

AERIAL VIEW



VICINITY MAP




SUN BLUE
147 Valley St.
Sleepy Hollow, NY 10591
1-914-222-3510

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SITE INFORMATION:
Campili, Darren & Carol
911 Fairway Lane
Mamaroneck, NY 10543
DC SYSTEM SIZE:
9.2 kW

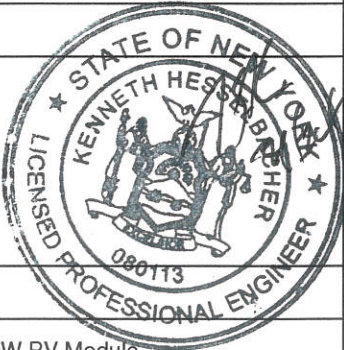
SHEET INDEX	
PAGE NUMBER	PAGE TITLE
PV01	TITLE PAGE
PV02	SITE PLAN
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PV04	ARRAY & STRINGING DETAIL
PV05	LABEL PLAN
SPECS	SPECSHEETS AND DOCUMENTS



Set Reviewed By:
PV-041115-011207

SCOPE OF WORK
DC System Size: 9.2kW Roof Type: Asphalt/Composite Shingle Roof Roof Pitch: 4/12 Anchored on 48" centers using UL listed racking system UV Resistant cable ties (not zip ties) used for permanent wire management in accordance with NEC 110.2, 110.3(A-B), 300.4 Junction boxes mounted flush with racking.

DESIGN CRITERIA
WIND SPEED: 130 MPH EXPOSURE CATEGORY: C



SYSTEM SUMMARY
MODULE: (23) HANWHA Q.PEAK DUO BLK ML-G10+ 400W PV Module INVERTER: (23) Enphase IQ8PLUS-72-2-US Micro Inverters RACKING: IRONRIDGE Roof Mounted PV System

APPLICABLE CODES
2017 National Electric Code (NEC) 2020 Residential Code of New York State 2020 Building Code of New York State 2020 Plumbing Code of New York State 2020 Mechanical Code of New York State 2020 Fuel Gas Code of New York State 2020 Fire Code of New York State 2020 Property Maintenance Code of New York State 2020 Existing Building Code of New York State 2020 NYS Uniform Code Supplement R324.3 Compliance
OCCUPANCY & CONSTRUCTION TYPE
OCCUPANCY - R3 CONSTRUCTION - V-B

GENERAL NOTES
A. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES. B. DRAWINGS HAVE BEEN DETAILED ACCORDING TO UL LISTING REQUIREMENTS. C. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY DBM OF ANY INCONSISTENCIES. D. ALL EQUIPMENT SHALL BE INSTALLED AS SHOWN. E. WARNINGS PER NEC 690. F. WIRING SHALL NOT BE INSTALLED WITHIN 10 INCHES OF ROOF DECKING EXCEPT WHERE DIRECTLY BELOW PV EQUIPMENT



