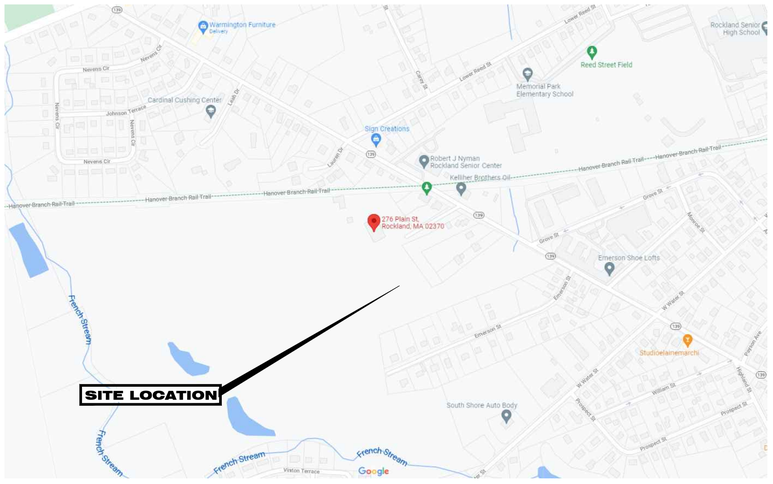
Planning Recd 11/7/22@ 10:27am

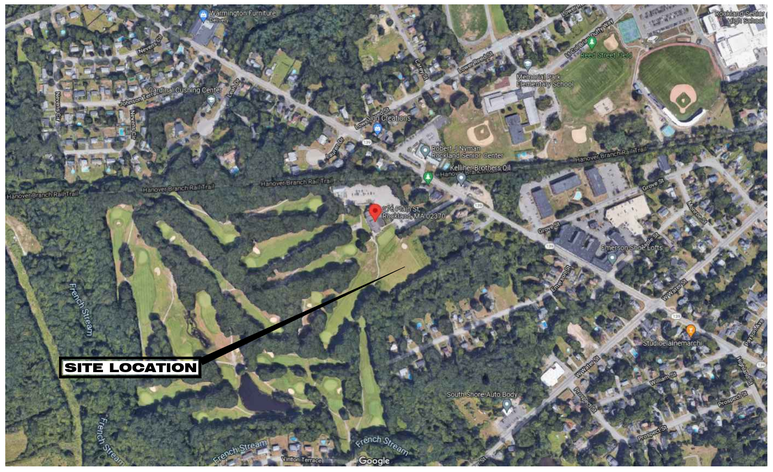
Know what's **below.** **Call** before you dig.

STERLING GOLF MANAGEMENT
GROUND MOUNTED PHOTOVOLTAIC SYSTEM
119.04 KWDC / 100.00 KWAC
276 PLAIN ST
ROCKLAND, MA 02370

LOCATION MAP
SCALE: NTS



SATELLITE MAP
SCALE: NTS



	ISSUES AND REVISIONS
ID / DRAWING TITLE	ISSUED FOR PERMIT 10.22.21
PV–001 COVER SHEET	X
PV–002 NOTES AND SYMBOLS	X
PV–100 PHOTOVOLTAIC SYSTEM LAYOUT	X
PV–101 PHOTOVOLTAIC DIMENSION PLAN	X
PV–200 PHOTOVOLTAIC SYSTEM ONE–LINE DIAGRAM	X
PV–300 PV SYSTEM CIRCUITING PLAN	X
PV–400 PHOTOVOLTAIC SYSTEM DETAILS SHEET 1	X
PV–401 PHOTOVOLTAIC SYSTEM DETAILS SHEET 2	X
PV–402 PHOTOVOLTAIC SYSTEM LABEL SHEET 1	X
PV–403 PHOTOVOLTAIC SYSTEM LABEL SHEET 2	X
PV–500 PHOTOVOLTAIC SYSTEM DATA SHEET 1	X
PV–501 PHOTOVOLTAIC SYSTEM DATA SHEET 2	X

PROJECT SUMMARY:

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.

SCOPE OF WORK:
- INSTALLATION OF SOLAR ARRAYS ON GROUND.
- INSTALLATION OF (2) 50 KW DC/AC INVERTER.
- ELECTRICAL CONDUIT & CABLES INSTALLED FROM SOLAR ARRAY TO THE INVERTERS.
- 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
INV-1	SOLAREDGE SE50KUS	50.00	1	2	QCELLS Q.PEAK DUO XL-G10.C	480	10°	230°, 50°	21	P960	11	60.00	1.20
			2	2					21/20		11,10		
			3	2					21		11		
INV-2	SOLAREDGE SE50KUS	50.00	1	2	QCELLS Q.PEAK DUO XL-G10.C	480	10°	230°, 50°	21	P960	11	59.04	1.18
			2	2					21/20		11,10		
			3	2					20		10		
TOTAL:	-	**100.00**	-						248	-	128	119.04	1.19

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MVJR
B	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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Stephen A. Bray
PROFESSIONAL ENGINEER
MA LICENSE: 47770
10/22/21

SolBid

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

KMB PROJECT No: **732.0900**

DRAWING TITLE: COVER SHEET

DRAWING SCALE: NONE

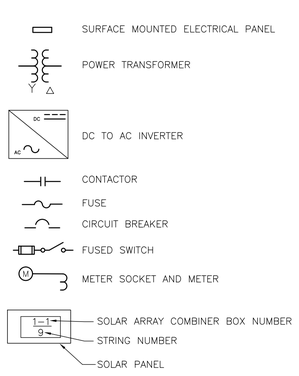
DESIGN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.: **PV-001**

ABBREVIATIONS:

A	AMPERE
AC	ALTERNATING CURRENT
AL	ALUMINUM
AF	AMP. FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AWG	AMERICAN WIRE GAUGE
C	CONDUIT (GENERIC TERM FOR RACEWAY, PROVIDE AS SPECIFIED)
CB	COMBINER BOX
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT SWITCH
DWG	DRAWING
EC	ELECTRICAL SYSTEM INSTALLER
EMT	ELECTRICAL METALLIC TUBING
FS	FUSIBLE SWITCH
FU	FUSE
GND	GROUND
GFI	GROUND FAULT INTERRUPTER
HZ	FREQUENCY (CYCLES PER SECOND)
JB	JUNCTION BOX
kCMIL	THOUSAND CIRCULAR MILS
kVA	KILO-VOLT AMPERE
kW	KILO-WATT
kWH	KILO-WATT HOUR
L	LINE
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO #	NUMBER
NTS	NOT TO SCALE
OCP	OVERCURRENT PROTECTION
P	POLE
PB	PULL BOX
PH ø	PHASE
PVC	POLY-VINYL CHLORIDE CONDUIT
PWR	POWER
RGS	RIGID GALVANIZED STEEL
SN	SOLID NEUTRAL
SWBD	SWITCHBOARD
TYP	TYPICAL
U.O.I.	UNLESS OTHERWISE INDICATED
WP	WEATHERPROOF
XFMR	TRANSFORMER
+72	MOUNT 72 INCHES TO BOTTOM ABOVE FINISHED FLOOR OR GRADE

SYMBOLS:



PV HANDLING NOTES:

1. 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.
8. 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 3/4".
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 CANNOT 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 PROTECTION
   - CONFINED SPACE
   - ELECTRICAL SAFETY
   - 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.

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MMJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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PROFESSIONAL ENGINEER

