

# Before You Begin

## IMPORTANT

Always wear safety glasses when cutting and drilling railing or decking products.

### HELPFUL HINTS

- Use carbide-tipped, multi-purpose blade for cutting.
- Do not lay components on abrasive surfaces.
- Do not use excessive force while assembling components.
- If any components are missing or defective, please call us at 800-233-8990.

### TIPS

- Make sure you have all the pieces you need to complete the job.
- Separate your flat and stair pieces to avoid using the wrong ones.

### IMPORTANT FIRE INFORMATION

Rigid vinyl decking and railing are made from organic materials that will not burn on their own but melt or burn when exposed to a significant source of flame or heat. Consequently, owners and installers should take a few simple steps to protect vinyl building materials from fire. Building owners, occupants and outside maintenance personnel should always take normal precautions to keep sources of fire, such as barbecues, and combustible materials like dry leaves, mulch and trash, away from vinyl decking and railing.

### TOOLS REQUIRED FOR ALL INSTALLATIONS

- Chop/mitre saw (with carbide-tipped, multi-purpose blade or non-ferrous blade)
- Power drill and bits
- Tape measure
- Pencil
- Level
- Safety glasses and equipment (as identified by tool manufacturers)
- #2 square drive
- Phillips screwdriver or bit

### ADDITIONAL TOOLS REQUIRED FOR SPECIFIC JOBS

- **Certa-Snap® Post Wrap**
  - Hammer
  - Siding snips
- **Gates**
  - 1/8" drill bit
  - 3/16" drill bit
  - 1/4" drill bit
  - 5/32" drill bit
  - 11/64" drill bit
  - 7/16" wrench
  - #3 square drive bit
- **Handrail Component System**
  - 3/8" masonry drill bit (for concrete installation)
  - 3/4" drill bit
  - Angle finder
  - Quick-clamps
  - Adhesive
  - Recommended adhesives:
    - Aluminum bonding-
    - Loctite® Metal/Concrete Epoxy™
    - Gorilla™ Epoxy-Impact Tough®
    - J-B Weld®-2-Part Epoxy
    - Loctite® Extra Time Epoxy
- **Mount Post Support Wood Surface**
  - 2" x 6" or 2" x 8" blocking
  - Wood screws to attach blocking to deck
  - 3/8" drill bit
  - 1/8" drill bit
  - 1/2" wrench or socket
- **Panorama®**
  - 1/4" drive socket, extension and 7/16" socket
  - Jigsaw/coping saw (optional)
  - Utility knife (optional)
  - File (optional)
  - Box-end wrenches (optional)
  - Chalk line (optional)
  - Silicone caulk and caulk gun (optional)
  - Angle finder (optional)
  - Extension bit for crush block (optional)
- **Porch Columns**
  - Saber saw with a fine-tooth blade
  - Hammer drill with 1/4" and 1/2" drill bits
  - T-square
- **UnderShield® Water Diversion**
  - Gloves
  - Step ladder
  - Snips
  - Utility knife
  - Chalk line
  - 12" speed square
  - Vinyl snap lock punch
  - Cordless drill/driver
  - 1-inch "J" channel
  - Flashing
  - Gutter and Downspout
  - Fascia boards
- **Vinyl Decking and Oxford T-Rail**
  - 2" hole saw
  - Circular saw
  - Drop cloth
  - Screwdrivers
    - Phillips and flat-bladed
  - Wood clamps
  - Wrenches (sockets)
    - 3/4" (post support)
    - 7/16" (EZ Set bracket)
    - 3/8" (rail plate)
  - Bevel guide (optional)
  - Chalk line (optional)
  - File (optional)
  - Jigsaw/hacksaw (optional)
  - Rotary hammer drill (optional)
  - Utility knife (optional)

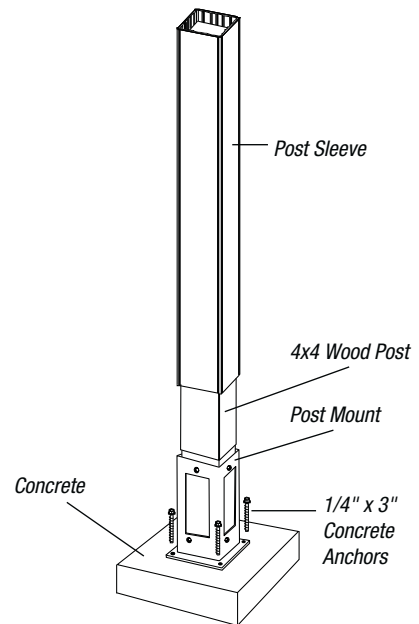
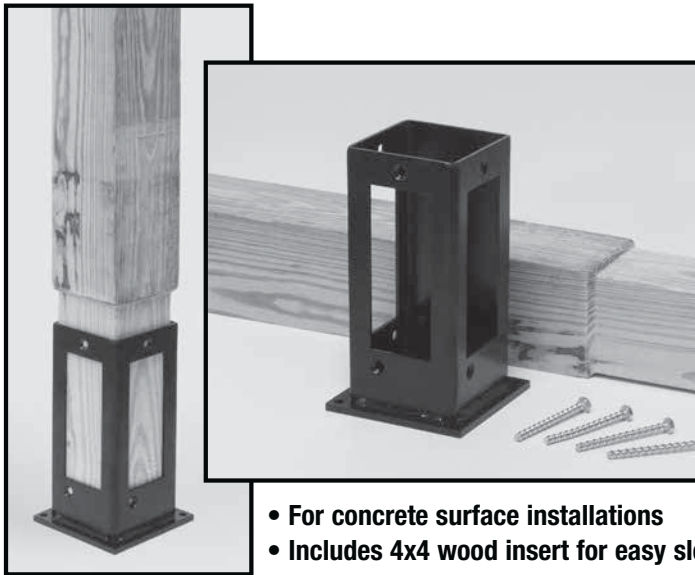
**TIP: Stainless steel fasteners are recommended to prevent future rust streaking.**

## STEP-BY-STEP INSTALLATION INSTRUCTIONS FOR

# POST SUPPORT KITS FOR PANORAMA® COMPOSITE RAILING

Use the Post Sleeve Mount to install post sleeves directly onto the deck or porch surface. Post sleeve mounts are available for concrete or wood/composite surfaces. When installing a post sleeve mount on a concrete surface, the support system is anchored into the concrete. When installed on a wood or composite deck, the support system is installed after the deck surface has been attached. Follow these guidelines to complete the post installation.

### POST SURFACE MOUNT WITH WOOD INSERT FOR CONCRETE



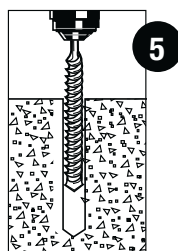
**Step 1:** Determine the desired location(s) and finished height of the post sleeve from the deck surface.

**Step 2:** Trim the post sleeve to the desired length.

**Step 3:** Trim the length of the 4x4 wood post. The wood post length is typically 1" shorter than the post sleeve length.

**Step 4:** The base of the mount should be positioned a minimum of 3" on center from the edge of the concrete pad. Use the base of the mount as a template and mark the four corner holes for the concrete anchors (included in kit).

**Step 5:** Drill the marked holes using a 1/4" masonry drill bit. Drill the holes into the concrete base to a depth of at least 1/2" deeper than the length of the 1/4" x 3" anchors. Blow the hole clean of dust and debris.

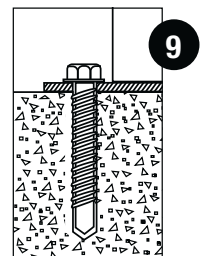


**Step 6:** Locate the mount by aligning the mount corner holes over the drilled holes.

**Step 7:** Insert the trimmed end of the 4x4 wood post into the mount. Ensure that the post is plumb and true.

**Step 8:** If necessary, place a shim under the mount to make the post plumb and true. Attach wood post to the base.

**Step 9:** Insert the four concrete anchors into the corner holes of the mount. Begin tightening the anchor by rotating clockwise and applying pressure in toward the base. This will engage the first few threads as the anchor begins to advance. Continue to tighten until the head of the anchor is firmly seated against the post mount. Repeat for the remaining anchors.



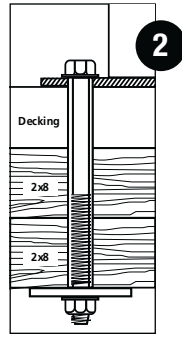
**Step 10:** Slide the post sleeve over the 4x4 treated wood post until it contacts the base of the mount.

## POST SURFACE MOUNT WITH WOOD INSERT FOR WOOD

**Step 1:** Determine the desired location(s) and finished height of the post sleeve from the deck surface.

**Step 2:** The thickness of the wood/composite deck and reinforcement boards underneath the deck should be a minimum of 4" (two treated and structurally sound 2" x 8" lumber under the deck board).

**Step 3:** Fasten the reinforcement boards with 3" stainless steel fasteners as shown.



**Step 4:** Trim the post sleeve to the desired length.

**Step 5:** Trim the length of the 4x4 wood post. The wood post length is typically 1" shorter than the post sleeve length.

**Step 6:** Use the base of the mount as a template and mark the four corner holes on the deck surface. Mark inside square of bracket on deck surface.

**Step 7:** Drill four 3/8" holes at the marked locations, drilling through the deck board and the reinforcement boards. Drill a 3/8" drainage hole in square through deck board and reinforcement boards for drainage.

