PRE-APPLICATION CONFERENCE

Thursday, September 7, 2023

Willamette Room*
City Hall
22500 Salamo Rd
West Linn

10:00 am:	**Proposed Class 1 Historic Design Review for Solar Panels**
Applicant:	**Sara Pavey**
Property Address:	**1611 6th Avenue**
Neighborhood Assn:	**Willamette Neighborhood Association**
Planner:	**Ben Gardner**

Project #: **PA-23-15**

*The pre-application conference will be conducted in person at City Hall. If you require special assistance under the Americans with Disabilities Act, please call City Hall 48 hours before the meeting date, 503-657-0331.

City of West Linn Planning & Development • 22500 Salamo Rd #1000 • West Linn, Oregon 97068
Telephone 503.742.6060 • westlinnoregon.gov

Pre-Application Conference Request

For Staff to Complete:

PA 23-15 **Conference Date:** 9/7/23 **Time:** 10:00am

Staff Contact: Ben Gardner **Fee:** $0

Pre-application conferences are held on the first and third Thursdays of the month between 9:00 am and 1:00 pm. Appointments must be made by 5:00 pm, 15 days before the meeting date. The applicant has a choice of an in-person or virtual meeting. To schedule a conference, submit this form, a site plan, and accompanying materials through the Submit a Land Use Application web page. The City will contact you to collect payment. Pre-application notes are valid for 18 months.

Property Owner Information

Name: **Kathy Selvaggio**
Email: **kathy.selvag@gmail.com**
Phone #: **301.653.0750**
Address: **1611 6th Ave, West Linn, OR 97068**

Applicant Information

RECEIVED
Lynn Schroder , 8/21/2023 ,3:56:40 PM

Name: **Sara Pavey**
Email: **saraprostat@gmail.com**
Phone #: **805.440.6678**
Address: **1721 NE 64th Ave, Ste 120, Vancouver, WA 98661**

Address of Subject Property (or tax lot): ↑same↑ **Detached garage facing alley**

REQUIRED ATTACHMENTS:

- ☐ A project narrative with a detailed description of the proposed project. Briefly describe the physical context of the site.
- ☐ A list of questions or issues the applicant would like the City to address.
- ☐ A dimensional site plan that shows:
  - ☐ North arrow and scale
  - ☐ Location of existing trees (a tree survey is highly recommended)
  - ☐ Streets Abutting the property and width of right of way
  - ☐ Location of creeks and/or wetlands (a wetland delineation is highly recommended)
  - ☐ Property Dimensions, existing buildings, and building setbacks
  - ☐ Slope map (if slope is 25% or more)
  - ☐ Location of existing utilities (water, sewer, etc.)
  - ☐ Conceptual layout, design, proposed buildings, building elevations, and setbacks
  - ☐ Location of all easements (access, utility, etc.)
  - ☐ Vehicle and bicycle parking layout (including calculation of required number of spaces, based on use and square footage of building), if applicable
  - ☐ Location of existing and proposed access and driveways. Include the proposed circulation system for vehicles, pedestrians, and bicycles, if applicable.
  - ☐ Proposed stormwater detention system with topographic contours

I certify that I am the owner or authorized agent of the owner:

APPLICANT: I Sara Pavey **DATE:** 8/18/2023

The undersigned property owner authorizes the requested conference and grants city staff the **right of entry** onto the property to review the application.

PROPERTY OWNER: Kathleen Selvaggio **DATE:** Aug 18, 2023

Written Statement regarding the Roof-Mounted Solar Installation at 1611 6th Ave, West Linn, OR 97068

ProStat Solar has been contracted to design and install a roof-mounted solar system on the detached garage at the home of Kathy Selvaggio, located at 1611 6th Ave, West Linn, OR 97068. The home is located in the Willamette Falls Historic District.

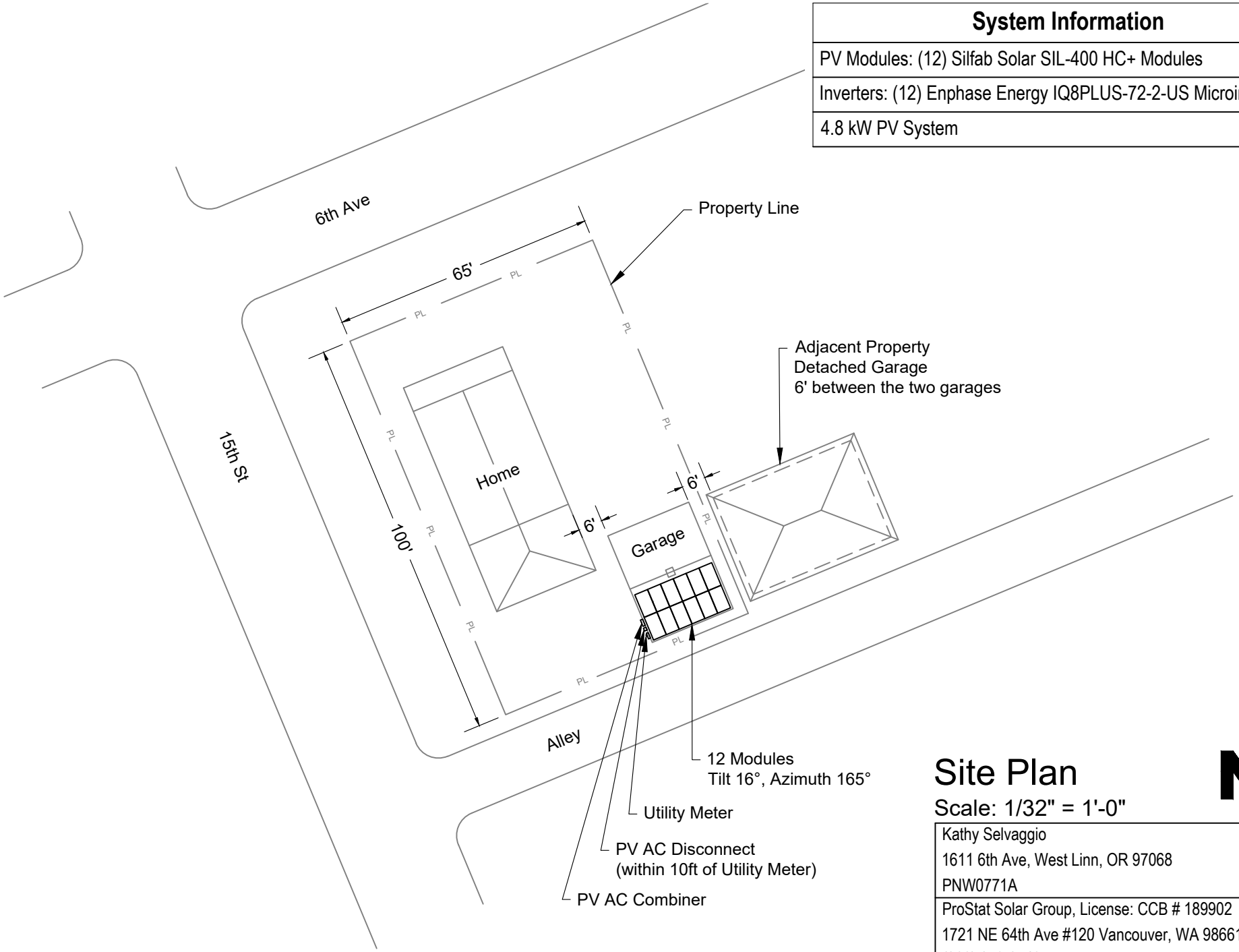
The solar installation will be mounted on the south roof of the detached garage, which faces the alley. The modules are all black and will be mounted flush to the roof, less than 12" from the roof surface. We will install 12 Silfab Solar Sil400HC+ modules and 12 Enphase Energy IQ8PLUS-72-2-US Microinverters, as well as an AC Combiner (Load Center) and an AC Disconnect switch that will serve as the Rapid Shutdown Initiation Device. Both the AC Combiner and the AC Disconnect will be located adjacent to the utility meter located on the exterior west wall of the garage.

