

September 21, 2022

Posigen Solar
1600 Olden Avenue, Unit 10
Ewing, NJ 08638

Re: Engineering Services
Vine Residence
8519 Apricot Street, New Orleans LA
5.810 kW System

To Whom It May Concern:

We have received information regarding solar panel installation on the roof of the above referenced structure. Our evaluation of the structure is to verify the existing capacity of the roof system and its ability to support the additional loads imposed by the proposed solar system.

A. Site Assessment Information

1. Site visit documentation identifying attic information including size and spacing of framing for the existing roof structure.
2. Design drawings of the proposed system including a site plan, roof plan and connection details for the solar panels. This information will be utilized for approval and construction of the proposed system.
3. The addition of solar panels will not exceed the height of the existing building
4. The outermost part of the solar panels will be less than 6 inches off the existing slope of the existing roof.

B. Description of Structure:

Roof Framing: 2x6 dimensional lumber at 16" on center.
Roof Material: Composite Asphalt Shingles
Roof Slope: 25 degrees
Attic Access: Accessible
Foundation: Permanent

C. Loading Criteria Used

- **Dead Load**
 - Existing Roofing and framing = 7 psf
 - New Solar Panels and Racking = 3 psf
 - TOTAL = 10 PSF
- **Live Load** = 20 psf (reducible) – 0 psf at locations of solar panels
- **Ground Snow Load** = 0 psf
- **Wind Load** based on ASCE 7-16
 - Ultimate Wind Speed = 144 mph (based on Risk Category II)
 - Exposure Category C

Analysis performed of the existing roof structure utilizing the above loading criteria is in accordance with the 2018 International Residential Code, including provisions allowing existing structures to not require strengthening if the new loads do not exceed existing design loads by 105% for gravity elements and 110% for seismic elements. This analysis indicates that the existing framing will support the additional panel loading without damage, if installed correctly.

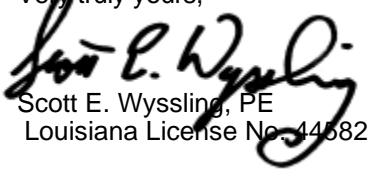
D. Solar Panel Anchorage

1. The solar panels shall be mounted in accordance with the most recent K2 Systems installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
2. The maximum allowable withdrawal force for a $\frac{5}{16}$ " lag screw is 235 lbs per inch of penetration as identified in the National Design Standards (NDS) of timber construction specifications. Based on a minimum penetration depth of $2\frac{1}{2}$ ", the allowable capacity per connection is greater than the design withdrawal force (demand). Considering the variable factors for the existing roof framing and installation tolerances, the connection using one $\frac{5}{16}$ " diameter lag screw with a minimum of $2\frac{1}{2}$ " embedment will be adequate and will include a sufficient factor of safety.
3. Considering the wind speed, roof slopes, size and spacing of framing members, and condition of the roof, the panel supports shall be placed no greater than 48" on center.
4. Panel supports connections shall be staggered to distribute load to adjacent framing members.

Based on the above evaluation, this office certifies that with the racking and mounting specified, the existing roof system will adequately support the additional loading imposed by the solar system. This evaluation is in conformance with the 2018 IRC, current industry standards, and is based on information supplied to us at the time of this report.

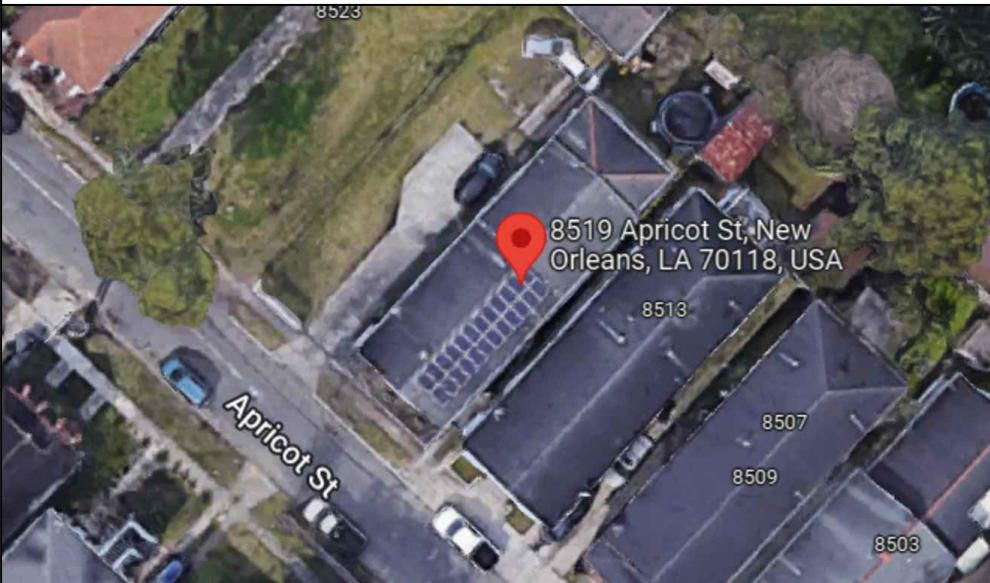
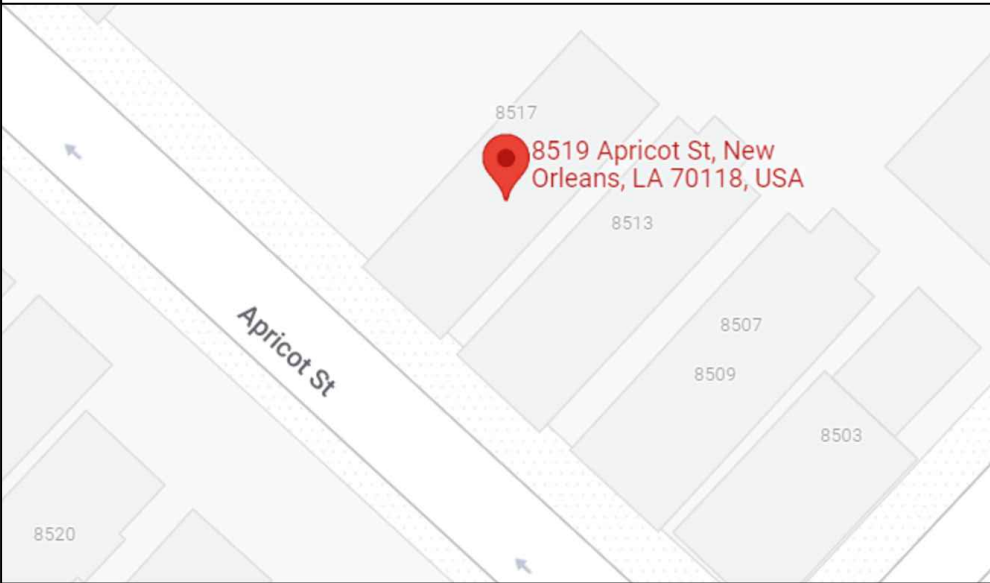
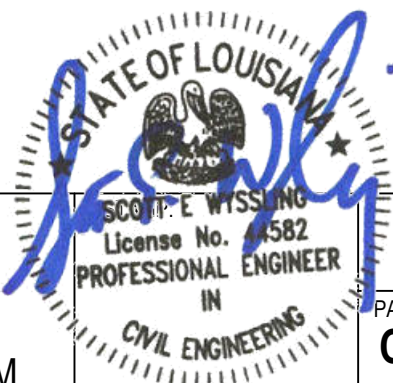

