

NEW PHOTOVOLTAIC SYSTEM 21.04 KW DC

2723 D'ABADIE ST, NEW ORLEANS, LA 70119

PROJECT INFORMATION

(61) MISSION SOLAR 345W PV MODULES
(02) SOL - ARK 12K-P INVERTER
(02) STORZ POWER 10.24 KWH STORAGE BATTERY
SYSTEM SIZE (STC): 21.04 KW DC
ROOF TYPE: SHINGLE
ATTACHMENT TYPE: ROOF TECH MINI

APPLICABLE CODES

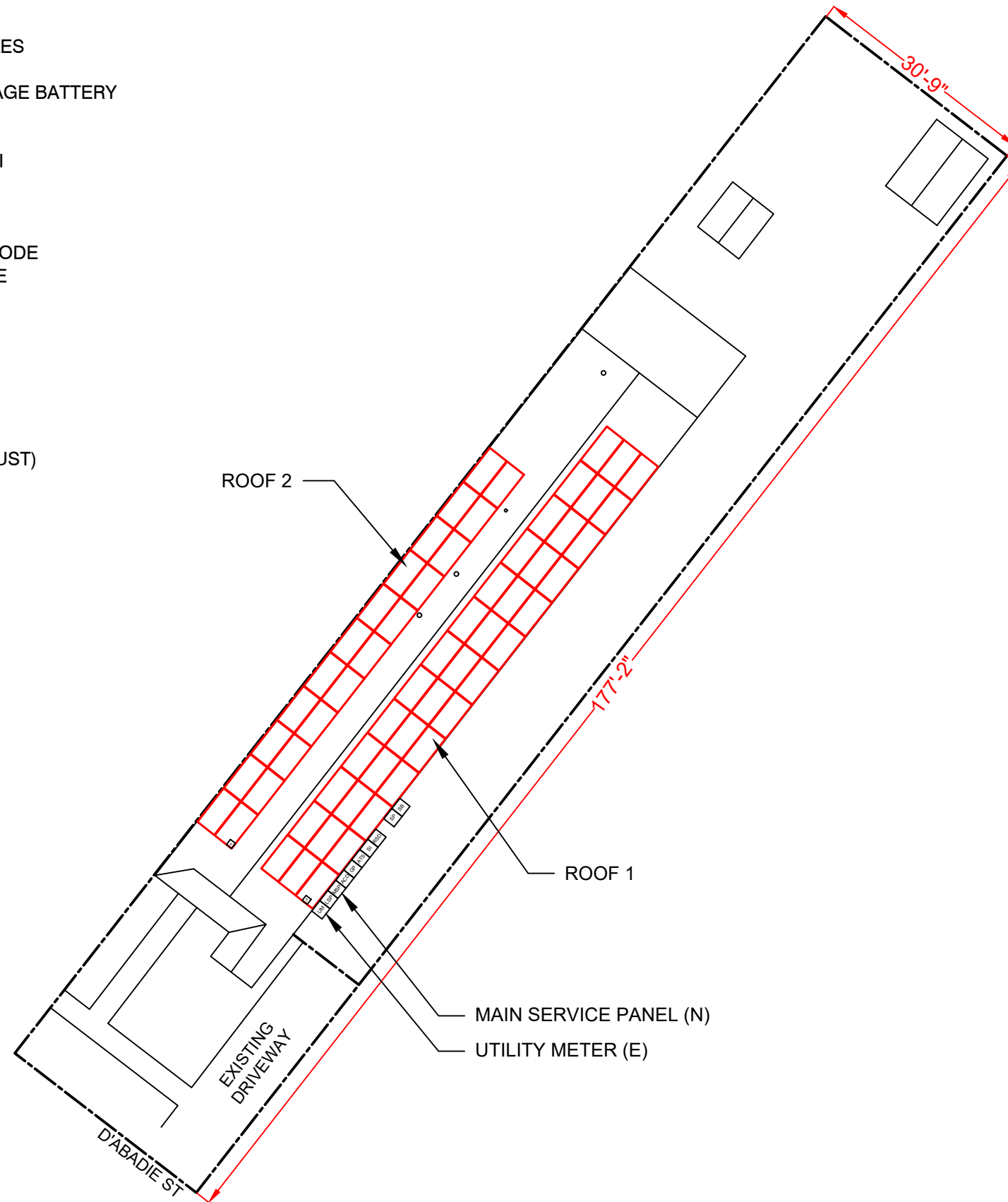
JURISDICTION: ORLEANS PARISH
2015 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL FIRE CODE
2014 NATIONAL ELECTRIC CODE

