

NEW PHOTOVOLTAIC ROOF MOUNTED SYSTEM - 16.000 KW DC/1441.420 KW CEC AC
560 HESTER CREEK RD, LOS GATOS, CA 95033

NEW PV SYSTEM SPECIFICATIONS
SYSTEM SIZE: DC SIZE: 16.000 KW DC-(STC)
CEC AC SIZE: 1441.420 KW AC
MODULE: (40) Q CELLS Q.PEAK DUO BLK ML-G10 400W
INVERTER: (40) ENPHASE IQ8A-72-2-US [240V] [S11-SB]

APPLICABLE CODES
ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA HISTORICAL BUILDING CODE
2022 CALIFORNIA EXISTING BUILDING CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA ELECTRICAL CODE
AS ADOPTED BY COUNTY OF SANTA CRUZ

DESIGN CRITERIA
ROOF SURFACE TYPE: COMPOSITE SHINGLE
ROOF FRAMING: 2"X6" TRUSS @ 24" OC
BUILDING STORY: TWO STORY
GROUND SNOW LOAD: 0 PSF
WIND SPEED: 91 MPH
WIND EXPOSURE: C
RISK CATEGORY: II

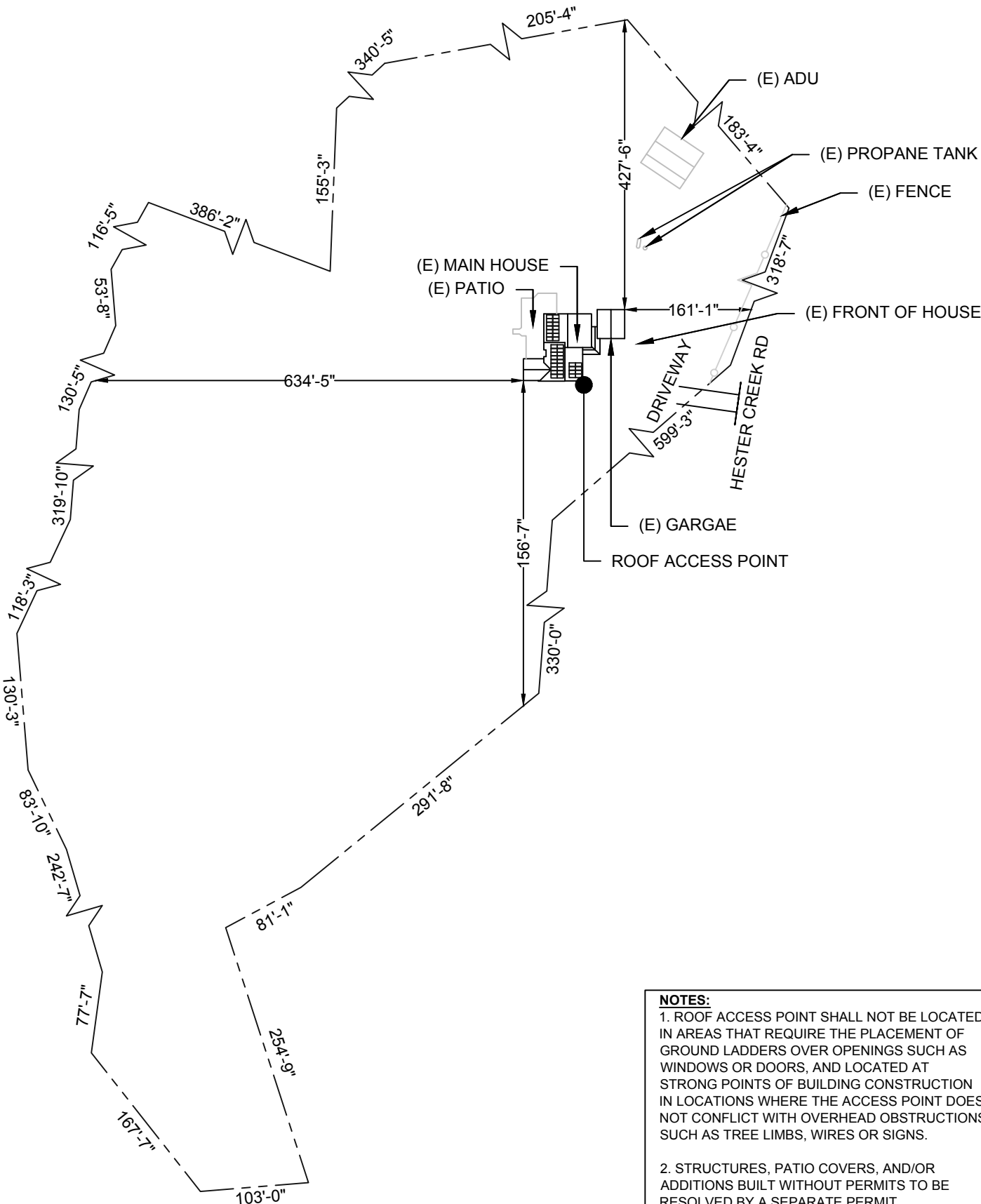
PROJECT NOTES
1.1.1 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE RELEVANT YEAR OF THE CALIFORNIA ELECTRIC CODE (CEC), ALL MANUFACTURER'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
1.1.2 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND THE PV SYSTEM MUST BE INSPECTED PRIOR TO OPERATION
1.1.3 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 CEC AND OTHER GOVERNING CODES
1.1.4 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 CEC AND AHJ.

SCOPE OF WORK
1.2.1 CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM. THE CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTION OF EXISTING ONSITE CONDITIONS TO DESIGN, SPECIFY, AND INSTALL THE ROOF-MOUNTED PHOTOVOLTAIC SYSTEM DETAILED IN THIS DOCUMENT



PROPERTY PLAN

SCALE:1/128"=1'-0"



NOTES:
1. ROOF ACCESS POINT SHALL NOT BE LOCATED IN AREAS THAT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.
2. STRUCTURES, PATIO COVERS, AND/OR ADDITIONS BUILT WITHOUT PERMITS TO BE RESOLVED BY A SEPARATE PERMIT.

