

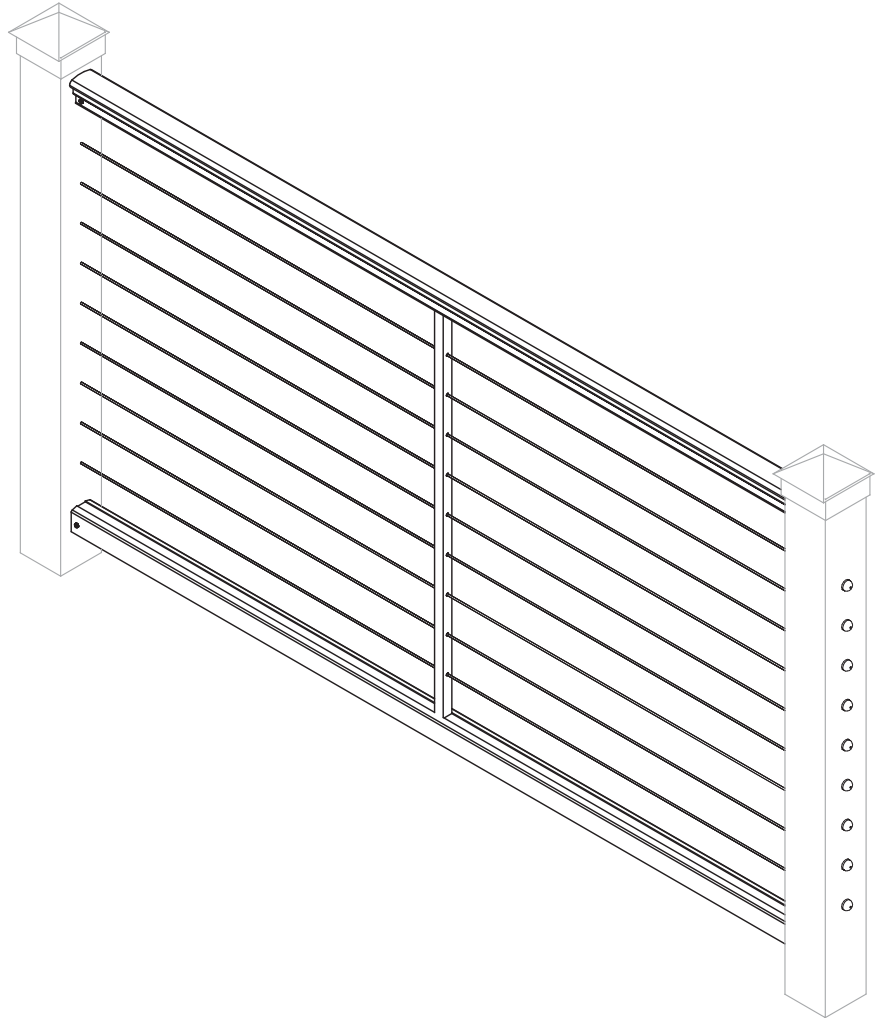
Installation Instructions

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

- 36"-42" high railing for residential applications between wood or non-ferrous metal posts
- Pre-drilled intermediate pickets for cable infill
- 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"

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

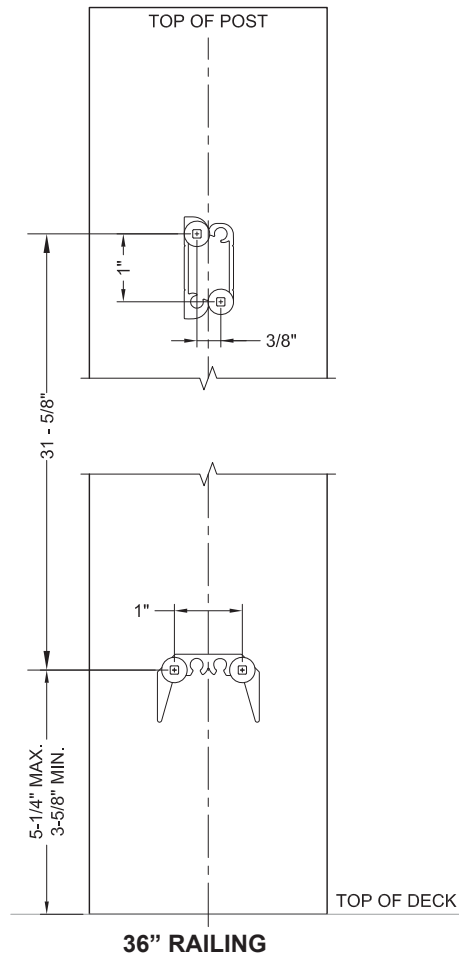


Note: DesignRail[®] Rail Kits will handle most railing conditions; however, if your railing requirements vary from those noted above, please check with your retailer's special order desk to determine other DesignRail[®] options that may be special ordered to suit your exact project needs. Before beginning 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.

