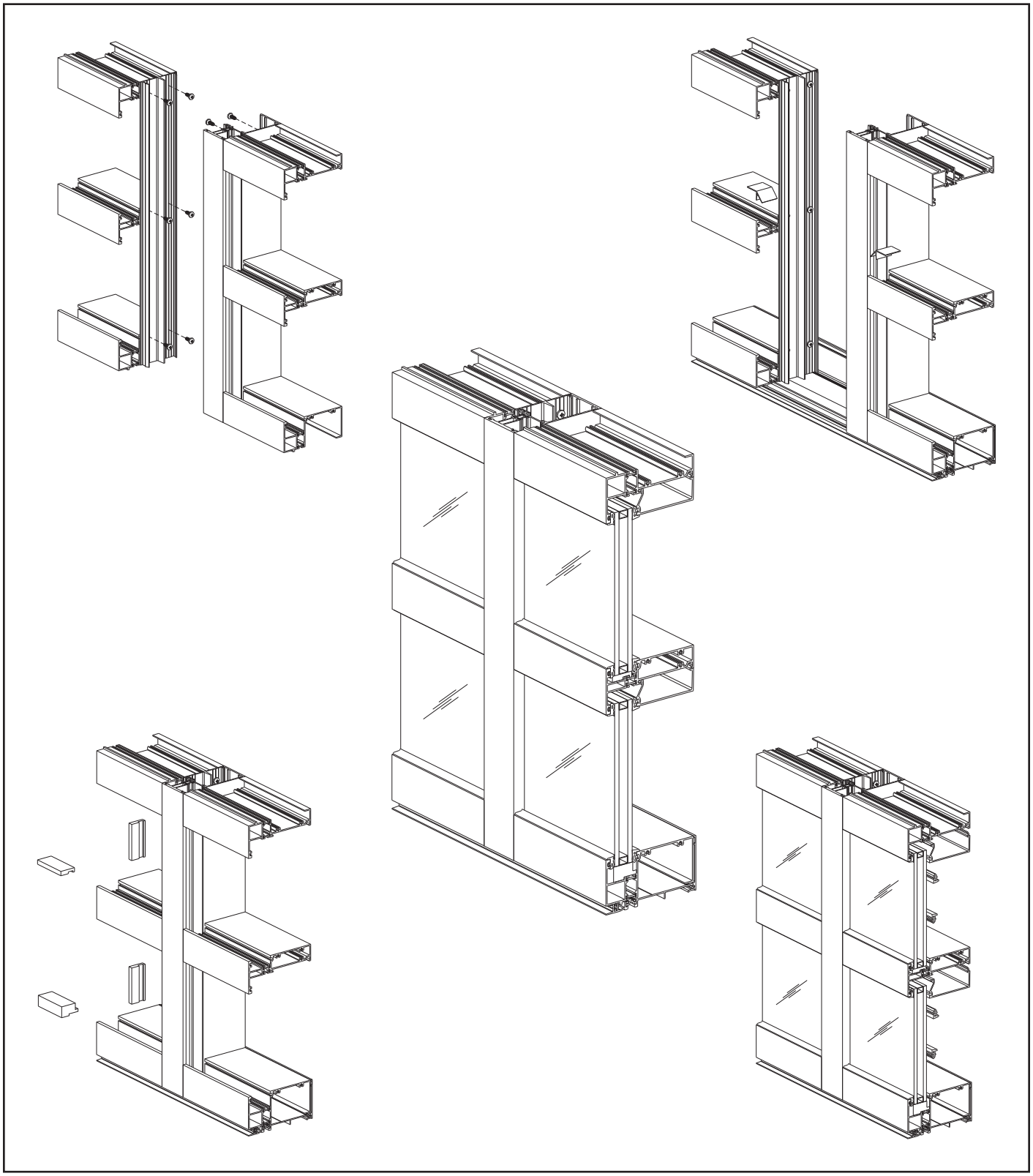
YWW 50 T Thermal Window Wall System
Vertical Run Through



Installation Manual

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Installation Notes

1. Do not drop, roll or drag boxes of aluminum framing. Move and stack boxes with proper support to prevent distortion. If fork lifts are used be especially careful about striking the boxes when lifting or moving.

2. Store in a dry, out of the way area. If rain exposure, condensation or any water contact is likely, then all packaging material should be removed. Wet packaging materials will discolor and may stain aluminum finishes and paints.

3. All materials should be checked for quantity and quality upon receipt, YKK AP must be notified immediately of any discrepancies in shipment. Check to make sure that you have the required shims, sealants, supplies and tools necessary for the installation.

4. Carefully check the openings and surrounding conditions that will receive your material. Remember, if the construction is not per the construction documents, it is your responsibility to notify the general contractor in writing. Any discrepancies must be brought to the general contractor's attention before you proceed with the installation.

5. Gather your shop drawings, materials, packing list and this installation manual. Carefully review parts location, the sequence it goes therein when you glaze it and how you seal it. Installation instructions are of a general nature and may not cover every condition you encounter. The shop drawings and/or installation manuals were prepared specifically for the product.

6. Any material substitutions must be of equal or greater quality.

7. Make certain that material samples have been sent for compatibility testing for all manufacturer's sealants involved. Make certain that sealants have been installed in strict accordance with the manufacturer's recommendations and specifications.

8. Remember to isolate, in an approved manner, all aluminum from uncured masonry or other incompatible materials.

9. System-to-structure fasteners are not supplied by YKK AP. Fasteners called out on shop drawings are to indicate minimum sizes for design loading.

10. Entrances are to be installed plumb, square, level and true.

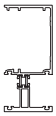
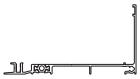
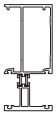
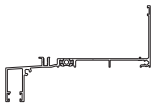
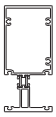
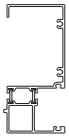
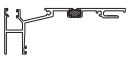
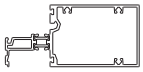
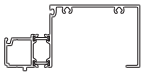
11. If any questions arise concerning YKK AP products or their installation, contact YKK AP for clarification before proceeding.

12. YKK AP store front and/or curtain wall framing is typically completed before drywall, flooring and other products that may still be in process. Take the extra time to wrap and protect the work produced.

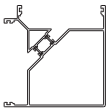
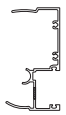
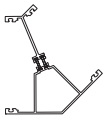
13. Cutting tolerances are plus zero, minus one thirty second unless otherwise noted.

14. Check our website, www.ykkap.com, for the latest installation manual update prior to commencing work.

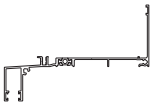
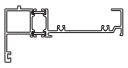
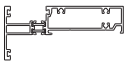
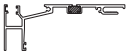
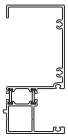
FRAMING MEMBERS FOR OUTSIDE GLAZING

	**Vertical**	**BE9-8707**		**Sill Flashing**	**BE9-2818**
	**Vertical** Heavy Duty	**BE9-8789**		**Sill Flashing** With Integral Plate Adaptor	**BE9-2812**
	**Snap-In Filler** Use with BE9-8707 and BE9-8789	**E9-8715**		**Sill Flashing**	**BE9-2814**
	**Vertical** For Continuous Head & Sill Construction	**BE9-2803**		**Aluminum Plate Adaptor** Use with BE9-2814	**E9-8222**
	**Head / Jamb**	**BE9-2816**		**Head Receptor**	**BE9-2819**
	**Horizontal**	**BE9-8728**		**Snap Cover** Use with BE9-2819	**E9-8720**
	**Sill**	**BE9-2823**		**Pocket Filler**	**BE9-8734**
	Exterior Glass Stop Use with BE9-2823 & BE9-8728	**E9-1715**		**Glazing Adapter** For 1/4” glazing Use with BE9-8734	**E9-1725**
	**Deep Pocket Glazing Adaptor** For 1/4” Glazing	**E9-1707**		**6-1/8” Slab Edge Cover** For use with 5-1/8” Slab	**E9-8059**
	**Shallow Pocket Glazing Adaptor** For 1/4” Glazing	**E9-1708**		**6-5/8” Slab Edge Cover** For use with 5-5/8” Slab	**E9-7723**

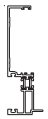
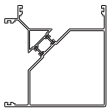
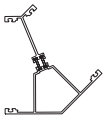
FRAMING MEMBERS FOR OUTSIDE GLAZING

	7-3/8” Slab Edge Cover For use with 6-3/8” Slab	**E9-8223**		**Expansion Mullion** Female Elastomer Weathering E2-0065 not Included	**BE9-8708**
	7-7/8” Slab Edge Cover For use with 6-7/8” Slab	**E9-8231**		**Expansion Mullion** Male	**BE9-2827**
	8” Slab Edge Cover For use with 7” Slab	**E9-8589**		**Slip-On Face Cap** Use with BE9-2827	**E9-1763**
	9” Slab Edge Cover For use with 8” Slab	**E9-8428**		**Hinged Mullion** Female	**BE9-7912**
	**90° Corner Mullion** Use with (2) BE9-8734	**BE9-8731**		**Outside Hinged Mullion** Male 3° to 20°	**BE9-7911**
	**135° Outside Corner Mullion** Use with (2) BE9-8734	**BE9-8725**			

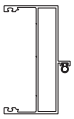
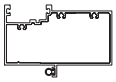
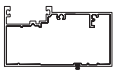
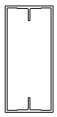
FRAMING MEMBERS FOR INSIDE GLAZING

	**Vertical**	**BE9-8707**		**Sill Flashing**	**BE9-2818**
	**Vertical** Heavy Duty	**BE9-8789**		**Sill Flashing** With Integral Plate Adaptor	**BE9-2812**
	**Snap-In Filler** Use with BE9-8707 and BE9-8789	**E9-8715**		**Sill Flashing**	**BE9-2814**
	**Head** For vertical through applications	**BE9-8703**		**Aluminum Plate Adaptor** Use with BE9-2814	**E9-8222**
	**Horizontal**	**BE9-8704**		**Head Receptor**	**BE9-2819**
	**Glass Stop** For 1” Glazing Use with BE9-8703 & BE9-8704	**E9-8711**		**Snap Cover** Use with BE9-2819	**E9-8720**
	**Glass Stop** For 1/4” Glazing Use with BE9-8703 & BE9-8704	**E9-7703**		**Pocket Filler**	**BE9-8734**
	**Sill / Jamb**	**BE9-2816**		**Glazing Adapter** For 1/4” glazing Use with BE9-8734	**E9-1725**
	**Deep Pocket Glazing Adaptor** For 1/4” Glazing	**E9-1707**		**6-1/8” Slab Edge Cover** For use with 5-1/8” Slab	**E9-8059**
	**Shallow Pocket Glazing Adaptor** For 1/4” Glazing	**E9-1708**		**6-5/8” Slab Edge Cover** For use with 5-5/8” Slab	**E9-7723**

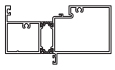
FRAMING MEMBERS FOR INSIDE GLAZING

	7-3/8” Slab Edge Cover For use with 6-3/8” Slab	**E9-8223**		**Expansion Mullion** Female Elastomer Weathering E2-0065 not Included	**BE9-8708**
	7-7/8” Slab Edge Cover For use with 6-7/8” Slab	**E9-8231**		**Expansion Mullion** Male	**BE9-2827**
	8” Slab Edge Cover For use with 7” Slab	**E9-8589**		**Slip-On Face Cap** Use with BE9-2827	**E9-1763**
	9” Slab Edge Cover For use with 8” Slab	**E9-8428**		**Hinged Mullion** Female	**BE9-7912**
	**90° Corner Mullion** Use with (2) BE9-8734	**BE9-8731**		**Outside Hinged Mullion** Male 3° to 20°	**BE9-7911**
	**135° Outside Corner Mullion** Use with (2) BE9-8734	**BE9-8725**			

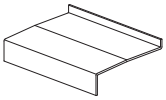
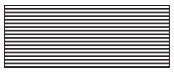
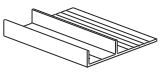
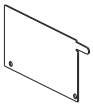
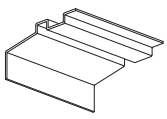
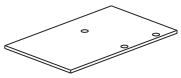
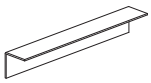
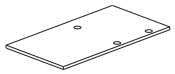
DOOR FRAMING MEMBERS

	**Single Acting Door Jamb** 2-1/4” x 5” Elastomer Weathering E2-0051 Included	**AS-2807**		**Glazing Pocket Flush Filler** For 1” Glazing	**BE9-2721**
	**Single Acting Transom Bar** 2-1/4” x 5” E2-0051 Included	**AS-2808**		**Glazing Adaptor** For 1/4” Glazing Use with BE9-8734 & E9-1721	**E9-1725**
	**Double Acting Door Jamb** 2-1/4” x 5”	**E9-2809**		**Transom Glazing Pocket** For 1” Glazing	**E9-1721**
	**Double Acting Transom Bar** 2-1/4” x 5” E2-0062 Included	**AS-2810**		**Door Stop O/P Assembly** Elastomer Weathering E2-0051 Included	**AS-0409**
	**Intermediate Door Jamb** 2” x 5” Tube Use with AS-0409 Door Stop	**E9-8439**		**Door Stop Base** Used with AS-0409	**E9-1113**
	**Jamb Filler**	**BE9-8734**		**Threshold** 1/2” x 4”	**E9-0407**
	Glazing Pocket Flush Filler For 1” Glazing	**BE9-7856**			

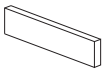
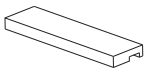
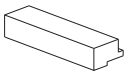
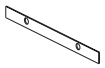
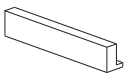
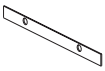
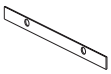
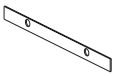
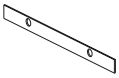
THERMAL DOOR FRAMING MEMBERS

	**Single Acting Door Jamb** 2-1/4" x 5", For 25T/35T/50T Doors, Elastomer Weathering E2-0051 not Included	**BE9-2841**		**Transom Glazing Adaptor** For 1" Glazing Use with E9-2834	**BE9-2833**
	**Single Acting Transom Bar** 2-1/4" x 5", For 25T/35T/50T Doors, Elastomer Weathering E2-0051 not Included	**BE9-2842**		**Transom Glass Stop** For 1" Glazing Use with BE9-2833	**E9-2834**
	**Jamb Filler**	**BE9-8734**		**Glass Stop** For 1" Glazing Use with BE9-2842	**E9-2835**
	Glazing Pocket Flush Filler For 1" Glazing	**BE9-7856**		**Threshold** 1/2" x 4-1/2" For 25T/35T/50T Doors	**BE9-0465**

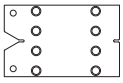
ACCESSORIES

	**Shear Block** For BE9-8728 Horizontal Use (2) PC-1228 & (2) FC-1212 not Included	**E1-2802**		**Splice Sleeve** For Sill Flashing at Slab Edge Cover	**E1-9959**
	**Shear Clip** For BE9-8704 Horizontal Use (4) PC-1210 not Included	**E1-2801**		**Splice Sleeve** For Sill Flashing and Head Receptor	**E2-0070**
	**"F" Anchor** For Head & Jamb	**E1-2803**		**End Dam** For BE9-2818 Sill Flashing	**E1-2808**
	**Splice Sleeve** For Head Receptor	**E1-2813**		**Expansion Mullion End Cap**	**E1-2806**
	**Splice Sleeve** For Head Receptor	**E1-9962**		**Standard Mullion End Cap**	**E1-2809**

ACCESSORIES (Continued)

	**End Cap** For BE9-2812 Sill Flashing	**E1-9951**		**Side Block**	**E2-0186**
	**End Cap** For E9-8222 Adaptor	**E1-1196**		**Side Block**	**E2-0537**
	**End Cap** For Head Receptor at Jamb	**E1-9952**		**Anti-Walk Block** For Deep Pocket	**E2-0153**
	**End Cap** For Head Receptor at Splice Joint	**E1-9957**		**Anti-Walk Block**	**E2-0546**
	**Setting Block / Side Block** 1” Glazing	**E2-0184**		**Water Deflector**	**E2-0047**
	**Setting Block** For Sill 1” Glazing	**E2-0182**		**End Cap** Use with E9-8059	**E1-9984**
	**Setting Block** For Horizontal 1/4” Glazing	**E2-0192**		**End Cap** Use with E9-7723	**E1-9985**
	**Setting Block** For Sill 1/4” Glazing	**E2-0190**		**End Cap** Use with E9-8223	**E1-9953**
	**Setting Block** Use with BE9-2819	**E2-0054**		**End Cap** Use with E9-8231	**E1-9954**
	**Weep Baffle**	**E2-0098**		**End Cap** Use with E9-8589	**E1-9955**
	**Weep Baffle**	**E2-0099**		**End Cap** Use with E9-8428	**E1-9956**

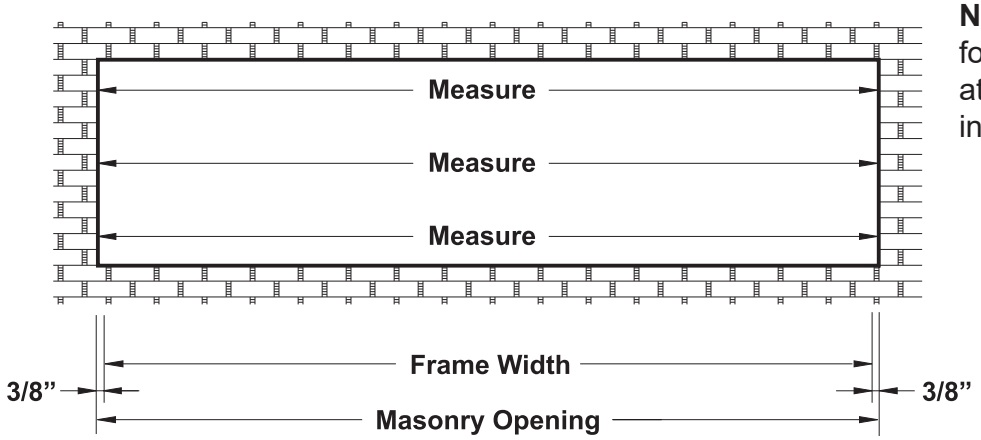
ACCESSORIES (Continued)

	**Push-In Glazing Gasket**	**E2-0801**		**#10 x 3/8” PHSMS-SS Type AB,** Stainless Steel For Attachment of Head Receptor Splice	**PC-1006 -SS**
	**Wedge Glazing Gasket**	**E2-0808**		**#10 x 5/8” PHSMS Type AB** Zinc Plated Steel For Attachment of E9-1724 Adaptor	**PC-1010**
	**Weathering Gasket** For Expansion Mullion	**E2-0065**		**#12 x 3/4” FHSMS Type AB** Zinc Plated Steel For Attachment of Horizontal to Shear Block E1-1037	**FC-1212**
	**Airtight Gasket** For Head Receptor	**E2-0051**		**#12 x 5/8” PHSMS Type AB** Zinc Plated Steel, For Attachment of Shear Clip E1-1040 to Vertical & Horiz.	**PC-1210**
	**Steel Reinforcing** 3/16” x 2-3/4” Use with E9-8443, E9-2805	**E1-2811**		**#12 x 1” PHSMS Type AB** Zinc Plated Steel For Screw Spline Attachment	**PC-1216**
	**Drill Fixture**	**H-7250**		**#12 x 1-1/4” PHSMS Type AB** Zinc Plated Steel, For Screw Spline Attachment When Using BE9-1704 as Jamb	**PC-1220**
	**#8 x 1/2” FHSMS Type AB** Zinc Plated Steel For Attachment of Hinged Mullions	**FC-0808**		**#12 x 1-3/4” PHSMS Type AB,** Zinc Plated Steel For Attachment of Shear Block E1-2802 to Vertical	**PC-1228**
	**#10 x 3/8” FHSMS Type AB** Zinc Plated Steel For Attachment of Mullion End Caps	**FC-1006**		**#10 x 3/8” PHMS** Stainless Steel, For Attachment of Sill Flashing	**PM-1006 -SS**
	**#12 x 3/4” UFHSMS Type A**, Zinc Plated Steel, For End Dam Attachment	**UA-1212**			

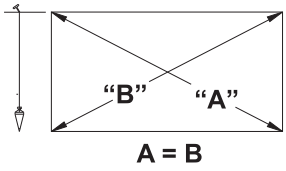
FRAME FABRICATION

STEP 1
DETERMINE FRAME SIZE

Determine Frame Width:



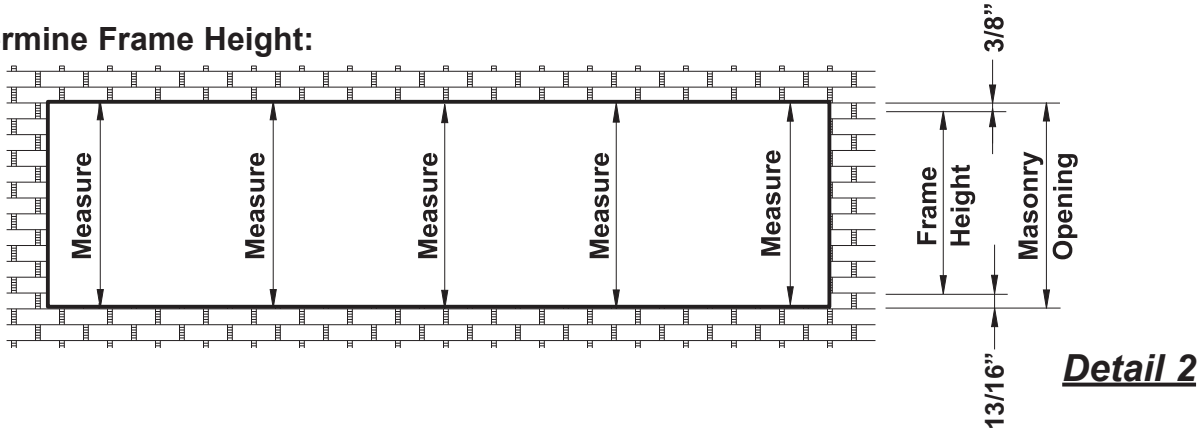
Note: Check the opening for squareness and plumb at both ends. Units must be installed in a true rectangle.



