

ROOF TOP PV MOUNTING SYSTEM

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

THIS PRODUCT APPROVAL IS FOR THE ROOF TOP PV MOUNTING SYSTEM AS SHOWN ON THESE DRAWINGS. ROOF DETAILS, UPLIFT, SLOPE, ROOF TRUSSES AND OTHER ELEMENTS SHALL BE DESIGNED BY A FLORIDA REGISTERED ENGINEER AND REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT. ENGINEER OF RECORD TO VERIFY THAT ROOF MEMBERS CAN SUPPORT THE PV MODULE ARRAY UNDER ALL CODE LEVEL LOADING CONDITIONS. INSTALLER TO MAINTAIN THE WATERPROOF INTEGRITY OF THE ROOF.

INSTALLATION OF PV PANEL ACCESSORIES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF FLORIDA BUILDING CODE AND THE MANUFACTURER’S INSTALLATION INSTRUCTIONS.

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 COVERING.

DESIGN LOADS SHOWN ARE BASED ON ‘ALLOWABLE STRESS DESIGN (ASD)’.

SOLAR PANELS TO BE INSTALLED PARALLEL TO THE ROOF SURFACE WITH A TOLERANCE OF LESS THAN 2 DEGREES.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1

DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2

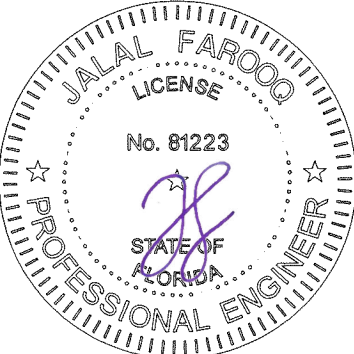
SELECT ROOF MOUNT TYPE CAPACITY FOR LANDSCAPE INSTALLATION USING CHARTS ON SHEETS 8 & 9 AND PORTRAIT INSTALLATION USING CHARTS ON SHEETS 10 & 11 WITH RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 3

THE LOWEST VALUE RESULTING FROM STEPS 1 AND 2 SHALL APPLY TO ENTIRE SYSTEM.

PV PANELS, RAILS AND PANEL CLAMPS NOT PART OF THIS APPROVAL. FOR PANEL DETAILS, GENERAL NOTES, COMPONENT SIZES, FIRE AND ELECTRICAL SAFETY STANDARDS, PANEL CONNECTION TO MOUNTS AND INSTALLATION REQUIREMENTS/LIMITATIONS SEE CORRESPONDING FLA. APPROVAL DWGS.

Sealed: 8/20/2024

FL #46074



- 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.

afcc

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

SOLAR-RACK\23-57F-SMC

ROOF TOP PV MOUNTING SYSTEM

SunModo Corp.
14800 N.E. 65th Street
Vancouver, WA. 98682
Phone: (360) 844-0048
sunmodo.com

revisions:

no	date	by	description
A	02.16.24		TOPTILE MOUNTS ADDED

date: 12-04-23

scale: 1/2"=1'-0"

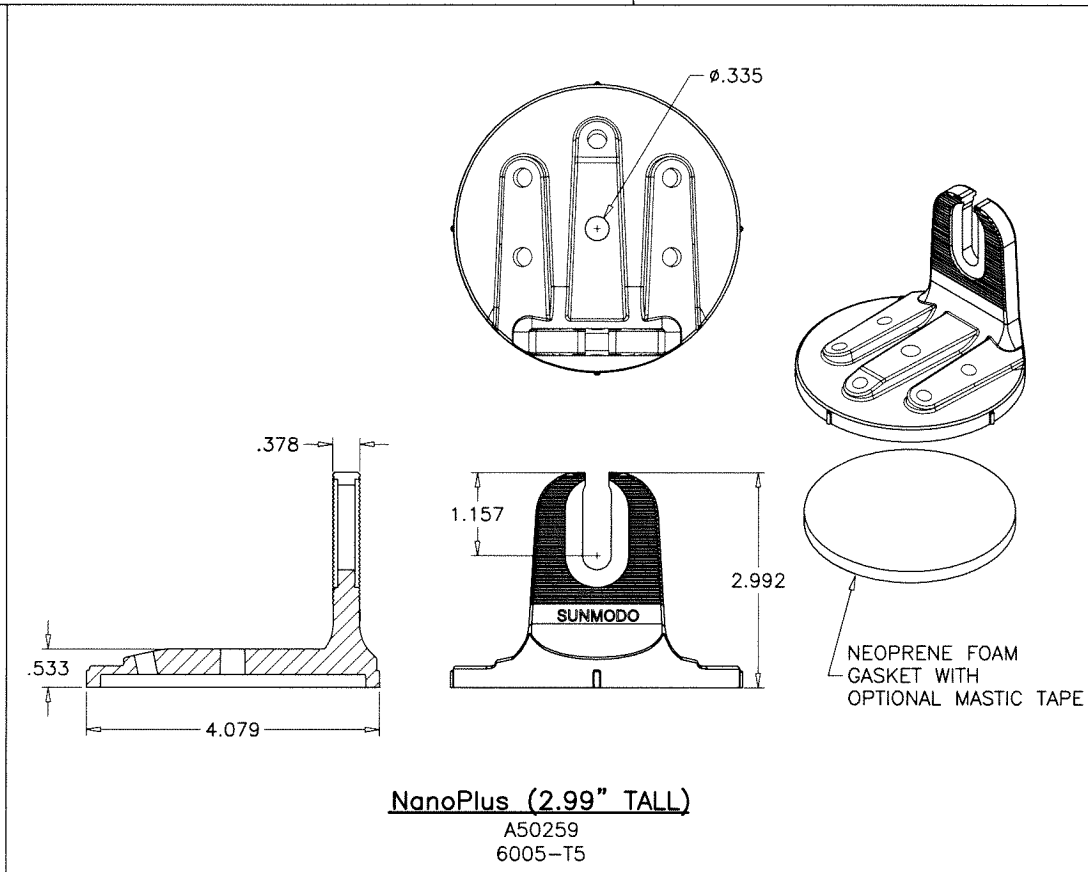
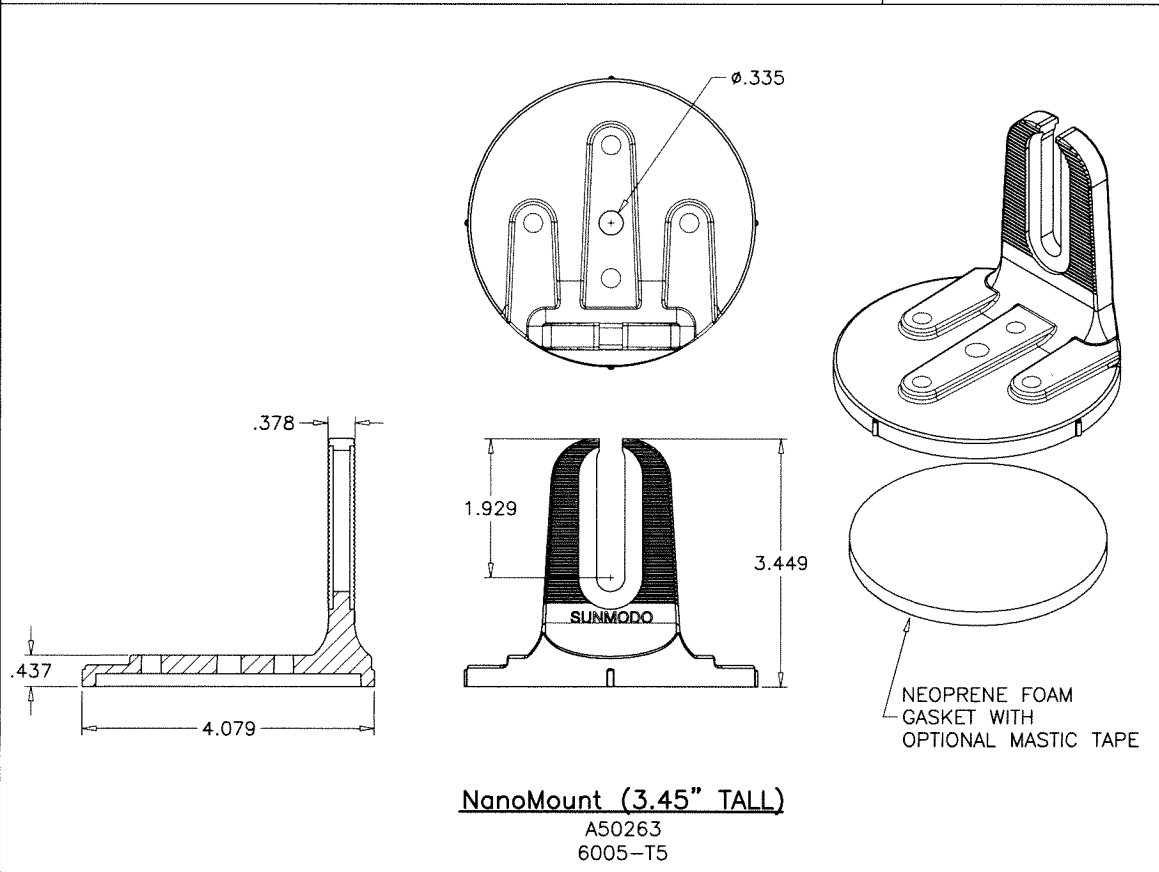
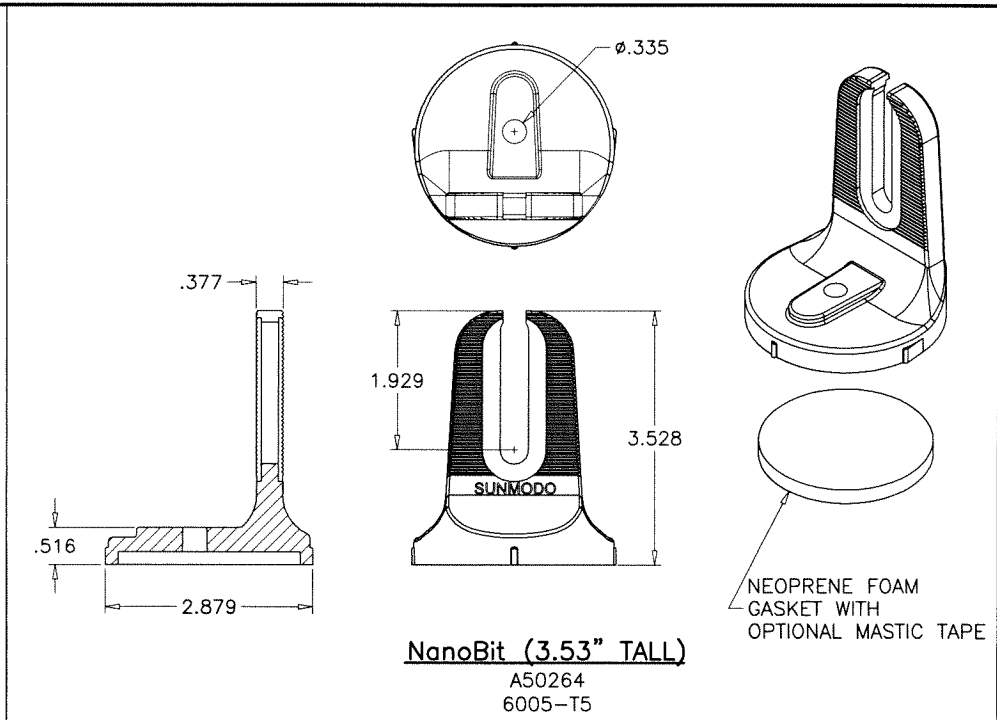
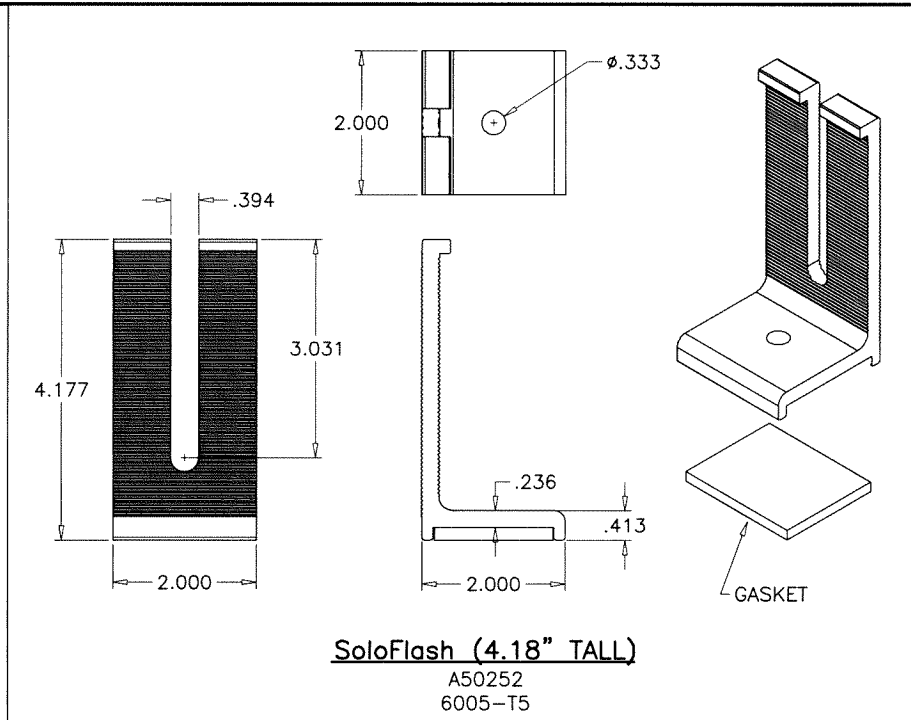
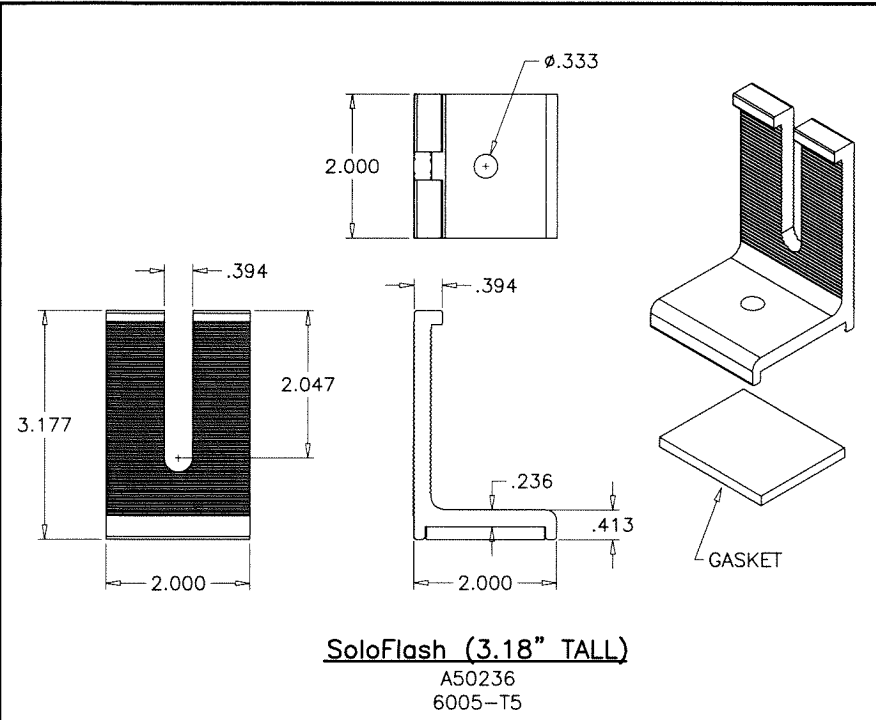
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chk. by:

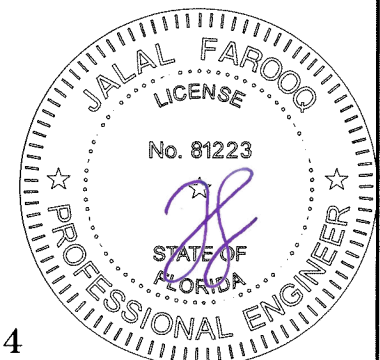
drawing no.

