

VILLAGE OF IRVINGTON

BUILDING DEPARTMENT

85 MAIN STREET

IRVINGTON, NEW YORK 10533

TEL: (914) 591-8335 • FAX: (914) 591-5870



PHOTOVOLTAIC (PV SOLAR) RESIDENTIAL SYSTEMS

PERMIT APPLICATION CHECK LIST

Revised June 7, 2017

It is suggested that all applicants applying for a permit read and understand the manufacture installation instructions prior to applying for a building permit and attached ARB guide lines and Village code for Solar Energy Equipment.

REQUIREMENTS TO APPLY FOR A PHOTOVOLTAIC (PV SOLAR) SYSTEM PERMIT

- EQ 1) Apply on line at www.irvingtonny.gov for a mechanical permit, under building permits and along with your application, submit to the building department the following;
- EQ 2) Owners phone number and email address entered in the online permit application
- EQ 3) Evidence of Workers Compensation Insurance (on a C-105 or equivalent)
- EQ 4) Evidence of Liability Insurance naming the Village of Irvington additional insured
- EQ 5) A copy of the contractors Westchester County Department of Consumer Protection License
- EQ 6) Pursuant to 9-12-A, provide evidence of notice to adjacent properties owners not less than 10 days prior to the meeting (see attached code section for more details)
- EQ 7) Submit permit fee: **(all fees must be paid at time of submission)**
 - EQ \$85 application fee
 - ___ \$200 for systems up to 5 kilowatts
 - ___ \$450 for systems above 5 kilowatts and less than 10 kilowatts
 - ___ \$700 for systems above 10 kilowatts and less than 20 kilowatts
 - ___ \$700 plus \$250 per additional 10 kilowatts above 20 for systems above 20 kilowatts
 - ___ \$75 Certificate of Completion inspection and fee
- EQ 8) An affidavit from a NYS licensed professional detailing and certifying that the existing structure meets or exceeds the minimum load requirement's as per TABLE R301.2(1) for wind and load before and after installation of the proposed equipment or the proposed upgrades to the existing structure to accomplish the aforesaid.
- EQ 9) Drawings (signed and sealed by a NYS licensed professional) of the roof plan showing the following criteria;
 - a. ☒ Showing all proposed PV panels on all proposed roof surfaces.
 - b. ☒ Showing all equipment on all elevations including
 - c. ☒ Show / list all roof connectors and flashing details
 - d. ☒ Show compliance with section R902.4 (fire classification in accordance with UL1703 and 3' from any lot line)
 - e. ☒ Show compliance with sections R324.3.1 through R324.7.2.5 and NFPA 70 (installation)
 - f. ☒ Show compliance with section R324.7 (access and pathways) (see attachment)
 - g. ☒ Show compliance with section R324.7.2.1-6. (roof access points) (see attachment)
 - h. ☒ Show compliance with section R324.7.3 (ground access areas) (see attachment)
 - i. ☒ Show compliance with section R324.7.4 (single ridge roofs *when applicable*) (see attachment)
 - j. ☒ Show compliance with section R324.7.5 (hip roofs *when applicable*) (see attachment)
 - k. ☒ Show compliance with section R324.7.6 (roof with valleys *when applicable*) (see attachment)
 - l. ☒ Show compliance with section R324.7.7 (allowance for smoke ventilation operations) (see attachment)
 - m. ☒ Show a Fire Department AC disconnect, located outside by the Utility meter on all systems.
- EQ 10) Provide a drawing or manufactures cut sheets of array mounting hardware and interconnection diagram and specifications.
- EQ 11) Provide a drawing or manufactures cut sheets of the unit mount and roof penetration's flashing system.
- EQ 12) 3 wire diagram showing all proposed equipment as governed by the National Electrical Code (NEC)
- EQ 13) Provide a diagram showing all proposed labels and labeling locations including; Solar AC Disconnect, Inverter Output, Connection Warning, Dual Power Source Warning, Solar AC Combiner Panel, Solar PV Circuits Only, Solar Production meter. (see attachment)
- EQ 14) Provide snow guards on panels were snow has the potential of sliding of the panel into a neighbor's property
- EQ 15) Pictures of dwelling showing photo shopped arrays on the structure.
- EQ 16) Provide a drawing or photo shop picture of all proposed equipment on all effected elevations (including FD emergency disconnect switch)
- EQ 17) A Fire Department AC disconnect, located outside by the Utility meter on all systems.

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BUILDING DEPARTMENT

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- 18) Separate Electrical Permit application by a Westchester County Department of Licensing, licensed Electrician with required insurances and the appropriate fee (must be filed by the licensed contractor, see village application for further details).
- 19) Submit signed check list with submission and appropriate building permit fee.
- 20) Applicant has provided seven copies of the entire submittal for Architectural Review Board approval.

Applicant Affidavit:

Applicants Name: Emily Quira
Applicants Address: 400 Executive Blvd Ste 137
Elmsford, NY 10523
Applicants Phone # (914) 438-0360
Applicants Email emily.quiraa@sunpowercorp.com

Applicant Name: Emily Quira Signature: [Signature] Date: 12/12/22 By signing this affidavit I attest to have read the attached Solar Energy Equipment Code and the Solar Equipment Guidelines manufactures installation instructions and that all information asked for above has been submitted and that the submitted information is correct.

General Contractor Affidavit:

Contractors Name: Sunpower Corporation
Contractors Address: 400 Executive Blvd Ste 137
Elmsford, NY 10523
Contractors Phone # (914) 438-0360
Contractors Email emily.quiraa@sunpowercorp.com

General Contractor Name: Nick Glagowski Signature: [Signature] Date: 12/12/22 By signing this affidavit I attest to being the general contractor of record for this application and will be responsible for oversight and direct supervision of same, and will maintain a valid Westchester County Department of Consumer Protection License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.

Electrical Contractor Affidavit:

Electrical Contractors Name: Ryan Franco
Electrical Contractors Address: 400 Executive Blvd Ste 137
Elmsford, NY 10523
Electrical Contractors Phone # (914) 438-0360
Electrical Contractors Email emily.quiraa@sunpowercorp.com

Electrical Contractor Name: Ryan Franco Signature: [Signature] Date: 12/12/22 By signing this affidavit I attest to being the electrical contractor of record for this application and will be responsible for oversight and direct supervision of same, and will maintain a valid Westchester County Electrical License, a valid for Workers Compensation Policy and a General Liability Policy listing the Village of Irvington as Certificate Holder and additional insured with no conditions until such time I apply for and receive a Certificate of Completion.

Note: Applications for all exterior elevation changes including photovoltaic solar systems are required to apply for, make a presentation in front of, and receive approval from the Village of Irvington Architectural Review Board (ARB) prior to issuance of a building permit. The ARB meetings are the second and fourth Mondays of the month, with a deadline for submissions one week prior to the meetings (see village web site for confirmation of meetings). Seven sets of copies of the entire application are required to be submitted at the deadline with appropriate fee at the time of submission.

Note: The following list above is given to assist in the application process. It is not intended to be a replacement for the Building or Zoning Code, County or State Regulations, or Consolidate Edison Requirements. Unique and Special projects may require additional information.

**Hours of Construction: Monday-Friday 7AM-7PM; Saturday 9AM-5PM; Sunday and holiday's construction is prohibited
Only completed applications will be accepted with attached insurance certificates and County license

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Irrington, NY 10533

Certified Mail Fee \$4.00

Extra Services & Fees (check box, add fee as appropriate)

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<input type="checkbox"/> Adult Signature Required	\$0.00
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Total Postage and Fees \$5.20

Sent To

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Irrington, NY 10533

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PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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SOLAR INDIVIDUAL PERMIT PACKAGE

JOHN COSSINS

8.20 kW GRID TIED PHOTOVOLTAIC SYSTEM

(512) 221-7561

21 S COTTENET ST PD

IRVINGTON NY 10533-1602

AHJ: IRVINGTON VILLAGE

UTILITY: CONSOLIDATED EDISON CO-NY INC

JOB NOTES

- SCOPE OF WORK
- (N) 8.200 kW PHOTOVOLTAIC SYSTEM

- (20) 410W (Model SPR-M-410-BLK-H-AC) PV MODULES

- POINT OF INTERCONNECTION AT MAIN SERVICE PANEL WITH CIRCUIT BREAKER

CODE INFORMATION

APPLICABLE CODES, LAWS AND REGULATIONS

2020 RESIDENTIAL CODE OF NEW YORK STATE (RCNYS)

2020 BUILDING CODE OF NEW YORK STATE (BCNYS)

2020 PLUMBING CODE OF NEW YORK STATE (PCNYS)

2020 MECHANICAL CODE OF NEW YORK STATE (MCNYS)

2020 FUEL GAS CODE OF NEW YORK STATE (FGCNYS)

2020 FIRE CODE OF NEW YORK STATE (FCNYS)

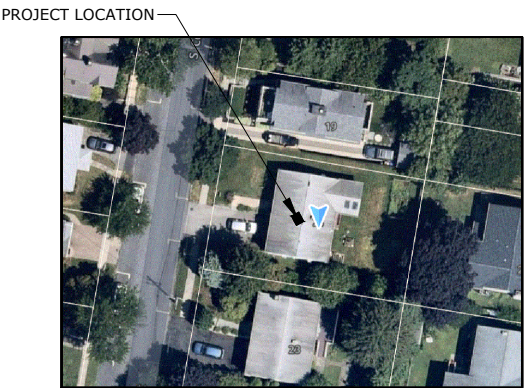
2020 PROPERTY MAINTENANCE CODE OF NEW YORK STATE (PMCNY)

