HISTORIC DISTRICT LANDMARKS COMMISSION
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MARGERY OLINDE
NEW GRID-INTERACTIVE PHOTOVOLTAIC SYSTEM
DC SYSTEM SIZE FOR SYSTEM 1 & 2 (3.24 KW)

SYSTEM DETAILS

DESCRIPTION	NEW GRID-INTERACTIVE PHOTOVOLTAIC SYSTEM WITHOUT BATTERY STORAGE
AC RATING OF SYSTEM-1 AC RATING OF SYSTEM-2	2.83 KW 2.83 KW
DC RATING OF SYSTEM-1 DC RATING OF SYSTEM-2	3.24 KW 3.24 KW
AC OUTPUT CURRENT-1 AC OUTPUT CURRENT-2	11.79 A 11.79 A
NO. OF MODULES	(18) SUNPOWER SPR-X22-360-E-AC SOLAR MODULES
NO. OF INVERTERS	(18) SUNPOWER SPR-X22-360-E-AC(IQ 7XS) MICROINVERTERS
POINT OF INTERCONNECTION	LINE SIDE TAP IN THE MSP
ARRAY STRINGING-1 ARRAY STRINGING-2	(1) BRANCHES OF 9 MODULES (1) BRANCHES OF 9 MODULES

SITE DETAILS

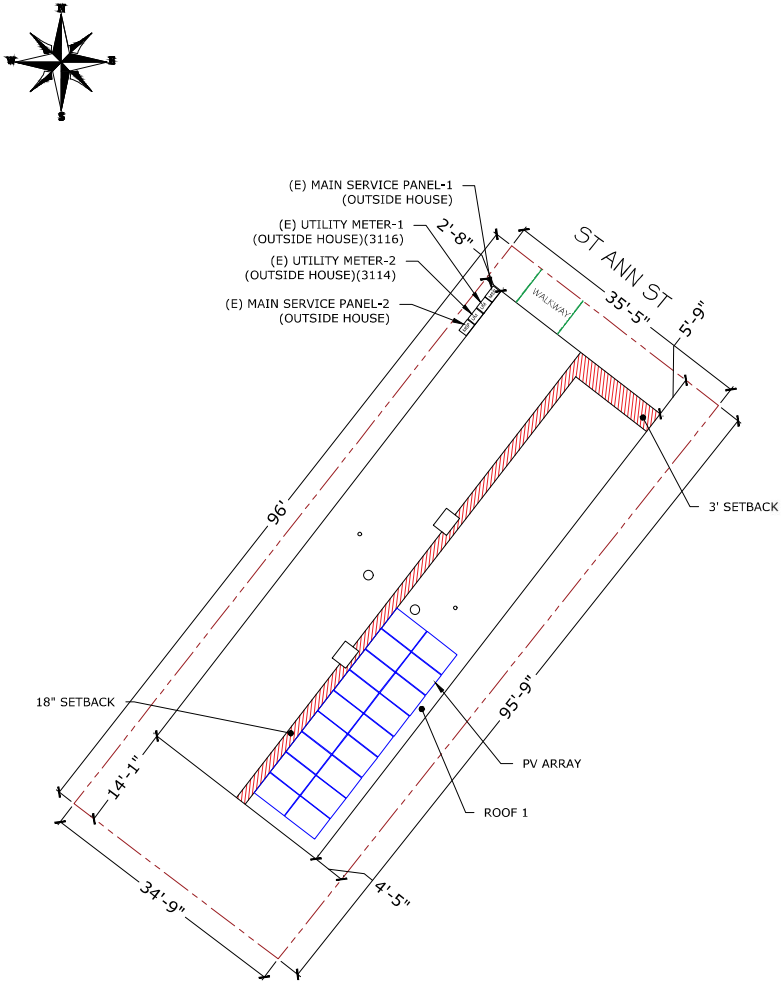
ASHRAE EXTREME LOW	-4°C
ASHRAE 2% HIGH	34°C
GROUND SNOW LOAD	0 PSF
WIND SPEED	144MPH (ASCE 7-10)
RISK CATEGORY	II
WIND EXPOSURE CATEGORY	B
AHJ	ORLEANS PARISH
UTILITY	ENTERGY NEW ORLEANS

GOVERNING CODES

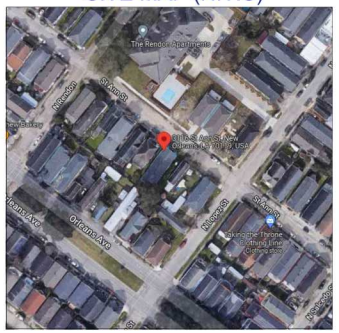
INTERNATIONAL RESIDENTIAL CODE 2015 (IRC) 2015
INTERNATIONAL BUILDING CODE 2015 (IBC) 2015
INTERNATIONAL FIRE CODE 2015 (IFC) 2015
NATIONAL ELECTRIC CODE, NEC 2014 CODE BOOK

SHEET INDEX

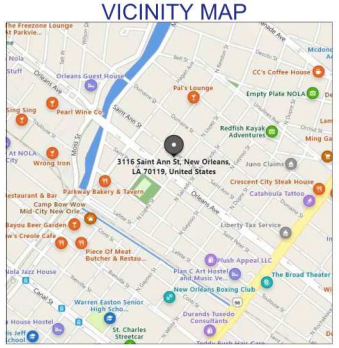
SHEET NO.	SHEET NAME
A - 00	SITE MAP & VICINITY MAP
S - 01	ROOF PLAN & MODULES
S - 02	ARRAY LAYOUT
S - 03	STRUCTURAL ATTACHMENT DETAIL
E - 01(1)	SINGLE LINE DIAGRAM
E - 01(2)	SINGLE LINE DIAGRAM
E - 02	WIRING CALCULATIONS
E - 03	SYSTEM LABELING
L - 01	MICROINVERTER LAYOUT
L - 02	PV CIRCUIT
DS - 01	MODULE AND INVERTER DATASHEET
DS - 02	ATTACHMENT AND RACKING DATASHEET



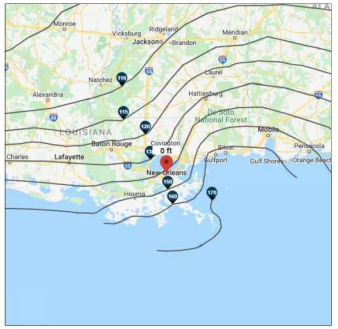
SITE MAP (N.T.S)



VICINITY MAP



WIND FLOW MAP



SUNPOWER
by South Coast Solar
ADD : 2605 RIDGELAKE DR,
METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