The roof attachments will connect to the roof framing, which consists of 2x4 engineered trusses, 24" on center. The attachments will be placed at 24" on center within 3'of the ridge, eave, and edges of the roof. The remaining attachments will be 48" on center.

The detached garage is 6' from the home and is also 6' from the adjacent property's detached garage. This structure is an unoccupied accessory structure and is exempt from the fire access pathways defined in the OSSC. However, it is designed with the prescriptive fire pathways and setbacks for additional safety.

This project meets the Oregon prescriptive guidelines for rooftop solar.

System Information
PV Modules: (12) Silfab Solar SIL-400 HC+ Modules
Inverters: (12) Enphase Energy IQ8PLUS-72-2-US Microinverters
4.8 kW PV System



Site Plan

Scale: 1/32" = 1'-0"

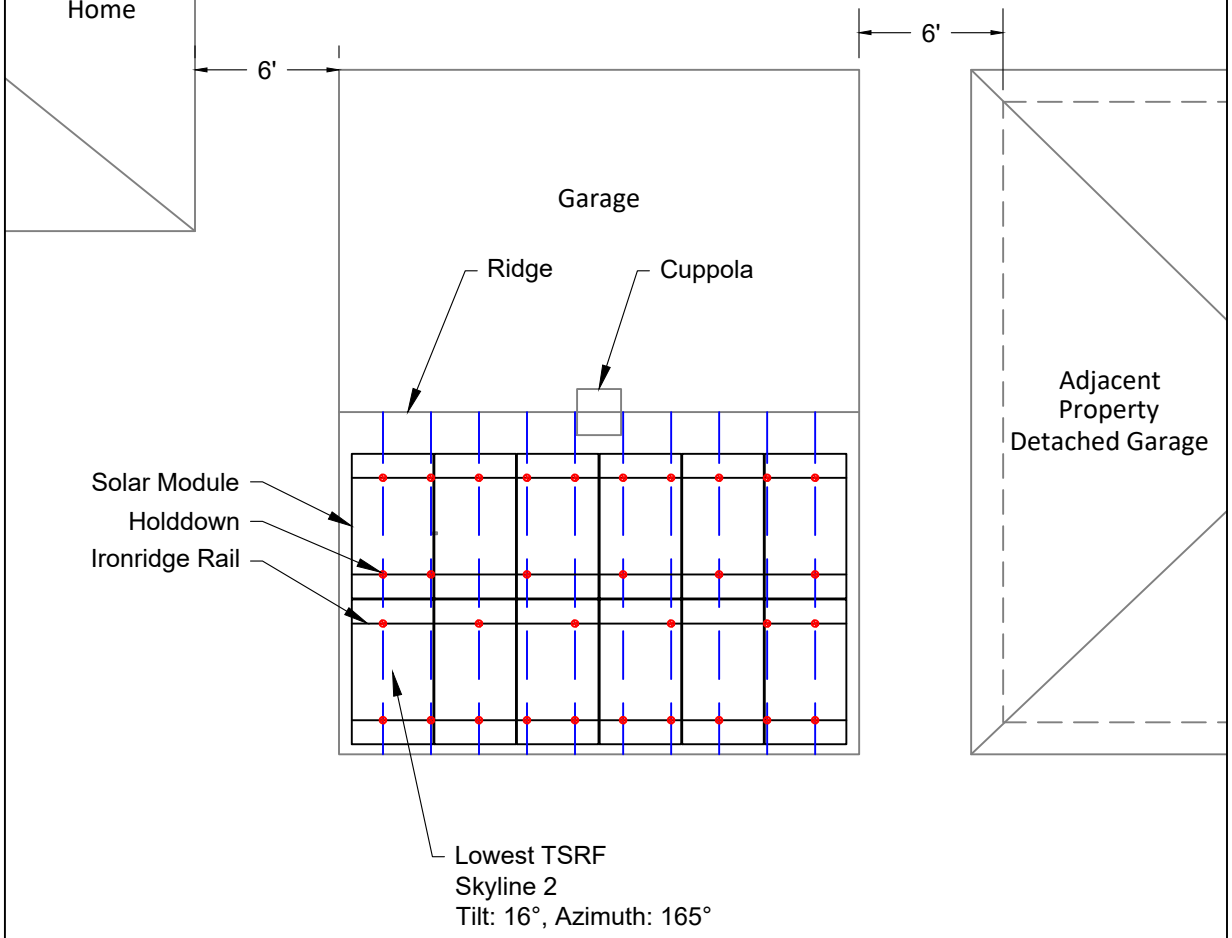
N

Kathy Selvaggio
1611 6th Ave, West Linn, OR 97068
PNW0771A

ProStat Solar Group, License: CCB # 189902
1721 NE 64th Ave #120 Vancouver, WA 98661
(360) 859-3749
Designed By: S Pavey, 8/16/23

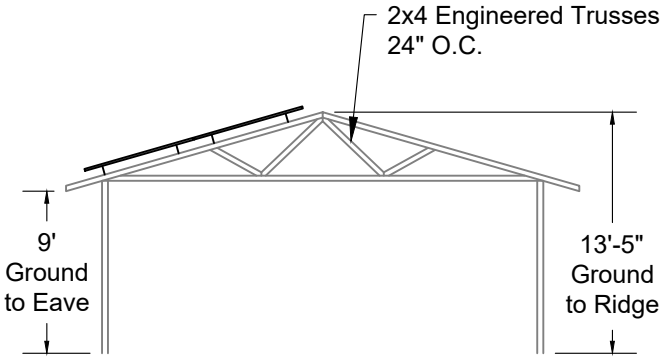
3111.3.4.8.1 Pathway Requirements (2022 OSSC)

Ex. 2. Pathways are not required on nonoccupied accessory structures, provided that they are separated from occupied structures by not less than 60 inches (3048 mm) or by a minimum two-hour fire-rated assembly.



