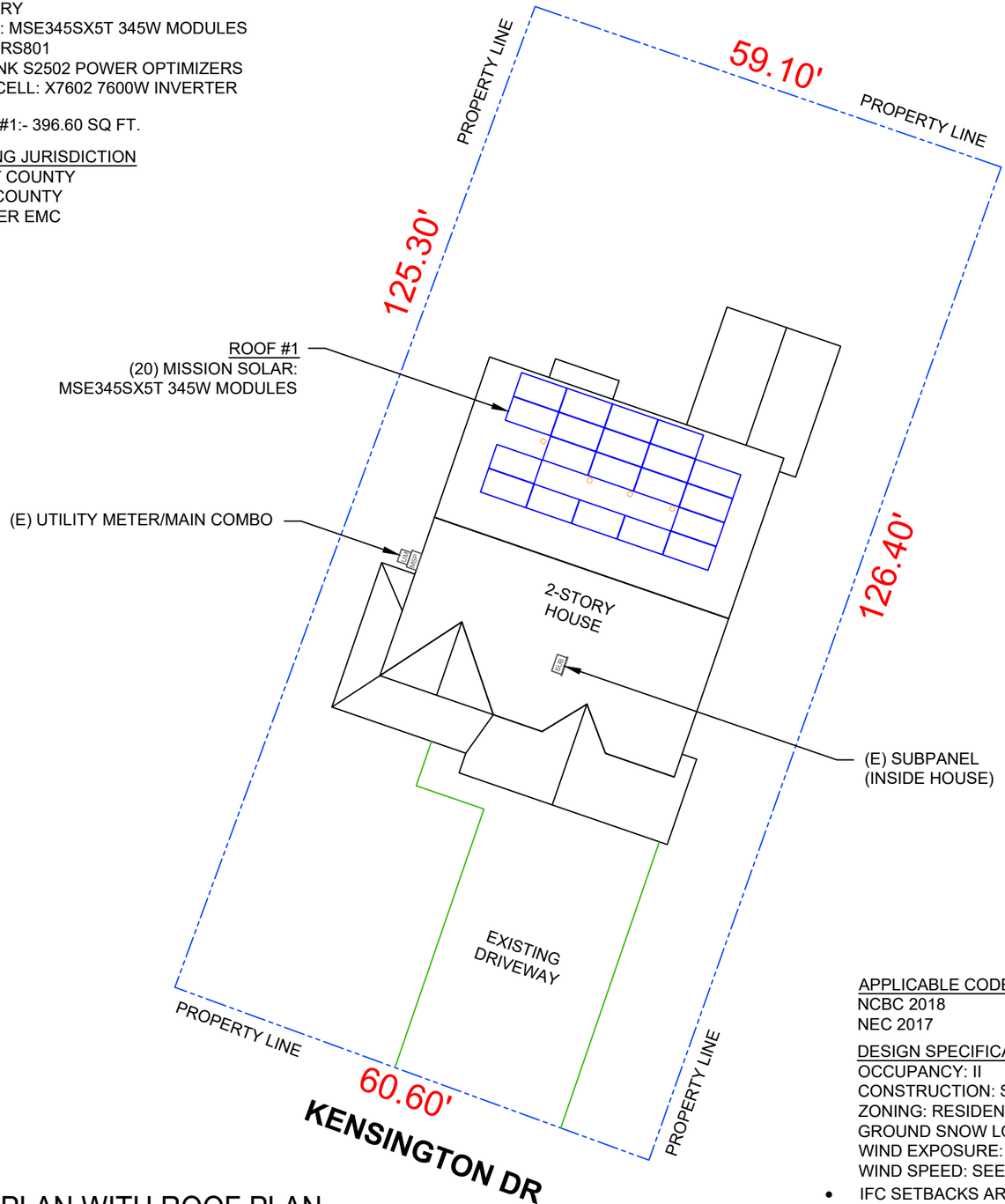
PROJECT DESCRIPTION:

20 x MISSION SOLAR: MSE345SX5T 345W MONO MODULES
ROOF MOUNTED SOLAR PHOTOVOLTAIC MODULES
DC SYSTEM SIZE: 6.900kW DC
AC SYSTEM SIZE: 7.600kW AC

EQUIPMENT SUMMARY
20 MISSION SOLAR: MSE345SX5T 345W MODULES
20 GENERAC SNAPRS801
03 GENERAC PV LINK S2502 POWER OPTIMIZERS
01 GENERAC PWRCELL: X7602 7600W INVERTER

ROOF ARRAY AREA #1:- 396.60 SQ FT.

AUTHORITIES HAVING JURISDICTION
BUILDING: HARNETT COUNTY
ZONING: HARNETT COUNTY
UTILITY: SOUTH RIVER EMC



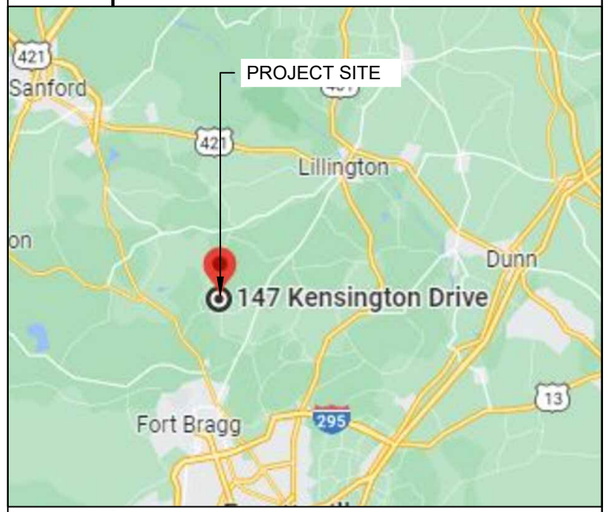
1 PLOT PLAN WITH ROOF PLAN
PV-1 SCALE: 1/16" = 1'-0"

APPLICABLE CODES & STANDARDS
NCBC 2018
NEC 2017

DESIGN SPECIFICATIONS
OCCUPANCY: II
CONSTRUCTION: SINGLE-FAMILY
ZONING: RESIDENTIAL
GROUND SNOW LOAD: SEE STRUCTURAL LETTER
WIND EXPOSURE: SEE STRUCTURAL LETTER
WIND SPEED: SEE STRUCTURAL LETTER

