PV SOLAR PLANS
SUNRISE VILLAGE GRIDLEY
1470 HIGHWAY 99,
GRIDLEY, CA 95948

GENERAL NOTES

1. ALL MATERIALS , EQUIPMENT, INSTALLATION WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES:

2019 CBC, 2019 CRC, 2019 CEC, 2019 CMC, 2019 CPC, 2019 BUILDING ENERGY EFFICIENCY STANDARDS

2. EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATIONS INTAKE OR OPENINGS SHALL NOT BE COVERED BY SOLAR PHOTOVOLTAIC SYSTEM.

3. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED, INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.

4. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.

5. ALL CIRCUITS CONNECTED TO MORE THAN ONE SOURCE SHALL HAVE OVERCURRENT DEVISES LOCATED SO AS TO PROVIDE OVERCURRENT PROTECTION FROM ALL SOURCES.

6. UTILITY-INTERACTIVE INVERTERS SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTIONNETWORK UPON LOSS OF VOLTAGE IN THE SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED.

7. DUE TO THE FACT THAT PV MODULES ARE ENERGIZED WHENEVER EXPOSED TO LIGHT, PV CONTRACTORS SHALL DISABLE THE ARRAY DURING INSTALLATION AND SERVICE BY SHORT-CIRCUITING, OPEN-CIRCUITING OR COVERING THE ARRAY WITH OPAQUE COVERING.

8. ALL CONDUCTORS EXPOSED TO WEATHER SHALL BE LISTED AND IDENTIFIED FOR THE INDIRECT SUNLIGHT.

9. MODULE CONNECTORS MUST BE TYPE USE-2 OR LISTED FOR PHOTOVOLTAIC PV WIRE.

10. ALL CONDUCTORS SHALL BE MARKED ON EACH END FOR UNIQUE IDENTIFICATION.

11. ALL GROUNDED CONDUCTORS SHALL BE MARKED IN EACH ENDS FOR UNIQUE IDENTIFICATION AND SHALL BE PROPERLY COLOR IDENTIFIED AS WHITE.

12.1. PV SYSTEM CONNECTED ON THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS OF THE OTHER SOURCE(S) AT ANY DISTRIBUTION EQUIPMENT ON THE PREMISES SHALL MEET THE FOLLOWING.

12.2. EACH SOURCE CONNECTION SHALL BE MADE AT A DEDICATED CIRCUIT BREAKER OR FUSIBLE DISCONNECTING MEANS.

12.3. THE SUM OF THE AMPERE RATINGS OF THE OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUSBAR OR CONDUCTOR SHALL NOT EXCEED 120% OF THE RATING OF THE BUSBAR OR CONDUCTOR.

12.4. EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES.

13. CIRCUIT BREAKER, IF BACKFED SHALL BE SUITABLE FOR SUCH OPERATION [NEC 705.12(D)(5)].

14. FOR LOAD SIDE INTERCONNECTION THE PANEL BOARD MAIN CIRCUIT BREAKER AND THE PV POWER SOURCE CIRCUIT BREAKER SHALL BE PHYSICALLY LOCATED AT THE OPPOSITE END OF THE BUSBAR.

15. METALLIC RACEWAYS OR METALLIC ENCLOSURES ARE REQUIRED WIRE METHOD FOR INSIDE A BUILDING FOR PV SYSTEM.

16. FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES OR CONNECTORS THAT ARE IDENTIFIED AND LISTED FOR SUCH USE.

17. CONNECTORS SHALL BE OF LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30V SHALL REQUIRE TOOL TO OPEN AND MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING".

18. ROOF MOUNTED PHOTOVOLTAIC MODULES, PANELS OR SOLAR VOLTAIC ROLL ROOFING MATERIAL SHALL HAVE THE SAME OR BETTER LISTED FIRE-RATING THAN THE BUILDING ROOF-COVERING MATERIAL.

19. REMOVAL OF A UTILITY-INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR AND THE PHOTOVOLTAIC SOURCE AND/OR OUTPUT CIRCUIT GROUNDED CONDUCTOR.

20. EQUIPMENT GROUNDING CONDUCTOR FOR PV MODULES SMALLER THAT 6 AWG SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY A RACEWAY OR CABLE ARMOR.

21. EQUIPMENT GROUNDING CONDUCTOR FOR PV SYSTEMS WITHOUT GROUND FAULT PROTECTION AND INSTALLED ON NON-DWELLING UNIT MUST HAVE AMPACITY OF AT LEAST TWO TIMES THE TEMPERATURE AND CONDUIT FILL CORRECTED CIRCUIT CONDUCTOR AMPACITY.

22. FINE-STRANDED CABLES USED FOR BATTERY TERMINALS, DEVICES AND CONNECTIONS REQUIRE LUGS AND TERMINALS LISTED AND MARKED FOR THE USE [NEC 690.74(A)]

23. AVERAGE SOLAR CONSUMPTION IS NOT TO EXCEED 120% OF AVERAGE ANNUAL CONSUMPTION.

24. THIS PROJECT SHALL COMPLY WITH ALL THE LATEST APPLICABLE NATIONAL ELECTRIC CODE (NEC) REQUIREMENTS [NEC ARTICLES 690 AND 705], NEC REQUIREMENTS, STATE OF CALIFORNIA REQUIREMENTS, BUILDING CODES, AND SHALL OBTAIN ELECTRICAL PERMIT(S) FOR THE EQUIPMENT INSTALLATION.

PROJECT INFORMATION

PROJECT ADDRESS:
1470 HIGHWAY 99,
GRIDLEY, CA 95948

JURISDICTION:
CITY OF GRIDLEY
685 KENTUCKY ST.
GRIDLEY, CA 95948

ELECTRICAL UTILITY SERVICE:
CITY OF GRIDLEY ELECTRIC

CONTACT INFORMATION

BUILDER/OWNER:
SUNRISE VILLAGE GRIDLEY

SOLAR SYSTEM CONTRACTORS:
CITADEL ROOFING AND SOLAR
4980 ALLISON PARKWAY
VACAVILLE, CA 95688

CODE COMPLIANCE

2019 CALIFORNIA BUILDING CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA RESIDENTIAL BUILDING CODE
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

SCOPE OF WORK

THE INSTALLATION OF SOLAR MODULES WITH MICROINVERTERS AND RACKING HARDWARE ON PITCHED AND/OR FLAT ROOF. REQUIRED DISCONNECTS TO BE INSTALLED IN AND/OR OUTSIDE GARAGE.

OCCUPANCY GROUP: R-2/U

CONSTRUCTION TYPE: TYPE VB

SPRINKLER SYSTEM: R-2 RESIDENTIAL BUILDINGS SHALL BE PROVIDED WITH SYSTEMS DESIGNED AND INSTALLED IN ACCORDANCE WITH CBC 903.3.1.2 OR NFPA 13R.

PV SYSTEM SPECIFICATIONS

PHOTOVOLTAIC SOLAR MODULE MODEL:
HANWHA Q.CELLS, Q.PEAK DUO BLK ML-G10+ (400W)