Roof Plan

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



Roof Elevation | Scale: 3/32" = 1'-0"

NOTES:

1) Attachments must be spaced not greater than 48 inches on center in any direction. Attachments shall be spaced not greater than 24 inches on center in any direction where located within 3 feet of a roof edge, hip, eave or ridge.
2) Solar weight is less than 4.5 lbs/sqft
3) Roof material: Composite Asphalt Shingle
4) Spans comply with OSSC 2308.7.2
5) Array complies with 2022 OSSC 3111.3.4.8

Array Coverage	
Roof Area (Plan View)	618 SqFt
Array Area (Plan View)	246.1 SqFt
Array Area / Roof Area	40%

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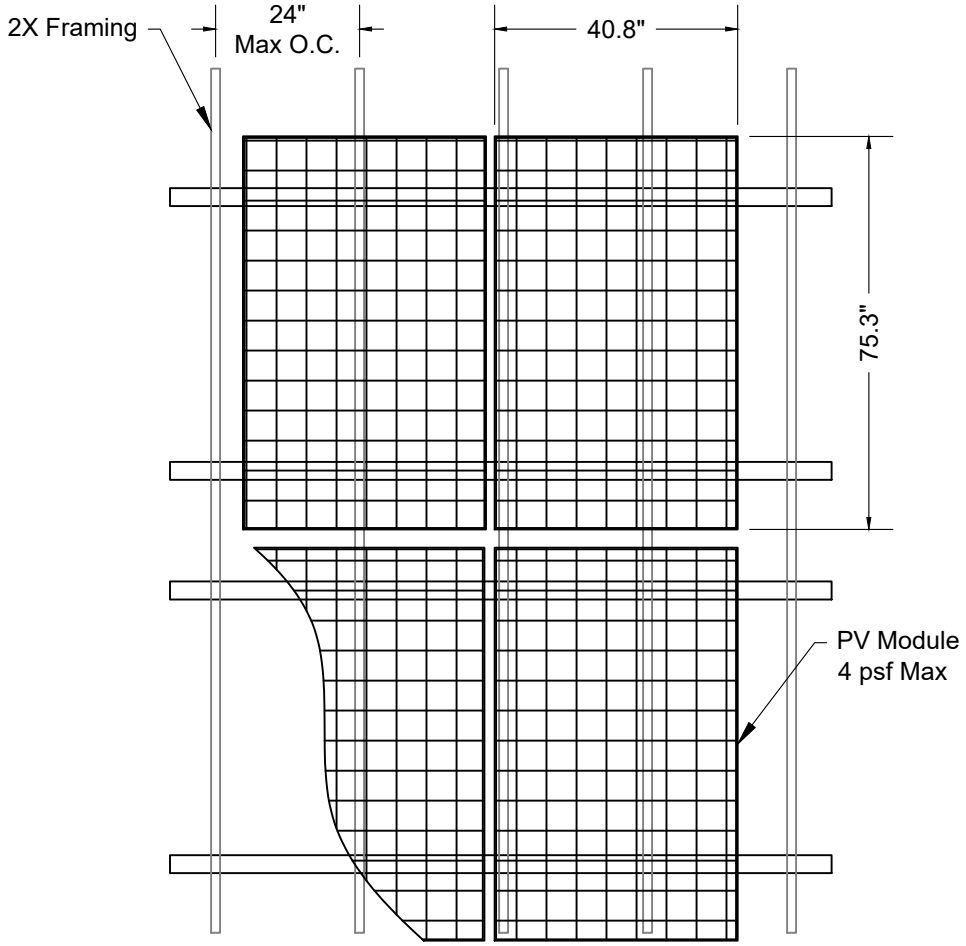
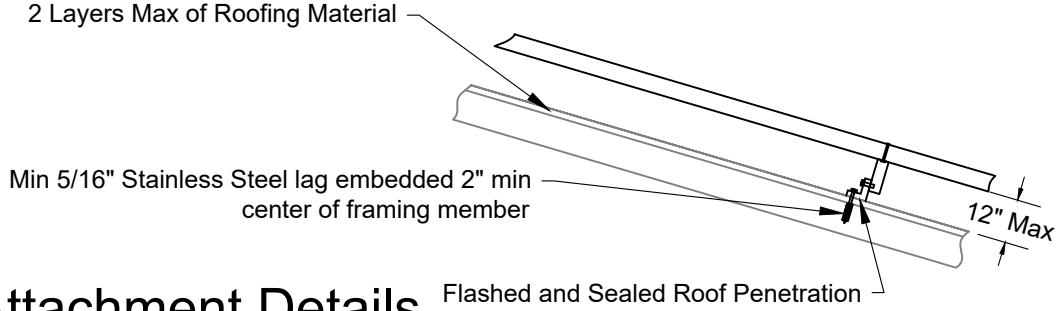


Mounting Details



Attachment Details

Mounting Specifications	
Racking Manufacturer	IronRidge
Racking Model	XR100
Attachment Manufacturer	IronRidge
Attachment Model	FlashFoot 2
Roof Area (Plan View)	618 SqFt
Array Area (Plan View)	246.1 SqFt
Array Area / Roof Area	40%
Roof Material	Composite Asphalt Shingle
Roof Structure	2x4 Engineered Trusses, 24" On Center

NOTES:
1) Attachments spaced so that no point load exceeds 50 lb.
2) Module connected to rails with 1 connector per 8 sqft or less, per racking manufacturer's specifications.
3) Aluminum rails to be mounted to alternate roof framing, 4 ft O.C. max. Two rails per Module, min.
4) 2x joist/truss to meet Oregon Solar code span requirements.

