THE CITY OF
POMONA

Development Services Department

November 29, 2023

Jalani High
1941 S. Vineyard Avenue
Ontario, CA 91764

Subject: Notice of Decision for File No. MINCOA 22859-2023

Dear Jose Lopez,

The Planning Division has reviewed your Certificate of Appropriateness application to install a solar system on the roof of the property located at 354 E. Columbia Avenue. Upon review of the City's historic preservation ordinance and design guidelines your project has been **approved**. The attached decision letter provides the analysis and basis for the decision. There is a 20 day appeal period from the date of approval.

If you have any questions, please contact me at (909) 620-2449 or email me at alan.fortune@pomonaca.gov.

Sincerely,

Alan Fortune
Assistant Planner

Attachment

City of Pomona

MINOR CERTIFICATE OF APPROPRIATENESS DECISION LETTER

FILE NO:	MINCOA 22859-2023 A request for a Minor Certificate of Appropriateness for install a solar system on the roof of a contributing historic structure.
ADDRESS:	**354 E. Columbia Avenue**
APPLICANT:	Jalani High
PROJECT PLANNER:	Alan Fortune, Assistant Planner
DECISION:	Approved File No(s). MINCOA 22859-2023.

BASIS FOR DECISION

Staff reviewed Pomona's Historic Preservation Ordinance (Section .5809-13), and the applicable design standards in Preserving Pomona – The Pomona Guide to Historic Preservation. In order to approve a Minor Certificate of Appropriateness Staff must determine that the findings contained in the City's Historic Preservation Ordinance can be made.

Applicable Design Standards

X	There will be no change in appearance of the roof.
X	The solar panels are removable so that, if removed at a later date, will not cause a change in the appearance of the roof;
X	The solar panels are removable so that, if removed at a later date, will not cause the historic roofing material of the roof to be removed; and
X	Any removal of roofing material at the time of installation will be replaced in-kind, causing no change in appearance and is subject to a reroof permit.
	Project meets City's preferred location for solar panels (Guide to Installing Solar Panels) (Not required under state law)
X	Project Applicant or owner signed Conditions of Approval

CONDITIONS OF APPROVAL:

The Planning Division has completed its review of MINCOA 22859-2023. The request has been **approved**. The approval is subject to the following conditions:

1. The approval shall be used in the manner requested and shall be in substantial conformity with the

plans approved by the Planning Division on the date listed on this letter, in accordance with the revision and/or additional conditions specifically required in this approval.

2. The approval shall be valid for not more than one year from the date of Permit approval. The Planning Division may grant a time extension for one (1) year provided that a written request by the applicant is submitted to the Planning Division within thirty (30) days prior to the expiration date without a fee. If plans are submitted to the Building and Safety division within one year from the date of approval, the proposed action shall be considered active.

3. The applicant shall obtain any required permits from the Building & Safety Division and/or Department of Public Works.

4. In the event that the approved plans under this Minor Certificate of Appropriateness are inconsistent with the provisions of the California Code of Regulations, Tittle 24 and/or any other applicable uniform building codes, the applicable building codes shall prevail.

5. Any deviation from the approved plans, shall require modification to the Certificate of Appropriateness and require approval of the Planning Division and, if necessary, the Historic Preservation Commission.

6. All project conditions shall be imprinted on the title sheet of the construction drawings (if required). The approved set of plans shall be retained on-site for review by Building Inspectors during the course of construction.

7. Prior to Occupancy the Planning Division shall inspect the premises to ensure the Conditions of Approval have been met and that the project has been constructed per the approved plans.

8. Construction Activities:

   Hours of construction activity shall be limited to:

   7:00 a.m. to 8:00 p.m., Monday through Saturday
   (There shall be no construction allowed on Sunday or on any Federal or State Holiday)

9. Violation of any of the conditions of this permit shall be cause for revocation and termination of all rights thereunder.

10. The applicant shall obtain a building permit prior to any demolition or construction.

11. All ground and roof-mounted equipment is required to be fully screened from view. Upon final inspection, Planning Division staff may require additional screening if warranted, through either landscaping, walls or a combination thereof.

City of Pomona

MINOR CERTIFICATE OF APPROPRIATENESS DECISION LETTER

12. There will be **NO** change in appearance of the roof;

13. The solar panels will be installed in such a manner that they are removable at a later date **WITHOUT** affecting the historic character of the roof;

14. The solar panels will be installed in such a manner that they are removable at a later date **WITHOUT** having to remove the historic roof material.

15. Any removal of existing roof material at the time of installation will be replace with a like material causing **NO** change in appearance and subject to a reroof permit.

APPEALS

This decision will become final on December 20, 2023, unless an appeal is filed with the Planning Division prior to this date. The applicant or any member of the public may file an appeal. There is no cost to file an appeal for a Minor Certificate of Appropriateness. Appeals may be filed with the contact listed in this letter.

Sincerely,

Geoffrey Starns, AICP, LEED AP BD+C
Historic Preservation Supervisor

November 29, 2023

Date

City of Pomona

MINOR CERTIFICATE OF APPROPRIATENESS DECISION LETTER

For Solar Panel Installations Only:

Acceptance of Conditions of Approval

1. There will be **NO** change in appearance of the roof;

2. The solar panels will be installed in such a manner that they are removable at a later date **WITHOUT** affecting the historic character of the roof;

3. The solar panels will be installed in such a manner that they are removable at a later date **WITHOUT** having to remove the historic roof material.

4. Any removal of existing roof material at the time of installation will be replace with a "like for like" material causing **NO** change in appearance and subject to a reroof permit.

I, as the applicant for the above referenced project, have reviewed the conditions of approval listed above and agree to all the conditions. As representative for the property owner I further state that the property owner has reviewed the above listed Conditions of Approval and is in agreement with the Conditions of Approval and has authorized me to accept the Conditions of approval on his behalf.

Signature: Jalani High **11/28/2023**

Name: **Jalani High** Date

Applicant **Jalani High**

SHEET INDEX

PV1	TITLE SHEET
PV2 (+PV2.1 AS NEEDED)	ROOF/SITE PLAN
PV3 (+ PV3.1 AS NEEDED)	ELECTRICAL LINE DIAGRAM / DETAILS
PV4	EQUIPMENT LABELS
PV4.1	PLACARD
PV5	ATTACHMENT PLAN
PV6	STRUCTURAL COMPONENTS
PV7	PROPERTY LINES
PV8-PV10	INSTALL DOCUMENTS
	STRUCTURAL ENGINEERING CALCS (IF REQ.)
	EQUIPMENT DATA SHEETS

APPLICABLE CODES

2022 CA BUILDING CODE
2022 CA RESIDENTIAL CODE
2022 CA MECHANICAL CODE
2022 CA ELECTRICAL CODE
2022 CA GREEN CODE
2022 CA PLUMBING CODE
2022 CA ENERGY CODE
2022 CA RESIDENTIAL FIRE CODE

OCCUPANCY & CONSTRUCTION TYPE

OCCUPANCY - R3
CONSTRUCTION - 5B

CONTRACTORS LICENSE # & TYPE

BRIGHT PLANET SOLAR INC
C-10 #1020761

ESS SYSTEM SCOPE OF WORK:

NUMBER OF ESS UNIT(S): 1
TYPE OF ESS UNIT(S): SOLAREDGE ENERGY BANK
ESS UNIT(S) CAPACITY (kWh/UNIT): 10kWh
INSIDE ATTACHED GARAGE(S): NO
INSIDE DETACHED GARAGE(S) AND/OR ACCESSORY STRUCTURES: NO
OUTDOORS ON EXTERIOR WALLS: YES
OTHER, AND/OR FOR ANOTHER BUILDING ON THE SAME SITE: NO

DISCONNECTS:

MINIMUM NUMBER OF DISCONNECTS REQUIRED TO TURN OFF ALL POWER SOURCES FEEDING THE HOME (UTILITY, ESS, PV, AND OTHERS): 3

STRUCTURE/SITE INFORMATION:

TOTAL ROOF REPLACEMENT: NO
ATTIC/RAFTER BAY RIDGE VENTING SYSTEM: NO
OPERABLE WINDOWS AND/OR DOORS ABOVE ROOF PLANE: NO
FIRE HAZARD SEVERITY ZONE: NO
STATE RESPONSIBILITY AREA: NO