2020 EXISTING BUILDING CODE OF NEW YORK STATE (EBCNYS)

2020 ENERGY CONSERVATION CODE OF NEW YORK STATE (ECCNYS)

2017 NATIONAL ELECTRIC CODE (NEC)CODEINFORMATION

SATELLITE IMAGE



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CORPORATION, SYSTEMS

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RICHMOND, CA 94804

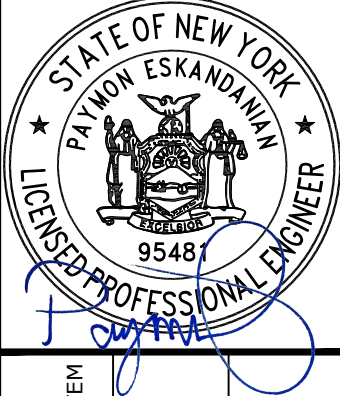
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SPRI - NEW YORK

777 WESTCHESTER AVE.

WHITE PLAINS, NY 10604

(FOR STRUCTURAL)



SHEET INDEX

PV SOLAR ARCHITECTURAL DRAWINGS

PVA-0COVER SHEET

PVA-1ARRAY LAYOUT

PV SOLAR STRUCTURAL DRAWINGS

PVS-1MOUNTING DETAILS

PV SOLAR ELECTRICAL DRAWINGS

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PVE-2ELECTRICAL CALCULATION

PVE-3ELECTRICAL DATA & SPECIFICATIONS

PVE-4EQUINOX GROUNDING DETAILS

PVE-5BRANCH DIAGRAM

JOHN COSSINS

8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

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SOLAR INDIVIDUAL PERMIT PACKAGE

COVER SHEET

REVISIONS

REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

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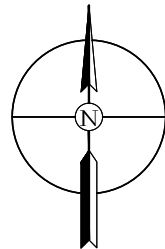
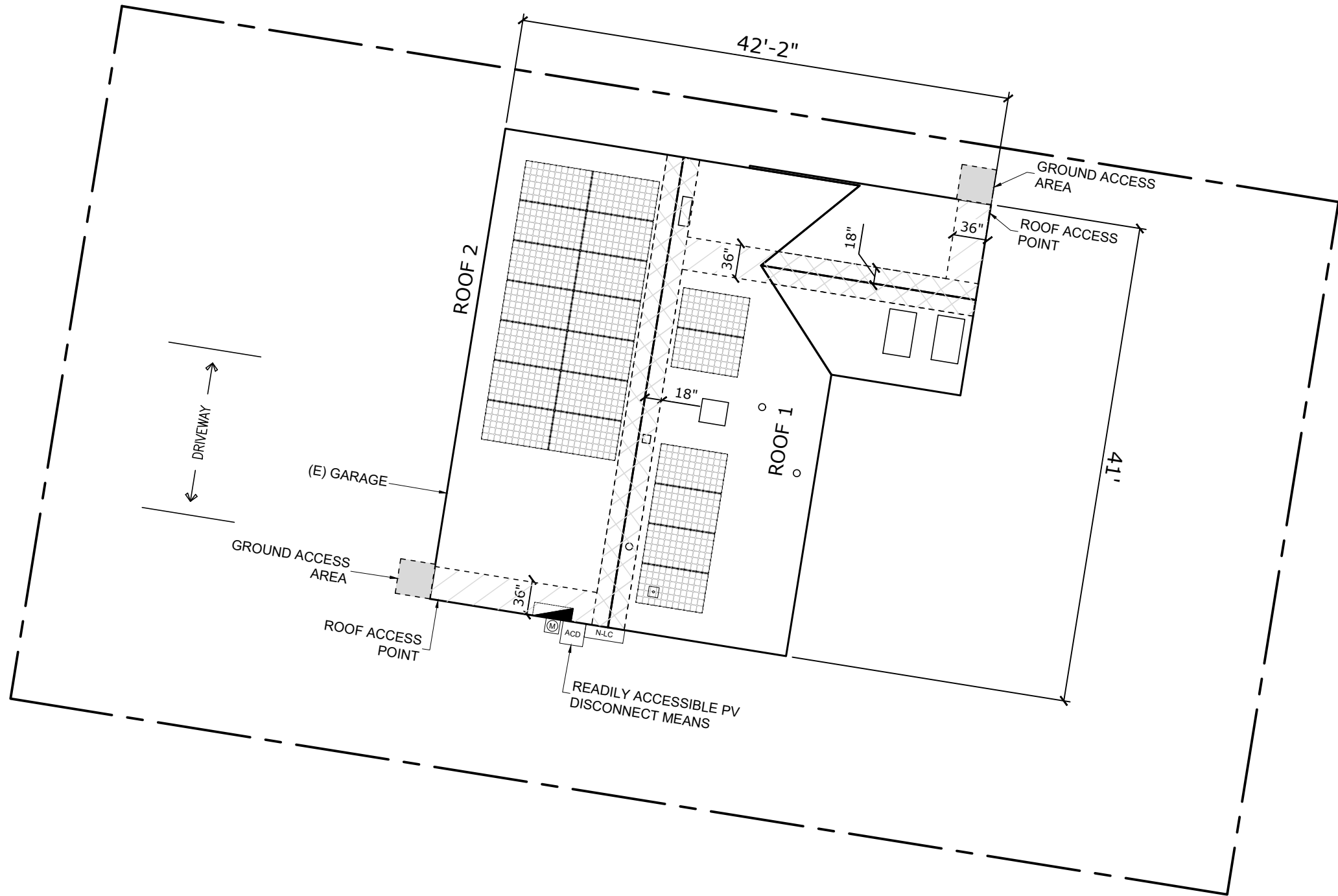
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET

PVA-0

SOUTH COTTENET STREET



LEGEND

	JUNCTION BOX
	CONDUIT
	MAIN SERVICE PANEL
	UTILITY METER
	PROPERTY LINE
	18" MIN VENT AREA
	36" MIN ROOF ACCESS
	36" GROUND ACCESS AREA
	NEW LOAD CENTER
	AC DISCONNECT

TOTAL ROOF AREA: 1567 SQ. FT.
TOTAL ARRAY AREA: 424 SQ. FT.
TOTAL PERCENTAGE OF ROOF
COVERED BY SOLAR: 27%

NOTE:
1. FIELD ADJUSTMENTS OF FEWER THAN 6"
MAY BE ALLOWED BASED ON SITE
CONDITIONS AND MEASUREMENTS.

ROOF	1	2				
MODULE QTY.	6	14				
AZIMUTH	99°	279°				
PITCH	4.5:12	4.5:12				
ROOF AREA (ft²)	617	684				

UTILITY ACCOUNT	51-1701-5525-0002-2
CONTRACT MODULE & QUANTITY	20 SPR-M410-BLK-H-AC (240)
MICROINVERTER TYPE & QUANTITY	20 IQ7HS-66-ACM-US (240)
ROOF TYPE	COMP SHINGLE
ROOF ATTACHMENT QUANTITY	42
STORY HOME TYPE	2 - STORY
TOTAL ARRAY AREA	424 SQ.FT.

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SOLAR INDIVIDUAL PERMIT PACKAGE
ARRAY LAYOUT

REVISIONS

REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

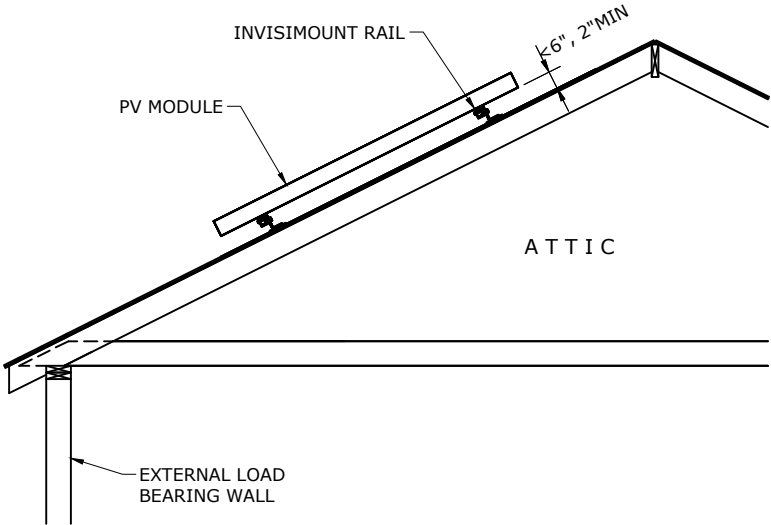
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PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	3/32" = 1'-0"

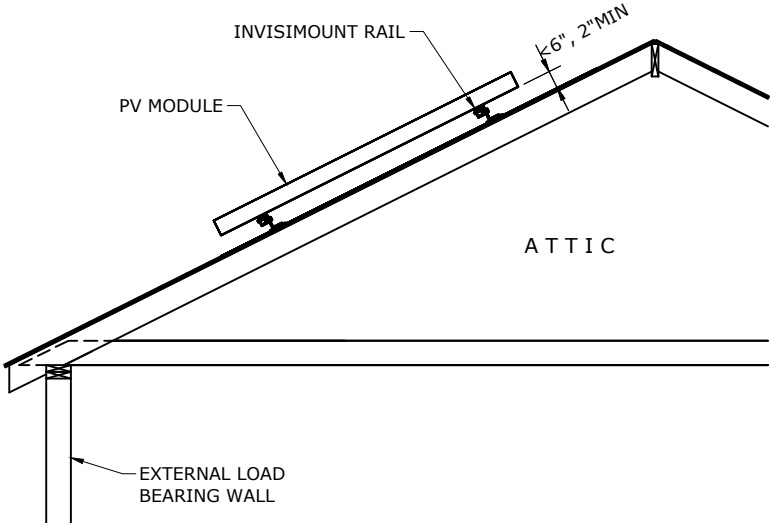
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PVA-1

