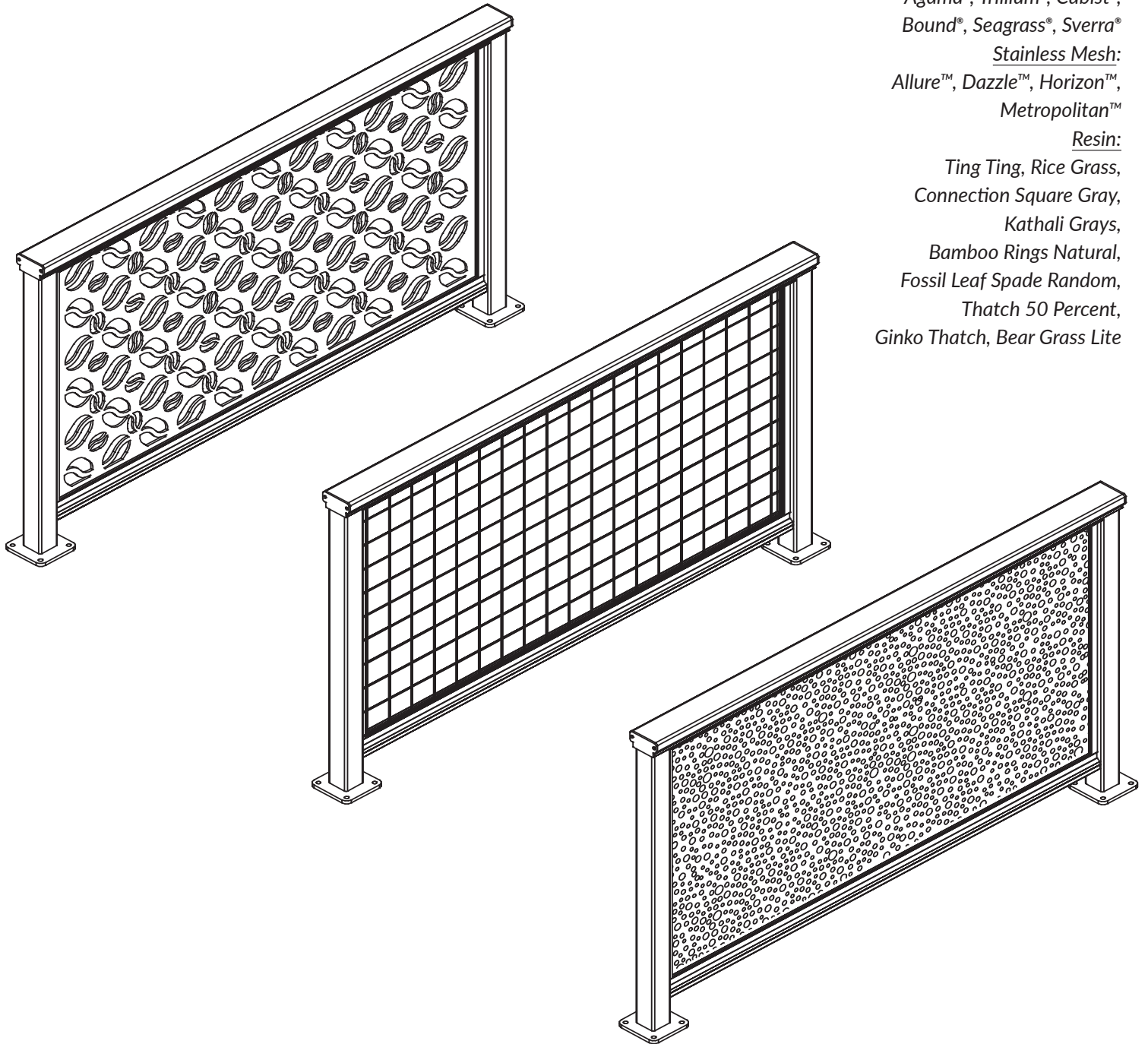


Installation Instructions

for DesignRail® with Panel Infill



Designs included:

Laser-cut Aluminum:

Pisces®, Torrent®, Cypher®,
Agama®, Trillium®, Cubist®,
Bound®, Seagrass®, Sverra®

Stainless Mesh:

Allure™, Dazzle™, Horizon™,
Metropolitan™

Resin:

Ting Ting, Rice Grass,
Connection Square Gray,
Kathali Grays,
Bamboo Rings Natural,
Fossil Leaf Spade Random,
Thatch 50 Percent,
Ginko Thatch, Bear Grass Lite

Notes:

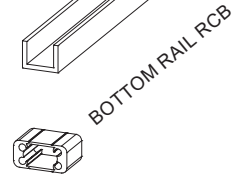
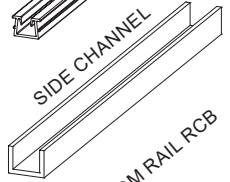
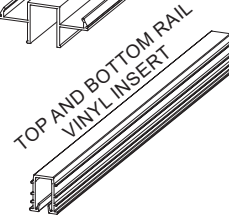
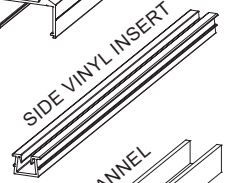
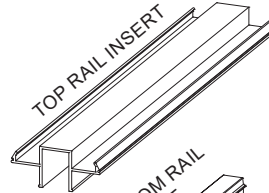
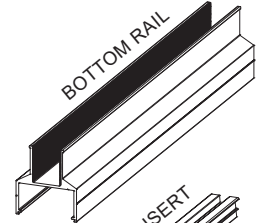
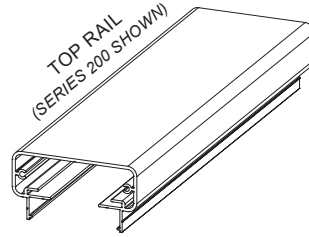
- 1) Prior to beginning installation, verify that all parts have arrived and that they match the packing list, and thoroughly review all of the installation instructions.
- 2) Consult local building code for all railing construction requirements in your area.
- 3) For projects with multiple infill options refer to additional installation instructions and documents, as needed.
- 4) For complete information on installation, care & maintenance, warranty, and product registration, visit feeneyinc.com

STEP 1

Check contents of packages and verify that all parts have arrived and that they match the packing list.

Note: Panel Infill is compatible for all DesignRail top rail options (series 200 shown as example).

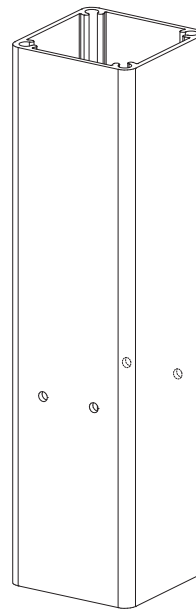
feeney®		Picking Ticket	
Model No.	Qty	Model No.	Qty
2000 Universal Street Oakland CA 94612 (916) 888-8888 (Fax) (916) 888-8872 (Pin)			
Page 1 of 4			
Ship To: ABC Company 123 MAIN Ave Anytown OR 12345-1234 United States			
Contact Name:	Phone:	Fax:	Primary Order Ref:
John Doe	123-456-7890	123-456-7890	1234567890
Order No.:	Ship Via:	Ship Date:	Est. Ship Date:
1234567890	Over Dimension 2P & Allow	11-12-2019	11-12-2019
Item	Qty	Description	Unit
1	1	**FIRE AND EXTERIOR RESISTANT APPLICATION** Aluminum Horizontal Cable Railing, Series 200 (Electroplated Finish) Top Rail For 30 Series - 36 Inch UMI With Removable Post, Polished Stainless Steel For Bottom Rail All Posts to be Fixed Mounted to Composite Over Wood **FOLD PANELS CONFIRMED BY CUSTOMER** **VERIFICATION OF COMPOSITE PANELS NOT REQUIRED FOR SELECTION OF CORRECT LAG BOLT LENGTH - 7" LAG BOLTS SUGGESTED** COLOR TO BE GRAY Price Will Include All 20 Mounting and Fastening Hardware as well as all S/S Cable Assembly Complete Detailed Order Will Ship From Northern CA Division Freight Prepaid and Addn. From Date of Approval, Please Allow 3-4 Weeks	



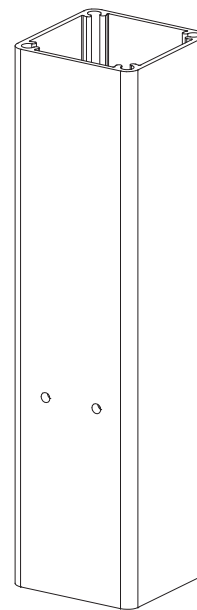
STEP 2 - GATHER AND IDENTIFY ALL POSTS:

Use the rail connecting bracket (RCB) holes on each post to identify the post type:

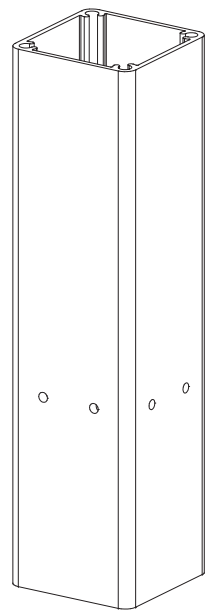
- Intermediate posts (IN) – RCB holes on opposite sides.
- End posts (E) – RCB holes on one side only.
- Single corner posts (SC) – RCB holes on adjacent sides.



