

Project Details			
<b>Name</b>	MAURICIO GONZALEZ	<b>Date</b>	03/26/2023
<b>Location</b>	93 Gold Court, Broadway, NC 27505	<b>Total modules</b>	24
<b>Module</b>	Mission Solar Energy: MSE395SX9R (40mm)	<b>Total watts</b>	9,480
<b>Dimensions</b>	Dimensions: 75.08" x 41.5" x 1.57" (1907.0mm x 1054.0mm x 40.0mm)	<b>Attachments</b>	52
<b>ASCE</b>	7-10	<b>Rails per row</b>	2

System Weight	
<b>Total system weight</b>	1,300.0 lbs
<b>Weight/attachment</b>	25.0 lbs
<b>Racking weight</b>	136.0 lbs
<b>Distributed weight</b>	2.5 psf

Load Assumptions	
<b>Wind exposure</b>	C
<b>Wind speed</b>	119 mph
<b>Ground snow load</b>	15 psf
<b>Attachment spacing portrait</b>	4.0'

Roof Information			
<b>Roof Material Family</b>	Comp Shingle	<b>Roof material</b>	Comp Shingle
<b>Building height</b>	15 ft	<b>Roof attachment</b>	None
		<b>Staggered attachments</b>	Yes
<b>Roof slope</b>	25 °	<b>Attachment hardware</b>	Square
<b>Risk category</b>	II		

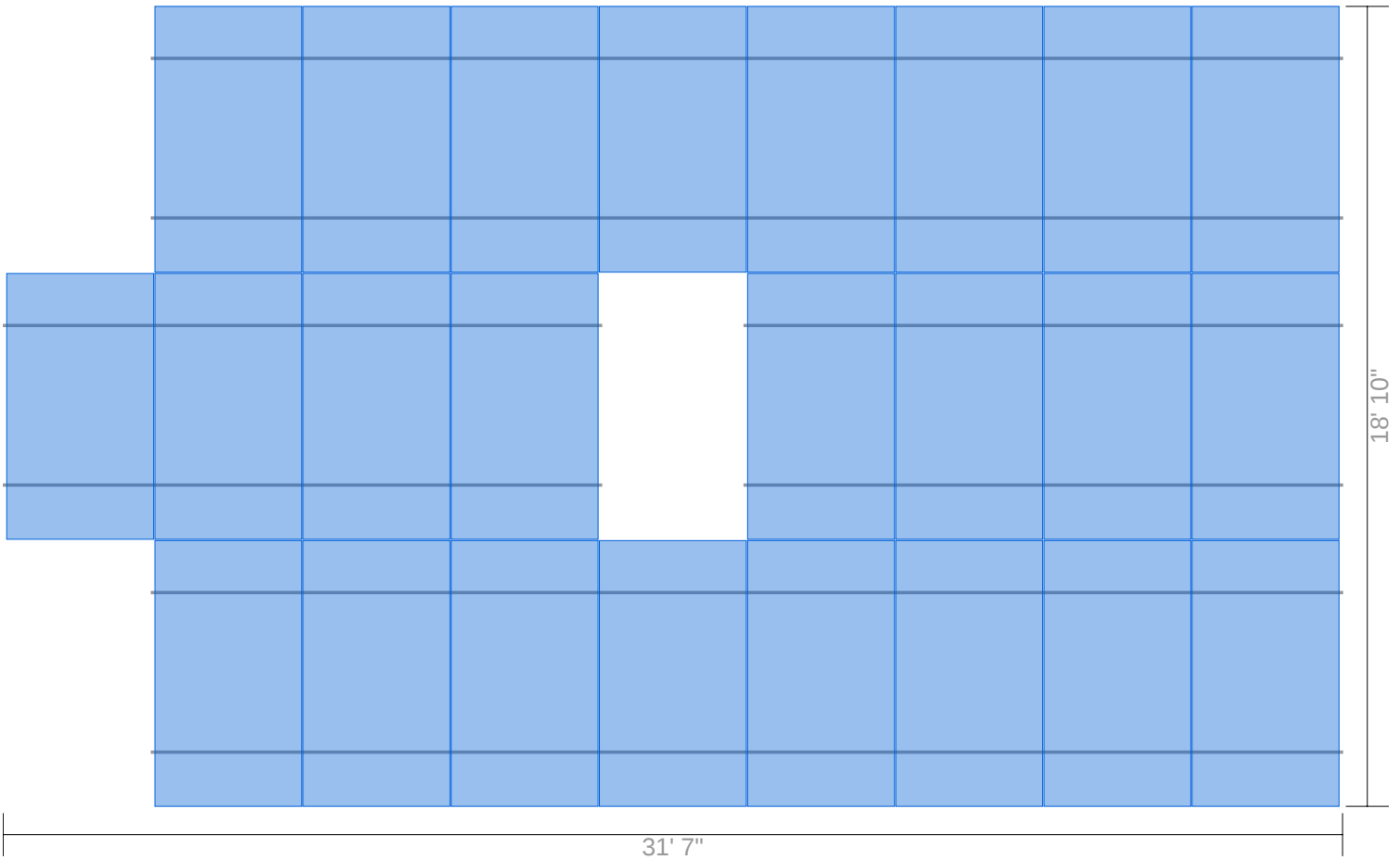
Span Details XR10 - Portrait		
Zone	Max span	Max cantilever
1	5' 11"	2' 4"
2	5' 5"	2' 2"
3	4' 4"	1' 9"

