

REVIVAL+ **Horizontal Railing**

Installation Instructions & User Guide

Thank you!

Congratulations on your new Revival Plus railing! We are so glad you chose to work with us, and we can't wait for you to start enjoying your amazing new outdoor space. If you have any questions or need further help with installation, please contact your retailer.

Please Note:

It is the installer's responsibility to understand and adhere to local building codes and safety requirements, and to obtain all required building permits before installing. All of our straight level aluminum railing sections 8 feet long and below meet IRC building codes. The purchaser and installer should review the intended use of the products with a licensed professional engineer to determine code compliance. Revival Railing is not liable for improper or unsafe installations of this product.

We recommend 2 people for assembly.

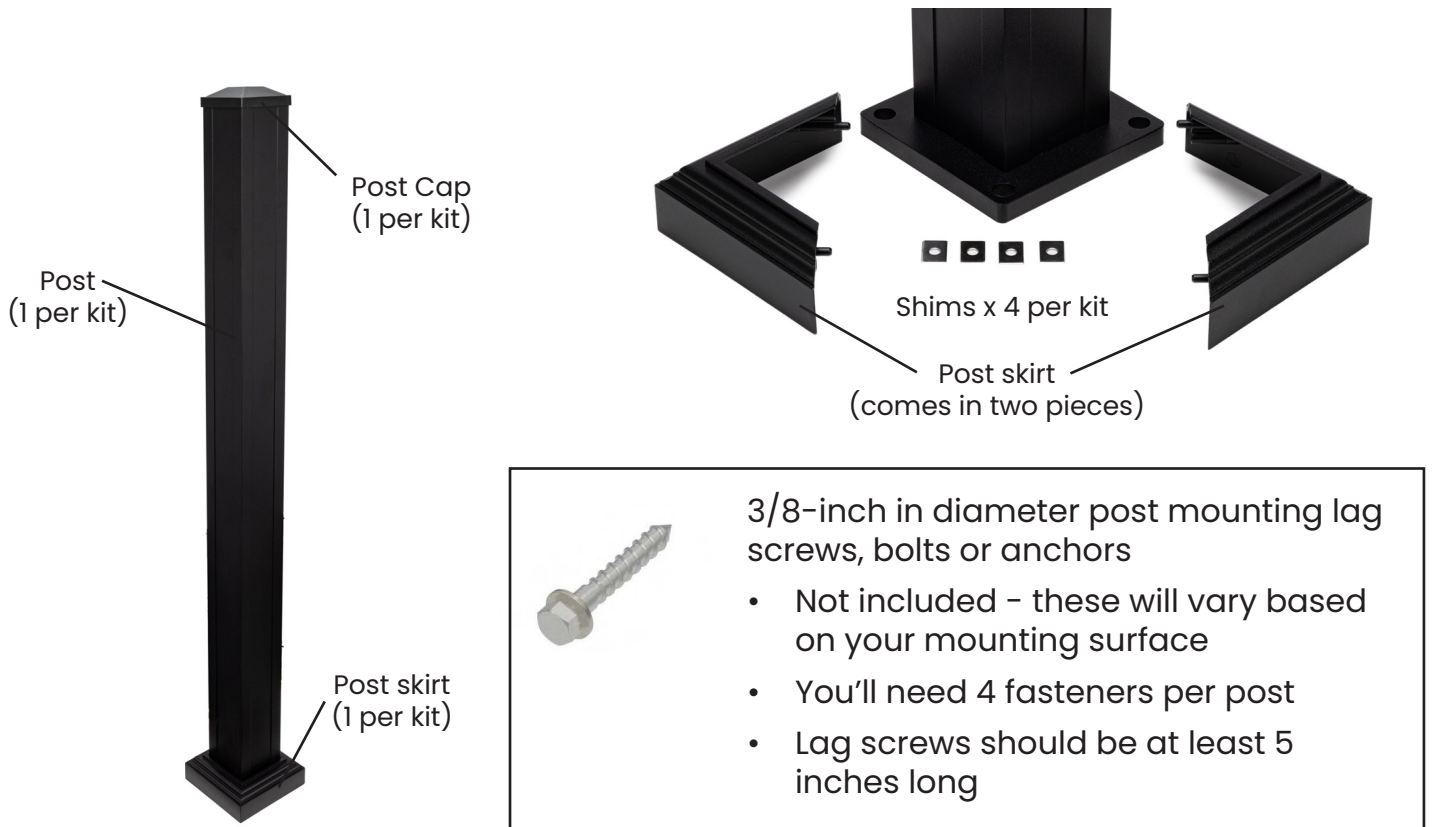
Required Tools for Assembly

- Miter saw with a high tooth count carbide blade
- Safety glasses
- Silicone adhesive
- Pencil
- Drill
- 5/32-inch drill bits
- Screwdriver
- Measuring tape
- Level
- Revival Touch-Up Paint
- Clamps
- At least two 2-3/4-inch blocks of wood to use as temporary supports
- A 1-inch-thick wood board as a temporary measuring support for stair railing sections

Note: When cutting any metal parts, make sure to coat the cut ends in Revival Touch-Up paint to protect the metal from corrosion.

Part I: Mount Your Posts

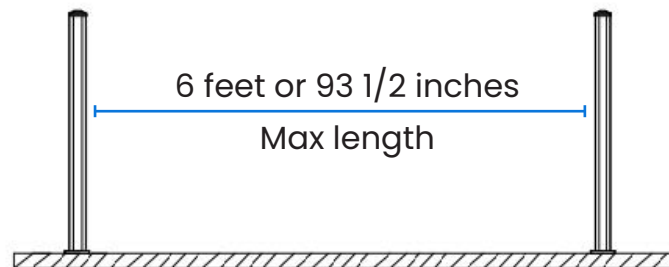
Post Installation Parts & Pieces



Step 1: Determine Where Your Posts Go

Measure the perimeter of your deck and mark where each post will mount.

- If you have **6-foot rail kits**, your posts can be up to **6 feet apart**.
- If you have **8-foot rail kits**, your posts can be up to **93-1/2 inches apart**.



Don't space your posts any further apart, or your top and bottom rails will not reach! You can cut your rails down to shorter lengths - we'll walk through measuring and cutting in Parts II and III.



Why 93-1/2 inches?

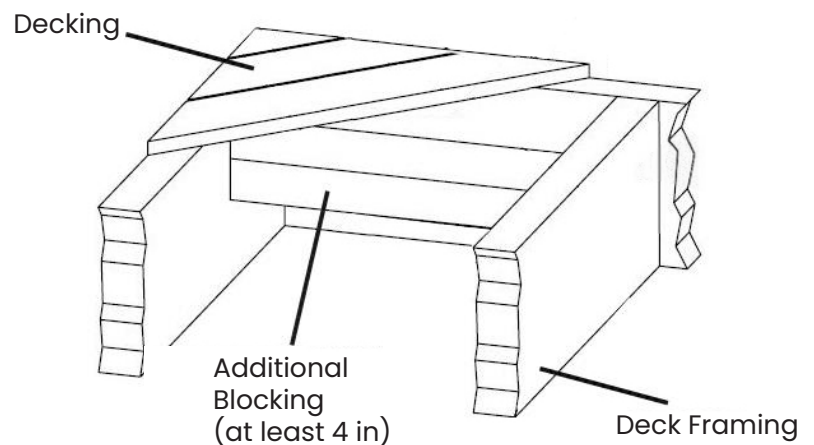
Our 8-foot rail kits use “on-center” dimensions, which means a full railing section would be 8 feet from the center of one post to the center of the next post. The “true” distance between the edges of the posts will be slightly shorter: 93-1/2-inches.

We do this to save you on shipping costs, as items 8 feet or longer cost significantly more to ship.

Step 2: Prepare Your Deck Frame With Enough Blocking Under Each Post

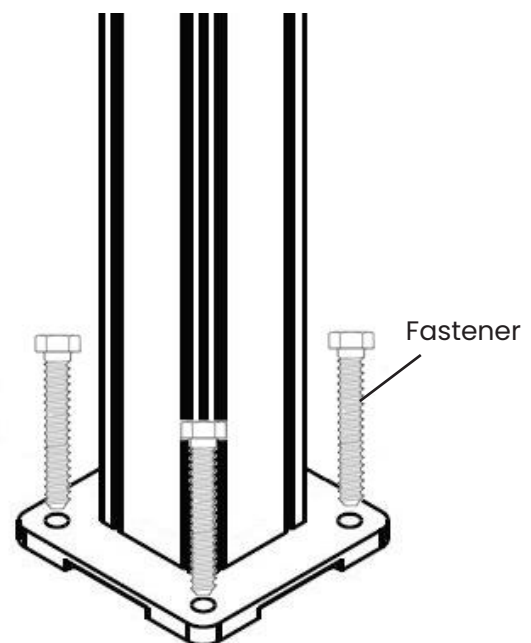
If you’re mounting posts onto a deck surface, make sure you have enough framing or blocking underneath the surface to securely hold your post.

