

## Tools and Items Needed

- Drill/power screwdriver
- Galvanized 1/2" Carriage Bolt, 1/2" Washer, 1/2" Hex Nut Carriage bolts
- Hammer
- Miter or circular saw with carbide tip blade
- Clear exterior construction adhesive
- Speed square
- Tape measure
- Level
- Pencil
- Adjustable wrench or socket wrench
- Safety glasses
- #2 square head drill bits
- 1/8" drill bit
- White Rubber Mallet
- 1/4" drill bit

## For 6' or 8' On-Center Line Railing:

### One line rail kit (fig. 1), which contains:

- 1 - Top rail
- 1 - Bottom rail
- 1 - Support block for 6' rail (2 Support blocks for 8' rail)
- 1 - Classic line rail bracket kit, which contains:
  - 4 - Brackets
  - 4 - Bracket covers
  - 16 - #8 x 2" pan head screws
  - 12 x 1" - pan head self-drilling screws
- 14 - 32-3/4" Round Aluminum Balusters for 6' (19 Balusters for 8' Rail)

### Sold Separately:

- 1 - 40" Post sleeve with trim and caps for each railing section (item #268215)
- 1 - Structural post mount kit (item #215036)
- 1 - Hardware kit (item #215037)

*Note: Post Sleeve, post cap and trim are not included in rail kit.*

## Post and Line Rail Installation Instructions

### Prior to construction, check with your local regulatory agency for special code requirements in your area.

Structural support should come from either the continuation of deck support posts that extend up through the deck floor, railing posts that are bolted to the inside of the rim/outer joists or structural post mounts. Always measure prior to securing the posts when installing angled rail sections. Install railing posts before deck boards are fastened to the joists.

The railing comes pre-routed for balusters. Pre-drilling all other screw holes is essential for successful rail installation. Do not over-tighten screws. **Read instructions completely to get an understanding of how the product goes together and how each piece affects the others.**

**Step 1** Determine the number of railing posts needed for your deck. Post spacing is either 6' on-center or 8' on-center depending on the rail length chosen. Example: A 12' x 16' deck attached to a building with a 4' access opening on one side will require a total of eight posts (fig. 2).

