

FRONT VIEW

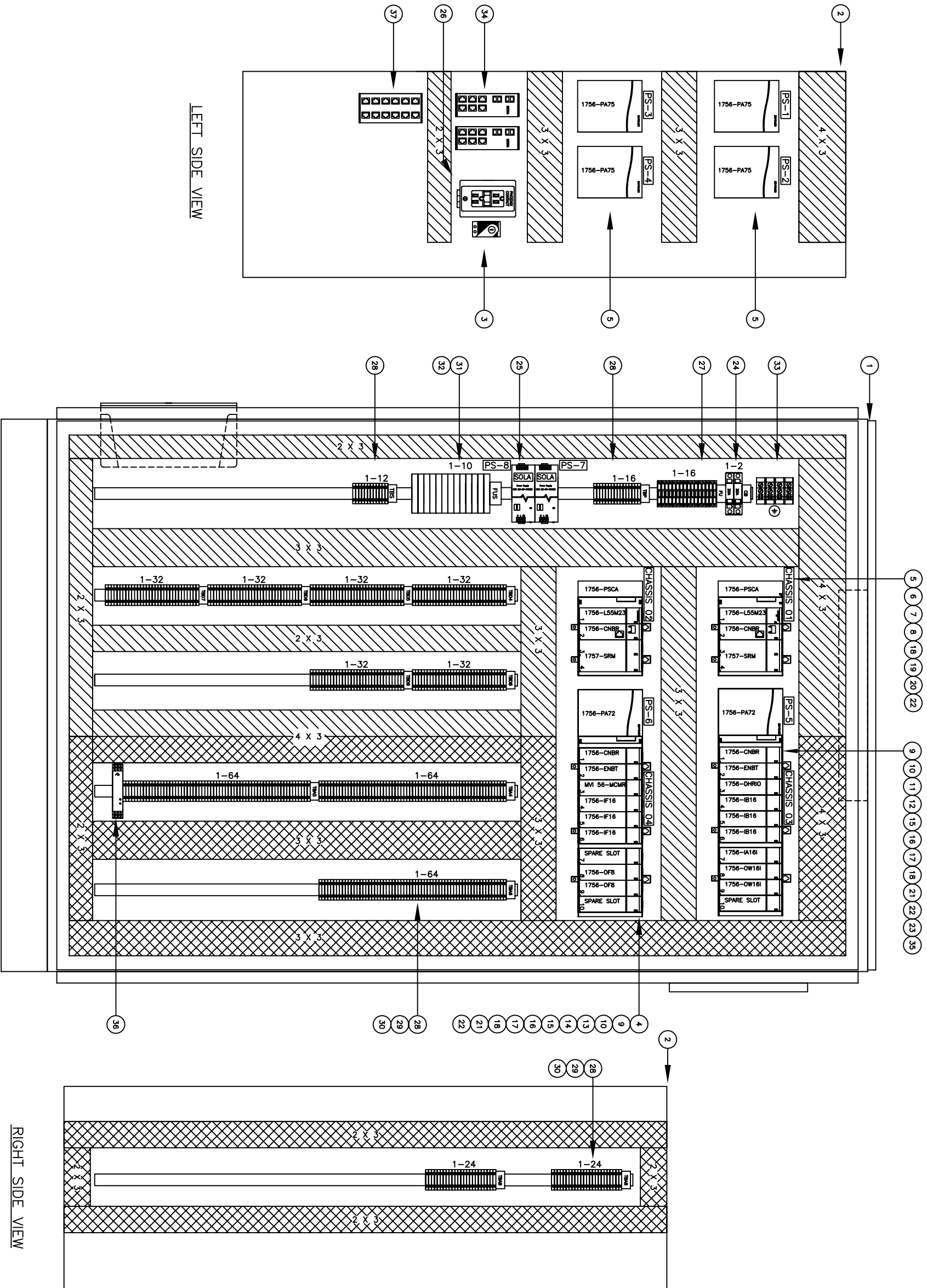
ITEM #	DESCRIPTION	MANUFACTURER	MODEL/PART #	PCS.	UM
1	DOUBLE BAY FRAME 1800mmx1200mmx600mm	HOFPLAN	P-F18126	1	PC
2	OVERLAPPING SOLID DOORS	HOFPLAN	P-TD1812	1	PC
3	SOLID COVER	HOFPLAN	P-CS186	2	PCS
4	KEYLOCKING FLUSH HANDLE	HOFPLAN	P-FHKBL	1	PC
5	SOLID SIDE	HOFPLAN	P-SS186	2	PCS
6	SOLID TOP	HOFPLAN	P-T126	1	PC
7	100mm SOLID BASE	HOFPLAN	P-B1126	1	PC
8	ENCLOSURE LIGHT W/ DOOR SWITCH	HOFPLAN	A-LF16D18	1	PC
9	COOLING FAN PACKAGE	HOFPLAN	T-PP101UL12	1	PC
10	GROUNDING KIT	HOFPLAN	P-GK	6	PCS
11	GROUNDING BAR SYSTEM	HOFPLAN	P-CSBK	1	PC
12	DATA POCKET	HOFPLAN	A-DP2	1	PC
13	EXHAUST GRILL	HOFPLAN	T-EP10UL12	1	PC
14	LEXAN WINDOW	GLASS PRO	CUSTOM	2	PCS
15	CORROSION INHIBITOR	HOFPLAN	A-HCI10E	5	PCS
16	FIBER OPTIC DISTRIBUTION PANEL 24-PORT	L-COM	PMR2400	1	PC
17	FIBER OPTIC SUB PANEL W/ ST TYPE COUPLINGS	L-COM	FSP-ST-BR	4	PCS

