

IMPORTANT NOTES: Read First

(A) Use liquid thread lock (such as Loctite®) with all threaded hardware. **Important:** Liquid thread lock (prior to curing) helps to eliminate the common problem of "thread seizure" in stainless steel hardware by serving as a lubricant during assembly.

(B) When installing Orbital Shade, make sure that the lowest point of the roof is a minimum of 84" [2130mm] above the underlying play surface.

FIGURE 1
Orbital Steel Roof

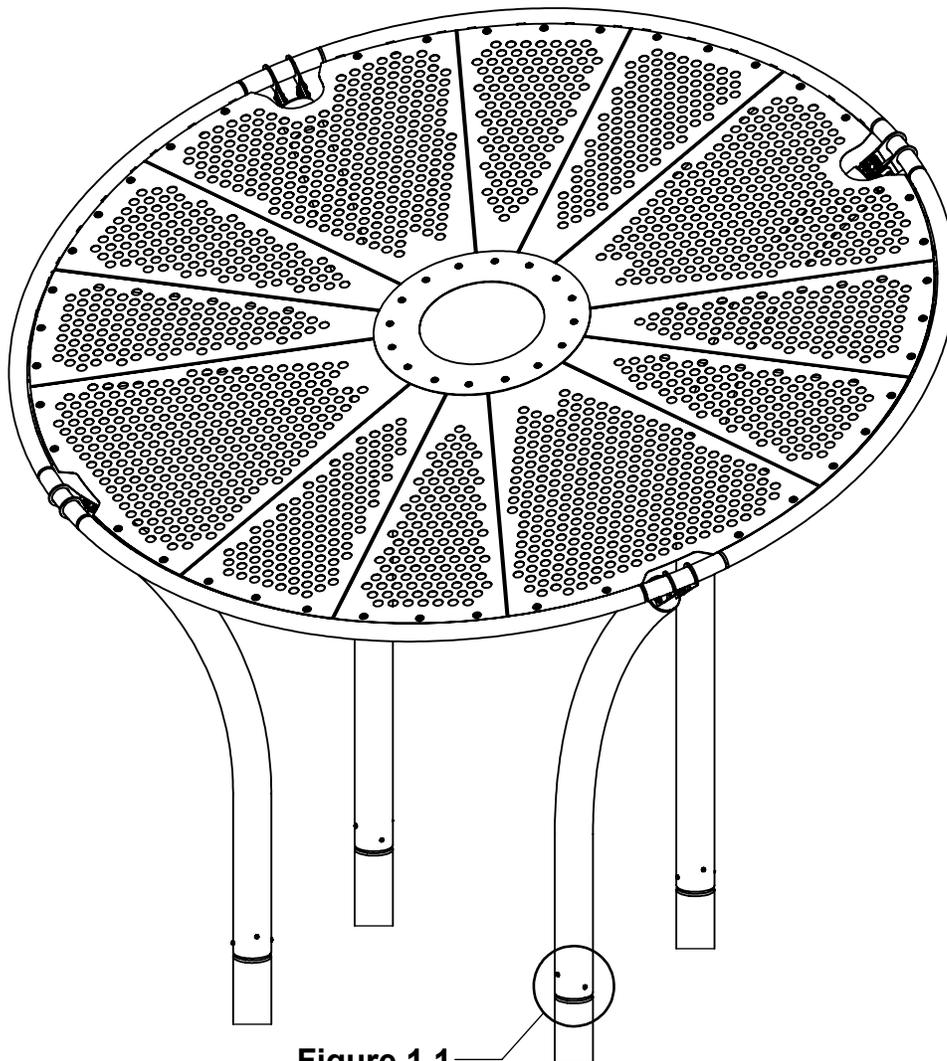
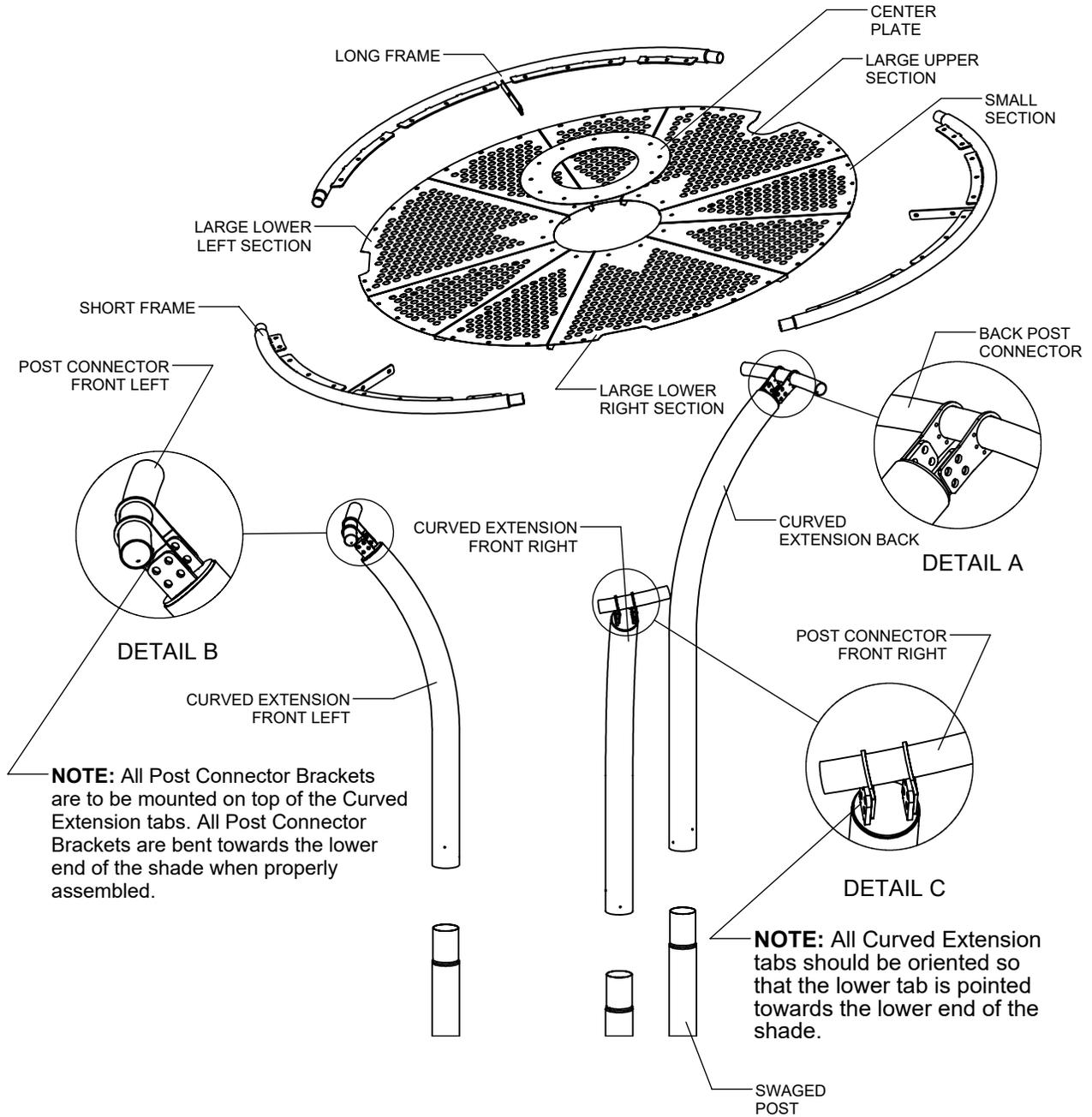


