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Climbing Wall Installation Instructions

Chameleon

Climbing wall design & engineering in accordance with CWA (Climbing Wall Association) standards.

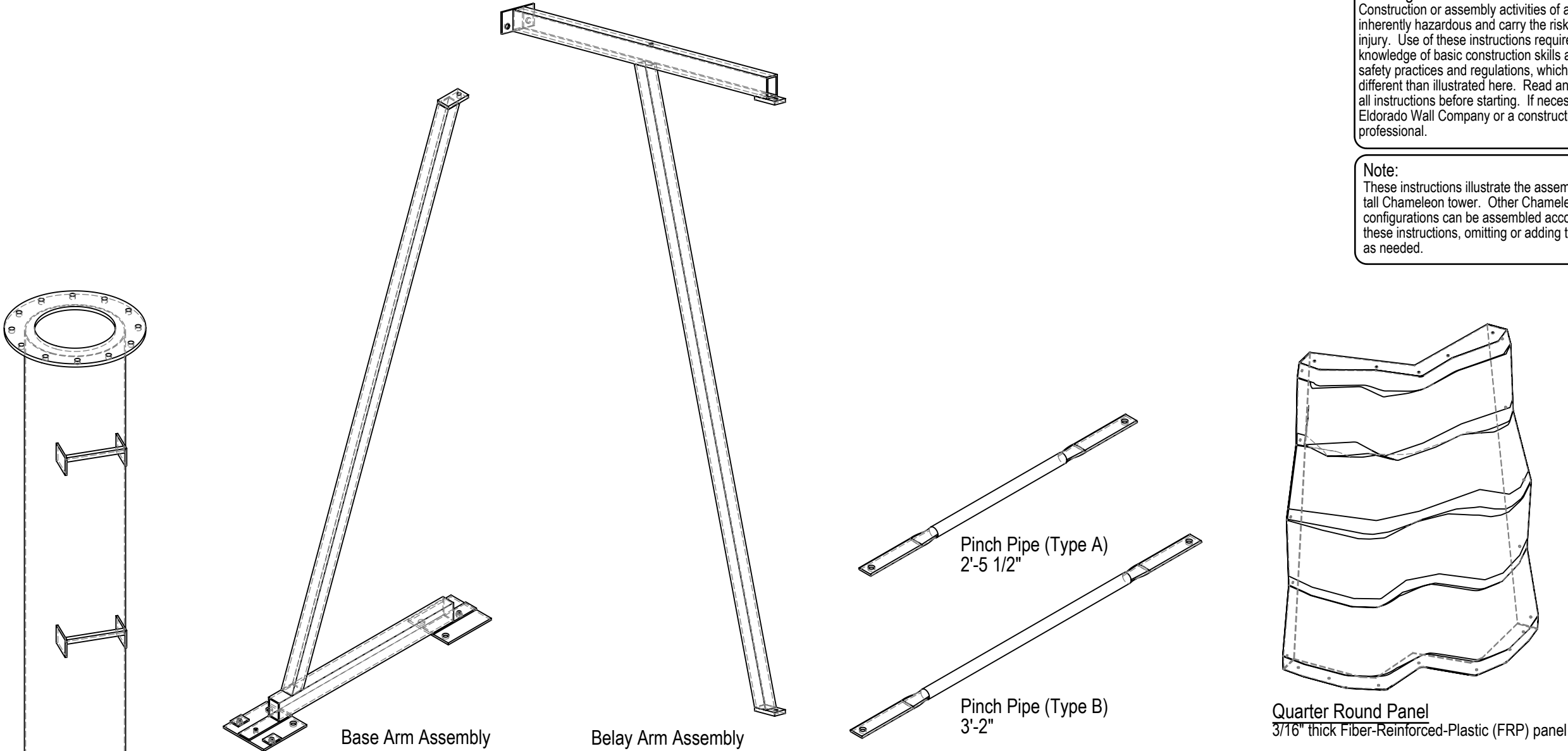
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ELDORADO
CLIMBING WALLS

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Note:
These instructions illustrate the assembly of a 21' tall Chameleon tower. Other Chameleon configurations can be assembled according to these instructions, omitting or adding tiers as needed.



Chameleon - Part Schedule

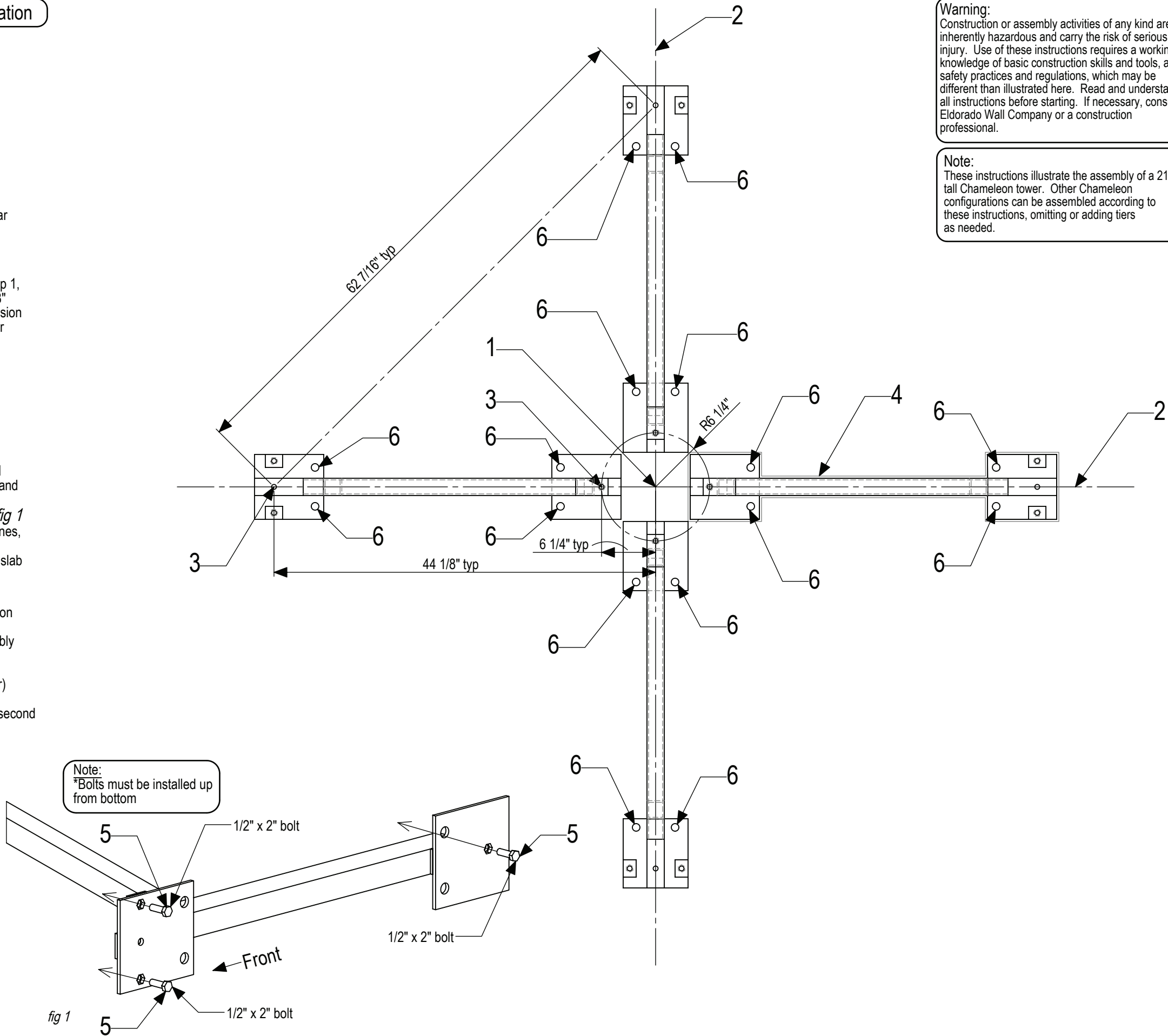
Panels	7' Tall	14' Tall	21' Tall	28' Tall	35' Tall
*Quarter Round Panel	4	8	12	16	20
Superstructure	7' Tall	14' Tall	21' Tall	28' Tall	35' Tall
Chameleon Column Assemblies	1	2	3	4	5
Base Arm Assemblies	4	4	4	4	4
*Pinch Pipe - A (2'-5 1/2")	4	10	14	14	18
*Pinch Pipe - B (3'-2")	-	4	4	8	8
*Belay Arm Assembly	0	6	6	6	6