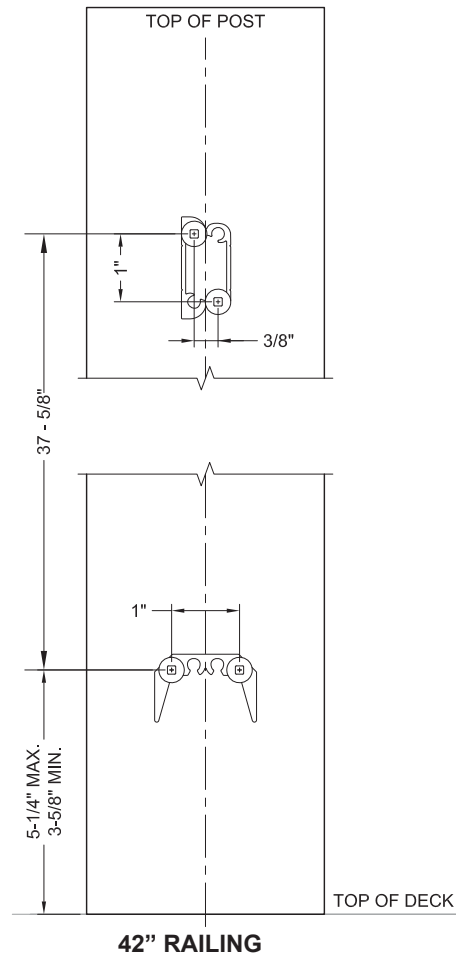
LEVEL RAILING INSTALLATION:

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

a) Mark and pre-drill the posts for the Rail Connecting Brackets (RCBs) attachment screws. Each RCB requires 2 screws. Refer to correct diagram below based on your railing system height, for hole location dimensions from top of deck (see Figures 1.1A & 1.2A).



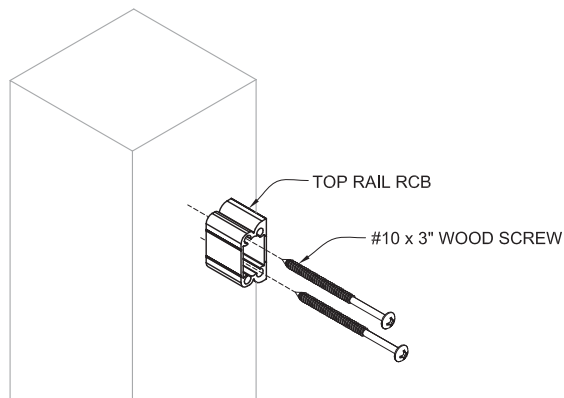
(Figure 1.1A)



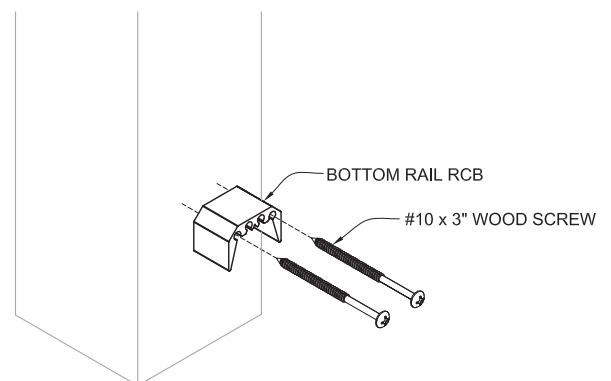
(Figure 1.2A)

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

a) Attach the top and bottom Rail Connecting Brackets to each post using the #10 x 3" wood screws (see Figures 2.1A & 2.2A). *The Rail Kits include #10 x 3" wood screws for attachment to wood posts (as shown), also included are #10 x 1-1/2" self-tapping screws for attachment to non-ferrous metal posts.*



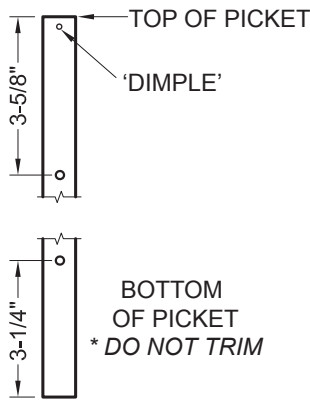
(Figure 2.1A)



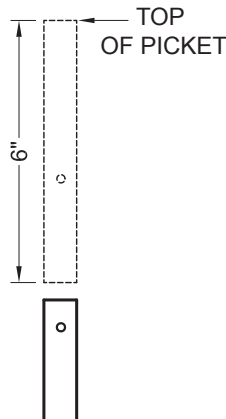
(Figure 2.2A)

Level Install: Step 3 – Trim top of Pickets (36" railing only)