Figure 1.1

NOTE: 4 Post Orbital Steel Roof shown. Other configurations will vary slightly, but does not affect assembly.

3 POST ORBITAL STEEL ROOF



NOTE: All Post Connector Brackets are to be mounted on top of the Curved Extension tabs. All Post Connector Brackets are bent towards the lower end of the shade when properly assembled.

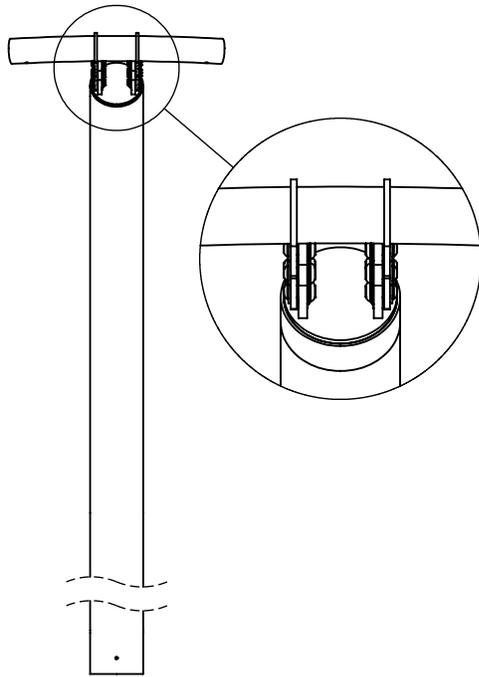
NOTE: All Curved Extension tabs should be oriented so that the lower tab is pointed towards the lower end of the shade.

FIGURE 2

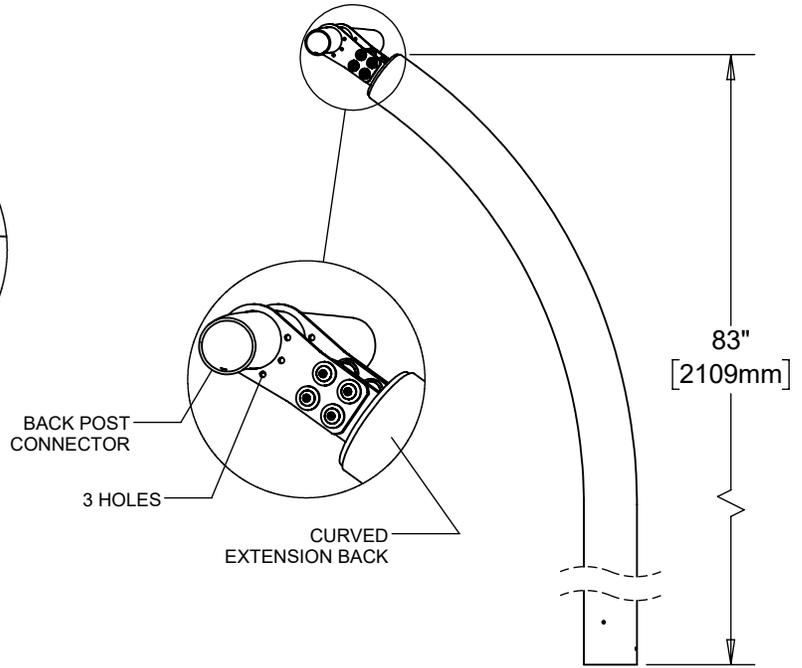
NOTE: Alignment of Post Connector Brackets on Curved Extensions is important for proper assembly.