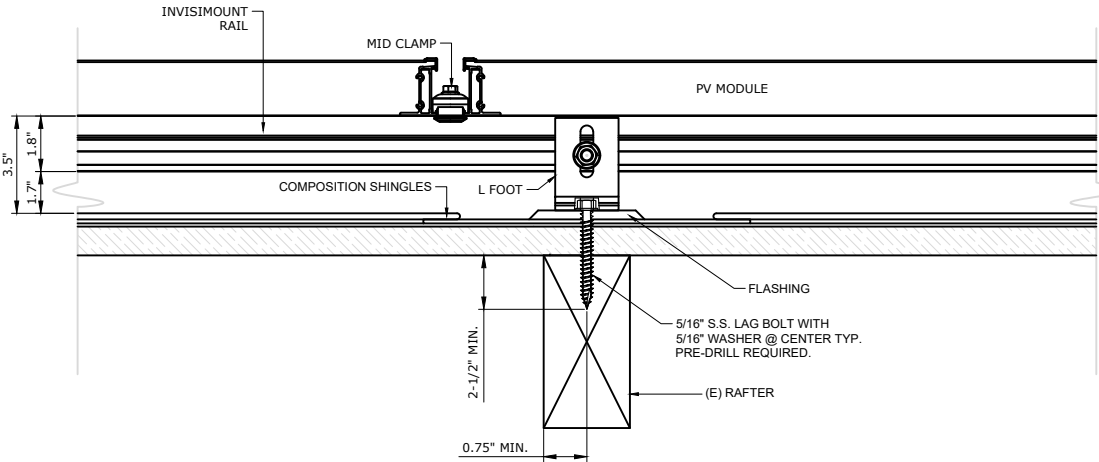
TABLE 1 – ARRAYS INFORMATION									
	ROOF PITCH	ROOFING TYPE	ATTACHMENT TYPE	NO. OF STORIES	FRAMING TYPE (in.)	MAX. RAFTER SPAN (ft.)	PENETRATION PATTERN (in.)	MAX. ATTACHMENT SPACING (in.)	MAX. RAIL OVERHANG (in.)
ROOF 1	20.5°	Comp Shingle	Pegasus L-foot	2	2x8 Rafter @ 16" OC	15.1'	Fully Staggered	48"	16"
ROOF 2	20.5°	Comp Shingle	Pegasus L-foot	2	2x8 Rafter @ 16" OC	15.1'	Fully Staggered	48"	16"
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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⊕ STRUCTURAL FRAMING SIDE DETAIL
Roof 1



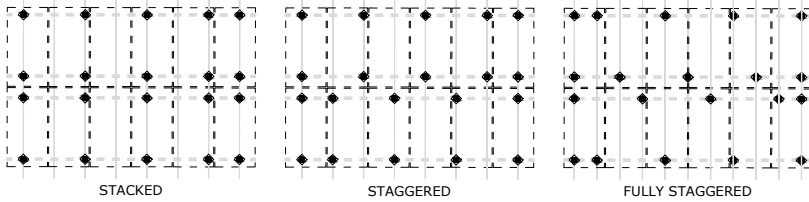
⊕ STRUCTURAL FRAMING SIDE DETAIL
Roof 2



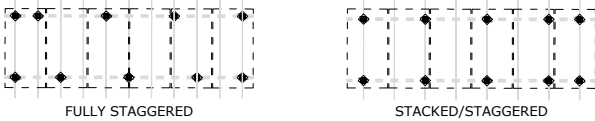
⊕ INVISIMOUNT ROOF ATTACHMENT DETAILS
HARDWARE: PEGASUS L-FOOT

TABLE 2: PENETRATION GUIDE FOR INSTALL

TWO OR MORE ROWS OF MODULES

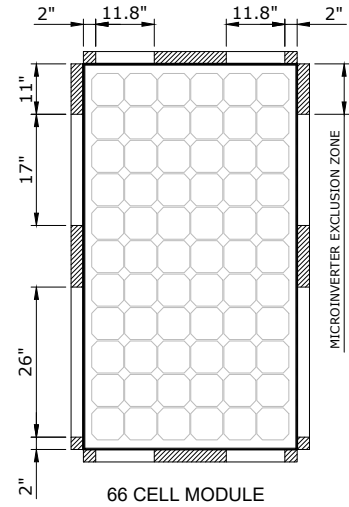


ONE ROW OF MODULES



*CHECK TABLE 1 FOR MAX.. PENETRATION SPACING AND PENETRATION PATTERN FOR EACH ARRAY.

FIGURE 3: MOUNTING CLAMP POSITIONING DETAILS



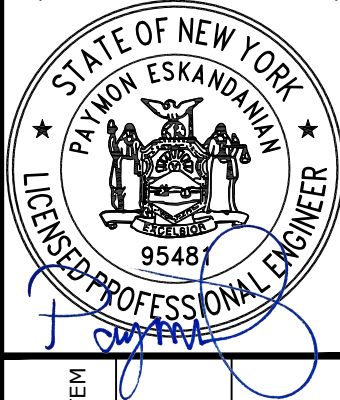
•RAILS SHALL BE POSITIONED IN THE NON-CROSS HATCHED REGIONS

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JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
STRUCTURAL INFORMATION
AND MOUNTING DETAILS

REVISIONS

REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

DRAWN BY:

PAOLO KATIGBAK

INSTALLER SPRI - NEW YORK

PROJECT RP-345110

DATE DRAWN 08-17-2022

SCALE NTS

SHEET

PVS-1

FIGURE A: THREE LINE DIAGRAM - 8.20 kW

UTILITY ACCOUNT INFORMATION

UTILITY: CONSOLIDATED EDISON CO-NY INC
ACCOUNT NAME: JOHN COSSINS
ACCOUNT NUMBER: 51-1701-5525-0002-2
ADDRESS: 21 S COTTENET ST PD
IRVINGTON NY 10533-1602

***MSP MAX PV BREAKER (A) =**
 $200A \times 120\% = 200A$
 $= 40A$

INCOMING SOURCE FEED
TOP FED
(E) MAIN SERVICE PANEL
MANUF: MURRAY
200A, 120/240V, 1PH, 3W
LOCATION: INSIDE GARAGE

EXISTING
(E) UTILITY BIDIRECTIONAL METER #:
9650649

TO HOUSE LOADS

PV BREAKER: TO BE
INSTALLED ON THE OPPOSITE SIDE
OF THE MAIN OCPD OF THE BUSS

GROUNDING ELECTRODE
GROUND ROD

UTILITY-LOCKABLE SAFETY SWITCH 100A, 240VAC
SQUARE D DU323RB OR EQUIVALENT
LOCATED OUTSIDE
WITH VISIBLE KNIFE BLADES

(N) SOLAR LOAD CENTER
100A MIN., 120/240 V,
LOCATION: NEAR METER

SUNPOWER AC MODULES W/
INTEGRATED MICROINVERTER
SPR-M410-BLK-H-AC (240)
MICROINVERTER MODEL:
IQ7HS-66-ACM-US (240)

