

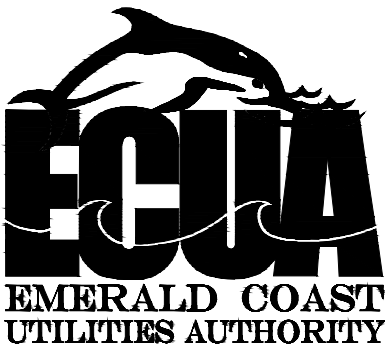
240-208V 3Ø 20HP - 25HP REDUCED  
VOLTAGE SOFT STARTER ELECTRICAL STANDARD  
- ALTERNATE

FOR  
EMERALD COAST UTILITIES AUTHORITY  
ESCAMBIA COUNTY, FL

| SHEET NO. | SHEET DESCRIPTION                                               |
|-----------|-----------------------------------------------------------------|
| 1         | MAIN POWER DISTRIBUTION SCHEMATIC                               |
| 2         | CONTROL SCHEMATIC                                               |
| 3         | DIGITAL INPUTS SCHEMATIC                                        |
| 4         | DIGITAL OUTPUTS & ANALOG INPUTS SCHEMATIC                       |
| 5         | ANALOG OUTPUTS & STARTER CONTROL SCHEMATIC                      |
| 6         | TERMINAL BLOCK LAYOUT AND FIELD CONNECTIONS                     |
| 7A        | BACK-TO-BACK EXTERIOR PANEL LAYOUT & FIELD CONDUIT REQUIREMENTS |
| 8         | POWER & PUMP 1 INTERNAL PANEL LAYOUTS                           |
| 9         | PUMP 2 & CONTROL PANEL INTERNAL LAYOUTS                         |
| 10        | EQUIPMENT LIST                                                  |
| 11        | HORSEPOWER RELATED EQUIPMENT & POWER CONDUCTORS                 |
| 12        | PANEL TO PANEL CONDUCTORS & EQUIPMENT                           |
| 13        | PANEL TO PANEL WIRING                                           |
| 14A       | BACK-TO-BACK STAINLESS STEEL FRAME LAYOUT                       |
| 15        | TABLES, LEGENDS & TAGS                                          |
| 16        | ISR INSTRUCTIONS                                                |
| 17        | GENERAL NOTES AND DETAILS                                       |
| 18        | GENERAL NOTES AND DETAILS                                       |

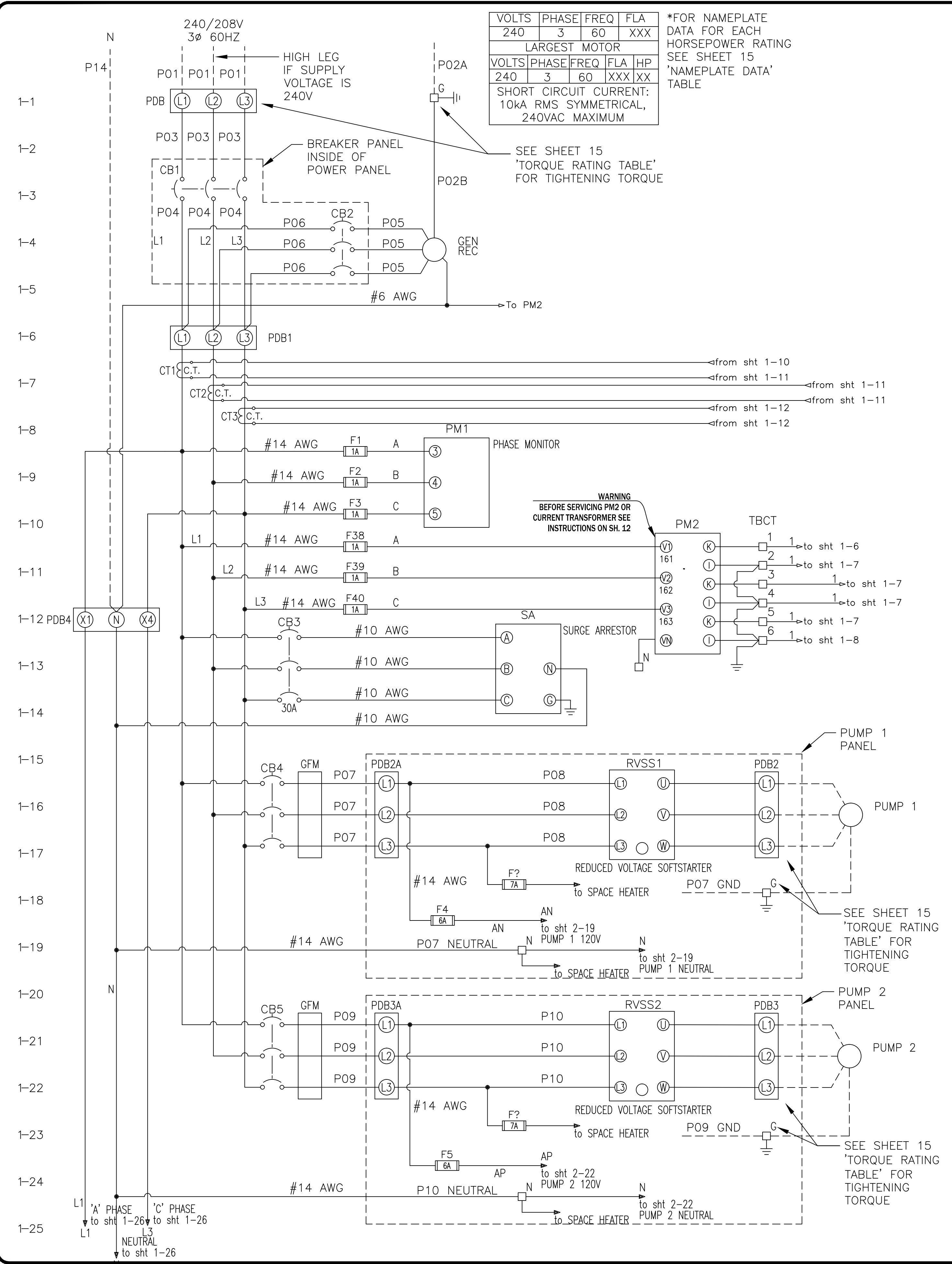
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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS



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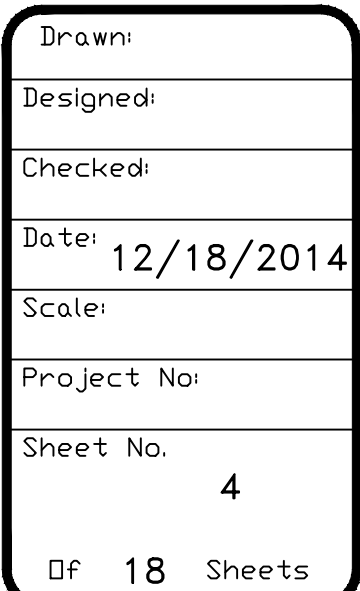
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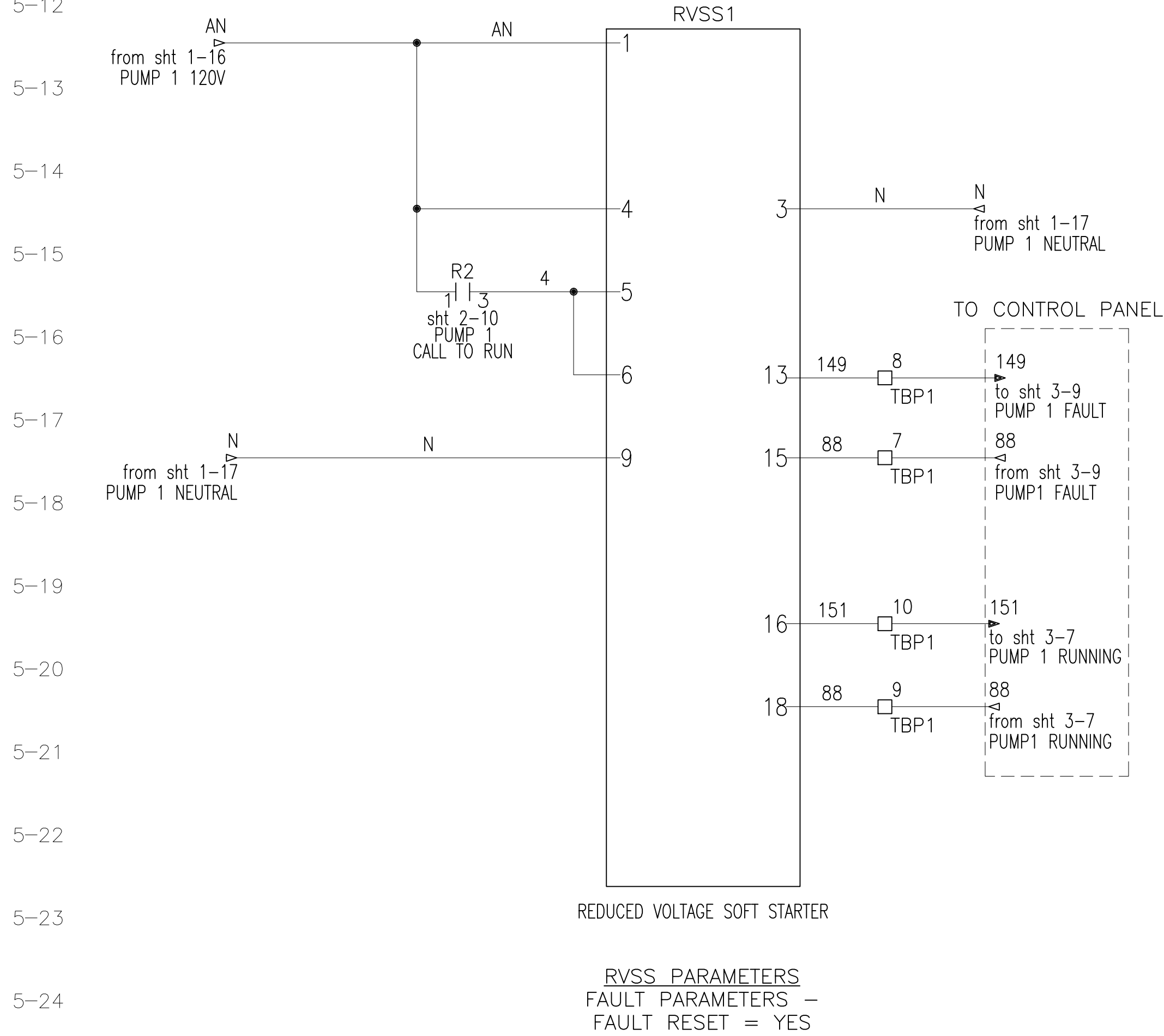
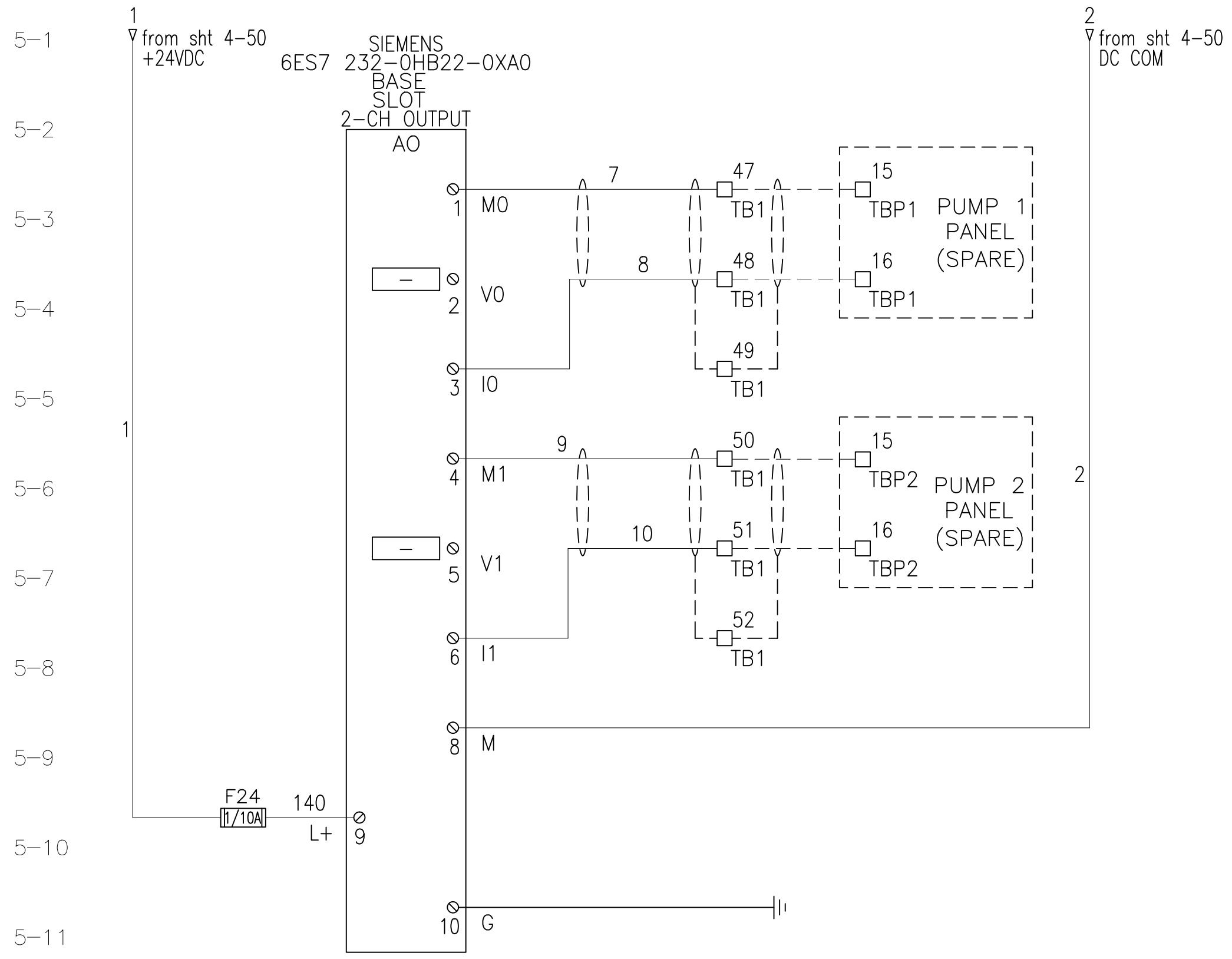




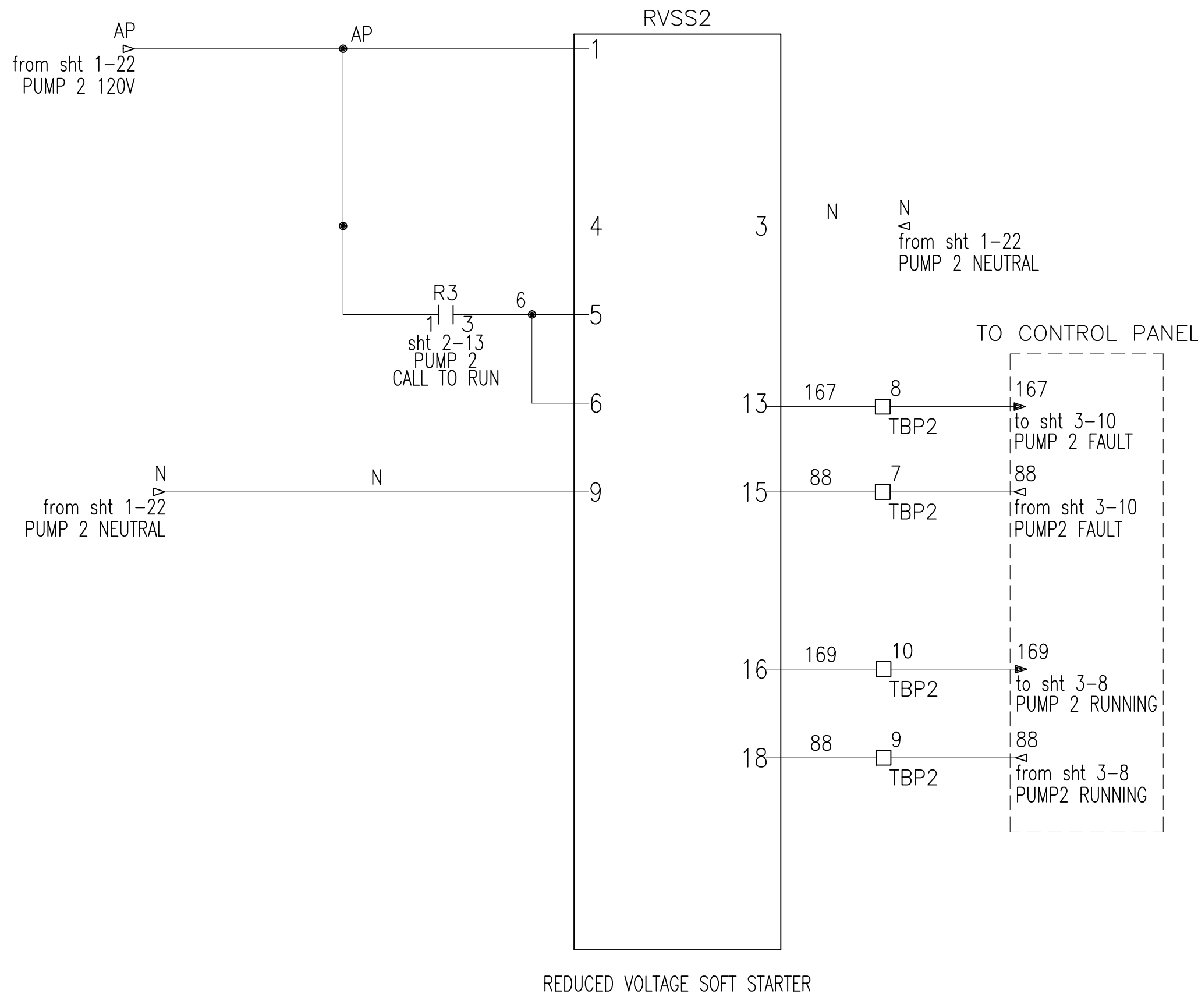


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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM

LIFT STATION CONSTRUCTION DETAILS

ELECTRICAL STANDARDS



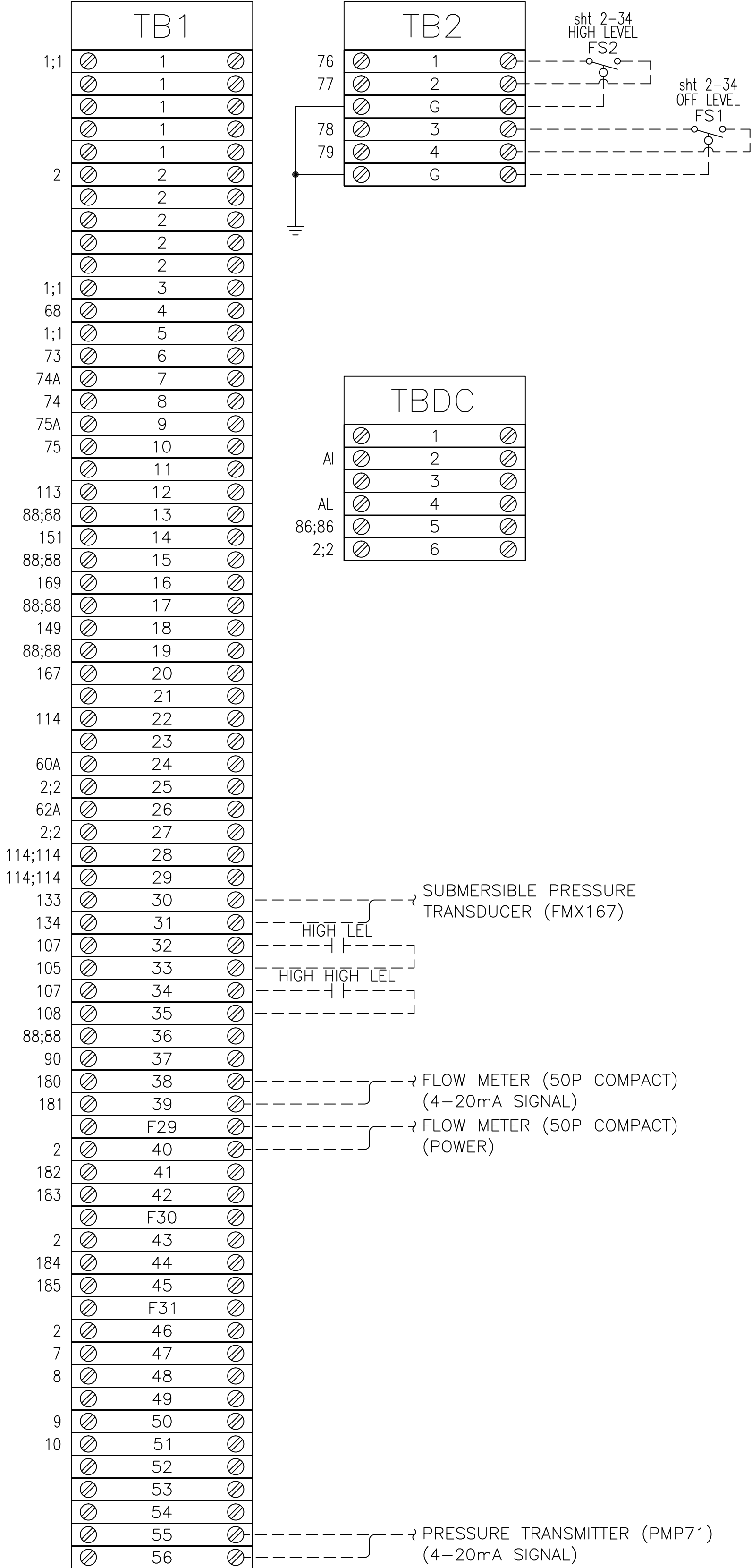
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| TBPP  |    |  |
|-------|----|--|
| AJ    | 1  |  |
| AM    | 2  |  |
| 2     | 3  |  |
|       | 4  |  |
| 113   | 5  |  |
| 114   | 6  |  |
|       | 7  |  |
| AA    | 8  |  |
| AB    | 9  |  |
|       | 10 |  |
| 88    | 11 |  |
| 90    | 12 |  |
| AR    | 13 |  |
| N     | 14 |  |
|       | 15 |  |
| AG;AG | 16 |  |
| AS    | 17 |  |
| N     | 18 |  |
|       | 19 |  |
| AT    | 20 |  |
| N     | 21 |  |
|       | 22 |  |

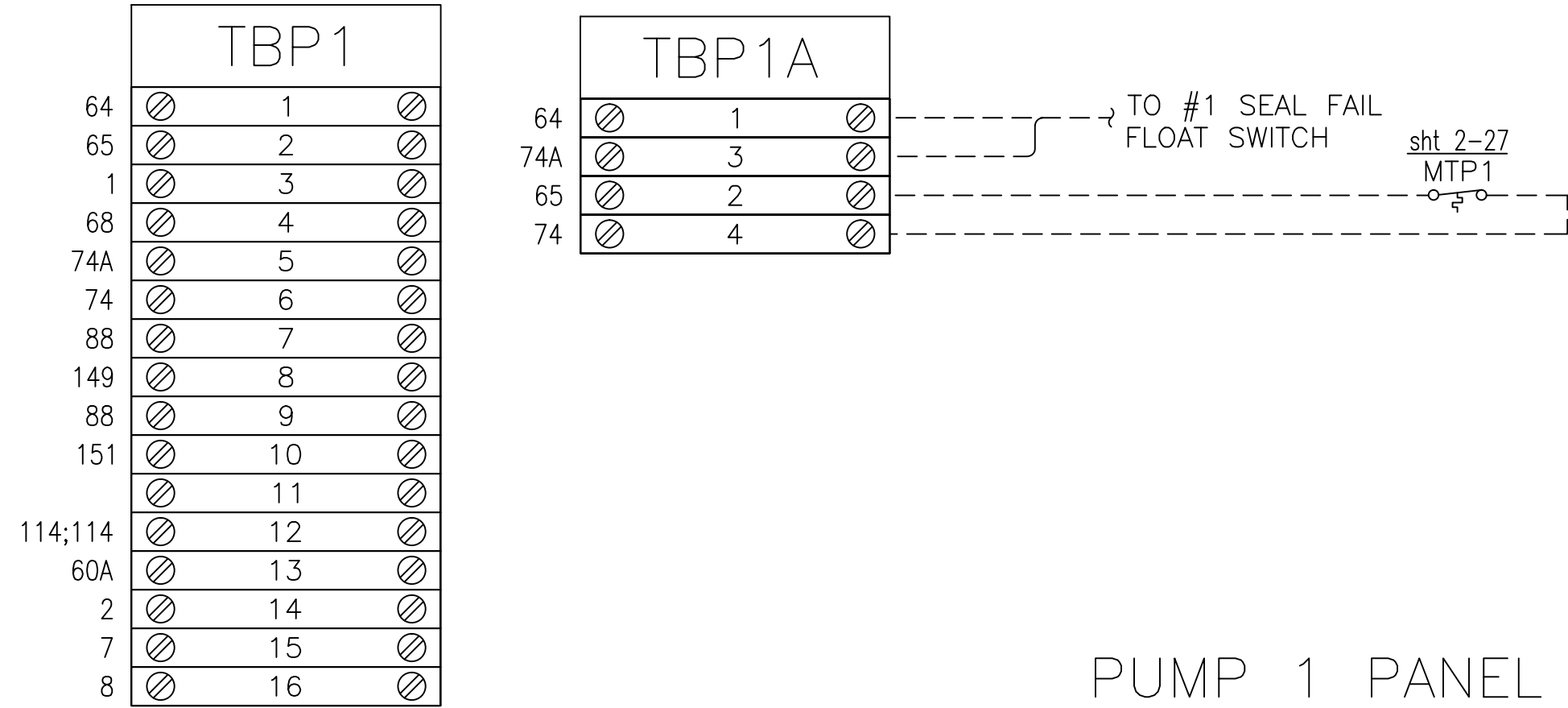
NOTE: THE TBCT FOR PM2  
NEEDS TO INTEGRATED INTO  
THE POWER PANEL. CONFER  
WITH THE PROJECT ENGINEER.