*Typical parts for Chameleon & Gecko systems

Superstructure - Base Arm Assembly Installation

Instructions:

1. Locate center of climbing wall
2. Mark Base Arm Assembly Centerlines:
 - Using a chalkline or straightedge, draw 2 perpendicular lines through centerpoint determined in Step 1
3. Base Arm Assembly Location Marks:
 - Measure and mark out from center, determined in Step 1, along centerlines, determined in Step 2, 6 1/4" & 44 1/8"
 - Check layout accuracy using 62 7/16" diagonal dimension
 - Place Base Arm Assemblies on centerlines and center holes over marks
 - *Accuracy is critical
4. Using a pencil or marker, trace perimeter of each Base Arm Assembly
5. Install Thru-Bolts:
 - Carefully tip Base Arm Assemblies on side and install two (2) 1/2" x 2" bolts at the front, up from the bottom, and one (1) 1/2" x 2" bolt at the rear, up from the bottom
 - Bolt heads will nest into hex recesses in plates, see *fig 1*
 - Position Base Arm Assemblies back over traced outlines, drawn in Step 4
 - Ensure Base Arm Assemblies sit flat on the concrete slab
6. Anchor Base Arm Assemblies:
 - Double check alignment of all Base Arm Assemblies on outlines created in Step 4
 - Drill 3/4" Ø holes in concrete, each Base Arm Assembly
 - *Quality is important - drill deep & clean holes with compressed air or blow tube
 - Install (2) two 3/4" x 8" wedge anchors (1 front, 1 rear) each Base Arm Assembly (8 total)
 - If rebar or other drilled obstruction is encountered, a second hole is provided at each end of Base Arm Assemblies
 - *Leave nuts loose - DO NOT TIGHTEN



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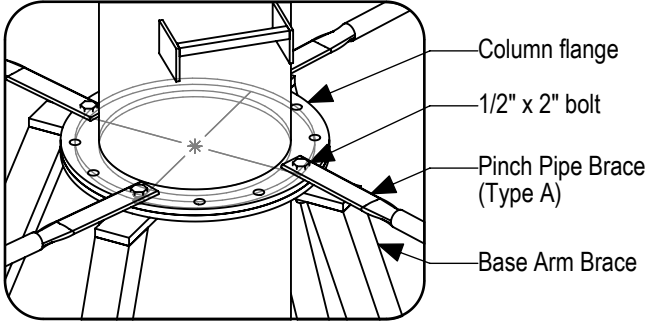
Superstructure - Bottom & Middle Tier Column Installation

Instructions:

7. Place Bottom Tier Chameleon Column Assembly:
- Place Column Assembly onto 1/2" x 1 1/2" bolts protruding from Base Arm Assemblies, installed during Step 5
 - Be sure to align steps in-between Base Arm Assemblies
 - Install nuts firm but not tight

- 8a. Mount Middle Tier Chameleon Column Assembly:
- Use scaffolding, mechanical lift, or crane to place middle tier Column Assembly

- 8b. Pre-install Pinch Pipe Braces & Secure Middle Column:
- Place four (4) Pinch Pipe Braces (Type A) on top of the bottom flange of middle tier Chameleon Column Assembly
 - Secure Pinch Pipe Braces (Type A) & column through column flanges and Base Arm Assembly Braces using four (4) 1/2" x 2" bolts
 - Install nuts firm but not tight
 - See Detail A and *fig 2* for location diagram



