

NEW PHOTOVOLTAIC SYSTEM 3.80 KW DC/2.90 KW AC

2858 AVELLA CIR, SAN DIEGO, CA 92108

GENERAL NOTES

1.1.1 PROJECT NOTES:
1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURER'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
1.1.3 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
1.1.4 GROUND FAULT DETECTION AND INTERRUPTION (GFDI) DEVICE IS INTEGRATED WITH THE MICRO-INVERTER IN ACCORDANCE WITH NEC 690.41(B)
1.1.5 ALL PV SYSTEM COMPONENTS: MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4; PV MODULES: UL 1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
1.1.6 MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC, IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
1.1.7 ALL INVERTERS, PHOTOVOLTAIC MODULES,PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4. SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3].
1.1.8 ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.

1.2.1 SCOPE OF WORK:
1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT

1.3.1 WORK INCLUDES:
1.3.2 PV RACKING SYSTEM INSTALLATION - UNIRAC SOLAR
1.3.3 PV MODULE AND INVERTER INSTALLATION - SILFAB SOLAR SIL-380 HC / ENPHASE IQ8PLUS-72-2-US INVERTER
1.3.4 PV EQUIPMENT ROOF MOUNT
1.3.5 PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
1.3.6 PV LOAD CENTERS (IF INCLUDED)
1.3.7 PV METERING/MONITORING (IF INCLUDED)
1.3.8 PV DISCONNECTS
1.3.9 PV GROUNDING ELECTRODE & BONDING TO (E) GEC
1.3.10 PV FINAL COMMISSIONING
1.3.11 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
1.3.12 SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

AS THE HOME OWNER OF THE SUBJECT PROJECT, I CERTIFY THAT I AM REQUESTING TO INSTALL THE SOLAR PHOTOVOLTAIC SYSTEM SHOWN ON THIS PLAN.

HOME OWNER SIGNATURE.....
DocuSigned by: Tianli Zhang D597F3769C6043F.....

HOME OWNER'S NAME (PRINTED).....
Tianli Zhang

PROJECT INFORMATION

OWNER
NAME: TIANLI ZHANG
APN- 6774400771

PROJECT MANAGER
NAME: SHAHIN HAYNES
PHONE: 8665071461

CONTRACTOR NAME
ADT SOLAR LLC
PHONE: 5052180838

SCOPE OF WORK
SYSTEM SIZE: STC:10 X 380W= 3.80 kW DC
PTC: 10 x 349.4W = 3.49 kW DC
(10) SILFAB SOLAR SIL-380 HC
(10) ENPHASE IQ8PLUS-72-2-US

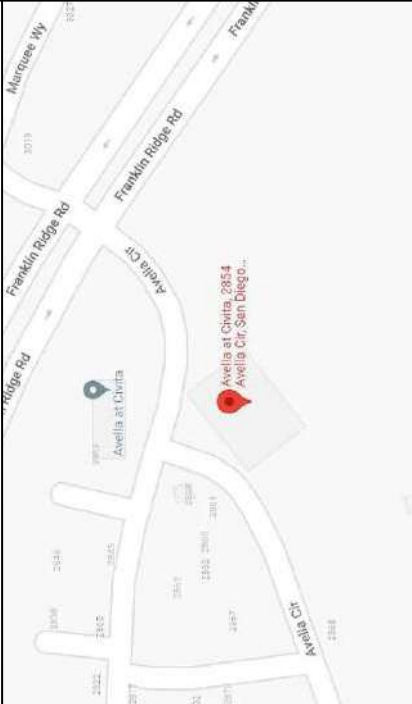
ATTACHMENT TYPE: ROOF MOUNT
MSP UPGRADE: NO
UTILITY METER UPGRADE: NO

AUTHORITIES HAVING JURISDICTION
BUILDING: CITY OF SAN DIEGO
ZONING: CITY OF SAN DIEGO
UTILITY: SAN DIEGO GAS & ELECTRIC CO - SDGE (CA)
METER NO: 02066064

DESIGN SPECIFICATION
OCCUPANCY: II
CONSTRUCTION: SINGLE-FAMILY RESIDENTIAL
ZONING:
GROUND SNOW LOAD: REFER STRUCTURAL LETTER
WIND EXPOSURE: REFER STRUCTURAL LETTER
WIND SPEED: REFER STRUCTURAL LETTER
APPLICABLE CODES & STANDARDS
BUILDING: CBC 2019, CRC 2019 CMC 2019 IECC 2018
CPC 2019 CEBC 2019 CGBSC 2019
ELECTRICAL: CEC 2019 NEC 2017
FIRE: CFC 2019

RAPID SHUTDOWN COMPLIANT

VICINITY MAP



SATELLITE VIEW



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R-008	RESOURCE DOCUMENT
R-009	RESOURCE DOCUMENT
R-010	RESOURCE DOCUMENT
R-011-R-016	RESOURCE DOCUMENT

CONTRACTOR



ADT SOLAR LLC
34859 FREDRICK ST. 101
WILDOMAR, CA 92595
951-678-7733

CA LICENSE #1080382 C10/C46
Signature of Licensed Preparer

Adam Evans #1080382

PROJECT NAME & ADDRESS
TIANLI ZHANG

2858 AVELLA CIR,
SAN DIEGO,
CA 92108

COUNTY:-SAN DIEGO COUNTY

SYSTEM SIZE

DC SIZE: 3.800 KW DC-(STC)
AC SIZE: 2.900 KW AC



Signed 8/2/2022



9/9/2022, 12:58:39 PM

SHEET TITLE

Diana Garcia

COVER PAGE

DRAWN DATE 7/19/2022

DRAWN BY SK

SHEET NUMBER

PV-0

SOLAR PHOTOVOLTAIC SYSTEM NOTES:

1. EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATIONS INTAKE AIR OPENINGS SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM.
2. EQUIPMENT. INVERTERS, MOTOR GENERATORS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, SOURCE-CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN PHOTOVOLTAIC POWER SYSTEMS SHALL BE IDENTIFIED AND LISTED FOR THE APPLICATION. (CEC 690.4(B))
3. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED, INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND NON ROOF SWITCHES. ROOF SWITCHES TO BE NEMA 4 RATED.
4. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH CEC ARTICLE 250.
5. PROTECTION DEVICES FOR PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS ALSO CONNECTED TO SOURCES HAVING SIGNIFICANTLY HIGHER CURRENT AVAILABILITY (E.G., PARALLEL STRINGS OF MODULES, UTILITY POWER), SHALL BE PROTECTED AT THE SOURCE FROM OVERCURRENT. [CEC 690.9(A)]
6. PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION THAT CONTROLS SPECIFIC CONDUCTORS. [CEC 690.12]
7. THE UTILITY INTERACTIVE INVERTERS SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THE SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED. [CEC 705.41]
8. ALL CONDUCTOR EXPOSED TO WEATHER SHALL BE LISTED AND IDENTIFIED FOR USE IN DIRECT SUNLIGHT. [CEC 310.10(D)(1)]
9. THE MODULE CONDUCTORS MUST BE TYPE USE-2 OR LISTED FOR PHOTOVOLTAIC (PV) WIRE. (CEC 690.31(C))
10. ALL CONDUCTORS SHALL BE MARKED ON EACH END FOR UNIQUE IDENTIFICATION.
11. AN INSULATED GROUNDED CONDUCTOR OF 6 AWG OR SMALLER SHALL BE IDENTIFIED AS A CONTINUOUS WHITE FINISH.[CEC 200.6]
12. THE OUTPUT OF AN INTERCONNECTED ELECTRICAL POWER SOURCE SHALL BE PERMITTED TO BE CONNECTED TO THE LOAD SIDE. INTERCONNECTING PROVISIONS FOR OTHER POWER SOURCES SHALL COMPLY WITH 705.12(B)(1) THROUGH 705.12(B)(5)

13. EACH SOURCE INTERCONNECTION OF ONE OR MORE POWER SOURCES INSTALLED IN ONE SYSTEM SHALL BE MADE AT A DEDICATED CIRCUIT BREAKER OR FUSIBLE DISCONNECTING MEANS [CEC 705.12(B)(1)]
14. THE SUM OF THE AMPERE RATING OF THE OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUSBAR OR CONDUCTOR SHALL NOT EXCEED 120% OF THE RATING OF BUSBAR OR CONDUCTOR.[CEC 705.12(B)(2)(3)(B)]
15. A CONNECTION AT EITHER END, BUT NOT BOTH ENDS, OF A CENTER-FED PANEL BOARD IN DWELLINGS SHALL BE PERMITTED WHERE THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR DOES NOT EXCEED 120 PERCENT OF THE CURRENT RATING OF THE BUSBAR. [CEC 705.12(B)(2)(3)(D)]
16. EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUS BAR OR CONDUCTOR SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES. [CEC 705.12(B)(3)]
17. CIRCUIT BREAKER, IF BACKFED, SHALL BE SUITABLE FOR SUCH OPERATION. [CEC705.12(B)(4)]
18. TO MINIMIZE OVERHEATING OF THE BUSBAR IN PANELBOARD, THE PANELBOARD MAIN CIRCUIT BREAKER AND THE PV POWER SOURCE CIRCUIT BREAKER SHALL BE PHYSICALLY LOCATED AT THE OPPOSITE END OF THE BUSBAR.
19. ALL THE CEC REQUIRED WARNING SIGNS, MARKINGS, AND LABELS SHALL BE POSTED ON EQUIPMENT AND DISCONNECTS PRIOR TO ANY INSPECTIONS TO BE PERFORMED BY THE BUILDING DEPARTMENT INSPECTOR.
20. WHERE PV SYSTEM DC CIRCUIT'S RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS TYPE MC METAL CLAD CABLE OR METAL ENCLOSURES FROM POINT OF PENETRATION OF THE SURFACE OF THE BUILDING TO THE FIRST READILY ACCESSIBLE DISCONNECTING MEANS. [CEC 690.31(G)]
21. FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES OR CONNECTOR THAT ARE IS IN ACCORDANCE WITH CEC 110.14
22. CONNECTORS SHALL BE OF LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30V DC OR 15V AC SHALL REQUIRE TOOL TO OPEN AND MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING". [CEC 690.33(C) & (E)(2)]

23. EQUIPMENT GROUNDING CONDUCTOR FOR PV MODULES SMALLER THAN 6AWG SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY A RACEWAY OR CABLE ARMOR. [CEC 690.46 & 250.120(C)]
24. AN EQUIPMENT GROUNDING CONDUCTOR SHALL NOT BE SMALLER THAN 14 AWG. [CEC 690.45]
25. FINE STRANDED CABLES USED FOR BATTERY TERMINALS, DEVICES, AND CONNECTIONS REQUIRE LUGS AND TERMINALS IS IN ACCORDANCE WITH CEC 110.14
26. GROUNDING ELECTRODE CONDUCTOR(S) SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH WITHOUT A SPLICE OR JOINT. IF NECESSARY, SPLICES OR CONNECTIONS SHALL BE MADE AS PERMITTED. (CEC 250.64 C)
27. ALL SMOKE ALARMS, CARBON MONOXIDE ALARMS AND AUDIBLE NOTIFICATION DEVICES SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 217 AND UL 2034. THEY WILL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND NFPA 720.(IRC 2019 R314 & R315).
28. SMOKE ALARMS AND CARBON MONOXIDE ALARMS WILL BE RETROFITTED INTO THE EXISTING DWELLING. THESE SMOKE ALARMS ARE REQUIRED TO BE IN ALL BEDROOMS, OUTSIDE EACH BEDROOM, AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE CARBON MONOXIDE ALARMS ARE REQUIRED TO BE RETROFITTED OUTSIDE EACH BEDROOM AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE. THESE ALARMS MAY BE SOLELY BATTERY OPERATED IF THE PHOTOVOLTAIC PROJECT DOES NOT INVOLVE THE REMOVAL OF INTERIOR WALL AND CEILING FINISHES INSIDE THE HOME, OTHERWISE, THE ALARMS MUST BE HARD WIRED AND INTERCONNECTED.

