

## IMPORTANT NOTES: Read First

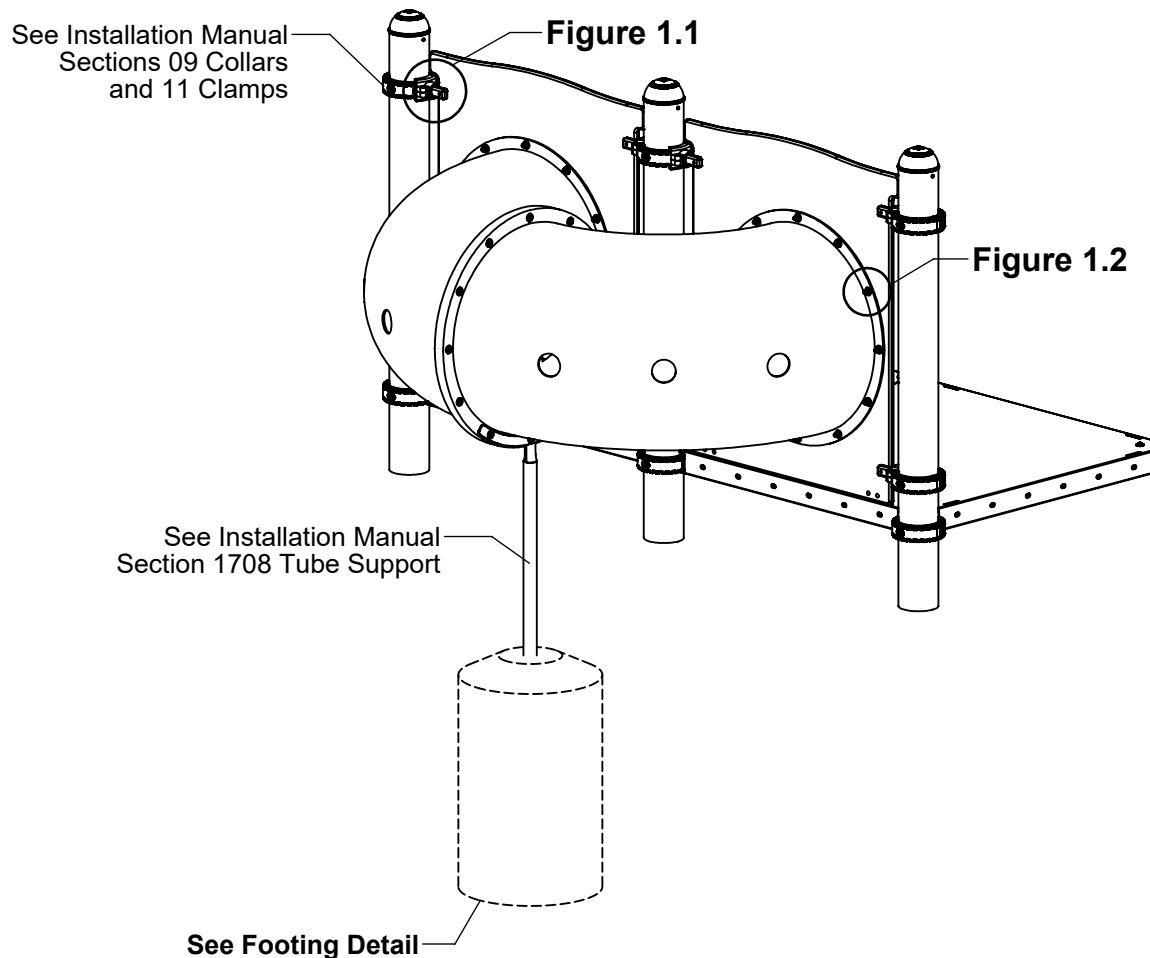
(A) Use liquid thread lock (such as Loctite®) with all threaded hardware. **Important:** Liquid thread lock (prior to curing) helps to eliminate the common problem of "thread seizure" in stainless steel hardware by serving as a lubricant during assembly.

(B) Do not pour concrete until the equipment is completely assembled, leveled and plumbed. Concrete must be allowed to cure completely before using the equipment (at least 72 hours).

(C) Refer to Installation Manual for 09 Collars, 11 Socket Clamps, and 1708 Tube Support installation instructions.

(D) An appropriate energy absorbing safety surface is required under and around all playground equipment. Loose fill protective surfacing is shown only as an example for the purpose of this assembly instruction. Other surfacing material may vary in thickness and/or compression depths. See free publication - The Handbook for Public Playground Safety, Publication #325 at [www.cpsc.gov](http://www.cpsc.gov) for the surfacing appropriate for the fall height of the equipment or consult your surfacing supply representative.