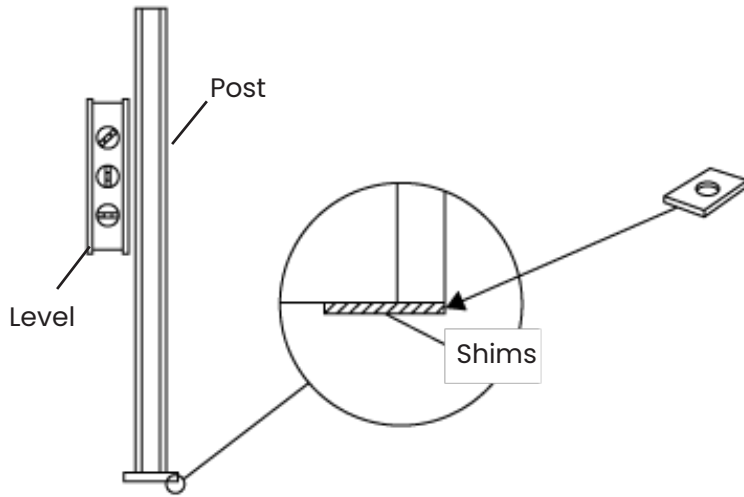
Each 5-inch post mounting lag screw should drive into at least 4 inches of solid wood – so you may need to add wood blocking to your deck frame underneath each spot you’ve marked to mount a post.



Step 3: Mount Your Posts

Attach each post to your mounting surface using four 5-inch x 3/8-inch fasteners.



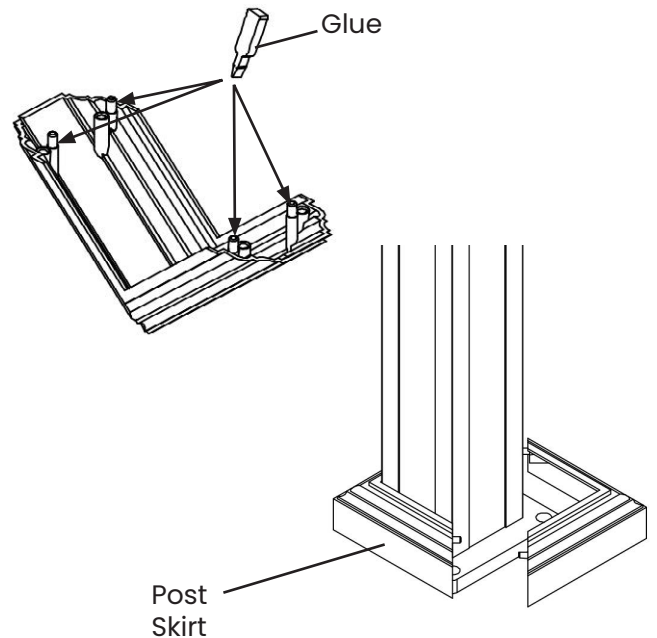


These fasteners are not included with the posts because the type of fastener needed depends on your mounting surface. To mount onto a deck surface, use 3/8-inch weather-resistant lag screws or bolts. To mount onto concrete, use concrete lag screws or anchors.

Make sure your post base is level and your post is plumb. Use shims to level the post if needed before fully seating your post-mounting fasteners.

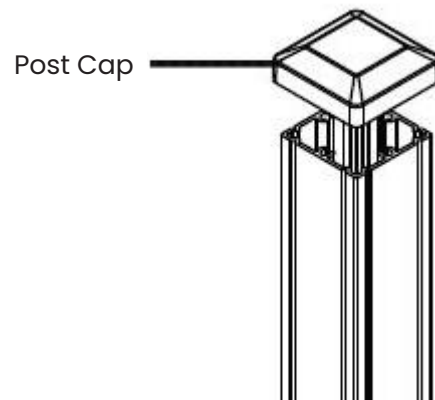
Step 4: Install Post Skirts

Place a drop of glue on each of the holes in the post skirt as shown. Slide the two pieces of the post skirt together around the post to cover the hardware at the base of your post.



Step 5: Attach Post Caps

Attach a post cap to each post, using silicone adhesive on the top of the post to secure the cap in place.



Part II: Install Level Railing Sections

Level Rail Section Parts & Pieces



Bottom Rail
(1 per kit)



Bottom Rail
Bracket
(2 per kit)



Top Rail
(1 per kit)



Top Rail Bracket
includes removable
top rail cover
(2 per kit)



Outside Vertical Balusters
(2 per kit)
Inside Vertical Balusters
(1 per kit)



Horizontal Rods
(6 per kit)



Vertical Baluster
Connectors
(6 per kit)



Baluster
Connector Screws
(6 per kit)

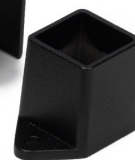
Note: Outside Vertical Balusters have holes on one side and Inside Vertical Balusters have holes on both sides



Post-to-Bracket
Screws
(10 per kit)



Rail-to-Bracket
Screws
(8 per kit)



Foot Block & Screws
(unassembled in picture)

Please note: These instructions are for railing sections in a straight line or at 90-degree angles. If you have any unique angles in your railing, check out Part IV for additional instructions.

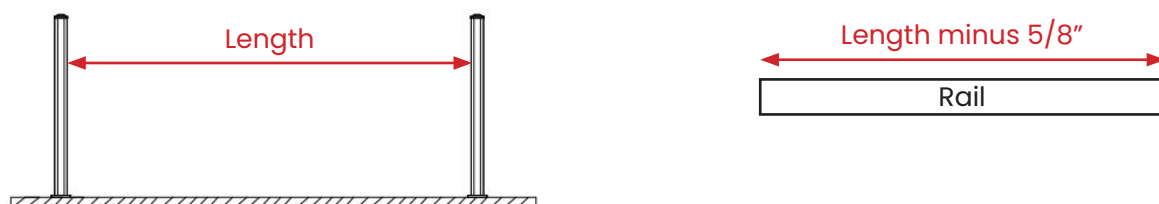
Part IIA: Cut Rails & Rods To Size

Step 1: Measure Distance Between Posts

Measure the distance between the two posts. Measure as close to the deck surface as possible for the most accurate measurement.

Step 2: Cut Top & Bottom Rails

Take that measurement minus $5/8$ -inch. This is the length of your top and bottom rails.

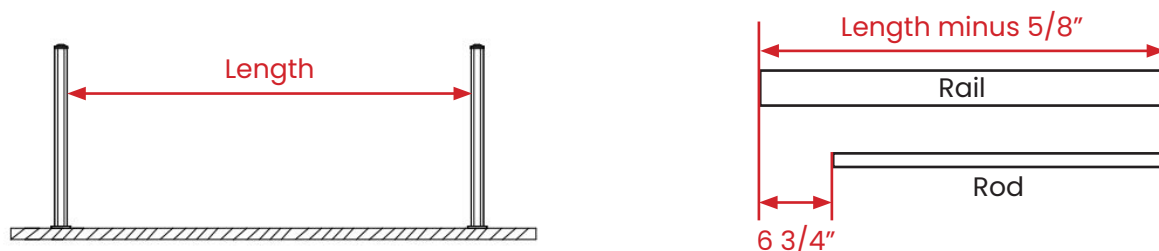


Measure your top and bottom rails, mark them, and cut them using a miter saw and a carbide-tipped blade with a high tooth count. Coat the cut ends in Revival Railing touch-up paint to protect them from corrosion.

Set the rails aside for a later step.

Step 3: Cut Horizontal Rods

Take the length of your top & bottom rails minus an additional $6-3/4$ inches. This is the length of each horizontal rod.



Measure your rods, mark them, and cut them using a miter saw and a carbide-tipped blade with a high tooth count.

Set the rods aside for a later step.

Part IIB: Prepare Rails & Install Bottom Rail

Step 1: Attach Vertical Baluster Connectors To Top & Bottom Rails

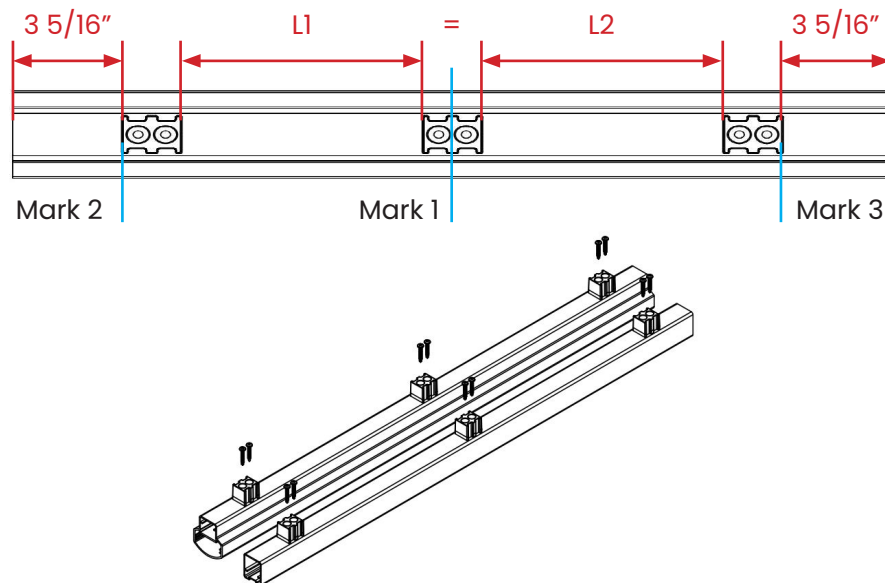
Take your cut-down top and bottom rails and make three marks on each:

Mark 1: Measure and mark the middle of each rail.

