



|||Estate
Enclosure System

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INTRODUCTION

READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

It is the responsibility of the installer to meet all code and safety requirements, and to obtain all required building permits. The fencing installer should determine and implement appropriate installation techniques for each installation situation. Fortress Building Products and its distributors shall not be held liable for improper or unsafe installations.

Before You Begin

Contact your local Building Code Department for required permits and laws regarding your fence project.

If applicable, also contact your Home Owners Association for rules and regulations regarding fence installations in your neighborhood.

Call 811 before you dig post holes to locate and identify any buried utilities.

Note

- When cutting Fortress Fencing, it is very important to complete the following at cut points:
- Remove all metal shavings from the cut area.
- File any sharp edges left by cutting. Thoroughly wipe and remove any filings, grime, or dirt.
- Apply two coats of Fortress zinc based touch-up paint to the cut area. If touch up is at rail ends, allow paint to dry before connecting bracket to post.
- Be sure to remove any metal shavings from the surface of Fence.

Torx Safety Tips

- Always use the lowest speed setting on drill.
 - To reduce chance of bit breakage, start tightening with drill on low torque setting and work up until screw is secured.
- Tip: Pre-drill holes with 3/16" [5mm] drill bit.**

Required Tools



Goggles



Safety
Gloves



Tape
Measurer



Speed
Square



Level
Tool



Fortress
Touch-up Paint



Drill



Bit
Extender



Socket
Set



Nut Driver Bit:
10mm



T-25
Driver Bit



Ratchet



Drill Bit: 9/16" [9mm]
Concrete Drill Bit: 3/4" [19mm]