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DATE:	4/17/2023
PROJECT #	2021-SUN BLUE
SHEET NAME:	COVER PAGE
PAGE #	PV01
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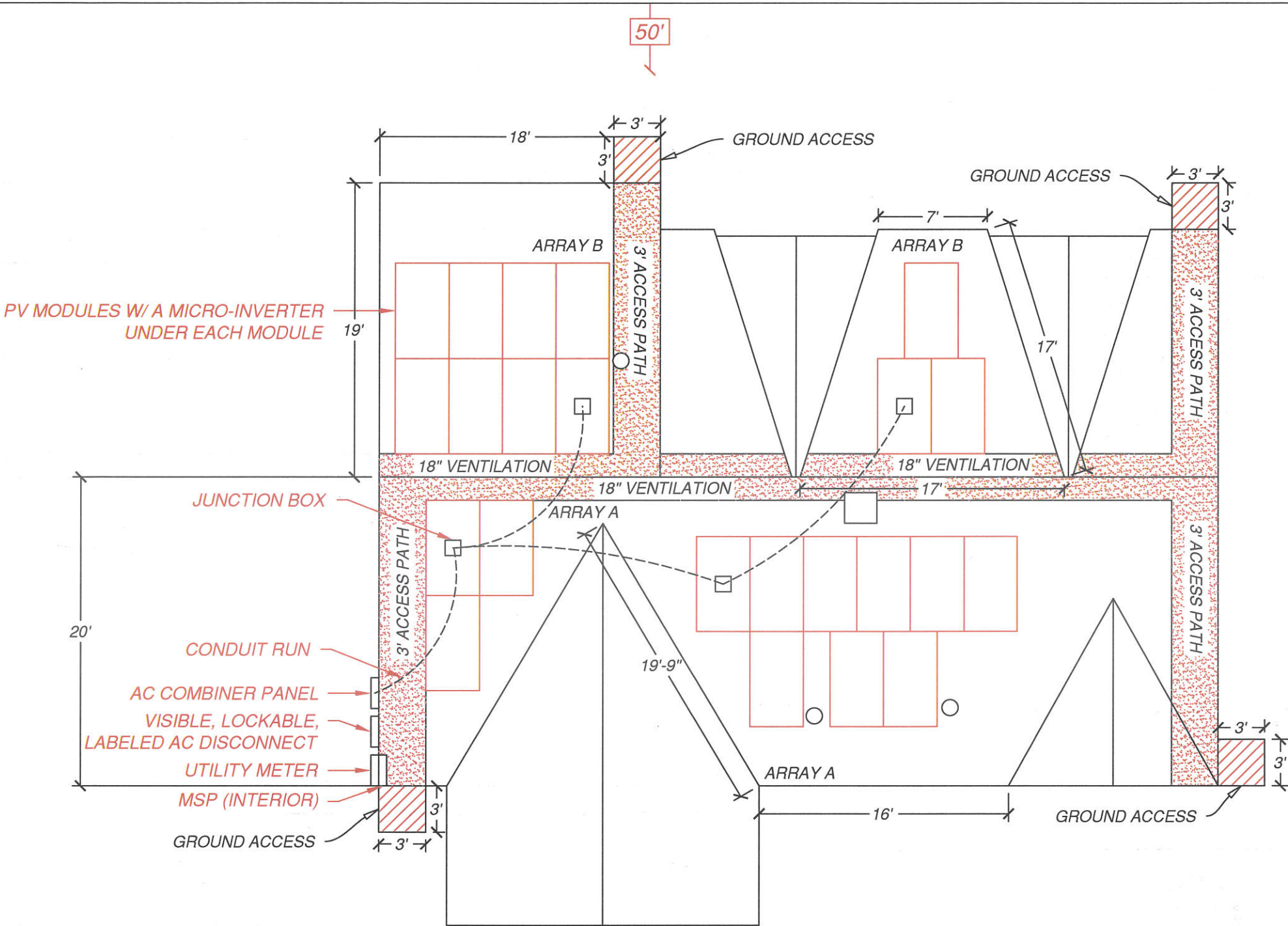
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SHEET NAME:
PROPERTY DETAIL

PAGE #
PV02

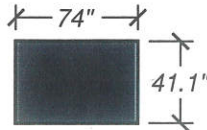
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- AC DISCONNECT LOCATED 10' OR LESS FROM UTILITY METER
- CONDUIT RUNS AND JUNCTION BOX LOCATIONS TO BE DETERMINED IN THE FIELD.
- EQUIPMENT LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD
- WIRES LOCATED IN READILY ACCESSIBLE LOCATIONS SHALL BE GUARDED PER NEC 690.31(A)

SITE INDEX

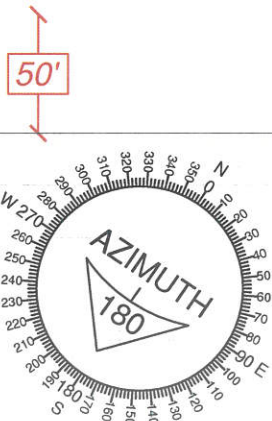
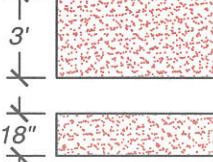
PHOTOVOLTAIC
MODULES



APPROXIMATE
DISTANCE TO
PROPERTY LINES

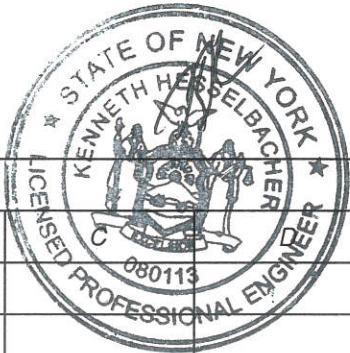


FIRECODE
SETBACKS



ARRAY DETAIL

	A	B
AZIMUTH	146°	326°
TILT ANGLE	25°	25°
MODULE COUNT	12	11
ROOF SUPPORTS	Truss = 2X10 @ 16" O.C.	



