



**KNOXVILLE HISTORIC ZONING COMMISSION  
STAFF REPORT - CERTIFICATE OF APPROPRIATENESS APPLICATION**

**PROPERTY LOCATION:** 1800 Jefferson Ave. /  
Parcel ID 82 P H 009

**FILE NO.:** 1-D-20-HZ

**DISTRICT:** Edgewood-Park City H-1

**MEETING DATE:** 1/16/2020

**APPLICANT:** Kevin Dispensa Solar Alliance Southeast (Contractor)

**LEVEL OF WORK:** Level II. Major repair or replacement of materials or architectural elements

**PROPERTY DESCRIPTION:** Queen Anne, c. 1900

One and one-half story frame residence with aluminum siding. Hip roof with lower cross gables, asphalt shingle covering, two gabled dormers. Recessed portico. One over one double hung windows. Interior offset brick chimney. Brick foundation. Rectangular plan.

► **DESCRIPTION OF WORK:**

Installation of two solar arrays on the rear (south) elevation roof. One array will be located on primary hipped-roof massing of rear elevation, and feature eight individual panels (arranged in two adjoining rows of four). Second array will be located on the lower hipped-roof addition roof, and feature four adjoining panels. Panels will be 39" wide by 65" long and 1.6" thick and will be fixed to the roof via a metal rail system. Additional utility meter and disconnect will be attached to the west side of the building, adjacent to the existing meter. Solar panels will not be visible from the primary right-of-way.

► **APPLICABLE DESIGN GUIDELINES:**

Edgewood-Park City Design Guidelines, adopted by the Knoxville City Council on July 29, 1997.

5. Do not use satellite dishes, solar collectors, modern skylights, or inappropriate structures on roof planes that are visible from the street, or install them where they interfere with decorative roof elements.

Secretary of the Interior's Standards for Rehabilitation

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

**COMMENTS:**

N/A

**STAFF FINDINGS:**

1. The house is a contributing structure to the Edgewood-Park City H Overlay and National Register Historic District.
2. The proposed elevation for installation is the rear (south elevation). The house is situated at the center of the block and the rear elevation faces the alley and the adjoining block of houses fronting Woodbine Avenue. The elevation to receive solar panels is not visible from Jefferson Avenue and would be very minimally visible from



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Woodbine Avenue.

3. The solar panels and racking will be mounted parallel to the roof slope and will project approximately two inches high above the roof, including the racking system. The necessary utility meter and disconnect will be installed on the west elevation of the building, next to the existing electrical meter, on a non-character-defining section of the house.

4. No historic roofing materials or features will be altered or removed for installation of the solar panels or associated equipment.

► **STAFF RECOMMENDATION:**

Staff recommends approval of the work as proposed.



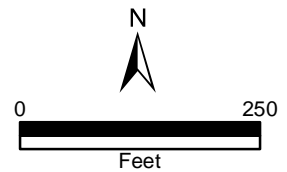
**1-D-20-HZ**  
**APPLICATION FOR CERTIFICATE OF APPROPRIATENESS**



**1800 Jefferson Ave. 37917**  
**Edgewood-Park City H-1**

Original Print Date: 1/6/2020  
 Knoxville/Knox County Planning -- Historic Zoning Commission

Petitioner: Kevin Dispensa Solar Alliance Southeast





# DESIGN REVIEW REQUEST

- DOWNTOWN DESIGN (DK)
- HISTORIC ZONING (H)
- INFILL HOUSING (IH)

KEVIN DISPENSA

Applicant		
12/17/19	1/16/20	1-D-20-HZ
Date Filed	Meeting Date (if applicable)	File Number(s)

## CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

- Owner  Contractor  Engineer  Architect/Landscape Architect

KEVIN DISPENSA	SOLAR ALLIANCE SOUTHEAST		
Name	Company		
3709 MARTIN MILL PIKE	KNOXVILLE	TN	37920
Address	City	State	Zip
847-305-9936	KDISPENSA@SOLARALLIANCE.COM		
Phone	Email		

## CURRENT PROPERTY INFO

LYNNE RANDAZZO	1800 JEFFERSON AVE	336-682-6239
Owner Name (if different from applicant)	Owner Address	Owner Phone
1800 JEFFERSON AVE	082PH009	
Property Address	Parcel ID	
EDGEWOOD	H-1	
Neighborhood	Zoning	

## AUTHORIZATION

		12/16/19
Staff Signature	Please Print	Date
	KEVIN DISPENSA	12/16/19
Applicant Signature	Please Print	Date

# REQUEST

## DOWNTOWN DESIGN

**Level 1:**

- Signs     Alteration of an existing building/structure

**Level 2:**

- Addition to an existing building/structure

**Level 3:**

- Construction of new building/structure     Site design, parking, plazas, landscape

*See required Downtown Design attachment for more details.*

Brief description of work: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## HISTORIC ZONING

**Level 1:**

- Signs     Routine repair of siding, windows, roof, or other features, in-kind; Installation of gutters, storm windows/doors

**Level 2:**

- Major repair, removal, or replacement of architectural elements or materials     Additions and accessory structures

**Level 3:**

- Construction of a new primary building

**Level 4:**

- Relocation of a contributing structure     Demolition of a contributing structure

*See required Historic Zoning attachment for more details.*

Brief description of work: ADDITION OF 12 SOLAR PHOTOVOLTAIC MODULES ON THE REAR (FACING THE ALLEY) OF THE STRUCTURE. AN ADDITIONAL UTILITY METER AND DISCONNECT WILL BE ON THE SIDE OF THE BUILDING, ADJACENT TO THE EXISTING METER.

## INFILL HOUSING

**Level 1:**

- Driveways, parking pads, access point, garages or similar facilities     Subdivisions

**Level 2:**

- Additions visible from the primary street     Changes to porches visible from the primary street

**Level 3:**

- New primary structure  
 Site built     Modular     Multi-Sectional

*See required Infill Housing attachment for more details.*

Brief description of work: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## STAFF USE ONLY

**ATTACHMENTS**

- Downtown Design Checklist  
 Historic Zoning Design Checklist  
 Infill Housing Design Checklist

**ADDITIONAL REQUIREMENTS**

- Property Owners / Option Holders

**Level 1:** \$50 • **Level 2:** \$100 • **Level 3:** \$250 • **Level 4:** \$500

<b>FEE 1:</b>		<b>TOTAL:</b>
<b>FEE 2:</b>		
<b>FEE 3:</b>		

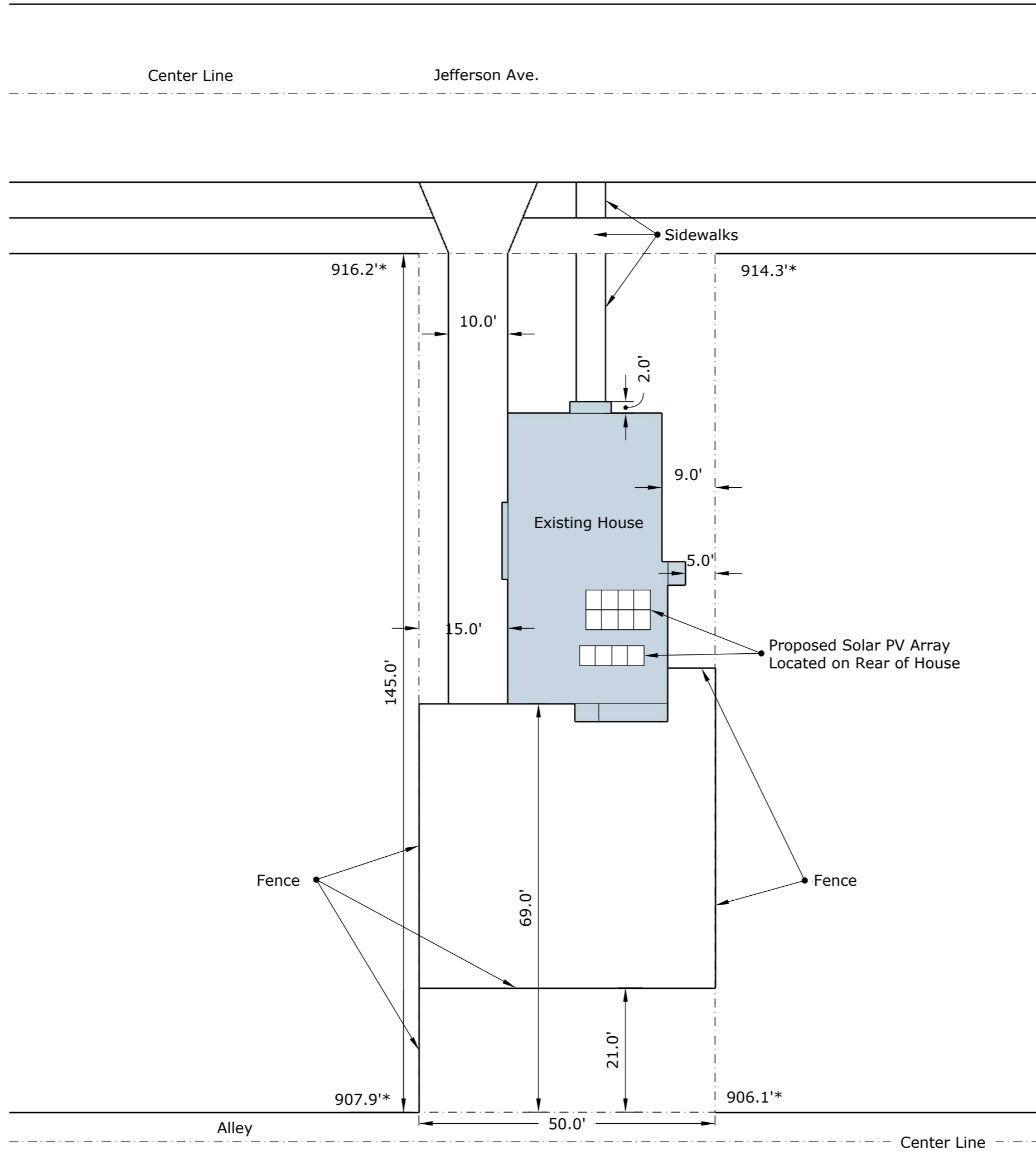


# Historic Zoning Review Request

for 1800 Jefferson Ave. Knoxville, TN 37917

## LEVEL 2 Additions and Accessory Structures

Review Request Form.....	1
Dimensioned Site Plan of Property.....	3
Dimensioned Front Elevation.....	4
Dimensioned Rear Elevation.....	5
Heleine 60-HBLK Solar Module Data Sheet.....	6
Ironridge Flushmount System Datasheet.....	8
Ironridge Sloped Roof Mount System Datasheet.....	10