23-57F

sheet 1 of 18



Sealed: 8/20/2024



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revisions:	
no	date by description

date: 12-04-23

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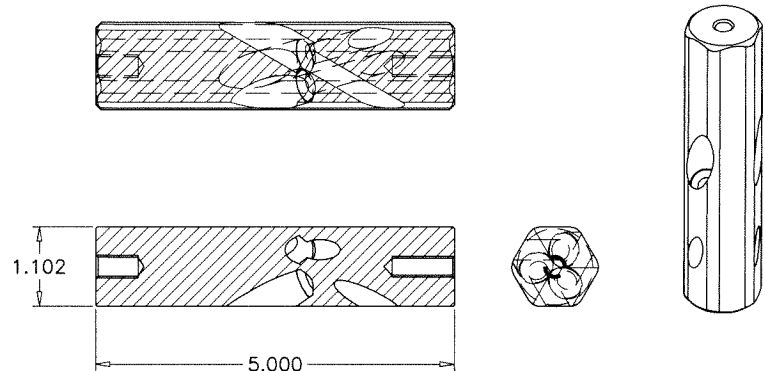
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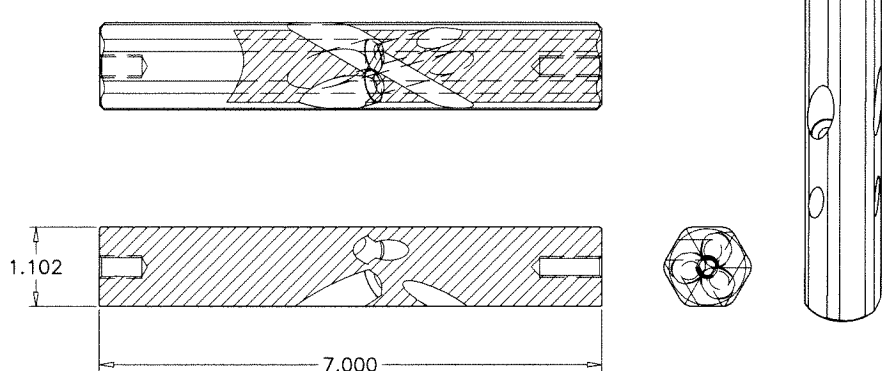
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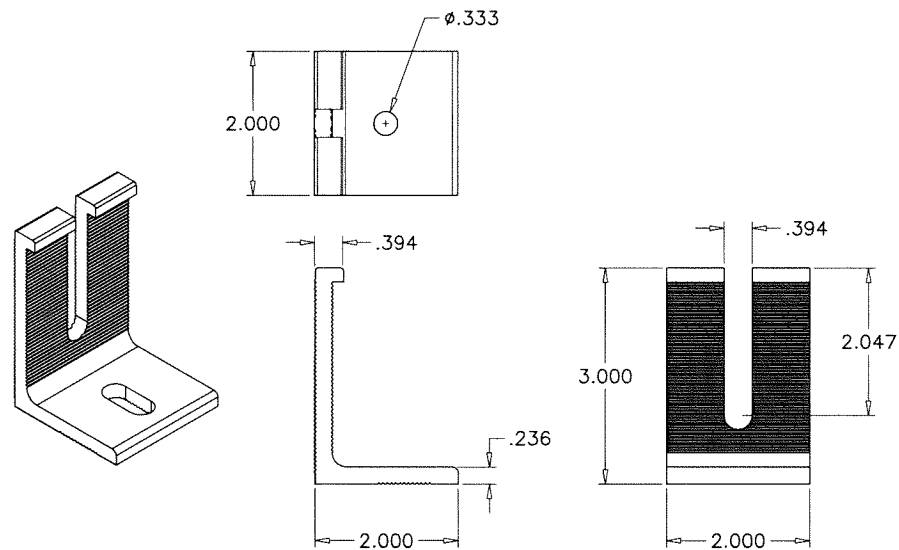
sheet 2 of 18



TopTile 5"
A20452-005
6005-T5

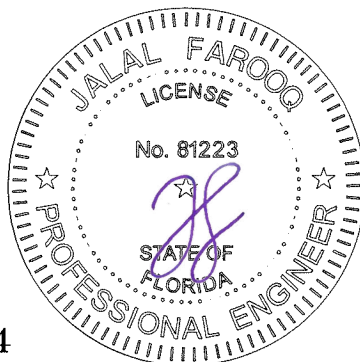


TopTile 7"
A20452-007
6005-T5



L-foot
A50223
6005-T5

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ROOF TOP PV MOUNTING SYSTEM

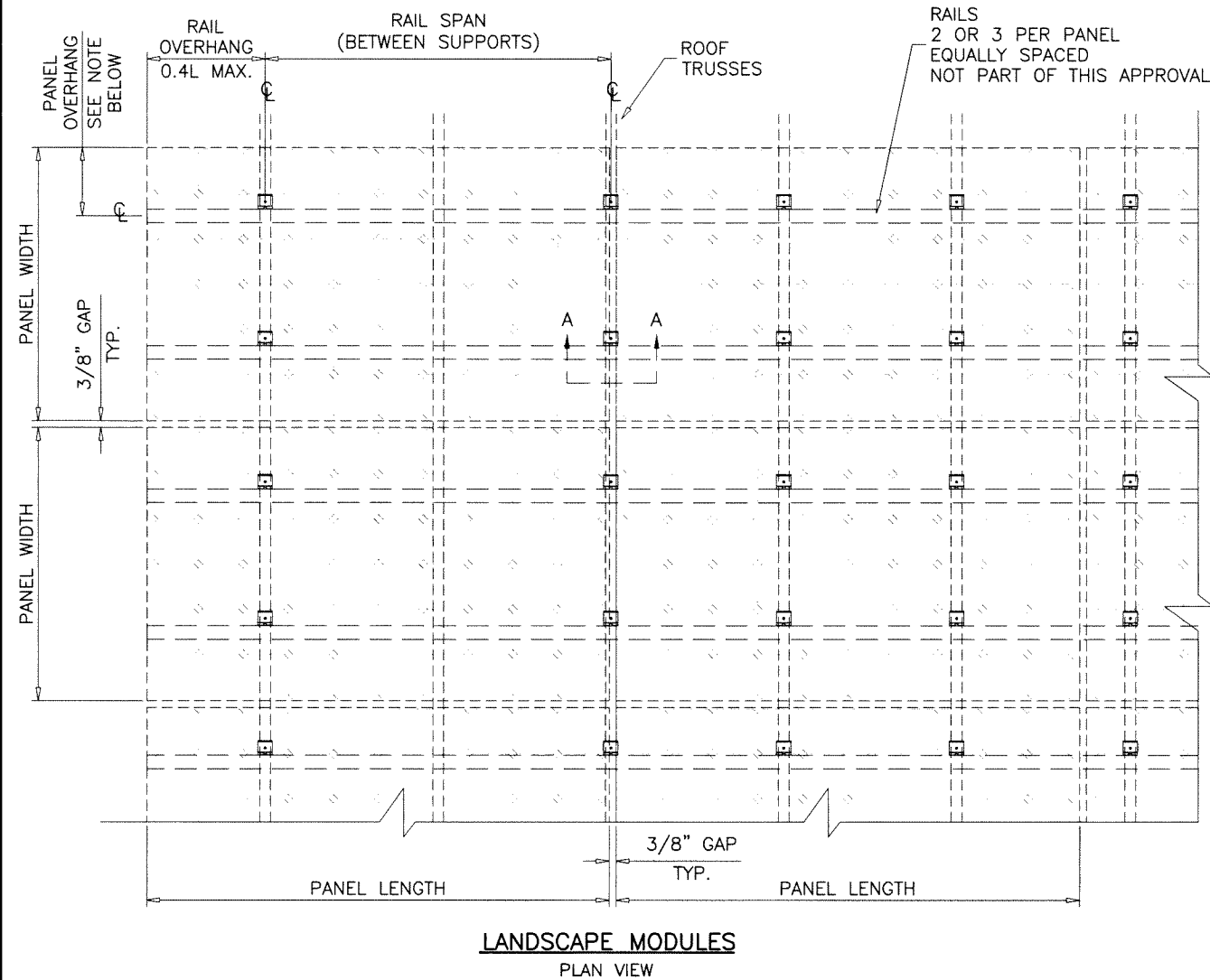
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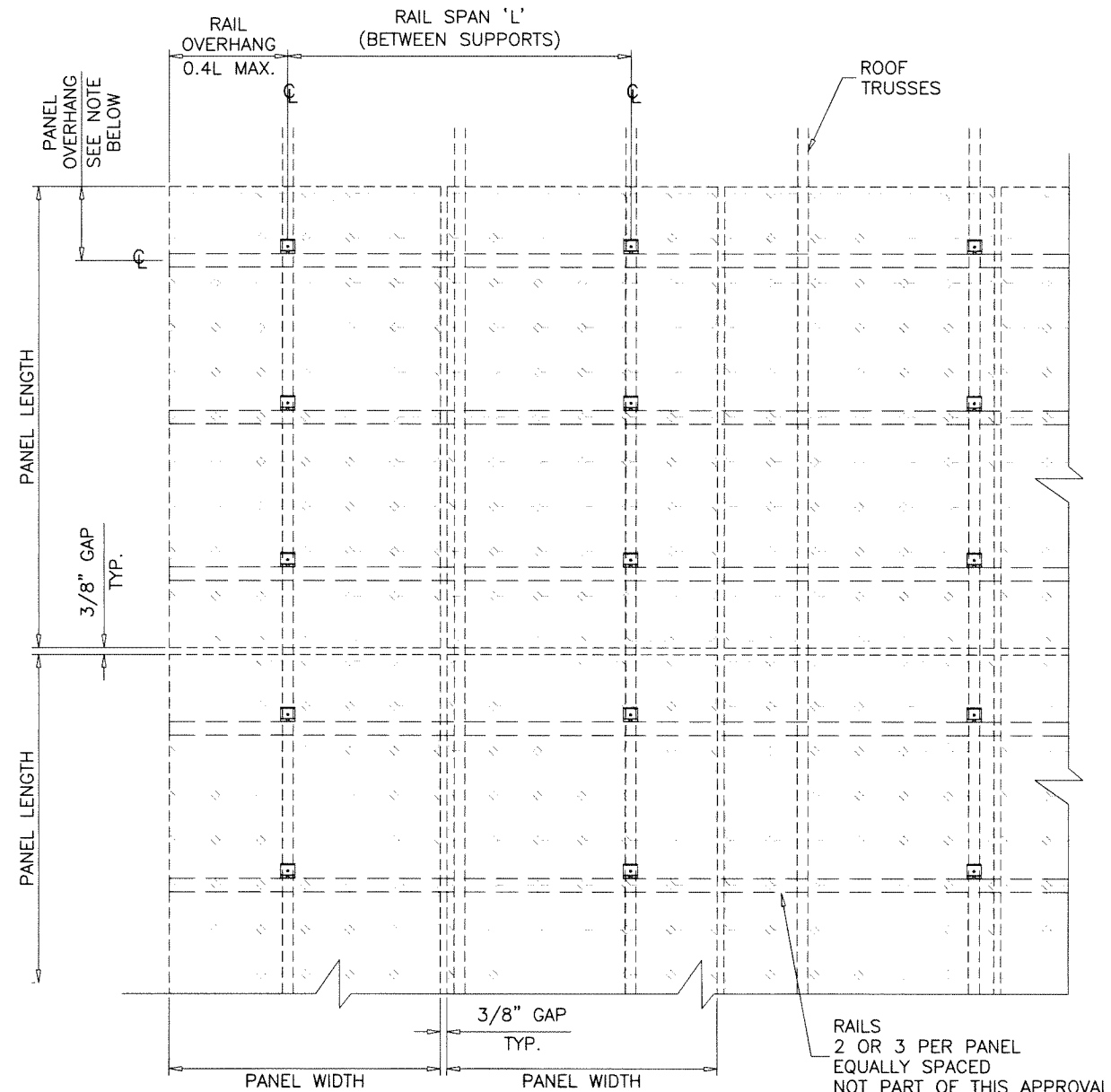
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no	by description

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drawing no.	23-57F
sheet	3 of 18



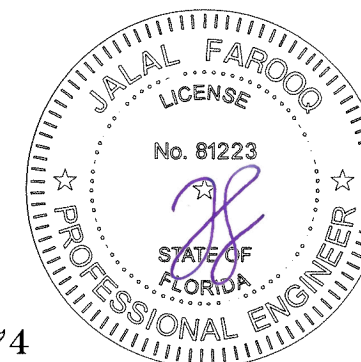
LANDSCAPE MODULES
PLAN VIEW



PORTRAIT MODULES
PLAN VIEW

NOTES:
 PANEL OVERHANG AS PER PANEL MANUFACTURER'S INSTRUCTIONS.
 SHOULD BE EQUAL ON BOTH SIDES OF PANELS
 FOR 3 RAILS SUPPORTED PANELS, OVERHANGS TO BE
 BETWEEN 12-20% OF PANEL LENGTH OR WIDTH.