Wrench:
3/4" [19mm], 9/16" [14mm], M13



Ground
Stakes



Spring
Punch



Rubber
Mallet



Post Hole
Digger



String



Pencil



Pliers



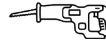
Wheelbarrow



Spade
Shovel



Concrete/
Gravel



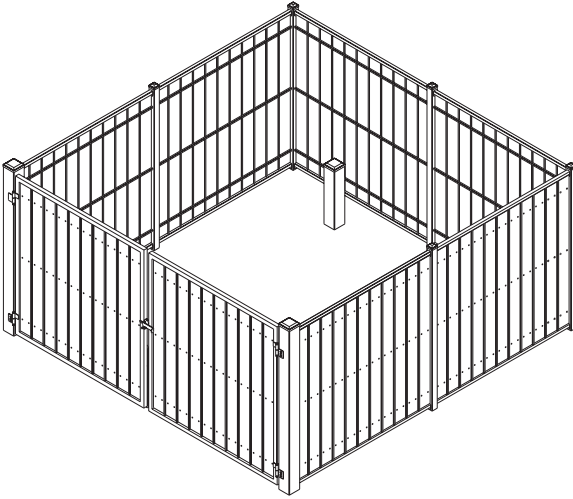
Reciprocating Saw
or Portable Bandsaw



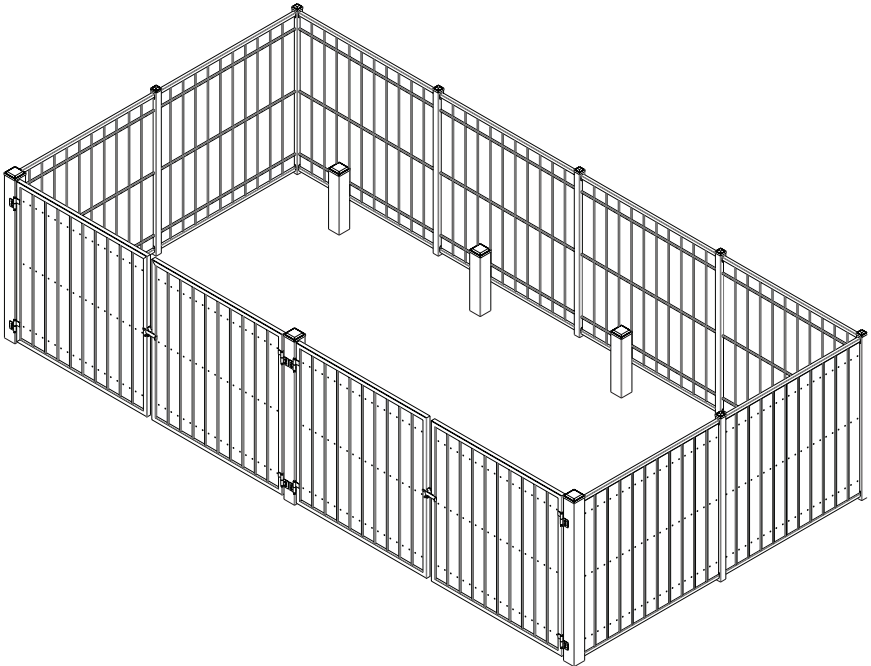
Close-Toed
Shoes

ESTATE ENCLOSURE SYSTEM INSTALLATION OPTIONS

13' [3962mm] x 13' [3962mm] Single



13' [3962mm] x 25' [7620mm] Double



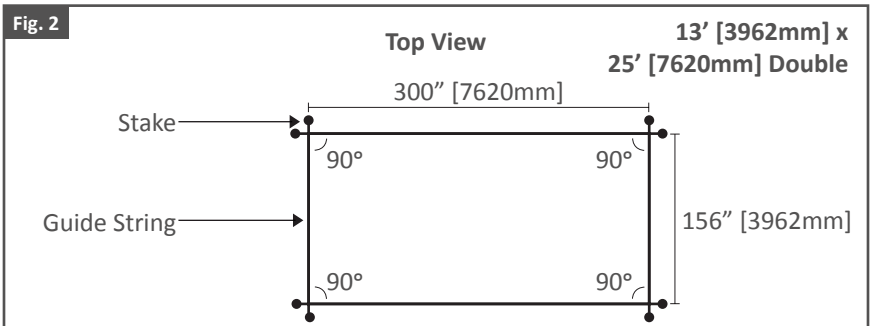
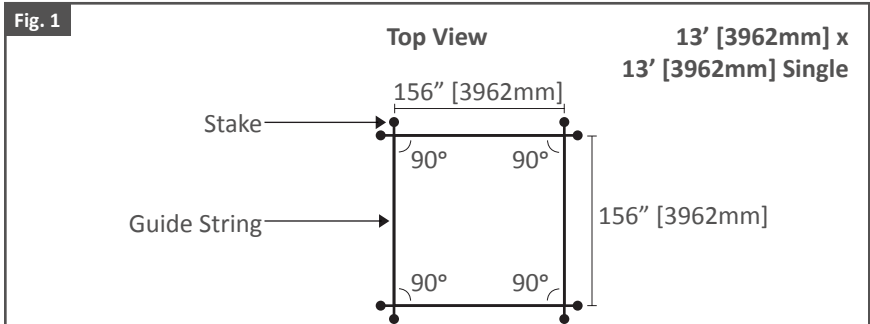
ESTATE ENCLOSURE SYSTEM LAYOUT

Step 1: Create Perimeter

1. Using stakes and string, create a perimeter for the Estate Enclosure System. Reference Fig. 1 or 2, depending on the size of your fence project.

Tip:

- Be sure corners are set at 90° angles.



Step 2: Mark Post Locations

1. Starting from a corner, measure and mark post locations. Reference Fig. 3 or 4.

Note:

- Measurements shown in Fig. 1 and 2 are taken from the center of each post.

Fig. 3

Top View

13' [3962mm] x
13' [3962mm]
Single

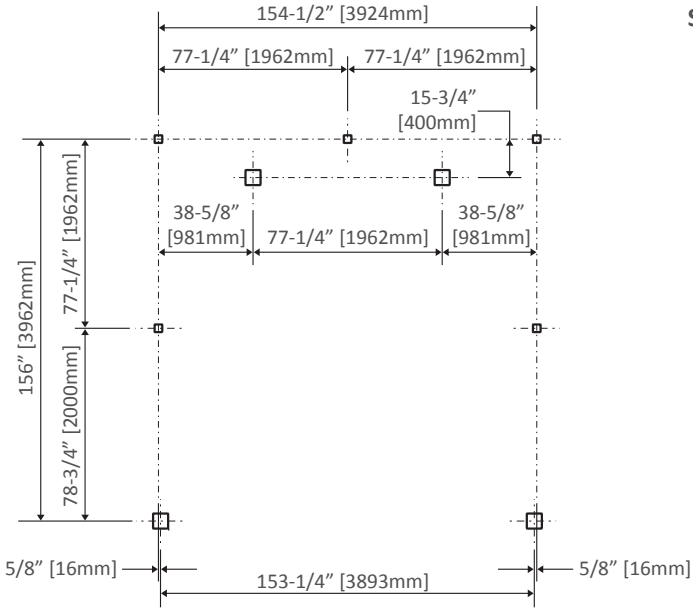
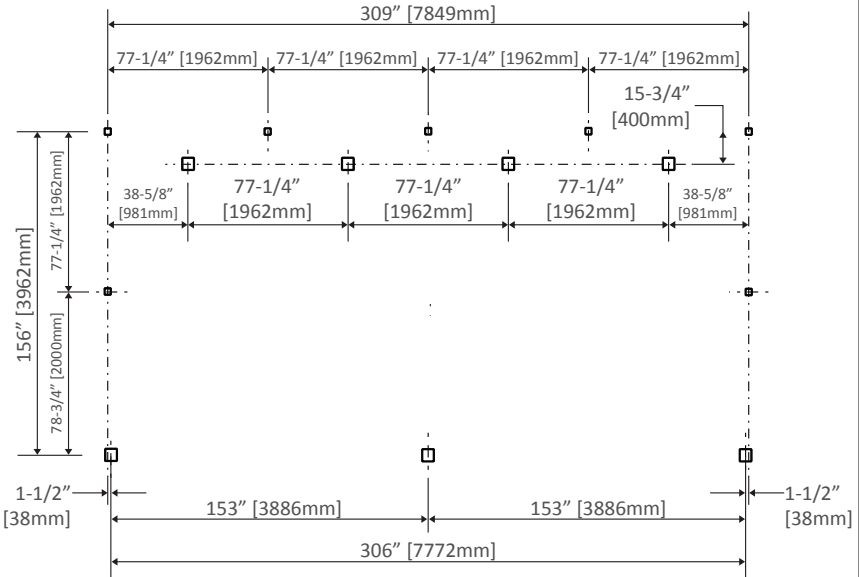