- a) For 36" railing systems the top of the picket must be trimmed 6". Locate the top of the picket by finding the indication 'dimple'. *Note: the distance from the top of the picket to the center of the first hole will be 3-5/8", (see Figure 3.1A).*
- b) Trim 6" of material off the top of the picket (see Figure 3.2A)



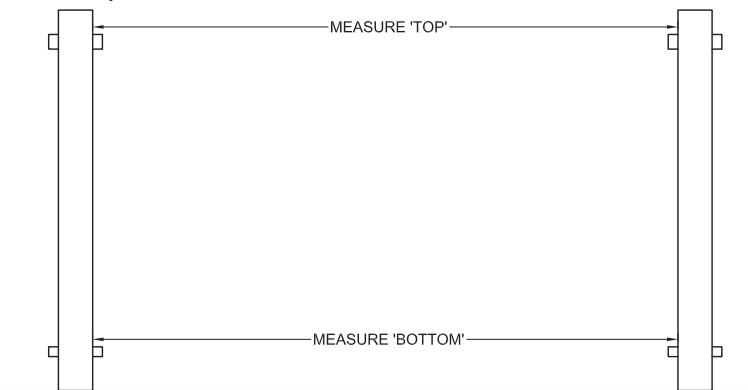
(Figure 3.1A)



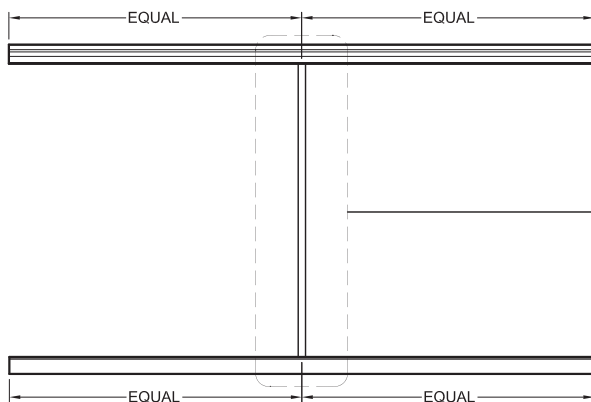
(Figure 3.2A)

Level Install: Step 4 – Assemble Rail Kits

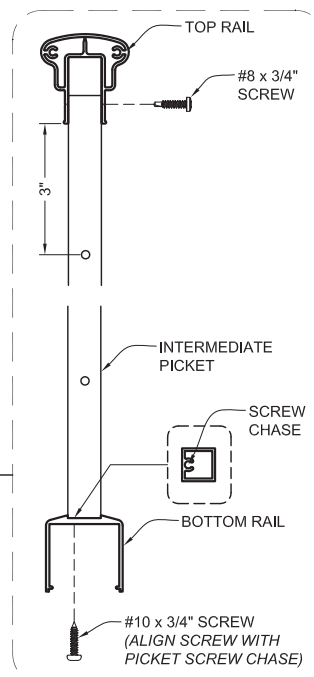
- a) Measure the open width between each set of posts (see Figure 4.1A). *Note: be sure to take two measurements: one just above the top RCBs for the top rail and one just above the bottom RCBs for the bottom rail.*
- b) Trim the top and bottom rails to match the corresponding measurements.
- c) Attach the Intermediate Picket to the center of the Top Rail using a #8 x 3/4" screw and to the center of the Bottom Rail using a #10 x 3/4" screw (see Figure 4.2A). *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 are included in the Rail Kits, and require a #2 square drive bit.*



(Figure 4.1A)

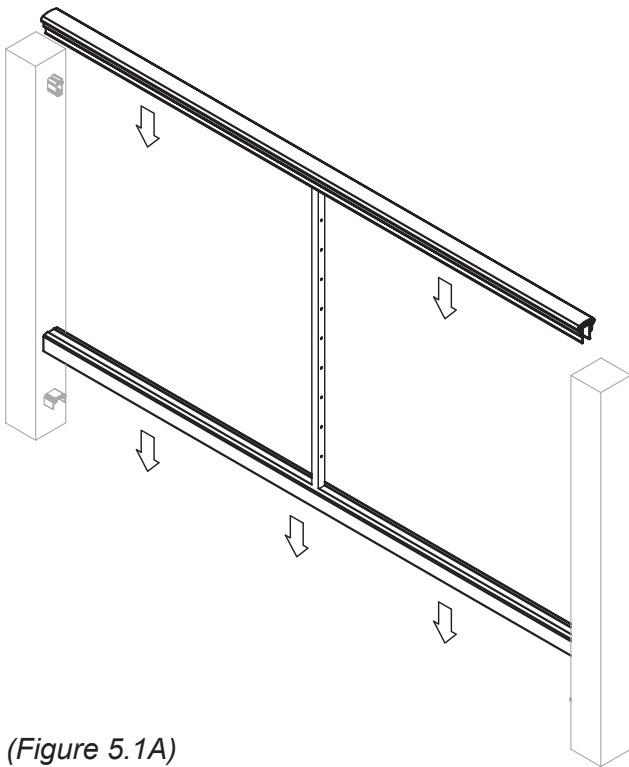


(Figure 4.2A)