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,


Scott E. Wyssling, PE
Louisiana License No. 44582



Date Signed 9/21/22

<div>ABBREVIATIONS</div> <table><tr><td>A</td><td>AMPERE</td></tr><tr><td>AC</td><td>ALTERNATING CURRENT</td></tr><tr><td>BLDG</td><td>BUILDING</td></tr><tr><td>CONC</td><td>CONCRETE</td></tr><tr><td>C</td><td>COMBINER BOX</td></tr><tr><td>D</td><td>DISTRIBUTION PANEL</td></tr><tr><td>DC</td><td>DIRECT CURRENT</td></tr><tr><td>EGC</td><td>EQUIPMENT GROUNDING CONDUCTOR</td></tr><tr><td>(E)</td><td>EXISTING</td></tr><tr><td>EMT</td><td>ELECTRICAL METALLIC TUBING</td></tr><tr><td>GALV</td><td>GALVANIZED</td></tr><tr><td>GEC</td><td>GROUNDING ELECTRODE CONDUCTOR</td></tr><tr><td>GND</td><td>GROUND</td></tr><tr><td>HDG</td><td>HOT DIPPED GALVANIZED</td></tr><tr><td>I</td><td>CURRENT</td></tr><tr><td>Imp</td><td>CURRENT AT MAX POWER</td></tr><tr><td>INVS</td><td>INVERTERS</td></tr><tr><td>Isc</td><td>SHORT CIRCUIT CURRENT</td></tr><tr><td>kVA</td><td>KILOVOLT AMPERE</td></tr><tr><td>kW</td><td>KILOWATT</td></tr><tr><td>LBW</td><td>LOAD BEARING WALL</td></tr><tr><td>MIN</td><td>MINIMUM</td></tr><tr><td>(N)</td><td>NEW</td></tr><tr><td>NEC</td><td>NATIONAL ELECTRIC CODE</td></tr><tr><td>NIC</td><td>NOT IN CONTRACT</td></tr><tr><td>NTS</td><td>NOT TO SCALE</td></tr><tr><td>OC</td><td>ON CENTER</td></tr><tr><td>P</td><td>PANEL BOARD</td></tr><tr><td>PL</td><td>PROPERTY LINES</td></tr><tr><td>PV</td><td>PHOTOVOLTAIC</td></tr><tr><td>PVC</td><td>POLYVINYL CHLORIDE</td></tr><tr><td>S</td><td>SUBPANEL</td></tr><tr><td>SCH</td><td>SCHEDULE</td></tr><tr><td>SS</td><td>STAINLESS STEEL</td></tr><tr><td>SSD</td><td>SEE STRUCTURAL DIAGRAMS</td></tr><tr><td>STC</td><td>STANDARD TESTING CONDITIONS</td></tr><tr><td>SWH</td><td>SOLAR WATER HEATER</td></tr><tr><td>TYP</td><td>TYPICAL</td></tr><tr><td>UON</td><td>UNLESS OTHERWISE NOTED</td></tr><tr><td>UPS</td><td>UNINTERRUPTIBLE POWER SUPPLY</td></tr><tr><td>V</td><td>VOLT</td></tr><tr><td>Vmp</td><td>VOLTAGE AT MAX POWER</td></tr><tr><td>Voc</td><td>VOLTAGE AT OPEN CIRCUIT</td></tr><tr><td>W</td><td>WATT</td></tr><tr><td>3R</td><td>NEMA 3R, RAIN TIGHT</td></tr></table>		A	AMPERE	AC	ALTERNATING CURRENT	BLDG	BUILDING	CONC	CONCRETE	C	COMBINER BOX	D	DISTRIBUTION PANEL	DC	DIRECT CURRENT	EGC	EQUIPMENT GROUNDING CONDUCTOR	(E)	EXISTING	EMT	ELECTRICAL METALLIC TUBING	GALV	GALVANIZED	GEC	GROUNDING ELECTRODE CONDUCTOR	GND	GROUND	HDG	HOT DIPPED GALVANIZED	I	CURRENT	Imp	CURRENT AT MAX POWER	INVS	INVERTERS	Isc	SHORT CIRCUIT CURRENT	kVA	KILOVOLT AMPERE	kW	KILOWATT	LBW	LOAD BEARING WALL	MIN	MINIMUM	(N)	NEW	NEC	NATIONAL ELECTRIC CODE	NIC	NOT IN CONTRACT	NTS	NOT TO SCALE	OC	ON CENTER	P	PANEL BOARD	PL	PROPERTY LINES	PV	PHOTOVOLTAIC	PVC	POLYVINYL CHLORIDE	S	SUBPANEL	SCH	SCHEDULE	SS	STAINLESS STEEL	SSD	SEE STRUCTURAL DIAGRAMS	STC	STANDARD TESTING CONDITIONS	SWH	SOLAR WATER HEATER	TYP	TYPICAL	UON	UNLESS OTHERWISE NOTED	UPS	UNINTERRUPTIBLE POWER SUPPLY	V	VOLT	Vmp	VOLTAGE AT MAX POWER	Voc	VOLTAGE AT OPEN CIRCUIT	W	WATT	3R	NEMA 3R, RAIN TIGHT	<div>ELECTRICAL NOTES</div> <div><div><div>1.</div><div>WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A SIGN WILL BE PROVIDED WARNING OF THE HAZARDS PER ART. 690.17.</div></div><div><div>2.</div><div>EACH UNGROUNDED CONDUCTOR OF THE MULTIWIRE BRANCH CIRCUIT WILL BE IDENTIFIED BY PHASE AND SYSTEM PER ART. 210.5.</div></div><div><div>3.</div><div>A NATIONALLY-RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH ART. 110.3.</div></div><div><div>4.</div><div>CIRCUITS OVER 250V TO GROUND SHALL COMPLY WITH ART. 250.97, 250.92(B)</div></div><div><div>5.</div><div>DC CONDUCTORS EITHER DO NOT ENTER BUILDING OR ARE RUN IN METALLIC RACEWAYS OR ENCLOSURES TO THE FIRST ACCESSIBLE DC DISCONNECTING MEANS PER ART. 690.31(E).</div></div><div><div>6.</div><div>ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY INTO BOXES AS REQUIRED BY UL LISTING.</div></div><div><div>7.</div><div>MODULE FRAMES SHALL BE GROUNDED AT THE UL-LISTED LOCATION PROVIDED BY THE MANUFACTURER USING UL LISTED GROUNDING HARDWARE.</div></div><div><div>8.</div><div>ALL EXPOSED METAL PARTS (MODULE FRAMES, RAIL, BOXES, ETC.) SHALL BE GROUNDED USING UL LISTED LAY-IN LUGS LISTED FOR THE PURPOSE. POSTS SHALL BE MADE ELECTRICALLY CONTINUOUS WITH ATTACHED RAIL.</div></div><div><div>9.</div><div>MODULE FRAMES, RAIL, AND POSTS SHALL BE BONDED WITH EQUIPMENT GROUND CONDUCTORS AND GROUNDED AT THE MAIN ELECTRIC PANEL.</div></div><div><div>10.</div><div>THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO ART. 250.166(B) & 690.47.</div></div></div>		<div>AERIAL VIEW</div> <div></div> <div>VICINITY MAP</div> <div></div> <div><div>GENERAL NOTES</div><div><div><div>1.</div><div>THIS SYSTEM IS GRID-INTERTIED VIA A UL-LISTED POWER-CONDITIONING INVERTER.</div></div><div><div>2.</div><div>THIS SYSTEM HAS NO BATTERIES, NO UPS.</div></div><div><div>3.</div><div>ALL INVERTERS AND ARRAYS ARE NEGATIVELY GROUNDED.</div></div><div><div>4.</div><div>SOLAR MOUNTING FRAMES ARE TO BE GROUNDED.</div></div></div></div>		<div>INDEX</div> <table><tr><td>PV-1</td><td>COVER SHEET</td></tr><tr><td>PV-2</td><td>SITE PLAN</td></tr><tr><td>PV-3</td><td>ATTACHMENT PLAN</td></tr><tr><td>PV-4</td><td>ATTACHMENT DETAIL</td></tr><tr><td>PV-5</td><td>SINGLE-LINE DIAGRAM</td></tr><tr><td>PV-5.1</td><td>ELECTRICAL NOTES</td></tr><tr><td>PV-6</td><td>PLACARD</td></tr><tr><td>PV-7</td><td>SAFETY LABELS</td></tr><tr><td rowspan="5"></td><td>BILL OF MATERIAL</td></tr><tr><td>MODULE DATASHEET</td></tr><tr><td>OPTIMIZER DATASHEET</td></tr><tr><td>INVERTER DATASHEET</td></tr><tr><td>MOUNTING SYSTEM DATASHEET</td></tr><tr><td colspan="2">MOUNTING SYSTEM ENGINEERING LETTER</td></tr><tr><td colspan="2">UL 2703 GROUND AND BONDING CERTIFICATION</td></tr></table> <div>APPLICABLE CODE</div> <div>INTERNATIONAL BUILDING CODE 2018 ((IBC 2018))</div> <div>INTERNATIONAL RESIDENTIAL CODE 2018 (IRC 2018)</div> <div>INTERNATIONAL FIRE CODE 2015 (IFC 2015)</div> <div>NATIONAL ELECTRICAL CODE 2014(NEC 2014)</div> <div>AHJ: NEW ORLEANS CITY</div> <div>UTILITY: ENTERGY</div> <div><div></div></div>	PV-1	COVER SHEET	PV-2	SITE PLAN	PV-3	ATTACHMENT PLAN	PV-4	ATTACHMENT DETAIL	PV-5	SINGLE-LINE DIAGRAM	PV-5.1	ELECTRICAL NOTES	PV-6	PLACARD	PV-7	SAFETY LABELS		BILL OF MATERIAL	MODULE DATASHEET	OPTIMIZER DATASHEET	INVERTER DATASHEET	MOUNTING SYSTEM DATASHEET	MOUNTING SYSTEM ENGINEERING LETTER		UL 2703 GROUND AND BONDING CERTIFICATION		<div>PV-1</div> <div>PAGE NAME:</div> <div>COVER SHEET</div> <div>SCALE:</div> <div>NTS</div> <div>DATE:</div> <div>9/15/2022</div>
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ARRAY 1

