







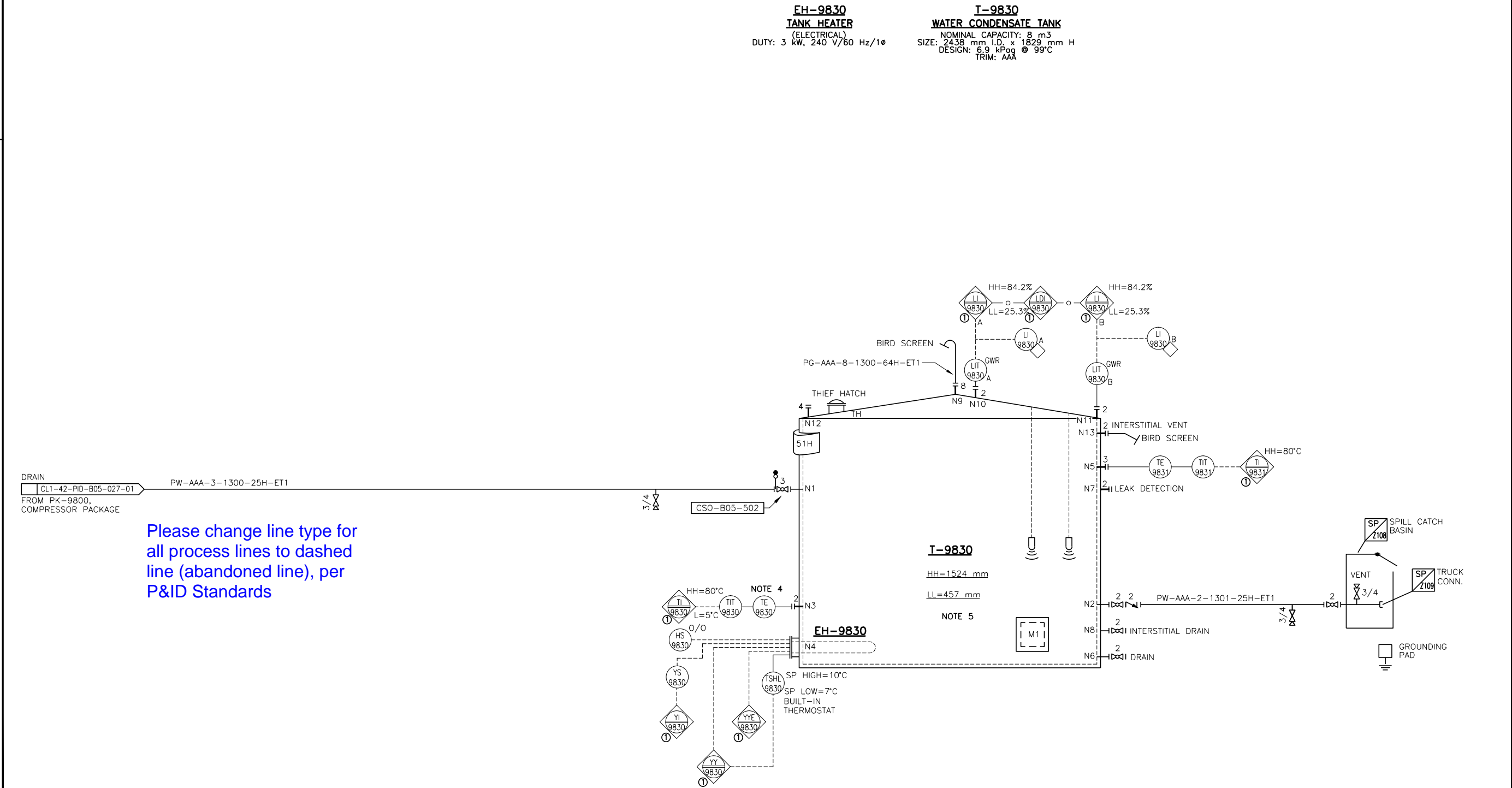







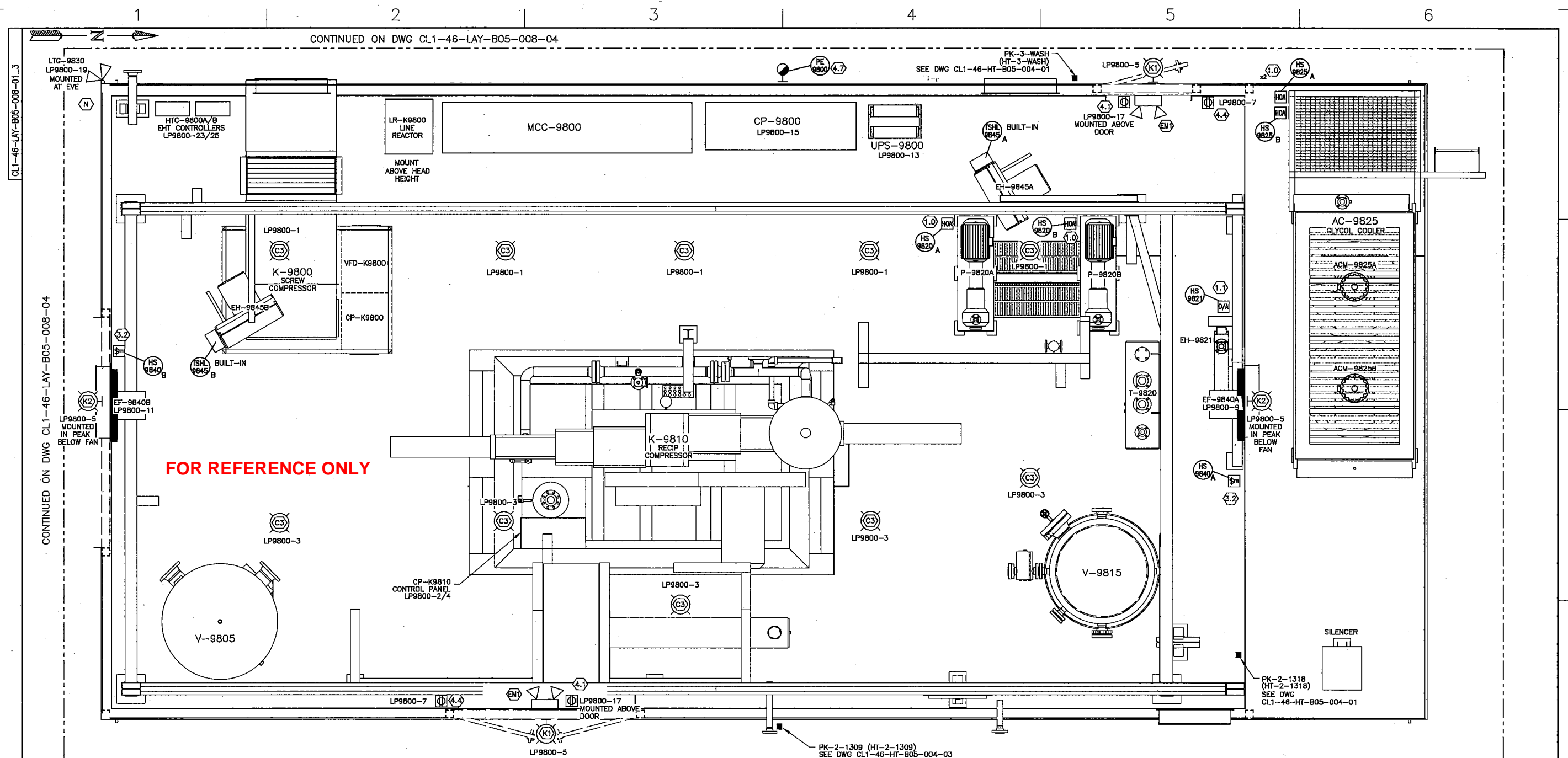
CL142PIDB0502801\_4

Z:\CAD\PIPING\CHRISTINA LAKE (PID)\CL1 OPERATIONS - 2003 - AS-BUILT\ISSUED\INDEX REV. 117\CL142PIDB0502801\_4.dwg Lynn Corden 11/6/2015 8:57 AM