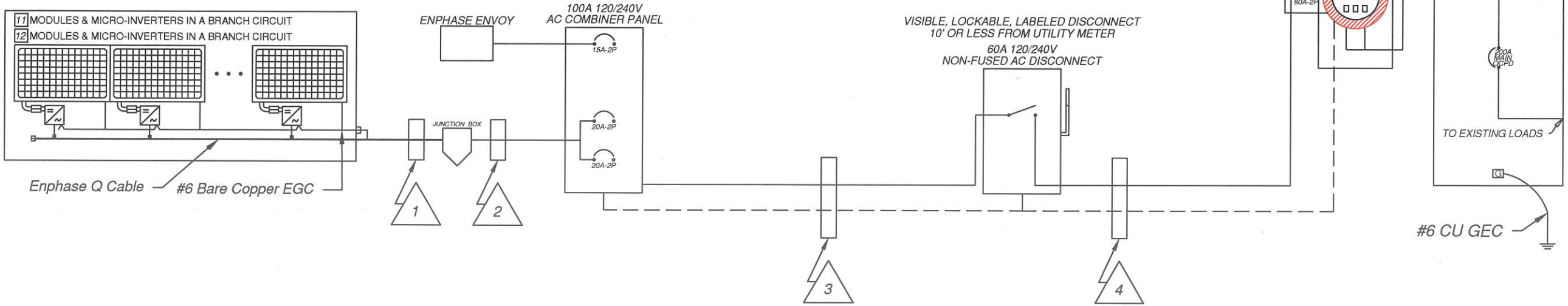
PV MODULE SPECIFICATIONS	
MANUFACTURER	Hanwha Q.PEAK
MODEL	DUO BLK ML-G10+ 400
MAX POWER-POINT CURRENT (Imp)	10.77A
MAX POWER-POINT VOLTAGE (Vmp)	37.13V
OPEN CIRCUIT VOLTAGE (Voc)	45.30V
SHORT CIRCUIT CURRENT (Isc)	11.14A
MAX SERIES FUSE (OCPD)	20A
MAX POWER (Pmax)	400W
MAX VOLTAGE (Vdc)	1000V

INVERTER SPECIFICATIONS	
MANUFACTURER	Enphase
MODEL	ENPHASE IQ8PLUS-72-2-US
GROUND	UNGROUND
AC OUTPUT VOLTAGE	240V
MAX OUTPUT POWER	300VA
CEC RATED OUTPUT POWER	290VA
RATED OUTPUT CURRENT	1.21A
MAX INPUT CURRENT	15 A
MAX DC INPUT VOLTAGE	60V
CEC WEIGHTED EFFICIENCY	97%
MAX FUSE (OCPD)	20 A

PHOTOVOLTAIC AC OUTPUT LABEL	
AC OUTPUT CURRENT	27.83A
NOMINAL AC VOLTAGE	240V

ConEd account name: Carol Campili
ConEd account number: 55-5715-0086-0005-0
ConEd meter number: 009802035

PV LOAD CALCULATIONS: SUPPLY SIDE TIE-IN	
60A RATED METER COLLAR DEVICE	
60A * 100% = 60A	
60A (MAIN BUS ALLOWABLE SOLAR)	
60A AVAILABLE FOR PV	
705.12(A) & 690.59	



ELECTRICAL NOTES

- ALL COMPONENTS SHALL COMPLY WITH NECAS AMENDED.
- PHASE CONDUCTORS SHALL BE IDENTIFIED.
- ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF UPON ENTRY INTO BOXES, REFER TO MANUFACTURERS INSTALLATION MANUAL FOR REQUIRED TORQUE VALUES.
- THE DC GEC, IF USED, SHALL BE CONTINUOUS FROM THE INVERTER GROUND BUS TO THE MAIN SERVICE GROUNDING ELECTRODE SYSTEM.
- ATTACHMENT TO GROUND ELECTRODE SHALL USE IRREVERSIBLE CLAMP.
- ALL EXPOSED METAL PARTS SHALL BE GROUNDED USING TIN PLATED COPPER LAY IN LUGS OR GROUNDING CLIPS LISTED FOR THE PURPOSE.
- MIN #10 BARE COPPER EGC AT SOURCE CIRCUITS SHALL BE ROUTED SECURELY TO MOUNTING HARDWARE THAT PROTECTS FROM PHYSICAL DAMAGE.
- #6 FOR AREAS THAT MAY BE SUBJECT TO DAMAGE.
- BOTH ENDS OF ALL METALLIC CONDUIT SHALL BE BONDED PER NEC250.
- INTERCONNECTION PER NEC690.
- ALL WIRES WILL BE RATED AT THHN/THWN-2.
- CONDUIT AND CONDUCTOR SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY FIELD CONDITIONS.
- PV PRODUCTION TERMINATED IN LOAD SIDES OF ALL AC DISCONNECTS.