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SoloFlash 3.18", SoloFlash 4.18"

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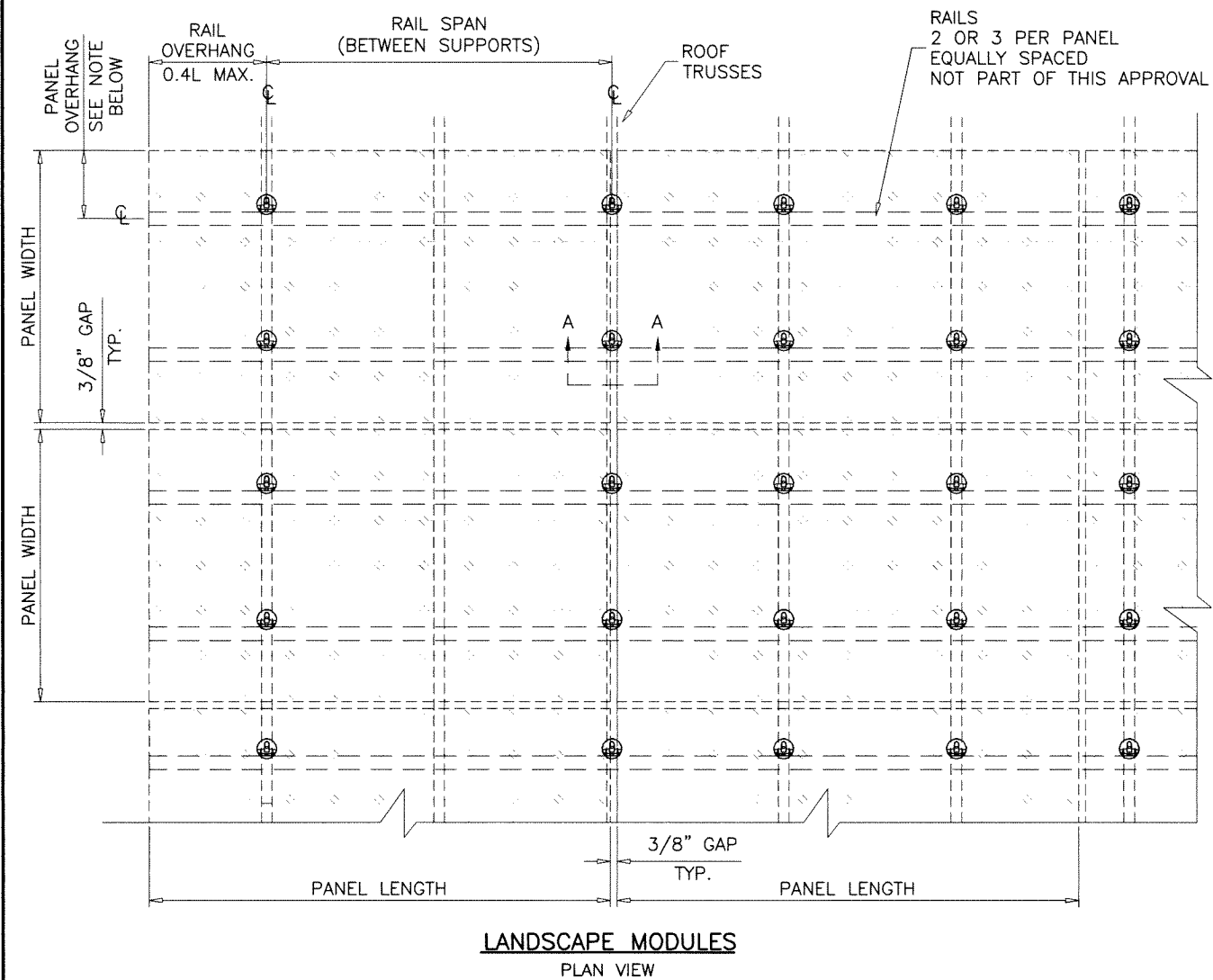
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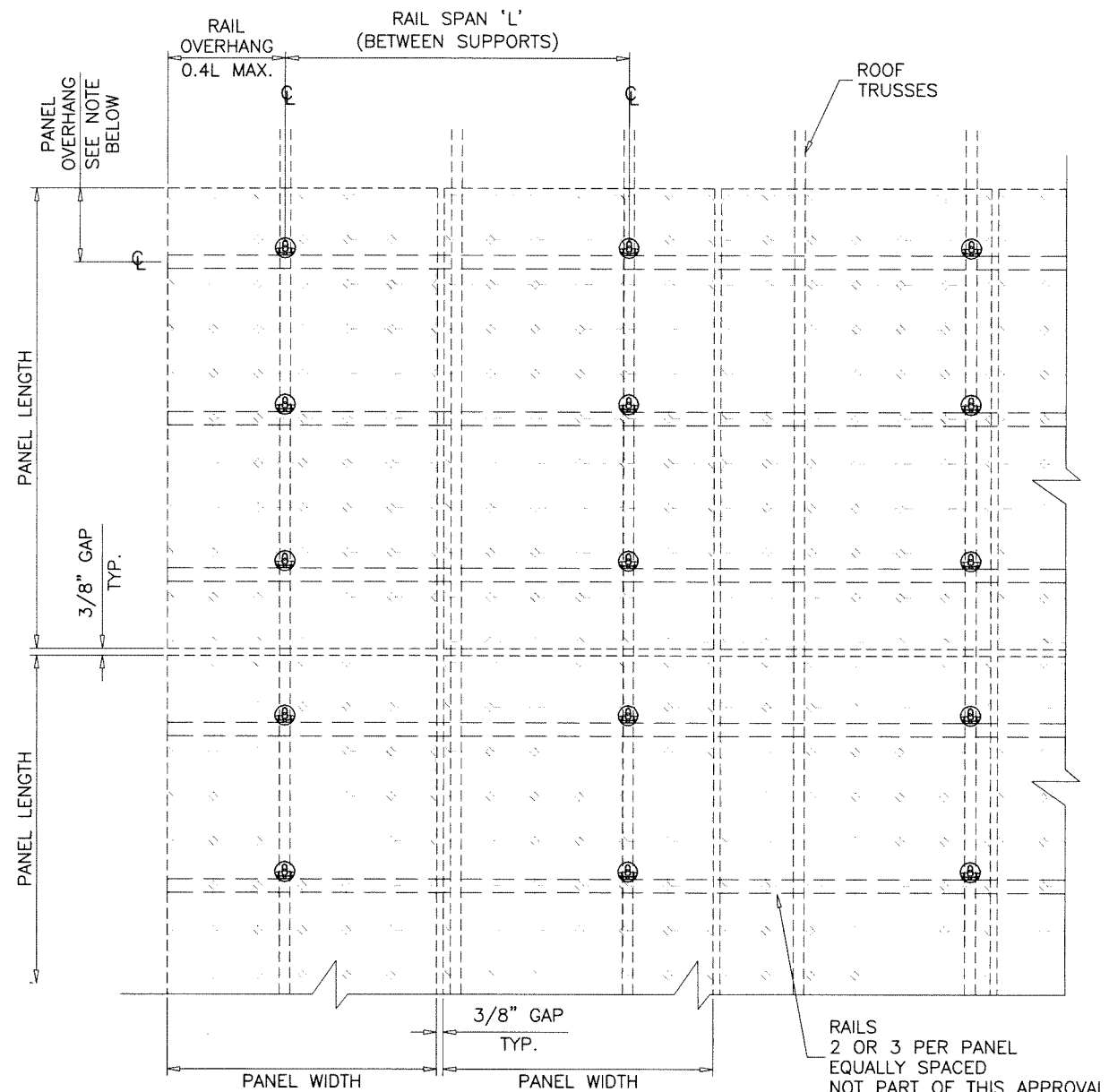
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 dr. by: TARIQ
 chk. by:

drawing no.
23-57F
 sheet 4 of 18



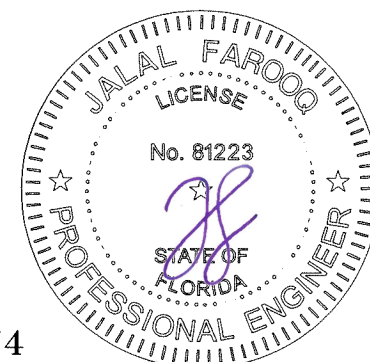
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PLAN VIEW



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PLAN VIEW

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NanoBit

FL #46074

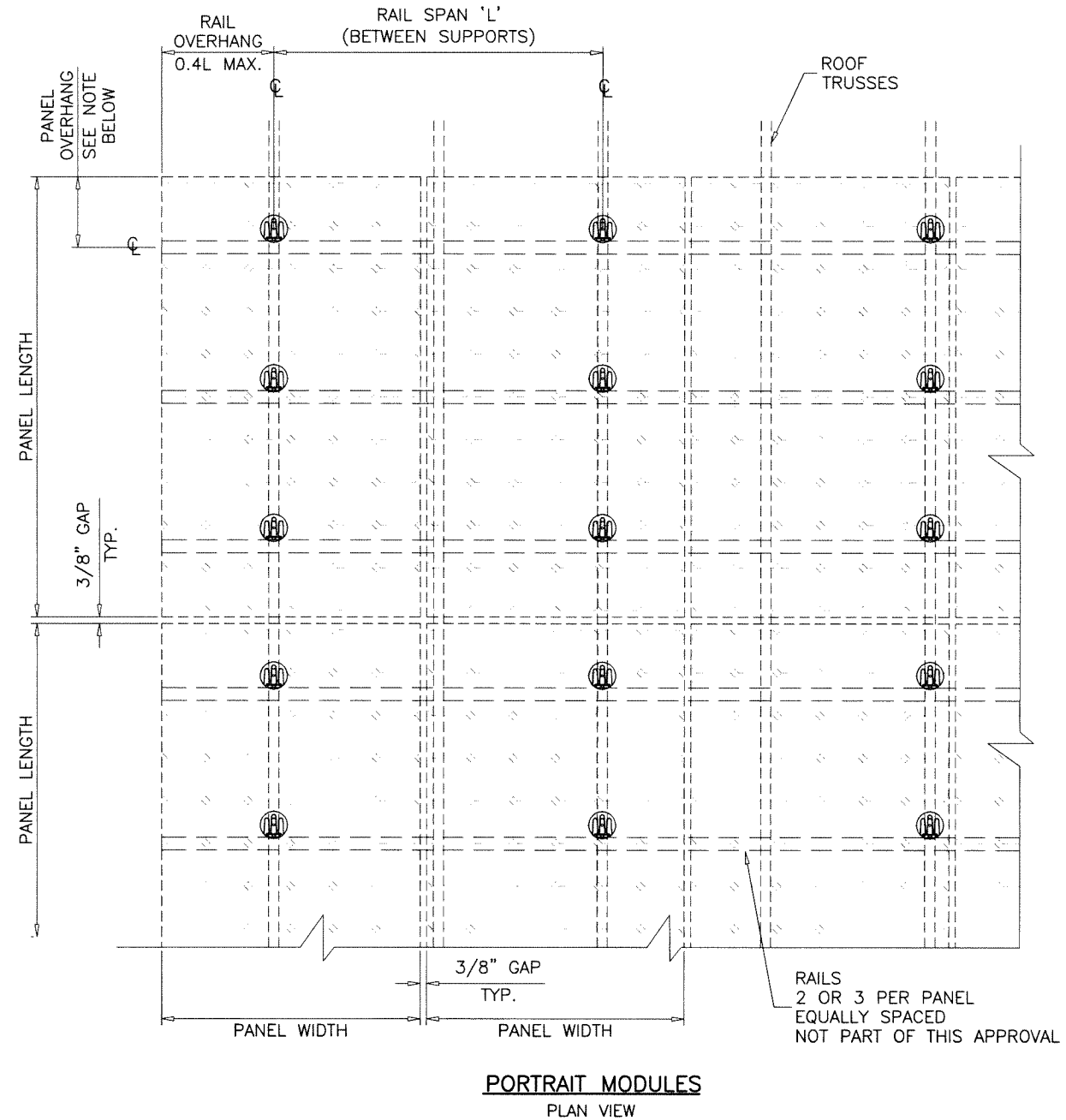
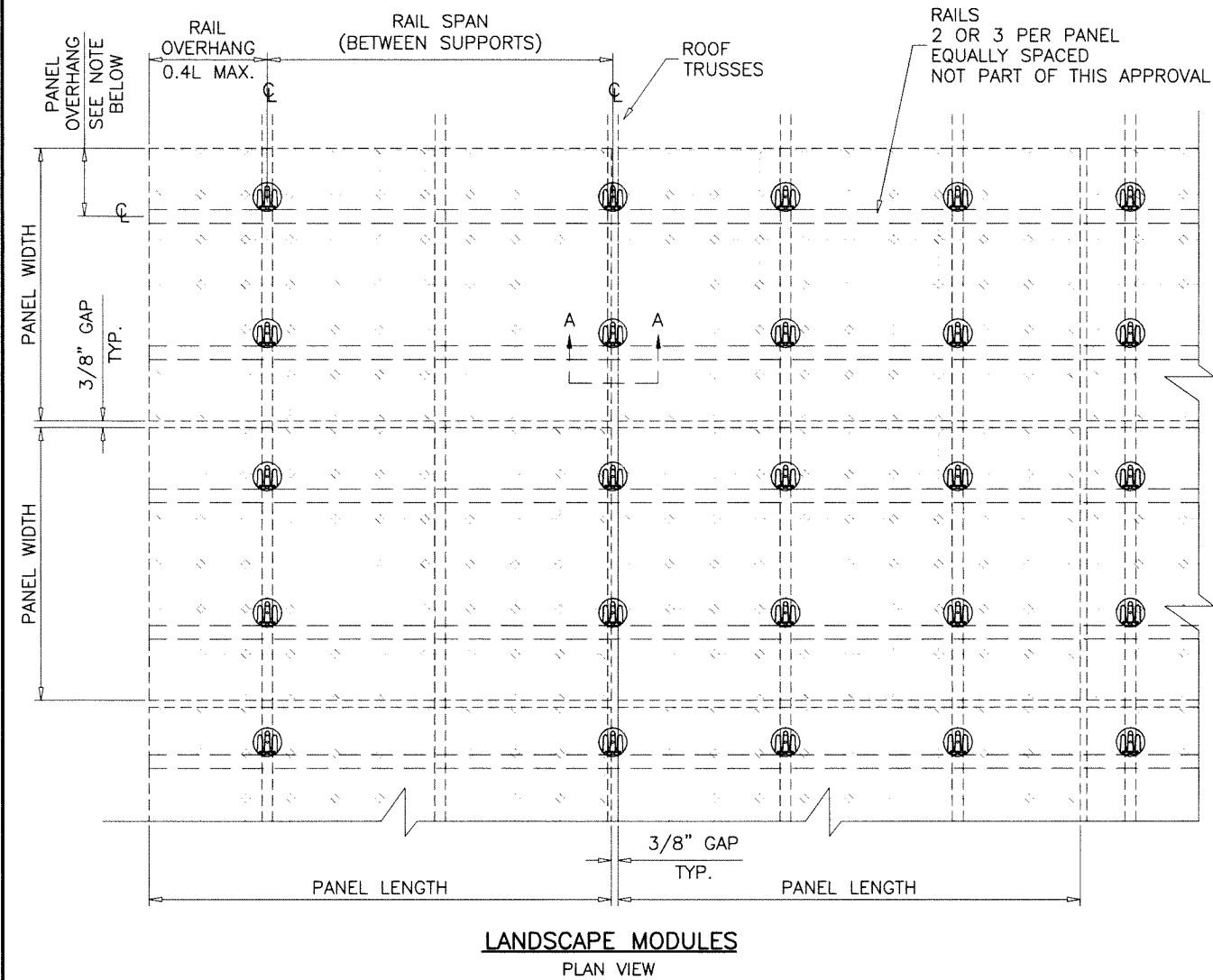
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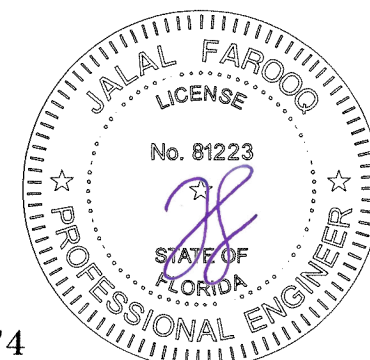
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dr. by:	TARIQ		
chk. by:			

drawing no.
23-57F
sheet 5 of 18



NOTES:
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NanoMount 3.45", NanoPlus 2.99"

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Roof Top PV Mounting System

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scale: 1/2" = 1'-0"

dr. by: TARIQ

chk. by:

revisions:

no	date	by	description

drawing no.