Signature with Seal

FOR EXISTING STRUCTURE ONLY

STATE OF LOUISIANA
PAUL K. ZACHER
License No. 39685
EXP. 04/30/2023
PROFESSIONAL ENGINEER

3116 SAINT ANNE ST
NEW ORLEANS, LA 70119

MARGERY OLINDE
3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS

REV	ENGG.	DESCRIPTION	DATE

PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME
SITE MAP & VICINITY MAP

SHEET NUMBER
A-00

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NOTES: 1. LOCATION OF JUNCTION BOX(ES), AC DISCONNECTS(S), AC COMBINER PANEL(S), AND OTHER ELECTRICAL EQUIPMENT(S) RELEVANT TO PV INSTALLATION SUBJECT TO CHANGE BASED ON SITE CONDITIONS. 2. SETBACKS AT RIDGES CAN BE REDUCED TO 18 INCHES IN COMPLIANCE WITH IBC 2018:
TOTAL PLAN VIEW AREA =2095.30 SQFT
TOTAL PV AREA = 22(61.3 IN)(41.2 IN)/(144 IN^2) =315.67 SQFT
(315.67 SQFT/2095.3 SQFT)100 = 15.65 %
TOTAL PV AREA POPULATES 15.65% OF TOTAL PLAN VIEW AREA AND IS WITHIN THE 33% REQUIREMENT.

MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 18 MODULES
MODULE TYPE = SUNPOWER SPR-X22-360-E-AC SOLAR MODULES
WEIGHT = 42.99 LBS / 19.5 KG.
MODULE DIMENSIONS = 61.3" X 41.2" = 17.54 SF

NUMBER OF INVERTER = 18 MICROINVERTERS
INVERTER TYPE = SUNPOWER SPR-X22-360-E-AC(IQ 7XS) MICROINVERTERS

FOR SYSTEM-1	FOR SYSTEM-2
AC SYSTEM SIZE: 2.83 KW	AC SYSTEM SIZE: 2.83 KW
DC SYSTEM SIZE: 3.24 KW	DC SYSTEM SIZE: 3.24 KW

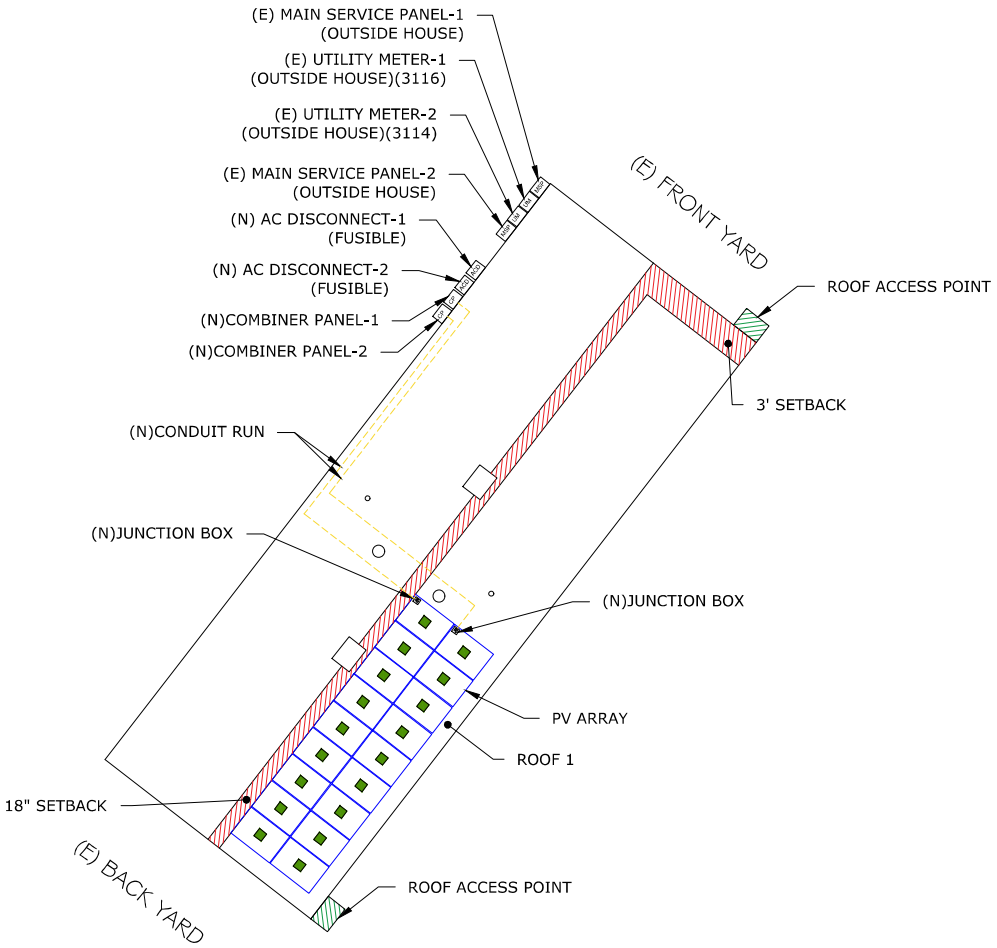
GENERAL INSTALLATION PLAN NOTES:

1) ROOF ATTACHMENTS TO TRUSSES SHALL BE INSTALLED AS SHOWN IN SHEET S-01 AND AS FOLLOWS FOR EACH WIND ZONE:.

WIND ZONE 1: MAX SPAN 6'-0" O.C.
WIND ZONE 2: MAX SPAN 4'-0" O.C.
WIND ZONE 3: MAX SPAN 2'-0" O.C.

2) EXISTING RESIDENTIAL BUILDING IS AN ASPHALT SHINGLE ROOF WITH MEAN ROOF HEIGHT 15 FT AND 2"X6" WOOD ROOF TRUSSES SPACED 24" O.C.
CONTRACTOR TO FIELD VERIFY AND SHALL REPORT TO THE ENGINEER IF ANY DISCREPANCIES EXIST BETWEEN PLANS AND IN FIELD CONDITIONS.

I CERTIFY THAT THE INSTALLATION OF THE MODULES IS IN COMPLIANCE WITH IBC: BUILDING CHAPTER 16.BUILDING STRUCTURE WILL SAFELY ACCOMMODATE LATERAL AND UPLIFT WIND LOADS, AND EQUIPMENT DEAD LOADS. *



LEGENDS

- BATT - TESLA POWERWALL
- GW - TESLA GATEWAY
- UM - UTILITY METER
- MSP - MAIN SERVICE PANEL
- M - METER MAIN COMBO
- JB - JUNCTION BOX
- ACD - AC DISCONNECT
- PM - PRODUCTION METER
- CP - COMBINER PANEL
- AGP - AC AGGREGATOR PANEL
- - FIRE SETBACK
- - MICROINVERTER
- - VENT, ATTIC FAN (ROOF OBSTRUCTION)
- - CONDUIT
- - TRENCHING

SUNPOWER
by South Coast Solar
ADD : 2605 RIDGELAKE DR, METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

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3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS	REV	ENGG.	DESCRIPTION	DATE

PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME
ROOF PLAN & MODULES

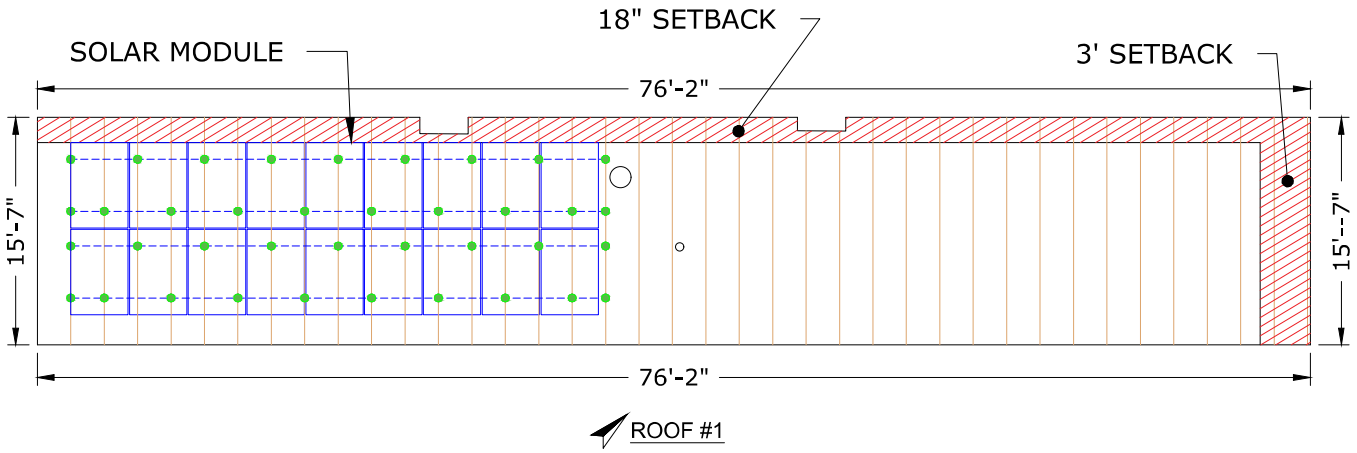
SHEET NUMBER
S-01

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ROOF DESCRIPTION:

(ROOF #1)

MODULES - 18
ROOF TILT - 27°
ROOF AZIMUTH - 128°
TRUSSES SIZE - 2"X6" @ 24" O.C.



LEGENDS

- FIRE SETBACK
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- PV ROOF ATTACHMENT
- RAILS
- RAFTERS / TRUSSES

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by South Coast Solar
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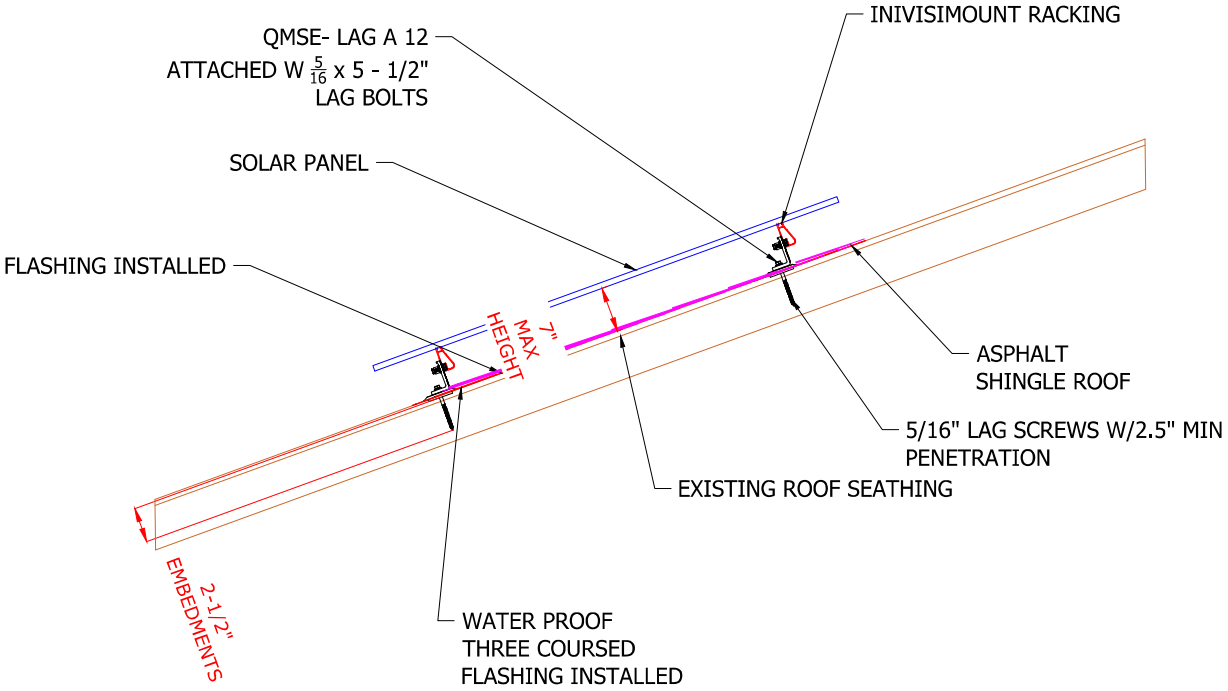
REVISIONS	DESCRIPTION	DATE
REV. ENGG.		

PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME
ARRAY LAYOUT

SHEET NUMBER
S-02

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LAG BOLT/SCREWS OF A RELATIVELY SMALL, 5/16 INCH DIAMETER BY 3 INCHES LONG CAN BE EMBEDDED IN THE TOP, 2X6 CHORD OF A SIMPLE SPAN MEMBER TRUSS A MINIMUM PENETRATION OF 2-1/2"INCHES IS REQUIRED (TYP TYPE RACKING)

SUNPOWER
by South Coast Solar
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3116 SAINT ANNE ST
NEW ORLEANS, LA 70119

MARGERY OLINDE

3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS	DATE	DESCRIPTION	REV ENGG.

PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME
STRUCTURAL ATTACHMENT DETAILS

SHEET NUMBER
S-03

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CONDUIT SCHEDULE

SR. NO.	DESCRIPTION	CONDUIT SIZE
1	(1) #10 AWG THWN-2 (L1) ,(1) #10 AWG THWN-2 (L2) ,(1) #10 AWG THWN-2 (G)	IN 3/4" CONDUIT RUN
2	(3) #6 AWG THWN-2 (L1,L2,N), (1) #10 AWG THWN-2 (G)	IN 3/4" CONDUIT RUN
3	(3) #6 AWG THWN-2 (L1,L2,N)	IN 3/4"" CONDUIT RUN

NOTE:
CONDUIT RUN- EMT,IMC, PVC, RMC, FMC, LFMC, OR EQUIVALENT AS PER NEC.