**Step 8:** Locate the mount by aligning the mount corner holes over the drilled holes.

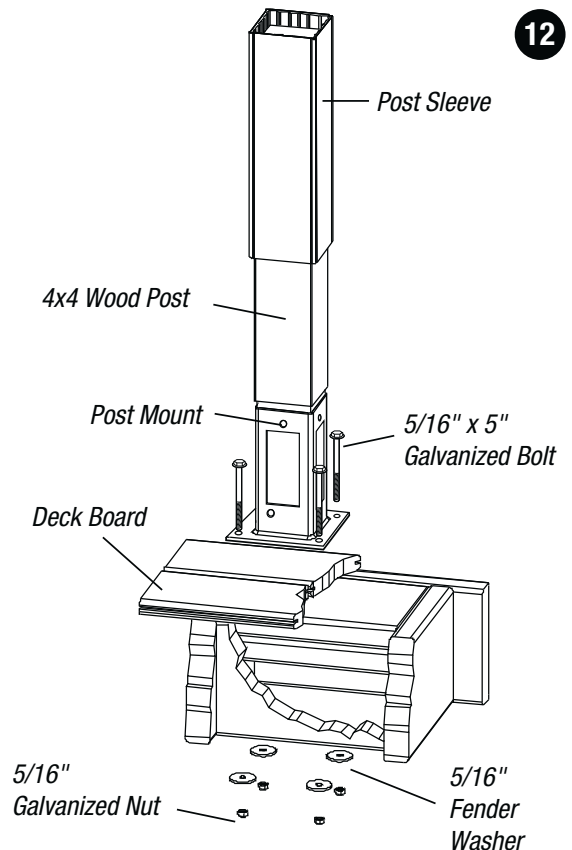
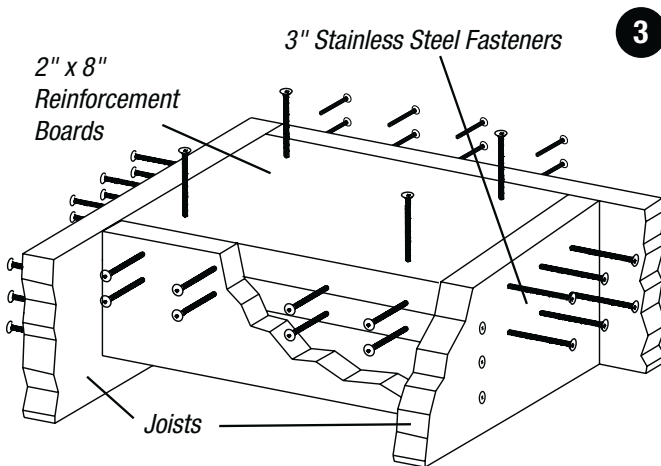
**Step 9:** Insert the trimmed end of the 4x4 wood post into the mount. Ensure that the post is plumb and true. Attach wood post to the base.

**Step 10:** If necessary, place a shim under the mount to make the post plumb and true.

**Step 11:** Insert the 5/16" x 5" galvanized hex bolts into the mount holes and the drilled holes. (Galvanized bolts, nuts and washers not included.)

**Step 12:** Fasten the four bolts underneath the reinforcement boards with the 5/16" Fender washer (included in kit) and 5/16" galvanized hex nuts.

**Step 13:** Slide the post sleeve over the 4x4 treated wood post until it contacts the base of the mount.



# STEP-BY-STEP INSTALLATION INSTRUCTIONS FOR PANORAMA® COMPOSITE RAILING SYSTEM ASSEMBLY Square or Steel Balusters

## INSTALLATION OVERVIEW

### Step 1: Install Post Sleeves

Be sure posts are plumb. Cut post sleeve to length. Slide the post sleeve over the post to rest on the deck surface. Slide post trim ring (1a) over the post sleeve to also rest on the deck surface.

### Step 2: Assemble Railing Section

Measure the distance between post sleeves. Lay universal rails side-by-side, aligning pre-drilled holes, not the rail ends. Calculate the center of the universal rails and assign the center either directly to a pre-drilled baluster hole or the space centered between two baluster holes. Measure and cut rails from the calculated center. Attach the balusters to the top and bottom universal rails (2a). Then attach the crush block to bottom universal rail (2b). Place and secure rail brackets.

### Step 3: Install Railing Section

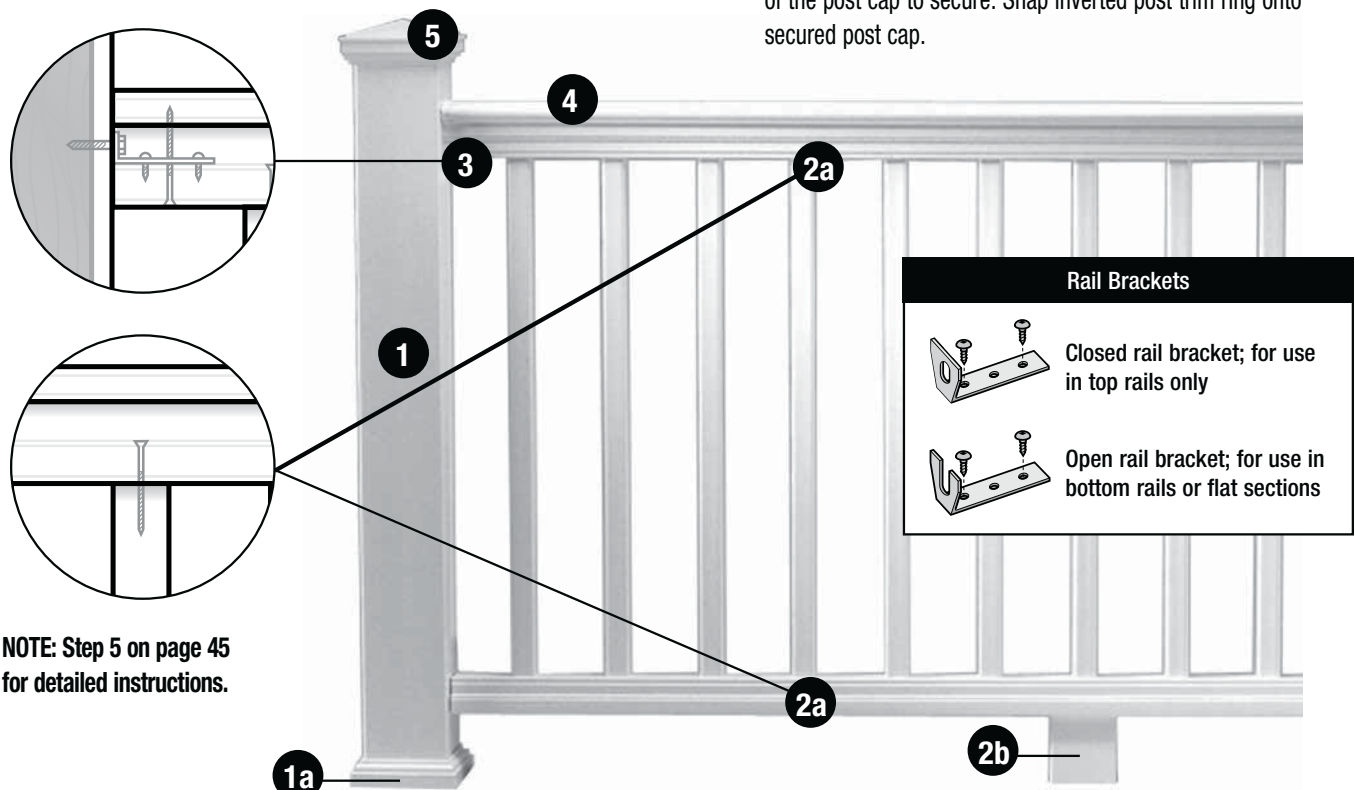
Drive lag bolts into posts leaving approximately 1/2" gap from lag bolt head to post sleeve surface. Place railing assembly over bottom lag bolts. Mark the position for the top lag bolts using the top rail bracket's position as a guide. Use a 1/4" drive socket with an extension to tighten lag bolts to the posts.

### Step 4: Install Top Rail

Measure the distance between post sleeves. Cut the top rail to length. Secure from underneath with supplied color matched head screws.

### Step 5: Install Post Caps

Slide inverted post trim ring over top of the post sleeve. Place post cap over top of the post sleeve. Screw through side holes of the post cap to secure. Snap inverted post trim ring onto secured post cap.



**NOTE: Step 5 on page 45 for detailed instructions.**

Panorama boxed kits are available in 6' and 8' lengths. Measurements are from post center to post center. Panorama 6' and 8' products are designed not to exceed 6' or 8' from center of post to center of post, respectively. Actual rail lengths are 67-1/2" (6') and 92-1/2" (8').

# RAILING INSTALLATION

## INSTALL POST SLEEVES

Sleeve Mount (Over existing 4x4 posts)

**Step 1:** Plumb 4x4 posts.

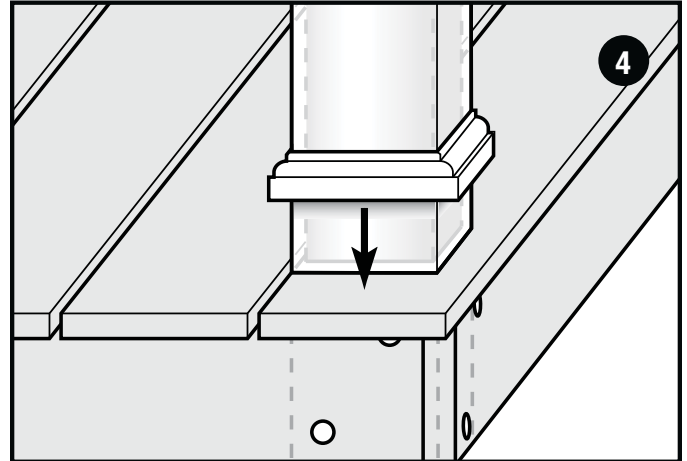
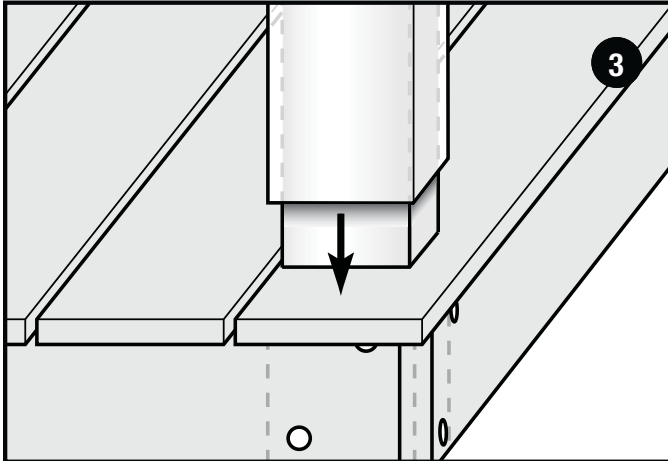
**Step 2:** Cut post and post sleeve to required length.