3 POST ORBITAL STEEL SHADE

BACK POST

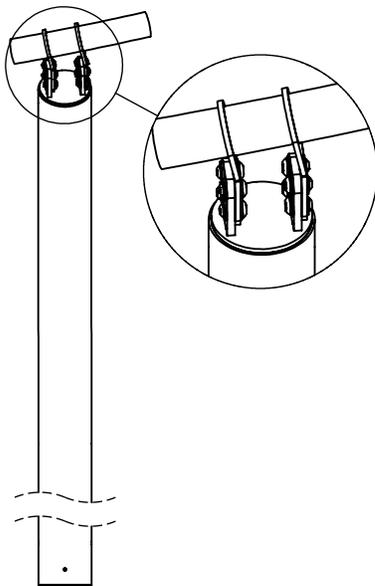


FRONT VIEW

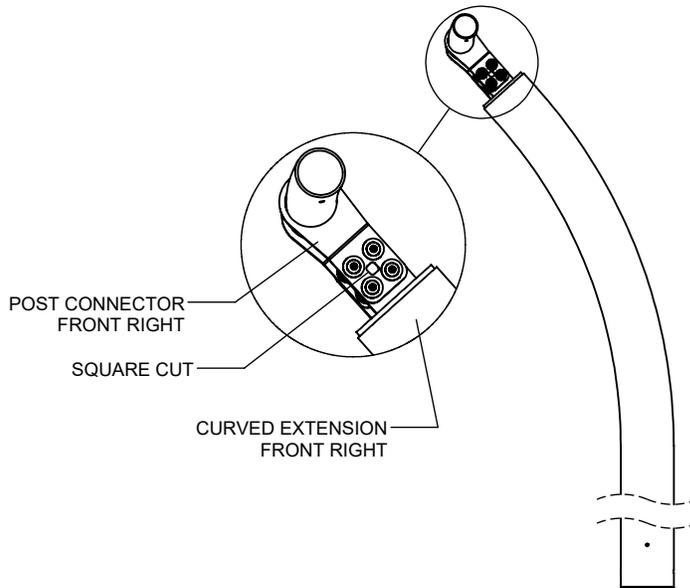


SIDE VIEW

FRONT RIGHT POST

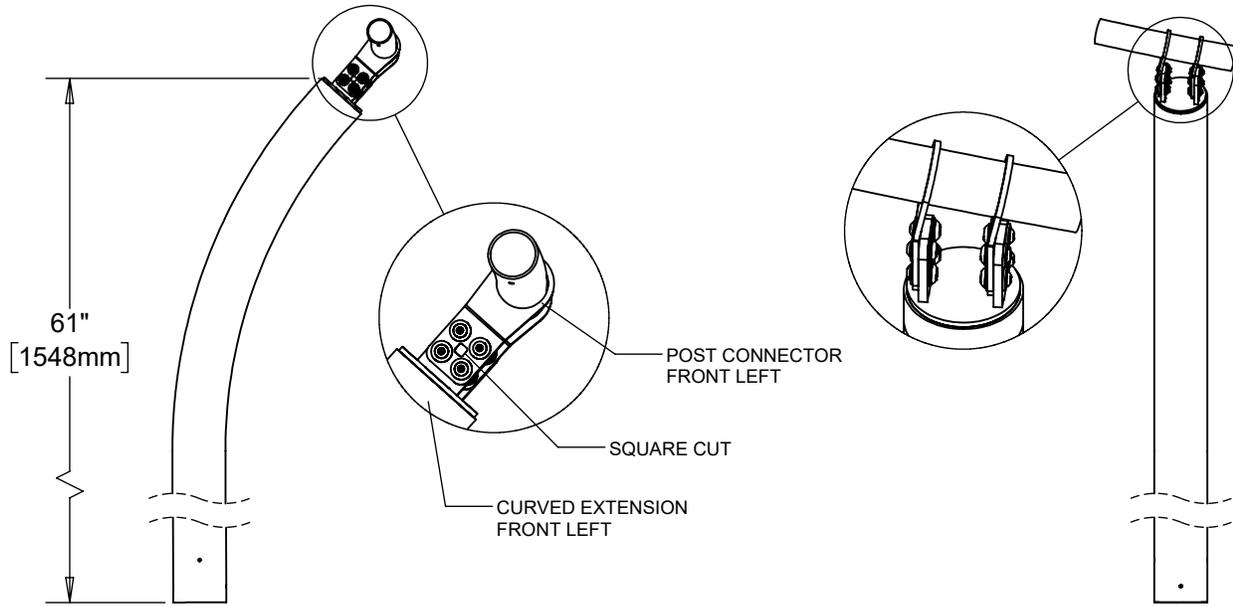


