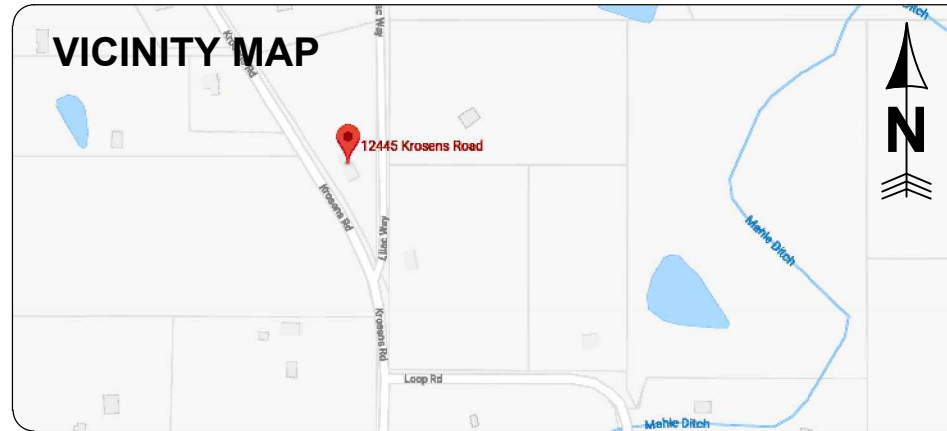


PROJECT DESCRIPTION

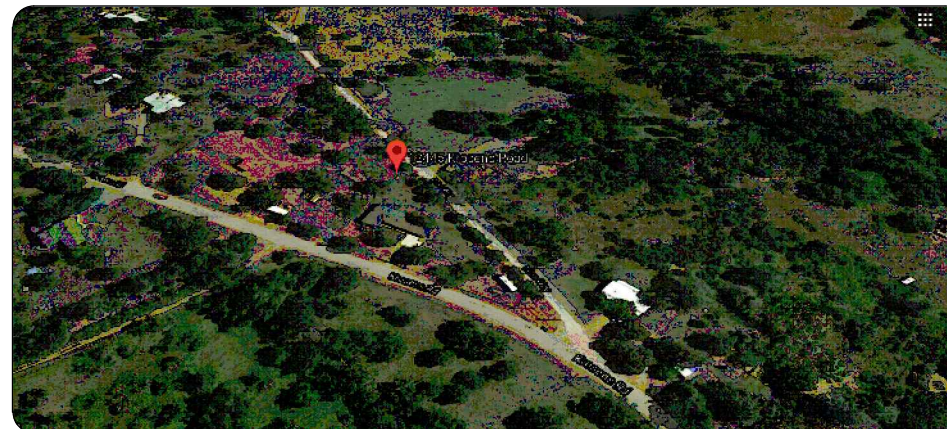
THIS ROOF-MOUNTED PHOTOVOLTAIC (PV) SYSTEM IS TO BE INSTALLED AT THE SINGLE FAMILY RESIDENTIAL IN **MARYSVILLE** , CALIFORNIA.
 THE ENERGY PRODUCED BY THE PV SYSTEM SHALL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ON-SITE ELECTRICAL EQUIPMENT VIA A BACK-FED BREAKER IN THE MAIN SERVICE PANEL.

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CALIFORNIA CODE OF REGULATIONS (CCR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS. (CONSTRUCTION SHALL COMPLY WITH 2016 CBC, CMC, CPC, CEC, CRC, CFC)
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN
3. WHERE WIRE SIZES ARE INDICATED ON PLANS FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTIONS AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
5. DRAWINGS AND DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWING AND LAYOUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
6. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF TYPE NEMA 3R.
7. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY.
8. ALL ELECTRICAL MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
9. WIRING METHOD SHALL BE EMT ABOVE GROUND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE- 40 PVC FOR BELOW GROUND INSTALLATION UNLESS NOTED OTHERWISE.
10. AN OSHA APPROVED LADDER PROVIDING ACCESS TO ALL PORTIONS OF THE ARRAY SHALL BE SECURED IN PRIOR TO REQUESTING INSPECTION.
11. SMOKE ALARMS AND CARBON MONOXIDE DETECTORS WILL MEET THE NECESSARY REQUIREMENTS PER CRC R314, R315
12. UTILITY COMPANY WILL BE NOTIFIED PRIOR TO ACTIVATION OF THE SOLAR PV SYSTEM.
13. ALL EXTERIOR CONDUIT PAINTED TO MATCH EXTERIOR SURFACE. (IF APPLICABLE)
14. NO PLUMBING, MECHANICAL OR BLDG VENTS TO BE COVERED OR OFFSET AROUND ARRAYS
15. EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATION'S INTAKE AIR OPENINGS SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM.
16. ALL EQUIPMENT SHALL BE LISTED AND LABELED BY A RECOGNIZED ELECTRICAL TESTING LABORATORY AND INSTALLED PER THE LISTING REQUIREMENTS AND THE MANUFACTURER'S INSTRUCTIONS. [NEC 690.4(D)]
17. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED, INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.
18. PAINT PV CONDUIT TO MATCH THE DWELLING EXTERIOR.
19. CONTACT THE SERVICING UTILITY BEFORE POWERING ON THE PHOTOVOLTAIC SYSTEM.



AERIAL VIEW



GOVERNING CODES

ALL MODULES AND RAIL ARE LISTED BY UNDERWRITER'S LABORATORIES FOR ELECTRICAL AND FIRE SAFETY (CLASS A FIRE RATING)

- NOTE:
- 1) NO DISCHARGE OF ANY POLLUTANTS TO ANY STORM DRAIN SYSTEM.
 - 2) UL 1703 FOR MODULES & UL 1741 FOR INVERTERS PER CITY SOLAR REQUIREMENTS.

THIS PROJECT SHALL COMPLY WITH THE :
 2016 CA BUILDING CODE 1507.17, 1509.7, 3111
 2016 CA PLUMBING CODE
 2016 CA RESIDENTIAL CODE R331, R908
 2016 CA ENERGY CODE
 2016 CA MECHANICAL CODE
 2016 CA FIRE CODE 605.11
 2016 CA ELECTRICAL CODE - 2014 NEC -110, 240, 250, 690, 705
 ORDINANCES OF THE CITY OF **MARYSVILLE**

SCOPE OF WORK

SYSTEM SIZE:
 7.036 KW-AC
 7.920 KW-DC

ROOF MOUNT PV SOLAR
ROOF TYPE: STANDING SEAM
 2 X 6 @ 24" O.C. RAFTERS
ROOF PITCH: 30°
AZIMUTH: 150°
 SINGLE STORY HOUSE
GROUND MOUNT ARRAY
ARRAY PITCH: 20°
ARRAY AZIMUTH: 180°

MODULES :
 (24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
 (12) AP SYSTEMS YC600

MAIN PANEL/BUS-BAR:(E)200A
MAIN BREAKER : (E)200A
PV RAIL:
 SNAPNRACK SERIES 100 /
 IRON RIDGE
PV MOUNT:
 S-5!-E CLAMP STANDING SEAM

INDEX SHEET

1. COVER PAGE
2. PLOT PLAN/ROOF PLAN
- 3.1 RAFTER SIDE VIEW
- 3.2 GROUND MOUNT DETAIL
4. ELECTRICAL DIAGRAM
5. WARNING LABELS
6. SPECS
7. SPECS
8. SPECS
9. SPECS
10. SPECS
11. SPECS
12. SPECS
13. SPECS

CONTRACTOR

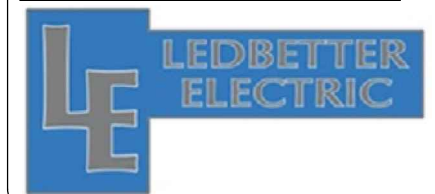
LEDBETTER ELECTRIC INC
 9610 BUTTE VIEW
 MARYSVILLE, CA 95901
 PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
 TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
 7.920 KW-DC

MODULES :
 (24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
 (12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
 COVER PAGE

CONTRACTOR

LEDBETTER ELECTRIC INC
 9610 BUTTE VIEW
 MARYSVILLE, CA 95901
 PHONE: (530) 701 - 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

[Redacted]
 Marysville, CA 95901
 OCCUPANCY R3 /
 TYPE 5 STRU.
 APN#: [Redacted]