- 40 inches minimum for 36" rail height
- 46 inches minimum for 42" rail height

**Step 3:** Slide post sleeve down over the post to the deck surface.

**Step 4:** Slide post trim ring over the post sleeve to the deck surface.

**NOTE:** If structural post is slightly twisted or warped, shim stock can be used between the post and inside of post sleeve so that the post sleeve is oriented properly. Otherwise, replace wood post.

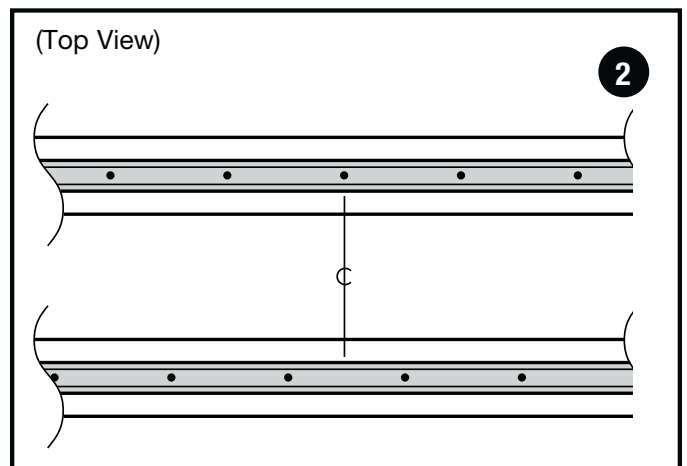


## ASSEMBLE RAILING SECTIONS

There are two types of balusters available for the Panorama® Composite Railing System: square and steel. Though most of the installation steps are the same for both, there are a couple of steps unique to steel balusters. These steps are designated by adding the letter S (for steel) to the numbered steps below. Steps common to steel balusters are designated by adding the letter to the numbered steps (e.g., 3S).

**Step 1:** Measure the distance between the post sleeves at the top and bottom (**NOTE: These two measurements may be slightly different.**) It's important that the posts are plumb.

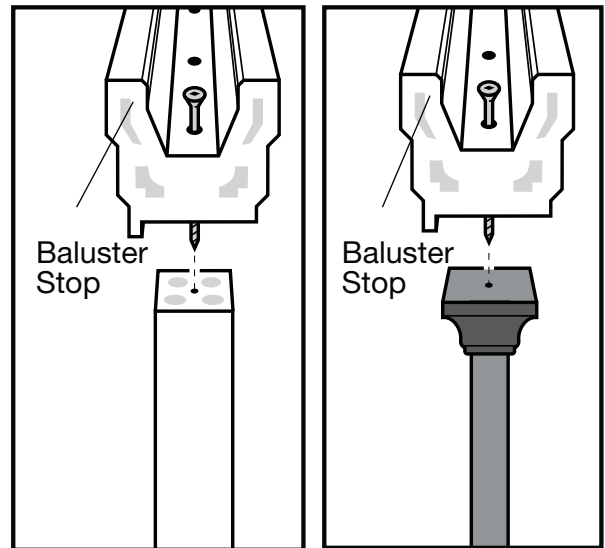
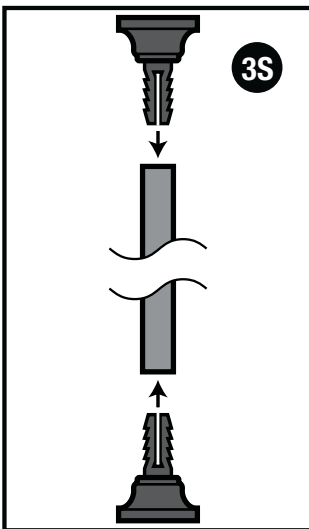
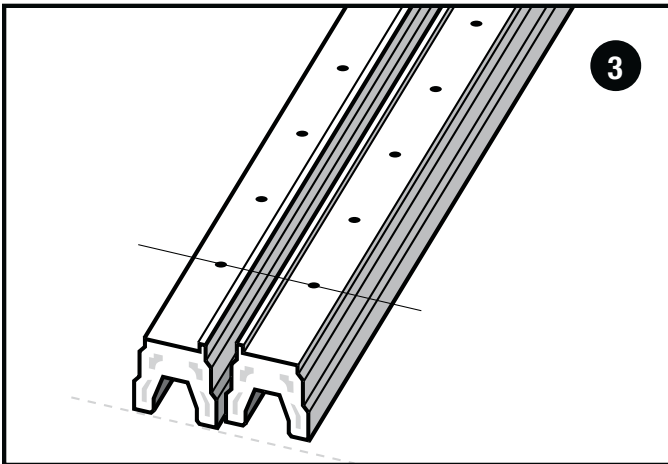
**Step 2:** Establish the center of the universal rails by applying the measurement between the post sleeves. You may choose to base the center of the universal rail on a pre-drilled hole OR exactly between two pre-drilled holes. This decision will affect the spacing between the post sleeve and adjacent baluster on each side of the railing assembly. Arrange the rail so you do not end at a post with a portion of a baluster (square) or steel baluster shoe.



**Step 3:** To ensure that the balusters will be installed plumb, place the two universal rails side-by-side on a flat surface, baluster stops both on the inside, aligning them according to the pre-drilled baluster holes, NOT the ends. Now, measure and cut each universal rail carefully to minimize gaps. Measure from the established center (see step 2) of the universal rails, trimming the proper amounts from each end to achieve rail lengths.

**Step 3S:** Insert one black baluster shoe completely into each end of every steel baluster.

**TIP:** For the opposite universal rail, direct a 2-1/2" baluster screw (or 3" baluster screw for steel balusters) into the channel of the universal rail, through the pre-drilled hole and into the center pilot hole in the end of a baluster or into the pilot hole of the black baluster shoe (steel). Start the screw into the baluster or shoe but do not tighten. This will provide space between the universal rail and the baluster end or baluster shoe to allow you to locate the remaining pilot holes in the baluster, black baluster shoe or baluster shoe. Repeat for the remaining balusters. When all balusters have been started, return to each baluster and tighten.



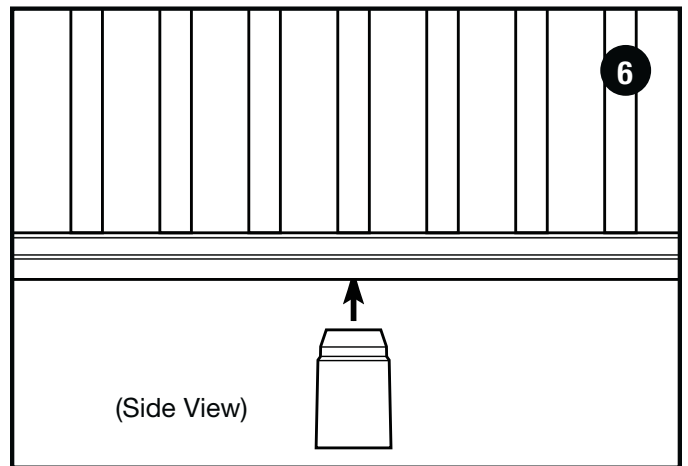
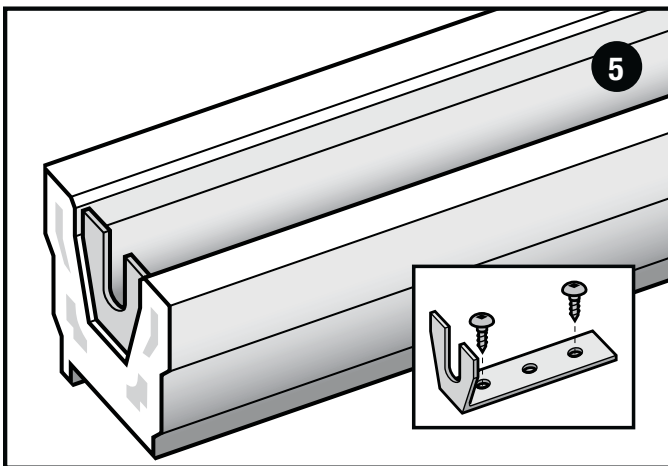
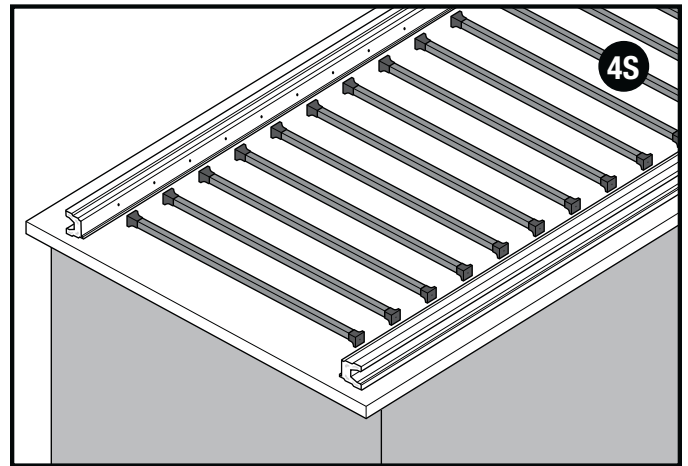
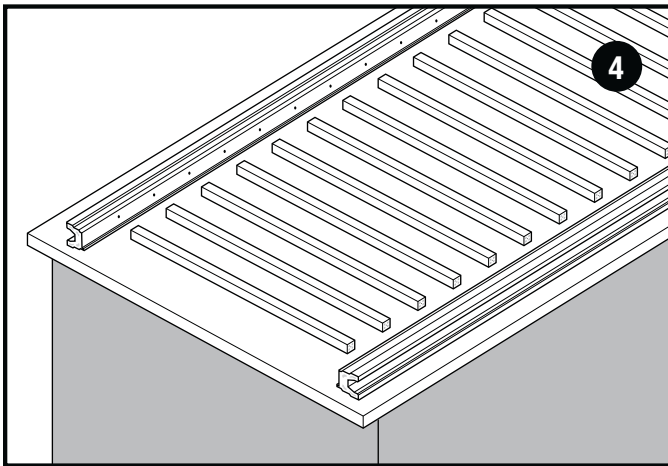
## ASSEMBLE RAILING SECTIONS CONTINUED

**Step 4:** Lay out the components of the railing section on a flat work surface, roughly in the final, assembled position. Make sure the baluster stops are on the same side of the railing assembly. Direct a 2-1/2" baluster screw – or a 3" baluster screw for steel balusters – into the channel of a universal rail, through the pre-drilled hole and into the center pilot hole in the end of a baluster (square) or into the pilot hole of the black baluster shoe (steel), which were already inserted in the steel baluster. Make sure baluster, black baluster shoe or baluster shoe is installed square and does not overlap the baluster stop on the universal rail. Repeat for the remaining balusters.