INTERMEDIATE



END

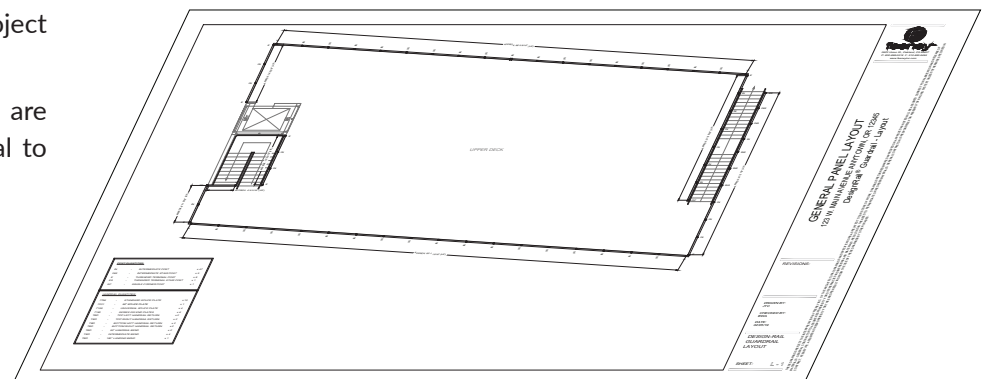


SINGLE CORNER

STEP 3 - INSTALL POSTS:

Install posts at required locations, based on project post placement layout.

Pay close attention and ensure that posts are accurately positioned and plumb; this is critical to ensure proper fit of panels between posts.

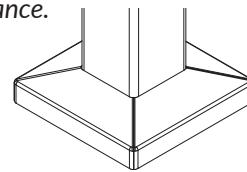
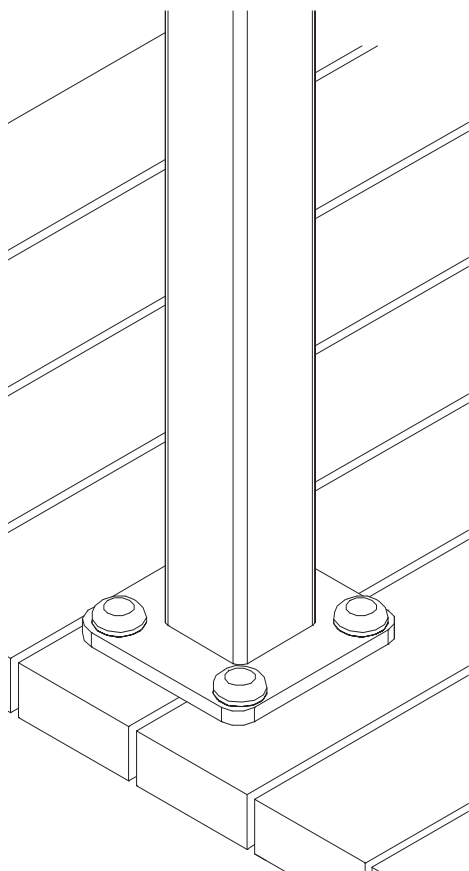


STEP 3A - BASE MOUNT

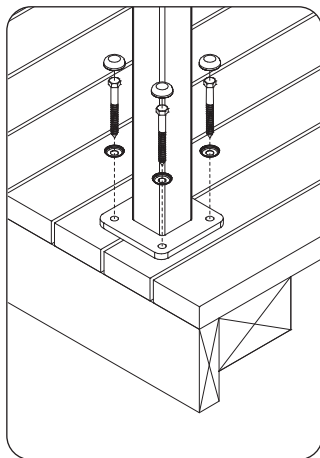
Determine position of all posts based on project post placement layout.

Attach each post using provided hardware. See additional detail drawing(s) included with order documents for specific hardware and additional attachment information.

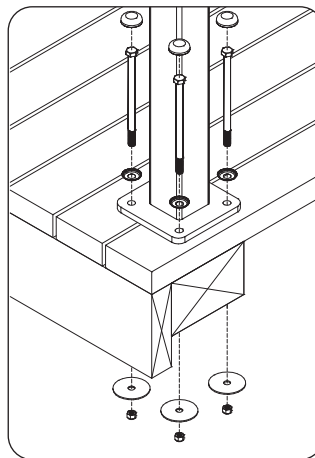
Optional: Base Plate Covers are available for a more finished appearance.



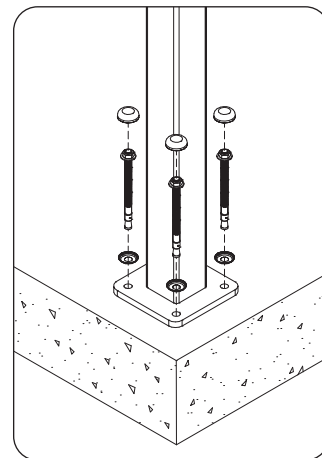
BASEPLATE COVER



LAG SCREWS



THRU-BOLTS

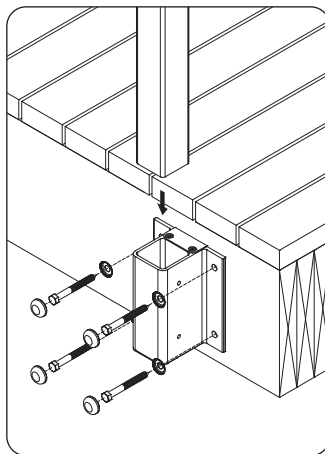
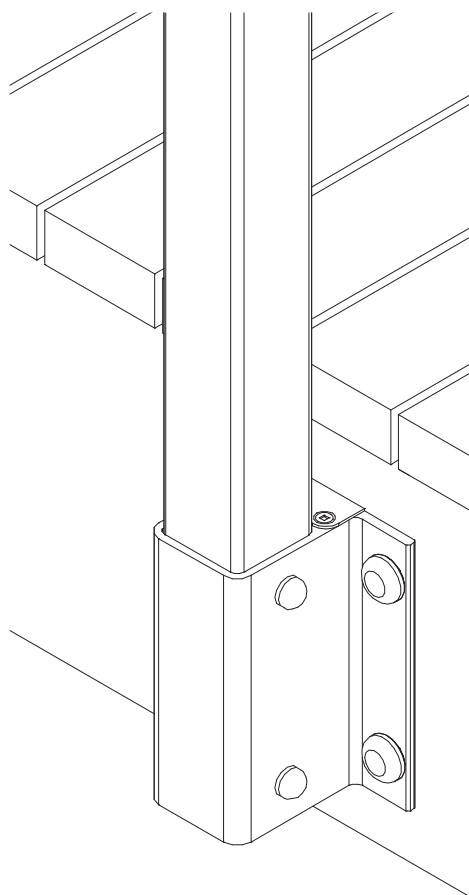


EXPANSION ANCHORS

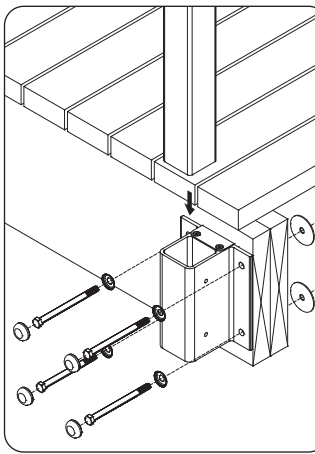
STEP 3B - FASCIA MOUNT BRACKET

Determine position of all posts based on project post placement layout.

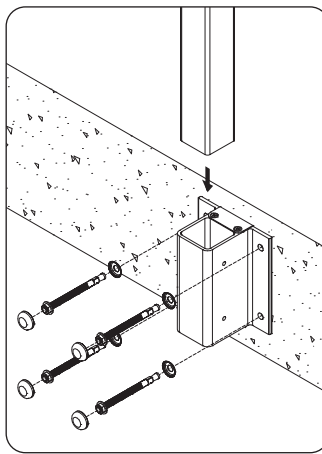
Attach brackets to fascia using provided hardware. Attach top and bottom plates to brackets. Insert posts into brackets and secure to brackets. See additional detail drawing(s) included with order documents for specific hardware and additional attachment information.