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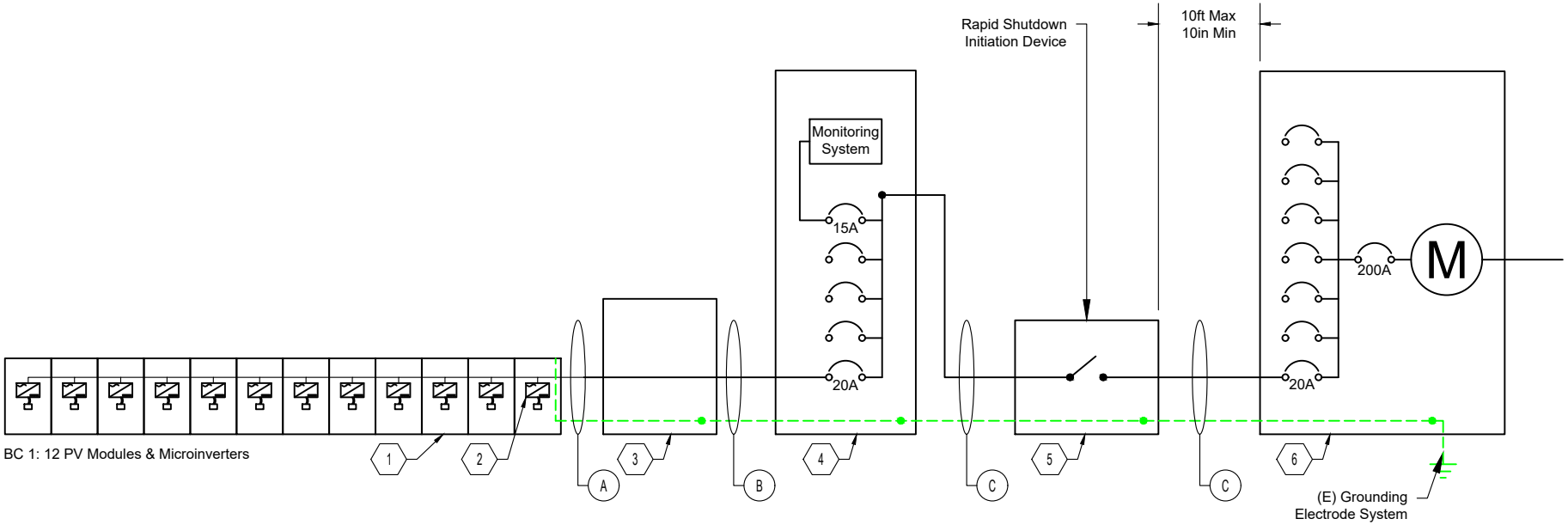
System Information

PV Modules: (12) Silfab Solar SIL-400 HC+ Modules
Inverters: (12) Enphase Energy IQ8PLUS-72-2-US Microinverters
4.8 kW PV System

Equipment Schedule

Tag	Qty	Description
1	12	New Silfab Solar SIL-400 HC+: 400 W Photovoltaic Modules
2	12	New Enphase Energy IQ8PLUS-72-2-US Microinverters
3	1	New NEMA 4X Junction Box
4	1	New Enphase AC Combiner, X-IQ-AM1-240-4, 125A, 240V, NEMA 3R
5	1	New Cutler Hammer DG221URB 30A Unfused AC Disconnect, Located adjacent to Utility Meter
6	1	Existing Meter Main Panel, 200A, 200A Main Breaker, 120/240V, 1 Phase, 3 Wire



Single Line Diagram

Conduit & Conductor Schedule

Tag	Conductor Type	Conductor Quantity	Conductor Size	Neutral Size	EGC Size	Conduit Type	Conduit Size	Conduit Fill
A	Q CABLE	(1) 2-Wire #12 Cable per Branch Circuit			Bare Copper #6	FREE AIR		N/A
B	THWN-2	2	#10		#12	EMT	3/4"	11%
C	THWN-2	2	#10	#10	#10	EMT	3/4"	16%

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PV Module Specifications	
Module Make	Silfab Solar
Module Model	SIL-400 HC+
Max. Power Point Current (Imp)	11.1 A
Max. Power Point Voltage (Vmp)	36.05 VDC
Open-Circuit Voltage (Voc)	43.02 VDC
Short-Circuit Current (Isc)	11.58 A
Max. Series Fuse (OCPD)	20 A
Max. Power (Pmax)	400 Watts DC
Max. Voltage	1000 Volts DC

Inverter Specifications	
Inverter Make	Enphase Energy
Inverter Model	IQ8PLUS-72-2-US
Max. DC Volt Rating	60 VDC
Nominal AC Voltage	240 VAC
Max Continuous Output Power	290 W
Max. AC Current ARMS	1.21 A
Max. OCPD	20 A

Voltage Drop Calculations - 240VAC, 1 Phase

Tag	Description	V Drop (V)	V Drop (%)	Inverter Qty / Circuit	Max Circuit Current (A)	AWG	Ω/ 1000 ft	1-Way Distance (ft)
A	Enphase Q Cable to Roof-Mounted J-Box	2.43	1.01%	12	14.52	N/A	N/A	N/A
B	Junction Box to AC Combiner	0.72	0.30%	12	14.52	#10	1.24	20
C	AC Combiner to AC Disconnect	0.36	0.15%	12	14.52	#10	1.24	10
C	AC Disconnect to Service Panel	0.36	0.15%	12	14.52	#10	1.24	10
	Totals	3.87 V	1.61%	✓	1.61% < 2.0%			

Electrical Calculations & Equipment Specifications

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WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES

TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

PV AC DISCONNECT

PHOTOVOLTAIC POWER SOURCE

RATED AC OUTPUT CURRENT: 14.52 A

RATED AC OPERATING VOLTAGE: 240 VAC

CAUTION

DUAL POWER SOURCE
SECOND SOURCE IS PV SYSTEM

PV SYSTEM DISCONNECT LOCATED:
ADJACENT TO UTILITY METER

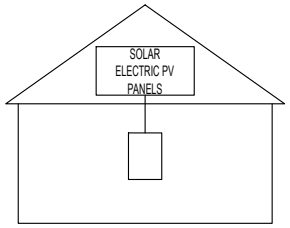
RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