LACoFD ENERGY STORAGE SYSTEMS NOTES

A. ALL WORK SHALL BE IN COMPLIANCE WITH THE MOST CURRENT LA COUNTY FIRE CODE AND ITS SECTIONS.

B. WHEN ESS IS INSTALLED INSIDE GARAGE - ANY PLANNED OR EXISTING ATTACHED GARAGE SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS, AND WITH THE MANUFACTURER'S INSTALLATION MANUAL(S) TO WHICH THE EQUIPMENT HAS BEEN LISTED, INCLUDING REQUIREMENTS PERTAINING TO FIRE PROACTIVE FEATURES (E.G., GYPSUM BOARD, DOORS, AND DUCTS), AND TO ALARM/DETECTOR DEVICES

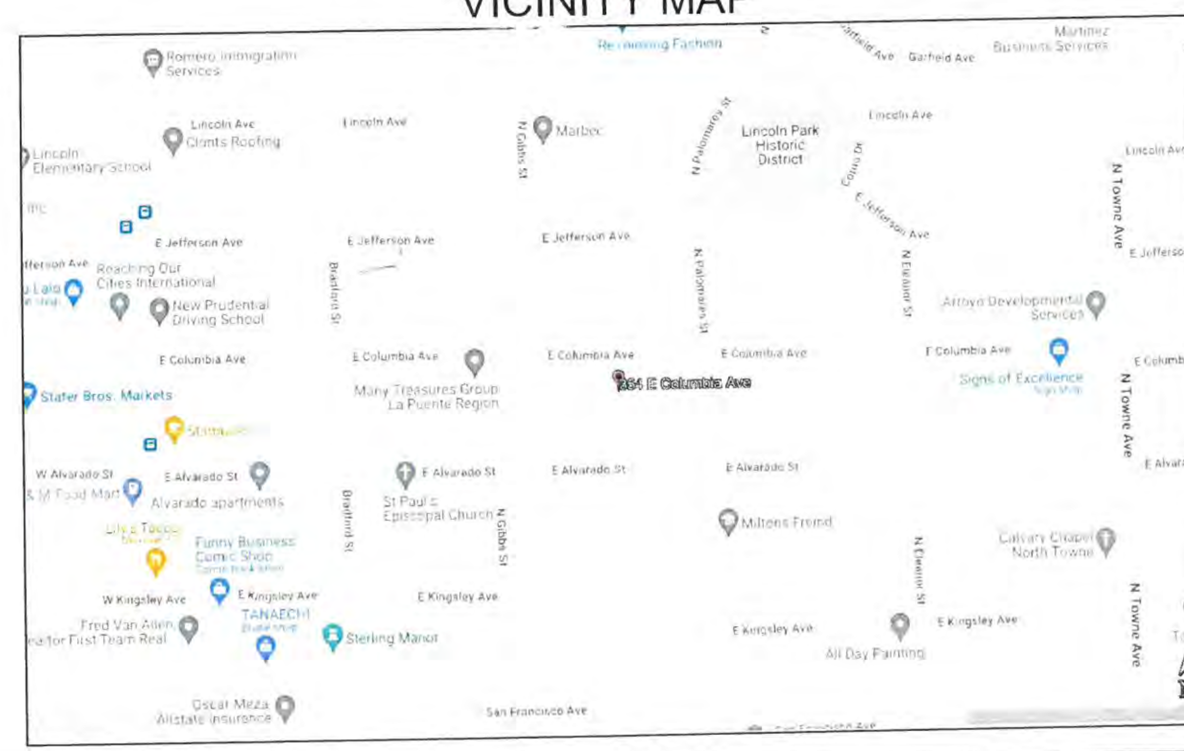
C. WHERE SUBJECT TO VEHICULAR IMPACT, ESS UNITS WILL BE MOUNTED 36" ABOVE THE FINISHED FLOOR TO AVOID THE NEED FOR IMPACT PROTECTION

D. BI-DIRECTIONAL EV CHARGERS NOT PERMITTED AT PROJECT LOCATION IF EV BATTERY EXCEEDS 80kWh IN ADDITION TO HOMES ESS CAPACITY

CONSTRUCTION NOTES

A. A LADDER SHALL BE IN PLACE FOR ANY INSPECTIONS IN COMPLIANCE WITH OSHA REGULATIONS.
B. PV MODULES ARE NON-COMBUSTIBLE IN NATURE.
C. THIS SYSTEM IS A UTILITY INTERACTIVE (GRID CONNECTED) SYSTEM AND DOES NOT HAVE STORAGE BATTERIES (UNLESS SPECIFICALLY INDICATED ON SHEET PV3 & PV3.1).
D. A GROUND ELECTRODE SYSTEM WILL BE PROVIDED IN ACCORDANCE WITH CEC 690.47 & 250.50 - 250.166. GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED WHEN BONDED AT THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE OR INADEQUATE, OR IS ONLY METALLIC WATER PIPING, A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8FT GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO GREATER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE FOR A COMPLETE GROUNDING SYSTEM.
E. EACH MODULE WILL BE GROUNDED USING THE SUPPLIED CONNECTION POINTS IDENTIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
F. THE EXPOSED METALLIC TABS OF THE SOLAREDGE OPTIMIZERS SHALL BE BONDED AND/OR GROUNDED PER CEC 690.43(A) AND THE MANUFACTURERS' INSTRUCTIONS.
G. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER CEC 110.26.
H. ALTERNATE POWER SOURCE PLACARD SHALL BE PLASTIC, ENGRAVED IN A CONTRASTING COLOR (WHITE). THIS PLAQUE WILL BE PERMANENTLY ATTACHED & UV RESISTANT.
I. ALL PLAQUES AND SIGNS WILL BE INSTALLED AS REQUIRED BY 2022 CEC.
J. A SMOKE DETECTOR, APPROVED AND LISTED BY THE STATE FIRE MARSHAL, SHALL BE INSTALLED IN EACH DWELLING WHEN A PERMIT FOR ALTERATIONS, REPAIRS OR ADDITIONS EXCEEDS $1,000.00. A BATTERY POWERED SMOKE DETECTOR SATISFIES THE REQUIREMENTS FOR A SMOKE DETECTOR. APPROVED COMBINED SMOKE ALARMS AND CARBON DIOXIDE ALARMS SHALL BE ACCEPTABLE. A CARBON MONOXIDE DETECTOR SHALL BE INSTALLED IN THE SPECIFIC EXISTING DWELLING UNIT THAT HAVE ATTACHED GARAGES OR FUEL-BURNING APPLIANCES FOR WHICH A PERMIT IS ISSUED FOR ALTERATIONS, REPAIRS OR ADDITIONS EXCEEDING $1,000.00. LISTED SINGLE- OR MULTI-STATION CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS. COMBINED SMOKE/CARBON MONOXIDE ALARMS MAY BE USED. THE ALARM SHALL RECEIVE ITS PRIMARY POWER FROM THE BUILDING WIRING EXCEPT IT IS PERMITTED TO BE SOLELY BATTERY OPERATED WHERE REPAIRS OR ALTERATIONS DO NOT RESULT IN THE REMOVAL OF WALL AND CEILING FINISHES OR THERE IS NO ACCESS BY MEANS OF AN ATTIC.
K. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (OR INVERTER) IF SMALLER THAN #6 AWG COPPER WIRE AS PER CEC 250.64(B)(2). THE GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AS BUSBARS WITHIN LISTED EQUIPMENT AS PER CEC 250.64(C).
L. ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE BUILDING CODE OF THE LOCAL JURISDICTION.
M. PV SYSTEMS CONNECTION IN THE SWITCH GEAR (PANEL) SHALL BE POSITIONED AT THE OPPOSITE END FROM THE INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION AS PER CEC 705.12(B)(3)(2).
N. ALL EQUIPMENT SUPPLIED SHALL BE UL LISTED OR LISTED BY A LISTING AGENCY RECOGNIZED BY THE STATE IN WHICH THE SYSTEM IS CONSTRUCTED.
O. AC DISCONNECTS SHALL BE IN COMPLIANCE WITH CEC 690.13.
P. ALL DC CONDUCTORS SHALL BE 90° RATED THHW, THWN-2, USE-2 OR PV WIRE. ALL AC CONDUCTORS SHALL BE 75° RATED THWN WIRE.
Q. ANY DC RUNS INSIDE THE BUILDING MUST BE IN METAL CONDUIT AND LABELED EVERY 10'.
R. THE UTILITY DISCONNECT HAS VISIBLE BLADES, IS LOCKABLE AND IS ACCESSIBLE TO THE UTILITY 24/7.
S. ALL BREAKERS SHALL BE SUITABLE FOR BACK FEED. WHEN BACK FED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION THE BREAKER SHALL NOT READ 'LINE AND LOAD'.
T. COORDINATE ANY POWER OUTAGE WITH LOCAL UTILITY AND PROPERTY OWNER. NOTIFY UTILITY BEFORE ACTIVATION OF PV SYSTEM.
U. CITY BUILDING INSPECTOR SHALL INSPECT ACCESSIBLE STRUCTURAL CONNECTIONS AND THE HOUSE CURRENT SIDE OF THE SYSTEM, ALL OTHER EQUIPMENT SHALL BE UL LISTED AND APPROVED.
V. PHOTOVOLTAIC MODULES SHALL NOT BE INSTALLED OVER ANY ATTIC, PLUMBING OR MECHANICAL VENT. PLUMBING VENTS TO EXTEND A MIN OF 6" ABOVE ROOF OR MODULE. NO BLDG, PLBG OR MECH VENTS TO BE COVERED, OBSTRUCTED OR ROUTED AROUND MODULES.
W. ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER THE OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT A STRONG POINT OF BUILDING CONSTRUCTION. FIELD VERIFY EXACT LOCATION.
X. THE DISCHARGE OF POLLUTANTS TO ANY STORM DRAINAGE SYSTEM IS PROHIBITED. NO SOLID WASTE, PETROLEUM BYPRODUCTS, SOIL PARTICULATE, CONSTRUCTION WASTE MATERIAL OR WASTEWATER GENERATED ON CONSTRUCTION SITE OR BY CONSTRUCTION ACTIVITIES SHALL BE PLACED, CONVEYED OR DISCHARGED INTO THE STREET, GUTTER OR STORM DRAIN SYSTEM.
Y. ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE AND WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF OF THE ROOF SURFACE.
Z. ALL EQUIPMENT AND CONDUITS SHALL BE PAINTED TO MATCH ITS EXISTING BACKGROUND COLOR OF THAT LOCATION. SYSTEM NOT TO BE ENERGIZED UNTIL APPROVED BY THE LOCAL UTILITY.
AA. NO ROOFTOP CONDUIT RUNS, J-BOXES, VENTS, OR OTHER EQUIPMENT OR OBSTRUCTIONS ARE ALLOWED IN THE STATE FIRE MARSHALL'S EDGE SETBACKS, LESS THAN 5' WIDE.