LAG SCREWS



THRU-BOLTS



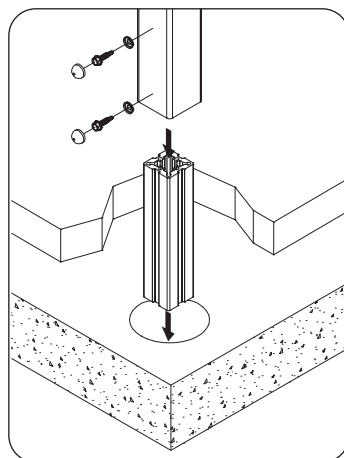
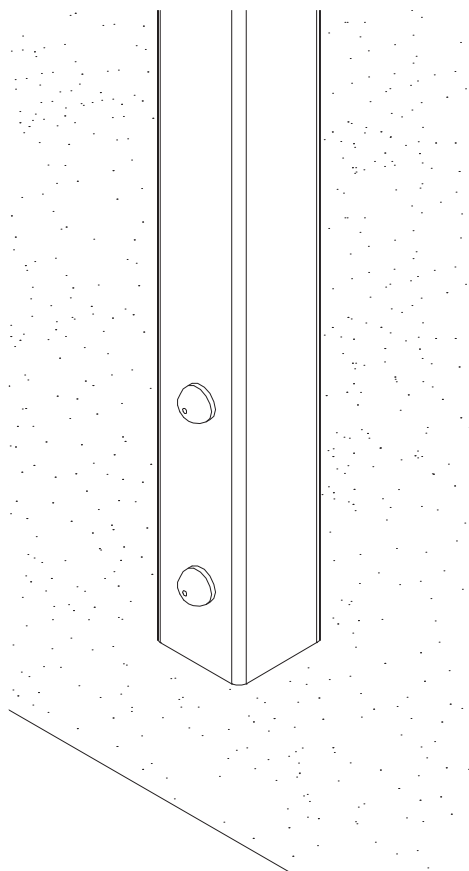
EXPANSION ANCHORS

STEP 3C - STANCHION MOUNT

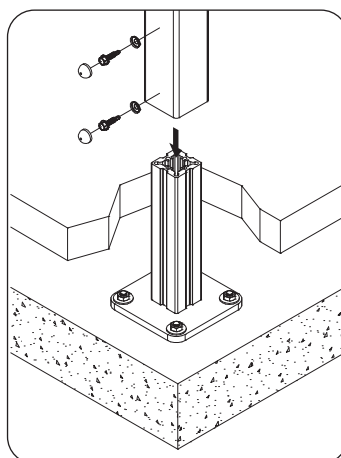
Determine position of all posts based on project post placement layout.

Stanchions without base plate: Install stanchions in core holes, or blockout holes and backfill with grout. See additional detail drawing(s) included with order documents for specific hardware and additional attachment information.

Stanchions with base plate: Attach stanchions using provided hardware. Slide posts over stanchions and secure to stanchions. See additional detail drawing(s) included with order documents for specific hardware and additional attachment information.



WITHOUT BASEPLATE

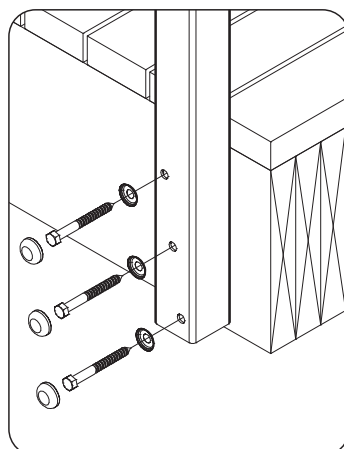
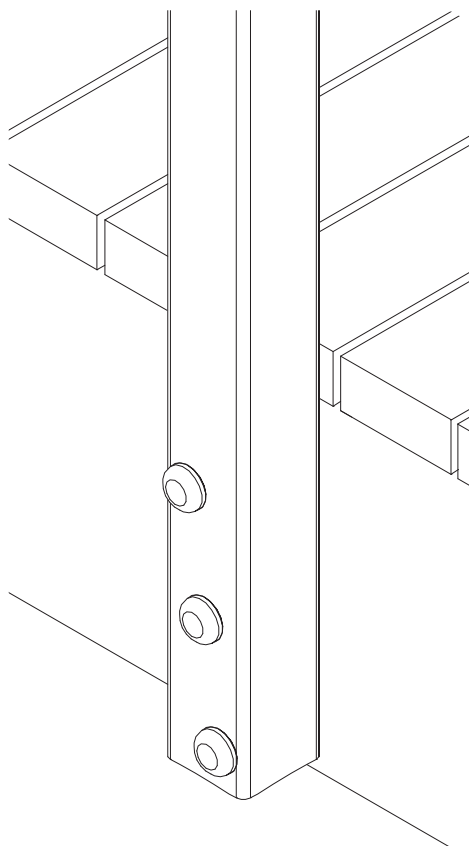


WITH BASEPLATE

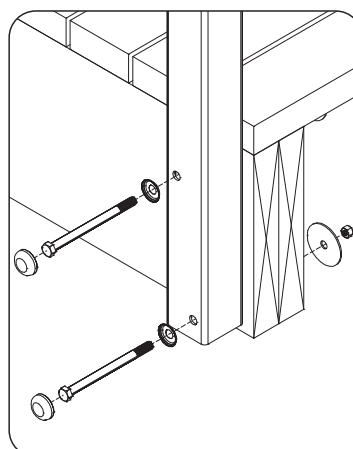
STEP 3D - FASCIA MOUNT

Determine position of all posts based on project post placement layout.

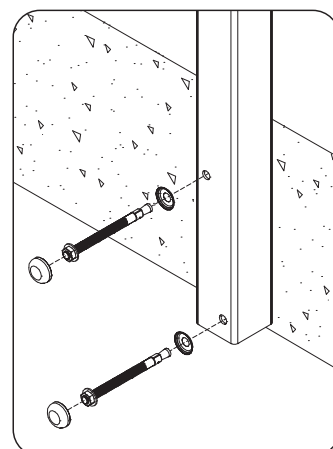
Attach posts to fascia using provided hardware. See additional detail drawing(s) included with order documents for specific hardware and additional attachment information.



LAG SCREWS



THRU-BOLT



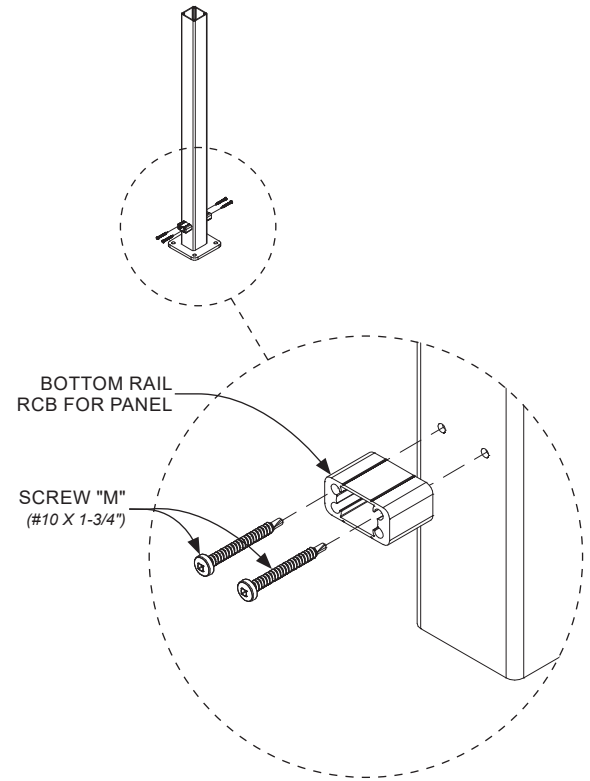
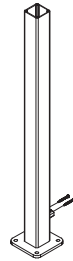
EXPANSION ANCHORS

STEP 4 - ATTACH RCBS

Locate the rail connecting bracket (RCB) holes on each post (these are pre-drilled except on stair rail posts where all the holes must be drilled in the field).

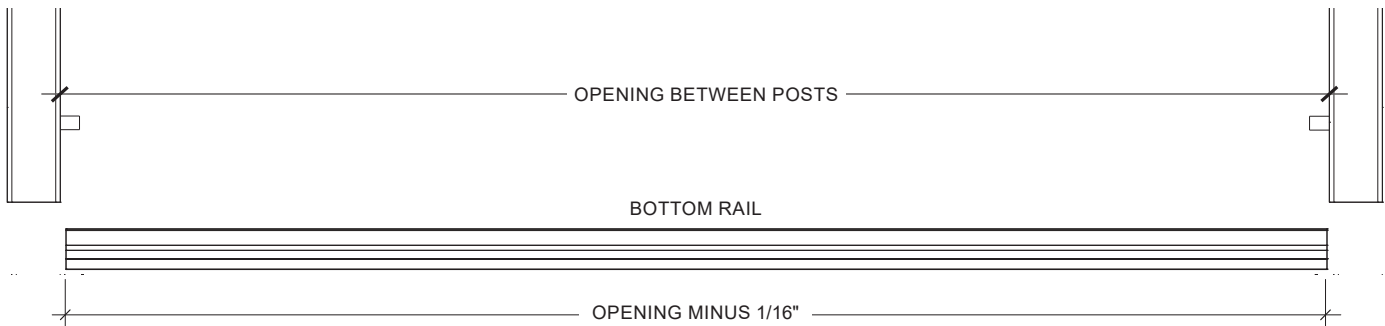
Attach the RCBS to the posts using Screw "M" (two per RCB).