MODULE RATING:
400W

NUMBER OF MODULES:
171

SOLAR ARRAY SIZE:
68.4KW

AZIMUTH:
VARIES

MOUNTING ARRAY HEIGHT:
2-STORY

PHOTOVOLTAIC SOLAR INVERTER:
ENPHASE IQ7PLUS-72-2-US

RACKING HARDWARE:
QUICKBOLT/SNAPNRACK

SHEET INDEX

CLIENT:
SUNRISE VILLAGE GRIDLEY

PROJECT:
PV SOLAR PLANS:
SUNRISE VILLAGE GRIDLEY
1470 HIGHWAY 99,
GRIDLEY, CA 95948

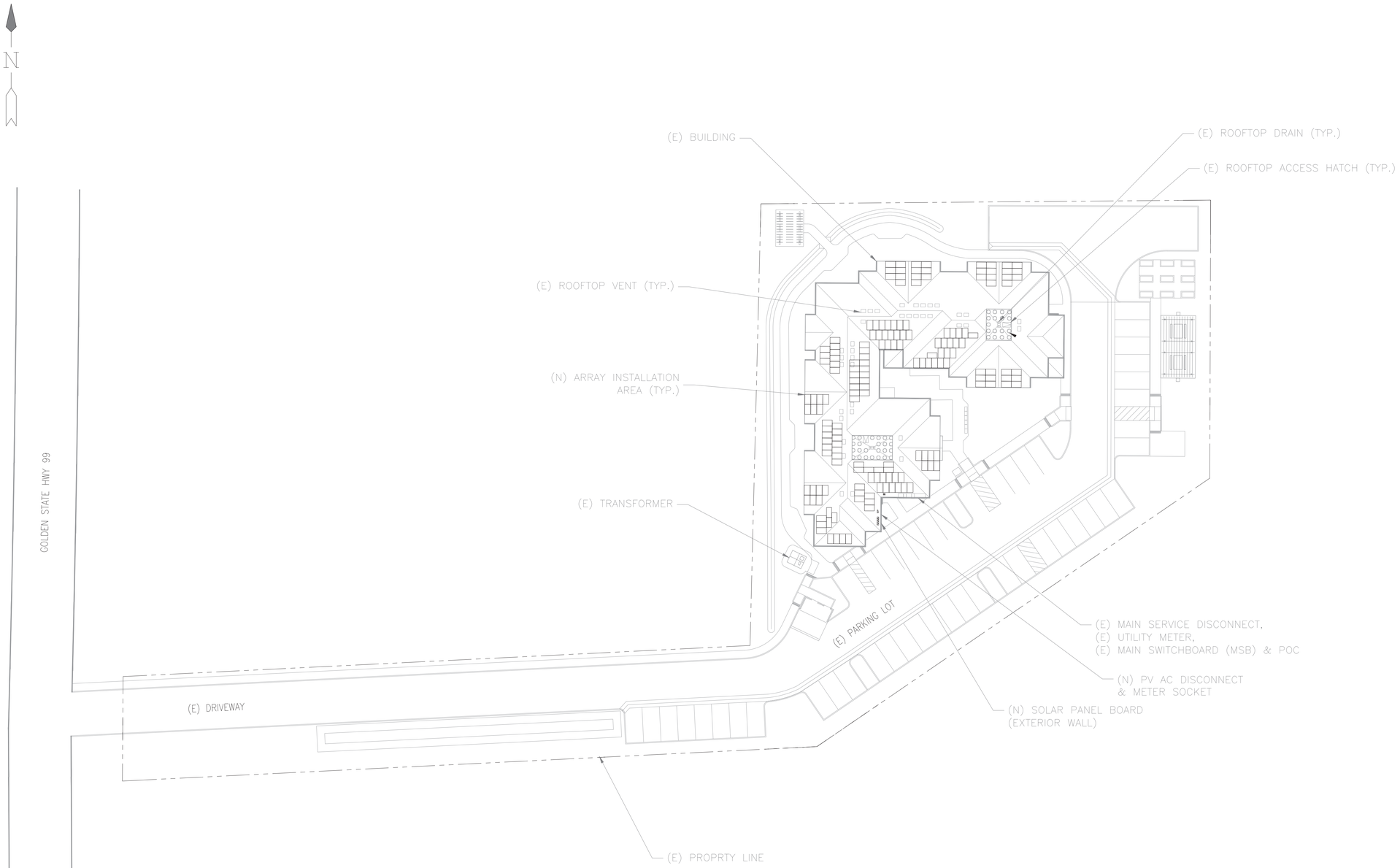
REV	DATE	DESCRIPTION OF REVISIONS

DATE: 11/05/22

DRAWN BY: SS

SHEET TTILE: COVER SHEET

SHEET: CS



A SITE PLAN
1"=30'-0"
0 30' 60'

CLIENT:
SUNRISE VILLAGE GRIDLEY

PROJECT:
PV SOLAR PLANS:
SUNRISE VILLAGE
GRIDLEY
1470 HIGHWAY 99,
GRIDLEY, CA 95948

REV	DATE	DESCRIPTION OF REVISIONS

DATE: 03/28/23
DRAWN BY: SS
SHEET TTILE: SOLAR SITE PLAN
SHEET: PV1.0

ARRAY SCHEDULE

ARRAY-#	QTY. MODULES	MODULE BRAND & MODEL	TILT ANGLE (°)	AZIMUTH (°) (SOUTH = 180°)
ROOF – 1	7	HANWHA Q.CELLS Q.PEAK DUO BLK ML-G10+ 400W	22.62°	270°
ROOF – 2	7			90°
ROOF – 3	7			270°
ROOF – 4	7			90°
ROOF – 5	9			270°
ROOF – 6	16			90°
ROOF – 7	18			180°
ROOF – 8	20			180°
ROOF – 9	6			270°
ROOF – 10	6			90°
ROOF – 11	7			180°
ROOF – 12	13			270°
ROOF – 13	18			180°
ROOF – 14	7			180°
ROOF – 15	7			180°
ROOF – 16	6			90°
ROOF – 17	6			270°
ROOF – 18	4			180°
TOTAL	171			

SYSTEM MECHANICAL INFO (FOR REFERENCE ONLY)

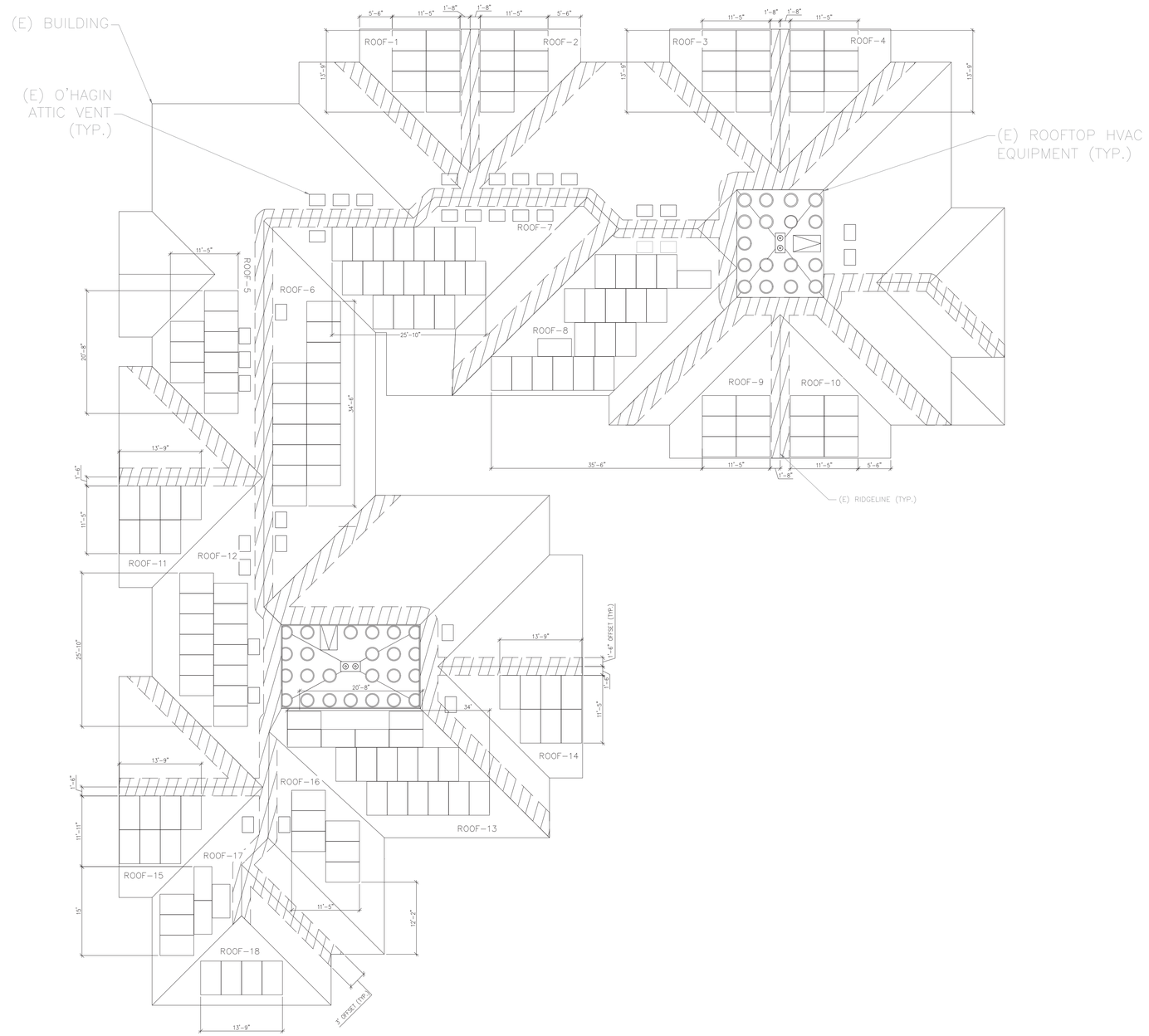
SOLAR MODULE WEIGHT: 48.50 lbs.
SOLAR MODULE DIMENSIONS: 74.00" X 41.10" X 1.26"
TOTAL ROOF AREA (MEASURED IN PLAN VIEW): 14882 ft²
SOLAR ARRAY AREA: 3611.7 ft², MEASURED IN PLAN VIEW: 3348.7 ft²
ARRAY AREA PERCENT OF ROOF (MEASURED IN PLAN VIEW): 22.5 %
SOLAR ARRAY ATTACHMENT TYPE: ECOFASTEN 44-R DIRECT-TO-DECK MOUNT
ROOF ATTACHMENT SPACING: **48"** O.C. MAX., STAGGERED, UNLESS NOTED OTHERWISE
SOLAR ARRAY MOUNTING RAIL TYPE: IRONRIDGE XR-100 RAIL (XR-100-168B, BLACK FINISH)
RAIL MAXIMUM CANTILEVER: **20"** MAX.
ROOF FRAMING: ENGINEERED TRUSSES @ 24" O.C.
ROOFING MATERIAL: ASPHALT SHINGLE