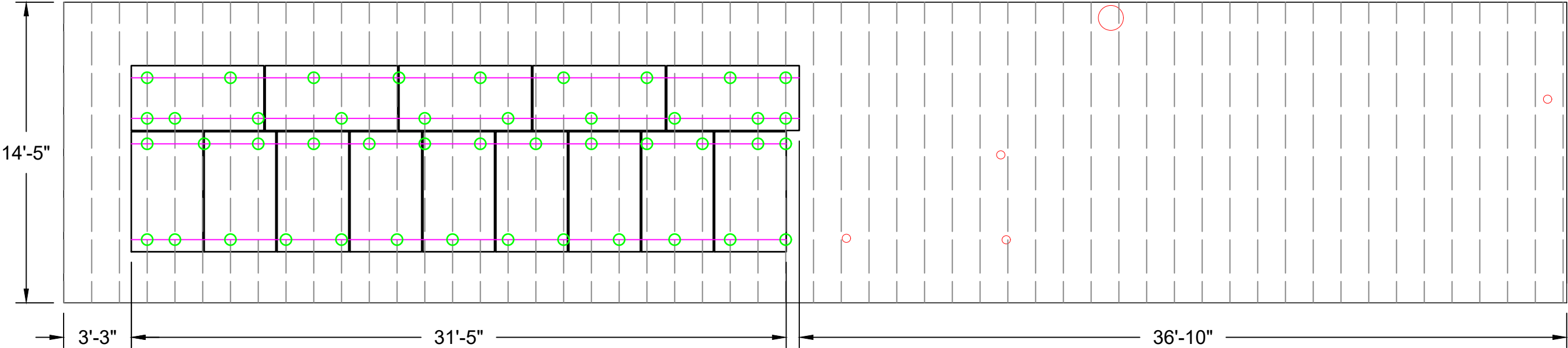
LEGEND


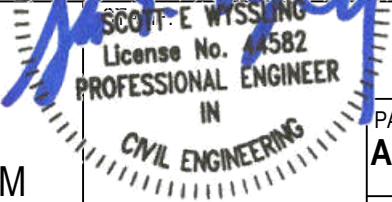
- ROOF
- RAFTERS
- RAIL
- MOUNT
- OBSTRUCTION