TVC
INC.
PORTSMOUTH, NH

TVC SYSTEMS

NO.	REVISION	BY	DATE	COGENERATION UPGRADE PROJECT BOP100 PLC PANEL ENCLOSURE DRAWING
A	REVISIONS PER MEETING	CC	2-24-03	
0	ECOP# 0851-002A	CC	5-6-03	
		DRN BY	CC	DATE 12-20-02
		APP BY	DATE	SCALE
				SHT OF
				0 REV

SIZE B DRAWING NO. 0851-001



ITEM #	DESCRIPTION	MANUFACTURER	MODEL/PART #	PCS.	UM
1	BACK PANEL 66.34"H X 44.49"W	HOFFMAN	P-PT1812	1	PC
2	SIDE PANEL 51.5" H X 17.6" W	HOFFMAN	P-PTSM146	2	PCS
3	TEMPERATURE CONTROL SWITCH	HOFFMAN	A-TEMP0	1	PC
4	MODBUS MASTER/SLAVE COMMUNICATIONS MODULE	PROSOFT TECHNOLOGIES	MM-56-MCMR	1	PC
5	CONTROLLOGIX REDUNDANT POWER ASSEMBLY	ALLEN-BRADLEY	1756-PAR	2	PCS
6	CONTROLLOGIX 5550 PROCESSOR 1.5MB MEMORY	ALLEN-BRADLEY	1756-L55M23	2	PCS
7	CONTROLLOGIX SYSTEM REUNDANCY MODULE	ALLEN-BRADLEY	1757-SRM/B	2	PCS
8	4 SLOT CONTROLLOGIX CHASSIS	ALLEN-BRADLEY	1756-A4	2	PCS
9	CHASSIS POWER SUPPLY	ALLEN-BRADLEY	1756-PA72	2	PCS
10	10 SLOT CONTROLLOGIX CHASSIS	ALLEN-BRADLEY	1756-A10	2	PCS
11	24VDC DIGITAL INPUT MODULE, 16pt.	ALLEN-BRADLEY	1756-IB16	3	PCS
12	ISOLATED DIGITAL CONTACT OUTPUT MODULE, 16pt.	ALLEN-BRADLEY	1756-OB16	2	PCS
13	4-20mA ANALOG INPUT MODULE, 16pt.	ALLEN-BRADLEY	1756-IF16	3	PCS
14	4-20mA ANALOG OUTPUT MODULE, 8pt.	ALLEN-BRADLEY	1756-OF8	2	PCS
15	36 PIN SCREW CLAMP BLOCK W/ STANDARD HOUSING	ALLEN-BRADLEY	1756-TBCH	6	PCS
16	20 PIN SCREW CLAMP BLOCK W/ STANDARD HOUSING	ALLEN-BRADLEY	1756-TBHH	5	PCS
17	SLOT FILLER COVER	ALLEN-BRADLEY	1756-N2	3	PCS
18	CONTROLNET 1-TAP	ALLEN-BRADLEY	1786-TPS	8	PCS
19	CONTROLNET 75 OHM TERMINATOR FLUG	ALLEN-BRADLEY	1786-XT	2	PCS
20	REUNDANCY MODULE CABLE	ALLEN-BRADLEY	1757-SRC1	1	PC
21	ETHERNET/IP 10/100 BRIDGE MODULE	ALLEN-BRADLEY	1756-ENBT	2	PCS
22	CONTROLNET REDUNDANT BRIDGE MODULE	ALLEN-BRADLEY	1756-CNBR	4	PCS
23	DH+ REMOTE I/O BRIDGE MODULE	ALLEN-BRADLEY	1756-DHRIO	1	PC
24	20A CIRCUIT BREAKER	ALLEN-BRADLEY	1492-CB1G200	2	PCS
25	REDUNDANT POWER SUPPLY 2.5A, 24VDC	SOLA/HEM-DUTY	SIN 2.5-24-100RED	2	PCS
26	120VAC GFCI RECEPTACLE TYPE EM-DUO-120/15-6FI	PHOENIX	5600462	1	PC
27	FUSED TERMINAL BLOCKS M 4/8 SF	ENTRELEC	115 65725	16	PCS
28	TERMINAL BLOCKS M 4/6	ENTRELEC	115 11607	356	PCS
29	GROUND TERMINAL BLOCK TYPE M 4/6 P	ENTRELEC	165 11316	64	PCS
30	DISCONNECT TERMINAL BLOCK TYPE M 4/6 SHF	ENTRELEC	115 21512	64	PCS
31	FUSED TERMINAL BLOCK TYPE ML10/13SF	ENTRELEC	199 09513	13	PCS
32	END SECTION	ENTRELEC	199 63524	1	PC
33	GROUND BLOCK	MARATHON	1412400	2	PCS
34	FIBER TO ETHERNET SWITCH	MOXA	ED6008-MM-SC	2	PCS
35	120VAC DIGITAL INPUT MODULE, 16pt.	ALLEN-BRADLEY	1756-IA16I	1	PC
36	SIGNAL ISOLATOR 4-20mA IN, 4-20mA OUT	ACTION I/Q	0501-1800	1	PC
37	12 PORT FIBER HUB	(SUPPLIED BY OTHERS)		1	PC

