

GENERAL NOTES

- 1.1.1 **PROJECT NOTES:**
- 1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
- 1.1.3 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
- 1.1.4 GROUND FAULT DETECTION AND INTERRUPTION (GFDI) DEVICE IS INTEGRATED WITH THE MICROINVERTER IN ACCORDANCE WITH NEC 690.41(B)
- 1.1.5 ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4:
 PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE
 INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519
 COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
- 1.1.6 MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1.1.7 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3].
- 1.1.8 ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1 **SCOPE OF WORK:**
- 1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1 **WORK INCLUDES:**
- 1.3.2 PV ROOF ATTACHMENTS - IRONRIDGE FLASHFOOT2
- 1.3.3 PV RACKING SYSTEM INSTALLATION - IRONRIDGE XR-10
- 1.3.4 PV MODULE AND INVERTER INSTALLATION - JINKO JKM375M-6RL3-B/ ENPHASE IQ7PLUS-72-2-US
- 1.3.5 PV EQUIPMENT GROUNDING
- 1.3.6 PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
- 1.3.7 PV LOAD CENTERS (IF INCLUDED)
- 1.3.8 PV METERING/MONITORING (IF INCLUDED)
- 1.3.9 PV DISCONNECTS
- 1.3.10 PV GROUNDING ELECTRODE & BONDING TO (E) GEC
- 1.3.11 PV FINAL COMMISSIONING
- 1.3.12 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3.13 SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

SCOPE OF WORK
 SYSTEM SIZE: STC: 34 x 375W = 12.750kW
 PTC: 34 x 346.5W = 11.781kW
 (34) JINKO JKM375M-6RL3-B
 (34) ENPHASE IQ7PLUS-72-2-US

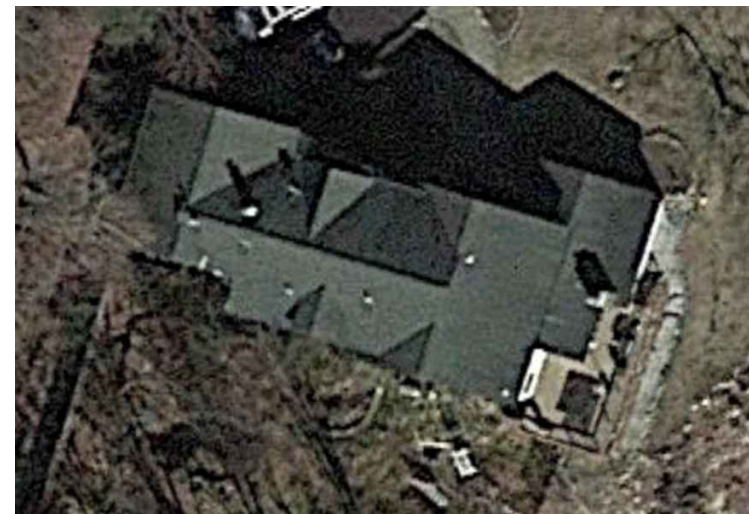
ATTACHMENT TYPE: IRONRIDGE FLASHFOOT2
 MSP UPGRADE: NO

NEW PV SYSTEM: 12.750 kWp

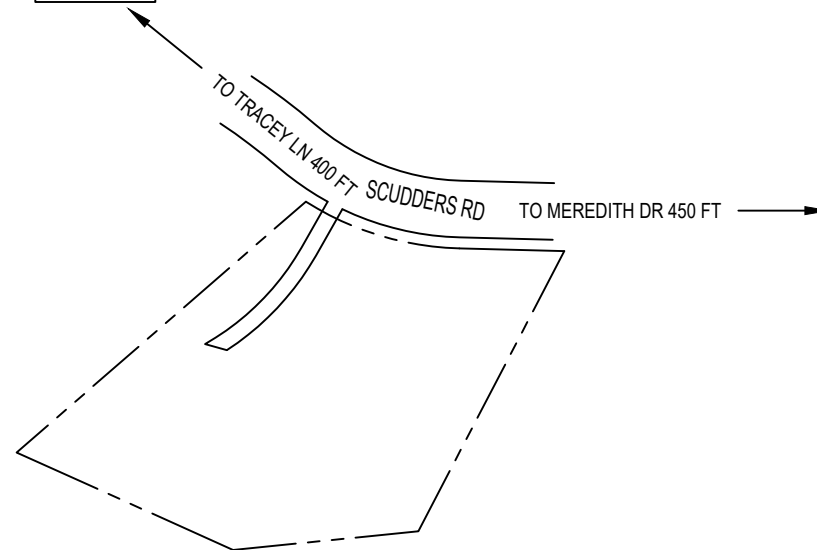
BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871

ASSESSOR'S #: 1826001000000004



01 AERIAL PHOTO
 NOT TO SCALE



02 PLAT MAP
 NOT TO SCALE

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
T-001	COVER PAGE
G-001	NOTES
A-101	SITE PLAN
A-102	ELECTRICAL PLAN
A-103	SOLAR ATTACHMENT PLAN
E-601	LINE DIAGRAM
E-602	DESIGN TABLES
E-603	PLACARDS
S-501	ASSEMBLY DETAILS
R-001	RESOURCE DOCUMENT
R-002	RESOURCE DOCUMENT
R-003	RESOURCE DOCUMENT
R-004	RESOURCE DOCUMENT
R-005	RESOURCE DOCUMENT
R-006	RESOURCE DOCUMENT

PROJECT INFORMATION

OWNER
 NAME: LELANE BARONE

PROJECT MANAGER
 NAME: ED SWEENEY
 PHONE: 781-401-0982

CONTRACTOR
 NAME: VANTAGE HOME SOLAR, LLC
 PHONE: 833-473-3611

AUTHORITIES HAVING JURISDICTION
 BUILDING: SPARTA
 ZONING: SPARTA
 UTILITY:

DESIGN SPECIFICATIONS
 OCCUPANCY: II
 CONSTRUCTION: SINGLE-FAMILY
 ZONING: RESIDENTIAL
 GROUND SNOW LOAD: 25 PSF
 WIND EXPOSURE: C
 WIND SPEED: 115 MPH

APPLICABLE CODES & STANDARDS
 BUILDING: IRC 2018 NEW JERSEY EDITION
 IBC 2018 NEW JERSEY EDITION
 ELECTRICAL: NEC 2017
 FIRE: IFC 2018



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
 ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
 HIC. NO.:
 ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

COVER PAGE

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

T-001.00

(SHEET 1)



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611

ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

**BARONE
RESIDENCE**

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

NOTES

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

G-001.00

(SHEET 2)

	A	B	C	D	E	F	G	H	
1	2.1.1	SITE NOTES:			4.5.1	GROUNDING NOTES:			
	2.1.2	A LADDER WILL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.			2.5.2	GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.			
	2.1.3	THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.			2.5.3	PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC TABLE 250.122.			
	2.1.4	THE SOLAR PV INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.			2.5.4	METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURES CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.136(A).			
	2.1.5	PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION NEC 110.26.			2.5.5	EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45 AND MICROINVERTER MANUFACTURERS' INSTRUCTIONS.			
2	2.1.6	ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THIS CODE AND THE APPROVED MANUFACTURER'S INSTRUCTIONS SUCH THAT THE ROOF COVERING SERVES TO PROTECT THE BUILDING OR STRUCTURE.			2.5.6	EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS.			
	2.2.1	EQUIPMENT LOCATIONS:			2.5.7	THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.			
	2.2.2	ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY CEC 110.26.			2.5.8	GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC 250.119]			
	2.2.3	WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31 (A),(C) AND NEC TABLES 310.15 (B)(2)(A) AND 310.15 (B)(3)(C).			2.5.9	THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250, NEC 690.47 AND AHJ.			
	2.2.4	JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34.			2.5.10	GROUND-FAULT DETECTION SHALL COMPLY WITH NEC 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS			
	2.2.5	ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.							
3	2.2.6	ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.							
	2.2.7	ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.			2.6.1	DISCONNECT AND OVER-CURRENT PROTECTION NOTES:			
					2.6.2	DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).			
	2.3.1	STRUCTURAL NOTES:			2.6.3	DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH			
	2.3.2	RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUST ALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAI MANUFACTURER'S INSTRUCTIONS.			2.6.4	PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).			
	2.3.3	JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS.			2.6.5	ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8, 690.9, AND 240.			
4	2.3.4	ROOFTOP PENETRATIONS FOR PV RACEWAY WILL BE COMPLETED AND SEALED W/ APPROVED CHEMICAL SEALANT PER CODE BY A LICENSED CONTRACTOR.			2.6.6	MICROINVERTER BRANCHES CONNECTED TO A SINGLE BREAKER OR GROUPED FUSES IN ACCORDANCE WITH NEC 110.3(B).			
	2.3.5	ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.			2.6.7	IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.			
	2.3.6	WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.			2.7.1	INTERCONNECTION NOTES:			
					2.7.2	LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 705.12 (B)]			
					2.7.3	THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS OUTPUT MAY NOT EXCEED 120% OF BUSBAR RATING [NEC 705.12(D)(2)(3)].			
5	2.4.1	WIRING & CONDUIT NOTES:			2.7.4	THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR, PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(B)(2)(3)].			
	2.4.2	ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.			2.7.5	AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 (B)(2)(3)(C).			
	2.4.3	CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.			2.7.6	FEEDER TAP INTERCONNECTION (LOAD SIDE) ACCORDING TO NEC 705.12 (B)(2)(1)			
	2.4.4	VOLTAGE DROP LIMITED TO 1.5%.			2.7.7	SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42			
	2.4.5	DC WIRING LIMITED TO MODULE FOOTPRINT. MICROINVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY W/ SUITABLE WIRING CLIPS.			2.7.8	BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC 705.12 (B)(5)].			
	2.4.6	AC CONDUCTORS COLORED OR MARKED AS FOLLOWS:							
		PHASE A OR L1- BLACK							
		PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE							
		PHASE C OR L3- BLUE, YELLOW, ORANGE**, OR OTHER CONVENTION							
		NEUTRAL- WHITE OR GREY							
6		IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15].							