Marks 2 & 3: Measure $3\text{--}5/16$ -inch from one end and make a mark. Then measure $3\text{--}5/16$ -inch from the other end and make another mark.

Measure and make sure that Mark 2 and Mark 3 are equal distances from Mark 1. These marks are where your vertical baluster connectors will attach.

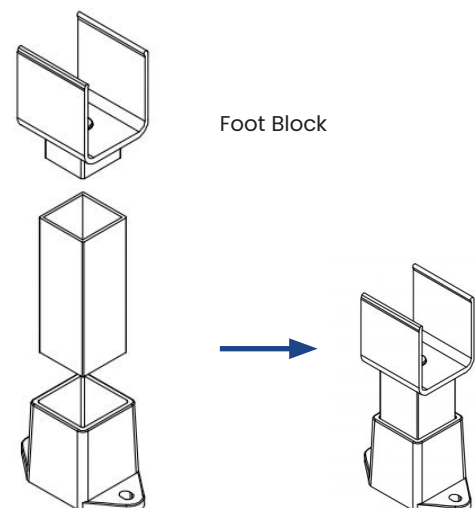
Using the included baluster connector screws, attach one vertical baluster connector centered over Mark 1 (your center mark). Attach vertical baluster connectors to Marks 2 & 3 as shown below, with the outside edge of the bracket connector aligned with the mark.



Step 2: Attach Foot Block To Bottom Rail

Find the center of your bottom rail and attach the foot block to it, with the bottom rail sitting in the U-channel at the top of the foot block.

The foot block comes apart in three pieces; if you need to adjust the height, you can cut the middle piece to size.

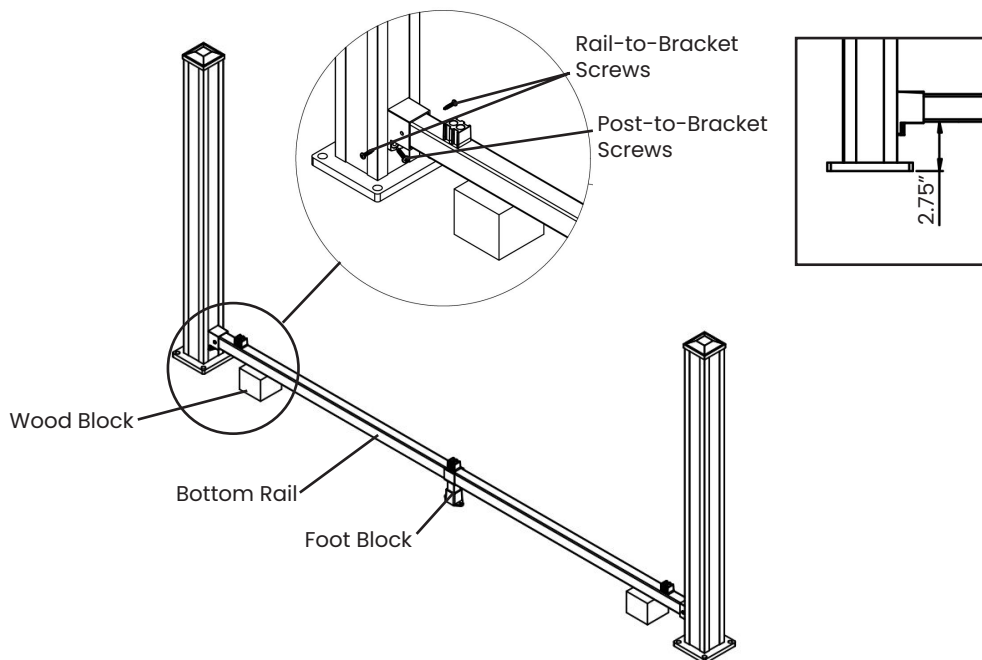


Step 3: Install Bottom Rail Brackets

Use two blocks of wood that are 2-3/4 inches tall as spacers. Insert the ends of your bottom rail into the bottom rail brackets, then lay the bottom rail on these spacer blocks between your posts.

Mark where the screw holes in the brackets line up on your post. Then pre-drill holes using a 5/32-inch drill bit. Use the grooves in the post to help make sure your brackets are centered and level.

Attach your bottom rail and bottom rail brackets to each post using the included post-to-bracket screws. Then attach the foot block to your deck surface with the included foot block screws.

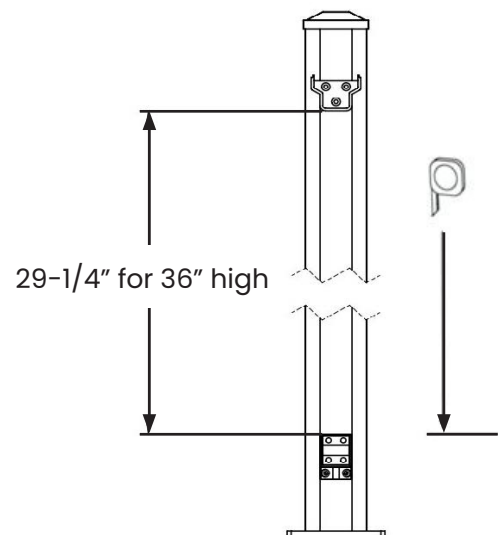


Step 4: Install Top Rail Brackets

Starting at the top of your bottom rail bracket, measure 29-1/4 inches up each post and place your top rail bracket. Make sure the bracket is level, then mark where the screw holes are and pre-drill holes using a 5/32-inch drill bit.

Remove the top rail covers from the top of each bracket and set them aside. Attach your top rail brackets to both posts using the included post-to-bracket screws.

Note: don't install your top rail yet. The infill panel has to be in place first.

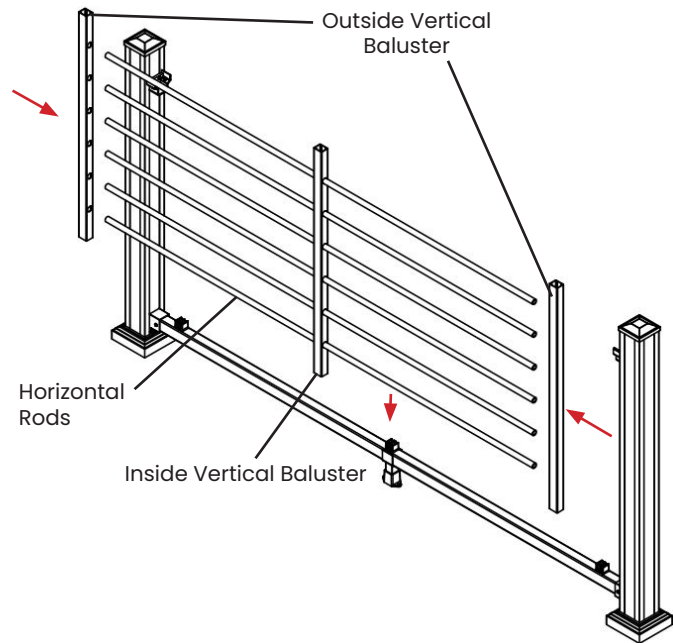


Part IIC: Install Horizontal Infill

Step 1: Assemble Horizontal Infill Panel

Take your cut-down horizontal rods and run them through the holes in your inside vertical baluster. Then fit your outside vertical balusters on each end of the rods to assemble your infill panel.

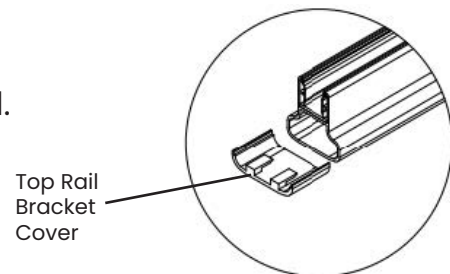
Using two people to hold the whole panel together, insert the three vertical balusters into the baluster connectors on your bottom rail.