INVERTER SPECIFICATIONS	
MANUFACTURER	SUNPOWER
MODEL NO.	SPR-X22-360-E-AC (IQ 7XS)
MAX DC INPUT VOLTAGE	79.5 V
MAX OUTPUT POWER	315 VA
NOMINAL AC OUTPUT VOLTAGE	240 V
NOMINAL AC OUTPUT CURRENT	1.31 A

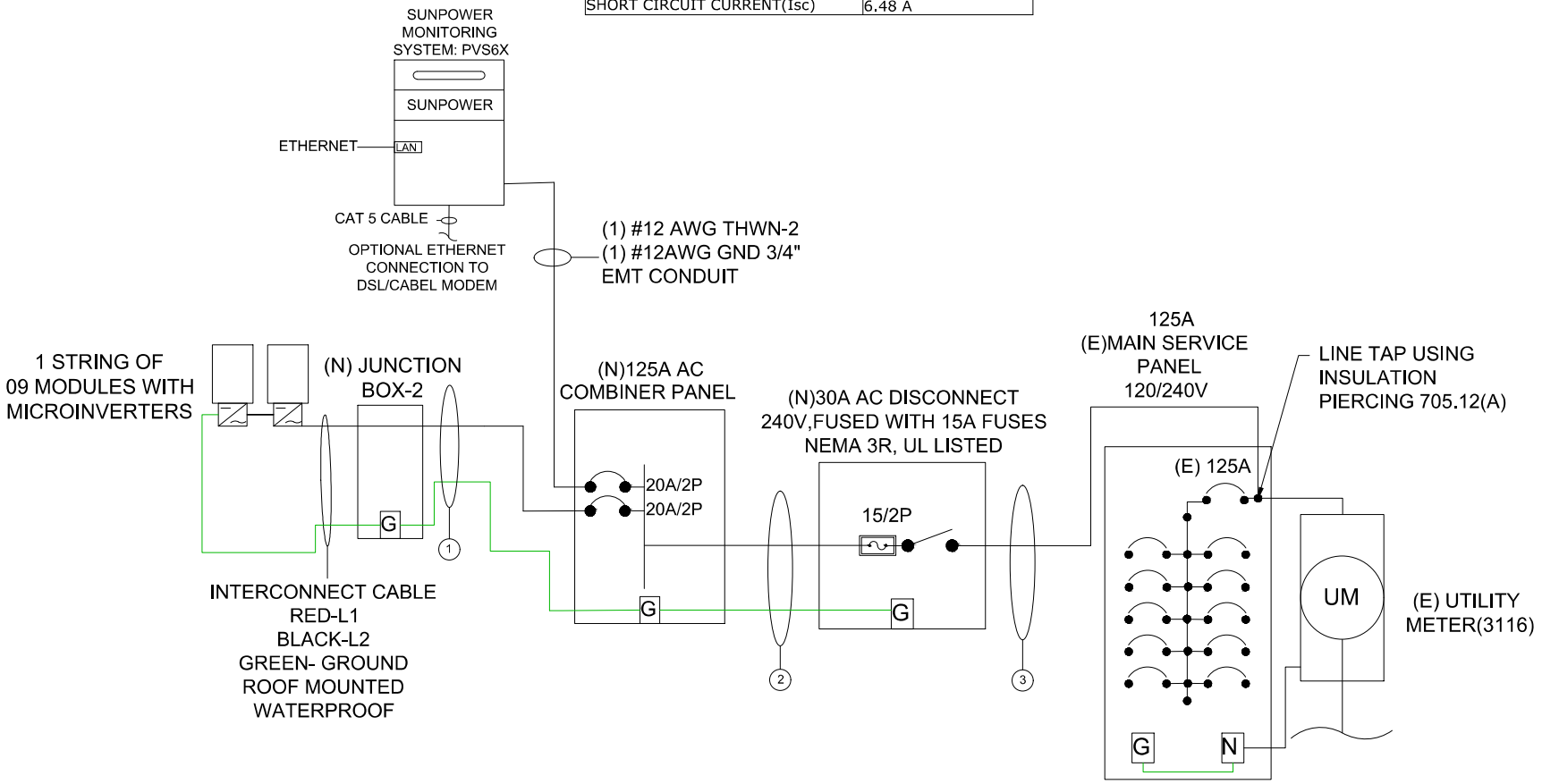
MODULE SPECIFICATIONS	
MODEL NO.	SPR-X22-360-E-AC
PEAK POWER	360 W
RATED VOLTAGE (Vmpp)	59.1 V
RATED CURRENT(Impp)	6.09 A
OPEN CIRCUIT VOLTAGE(Voc)	69.5 V
SHORT CIRCUIT CURRENT(Isc)	6.48 A

NOTE:
1. SUBJECT PV SYSTEMS HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE NEC 2014, AND INCLUDING MAXIMUM NUMBER OF MODULE STRINGS, MAXIMUM NUMBER OF MODULES PER STRING, MAXIMUM OUTPUT, MODULE MANUFACTURER AND MODEL NUMBER, INVERTER MANUFACTURER AND MODEL NUMBER, AS APPLICABLE.
2. PROVIDE TAP BOX IN COMPLIANCE WITH 312.8 IF PANEL GUTTER SPACE IS INADEQUATE.

SOLAR ARRAY (3.24KW-DC STC)

(09) SUNPOWER SPR-X22-360-E-AC SOLAR MODULES
(1) BRANCHES OF 9 MODULES

FOR SYSTEM-1



SUNPOWER by South Coast Solar
ADD : 2605 RIDGELAKE DR, METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

Signature with Seal

MARGERY OLINDE

3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS

REV	ENGG.	DESCRIPTION	DATE

PERMIT DEVELOPER	
DATE	03/23/2022
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REVIEWER	

SHEET NAME
SINGLE LINE DIAGRAM

SHEET NUMBER
E-01(1)

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CONDUIT SCHEDULE

SR. NO.	DESCRIPTION	CONDUIT SIZE
1	(1) #10 AWG THWN-2 (L1) ,(1) #10 AWG THWN-2 (L2) ,(1) #10 AWG THWN-2 (G)	IN 3/4" CONDUIT RUN
2	(3) #6 AWG THWN-2 (L1,L2,N), (1) #10 AWG THWN-2 (G)	IN 3/4" CONDUIT RUN
3	(3) #6 AWG THWN-2 (L1,L2,N)	IN 3/4"" CONDUIT RUN

NOTE:
CONDUIT RUN- EMT,IMC, PVC, RMC, FMC, LFMC, OR EQUIVALENT AS PER NEC.

