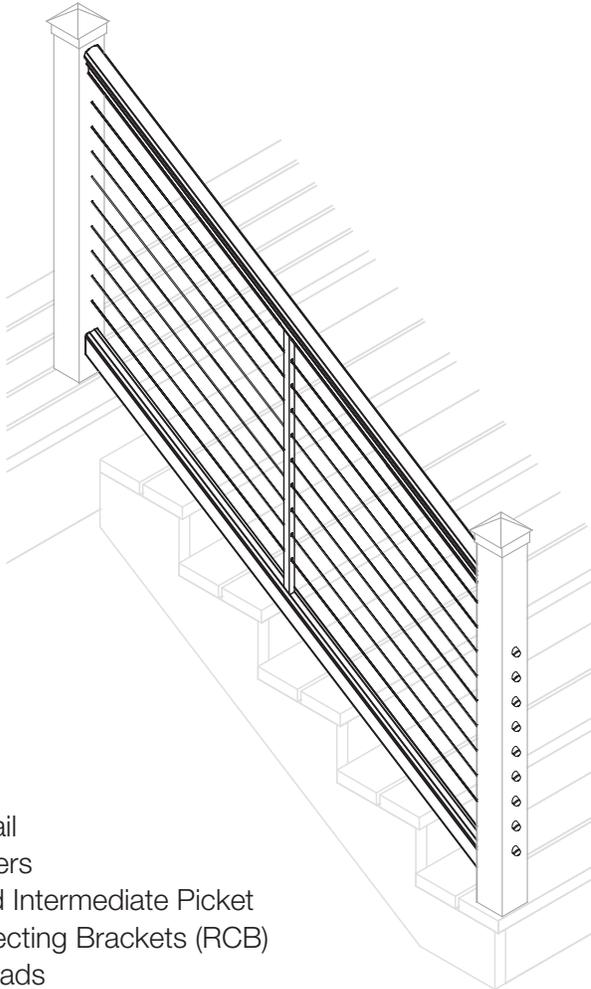


Installation Instructions

for DesignRail[®] Aluminum Rail Kits with CableRail Cable Infill - STAIR RAILING

- Stair Rail Kits will fit maximum 6 ft long stairs with a slope range of 29-34 degrees with 'Graspable Top Rail' finishing at 34"-38" high for residential applications between wood or non-ferrous metal posts
- Pre-drilled intermediate pickets for cable infill



Tools Needed:

- Safety glasses
- Ear protection
- Gloves
- Measuring tape
- Felt tip marker
- Electric miter saw with fine-tooth carbide blade
- String
- Level
- Small file
- Electric drill
- #2 square-drive bits
- Drill bits, assorted sizes
- Adjustable Vice-Grip-type pliers
- 7/16" socket wrench
- 9/16" socket wrench
- Electric grinder
- Cable cutters or cut-off disk
- Hacksaw or electric reciprocating saw
- Cable lacing needle

Parts List:

- 1- Top Rail
- 1- Bottom Rail
- 2- Snap Covers
- 1- Pre- drilled Intermediate Picket
- 4- Rail Connecting Brackets (RCB)
- 4- Isolation Pads
- 8- #10 x 3" SS Pan Head Screw, Square Drive (RCB to Wood Post)
- 8- #10 x 1-3/4" SS Self-Tapping Pan Head Screws, Square Drive (RCB to Metal Post)
- 11- #8 x 3/4" SS Self-Tapping Pan Head Screws, Square Drive, Colored (Picket to Top Rail and Rails to RCBs)
- 1- #10 X 3/4" SS Pan Head Screws, Square Drive (Picket to Bottom Rail)

Note: DesignRail[®] Rail Kits will handle most railing conditions; however, if your railing requirements vary from those noted above, please check with your retailer's special order desk to determine other DesignRail[®] options that may be special ordered to suit your exact project needs. Before beginning your project, thoroughly review all of the installation instructions for this railing system and the CableRail infill to ensure that the railing styles and sizes meet your local building code requirements. Spacer materials or other physical barriers are recommended to prevent the direct contact of pressure treated wood with aluminum products. Check building codes for latest information.

