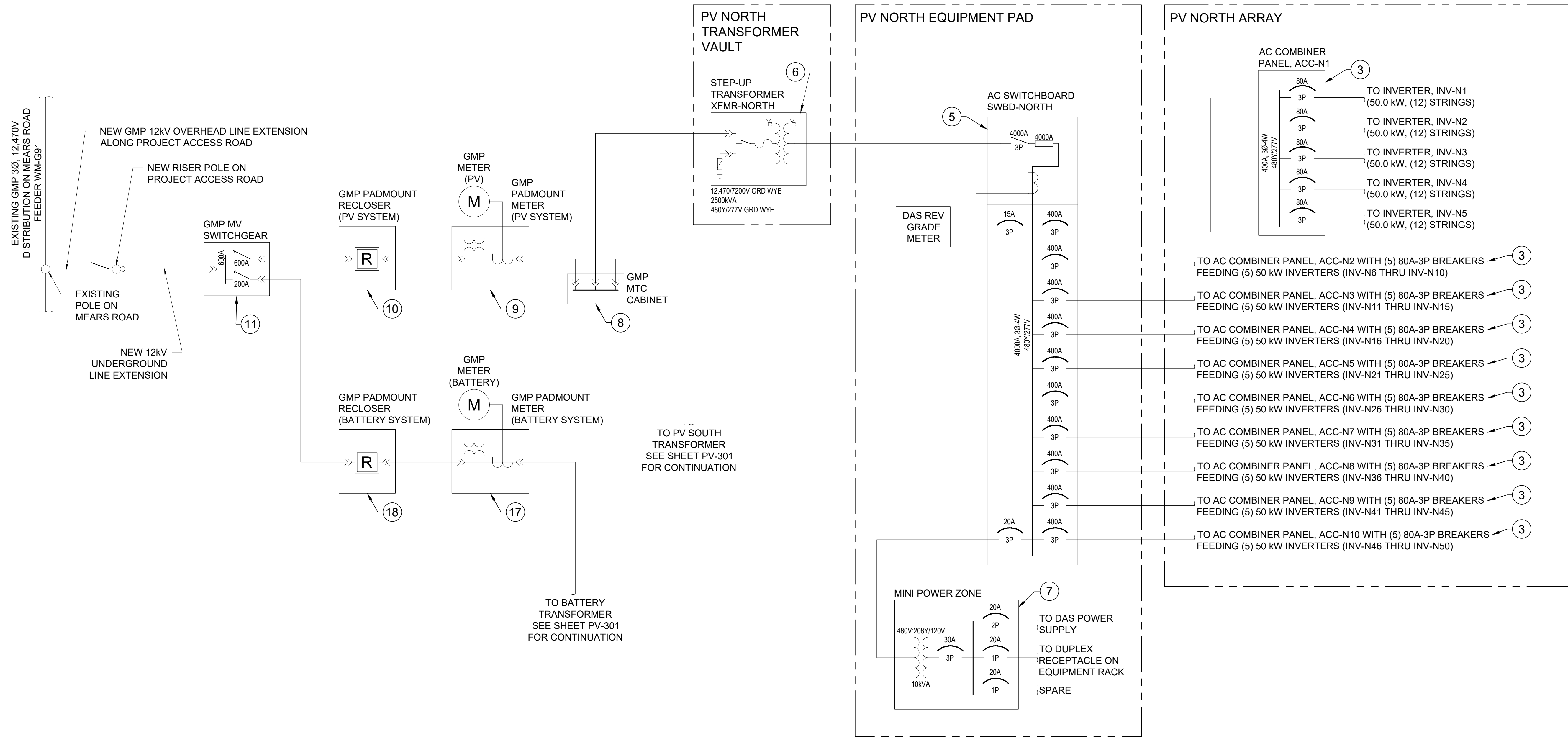


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PV SYSTEM RATING		
MODULE MANUFACTURER	CANADIAN SOLAR	
MODULE PART #	CS6U-325P	
MODULE WATTAGE	325	
TOTAL # MODULES	21,384	MODULES
TOTAL STC POWER RATING kW (DC)	6949.80	kWDC
TOTAL SYSTEM RATING kW (AC)	4950	kWAC
PV SERIES STRING RATINGS		
# OF SERIES IN STRING	18	MODULES
MAX Voc @ -28C	953.6	VOLTS
MAX STRING CURRENT (Isc)	9.34	AMPS
STC POWER RATING (PER STRING)	5850	WATTS