- IFC SETBACKS ARE REQUIRED TO BE DISCUSSED WITH THE AHJ PRIOR TO CONSTRUCTION

2 HOUSE PHOTO
PV-1 SCALE: NTS



3 VICINITY MAP
PV-1 SCALE: NTS

SHEET INDEX

365Solar Energy

REVISIONS

DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

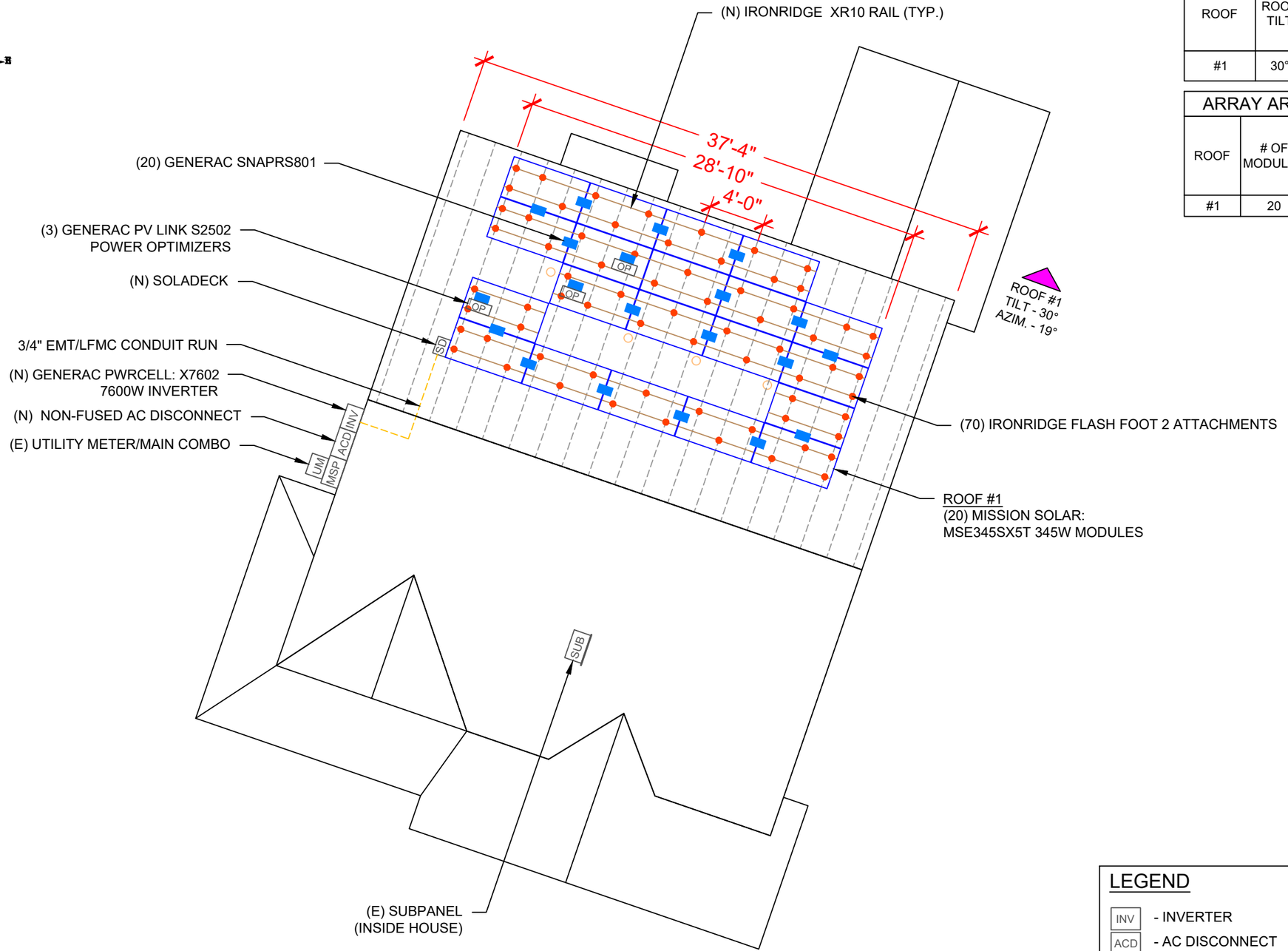
SHEET NAME
PLOT PLAN & VICINITY MAP

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-1

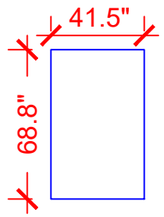
MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 20 MODULES
MODULE TYPE = MISSION SOLAR: MSE345SX5T 345W MODULES
MODULE WEIGHT = 44.8 LBS / 20.3KG.
MODULE DIMENSIONS = 68.8"x 41.5" = 19.83 SF



ROOF DESCRIPTION				
ROOF TYPE			COMPOSITE SHINGLE	
ROOF LAYER			1 LAYER	
ROOF	ROOF TILT	AZIMUTH	TRUSS SIZE	TRUSS SPACING
#1	30°	19°	2X4	24"

ARRAY AREA & ROOF AREA CALC'S				
ROOF	# OF MODULES	ARRAY AREA (Sq. Ft.)	ROOF AREA (Sq. Ft.)	ROOF AREA COVERED BY ARRAY (%)
#1	20	396.60	662.73	60



MISSION SOLAR:
MSE345SX5T
345W MODULES

LEGEND

- INV - INVERTER
- ACD - AC DISCONNECT
- MSP - MAIN SERVICE PANEL
- CONDUIT
- TRUSS
- SD - SOLADECK
- OP - PV LINK -S2502
- SNAPRS801
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- ROOF ATTACHMENT

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

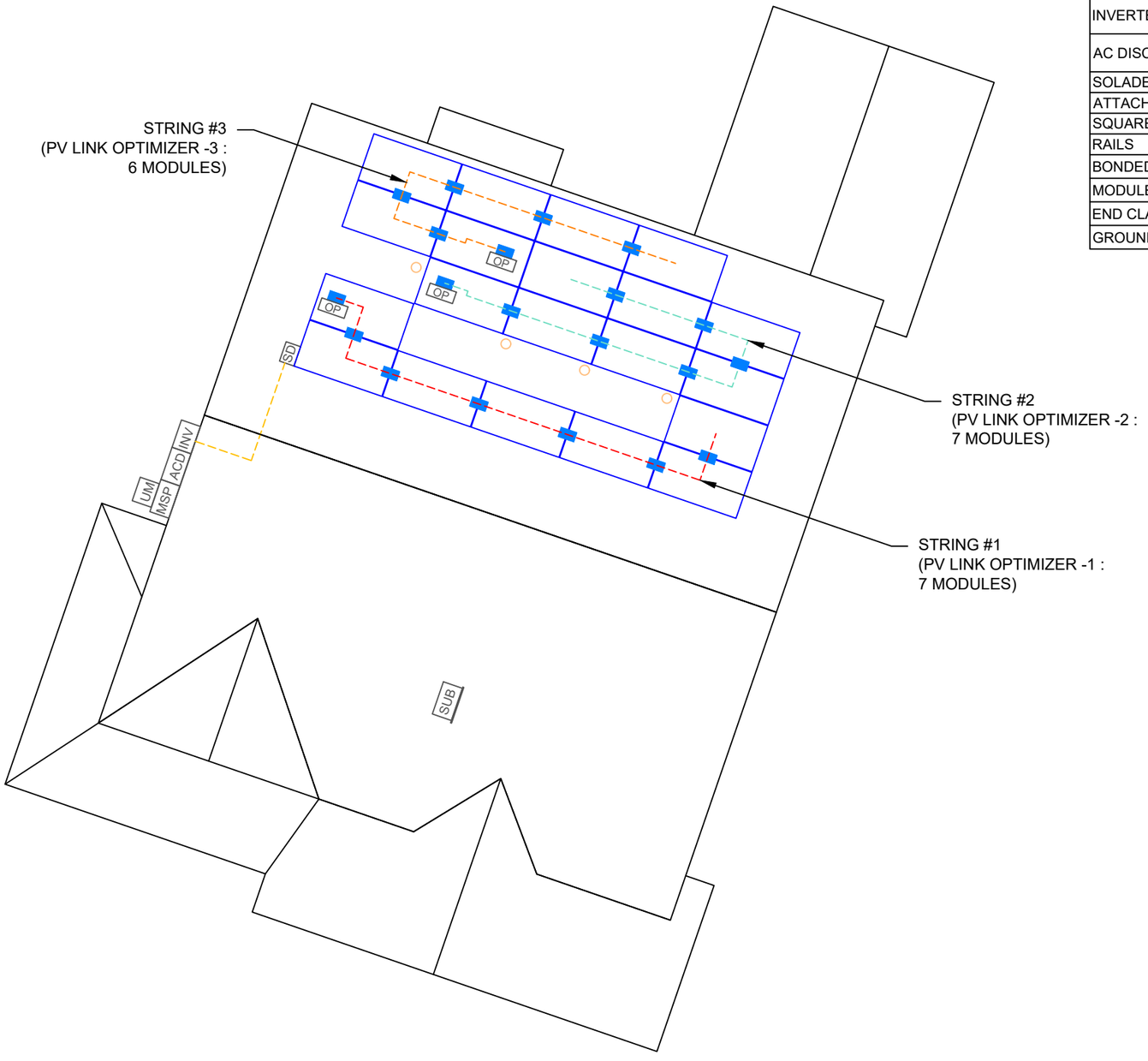
SHEET NAME
ROOF PLAN & MODULES

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-2

1 ROOF PLAN & MODULES
PV-2 SCALE: 1/8" = 1'-0"

STRING LEGENDS
STRING #1
STRING #2
STRING #3



BILL OF MATERIALS

EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	20	MISSION SOLAR: MSE345SX5T 345W MODULES
SNAPRS	20	GENERAC SNAPRS801
OPTIMIZER	3	GENERAC PV LINK S2502 POWER OPTIMIZERS
INVERTER	1	GENERAC PWRCELL: X7602 7600W INVERTER
AC DISCONNECT	1	60A NON-FUSED AC DISCONNECT, 240V NEMA 3R, UL LISTED
SOLADECK	1	SOLADECK 600V,NEMA 3R, UL LISTED
ATTACHMENT	70	IRONRIDGE FLASH FOOT 2 ATTACHMENT
SQUARE-BOLT	70	SQUARE-BOLT BONDING ATTACHMENT HARDWARE
RAILS	17	IRONRIDGE XR10 RAIL-168" (14 FEET) BLACK
BONDED SPLICE	12	SPLICE KIT
MODULE CLAMPS	28	UNIVERSAL MODULE CLAMPS
END CLAMPS	24	END CLAMPS / STOPPER SLEEVE
GROUNDING LUG	6	IRONRIDGE GROUNDING LUG

