PV-002 | NOTES AND SYMBOLS

PHOTOVOLTAIC SYSTEM LAYOUT PHOTOVOLTAIC DIMENSION PLAN

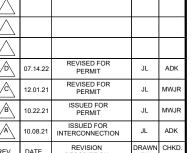
PV SYSTEM CIRCUITING PLAN

PHOTOVOLTAIC SYSTEM ONE-LINE DIAGRAM

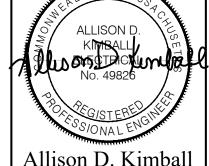
PHOTOVOLTAIC SYSTEM DETAILS SHEET 1 PHOTOVOLTAIC SYSTEM DETAILS SHEET 2

PHOTOVOLTAIC SYSTEM LABEL SHEET 1

PHOTOVOLTAIC SYSTEM LABEL SHEET 2 PHOTOVOLTAIC SYSTEM DATA SHEET 1 PHOTOVOLTAIC SYSTEM DATA SHEET 2







732.0900

COVER

SolBidie

STERLING GOLF MANAGEMENT GROUND MOUNTED PHOTOVOLTAIC SYSTEM 119.04 KWDC / 100.00 KWAC 276 PLAIN ST

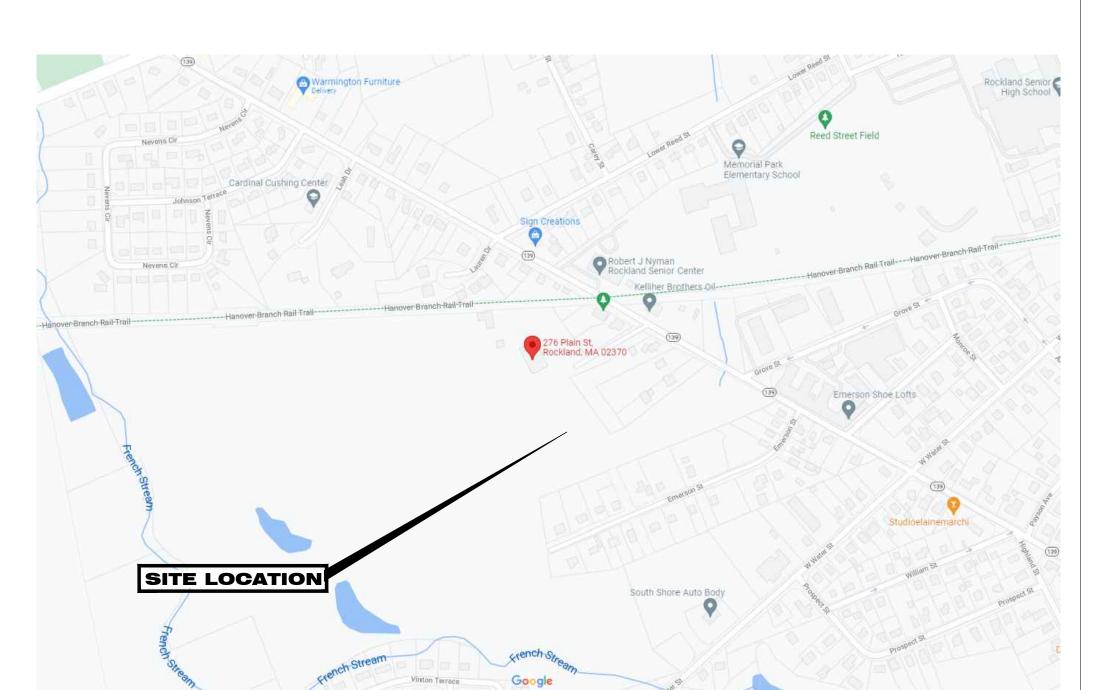
ROCKLAND, MA 02370

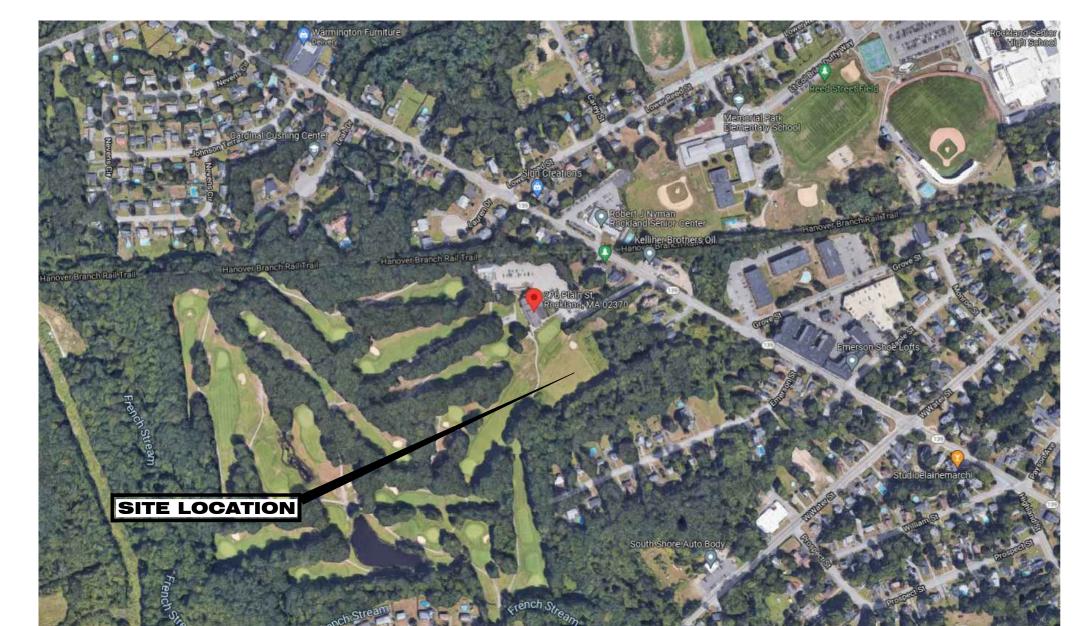
LOCATION MAP SCALE: NTS

Know what's below.

Call before you dig.







PROJECT OBJECTIVES: INSTALLATION OF SOLAR PANEL ARRAYS ON GROUND MOUNTED STRUCTURE AND ASSOCIATED EQUIPMENT TO PROVIDE A TOTAL OF 100 KWAC OF ELECTRICAL POWER TO THE EXISTING SERVICE.

- INSTALLATION OF SOLAR ARRAYS ON GROUND.
- INSTALLATION OF (2) 50 KW DC/AC INVERTER. ELECTRICAL CONDUIT & CABLES INSTALLED FROM SOLAR ARRAY TO THE
- ELECTRICAL CONDUIT AND CABLES FROM INVERTERS TO THE ELECTRICAL EQUIPMENT.

APPLICABLE CODES

2020 NEC (NFPA-70) 9TH EDITION OF MA STATE BUILDING CODE 780 CMR

UL 1703 - SOLAR MODULES UL 1741 - INVERTERS

THIS PHOTOVOLTAIC INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH THE 9TH EDITION OF MA STATE BUILDING CODE 780 CMR, THE NATIONAL ELECTRICAL CODE (NEC), AND ANY LOCAL BUILDING CODES CURRENTLY BEING ENFORCED BY THE AUTHORITY HAVING JURISDICTION (AHJ).

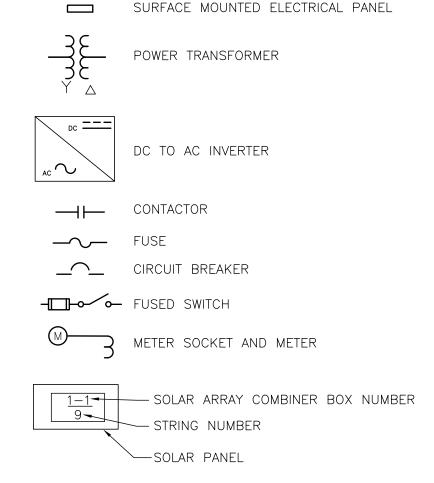
INVERTER NUMBER	INVERTER MODEL	INVERTER SIZE (KWAC)	INVERTER SECTION	# STRINGS	MODULE TYPE	MODULE SIZE (W)	TILT	AZIMUTH	NUMBER OF MODULES/ STRING	OPTIMIZER MODEL	NUMBER OF OPTIMIZERS/ STRING	SYSTEM SIZE (KWDC)	DC:AC
			1	2					21		11		
INV-1	INV-1 SOLAREDGE SE50KUS	50.00	2	2	QCELLS Q.PEAK DUO XL-G10.C	480	10°	230°, 50°	21/20	P960	11,10	60.00	1.20
	SESONOS		3	2					21		11		
			1	2					21		11		
INV-2	SOLAREDGE SE50KUS	50.00	2	2	QCELLS Q.PEAK DUO XL-G10.C	480	10°	230°, 50°	21/20	P960	11,10	59.04	1.18
	SESSINGS		3	2					20		10		
TOTAL:	-	100.00			-				248	-	128	119.04	1.19

SYMBOLS:

+72 MOUNT 72 INCHES TO

FLOOR OR GRADE

BOTTOM ABOVE FINISHED



PV HANDLING NOTES:

PANELS ARE WRAPPED AND SECURED IN THE CRATE BY A MEANS THAT WILL ALLOW THE INSTALLER TO REMOVE ONE PANEL AT A TIME WITHOUT COMPROMISING THE STABILITY OF THE REMAINING PANELS. (IF THE CRATE IS OPENED AND PANELS ARE REMOVED FROM THE WRONG END, PANEL STABILITY WILL BE COMPROMISED AND WILL CREATE A DANGEROUS SITUATION)

- 2. EACH INDIVIDUAL PHOTOVOLTAIC MODULE WEIGHS 58.4 LBS. FOR THE EASE AND SAFETY OF LIFTING, IT IS RECOMMENDED BY THE MANUFACTURER THAT THIS OPERATION BE PERFORMED BY NO LESS THAN TWO INSTALLERS. EACH INSTALLER SHALL USE THE CORRECT METHOD OF LIFTING AND PLACING.
- 3. ONCE A MODULE IS REMOVED FROM THE CRATE, NEVER LEAVE THE MODULE STANDING UNSUPPORTED OR UNSECURED. REMEMBER THAT DURING DAYLIGHT HOURS THE MODULE WILL BE PRODUCING 54 VDC. IF THE MODULE IS DAMAGED THERE IS A CHANCE THAT YOU COULD BE EXPOSED TO THE FULL VOLTAGE AND CURRENT BEING GENERATED. IF A MODULE IS SHIPPED DAMAGED OR BECOMES DAMAGED AT THE JOBSITE, CAREFULLY HANDLE THE MODULE AND PLACE IT OUT OF THE SUNLIGHT.
- 4. EVEN IF THE MODULE IS NOT DAMAGED, KEEP IN MIND THAT WHENEVER MODULES ARE EXPOSED TO SUNLIGHT THE MODULES AND BALANCE OF SYSTEM COMPONENTS CAN GENERATE UP TO 1,000 VDC. WHEN WORKING WITH THIS EQUIPMENT, MAKE SURE THAT YOU TAKE EVERY PRECAUTION TO AVOID CONTACT WITH ANY ELECTRICAL TERMINAL OR WIRE UNLESS SYSTEM VOLTAGE IS TESTED, LOCKED OUT, AND DEEMED SAFE FOR WORK.
- 5. IF YOU HAVE ANY QUESTIONS PERTAINING TO THE INSTALLATION, OPERATION OR FUNCTION OF ANY COMPONENTS THAT MAKE UP THIS PHOTOVOLTAIC SYSTEM, CONTACT THE PROJECT MANAGER AND THEY WILL ASSIST YOU IN EFFECTING A SAFE AND EFFICIENT INSTALLATION.
- 6. WHEN LIFTING THE CRATES OF PHOTOVOLTAIC MODULES ONTO THE ROOF, BE SURE THAT THE ROOF IS CAPABLE OF SUPPORTING THE ADDITIONAL DEAD WEIGHT OF THESE CRATES AND THAT THE LOAD IS DISTRIBUTED EVENLY.
- 7. BE SURE THAT THE CRANE OPERATOR IS IN CONTINUOUS COMMUNICATION WITH THE REPRESENTATIVES ON THE ROOF WHEN PLACING THE CRATES. DURING THIS OPERATION ALL WORKERS MUST BE WEARING OSHA APPROVED HEAD PROTECTION AND STEEL TOED SHOES.
- WHEN LANDING THE CRATES ON THE ROOF, BE SURE THAT THE CRATE IS FACING THE CORRECT DIRECTION FOR PANEL REMOVAL. THE END THAT IS MARKED "OPEN THIS END" SHOULD BE ACCESSIBLE SO THAT THE PANELS CAN BE REMOVED SAFELY.