REFERENCE NUMBER	REFERENCE TITLE	STAMPS	REV NO	REVISION	DATE	DRN	CKD	DES	LDE	PE	CONSULTANT NAME AND LOGO	TITLE	DRAWING NO.	REVISION NO.
			2Z	AS-BUILT - PROJECT CVE11002; SUPERSEDES REV. 0Z	2015/06/15	RP	GL		RG	EN	 Cenovus FCCL Ltd	CHRISTINA LAKE OFFSITES 'B' POD WELL PADS B05-8 RISE RATE CONTROL CONDENSATE TANK T-9830	CL1-42-PID-B05-028-01	4.B.0
			3	AS-BUILT BASE CASE; SUPERSEDES REV. 2Z	2015/06/15	JE	GL		RG	EN				
			4	BASE CASE; AS-BUILT SUPERSEDES REV. 3 - RDN-MECH-B05-028-01	2015/11/06	DI								
			4.B.0	ISSUED FOR CONSTRUCTION; MOC-7531	2018/07/04	JW	DK			DK				
											REVISION DESCRIPTION			
											PROJECT NO.			
											LSD			
											ISSUE DATE	SCALE		
											2018/07/04	NONE		





TYPICAL STANDARD INSTALLATION DWGS		NOTES:	
<div><div><div>04</div><div>TR-STD-F-002</div></div><div><div>05</div><div>TR-STD-F-002</div></div><div><div>12</div><div>TR-STD-F-002</div></div></div> <div><div><div>01</div><div>TR-STD-F-004</div></div><div><div>04</div><div>TR-STD-F-004</div></div></div> <div><div><div>02</div><div>TR-STD-F-005</div></div><div><div>03</div><div>TR-STD-F-005</div></div><div><div>06</div><div>TR-STD-F-005</div></div></div> <div>SEE NOTE 5</div>		<div>1. ALL INSTRUMENT, EQUIPMENT AND BUILDING NUMBERS ARE PREFIXED WITH "B05-".</div> <div>2. EQUIPMENT MOUNTING HEIGHTS AS PER SPECIFICATION TR-46-SPC-00-016-001 (SECTION 2.2.2)</div> <div>3. CABLE TERMINATIONS ARE TO BE DONE AS PER SPECIFICATION TR-46-SPC-00-016-001 (SECTION 2.2.4)</div> <div>4. INTERIOR FIXTURE (250WATT HPS) QUANTITY = 10 EXTERIOR FIXTURE (150WATT HPS) QUANTITY = 2 &amp; (70WATT) QUANTITY = 2 INTERIOR RECEPTACLE QUANTITY = 2 EMERGENCY FIXTURE RECEPTACLE QUANTITY = 2 EMERGENCY FIXTURE QUANTITY = 2</div> <div>5. EXHAUST FAN INSTALLATION DOES NOT INCLUDE THERMOSTAT.</div>	
REFERENCE NUMBER	REFERENCE TITLE	STAMPS	
LIGHTING PANEL SCHEDULE	CL1-46-PSD-B05-008-01		
CONDUIT AND CABLE SCHEDULE	CL1-46-SCD-B05-008		
SINGLE LINE DIAGRAM	CL1-46-SLD-B05-002		
FIXTURE SCHEDULE AND BILL OF MATERIALS	CL1-46-SCD-00-004-01/02/03/04		

0 METRES

1

2

0 FEET

5

1:20

PACKAGE NO.