Detail 1

-Measure the width of the masonry opening at the top, middle, and bottom.
-Select the smallest dimension measured and subtract 3/4” to determine the frame width.
See **Detail 1**.

Determine Frame Height:



Detail 2

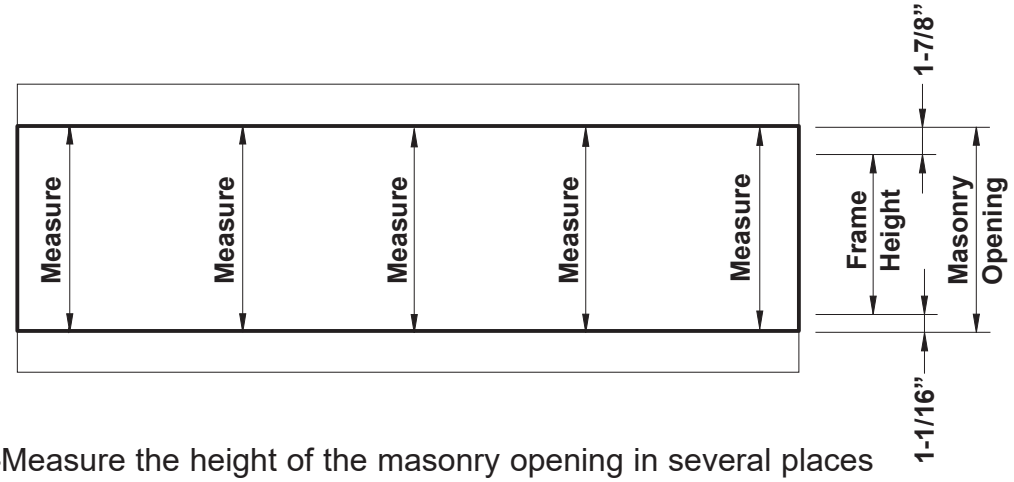
-Measure the height of the masonry opening in several places along the entire length of the opening.
-Select the smallest dimension measured and subtract 1-3/16” to determine the frame height to be used:
-3/8” for the shim/caulk joint at the head.
-7/16” for the sill flashing.
-3/8” for the shim/caulk joint below the sill flashing.
See **Detail 2**.

NOTE: Vertical through frame widths over 24’-0” require expansion mullions every 12 to 15 feet (best location at vertical next to the door jamb.)

FRAME FABRICATION

STEP 1 (Continued)
DETERMINE FRAME SIZE

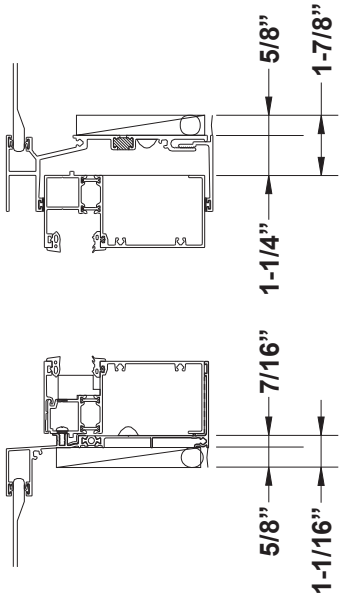
Determine Frame Height for Slab Edge Conditions:



-Measure the height of the masonry opening in several places along the entire length of the opening.
-Select the smallest dimension measured and subtract 2-15/16” to determine the frame height to be used:
  -5/8” for the shim/caulk joint at the head.
  -1-1/4” for the head receptor.
  -7/16” for the sill flashing.
  -5/8” for the shim/caulk joint below the sill flashing.

See **Detail 3**.

Detail 3

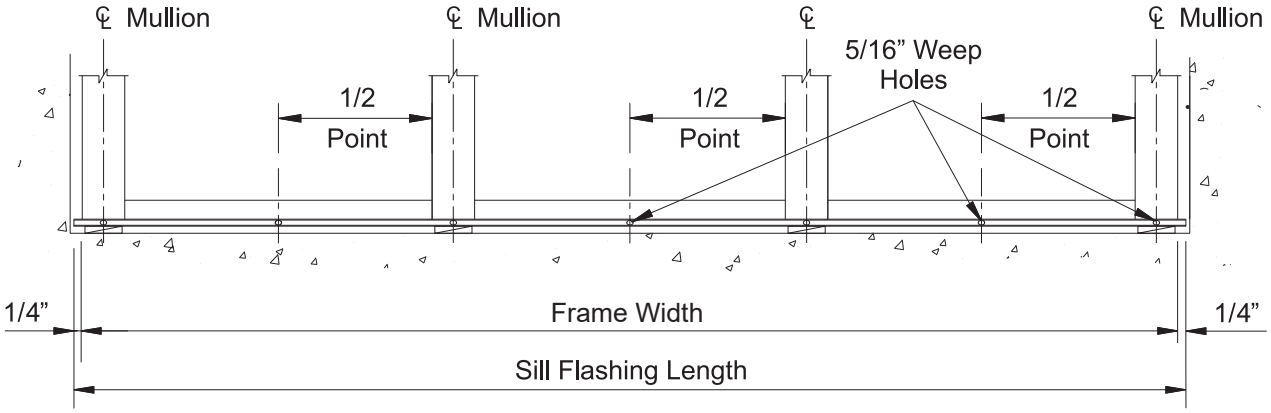


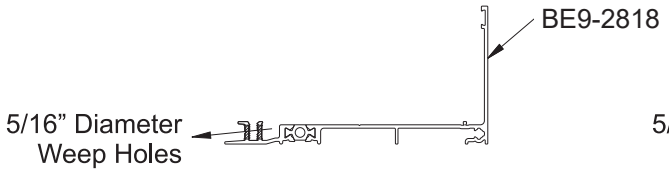
FRAME FABRICATION

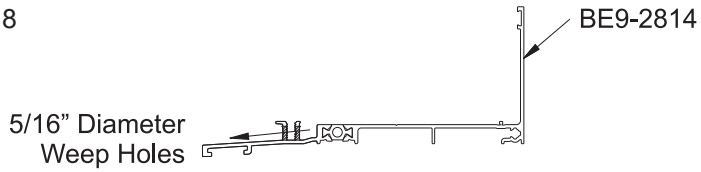
STEP 2
FABRICATE SILL FLASHING

YWW 50 T requires the use of extruded sill flashing for vertical through frames:

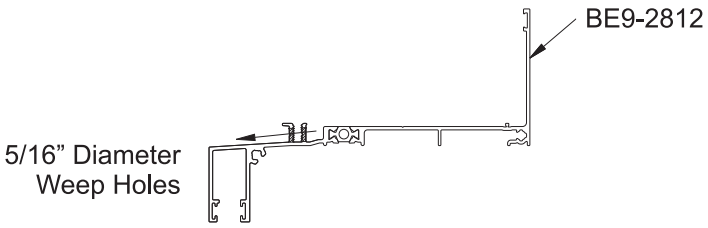
-Cut the sill flashing, BE9-2812, BE9-2818, BE9-2814 as determined in **Step 1**: Frame width plus(+) 1/4" at each jamb.
-For openings longer than 24'-0" the sill flashing needs to be spliced every twelve to fifteen feet.
-Allow for a 3/8" splice joint between sill flashing members.
-Mark the centerline of each vertical mullion on the sill flashing.







Detail 4



-Drill a 5/16" diameter weep hole in the face of the sill flashing at the centerline of each vertical mullion and at the midpoints between vertical mullions.

See **Detail 4**.

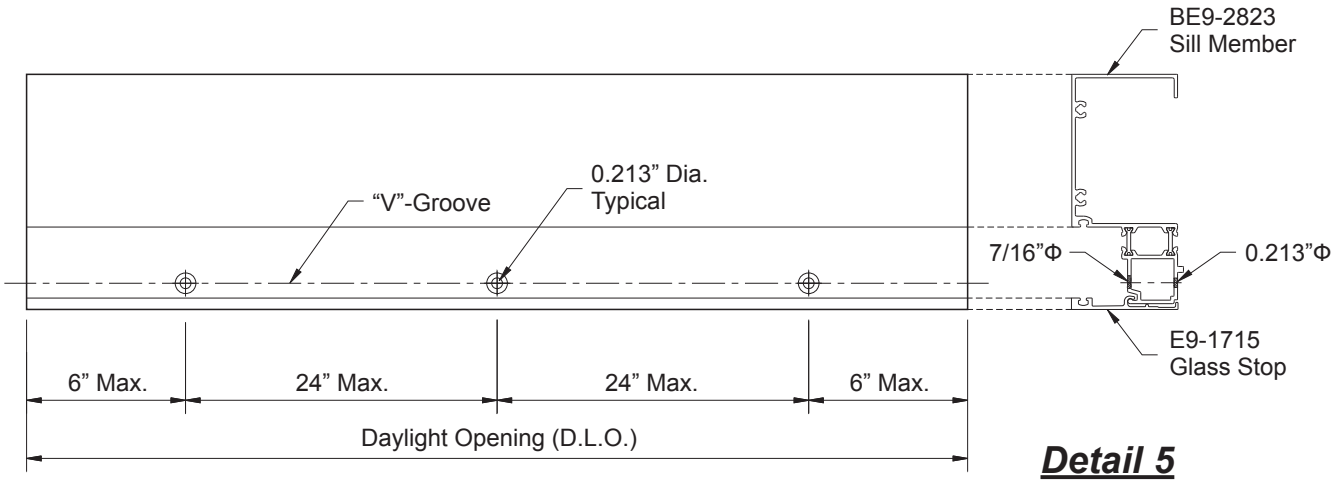
NOTE: Sill flashing is required for installation. Head and sill members do not run continuous for this system.

FRAME FABRICATION

STEP 3
FABRICATE HEAD & SILL MEMBERS

-Cut all head and sill members to the daylight opening between verticals.

Sill members require additional fabrication for anchoring to the sill flashing.
-Measure in 6” from each end of the sill member and mark hole locations along the glazing pocket “V”-groove.
-Mark additional hole locations a maximum of 24” on center (O.C.).
-Drill 0.213” diameter (#3 drill bit) holes at the underside of the “V” groove.
-Drill 7/16” diameter access holes at the top of the sill.
See **Detail 5**.



Detail 5

FRAME FABRICATION

STEP 4
FABRICATE TWO PIECE VERTICALS & JAMB MEMBERS

-Cut two piece verticals, fillers, and jamb members to the frame height determined in **Step 1** on **Page 10** or as shown on approved shop drawings.

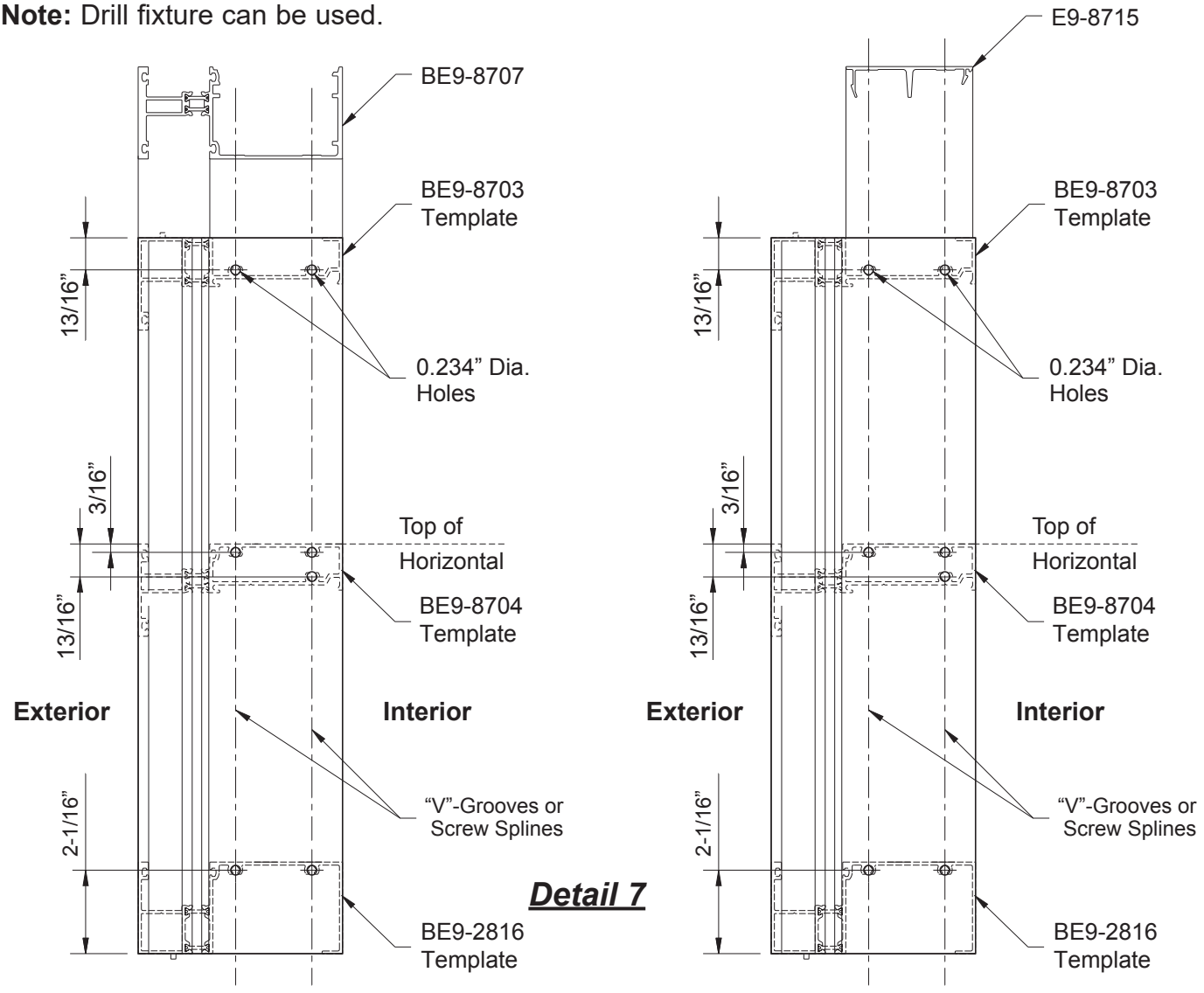
Fabrication of Verticals for Inside Glazed Frames:

-Use a short piece of each horizontal member as a template.
-Center the template on the face of the vertical member.
-Line up the glazing pockets and mark the location of each screw spline.

-OR-

-Layout the hole locations along the “V”-grooves of each member as shown in **Detail 7.**
-Drill a 0.234” diameter hole at each location marked.

Note: Drill fixture can be used.



Detail 7

FRAME FABRICATION

STEP 4 (Continued)
FABRICATE TWO PIECE VERTICALS & JAMB MEMBERS

-Cut two piece verticals, fillers, and jamb members to the frame height determined in **Step 1** on **Page 10** or as shown on approved shop drawings.

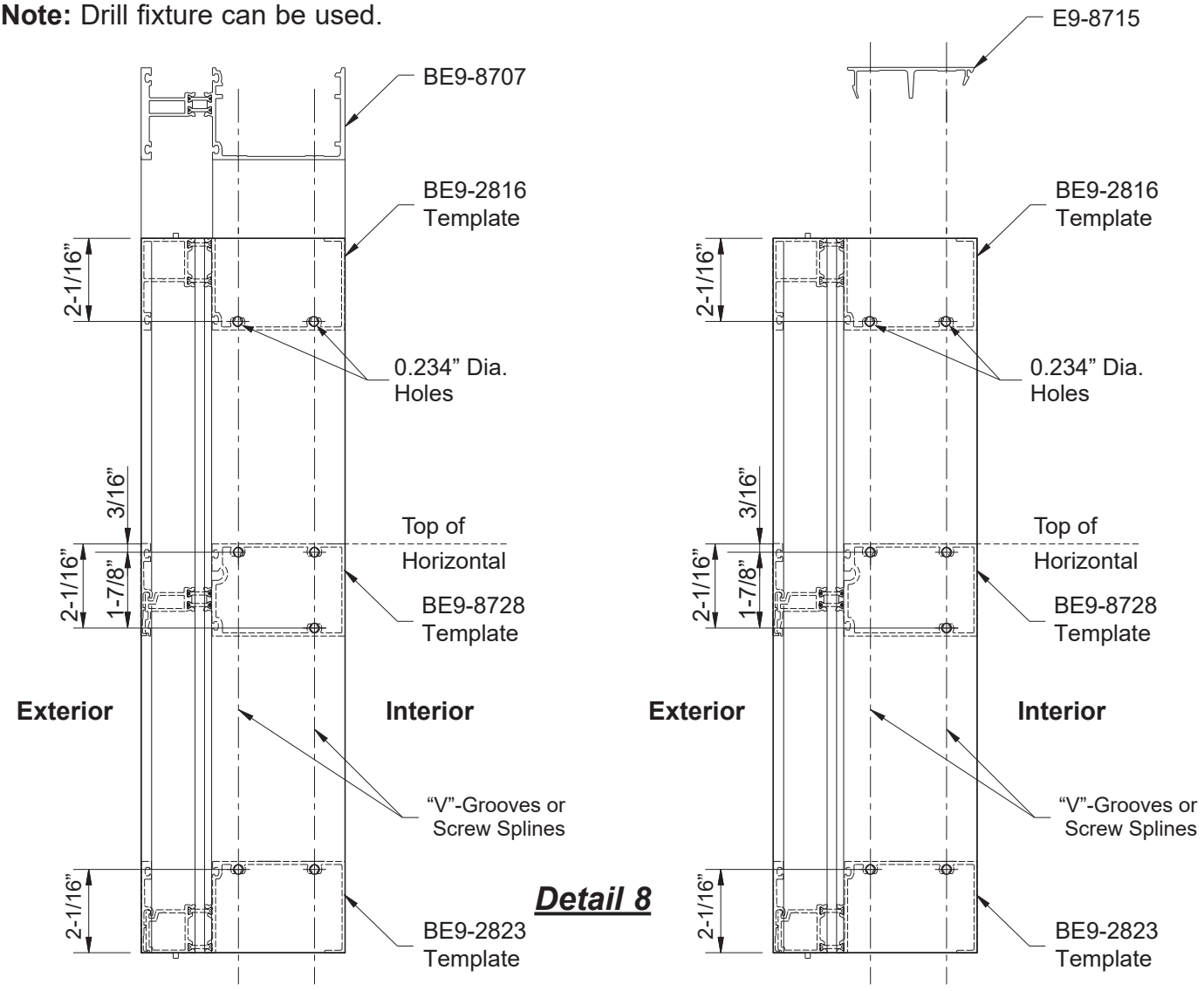
Fabrication of Verticals for Outside Glazed Frames:

-Use a short piece of each horizontal member as a template.
-Center the template on the face of the vertical member.
-Line up the glazing pockets and mark the location of each screw spline.