**NOTE:** Set clutch on drill to avoid over-tightening screws.

**Step 5:** Using (two) #10 x 3/4" screws, secure each rail bracket into the channels of the universal rails by aligning the rail brackets flush or slightly recessed inside each end cut. Make sure not to let the rail bracket face extend beyond the universal rail end cut. Secure the rail bracket through the two screw holes at each end of the rail bracket, leaving the center screw hole empty.

**Step 6:** Fit the beveled end of the crush block up into the channel of the bottom universal rail on the railing assembly, centered between the two cut ends. Using (two) #10 x 3/4" screws, secure the crush block from underneath, up into the channel of the bottom universal rail.





## INSTALL RAILING SECTIONS

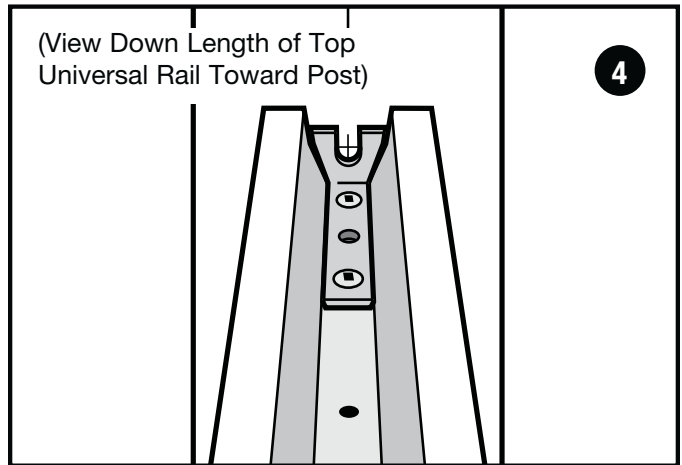
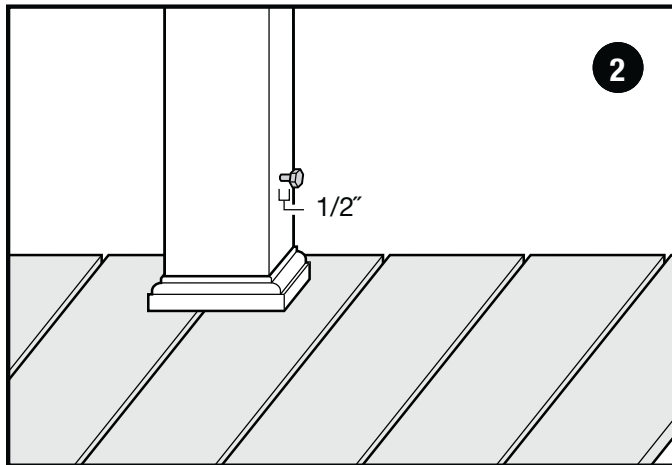
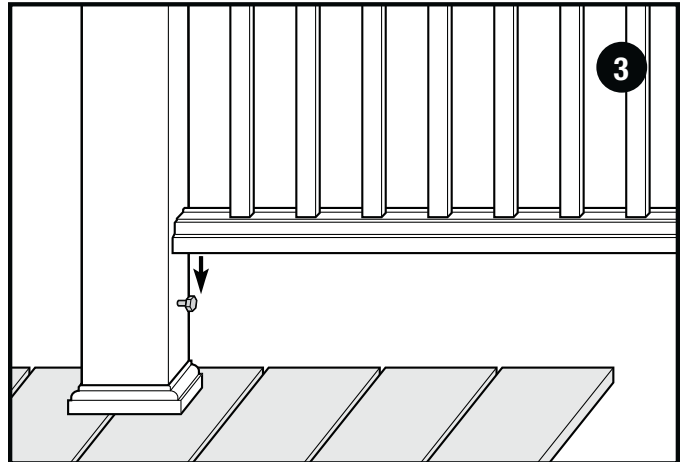
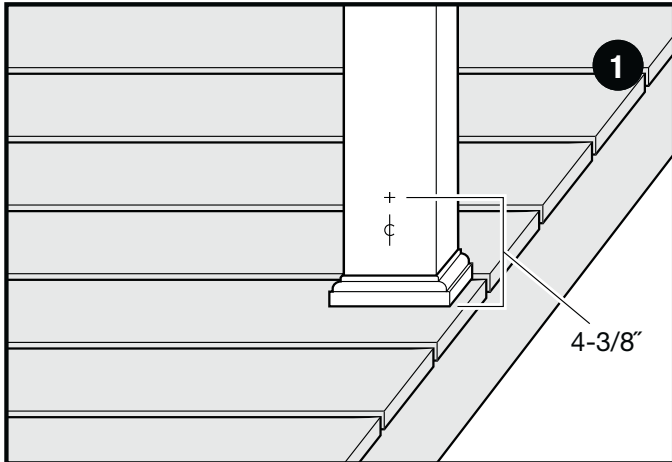
It is critical that posts are plumb. Double-check posts to ensure proper fit of completed railing assemblies.

**Step 1:** At 4-3/8" above the deck surface and centered on the post sleeve, drill a 1/8" pilot hole through the post sleeve and into the post. Then drill a 3/8" clearance hole through the post sleeve ONLY for the bottom lag bolts. Do not drill holes for the top lag bolts.

**Step 2:** Thread bottom lag bolt into post sleeve, leaving approximately 1/2" of the lag bolt shaft exposed. Repeat for opposite post.

**Step 3:** Place railing assembly over bottom lag bolts with universal rail baluster stop on the outward side of rail, making sure the rail brackets seat properly over the lag bolt heads.

**Step 4:** Center and plumb the top of the railing assembly to the post sleeve. Mark the position for the top lag bolts on the post sleeve using the top rail bracket's position as a guide.





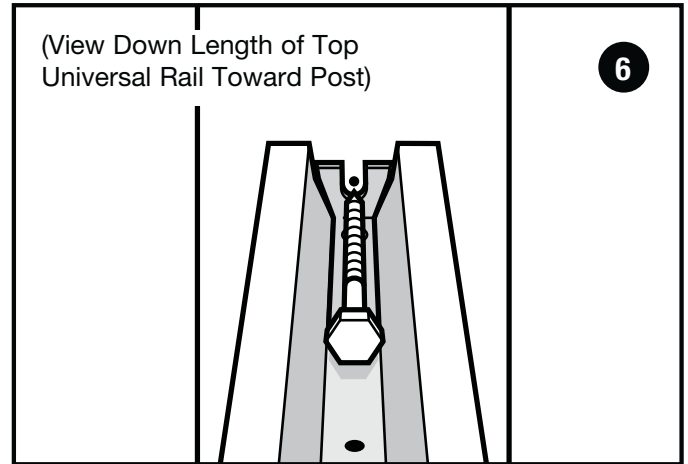
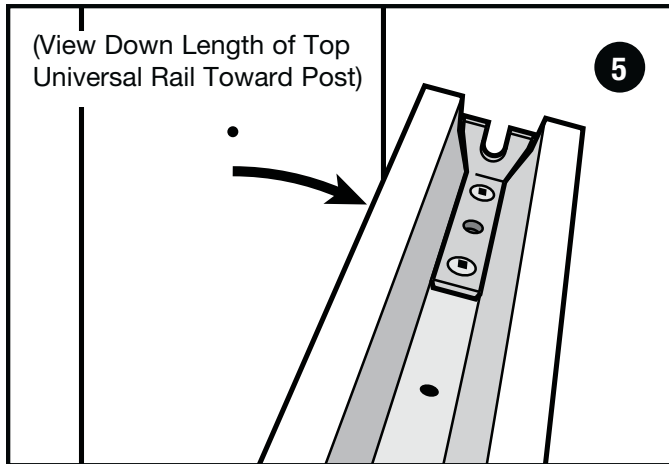
## INSTALL RAILING SECTIONS CONTINUED

**Step 5:** Rotate the top of the railing assembly out of the way. Drill a 1/8" pilot hole through the sleeve and into the post. Then drill a 3/8" clearance hole through the post sleeve ONLY for the top lag bolt. Repeat for opposite post (other side of railing assembly).

**Step 6:** Rotate the top of the railing assembly back into the proper position and thread the top lag bolts through the rail brackets and into the holes in the post sleeves. With the lag bolt heads

now located in the channels of the universal rails, a 1/4" drive socket with three inches or greater extension and a 7/16" socket is needed to sufficiently tighten the lag bolts. Repeat for opposite post.