FIRE ACCESS ZONE

SHEET NOTES

1. ANY AND ALL LAYOUT CHANGES, INCLUDING BUT NOT LIMITED TO SHIFTING OF THE ARRAY, ARE SUBJECT TO APPROVAL BY THE DESIGN ENGINEER.
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY. PLEASE REFER TO MANUFACTURERS DRAWINGS TO CONFIRM ALL DIMENSIONS. ALL DIMENSIONS DISPLAYED ON THIS SHEET ARE ROUNDED TO THE NEAREST 1/4" U.O.N.
3. ALL ROOFTOP CONDUIT SUPPORT ATTACHMENTS WEATHERPROOFED PER MANUFACTURERS REQUIREMENTS.
4. SPANS BETWEEN RACKING ATTACHMENTS AND MAXIMUM RACK CANTILEVERS TO BE VERIFIED BY INSTALLER.
5. RACKING ATTACHMENTS AND RAIL LOCATIONS FOR PROPER MODULE SUPPORT TO BE VERIFIED BY INSTALLER.
6. CALIFORNIA FIRE CODE 1204.3 EXCEPTION THAT ROOF CONFIGURATION IS SIMILAR TO THAT OF A GROUP R-3 OCCUPANCY AND THEREFORE FOLLOWED GROUP R-3 RESPECTIVE FIRE ACCESS PATHWAYS.

N



A SITE PLAN
1"=30'-0"
0 30' 60'

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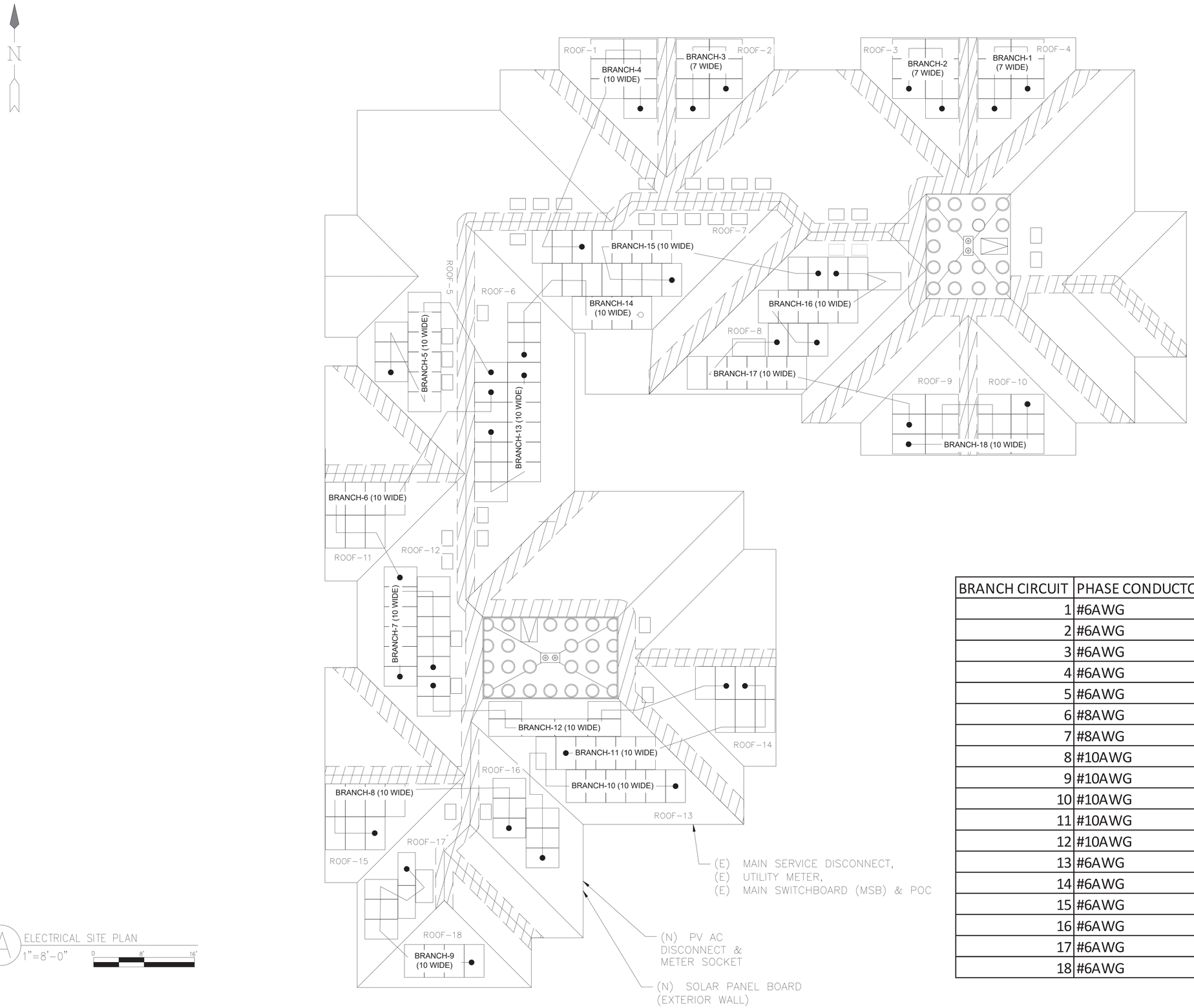
REV	DATE	DESCRIPTION OF REVISIONS

DATE: 03/28/23
DRAWN BY: SS
SHEET TTILE: SOLAR LAYOUT
SHEET: PV1.1



A ELECTRICAL SITE PLAN
1"=8'-0"
0 8' 16'

BRANCH CIRCUIT	PHASE CONDUCTOR SIZE	VOLTAGE DROP
1	#6AWG	1.13%
2	#6AWG	1.09%
3	#6AWG	1.00%
4	#6AWG	0.78%
5	#6AWG	0.59%
6	#8AWG	0.75%
7	#8AWG	0.58%
8	#10AWG	0.63%
9	#10AWG	0.87%
10	#10AWG	0.26%
11	#10AWG	0.54%
12	#10AWG	0.47%
13	#6AWG	0.54%
14	#6AWG	0.65%
15	#6AWG	0.81%
16	#6AWG	0.80%
17	#6AWG	0.90%
18	#6AWG	1.04%