SHEET INDEX

PV-01	COVER PAGE
PV-02	SITE PLAN
PV-03	ATTACHMENT PLAN & DETAILS
PV-04	ELECTRICAL DIAGRAM
PV-05	NOTES
PV-06	WARNING LABELS
PV-07	INSTALLATION RESOURCE

EQUIPMENT DATASHEETS ATTACHED

LEGEND

---	- PROPERTY LINE
○-○-○	- FENCE LINE

VICINITY MAP



SATELLITE MAP



CONTRACTOR

DAY ONE SOLAR

387 CORAL ST, SANTA CRUZ,
CA 95060

LIC. NO. - 987896

County of Santa Cruz
Community Development & Infrastructure
Reviewed for Code Compliance
By: RAI
Date: 11/15/2023
Permit #: B-237270
CCD/DEF:

PROJECT NAME & ADDRESS

ROBERT AND TAMMY ESTES

560 HESTER CREEK RD,
LOS GATOS, CA 95033
APN #: 09723135

AHJ: COUNTY OF SANTA CRUZ
UTILITY: PG&E

SYSTEM DETAILS

DC SIZE: 16.000 KW DC-(STC)
CEC AC SIZE: 1441.420 KW AC
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(40) ENPHASE IQ8A-72-2-US [240V] [S11-SB]

REVISIONS

REV	DESCRIPTION	DATE

SHEET TITLE

COVER PAGE

DRAWN DATE 10/27/2023

DRAWN BY PCAD

SHEET NUMBER

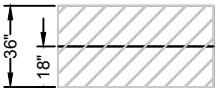


PV-01

NOTES:

1. ROOF ACCESS POINT SHALL NOT BE LOCATED IN AREAS THAT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.
2. STRUCTURES, PATIO COVERS, AND/OR ADDITIONS BUILT WITHOUT PERMITS TO BE RESOLVED BY A SEPARATE PERMIT.

PLAN VIEW TOTAL ROOF AREA: 3973 FT²
TOTAL PV ARRAY AREA: 844.83 FT²
TOTAL % OF ROOF COVERED BY PV: 21.26%

LEGEND

-  FIRE SETBACKS
-  = MECHANICAL VENT
-  = FLUE / PLUMBING VENT
- 1 MICROINVERTER (1 PER MODULE)
- 2 (40) Q CELLS Q.PEAK DUO BLK ML-G10 400W MODULES WITH ENPHASE IQ8A-72-2-US [240V] [SI1-SB] UNDER EACH MODULE
- 3 (N) JUNCTION BOX (NEMA 3R)
- 4 CONDUIT RUN; SURFACE MOUNTED (ACTUAL CONDUIT RUNS TO BE DETERMINED IN FIELD)
- 5 (E) UTILITY METER (UNDERGROUND SERVICE) METER #: 1010300413
- 6 MAIN SERVICE PANEL
- 7 EXISTING MLO PANEL
- 8 ENPHASE IQ COMBINER BOX

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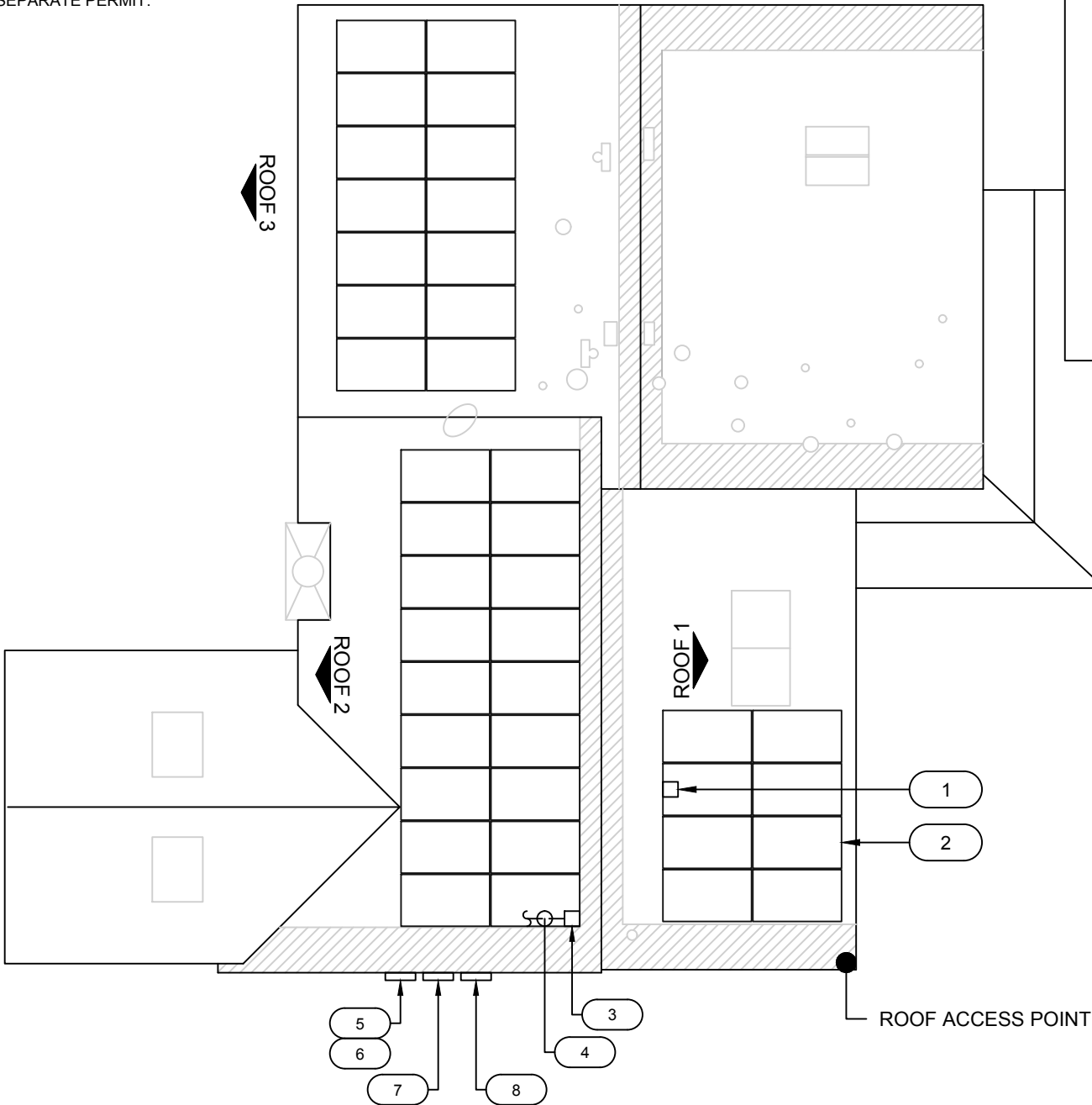
SITE PLAN

DRAWN DATE 10/27/2023

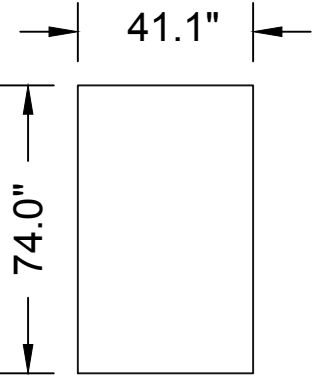
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SHEET NUMBER

PV-02



FRONT OF HOUSE



1
PV-02

SITE PLAN

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

MICROINVERTER SPECIFICATIONS		SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	ENPHASE IQ8A-72-2-US [240V] [SI1-SB]	MANUFACTURER / MODEL #	Q CELLS Q.PEAK DUO BLK ML-G10 400W
INPUT POWER RANGE	295W-500W	VMP	37.13V
MIN/MAX START VOLTAGE	22V/58V	IMP	10.77A
NOMINAL AC VOLTAGE	240V	VOC	45.30V
MAX CONT. OUTPUT CURRENT	1.45A	ISC	11.14A
MAX CONT. OUTPUT POWER	349W	TEMP. COEFF. VOC	-0.27%/°K
MAX MODULES PER STRING	11 (11 MICROINVERTERS)		