PV SOLAR BREAKER

DO NOT RELOCATE THIS OVERCURRENT DEVICE

SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN

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



Labels & Markings

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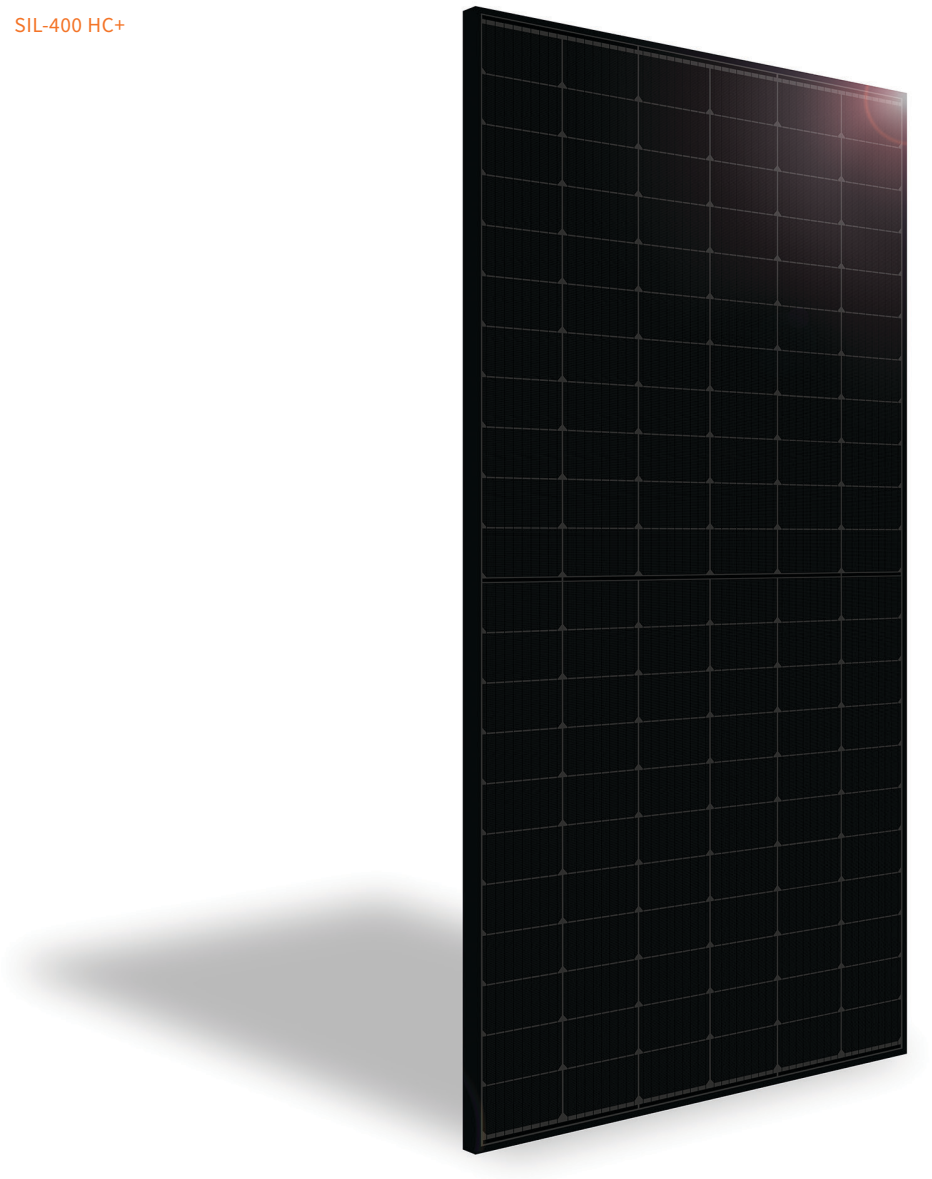
SILFAB PRIME

SIL-400 HC+

SILFAB SOLAR®



RELIABLE ENERGY.
DIRECT FROM THE SOURCE.

Designed to outperform.

Dependable, durable, high-performance solar panels engineered for North American homeowners.

PV MODULE INDEX REPORT 2022
HIGH ACHIEVEMENT IN PERFORMANCE
RETC

SILFABSOLAR.COM

CE · Intertek · Intertek · IEC · Fraunhofer ISE

CHUBB*

* Chubb provides error and omission insurance to Silfab Solar Inc.

ELECTRICAL SPECIFICATIONS		400	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	400	298
Maximum power voltage (Vpmax)	V	36.05	33.50
Maximum power current (Ipmax)	A	11.10	8.90
Open circuit voltage (Voc)	V	43.02	40.35
Short circuit current (Isc)	A	11.58	9.34
Module efficiency	%	20.2%	18.8%
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m² • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	21.3kg ±0.2kg	47lbs ±0.4lbs
Dimensions (H x L x D)	1914 mm x 1036 mm x 35 mm	75.3 in x 40.8 in x 1.37 in
Maximum surface load (wind/snow)*	5400 Pa rear load / 5400 Pa front load	112.8 lb/ft² rear load / 112.8 lb/ft² front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	132 Half cells - Si mono PERC 9 busbar - 83 x 166 mm	132 Half cells- Si mono PERC 9 busbar - 3.26 x 6.53 in
Glass	3.2 mm high transmittance, tempered, DSM antireflective coating	0.126 in high transmittance, tempered, DSM antireflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, MC4 from Staubli	53 in, ø 0.22 in (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated	

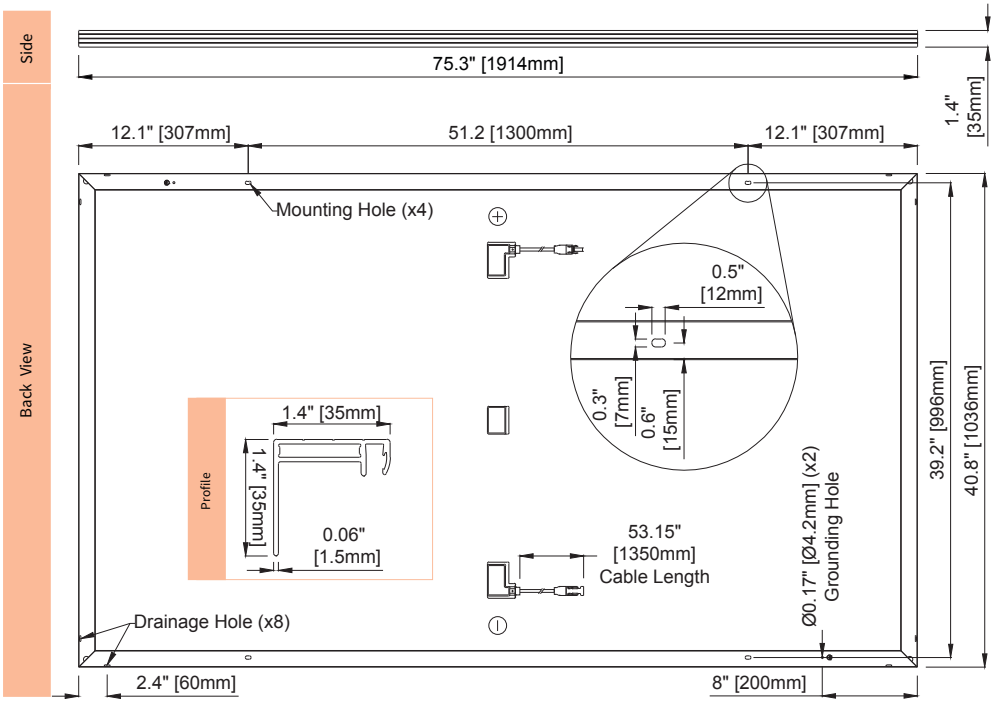
TEMPERATURE RATINGS	
Temperature Coefficient Isc	+0.064 %/°C
Temperature Coefficient Voc	-0.28 %/°C
Temperature Coefficient Pmax	-0.36 %/°C
NOCT (± 2°C)	45 °C
Operating temperature	-40/+85 °C