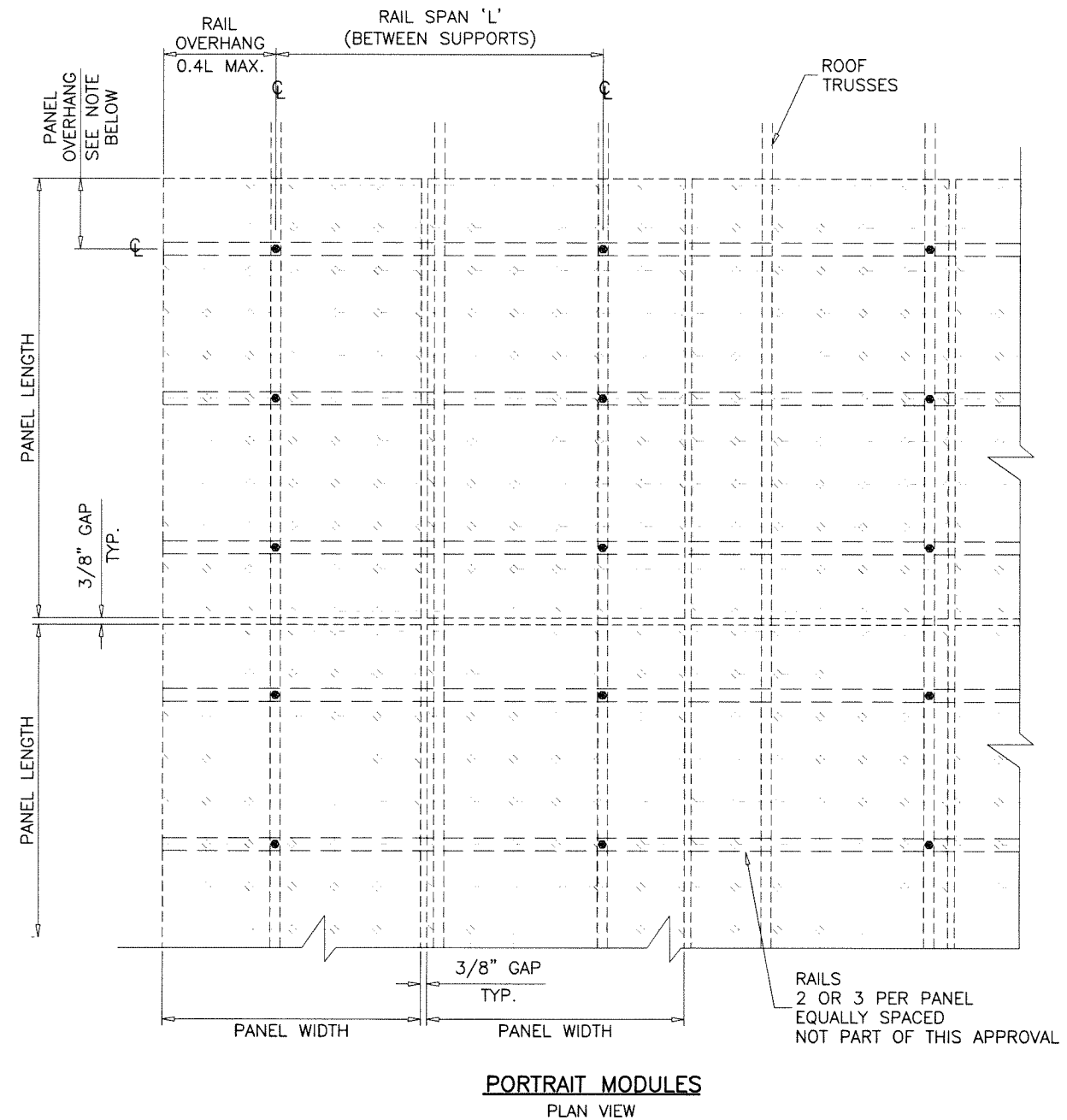
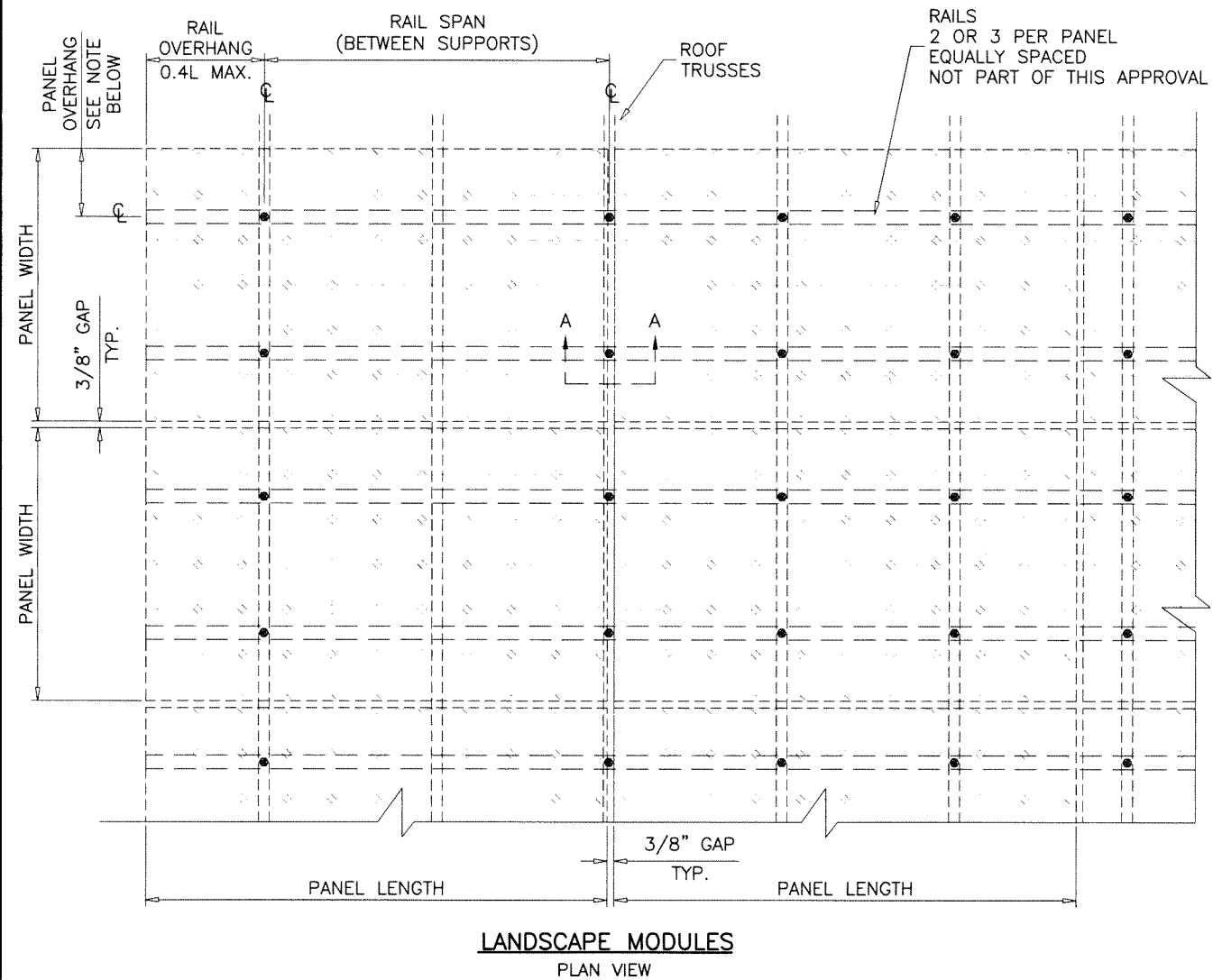
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sheet 6 of 18

drawing no.

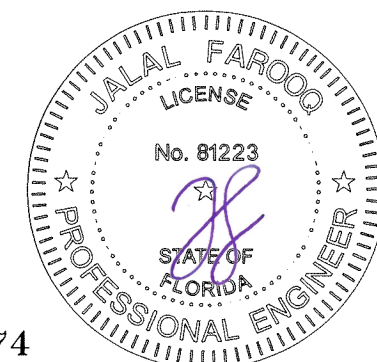
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sheet 6 of 18



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TopTile 5", TopTile 7"

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SOLAR-RACK\23-57F-J-SMC

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date: 12-04-23		revisions:	
scale: 1/2"=1'-0"		no.	by description
dr. by: TARIQ			
chk. by:			
drawing no.			
23-57F			
sheet 7 of 18			

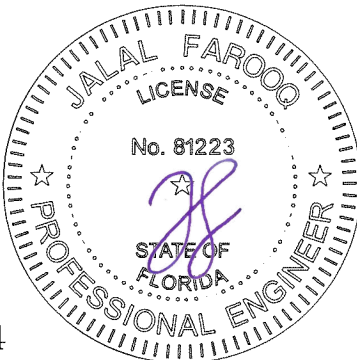
SoloFlash 3.18", SoloFlash 4.18", NanoBit, NanoMount 3.45", NanoPlus 2.99"

ROOF MOUNTS DESIGN LOAD CAPACITY – PSF (LANDSCAPE MODULES)																												
PANEL LENGTH	NUMBER OF RAILS	SPAN 'L'	FLAT ROOFS					ROOF SLOPES UP TO 7°					ROOF SLOPES 8° TO 20°					ROOF SLOPES 21° TO 27°					ROOF SLOPES 28° TO 45°					
			SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	
68"	2	16"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		24"	200.0	200.0	175.3	200.0	200.0	200.0	200.0	174.6	200.0	200.0	200.0	200.0	173.2	200.0	200.0	200.0	200.0	172.5	200.0	200.0	200.0	200.0	200.0	170.4	200.0	200.0
		32"	200.0	200.0	132.4	161.6	161.6	200.0	200.0	131.8	160.8	160.9	200.0	200.0	130.4	159.2	159.5	200.0	200.0	129.6	158.3	158.7	200.0	200.0	127.6	156.0	156.6	
		48"	147.9	147.9	89.6	109.1	109.1	146.3	145.9	89.0	108.3	108.4	143.3	142.0	87.6	106.7	107.0	141.7	139.9	86.8	105.8	106.2	137.8	134.9	84.8	103.5	104.1	
		64"	111.9	111.9	68.2	82.8	82.8	110.4	109.9	67.6	82.0	82.1	107.3	106.0	66.2	80.4	80.7	105.7	103.9	65.4	79.5	79.9	101.8	98.9	63.4	77.2	77.8	
		72"	100.0	100.0	61.1	74.0	74.0	98.4	97.9	60.4	73.3	73.4	95.4	94.0	59.1	71.7	72.0	93.7	91.9	58.3	70.8	71.2	89.8	86.9	56.2	68.5	69.0	
	3	16"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		24"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		32"	200.0	200.0	157.6	192.5	192.5	200.0	200.0	156.9	191.7	191.8	200.0	200.0	155.6	190.1	190.4	200.0	200.0	154.8	189.2	189.6	200.0	200.0	152.7	186.9	187.5	
		48"	176.1	176.1	106.4	129.6	129.6	174.5	174.0	105.7	128.8	128.9	171.5	170.1	104.4	127.3	127.5	169.9	168.1	103.6	126.4	126.7	165.9	163.1	101.6	124.1	124.6	
		64"	133.1	133.1	80.8	98.2	98.2	131.5	131.0	80.1	97.4	97.5	128.5	127.1	78.8	95.9	96.1	126.9	125.1	78.0	95.0	95.3	122.9	120.1	76.0	92.6	93.2	
		72"	118.7	118.7	72.3	87.8	87.8	117.2	116.7	71.6	87.0	87.1	114.1	112.8	70.2	85.4	85.7	112.5	110.7	69.5	84.5	84.9	108.6	105.7	67.4	82.2	82.8	
80"	2	16"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		24"	200.0	200.0	175.3	200.0	200.0	200.0	200.0	174.6	200.0	200.0	200.0	200.0	173.2	200.0	200.0	200.0	200.0	172.5	200.0	200.0	200.0	200.0	200.0	170.4	200.0	200.0
		32"	200.0	200.0	132.4	161.6	161.6	200.0	200.0	131.8	160.8	160.9	200.0	200.0	130.4	159.2	159.5	200.0	200.0	129.6	158.3	158.7	200.0	200.0	127.6	156.0	156.6	
		48"	147.9	147.9	89.6	109.1	109.1	146.3	145.9	89.0	108.3	108.4	143.3	142.0	87.6	106.7	107.0	141.7	139.9	86.8	105.8	106.2	137.8	134.9	84.8	103.5	104.1	
		64"	111.9	111.9	68.2	82.8	82.8	110.4	109.9	67.6	82.0	82.1	107.3	106.0	66.2	80.4	80.7	105.7	103.9	65.4	79.5	79.9	101.8	98.9	63.4	77.2	77.8	
		72"	100.0	100.0	61.1	74.0	74.0	98.4	97.9	60.4	73.3	73.4	95.4	94.0	59.1	71.7	72.0	93.7	91.9	58.3	70.8	71.2	89.8	86.9	56.2	68.5	69.0	
	3	16"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		24"	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
		32"	200.0	200.0	157.6	192.5	192.5	200.0	200.0	156.9	191.7	191.8	200.0	200.0	155.6	190.1	190.4	200.0	200.0	154.8	189.2	189.6	200.0	200.0	152.7	186.9	187.5	
		48"	176.1	176.1	106.4	129.6	129.6	174.5	174.0	105.7	128.8	128.9	171.5	170.1	104.4	127.3	127.5	169.9	168.1	103.6	126.4	126.7	165.9	163.1	101.6	124.1	124.6	
		64"	133.1	133.1	80.8	98.2	98.2	131.5	131.0	80.1	97.4	97.5	128.5	127.1	78.8	95.9	96.1	126.9	125.1	78.0	95.0	95.3	122.9	120.1	76.0	92.6	93.2	
		72"	118.7	118.7	72.3	87.8	87.8	117.2	116.7	71.6	87.0	87.1	114.1	112.8	70.2	85.4	85.7	112.5	110.7	69.5	84.5	84.9	108.6	105.7	67.4	82.2	82.8	

SEE SHEET 12 FOR SoloFlash 3.18" INSTALLATION
SEE SHEET 13 FOR SoloFlash 4.18" INSTALLATION
SEE SHEET 14 FOR NanoBit INSTALLATION
SEE SHEET 15 FOR NanoMount INSTALLATION
SEE SHEET 16 FOR NanoPlus INSTALLATION

LOADS SHOWN IN CHARTS ABOVE ARE FOR 60 CELLS PANEL (40" X 68")
AND 72 CELLS PANEL (40" X 80").