Intermediate, Single Corner posts will have two RCBS each, while End posts will have one RCB (see Step 2).



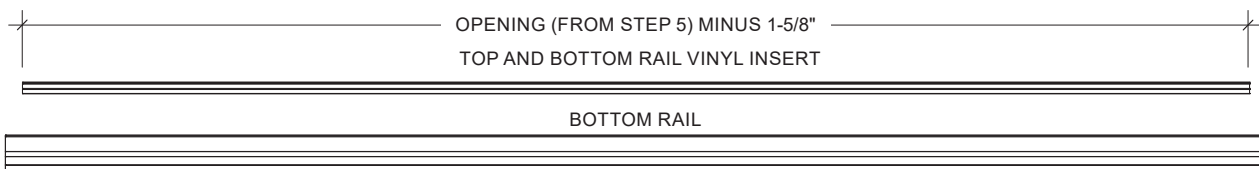
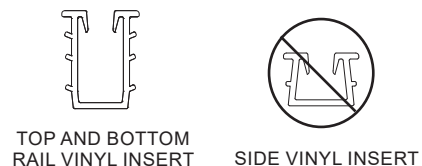
STEP 5 - MEASURE AND CUT BOTTOM RAIL

Measure the opening between the inside post faces, just above the bottom rail RCBS. Subtract $\frac{1}{16}$ " to allow for a $\frac{1}{32}$ " clearance on each side, to prevent scratching the posts during installation. Cut the bottom rail to the calculated dimension.



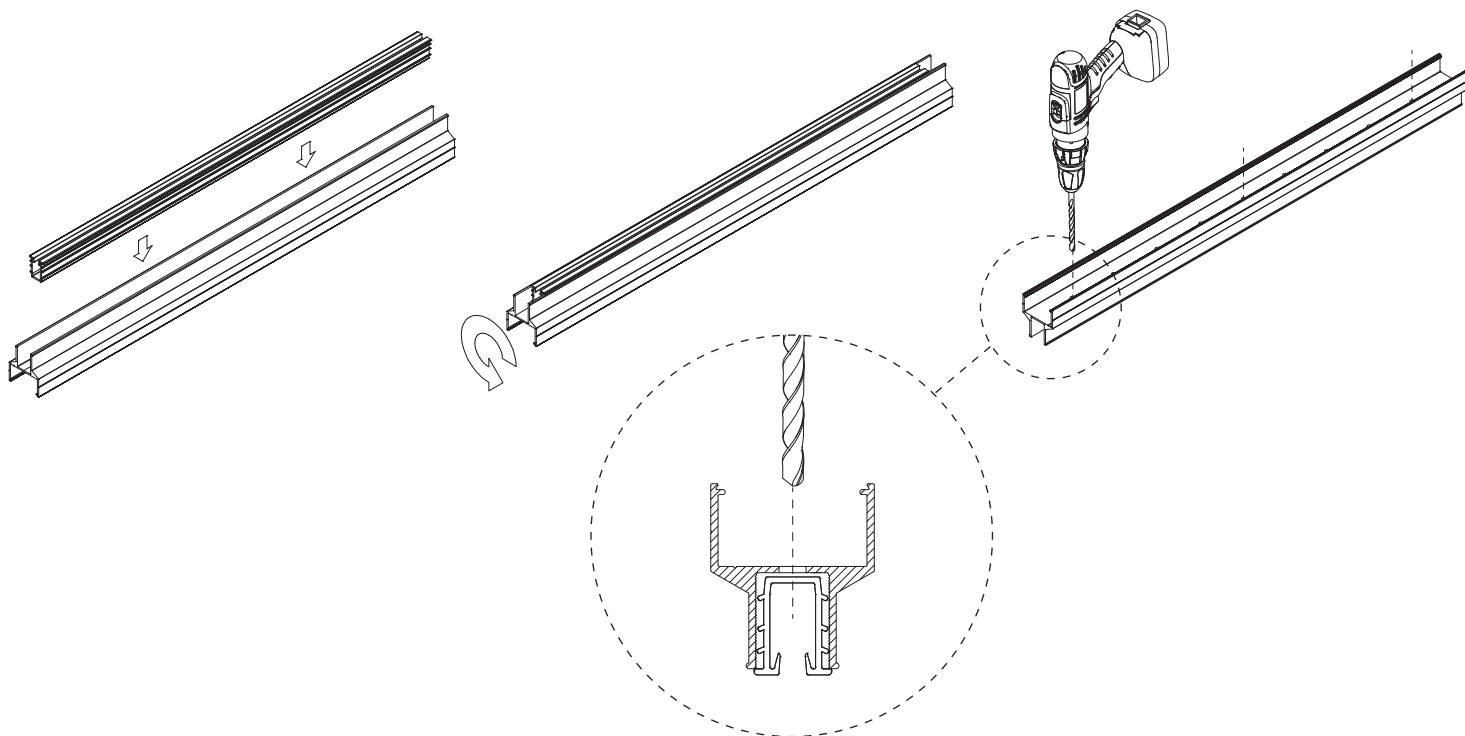
STEP 6 - MEASURE AND CUT VINYL INSERT

Subtract $1\text{-}5/8$ " from the opening measurement and cut the top and bottom rail vinyl inserts to that dimension.



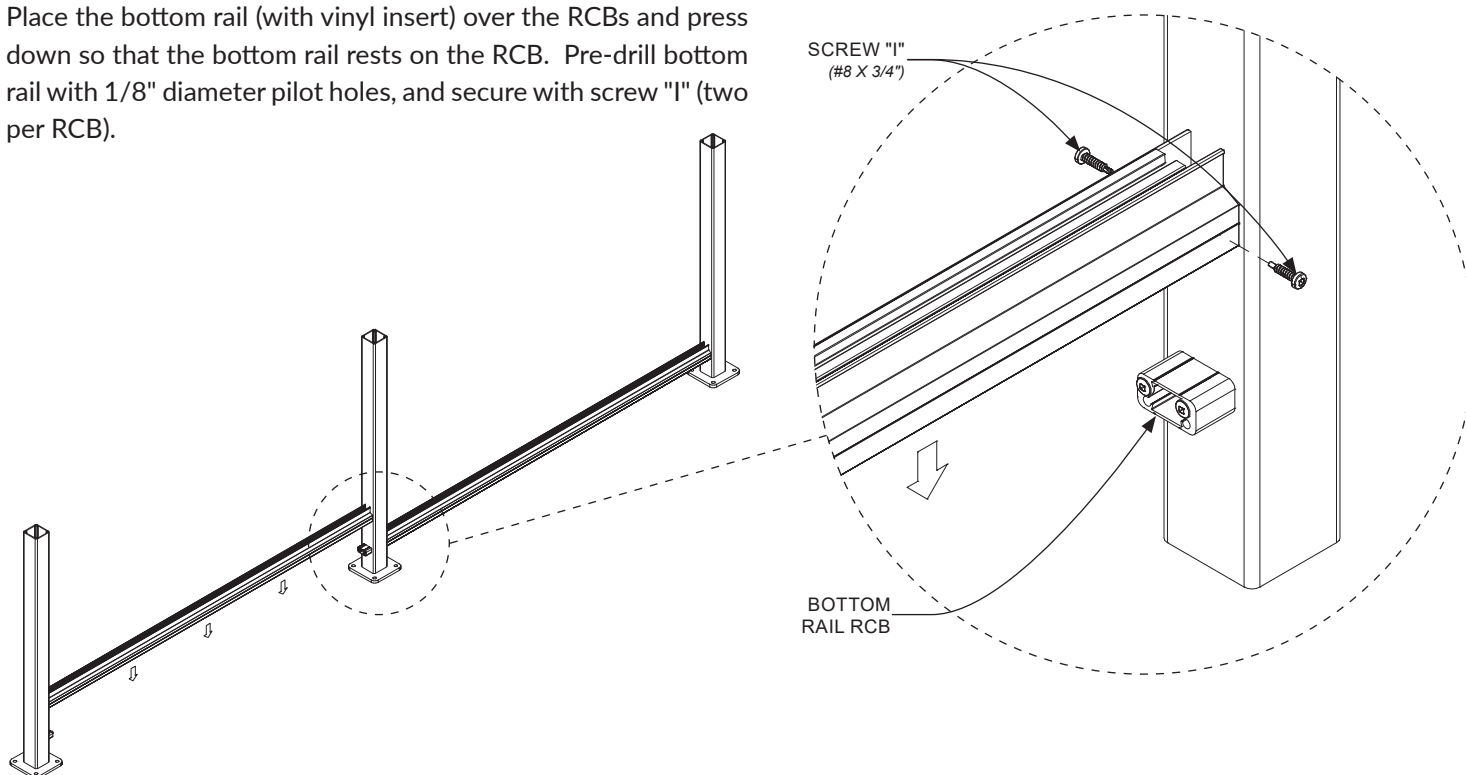
STEP 7 - DRILL WEEP HOLES IN BOTTOM RAIL VINYL INSERT

Insert the bottom vinyl into the bottom rail, and center it so that it is approximately 3/4" inset on each end. Flip the bottom rail so that the pre-drilled holes are exposed. Use the holes as a guide to drill water drainage/weep holes through the vinyl insert in several locations. Leave the bottom rail vinyl insert in place, and proceed.