3709 Martin Mill Pike  
Knoxville, TN 37920

Ryan Dunaway  
RDunaway@SolarAlliance.com

(865) 309-4674

**Project Info**  
Client:  
Lynne Randazzo  
1800 Jefferson Ave.  
Knoxville, TN 37917  
(336) 682-6239

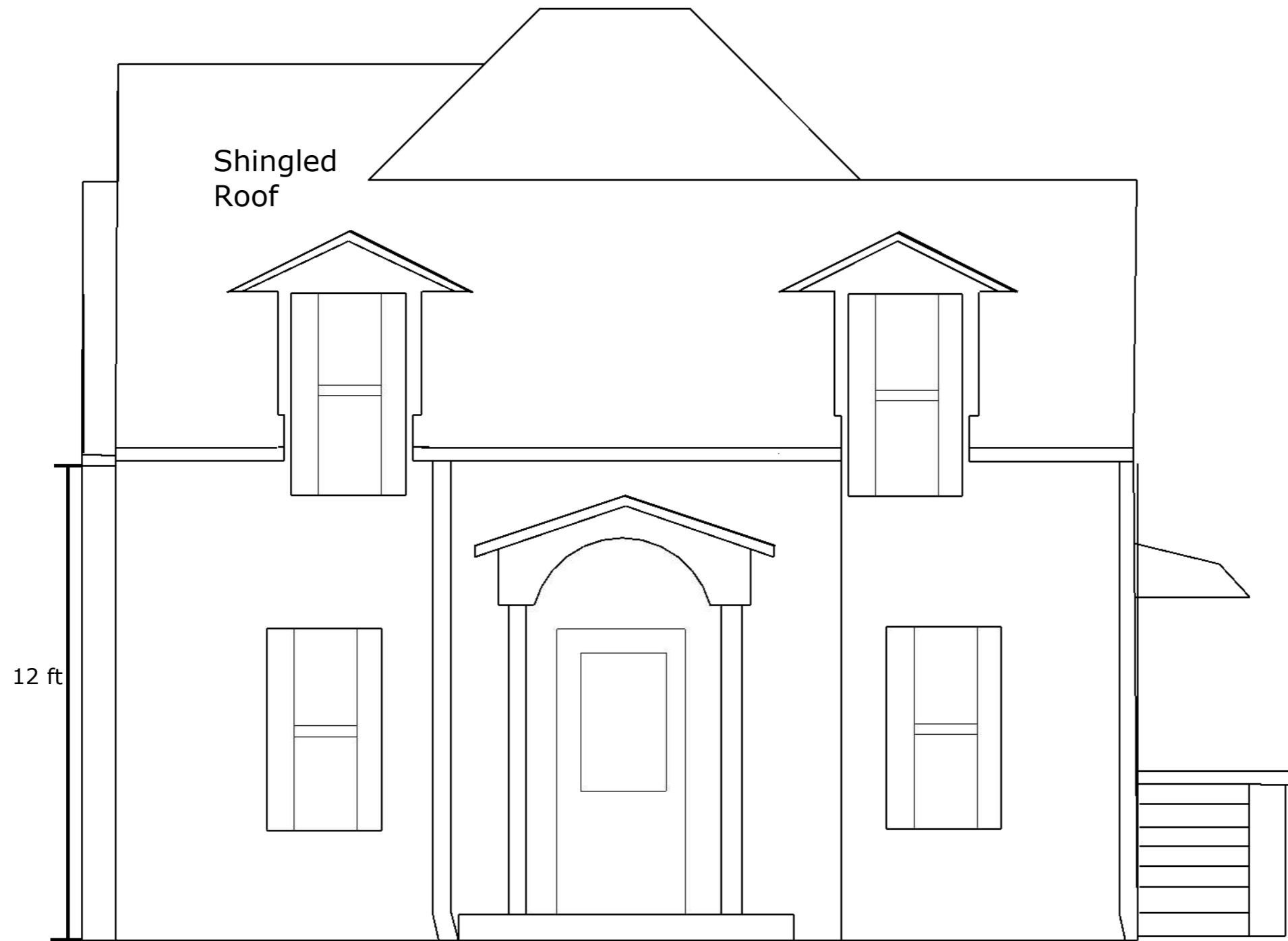
3.4 kW Solar PV  
System  
Residential  
Grid tied  
Roof Mount

**Drawing Info**  
Title: Randazzo  
Historic Plot Plan

Date:  
December 17, 2019

Revision: 1

Front elevation will NOT be affected



FRONT ELEVATION



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Knoxville, TN 37920

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RDunaway@SolarAlliance.com

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1800 Jefferson Ave.  
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(336) 682-6239

3.4 kW Solar PV  
System  
Residential  
Grid tied  
Roof Mount

Drawing Info  
Title: Randazzo Front  
Elevation

Date:  
December 17, 2019

Revision: 1





3709 Martin Mill Pike  
Knoxville, TN 37920

Ryan Dunaway  
RDunaway@SolarAlliance.com

(865) 309-4674

**Project Info**

Client:  
Lynne Randazzo  
1800 Jefferson Ave.  
Knoxville, TN 37917  
(336) 682-6239

3.4 kW Solar PV  
System  
Residential  
Grid tied  
Roof Mount

**Drawing Info**  
Title: Randazzo Rear  
Elevation

Date:  
December 17, 2019

Revision: 1



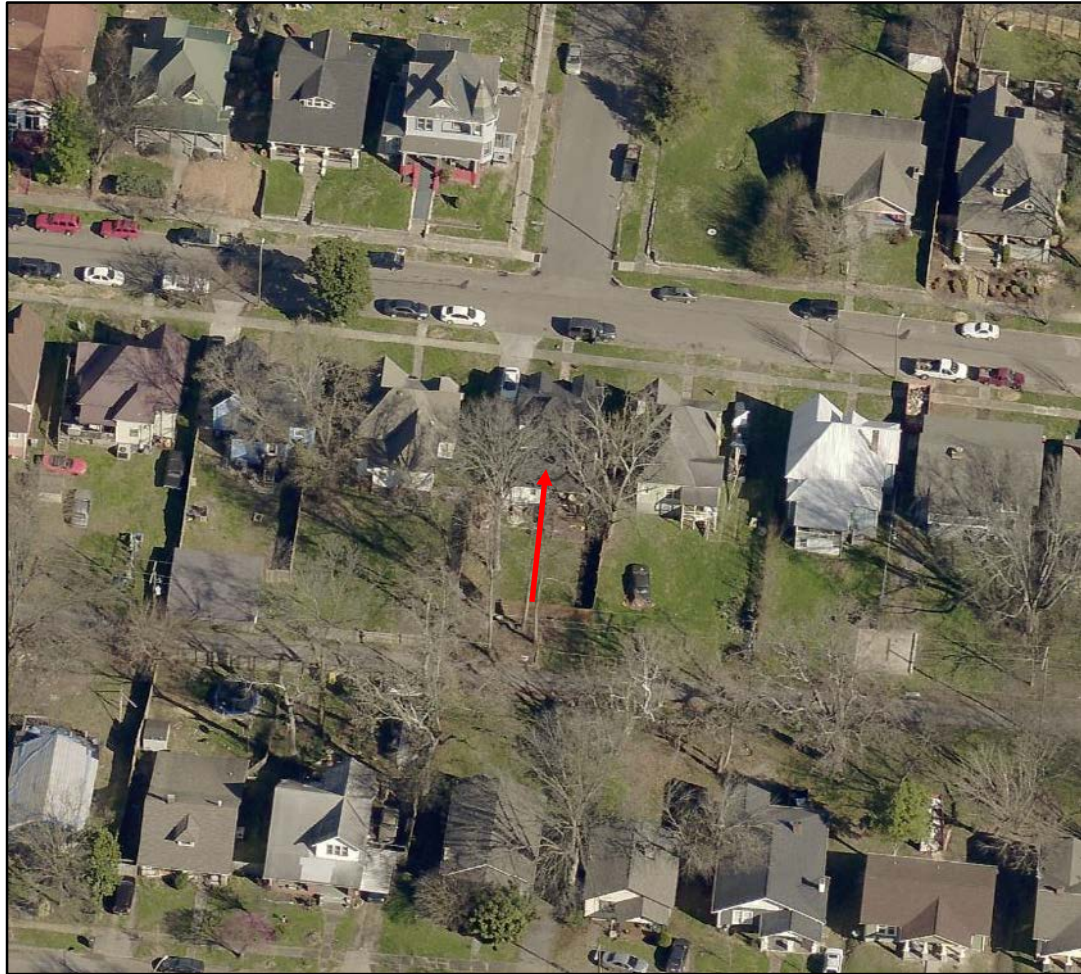
**REAR ELEVATION**



Façade, facing south



Rear elevation to receive solar panels, facing north



2018 aerial of property from Pictometry, facing north



2018 aerial of property from Pictometry, facing south



2018 aerial of property from Pictometry, facing east



2018 aerial of property from Pictometry, facing west

MONO

POLY



HELIENE

60M-HBLK

60-CELL MONOCRYSTALLINE MODULE



300 Wp

MAX POWER OUTPUT

18.6%

MAX EFFICIENCY

10 YEAR

PRODUCT WARRANTY

25 YEAR

LINEAR PERFORMANCE GUARANTEE



H-BLACK INTEGRATION - BLACK FRAME & BACKSHEET



PERFECT FOR HIGH VISIBILITY APPLICATIONS



MANUFACTURED ACCORDING TO INTERNATIONAL QUALITY SYSTEM STANDARDS: ISO9001



GUARANTEED POSITIVE POWER SORTING: [-0 : +4.99 WP]