STAIR RAILING INSTALLATION:

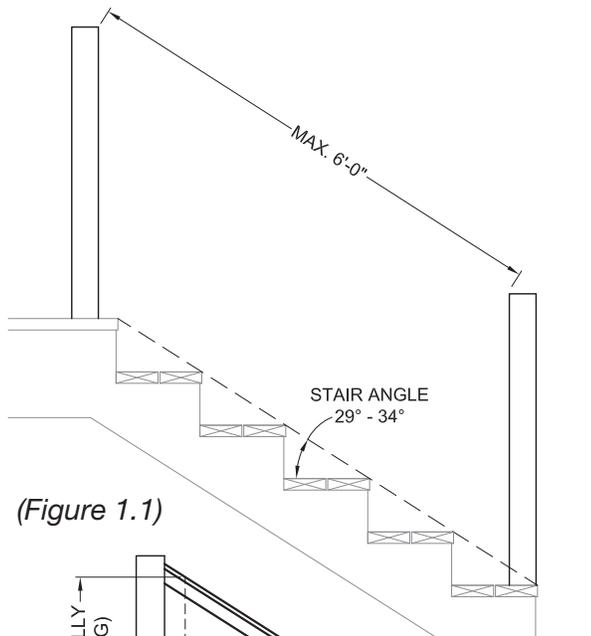
Note: Stair Rail Kits can accommodate stairways with 6-ft maximum between posts, and the pickets are pre-drilled for cables to fit a stair slope of between 29 and 34 degrees. Stair Rail Kits are designed to finish at a height of 34"-38", with the top rail acting as a graspable handrail.

Stair Install: Step 1 – Prepare post for Rail Connecting Brackets (RCBs)

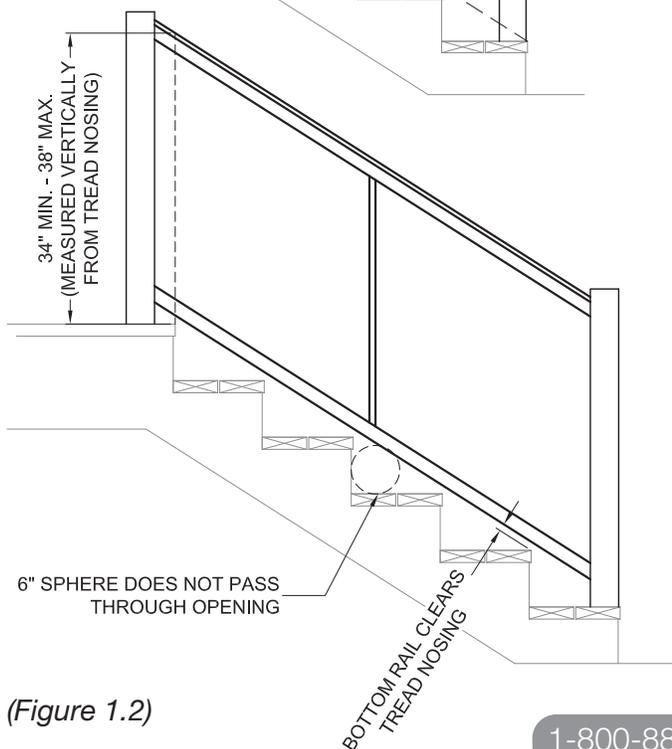
- a) RCB location will be dependent on newel post locations in relation to the top and bottom stair treads. It is important to place the top and bottom rail so that the final assembly will meet the following conditions:
- The bottom rail will not rest on the stair tread nosing.
 - The bottom rail and stair treads do not create an opening that allows a 6" sphere to pass through.
 - The top rail will finish at a minimum height of 34" and a maximum height of 38".

Note: These conditions are typical for residential stair code compliance, but may vary depending on local code requirements. Be sure to check with your local building code authority regarding code compliance requirements in your project location.