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

----- PROPERTY LINE



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611

ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

SITE PLAN

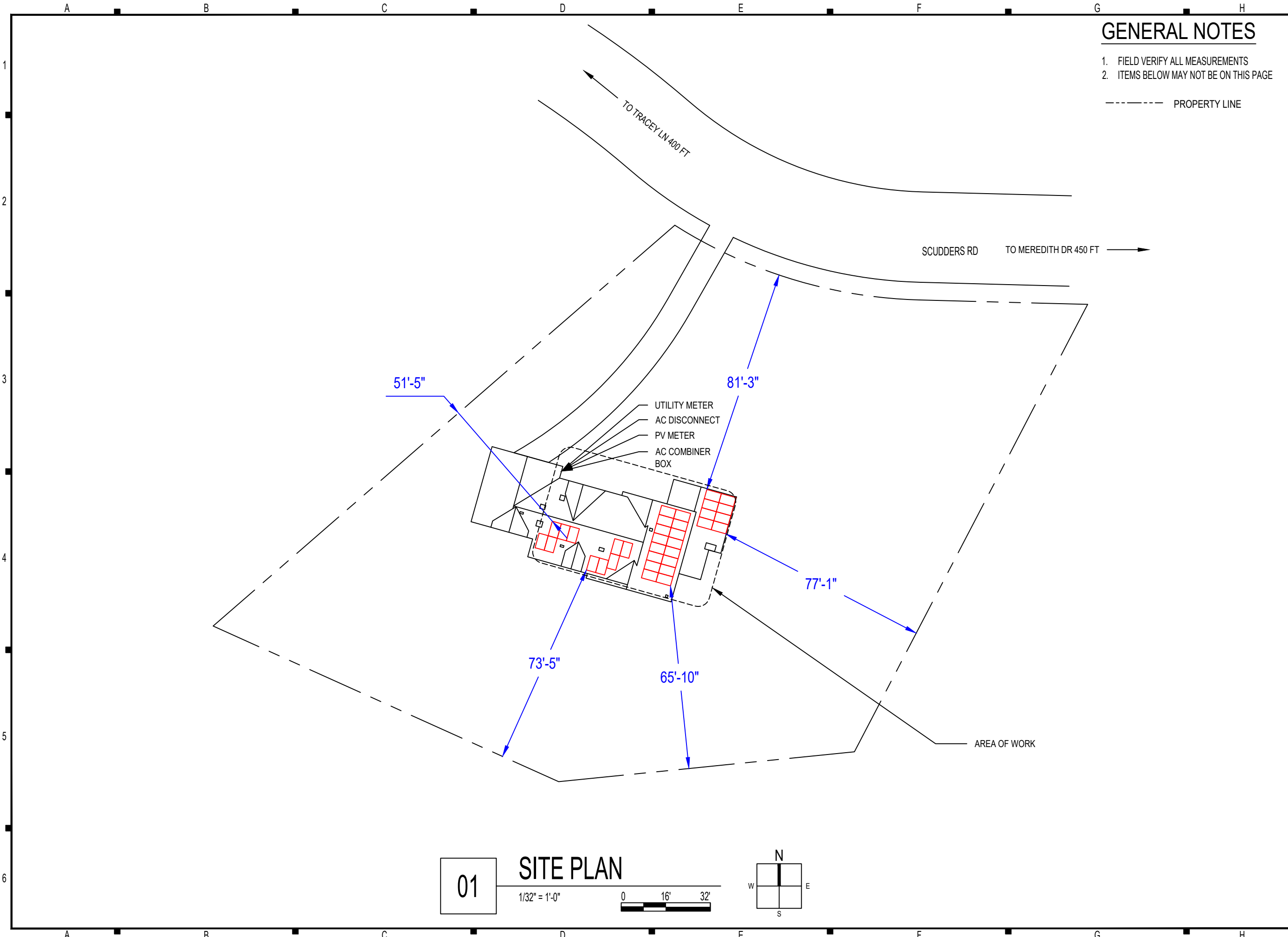
DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

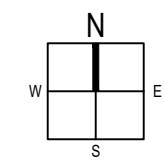
REVISIONS

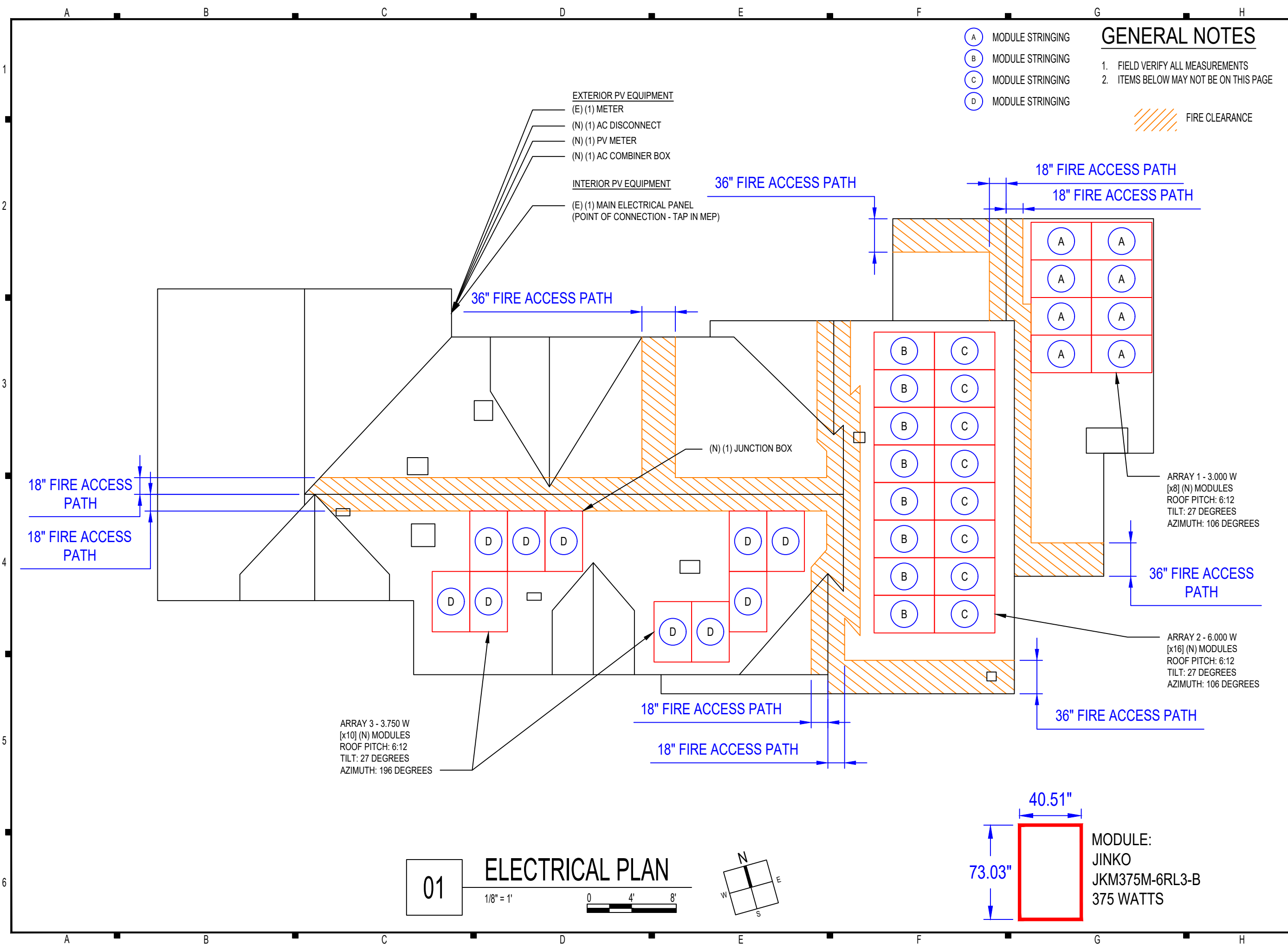
A-101.00
(SHEET 3)



01 SITE PLAN

1/32" = 1'-0"
0 16' 32'





- (A) MODULE STRINGING
- (B) MODULE STRINGING
- (C) MODULE STRINGING
- (D) MODULE STRINGING

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE



EXTERIOR PV EQUIPMENT
 (E) (1) METER
 (N) (1) AC DISCONNECT
 (N) (1) PV METER
 (N) (1) AC COMBINER BOX

INTERIOR PV EQUIPMENT
 (E) (1) MAIN ELECTRICAL PANEL
 (POINT OF CONNECTION - TAP IN MEP)

36" FIRE ACCESS PATH

18" FIRE ACCESS PATH
 18" FIRE ACCESS PATH

36" FIRE ACCESS PATH

(N) (1) JUNCTION BOX

18" FIRE ACCESS PATH

18" FIRE ACCESS PATH

ARRAY 1 - 3.000 W
 [x8] (N) MODULES
 ROOF PITCH: 6:12
 TILT: 27 DEGREES
 AZIMUTH: 106 DEGREES

36" FIRE ACCESS PATH

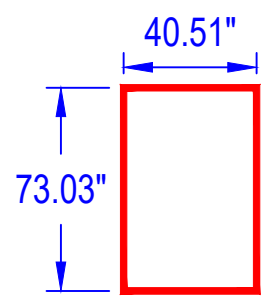
ARRAY 2 - 6.000 W
 [x16] (N) MODULES
 ROOF PITCH: 6:12
 TILT: 27 DEGREES
 AZIMUTH: 106 DEGREES

18" FIRE ACCESS PATH

36" FIRE ACCESS PATH

18" FIRE ACCESS PATH

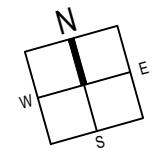
ARRAY 3 - 3.750 W
 [x10] (N) MODULES
 ROOF PITCH: 6:12
 TILT: 27 DEGREES
 AZIMUTH: 196 DEGREES



MODULE:
 JINKO
 JKM375M-6RL3-B
 375 WATTS

01 ELECTRICAL PLAN

1/8" = 1'



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611

ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

ELECTRICAL PLAN

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

A-102.00
 (SHEET 4)

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

--- ROOF RAFTERS

ROOF MATERIAL ASPHALT SHINGLE

FLUSH MOUNT SOLAR MODULES
ATTACHED TO ROOF SURFACE (SEE
SHEET S-501 FOR MOUNTING DETAILS)