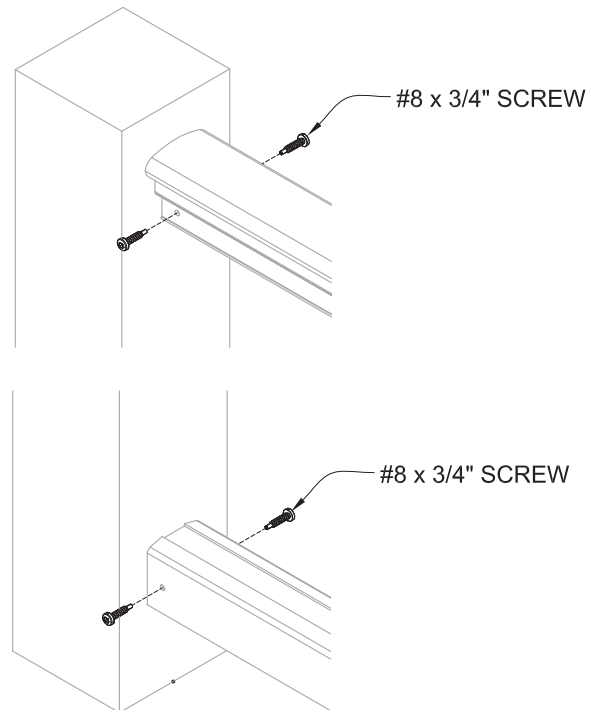


Level Install: Step 5 – Attach Rail Kits to Posts

- a) Insert the rail kit assembly between the posts and slide down onto the RCBs (see Figure 5.1A).
- b) Secure the Top and Bottom Rails to the RCBs using two #8 x 3/4" screws for the top rail and two for the bottom rail (see Figure 5.2A). *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.*



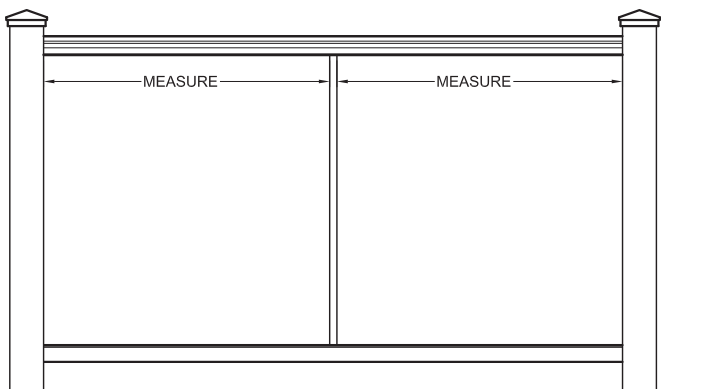
(Figure 5.1A)



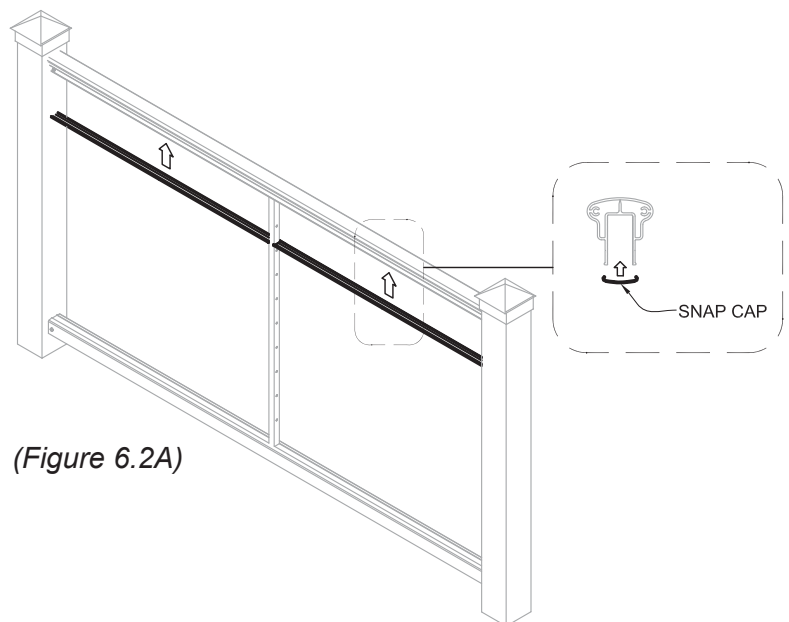
(Figure 5.2A)

Level Install: Step 6 – Cut and Attach Snap Caps

- a) Measure underneath the top rail from the face of the Intermediate Picket to the adjacent post faces (See Figure 6.1A).
- b) Trim the Snap Caps to match the corresponding measurements.
- c) Press the Snap Caps on to the bottom of the top rails until they click and lock into place (see Figure 6.2A).