FRONT VIEW



SIDE VIEW

FRONT LEFT POST



SIDE VIEW

FRONT VIEW

4 POST ORBITAL STEEL ROOF

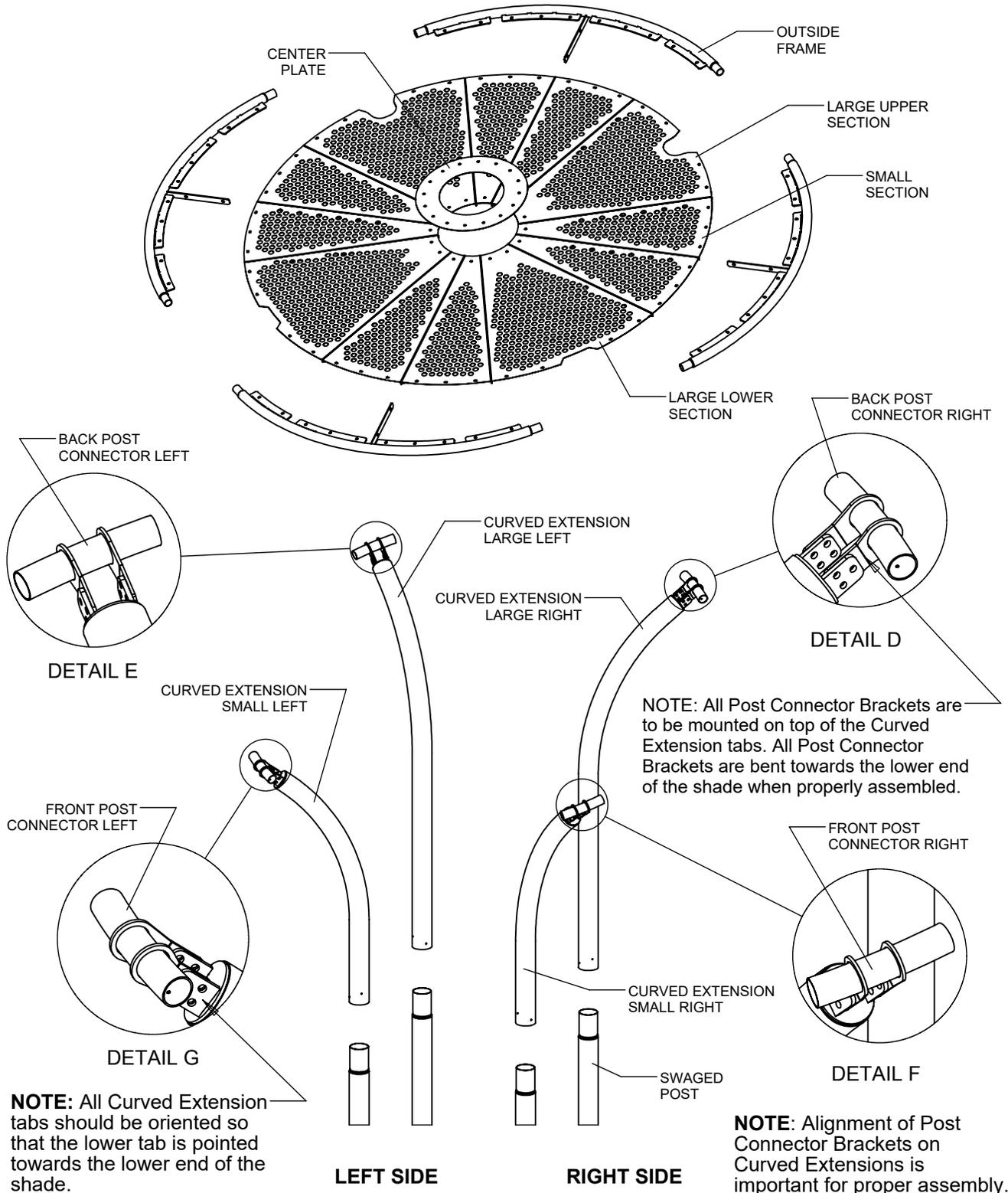
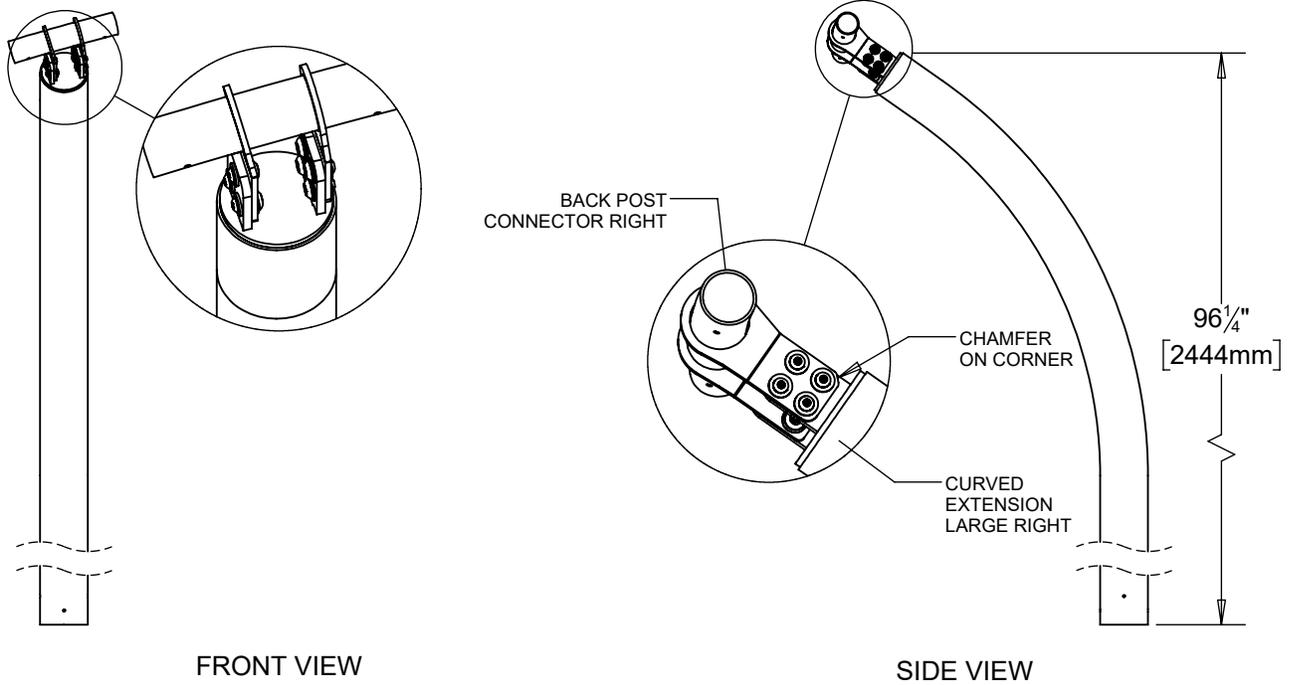