Detail A - Middle Tier Column Connection

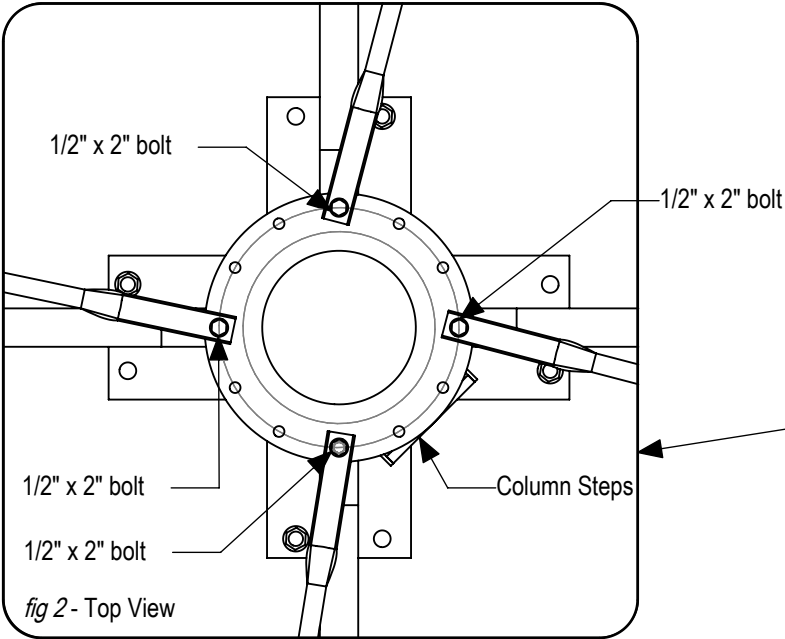
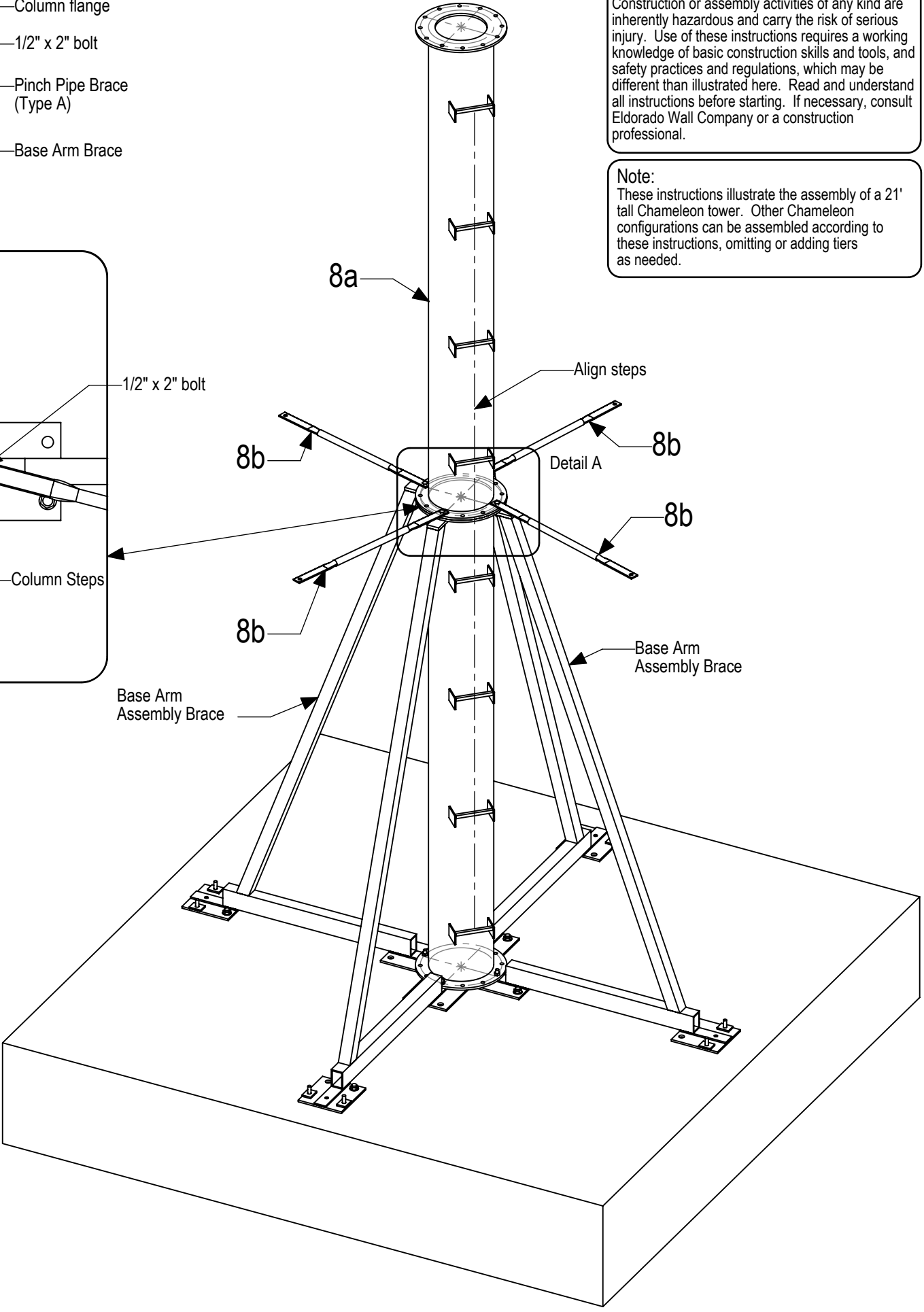
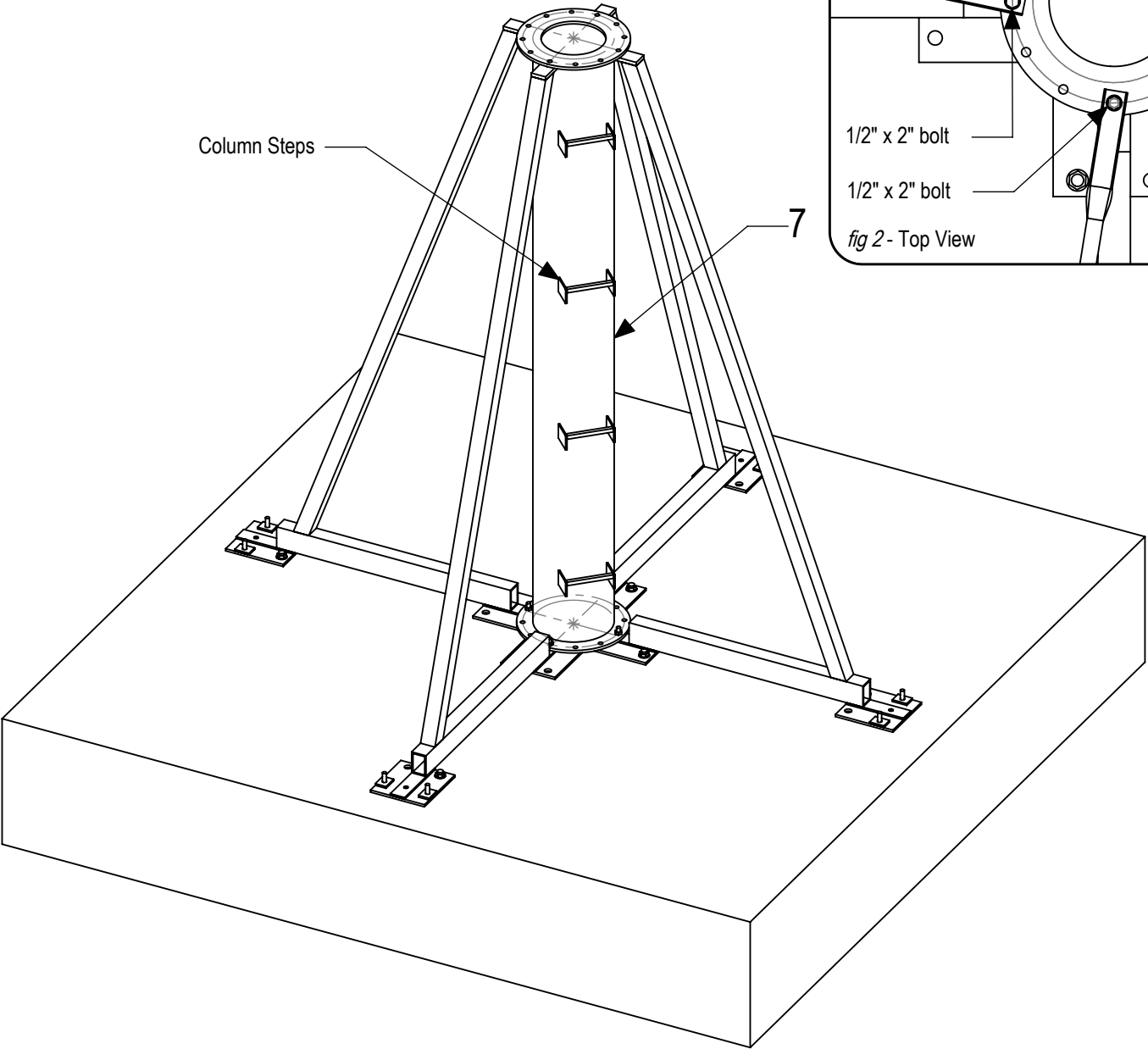