(Figure 6.1A)



(Figure 6.2A)

Level Install: Step 7 – Install CableRail Infill

See page 8 for more information

STAIR RAILING INSTALLATION:

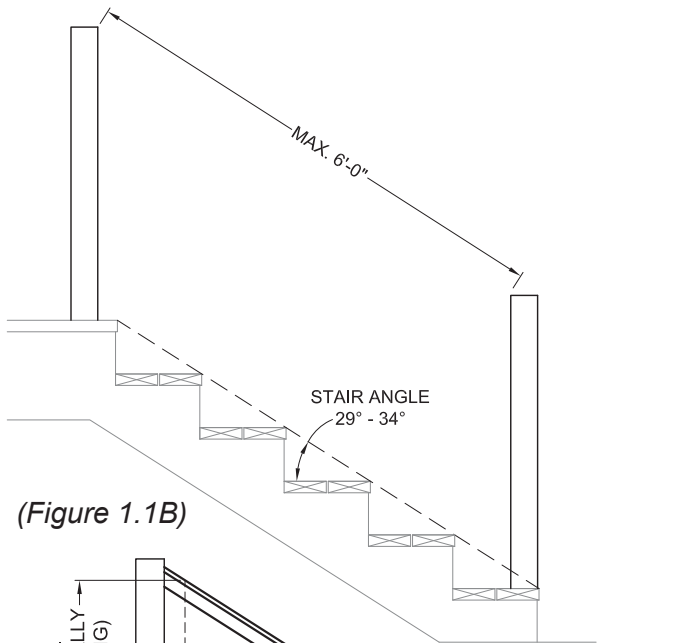
Note: Stair Rail Kits can accommodate stairways with 6-ft maximum between posts, and the pickets are pre-drilled for cables to fit a stair slope of between 29 and 34 degrees. Stair Rail Kits are designed to finish at a height of 34"-38", with the top rail acting as a graspable handrail.

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

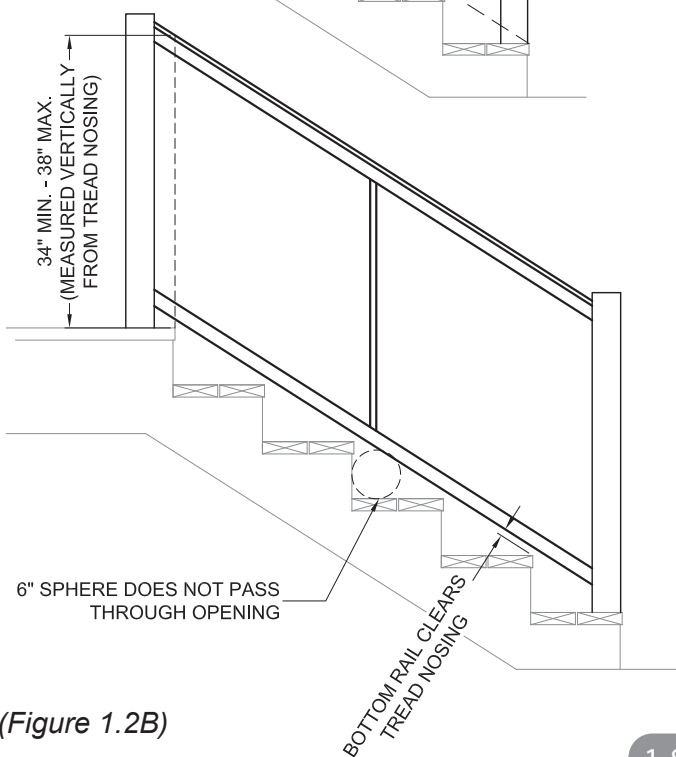
- a) RCB location will be dependent on newel post locations, in relation to the top and bottom stair treads. It is important to place the top and bottom rail so that the final assembly will meet the following conditions:
- The bottom rail will not rest on the stair tread nosing.
 - The bottom rail and 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. Always be sure to check with your local building code authority regarding code compliance requirements in your project location.

