

IRONRIDGE XR FLUSH MOUNT PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT GF-1 L-FOOT ROOF ATTACHMENTS

GENERAL NOTES:

- 1. THIS SYSTEM MEETS ALL OF THE REQUIREMENTS OF THE 8TH EDITION (2023) FLORIDA BUILDING CODE, INCLUDING THE HVHZ PROVISIONS.
- 2. THIS SYSTEM HAS BEEN TESTED PER TAS 100(A) AND ASTM D7147. IT IS NOT A PART OF THE BUILDING ENVELOPE, AND IMPACT RESISTANCE IS NOT REQUIRED.
- 3. THIS SYSTEM SHALL BE INSTALLED PER THE IRONRIDGE XR FLUSH MOUNT INSTALLATION MANUAL.
- 4. THE PV PANELS ARE BY OTHERS AND ARE NOT A PART OF THIS APPROVAL.
- 5. RAIL SPACING TO BE AS SPECIFIED BY THE PV PANEL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6. THE DESIGN OF THE ROOF SUBSTRATE IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD OR OTHER SPECIALTY ENGINEER, AND IS NOT A PART OF THIS APPROVAL. THE SUBSTRATE MUST SAFELY TRANSMIT THE LOADS APPLIED TO THIS SYSTEM TO THE BUILDING STRUCTURE.
- 7. FIRE RATINGS OR FIRE RESISTANCE IS NOT A PART OF THIS REVIEW.
- 8. ALL ANCHORS SECURING THE SYSTEM TO PRESSURE TREATED WOOD SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE CHEMICALS IN THE WOOD.
- 9. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE PROTECTED PER FBC REQUIREMENTS.
- 10. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. Cd=1.6 WAS USED FOR WOOD SCREWS ONLY.

WINDLOAD NOTES:

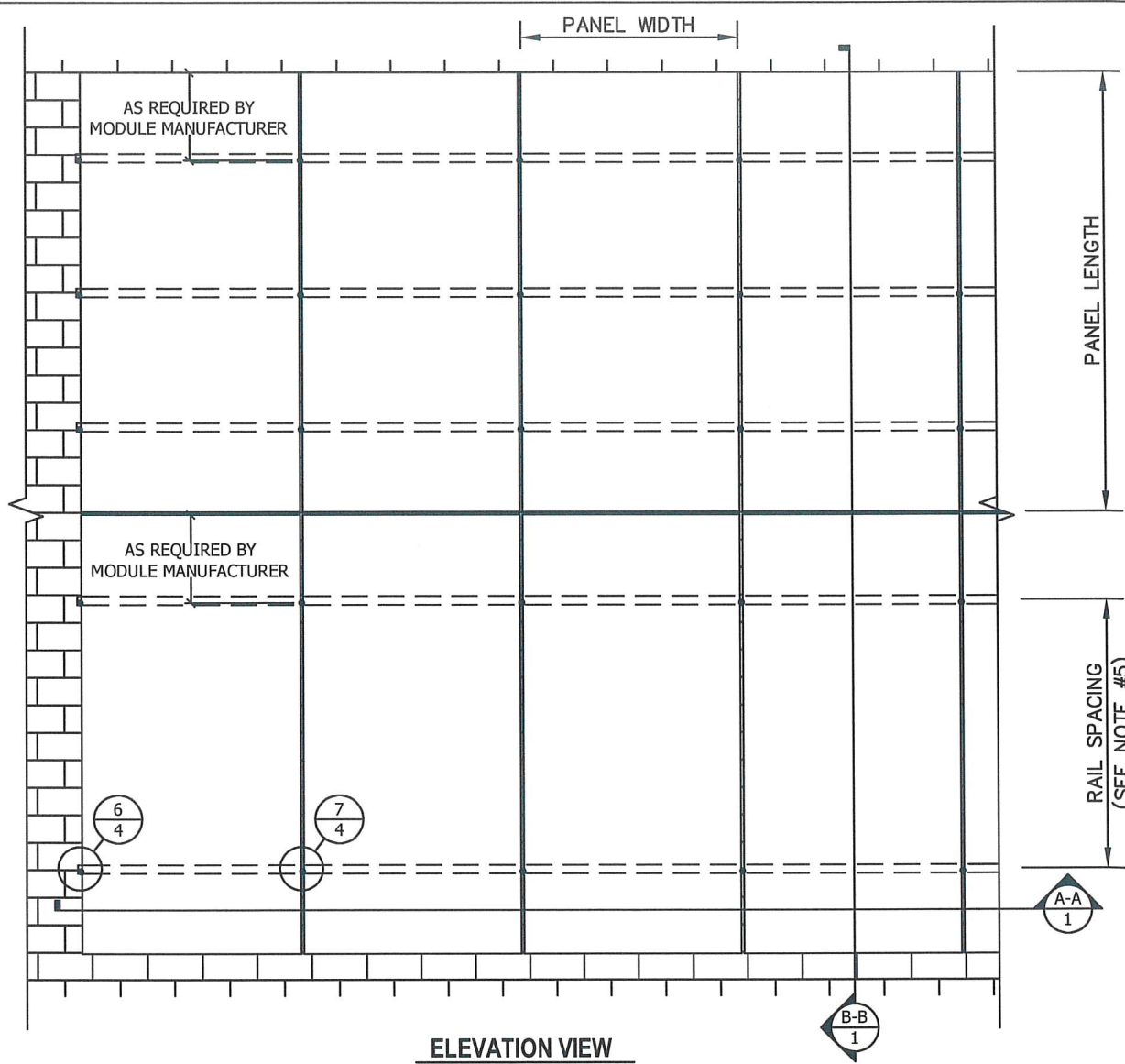
- 1. DESIGN WINDLOADS MUST BE CALCULATED BY A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT FOR EACH PROJECT, PER ASCE 7-22 SECTION 29.4.4. DESIGN (ASD) WINDLOADS MAY NOT EXCEED THE ALLOWABLE WINDLOADS SHOWN IN THIS CHART.
- 2. PANEL SYSTEM LOCATION, HEIGHT, AND SPACING MUST MEET THE REQUIREMENTS OF ASCE 7-22 SECTION 29.4.4. WINDLOADS ACT NORMAL TO THE SURFACE OF THE PV PANEL SYSTEM.
- 3. OTHER CONFIGURATIONS REQUIRE PROJECT SPECIFIC ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT.
- 4. ALLOWABLE (ASD) WINDLOADS ARE BASED ON ANCHORING IN WOOD RAFTERS WITH S.G.=0.45 MIN.