Fig. 4

Top View

13' [3962mm] x
25' [7620mm] Double

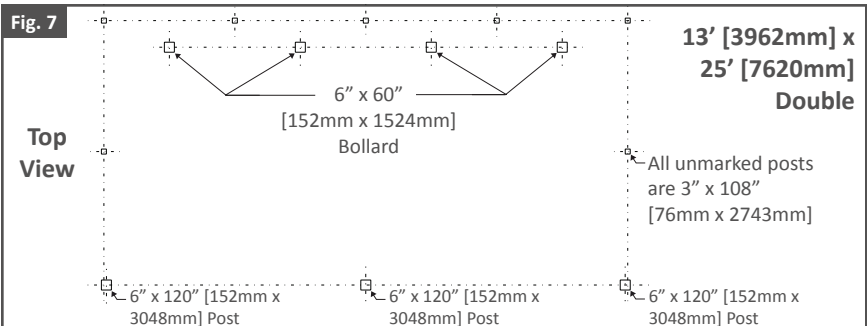
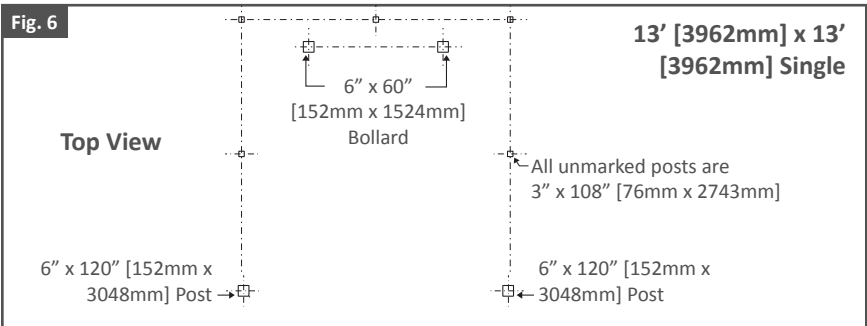
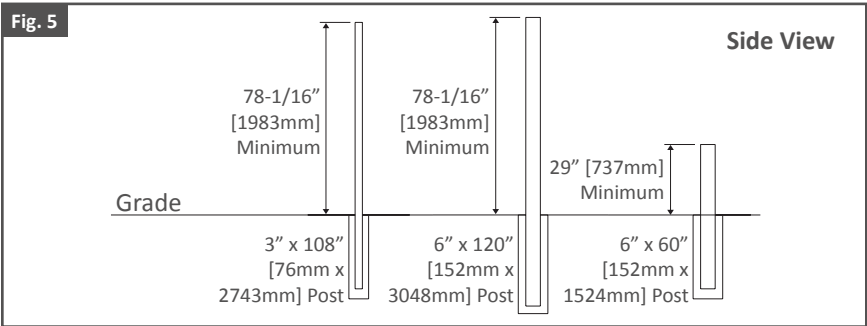


Step 3: Post Sizes

1. Refer to Fig. 5, 6 and 7 below for post sizes.

Note:

- 3" x 108" [76mm x 2743mm] post must be 78-1/16" [1983mm] above grade at a minimum.
- 6" x 120" [152mm x 3048mm] post must be 78-1/16" [1983mm] above grade at a minimum.
- 6" x 60" [152mm x 1524mm] bollards must be 29" above grade at a minimum.

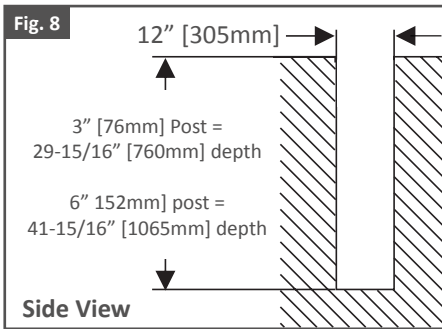


Step 4: Dig Post Holes

1. Use a Post Hole Digger to dig the holes. Be sure to keep Post Hole Digger straight and plumb.

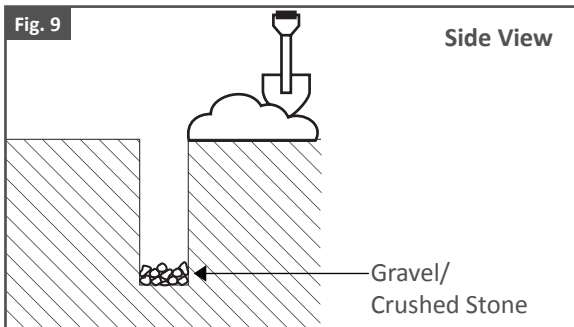
Note:

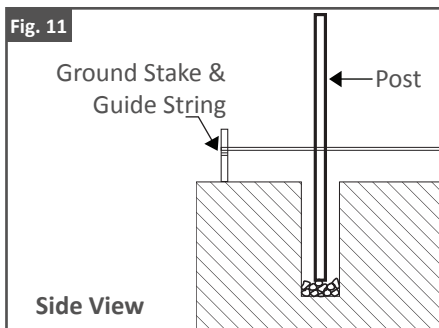
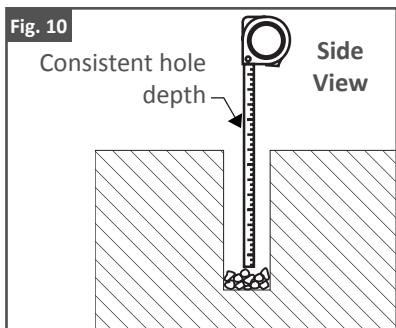
- 3" [76mm] post should be buried to a depth of 29-15/16" [760mm]. 6" [152mm] post should be buried to a depth of 41-15/16" [1065mm]. As shown in Fig. 8.



Step 5: Set Posts

1. Fill holes with 3" [72mm] of pea gravel or crushed stone to allow for drainage. As shown in Fig. 9.
2. Compact the gravel before setting post.
3. Use tape measure to check depth. Be sure to keep post hole depth consistent for each hole. As shown in Fig. 10.
4. Use the string as a guide when placing posts in each hole. As shown in Fig. 11.





POST INSTALLATION

Step 1: Install Post

1. Confirm post hole depth.
2. Remove or add gravel to set consistent post hole depth.
3. Insert posts into post holes then position posts along guide string.
4. Confirm panel and gate opening measurements. Reference Fig. 12 or 13.

Tip:

- Be sure to confirm posts are level and spacing between posts are correct before pouring concrete.
- Measurements shown in Fig. 12 and 13 show the edge to edge spacing between posts.

