

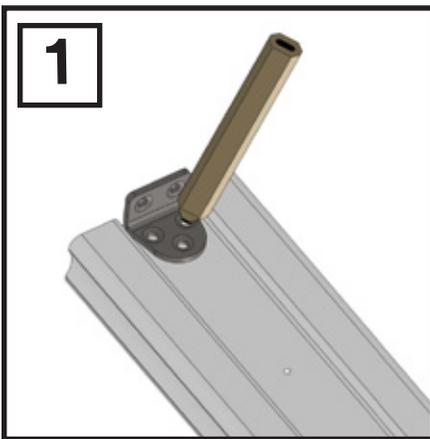


COMPOSITE RAILING

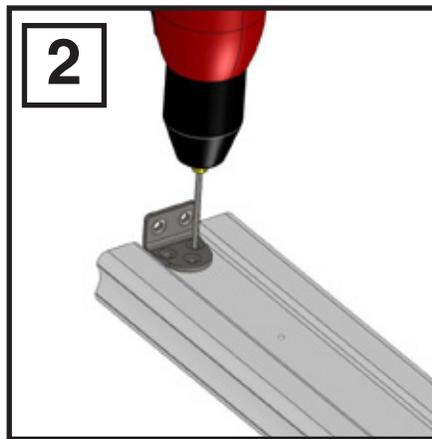
Railing Installation Instructions - Composite Balusters

Prior to installing railing:

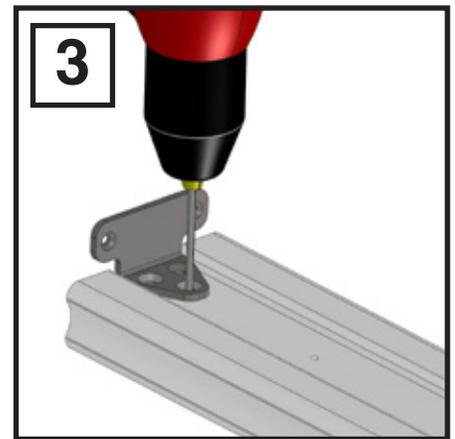
Please consult local zoning laws in regards to load requirements and bottom space requirements for rails. All supporting structures must be in accordance with applicable building codes. Neighborhood associations and/or historic districts may regulate size, type, placement and ability of railing. Apply for permits if required by local authorities and codes. Ensure compliance prior to installation. Local building code requirements will always supersede any and all suggested procedures and measurements in the following installation. The following installation instructions are intended as a general guideline based on common building practices used in railing installation.



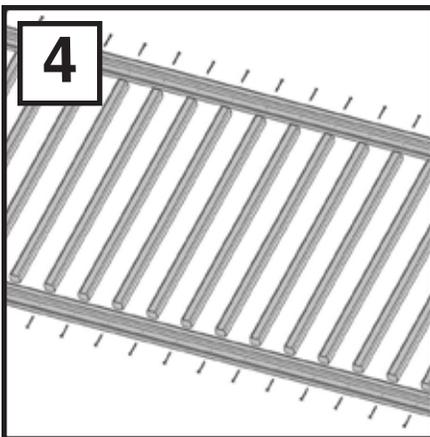
Begin line assembly by measuring & cutting the rails to desired length, making sure to center the baluster hole pattern on the rails. Use the brackets as templates and mark the hole locations on the bottom rail and top sub rail. Make sure that a minimum of 2-3/4" space is left from the end of the rail to the first baluster hole.



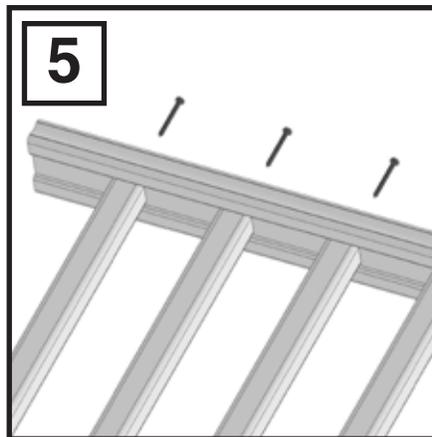
Predrill the bracket holes using a 1/8" drill bit. Make sure to only predrill 3/4" or the hole may be visible from the top surface. Use a pencil to mark the hole locations, making sure to leave the bracket 1/32"-1/16" short from the cut end.



