Document # 310135

SunWize Power & Battery Mount Installation Guide Large Format Side of Pole

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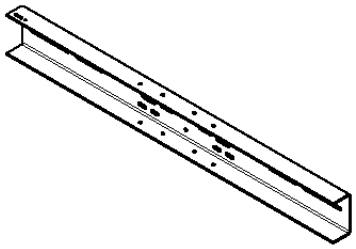
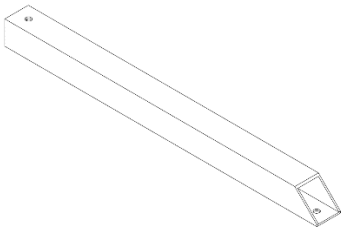
Included Parts:

A) 4x 60in Module Rail

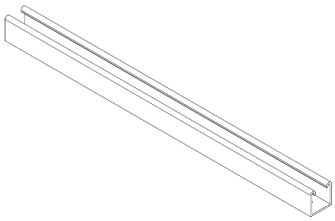
B) 3x Saddle Bracket



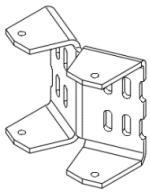
C) 2x 26in Tilt Leg Tube



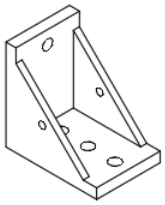
D) 4x 24inTilt Leg Strut



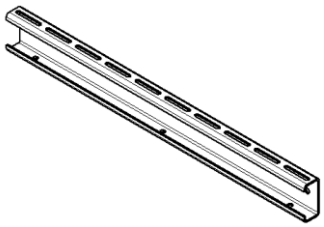
E) 3x Easy Mount Bracket



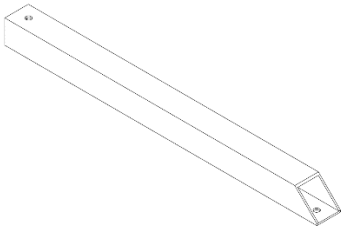
F) 6x Angle Bracket



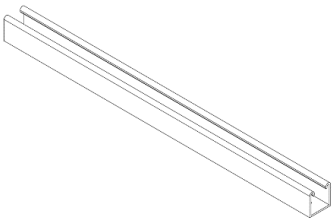
G) 2x 27in Splice Rail



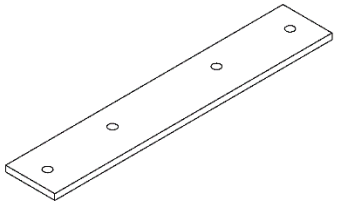
H) 2x 42in Tilt Leg Tube



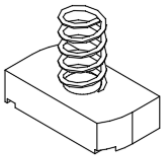
I) 2x 40in Tilt Leg Strut



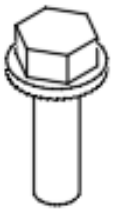
J) Stiffener Plate, 12in



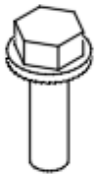
K) 4x 3/8” Spring Nut



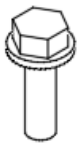
L) 4x 3/8” Flange Bolt



M) 42x 5/16″ Flange Bolt



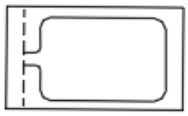
N) 16x ¼” Flange Bolt



O) 42x 5/16” Flange Nut

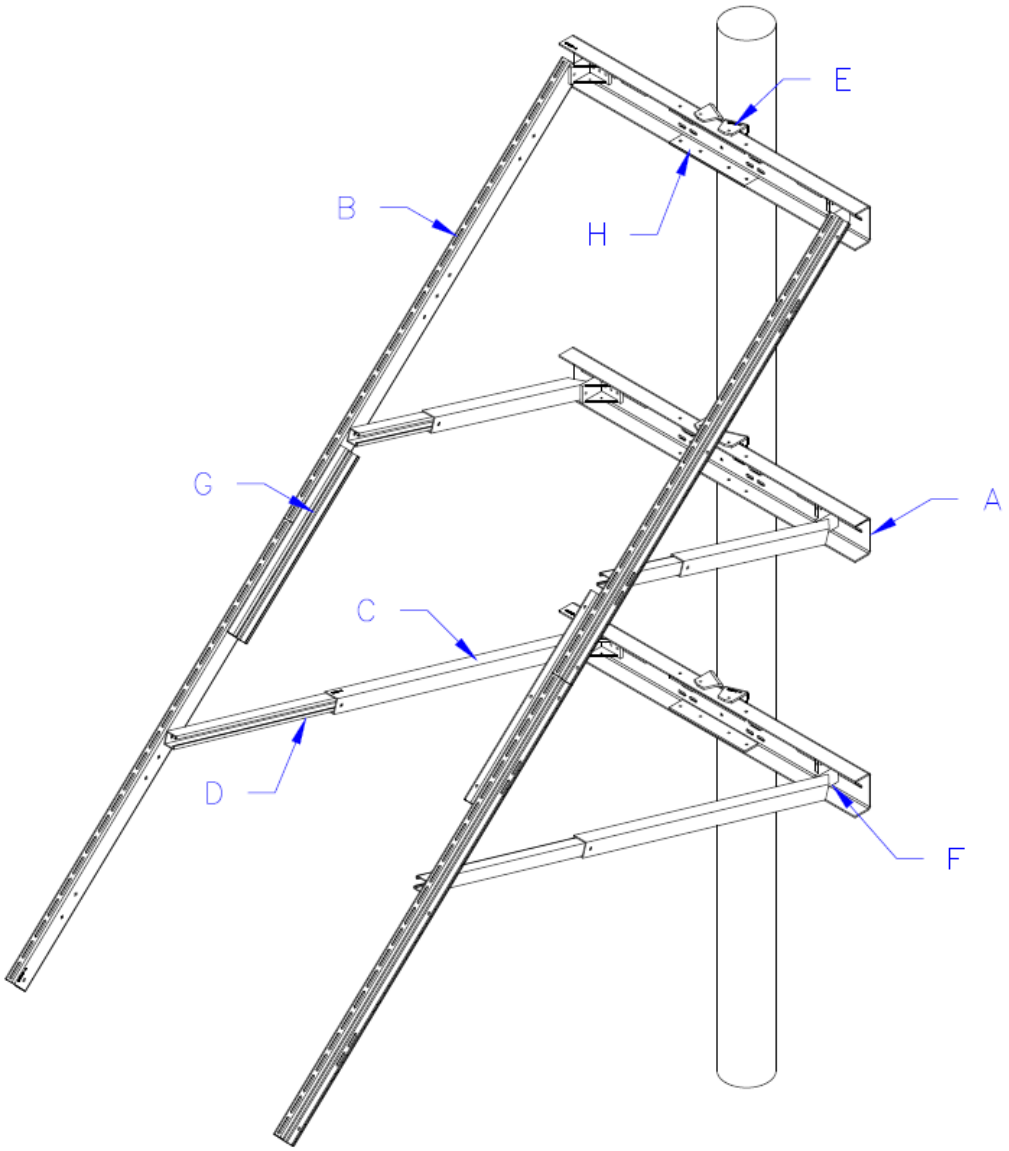
P) 16x ¼” Flange Nut