Fig. 12

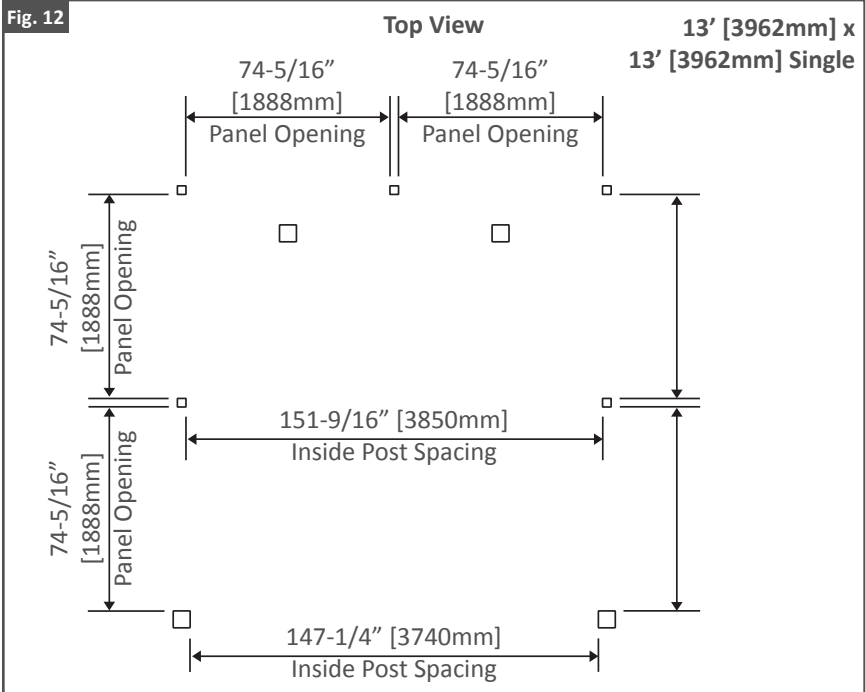
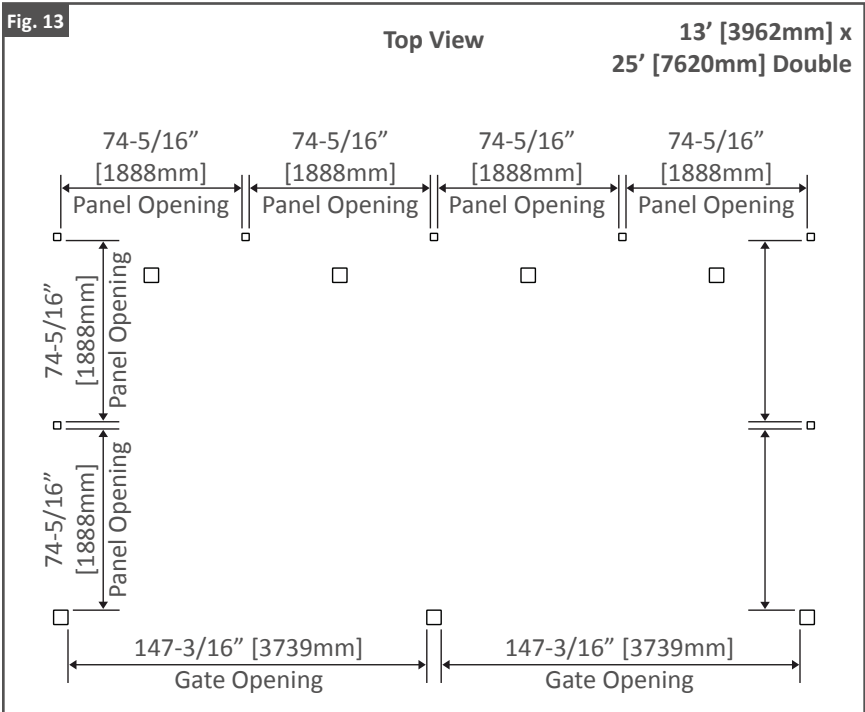


Fig. 13

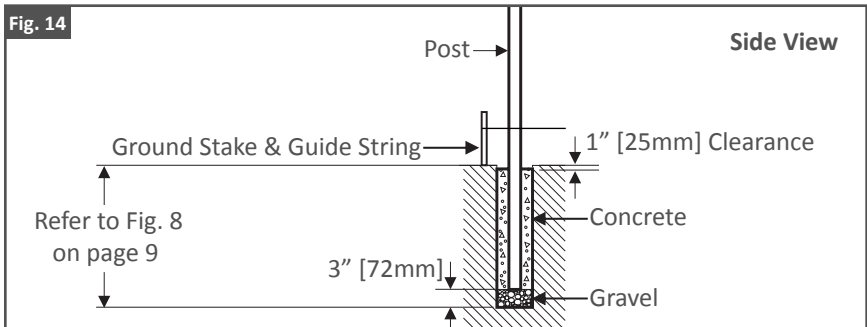


Step 2: Pour Concrete

1. Fill posts holes with concrete to within 1" [25mm] of the surface of soil. As shown in Fig. 14.

Tip:

- As the concrete cures, be sure to keep posts placed along guide strings & continuously check that they are plumb/level, in line with the next post and spacing is correct.
- Allow concrete to cure for a minimum of 24 hours before installing the panels and brackets.



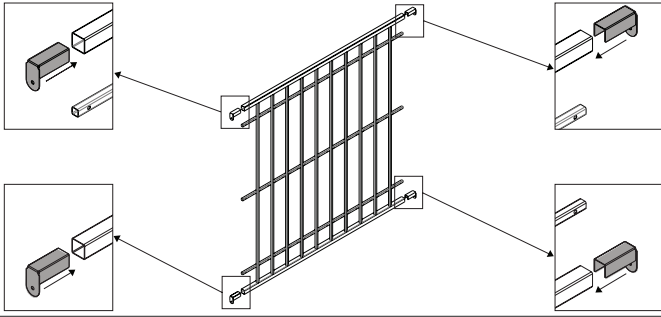
HD-106-1.5" [38mm] BRACKETS AND PANEL INSTALLATION

Step 1: Install Brackets into Panel

1. Insert an HD-106-1.5" [38mm] bracket into both ends of the top and bottom rails of the panel. As shown in Fig. 15.

Tip:

- Be sure to position the brackets with the screw hole facing down on all 4 brackets.
- If required, use a Rubber Mallet to fully seat brackets into top and bottom rails.