ELECTRICAL NOTES:

- 1. IN EVERY PULL BOX AND IN ALL PLACES WHERE WIRES MAY NOT BE READILY IDENTIFIED BY NAMEPLATE MARKINGS ON THE EQUIPMENT TO WHICH THEY CONNECT, THE INSTALLATION CONTRACTOR WILL BE RESPONSIBLE FOR IDENTIFYING EACH CIRCUIT WITH A PLASTIC LABEL OR TAG.
- 2. THE LAYOUT OF THE CONDUIT SHOWN IN THIS DRAWING PACKAGE IS INDICATIVE ONLY. THE INSTALLATION CONTRACTOR WILL BE RESPONSIBLE FOR FIELD ROUTING AND LOCATING ALL CONDUITS AND ACCESSORIES TO SUIT SPECIFIC SITE CONDITIONS. THE INSTALLATION CONTRACTOR WILL COORDINATE ALL LOCATIONS WITH THE OWNER/GENERAL CONTRACTOR.
- 3. WHERE THE WIRING AND CABLE ROUTING IS NOT SHOWN AND THE DESTINATION IS ONLY INDICATED, THE INSTALLATION CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING AND LENGTHS REQUIRED.
- 4. ALL CALCULATIONS FOR WIRING SIZE ARE BASED ON THE ESTIMATED CONDUIT ROUTING THAT MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS. SHOULD THE CONDUIT LENGTHS INCREASE DUE TO RELOCATION OF THE SOURCE OR REROUTING OF THE CONDUITS, THE WIRING SIZES MAY NEED TO BE INCREASED. INCREASE WIRING SIZES WHERE REQUIRED TO MEET MINIMUM VOLTAGE DROP ALLOWANCES DEPENDENT UPON FINAL CONDUIT ROUTING. WHERE LENGTH OF WIRE INCREASES FROM ESTIMATES SHOWN IN SCHEDULE ON SHEET PV-200, KMB SHALL BE CONSULTED TO CONFIRM WIRE SIZES ARE ACCEPTABLE.
- 5. ALL WIRING SHALL BE RUN IN SPECIFIED CONDUIT. THE CONTRACTOR WILL BE REQUIRED TO SEEK APPROVAL BY THE GENERAL CONTRACTOR/DESIGN AGENCY PRIOR TO CHANGING ANY MATERIAL SPECIFICATIONS.
- 6. ANY BENDS IN THE CONDUIT OR RACEWAY SHALL NOT DAMAGE OR SIGNIFICANTLY CHANGE THE INTERNAL DIAMETER (NO KINKS).
- 7. ANY CONDUCTORS RUN IN A VERTICAL CONDUIT WILL BE SUPPORTED IN ACCORDANCE WITH NEC REQUIREMENTS.
- 8. THE INSTALLATION CONTRACTOR WILL INSTALL ALL WIRING MATERIALS IN A NEAT AND WORKMANLIKE MANNER. USE OF GOOD TRADE PRACTICES WILL BE ENFORCED AS REQUIRED BY CHAPTER 3 OF THE NEC.
- 9. WHERE APPLICABLE, THE INSTALLATION CONTRACTOR WILL ARRANGE CONDUIT IN SUCH A MANNER THAT WILL MAINTAIN HEADROOM AND IN A NEAT, INCONSPICUOUS MANNER. RUN PARALLEL AND AT RIGHT ANGLES TO STRUCTURAL MEMBERS, PROVIDE BOXES, FITTINGS, AND BENDS FOR CHANGE OF DIRECTION. INSTALLATION CONTRACTOR IS TO FASTEN ALL CONDUITS SECURELY IN PLACE.
- 10. THE INSTALLATION CONTRACTOR WILL SUPPORT CONDUIT USING STEEL OR MALLEABLE IRON STRAPS, LAY—IN ADJUSTABLE HANGERS, CLEVIS HANGERS AND SPLIT—HANGERS. HANGER SPACING SHALL BE 5'—0" MAXIMUM. THE CONTRACTOR WILL BE RESPONSIBLE FOR USING APPROVED BEAM CLAMPS FOR CONNECTION TO ANY STRUCTURAL MEMBERS.
- 11. THE INSTALLATION CONTRACTOR WILL PROVIDE PULL AND JUNCTION BOXES WHERE REQUIRED TO FACILITATE THE INSTALLATION OF WIRING, IN ADDITION TO THOSE THAT MAY BE SHOWN ON THE DRAWINGS. BENDS IN THE CONDUITS BETWEEN THE PULL BOXES SHALL NOT EXCEED THE EQUIVALENT OF FOUR 90 DEGREE BENDS.
- 12. ANY BENDS IN THE CONDUIT RUNS SHALL UTILIZE MANUFACTURER'S STANDARD ELBOWS WHERE PRACTICAL.
- 13. WHERE FIELD CUTTING IS REQUIRED, THE CONDUIT SHALL BE CUT SQUARE AND REAMED OR OTHERWISE FINISHED TO REMOVE ROUGH EDGES. . WHEN COMPLETE, ALL METAL FILINGS WILL BE DISPOSED OF PROPERLY.
- 14. WHERE CONDUIT SIZES ARE NOT SPECIFIED THE INSTALLATION CONTRACTOR WILL BE REQUIRED TO CONFORM TO THE NEC SPECIFICATIONS. THE MINIMUM ALLOWABLE CONDUIT SIZE SHALL BE
- 15. THE MINIMUM ALLOWABLE WIRING SIZE WILL BE #12 AWG. THE ONLY EXCEPTION WILL BE FOR SIGNAL AND/OR CONTROL WIRING.
- 16. SAFETY REGULATIONS INCLUDING BUT NOT LIMITED TO THE INFORMATION CONTAINED IN THE SAFETY MANUAL MUST BE OBSERVED BY THE INSTALLATION CONTRACTOR DURING THE CONSTRUCTION OF THIS PROJECT IN ACCORDANCE WITH THE SAME ESTABLISHED BY OWNER AND/OR GENERAL CONTRACTOR.
- 17. ALL ENCLOSURES SHALL BE NEMA 3R.
- 18. NO PENETRATIONS ARE PERMITTED ON THE TOP OF EQUIPMENT BOXES OR ENCLOSURES.
- 19. ALL EQUIPMENT AND WIREWAYS SHALL BE INSTALLED SUCH THAT THEY ARE ARRANGED TO DRAIN AND CABLES OR CONDUITS <u>CANNOT</u> COLLECT AND DRAIN WATER INTO EQUIPMENT.
- 20. WHERE CONDUIT IS INSTALLED ON ROOFTOP, THE CONDUIT SHALL BE RMC, RGS, EMT AND ASSOCIATED FITTINGS SHALL BE LISTED FOR USE OUTDOORS. CONDUIT SHALL BE MOUNTED WITH A MINIMUM OF 4" BETWEEN ROOFTOP AND BOTTOM OF CONDUIT.
- 21. ALL WIRING SHALL BE 90° RATED COPPER UNLESS OTHERWISE SPECIFIED.

GENERAL CONSTRUCTION NOTES:

- 1. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL DRAWINGS HAVE BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION." CONTRACTOR SHALL ENSURE THAT THEY HAVE THE LATEST SET OF CONSTRUCTION DRAWINGS PRIOR TO COMMENCING ANY WORK WHATSOEVER.
- 3. THESE PLANS ARE INTENDED TO BE USED TO DIRECT THE PROPOSED LAYOUT. DRAWINGS SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED. PLANS, ELEVATIONS AND DETAILS ARE INTENDED TO SHOW THE END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS.
- 4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
- 5. THESE PLANS ARE DESIGNED TO REFLECT OBSERVED FIELD CONDITIONS. CERTAIN CONDITIONS ARE ASSUMED TO COMPLY WITH GENERAL STANDARD CONSTRUCTION DESIGN METHODS AND PRINCIPLES, AND THE CONTRACTOR SHALL NOTE THAT NOT ALL AREAS OF STRUCTURAL ATTACHMENT HAVE BEEN OPENED OR SPECIFICALLY VERIFIED. THE CONTRACTOR IS THEREFORE REQUESTED TO NOTIFY THE ENGINEER IMMEDIATELY SHOULD ENCOUNTERED FIELD CONDITIONS VARY FROM THOSE DEPICTED ON THE DRAWINGS. KMB DESIGN GROUP, LLC WILL ISSUE FIELD CHANGE DIRECTION IF REQUIRED.
- 6. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE NOTED BY THE ENGINEER OF RECORD.
- 7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK PERFORMED AND MATERIALS INSTALLED TO BE IN STRICT CONFORMANCE, AS A MINIMUM STANDARD, WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, AND ALL OTHER LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND WITH LOCAL UTILITY COMPANY SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
- 8. THE CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, STUMPS, STONES, RUBBISH OR DEBRIS IN ACCORDANCE WITH ALL LOCAL AND ENVIRONMENTAL LAWS. NO MATERIALS OR EQUIPMENT SHALL BE PLACED ANYWHERE ON OR IN THE STRUCTURE WITHOUT MAKING ADEQUATE PROVISIONS TO PROTECT EXISTING PROPERTY. UPON COMPLETION, REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DURING CONSTRUCTION. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.
- 9. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR THEIR WORK AND ALL SUBCONTRACTORS.

SITE WORK GENERAL NOTES:

- 1. THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- 2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO:
 - FALL PROTECTIONCONFINED SPACE
 - ELECTRICAL SAFETY
 TRENCHING & EXCAVATION
 - TRENCHING & EXCAVATION
- 3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING.
- 4. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- 5. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH:
 - A. CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
 - B. CURRENT PREVAILING UTILITY COMPANY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

CONSTRUCTION SPECIFICATIONS:

- 1. THE CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH SPECIFICATIONS CONTAINED IN THE BID PACKAGE PREPARED BY KMB DESIGN GROUP, LLC AND THE CLIENT. CONTRACTOR SHALL ENSURE THAT THEY HAVE THE LATEST SET OF CONSTRUCTION DRAWINGS PRIOR TO COMMENCING ANY WORK WHATSOEVER.
- 2. IN THE EVENT OF A CONFLICT BETWEEN THE BID PACKAGE SPECIFICATIONS AND THESE NOTES, THE PROVISIONS OF THE CLIENTS SPECIFICATIONS SHALL TAKE PRECEDENCE.
- 3. THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT THEMSELVES WITH THE CONDITIONS AS THEY EXIST IN ORDER THAT ANY RESTRICTIONS PERTAINING TO THE WORK ARE UNDERSTOOD. ALL AREAS AND DIMENSIONS ARE INDICATED ON THE DRAWINGS AS ACCURATELY AS POSSIBLE, BUT ALL CONDITIONS SHALL BE VERIFIED BY EACH CONTRACTOR AND/OR SUBCONTRACTOR AT THE SITE. THE FAILURE OF THE CONTRACTOR TO EXAMINE OR RECEIVE ANY FORM, INSTRUMENT OR DOCUMENT, OR TO VISIT THE SITE, SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLIGATION WITH RESPECT TO THEIR QUOTED PRICE. THE SUBMISSION OF A QUOTATION SHALL ACKNOWLEDGE THAT THE CONTRACTOR AND THEIR SUBCONTRACTORS HAVE FULLY EXAMINED THE SITE AND KNOW THE EXISTING CONDITIONS AND HAVE MADE PROVISIONS FOR OPERATING UNDER THE CONDITIONS AS THEY EXIST AT THE SITE AND HAVE INCLUDED ALL NECESSARY ITEMS.
- 4. THE CONTRACTORS SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE OWNER IN ORDER TO AVOID CONFLICTS WITH CURRENT USE OF THE SITE.
- 5. THE OWNER MAY HAVE WORK PERFORMED UNDER SEPARATE CONTRACTS, CONCURRENTLY, WITH THE WORK OF THIS CONTRACT.
- 6. THE GENERAL CONTRACTOR SHALL PERMIT ACCESS TO THE PROJECT TO THESE CONTRACTORS TO PERFORM THEIR WORK.
- 7. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE LOCAL, COUNTY, STATE, AND FEDERAL CODES, LAWS AND REQUIREMENTS, INCLUDING OSHA.
- 8. THE CONTRACTOR SHALL APPLY AND PAY FOR THE CONSTRUCTION PERMIT, AND ALL OTHER REQUIRED PERMITS OR LICENSES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL INSPECTIONS.
- 9. CARE SHALL BE EXERCISED IN PROTECTING THE SITE OCCUPANTS DURING THE DEMOLITION AND CONSTRUCTION PERIODS OF THIS PROJECT. EVERY EFFORT SHALL BE MADE TO MAINTAIN A CLEAN OPERATION. DEBRIS SHALL NOT ACCUMULATE. ALL DEBRIS WILL BE DEPOSITED IN A SUITABLE CONTAINER ON A DAILY BASIS AND SHALL BE EMPTIED ON A REGULAR SCHEDULE. THE LOCATION OF THE CONTAINER SHALL BE COORDINATED WITH THE BUILDING MANAGER.
- 10. SAFETY PROCEDURES: ATTENTION IS DIRECTED TO FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH STANDARDS. THE CONSTRUCTION COMPANY AWARDED THIS PROJECT SHALL ENSURE ALL WORKING SURROUNDINGS AND CONDITIONS ARE SANITARY, AND ARE NOT HAZARDOUS OR DANGEROUS TO THE HEALTH OR SAFETY OF THE WORK CREWS OR BUILDING OCCUPANTS. PRECAUTION SHALL BE EXERCISED AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY. IT IS MANDATORY THAT THE SAFETY PROVISIONS OF APPLICABLE LOCAL LAWS, OSHA REGULATIONS AND BUILDING AND CONSTRUCTION CODES, BE OBSERVED FOR ALL CONTRACTORS.
- 11. THE GENERAL CONTRACTOR MUST COORDINATE ALL ROOF RELATED WORK WITH THE BUILDING OWNER'S PRE— APPROVED ROOFER. THE GENERAL CONTRACTOR MUST CONFIRM THE COMPATIBILITY OF ALL MATERIALS AND ENSURE THAT ALL EXISTING ROOF WARRANTIES, IF ANY, REMAIN IN EFFECT.
- 12. THE GENERAL CONTRACTOR WILL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER ALL PROJECT MANAGEMENT, SITE COORDINATION, AND CONSTRUCTION SCHEDULE TO BE DIRECTLY SUBMITTED TO THE OWNER FOR APPROVAL AND COORDINATION.
- 13. THE GENERAL CONTRACTOR WILL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER ALL SITE COMMISSIONING, AS—BUILTS, STARTUP, AND UTILITY REQUIRED TESTING AND COORDINATION.