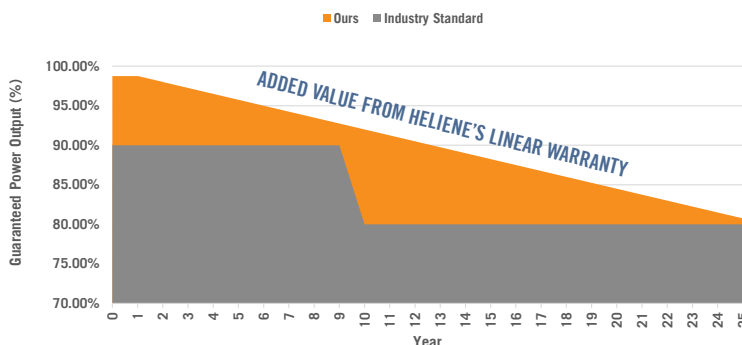
HELIENE INC. IS A PREMIER SOLAR MODULE MANUFACTURER, SERVICING THE GROWING SOLAR ENERGY MARKETS OF NORTH AMERICA.

COMBINING PROVEN EUROPEAN TECHNOLOGY WITH NORTH AMERICAN INGENUITY ALLOWS HELIENE TO MAKE A REAL COMMITMENT IN PROVIDING SMARTER ENERGY CHOICES FOR THE FUTURE.

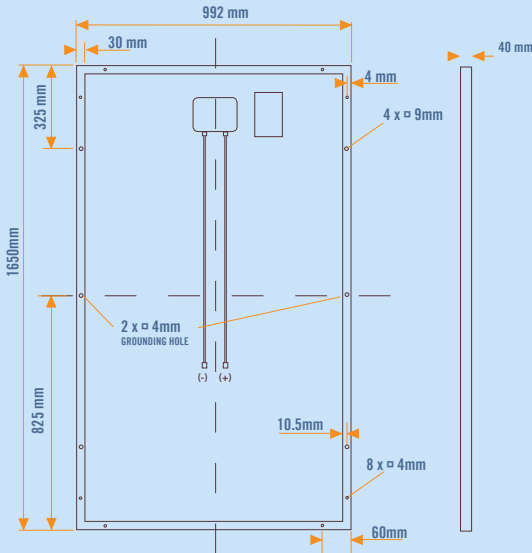
Heliene Inc.  
www.heliene.com

LINEAR PERFORMANCE GUARANTEE

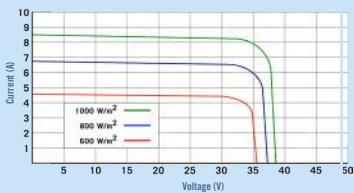
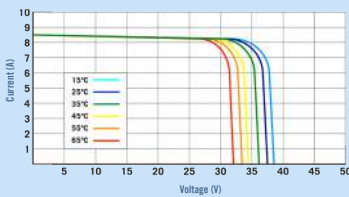
10 YEAR WORKMANSHIP WARRANTY • 25 YEAR LINEAR PERFORMANCE GUARANTEE



## DIMENSIONS FOR HELIENE 60M SERIES MODULES



## I-V CURVE FOR HELIENE 60M SERIES



## CERTIFICATIONS



## ELECTRICAL DATA (STC)

Peak Rated Power	$P_{mpp}$ (W)	300	295	290	285
Maximum Power Voltage	$V_{mpp}$ (V)	33.139	32.838	32.537	32.236
Maximum Power Current	$I_{mpp}$ (A)	9.127	9.058	8.989	8.920
Open Circuit Voltage	$V_{oc}$ (V)	39.830	39.679	39.528	39.377
Short Circuit Current	$I_{sc}$ (A)	9.590	9.507	9.424	9.341
Module Efficiency *	Eff (%)	18.6	18.3	18.0	17.7
Power Output Tolerance		[- 0 , + 4.99] Wp			

STC - Standard Test Conditions: Irradiation 1000 W/m<sup>2</sup> - Air mass AM 1.5 - Cell temperature 25 °C

\* Calculated using maximum power based on full positive output tolerance [-0 , +4.99] Wp

## MECHANICAL DATA

Dimensions (L x W x D)	1650 x 992 x 40 mm (65 x 39 x 1.6 inch)
Weight*	20 kg (43.9 lbs)
Output Cables	1.1 m (43.3 inch) symmetrical cables with MC4 type connectors
Junction Box	IP-67 rated with bypass diodes
Frame	Double webbed 15 micron anodized aluminum alloy
Front Glass	Low-iron content, high-transmission PV solar glass
Solar Cells	60 Monocrystalline cells (156 x 156 mm)

\* Calculated using 3.2mm PV glass, if 4mm profile is requested weight load will vary

## CERTIFICATIONS

UL Listed	ULC/ORD-C1703-1 , UL1703, UL1703 Fire Classification Type 1
IEC Listed	IEC 61215, IEC 61730

All Heliene modules are certified under the California Energy Commission (CEC) Listing Report

## TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of $P_{max}$	-0.39%/°C
Temperature Coefficient of $V_{oc}$	-0.31%/°C
Temperature Coefficient of $I_{sc}$	0.045%/°C

## MAXIMUM RATINGS

Operational Temperature	-40°C - +85°C
Max System Voltage	1500V (UL / IEC)
Max Series Fuse Rating	15 A

## WARRANTY

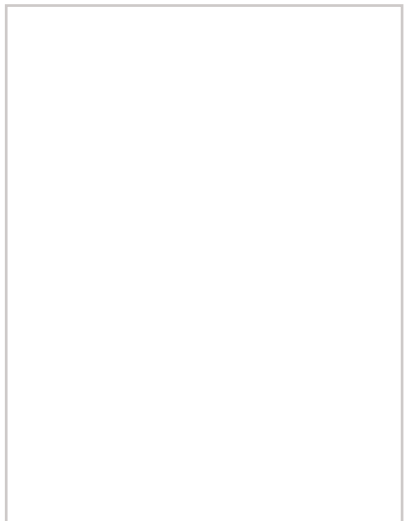
10 Year Manufacturer's Workmanship Warranty

25 Year Linear Power Guarantee

(Refer to product warranty page for details)

## PACKAGING CONFIGURATION

Modules per box:	25 pieces
Modules per 53' trailer:	750 pieces



HELIENEGOMBLK\_IFD\_1609\_1500V



## Built for solar's toughest roofs.

IronRidge builds the strongest mounting system for pitched roofs in solar. Our components have been tested to the limit and proven in extreme environments, including Florida's high-velocity hurricane zones.

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 25-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

**Bonding Hardware**



Bond and attach XR Rails to roof attachments.

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

**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 3/4" or 1" conduit

**Knockout Tile**



Replace tiles and ensure superior waterproofing.

- Flat, S, & W tile profiles
- Form-fit compression seal
- Single-lag universal base

**All Tile Hook**



Mount on tile roofs with a simple, adjustable hook.

- Works on flat, S, & W tiles
- Single-socket installation
- Optional deck flashing

**Resources**



**Design Assistant**

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

Go to [IronRidge.com/design](https://IronRidge.com/design)