CONTRACTOR



ADT SOLAR LLC
34859 FREDRICK ST. 101
WILDOMAR, CA 92595
951-678-7733

CA LICENSE #1080382 C10/C46
Signature of Licensed Preparer

Adam Evans #1080382

PROJECT NAME & ADDRESS

TIANLI ZHANG

2858 AVELLA CIR,
SAN DIEGO,
CA 92108

COUNTY:-SAN DIEGO COUNTY

SYSTEM SIZE

DC SIZE: 3.800 KW DC-(STC)
AC SIZE: 2.900 KW AC



Signed 8/2/2022



9/9/2022, 12:58:39 PM

SHEET TITLE

Diana Garcia
NOTES

DRAWN DATE 7/19/2022

DRAWN BY SK

SHEET NUMBER

PV-1

SAN DIEGO GENERAL NOTES:

1. ALL PLAQUES AND SIGNAGE REQUIRED BY THE LATEST EDITION OF CALIFORNIA ELECTRICAL CODE AND THE SAN DIEGO AREA ELECTRICAL NEWSLETTER WILL BE INSTALLED AS REQUIRED.
2. ALTERNATE POWER SOURCE PLACARD SHALL BE METALLIC OR PLASTIC, ENGRAVED OR MACHINE PRINTED LETTERS IN A CONTRASTNG COLOR TO THE PLAQUE. THIS PLAQUE WILL BE ATTACHED BY POP RIVETS OR SCREWS OR OTHER APPROVED METHOD. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANCE.
3. PHOTOVOLTAIC DC CONDUCTORS ENTERING THE BUILDING SHALL BE INSTALLED IN METAL CONDUIT AND THE CONDUIT SHALL BE LABELED, "CAUTION DC CIRCUIT" OR EQUIVALENT EVERY 10 FT."
4. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENTS, AND CONDUCTOR ENCLOSURES SHALL BE GROUNDE D IN ACCORDANCE WITH 250.134 OR 250.136 (A) REGARDLESS OF VOLTAGE.
5. EACH MODULE SHALL BE GROUNDE D USING THE SUPPLIED CONNECTION POINT IDENTIFIED ON THE MODULE AND THE MANUFACTURER'S INSTRUCTIONS.
6. IF THE EXISTING GROUNDING ELECTRODE SYSTEM CAN NOT BE VERIFIED OR IS ONLY METALIC WATER PIPING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
7. THE INVERTER SHALL BE LISTED AS A UTILITY INTERACTIVE
8. UNIT INSTALLED ON THE SAME BUILDING AS THE MODULES BUT NOT ON THE ROOF.
9. THE INVERTER OUTPUT CIRCUIT CONDUCTORS SHALL TERMINATE WITHIN THE SERVICE PANEL IN ACCORDANCE WITH CEC 690.64(B) (7).
10. BACKFEED BREAKERS IN THE SERVICE PANEL SHALL BE SUITABLE AS SUCH.
11. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S APPROVED INSTALLATION INSTRUCTIONS. A COPY OF THESE INSTRUCTIONS ARE INCLUDED AS PART OF THIS PLAN.
12. ALL EQUIPMENT AND WIRING SHALL BE LISTED BY NATIONAL RECOGNIZE D TESTING AGENCY
13. USE MINIMUM 8 AWG EQUIPMENT GROUNDING CONDUCTOR (EGC) WHEN IT IS SUBJECT TO PHYSICAL DAMAGE, OR INSTALL THE EGC IN AN APPROVED RACEWAY.
14. ALL WIRING SHALL BE OF COPPER MATERIAL, AND KEPT OUTSIDE OF THE BUILDING.
15. ALL ELECTRICAL EQUIPMENT INCLUDING THE SERVICE SHALL HAVE A LEGIBLE, VISIBLE, AND DURABLE MARKING INDICATING THE MANUFACTURER NAME, CURRENT, VOLTAGE, FREQUENCY, AND NUMBER OF PHASES.
16. EACH INSTALLED EQUIPMENT, WIRING AND OVERCURRENT PROTECTIVE DEVICE (OCPD) SHALL HAVE A SHORT CIRCUIT RATING NOT LESS THAN THE AVAILABLE SHORT CIRCUIT CURRENT AT THEIR INPUT TERMINALS.
17. THE INVERTER SHALL COMPLY IN ACCORDANCE WITH CEC 690.11.

CONTRACTOR	
	
ADT SOLAR LLC 34859 FREDRICK ST. 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46	
Signature of Licensed Preparer <i>Adam Evans #1080382</i>	
PROJECT NAME & ADDRESS TIANLI ZHANG	
2858 AVELLA CIR, SAN DIEGO, CA 92108	
COUNTY:-SAN DIEGO COUNTY	
SYSTEM SIZE DC SIZE: 3.800 KW DC-(STC) AC SIZE: 2.900 KW AC	
 Signed 8/2/2022	
 9/9/2022, 12:58:39 PM	
SHEET TITLE Diana Garcia NOTES	
DRAWN DATE	7/19/2022
DRAWN BY	SK
SHEET NUMBER PV-2	

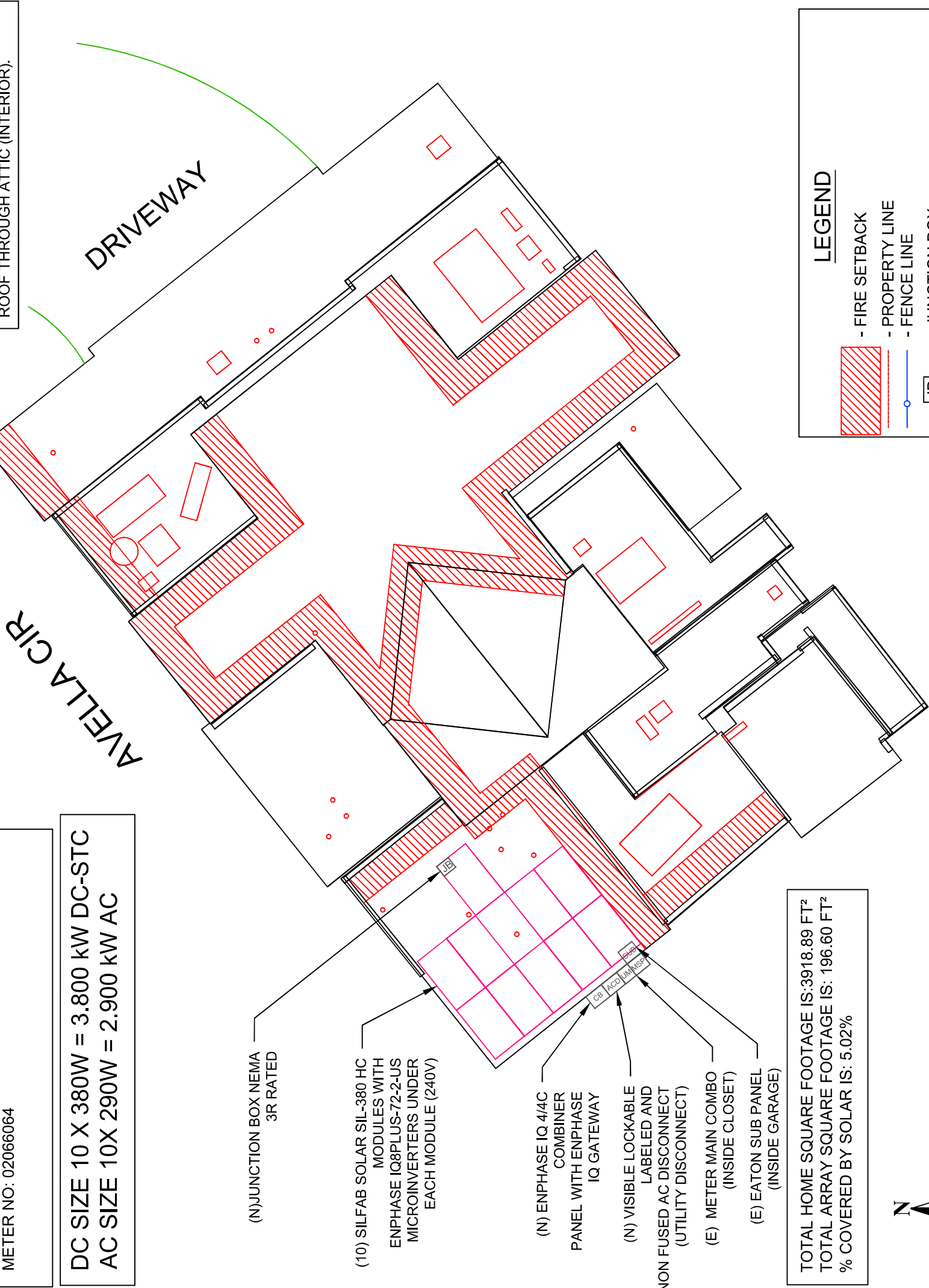
(10) SILFAB SOLAR SIL-380 HC
(10) ENPHASE IQ8PLUS-72-2-US

