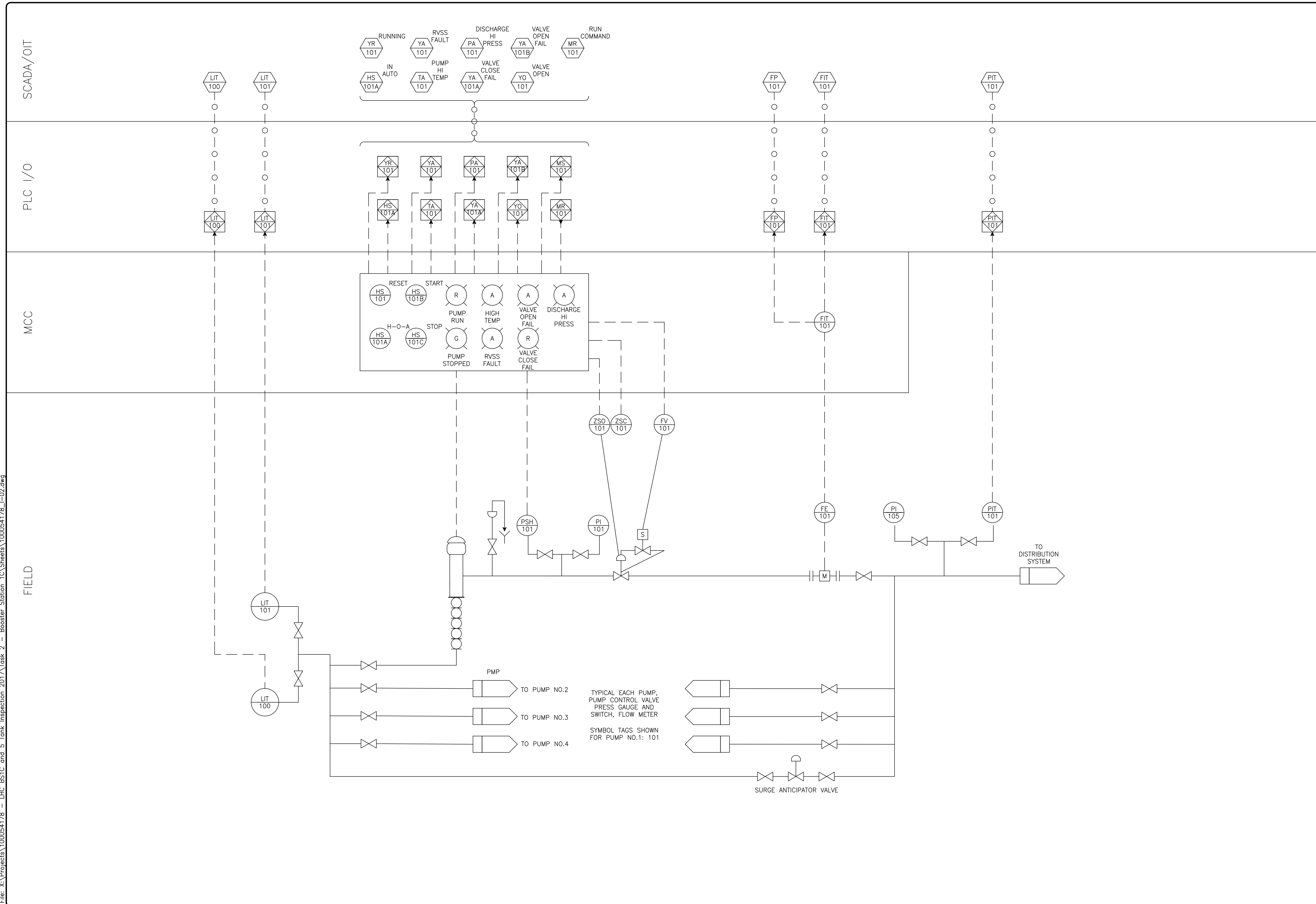


Plotted By: COPD5148 Date: 28-Feb-19-08:00  
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REVISIONS:

LAKE HAVASU CITY

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P & ID - 1

PROJECT:  
**BOOSTER STATION 1C REPLACEMENT**  
 LAKE HAVASU CITY, ARIZONA

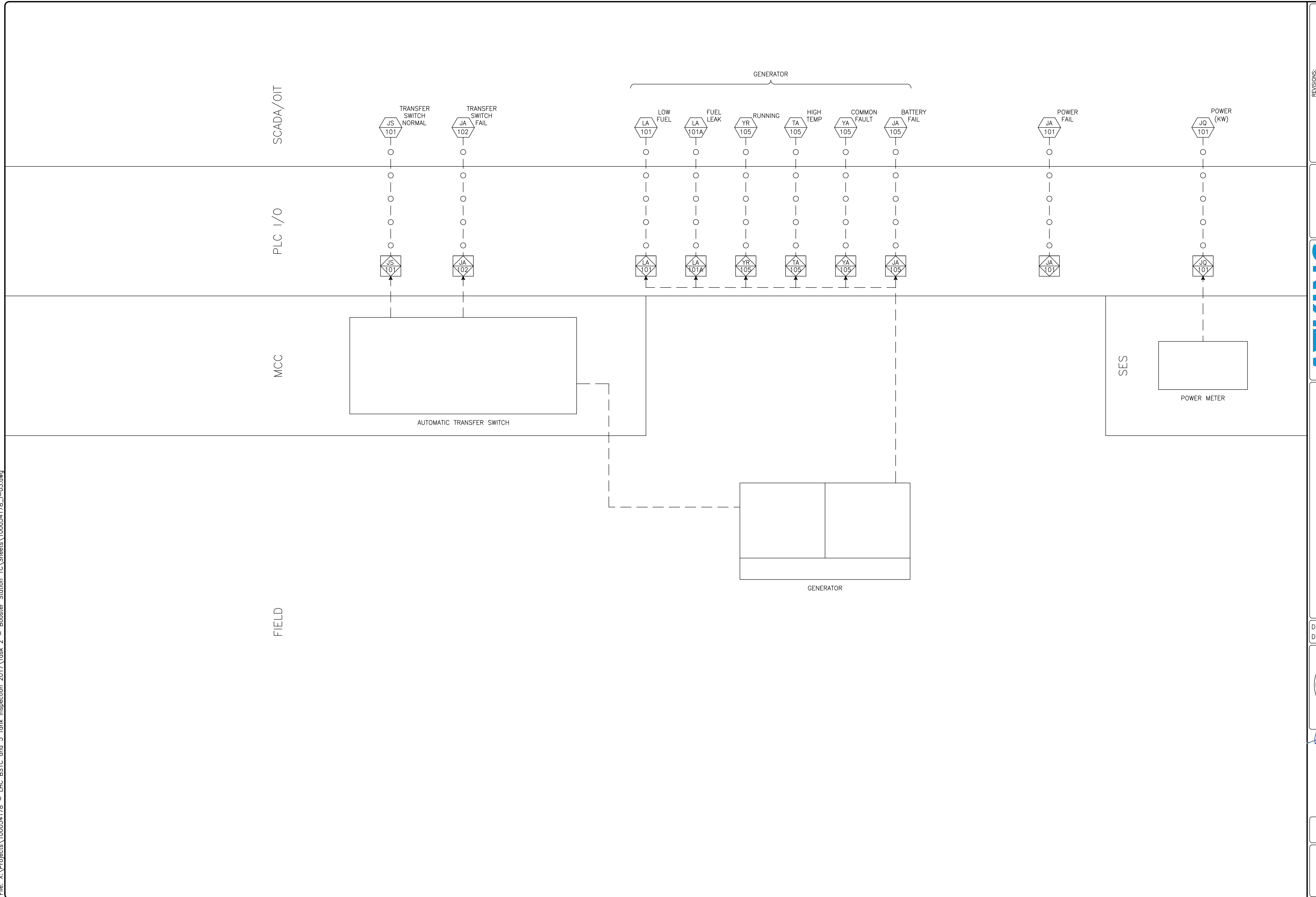
DESIGNED BY: SBG/RAW  
 DRAWN BY: RAW



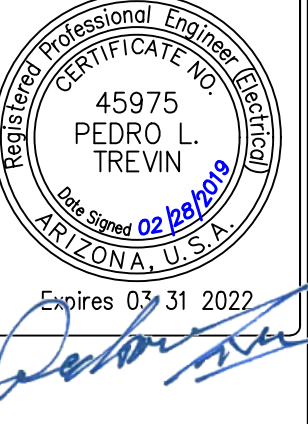
Professional Engineer  
 CERTIFICATE NO.  
 45975  
 PEDRO L.  
 TREVINO  
 Expires 03/31/2022