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DATE
REV

DATE: 03/28/23
DRAWN BY: SS
SHEET TTILE: ELECTRICAL SITE PLAN
SHEET: PV1.2

MICROINVERTER
171 MODULE LEVEL MICROINVERTER IQ7PLUS-72-2-US MICROINVERTERS
UL 1741, NEMA TYPE 6/ OUTDOOR, 208VAC, 1.39A

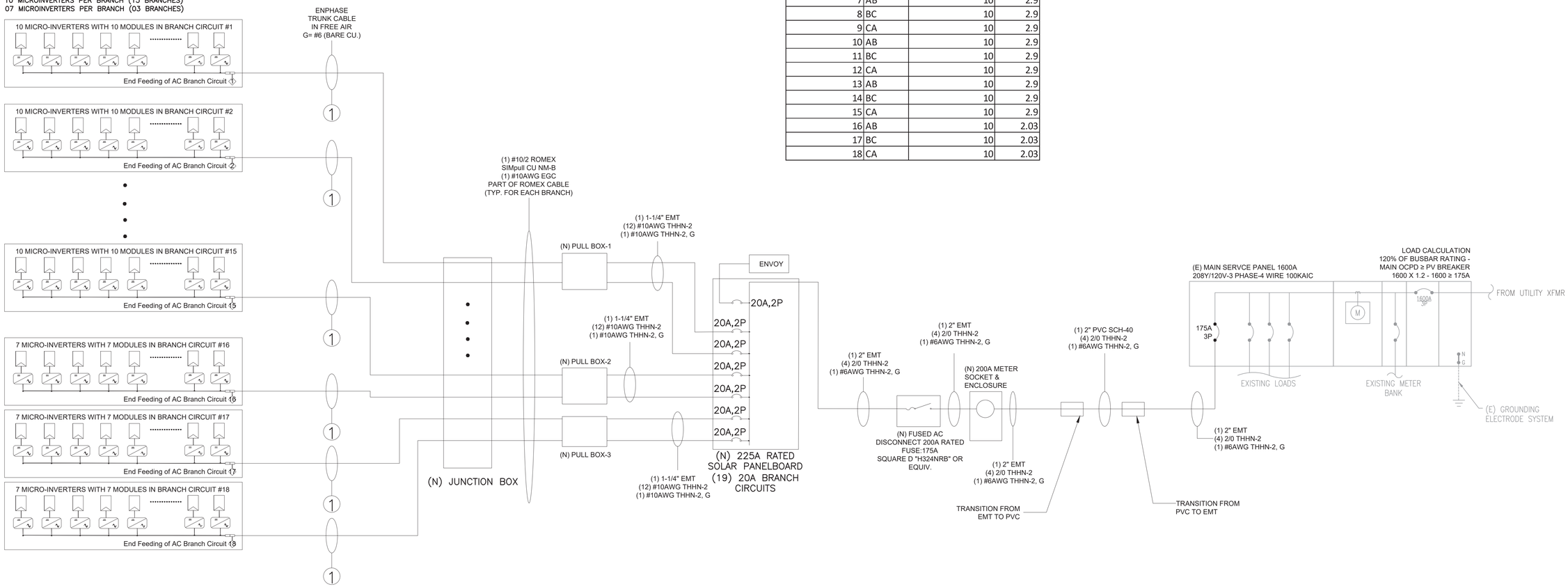
MODULES:
171 HANWHA Q.CELLS Q.PEAK DUO BLK ML-G10+ 400W SOLAR MODULES.
1 MODULE PER MICROINVERTER

CIRCUIT CURRENT FOR 1 MICROINVERTER= 1.39A
BRANCH CIRCUIT CURRENT : 1.39 X 10 = 13.9A
OCPD= 13.9 X 1.25 = 20A

10 MICROINVERTERS PER BRANCH (15 BRANCHES)
07 MICROINVERTERS PER BRANCH (03 BRANCHES)

PHASE	AB	BC	CA
NO OF INVERTERS	57	57	57
KWAC	16.53	16.53	16.53

BRANCH CIRCUIT	PHASE	NO OF INVERTERS	KWAC
1	AB	7	2.9
2	BC	7	2.9
3	CA	7	2.9
4	AB	10	2.9
5	BC	10	2.9
6	CA	10	2.9
7	AB	10	2.9
8	BC	10	2.9
9	CA	10	2.9
10	AB	10	2.9
11	BC	10	2.9
12	CA	10	2.9
13	AB	10	2.9
14	BC	10	2.9
15	CA	10	2.9
16	AB	10	2.03
17	BC	10	2.03
18	CA	10	2.03



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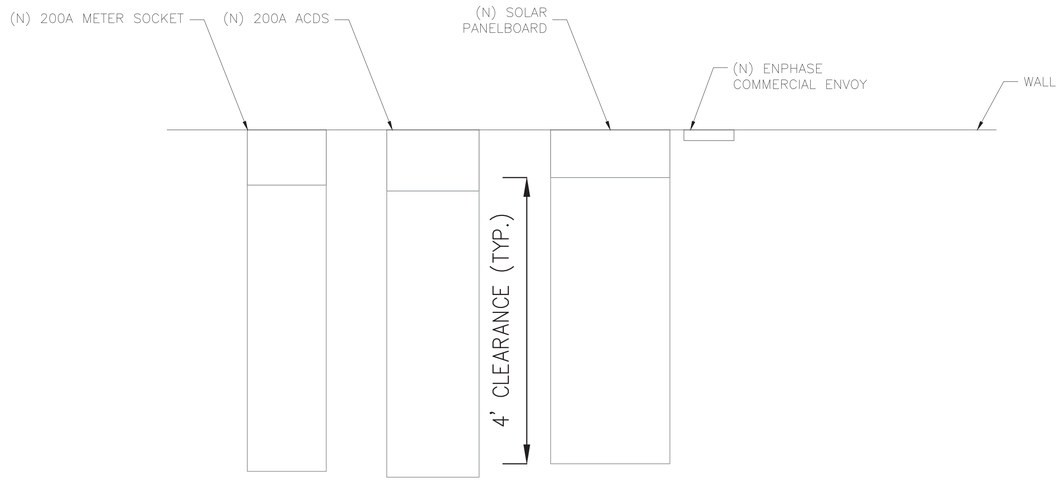
DESCRIPTION OF REVISIONS

REV	DATE

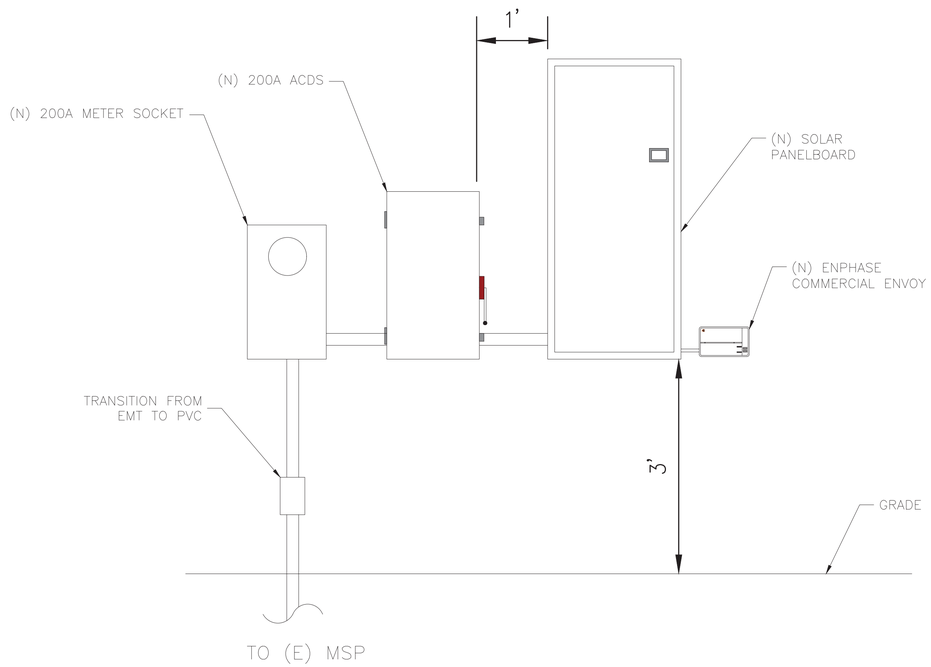
DATE: 03/28/23
DRAWN BY: SS
SHEET TTILE: SINGLE LINE DIAGRAM
SHEET: E-1.1



1 EQUIPMENT LAYOUT PLAN

E-2.1

SCALE: 1"=1'-0"



2 EQUIPMENT ELEVATION

E-2.1

SCALE: 1"=1'-0"

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REV	DATE	DESCRIPTION OF REVISIONS

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SHEET TTILE: EQUIPMENT ELEVATION

SHEET: E-2.1

1 EMT / CONDUIT RACEWAYS, JUNCTION BOXES

*(REFLECTIVE MATERIAL REQUIRED)

WARNING: PHOTOVOLTAIC POWER SOURCE

PER NEC 690.31(G)(3) & (4)

WARNING

PHOTOVOLTAIC POWER SOURCE

DO NOT REMOVE UNLESS REPLACED IN EXACT LOCATION - PV POWER CIRCUIT DIRECTLY BELOW

PER NEC 690.31(G)(1) - WHERE CIRCUITS ARE EMBEDDED IN BUILT-UP, LAMINATE, OR MEMBRANE ROOFING MATERIALS IN ROOF AREAS NOT COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT.