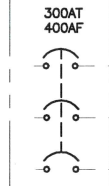
REV NO	REVISION	DATE	DRN	CHKD	DES	LDE	PE	CONSULTANT NAME AND LOGO	TITLE	
22	AS BUILT PROJECT ONE1002 SUPERSEDES REVS 02 & 12	15/07/27	IS	SS			EN	<div>cenovusENERGY</div> <div>Cenovus FCCL Ltd</div>	CHRISTINA LAKE OFFSITES WELLPAD B05 RISE RATE CONTROL COMPRESSOR PACKAGE – PK-9800/BU-9800 ELECTRICAL LAYOUT	
3	AS BUILT – BASE CASE; SUPERSEDES REV 22	15/07/27	IS	SS						
								REVISION DESCRIPTION		
								AS BUILT – BASE CASE		
								PROJECT NO.		
								LSD		
								ISSUE DATE	SCALE	DRAWING NO.
								15/07/27	1:20	CL1-46-LAY-B05-008-01
										REVISION NO.
										3



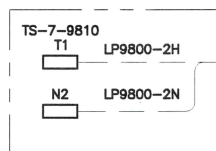
CONDUIT AND CABLE SCHEDULE																
CONDUIT OR CABLE NO	APPLICATION	LOAD		FROM	RUN	TO	CABLE/CONDUIT		WIRE						REMARKS	
		HP KW KVA	VOLTS				TYPE	CONDUIT SIZE	SIZE	QTY	INSUL	VOLTS	SPARE			
P-9820A	POWER	10HP	480VAC	MCC-9800	TRAY	P-9820A GLYCOL PUMP	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
C-9820A	CONTROL	-	120VAC	MCC-9800	TRAY	HS-9820A (P-9820A GLYCOL PUMP)	TECK	-	#14 AWG	3C	RW90XLPE	600	-	-		
P-9820B	POWER	10HP	480VAC	MCC-9800	TRAY	P-9820B GLYCOL PUMP	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
C-9820B	CONTROL	-	120VAC	MCC-9800	TRAY	HS-9820B (P-9820B GLYCOL PUMP)	TECK	-	#14 AWG	3C	RW90XLPE	600	-	-		
P-ACM9825A	POWER	3HP	480VAC	MCC-9800	TRAY	ACM-9820A GLYCOL COOLER FAN	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
C-ACM9825A	CONTROL	-	120VAC	MCC-9800	TRAY	HS-9825A (ACM-9825A GLYCOL COOLER FAN)	TECK	-	#14 AWG	3C	RW90XLPE	600	-	-		
P-ACM9825B	POWER	3HP	480VAC	MCC-9800	TRAY	ACM-9820B GLYCOL COOLER FAN	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
C-ACM9825B	CONTROL	-	120VAC	MCC-9800	TRAY	HS-9825B (ACM-9825B GLYCOL COOLER FAN)	TECK	-	#14 AWG	3C	RW90XLPE	600	-	-		
P-EH9821	POWER	6kW	480VAC	MCC-9800	TRAY	EH-9821 GLYCOL HEATER	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
C-EH9821	CONTROL	-	120VAC	MCC-9800	TRAY	HS-9821 (EH-9821 GLYCOL HEATER)	TECK	-	#14 AWG	2C	RW90XLPE	600	-	-		
P-EH9845A	POWER	20kW	480VAC	MCC-9800	TRAY	EH-9845A UNIT HEATER	TECK	-	#8 AWG	3C	RW90XLPE	600	-	-		
P-EH9845B	POWER	20kW	480VAC	MCC-9800	TRAY	EH-9845B UNIT HEATER	TECK	-	#8 AWG	3C	RW90XLPE	600	-	-		
P-K9800-1	POWER	115HP	480VAC	MCC-9800	TRAY	LR-K9800 LINE REACTOR	TECK	-	#2/0 AWG	3C	RW90XLPE	600	-	-		