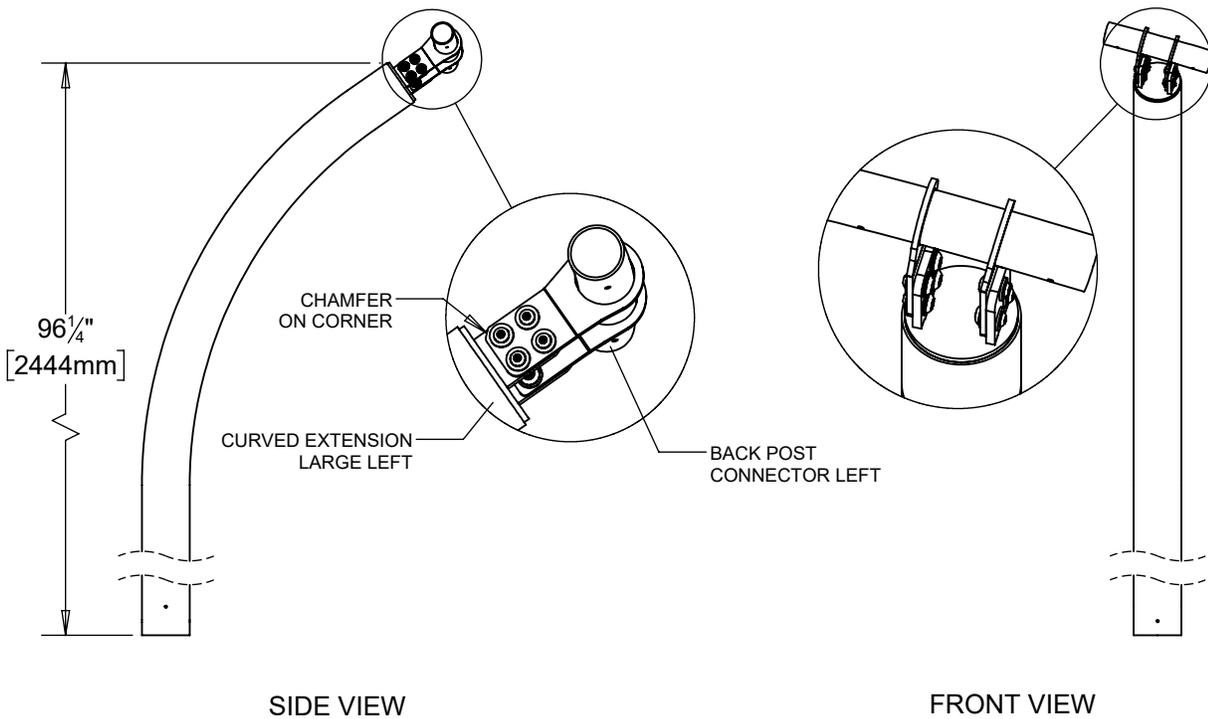
FIGURE 3

4 POST ORBITAL STEEL SHADE

BACK POST RIGHT

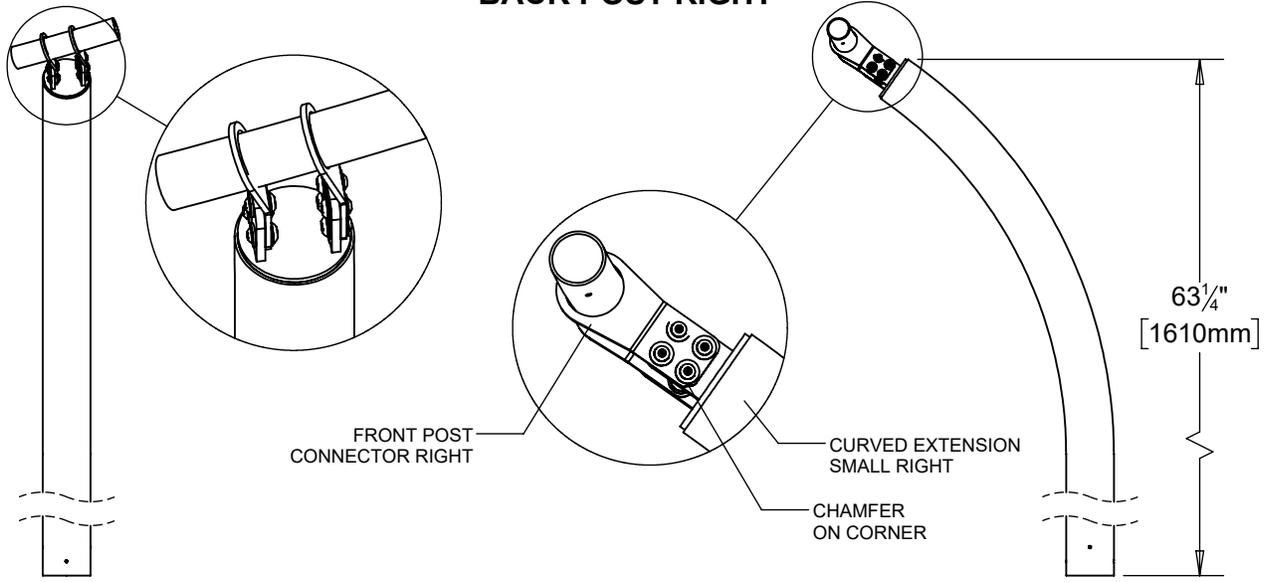


BACK POST LEFT

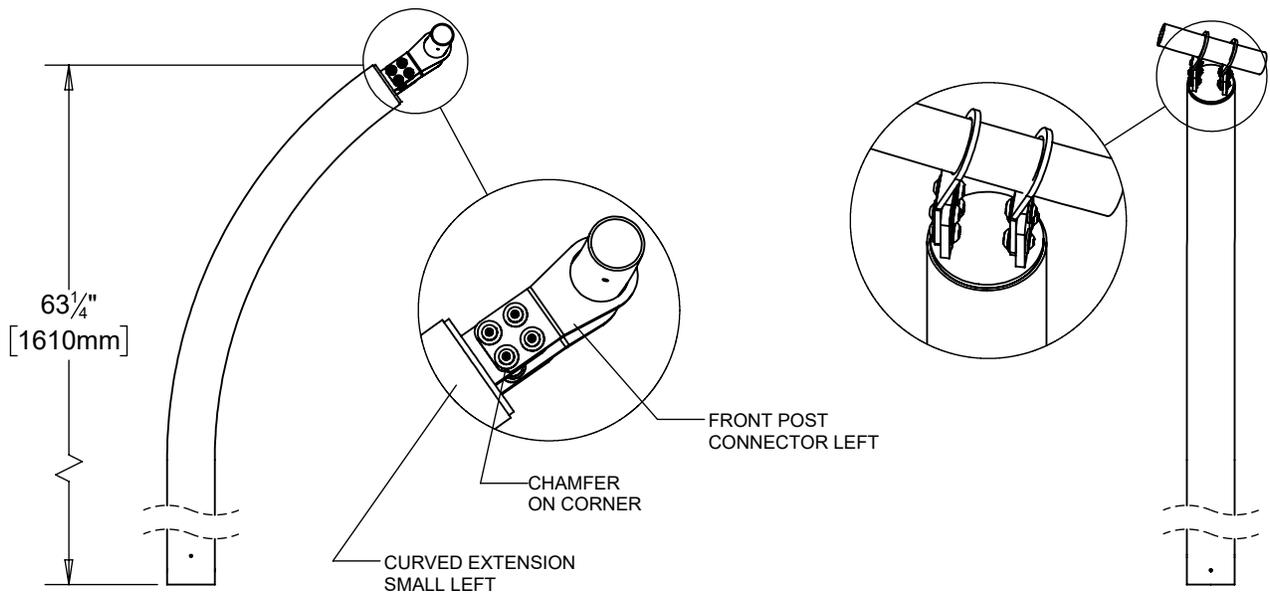


4 POST ORBITAL STEEL SHADE

BACK POST RIGHT



BACK POST LEFT



Step 1 (Factory Assembled)

Attach each Post Connector to its corresponding Curved Extension as shown in Figures 2, 3, and 4. Reference Figures 2 and 3 for overall location of each Post Connector configuration. (See Note A)

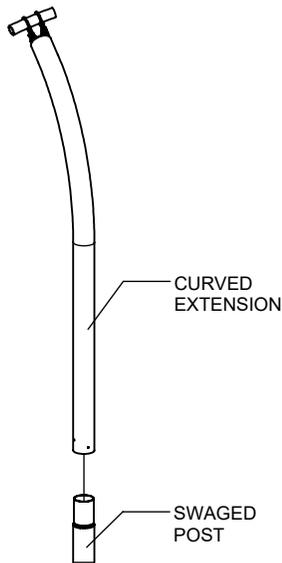


FIGURE 5

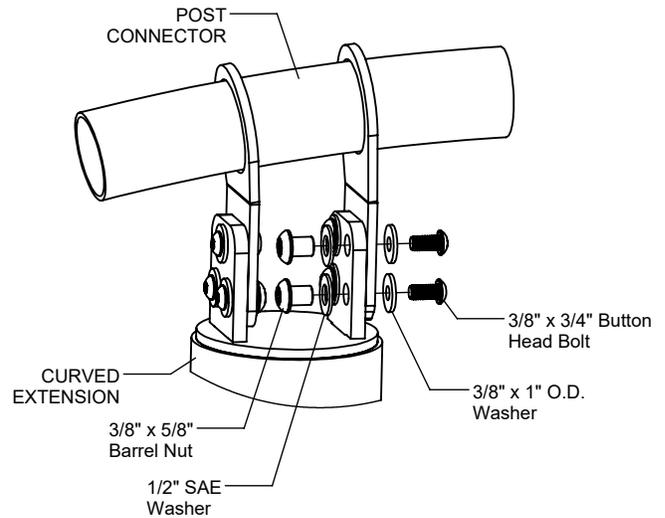


FIGURE 4

Step 2

Slide Curved Extensions over Swaged Posts as shown in Figure 5. Reference Figures 2 and 3 for relative location and orientation.