STEP 8 - INSTALL BOTTOM RAILS

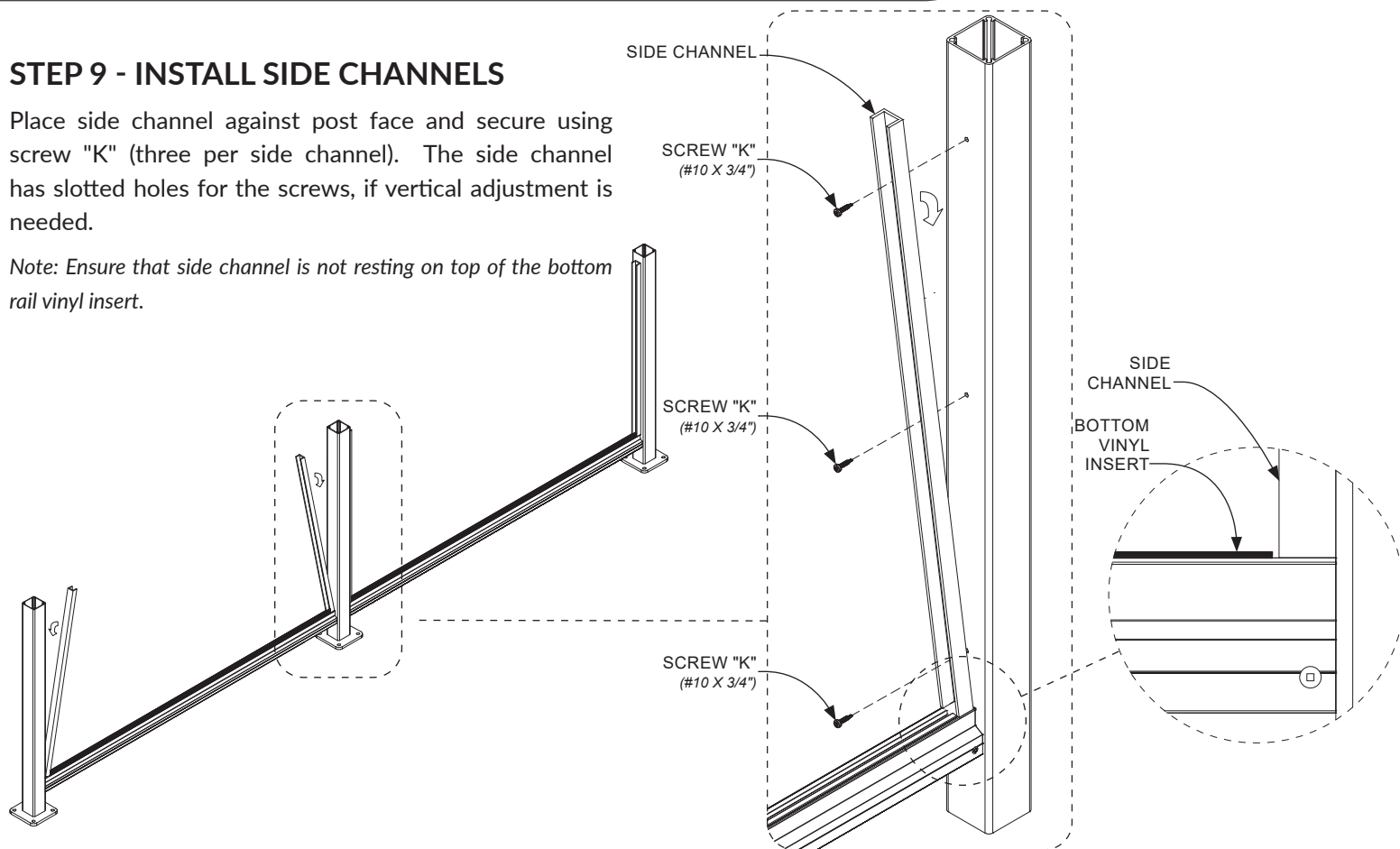
Place the bottom rail (with vinyl insert) over the RCBs and press down so that the bottom rail rests on the RCB. Pre-drill bottom rail with 1/8" diameter pilot holes, and secure with screw "I" (two per RCB).



STEP 9 - INSTALL SIDE CHANNELS

Place side channel against post face and secure using screw "K" (three per side channel). The side channel has slotted holes for the screws, if vertical adjustment is needed.

Note: Ensure that side channel is not resting on top of the bottom rail vinyl insert.

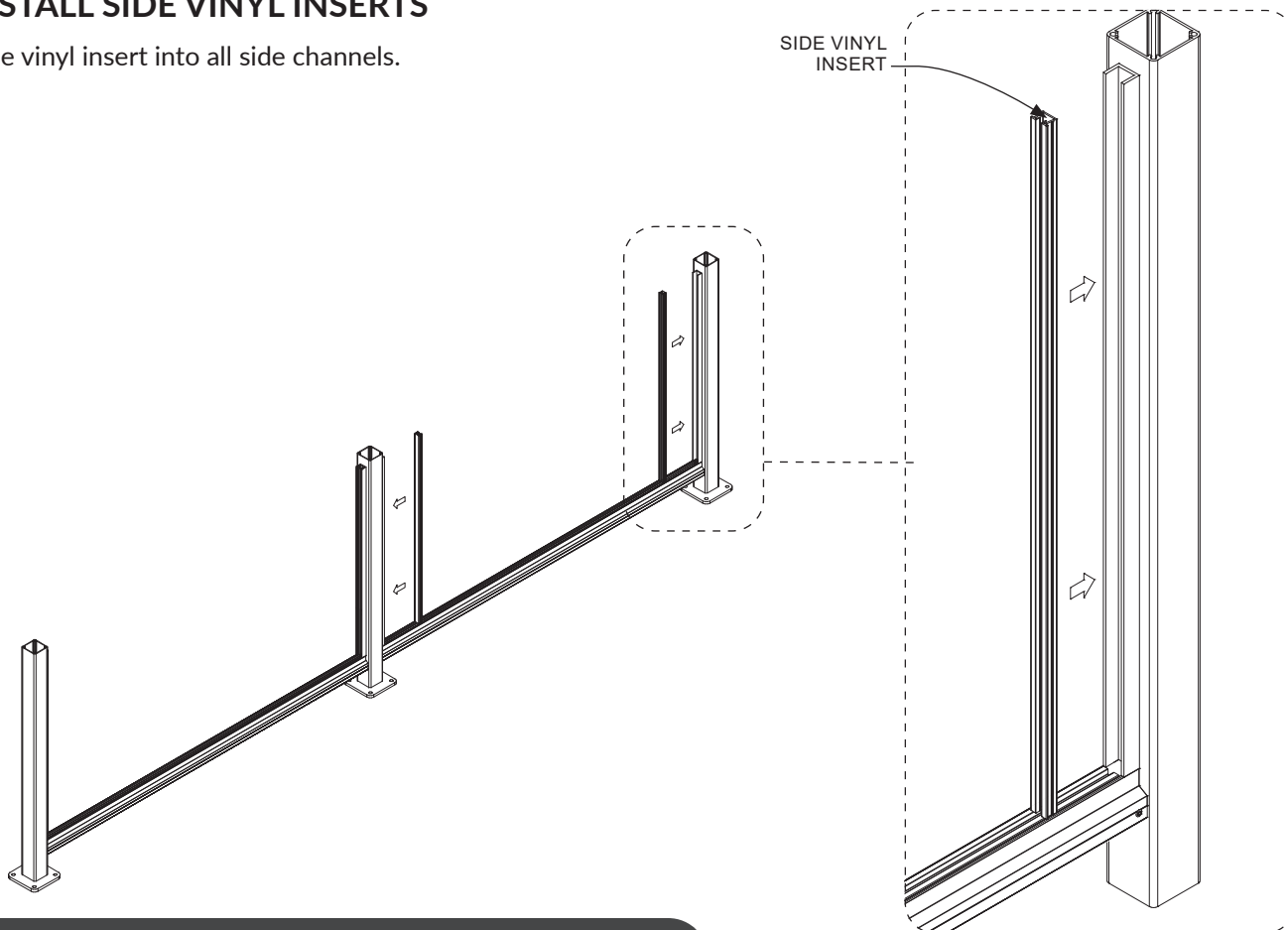


STEP 10 - INSTALL SIDE VINYL INSERTS

Insert pre-cut side vinyl insert into all side channels.