Q) 1x Anti-Seize Packet



121” Module Rail SOP Mount Specifications

Part #	Rail Length (inches)	Pipe Size Diameter (SCH 40)	Max Module Qty. (Large Format)	Max Module Qty. (Small Format)
240060	121	6-12in	3	4



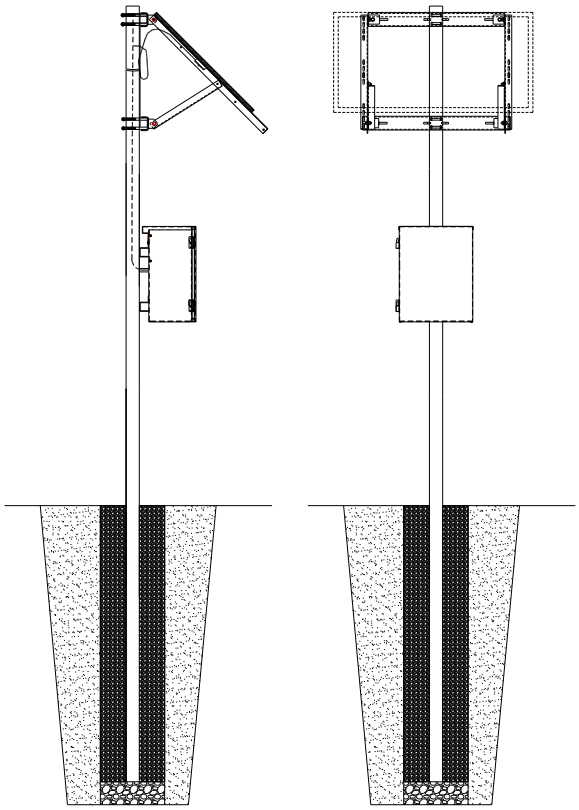
Hardware Note:

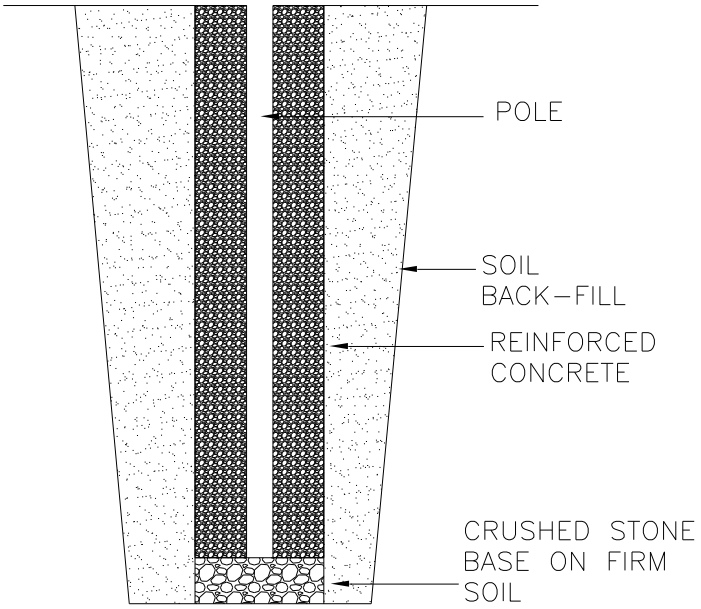
- Apply anti-seize to all hardware to prevent galling
- 1 ft-lb = 12 in-lb = 1.36 Nm

- Use 5/16” hardware → Mount assembly
- Use 1/4" hardware → Mounting module to rails
- Use 3/8” bolts → Tilt leg spring nuts

Pole Mount Site Preparation

- The pole used to support the PV array must be designed per the local soil conditions to meet the following minimum requirements:
    - Array area based at tilted angle
    - Typical sustained wind speed per the recommended local building code.
- The pole is to be seated against a firm crushed stone base, on firm compacted soil a minimum of 6” below the frost line encased in reinforced concrete per ASTM standards.
- The pole is to be level and plumb.
- Pole diameter and wall thickness sized to withstand array forces without damage.
- Ensure mount and module point due south in northern hemisphere, or due north in southern hemisphere.