JUNCTION BOX,
NEMA-3R,

BRANCH CIRCUIT #1
10 AC MODULES

BRANCH CIRCUIT #2
10 AC MODULES

SUNPOWER MONITORING
PVS6

CAT5e
ETHERNET
CONNECTION TO
DSL/CABLE MODEM

52 IT - 20A, 2P
52 IT - 20A, 2P
52 IT - 15A, 2P

(3) #14 THWN
(1) #14 THWN EGC

GND
N L2 L1

TAG	DESCRIPTION		CONDUCTOR / CONDUIT SCHEDULE						ELECTRICAL NOTES	
<u>1</u>	SOLAR AC MODULE / BRANCH	ACM	TAG	DESCRIPTION & CONDUCTOR TYPE	CONDUCTOR SIZE (AWG)	NUMBER OF CONDUCTORS	CONDUIT/CABLE TYPE	CONDUIT SIZE	<div>1. PROPER LISTING EXPECTED FOR CONDITIONS OF USE ON ALL LUGS, FITTINGS, CRIMPS, ETC. 2. ALL CONDUIT BEND RADII TO CONFORM TO THE NEC MINIMUM BEND RADII REQUIREMENTS. 3. MINIMUM CLEARANCE SHALL BE MAINTAINED PER NEC FOR ALL NEW EQUIPMENT TO BE INSTALLED. 4. EXISTING GROUNDING ELECTRODE SYSTEM MUST MEET NEC AND LOCAL UTILITY REQUIREMENTS. 5. COPPER CONDUCTORS SHALL BE USED UNLESS SPECIFIED. 6. TYPE NM (ROMEX) CONDUCTORS ARE ALLOWED FOR INTERNAL AND ATTIC RUNS AND SHALL BE INSTALLED MEETING NEC REQUIREMENTS. 7. IF MAIN SERVICE PANEL IS TO BE UPGRADED, IT WILL BE PERMITTED AND INSTALLED BY 3RD PARTY. 8. AC WIRING SHALL UPSIZE IF VOLTAGE DROP EXCEEDS 2%. 9. RUN CONDUCTORS IN EXISTING CONDUIT WHEN AVAILABLE PROVIDED IT HAS NO OTHER CONDUCTORS RUNNING THROUGH IT. 10. EQUIVALENT SPECIFICATION ON CABLES AND ELECTRICAL EQUIPMENT SPECIFIED ARE ACCEPTABLE. 11. AS DC POWER IS INTERNAL TO THE MODULE, GROUNDING ELECTRODE CONDUCTOR (GEC) FOR THE MODULE OR ARRAY IS NOT REQUIRED.</div>	
<u>2</u>	DC / DC CONVERTERS	NO								
<u>3</u>	SOURCE CIRCUIT JUNCTION BOX	YES		A	SUNPOWER PROVIDED AC MODULES EXTENSION CABLE, LISTED AS AN ASSEMBLY	#12	2	BRANCH CIRCUIT FROM PV ARRAY TO JUNCTION BOX		--
<u>4</u>	SEPARATE DC DISCONNECT	NO			EGC: BARE Cu	#6	1			
<u>5</u>	INTERNAL INVERTER DC DISCONNECT	NO		B	THWN-2	#10	4	EMT		3/4"
<u>6</u>	STRING INVERTER	NO			EGC: THWN-2	#10	1			
<u>7</u>	SOLAR LOAD CENTER	YES		C	THWN-2	#8	3	EMT		3/4"
<u>8</u>	PV PRODUCTION METER	YES			EGC: THWN-2	#10	1			
<u>9</u>	SEPARATE AC DISCONNECT	YES								
<div>PV CERTIFICATIONS AND COMPLIANCE<ul style="list-style-type: none">UL 1741 / IEEE-1547UL 1741 AC MODULE (TYPE 2 FIRE RATED)UL 62109-1 / IEC 62109-2UL LISTED PV RAPID SHUTDOWN EQUIPMENT</div> <div>ENABLES INSTALLATION IN ACCORDANCE WITH:<ul style="list-style-type: none">NEC 690.6 (AC MODULE)NEC 690.12 RAPID SHUTDOWN (INSIDE AND OUTSIDE THE ARRAY)NEC 690.15 AC CONNECTORS, 690.33(A)–(E)(1)</div>										
AC MODULES NOTES										
<div>1. DC CIRCUIT IS ISOLATED AND INSULATED FROM GROUND AND MEETS THE REQUIREMENT OF NEC 690.35. 2. SUNPOWER PROVIDED CABLES COMES WITH TWO (2) #12 AWG WIRE AND THIS IS BY DESIGN. NEUTRAL AND ADDITIONAL GROUND WIRE IS NOT REQUIRED FOR PROVIDED TRUNK AND EXTENSION CABLES. 3. SUNPOWER AC MODULES HAVE BEEN TESTED AND CERTIFIED TO UL 2703 FOR INTEGRATED GROUNDING AND HENCE A SEPARATE GROUND WIRE IS NOT REQUIRED WITHIN THE ARRAY. 4. USE ROW-TO-ROW GROUNDING CLIP PROVIDED TO GROUND ROWS OF MODULE. BOND SUB-ARRAYS BY RUNNING #6 AWG BARE CU WIRE AND GROUND LUGS AT A SINGLE POINT ON EACH SUB-ARRAY AND THEN TO THE JUNCTION BOX. REFER TO PVE-4 FOR ADDITIONAL DETAILS.</div>										

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JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE ELECTRICAL THREE-LINE DIAGRAM & SPECIFICATIONS

R E V I S I O N S			
REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

DRAWN BY:

PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET

PVE-1

SUBPANEL TO GRID-TIE WIRING	#8
VOLTAGE	240 V
SUM OF BRANCHES: I _{OUT_TOTAL} =	32 A
MINIMUM WIRE AMPACITY: I _{MAX} = I _{OUT} x 1.25	40.00 A
CONDUCTOR DE-RATING	
MAXIMUM AMBIENT TEMPERATURE	35 °C
TEMPERATURE USED FOR AMPACITY DE-RATING	35 °C
TEMPERATURE DE-RATING COEFFICIENT	0.96
FILL DE-RATING COEFFICIENT	1.00
I _{WIREMIN} = I _{OUT} / TEMP_COEFF / FILL_COEFF	33.33 A
WIRE SIZE AMPACITY	55 A
CONDUCTOR SIZE	#8
CONDUCTOR SIZE ADJUSTED FOR VOLTAGE DROP	#8
ONE WAY CIRCUIT LENGTH	8 FT.
VOLTAGE DROP	0.17%
OVERCURRENT PROTECTION	40A, 2P
MINIMUM OCPD = I _{OUT} x 1.25	40.00 A

	BRANCH 1	BRANCH 2
ROOF JCT BOX TO SUBPANEL WIRING	#10	#10
NUMBER OF MODULES	10	10
VOLTAGE	240 V	240 V
RATED AC OUTPUT CURRENT: I _{OUT} =	16 A	16 A
MINIMUM WIRE AMPACITY: I _{MAX} = I _{OUT} x 1.25	20.00 A	20.00 A
CONDUCTOR DE-RATING		
MAXIMUM AMBIENT TEMPERATURE	35 °C	35 °C
TEMPERATURE ADDER	22 °C	22 °C
TEMPERATURE USED FOR AMPACITY DE-RATING	57 °C	57 °C
TEMPERATURE DE-RATING COEFFICIENT	0.71	0.71
FILL DE-RATING COEFFICIENT	0.8	0.8
I _{WIREMIN} = I _{OUT} / TEMP_COEFF / FILL_COEFF	28.17 A	28.17 A
WIRE SIZE AMPACITY	40 A	40 A
CONDUCTOR SIZE	#10	#10
CONDUCTOR SIZE ADJUSTED FOR VOLTAGE DROP	#10	#10
ONE WAY CIRCUIT LENGTH	35 FT.	35 FT.
CALCULATED VOLTAGE DROP	0.58%	0.58%
OVERCURRENT PROTECTION	20A, 2P	20A, 2P
MINIMUM OCPD = I _{OUT} x 1.25	20.00 A	20.00 A

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RICHMOND, CA 94804
(510) 540-0550

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WHITE PLAINS, NY 10604

JOHN COSSINS
8.20 kW GRID-TIED PHOTOVOLTAIC SYSTEM

21 S COTTENET ST PD
IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ELECTRICAL CALCULATION

REVISIONS

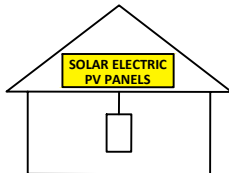
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1	AHJ COMMENT	01/10/23	PK

DRAWN BY:
PKatigbak
PAOLO KATIGBAK

INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	NTS

SHEET

PVE-2

ELECTRICAL DATA & SPECIFICATIONS									
<div><div>PHOTOVOLTAIC POINT OF INTERCONNECTION</div><div>WARNING: DUAL POWER SOURCE. SECOND SOURCE IS PHOTOVOLTAIC SYSTEM</div><table><tr><td>MAXIMUM RATED AC OUTPUT CURRENT:</td><td>32 A</td><td>AMPS</td></tr><tr><td>MAXIMUM OPERATING AC VOLTAGE:</td><td>240 V</td><td>VOLTS</td></tr></table><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>MAIN SERVICE PANEL</div><div>INDOOR / OUTDOOR SUBPANEL</div></div></div>	MAXIMUM RATED AC OUTPUT CURRENT:	32 A	AMPS	MAXIMUM OPERATING AC VOLTAGE:	240 V	VOLTS	<div><div>PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN</div><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>MAIN SERVICE PANEL</div></div></div> <div><div>PV SOLAR BREAKER</div><div>DO NOT RELOCATE THIS OVERCURRENT DEVICE</div><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>MAIN SERVICE PANEL</div><div>NEW INDOOR / OUTDOOR LOAD CENTER</div><div>INDOOR / OUTDOOR SUBPANEL</div></div></div>	<div><div>RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM</div><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>LABEL SHALL BE LOCATED ON OR NO MORE THAN 1M (3FT) FROM THE SWITCH</div></div></div>	
MAXIMUM RATED AC OUTPUT CURRENT:	32 A	AMPS							
MAXIMUM OPERATING AC VOLTAGE:	240 V	VOLTS							
<div><div>SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN</div><div><div>TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN AND REDUCE SHOCK HAZARD IN THE ARRAY</div><div></div></div><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>SHALL BE LOCATED ON OR NO MORE THAN 1 M (3 FT) FROM THE SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED.</div></div></div>	<div><div>PHOTOVOLTAIC SYSTEM AC DISCONNECT</div><table><tr><td>RATED AC OUTPUT CURRENT:</td><td>32 A</td><td>AMPS</td></tr><tr><td>NOMINAL OPERATING AC VOLTAGE:</td><td>240 V</td><td>VOLTS</td></tr></table><div>SIGNAGE LOCATIONS:</div><div><div><div></div></div><div>INDOOR / OUTDOOR AC DISCONNECT</div></div></div>	RATED AC OUTPUT CURRENT:	32 A	AMPS	NOMINAL OPERATING AC VOLTAGE:	240 V	VOLTS		
RATED AC OUTPUT CURRENT:	32 A	AMPS							
NOMINAL OPERATING AC VOLTAGE:	240 V	VOLTS							
			<div>SIGNAGE NOTES</div> <div><div>1. MATERIAL USED FOR THE SIGNAGE SHALL BE REFLECTIVE, WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT.</div><div>2. ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM 3⁄8" LETTER HEIGHT, WHITE ON RED BACKGROUND.</div><div>3. MAIN SERVICE DISCONNECT MARKING SHALL BE PLACED ADJACENT TO MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED.</div><div>4. MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, AND JUNCTION BOXES TO ALERT THE FIRE SERVICE TO AVOID CUTTING THEM. MARKINGS SHALL BE PLACED EVERY 10', AT TURNS AND ABOVE AND/OR BELOW PENETRATIONS, AND AT ALL DC COMBINER AND JUNCTION BOXES.</div><div>5. DO NOT USE SCREWS FOR SIGNAGE ATTACHMENT. USE ONLY APPROVED ADHESIVE.</div></div>						

