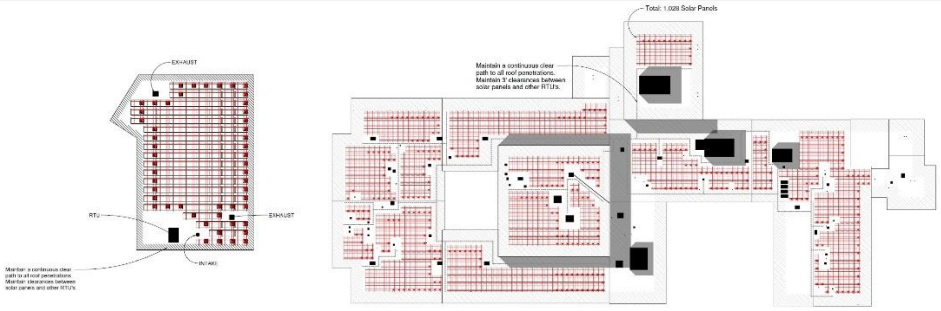
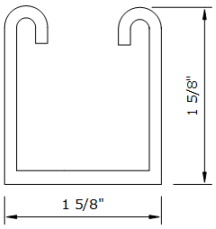
The intent of this assembly instruction document is only to provide step-by-step assembly instructions to the installer. The installation manual provided will be the final document of record and should be referred to at all times. If there is any difference between the assembly instructions and the installation manual, the installation manual will supersede.



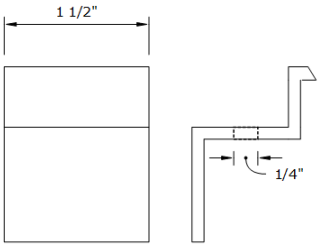
SYSTEM INSTALLATION INSTRUCTIONS

PARTS LIST

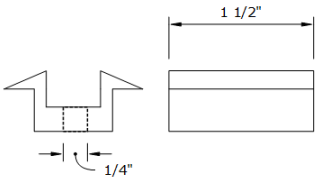
1. Unistrut Rail (10 ft, 19 ft and 20 ft lengths)
2. End Clamp
3. Mid Clamp
4. N-S Rail to E-W rail connection using 3/8” bolt and spring nut
5. Splice connections
6. Three high Unistrut Bolt pattern and construction.



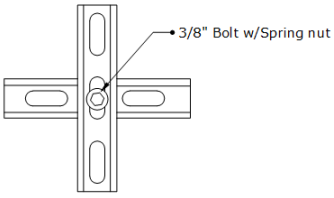
Unistrut Rail



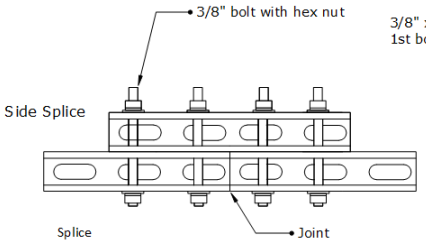
End Clamp



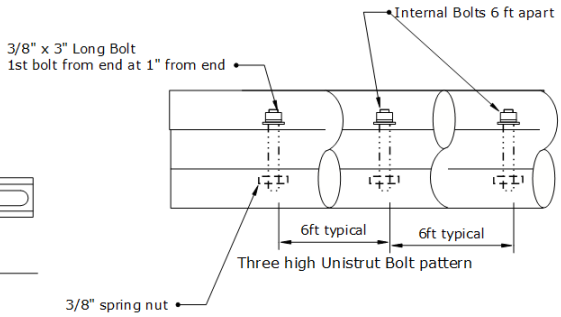
Mid Clamp



Connection between E-W and N-S rail



Splice



Back three high Unistrut Construction

ASSEMBLY INSTRUCTIONS

1

INSTALL N-S RAILS

Start by installing the N-S rails. These rails must be measured for the total length (# of rows of modules). The inter-row module spacing must be figured into the total length. The minimum inter-row spacing is 12” and the maximum is 18”.

The 12” spacing is high density, the 18” is low density and will provide lower weight distribution.