MA LICENSE: 47770 10/22/21

SolBid

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

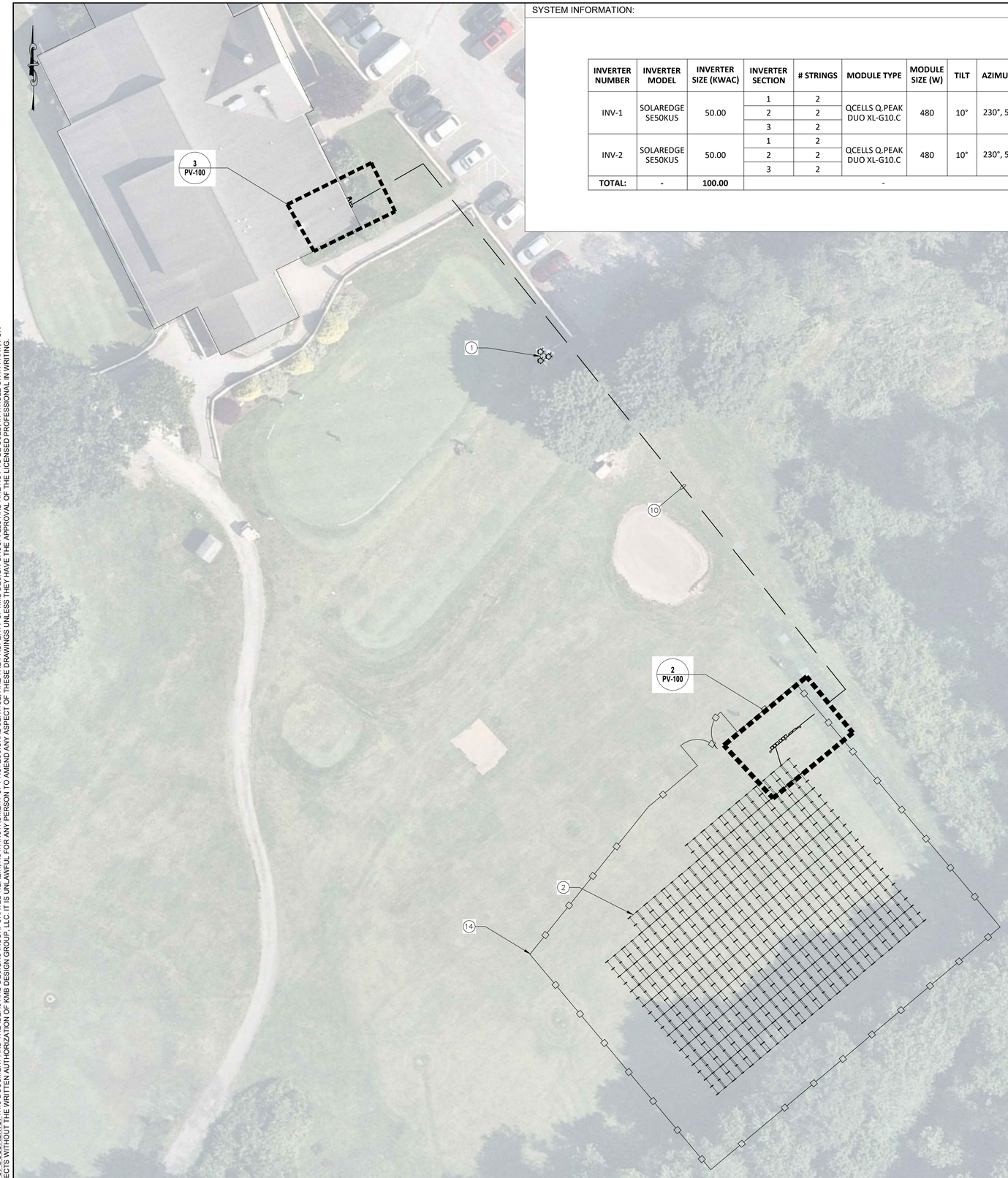
KMB PROJECT No.: **732.0900**

DRAWING TITLE: NOTES AND SYMBOLS

DRAWING SCALE: NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.: **PV-002**



1 **PHOTOVOLTAIC SYSTEM LAYOUT**

SCALE: 1" = 20'-0"

SYSTEM INFORMATION:

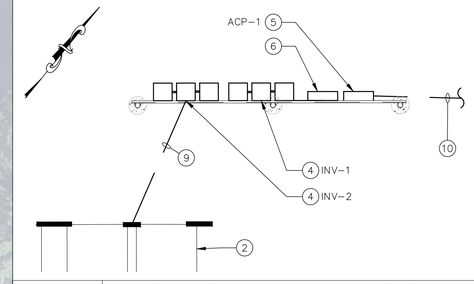
INVERTER NUMBER	INVERTER MODEL	INVERTER SIZE (KWAC)	INVERTER SECTION	# STRINGS	MODULE TYPE	MODULE SIZE (W)	TILT	AZIMUTH	NUMBER OF MODULES/ STRING	OPTIMIZER MODEL	NUMBER OF OPTIMIZERS/ STRING	SYSTEM SIZE (KWDC)	DC:AC
INV-1	SOLAREDGE SE50KUS	50.00	1	2	QCELLS Q.PEAK DUO XL-G10.C	480	10°	230°, 50°	21	P960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

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 780 CMR.
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.

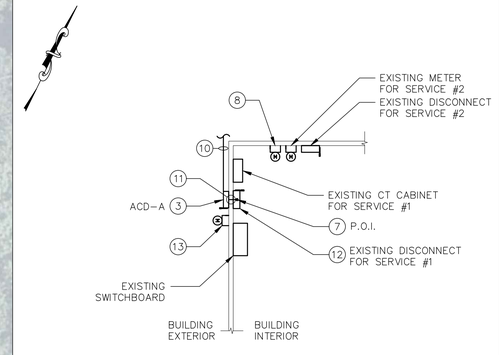
SYSTEM PLAN KEY NOTES:

1. EXISTING POLE MOUNTED UTILITY TRANSFORMERS WITH 120/208V 3PH SECONDARIES.
2. NEW PV ARRAY ON AEROCOMPACT COMPACT GROUND G20 GROUND MOUNTING SYSTEM. QCELLS Q.PEAK DUO XL-G10.C 480W MODULES. SEE SINGLE LINE DIAGRAM ON PV-200 FOR ADDITIONAL INFORMATION.
3. NEW 400A, 120/208V, 3ø, 4W, NEMA 3R PV MAIN SERVICE AC FUSIBLE DISCONNECT SWITCH ACD-A, FUSED AT 350A. SWITCH SHALL BE LOAD BREAK RATED, VISIBLE BREAK, LOCKABLE IN THE OPEN POSITION AND ACCESSIBLE 24/7.
4. NEW SOLAREDGE SE50KUS STRING INVERTER, 208V, 3PH, 4W INVERTER. SEE PV-200 FOR DETAILS.
5. NEW 400A, 120/208V, 3PH, 4W, NEMA 3R PV COMBINER AC PANELBOARD, ACP-1. MOUNTED ON UNISTRUT FRAME. SEE PV-200 FOR DETAILS.
6. NEW REVENUE GRADE SREC METER AND DAS IN NEMA 3R ENCLOSURE. COORDINATE EXACT REQUIREMENTS WITH DAS MANUFACTURER.
7. NEW PV INTERCONNECTION TO BE MADE IN EXISTING MAIN SERVICE DISCONNECT #1. SEE PV-200 FOR DETAILS.
8. EXISTING NATIONAL GRID UTILITY METER #: 05085036.
9. APPROXIMATE ROUTE OF NEW UNDERGROUND DC CONDUCTORS RUN FROM GROUND MOUNT ARRAY TO THE INVERTERS MOUNTED ON A UNISTRUT FRAME.
10. APPROXIMATE ROUTE OF NEW UNDERGROUND AC CONDUCTORS FROM ACP-1 TO THE AC DISCONNECT, ACD-A, LOCATED AT THE BUILDING EXTERIOR. REFER TO TRENCHING DETAIL ON PV-401 DETAIL 3.
11. APPROXIMATE ROUTE OF NEW AC CONDUCTORS FROM ACD-A, LOCATED AT THE BUILDING EXTERIOR TO POINT OF INTERCONNECTION IN EXISTING MAIN SERVICE DISCONNECT #1. CONDUIT SHALL PENETRATE BUILDING WALL AND RUN TO EXISTING MAIN SERVICE DISCONNECT #1.
12. EXISTING MAIN SERVICE DISCONNECT SWITCH FOR SERVICE #1, 800A, 120/208V, 3PH, 4W.
13. 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 AND DISCONNECT MIGHT BE REQUIRED TO BE GROUPED WITH EXISTING METERING. FINAL METERING LOCATION AND GROUPING WILL BE DETERMINED BY THE NGRID METERING DEPARTMENT.
14. NEW 6' CHAIN LINK FENCE INSTALLED AROUND NEW ARRAY.



2 **ENLARGED ELECTRICAL EQUIPMENT PLAN**

SCALE: 1/4" = 1'-0"



3 **ENLARGED ELECTRICAL ROOM PLAN**

SCALE: 1/8" = 1'-0"

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MHJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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Stephen A. Bray
PROFESSIONAL ENGINEER
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SolBid