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IRVINGTON NY 10533-1602

SOLAR INDIVIDUAL PERMIT PACKAGE
ELECTRICAL DATA & SPECIFICATIONS

REV

DESCRIPTION

DATE

DB

1	AHJ COMMENT	01/10/23	PK

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PKatigbak
PAOLO KATIGBAK

INSTALLER

SPRI - NEW YORK

PROJECT

RP-345110

DATE DRAWN

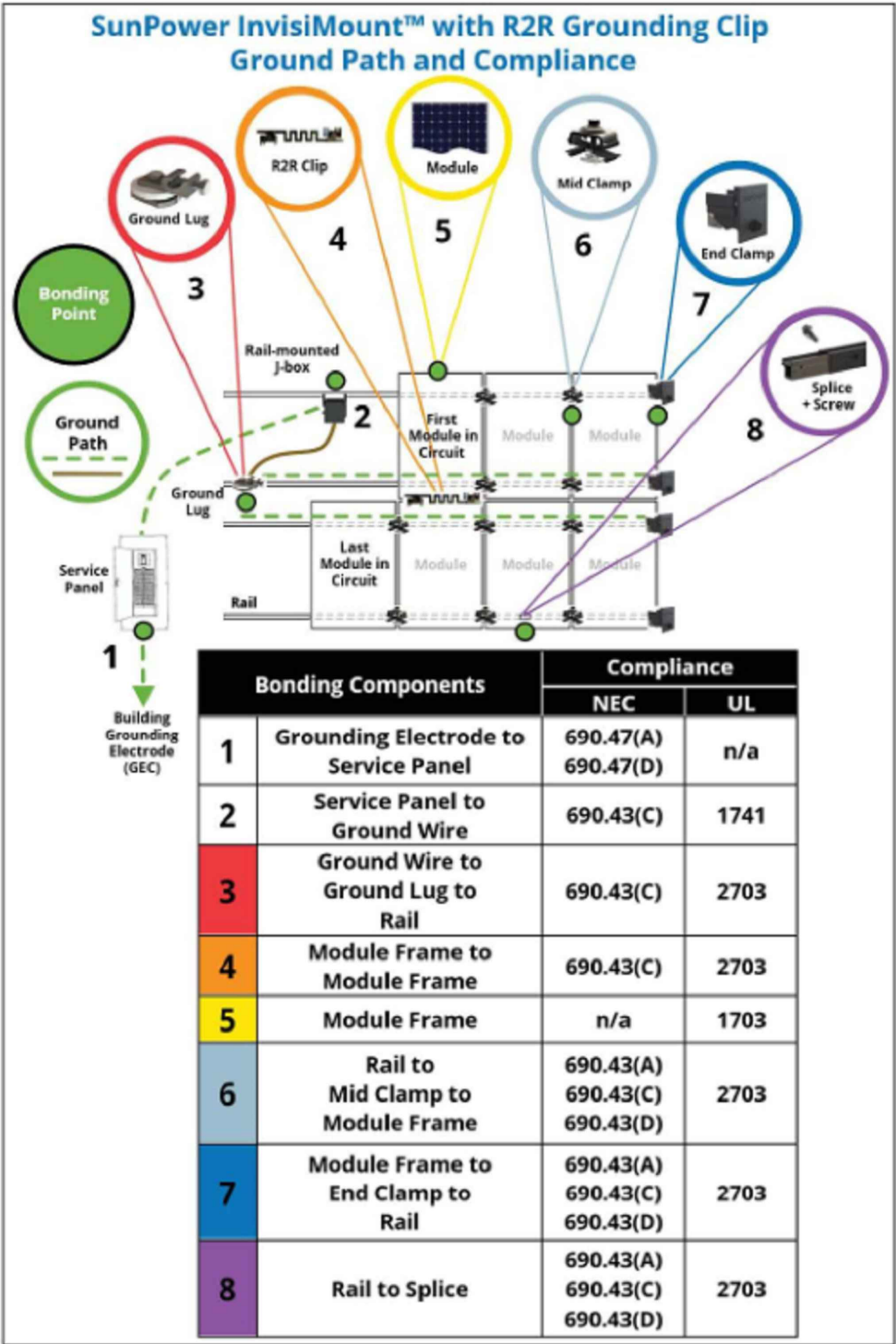
08-17-2022

SCALE

NTS

SHEET

PVE-3



Document: #508968 RevH

15

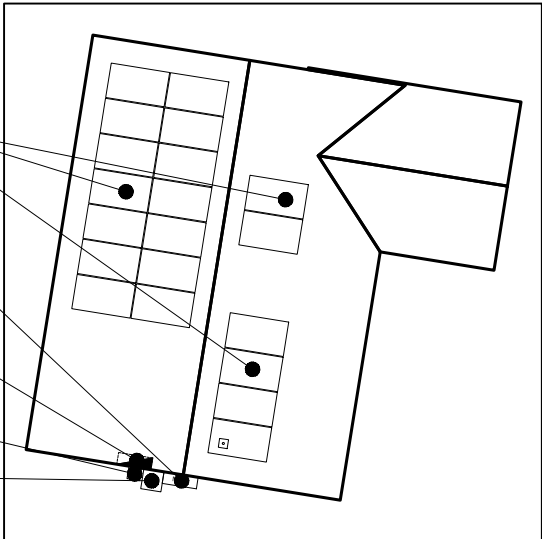
SunPower Proprietary

FIGURE 1: SUNPOWER EQUINOX GROUNDING DETAILS

CAUTION:

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECT(S) LOCATED AS SHOWN:

PHOTOVOLTAIC
ARRAY ON ROOF
SOLAR LOAD
CENTER
MAIN SERVICE
PANEL
UTILITY METER
AC
DISCONNECT



21 S COTTENET ST PD

FIGURE 2: PLACARD IDENTIFYING LOCATION OF DISCONNECTS AND POWER SOURCES

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REVISIONS

REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

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INSTALLER SPRI - NEW YORK

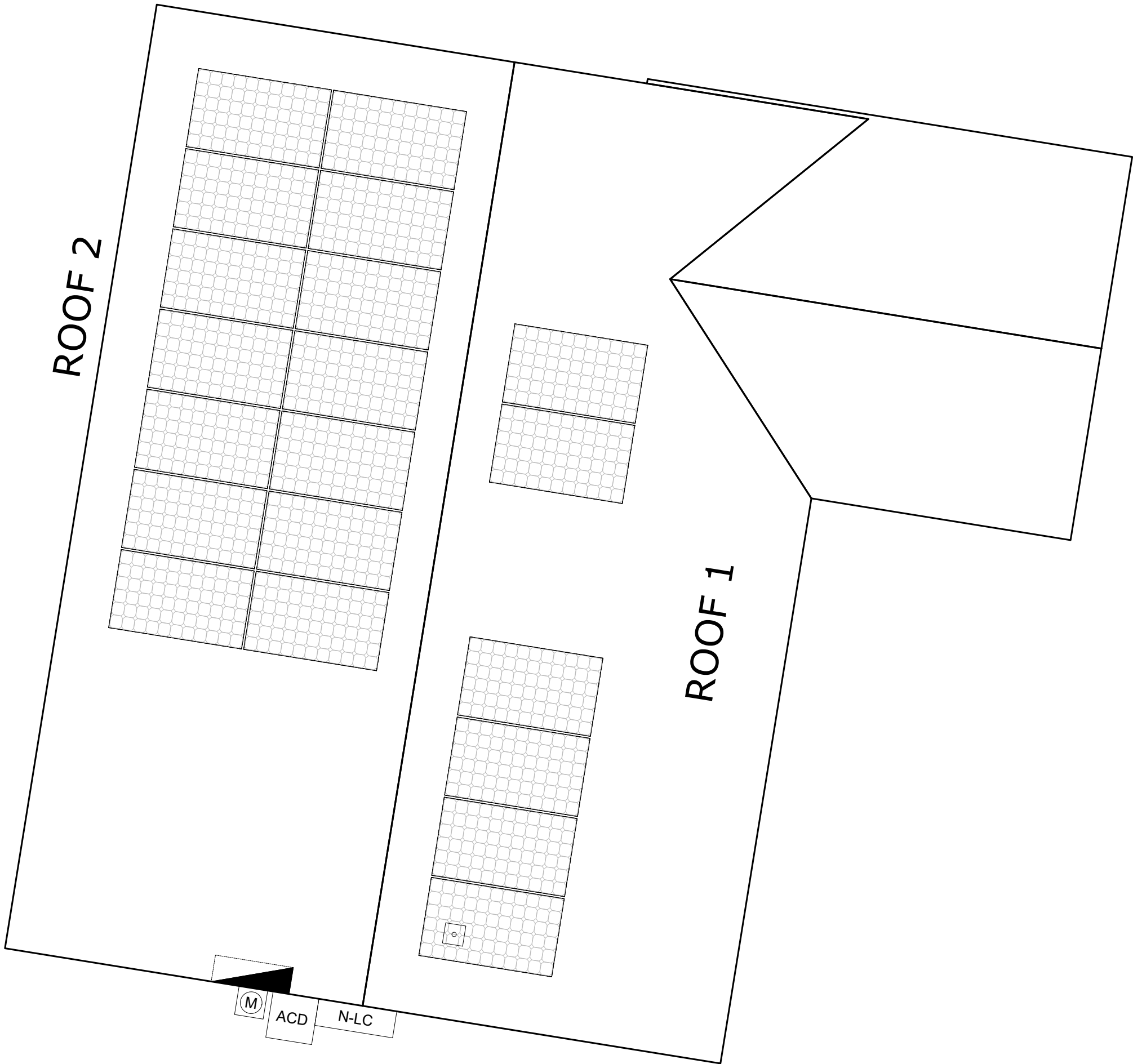
PROJECT RP-345110

DATE DRAWN 08-17-2022

SCALE NTS

SHEET

PVE-4

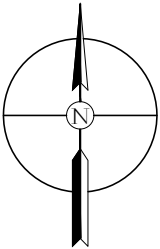


INSTALLER NAME:

BRANCH VOLTAGES:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

ROOF	1	2				
MODULE QTY.	6	14				
AZIMUTH	99°	279°				
PITCH	4.5:12	4.5:12				



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SOLAR INDIVIDUAL PERMIT PACKAGE
BRANCH DIAGRAM

REVISIONS			
REV	DESCRIPTION	DATE	DB
1	AHJ COMMENT	01/10/23	PK

DRAWN BY: <i>PKatigbak</i> PAOLO KATIGBAK	
INSTALLER	SPRI - NEW YORK
PROJECT	RP-345110
DATE DRAWN	08-17-2022
SCALE	55/256" = 1'-0"



425-410 W Residential Black AC Module

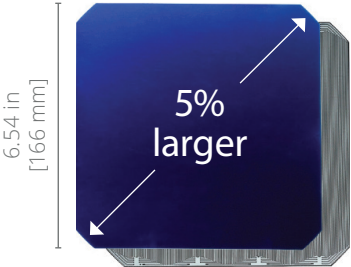
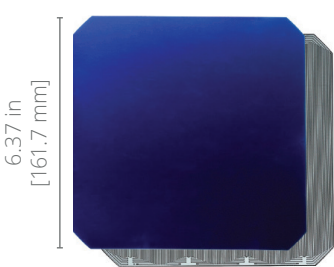
SunPower® Maxeon® Technology

Built specifically for use with the SunPower Equinox® system, the only fully integrated solution designed, engineered, and warranted by one company.



Highest Power Density Available

The patented, solid-copper foundation Maxeon Gen 6 cell is over 5% larger than prior generations, delivering the highest-efficiency all-black AC solar module available.¹



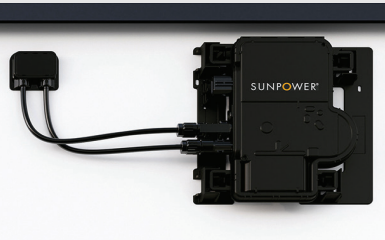
Part of the SunPower Equinox® Solar System

- Seamless aesthetics
- Compatible with mySunPower monitoring



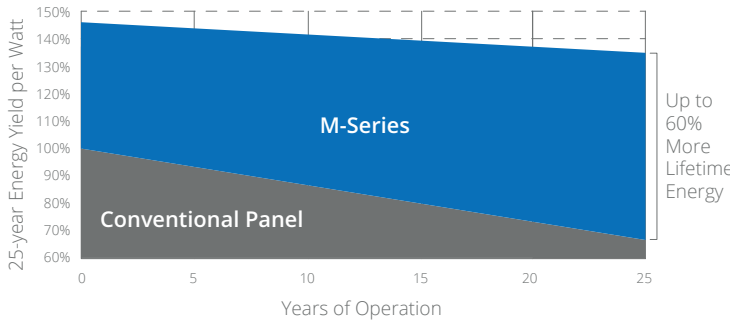
Factory-integrated Microinverter

- Highest-power integrated AC module in solar
- Engineered and calibrated by SunPower for SunPower AC modules



Highest Lifetime Energy and Savings

Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.²



Best Reliability, Best Warranty

With more than 42.6 million and 15 GW of modules deployed around the world, SunPower technology is proven to last. That's why we stand behind our module and microinverter with the industry's best 25-year Combined Power and Product Warranty, including the highest Power Warranty in solar.

AC Electrical Data		
Inverter Model: Type H (Enphase IQ7HS)	@240 VAC	@208 VAC
Peak Output Power (VA)	384	369
Max. Continuous Output Power (VA)	384	369
Nom. (L-L) Voltage/Range ³ (V)	240 / 211–264	208 / 183–229
Max. Continuous Output Current (A)	1.60	1.77
Max. Units per 20 A (L-L) Branch Circuit ⁴	10	9
CEC Weighted Efficiency	97.0%	96.5%
Nom. Frequency	60 Hz	60 Hz
Extended Frequency Range	47–68 Hz	47–68 Hz
AC Short Circuit Fault Current Over 3 Cycles	4.82 A	4.82 A
Overvoltage Class AC Port	III	III
AC Port Backfeed Current	18 mA	18 mA
Power Factor Setting	1.0	1.0
Power Factor (adjustable)	0.85 (inductive) / 0.85 (capacitive)	0.85 (inductive) / 0.85 (capacitive)

DC Power Data			
	SPR-M425-BLK-H-AC	SPR-M415-BLK-H-AC	SPR-M410-BLK-H-AC
Nom. Power ⁶ (P _{nom}) W	425	415	410
Power Tolerance	+5/–0%	+5/–0%	+5/–0%
Module Efficiency	22.0%	21.5%	21.2%
Temp. Coef. (Power)	–0.29% / °C	–0.29% / °C	–0.29% / °C
Shade Tolerance	Integrated module-level max. power point tracking		

Tested Operating Conditions	
Operating Temp.	–40°F to +185°F (–40°C to +85°C)
Max. Ambient Temp.	122°F (50°C)
Max. Test Load ⁸	Wind: 125 psf, 6000 Pa, 611 kg/m ² back Snow: 187 psf, 9000 Pa, 917 kg/m ² front
Max. Design Load	Wind: 75 psf, 3600 Pa, 367 kg/m ² back Snow: 125 psf, 5400 Pa, 550 kg/m ² front
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)

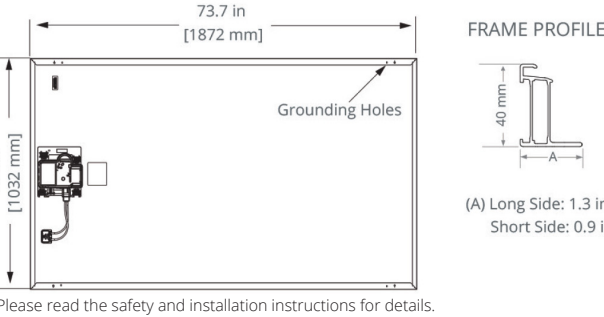
Mechanical Data	
Solar Cells	66 Maxeon Gen 6
Front Glass	High-transmission tempered glass with anti-reflective coating
Environmental Rating	Outdoor rated
Frame	Class 1 black anodized (highest AAMA rating)
Weight	48 lb (21.8 kg)
Recommended Max. Module Spacing	1.3 in. (33 mm)

Warranties, Certifications, and Compliance	
Warranties	• 25-year limited power warranty • 25-year limited product warranty
Certifications and Compliance	• UL 1741 / IEEE-1547 • UL 1741 AC Module • UL 61730 (Type 2 fire rated) • UL 62109-1 / IEC 62109-2 • FCC Part 15 Class B • ICES-0003 Class B • CAN/CSA-C22.2 NO. 107.1-01 • CA Rule 21 (UL 1741 SA) ⁵ (includes Volt/Var and Reactive Power Priority) • UL Listed PV Rapid Shutdown Equipment ⁷ Enables installation in accordance with: • NEC 690.6 (AC module) • NEC 690.12 Rapid Shutdown (inside and outside the array) • NEC 690.15 AC Connectors, 690.33(A)–(E)(1) When used with AC module Q Cables and accessories (UL 6703 and UL 2238) ⁷ • Rated for load break disconnect When used with InvisiMount racking and InvisiMount accessories (UL 2703): • Module grounding and bonding through InvisiMount • Class A fire rated
PID Test	1000 V: IEC 62804

Packaging Configuration	
Modules per pallet	25
Packaging box dimensions	75.4 x 42.2 x 48.0 in. (1915 x 1072 x 1220 mm)
Pallet gross weight	1300 lb (590 kg)
Pallets per container	32
Net weight per container	18,880 kg

1 Based on datasheet review of websites of top 20 manufacturers per IHS, as of July 2021.
2 Maxeon 435 W, 22.5% efficient, compared to a Conventional Panel on same-sized arrays (300 W, 19% efficient, approx. 1.6 m²), 7.9% more energy per watt (based on PVsyst pan files for avg. US climate), 0.5%/yr slower degradation rate (Jordan, et. al. "Robust PV Degradation Methodology and Application."PVSC 2018).
3 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of June 2021.
4 Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
5 Factory set to IEEE 1547a-2014 default settings. CA Rule 21 default settings profile set during commissioning.
6 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25°C). All DC voltage is fully contained within the module.
7 UL Listed as PVRSE and conforms with NEC 2017 and NEC 2020 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors; when installed according to manufacturer's instructions.
8 Please read the safety and installation instructions for more information regarding load ratings and mounting configurations.

See www.sunpower.com/company for more reference information.
For more details, see extended datasheet: www.sunpower.com/solar-resources.
Specifications included in this datasheet are subject to change without notice.
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COMP MOUNTS




WATERTIGHT FOR LIFE

Pegasus Solar's Comp Mounts are a cost effective, high-quality option for rail installations on composition shingle roofs. Designed to last decades, the one-piece flashing with elevated cone means there is simply nothing to fail.