Reaction Forces XR10 - Portrait			
Zone	Down (lbs)	Uplift (lbs)	Lateral (lbs)
1	207	154	66
2	207	309	66
3	207	485	66

**Roof Section 1**

Details		Weights
Panels: 24	Provided rail: 280' [20 x 168"]	Total weight: 1,300.0 lbs
Rail orientation: East-West	Attachments: 52	Weight/attachment: 25.0 lbs
Panel orientation: Portrait	Splices: 12	Total Area: 528.7 sq ft
Entry type: Graphical	Clamps: 56	Distributed weight: 2.5 psf

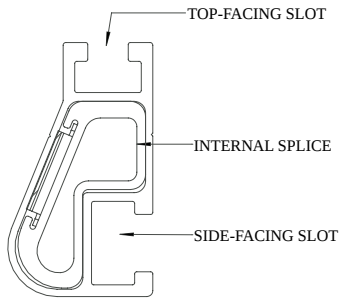
**Diagram**



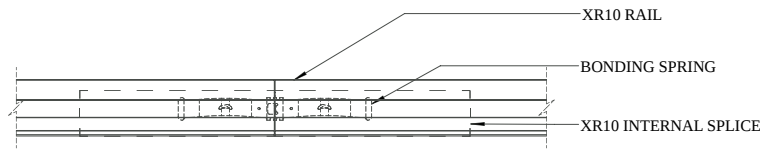
**Segments**

Identifier	Columns	Row length	Rail length	Cantilever	Rail	Attachments	Splices	Clamps
A	8	28' 1"	28' 1"	0"	84' [6 x 168"]	17	4	18
<b>Row segment totals (x 2) →</b>					<b>168' [12 x 168"]</b>	<b>34</b>	<b>8</b>	<b>36</b>
B	4	14' 1"	14' 1"	1' 1"	56' [4 x 168"]	9	2	10
<b>Row segment totals (x 2) →</b>					<b>112' [8 x 168"]</b>	<b>18</b>	<b>4</b>	<b>20</b>