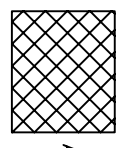
TVC SYSTEMS
INC.
PORTSMOUTH, NH

NO.	REVISION	BY	DATE	COGENERATION UPGRADE PROJECT BOP100 PLC PANEL PANEL LAYOUT DRAWING
A	REVISIONS PER MEETING	CC	2-24-03	
0	ECOF 0851-002A	CC	5-6-03	
1	FIELD AS-BUILT	CC	5-17-04	
		DRN BY CC	DATE 12-20-02	SCALE
		APP BY	DATE	SHT OF
		SIZE	DRAWING NO. 0851-002	REV 1

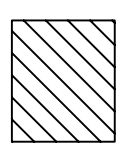
FRONT VIEW

LEFT SIDE VIEW

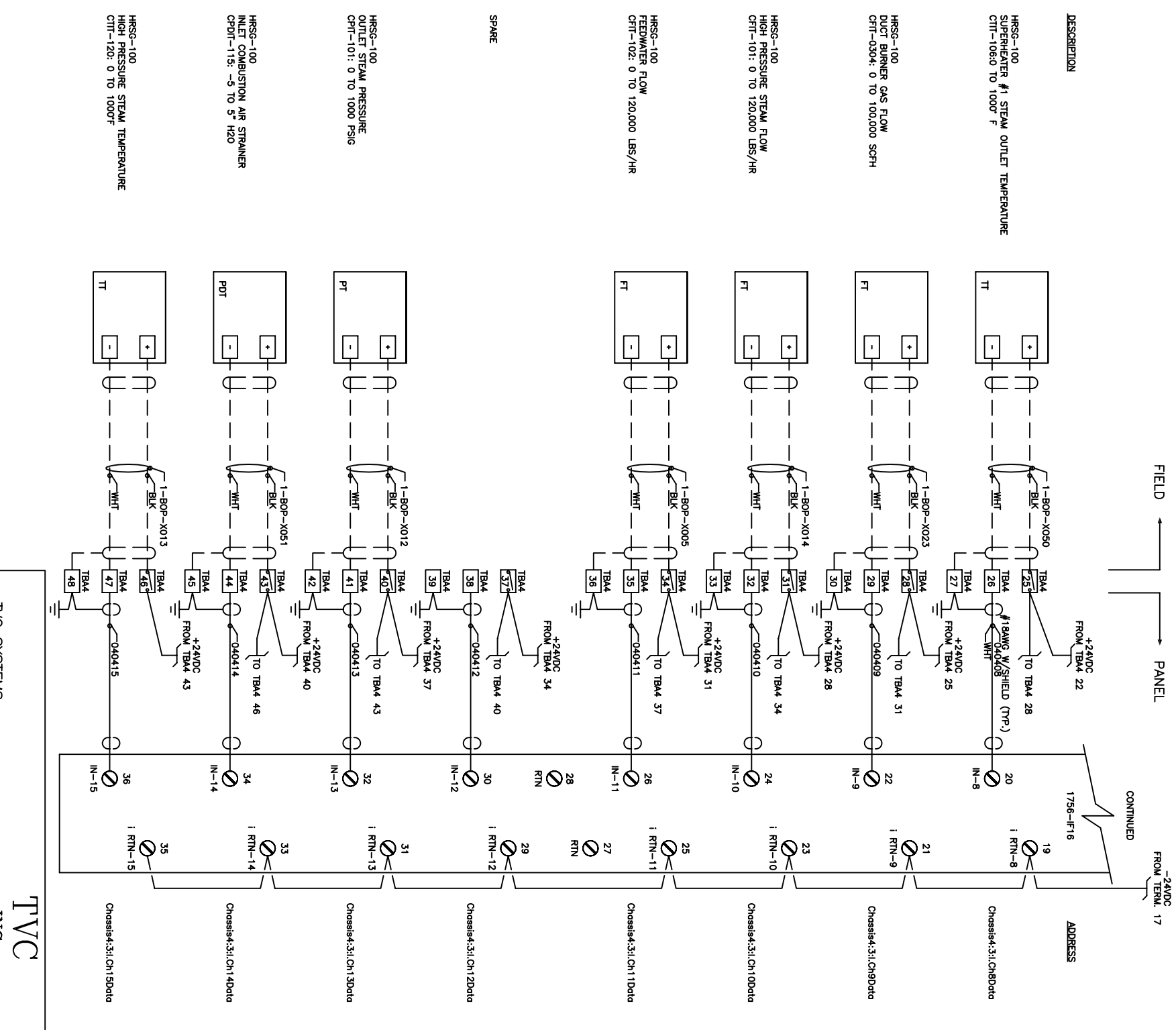
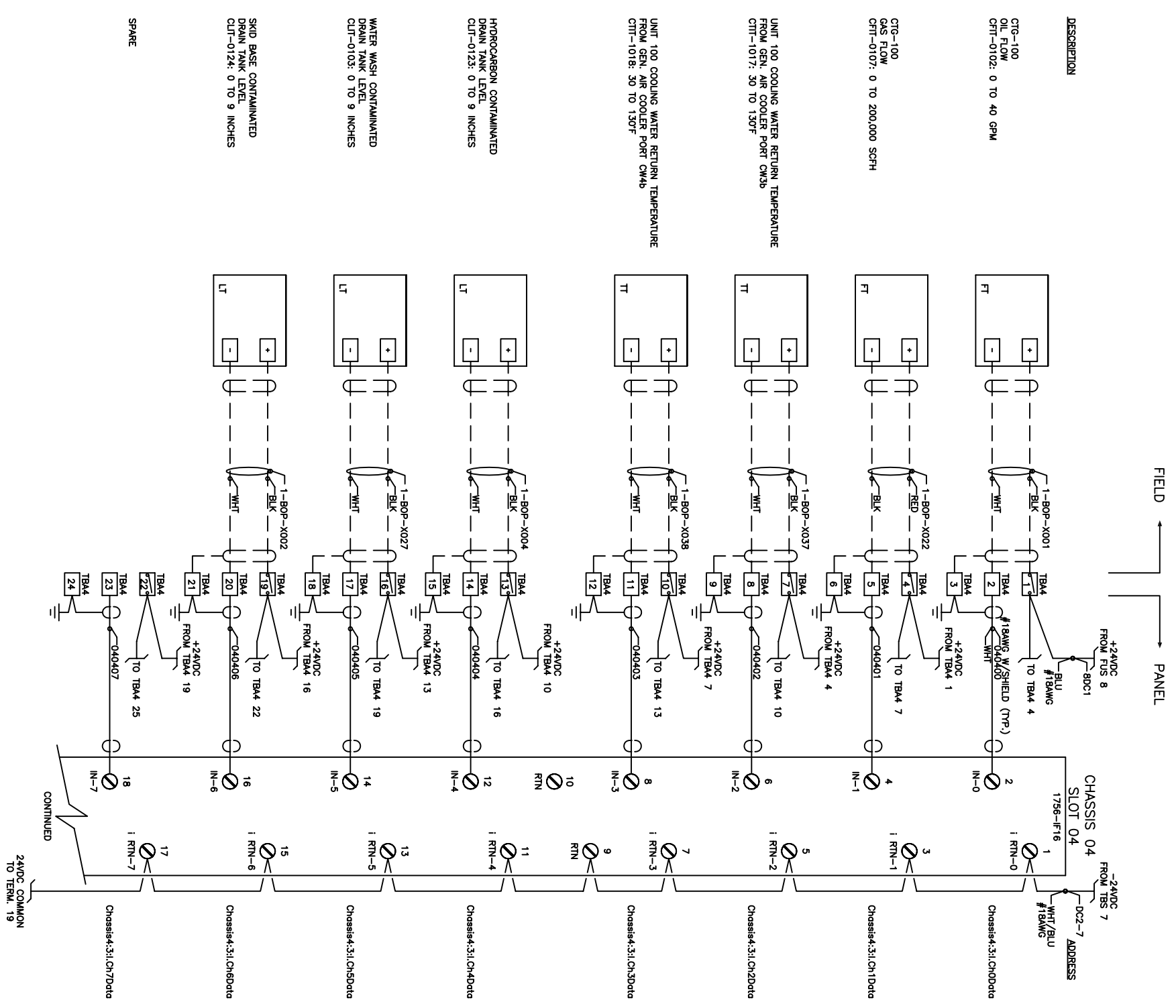
RIGHT SIDE VIEW