VICINITY MAP



BRIGHT PLANET SOLAR
103A MILLBURY ST,
AUBURN MA 01501
888-997-4469

SIGNATURE:

CONTRACTOR LICENSE: C-10#1020761
DATE: 10/30/2023 12:00:57 PM

PROJECT #	BPN60561		REV	DATE	DESCRIPTION
SYSTEM SIZE	8.69kW/DC	6kW/AC		---	
DATE:	10/30/2023 12:00:57 PM			---	
DESIGNER:	DAPHNE COLON			---	

SUSAN WILSON
354 E COLUMBIA AVE
POMONA, CA 91767

TITLE SHEET

PV1

AZIMUTH AND TILT ANGLE						
	ROOF					
	ROOF A:	ROOF B:	ROOF C:	ROOF D:	ROOF E:	ROOF F:
AZIMUTH	90°	270°	180°	180°		
TILT ANGLE	4/12	4/12	4/12	4/12		
MODULE COUNT	2	10	8	2		
SOLAR ACCESS						
TSRF AVEREAGE						
INVERTERS	SOLAR EDGE SE6000H-USSN	1				
OPTIMIZERS	SOLAR EDGE P401	22				
	MODULE #1:	COUNT:	MODULE #2:	COUNT:	TOTAL COUNT:	
	CANADIAN SOLAR CS3N-395MS	22			22	

3' 1'-6" FIRE CODE PATHWAYS & SETBACKS

SYMBOL LEGEND
□ = MECHANICAL VENT
○ = FLUE / PLUMBING VENT

1 MAIN SERVICE PANEL

2 UTILITY METER (1 OF 2 DISCONNECTS)

3 AC DISCONNECT

4 NOT USED

4.1 NOT USED

5 INVERTER & INTEGRATED DC DISCONNECT (2 OF 2 DISCONNECTS)

5.1 NOT USED

6 OPTIMIZER (TYPICAL FOR EACH MODULE)

7 JUNCTION BOX ON ROOF (SIZE DETERMINED IN FIELD)

8 PV MODULES

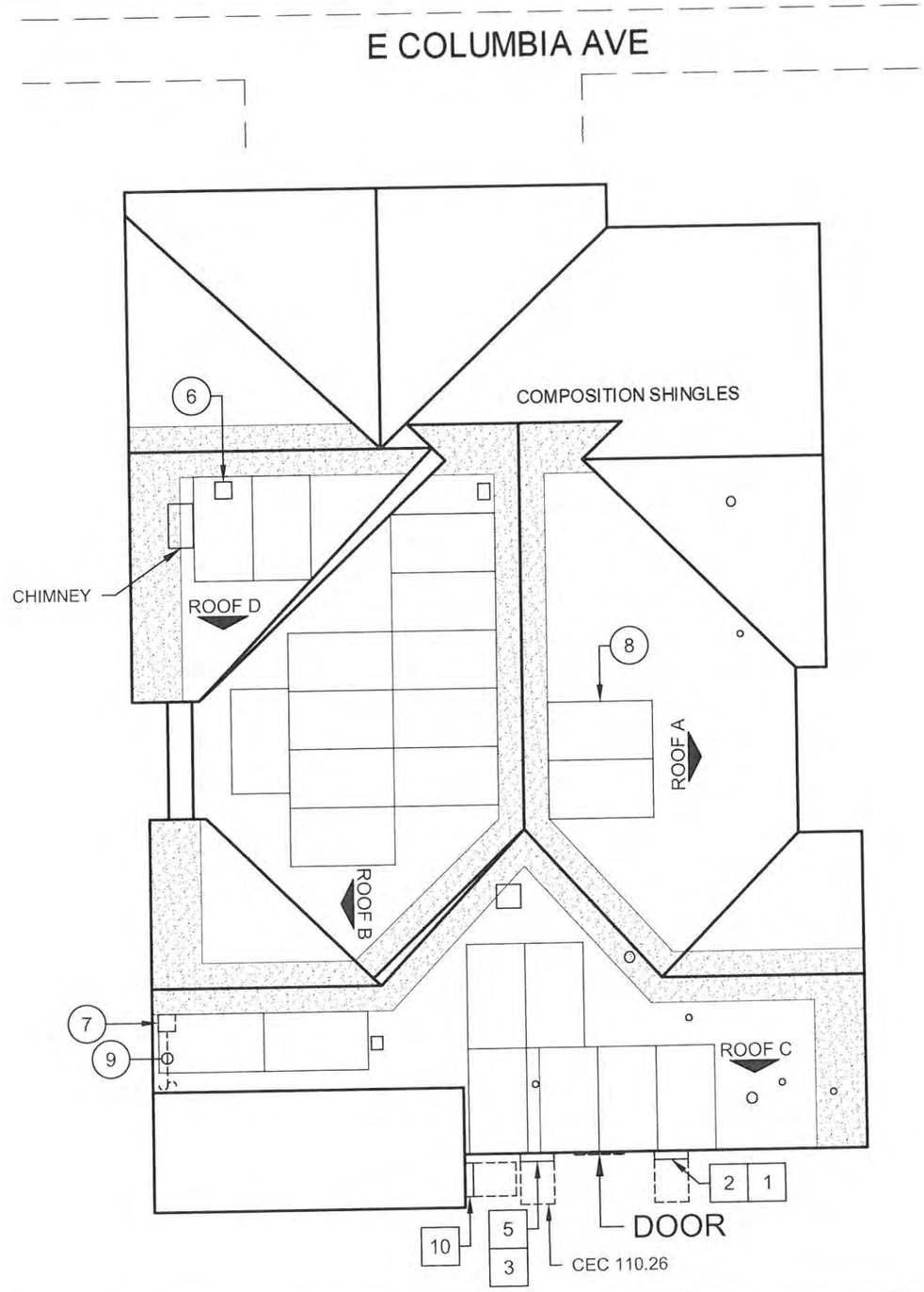
9 CONDUIT RUN IS SURFACE MOUNTED (ACTUAL CONDUIT RUNS TO BE DETERMINED IN THE FIELD)