Part IID: Install Top Rail

Step 1: Attach Top Rail Bracket Covers To Top Rail

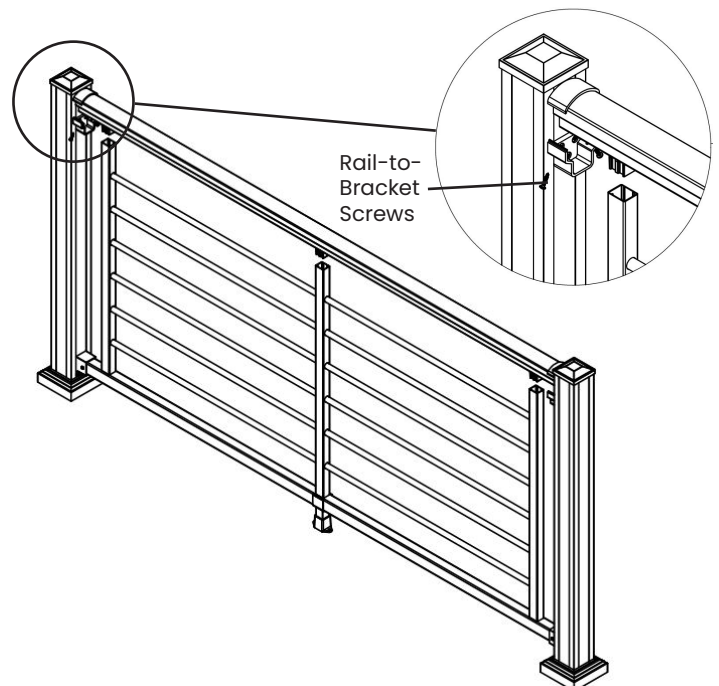
Insert bracket covers onto each end of your cut top rail.



Step 2: Attach Top Rail To Brackets

Lower your top rail onto your top rail brackets. Make sure the baluster connectors insert into the tops of your three vertical balusters.

Once it's in place, attach your top rail to your top rail brackets using the included rail-to-bracket screws.



Part III: Install Stair Railing Sections

Stair Rail Section Parts & Pieces



Bottom Rail
(1 per kit)



Bottom Rail
Bracket
(2 per kit)



Bottom Rail
Bracket Base
(2 per kit)



Outside Vertical Balusters
(2 per kit)
Inside Vertical Balusters
(1 per kit)

Note: Outside Vertical Balusters have holes on one side and Inside Vertical Balusters have holes on both sides



Top Rail
(1 per kit)



Top Rail Bracket
(2 per kit)



Top Rail
Bracket Base
(2 per kit)



Bracket-Hinge bolt
assemblies
(four long hollow bolts
& four short bolts - all
with hex heads)



Horizontal Rods
(6 per kit)



Vertical Baluster
Connectors
(6 per kit)



Baluster
Connector Screws
(6 per kit)



Post-to-Bracket
Screws
(8 per kit)



Short Baluster
Finishing Screws
(6 per kit)



Rail-to-Bracket
Screws
(8 per kit)



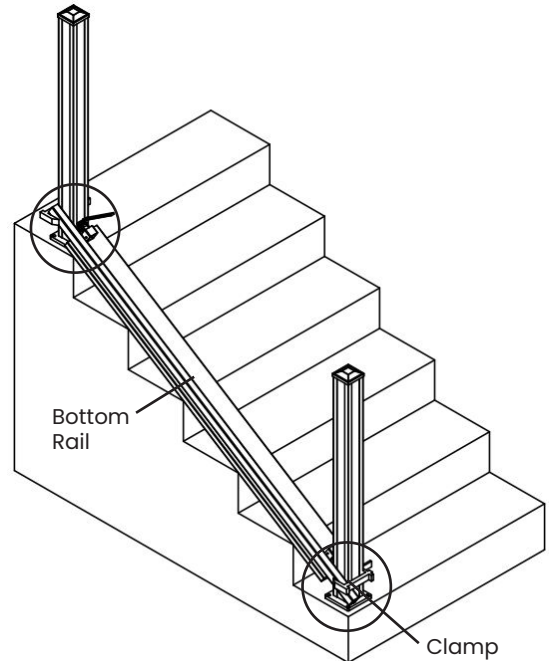
Allen Wrench
(1 per kit)

Part IIIA: Cut Top & Bottom Rails To Size

Step 1: Clamp Bottom Rail In Place

Lay a 1-inch-thick piece of wood on your stair treads to mark the slope of your stairs.

Lay your bottom rail on the wood piece and clamp it to the posts at the top and bottom of your stairs.

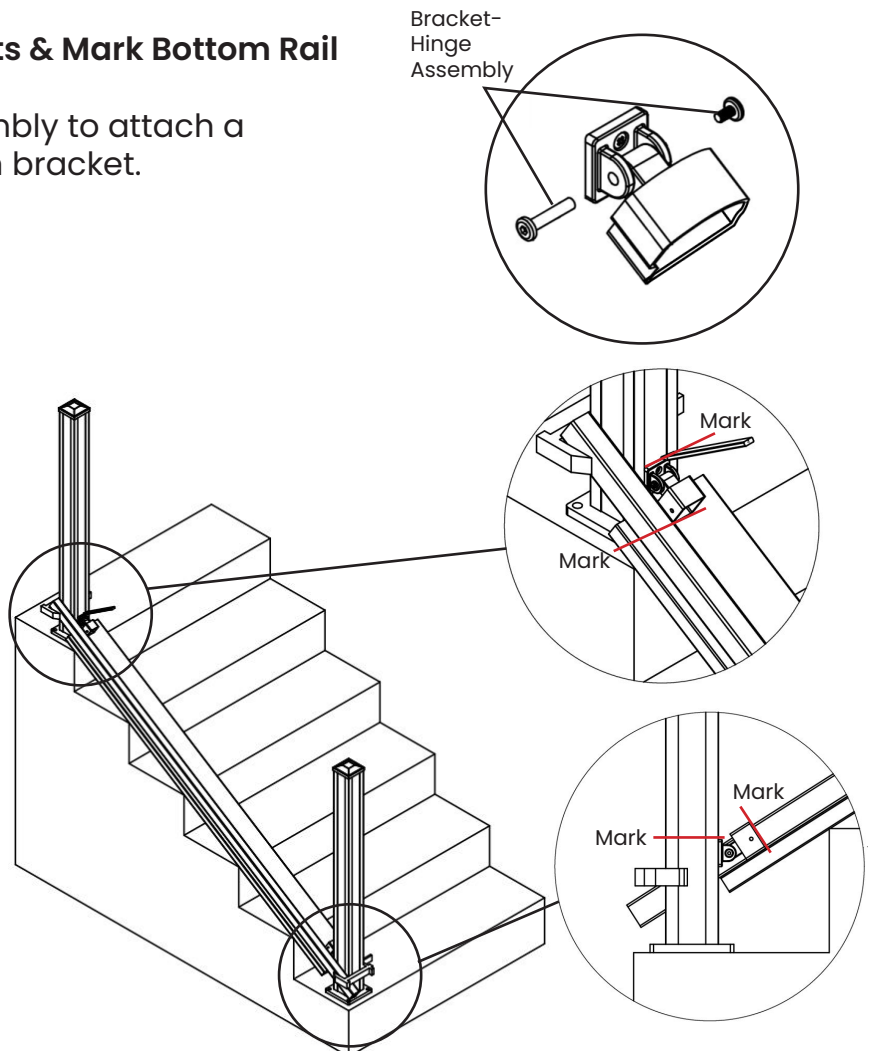


Step 2: Assemble Bottom Brackets & Mark Bottom Rail

Use the bracket-hinge bolt assembly to attach a bottom bracket base to a bottom bracket.

Set the entire bracket assembly on your one-inch wood piece so it's parallel to your clamped bottom rail. Mark where the base will attach to your post, and mark where the end of the bracket lines up with your bottom rail.

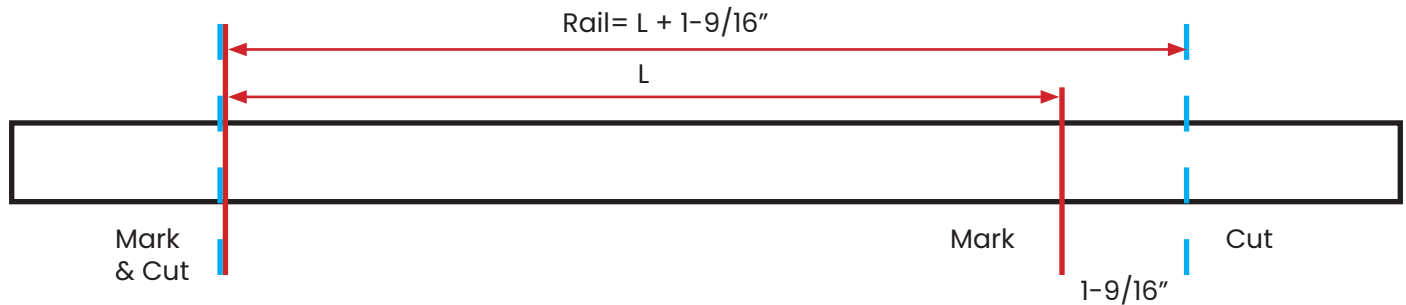
Do this at the top and bottom of your stairs.



Step 3: Cut Top & Bottom Rail To Size

Take the length between the two marks on your bottom rail (L) and **go 1-9/16 inches beyond one mark**. Cut your bottom rail to this length using a miter saw and a carbide-tipped blade with a high tooth count.

Then use your bottom rail as a template and cut your top rail to the same length. Coat the cut ends of both rails in Revival Railing touch-up paint to protect them from corrosion.