AMBIENT TEMPERATURE SPECIFICATIONS	
RECORD LOW TEMP	0°C
AMBIENT TEMP (HIGH TEMP 2% AVG.)	32°C
MINIMUM CONDUIT HEIGHT ABOVE ROOF SURFACE	7/8"

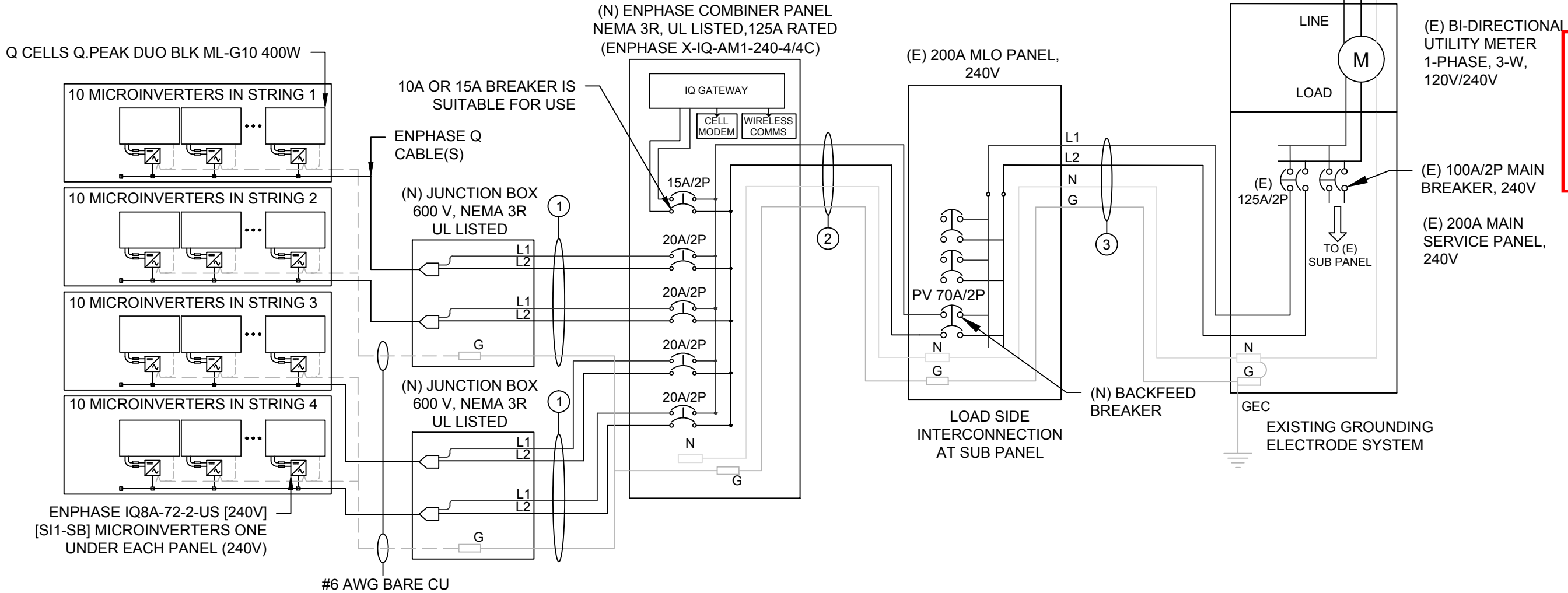
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ROMEX CAN BE USED IN LIEU OF CONDUIT FOR INTERIOR BUILDING AND ATTIC RUNS ONLY. DO NOT USE ROMEX IN CONDUIT OR OUTDOOR ENVIRONMENTS.



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SHEET TITLE
ELECTRICAL
DIAGRAM

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PV-04

DESCRIPTION					FORMULA (SUB-PANEL)				RESULT			
PV OVERCURRENT PROTECTION CEC 690.9(B)					TOTAL INVERTER OUTPUT CURRENT x 1.25 = (40 x 1.45)A x 1.25				72.50A (SELECTED PV BREAKER = 70A)			
120% RULE FOR BACKFEED BREAKER CEC 705.12					BUS BAR RATING x 1.2 - MCB RATING = MAX ALLOWABLE PV BREAKER 200A x 1.2 - 125A = 115A				SELECTED PV BREAKER <= MAX ALLOWABLE PV BREAKER 70A <= 115A			
WIRE ID	EXPECTED WIRE TEMP (°C)	TEMP DERATE (90 °C)	QTY OF CURRENT CARRYING CONDUCTORS	CONDUIT FILL DERATE	MINIMUM CONDUIT SIZE (TBD ON SITE)	WIRE GAUGE & TYPE	CONDUCTOR AMPACITY @ 90°C (A)	CONDUCTOR AMPACITY @ 75°C (A)	REQUIRED CIRCUIT CONDUCTOR AMPACITY (A)	ADJUSTED CONDUCTOR AMPACITY @ 90 °C (A)	NEUTRAL CONDUCTOR SIZE & TYPE	GROUND WIRE SIZE & TYPE
1	32	0.96	4	0.8	3/4" METAL	#10 THWN-2	40	35	18.13	30.72	NONE	#10 THWN-2
2	32	0.96	2	1	1" METAL	#4 Al DIRECT BURIAL	75	65	72.50	72.00	#4 Al DIRECT BURIAL	#8 Al DIRECT BURIAL
3	32	0.96	2	1	1-1/2" METAL	#1 Al DIRECT BURIAL	115	100	72.50	110.40	#1 Al DIRECT BURIAL	#6 Al DIRECT BURIAL

GENERAL NOTES

1. EXISTING PLUMBING VENTS, SKYLIGHTS,EXHAUST OUTLETS, VENTILATION 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 3R 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 [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 CEC 705.12.

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 IN ACCORDANCE WITH CEC 705.12.

14. THE SUM OF THE AMPERE RATING OF THE OVERCURRENT PROTECTION DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUSBAR OR CONDUCTOR SHALL NOT EXCEED 120% OF THE RATING OF BUSBAR OR CONDUCTOR IN ACCORDANCE WITH CEC 705.12

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 IN ACCORDANCE WITH CEC 705.12.

16. EQUIPMENT CONTAINING OVERCURRENT PROTECTION DEVICES IN CIRCUITS SUPPLYING POWER TO A BUS BAR OR CONDUCTOR SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES IN ACCORDANCE WITH CEC 705.12.

17. CIRCUIT BREAKER, IF BACKFED, SHALL BE SUITABLE FOR SUCH OPERATION IN ACCORDANCE WITH CEC 705.12.

18. TO MINIMIZE OVERHEATING OF THE BUSBAR IN ELECTRICAL ENCLOSURE, THE 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.