Fig. 15

Step 2: Install Panel onto Post

1. Use a scrap piece of wood 2" x 4" [60mm x 102mm] to space the panel 1-1/2" [38mm] above the ground.
2. With the HD-106-1.5" [38mm] brackets installed on the panel, insert the panel between the posts. As shown in Fig. 16.
3. Center the panel onto the posts. Be sure the horizontal rails are also centered onto the posts.
4. Use a level to confirm the panel is level and top edges are in line with each other.
5. Using the provided screws, install the brackets onto the posts with a 10mm driver bit or T-25 Torx Bit. As shown in Fig. 17.
6. Removed the wood 2" x 4" [60mm x 102mm] spacers and continue to install all remaining panels.

Tip:

- Use a Bit Extender to fasten screws.

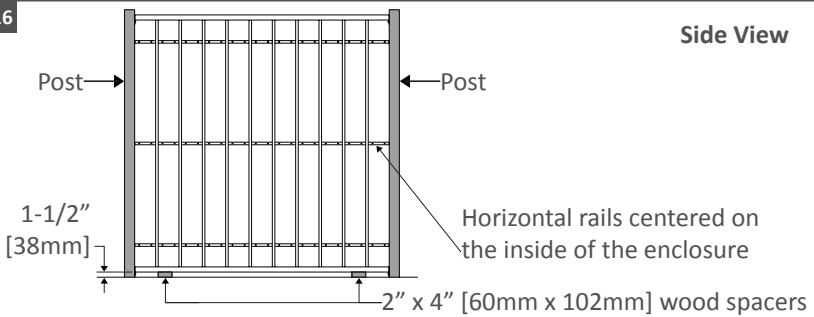
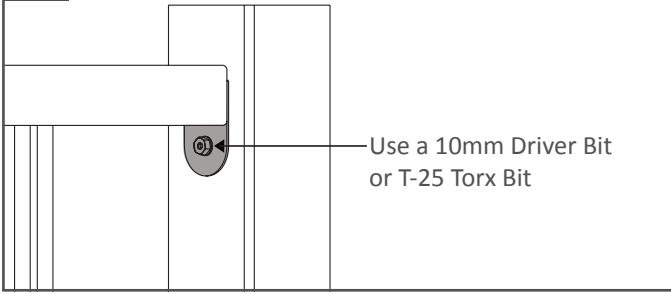
Fig. 16

Fig. 17



6" [152mm] ESTATE HINGE AND GATE PANEL INSTALLATION

Step 1: Install Estate Hinge Assembly onto Gate Panel

1. Disassemble the Estate Hinge Assembly. As shown in Fig. 18.
2. Remove the 1/2" [13mm] bolt from the welded gate hinge.
3. Re-assemble the Estate Hinge below the pre-welded gate hinge. As shown in Fig. 19 & 20. The Brass Washer should be between the pre-welded gate hinge and Estate Hinge.
5. Do not over tighten the bolt and nut. The hinge should move freely.

Fig. 18

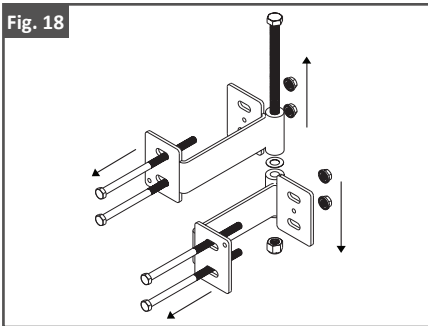


Fig. 19

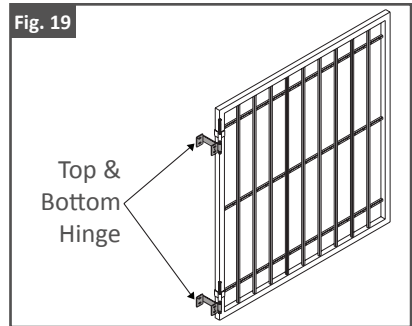
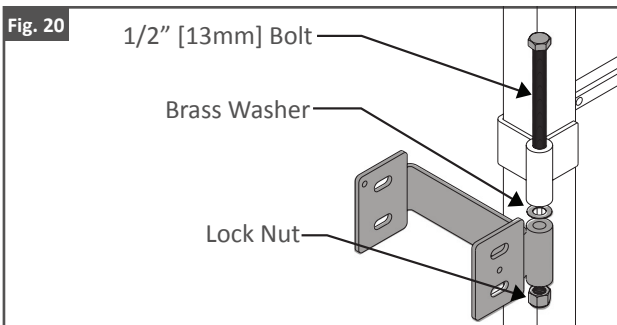


Fig. 20



Step 2: Pre-drill Estate Hinge Assembly Holes On Post

1. Use a scrap piece of wood 2" x 4" [60mm x 102mm] to space the gate panel 1-1/2" [38mm] above the ground. As shown in Fig. 21.
2. Mount the top and bottom Estate Hinges onto the desired face of the post.
3. With the Estate Hinges mounted on the post, mark the desired bolt hole locations on both sides of the post inside the Estate Hinge slot holes. As shown in Fig. 22. **Be sure each bolt hole location is marked on the edge of the slot hole closest the gate panel. This will allow for adjustment when installing the gate panel in step 3.**
4. Remove the Estate Hinges from the post, then use a 9/16" [14mm] size drill bit to drill into previously marked bolt hole locations.
5. After all holes are drilled, mount the Estate Hinges back onto the post. Confirm the drilled bolt holes in the post line up with the slot holes in the Estate Hinges.

Tip:

- If installing post double gates, be sure to align gates attached to the same post. As shown in Fig. 23.
- **DO NOT** remove the scrap piece of wood in this step.