2 PHOTOVOLTAIC SYSTEM AC DISCONNECT

MAIN PHOTOVOLTAIC SYSTEM AC DISCONNECT

PER NEC 690.13(B)

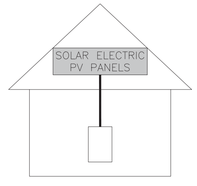
⚠WARNING

ELECTRICAL SHOCK HAZARD

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

PER NEC 690.13(B)

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



PER NEC 690.56(C)(1)(A)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

PER NEC 690.56(C)(3)

3 SOLAR PANELBOARD/SWITCHBOARD

△WARNING

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

PER NEC 705.12(B)(2)(3)(c)

4 MAIN SERVICE DISCONNECT & DISTRIBUTION PANEL FOR MULTI-APARTMENT & COMMERCIAL SYSTEMS WHICH ARE RATED LESS THAN 1200A.

⚠WARNING

ARC-FLASH AND SHOCK HAZARD

APPROPRIATE PPE REQUIRED

PER NEC ARTICLE 110.16(A) AND NFPA 70E ARTICLE 130.5(C)(1),(2),(3)

NOTE: PER NEC ARTICLE 110.16(B) DETAILED ARC FLASH LABELS ARE REQUIRED FOR COMMERCIAL SYSTEMS WHICH ARE RATED FOR 1200A AND MORE.

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT: 137.7A

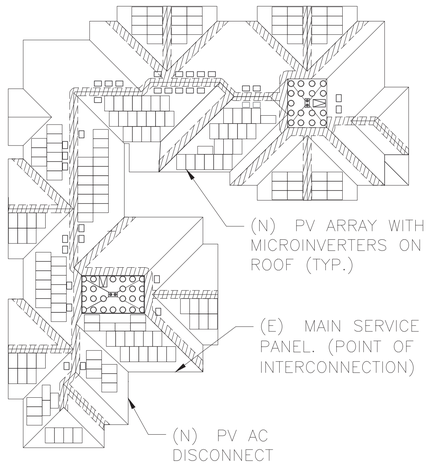
NOMINAL OPERATING AC VOLTAGE: 208V

PER NEC 690.54

1 BUILDING / STRUCTURE

CAUTION

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



PER NEC 690.56(B) & 705.10

LABELING REQUIREMENTS FOR ARTICLE 110.16, 690 & 705.12

NEC 110.21 B) Field-Applied Hazard Markings.

Where caution, warning, or danger signs or labels are required by this Code, the labels shall meet the following requirements:

1) The marking shall warn of the hazards using effective words, colors, symbols, or any combination thereof.
   Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for suitable font sizes, words, colors, symbols, and location requirements for labels.
2) The label shall be permanently affixed to the equipment or wiring method and shall not be handwritten.
   Exception to (2): Portions of labels or markings that are variable, or that could be subject to changes, shall be permitted to be handwritten and shall be legible.
3) The label shall be of sufficient durability to withstand the environment involved.
   Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for the design and durability of safety signs and labels for application to electrical equipment.

NEC 110.16 Arc Flash:

(A) General -
Electrical equipment, such as switchboards, switchgear, panelboards, industrial control panels, meter socket enclosures, and motor control centers, that is in other than dwelling units, and is likely to require examination, adjustment, servicing, or maintenance while energized, shall be field or factory marked to warn qualified persons of potential electric arc flash hazards. The marking shall meet the requirements in 110.21(B) and shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

(B) Service Equipment
In other than dwelling units, in addition to the requirements in (A), a permanent label shall be field or factory applied to service equipment rated 1200 amps or more. The label shall meet the requirements of 110.21(B) and contain the following information.

1. Nominal system voltage
2. Available fault current at the service overcurrent protective devices.
3. The clearing time of service overcurrent protective devices based on the available fault current at the service equipment.
4. The date the label was applied.

Exception: Service equipment labeling shall not be required if an arc flash label is applied in accordance with acceptable industry practice.

NEC 690.13(B)
Each PV system disconnecting means shall plainly indicate whether in the open (off) or closed (on) position and be permanently marked "PV SYSTEM DISCONNECT" or equivalent. Additional markings shall be permitted based upon the specific system configuration. For PV system disconnecting means where the line and load terminals may be energized in the open position, the device shall be marked with the following words or equivalent.

NEC 690.31(G)(1)
Where circuits are embedded in build up, laminate or membrane roofing materials not covered by PV modules and associated equipment, the location of the circuits shall be clearly marked.

NEC 690.31(G)(3) & (4)
PV dc system circuit labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings, or floors. Spacing between labels or markings, or between a label and a marking, shall not be more than 3 m (10 ft). Labels required in this section shall be suitable for the environment where they are installed.

NEC 690.53
A permanent label for the dc PV power source indicating items (1) through (3) shall be provided by the installer at dc PV system disconnecting means and at each dc equipment disconnecting means required by 690.15. Where a disconnecting means has more than one dc PV power source, the values in 690.53 (1) through (3) shall be specified for each source.

NEC 690.54
All interactive system(s) points of interconnection with other sources shall be marked as an accessible location at the disconnecting means as a power source and with the rated ac output current and the nominal operating ac voltage.

NEC 690.56(B)
Plaques or directories shall be installed in accordance with 705.10.

NEC 690.56(C)(1)(a)
For PV systems that shut down the array and conductors leaving the array shall be labeled accordingly.

NEC 690.56(C)(3)
A rapid shutdown switch shall have a label located on or no more than 1 meter (3 ft) from the switch that includes the following wording.

NEC 705.10
A permanent plaque or directory, denoting the location of all electric power source disconnecting means on or in the premises, shall be installed at each service equipment location and at the location(s) of the system disconnect(s) for all electric power production sources capable of being interconnected. Also see 690.4(d) One sign required for each PV system.

NEC 705.12(B)(2)(3)(b)
Where two sources, one a primary power source and the other another power source, are located at opposite ends of a busbar that contains loads, the sum of 125 percent of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar shall not exceed
120 percent of the ampacity of the busbar. A permanent warning label shall be applied to the distribution equipment adjacent to the back-fed breaker from the power source that displays the following or equivalent wording.

NEC 705.12(B)(2)(3)(c)
The sum of the ampere ratings of all overcurrent devices on panelboards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar. The rating of the overcurrent device protecting the busbar shall not exceed the rating of the busbar. Permanent warning labels shall be applied to distribution equipment displaying the following or equivalent wording.

NEC 705.12(B)(3)
Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources. Circuits if backfed shall be suitable for such operations.

0 1" 2"

SCALE FOR PRINTING ONLY

SIGNAGE NOTES:

1. SIGNAGE SHALL BE WEATHER RESISTANT. UL 969 SHALL BE USED AS A STANDARD FOR WEATHER RATING.
2. ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM 3/8" LETTER HEIGHT FOR HEADERS & 1/4" FOR REST OF THE TEXT. TEXT WITH RED BACKGROUND TO BE OF 3/8" HEIGHT
3. DO NOT USE SCREWS FOR SIGNAGE ATTACHMENT, USE ONLY PERMANENT ADHESIVE.

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DESCRIPTION OF REVISIONS

REV | DATE

DATE: 03/28/23

DRAWN BY: SS

SHEET TTILE: LABELS

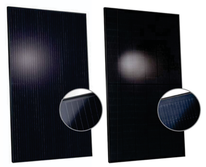
SHEET: E-3.1

powered by Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G10+
385-405
ENDURING HIGH PERFORMANCE

Quality Controlled PV
TÜVRheinland CERTIFIED
www.tuv.com ID 1111232615

Made in USA
25 YR Warranty Product & Performance
EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2021
Q CELLS Yield Security



6 BUSBAR CELL TECHNOLOGY

12 BUSBAR CELL TECHNOLOGY

BREAKING THE 20 % EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9 %.

THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY
Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behavior.

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING
High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).

A RELIABLE INVESTMENT
Inclusive 25-year product warranty and 25-year linear performance warranty[2].