ADDRESS : 2858 AVELLA CIR
CITY ZIP : SAN DIEGO, CA 92108
METER NO: 02066064

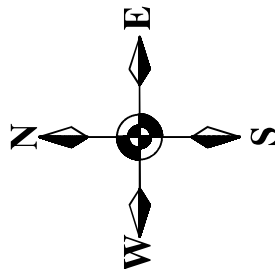
DC SIZE 10 X 380W = 3.800 kW DC-STC
AC SIZE 10X 290W = 2.900 kW AC

NOTE:
1.STRUCTURES, PATIO COVERS, AND/OR ADDITIONS BUILT WITHOUT PERMITS TO BE RESOLVED BY A SEPARATE PERMIT.

TO AVOID EXTRA TEMP. CORRECTIONS CONDUIT MUST BE 7/8" MINIMUM HEIGHT OFF ROOFTOP (EXTERIOR) OR 18" BELOW ROOF THROUGH ATTIC (INTERIOR).



TOTAL HOME SQUARE FOOTAGE IS:3918.89 FT²
TOTAL ARRAY SQUARE FOOTAGE IS: 196.60 FT²
% COVERED BY SOLAR IS: 5.02%



1 | SITE PLAN
SCALE:3/32" = 1'-0"

THE INSTALLATION OF SMOKE ALARMS AND SMOKE DETECTORS SHALL COMPLY WITH THE SPECIFIC LOCATION REQUIREMENTS OF CRC SECTION R314.3.4.

NOTE:
1.NO ROOF, PLUMBING, OR HEAT VENT TO BE OBSTRUCTED BY THE ARRAY.

2.WORKING CLEARANCES AROUND EXISTING ELECTRICAL EQUIPMENT AS WELL AS THE NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH CEC 110.26

3.THE PHOTOVOLTAIC INVERTER WILL BE LISTED AS UL 1741 COMPLIANT IN ACCORDANCE WITH CEC 690.4(B)

4.THE 2019 CALIFORNIA RESIDENTIAL CODE (CRC) REQUIRES THAT SMOKE ALARMS AND CARBON MONOXIDE ALARMS ARE RETROFITTED INTO THE EXISTING DWELLING. THE REQUIRED SMOKE ALARMS AND CARBON MONOXIDE DETECTORS SHALL BE LOCATED AS REQUIRED PER SECTIONS R314 & R315 CALIFORNIA RESIDENTIAL CODE (CRC).

5.SOLAR MODULES WILL BE INSTALLED PARALLEL WITH THE EXISTING ROOF SLOPE AND NO MORE THAN 6" ABOVE THE ROOF SURFACE.

CODE & STANDARD
DESIGN COMPLYING WITH THE LATEST EDITION OF CEC,THE SAN DIEGO AREA ELECTRICAL NEWS LETTER
AND ALL LOCAL ORDINANCES AND POLICIES

GENERAL NOTES

SOLAR PV SYSTEM TO BE INSTALLED ON RESIDENTIAL STRUCTURE

THIS PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE CBC SECTION 1069 TO WITHSTAND A MIN OF 110 MPH WIND LOAD

THE HOUSE IS 2 STORY(IES) TALL
THE TRUSS ARE 2"x4" AND 24" O.C

THIS SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY OBTAINED

THIS SYSTEM IS AN UTILITY INTERACTIVE SYSTEM WITH NO BATTERIES

THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING OR MECHANICAL OR BUILDING ROOF VENTS

IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE AVERIFIABLE GROUNDING ELECTRODE IT IS CONTRACTORS RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE

EACH MODULES WILL BE GROUNDED USING THE SUPPLIED CONNECTION POINTS IDENTIFIED ON THE MODULE AND THE MANUFACTURES INSTALLATION INSTRUCTIONS

A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH CAL-OSHA REGULATIONS

PROPER ACCESS AND WORKING CLEARANCE WILL BE PROVIDED AS PER SECTION 110.26 CEC

THIS PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE CITY OF SAN DIEGO PROP D & FAA REQUIREMENTS

CONTRACTOR

ADT SOLAR LLC 34859 FREDRICK ST. 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46 Signature of Licensed Preparer <i>Adam Evans #1080382</i>
PROJECT NAME & ADDRESS TIANLI ZHANG 2858 AVELLA CIR, SAN DIEGO, CA 92108 COUNTY:-SAN DIEGO COUNTY
SYSTEM SIZE DC SIZE: 3.800 KW DC-(STC) AC SIZE: 2.900 KW AC



Signed 8/2/2022



SHEET TITLE Diana Garcia SITE PLAN
DRAWN DATE 7/19/2022
DRAWN BY SK
SHEET NUMBER PV-3

ROOF SECTION(S)