DESIGN SPECIFICATIONS

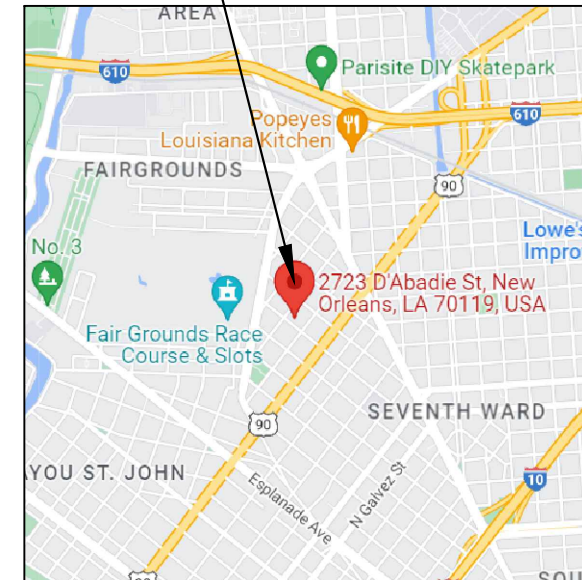
OCCUPANCY RISK: II
ZONING TYPE: RESIDENTIAL
WIND EXPOSURE CATEGORY: C
WIND SPEED: 143 MPH (3 SECOND GUST)
SNOW LOAD: 0 PSF

SHEET INDEX

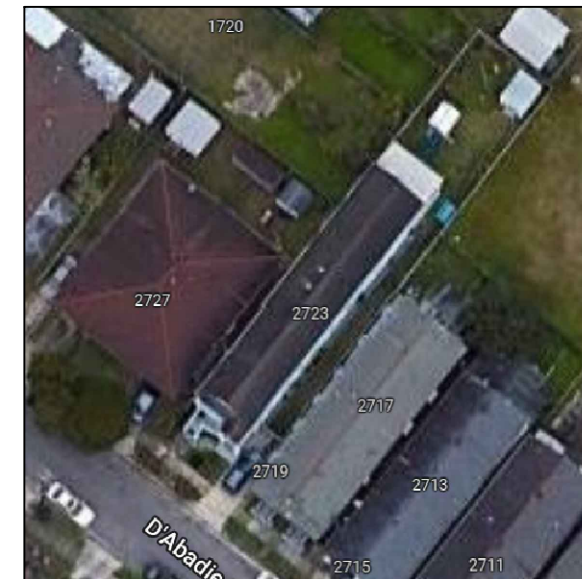
PV-1: TITLE SHEET
PV-2: PROJECT NOTES
PV-3: ROOF LAYOUT
PV-4: ELECTRICAL DIAGRAM
PV-5: SAFETY LABELS
REF: REFERENCE PAGES



PROJECT LOCATION



VICINITY MAP N.T.S.



AERIAL MAP N.T.S.

NOTE:

THESE DRAWINGS ARE FOR PERMIT USE ONLY.
DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD
VERIFIED BY THE CONTRACTOR BEFORE INSTALLATION.