ALLOWABLE WINDLOADS

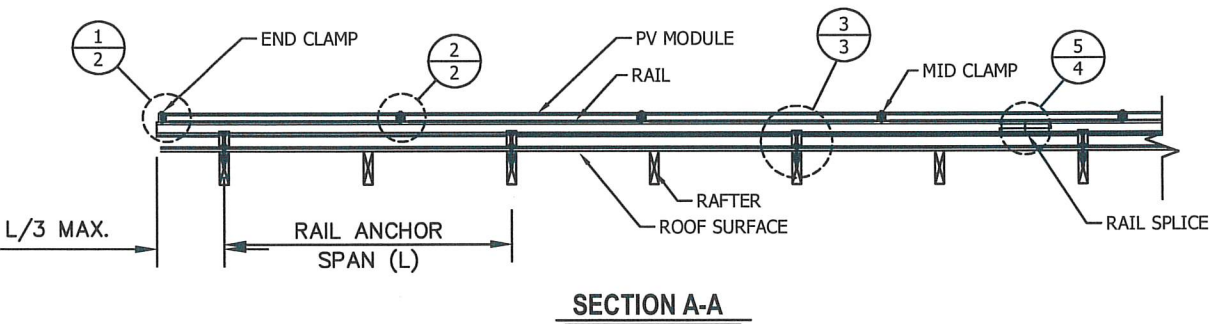
TWO RAIL SYSTEM						THREE RAIL SYSTEM					
PANEL WIDTH (in)	PANEL LENGTH (in)	ANCHOR SPAN (L) (in)	XR-10 RAIL (+/- psf)	XR-100 RAIL (+/- psf)	XR-1000 RAIL (+/- psf)	PANEL WIDTH (in)	PANEL LENGTH (in)	ANCHOR SPAN (L) (in)	XR-10 RAIL (+/- psf)	XR-100 RAIL (+/- psf)	XR-1000 RAIL (+/- psf)
45	67 1/2	16	90	90	90	45	67 1/2	16	135.0	135.0	135.0
		24	65.4	90	90			24	98.1	135.0	135.0
		32	56.1	90	90			32	84.2	135.0	135.0
		36	49.9	90	90			36	74.9	135.0	135.0
		48	37.4	85.6	90			48	56.1	128.4	135.0
		64	28.1	64.2	68.4			64	42.2	96.3	102.6
		72	23.7	54	59.5			72	35.6	81.0	89.3
	80	16	75.9	75.9	75.9		80	16	113.9	113.9	113.9
		24	55.2	75.9	75.9			24	82.8	113.9	113.9
		32	47.3	75.9	75.9			32	71.0	113.9	113.9
		36	42.1	75.9	75.9			36	63.2	113.9	113.9
		48	31.6	72.2	75.9			48	47.4	108.3	113.9
		64	23.7	54.2	57.7			64	35.6	81.3	86.6
		72	20	45.6	50.2			72	30.0	68.4	75.3
	86	16	70.6	70.6	70.6		86	16	105.9	105.9	105.9
		24	51.3	70.6	70.6			24	77.0	105.9	105.9
		32	44	70.6	70.6			32	66.0	105.9	105.9
		36	39.1	70.6	70.6			36	58.7	105.9	105.9
		48	29.4	67.2	70.6			48	44.1	100.8	105.9
		64	22	50.4	53.7			64	33.0	75.6	80.6
		72	18.6	42.4	46.7			72	27.9	63.6	70.1
	92 1/2	16	65.7	65.7	65.7		92 1/2	16	98.6	98.6	98.6
		24	47.7	65.7	65.7			24	71.6	98.6	98.6
		32	40.9	65.7	65.7			32	61.4	98.6	98.6
		36	36.4	65.7	65.7			36	54.6	98.6	98.6
		48	27.3	62.5	65.7			48	41.0	93.8	98.6
		64	20.5	46.9	49.9			64	30.8	70.4	74.9
		72	17.3	39.4	43.4			72	26.0	59.1	65.1
LANDSCAPE LAYOUT:											
45	92 1/2	16	65.7	65.7	65.7	45	92 1/2	16	98.6	98.6	98.6
		24	52.9	65.7	65.7			24	79.4	98.6	98.6
		32	40.8	65.7	65.7			32	61.2	98.6	98.6
		36	36	65.7	65.7			36	54.0	98.6	98.6
		48	24.2	55	65.7			48	36.3	82.5	98.6
		64	20.5	46.9	65.7			64	30.8	70.4	98.6
		72	18.2	41.7	65.7			72	27.3	62.6	98.6

THREE RAIL SYSTEM:

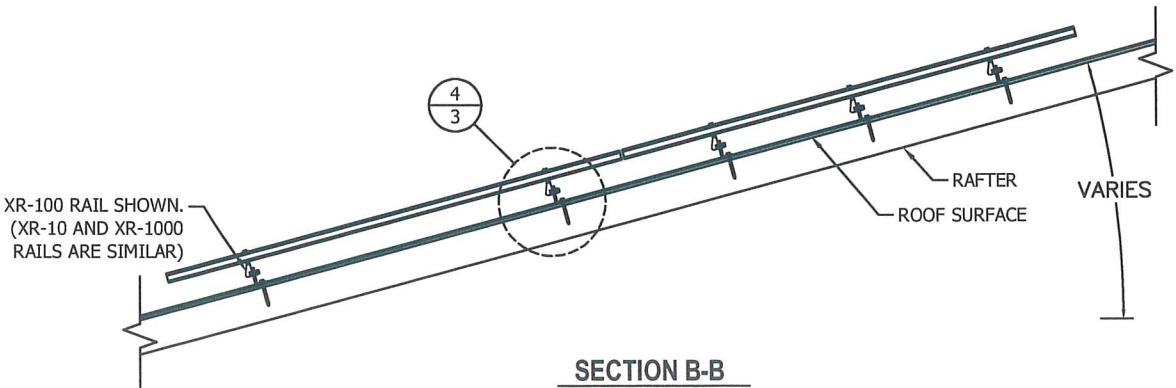
TWO RAIL SYSTEM:



ELEVATION VIEW



SECTION A-A



SECTION B-B

IRONRIDGE

DWG: XR-GF1
SHEET: 1/8

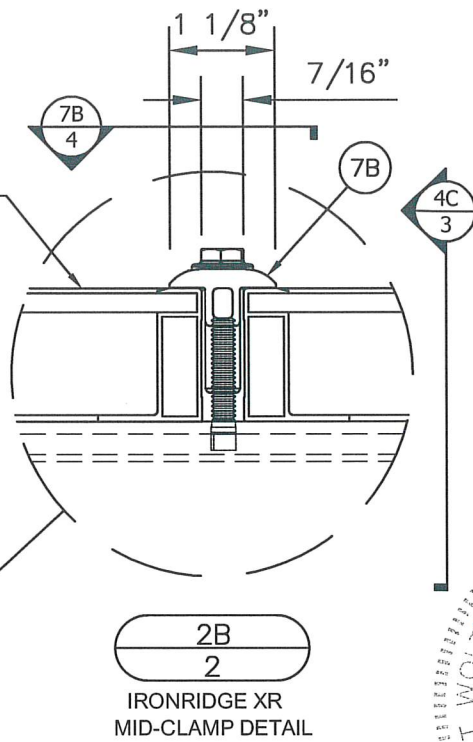
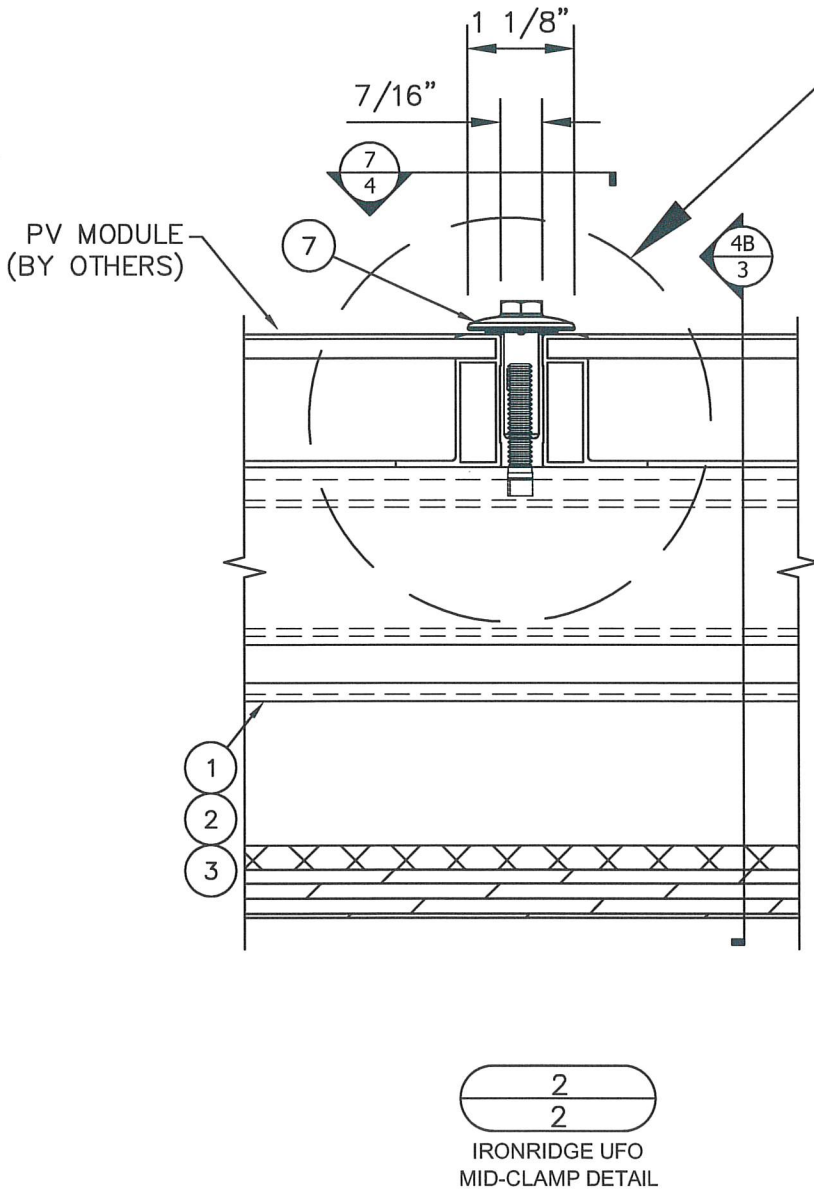
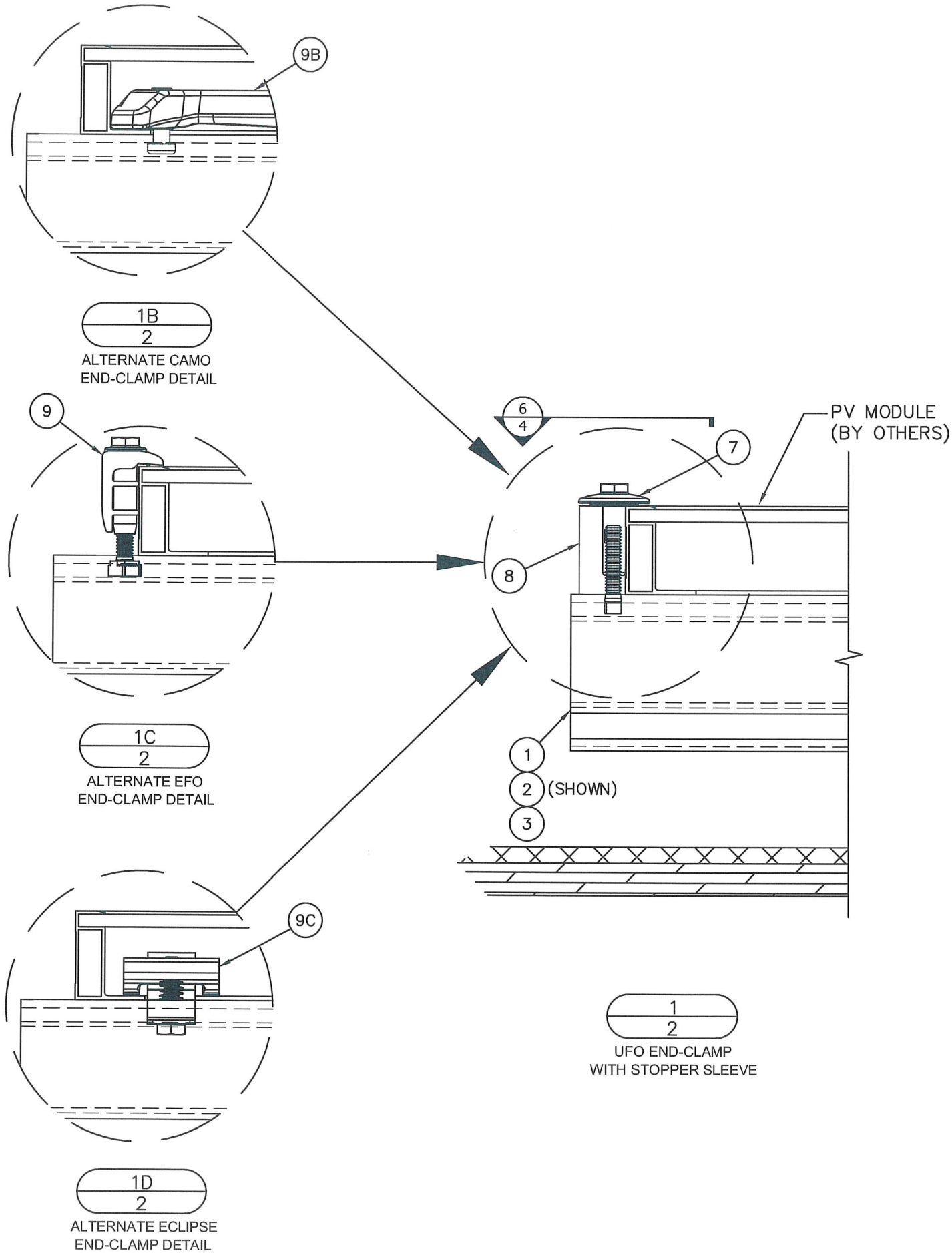
SCOTT WOLTERS
FL PE# 62354

WOLTERS ENGINEERING
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412
(561) 225-1982