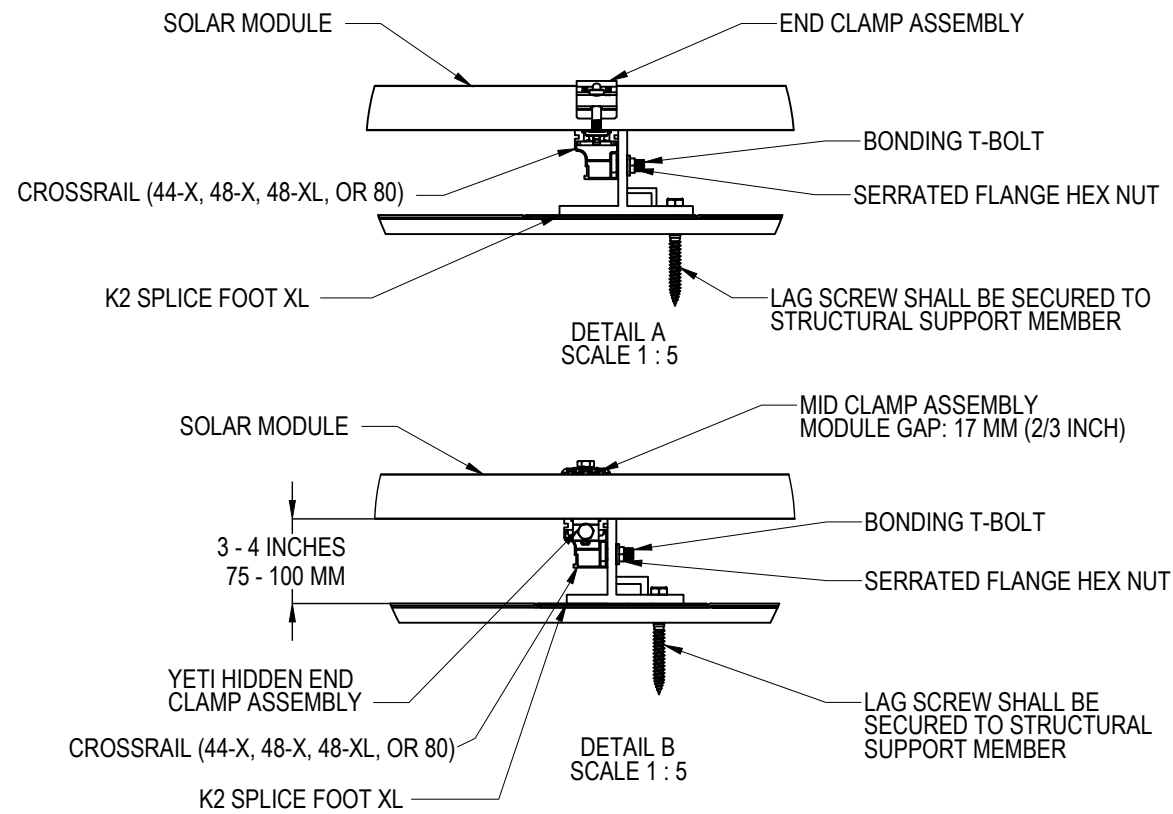
TOTAL PENETRATION COUNT: 45

ARRAY 1

RAFTER PROFILE	2"X6"
RAFTER SPACING	16"OC
RIDGE PROFILE	2"X8"
C.T. PROFILE	----
C.T. SPACING	----OC
ARRAY PITCH	25°
ARRAY AZIMUTH	130°
ROOF SURFACE TYPE	COMP. SHINGLE
TOTAL NO. OF PENETRATION	45
STORIES	1

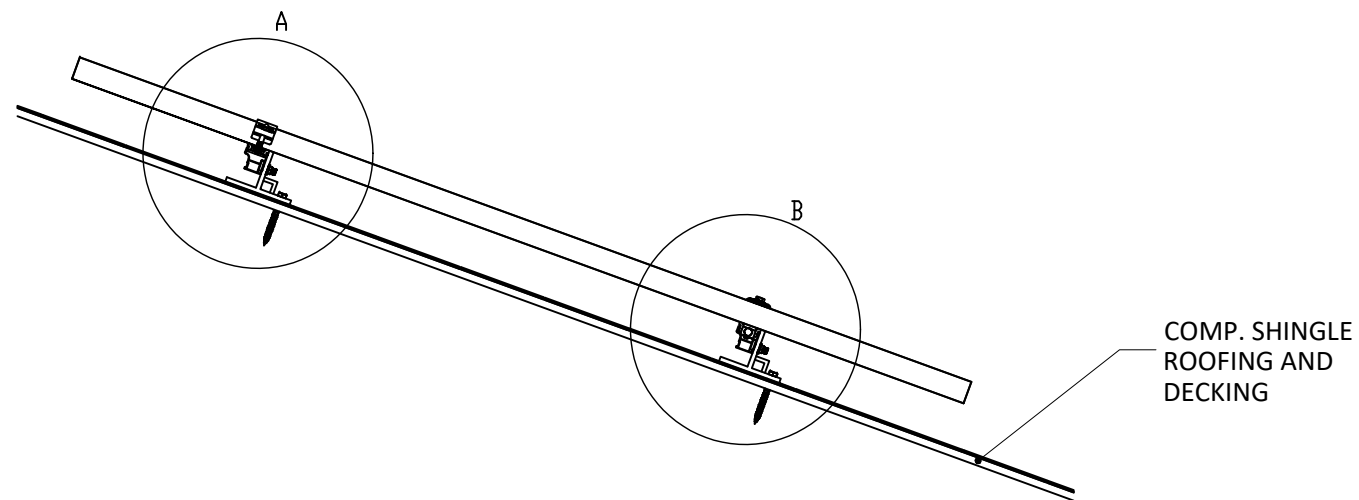


 PosiGen Solar Energy and Energy Efficiency	JOB NUMBER: P-004807	OWNER: WALTER VINE, 8519 APRICOT STNEW ORLEANS, LA 70118	DESCRIPTION: WALTER VINE, RESIDENCE 5.81 kWDC ROOF SOLAR SYSTEM PRODUCTION: 6,694kWH	 PV-3		
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OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER		DATE: 9/15/2022				
INVERTER: (1)SOLAREEDGE SE6000H-US						