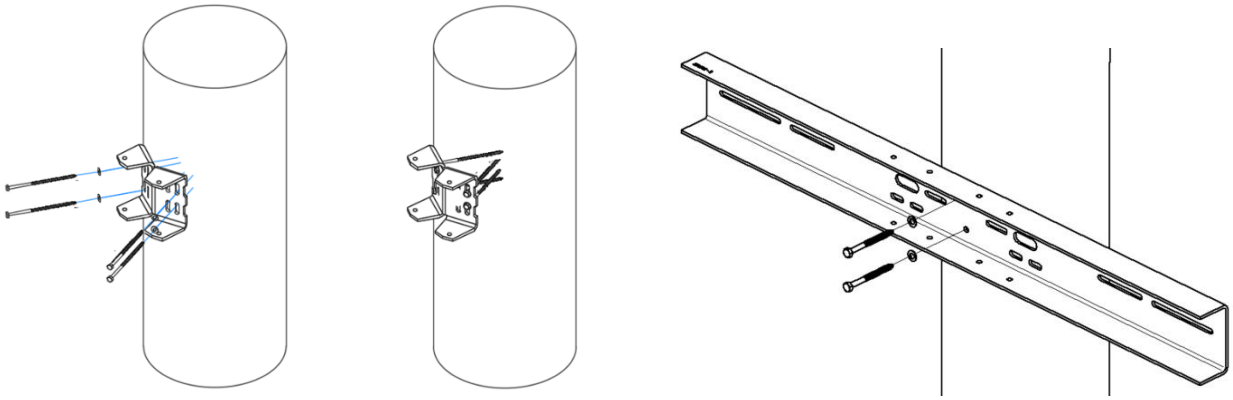




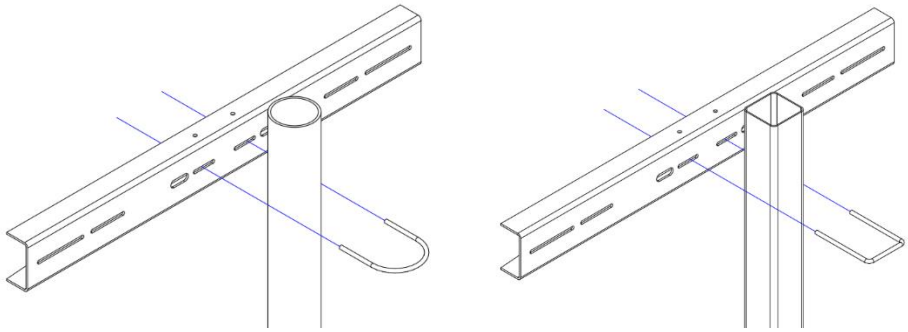
Mount Installation

1. Fasten the upper *Easy Mount Solar Bracket* to the pole at the desired maximum height of the mount using lag bolts OR use a U-bolt to mount the saddle directly to the pole. DO NOT use the easy mount bracket when using U-bolts.

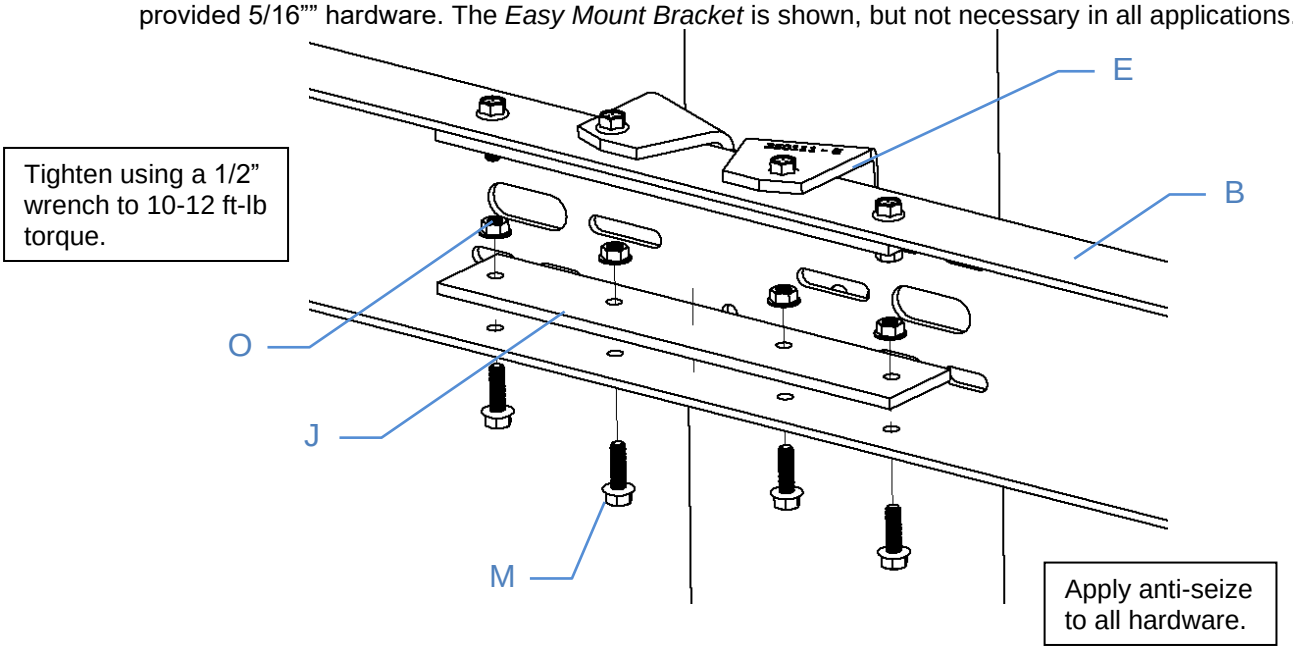
Lag Bolting:



U-Bolt Mounting:



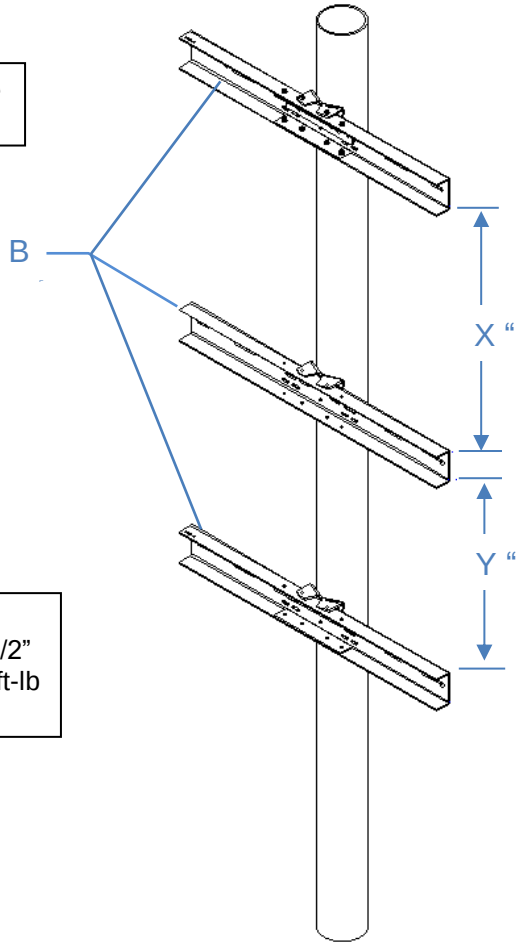
2. Ubolt or lag the saddle bracket into place and secure the stiffener plate and to the saddle using the provided 5/16”” hardware. The *Easy Mount Bracket* is shown, but not necessary in all applications.



3. Attach lower *Easy Mount Solar Bracket* and saddle bracket using same method in steps one and two. Place the top saddle first with “X” spacing, followed by the bottom brackets with “Y” spacing.

Apply anti-seize to all hardware.

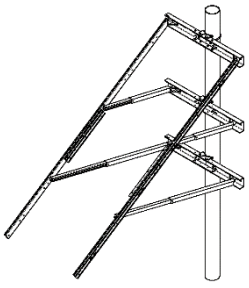
Mount should face true south (Northern Hemisphere)



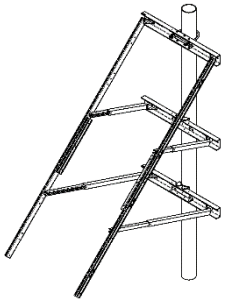
Tighten saddle bracket using a 1/2” wrench to 10-12 ft-lb torque.

Large Format Mount Angles vs Saddle Spacing (X)		
Degrees	X	Y
30	30in	25in
45	38in	30in
60	49in	17in