P-K9800-2	POWER	115HP	480VAC	LR-K9800 LINE REACTOR	TRAY	K-9800 SCREW COMPRESSOR PACKAGE	TECK	-	#2/0 AWG	3C	RW90XLPE	600	-	-		
C-K9800-1	CONTROL	-	24VDC	CP-9800 CONTROL PANEL	TRAY	CP-K9800 CONTROL PANEL (K-9800 SCREW COMPRESSOR PACKAGE)	TECK	-	#14 AWG	10C	RW90XLPE	600	4C	-		
C-K9800-2	CONTROL	-	12VDC	CP-9800 CONTROL PANEL	TRAY	CP-K9800 CONTROL PANEL (K-9800 SCREW COMPRESSOR PACKAGE)	TECK	-	#14 AWG	4C	RW90XLPE	600	2C	-		
P-K9810	POWER	100HP	480VAC	MCC-9800	TRAY	K-9810 RECIP. COMPRESSOR PACKAGE	TECK	-	#2/0 AWG	3C	RW90XLPE	600	-	-		
C-K9810-1	CONTROL	-	24VDC	CP-9800 CONTROL PANEL	TRAY	CP-K9810 CONTROL PANEL (K-9810 RECIP. COMPRESSOR PACKAGE)	TECK	-	#14 AWG	6C	RW90XLPE	600	2C	-		
C-K9810-2	CONTROL	-	12VDC	CP-9800 CONTROL PANEL	TRAY	CP-K9810 CONTROL PANEL (K-9810 RECIP. COMPRESSOR PACKAGE)	TECK	-	#14 AWG	4C	RW90XLPE	600	2C	-		
P-CP-K9810	CONTROL POWER	-	120VAC	CP-9800 CONTROL PANEL	TRAY	CP-K9810 CONTROL PANEL (K-9810 RECIP. COMPRESSOR PACKAGE)	TECK	-	#12 AWG	4C	RW90XLPE	600	-	-		
P-UPS-9800	POWER	-	120VAC	LP-9800 PANEL (LOCATED IN MCC-9800)	TRAY	UPS-9800 POWER SUPPLY	TECK	-	#12 AWG	2C	RW90XLPE	600	-	-		
C-UPS-9800	CONTROL	-	24VDC	CP-9800 CONTROL PANEL	TRAY	UPS-9800 POWER SUPPLY	TECK	-	#14 AWG	10C	RW90XLPE	600	4C	-		
UPS-CP-9800	POWER	-	24VDC	UPS-9800 POWER SUPPLY	TRAY	CP-9800 CONTROL PANEL	TECK	-	#10 AWG	2C	RW90XLPE	600	-	-		
P-CP-9800	POWER	-	120VAC	LP-9800 PANEL (LOCATED IN MCC-9800)	TRAY	CP-9800 CONTROL PANEL	TECK	-	#12 AWG	20C	RW90XLPE	600	4C	-		
C-PE-9800	CONTROL	-	120VAC	CP-9800 CONTROL PANEL	TRAY	PE-9800 PHOTO CELL	TECK	-	#12 AWG	3C	RW90XLPE	600	-	-		
P-EF9840A-1	POWER	-	120VAC	CP-9800 CONTROL PANEL	TRAY	HS-9840A (EF-9840A EXHAUST FAN)	TECK	-	#12 AWG	2C	RW90XLPE	600	-	-		
P-EF9840A-2	POWER	-	120VAC	HS-9840A (EF-9840A EXHAUST FAN)	SURFACE	EF-9840A EXHAUST FAN	TECK	-	#12 AWG	2C	RW90XLPE	600	-	-		
P-EF9840B-1	POWER	-	120VAC	CP-9800 CONTROL PANEL	TRAY	HS-9840B (EF-9840B EXHAUST FAN)	TECK	-	#12 AWG	2C	RW90XLPE	600	-	-		
P-EF9840B-2	POWER	-	120VAC	HS-9840B (EF-9840B EXHAUST FAN)	SURFACE	EF-9840B EXHAUST FAN	TECK	-	#12 AWG	2C	RW90XLPE	600	-	-		
C-MCC-9800-1	CONTROL	-	24VDC	CP-9800 CONTROL PANEL	TRAY	MCC-9800	TECK	-	#14 AWG	30C	RW90XLPE	600	8C	-		
C-MCC-9800-2	CONTROL	-	120VAC	CP-9800 CONTROL PANEL	TRAY	MCC-9800	TECK	-	#14 AWG	30C	RW90XLPE	600	6C	-		
			</													