STATE OF FLORIDA
AUG 22 2025
PROFESSIONAL ENGINEER

REV# 8/22/25
DATE
PRINTS ISSUED FOR

IRONRIDGE XR FLUSH MOUNT PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT GF-1 L-FOOT ROOF ATTACHMENTS



DATE	8/15/25
REV.#	1
PRINTS ISSUED FOR	1ST SUBMITTAL

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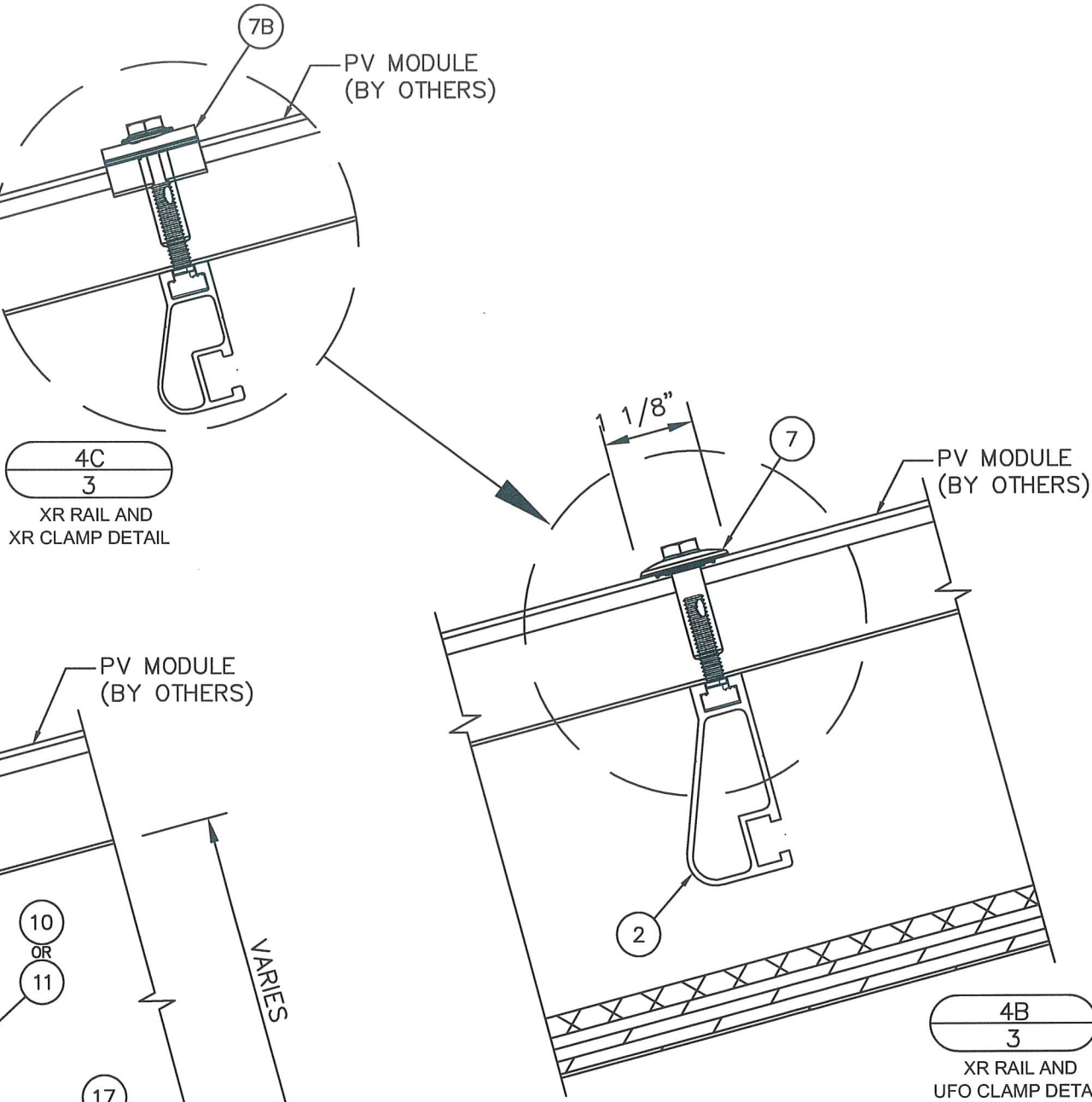
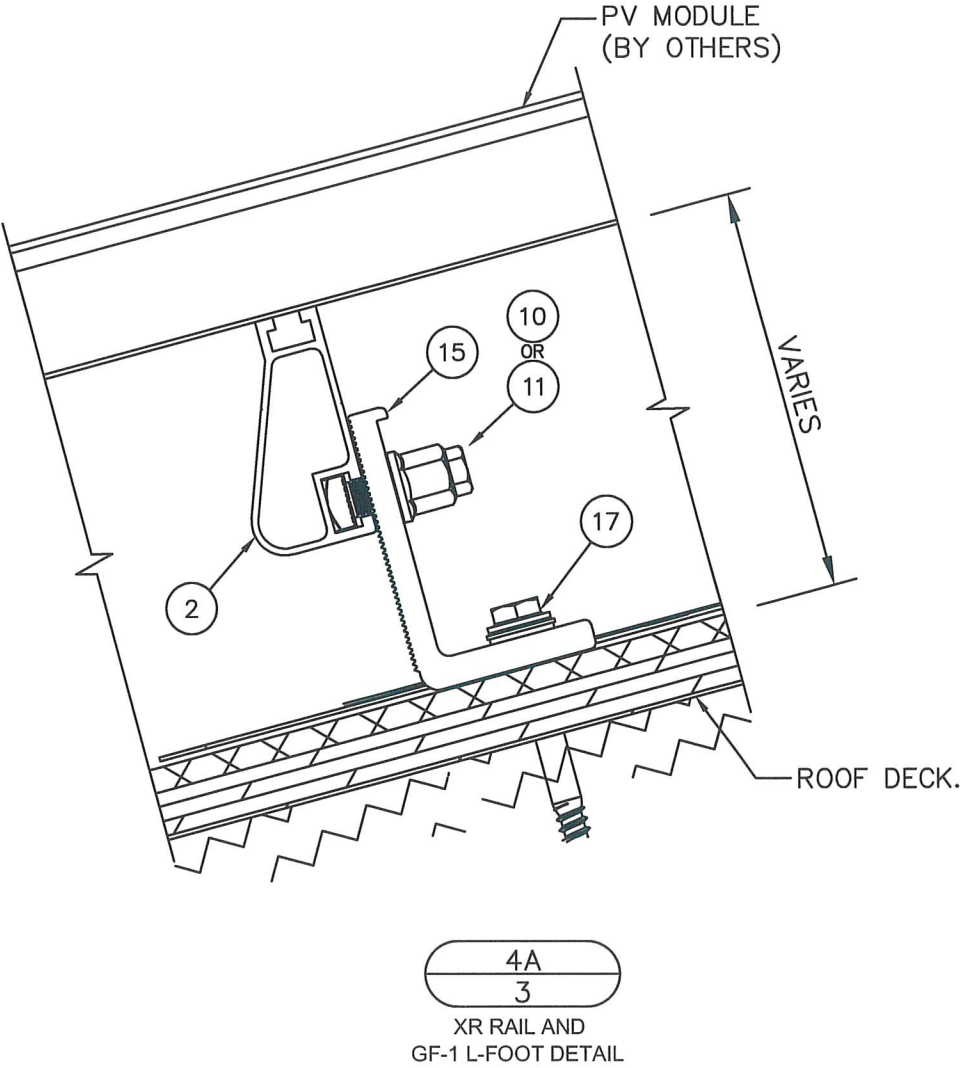
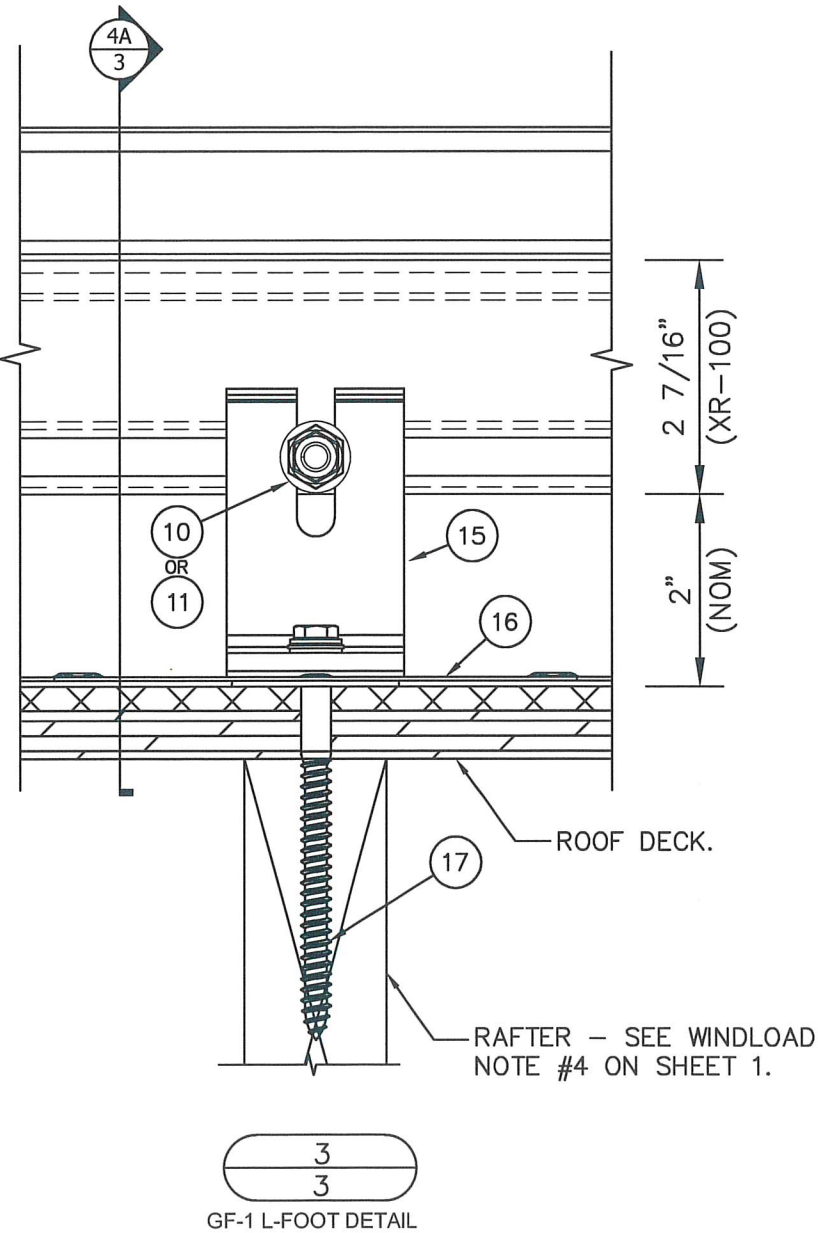
IRONRIDGE

28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545

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DWG: XR-GF1
SHEET: 2/8

IRONRIDGE XR FLUSH MOUNT PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT GF-1 L-FOOT ROOF ATTACHMENTS



XR-100 RAIL IS SHOWN.
XR-10 AND XR-1000
RAILS ARE SIMILAR.

