

KEYED NOTES

- 1 INVERTER: SATCON POWER SYSTEMS UNIT OR EQUAL: UL1741 LISTED WITH INTEGRAL ANTI-ISLANDING PROTECTION. UL1741 LISTING INCLUDES COMPLIANCE WITH IEEE519 FOR POWER QUALITY, IEEE929 FOR INTERCONNECTION SAFETY AND NEC REQUIREMENTS. INTEGRATED DC DISCONNECT SWITCH SHALL COMPLY WITH NEC 690.15 REQUIREMENTS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR DETAILS.
- 2 AC DISCONNECT SHALL BE USED AS LOCKABLE UTILITY REQUIRED DISCONNECTING MEANS. THIS DISCONNECT SWITCH SHALL BE PLACED WITHIN 10 FEET OF THE UTILITY INTERCONNECTION POINT.
- 3 CONNECT PV SYSTEM OUTPUT TO THE SUPPLY SIDE OF THE SERVICE DISCONNECTING MEANS IN ACCORDANCE WITH NEC 230.82 AND 690.64.
- 4 PROVIDE AND INSTALL NEW DISCONNECT SWITCH AS REQUIRED BY NEC 690 PART III. THE DISCONNECTING MEANS SHALL MATCH DEVICE TYPE REQUIRED BY LOCAL UTILITY COMPANY (PG&E).
- 5 THE COMBINER BOXES SELECTED AND PROVIDED BY CONTRACTOR.
- 6 NOT USED.
- 7 NOT USED.
- 8 NOT USED.
- 9 CONTRACTOR TO VERIFY WITH INVERTER'S MANUFACTURER ON AVAILABLE 120VAC CONTROL POWER OPTIONS. MINIMUM ONE (1) 15AMP 120VAC CIRCUIT IS REQUIRED.
- 10 WHERE IS APPLICABLE EXTERNAL SUB-ARRAY FUSIBLE COMBINER BOX SHALL BE PLACED WITHIN 10 FEET OF INVERTER DC INPUT CONNECTION POINT (TAPS NOT OVER 10FEET LONG) AND INSTALLATION SHALL COMPLY WITH NEC 240.21(B)(1). OTHERWISE PROVIDE AVAILABLE FROM INVERTER'S MANUFACTURER FUSIBLE COMBINER BOX OPTION. CONTACT INVERTER MANUFACTURER FOR DETAILS AND REQUIREMENTS.
- 11 PULL-BOX, NEMA 3R ENCLOSURE, READILY ACCESSIBLE, TO COMBINE MULTIPLE DC FEEDERS TO ONE CONDUIT. SIZED BY CONTRACTOR PER NEC REQUIREMENTS AND FIELD CONDITION.
- 12 DELETED.
- 13 APPLY A PERMANENT WARNING LABEL WITH THE FOLLOWING MARKING:
CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED
- 14 APPLY A PERMANENT WARNING LABEL WITH THE FOLLOWING MARKING (RATING PER AC WIRE SCHEDULE):
ACDS-1
UTILITY PHOTOVOLTAIC SYSTEM
AC DISCONNECT SWITCH
NOMINAL VOLTAGE: 208VAC
MAXIMUM CURRENT: 375AMPS
- 15 APPLY A PERMANENT LABEL WITH THE FOLLOWING OR EQUIVALENT MARKING:
ARRAY-1 ISOLATION SW. IS LOCATED AT (ACTUAL LOCATION)
ARRAY-2 ISOLATION SW. IS LOCATED AT (ACTUAL LOCATION)
- 16 MARKING SHOULD BE PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, EVERY 10 FEET, AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS AND ALL DC COMBINER AND JUNCTION BOXES WITH THE FOLLOWING MARKING:
CAUTION: SOLAR CIRCUIT