## POWER PANEL

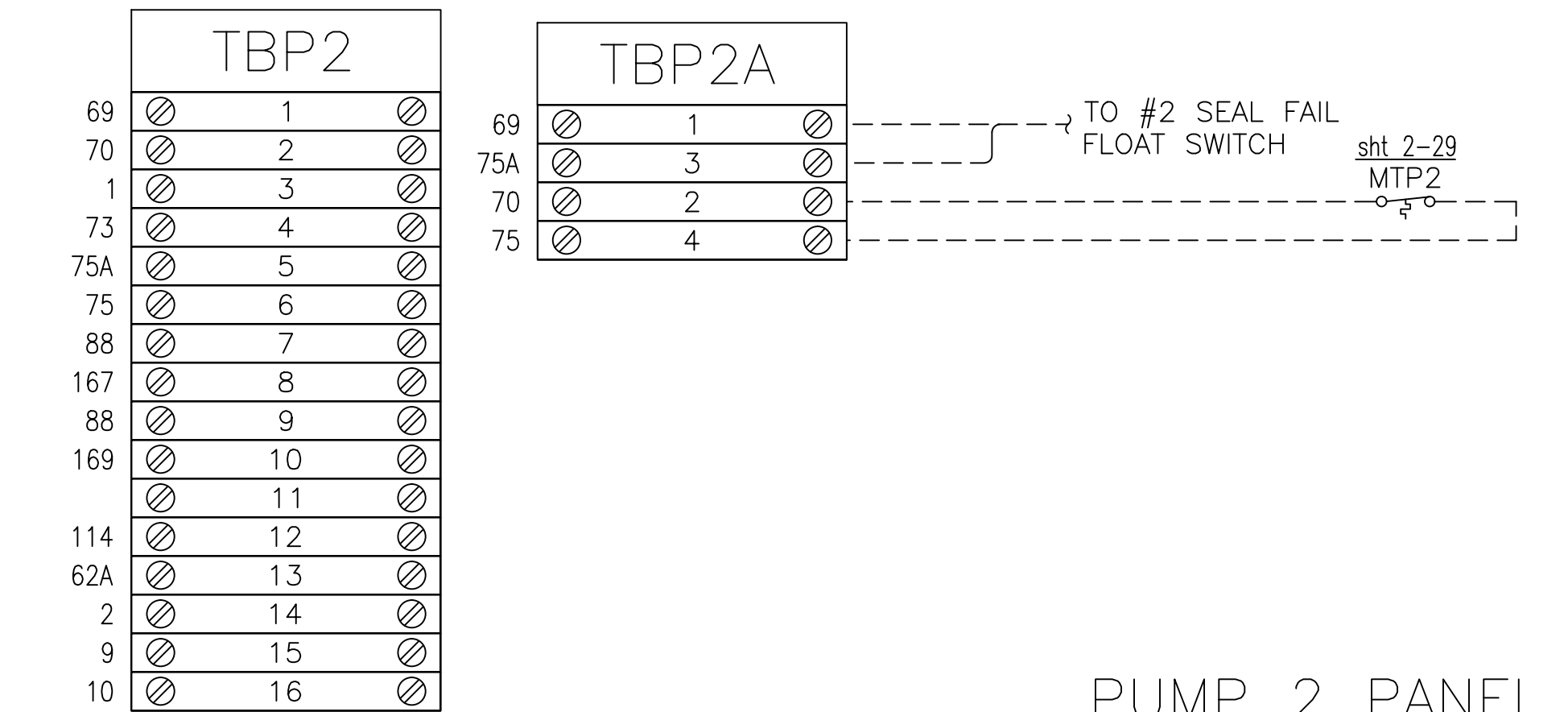


## CONTROL PANEL

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## PUMP 1 PANEL



## PUMP 2 PANEL

TYPICAL FOR ALL TERMINAL BLOCKS ON THIS DRAWING

|                                 |
|---------------------------------|
| USE COPPER CONDUCTORS ONLY      |
| 75 DEG C (167 DEG F)            |
| 5.3-7.0 LB/IN TIGHTENING TORQUE |

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# IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM LIFT STATION CONSTRUCTION DETAILS ELECTRICAL STANDARDS



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## NOTES:

TERMINAL BLOCK DESIGNATIONS:

- TBPP - POWER PANEL TERMINAL BLOCK
- TB1 - CONTROL PANEL TERMINAL BLOCK
- TB2 - INTRINSICALLY SAFE TERMINAL BLOCK
- TBP1 - PUMP 1 TERMINAL BLOCK
- TBP1A - PUMP 1 TERMINAL BLOCK (MOTOR THERMAL AND SEAL FAILURE)
- TBP2 - PUMP 2 TERMINAL BLOCK
- TBP2A - PUMP 2 TERMINAL BLOCK (MOTOR THERMAL AND SEAL FAILURE)

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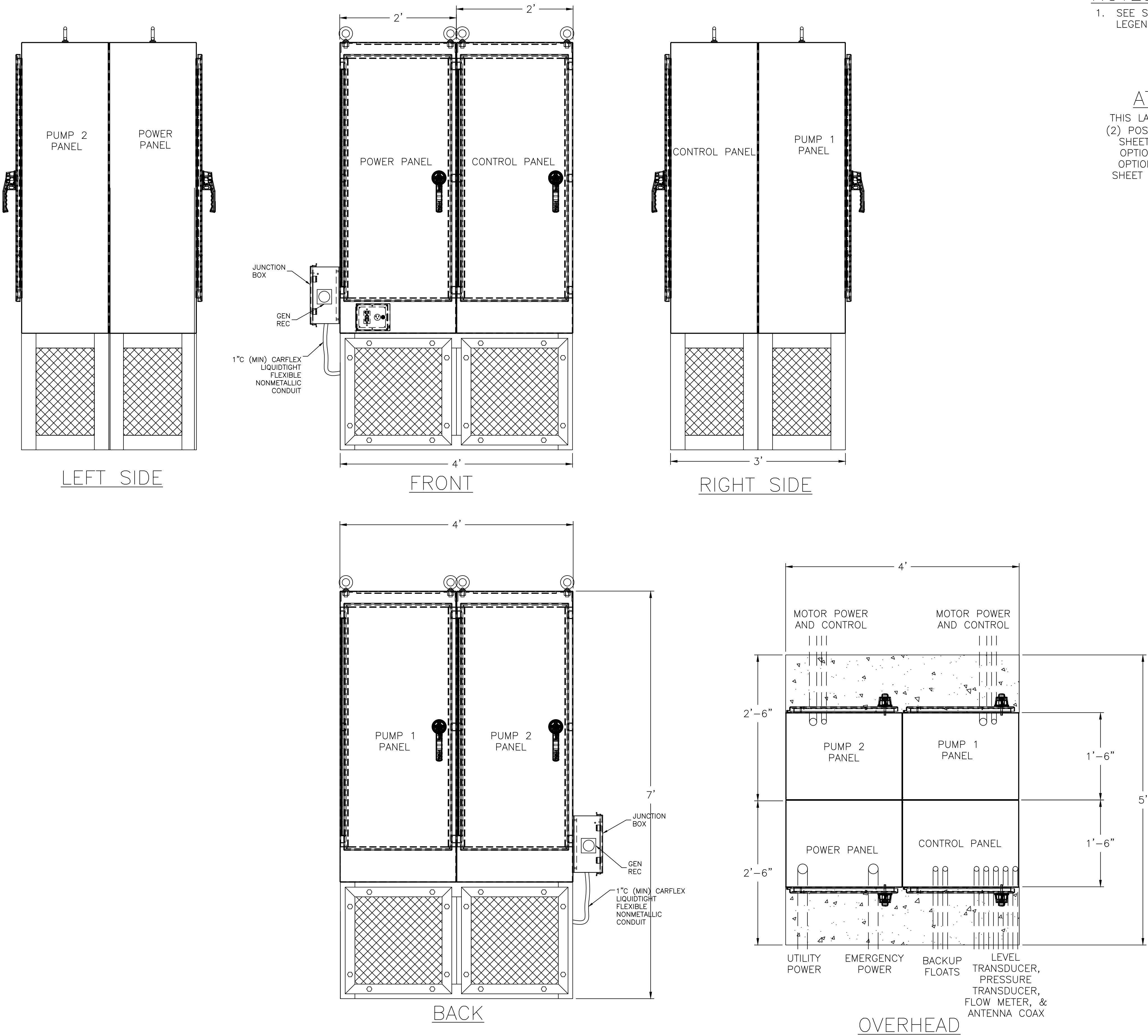
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NOTES

1. SEE SHEET 15 FOR SCHEDULES, LEGENDS AND PANEL TAGS.

ATTENTION

THIS LAYOUT IS ONE OF TWO (2) POSSIBLE CHOICES – SEE SHEET 7 FOR THE OTHER OPTION. IF THIS LAYOUT OPTION IS SELECTED, SEE SHEET 14A FOR ASSOCIATED RACK DETAILS.



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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS



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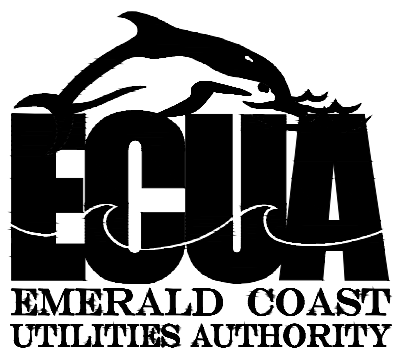
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NOTES

- 1. SEE SHEET 15 FOR SCHEDULES, LEGENDS AND PANEL TAGS.
- 2. LAYOUT OF THE POWER & STARTER SECTIONS DEPICTS THE LARGEST POSSIBLE HORSEPOWER CONFIGURATION.

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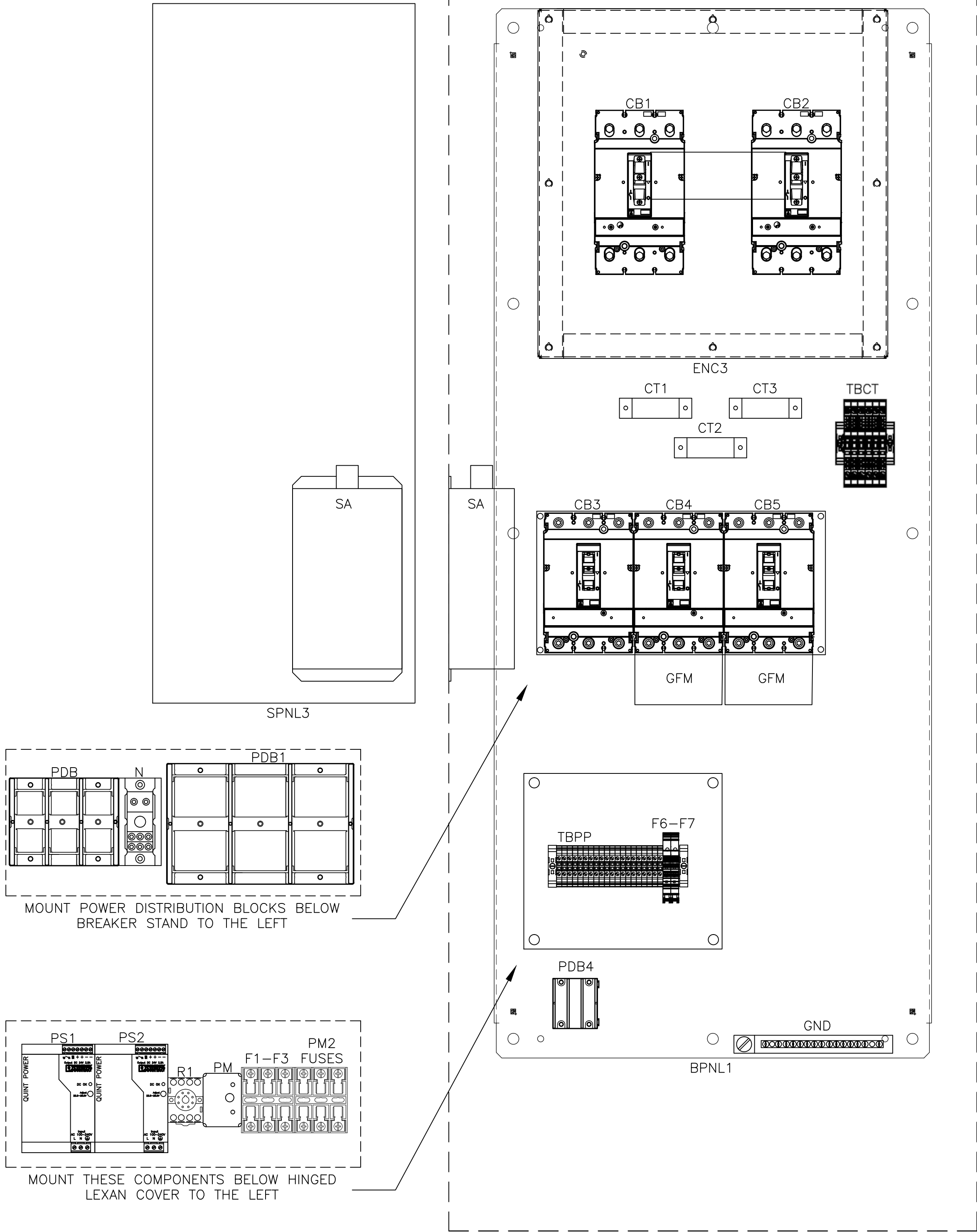
IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS



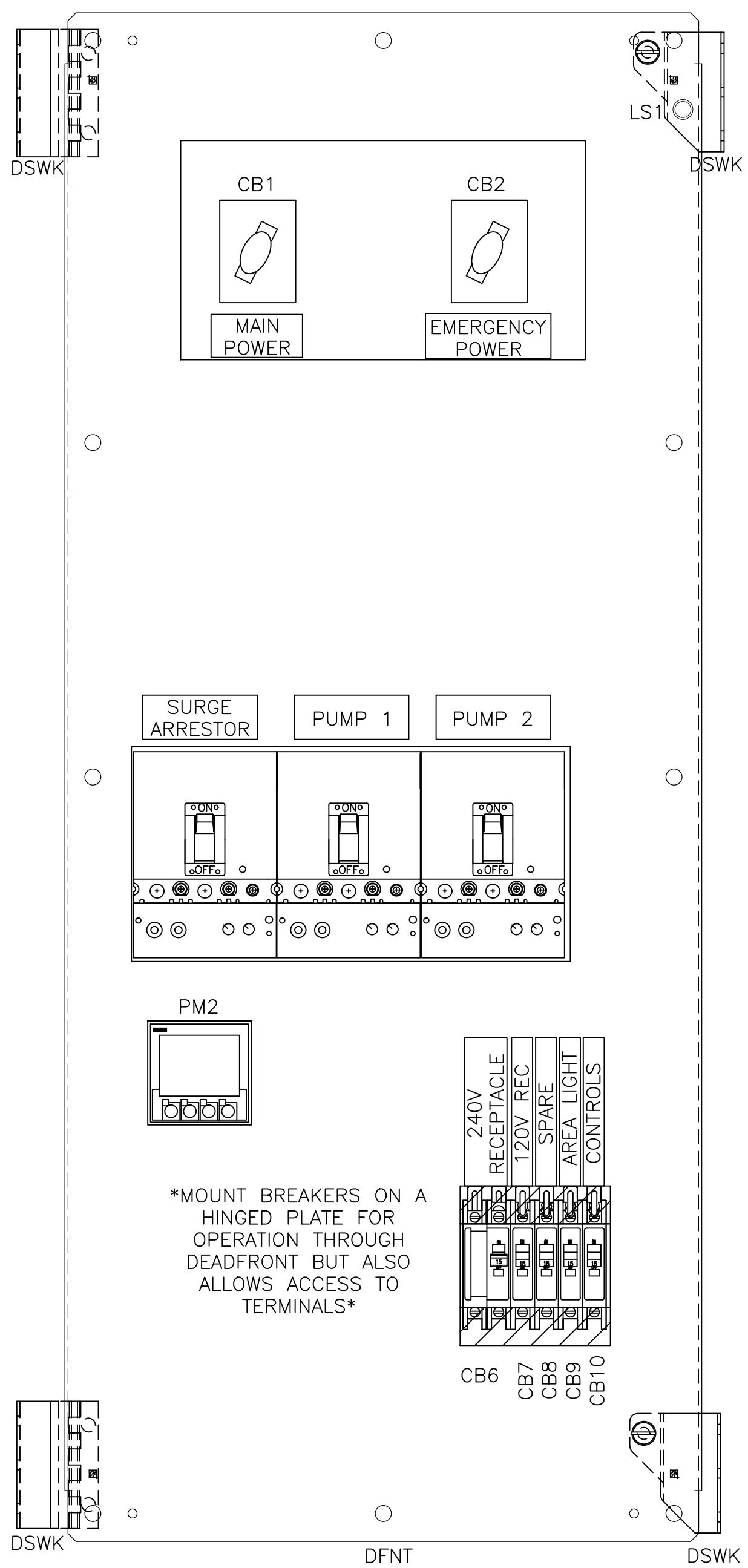
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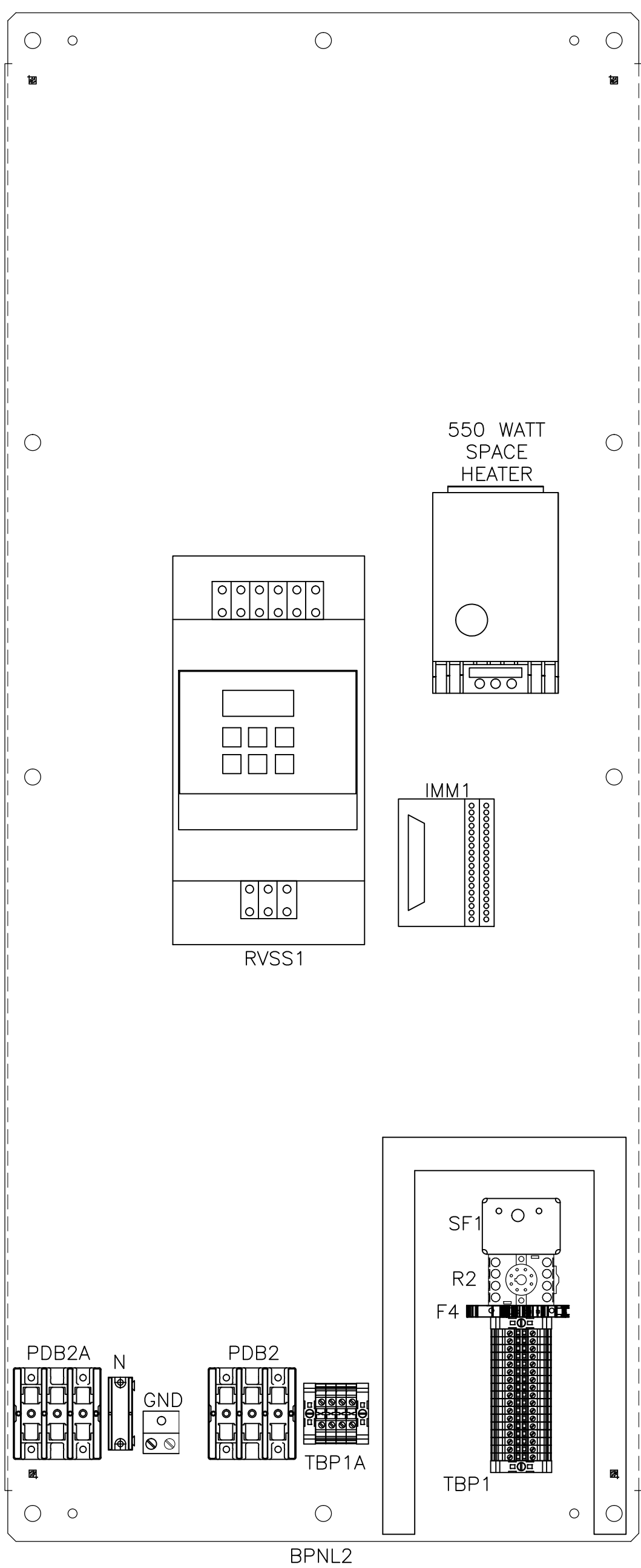
POWER ENCLOSURE  
LEFT SIDE PANEL  
LAYOUT



POWER ENCLOSURE  
BACKPANEL LAYOUT



POWER ENCLOSURE  
DEADFRONT LAYOUT



PUMP 1 ENCLOSURE  
BACKPANEL LAYOUT

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE E.C.U.A. STANDARD SPECIFICATIONS

NOTES

- 1. SEE SHEET 15 FOR SCHEDULES, LEGENDS AND PANEL TAGS.
- 2. LAYOUT OF THE VFD SECTION DEPICTS THE LARGEST POSSIBLE HORSEPOWER CONFIGURATION.

