

SYSTEM IS SECURED TO ROOF STRUCTURE  
(BY OTHERS) AS SOLAR PANEL RACK.

PV RACKING SYSTEM IS NOT RATED FOR IMPACT.

SOLAR PV RACKING SYSTEM.

DESIGN LOAD RATING FOR SOLAR PANEL RACK TO BE AS PER  
CHARTS SHOWN ON SHEETS 2 AND 3.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE  
REQUIREMENTS OF THE 2017 (6TH EDITION) FLORIDA BUILDING CODE  
INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS  
AND INSTALLED PER MANUF’S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE  
MATERIAL SHALL BE BEYOND ROOF SHEATHING.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON–METALLIC AND NON–COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT  
COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE  
REQUIREMENTS OF THE 2017 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION  
FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY  
OF STRUCTURE RECEIVING THIS PRODUCT AND WEATHER SEALING FOR  
WATER INFILTRATION RESISTANCE ETC.  
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,  
AND TO BE REVIEWED BY BUILDING OFFICIAL.

MANUFACTURER’S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION  
IN ACCORDANCE WITH SECTION 1703.5 OF FLORIDA BUILDING CODE. LABELING  
TO COMPLY WITH SECTION 1703.5.

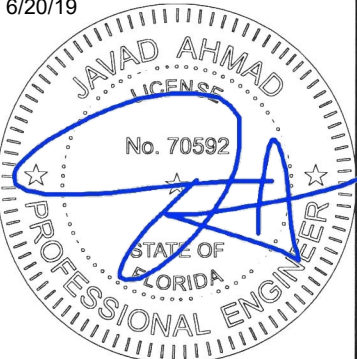
MAX. ROOF SLOPE = 45°

A– CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND  
INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION  
PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED  
ON THIS DOCUMENT.

B– THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF  
ALTERED BY ANY MEANS.

C– SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED  
ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.)  
FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER  
USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED  
ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE  
SPECIFIC DRAWINGS FOR REVIEW.

D– THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF  
THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



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FL #29843

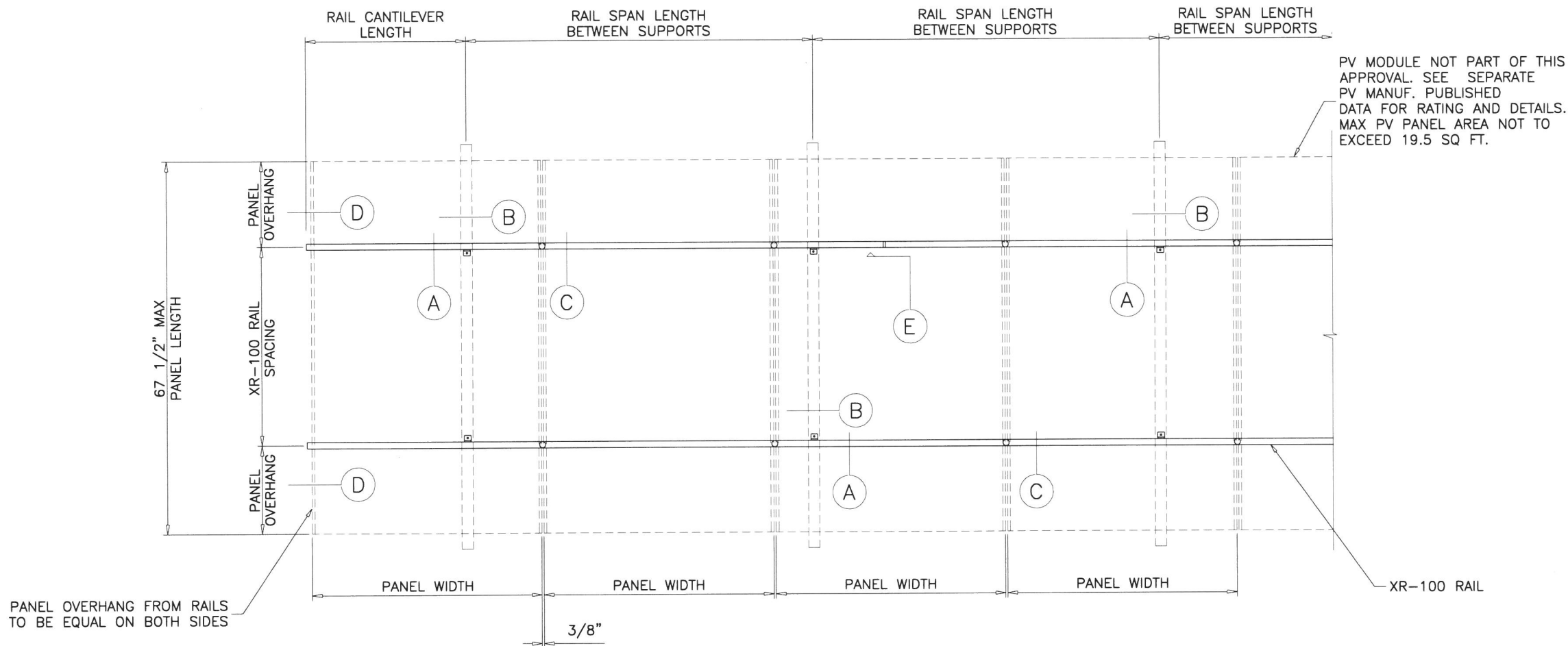
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
(C.A.N. 3538)

PAN – RACK \ 19 – 51F – IR

SOLAR PV RACKING SYSTEM (N.I.)

**IRONRIDGE, INC.**  
28357 Industrial Blvd.  
Hayward, CA. 94545  
Phone: (800) 227–9523 Fax: (510) 259–9747

revisions:	
no	date
by	description
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sheet 1 of 10	

