

NEW PHOTOVOLTAIC SYSTEM 21.04 KW DC

2723 DABADIE ST, NEW ORLEANS, LA 70119

DESIGNED FOR
ENVISHA ENERGY

PROJECT NAME & ADDRESS

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

ENGINEER'S SIGNATURE & SEAL

PROJECT INFORMATION

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

APPLICABLE CODES

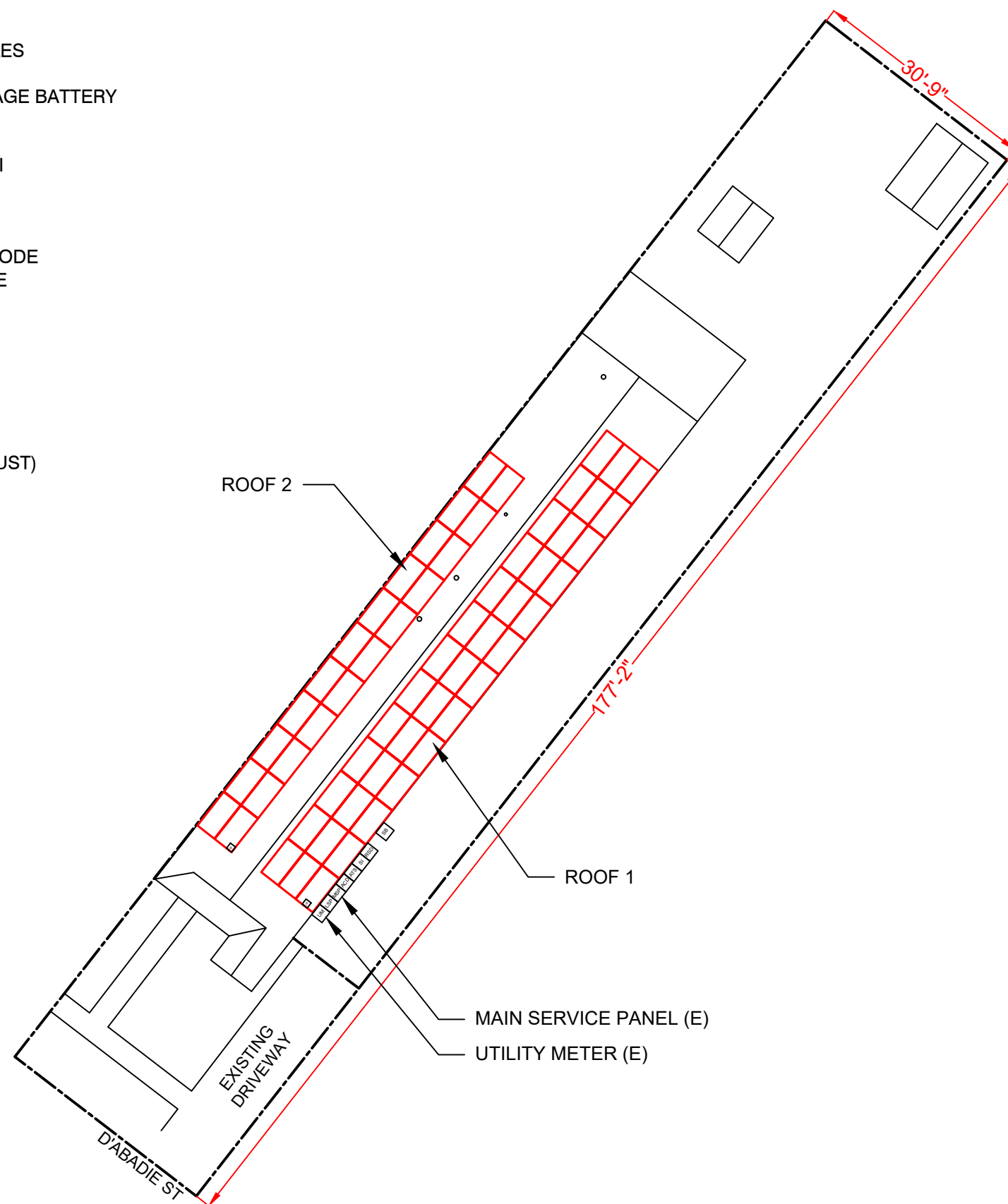
JURISDICTION: ORLEANS PARISH
2015 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL FIRE CODE
2014 NATIONAL ELECTRIC CODE