Sealed: 8/20/2024



FL #46074

afC

AL-FAROOQ CORPORATION

ENGINEERS & PRODUCT DEVELOPMENT

9360 SUNSET DRIVE, SUITE 220

MIAMI, FLORIDA 33173

TEL. (305) 264-8100

WWW.AFCENG.COM

SOLAR-RACK\23-57F-SMC

ROOF TOP PV MOUNTING SYSTEM

SunModo Corp.
14800 N.E. 65th Street
Vancouver, WA. 98682
Phone: (360) 844-0048
sunmodo.com

revisions:
no date by description
12-04-23
scale: -
dr. by: TARIQ
chk. by:
drawing no.
23-57F
sheet 8 of 18

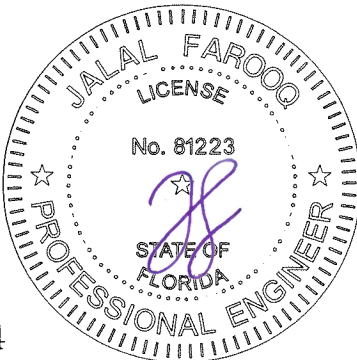
TopTile 5", TopTile 7"

ROOF MOUNTS DESIGN LOAD CAPACITY – PSF (LANDSCAPE MODULES)												
PANEL LENGTH	NUMBER OF RAILS	SPAN 'L'	FLAT ROOFS		ROOF SLOPES UP TO 7°		ROOF SLOPES 8° TO 20°		ROOF SLOPES 21° TO 27°		ROOF SLOPES 28° TO 45°	
			TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"
68"	2	16"	148.5	148.5	141.7	141.7	129.3	129.3	122.9	122.9	108.1	108.1
		24"	100.3	100.3	93.5	93.5	81.1	81.1	74.7	74.7	59.9	59.9
		32"	76.2	76.2	69.4	69.4	57.0	57.0	50.6	50.6	35.9	35.9
		48"	52.2	52.2	45.4	45.4	33.0	33.0	26.6	26.6	–	–
		64"	40.1	40.1	33.3	33.3	20.9	20.9	–	–	–	–
		72"	36.1	36.1	29.3	29.3	16.9	16.9	–	–	–	–
	3	16"	176.7	176.7	170.0	170.0	157.5	157.5	151.1	151.1	136.4	136.4
		24"	119.2	119.2	112.4	112.4	100.0	100.0	93.6	93.6	78.8	78.8
		32"	90.4	90.4	83.6	83.6	71.2	71.2	64.8	64.8	50.0	50.0
		48"	61.6	61.6	54.8	54.8	42.4	42.4	36.0	36.0	21.2	21.2
		64"	47.2	47.2	40.4	40.4	28.0	28.0	21.6	21.6	–	–
		72"	42.4	42.4	35.6	35.6	23.2	23.2	16.8	16.8	–	–
80"	2	16"	148.5	148.5	141.7	141.7	129.3	129.3	122.9	122.9	108.1	108.1
		24"	100.3	100.3	93.5	93.5	81.1	81.1	74.7	74.7	59.9	59.9
		32"	76.2	76.2	69.4	69.4	57.0	57.0	50.6	50.6	35.9	35.9
		48"	52.2	52.2	45.4	45.4	33.0	33.0	26.6	26.6	–	–
		64"	40.1	40.1	33.3	33.3	20.9	20.9	–	–	–	–
		72"	36.1	36.1	29.3	29.3	16.9	16.9	–	–	–	–
	3	16"	176.7	176.7	170.0	170.0	157.5	157.5	151.1	151.1	136.4	136.4
		24"	119.2	119.2	112.4	112.4	100.0	100.0	93.6	93.6	78.8	78.8
		32"	90.4	90.4	83.6	83.6	71.2	71.2	64.8	64.8	50.0	50.0
		48"	61.6	61.6	54.8	54.8	42.4	42.4	36.0	36.0	21.2	21.2
		64"	47.2	47.2	40.4	40.4	28.0	28.0	21.6	21.6	–	–
		72"	42.4	42.4	35.6	35.6	23.2	23.2	16.8	16.8	–	–

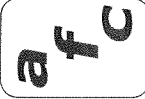
SEE SHEET 17 FOR TopTile 5" INSTALLATION
SEE SHEET 18 FOR TopTile 7" INSTALLATION

LOADS SHOWN IN CHARTS ABOVE ARE FOR 60 CELLS PANEL (40" X 68")
AND 72 CELLS PANEL (40" X 80").

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date: 12-04-23	scale: –	dr. by: TARIQ	chk. by:
drawing no. 23-57F			
sheet 9 of 18			

SOLAR – RACK \ 23 – 57F – SMC

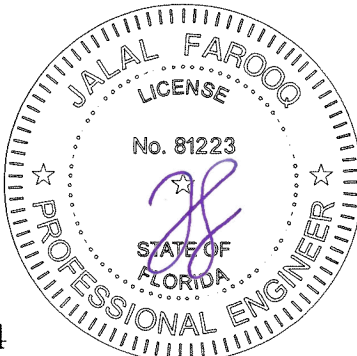
SoloFlash 3.18", SoloFlash 4.18", NanoBit, NanoMount 3.45", NanoPlus 2.99"

ROOF MOUNTS DESIGN LOAD CAPACITY – PSF (PORTRAIT MODULES)																											
PANEL LENGTH	NUMBER OF RAILS	SPAN 'L'	FLAT ROOFS					ROOF SLOPES UP TO 7°					ROOF SLOPES 8° TO 20°					ROOF SLOPES 21° TO 27°					ROOF SLOPES 28° TO 45°				
			SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"	SoloFlash 3.18"	SoloFlash 4.18"	NanoBit 3.53"	NanoMount 3.45"	NanoPlus 2.99"
68"	2	16"	200.0	200.0	155.1	189.4	189.4	200.0	200.0	154.4	188.6	188.7	200.0	200.0	153.1	187.0	187.3	200.0	200.0	152.3	186.1	186.5	200.0	200.0	150.3	183.8	184.4
		24"	173.3	173.3	104.7	127.6	127.6	171.7	171.3	104.1	126.8	126.9	168.7	167.4	102.7	125.2	125.5	167.1	165.3	101.9	124.3	124.7	163.2	160.3	99.9	122.0	122.6
		32"	131.0	131.0	79.6	96.7	96.7	129.4	128.9	78.9	95.9	96.0	126.4	125.0	77.5	94.3	94.6	124.8	123.0	76.8	93.4	93.8	120.8	118.0	74.7	91.1	91.7
		48"	88.7	88.7	54.4	65.8	65.8	87.1	86.6	53.7	65.0	65.1	84.1	82.7	52.4	63.4	63.7	82.4	80.6	51.6	62.5	62.9	78.5	75.7	49.5	60.2	60.8
		64"	67.5	67.5	41.8	50.4	50.4	65.9	65.4	41.1	49.6	49.7	62.9	61.5	39.8	48.0	48.3	61.3	59.5	39.0	47.1	47.5	57.3	54.5	36.9	44.8	45.4
		72"	60.4	60.4	37.6	45.2	45.2	58.9	58.4	36.9	44.4	44.5	55.8	54.5	35.6	42.8	43.1	54.2	52.4	34.8	41.9	42.3	50.3	47.4	32.7	39.6	40.2
	3	16"	200.0	200.0	184.7	200.0	200.0	200.0	200.0	184.0	200.0	200.0	200.0	200.0	182.7	200.0	200.0	200.0	200.0	181.9	200.0	200.0	200.0	200.0	179.9	200.0	200.0
		24"	200.0	200.0	124.5	151.8	151.8	200.0	200.0	123.8	151.0	151.1	200.0	200.0	122.4	149.4	149.7	200.0	198.5	121.7	148.5	148.9	196.3	193.5	119.6	146.2	146.8
		32"	155.9	155.9	94.3	114.9	114.9	154.3	153.8	93.7	114.1	114.2	151.3	149.9	92.3	112.5	112.8	149.6	147.8	91.6	111.6	112.0	145.7	142.9	89.5	109.3	109.9
		48"	105.2	105.2	64.2	77.9	77.9	103.7	103.2	63.6	77.1	77.2	100.6	99.3	62.2	75.5	75.8	99.0	97.2	61.4	74.6	75.0	95.1	92.2	59.4	72.3	72.9
		64"	79.9	79.9	49.2	59.4	59.4	78.4	77.9	48.5	58.6	58.7	75.3	74.0	47.2	57.1	57.3	73.7	71.9	46.4	56.2	56.5	69.8	66.9	44.3	53.8	54.4
		72"	71.5	71.5	44.2	53.3	53.3	69.9	69.4	43.5	52.5	52.6	66.9	65.5	42.1	50.9	51.2	65.3	63.5	41.4	50.0	50.4	61.3	58.5	39.3	47.7	48.3
80"	2	16"	200.0	200.0	132.4	161.6	161.6	200.0	200.0	131.8	160.8	160.9	200.0	200.0	130.4	159.2	159.5	200.0	200.0	129.6	158.3	158.7	200.0	200.0	127.6	156.0	156.6
		24"	147.9	147.9	89.6	109.1	109.1	146.3	145.9	89.0	108.3	108.4	143.3	142.0	87.6	106.7	107.0	141.7	139.9	86.8	105.8	106.2	137.8	134.9	84.8	103.5	104.1
		32"	111.9	111.9	68.2	82.8	82.8	110.4	109.9	67.6	82.0	82.1	107.3	106.0	66.2	80.4	80.7	105.7	103.9	65.4	79.5	79.9	101.8	98.9	63.4	77.2	77.8
		48"	76.0	76.0	46.8	56.5	56.5	74.4	73.9	46.1	55.7	55.8	71.4	70.0	44.8	54.2	54.4	69.7	67.9	44.0	53.3	53.6	65.8	63.0	42.0	50.9	51.5
		64"	58.0	58.0	36.1	43.4	43.4	56.4	55.9	35.4	42.6	42.7	53.4	52.0	34.1	41.0	41.3	51.8	49.9	33.3	40.1	40.5	47.8	45.0	31.3	37.8	38.4
		72"	52.0	52.0	32.5	39.0	39.0	50.4	49.9	31.9	38.2	38.3	47.4	46.0	30.5	36.6	36.9	45.8	43.9	29.7	35.8	36.1	41.8	39.0	27.7	33.4	34.0
	3	16"	200.0	200.0	157.6	192.5	192.5	200.0	200.0	156.9	191.7	191.8	200.0	200.0	155.6	190.1	190.4	200.0	200.0	154.8	189.2	189.6	200.0	200.0	152.7	186.9	187.5
		24"	176.1	176.1	106.4	129.6	129.6	174.5	174.0	105.7	128.8	128.9	171.5	170.1	104.4	127.3	127.5	169.9	168.1	103.6	126.4	126.7	165.9	163.1	101.6	124.1	124.6
		32"	133.1	133.1	80.8	98.2	98.2	131.5	131.0	80.1	97.4	97.5	128.5	127.1	78.8	95.9	96.1	126.9	125.1	78.0	95.0	95.3	122.9	120.1	76.0	92.6	93.2
		48"	90.1	90.1	55.2	66.8	66.8	88.5	88.0	54.5	66.0	66.1	85.5	84.1	53.2	64.4	64.7	83.8	82.0	52.4	63.6	63.9	79.9	77.1	50.4	61.2	61.8
		64"	68.5	68.5	42.4	51.1	51.1	67.0	66.5	41.7	50.3	50.4	63.9	62.6	40.4	48.7	49.0	62.3	60.5	39.6	47.8	48.2	58.4	55.5	37.6	45.5	46.1
		72"	61.4	61.4	38.1	45.9	45.9	59.8	59.3	37.5	45.1	45.2	56.8	55.4	36.1	43.5	43.8	55.2	53.3	35.3	42.6	43.0	51.2	48.4	33.3	40.3	40.9

SEE SHEET 12 FOR SoloFlash 3.18" INSTALLATION
SEE SHEET 13 FOR SoloFlash 4.18" INSTALLATION
SEE SHEET 14 FOR NanoBit INSTALLATION
SEE SHEET 15 FOR NanoMount INSTALLATION
SEE SHEET 16 FOR NanoPlus INSTALLATION

LOADS SHOWN IN CHARTS ABOVE ARE FOR 60 CELLS PANEL (40" X 68")
AND 72 CELLS PANEL (40" X 80").

Sealed: 8/20/2024



FL #46074

af c

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ROOF TOP PV MOUNTING SYSTEM

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revisions:

no	date	by	description

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scale: –

dr. by: TARIQ

chk. by:

drawing no.

23–57F

sheet 10 of 18

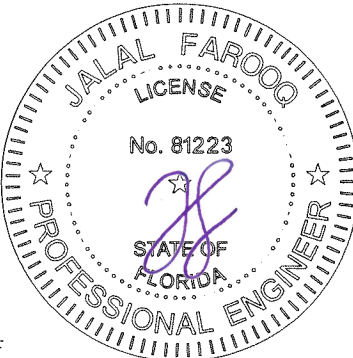
TopTile 5", TopTile 7"

ROOF MOUNTS DESIGN LOAD CAPACITY – PSF (PORTRAIT MODULES)												
PANEL LENGTH	NUMBER OF RAILS	SPAN 'L'	FLAT ROOFS		ROOF SLOPES UP TO 7°		ROOF SLOPES 8° TO 20°		ROOF SLOPES 21° TO 27°		ROOF SLOPES 28° TO 45°	
			TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"	TopTile 5"	TopTile 7"
68"	2	16"	89.0	89.0	82.2	82.2	69.8	69.8	63.4	63.4	48.6	48.6
		24"	60.6	60.6	53.9	53.9	41.4	41.4	35.0	35.0	20.3	20.3
		32"	46.5	46.5	39.7	39.7	27.3	27.3	20.9	20.9	–	–
		48"	32.3	32.3	25.5	25.5	–	–	–	–	–	–
		64"	25.2	25.2	18.5	18.5	–	–	–	–	–	–
	3	72"	22.9	22.9	16.1	16.1	–	–	–	–	–	–
		16"	105.6	105.6	98.8	98.8	86.4	86.4	80.0	80.0	65.2	65.2
		24"	71.7	71.7	65.0	65.0	52.5	52.5	46.1	46.1	31.4	31.4
		32"	54.8	54.8	48.0	48.0	35.6	35.6	29.2	29.2	–	–
		48"	37.9	37.9	31.1	31.1	18.7	18.7	–	–	–	–
80"	2	64"	29.4	29.4	22.6	22.6	–	–	–	–	–	–
		72"	26.6	26.6	19.8	19.8	–	–	–	–	–	–
		16"	76.2	76.2	69.4	69.4	57.0	57.0	50.6	50.6	35.9	35.9
		24"	52.2	52.2	45.4	45.4	33.0	33.0	26.6	26.6	–	–
		32"	40.1	40.1	33.3	33.3	20.9	20.9	–	–	–	–
	3	48"	28.1	28.1	21.3	21.3	–	–	–	–	–	–
		64"	22.1	22.1	15.3	15.3	–	–	–	–	–	–
		72"	20.1	20.1	–	–	–	–	–	–	–	–
		16"	90.4	90.4	83.6	83.6	71.2	71.2	64.8	64.8	50.0	50.0
		24"	61.6	61.6	54.8	54.8	42.4	42.4	36.0	36.0	21.2	21.2
		32"	47.2	47.2	40.4	40.4	28.0	28.0	21.6	21.6	–	–
		48"	32.8	32.8	26.0	26.0	–	–	–	–	–	–
		64"	25.6	25.6	18.8	18.8	–	–	–	–	–	–
		72"	23.2	23.2	16.4	16.4	–	–	–	–	–	–

SEE SHEET 17 FOR TopTile 5" INSTALLATION
SEE SHEET 18 FOR TopTile 7" INSTALLATION

LOADS SHOWN IN CHARTS ABOVE ARE FOR 60 CELLS PANEL (40" X 68")
AND 72 CELLS PANEL (40" X 80").

Sealed: 8/20/2024



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ROOF TOP PV MOUNTING SYSTEM

revisions:

no	date	by	description

date: 12-04-23

scale: –

dr. by: TARIQ

chk. by:

drawing no.