ROOF 1	TILT - 5° AZIMUTH - 231° MODULE - 10 SYSTEM SIZE (KW)- 3.80
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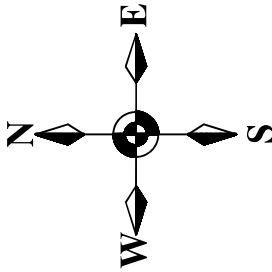
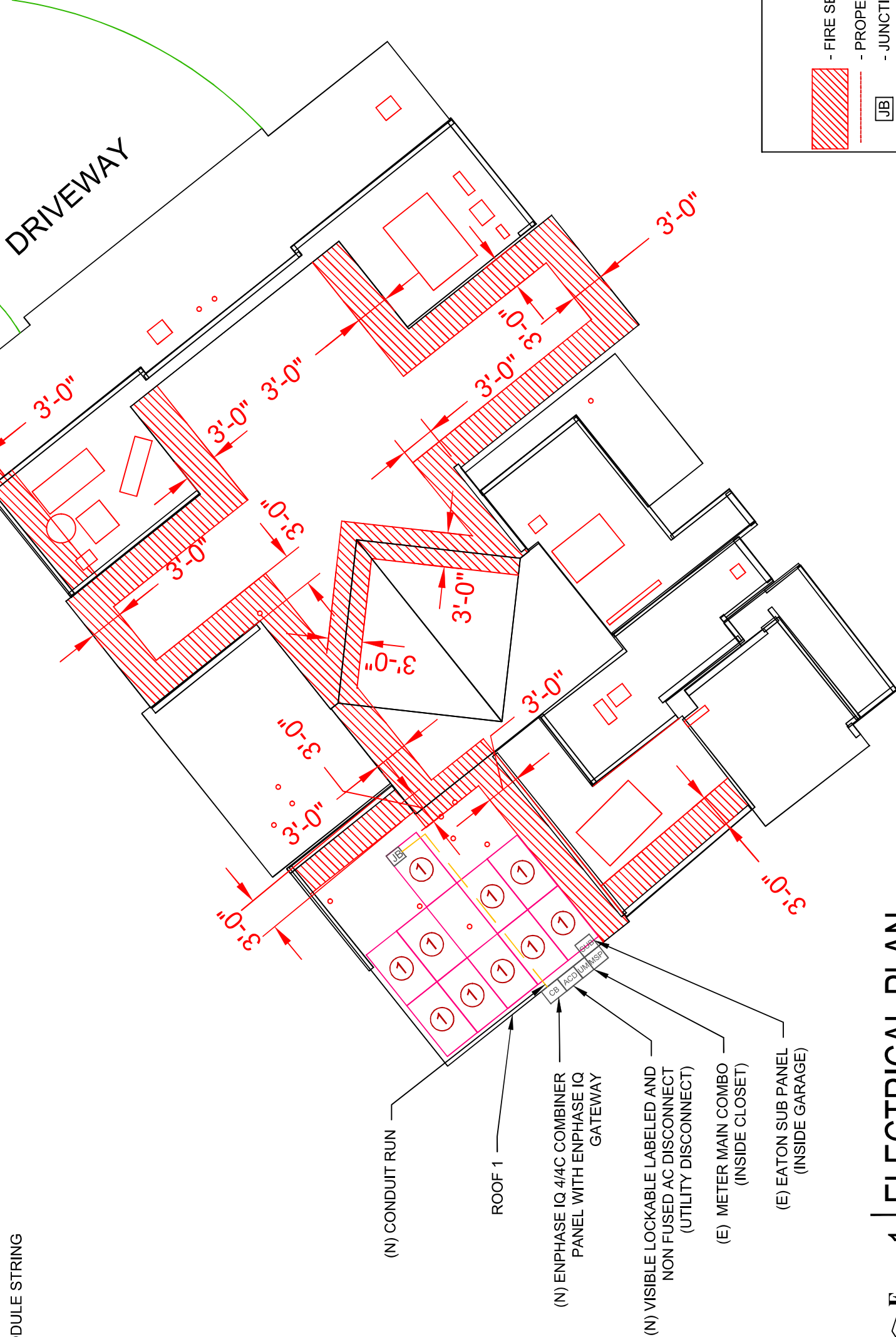
① - MODULE STRING

AVELLA CIR

LADDER ACCESS

DRIVEWAY

NOTE:
TO AVOID EXTRA TEMP. CORRECTIONS
CONDUIT MUST BE 7/8" MINIMUM HEIGHT
OFF ROOFTOP (EXTERIOR) OR 18" BELOW
ROOF THROUGH ATTIC (INTERIOR).



1 | ELECTRICAL PLAN

SCALE: 3/32" = 1'-0"

LEGEND

- FIRE SETBACK
- PROPERTY LINE
- JUNCTION BOX
- SKYLIGHT (ROOF OBSTRUCTION)
- CHIMNEY (ROOF OBSTRUCTION)
- VENT, ATTIC FAN (ROOF OBSTRUCTION)

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ELECTRICAL PLAN

DRAWN DATE 7/19/2022

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SHEET NUMBER

PV-4

ROOF SECTION(S)

ROOF 1	ROOF MATERIAL - ROLLED ROOF RAFTER SIZE - 2"X6" O.C. SPACING - 24"
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POINT LOAD CALCULATION

NUMBER OF PANELS IN ARRAY = 10 MODULES
MODULE TYPE = SILFAB SOLAR SIL-380 HC (380W) MODULES
NUMBER OF CONNECTIONS TO ROOF = 27
WEIGHT OF INDIVIDUAL PANEL = 43.00 LBS / 19.5 KG.
TOTAL WEIGHT OF ARRAY: 430.00 LBS.
WEIGHT AT EACH CONNECTION : 430.00 LBS / 27 = 15.93 LBS
SOLAR PANEL AREA = 69.4"X 40.8" = 19.66 SF
TOTAL ARRAY AREA = 10 X 19.66 = 196.60 SF
DISTRIBUTED LOAD = 430.00/196.60 = 2.1872 PSF