CL146SCHB0501001\_3

MCC-9800



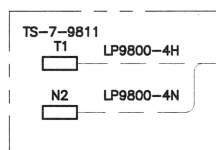
CP-9800



CONT'D ON DWG  
CL1-47-PNL-B05-002-03C

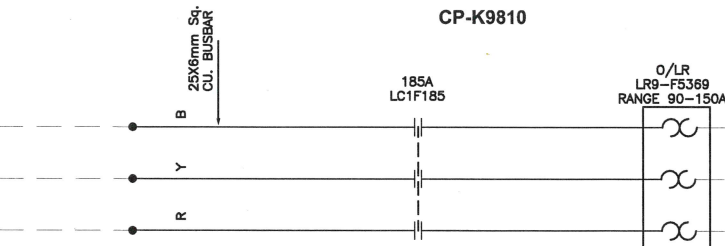
FOR REFERENCE ONLY

CP-9800

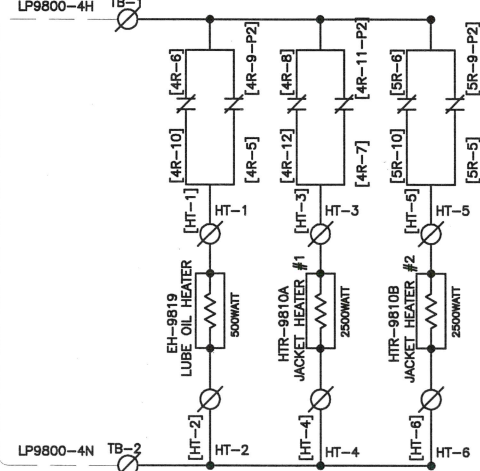
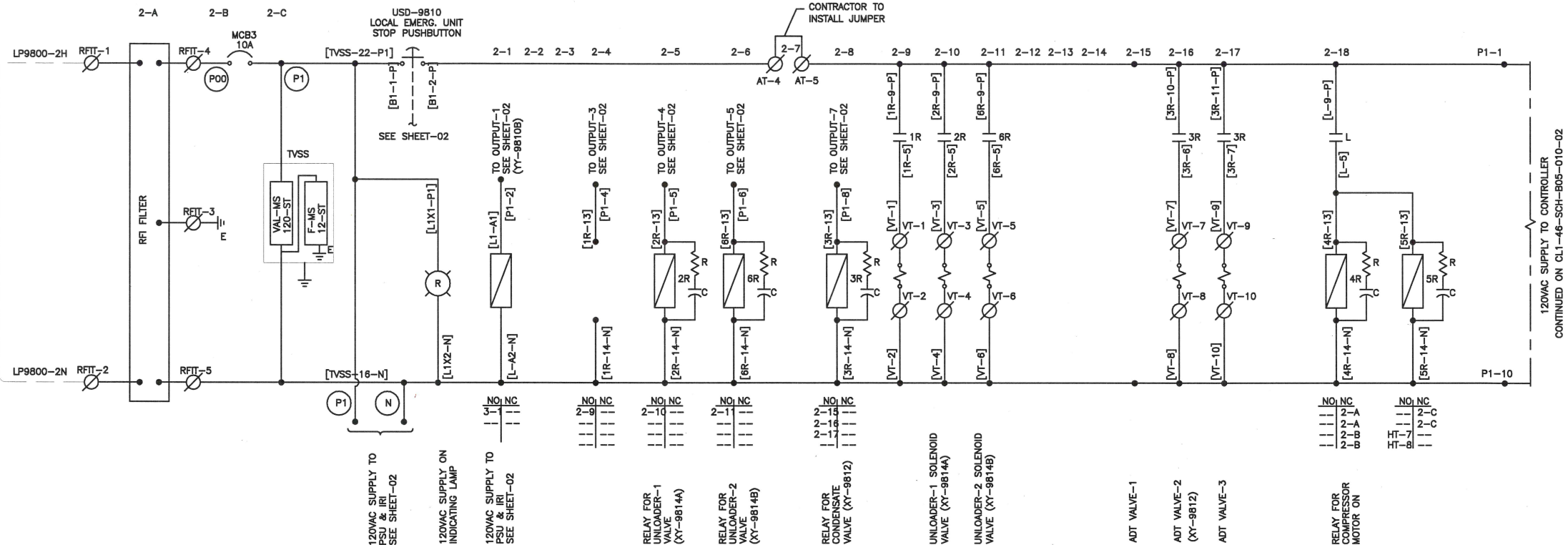