- All Exposed PV rooftop conductors that are not located under the array modules, shall be installed in a listed raceway, and shall include listed junction boxes at both ends of the raceway to transition from exposed conductors to the listed raceways. In Accordance with NEC 690.31(A) & (B)**
- ROMEX AMPACITY LIMITED TO 60° VALUES. IF USED, SIZE ACCORDING TO NEC TABLE 310.15
- DC Conduit must be marked in accordance with NEC 690.31. Labeling must be every 10' and must comply with NEC 690.31. See PV05 for Label plan
- ALL DC Conductors must be protected with metal conduit

CONDUCTOR SCHEDULE WITH NEC ELECTRICAL CALCULATIONS

ID	CONDUCTOR	CONDUIT	NO. OF CNDRS. IN CNDT.	RATED AMPS	EGC	TEMP. CORR. FACTOR	FILL ADJ. FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMPACITY	DERATED AMPACITY	WIRE RUN DISTANCE
1	ENPHASE Q CABLE	FREE AIR	N/A	14.52A MAX	#12 TRUNK CABLE	0.96	N/A	14.52A	18.15A	25A	24.00A	20ft
2	10 AWG THWN-2 CU	3/4" DIA EMT	4	14.52A MAX	10 AWG THWN-2 CU	0.96	0.8	14.52A	18.15A	35A	26.88A	20ft
3	6 AWG THWN-2 CU	3/4" DIA EMT	3	27.83A	10 AWG THWN-2 CU	0.96	1.0	27.83A	34.79A	65A	62.40A	5ft
4	6 AWG THWN-2 CU	3/4" DIA EMT	3	27.83A	10 AWG THWN-2 CU	0.96	1.0	27.83A	34.79A	65A	62.40A	5ft



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PROJECT #
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SHEET NAME:
ELD