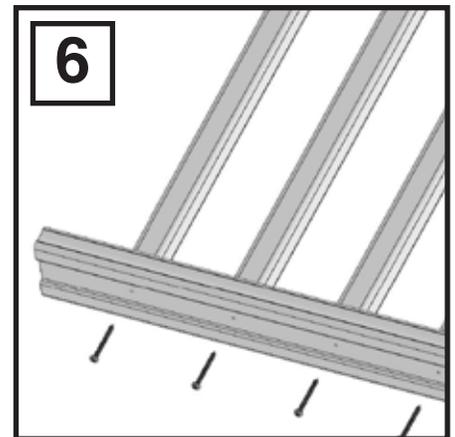
Locate the holes and predrill the holes in the top sub rail. Install post trim. Secure all brackets using 3/4" screws (hardware sold separately). (NOTE: Do not over tighten.)



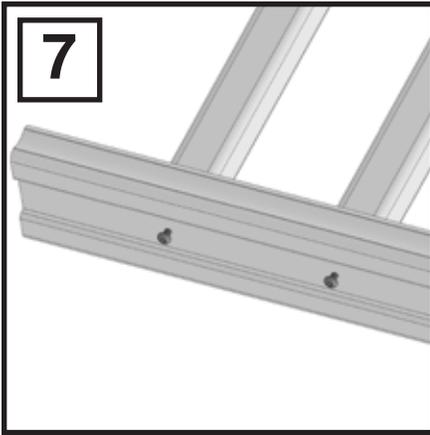
Measure & cut all balusters to the desired length. Lay out the bottom rail & top sub rail with the balusters roughly aligned with the predrilled holes.



Position the top of the balusters inside the channel in the top sub rail, carefully aligning the holes & fastener, and secure each with 1-3/4" (minimum) screws (hardware sold separately).

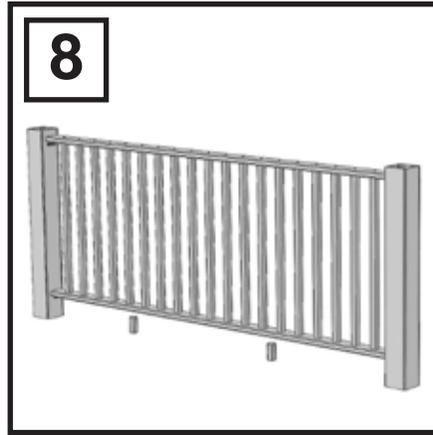


Align the bottom balusters with the predrilled holes. Make sure the rail channel is facing away from the balusters.



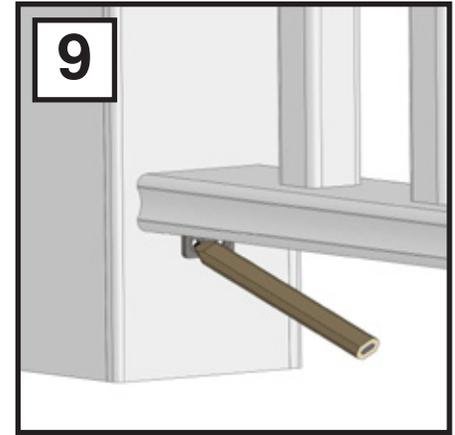
7

TIP: only insert 1-3/4" (minimum) screws into the bottom end of the balusters part way (hardware sold separately). This allows for easier alignment of upcoming balusters. Tighten all screws after each baluster is secured to bottom rail.



8

Install post trim. Lower the assembly onto crush blocks cut to the required length. A minimum of 2 crush blocks are needed and the installer needs to cut crush blocks from an extra baluster.