INVERTER SPECIFICATIONS	
MANUFACTURER	SUNPOWER
MODEL NO.	SPR-X22-360-E-AC (IQ 7XS)
MAX DC INPUT VOLTAGE	79.5 V
MAX OUTPUT POWER	315 VA
NOMINAL AC OUTPUT VOLTAGE	240 V
NOMINAL AC OUTPUT CURRENT	1.31 A

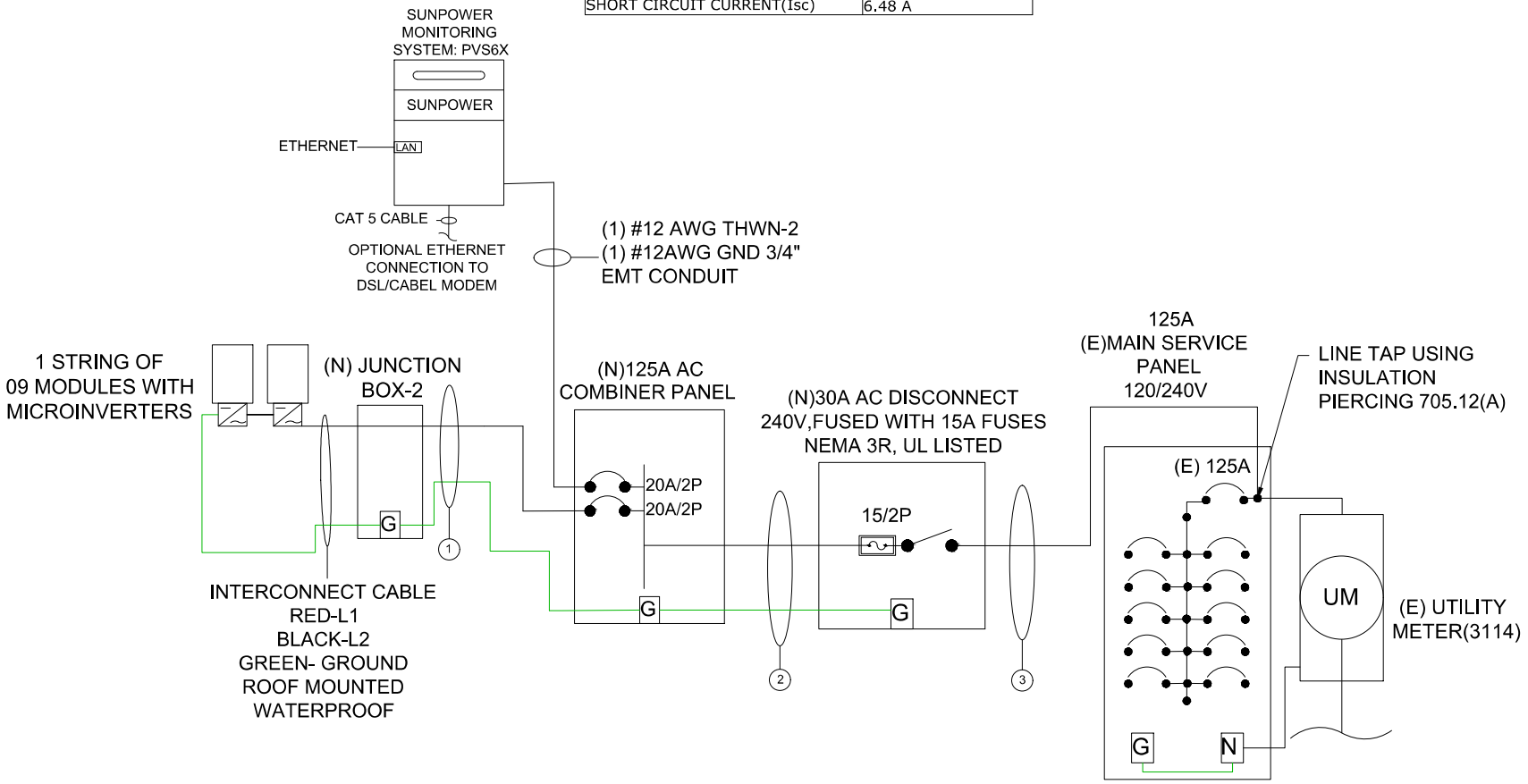
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PEAK POWER	360 W
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RATED CURRENT(Impp)	6.09 A
OPEN CIRCUIT VOLTAGE(Voc)	69.5 V
SHORT CIRCUIT CURRENT(Isc)	6.48 A

NOTE:
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2. PROVIDE TAP BOX IN COMPLIANCE WITH 312.8 IF PANEL GUTTER SPACE IS INADEQUATE.

SOLAR ARRAY (3.24KW-DC STC)

(09) SUNPOWER SPR-X22-360-E-AC SOLAR MODULES
(1) BRANCHES OF 9 MODULES

FOR SYSTEM-2



SUNPOWER
by South Coast Solar
ADD : 2605 RIDGELAKE DR, METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

Signature with Seal

MARGERY OLINDE

3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS

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ENGG.		

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DATE	03/23/2022
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SINGLE LINE DIAGRAM

SHEET NUMBER
E-01(2)

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ELECTRICAL CALCULATIONS (FOR SYSTEM 1 & 2):

1. CURRENT CARRYING CONDUCTOR

(A) BEFORE AC COMBINER PANEL

AMBIENT TEMPERATURE - (34+22)°C= 56°C ...NEC 310.15(B)(3)(c)
TEMPERATURE DERATE FACTOR - 0.71 ...NEC 310.15(B)(2)(a)
GROUPING FACTOR -0.8...NEC 310.15(B)(3)(a)

CONDUCTOR AMPACITY
= (INV O/P CURRENT) x 1.25 / A.T.F / G.F ...NEC 690.8(B)
= [(9x 1.31) x 1.25] / 0.71 / 0.8
= 25.95 A
SELECTED CONDUCTOR - #10 THWN-2 ...NEC 310.15(B)(16)

(B) AFTER AC COMBINER PANEL

TEMPERATURE DERATE FACTOR - 0.96
GROUPING FACTOR - 1

CONDUCTOR AMPACITY
= (TOTAL INV O/P CURRENT) x 1.25 / 0.96 / 1 ...NEC 690.8(B)
= [(9x 1.31) x 1.25] / 0.96 / 1
= 15.35 A
SELECTED CONDUCTOR - #6 THWN-2 ...NEC 310.15(B)(16)

2. PV OVER CURRENT PROTECTION ..NEC 690.9(B)

= TOTAL INVERTER O/P CURRENT x 1.25
= (9 x 1.31) x 1.25 = 14.73 A
SELECTED OCPD = 15 A

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.THE TERMINALS ARE RATED FOR 75 DEGREE C.
3. CONDUCTOR TERMINATION AND SPLICING AS PER NEC 110.14
4. 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.
5. WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
6. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
7. WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
8. ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
9. MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
10. MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
11. THE POLARITY OF THE GROUNDED CONDUCTORS IS NEGATIVE .
12. UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.
13. MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.
14. RACKING CONFORMS TO AND IS LISTED UNDER UL 2703.
15. CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C) (1) AND ARTICLE 310.10 (D).
16. CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).