ROOF MATERIAL ASPHALT SHINGLE

FLUSH MOUNT SOLAR MODULES
ATTACHED TO ROOF SURFACE (SEE
SHEET S-501 FOR MOUNTING DETAILS)

CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

SOLAR ATTACHMENT PLAN

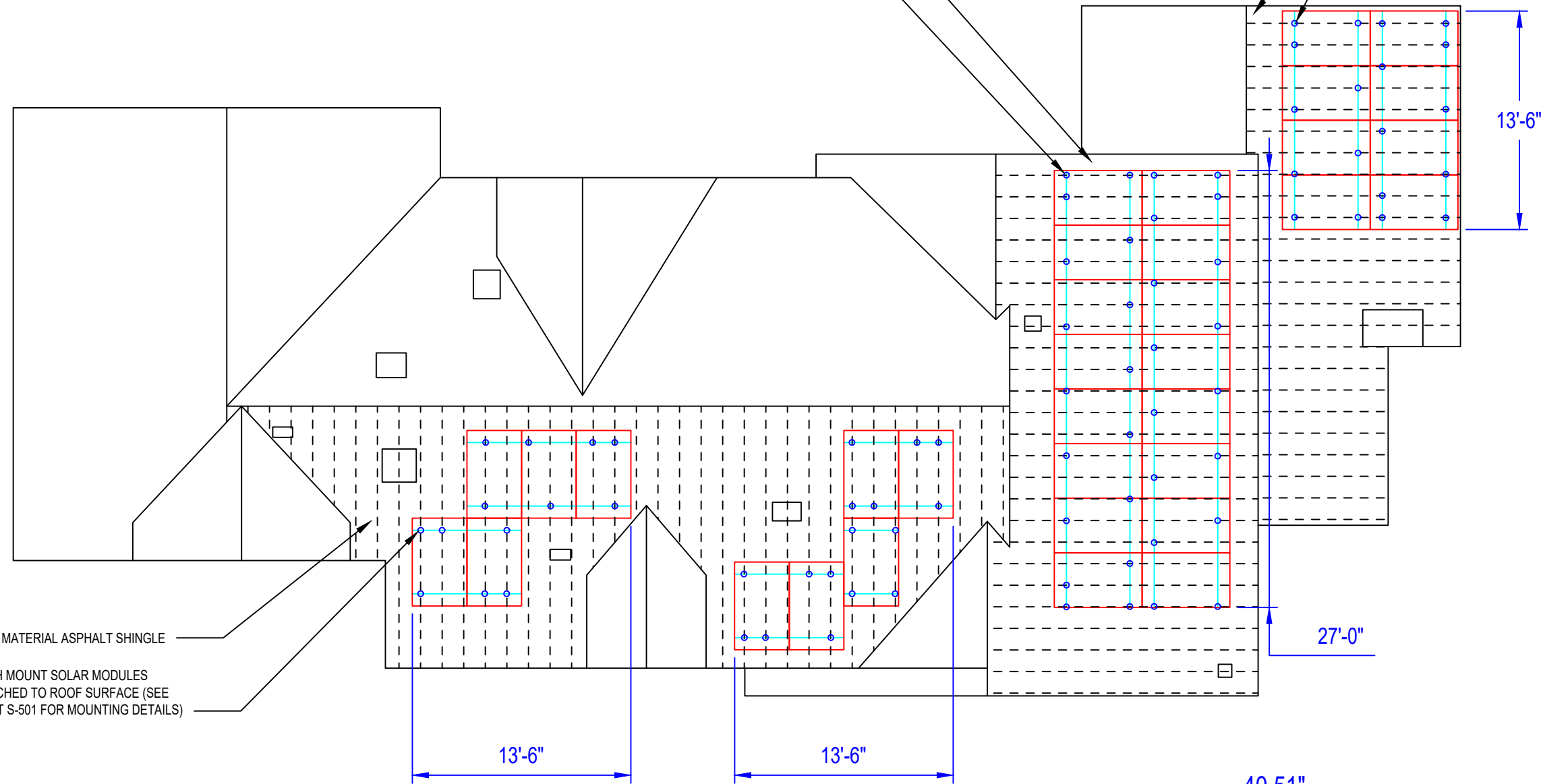
DATE: 11.04.2021

DESIGN BY: V.H.

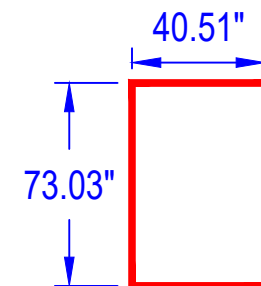
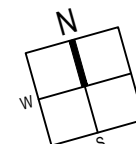
CHECKED BY:

REVISIONS

A-103.00
(SHEET 5)



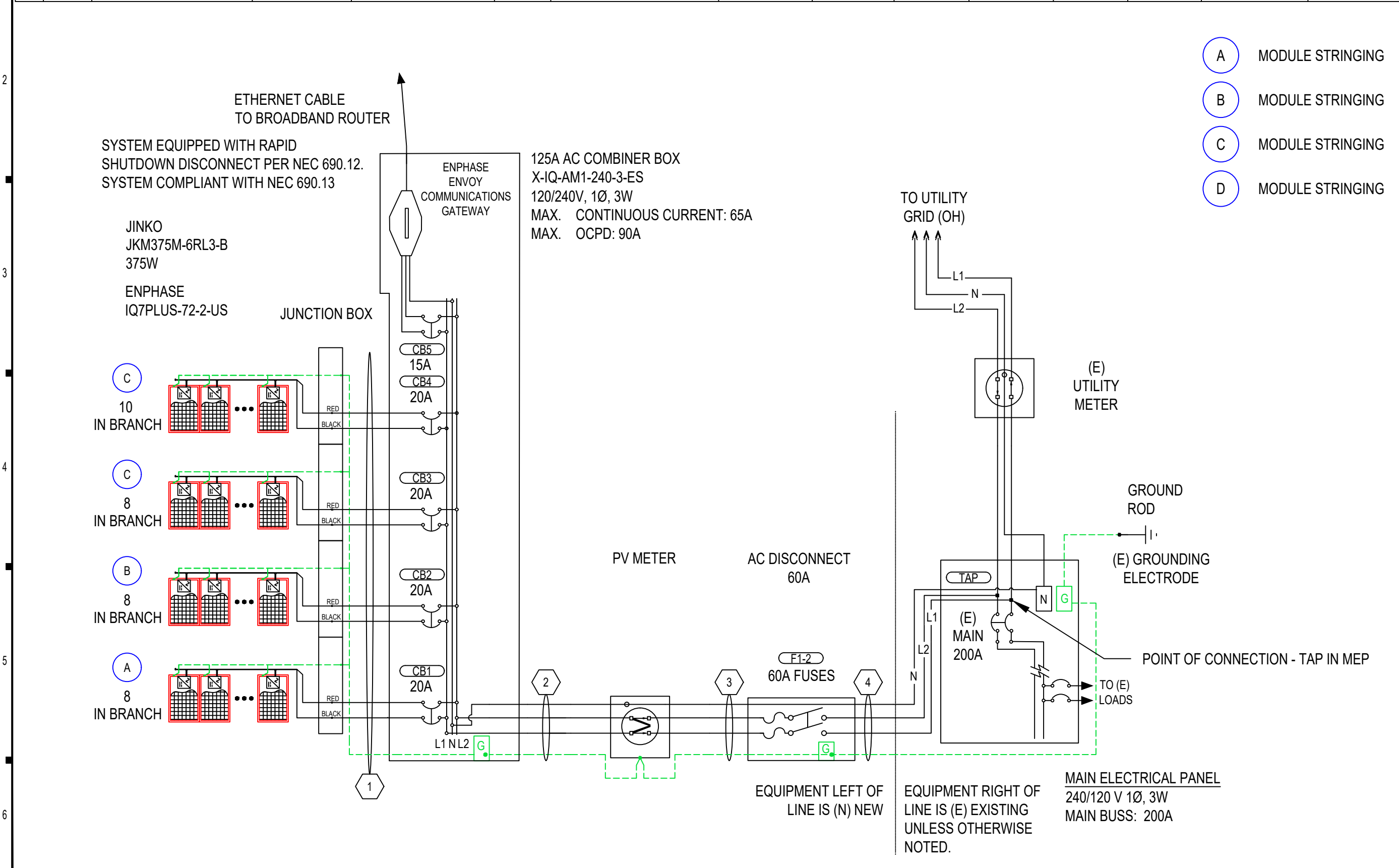
01 SOLAR ATTACHMENT PLAN
1/8" = 1'



MODULE:
JINKO
JKM375M-6RL3-B
375 WATTS

CONDUCTOR AND CONDUIT SCHEDULE W/ELECTRICAL CALCULATIONS

ID	TYPICAL	CONDUCTOR	CONDUIT	CURRENT-CARRYING CONDUCTORS IN CONDUIT	OCPD	EGC	TEMP. CORR. FACTOR	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT (125%)	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING	AMP. @ TERMINAL
1	1	10 AWG THWN-2, COPPER	0.75" DIA EMT	8	20A	8 AWG THWN-2, COPPER	0.96 (33.7 °C)	0.7	12.1A	15.13A	40A	26.88A	75°C	35A
2	1	6 AWG THWN-2, COPPER	0.75" DIA EMT	2	N/A	6 AWG THWN-2, COPPER	0.96 (33.7 °C)	1	41.14A	51.43A	75A	72A	75°C	65A
3	1	6 AWG THWN-2, COPPER	0.75" DIA EMT	2	60A	6 AWG THWN-2, COPPER	0.96 (33.7 °C)	1	41.14A	51.43A	75A	72A	75°C	65A
4	1	6 AWG THWN-2, COPPER	0.75" DIA EMT	2	N/A	6 AWG THWN-2, COPPER	0.96 (33.7 °C)	1	41.14A	51.43A	75A	72A	75°C	65A



- (A) MODULE STRINGING
- (B) MODULE STRINGING
- (C) MODULE STRINGING
- (D) MODULE STRINGING



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611

ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800

HIC. NO.:

ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

LINE DIAGRAM

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

A B C D E F G H

SYSTEM SUMMARY			
	BRANCH #1	BRANCH #2	BRANCH #3
INVERTERS PER BRANCH	8	8	8
MAX AC CURRENT	9.68A	9.68A	9.68A
MAX AC OUTPUT POWER	2,360W	2,360W	2,360W
ARRAY STC POWER		12,750W	
ARRAY PTC POWER		11,781W	
MAX AC CURRENT		41.14A	
MAX AC POWER		10,030W	
DERATED (CEC) AC POWER		10,030W	

MODULES											
REF.	QTY.	MAKE AND MODEL	PMAX	PTC	ISC	IMP	VOC	VMP	TEMP. COEFF. OF VOC	FUSE RATING	
PM1-34	34	JINKO JKM375M-6RL3-B	375W	346.5W	11.01A	10.19A	44.12V	36.8V	-0.124V/°C (-0.28%/°C)	20A	

INVERTERS										
REF.	QTY.	MAKE AND MODEL	AC VOLTAGE	GROUND	OC PD RATING	RATED POWER	MAX OUTPUT CURRENT	MAX INPUT CURRENT	MAX INPUT VOLTAGE	CEC WEIGHTED EFFICIENCY
I1-34	34	ENPHASE IQ7PLUS-72-2-US	240V	FLOATING	20A	290W	1.21A	15A	60V	97.0%

DISCONNECTS				
REF.	QTY.	MAKE AND MODEL	RATED CURRENT	MAX RATED VOLTAGE
SW1	1	SQUARE D D222NRB OR EQUIV.	60A	240VAC

OCPDS			
REF.	QTY.	RATED CURRENT	MAX VOLTAGE
CB1-4	4	20A	240VAC
CB5	1	15A	240VAC
F1-2	2	60A	240VAC

ASHRAE EXTREME LOW	-18.2°C (-0.8°F), SOURCE: ESSEX CO (40.88°; -74.28°)
ASHRAE 2% HIGH	33.7°C (92.7°F), SOURCE: ESSEX CO (40.88°; -74.28°)

1

2

3

4

5

6



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
 ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
 HIC. NO.:
 ELE. NO.:

UNAUTHORIZED USE OF THIS
 DRAWING SET WITHOUT WRITTEN
 PERMISSION FROM CONTRACTOR IS IN
 VIOLATION OF U.S. COPYRIGHT LAWS
 AND WILL BE SUBJECT TO CIVIL
 DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

**BARONE
 RESIDENCE**

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

DESIGN TABLES

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

E-602.00
 (SHEET 7)

BILL OF MATERIALS							
CATEGORY	MAKE	MODEL NUMBER	REF	QTY	UNIT	QTY/UNIT	DESCRIPTION
MODULE	JINKO	JKM375M-6RL3-B	PM1-34	34	PIECES	1	JINKO JKM375M-6RL3-B 375W 0
INVERTER	ENPHASE	IQ7PLUS-72-2-US	I1-34	34	PIECES	1	ENPHASE IQ7PLUS-72-2-US 290W INVERTER
DISCONNECT	SQUARE D	D222NRB	SW1	1	PIECE	1	SQUARE D D222NRB, FUSED, 2-POLE, 60A, 240VAC OR EQUIVALENT
PRODUCTION METER	GENERIC MANUFACTURER	GEN-METER-80A	M1	1	PIECE	1	ELECTRICAL METER, OWNER APPROVED
MISC ELECTRICAL EQUIPMENT		GEN-CABLE-CLIP	HDWR37-207	170	PIECES	1	GENERIC CABLE CLIP
AC COMBINER PANEL		ENPHASE-IQ3-ES-PANEL	EP1	1	PIECE	1	ENPHASE IQ COMBINER 3 ES (X-IQ-AM1-240-3-ES)
MONITORING		ENPHASE-ENVOY	ENV1	1	PIECE	1	ENPHASE ENVOY
WIRING	ENPHASE	Q-12-20-200	EN1-34	34	PIECES	1	ENPHASE ENGAGE (TM) TRUNK CABLE
WIRING	ENPHASE	Q-TERM-10	EN35	1	BUNDLE	10	ENPHASE ENGAGE (TM) BRANCH TERMINATOR
WIRING	ENPHASE	Q-SEAL-10	EN36	1	BUNDLE	10	ENPHASE ENGAGE (TM) WATERTIGHT SEALING CAP
WIRING		GEN-10-AWG-THWN-2-CU-RD	WR1	180	FEET	1	10 AWG THWN-2, COPPER, RED (LINE 1)
WIRING		GEN-10-AWG-THWN-2-CU-BLK	WR1	180	FEET	1	10 AWG THWN-2, COPPER, BLACK (LINE 2)
WIRING		GEN-8-AWG-THWN-2-CU-GR	WR1	45	FEET	1	8 AWG THWN-2, COPPER, GREEN (GROUND)
WIRING		GEN-6-AWG-THWN-2-CU-RD	WR2-4	30	FEET	1	6 AWG THWN-2, COPPER, RED (LINE 1)
WIRING		GEN-6-AWG-THWN-2-CU-BLK	WR2-4	30	FEET	1	6 AWG THWN-2, COPPER, BLACK (LINE 2)
WIRING		GEN-6-AWG-THWN-2-CU-WH	WR2-4	30	FEET	1	6 AWG THWN-2, COPPER, WHITE (NEUTRAL)
WIRING		GEN-6-AWG-THWN-2-CU-GR	WR2-4	30	FEET	1	6 AWG THWN-2, COPPER, GREEN (GROUND)
WIREWAY	ENPHASE	ET-SPLK-05	EN7	1	BUNDLE	5	ENPHASE ENGAGE (TM) ENGAGE COUPLER
WIREWAY		GEN-EMT-0.75" DIA	WW1-4	75	FEET	1	EMT CONDUIT, 0.75" DIA
OCPD	GENERIC MANUFACTURER	GEN-CB-20A-240VAC	CB1-4	4	PIECES	1	CIRCUIT BREAKER, 20A, 240VAC
OCPD	GENERIC MANUFACTURER	GEN-CB-15A-240VAC	CB5	1	PIECE	1	CIRCUIT BREAKER, 15A, 240VAC
OCPD	GENERIC MANUFACTURER	GEN-FU-60A-240VAC	F1-2	2	PIECES	1	FUSE, 60A, 240VAC
TRANSITION BOX	GENERIC MANUFACTURER	GEN-AWB-TB-4-4X	JB1	1	PIECE	1	TRANSITION/PASS-THROUGH BOX, WITH 4 TERMINAL BLOCKS

A B C D E F G H

LABELING NOTES
 1.1 LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, ANSI Z535
 1.2 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
 1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
 1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.
 1.5 ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND. [ANSI Z535]

WARNING
 ELECTRICAL SHOCK HAZARD
 TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1
 AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT (2" X 4"). [NEC 690.13].

WARNING
 POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 2
 AT POINT OF INTERCONNECTION OVERCURRENT DEVICE (2" X 4"). [NEC 705.12(B)(2)(3)(B)].

PHOTOVOLTAIC SYSTEM AC DISCONNECT
 RATED AC OUTPUT CURRENT **41.14** A
 NOMINAL OPERATING AC VOLTAGE **240** V

LABEL 3
 AT POINT OF INTERCONNECTION, MARKED AT DISCONNECTING MEANS (4" X 2"). [NEC 690.54]

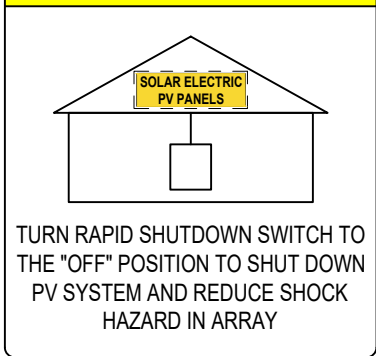
PHOTOVOLTAIC SOLAR AC DISCONNECT

LABEL 4
 AT EACH AC DISCONNECTING MEANS (4" X 1"). [NEC 690.13(B)].

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 5
 AT RAPID SHUTDOWN DISCONNECT SWITCH (5 1/4" X 2"). [NEC 690.56(C)(3)].

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN



LABEL 6
 AT RAPID SHUTDOWN SYSTEM (3 3/4" X 5 1/4"). [NEC 690.56(C)(1)(A)].

WARNING
 DUAL POWER SUPPLY SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 7
 AT POINT OF INTERCONNECTION (2 3/4" X 1 5/8"). [NEC 705.12(B)(3)]

WARNING
 SOLAR ELECTRIC CIRCUIT BREAKER IS BACKFED

LABEL 8
 AT POINT OF INTERCONNECTION (2" X 1"). [NEC 705.12(B)(3)]