ANALOG WIRING



DIGITAL WIRING



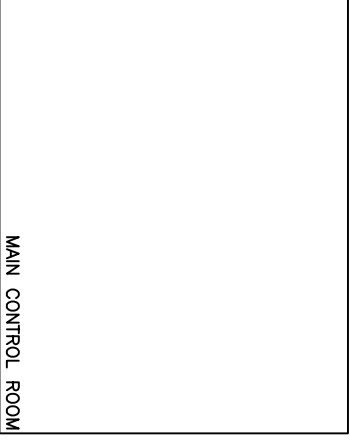
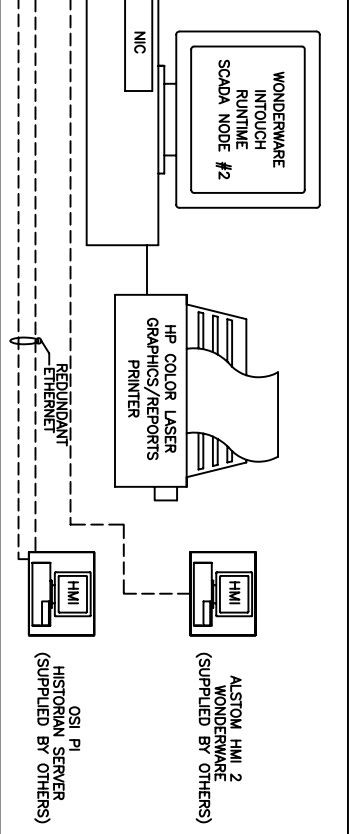
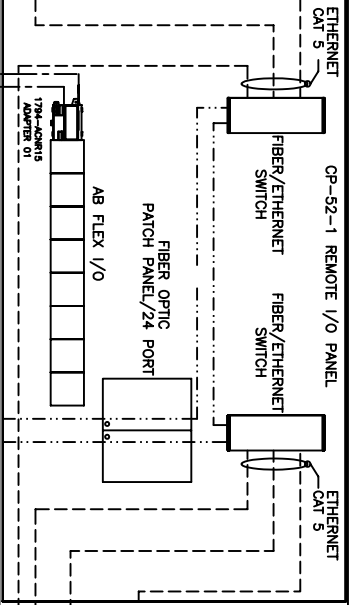
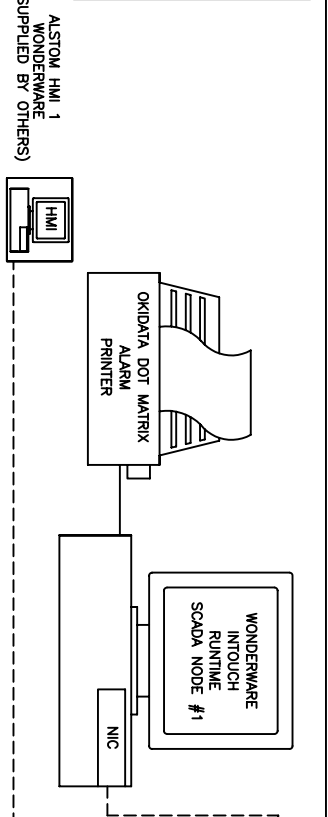
TVC SYSTEMS				COGENERATION UPGRADE PROJECT			
INC.				PORTSMOUTH, NH			
NO.				REVISION			
0				EOP# 0851-002A			
1				FIELD AS-BUILT			
BY				DATE			
CC				5-6-03			
CC				5-17-04			
DRN				BY CC			
DATE				2-7-03			
APP				BY			
DATE				SHT			
OF				REV			
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CHASSIS 04 SLOT 04 POINT TO POINT DRAWING
SCALE NONE