SYSTEM SIZE

7.036 KW-AC
 7.920 KW-DC
 MODULES :
 (24) CANADIAN SOLAR CS6U 330M
 INVERTER(S) :
 (12) AP SYSTEM YC600

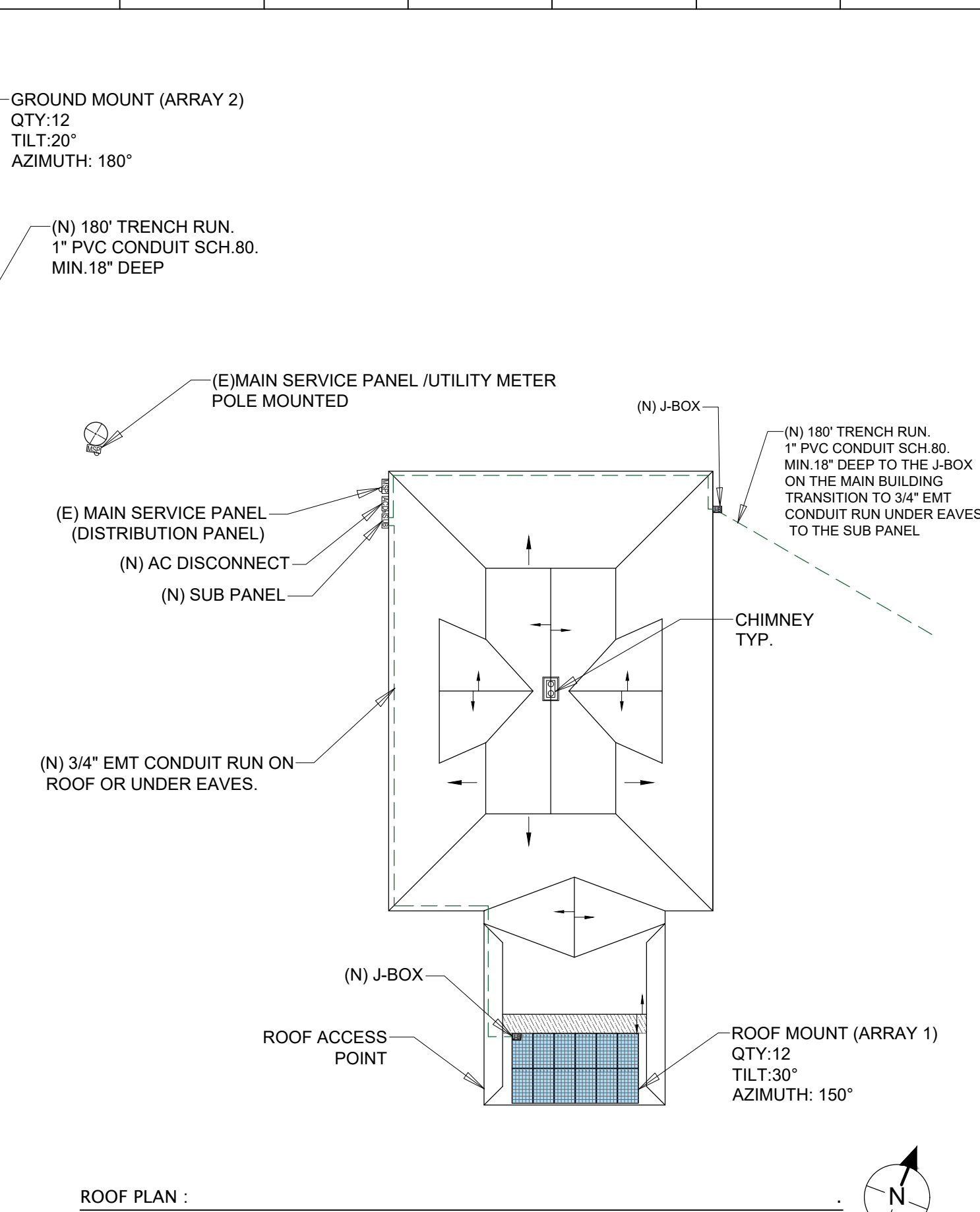
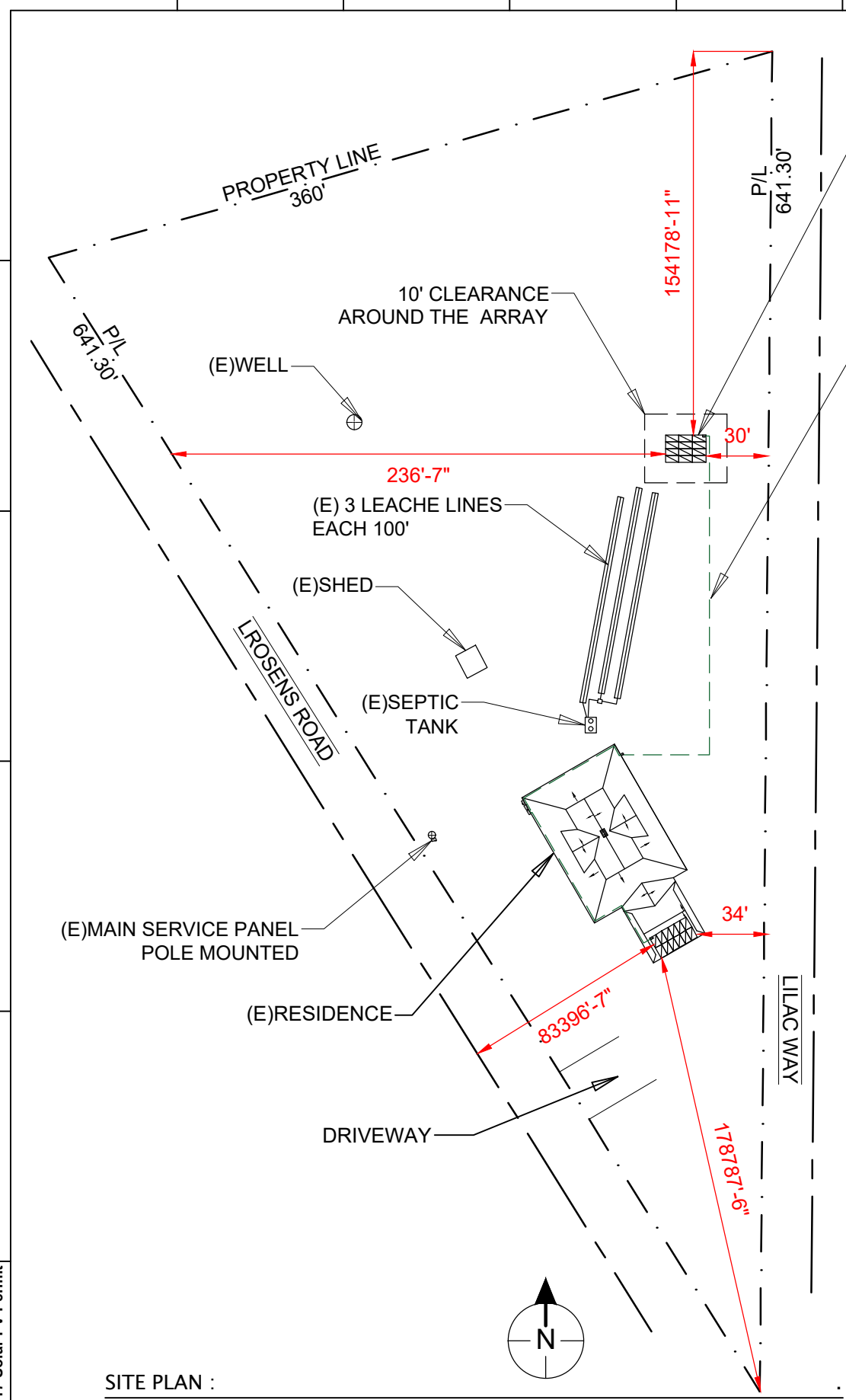
DATE: 10/23/18

REVISION :

PAGE INFORMATION

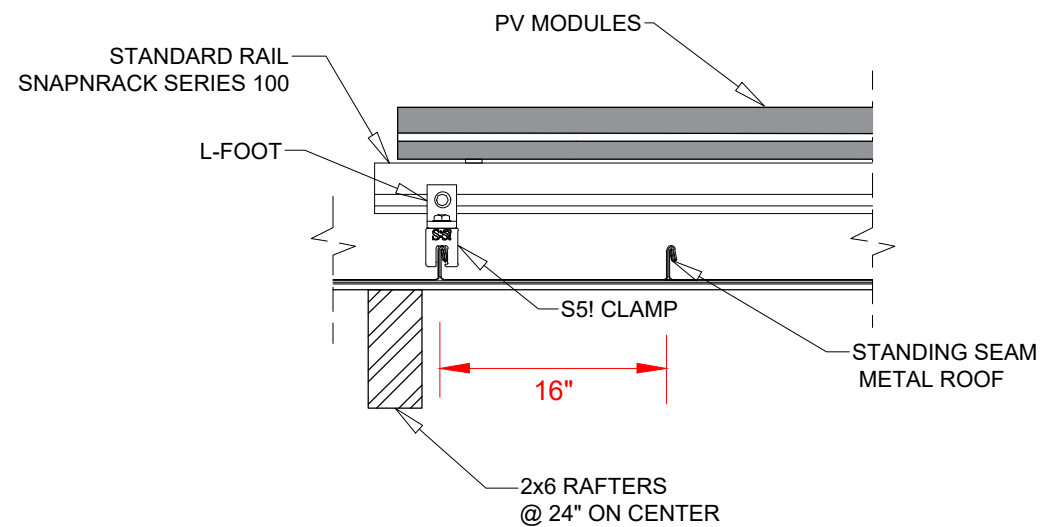
TITLE:
 PLOT PLAN / ROOF PLAN

PV-02

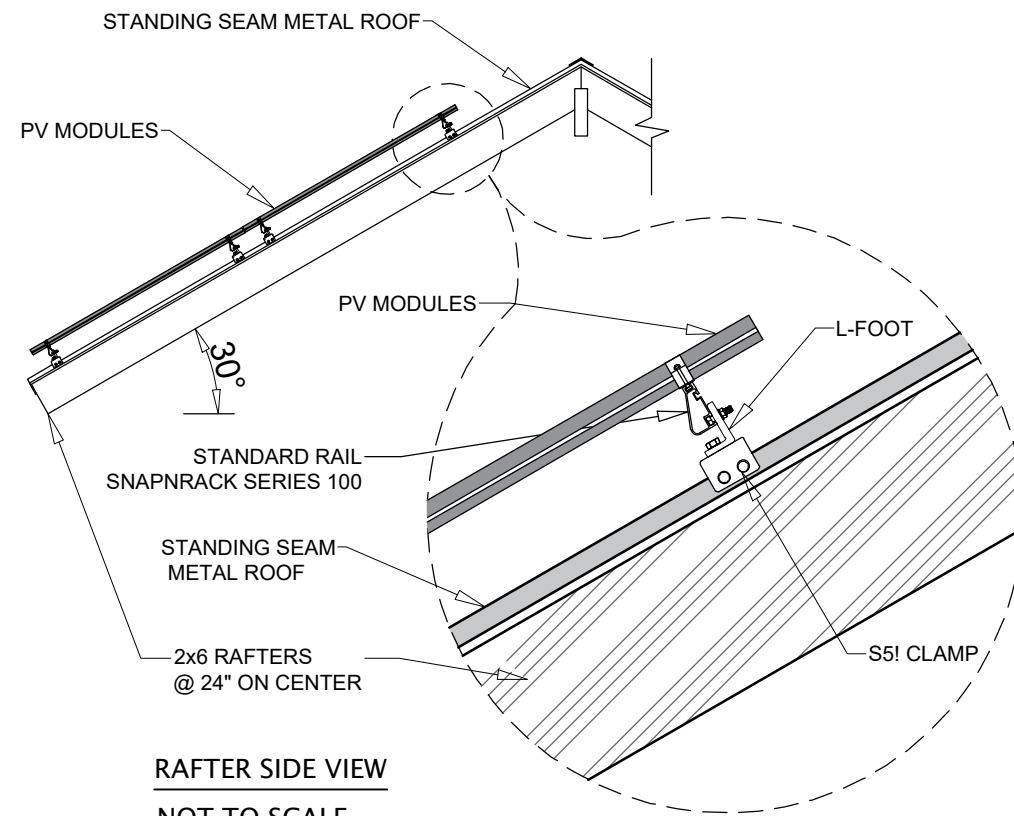


© Copyright 2017-Solar PV Permit

DISCLAIMER: If any Errors, Discrepancies or Omissions appear in these drawings, specifications or other contract documents; The Owner or General Contractor shall notify the Designer, in writing, of such error or omission. In the event that the Owner or General Contractor fails to give such notice, before construction and/or fabrication of the work, the Owner or General Contractor will be held responsible to the result of any errors, discrepancies or omissions and the cost of rectifying them.