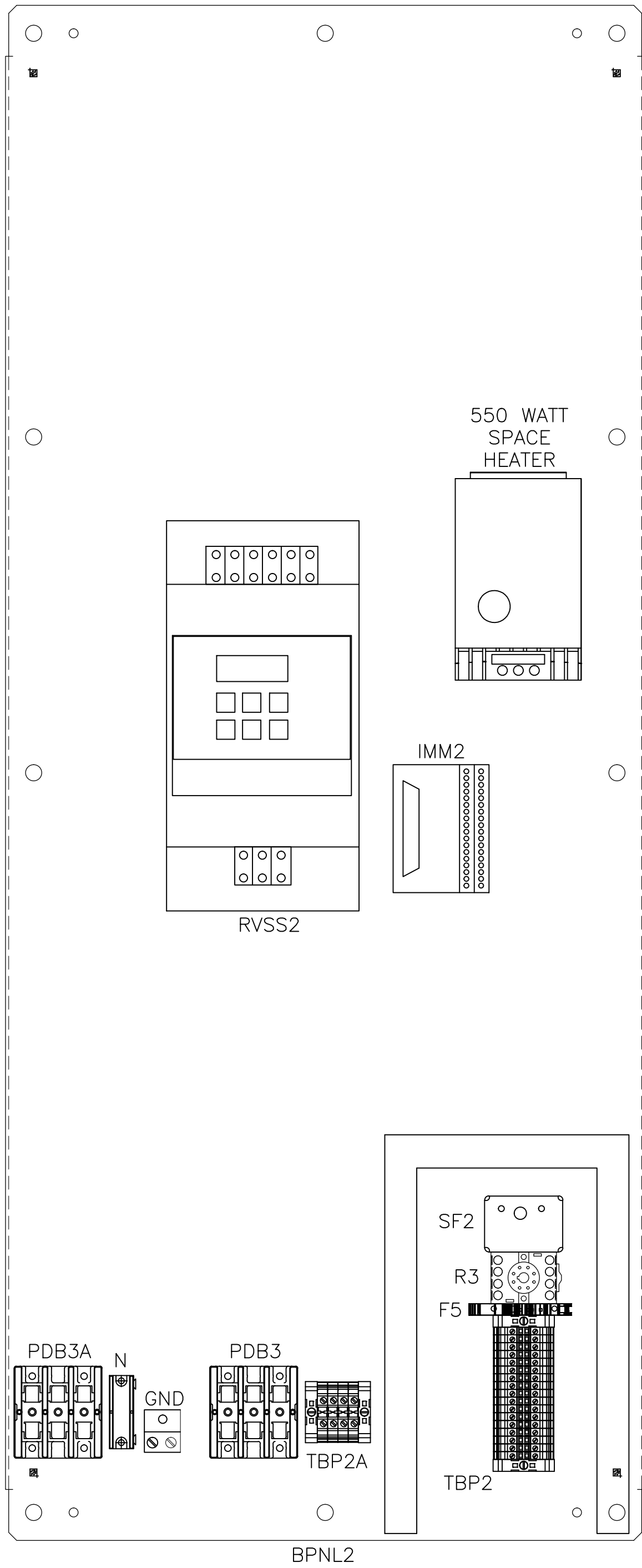
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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS

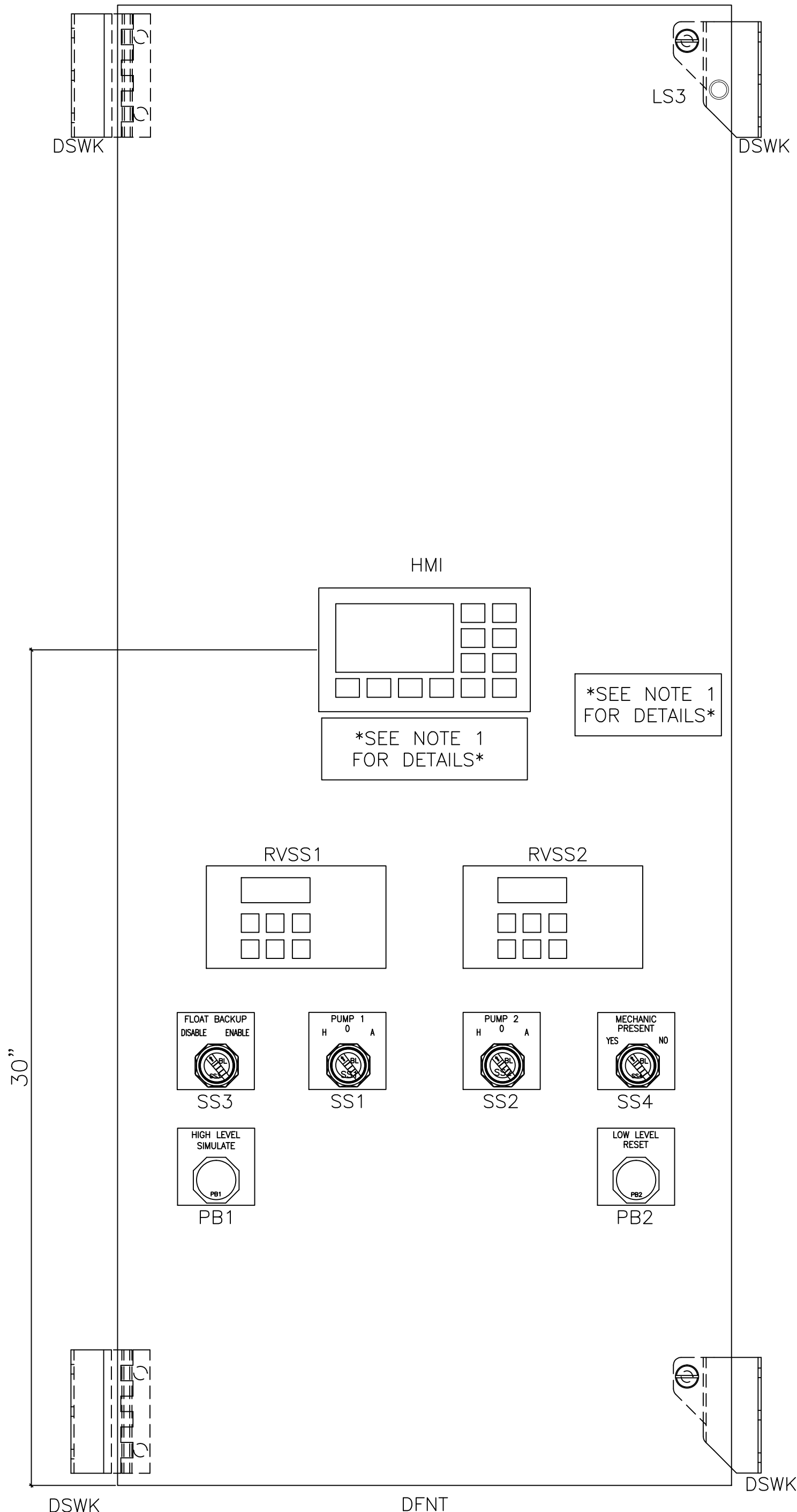


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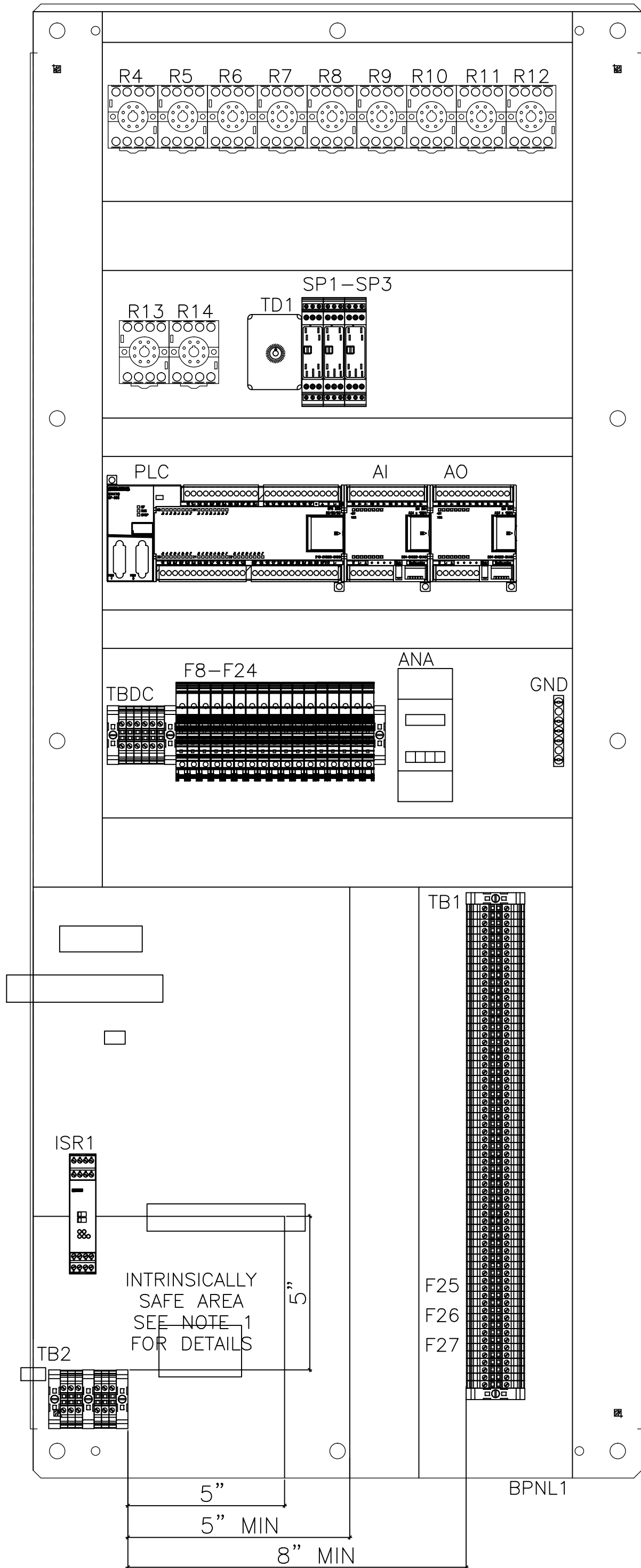
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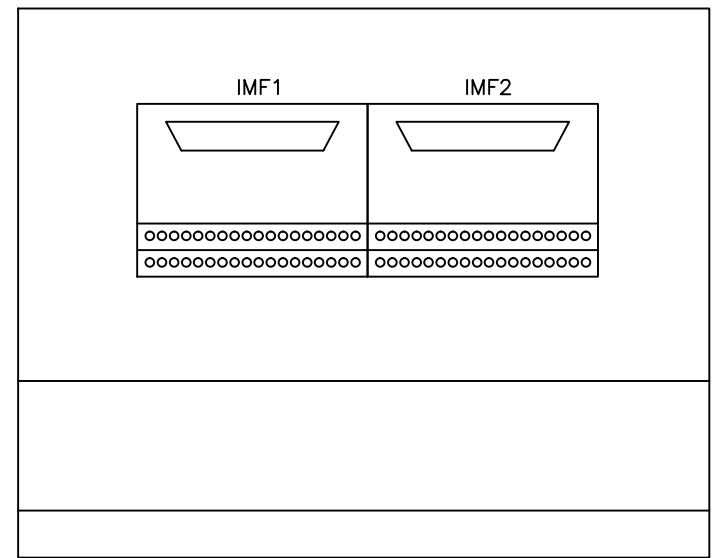
PUMP 2 ENCLOSURE  
BACKPANEL LAYOUT



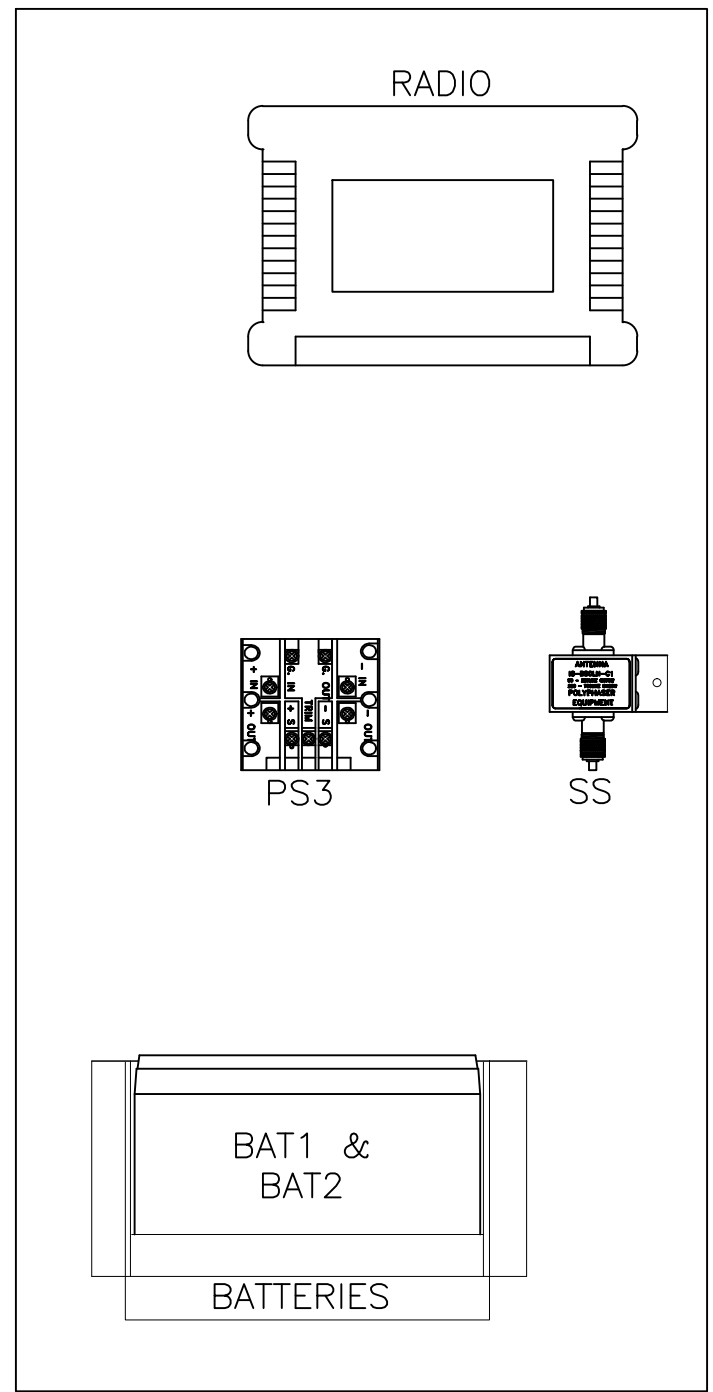
CONTROL ENCLOSURE  
DEADFRONT LAYOUT



CONTROL ENCLOSURE  
BACKPANEL LAYOUT



CONTROL ENCLOSURE  
LEFT SIDEPANEL  
LAYOUT



CONTROL ENCLOSURE  
RIGHT SIDEPANEL LAYOUT

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE E.C.U.A. STANDARD SPECIFICATIONS