DESIGNED FOR
ENVISHA ENERGY

PROJECT NAME & ADDRESS

CANDICE SIRMON
2723 D'ABADIE ST
NEW ORLEANS, LA 70119

ENGINEER'S SIGNATURE & SEAL



07/12/2022

Louisiana Firm No. EF-003168
Principal Engineering, Inc.

REVISIONS

REV	DESCRIPTION	DATE

DATE	06/30/2022
DRAWN BY	HY CONSULTING, LLC

TITLE SHEET

SHEET IDENTIFICATION

PV-1



SCALE: N.T.S.

PROJECT NOTES:

THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE LOCAL ORDINANCES
ALL WORK SHALL COMPLY WITH RESPECTIVE NEC, IRC, IBC AND IFC MUNICIPAL CODES, AND ALL MANUFACTURERS' RECOMMENDATIONS AND SPECIFICATIONS.
PROPER ACCESS AND WORKING CLEARANCE WILL BE PROVIDED AT PROJECT SITE
A LADDER SHALL BE IN PLACE FOR THE INSPECTION TO COMPLY WITH OSHA REGULATIONS
THE SOLAR PV INSTALLATION WILL NOT OBSTRUCT ANY ROOF VENTS (PLUMBING, MECHANICAL, OR BUILDING, ETC).
ALL EQUIPMENT SHALL BE INSTALLED WITHIN AN ACCESSIBLE AREA FOR QUALIFIED PERSONNEL.
ALL APPLICABLE EQUIPMENT IS TO BE UL LISTED.
ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.
ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS REQUIRED BY NEC AND ANY OTHER APPLICABLE CODES.
ANY WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURES.
IF NECESSARY, ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC DISCONNECT.
RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL AND WILL FOLLOW MANUFACTURERS' RECOMMENDATIONS AND SPECIFICATIONS.
WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.
MODULES WILL BE FLUSH MOUNTED AND NOT EXCEED A MXIMUM OF 6” PARALLEL FROM THE ROOF PLANE
ALL ROOF PENETRATIONS WILL BE SEALED WITH APPROVED ROOF SEALANT BY A LICENSED CONTRACTOR.

PROJECT NOTES CONTINUED:

ALL PV RELATED ROOF ATTACHMENTS ARE TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.
ANY CONDUIT EXPOSED TO SUNLIGHT ON ROOF SHALL BE LOCATED NO LESS THAN 7/8" ABOVE ROOF SURFACE.
ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.
VOLTAGE DROP LIMITED TO 1.5%.
DC WIRING LIMITED TO MODULE FOOTPRINT.
MICROINVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE WIRING CLIPS.
PHOTOVOLTAIC SYSTEM INVERTER IS UNGROUNDED.
NO CONDUCTORS ARE SOLIDLY GROUNDED IN THE INVERTER, AND SYSTEM COMPLIES WITH NEC ARTICLE 690.
AC DISCONNECT(S) ARE VISIBLE, LOCKABLE AND ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL.
LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND THE SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY IS OBTAINED.
A PV METER WILL BE INSTALLED IF REQUIRED BY AUTHORITY HAVING JURISDICTION
ALL ELECTRICAL EQUIPMENT WILL BE PROPERLY LABELED WITH NECESSARY PLACARDS AS PER NEC 690

ABBREVIATIONS:

AC	ALTERNATING CURRENT
ACD	ALTERNATING CURRENT DISCONNECT
APPR	APPROXIMATE
CB	COMBINER BOX
DC	DIRECT CURRENT
DCD	DIRECT CURRENT DISCONNECT
E	EXISTING
JB	JUNCTION BOX
MIN	MINIMUM
MISC	MISCELLANEOUS
MSP	MAIN SERVICE PANEL
N	NEW
PV	PHOTOVOLTAIC
PVM	PHOTOVOLTAIC METER
SB	STORAGE BATTERY
SI	STRING INVERTER
SQFT	SQUARE FOOT
STC	STANDARD TEST CONDITIONS
TYP	TYPICAL
UM	UTILITY METER