SUNPOWER
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MARGERY OLINDE
3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS	REV	ENGG.	DESCRIPTION	DATE

PERMIT DEVELOPER	
DATE	03/23/2022
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REVIEWER	

SHEET NAME
WIRING CALCULATIONS

SHEET NUMBER
E-02

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FOR SYSTEM 1 & 2

MULTIPLE POWER SOURCES ARE CONNECTED TO THIS PANEL.

LABEL 1: NEC 705.12(B)(3). AT MAIN PANEL & METER.

1

PV SYSTEM DISCONNECT
RATED AC OPERTING CURRENT: 23.58 A
NOMINAL AC OPERATING VOLTAGE: 240 V

LABEL 2: NEC 690.13(B), NEC690.54. AT PV DISCONNECT. NO HAZARD ON LOAD SIDE

2

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 3: NEC 690.56(C) 3. ON BUILDINGS WITH BOTH UTILITY SERVICE AND A PHOTOVOLTAIC SYSTEM. SET UP ON DISCONNECT OR WITHIN 3 FT.

3

! WARNING !
PV BRANCH CIRCUIT
OUTPUT CONNECTION:

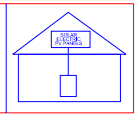
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LABEL 4: NEC 705.12(B)(2)(3)(b). AT COMBINER AND/OR MAIN PANEL. .

4

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 5: NEC 690.56(C) 1(a). ON BUILDINGS WITH BOTH UTILITY SERVICE AND A PHOTOVOLTAIC SYSTEM. SET UP ON DISCONNECT OR WITHIN 3 FT.

5

MULTIPLE POWER SOURCES ARE CONNECTED TO THIS PANEL.
PHOTOVOLTAIC SYSTEM PARAMETERS
PV MODULES IN THIS SYSTEM 18@ SPR-X22-360-E-AC
MAX CURRENT PER MODULE @ 240V 1.31A AC
INSTALLER: SUNPOWER BY SOUTH COAST SOLAR
METAIRIE, LA (504)529-7869 WWW.SOUTHCOASTSOLAR.COM
SPR-X22-360-E-AC(IQ 7XS)

MULTIPLE POWER SOURCES ARE CONNECTED TO THIS PANEL.
PHOTOVOLTAIC SYSTEM PARAMETERS
PV MODULES IN THIS SYSTEM 18@ SUNPOWER SPR-X22-360-E-AC
MAX CURRENT PER MODULE @ 240V 1.31A AC
INSTALLER: SUNPOWER BY SOUTH COAST SOLAR
COLUMBIA, SC (803)254-0294 WWW.SOUTHCOASTSOLAR.COM
SPR-X22-360-E-AC(IQ 7XS)

LABEL 6: VARIATION OF NEC 705.12(B)(3). At COMBINER PANEL.

6

! WARNING !
THIS EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.

LABEL 7: NEC 2017 705.12(B)(2)(3)(c)

7

SUNPOWER
by South Coast Solar
ADD : 2605 RIDGELAKE DR.
METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

Signature with Seal

MARGERY OLINDE

3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS	REV	ENGG.	DESCRIPTION	DATE

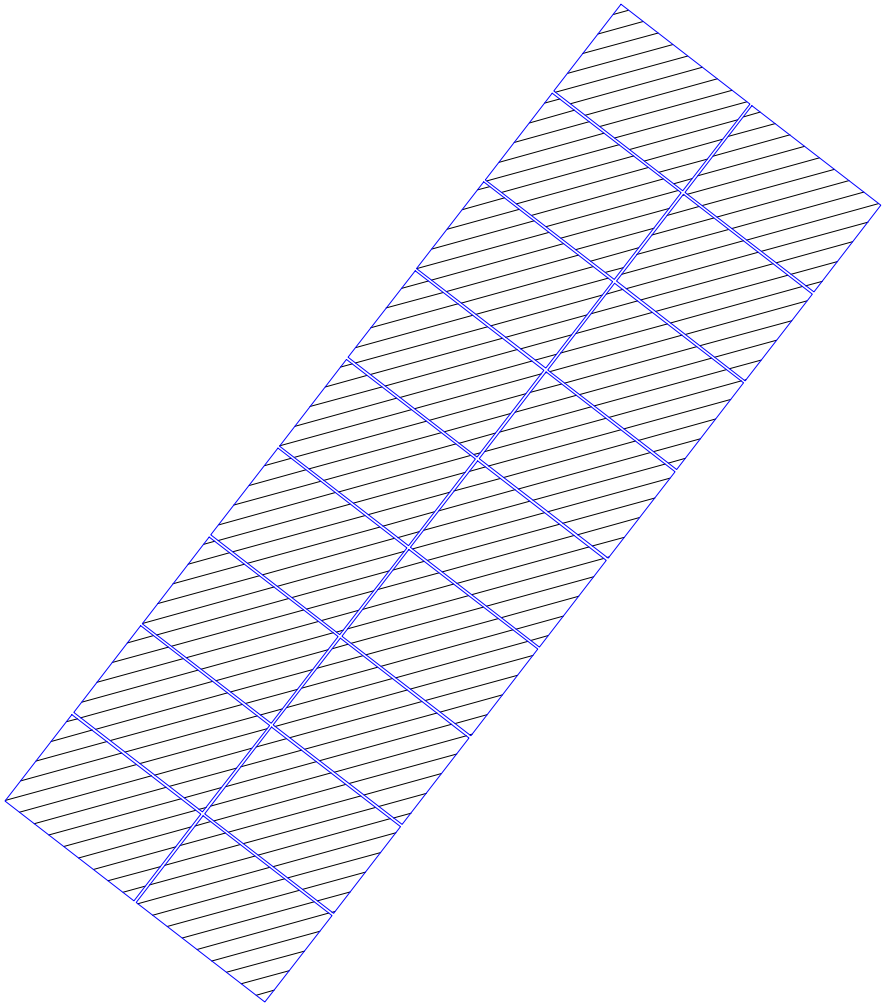
PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME
SYSTEM LABELING

SHEET NUMBER
E-03

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MICROINVERTER LAYOUT



SUNPOWER
by South Coast Solar
ADD : 2605 RIDGELAKE DR,
METAIRIE, LA 70002, USA
USAPHONE: 504-688-4044
FAX: 504-617-6868