10 ENERGY BANK BATTERY PACK

N W E S

ROOF AREA CALCULATION:
TOTAL AREA OF ARRAY(S) = 481.8 SQ. FT.
TOTAL AREA OF ROOF = 2441 SQ. FT.
PERCENTAGE OF ROOF COVERAGE = 19.7%

0' 5' 10'



BRIGHT PLANET SOLAR
103A MILLBURY ST,
AUBURN MA 01501
888-997-4469

SIGNATURE:

CONTRACTOR LICENSE:
C-10#1020761
DATE: 10/30/2023 12:00:57 PM

PROJECT #	BPN60561	
SYSTEM SIZE	8.69kW/DC	6kW/AC
DATE:	10/30/2023 12:00:57 PM	
DESIGNER:	DAPHNE COLON	

REV	DATE	DESCRIPTION

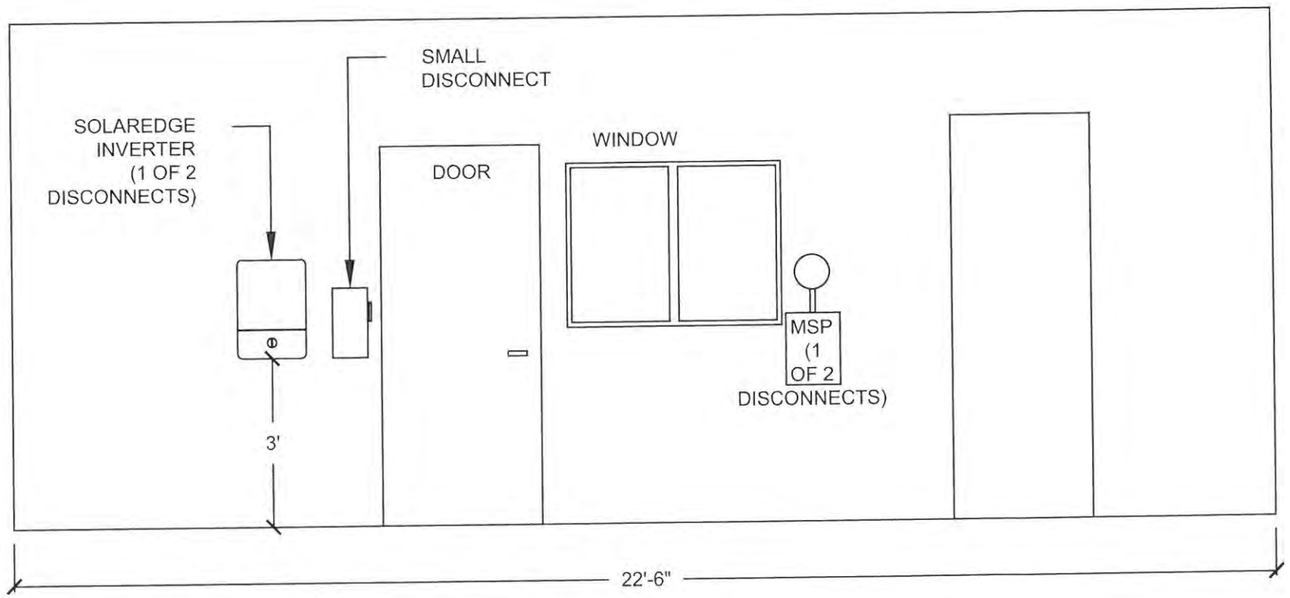
SUSAN WILSON
354 E COLUMBIA AVE
POMONA, CA 91767

ROOF/SITE PLAN

PV2

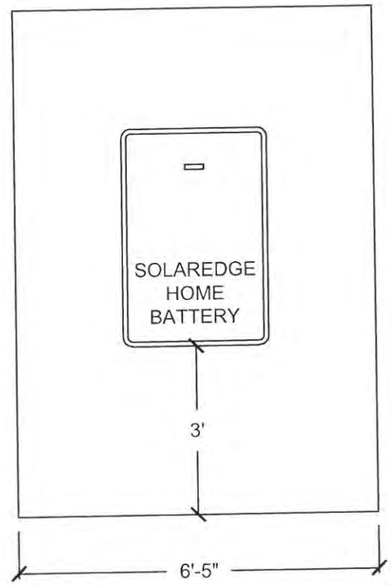
POWER SOURCE DISCONNECT SCHEDULE	
DISCONNECT NUMBER	TYPE OF DISCONNECT
1 OF 2	UTILITY
2 OF 2	PV RAPID SHUTDOWN

MINIMUM NUMBER OF DISCONNECTS REQUIRED TO TURN OFF ALL POWER SOURCES TO THE HOME (UTILITY, ESS, AND PV)



A FLOOR PLAN DETAIL

SOUTH WALL - SCALE: 3/8" = 1'-0"



B FLOOR PLAN DETAIL

EAST WALL - SCALE: 3/8" = 1'-0"

NOTE:
1. EXTERIOR ESS UNITS WILL NOT BE INSTALLED WITHIN 3' (IN ANY DIRECTION) OF ALL DOORS, WINDOWS, OPERABLE OPENINGS INTO BUILDINGS, AND HVAC INLETS.
2. INDIVIDUAL ESS UNIT(S) SHALL BE SEPARATED FROM EACH OTHER BY AT LEAST 3', INCLUDING INSTALLATIONS ON ADJACENT WALLS (NOT APPLICABLE FOR UL9540A LISTED BATTERIES).
3. ESS UNITS WILL BE INSTALLED NO LESS THAN 3' FROM FINISHED GRADE (LACFC 1206.4.3.1)
4. ALL BUILDING DISCONNECTS MUST BE LOCATED WITHIN 6' OF THE MAIN SERVICE PANEL

BrightPlanetSolar

BRIGHT PLANET SOLAR
103A MILLBURY ST,
AUBURN MA 01501
888-997-4469

SIGNATURE:

CONTRACTOR LICENSE: C-10#1020761
DATE: 10/30/2023 12:00:58 PM

			REV	DATE	DESCRIPTION
PROJECT #	BPN60561				
SYSTEM SIZE	8.69kW/DC	6kW/AC		---	
DATE:	10/30/2023 12:00:58 PM			---	
DESIGNER:	DAPHNE COLON			---	

SUSAN WILSON
354 E COLUMBIA AVE
POMONA, CA 91767

ESS FLOOR PLAN

PV2.1

OPTIMIZER SPECIFICATIONS

MAKE AND MODEL	SOLAR EDGE P401			
	INPUTS		OUTPUTS	
MAX INPUT VOLTAGE AT VOC/MIN	60	[V]	60	MAX OUTPUT VOLTAGE
MAX SHORT CIRCUIT CURRENT Isc	12.5	[A]	15	MAX OUTPUT CURRENT
MAX DC INPUT CURRENT	12.5	[A]	15	ACTUAL STRING OUTPUT CURRENT
RATED INPUT DC POWER	430	[W/V]	380	ACTUAL STRING OUTPUT VOLTAGE

NOTE 1 : OPTIMIZERS TO BE GROUNDED USING 1/4" HEX HEAD BOLT, WASHER, NUT, FOR TOP RAIL MOUNT. SUPPLIED SST STAR WASHER.