DESIGN SPECIFICATIONS

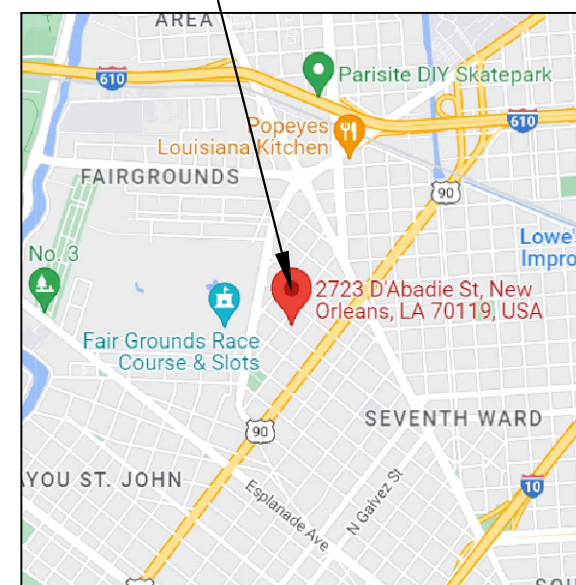
OCCUPANCY RISK: II
ZONING TYPE: RESIDENTIAL
WIND EXPOSURE CATEGORY: C
WIND SPEED: 143 MPH (3 SECOND GUST)
SNOW LOAD: 0 PSF

SHEET INDEX

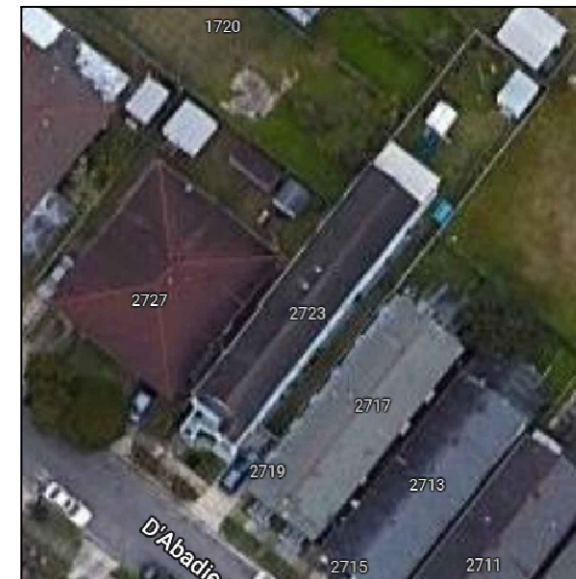
PV-1: TITLE SHEET
PV-2: PROJECT NOTES
PV-3: ROOF LAYOUT
PV-4: ELECTRICAL DIAGRAM
PV-5: SAFETY LABELS
REF: REFERENCE PAGES



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.