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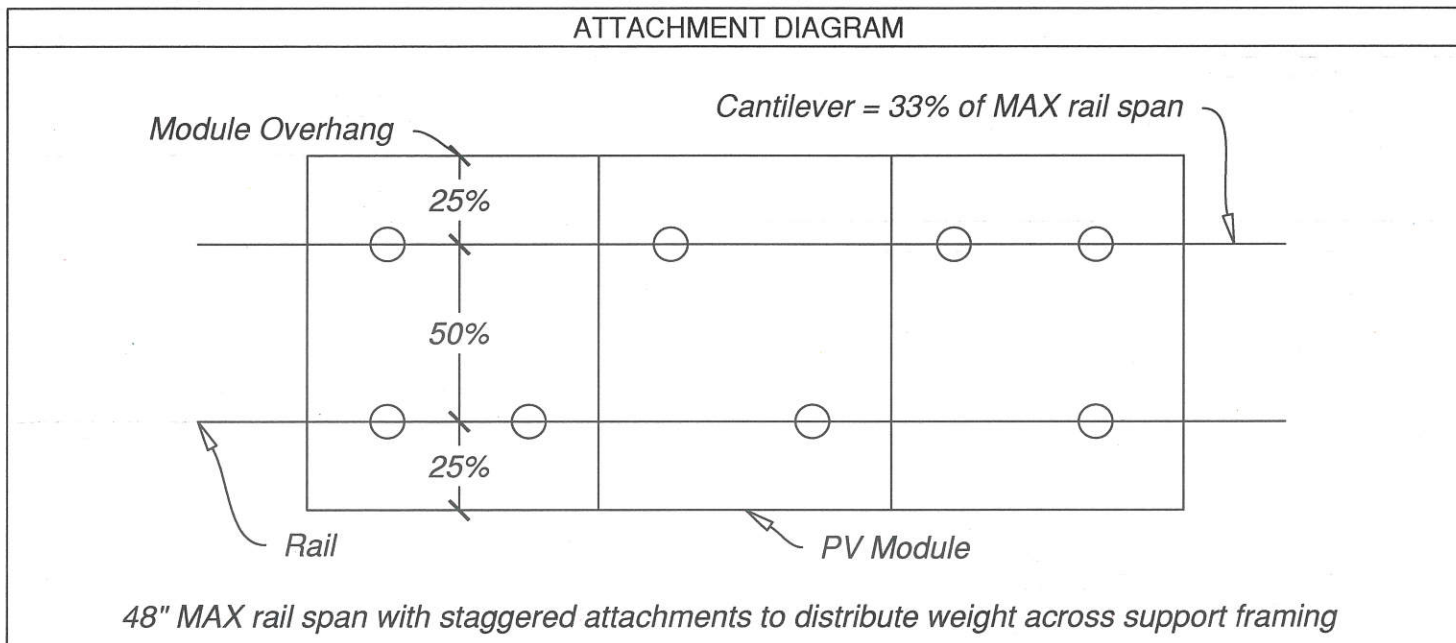