PV MODULE #1 SPECIFICATIONS

		CANADIAN SOLAR CS3N-395MS	TEMP ADJUSTED VALUES
MAKE AND MODEL			
MAX POWER-POINT CURRENT (I_{MP})	[A]	10.68	
MAX POWER-POINT VOLTAGE (V_{MP})	[V]	37	31.3
OPEN CIRCUIT VOLTAGE (V_{OC})	[V]	44.3	47.3
SHORT CIRCUIT CURRENT (I_{SC})	[A]	11.44	
MAX SERIES FUSE (OCPD)	[A]	16	
MAX POWER (P_{MAX})	[W]	395	
MAX VOLTAGE (V_{DC})	[V]	1000	

INVERTER SPECIFICATIONS

		SOLAR EDGE SE6000H -
MANUFACTURER AND MODEL		
MAX DC INPUT VOLTAGE	[V]	480
MAX OUTPUT POWER	[W]	6000
NOMINAL DC INTPUT VOLTAGE	[V]	380
NOMINAL AC OUTPUT VOLTAGE	[V]	240
MAX CONTINUOUS OUTPUT CURRENT	[A]	25
MAX FUSE (OCPD)	[A]	40
MAX DC INPUT CURRENT *	[A]	16.5

* DC CURRENT LIMITED BY INVERTER AT DC DISCONNECT
NOTE: SOLAR EDGE INVERTERS & OPTIMIZERS WITH INTEGRATED GROUND MEET THE REQUIREMENTS FOR FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEMS IN SECTIONS 690.41 & 690.42 OF THE 2022 CEC. THEREFORE, GROUND FAULT REQ. OF 690.41 & 690.42 ARE MET AND SIZING OF EQUIPMENT GROUND PER 690.41 & 250.122 ARE SATISFIED.

NEW MAIN SERVICE PANEL

MANUFACTURER:	SQUARE D OR EQUAL	
PANEL MODEL NUMBER:	240V,225A,200A-MCB,3R	
VOLTAGE:	240	[V]
PHASES:	1	ø
BOX/BUSS RATING:	225	[A]
MAIN BREAKER:	200	[A]
PV SYSTEM BREAKER SIZE	40	[A]
#OF SPARE BREAKERS		

CALCS: PER CEC 705.12(B)(3)(2)

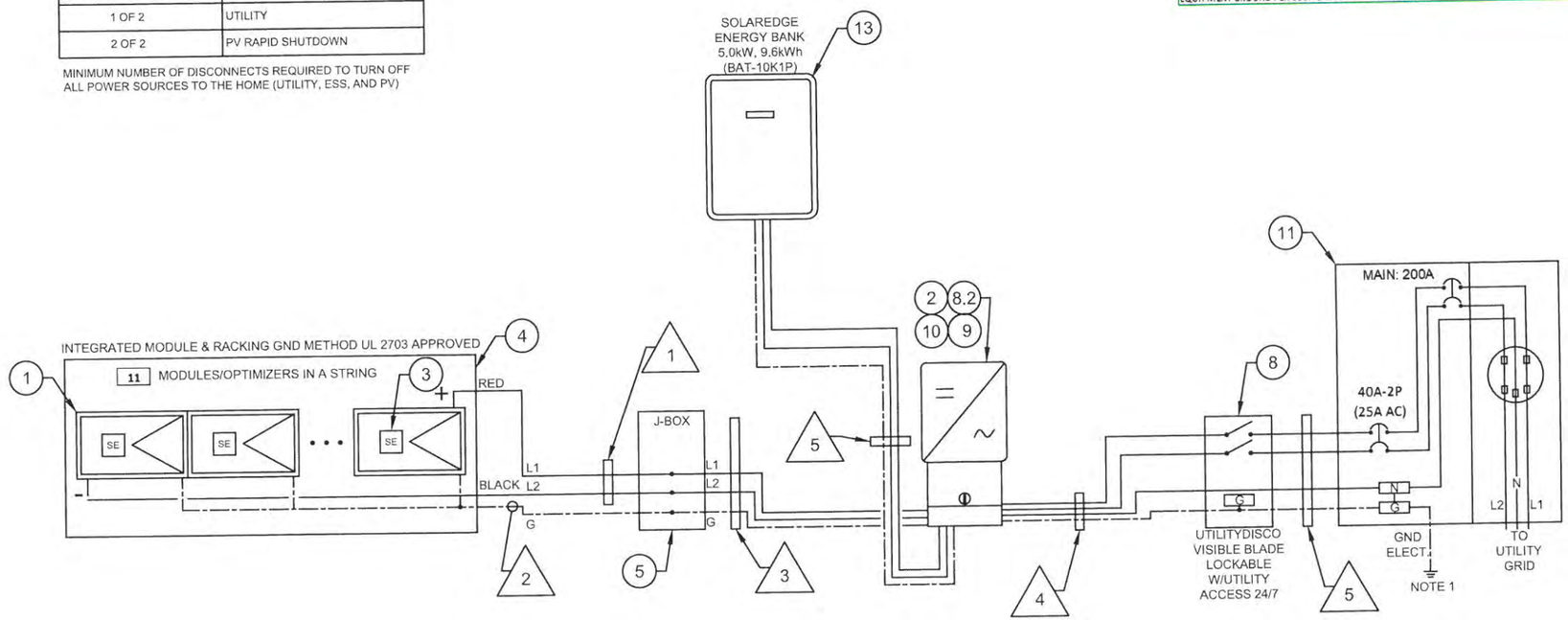
Buss			MAX
225	* 1.2	=	270
MCB	PV BRK		
200	+ 40	=	240

CEC 705.12(B)(3)(2)

NOTE 1: IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE VERIFIABLE GROUNDING ELECTRODE, IT IS THE PV CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE. NOTE 2: ENSURE G.E.C. INSTALLED AS PER CEC 690.47 & 250.64.

POWER SOURCE DISCONNECT SCHEDULE	
DISCONNECT NUMBER	TYPE OF DISCONNECT
1 OF 2	UTILITY
2 OF 2	PV RAPID SHUTDOWN

MINIMUM NUMBER OF DISCONNECTS REQUIRED TO TURN OFF ALL POWER SOURCES TO THE HOME (UTILITY, ESS, AND PV)



NOTE: SOLAR EDGE INVERTER DOES NOT HAVE BACKUP CAPABILITIES WITHOUT ADDITION OF HOME BUI

STRING CALCULATIONS

1 CIRCUIT WITH 11 - SOLAR EDGE P401 OPTIMIZERS IN SERIES

4345W	/	380V	ACTUAL STRING CURRENT	11.43A
380V	/	11	ACTUAL VOLTAGE PER OPTIMIZER	34.5V
1	X	380V	MAX SYSTEM VOLTAGE	380V
1	X	15A	MAX SYSTEM CURRENT	15A
11	X	395W	<---ACTUAL | MAX POWER DC--->	4345W

STRING CALCULATIONS

1 CIRCUIT WITH 11 - SOLAR EDGE P401 OPTIMIZERS IN SERIES

4345W	/	380V	ACTUAL STRING CURRENT	11.43A
380V	/	11	ACTUAL VOLTAGE PER OPTIMIZER	34.5V
1	X	380V	MAX SYSTEM VOLTAGE	380V
1	X	15A	MAX SYSTEM CURRENT	15A
11	X	395W	<---ACTUAL | MAX POWER DC--->	4345W

EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	PART NUMBER	NOTES
1	SOLAR PV MODULE #1	CANADIAN SOLAR CS3N-395MS	CANADIAN SOLAR CS3N-395MS	QUANTITY 22
2	INVERTER #1	SOLAR EDGE SE6000H -USSN	SOLAR EDGE SE6000H -USSN	QUANTITY 1
3	OPTIMIZERS	SOLAR EDGE P401	SOLAR EDGE P401	22
4	RACKING	SNAPNRACK	SNAPNRACK ULTRA	SEE RACKING SPECIFICATIONS
5	J-BOX			SELECTED IN FIELD
6	GROUNDING	SNAPNRACK	SNAPNRACK ULTRA	MODULE TO RAIL/RAIL TO J-BOX
7	NOT USED	EXISTING		
8	AC (UTILITY) DISCONNECT	SQUARE D OR EQUAL	DU222RB,240V,60A,2P,3R	NEMA 3R
8.2	INTERGRATED DC DISCONNECT	SOLAR EDGE		INTEGRAL TO INVERTER
9	RAPID SHUTDOWN	SOLAR EDGE		INTEGRAL TO INVERTER
10.1	INTERGRATED REVENUE METER	SOLAR EDGE		INTEGRAL TO INVERTER
11	NEW MAIN SERVICE PANEL	SQUARE D OR EQUAL	240V,225A,200A-MCB,3R,40ckt	
13	ENERGY STORAGE	SOLAR EDGE HOME BATTERY	BAT-10K1P	# OF 10kWH BATTERIES 1