| 240-208V RVSS Equipment List |                        |                     |                                                                                  |                  |                       |     |      |                         |                     |                                                                                       |                   |                     |     |
|------------------------------|------------------------|---------------------|----------------------------------------------------------------------------------|------------------|-----------------------|-----|------|-------------------------|---------------------|---------------------------------------------------------------------------------------|-------------------|---------------------|-----|
| Item                         | Tag                    | Panel               | Description                                                                      | Manufacturer     | Model                 | Qty | Item | Tag                     | Panel               | Description                                                                           | Manufacturer      | Model               | Qty |
| 1                            | ENC1                   | All                 | 60X24X18 NEMA 4X SS Enclosure                                                    | Hoffman          | A602418SSF5N4         | 4   | 72   | F14, F15                | Control             | 1/4A Fuse, Motor Thermal Inputs                                                       | Bussmann          | AGC-1/4             | 2   |
| 2                            | BPNL1                  | All                 | 60x24 Painted Steel Backpanel                                                    | Hoffman          | A60P24F1              | 4   | 73   | F12, F13, F19, F20      | Control             | 2A Fuse, Radio Power Supply, Radio & Digital Outputs                                  | Bussmann          | AGC-2               | 4   |
| 3                            | SPNL1                  | Control             | 28"H x 12"W Aluminum Sidepanel                                                   | EWS              | Custom                | 1   | 74   | SS1, SS2                | Control             | 3 Position Selector Switch, 30MM                                                      | Square D          | 9001SKS43BH2        | 2   |
| 4                            | DFNT                   | Power & Control     | 60x24 Aluminum Deadfront Panel                                                   | EWS              | Custom                | 2   | 75   | R2-R13                  | Control             | 24VDC 3PDT General Purpose Relay w/ Indicator Lamp                                    | Potter Brumfield  | KRPA-14DN-24        | 12  |
| 5                            | DSWK                   | Power & Control     | Door Swing Kit                                                                   | Hoffman          | ANADFK                | 2   | 76   | SF1, SF2                | Control             | 120V Seal Failure Relay                                                               | ATC               | SPM-120-AAA-10K     | 2   |
| 6                            | FRM                    | Power               | Expanded Metal Stainless Steel Frame                                             | EWS              | SEE DRAWINGS          | 1   | 77   | ISR1                    | Control             | Intrinsically Safe Barrier Relay, 24VDC                                               | Phoenix Contact   | 2685476             | 1   |
| 7                            | PDB                    | Power               | Incoming Power Distribution Block PDB                                            | Square D         | 9080LBA363101         | 1   | 78   | TB2                     | Control             | Terminal Block, Blue TB2                                                              | Phoenix Contact   | 3044115             | 4   |
| 8                            | PDB                    | Power               | Incoming Power Distribution Block PDB Cover                                      | Square D         | 9080LB33              | 1   | 79   | TB2                     | Control             | Terminal Block, Blue End Barrier, TB2                                                 | Phoenix Contact   | 3047235             | 1   |
| 9                            | GND                    | Power               | Power Panel Ground Bar                                                           | Square D         | PK15GTA-L             | 1   | 80   | TB2                     | Control             | Ground Terminal Blocks, TB2                                                           | Phoenix Contact   | 3044128             | 2   |
| 10                           | ENC3                   | Power               | 16"H x 16"W x 8"D Screw Cover Type 3R Enclosure                                  | Hoffman          | A16168GSC             | 1   | 81   | PB1, PB2                | Control             | Push Button, Black 1NO 1NC                                                            | Square D          | 9001SKR1BH13        | 2   |
| 11                           | CB1                    | Power               | 600V Main Circuit Breaker                                                        | Square D         | SEE HP TABLE SHEET 11 | 1   | 82   | SS3, SS4                | Control             | 2 Position Selector Switch, 30MM                                                      | Square D          | 9001SKS11BH2        | 2   |
| 12                           | CB2                    | Power               | 600V Emergency Circuit Breaker                                                   | Square D         | JDL36200              | 1   | 83   | TD1                     | Control             | 24VDC 0-180 Second Time Delay Relay                                                   | Square D          | RE48ATM12MW         | 1   |
| 13                           | CB1,CB2                | Power               | Mechanical Interlock for H/J Frame Circuit Breakers                              | Square D         | S29369                | 1   | 84   | TD1                     | Control             | 8 Pin Relay Base                                                                      | ABB               | NDS-8               | 1   |
| 14                           | CB1,CB2                | Power               | Door Mounted Rotary Handle for H/J Frame Circuit Breakers                        | Square D         | S29338                | 2   | 85   | F16, F23, F24           | Control             | 1/10A Fuse, Analog Inputs, Analog Outputs & HMI                                       | Bussmann          | AGC-1/10            | 3   |
| 15                           | GEN REC                | Power               | NEMA 4X Generator Receptacle                                                     | Appleton         | AR20044RS             | 1   | 86   | HMI                     | Control             | TD400C Text Display                                                                   | Siemens           | 6AV6 640-0AA00-0AX1 | 1   |
| 16                           | PDB1                   | Power               | Main Power Distribution Block PDB1                                               | Square D         | 9080LBA365208         | 1   | 87   | F17, F18                | Control             | 1A Fuse, Digital Inputs                                                               | Bussmann          | AGC-1               | 2   |
| 17                           | PDB1                   | Power               | Main Power Distribution Block PDB1 Cover                                         | Square D         | 9080LB53              | 1   | 88   | PLC                     | Control             | S7-200 Dual Com Port Processor w/ 24 DI & 16 DO Points                                | Siemens           | 6ES7 216-2AD23-0XB0 | 1   |
| 18                           | F1-F3, F38-F40         | Power               | 3 Pole Rejection type Fuse Block                                                 | Bussmann         | BC6033PQ              | 2   | 89   | AI                      | Control             | S7-200 4 Point AI Module                                                              | Siemens           | 6ES7 231-0HC22-0XAO | 1   |
| 19                           | F1-F3, F38-F40         | Power               | 1A Rejection Type Fuse, Class CC                                                 | Bussmann         | KTk-R- 1              | 6   | 90   | AO                      | Control             | S7-200 2 Point AO Module                                                              | Siemens           | 6ES7 232-0HB22-0XAO | 1   |
| 20                           | F1-F3, F38-F40         | Power               | Fuse Cover                                                                       | Bussmann         | SAMI-7N               | 6   | 91   | PLC                     | Control             | S7-200 Communication cable PC/PP1 RS-232/485                                          | Siemens           | 6ES7 901-3CB30-0XAO | 1   |
| 21                           | PM                     | Power               | 240V Phase Monitor                                                               | Timemark         | 257B                  | 1   | 92   | SP1-SP3                 | Control             | Plug In DI Surge Suppression, PT 4x1...DC                                             | Phoenix Contact   | 2838322             | 3   |
| 22                           | PM                     | Power               | 600V, 8-Pin Relay Base                                                           | ABB              | OT08PC                | 1   | 93   | SP1-SP3                 | Control             | Terminal Block Base for Plugable Surge Supression, PT 4x1-BE                          | Phoenix Contact   | 2839363             | 3   |
| 23                           | CB3-CB5                | Power               | Breaker Stand                                                                    | EWS              | Custom                | 1   | 94   | LS1-LS4                 | Control             | Panel Intrusion Switches, N.C. Contacts                                               | NSI               | 76030PS             | 4   |
| 24                           | CB3                    | Power               | 30A 600V 3 Pole Circuit Breaker, Main Surge Arrestor                             | Square D         | HDL36030              | 1   | 95   | F21                     | Control             | 1-1/2A Fuse, PLC Supply                                                               | Bussmann          | AGC-1-1/2           | 1   |
| 25                           | SA                     | Power               | Main Surge Arrestor                                                              | SSI              | SEE HP TABLE SHEET 11 | 1   | 96   | F22                     | Control             | 3/4A Fuse, Process Analyzer                                                           | Bussmann          | AGC-3/4             | 1   |
| 26                           | CB4, CB5               | Power               | 600V 3 Pole Circuit Breaker, Starter                                             | Square D         | SEE HP TABLE SHEET 11 | 2   | 97   | PT                      | Control             | Process Transmitter                                                                   | Endress & Hauser  | RMA42AAAH2          | 2   |
| 27                           | CB4, CB5               | Power               | H & J Frame Circuit Breaker Locking System                                       | Square D         | S29371                | 2   | 98   | PT                      | -                   | Submersible Level Transducer, 33ft Range w/ 60ft Cable & Mounting Clamp (Ship Loose ) | Endress & Hauser  | FMX21-FE221HGE21A   | 1   |
| 28                           | PDB2A, PDB3A           | Pump 1 & 2          | Power Distribution Block, (1)#14-2/0.....(4)#14-4 (PDB2A, PDB3A)                 | Square D         | 9080LBA362104         | 2   | 99   | F29-F31                 | Control             | 24VDC Fused Terminal Block With Indication                                            | Phoenix Contact   | 3046090             | 3   |
| 29                           | PDB2A, PDB3A           | Pump 1 & 2          | Power Distribution Block Cover, (1)#14-2/0.....(1)#14-2/0                        | Square D         | 9080LB23              | 2   | 100  | F29-F31                 | Control             | 1/4A Fuse, Analog Inputs                                                              | Bussmann          | GMA-250             | 3   |
| 30                           | F4, F5                 | Pump 1 & 2          | 6A Fuse, RVSS Control Power                                                      | Bussmann         | AGC-6                 | 2   | 101  | F4, F5                  | Pump 1 & 2          | 6A Fuse, RVSS Control Power                                                           | Bussmann          | AGC-6               | 2   |
| 31                           | RVSS1, RVSS2           | Pump 1 & 2          | Reduced Voltage Soft Starter                                                     | Solcon           | SEE HP TABLE SHEET 11 | 2   | 102  | TBPP,1,DC,P1,1A,P2 & 2A | All                 | Terminal Block, Gray 26-10 AWG Wire                                                   | Phoenix Contact   | 3044102             | 120 |
| 32                           | RVSS1, RVSS2           | Control             | Remote keypad for Solcon RVS-DN SoftStarter                                      | Solcon           | DISP6640043           | 2   | 103  | TBPP,1,DC,P1,1A,P2 & 2A | All                 | Terminal Block End Barrier                                                            | Phoenix Contact   | 3047028             | 8   |
| 33                           | IMM1, IMM2             | Pump 1 & 2          | FLKM-037 SUB/S Interface Cable Male                                              | Phoenix Contact  | 2281115               | 2   | 104  | TBPP,1,DC,P1,1A,P2 & 2A | All                 | Terminal Block End Anchor                                                             | Phoenix Contact   | 800886              | 17  |
| 34                           | IMF1, IMF2             | Control             | FLKM-037 SUB/B Interface Cable Female                                            | Phoenix Contact  | 2281212               | 2   | 105  | TBP1A, TBP2A            | Pump 1 & 2          | Terminal Block, Gray 26-8 AWG Wire, TBVFD1A & TBVFD2A                                 | Phoenix Contact   | 3044131             | 8   |
| 35                           | IMM1, IMM2, IMF1, IMF2 | Pump 1, 2 & Control | 37 Pin D-Sub Cable, DB-37 Male to DB-37 Female                                   | GC Electronics   | 45-463                | 2   | 106  | GND                     | Control             | Control Panel Ground Bar                                                              | Square D          | PK5GTA              | 3   |
| 36                           | SPNL2                  | Control             | 10"H x 12"W Aluminum Sidepanel                                                   | EWS              | Custom                | 1   | 107  | -                       | Pump 1, 2 & Control | Meter Socket (SHIP LOOSE)                                                             | Milbank           | UAP3566-X-HSP       | 1   |
| 37                           | GND                    | Pump 1 & 2          | Motor Ground Lug                                                                 | NSI              | 2-OT                  | 2   | 108  | -                       | -                   | Stainless Steel 60' Float (SHIP LOOSE)                                                | Anchor Scientific | P60NO-SST           | 2   |
| 38                           | PDB2, PDB3             | Pump 1 & 2          | Motor Power Distribution Block PDB2&3, (1)#14-2/0.....(1)#14-2/0                 | Square D         | 9080LBA362101         | 2   | 109  | -                       | -                   | Insulated Ground Neutral (SHIP LOOSE)                                                 | Square D          | SN400LA             | 1   |
| 39                           | PDB2, PDB3             | Pump 1 & 2          | Motor Power Distribution Block PDB2&3 Cover                                      | Square D         | 9080LB23              | 2   | 110  | -                       | -                   | Ground Bar Kit (SHIP LOOSE)                                                           | Square D          | PKDGTJ250           | 1   |
| 40                           | CB6-CB9                | Power               | Hinged Aluminum Bracked for Mounting 240/120V Circuit Breakers through Deadfront | EWS              | Custom                | 1   | 111  | -                       | -                   | NEMA 4A S.S. Disconnect (SHIP LOOSE)                                                  | Square D          | J250DS              | 1   |
| 41                           | PDB4                   | Power               | 240V/120V Power Distribution Block PDB4, (1) #14-2 ... (4) #18-10                | Square D         | 9080LBA361104         | 1   | 112  | -                       | -                   | Antenna Mast Stabilization Plate (Ship Loose)                                         | EWS               | Custom              | 1   |
| 42                           | CB6                    | Power               | 20A, 240V, 2 Pole Circuit Breaker                                                | Square D         | QOU220                | 1   | 113  | -                       | -                   | Stainless Steel 'U' Bolt, 2" Pole, 5/16" Diameter Bolt w/ 2-1/2" Threads (SHIP LOOSE) |                   |                     | 1   |
| 43                           | REC1                   | Power               | 20A, 250V, 6-20R Receptacle                                                      | P&S              | 5872I                 | 1   | 114  | -                       | -                   | 5/16" Stainless Steel Flat Washer for 'U' Bolt (SHIP LOOSE)                           |                   |                     | 2   |
| 44                           | CB7, CB8               | Power               | 20A, 120V 1 Pole Circuit Breaker                                                 | Square D         | QOU120                | 2   | 115  | -                       | -                   | 5/16" Stainless Steel Lock Washer for 'U' Bolt (SHIP LOOSE)                           |                   |                     | 2   |
| 45                           | REC2                   | Power               | 120V 20A GFCI Duplex Receptacle NEMA5-20R                                        | P&S              | 2094-I                | 1   | 116  | -                       | -                   | 5/16" Stainless Steel Nut for 'U' Bolt (SHIP LOOSE)                                   |                   |                     | 2   |
| 46                           | REC1, REC2             | Power               | Custom Receptacle Cover NEMA 4X S.S.                                             | HOFFMAN          | HIDRPSS-MOD           | 1   | 117  | -                       | -                   | Stainless Steel 'U' Bolt, 1/4" Diameter (SHIP LOOSE)                                  |                   |                     | 2   |
| 47                           | REC1, REC2             | Power               | 3/4 1G AL FD BOX                                                                 | Appelton         | 4CS-1/2               | 2   | 118  | -                       | -                   | 1/4" Stainless Steel 1/4" Nut for 'U' Bolt (SHIP LOOSE)                               |                   |                     | 4   |
| 48                           | CB9                    | Power               | 15A, 120V, 1 Pole Circuit Breaker                                                | Square D         | QOU115                | 1   | 119  | -                       | -                   | 1-1/4" Reduction Bushing for Antenna Tower, ROHN R-TB50 (SHIP LOOSE)                  | Tessco            | 36882               | 1   |
| 49                           | CB10                   | Power               | 10A, 120V, 1 Pole Circuit Breaker                                                | Square D         | QOU110                | 1   | 120  | PLC                     | Control             | S7-200 Memory Module                                                                  | Siemens           | 6ES7 2918GF230AX0   | 1   |
| 50                           | R1                     | Power               | 120V 3PDT General Purpose Relay w/ Indicator Lamp                                | Potter Brumfield | KRPA-14AN-120         | 1   | 121  | N                       | Power               | Incoming Neutral Block                                                                | Square D          | 9080LBA163206       | 1   |
| 51                           | R1-R13, SF1, SF2       | All                 | 11 Pin Relay Base                                                                | ABB              | NDS-11                | 15  | 122  | N                       | Power               | Incoming Neutral Block Cover                                                          | Square D          | 9080LB31            | 1   |
| 52                           | F4 - F7                | Pump 1, 2 & Power   | Fused Terminal Block w/ 120V Blown Fuse Indication                               | Allen Bradley    | 1492-H4               | 4   | 123  | N                       | Pump 1 & 2          | Neutral Block                                                                         | Square D          | 9080LBA161104       | 2   |
| 53                           | -                      | Pump 1, 2 & Power   | 1492-H4 &H5 Fused Terminal Block End Cover                                       | Allen Bradley    | 1492-N37              | 4   | 124  | SPNL3                   | Power               | 32"X12" Aluminum Sidepanel                                                            | EWS               | Custom              | 1   |
| 54                           | F6, F7                 | Power               | 3A Fuse, Power Supply Primary                                                    | Bussmann         | AGC-3                 | 2   | 125  | FM                      | Control             | Flow Meter                                                                            | Endress & Hauser  | SOP Compact         | 1   |
| 55                           | PS1, PS2               | Power               | 10A 24VDC Power Supply                                                           | Phoenix Contact  | 2938604               | 2   | 126  | PR                      | Control             | Pressure Transmitter (1-150 PSI Transmitter)                                          | Endress & Hauser  | PMP71-AAC1PG1RAAMA  | 1   |
| 56                           | D1, D2                 | Power               | 10A Diode, P1000A                                                                | Newark           | 51R7094               | 2   | 127  | PM2                     | Power               | Voltage Monitor, Siemens Sentron PAC3100                                              | Siemens           | 7KM3133-0BA00-3AA0  | 1   |
| 57                           | -                      | Power               | Custom Stand/Lexan Hinged Cover w/Alum Stand for TBPP & Power Supply Fuses       | EWS              | Custom                | 1   | 128  | HTR                     | Pump 1 & 2          | Enclosed Heater w/Fan 120VAC 550W Adj Thermostat                                      | Stego             | 02700.9-00          | 2   |
| 58                           | F8-F24                 | Control             | Fused Terminal Block w/ 24VDC Blown Fuse Indication                              | Allen Bradley    | 1492-H5               | 17  | 129  | TBCT                    | Power               | Terminal Block, DIN Rail, Test Disconnect                                             | Phoenix Contact   | 3047400             | 6   |
| 59                           | F8 - F11               | Control             | 10A Fuse, Power Supply Secondary & Batteries                                     | Bussmann         | AGC-10                | 4   | 130  | TBCT                    | Power               | Terminal Block, C-ME 6/2                                                              | Phoenix Contact   | 3034442             | 3   |
| 60                           | BAT1, BAT2             | Control             | 12VDC Battery                                                                    | Power Sonic      | PS1290                | 2   | 131  | TBCT                    | Power               | Switching Jumper POS 2, Gray/Orange                                                   | Phoenix Contact   | 3034468             | 3   |
| 61                           | PS3                    | Control             | 24VDC-15VDC Converter, 2A                                                        | Vicor            | V1-J12-EY-B1          | 1   | 132  | TBCT                    | Power               | Cover, 2.2M                                                                           | Phoenix Contact   | 3047426             | 1   |
| 62                           | RADIO                  | Control             | 400MHz Radio                                                                     | GE MDS           | SD04MD                | 1   | 133  | CT1-CT3                 | Power               | Current Transformer, 200:5 Ratio                                                      | Square D          | 2NR201              | 3   |
| 63                           | RADIO                  | Control             | DB9 Male/Male Gender Changer                                                     | Office Depot     | 946660                | 1   | 134  | F41                     | Power               | 1 Pole Rejection Type Fuse Block                                                      | Bussmann          | BC6031PQ            | 1   |
| 64                           | RADIO/SS               | Control             | 3 Foot LMR400UF Coaxial Jumper NMale to TNCMale                                  | Tessco           | 324503                | 1   | 135  | F41                     | Power               | 0.6A Rejection Type Fuse, Class CC                                                    | Bussmann          | KTk-R-6/10          | 1   |
| 65                           | SS                     | Control             | Coaxial Surge Suppressor, 100-512MHz                                             | Polyphaser       | VHF50HN               | 1   | 136  | GFM                     | Power               | Ground Fault Module, Pump 1 & Pump 2                                                  | Square D          | GFM150HD            | 2   |
| 66                           | -                      | -                   | 50FT Coaxial Cable, NMale-Nmale, Wireless Solutions 400-07-07-P50 (Ship Loose )  | Tessco           | 370875                | 1   | 137  | ENC4                    | Power               | 14 X 12 NEMA 4X SS Enclosure                                                          | Hoffman           | LC35302OSS          | 1   |
| 67                           | -                      | -                   | 400MHz Yagi Antenna w/ N Female Connector, MAXRAD MYA4506N (Ship Loose )         | Tessci           | 37634                 | 1   | 138  | ENC4                    | Power               | 2" Galv. Rigid Coupling                                                               | -                 | -                   | 1   |
| 68                           | -                      | -                   | Antenna Tower 5' Base Section, ROHN R-SB25G5 (Ship Loose)                        | Tessco           | 64559                 | 1   | 139  | ENC4                    | Power               | 2" x 1-1/2" Reducing Bushing                                                          | Crousehinds       | -                   | 1   |
| 69                           | -                      | -                   | Antenna Tower 10' Mid Section, ROHN R-25G (Ship Loose)                           | Tessco           | 56866                 | 1   | 140  | ENC4                    | Power               | 2" Ring Seal Rubber Gasket                                                            | T&B               | 5267                | 1   |
| 70                           | -                      | -                   | Antenna Tower 9' Top Section, ROHN R-25AG2 (Ship Loose)                          | Tessco           | 70080                 | 1   | 141  | ENC4                    | Power               | Cord Grip, 1.28 - 1.53                                                                | Appleton          | CG-128150           | 1   |
| 71                           | -                      | -                   | 21' 1-1/4" S.S. Antenna Mast (Ship Loose)                                        | Bell Steel       | 23008                 | 1   | 142  | ENC4                    | Power               | 1-1/2" Alum. Hub                                                                      | Crousehinds       | STA-S               | 1   |

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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
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ELECTRICAL STANDARDS



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| Horsepower Related Components Equipment List |          |                                 |                                 |                                 |                                 |
|----------------------------------------------|----------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Item                                         | Tag      | 240V Supply                     |                                 | 208V Supply                     |                                 |
|                                              |          | Horsepower                      |                                 | Horsepower                      |                                 |
|                                              |          | 10                              | 15                              | 10                              | 15                              |
| Main Circuit Breaker                         | CB1      | JDL36200                        | JDL36225                        | JDL36225                        | JDL36250                        |
| Starter Circuit Breaker                      | CB4, CB5 | HDL36090SA                      | HDL36100SA                      | HDL36100SA                      | HDL36110SA                      |
| Reduced Voltage Soft Starter                 | M1, M2   | RVS-DN-58-400-115-3+M+8+9+D+U-S | RVS-DN-72-400-115-3+M+8+9+D+U-S | RVS-DN-72-400-115-3+M+8+9+D+U-S | RVS-DN-85-400-115-3+M+8+9+D+U-S |
| Surge Arrestor                               | SA       | SDLA3D1                         | SDLA3D1                         | SDLA3Y1                         | SDLA3Y1                         |
| Ground Fault Module                          | CB4, CB5 | GFM150HD                        | GFM150HD                        | GFM150HD                        | GFM150HD                        |

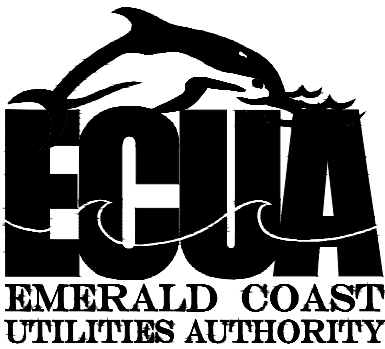
| Horsepower Related Power Conductors, CGB's and Hubs |                    |                   |                  |                   |                    |
|-----------------------------------------------------|--------------------|-------------------|------------------|-------------------|--------------------|
| Conductor Tag                                       |                    | Horsepower (240V) |                  | Horsepower (208V) |                    |
|                                                     |                    | 20                | 25               | 20                | 25                 |
| P-01, P-03 & P-04                                   | Description        | (3)#3/0           | (3)#4/0          | (3)#4/0           | (3)#250            |
|                                                     | Manufacturer       | N/A               | N/A              | N/A               | N/A                |
|                                                     | Catalog #          | N/A               | N/A              | N/A               | N/A                |
|                                                     | Length (Ft. Max)   | N/A               | N/A              | N/A               | N/A                |
|                                                     | Cable Dia (in)     | 0.584"            | 0.642"           | 0.642"            | 0.711"             |
|                                                     | Appleton Connector | (3) -CG-5075      | (3) -CG-6275     | (3) -CG-6275      | (3) -CG-75100      |
|                                                     | Connector Range    | 0.500"-0.625"     | 0.625"-0.750"    | 0.625"-0.750"     | 0.750"-0.875"      |
| P-02A                                               | Meyers Hub         | (3) 3/4" - STA-2  | (3) 3/4" - STA-2 | (3) 3/4" - STA-2  | (3) 1" - STA-3     |
|                                                     | Description        | (1)#6             | (1)#4            | (1)#4             | (1)#4              |
|                                                     | Manufacturer       | N/A               | N/A              | N/A               | N/A                |
|                                                     | Catalog #          | N/A               | N/A              | N/A               | N/A                |
|                                                     | Length (Ft. Max)   | N/A               | N/A              | N/A               | N/A                |
|                                                     | Cable Dia (in)     | 0.254"            | 0.324"           | 0.324"            | 0.324"             |
|                                                     | Appleton Connector | (1)-GC-1850       | (1)-GC-3150      | (1)-GC-3150       | (1)-GC-3150        |
| P-02B                                               | Connector Range    | 0.187"-0.312"     | 0.312"-0.437"    | 0.312"-0.437"     | 0.312"-0.437"      |
|                                                     | Hub                | (1) 1/2" - STA-1  | (1) 1/2" - STA-1 | (1) 1/2" - STA-1  | (1) 1/2" - STA-1   |
|                                                     | Description        | (1)#6             | (1)#4            | (1)#4             | (1)#4              |
|                                                     | Manufacturer       | Southwire         | Southwire        | Southwire         | Southwire          |
|                                                     | Description        | (3)#3/0           | (3)#3/0          | (3)#3/0           | (3)#3/0            |
|                                                     | Manufacturer       | N/A               | N/A              | N/A               | N/A                |
|                                                     | Catalog #          | N/A               | N/A              | N/A               | N/A                |
| P-05 & P-06                                         | Length (Ft. Max)   | N/A               | N/A              | N/A               | N/A                |
|                                                     | Cable Dia (in)     | 0.584"            | 0.584"           | 0.584"            | 0.584"             |
|                                                     | Appleton Connector | (3) -CG-5075      | (3) -CG-5075     | (3) -CG-5075      | (3) -CG-5075       |
|                                                     | Connector Range    | 0.500"-0.625"     | 0.500"-0.625"    | 0.500"-0.625"     | 0.500"-0.625"      |
|                                                     | Hub                | (3) 3/4" - STA-2  | (3) 3/4" - STA-2 | (3) 3/4" - STA-2  | (3) 3/4" - STA-2   |
|                                                     | Description        | (3)#4 W/G, TC     | (3)#4 W/G, TC    | (3)#4 W/G, TC     | (3)#2 W/G, TC      |
|                                                     | Manufacturer       | Houston Wire      | Houston Wire     | Houston Wire      | Houston Wire       |
| P-07 & P-09                                         | Catalog #          | HW 154 00404      | HW 154 00404     | HW 154 00404      | HW 154 00204       |
|                                                     | Length (Ft. Max)   | 19 FT             | 19 FT            | 19 FT             | 19 FT              |
|                                                     | Cable Dia (in)     | 0.97"             | 0.97"            | 0.97"             | 1.13"              |
|                                                     | Appleton Connector | (2) - CG-87100    | (2) - CG-87100   | (2) - CG-87100    | (2) - CG-112125    |
|                                                     | Connector Range    | 0.875"-1.000"     | 0.875"-1.000"    | 0.875"-1.000"     | 1.125"-1.250"      |
|                                                     | Hub                | (2) 1" - STA-3    | (2) 1" - STA-3   | (2) 1" - STA-3    | (2) 1-1/4" - STA-4 |
|                                                     | Description        | (3)#4             | (3)#4            | (3)#4             | (3)#2              |
| P-08 & P-10                                         | Manufacturer       | Southwire         | Southwire        | Southwire         | Southwire          |

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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM

LIFT STATION CONSTRUCTION DETAILS

ELECTRICAL STANDARDS



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| Power & Control Conductors, CGB's and Hubs |                           |                      |               |                  |                |                                      |                       |                               |                      |                    |
|--------------------------------------------|---------------------------|----------------------|---------------|------------------|----------------|--------------------------------------|-----------------------|-------------------------------|----------------------|--------------------|
| Cable Number                               | Description               | Manufacturer         | Catalog Numer | Length (Ft. Max) | Cable Diameter | Appleton Liquidtight Cable Connector | Connector Cable Range | Crouse-Hinds Myers Hub        | From Panel/Enclosure | To Panel/Enclosure |
| P-14                                       | (1) #8 AWG                | N/A                  | N/A           | AS REQ'D         | N/A            | N/A                                  | N/A                   | N/A                           | Field                | Power Panel        |
| P-15                                       | 3-1/C #12 AWG             | N/A                  | N/A           | AS REQ'D         | N/A            | N/A                                  | N/A                   | N/A                           | Power Panel          | Power Panel        |
| P-16                                       | 3-1/C #12 AWG             | N/A                  | N/A           | AS REQ'D         | N/A            | N/A                                  | N/A                   | N/A                           | Power Panel          | Power Panel        |
| C-01                                       | (16) #14 AWG, Tray Cable  | Houston Wire & Cable | HW 151 01416  | 24 FT            | 0.68"          | (2) - CG-6275                        | 0.625"-0.750"         | (2) 3/4" - STA-2              | Power Panel          | Control Panel      |
| C-02                                       | (16) #14 AWG, Tray Cable  | Houston Wire & Cable | HW 151 01416  | 22 FT            | 0.68"          | (2) - CG-6275                        | 0.625"-0.750"         | (2) 3/4" - STA-2              | Pump 1 Panel         | Control Panel      |
| C-03                                       | (16) #14 AWG, Tray Cable  | Houston Wire & Cable | HW 151 01416  | 19 FT            | 0.68"          | (2) - CG-6275                        | 0.625"-0.750"         | (2) 3/4" - STA-2              | Pump 2 Panel         | Control Panel      |
| C-04                                       | 1 Pair #16 SH, Tray Cable | Houston Wire & Cable | HW 120 01601  | 22 FT            | 0.33"          | (2) - CG-2575                        | 0.250"-0.375"         | (2) 3/4" - STA-2              | Pump 1 Panel         | Control Panel      |
| C-05                                       | 1 Pair #16 SH, Tray Cable | Houston Wire & Cable | HW 120 01601  | 22 FT            | 0.33"          | (2) - CG-2575                        | 0.250"-0.375"         | (2) 3/4" - STA-2              | Pump 2 Panel         | Control Panel      |
| PUMP 1-PWR                                 | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 1 Panel       |
| PUMP 1-MTP                                 | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 1 Panel       |
| PUMP 1-SF                                  | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 1 Panel       |
| PUMP 2-PWR                                 | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 2 Panel       |
| PUMP 2-MTP                                 | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 2 Panel       |
| PUMP 2-SF                                  | Per Mfg Specs             | N/A                  | N/A           | N/A              | N/A            | CG Series based on Mfg Specs         | N/A                   | STA Series based on Mfg Specs | Field                | Pump 2 Panel       |
| Float Switch 1                             | Float Switch Cable        | BY OTHERS            | N/A           | N/A              | 0.56"          | (1) - CG-5050                        | 0.500"-0.625"         | (1) 1/2" - STA-1              | Field                | Control Panel      |
| Float Switch 2                             | Float Switch Cable        | BY OTHERS            | N/A           | N/A              | 0.56"          | (1) - CG-5050                        | 0.500"-0.625"         | (1) 1/2" - STA-1              | Field                | Control Panel      |
| Pressure Xducer                            | Pressure Transducer Cable | BY OTHERS            | N/A           | N/A              | 0.35"          | (1) - G-3150                         | 0.312"-0.437"         | (1) 1/2" - STA-1              | Field                | Control Panel      |
| Antenna COAX                               | Coaxial Cable             | BY OTHERS            | N/A           | N/A              | 0.408"         | (1) - CG-3750                        | 0.375"-0.500"         | (1) 1/2" - STA-1              | Field                | Control Panel      |
| Comm-1                                     | (37) #18 AWG, Tray Cable  | Houston Wire & Cable | HW15001837    | 20 FT            | 0.74"          | (1) - CG-6275                        | 0.625"-0.750"         | (1) 3/4" - STA-2              | Control Panel        | Pump 1 Panel       |
| Comm-2                                     | (37) #18                  | Houston Wire & Cable | HW15001837    | 20 FT            | 0.74"          | (1) - CG-6275                        | 0.625"-0.750"         | (1) 3/4" - STA-2              | Control Panel        | Pump 2 Panel       |

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE E.C.U.A. STANDARD SPECIFICATIONS

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## SERVICING CT & TESTING AMMETERS INSTRUCTIONS

### WARNING

NEVER LEAVE THE CT CIRCUIT OPEN ALWAYS SHORT THE CIRCUIT. WHEN MAINTENANCE IS REQUIRED ENSURE TO FOLLOW THE INSTRUCTIONS BELOW. FAILURE TO DO SO MAY RESULT IN HIGH VOLTAGE SURGE THAT COULD INJURE PERSONAL AND DAMAGE EQUIPMENT.