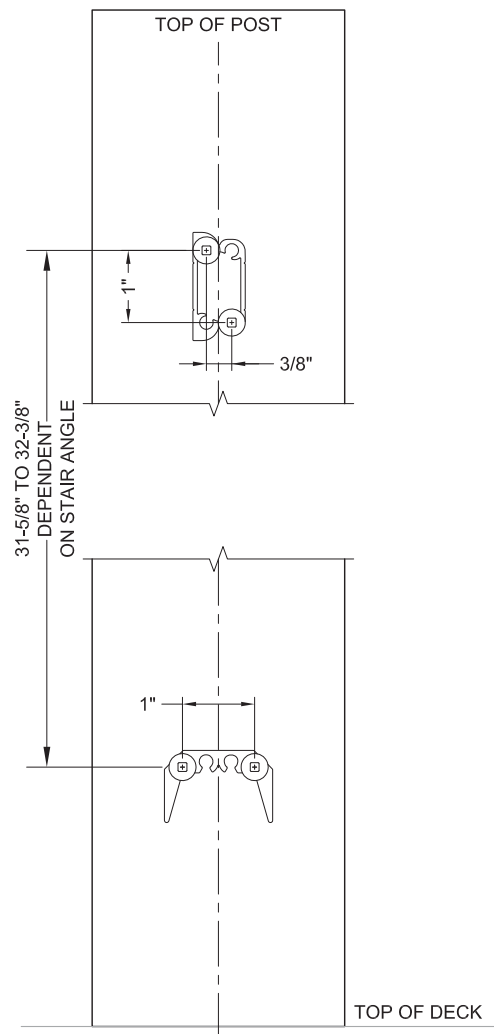
Following these conditions (see Figures 1.1B & 1.2B), locate the top and bottom RCB locations, mark and pre-drill the posts for the Rail Connecting Brackets (RCBs) attachment screws. Each RCB requires 2 screws. (see Figure 1.3B).



(Figure 1.1B)



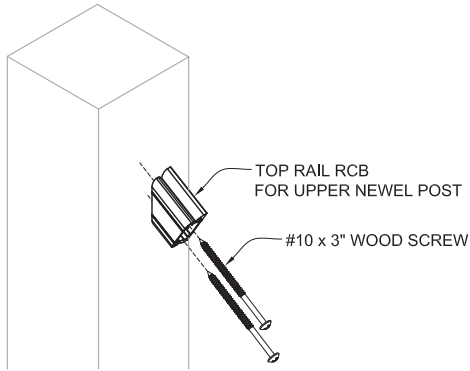
(Figure 1.2B)



(Figure 1.3B)

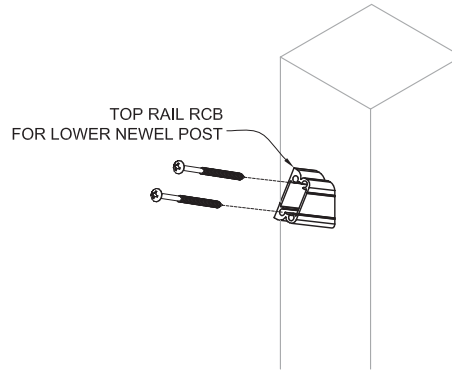
Stair Install Step 2 – Attach Rail Connecting Brackets (RCBs) to Posts

- a) Follow the instructions in **Level Install Step 2 – Attach Rail Connecting Brackets (RCBs) to Posts**
 Note: Each stair RCB is different, be sure to use the proper RCB in the respective post location.
 (see Figures 2.1B & 2.2B).



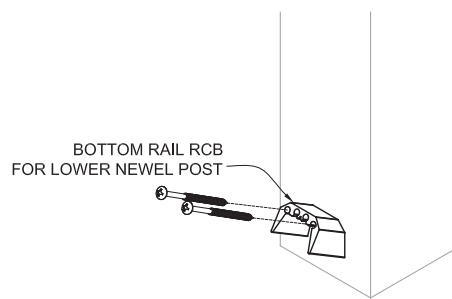
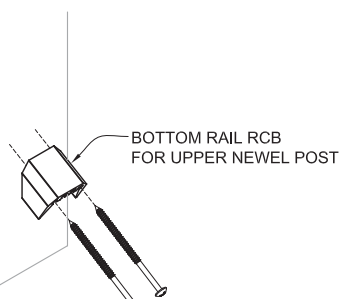
UPPER NEWEL POST

(Figure 2.1B)



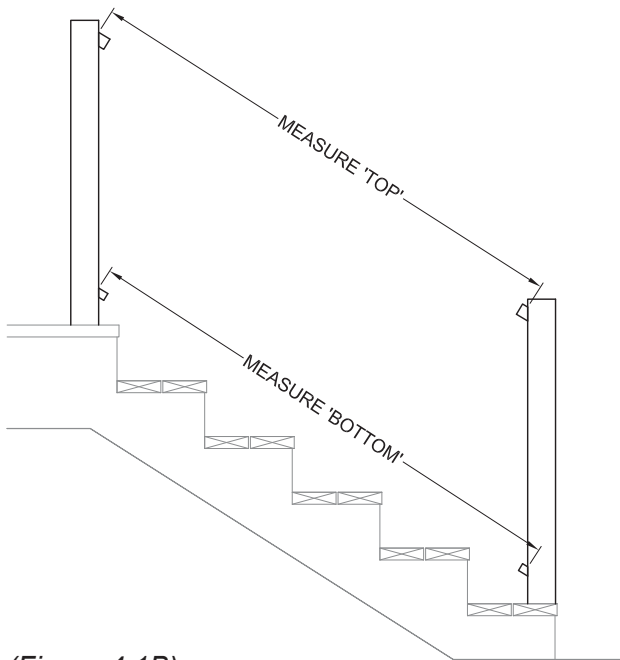
LOWER NEWEL POST

(Figure 2.2B)