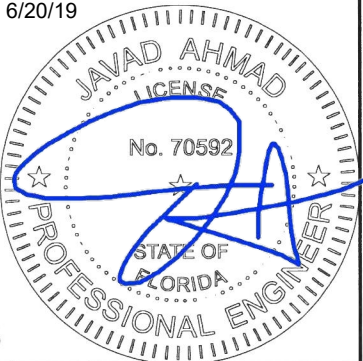


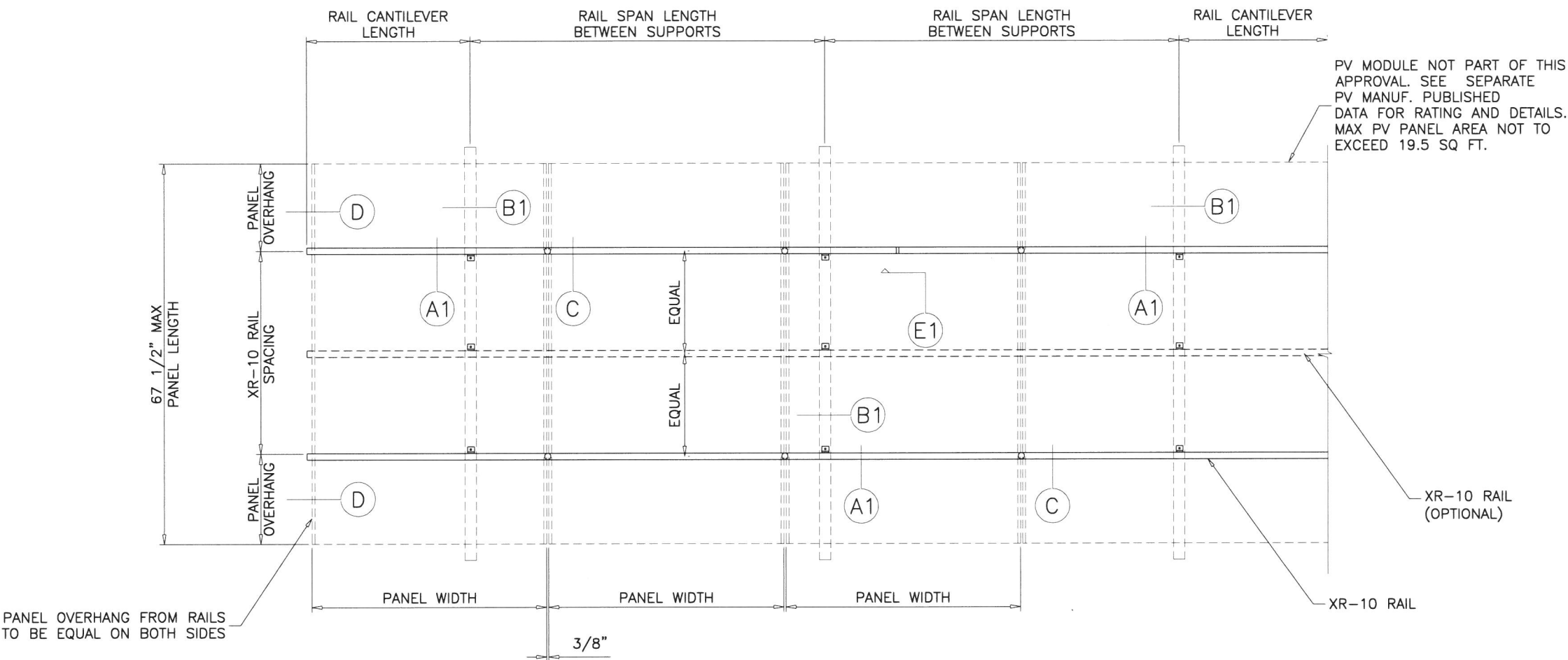
**TYPICAL ELEVATION**  
XR-100 RAIL

DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.			ANCHOR TYPE
SPAN INCHES	CANTILEVER INCHES	NUMBER OF RAILS	'A' & 'B'
			(+) / (-)
16	6.4	2	100.0
24	9.6	2	100.0
32	12.8	2	100.0
36	14	2	100.0
48	19	2	75.0
60	24	2	51.0
64	25.6	2	46.7
72	29	2	40.0

INTERPOLATION BETWEEN CHART VALUES ALLOWED.

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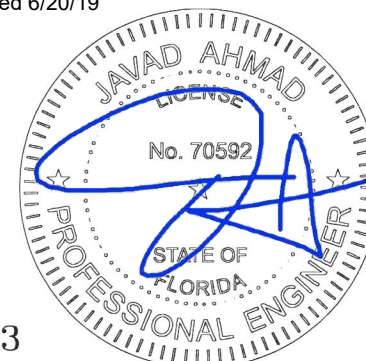
**TYPICAL ELEVATION**  
XR-10 RAIL

DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.			ANCHOR TYPE
SPAN INCHES	CANTILEVER INCHES	NUMBER OF RAILS	'A' & 'B'
			(+) / (-)
16	6.4	3	100.0
24	9.6	3	100.0
32	12.8	3	100.0
36	14	3	87.0
48	19	3	75.0
16	6.4	2	60.0
24	9.6	2	60.0
32	12.8	2	60.0
36	14	2	58.6
48	19	2	40.0

INTERPOLATION BETWEEN CHART VALUES ALLOWED.

ALTERNATE SIZE UNITS:  
MAX. PV PANEL AREA NOT TO EXCEED 19.5 SQ FT.

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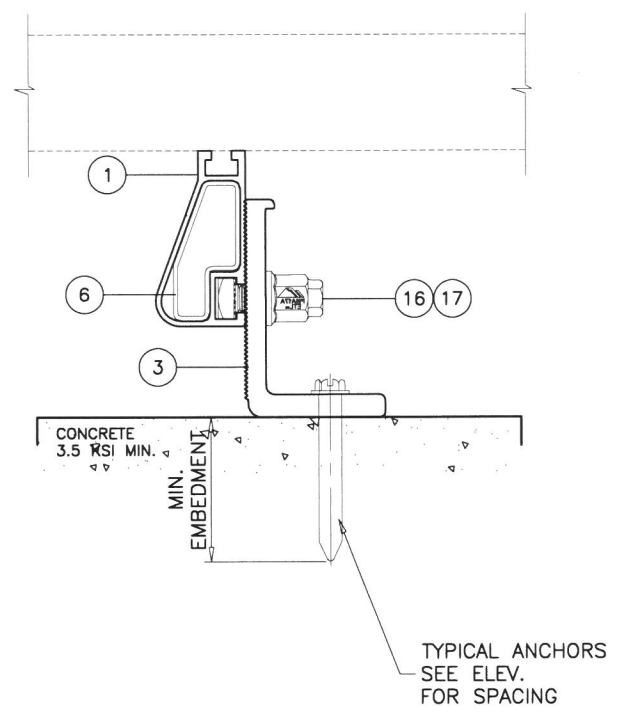
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(C.A.N. 35.38)  
PAN-RACK\19-51F-IR