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL
RESIDENCE

147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

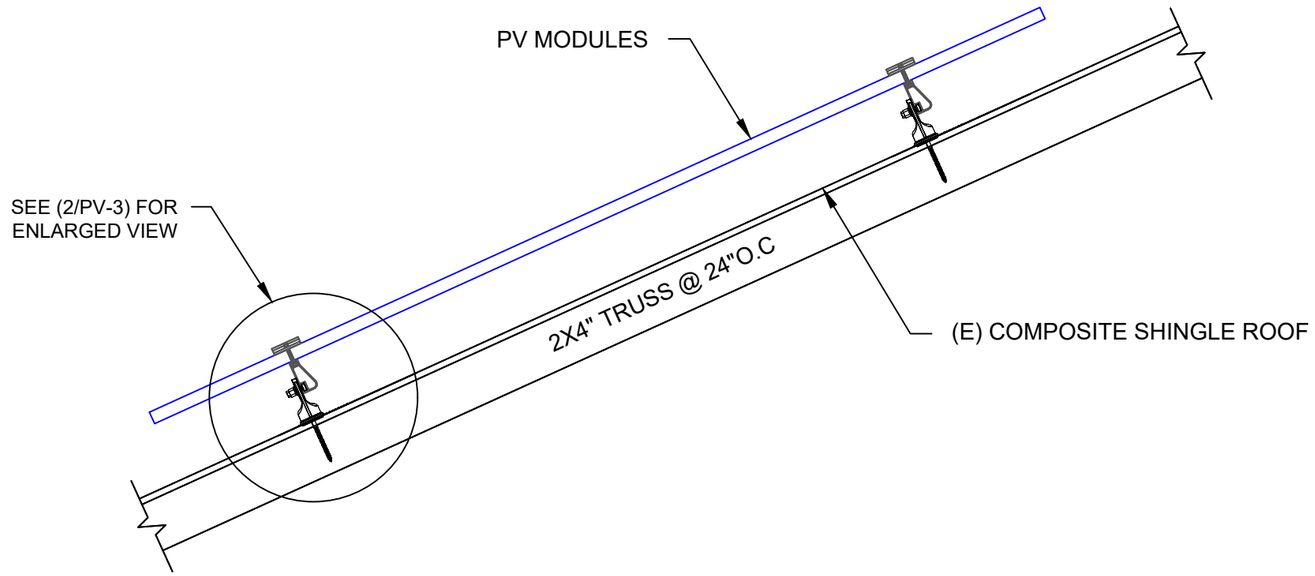
SHEET NAME
STRING
LAYOUT

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-2A

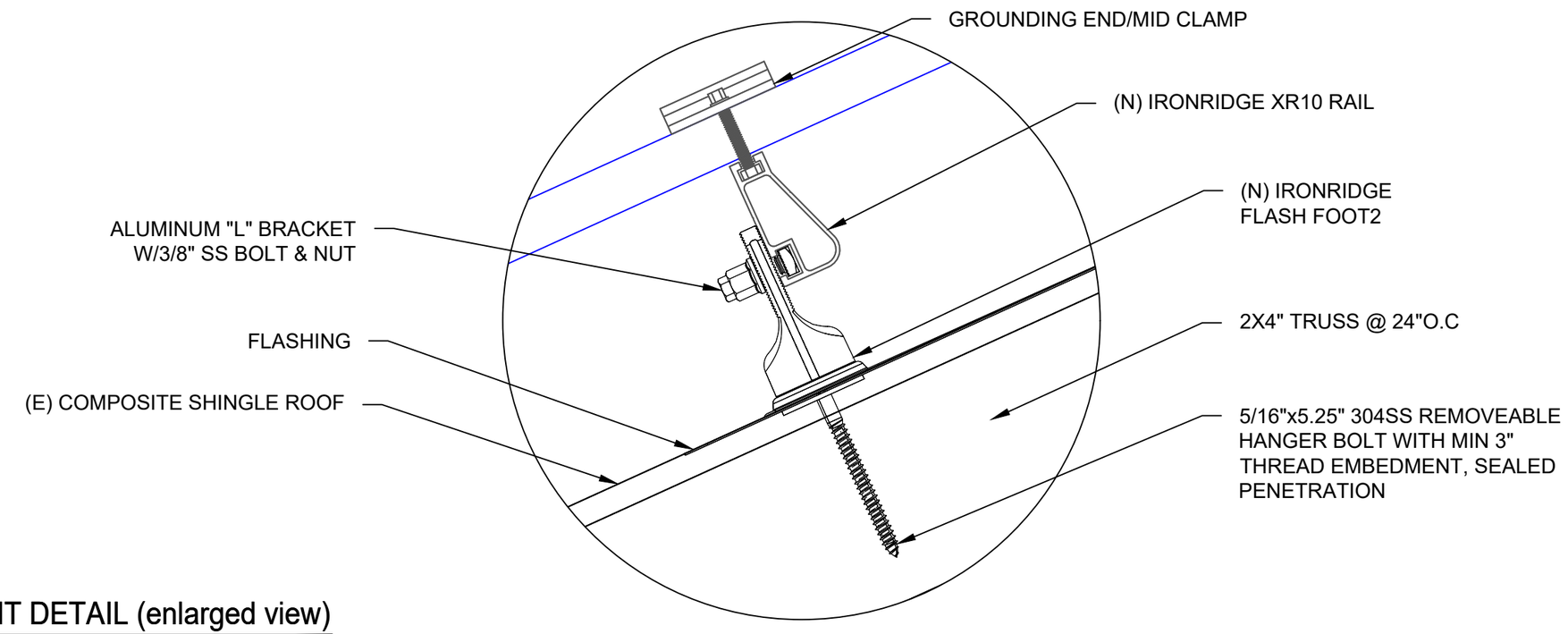
1 ROOF PLAN WITH STRING LAYOUT

PV-2A SCALE: 1/8" = 1'-0"



1 ATTACHMENT DETAIL

PV-3 SCALE: NTS



2 ATTACHMENT DETAIL (enlarged view)

PV-3 SCALE: NTS

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE

147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW

AC SIZE: 7.600 KW

SHEET NAME
ATTACHMENT DETAIL

SHEET SIZE
ANSI B
11" X 17"

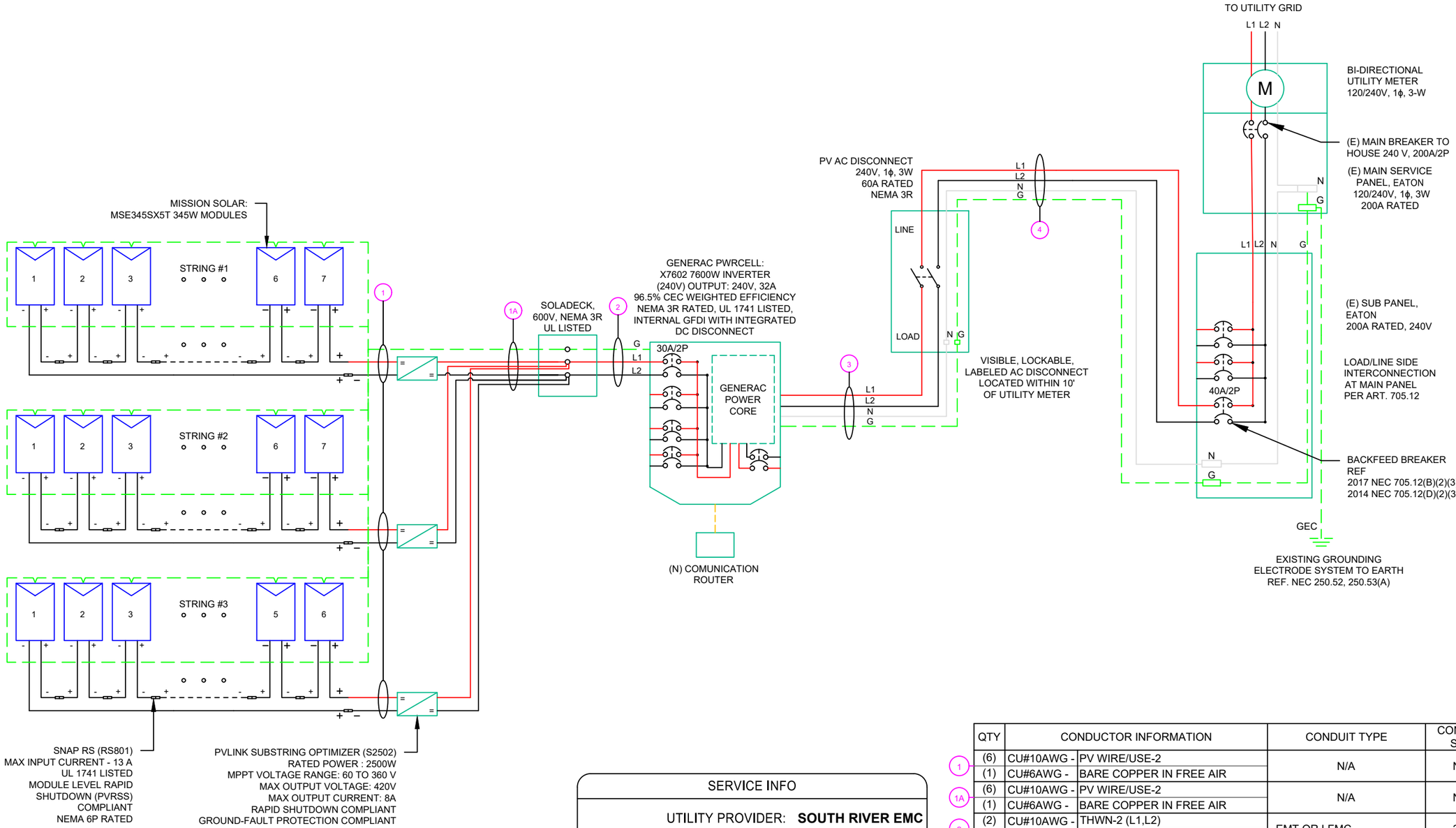
SHEET NUMBER
PV-3

DC SYSTEM SIZE: 6.900 kW DC
AC SYSTEM SIZE: 7.600 kW AC

(20) MISSION SOLAR: MSE345SX5T 345W MODULES
WITH (20) GENERAC SNAPRS801

(2) STRINGS OF 7 MODULES AND
(1) STRING OF 6 MODULES CONNECTED IN SERIES

RACKING NOTE:-
1. BOND EVERY RAIL WITH #6 BARE COPPER



SERVICE INFO	
UTILITY PROVIDER:	**SOUTH RIVER EMC**
MAIN SERVICE VOLTAGE:	240V
MAIN PANEL BRAND:	EATON
MAIN SERVICE PANEL:	200A
MAIN STRING BREAKER RATING:	200A
MAIN SERVICE LOCATION:	NORTH-WEST
SERVICE FEED SOURCE:	UNDERGROUND