-OR-

-Layout the hole locations along the “V”-grooves of each member as shown in **Detail 8.**
-Drill a 0.234” diameter hole at each location marked.

Note: Drill fixture can be used.

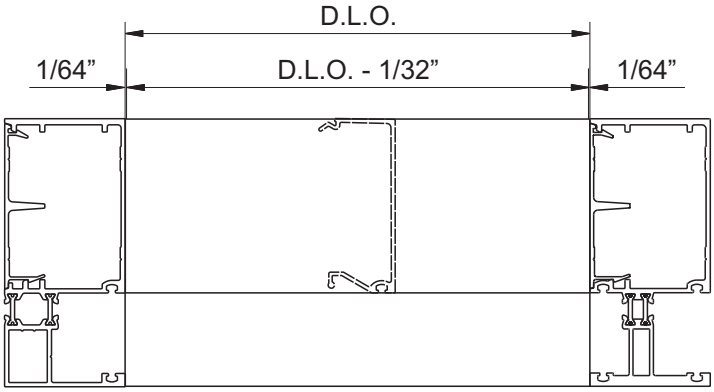


Detail 8

FRAME FABRICATION

STEP 5
FABRICATE INTERIOR GLASS STOP FOR INSIDE GLAZED HORIZONTALS

-Interior glazed horizontals require interior glass stops:
BE9-8704 requires interior glass stop E9-8711.
-Cut all interior glass stops to the same dimension as the horizontals (D.L.O.) minus (-) 1/32”.
See **Detail 9**.

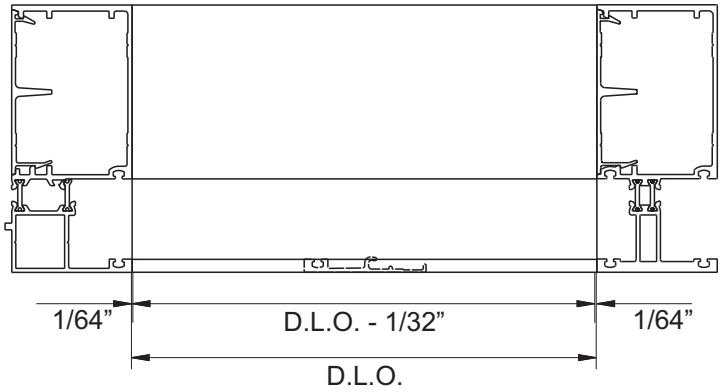


Detail 9

STEP 6
FABRICATE EXTERIOR GLASS STOP FOR OUTSIDE GLAZED HORIZONTALS

-Exterior glazed horizontals require exterior glass stops:
BE9-8706 and BE9-8728 requires interior glass stop E9-1715.
-Cut the glass stop to the same dimension as the horizontals (D.L.O.) minus (-) 1/32”.
See **Detail 10**.

Detail 10



FRAME FABRICATION

STEP 6
FABRICATE GLAZING ADAPTORS

YWW 50 T offers glazing adaptors for 1/4” glazing:
- E9-1707 for captured mullion deep pockets.
- E9-1708 for captured mullion shallow pockets.
- E9-1725 for BE9-8734 pocket fillers for 90° corner posts and door jambs.

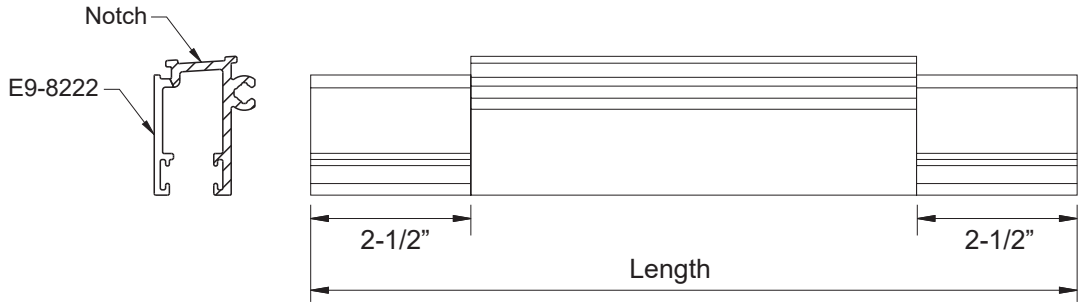
-Cut vertical glazing adaptors to the daylight opening dimension between horizontals plus(+) 7/8”.
-Cut horizontal glazing adaptors to the daylight opening dimension between verticals minus(–) 1/32”.

FRAME FABRICATION

STEP 7
FABRICATE PLATE ADAPTOR

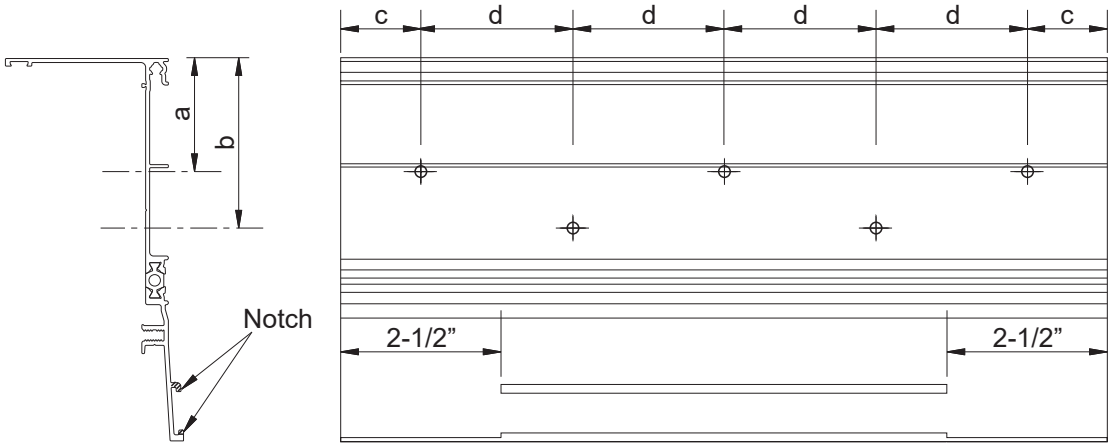
-Cut the aluminum plate adaptor, E9-8222, to the same length as the sill flashing.
-Notch the aluminum plate adaptor 2-1/2” from each end where adjacent to a splice location as shown in **Detail 12**.

Detail 12



-Drill a hole at each location marked for anchoring to the sill flashing. Anchor size and location as determined by structural calculations.
-Alternate perimeter fasteners as shown with dimensions a and b.

Note: It is necessary to also notch the sill flashing 2-1/2” from each end where adjacent to a splice location as shown in **Detail 13**.



Dimensions a, b, c, & d per P.E. calcs

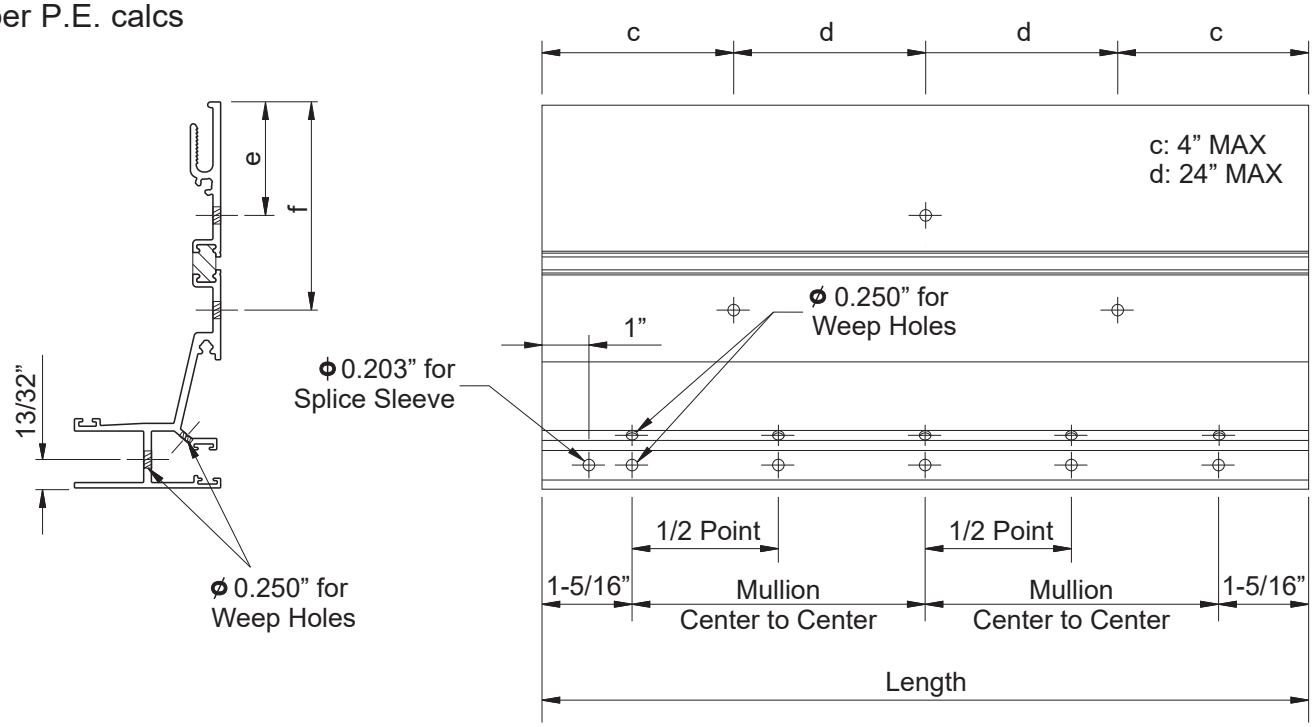
Detail 13

FRAME FABRICATION

STEP 8
FABRICATE HEAD RECEPTOR AND SNAP COVER

-Cut the head receptor and snap cover to the same dimension of the sill flashing as determined in **Step 2**.
-Alternate perimeter fasteners and drill weep holes as shown in **Detail 14**.

Dimensions
c, d, e, & f
per P.E. calcs



Detail 14

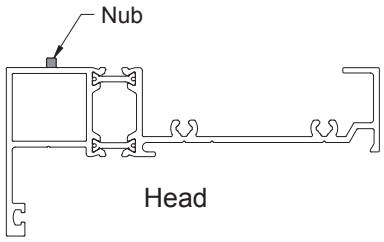
FRAME FABRICATION

STEP 9
FABRICATE HEAD NEAR EXPANSION JOINT

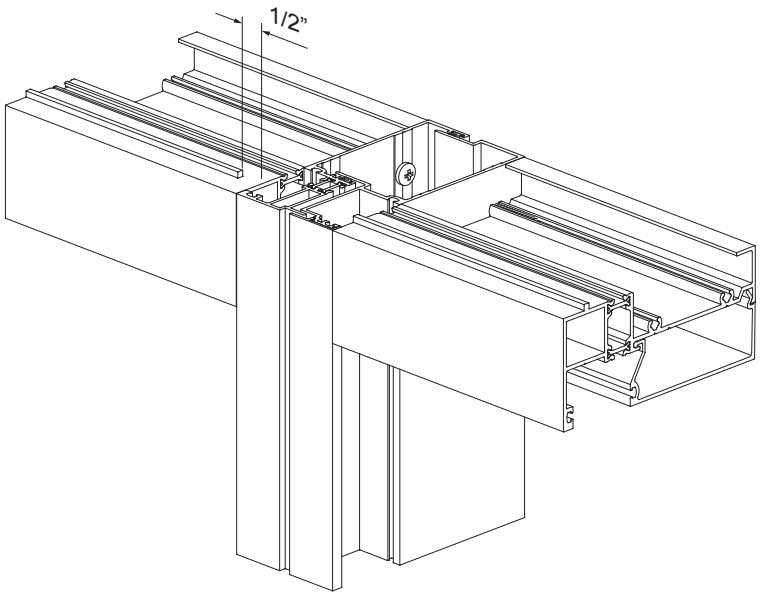
The square nubs at the head will need to be notched at the expansion mullions to clear the end caps.

-Cut the nub 1/2” at the expansion mullion half of which the end cap is not attached to.

See **Detail 15**.



Detail 15

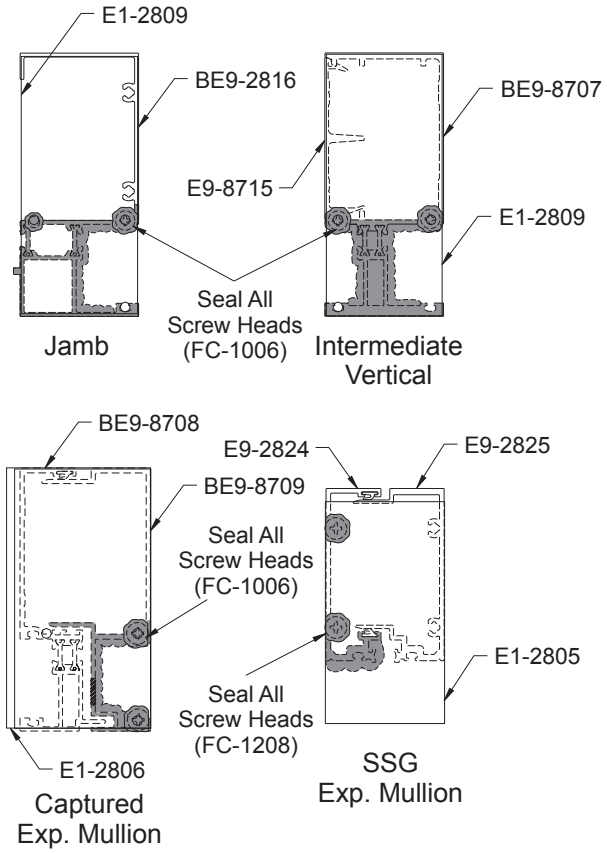


FRAME ASSEMBLY

STEP 10
ATTACH MULLION END CAPS

Mullion end caps are required at the top end only of jamb and vertical mullions of vertical through frames and at each end of the expansion mullion of continuous head and sill frames.

-Clean the vertical mullion ends and mullion end caps with a cleaner and method approved by the sealant manufacturer.
-Apply sealant to the gasket reglet and along the front of the vertical members on both ends prior to installing mullion end caps .
For expansion mullions, apply sealant to the fastener side mullion only.
-Attach the mullion end caps to each end of the mullion with fasteners as shown **Detail 16**.
-Install E1-2806 mullion cap as shown on expansion mullion half. On the standard mullion, install E1-2809 end cap as shown.
-Tool the excess sealant along the inside of the glazing pocket between the mullion end cap and the mullion.
Field note: At the top of each mullion, the perimeter sealant must cover the extrusions entire front edge, thus completely covering the mullion cap.
-Seal all screw heads.
See **Detail 16**.



Detail 16

FRAME ASSEMBLY

STEP 12
PREPARE FRAMES FOR ASSEMBLY

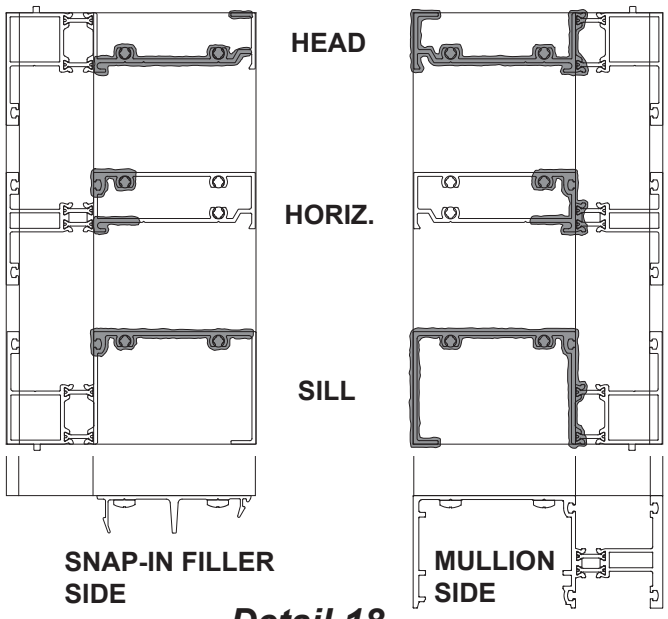
Vertical Through Frames:

-Clean the ends of the horizontal members and attachment areas of vertical members using a cleaner approved by the sealant manufacturer.

-Apply and tool the sealant to the shaded area just prior to assembly with vertical members.

Note: Make sure that the sealant does not get into the glass stop reglets of the head and horizontal members.

See **Detail 18**.



Detail 18

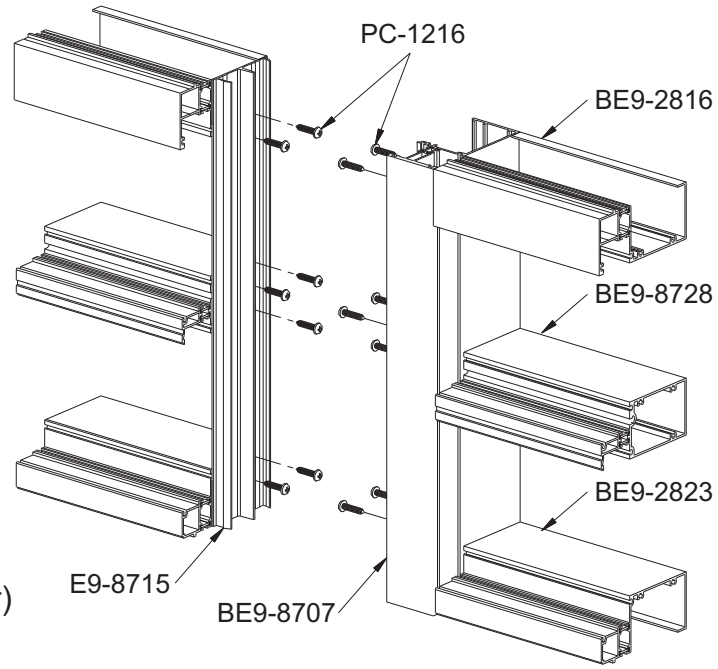
STEP 12A
ASSEMBLE FRAMES

Vertical Through Frames:

-Attach head and sill members to two piece verticals and jambs using (2) PC-1216 fasteners at each end.
-Attach intermediate horizontals to two piece verticals and jambs using (3) PC-1216 fasteners at each end.

Note: PC-1220 fasteners must be substituted for the PC-1216 fasteners when attaching to vertical members that have screw splines.