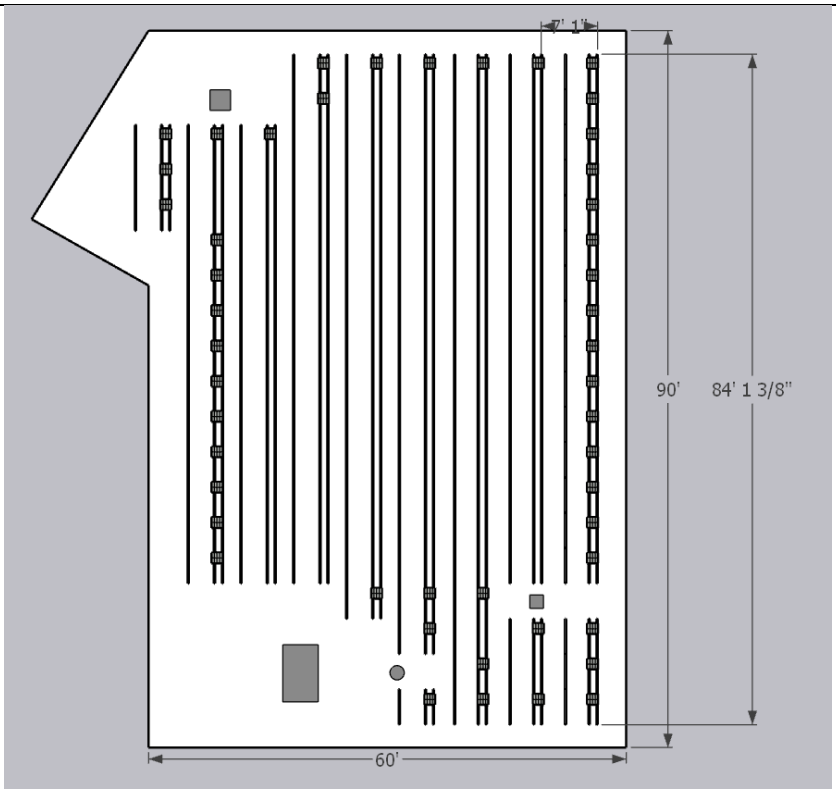


Figure 1

2

INSTALL E-W RAILS and CONCRETE BLOCKS

On every connection between the N-S Rail and the E-W rail, fasten using 3/8" x 1 ¼" bolt. They will always be 90 degrees to one another (Figure 2).

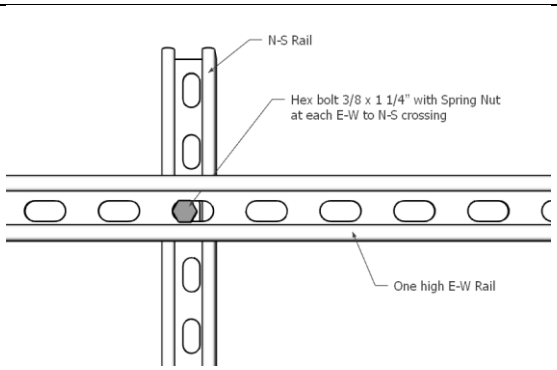


Figure 2

Fasten two top Unistrut of the same E-W length over the one Unistrut that was fastened to the N-S rail. Use 3/8" x 3" bolt to fasten the three high Unistrut together every 6 ft and every 3 ft from joint. Ensure the middle E-W Unistrut is staggered so the joints are offset by at least 6 ft. (Figure 3)

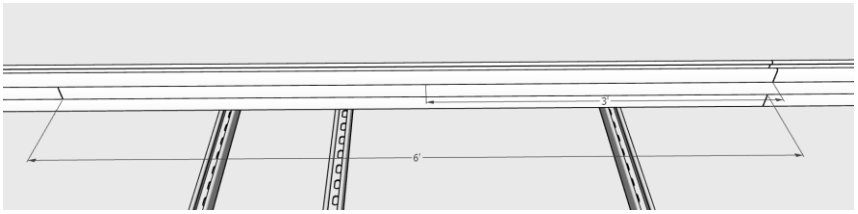


Figure 3

Place 16" x 16" x 1.5" thick concrete block on all edge module locations. (Figure 4)