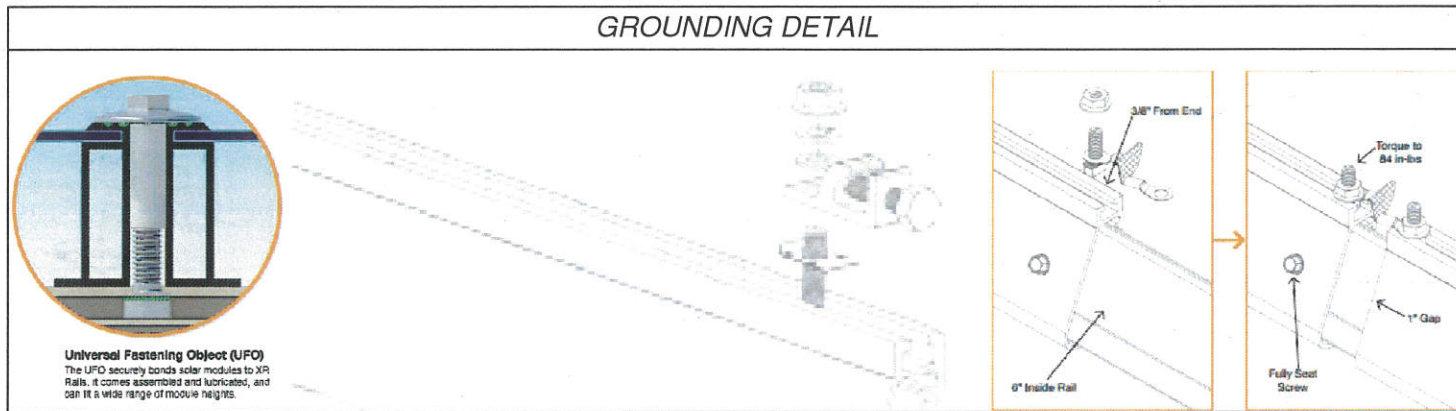
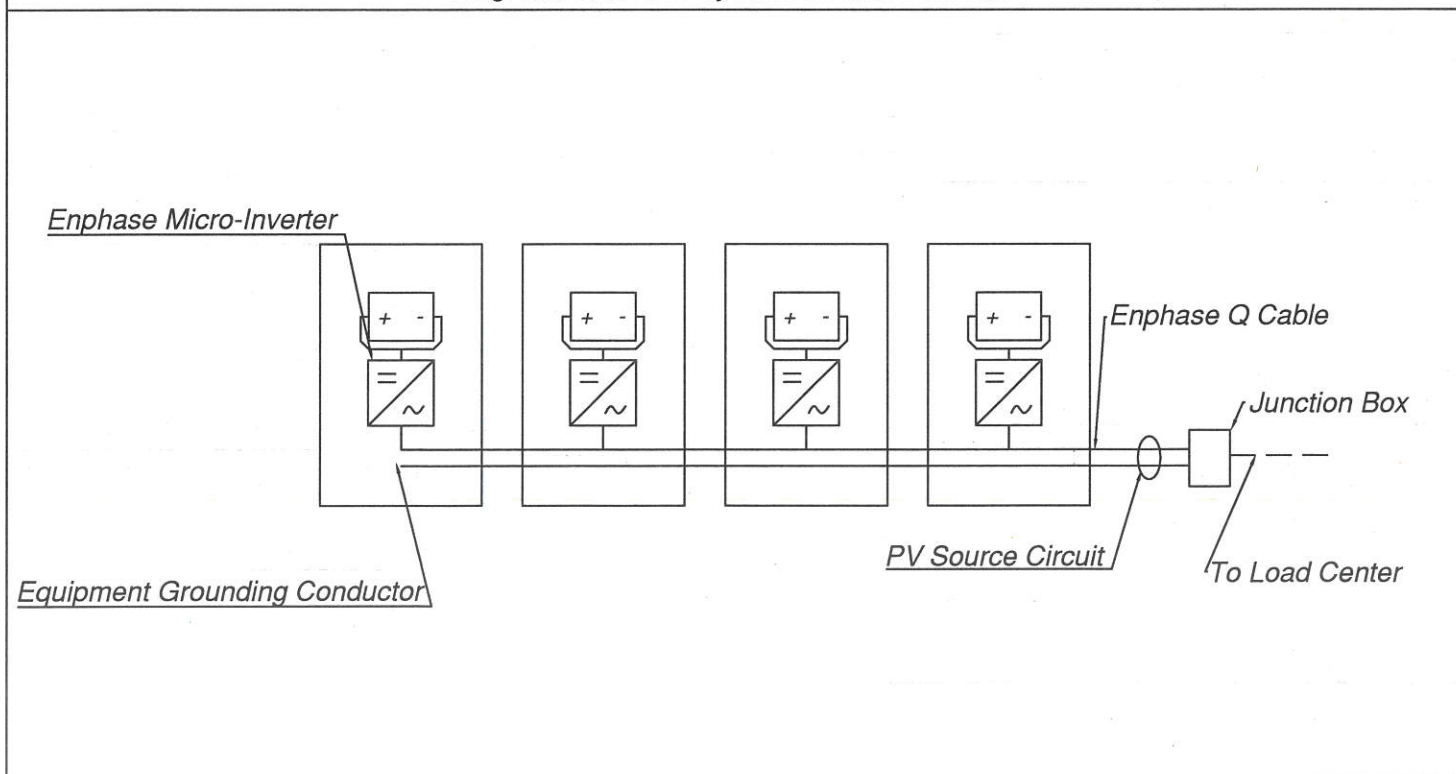
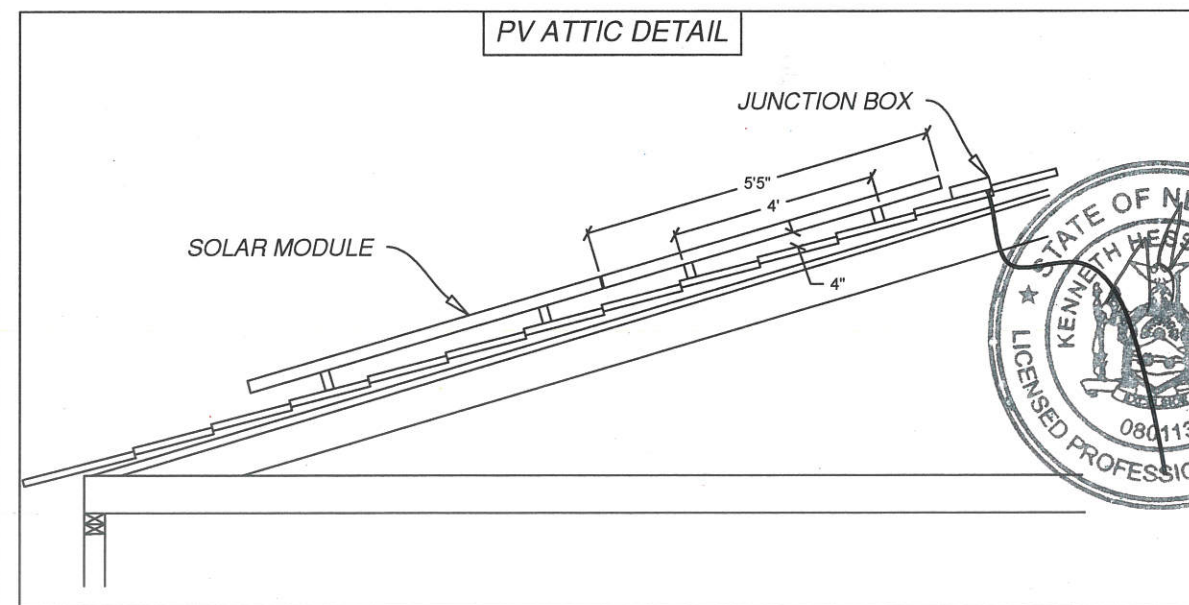