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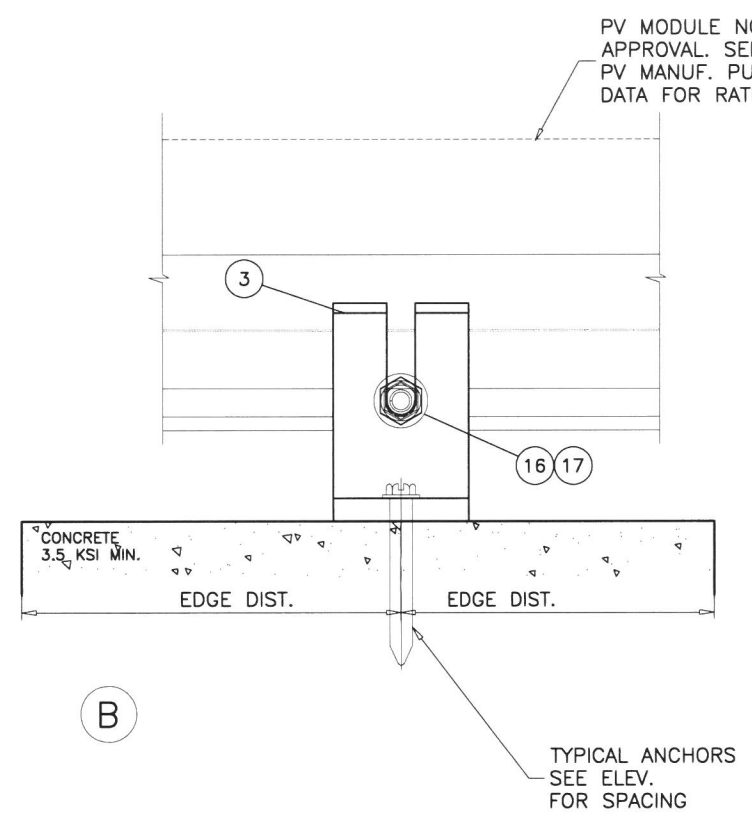
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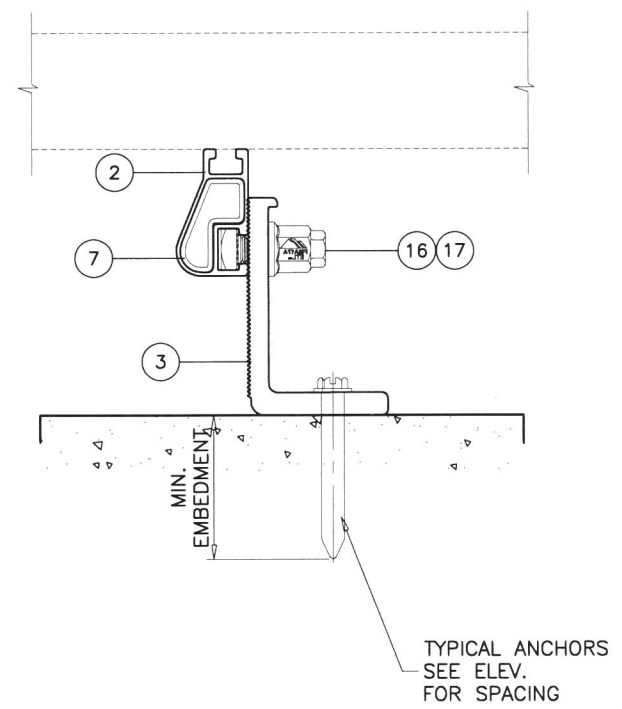
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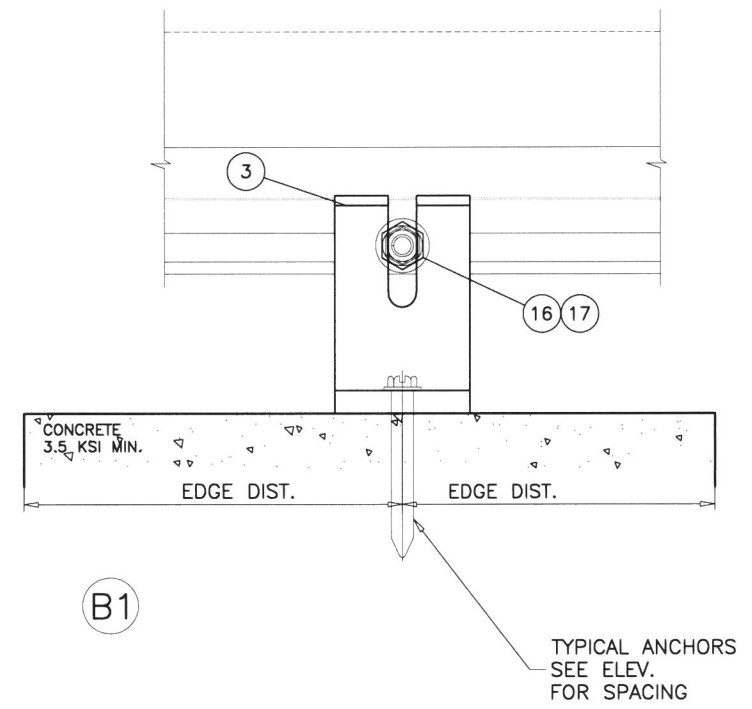
B



A1



B1



INSTALLATIONS AT CONCRETE STRUCTURES

WOOD, CONCRETE AND METAL STRUCTURE NOT BY IRONRIDGE, INC. MUST SUSTAIN LOADS IMPOSED BY RACKING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING

TYPE 'A' - 5/16" DIA. LAG SCREW (Fy=60 KSI)  
 INTO WOOD STRUCTURES  
 3" MIN. THREAD PENETRATION INTO WOOD

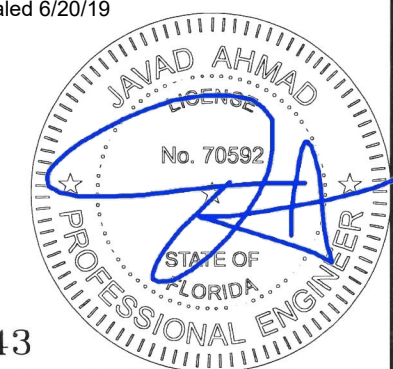
TYPE 'B' - 3/8" DIA. ST/ST KWIK BOLT TZ EXPANSION ANCHOR BY 'HILTI' (Fu=115 KSI, Fy=92 KSI)  
 DIRECTLY INTO CONCRETE  
 2-5/16" MIN. EMBED INTO CONCRETE

TYPE 'C' - 3/8" DIA. ST/ST HUS-HR ANCHOR BY 'HILTI' (Fu=138 KSI, Fy=118 KSI)  
 DIRECTLY INTO CONCRETE  
 2-3/4" MIN. EMBED INTO CONCRETE

**CRITICAL EDGE DISTANCE**  
 INTO CONCRETE = 3-1/2" MIN.  
 INTO WOOD STRUCTURE = 3/4" MIN.

WOOD SUBSTRUCTURE SG = 0.45 MIN.  
 CONCRETE SUBSTRUCTURE f'c = 3500 PSI MIN.

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ROOF STRUCTURE AND ROOF DECK NOT BY IRONRIDGE MUST SUSTAIN LOADS IMPOSED BY RACKING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