STERLING GOLF MANAGEMENT

GROUND MOUNTED PHOTOVOLTAIC SYSTEM
100.0 KW AC / 119.04 KW DC
276 PLAIN ST
ROCKLAND, MA 02370

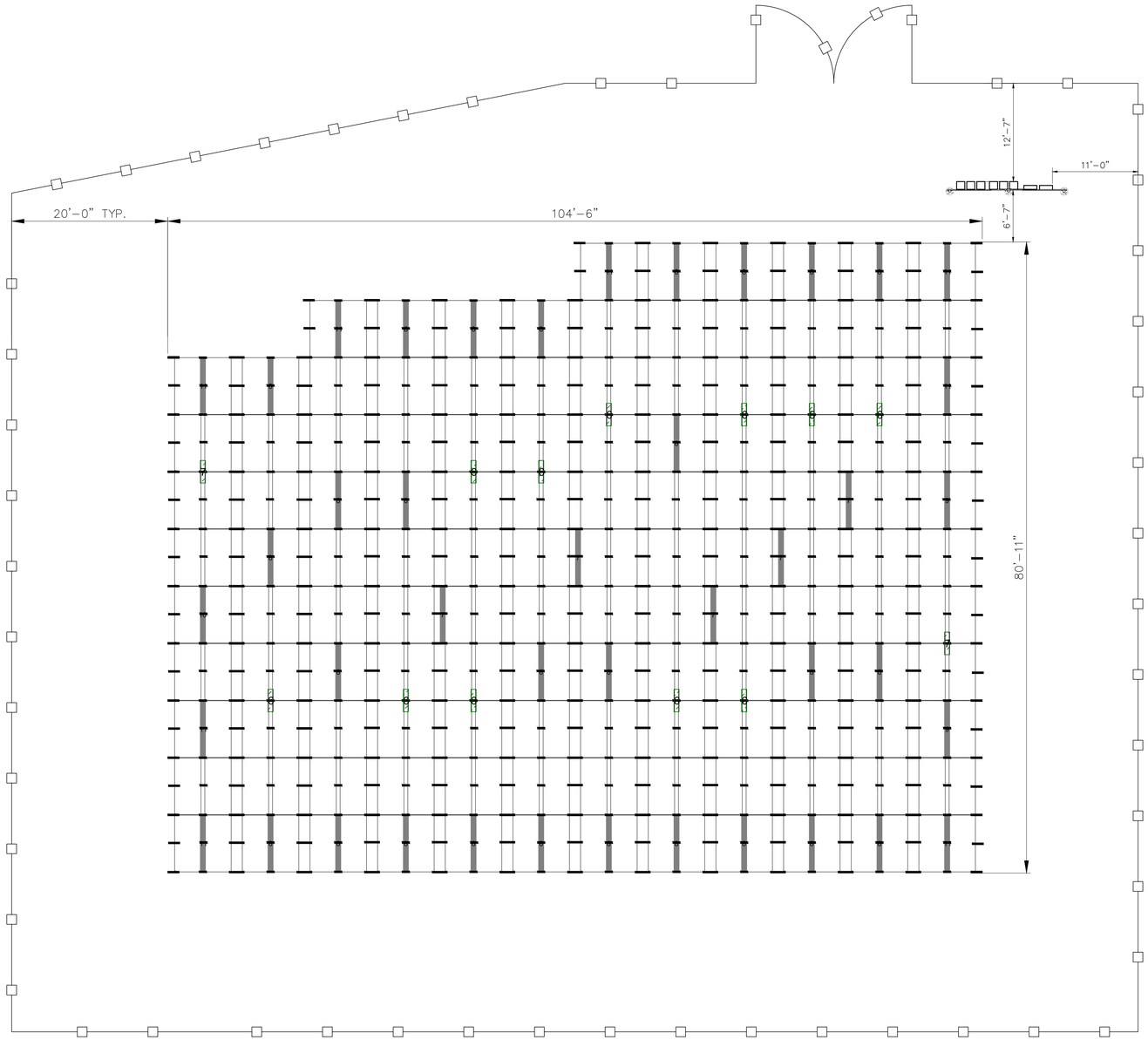
KMB PROJECT No.: **732.0900**

DRAWING TITLE: PHOTOVOLTAIC SYSTEM LAYOUT

DRAWING SCALE: AS NOTED

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.: **PV-100**



1 **PHOTOVOLTAIC DIMENSION PLAN**

SCALE: 1/8" = 1'-0"

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 780 CMR.
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.

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MWJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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

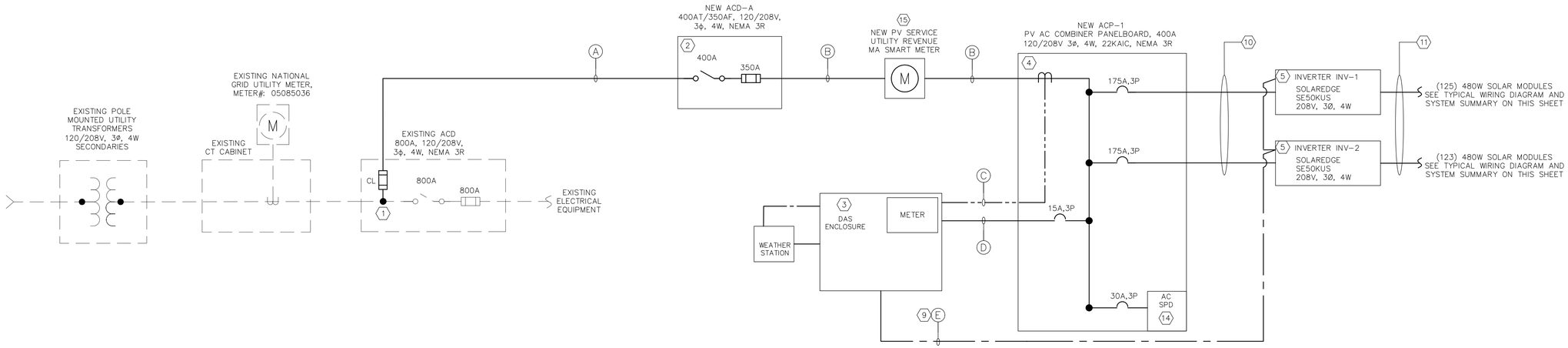
KMB PROJECT No:
732.0900

DRAWING TITLE:
PHOTOVOLTAIC DIMENSION PLAN

DRAWING SCALE:
AS NOTED

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No:
PV-101



SYSTEM SUMMARY

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
INV-1	SOLAREDGE SE50KUS	50.00	1	STRING 1	QCELLS Q.PEAK DUO XL-G10.C	480	21	P960	11	10°	230°, 50°	60.00	1.20
				STRING 2			21		11				
			2	STRING 3			21		11				
				STRING 4			20		10				
			3	STRING 5			21		11				
				STRING 6			21		11				
INV-2	SOLAREDGE SE50KUS	50.00	1	STRING 1	QCELLS Q.PEAK DUO XL-G10.C	480	21	P960	11	10°	230°, 50°	59.04	1.18
				STRING 2			21		11				
			2	STRING 3			21		11				
				STRING 4			20		10				
			3	STRING 5			20		10				
				STRING 6			20		10				
TOTAL:	-	**100.00**	-				248	-	128	-	-	119.04	1.19

INVERTER DC WIRING SCHEDULE:

DC WIRING CHART							
INVERTER #	STRING HOME RUN WIRE SIZE AND TYPE		EQUIPMENT GROUND SIZE	MODULES PER STRING	NUMBER OF STRINGS	LONGEST STRING LENGTH (FT)	STRING VOLTAGE DROP (%)
INV-1	#8	AWG 1KV PV WIRE	#6 AWG	21,20	5,1	150	0.33%
INV-2	#8	AWG 1KV PV WIRE	#6 AWG	21,20	3,3	200	0.43%

INVERTER AC WIRE SCHEDULE:

INVERTER AC WIRE SCHEDULE						
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) 1-1/2"	10	0.05%
INV-2	208V 3PH	175	(3) #2/0 AWG CU THWN-2 +#6 AWG N + #6 AWG GND	(1) 1-1/2"	10	0.05%

EQUIPMENT SPECIFICATIONS

MODULE SPECIFICATIONS		
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

INVERTER SPECIFICATIONS		
SOLAREDGE SE50KUS		
RATED OUTPUT	(KW)	50
AC RATED OUTPUT	(VOLTS)	208
AC RATED CURRENT	(AMPS)	140
POWER FACTOR	-	>0.99
PEAK EFFICIENCY	EFF%	98.5%

OPTIMIZER SPECIFICATIONS		
SOLAR EDGE P960		
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%

INVERTER PROTECTIVE SETTING TABLE

PROPOSED INVERTER GRID PROTECTION SETTINGS					
DEVICE SETTING	PICKUP	VALUE	CLEARING TIME (SEC)	CLEARING TIME (CYCLES)	DESCRIPTION
27-1	50%	60.05 V	1.10	66.00	UNDERVOLTAGE
27-2	88%	105.68 V	2.00	120.00	
59-1	110%	132 V	2.00	120.00	OVERVOLTAGE
59-2	120%	144 V	0.16	9.60	
81U-2	56.5Hz		0.16	9.60	UNDERFREQUENCY
81U-1	58.5Hz		300.00	18000.00	
81O-1	61.2Hz		300.00	18000.00	OVERFREQUENCY
81O-2	62.0Hz		0.16	9.60	

AC WIRE AND CONDUIT SCHEDULE:

AC WIRE AND CONDUIT SCHEDULE					
	MINIMUM VOLTAGE	WIRE SIZE & TYPE	MINIMUM CONDUIT	CONDUCTOR LENGTH (FT)	VOLTAGE DROP
A	208V 3PH	(3) 500 KCMIL CU THWN-2 +#3 AWG N + #3 AWG GND	(1) 2-1/2"	20	0.06%
B	208V 3PH	(3) 500 KCMIL CU THWN-2 +#3 AWG N + #3 AWG GND	(1) 2-1/2"	325	0.95%
C	-	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	-	-	-