PV INVERTERS - INPUT & OUTPUT RATINGS			
INVERTER SIZE	50.0	KW	
# OF PARALLEL STRINGS	12	STRINGS	
DC OPERATING INPUT VOLTAGE	666.0	DC VOLTS	
DC OPERATING INPUT CURRENT	105.4	DC AMPS	
MAXIMUM SYSTEM VOLTAGE @ -28C	953.6	DC VOLTS	
MAXIMUM SHORT CIRCUIT CURRENT	140.1	DC AMPS	
INVERTER OUTPUT VOLTAGE	480	AC VOLTS	
INVERTER MAX OUTPUT CURRENT	60.0	AC AMPS	

PV SYSTEM - BILL OF MATERIALS (APPLIES TO PV-300 & PV-301)		
ITEM	QTY	DESCRIPTION
1	21,384	PV MODULE, 325 WATT, POLYCRYSTALLINE, 72-CELL, CANADIAN SOLAR CS6U-325P MODULE SPECS: Vmp = 37.0; Imp = 8.78; Voc = 45.5; Isc = 9.34
2	99	PV INVERTER, 50.0 kW, 200 TO 950 VDC INPUT, (15) DC INPUT STRINGS, 480Y/277V 3-PHASE GROUNDED WYE OUTPUT, CHINT POWER SYSTEMS MODEL CPS-SCA50KTL-DO/US-480
3	19	AC PANELBOARD, 480Y/277V, 3Ø-4W, 400A RATED BUS WITH MAIN LUG, WITH (5) 80A-3P BRANCH BREAKERS, NEMA 3R ENCLOSURE
4	1	AC PANELBOARD, 480Y/277V, 3Ø-4W, 400A RATED BUS WITH MAIN LUG, WITH (4) 80A-3P BRANCH BREAKERS, NEMA 3R ENCLOSURE
5	2	AC SWITCHBOARD, 480Y/277V, 3Ø-4W, 4000A RATED BUS WITH 4000A FUSED BOLTED PRESSURE SWITCH, (10) 400A-3P, (1) 15A-3P AND (1) 20A-3P BRANCH BREAKERS, NEMA 3R ENCLOSURE
6	2	TRANSFORMER, 2500kVA, 480Y/277V GRD WYE SECONDARY, 12,470Y/7,200V GRD WYE PRIMARY, LOOP-FEED, ELBOW MOUNTED 9kV LIGHTNING ARRESTORS
7	2	MINI-POWER ZONE, 480V PRIMARY, 208Y/120V 3Ø-4W SECONDARY, 10kVA, 12-CIRCUIT
8	1	MANUAL TERMINATION CABINET (MTC), 15kV RATED, 600A RATED, (1) SET OF 600A RATED INPUT BUSHINGS, (2) SETS OF 200A RATED OUTGOING BUSHINGS. MTC TO BE MOUNTED ON GMP APPROVED VAULT.
9	1	METERING CABINET, PAD MOUNTED, 15kV RATED, EXACT REQUIREMENTS TO BE DETERMINED. METER CABINET TO BE MOUNTED ON GMP APPROVED VAULT.
10	1	RECLOSER, PAD MOUNTED, 15kV RATED, EXACT REQUIREMENTS TO BE DETERMINED. RECLOSER TO BE MOUNTED ON GMP APPROVED VAULT.
11	1	MEDIUM VOLTAGE (MV) SWITCHGEAR, PAD MOUNTED, 15kV RATED, 600A RATED BUS, (1) 600A AND (1) 200A SWITCHES. EXACT REQUIREMENTS TO BE DETERMINED BY GMP. MV GEAR TO BE MOUNTED ON GMP APPROVED VAULT.