25-year Warranty

Manufactured with advanced materials and coatings to outlast the roof itself




Superior Waterproofing

Tested to AC286 without sealant 0.9" elevated water seal



Code Compliant

Fully IBC/CBC Code Compliant
Exceeds ASCE 7-16 Standards



All-In-One Kit Packaging

Flashings, L-Feet and SS lags with bonded EPDM washers are included in each 24-pack

COMP MOUNTS

1. Drill pilot hole in center of rafter.



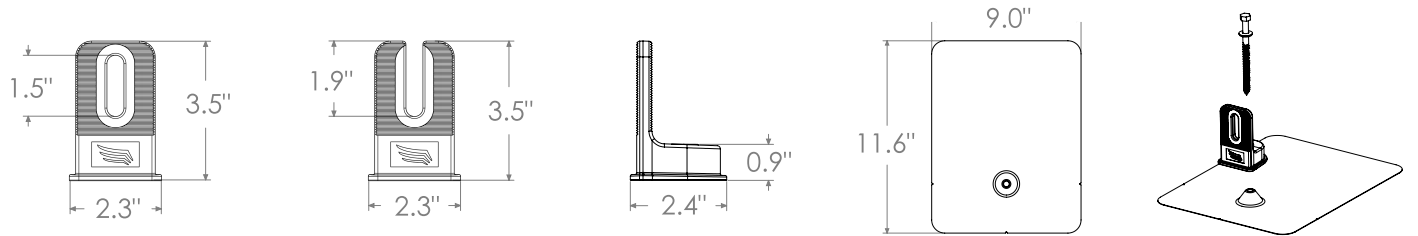
2. Optional: Apply a "U-shape" of sealant to underside of flashing and position under 2nd shingle course, cone over pilot hole.



3. Place L-Foot over cone and install lag with washer through L-Foot.



4. Drive lag to required depth. Attach rail per rail manufacturer's instructions.



Specifications	Comp Mount Install Kits				
SKU	PSCR-CBB0	PSCR-UBB0	SPCR-CBBH	PSCR-CMM0	PSCR-UMM0
Finish	Black L-Foot and Black Flashing			Mill L-Foot and Mill Flashing	
L-Foot Type	Closed Slot	Open Slot	Closed Slot	Closed Slot	Open Slot
Kit Contents	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer and M10 Hex Bolt	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer	L-Foot, Flashing, 5/16"x 4-1/2" SS Lag with metalized EPDM washer
Roof Type	Composition Shingle				
Certifications	IBC, ASCE/SEI 7-16, AC286				
Install Application	Railed Systems				
Compatible Rail	Most				
Flashing Material	Painted Galvalume Plus			Galvalume Plus	
L-Foot Material	Aluminum				
Kit Quantity	24				
	72				



SunPower® InvisiMount™ | Residential Mounting System

Simple and Fast Installation

- Integrated module-to-rail grounding
- Pre-assembled mid and end clamps
- Levitating mid clamp for easy placement
- Mid clamp width facilitates consistent, even module spacing
- UL 2703 Listed integrated grounding

Flexible Design

- Addresses sloped and low-sloped residential roofs
- Design in landscape and portrait with up to 8’ rail span
- Pre-drilled rails and rail splice
- Rails enable easy obstacle management

Customer-Preferred Aesthetics

- Best-in-class system aesthetics
- Black anodized components
- Low-profile mid clamps and capped, flush end clamps

Part of Superior System

- Best-in-class system reliability and aesthetics
- Optional rooftop transition flashing, rail-mounted J-box, and wire management rail clips
- Combine with SunPower modules and mySunPower® monitoring app



Elegant Simplicity

SunPower® InvisiMount™ is a SunPower-designed rail-based mounting system. The InvisiMount system addresses residential sloped roofs and combines faster installation time, design flexibility, and superior aesthetics. Classic InvisiMount is specifically envisioned and engineered to pair with SunPower modules; Universal InvisiMount is compatible with a wide range of modules. The resulting system-level approach amplifies the installation and aesthetic benefits—for homeowners and for installers.

sunpower.com



SunPower® InvisiMount™ | Residential Mounting System

InvisiMount Components



InvisiMount Component Details		
Classic mid clamp	Black oxide stainless steel 300 series	63 g (2.2 oz)
Universal mid clamp	Black anodized aluminum 6000 series	60 g (2.1 oz)
Classic end clamp	Black anodized aluminum 6000 series	110 g (3.88 oz)
Universal end clamp	Black anodized aluminum 6000 series	103 g (3.63 oz)
Rail	Black anodized aluminum 6000 series	830 g/m (9 oz/ft)
Rail splice	Aluminum alloy 6000 series	830 g/m (9 oz/ft)
Rail bolt	M10-1.5 × 25 mm; custom T-head SS304	18 g (0.63 oz)
Rail nut	M10-1.5; DIN 6923 SS304	nominal
Ground lug assembly	SS304; A2-70 bolt; tin-plated copper lug	106.5 g (3.75 oz)
Row-to-row grounding clip	SS 301 with SS 304 M6 bolts	75 g (2.6 oz)
Row-to-row grounding jumper	Stainless steel 300 series	10 g (0.35 oz)
Row-to-row spacer	Black POM-grade plastic	5 g (0.18 oz)

Roof Attachment BOM	
<ul style="list-style-type: none">• InvisiMount Comp Shingle Attachment with Pegasus• InvisiMount Flat Tile Replacement Attachment with Pegasus• InvisiMount S-Tile Replacement Attachment with Pegasus• InvisiMount W-Tile Replacement Attachment with Pegasus	

InvisiMount Warranties And Certifications	
Warranties	<ul style="list-style-type: none">• 25-year product warranty• 5-year finish warranty
Certifications	<ul style="list-style-type: none">• UL 2703 Listed• Class A Fire Rated



InvisiMount Operating Conditions	
Temperature	–40°C to 90°C (–40°F to 194°F)

Roof Attachment Hardware Warranties	
Refer to roof attachment hardware manufacturer's documentation.	

InvisiMount Component LRFD Capacities ²		
Classic Mid clamp	Uplift	664 lbf
	Shear	540 lbf
Universal Mid clamp	Uplift	962 lb
	Shear	437 lb
Classic End clamp	Uplift	899 lbf
	Shear	220 lbf
Universal End clamp	Uplift	605 lb
	Shear	242 lb
Rail	Moment: upward	548 lbf-ft
	Moment: downward	580 lbf-ft
Rail splice	Moment: upward	548 lbf-ft
	Moment: downward	580 lbf-ft
L-foot	Uplift	1000 lbf
	Shear	390 lbf

¹ With Classic InvisiMount, a module frame that is compatible with the InvisiMount system is required for hardware interoperability; modules without this frame may be used with Universal InvisiMount.

² SunPower recommends that all Equinox™, InvisiMount™, and AC module systems always be designed using the InvisiMount Span Tables #524734. If a designer decides to instead use the component capacities listed in this document to design a system, note that the capacities shown are Load and Resistance Factor Design (LRFD) design loads, and are NOT to be used for Allowable Stress Design (ASD) calculations; and that a licensed Professional Engineer (PE) must then stamp all calculations. If you have any questions please contact SunPower Technical Support at 1-855-977-7867.

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sunpower.com
509506 RevG



Improve Support, Reduce Costs

An intuitive monitoring website enables you to:

- See a visual map of customer sites
- Remotely manage hundreds of sites
- Remotely diagnose and troubleshoot system issues
- Drill down for the status of individual devices

Add Value for Customers

With mySunPower™ monitoring customers can:

- Track their energy production by day, month, year and in different weather conditions
- See their energy use and estimated bill savings
- Maximize their savings with automatic system alerts and tips
- Customize storage settings and easily monitor and track available battery power
- Receive elective system reports

SunPower® Monitoring—Plug-and-Play Installation

This complete solution for residential monitoring and control includes the SunPower® PV Supervisor (PVS) which improves the installation process, overall system reliability, and customer experience:

- Compact footprint for improved aesthetics
- Robust cloud connectivity and comprehensive local connectivity
- Flexible configuration of devices during installation
- Consumption metering
- Revenue-quality production metering
- Web-based commissioning
- Remote diagnostics of PVS and inverters
- Durable UL Type 3R enclosure helps reduce maintenance costs
- Easy integration with SunPower eBOS

Robust Cloud Connectivity

Multiple options to maintain optimal connectivity:

- Hardwired Ethernet
- WiFi
- Cellular backup



SunPower® Pro Fleet Management for Installers



mySunPower™ for Homeowners



PVS



SunPower® AC Modules



Site Requirements	
Number of modules supported per PVS	• 85 (SunPower AC modules)
Internet access	• High-speed internet access via accessible router or switch
Power	• 100–240 VAC (L–N), 50 or 60 Hz • 208 VAC (L–L in phase 3), 60 Hz

Mechanical	
Weight	• 5.5 lb (2.5 kg)
Dimensions	• 11.8 × 8.0 × 4.2 in. (30.5 × 20.5 × 10.8 cm)
Enclosure rating	• UL 50E Type 3R

Operating Conditions	
Temperature	• –22°F to +140°F (–30°C to +60°C)
Humidity (max.)	• 95%, non-condensing

Warranty and Certifications	
Warranty	• 10-year Limited Warranty
Certifications	• UL, cUL, CE, UL 61010-1 and -2, FCC Part 15 (Class B)

Communication	
RS-485	• Supports string inverters, external meters, and other auxiliary devices
Integrated metering	• One channel of revenue-quality production metering • Two channels of consumption metering
Ethernet	• 1 LAN (or optional WAN) port
PLC	• Supports SunPower AC modules
WiFi	• 802.11b/g/n 2.4 GHz and 5 GHz
Cellular	• LTE Cat-M1/3G UMTS
ZigBee	• IEEE 802.15.4 MAC, 2.4 GHz ISM band
Data storage	• 60 days
Upgrades	• Automatic firmware upgrades

Web and Mobile Device Support	
Customer site	• mysunpower.com
Partner site	• monitor.sunpower.com
Browsers	• Firefox, Safari, and Chrome
Mobile devices	• iPhone®, iPad®, and Android™
Customer app	1 Create account online at mysunpower.com 2 On a mobile device, download the SunPower Monitoring app from Apple App Store or Google Play™ Store 3 Sign in using account email and password



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InvisiMount™ Rail-Mounted Junction Box (RMJ) v2

- 70% larger than original InvisiMount J-box.
- Integrated grounding to InvisiMount rail, replacing grounding lug assembly.
- Snap-on attachment for fast and secure installation.