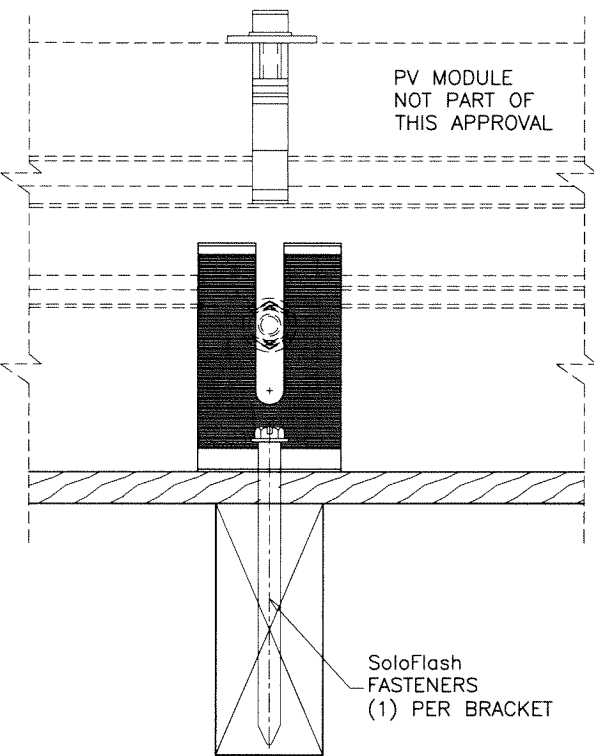
23-57F

sheet 11 of 18

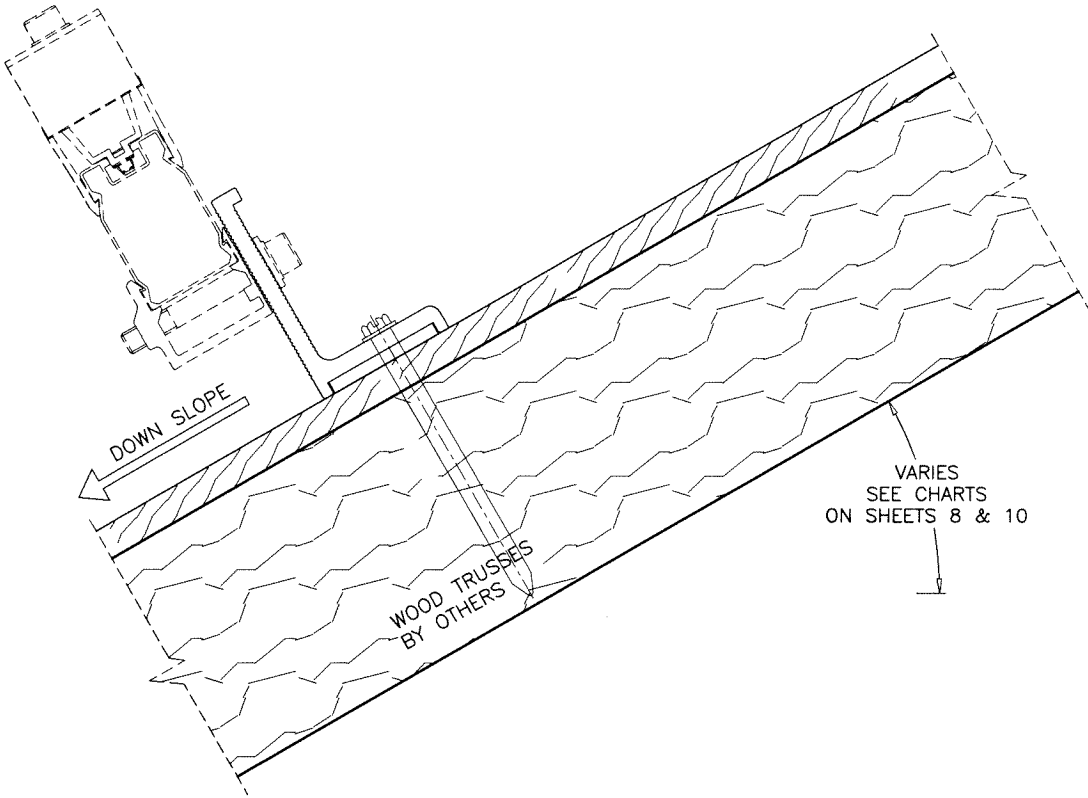
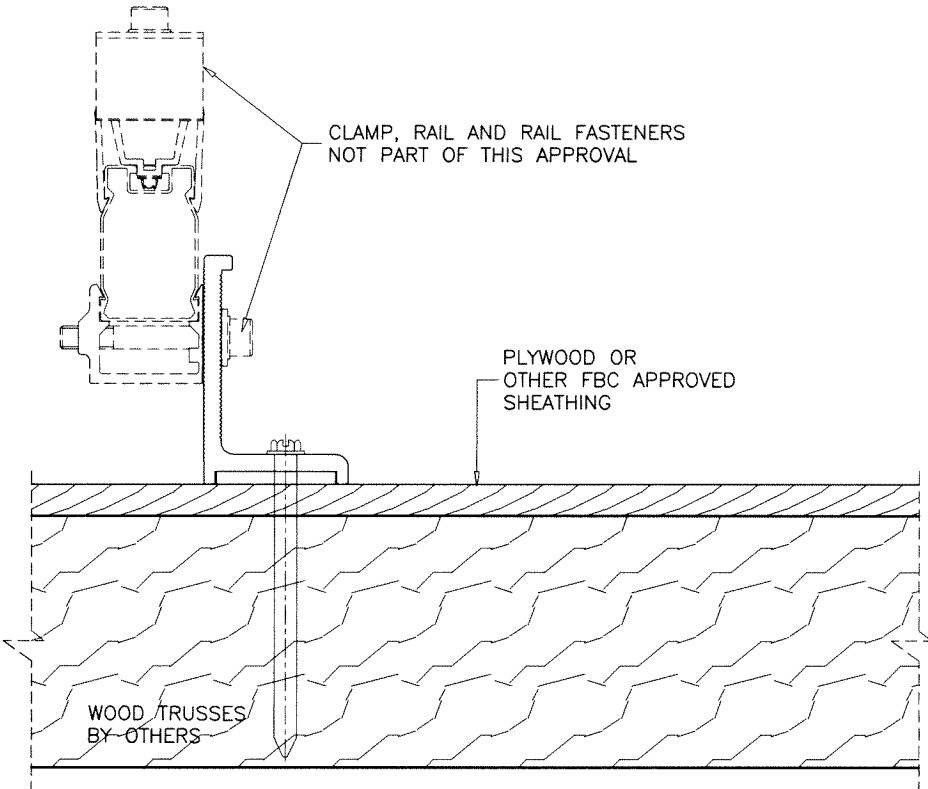
SOLAR-RACK\23-57F-SMC

FBPE #3538

SoloFlash 3.18"



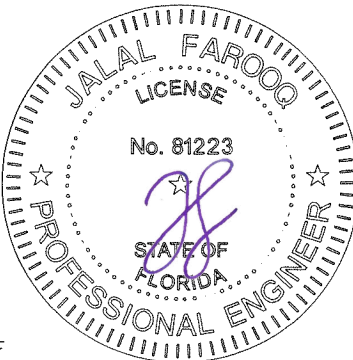
SECTION A-A



SoloFlash FASTENERS:

5/16" X 4-3/8" ST/ST LAG SCREWS (Fy = 65 KSI MIN.)
3-3/8" MIN. PENETRATION INTO WOOD TRUSSES CENTERED
AT WOOD TRUSSES (SG = 0.50 MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 1151.4 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 361.8 Lbs MAX.



Sealed: 8/20/2024

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revisions:		no	date	by	description

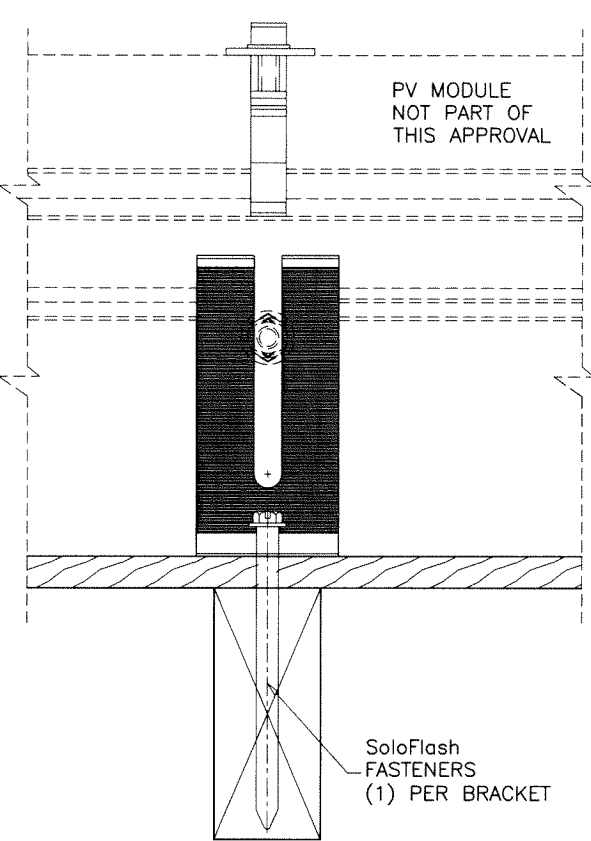
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chk. by:

drawing no.
23-57F

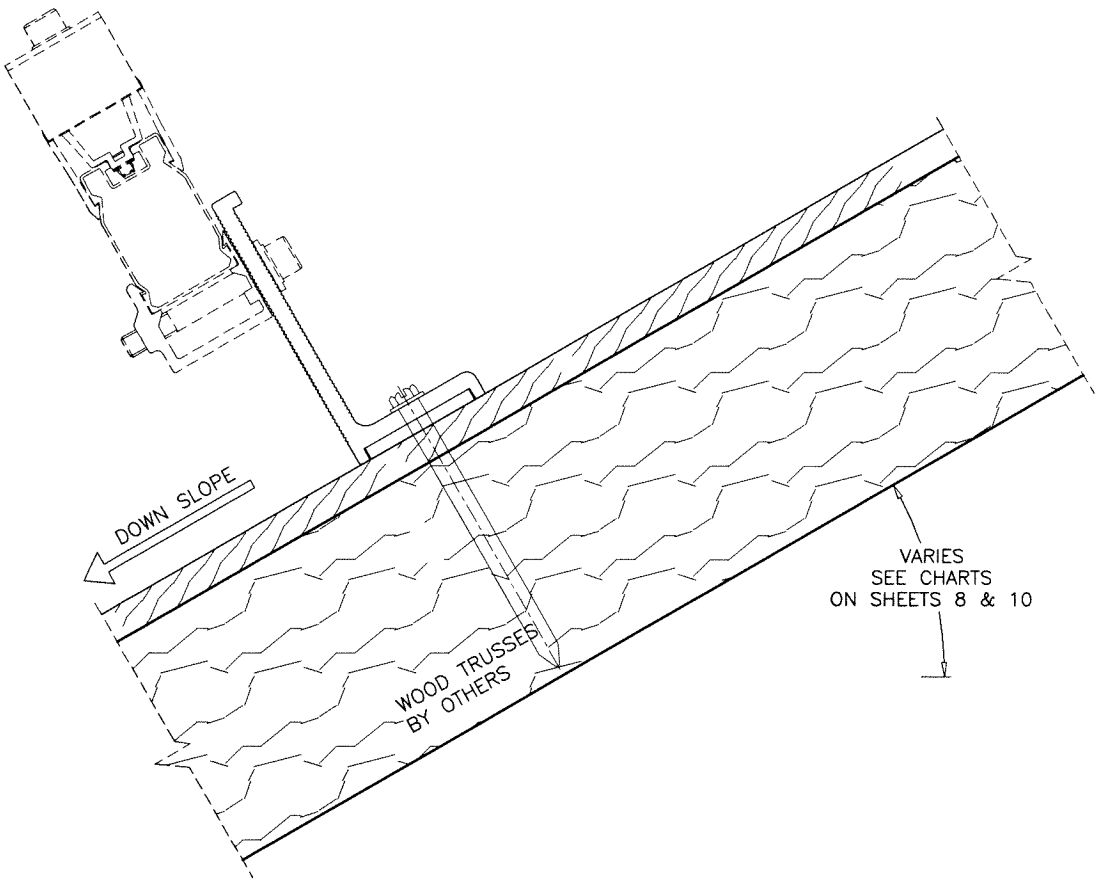
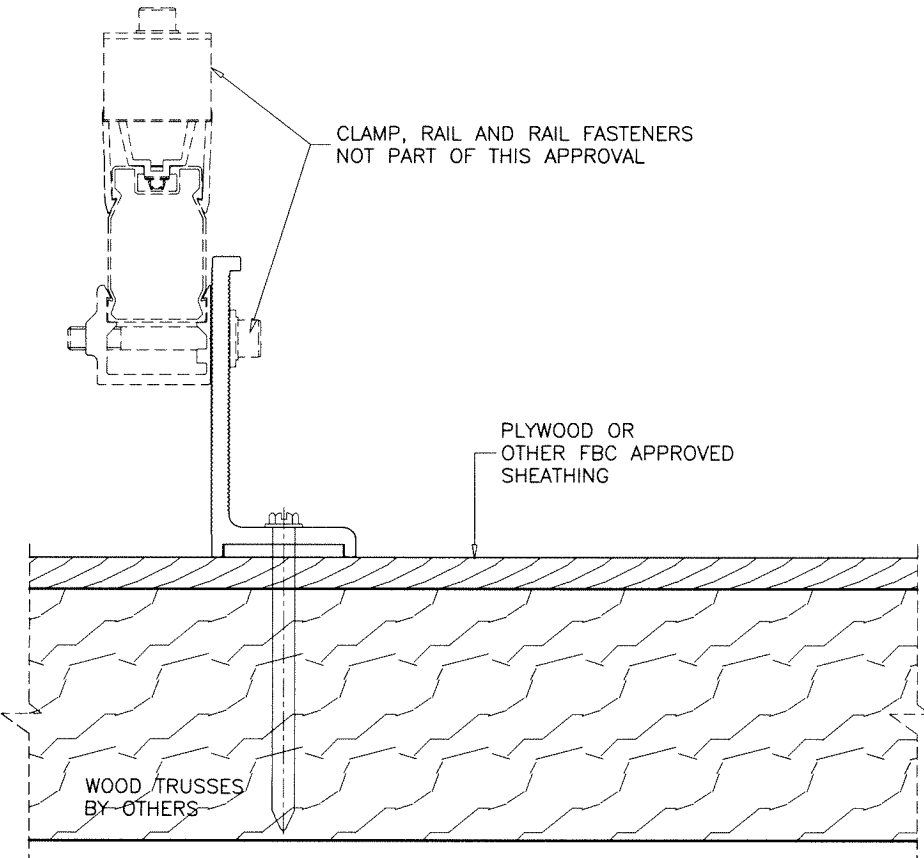
sheet 12 of 18

SOLAR-RACK\23-57F-SMC

SoloFlash 4.18"



SECTION A-A

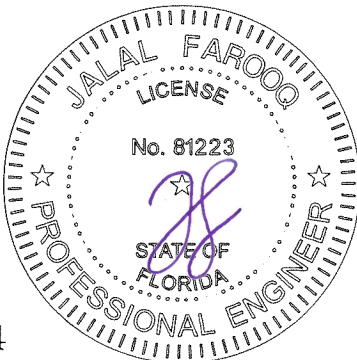


SoloFlash FASTENERS:

5/16" X 4-3/8" ST/ST LAG SCREWS (Fy = 65 KSI MIN.)
3-3/8" MIN. PENETRATION INTO WOOD TRUSSES CENTERED
AT WOOD TRUSSES (SG = 0.50 MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 1151.4 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 275.2 Lbs MAX.