SCALE: N.T.S

REVISIONS		
REV	DESCRIPTION	DATE

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

TITLE SHEET

SHEET IDENTIFICATION
PV-1

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 MAXIMUM 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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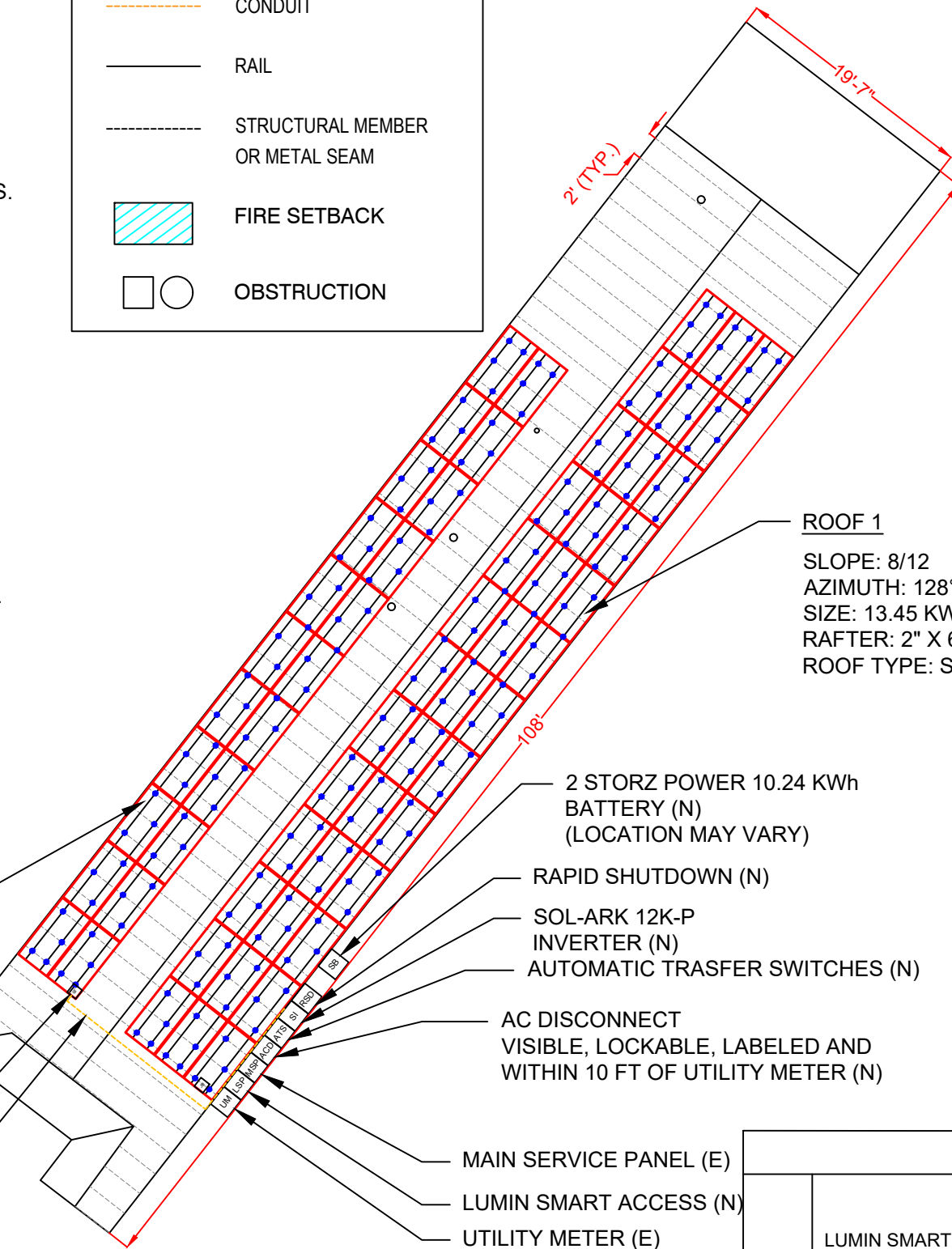
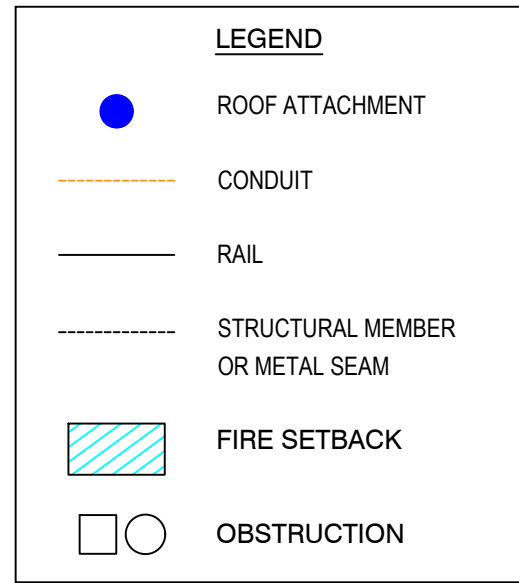
PROJECT NOTES

SHEET IDENTIFICATION

PV-2

GENERAL NOTES:

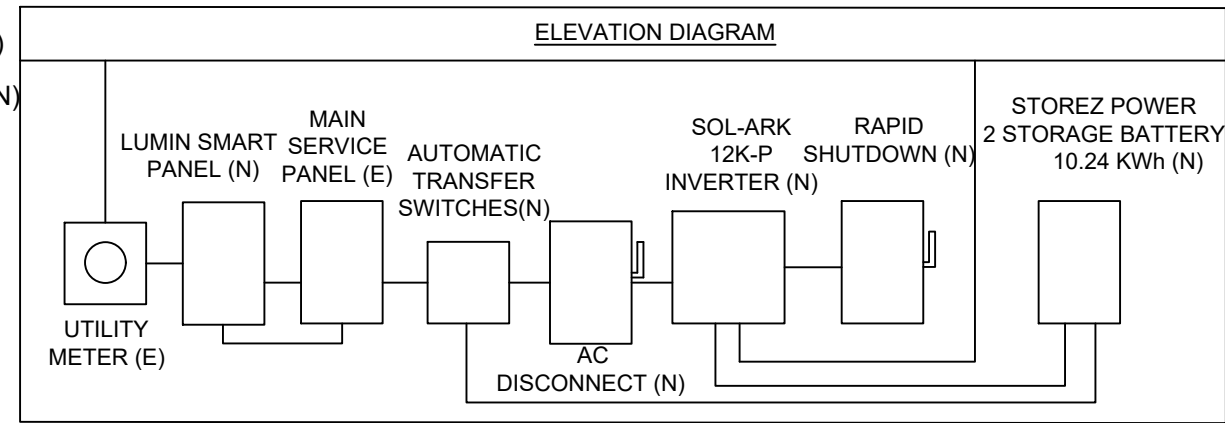
1. VISIBLE, LOCKABLE, AND LABELED AC DISCONNECT IS LOCATED WITHIN 10 FEET OF THE UTILITY METER.
2. NO ENCROACHMENT INTO EASEMENTS BY NEW SCOPE OF WORK (SOLAR MODULES, RACK/RAIL SYSTEMS, AND EQUIPMENT).
3. RAFTER LOCATIONS ARE APPROXIMATE AND MAY NOT DEPICT EXACT LOCATIONS. THEREFORE, ROOF ATTACHMENTS 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.



ROOF 1
 SLOPE: 8/12
 AZIMUTH: 128°
 SIZE: 13.45 KW DC
 RAFTER: 2" X 6" @ 24" O.C.
 ROOF TYPE: SHINGLE

ROOF 2
 SLOPE: 8/12
 AZIMUTH: 308°
 SIZE: 7.59 KW DC
 RAFTER: 2" X 6" @ 24" O.C.
 ROOF TYPE: SHINGLE

- 2 STORZ POWER 10.24 KWh BATTERY (N) (LOCATION MAY VARY)
- RAPID SHUTDOWN (N)
- SOL-ARK 12K-P INVERTER (N)
- AUTOMATIC TRASFER SWITCHES (N)
- AC DISCONNECT VISIBLE, LOCKABLE, LABELED AND WITHIN 10 FT OF UTILITY METER (N)
- MAIN SERVICE PANEL (E)
- LUMIN SMART ACCESS (N)
- UTILITY METER (E)



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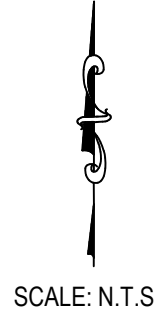
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ROOF LAYOUT

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ELECTRICAL DIAGRAM

SHEET IDENTIFICATION

PV-4

1 COMBINER BOXES/ENCLOSURES/PULL BOXES

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

NEC 690.13(B) & 706.15(C)(4)

WARNING
TURN OFF PHOTOVOLTAIC AC
DISCONNECT PRIOR TO
WORKING INSIDE PANEL

NEC 110.27(C)

2 DC DISCONNECT/BREAKER

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

DC VOLTAGE IS ALWAYS PRESENT
WHEN SOLAR MODULES
ARE EXPOSED TO SUNLIGHT

NEC 690.13(B)

**PHOTOVOLTAIC
AC DISCONNECT**

NEC 690.13(B)

RATED AC OPERATING CURRENT
MAX RATED AC OPERATING CURRENT
RATED AC OPERATING VOLTAGE
MAX RATED AC OPERATING VOLTAGE
RATED SHORT CIRCUIT CURRENT
MAXIMUM SYSTEM VOLTAGE