fig 2 - Top View

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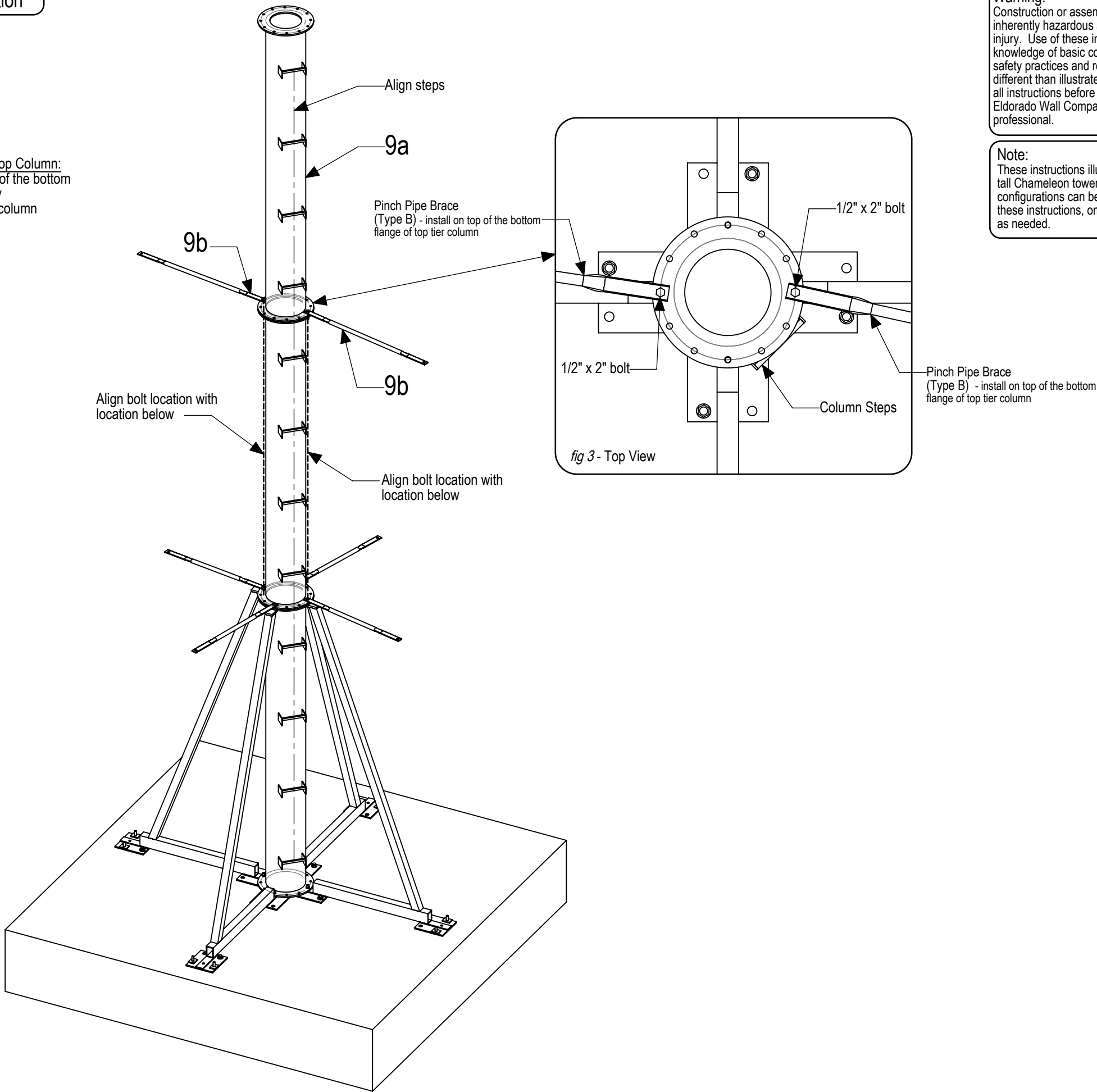
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Instructions:

- 9a. Mount Top Tier Chameleon Column Assembly:
- Use scaffolding, mechanical lift, or crane to place top tier Chameleon Column Assembly
- 9b. Pre-install Pinch Pipe Braces (Type B) & Secure Top Column:
- Place two (2) Pinch Pipe Braces (Type B) on top of the bottom flange of the top tier Chameleon Column Assembly
- Secure each Pinch Pipe Brace (Type B) through column flanges using one (1) 1/2" x 2" bolts
- Install nuts firm but not tight
- See *fig 3* for location diagram



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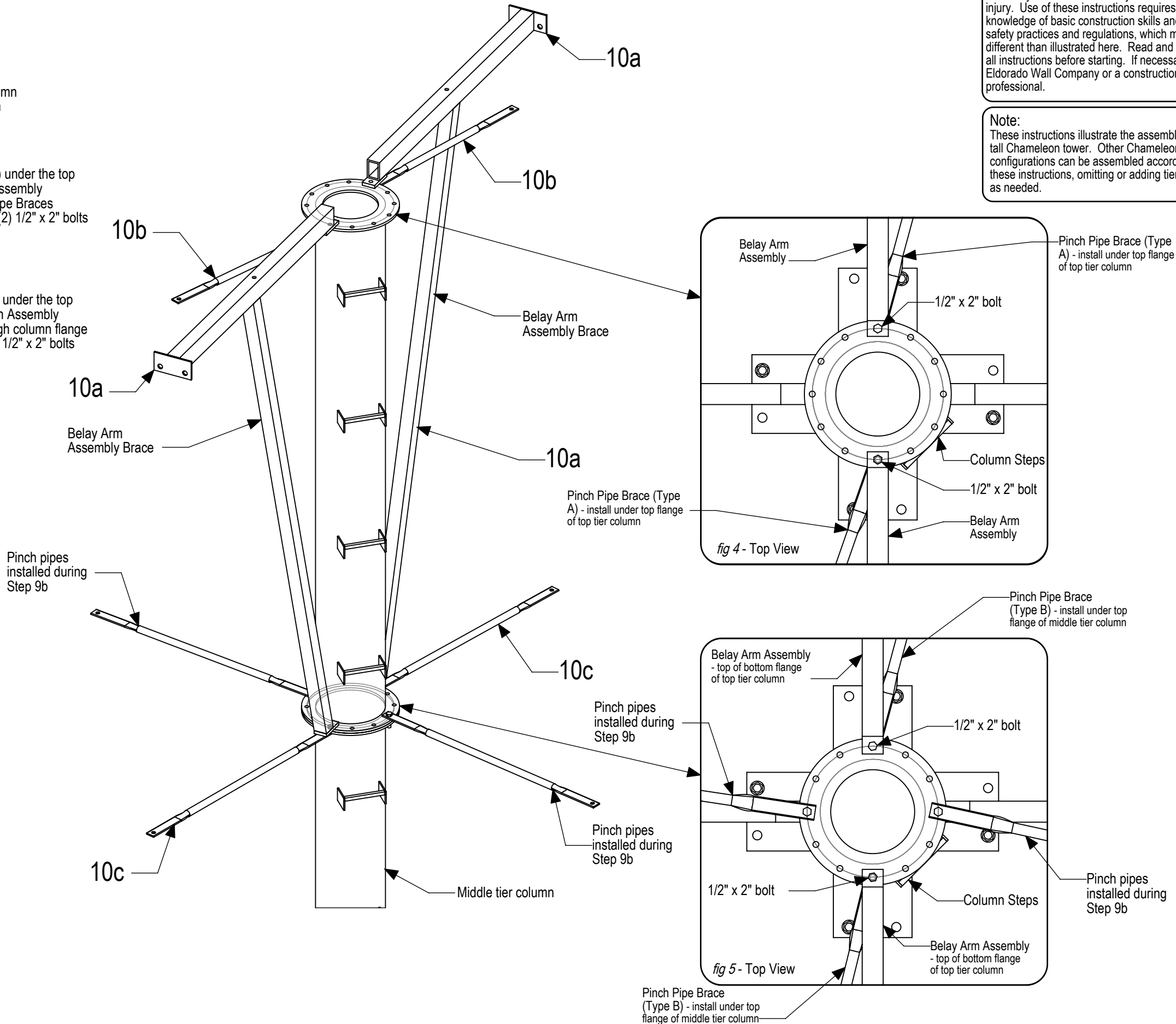
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Installation Instructions