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED NORHT SIDE OF THE HOUSE

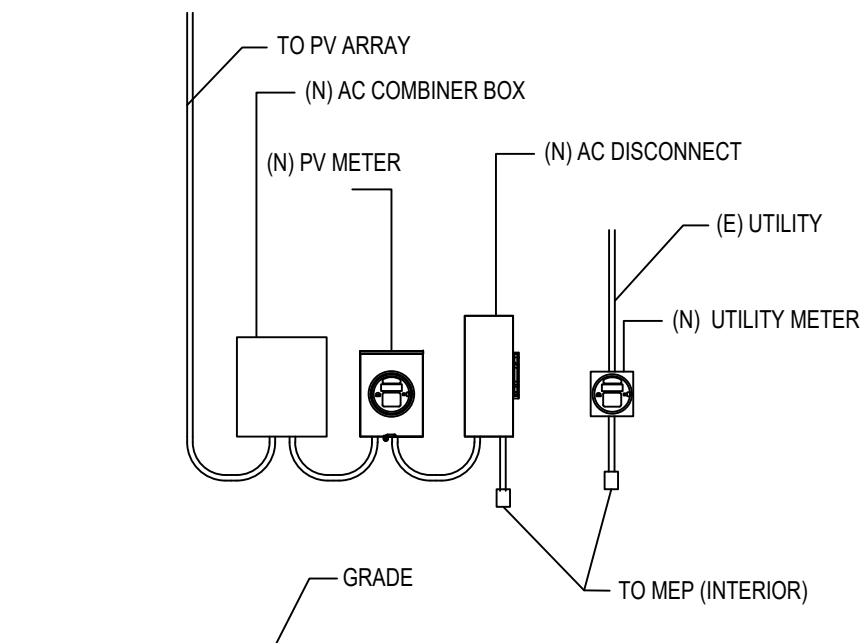
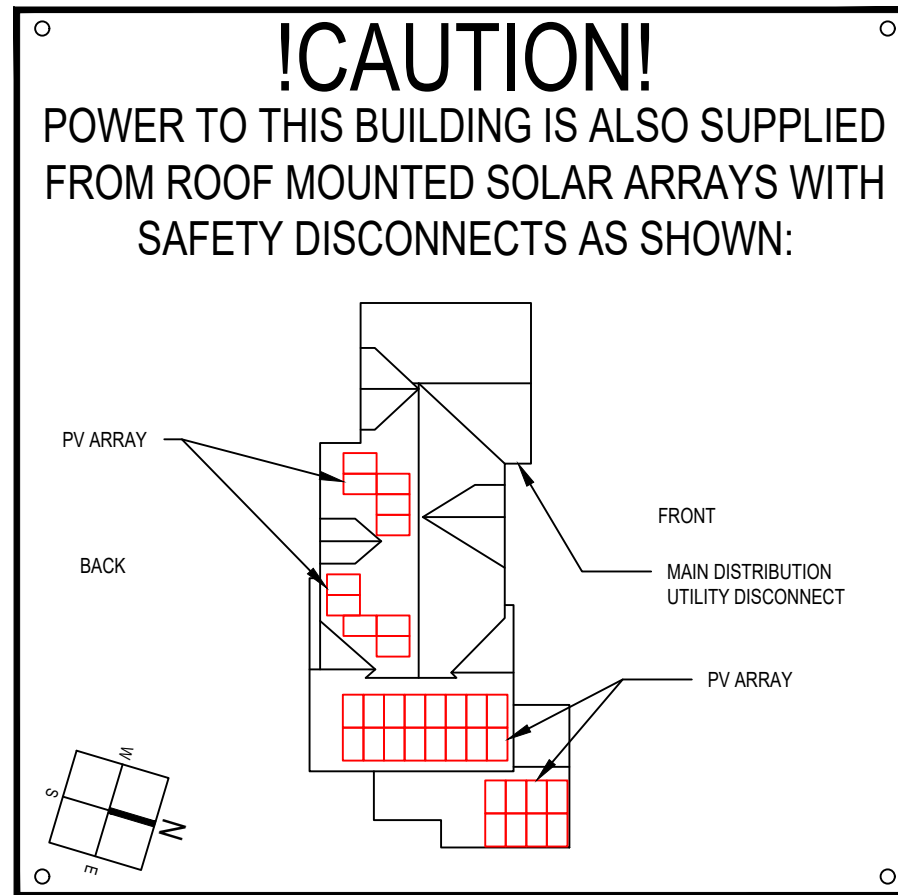
DIRECTORY
 PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF NOT IN THE SAME LOCATION (5 3/4" X 1 1/8"). [NEC 690.56(B)]
 WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE PROVIDED AT EACH PV SYSTEM DISCONNECTING MEANS. PV SYSTEM EQUIPMENT AND DISCONNECTING MEANS SHALL NOT BE INSTALLED IN BATHROOMS [NEC 690.4(D),(E)]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 9
 AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS (5 3/4" X 1 1/8"). [NEC 690.31(G)]
 LETTERS AT LEAST 3/8 INCH; WHITE ON RED BACKGROUND; REFLECTIVE [IFC 605.11.1.1]

CAUTION
SOLAR ELECTRIC SYSTEM CONNECTED

LABEL 10
 AT UTILITY METER (5 3/4" X 1 1/8") [NEC 690.56(B)]



01 **EQUIPMENT ELEVATION**
 NOT TO SCALE



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
 ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
 HIC. NO.:
 ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

PLACARDS

DATE: 11.04.2021

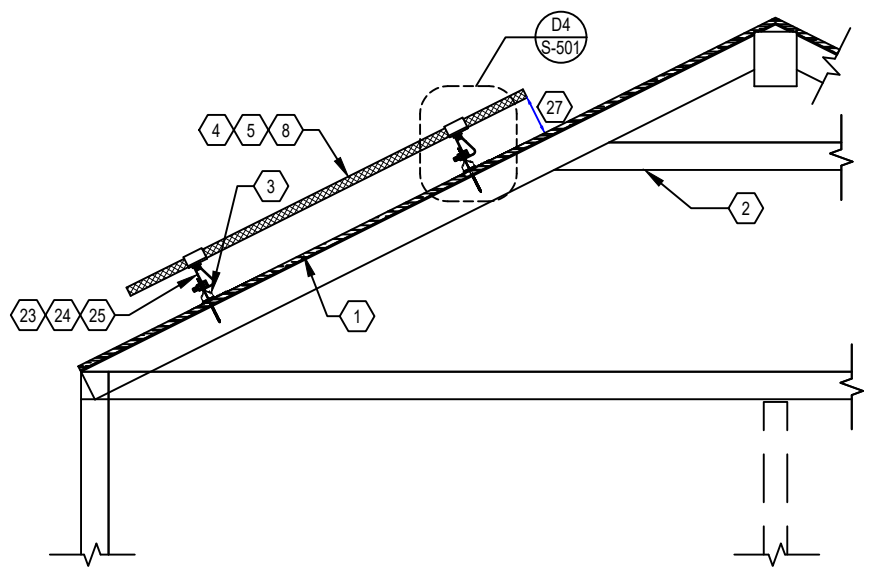
DESIGN BY: V.H.

CHECKED BY:

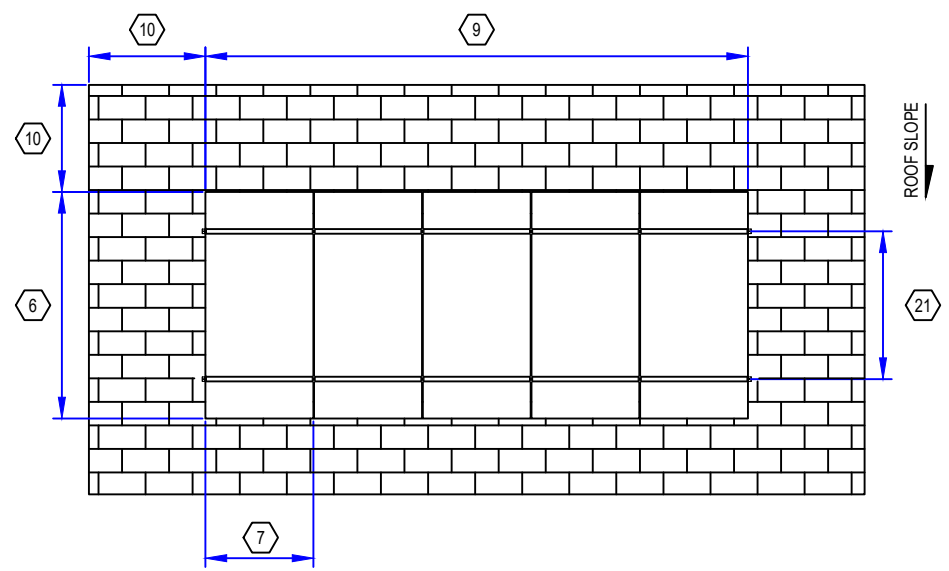
REVISIONS

E-603.00
 (SHEET 8)

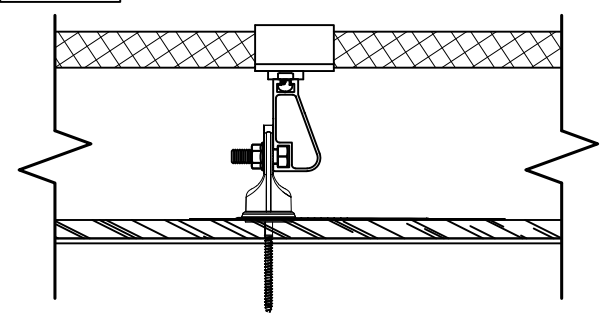
A B C D E F G H



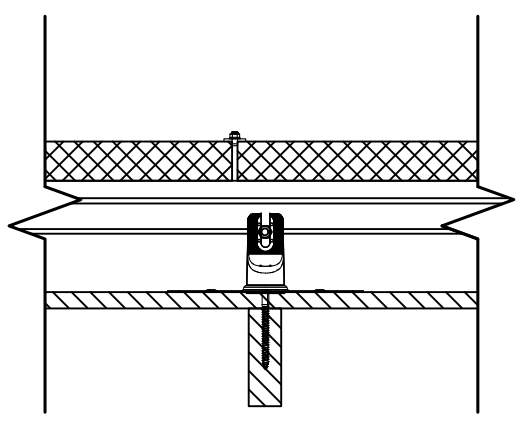
D1 RACKING DETAIL (TRANSVERSE)
NOT TO SCALE