DWG: **XR-GF1**
SHEET: **3/8**

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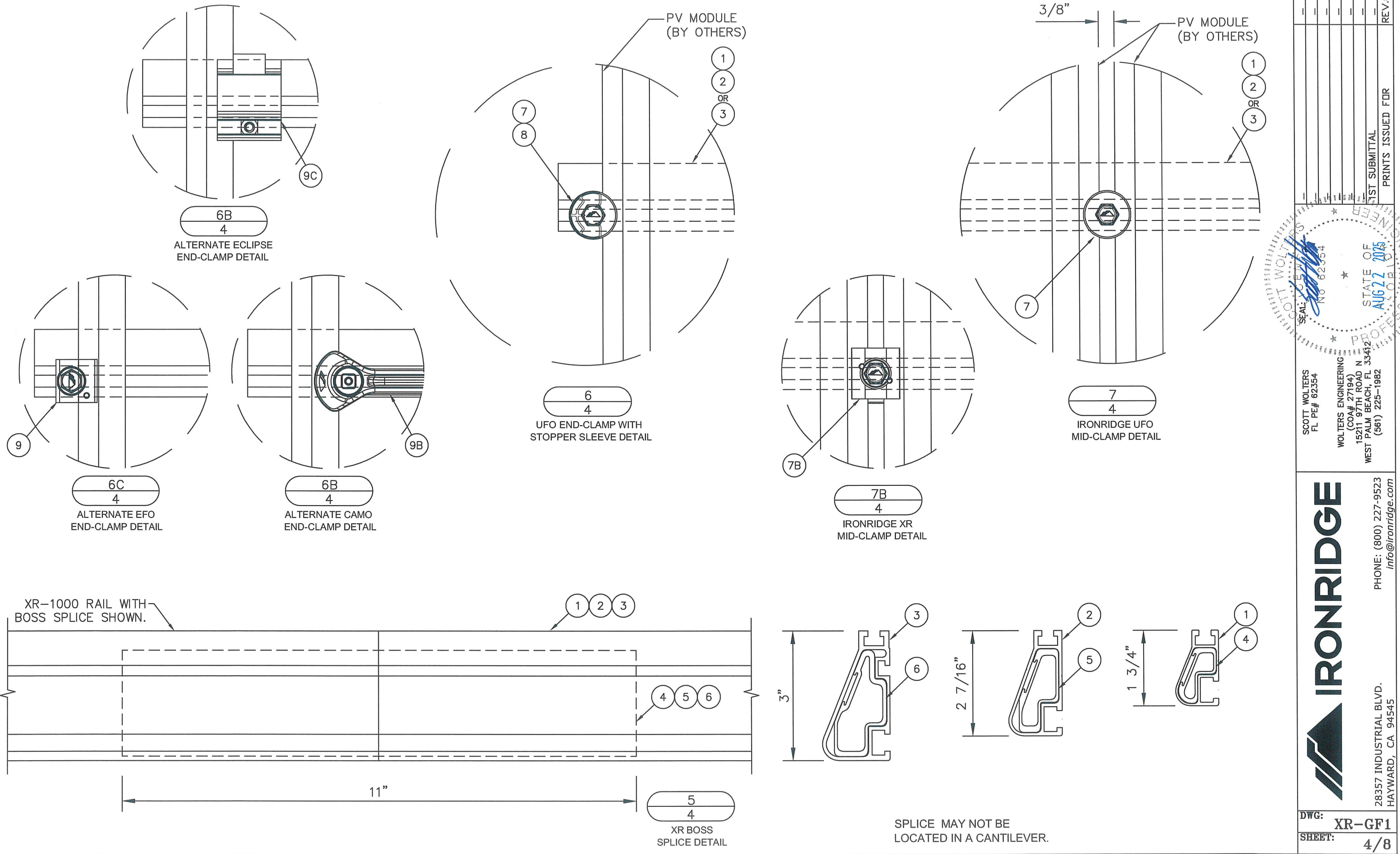
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SEAL: [Signature]
No. 62354

STATE OF FLORIDA
AUG 22 2015
PROFESSIONAL ENGINEER

PRINTS ISSUED FOR
REV#
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8/15/25

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STATE OF	
PROFESSIONAL ENGINEER	
SCOTT WOLTERS	
FL PE# 62354	
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DWG: **XR-GF1**
SHEET: **4/8**

IRONRIDGE XR FLUSH MOUNT PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT GF-1 L-FOOT ROOF ATTACHMENTS

BILL OF MATERIALS- QuickMount GF-1 L-Foot & Flashing		
#	DESCRIPTION	MATERIALS/NOTES
15	L-FOOT, GF-1, MILL OR BLACK	6000 SERIES AL
15B	L-FOOT, BLACK OR MILL, US PRODUCTION	6000 SERIES AL SAME AS LINE 1, PRODUCED DOMESTICALLY
16	GF-1 FLASHING ASSEMBLY, MILL OR BLACK	300 SERIES AL
16B	FLASHING ASSEMBLY, MILL OR BLACK, US PRODUCTION	300 SERIES AL SAME AS LINE 2, PRODUCED DOMESTICALLY
17	5/16" X 4" HEX HEAD LAG SCREW WITH EPDM WASHER	300 SERIES SS & EPDM

F1 = 1092 lb (max)
(Direct Tension/Uplift)

F2 = 961 lb (max)
(Shear-Strong Axis)

F3 = 800 lb (max)
(Shear-Weak Axis)

ANCHOR CAPACITY:
ANCHOR CAPACITIES LISTED ARE
PER FLPA# 29846.

**IRONRIDGE**

DWG: **XR-GF1**
SHEET: **5/8**

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SEAL: 