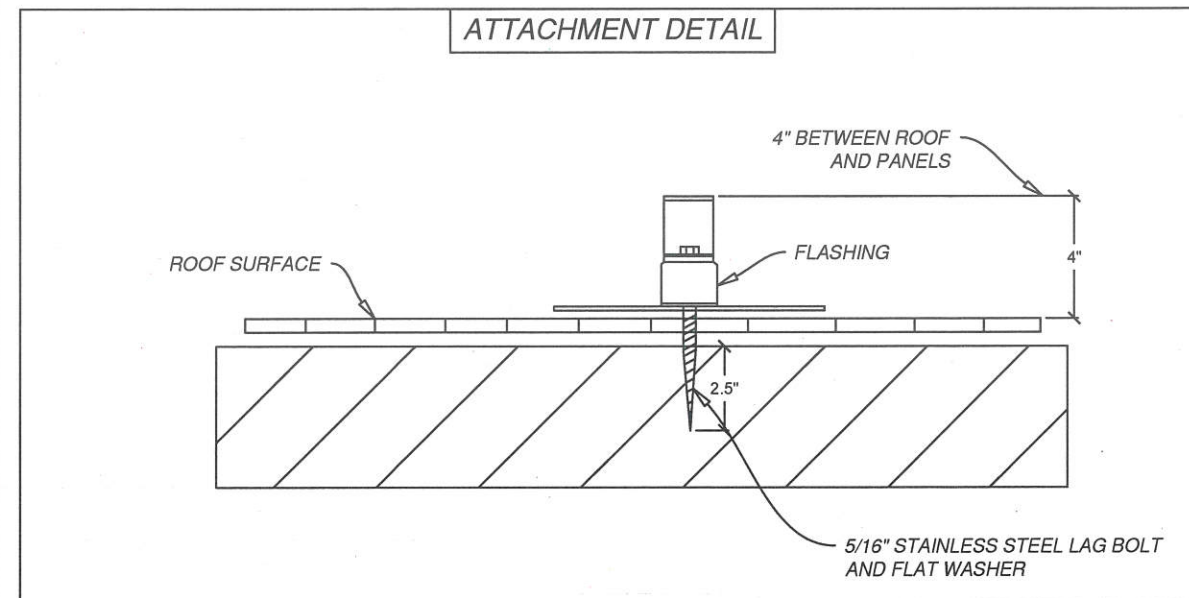
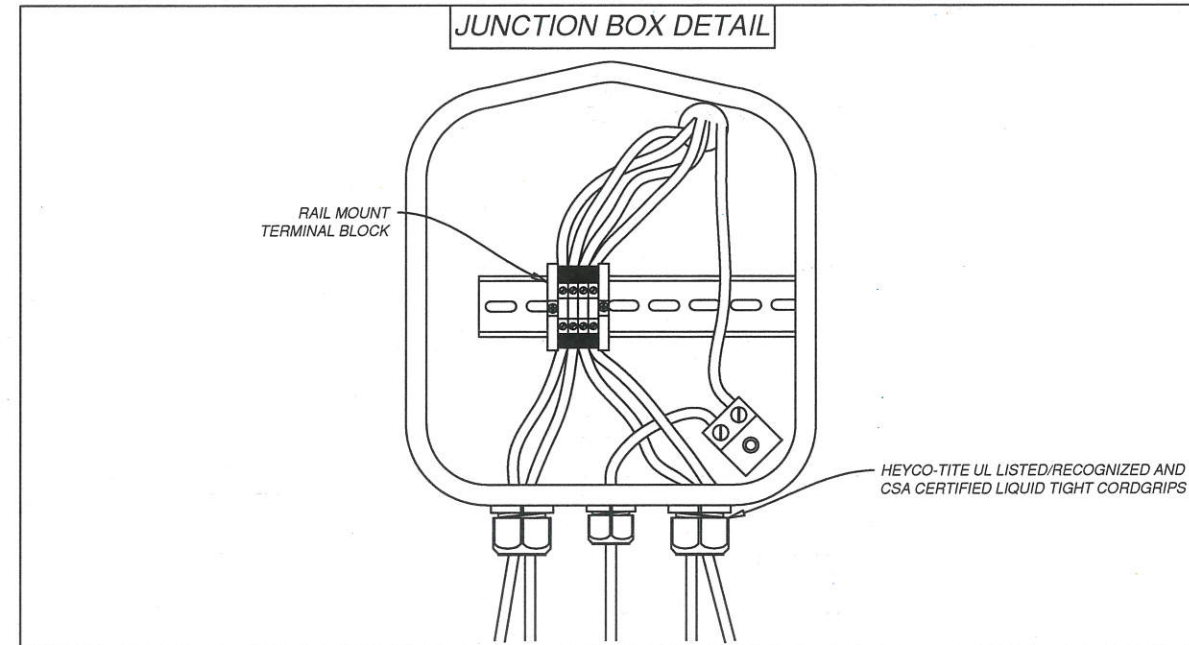