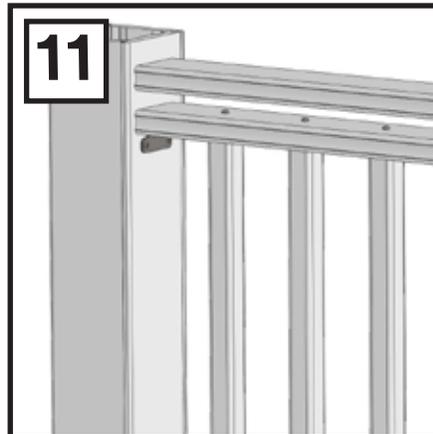
9

Use a pencil to mark the locations of the screw holes for the bottom and sub rails on both ends.



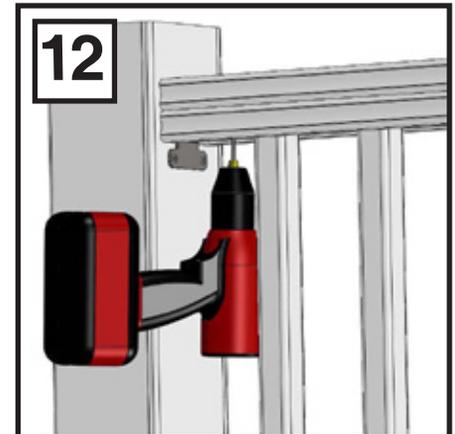
10

Pre-drill all holes with a 1/8" drill bit.



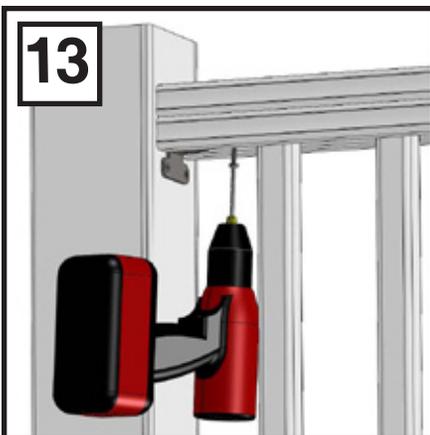
11

Secure the brackets to the posts with 2" screws (hardware sold separately). Align the top rail with the assembly.



12

Pre-drill the sub rail & top rail before the first baluster and between the 5th and 6th baluster from each end using a 1/8" drill bit no deeper than 1-7/8" deep, making sure to not penetrate the top of the top rail. (NOTE: this will allow the fastener to snug the top rail correctly).



13

Remove the top rail and drill out the sub rail holes with a 7/32" drill bit. Secure the rail to assembly using four 1-3/4" screws (hardware sold separately). (NOTE: Do not over tighten.)



14

Finish the assembly by gluing the crush blocks between the 5th and 6th baluster from each end & post caps in place using a quality exterior grade adhesive.

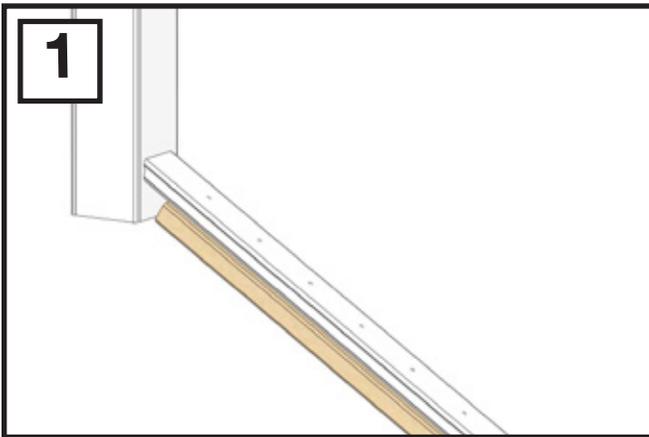


COMPOSITE RAILING

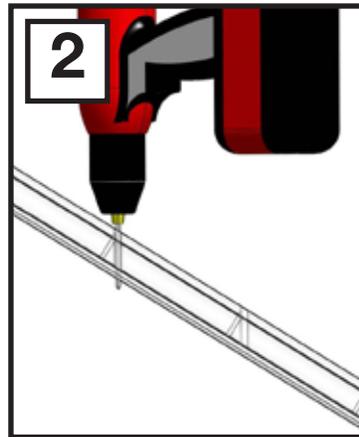
Stair Installation Instructions

Prior to installing railing:

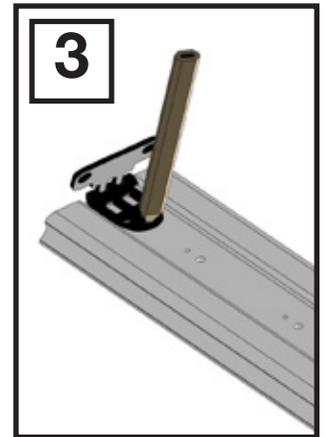
Please consult local zoning laws in regards to load requirements and bottom space requirements for rails. All supporting structures must be in accordance with applicable building codes. Neighborhood associations and/or historic districts may regulate size, type, placement and ability of railing. Apply for permits if required by local authorities and codes. Ensure compliance prior to installation. Local building code requirements will always supersede any and all suggested procedures and measurements in the following installation. The following installation instructions are intended as a general guideline based on common building practices used in railing installation. Angle used in the installation instructions is based on a common 7" rise x 11" run.



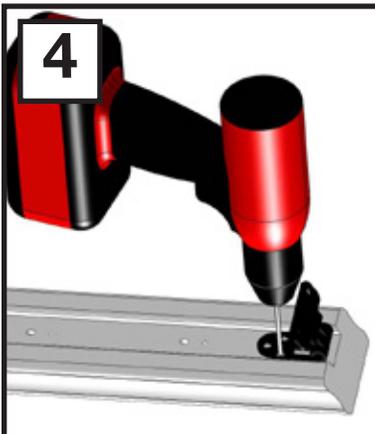
Posts should be plumb in both directions. Measure the distance between the posts in various locations. The measurement should not vary by more than 1/16". Length between posts should not exceed 70" diagonally. Begin by supporting the bottom rail uniformly between the completed post assemblies. Transfer the proper angle to the rail.



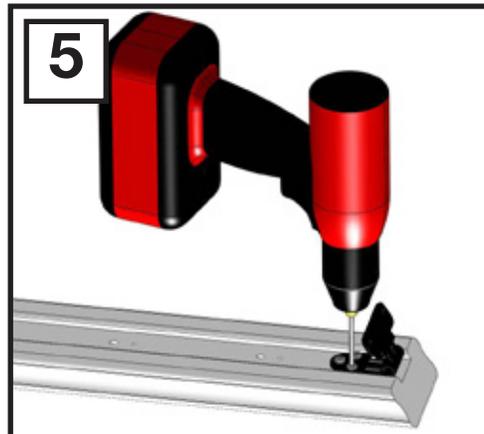
Center the hole pattern, and cut both ends to the proper angle. Drill out the holes with a 7/32" bit at the same angle as the end cuts. A minimum of 2-1/2" is needed from end of rail to first baluster hole.



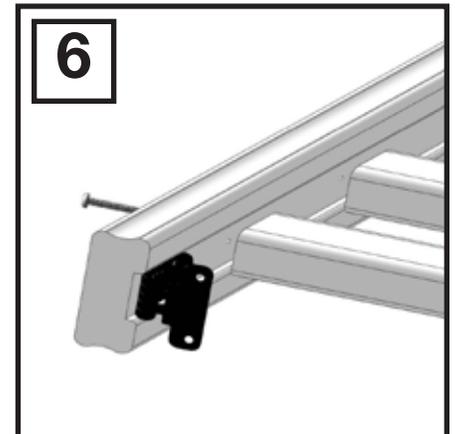
Place the hinge angle brackets on the bottom & top sub-rail. Use a pencil to mark the hole locations, making sure to leave the bracket 1/32"-1/16" short from the cut end.