Part IIIB: Cut Horizontal Rods To Size

Step 1: Attach Bottom Bracket Bases To Posts

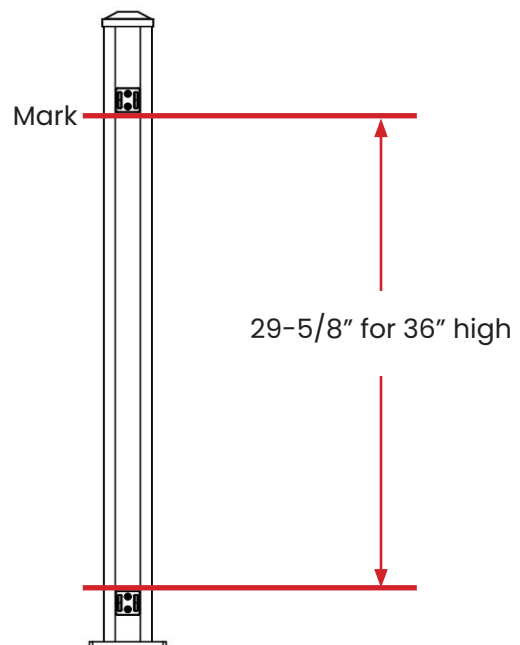
Take your bracket assemblies apart again so the bracket bases and brackets are separate.

Using the marks you made on the post, attach the bottom rail bracket bases to the posts at the top and bottom of your stairs. Mark the locations of the screw holes, pre-drill holes with a 5/32-inch drill bit, then attach the bracket bases using the included post-to-bracket screws.

Step 2: Attach Top Bracket Bases To Posts

Measure 29-5/8 inches up from the top edge of your bottom bracket bases and mark your posts. This is where the bottom of your top rail bracket bases will attach.

Line up the top rail bracket base, mark the locations of the screw holes, pre-drill holes with a 5/32-inch drill bit, and then attach the top rail bracket bases using the included post-to-bracket screws.

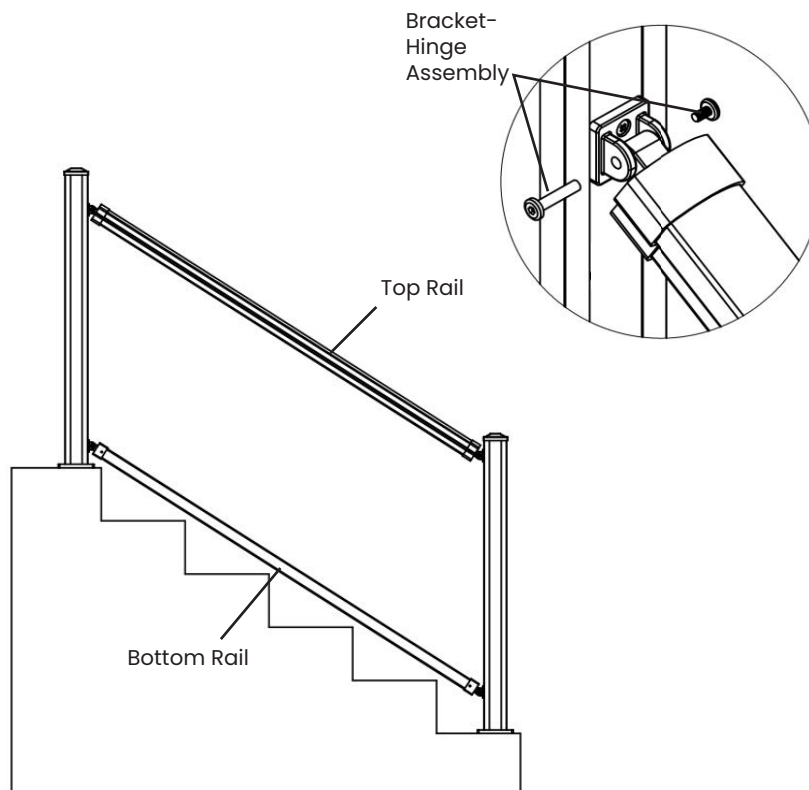


Step 3: Loosely & Temporarily Place Top & Bottom Rails In Place

Insert the ends of your cut-down top and bottom rails into the top and bottom brackets. Don't fasten them yet.

Put your bottom rail in place, loosely connecting the bottom rail brackets to the bottom bracket bases with the bracket-hinge bolt assembly. You don't need to fully tighten these screws yet.

Then repeat the same process for the top rail.



Why shouldn't I fasten rails yet?

Stairs come in so many different angles and sizes that the trickiest part of stair railings is matching everything to the exact angle of your stairs. We're lining everything up so we can measure and mark all the angles – then we can cut all the parts and assemble them all at once!

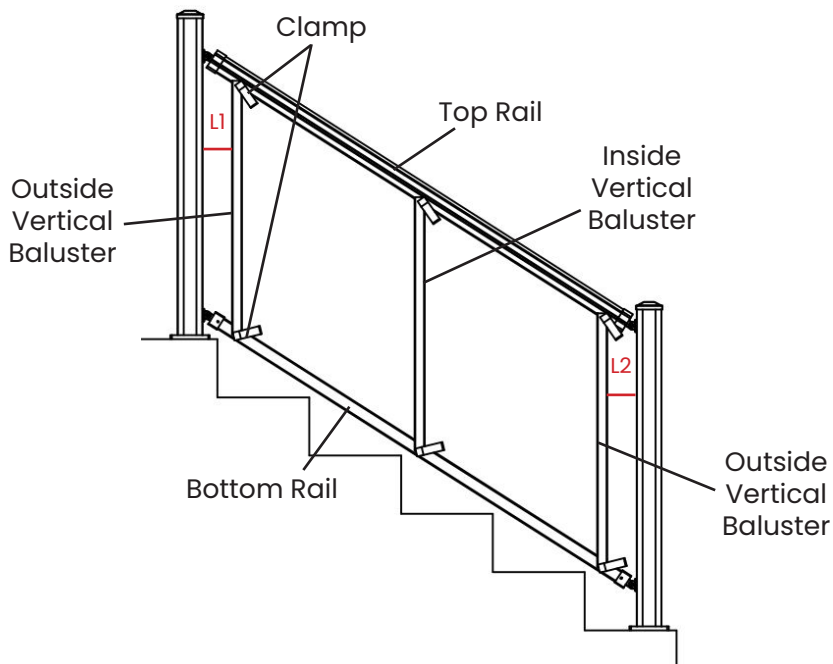
Step 4: Clamp Vertical Balusters To Rails

Use clamps to set your two outside vertical balusters and your one inside vertical baluster in place.

The outside vertical baluster at the top of the stairs should be less than 4 inches from the post and perfectly plumb, or level vertically. Measure the distance between the baluster and the post (L1).

The outside vertical baluster at the bottom of the stairs should be the same distance from the post and perfectly plumb. Measure to make sure the two outside balusters are equal distances from their posts ($L1 = L2$).

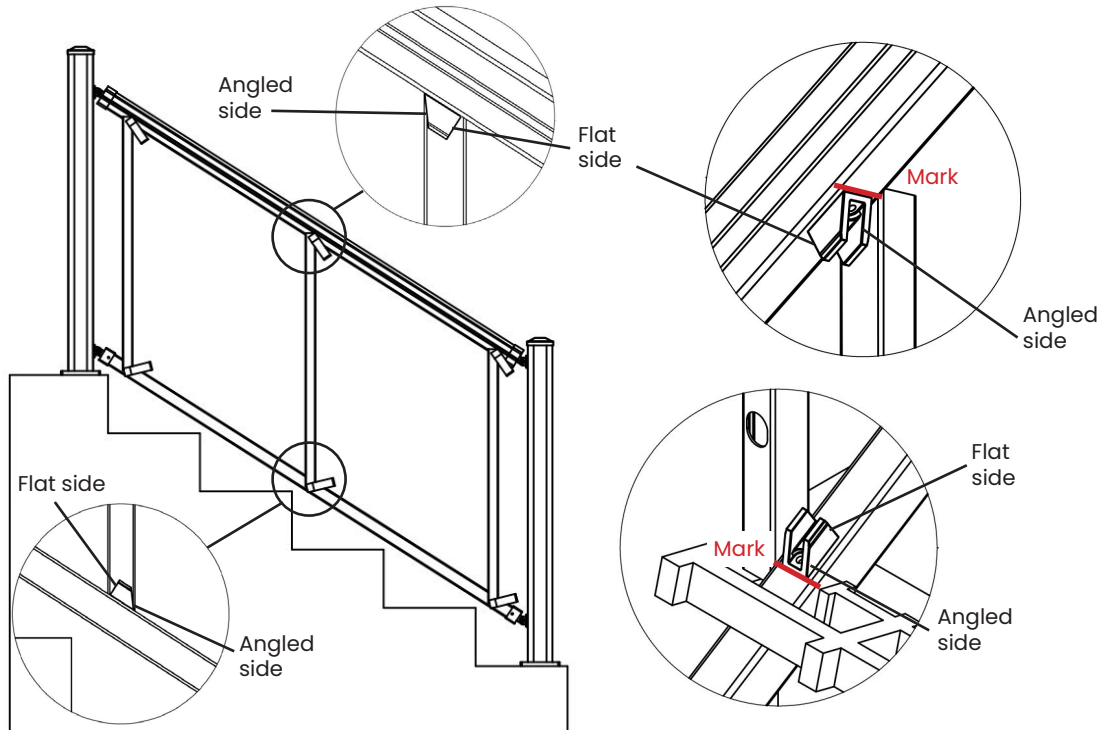
The inside vertical baluster should be halfway between the two outside balusters and perfectly plumb.