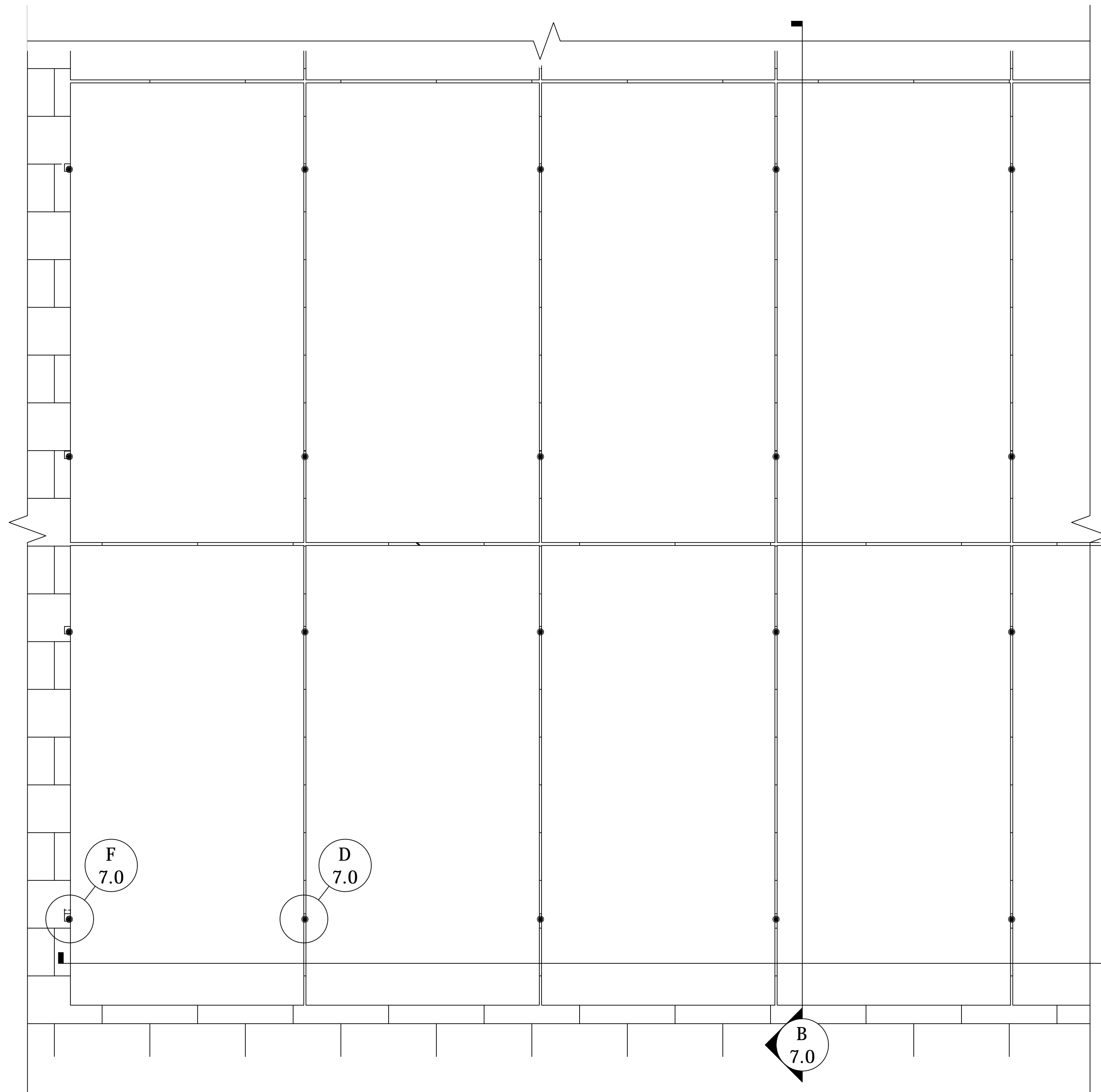


**Endorsed by FL Building Commission**

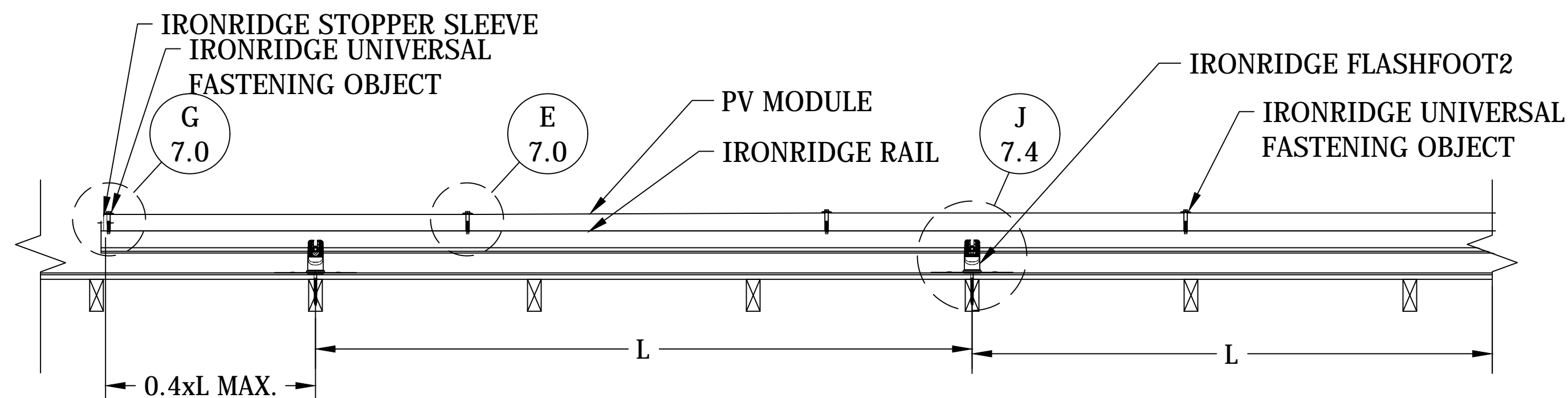
Flush Mount is the first mounting system to receive Florida Product approval for 2017 Florida Building Code compliance.

Learn More at [bit.ly/floridacert](https://bit.ly/floridacert)

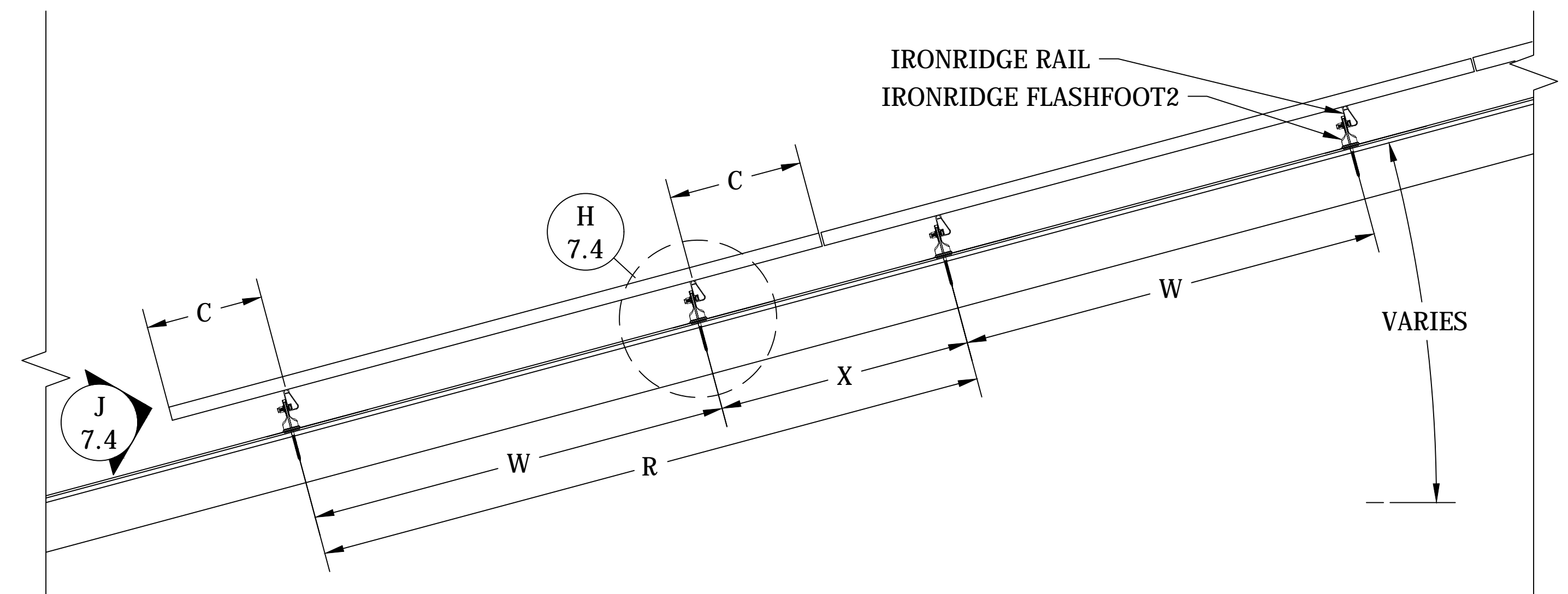




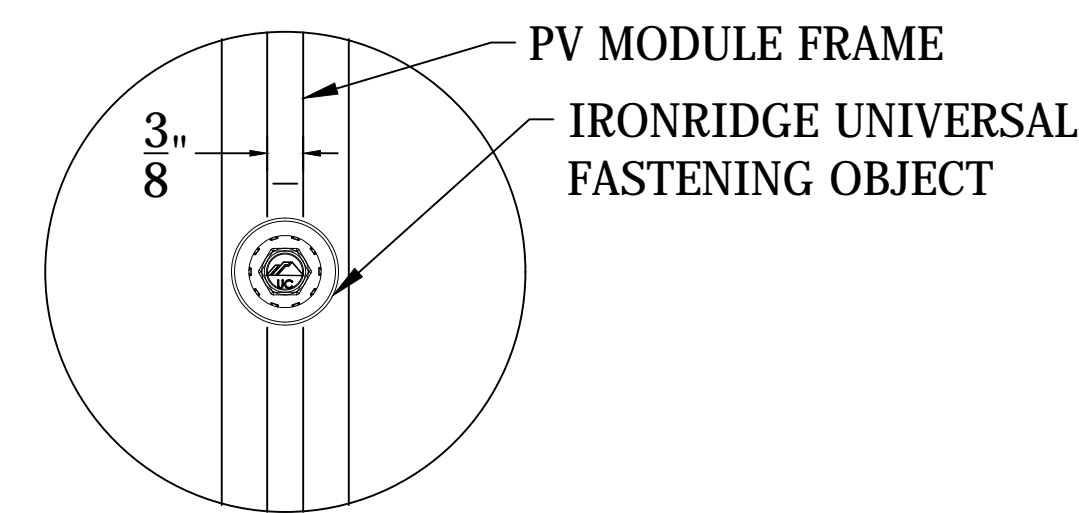
**A** PLAN VIEW, FLASHFOOT2 MOUNT, PORTRAIT MODULE  
Scale: 1"=1'-0"