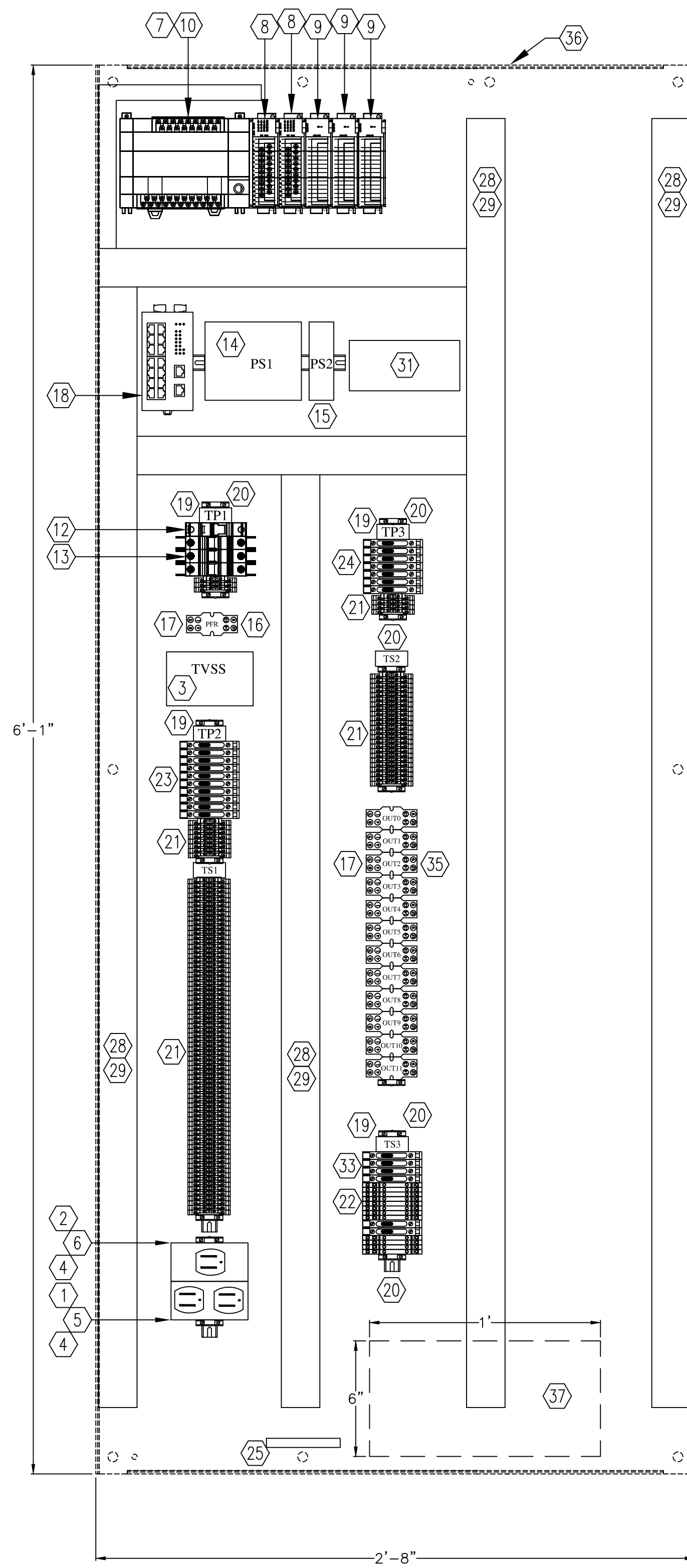
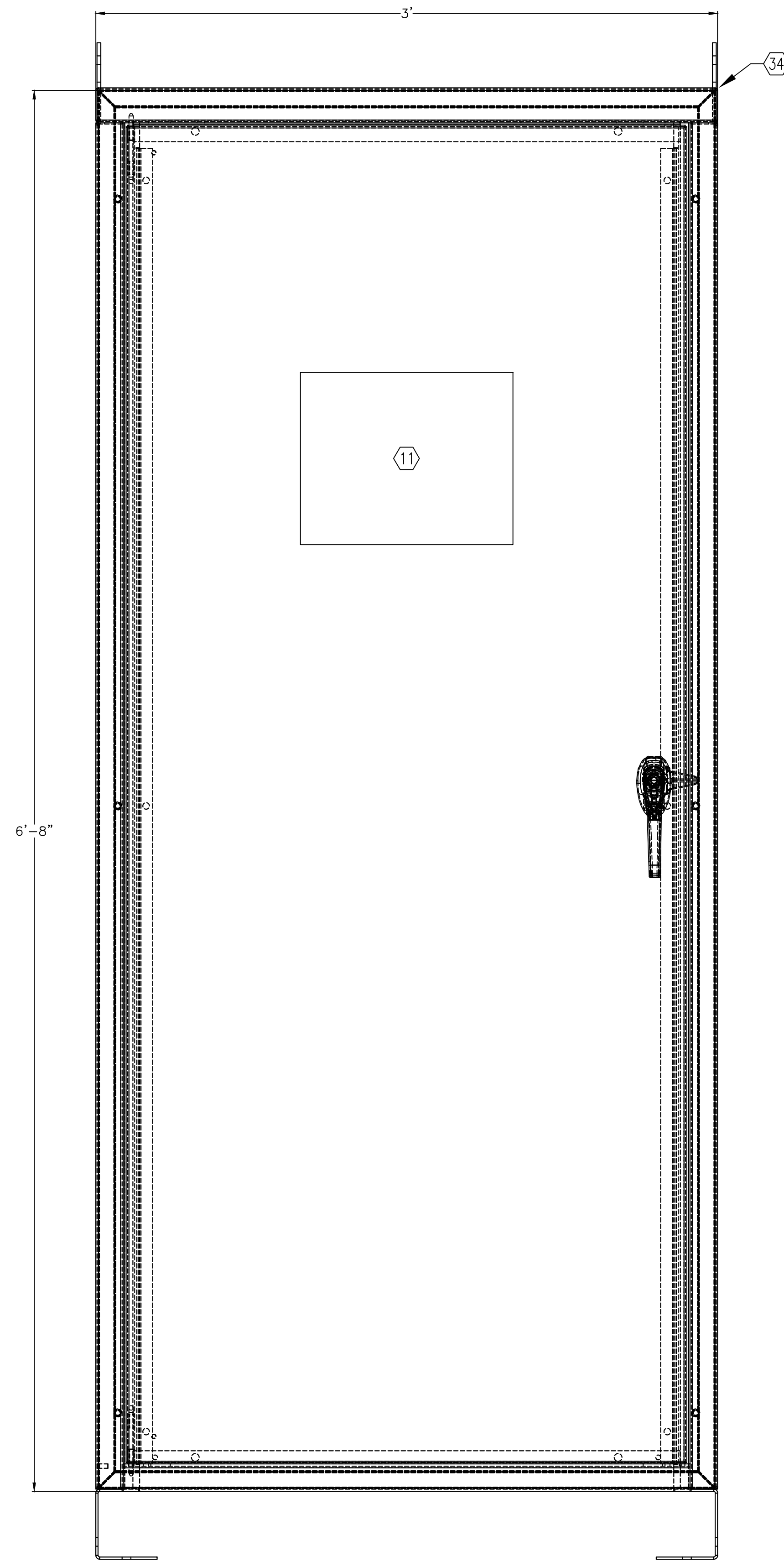
PROJECT NO.  
 WT7440