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 CONNECTORS THAT ARE LISTED 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 6 AWG 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. 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)]

26. 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]

27. 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.

28. LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC

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560 HESTER CREEK RD, LOS GATOS, CA 95033 APN #: 09723135		
AHJ: COUNTY OF SANTA CRUZ UTILITY: PG&E		
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REV	DESCRIPTION	DATE
SHEET TITLE		
NOTES		
DRAWN DATE	10/27/2023	
DRAWN BY	PCAD	
SHEET NUMBER		
PV-05		

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WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL LOCATION: COMBINER PANEL, AC
DISCONNECT, POINT OF INTERCONNECTION
PER CODE: CEC 706.15(C)(4), CEC 690.13(B)

⚠️

WARNING

TURN OFF PHOTOVOLTAIC AC
DISCONNECT PRIOR TO
WORKING INSIDE PANEL

LABEL LOCATION: COMBINER PANEL(S), MAIN SERVICE DISCONNECT
PER CODE: CEC 110.27(C), OSHA 1910.145(f)(7)

PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION: DC CONDUIT/RACEWAYS
PER CODE: CEC 690.31(D)(2)

SOLAR PV DC CIRCUIT

LABEL LOCATION: DC CONDUIT/RACEWAYS
PER CODE: CEC 690.31(D)(2)

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OUTPUT CURRENT: 58.00 A

NOMINAL OPERATING AC VOLTAGE: 240 V

LABEL LOCATION: AC DISCONNECT/POINT OF INTERCONNECTION
PER CODE: CEC 690.54

⚠️

WARNING

DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION: MAIN SERVICE DISCONNECT, PRODUCTION/NET METER
PER CODE: CEC 690.59, 705.12(C)

PV SYSTEM

DISCONNECT

LABEL LOCATION: AC DISCONNECT
PER CODE: CEC 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

LABEL LOCATION: AC DISCONNECT
PER CODE: CEC 705.12(B)(3)(3)

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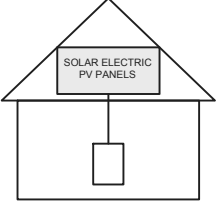
WARNING

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

LABEL LOCATION: POINT OF INTERCONNECTION
PER CODE: CEC 705.12(B)(3)(2)

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



LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: CEC 690.56(C)

MAIN PHOTOVOLTAIC
SYSTEM DISCONNECT

LABEL LOCATION: MAIN SERVICE DISCONNECT, UTILITY METER
PER CODE: CEC 690.13(B)

RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM

LABEL LOCATION: RSD INITIATION DEVICE, AC DISCONNECT
PER CODE: CEC 690.56(C)(2)

⚠️

CAUTION

PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: CEC 705.12(D), CEC 690.59

DO NOT DISCONNECT
UNDER LOAD

LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: CEC 690.15(B) & CEC 690.33(D)(2)

MAXIMUM DC VOLTAGE
OF PV SYSTEM

LABEL LOCATION: DC DISCONNECT/INVERTER/PV DIST.
EQUIPMENT
PER CODE: CEC 690.53

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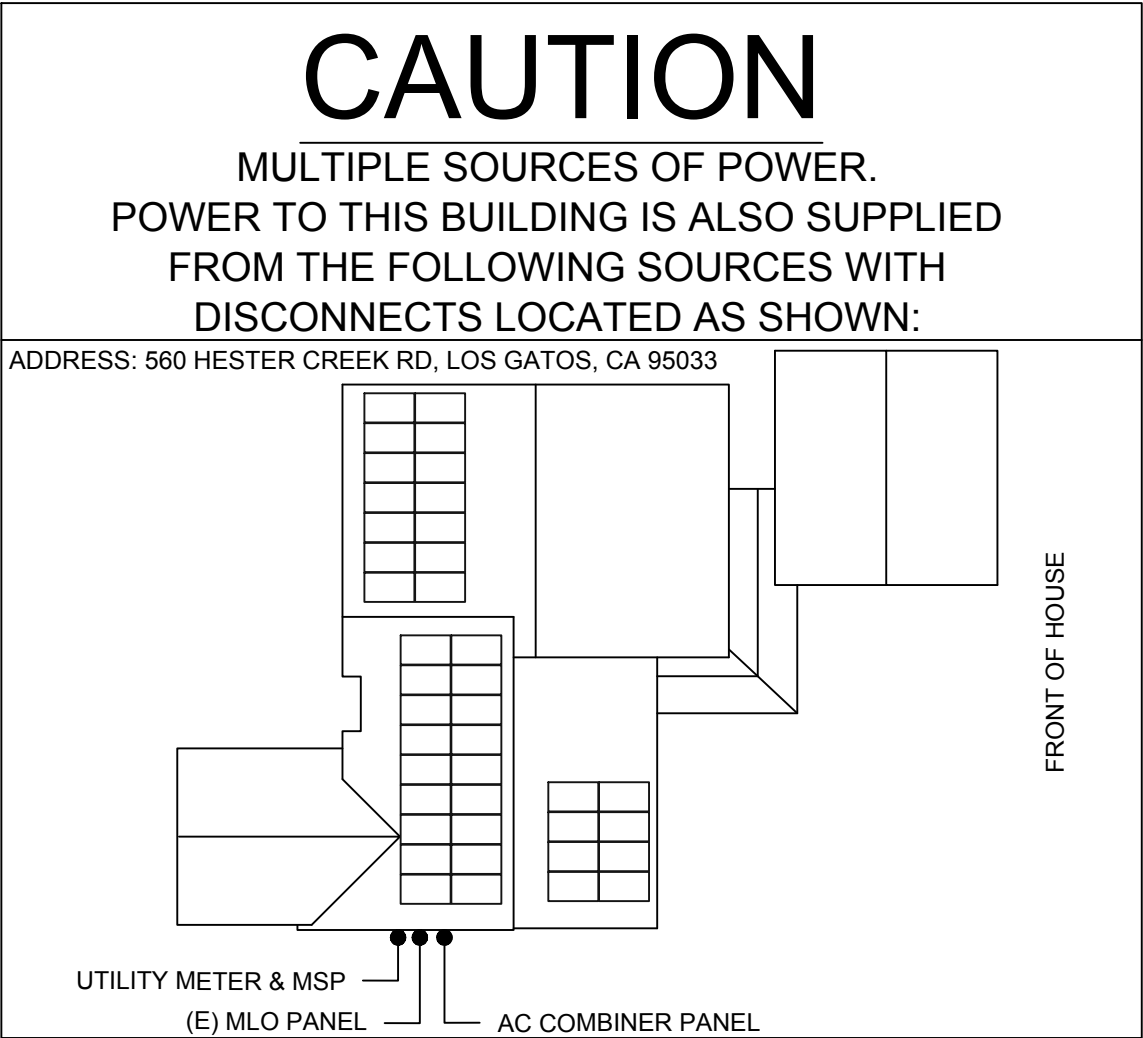
WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