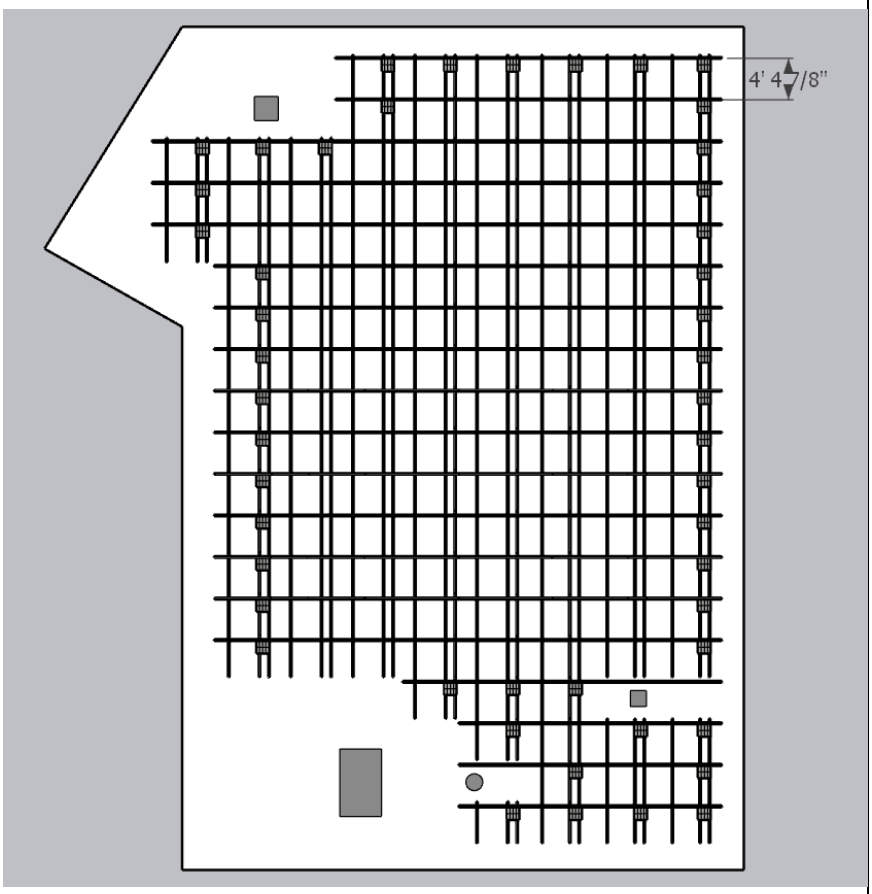


Figure 4

3

INSTALL MICROINVERTER / OPTIMIZER / RSD SWITCH

Install the module Level Power Electronics using a ¼" bolt and spring nut. Fasten to the Unistrut rail. (Figures 5 and 6.

Use zip ties to secure the cable to the E-W Rails. Ensure the cable does not contact the roof surface. Use sufficient zip ties to secure. Use UV resistant and outdoor zip ties.

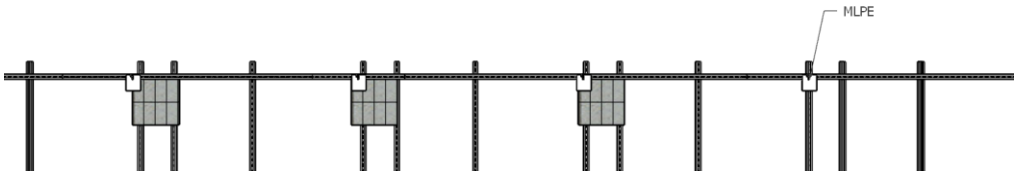


Figure 5

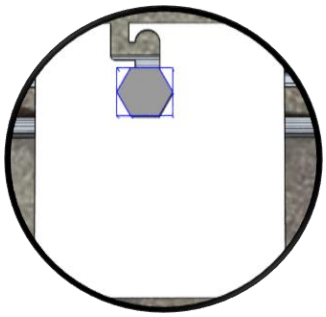


Figure 6

ASSEMBLY INSTRUCTIONS (CONT…)

4

INSTALL SOLAR MODULES ON TO RACKING

All mid clamps must be of the bonded mid clamp. (Figure 6) and will be secured between the modules on the E-W three high rails.

End Clamps will be used to clamp the module to the N-S rails. (Figure 7).