Chameleon

3.0

Instructions:

- 10a. Install Belay Arm Assemblies:
- On the top of the top tier Chameleon Column Assembly flanges, install two (2) Belay Arm Assemblies
- 10b. Pre-install Pinch Pipe Braces (Type A):
- Install two (2) Pinch Pipe Braces (Type A) under the top flange of the top tier Chameleon Column Assembly
- Secure Belay Arm Assemblies & Pinch Pipe Braces (Type A) through column flange using two (2) 1/2" x 2" bolts
- Install nuts firm but not tight
- See *fig 4* for location diagram
- 10c. Pre-install Pinch Pipe Braces (Type B):
- Install two (2) Pinch Pipe Braces (Type B) under the top flange of the middle tier Chameleon Column Assembly
- Secure Pinch Pipe Braces (Type A) through column flange & Belay Arm Assembly Brace using two (2) 1/2" x 2" bolts
- Install nuts firm but not tight
- See *fig 5* for location diagram



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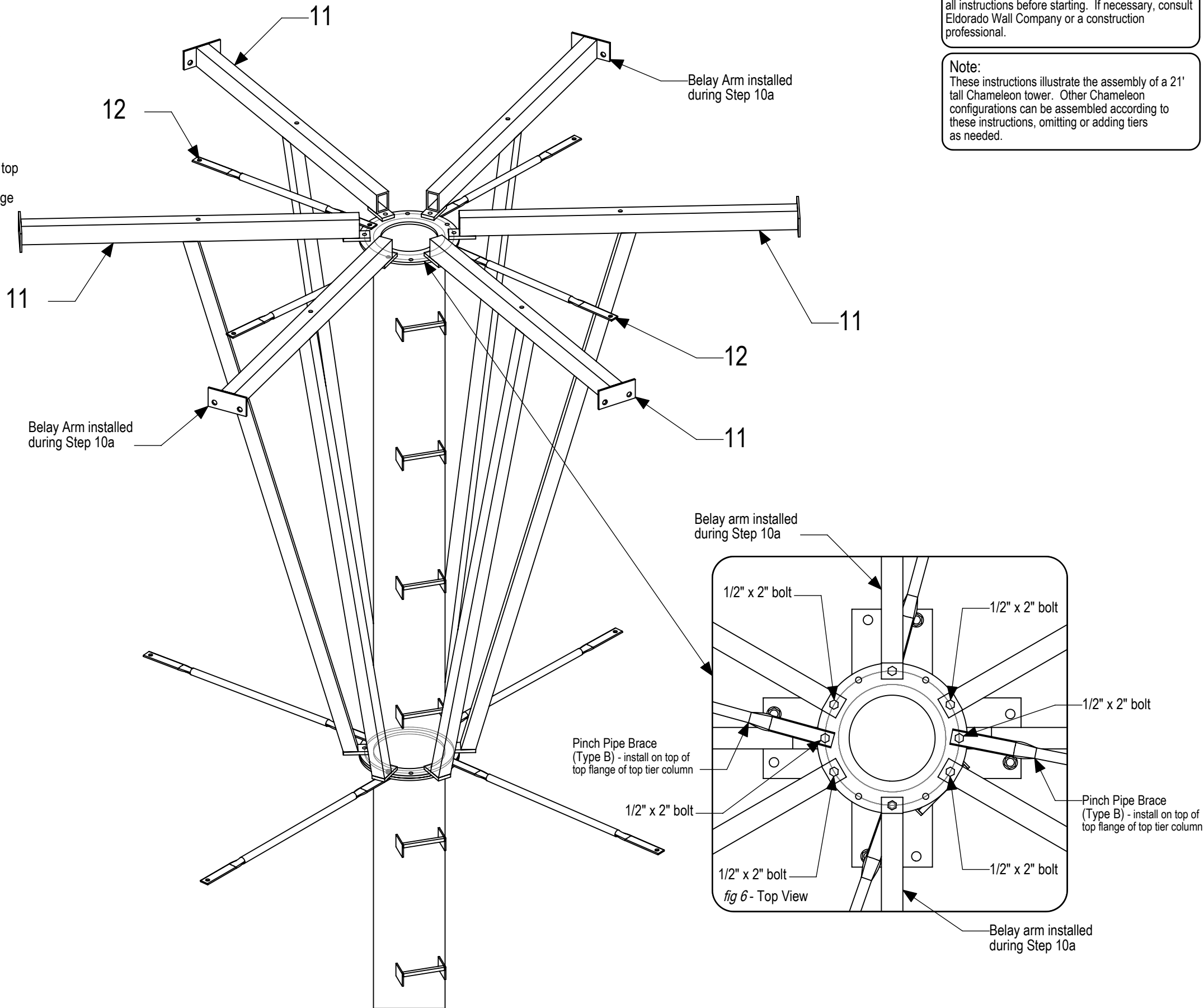
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Instructions:

11. Install Belay Arm Assemblies:
- On the top of the top tier Chameleon Column Assembly flanges, install four (4) Belay Arm Assemblies
 - Secure each Belay Arm Assembly through column flanges with two (2) 1/2" x 2" bolt
 - Install nuts firm but not tight
 - See *fig 6* for location diagram
12. Install Pinch Pipe Braces (Type A):
- Install two (2) Pinch Pipe Braces (Type A) on top of the top flange of the top tier Chameleon Column Assembly
 - Secure Pinch Pipe Braces (Type A) through column flange using two (2) 1/2" x 2" bolts
 - Install nuts firm but not tight
 - See *fig 6* for location diagram