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

LABEL LOCATION: DC DISCONNECT
PER CODE: CEC 690.13(B)



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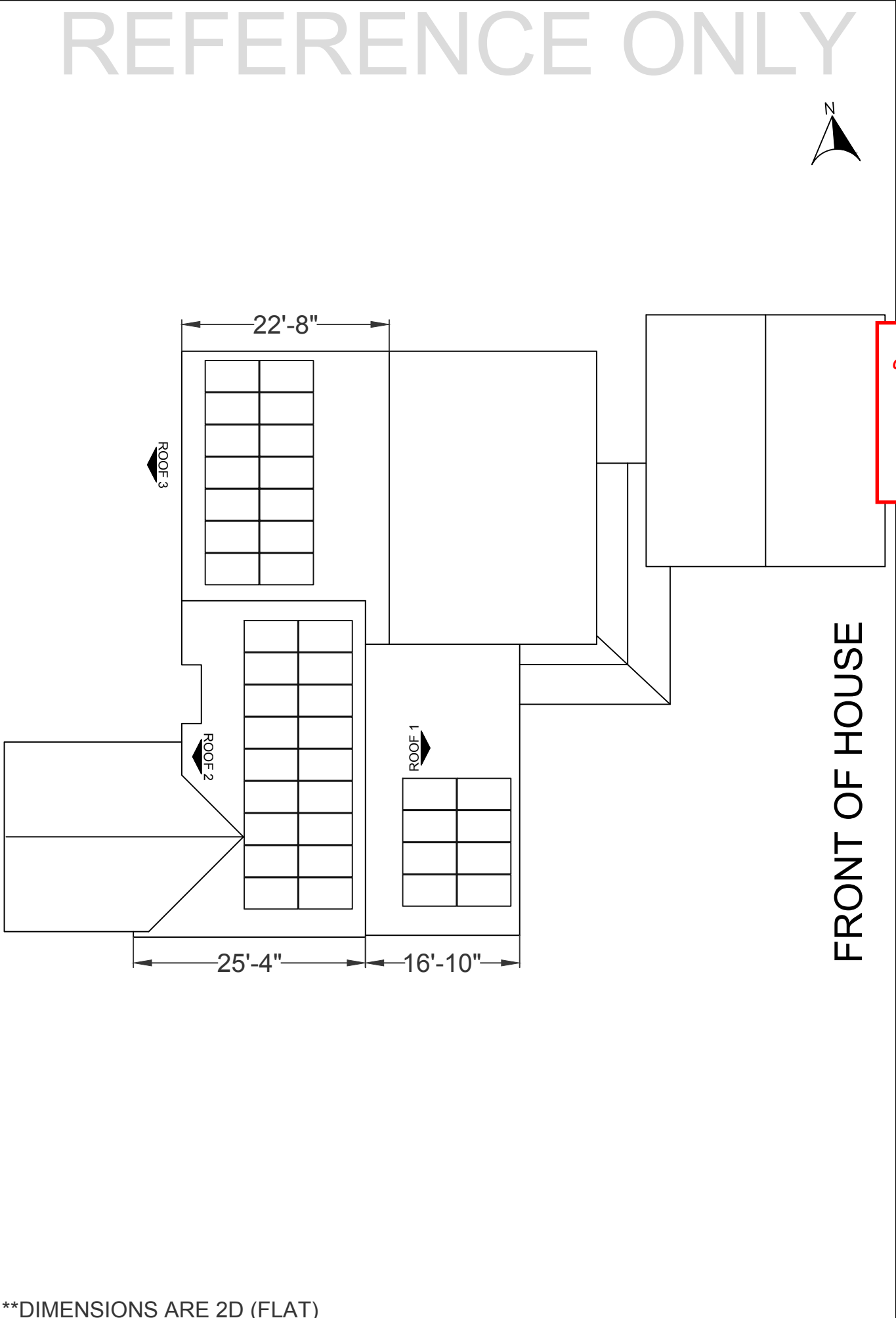
WARNING LABELS

DRAWN DATE	10/27/2023
DRAWN BY	PCAD

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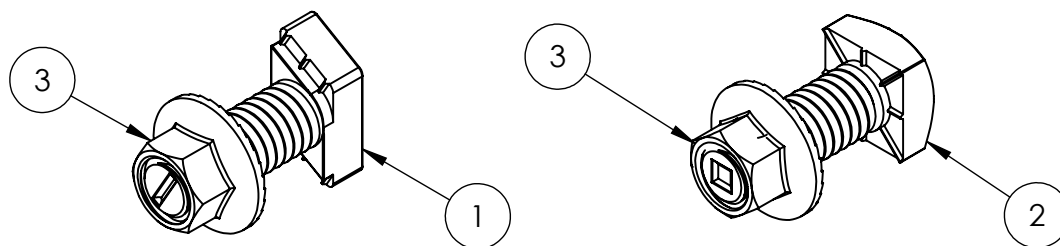
PV-06

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						



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INSTALLATION		
RESOURCE		
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PV-07		

**DIMENSIONS ARE 2D (FLAT)

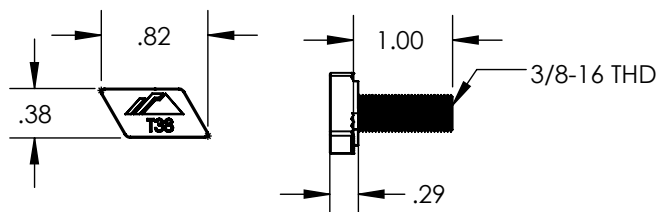


ITEM NO.	DESCRIPTION
1	BOLT, T CSTM, 3/8-16
2	BOLT, BONDING 3/8-16 SQ HEAD
3	NUT, BONDING SERRATIONS

BONDING HARDWARE

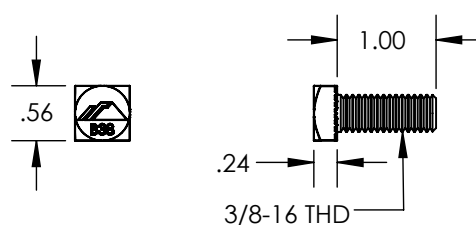
PART NUMBER	DESCRIPTION
BHW-TB-03-A1	T-BOLT, BONDING HARDWARE
BHW-SQ-03-A1	SQUARE BOLT, BONDING HARDWARE

1) BOLT, T CSTM, 3/8-16



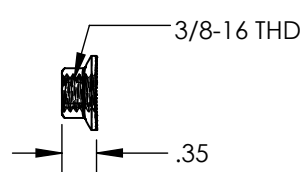
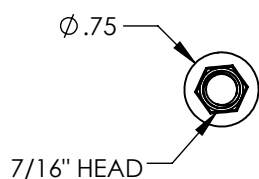
PROPERTY	VALUE
MATERIAL	300 SERIES STAINLESS STEEL
FINISH	CLEAR