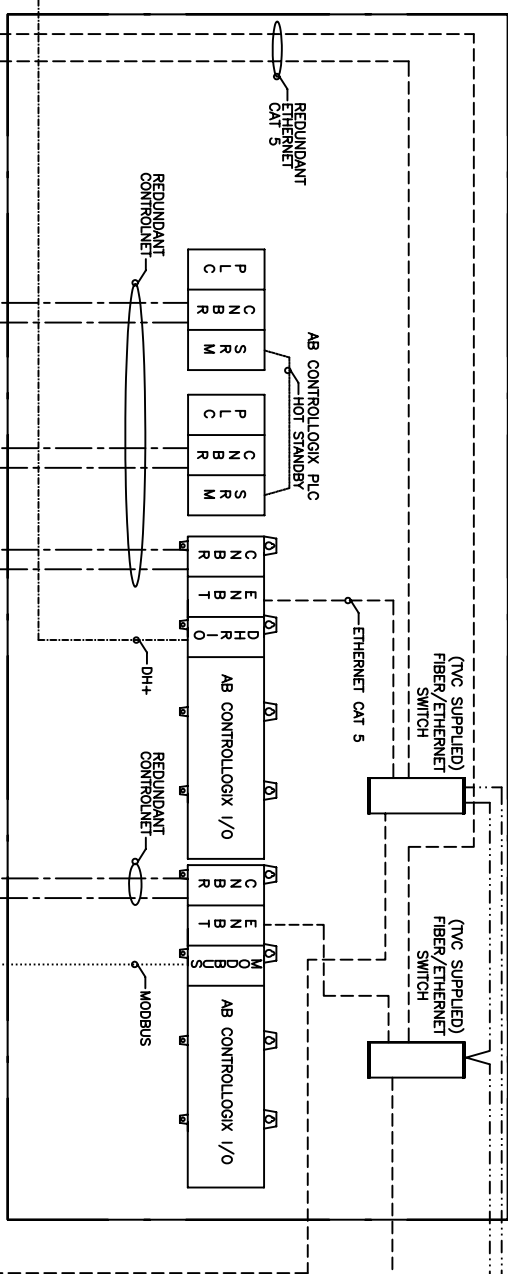
DRAWING NO. 0851-114

LEGEND

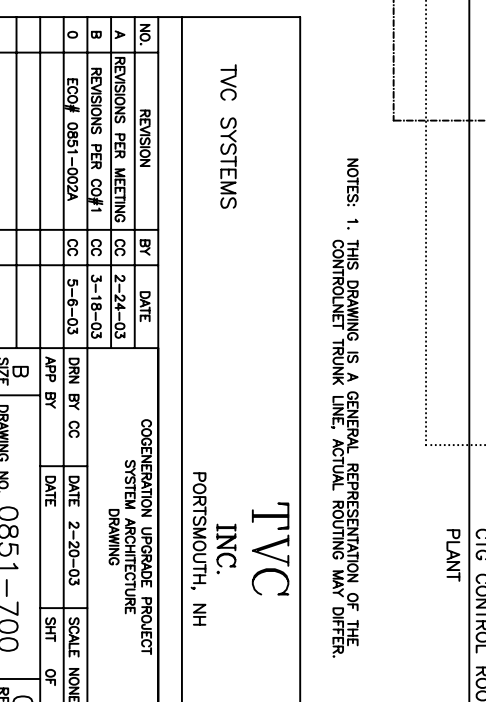
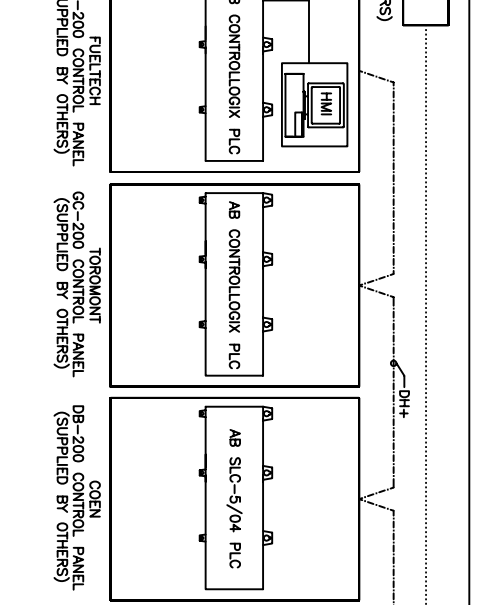
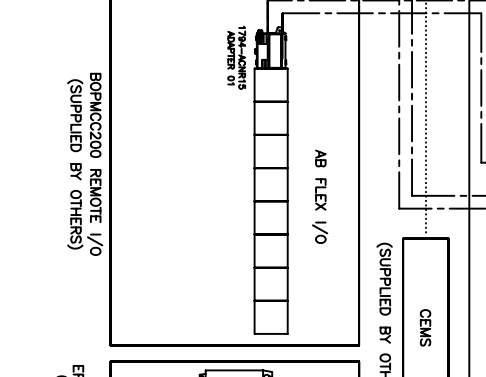
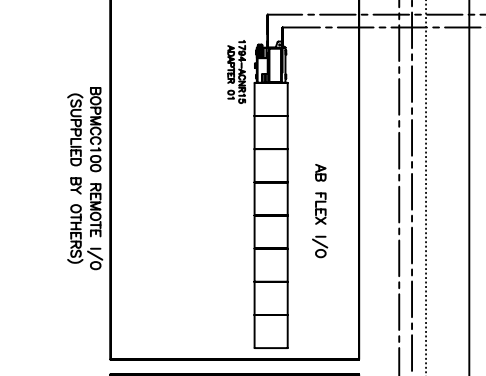
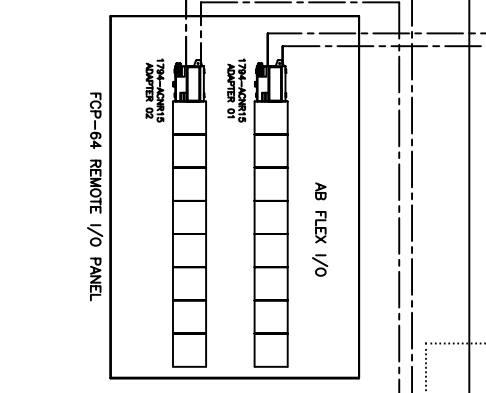
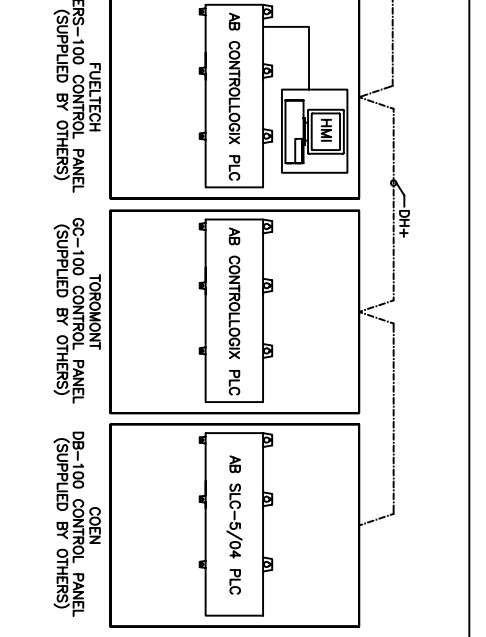
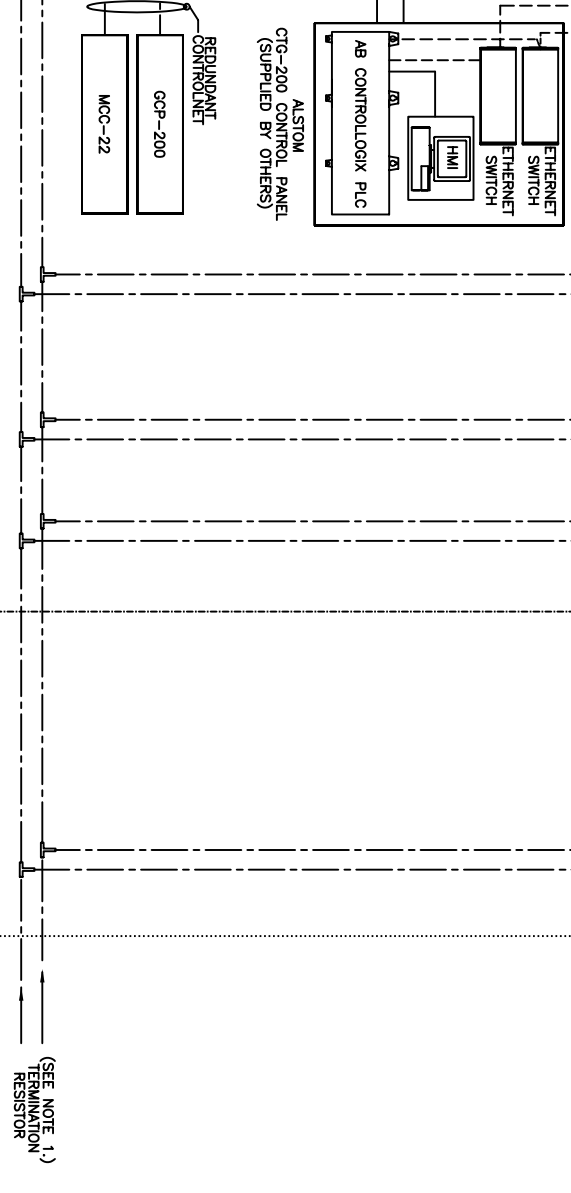
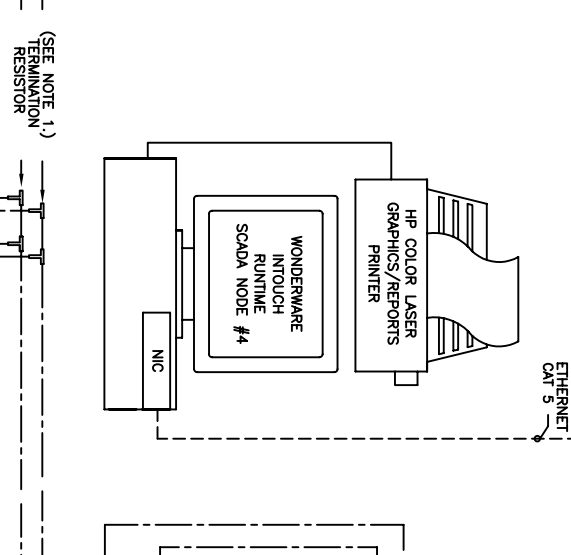
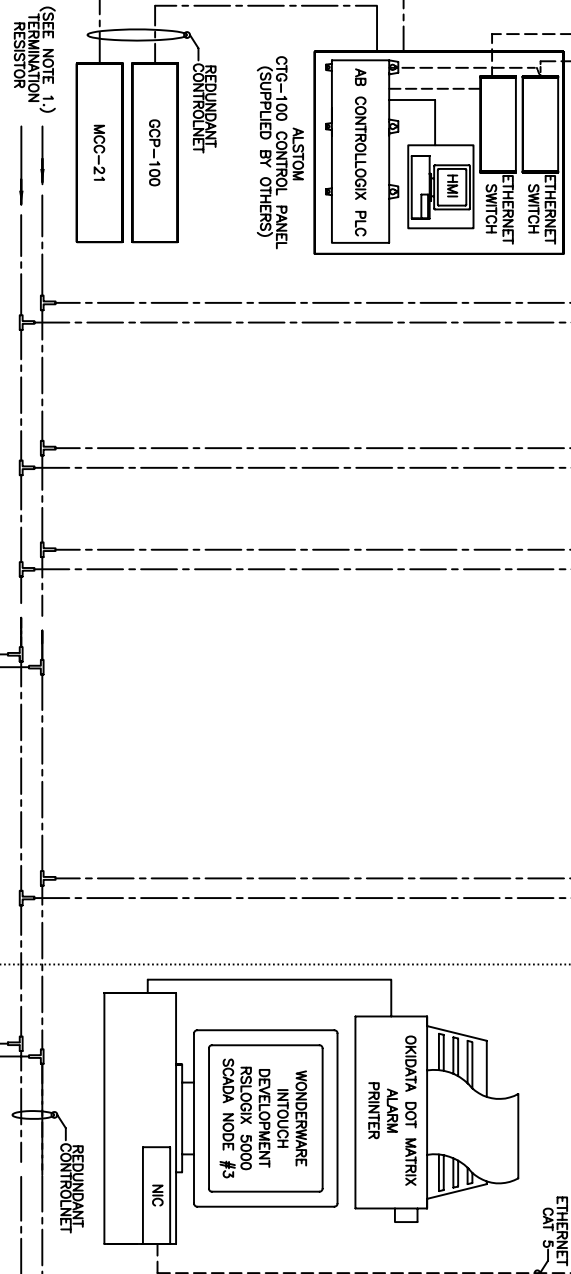