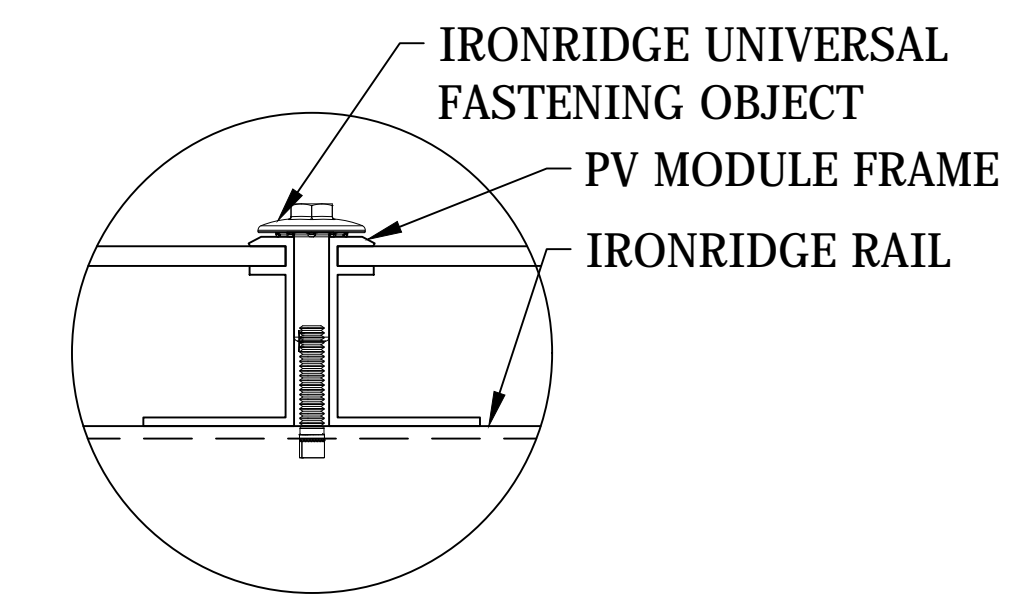
**C** FRONT VIEW, FLASHFOOT2 MOUNT, PORTRAIT MODULE  
Scale: 1"=1'-0"



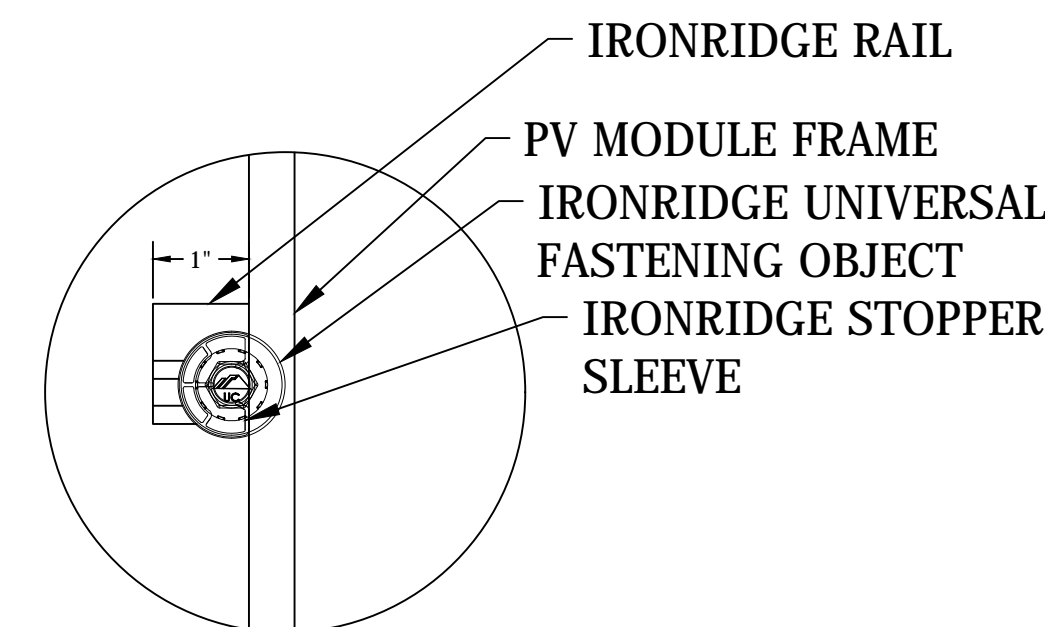
**B** SIDE VIEW, FLASHFOOT2 MOUNT, PORTRAIT MODULE  
Scale: 1"=1'-0"



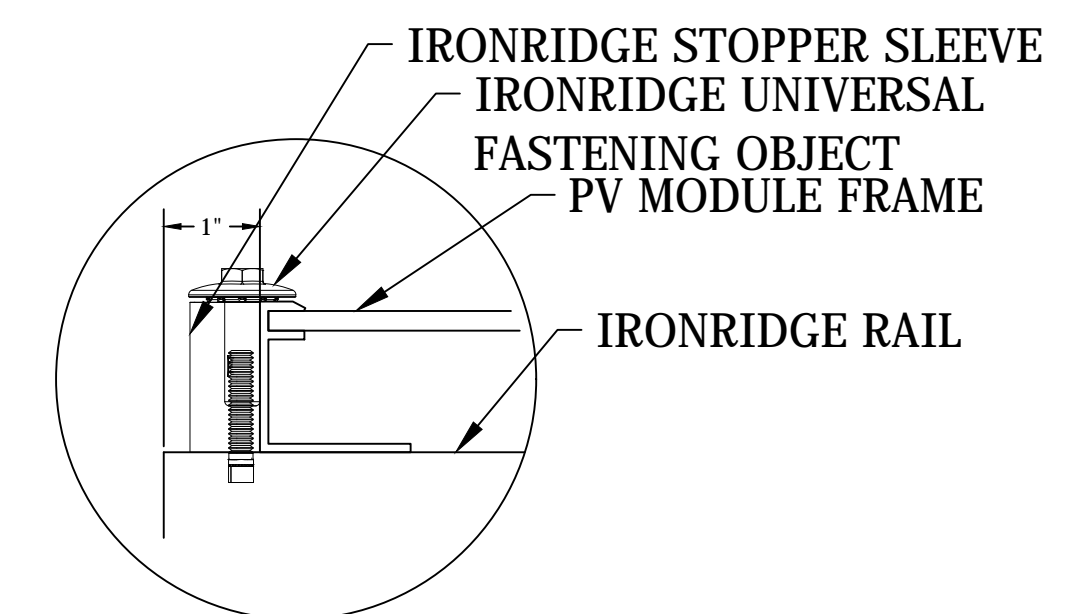
**D** DETAIL, MID CLAMP PLAN  
Scale: 6"=1'-0"



**E** DETAIL, MID CLAMP FRONT  
Scale: 6"=1'-0"



**F** DETAIL, END CLAMP (UFO) PLAN  
Scale: 6"=1'-0"



**G** DETAIL, END CLAMP (UFO) FRONT  
Scale: 6"=1'-0"

CLIENT NAME	IRONRIDGE
PROJECT NAME	SLOPED ROOF MOUNT SYSTEM
PROJECT ADDRESS	
SYSTEM KW DC	

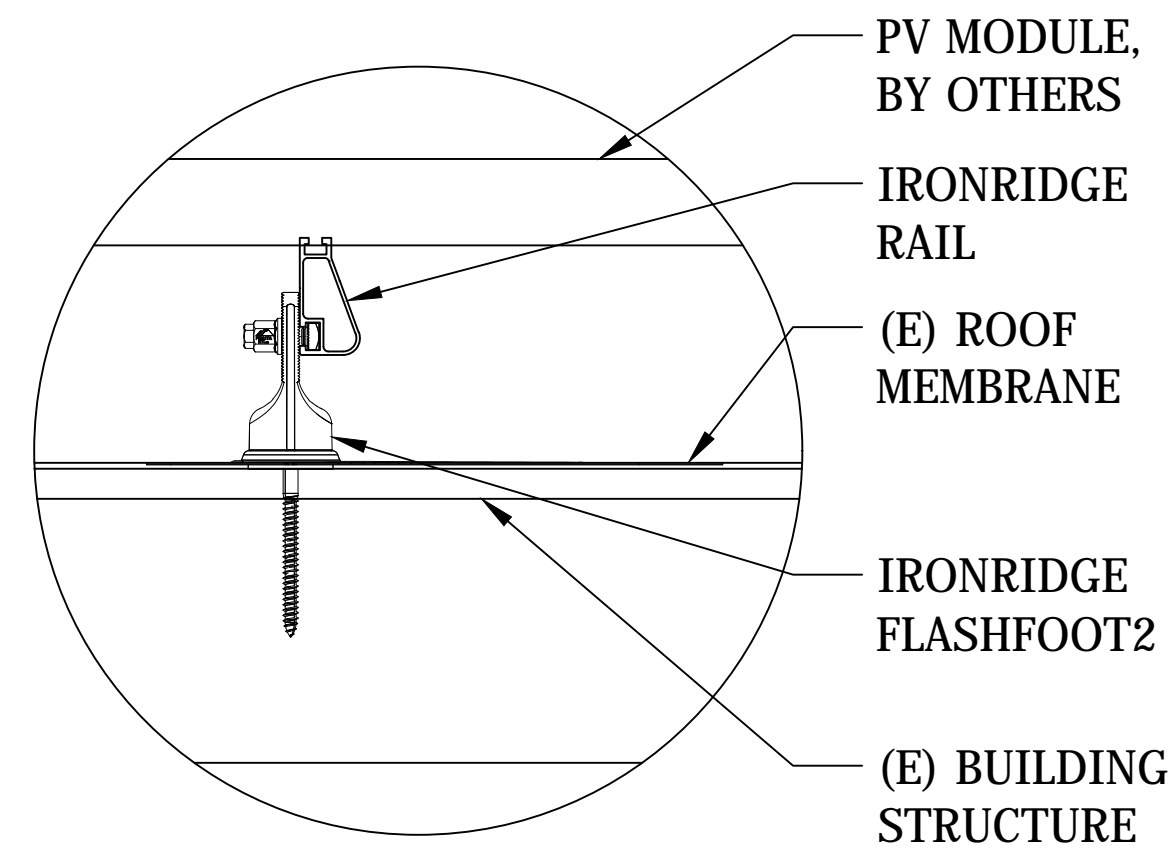
WIND SPEED, MPH	
SNOW LOAD, PSF	
EXPOSURE CAT	
RISK CAT	
MODULE TYPE	72-CELL, GENERIC
MODULE W DC	
MODULE QTY	