Step 5: Line Up Baluster Connectors & Mark Locations On Top & Bottom Rails

With your balusters properly lined up and securely clamped in place, line up your baluster connectors and mark where they'll attach to your top and bottom rails.

Each baluster connector has an angled side and a flat side - use the instructions below to line them up and mark them correctly:



- On your **top rail**, the angled side of each baluster connector should point **up** the stairs.
- On your **bottom rail**, the angled side of each baluster connector should point **down** the stairs.
- The angled sides should run roughly parallel to the vertical balusters.

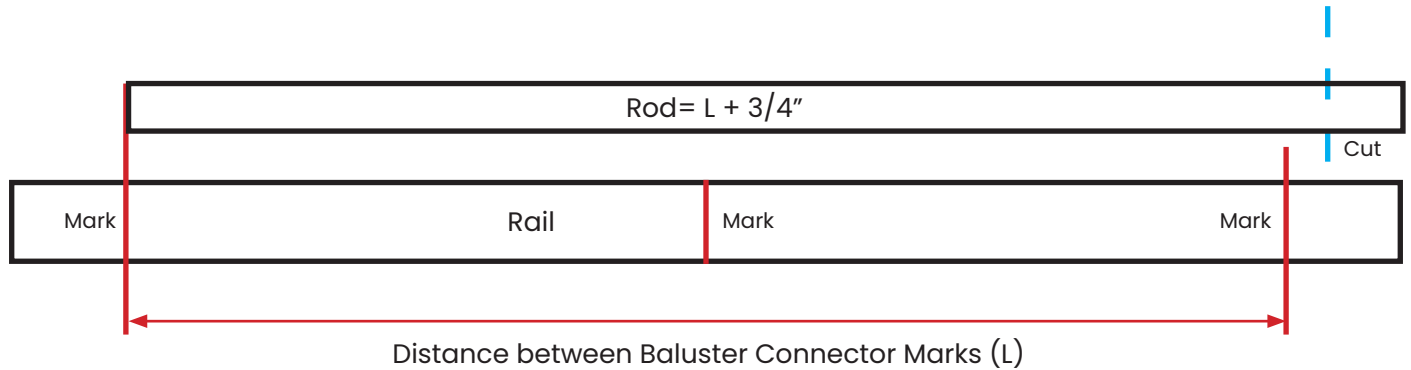
Mark your top & bottom rails **at the angled side of each baluster connector**.

Important: Make sure you mark the angled side of each baluster connector, not the flat side. This will impact the cut length of your rods, as well as the baluster connector attachment in a future step.

Step 6: Cut Horizontal Rods To Length

Measure the distance between the baluster connector marks (L) you just made. Add 3/4-inch and cut your horizontal rods to this length using a miter saw and a carbide-tipped blade with a high tooth count. Coat the cut ends in Revival Railing touch-up paint to protect them from corrosion.

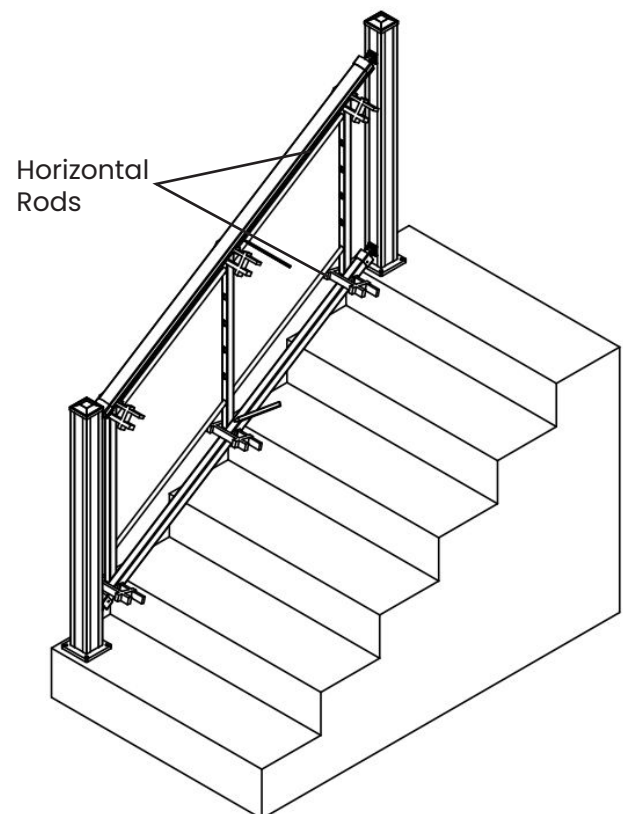
Note: you don't have to cut your rods at an angle.



Part IIIC: Cut Vertical Balusters To Size

Step 1: Temporarily Insert Two Rods

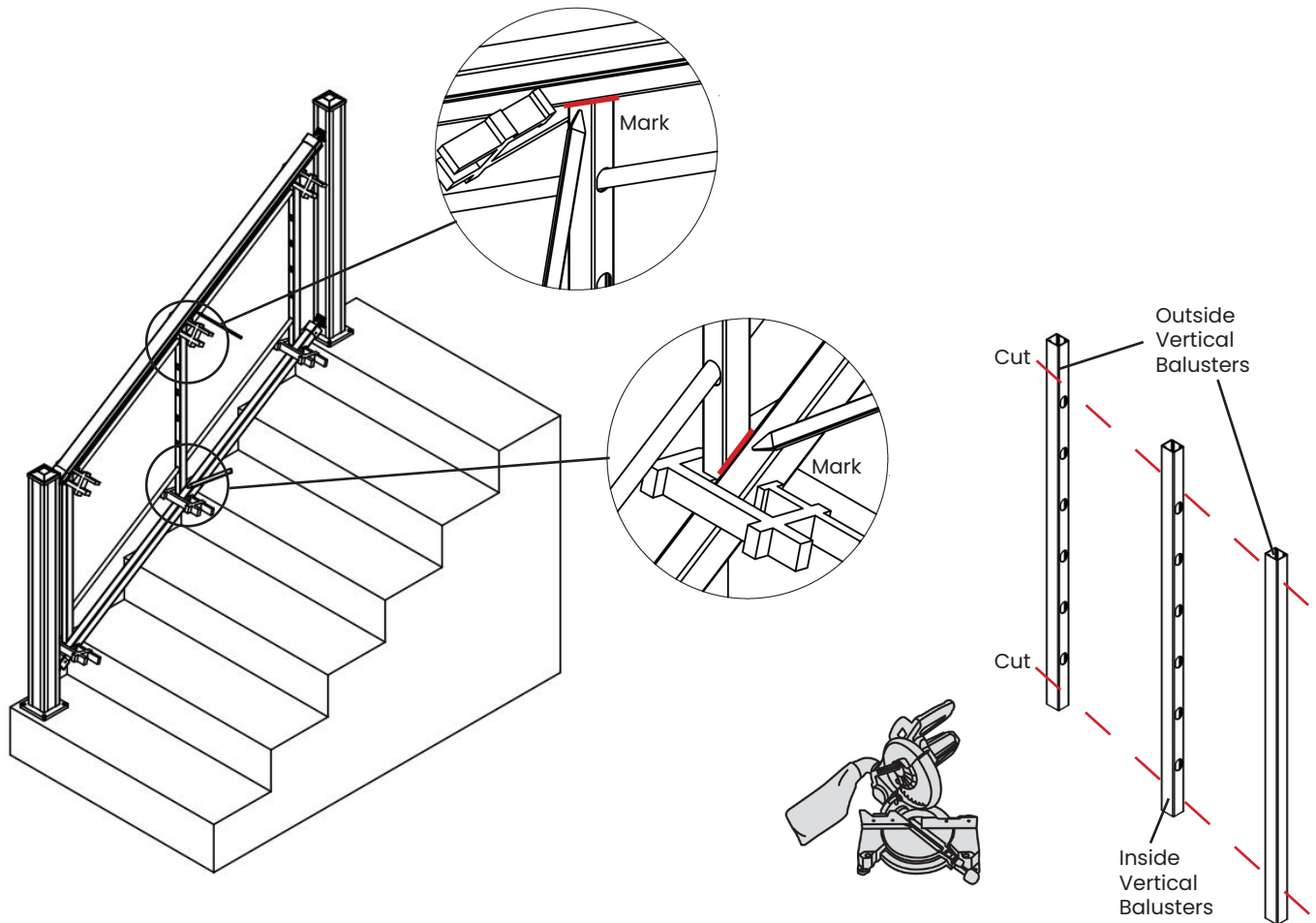
Unclamp one of your outside vertical balusters. Slide two cut rods through the holes in the remaining two balusters – one rod through the top set of holes and one rod through the bottom set. Then replace the third vertical baluster on the end of the rods and clamp it in place.