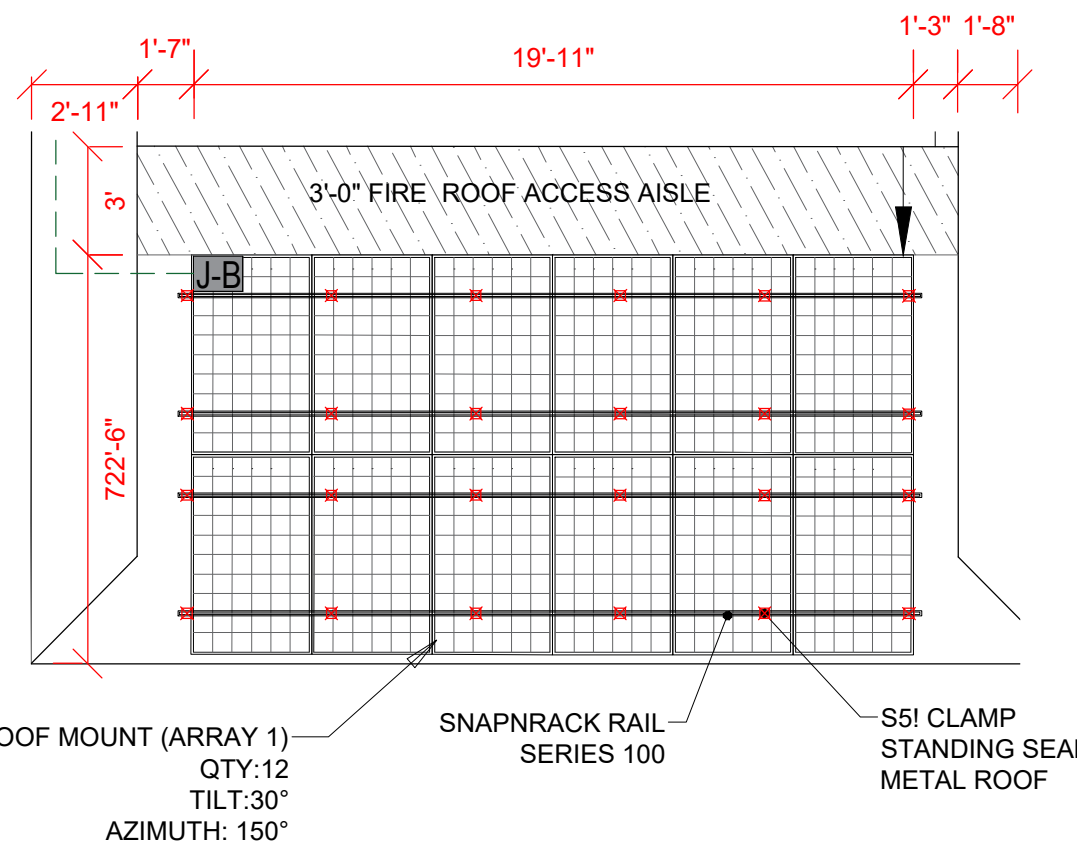


FRONT VIEW
NOT TO SCALE



RAFTER SIDE VIEW
NOT TO SCALE

SYSTEM WEIGHT / MODULE INFO			
DESCRIPTION	QTY	WEIGHT / UNIT (lbs)	TOTAL WEIGHT (lbs)
MODULE	12	49.4	592.8
OPTIMIZER/ MICRO-INV.	6	5.7	68.4
RAIL	84ft	0.7	58.8
STANDOFF	24	0.50	12.00
TOTAL SYSTEM WEIGHT			732.0
TOTAL MODULES AREA= 240ft²			
LOADING WEIGHT PER ft² = 3.1lbs			
LOADING WEIGHT PER STANDOFF = 36.3lbs			



ROOF LAYOUT :

SCALE: 1/8" = 1'-0"

CONTRACTOR

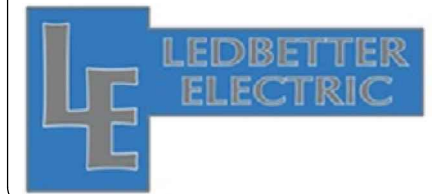
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

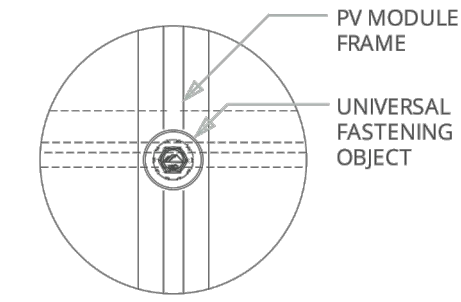
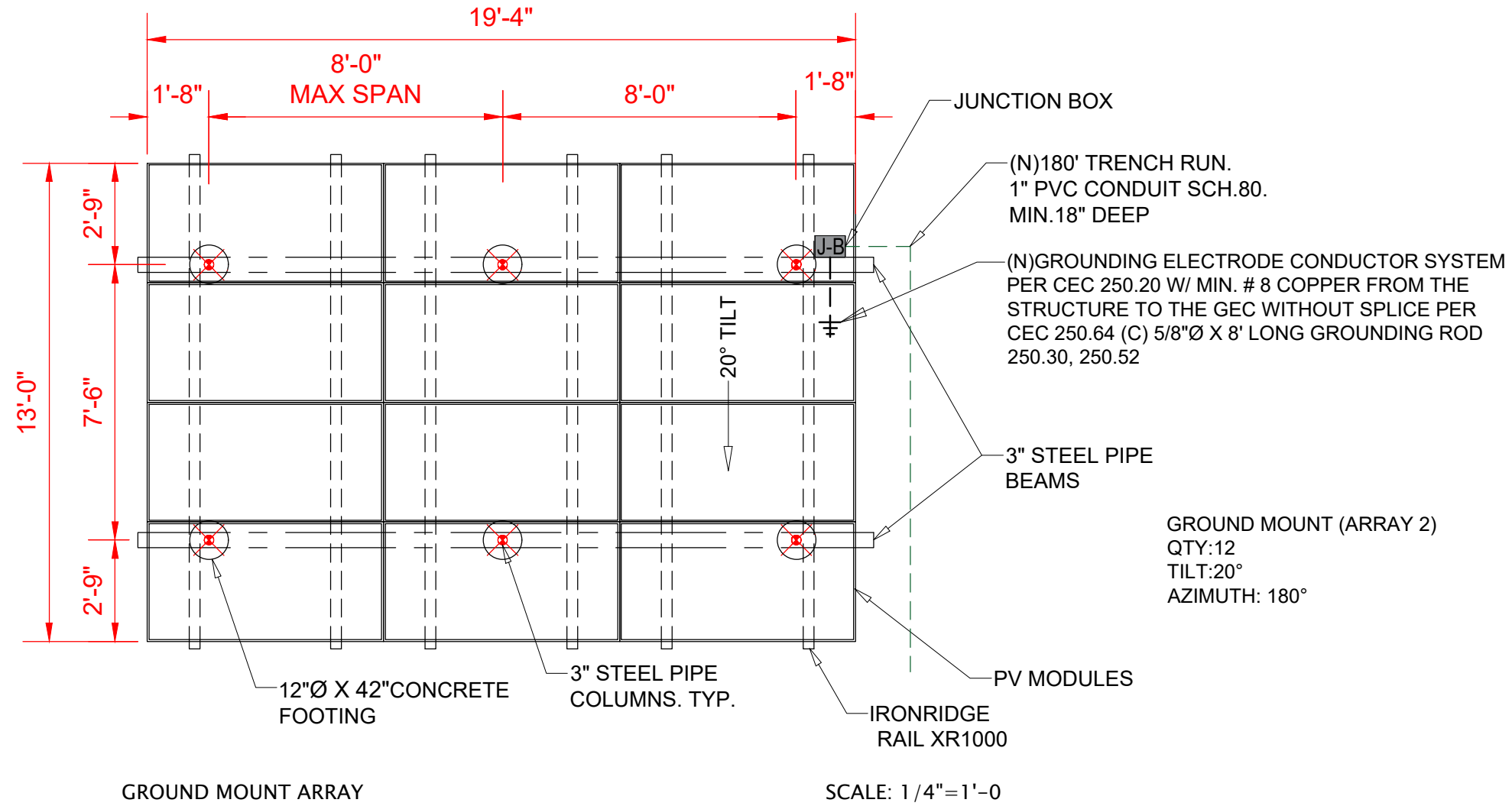
REVISION :

PAGE INFORMATION

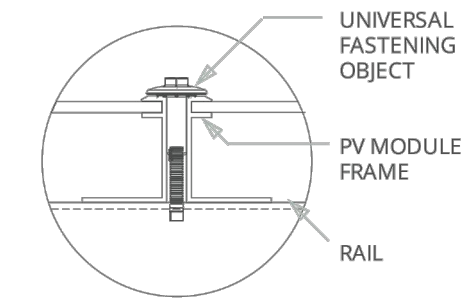
TITLE:
ROOF LAYOUT
RAFTER SIDE VIEW

PV-03.1

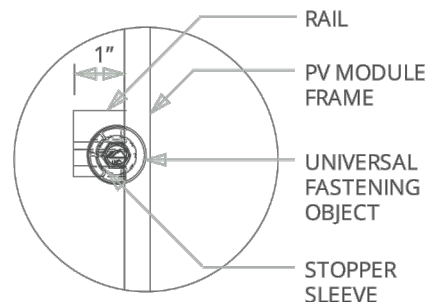
WIND SPEED: 110 MPH
 EXPOSURE CATEGORY: C
 RISK CATEGORY: 1
 SOIL PRESSURE: 1500 PSI
 SNOW LOAD: 0 PSF
 STEEL PIPE: SCH. 40 ASTM A53 GRADE B
 CONCRETE: 2,500 P.S.I.
 REBAR: ASTM A615 GRADE 40



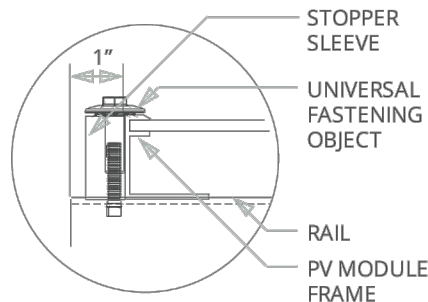
Mid Clamp, Plan



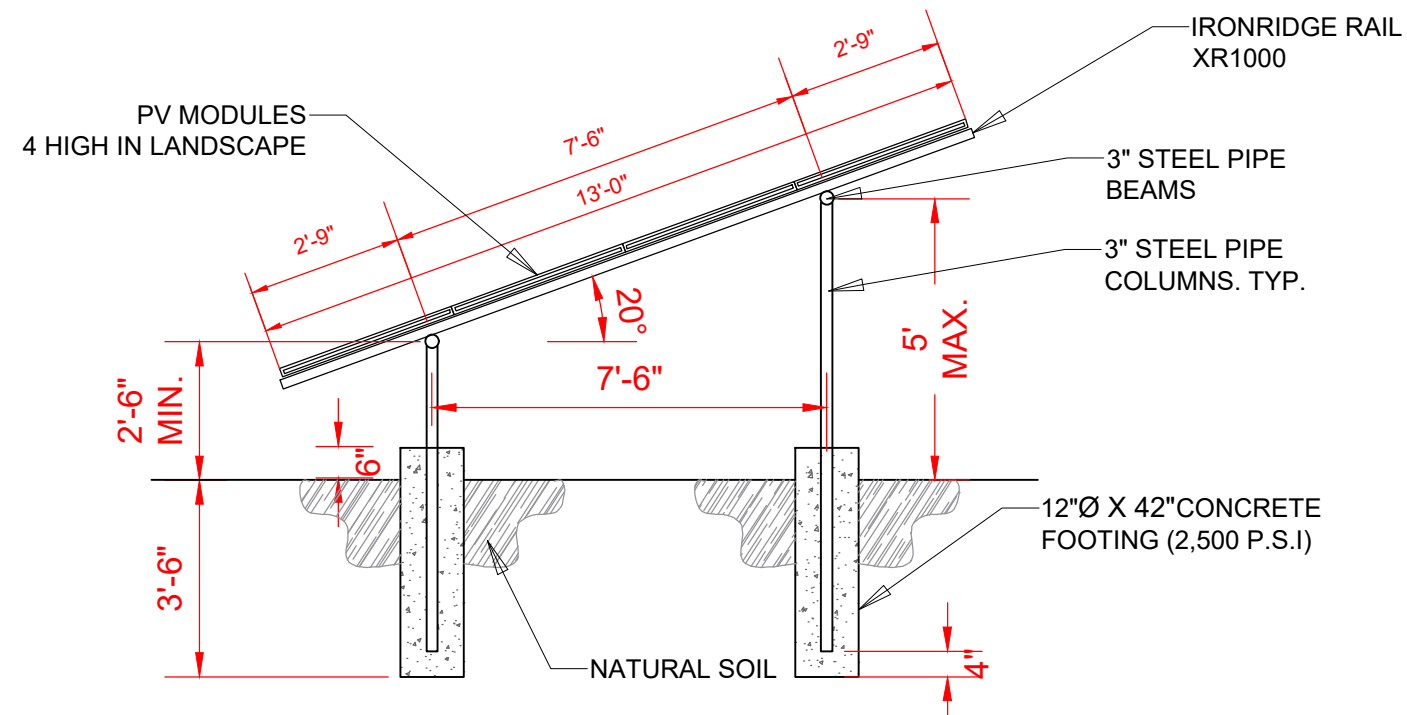
Mid Clamp, Front



End Clamp, Plan



End Clamp, Front



CONTRACTOR

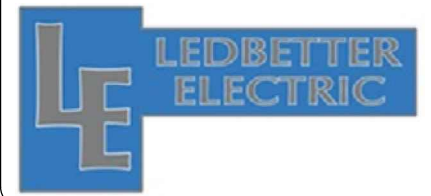
LEDBETTER ELECTRIC INC
 9610 BUTTE VIEW
 MARYSVILLE, CA 95901
 PHONE: (530) 701 - 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
 TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
 7.920 KW-DC