See **Detail 19**.
(YWW 50 T Outside Glazed shown; others similar)

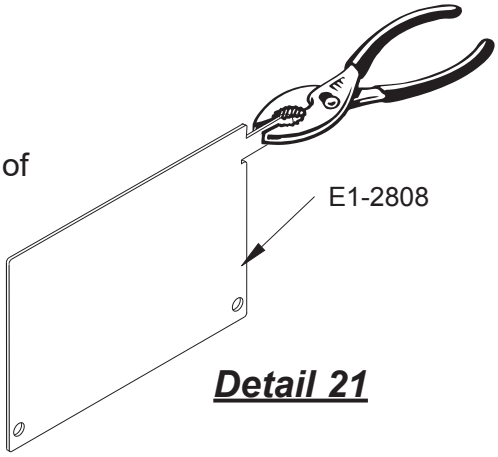


Detail 19

FRAME ASSEMBLY

STEP 13
INSTALL SILL FLASHING END DAMS

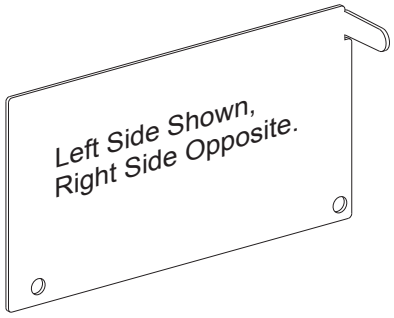
-Bend the tab as shown in **Detail 21** and **Detail 22** with a pair of pliers.



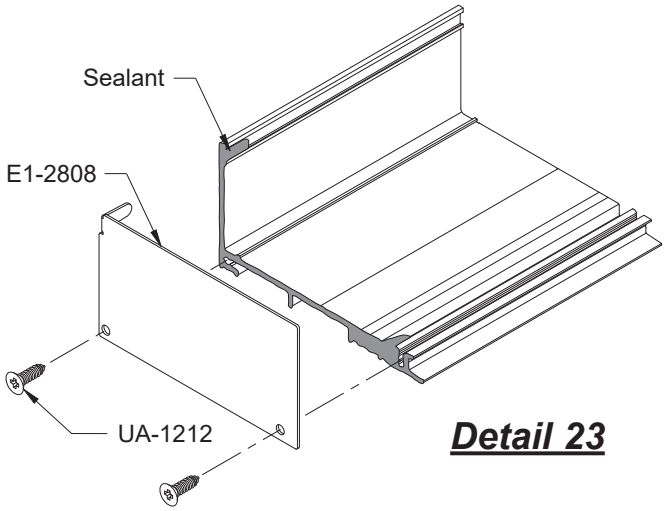
Detail 21

Note: The tab must be bent in the correct position for the left or right end of the sill flashing.

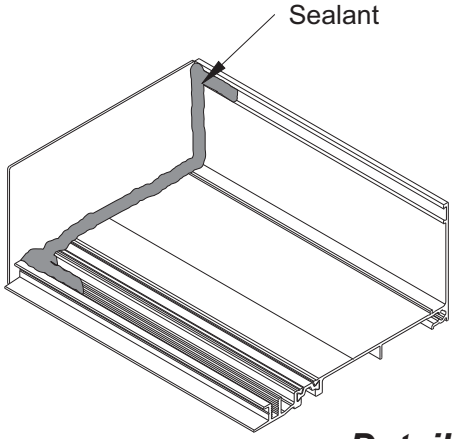
-Clean all joint surfaces using cleaner approved by sealant manufacturer.
-Apply silicone sealant to the end of the sill flashing as shown in **Detail 23.**
-Slide the tab into the top portion of the sill flashing.
-Tap the tab into place with a small tool until the end dam is snug against the end cut of the flashing.
-Fasten the end dam to the sill flashing with two UA-1212 screws, starting at the back, followed by the front as shown in **Detail 23.**
-Tool sealant along the joint between the end dam and the sill flashing as
shown in **Detail 24.**
-Seal over any exposed screw threads.



Detail 22



Detail 23



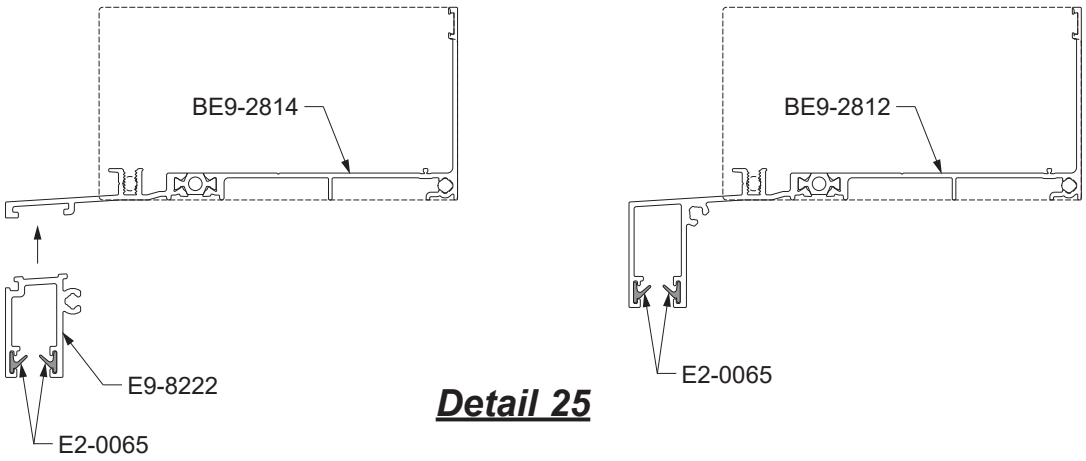
Detail 24

FRAME ASSEMBLY

STEP 14
ASSEMBLE SILL FLASHING FOR SLAB EDGE COVER

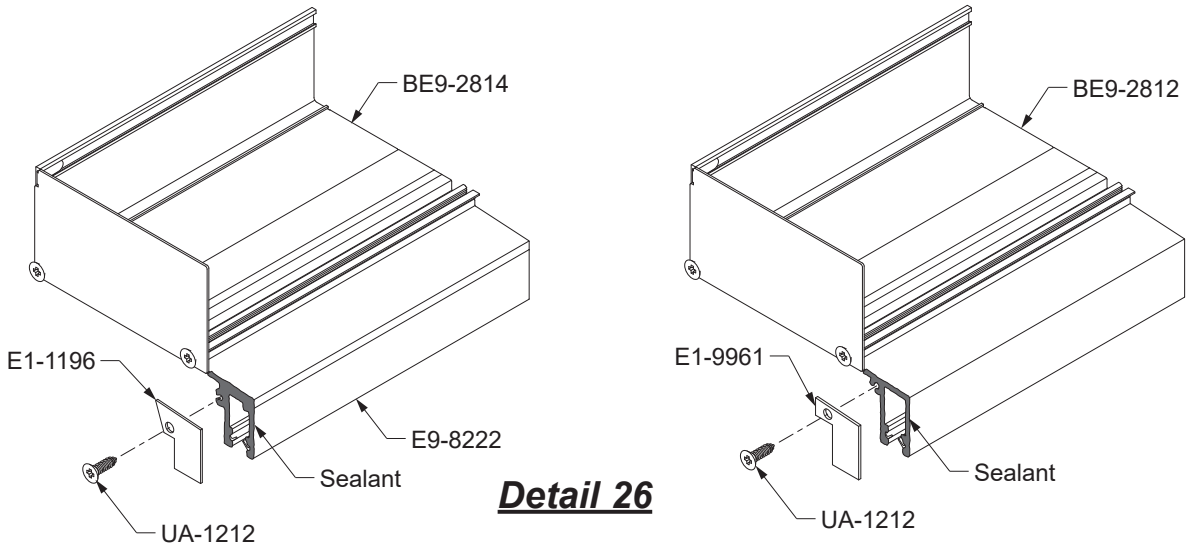
-Install 2 rows of gasket, E2-0065 at the slab edge cover pocket side of the plate adapter, E9-8222, or into the integrated adaptor of the BE9-2812 sill flashing.
-Install the aluminum plate adaptor into the BE9-2814 sill flashing, by sliding into place.

See **Detail 25.**



Detail 25

-At the jamb, clean all joint surfaces using cleaner approved by sealant manufacturer.
-Apply silicone sealant to the end of the plate adaptor region as shown in **Detail 26.**
-Fasten the appropriate end dam into the plate adaptor using one UA-1212 fastener.



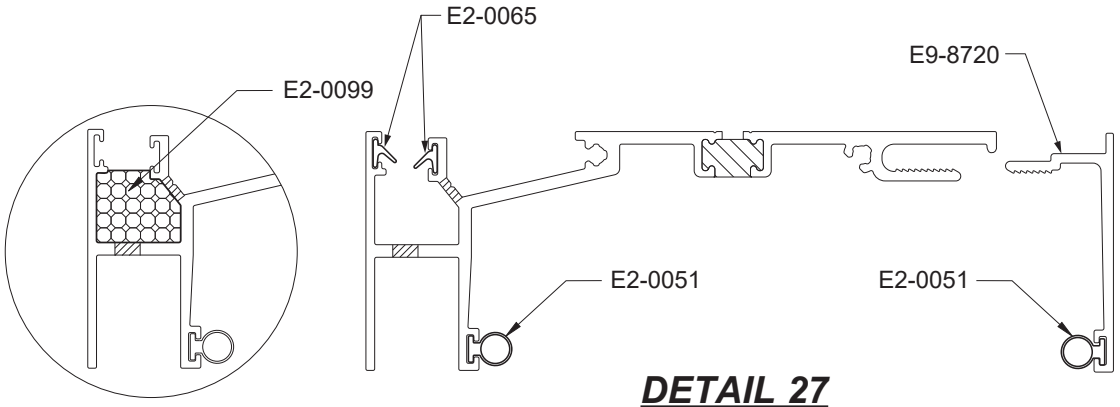
Detail 26

FRAME ASSEMBLY

STEP 15
ASSEMBLE HEAD RECEPTOR FOR SLAB EDGE COVER

-Install weep baffle, E2-0099, over every weep hole location.
-Install gasket, E2-0051, (cut to receptor length plus 3/8”) on YWW 50 T frame side of receptor.
-Install gasket, E2-0051, (cut to receptor snap cover length) onto the E9-8720 snap cover.
-Install two rows of gasket, E2-0065, on the slab edge cover pocket side of head receptor.

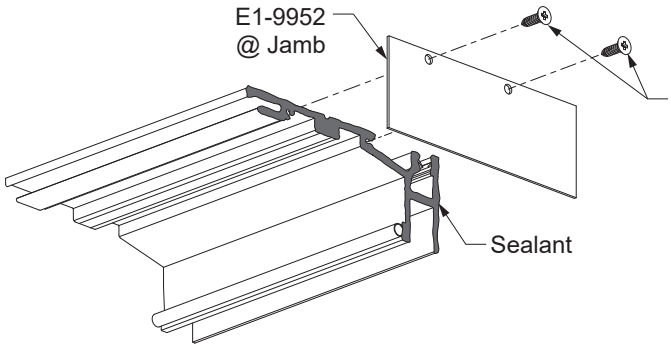
See **Detail 27.**



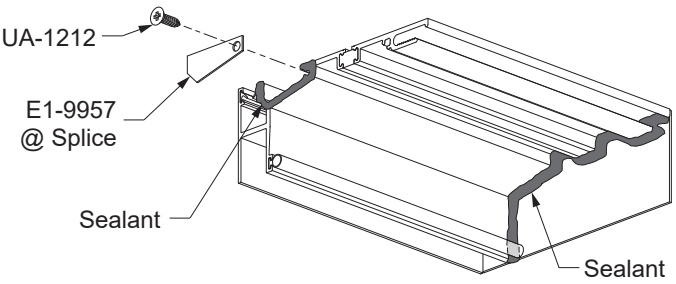
DETAIL 27

-Clean the ends of the receptor using cleaner approved by sealant manufacturer.
-Where the receptor is used at the jamb, apply sealant to the end as shown in **Detail 28A**.
-Attach the E1-9952 end dam to the head receptor using two UA-1212 fasteners.
-On the inside of the end dam, tool sealant as shown in Detail 35B.

-At splice joints, the E1-9957 end dam is used. Apply sealant as shown in **Detail 28B**.
-Attach the E1-9957 end dam with one UA-1212 fastener.



DETAIL 28A

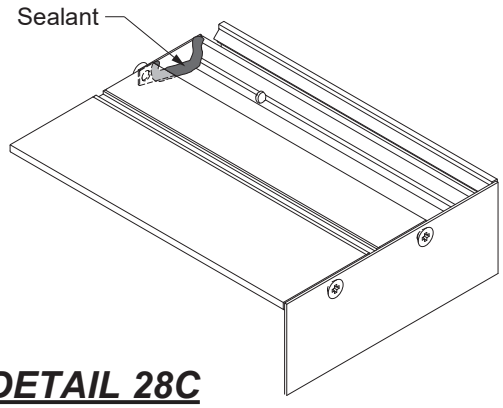


DETAIL 28B

FRAME ASSEMBLY

STEP 15 (Continued)
ASSEMBLE HEAD RECEPTOR FOR SLAB EDGE COVER

-On the inside of the E1-9957 end cap, tool sealant as shown in **Detail 28C**.

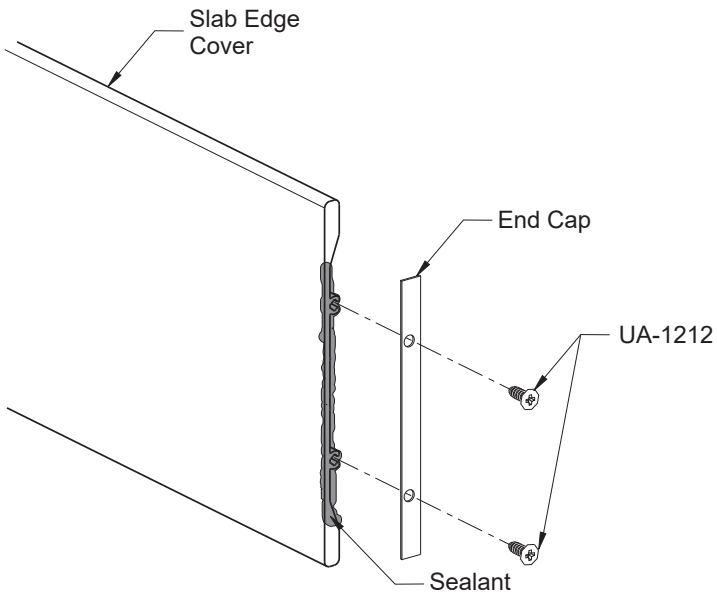


DETAIL 28C

STEP 16
ASSEMBLE SLAB EDGE COVER PLATES

-Clean the ends of the slab edge cover and attachment areas of end caps using a cleaner approved by sealant manufacturer.
-Apply and tool sealant to each end of the slab edge cover prior to attaching the end caps.
-Attach end caps to each end of the slab edge cover using (2) UA-1212 fasteners.
-Tool and wipe away any excess sealant at the joints.

See **Detail 29**.



DETAIL 29

FRAME INSTALLATION

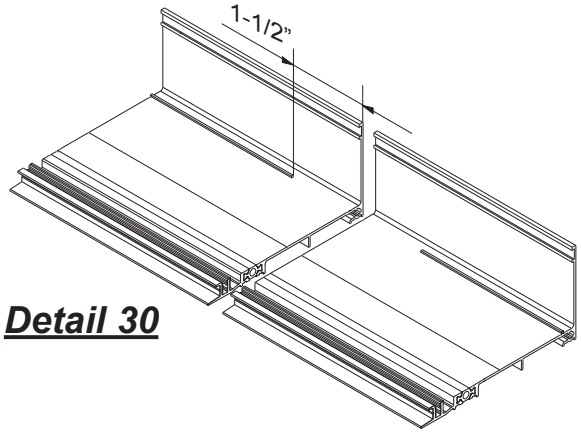
STEP 17
INSTALL SILL FLASHING

Note: For slab edge cover applications, see **Step 23** on **Page 34**.

-Starting at the smallest opening height, install the sill flashing with a minimum of 3/8” shim underneath. Sill flashing must be installed level.
-Anchor the sill flashing to the structure a maximum of 4” from each end and then 18” to 24” on center.
-Apply and tool sealant to cover the heads of all fasteners.

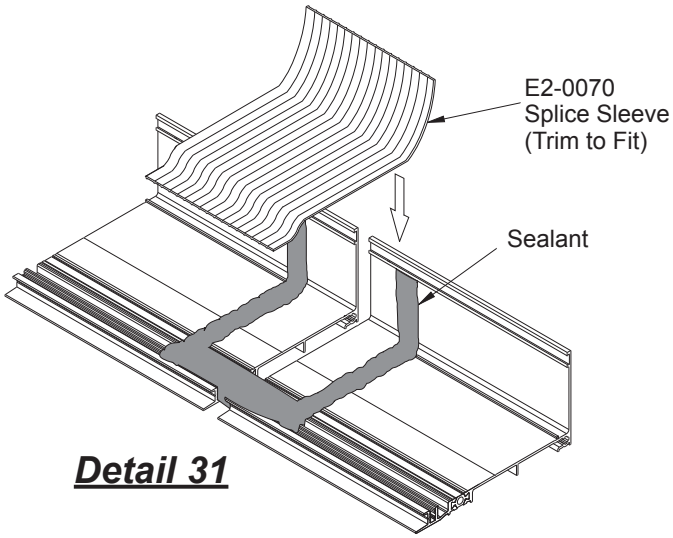
STEP 18
INSTALL SILL FLASHING SPLICE SLEEVE

-Remove the nub with a chisel or needle nose pliers a minimum length of 1-1/2” as shown in **Detail 30** .
-After the sill flashing has been shimmed and installed to the building structure, apply a small backer rod under the sill flashing as shown in **Detail 32**.
-Position the Silicone Splice Sleeve against the back wall below the groove.
-Bend the Silicone Splice Sleeve into the front on the channel as shown. Mark, and cut the sleeve at this position.
-Clean Sill Flashing and Silicone Splice Sleeve with iso-propyl alcohol at the splice location
-Seal the flashing at the splice location as shown in **Detail 31**, before positioning the flashing. Set the Silicone Splice Sleeve into the sealant and flashing.
-Tool sealant tight as shown in **Detail 33**, squeezing the sheet flat.
-Thoroughly seal the small joint directly in front of the Silicone Splice Sleeve as shown in **Detail 33**.

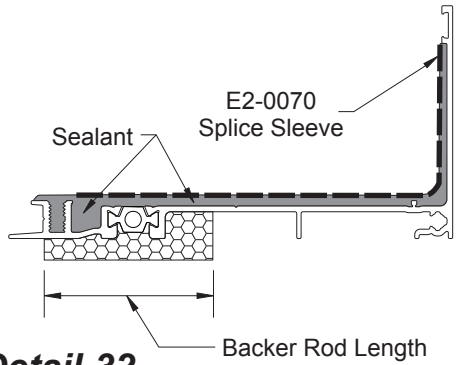


Detail 30

When using E2-0070, a compatible Silicone Sealant must be used at the splice. Compatible Silicone Sealants include Tremco Spectrum 2 and Dow Corning 795.