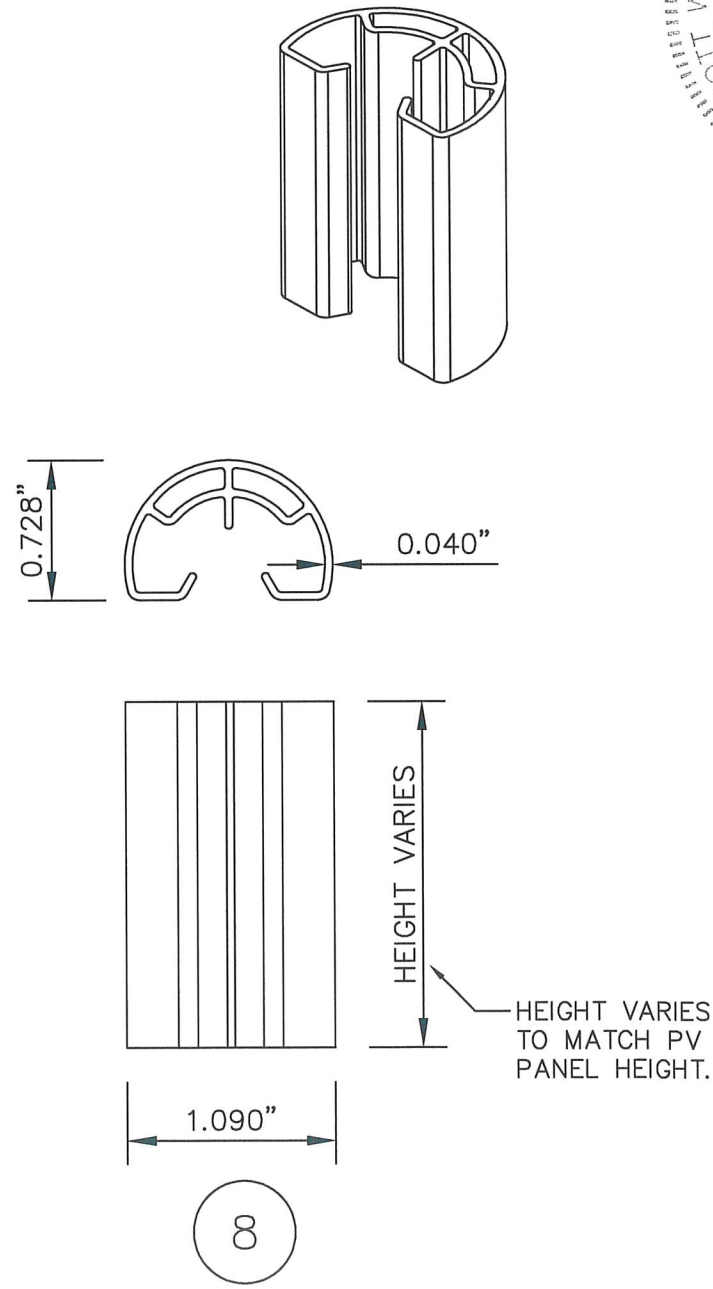
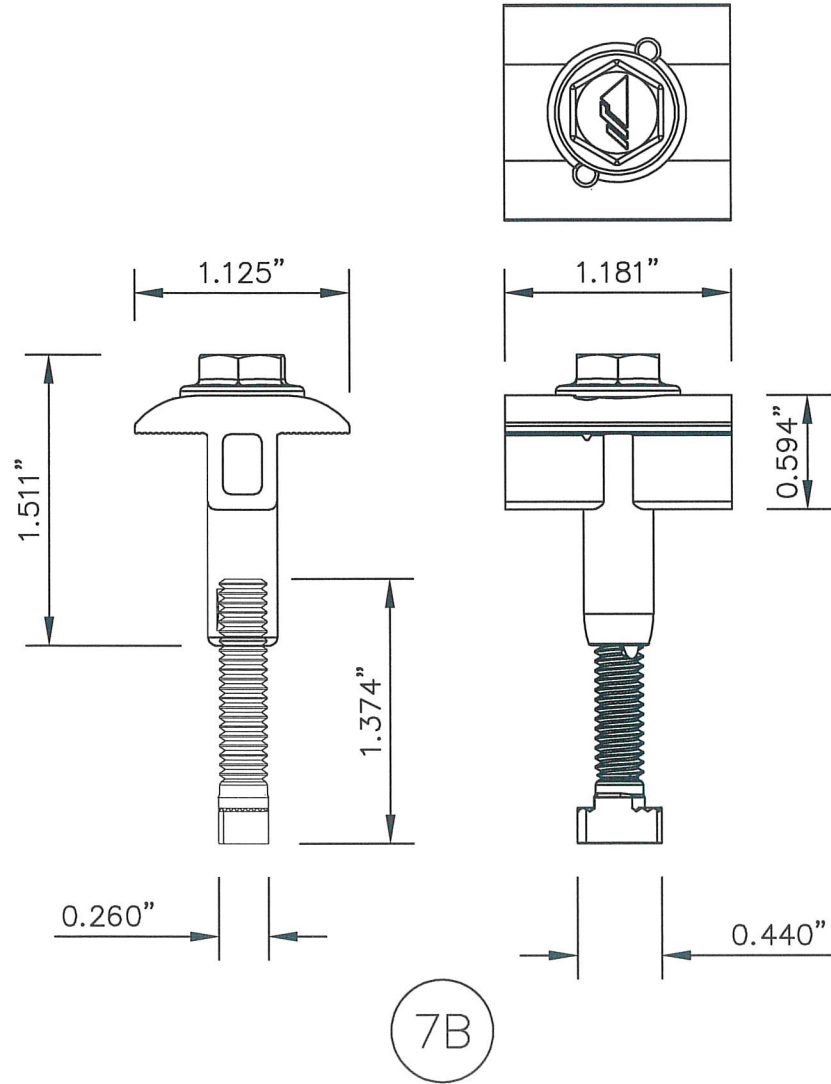
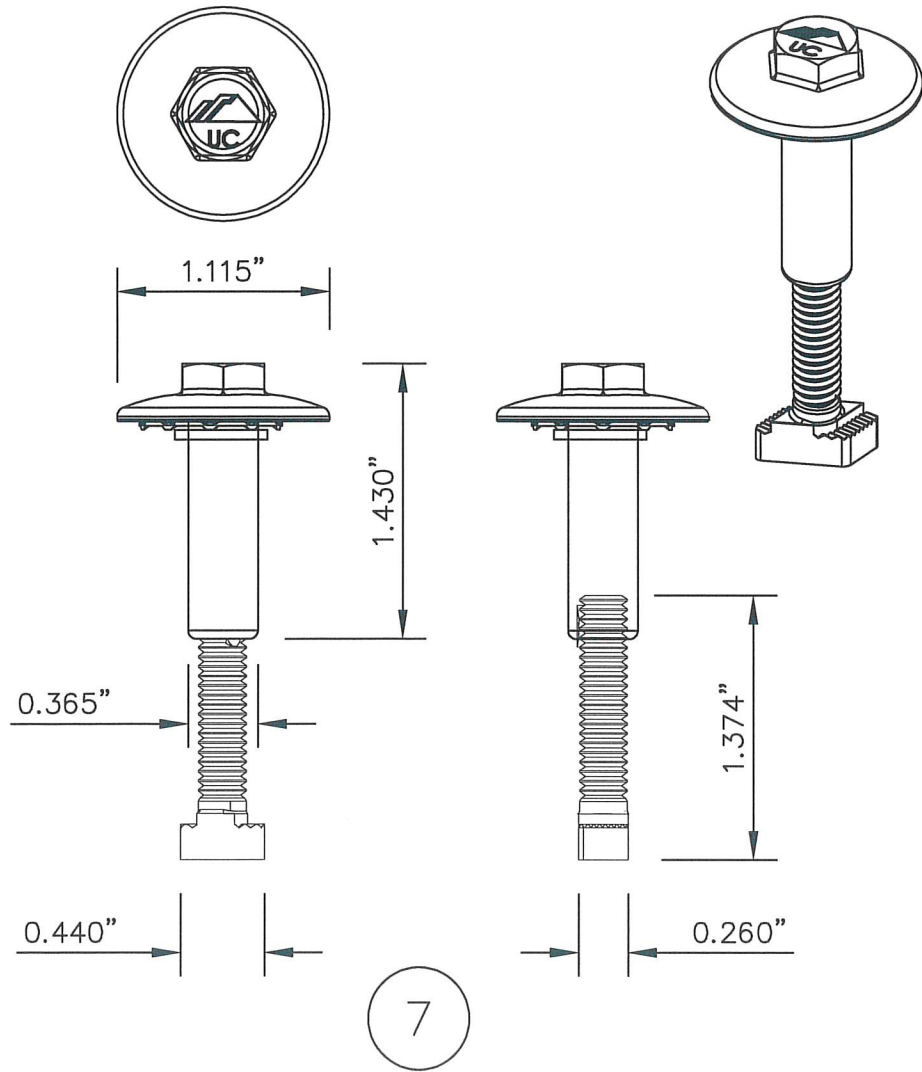
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1	8/15/25	1ST SUBMITTAL

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BILL OF MATERIALS- XR System		
#	DESCRIPTION	MATERIALS/NOTES
1	XR-10 RAIL	6000 SERIES AL
2	XR-100 RAIL	6000 SERIES AL
3	XR-1000 RAIL	6000 SERIES AL
4	XR-10 BOSS SPLICE	6000 SERIES AL & 300 SERIES SS
5	XR-100 BOSS SPLICE	6000 SERIES AL & 300 SERIES SS
6	XR-1000 BOSS SPLICE	6000 SERIES AL & 300 SERIES SS
7	UFO UNIVERSAL MODULE CLAMP	300 SERIES SS
7B	XR MID CLAMP (30-40MM), US PRODUCTION	6000 SERIES AL & 300 SERIES SS
8	STOPPER SLEEVE	6000 SERIES AL
9	EFO UNIVERSAL END CLAMP	300 SERIES AL & 300 SERIES SS
9B	CAMO HIDDEN END CAM	300 SERIES AL & 300 SERIES SS
9C	ECLIPSE HIDDEN END CLAMP ASSEMBLY	6000 SERIES AL & 300 SERIES SS
10	3/8" X 1" SQUARE BOLT BONDING HARDWARE	300 SERIES SS
11	3/8" X 1" T-BOLT BONDING HARDWARE	300 SERIES SS
12	XR-10 RAIL END CAP (OPTIONAL)	POLYMERIC
13	XR-100 RAIL END CAP (OPTIONAL)	POLYMERIC
14	XR-1000 RAIL END CAP (OPTIONAL)	POLYMERIC

FOR 6000 SERIES EXTRUSIONS F_{UT} =38 ksi min, F_y =34 ksi min.

FOR 300 SERIES STAINLESS STEEL F_y =65 ksi min.