MODULES :
 (24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
 (12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
 GROUND MOUNT DETAIL

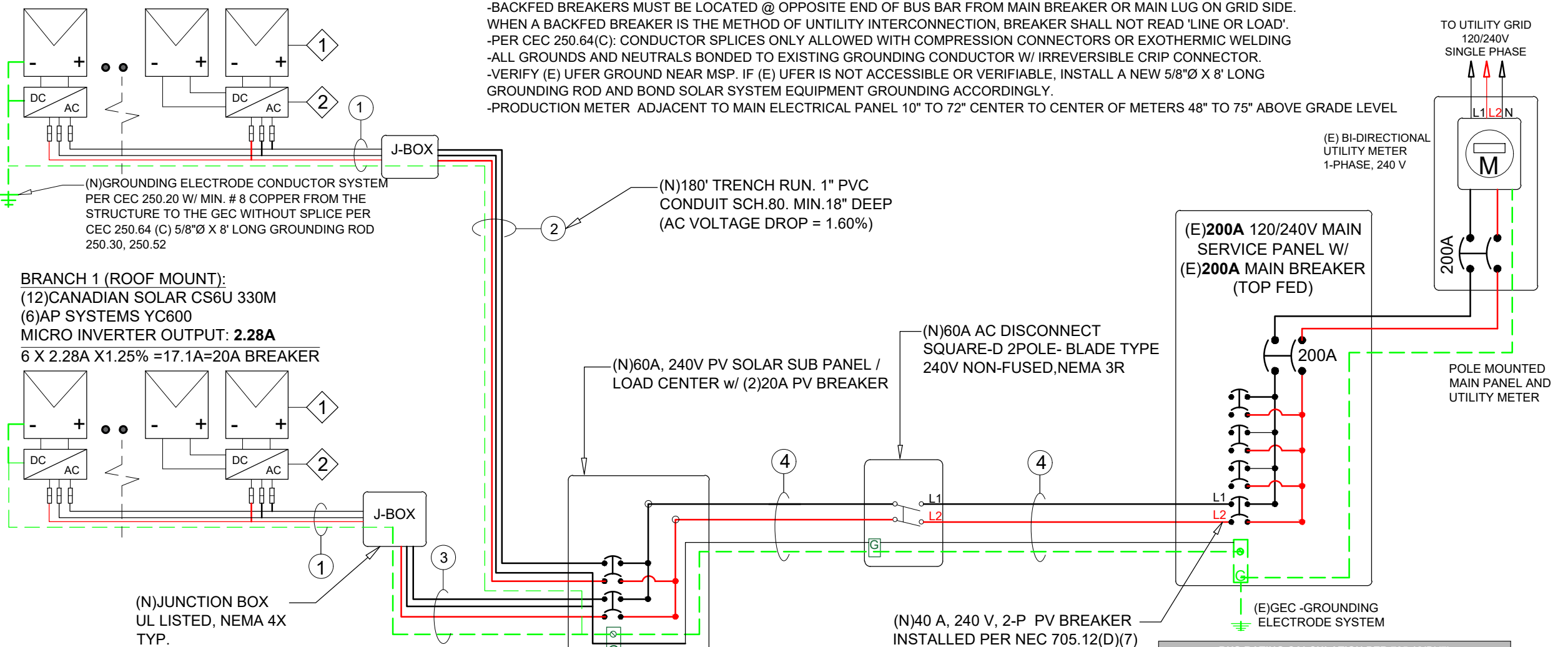
PV-03.2

WIRE TAG#	MAX AMPS X NEC MULT= DESIGN AMPS	BREAKER SIZE AMPS	WIRE TYPE	EGC / GRND.SIZE	WIRE RATING IN 90° X TEMP DERATE X CONDUCTOR DERATE = DERATE WIRE	TERMINAL 60°C RATING	CONDUIT SIZE CONDUIT FILL
①	13.68 x 1.25 =17.1A	20A	(3) #10 PV WIRE	(1)#6 THWN-2 BARE COPPER EGC	40 x 0.65 x 1.0 =26.0 >=17.1	30> =17.1	OPEN AIR
②	13.68 x 1.25 =17.1A	20A	(3) #8 THWN-2	(1)#8 THWN-2 EGC	55 x 0.65 x 1.0 =35.8 >=17.1	40> =17.1	1" PVC FILL: 0.1632 , 31%
③	13.68 x 1.25 =17.1A	20A	(3) #10 THWN-2	(1)#8 THWN-2 EGC	40 x 0.91 x 1.0 =36.4 >=17.1	30> =17.1	3/4" EMT FILL: 0.1887 , 35%
④	27.36 x 1.25 =34.2A	40A	(3) #8 THWN-2	(1)#8 THWN-2 EGC	55 x 0.91 x 1.0 =50.1 >=34.2	40> =34.2	3/4" EMT FILL: 0.1887 , 35%

BRANCH 2 (GROUND MOUNT):
 (12)CANADIAN SOLAR CS6U 330M
 (6) AP SYSTEMS YC600
 MICRO INVERTER OUTPUT: **2.28A**
 6 X 2.28A X1.25% =17.1A=20A BREAKER

NOTES:

- SOLID BARE E.G.C. (FREE-AIR) MOUNTED UNDER ARRAY
- PER NEC 250.120(C): WHERE CONDUCTORS & GROUND WIRE ARE RUN EXPOSED ON ROOF FROM ARRAY TO J-BOX, CONDUCTORS & BARE GROUND WIRE SHALL BE CONCEALED INSTALL IN CONDUIT
- PER NEC ARTICLE 690.35 INVERTER GROUND FAULT PROTECTION PROVIDED
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR W/ IRREVERSIBLE CRIP CONNECTOR.
- BACKFED BREAKERS MUST BE LOCATED @ OPPOSITE END OF BUS BAR FROM MAIN BREAKER OR MAIN LUG ON GRID SIDE.
- WHEN A BACKFED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION, BREAKER SHALL NOT READ 'LINE OR LOAD'.
- PER CEC 250.64(C): CONDUCTOR SPLICES ONLY ALLOWED WITH COMPRESSION CONNECTORS OR EXOTHERMIC WELDING
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR W/ IRREVERSIBLE CRIP CONNECTOR.
- VERIFY (E) UFER GROUND NEAR MSP. IF (E) UFER IS NOT ACCESSIBLE OR VERIFIABLE, INSTALL A NEW 5/8"Ø X 8' LONG GROUNDING ROD AND BOND SOLAR SYSTEM EQUIPMENT GROUNDING ACCORDINGLY.
- PRODUCTION METER ADJACENT TO MAIN ELECTRICAL PANEL 10" TO 72" CENTER TO CENTER OF METERS 48" TO 75" ABOVE GRADE LEVEL



EQUIPMENT LIST		QTY
①	CANADIAN SOLAR CS6U 330M Voc:45.90V Vmp:37.50V Isc:9.31A Imp:8.80A	24
②	AP SYSTEMS YC600 96.5% CEC EFFICIENCY MAX. OUTPUT CURRENT : 2.28A MAX. INPUT CURRENT: 15Adc	12

BUS RATING CALCULATION PER 705.12(D)(7)

MAIN SERVICE PANEL BUS BAR =200A
 MAIN BREAKER =200A
 MAIN BUS X 120 % = 240A - MAIN BREAKER =
 40A AVAILABLE FOR SOLAR
 SOLAR BREAKER = 40A OK

CONTRACTOR

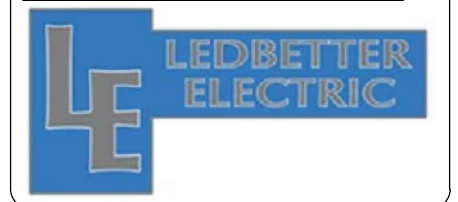
LEDBETTER ELECTRIC INC
 9610 BUTTE VIEW
 MARYSVILLE, CA 95901
 PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
 TYPE 5 STRU.
 APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
 7.920 KW-DC

MODULES :
 (24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
 (12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
 ELECTRICAL DIAGRAM

PV-04

CONTRACTOR

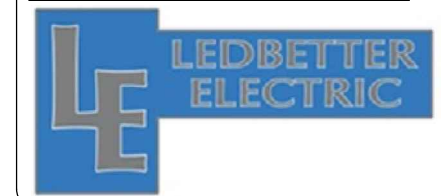
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

[Redacted]
Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [Redacted]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