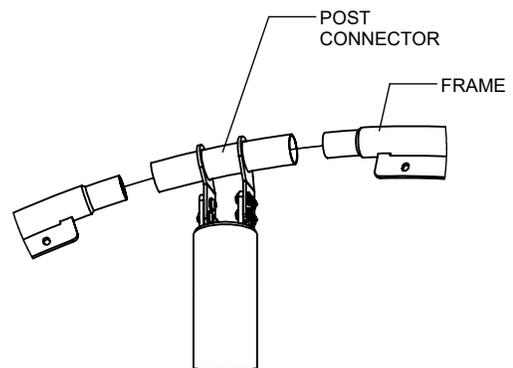


FIGURE 6

Step 3

Slide Outside Frames into the Post Connectors as shown in Figure 6. Reference Figures 2 and 3 for relative location and orientation.

Step 4a (3 Post Orbital Steel Roof Only)

Loosely attach Upper and Lower Large Sections to Outside Frame as shown in Figure 7. (See Note A)

NOTE: Refer to Figure 2 (Sheet 2) for relative section locations.

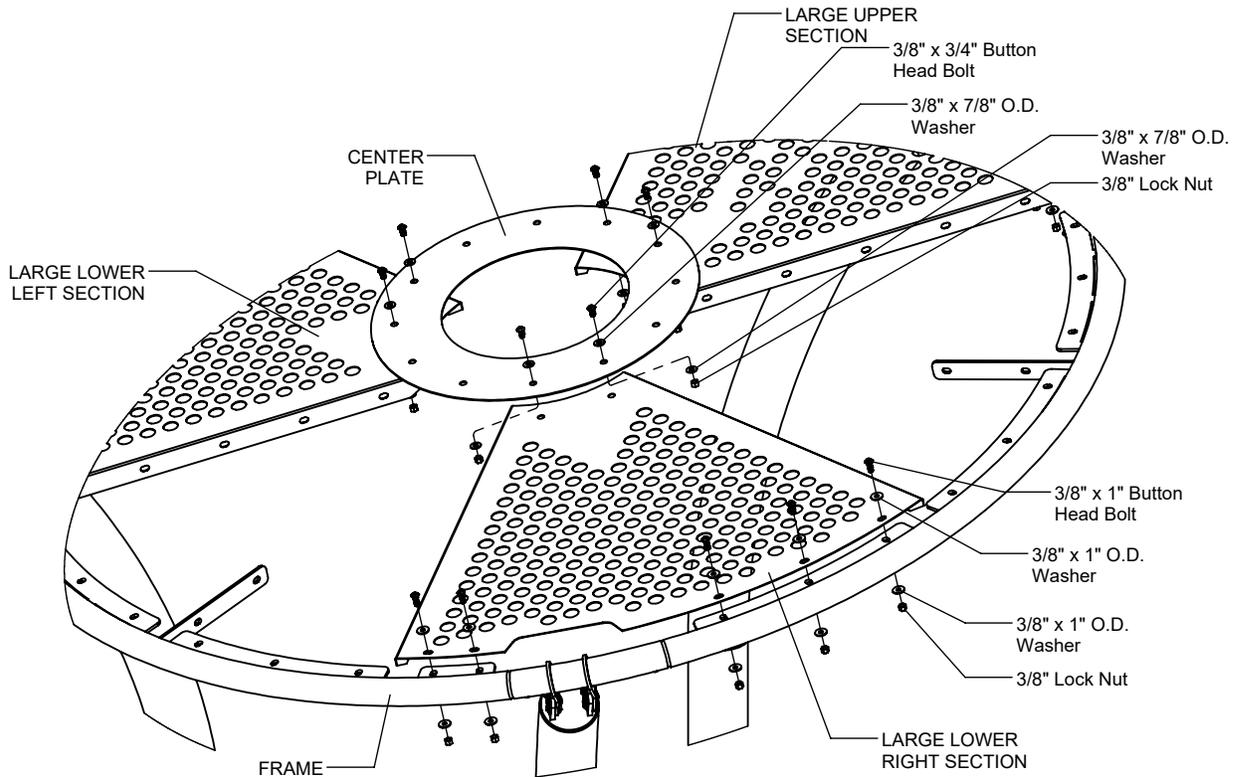


FIGURE 7

Step 4b (4 Post Orbital Steel Roof Only)

Loosely attach Upper and Lower Large Sections to Outside Frame as shown in Figure 8. (See Note A)

NOTES: Attach two opposing Large Sections first to locate Center Plate.
Attach remaining Large Sections to complete step.