**SOLAR POWER ENGINEERING**

272 SPRING HOLLOW LANE  
MONTPELIER, VT 05602  
802.595.5510



**GMP MICROGRID MILTON  
4.95 MWAC PV & 2 MWAC  
BATTERY PROJECT**

129 MEARS ROAD  
MILTON, VERMONT 05468

DATE: 11/08/2017  
PROJ NO.: K&L\_MRS\_1117  
SCALE: NONE  
DRAWN BY: BPB

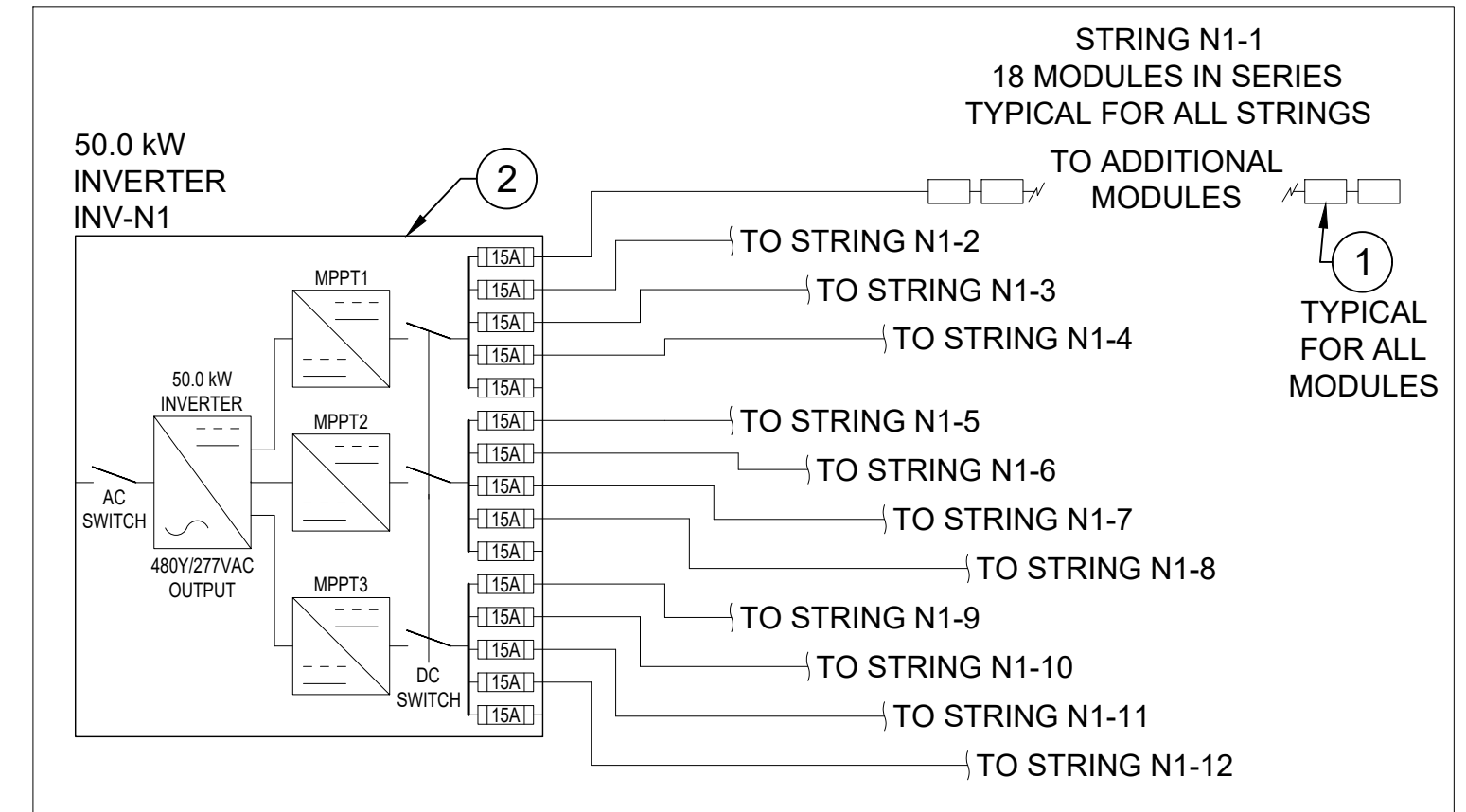
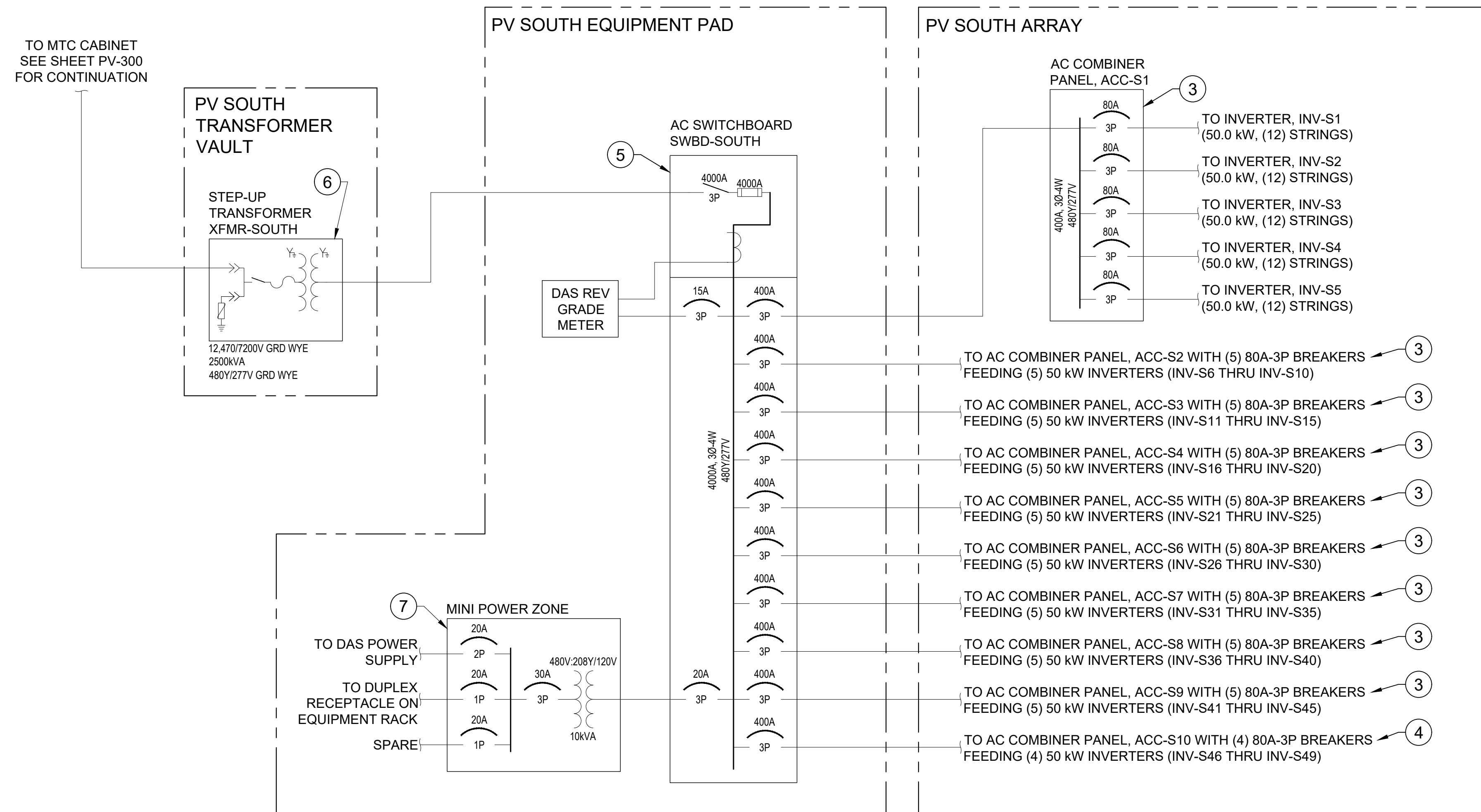
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**ONE-LINE DIAGRAM**