- CLAMP

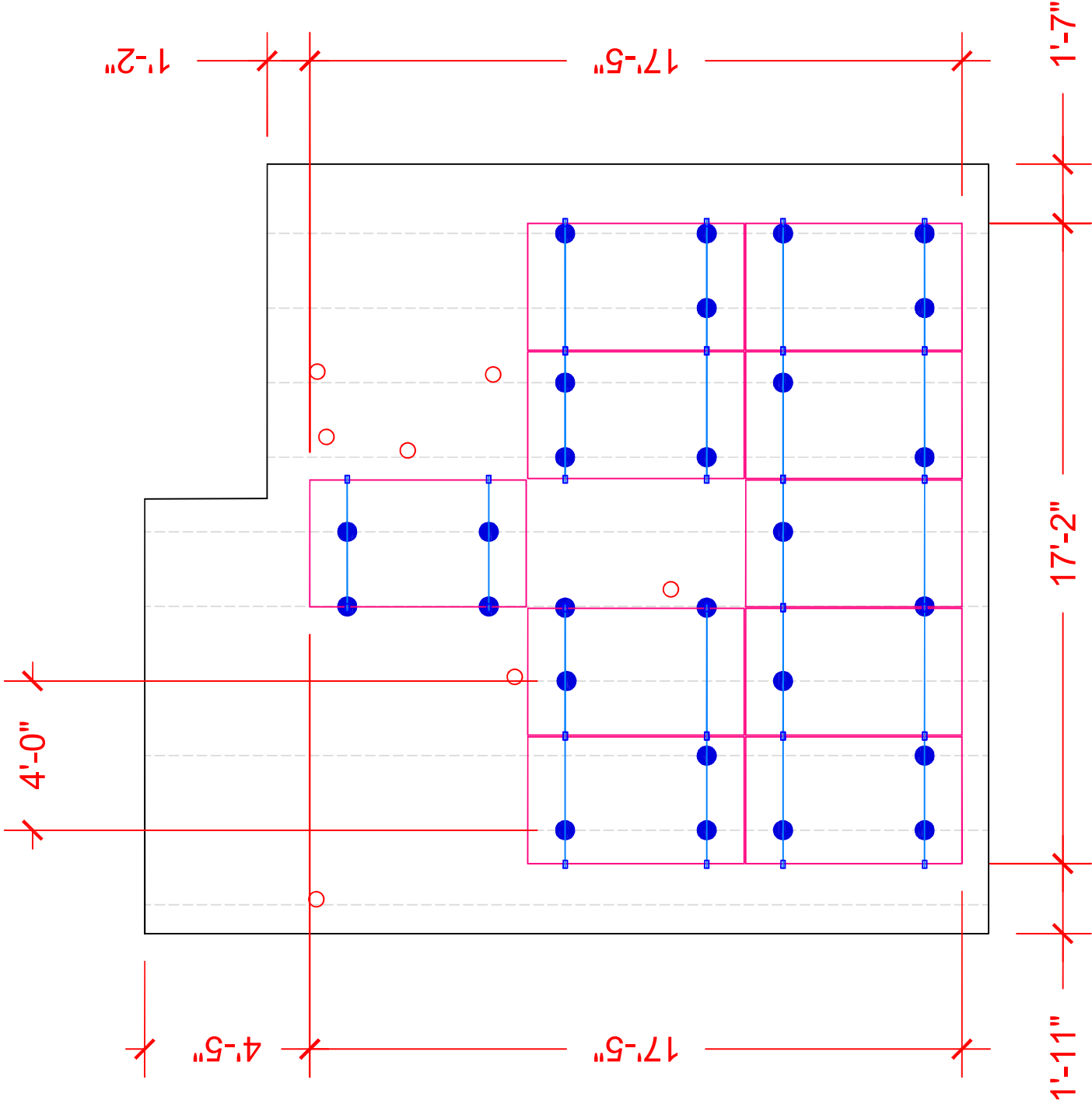
- UNIRAC FLASHLOC

- RAIL

- RAFTER

27

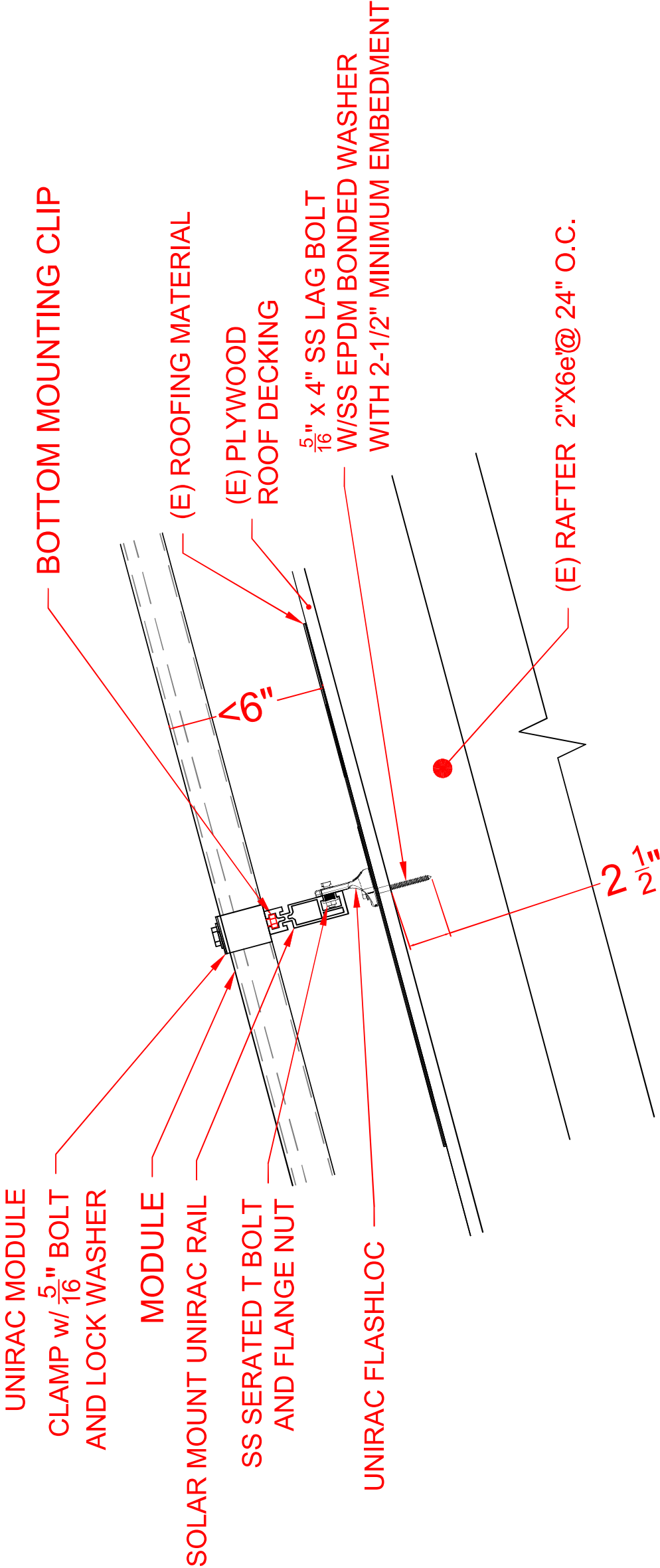
- TOTAL MOUNT



1 | ATTACHMENT PLAN
SCALE: 1/4"=1'-0"