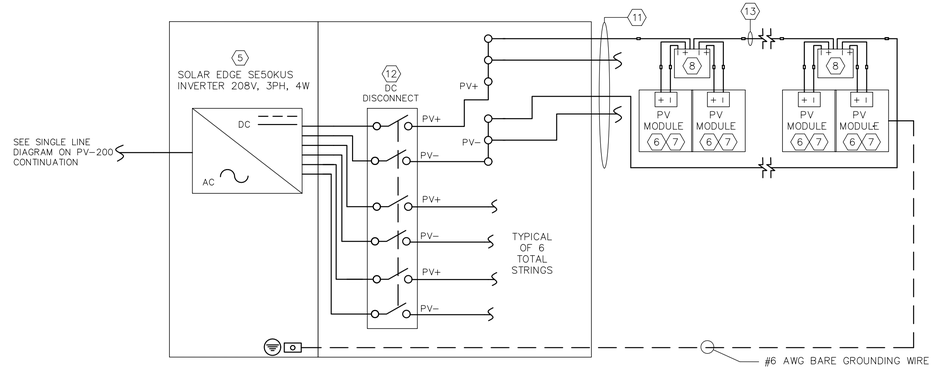
SYMBOLS LEGEND:

- EXISTING TO REMAIN
- NEW
- NEW COMMUNICATIONS
- (N) NEW
- (E) EXISTING
- POWER TRANSFORMER
- DC TO AC INVERTER
- CONTACTOR
- FUSE
- CIRCUIT BREAKER
- FUSED SWITCH
- METER SOCKET AND METER
- SHUNT TRIP
- GROUND FAULT PROTECTION

KEY NOTES:

1. NEW PV INTERCONNECTION TO BE MADE ON THE LINE SIDE OF THE EXISTING MAIN SERVICE DISCONNECT #1 AFTER CT CABINET. CONTRACTORS SHALL SHALL INSTALL CABLE LIMITERS ON CONDUCTORS AT THE POINT OF CONNECTION. IF THE EXISTING SERVICE IS FOUND TO BE DIFFERENT THAN SHOWN, CONTRACTOR TO CONTACT ENGINEER OF RECORD FOR A REVISED POINT OF INTERCONNECTION.
2. PROVIDE NEW ACD-A 400A, 120/208V, 3ø, 4W, NEMA 3R DISCONNECT SWITCH, FUSED AT 350A. SWITCH SHALL BE LOAD BREAK RATED, VISIBLE BREAK AND LOCKABLE IN THE OPEN POSITION. LOCATED AT BUILDING EXTERIOR.
3. NEW REVENUE GRADE SREC METER AND DAS IN NEMA 3R ENCLOSURE. COORDINATE EXACT REQUIREMENTS WITH DAS MANUFACTURER.
4. 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.
5. 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.
6. 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, OTHERWISE THE MODULE WARRANTY AND THE UL LISTING MAY BE INVALIDATED. QUICK CONNECTS SHALL COMPLY WITH NEC 690.33(C).
7. INDIVIDUAL MODULES SHALL BE BONDED TO THE RACKING SYSTEM USING APPROVED RACKING GROUNDING LUG.
8. SOLAREDGE POWER OPTIMIZER, P960. FOR STRINGS WITH AN EVEN NUMBER OF 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.
9. COMMUNICATIONS CABLE BETWEEN INVERTER AND DATA ACQUISITION SYSTEM.
10. SEE INVERTER AC WIRING SCHEDULE ON THIS SHEET.
11. SEE INVERTER DC WIRING SCHEDULE ON THIS SHEET FOR WIRING INFORMATION.
12. DC DISCONNECT SWITCH, SUPPLIED INTEGRAL WITH THE INVERTER.
13. #8 AWG 1KV PV WIRE JUMPER CABLE TO BE INSTALLED BETWEEN SOLAREDGE OPTIMIZERS WHERE NEEDED.
14. PANEL MOUNTED 120/208V, 3PH AC SURGE PROTECTIVE DEVICE.
15. 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.

TYPICAL INVERTER SCHEMATIC:



REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MWJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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10/22/21

SolBid

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

KMB PROJECT NO.
732.0900

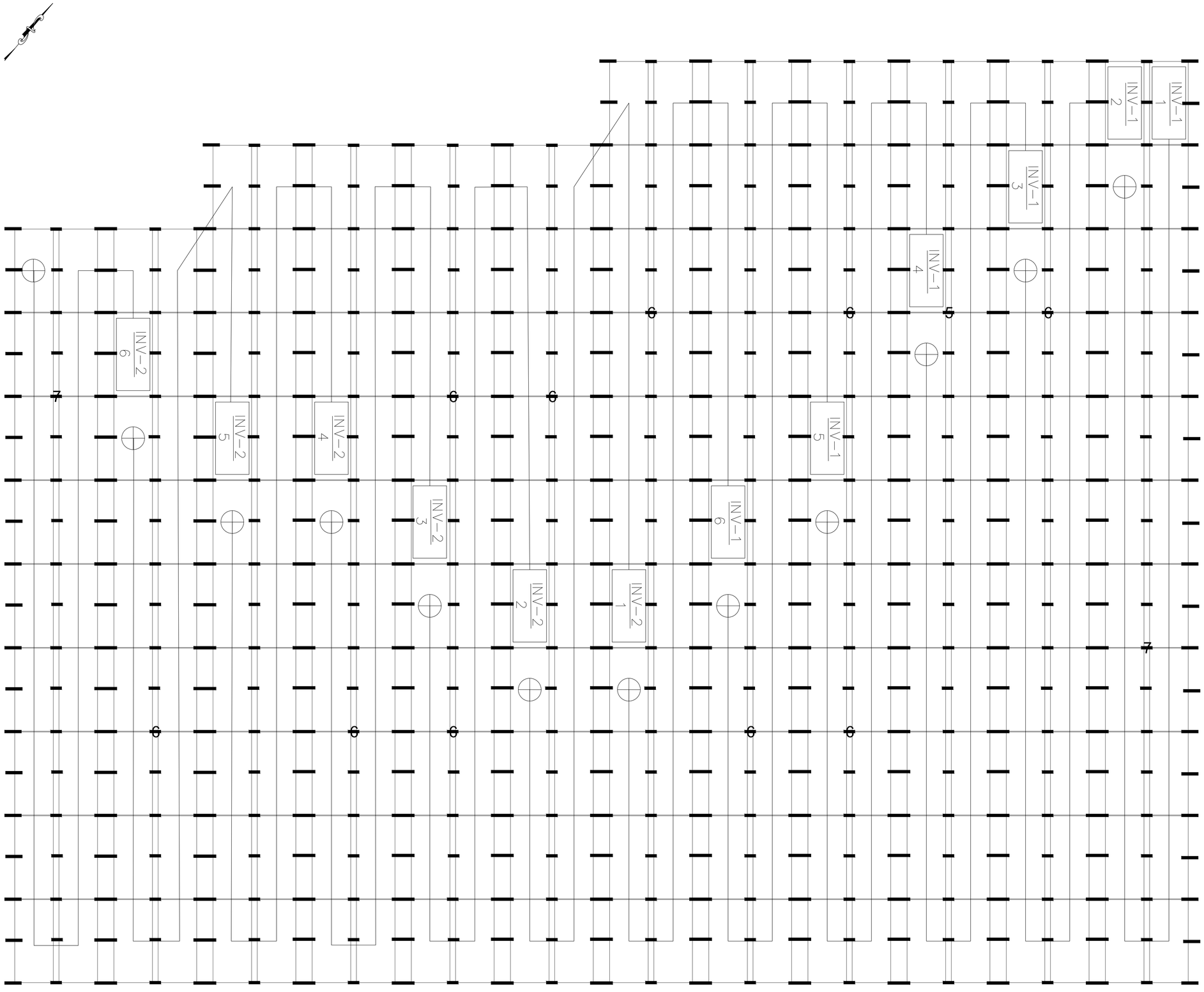
DRAWING TITLE
PHOTOVOLTAIC ONE-LINE DIAGRAM

DRAWING SCALE:
NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

CDTD No.:

PV-200



1 **PHOTOVOLTAIC SYSTEM CIRCUITING LAYOUT**

SCALE: 1/4" = 1'-0"

SERVICE PLAN GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE WIRING IDENTIFICATION AS FOLLOWS:

   DC WIRING
   POSITIVE: RED
   NEGATIVE: BLACK
   GROUND: GREEN

   AC WIRING 120V/208V/240V

PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN

   AC WIRING 277V/480V

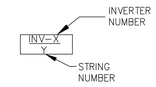
PHASE A	BROWN
PHASE B	ORANGE
PHASE C	YELLOW
NEUTRAL	GRAY
GROUND	GREEN

2. INSTALLATION CONTRACTOR SHALL INSTALL HOME RUN DC WIRING TO INVERTERS. THIS SHALL CONSIST OF #8 AWG 1KV PV SUNLIGHT RESISTANT CABLE WITH LOCKING MC CONNECTOR. JUMPER CABLES BETWEEN OPTIMIZERS SHALL CONSIST OF #8 AWG 1KV PV SUNLIGHT RESISTANT CABLE.