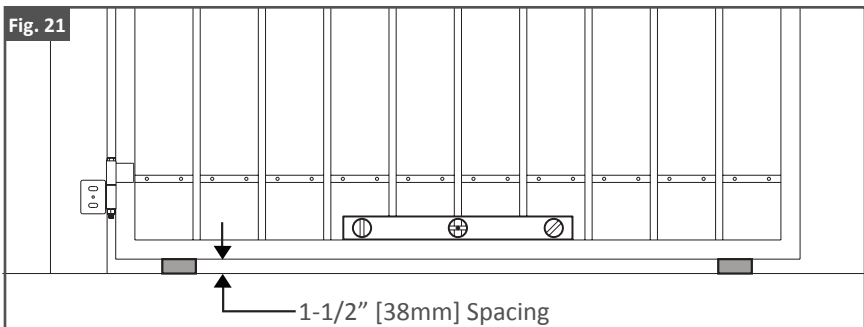


Fig. 22

Mark the bolt hole locations on both sides of the post

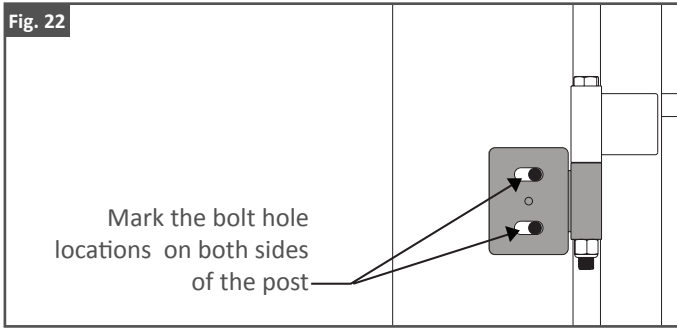
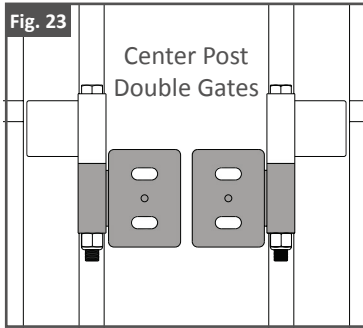


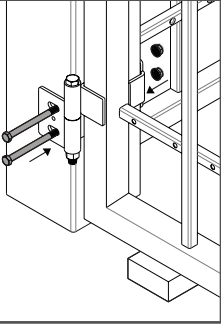
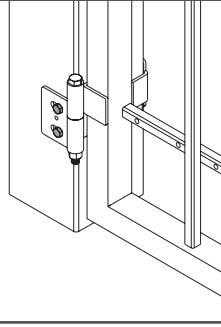
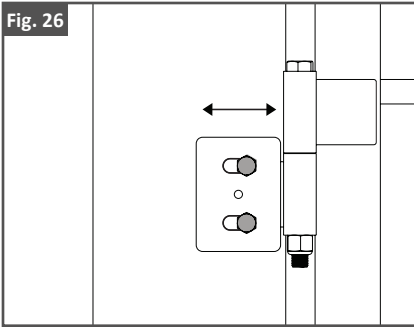
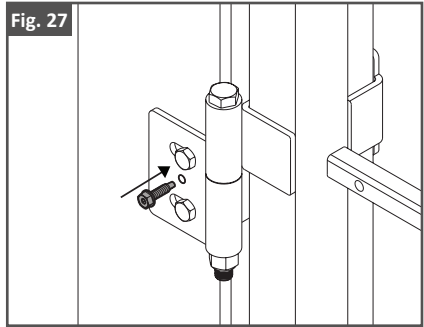
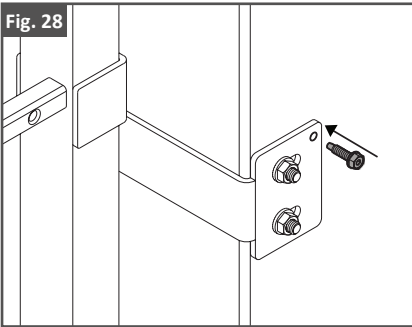
Fig. 23

Center Post
Double Gates



Step 3: Install Gate Panel onto Post

1. Insert the two 3/8" [10mm] bolts completely thru the post and attached then tighten the flange nuts on the opposite side. As shown in Fig. 24 & 25. Complete this step for both fastener locations.
2. Remove the scrap piece of wood from under the gate.
3. Confirm the gate is hanging level.
4. If the gate is not level, loosen the bolts on the top or bottom Estate Hinge and rotate the gate until it is level. As shown in Fig. 26.
5. Once the gate is level re-tighten the bolts.
6. Once all the adjustments have been made to the gates, Attach the 2 self drilling screws into the Estate Hinges to lock it inplace using a 10mm nut driver or T-25 Torx bit. As shown in Fig. 27 and 28.
7. Follow the same steps to install the second gate.

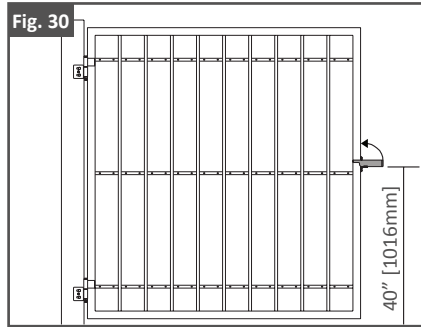
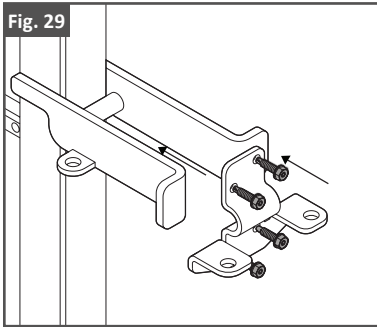
Fig. 24**Fig. 25****Fig. 26****Fig. 27****Fig. 28**

ESTATE DOUBLE SWING GATE LATCH INSTALLATION

Step 1: Install Estate Double Swing Gate Latch

1. Install the Estate DSG Latch on the end of one of the 2" [51mm] gate uprights.
2. Using a 10mm Nut Driver or T-25 Torx Bit, attach the Latch Plate to the upright with the four (4) supplied screws. As shown in Fig. 29.