Install the module for 10 degree tilt using the mid and end clamps. (Figure 8)

SolarPod™ mid clamp with WEEB BMC

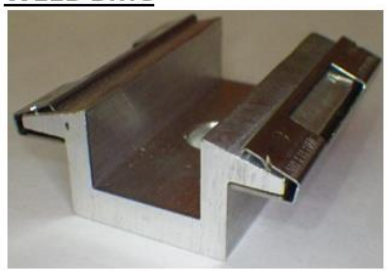


Figure 7

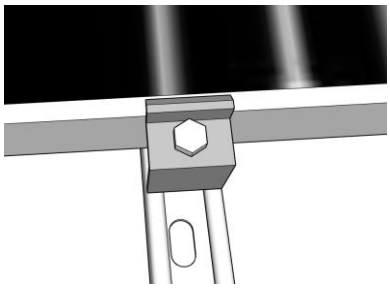


Figure 8

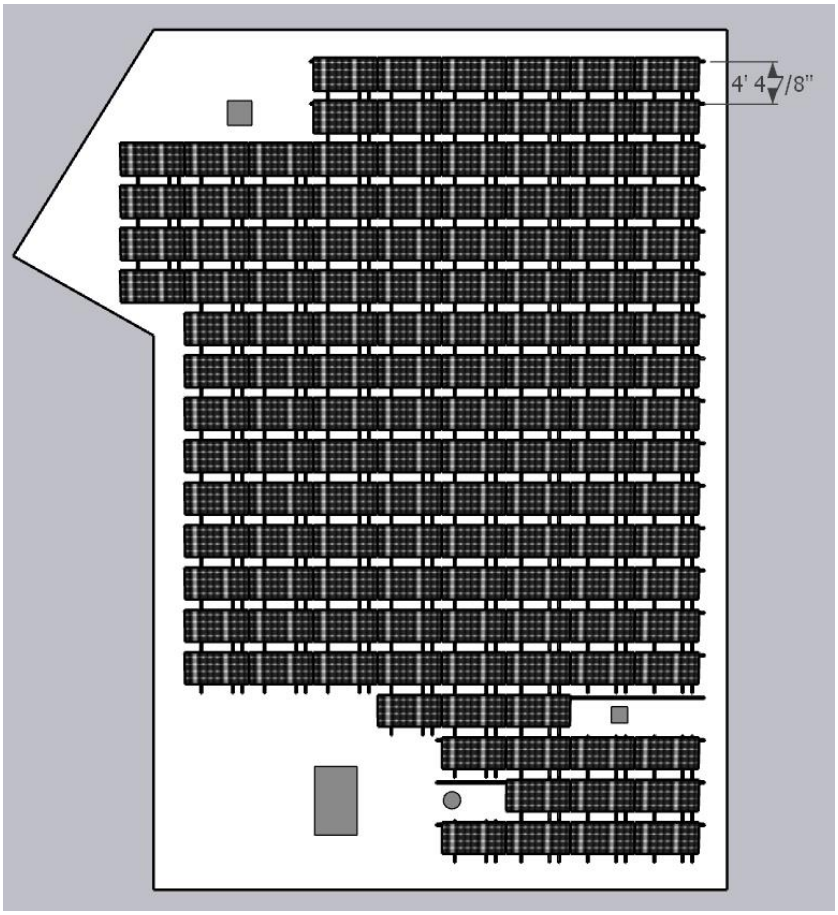


Figure 9

5

WIRE STRINGING, JUNCTION BOX TERMINATION AND HOME RUNS

The stringing of wires, installation of junction boxes and home runs are no different than in conventional racking solutions.

6

BONDING AND GROUNDING

The solar modules are bonded using the bonded mid clamps to the rails. The rails, being metallic and interconnected, are all at the same potential (bond). If using an EMT, please place a bonded jumper as in the figure.

All separated arrays must also be bonded using a similar jumper.

Figure 6

WEIGHT DISTRIBUTION ON ROOF

	Low Density	High Density
Width of module in X (ft)	6.71	6.71
Inter row spacing (in)	18.00	12.00
Length of module in Y (ft)	4.91	4.41
Area of one module (sqft)	32.9	29.6
# of Modules in X direction	12	12
# of Modules in Y direction	12	12
Weight of module (lbs)	49.6	49.6
Width of array in X (ft)	80.50	80.50
Length of array in Y (ft)	58.95	52.95
Array area	4745.475	4262.475
Weight of rails		
Unistrut Weight (lbs)	10040.4	9608.4
Weight of Modules	7142.4	7142.4
# Ballast	34	34
Total Weight (lbs)	18542.8	18110.8
Distributed weight on roof (psf)	**3.91**	**4.25**