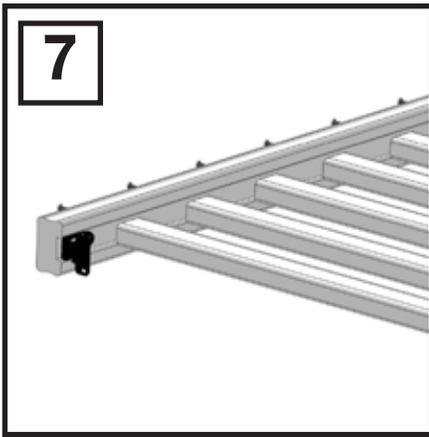
Pre-drill the holes for the brackets using a 1/8" drill bit.



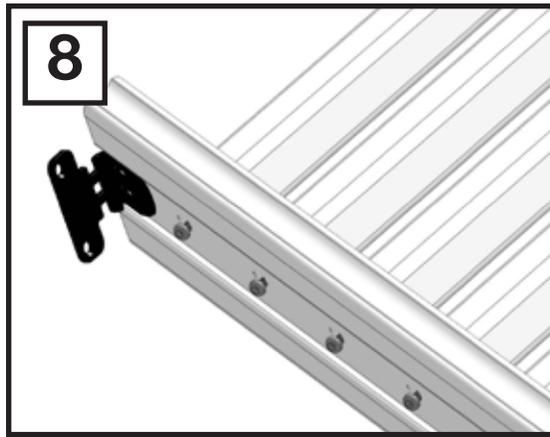
Secure the brackets to the top sub-rail & bottom rail using 3/4" screws (hardware sold separately). (NOTE: Do not over tighten.)



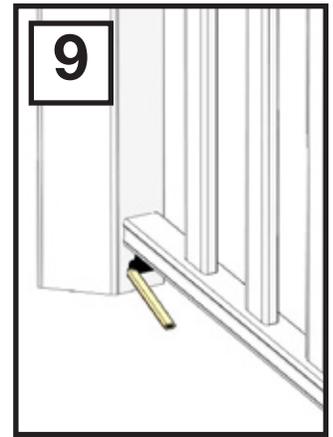
Transfer the rail angle to both ends of the balusters and cut to correct length. It may be necessary to predrill the 1/8" diameter holes at the ends of the balusters. Place rails on a smooth, clean surface with the balusters loosely aligned with the holes.



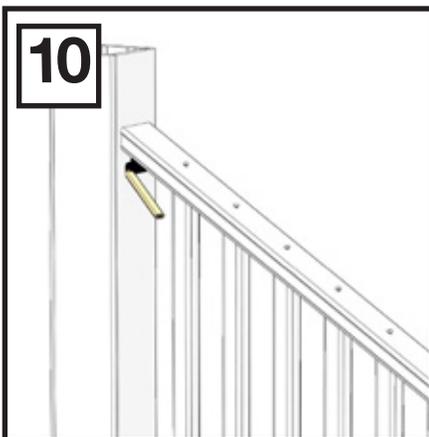
Starting with the top sub-rail, secure each baluster using 1-3/4" (minimum) screws (hardware sold separately). The balusters will fit between the walls on the underside of the top sub-rail.