DWG NO.  
**I-2**  
 31 OF 47

ORIGINAL SCALE: 1" = 16' 0" INCHES



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P & ID - 2	PROJECT: <b>BOOSTER STATION 1C REPLACEMENT</b> LAKE HAVASU CITY, ARIZONA
DESIGNED BY: SBG/RAW DRAWN BY: RAW	
	
PROJECT NO. WT7440	DWG NO. <b>I-3</b> 32 OF 47



BILL OF MATERIALS				
ITEM	QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
1	1	HUBBEL	GFR5362GYTR	GRAY GFIC DUPLEX RECEPTACLE 20A @ 120Vac
2	1	HUBBEL	HBL5361GRY	GRAY SIMPLEX RECEPTACLE 20A @ 125Vac
3	1	EDCO	EMC-240B	UL 1449 LISTED TVSS
4	2	STEEL CITY	58361-1/2	UTILITY BOX FOR RECEPTACLES
5	1	STEEL CITY	58-C-07	DUPLEX UTILITY BOX COVER
6	1	STEEL CITY	58-C-05	SIMPLEX UTILITY BOX COVER
7	1	ALLEN-BRADLEY	1766-L32BWA	MICROLOGIX 1400 BASE UNIT
8	2	ALLEN-BRADLEY	1762-IQ16	16Pt. DISCRETE INPUT MODULE (120Vac)
9	3	ALLEN-BRADLEY	1762-IF4	8 Pt. ANALOG CURRENT OUTPUT/PUT MODULE
10	1	ALLEN-BRADLEY	1766-MM1RTC	MEMORY MODULE W/REAL TIME CLOCK
11	1	ALLEN-BRADLEY	2711R-T10T	10" COLOR OPERATORS INTERFACE
12	1	ALLEN-BRADLEY	1489-A1C200	UL 489 LISTED CIRCUIT BREAKER 20A
13	4	ALLEN-BRADLEY	1492-SP1C200	20A CIRCUIT BREAKER
14	1	IDEC	PS5R-SE24	120W 24Vdc POWER SUPPLY (5A @ 24Vdc)
15	1	IDEC	PS5R-SC24	30W 24Vdc POWER SUPPLY
16	1	IDEC	RH2B-UL-AC120	2 POLE 120Vac COIL RELAY/W INDICATOR
17	13	IDEC	SH2B-05	2 POLE RELAY SOCKET
18	1	PHOENIX CONTACT	FL SWITCH SFN16TX (2891933)	16 PORT UNMANAGED ETHERNET SWITCH
19	5	PHOENIX CONTACT	UBE/D	TERMINAL STRIP LABEL
20	22	PHOENIX CONTACT	E/NS 35N (0800886)	END BRACKET FOR DIN RAIL
21	86	PHOENIX CONTACT	UKK 5 (2774017)	DOUBLE FEED THROUGH TERMINAL BLOCK
22	12	PHOENIX CONTACT	TT-2-PE-24DC (2838186)	SURGE PROTECTING TERMINAL BLOCK
23	10	PHOENIX CONTACT	UK 6,3 HESILA 250 (3004249)	250Vac FUSED TERMINAL BLOCK (6.3mmX32mm FUSE)
24	8	PHOENIX CONTACT	UK 6,3 HESILED 24 (3004265)	24Vdc FUSED TERMINAL BLOCK (6.3mmX32mm FUSE)
25	1	SQUARE D	PK12GTA	12 PORT GROUNDING BUS
26	1	HOFFMAN	ALF16D18R	LIGHT
27	A/R	PANDUIT	F1X4WH6 W/C1WH6	1"x4" WIREWAY W/COVER
28	A/R	PANDUIT	F2X4WH6	2"x4" WIREWAY
29	A/R	PANDUIT	C2WH6	2"x4" AND 1"x4" WIREWAY'S COVER
30	A/R	E-RAIL	ER-35RR	RAISED DIN RAIL
31	1	ESTEEM	195EP	SCADA RADIO (NO EQUAL)
32	A/R	PHOENIX CONTACT	UKSLKG 5	GROUNDING TERMINAL BLOCKS
33	6	PHOENIX CONTACT	UT 4 HESILA 24	24Vdc FUSED TERMINAL BLOCK (6.3mmX32mm FUSE)
34	1	HOFFMAN	A84N2518FSLP	NEMA 1 84"x36"x24" ENCLOSURE
35	12	IDEC	RH2B-UL-A24DC	2 POLE 24Vdc COIL RELAY W/INDICATOR
36	1	HOFFMAN	A73P32N	BACK PANEL
37	1	APC	BK500BLK	UNINTERRUPTIBLE POWER SUPPLY

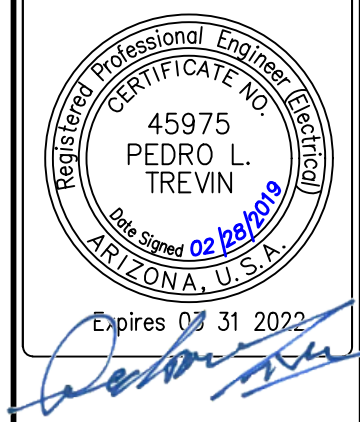
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ELEVATION AND BILL OF MATERIALS  
 PROJECT:  
**BOOSTER STATION IC REPLACEMENT**  
 LAKE HAVASU CITY, ARIZONA