3. ANY STRING WIRING THAT IS NOT UNDER THE ARRAY SHALL BE RUN IN CONDUIT FOR PROTECTION.

4. THE DESIGN OF THE RACKING SYSTEM 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, AND/OR ATTACHMENT DESIGN.

LEGEND:



REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MWJR
B	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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MA LICENSE: 47770 10/22/21

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

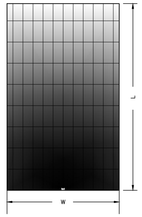
KMB PROJECT No: **732.0900**

DRAWING TITLE: PV SYSTEM CIRCUITING PLAN

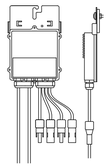
DRAWING SCALE: NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.: **PV-300**



MODULE SPECIFICATIONS		
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



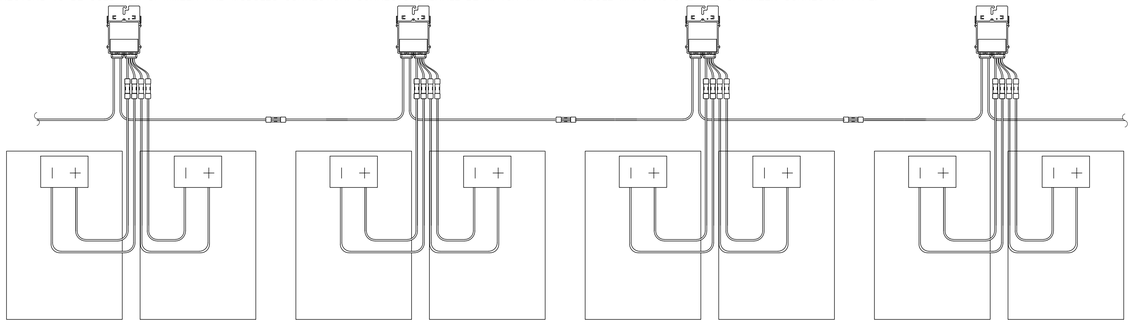
OPTIMIZER SPECIFICATIONS		
SOLAR EDGE P960		
RATED INPUT OUTPUT	(W)	960
RATED INPUT VOLTAGE PER INPUT	(VOLTS)	60
RATED INPUT CURRENT PER INPUT	(AMPS)	11.6
DC RATED OUTPUT	(VOLTS)	80
DC RATED CURRENT	(AMPS)	18.0
POWER FACTOR	-	>0.99
PEAK EFFICIENCY	EFF%	99.5%
WIDTH	W (IN)	5.10
DEPTH	D (IN)	6.61
HEIGHT	H (IN)	2.32
WEIGHT	WT (LBS)	2.34

INVERTER SPECIFICATIONS		
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 (TYP OF 1)		
WIDTH	W (IN)	22.4
DEPTH	D (IN)	11.6
HEIGHT	H (IN)	14.17
WEIGHT	WT (LBS)	39.6
SYNERGY UNIT (TYP of 3)		
WIDTH	W (IN)	12.90
DEPTH	D (IN)	10.75
HEIGHT	H (IN)	22
WEIGHT	WT (LBS)	70.4

1 INVERTERS & SOLAR PANEL SPECS

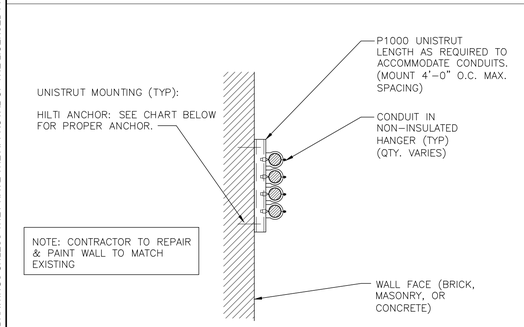
SCALE: NTS

NOTES:
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 PROTECTING THESE CABLES WHEN MOVING AND INSTALLING THE MODULES.
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 ASSEMBLY PRACTICES.
3. CONNECTORS TO BE USED FOR OPTIMIZER AND MODULES CONNECTION. CONNECTORS SHALL BE MATCH WITH PV MODULE MANUFACTURE AND OPTIMIZER CONNECTOR TYPE.



2 2-MODULE OPTIMIZER STRINGING DETAIL

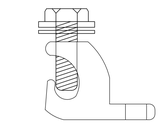
SCALE: NTS



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.

3 CONDUIT VERTICAL SUPPORT DETAIL

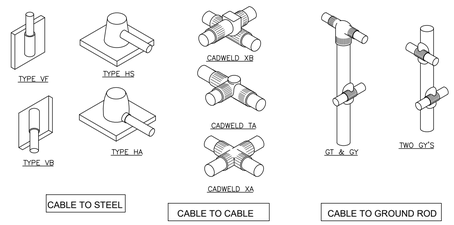
SCALE: NTS



NOTES:
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.

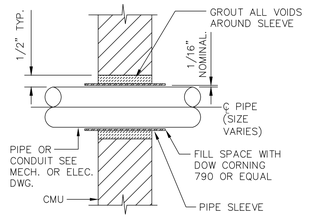
4 TYPICAL LAY-IN GROUNDING LUG

SCALE: NTS



5 EXOTHERMIC WELD CONNECTIONS

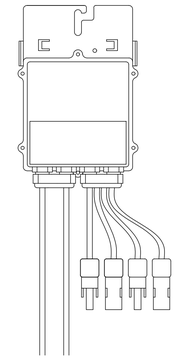
SCALE: NTS



NOTES: (FOR FIRE-RATED WALL ONLY)
1. PIPE ANCHORAGE IS REQUIRED NEARBY TO PREVENT PIPE MOVEMENT THROUGH PENETRATION.
2. CABLES WITHIN CONDUIT PENETRATION SHALL BE FIRE SEALED AFTER INSTALLATION

6 CONDUIT WALL PENETRATION DETAIL

SCALE: NTS



NOTE:
MOUNTING OF OPTIMIZERS SHALL FOLLOW MOST RECENT VERSION OF SOLAREDGE INSTALLATION MANUAL. CONTRACTOR SHALL ALSO CONFIRM THAT INSTALLATION METHOD IS APPROVED BY RACKING MANUFACTURER.

E-W RACKING PURLIN. OPTIMIZER SHALL BE MOUNTED USING THE SAME MEANS & METHOD OF INSTALLATION USED FOR MOUNTING MODULES.

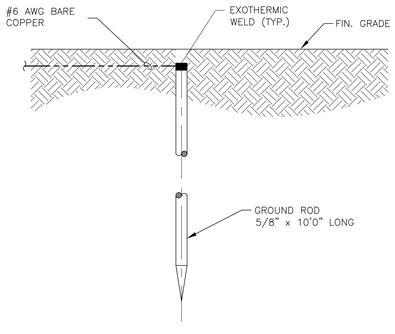
7 SOLAR EDGE P960 OPTIMIZER DETAIL

SCALE: NTS

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, RECEPTACLES, ETC SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
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 RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT.
5. 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.

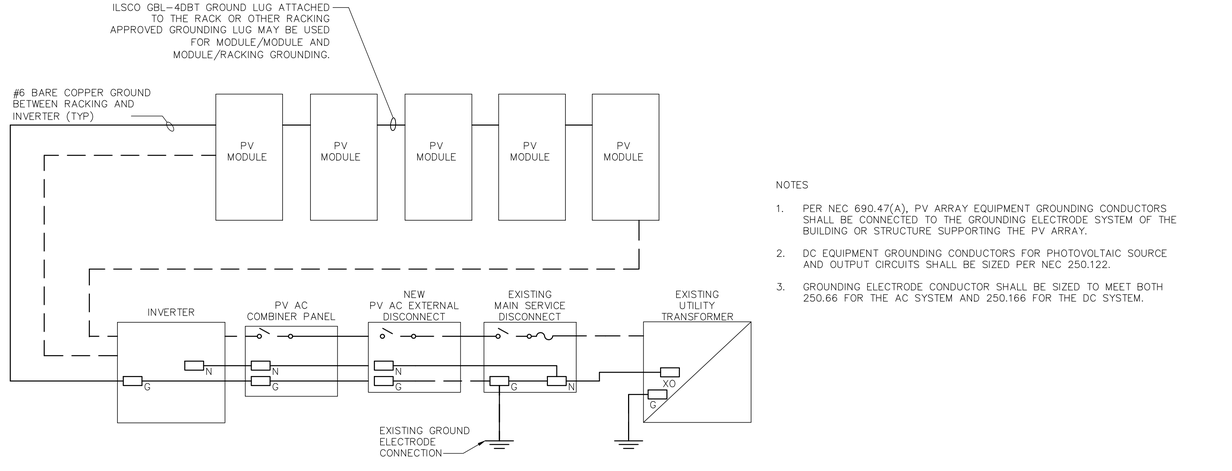
8 GROUNDING NOTES

SCALE: NTS



9 AC GROUNDING ELECTRODE DETAIL

SCALE: NTS



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.