WARRANTIES	
Module product workmanship warranty	25 years**
Linear power performance guarantee	30 years
	≥ 97.1% end 1st yr ≥ 91.6% end 12th yr ≥ 85.1% end 25th yr ≥ 82.6% end 30th yr

CERTIFICATIONS	
Product	UL 61215-1:2017 Ed.1***, UL 61215-2:2017 Ed.1***, UL 61730-1:2017 Ed.1***, UL 61730-2:2017 Ed.1 ***, CSA C22.2#61730-1:2019 Ed.2***, CSA C22.2#61730-2:2019 Ed.2***, IEC 61215-1:2016 Ed.1***, IEC 61215-2:2016 Ed.1***, IEC 61730-1:2016 Ed.2***, IEC 61730-2:2016 Ed.2***, IEC 61701:2020 (Salt Mist Corrosion), IEC 62716:2013 (Ammonia Corrosion), UL Fire Rating: Type 2, CEC Listing***
Factory	ISO9001:2015

SHIPPING SPECS	
Modules Per Pallet:	26 or 26 (California)
Pallets Per Truck	34 or 31 (California)
Modules Per Truck	832 or 806 (California)

* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.
** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com.
PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.
*** Certification and CEC listing in progress. December 2022, expected completion.



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Silfab - SIL-400-HC+-20220906

ENPHASE

DATA SHEET

IQ8 and IQ8+ Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.

Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.

Enphase 25 year limited warranty

IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.

Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.

UL CERTIFIED SAFETY

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support**
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8SP-DS-0002-01-EN-US-2022-03-17

* Only when installed with IQ System Controller 2, meets UL 1741.

** IQ8 and IQ8Plus supports split phase, 240V installations only.

IQ8 and IQ8+ Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US
Commonly used module pairings[1]	W	235 – 350	235 – 440
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
MPPT voltage range	V	27 – 37	29 – 45
Operating range	V	25 – 48	25 – 58
Min/max start voltage	V	30 / 48	30 / 58
Max input DC voltage	V	50	60
Max DC current[2] [module Isc]	A	15	
Overvoltage class DC port		II	
DC port backfeed current	mA	0	
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT DATA (AC)		**IQ8-60-2-US**	**IQ8PLUS-72-2-US**
Peak output power	VA	245	300
Max continuous output power	VA	240	290
Nominal (L-L) voltage/range[3]	V	240 / 211 – 264	
Max continuous output current	A	1.0	1.21
Nominal frequency	Hz	60	
Extended frequency range	Hz	50 – 68	
AC short circuit fault current over 3 cycles	Arms	2	
Max units per 20 A (L-L) branch circuit[4]		16	13
Total harmonic distortion		<5%	
Overvoltage class AC port		III	
AC port backfeed current	mA	30	
Power factor setting		1.0	
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging	
Peak efficiency	%	97.5	97.6
CEC weighted efficiency	%	97	97
Night-time power consumption	mW	60	
MECHANICAL DATA			
Ambient temperature range		-40°C to +60°C (-40°F to +140°F)	
Relative humidity range		4% to 100% (condensing)	
DC Connector type		MC4	
Dimensions (HxWxD)		212 mm (8.3”) x 175 mm (6.9”) x 30.2 mm (1.2”)	
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	
Environ. category / UV exposure rating		NEMA Type 6 / outdoor	
COMPLIANCE			
Certifications		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. 107.1-01 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 C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer’s instructions.	

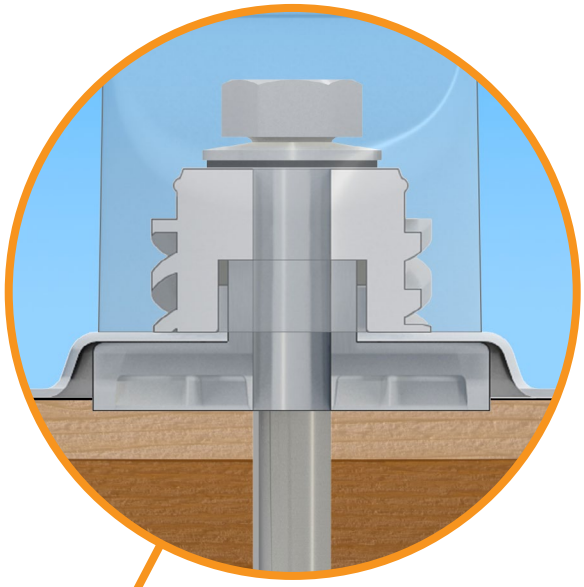
(1) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility
(2) Maximum continuous input DC current is 10.6A (3) Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IRONRIDGE

FlashFoot2

The Strongest Attachment in Solar

IronRidge FlashFoot2 raises the bar in solar roof protection. The unique water seal design is both elevated and encapsulated, delivering redundant layers of protection against water intrusion. In addition, the twist-on Cap perfectly aligns the rail attachment with the lag bolt to maximize mechanical strength.