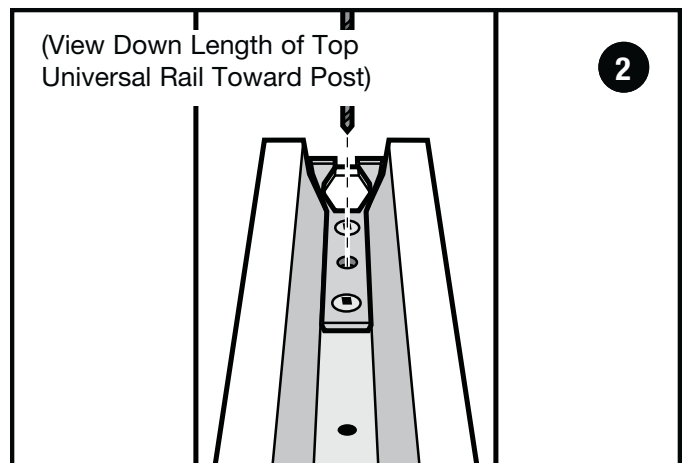
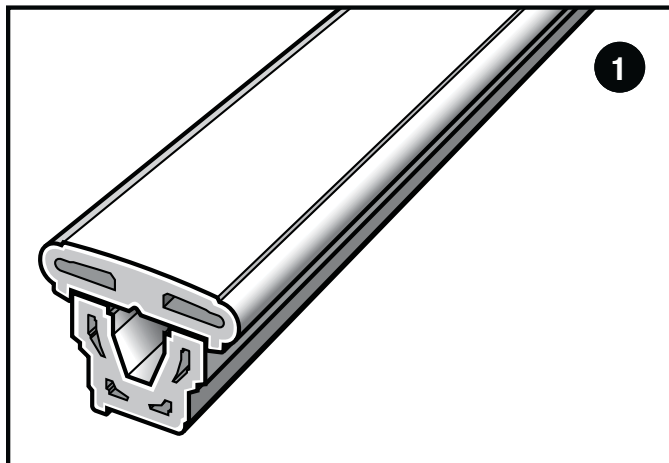
**Step 7:** Return to bottom lag bolts and tighten.



## INSTALL TOP RAILS

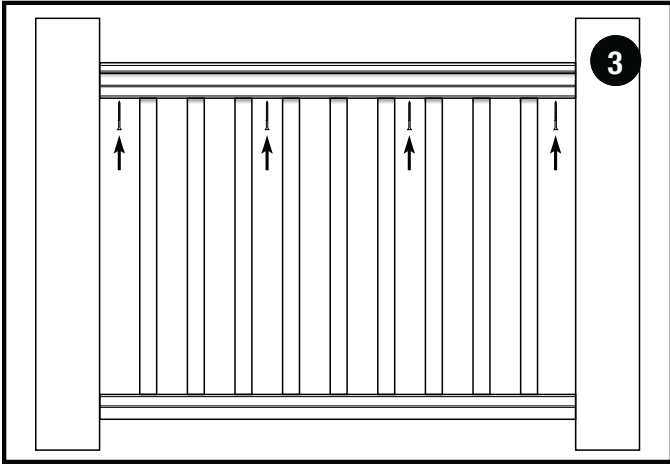
**Step 1:** Measure the distance between post sleeves. Cut the top rail to length. The top rail's bottom channel fits over the top edges of the top universal rail.

**Step 2:** Drill a 3/16" clearance hole down through middle (empty) hole in top rail bracket, completely through top universal rail. Repeat for opposite top rail bracket.

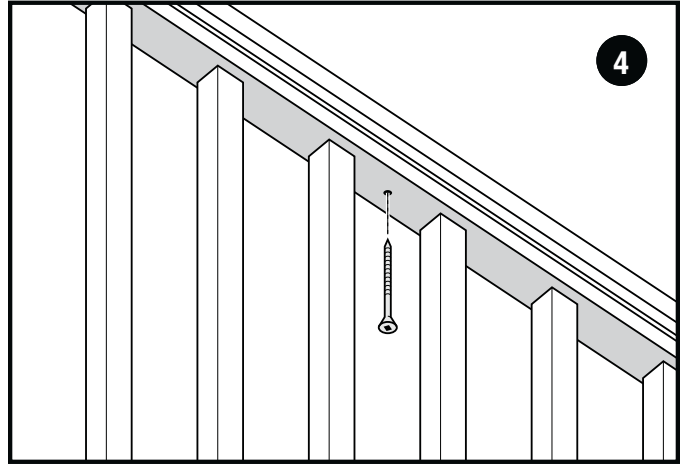


## INSTALL TOP RAILS CONTINUED

**Step 3:** Roughly divide the railing assembly into three equal sections by counting balusters or baluster spaces. Drill 3/16" clearance holes between the balusters at these points.



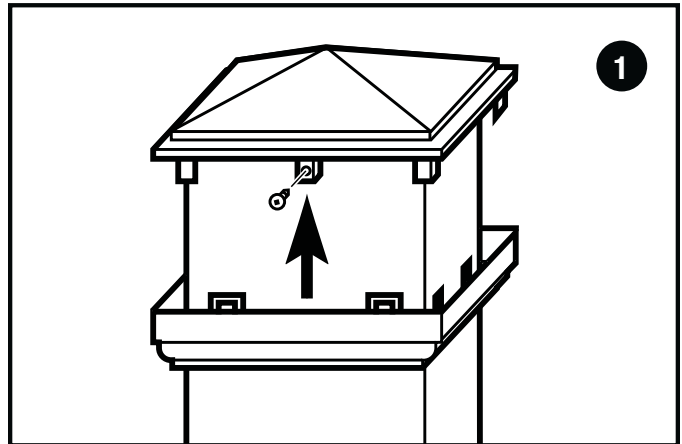
**Step 4:** Place top rail over top universal rail and drive the 2-1/2" top rail screws (with color matched heads) up through the four clearance holes in the bottom of the top universal rail, into the top rail to secure. Be sure not to over-tighten the screws.



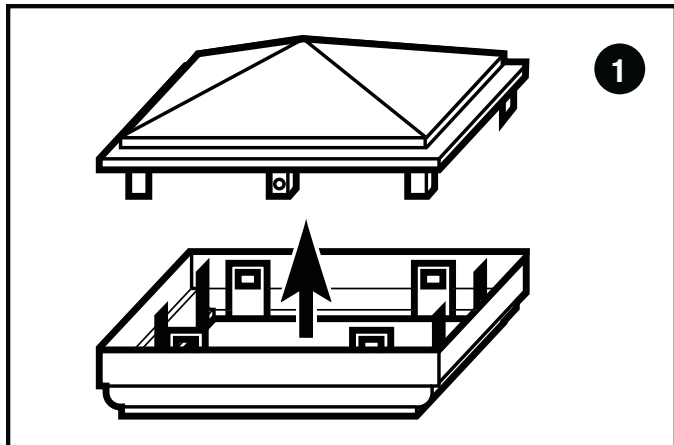
## INSTALL POST CAPS

**Step 1:** Invert post trim ring and slide over the top of the post sleeve. Position post cap over the top of the post sleeve and secure with (two) 10 x 3/4" screws through tabs. Slide inverted post trim ring up and snap together with secured post cap.

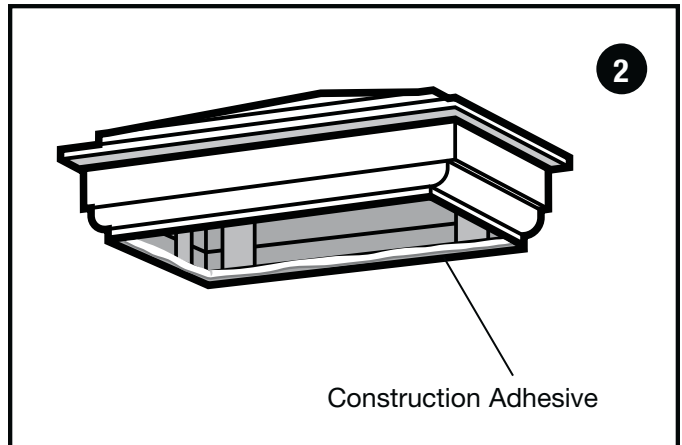
OR



**Step 1:** Snap together a cap and inverted post trim ring to create a complete post cap.



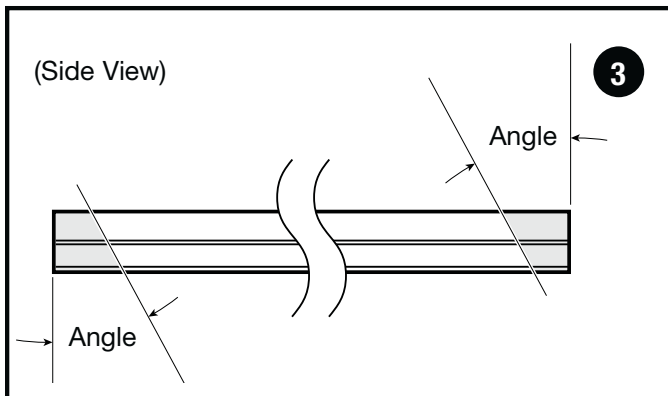
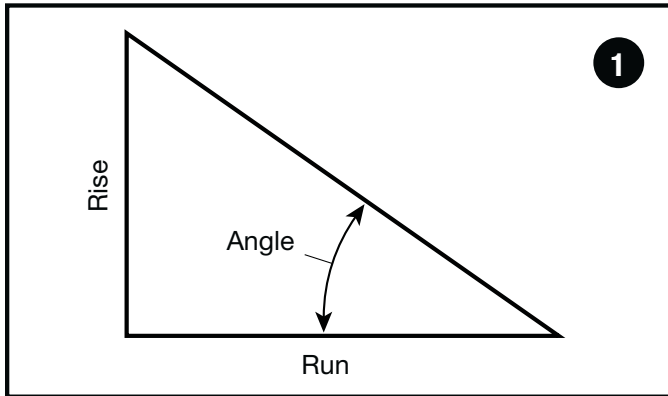
**Step 2:** Apply a small bead of construction adhesive to the inside lower lip of the post cap and slide it over the top of the post sleeve.