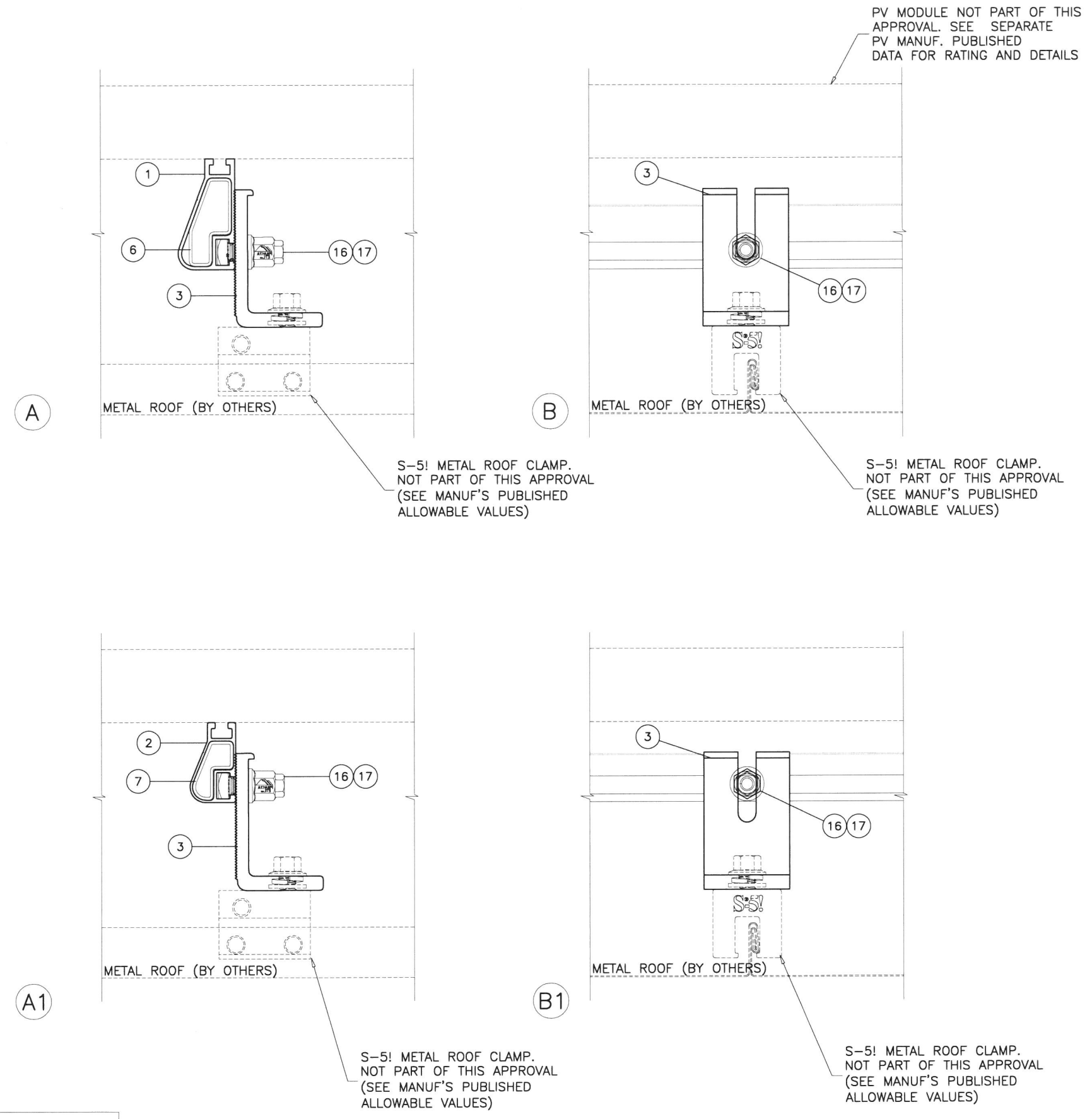
FL #29843

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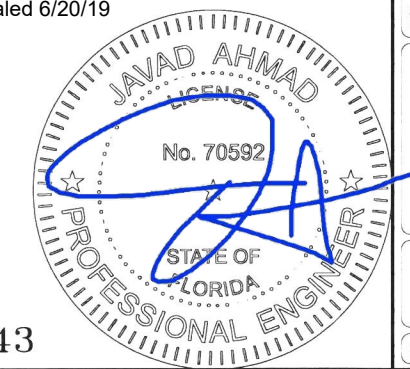
SOLAR PV RACKING SYSTEM (N.I.)	
IRONRIDGE, INC. 28357 Industrial Blvd. Hayward, CA. 94545 Phone: (800) 227-9523	Fax: (510) 259-9747
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sheet 4 of 10	



ROOF STRUCTURE AND ROOF DECK NOT BY IRONRIDGE  
MUST SUSTAIN LOADS IMPOSED BY RACKING SYSTEM  
AND TRANSFER THEM TO THE BUILDING STRUCTURE.

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sheet 5 of 10



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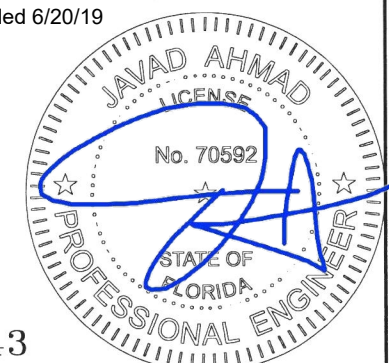
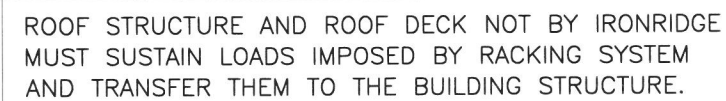
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Phone: (800) 227-9523

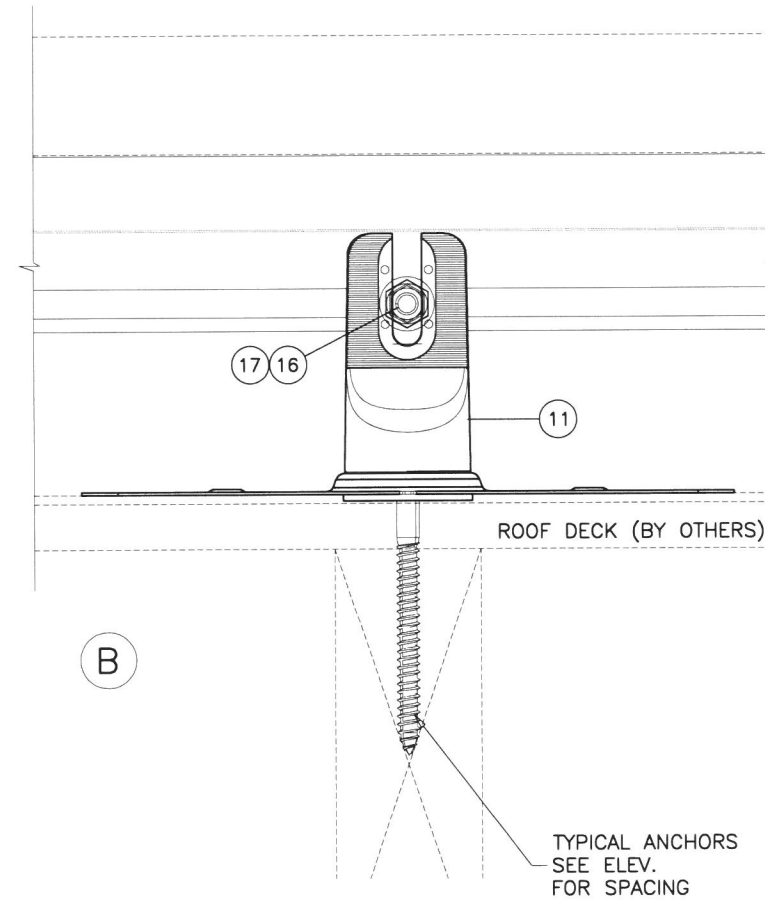
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sheet 6 of 10