	QTY	CONDUCTOR INFORMATION		CONDUIT TYPE	CONDUIT SIZE
1	(6)	CU#10AWG -	PV WIRE/USE-2	N/A	N/A
	(1)	CU#6AWG -	BARE COPPER IN FREE AIR		
1A	(6)	CU#10AWG -	PV WIRE/USE-2	N/A	N/A
	(1)	CU#6AWG -	BARE COPPER IN FREE AIR		
2	(2)	CU#10AWG -	THWN-2 (L1,L2)	EMT OR LFMC	3/4"
	(1)	CU#10AWG -	THWN-2 GND		
3	(2)	CU#8AWG -	THWN-2 (L1,L2)	EMT OR LFMC	3/4"
	(1)	CU#8AWG -	THWN-2 NEUTRAL		
	(1)	CU#10AWG -	THWN-2 GND		
4	(2)	CU#8AWG -	THWN-2 (L1,L2)	EMT OR LFMC	3/4"
	(1)	CU#8AWG -	THWN-2 NEUTRAL		
	(1)	CU#10AWG -	THWN-2 GND		

1 ELECTRICAL LINE DIAGRAM
PV-4 SCALE: NTS

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
ELECTRICAL LINE DIAGRAM

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-4

SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	MISSION SOLAR: MSE345SX5T 345W MODULES
VMP	33.37V
IMP	10.34A
VOC	41.00V
ISC	10.92A
TEMP. COEFF. VOC	-0.262%/°C
MODULE DIMENSION	68.8"L x 41.5"W x 1.60"D (In Inch)

POWER OPTIMIZER (GENERAC PV LINK S2502 POWER OPTIMIZERS)	
RATED POWER	2500W
MAXIMUM INPUT VOLTAGE	420Voc
MPPT VOLTAGE RANGE	60-360Vmp
NOMINAL OUTPUT	380Vdc
MAXIMUM OUTPUT	420Adc
MAXIMUM OUTPUT CURRENT	8A
MAXIMUM SHORT CIRCUIT CURRENT	18A

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	-10°
AMBIENT TEMP (HIGH TEMP 2%)	36°
MODULE TEMPERATURE COEFFICIENT OF Voc	-0.262%/°C

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	GENERAC PWRCELL: X7602 7600W INVERTER
NOMINAL AC POWER	7.600 KW
NOMINAL OUTPUT VOLTAGE	240 VAC
NOMINAL OUTPUT CURRENT	32A

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
0.80	4-6
0.70	7-9
0.50	10-20

AC FEEDER CALCULATIONS

CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA*1.25 (A)	OCPD SIZE (A)	NEUTRAL SIZE	GROUND SIZE	CONDUCTOR SIZE	75°C AMPACITY (A)	AMPACITY CHECK #1	AMBIENT TEMP. (°C)	TOTAL CC CONDUCTORS IN RACEWAY	90°C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90°C AMPACITY DERATED (A)	AMPACITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/KFT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
INVERTER 1	AC DISCONNECT	240	32	40	40	CU #8 AWG	CU #10 AWG	CU #8 AWG	50	PASS	36	2	55	0.91	1	50.05	PASS	5	0.778	0.104	3/4" EMT	24.5591
AC DISCONNECT	POI	240	32	40	40	CU #8 AWG	CU #10 AWG	CU #8 AWG	50	PASS	36	2	55	0.91	1	50.05	PASS	5	0.778	0.104	3/4" EMT	24.5591

CUMULATIVE VOLTAGE DROP	0.21

DC FEEDER CALCULATIONS

CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA*1.25 (A)	OCPD SIZE (A)	GROUND SIZE	CONDUCTOR SIZE	75°C AMPACITY (A)	AMPACITY CHECK #1	AMBIENT TEMP. (°C)	TOTAL CC CONDUCTORS IN RACEWAY	90°C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90°C AMPACITY DERATED (A)	AMPACITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/KFT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
STRING 1	SOLADECK	380	8.00	10.00	20	BARE COPPER #6 AWG	CU #10 AWG	35	PASS	36	2	40	0.91	1	36.4	PASS	5	1.24	0.026	N/A	#N/A
STRING 2	SOLADECK	380	8.00	10.00	20	BARE COPPER #6 AWG	CU #10 AWG	35	PASS	36	2	40	0.91	1	36.4	PASS	5	1.24	0.026	N/A	#N/A
STRING 3	SOLADECK	380	8.00	10.00	20	BARE COPPER #6 AWG	CU #10 AWG	35	PASS	36	2	40	0.91	1	36.4	PASS	5	1.24	0.026	N/A	#N/A
JUNCTION BOX	INVERTER	380	24.00	30.00	30	CU #10 AWG	CU #10 AWG	35	PASS	36	2	40	0.91	1	36.4	PASS	35	1.24	0.548	3/4" EMT	11.87617

String 1 Voltage Drop	0.574
String 2 Voltage Drop	0.574
String 3 Voltage Drop	0.574

ELECTRICAL NOTES

1. ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
2. ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
3. WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
4. WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
5. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
6. WHERE SIZES OF SOLADECK, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
7. ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
8. 8.) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
9. MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
10. TEMPERATURE RATINGS OF ALL CONDUCTORS, TERMINATIONS, BREAKERS, OR OTHER DEVICES ASSOCIATED WITH THE SOLAR PV SYSTEM SHALL BE RATED FOR AT LEAST 75 DEGREE C.

365Solar Energy

REVISIONS

DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE

147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW

AC SIZE: 7.600 KW

SHEET NAME
WIRING CALCULATIONS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-5

CAUTION:
AUTHORIZED SOLAR
PERSONNEL ONLY!

LABEL-1:
LABEL LOCATION:
AC DISCONNECT

WARNING: PHOTOVOLTAIC POWER SOURCE

EVERY 10' ON CONDUIT & ENCLOSURES

LABEL- 2:
LABEL LOCATION:
EMT/CONDUIT RACEWAY
SOLADECK / JUNCTION BOX
CODE REF: NEC 690.31 (D)(2)

⚠ WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL- 3:
LABEL LOCATION:
AC DISCONNECT
INVERTER
MAIN SERVICE PANEL
SUBPANEL
MAIN SERVICE DISCONNECT
CODE REF: NEC 690.13(B)

⚠WARNING **DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM**

LABEL- 4:
LABEL LOCATION:
PRODUCTION METER
UTILITY METER
MAIN SERVICE PANEL
SUBPANEL
CODE REF: NEC 705.12(C) & NEC 690.59

⚠ WARNING

TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

LABEL- 5:
LABEL LOCATION:
MAIN SERVICE PANEL
SUBPANEL
MAIN SERVICE DISCONNECT
CODE REF: NEC 110.27(C) & OSHA 1910.145 (f) (7)

⚠ CAUTION

PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFEED

LABEL- 6:
LABEL LOCATION:
MAIN SERVICE PANEL (ONLY IF SOLAR IS BACK-FED)
SUBPANEL (ONLY IF SOLAR IS BACK-FED)
CODE REF: NEC 705.12(D) & NEC 690.59

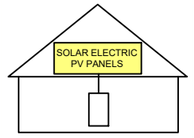
⚠ WARNING

POWER SOURCE OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL- 7:
LABEL LOCATION:
MAIN SERVICE PANEL (ONLY IF SOLAR IS BACK-FED)
SUBPANEL (ONLY IF SOLAR IS BACK-FED)
CODE REF: NEC 705.12(B)(3)(2)

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY



LABEL- 8:
LABEL LOCATION:
AC DISCONNECT
CODE REF: IFC 605.11.3.1(1) & NEC 690.56(C)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL- 9:
LABEL LOCATION:
AC DISCONNECT
CODE REF: NEC 690.56(C)(2)

PHOTOVOLTAIC

AC DISCONNECT

LABEL- 10:
LABEL LOCATION:
AC DISCONNECT
CODE REF: NEC 690.13(B)

PHOTOVOLTAIC

DC DISONNECT

LABEL- 11:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.13(B)

PHOTOVOLTAIC AC DISCONNECT

NOMINAL OPERATING AC VOLATGE	**240 V**
RATED AC OUTPUT CURRENT	**32.00 A**

LABEL- 12:
LABEL LOCATION:
MAIN SERVICE PANEL
SUBPANEL
AC DISCONNECT
CODE REF: NEC 690.54

INVERTER AC DISCONNECT

NOMINAL OPERATING AC VOLATGE	**240 V**
RATED AC OUTPUT CURRENT	**32.00 A**

LABEL- 13:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.54

MAXIMUM VOLTAGE	**380 V**
MAXIMUM CIRCUIT CURRENT	**30 A**
MAXIMUM RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED)	

LABEL- 14:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.53

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

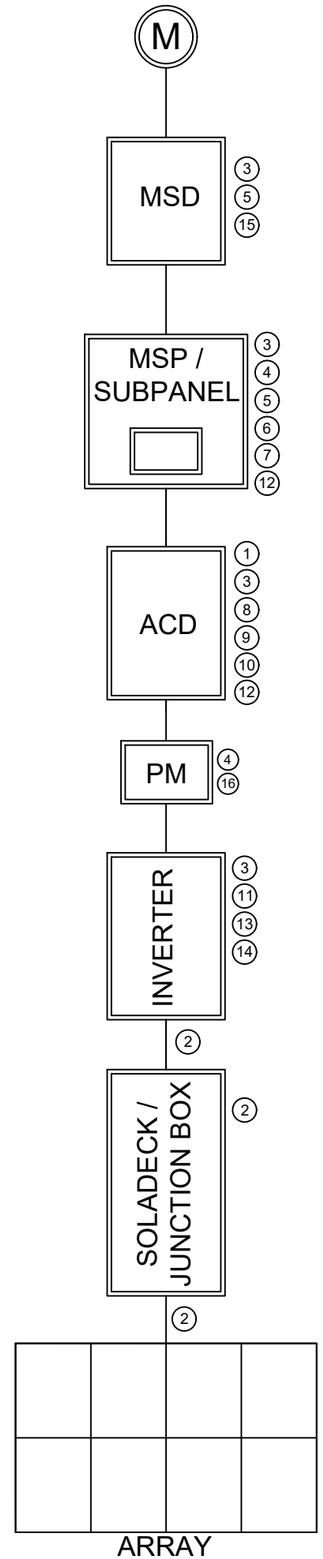
LABEL- 15:
LABEL LOCATION:
MAIN SERVICE DISCONNECT (ONLY IF MAIN SERVICE DISCONNECT IS PRESENT)
CODE REF: NEC 690.13(B)