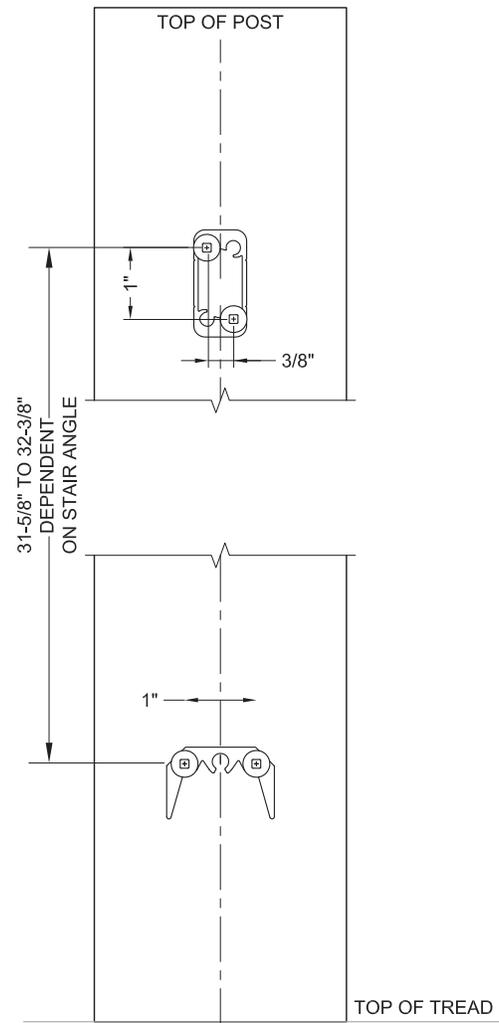
Following these conditions (see Figures 1.1 & 1.2), locate the top and bottom RCB locations, mark and pre-drill the posts for the Rail Connecting Brackets (RCBs) attachment screws. Each RCB requires 2 screws. (see Figure 1.3)



(Figure 1.1)



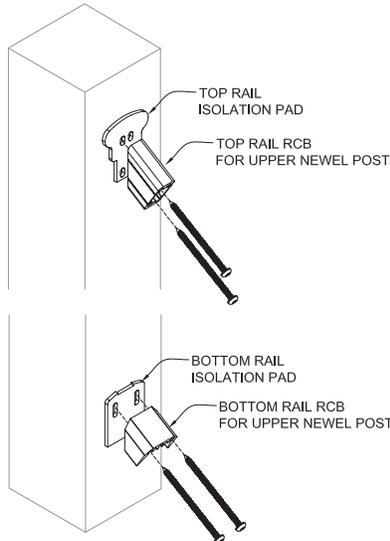
(Figure 1.2)



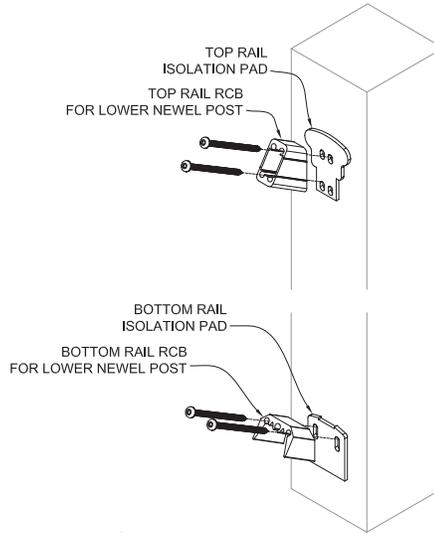
(Figure 1.3)

Stair Install: Step 2 – Attach Rail Connecting Brackets (RCBs) to Posts

- a) Attach the top and bottom isolation pads and Rail Connecting Brackets to each post using the included screws. *Note: Each stair RCB is different, be sure to use the proper RCB in the respective post location. (see Figures 2.1 & 2.2). The Rail Kits include #10 x 3" wood screws for attachment to wood posts (as shown), also included are #10 x 1-3/4" self-tapping screws for attachment to non-ferrous metal posts. (Note: The recommended pre-drill size for a #10 self tapping screw is no less than 5/32" (0.157").*