DELIVERY, STORAGE AND HANDLING:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROCEDURES AND SCHEDULING ASSOCIATED WITH HOISTING, STAGING, ERECTING OF MATERIALS AND EQUIPMENT TO AND/OR UPON THE SITE.
- 2. ALL ELEMENTS OF THE EXISTING SITE, I.E. STRUCTURES, SITE PLANTINGS, ETC. SHALL BE PROTECTED AS NECESSARY FROM SAID ACTIONS. THIS WORK MUST BE DONE IN A SAFE, SECURE NONDESTRUCTIVE MANNER FOR PROTECTING PERSONNEL AND PROPERTY.

GENERAL PV INSTALLATION NOTES:

- 1. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL DIRECTIONS AND INSTRUCTIONS CONTAINED IN THIS DRAWING PACKAGE, IN ANY INFORMATION RECEIVED FROM THE CLIENT AND OTHERS AND ANY INFORMATION CONTAINED IN EQUIPMENT INSTALLATION MANUALS.
- 2. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL DRAWINGS, COMPONENT AND INVERTER MANUALS PRIOR TO INSTALLATION. THE INSTALLATION CONTRACTOR IS ALSO REQUIRED TO HAVE ALL COMPONENT SWITCHES IN THE OFF POSITION AND FUSES REMOVED PRIOR TO THE INSTALLATION OF ALL FUSE BEARING SYSTEM COMPONENTS.
- 3. ONCE THE PHOTOVOLTAIC MODULES ARE MOUNTED, THE INSTALLATION CONTRACTOR SHOULD HAVE A MINIMUM OF ONE ELECTRICIAN WHO HAS ATTENDED A SOLAR PHOTOVOLTAIC INSTALLATION COURSE.
- 4. FOR SAFETY IT IS RECOMMENDED BY THE MANUFACTURER THAT THE INSTALLATION CREW ALWAYS HAVE A MINIMUM OF TWO PERSONS WORKING TOGETHER AND THAT EACH OF THE INSTALLATION CREW MEMBERS BE TRAINED IN FIRST AID AND CPR.
- 5. THIS SOLAR PHOTOVOLTAIC SYSTEM IS TO BE INSTALLED FOLLOWING THE CONVENTIONS OF THE NATIONAL ELECTRIC CODE. ANY LOCAL CODE WHICH MAY SUPERSEDE THE NEC SHALL GOVERN.
- 6. ALL SYSTEM COMPONENTS TO BE INSTALLED WITH THIS SYSTEM ARE TO BE "UL" LISTED. ALL OUTDOOR EQUIPMENT WILL BE NEMA 3R OR NEMA 4 AS INDICATED ON THE PLANS.
- 7. THE DC VOLTAGE FROM THE ARRAY IS ALWAYS PRESENT AT THE DC DISCONNECT ENCLOSURE AND THE DC TERMINALS OF THE INVERTER DURING DAYLIGHT HOURS. ALL PERSONS WORKING ON OR INVOLVED WITH THIS PHOTOVOLTAIC SYSTEM ARE WARNED THAT THE SOLAR MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT.
- 8. ALL PORTIONS OF THIS SOLAR PHOTOVOLTAIC SYSTEM SHALL BE MARKED CLEARLY IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ARTICLE 690.
- 9. PRIOR TO SYSTEM START-UP, THE INSTALLATION CONTRACTOR SHALL ASSIST IN PERFORMING ALL INITIAL HARDWARE CHECKS AND DC WIRING CONDUCTIVITY CHECKS.
- 10. FOR THE PROPER MAINTENANCE AND ISOLATION OF THE INVERTERS REFER TO THE ISOLATION PROCEDURES IN THE OPERATIONS MANUAL.
- 11. ALL ELECTRICAL TERMINATIONS AND MECHANICAL CONNECTIONS OF THE SOLAR INSTALLATION MUST BE TORQUED TO FACTORY SPECIFICATIONS AND MARKED WITH A PERMANENT TAMPER PROOF MEANS.

 RACKING SYSTEM:
- THE DESIGN OF THE RACKING SYSTEM, BALLASTING AND/OR ATTACHMENT DESIGN, AND ALL ASSOCIATED CALCULATIONS ARE NOT INCLUDED IN THE SCOPE OF WORK PERFORMED BY KMB DESIGN GROUP, LLC(KMB), ARE NOT PART OF THESE DRAWINGS AND KMB MAKES NO REPRESENTATION WHATSOEVER WITH REGARD TO SAID RACKING, BALLASTING AND/OR ATTACHMENT DESIGN.





Allison D. Kimball
PROFESSIONAL ENGINEER
MA LICENSE: 49826 7/14/22



STERLING GOLF MANAGEMENT GROUND MOUNTED PHOTOVOLTAIC SYSTER 100.0 KW AC / 119.04 KW DC 276 PLAIN ST ROCKLAND, MA 02370

732.0900

NOTES AND SYMBOLS

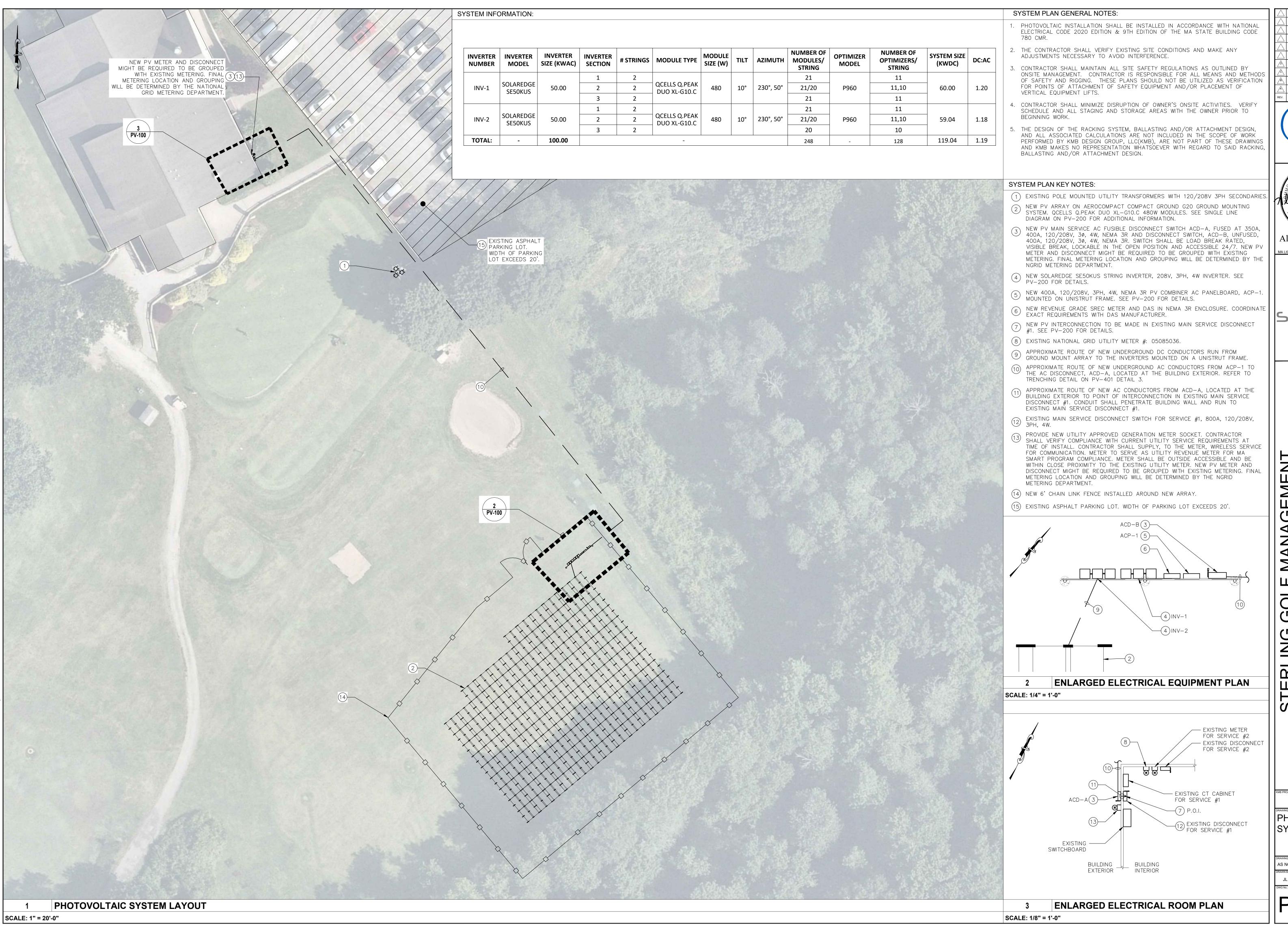
DRAWING SCALE:

NONE

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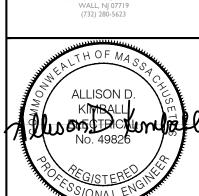
JL ADK 10.08.21

||PV-002



REVISED FOR PERMIT JL N A 10.08.21 ISSUED FOR INTERCONNECTION





Allison D. Kimbal PROFESSIONAL ENGINEER



SolBid

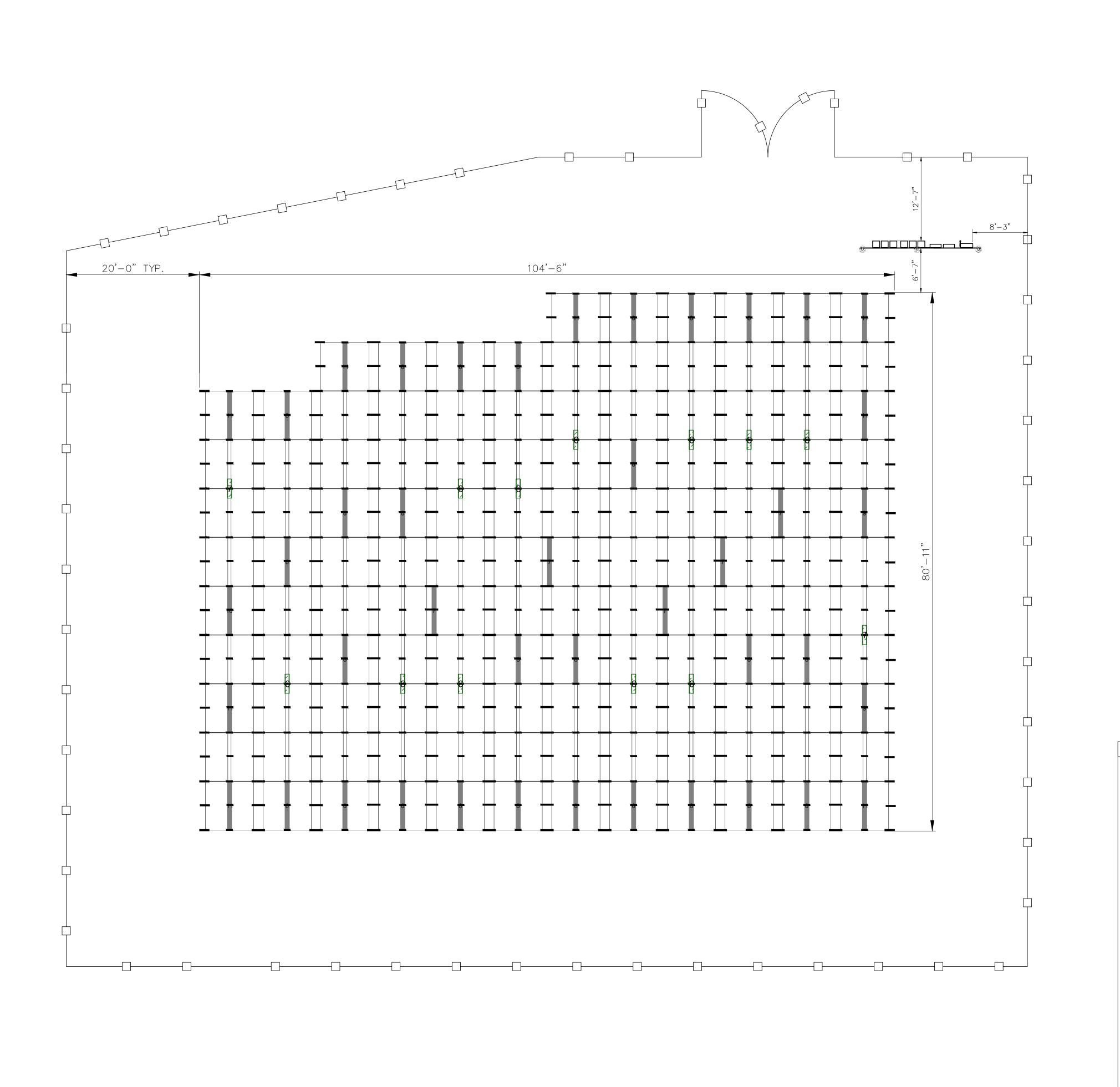
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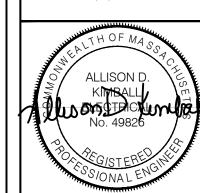
PHOTOVOLTAIC SYSTEM LAYOUT

AS NOTED ADK 10.08.21

PV-100







Allison D. Kimbal



STERLING GOLF MANAGEME
GROUND MOUNTED PHOTOVOLTAIC SYSTON TOO.0 KW AC / 119.04 KW DC
276 PLAIN ST
ROCKLAND, MA 02370

SYSTEM PLAN GENERAL NOTES:

- 1. PHOTOVOLTAIC INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE 2020 EDITION & 9TH EDITION OF THE MA STATE BUILDING CODE
- 2. THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND MAKE ANY ADJUSTMENTS NECESSARY TO AVOID INTERFERENCE.
- 3. CONTRACTOR SHALL MAINTAIN ALL SITE SAFETY REGULATIONS AS OUTLINED BY ONSITE MANAGEMENT. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF SAFETY AND RIGGING. THESE PLANS SHOULD NOT BE UTILIZED AS VERIFICATION FOR POINTS OF ATTACHMENT OF SAFETY EQUIPMENT AND/OR PLACEMENT OF VERTICAL EQUIPMENT LIFTS.
- 4. CONTRACTOR SHALL MINIMIZE DISRUPTION OF OWNER'S ONSITE ACTIVITIES. VERIFY SCHEDULE AND ALL STAGING AND STORAGE AREAS WITH THE OWNER PRIOR TO BEGINNING WORK.
- 5. THE DESIGN OF THE RACKING SYSTEM, BALLASTING AND/OR ATTACHMENT DESIGN, AND ALL ASSOCIATED CALCULATIONS ARE NOT INCLUDED IN THE SCOPE OF WORK PERFORMED BY KMB DESIGN GROUP, LLC(KMB), ARE NOT PART OF THESE DRAWINGS AND KMB MAKES NO REPRESENTATION WHATSOEVER WITH REGARD TO SAID RACKING, BALLASTING AND/OR ATTACHMENT DESIGN.