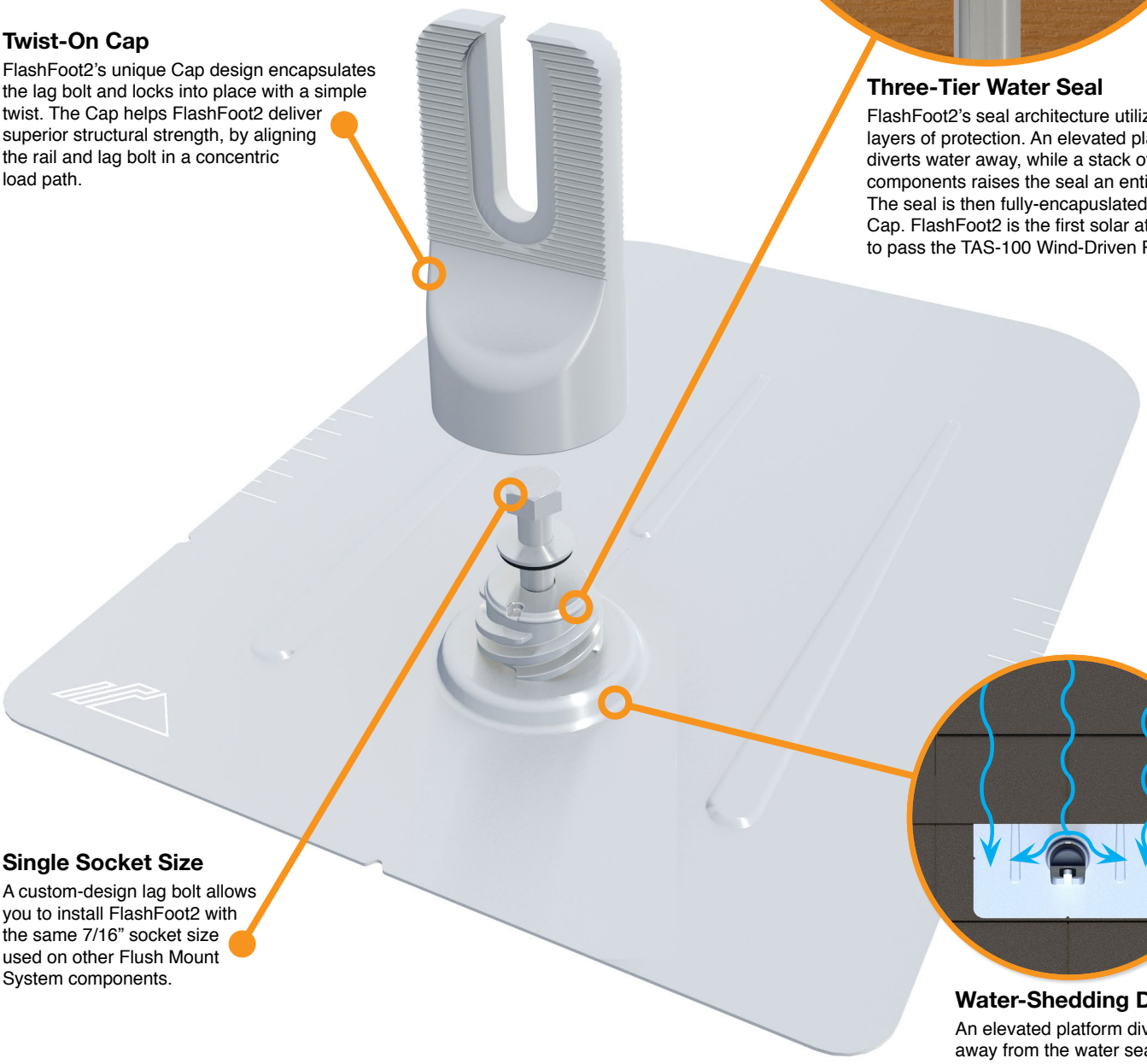


Twist-On Cap

FlashFoot2's unique Cap design encapsulates the lag bolt and locks into place with a simple twist. The Cap helps FlashFoot2 deliver superior structural strength, by aligning the rail and lag bolt in a concentric load path.

Three-Tier Water Seal

FlashFoot2's seal architecture utilizes three layers of protection. An elevated platform diverts water away, while a stack of rugged components raises the seal an entire inch. The seal is then fully-encapuslated by the Cap. FlashFoot2 is the first solar attachment to pass the TAS-100 Wind-Driven Rain Test.



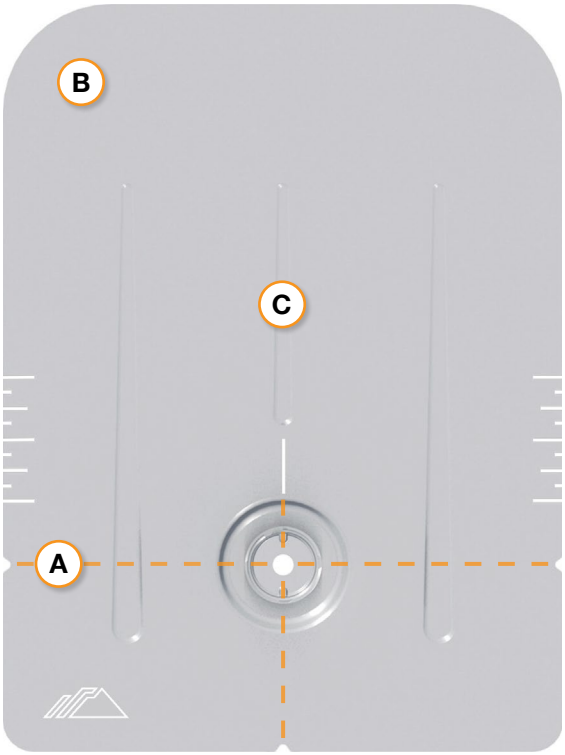
Single Socket Size

A custom-design lag bolt allows you to install FlashFoot2 with the same 7/16" socket size used on other Flush Mount System components.

Water-Shedding Design

An elevated platform diverts water away from the water seal.

Installation Features



A Alignment Markers

Quickly align the flashing with chalk lines to find pilot holes.

B Rounded Corners

Makes it easier to handle and insert under the roof shingles.

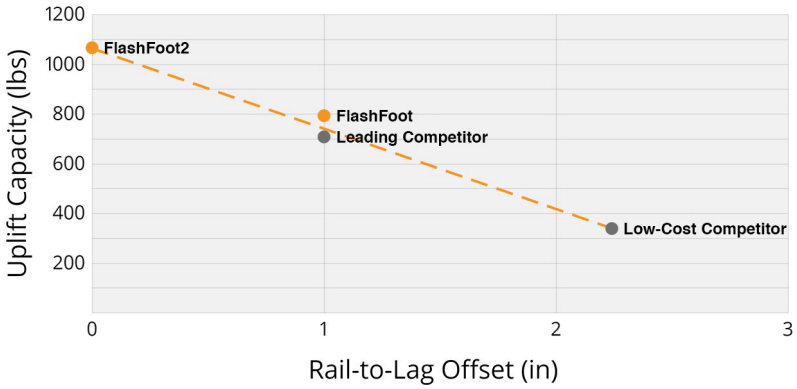
C Reinforcement Ribs

Help to stiffen the flashing and prevent any bending or crinkling during installation.

Benefits of Concentric Loading

Traditional solar attachments have a horizontal offset between the rail and lag bolt, which introduces leverage on the lag bolt and decreases uplift capacity.

FlashFoot2 is the only product to align the rail and lag bolt. This concentric loading design results in a stronger attachment for the system.



Testing & Certification

Structural Certification

Designed and Certified for Compliance with the International Building Code & ASCE/SEI-7.

Water Seal Ratings

Water Sealing Tested to UL 441 Section 27 “Rain Test” and TAS 100-95 “Wind Driven Rain Test” by Intertek. Ratings applicable for composition shingle roofs having slopes between 2:12 and 12:12.

