



Installation Manual

STP-LCHW-MAN 2018 Edition v1.0

For models:

STP-LCR/82HW

STP-LCR/124HW





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Introduction

The Top of Pole Mount is an extremely sturdy, universal pole mounting solution for small area solar photovoltaic (PV) needs. With its user adjustable angle settings (0° to 60° in 10° increments), the Top of Pole Mount can support installations in a wide range of locations.

Customer Support

Tamarack Solar makes every effort to ensure your mounting kit is easy to install. If you need assistance at any point in your installation or have suggestions on how we can improve your experience, call customer support at **1-800-819-7236** or email us



Tools Required

Tools that support the following size hex heads: Torque values are “dry”, add 15% if using anti-seize lubricant on stainless hardware (Recommended). Deep sockets for 5/16” and 1/2”, long combination wrench for 5/16.

1. 3/8” = 240\20 In\Ft Lbs
2. 5/16” = 144\12 In\Ft Lbs
3. 1/4” = 84\7 In\Ft Lbs

Components List

The following parts are used on the STP-LCR/82HW STP-LCR/124HW mount models:

Galvanized coated sheet steel components will show rust on cut edges and is normal and will not affect the structure and function of the mount.

		82HW	124HW
PART NUMBER	DESCRIPTION	QTY.	QTY.
51-04PC-012 REV A	4" Pipe Clamp Half	2	2
51-04CH-012 REV A	Clamp Strong Back Cap	1	1
51-04BC-TLT REV A	Channel, Tilt Plate Mounting	2	2
51-04TP-LR2 REV C	TILT PLATE L/R	2	2
51-07CR-058 REV C	Cross Rail, 58 Inch		3
51-04CR-R60 REV B	Rail, 60 in Cross	3	
51-07TC-056 REV B	Panel Support Section 56 inch		2
51-07TC-068 REV B	Panel Support Section 68 inch		2
51-07CN-030 REV D	Connector, 30"		2
51-04TC-082 REV D	Panel Support TP 82 inch	2	
51-0534-HWI rev A	Channel, Inner Brace 34.5"	2	2
51-0534-HWO rev A	Channel, Outer Brace 34.5"	2	2
51-06HW-015 rev A	INNER SWIVEL BRACKET	2	2
51-06HW-020 rev A	OUTER SWIVEL BRACKET	4	4
51-STPB-000 REV A	LOWER BRACE ANGLE BRACKET	2	2
51-SPCB-4BC REV A	4" PIPE CLAMP (BOTTOM)	1	1
23-0100-040	Bolt, U 3/8 4 1/2"x6" ID HDG	2	2
25-3702-GLV	Washer, Flat 3/8" HDG	4	4
25-3701-GLV	Washer, lock 3/8" HDG	4	4
24-3716-GLV	Nut, 3/8-16 Hex HDG	4	4
23-3716-100	Bolt, 3/8-16 x 1.0 Hex SST.	16	16
25-3702-000	Washer, Flat 3/8" SST.	32	32
25-3701-000	Washer, lock 3/8" SST.	16	16
24-3716-440	Nut, 3/8-16 Hex SST.	16	16
27-0456-700	Rod, threaded, SST 5/16-18 x 7" long	4	4
23-3118-350	BOLT Hex 5/16-18 x 3.5" SST	6	6
23-3118-850	Bolt, 5/16-18 x 1.0 Hex CS SS	1	1
23-3118-875	Bolt, Hex 5/16-18 x .875 SST	12	20
25-3102-000	Washer, flat 5/16" SS	19	27
25-2501-015	Nut, flange 5/16 SST	35	43
23-2520-050	Bolt, Hex 1/4-20 x .75 SST	24	28
25-2502-000	Washer, flat 1/4 SS	32	40
25-2501-000	Washer, lock 1/4"	8	12
24-2520-440	Nut, 1/4-20 fin hex SS	8	12
25-2501-014	Nut, Flange Serrated 1/4-20 SST	16	16



Pre Assembly for Models STP-LCR/82HW STP-LCR/124HW

Step 1: Connecting Panel Support Channels (STP-LCR/124HW only)

- A. Lay (1) 56" and (1) 68" panel support channel end to end with a connector in the middle.
NOTE: You will need 2 sets, 1 left and 1 right, keep 56" supports on the same end with open sides facing each other (Detail A).
- B. Using a connector, bolt the panel support channels together. Tighten the 5/16-18 x 7/8" hardware (hex bolt, flat washer, and flange nut) to 144 in-lbs (dry). Repeat with the remaining set of channel rails and set aside.

Step 2 Connecting inner\outer brace channels

- A. Lay an inner brace channel inside of an outer brace channel, adjust overlap per the chart **(Detail M)** and bolt together using the holes at the ends of the channels with 5/16 x 7/8 bolts, flat and flange nut, torque to 144 inLbs (dry) **(Detail AA) Note: make one left hand and one right hand.**

Step 3: Connecting Panels to Panel Supports

(STP-LCR/124HW) 3 panels per tier, connect middle panel only, **(Detail B)**

(STP-LCR/82HW) 2 panels per tier, connect both panels

- B. Lay panel(s) on a flat surface, frame side up.
- C. Lay panel supports across the panel(s) with obround slots face down, and the open sides facing towards the center of the panel, aligning the mounting holes of the panel with the obround slots on the panel supports, placing the panel in the center (3 panel tier shown) or equally spaced (2 panel tier). Install with 1/4 x 3/4 bolts, flats, locks and nuts, tighten only enough to hold firmly, **do not torque at this time.**

Final Assembly

Step 4: Attach Pole Clamp Assembly to Pole

- A. Slide the pre-assembled pole clamp over the pole, the assembly should rest on the notches on the top edge of the pole. **(Detail C).**
- B. Loosen the four 1/4" bolts slightly to allow the clamp halves to tighten up on the pole.
- C. Orientate brace to face south.
- D. Tighten the 8 outside 5/16 flange nuts on the threaded rods evenly, making sure that each nut is tightened the same amount of turns so the distance between the clamp halves is the same on each side of the pole, until the torque setting is reached. 12 Ft-lbs (dry).
- E. Finger tighten the 8 inside 5/16 flange nuts up to the flanges of the clamp halves.
- F. Using a long 5/16 box wrench, tighten 5/16 flange nuts, alternating turns from side to side, pulling the flanges together. (Close or touching, not flattened out).
- G. Install 5/16 x 7/8 bolt, flat, and flange nuts in the 4 holes of the clamp halves flange ends. Tighten 5/16 bolts, alternating turns from side to side, pulling the flanges together. (close or touching, not flattened out) **(Detail D).**
- H. **Check the torque of the 8 outside flange nuts,** re torque as needed.
- I. Torque the four 1/4" bolts on top to 84 in-lbs. **(previously loosened slightly)**
- J. **(Optional)** caulk the seams on top of pipe clamp to seal preventing rain water entering the pipe.

Step 5: Attach Tilt Plate Mounting Channel

- A. Place tilt plate mounting channels on the sides of the pole clamp assembly **(Detail E)**.
- B. Install 1/4" bolt, flat and flange nuts 6 places on both sides, tighten to 84 in-lbs. Note: placing the flange nut in the "closed" side of the wrench to align with the bolt through the cutout will make it easier to start.
(Detail F) Dropped nuts cannot be retrieved very easily.

Step 6: Attach Tilt plates

- A. Attach tilt plates, flanges facing to the outside using 3/8-16 X 1"bolts, flats, locks and nuts; position the tilt plates with the top parallel to the ground (0°). Do not torque at this time, tighten only enough to hold firmly for next assembly steps. **(Detail G)**.

Step 7: Attach Cross Rails to Tilt Plates.

- A. Attach cross rails to the tilt plates, open sides facing to the inside, (CENTERED) using 3/8-16 X 1"bolts, flats, locks and nuts. Torque to 20 ft-lbs. **(Detail H)**

Step 8: Attach Panel Support Sub Assembly to Cross Rails

- A. Lean the 124" or the 82" sub assembly against the cross rail **(Detail I)**, lift the end up and slide sub assembly onto both cross rails and place the seam where the 56" and 68" panel supports meet, centered between the cross rails, for the (STP-LCR/124HW) **(Note: 56" section to be on the north side of the cross rails.)** or 22 7/8" from the end of the 82" panel support to the north side cross rail face for the (STP-LCR/82HW) **(Detail J)** attach with 3/8-16 X 1" bolt, flats, locks and nuts, Torque to 20 ft-lbs (dry) (4) Places. **(DETAIL K)**
- B. **(STP-LCR/124HW)** Lift next panel up onto the panel supports on the north side; align mounting holes so the inside panel edges are approximately 1" apart. Loosely install with 1/4 x 3/4 bolts, flat, lock and nuts. Repeat with the panels on the south side.
- C. Final adjust spacing of all the panels to be even and parallel, and Torque to 84 in-lbs (dry).