CONDUIT AND CONDUCTOR SCHEDULE

TAG	DESCRIPTION OF CONDUCTOR TYPE	CONDUCTOR SIZE (AWG)	# OF CONDUCTORS	CONDUIT TYPE	CONDUIT SIZE
1	PV WIRE	#10	4	IN FREE AIR	
2	EGC/GEC	#6	1	IN FREE AIR	SOLID BARE
3	THWN-2	#10 & #6	4 & (1)G	EMT	3/4"
4	THWN	#8 & #8	3 & (1)G	EMT	3/4"
5	THWN	#10 & #8	2 & (1)G	EMT	3/4"

CONDUCTOR CALCULATIONS:

3) 15 x 1.25 = 18.75a
#10AWG = 40a
Amb. Temp. Max = 58°C
T690.31(A) 0.00a / 0.71 = 26.41a
26.41a < 40a

4) 25 x 1.25 = 31.25a
#8AWG = 50a
Amb. Temp. Max = 37°C
31.25a / 0.91 = 34.34a
34.34a < 50a

1. ALL CONDUCTORS ARE DESIGNED FOR LESS THAN 2% VOLTAGE DROP.
2. ALL EXTERIOR CONDUITS SHALL HAVE WATERPROOF FITTINGS.

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103A MILLBURY ST,
AUBURN MA 01501
888-997-4469

SIGNATURE:

CONTRACTOR LICENSE: C-10#1020761
DATE: 10/30/2023 12:01:00 PM

PROJECT #	BPN60561		
SYSTEM SIZE	8.69kW/DC	6kW/AC	
DATE:	10/30/2023 12:01:00 PM		
DESIGNER:	DAPHNE COLON		

REV	DATE	DESCRIPTION

SUSAN WILSON
354 E COLUMBIA AVE
POMONA, CA 91767

ELECTRICAL LINE DIAGRAM/ DETAILS

PV3

NOTE: PLAQUES SHALL BE ATTACHED TO THE SERVICE EQUIPMENT WITH NON CORROSIVE, POP-RIVETS, SCREWS, OR APPROVED ADHESIVE.

(1) LOCATION: MAIN SERVICE PANEL & AC DISCONNECT

⚠ WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
PHOTOVOLTAIC MODULES PRODUCE DC VOLTAGE WHENEVER THEY ARE EXPOSED TO SUNLIGHT

(2) LOCATION: MAIN SERVICE PANEL PV BACK-FED BREAKER

⚠ WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE

(3) LOCATION: MAIN SERVICE PANEL PV BACK-FED BREAKER

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

(4) LOCATION: UTILITY METER

⚠ WARNING
THIS SERVICE METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

(5) LOCATION: PV SUB PANEL (IF USED)

⚠ WARNING
PHOTOVOLTAIC SYSTEM COMBINER PANEL
DO NOT ADD LOADS

(6) CONDUIT, RACEWAYS & ENCLOSURES

WARNING: PHOTOVOLTAIC POWER SOURCE

(7) LOCATION: DC DISCONNECT/INVERTER #1

PHOTOVOLTAIC SYSTEM DC DISCONNECT	
MAXIMUM CIRCUIT CURRENT	16.5 A
MAXIMUM SYSTEM VOLTAGE	480 V
MAXIMUM RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-to-DC CONVERTER	15 A

(8) LOCATION: MAIN SERVICE PANEL

PV SYSTEM POINT OF CONNECTION SOLAR PV SYSTEM AC POINT OF CONNECTION	
MAX AC OUTPUT CURRENT	25 A
MAX NOMINAL AC VOLTAGE	240 V

THIS PANEL FED BY MULTIPLE SOURCES (UTILITY AND SOLAR)

(9) LOCATION: MAIN SERVICE PANEL

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

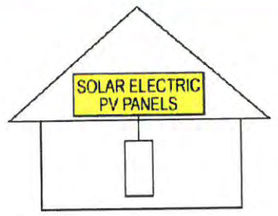
(10) LOCATION: INVERTER

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

(11) LOCATION: MAIN PANEL

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



(13) LOCATION: MAIN SERVICE PANEL / AC DISCONNECT

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

(14) LOCATION: AC DISCONNECT

PHOTOVOLTAIC AC DISCONNECT

(16) LOCATION: MAIN SERVICE PANEL

F.D. - ELECTRICAL BLDG DISCONNECT
#1 of 3

(16.1) LOCATION: INVERTER #1

F.D. - ELECTRICAL BLDG DISCONNECT
#2 of 3

(17) LOCATION: MSP MAIN BREAKER

#1

(17.1) LOCATION: INVERTER DC DISCONNECT #1

#2

(16) LOCATION: ENERGY STORAGE

SOLAREDGE	
RATED FREQUENCY:	60Hz
PHASES:	SINGLE
RATING (kW or kVA):	5kW
AVAILABLE FAULT CURRENT (AT OUTPUT TERMINALS):	1k/10Adc
MAXIMUM OUTPUT AND INPUT CURRENT (AT OUTPUT TERMINALS):	14.3Adc
MAXIMUM OUTPUT AND INPUT VOLTAGE (AT OUTPUT TERMINALS):	450V
UTILITY-INTERACTIVE CAPABLE:	YES

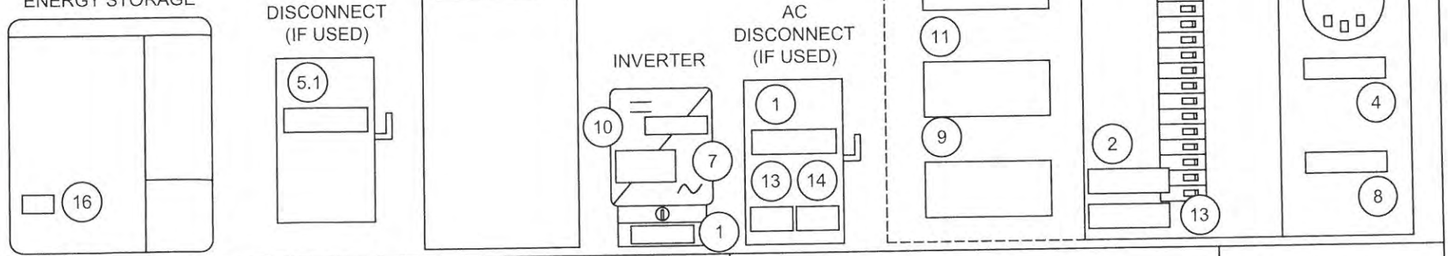
NOMINAL ESS AC VOLTAGE:	N/A
MAXIMUM ESS DC VOLTAGE:	450V
AVALIABLE FAULT CURRENT DERIVED FROM THE ESS:	1k/10Adc
DATE CALCUALTION WAS PERFORMED:	10/30/2023

(5.1) LOCATION: BATTERY DISCONNECT

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

(15) LOCATION: MAIN SERVICE PANEL

⚠ WARNING ⚠
THREE POWER SOURCES
SOURCES: UTILITY GRID, BATTERY AND PV SOLAR ELECTRIC SYSTEM



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AUBURN MA 01501
888-997-4469

SIGNATURE:

CONTRACTOR LICENSE: C-10#1020761
DATE: 10/30/2023 12:01:01 PM

PROJECT #	BPN60561		REV	DATE	DESCRIPTION
SYSTEM SIZE	8.69kW/DC	6kW/AC		---	
DATE:	10/30/2023 12:01:01 PM			---	
DESIGNER:	DAPHNE COLON			---	