PRODUCTION METER

LABEL- 16:
LABEL LOCATION:
PRODUCTION METER (ONLY IF PRODUCTION METER IS USED)

NOTE:

** ELECTRICAL DIAGRAM SHOWN IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ELECTRICAL DIAGRAM PAGE. **



365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

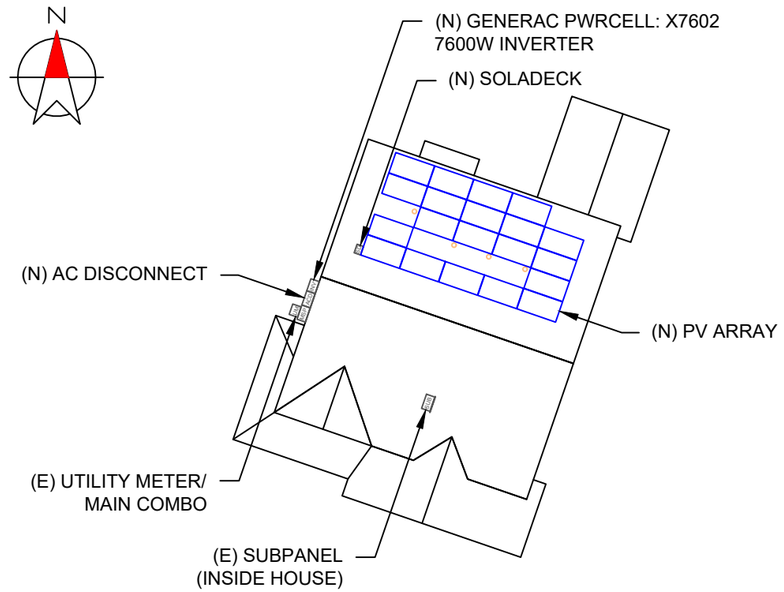
SHEET NAME
LABELS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-6

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM MULTIPLE SOURCES OF POWER WITH SAFETY DISCONNECTS AS SHOWN:



147 KENSINGTON DR, SPRING LAKE, NC 28390

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

LABELING NOTES:

1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE

147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW

AC SIZE: 7.600 KW

SHEET NAME

PLACARD

SHEET SIZE

ANSI B
11" X 17"

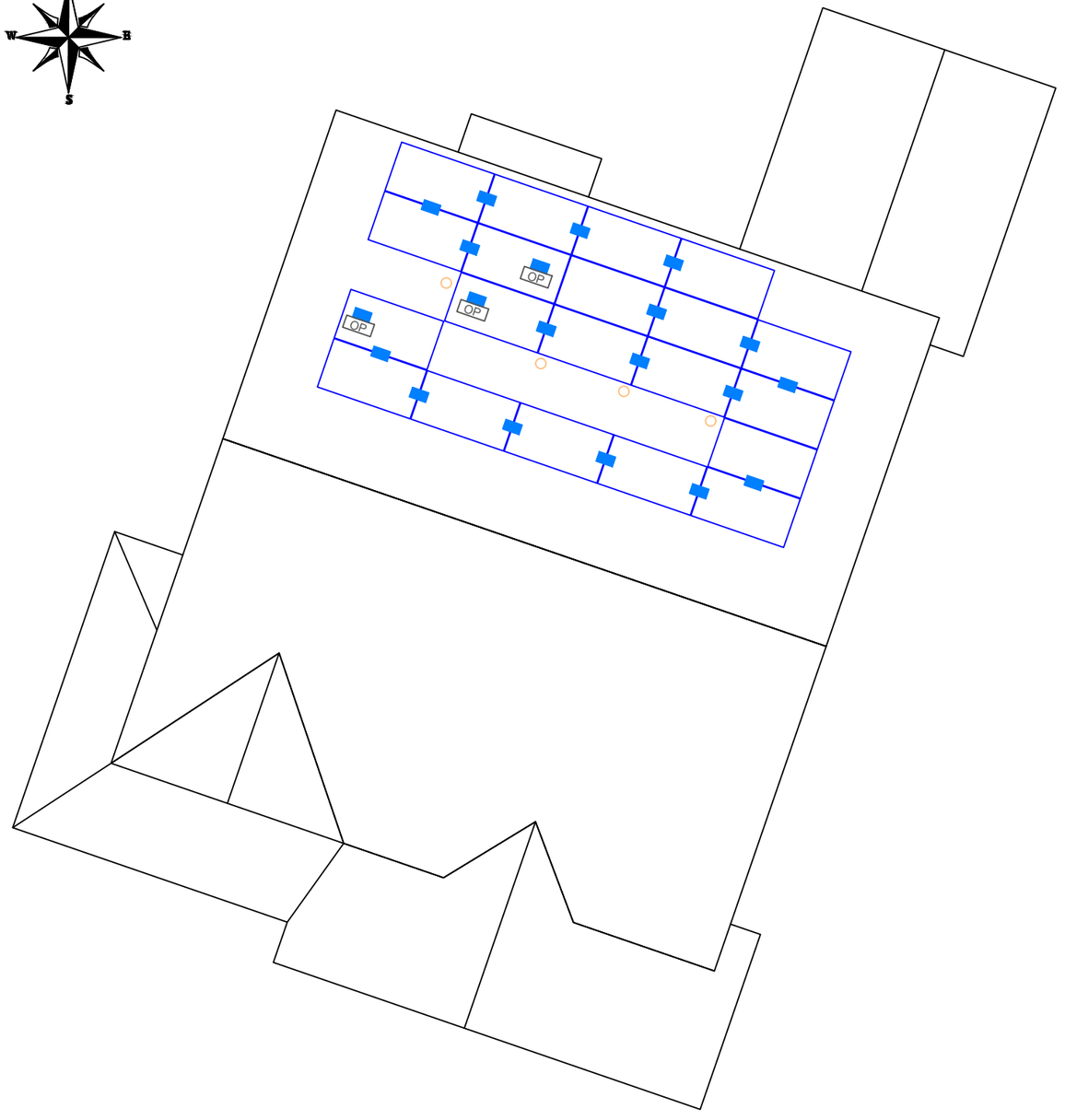
SHEET NUMBER

PV-7

1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

POWER OPTIMIZER CHART



365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE

147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW

AC SIZE: 7.600 KW

SHEET NAME
POWER OPTIMIZER CHART

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-8

MSE PERC 60

MISSION SOLAR ENERGY

345W
Class leading power output

Positive Power Tolerance
-0 to +3%

FRAME-TO-FRAME WARRANTY

Degradation guaranteed not to exceed 2% in year one and 0.58% annually from years two to 30 with 84.08% guaranteed in year 25.
For more information visit www.missionsolar.com/warranty

CERTIFICATIONS

CEC · TÜV SUD · c UL us LISTED

UL 61730 / IEC 61215 / IEC 61730 / IEC 61701

If you have questions or concerns about certification of our products in your area, please contact Mission Solar Energy.

True American Quality
True American Brand

Mission Solar Energy is headquartered in San Antonio, Texas, where we manufacture our modules. We produce American, high quality solar modules ensuring the highest in-class power output and best in-class reliability. Our product line is tailored for residential, commercial and utility applications. Every Mission Solar Energy solar module is certified and surpasses industry standard regulations, proving excellent performance over the long term.

Demand the best. Demand Mission Solar Energy.

Certified Reliability
- Tested to UL 61730 & IEC Standards
- PID resistant
- Resistance to salt mist corrosion

Advanced Technology
- 6 Busbar
- Passivated Emitter Rear Contact
- Ideal for all applications

Extreme Weather Resilience
- Up to 5,600 Pa front load & 5,631 Pa back load
- Tested load to UL 61730
- 40 mm frame

BAA Compliant for Government Projects
- Buy American Act
- American Recovery & Reinvestment Act

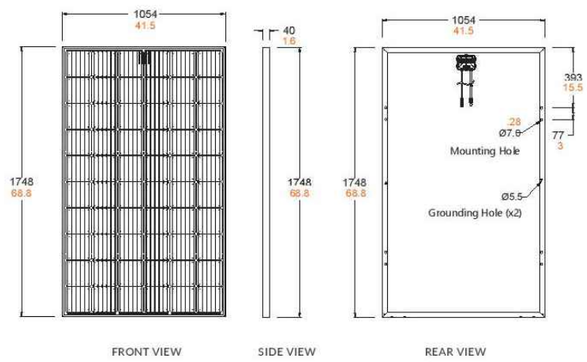
Made in the USA · 25 Year Frame-to-Frame Warranty

Class Leading
340-350W

MSE PERC 60

BASIC DIMENSIONS

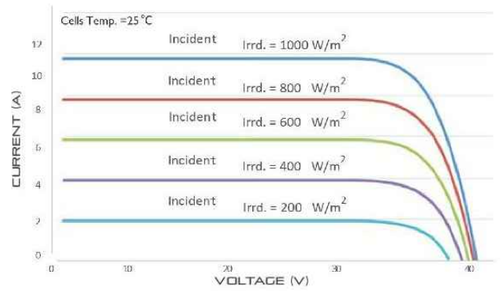
[UNITS: MM/IN]