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PAN-RACK\19-51F-IR



DATA FOR RAY

1

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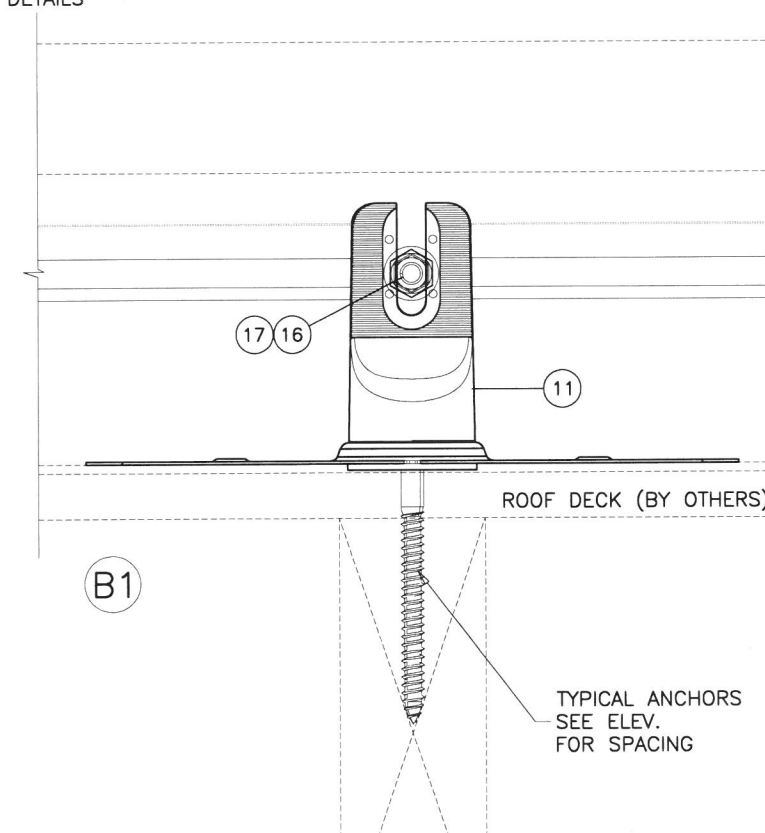
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ROOF DECK (BY OTHERS)

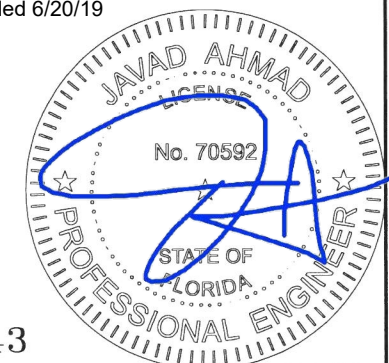
MIN. THREAD EMBEDMENT

TYPICAL ANCHORS  
SEE ELEV.  
FOR SPACING

A1



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Fax: (510) 259-9747

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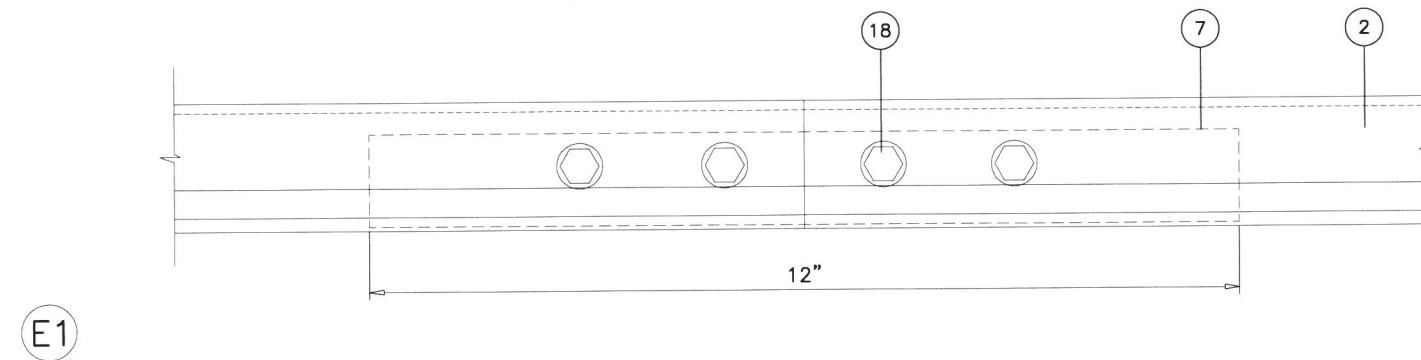
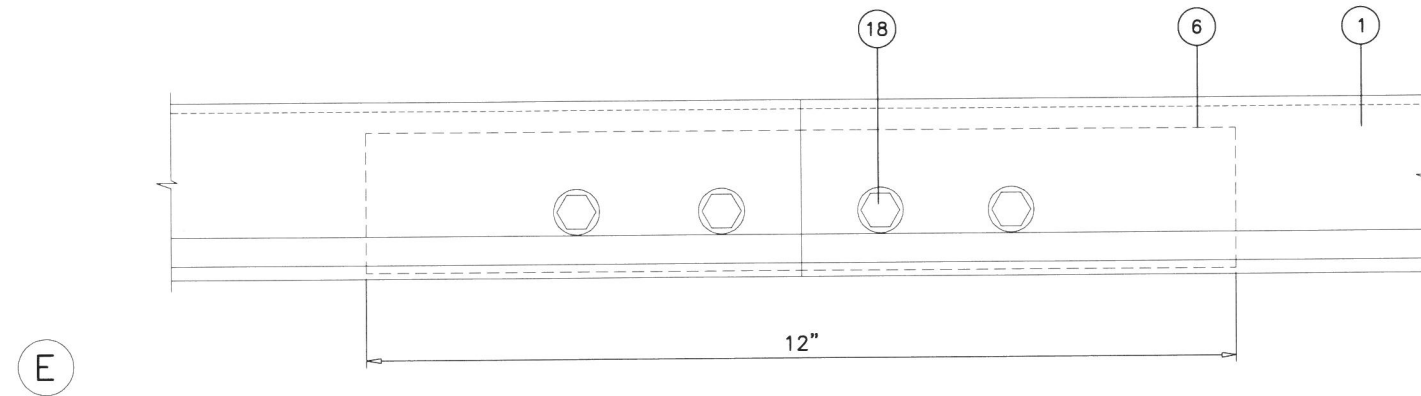
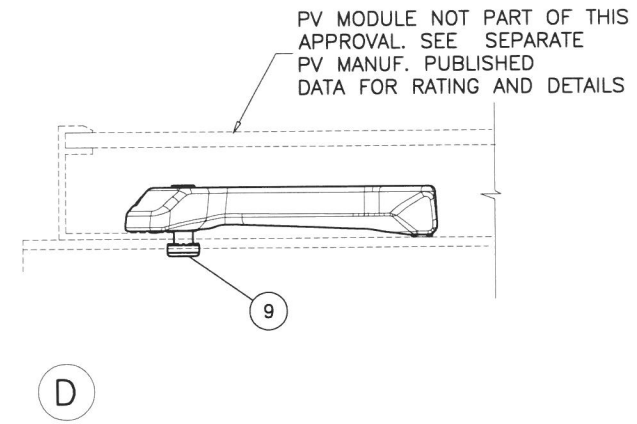
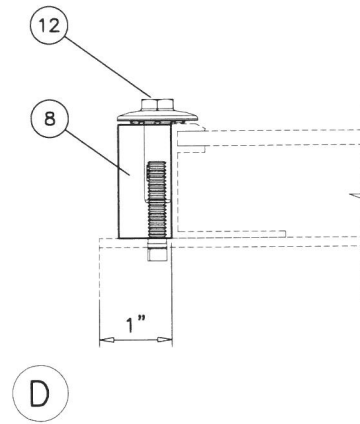
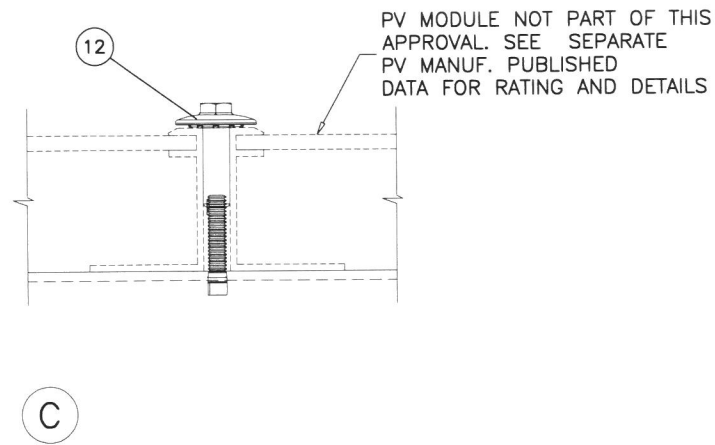
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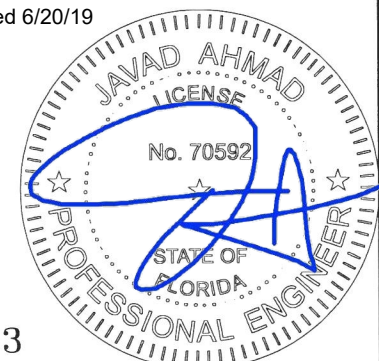
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FL #29843