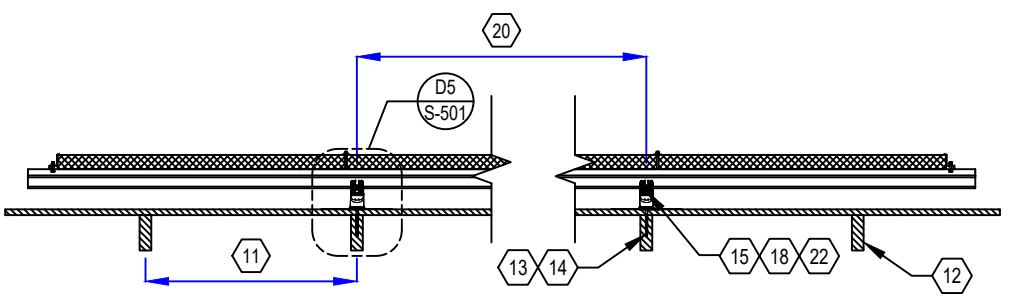
D3 RACKING DETAIL (TOP)
NOT TO SCALE



D4 DETAIL (TRANSVERSE)
NOT TO SCALE



D5 DETAIL (LONGITUDINAL)
NOT TO SCALE



D2 RACKING DETAIL (LONGITUDINAL)
NOT TO SCALE

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS

SHEET KEYNOTES

1. ROOF MATERIAL: ASPHALT SHINGLE
2. ROOF STRUCTURE: COLLAR TIE
3. ATTACHMENT TYPE: IRONRIDGE FLASHFOOT2
4. MODULE MANUFACTURER: JINKO
5. MODULE MODEL: JKM375M-6RL3-B
6. MODULE LENGTH: 73.03"
7. MODULE WIDTH: 40.51"
8. MODULE WEIGHT: 45.86 LBS.
9. SEE SHEET A-103 FOR DIMENSION(S)
10. MIN. FIRE OFFSET: 18" FROM RIDGE, AT LEAST 2 PATHWAY TO A STREET OR DRIVEWAY MINIMUM 3' WIDE
11. RAFTER SPACING: 16 IN. O.C.
12. RAFTER SIZE: 2X8 IN. NOMINAL
13. LAG BOLT DIAMETER: 5/16 IN.
14. LAG BOLT EMBEDMENT: 2-1/2 IN.
15. TOTAL # OF ATTACHMENTS: 81
16. TOTAL AREA: 698.52 SQ. FT.
17. TOTAL WEIGHT: 1740.25 LBS.
18. WEIGHT PER ATTACHMENT: 21.48 LBS.
19. DISTRIBUTED LOAD: 2.49 PSF
20. MAX. HORIZONTAL STANDOFF: 48 IN.
21. MAX. VERTICAL STANDOFF: IN ACCORDANCE WITH MODULE MANUFACTURER'S INSTRUCTIONS.
22. STANDOFF STAGGERING: YES
23. RAIL MANUFACTURER (OR EQUIV.): IRONRIDGE
24. RAIL MODEL (OR EQUIVALENT): XR10
25. RAIL WEIGHT: 0.436 PLF.
26. MAX. RAFTER SPAN: 167", 175", 143".
27. MODULE CLEARANCE: 3 IN. MIN., 6 IN. MAX.



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

ASSEMBLY DETAILS

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

S-501.00

(SHEET 9)

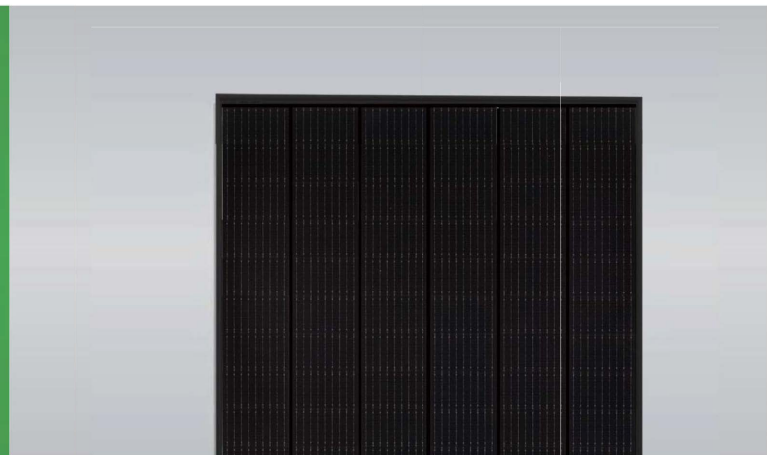
A B C D E F G H

www.jinkosolar.com



Tiger Mono-facial All Black 360-380 Watt

Tiling Ribbon (TR) Technology
 Positive power tolerance of 0~+3%
 ISO9001:2015, ISO14001:2015, ISO45001:2018 certified factory
 IEC61215, IEC61730 certified product

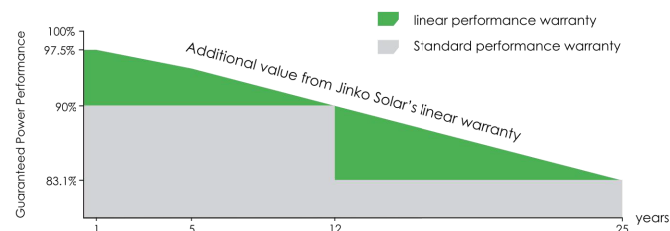


KEY FEATURES

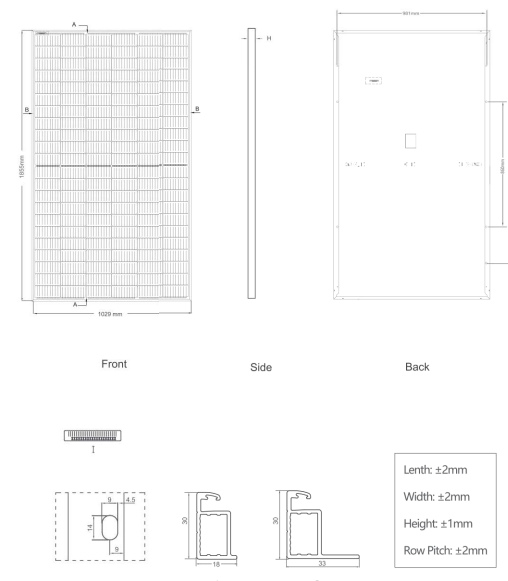
- TR technology + Half Cell**
TR technology with Half cell aims to eliminate the cell gap to increase module efficiency (mono-facial up to 19.91%)
- 9BB instead of 5BB**
9BB technology decreases the distance between bus bars and finger grid line which is benefit to power increase.
- Higher lifetime Power Yield**
2.5% first year degradation, 0.6% linear degradation
- Best Warranty**
12 year product warranty, 25 year linear power warranty
- Avoid debris, cracks and broken gate risk effectively**
9BB technology using circular ribbon that could avoid debris, cracks and broken gate risk effectively
- Severe Weather Resilience**
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

LINEAR PERFORMANCE WARRANTY

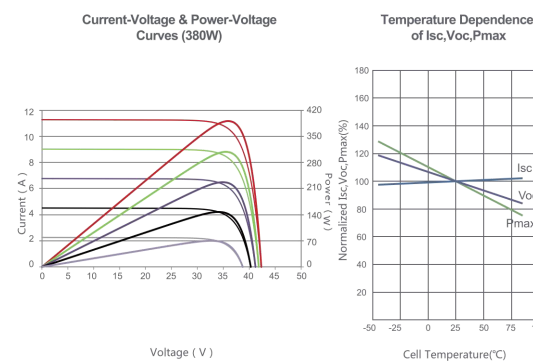
12 Year Product Warranty 25 Year Linear Power Warranty
 0.6% Annual Degradation Over 25 years



Engineering Drawings



Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	P type Mono-crystalline
No. of cells	132 (2x66)
Dimensions	1855x1029x30mm (73.03x40.51x1.18 inch)
Weight	20.8 kg (45.86 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1x4.0mm ² (+): 290mm, (-): 145 mm or Customized Length

Packaging Configuration

(Two pallets = One stack)
 35pcs/pallets, 70pcs/stack, 840pcs/ 40'HQ Container

SPECIFICATIONS

Module Type	JKM360M-6RL3-B		JKM365M-6RL3-B		JKM370M-6RL3-B		JKM375M-6RL3-B		JKM380M-6RL3-B	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	360Wp	268Wp	365Wp	272Wp	370Wp	275Wp	375Wp	279Wp	380Wp	283Wp
Maximum Power Voltage (Vmp)	36.51V	33.27V	36.61V	33.36V	36.71V	33.49V	36.80V	33.57V	36.90V	33.70V
Maximum Power Current (Imp)	9.86A	8.05A	9.97A	8.14A	10.08A	8.22A	10.19A	8.31A	10.30A	8.39A
Open-circuit Voltage (Voc)	43.82V	41.36V	43.92V	41.45V	44.02V	41.55V	44.12V	41.64V	44.22V	41.74V
Short-circuit Current (Isc)	10.68A	8.63A	10.79A	8.71A	10.90A	8.80A	11.01A	8.89A	11.12A	8.98A
Module Efficiency STC (%)	18.86%		19.12%		19.38%		19.65%		19.91%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000VDC (IEC)									
Maximum series fuse rating	20A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.35%/°C									
Temperature coefficients of Voc	-0.28%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									

* STC: ☀ Irradiance 1000W/m² 🌡 Cell Temperature 25°C ☁ AM=1.5
 NOCT: ☀ Irradiance 800W/m² 🌡 Ambient Temperature 20°C ☁ AM=1.5 🌪 Wind Speed 1m/s
 * Power measurement tolerance: ± 3%

The company reserves the final right for explanation on any of the information presented hereby. TR JKM360-380M-6RL3-B-A1.1-EN



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
 ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
 HIC. NO.:
 ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-001.00

(SHEET 10)

Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready **Enphase IQ 7 Micro™** and **Enphase IQ 7+ Micro™** dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable

- Optimized for high powered 60-cell/120 half-cell and 72-cell/144 half-cell* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

* The IQ 7+ Micro is required to support 72-cell/144 half-cell modules.

Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)	IQ7-60-2-US		IQ7PLUS-72-2-US	
Commonly used module pairings ¹	235 W - 350 W +		235 W - 440 W +	
Module compatibility	60-cell/120 half-cell PV modules only		60-cell/120 half-cell and 72-cell/144 half-cell PV modules	
Maximum input DC voltage	48 V		60 V	
Peak power tracking voltage	27 V - 37 V		27 V - 45 V	
Operating range	16 V - 48 V		16 V - 60 V	
Min/Max start voltage	22 V / 48 V		22 V / 60 V	
Max DC short circuit current (module Isc)	15 A		15 A	
Overvoltage class DC port	II		II	
DC port backfeed current	0 A		0 A	
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit			
OUTPUT DATA (AC)	IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power	250 VA		295 VA	
Maximum continuous output power	240 VA		290 VA	
Nominal (L-L) voltage/range ²	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency	60 Hz		60 Hz	
Extended frequency range	47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit ³	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
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 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	
EFFICIENCY	@240 V	@208 V	@240 V	@208 V
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %
MECHANICAL DATA				
Ambient temperature range	-40°C to +65°C			
Relative humidity range	4% to 100% (condensing)			
Connector type	MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)			
Dimensions (HxWxD)	212 mm x 175 mm x 30.2 mm (without bracket)			
Weight	1.08 kg (2.38 lbs)			
Cooling	Natural convection - No fans			
Approved for wet locations	Yes			
Pollution degree	PD3			
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure			
Environmental category / UV exposure rating	NEMA Type 6 / outdoor			
FEATURES				
Communication	Power Line Communication (PLC)			
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.			
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.			
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.			