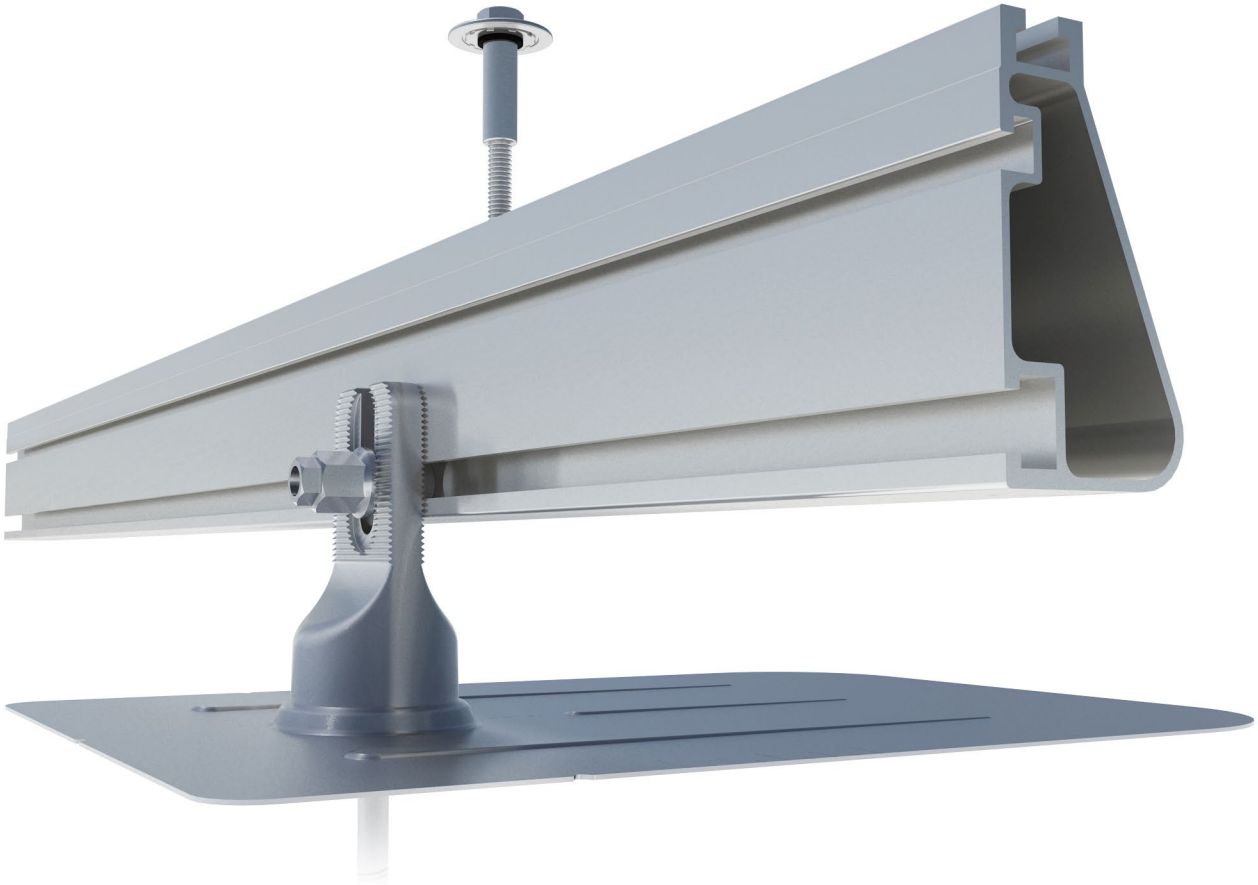
UL 2703

Conforms to UL 2703 Mechanical and Bonding Requirements. See Flush Mount Install Manual for full ratings.

Datasheet

IRONRIDGE

Flush Mount System



Built for solar's toughest roofs.

IronRidge builds the strongest mounting system for pitched roofs in solar. Every component has been tested to the limit and proven in extreme environments.

Our rigorous approach has led to unique structural features, such as curved rails and reinforced flashings, and is also why our products are fully certified, code compliant and backed by a 20-year warranty.

Strength Tested

All components evaluated for superior structural performance.

PE Certified

Pre-stamped engineering letters available in most states.

Class A Fire Rating

Certified to maintain the fire resistance rating of the existing roof.

Design Assistant

Online software makes it simple to create, share, and price projects.

UL 2703 Listed System

Entire system and components meet newest effective UL 2703 standard.

25-Year Warranty

Products guaranteed to be free of impairing defects.

XR Rails

XR10 Rail

A low-profile mounting rail for regions with light snow.

- 6’ spanning capability
- Moderate load capability
- Clear and black finish

XR100 Rail

The ultimate residential solar mounting rail.

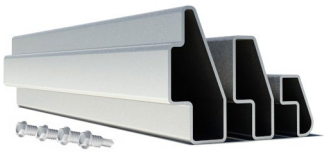
- 8’ spanning capability
- Heavy load capability
- Clear and black finish

XR1000 Rail

A heavyweight mounting rail for commercial projects.

- 12’ spanning capability
- Extreme load capability
- Clear anodized finish

Bonded Splices



All rails use internal splices for seamless connections.

- Self-drilling screws
- Varying versions for rails
- Forms secure bonding

Clamps & Grounding

UFOs

Universal Fastening Objects bond modules to rails.

- Fully assembled & lubed
- Single, universal size
- Clear and black finish

Stopper Sleeves

Snap onto the UFO to turn into a bonded end clamp.

- Bonds modules to rails
- Sized to match modules
- Clear and black finish

CAMO

Bond modules to rails while staying completely hidden.

- Universal end-cam clamp
- Tool-less installation
- Fully assembled

Grounding Lugs

Connect arrays to equipment ground.

- Low profile
- Single tool installation
- Mounts in any direction

Attachments

FlashFoot2

Flash and mount XR Rails with superior waterproofing.

- Twist-on Cap eases install
- Wind-driven rain tested
- Mill and black finish

Conduit Mount

Flash and mount conduit, strut, or junction boxes.

- Twist-on Cap eases install
- Wind-driven rain tested
- Secures ¾” or 1” conduit

Slotted L-Feet

Drop-in design for rapid rail attachment.

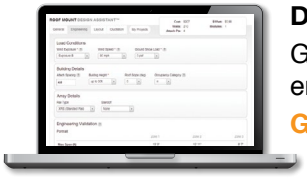
- Secure rail connections
- Slot for vertical adjusting
- Clear and black finish

Bonding Hardware

Bond and attach XR Rails to roof attachments.

- T & Square Bolt options
- Nut uses 7/16” socket
- Assembled and lubricated

Resources



Design Assistant

Go from rough layout to fully engineered system. For free.

Go to IronRidge.com/design

NABCEP Certified Training

Earn free continuing education credits, while learning more about our systems.

Go to IronRidge.com/training