APPROVAL STATUS

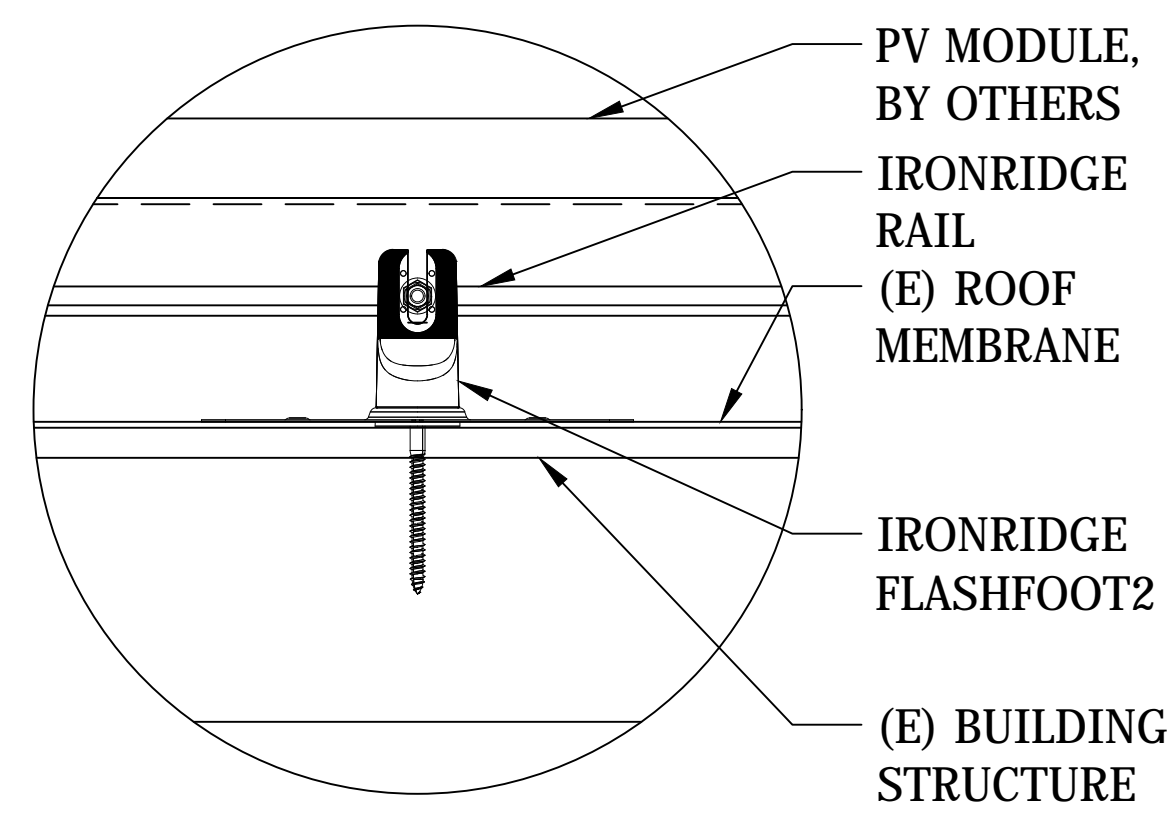
NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE

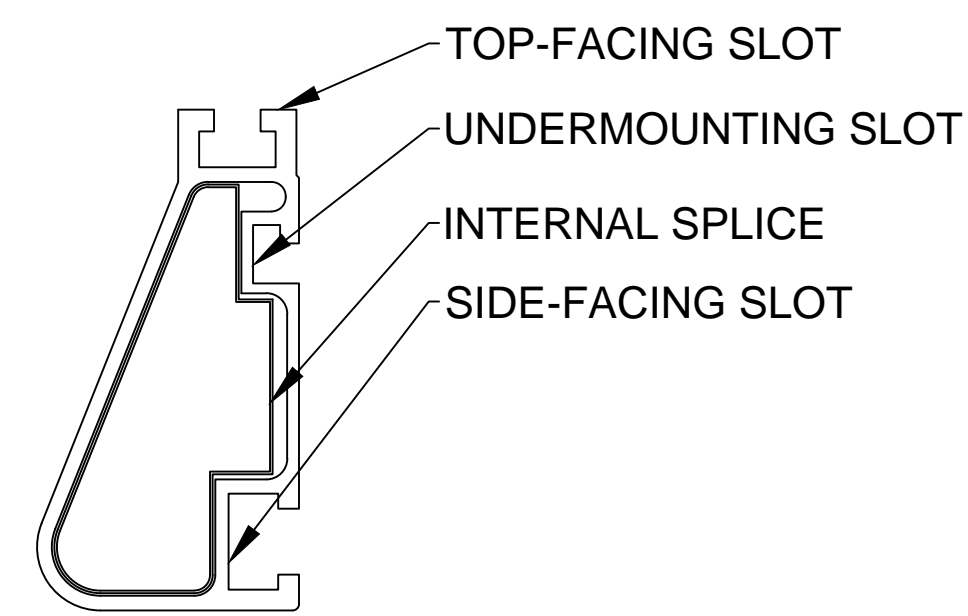
SHEET NAME	
SLOPED ROOF PV SYSTEM DETAILS: FLASHFOOT2 (UFO)	
JOB NO.	3.1 SR
ISSUE DATE	DEC 2018
SHEET NO.	<b>IR 7.0</b>
SHEET SIZE	24X36



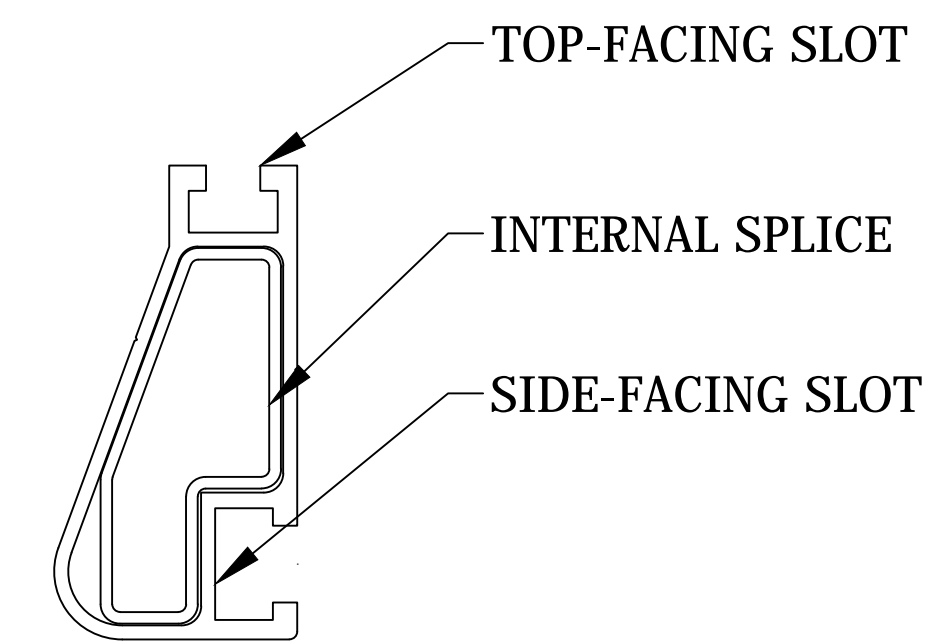
H FLASHFOOT2 DETAIL  
Scale: 3"=1'-0"