SIDE VINYL INSERT



STEP 11 - TRIM PANELS (IF NECESSARY)

Panels may need to be trimmed to width, depending on exact post spacing. Measure the opening between the posts (see Step 5) and subtract 7/8". Trim the panels to the calculated dimension.

Note: Laser-cut aluminum panels are not field trimmable, they are delivered pre-cut based on ordered dimensions.

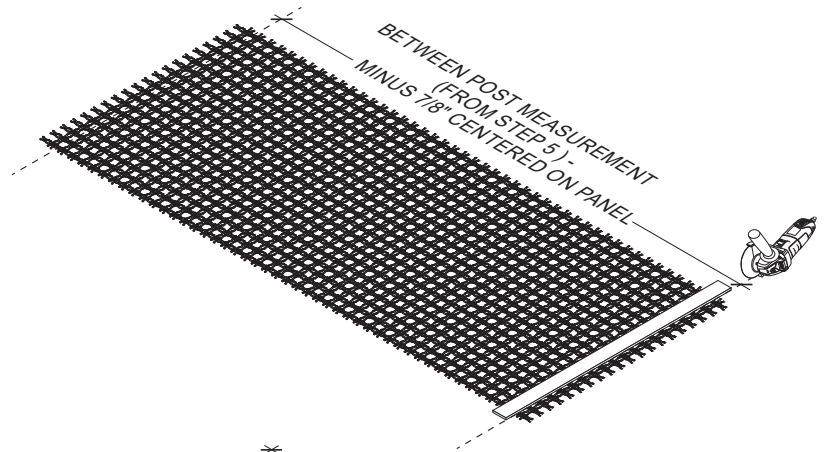


STEP 11A - TRIM MESH PANEL

Trim mesh panels using a straight edge and an angle grinder with an abrasive cut-off wheel.

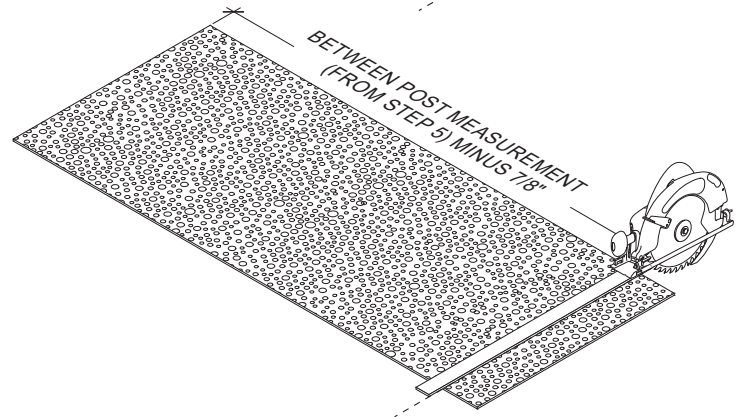
Notes: Trim equal amounts from each side, in order to retain pattern symmetry.

To avoid cross-contamination and corrosion issues use a new cut-off wheel, specifically made for cutting stainless steel.



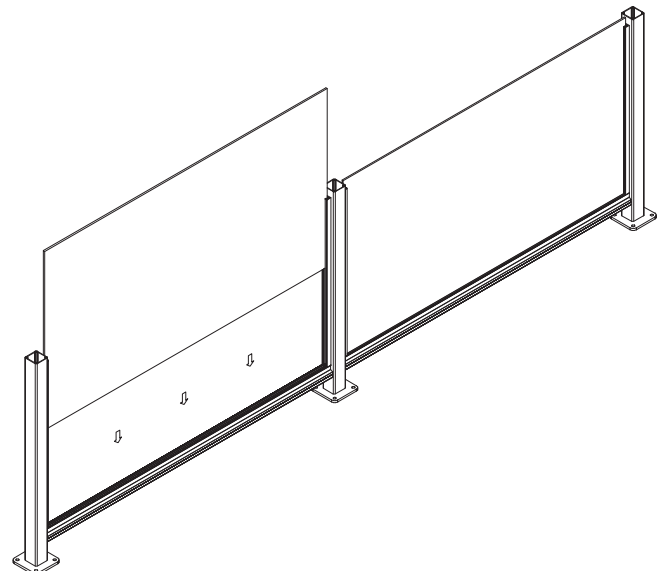
STEP 11B - TRIM RESIN PANEL

Trim resin panels using a table saw or a straight edge and a circular saw with a medium to fine pitched, carbide-tipped blade.



STEP 12 - INSERT INFILL PANELS

Insert infill panel into side channels and push down until the panel is seated into the bottom rail vinyl. If necessary, for lasercut aluminum or resin panels, use soapy water to reduce friction and ease installation.

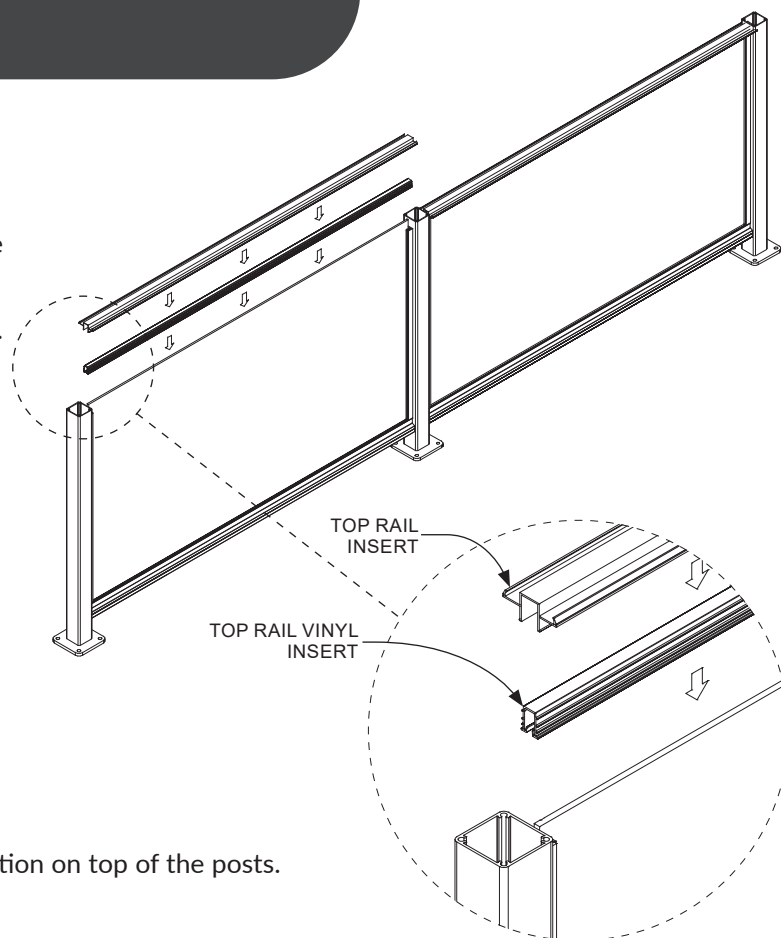


STEP 13- CUT TOP RAIL INSERTS AND INSTALL TOP VINYL

Attach top rail vinyl insert to top of panel, centered between side channels.

Cut Top rail insert to length of opening minus 1/16" (see step 5).

Attach top rail insert over top rail vinyl insert.