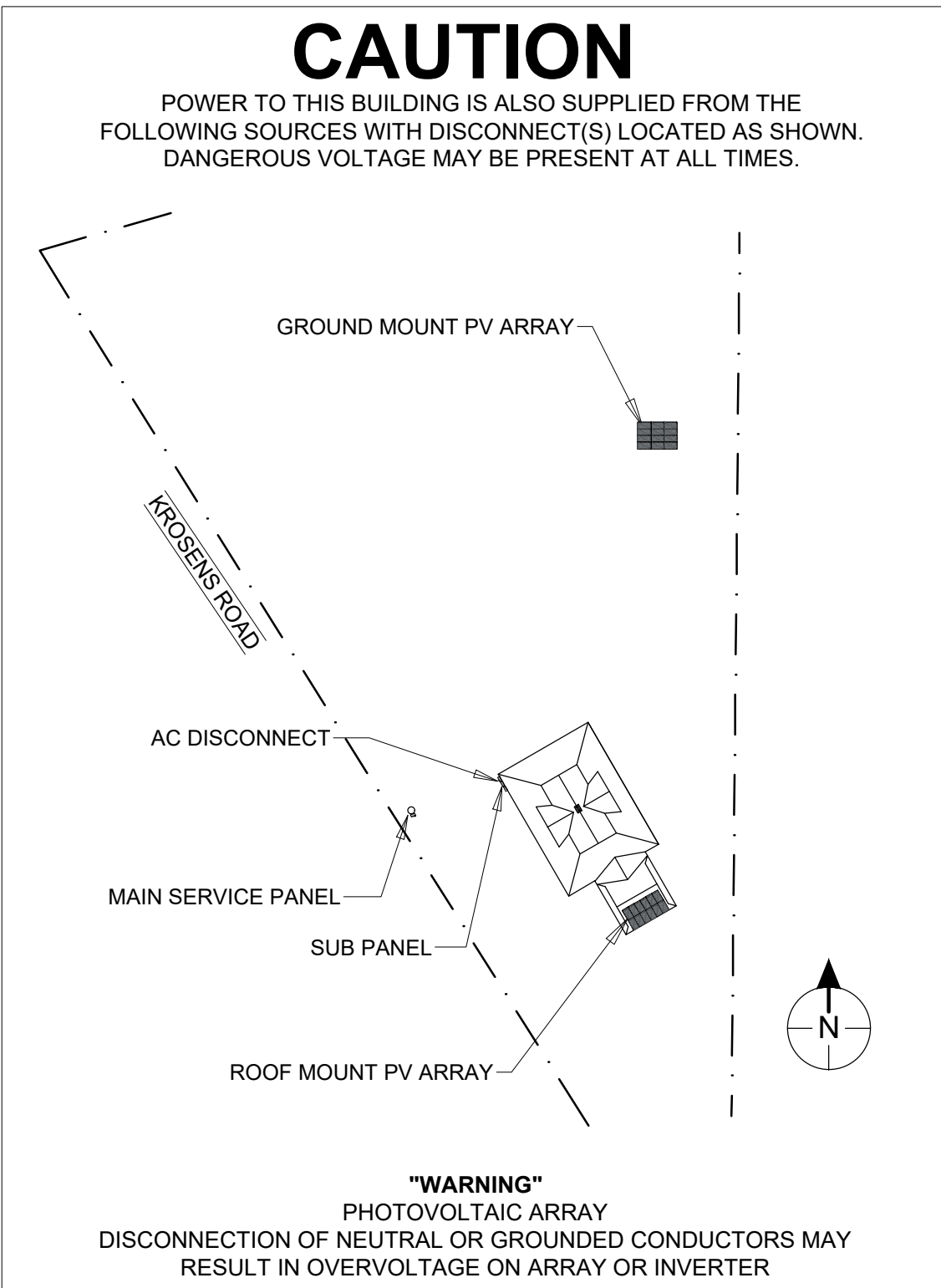
TITLE:
WARNING LABELS

PV-05

MIN.6"X8" PLACARD SHALL BE IN RED COLOR WITH PRINTED IN WHITE
TO GO ON MAIN SERVICE PANEL CEC 705.10

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE
FOLLOWING SOURCES WITH DISCONNECT(S) LOCATED AS SHOWN.
DANGEROUS VOLTAGE MAY BE PRESENT AT ALL TIMES.



"WARNING"
PHOTOVOLTAIC ARRAY
DISCONNECTION OF NEUTRAL OR GROUNDED CONDUCTORS MAY
RESULT IN OVERVOLTAGE ON ARRAY OR INVERTER

**PLAQUE SHALL BE ATTACHED TO THE SERVICE EQUIPMENT WITH
POP-RIVETS OR SCREWS.**

PV SYSTEM AC DISCONNECT
RATED AC OUTPUT CURREN **27.36** AMPS
AC NORMAL OPERATING VOLTAGE **240** VOLTS
PLACE ON MAIN PANEL / AC DISCONNECT
690.54, 690.14, 690.15

"WARNING"
DUAL POWER SOURCES
SECOND SOURCE IS PHOTO-VOLTAIC SYSTEM
RATED AC OUTPUT CURRENT **27.36** AMPS
AC NORMAL OPERATING VOLTAGE **240** VOLTS
PLACE ON MAIN PANEL 690.54

**PHOTOVOLATAIC SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**
PLACE ON AC DISCONNECT 690.56C

WARNING
INVERTER OUTPUT
CONNECTIONS(S),
DO NOT RELOCATE THIS
OVERCURRENT DEVICE
PLACE ON MAIN PANEL & SUB PANEL

CAUTION
SOLAR ELECTRIC SYSTEM CONNECTED
PLACE ON AC DISCONNECT

CAUTION: AC SOLAR VOLTAGE

WARNING
PHOTOVOLTAIC POWER SOURCE

WARNING
PHOTOVOLTAIC POWER SOURCE
PLACED ON ALL AC CONDUITS RACEWAY & ENCLOSURES
EVERY 10 FEET
CEC 605.11.1.4, CEC 690.31(E)(3) & (4), CRC R331.2.4

PLACED ON INTERIOR AND EXTERIOR AC CONDUIT,
RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, JUNCTION
BOXES, AND DISCONNECTS. MARKING SHALL BE PLACED ON
INTERIOR AND EXTERIOR AC CONDUIT, RACEWAYS,
ENCLOSURES AND CABLE ASSEMBLIES EVERY 10 FEET
(3048MM), WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN
1 FOOT ABOVE AND BELOW PENETRATIONS OF
ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS.
CFC 604.11.1& CRC R331.2

WARNING
POWER TO THIS BUILDING IS
ALSO SUPPLIED BY THE
PHOTOVOLTAIC SOLAR SYSTEM
DO NOT TOUCH TERMINALS
PLACE ON MAIN PANEL

© Copyright 2017-Solar PV Permit

DISCLAIMER: If any Errors, Discrepancies or Omissions appear in these drawings, specifications or other contract documents; The Owner or General Contractor shall notify the Designer, in writing, of such error or omission. In the event that the Owner or General Contractor fails to give such notice, before construction and/or fabrication of the work, the Owner or General Contractor will be held responsible to the result of any errors, discrepancies or omissions and the cost of rectifying them.



New Cell Technology
with 5 Busbar



MAXPOWER CS6U-330 | 335 | 340M

Canadian Solar's new MAXPOWER mono modules use the latest innovative 5 busbar cell technology, increasing module power output and system reliability.

KEY FEATURES



Cell efficiency of up to 20.0 %



Outstanding low irradiance performance: 97%



IP67 junction box for long-term weather endurance



Heavy snow load up to 5400 Pa, wind load up to 2400 Pa

25
years

linear power output warranty

10
years

product warranty on materials
and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO/TS 16949:2009 / The automotive industry quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / Take-e-way



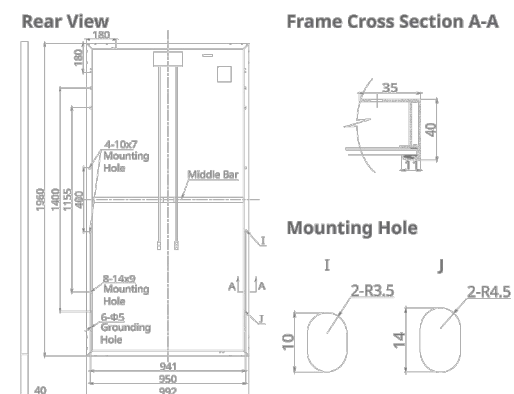
* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 15 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

CANADIAN SOLAR (USA) INC.

2430 Camino Ramon, Suite 240 San Ramon, CA, USA 94583-4385, www.canadiansolar.com, sales.us@canadiansolar.com

ENGINEERING DRAWING (mm)



ELECTRICAL DATA / STC*

CS6U	330 M	335 M	340 M
Nominal Max. Power (Pmax)	330 W	335 W	340 W
Opt. Operating Voltage (Vmp)	37.5 V	37.8 V	37.9 V
Opt. Operating Current (Imp)	8.80 A	8.87 A	8.97 A
Open Circuit Voltage (Voc)	45.9 V	46.1 V	46.2 V
Short Circuit Current (Isc)	9.31 A	9.41 A	9.48 A
Module Efficiency	16.97%	17.23%	17.49%
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1000 V (IEC) or 1000 V (UL)		
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)		
Max. Series Fuse Rating	15 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA / NOCT*

CS6U	330 M	335 M	340 M
Nominal Max. Power (Pmax)	238 W	242 W	245 W
Opt. Operating Voltage (Vmp)	34.2 V	34.5 V	34.6 V
Opt. Operating Current (Imp)	6.96 A	7.01 A	7.10 A
Open Circuit Voltage (Voc)	42.1 V	42.3 V	42.4 V
Short Circuit Current (Isc)	7.54 A	7.62 A	7.67 A

* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

PERFORMANCE AT LOW IRRADIANCE

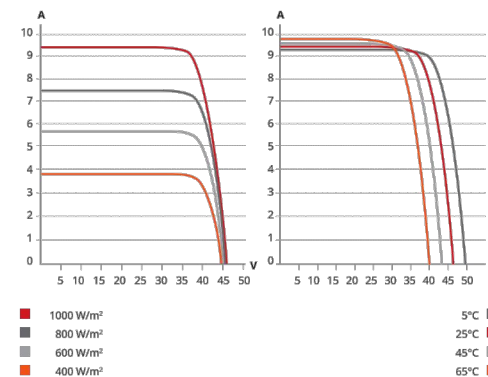
Outstanding performance at low irradiance, average relative efficiency of 97 % from an irradiance of 1000 W/m² to 200 W/m² (AM 1.5, 25°C).

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the modules.

CANADIAN SOLAR (USA) INC. July 2016. All rights reserved, PV Module Product Datasheet V5.51P1_NA

CS6U-335M / I-V CURVES



MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline, 6 inch
Cell Arrangement	72 (6×12)
Dimensions	1960×992×40 mm (77.2×39.1×1.57 in)
Weight	22.4 kg (49.4 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	4 mm ² (IEC) or 4 mm ² & 12 AWG 1000V (UL), 1160 mm (45.7 in)
Connectors	T4 (IEC / UL)
Per Pallet	26 pieces
Per container (40' HQ)	572 pieces

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.053 % / °C
Nominal Operating Cell Temperature	45±2 °C

PARTNER SECTION



CONTRACTOR

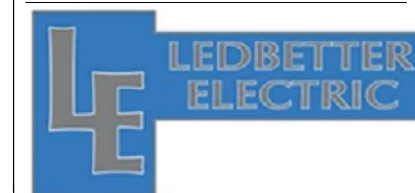
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

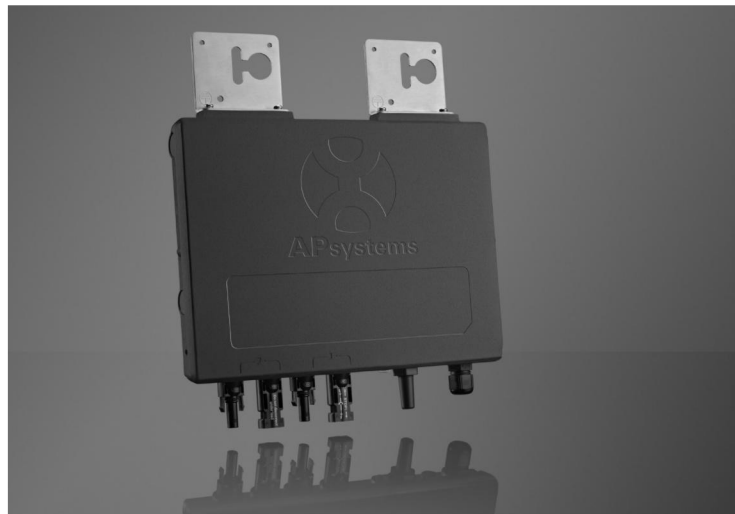
PAGE INFORMATION

TITLE:
SPECS

PV-06



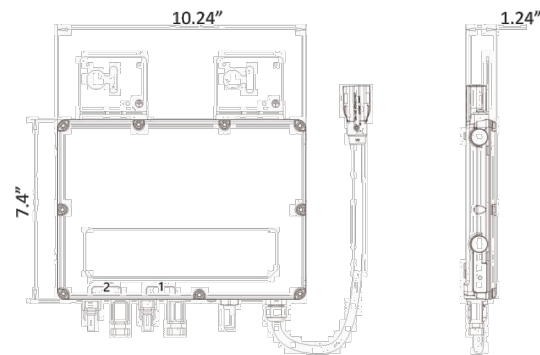
Leading the Industry in
Solar Microinverter Technology



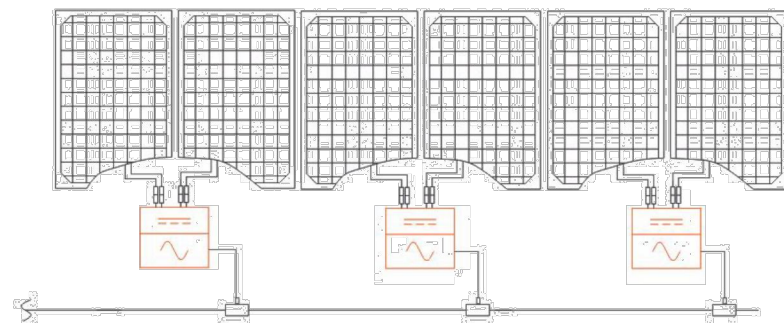
YC600 Microinverter

- Dual-module microinverter with independent MPPT
- Utility-interactive with Reactive Power Control (RPC)
- CA Rule 21 compliant
- Continuous power of 274VA per channel, 300VA peak
- Accommodates modules from 250-365W+
- Wide MPPT voltage range (22V-48V)
- Meets NEC 2014/2017 690.12 Rapid Shutdown requirements
- ZigBee communication & free monitoring

DIMENSIONS



WIRING SCHEMATIC



With its groundbreaking design and features, the YC600 is the pinnacle of microinverter technology. A single-phase, smart grid-compliant microinverter, the YC600 serves two modules with dual, independent MPPT. Zigbee wireless communication over a mesh network offers faster data speeds than PLC and a wider MPPT voltage range results in a greater energy harvest for homeowners.