# STAIR RAILING INSTALLATION

## ASSEMBLE STAIR RAILING SECTIONS

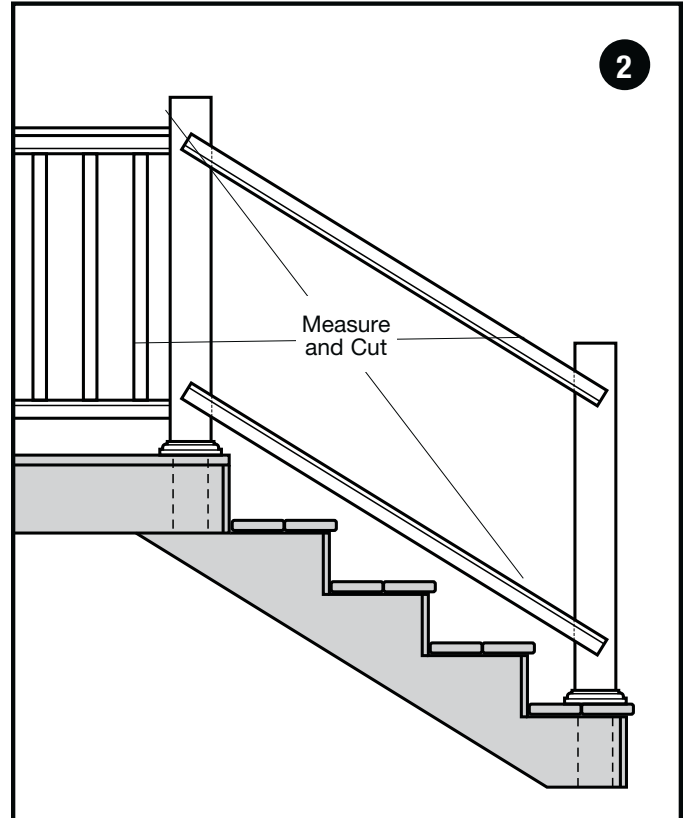
**Step 1:** Make sure post sleeves are installed and plumb. Evaluate the rise and run of the stairs to determine the proper stair angle. Be as accurate evaluating the stair angle as possible — every cut you make from this point forward will depend upon this angle.



**Step 2:** Measure the distance between the post sleeves at the top and bottom

**NOTE:** These two measurements may be slightly different.

**Step 3:** Cut each universal rail to the proper length and angle, making sure that the baluster stop will be on the same side (yard side) of the finished railing assembly.



### Composite Balusters

STAIR RAILING TABLE	RISE % RUN	STAIR ANGLE	BALUSTER SPACING O.C.
	.36	20°	5-5/16"
	.40	22°	5-3/8"
	.45	24°	5-1/2"
	.49	26°	5-9/16"
	.53	28°	5-11/16"
	.58	30°	5-3/4"
	.62	32°	5-7/8"
	.64	32.5°	5-15/16"
	.67	34°	6"
	.73	36°	6-3/16"
.78	38°	6-3/8"	

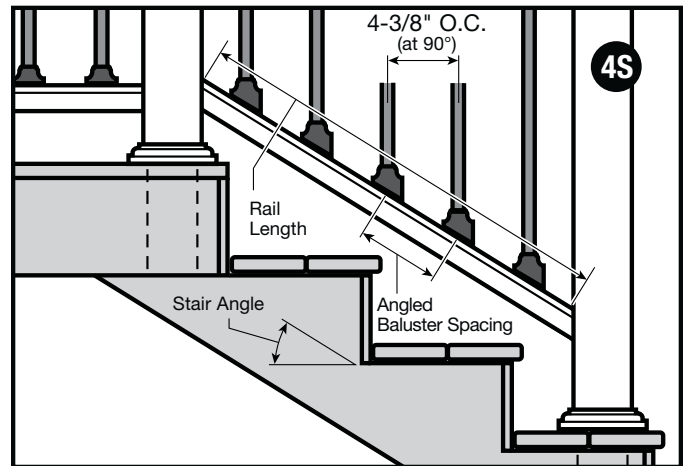
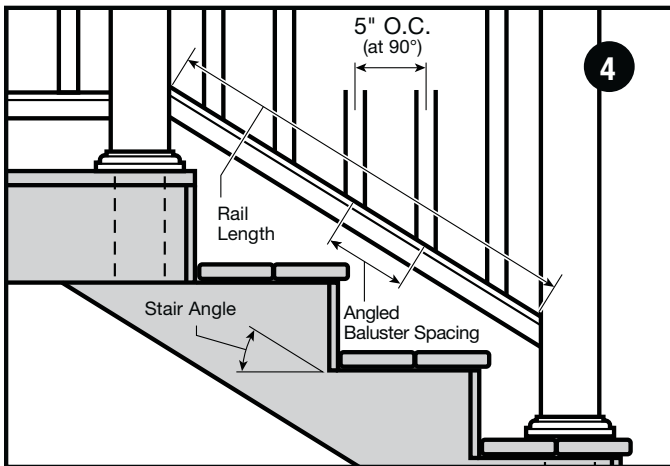
### Steel Balusters

STAIR RAILING TABLE	RISE % RUN	STAIR ANGLE	BALUSTER SPACING O.C.
	.36	20°	4-21/32"
	.40	22°	4-23/32"
	.45	24°	4-25/32"
	.49	26°	4-7/8"
	.53	28°	4-31/32"
	.58	30°	5-1/16"
	.62	32°	5-5/32"
	.64	32.5°	5-3/16"
	.67	34°	5-9/32"
	.73	36°	5-13/32"
.78	38°	5-9/16"	

**Step 4:** Determine number of balusters needed on stair railing assembly to maintain approximately the same baluster spacing as the deck railing. (Deck railing baluster spacing is 5", on center for standard balusters, and 4-3/8", on center, for steel balusters.) Multiply number of balusters needed by two to determine number of black baluster shoes required for steel balusters. (Refer to stair railing tables on facing page.)

**Step 4S:** Cut each stair baluster shoe at the proper angle. To safely cut the stair baluster shoes, insert a stair baluster shoe into each end of the supplied 8" steel tube (included in the stair baluster shoe package to prevent hands from getting close to the saw blade). Rotate the stair baluster shoe so that the "raised dot" is in the upward position (the raised dot is a bisecting point for the saw blade to cut through). Proceed to cut the stair baluster shoe at the determined angle.

**TIP:** If using a chop saw with a rotating table, clamp a piece of lumber to the back fence of the saw. This will close the gap on each side of the blade. Set the saw to the correct angle and make a cut through the lumber. Lay the steel tube holder with the two stair baluster shoes on the saw table and make the first cut, bisecting the raised dot. Use the cut stair baluster shoe to mark another stair baluster shoe across the raised dot, then insert it into the steel tube holder. Set up a wood block on the lumber fence that will act as a stop and position the marked line of the uncut stair baluster shoe. Cut the stair baluster shoe. Repeat this procedure until all stair baluster shoes are cut.



**Step 5:** Measure and mark for the baluster screw holes on the universal rails. Use the stair railing table to determine angled baluster spacing for layout. (See table on page 49.)

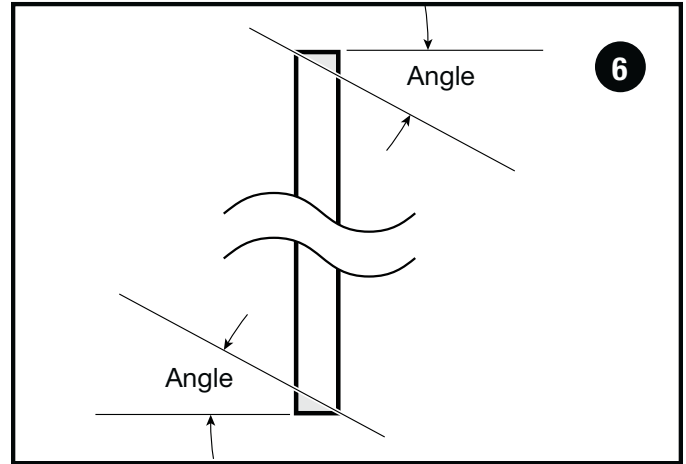
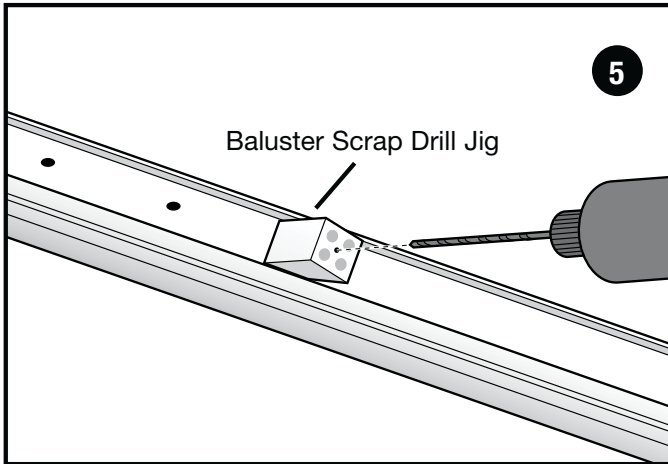
Drill 3/16" holes at the proper angle. Use the baluster-scrap drill jig (see tip below) to assist in aligning the drill to the proper angle. For steel balusters, use the stair baluster shoe cut to the stair angle to assist in aligning the drill to the proper angle.

**TIP: If you have an extra scrap baluster, cut a small piece of that baluster to be used as a drill jig for drilling the baluster screw holes through the universal rails.**

**Step 6:** Determine required baluster length to maintain rail height at stair nose. Cut balusters to length with angled cuts, top and bottom. Make sure all balusters are the same length.