Composition Shingle Roof Transition Junction Box

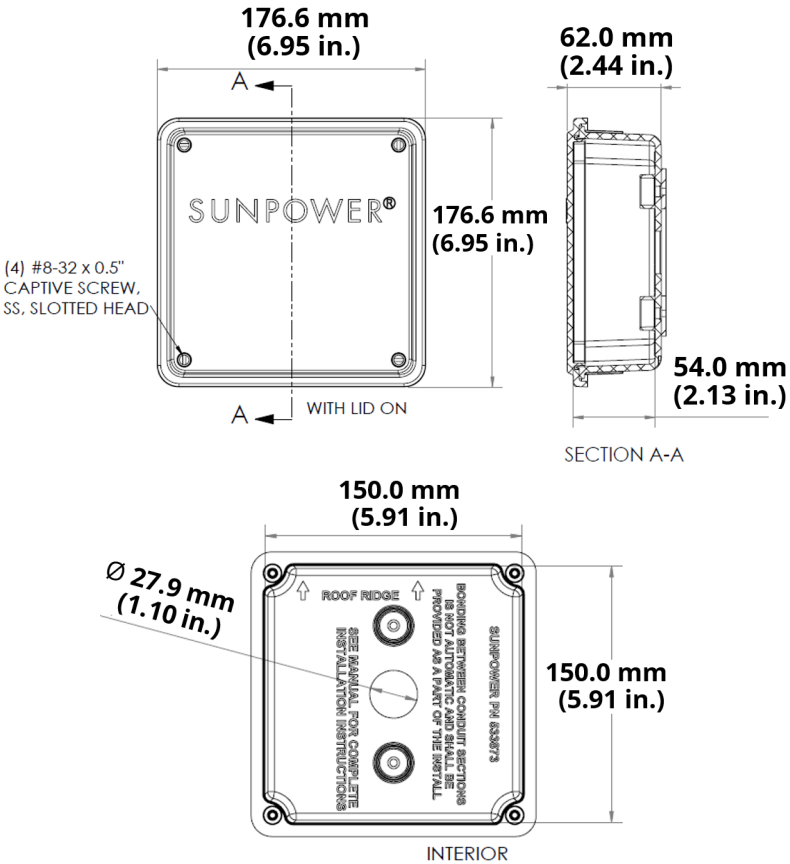
- Enables transitioning conductors directly through the roof.
- Integrated flashing for peace of mind.
- Compatible with composition shingle roofs.

SPECIFICATIONS

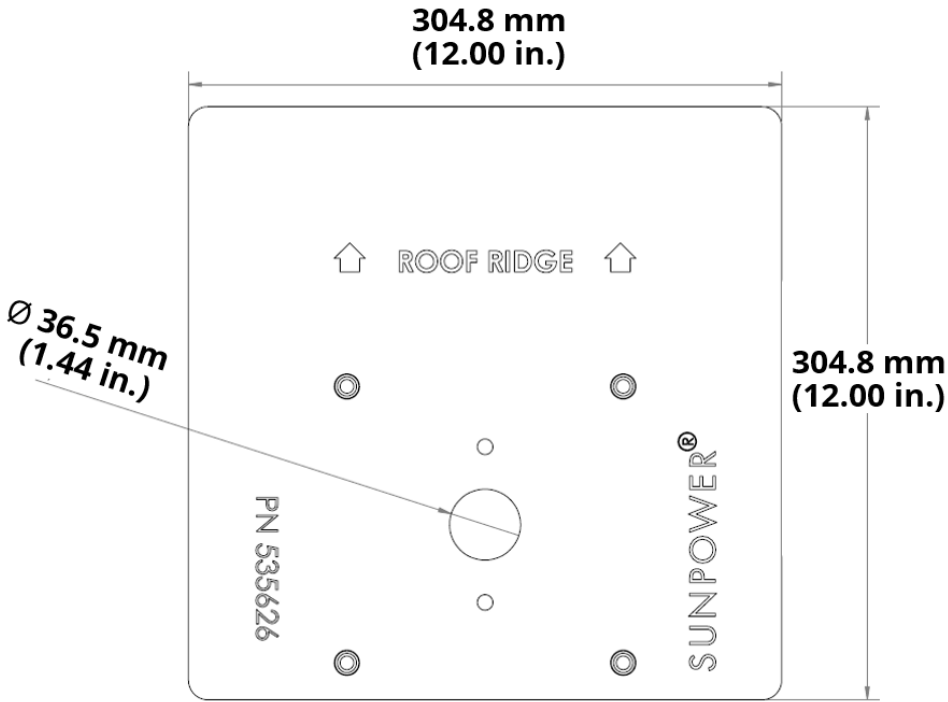
Model	RMJ v2	Comp Shingle Transition J-Box
Kit Part Number	530167	530168
Max. Voltage Rating	600 V (AC or DC)	
Ambient Temp. Range	-35°C to 75°C (-31°F to 167°F)	
Enclosure Material	Flame-retardant, UV-resistant, high-impact resistant resin	
Attachment/Flashing Material	304 stainless steel	Steel w/zinc-aluminum coating
Cavity Dimensions	150 × 150 × 62 mm (5.91" × 5.91" × 2.13")	
Enclosure Volume	1150 cc (70 in³)	
Attachment/Flashing Finish	Black oxide	Black powder coat
Compatibility	InvisiMount rail	Comp shingle roofs
Assembled Weight	0.78 kg (1.7 lb)	1.27 kg (2.8 lb)
Certifications & Ratings	<ul style="list-style-type: none">• Watertight, UL Type 4• UL 94 5VA• UL 1741• UL 2703 (with InvisiMount)	<ul style="list-style-type: none">• Watertight, UL Type 4• UL 94 5VA• UL 1741
Additional Hardware Included	<ul style="list-style-type: none">• 3/4" cord grip• Lay-in lug	<ul style="list-style-type: none">• 3/4" cord grip• #12 screws with EPDM washer

COMPONENT DIMENSIONS

J-Box Enclosure
(used in both RMJ and Transition J-box)



Flashing
(used only with Transition J-Box)



DU222RB

Safety switch, general duty, non fusible, 60A, 2 poles, 10 hp, 240 VAC, NEMA 3R, bolt-on provision

Product availability : Stock - Normally stocked in distribution facility



Price* : 353.00 USD



Main

Product	Single Throw Safety Switch
Current Rating	60 A
Certifications	UL listed file E2875
Enclosure Rating	NEMA 3R
Disconnect Type	Non-fusible disconnect switch
Factory Installed Neutral	None
Mounting Type	Surface
Number of Poles	2
Electrical Connection	Lugs
Duty Rating	General duty
Voltage Rating	240 V AC
Wire Size	AWG 12...AWG 3 aluminium AWG 14...AWG 3 copper

Complementary

Short-circuit withstand	200 kA
Maximum Horse Power Rating	10 hp 240 V AC 60 Hz 1 phase NEC 430.52
Tightening torque	35 lbf.in (3.95 N.m) 0.00...0.01 in² (2.08...5.26 mm²) AWG 14...AWG 10) 35 lbf.in (3.95 N.m) AWG 14...AWG 10) 45 lbf.in (5.08 N.m) 0.01 in² (8.37 mm²) AWG 8) 45 lbf.in (5.08 N.m) 0.02...0.03 in² (12.3...21.12 mm²) AWG 6...AWG 4) 50 lbf.in (5.65 N.m) 0.04 in² (26.67 mm²) AWG 3)
Height	9.63 in (244.60 mm)
Width	7.75 in (196.85 mm)
Maximum Depth	3.75 in (95.25 mm)

* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price

D222NRB

Safety Switch , 60A, Fusible, Cartridge (Class H, K or R), 2-Pole



List Price \$326.00 USD

Availability **Stock Item: This item is normally stocked in our distribution facility.**

Technical Characteristics

Terminal Type	Lugs
Type of Duty	General Duty
Maximum Voltage Rating	240VAC
Wire Size	#10 to #2 AWG(Al) - #14 to #2 AWG(Cu)
Depth	4.83 Inches
Height	14.88 Inches
Width	6.63 Inches
Action	Single Throw
Ampere Rating	60A
Approvals	UL Listed File: E2875
Enclosure Rating	NEMA 3R
Enclosure Type	Rainproof and Sleet/Ice proof (Indoor/Outdoor)
Enclosure Material	Galvannealed Steel
Factory Installed Neutral	Yes
Fuse Type	Cartridge (Class H, K or R)
Disconnect Type	Fusible
Short Circuit Current Rating	100kA (max. depending on fuse type)
Mounting Type	Surface
Number of Poles	2-Pole

Shipping and Ordering

Category	00106 - Safety Switch, General Duty, 30 - 200 Amp, NEMA3R
Discount Schedule	DE1A
GTIN	00785901460640
Package Quantity	1
Weight	8.35 lbs.
Availability Code	Stock Item: This item is normally stocked in our distribution facility.
Returnability	Y
Country of Origin	US

As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this document.