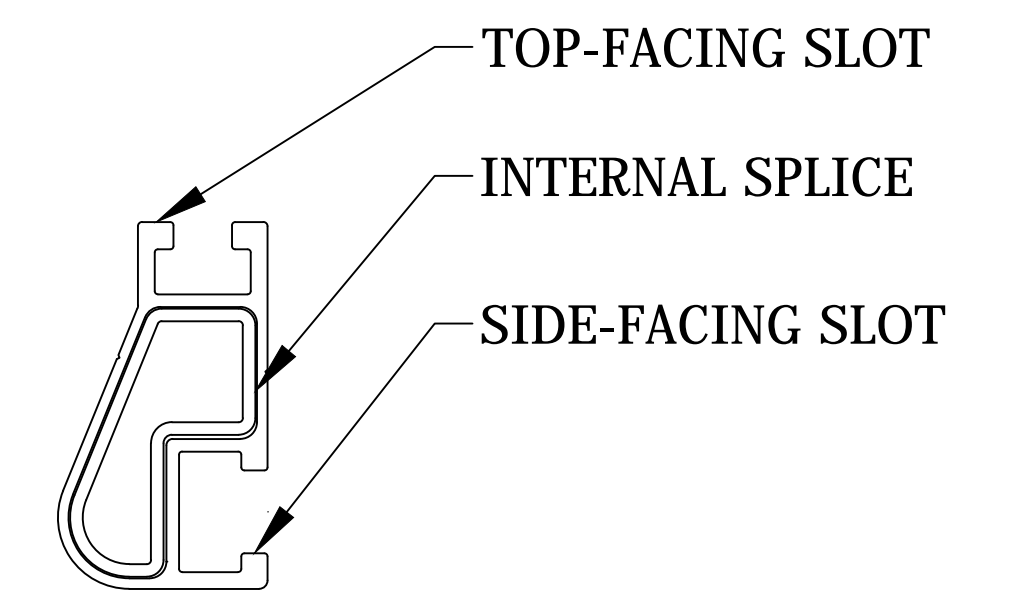
J FLASHFOOT2 DETAIL  
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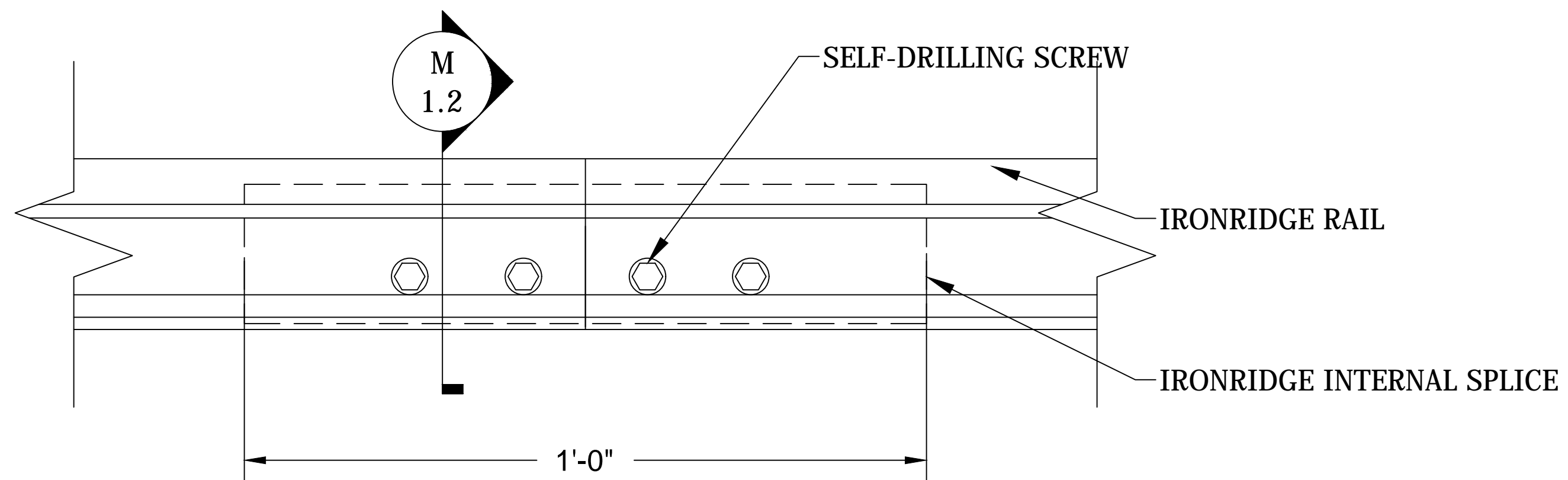
M DETAIL, SPLICE, XR1000  
1'-0"=1'-0"



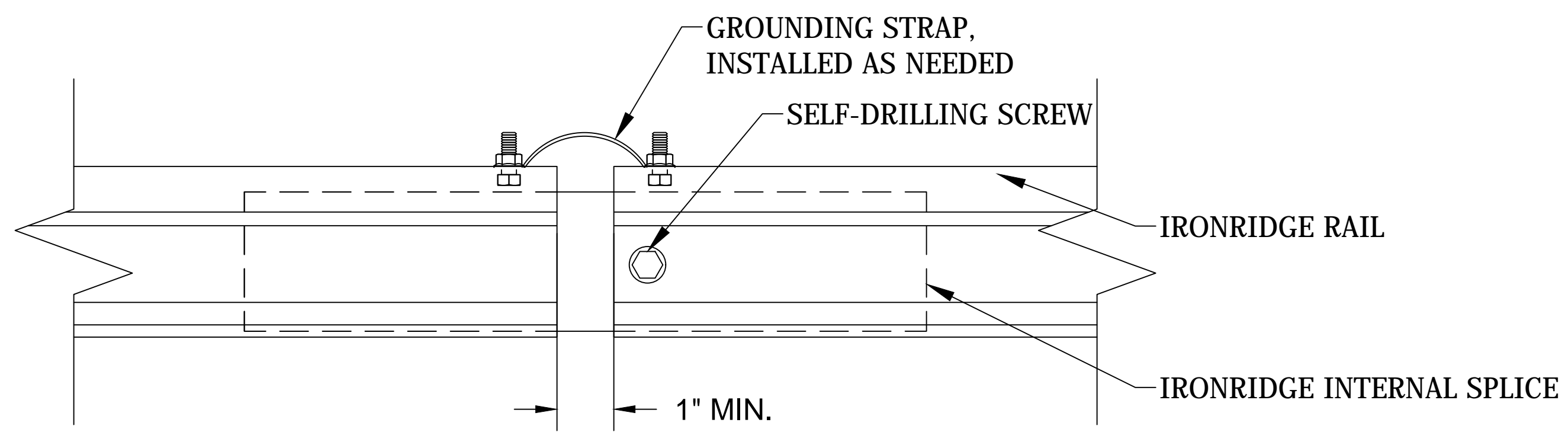
N DETAIL, SPLICE, XR100  
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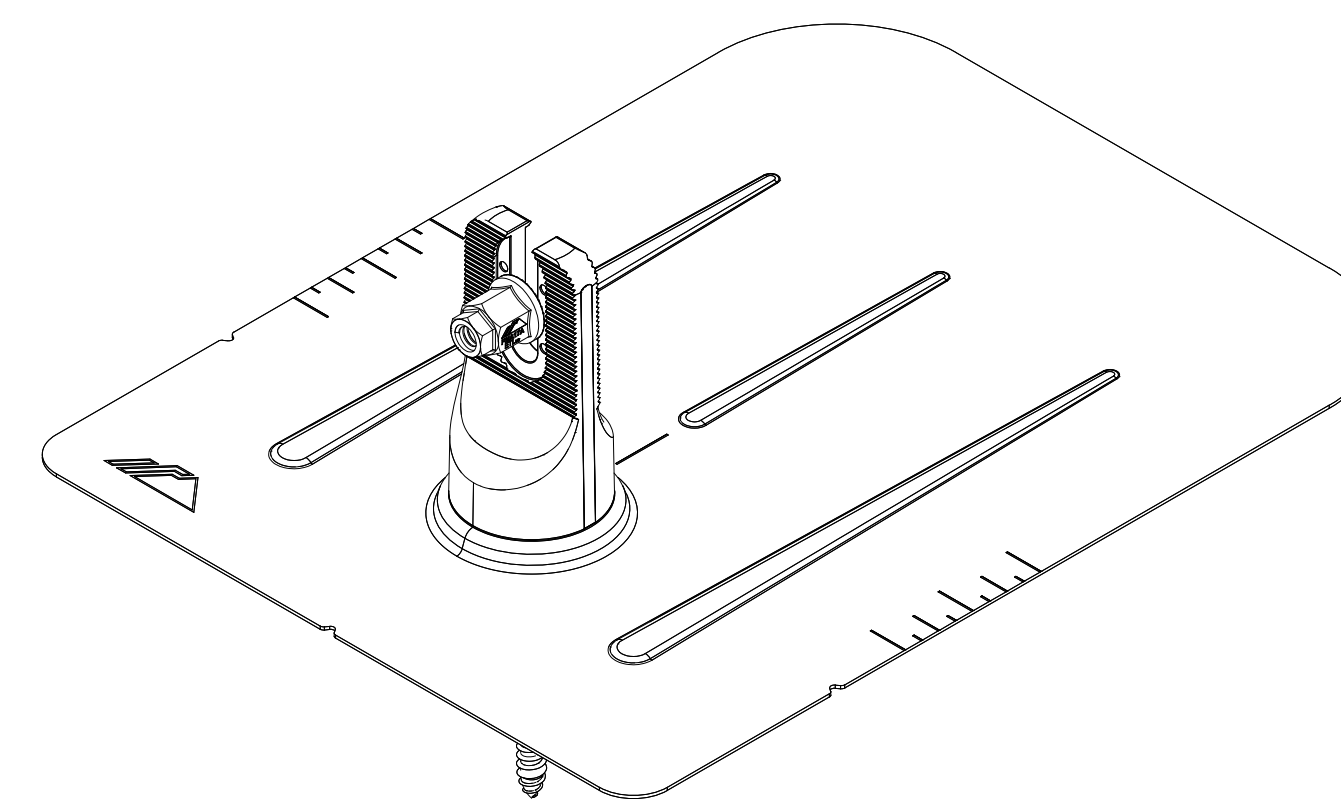
O DETAIL, SPLICE, XR10  
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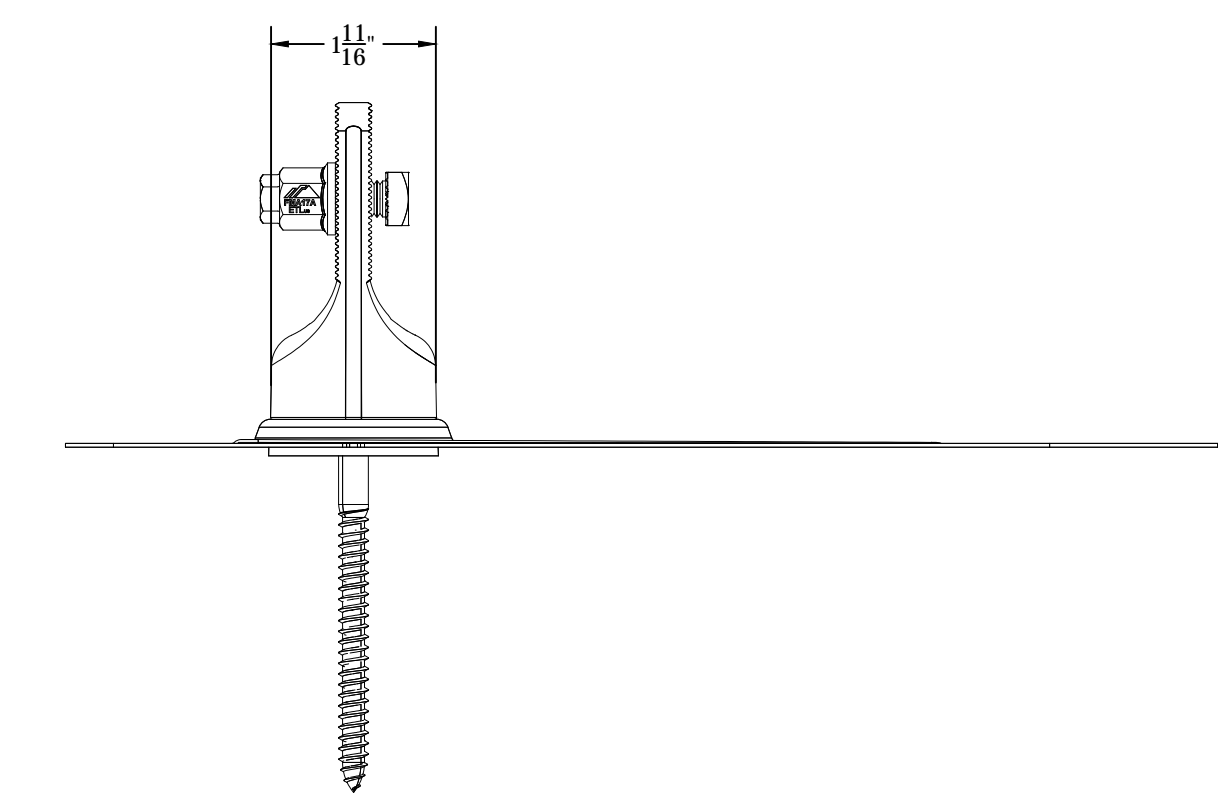
K DETAIL, SPLICE CONNECTION, XR1000  
6"=1'-0"