4. Use the below chart for approximate spacing between the two saddles.

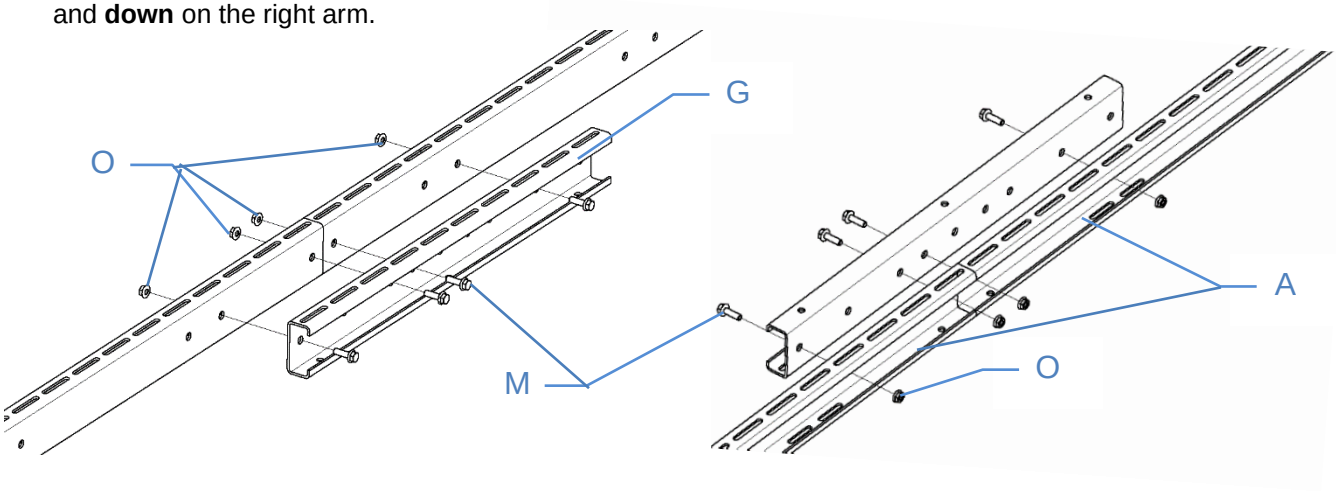


30 Degree Tilt Position



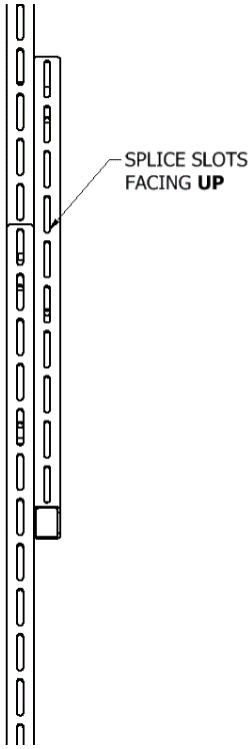
45 Degree Tilt Position

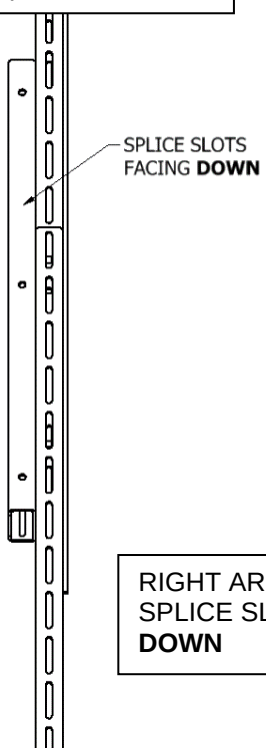
5. While on the ground, assemble the 121in long module rails. Use qty 2 of the 60.5in rails and the 27.5in rail with qty 4 bolts to create a splice. Ensure the slots for the splice face **up** on the left arm and **down** on the right arm.



Apply anti-seize to all hardware.

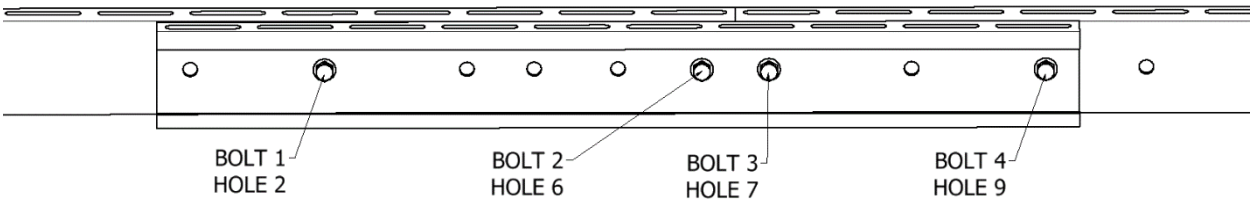
Tighten using 1/2” wrench to 10-12 ft-lb torque.