[1] APT test conditions according to IEC / TS 62804-1:2015, method A (−1500 V, 96 h)
[2] See data sheet on rear for further information.

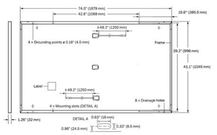
THE IDEAL SOLUTION FOR:
Rooftop arrays on residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	74.0 in × 41.1 in × 1.26 in (including frame) (1879 mm × 1045 mm × 32 mm)
Weight	48.5 lbs (22.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09–3.98 in × 1.26–2.36 in × 0.59–0.71 in (53–101 mm × 32–60 mm × 15–18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥ 49.2 in (1250 mm), (−) ≥ 49.2 in (1250 mm)
Connector	Stäubli MC4; IP68

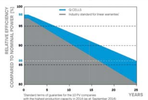


ELECTRICAL CHARACTERISTICS

POWER CLASS			385	390	395	400	405
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)							
Minimum	Power at MPP[2]	P_{MPP} [W]	385	390	395	400	405
	Short Circuit Current[3]	I_{SC} [A]	11.04	11.07	11.10	11.14	11.17
	Open Circuit Voltage[3]	V_{OC} [V]	45.19	45.23	45.27	45.30	45.34
	Current at MPP	I_{MPP} [A]	10.59	10.65	10.71	10.77	10.83
	Voltage at MPP	V_{MPP} [V]	36.36	36.60	36.86	37.13	37.39
	Efficiency[4]	η [%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[1]							
Minimum	Power at MPP	P_{MPP} [W]	288.8	292.6	296.3	300.1	303.8
	Short Circuit Current	I_{SC} [A]	8.90	8.92	8.95	8.97	9.00
	Open Circuit Voltage	V_{OC} [V]	42.62	42.65	42.69	42.72	42.76
	Current at MPP	I_{MPP} [A]	8.35	8.41	8.46	8.51	8.57
	Voltage at MPP	V_{MPP} [V]	34.59	34.81	35.03	35.25	35.46

[1] Measurement tolerances P_{MPP} ±3 %; I_{SC}; V_{OC} ±5 % at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • 800 W/m², NMOT, spectrum AM 1.5

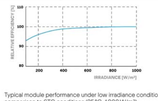
Q CELLS PERFORMANCE WARRANTY



Standard terms of guarantee for the Q.PEAK DUO BLK ML-G10+ series: At least 98 % of nominal power during first year. Thereafter max. 0.5 % degradation per year. At least 93.5 % of nominal power up to 10 years. At least 86 % of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.34	Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull[2]	[lbs/ft²]	75 (3600 Pa) / 55 (2660 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +185 °F (−40 °C up to +85 °C)
Max. Test Load, Push / Pull[2]	[lbs/ft²]	113 (5400 Pa) / 84 (4000 Pa)		

[2] See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE-compliant, Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells).

PACKAGING INFORMATION

Horizontal packaging	76.4 in 1940 mm	43.3 in 1100 mm	48.0 in 1220 mm	1656 lbs 751 kg	53 pallets	24 pallets	32 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.
400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | **TEL** +1 949 748 59 96 | **EMAIL** inquiry@us.q-cells.com | **WEB** www.q-cells.us

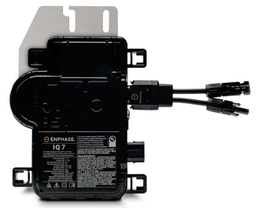
Data Sheet
Enphase Microinverters
Region: AMERICAS

Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



CERTIFIED

Easy to Install
- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable
- Optimized for high powered 60-cell/120 half-cell and 72-cell/144 half-cell* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready
- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

* The IQ 7+ Micro is required to support 72-cell/144 half-cell modules.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)	IQ7-60-2-US		IQ7PLUS-72-2-US	
Commonly used module pairings[1]	235 W - 350 W +		235 W - 440 W +	
Module compatibility	60-cell/120 half-cell PV modules only		60-cell/120 half-cell and 72-cell/144 half-cell PV modules	
Maximum input DC voltage	48 V		60 V	
Peak power tracking voltage	27 V - 37 V		27 V - 45 V	
Operating range	16 V - 48 V		16 V - 60 V	
Min/Max start voltage	22 V / 48 V		22 V / 60 V	
Max DC short circuit current (module Isc)	15 A		15 A	
Overvoltage class DC port	II		II	
DC port backfeed current	0 A		0 A	
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit			
OUTPUT DATA (AC)	**IQ 7 Microinverter**		**IQ 7+ Microinverter**	
Peak output power	250 VA		295 VA	
Maximum continuous output power	240 VA		290 VA	
Nominal (L-L) voltage/range[2]	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency	60 Hz		60 Hz	
Extended frequency range	47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit[3]	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port	III		III	
AC port backfeed current	18 mA		18 mA	
Power factor setting	1.0		1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	
EFFICIENCY	**@240 V**	**@208 V**	**@240 V**	**@208 V**
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %
MECHANICAL DATA				
Ambient temperature range	-40°C to +65°C			
Relative humidity range	4% to 100% (condensing)			
Connector type	MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)			
Dimensions (HxWxD)	212 mm x 175 mm x 30.2 mm (without bracket)			
Weight	1.08 kg (2.38 lbs)			
Cooling	Natural convection - No fans			
Approved for wet locations	Yes			
Pollution degree	PD3			
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure			
Environmental category / UV exposure rating	NEMA Type 6 / outdoor			
FEATURES				
Communication	Power Line Communication (PLC)			
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.			
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.			
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 1071-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.			

1. No enforced DC/AC ratio. See the compatibility calculator at https://enphase.com/en-us/support/module-compatibility.
2. Nominal voltage range can be extended beyond nominal if required by the utility.
3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Product data sheet
Specifications

SQUARE D
Green Premium

Safety switch, heavy duty, fusible, 200A, 4 wire, 3 poles, 1 neutral, 60hp, 240VAC/250VDC, Type 3R, bolt on hub provision

H324NRB

Product availability : Stock - Normally stocked in distribution facility

Price* : 1,748.00 USD

Main

Product	Single Throw Safety Switch
Duty Rating	Heavy duty
Device Application	Heavy application
Disconnect Type	Fusible disconnect
Factory Installed Neutral	Neutral (factory installed)
Phase	3 phase
Number of Poles	3
Current Rating	200 A
Voltage Rating	250 V DC 240 V AC
Enclosure Rating	NEMA 3R galvannealed steel
Maximum Horse Power Rating	15 hp 240 V at AC 50-60 Hz for 1 phase conforming to NEC 240.6 25 hp 240 V at AC 50-60 Hz for 3 phase conforming to NEC 240.6 60 hp 240 V at AC 50-60 Hz for 3 phase conforming to NEC 430.52 40 hp 250 V at DC

Complementary

Short Circuit Current Rating	10 kA H or K 200 kA R or J
Fuse type	H or K R or J
Mounting Type	Surface
Electrical Connection	Lugs
Wiring configuration	4-wire (3PH + G)
Wire Size	AWG 6...250 kcmil copper or aluminium
Tightening torque	275 lbf.in (31.07 N.m) 0.02...0.20 in² (13.3...127 mm²) (AWG 6...250 kcmil)
Depth	8.5 in (215.90 mm)
Width	17.25 in (438.15 mm)
Height	29.25 in (742.95 mm)
Net Weight	56.50 lb(US) (25.63 kg)

* Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Environment

Certifications	UL listed file E2875

Ordering and shipping details

Category	00009-H&HU SW,2&3P,N3R,30-200A
Discount Schedule	DE1
GTIN	785901480594
Nbr. of units in pkg.	1
Package weight(Lbs)	45.36 lb(US) (20.575 kg)
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	8.20 in (20.828 cm)
Package 1 width	19.30 in (49.022 cm)
Package 1 Length	31.00 in (78.74 cm)

Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal sccpe)
Environmental Disclosure	Product Environmental Profile
PVC free	Yes

Contractual warranty

Warranty	18 months

Data Sheet
Enphase Networking

Enphase IQ Commercial Gateway

The Enphase IQ Commercial Gateway delivers solar production and energy consumption data to Enphase Installer App monitoring and analysis software for comprehensive, remote maintenance and management of three-phase Enphase IQ Systems.

With integrated production metering and optional consumption monitoring, the IQ Gateway is the platform for total energy management and integrates with the IQ Microinverters and Enphase IQ Battery.