CONTRACTOR	
ADT SOLAR LLC 34859 FREDRICK ST. 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46 Signature of Licensed Preparer <i>Adam Evans #1080382</i>	
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DRAWN BY	SK
SHEET NUMBER PV-6	



SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	SILFAB SOLAR SIL-380 HC
VMP	35.32V
IMP	10.77A
VOC	42.17V
ISC	11.36A
TEMP. COEFF. VOC	-0.28%/°C
MODULE DIMENSION	69.4"L x 40.8"W x 1.37"D (In Inch)

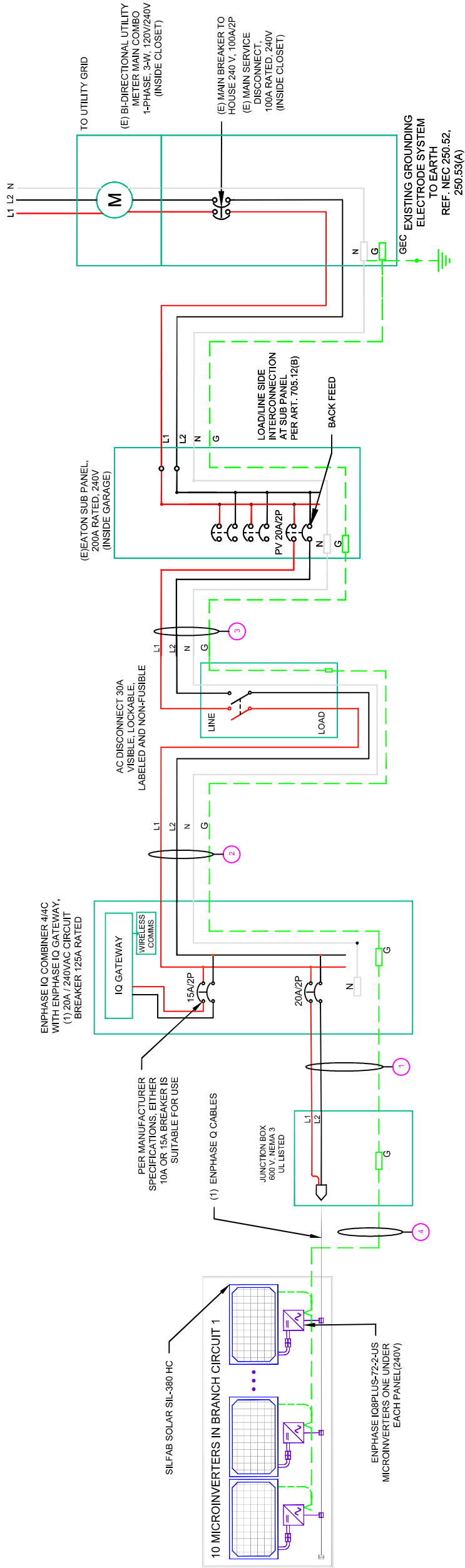
DC SIZE 10 X 380W = 3.800 kW DC-STC
AC SIZE 10X 290W = 2.900 kW AC

<u>INVERTER SPECIFICATIONS</u>	
MANUFACTURER / MODEL #	ENPHASE IQ8PLUS-72-2-US MICROINVERTER
MIN/MAX DC VOLT RATING	30V MIN/ 58V MAX
MAX INPUT POWER	235W-440W
NOMINAL AC VOLTAGE RATING	240V/ 211-264V
MAX AC CURRENT	1.21A
MAX MODULES PER STRING	13 (SINGLE PHASE)
MAX OUTPUT POWER	290 VA

NOTE: CONDUIT TO BE UL LISTED FOR WET LOCATIONS AND UV PROTECTED (EX. -EMT,PVC OR RMC)*FMC MAYBE USED IN INDOOR APPLICATIONS WHERE PERMITTED BY NEC ART 348

WIRE /CONDUIT SCHEDULE	
TAG	DESCRIPTION
1	(1) #10/2 ROMEX IN ATTIC(4) #10 THWN-2 & (1)#6 THWN -2 GROUND/ IN 3/4" EMT/FMC CONDUIT
2	(3) #10 THWN-2 & (1)#6 THWN-2 GROUND / IN 1" EMT/FMC CONDUIT
3	(3) #10 THWN-2 & (1)#6 THWN-2 GROUND / IN 1" EMT/FMC CONDUIT
4	(1)#6 BARE GROUND

METER NO: 02066064



**NOTE: ENPHASE MICROINVERTERS
MEET CEC 690.12 RAPID
SHUTDOWN REQUIREMENTS**

SOLAR BREAKER LOCATED AT THE FURTHEST END OF BUSBAR FROM THE MAIN BREAKER OR FEEDER UNIT

CONTRACTOR	 ADT SOLAR LLC 34859 FREDRICK ST. 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46 Signature of Licensed Preparer <i>Adam Evans #1080382</i>
PROJECT NAME & ADDRESS	TIANLI ZHANG 2858 AVELLA CIR, SAN DIEGO, CA 92108 COUNTY:-SAN DIEGO COUNTY
SYSTEM SIZE	DC SIZE: 3.800 KW DC-(STC) AC SIZE: 2.900 KW AC



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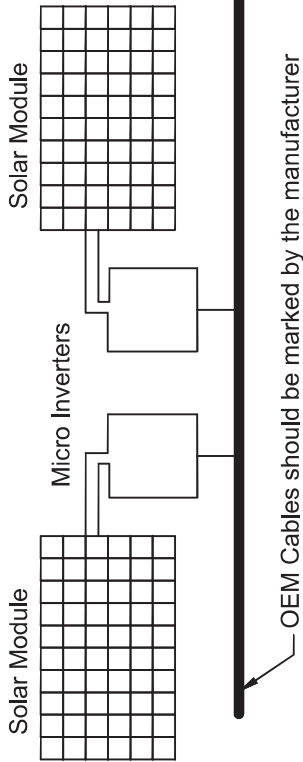
LINE DIAGRAM

DRAWN DATE	7/19/2022
DRAWN BY	SK

SHEET NUMBER

PV-7

System Labels



1 **WARNING: PHOTOVOLTAIC POWER SOURCE**

On Ext. and Int. Conduit Every 10 Feet and within 1' of turns and within 1' above/or below penetrations and all Junction Boxes. Reflective. NEC 690.31(G)

2 **CAUTION: PHOTOVOLTAIC J-BOX FOR SERVICE: SUNPRO SOLAR 951-678-7733**

3 **WARNING**
ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

4 **SOLAR LOAD CENTER**
WARNING
MAX SIZE FOR MAIN BREAKER IN LOAD CENTER IS 20 AMPS. INCREASING BREAKER SIZE WILL CREATE AN ELECTRICAL FIRE HAZARD!
PV RATED AC OUTPUT CURRENT **12.10 A**
NOMINAL OPERATING AC VOLTAGE **240 V**

SUNPRO SOLAR 951-678-7733

5 **WARNING**
ELECTRIC SHOCK HAZARD

IF GROUND FAULT IS INDICATED ALL NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED

6 **WARNING**
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

7 **WARNING:**
PHOTOVOLTAIC SOLAR BREAKER. DO NOT RELOCATE THIS OVER-CURRENT DEVICE.