2) BOLT, BONDING 3/8-16 SQ HEAD

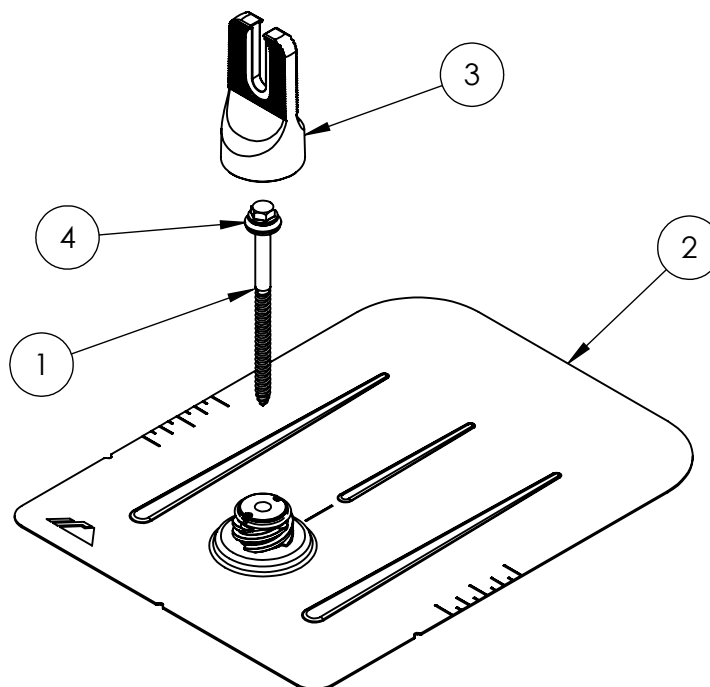


PROPERTY	VALUE
MATERIAL	300 SERIES STAINLESS STEEL
FINISH	CLEAR

3) NUT, BONDING SERRATIONS



PROPERTY	VALUE
MATERIAL	300 SERIES STAINLESS STEEL
FINISH	CLEAR

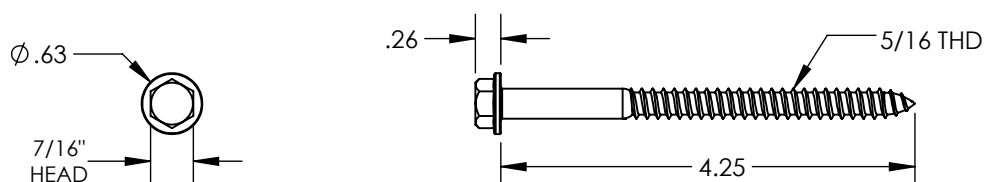


ITEM NO.	DESCRIPTION	QTY IN KIT
1	BOLT LAG 5/16 X 4.25"	1
2	ASSY, FLASHING	1
3	ASSY, CAP	1
4	WASHER, EPDM BACKED	1

FLASHFOOT 2

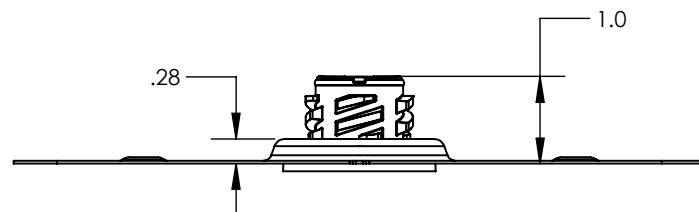
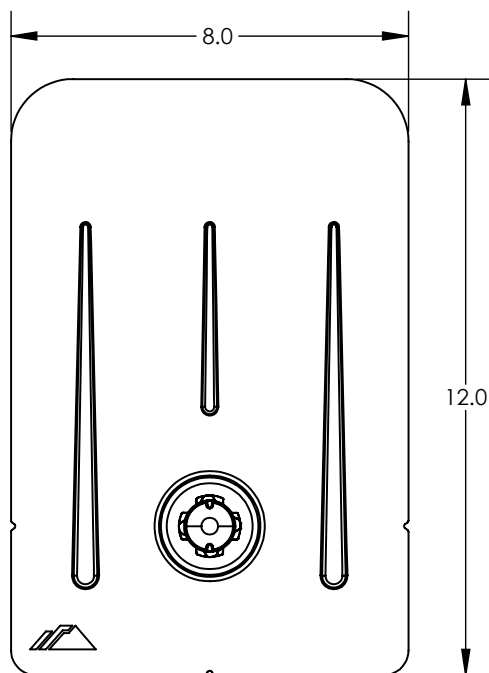
PART NUMBER	DESCRIPTION
FF2-02-M2	FLASHFOOT2® (MILL)
FF2-02-B2	FLASHFOOT2® (BLACK)

1) BOLT, LAG 5/16 x 4.25



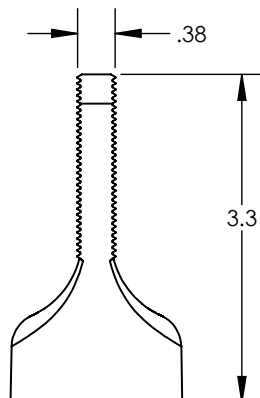
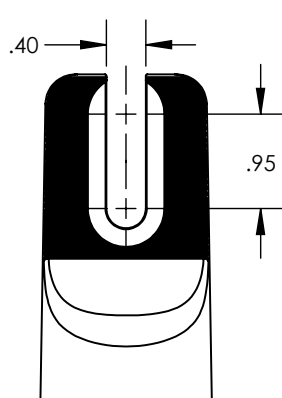
PROPERTY	VALUE
MATERIAL	300 SERIES STAINLESS STEEL
FINISH	CLEAR

2) ASSY, FLASHING



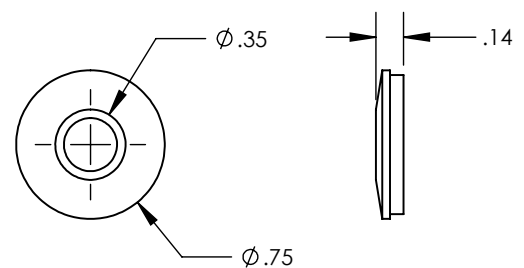
PROPERTY	VALUE
MATERIAL	ALUMINUM
FINISH	MILL/BLACK

3) ASSY, CAP



PROPERTY	VALUE
MATERIAL	ALUMINUM
FINISH	MILL/BLACK

4) WASHER, EPDM BACKED



PROPERTY	VALUE
MATERIAL	300 SERIES STAINLESS STEEL
FINISH	CLEAR

IronRidge XR-LUG-04-A1

TECHNICAL SPECIFICATION SHEET

Model: XR-LUG-04-A1

Manufacturer: IronRidge

Category: Solar Hardware

ELECTRICAL SPECIFICATIONS:

Grounding: Integrated bonding

Material: Aluminum alloy

MECHANICAL SPECIFICATIONS:

Material: 6005-T5 aluminum

Finish: Clear anodized

Load Rating: High strength

CERTIFICATIONS & COMPLIANCE:

â€¢ UL 2703 Listed

â€¢ ICC-ES Evaluated

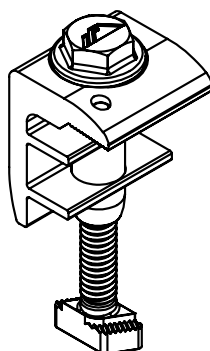
INSTALLATION NOTES:

â€¢ Professional installation required

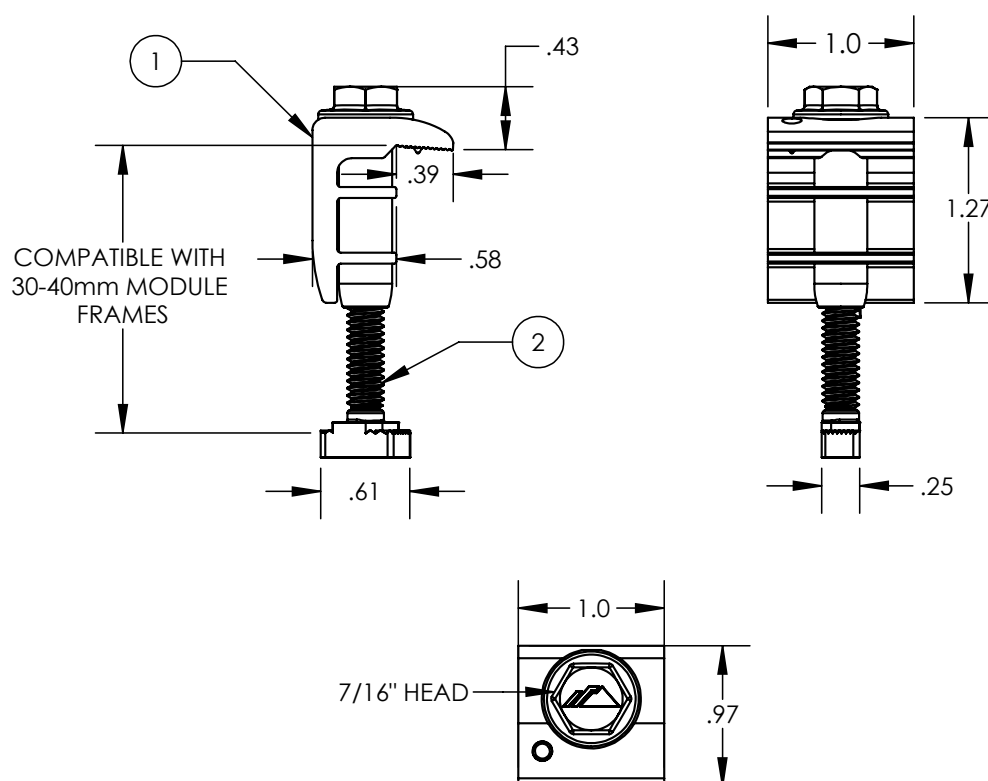
â€¢ Follow NEC grounding requirements

This specification sheet is for permit approval purposes.

For complete installation instructions, refer to manufacturer documentation.

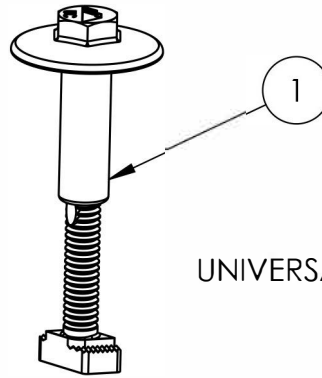


PART NO.	DESCRIPTION
UFO-END-01-A1	END FASTENING OBJECT (END CLAMP, 30-40mm), MILL
UFO-END-01-B1	END FASTENING OBJECT (END CLAMP, 30-40mm), BLACK



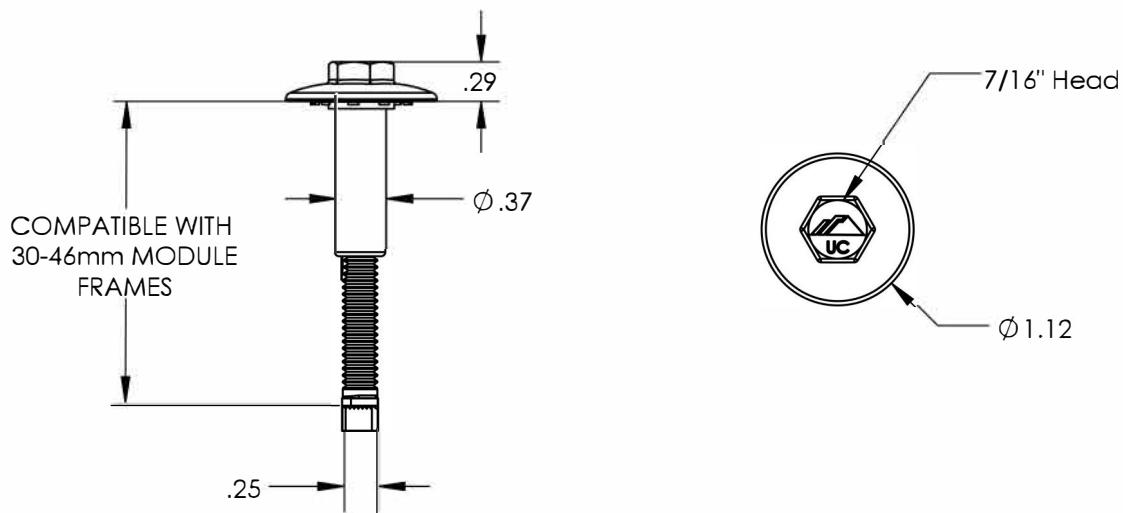
ITEM NO.	MATERIAL	FINISH
1	6000 SERIES ALUMINUM	MILL OR BLACK
2	300 SERIES STAINLESS STEEL	CLEAR AND BLACK

Only for installation and use with IronRidge products in
accord with written instructions see IronRidge.com/UFO