### THE CALIBRATION & DISCONNECT PROCESS

- Loosen the screws on the SB-ME 2-8 and move the shorting bar from position A to B to short the outputs of the CT.
- Secure the shorting bar by tightening the screws. The CT is now neutralized and the circuit is "safe" to open.
  - For circuits that include an ME knife-disconnect terminal block, the knife disconnects can now be safely opened.
- The test signal can now be injected into the transducer/meter side of the circuit by inserting the signal probes into the test adapters or connecting the signal to the disconnected wiring of the measurement circuit.

To return the unit to normal operation, perform the above steps in reverse order:

- Disconnect the test signal/probes from the transducer wires or remove probes from the test plugs.
  - For circuits that include the ME, the knife disconnect must now be CLOSED.
- Open the switching bridge and return to normal operation.
- Loosen the screws and move the shorting bar from position B to A and snap into place.
- Tighten the screws to prevent movement and inadvertent shorting of the CT.

The CT measurement circuit is now functional

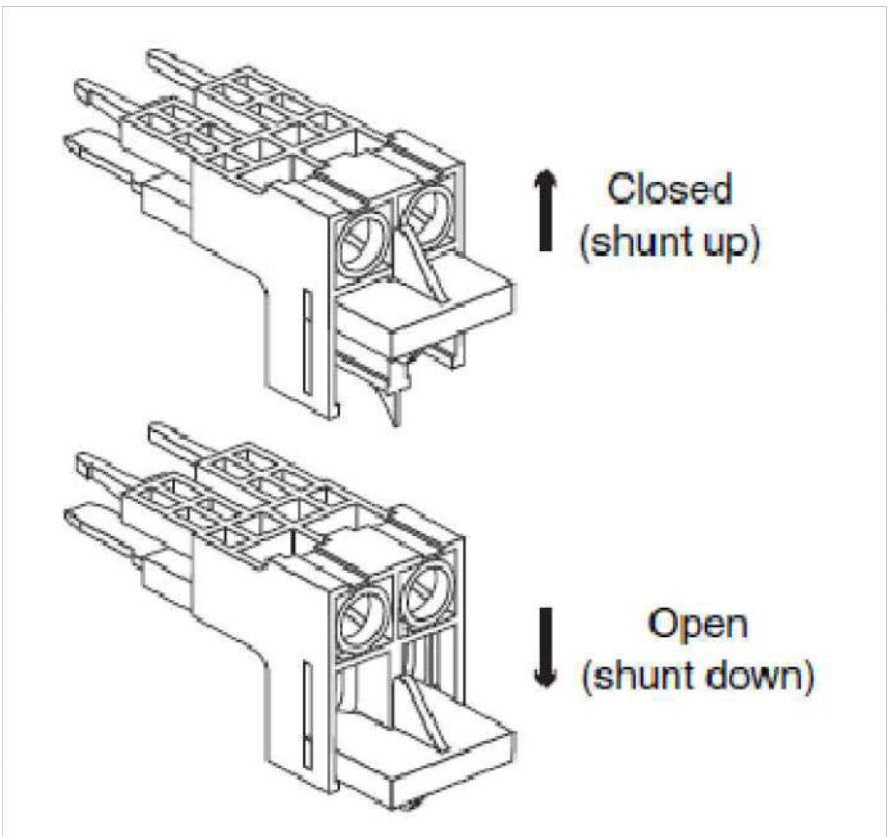


FIGURE 1: SB-ME 2-8 switching bridge

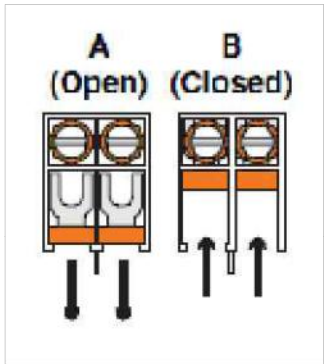
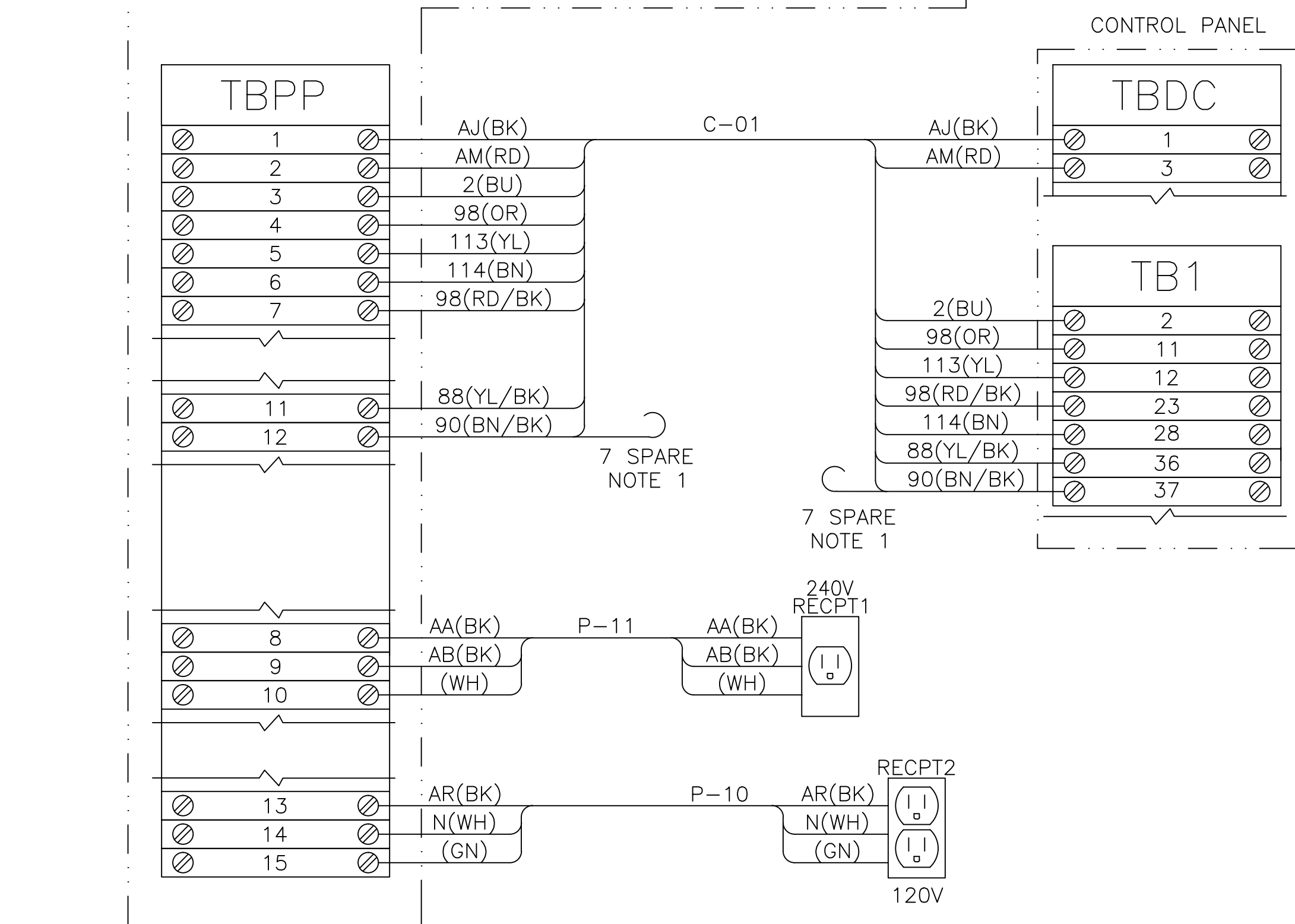
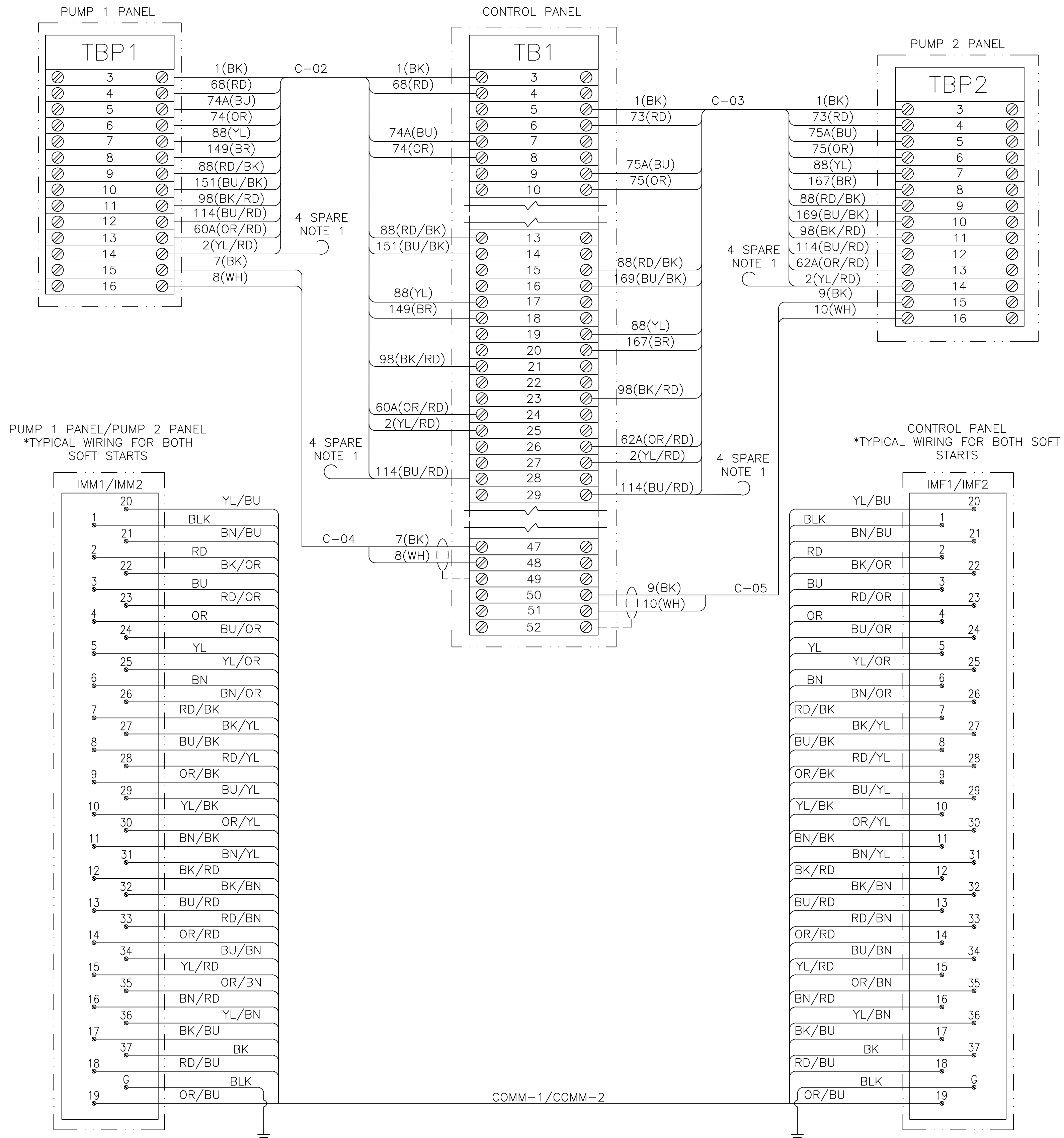


FIGURE 2: SB-ME 2-8 switching bridge

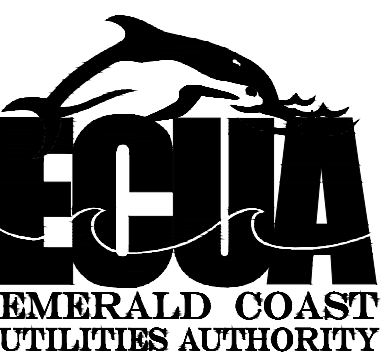


- 1) ALL SPARE WIRE WILL BE CLEARLY LABELED WITH THE CABLE NUMBER & A SPARE DESIGNATION ON INDIVIDUAL WIRES. THESE SPARES WILL BE LONG ENOUGH TO REACH ANY POINT IN THE PANEL.
- 2) SPARE CONDUCTORS SHOULD BE TRIMMED AND HEAT SHRINK SHOULD BE USED TO SECURE THE SPARE CONDUCTORS IN THE CABLE.
- 3) THE INNER CONNECTING CONDUCTORS BETWEEN THE PANELS ARE CODED AS FOLLOWS: THE FIRST GROUP OF CHARACTER IS THE WIRE NUMBER AND THE SECOND GROUP IS THE COLOR (I.E. 1(BK) SIGNIFIES THAT THE WIRE NUMBER IS 1 AND THE COLOR IS BLACK). WIRE COLOR CODE AS FOLLOWS: BK-BLACK, RD-RED, BU-BLUE, OR-ORANGE, YL-YELLOW, BN-BROWN. FOR COLORS THAT ARE DENOTED AS XX/YY, XX IS THE BASE COLOR AND YY IS THE SPIRAL STRIPE (I.E. RD/BK IS A RED WIRE WITH A BLACK SPIRAL STRIPE).
- 4) SEE SHEETS 11 & 12 FOR PANEL TO PANEL INNER CONNECTING CONDUCTOR AND CABLE DETAILS.