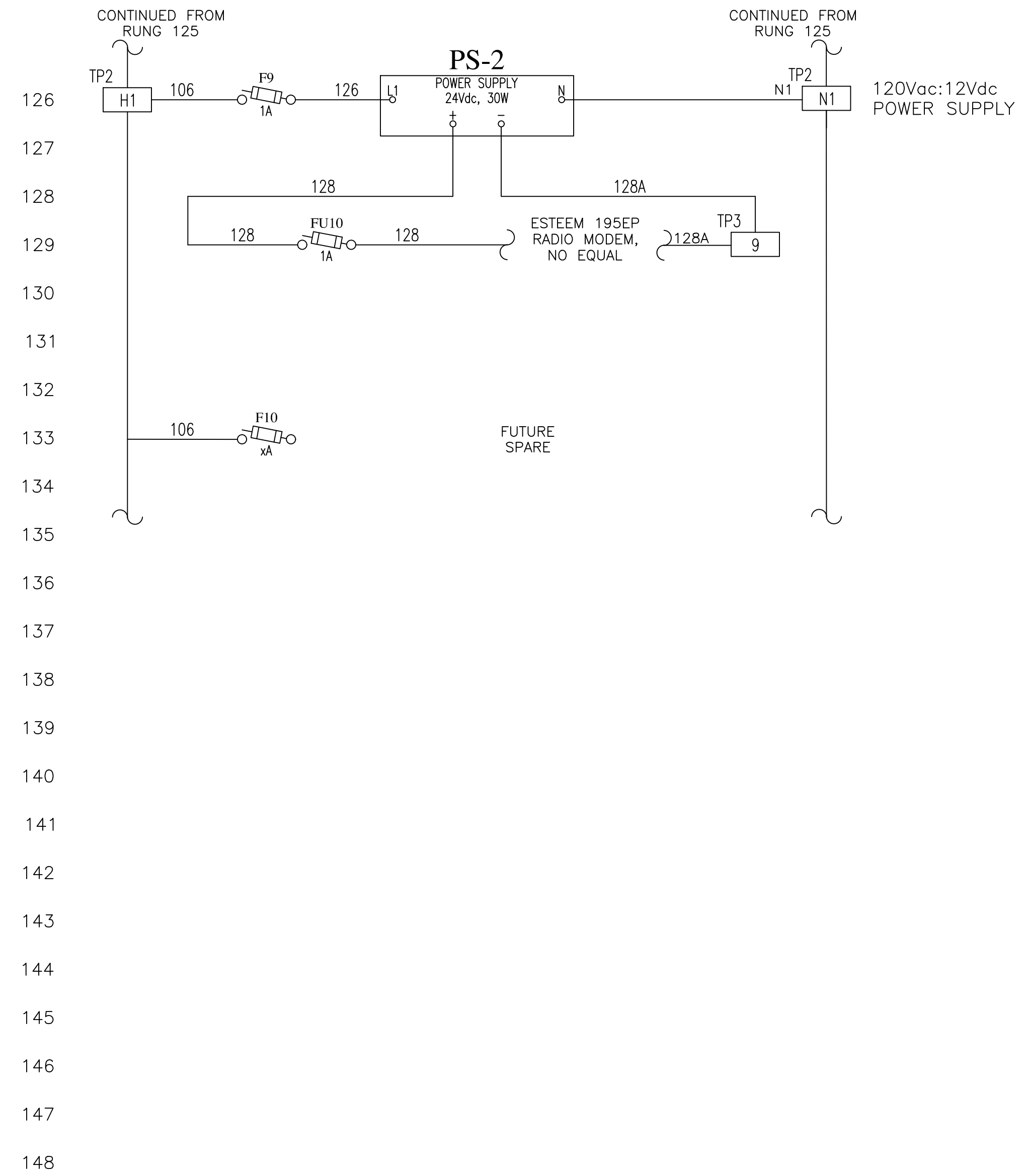
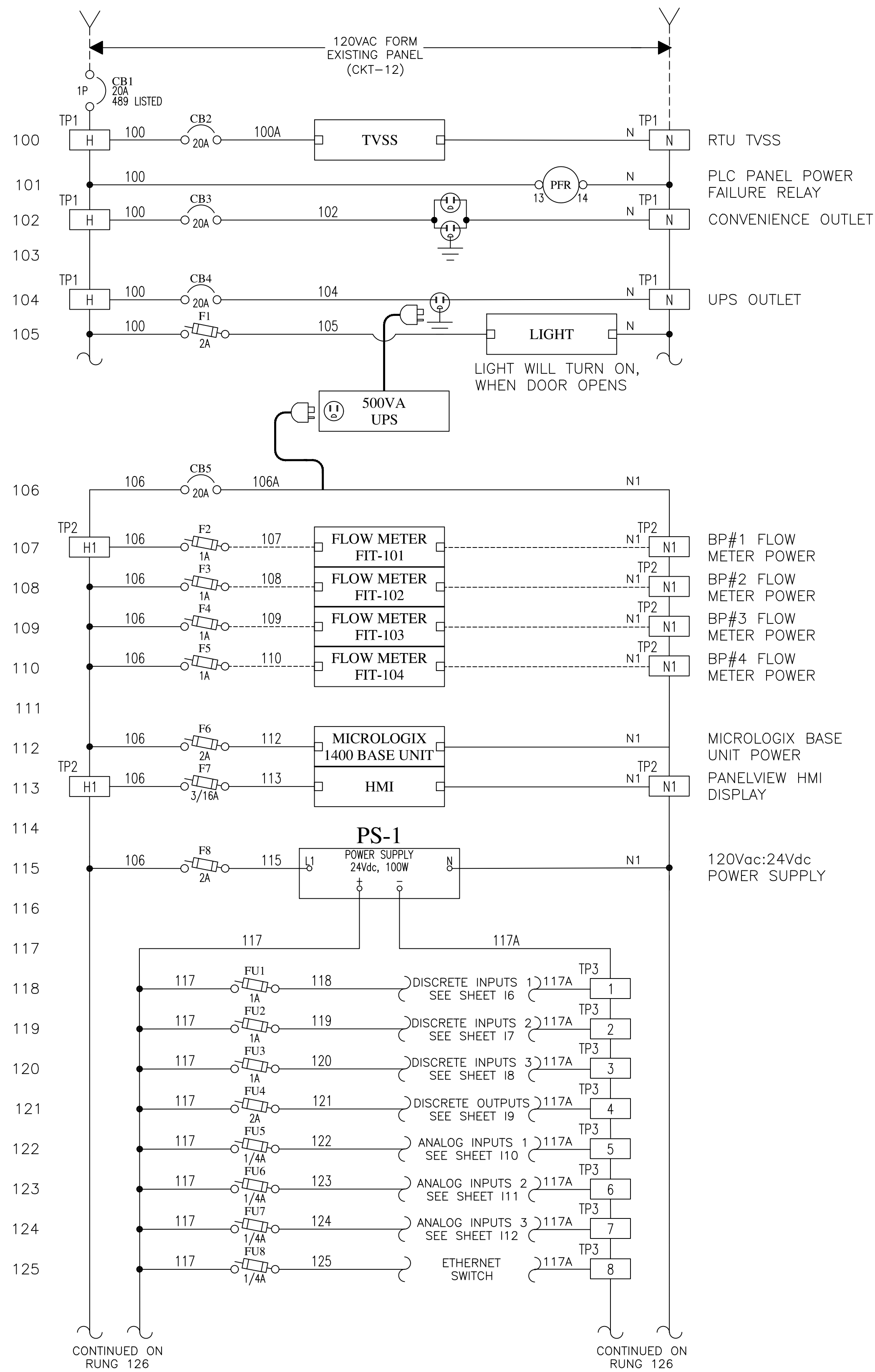
DESIGNED BY: SBG/RAW  
 DRAWN BY: RAW