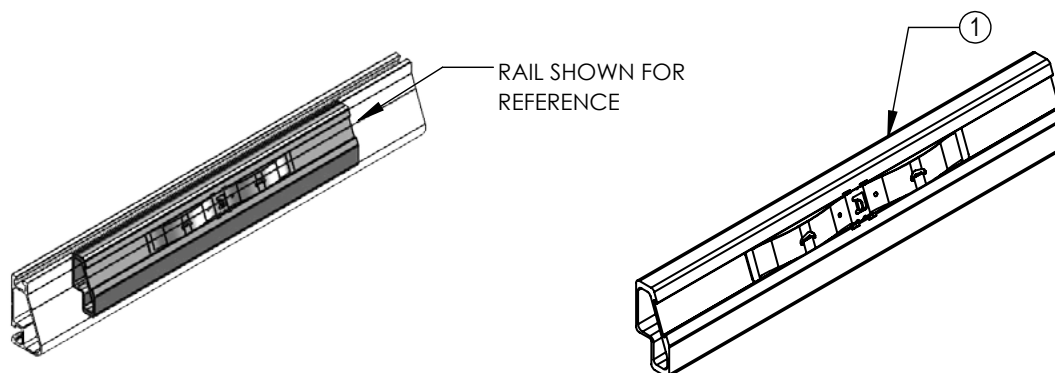


UNIVERSAL FASTENING OBJECT®

ITEM NO.	DESCRIPTION
UFO-CL-01-A1	UNIVERSAL MODULE CLAMP, CLEAR
UFO-CL-01-B1	UNIVERSAL MODULE CLAMP, BLACK



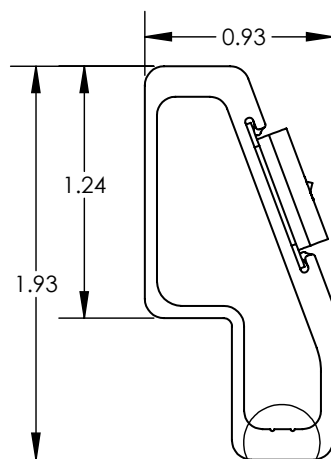
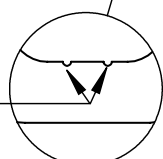
Property	Value
Material	300 Series Stainless Steel
Finish	Clear and Black



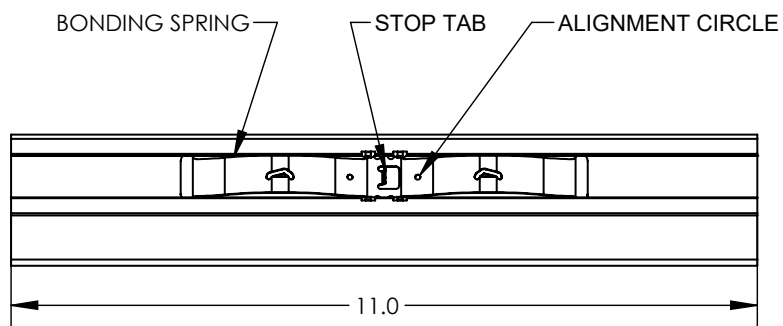
ITEM NO	DESCRIPTION	QTY IN KIT
1	BONDED SPLICE, XR100, US	1

PART NUMBER	DESCRIPTION
XR100-BOSS-01-M1-US	BONDED SPLICE, XR100, US PRODUCTION

1) BONDED SPLICE, XR100

DOMESTIC
IDENTIFYING
GROOVE

DETAIL A



PROPERTY	VALUE
MATERIAL	6000 SERIES ALUMINUM
FINISH	MILL

IronRidge XR-100 Solar Mounting Rail

TECHNICAL SPECIFICATION SHEET

Model: XR-100-168A

Manufacturer: IronRidge

Category: Mounting Rail

ELECTRICAL SPECIFICATIONS:

Grounding: Integrated WEEB grounding

Bonding: UL 2703 listed

Conductivity: Meets NEC 250.118(6)

MECHANICAL SPECIFICATIONS:

Length: 168 inches (14 feet)

Material: 6005-T5 aluminum

Finish: Clear anodized

Weight: 12.6 lbs

Moment of Inertia: 1.49 in⁴

Section Modulus: 0.95 in³

CERTIFICATIONS & COMPLIANCE:

• ICC-ES AC 428

• UL 2703 Listed

• Florida Building Code Approved

INSTALLATION NOTES:

• Compatible with all IronRidge attachments

• Supports up to 8 modules per span

• Pre-drilled mounting holes every 12 inches

• Splice with XR-SPLICE-01-A1

This specification sheet is for permit approval purposes.

For complete installation instructions, refer to manufacturer documentation.

IronRidge XR-100-204A

TECHNICAL SPECIFICATION SHEET

Model: XR-100-204A

Manufacturer: IronRidge

Category: Solar Hardware

ELECTRICAL SPECIFICATIONS:

Grounding: Integrated bonding

Material: Aluminum alloy

MECHANICAL SPECIFICATIONS:

Material: 6005-T5 aluminum

Finish: Clear anodized

Load Rating: High strength

CERTIFICATIONS & COMPLIANCE:

â€¢ UL 2703 Listed

â€¢ ICC-ES Evaluated

INSTALLATION NOTES:

â€¢ Professional installation required

â€¢ Follow NEC grounding requirements

This specification sheet is for permit approval purposes.

For complete installation instructions, refer to manufacturer documentation.

Q.PEAK DUO BLK ML-G10+ 400W Solar Module

TECHNICAL SPECIFICATION SHEET

Model: Q.PEAK DUO BLK ML-G10+ 400W

Manufacturer: Q CELLS

Category: Solar Module

ELECTRICAL SPECIFICATIONS:

Max Power (Pmax): 400 W

Module Efficiency: 20.4%

Voltage at Pmax (Vmpp): 41.8 V

Current at Pmax (Impp): 9.58 A

Open Circuit Voltage (Voc): 49.8 V

Short Circuit Current (Isc): 10.17 A

Max System Voltage: 1500 V DC

Max Fuse Rating: 20 A

MECHANICAL SPECIFICATIONS:

Dimensions: 2024 x 1024 x 32 mm

Weight: 22.5 kg

Cell Type: Monocrystalline PERC

Number of Cells: 120 (6 x 20)

Frame: Anodized aluminum

Glass: 3.2 mm tempered glass

CERTIFICATIONS & COMPLIANCE:

• IEC 61215, IEC 61730

• UL 1703 (UL Listed)

• CEC Listed

• ISO 9001:2015

INSTALLATION NOTES:

• Portrait or landscape installation

• Use only listed mounting systems

• Grounding per NEC requirements

• Maximum wind load: 2400 Pa

• Maximum snow load: 5400 Pa

Enphase IQ8A-72-2-US Microinverter

TECHNICAL SPECIFICATION SHEET

Model: IQ8A-72-2-US

Manufacturer: Enphase Energy

Category: Microinverter

ELECTRICAL SPECIFICATIONS:

Max AC Power: 366 VA

Peak AC Power: 366 W

Max DC Input Power: 440 W

MPPT Voltage Range: 27-54.7 V

Max DC Input Current: 13 A

AC Output Voltage: 240 V

AC Output Frequency: 60 Hz

Efficiency: 97.0%

MECHANICAL SPECIFICATIONS:

Dimensions: 210 x 175 x 33 mm

Weight: 1.25 kg

Enclosure: NEMA 6P

Operating Temperature: -40°C to +65°C

Cooling: Natural convection

CERTIFICATIONS & COMPLIANCE:

• UL 1741-SA

• IEEE 1547-2018

• FCC Part 15 Class B

• NEMA TS-4 Seismic

INSTALLATION NOTES:

• Install one per solar module

• Use Enphase Q-Cables for interconnection

• Grounding integrated with mounting rail

• Built-in rapid shutdown capability