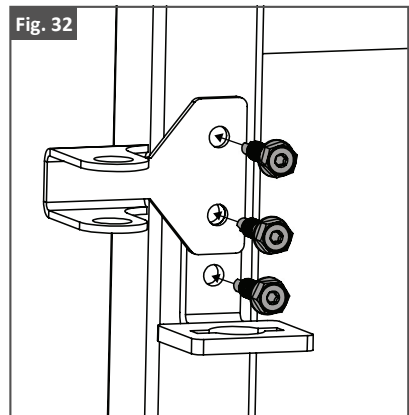
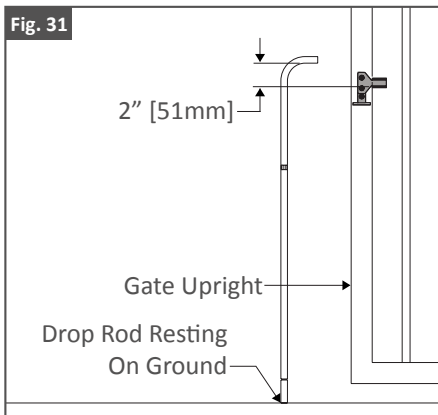
3. It is recommended the latch be installed at 40" [1016mm] above the ground. As shown in Fig. 30.
4. After installation confirm that the gate arm can swing up all the way.



ESTATE GATE DROP ROD INSTALLATION

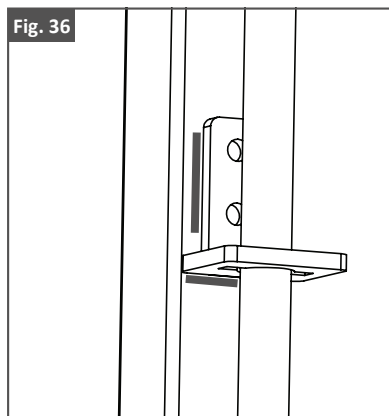
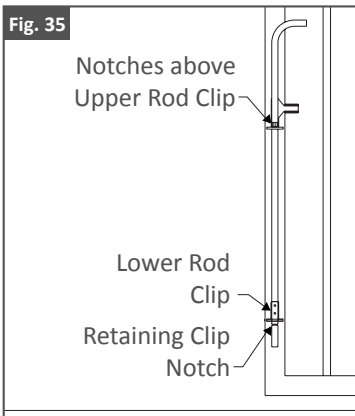
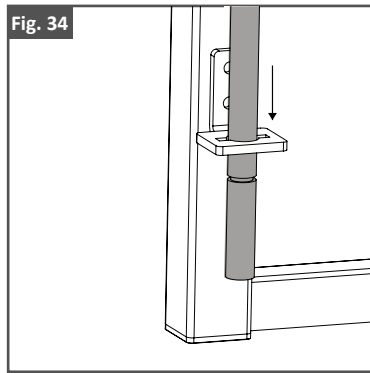
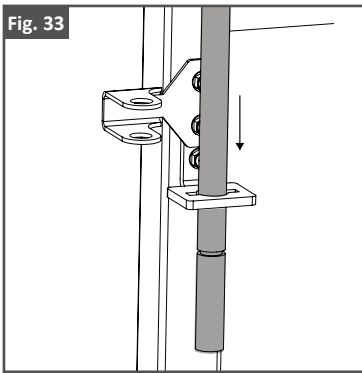
Step 1: Install Locking Plate & Upper Rod Clip

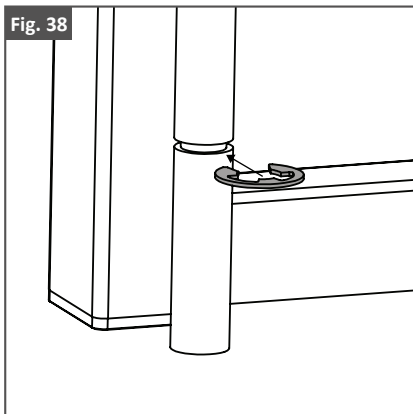
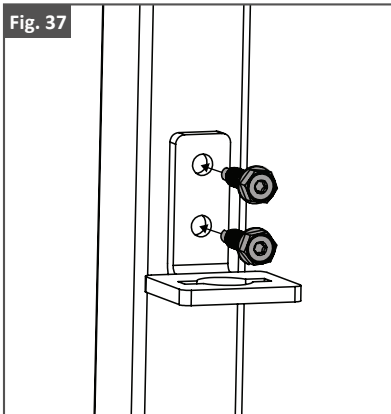
1. Use the Drop Rod to find the placement for the brackets.
2. Place the Drop Rod on the surface standing up and level next to the gate upright.
3. The Locking Plate should be mounted 2" [51mm] below the bend in the drop rod. As shown in Fig 31.
4. Center the Locking Plate and Upper Rod Clip on the upright and install with the 3 provided self-drilling screws using a 10mm Nut Driver or T-25 Torx Bit. As shown in Fig 32.



Step 2: Install Lower Rod Clip & Retaining Clip

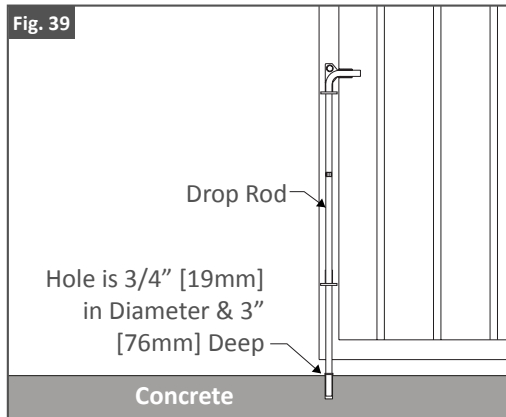
1. Insert the Drop Rod through the mounted Upper Rod Clip, then through the unmounted Lower Rod Clip. As shown in Fig 33 & 34.
2. With the Drop Rod in the up position, locate the Lower Rod Clip above the Retaining Clip notch in the Drop Rod. As shown in Fig 35.
3. Ensure that Drop Rod is Level.
4. Mark Location of Lower Rod Clip on Gate Upright. As shown in Fig 36.
5. Remove the Drop Rod then Install Lower Rod Clip with supplied self-drilling screws. As shown in Fig 37.
6. Once lower Rod Clip is installed, Re-insert the Drop Rod through in both Rod Clips.
7. Install the Retaining Clip into the Drop Rod using Channel Lock Pliers. As shown in Fig 38.