Signature with Seal

MARGERY OLINDE

3116 SAINT ANNE ST, NEW ORLEANS,LA 70119

REVISIONS	REV	ENGG.	DESCRIPTION	DATE

PERMIT DEVELOPER	
DATE	03/23/2022
DESIGNER	OPJ
REVIEWER	

SHEET NAME

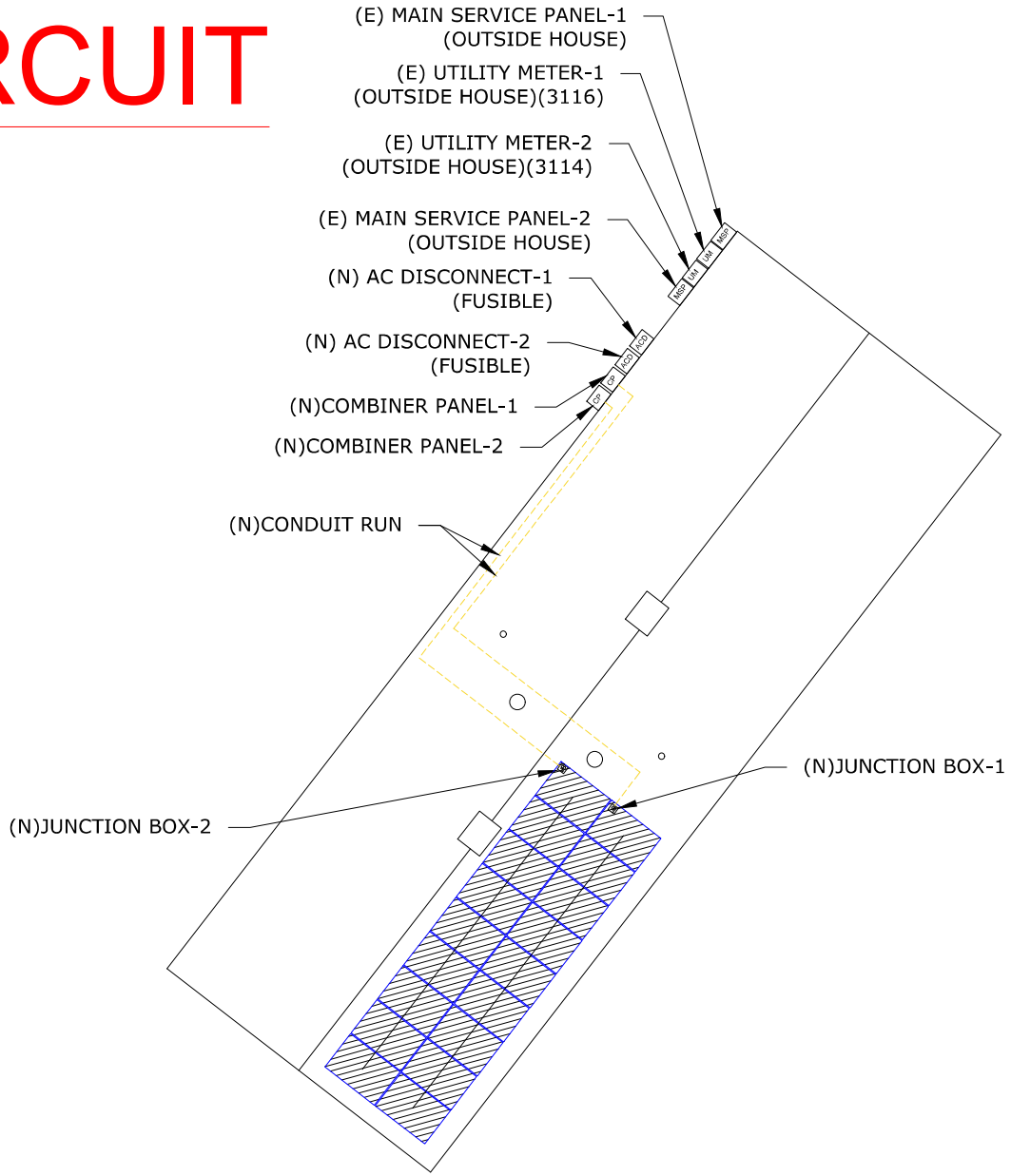
MICROINVERTER LAYOUT

SHEET NUMBER

L-01

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PV CIRCUIT



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by South Coast Solar
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METAIRIE, LA 70002, USA
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Signature with Seal

MARGERY OLINDE

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PV CIRCUIT

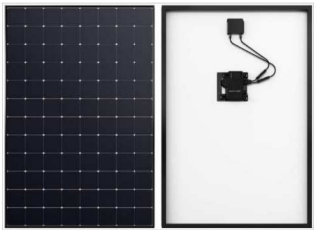
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X-SERIES

SUNPOWER®



SunPower® X-Series: X22-370 | X22-360

SunPower® Residential AC Module

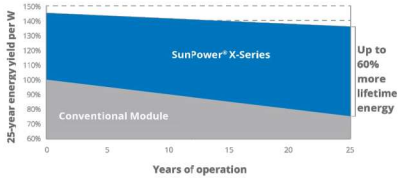
Built specifically for use with the SunPower Equinox™ system, the only fully integrated solution designed, engineered, and warranted by one manufacturer.

Maximum Power. Minimalist Design.

Industry-leading efficiency means more power and savings per available space. With fewer modules required and hidden microinverters, less is truly more.

Highest Lifetime Energy and Savings.

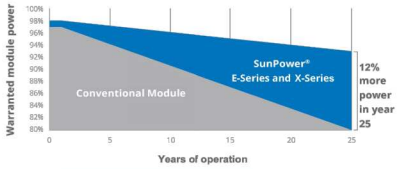
Designed to deliver 60% more energy over 25 years in real-world conditions like partial shade and high temperatures.[1]



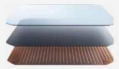
Best Reliability. Best Warranty.

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

25-Yr SunPower Complete Confidence



Fundamentally Different. And Better.



The SunPower® Maxeon® Solar Cell

- Enables highest-efficiency modules available [2]
- Unmatched reliability [3]
- Patented solid metal foundation prevents breakage and corrosion



Factory-integrated Microinverter

- Simpler, faster installation
- Integrated wire management, rapid shutdown
- Engineered and calibrated by SunPower for SunPower modules

Datasheet

X-Series: X22-370 | X22-360 SunPower® Residential AC Module

AC Electrical Data	
Inverter Model: Type E (IQ 7XS)	@240 VAC
Peak Output Power	320 VA
Max. Continuous Output Power	315 VA
Nom. (L–L) Voltage/Range[2] (V)	240 / 211–264
Max. Continuous Output Current (A)	1.31
Max. Units per 20 A (LL) Branch Circuit[3]	12 (single phase)
CEC Weighted Efficiency	97.5%
Nom. Frequency	60 Hz
Extended Frequency Range	47–68 Hz
AC Short Circuit Fault Current Over 3 Cycles	5.8 A rms
Overvoltage Class AC Port	III
AC Port Backfeed Current	18 mA
Power Factor Setting	1.0
Power Factor (adjustable)	0.7 lead. / 0.7 lag.
No active phase balancing for three-phase installations	

DC Power Data	SPR-X22-370-E-AC	SPR-X22-360-E-AC
Nominal Power [4](Pnom)	370 W	360 W
Power Tolerance	+5/–0%	+5/–0%
Module Efficiency [5]	22.7%	22.1%
Temp. Coef. (Power)	–0.29%/°C	–0.29%/°C
Shade Tolerance	• Three bypass diodes • Integrated module-level maximum power point tracking	