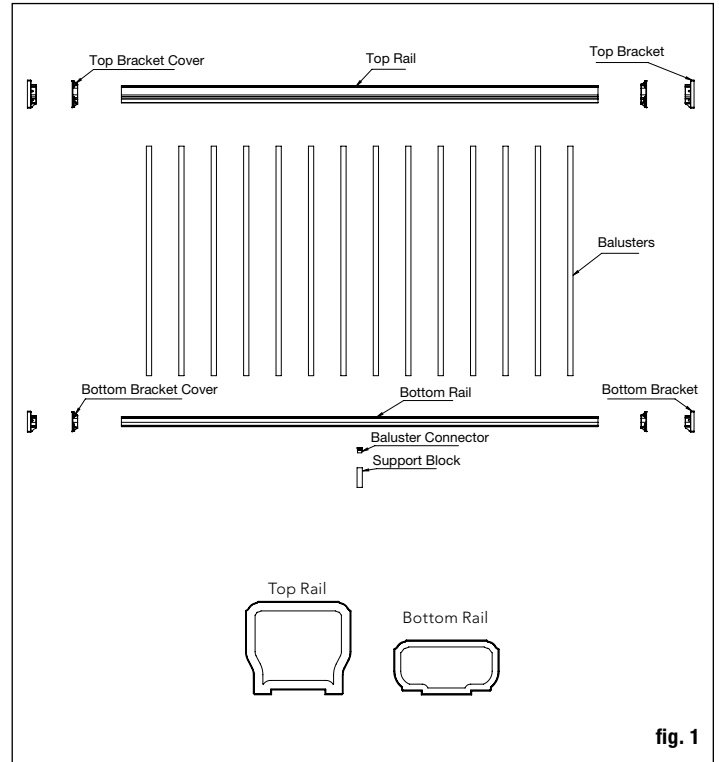


fig. 1

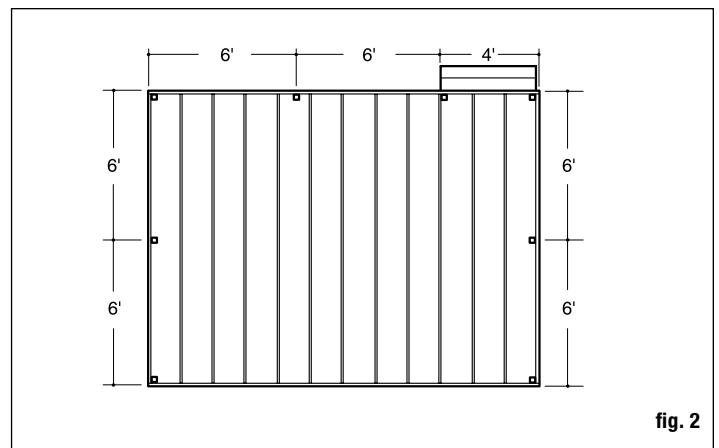


fig. 2

**Step 2** Install railing posts prior to installing deck boards. 4 x 4 Cedar or pressure treated pine railing posts or structural post mounts (item #215036, sold separately) provide the strength for the railing. Note: structural post mounts should be used for installation on concrete. The length of each post is determined by the total of the joist width (typically 7-1/4") + decking thickness (1") + railing height (36") + spacing for post cap (2") = 46-1/4". **Important: Do not notch the 4x4 railing posts. Notching will reduce the strength of the post and could result in railing collapse or failure (fig. 3).**

**Step 3** Position, plumb with a level, and clamp the railing post on the interior face of the joist. Plumb again. The 4x4 railing post should be bolted to the inside of the joist using two 1/2" galvanized carriage bolts, washers and nuts. Corner posts use a third carriage bolt, washers and nuts inserted through the adjacent joist (fig. 3).

**Step 4** Install decking; notch deck boards to fit around the 4x4 railing posts. Allow 1/4" space between the deck boards and any permanent structure or post. Additional blocking may be necessary on the 4x4 for fastening deck boards.

**Step 5** Trim 4x4 post sleeves to length. Post sleeves should be a minimum of 2" longer than the railing height (fig. 3). Example: For a 36" high railing, trim post sleeve to a minimum of 38", can be left longer if desired.

**Step 6** Measure the distance between installed post sleeves to determine the length of the top and bottom rails. Place the bottom rail in position next to the posts using 3" temporary supports and adjust so the distance between the first baluster hole and post is greater than 2" and equal on both ends (refer to fig. 4). Mark the rail. Cut the bottom rail. Cut the top rail to the same spacing and length.

**Step 7** For the 6' rail find the center of the underside of the bottom rail and attach the baluster connector included with the support block using the screw provided. (For the 8' rail divide the length of the rail in three to get the location of the support blocks. Then attach the baluster connectors included with the support blocks using the screws provided.) Check building code requirements for the maximum spacing between deck surface and bottom of rail (sweep). This rail is designed for a 3" sweep see (fig. 4). If necessary, trim the support block to the determined height (fig.5). **Drill two 1/4" drain holes through the bottom of the rail to prevent trapping water. Center drain holes between two baluster locations as baluster can block the pathway and stop water from properly draining.**

**Step 8** Separate the bracket covers from the brackets (fig.6).

**Step 9** Place the line rail bracket covers and line brackets on the ends of the bottom rail and prop the bottom rail between the posts using blocks cut to size. Check the rail for level. Using the line bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the line bracket to the post sleeve using the #8-15 x 2" - #2 square drive pan head screws and then attach line bracket to rail using #10 x 3/4" - #2 square drive pan head self-drilling screws (fig.7)

**Step 10** Place balusters into each routed hole in the bottom rail. Make sure balusters are fully seated in rail.

**Step 11** Place the line rail bracket covers and line brackets on the ends of the top rail. Position the top rail by placing the balusters inside the routed holes, while working from one end to the other. Check the rail for level. Using the line bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the line bracket to the post sleeve using the #8 x 2" - #2 square drive pan head screws and then attach line bracket to rail using #10 x 3/4" - #2 square drive pan head self-drilling screws (fig. 7).

**Step 12** Slide the rail bracket covers over the rail brackets and snap into place.

**Step 13** Apply a thin line of clear exterior silicone adhesive to the inside rim of a post cap and place firmly on the post. Repeat for each post.

**Step 14** Snap the two base trim pieces together into place around the base of the post sleeve. Note: for a more secure connection to the post sleeve, apply a thin layer of clear exterior adhesive to the inside of the post trim where the trim will make contact to the post sleeve prior to installation.