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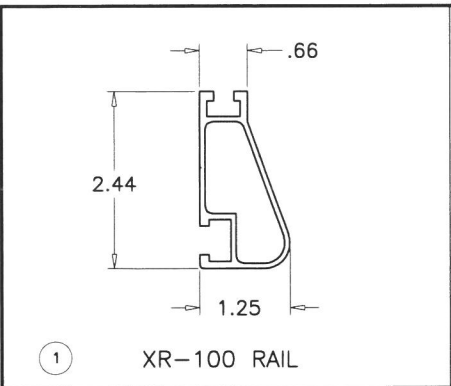
FL #29843

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**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220 (C.A.N. 3538)  
 MIAMI, FLORIDA 33173  
 TEL. (305) 264-8100 FAX. (305) 262-6978  
 PAN-RACK\19-51F-IR

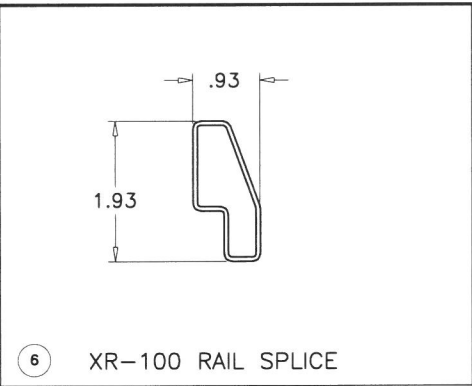
SOLAR PV RACKING SYSTEM (N.I.)  
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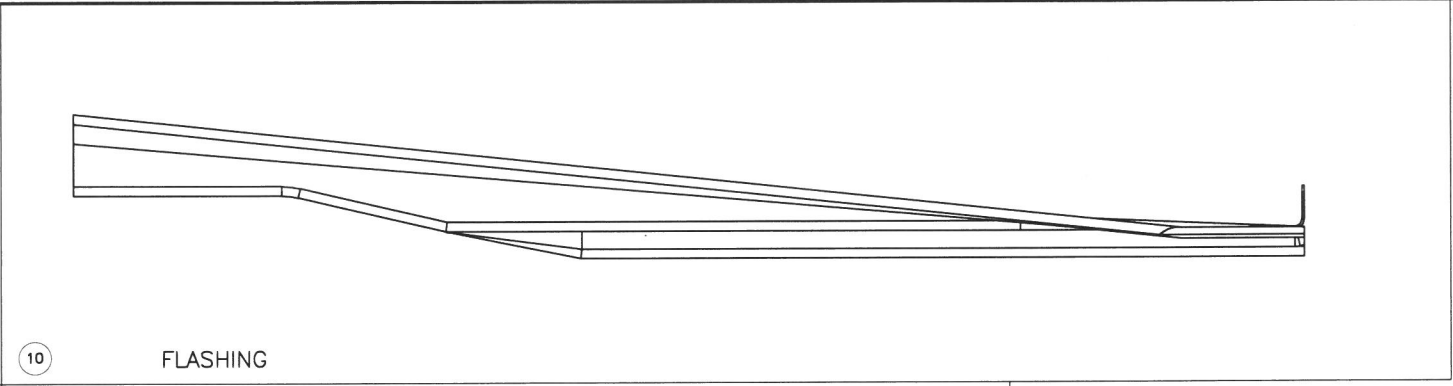