CURRENT-VOLTAGE CURVE

MSE345SX5T: 345WP, 60 CELL SOLAR MODULE

Current-voltage characteristics with dependence on irradiance and module temperature



CERTIFICATIONS AND TESTS

IEC	61215, 61730, 61701
UL	61730

TÜV SUD · CEC · c UL us LISTED

Mission Solar Energy
8303 S. New Braunfels Ave., San Antonio, Texas 78235
www.missionsolar.com | info@missionsolar.com

ELECTRICAL SPECIFICATION

PRODUCT TYPE	MSExxxSX5T (xxx = P_{max})				
Power Output	P_{max}	W_p	340	345	350
Module Efficiency		%	18.5	18.7	19.0
Tolerance		%	0/+3	0/+3	0/+3
Short Circuit Current	I_{sc}	V	10.86	10.92	10.97
Open Circuit Voltage	V_{oc}	A	40.82	41.00	41.18
Rated Current	I_{mp}	V	10.24	10.34	10.44
Rated Voltage	V_{mp}	V	33.20	33.37	33.52
Fuse Rating		A	20	20	20
System Voltage		V	1,000	1,000	1,000

TEMPERATURE COEFFICIENTS

Normal Operating Cell Temperature (NOCT)	44.43°C (±3.7%)
Temperature Coefficient of Pmax	-0.361%/°C
Temperature Coefficient of Voc	-0.262%/°C
Temperature Coefficient of Isc	0.039%/°C

OPERATING CONDITIONS

Maximum System Voltage	1,000Vdc
Operating Temperature Range	-40°C (-40°F) to +85°C (185°F)
Maximum Series Fuse Rating	20A
Fire Safety Classification	Type 1
Front & Back Load (UL Standard)	Up to 5,600 Pa front and 5,631 Pa back load, Tested to UL 61730
Hail Safety Impact Velocity	25mm at 23 m/s

MECHANICAL DATA

Solar Cells	P-type mono-crystalline silicon
Cell Orientation	60 cells (6x10)
Module Dimension	1748mm x 1054mm x 40mm
Weight	20.3 kg (44.8 lbs.)
Front Glass	3.2mm, tempered, low-iron, anti-reflective
Frame	Anodized
Encapsulant	Ethylene vinyl acetate (EVA)
Junction Box	Protection class IP67 with 3 bypass-diodes
Cable	1.0m, Wire 4mm2 (12AWG)
Connector	Staubli PV-KBT4/6II-UR and PV-KST4/6II-UR, MC4, Renhe 05-8

SHIPPING INFORMATION

Container Feet	Ship To	Pallet	Panels	345 W Bin
53'	Most States	34	884	304.98 kW
Double Stack	CA	28	728	251.16 kW

PALLET [26 PANELS]

Weight	Height	Width	Length
1263 lbs. (573 kg)	47.5 in (120.65 cm)	46 in (116.84 cm)	70.25 in (178.43 cm)

C-SA2-MKTG-0025 REV 4 05/05/2021 www.missionsolar.com | info@missionsolar.com

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-9

GENERAC

SnapRS™

Inline Disconnect Switch
Model #: RS801 (Ordering SKU: APKE00011)

C ETL LISTED US
Intertek

Generac SnapRS are a simple way to satisfy rapid shutdown compliance for solar + storage systems. Generac SnapRS are 2017/2020 NEC 690.12 compliant, don't require any extra hardware to mount, and need no pairing or fussy digital communications.

FEATURES & BENEFITS

- Fast, easy, and simple to install
- One SnapRS device per PV module
- Achieves PVRSS Compliance
- Low cost, high efficiency solution

SYSTEM DESIGN

Snap a Generac SnapRS disconnect device (RS) to the negative lead (-) of each module in the solar array for simple module-level rapid shutdown compliance. SnapRS devices isolate array voltage when a rapid shutdown is initiated at a PWRcell™ Inverter. When rapid shutdown is initiated, SnapRS units isolate each PV module in the array, reducing array voltage to <80V in seconds.

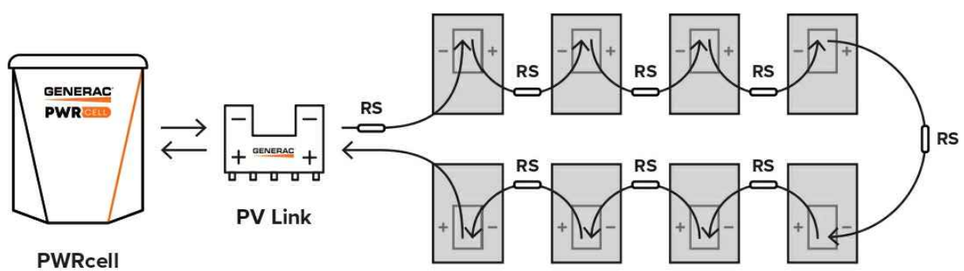


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

SnapRS™ (APKE00011)	
PV MODULE MAX VOC:	75 V
EFFICIENCY:	99.8%*
MAX INPUT CURRENT:	13 A
MAX STC ISC OF STRING:	10.4 A
MAX TOTAL QTY IN SUBSTRING:	10
SHUTDOWN TIME:	< 10 Seconds
ENCLOSURE RATING:	NEMA 6P
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-40 to 158 °F (-40 to 70 °C)
CERTIFICATIONS:	UL1741
PROTECTIONS:	PVRSE
WEIGHT - LB (KG):	0.17 (0.08)
DIMENSIONS, L x W x H - IN (MM):	7" x 1" x 1" (177.8 x 25.4 x 25.4)
WARRANTY:	25 Years

**When used with a 50V panel*

Connect one SnapRS device to the negative lead of each PV module in the PV Link controlled array for complete PV Rapid shutdown performance

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528183 REV E

GENERAC

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-10

GENERAC

PV Link™

2500W MPPT Substring Optimizer
Model #: S2502 (Ordering SKU: APKE00010)

C ETL LISTED US
Intertek

PV Link is the simple solar optimizer for quick installation and long-lasting performance. Connect PV modules to each PV Link to overcome shading and challenging roof lines.

FEATURES & BENEFITS

- Fast, simple installation
- Lower failure risk than module-level optimizers
- 2017/2020 NEC rapid shutdown compliant with SnapRS™
- Quick connections with MC4 connectors
- Exports up to 2500W
- Compatible with PWRcell™ Inverters
- Cost-effective solution for high-performance PV
- Ground-fault protection

SINGLE-STRING PV ARRAY WITH SnapRS DEVICES

Where PV module-level rapid shutdown is required (NEC 690.12), a SnapRS device (RS) is installed to negative (-) lead of each PV module.

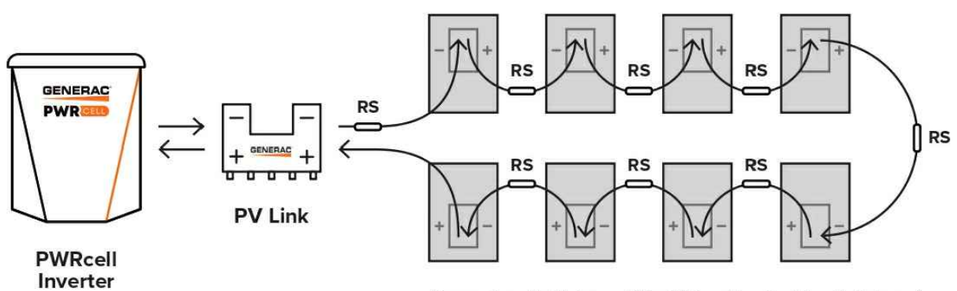


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

PV Link™ (APKE00010)	
RATED POWER*:	2500W
PEAK EFFICIENCY:	99%
MPPT VOLTAGE RANGE:	60-360 VMP
MAX INPUT VOLTAGE:	420 VOC; max when cold
MAX OUTPUT:	420 VOC
NOMINAL OUTPUT (REbus™):	380 VDC
MAX OUTPUT CURRENT (CONTINUOUS):	8 A
MAX OUTPUT CURRENT (FAULT):	10 A
MAX INPUT CURRENT (CONTINUOUS):	13 A @ 50°C, 10 A @ 70°C
MAX INPUT SHORT CIRCUIT CURRENT (ISC):	18 A
STANDBY POWER:	< 1 W
PROTECTIONS:	Ground-fault, Arc-fault (Arc-fault Type 1 AFCI, Integrated), PVRSE
MAX OPERATING TEMP: FAHRENHEIT (CELSIUS)	158 °F (70 °C)
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
ENCLOSURE:	Type 4X
WEIGHT - LB (KG):	7.3 lb (3.3 kg)
DIMENSIONS, L x W x H - IN (MM):	15.4" x 2" x 9.6" (391.2 x 50.8 x 243.8)
COMPLIANCE:	UL 1741, CSA 22.2
WARRANTY:	25 Years

**PV Link can tolerate higher than rated power at its input if Max Input Voltage and Short Circuit Current specifications are not exceeded*

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)
A0000528162 REV D

GENERAC

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-11

GENERAC

PWRCELL

7.6kW 1Ø PWRcell Inverter with CTs
Model #: X7602 (Ordering SKU: APKE00014)

11.4 kW 3Ø PWRcell Inverter with CTs
Model #: X11402 (Ordering SKU: APKE00013

Solar + storage is simple with the Generac PWRcell™ Inverter. This bi-directional, REbus™-powered inverter offers a simple, efficient design for integrating smart batteries with solar. Ideal for self-supply, backup power, zero-export and energy cost management, the PWRcell Inverter is the industry's most feature-rich line of inverters, available in single-phase and three-phase models.