GENERAL NOTES

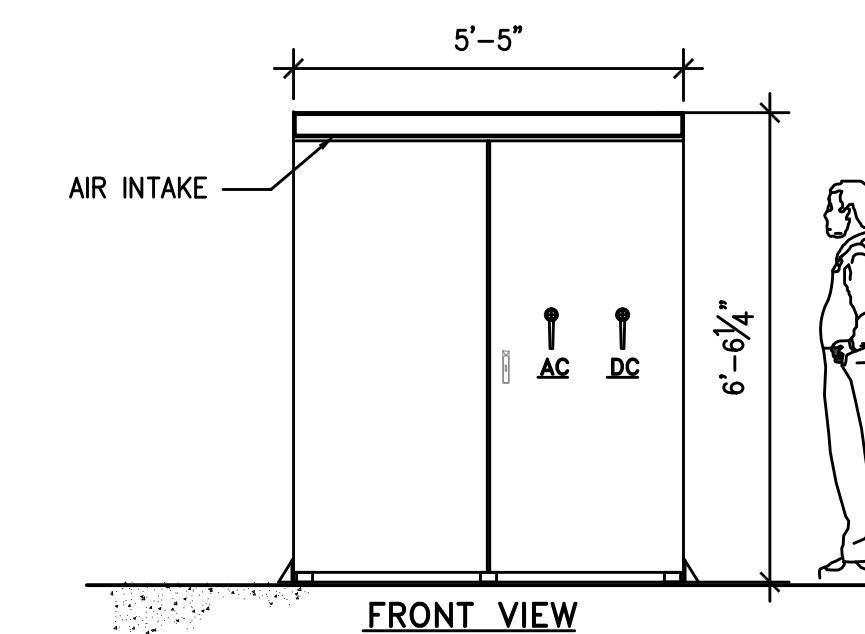
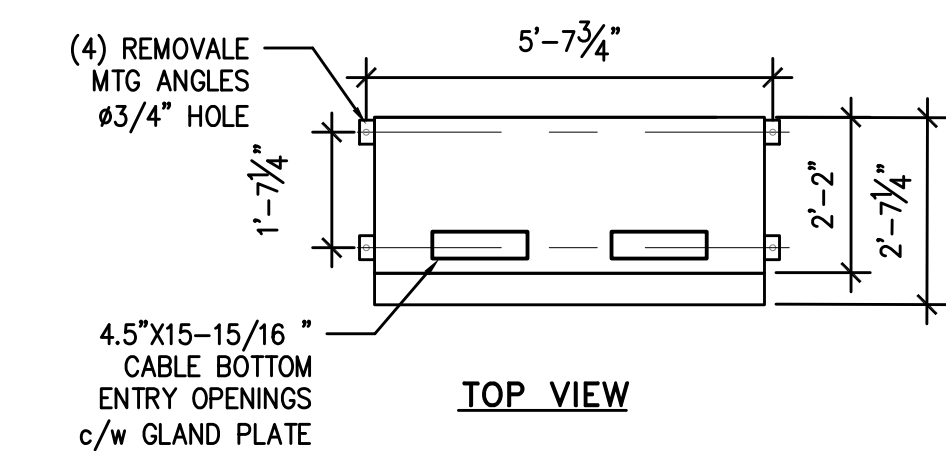
1. ALL EQUIPMENT SHALL BE UL LISTED.
2. ALL INVERTER WIRING AND GROUNDING METHODS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES. REFER TO PLANNING & INSTALLATION MANUAL FOR THIS GUIDANCE.
3. ALL DC ISOLATION SWITCHES AND COMBINER BOXES SHALL BE LABELED "WARNING - ELECTRIC SHOCK HAZARD - DO NOT TOUCH TERMINALS" AND "TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION" PER NEC 690.17.
4. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENT AND ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.134 AND 250.136(A). PHOTOVOLTAIC MODULES TO BE GROUNDED USING FACTORY GROUND POINT ONLY.
5. PV SYSTEM MUST BE MARKED WITH WORDING AND LOCATION AS DESCRIBED IN KEYED NOTES NUMBER 13 THROUGH 15. MATERIALS USED FOR MARKING MUST BE WEATHER RESISTANT. IT IS RECOMMENDED THAT UL969 BE USED AS STANDARD TO DETERMINE WEATHER RATING (UL LISTING OF MARKING IS NOT REQUIRED).
6. UNLESS OTHERWISE NOTED MARKING FORMAT SHOULD BE: WHITE LETTERING ON RED BACKGROUND, MINIMUM 3/8" LETTER HEIGHT, CAPITAL LETTERS IN ARIAL OR SIMILAR FONT, NON-BOLD, REFLECTIVE WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (DURABLE ADHESIVE MATERIALS MAY MEET THIS REQUIREMENT).
7. MARKING SHOULD BE PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, EVERY 10 FEET, AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS AND ALL DC COMBINER AND JUNCTION BOXES WITH THE FOLLOWING MARKING:
CAUTION: SOLAR CIRCUIT
8. ALL CONDUCTORS ARE COPPER UNLESS OTHERWISE NOTED.

PHOTOVOLTAIC ARRAYS CONFIGURATION

	ARRAY 1	ARRAY 2										Total
STRING NUMBER	9	45	0	0	0	0	0	0	0	0	0	54
PV MODULES QTY	126	630	0	0	0	0	0	0	0	0	0	756
ARRAY DESIGN KWDC MAX	28.98	144.9	0	0	0	0	0	0	0	0	0	173.88
INVERTER 1 INPUT MATRIX [KWDC]	28.98	144.9	0	0	0	0	0	0	0	0	0	173.88

PHOTOVOLTAIC MODULE

PARKSIDE ELEMENTARY SCHOOL						
PV module	Watts	Vmp	Voc	Imp	Isc	Module
	230	29.5	37	7.8	8.4	YINGLI
			Maximum fuse	=	15	YL230P-29b
String or panel (collection of # modules)	PV modules	String Vmp	String Voc		Ambient Corr.	String Vdc
	14	413	518	22-14degF	1.14	590.52



2 INVERTER DIMENSIONS
SCALE: NTS

1 ONE-LINE DIAGRAM
SCALE: NTS

CAUTION: THIS PLAN MAY BE REDUCED



1	AS BUILT	LMM	12-10-10
REV.	DESCRIPTION	BY	DATE
STELLAR ENERGY GP, INC. ROHNERT PARK, CA			
BLYMYER ENGINEERS, INC. ALAMEDA, CALIFORNIA			
SCALE	NTS	FOR	PARKSIDE ELEMENTARY SCHOOL PHOTOVOLTAIC ARRAYS
DATE	05-11-10	DRWN	OBOJ
CHECKED	LMM	TITLE	ONE LINE DIAGRAM
APPROVED		JOB	209004.1
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