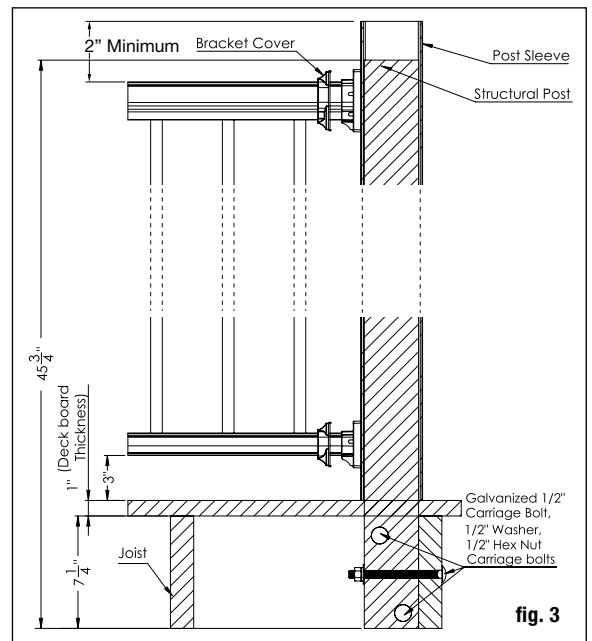


fig. 3

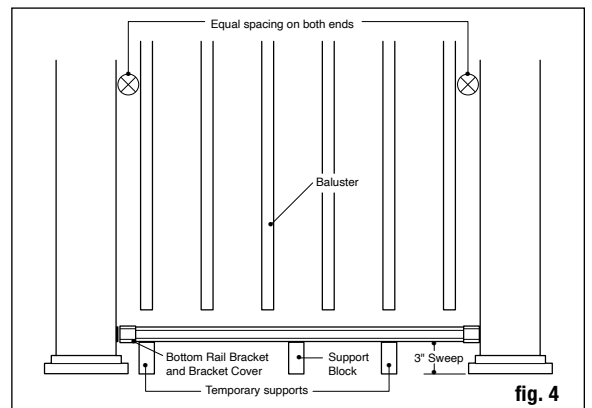


fig. 4

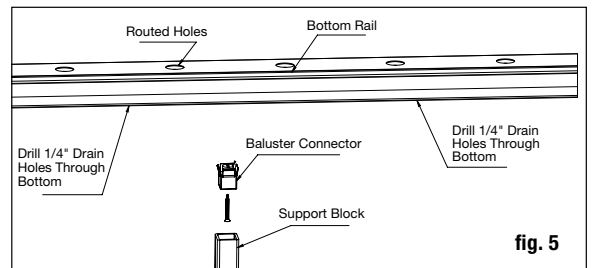


fig. 5

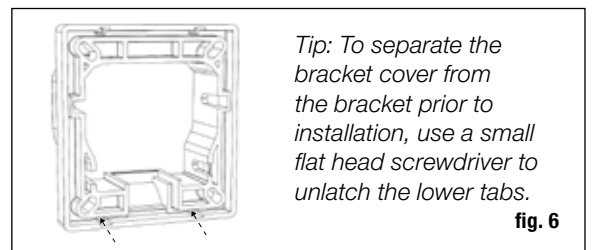


fig. 6

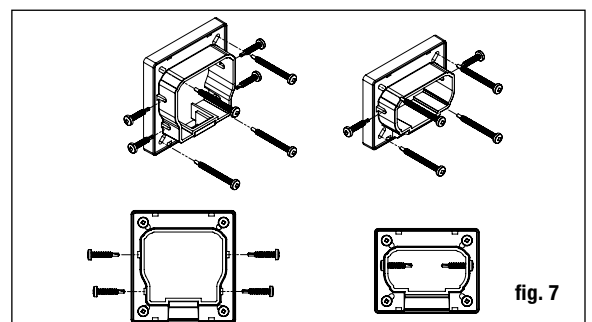


fig. 7

## For 6' On-Center Classic Style Stair Railing:

### One stair rail kit (fig. 1a), which contains:

- 1 - Top rail
- 1 - Bottom rail
- 1 - Support block
- 1 - Classic stair rail bracket kit, which contains:
  - 4 - Brackets
  - 4 - Bracket covers
  - 16 - #8 x 2" pan head screws
  - 8 x 1" - pan head self-drilling screws
- 12 - 32-3/4" Square Composite Balusters for 6'

### Sold Separately:

- 1 - 48" Post sleeve with trim for each railing section (item #268216)
- 1 - Post cap for each post sleeve (item #245522)
- 1 - 48" Post sleeve with trim to end the railing run (item #268216)