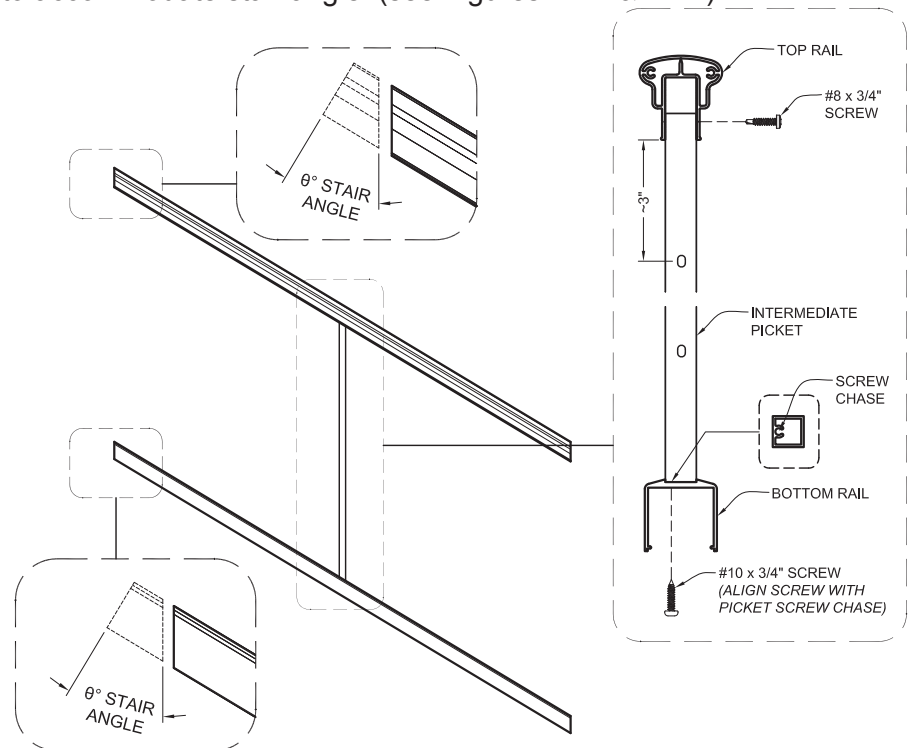


Stair Install: Step 4 – Assemble Rail Kits

- a) Follow the instructions in **Level Install: Step 4 – Assemble Rail Kits** and be sure to miter the cuts on both ends of the top and bottom rails to accommodate stair angle. (see Figures 4.1B & 4.2B).



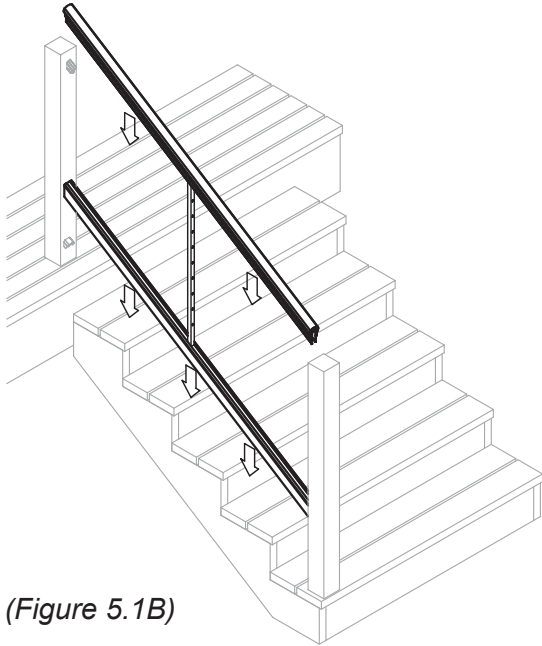
(Figure 4.1B)



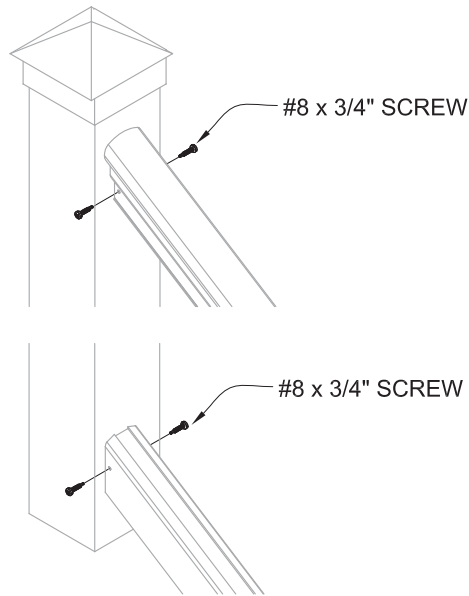
(Figure 4.2B)

Stair Install: Step 5 – Attach Rail Kits to Posts

a) Follow the instructions in *Level Install: Step 5 – Attach Rail Kits to Posts* (see Figures 5.1B & 5.2B).