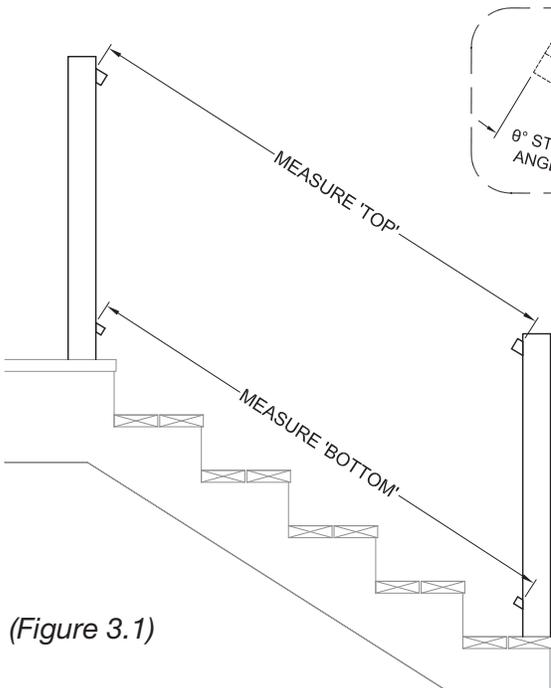
UPPER NEWEL POST
(Figure 2.1)



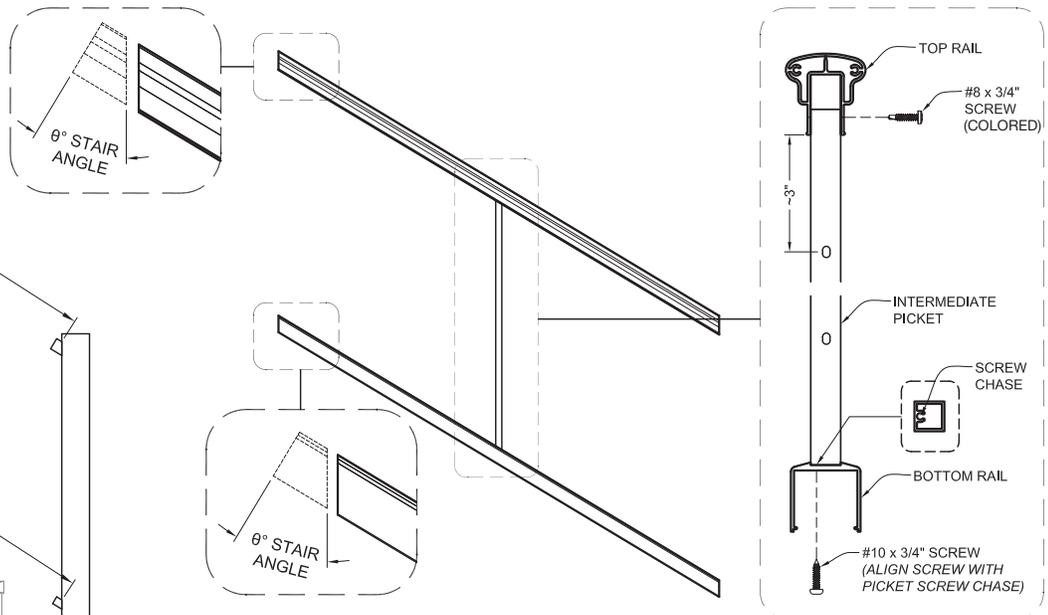
LOWER NEWEL POST
(Figure 2.2)

Stair Install: Step 3 – Assemble Rail Kits

- a) Measure the open width between each set of posts. (see Figure 3.1)
Note: Be sure to take two measurements: one just above the top RCBs for the top rail, and one measurement just above the bottom RCBs for the bottom rail.
- b) Trim the top and bottom rails to match the corresponding measurements, always miter the cuts on both ends of the top and bottom rails to accommodate stair angle. (see Figures 3.1 & 3.2)
- c) Attach the intermediate picket to the center of the top rail using a colored #8 x 3/4" screw and to the center of the bottom rail using a #10 x 3/4" screw. (see Figure 3.2) *Note: drill a 1/8" pilot hole for the #8 screw and a 1/4" pilot hole through the bottom rail for the #10 screw; the 1/4" hole must be drilled slightly off center to align with the picket screw chase. The #8 and #10 screws require a #2 square drive bit.*