Smart
- Enables web-based monitoring and control
- Bidirectional communications for remote upgrades
- Supports power export limiting and zero-export applications

Simple
- Easy system configuration using Enphase Installer App
- Flexible networking with Wi-Fi, Ethernet, or cellular

Reliable
- Designed for installation indoors or outdoors in an enclosure
- Five-year warranty

LISTED

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Enphase IQ Commercial Gateway

MODEL NUMBERS	
Enphase IQ™ Commercial Gateway ENV-IQ-AM3-3P	Three-phase communications gateway with integrated PV production metering (+/- 0.5%) and optional consumption monitoring (+/- 2.5%). Includes three 200A continuous rated production CTs.
ACCESSORIES (order separately)	
Consumption Monitoring CTs CT-200-SPLIT (order three or six, as needed)	Split-core current transformers enable consumption metering.
POWER REQUIREMENTS	
Power requirements	208Y/120 VAC three-phase 220Y/127 VAC three-phase 230Y/133 VAC three phase Max 20 A overcurrent protection required
Typical Power Consumption	5W
CAPACITY	
Number of microinverters polled	Up to 300
MECHANICAL & ELECTRICAL DATA	
Dimensions (WxHxD)	21.3 x 12.6 x 4.5 cm (8.4" x 5" x 1.8")
Weight	17.6 oz (498 g)
Ambient temperature range	-40° to 65° C (-40° to 149° F) -40° to 46° C (-40° to 115° F) if installed in an enclosure
Environmental rating	IP30. For installation indoors or in an NRTL-certified, NEMA type 3R enclosure.
Altitude	Up to 3000 meters (9,842 feet)
Production CTs	- Are limited to 200A of continuous current / 250A OCPD – 72kW AC - Allow for parallel connected CTs for up to 500A – 144kW AC (if possible) - Internal aperture measures 19.36mm to support 250MCM THWN conductors (max) - Accuracy of +/-0.5% for production metering
Consumption CTs	- For electrical services to 250A with parallel runs up to 500A - Internal aperture measures 0.84" x 0.96" (21.33mm x 24.38mm) to support 3/0 THWN conductor - CT wire insulation rating of 600V - Accuracy of +/-2.5% for consumption monitoring
INTERNET CONNECTION OPTIONS	
Integrated Wi-Fi	802.11b/g/n
Ethernet	802.3, Cat5E (or Cat 6) UTP Ethernet cable, not included
Mobile	Optional, CELLMODEM-M1 (LTE), CELLMODEM-01 (3G), or CELLMODEM-03 (4G), not included
COMPLIANCE	
Compliance	UL 916 CAN/CSA C22.2 No. 61010-1 47 CFR, Part 15, Class B, ICES 003 IEC/EN 61010-1:2010, EN50065-1, EN61000-4-5, EN61000-6-1, EN61000-6-2

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

CLIENT:
SUNRISE VILLAGE GRIDLEY

PROJECT:
PV SOLAR PLANS:
SUNRISE VILLAGE GRIDLEY
1470 HIGHWAY 99, GRIDLEY, CA 95948

REV	DATE	DESCRIPTION OF REVISIONS

DATE: 03/28/23
DRAWN BY: SS
SHEET TTILE: SPECIFICATIONS 1
SHEET: E-4.1

DESCRIPTION:

SNAPNRACK, FLASHED L FOOT

DRAWN BY: M.Watkins

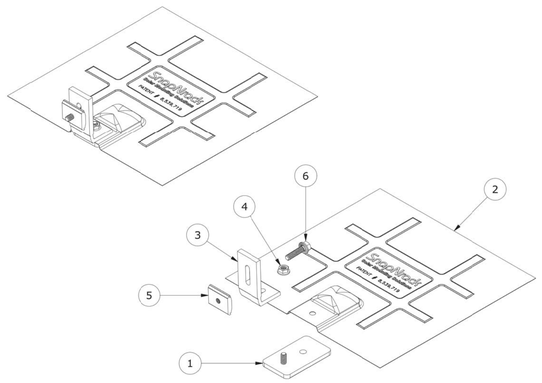
REVISION: A

PART NUMBER(S):

242-92047, 242-92048, 242-92050, 242-92051

SnapNrack Solar Mounting Solutions

595 MARKET STREET, 29TH FLOOR • SAN FRANCISCO, CA 94105 USA
PHONE (415) 580-6900 • FAX (415) 580-6902



PARTS LIST		
ITEM	QTY	DESCRIPTION
1	1	SNAPNRACK, L FOOT BASE, MILL
2	1	SNAPNRACK, L FOOT FLASHING, 12IN X 12IN, BLACK GALV
3	1	SNAPNRACK L FOOT, COMPOSITION 92DEG, CLEAR / BLACK
4	1	NUT, FLANGE, SERRATED, 5/16IN-18, SS
5	1	SNAPNRACK CHANNEL NUT 5/16IN-18
6	1	BOLT, FLANGED HEX, 5/16IN-18 X 1-1/4IN, SS

MATERIALS:	6000 SERIES ALUMINUM, STAINLESS STEEL	OPTIONS:
DESIGN LOAD (LBS):	309 UP, 1469 DOWN, 251 SIDE	CLEAR / BLACK ANODIZED
ULTIMATE LOAD (LBS):	928 UP, 4406 DOWN, 754 SIDE	GALV STEEL / ALUM FLASHING
TORQUE SPECIFICATION:	10+ LB-FT	
CERTIFICATION:	UL 2703, FILE E359313	
WEIGHT (LBS):	0.90 - 1.25	

DESCRIPTION:

SNAPNRACK, FLASHED L FOOT

DRAWN BY: M.Watkins

REVISION: A

PART NUMBER(S):

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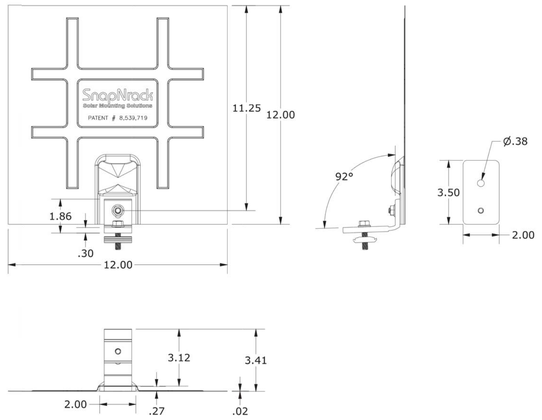


FLASHED L FOOT PROPERTIES		
SKU	FLASHING MATERIAL	L FOOT FINISH
242-92047	SILVER ALUMINUM	CLEAR
242-92048	BLACK ALUMINUM	BLACK
242-92050	BLACK GALV STEEL	CLEAR
242-92051	BLACK GALV STEEL	BLACK

ALL DIMENSIONS IN INCHES

SnapNrack
Solar Mounting Solutions

snapnrack.com

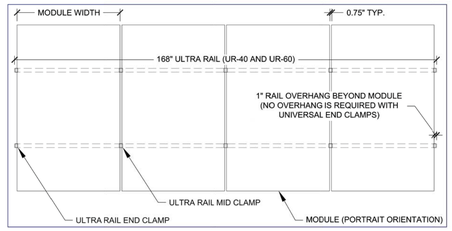
SnapNrack Ultra Rail Mid Clamp & Ultra Rail End Clamp

Ultra Rail Mid Clamp

Ultra Rail End Clamp

Overview

SnapNrack has introduced the new Ultra Rail Mid Clamps and Ultra Rail End Clamps to improve the installation experience and SKU efficiency for installers. The one-size-fits-all universal clamping height of the module clamps are compatible with 30mm to 46mm module frame sizes, reducing the number of SKUs per module height. The new Mid Clamps can provide greater spans by reducing the effect of the wind load uplift from the ¾" gap created between modules. Installers will find there is more space in the rail channel for wire management from elimintating the bolt inference.



SnapNrack Ultra Rail is available in 168" rail lengths. Standard install allows for (4) four portrait-orientation modules to be installed without requiring a splice.

- (4) four portrait maximum module width using Ultra Rail End Clamps (242-02072 or 242-02073): 40.94" (1,040mm)
- (4) four portrait maximum module width using Universal End Clamps (242-02215): 41.44" (1,053mm)
- Modules exceeding these dimensions or in rows greater than (4) four portrait-orientation modules across will require a splice.
- Installation Note: The Ultra Rail Module Clamps cannot be installed over the gap between spliced rails to accomodate for proper thermal expansion. In some cases it may be necessary to cut down the rail to accommodate proper mounting module clamp location(s).

