

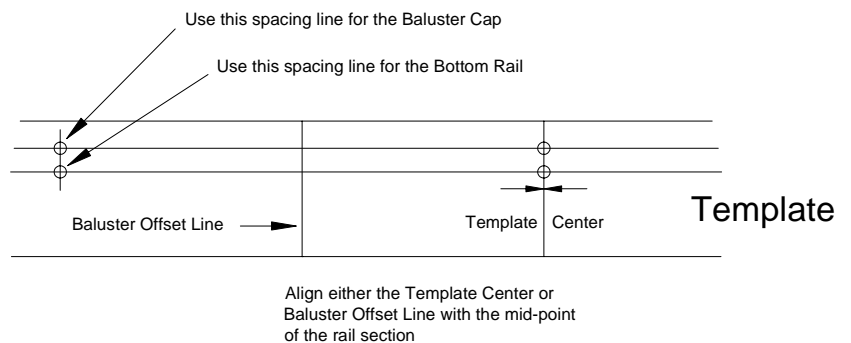
Horizontal Application

1. Measure and cut rail sections to length.

- a. Insure newels or columns to which rail will be mounted are plumb and sturdy enough to support rail. If newel/column covers are used, insure they have blocking at each location where railing will be attached.
- b. Measure span at top and bottom rail locations.
- c. Cut all vinyl portions of rail to required length.

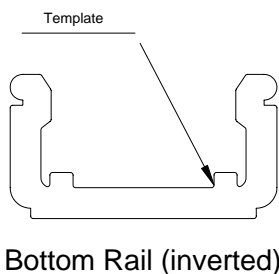
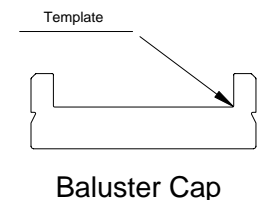
2. Determine baluster layout and assemble rail/baluster section.

a. For standard baluster spacing (with the variable spaces at the ends of each rail section) use the template provided. Align the template reference edge as indicated to the inside of the bottom rail. Determine best end spacing by either locating a baluster directly at the center of the rail section, or the mid-point between two balusters as the center of the rail section, and tape template in center and at ends. Drill a 1/8" hole through the template and bottom rail using the appropriate spacing line marked 'bottom rail'. Repeat this process for the baluster cap, using the same template, but drill through the spacing line marked 'baluster cap'.

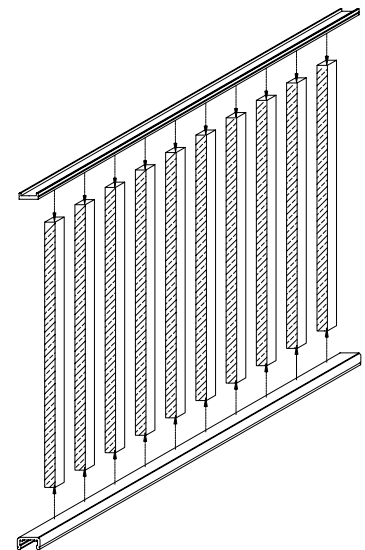


b. If equal spacing between all balusters and newels/columns is desired, disregard section 'a' above and determine spacing based upon width and number of balusters (Note: check local building codes for maximum spacing allowed).

Template Placement

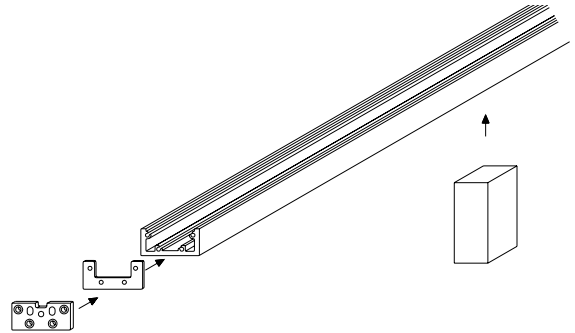


c. Secure each baluster with one #8 x 2-1/2" Square Drive T17 18-8SS screw through the baluster cap, and one through the bottom rail. Insure balusters are straight and aligned and secure with one #8 x 1-1/2" Square Drive T17 18-8SS screw through the bottom rail (offset from center) to preclude baluster from rotating after installation.