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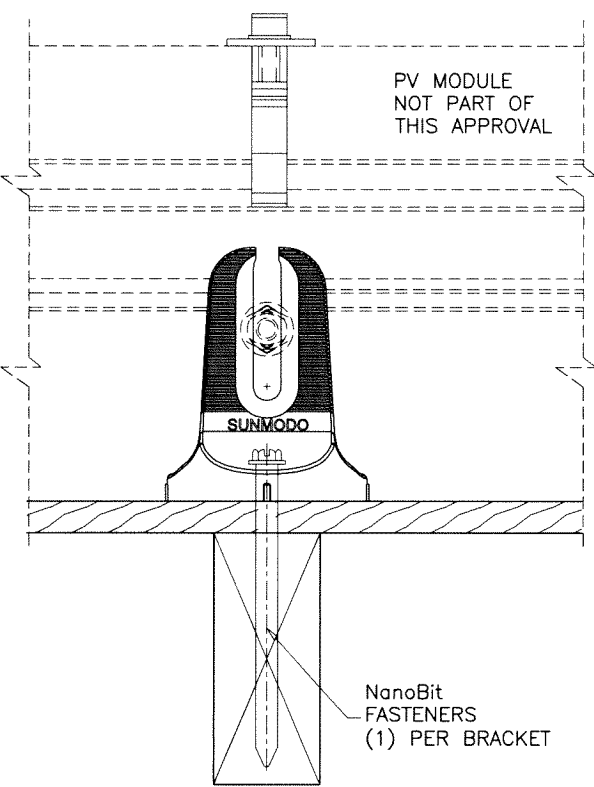


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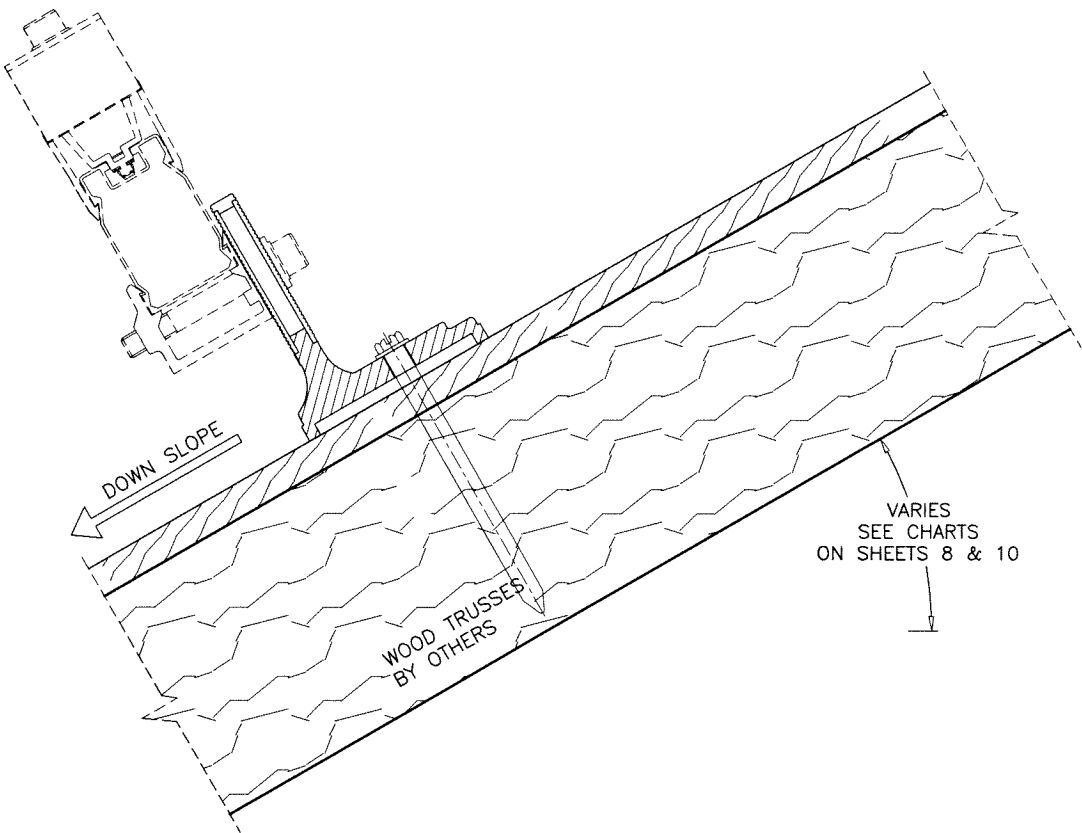
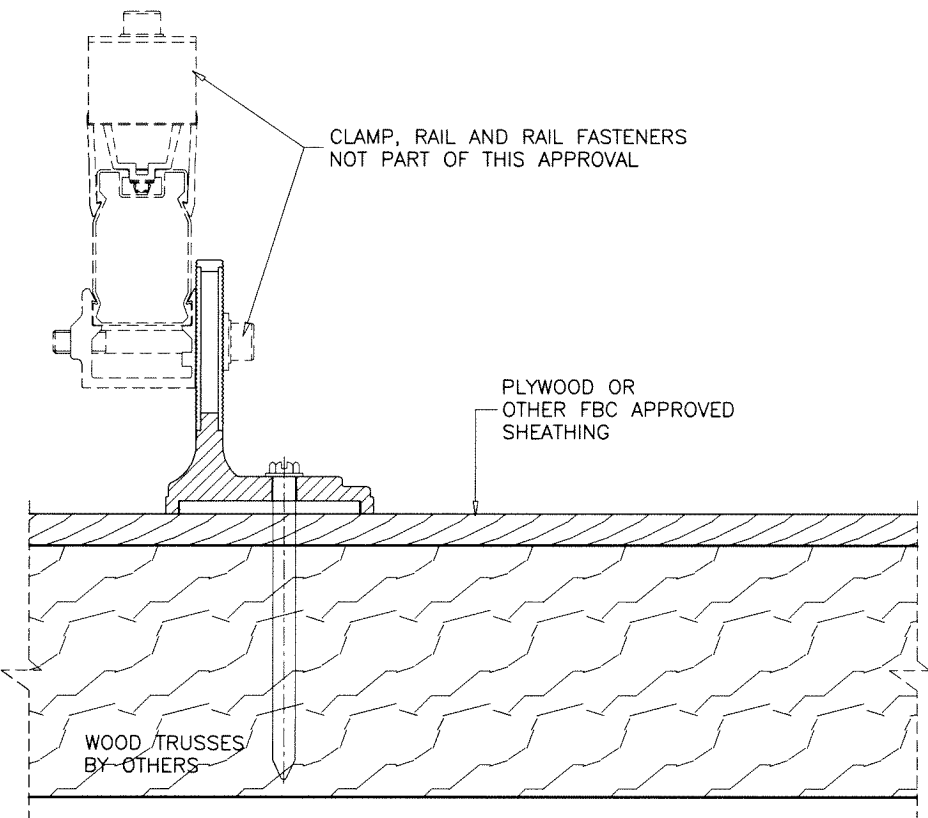
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538
SOLAR-RACK\23-57F-SMC

ROOF TOP PV MOUNTING SYSTEM
SunModo Corp.
14800 N.E. 65th Street
Vancouver, WA. 98682
Phone: (360) 844-0048
sunmodo.com

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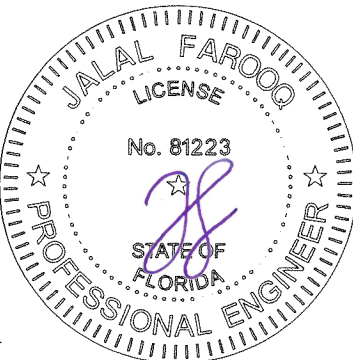
SECTION A-A



NanoBit FASTENERS:

5/16" X 4-3/8" ST/ST LAG SCREWS (Fy = 65 KSI MIN.)
3-1/4" MIN. PENETRATION INTO WOOD TRUSSES CENTERED
AT WOOD TRUSSES (SG = 0.50 MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 685.0 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 527.7 Lbs MAX.



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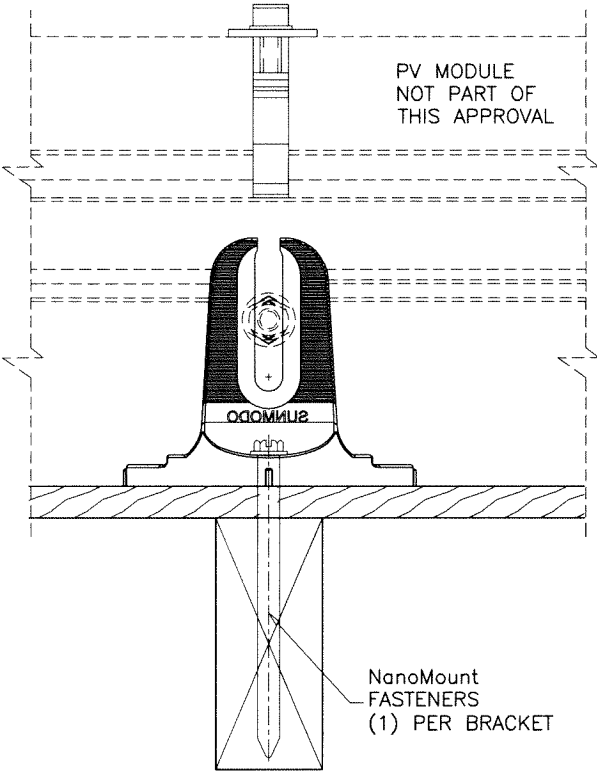
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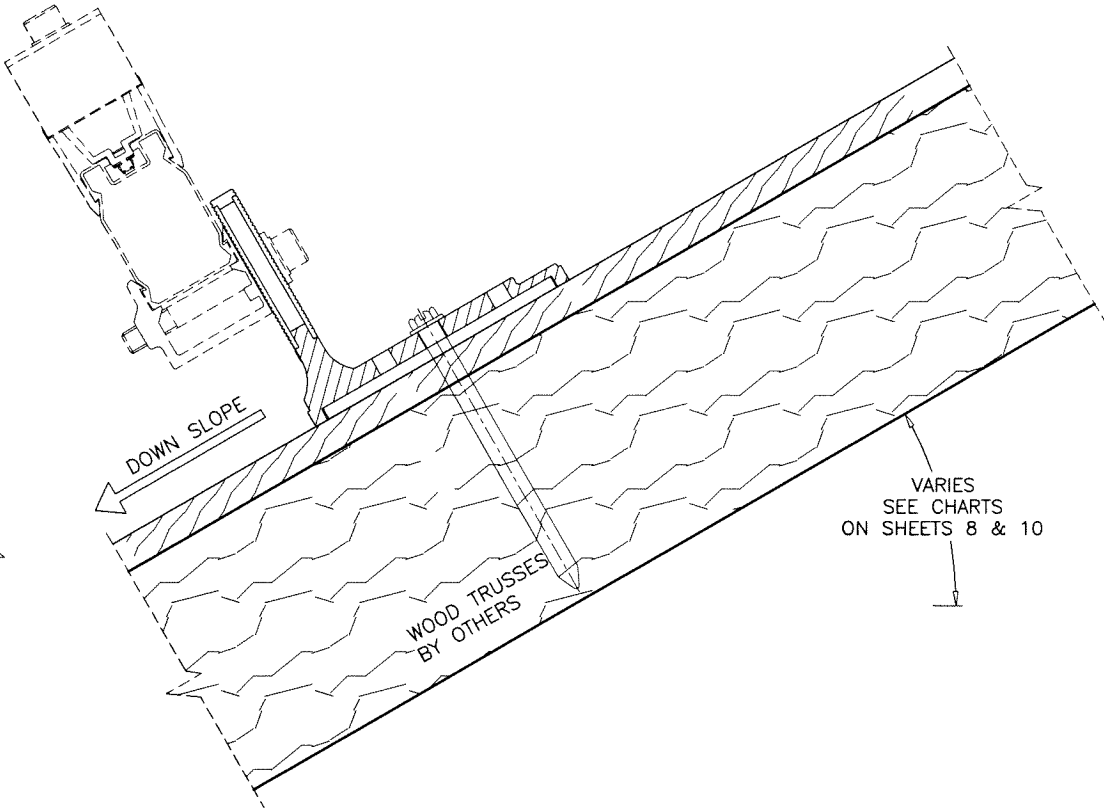
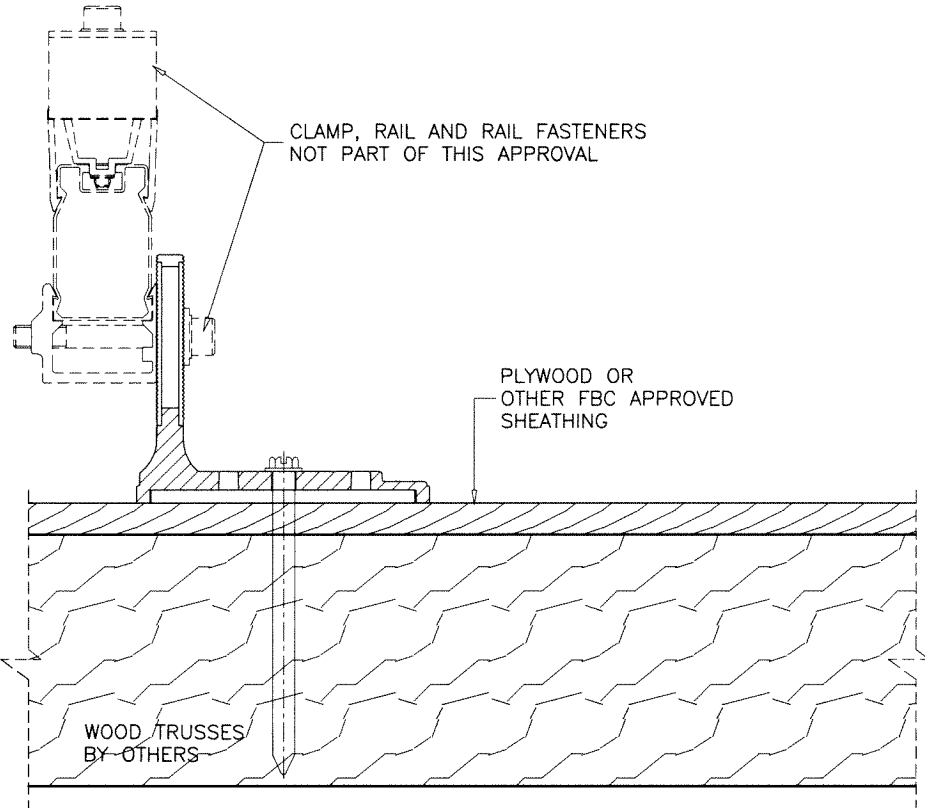
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23-57F
sheet 14 of 18

NanoMount



SECTION A-A



Sealed: 8/20/2024

NanoMount FASTENERS:

5/16" X 4-3/8" ST/ST LAG SCREWS (Fy = 65 KSI MIN.)
3-3/8" MIN. PENETRATION INTO WOOD TRUSSES CENTERED
AT WOOD TRUSSES (SG = 0.50 MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 840.5 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 539.0 Lbs MAX.



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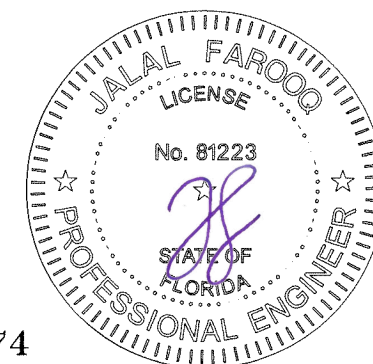
ROOF TOP PV MOUNTING SYSTEM
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Vancouver, WA. 98682
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sunmodo.com

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5/16" X 4-3/8" ST/ST LAG SCREWS ($F_y = 65$ KSI MIN.)
3-1/4" MIN. PENETRATION INTO WOOD TRUSSES CENTERED
AT WOOD TRUSSES ($SG = 0.50$ MIN.)