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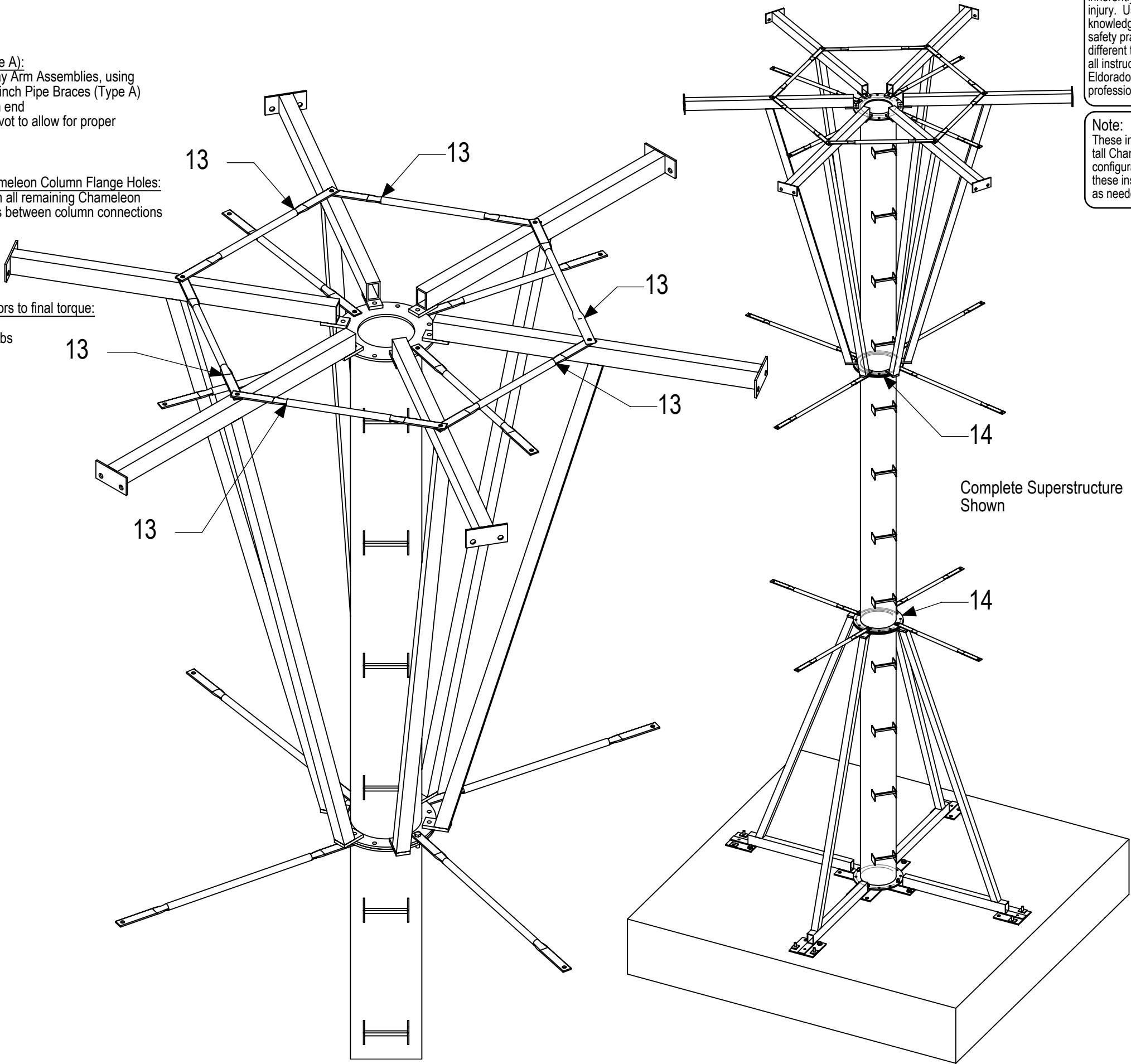
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Chameleon

5.0

Instructions:

13. Install Pinch Pipe Braces (Type A):
- On top and between the Belay Arm Assemblies, using center mounting hole, install Pinch Pipe Braces (Type A) with one (1) 1/2" x 2" bolt each end
- Belay Arm Assemblies will pivot to allow for proper alignment
- Install nuts firm but not tight
14. Install Bolts in Remaining Chameleon Column Flange Holes:
- Install 1/2" x 2" bolts & nuts in all remaining Chameleon Column Assembly flange holes between column connections
15. Tighten bolts and wedge anchors to final torque:
- 1/2" bolts = 50 ft lbs
- 3/4" wedge anchors = 175 ft lbs



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Instructions:

16. Place Bottom Tier Quarter Round Panels:
- Lift and place all bottom tier Quarter Round Panels over 1/2" x 2" bolts protruding from Base Arm Assembly (one bolt each panel corner)
- *Be sure to locate access panel on this level
- Loosely install 1/2" x 2" bolts, washers and nuts into each panel flange hole between panels
17. Level top edge of Bottom Tier Quarter Round Panels:
- Using a level, align tops of panels and then tighten flange bolts. See *fig 7*
18. Secure Bottom Tier Quarter Round Panels:
- After all bottom tier Quarter Round Panels are aligned and flange bolts are tightened, tighten nuts on bolts protruding from Base Arms Assemblies

Important!
A washer must be used on every fiberglass surface where a bolt or nut makes contact

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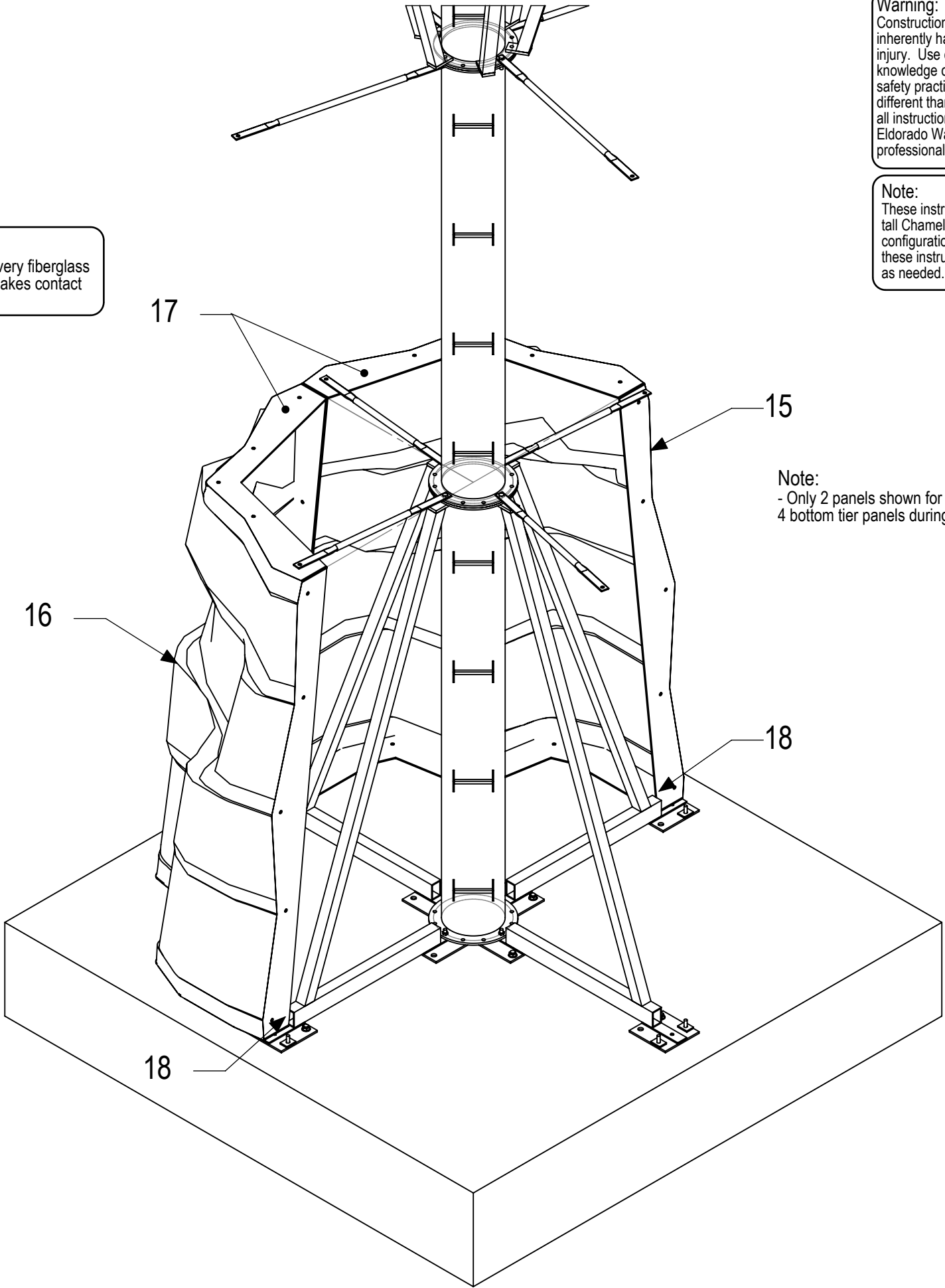
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Note:
- Only 2 panels shown for clarity. Place all 4 bottom tier panels during this step