Diagram: Grid-Tied System W/ Micro-Inverters



*See Attached Data Sheets For More Information



SunBlue
ENERGY

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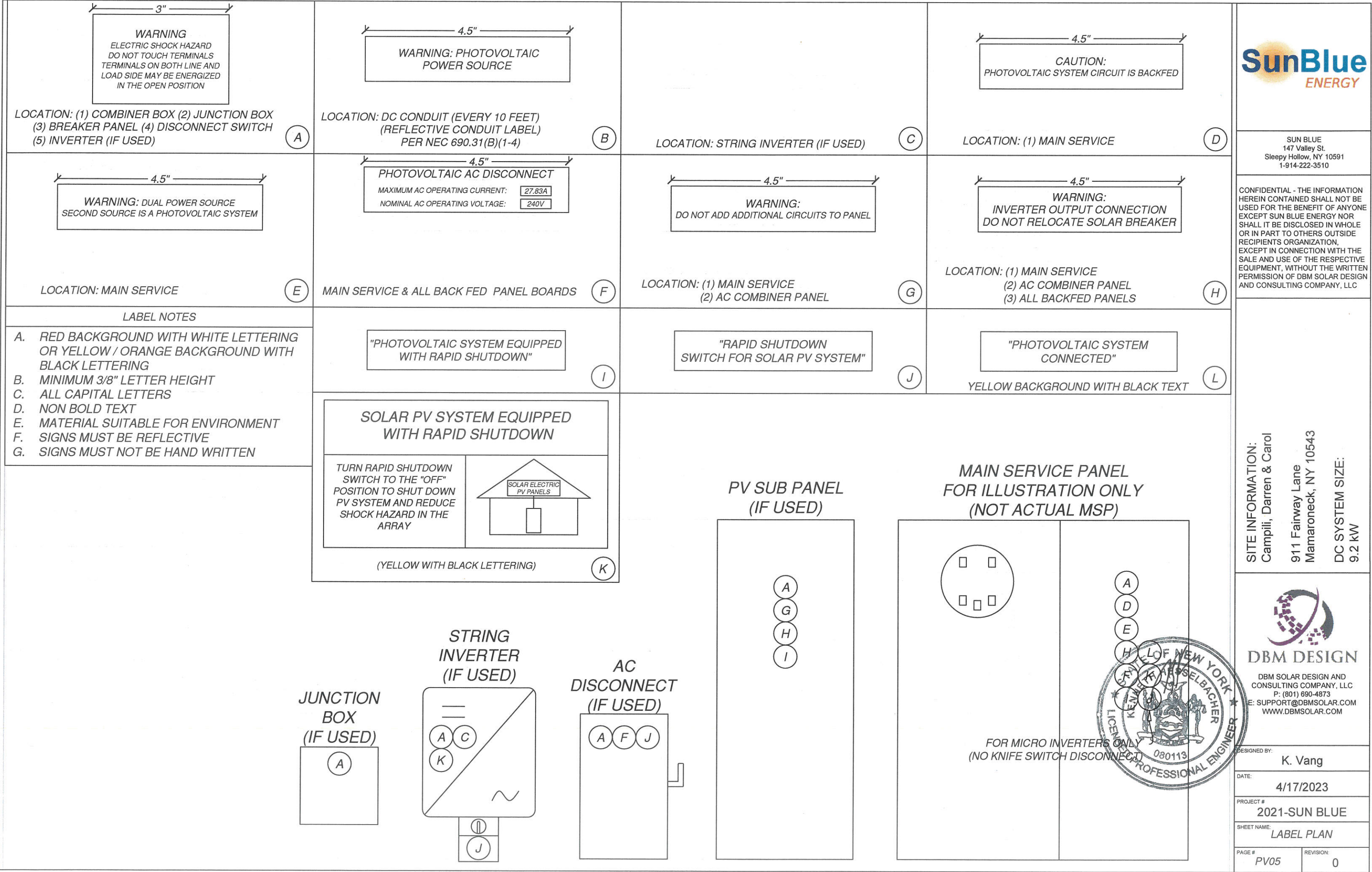
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