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.
 2. Nominal voltage range can be extended beyond nominal if required by the utility.
 3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit enphase.com

© 2020 Enphase Energy. All rights reserved. Enphase, the Enphase logo, Enphase IQ 7, Enphase IQ 7+, Enphase IQ Battery, Enphase Enlighten, Enphase IQ Envoy, and other trademarks or service names are the trademarks of Enphase Energy, Inc. Data subject to change. 2020-08-12



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
 ADDRESS: 3600 ROUTE 66, UNIT 150
 NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
 HIC. NO.:
 ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
 SPARTA, NJ 07871
 APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-002.00

(SHEET 11)



To learn more about Enphase offerings, visit enphase.com



UL Product iQ™



QIJW.E341165 - Photovoltaic Rapid Shutdown System Equipment

Photovoltaic Rapid Shutdown System Equipment

See General Information for Photovoltaic Rapid Shutdown System Equipment

ENPHASE ENERGY INC
1420 N McDowell Blvd
Petaluma, CA 94954-6515 USA

E341165

Cat. No.	Function	Ratings
Photovoltaic rapid shutdown system equipment		
M190-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 190W
M210-84	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 210 W
M215-60	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 215W
M250-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 250W
IQ6PLUS-72-X-US*(a)(b) IQ6PLUS-72-ACM*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 280W
IQ6-60-X-US*(a)(b) IQ6-60-ACM-US*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 230W
IQ7-60 (c)	Inverter/AC Attenuator	Input: 27-37DC Output: 208 or 240, 240W
IQ7PLUS-72 (c)	Inverter/AC Attenuator	Input: 27-45VDC Output: 208 or 240, 290W
IQ7X-96 (c)	Inverter/AC Attenuator	Input: 53-64 VDC Output: 208 or 240, 315W
IQ7XS-96 (c)	Inverter/AC Attenuator	Input: 53-64VDC Output: 208 or 240, 315W
IQ7A, may be f/b S, may be f/b 66 or -72 (c)	Inverter/AC Attenuator	Input: 25-79.5VDC Output: 349W (240V) / 290W (208V)
IQ7A-72 (c)	Inverter/AC Attenuator	Input: 25-79.5VDC Output: 349W (240V) / 290W (208V)
IIQ7PD-72-2-US	Inverter/AC Attenuator	Input: 22-40VDC Output: 208 or 240, 190W
IQ7PD-84-2-US	Inverter/AC Attenuator	Input: 31-50VDC Output: 208 or 240, 210W

M175IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 175W
M175IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 175W
M190IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 190W
M190IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 190W
M200IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 200W
M200IQ7-240	Inverter/AC Attenuator	Input: 44-65VDC Output: 240, 200W
M210IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 210W
M210IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 210W
M215IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 215W
M215IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 215W
M250IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 240W
M250IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 240W
S230IQ7-208	Inverter/AC Attenuator	Input: 27-45VDC Output: 208, 220W
S230IQ7-240	Inverter/AC Attenuator	Input: 27-45VDC Output: 240, 220W
S280IQ7-208	Inverter/AC Attenuator	Input: 27-45VDC Output: 208, 270W
S280IQ7-240	Inverter/AC Attenuator	Input: 27-45VDC Output: 240, 270W
IQ6IQ7-US	Inverter/AC Attenuator	Input: 27-37VDC Output: 240-120 / 208, 230W
IQ6PLUSIQ7-US	Inverter/AC Attenuator	Input: 27-37VDC Output: 240-120 / 208, 280W

(a) - Where x may be 2, 5, or B.

(b) - Where * may be any combination of letters or numbers or hyphen or none

(c) - May be f/b -2, 5, -E, or -ACM, f/b US, may be f/b -NM, may be f/b -RMA&, where "&" may be optional alphanumeric characters.

Last Updated on 2020-09-10



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-003.00

(SHEET 12)

Enphase IQ Combiner 3-ES/3C-ES

X-IQ-AM1-240-3-ES
X-IQ-AM1-240-3C-ES

The **Enphase IQ Combiner 3-ES/3C-ES™** with Enphase IQ Envoy™ and integrated LTE-M1 cell modem (included only with IQ Combiner 3C-ES) consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.



To learn more about Enphase offerings, visit enphase.com

Smart

- Includes IQ Envoy for communication and control
- Includes LTE-M1 cell modem (included only with IQ Combiner 3C-ES)
- Includes solar shield to match Ensemble esthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Reduced size from IQ Combiner+ (X-IQ-AM1-240-2)
- Centered mounting brackets support single stud mounting
- Supports back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included
- UL listed



Enphase IQ Combiner 3-ES / 3C-ES

MODEL NUMBER	
IQ Combiner 3-ES (X-IQ-AM1-240-3-ES)	IQ Combiner 3-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.
IQ Combiner 3C-ES (X-IQ-AM1-240-3C-ES)	IQ Combiner 3C-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect LTE-M1 (CELLMODEM-M1), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.
ACCESSORIES and REPLACEMENT PARTS (not included, order separately)	
Ensemble Communications Kit (COMMS-CELLMODEM-M1)	Includes COMMS-KIT-01 and CELLMODEM-M1 with 5-year data plan for Ensemble sites
Circuit Breakers BRK-10A-2-240 BRK-15A-2-240 BRK-20A-2P-240	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220
EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
XA-SOLARSHIELD-ES	Replacement solar shield for Combiner 3-ES / 3C-ES
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for EPLC-01)
XA-ENV-PCBA-3	Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES
ELECTRICAL SPECIFICATIONS	
Rating	Continuous duty
System voltage	120/240 VAC, 60 Hz
Eaton BR series busbar rating	125 A
Max. continuous current rating	65 A
Max. continuous current rating (input from PV/storage)	64 A
Max. fuse/circuit rating (output)	90 A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. total branch circuit breaker rating (input)	80A of distributed generation / 90A with IQ Envoy breaker included
Production metering CT	200 A solid core pre-installed and wired to IQ Envoy
Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers
MECHANICAL DATA	
Dimensions (WxHxD)	37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets.
Weight	7.5 kg (16.5 lbs)
Ambient temperature range	-40° C to +46° C (-40° to 115° F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes	<ul style="list-style-type: none"> • 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing.
Altitude	To 2000 meters (6,560 feet)
INTERNET CONNECTION OPTIONS	
Integrated Wi-Fi	802.11b/g/n
Cellular	CELLMODEM-M1 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.
Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)
COMPLIANCE	
Compliance, Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5
Compliance, IQ Envoy	UL 60501-1/CANCSA 22.2 No. 61010-1

To learn more about Enphase offerings, visit enphase.com

© 2020 Enphase Energy. All rights reserved. Enphase, the Enphase logo, IQ Combiner 3C-ES, and other trademarks or service names are trademarks of Enphase Energy, Inc. Data subject to change. 2020-08-06



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-004.00

(SHEET 13)



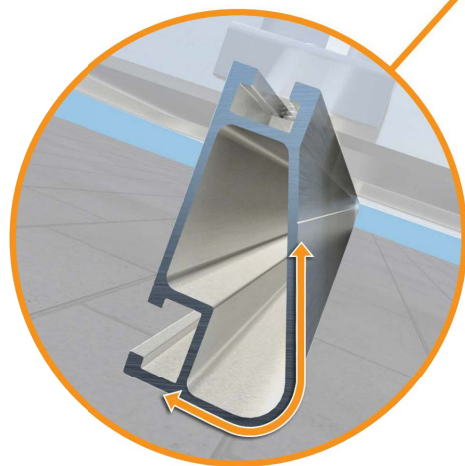
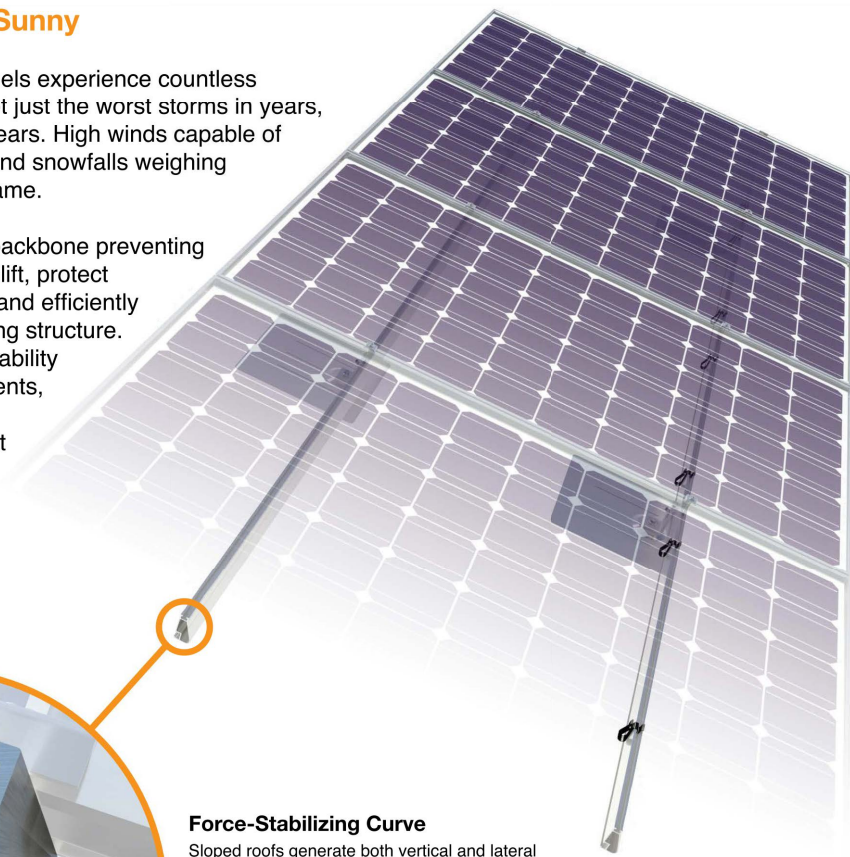
Tech Brief

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs



XR Rails are compatible with FlashFoot and other pitched roof attachments.



IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of marine-grade aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves 6 foot spans, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 8 feet.

- 8' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12 feet or more for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The following table was prepared in compliance with applicable engineering codes and standards. Values are based on the following criteria: ASCE 7-10, Roof Zone 1, Exposure B, Roof Slope of 7 to 27 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed span tables and certifications.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	100	XR10		XR100		XR1000	
	120						
	140						
	160						
10-20	100						
	120						
	140						
	160						
30	100						
	160						
40	100						
	160						
50-70	160						
80-90	160						

© 2014 IronRidge, Inc. All rights reserved. Visit www.ironridge.com or call 1-800-227-9523 for more information. Version 1.11



CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-005.00

(SHEET 14)



Tech Brief

FlashFoot2

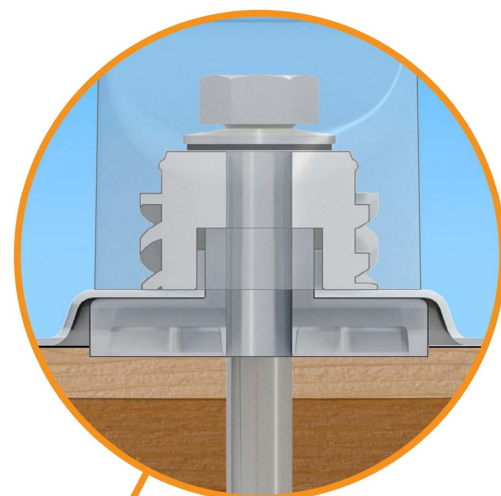
Installation Features

Tech Brief



The Strongest Attachment in Solar

IronRidge FlashFoot2 raises the bar in solar roof protection. The unique water seal design is both elevated and encapsulated, delivering redundant layers of protection against water intrusion. In addition, the twist-on Cap perfectly aligns the rail attachment with the lag bolt to maximize mechanical strength.

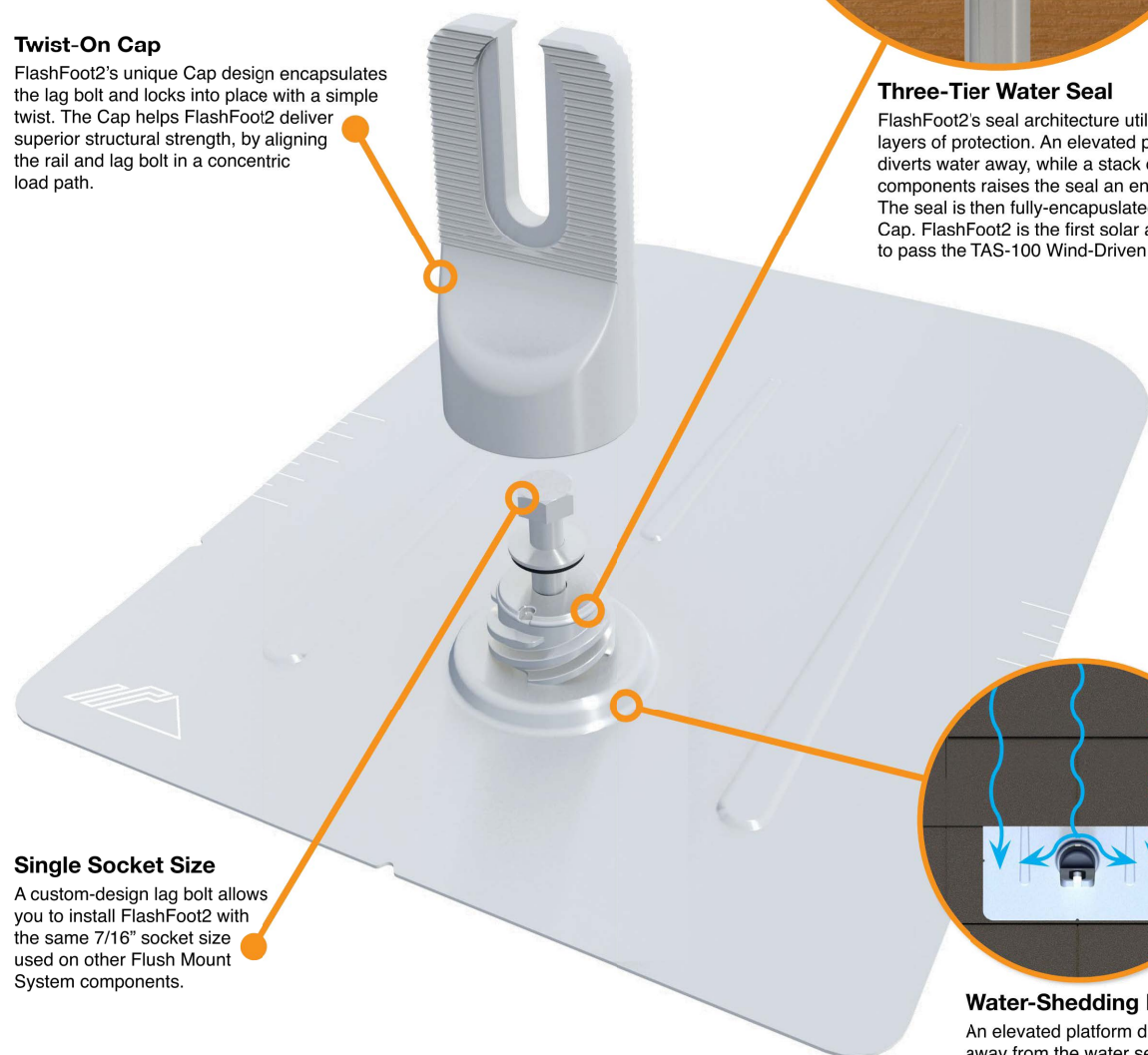


Three-Tier Water Seal

FlashFoot2's seal architecture utilizes three layers of protection. An elevated platform diverts water away, while a stack of rugged components raises the seal an entire inch. The seal is then fully-encapsulated by the Cap. FlashFoot2 is the first solar attachment to pass the TAS-100 Wind-Driven Rain Test.

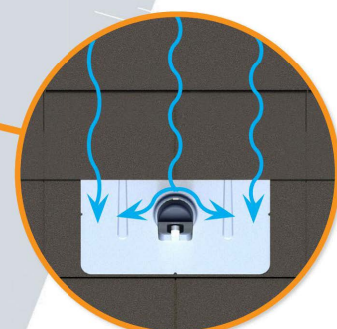
Twist-On Cap

FlashFoot2's unique Cap design encapsulates the lag bolt and locks into place with a simple twist. The Cap helps FlashFoot2 deliver superior structural strength, by aligning the rail and lag bolt in a concentric load path.



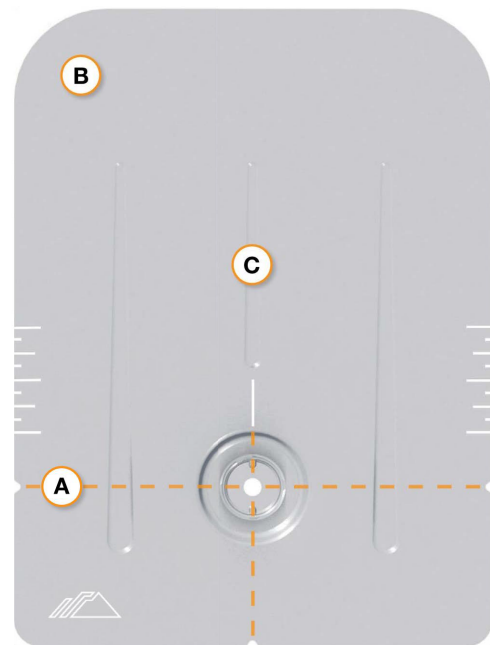
Single Socket Size

A custom-design lag bolt allows you to install FlashFoot2 with the same 7/16" socket size used on other Flush Mount System components.



Water-Shedding Design

An elevated platform diverts water away from the water seal.



A Alignment Markers

Quickly align the flashing with chalk lines to find pilot holes.

B Rounded Corners

Makes it easier to handle and insert under the roof shingles.

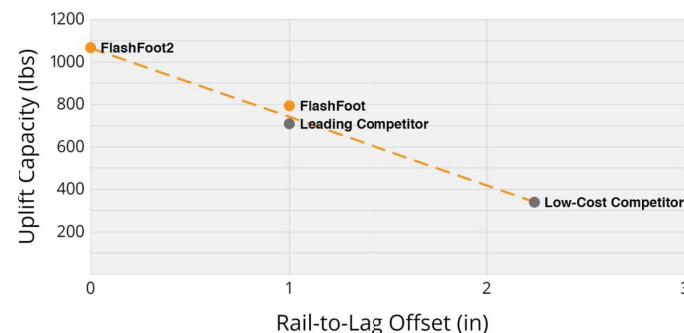
C Reinforcement Ribs

Help to stiffen the flashing and prevent any bending or crinkling during installation.

Benefits of Concentric Loading

Traditional solar attachments have a horizontal offset between the rail and lag bolt, which introduces leverage on the lag bolt and decreases uplift capacity.

FlashFoot2 is the only product to align the rail and lag bolt. This concentric loading design results in a stronger attachment for the system.



Testing & Certification

Structural Certification

Designed and Certified for Compliance with the International Building Code & ASCE/SEI-7.

Water Seal Ratings

Water Sealing Tested to UL 441 Section 27 "Rain Test" and TAS 100-95 "Wind Driven Rain Test" by Intertek. Ratings applicable for composition shingle roofs having slopes between 2:12 and 12:12.

UL 2703

Conforms to UL 2703 Mechanical and Bonding Requirements. See Flush Mount Install Manual for full ratings.

CONTRACTOR

VANTAGE HOME SOLAR, LLC

PHONE: 833-473-3611
ADDRESS: 3600 ROUTE 66, UNIT 150
NEPTUNE CITY, NJ 07753

LIC. NO.: HIC:13VH09715800
HIC. NO.:
ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 12.750 kWp

BARONE RESIDENCE

31 SCUDDERS RD
SPARTA, NJ 07871
APN: 1826001000000004

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

DATE: 11.04.2021

DESIGN BY: V.H.

CHECKED BY:

REVISIONS

R-006.00

(SHEET 15)