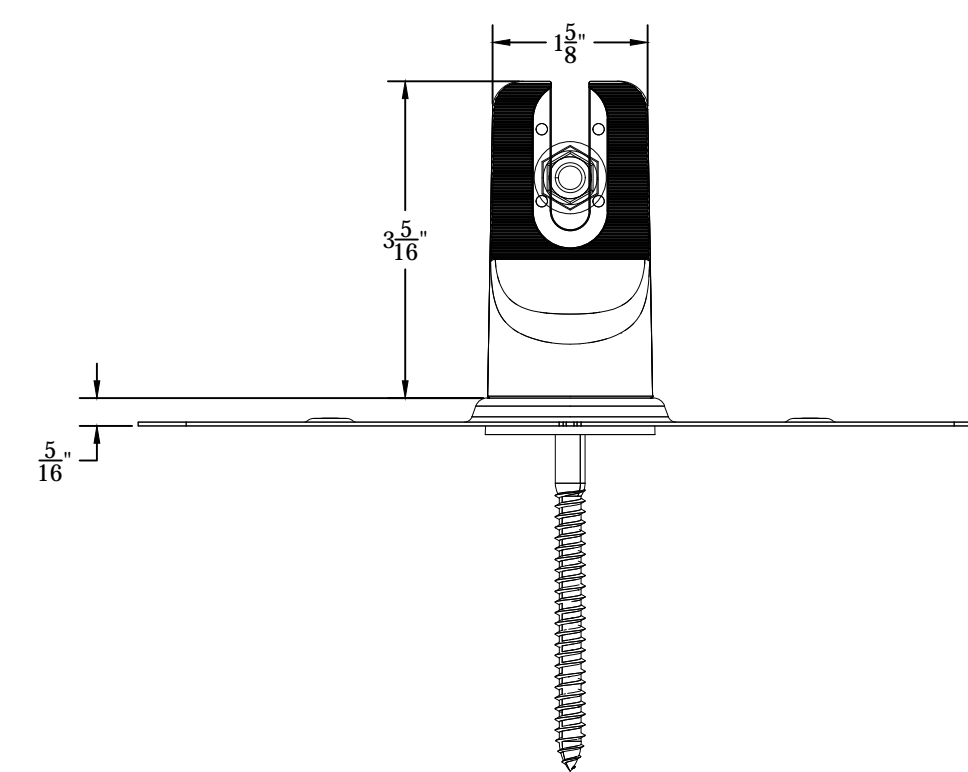
L DETAIL, EXPANSION JOINT CONNECTION, XR1000  
6"=1'-0"



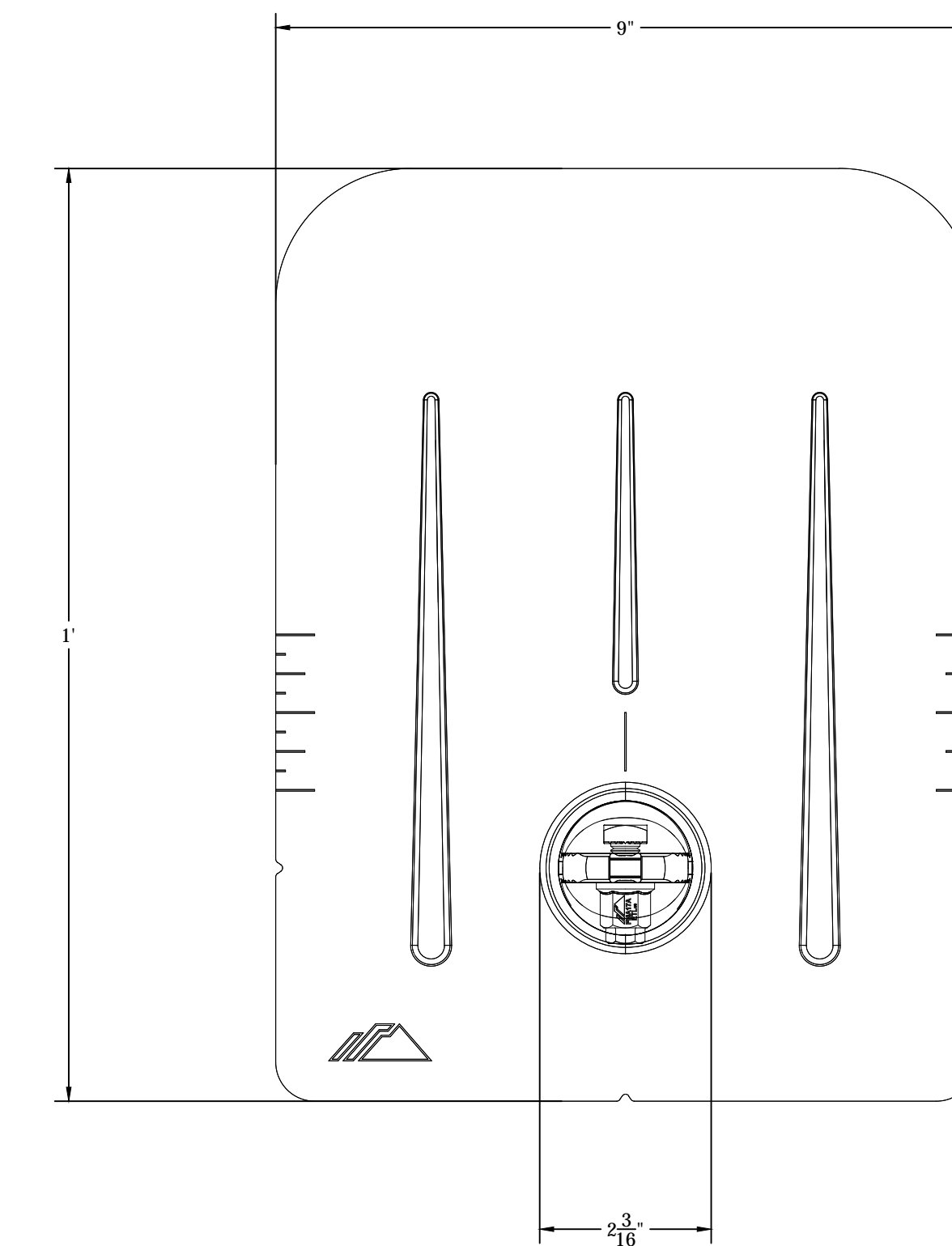
Q IRONRIDGE FLASHFOOT2



P IRONRIDGE FLASHFOOT2, SIDE VIEW



R IRONRIDGE FLASHFOOT2, FRONT VIEW

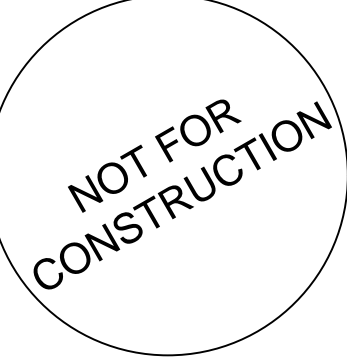


S IRONRIDGE FLASHFOOT2, PLAN VIEW

CLIENT NAME	IRONRIDGE
PROJECT NAME	SLOPED ROOF MOUNT SYSTEM
PROJECT ADDRESS	
SYSTEM KW DC	

WIND SPEED, MPH	
SNOW LOAD, PSF	
EXPOSURE CAT	
RISK CAT	72-CELL, GENERIC
MODULE TYPE	
MODULE W DC	
MODULE QTY	

APPROVAL STATUS



REV	DESCRIPTION	DATE

SHEET NAME

SLOPED ROOF PV SYSTEM  
DETAILS:  
FLASHFOOT2

JOB NO.	3.1 SR
ISSUE DATE	DEC 2018
SHEET NO.	IR 7.4
SHEET SIZE	24X36