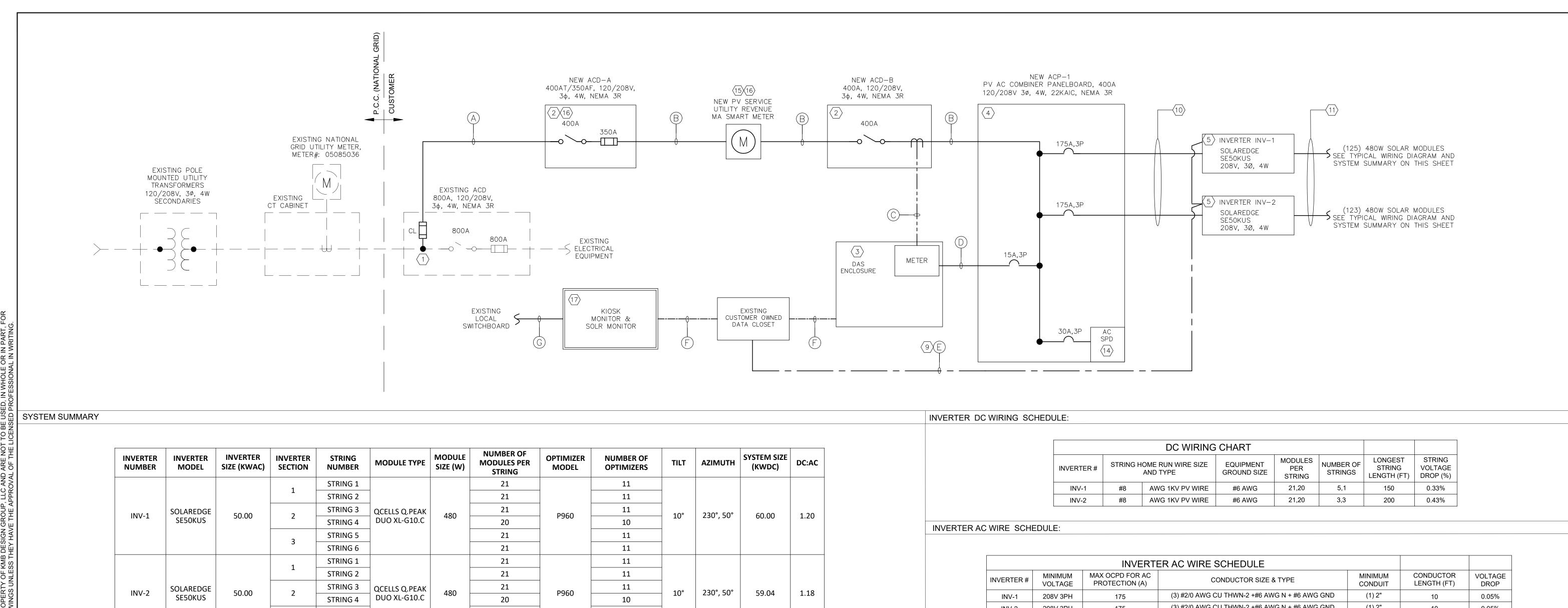
732.0900

PHOTOVOLTAIC DIMENSION PLAN

AS NOTED

JL ADK 10.08.21

PV-101



INVERTER NUMBER	INVERTER MODEL	INVERTER SIZE (KWAC)	INVERTER SECTION	STRING NUMBER	MODULE TYPE	MODULE SIZE (W)	NUMBER OF MODULES PER STRING	OPTIMIZER MODEL	NUMBER OF OPTIMIZERS	TILT	AZIMUTH	SYSTEM SIZE (KWDC)	DC:AC						
			1	STRING 1	_		21	- P960	11				1.20						
			1	STRING 2			21		11		230°, 50°	60.00							
INV-1	SOLAREDGE	50.00	2	STRING 3	QCELLS Q.PEAK	480	21		11	10°									
IIAA-T	SE50KUS	30.00	50.00	50.00	30.00	20,00	30.00	2	STRING 4	DUO XL-G10.C	400	20	1 1960	10	10	230 , 30	00.00	1.20	
						3	STRING 5			21		11							
			3	STRING 6			21		11										
			1	STRING 1			21		11										
							1	STRING 2			21		11						
INV-2	SOLAREDGE	50.00	2	STRING 3	QCELLS Q.PEAK	480	21	P960	11	10°	230°, 50°	59.04	1.18						
114 V - Z	SE50KUS	30.00	2	STRING 4	DUO XL-G10.C	460	20	P 900	10		230,30	39.04							
				3	STRING 5			20		10									
											3	STRING 6			20		10		
TOTAL:	-	100.00			-		248	-	128	-	-	119.04	1.19						

INVERTER #	MINIMUM VOLTAGE	MAX OCPD FOR AC PROTECTION (A)	CONDUCTOR SIZE & TYPE	MINIMUM CONDUIT	CONDUCTOR LENGTH (FT)	VOLTAGE DROP
INV-1	208V 3PH	175	(3) #2/0 AWG CU THWN-2 +#6 AWG N + #6 AWG GND	(1) 2"	10	0.05%
INV-2	208V 3PH	175	(3) #2/0 AWG CU THWN-2 +#6 AWG N + #6 AWG GND	(1) 2"	10	0.05%

EQUIPMENT SPECIFICATIONS	INVERTER PROTECTIVE SETTING TABLE	AC WIRE AND CONDUIT SCHEDULE:

:						_					PRO	POSED INVER	TER GRID PROT	ECTION SETTIN	IGS
	MODULE SPEC	CIFICATIONS		INVERTER SF	PECIFICATIONS	5	OPTIMIZER S	SPECIFICATIO	NS	55,405			OLEADING.	CLEARING	
	QCELLS Q.PEAK	DUO XL-G10	.C	SOLAREDO	GE SE50KUS		SOLAR	EDGE P960		DEVICE SETTING	PICKUP	VALUE	CLEARING TIME (SEC)	TIME	DESCRIPTION
MA	X POWER OUTPUT	(WATTS)	480	RATED OUTPUT	(KW)	50	RATED INPUT OUTPUT	(W)	960	3211110			(- /	(CYCLES)	
MA	X VOLTAGE	(VOLTS)	44.81	AC RATED OUTPUT	(VOLTS)	208	RATED INPUT			27-1	50%	60.05 V	1.10	66.00	UNDERVOLTAGE
MA	X CURRENT	(AMPS)	10.71	AC RATED CURRENT	(AMPS)	140	VOLTAGE PER INPUT	(VOLTS)	60	27-2	88%	105.68 V	2.00	120.00	ONDERVOLTAGE
OPE	EN CIRCUIT			POWER FACTOR	-	>0.99	RATED INPUT CURRENT PER INPUT	(AMPS)	11.6	59-1	110%	132 V	2.00	120.00	OVERVOLTAGE
· I ├──	LTAGE	(VOLTS)	53.61	PEAK EFFICIENCY	EFF%	98.5%	DC RATED OUTPUT	(VOLTS)	80	59-2	120%	144 V	0.16	9.60	OVERVOLTAGE
)	ORT CIRCUIT RRENT	(AMPS)	11.26		1		DC RATED CURRENT	(AMPS)	18.0	81U-2	50	6.5Hz	0.16	9.60	UNDERFREQUENCY
	VIVLIVI	(/ 5/	11.20				POWER FACTOR	(7.11711 3)	>0.99	81U-1	58	8.5Hz	300.00	18000.00	UNDERFREQUENCY
								EFF%	99.5%	810-1	6	1.2Hz	300.00	18000.00	OVEDEDEOLIENOV
							PEAK EFFICIENCY	EFF70	99.5%	810-2	62	2.0Hz	0.16	9.60	OVERFREQUENCY

		AC WIRE AND CONDUIT SCHEDULE			
	MINIMUM VOLTAGE	WIRE SIZE & TYPE	MINIMUM CONDUIT	CONDUCTOR LENGTH (FT)	VOLTAGE DROP
Α	208V 3PH	(3) 500 KCMIL CU THWN-2 +#3 AWG N + #3 AWG GND	(1) 4"	20	0.06%
В	208V 3PH	(3) 500 KCMIL CU THWN-2 +#3 AWG N + #3 AWG GND	(1) 4"	325	0.95%
С	-	18 AWG SHIELDED TWISTED PAIR - CT EXTENSION CABLE	-	-	-
D	208V 3PH	(3) #12 THWN-2 + #12AWG CU GROUND	3/4"	-	-
E	-	RS485 MODBUS COMMUNICATIONS CABLE	-	-	-
F	-	RS485 MODBUS COMMUNICATIONS CABLE OR CAT-5 EQUIVALENT	-	-	-
G	120V 1PH	(2) #12 THWN-2 + #12AWG CU GROUND	3/4"	-	-

SYMBOLS LEGEND:	KEY NOTES:
	NEW PV INTERCONNECTION TO BE MADE ON THE LINE SIDE OF THE EXISTING SERVICE DISCONNECT #1 AFTER CT CABINET. CONTRACTORS SHALL SHALL INS CABLE LIMITERS ON CONDUCTORS AT THE POINT OF CONNECTION. IF THE EXIS
NEW COMMUNICATIONS	SERVICE IS FOUND TO BE DIFFERENT THAN SHOWN, CONTRACTOR TO CONTACTOR OF THE PROPERTY OF THE PR

(N) NEW

 $\dashv\vdash$

- FUSE

(E) EXISTING

POWER TRANSFORMER

DC TO AC INVERTER

METER SOCKET AND METER

GROUND FAULT PROTECTION

CONTACTOR

____ CIRCUIT BREAKER

SMAIN SOLAREDGE POWER OPTIMIZER, P960. FOR STRINGS WITH AN EVEN NUMBER OF ISTALL BE INSTALLED FOR EVERY 2 MODILIES. FOR NSTALL METERING DEPARTMENT WILL APPROVE OF ANY TAP BOXES OR TAP LOCATIONS. FINAL METERING LOCATION AND GROUPING WILL BE DETERMINED BY THE NGRID METERING DEPARTMENT.

- PROVIDE NEW ACD-A, 400A, 120/208V, 3ϕ , 4W, NEMA 3R DISCONNECT SWITCH, FUSED AT 350A AND NEW ACD-B, UNFUSED, 400A, 120/208V, 3ϕ , 4W, NEMA 3R DISCONNECT SWITCH. SWITCHES SHALL BE GANG OPERATED, VISIBLE BREAK WHEN OPENED, UTILITY LOCKABLE IN THE OPEN POSITION, AND ACCESSIBLE 24/7 TO THE UTILITY. NEW PV DISCONNECT MIGHT BE REQUIRED TO BE GROUPED WITH ANY EXISTING METER. NGRID METERING DEPARTMENT WILL APPROVE OF ANY TAP BOXES OR TAP LOCATIONS. FINAL METERING LOCATION AND GROUPING WILL BE DETERMINED BY THE NGRID METERING DEPARTMENT.
- NEW REVENUE GRADE SREC METER AND DAS IN NEMA 3R ENCLOSURE. COORDINATE EXACT REQUIREMENTS WITH DAS MANUFACTURER. NEW PV AC COMBINER PANEL WITH CIRCUIT BREAKERS SIZED AS SHOWN FOR INTERCONNECTION OF PV INVERTERS. CIRCUIT BREAKERS SHALL BE LABELED AS PV EQUIPMENT DISCONNECTS. LOCATED AT BUILDING EXTERIOR.
- NEW SOLAREDGE SE50KUS 208V, 3Ø INVERTER. SEE SYSTEM SUMMARY ON PV-200 SHEET FOR FURTHER INFORMATION. THE POSITIVE AND NEGATIVE DC CONDUCTORS FROM THE PV SYSTEM ARE UNGROUNDED.
- QCELLS Q.PEAK DUO XL-G10.C 480W SOLAR MODULES. SEE SYSTEM SUMMARY FOR FURTHER INFORMATION. EACH MODULE INCLUDES 1 #10 AWG OUTDOOR RATED QUICK CONNECTS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS FOR MODULE INTERCONNECTION. DO NOT REMOVE THE QUICK CONNECTS, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING MAY (16) BE INVALIDATED. QUICK CONNECTS SHALL COMPLY WITH NEC 690.33(C). individual modules shall be bonded to the racking system using approved racking grounding lug.
- PROVIDE NEW UTILITY APPROVED GENERATION METER SOCKET. CONTRACTOR SHALL VERIFY COMPLIANCE WITH CURRENT UTILITY SERVICE REQUIREMENTS AT TIME OF INSTALL. CONTRACTOR SHALL SUPPLY, TO THE METER, WIRELESS SERVICE FOR COMMUNICATION. METER TO SERVE AS UTILITY REVENUE METER FOR MA SMART PROGRAM COMPLIANCE. METER SHALL BE OUTSIDE ACCESSIBLE AND BE WITHIN CLOSE PROXIMITY TO THE EXISTING UTILITY METER. NEW PV METER MIGHT BE REQUIRED TO BE GROUPED WITH ANY EXISTING METERING. NGRID METERING DEPARTMENT WILL APPROVE OF ANY TAP BOXES OR TAP LOCATIONS. FINAL METERING LOCATION AND GROUPING WILL BE DETERMINED BY

MODULES, ONE OPTIMIZER SHALL BE INSTALLED FOR EVERY 2 MODULES. FOR STRINGS WITH AN ODD NUMBER OF MODULES THE LAST MODULE SHALL BE CONNECTED TO ONE OPTIMIZER. POWER OPTIMIZER SHALL BE BOLTED TO THE RACKING SYSTEM USING THE STAR WASHERS INCLUDED WITH THE OPTIMIZER. THIS PROVIDES THE GROUNDING OF THE OPTIMIZER IN ACCORDANCE WITH THE NEC.