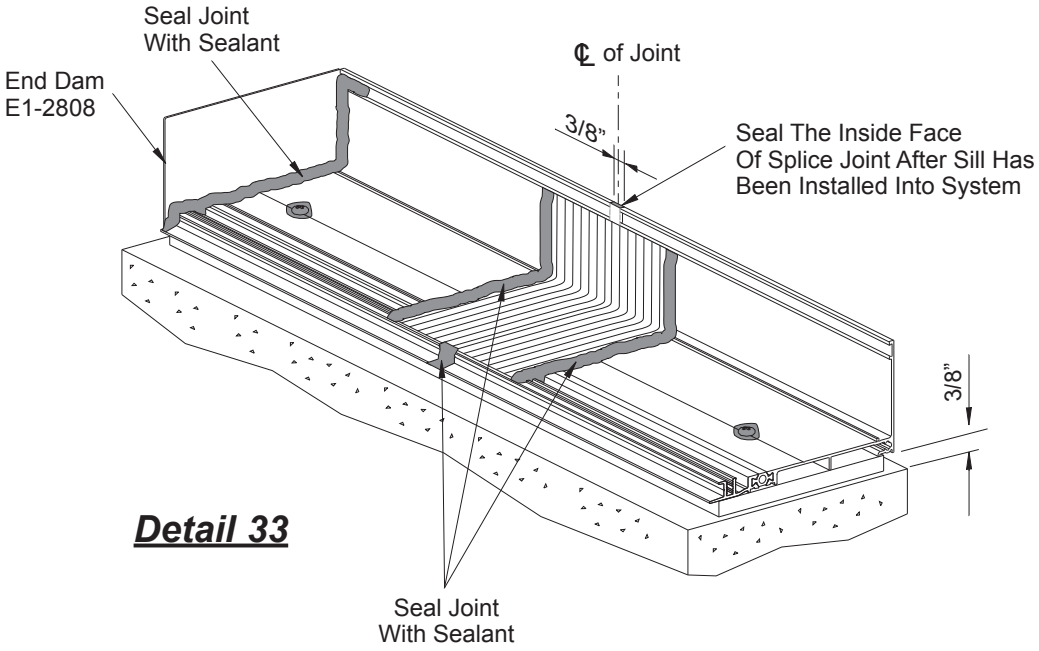


Detail 31



Detail 32

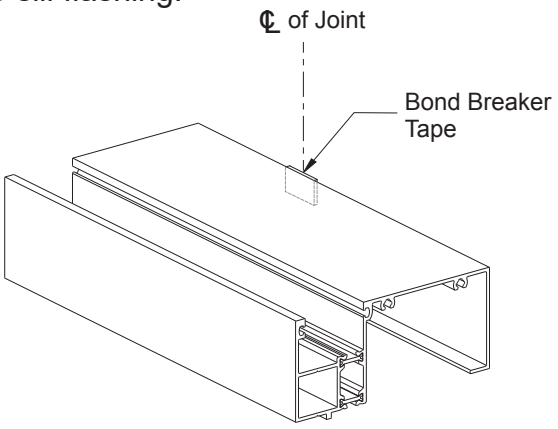
FRAME INSTALLATION



Detail 33

STEP 19
SILL PREPARATION

At every sill flashing splice condition, apply bond breaker tape to the back of the sill member before it is placed into the sill flashing.
See **Detail 34.**

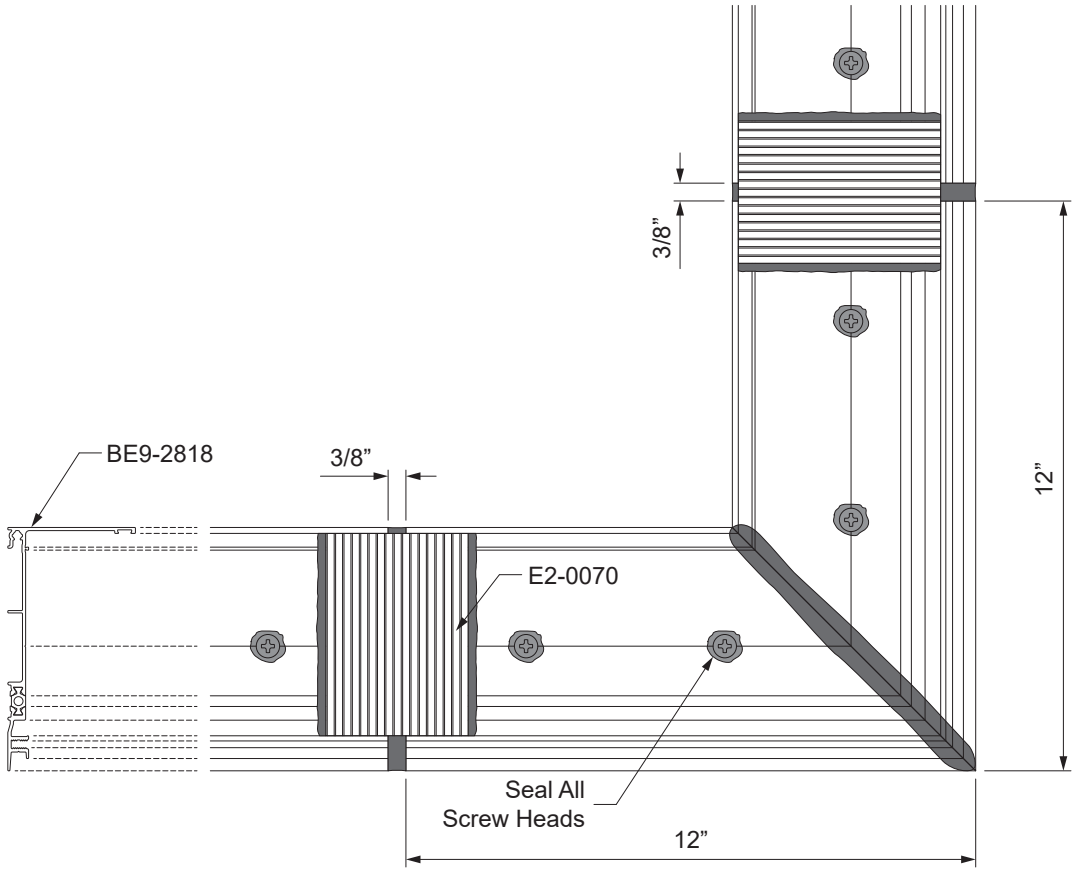


Detail 34

FRAME INSTALLATION

STEP 20
INSTALL SILL FLASHING AT CORNERS

-Cut two 12” long pieces of sill flashing and miter (45° for 90°corners and 67.5° for 135° corners).
-Align the two pieces at the corner condition with the mitered ends pushed together tight and anchor the sill flashing as called out on shop drawings.
-Apply and tool sealant to the mitered joint and anchor heads.
See **Detail 30**.
-Continue installing the rest of the sill flashing providing a 3/8” expansion joint at splices as shown in **Step 18** on **Page 27 & 28**.



Detail 30
90° Outside Corner Shown
Others Similar

FRAME INSTALLATION

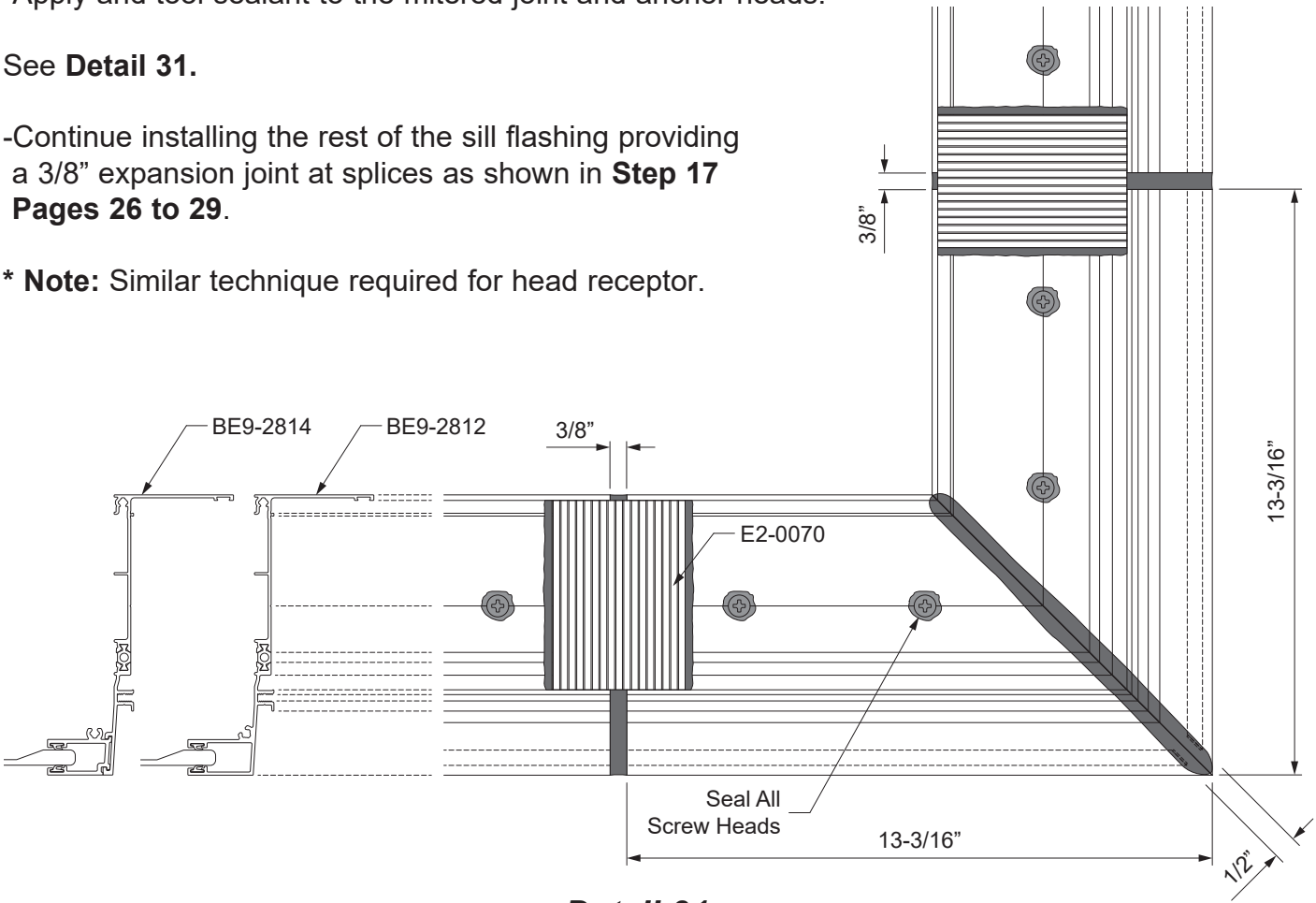
STEP 20A
INSTALL BE9-2814 / BE9-2812 SILL FLASHING AT CORNERS *

-Cut two 13-3/16” long pieces of sill flashing and E9-8222 slab edge cover adaptor, and miter (45° for 90° corners). The head receptor that is to be installed below will also receive the same miter cut fabrication.
-Install the head receptor using similar procedure as previously desribed for the sill flashing.
-Miter cut the slab edge cover plates 45° for 90° corners, such that upon installation, they leave a 1/2” gap at the corner.
-Fasten end caps onto the edge of the slab edge cover plates.
-Install the slab edge plates onto the setting blocks of the head receptor below.
-Align the two pieces of the sill flashing at the corner condition with the mitered ends pushed together tight and anchor the sill flashing as indicated on the approved shop drawings and or P.E. calculations.
-Apply and tool sealant to the mitered joint and anchor heads.

See **Detail 31.**

-Continue installing the rest of the sill flashing providing a 3/8” expansion joint at splices as shown in **Step 17 Pages 26 to 29**.

*** Note:** Similar technique required for head receptor.



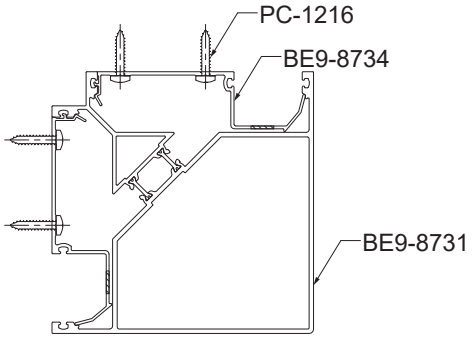
Detail 31
90° Outside Corner Shown
Others Similar

FRAME INSTALLATION

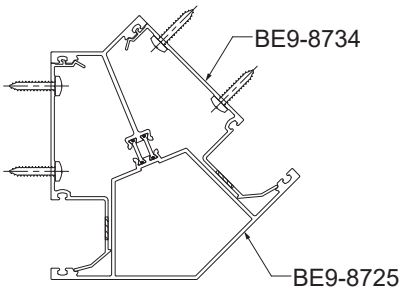
STEP 20
INSTALL CORNER ASSEMBLIES

-Attach horizontal members to standard verticals as shown before in **Step 11**.
-Attach the other end of the horizontals to the corner mullions, hinged mullions or flat fillers, corners using the same technique.
-Snap the corner framing members together to form the corner assemblies.
-Hinged mullions must be fastened through the ball joint 6” from each end and no more than 18” on center with PC-0806 fasteners.
-Carefully move the corner assembly into place and snap it into the rest of the frame one side at a time.

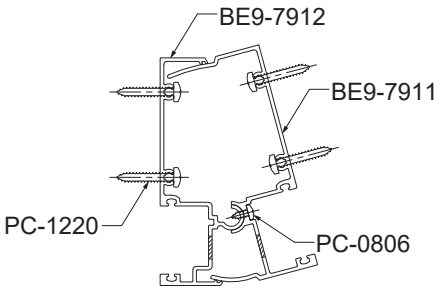
See **Detail 36**.



90˚ Outside Corner



135˚ Outside Corner



0˚-15˚ Outside Corner

Detail 36

FRAME INSTALLATION

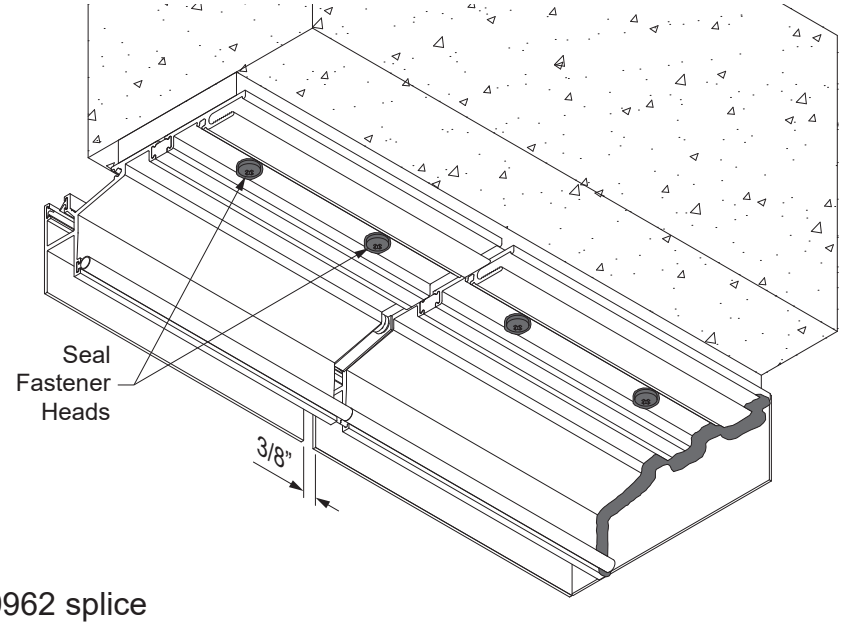
STEP 21
INSTALL HEAD RECEPTORS

With slab edge cover applications, the head receptor of the system below is installed first, then the slab edge cover, and then the sill flashing with slab edge adaptor for the system above.

-Starting at the smallest opening height, install the head receptor with a minimum of 1/2” shim space underneath. Head receptor must be installed level. Allow for a 3/8” splice joint between spans.
-Anchor the head receptor to the structure a maximum of 4” from each end and then 18” to 24” on center.
-Apply and tool sealant to the heads of all fasteners.

See **Detail 37**.

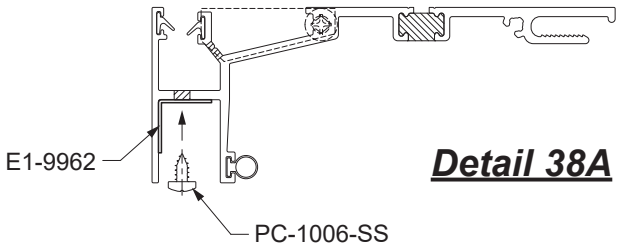
Detail 37



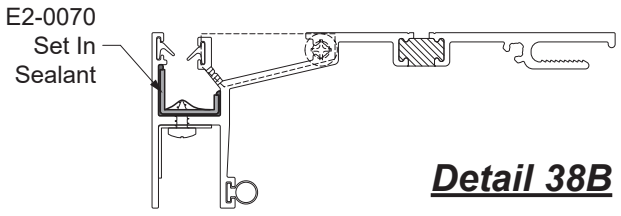
-At each splice location, install the E1-9962 splice sleeve, centered at the splice joint, using one PC-1006-SS fastener as shown in **Detail 38A**.

-In the slab edge receptacle above, adhere an E2-0070 silicone sheet to the receptor with sealant, also centered at the splice joint. Note that there will be a bulge where the fastener below penetrates the receptacle.

See **Detail 38B**.



Detail 38A



Detail 38B

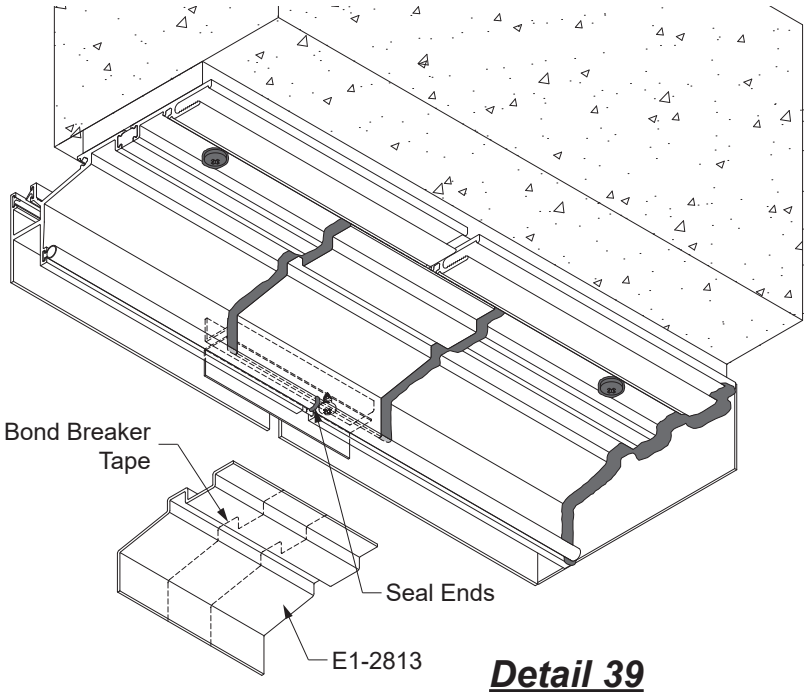
FRAME INSTALLATION

STEP 21 (Continued)
INSTALL HEAD RECEPTORS

-Prior to installing the E1-2813 splice sleeve, clean head receptor and splice sleeve with isopropyl alchohol at the splice location.

-Apply bond breaker tape to the top side of the splice sleeve at the center.

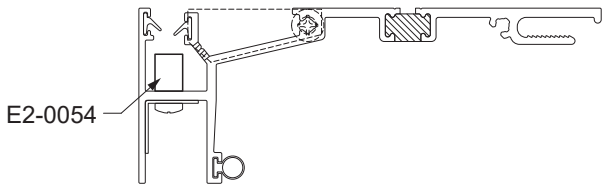
-Position the splice sleeve inside the front wall inside the head receptor, set in sealant centered on the splice joint as shown in **Detail 39**. Press the sleeve tight against the receptor.



Detail 39

-Install E2-0054 setting blocks at 1/4 points of the head receptor.

See **Detail 40**.