Aligning panel holes



fig 7



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7.0

Instructions:

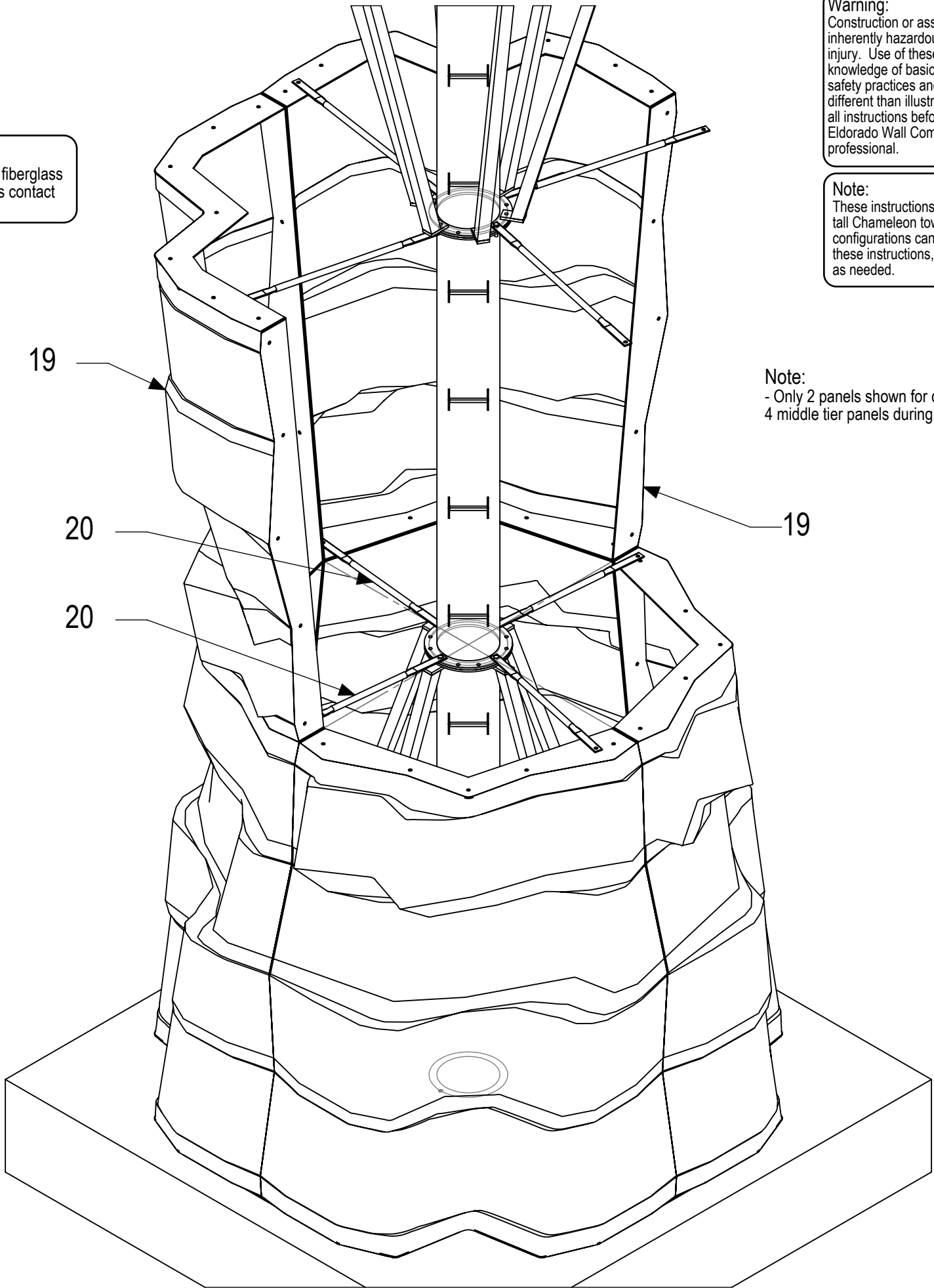
19. Place Middle Tier Quarter Round Panels:
- Use scaffolding, mechanical lift, or crane to place middle tier Quarter Round Panels on top of lower tier Quarter Round Panels
- Loosely install 1/2" x 2" bolts, washers and nuts into each panel flange hole between panels
- Tighten nuts starting at the panel corners to ensure alignment with adjacent panels
- See *fig 8*
20. Secure Pinch Pipe Braces (Type A):
- For each panel secure one (1) Pinch Pipe Brace (Type A) at panel corner using one (1) 1/2" x 2" bolt, washer and nut