FEATURES & BENEFITS

- Single inverter for grid-tied solar with smart battery integration
- Simplified system design: No autotransformer or battery inverter needed
- User-selectable modes for backup power, self-supply, time-of-use, zero-import and export limiting
- Free system monitoring included via PWRview™ Web Portal and Mobile App

AC OUTPUT/GRID-TIE	MODEL X7602	MODEL X11402
CONT. GRID-TIED AC POWER @ 50°C (122°F):	7600 W	11400 W
AC OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 3Ø VAC
AC FREQUENCY:	60 Hz	
MAXIMUM CONTINUOUS OUTPUT CURRENT:	32 A, RMS	
GROUND-FAULT ISOLATION DETECTION:	Included	
CHARGE BATTERY FROM AC:	Yes	
THD (CURRENT):	< 2%	
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	

AC OUTPUT/ISLANDED	MODEL X7602	MODEL X11402
MAX. CONT. ISLANDED AC POWER WITHOUT AN EXTERNAL TRANSFER SWITCH[1]:	7600 W	
MAX. CONT. ISLANDED AC POWER W/ EXTERNAL TRANSFER SWITCH AND SINGLE 6 MODULE BATTERY CABINET[2]:	9000 W	
MAX. CONT. ISLANDED AC POWER W/ EXTERNAL TRANSFER SWITCH AND 2 BATTERY CABINETS (8 MODULES MINIMUM)[2]:	11000 W	9600 W-11000 W*
PEAK MOTOR STARTING CURRENT (2 SEC):	50 A, RMS	
AC BACKUP OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 1Ø VAC
AC FREQUENCY:	60 Hz	
THD (VOLTAGE):	< 2%	
ALLOWABLE SPLIT PHASE IMBALANCE:	Up to 30%	

DC INPUT	MODEL X7602	MODEL X11402
DC INPUT VOLTAGE RANGE:	360-420 VDC	
NOMINAL DC BUS VOLTAGE:	380 VDC	
DC DISTRIBUTION INPUT BREAKERS:	4 x 2P30 A	
MAX INPUT CURRENT PER DC INPUT:	30 A	
REVERSE-POLARITY PROTECTION:	Yes	
TRANSFORMERLESS, UNGROUNDED:	Yes	
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	
DC BUS EXPORT FUSES (+/-):	40 A	
2-POLE DISCONNECTION:	Yes	

EFFICIENCY	MODEL X7602	MODEL X11402
PEAK EFFICIENCY:	97.3%	97.7%
CEC WEIGHTED EFFICIENCY:	96.5%	97.5%

[1]When islanded, continuous power output is restricted to 7.6kW unlsess backup power is routed through an external transfer switch.
[2]Peak performance, values provided for 40°C (104°F).
**In Island mode X11402 protected loads only supply 2 phases 120 VAC L-N, 208 L-L which results in lower power than in grid tied 3 phase mode. The low value of the range is for full L-L loading while high value of the range is full L-N loading*

Specifications

FEATURES AND MODES	
ISLANDING[4]:	Yes
GRID SELL:	Yes
SELF CONSUMPTION:	Yes
PRIORITIZED CHARGING FROM RENEWABLES:	Yes
GRID SUPPORT - ZERO EXPORT:	Yes
ESS PCS OPERATION MODES (IMPORT ONLY, EXPORT ONLY):	Yes

ADDITIONAL FEATURES	
SUPPORTED COMMUNICATION INTERFACES:	REbus™, CANbus, Ethernet
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
BACKUP LOADS DISCONNECT[4]:	Yes, 50 A Circuit Breaker
INVERTER BYPASS SWITCH:	Automatic
WARRANTY:	10 Years

STANDARDS COMPLIANCE	
SAFETY:	UL 1741 SA, CSA 22.2, UL 1998
GRID CONNECTION STANDARDS:	IEEE 1547, Rule 21, Rule 14H, CSIP, UL 1741 PCS CRD (Import Only, Export Only)
EMISSIONS:	FCC Part 15 Class B

DIMENSIONS AND INSTALLATION SPECIFICATIONS	
ENCLOSURE KNOCKOUTS - QTY, SIZE - IN (MM):	6 x Combo 3/4" x 1" (19 x 25.4) 7 x Combo 1/2" x 3/4" (12.7 x 19)
DIMENSIONS L x W x H - IN (MM):	24.5" x 19.25" x 8" (622.3 x 488.9 x 203.2)
WEIGHT - LB (KG):	62.7 (28.4)
COOLING:	Forced convection
AUDIBLE NOISE:	< 40 dBA
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-4 to 122 °F (-20 to 50 °C)[5]
ENCLOSURE TYPE:	Type 3R

INSTALLATION GUIDELINES	
BATTERY TYPES SUPPORTED:	PWRcell™ Battery
MODULE STRING SIZE PER PV LINK OPTIMIZER:	Varies, refer to PV Link Installation Manual
MAXIMUM RECOMMENDED DC POWER FROM PV[6]:	10 kW (1Ø), 15 kW (3Ø)

[4]3Ø inverters offer islanding for 1Ø loads.
[5]Includes ambient temperature rising from inverter operation. Reduced power at extreme temperatures. Specifications listed in this document are achieved with firmware version 13310 or greater. Confirm inverter has latest firmware to ensure full performance.
[6]Values provided for PV-only or small storage systems. Additional PV power is permissible if sufficient battery storage capacity is installed.

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528185 REV G

GENERAC

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-12

Datasheet

IRONRIDGE

Flush Mount System

Built for solar's toughest roofs.

IronRidge builds the strongest mounting system for pitched roofs in solar. Our components have been tested to the limit and proven in extreme environments, including Florida's high-velocity hurricane zones.

Our rigorous approach has led to unique structural features, such as curved rails and reinforced flashings, and is also why our products are fully certified, code compliant and backed by a 25-year warranty.

Strength Tested
All components evaluated for superior structural performance.

PE Certified
Pre-stamped engineering letters available in most states.

Class A Fire Rating
Certified to maintain the fire resistance rating of the existing roof.

Design Assistant
Online software makes it simple to create, share, and price projects.

UL 2703 Listed System
Entire system and components meet newest effective UL 2703 standard.

25-Year Warranty
Products guaranteed to be free of impairing defects.

Datasheet

XR Rails

XR10 Rail

A low-profile mounting rail for regions with light snow.

- 6' spanning capability
- Moderate load capability
- Clear and black finish

XR100 Rail

The ultimate residential solar mounting rail.

- 8' spanning capability
- Heavy load capability
- Clear and black finish

XR1000 Rail

A heavyweight mounting rail for commercial projects.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish

Bonded Splices

All rails use internal splices for seamless connections.

- Self-drilling screws
- Varying versions for rails
- Forms secure bonding

Clamps & Grounding

UFOs

Universal Fastening Objects bond modules to rails.

- Fully assembled & lubed
- Single, universal size
- Clear and black finish

Stopper Sleeves

Snap onto the UFO to turn into a bonded end clamp.

- Bonds modules to rails
- Sized to match modules
- Clear and black finish

CAMO

Bond modules to rails while staying completely hidden.

- Universal end-cam clamp
- Tool-less installation
- Fully assembled

Bonding Hardware

Bond and attach XR Rails to roof attachments.

- T & Square Bolt options
- Nut uses 7/16" socket
- Assembled and lubricated

Attachments

FlashFoot2

Flash and mount XR Rails with superior waterproofing.

- Twist-on Cap eases install
- Wind-driven rain tested
- Mill and black finish

Conduit Mount

Flash and mount conduit, strut, or junction boxes.

- Twist-on Cap eases install
- Wind-driven rain tested
- Secures ¾" or 1" conduit

Knockout Tile

Replace tiles and ensure superior waterproofing.

- Flat, S, & W tile profiles
- Form-fit compression seal
- Single-lag universal base

All Tile Hook

Mount on tile roofs with a simple, adjustable hook.