 $\langle 9
angle$ communications cable between inverter and data acquisition system.

 $raket{11}$ see inverter DC wiring schedule on this sheet for wiring information.

#8 AWG 1KV PV WIRE JUMPER CABLE TO BE INSTALLED BETWEEN SOLAREDGE OPTIMIZERS

(12) DC DISCONNECT SWITCH, SUPPLIED INTEGRAL WITH THE INVERTER.

 $\langle 14 \rangle$ panel mounted 120/208V, 3PH ac surge protective device.

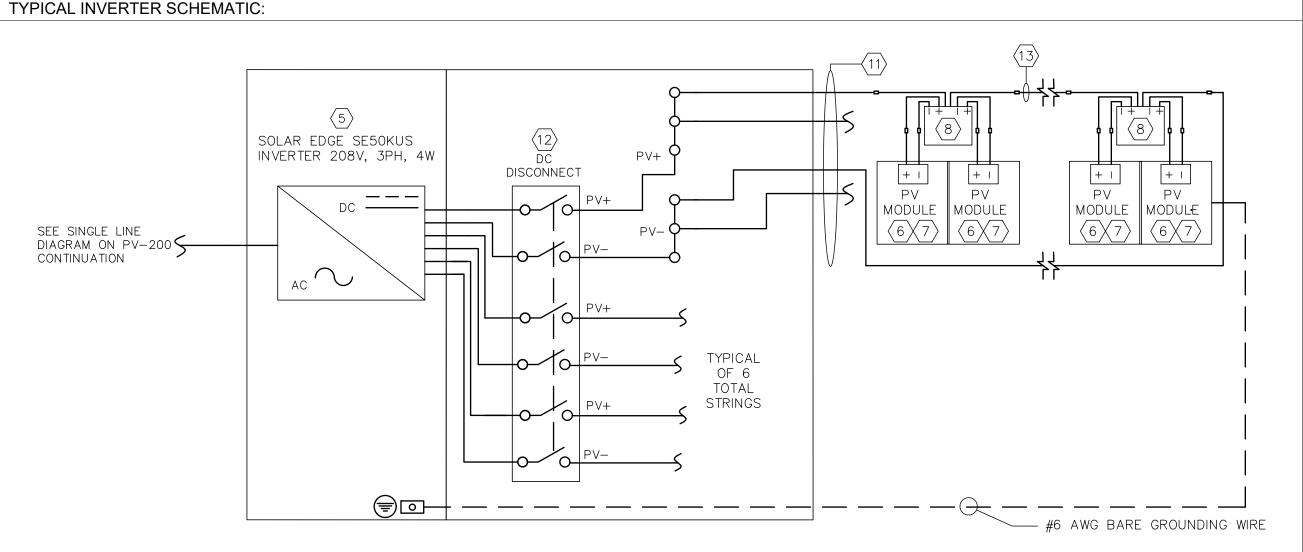
(10) SEE INVERTER AC WIRING SCHEDULE ON THIS SHEET.

THE NGRID METERING DEPARTMENT.

WHERE NEEDED.

NEW PV METER AND DISCONNECT MIGHT BE REQUIRED TO BE GROUPED WITH EXISTING METERING. FINAL METERING LOCATION AND GROUPING WILL BE DETERMINED BY THE NATIONAL GRID METERING DEPARTMENT.

NEW KIOSK MONITOR AND SOLAR MONITOR TO BE INSTALLED BY CONTRACTOR. CONTRACTOR TO SUPPLY A 120V, 1PH, 20A OUTLET FOR THE MONITOR. SEE SOLR MONITOR GUIDE FOR ADDITIONAL DETAILS. CONTRACTOR TO COORDINATE WITH CUSTOMER FOR FINAL LOCATION OF KIOSK.



STERLING GROUND MOUN 100.0 K

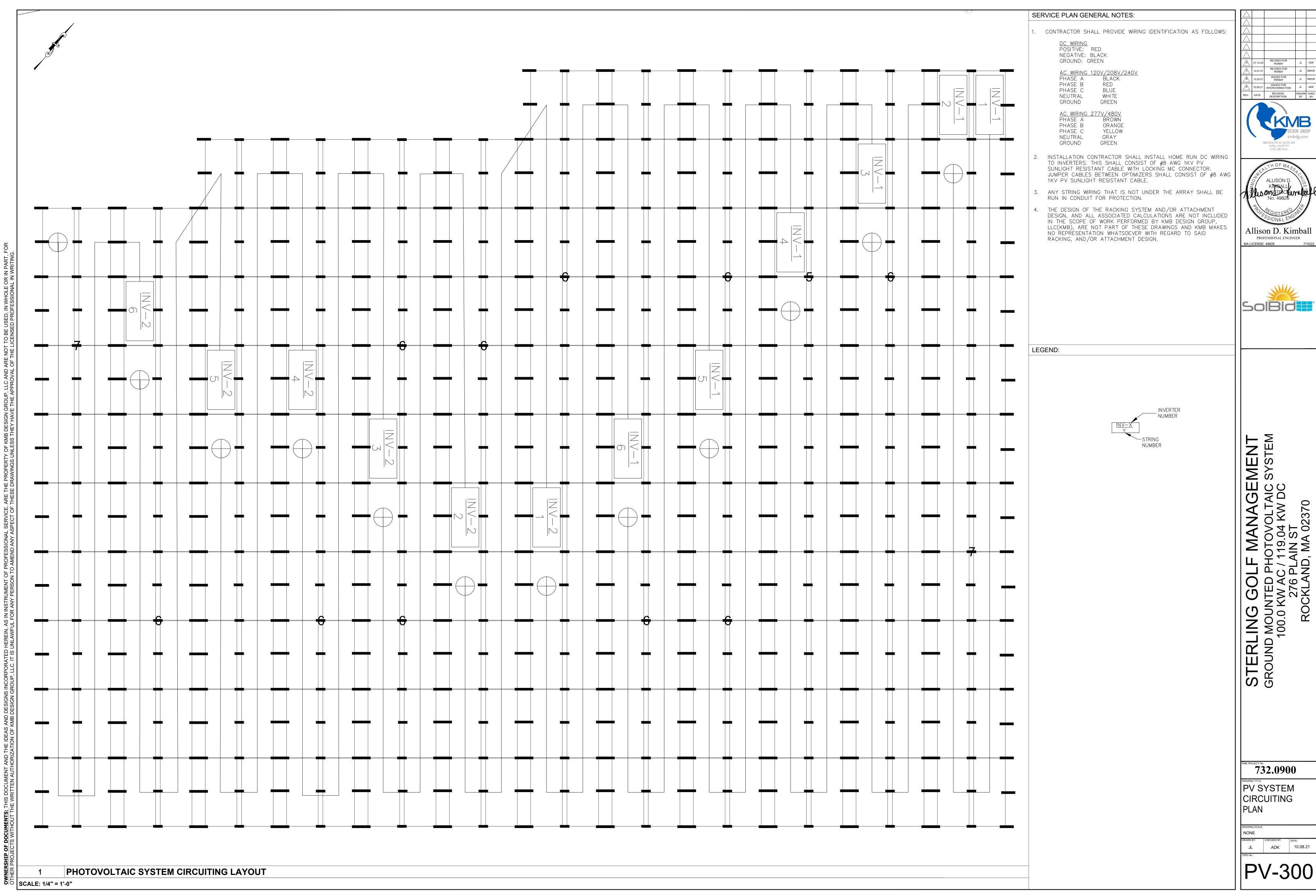
KIMBALLI MA

Allison D. Kimbal PROFESSIONAL ENGINEER

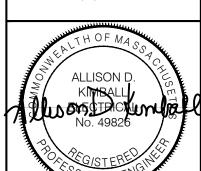
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PHOTOVOLTAIC ONE-LINE DIAGRAM

NONE ADK 10.08.21



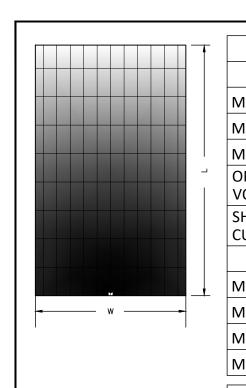




Allison D. Kimball PROFESSIONAL ENGINEER



732.0900



SCALE: NTS

QCELLS Q.PEAK DUO XL-G10.C							
MAX POWER OUTPUT	(WATTS)	480					
MAX VOLTAGE	(VOLTS)	44.81					
MAX CURRENT	(AMPS)	10.71					
OPEN CIRCUIT VOLTAGE	(VOLTS)	53.61					
SHORT CIRCUIT CURRENT	(AMPS)	11.26					
MODULE LENGTH	L (IN)	87.2					
MODULE WIDTH	W (IN)	41.1					
MODULE DEPTH	D (IN)	1.38					
MODULE WEIGHT	WT (LBS)	58.4					

MODULE SPECIFICATIONS

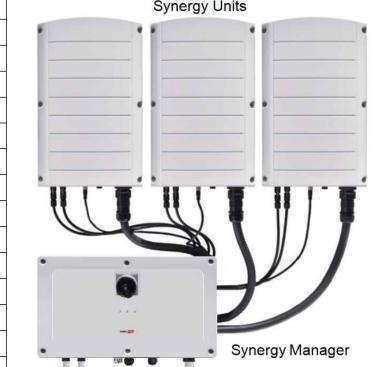
OPTIMIZER SPECIFICA	TIONS	
SOLAR EDGE P96	0	
RATED INPUT OUTPUT	(W)	960
RATED INPUT VOLTAGE PER INPUT	(VOLTS)	60
RATED INPUT CURRENT PER INPUT	(AMPS)	11.6
DC RATED OUTPUT	(VOLTS)	80
DC RATED CURRENT	(AMPS)	18.0
POWER FACTOR	-	>0.99
PEAK EFFICIENCY	EFF%	99.5%
WIDTH	W (IN)	5.10
DEPTH	D (IN)	6.61
HEIGHT	H (IN)	2.32

INVERTER SPEC	CIFICATIONS	
SOLAREDGE	SE50KUS	
RATED OUTPUT	(KW)	50
AC RATED OUTPUT	(VOLTS)	208
AC RATED CURRENT	(AMPS)	140
POWER FACTOR	-	>0.99
PEAK EFFICIENCY	EFF%	97.0%
SYNERGY MANAGER (TYPE	OF 1)	

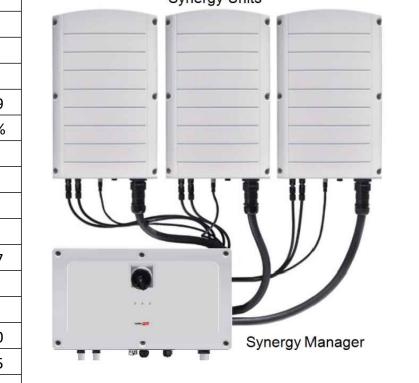
	SYNERGY MANAGER (TY	(P OF 1)	
	WIDTH	W (IN)	22.4
\neg	DEPTH	D (IN)	11.6
	HEIGHT	H (IN)	14.17
	WEIGHT	WT (LBS)	39.6
	SYNERGY UNIT (TYP of 3	3)	
	WIDTH	W (IN)	12.90
	DEPTH	D (IN)	10.75
	HEIGHT	H (IN)	22

WEIGHT

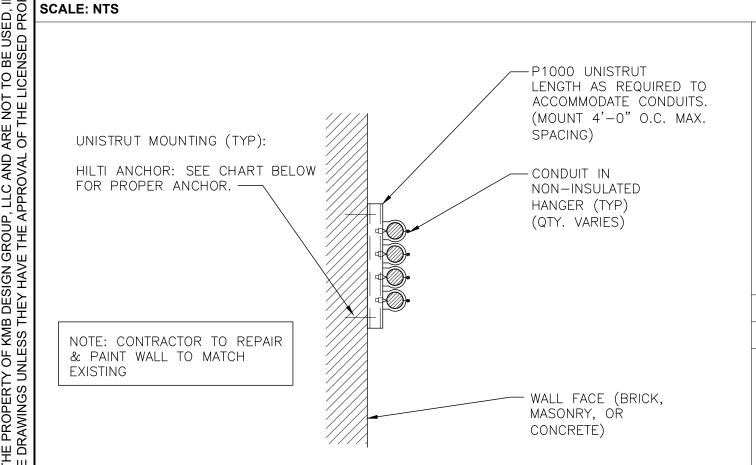
2.34



Synergy Units



WT (LBS) WEIGHT **INVERTERS & SOLAR PANEL SPECS**



Γ					
	MOUNTING METHODS CHART				
	WALL TYPE	METHOD OF ATTACHMENT			
	CONCRETE BLOCK (HOLLOW)	3/8"Ø HILTI HIT HY70 WITH SCREEN. MINIMUM EMBEDMENT 6" SPACED 24" O. C. OR 1/4"Ø HILTI KWIK-CON II+ 3 1/2" MINIMUM EMBEDMENT SPACED 16" O.C.			
	CONCRETE /BRICK	3/8"Ø HILTI HIT HY150. MINIMUM EMBEDMENT 3 1/2" SPACED 24" O.C. OR 1/4"Ø HILTI KWIK-CON II+ 3 1/2" MINIMUM EMBEDMENT SPACED 16" O.C.			