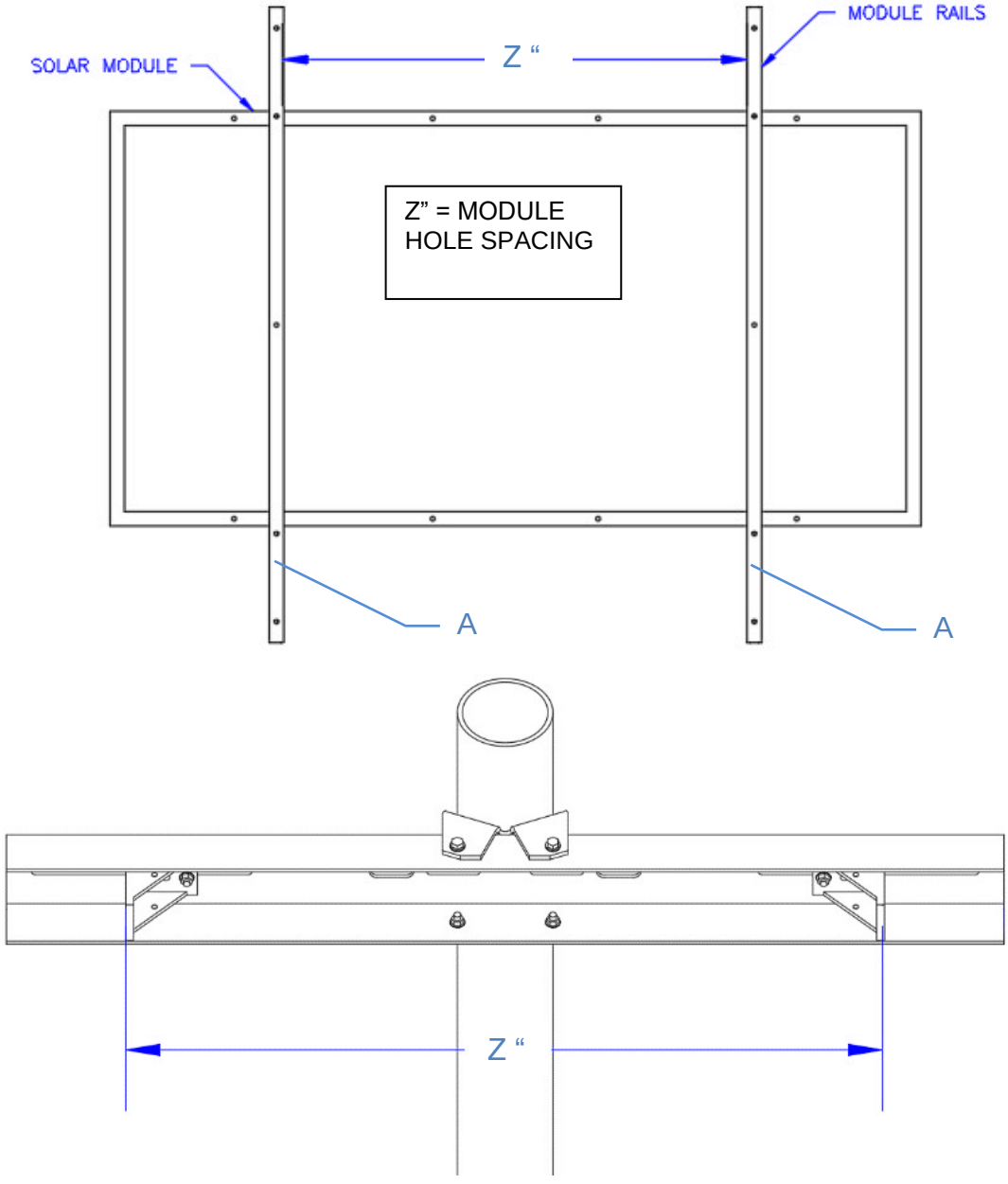


LEFT ARM SPLICE SLOTS **UP**

RIGHT ARM SPLICE SLOTS **DOWN**

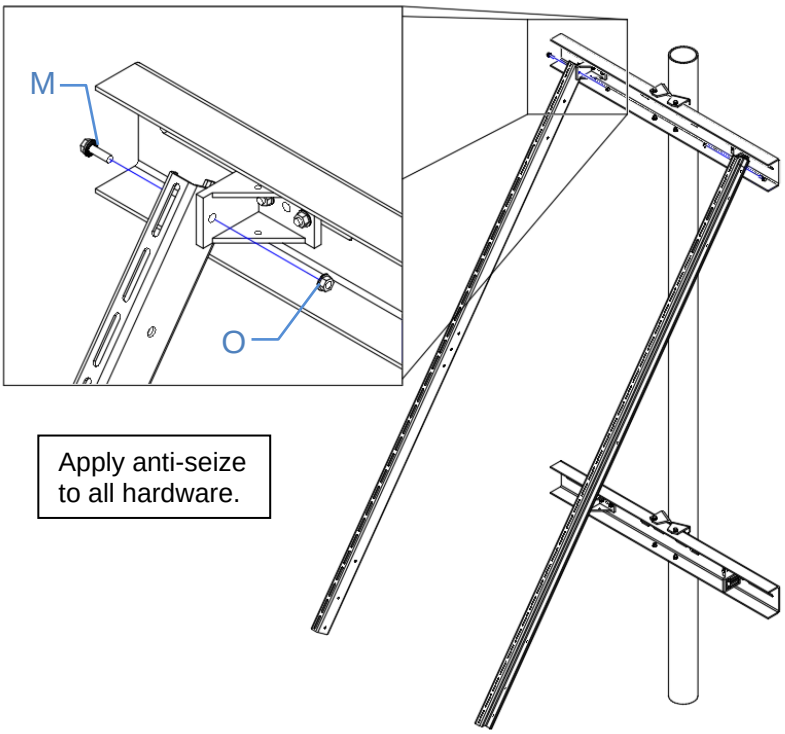


6. On the ground, lay rails on module holes (but do NOT attach to module) to determine upper angle bracket spacing. Measure between the inside of the module rails. Attach angle brackets so that the module rails can be mounted with the correct spacing.



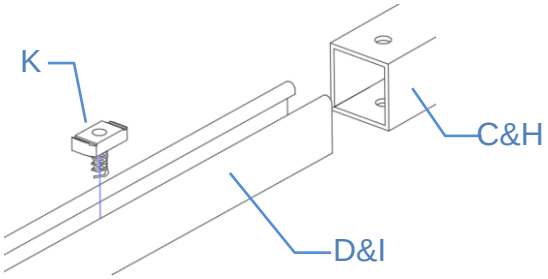
Note: For use with *High Wind Accessory Kit*, lower angle brackets must face inwards as shown.

7. Attach panel rails to upper saddle L-brackets using 5/16” hardware provided.

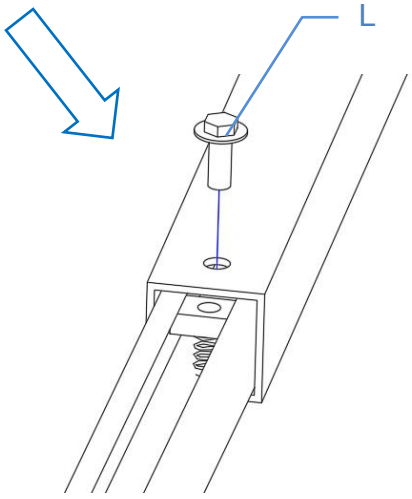


Apply anti-seize to all hardware.