A true utility-interactive microinverter with Reactive Power Control (RPC) technology, the YC600 meets CA Rule 21 requirements and is inherently NEC 2014/2017 Rapid Shutdown compliant. The unit also builds on the successful APsystems line of multi-module microinverters, simplifying installation and reducing logistics costs.

APsystems YC600 Microinverter Datasheet

INPUT DATA (DC)

Module Compatibility	60 & 72 Cell PV Modules
MPPT Voltage Range	22V-48V
Operation Voltage Range	16V-55V
Maximum Input Voltage	60V
Maximum Input Current	12A x 2
Maximum Total PV Array Short Circuit Current	15A

OUTPUT DATA (AC)

	240V	208V
Maximum Continuous Output Power	548VA	548VA
Peak Output Power	600VA	600VA
Nominal Output Voltage	240V	208V
Nominal Output Current	2.28A	2.63A
Nominal Output Frequency	60Hz	60Hz
Adjustable Output Voltage Range	211-264V	183-229V
Adjustable Output Frequency Range	59.3 - 60.5Hz	59.3 - 60.5Hz
Power Factor (Adjustable)	0.8 leading...0.8 lagging	0.8 leading...0.8 lagging
Total Harmonic Distortion	<3%	<3%
Maximum Units per Branch	7 (14 PV modules)	6 (12 PV modules)

EFFICIENCY

Peak Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	60mW

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Dimensions (WxHxD) inches	10.24" x 7.4" x 1.24"
Dimensions (WxHxD) mm	260mm x 188mm x 31.5mm
Weight	5.7 lbs (2.6kg)
AC BUS Maximum Current	20A
Connector Type	MC4 Type
Enclosure Rating	NEMA 6 (IP67)
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Wireless Zigbee
Transformer Design	High Frequency Transformers, Galvanic Isolation
Monitoring	Via EMA**Online Portal
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4, ICES-003
Safety & Grid Connection Compliance	UL1741, UL1741 SA, IEEE1547, CSA C22.2 No.1071-01, NEC 2017 690.12, 690.11, CA Rule 21

* Depending on the local regulations.
**APsystems online Energy Management Analysis (EMA) platform

Specifications subject to change without notice - please ensure you are using the most recent version found at APsystems.com

600 Ericksen Ave NE, Suite 200, Seattle, WA 98110 | 844.666.7035 | APsystems.com



CONTRACTOR

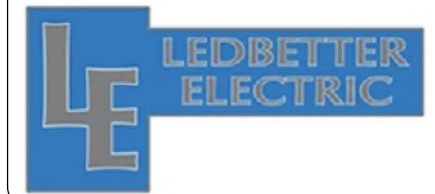
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 - 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-07

S-5![®]

The Right Way!

S-5-E Clamp

The S-5-E clamp is designed specially for double-folded standing seam roof profiles having the appropriate dimensioning.

Although a bit smaller and less expensive than the S-5-U, for these profiles, the S-5-E is just as strong.

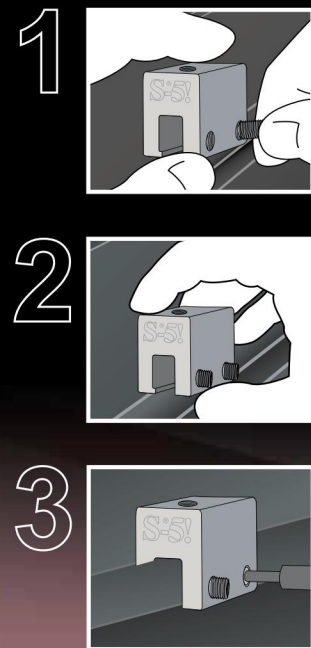
The S-5-E is perfect for use with S-5![®] ColorGard[®] snow retention systems and other heavy-duty applications.

Installation is as simple as placing the clamp on the seam and tightening the patented round-point setscrews to the specified tension. Then, affix ancillary items using the bolt provided. Go to www.S-5.com/tools for information and tools available for properly attaching and tensioning S-5! clamps.

S-5-E Mini Clamp

The S-5-E Mini is a bit shorter than the S-5-E and has one setscrew rather than two. The mini is the choice for attaching all kinds of rooftop accessories: signs, walkways, satellite dishes, antennas, rooftop lighting, lightning protection systems, solar arrays, exhaust stack bracing, conduit, condensate lines, mechanical equipment—just about anything!*

*S-5! mini clamps are not compatible with, and should not be used with S-5! SnoRail™/SnoFence™ or ColorGard[®] snow retention systems.



S-5-E and S-5-E Mini

The S-5-E clamp is secured with our patented round-point setscrews without piercing the metal roof panel, thereby preserving the roof manufacturer's warranty!

888-825-3432 | www.S-5.com |

S-5![®]

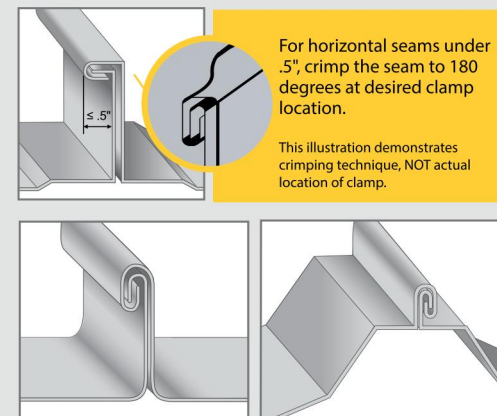
The Right Way!

The strength of the S-5-E clamp is in its simple design. The patented setscrews will slightly dimple the metal seam material but will not puncture it—leaving roof warranties intact.

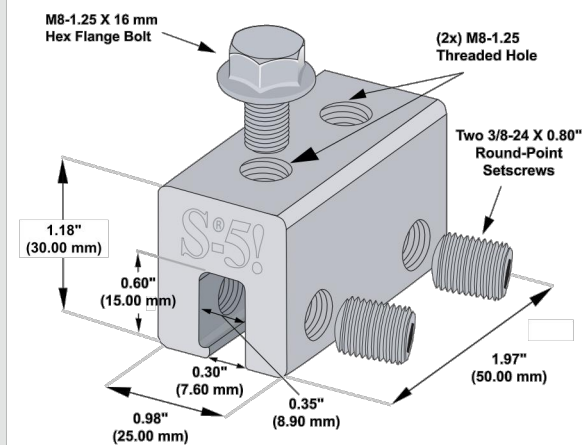
The S-5-E and S-5-E Mini clamps are each furnished with the hardware shown to the right. Each box also includes a bit tip for tightening setscrews using an electric screw gun. A structural aluminum attachment clamp, the S-5-E is compatible with most common metal roofing materials excluding copper. All included hardware is stainless steel. Please visit www.S-5.com for more information including CAD details, metallurgical compatibilities and specifications.

The S-5-E and S-5-E Mini clamps have been tested for load-to-failure results on a variety of double-folded standing seam roofs, from leading manufacturers of panels and panel-forming machines. The independent lab test reports found on our website at www.S-5.com prove that S-5![®] holding strength is unmatched in the industry.

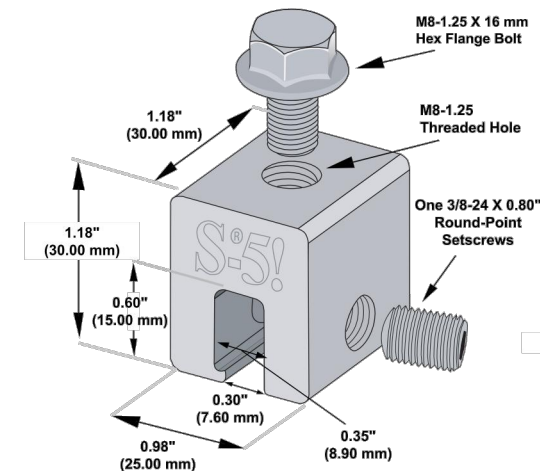
Example Profiles



S-5-E Clamp



S-5-E Mini Clamp



Please note: All measurements are rounded to the second decimal place.

S-5![®] Warning! Please use this product responsibly!

Products are protected by multiple U.S. and foreign patents. Visit the website at www.S-5.com for complete information on patents and trademarks. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. Clamp setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel, and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Consult the S-5! website at www.S-5.com for published data regarding holding strength.

Copyright 2015, Metal Roof Innovations, Ltd. S-5! products are patent protected. S-5! aggressively protects its patents, trademarks, and copyrights. Version 052115.

Distributed by

CONTRACTOR

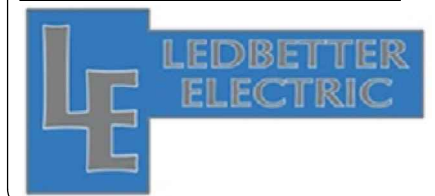
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-08

SERIES 100 UL ROOF MOUNT SYSTEM

SnapNrack Solar Mounting Solutions

The SnapNrack line of solar mounting solutions is designed to reduce total installation costs. The system's technical innovations have been proven to drive down costs and improve installation quality on more than 350 MW of solar installations.

Pitched Roof Arrays Simplified

The SnapNrack Series 100 UL Roof Mount System is an efficient, visually appealing, photovoltaic (PV) module installation system. Series 100 UL is Listed to the UL Standard 2703 for Bonding, meaning that all system components have been Certified by UL for electrical continuity, eliminating the need for additional grounding hardware. The System's components provide an adequate bonding path which has eliminated the need for grounding lugs and washers at each module, and bonding jumpers between splices. The UL 2703 Listing ensures that SnapNrack partners can provide the best in class installations in quality, safety, and efficiency.