10 TYPICAL GROUNDING DETAIL

SCALE: NTS

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MWJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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Stephen A. Bray
PROFESSIONAL ENGINEER

MA LICENSE: 47770 10/22/21

SolBid

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

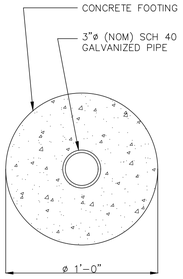
KMB PROJECT No: **732.0900**

DRAWING TITLE: PHOTOVOLTAIC SYSTEM DETAILS SHEET 1

DRAWING SCALE: NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.: **PV-400**

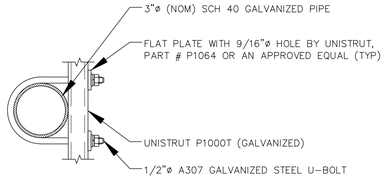


CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318 AND THE SPECIFICATION CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL.....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
4. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.

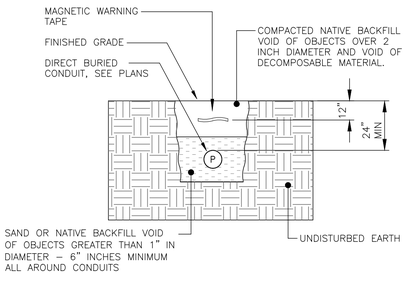
1 EQUIPMENT POST DETAIL

SCALE: NTS



2 UNISTRUT CONNECTION DETAIL

SCALE: NTS

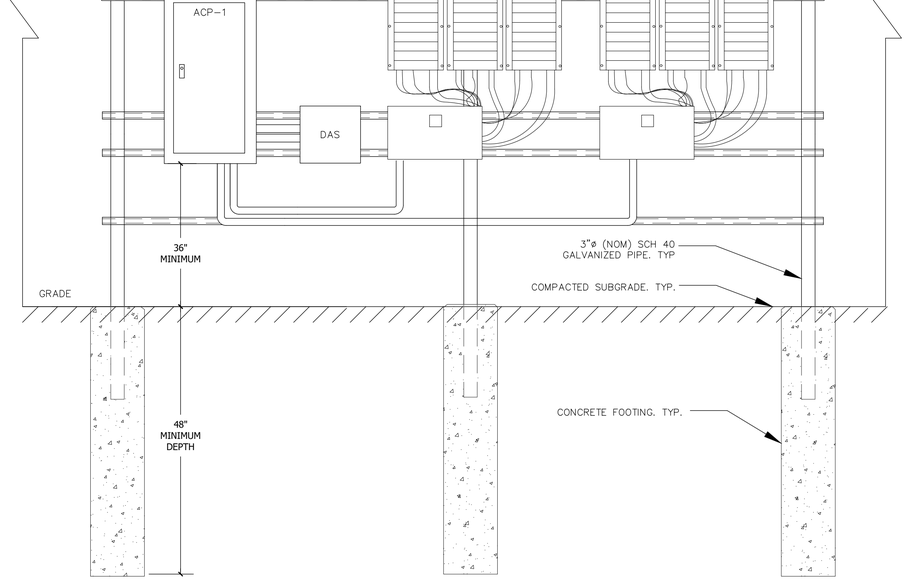


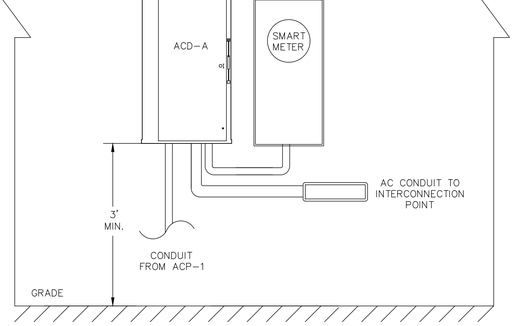
NOTE:
1. MAGNETIC DETECTABLE WARNING TAPE – "CAUTION ELECTRIC LINE BELOW" TO BE INSTALLED IN TRENCH AT NO DEEPER THAN 12" BELOW FINISHED GRADE.
2. THIS DETAIL IS GENERAL, TO SHOW THE REQUIRED DEPTH'S AND COVER. ADJUST AS NECESSARY FOR MORE THEN ONE CONDUIT.
3. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUITABILITY OF NATIVE SOIL FOR BACKFILL AROUND DIRECT BURIED CABLES.

3 DIRECT BURIED CONDUIT DETAIL

SCALE: NTS

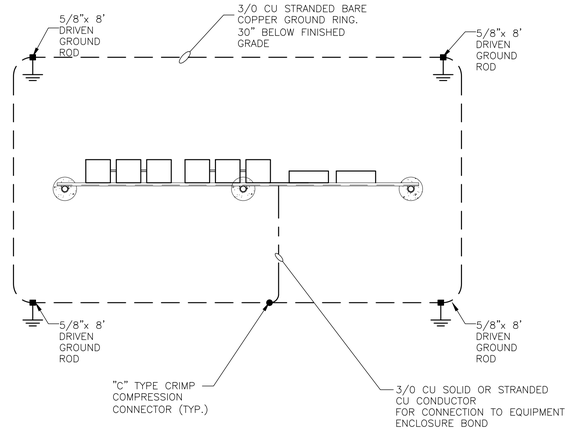
NOTE:
DETAILS ARE INTENDED TO CONVEY DESIGN INTENT ONLY.
CONTRACTOR SHALL MODIFY AS NECESSARY TO SUIT FIELD CONDITIONS. CLEARANCES SHALL BE MAINTAINED PER NEC AND OTHER APPLICABLE LOCAL CODES.





4 MAIN SOLAR EQUIPMENT ELEVATION DETAIL

SCALE: NTS



5 EQUIPMENT PAD GROUNDING DETAIL

SCALE: NTS

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
B	10.22.21	ISSUED FOR PERMIT	JL	MHJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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MA LICENSE: 47770 10/22/21

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

KMB PROJECT No.
732.0900

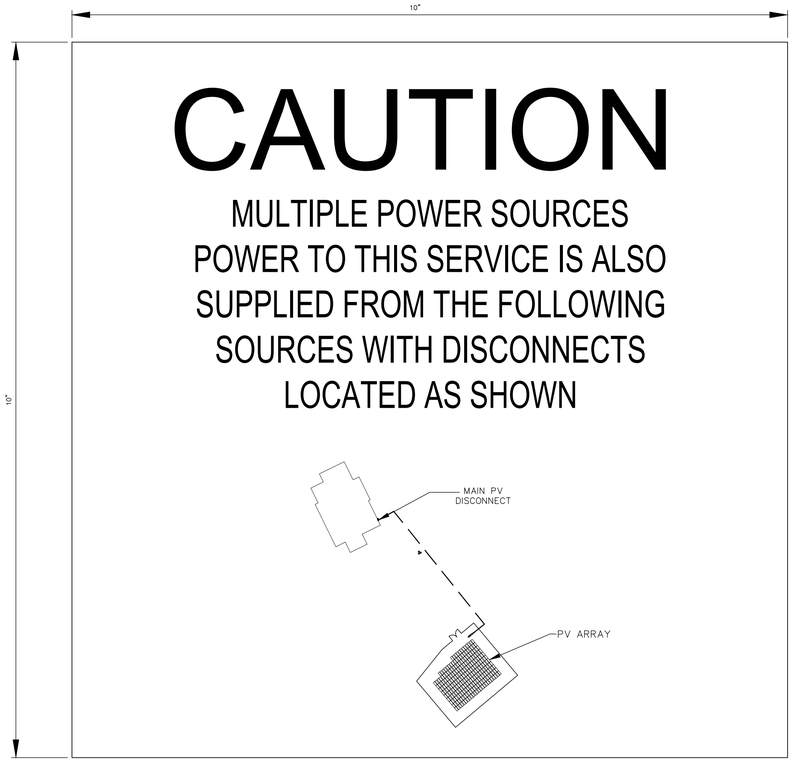
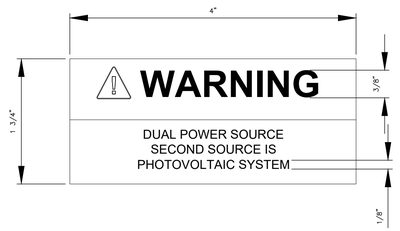
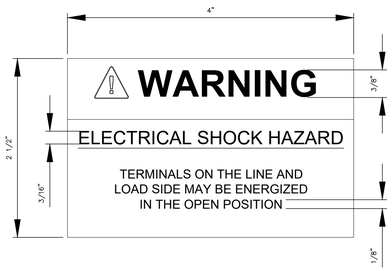
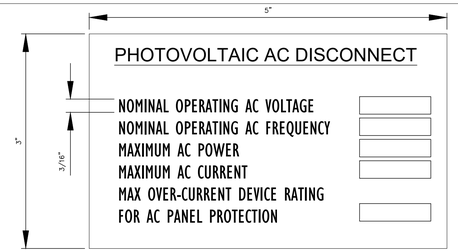
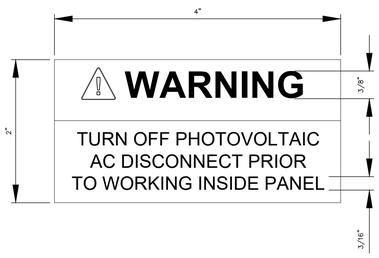
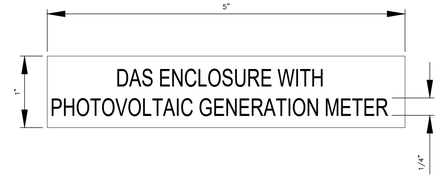
DRAWING TITLE
PHOTOVOLTAIC SYSTEM DETAILS SHEET 2