8 **PHOTOVOLTAIC SYSTEM AC DISCONNECT**

RATED AC OUTPUT CURRENT **12.10 A**
NOMINAL OPERATING AC VOLTAGE 240 V

9 **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

10 **CAUTION**
SOLAR ELECTRIC SYSTEM CONNECTED

RATED AC OUTPUT CURRENT **12.10 A**
NOMINAL OPERATING AC VOLTAGE **240 V**

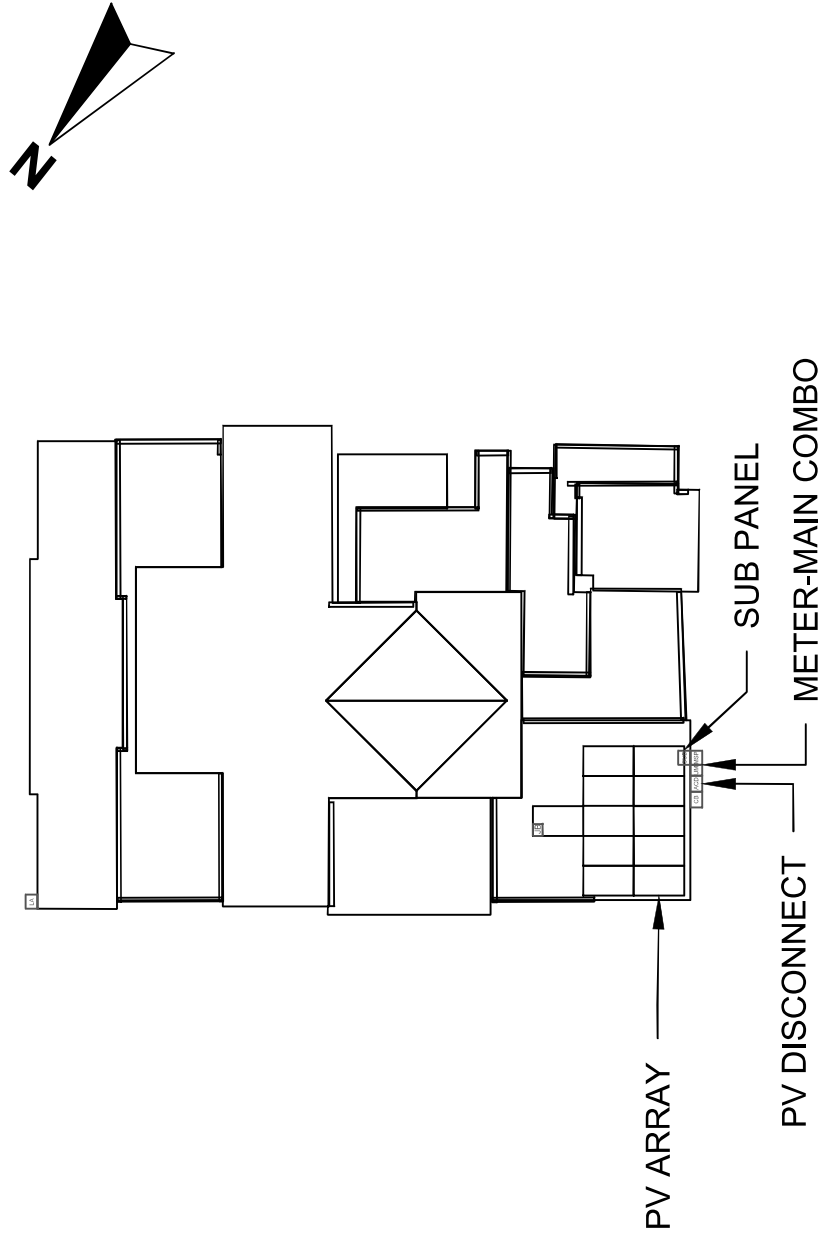
11 **RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

THIS PLAQUE SHALL BE RED PLASTIC WITH ENGRAVED WHITE LETTERING. THE PLAQUE SHALL BE ATTACHED TO THE EXTERIOR OF THE ENCLOSURE FOR THE SERVICE DISCONNECTING MEANS WITH POP-RIVETS. MACHINE SCREWS, OR OTHER FASTENERS AS APPROVED BY THE AHJ.

CONTRACTOR	
ADT SOLAR LLC 34859 FREDRICK ST. 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46 Signature of Licensed Preparer <i>Adam Evans #1080382</i>	
PROJECT NAME & ADDRESS TIANLI ZHANG 2858 AVELLA CIR, SAN DIEGO, CA 92108 COUNTY:-SAN DIEGO COUNTY	
SYSTEM SIZE DC SIZE: 3.800 KW DC-(STC) AC SIZE: 2.900 KW AC	
9/9/2022, 12:58:39 PM	
WARNING SHEDDABLE WARNING LABELS	
DRAWN DATE	7/19/2022
DRAWN BY	SK
SHEET NUMBER PV-9	

CAUTION

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



CONTRACTOR	
	
ADT SOLAR LLC 34859 FREDRICK ST., 101 WILDOMAR, CA 92595 951-678-7733 CA LICENSE #1080382 C10/C46 Signature of Licensed Preparer <i>Adam Evans #1080382</i>	
PROJECT NAME & ADDRESS TIANLI ZHANG 2858 AVELLA CIR, SAN DIEGO, CA 92108 COUNTY:-SAN DIEGO COUNTY	
SYSTEM SIZE DC SIZE: 3.800 KW DC-(STC) AC SIZE: 2.900 KW AC	
	
9/9/2022, 12:58:39 PM SHEET TITLE Diana Garcia PLACARD	
DRAWN DATE	7/19/2022
DRAWN BY	SK
SHEET NUMBER	
PV-10	