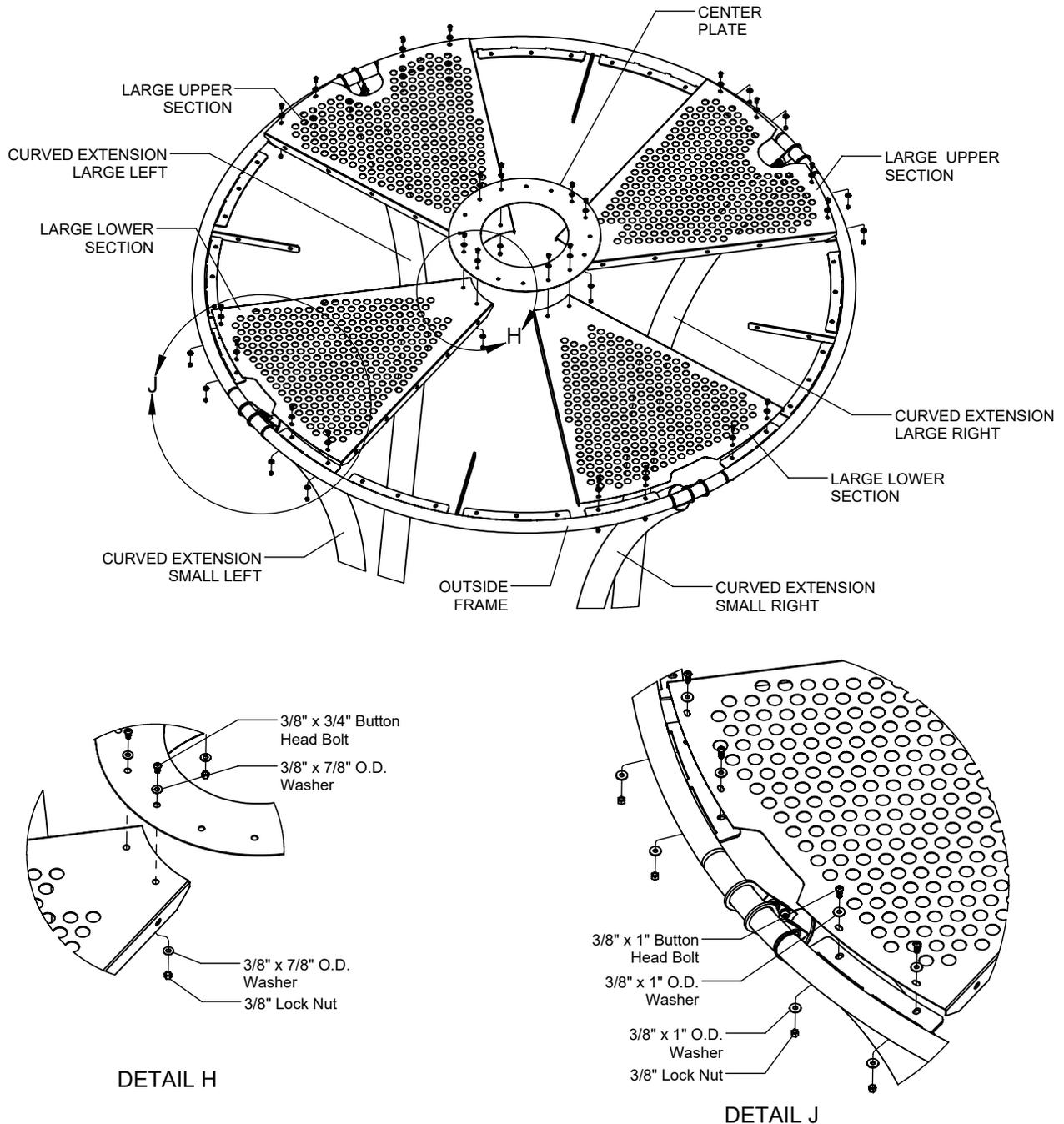


FIGURE 8

Step 5

Attach each Section to the correct Section and attach the sections to the Frame as shown in Figure 9. Refer to Figures 2 and 3 for relative Section locations. (See Note A)

NOTE: When assembled properly, the radial Support Brackets are mated to the side of a Section and the Sections are mated to one another. Do not attempt to mate the Support Bracket between the two Sections. Refer to Detail H for correct assembly.

NOTE: Completely tighten all fasteners after all sections are properly located

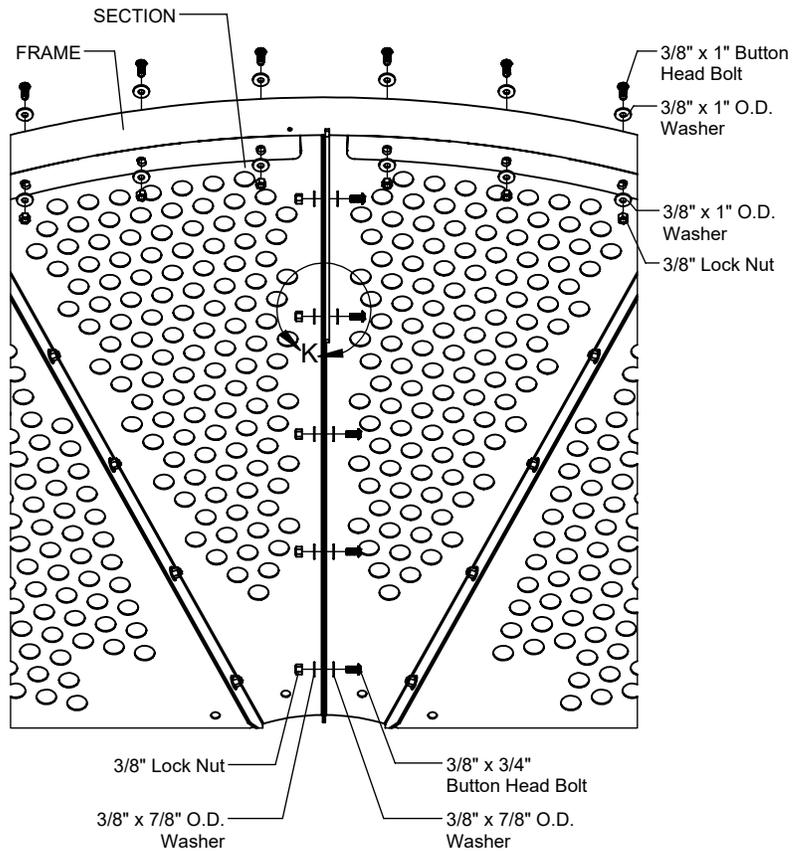
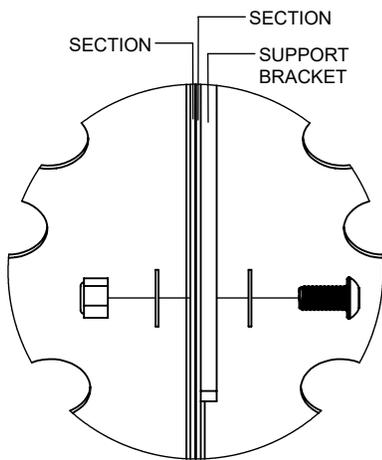


FIGURE 9



DETAIL K

Step 6

Attach Tek Screws to Post Connectors as shown in Figure 10. (See Note A)