*Note: Post sleeve, post cap and trim are not included in rail kit.*

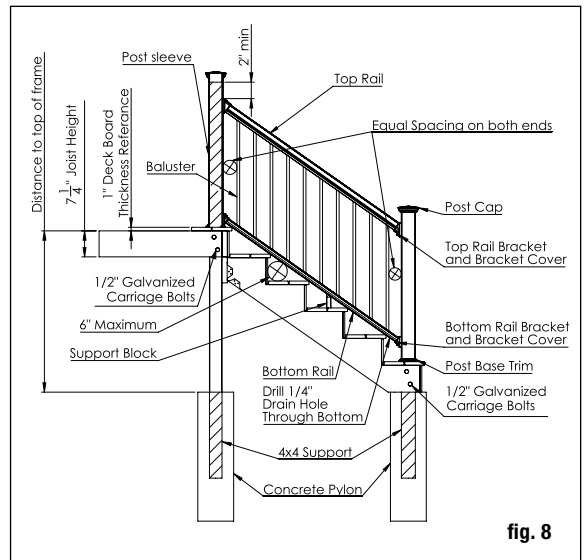


fig. 8

## Stair Railing Installation Instructions

*Note: Stair angle should be 35 degrees for brackets in kit to fit properly.*

**Step 1** Determine the number of stair railing posts needed for your deck. Post spacing is 6' on-center.

**Step 2** Install wooden stair posts prior to installing stair treads. Cedar or pressure-treated pine 4x4 railing posts provides the structural strength for the stair railing. Position, plumb with a level, and clamp 5-ft. Wooden posts on the interior face of the stringer. Plumb again. The 4x4 stair railing post should be bolted to the inside of the stringer using two 1/2"x6" galvanized carriage bolts, washers and nuts. Corner posts use a third carriage bolt, washers and nuts inserted through the adjacent joist. Ground level posts should be set in concrete as shown (fig. 8). Deckorators structural post mount kits (item #215036, sold separately) can also be used to secure the post to the top of concrete.

**Important: Do not notch the 4x4 railing posts. Notching will reduce the strength of the post and could result in railing collapse or failure (fig. 3).**

**Step 3** Install treads; notch treads to fit around the 4x4 stair railing posts. Allow 1/4" space between the treads and any permanent structure or post. Additional blocking may be necessary on the 4x4 for fastening treads.

**Step 4** Slide a post sleeve over each 4x4 railing post or post mount. Post sleeve should slide easily over the post. DO NOT FORCE post sleeve onto post. Twisted or crooked 4x4s should be replaced. Slide a post base trim over each post sleeve for a finished look.

**Step 5** Measure the distance between installed post sleeves to determine the length of the top and bottom rails. Ensure baluster holes are oriented in the right direction. Then place the bottom rail on the stair treads next to the posts and adjust so the distance between the first baluster hole and post is greater than 2-3/4" minimum and equal on both ends (fig. 8). Mark the rail to show the desired length and cut angle. Cut the bottom rail. Transfer the cut lines from the bottom rail to the top rail, then cut both rails. (fig. 9). **Drill one 1/4" drain hole through the bottom of the rail to prevent trapping water. Position the hole toward the lower end of the rail, roughly 2.5" from rail end to avoid the lower bracket.**

**Step 6** Place the proper rail bracket covers and stair brackets on the ends of the bottom rail. Pay particular attention to the brackets being used as they differ based on top/bottom rail and up/down angle. Determine the position of the support block and attach to the bottom rail. Prop the bottom rail between the posts on the stair treads (fig. 9). You may need to place equal shims between two stair tread noses to elevate the bottom rail. Check for requirements in your area. Typically, a 6" sphere may not be allowed to pass through the triangle formed by the bottom rail, tread and riser (fig. 8). Center the stair bracket on the post. Using the stair bracket as a guide, mark the screw positions on the post