PV NORTH TRANSFORMER

**PV-300**

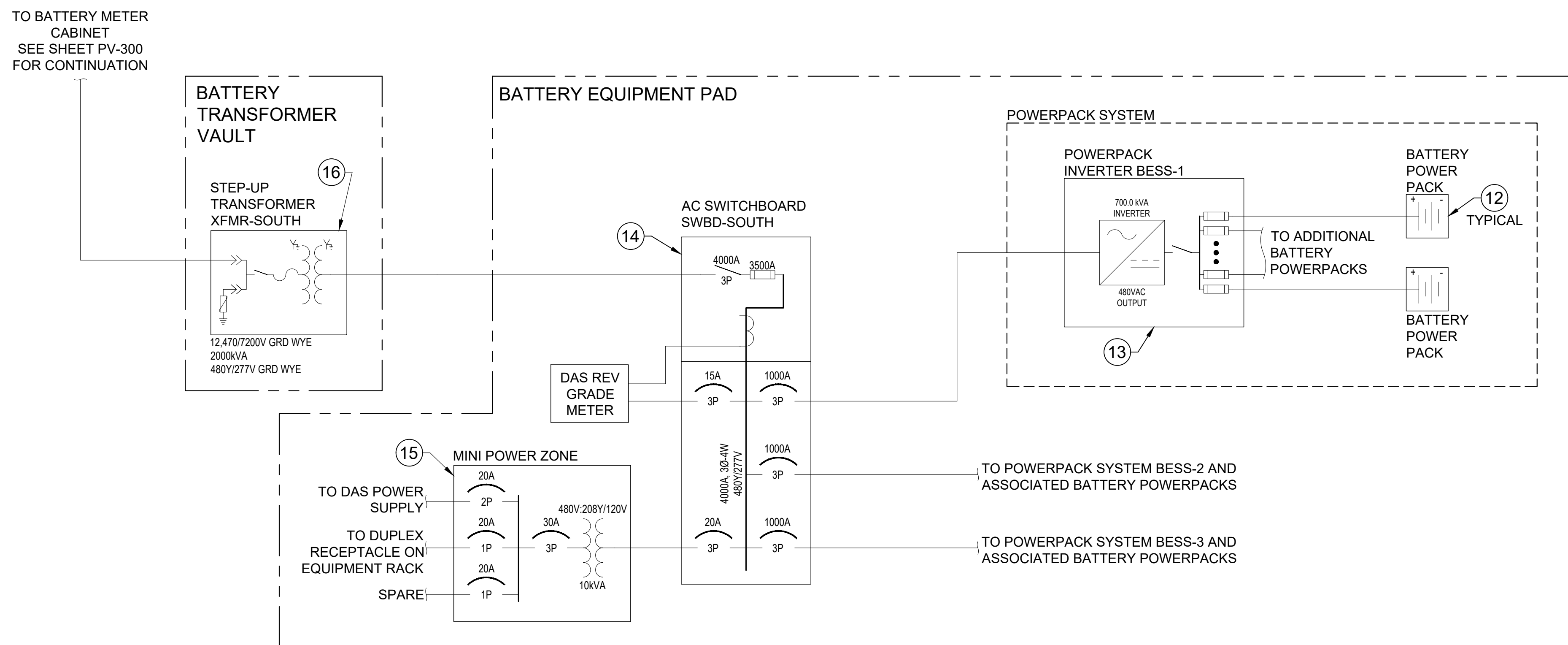
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**TYPICAL INVERTER WIRING**

NOTE: CONFIGURATION SHOWN IS FOR INVERTER N1 AND IS TYPICAL FOR ALL INVERTERS

GENERAL NOTE: REFER TO PV-300 FOR BILL OF MATERIALS APPLICABLE TO PV SYSTEM



BATTERY SYSTEM - BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
12	41	BATTERY POWERPACK, 50kW RATED, 200kWh, NEMA 3R ENCLOSURE, UL LISTED 1973, TESLA BATTERY POWERBACK
13	3	POWERPACK INVERTER, 700kVA RATED, 1000VDC INPUT, 480V 3Ø-3W OUTPUT, NEMA 4 ENCLOSURE, UL LISTED 1741, TESLA POWERBACK INVERTER
14	1	AC SWITCHBOARD, 480Y/277V, 3Ø-4W, 4000A RATED BUS WITH 3500A FUSED BOLTED PRESSURE SWITCH, (3) 1000A-3P, (1) 15A-3P AND (1) 20A-3P BRANCH BREAKERS, NEMA 3R ENCLOSURE
15	1	MINI-POWER ZONE, 480V PRIMARY, 208Y/120V 3Ø-4W SECONDARY, 10KVA, 12-CIRCUIT
16	1	TRANSFORMER, 2000kVA, 480Y/277V GRD WYE SECONDARY, 12,470Y/7,200V GRD WYE PRIMARY, LOOP-FEED, ELBOW MOUNTED 9KV LIGHTNING ARRESTORS
17	1	METERING CABINET, PAD MOUNTED, 15kV RATED, EXACT REQUIREMENTS TO BE DETERMINED. METER CABINET TO BE MOUNTED ON GMP APPROVED VAULT.
18	1	RECLOSER, PAD MOUNTED, 15kV RATED, EXACT REQUIREMENTS TO BE DETERMINED. RECLOSER TO BE MOUNTED ON GMP APPROVED VAULT.

**SOLAR POWER ENGINEERING**

272 SPRING HOLLOW LANE  
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**GMP MICROGRID MILTON  
4.95 MWAC PV & 2 MWAC  
BATTERY PROJECT**

129 MEARS ROAD  
MILTON, VERMONT 05468

DATE: 11/08/2017  
PROJ NO.: K&L\_MRS\_1117  
SCALE: NONE  
DRAWN BY: BPB

REVISIONS  
ISSUED FOR PERMITTING 11/08/2017

**ONE-LINE DIAGRAM  
PV SOUTH TRANSFORMER & BATTERY SYSTEM**

**PV-301**