1 ENLARGED VIEW

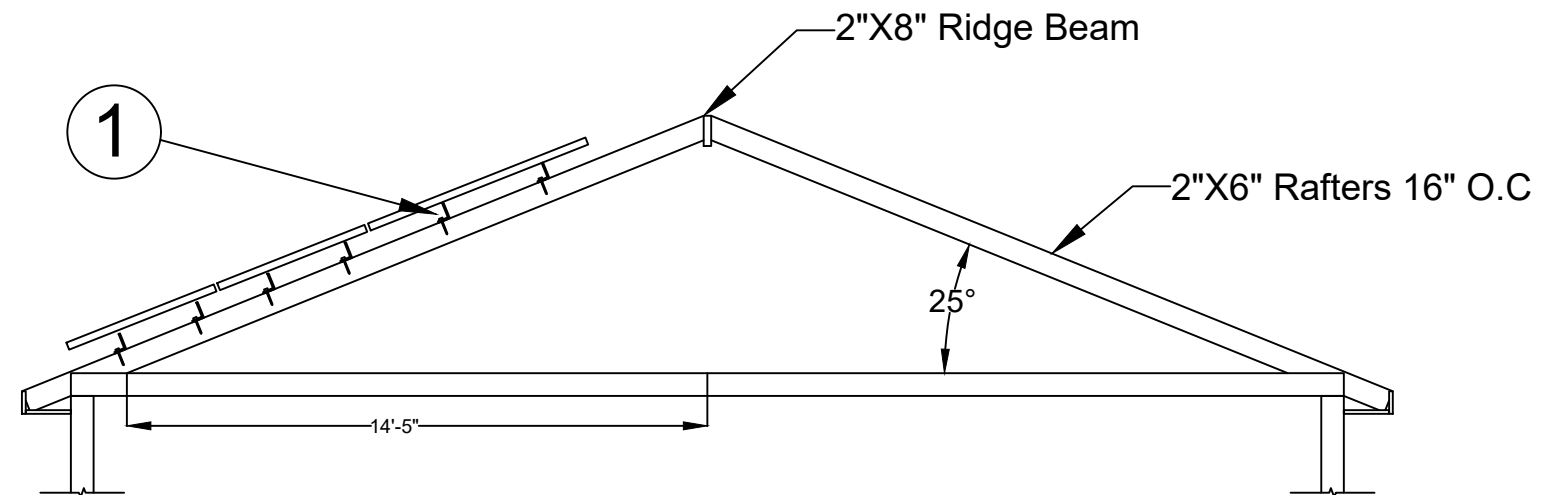
SCALE: NTS



2 ATTACHMENT DETAIL (SIDE VIEW)

SCALE: NTS

FRAME SECTION 1



JOB NUMBER: P-004807

UTILITY: ENTERGY

RACKING: K2 CROSSRAIL SYSTEM

MODULES: (14)CS3N-415MS

OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER

INVERTER: (1)SOLAREEDGE SE6000H-US

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WALTER VINE,
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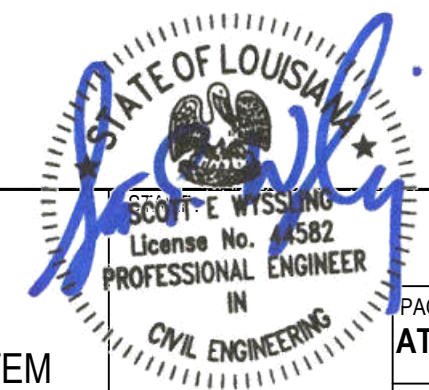
WALTER VINE,
RESIDENCE

5.81 kWDC ROOF SOLAR SYSTEM
PRODUCTION: 6,694kWH

DESIGNED BY:

ENERQUAL

REV:



Signed 9/21/2022

PV-4

PAGE NAME:

ATTACHMENT DETAIL

SCALE:

NTS

DATE:

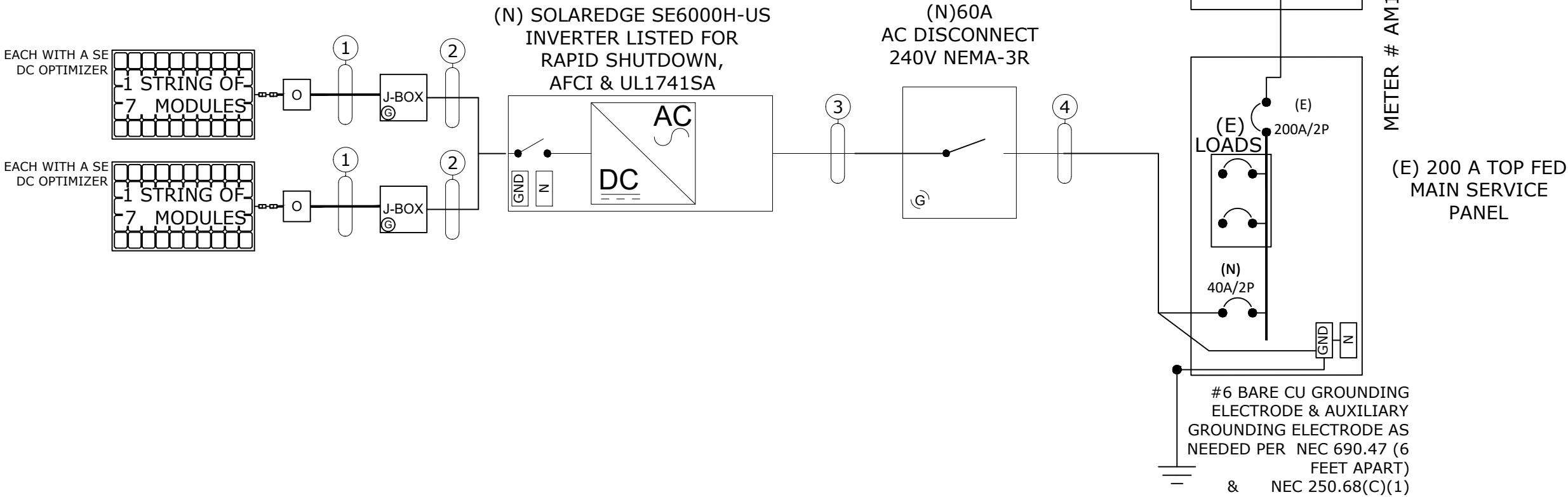
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POSIGEN DEVELOPER, LLC
819 CENTRAL AVE STE 210
JEFFERSON, LA 70121
LA ELECTRICAL LICENSE :74446