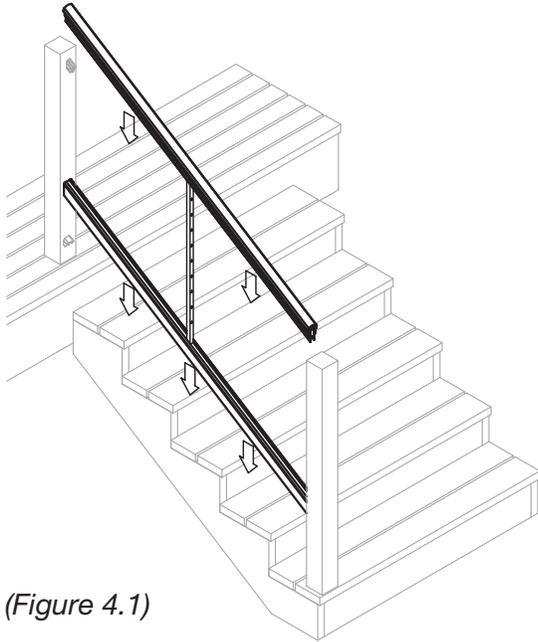
(Figure 3.1)



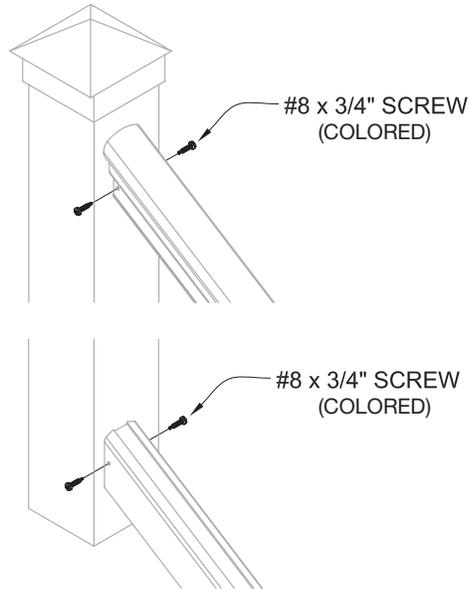
(Figure 3.2)

Stair Install: Step 4 – Attach Rail Kits to Posts

- a) Insert the Rail Kit assembly between the posts and slide down onto the RCBs. (see Figure 4.1)
- b) Secure the top and bottom rails to the RCBs using two colored #8 x 3/4" screws for the top rail and two for the bottom rail (see Figure 4.2). *Note: drill 1/8" pilot holes for the screws and offset the holes slightly so that the screws do not hit one another inside the RCBs. The screws require a #2 square drive bit.*



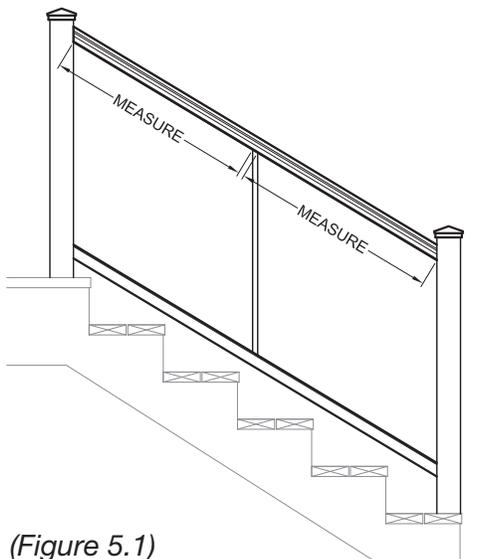
(Figure 4.1)