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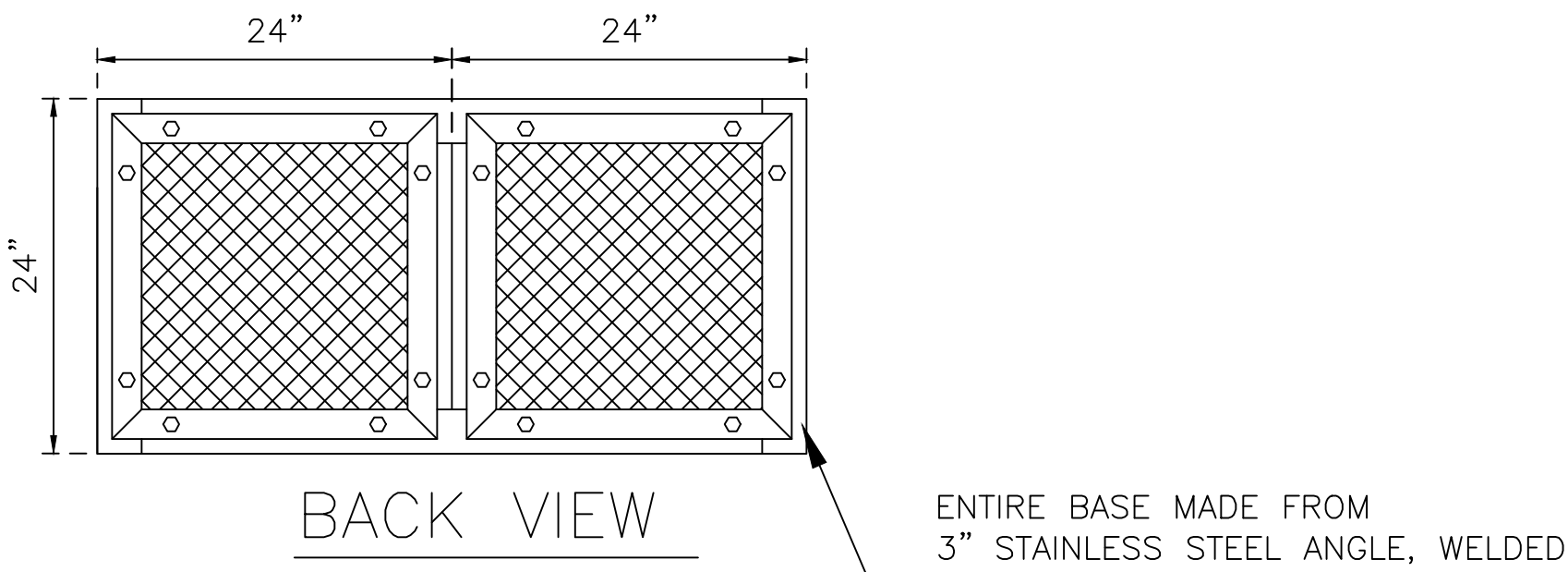
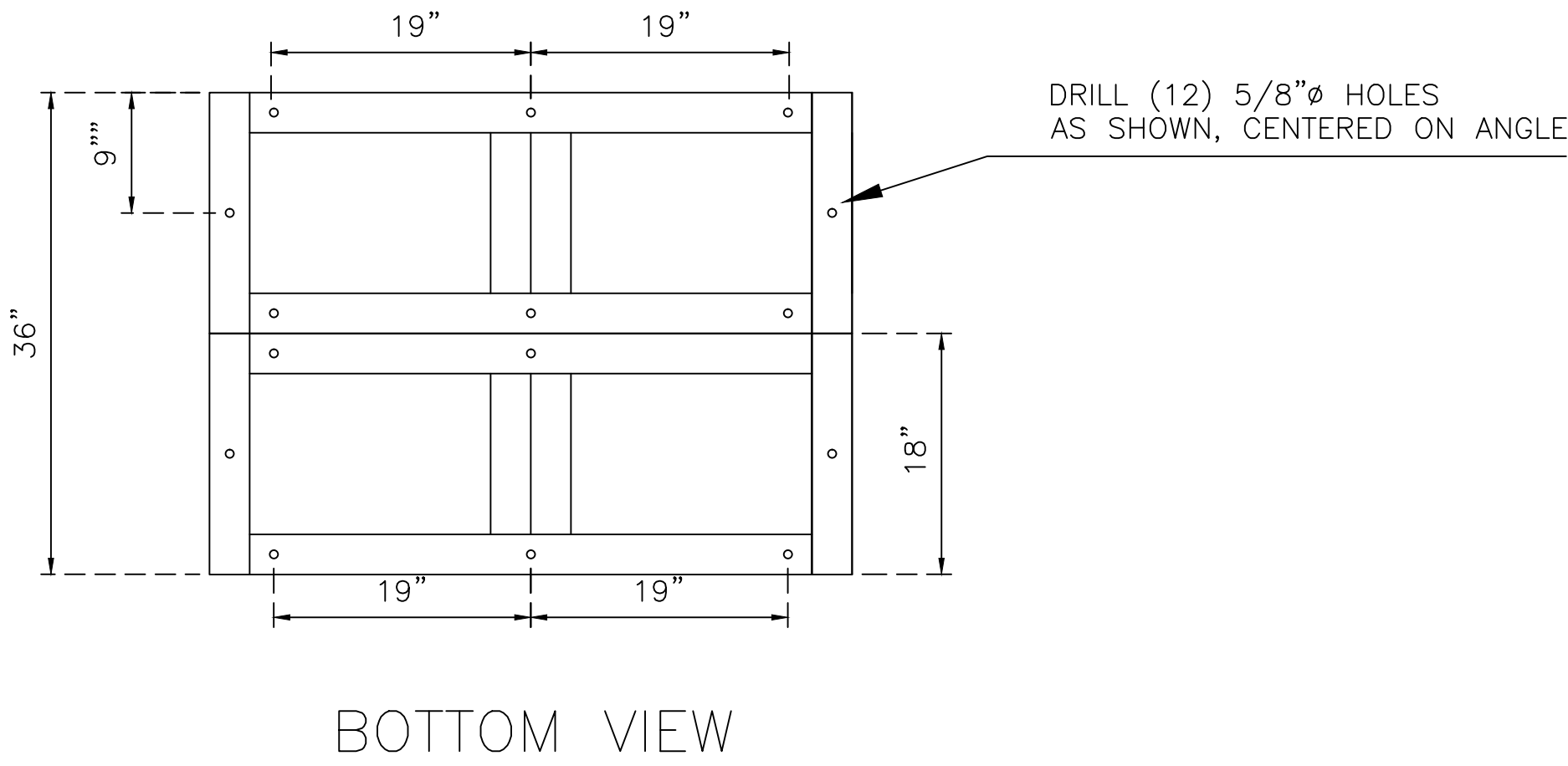
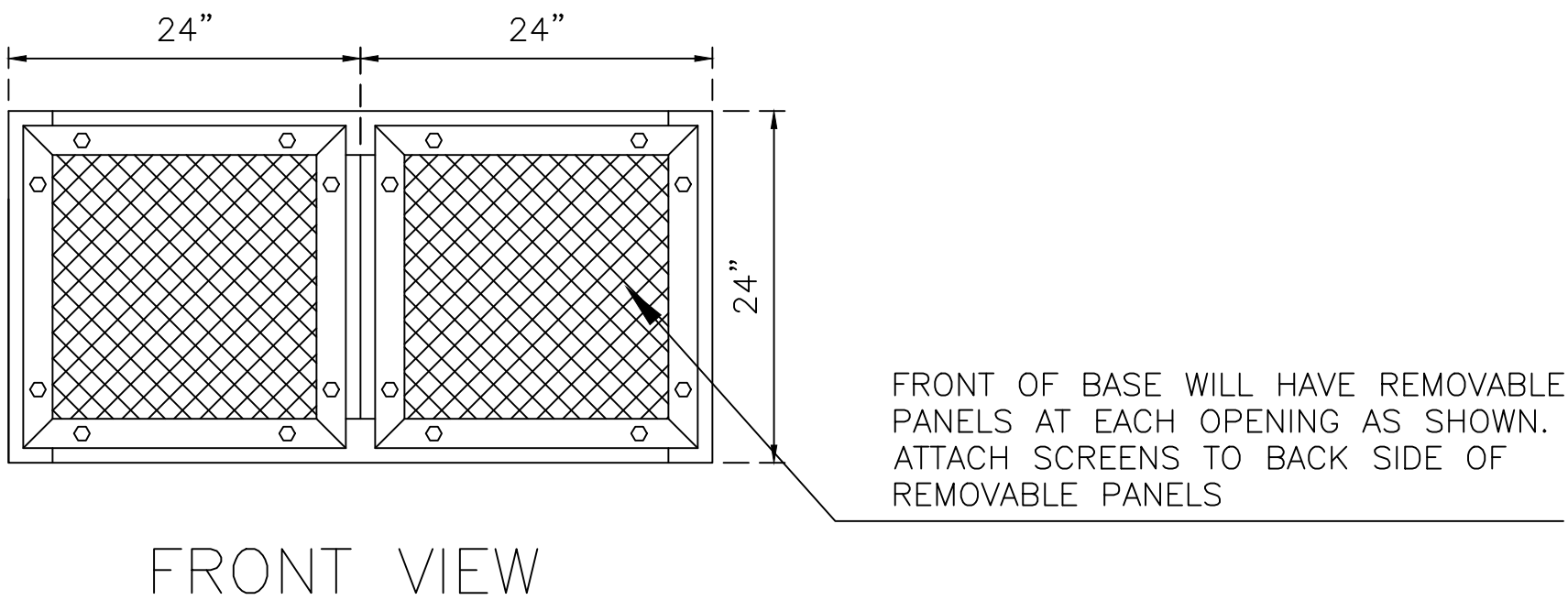
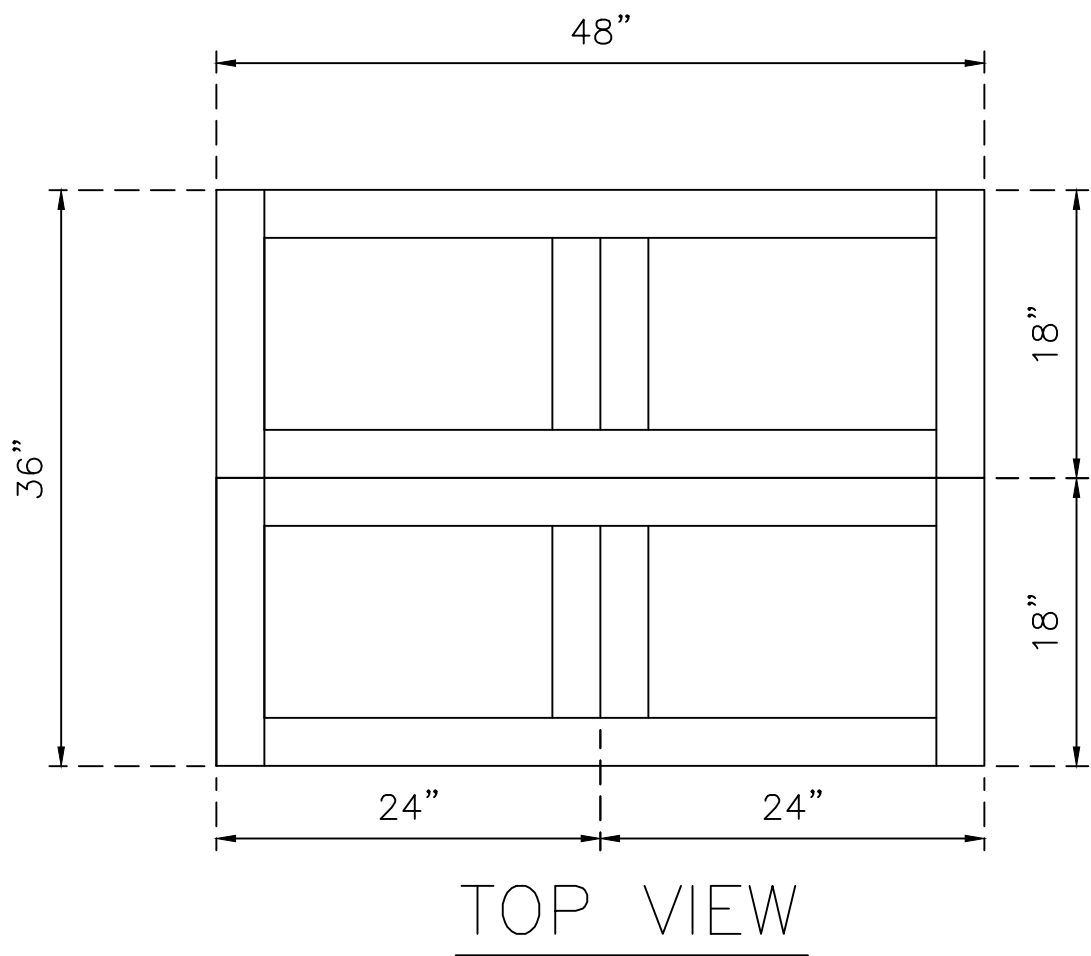
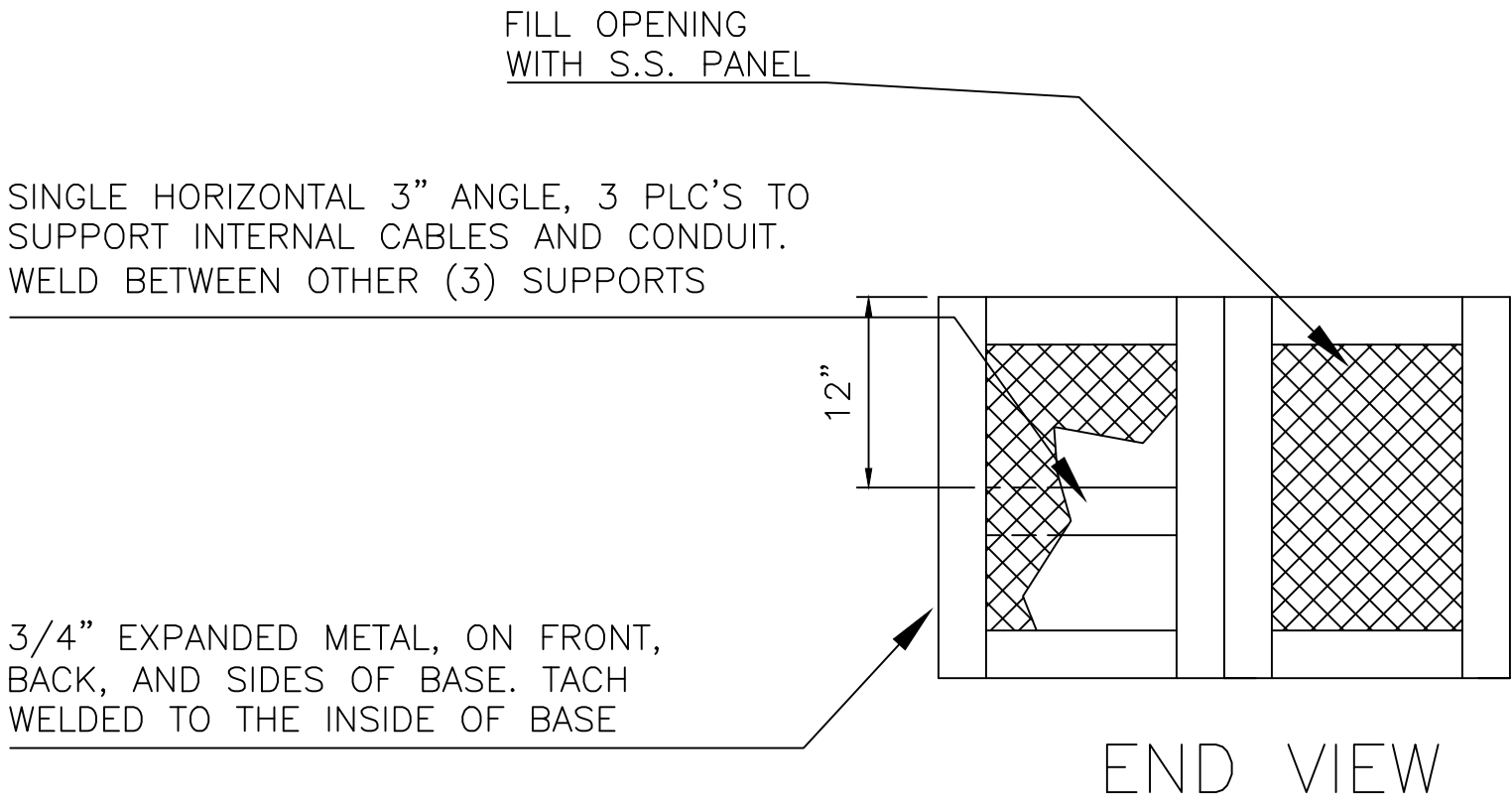
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ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE E.C.U.A. STANDARD SPECIFICATIONS

- NOTES:
1. TOP AND BOTTOM OF BASE TO BE LEFT OPEN.
  2. DRILL TOP OF BASE TO ATTACH ENCLOSURES AS REQUIRED.
  3. DRILL BOTTOM OF BASE TO ATTACH TO SLAB AS REQUIRED.

ATTENTION

THIS LAYOUT IS ONE OF TWO (2) POSSIBLE CHOICES – SEE SHEET 14 FOR THE OTHER OPTION. IF THIS LAYOUT OPTION IS SELECTED, SEE SHEET 7A FOR ASSOCIATED PANEL LAYOUT DETAILS.

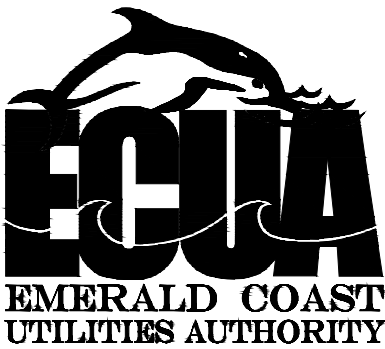


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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM

LIFT STATION CONSTRUCTION DETAILS

ELECTRICAL STANDARDS



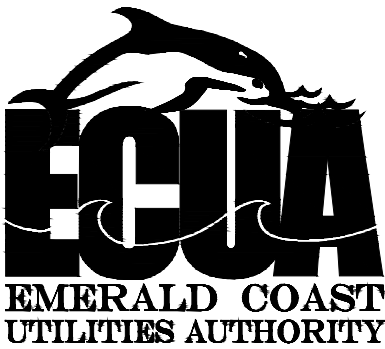
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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS



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| Power Panel Fuse Schedule |            |         |      |                           |
|---------------------------|------------|---------|------|---------------------------|
| Fuse                      | Type       | Voltage | Amps | Description               |
| F1                        | KTK-R-1    | 600     | 1A   | PM1 Phase Monitor A Phase |
| F2                        | KTK-R-1    | 600     | 1A   | PM1 Phase Monitor B Phase |
| F3                        | KTK-R-1    | 600     | 1A   | PM1 Phase Monitor C Phase |
| F6                        | AGC-3      | 250     | 3A   | Power Supply 1 Primary    |
| F7                        | AGC-3      | 250     | 3A   | Power Supply 2 Primary    |
| F38                       | KTK-R-1    | 600     | 1A   | PM2 Power Monitor A Phase |
| F39                       | KTK-R-1    | 600     | 1A   | PM2 Power Monitor B Phase |
| F40                       | KTK-R-1    | 600     | 1A   | PM2 Power Monitor C Phase |
| F41                       | KTK-R-6/10 | 600     | .6A  | Power Monitor             |

| Pump 1 Panel Fuse Schedule |       |         |      |                      |
|----------------------------|-------|---------|------|----------------------|
| Fuse                       | Type  | Voltage | Amps | Description          |
| F4                         | AGC-6 | 250     | 6A   | Pump 1 Control Power |

| Pump 2 Panel Fuse Schedule |       |         |      |                      |
|----------------------------|-------|---------|------|----------------------|
| Fuse                       | Type  | Voltage | Amps | Description          |
| F5                         | AGC-6 | 250     | 6A   | Pump 1 Control Power |

| Nameplate Data   |      |     |      |     |
|------------------|------|-----|------|-----|
|                  | 240V |     | 208V |     |
| Total Load (FLA) | 138  | 166 | 166  | 192 |
| Motor Hp         | 20   | 25  | 20   | 25  |
| Motor FLA        | 54   | 68  | 62   | 78  |

| Torque Rating Table                 |                  |                  |
|-------------------------------------|------------------|------------------|
| Component                           | Horsepower       |                  |
|                                     | 20               | 25               |
| Incoming Distribution Block (PDB)   | 275lb-in/31.0N-m | 275lb-in/31.0N-m |
| Incoming Neutral Block              | 40lb-in/4.5N-m   | 40lb-in/4.5N-m   |
| Main Ground Block                   | 35lb-in/3.9N-m   | 35lb-in/3.9N-m   |
| Motor Distribution Block (PDB2 & 3) | 120lb-in/13.5N-m | 120lb-in/13.5N-m |
| Motor Ground Block                  | 45lb-in/5.1N-m   | 45lb-in/5.1N-m   |

| Control Panel Fuse Schedule |           |         |        |                              |
|-----------------------------|-----------|---------|--------|------------------------------|
| Fuse                        | Type      | Voltage | Amps   | Description                  |
| F8                          | AGC-10    | 250     | 10A    | Power Supply 1 Secondary     |
| F9                          | AGC-10    | 250     | 10A    | Power Supply 2 Secondary     |
| F10                         | AGC-10    | 250     | 10A    | Control Power                |
| F11                         | AGC-10    | 250     | 10A    | Batteries                    |
| F12                         | AGC-2     | 250     | 2A     | Radio Power Supply Primary   |
| F13                         | AGC-2     | 250     | 2A     | Radio Power Supply Secondary |
| F14                         | AGC-1/4   | 250     | 1/4A   | Pump 1 Moter Thermal         |
| F15                         | AGC-1/4   | 250     | 1/4A   | Pump 2 Moter Thermal         |
| F16                         | AGC-1/10  | 250     | 1/10A  | Operator Interface           |
| F17                         | AGC-1     | 250     | 1A     | Digital Inputs 0.0-1.4       |
| F18                         | AGC-1     | 250     | 1A     | Digital Inputs 1.5-2.7       |
| F19                         | AGC-2     | 250     | 2A     | Digital Outputs 0.0-0.7      |
| F20                         | AGC-2     | 250     | 2A     | Digital Outputs 1.0-1.7      |
| F21                         | AGC-1-1/2 | 250     | 1-1/2A | PLC Power                    |
| F22                         | AGC-3/4   | 250     | 3/4A   | Process Transmitter Supply   |
| F23                         | AGC-1/10  | 250     | 1/10A  | Analog Inputs                |
| F24                         | AGC-1/10  | 250     | 1/10A  | Analog Outputs               |
| F25                         | GMA-1/4   | 250     | 1/4A   | Analog Input 2               |
| F26                         | GMA-1/4   | 250     | 1/4A   | Analog Input 3               |
| F27                         | GMA-1/4   | 250     | 1/4A   | Analog Input 4               |

| HMI BUTTON LEGEND |                              |
|-------------------|------------------------------|
| F1                | FAULT RESET/ENABLE INTRUSION |
| SHIFT+F1          | DISABLE INTRUSION            |
| F2                | ALTERNATE PUMP ASSIGNMENTS   |
| F3                | RESET PUMP 1 RUNTIME         |
| SHIFT+F3          | RESET PUMP 2 RUNTIME         |
| F4                | ALARMS SCREEN                |
| F5                | OVERVIEW SCREEN              |
| F6                | PUMP 1 SCREEN                |
| F7                | PUMP 2 SCREEN                |
| F8                | SETPOINTS SCREEN             |

CONTROL PANEL ISR INFORMATION TAGS

THIS AREA IN BLUE IS FOR INTRINSICALLY SAFE CIRCUITS AND DEVICES ONLY. THIS AREA INCLUDES THE AIR SPACE DIRECTLY IN FRONT OF THE BLUE AREA BETWEEN THE BACKPANEL AND THE ENCLOSURE WALLS AND DOOR INCLUDING THE BOTTOM OF THE ENCLOSURE. ONLY INTRINSICALLY SAFE DEVICES AND WIRING ARE ALLOWED IN THIS AREA. DO NOT ROUTE NON-INTRINSICALLY SAFE WIRING THROUGH THIS AREA OF ENCLOSURE.

WARNING

SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY

CONTROL PANEL EXTERIOR TAG INFORMATION

WARNING

TO PREVENT IGNITION OF FLAMMABLE OR COMBUSTIBLE ATMOSPHERES DISCONNECT POWER BEFORE SERVICING

PROVIDES INTRINSICALLY SAFE CIRCUIT EXTENSIONS FOR USE IN CLASS 1, GROUPS A, B, C, AND D WHEN CONNECTED PER REFERENCE DRAWINGS ON MAIN NAMEPLATE LABEL

CONTROL PANEL DEADFRONT TAG INFORMATION

SECURELY FASTEN ALL INNER DOOR LATCHES BEFORE CLOSING OUTER DOOR. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD CAUSE THE OUTER DOOR TO JAM WHEN RE-OPENED



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MNR 9040234 / 2010-11-03

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CONTROL / INSTALLATION DRAWING  
MACX MCR-EX Series

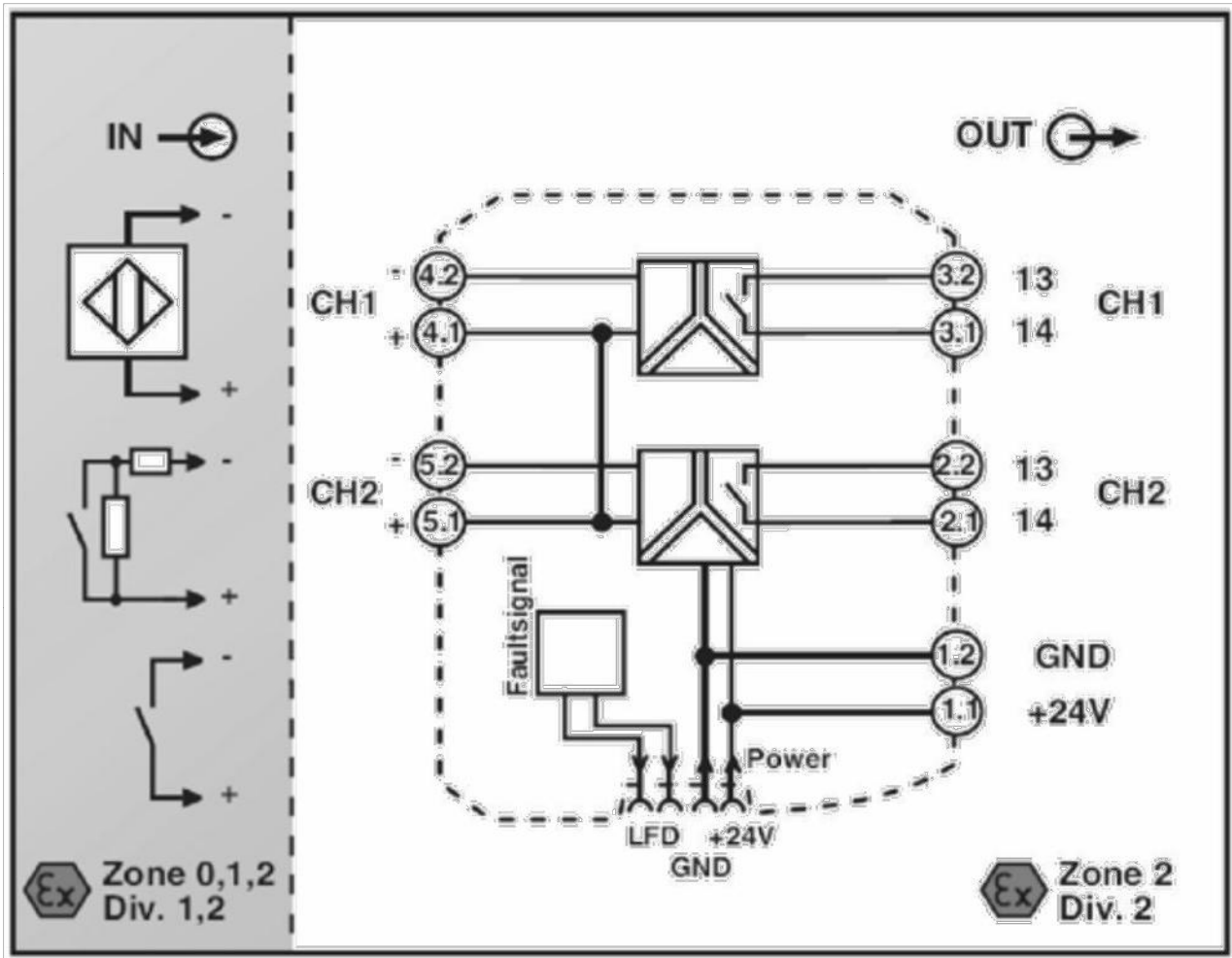
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Art.Nr.    Model Number  
  
2865476    MACX MCR-EX-SL-2NAM-RO  
~~2924087    MACX MCR-EX-SL-2NAM-RO-SP~~

WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.

WARNING – EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

WARNING – Exposure to some chemicals may degrade the sealing properties of materials used in the sealed relays.