PROJECT NO.  
 WT7440

DWG NO.  
**I-4**  
 33 OF 47





NOTES:  
 1. DESIGN FOR 20% SPARES

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PLC PANEL SCHEMATIC  
 PROJECT:  
**BOOSTER STATION IC REPLACEMENT**  
 LAKE HAVASU CITY, ARIZONA

DESIGNED BY: SBG/RAW  
 DRAWN BY: RAW



PROJECT NO.  
 WT7440

DWG NO.  
**I-5**  
 34 OF 47

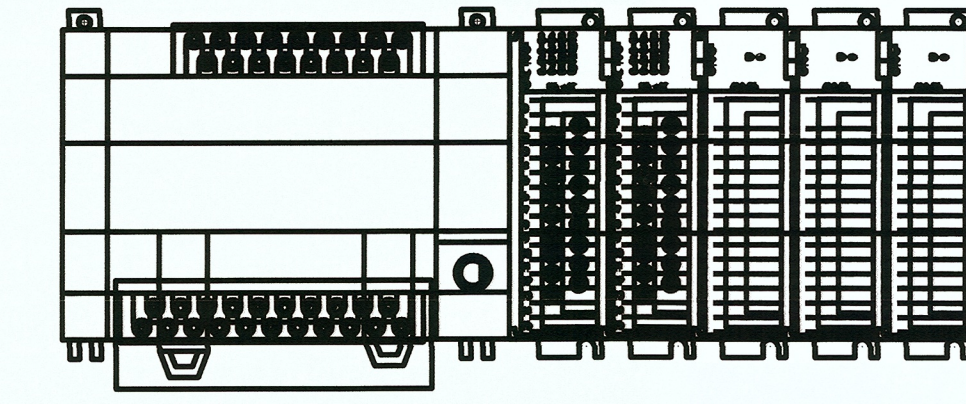
ORIGINAL SCALE: 1/8" = 1'-0"