**FIGURE 1**  
180° Crawl Tube R5

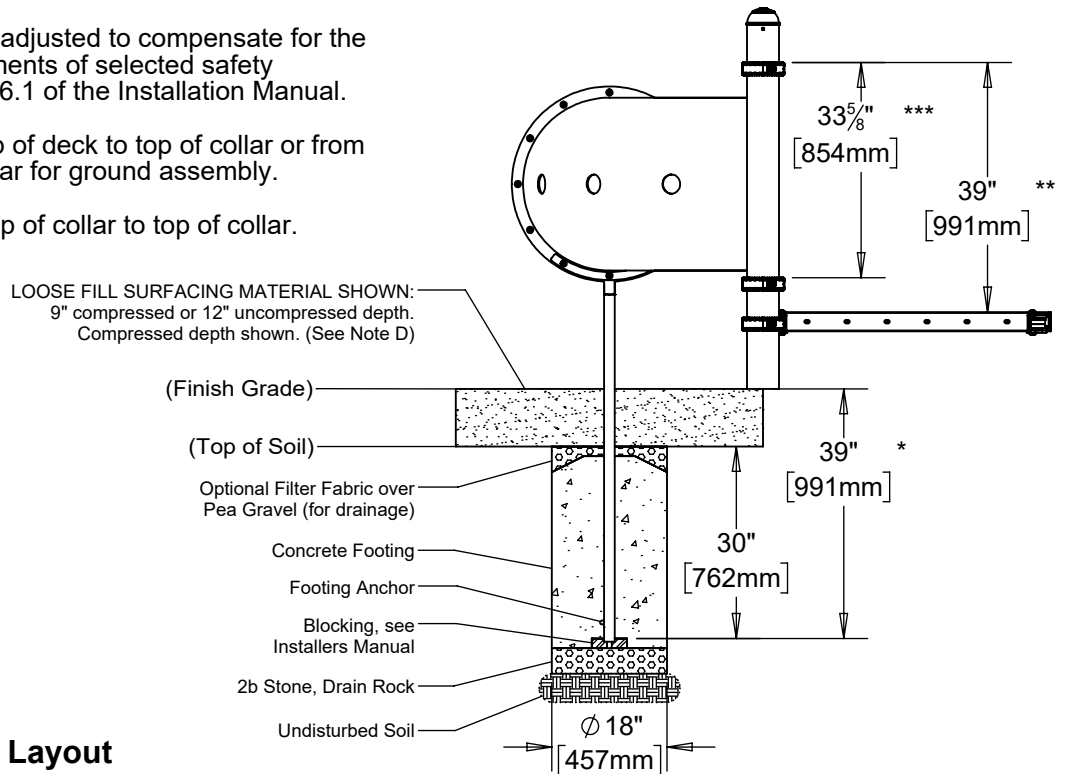


Refer to Footing Layout and mark footing hole location. Dig (1) Ø 18" footing hole. Refer to Footing Detail for depth and details.

\* Footing depth must be adjusted to compensate for the depth/thickness requirements of selected safety surfacing. See Section 06.1 of the Installation Manual.

\*\* Height shown from top of deck to top of collar or from finish grade to top of collar for ground assembly.

### Elevation View - Footing Detail



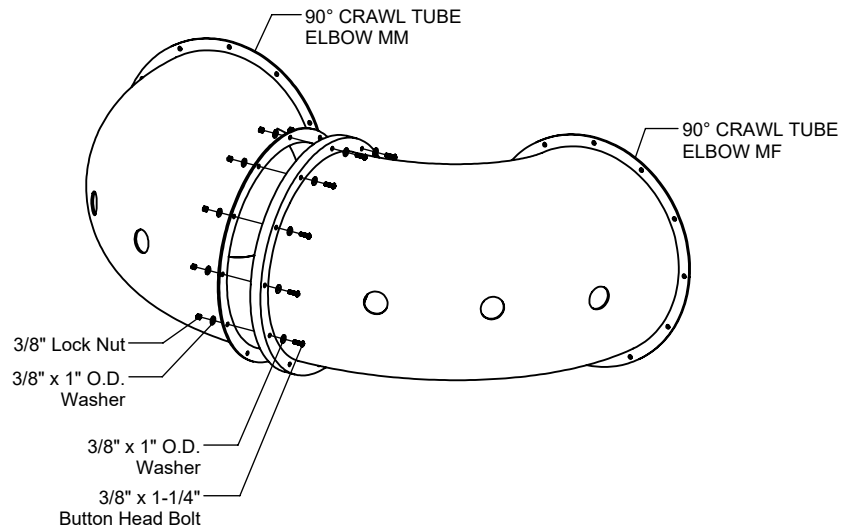
Technical drawing of a mechanical assembly. The drawing shows a vertical shaft with a horizontal arm extending to the left. A large circular component is attached to the shaft. Dimensions are given in inches and millimeters:

- Horizontal distance from the shaft centerline to the end of the arm:  $24''$  [610mm]
- Vertical distance from the top of the shaft to the center of the circular component:  $45\frac{3}{8}''$  [1153mm]
- Vertical distance from the center of the circular component to the bottom of the shaft:  $44\frac{5}{8}''$  [1133mm]



## Step 2

Attach Crawl Tube sections as shown in Figure 2.  
 (See Note A)



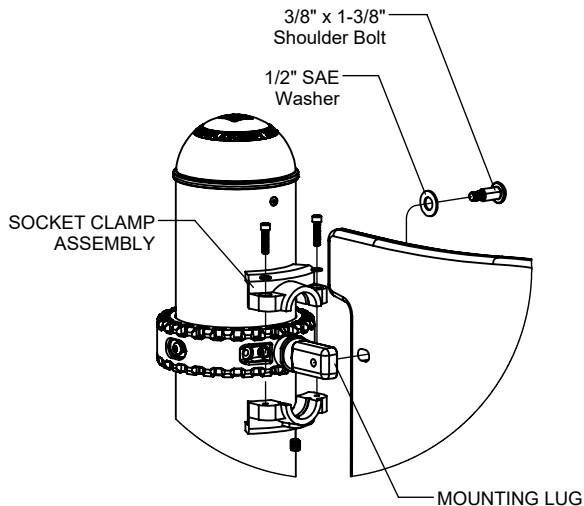
**FIGURE 2**

## Step 3

Locate and attach Collars at heights shown in Elevation View. (See Note C)

## Step 4

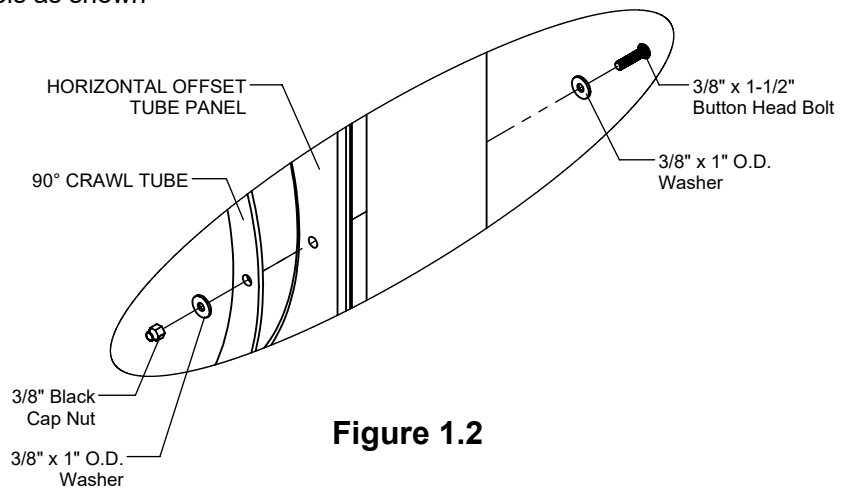
Attach Tube Panels to Collars as shown in Figure 1.1. (See Notes A & C)