**HAZARDOUS AREA**  
Class I, Division 1, Groups A,B,C,D  
Class II, Division 1, Groups E,F,G  
Class III, Division 1  
Class I, Zone 0,1,2, Groups IIC,IIB,IIA

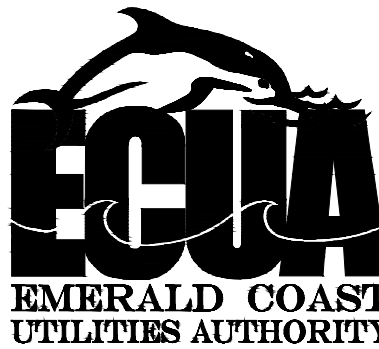
**NON HAZARDOUS AREA**  
or Class I, Division 2, Groups A,B,C,D  
or Class I, Zone 2, Groups IIC,IIB,IIA

- I. The Entity Concept allows interconnection of intrinsically safe apparatus with associated apparatus not specifically examined in combination as a system. Selected Intrinsically Safe Equipment must be third party listed as intrinsically safe for the application and have intrinsically safe entity parameters conforming with table 1 below:
- Tabelle 1:
- | I.S. Equipment                     |   | Associated Apparatus                                   |
|------------------------------------|---|--------------------------------------------------------|
| V max (or U <sub>i</sub> )         | ≥ | V <sub>oc</sub> or V <sub>t</sub> (or U <sub>o</sub> ) |
| I max (or I <sub>i</sub> )         | ≥ | I <sub>sc</sub> or I <sub>t</sub> (or I <sub>o</sub> ) |
| P max (or P <sub>i</sub> )         | ≥ | P <sub>o</sub>                                         |
| C <sub>i</sub> + C <sub>able</sub> | ≤ | C <sub>a</sub> (or C <sub>o</sub> )                    |
| L <sub>i</sub> + L <sub>able</sub> | ≤ | L <sub>a</sub> (or L <sub>o</sub> )                    |
- II. Capacitance and inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown under I. Where the cable capacitance and inductance per foot are not known, the following values shall be used: C<sub>able</sub> = 60 pF / ft., L<sub>able</sub> = 0.2 µH / ft.
- III. The output current of this associated apparatus is limited by a resistor such that the output voltage-current plot is a straight line drawn between open-circuit voltage and short-circuit current.
- IV. This associated apparatus has not been evaluated for use in combination with another associated apparatus.
- V. This associated apparatus may also be connected to simple apparatus as defined in Article 504.2 and installed and temperature classified in accordance with Article 504.10(B) of the National Electrical Code (ANSI/NFPA70), or other local codes applicable.
- VI. Associated apparatus must be installed in an enclosure (which meets the requirements of ANSI/ISA S82) suitable for the application in accordance with the National Electrical Code (ANSI/NFPA 70) for installation in the United States, the Canadian Electrical Code for installation in Canada, or other local codes, as applicable.
- VII. When using as non-incendive device for Class I, Division 2 or Class I, Zone 2 do not snap equipment onto or off the T-connector, or connect and disconnect non-intrinsically safe-lines unless power has been removed or the area is known to be non hazardous.
- VIII. Intrinsically safe circuits must be wired separately in according with Article 504.20 of the National Electrical Code (ANSI/NFPA 70) for installation in the United States, the Canadian Electrical Code Part 1, Appendix F for installation in Canada, or other local codes, as applicable.
- IX. When multiple circuits extend from the same piece of associated apparatus, they must be installed in separate cables or in one cable having suitable insulation. Refer to Article 504.30(B) of the National Electrical Code (ANSI/NFPA 70) and Instrument Society of America Recommended Practice ISA RP12.6 for installing intrinsically safe equipment.
- X. When using as non-incendive device for Class I, Division 2 or Class I, Zone 2 with exposure to some chemicals a periodically inspect of the relays for any degradation of properties and a replacement if degradation is found is recommended.

|         |                           | output circuit - hazardous zone |                 |                |         |         |            | Group A, B or IIC |               | Group C or IIB |               | Group D or IIA |               | input circuit - hazardous zone |                |                 |         |         |
|---------|---------------------------|---------------------------------|-----------------|----------------|---------|---------|------------|-------------------|---------------|----------------|---------------|----------------|---------------|--------------------------------|----------------|-----------------|---------|---------|
| Art.Nr. | Model Number              | Terminal                        | Voc or Uo / Vdc | Isc or Io / mA | Po / mW | Ci / nF | Li / mH    | Ca or Co / nF     | La or Lo / mH | Ca or Co / nF  | La or Lo / mH | Ca or Co / nF  | La or Lo / mH | Terminal                       | Vmax or Ui / V | Imax or Ii / mA | Ci / nF | Li / mH |
| 2865476 | MACX MCR-EX-SL-2NAM-RO    | 4.1-4.2                         | 9,6             | 10             | 25      | 1,1     | negligible | 510               | 100           | 2700           | 100           | -              | -             | -                              | -              | -               | -       | -       |
|         |                           | 840                             |                 |                |         |         |            | 5                 | 4400          | 5              |               |                |               |                                |                |                 |         |         |
|         |                           | 1200                            |                 |                |         |         |            | 1                 | 6300          | 1              |               |                |               |                                |                |                 |         |         |
|         |                           | 3600                            |                 |                |         |         |            | 0,01              | 26000         | 0,01           |               |                |               |                                |                |                 |         |         |
| 2924087 | MACX MCR-EX-SL-2NAM-RO-SP | 4.1-4.2                         | 9,6             | 10             | 25      | 1,1     | negligible | 510               | 100           | 2700           | 100           | -              | -             | -                              | -              | -               | -       | -       |
|         |                           | 840                             |                 |                |         |         |            | 5                 | 4400          | 5              |               |                |               |                                |                |                 |         |         |
|         |                           | 1200                            |                 |                |         |         |            | 1                 | 6300          | 1              |               |                |               |                                |                |                 |         |         |
|         |                           | 3600                            |                 |                |         |         |            | 0,01              | 26000         | 0,01           |               |                |               |                                |                |                 |         |         |

| Art.Nr. | Model Number              | power supply circuit |             |                                             |                     | Max. Surrounding Air Temperature Rating: 60°C | signal circuit - safe zone      |                   |        | interface circuit |        |
|---------|---------------------------|----------------------|-------------|---------------------------------------------|---------------------|-----------------------------------------------|---------------------------------|-------------------|--------|-------------------|--------|
|         |                           | Terminal             | T-Connector | U <sub>n</sub> = 24 V - 20% +25%<br>U range | U <sub>m</sub>      |                                               | Ambient Temperature Range: Tamb | Terminal          | output | input             | socket |
| 2865476 | MACX MCR-EX-SL-2NAM-RO    | 1.1-1.2              | yes         | 19,2 ... 30 V DC                            | 253 V AC / 125 V DC | -20...+60°C                                   |                                 | 3.1-3.2 + 2.1-2.2 | X      | -                 | -      |
| 2924087 | MACX MCR-EX-SL-2NAM-RO-SP | 1.1-1.2              | yes         | 19,2 ... 30 V DC                            | 253 V AC / 125 V DC | -20...+60°C                                   |                                 | 3.1-3.2 + 2.1-2.2 | X      | -                 | -      |

IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM  
LIFT STATION CONSTRUCTION DETAILS  
ELECTRICAL STANDARDS



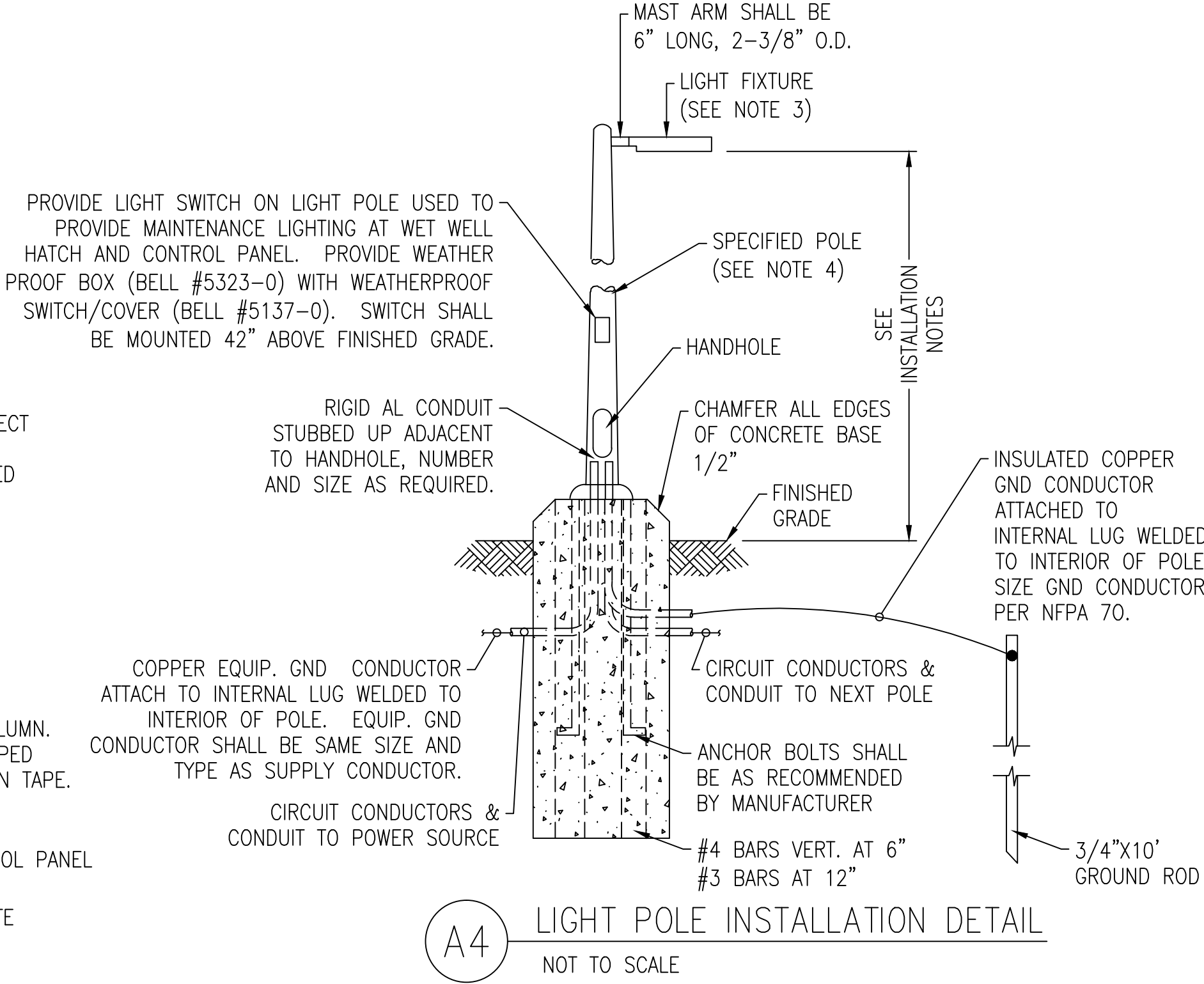
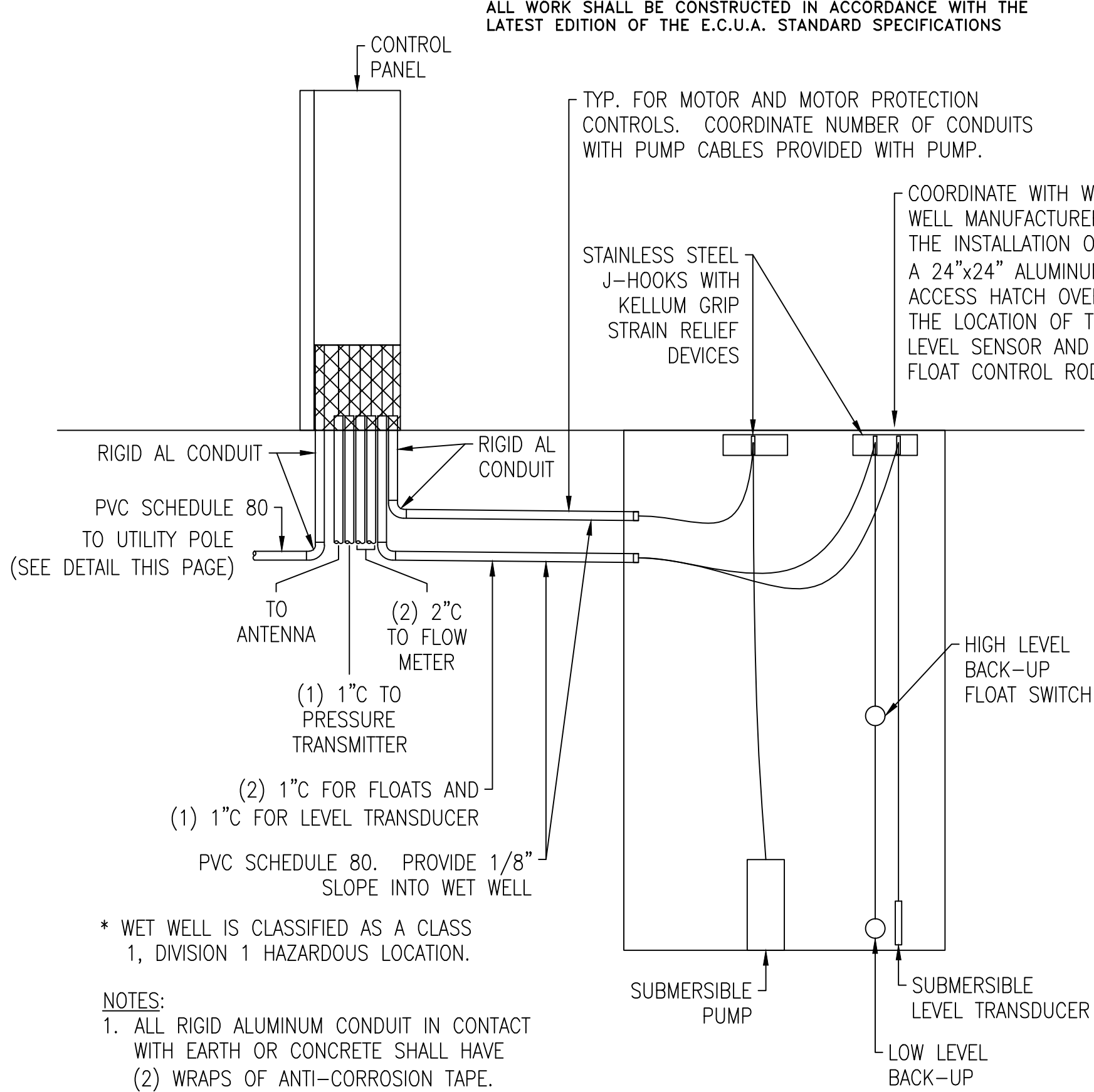
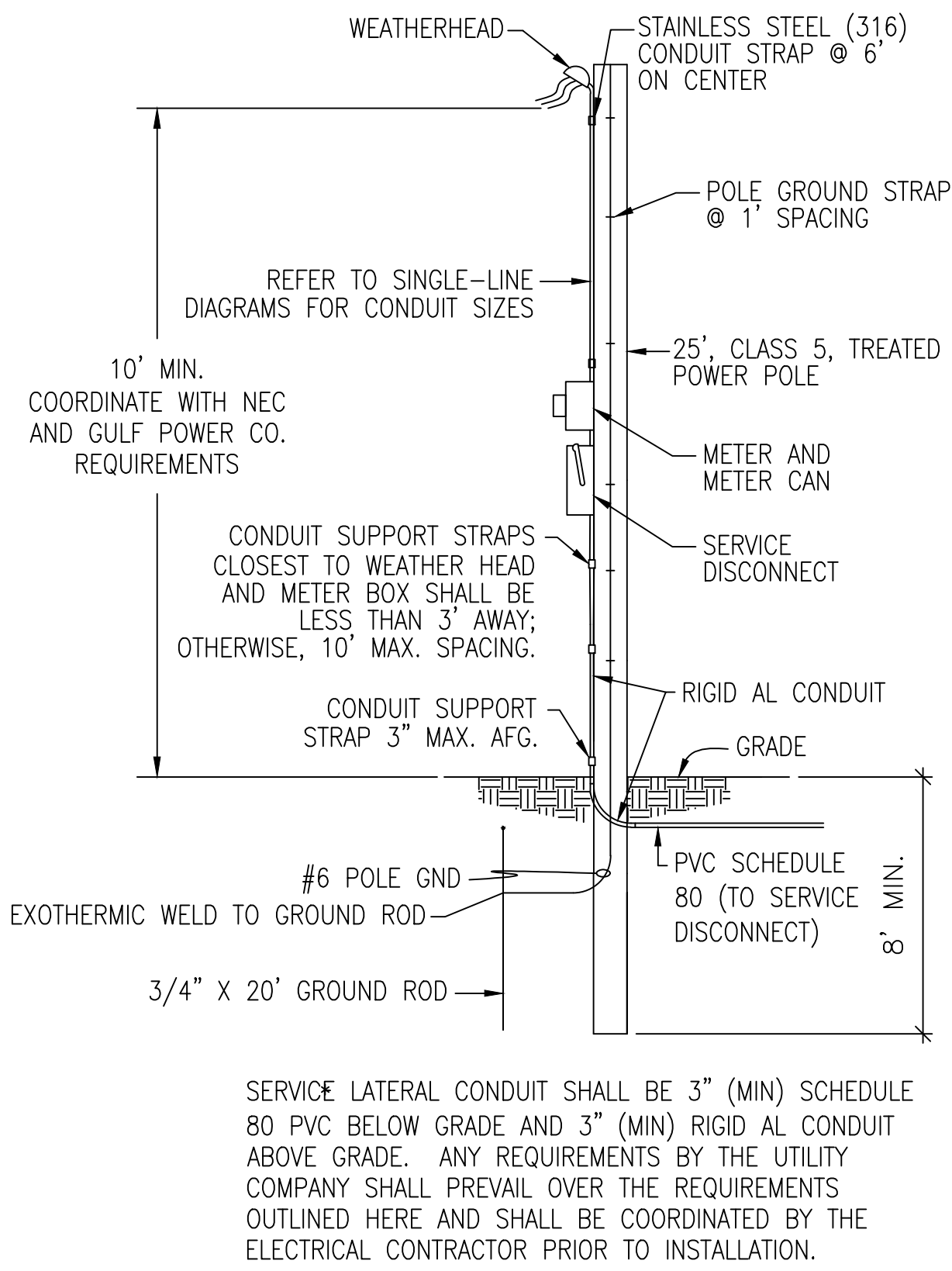
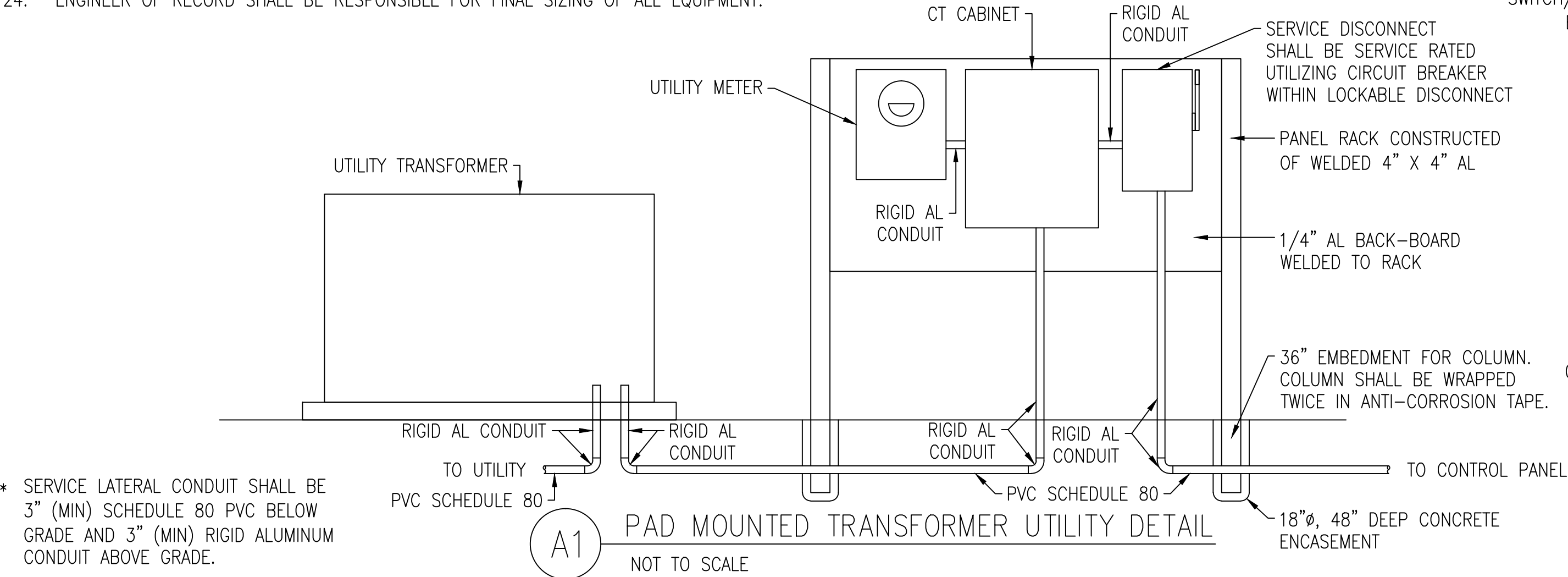
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GENERAL ELECTRICAL NOTES

NEW WORK:

1. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION (UNLESS NOTED OTHERWISE) OF THE FOLLOWING CODES AND STANDARDS:  
1.1. NATIONAL ELECTRICAL CODE (NFPA 70).  
1.2. STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES (NFPA 820).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING ALL PROJECT SPECIFICATIONS AND WILL BE RESPONSIBLE FOR MEETING ALL REQUIREMENTS OUTLINED IN THE SPECIFICATIONS.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO ROUGH-IN AND INSTALLATION.
4. WORKING SPACE FOR ALL ELECTRICAL AND CONTROL EQUIPMENT OPERATING AT 600V VOLTS OR LESS TO GROUND AND LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED SHALL COMPLY WITH NEC, ARTICLE 110.26.
5. THE ELECTRICAL DESIGN PROVIDES A NUMBER OF BRANCH CIRCUITS, AMPACITY AND OVERCURRENT PROTECTION FOR OTHER DIVISIONS DESIGN BASIS EQUIPMENT CONFORMING TO MANUFACTURER'S SPECIFICATIONS AVAILABLE AT TIME OF DESIGN. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT LOADS PRIOR TO ROUGH-IN. IF REQUIREMENTS OF EQUIPMENT ACTUALLY PROVIDED UNDER CONTRACT FOR CONSTRUCTION ARE DIFFERENT, CONTRACTOR SHALL MAKE ALL CHANGES NECESSARY WITHOUT INCREASE IN THE CONTRACT AMOUNT. SUCH CHANGES SHALL BE BASED UPON REQUIREMENTS, NAMEPLATE VALUES AND CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT, AND MAY INCLUDE, BUT ARE NOT LIMITED TO: SIZE OF CONDUCTORS, SIZE OF CONDUIT, QUANTITY OF CONDUCTORS AND CONDUITS, TYPE AND SIZE OF CIRCUIT BREAKER OR DISCONNECT, OVERLOADS, FULL-VOLTAGE STARTERS, REDUCED VOLTAGE SOFT STARTERS, VARIABLE FREQUENCY DRIVES, AND FUSE PROTECTION.
6. THE ELECTRICAL CONTRACTOR IS REQUIRED TO COORDINATE, PROVIDE, AND INSTALL A FULLY OPERATIONAL AND CODE COMPLIANT ELECTRICAL SYSTEM. THIS MAY INCLUDE THE ADDITION OF ELECTRICAL ITEMS NOT SHOWN ON THE ELECTRICAL PLANS, BUT REQUIRED FOR SYSTEM OPERATION.
7. CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL SERVICE WITH ELECTRICAL UTILITY COMPANY PROVIDING ELECTRICAL SERVICE TO FACILITY. CONTRACTOR SHALL PAY ALL FEES ASSESSED BY ELECTRICAL UTILITY COMPANY TO PROVIDE ELECTRICAL SERVICE TO FACILITY.
8. CONTRACTOR SHALL EXCAVATE AND CONDUCT DEMOLITION SO AS TO AVOID DAMAGE TO EXISTING UTILITIES AND OTHER UNDERGROUND OR CONCEALED ITEMS. IF EXISTING OR NEW ITEMS ARE DAMAGED, THE CONTRACTOR SHALL NOTIFY THE OWNER AT ONCE OF ALL DAMAGE AND SHALL REPAIR (OR REPLACE IF NECESSARY) TO THE ORIGINAL CONDITION TO THE SATISFACTION OF OWNER AND ENGINEER AT NO CHARGE IN THE CONTRACT AMOUNT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DETAILED ELECTRICAL AND CONTROL EQUIPMENT LAYOUT DRAWINGS TO THE ENGINEER AND OWNER FOR APPROVAL PRIOR TO INSTALLATION.
10. ALL CONDUITS NOT LOCATED UNDER SLAB SHALL HAVE A MINIMUM BURIAL DEPTH OF 42", UNLESS NOTED OTHERWISE.
11. CONDUITS SHALL BE BURIED 42" (MINIMUM) BELOW GRADE WITH MARKER TAPE 6" ABOVE TOP OF CONDUIT, UNLESS NOTED OTHERWISE.
12. MINIMUM SIZE CONDUIT SHALL BE 1" (UNLESS NOTED OTHERWISE).
13. CONDUIT ROUTINGS AND DEVICE/EQUIPMENT LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AND LOCATE AS REQUIRED.
14. CONTRACTOR SHALL PROVIDE PULL BOXES IN POWER CIRCUIT CONDUIT AS REQUIRED TO LIMIT THE NUMBER OF BENDS TO A MAXIMUM OF 270° OR THREE 90° BENDS.
15. ALL WIRE SHALL BE COPPER.
16. ALL ELECTRICAL CIRCUITS SHALL INCLUDE A GREEN GROUNDING CONDUCTOR SIZED PER NEC.
17. CONDUCTORS SHALL BE TERMINATED ON TERMINAL BLOCKS.
18. THE CONTRACTOR SHALL TAG ALL POWER AND CONTROL SYSTEM CABLING AT ALL TERMINATION POINTS.
19. FINAL CONNECTION TO ALL EQUIPMENT IS SHOWN DIAGRAMMATIC. PROVIDE FINAL CONNECTION AS REQUIRED PER MANUFACTURER OF EQUIPMENT.
20. CONTRACTOR SHALL MAINTAIN A SET OF PRINTS AND MARK-UP DURING CONSTRUCTION TO REFLECT "AS-BUILT" CONDITIONS. PRINTS SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
21. ALL HARDWARE SHALL BE STAINLESS STEEL.
22. ALUMINUM CONDUIT SHALL BE COATED WITH (2) WRAPS OF ANTI-CORROSION TAPE OR RUN THROUGH A SCHEDULE 80 PVC SLEEVE TO WHEN IN CONTACT WITH CONCRETE.
23. BARE COPPER SHALL BE COATED WITH (2) WRAPS OF ANTI-CORROSION TAPE OR RUN THROUGH A SCHEDULE 80 PVC SLEEVE TO WHEN IN CONTACT WITH CONCRETE.
24. ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR FINAL SIZING OF ALL EQUIPMENT.



ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE E.C.U.A. STANDARD SPECIFICATIONS

TYP. FOR MOTOR AND MOTOR PROTECTION CONTROLS. COORDINATE NUMBER OF CONDUITS WITH PUMP CABLES PROVIDED WITH PUMP.

STAINLESS STEEL J-HOOKS WITH KELLUM GRIP STRAIN RELIEF DEVICES

COORDINATE WITH WET WELL MANUFACTURER THE INSTALLATION OF A 24"x24" ALUMINUM ACCESS HATCH OVER THE LOCATION OF THE LEVEL SENSOR AND FLOAT CONTROL ROD.

RIGID AL CONDUIT

PVC SCHEDULE 80 TO UTILITY POLE (SEE DETAIL THIS PAGE)

TO ANTENNA

(2) 2"C TO FLOW METER

(1) 1"C TO PRESSURE TRANSMITTER

(2) 1"C FOR FLOATS AND (1) 1"C FOR LEVEL TRANSDUCER

PVC SCHEDULE 80. PROVIDE 1/8" SLOPE INTO WET WELL

HIGH LEVEL BACK-UP FLOAT SWITCH

SUBMERSIBLE PUMP

SUBMERSIBLE LEVEL TRANSDUCER

LOW LEVEL BACK-UP FLOAT SWITCH

\* WET WELL IS CLASSIFIED AS A CLASS 1, DIVISION 1 HAZARDOUS LOCATION.

NOTES:  
1. ALL RIGID ALUMINUM CONDUIT IN CONTACT WITH EARTH OR CONCRETE SHALL HAVE  
(2) WRAPS OF ANTI-CORROSION TAPE.

LIGHTING PERFORMANCE CRITERIA:

1. LIGHTING FIXTURE LAYOUT SHALL BE BASED UPON ACHIEVING 20 FOOT CANDLES (+/- 20%) AT THE FRONT OF THE CONTROL PANEL (WORK-PLANE OF 24" AFG) AND AT THE WET WELL ACCESS HATCH (WORKPLANE OF 0" AFG).
2. GENERAL SECURITY LIGHTING SHALL ENCOMPASS ACCESS GATE AND ALL PIPING/EQUIPMENT AT A MIN: AVERAGE 1 FOOT-CANDLE (+/- 20%, AT WORKPLANE OF 0" AFG).
3. REFER TO LIGHTING CONTROL DIAGRAM ON SHEET No. 18 FOR ADDITIONAL REQUIREMENTS.

LIGHT POLE INSTALLATION NOTES:

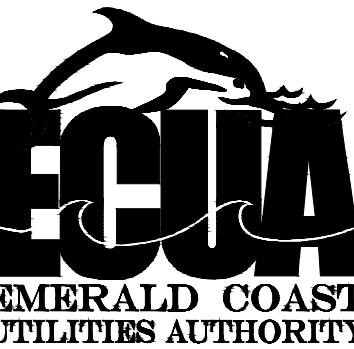
1. BURIAL AND DIAMETER DIMENSIONS INDICATED ARE FOR NOMINAL MINIMAL SIZES ONLY. FINAL DIMENSIONS SHALL BE DETERMINED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF FLORIDA. BASED UPON FIXTURES PROVIDED. PROVIDE SIGNED, DATED, AND SEALED PLANS FOR EACH INSTALLATION TYPE AND FIXTURE TYPE AS PART OF LIGHTING SUBMITTAL PACKAGE.
2. THE POLE AND FOUNDATION DESIGN SHALL BE BY A DELEGATED PROFESSIONAL ENGINEER TO MEET THE FOLLOWING CRITERIA:  
2.1. DESIGN WIND SPEED 160 MPH WITH A 1.3 GUST FACTOR. EXPOSURE CATEGORY C.  
2.2. SIZE EMBEDMENT FOR A MAXIMUM PERMANENT POLE DEFLECTION AFTER DESIGN WIND SPEED EVENT OF 1.00". ALUMINUM, ROUND OR SQUARE, TAPERED.  
2.3.
3. FIXTURE SHALL BE AMERICAN ELECTRIC LIGHTING ATB2 FIXTURE, 40 LED, 1000mA DRIVER, 120V, TYPE 4, WITH PHOTOCONTROL.
4. REFER TO SPECIFICATIONS SECTION 16521 "EXTERIOR LIGHTING" FOR ADDITIONAL REQUIREMENTS.
5. LIGHT FIXTURES SHALL BE MOUNTED AT 15'-0" (MAXIMUM) ABOVE FINISHED GRADE.

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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM

LIFT STATION CONSTRUCTION DETAILS

ELECTRICAL STANDARDS



APPROVED BY:

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| Drawn:           |
| Designed:        |
| Checked:         |
| Date: 12/18/2014 |
| Scale:           |
| Project No:      |
| Sheet No. 17     |
| Of 18 Sheets     |

| REVISIONS | BY |
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IMPROVEMENTS TO WASTEWATER COLLECTION SYSTEM

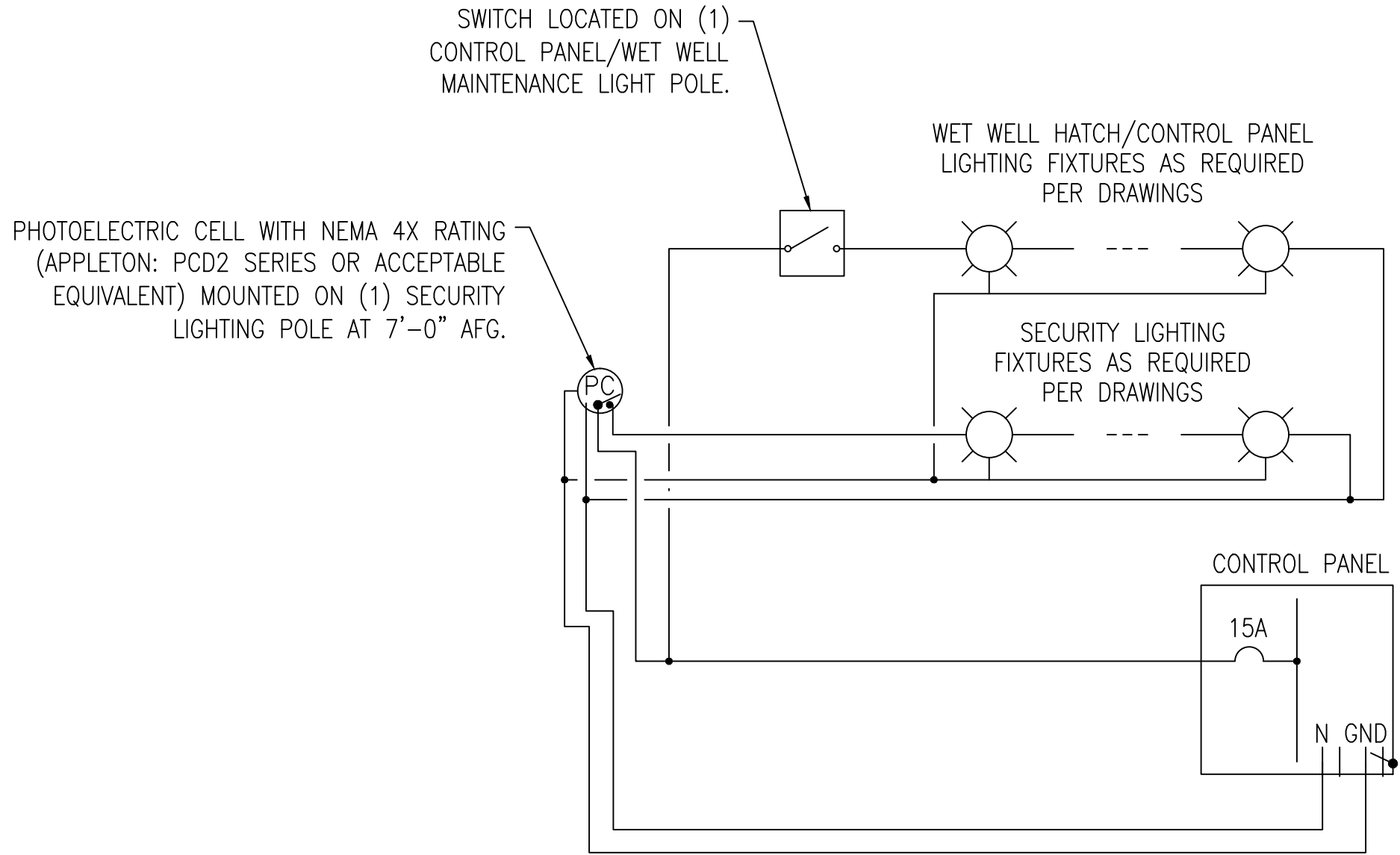
LIFT STATION CONSTRUCTION DETAILS

ELECTRICAL STANDARDS

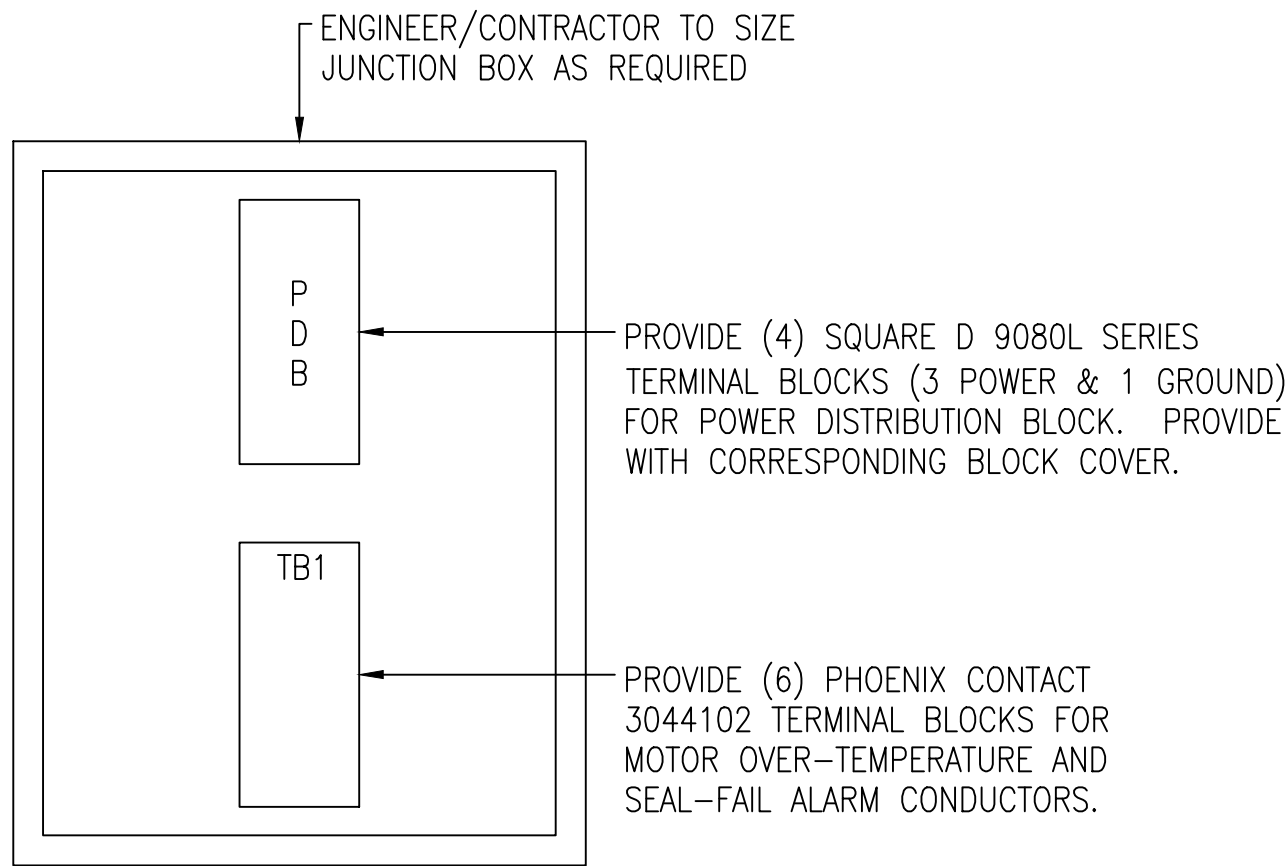


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| Drawn:           |
| Designed:        |
| Checked:         |
| Date: 12/18/2014 |
| Scale:           |
| Project No:      |
| Sheet No. 18     |
| Of 18 Sheets     |



C2 TYPICAL LIGHTING CONTROL DIAGRAM  
NOT TO SCALE

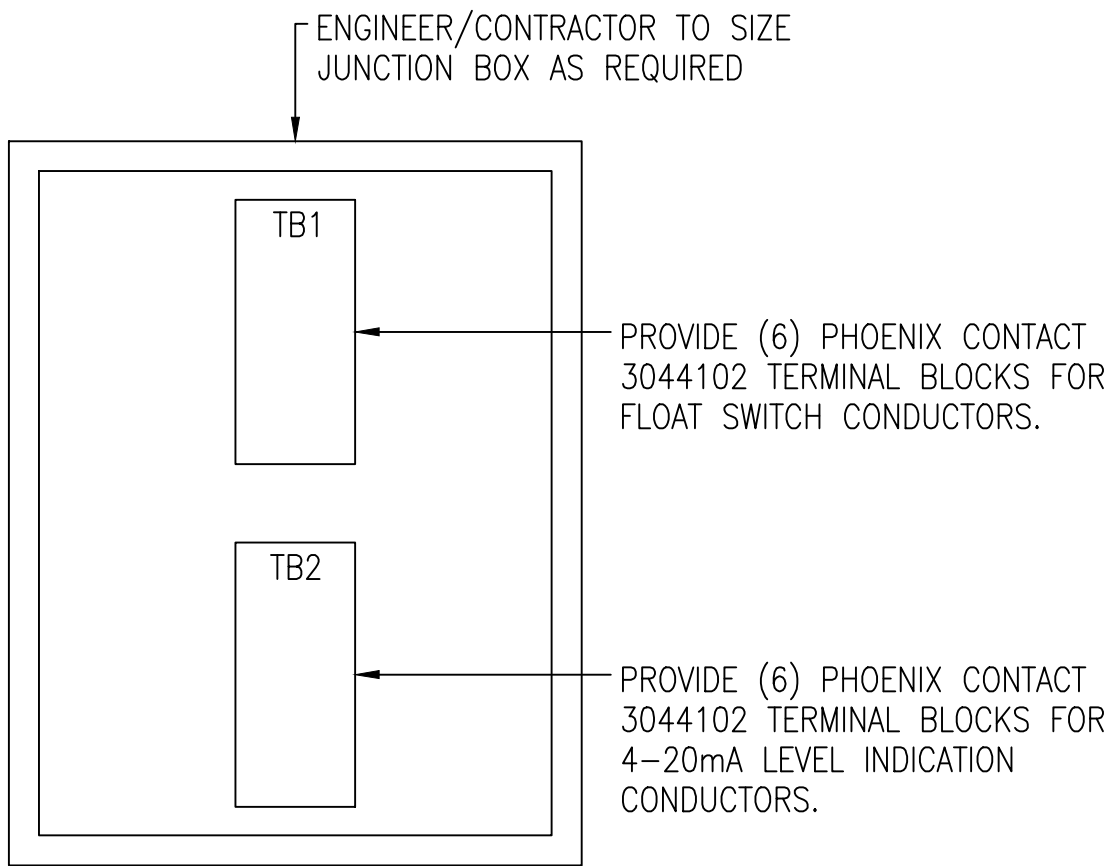


INTERIOR ELEVATION

DETAIL NOTES:

- ALL TERMINAL BLOCKS SHALL BE PROVIDED WITH CORRESPONDING END BRACKETS AND END COVERS.
- PROVIDE SEPARATE GROUND LUG IN EACH JUNCTION BOX, BONDED TO JUNCTION BOX.

A1 TYPICAL PUMP JUNCTION BOX ELEVATION  
NOT TO SCALE

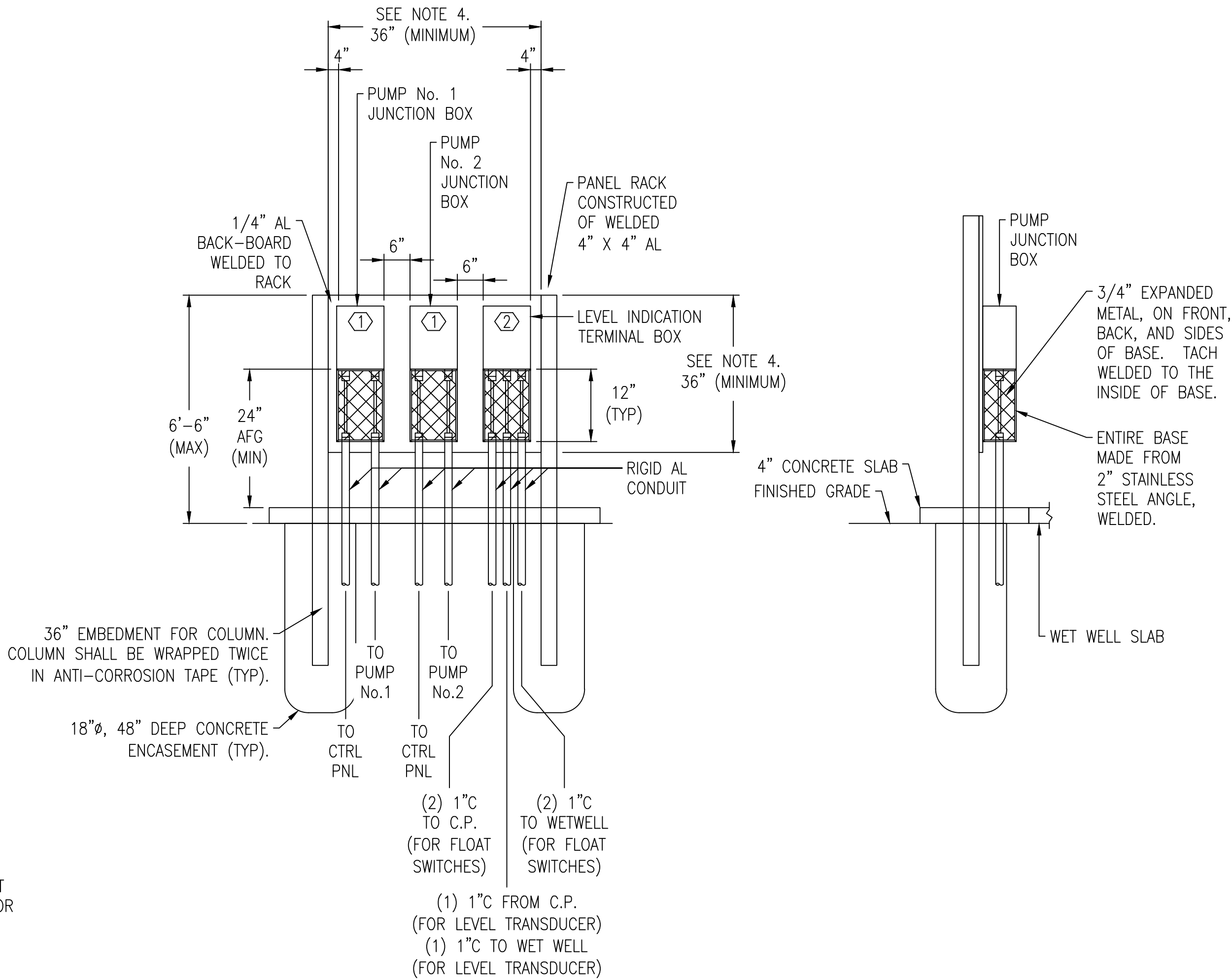


INTERIOR ELEVATION

DETAIL NOTES:

- ALL TERMINAL BLOCKS SHALL BE PROVIDED WITH CORRESPONDING END BRACKETS AND END COVERS.
- PROVIDE SEPARATE GROUND LUG IN EACH JUNCTION BOX, BONDED TO JUNCTION BOX.

A3 TYPICAL LEVEL INDICATION JUNCTION BOX ELEVATION  
NOT TO SCALE



FRONT ELEVATION

SIDE ELEVATION

DETAIL NOTES:

- THIS DETAIL SHALL ONLY APPLY WHEN THE CONTROL PANEL CANNOT BE PLACED WITHIN 10'-0" OF THE WET WELL TO ALLOW FOR CONNECTION OF STANDARD 50 FOOT PUMP CABLE CONNECTIONS.
- BACKBOARD SHALL BE PLACED AT THE EDGE OF THE WET WELL SLAB BETWEEN THE WET WELL AND CONTROL PANEL.
- JUNCTION BOXES SHALL BE MOUNTED SUCH THAT THEY ARE FACING THE WET WELL.
- ENGINEER/CONTRACTOR SHALL SIZE JUNCTION BOXES AND BACKBOARDS BASED UPON INSTALLATION REQUIREMENTS PROVIDED AT TIME OF DESIGN.

KEY NOTES

- ① REFER TO "TYPICAL PUMP JUNCTION BOX ELEVATION" (THIS SHEET) FOR ADDITIONAL REQUIREMENTS.
- ② REFER TO "TYPICAL LEVEL INDICATION JUNCTION BOX ELEVATION" (THIS SHEET) FOR ADDITIONAL REQUIREMENTS.

A4 TYPICAL PUMP JUNCTION BOXES  
NOT TO SCALE