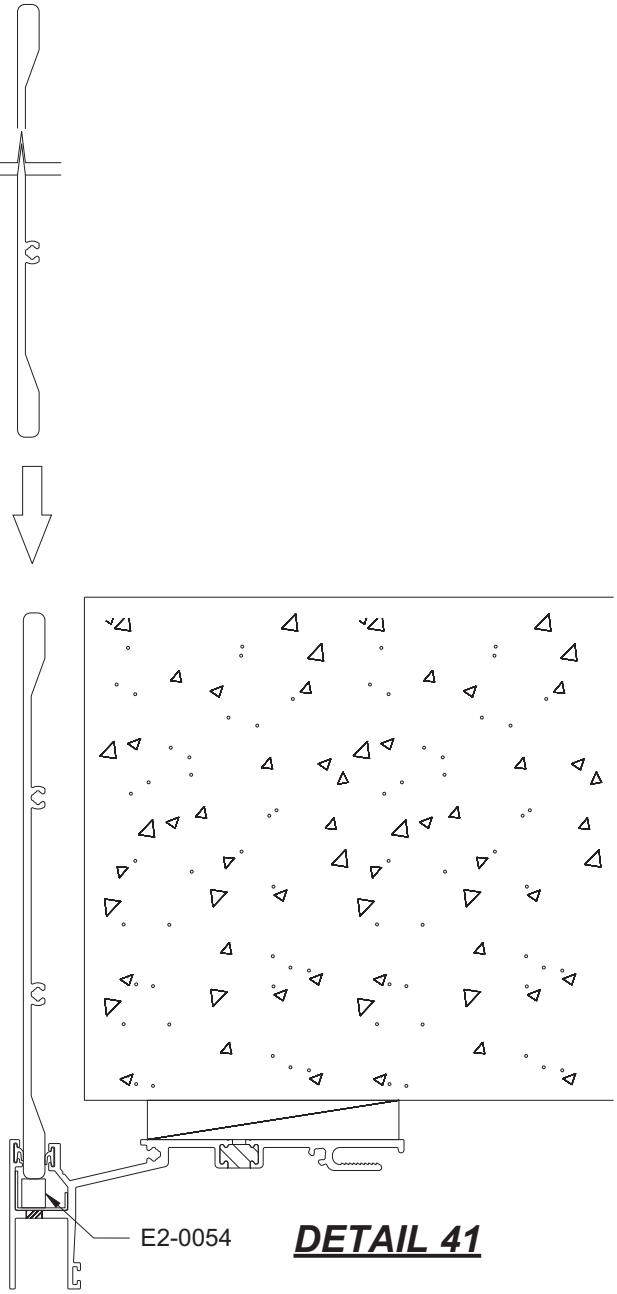
Detail 40

FRAME INSTALLATION

STEP 22
INSTALL SLAB EDGE COVER FASCIA

-Push slab edge cover into the head receptor to make contact with setting blocks, E2-0054.
-Be sure to leave a 3/8” joint between the plates for runs longer than 24’-0”.

See **Detail 41.**

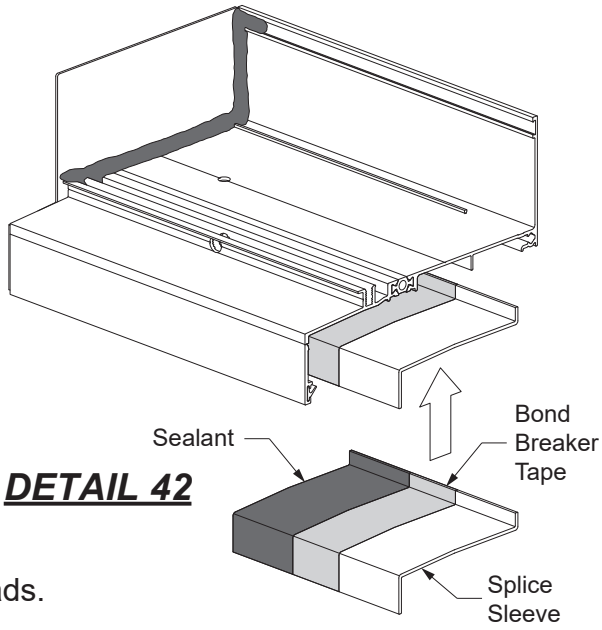


DETAIL 41

FRAME INSTALLATION

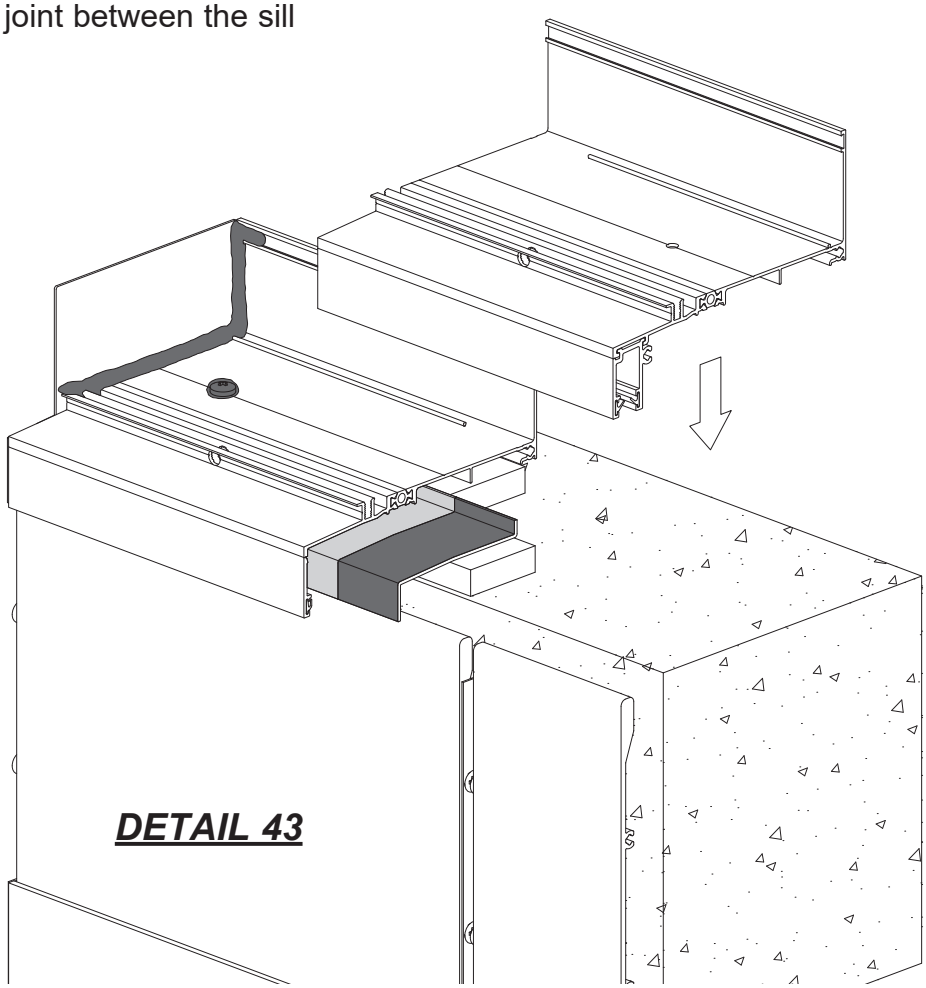
STEP 23
INSTALL SILL FLASHING FOR SLAB EDGE COVER

Before installing the sill flashing, install an E1-9959 splice sleeve at the underside of the sill flashing and slab edge adaptor.
-Apply bond breaker tape down the middle of the splice sleeve and sealant to one side of the splice sleeve as shown in **Detail 42**.
-Adhere the sealed half of the splice sleeve to the underside of the sill flashing.



DETAIL 42

-Install the sill flashing assembly onto the substrate (1/2” minimum shim space), engaging the slab edge cover plates below and sealing all anchor fastener heads.
-Install the next slab edge sill flashing assembly onto the splice sleeve as shown in **Detail 43**.
Be sure to leave a 3/8” splice joint between the sill flashing assemblies.

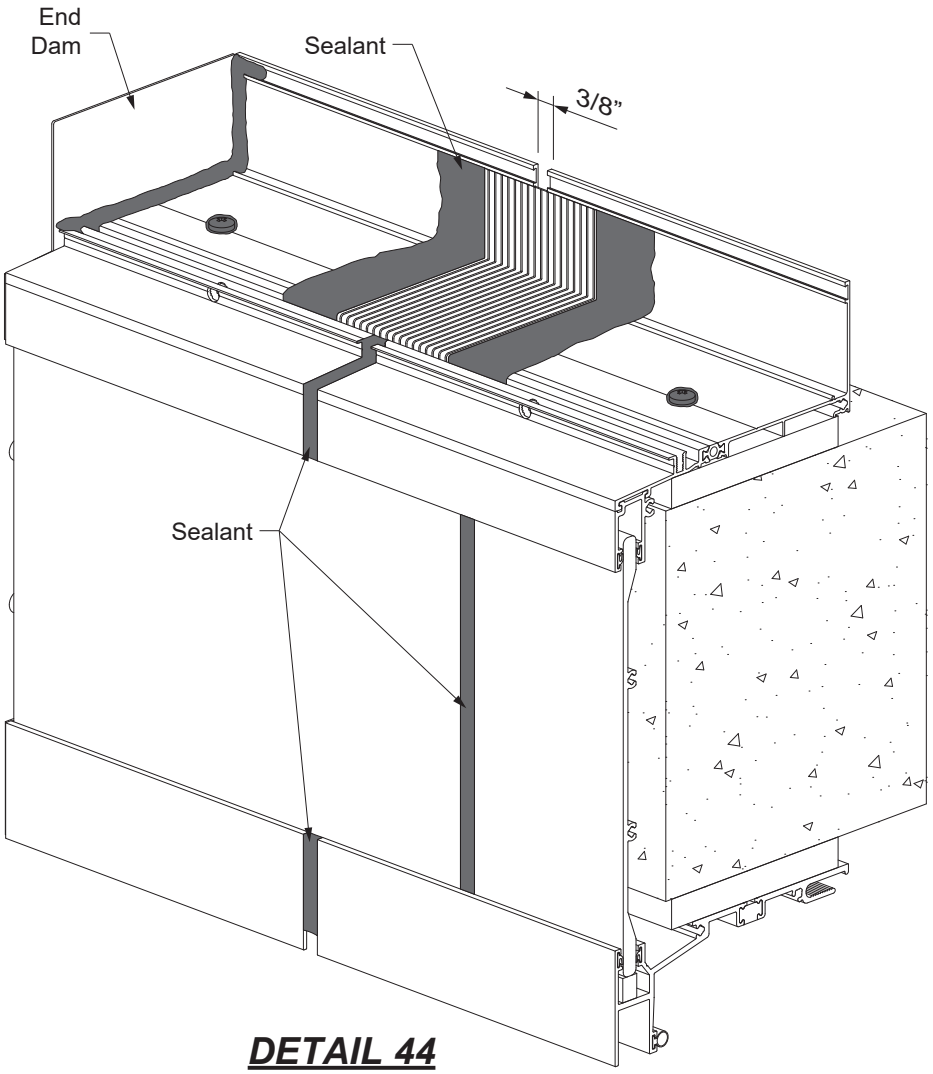


DETAIL 43

FRAME INSTALLATION

STEP 23 (Continued)
INSTALL SILL FLASHING FOR SLAB EDGE COVER

-Installation of the E2-0070 splice sleeve is the same as previously outlined in **Step 17**, except to apply sealant to the joint at the slab edge cover plate, adaptor, and head receptor as shown in **Detail 44**.



DETAIL 44

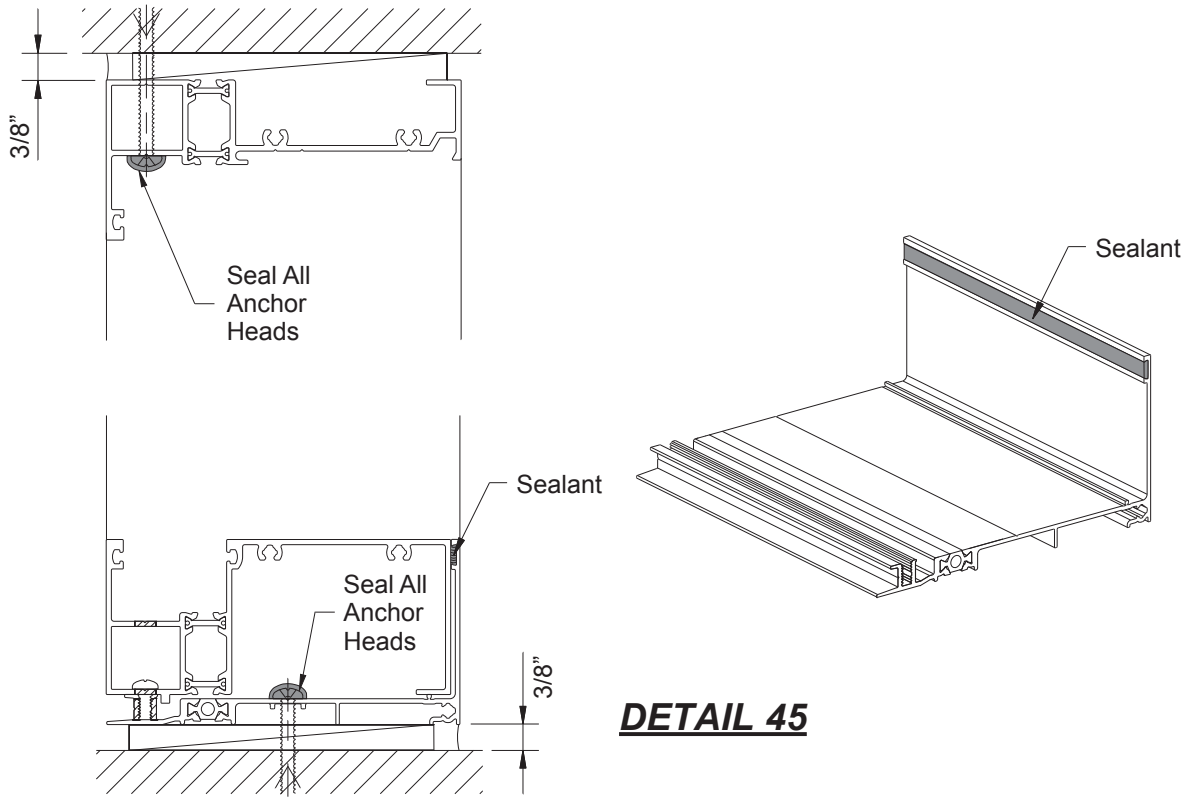
FRAME INSTALLATION

STEP 24
INSTALL ASSEMBLED FRAMES

-Immediately before installing the frames, apply a continuous bead of sealant to the top of the upturned leg of the sill flashing,and a generous amount of sealant to the pilot holes in the sill flashing. Be sure not to obstruct weep holes on exterior of sill. Make sure all surfaces are clean before applying sealant.
-Snap frame assemblies together and set onto the sill flashing.
-Shim the head and jamb members to ensure that the frame is installed plumb, square, and true.
-Anchor the head members at 6” on each side of every vertical centerline and then no more than 24” on center.
-Anchor jamb members 6” from each end and then no more than 24” on center.
-Follow by inserting and tightening fasteners into flashing through sealant.
-Seal all anchor heads.

Note: Shims must be installed at all anchor locations.

See **Detail 45.**
(Inside glazed shown, outside glazed similar)



DETAIL 45

FRAME INSTALLATION

STEP 24A
INSTALL ASSEMBLED FRAMES

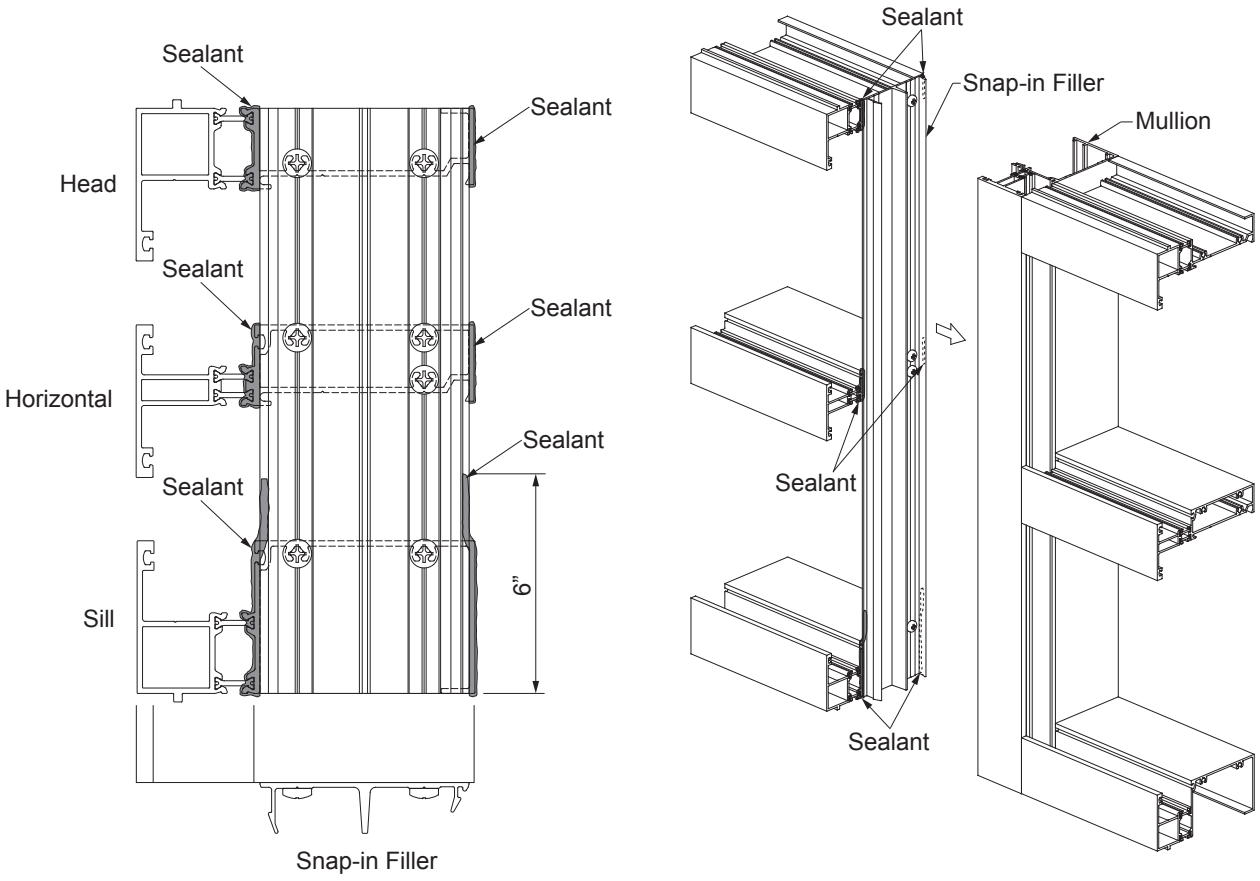
-Clean the ends of horizontal members and attachment areas of the vertical members using a cleaner approved by the sealant manufacturer.

-Apply and tool the sealant to the shaded area just prior to the mullion snap-in. Make sure that the sealant does not get into the glass stop reglets of the head, horizontal, and sill.

-Snap the mullion filler into the mullion.

-Tool and wipe away any excess sealant at the joints

See **Detail 46.**

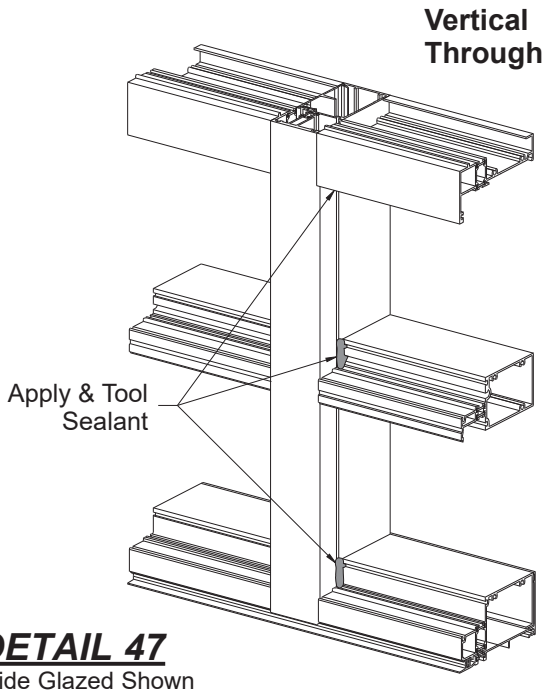


DETAIL 46

FRAME INSTALLATION

STEP 25
APPLY INTERNAL & PERIMETER SEALANT

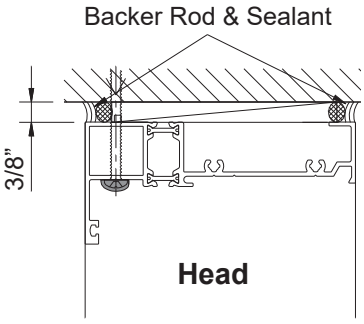
-Apply sealant to all vertical/horizontal joints at the glazing pockets.
-Tool the sealant to ensure a watertight joint.
See **Detail 47**.