Step 9: Install Knee Brace Cross rail STP-LCR/82HW STP-LCR/124HW

- A. Install the 3rd cross rail across the south side (open side facing the pole) **(DETAIL L)** Note: location is determined by the final desired angle setting for the array, see **(DETAIL M)**.

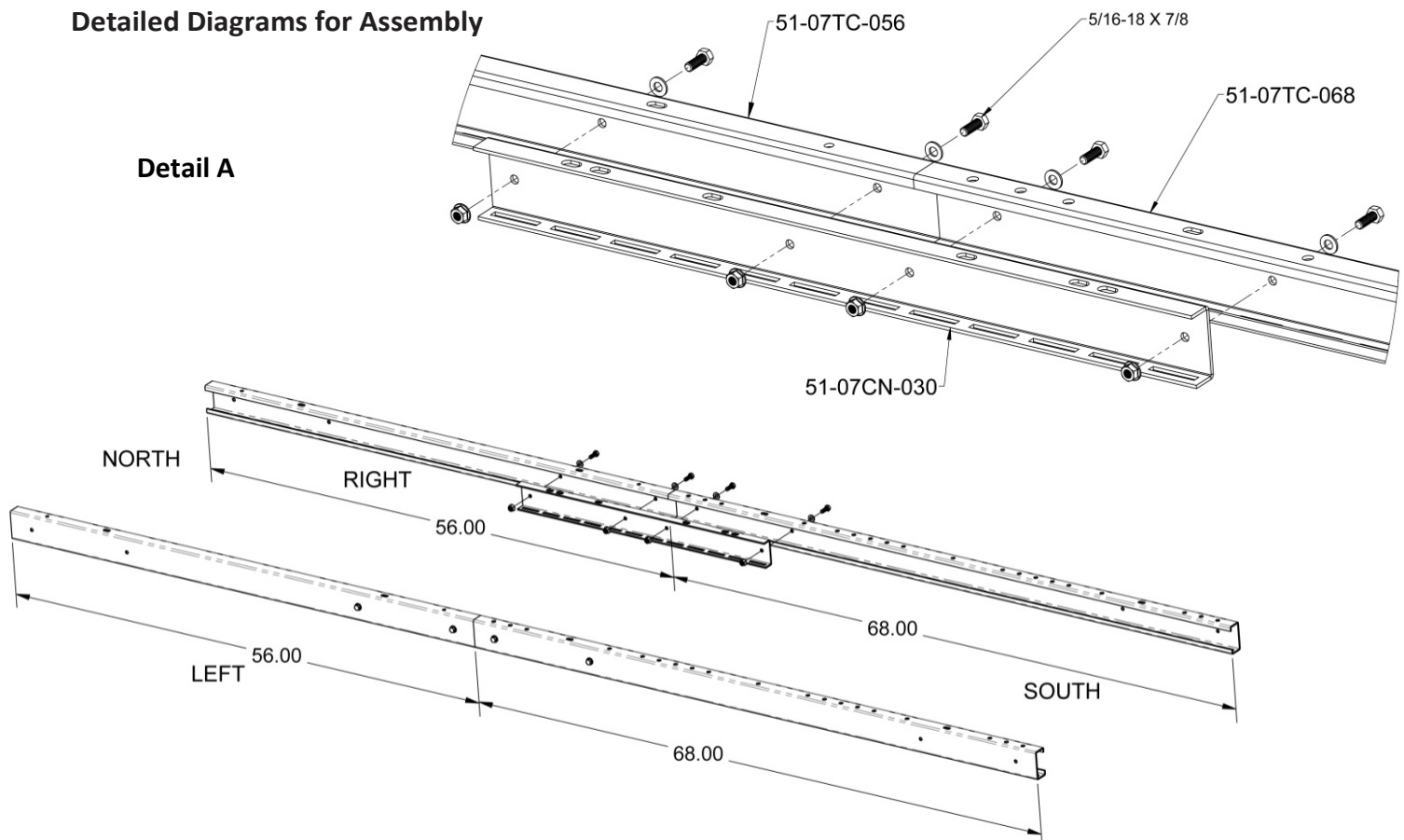
Step 10: Adjust Tilt Angle

Remove the lower two 3/8-16 x 1.0 bolts from the tilt plates and tilt the array to desired angle, the array tilts in 10° increments from 0° to 60°. Re install 3/8-16 x 1.0 bolts and torque all six 3/8-16 x 1.0 bolts to 20 ft-lbs (dry) **Note:** to set to 60° one bolt set will need to be in the center position.

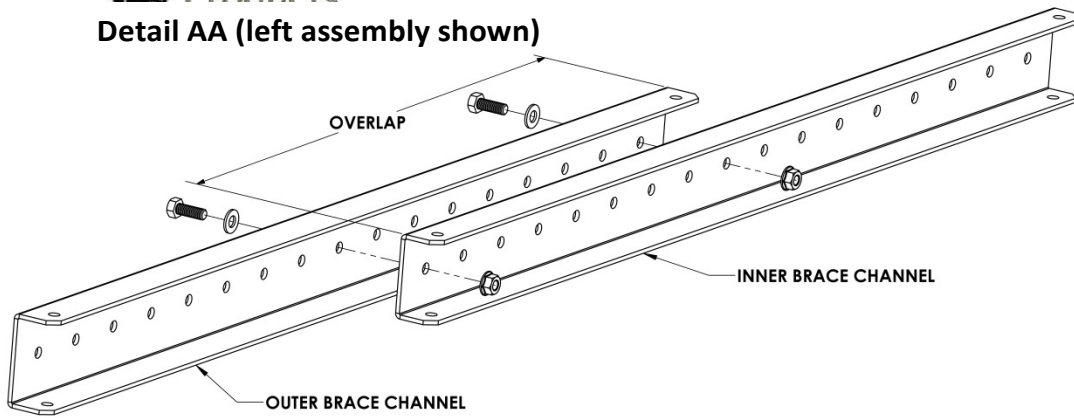
Step 11: Install Lower Vee Brace STP-LCR/82HW STP-LCR/124HW

- A. Pre assemble both of the lower brace angle brackets with the 5/16-18 x 1.0 bolt, flat and flange nut (attached to one of the angle brackets for shipping). Do not torque, just snug for alignment **(Detail N)**
- B. Attach the lower knee brace clamp and preassembled angle brackets loosely to the pole with the 3/8-16 x 4" U-bolt flat, lock and nut. **(Detail N)** See **(DETAIL M)** for location position.
- C. Loosely attach the outer swivel brackets to the lower knee brace clamp with the (previously used to align the angle brackets) 5/16-18 x1.0 bolt, flat washer and flange nut. **Note: the 2 outer holes must face away from the pole. (Detail O).**
- D. Attach the outer swivel brackets to the cross rail sub assembly at both ends with 5/16-18 x 7/8 bolt, flat washer and flange nut. **Flange nut to be inside of the knee brace channel. Tighten to 144 in-lbs (dry) (Detail L).**
- E. Loosely attach the inner swivel brackets to the outer swivel brackets just installed on the cross rail sub assembly. **(Detail P).**
- F. Loosely attach the pre-assembled inner\ outer brace channels to the inner swivel brackets on the third cross rail, open side facing in with the inner channel end, with the 5/16-18 x3.5 bolt, flat washer and flange nut. **(Detail R).**
- G. Adjust the lower knee brace clamp slightly up or down so the outer channel holes align with the outer swivel bracket on the lower knee brace, install with 5/16-18 x3.5 bolt, flat washer and flange nut, tighten all 5/16 hardware to 144 in-lbs (dry). **(Detail Q). Torque the 3/8 U-bolts to 20Ftlbs**