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PROJECT NOTES

SHEET IDENTIFICATION
PV-2

GENERAL NOTES:

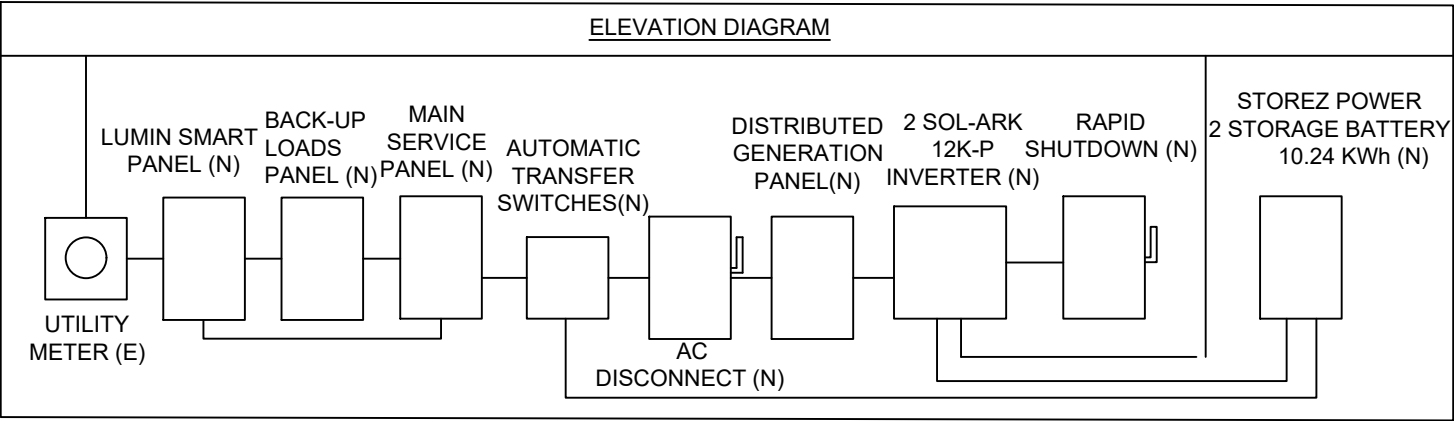
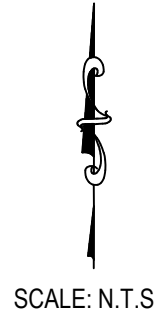
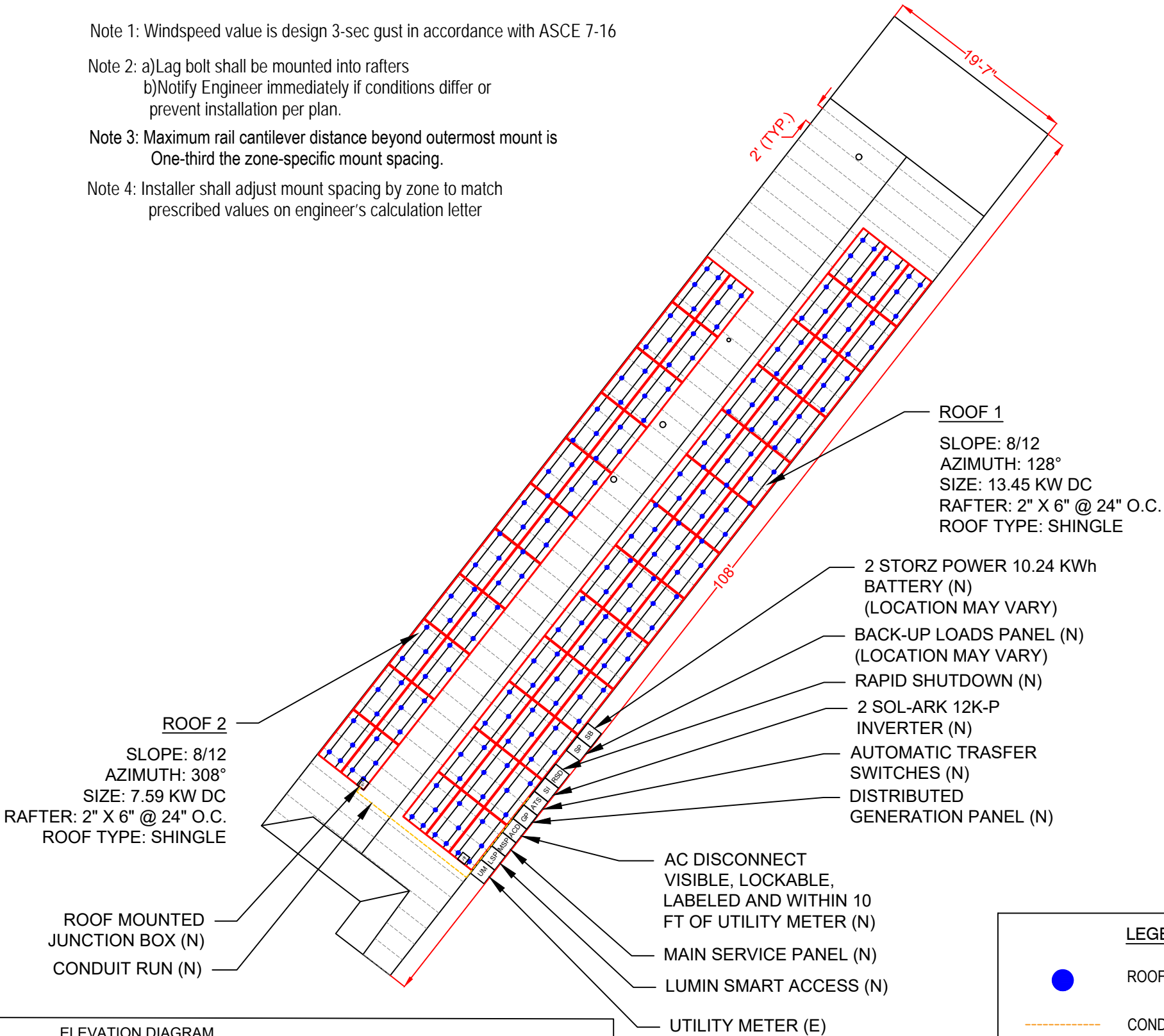
1. VISIBLE, LOCKABLE, AND LABELED AC DISCONNECT IS LOCATED WITHIN 10 FEET OF THE UTILITY METER.
2. NO ENCROACHMENT INTO EASEMENTS BY NEW SCOPE OF WORK (SOLAR MODULES, RACK/RAIL SYSTEMS, AND EQUIPMENT).
3. RAFTER LOCATIONS ARE APPROXIMATE AND MAY NOT DEPICT EXACT LOCATIONS. THEREFORE, ROOF ATTACHMENTS ARE SUBJECT TO CHANGE DURING INSTALLATION, BUT WILL NOT EXCEED MAXIMUM ROOF ATTACHMENT SPACING PROVIDED BY THE ENGINEER.
4. ROOF ATTACHMENTS ARE TO BE STAGGERED SO THAT NO ONE ATTACHMENT FALLS ON THE SAME STRUCTURAL MEMBER WITH THE EXCEPTION OF THE FIRST AND FINAL STRUCTURAL MEMBER HAVING TWO ROOF ATTACHMENTS.
5. FOR METAL ROOF INSTALLATIONS, ROOF ATTACHMENTS ARE TO BE MOUNTED TO THE SEAM OF THE METAL AND SHOULD STILL FOLLOW A STAGGERED PATTERN UNLESS SPECIFIED OTHERWISE BY THE ENGINEER.