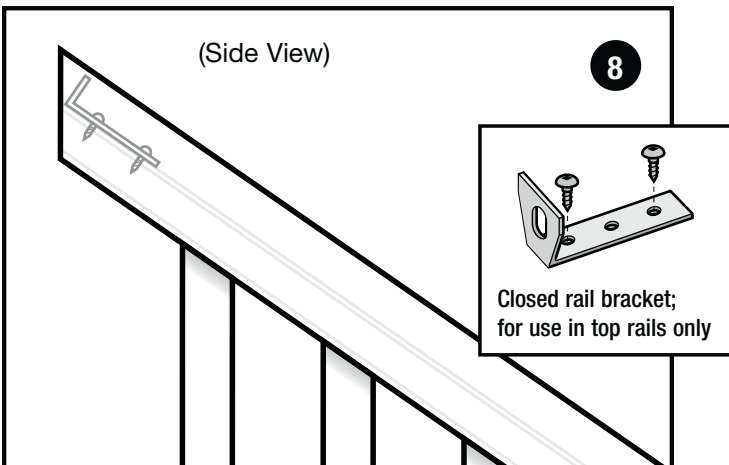
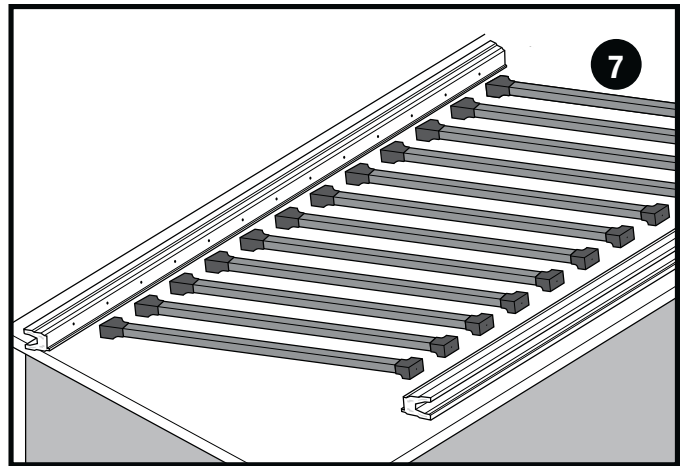
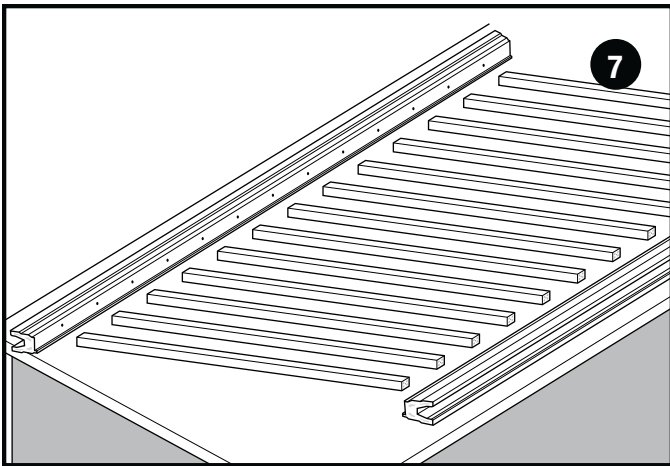
**Step 6S:** Insert one black stair baluster shoe (steel) into each end of every baluster, making sure the baluster shoes are positioned properly before inserting them completely. Now insert them completely into the balusters.

**TIP: For the opposite universal rail, direct a 2-1/2" baluster screw into the channel of the universal rail, through the pre-drilled hole and into the center pilot hole in the end of a baluster. Start the screw into the baluster but do not tighten. This will provide space between the universal rail and the baluster end to allow you to locate the remaining balusters' pilot holes. Repeat for the remaining balusters. When all balusters have been started, return to each baluster and tighten.**



**Step 7:** Lay out the components of the stair railing section on a flat work surface, roughly in the final, assembled position. Make sure the baluster stops are on the same side of the railing assembly. Direct a 2-1/2" baluster screw (3" baluster screw for steel balusters) into the channel of a universal rail, through the pre-drilled hole and into the center pilot hole in the end of a baluster, or the center pilot hole of the stair baluster shoe for steel balusters. Make sure the baluster or stair baluster shoe is installed square, at the proper angle, and does not overlap the baluster stop on the universal rail. Repeat for the remaining balusters.

**Step 8:** Using (two) #10 x 3/4" screws, secure each rail bracket into the channels of the universal rails by aligning the rail brackets just inside each end cut. Make sure that no part of the rail bracket extends beyond the universal rail end cut. Do not bend the rail brackets. Secure the rail bracket through the two screw holes at each end of the rail bracket, leaving the center screw hole empty.



## INSTALL STAIR RAILING SECTIONS

**Step 1:** Position stair railing assembly between post sleeves to determine bottom lag bolt positions. Railing assembly's bottom rail should be positioned so that the distance to tread or gap meets your local code requirement (typically, a 6" sphere cannot pass through the space created between the riser, stair tread and bottom of stair railing).

**Step 2:** Centered on the post sleeve at the proper height, drill a 1/8" pilot hole through the post sleeve and into the post, then drill a 3/8" clearance hole through the post sleeve only at the proper angle (in-line with the bottom universal rail) for both bottom lag bolts. Do not drill holes for the top lag bolts.

**Step 3:** Thread bottom lag bolt into the post at the proper angle, leaving approximately 1/2" of the lag bolt shaft exposed. Repeat for opposite post.

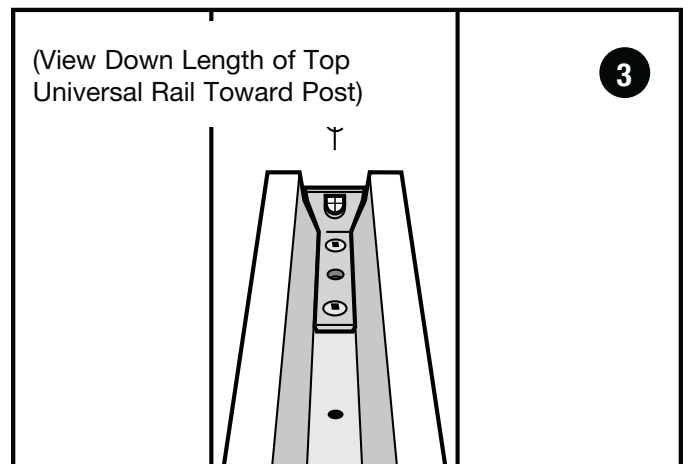
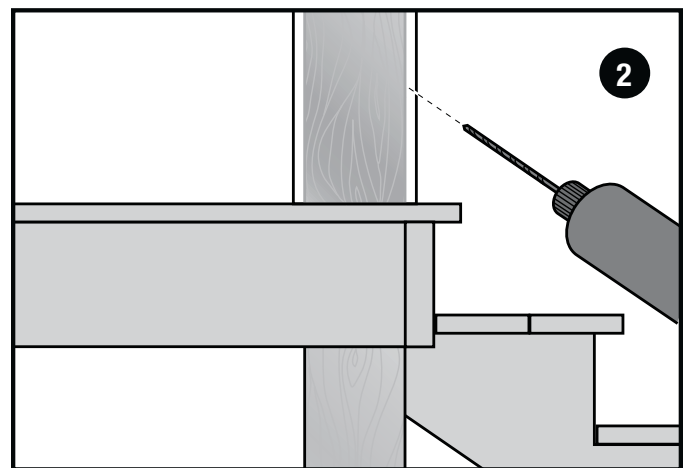
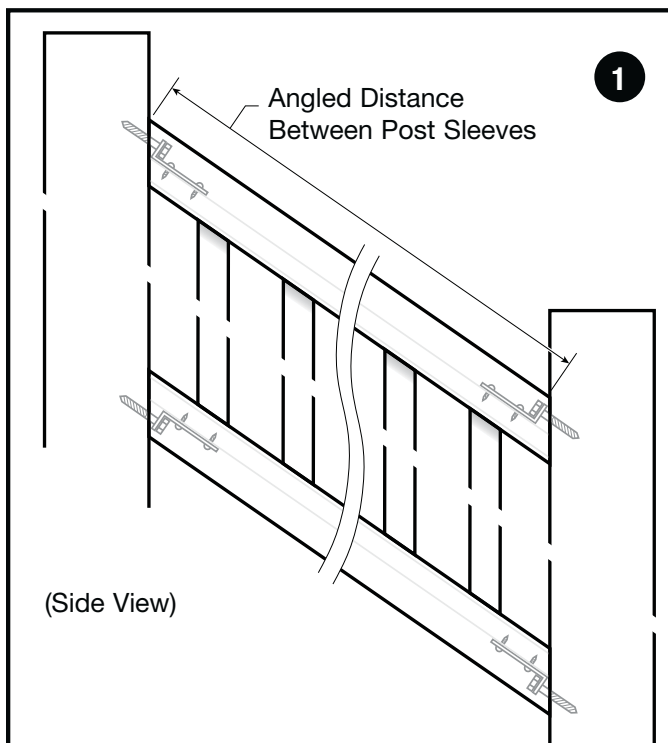
**Step 4:** Place stair railing assembly over bottom lag bolts with universal rail baluster stops facing yard side, making sure the rail brackets seat properly over the lag bolt heads.

**Step 5:** Center and plumb the top of the stair railing assembly to the post sleeve. Mark the position for the top lag bolts on the post sleeve using the top rail bracket's position as a guide.

**Step 6:** Lift the top of the stair railing assembly out of the way. Drill a 1/8" pilot hole through the sleeve and into the post at the proper angle. Then drill a 3/8" clearance hole through the post sleeve only for the top lag bolt at the proper angle. Repeat for opposite post.

**Step 7:** Place the top of the stair railing assembly back into the proper position and thread the top lag bolts through the rail brackets and into the holes in the post sleeves. With the lag bolt heads now located in the channels of the universal rails, a 1/4" drive socket with an extension and a 7/16" socket is needed to sufficiently tighten the lag bolts. Repeat for opposite post.