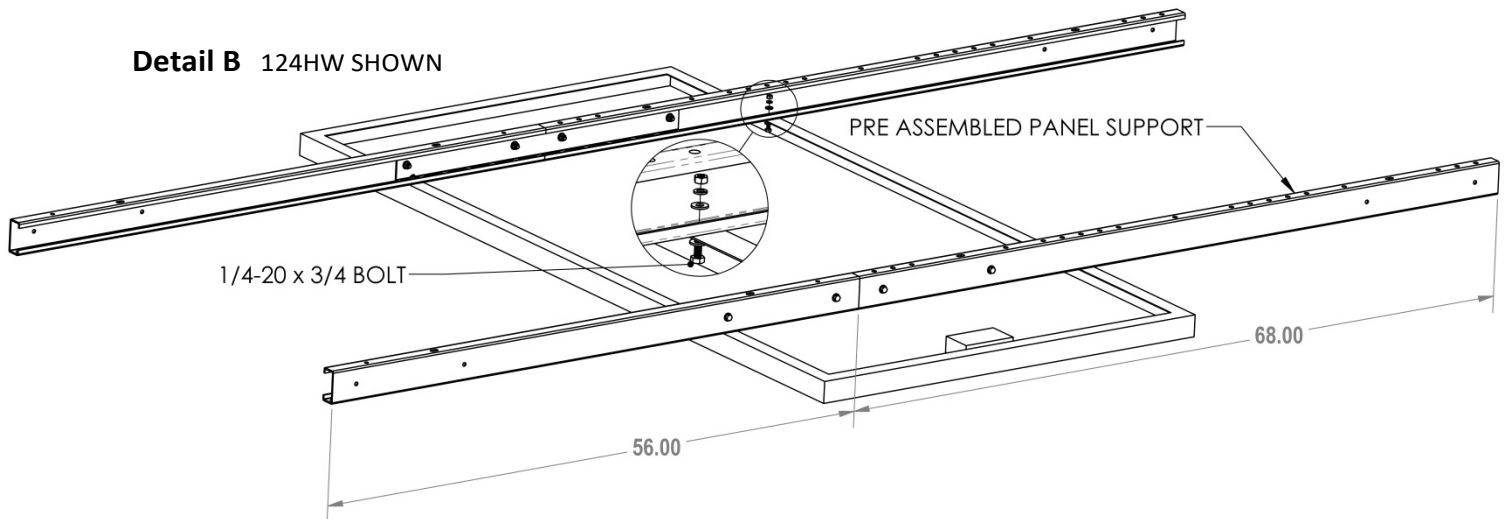
Detailed Diagrams for Assembly



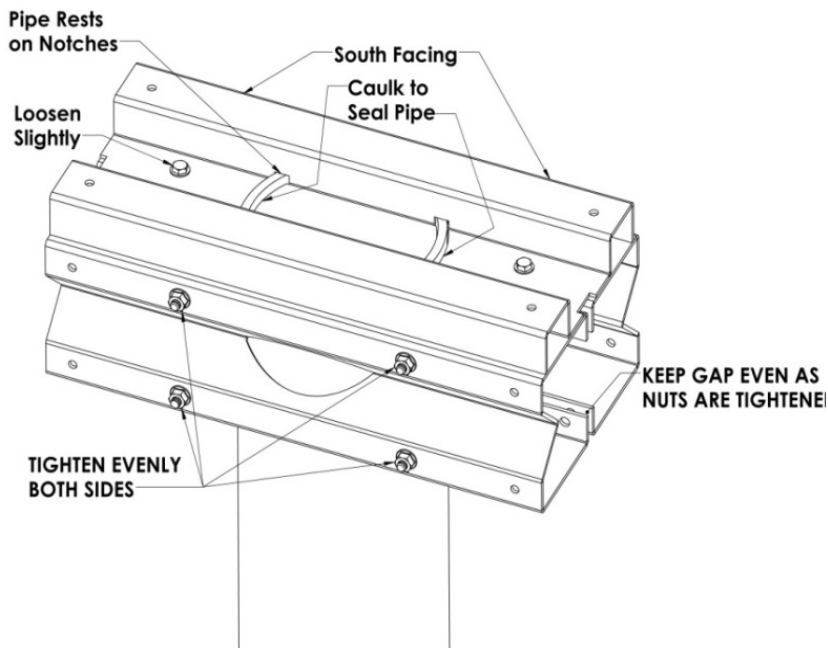
Detail AA (left assembly shown)