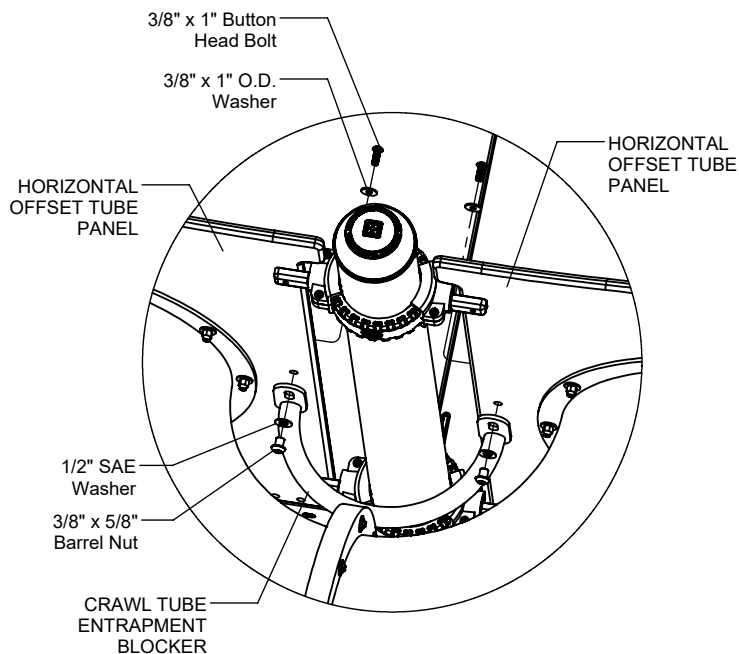
**Figure 1.1**

## Step 5

Attach Crawl Tube sections to Tube Panels as shown in Figure 1.2. (See Note A)



**Figure 1.2**



**FIGURE 3**

## Step 6

Attach Crawl Tube Entrapment Blocker to Tube Panels as shown in Figure 3. (See Note A)

## Step 7

Place Tube Support into footing hole and attach to Tube Sections. (See Notes B & C)

## Step 8

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

## Step 9

Plumb and level entire component. Pour concrete into footing hole. Allow at least 72 hours to cure before using this equipment. (See Note B)

## Step 10

Place required protective surfacing under and around 180° Crawl Tube R5. (See Note D)

# 180° CRAWL TUBE R5 INSTALLATION INSTRUCTIONS

**R5-1500-180**  
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## Parts List

180° CRAWL TUBE R5		
Part #	DESCRIPTION	QTY
DE-1509-MF	90° Crawl Tube Elbow MF	1
DE-1509-MM	90° Crawl Tube Elbow MM	1
EF-4451	Tube Panel Offset 1.5" R5	2
FS-1500-BLK180	180 Deg. Crawl Tube Entrapment Blocker	1
GF-7007	Mounting Lug R5	8
HS-1001-R5	Socket Clamp Set R5	8
S-1708-STRT	Straight Tube Support	1
9103052-TR	Bolt Button Head 3/8" x 1"	2
9103062-TR	Bolt Button Head 3/8" x 1-1/4"	9
9103072-TR	Bolt Button Head 3/8" x 1-1/2"	24
9143062-TR	Bolt Shoulder 3/8" x 1-3/8" BH	8
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	68
9345002	Washer Flat SAE 1/2"	10
9413002	Nut Lock 3/8"	9
9413162-BLK	Nut Lock 3/8" w/ Black Cap	24
9443022-TR	Nut Barrel 3/8" x 5/8" BH	2

180° CRAWL TUBE R5 CANADA		
Part #	DESCRIPTION	QTY
DE-1509-MF	90° Crawl Tube Elbow MF	1
DE-1509-MM	90° Crawl Tube Elbow MM	1
EF-4451-CAN	Tube Panel Offset 1.5" R5 Canada	2
FS-1500-BK180CAN	180 Deg. Crawl Tube Entrapment Blocker Canada	1
GG-8113	Mounting Lug R3.5	8
HS-1001-R5	Socket Clamp Set R5	8
S-1708-STRT	Straight Tube Support	1
9103052-TR	Bolt Button Head 3/8" x 1"	2
9103062-TR	Bolt Button Head 3/8" x 1-1/4"	9
9103072-TR	Bolt Button Head 3/8" x 1-1/2"	24
9143062-TR	Bolt Shoulder 3/8" x 1-3/8" BH	8
9333002	Washer Flat 3/8" x 1" O.D. x .100" thick	68
9345002	Washer Flat SAE 1/2"	10
9413002	Nut Lock 3/8"	9
9413162-BLK	Nut Lock 3/8" w/ Black Cap	24
9443022-TR	Nut Barrel 3/8" x 5/8" BH	2

## Specifications

### 90° CRAWL TUBE ELBOW:

Shall be constructed of UV-stabilized, rotationally molded, linear, low density polyethylene with an average wall thickness of .250".

### TUBE PANEL R5:

Shall be made from high density 3/4" sheet plastic specially formulated for optimum UV stability and color retention.

### 180° CRAWL TUBE ENTRAPMENT BLOCKER:

Shall fabricated with 1.315" O.D. 12 gauge steel tubing with welded 1/4" thick steel mounting plates and will have a multi-stage baked-on powder coat finish.

### MOUNTING LUGS:

Shall be precision die-cast from a high-strength aluminum alloy and will have a multi-stage baked-on powder coat finish.

### SOCKET CLAMPS:

Shall be two-part and precision die-cast from a high strength aluminum alloy 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.



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