ILSCO GBL-4DBT GROUND LUG

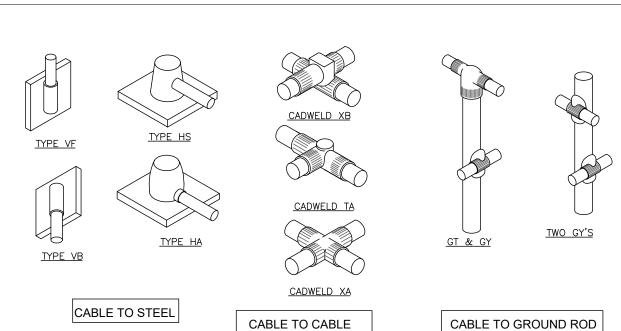
SCALE: NTS

WT (LBS) 70.4

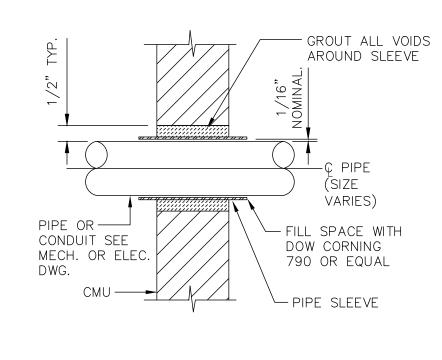
1. MODULE MOUNTING SYSTEM SHALL BE BONDED TOGETHER USING SOLID WIRE GROUNDING ASSEMBLY OR OTHER RACKING APPROVED GROUNDING ASSEMBLY. SEE PV-200 FOR EQUIPMENT GROUNDING CONDUCTOR SIZE.

2. INDIVIDUAL MODULES SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR AS PER THE DETAIL.

TYPICAL LAY-IN GROUNDING LUG



SCALE: NTS



PROTECTING THESE CABLES WHEN MOVING AND INSTALLING THE MODULES.

2-MODULE OPTIMIZER STRINGING DETAIL

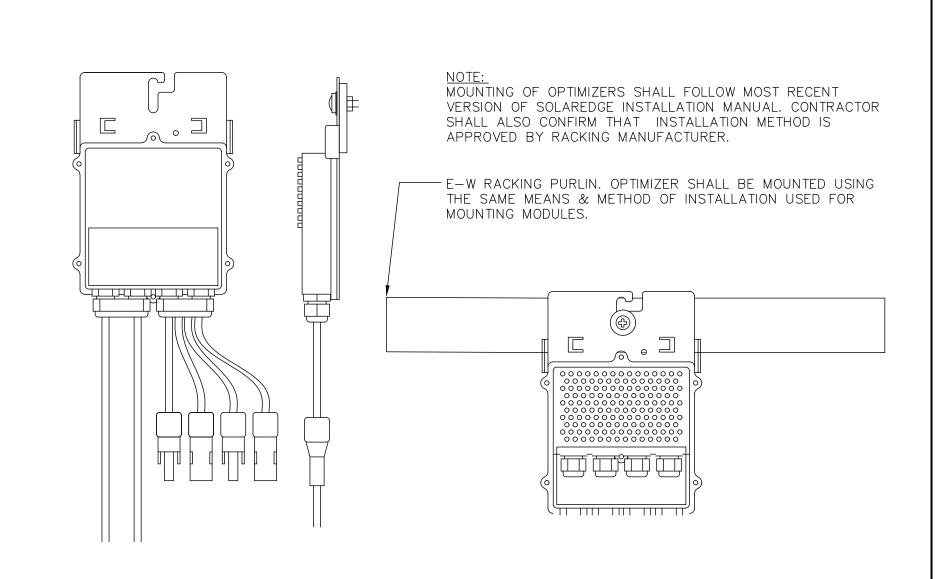
1. WIRING OF THE SOLAR MODULES WILL BE ACCOMPLISHED USING THE PRE-ATTACHED #12 AWG/USE-2 MC CABLES. THE INSTALLATION CONTRACTOR MUST PAY SPECIAL ATTENTION TO

3. CONNECTORS TO BE USED FOR OPTIMIZER AND MODULES CONNECTION. CONNECTORS SHALL BE MATCH WITH PV MODULE MANUFACTURE AND OPTIMIZER CONNECTOR TYPE.

2. RETURN STRING WIRING WILL BE #8 PV WIRE SUNLIGHT RESISTING CABLES. THESE CABLES WILL BE CONSTRUCTED TO LENGTH BY THE ELECTRICAL CONTRACTOR AND BE INSTALLED USING GOOD

1. PIPE ÀNCHORAGE IS REQUIRED NEARBY TO PREVENT PIPE MOVEMENT THROUGH PENETRATION.

2. CABLES WITHIN CONDUIT PENETRATION SHALL BE FIRE SEALED AFTER INSTALLATION

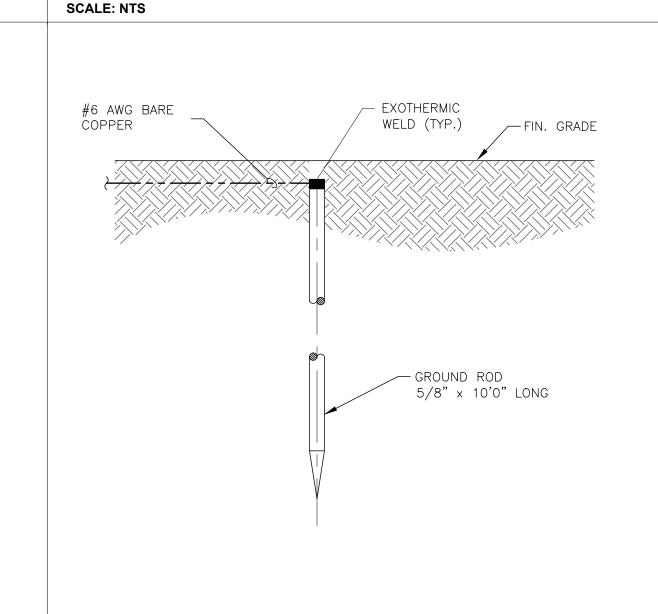


CONDUIT VERTICAL SUPPORT DETAIL

1.	ALL GROUNDING/BONDING CONNECTIONS NOT TERMINATED INSIDE
	EQUIPMENT SHALL BE MADE USING IRREVERSIBLE COMPRESSION OR
	EXOTHERMIC CONNECTIONS

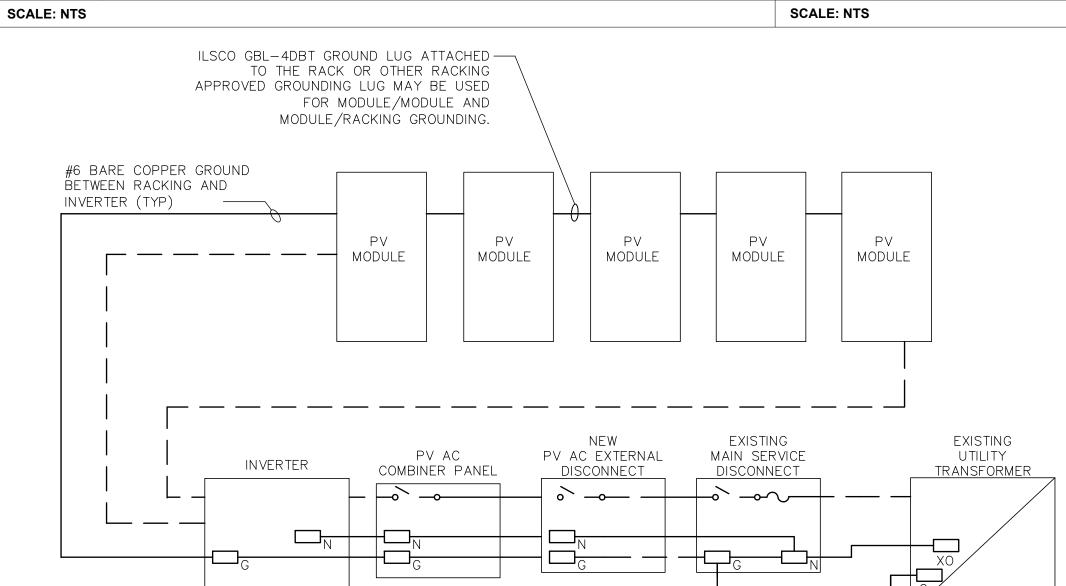
- 2. ALL AC & DC MADE GROUNDING ELECTRODES SHALL CONSIST OF COPPER OR COPPERCLAD DRIVEN GROUND RODS NO SMALLER THAN 5/8"X10' AND HAVE RESISTANCE TO EARTH OF 25 OHMS OR LESS. IF RESISTANCE OF 25 OHMS OR LESS TO EARTH CANNOT BE ACHEEIVED THAN A SUPPLEMENTAL ELECTRODE SHALL BE DRIVEN AS PER NEC 50.53. IF MULTIPLE GROUND RODS ARE DRIVEN THEY SHALL BE SPACED NOT LESS THAN 6FT APART.
- 3. ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES,
- 4. ALL EXTERIOR METALLIC CONDUIT WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF HANDHOLES, NON-METALLIC JUNCTION BOXES, DIRECT BURIAL TRANSITIONS, CABLE TRAY TRANSITIONS, ETC SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE RUN. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE WHERE THERE IS NOT CONTINUITY BETWEEN THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE
- PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED WITH ALL RACEWAYS AND CABLE CONVEYANCES. METALLIC RACEWAY AND CONDUIT CONNECTORS SHALL NOT BE CONSIDERED ADEQUATE GROUNDING.

EXOTHERMIC WELD CONNECTIONS



CONDUIT WALL PENETRATION DETAIL

SOLAR EDGE P960 OPTIMIZER DETAIL



NOTES

- 1. PER NEC 690.47(A), PV ARRAY EQUIPMENT GROUNDING CONDUCTORS SHALL BE CONNECTED TO THE GROUNDING ELECTRODE SYSTEM OF THE BUILDING OR STRUCTURE SUPPORTING THE PV ARRAY.
- 2. DC EQUIPMENT GROUNDING CONDUCTORS FOR PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUITS SHALL BE SIZED PER NEC 250.122.
- 3. GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED TO MEET BOTH 250.66 FOR THE AC SYSTEM AND 250.166 FOR THE DC SYSTEM.

732.0900

STERLING GROUND MOUN 100.0 K

PHOTOVOLTAIC SYSTEM DETAILS SHEET 1

Allison D. Kimbal

PROFESSIONAL ENGINEER

ADK 10.08.21

EXOTHERMIC CONNECTIONS.

RECEPTACLES, ETC SHALL BE BONDED TO THE RESPECTIVE GROUNDING

RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT.