CONT'D ON DWG  
CL1-47-PNL-B05-002-03C

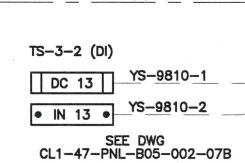
CP-K9810



MOTOR DATA	
MOTOR	100HP [FV]
FULL LOAD CURRENT	121A [W/O SF]
FULL LOAD CURRENT	150A [WITH SF]
VOLTS	460V
PHASE	3
FREQUENCY	60HZ
SERVICE FACTOR	1.15
TYPE	SQ. CAGE



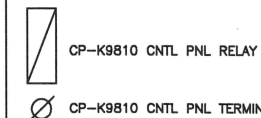
CP-9800



PART OF  
C-K9810-1



LEGEND



PACKAGE NO.


REFERENCE NUMBER	REFERENCE TITLE	STAMPS	REV NO	REVISION	DATE	DRN	CKD	DES	LDE	PE	CONSULTANT NAME AND LOGO	TITLE	DRAWING NO.	REVISION NO.
			3	BASE CASE; SUPERSEDES REV. 2	2015/11/05	DD	CAB					 Cenovus FCCL Ltd CHRISTINA LAKE COMMERCIAL PLANT WELLPAD B05 RISE RATE CONTROL K-9810 RECIP. COMPRESSOR (CP-K9810) CONTROL SCHEMATIC	CL1-46-SCH-B05-010-01	3
											REVISION DESCRIPTION BASE CASE			
											PROJECT NO. MOC-2925			
											ISSUE DATE 2015/11/05		SCALE NONE	






CSA NAMEPLATE	
SUPPLIER: CUTLER HAMMER	DATE: 10/28/2011
SHOP ORDER: 378A18001	
STYLE: MCC-2100	
ELECTRICAL CHARACTERISTICS	
480 VOLTS MAX, 3 W, 60HZ HOR. BUS 600A	
3 PH, VER. BUS 600A 3 PH	
BUS BRACING 42kA	

ARC-FLASH HAZARD RATING

 FLASH PROTECTIVE BOUNDARY (FPB)