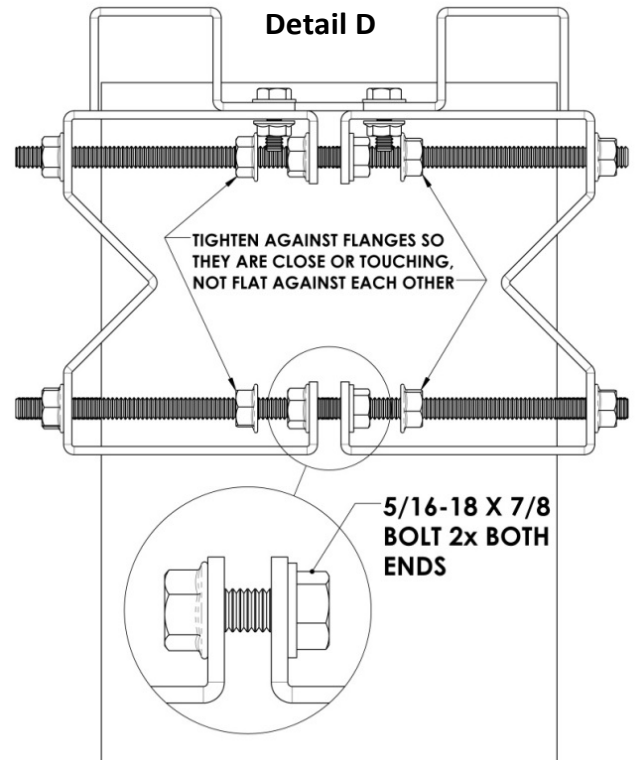
Detail B 124HW SHOWN



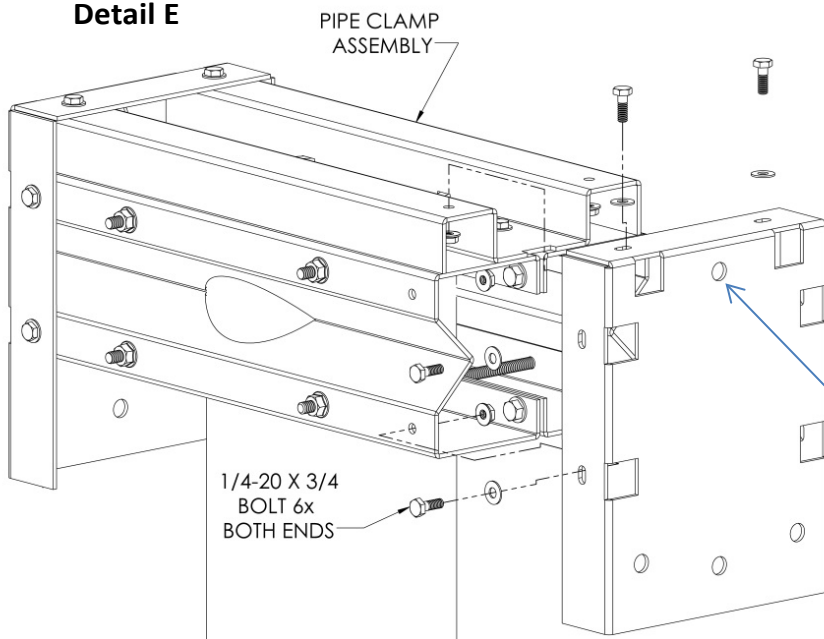
Detail C



Detail D



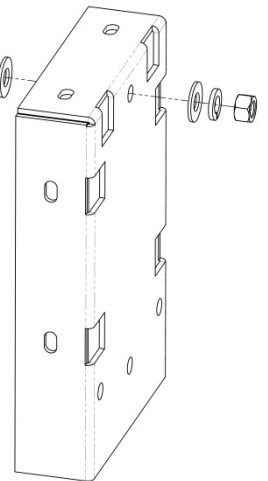
Detail E



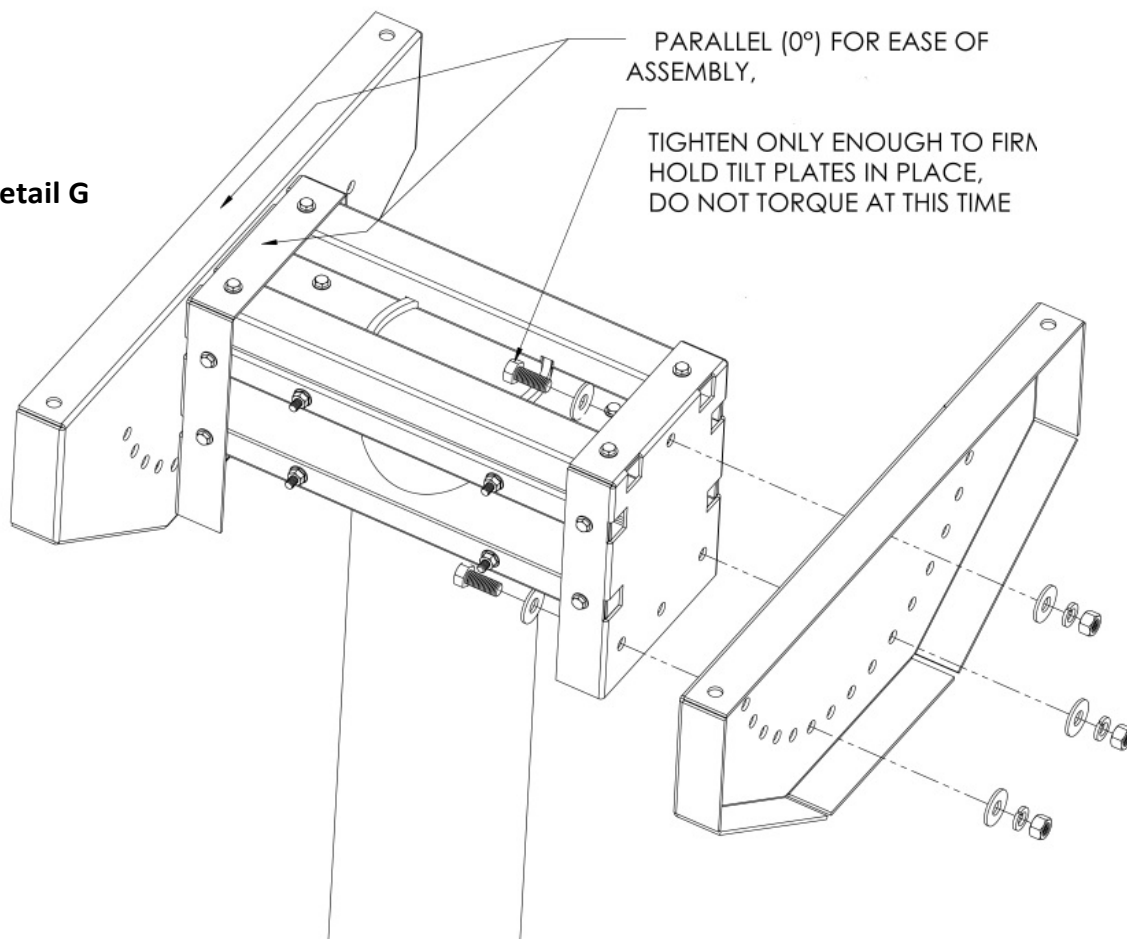
Detail F



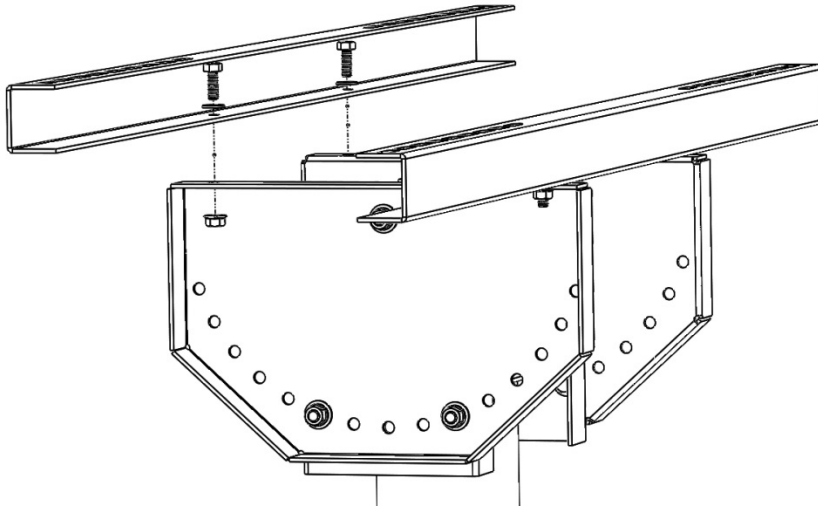
Helpful tip: pre install -
3/8" bolt for ease of
assembly in Detail G.