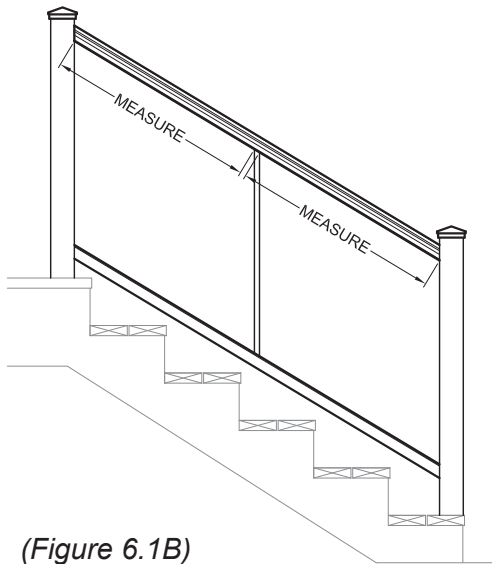
(Figure 5.1B)



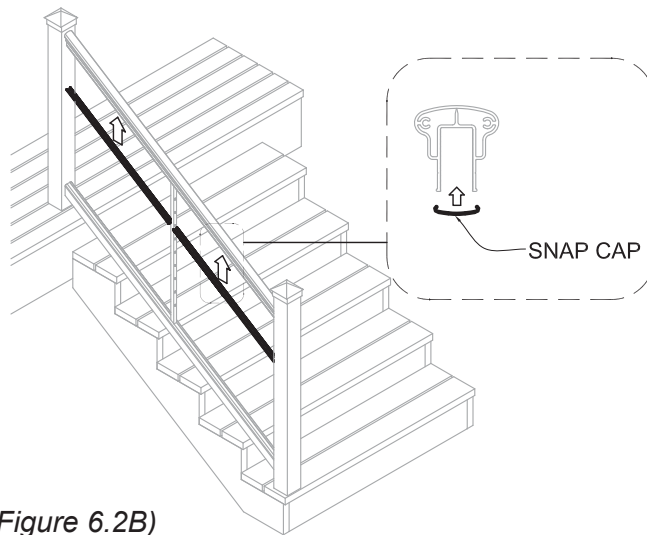
(Figure 5.2B)

Stair Install: Step 6 – Cut and Attach Snap Caps.

a) Follow the instructions in *Level Install: Step 6 – Cut and Attach Snap Caps* (see Figures 6.1B & 6.2B).



(Figure 6.1B)

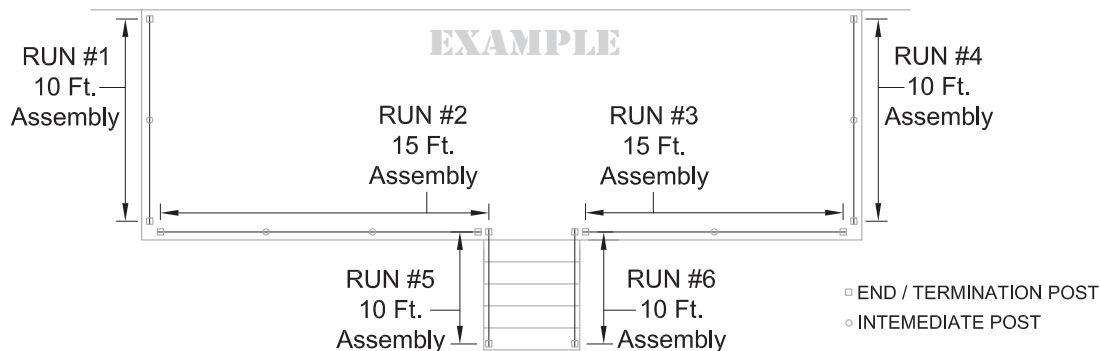


(Figure 6.2B)

Stair Install: Step 7 – Install 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) 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'.*

For 36" railing systems you will need 9 cable assemblies for each cable run section.
For 42" railing systems you will need 11 cable assemblies for each cable run section.

Use the chart below to write down the quantity of each cable assembly needed.

CABLE ASSEMBLIES			
Qty	Item	Qty	Item
	5-ft. CableRail Cable Assembly		25-ft. CableRail Cable Assembly
	10-ft. CableRail Cable Assembly		30-ft. CableRail Cable Assembly
	15-ft. CableRail Cable Assembly		40-ft. CableRail Cable Assembly
	20-ft. CableRail Cable Assembly		50-ft. CableRail Cable Assembly

- d) Install CableRail Assemblies per installation instructions.

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