Best Installation Practices

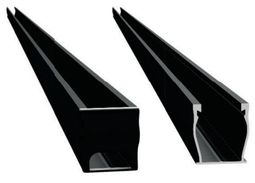
- When sliding the Ultra Rail module clamps in the rail channel, push the clamp from the base of the clamp in the rail channel rather than from the top.
- Install the Ultra Rail module clamps as close to the module frame as possible to reduce the distance required to slide the clamps.
- When installing the Ultra Rail End Clamps hold the top of the clamp firmly against the module frame while tightening the bolt.

877-732-2860 www.snapnrack.com contact@snapnrack.com

SnapNrack
Solar Mounting Solutions

UR-40
UR-60

Ultra Rail



The Ultimate Value in Rooftop Solar

- Industry leading Wire Management Solutions
- Mounts available for all roof types
- Single Tool Installation
- All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

Start Installing Ultra Rail Today

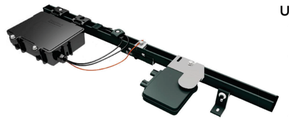
RESOURCES snapnrack.com/resources
DESIGN snapnrack.com/configurator
WHERE TO BUY snapnrack.com/where-to-buy

SnapNrack Ultra Rail System

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit Clamps
- System is fully bonded and listed to UL 2703 Standard

Heavy Duty UR-60 Rail

- UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads
- Taller, stronger rail profile includes profile-specific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience

Quality. Innovative. Superior.

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

877-732-2860 www.snapnrack.com contact@snapnrack.com

Single Meter Sockets - With Safety Socket Bypass

100 & 200 Amp

117TB (closed)

117TB (open)

Application

- Safety socket bypass (test block bypass) under separate cover
- Receive ANSI C12.10 watthour meters
- Surface mount

Construction

- Ring type
- NEMA Type 3R
- ANSI 61 gray E-coat finish
- Aluminum snap ring included

Standards

- UL 414 Listed
- ANSI C12.7
- EUSERC 304 & 305

Accessories

- 5th Jaw Kit - 50371
- Bussed Gutters - see page 51
- AW Hubs

Single Meter Sockets With Safety Socket Bypass

Part/UPC Number	Catalog Number	Amp Rating	Jaws	Service Type	Access	Bypass	Connections Line	Connections Load	Connections Neutral
78205147005	**114 TB** *	100	4	1Ø/3W	OH/UG	TB	#14 - 2/0	14 - 2/0	#14 - 1/0
78205147025	**115 TB** *	100	5	3Ø/3W	OH/UG	TB	#14 - 2/0	14 - 2/0	#14 - 1/0
78205147030	**117 TB** *	100	7	3Ø/4W	OH/UG	TB	#14 - 2/0	14 - 2/0	#14 - 1/0
78205159005	**124 TB** **	200	4	1Ø/3W	OH/UG	TB	#6 - 250 MCM	#6 - 250 MCM	#6 - 1/0
78205159025	**125 TB** **	200	5	3Ø/3W	OH/UG	TB	#6 - 250 MCM	#6 - 250 MCM	#6 - 1/0
78205159035	**127 TB** **	200	7	3Ø/4W	OH/UG	TB	#6 - 250 MCM	#6 - 250 MCM	#6 - 1/0

Part/UPC Number	Catalog Number	Overall Dimensions Height	Width	Depth	Top Provision	Knockout Layout
78205147005	**114 TB** *	24"	12"	4⅛"	AW Hub	Fig. 1
78205147025	**115 TB** *	24"	12"	4⅛"	AW Hub	Fig. 1
78205147030	**117 TB** *	24"	12"	4⅛"	AW Hub	Fig. 1
78205159005	**124 TB** **	30"	14"	6"	AW Hub	Fig. 2
78205159025	**125 TB** **	30"	14"	6"	AW Hub	Fig. 2
78205159035	**127 TB** **	30"	14"	6"	AW Hub	Fig. 2

* 100 Amp units compliant with EUSERC 304

** 200 Amp units compliant with EUSERC 305

CLIENT: SUNRISE VILLAGE GRIDLEY

PROJECT: PV SOLAR PLANS:
SUNRISE VILLAGE GRIDLEY
1470 HIGHWAY 99, GRIDLEY, CA 95948

DESCRIPTION OF REVISIONS

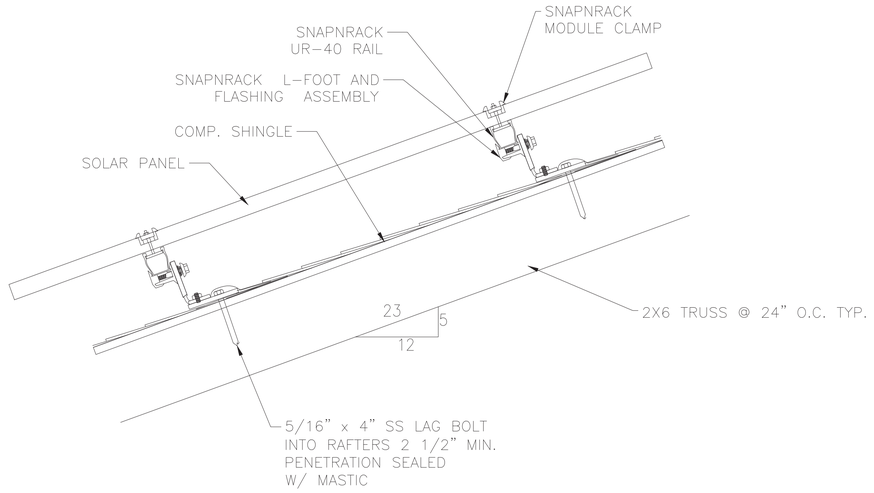
REV | DATE

DATE: 03/28/23

DRAWN BY: SS

SHEET TTILE: SPECIFICATIONS 2

SHEET: E-4.2

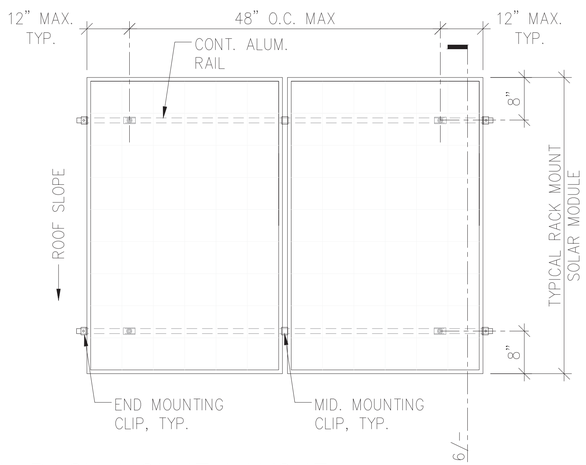


AA SNAPNRACK RAIL W/ L-FOOT & FLASHING

SCALE: NTS

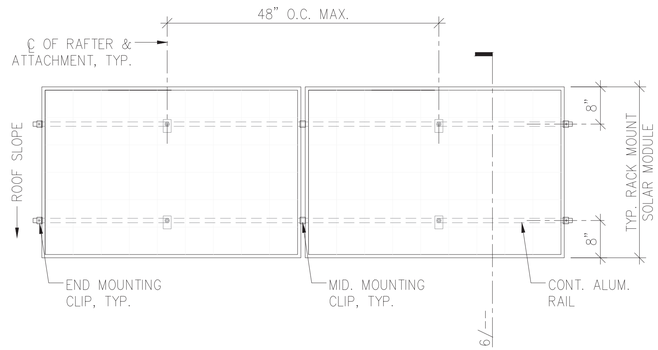
ROOF HOOK ATTACHMENT DETAIL

SCALE: 1"=1'-0"



BB TYPICAL RACK MOUNT LAYOUT

SCALE: NTS



CC TYPICAL RACK MOUNT LAYOUT

SCALE: NTS

PORTRAIT RACK MOUNT LAYOUT

SCALE: NTS

PORTRAIT RACK MOUNT LAYOUT

SCALE: NTS

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GRIDLEY, CA 95948

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SHEET TTILE: STRUCTURE DETAILS

SHEET: S-1