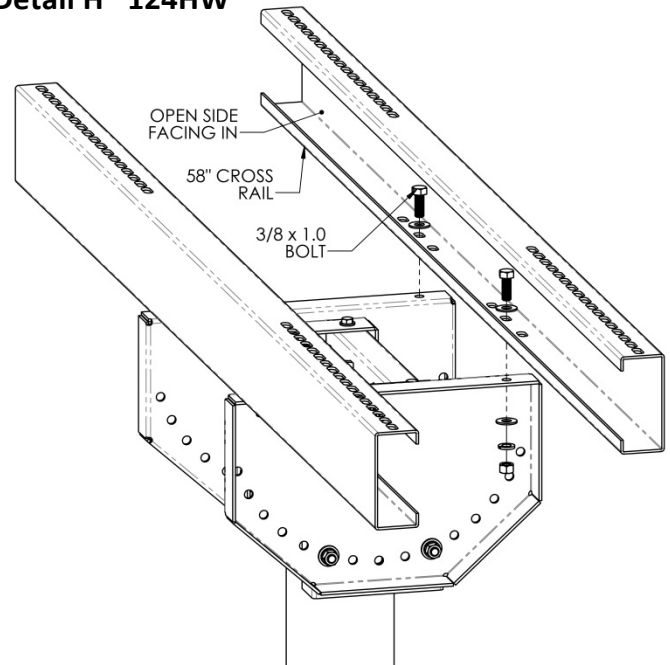
Detail G



Detail H 82HW



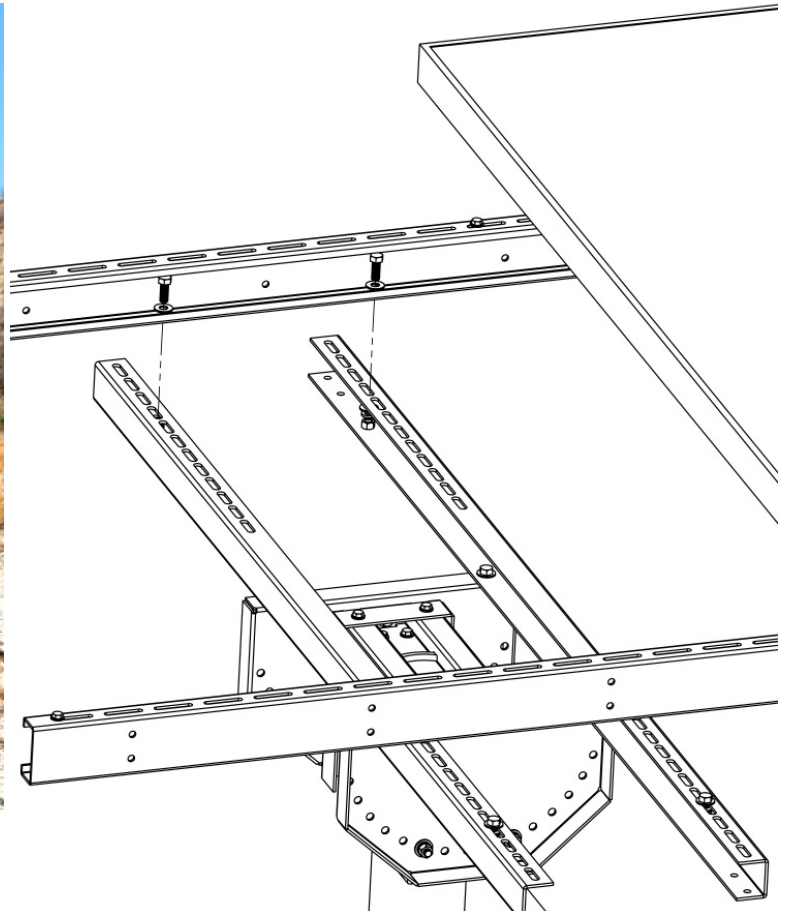
Detail H 124HW



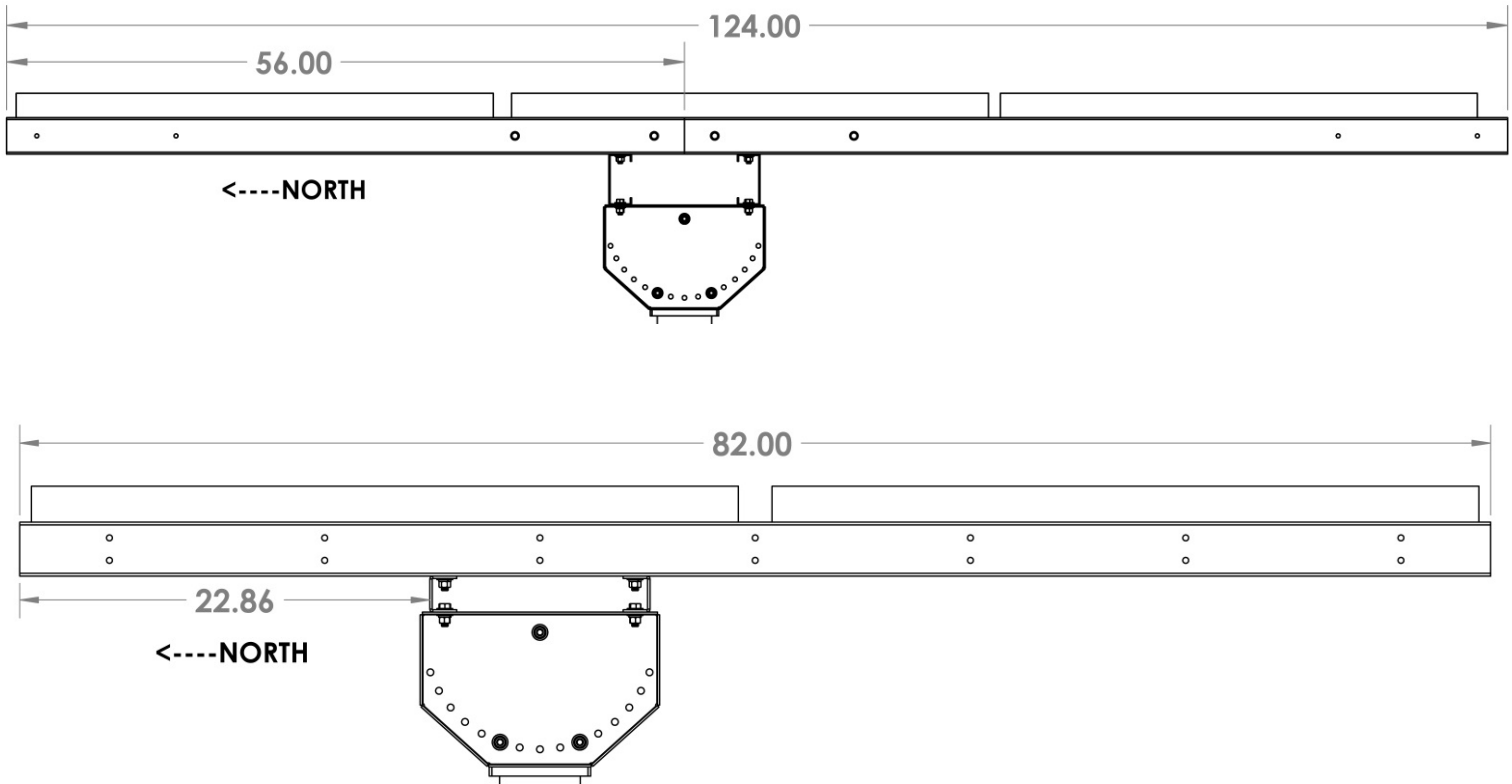
DETAIL I STP-LCR/124HW SHOWN



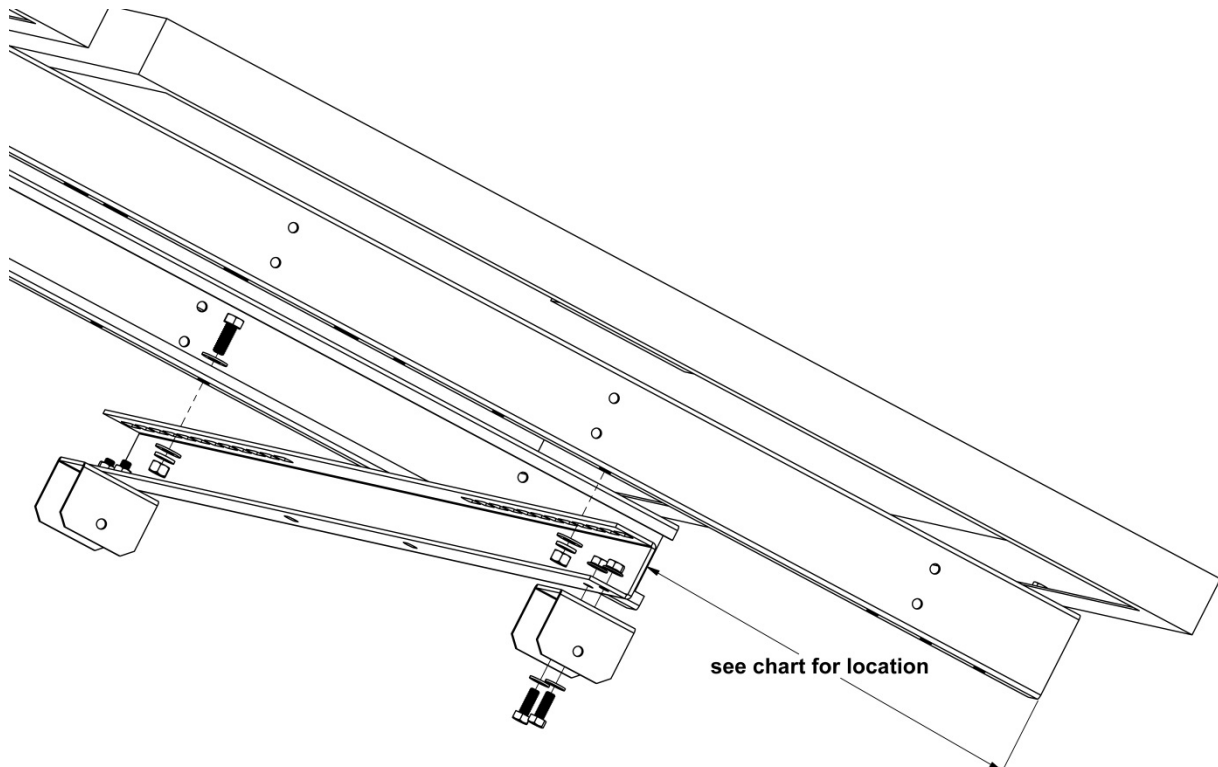
DETAIL K (STP-LCR/82HW SHOWN)



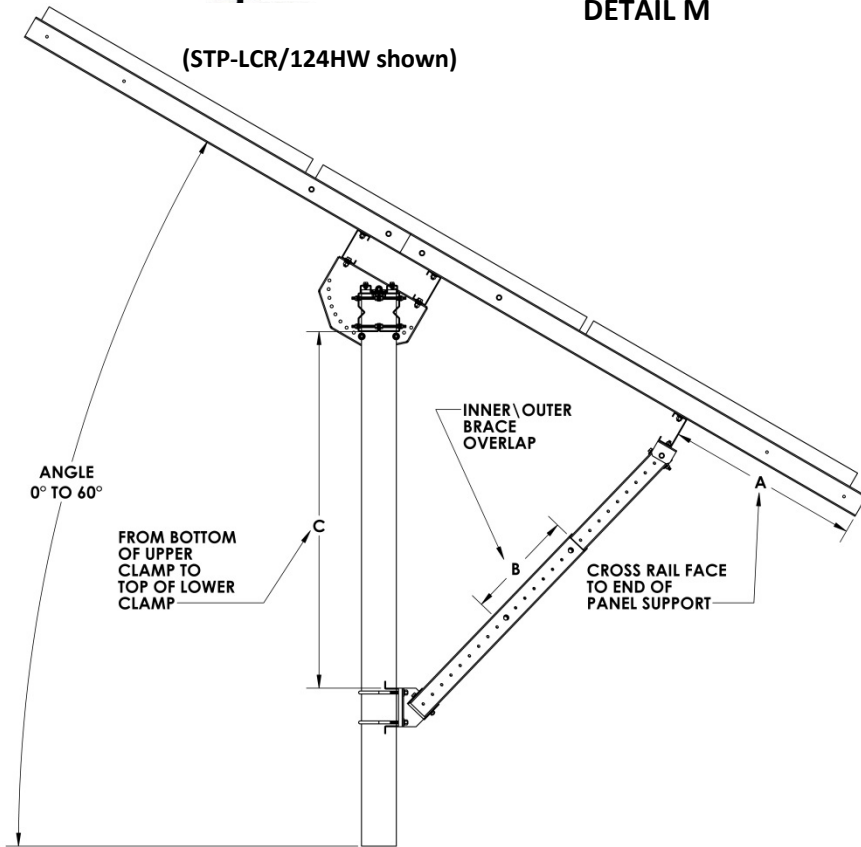
DETAIL J



DETAIL L (STP-LCR/82HW SHOWN)