DRAWING SCALE:
NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.
PV-401

EQUIPMENT LABEL SCHEDULE

LABEL NUMBER	A	LABEL NUMBER	B	C
LABEL LOCATION	ACD-A AND EXISTING MAIN DISCONNECT	LABEL LOCATION	ACD-A AND EXISTING MAIN DISCONNECT	ACD-A
LABEL QUANTITY	2	LABEL QUANTITY	2	1
LABEL FIGURE		LABEL FIGURE		
LABEL NUMBER	D	LABEL NUMBER	G	
LABEL LOCATION	ACD-A	LABEL LOCATION	ACD-A	
LABEL QUANTITY	1	LABEL QUANTITY	1	
LABEL FIGURE		LABEL FIGURE	 NOTE: PLEASE SEE THE AC LABELING CHART ON THIS SHEET FOR IDENTIFICATION RATING.	
LABEL NUMBER	H	LABEL NUMBER	I	
LABEL LOCATION	EXISTING MAIN DISCONNECT	LABEL LOCATION	DAS ENCLOSURE	
LABEL QUANTITY	1	LABEL QUANTITY	1	
LABEL FIGURE		LABEL FIGURE		
LABEL NUMBER				
LABEL LOCATION				
LABEL QUANTITY				
LABEL FIGURE				

TO COMPLY WITH NEC 705.10 & NEC 690.56(B)

GENERAL NOTES

1. LABELS AND MARKINGS SHALL BE APPLIED TO THE APPROPRIATE COMPONENTS IN ACCORDANCE WITH NEC.
2. SOLAR MODULES ARE SUPPLIED FROM THE MANUFACTURER WITH MARKINGS PRE-APPLIED TO MEET THE REQUIREMENTS OF NEC.
3. THE INVERTERS ARE SUPPLIED FROM THE MANUFACTURER WITH THE APPROPRIATE LABELS AND MARKINGS.
4. TEXT LABELS WILL BE ENGRAVED WITH WHITE GRAPHICS ONTO 1/16" RED MELAMINE PLASTIC PLACARDS. THE LABEL WILL BE ATTACHED TO THE APPROPRIATE COMPONENT ENCLOSURES IN CONSPICUOUS PLACES USING TWO PART EPOXY.
5. LABEL 'D' WILL BE ETCHED WITH WHITE GRAPHICS ONTO 1/16" RED PLASTIC PLACARD. THE LABEL WILL BE EFFECTIVELY ATTACHED TO THE EXISTING FACILITY SWITCHBOARD AND THE NEW PHOTOVOLTAIC SYSTEM DISCONNECT.
6. EACH INVERTER SHALL BE LABELED WITH IT'S INVERTER IDENTIFICATION NUMBER, ETCHED WITH WHITE GRAPHICS ONTO 1/16" RED PLASTIC PLACARDS.

AC DISCONNECT LABELING CHART

AC DISCONNECT LABELING CHART					
ACD NUMBER	NOMINAL OPERATING AC VOLTAGE (VAC)	NOMINAL OPERATING AC FREQUENCY (HZ)	MAX AC POWER (KW)	MAX AC CURRENT (A)	MAX OCPD FOR AC PROTECTION (A)
INV-1	208	60	50	139.50	175
INV-2	208	60	50	139.50	175
ACD-A	208	60	100	279.00	350

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MHJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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GROUND MOUNTED PHOTOVOLTAIC SYSTEM
100.0 KW AC / 119.04 KW DC
276 PLAIN ST
ROCKLAND, MA 02370

KMB PROJECT No:
732.0900

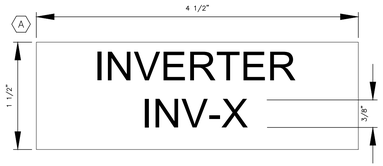
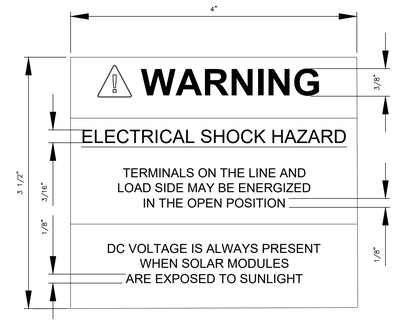
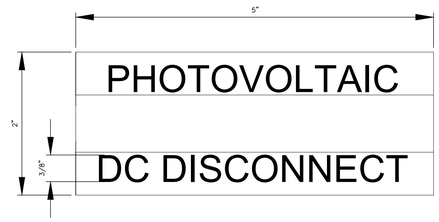
DRAWING TITLE:
PHOTOVOLTAIC SYSTEM LABEL SHEET 1

DRAWING SCALE:
NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No.:
PV-402

EQUIPMENT LABEL SCHEDULE

LABEL NUMBER	A	B
LABEL LOCATION	ALL INVERTERS	ALL INVERTERS
LABEL QUANTITY	2	2
LABEL FIGURE	 NOTE: PLEASE SEE THE DC LABELING CHART ON THIS SHEET FOR INVERTER IDENTIFICATION NUMBER.	
LABEL NUMBER	C	D
LABEL LOCATION	ALL INVERTERS	ALL INVERTERS
LABEL QUANTITY	2	2
LABEL FIGURE		

GENERAL NOTES

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3. THE INVERTERS ARE SUPPLIED FROM THE MANUFACTURER WITH THE APPROPRIATE LABELS AND MARKINGS.
4. TEXT LABELS WILL BE ENGRAVED WITH WHITE GRAPHICS ONTO 1/16" RED MELAMINE PLASTIC PLACARDS. THE LABEL WILL BE ATTACHED TO THE APPROPRIATE COMPONENT ENCLOSURES IN CONSPICUOUS PLACES USING TWO PART EPOXY.
5. LABEL 'B' WILL BE ETCHED WITH WHITE GRAPHICS ONTO 1/16" RED PLASTIC PLACARD. THE LABEL WILL BE EFFECTIVELY ATTACHED TO THE EXISTING FACILITY SWITCHBOARD AND THE NEW PHOTOVOLTAIC SYSTEM DISCONNECT.
6. EACH INVERTER SHALL BE LABELED WITH IT'S INVERTER IDENTIFICATION NUMBER, ETCHED WITH WHITE GRAPHICS ONTO 1/16" RED PLASTIC PLACARDS.

LABEL NUMBER	
LABEL LOCATION	
LABEL QUANTITY	
LABEL FIGURE	

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MHJR
B	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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10/22/21

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GROUND MOUNTED PHOTOVOLTAIC SYSTEM
100.0 KW AC / 119.04 KW DC
276 PLAIN ST
ROCKLAND, MA 02370

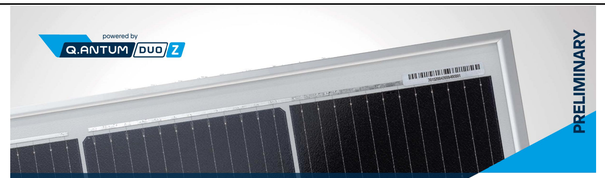
KMB PROJECT No:
732.0900

DRAWING TITLE:
PHOTOVOLTAIC SYSTEM LABEL SHEET 2

DRAWING SCALE:
NONE

DRAWN BY:	CHECKED BY:	DATE:
JL	ADK	10.08.21

DWG No:
PV-403



PRELIMINARY

Q.PEAK DUO XL-G10.2
475-495
ENDURING HIGH PERFORMANCE

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2020

Q CELLS Yield Security

BREAKING THE 21% EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 21.6%.

LOW ELECTRICITY GENERATION COSTS
Higher yield per surface area, lower BOS costs and up to 80 watts more module power than standard 144 half-cell modules.

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING
High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (2400 Pa).

A RELIABLE INVESTMENT
Inclusive 12-year product warranty and 25-year linear performance warranty[2].

STATE OF THE ART MODULE TECHNOLOGY
Q.ANTUM DUO combines cutting edge cell separation and innovative 12-busbar design with Q.ANTUM Technology.

[1] APT test conditions according to IEC/TS 62804-1:2015, method B (–1500 V, 168 h)
[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:
Ground-mounted solar power plants

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	2216 mm × 1045 mm × 35 mm (including frame)
Weight	26.5 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodised aluminium
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 700 mm, (–) ≥ 350 mm*
Connector	Stäubli MC4-Evo2, Hanwha Q CELLS HQC4; IP68

*Long cables (+) ≥ 1450 mm, (–) ≥ 1450 mm for landscape installation are available upon request.