**Step 8:** Return to bottom lag bolts and tighten.





## INSTALL STAIR TOP RAILS

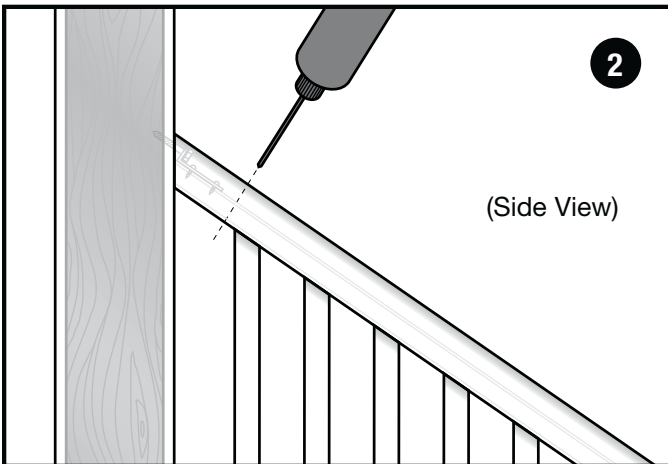
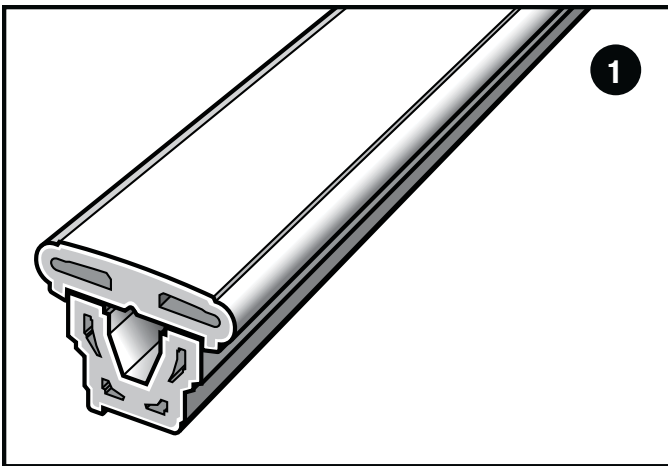
**Step 1:** Measure the distance between post sleeves. Cut the top rail to length and proper angle. The top rail's bottom channel fits over the top edges of the top universal rail.

**Step 2:** To secure the top rail to the stair railing assembly, the top rail screws must be driven through the bottom of the universal rail and into the top rail at a 90° angle, NOT parallel with the balusters. Two of the four top rail screws should secure the top rail nearest each post, with the other two screws spaced equally over the span of the rail, dividing the top rail into three equal sections. Clearance holes should be located where there is room between balusters to maneuver a tool. Drill 3/16" clearance holes down through the top universal rail, between the balusters, in the four calculated positions.

**Step 3:** Place the top rail over the top universal rail. Make sure that the top rail's bottom channel fits over the top edges of the universal rail. Attach the four 2-1/2" top rail screws (with color-matched heads) through the pilot holes in the bottom of the universal rail and into the top rail to secure. Be sure not to over-tighten the screws.

**Step 4:** Place top rail over top universal rail and drive the 2-1/2" top rail screws (with color-matched heads) up through the four clearance holes in the bottom of the top universal rail, into the top rail to secure. Be sure not to overdrive the screws.

**Step 5:** Install post caps. Refer to page 48 for instructions.

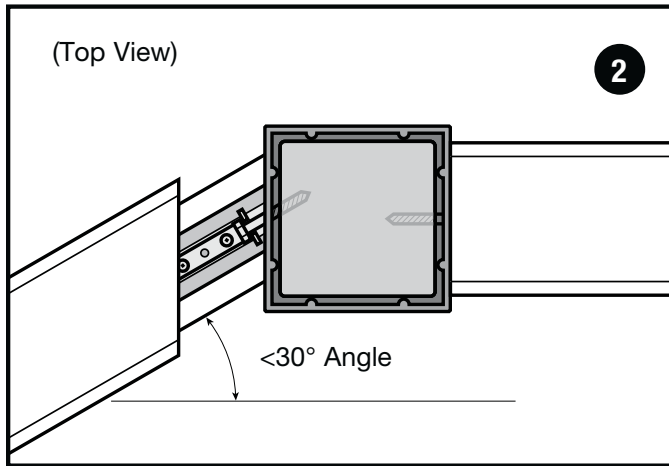


## INSTALLATION FOR MITERED/ANGLED DECK AND PORCH RAILING

Refer to page 43 - 48 for railing assembly and railing installation instructions.

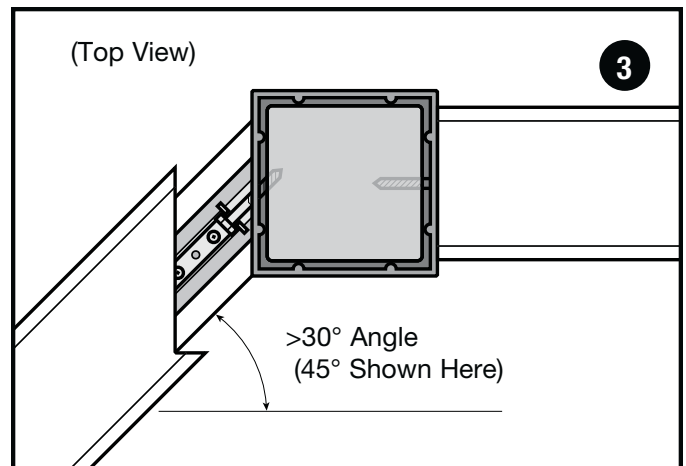
**Step 1:** For angled railing, determine the angle and type of cut needed to fit the universal rails and top rail to the post sleeve.

**Step 2:** For angles **LESS THAN OR EQUAL TO 30°**, the universal rail and top rail can be cut to the required angle. Secure rail brackets and railing assembly to the post as shown.



**Step 3:** For angles **MORE THAN 30°**, the universal rail can be cut to the required angle. The top rail will require a “birds mouth” cut to fit properly around the corner of the post sleeve as shown.

**Step 4:** For angles **MORE THAN 45°**, both the universal rail and top rail will require a “birds mouth” cut to fit properly around the corner of the post sleeve.



# CARE AND MAINTENANCE

## CARE AND MAINTENANCE

Vinyl and composite building materials require very little maintenance. Nevertheless, common sense dictates that builders and suppliers of these products store, handle, and install materials in a manner that avoids damage to the product or structure.

CertainTeed decking and railing is not difficult to work with, but there are a few precautions you should take before you begin to unload and install the product. Always place planks, posts, rails and accessories on a non-abrasive surface, such as a drop cloth or cardboard, to avoid scratches. Protect all components during transport. Finally, when assembling the deck and railing, avoid over-tightening the screws.

## CLEANING VINYL DECKING AND RAILING

CertainTeed vinyl decking and railing resists most common household stains, including oil and grease. But, like any other product, it will get dirty when it is exposed to the atmosphere. Chalk may also accumulate on the surface. This is a normal condition for all pigmented materials that are constantly exposed to sunlight and the elements. Soil, grime and chalk can be removed with a garden hose and a bucket of soapy water.

### Mildew

Mildew may be a problem in some areas, especially warmer climates with consistently high humidity. Mildew appears as black spots on surface dirt and is usually first detected in areas not subjected to rainfall, such as eaves and porch enclosures. You can remove mildew from vinyl decking and railing with the following solution.

### Mix together:

- 1/3 cup detergent (Tide, for example)
- 2/3 cup trisodium phosphate (e.g., Soilex)
- 1 qt. 5% sodium hypochlorite (e.g., Clorox)
- 3 qt. water

**CAUTION: Cleaning solution mixed at greater concentrations may harm the vinyl.**

If the above solution does not readily remove the mildew spots, purchase mildew cleaner from your local hardware store. Before you use any commercial cleaner, test it on an inconspicuous area.

The chemical agents mentioned above may be hazardous to the user or to the environment. Be sure to follow all precautions and warnings on the product label, particularly those that may be necessary to prevent personal injury. Please DISCARD these chemical agents in the manner

prescribed by the manufacturer. If you are unsure how to use or dispose of these chemical agents, contact the manufacturer.

## CLEANING PANORAMA® COMPOSITE RAILING

Panorama® Composite Railing resists most common household stains, but it will become dirty like any product exposed to atmospheric conditions. Periodic washing with a soft bristle brush and clean water from a garden hose may be necessary to remove surface dirt which may accumulate on the surface. For best appearance, clean your Panorama Composite Railing at least once a year, unless local conditions require additional cleaning.

## CLEANING UNDERSHIELD® WATER DIVERSION SYSTEM

UnderShield® resists most common household stains, but it will become dirty like any product exposed to atmospheric conditions. Periodic washing with a soft bristle brush and clean water from a garden hose may be necessary to remove surface dirt. Chalk may also accumulate on the surface. This is a normal condition for pigmented materials exposed to the elements. For the best appearance, clean UnderShield at least once a year. To remove soil, grime and chalk from UnderShield, use a garden hose, a soft bristle brush, and a bucket of soapy water. (You can also use the solution described in the section dealing with mildew.) Thoroughly rinse UnderShield with clean water from a garden hose. Avoid prolonged or high pressure rinsing of open ventilated areas. Keep cleaning solution off surrounding fixtures and surfaces not scheduled for washing.

If debris such as leaves gets in the system, you will need to periodically flush out the system with a garden hose. This can be done from above or possibly from access to the sides by removing the fascia panel.

**NOTE: We do not recommend power washing UnderShield as it can cause moisture intrusion, damage, and/or discoloration.**

### Stubborn Stains

If you can't remove especially stubborn stains using normal household detergents, request a cleaner from your contractor or your local building materials retailer. Always test any cleaner on an inconspicuous area before full use.

**CAUTION: Greater concentration may cause damage to UnderShield.**

If the above solution does not readily remove mildew spots, ask your contractor or your local building materials retailer for a mildew cleaner.