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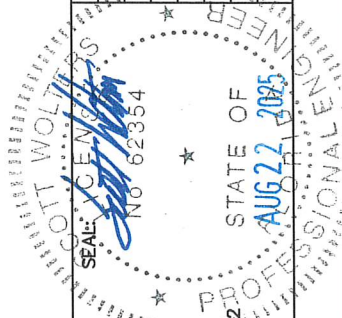
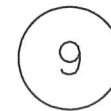
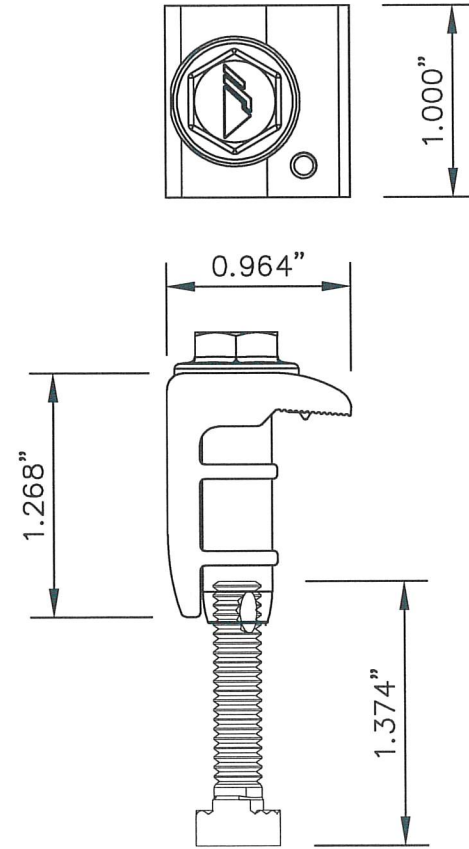
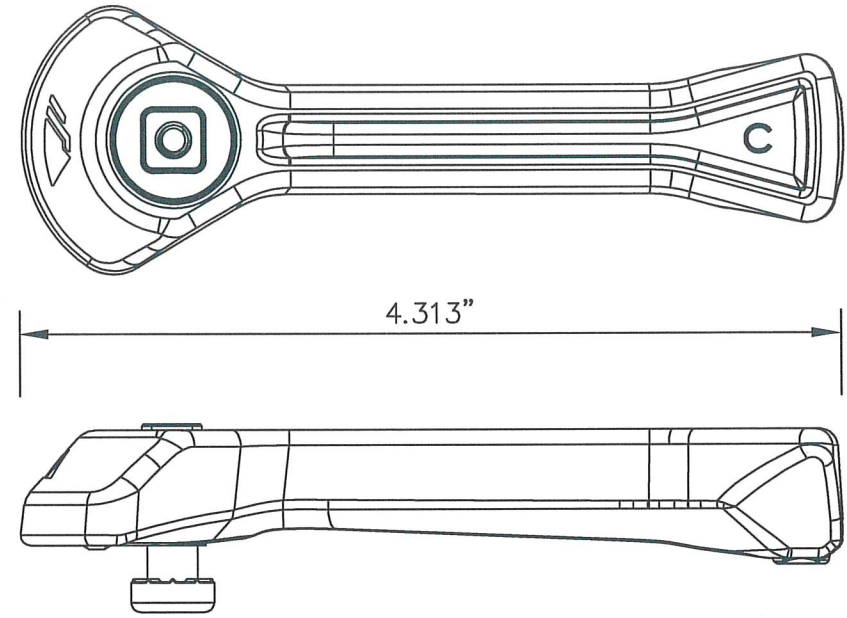
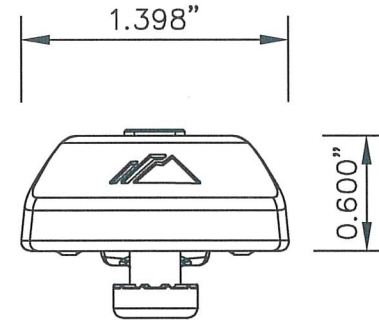
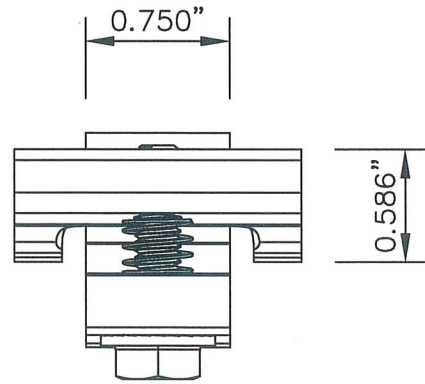
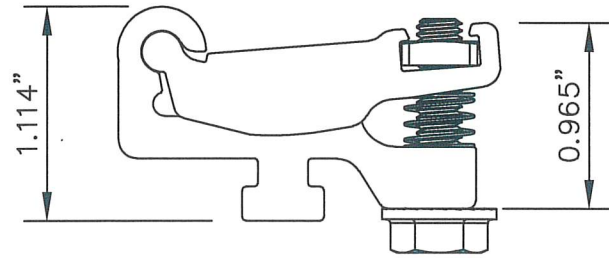
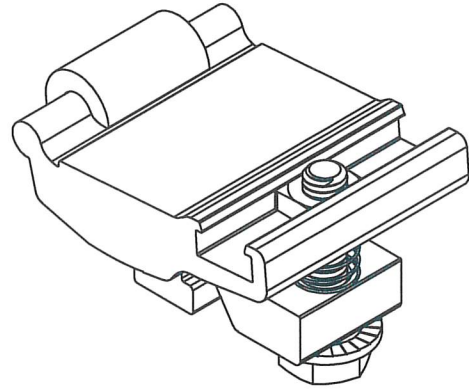
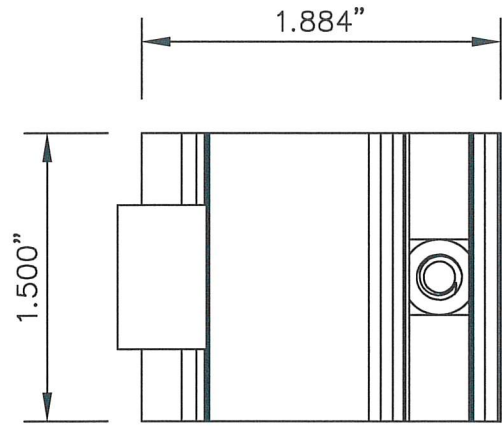


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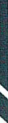
DWG: XR-GF1
SHEET: 6/8

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IRONRIDGE

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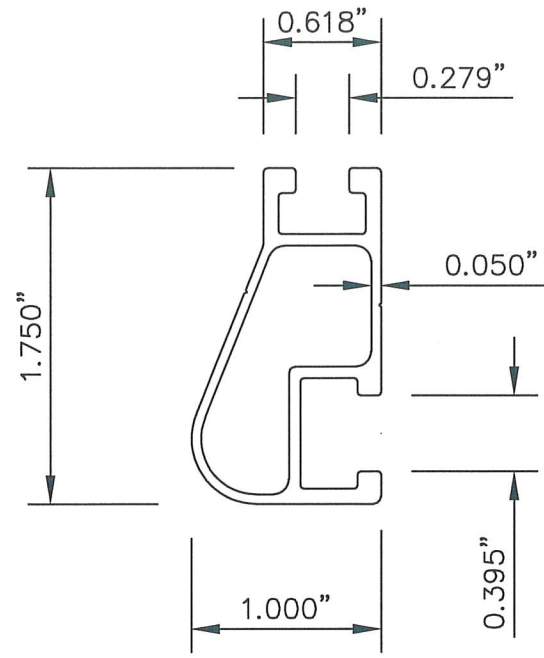
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SHEET:	7/8

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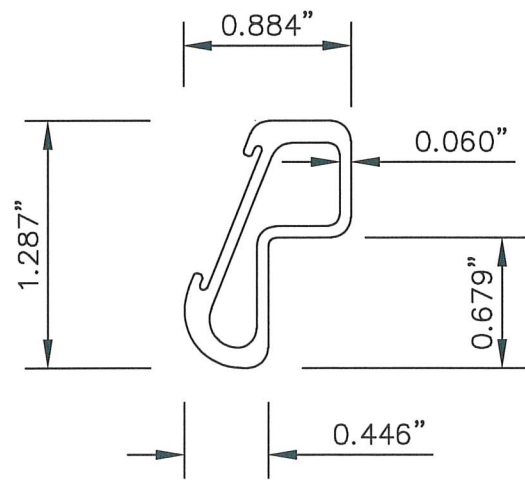
STATE OF
AUG 22 2023