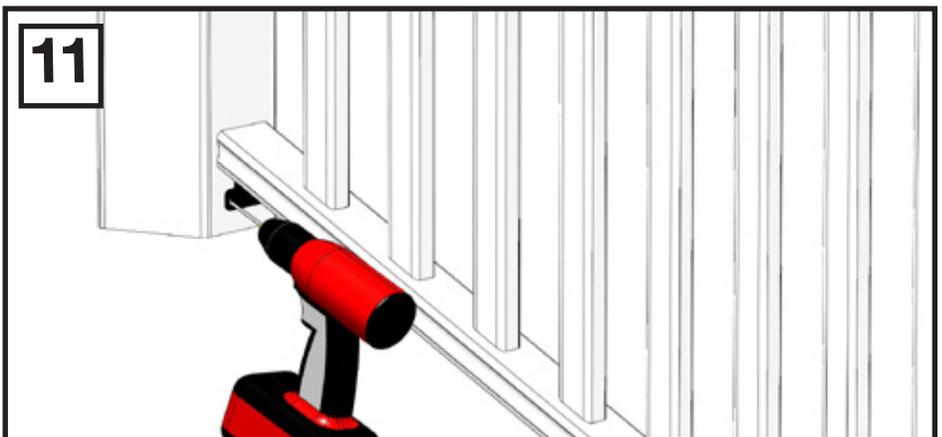
Secure the bottom rail to the balusters using 1-3/4" (minimum) screws (hardware sold separately). TIP: don't fully drive the screws into the bottom rail until all balusters have been started. This will help in starting the screws into the predrilled holes in the balusters. Make sure to snug the screws once all balusters are started properly. Install post trim prior to step #9.



Position and support the assembled guardrail between the posts in final position. Mark the screw holes with a pencil for predrilling.



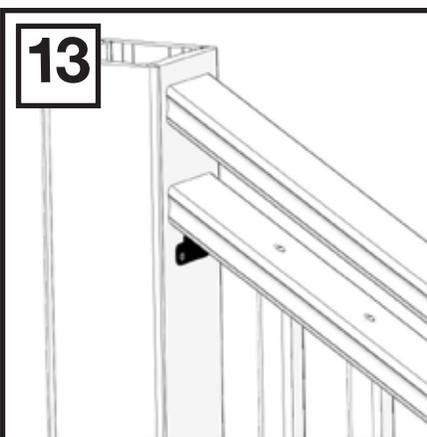
Also mark the locations of the top bracket. Slide trim onto post before attaching rail.



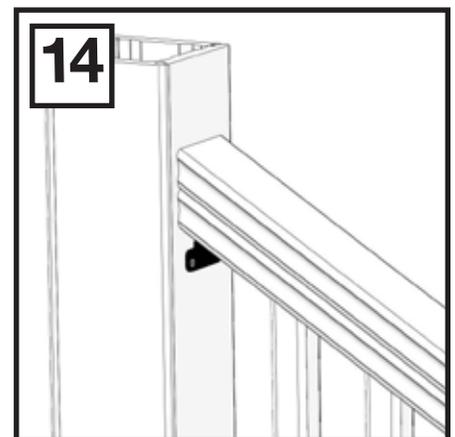
Predrill bottom holes, and secure using 2" screws (hardware sold separately). (NOTE: Care should be taken to predrill and insert the screws as perpendicular to the post as possible. For stairs, it will not be possible to drive all bracket fasteners perpendicular to the post. The use of a flexible shaft or extension may be necessary.)



Secure the top bracket using 2" screws (hardware sold separately).



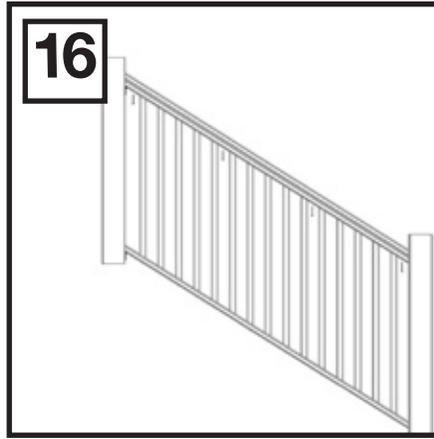
Position the top rail over the assembly.



Lower the top rail into place.



15
Predrill holes at 1/3 points and between the bracket and first baluster from each end using a 1/8" drill bit. Follow up with a 7/32" drill bit, drilling through the top sub rail only (this will allow screws to snug the top rail tightly).



16
Secure the top rail to the top sub rail using four 1-3/4" screws (hardware sold separately). (NOTE: It may be necessary to countersink using a 3/8" bit, not more than 1/4" deep.)



17
Finish by gluing the post caps on using a quality exterior adhesive. Cut 1 crush block from baluster and glue centered between posts as shown in the above diagram.