 INCIDENT ENERGY AT SPECIFIED WORKING DISTANCE

FPB - SPECIFIED DISTANCE WHERE INCIDENT ENERGY IS 1.2 Cal/cm2

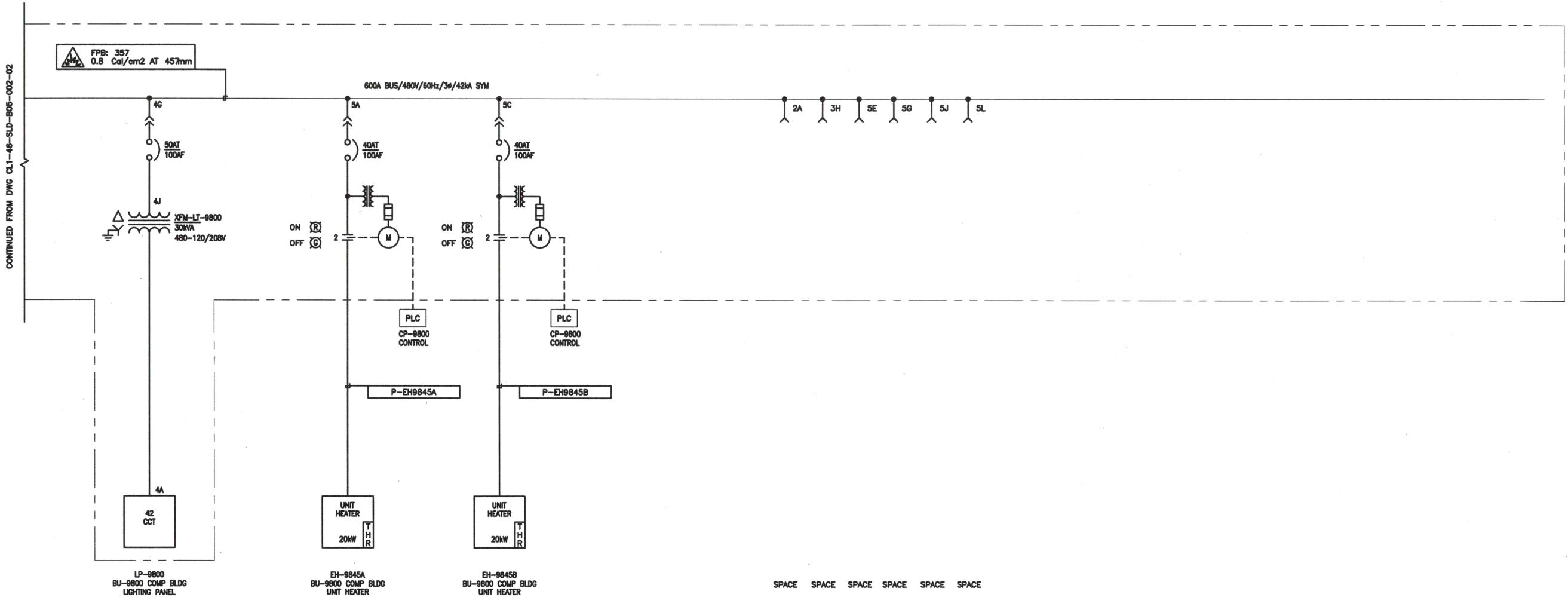
NOTES:

1. CONSULT ARC-FLASH REPORT FOR ENGINEERING METHODOLOGY WHEN INSTITUTING SAFETY & PERSONAL PROTECTIVE EQUIPMENT (PPE) PROCEDURES.

2. ARC-FLASH CALCULATIONS ARE COMPLIANT WITH IEEE STANDARD 1584.


3. ARC-FLASH VALUES PRESENTED HERE ARE VALID ONLY FOR AS DESIGNED SYSTEM AS SPECIFIED IN ARC-FLASH REPORT.

FOR REFERENCE ONLY



NOTES:  
1. ALL INSTRUMENT, EQUIPMENT AND BUILDING NUMBERS ARE PREFIXED WITH "B05-".

PACKAGE NO.

REFERENCE NUMBER		REFERENCE TITLE		STAMPS	REV NO	REVISION	DATE	DRN	CKD	DES	LDE	PE	CONSULTANT NAME AND LOGO		<div> Cenovus FCCL Ltd</div>		TITLE CHRISTINA LAKE COMMERCIAL PLANT WELLPAD B05 BU-9800 COMP BLDG 480V MCC-9800 SINGLE LINE DIAGRAM						
CL1-46-SLD-B05-002-01		MCC-9800 LAYOUT			4	BASE CASE; SUPERSEDES REV. 3	2015/11/26	DT	CAB														
									DT	CAB													
															</								