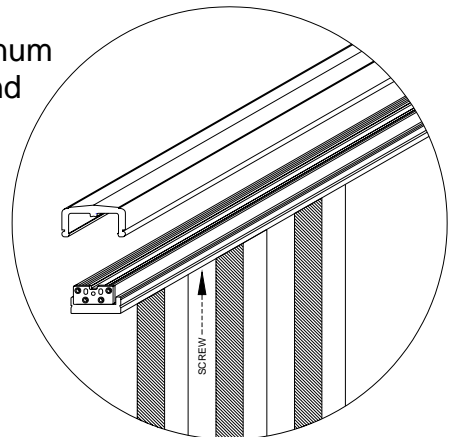
3. Prepare aluminum reinforcements.

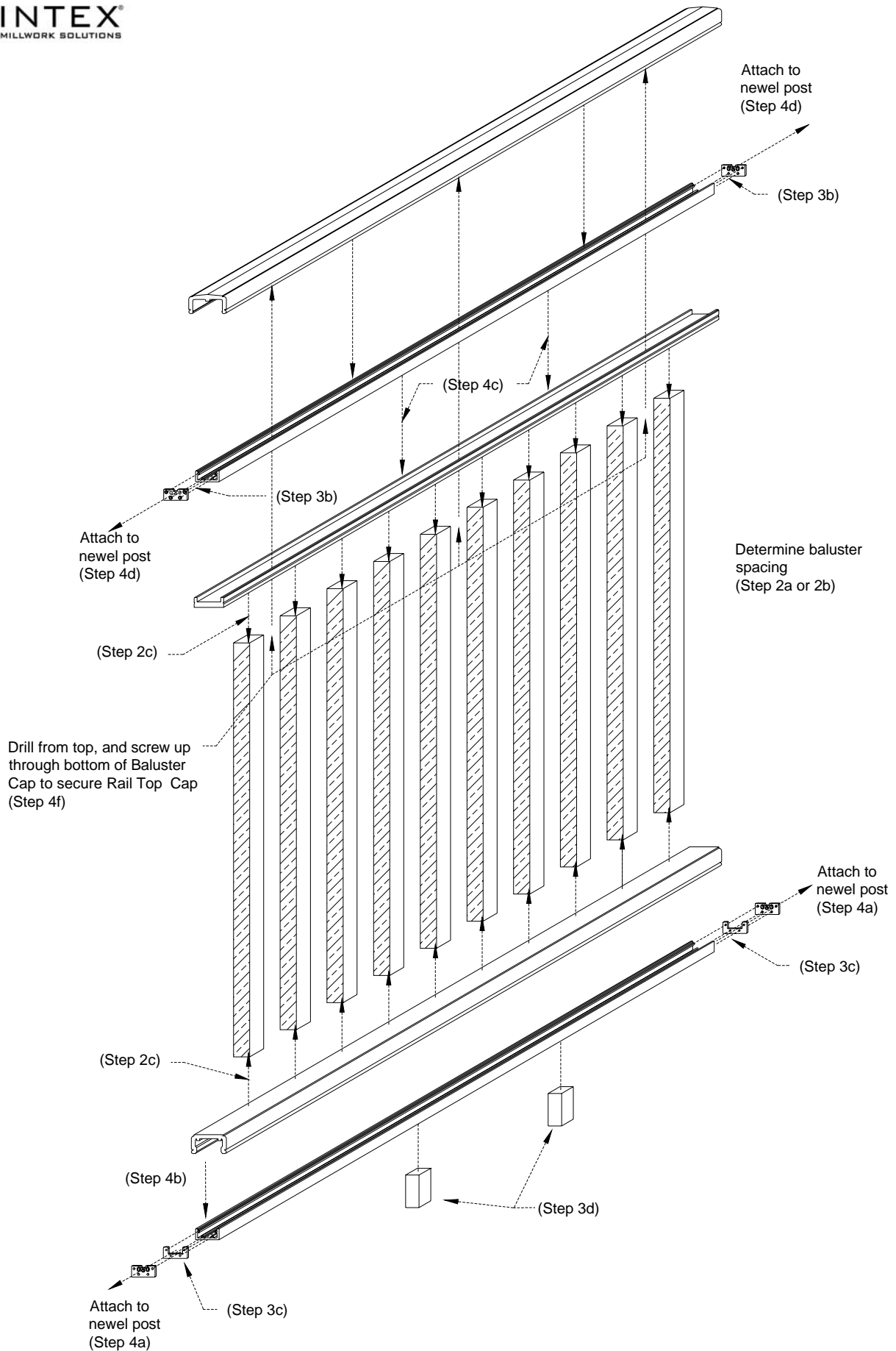
- a. Cut aluminum rail reinforcements to length, 1/4" shorter than the vinyl rails.
- b. Attach mounting brackets to both ends of the upper (mill finish) aluminum rail reinforcement, using four #8 x 1-1/4" Square Drive T17 18-8SS screws supplied.
- c. Place gaskets provided between the mounting brackets and the reinforcement on the lower (white painted) aluminum rail reinforcement and secure using four #8 x 1-1/4" Square Drive T17 18-8SS screws supplied. Lubricate the threads with oil or soap to avoid binding or stripping screws.
- d. Locate crush block(s) provided to the bottom (white painted) aluminum rail reinforcement, with spacing no greater than 36" from the end, or between crush blocks.
- e. Drill a 3/16" hole through the aluminum rail reinforcement, and secure each crush block using one #8 x 2-1/2" Square Drive T17 18-8SS screw.
- f. Drill additional 3/16" holes at each end of aluminum rail reinforcement for drainage.