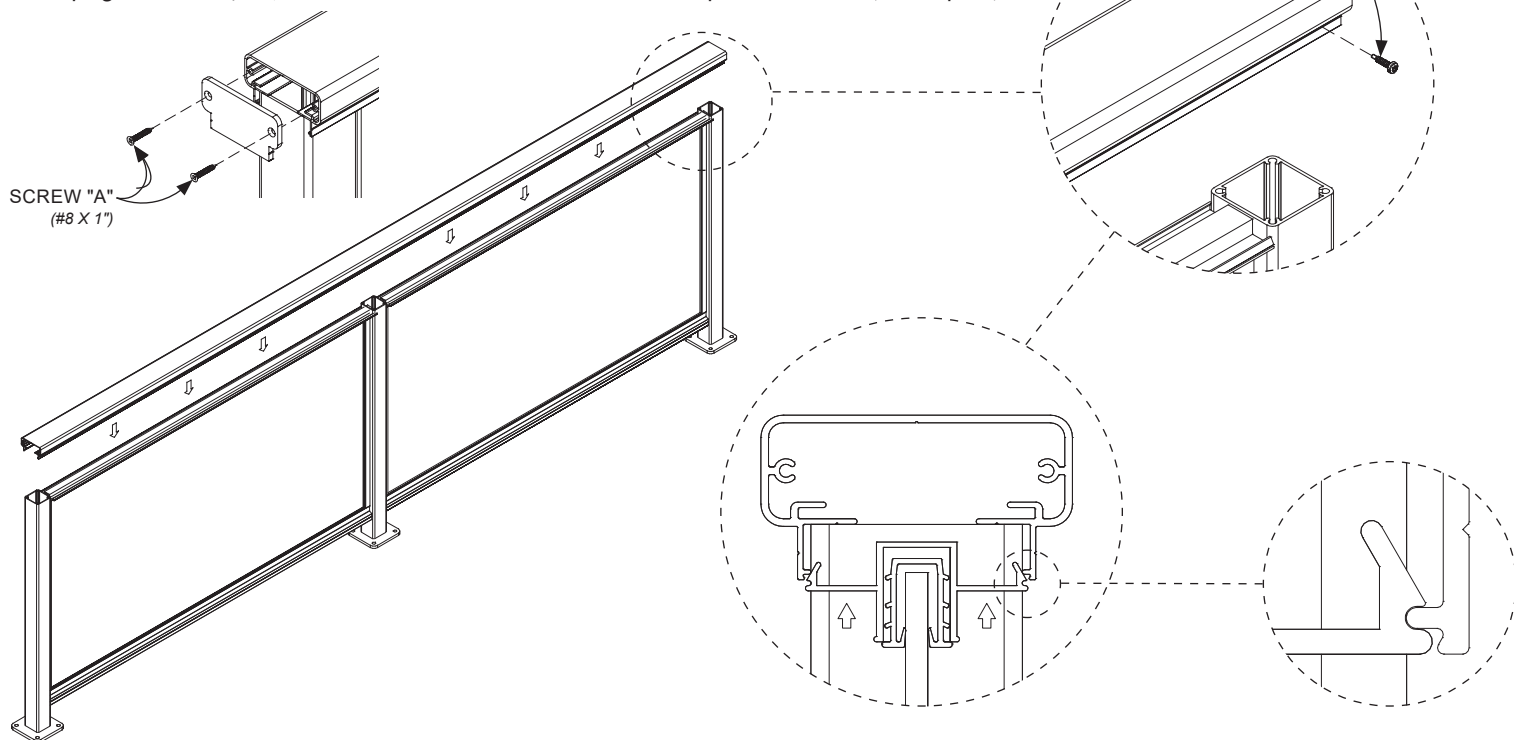
STEP 14 - INSTALL TOP RAIL

Cut the top rail to the desired length and then place it into position on top of the posts. Push the top rail down so that it fully sits on top of the posts.

Push top rail insert up into top rail until it snaps into place.

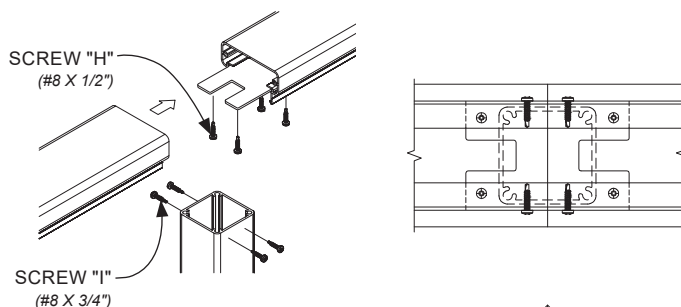
Secure the top rail to the posts using Screw "I" (one on each side of the post).

Note: Prior to attaching the top rail to the posts, be sure to install decorative end plates to any ends that butt-up against a wall face, or ends will have limited access once the top rail is installed (see Step 15).



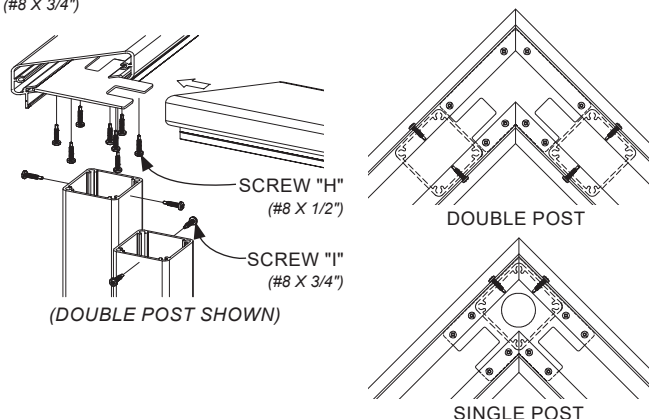
STEP 14A - BUTT SPLICE

Cut the top rail at 90-degrees and center the joint over an intermediate post. Join the top rail together using a rectangular splice plate, secured to the top rail with screw "H" (four per splice). Attach the joined top rail to the post using screw "I" (four per joint).



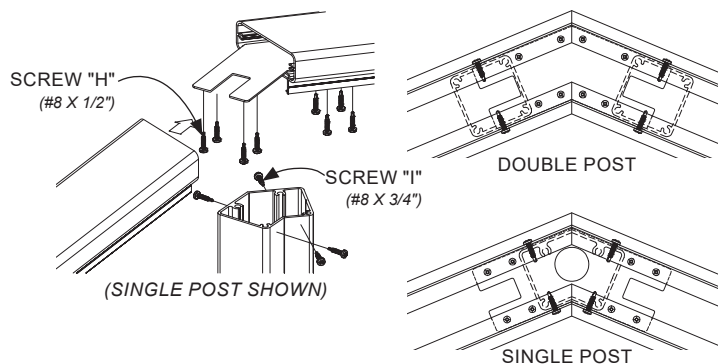
STEP 14B - 90 DEGREE SPLICE

Miter cut the top rail on either side of the joint at 45-degrees. Join the top rail together at the miter joint using a 90-degree splice plate, secured to the top rail with screw "H" (eight per splice). Attach the joined top rail to the post(s) using screw "I" (four per joint for double corner posts, 2 per joint for single corner posts).



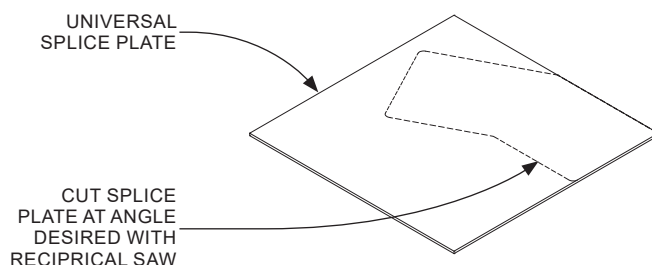
STEP 14C - 135/45 DEGREE SPLICE

Miter cut the top rail on either side of the joint at 22.5-degrees. Join the top rail together at the miter joint using a 45-degree splice plate, secured to the top rail with screw "H" (eight per splice). Attach the joined top rail to the post(s) using screw "I" (four per joint).



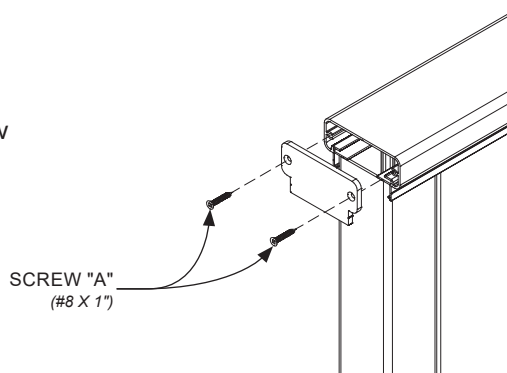
STEP 14D - CUSTOM ANGLE SPLICE

Miter cut the top rail on either side of the joint at the bisected angle (desired angle divided by two). Cut the universal splice plate material to the desired angle. Join the top rail together at the miter joint using the custom cut splice plate, secured to the top rail with screw "H" (eight per splice). Attach the joined top rail to the post(s) using screw "I" (four per joint).



STEP 15 - INSTALL END PLATES




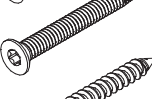

Attach top rail end plates to all exposed top rail ends, using screw "A" (two per end plate).





HARDWARE OVERVIEW

All DesignRail® hardware shown for reference. Only certain hardware will be provided depending on project type, configuration, specific attachment detail, and structure substrate.