DETAIL M



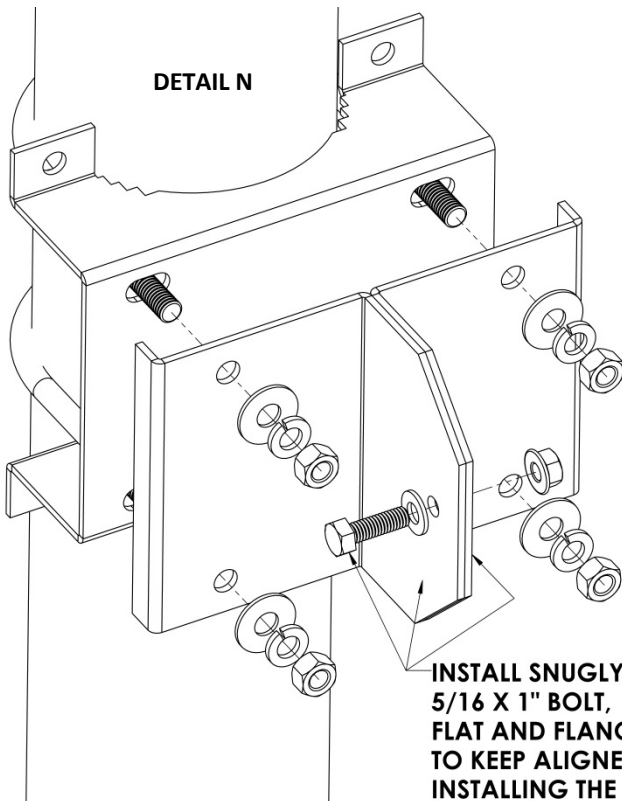
Location Chart STP-LCR/124HW

ANGLE	A	B	C
0°	27.06	6.50	36.56
10°	27.06	8.50	41.27
20°	25.06	8.50	48.76
30°	25.06	16.50	46.14
40°	15.06	18.50	51.19
50°	15.06	26.50	49.74
60°	5.06	30.50	56.80

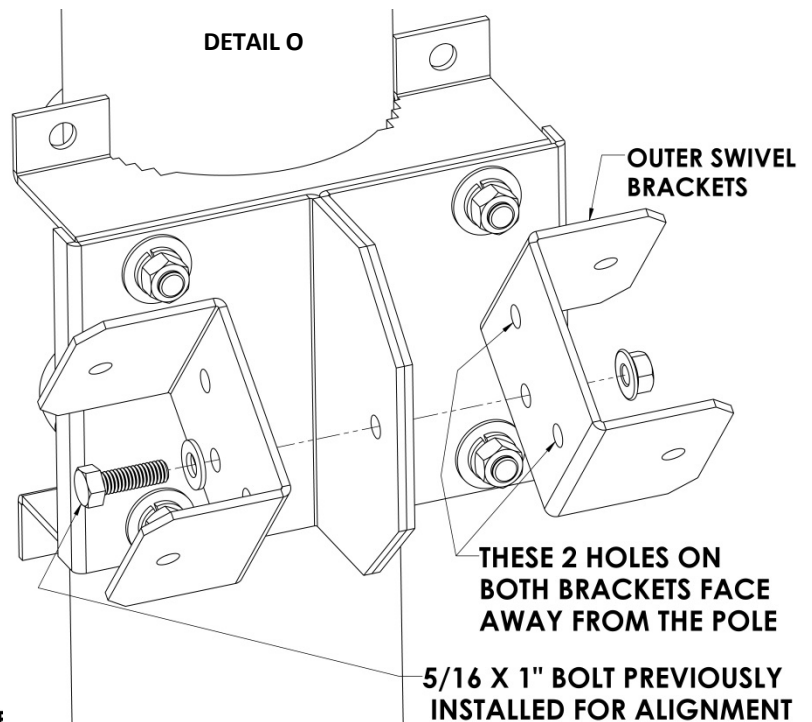
Location Chart STP-LCR/82HW

ANGLE	A	B	C
0°	19.17	6.50	40.97
10°	19.17	8.50	44.45
20°	15.17	8.50	50.00
30°	15.17	18.50	43.60
40°	15.17	26.50	38.79
50°	1.17	26.50	48.51
60°	1.17	32.50	49.21