Note 1: Windspeed value is design 3-sec gust in accordance with ASCE 7-16

Note 2: a) Lag bolt shall be mounted into rafters
b) Notify Engineer immediately if conditions differ or prevent installation per plan.

Note 3: Maximum rail cantilever distance beyond outermost mount is One-third the zone-specific mount spacing.

Note 4: Installer shall adjust mount spacing by zone to match prescribed values on engineer's calculation letter



LEGEND

●

ROOF ATTACHMENT

CONDUIT

—

RAIL

STRUCTURAL MEMBER OR METAL SEAM

FIRE SETBACK

OBSTRUCTION

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PRINCIPAL
Engineering

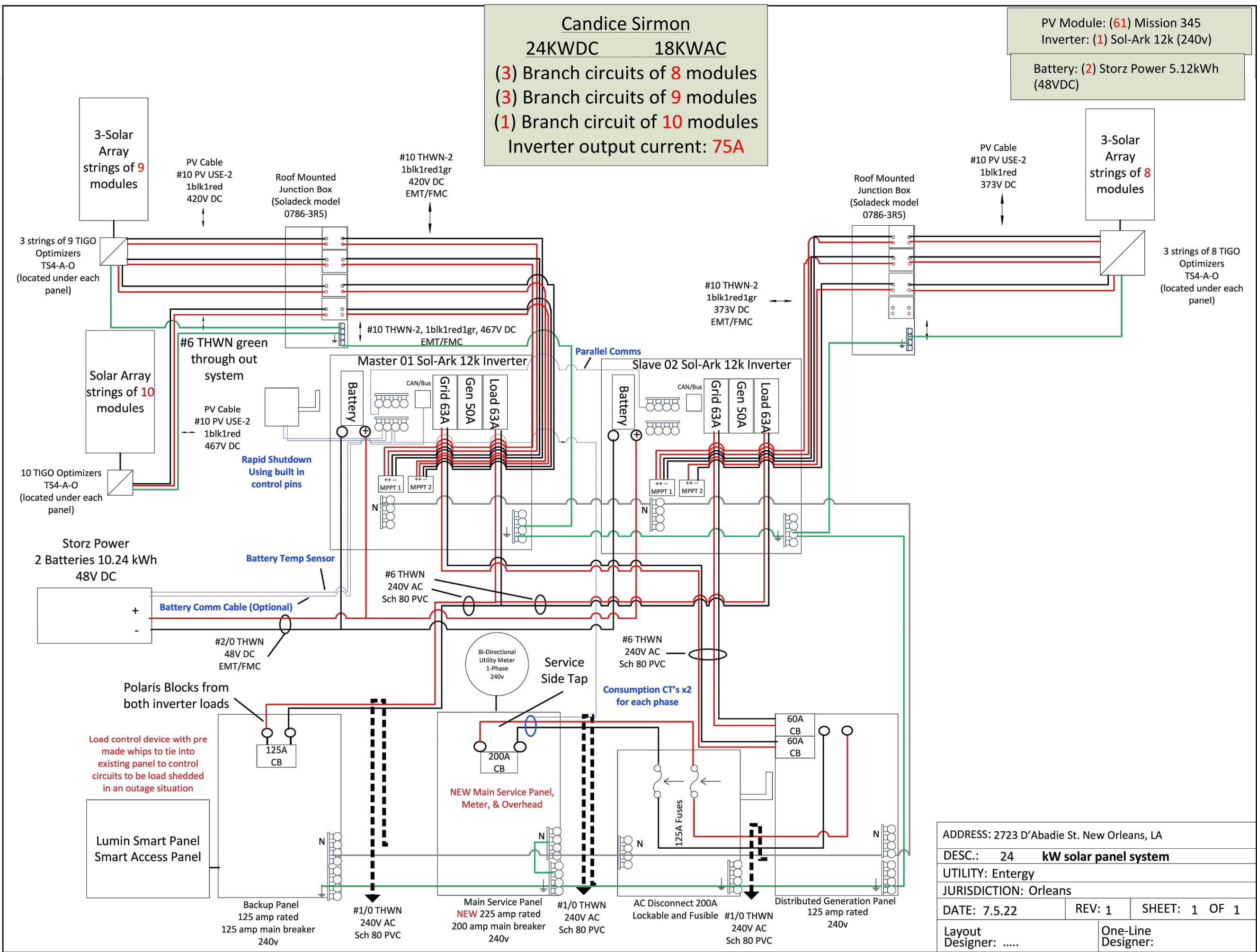
SDVOSB
Service Disabled Veteran Owned Small Business