BATTERY BACKUP SYSTEMS

**MAXIMUM DC VOLTAGE
OF PV SYSTEM**

NEC 690.53

3 EMT/CONDUITS

SOLAR PV DC CIRCUIT

NEC 690.31(O)(2)

**PHOTOVOLTAIC POWER
SOURCE**

NEC 690.31(D)(2)

4 INVERTER

WARNING
THE DISCONNECTION OF THE
GROUNDED CONDUCTOR(S) MAY
RESULT IN OVERVOLTAGE ON
THE EQUIPMENT

NEC 690.31(E)

PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT:
NOMINAL OPERATING AC VOLTAGE:

NEC 690.54

5 PRODUCTION METER/BI-DIRECTIONAL NET METER

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

NEC 705.12(D)(3) & NEC 690.59

6 AC DISCONNECT/BREAKER/POINTS OF CONNECTION

**PHOTOVOLTAIC
AC DISCONNECT**

NEC 690.13(B)

WARNING
THIS EQUIPMENT FED BY MULTIPLE
SOURCES:
TOTAL RATING OF ALL OVERCURRENT
DEVICES EXCLUDING MAIN POWER
SUPPLY SHALL NOT EXCEED AMPACITY
OF BUSBAR

NEC 710.15(C) & 692.9(C)

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

NEC 690.13(B) & 706.15(C)(4)

7 MAIN SERVICE DISCONNECT/UTILITY METER

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

NEC 690.13(B) & 706.15(C)(4)

WARNING
TURN OFF PHOTOVOLTAIC AC
DISCONNECT PRIOR TO
WORKING INSIDE PANEL

NEC 110.27(C)

**DO NOT DISCONNECT
UNDER LOAD**

NEC 690.15(C) & NEC 690.33(E)(2)

CAUTION
PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

NEC 705.12(D) & NEC 690.59

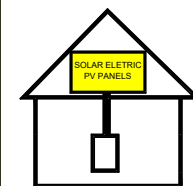
WARNING
POWER SOURCE OUTPUT
CONNECTION. DO NOT
RELOCATE THIS
OVERCURRENT DEVICE.

NEC 705.12(B)(3)(2)

8 RAPID SHUTDOWN

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

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



**RAPID SHUTDOWN FOR
SOLAR PV SYSTEM**

NEC 690.56(C)(2)

9 ENERGY STORAGE

NOMINAL ESS AC VOLTAGE
NOMINAL ESS DC VOLTAGE
AVAILABLE FAULT CURRENT
DERIVED FROM THE ESS
DATE CALCULATION PERFORMED

NEC 705.15(C)(4)

WARNING
FUEL CELL POWER
SYSTEM CONTAINS
ENERGY STORAGE
DEVICES

NEC 705.12(B)(3)(2)

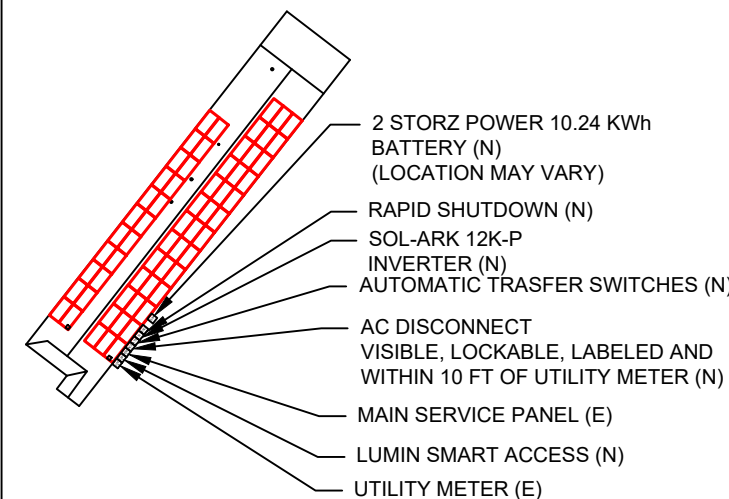
**ENERGY
STORAGE
SYSTEM
DISCONNECT**

NEC 706.15(C)

10 BUILDING/STRUCTURE

CAUTION

MULTIPLE SOURCES OF POWER



NEC 705.10 & NEC 690.56 (A)(B)

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SAFETY LABELS

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PV-5