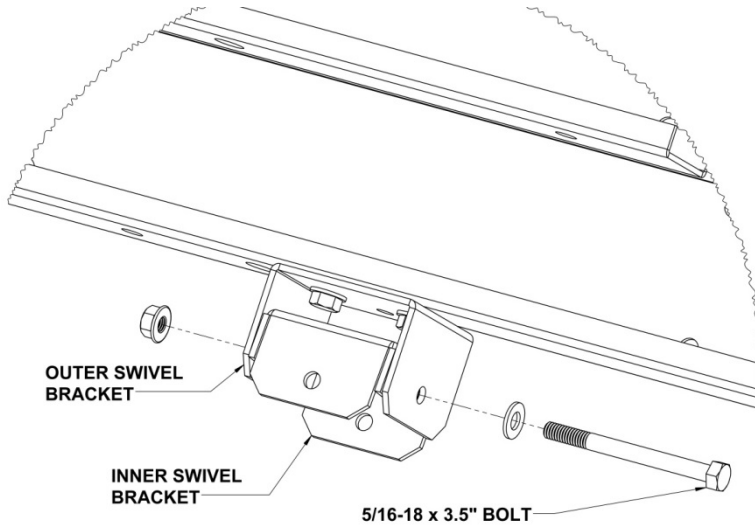
DETAIL N



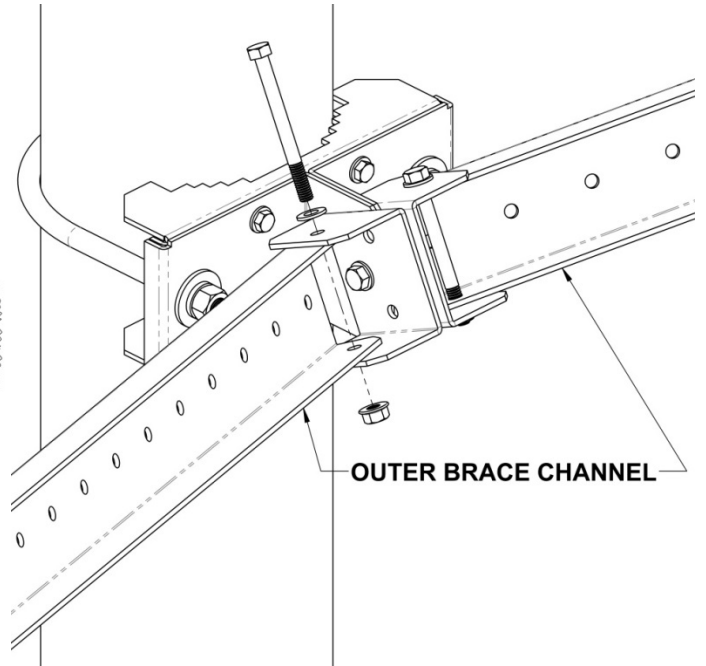
DETAIL O



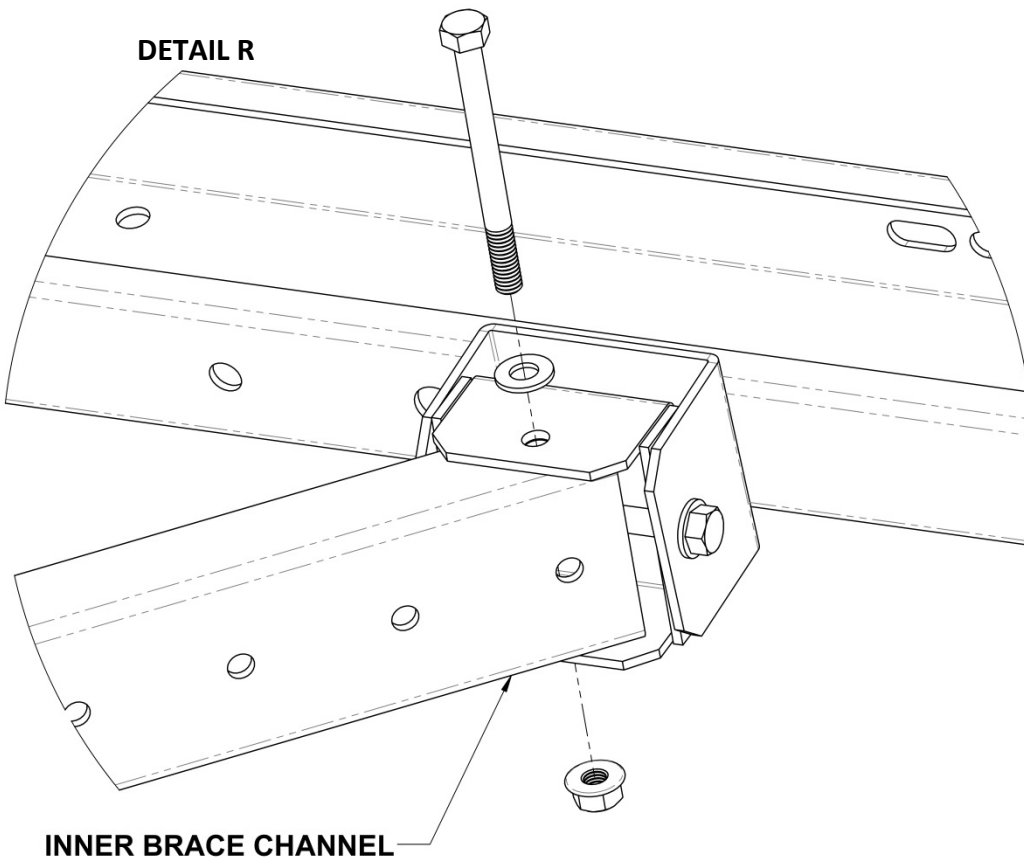
DETAIL P



DETAIL Q



DETAIL R



Foundation Hole Guidelines (see charts pages 14, 15)

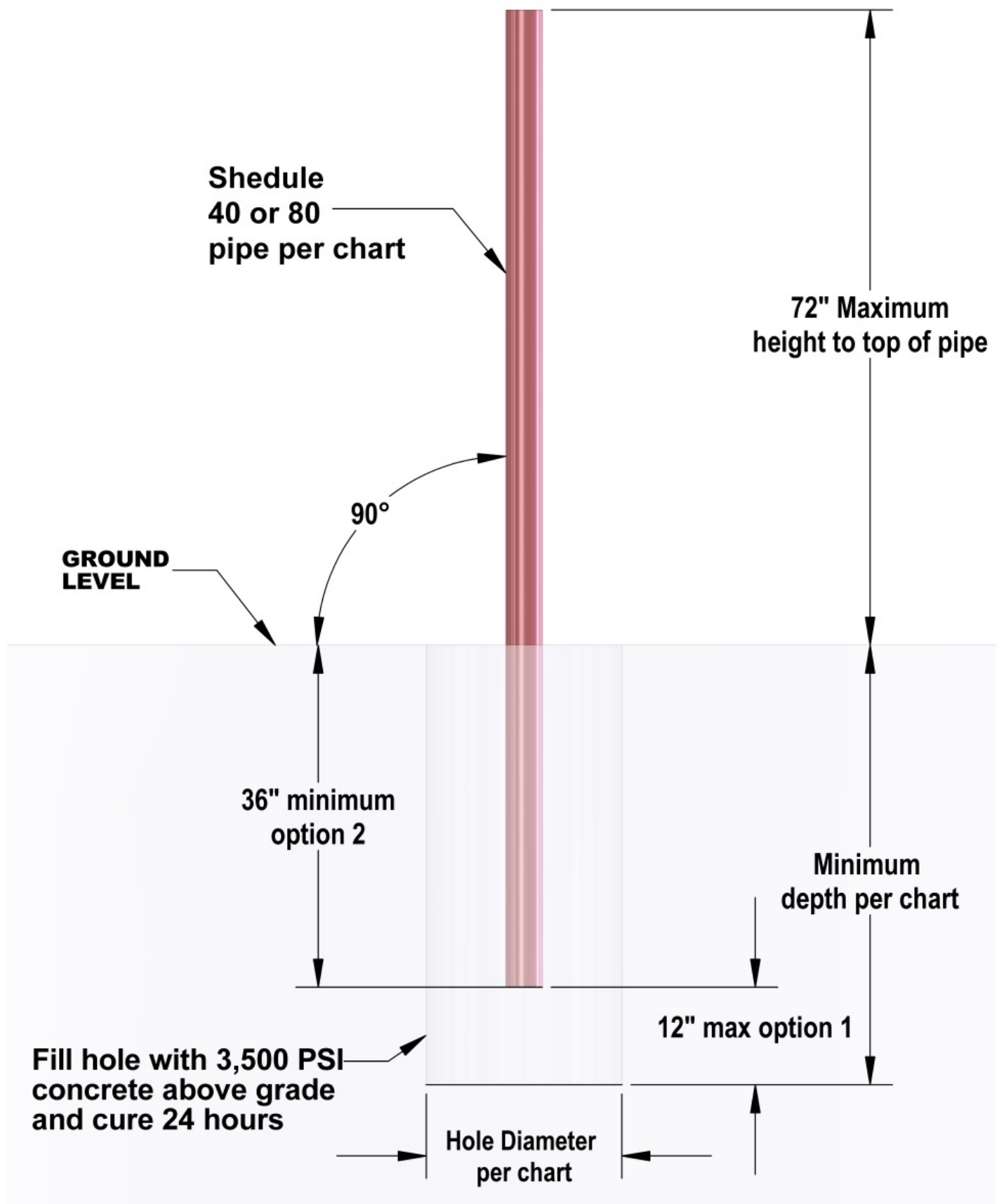
The suggestions below are **recommendations only**. It is the installer's responsibility to validate foundation parameters prior to installation, as local geotechnical report may be required to assess ground conditions. We recommend consulting with a local engineer familiar with local regulations and build site requirements, including soil conditions, terrain and load criteria (wind, snow, seismic). All of these parameters may impact foundation requirements.

Installation Recommendations: Concrete to be min 3,500 PSI

1. *Auger hole to minimum depth shown in foundation guidelines, + 6" for (#2).
Drilled holes to be filled with concrete shall be cleaned to remove all loose cuttings.*
2. *Stumps or other decomposable material exceeding 3 inches in the least dimension located within the drilled diameter of the foundation shall be removed entirely prior to placing concrete.*
3. *The bottom 6" of hole should be filled with crushed rock or a blocking; this will prevent the pipe(s) from touching the base of the hole, insuring complete encapsulation of the pipe when concrete is poured, as well as allowing for water drainage. (see option 1)*
4. *The pipe(s) should be installed vertically no matter the slope of the install site and centered in the hole.*
5. *Make arrangements to prevent the pipe(s) from twisting or moving prior to and during pouring of the concrete.*
6. *The pipe(s) should be braced to remain plumb and in position until concrete has cured at least 24hrs.*
7. *The solar system shall not be attached to the support pipe until the concrete has reached 3,500 psi.*

The Steel Post shall be embedded into the concrete pier using one of the following options:

- A. **Option 1:** *To within 12" of the bottom of the concrete pier.*
- B. **Option 2:** *The steel post embedment shall be a minimum of 36" into the concrete pier with (2) #5 bars extending vertically to within 12" of the bottom of the pier, one on each side of the steel post. The rebar shall lap with the steel post a minimum of 30". A bolt (5/16" minimum) shall be placed through the steel post at approximately 6" (+/- 2") from the bottom of the post with a hand tightened nut to provide uplift resistance in direct bearing with the concrete*