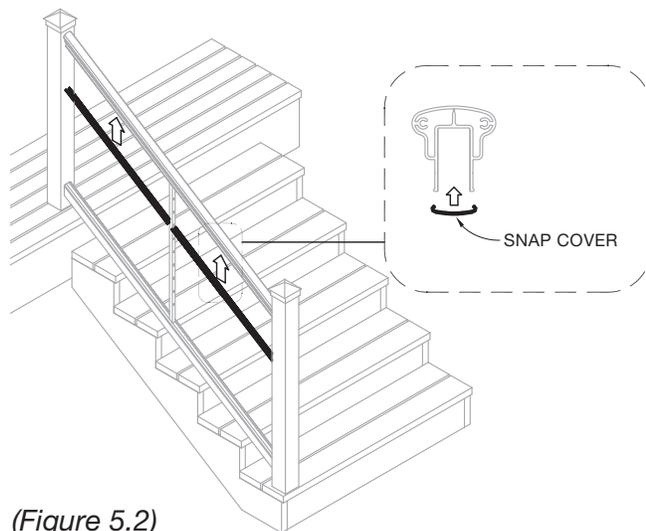
(Figure 4.2)

Stair Install: Step 5 – Cut and Attach Snap Covers.

- a) Measure underneath the top rail from the face of the intermediate picket to the adjacent post faces. (See Figure 5.1)
- b) Trim the Snap Covers at the end with the hole to match the corresponding measurements.
- c) Position the Snap Covers so the trimmed end is against the post. Press the Snap Covers on to the bottom of the top rails until they click and lock into place. (see Figure 5.2)



(Figure 5.1)



(Figure 5.2)

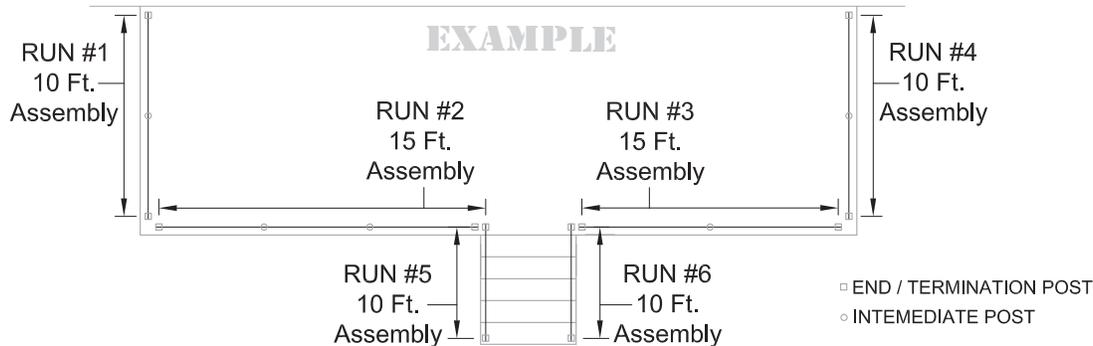
Stair Install: Step 6 – Install CableRail Infill

See page 5 for more information

Installing CableRail Cables

Note: Level cables must terminate at each end post, at each corner post, and at the top of each stair. Sloped stair cables must terminate at each top and bottom stair post.

- a) Review information on determining cable design and assemblies in the *CableRail* brochure and online at www.feeneyinc.com.
- b) Identify all cable termination posts and calculate the cable run length for each section.



- c) Select the assemblies you need.

Standard Cable Assemblies: Pre-packed assemblies including cable with a pre-attached threaded terminal and a *Quick-Connect*® fitting. Round-up your run lengths to the nearest 5-foot or 10-foot increment to determine the length of the cable assemblies you'll need.

Note: Standard CableRail Assemblies are available in the following lengths: 5', 10', 15', 20', 25', 30', 40', 50'.

Custom Cable Assemblies: Standard assemblies work for most *CableRail* installation, but if your project requires a different solution please take a look at custom assemblies using *Quick-Connect*® Fittings. These easy to use fittings can be used for post or wall attachment, concrete or masonry, angled terminations, and much more. For more information please visit [feeneyinc.com](http://www.feeneyinc.com) or the *Quick-Connect*® display at participating dealers.

NOTE:

For 36" railing systems you will require 9 cable assemblies for each cable run section.

For 42" railing systems you will require 11 cable assemblies for each cable run section.

- d) Install *CableRail* Assemblies per installation instructions.

For warranty and maintenance information please visit www.feeneyinc.com