### Splice Details

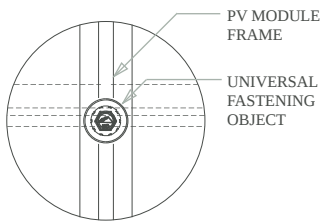


XR10

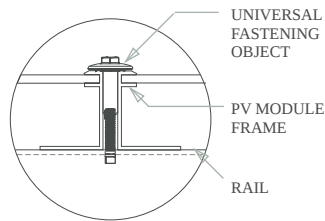


Splice Connection

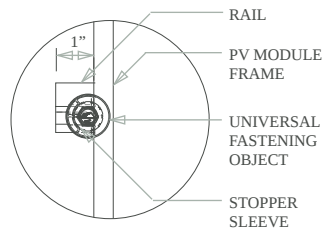
### Clamp Detail



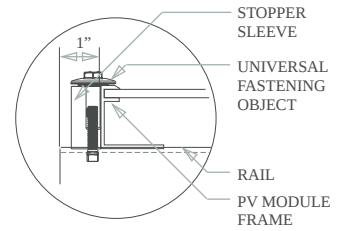
Mid Clamp, Plan



Mid Clamp, Front

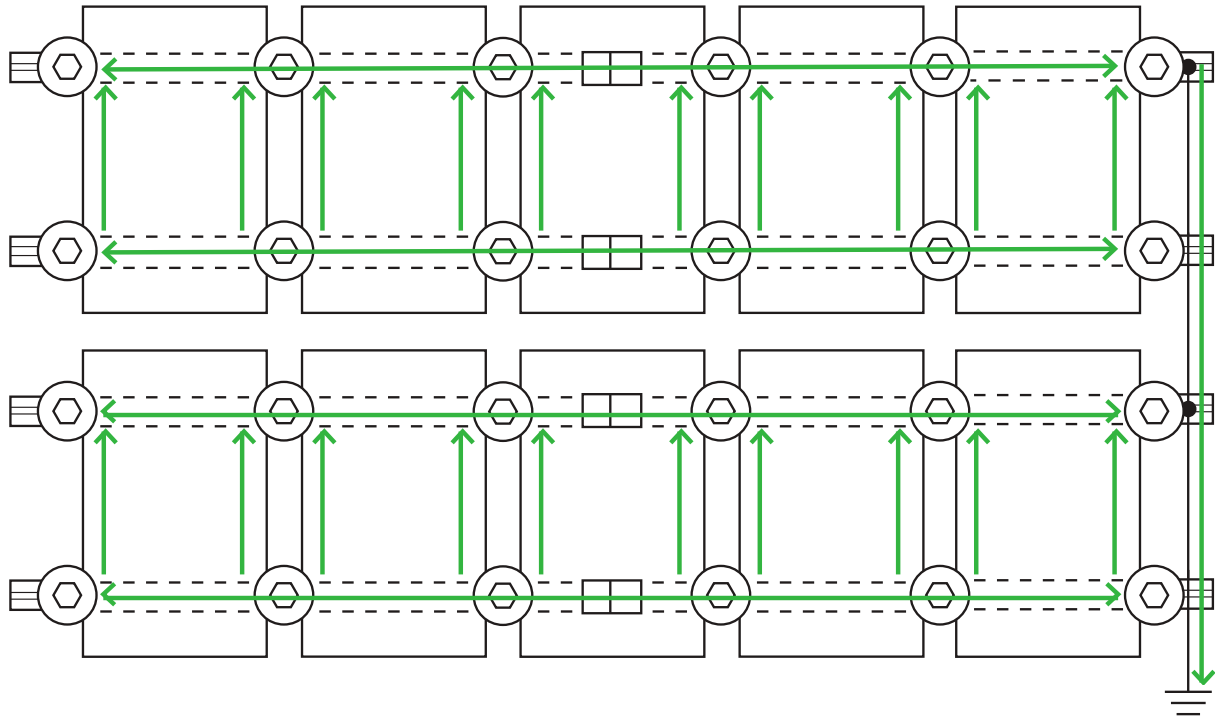


End Clamp, Plan




End Clamp, Front

### Grounding Diagram



 UFO Clamp

 Fault Current Ground Path

 Grounding Lug \*

 Min 10 AWG Copper Wire \*

 Bonded Splice (Rail Connection)

\* Grounding Lugs and Wire are not required in systems using Enphase microinverters.

**Bill of Materials**

<b>Part</b>	<b>Spares</b>	<b>Total Qty</b>
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**Rails & Splices**

XR-10-168B XR10, Rail 168" (14 Feet) Black	0	20
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XR10-BOSS-01-M1 Bonded Splice, XR10	0	12
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**Clamps & Grounding**

UFO-CL-01-B1 Universal Module Clamp, Black	0	56
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UFO-STP-40MM-B1 Stopper Sleeve, 40MM, Black	0	16
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XR-LUG-03-A1 Grounding Lug, Low Profile	0	4
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**Attachments**

BHW-SQ-02-A1 Square-Bolt Bonding Hardware	0	52
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