DATE _____

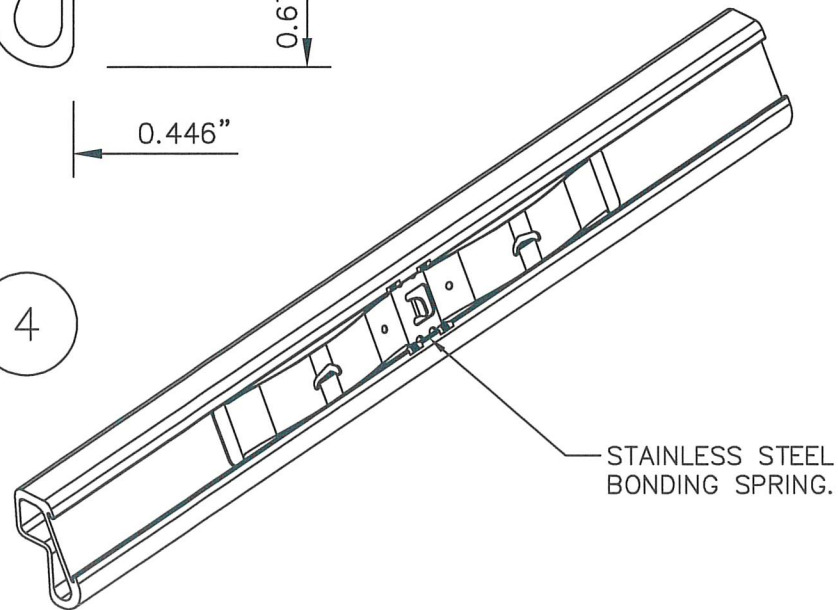
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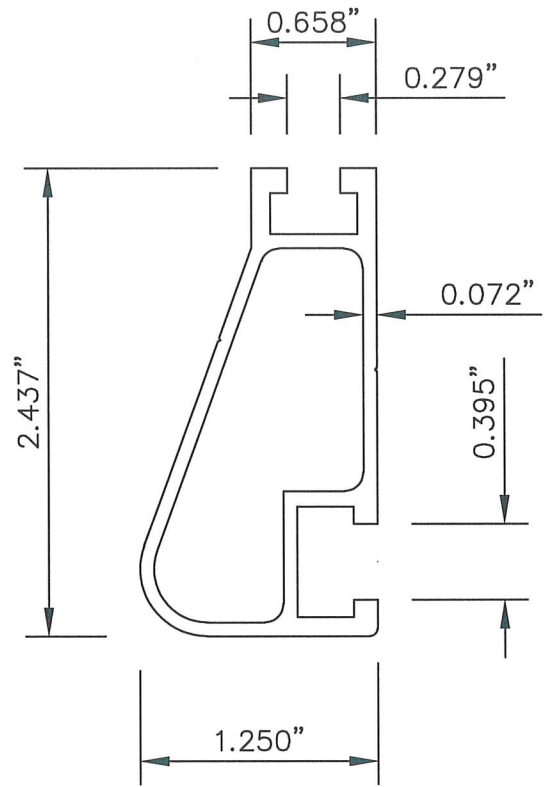
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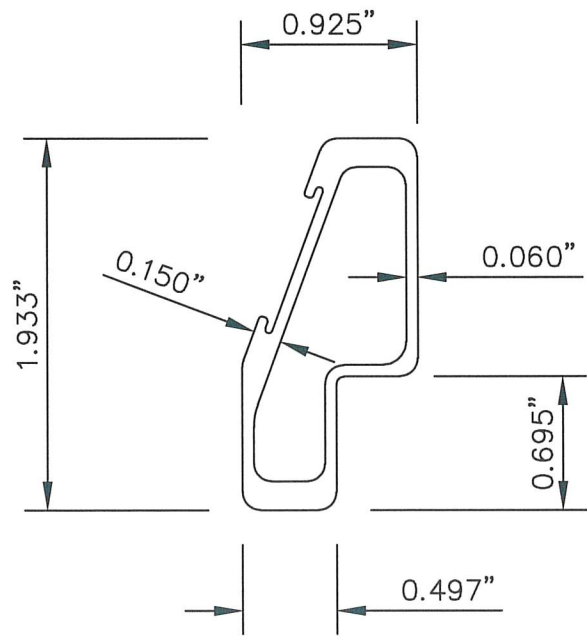
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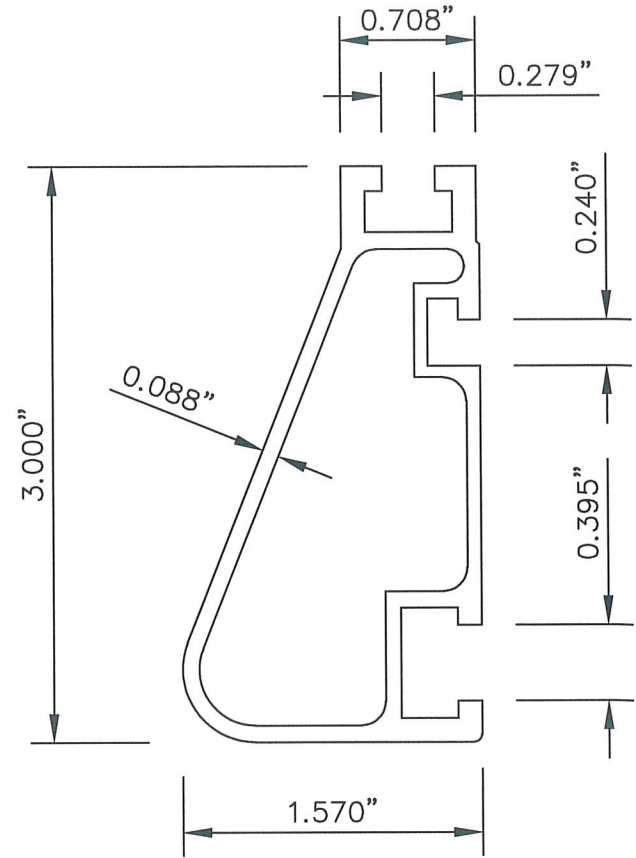
STAINLESS STEEL
BONDING SPRING.



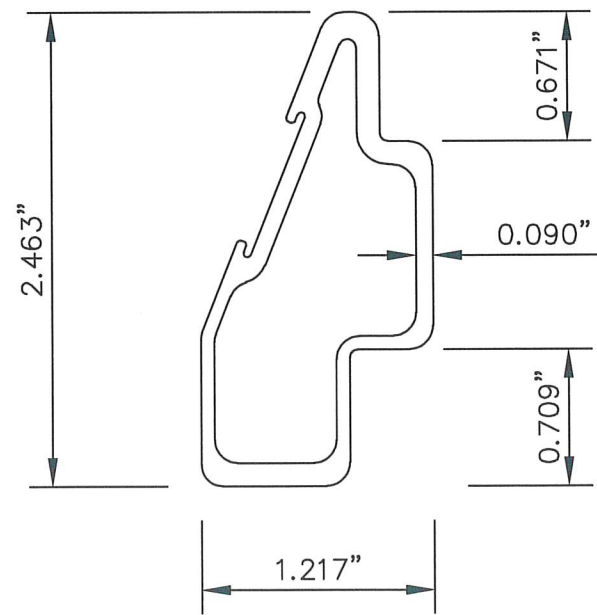
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5



3



6

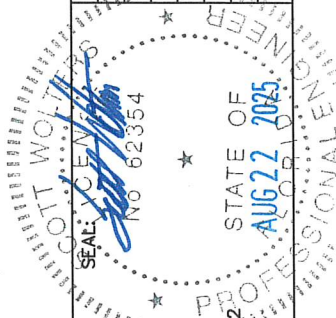


DWG: XR-GF1
SHEET: 8/8

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