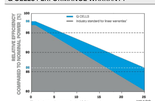
PRELIMINARY

ELECTRICAL CHARACTERISTICS

POWER CLASS				475	480	485	490	495
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / –0 W)								
Minimum	Power at MPP[2]	P_{MPP}	[W]	475	480	485	490	495
	Short Circuit Current[2]	I_{SC}	[A]	11.24	11.26	11.29	11.31	11.34
	Open Circuit Voltage[2]	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[2]	η	[%]	≥20.5	≥20.7	≥20.9	≥21.2	≥21.4
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[1]								
Minimum	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	V_{OC}	[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

[1] Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • 800 W/m², NMOT, spectrum AM 1.5

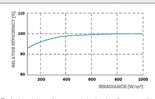
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	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 / TYPE 1
Max. Design Load, Push / Pull		[Pa]	3600 / 1600	Permitted Module Temperature on Continuous Duty	–40°C - +85°C
Max. Test Load, Push / Pull		[Pa]	5400 / 2400		

QUALIFICATIONS AND CERTIFICATES

IEC 61215 2016;
IEC 61730:2016.
This data sheet complies with DIN EN 50380.

Certification in process.

CE

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 use of this product.

Hanwha Q CELLS GmbH
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | **TEL** +49 (0)3494 66 99-23444 | **FAX** +49 (0)3494 66 99-23000 | **EMAIL** sales@q-cells.com | **WEB** www.q-cells.com

Specifications subject to technical changes © Q CELLS Q.PEAK DUO XL-G10.2_475-495_2020_IEC_Rev02_EN

Engineered in Germany

Q CELLS

PRELIMINARY

1 | MODULE DATA SHEET

SCALE: NTS

INVERTERS

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 performance
- Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

*Applicable only for DC and AC SPDs

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/ Three Phase Inverter with Synergy Technology
For the 208V Grid for North America
SE50KUS

Applicable to inverter with Part Numbers	SExxK-USx2Inxxxx SE50KUS	
OUTPUT		
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 UL 1699B)	
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	

(1) For other regional settings please contact SolarEdge support
(2) Where permitted by local regulations
(3) For specifications of the optional communication options, visit https://www.solaredge.com/products/communication or the Resource Library webpage: https://www.solaredge.com/downloadsft, to download the relevant product datasheet

2 | INVERTER DATA SHEET

SCALE: NTS

POWER OPTIMIZER

Power Optimizer
For North America
P860 / P960 / P1101

PV power optimization at the module-level
The most cost-effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- 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
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)

solaredge.com

solaredge

/ Power Optimizer For North America
P860 / P960 / P1101

Power Optimizer Model (Typical Module Compatibility)	P860 (for 2 x 72 cell modules)	P960 (for 2 x 72 cell modules)	P1101 (for up to 2 x high power or bi-facial modules)	
INPUT				
Rated Input DC Power[(1)]	860	960	1100	W
Connection Method	Dual input for independently connected modules[(2)]		Single input for series connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	60		125	Vdc
MPPT Operating Range	12.5 - 60		12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	22	23.2	14.1	Adc
Maximum Short Circuit Current per Input (Isc)	11	11.6	-	Adc
Maximum Efficiency		99.5		%
Weighted Efficiency		98.6		%
Overvoltage Category		II		
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)				
Maximum Output Current		18		Adc
Maximum Output Voltage		80		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)				
Safety Output Voltage per Power Optimizer		1 ± 0.1		Vdc
STANDARD COMPLIANCE				
Photovoltaic Rapid Shutdown System		Compliant with NEC 2014, 2017, 2020		
EMC		FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3		
Safety		IEC62109-1 (class II safety), UL1741	IEC62109-1 (class II safety), UL1741, UL3741	
Material		UL94 V-0, UV resistant		
RoHS		Yes		
INSTALLATION SPECIFICATIONS				
Compatible SolarEdge Inverters		Three phase inverters	SE30K & larger	
Maximum Allowed System Voltage		1000		Vdc
Dimensions (W x L x H)		129 x 168 x 59 / 5.1 x 6.61 x 2.32	129 x 162 x 59 / 5.1 x 6.4 x 2.32	mm / in
Weight		1064 / 2.34		gr / lb
Input Connector		MC4[(4)]		
Input Wire Length Options	Input #1 / Input #2	Input #1 / Input #2	-	
1	(-) 0.16 / 0.52, (+) 0.16 / 0.52	(-) 0.16 / 0.52, (+) 0.16 / 0.52		m / ft
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	m / ft
3	(-) 1.6 / 5.2, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2		m / ft
Output Wire Type / Connector		Double insulated; MC4		
Output Wire Length	2.3 / 7.5	2.3 / 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		%

(1) Rated power of the module at STC will not exceed the Power Optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed
(2) In the event of an odd number of PV modules in one string, installation of one P860 /P960 Power Optimizer connected to one PV module is allowed. When connecting a single module to the P860/ P960, seal the unused input connectors with the supplied pair of seals
(3) For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf
(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 Design Using a SolarEdge Inverter[(5)(6)]		208V Grid SE14.4K*	208V Grid SE17.3K*	277/480V Grid SE20K, 30K	277/480V Grid SE33.3K*, SE40K*	
Compatible Power Optimizers		P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	
Minimum String Length	Power Optimizers	8	9	14	14	
	PV Modules	15	17	27	27	
Maximum String Length	Power Optimizers	30	30	30	30	
	PV Modules	60	60	60	60	
Maximum Continuous Power per String		7200	8730	15300	15300	W
Maximum Allowed Connected Power per String[(7)] (Permitted only when the difference in connected power between strings is up to 2,000W for the 277/480V grid, or 1,000W for the 208V grid)		1 string - 8400 2 strings or more - 9000	1 string - 9930 2 strings or more - 10530	1 string - 17550 2 strings or more - 20300	2 strings or less - 17550 3 strings or more - 20300	W
Parallel Strings of Different Lengths or Orientations		Yes				

* 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 P850/P950
(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.

RoHS

3 | POWER OPTIMIZER SHEET

SCALE: NTS

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
A	10.22.21	ISSUED FOR PERMIT	JL	MMJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

KMB DESIGN GROUP
krmbdg.com
1800 ROUTE 34, SUITE 209
WALL, NJ 07719
(732) 280-5623

Stephen A. Bray
PROFESSIONAL ENGINEER

MA LICENSE: 47770 10/22/21

SolBid

KMB PROJECT NO.
732.0900

DRAWING TITLE
PHOTOVOLTAIC SYSTEM DATA SHEET 1

DRAWING SCALE:
NONE

DRAWN BY: JL | CHECKED BY: ADK | DATE: 10.08.21

DWG No.:
PV-500

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

COMPACT**GROUND**

COMPACT**GROUND 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 COMPACT**GROUND G+**.

AEROCOMPACT®

25 YEARS PRODUCT WARRANTY | WIND TUNNEL-TESTED | TÜV-CERTIFIED AS PER UL 2703 | CE | TÜV RHEINLAND LISTED

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 COMPACT**GROUND 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.

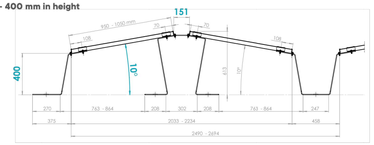
Due to the special "spring effect" of the legs, the substructure adjusts optimally to the conditions of the surface structure.

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 COMPACT**GROUND 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.

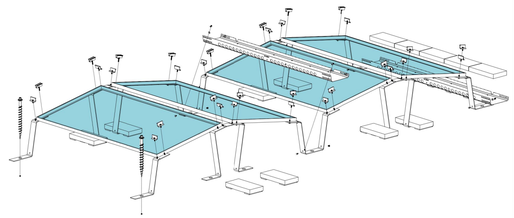
G+ – 400 mm in height



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.



Conception and design: Weiss Consulting Group®, Siegen, Germany

- **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

PB-G+-EN-EU-V02-2019

AEROCOMPACT®

Headquarter Europe
Aerocompact GmbH // Sonnenstraße 10 // 6822 Satteins, Austria
Phone: +43 5524 22566 // E-mail: office@aerocompact.com
www.aerocompact.com

REV	DATE	REVISION DESCRIPTION	DRAWN BY	CHKD BY
B	10.22.21	ISSUED FOR PERMIT	JL	MHJR
A	10.08.21	ISSUED FOR INTERCONNECTION	JL	ADK

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PROFESSIONAL ENGINEER
MA LICENSE: 47770 10/22/21

SolBid

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

KMB PROJECT No: 732.0900
DRAWING TITLE: PHOTOVOLTAIC SYSTEM DATA SHEET 2
DRAWING SCALE: NONE
DRAWN BY: JL | CHECKED BY: ADK | DATE: 10.08.21
DWG No.: PV-501