WIRE TAG #	CONDUIT	WIRE QTY	WIRE GAUGE:	WIRE TYPE	TEMP RATING:	WIRE AMP	TEMP DE-RATE:	CONDUIT FILL:	WIRE OCP:	TERMINAL 75°C RATING:	STRING WATTAGE	OPERATING VOLTAGE	STRING AMPS	NEC:	MAX AMPS	MAX. SYSTEM VOLTAGE	GRND SIZE	GRND WIRE TYPE
1	Open Air	2	#10	PV WIRE	90°	40	x 0.96	x 1	= 38.40A	35 A	2905	/ 380	= 7.64	x 1.25	= 9.56 A	480	#6	SBC
2	3/4" EMT	2	#10	THWN-2	90°	40	x 0.96	x 1	= 38.40A	35 A	2905	/ 380	= 7.64	x 1.25	= 9.56 A	480	#10	THWN-2
3	3/4" EMT	3	#8	THWN-2	90°	55	x 0.96	x 1	= 52.80A	50 A		/	= 25	x 1.25	= 31.25 A	240	#10	THWN-2
4	3/4" EMT	3	#8	THWN-2	90°	55	x 0.96	x 1	= 52.80A	50 A		/	= 25	x 1.25	= 31.25 A	240	#10	THWN-2

INVERTER SPECS			OPTIMIZER SPECS			DISCONNECTS			MODULE SPECS				ASHRAE AMBIENT TEMPERATURE SPECS		
INVERTER:SE6000H-US			OPTIMIZER:S440			MAKE:EATON DG222NRB			MODULE TYPE: QTY: WATTAGE: FRAME COLOR:				High Temp	DISTANCE ABOVE ROOF	EXTREME
QTY:1			QTY:14			QTY:1			CS3N-415MS 14 415 BLACK				2% Avg.	1"	MIN
VOLTAGE: 240			WATTAGE: 6000			RATED CURRENT: 60A			Voc: 45.1V Isc: 11.68A Imp: 10.98A Vpmax: 37.8V				34.2° C	NO TEMP ADDER PER 310.15(B)(3)(C)	-1.4° C
NEC EFF: 99%			CELL: 60			ISC: 14.5			MAX STRING WATTAGE: 5700						
						MAX RATED VOLTAGE: 240V									


UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.
CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C) (1) AND ARTICLE 310.10 (D).
CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).
ALL BOS COMPONENTS SHALL BE INSTALLED WITHIN 10 FT OF ADJACENT COMPONENTS




FOR MSP

120 % RULE

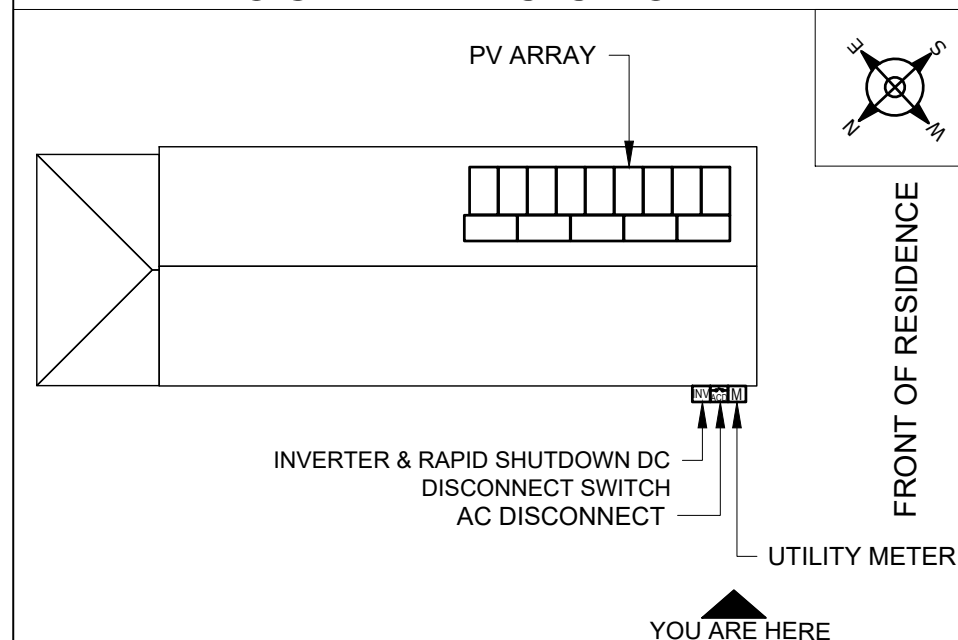
$$\left(\frac{\text{BUS BAR}}{200\text{A} \times 1.2} \right) - 200\text{A} = 40\text{A}$$

<div><div>Solar Energy and Energy Efficiency</div></div> <div>POSIGEN DEVELOPER, LLC 819 CENTRAL AVE STE 210 JEFFERSON, LA 70121 LA ELECTRICAL LICENSE :74446</div>	JOB NUMBER: P-004807	OWNER: WALTER VINE, 8519 APRICOT STNEW ORLEANS, LA 70118	DESCRIPTION: WALTER VINE, RESIDENCE 5.81 kWDC ROOF SOLAR SYSTEM PRODUCTION: 6,694kWH	STAMP:	PV-5
	UTILITY: ENTERGY				
	RACKING: K2 CROSSRAIL SYSTEM				
	MODULES: (14)CS3N-415MS	ACCOUNT NUMBER : 56464969			
OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER			DESIGNED BY: ENERQUAL	REV:	SCALE: NTS
INVERTER: (1)SOLAREEDGE SE6000H-US					DATE: 9/15/2022