GROUNDING NOTES

SCALE: NTS

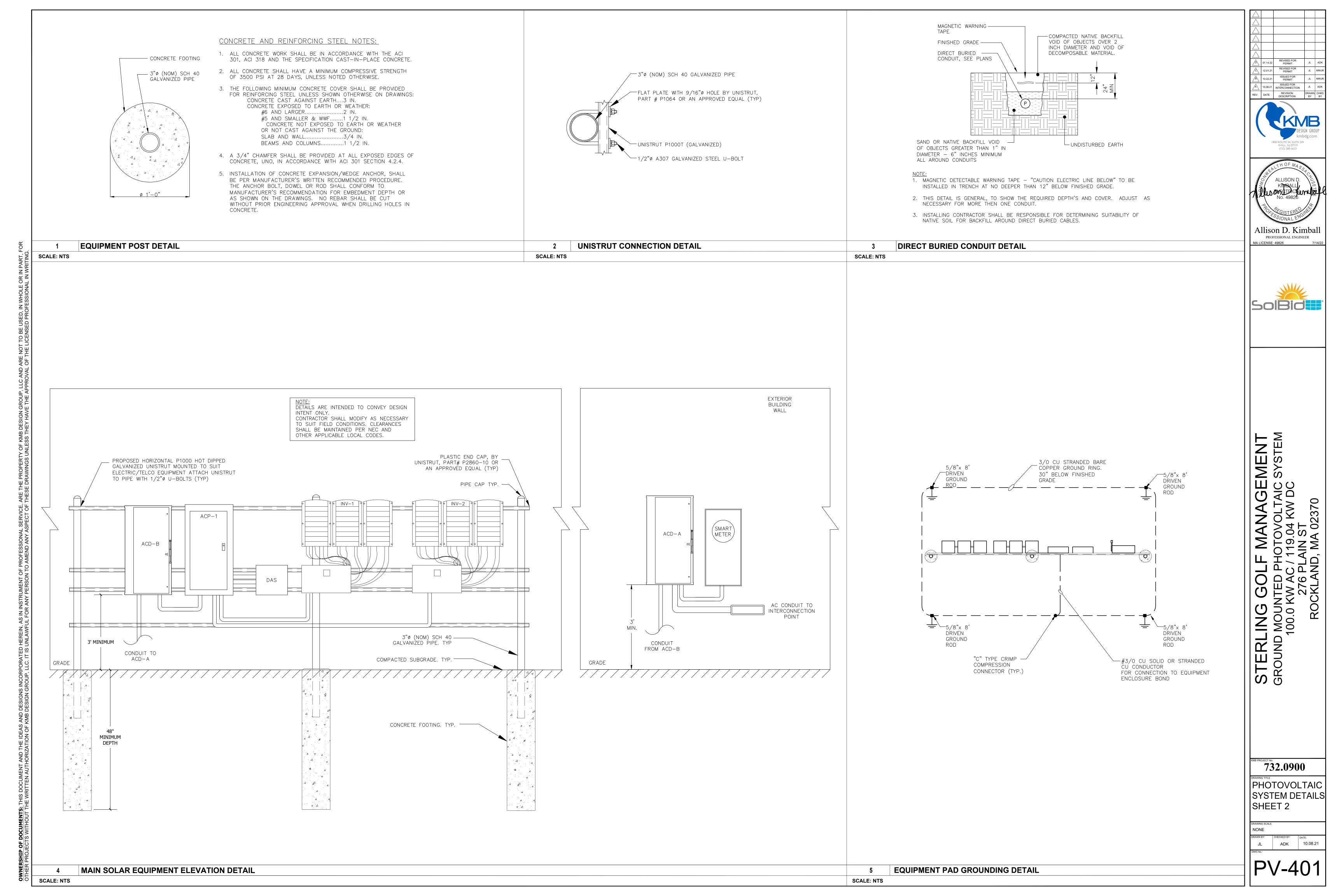
AC GROUNDING ELECTRODE DETAIL

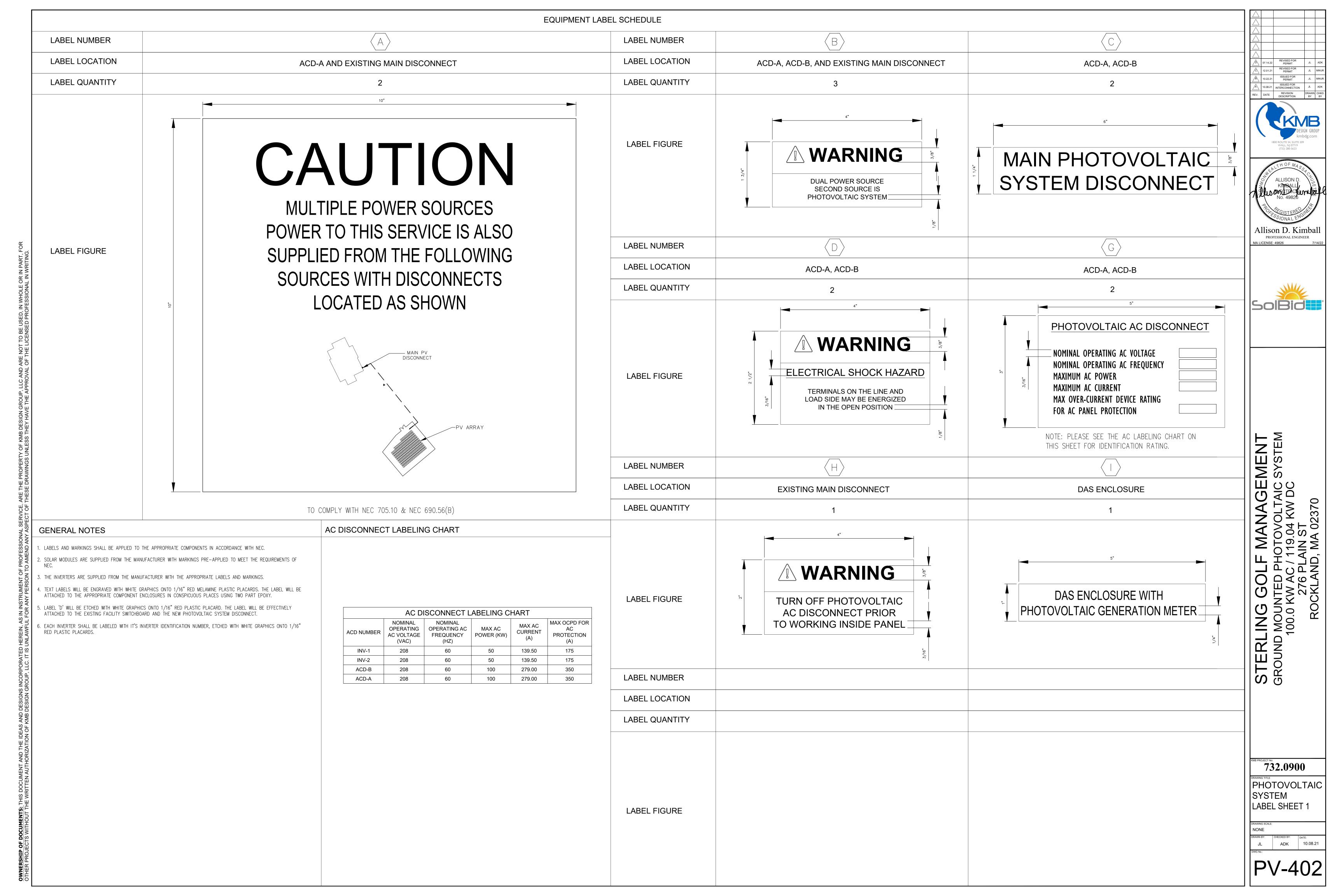
SCALE: NTS

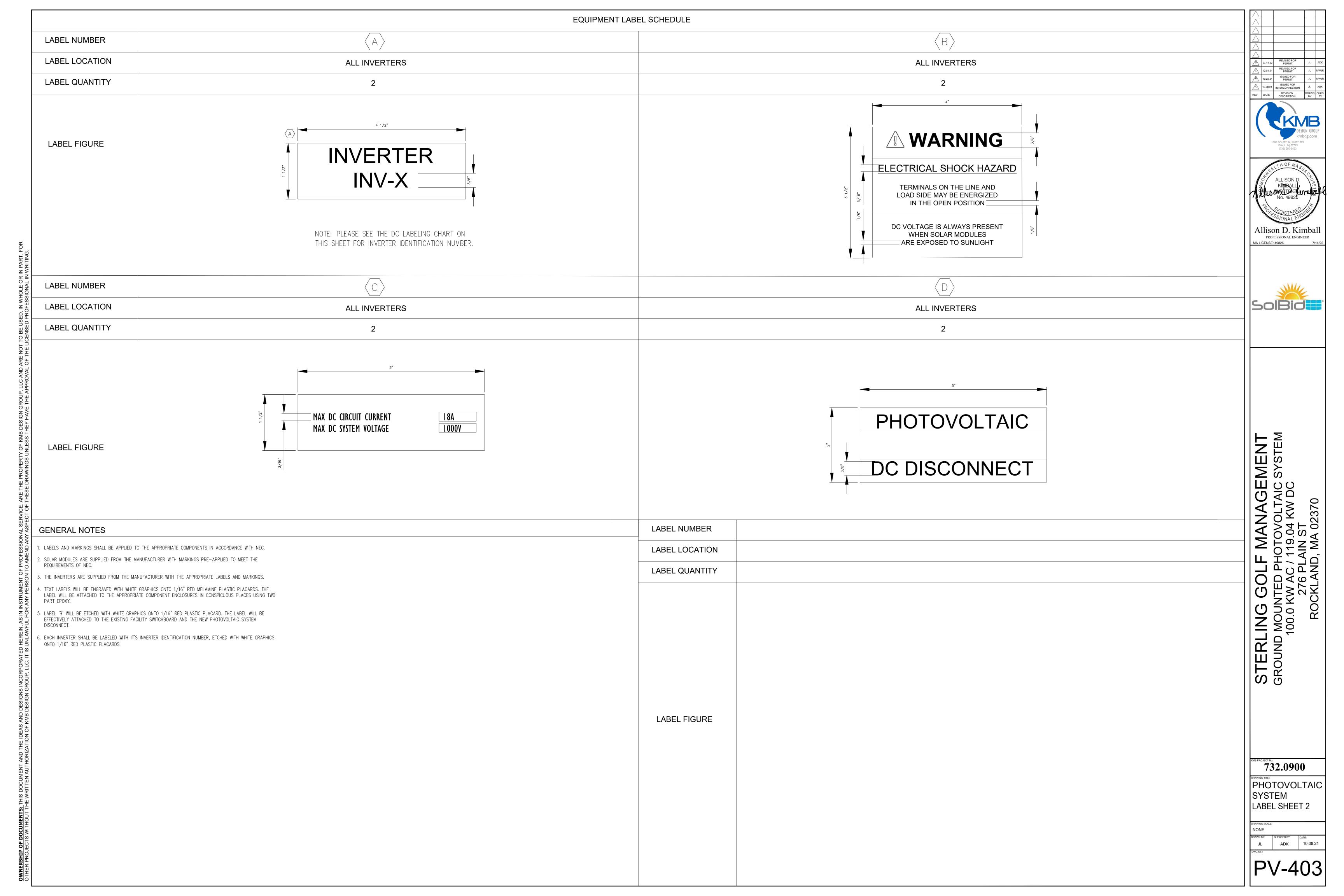
SCALE: NTS

TYPICAL GROUNDING DETAIL

EXISTING GROUND ELECTRODE CONNECTION—

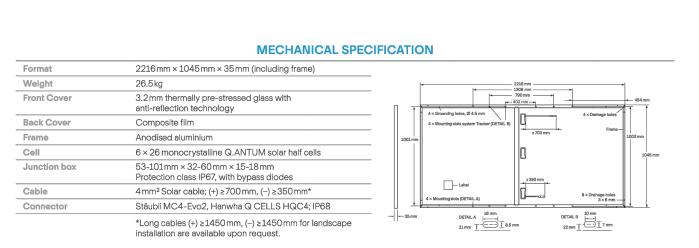






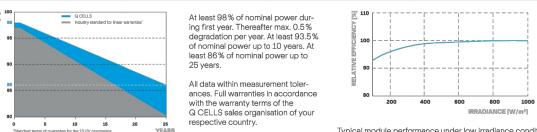
THE IDEAL SOLUTION FOR: Ground-mounted solar power plants

Engineered in Germany



	EL	ECTRICA	L CHARACTE	RISTICS			
VER CLASS			475	480	485	490	495
IIMUM PERFORMANCE AT STANDARD	TEST CONDITIO	NS, STC1 (PC	OWER TOLERANCE	+5W/-0W)			
Power at MPP ¹	P _{MPP}	[W]	475	480	485	490	495
Short Circuit Current ¹	I _{SC}	[A]	11.24	11.26	11.29	11.31	11.34
Open Circuit Voltage ¹	V _{oc}	[V]	53.58	53.61	53.64	53.68	53.71
Current at MPP	I _{MPP}	[A]	10.66	10.71	10.76	10.81	10.86
Voltage at MPP	V_{MPP}	[V]	44.54	44.81	45.07	45.33	45.59
Efficiency ¹	η	[%]	≥20.5	≥20.7	≥20.9	≥21.2	≥21.4
IIMUM PERFORMANCE AT NORMAL C	PERATING CONE	DITIONS, NW	IOT ²				
Power at MPP	P _{MPP}	[W]	356.4	360.1	363.9	367.6	371.4
Short Circuit Current	I _{sc}	[A]	9.05	9.07	9.09	9.12	9.14
Open Circuit Voltage	Voc	[V]	50.53	50.56	50.59	50.62	50.65
Current at MPP	I _{MPP}	[A]	8.39	8.43	8.47	8.52	8.56
Voltage at MPP	V _{MPP}	[V]	42.49	42.72	42.94	43.17	43.39
֡	Power at MPP¹ Short Circuit Current¹ Open Circuit Voltage¹ Current at MPP Voltage at MPP Efficiency¹ IIMUM PERFORMANCE AT NORMAL C Power at MPP Short Circuit Current Open Circuit Voltage Current at MPP	WER CLASS IIIMUM PERFORMANCE AT STANDARD TEST CONDITIO Power at MPP¹ PMPP Short Circuit Current¹ I _{SC} Open Circuit Voltage¹ V _{OC} Current at MPP I _{MPP} Voltage at MPP V _{MPP} Efficiency¹ IIIMUM PERFORMANCE AT NORMAL OPERATING CONDITION Power at MPP PMPP Short Circuit Current I _{SC} Open Circuit Voltage V _{OC} Current at MPP I _{MPP}	NER CLASS	MER CLASS	IMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC¹ (POWER TOLERANCE +5W /-0W) Power at MPP¹	MER CLASS	MER CLASS 475 480 485 490 48

$Measurement \ tolerances \ P_{MPP} \pm 3\%; \ |_{SC}; V_{OC} \pm 5\% \ at \ STC: 1000 \ W/m^2, 25 \pm 2\ ^\circ C, \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ IEC \ 60904 - 3 \cdot ^2800 \ W/m^2, \ NMOT, \ spectrum \ AM \ 1.5 \ according \ to \ 1.5 \ according \ to \ 1.5 \ according \ to \ 1.5 \ according \ 1.5 \ according \ to \ 1.5 \ according \ 1.5 \$ Q CELLS PERFORMANCE WARRANTY PERFORMANCE AT LOW IRRADIANCE



TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of Voc	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}		γ [%/K] -0.34 Nominal Module Operating Temperature		NMOT	[°C]	43±3	
			PROPERTIES FOR	SYSTEM DESIGN			
Maximum System Voltage	V _{sys}	[V]	1500	PV module classification			Class II
Maximum Reverse Current	I _R	[A]	20	Fire Rating based on ANSI/UL 61730			C/TYPE1
Max. Design Load, Push/Pull		[Pa]	3600/1600	Permitted Module Temperature		-40	°C - +85°C
Max. Test Load, Push / Pull		[Pa]	5400/2400	on Continuous Duty			

QUALIFICATIONS AND CERTIFICATES

IEC 61215:2016; IEC 61730:2016.