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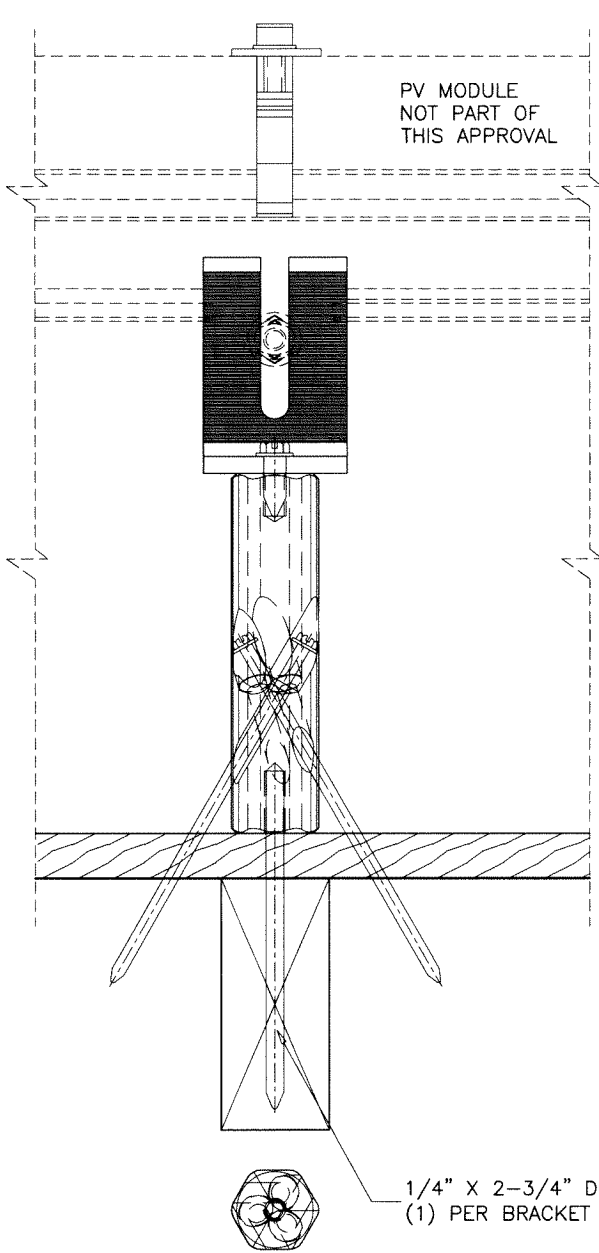
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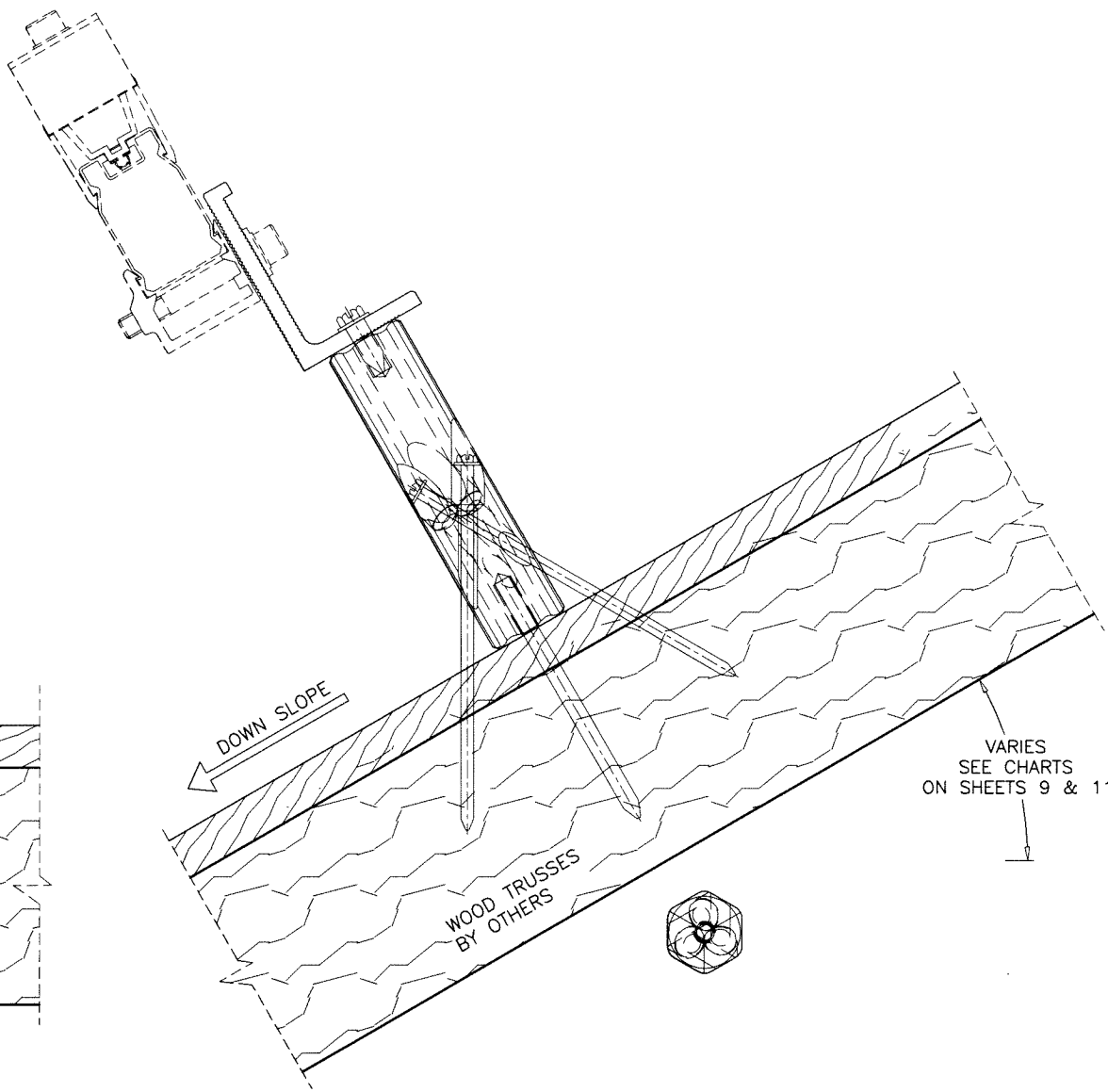
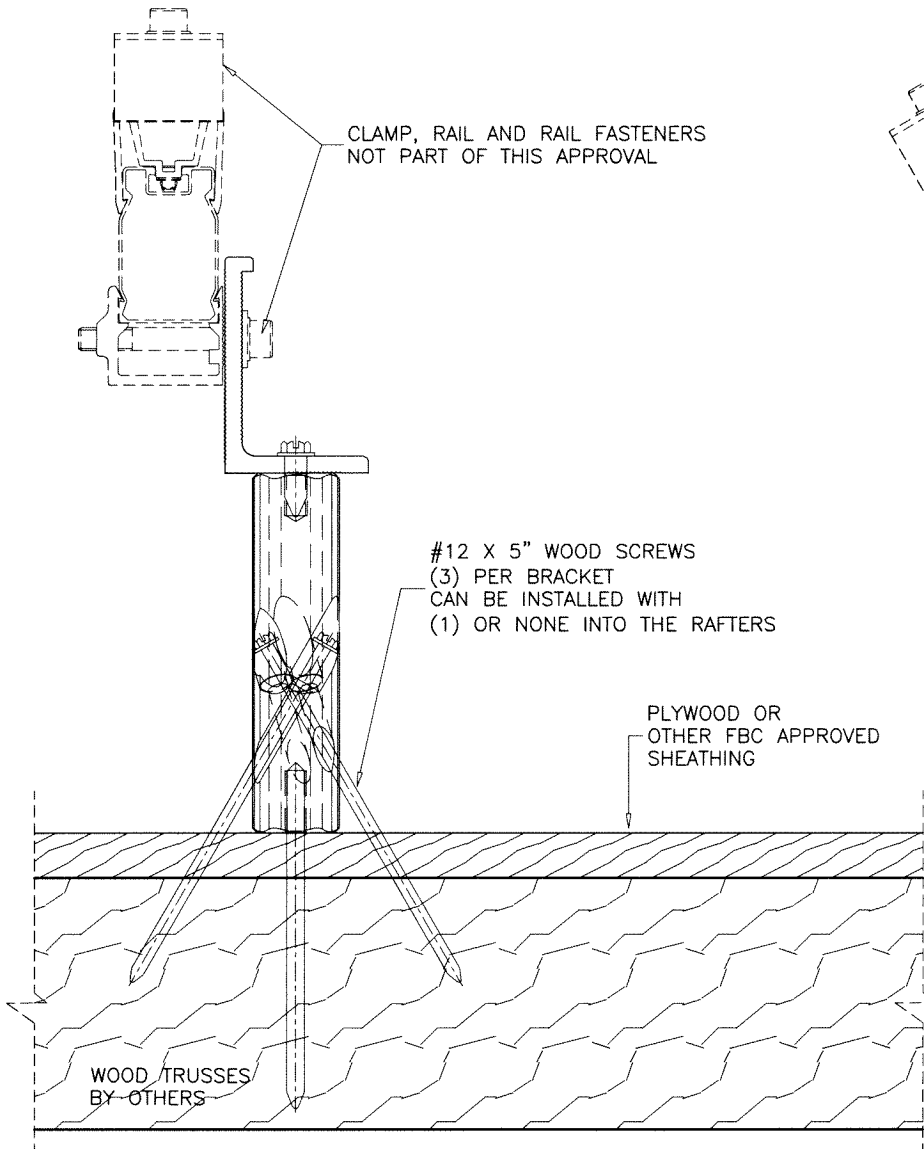
sheet 16 of 18

23-57F

TopTile 5"



SECTION A-A

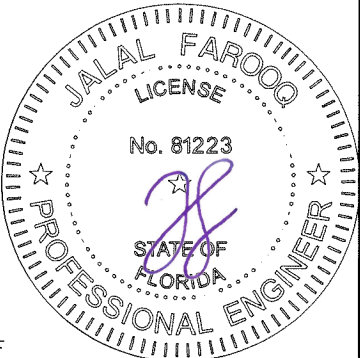


TopTile 5" FASTENERS:

- 1/4" X 2-3/4" ST/ST DOWEL SCREWS (Fy = 65 KSI MIN.)
- 2" MIN. PENETRATION INTO WOOD TRUSSES CENTERED AT WOOD TRUSSES (SG = 0.50 MIN.)
- #12 X 5" (17 POINT) WOOD SCREWS (Fy = 65 KSI MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 385.2 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 27.8 Lbs MAX.

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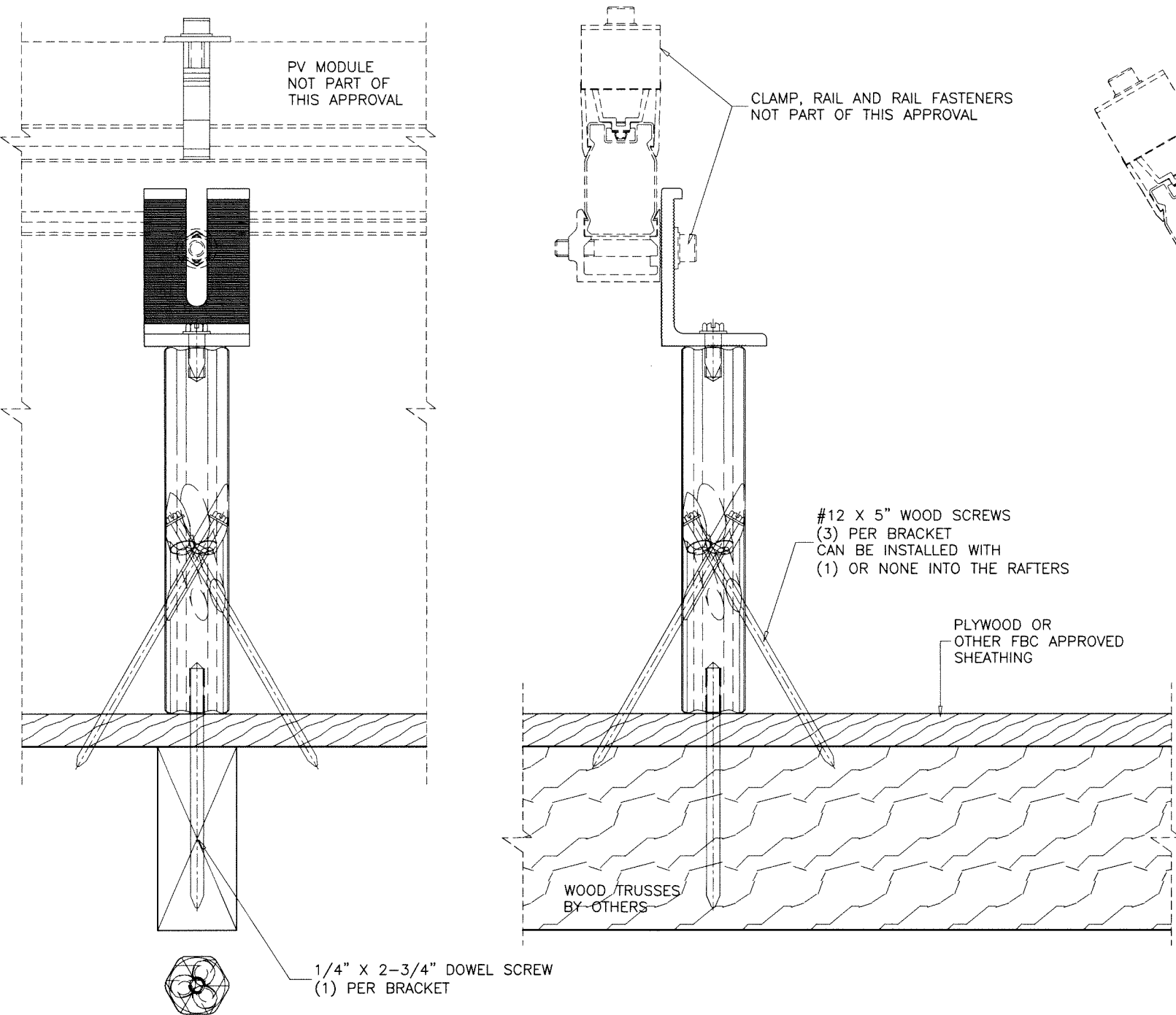
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drawing no.
23-57F
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TopTile 7"



SECTION A-A

TopTile 7" FASTENERS:

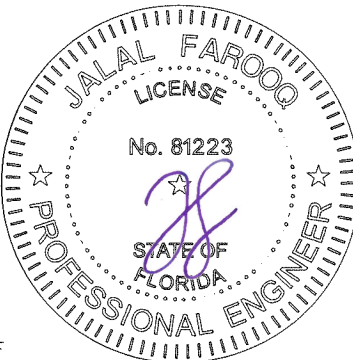
1/4" X 2-3/4" ST/ST DOWEL SCREWS (Fy = 65 KSI MIN.)

2" MIN. PENETRATION INTO WOOD TRUSSES CENTERED AT WOOD TRUSSES (SG = 0.50 MIN.)

#12 X 5" (17 POINT) WOOD SCREWS (Fy = 65 KSI MIN.)

WIND LOAD UPLIFT RESISTANCE (PERPENDICULAR TO ROOF) = 385.2 Lbs MAX.
SHEAR RESISTANCE (PERPENDICULAR TO RAFTER) = 27.8 Lbs MAX.

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date:	12-04-23	scale:	3/8" = 1"	dr.	by:	TARIQ	chk.	by:	
drawing no.		23-57F		sheet 18 of 18					