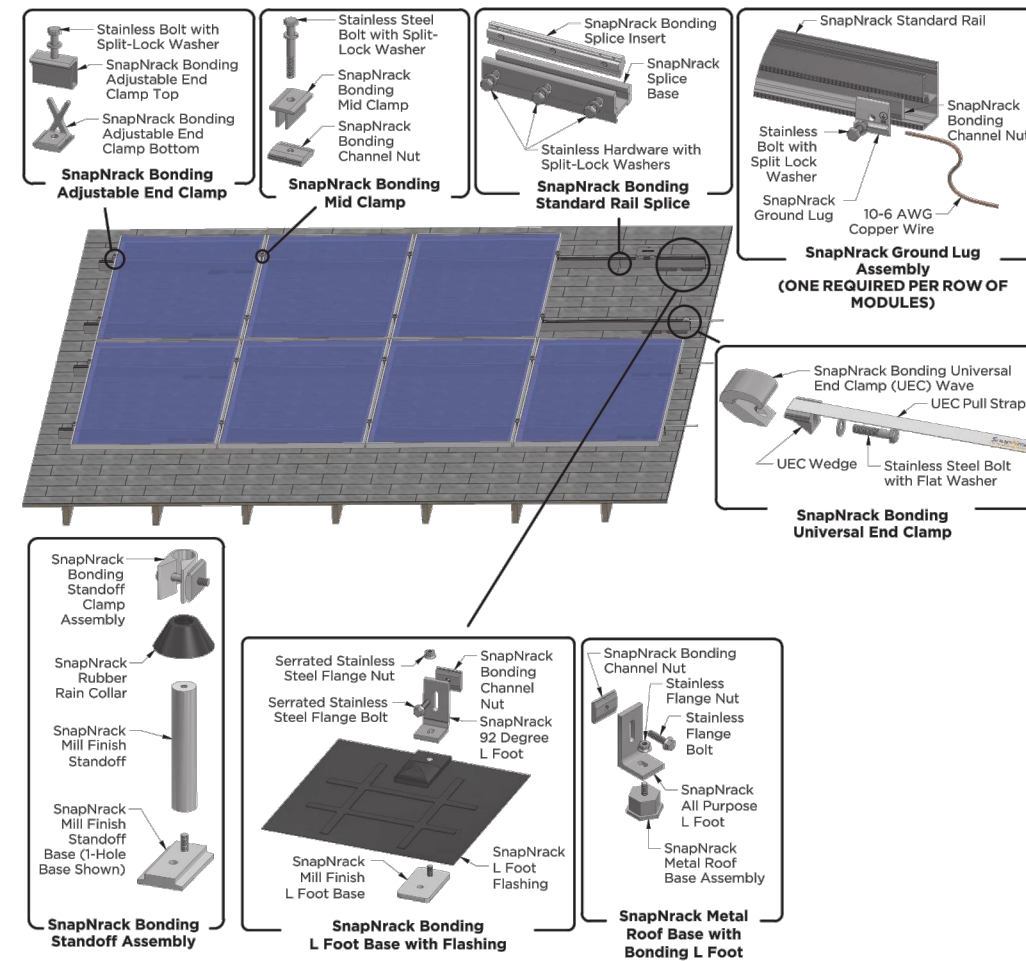
- All bonding hardware is fully integrated into the components
- No grounding lugs required for modules
- Rail splices bond rails together, no rail jumpers required
- Proprietary SnapNrack grounding lug snaps in the rail channel, no drilling of rail or reaching for other tools required (One Lug per individual row of modules)
- Class A Fire Rating Type 1 and 2 modules

Patent Pending



Roof System in 4 Simple Steps:

- 1) Go to the online Series 100 Configuration Tool (configure.snapnrack.com) and select "Yes" for UL 2703 Listed
- 2) Identify Site Conditions (Array Tilt, Building Height, Roof Type, Wind and Snow Loads)
- 3) Build array in the online Configuration Tool and automatically generate a Bill of Materials.
- 4) Place order with your distributor. Purchase material for a single project or order in bulk for additional savings



SnapNrack Series 100 UL Technical Data <small>Patent Pending</small>	
Materials	<ul style="list-style-type: none"> • 6000 Series aluminum • Stainless steel • Galvanized Steel and Aluminum Flashing
Material Finish	<ul style="list-style-type: none"> • Clear and black anodized aluminum • Mill Finish on select components
Installation	<ul style="list-style-type: none"> • Quick and efficient mounting • Adjustable hardware to ensure clean and level finish • All components bonded to ground with integrated bonding features
Calcs. & Certifications	<ul style="list-style-type: none"> • Listed to UL Standard 2703 for Grounding/Bonding and Fire Classification • Class A Fire Rating Type 1 and Type 2 Modules • Stamped Structural Engineering Reports for all 50 States
Grounding	<ul style="list-style-type: none"> • SnapNrack Grounding Lug (One Lug per individual row of modules)
Warranty	<ul style="list-style-type: none"> • 10 Year material and workmanship (download full details at snapnrack.com)

SnapNrack
Solar Mounting Solutions

(877) 732-2860 www.SnapNrack.com

Printed on recycled paper using soy based inks.
© 2015 by SnapNrack PV Mounting System. All rights reserved.

CONTRACTOR

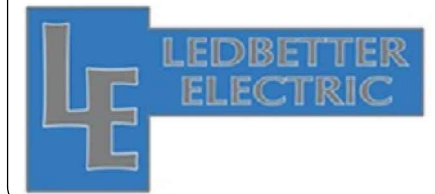
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-09



Ground Mount System

Datasheet



Mount on all terrains, in no time.

The IronRidge Ground Mount System combines our XR1000 rails with locally-sourced steel pipes, or mechanical tubing, to create a cost-effective structure capable of handling any site or terrain challenge. Installation is simple with only a few structural components and no drilling, welding, or heavy machinery required. In addition, the system works with a variety of foundation options, including concrete piers and driven piles.

Rugged Construction
Engineered steel and aluminum components ensure durability.

PE Certified
Pre-stamped engineering letters available in most states.

Simple Assembly
Just a few simple components and no heavy equipment.

Design Software
Online tool generates engineering values and bill of materials.

Flexible Architecture
Multiple foundation and array configuration options.

20 Year Warranty
Twice the protection offered by competitors.

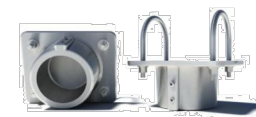
Datasheet



360° Product Tour
Visit ironridge.com

Substructure

Top Caps



Connect vertical and cross pipes.

Rail Connectors



Attach Rail Assembly to horizontal pipes.

Diagonal Braces



Optional Brace provides additional support.

Cross Pipe & Piers



Steel pipes or mechanical tubing for substructure.

Rail Assembly

XR1000 Rails



Curved rails increase spanning capabilities.

Top-Down Clamps



Secure modules to rails and substructure.

Under Clamps



Alternative clamps for pre-attaching modules to rails.

Accessories



Wire Clips and End Caps provide a finished look.

Resources



Design Assistant
Go from rough layout to fully engineered system. For free. Go to ironridge.com/gm



NABCEP Certified Training
Earn free continuing education credits, while learning more about our systems. Go to ironridge.com/training

© 2014 IronRidge, Inc. All rights reserved. Visit www.ironridge.com or call 1-800-227-9523 for more information. Version 1.12

CONTRACTOR

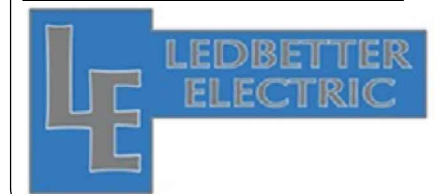
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-10



UFO Family of Components

Tech Brief

Simplified Grounding for Every Application

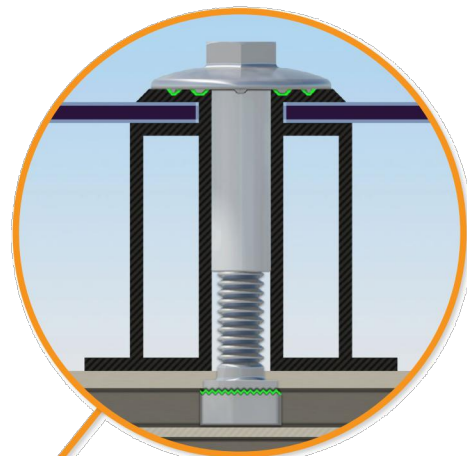
The UFO family of components eliminates the need for separate grounding hardware by bonding solar modules directly to IronRidge XR Rails. All system types that feature the UFO family—Flush Mount, Tilt Mount and Ground Mount—are fully listed to the UL 2703 standard.

UFO hardware forms secure electrical bonds with both the module and the rail, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.



Stopper Sleeve

The Stopper Sleeve snaps onto the UFO, converting it into a bonded end clamp.



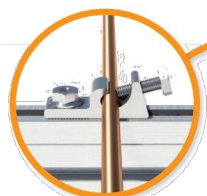
Universal Fastening Object (UFO)

The UFO securely bonds solar modules to XR Rails. It comes assembled and lubricated, and can fit a wide range of module heights.



Bonded Splice

Each Bonded Splice uses self-drilling screws to form a secure connection. No bonding strap needed.



Grounding Lug

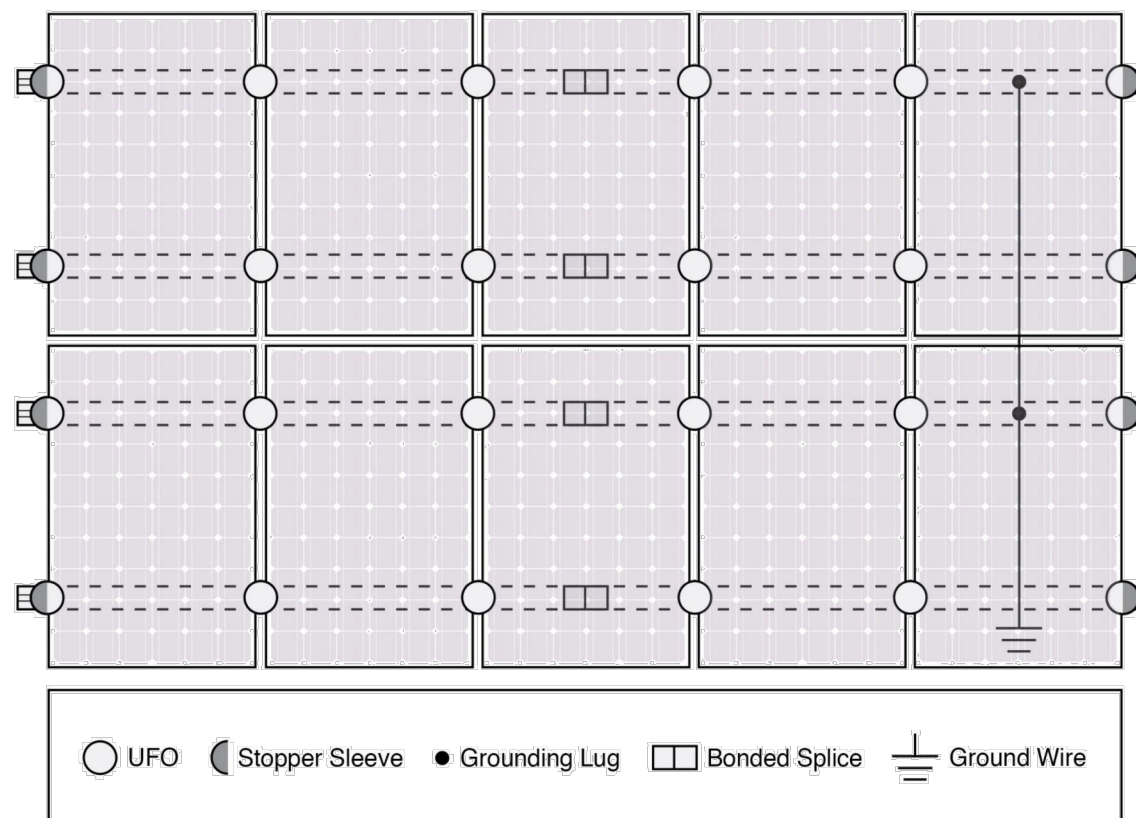
A single Grounding Lug connects an entire row of PV modules to the grounding conductor.