FLAT HEAD SCREWS

- A** 7294: #8 x 1" SS SCREW, FLAT HEAD, #2 SQUARE DRIVE
USE: TOP RAIL END PLATES 
- B** 7643: #10 x 1" SS SCREW, FLAT HEAD, #2 SQUARE DRIVE
USE: PICKET RECEIVER & PICKET BASE PLATE TO WOOD 
- C** 7273: #12 x 1" SS SCREW, FLAT HEAD, #3 SQUARE DRIVE
USE: FASCIA BRACKET COVER PLATES 
- D** 7265: #14 x 2" STEEL MAGNA-COAT SCREW, TYPE F, FLAT HEAD, TORX DRIVE
USE: BASE PLATE TO POST 
- E** 5294: 3/16" x 2-1/4" SS TAPCON SCREW, FLAT HEAD, #2 PHILLIPS DRIVE
USE: PICKET RECEIVER & PICKET BASE PLATE TO CONCRETE 

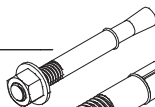
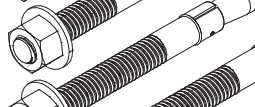
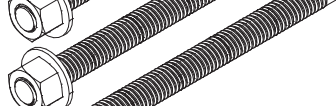

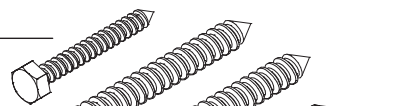
HEX HEAD SCREWS

- F** 7017: #14 x 1" SS SELF-TAPPING SCREW, HEX WASHER HEAD
USE: POST TO STANCHION & FASCIA MOUNT BRACKET 
- G** 8024: 5/16" x 1" SS THREAD-CUTTING SCREW, HEX WASHER HEAD
USE: HANDRAIL BRACKET TO POST 

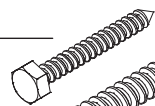
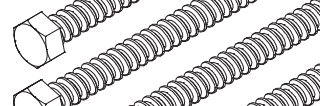
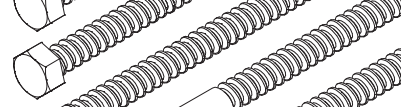




PAN HEAD SCREWS

- H** 7226: #8 x 1/2" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: TOP RAIL TO SPLICE PLATE (SERIES 450) 
- I** 7270: #8 x 3/4" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: TOP RAIL TO SPLICE PLATE, TOP RAIL TO POST, RAIL TO RCB, PICKET TO RECEIVER 
- J** 7285: #8 x 1" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: LIGHTING PICKET INSERT TO TOP RAIL 
- K** 7272: #10 x 3/4" SS SCREW, #2 PAN HEAD, SQUARE DRIVE
USE: PICKET TO TOP RAIL INSERT 
- L** 7271: #10 x 1-1/2" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: 
- M** 7267: #10 x 1-3/4" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: RCB TO POST (LEVEL) 
- N** 7355: #10 x 2" SS SELF-TAPPING SCREW, PAN HEAD, #2 SQUARE DRIVE
USE: RCB TO POST (STAIRS) 
- O** 7802: #12 x 2" SS SELF-TAPPING SCREW, PAN HEAD, #3 SQUARE DRIVE
USE: RCB TO POST (CENTER HOLE) 
- P** 7282: #14 x 3" SS SCREW, PAN HEAD, #3 PHILLIPS DRIVE
USE: NBR PICKET TO FASCIA 
- Q** 7966: #14 x 4" SS SCREW, PAN HEAD, #3 PHILLIPS DRIVE
USE: NBR PICKET TO FASCIA (FMB) 

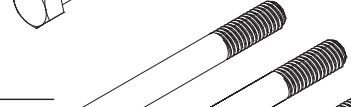





EXPANSION ANCHORS

- R** 7276: 1/4" x 2-1/4" EXPANSION ANCHOR 
- S** 8015: 3/8" x 3" EXPANSION ANCHOR 
- T** 7356: 3/8" x 3-3/4" EXPANSION ANCHOR 
- U** 7288: 3/8" x 5" EXPANSION ANCHOR 
- V** 7284: 3/8" x 6-1/2" EXPANSION ANCHOR 

LAG SCREWS

- W** 3183: 1/4" x 2" LAG SCREW, HEX HEAD 
- X** 7277: 3/8" x 3-1/2" LAG SCREW, HEX HEAD 
- Y** 6565: 3/8" x 4-1/2" LAG SCREW, HEX HEAD 
- Z** 7280: 3/8" x 5" LAG SCREW, HEX HEAD 
- AA** 7278: 3/8" x 6" LAG SCREW, HEX HEAD 
- BB** 7209: 3/8" x 6-1/2" LAG SCREW, HEX HEAD 
- CC** 7248: 3/8" x 7" LAG SCREW, HEX HEAD 

BOLTS

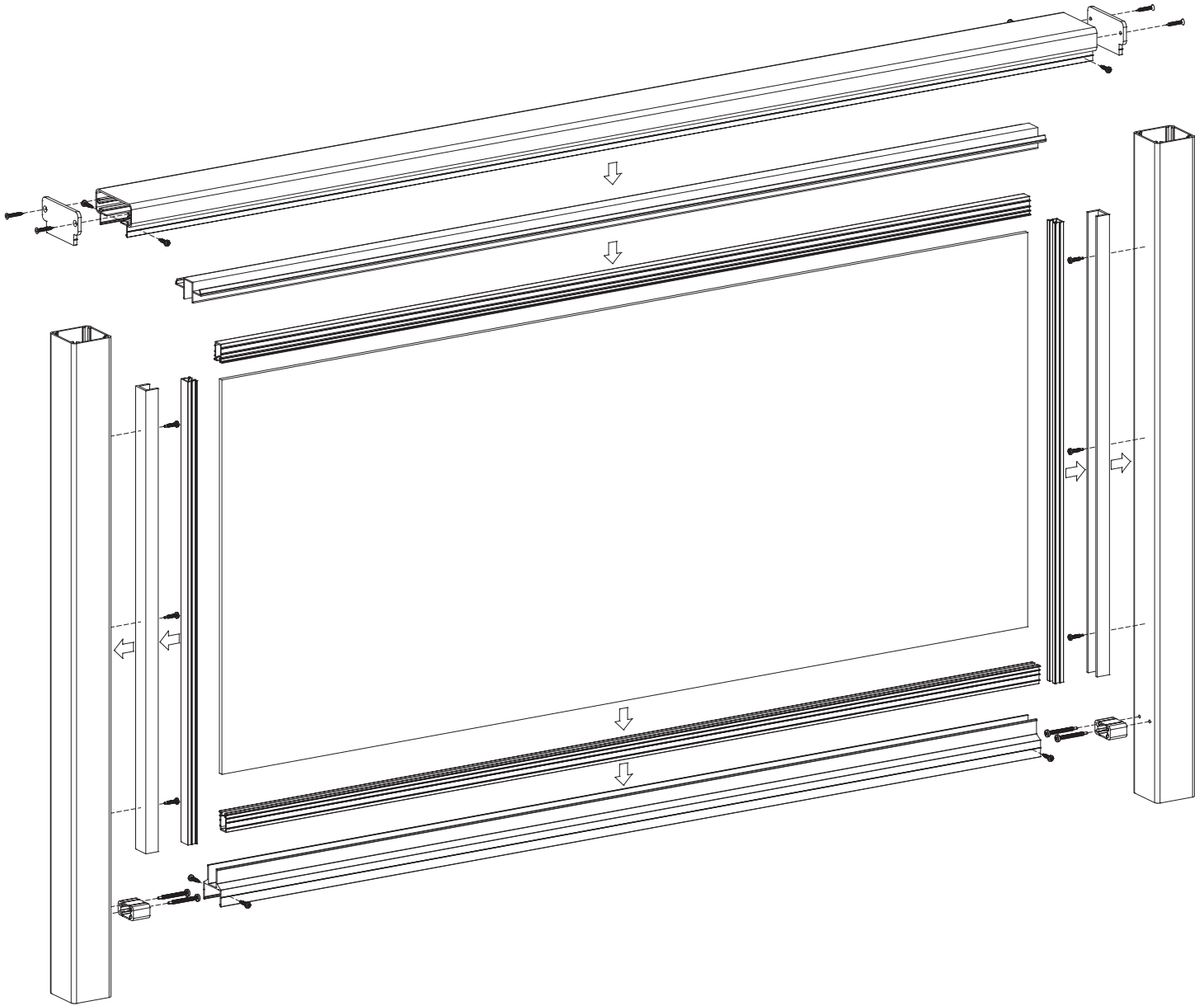
- DD** 7287: 3/8" x 4" 18/8 SS CAP SCREW, HEX HEAD 
- EE** 8017: 3/8"-16 x 5" CAP SCREW, HEX HEAD (3-7/8" SHANK, 1" THREAD) 
- FF** 8016: 3/8"-16 x 6" CAP SCREW, HEX HEAD (4-7/8" SHANK, 1" THREAD) 
- GG** 8004: 3/8"-16 x 7" CAP SCREW, HEX HEAD (5-9/16" SHANK, 1-3/8" THREAD) 
- HH** 7225: 3/8"-16, NYLON INSERT LOCKNUT, HEX HEAD 
- II** 7224: 3/8" ID, 2" OD FENDER WASHER 

CAPS

- JJ** PART # VARIES: VINYL CAP (SMALL) 
- KK** PART # VARIES: VINYL CAP (LARGE) 

WASHERS

- LL** 7070: 1/4" ID WASHER, FOR SMALL VINYL CAPS 
- MM** 7062: 1/4" ID WASHER, FOR LARGE VINYL CAPS 
- NN** 7063: 3/8" ID WASHER, FOR LARGE VINYL CAPS 
- OO** 7064: 9/16" ID WASHER, FOR LARGE VINYL CAPS 



EXPLODED ISOMETRIC VIEW



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