GROUNDING NOTES		7	EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC ARTICLE 690.45, AND BE A MINIMUM OF #10AWG WHEN NOT EXPOSED TO DAMAGE, AND #6AWG SHALL BE USED WHEN EXPOSED TO DAMAGE	NOTES : 1. MATING CONNECTORS SHALL COMPLY WITH NEC 690.33. 2. SOLAR EDGE SYSTEM MEETS REQUIREMENTS FOR PHOTOVOLTAIC RAPID SHUTDOWN SYSTEM (PVRSS), AS PER NEC 690.12(B). 3. THE SPECIFIED OPTIMIZER CAN BE SUBSTITUTED WITH A P400, P405, P505, P401, OR P485. THESE OPTIMIZERS HAVE AN INPUT VOLTAGE WINDOW WIDE ENOUGH TO ACCOMMODATE THE OUTPUT VOLTAGE RANGE OF THE MODULE AT THE DESIGN TEMPERATURES, HAVE A MAX INPUT CURRENT RATING THAT IS ABOVE THE MAX OUTPUT CURRENT OF THE MODULE, AND A MAX POWER INPUT THAT IS ABOVE THE RATED POWER OUTPUT OF THE MODULE. 4. DC PV CONDUCTORS ARE NOT SOLIDLY-GROUNDED. NO DC PV CONDUCTOR SHALL BE WHITE- OR GRAY-COLORED 5. ALL METAL ENCLOSURES, RACEWAYS, CABLES AND EXPOSED NONCURRENT-CARRYING METAL PARTS OF EQUIPMENT SHALL BE GROUNDED TO EARTH AS REQUIRED BY NEC 250.4(A) AND PART III OF ARTICLE 250 AND EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45. THE GROUNDING ELECTRODE SYSTEM SHALL ADHERE TO NEC 690.47(A) AND NEC 250.169. THE DC GROUNDING ELECTRODE SHALL BE SIZED ACCORDING TO NEC 250.166 AND INSTALLED IN COMPLIANCE WITH NEC 250.64. 6. MAX DC VOLTAGE OF ARRAY FIXED BY THE INVERTER AT 380V REGARDLESS OF TEMPERATURE. THE MAX DC VOLTAGE OF THE MODULE AT -15°C IS 53.2V (-15°C - 25°C) X -0.138V/C + 47.7V = 53.2V). 7. POINT-OF-CONNECTION IS ON THE SUPPLY SIDE OF SERVICE DISCONNECT, INSIDE PANELBOARD ENCLOSURE USING UNUSED TERMINALS, TERMINALS THAT ARE SUITABLE FOR DOUBLE LUGGING, OR USING OTHER LOCALLY-APPROVED METHODS AND HARDWARE, IN COMPLIANCE WITH NEC 705.12(A). THE PANELBOARD SHALL HAVE SUFFICIENT SPACE TO ALLOW FOR ANY TAP HARDWARE AS REQUIRED BY NEC 110.3 AND NEC 312.8(A) 8. PV SYSTEM DISCONNECT SHALL BE A VISIBLE KNIFE-BLADE TYPE DISCONNECT THAT IS ACCESSIBLE AND LOCKABLE BY THE UTILITY. THE DISCONNECT SHALL BE LOCATED WITHIN 10 FT OF UTILITY METER. DISCONNECT SHALL BE GROUPED IN ACCORDANCE WITH NEC 230.72.			
1	ALL EQUIPMENT SHALL BE PROPERLY GROUNDED PER THE REQUIREMENTS OF NEC ARTICLES 250 & 690						
2	INSTALLER SHALL CONFIRM THAT MOUNTING SYSTEM HAS BEEN EVALUATED FOR COMPLIANCE WITH UL 2703 "GROUNDING AND BONDING" WHEN USED WITH PROPOSED PV MODULE.						
3	PV MODULES SHALL BE GROUNDED TO MOUNTING RAILS USING MODULE LUGS OR RACKING INTEGRATED GROUNDING CLAMPS AS ALLOWED BY LOCAL JURISDICTION. ALL OTHER EXPOSED METAL PARTS SHALL BE GROUNDED USING UL-LISTED LAY-IN LUGS.						
4	GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLOR CODED GREEN, OR MARKED GREEN IF #4AWG OR LARGER						
5	AC SYSTEM GROUNDING ELECTRODE CONDUCTOR (GEC) SHALL BE A MINIMUM SIZE #8AWG WHEN INSULATED, #6AWG IF BARE WIRE.						
6	IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE A VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.						
<div><div>Solar Energy and Energy Efficiency</div><div>POSIGEN DEVELOPER, LLC 819 CENTRAL AVE STE 210 JEFFERSON, LA 70121 LA ELECTRICAL LICENSE :74446</div></div>		JOB NUMBER: P-004807		OWNER: WALTER VINE, 8519 APRICOT STNEW ORLEANS, LA 70118	DESCRIPTION: WALTER VINE, RESIDENCE 5.81 kWDC ROOF SOLAR SYSTEM PRODUCTION: 6,694kWH	STAMP:	<div>PV-5.1</div> <div>PAGE NAME: ELECTRICAL NOTES</div> <div>SCALE: NTS</div> <div>DATE: 9/15/2022</div>
		UTILITY: ENTERGY					
		RACKING: K2 CROSSRAIL SYSTEM					
		MODULES: (14)CS3N-415MS		ACCOUNT NUMBER : 56464969	DESIGNED BY: ENERQUAL		REV:
		OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER					
		INVERTER: (1)SOLAREEDGE SE6000H-US					

CAUTION

POWER TO THIS BUILDING IS ALSO
SUPPLIED FROM THE FOLLOWING
SOURCES WITH DISCONNECTS
LOCATED AS SHOWN:



PLACARD RIVETED TO THE MAIN SERVICE PANEL

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])



JOB NUMBER: P-004807

UTILITY: ENTERGY

RACKING: K2 CROSSRAIL SYSTEM

MODULES: (14)CS3N-415MS

OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER

INVERTER: (1)SOLAREEDGE SE6000H-US

OWNER:

WALTER VINE,
8519 APRICOT STNEW ORLEANS,
LA 70118

ACCOUNT NUMBER : 56464969

DESCRIPTION:

WALTER VINE,
RESIDENCE

5.81 kWDC ROOF SOLAR SYSTEM
PRODUCTION: 6,694kWH

STAMP:

PV-6

PAGE NAME:
PLACARD

SCALE:
NTS

DATE:
9/15/2022

POSIGEN DEVELOPER, LLC
819 CENTRAL AVE STE 210
JEFFERSON, LA 70121
LA ELECTRICAL LICENSE :74446

DESIGNED BY:

ENERQUAL

REV:

DC RACEWAYS

2

SW1 - DISCONNECT
(EATON DG222URB)

3

5

6

I1 - INVERTER
(SOLAREEDGE SE6000H-US000BNC4)

3

4

MSP - MAIN SERVICE PANEL

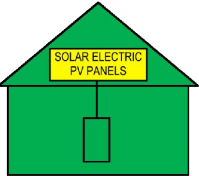
1

7

1 SEE NOTE NO. 4 (MSP)

EMERGENCY RESPONDER
THIS SOLAR PV SYSTEM IS
EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN
SWITCH TO THE 'OFF'
POSITION TO SHUT DOWN
THE ENTIRE PV SYSTEM.