- Works on flat, S, & W tiles
- Single-socket installation
- Optional deck flashing

Resources

Design Assistant
Go from rough layout to fully engineered system. For free.
Go to IronRidge.com/design

Endorsed by FL Building Commission
Flush Mount is the first mounting system to receive Florida Product approval for 2017 Florida Building Code compliance.
Learn More at bit.ly/floridacert

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-13

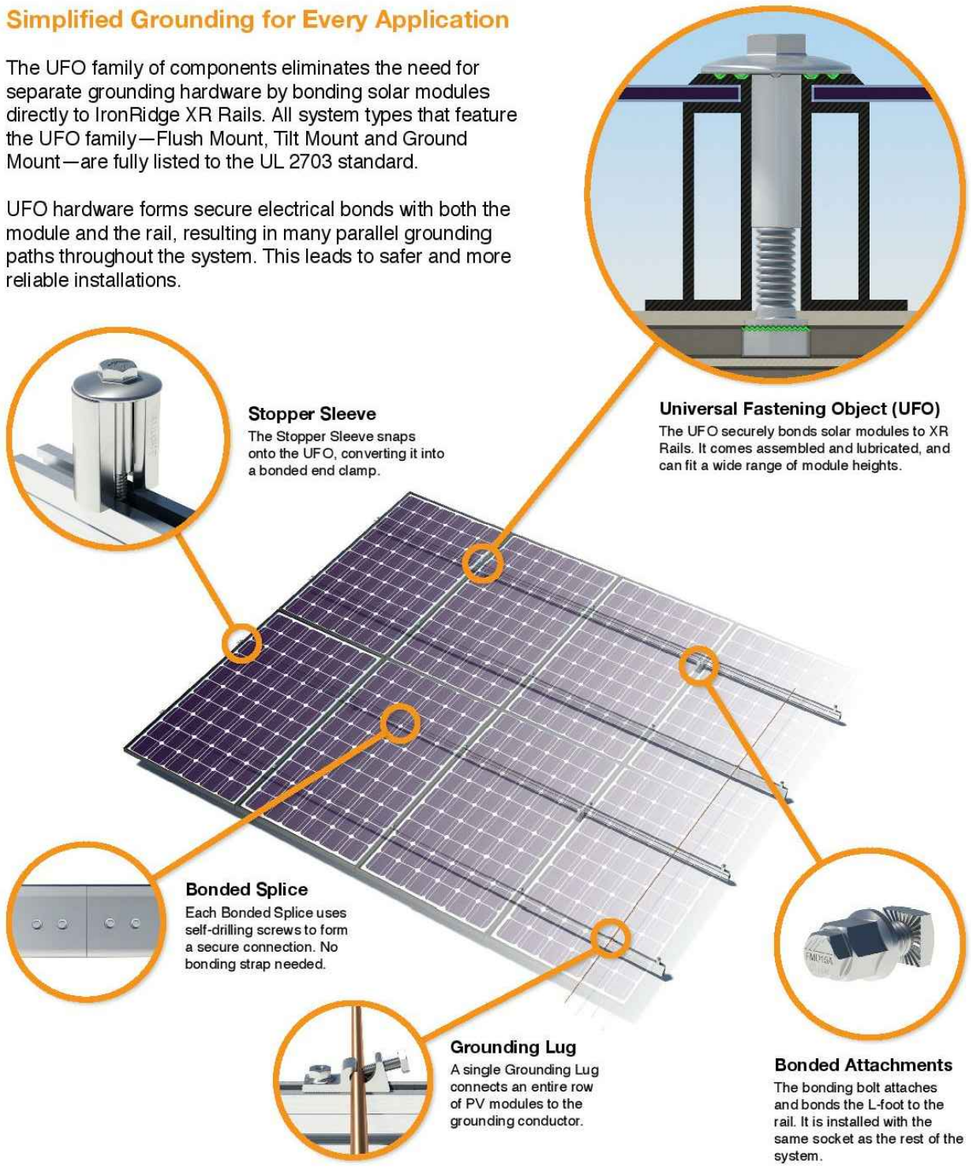
Tech Brief

IRONRIDGE UFO Family of Components

Simplified Grounding for Every Application

The UFO family of components eliminates the need for separate grounding hardware by bonding solar modules directly to IronRidge XR Rails. All system types that feature the UFO family—Flush Mount, Tilt Mount and Ground Mount—are fully listed to the UL 2703 standard.

UFO hardware forms secure electrical bonds with both the module and the rail, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.



Stopper Sleeve
The Stopper Sleeve snaps onto the UFO, converting it into a bonded end clamp.

Universal Fastening Object (UFO)
The UFO securely bonds solar modules to XR Rails. It comes assembled and lubricated, and can fit a wide range of module heights.

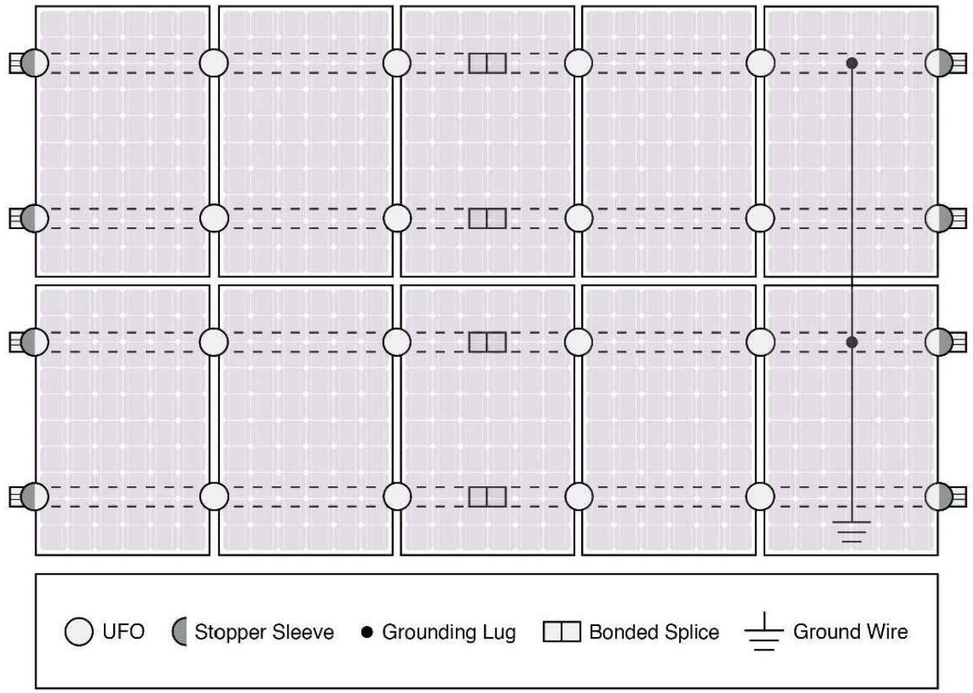
Bonded Splice
Each Bonded Splice uses self-drilling screws to form a secure connection. No bonding strap needed.

Grounding Lug
A single Grounding Lug connects an entire row of PV modules to the grounding conductor.

Bonded Attachments
The bonding bolt attaches and bonds the L-foot to the rail. It is installed with the same socket as the rest of the system.

Tech Brief

System Diagram



Approved Enphase microinverters can provide equipment grounding of IronRidge systems, eliminating the need for grounding lugs and field installed equipment ground conductors (EGC). A minimum of two microinverters mounted to the same rail and connected to the same Engage cable is required. Refer to installation manuals for additional details.

UL Certification

The IronRidge Flush Mount, Tilt Mount, and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

Go to IronRidge.com/UFO

Cross-System Compatibility			
Feature	**Flush Mount**	**Tilt Mount**	**Ground Mount**
XR Rails	✔	✔	XR1000 Only
UFO/Stopper	✔	✔	✔
Bonded Splice	✔	✔	N/A
Grounding Lugs	1 per Row	1 per Row	1 per Array
Microinverters & Power Optimizers	Enphase - M250-72, M250-60, M215-60, C250-72 Darfon - MIG240, MIG300, G320, G640 SolarEdge - P300, P320, P400, P405, P600, P700, P730		
Fire Rating	Class A	Class A	N/A
Modules	Tested or Evaluated with over 400 Framed Modules Refer to installation manuals for a detailed list.		

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-14

SolaDeck

FLASHED PV ROOF-MOUNT COMBINER/ENCLOSURE

Basic Features

- Stamped Seamless Construction
- 18 Gauge Galvanized Steel
- Powder Coated Surfaces
- Flashes into the roof deck
- 3 Roof deck knockouts .5", .75", 1"
- 5 Centering dimples for entry/exit fittings or conduit
- 2 Position Ground lug installed
- Mounting Hardware Included

SolaDeck Model SD 0783

SolaDeck UL50 Type 3R Enclosures

Available Models:
Model SD 0783 - (3" fixed Din Rail)
Model SD 0786 - (6" slotted Din Rail)

SolaDeck UL 1741 Combiner/Enclosures

Models SD 0783-41 and SD 0786-41 are labeled and ETL listed UL STD 1741 according to the UL STD 1741 for photovoltaic combiner enclosures.

Max Rated - 600VDC, 120AMPS

Model SD 0783-41 3" Fixed Din Rail fastened using Norlock System

****Typical System Configuration**

4- Din Rail Mounted Fuse Holders 600VDC 30 AMP
1- Power Distribution Block 600VDC 175AMP
1- Bus Bar with UL lug

Model SD 0786-41 6" Slotted Din Rail fastened using steel studs

****Typical System Configuration**

4- Din Rail Mounted Fuse Holders 600VDC 30 AMP
4- Din Rail Mounted Terminal Blocks
Bus Bars with UL lug

**Fuse holders and terminal blocks added in the field must be UL listed or recognized and meet 600 VDC 30 AMP 110C for fuse holders, 600V 50 AMP 90C for rail mounted terminal blocks and 600 V 175 AMP 90C for Power Distribution Blocks. Use Copper Wire Conductors.

Cover is trimmed to allow conduit or fittings, base is center dimpled for fitting locations.

Model SD 0783-41, wired with Din Rail mounted fuse holders, bus bar and power distribution block.

Model SD 0786-41, wired with Din Rail mounted fuse holders, terminal blocks and bus bars.

RSTC Enterprises, Inc • 2219 Heimstead Road • Eau Claire, WI 54703
For product information call 1(866) 367-7782

365Solar Energy

REVISIONS		
DESCRIPTION	DATE	REV
INITIAL	06/17/2022	
CAPACITY INCREASE	07/09/2022	A

SIGNATURE WITH SEAL

DATE: 06/17/2022

PROJECT NAME & ADDRESS

CANDICE HALL RESIDENCE
147 KENSINGTON DR
SPRING LAKE, NC 28390

DC SIZE: 6.900 KW
AC SIZE: 7.600 KW

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-15