Footing Chart 2 panel STP-LCR/82HW

60 and 72 cell modules									60 and 72 cell modules					
0° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						0° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72	72	60		Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	72	60			Footing Depth (feet)		4.00	3.50	3.75	3.25
	120 MPH	93 MPH	72	72	72	60		4.00			3.50	3.50	3.00	
	130 MPH	100 MPH	72	72	72	60		4.50			3.75	3.75	3.25	
	140 MPH	108 MPH	72	72	72									
	150 MPH	116 MPH	72	72	60									
10° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						10° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72				Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	60				Footing Depth (feet)		4.00	3.25	3.50	3.00
	120 MPH	93 MPH	72	72	60			4.00			3.25	3.50	3.00	
	130 MPH	100 MPH	72	72	60			4.50			3.75	4.00	3.25	
	140 MPH	108 MPH	72	72										
	150 MPH	116 MPH	72	72										
20° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						20° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72				Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	72				Footing Depth (feet)		4.75	4.00	4.25	3.50
	120 MPH	93 MPH	72	72	60			4.75			4.00	4.25	3.50	
	130 MPH	100 MPH	72	72				5.25			4.25	4.50	3.75	
	140 MPH	108 MPH	60	60										
	150 MPH	116 MPH	60	60										
30° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						30° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	60				Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	60				Footing Depth (feet)		N/A	N/A	N/A	N/A
	120 MPH	93 MPH	72	72	60			5.25			4.25	4.50	3.75	
	130 MPH	100 MPH	60	60				6.50			5.25	5.50	4.50	
	140 MPH	108 MPH												
	150 MPH	116 MPH												
40° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						40° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72	60	60		Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	72	60			Footing Depth (feet)		N/A	N/A	N/A	N/A
	120 MPH	93 MPH	72	72	60			5.75			4.75	5.00	4.00	
	130 MPH	100 MPH	60	60	60			7.25			5.75	6.00	5.00	
	140 MPH	108 MPH												
	150 MPH	116 MPH												
50° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						50° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72	72	60	60	Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	72	72	60		Footing Depth (feet)		6.75	5.50	5.75	4.75
	120 MPH	93 MPH	72	72	72	60	60	6.50			5.25	5.50	4.50	
	130 MPH	100 MPH	60	60	60	60		7.50			6.25	6.50	5.25	
	140 MPH	108 MPH												
	150 MPH	116 MPH												
60° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						60° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Soil Type		Class 5		Class 4	
	110 MPH	85 MPH	72	72	72	72	72	72	Diameter		18"	30"	18"	30"
	115 MPH	89 MPH	72	72	72	72	72	72	Footing Depth (feet)		N/A	N/A	N/A	N/A
	120 MPH	93 MPH	72	72	72	72	72	6.75			5.50	5.75	4.75	
	130 MPH	100 MPH	60	60	60	60	60	8.00			6.50	6.75	5.50	
	140 MPH	108 MPH												
	150 MPH	116 MPH												

Footing Chart 3 panel STP-LCR/124HW

60 and 72 cell modules									60 and 72 cell modules					
0° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						0° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	72	72	72	60			Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	72	72	72	60			Diameter		18"	30"	18"	30"
	120 MPH	93 MPH	72	72	72	60								
	130 MPH	100 MPH	72	72	72	60			Footing Depth (feet)		4.00	3.25	3.50	3.00
	140 MPH	108 MPH	72	72	60				4.00	3.25	3.50	3.00		
	150 MPH	116 MPH	72	72	60				4.00	3.50	3.50	3.00		
10° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						10° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	72	72	72	60			Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	72	72	72	60			Diameter		18"	30"	18"	30"
	120 MPH	93 MPH	72	72	72									
	130 MPH	100 MPH	72	72	60				Footing Depth (feet)		4.75	4.00	4.00	3.50
	140 MPH	108 MPH	72	72	60				4.75	4.00	4.00	3.50		
	150 MPH	116 MPH	72	72					5.00	4.00	4.25	3.50		
20° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						20° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	72	72	72	60			Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	72	72	72	60			Diameter		18"	30"	18"	30"
	120 MPH	93 MPH	72	72	72									
	130 MPH	100 MPH	72	72	60				Footing Depth (feet)		4.75	4.00	4.25	3.50
	140 MPH	108 MPH	60	60	60				4.75	4.00	4.25	3.50		
	150 MPH	116 MPH							5.50	4.50	4.75	3.75		
30° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						30° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	72	72	72	60			Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	72	72	72	60			Diameter		18"	30"	18"	30"
	120 MPH	93 MPH	72	72	72									
	130 MPH	100 MPH	60	60	60				Footing Depth (feet)		N/A	N/A	N/A	N/A
	140 MPH	108 MPH							6.00	5.00	5.25	4.25		
	150 MPH	116 MPH							7.50	6.00	6.25	5.25		
40° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						40° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	72	72	72	72	60		Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	72	72	72	60	60		Diameter		18"	30"	18"	30"
	120 MPH	93 MPH	72	72	72	60								
	130 MPH	100 MPH							Footing Depth (feet)		N/A	N/A	N/A	N/A
	140 MPH	108 MPH							6.50	5.25	5.50	4.50		
	150 MPH	116 MPH							8.25	6.75	7.00	5.75		
50° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						50° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	60	60	60	60	60	60	Soil Type		Class 5		Class 4	
	115 MPH	89 MPH	60	60	60	60	60	60	Diameter		18"	30"	18"	30"
	120 MPH	93 MPH												
	130 MPH	100 MPH							Footing Depth (feet)		N/A	N/A	N/A	N/A
	140 MPH	108 MPH							N/A	N/A	N/A	N/A		
	150 MPH	116 MPH	-	-	-	-	-	-	8.00	6.50	7.00	5.75		
60° TILT	Design Wind Speed (V)		Ground Snow Load (p _g)						60° TILT					
	ASCE 7-10	ASCE 7-05	0	10	20	30	40	50	Footing Depth (feet)					
	110 MPH	85 MPH	60	60	60	60	60	60	Soil Type		Class 5		Class 4	
	115 MPH	89 MPH							Diameter		18"	30"	18"	30"
	120 MPH	93 MPH												
	130 MPH	100 MPH							Footing Depth (feet)		N/A	N/A	N/A	N/A
	140 MPH	108 MPH							N/A	N/A	N/A	N/A		
	150 MPH	116 MPH							8.00	6.50	6.75	5.50		

Installer Responsibility

The installer is solely responsible for:

Complying with all applicable local or national building codes, including any that may supersede this manual;

Ensuring that Tamarack Solar and other products are appropriate for the particular installation and the installation environment;

Using only Tamarack Solar parts and installer-supplied parts as specified by Tamarack Solar. Substitution parts may void the warranty;

Ensuring safe installation of all electrical aspects of the PV array; and

Ensuring correct and appropriate design parameters are used in determining the design loading used for the specific installation. Parameters, such as snow loading, wind speed, exposure and topographic factor should be confirmed with the local building official or a licensed professional engineer.

Warranty Information

Tamarack Solar warrants each Mounting Structure to be free from defects in materials and workmanship for ten (10) years from the date of first purchase ("Warranty Period"), when installed properly and used for the purpose for which it is designed, except for the finish, which shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of three (3) years, from the earlier of 1) the date the installation of the Product is completed, or 2) 30 days after the purchase of the Product by the original Purchaser ("Finish Warranty"). The Finish Warranty does not apply to any foreign residue deposited on the finish.

Galvanized coated sheet steel components will show rust on cut edges and is normal and will not affect the structure and function of the mount.

All installations in corrosive atmospheric conditions are excluded. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 – "Cleaning and Maintenance for Architecturally Finished Aluminum" (www.aamanet.org) are not followed by Purchaser for Tamarack Solar's aluminum based products.

The warranty covers the replacement cost of parts to repair the product to proper working condition. Transportation and incidental costs associated with warranty items are not reimbursable. The warranty does not cover normal wear, or damage resulting from misuse, abuse, improper installation, negligence, or accident, or typographical errors in instruction manuals. The Warranty does not cover any defect that has not been reported in writing to Tamarack Solar within ten (10) days after discovery of such defect. Furthermore, it does not cover units that have been altered, modified or repaired without written authorization from the manufacturer or its authorized representative, or units used in a manner or for a purpose other than that specified by the manufacturer. Tamarack Solar's entire liability and Purchaser exclusive remedy, whether in contract, tort or otherwise, for any claim related to or arising out of breach of the warranty covering the Mounting Structures shall be correction of defects by repair, replacement, or credit, at Tamarack Solar's discretion. Refurbished Mounting Structures may be used to repair or replace the Mounting Structures

Tamarack Solar shall have no liability for any injuries or damages to persons or property resulting from any cause, whatsoever, or any claims or demands brought against Tamarack Solar by Purchaser, any employee of Purchaser, client of Purchaser, end-user of the Product or other party, even if Tamarack Solar has been advised of the possibility of such claims or demands (collectively, "Third Party Claims"). This limitation applies to all materials provided by Tamarack Solar during and after the Warranty Period.