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Tightening panels at corners



fig 8

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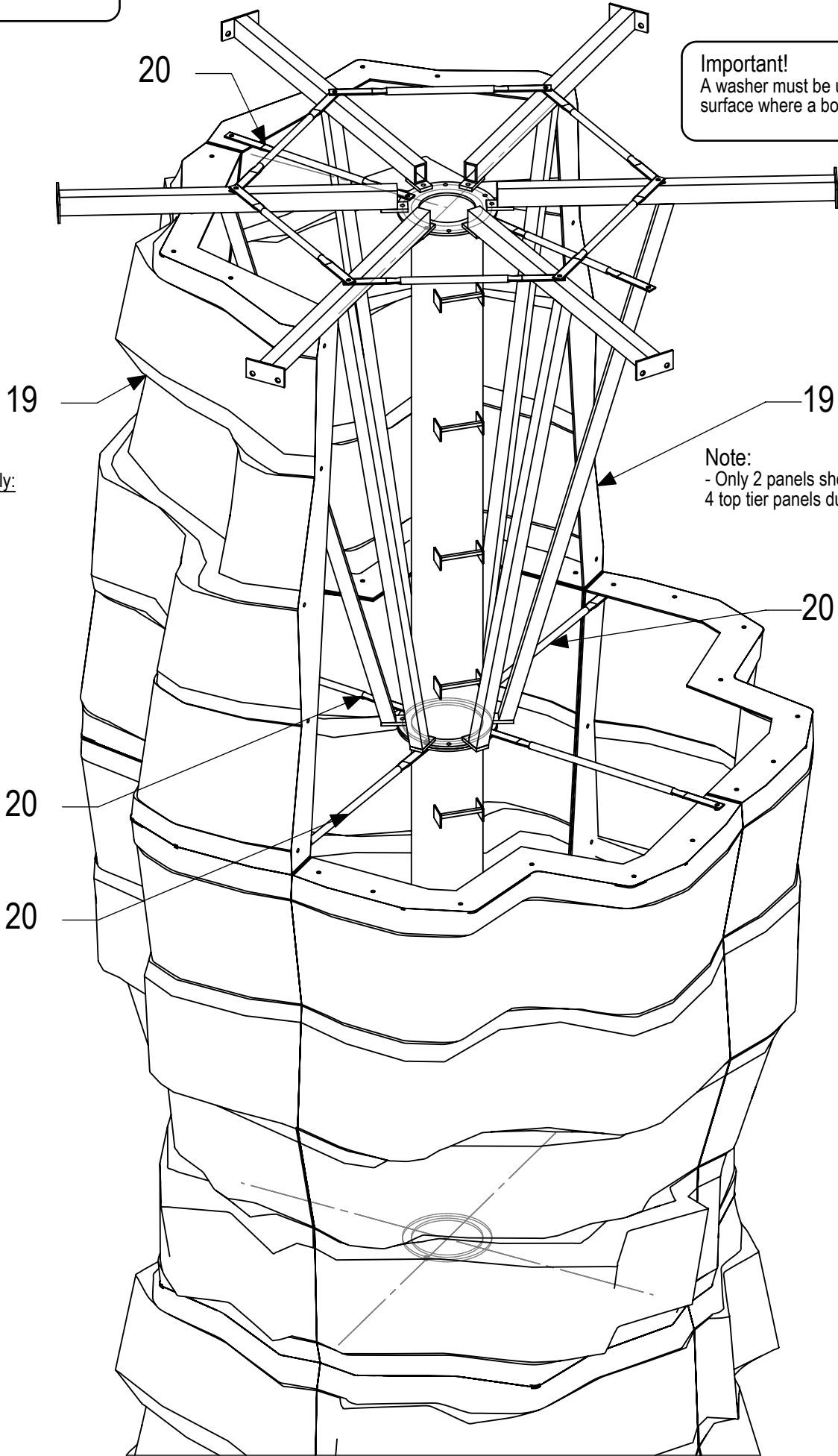
Chameleon

8.0

Panel Installation - Top Tier

Instructions:

20.
- Place Top Tier Quarter Round Panels:
- Use scaffolding, mechanical lift, or crane to place top tier Quarter Round Panels on top of middle tier Quarter Round Panels
- Loosely install 1/2" x 2" bolts, washers and nuts into each panel flange hole between panels
- Tighten nuts starting at the panel corners to ensure alignment with adjacent panels
- See *fig 8 on Sheet 8.0*
21.
- Secure Remaining Pinch Pipe Braces (Type A & B):
- For each panel secure one (1) Pinch Pipe Brace (Type A) and Pinch Pipe Brace (Type B) at panel corners using one (1) 1/2" x 2" bolt, washer and nut per brace
22.
- Double check all bolts are installed & tightened properly:
- 1/2" bolts = 50 ft lbs
- 3/4" wedge anchors = 175 ft lbs

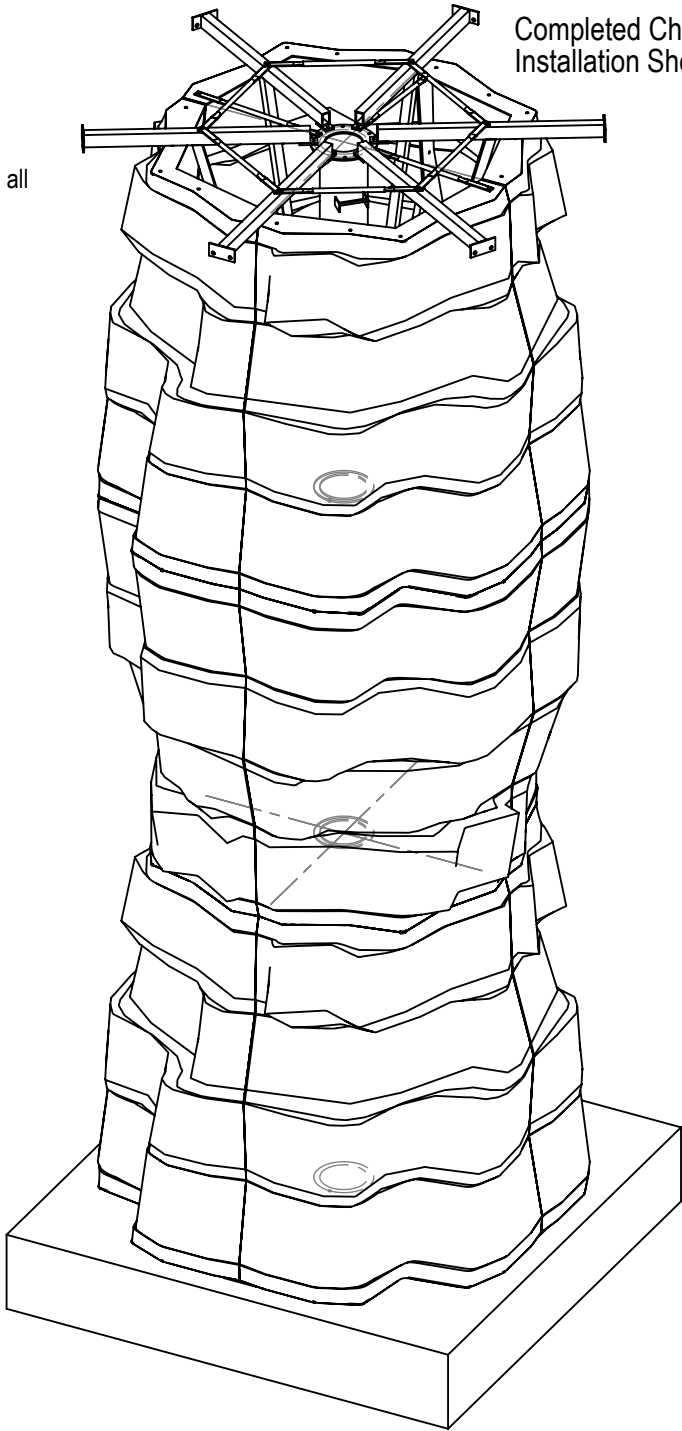


Important!
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Note:
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Completed Chameleon Installation Shown

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