Step 2: Mark & Cut Vertical Balusters

Make sure all three of your balusters are plumb again. Then mark lines on your balusters where they meet your top and bottom rail.

Cut the balusters on those marked lines using a miter saw and a carbide-tipped blade with a high tooth count. Coat the cut ends in Revival Railing touch-up paint to protect them from corrosion. You'll cut these balusters at an angle.

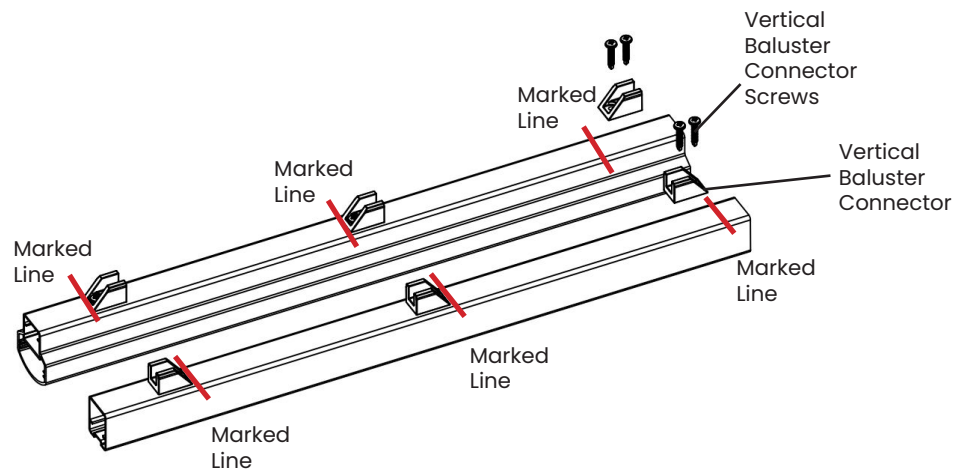


Part IIID: Install Rails & Infill

Step 1: Attach Vertical Baluster Connectors To Top & Bottom Rails

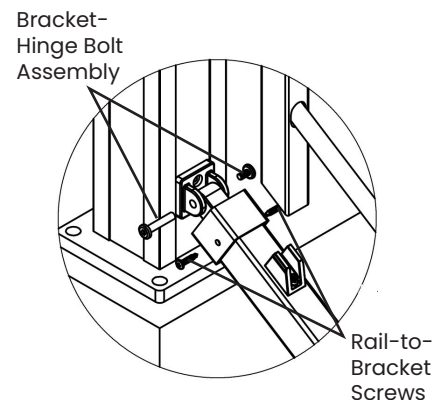
Remove your top and bottom rails. Using the baluster connector screws, attach the vertical baluster connectors at the spots you marked in Part IIB, step 5.

Remember to line up the angled end of the baluster connector with your marks, and to have the angled ends pointing up the stairs on the top rail and down the stairs on the bottom rail.



Step 2: Install Bottom Rail

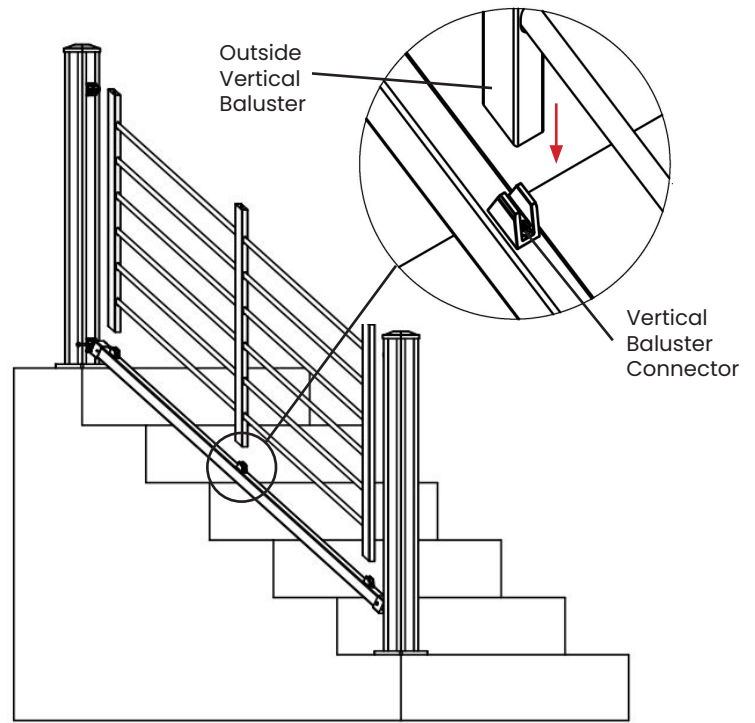
Slide bottom rail brackets onto each end of your bottom rail. Then put the whole bottom rail in place. Use bracket-hinge bolt assembly to attach the brackets to the bracket bases, and use rail-to-bracket screws to fasten the bottom rail to the bracket.



Step 3: Assemble & Install Infill Panel

Take your cut-down horizontal rods and run them through the holes in your inside vertical baluster. Then fit your outside vertical balusters on each end of the rods to assemble your infill panel.

Fit the whole panel into place on your bottom rail, making sure each vertical baluster sits on a baluster connector.

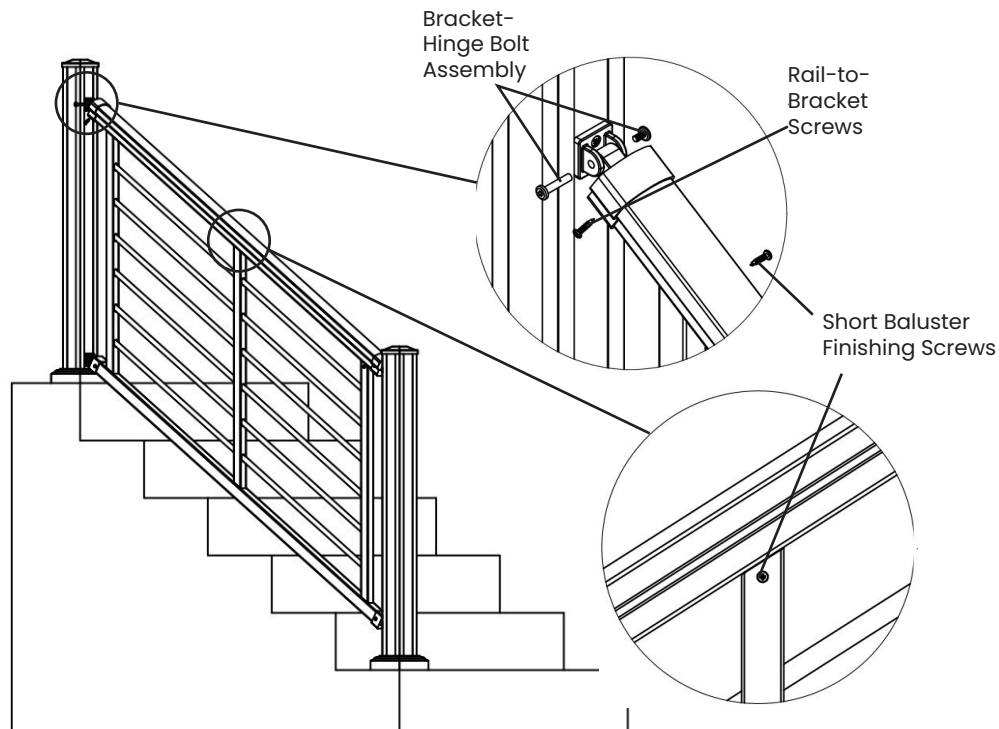


Step 4: Install Top Rail

Slide top rail brackets onto each end of your top rail. Then put the whole top rail in place, making sure the baluster connectors fit into the tops of the vertical balusters.

Use bracket-hinge bolt assembly to attach the top rail brackets to the bracket bases. Then use rail-to-bracket screws to fasten the top rail to the bracket.

Use the 6 short baluster finishing screws to fasten the top and bottom of each vertical baluster to the baluster connector inside it. Pre-drill holes if necessary.



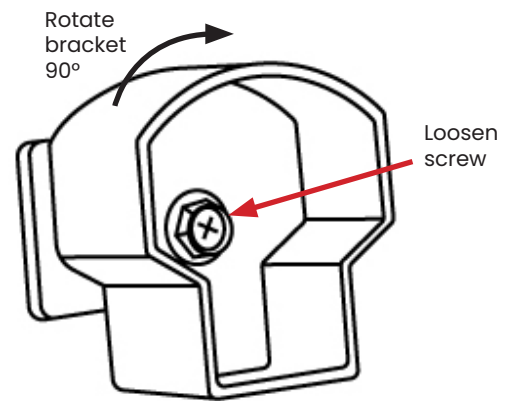
Part IV: How To Create Custom Angles

If your railing sections are all attached in straight lines or at standard 90-degree corners, attach all your brackets as described in the sections above.