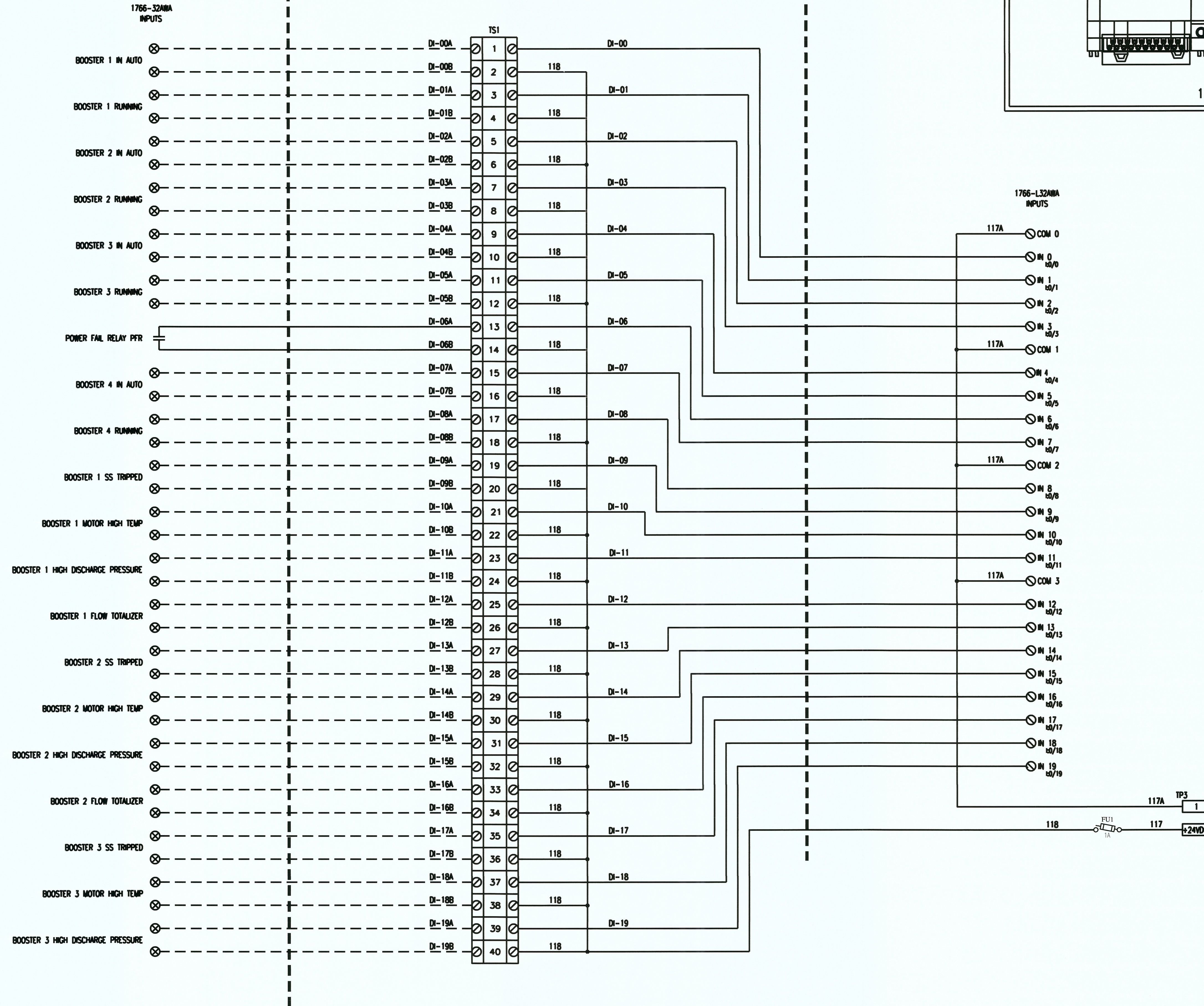
PANEL AND FIELD MOUNTED EQUIPMENT DEVICE

ALLEN-BRADLEY I/O SUB-PANEL CONNECTION TERMINAL TS1 INPUTS

ALLEN-BRADLEY I/O CONNECTION



1766-L32BWA SLOT: BASE UNIT



Plotted By: pin8431 Date: 23-Oct-18-15:20  
 File: C:\BLD\SVCS\COMMON\Lake Havasu - PS Arizona\Booster Station 1C\Final Instrumentation Dwg\100054178\_I-05 - I-12.dwg

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*[Signature]*

PROJECT NO. WT7440

DWG NO. **I-6**  
 35 OF 47