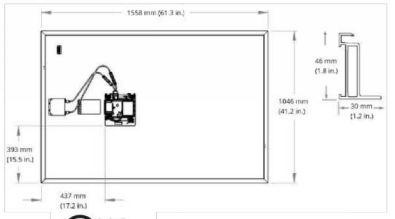
Tested Operating Conditions	
Operating Temp.	–40°F to +185°F (–40°C to +85°C)
Max. Ambient Temp.	122°F (50°C)
Max. Test Load[7]	Wind: 154 psf, 7400 Pa, 754 kg/m² back Snow: 208 psf, 10000 Pa, 1019 kg/m² front
Design Load	Wind: 62 psf, 3000 Pa, 305 kg/m² back Snow: 125 psf, 6000 Pa, 611 kg/m² front
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)

Mechanical Data	
Solar Cells	96 Monocrystalline Maxeon Gen III
Front Glass	High-transmission tempered glass with anti-reflective coating
Environmental Rating	Module: Outdoor rated Inverter: NEMA Type 6 Class II
Frame	Class 1 black anodized (highest AAMA rating)
Weight	42.9 lb (19.5 kg)
Recommended Max. Module Spacing	1.3 in. (33 mm)

Warranties, Certifications, and Compliance	
Warranties	• 25-year limited power warranty • 25-year limited product warranty
Certifications and Compliance	• UL 1703 • UL 1741 / IEEE-1547 • UL 1741 AC Module (Type 2 fire rated) • UL 62109-1 / IEC 62109-2 • FCC Part 15 Class B • ICES-0003 Class B • CAN/CSA-C22.2 NO. 107.1-01 • CA Rule 21 (UL 1741 SA)[4] (includes Volt/Var and Reactive Power Priority) • UL Listed PV Rapid Shutdown Equipment[6] Enables installation in accordance with: • NEC 690.6 (AC module) • NEC 690.12 Rapid Shutdown (inside and outside the array) • NEC 690.15 AC Connectors, 690.33(A)–(E)(1) When used with InvisiMount racking and InvisiMount accessories (UL 2703): • Module grounding and bonding through InvisiMount • Class A fire rated When used with AC module Q Cables and accessories (UL 6703 and UL 2238)[8]: • Rated for load break disconnect
PID Test	Potential-induced degradation free

1 SunPower 360 W compared to a conventional module on same-sized arrays (260 W, 16% efficient; approx. 1.6 m²), 4% more energy per watt (based on third-party module characterization and PVSim), 0.75%/yr slower degradation (Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013).
2 Based on search of datasheet values from websites of top 10 manufacturers per IHS, as of January 2017.
3 #1 rank in "Fraunhofer PV Durability Initiative for Solar Modules: Part 3," PV Tech Power Magazine, 2015. Campeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, 2013.
4 Factory set to 1547a-2014 default settings. CA Rule 21 default settings profile set during commissioning.
5 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25°C). NREL calibration standard: SOMS current, LACCS FF and voltage. All DC voltage is fully contained within the module.
6 This product is UL Listed as PVRSE and conforms with NEC 2014 and NEC 2017 690.12; and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors; when installed according to manufacturer's instructions.
7 Please read the safety and installation instructions for more information regarding load ratings and mounting configurations.

See www.sunpower.com/facts for more reference information.
For more details, see extended datasheet www.sunpower.com/datasheets Specifications included in this datasheet are subject to change without notice.
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UL LISTED Module Fire Performance: Type 2

SUNPOWER®

Please read the Safety and Installation Instructions for details.

531945 RevC

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REVISIONS

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DESIGNER	OPJ
REVIEWER	

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MODULE & INVERTER DATASHEET

SHEET NUMBER
DS-01

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SunPower® InvisiMount™ | Residential Mounting System

Simple and Fast Installation

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

Flexible Design

- Addresses nearly all sloped residential roofs
- Design in landscape and portrait
- Rails enable easy obstacle management

Customer-Preferred Aesthetics

- #1 module and #1 mounting aesthetics
- Best-in-class system aesthetics
- Premium, low-profile design
- Black anodized components
- Hidden mid clamps and end clamps and capped, flush rails

Part of Superior System

- Built for use with SunPower DC and AC modules
- Best-in-class system reliability and aesthetics
- Combine with SunPower modules and monitoring app





Elegant Simplicity

SunPower® InvisiMount™ is a SunPower-designed rail-based mounting system. The InvisiMount system addresses residential sloped roofs and combines faster installation time, design flexibility, and superior aesthetics. The InvisiMount product was specifically envisioned and engineered to pair with SunPower modules. The resulting system-level approach will amplify the aesthetic and installation benefits for both homeowners and installers.

sunpower.com

Datasheet

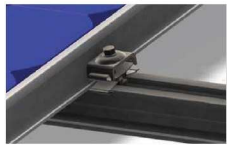
SUNPOWER®



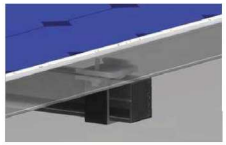
SunPower® InvisiMount™ | Residential Mounting System

InvisiMcunt Component Images

Module* / Mid Clamp and Rail



Module* / End Clamp and Rail



Mid Clamp



End Clamp



Rail & Rail Splice



Ground Lug Assembly



End Cap



InvisiMount Component Details

Component	Material	Weight
Mid Clamp	Black oxide stainless steel AISI 304	63 g (2.2 oz)
End Clamp	Black anodized aluminum alloy 6063-T6	110 g (3.88 oz)
Rail	Black anodized aluminum alloy 6005-T6	830 g/m (9 oz/ft)
Rail Splice	Aluminum alloy 6005-T5	830 g/m (9 oz/ft)
Ground Lug Assembly	304 stainless (A2-70 bolt; tin-plated copper lug)	106.5 g/m (3.75 oz)
End Cap	Black acetal (POM) copolymer	10.4 g (0.37 oz)

Roof Attachment Hardware Supported by InvisiMount System Design Tool

Application	• Composition Shingle Rafter Attachment • Composition Shingle Roof Decking Attachment • Curved and Flat Tile Roof Attachment • Universal Interface for Other Roof Attachments

InvisiMount Operating Conditions

Temperature	–40° C to 90° C (–40° F to 194° F)
Max. Load (LRFD)	• 3000 Pa uplift • 6000 Pa downforce

InvisiMount Warranties And Certifications

Warranties	• 25-year product warranty • 5-year finish warranty
Certifications	• UL 2703 Listed • Class A Fire Rated

Roof Attachment Hardware Warranties

Refer to roof attachment hardware manufacturer's documentation.

*Module frame that is compatible with the InvisiMount system required for hardware interoperability.

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ATTACHMENT AND RACKING DATASHEET

SHEET NUMBER
DS-02