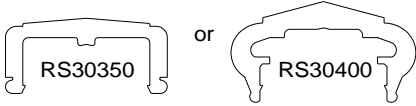
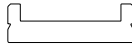

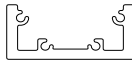

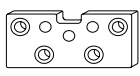
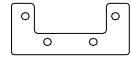
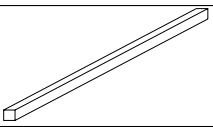

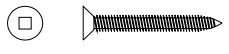

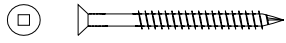
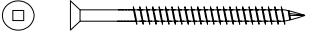

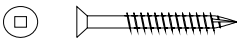


4. Install rail

- a. Position bottom aluminum rail reinforcement, with crush blocks attached, between newels or columns, centered in newel or column face, and secure each end with two #10 x 3" Slot Hex Washer Head TA 18-8SS screws supplied.
- b. Position vinyl rail/baluster assembly between newels or columns and seat fully down on bottom aluminum rail reinforcement.
- c. Seat remaining aluminum reinforcement into baluster cap.
- d. Insure rail is centered on face of newel or column and secure each end with three #10 x 3" Slot Hex Washer Head TA 18-8SS screws supplied.
- e. Drill a 3/16" hole through the aluminum reinforcement over every third baluster (note: offset to avoid the screw which attaches the baluster to the Baluster Cap) and secure the aluminum reinforcement to the rail/baluster assembly using #8 x 2-1/2" Square Drive T17 18-8SS screws
- f. Drill a 3/16" hole down through the aluminum reinforcement and the baluster cap, plumb, at both ends and near the center of the span (all between balusters). Seat the Rail Cap fully onto Baluster Cap, and use the screws provided to attach Rail Cap, screwing up through the underside of the Baluster Cap. Note: screws provided for RS30350 rail are #8 x 1-7/8" Square Drive T17 18-8SS, and screws for RS30400 rail are #8 x 2-1/4" Square Drive T17 18-8SS white heads.





Item	Quantity per Kit			
	6'	8'	10'	12'
Rail Cap 	1	1	1	1
Baluster Cap 	1	1	1	1
Bottom Rail 	1	1	1	1
Upper Reinforcement (mill finish) 	1	1	1	1
Lower Reinforcement (white finish) 	1	1	1	1
Rail Brackets 	4	4	4	4
Bottom Rail Bracket Gaskets 	2	2	2	2
Baluster 	13	18	23	28
Crush Block 	1	2	2	3
Rail Bracket Screws #8 x 1-1/4" Flat Head Square Drive 	16	16	16	16
Rail Attachment Screws #10 X 3" Slot Hex Washer Head 	10	10	10	10
Top Rail Cap Attachment Screws #8 X 1-7/8" Flat Head Square Drive (RS30350 ONLY)  White Painted Head	4	4	4	4
Top Rail Cap Attachment Screws #8 X 2-1/4" Flat Head Square Drive (RS30400 ONLY)  White Painted Head	4	4	4	4
Baluster Screws #8 x 2-1/2" Flat Head Square Drive 	31	44	55	68
Baluster Lock Screws #8 x 1-1/2" Flat Head Square Drive 	13	18	23	28