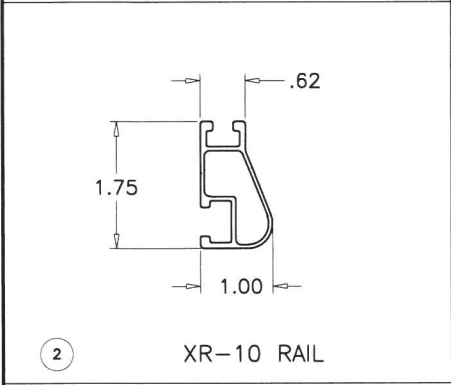
1 XR-100 RAIL



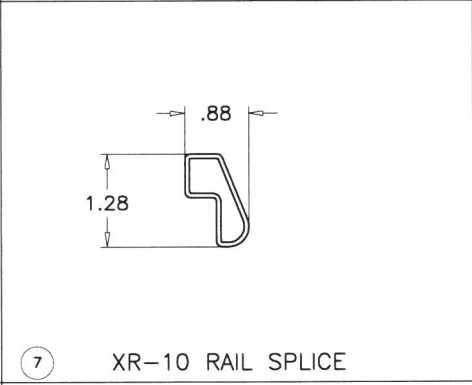
6 XR-100 RAIL SPLICE



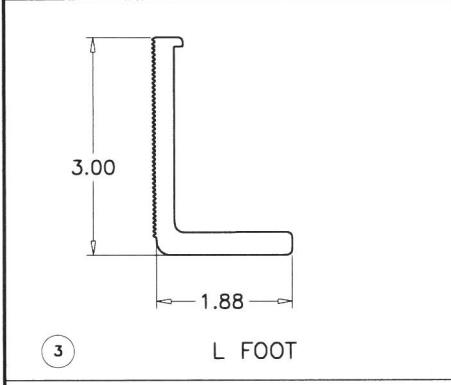
10 FLASHING



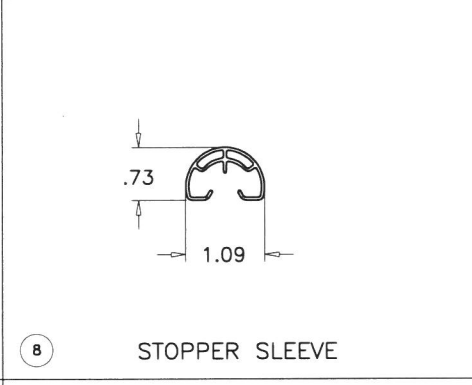
2 XR-10 RAIL



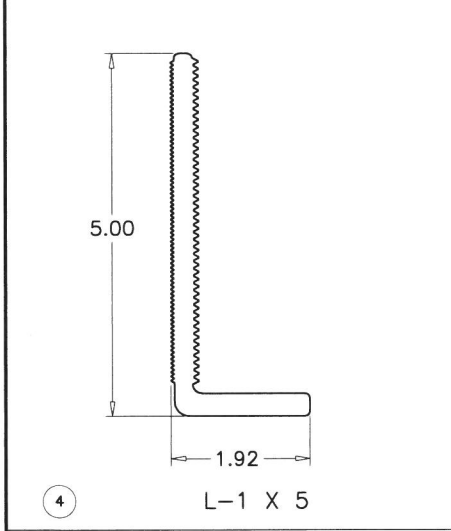
7 XR-10 RAIL SPLICE



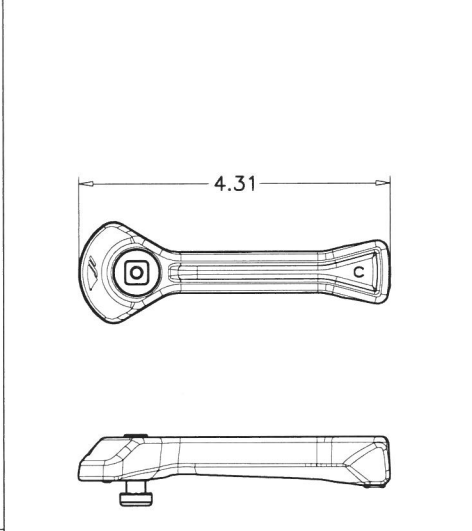
3 L FOOT



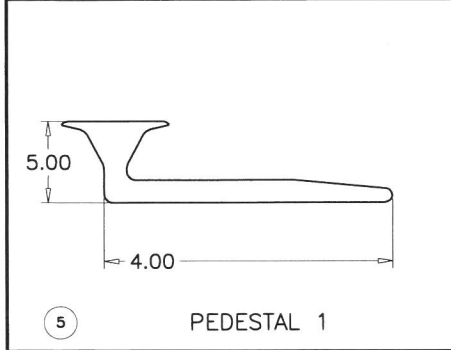
8 STOPPER SLEEVE



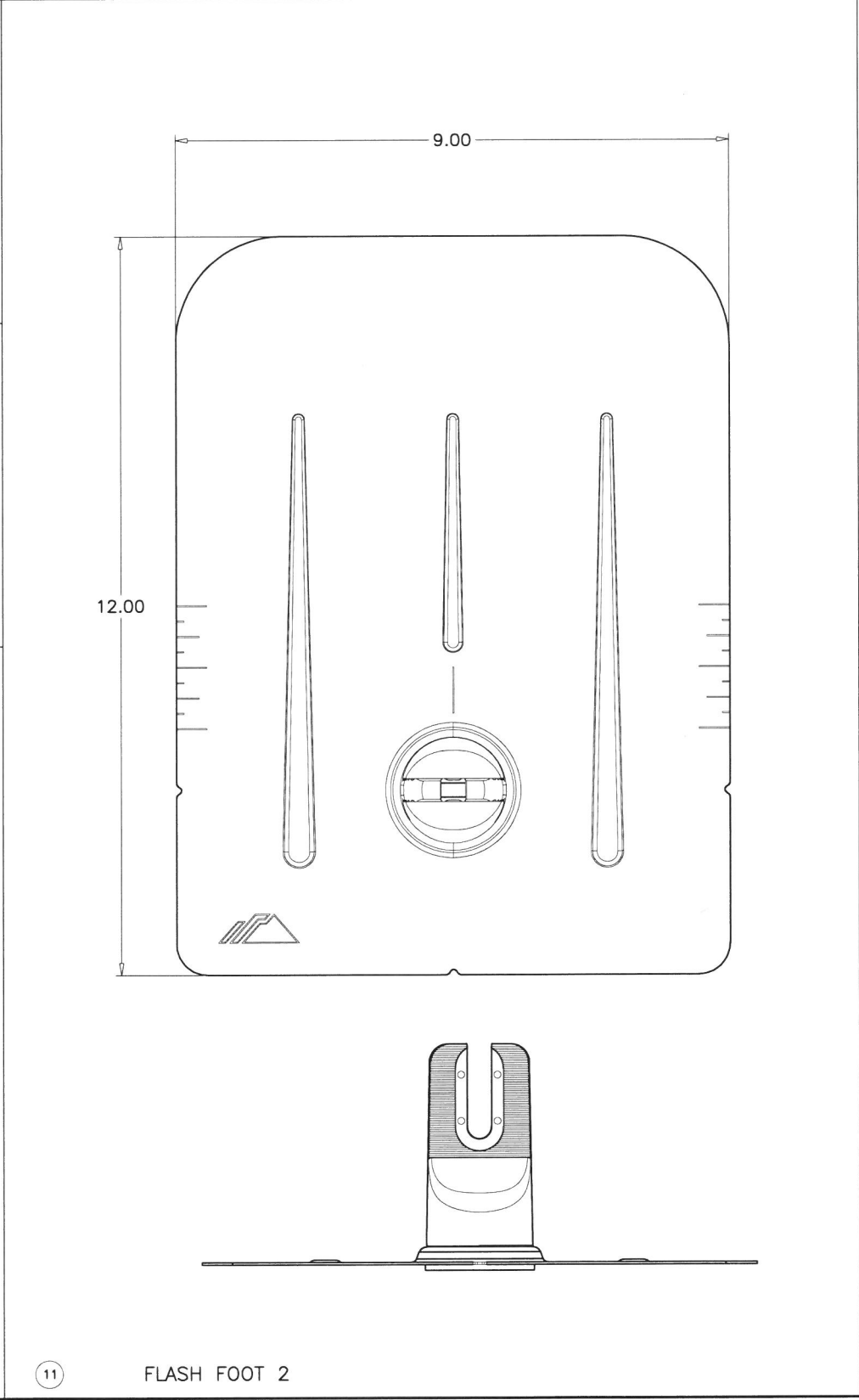
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9 HIDDEN END CAM