SUSAN WILSON
354 E COLUMBIA AVE
POMONA, CA 91767

EQUIPMENT LABELS

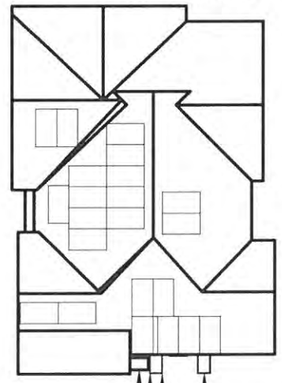
PV4

(12) PLACARD

CAUTION

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

E COLUMBIA AVE



UTILITY METERING AC DISCONNECT

ENERGY STORAGE

SOLAR INVERTER & DC DISCONNECT

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PLACARD

PV4.1

Table R802.5.1(2) - Continued
RAFTER SPANS FOR COMMON LUMBER SPECIES
(Roof live load = 20 psf, ceiling attached to rafters, L/Δ = 240

RAFTER SPACING (inches)	SPECIES AND GRADE		DEAD LOAD = 10 psf					DEAD LOAD = 20 psf				
			2 x 4	2 x 6	2 x 8	2 x 10	2 x 12	2 x 4	2 x 6	2 x 8	2 x 10	2 x 12
			Maximum rafter spans*									
			(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
24	Douglas fir-larch	SS	8-3	13-0	17-2	21-10	Note b	8-3	13-0	16-10	20-7	23-10
	Douglas fir-larch	#1	8-0	12-6	15-10	19-5	22-6	7-5	10-10	13-9	16-9	19-6
	Douglas fir-larch	#2	7-10	11-11	15-1	18-5	21-4	7-0	10-4	13-0	15-11	18-6
	Douglas fir-larch	#3	6-2	9-1	11-6	14-1	16-3	5-4	7-10	10-0	12-2	14-1
	Him-fir	SS	7-10	12-3	16-2	20-8	25-1	7-10	12-3	16-2	19-10	23-0
	Him-fir	#1	7-8	12-0	15-8	19-2	22-2	7-4	10-9	13-7	16-7	19-3
	Him-fir	#2	7-3	11-5	14-8	17-10	20-9	6-10	10-0	12-8	15-6	17-11
	Him-fir	#3	6-1	8-10	11-3	13-8	15-11	5-3	7-8	9-9	11-10	13-9
	Southern Pine	SS	8-1	12-9	16-10	21-6	Note b	8-1	12-9	16-10	20-10	24-8
	Southern Pine	#1	7-10	12-3	16-2	18-11	22-6	7-5	11-1	14-0	16-5	19-6
	Southern Pine	#2	7-4	11-0	13-11	16-6	19-6	6-4	9-6	12-1	14-4	16-10
	Southern Pine	#3	5-8	8-4	10-6	12-9	15-1	4-11	7-3	9-1	11-0	13-1
	Spruce-pine-fir	SS	7-8	12-0	15-10	20-2	24-7	7-8	12-0	15-4	18-9	21-9
	Spruce-pine-fir	#1	7-6	11-9	14-10	18-2	21-0	6-11	10-2	12-10	15-8	18-3
	Spruce-pine-fir	#2	7-6	11-9	14-10	18-2	21-0	6-11	10-2	12-10	15-8	18-3
	Spruce-pine-fir	#3	6-1	8-10	11-3	13-8	15-11	5-3	7-8	9-9	11-10	13-9

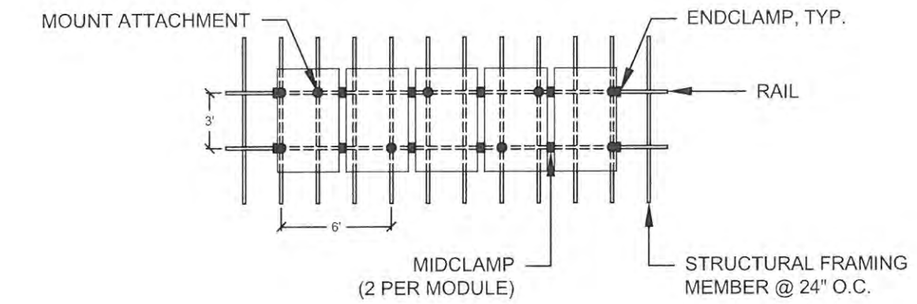
● = MOUNT ATTACHMENT LOCATION
MAXIMUM OVERHANG (CANTILEVER) IS 19"
MAXIMUM SPACING OF ANCHORS (FOOTINGS) IS 72 IN. O.C.
FIELD VERIFY EXACT LOCATION OF STRUCTURE MEMBERS.

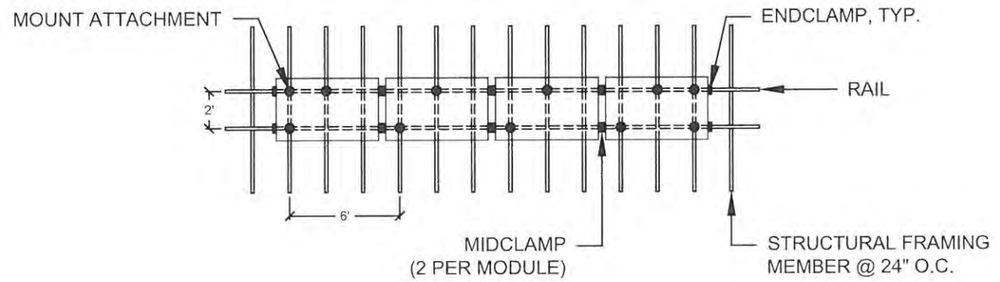
ROOF A:
PHOTOVOLTAIC DEAD LOAD STATEMENT
TOTAL AREA OF ARRAY = 36.28 SQ. FT.
ARRAY GROSS WEIGHT = 101.58 LBS
DEAD LOAD RATING = 2.8 LBS/SQ.FT.
EXISTING STRUCTURAL FRAMING = 2x4 @ 24 IN. O.C.

ROOF B:
PHOTOVOLTAIC DEAD LOAD STATEMENT
TOTAL AREA OF ARRAY = 181.39 SQ. FT.
ARRAY GROSS WEIGHT = 471.61 LBS
DEAD LOAD RATING = 2.8 LBS/SQ.FT.
EXISTING STRUCTURAL FRAMING = 2x4 @ 24 IN. O.C.

ROOF C:
PHOTOVOLTAIC DEAD LOAD STATEMENT
TOTAL AREA OF ARRAY = 145.11 SQ. FT.
ARRAY GROSS WEIGHT = 377.29 LBS
DEAD LOAD RATING = 2.8 LBS/SQ.FT.
EXISTING STRUCTURAL FRAMING = 2x4 @ 24 IN. O.C.

ROOF D:
PHOTOVOLTAIC DEAD LOAD STATEMENT
TOTAL AREA OF ARRAY = 36.28 SQ. FT.
ARRAY GROSS WEIGHT = 94.32 LBS
DEAD LOAD RATING = 2.8 LBS/SQ.FT.
EXISTING STRUCTURAL FRAMING = 2x4 @ 24 IN. O.C.