If your deck railing has any unique angles that aren't 90° or 180°, you'll need to use angled brackets (used above for stair railing sections) to attach your top and bottom rails. Follow these steps first, then go back to Part II and complete any remaining steps:

Angled Connection Part #1: How To Adjust Angled Bracket To Pivot Side-To-Side

Loosen the screw inside the angled bracket until the bracket comes apart in two pieces. Rotate the bracket 90 degrees and re-attach it. Do this for the top rail brackets and bottom rail brackets.



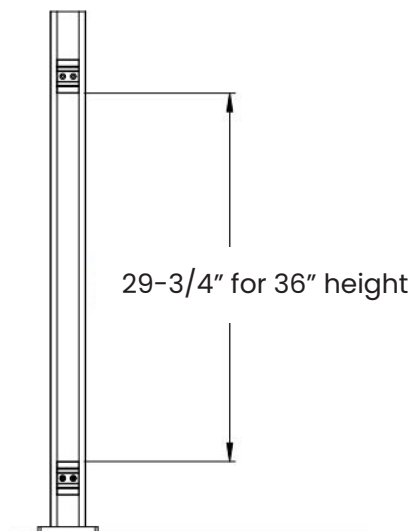
Use the bracket-hinge bolt assembly to connect the bracket to the bracket base.

Angled Connection Part #2: Attach Angle Brackets

Insert one end of your bottom rail into an angle bracket and set the bottom rail on top of 2-3/4-inch wood blocks to mark where the bottom angle bracket will attach to the post. Pre-drill holes and attach the bottom brackets. Do the same for the bracket on the other side.

Starting at the top edge of your bottom bracket base, measure upwards 29-3/4 inches and make a mark.

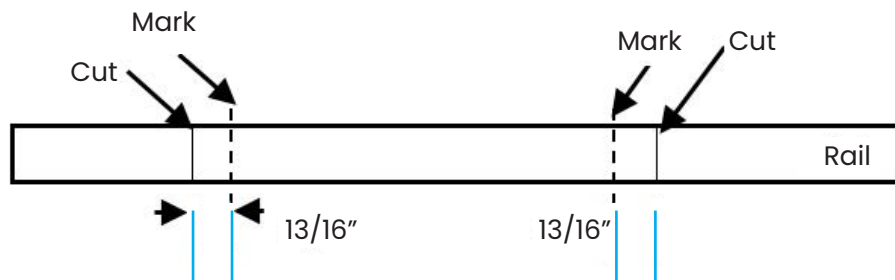
Attach your top rail bracket here, lining up the bottom of the bracket base with your mark.



Angled Connection Part #3: When Cutting Top & Bottom Rails, Use Angled Bracket To Measure, Mark & Cut

With the angled brackets attached to your posts, hold your top or bottom rail alongside both brackets.

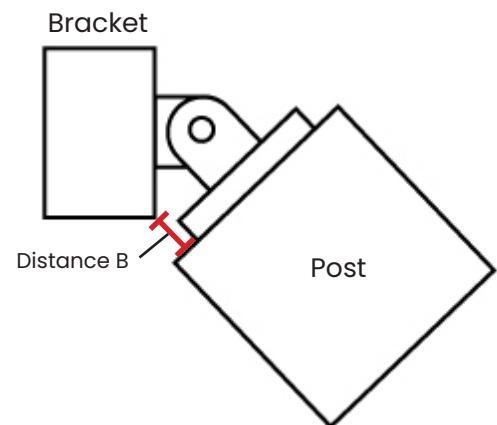
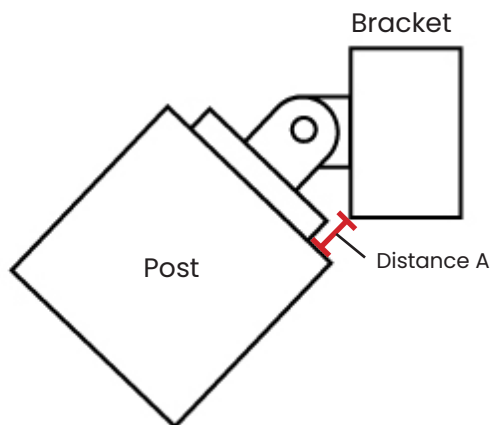
Gently mark the rail where it meets the edge of your bracket at each end. **Measure 13/16-inch from that mark (towards the end of the rail) and make a second mark - this second mark is your cut mark.**



Angled Connection Part #4: Use Different Measurements To Place Vertical Baluster Connectors

With differently-sized top rails, you'll also need to slightly adjust where you attach the vertical baluster connectors.

Align your brackets to the exact angle they'll be installed at. Then measure the shortest distances between each post and the edge of the bracket, labeled **Distance A** and **Distance B** below:



If one side of your rail isn't using a custom angle bracket, then the distance is zero.

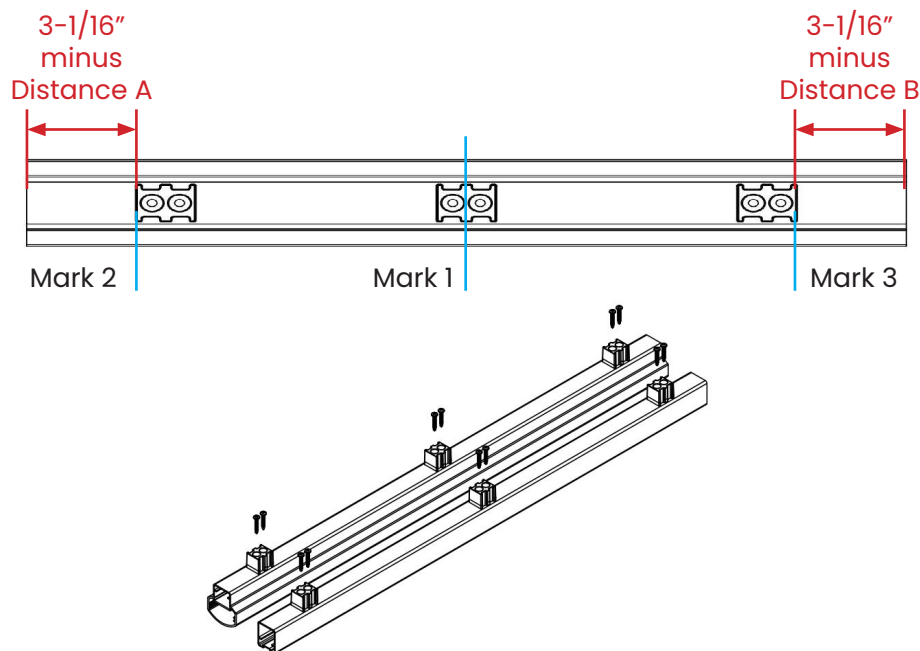
Take your cut-down top and bottom rails and make three marks on each:

Mark 1: Measure and mark the exact middle of each rail.

Mark 2: Take $3\text{-}1/16''$ minus **Distance A**. This new total is how far to measure in from the end of your rail for Mark 2.

Mark 3: Take $3\text{-}1/16''$ minus **Distance B**. This new total is how far to measure in from the end of your rail for Mark 3.

Using the included baluster connector screws, attach one vertical baluster connector centered over Mark 1 (your center mark). Attach vertical baluster connectors to Marks 2 & 3 as shown below, with the outside edge of the bracket connector aligned with the mark.



Angled Connection Part #5: Use Different Measurements To Cut Rods

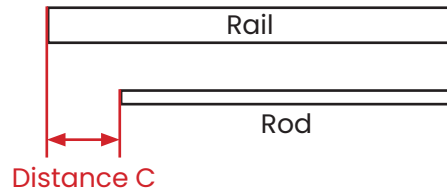
You'll also need to measure and cut your horizontal rods differently to account for the larger angle brackets. There's some math involved here, but it's not too complex. Bear with us for a minute – your custom angle is going to look awesome!

Add Distance A and Distance B from above. Then take 6-1/4 inches minus that total. We'll call this "Distance C".

Then measure the length of your top rail and subtract Distance C. This is how long you should cut your rods.

$$6\text{-}1/4" \text{ minus (Distance A + Distance B) = Distance C}$$

$$\text{Top Rail Length minus Distance C = Rod Length}$$



Now, return to Part II and continue installing your railing with **Part IIB, Step 2: Attaching Foot Block To Bottom Rail.**

Congratulations! Enjoy your new Revival Railing!

Operation & Maintenance

We recommend cleaning your Revival Plus Aluminum Railing 2-3 times a year to prevent corrosion and extend the lifespan of your railing. Clean using a mixture of water and mild detergent (like dish soap) and a soft sponge or cloth. Wet down your railing with a garden hose, then hand wash all surfaces with the soapy water and rinse thoroughly with fresh water.

For railings near saltwater, we recommend more frequent cleaning.

Warranty Information

Your Revival Railing is covered by a 10-year limited warranty for residential installations or a 5-year limited warranty for any non-residential installation. Please reach out to your retailer for any warranty claims or questions.

Share Photos Of Your Deck Revival!

We would love to see pictures of your finished project and celebrate your amazing new outdoor space with you! Tag #RevivalRailing on social media to share your best photos. We especially love to see before & after photos so we can celebrate the transformation!