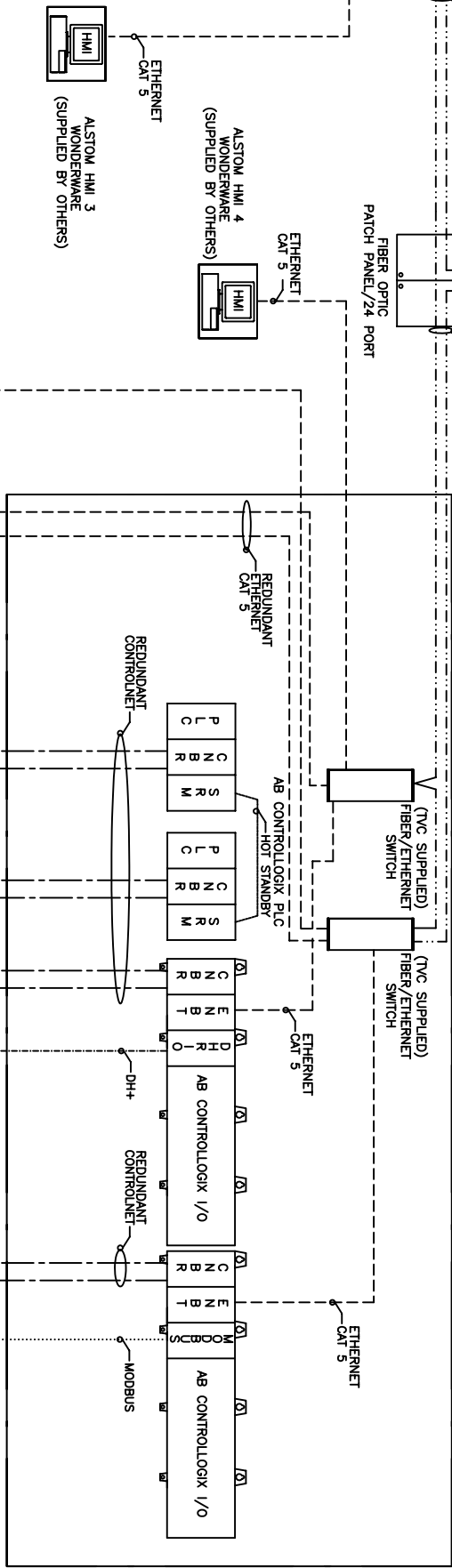
- - - - - = ETHERNET CABLE CAT. 5
- - - - - = FIBER OPTIC CABLE 62.5/125 MULTIMODE TERMINATED WITH "ST" CONNECTORS
- - - - - = CONTROLNET R66 COAXIAL CABLE
- SEE NOTE 1
- - - - - = DATA HIGHWAY PLUS (DHP)
- - - - - = MODBUS/RS485 3 CONDUCTOR WITH SHIELD



BOP100, CP-101 MASTER PLC PANEL



BOP200, CP-200 MASTER PLC PANEL



NOTES: 1. THIS DRAWING IS A GENERAL REPRESENTATION OF THE CONTROLNET TRUNK LINE; ACTUAL ROUTING MAY DIFFER.

PLANT

CTG CONTROL ROOM

MAIN CONTROL ROOM

CTG CONTROL ROOM

PORTSMOUTH, NH

TVC INC.

COGENERATION UPGRADE PROJECT SYSTEM ARCHITECTURE DRAWING

NO.	REVISION	BY	DATE
A	REVISIONS PER MEETING	CC	2-24-03
B	REVISIONS PER CO#1	CC	3-18-03
0	ECOP# 0851-002A	CC	5-6-03

NO.	REVISION	BY	DATE	SCALE
A	REVISIONS PER MEETING	CC	2-24-03	NONE
B	REVISIONS PER CO#1	CC	3-18-03	NONE
0	ECOP# 0851-002A	CC	5-6-03	NONE

SIZE B DRAWING NO. 0851-700 REV 0