Bonded Attachments

The bonding bolt attaches and bonds the L-foot to the rail. It is installed with the same socket as the rest of the system.

System Diagram



Approved Enphase microinverters can provide equipment grounding of IronRidge systems, eliminating the need for grounding lugs and field installed equipment ground conductors (EGC). A minimum of two microinverters mounted to the same rail and connected to the same Engage cable is required. Refer to installation manuals for additional details.

UL Certification

The IronRidge Flush Mount, Tilt Mount, and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

[Go to IronRidge.com/UFO](http://www.ironridge.com/UFO)

Cross-System Compatibility

Feature	Flush Mount	Tilt Mount	Ground Mount
XR Rails	✓	✓	XR1000 Only
UFO/Stopper	✓	✓	✓
Bonded Splice	✓	✓	N/A
Grounding Lugs	1 per Row	1 per Row	1 per Array
Microinverters & Power Optimizers	Enphase - M250-72, M250-60, M215-60, C250-72 Darfon - MIG240, MIG300, G320, G640 SolarEdge - P300, P320, P400, P405, P600, P700, P730		
Fire Rating	Class A	Class A	N/A
Modules	Tested or Evaluated with over 400 Framed Modules Refer to installation manuals for a detailed list.		

CONTRACTOR

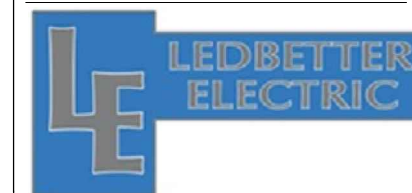
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 - 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-11

© 2016 IronRidge, Inc. All rights reserved. Visit www.ironridge.com or call 1-800-227-9523 for more information. Version 1.10

DISCLAIMER: If any Errors, Discrepancies or Omissions appear in these drawings, specifications or other contract documents; The Owner or General Contractor shall notify the Designer, in writing, of such error or omission. In the event that the Owner or General Contractor fails to give such notice, before construction and/or fabrication of the work, the Owner or General Contractor will be held responsible to the result of any errors, discrepancies or omissions and the cost of rectifying them.

SnapNrack UL 2703 Fire Classification

February 2015

As of January 1st, 2015 many jurisdictions are now enforcing codes based upon updates to the International Building Code (IBC) and UL Standards 1703 (modules) and 2703 (mounting systems). The language included in the 2012 IBC requires that the combination of roof mounted solar modules and racking components is to be considered a system (IBC Section 1509.7.2). Additionally, it requires that this system shall meet or exceed the fire classification of the roof assembly.

The objective is to ensure that the PV system does not adversely affect the fire rating of the roof. Roof surface fire ratings are classified either A, B, or C; Class A being the most resistant to the spread of flame.



Since the physical characteristics of the PV module (material, thickness of glass, etc) also potentially affect how a fire will act, modules are now tested and assigned a "type" based upon these characteristics and spread of flame test results. There are 15 total module types, Types 1, 2 and 3 represent differences in the module composition and Types 4 - 15 are the same module compositions as Types 1 - 3 with differing fire test performance.

SnapNrack Series 100 has been Certified for a Class A fire rating with Type 1 and Type 2 modules, in accordance with the standards set forth in UL1703/2703 and IBC 2012. In order to maintain this classification, the SnapNrack mounting system must be installed per the UL-approved [Installation Manual](#). Because the test was conducted with the modules at 5 inches from the roof surface (worst case scenario), there is no restriction to the standoff height.

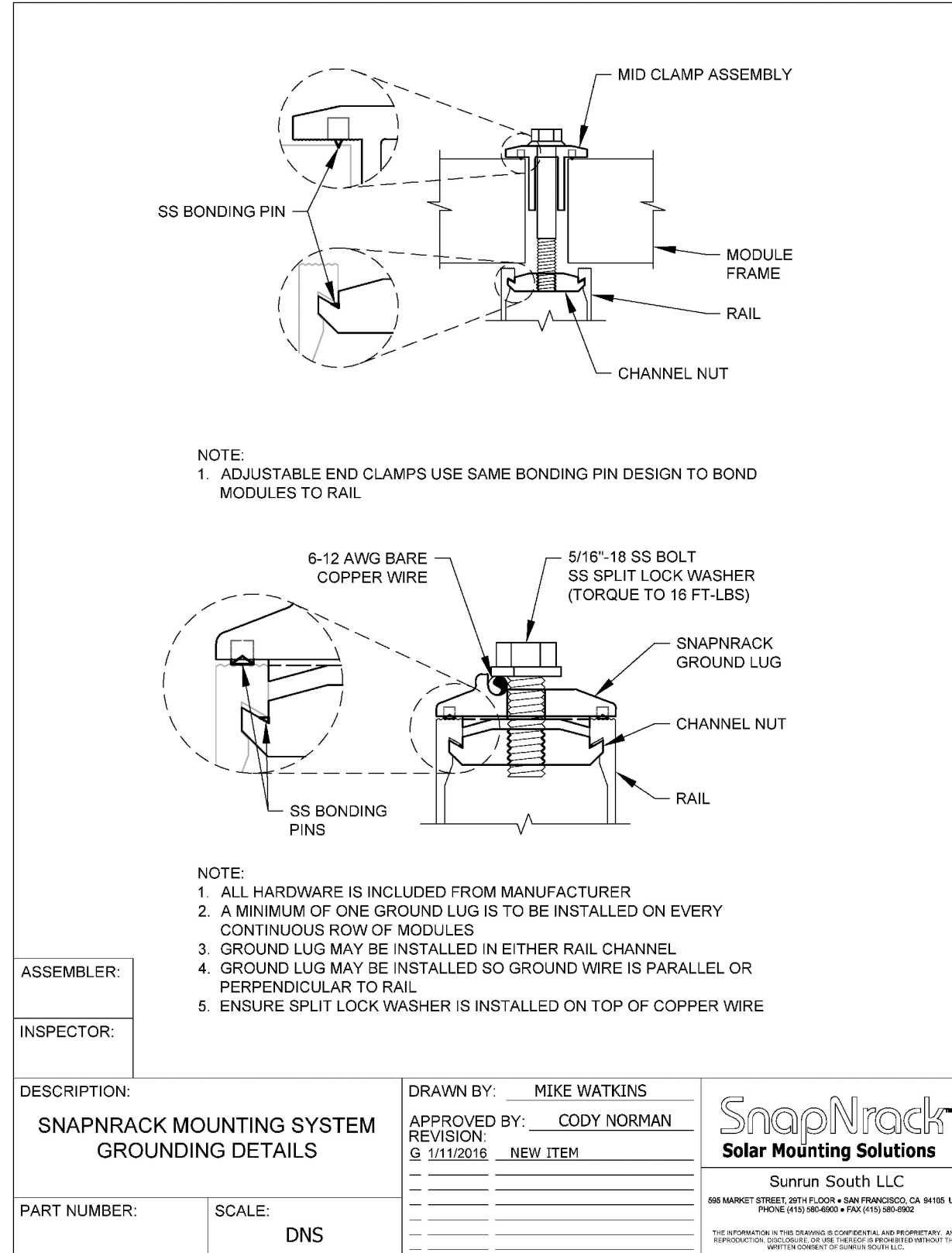
Attachment 1 is the SnapNrack QIMS File which is accessed through the UL Online Certification Directory, or available here: [SnapNrack QIMS File](#).

The full SnapNrack Series 100 UL Test Report is available by sending requests to appeng@snapnrack.com.

Resources snapnrack.com/resources
877-732-2860

Design snapnrack.com/configurator
www.snapnrack.com

Where to Buy snapnrack.com/where-to-buy
contact@snapnrack.com



CONTRACTOR

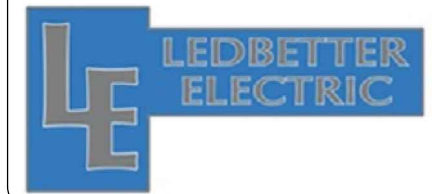
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 - 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#: [REDACTED]

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-11



8431 Murphy Drive
Middleton, WI 53562 USA
Telephone: 608.836.4400
Facsimile: 608.831.9279
www.intertek.com

Test Verification of Conformity

In the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address:	IronRidge, Inc. 1495 Zephyr Ave. Hayward, CA 94544 USA
Product Description:	Tilt Mount System with XR Rails.
Ratings & Principle Characteristics:	<u>Fire Class Resistance Rating:</u> -Tilt Mount (Asymmetrical). Class A Fire Rated for Low Slope applications when using Type 1, 2 and 3, listed photovoltaic modules. Class A Fire Rated for Steep Slope applications with Type 1 and 2, listed photovoltaic modules. "Angle of tilt allowed by the system is any greater than or equal to 1° and specified in the installation instructions. This system was evaluated with a 5" gap between the bottom of the module and the roof's surface. Per Section 31.2.2.1 of UL 1703 this product can be installed with any gap stated in the manufacturers installation instructions. No perimeter guard is required. Installed with components per IronRidge installation manual and as reviewed by Intertek Engineering Evaluation 102241487MID-001.1. This rating is applicable with any IronRidge or 3rd party roof anchors.
Models:	IronRidge Tilt Mount with XR Rails
Brand Name:	IronRidge Tilt Mount
Relevant Standards:	UL 2703 (Section 15.2 and 15.3) Standard for Safety Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels, First Edition dated Jan. 28, 2015 Referencing UL1703 Third Edition dated May 2015, (Section 31.2) Standard for Safety for Flat-Plate Photovoltaic Modules and Panels.
Verification Issuing Office:	Intertek Testing Services NA, Inc. 8431 Murphy Drive Middleton, WI 53562
Date of Tests:	Tests: 08/27/2014 to 03/17/2015; Evaluations: 08/19/2015
Test Report Number(s):	101769343MID-001r1, 101769343MID-001a, 101915978MID-001, 101999492MID-001ar1-cr1 & 102241487MID-001.1 (Evaluation for South Tilt Leg Assembly)
This verification is part of the full test report(s) and should be read in conjunction with them. This report does not automatically imply product certification.	
Completed by:	Chris Zimbrich
Title:	Technician II, Fire Resistance
Signature:	
Date:	05/25/2016
Reviewed by:	Chad Naggs
Title:	Technician I, Fire Resistance
Signature:	
Date:	05/25/2016

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

GFT-OP-11a (24-MAR-2014)

CONTRACTOR

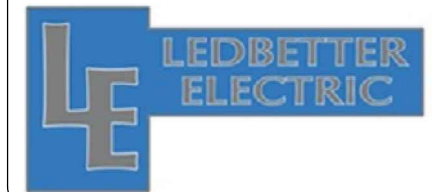
LEDBETTER ELECTRIC INC
9610 BUTTE VIEW
MARYSVILLE, CA 95901
PHONE: (530) 701 – 5748

STATE LICENSE#: 994171

LICENSE TYPE : C 10

EXPIRATION DATE : 09/30/2022

STAMP/ SIGNATURE :



OWNER / ADDRESS

Marysville, CA 95901

OCCUPANCY R3 /
TYPE 5 STRU.

APN#:

SYSTEM SIZE

7.036 KW-AC
7.920 KW-DC

MODULES :
(24) CANADIAN SOLAR CS6U 330M

INVERTER(S) :
(12) AP SYSTEM YC600

DATE: 10/23/18

REVISION :

PAGE INFORMATION

TITLE:
SPECS

PV-11