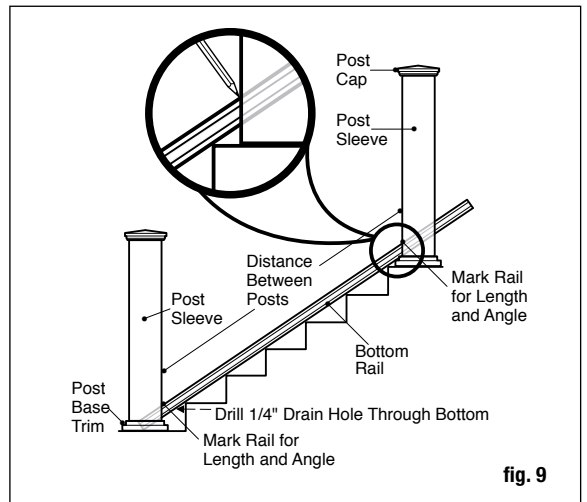


fig. 9

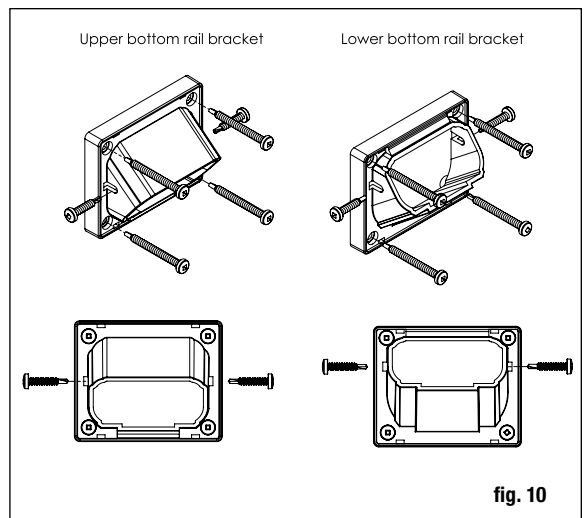


fig. 10

sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the stair bracket to the post sleeve using the #8-15 x 2" - #2 square drive pan head screws and then attach stair bracket to rail using #8-16 x 3/4" - #1 square drive pan head self-drilling screws (fig. 10).

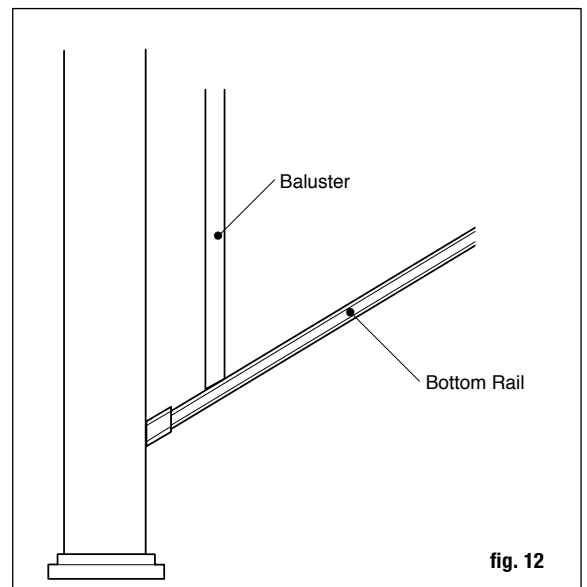
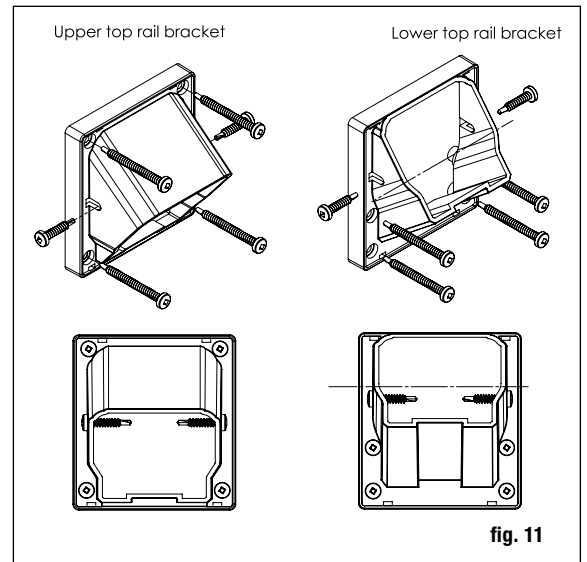
**Step 7** Place a baluster into each routed hole in the bottom rail. Make sure baluster is fully seated in rail.

**Step 8** Place the stair rail bracket covers and stair brackets on the ends of the top rail. Position the top rail by placing the balusters inside the routed holes, while working from one end to the other. Center the stair bracket on the post. Using the stair bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the stair bracket to the post sleeve using the #8-15 x 2" - #2 square drive pan head screws and then attach stair bracket to rail using #8-16 x 3/4" - #1 square drive wafer head self-drilling screws (fig. 11).

**Step 9** Slide all of the rail bracket covers over the rail brackets until they snap into place.

**Step 10** Apply a thin line of clear exterior construction adhesive to the inside rim of a post cap and place firmly on the post. Repeat for each post.

**Step 11** To install the post base trim (optional), snap the two trim pieces together around the base of the post sleeve. Note: For a more permanent installation, apply a thin line of clear adhesive to the inside of the trim prior to placing onto the post sleeve.



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