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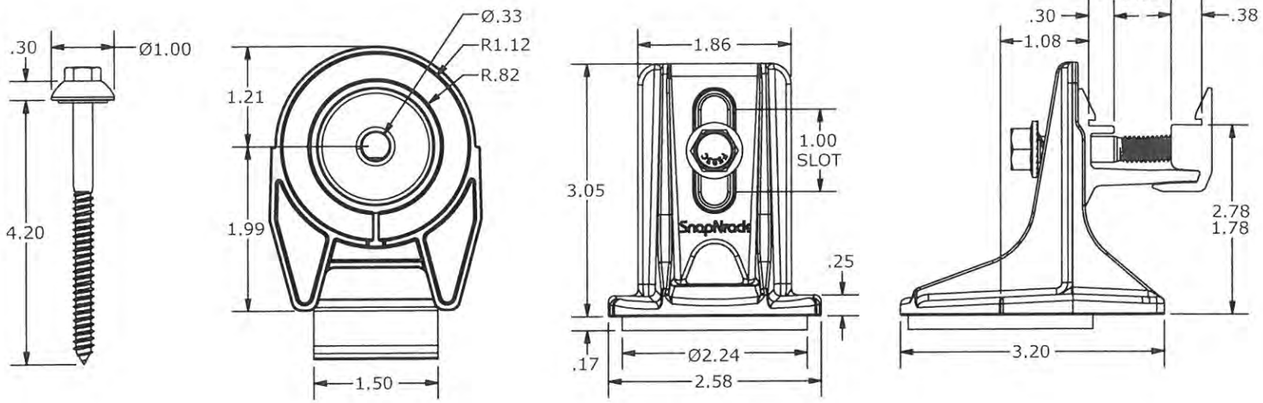
ATTACHMENT PLAN

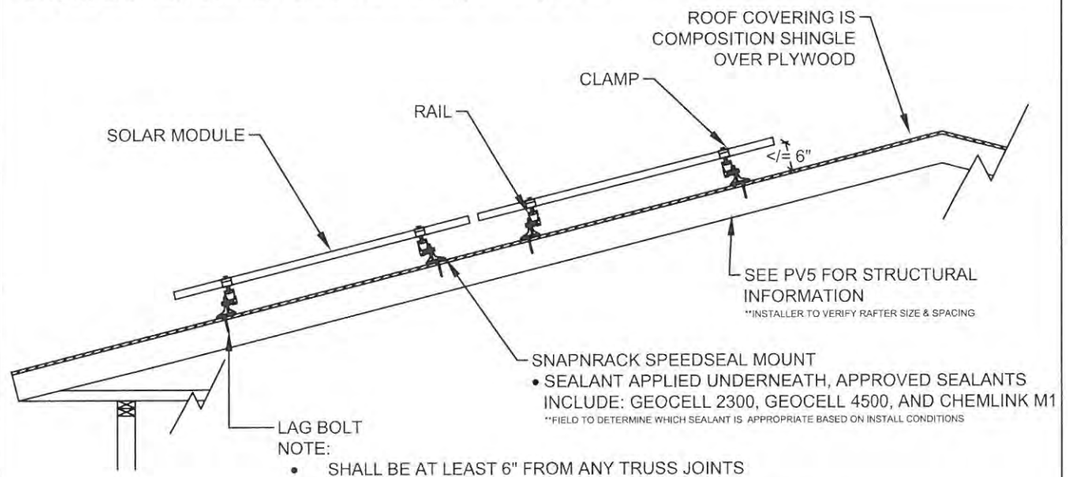
PV5

ALL DIMENSIONS IN INCHES



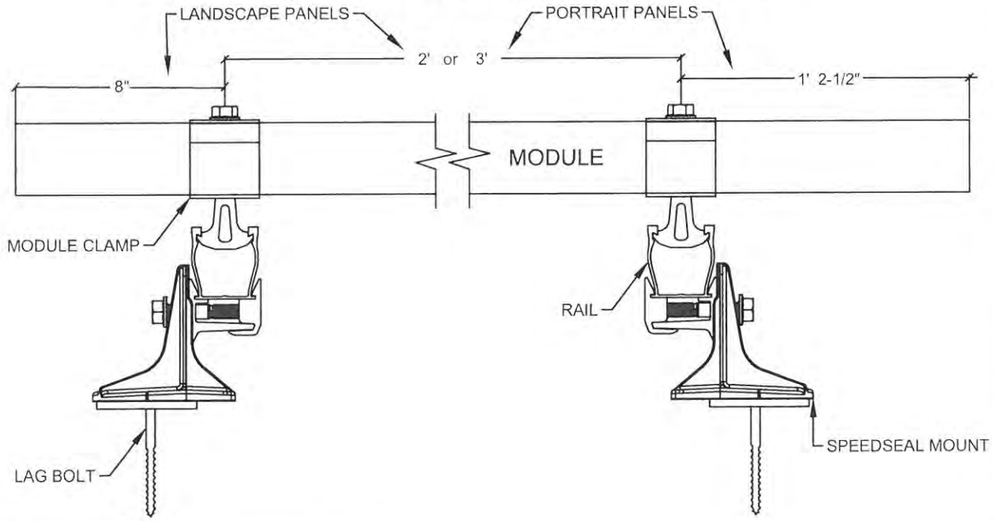
SNAPNRACK ROOF MOUNT SYSTEM

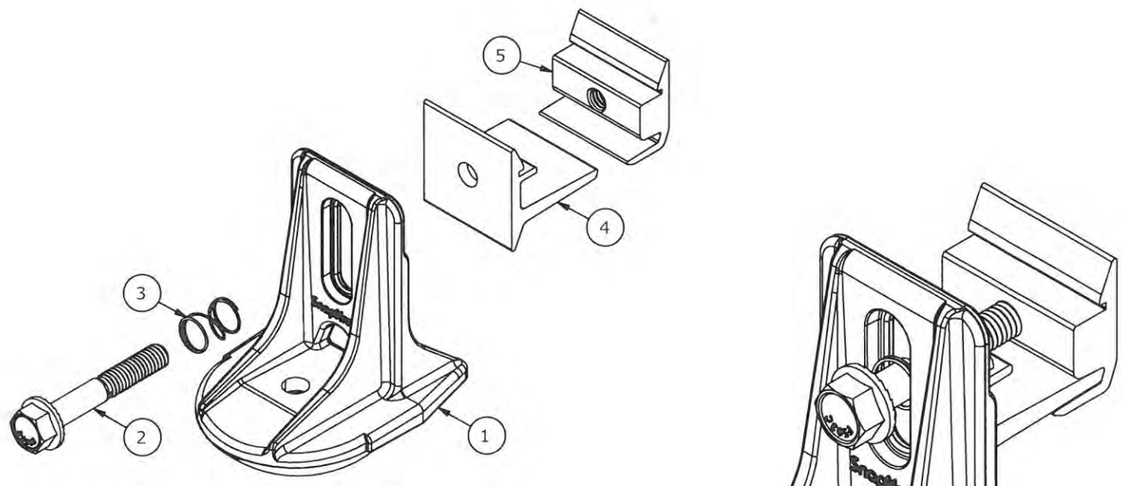
SNOW/CRITTER GUARD TO BE INSTALLED, IF REQUIRED

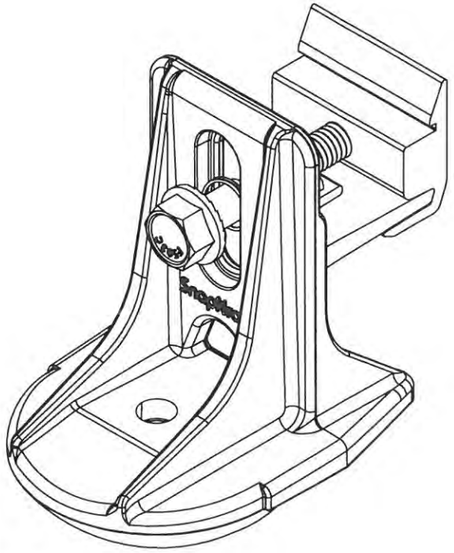


NOTE:
- SHALL BE AT LEAST 6" FROM ANY TRUSS JOINTS
- $\frac{5}{16}$" DIAMETER
- MINIMUM EMBEDMENT OF 2.5" INTO STRUCTURAL MEMBER

OPTIMAL SPACING FROM EDGE AND IN BETWEEN CLAMPS







PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	SNAPNRACK, SPEEDSEAL FOOT, BASE, SEALING, SILVER / BLACK
2	1	BOLT, FLANGE, SERRATED, 5/16IN-18 X 2IN, SS
3	1	SNAPNRACK, RL UNIVERSAL, MOUNT SPRING, SS
4	1	SNAPNRACK, ULTRA RAIL MOUNT THRU PRC, CLEAR / BLACK
5	1	SNAPNRACK, ULTRA RAIL MOUNT TAPPED PRC, CLEAR / BLACK

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DESIGNER:	DAPHNE COLON		

REV	DATE	DESCRIPTION

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STRUCTURAL COMPONENTS

PV6

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SIGNATURE:

CONTRACTOR LICENSE:
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PROJECT #	BPN60561		REV	DATE	DESCRIPTION
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DESIGNER:	DAPHNE COLON			---	

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PROPERTY LINES

PV7