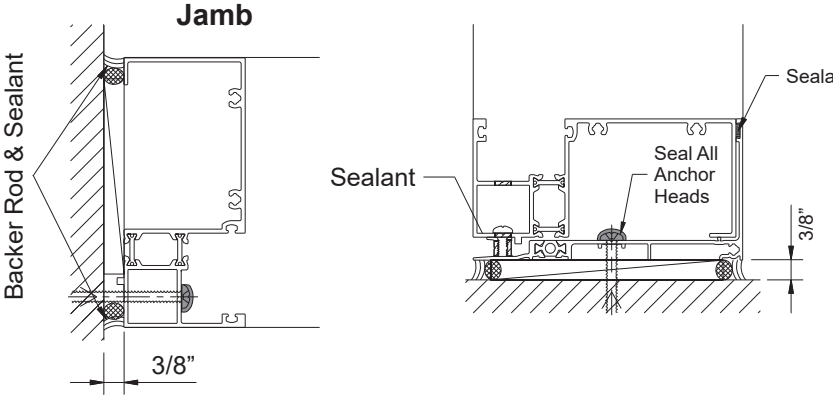


DETAIL 47
Outside Glazed Shown
Inside Glazed Similar

-Install backer rod around the perimeter of the frame between the frame and the structure.
-Apply and tool sealant to ensure a watertight joint.
See **Detail 48**.

Note: Interior and exterior seals are required.





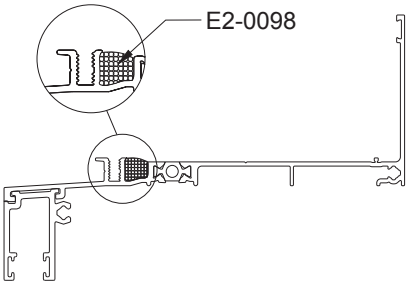
DETAIL 48
Inside Glazed Shown
Outside Glazed Similar

FRAME INSTALLATION

STEP 26
INSTALL ASSEMBLED FRAMES WITH SLAB EDGE COVER

-Install E2-0098 sill weep baffle at each weep hole location.
-Clean the surfaces using cleaner approved by sealant manufacturer.

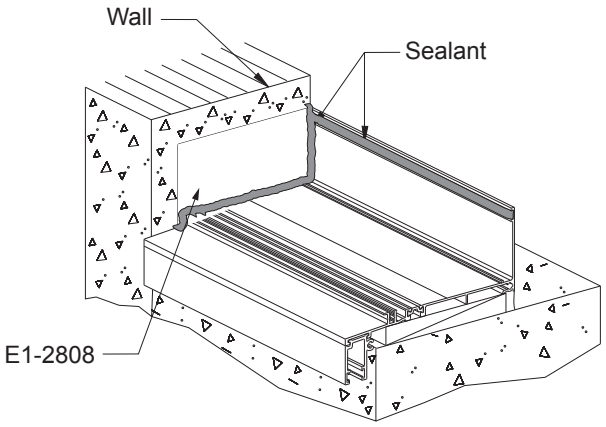
See **Detail 49.**



DETAIL 49

-Apply and tool sealant between wall and end dam.
-Apply and tool sealant to the sealant track on the back of the sill flashing.

See **Detail 50.**



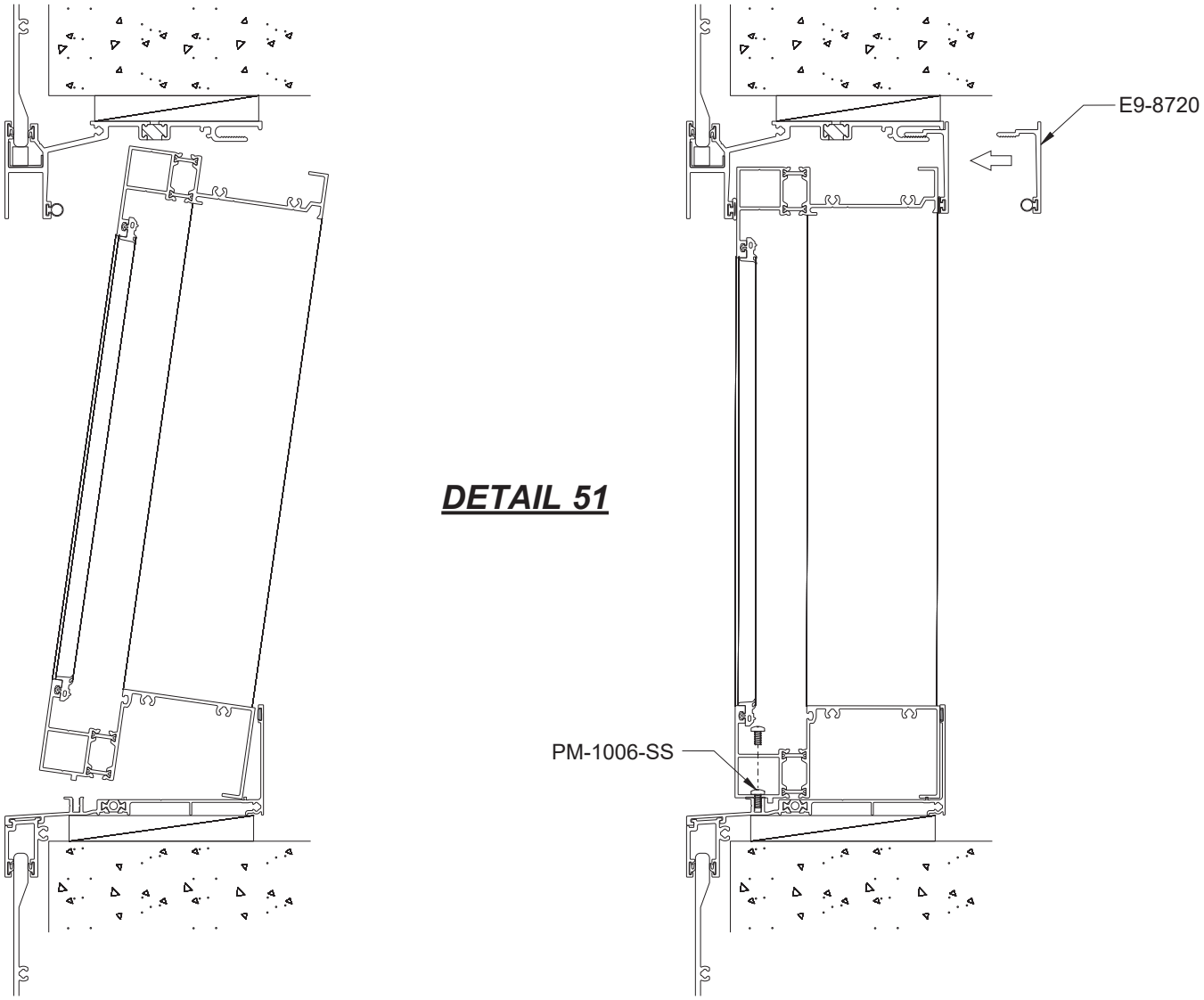
DETAIL 50

FRAME INSTALLATION

STEP 26 (Continued)
INSTALL ASSEMBLED FRAMES WITH SLAB EDGE COVER

-Set unglazed YWW 50 T frame into the opening pressing the excess sealant out of the sealant track on the sill flashing.
-Clean up excess sealant.
-Apply receptor snap cover into head receptor.
-Match drill hole in sill flashing for PM-1006-SS and install screws.

See **Detail 51.**

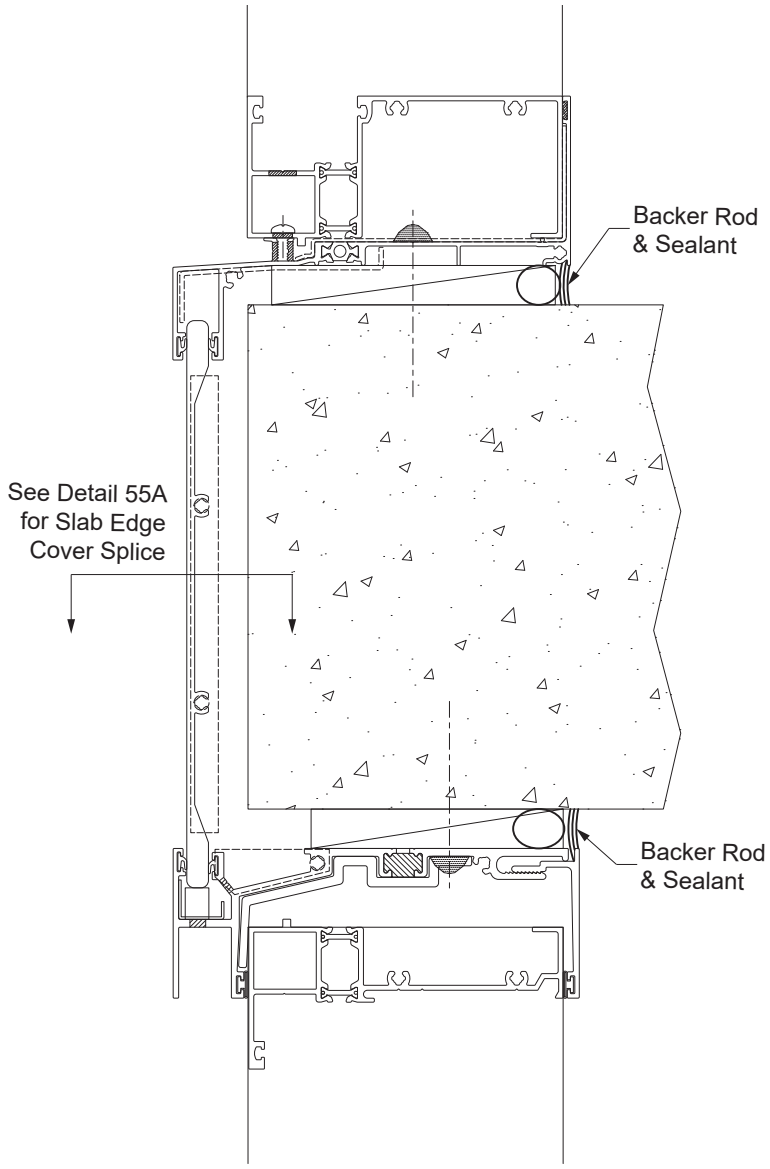


DETAIL 51

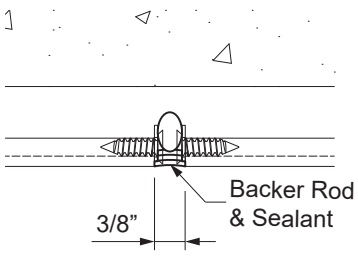
FRAME INSTALLATION

STEP 27
APPLY PERIMETER SEALANT

-Install backer rod and apply sealant to the back of the sill flashing and head receptor.
-Tool sealant prior to skinning over. See **Detail 52.**
-Also apply and tool sealant to the splice joint between the slab edge cover plates. See **Detail 52A**.



DETAIL 52
(WITH SLAB EDGE COVER)



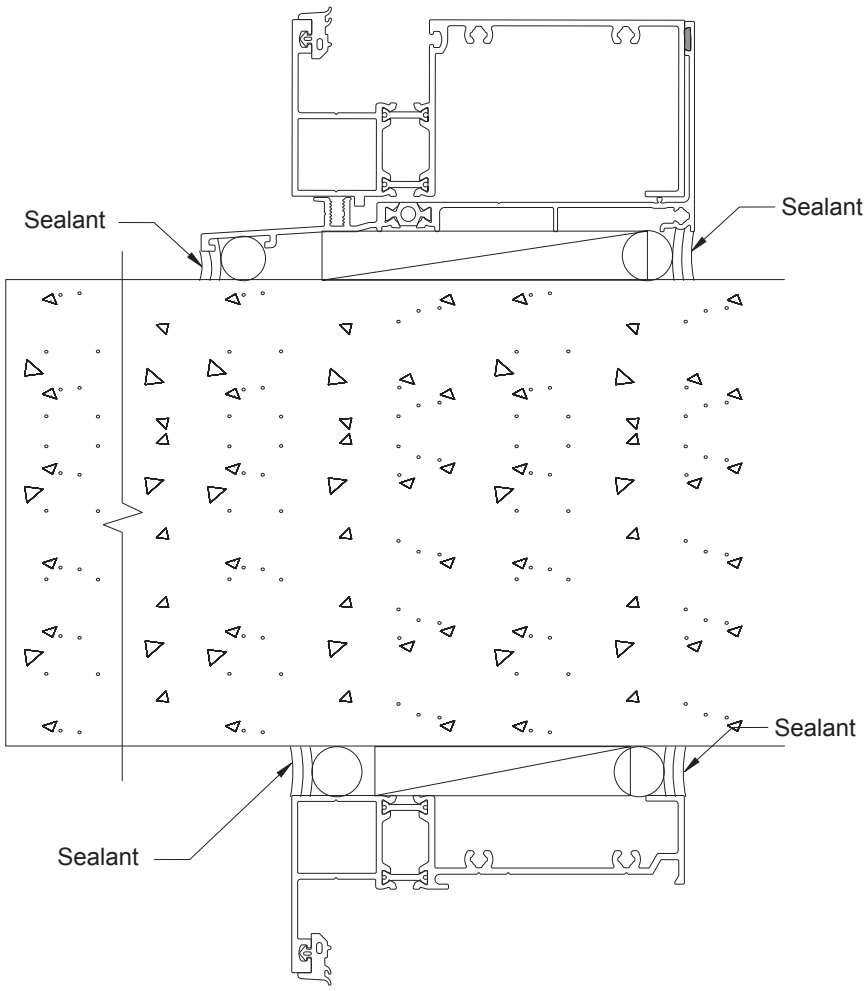
DETAIL 52A
(WITH SLAB EDGE COVER)

FRAME INSTALLATION

STEP 27 Continued)
APPLY PERIMETER SEALANT

-Install backer rod and apply sealant to the back of the sill flashing and head receptor.
-Tool sealant prior to skinning over.

See **Detail 53.**



DETAIL 53
(WITHOUT SLAB EDGE COVER)

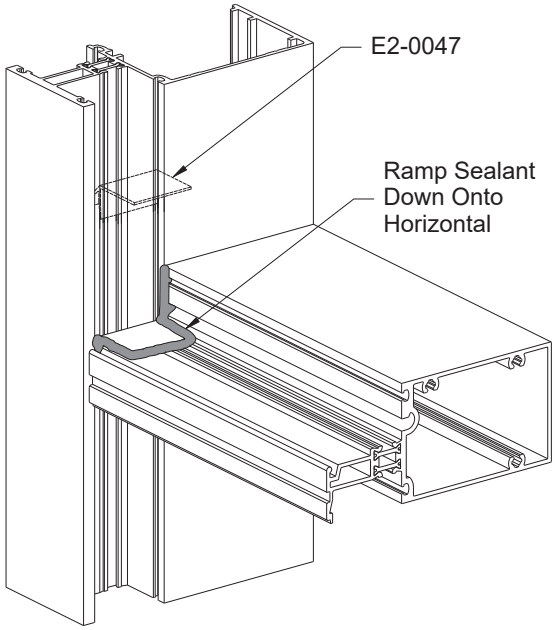
FRAME INSTALLATION

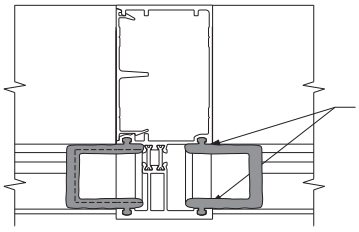
STEP 28
INSTALL WATER DEFLECTORS
(Standard Mullions and Jambs)

The installation of a water deflector, E2-0047, at the ends of every intermediate horizontal is required to divert water away from the insulated units.

- -Clean and dry off the glazing pocket of each horizontal at the ends.
- -Peel off the protective paper and install the water deflector at the end of the horizontal.
- -Position the vertical leg of the deflector against the end of the horizontal.
- -Apply and tool sealant along the edges of the water deflector down onto the horizontal.
- -Seal the ramp of the water deflector to the sides of the glazing pocket wall.

See **Detail 54**.





DETAIL 54
Outside Glazed Shown
Inside Glazed Similar

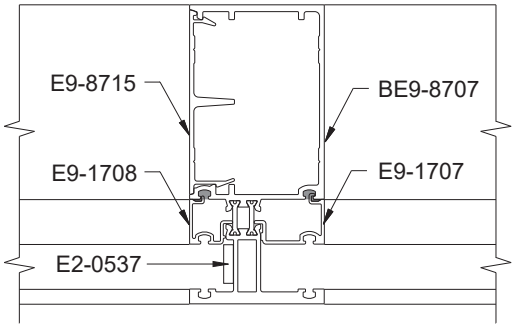
FRAME INSTALLATION

STEP 30
INSTALL 1/4” GLAZING ADAPTORS
(When Required)

Attach the vertical glazing adaptors first.

For Standard Verticals:
- -Apply sealant in the vertical gasket reglets.
- -Center the vertical adaptor in the opening.
- -Position the foot of the adaptor into the MegaTherm recess and rotate the other end into the gasket reglet of the mullion.

See **Detail 56**.



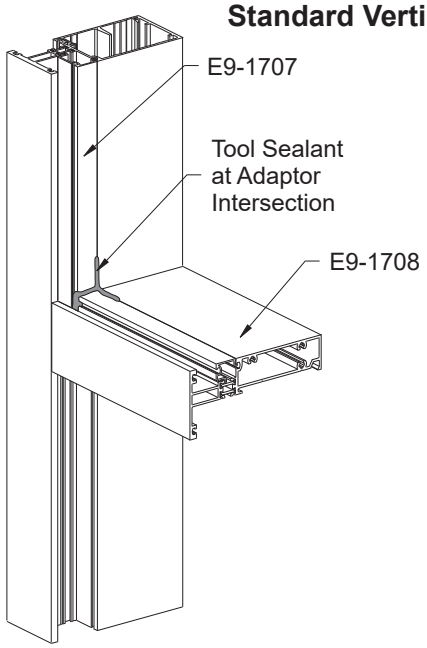
Standard Vertical

DETAIL 56

Attach the horizontal glazing adaptors last.
- -Apply sealant to the ends of the horizontal glazing adaptors.
- -Install the horizontal adaptors.

-Tool the sealant at the intersections of the adaptors to completely seal the joint.
See **Detail 57**.

Standard Vertical



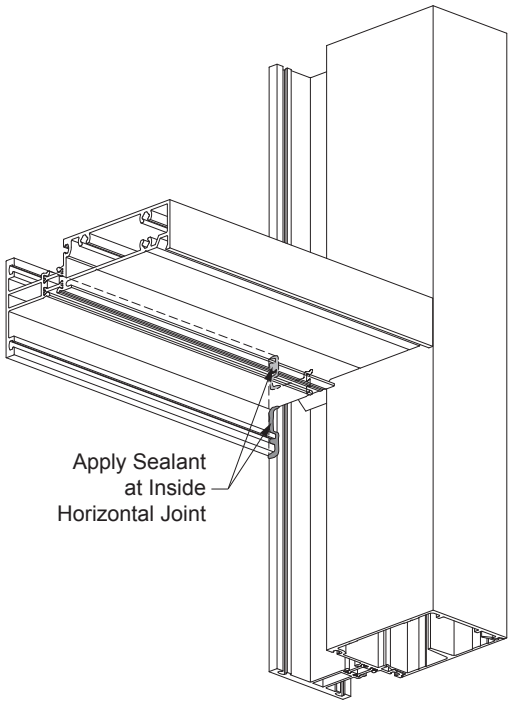
DETAIL 57

GLAZING

STEP 31
SEAL INSIDE GLAZED HORIZONTALS

Note: For Outside Glazing, skip this step and proceed to **Step 32** on **Page 46**.