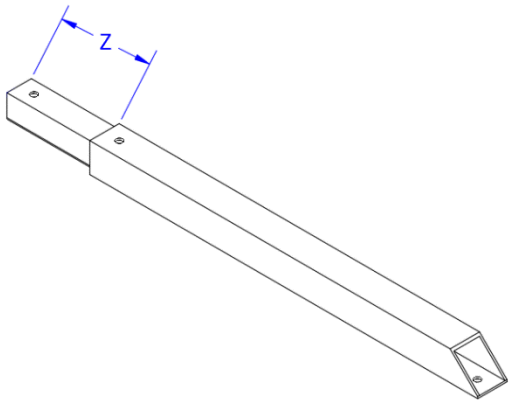
8. Drop spring nut into tilt leg strut and rotate to lock into place. Slide strut and spring nut into tilt leg tube and adjust to desired length. See table for approximate extension length.



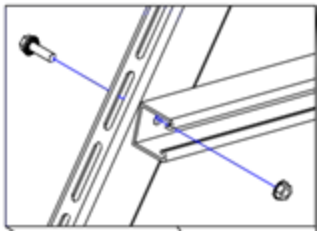
Tilt Angles vs Leg Extension (Z)		
Degrees	Upper Rail	Lower Rail
30	16.5in	35in
45	11in	20in
60	4in	4in

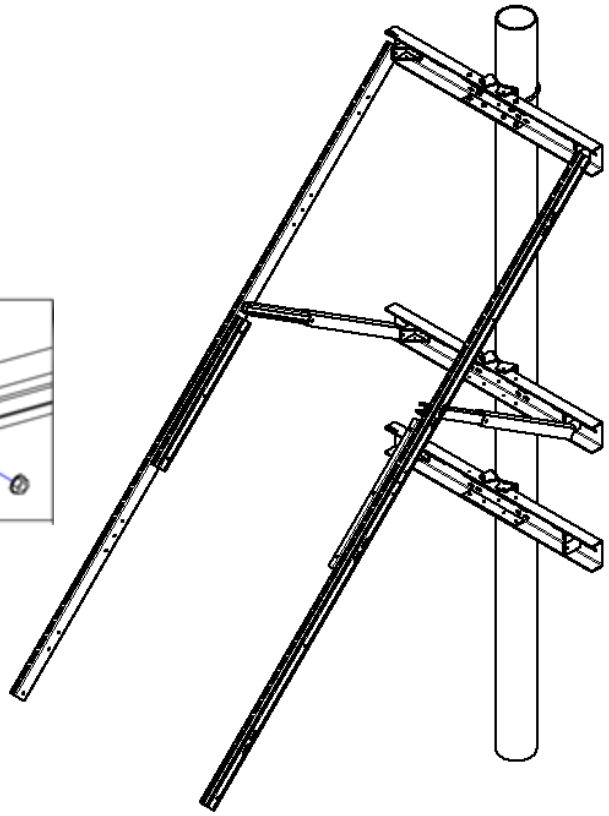


Tighten 3/8” hardware using 9/16” wrench to 18-20 ft-lb torque.



9. Attach legs to lower saddle angle brackets.

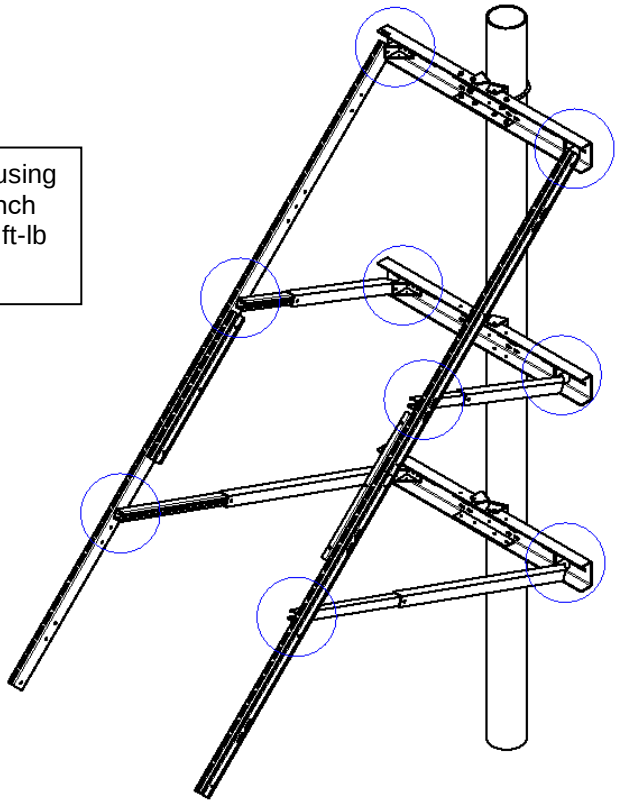




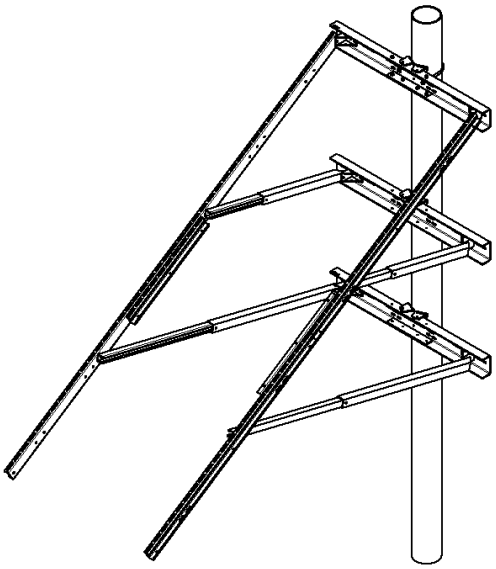
Apply anti-seize to all hardware.