NEC690.56(C)(1) AND NFPA
111.12.2.1.1.1,11.12.2.1.4

6 AC DISCONNECT (SW1)

MAXIMUM AC OPERATING CURRENT: 25A
MAXIMUM AC OPERATING VOLTAGE: 240V

NEC690.54

2 SEE NOTE NO. 5 (DC RACEWAYS)

WARNING
PHOTOVOLTAIC POWER SOURCE

NEC690.31(G)(3) AND NFPA 111.12.2.1.3

4 DC DISCONNECT (I1)

DIRECT-CURRENT PV POWER SOURCE
MAXIMUM VOLTAGE: 380V
MAX CIRCUIT-CURRENT: 7.64A
DC-TO-DC CONVERTER RATED CURRENT: 15.0A

NEC690.53

7 ANY AC ELECTRICAL PANEL THAT IS FED BY
BOTH THE UTILITY AND THE PHOTOVOLTAIC
SYSTEM (MSP)

! WARNING !

DUAL POWER SOURCE. SECOND SOURCE IS
PHOTOVOLTAIC SYSTEM.

NEC705.12(B)(3)

3 EACH DISCONNECTING MEANS FOR
PHOTOVOLTAIC EQUIPMENT (SW1, I1)

! WARNING !

ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH
LINE AND LOAD SIDES MAY BE ENERGIZED IN
THE OPEN POSITION.

NEC690.13(B)

5 AC SOLAR DISCONNECT (SW1)

PV SYSTEM DISCONNECT

NEC690.13(B)

LABELING NOTES

1 ALL PLAQUES AND SIGNAGE REQUIRED BY 2017 NEC
AND 2018 NFPA 1 WILL BE INSTALLED AS REQUIRED.

2 LABELS, WARNING(S) AND MARKING SHALL COMPLY
WITH ANSI Z535.4, WHICH REQUIRES THAT DANGER,
WARNING, AND CAUTION SIGNS USED THE STANDARD
HEADER COLORS, HEADER TEXT, AND SAFETY ALERT
SYMBOL ON EACH LABEL. THE ANSI STANDARD
REQUIRES A HEADING THAT IS AT LEAST 50% TALLER
THAN THE BODY TEXT, IN ACCORDANCE WITH NEC
110.21(B).

3 A PERMANENT PLAQUE OR DIRECTORY SHALL BE
INSTALLED PROVIDING THE LOCATION OF THE
SERVICE DISCONNECTING MEANS AND THE
PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF
NOT IN THE SAME LOCATION IN ACCORDANCE WITH
NEC 690.56(B).

4 LABEL(S) WITH MARKING, "TURN RAPID SHUTDOWN
SWITCH TO THE 'OFF' POSITION TO SHUT DOWN THE
ENTIRE PV SYSTEM," SHALL BE LOCATED WITHIN 3 FT
OF SERVICE DISCONNECTING MEANS THE TITLE SHALL
UTILIZE CAPITALIZED LETTERS WITH A MINIMUM
HEIGHT OF 3/8" IN BLACK ON A RED BACKGROUND,
AND REMAINING TEXT SHALL BE CAPITALIZED WITH A
MINIMUM HEIGHT OF 3/16" IN BLACK ON WHITE
BACKGROUND

5 LABEL(S) WITH MARKING, "WARNING PHOTOVOLTAIC
POWER SOURCE," SHALL BE LOCATED AT EVERY 10
FEET OF EACH DC RACEWAY AND WITHIN ONE FOOT
OF EVERY TURN OR BEND AND WITHIN ONE FOOT
ABOVE AND BELOW ALL PENETRATIONS OF
ROOF/CEILING ASSEMBLIES, WALLS AND BARRIERS.
THE LABEL SHALL HAVE 3/8" TALL LETTERS AND BE
REFLECTIVE WITH WHITE TEXT ON A RED
BACKGROUND



POSIGEN DEVELOPER, LLC
819 CENTRAL AVE STE 210
JEFFERSON, LA 70121
LA ELECTRICAL LICENSE :74446

JOB NUMBER: P-004807

UTILITY: ENTERGY

RACKING: K2 CROSSRAIL SYSTEM

MODULES: (14)CS3N-415MS

OPTIMIZER: (14) SOLAREEDGE S440 OPTIMIZER

INVERTER: (1)SOLAREEDGE SE6000H-US

OWNER:

WALTER VINE,
8519 APRICOT STNEW ORLEANS,
LA 70118

ACCOUNT NUMBER : 56464969

DESCRIPTION:

WALTER VINE,
RESIDENCE
5.81 kWDC ROOF SOLAR SYSTEM
PRODUCTION: 6,694kWH

STAMP:

PV-7

PAGE NAME:
SAFETY LABELS

SCALE:
NTS

DATE:
9/15/2022

DESIGNED BY:

ENERQUAL

REV:

Bill Of Materials

WALTER VINE 8519 APRICOT ST, NEW ORLEANS, LA 70118		
	Electrical Equipment	
QTY	Part #	Description
14	CS3N-415MS	CANADIAN SOLAR CS3N-415MS Solar Modules
1	SOLAREEDGE SE6000H-US	SOLAREEDGE SE6000H-US (240V) Inverter(s)
14	SolarEdge S440	SolarEdge S440 Optimizers
1	SE-GSM-R05-US-S1	SolarEdge GSM w/ 5 Year Plan
1	60A UNFUSED AC Disconnect	AC Disconnect, NEMA 3R, 60A, 240VAC, 2-Pole
1	Junction Box	Junction Box
Breakers and Fuses		
1	40A 2-Pole Breaker(s)	General 40A 2-Pole Breaker(s)
Racking		
TBD	4000021 (180" mill)	CrossRail 44-X (shown) all CR profiles applicable
TBD	4000019 (168" mill)	CrossRail 44-X (shown) all CR profiles applicable
TBD	4000051 (mill)	CrossRail 44-X Rail Connector
24	4000601-H (mill)	CrossRail Mid Clamp
8	4000429 (mill)	CrossRail (Standard) End Clamp
45	4000630 (mill)	L-Foot Slotted Set
2	4000006-H	Everest Ground Lug