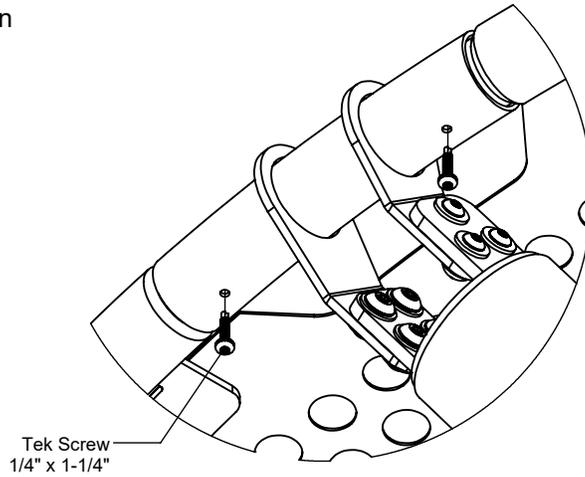


FIGURE 10

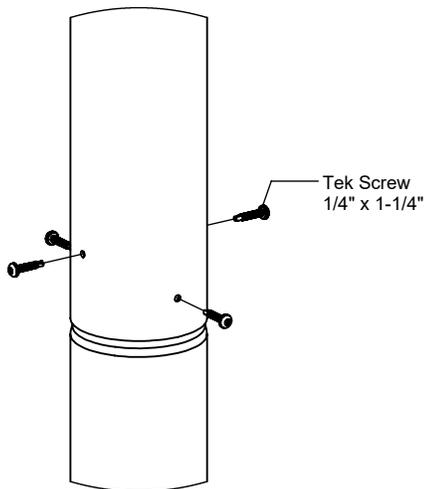


Figure 1.1

Step 8

Attach Tek Screws to Posts as shown in Figure 1.2. (See Note A)

Step 9

Fully tighten all fasteners according to the "TIGHTENING TORQUE FOR HARDWARE" section of the Installation Manual.

Parts List

3 POST ORBITAL STEEL ROOF		
Part #	DESCRIPTION	QTY
AF-1104	Orbital Steel Roof 3 Post - Center Plate	1
BF-1103-LLL	Orbital Steel Roof 3 Post - Large Lower Left Section	1
BF-1103-LLR	Orbital Steel Roof 3 Post - Large Lower Right Section	1
BF-1103-LU	Orbital Steel Roof 3 Post - Large Upper Section	1
BF-1103-S	Orbital Steel Roof 3 Post - Small Section	6
FS-18030-S3FLL	Orbital Steel Roof 3 Post - Long Frame Left	1
FS-18030-S3FLR	Orbital Steel Roof 3 Post - Long Frame Right	1
FS-18030-S3FS	Orbital Steel Roof 3 Post - Frame Short	1
9103032-TR	Bolt Button Head 3/8" x 3/4"	57
9103052-TR	Bolt Button Head 3/8" x 1"	34
9271062-TR	1/4" x 1-1/4" Tek Screw	18
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	68
9333042	Washer Flat 3/8" x 7/8" O.D.	114
9413002	Nut Lock 3/8"	91

4 POST ORBITAL STEEL ROOF		
Part #	DESCRIPTION	QTY
AF-1079	Orbital Steel Roof 4 Post - Center Plate	1
BF-1078-LL	Orbital Steel Roof 4 Post - Large Lower Section	2
BF-1078-LU	Orbital Steel Roof 4 Post - Large Upper Section	2
BF-1078-S	Orbital Steel Roof 4 Post - Small Section	8
FS-18030-SOF	Orbital Steel Roof 4 Post - Outside Frame	4
9103032-TR	Bolt Button Head 3/8" x 3/4"	76
9103052-TR	Bolt Button Head 3/8" x 1"	40
9271062-TR	1/4" x 1-1/4" Tek Screw	24
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	80
9333042	Washer Flat 3/8" x 7/8" O.D.	152
9413002	Nut Lock 3/8"	116

Assembled Parts List

3 POST ORBITAL STEEL ROOF		
Part #	DESCRIPTION	QTY
FS-18030-3BP	Orbital Shade 3 Post - Curved Extension Back	1
FS-18030-3FP	Orbital Shade 3 Post - Curved Extension Front Left	1
FS-18030-3FP	Orbital Shade 3 Post - Curved Extension Front Right	1
FS-18030-S3BC	Orbital Steel Roof 3 Post - Back Post Connector	1
FS-18030-S3FC	Orbital Steel Roof 3 Post - Post Connector Front Right	1
FS-18030-S3FC	Orbital Steel Roof 3 Post - Post Connector Front Left	1
9103032-TR	Bolt Button Head 3/8" x 3/4"	24
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	24
9345002	Washer Flat SAE 1/2"	24
9443022-TR	Nut Barrel 3/8" x 5/8" BH	24

4 POST ORBITAL STEEL ROOF		
Part #	DESCRIPTION	QTY
FS-18030-LRG	Orbital Shade 4 Post - Curved Extension Large Right	1
FS-18030-LRG	Orbital Shade 4 Post - Curved Extension Large Left	1
FS-18030-SBCK	Orbital Steel Roof 4 Post - Back Post Connector Right	1
FS-18030-SBCK	Orbital Steel Roof 4 Post - Back Post Connector Left	1
FS-18030-SFRT	Orbital Steel Roof 4 Post - Post Connector Front Right	1
FS-18030-SFRT	Orbital Steel Roof 4 Post - Post Connector Front Left	1
FS-18030-SM	Orbital Shade 4 Post - Curved Extension Small Right	1
FS-18030-SM	Orbital Shade 4 Post - Curved Extension Small Left	1
9103032-TR	Bolt Button Head 3/8" x 3/4"	28
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	28
9345002	Washer Flat SAE 1/2"	28
9443022-TR	Nut Barrel 3/8" x 5/8" BH	28



Specifications

ORBITAL STEEL ROOF - POST CONNECTORS:

Shall be fabricated using 2.375" O.D. 11 gauge steel tubing with welded 1/4" thick steel brackets. and will have a multi-stage baked-on powder coat finish.

ORBITAL SHADE - CURVED EXTENSIONS:

Shall be fabricated using 5" O.D. 11 gauge steel tubing with a welded 1/4" thick steel cap and 3/8" thick steel brackets and will have a multi-stage baked-on powder coat finish.

ORBITAL STEEL ROOF - FRAMES:

Shall be fabricated using 2.375" O.D. 11 gauge steel tubing with welded 1/4" thick steel plates and 10 gauge steel brackets and will have a multi-stage baked-on powder coat finish.

ORBITAL STEEL ROOF - CENTER PLATE:

Shall be precision cut from 12 gauge steel and will have a multi-stage baked-on powder coat finish.

ORBITAL STEEL ROOF - SECTIONS:

Shall be precision cut and formed from 0.08" thick aluminum and will have a multi-stage baked-on powder coat finish.

HARDWARE:

Shall be stainless steel, zinc/nickel plated or galvanized as required to resist rust and corrosion.

Maintenance

Periodically tighten all screws, bolts and nuts. A periodic inspection of all parts is necessary. If a part is broken or worn, replace immediately. For general maintenance please refer to our Playground Maintenance Manual.