Engineered in Germany

MODULE DATA SHEET



Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and

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QCELLS

QCELLS

Three Phase Inverter with Synergy Technology

For the 208V Grid for North America

SE50KUS



Powered by unique pre-commissioning process for rapid system installation

- Pre-commissioning feature for automated validation of system components and wiring during the site
- installation process and prior to grid connection Easy 2-person installation with lightweight, modular design (each inverter consists of 3 Synergy units and one Synergy Manager)
- Independent operation of each Synergy unit enables higher uptime and easy serviceability
- Built-in thermal sensors detect faulty wiring ensuring enhanced protection and safety
- Built-in arc fault protection and rapid shutdown Built-in PID mitigation for maximized system
- Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

*Applicable only for DC and AC SPDs

solaredge.com

SE50KUS



INVERTERS

/ Three Phase Inverter with Synergy Technology For the 208V Grid for North America

Assistant and the San Market	SExxK-USx2Ixxxx				
Applicable to inverter with Part Numbers	SE50KUS				
ОИТРИТ					
Rated AC Active Output Power	50000	W			
Maximum AC Apparent Output Power	50000	VA			
AC Output Line Connections	3W + PE, 4W + PE	-			
Supported Grids	WYE: TN-C, TN-S, TN-C-S, TT, IT; Delta: IT				
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-N)	105-120-132.5	Vac			
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-L)	183-208-229	Vac			
AC Frequency Min-Nom-Max ⁽¹⁾	59.5 - 60 - 60.5	Hz			
Maximum Continuous Output Current (per Phase, PF=1)	139.5	Aac			
GFDI Threshold	1	A			
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes				
Total Harmonic Distortion	≤3	%			
Power Factor Range	+/-0.2 to 1				
INPUT		·			
Maximum DC Power (Module STC) Inverter / Synergy Unit	75000 / 25000	W			
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC+ to DC-	600	Vdc			
Operating Voltage Range	370 - 600	Vdc			
Maximum Input Current	3 x 46.5	Adc			
Reverse-Polarity Protection	Yes				
Ground-Fault Isolation Detection	167kΩ sensitivity per Synergy Unit ⁽²⁾				
CEC Weighted Efficiency	97	%			
Nighttime Power Consumption	< 12	W			
ADDITIONAL FEATURES		·			
Supported Communication Interfaces ⁽³⁾	2 x RS485, Ethernet, Wi-Fi (optional), Cellular (optional)				
Smart Energy Management	Export Limitation				
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection				
Arc Fault Protection	Built-in, User Configurable (According to UL1699B)				
Photovoltaic Rapid Shutdown System	NEC 2014, 2017 and 2020, Built-in				
PID Rectifier	Nighttime, built-in				
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated				
AC, DC Surge Protection	Type II, field replaceable, integrated				
DC Fuses (Single Pole)	25A, integrated				
DC SAFETY SWITCH					
DC Disconnect	Built-in				
STANDARD COMPLIANCE					
Safety	UL1699B, CSA C22.2#107.1, Canadian AFCI according to T.I.L. M-07				
Grid Connection Standards	IEEE 1547, Rule 21, Rule 14 (HI)				
Emissions	FCC part 15 class A				

(3) For specifications of the optional communication options, visit https://www.solaredge.com/products/communication or the Resource Library webpage: https://www.solaredge.com/downloads#, to download the relevant product datasheet

(1) For other regional settings please contact SolarEdge support

Power Optimizer For North America

P860 / P960 / P1101



OWE

PV power optimization at the module-level

The most cost-effective solution for commercial and large field installations

monitoring

and firefighter safety

Shutdown System (PVRSS)

- Specifically designed to work with SolarEdge
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt

solaredge.com



RoHS

Advanced maintenance with module-level

Module-level voltage shutdown for installer

protection (AFCI) and Photovoltaic Rapid

Meets NEC requirements for arc fault

Power Optimizer For North America

P860 / P960 / P1101

Power OptimizerModel (Typical Module Compatibility)		P860 P960 Produles (for 2 x 72 cell modules)			P1101 (for up to 2 x high power or bi- facial modules)			
INPUT				·				
Rated Input DC Power ⁽¹⁾	86	50	g	960	1100	W		
Connection Method	Du	al input for independe	ntly connected modu	les ⁽²⁾	Single input for series connected modules			
Absolute Maximum Input Voltage (Voc at lowest temperature)		6	0		125	Vdc		
MPPT Operating Range		12.5	- 60		12.5 - 105	Vdc		
Maximum Short Circuit Current (Isc)	2	2	2	3.2	14.1	Adc		
Maximum Short Circuit Current per Input (Isc)	1	1	1	1.6	-	Adc		
Maximum Efficiency			9	9.5		%		
Weighted Efficiency			9	98.6		%		
Overvoltage Category				1				
OUTPUT DURING OPERATION (P	OWER OPTIMI	ZER CONNECTE	D TO OPERAT	ING SOLARED	GE INVERTER)	1		
Maximum Output Current				18		Adc		
Maximum Output Voltage				80		Vdc		
OUTPUT DURING STANDBY (POV	VER OPTIMIZER	R DISCONNECTE	D FROM SOLA	REDGE INVER	TER OR SOLAREDGE INVERTER (OFF)		
Safety Output Voltage per Power Optimizer				± 0.1		Vdc		
STANDARD COMPLIANCE								
Photovoltaic Rapid Shutdown System			Compliant with NE	EC 2014, 2017, 2020				
EMC		FC)-6-3			
Safety		FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3 IEC62109-1 (class II safety), UL1741 IEC62109-1 (class II safety), UL1741, UL3741						
Material		UL94 V-0, UV resistant						
RoHS				/es				
INSTALLATION SPECIFICATIONS			·					
Compatible SolarEdge Inverters		Three phas	se inverters		SE30K & larger			
Maximum Allowed System Voltage				000		Vdc		
Dimensions (W x L x H)		129 x 168 x 59 /			129 x 162 x 59 / 5.1 x 6.4 x 2.32	mm / ii		
Weight		,		/ 2.34		gr/lb		
Input Connector				C4 ⁽³⁾		9. 7		
Input Wire Length Options	Input #1	Input #2	Input #1	Input #2	, pa			
1	(-) 0.16 / 0.52, (+) 0.16 / 0.52	(-) 0.16 / 0.52, (+) 0.16 / 0.52	,					
2	(-) 1.6 / 5.2, (+) 0.16 / 0.52	(-) 0.16 / 0.52, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2	1.6 / 5.2	m/ft		
3	(-) 1.6 / 5.2, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2						
Output Wire Type / Connector	Double insulated; MC4							
Output Wire Length	2.3 /	7.5		/ 7.5	2.4 / 7.8	m/ft		
Operating Temperature Range ⁽⁴⁾	-40 to +85 / -40 to +185					°C / °F		
Protection Rating	IP68 / NEMA6P							
Relative Humidity	0 - 100 d the Power Optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed							

(4) For ambient temperature above +70°C / +158°F, power de-rating is applied. Refer to the Power Optimizers Temperature De-Rating Application Note for more details

PV System Des SolarEdge Inve	3	208V Grid SE14.4K*	208V Grid SE17.3K*	277/480V Grid SE20K, 30K	277/480V Grid SE33.3K*, SE40K*	
Compatible Power O	ptimizers	P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	
Minimum String	Power Optimizers	8	9	14	14	
Length	PV Modules	15	17	27	27	
Maximum String	Power Optimizers	30	30	30	30	
Length	PV Modules	60	60	60	60	
Maximum Continuous Power per String		7200	8730	15300	15300	W
	Connected Power per String ⁽⁷⁾ n the difference in connected	1 string - 8400	1 string - 9930	1 string - 17550	2 strings or less - 17550	
,	gs is up to 2,000W for the	2 strings or more - 9000	2 strings or more - 10530	2 strings or more - 20300	3 strings or more - 20300	W

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter (5) P860/P960 can be mixed in one string only with P860/P960 7) P860/P960 design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification (8) To connect more STC power per string, design your project using SolarEdge Designer

Parallel Strings of Different Lengths or Orientations

POWER OPTIMIZER SHEET

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INVERTER DATA SHEET

SCALE: NTS

SCALE: NTS

Allison D. Kimbal

SolBid

732.0900

PHOTOVOLTAIC SYSTEM DATA SHEET 1

ADK 10.08.21

COMPACTGROUND G+

SMART. STABLE. INTELLIGENT.

Compact and tested substructure for the two-sided stand-mounting of PV modules on open ground

THE COMPACT**GROUND G+** is an east-west aligned open ground system with an incline of 10° and a floor spacing of up to 40 cm. When compared with conventional systems, up to 30% more modules can be installed on the same space with the COMPACTGROUND G+.

AEROCOMPACT®













The aerodynamic design boasts excellent structural properties and requires considerably less ballast than other systems on the market. Installation is performed without piling instruments or big machine deployment. THE COMPACT**GROUND G+** is ballasted with weights, but can also alternatively be fixed with the grounding pins option.

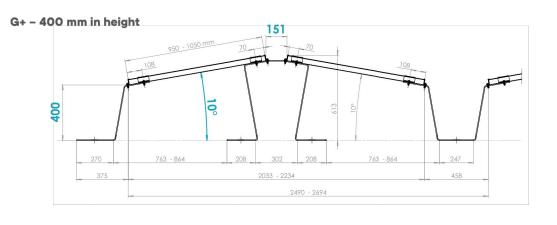
As one of the quickest open ground systems in the industry to install and with the capability of loading up to 1 MWp in one truck, the COMPACTGROUND G+ not only offers the best installation times and transport costs, but also a considerable price advantage. Thanks to these distinctive product characteristics, the system is also especially well-suited to temporary project installations or small systems from 2 kWp and upwards.

Due to the special "spring effect" of the legs, the substructure adjusts optimally to the conditions of the surface structure.

The system was tested and approved by TÜV Rheinland in accordance with UL 2703. The wire management solution for the string-wiring of module rows is UL-certified and available as an accessory with the substructure.

The COMPACT**GROUND G+** is stored in our 3D engineering software AEROTOOL. The AEROCOMPACT® customer center is able to issue clear and competent project reports based on empirical data (wind load, snow load, structural analysis).

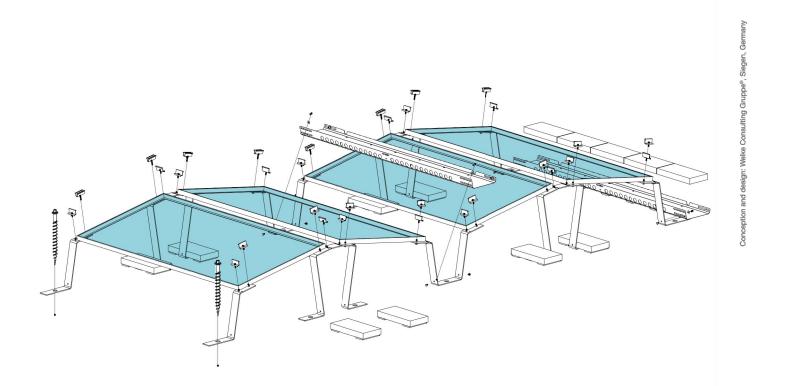
With only three main components, the COMPACTGROUND G+ achieves an exceptional price-performance ratio. In addition to the attractive system price, the simple installation of the innovative system saves time and resources.



TECHNICAL DATA

Description	Aerodynamic installation system for the stand-mounting of framed PV modules on open ground.
Scope of use	On grassland and farmland, as well as on sand, gravel, grit, concrete, or asphalt
Module dimensions	950-1,050 mm x 1,475-2,080 mm (width x length)
Installation angle	10°, bilateral
Row spacing	COMPACT GROUND G+ (8° internal shading angle): 609 mm
Distance from the roof surface / floor surface	Approx. 400 mm
Distance from roof edge	-
Max. building height	-
Max. roof pitch	Up to 10° possible without ground anchors; over 10° only with ground anchors
Max. field size	12 x 16 double rows; 384 modules
Min. field size	2 double rows for every 2 modules
Wind load	Suction load up to 2.4 kN/m²
Snow load	Pressure load up to 2.4 kN/m²
Design/stability verification	Software-supported based on wind tunnel analyses
On-site requirements	Sufficient load-bearing capacity and compressive strength of the ground must be ensured on site. The general terms and conditions, terms of warranty, and the user agreement apply.
Module approval	The list of approved modules is provided by AEROCOMPACT®; individual approvals through the module manufacturer
Components	Module clamps with grounding pins, open ground brackets, ballast stones; optional ballast trays, ground anchors
Materials	Bearing connecting parts made from aluminum EN AW 6060 T64; module clamps made from aluminum EN AW 6063 T66; screws made from stainless steel A2–70; ballast trays made from steel with aluminum–zinc coating; ground anchors made from cast aluminum

When installing on green spaces, we recommend using a robotic lawn mower or inserting some natural growth-inhibiting fleece underneath.







Module clamps with grounding pins Grounding screw fixing option Very low transport costs Installation without piling implements or big machine deployment Suitable for temporary project installations

Structurally optimized system

Minimum order quantity only 2 kWp

Quickest open ground installation UL-certified wiring management TÜV-certified as per UL 2703 Wind tunnel-tested

Engineered in Europe

General building inspectorate approval applied for

25 years product warranty



Scan QR code to watch installation video

AEROCOMPACT®

Headquarter Europe

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PHOTOVOLTAIC SYSTEM DATA SHEET 2