Step 3: Drill A Hole For The Drop Rod

1. Lower the Drop Rod so that it is resting on the concrete surface.
2. Mark hole location.
3. Using a 3/4" [19mm] Concrete drill bit, drill a 3" [76mm] deep hole below the Drop Rod when the gate is in the closed position. As shown in Fig 39.

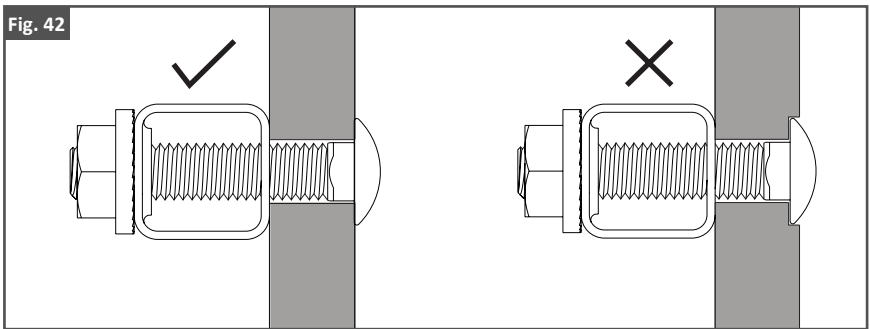
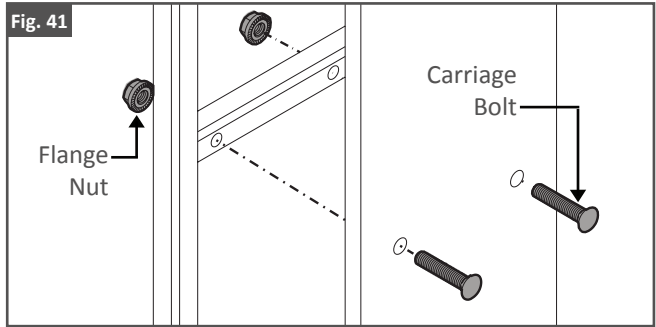
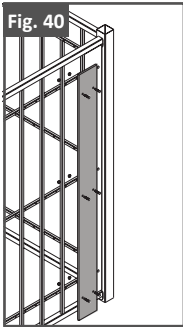


COMPOSITE PICKET INSTALLATION

Step 1: Install Pickets

1. Center the composite pickets in the middle of the panel and gate openings.

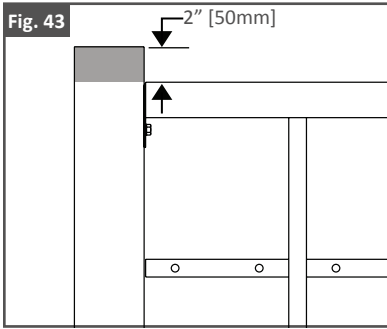
2. Use the supplied fasteners to attach the pre-drilled composite pickets to the panels. As shown in Fig. 40 & 41.
3. Tighten all bolts down until the head of the bolts is flush with the picket. As shown in Fig. 42 .



POST CAP INSTALLATION

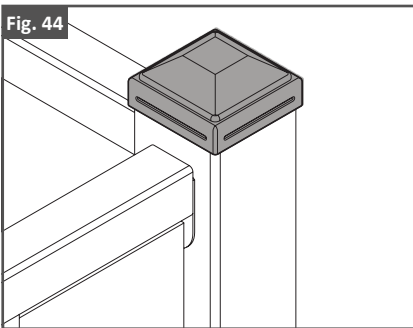
Step 1: Trim Excess Post Material

1. Determine required post height. Post should extend 2" [50mm] above the top face of panel. As shown in Fig. 43.
2. Measure and make cut marks on posts.
3. Use the Reciprocating Saw or Portable Bandsaw to trim the top of the post to required height.
4. Use file to clean cuts.
5. Remove any metal shavings and dust with a brush or rag.
6. Using a piece of cardboard as a mask, apply the 1st coat of Fortress zinc based touch-up paint to cut areas.
7. Allow to dry before applying second coat.
8. Apply the 2nd coat of Fortress zinc based touch-up paint.
9. Allow to dry before installing Post Caps.



Step 2: Install Post Cap

1. Using a Rubber Mallet, lightly tap the post caps down on all posts and bollard. As shown in Fig. 44.
2. Remove any metal shavings from the Estate Enclosure and work area.



CARE & MAINTENANCE

Care And Maintenance Of Fortress Building Products Powder-Coated Products And Surfaces:

- After installation of your Fortress Building Product, clean powder-coated products and surfaces with a solution of warm water and non-abrasive, pH neutral detergent solution. Surfaces should be thoroughly rinsed after cleaning to remove all residues. All surfaces should be cleaned using a soft cloth or sponge. Examples of acceptable cleaners are Simple Green, dish soap and warm water.
- Ensure construction materials such as concrete, plaster, and paint splashes are removed immediately before they have a chance to dry. Failure to remove these materials may cause damage to the powder-coated surfaces.
- The frequency of cleaning depends in part on the standard of appearance and also the requirements to remove deposits that may cause damage to the powder coating after prolonged exposure. Fortress recommends cleaning in three to four monthly intervals.
- **WARNING: Do not use strong solvents such as thinners, or solutions containing chlorinated hydrocarbons, esters, or ketones. Abrasive cleaners or cutting compounds should not be used.**

WARRANTY

To obtain and review a copy of the warranty, please go to: <https://Fortressbp.com/warranties>. You can also contact: (844) 909-1999 or write to: Fortress Building Products Warranty, 1720 N 1st St, Garland, TX 75040 to obtain a copy of the warranty.



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