Henry I. DiFranco, Jr.
Reg. No. 27448
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

07/12/2022

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Principal Engineering, Inc.

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ROOF LAYOUT		
SHEET IDENTIFICATION		
PV-3		



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ENGINEER'S SIGNATURE & SEAL
PRINCIPAL Engineering
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Nestor James Houghton
REG. No. 22390
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING
07/12/2022
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ELECTRICAL DIAGRAM

SHEET IDENTIFICATION
PV-4

MSE PERC 60

MISSION SOLAR
ENERGY



345W

Class leading power output -0 to +3%

Positive
Power
Tolerance

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



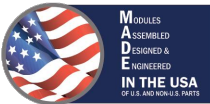
Extreme Weather Resilience

- 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



CERTIFICATIONS

CEC



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.

C-SA2-MKTG-0025 REV 4 05/05/2021

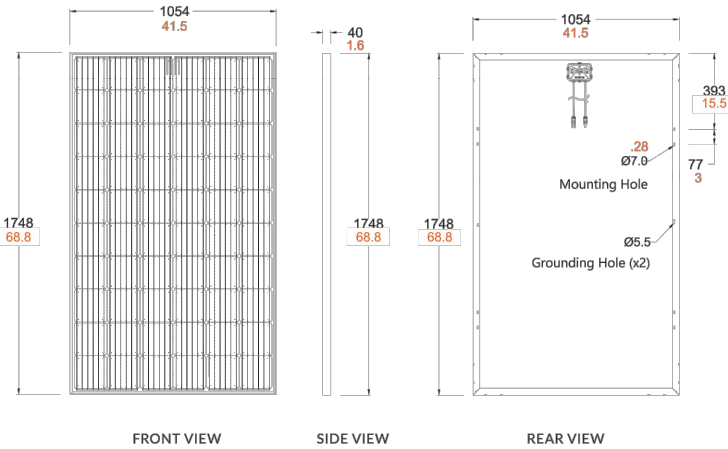
www.missionsolar.com | info@missionsolar.com

Class Leading
340-350W

MSE PERC 60

BASIC DIMENSIONS

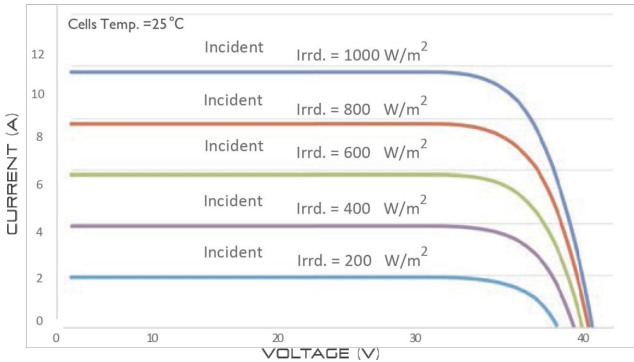
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CURRENT-VOLTAGE CURVE

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



CEC



Mission Solar Energy

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

Mission Solar Energy reserves the right to make specification changes without notice.
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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 P _{max}	-0.361%/°C
Temperature Coefficient of V _{oc}	-0.262%/°C
Temperature Coefficient of I _{sc}	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	1,748mm x 1,054mm 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	
1,263 lbs. (573 kg)	47.5 in (120.65 cm)	46 in (116.84 cm)	70.25 in (178.43 cm)	

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