Before installing the gaskets on an inside glazed window wall, the horizontals must be sealed to the verticals at the face of the system from the inside as shown in **Detail 58**.



DETAIL 58
Inside Glazed Shown

GLAZING

STEP 32
INSTALL PUSH IN GLAZING GASKETS

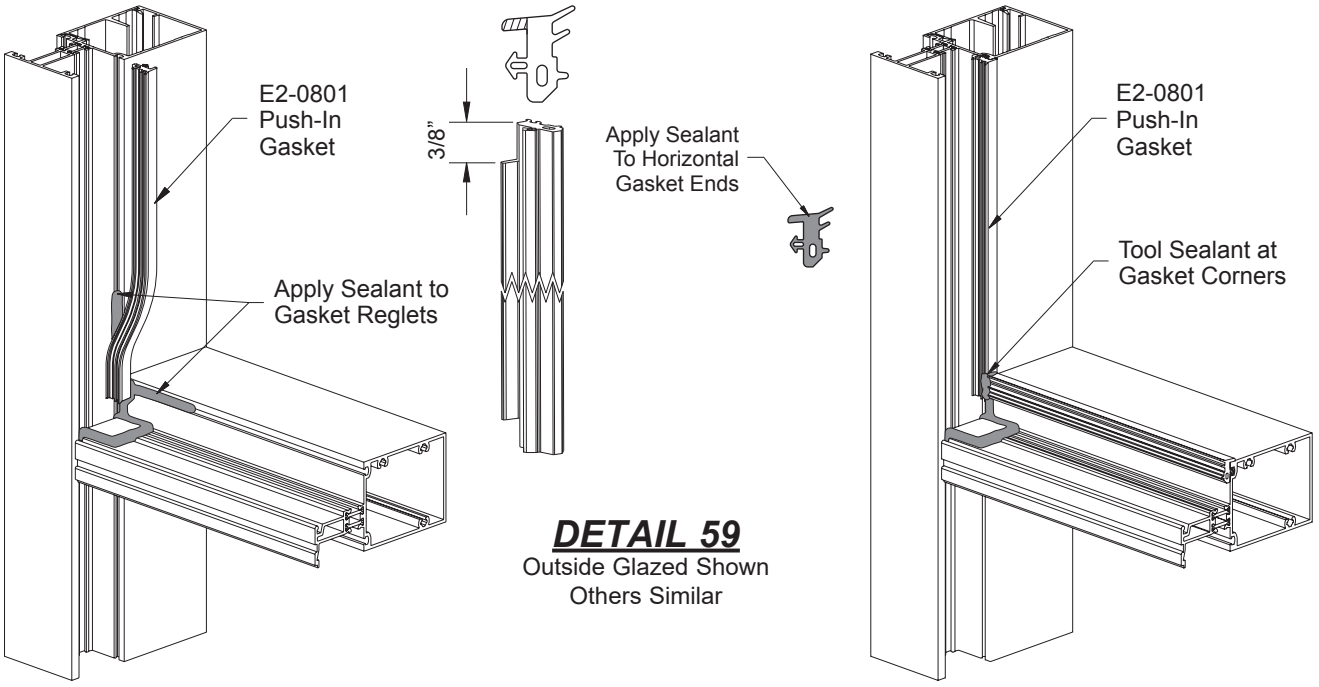
For inside glazing: Push-in gasket, E2-0801, must be installed on the exterior prior to glazing.
For outside glazing: Push-in gasket, E2-0801, must be installed on the interior prior to glazing.

-Using a small brush clean out any dirt that may have accumulated in the gasket reglets.

Vertical glazing gaskets must be installed first:

-Cut vertical glazing gaskets to the Daylight Opening plus(+) 3/4" plus(+) an additional 1/4" for each foot of length. Notch ends of the vertical gasket as shown.
-Insert the gasket into the reglets at each end first; then insert the gasket at the midpoint of the opening.
-Push the gasket into the reglet starting at the midpoint and work towards each end.

See **Detail 59**.



DETAIL 59
Outside Glazed Shown
Others Similar

Install horizontal glazing gaskets next:

-Cut horizontal glazing gaskets to Daylight Opening plus(+) 1/4" for each foot of length.
-Apply sealant to each end of the horizontal glazing gasket prior to inserting into the reglet.
-Insert the gasket into the reglet at each end first; then insert the gasket at the midpoint of the opening.
-Push the gasket into the reglet starting at the midpoint and work towards each end.
-Tool the excess sealant at the gasket corners to ensure a watertight seal.

See **Detail 59**.

GLAZING

STEP 33
INSTALL GLASS FOR STANDARD GLAZING

Determine the glass size:

	Width	Height
Standard Glazing	**D.L.O. + 7/8”**	**D.L.O. + 7/8”**

-Install setting blocks at 1/4 points or according to engineering calculations.
At intermediate horizontals: E2-0184 for 1” glazing and E2-0192 for 1/4” glazing.
At sill conditions: E2-0182 for 1” glazing and E2-0190 for 1/4” glazing.

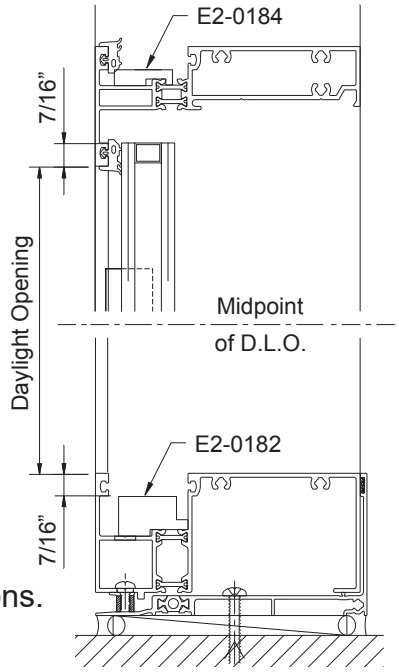
See **Detail 60**.

-Install side blocks, E2-0186, in the shallow glazing pocket of each vertical at the midpoint of daylight opening.
-Carefully install glass into the frame making sure that setting and side blocks are properly aligned with the glass.

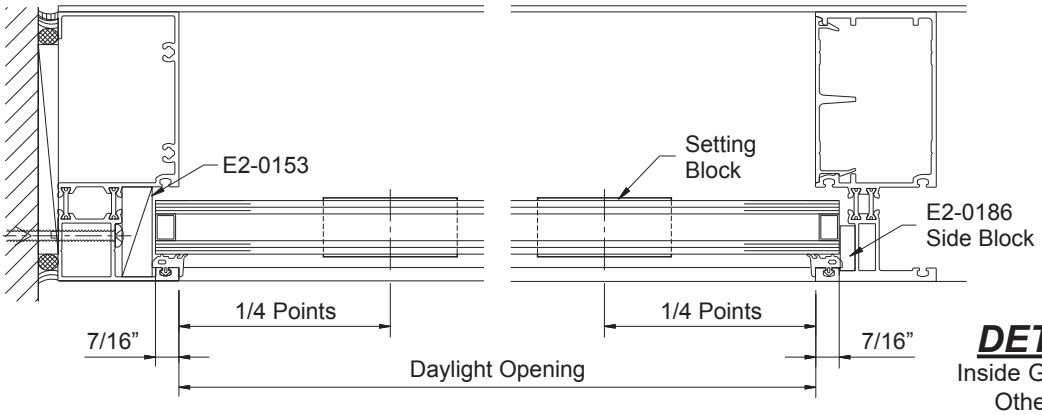
Note: Be careful not to disengage any gaskets that have already been installed when installing glass.

See **Details 60 & 61**.

After glass is set, install one (1) E2-0153 anti-walk block at the deep pocket mullion locations.



DETAIL 60



DETAIL 61
Inside Glazed Shown
Others Similar

GLAZING

STEP 33 (Continued)
INSTALL GLASS FOR STANDARD GLAZING

For Interior Glazing:

Interior glass stops are required at all head and intermediate horizontals:
E9-8711 for 1” glazing and
E9-7703 for 1/4” glazing.
-Apply sealant to each end of the glass stops and snap them into position.

-Tool the sealant into the joint between the glass stop and the vertical to ensure a watertight seal and wipe away any excess sealant.

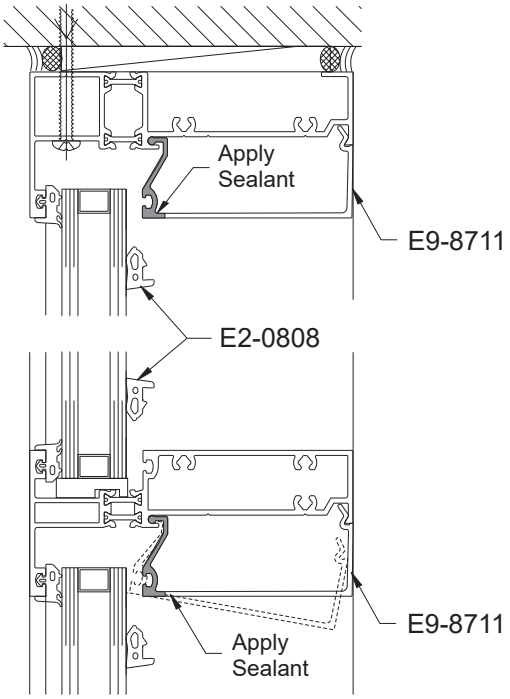
See **Detail 62**.

-Install the interior horizontal wedge gaskets, E2-0808, to the Daylight Opening plus(+) 1/4” for each foot of length, leaving the ends out until the vertical gasket is installed.

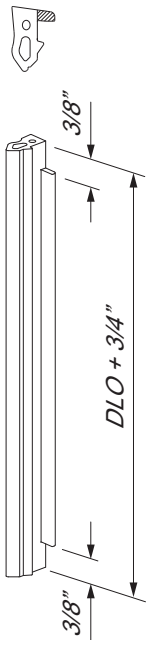
-Cut the vertical wedge gasket to vertical Daylight Opening plus (+) 3/4”. Notch the ends of the gasket as shown in **Detail 63**.

-Insert the vertical gasket into the glazing pocket, pushing the notched ends into the horizontals.
-Apply sealant to the ends of the horizontal wedge gaskets and finish inserting them into the glazing pocket against the vertical wedge gaskets.

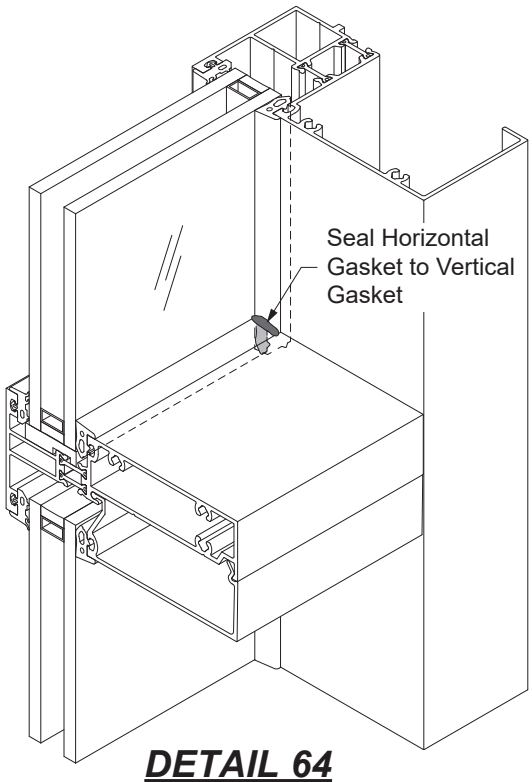
See **Detail 64**.



DETAIL 62



DETAIL 63



DETAIL 64
Inside Glazing

GLAZING

STEP 33 (Continued)
INSTALL GLASS FOR STANDARD GLAZING

For Outside Glazing:

Exterior face covers are required at all sill and intermediate horizontals:
E9-1715 for BE9-2823 horizontal members.

-Apply sealant to the ends of the face covers, and engage the hook of the face covers with the ball of the horizontal members and rotate them into position.

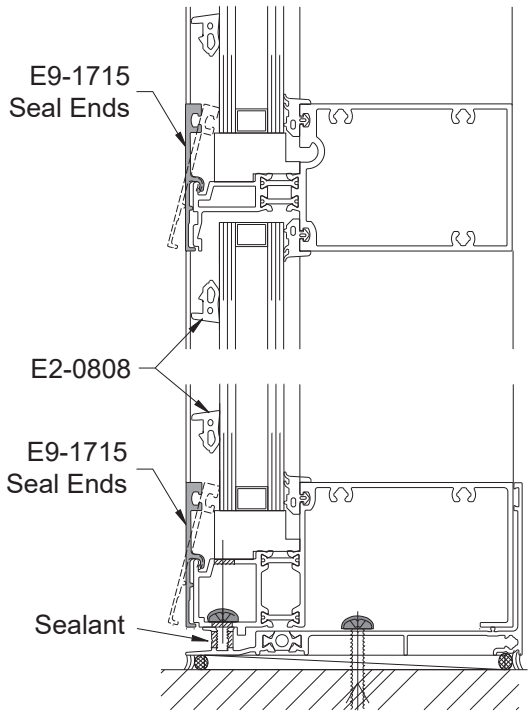
See **Detail 65**.

-Install the exterior horizontal wedge gaskets, E2-0808, to the Daylight Opening plus(+) 1/4" for each foot of length, leaving the ends out until the vertical gasket is installed.

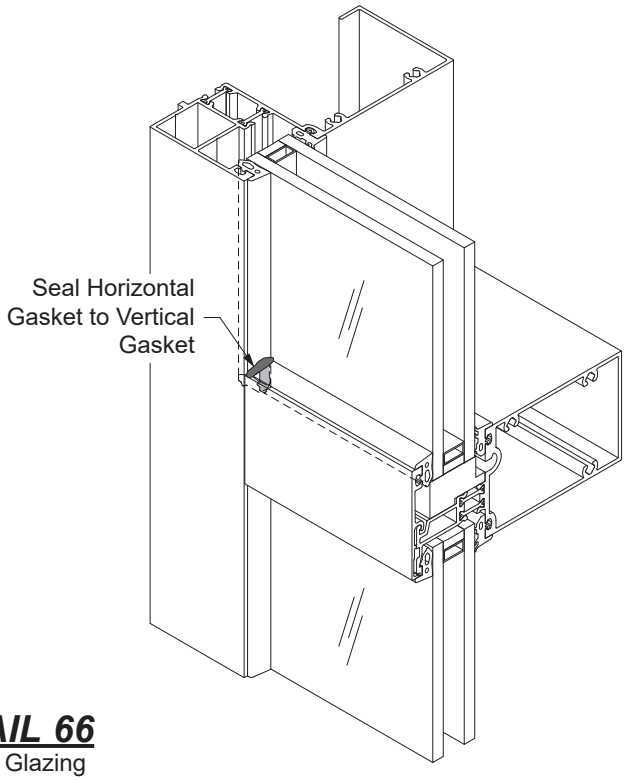
-Cut the vertical wedge gasket to vertical Daylight Opening plus (+) 3/4". Notch the ends of the gasket as previously shown in **Detail 63**.

-Insert the vertical gasket into the glazing pocket, pushing the notched ends into the horizontals.
-Apply sealant to the ends of the horizontal wedge gaskets and finish inserting them into the glazing pocket against the vertical wedge gaskets.

See **Detail 66**.



DETAIL 65



DETAIL 66
Outside Glazing

DOOR FRAME INSTALLATION

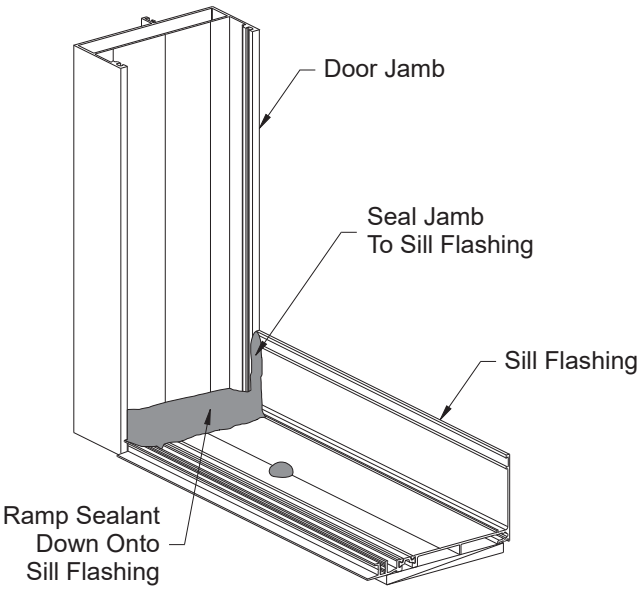
STEP 35
INSTALL DOOR FRAME

Doors are shipped assembled, and door frames will be fabricated and shipped knocked down. Please refer to the 20D, 35D, & 50D Entrances Installation Manual for door installation.

Prior to snapping the assembled frames into the door jamb, the end of the sill flashing needs to be sealed to the door jamb.

- -Apply and tool sealant to all sill flashing to door jamb joints.
- -Apply a liberal amount of sealant to completely fill the door jamb cavity and ramp the sealant down onto the sill flashing.

See **Detail 72**.

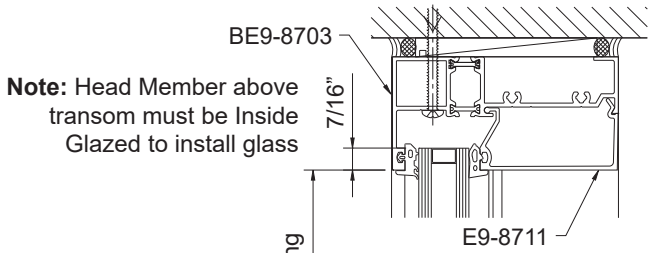


DETAIL 72

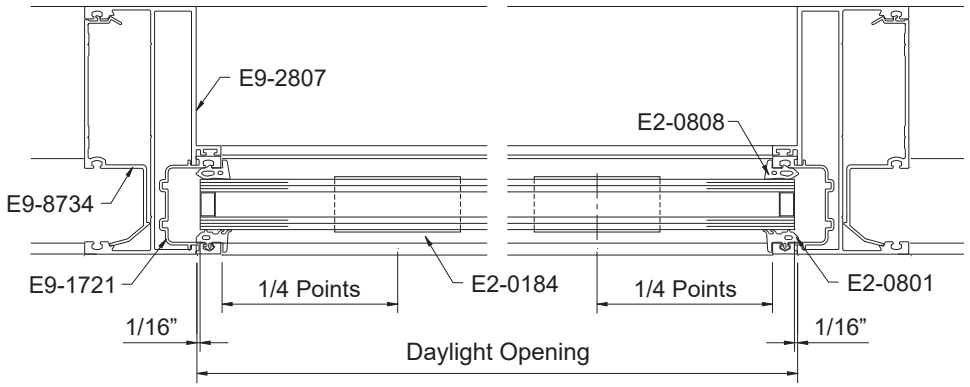
Glass sizes for transom areas are not the same as for standard YWW 45 T frames. See the table below and **Detail 73** for transom glass sizes.

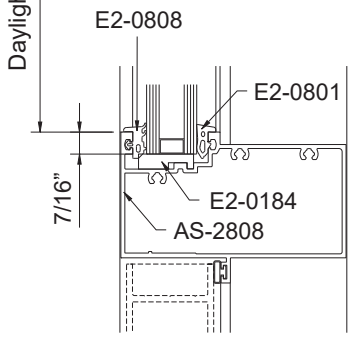
Transom Glass Sizes:

	Width	Height
Transom Glazing	**D.L.O. – 1/8”**	**D.L.O. + 7/8”**



DETAIL 73





YKK AP America Inc.

101 Marietta Street NW
Suite 2100
Atlanta, Georgia 30303
www.ykkap.com