10. Tighten all remaining bolted connections circled below.

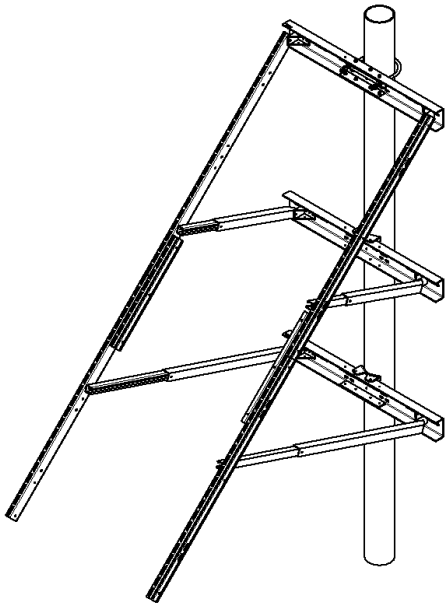
Tighten using 1/2” wrench to 10-12 ft-lb torque.



11. Check alignment of all assembled parts and ensure all bolted connections are tight.

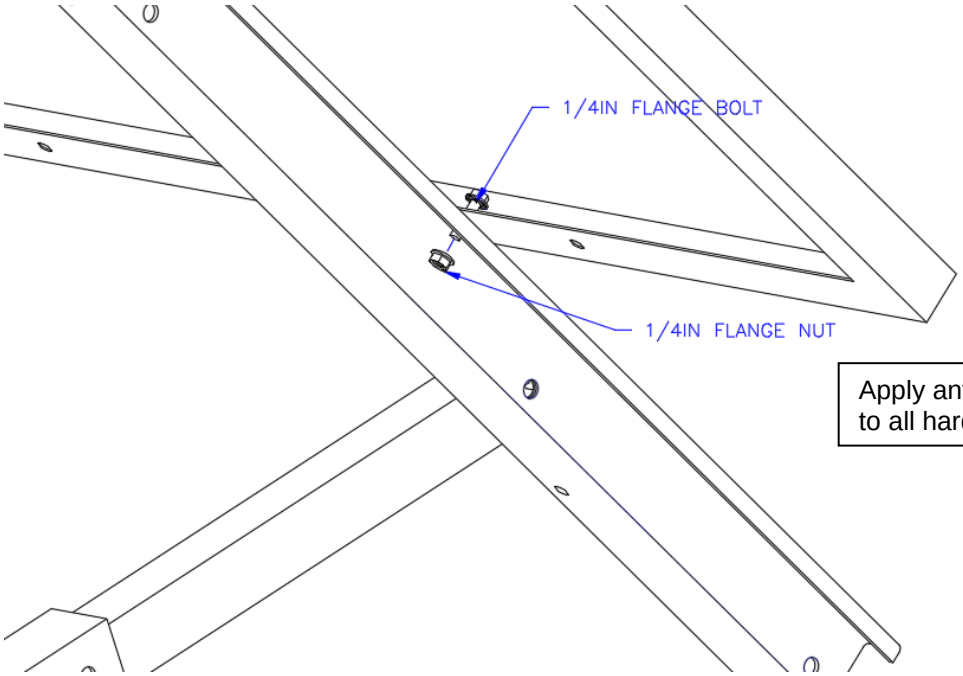


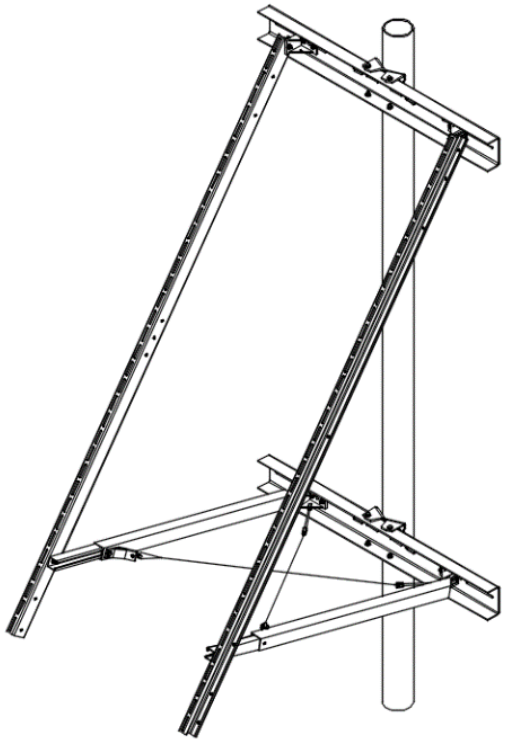
30 Degree Tilt Position



45 Degree Tilt Position

12. Mount the solar modules to the rails using the 1/4” hardware provided.



Apply anti-seize to all hardware.

13. **(OPTIONAL)** If using the *Cable Bracing Accessory Kit*, attach one bracket to the lower tilt leg and run the cable to the opposite corner of the saddle bracket. Tighten and lock the cable in place. Repeat with other bracket and cable on opposite side.