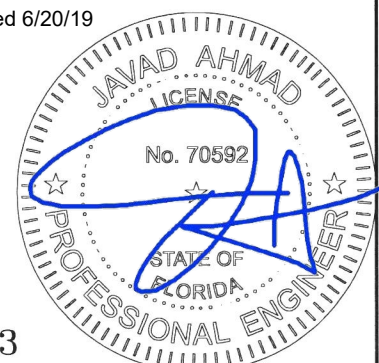


5 PEDESTAL 1



11 FLASH FOOT 2

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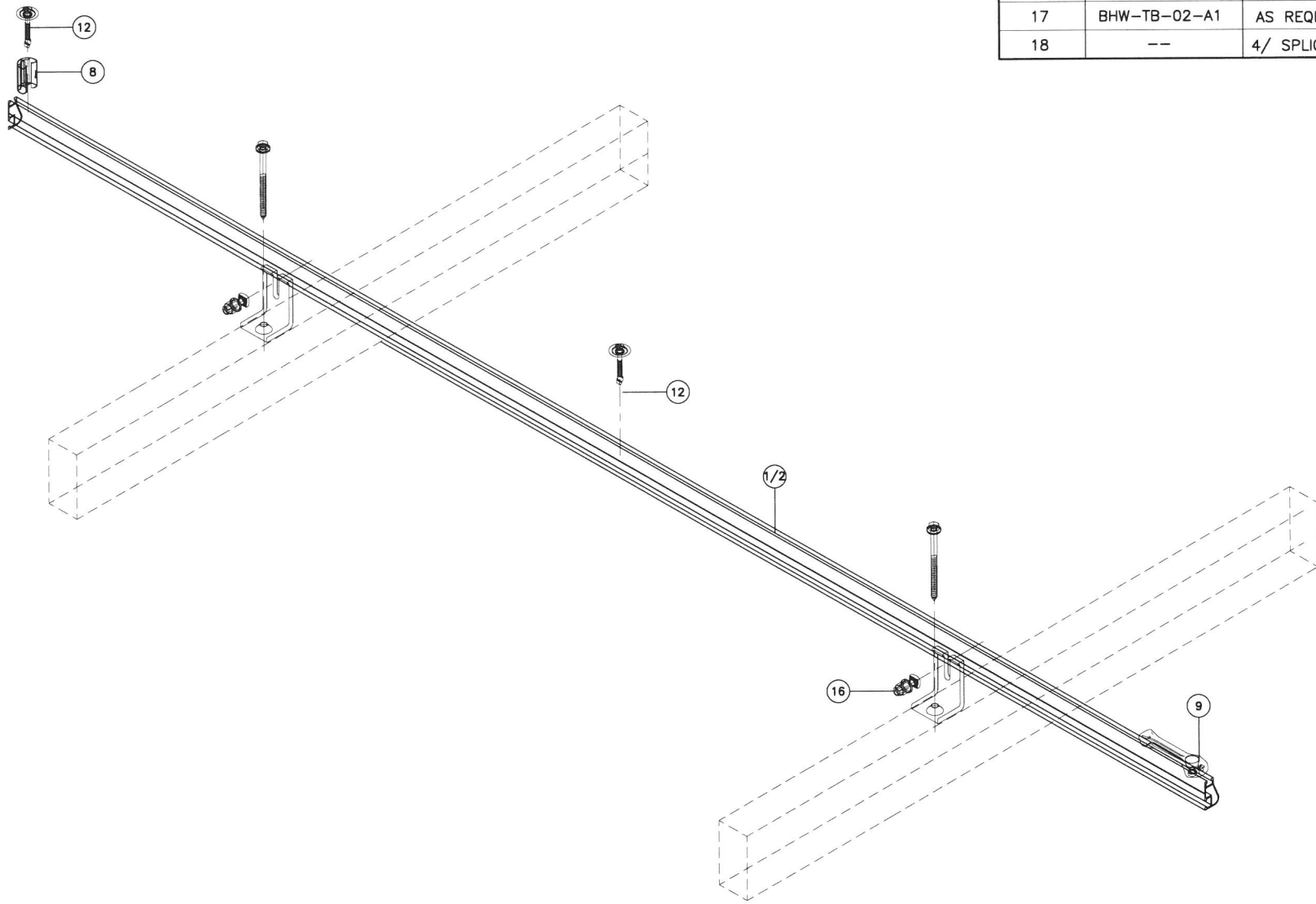
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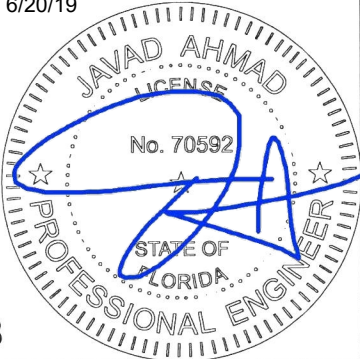
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**19-51F**  
sheet 9 of 10

PAN-RACK\19-51F-IR



ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL
1	XR-100	AS REQD.	RAIL	6000 SERIES ALUM (Fy MIN. 34 KSI)
2	XR-10	AS REQD.	RAIL	6000 SERIES ALUM (Fy MIN. 34 KSI)
3	LFT-03	AS REQD.	L FOOT ATTACHMENT	6000 SERIES ALUM
4	L-1X5	AS REQD.	KO TILE ATTACHMENT	6000 SERIES ALUM
5	PEDESTAL 1	AS REQD.	KO TILE ATTACHMENT	6000 SERIES ALUM
6	---	AS REQD.	XR-100 RAIL SPLICE	6000 SERIES ALUM (Fy MIN. 34 KSI)
7	---	AS REQD.	XR-10 RAIL SPLICE	6000 SERIES ALUM (Fy MIN. 34 KSI)
8	UFO-STP	AS REQD.	STOPPER SLEEVE	6000 SERIES ALUM
9	CAM0-01-MI	AS REQD.	HIDDEN END CAM (UNIVERSAL CAMP)	300 SERIES ALUM & ST
10	KOF-S01-T1	AS REQD.	TILE REPLACEMENT FLASHING S TAN	1000 SERIES ALUM
10A	KOF-F01-T1	AS REQD.	TILE REPLACEMENT FLASHING FLAT TAN	1000 SERIES ALUM
10B	KOF-W01-T1	AS REQD.	TILE REPLACEMENT FLASHING W TAN	1000 SERIES ALUM
11	FM-FF2-001(B)	AS REQD.	FLASH FOOT 2	300 & 3000 SERIES ALUM, 300 SERIES ST
12	UFO-CL-01	AS REQD.	UNIVERSAL MODULE CLAMP FASTENER	3000 SERIES ST/ST
13	---	AS REQD.	5/16-18 X 1.5 SCREW	ST/ST
14	---	AS REQD.	5/16-18 X 1.5 NUT & WASHER	ST/ST
15	---	AS REQD.	SIMPLE SEAL	EDPM
16	BHW-SQ-02-A1	AS REQD.	SQUARE BOLT BONDING HARDWARE	ST/ST
17	BHW-TB-02-A1	AS REQD.	T-BOLT BODING HARDWARE	ST/ST
18	---	4/ SPLICE	12-14 X 5/8" SELF DRILLING SCREW	ST

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FL #29843

afcc

AL-FAROOQ CORPORATION

ENGINEERS & PRODUCT DEVELOPMENT

9360 SUNSET DRIVE, SUITE 220

MIAMI, FLORIDA 33173

TEL. (305) 264-8100

FAX. (305) 262-6978

(C.A.N. 3538)

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