



YWW 50 TU / YWW 60 TU Window Wall Installation Manual Preglazed Captured



TABLE OF CONTENTS

Installation Notes	Page ii
PARTS DESCRIPTION	
Framing Members	Pages 1 to 4
Accessories	Pages 5 & 6
FRAME FABRICATION	
Determine Frame Size	Pages 7 & 8
Fabricate Vertical Members	
Fabricate Horizontals	0
Fabricate Glass Stops	
Fabricate Sill Flashing Fabricate Slab Edge Plate Adaptor	
Fabricate Corner Covers	
Fabricate Head Receptors	
Fabricate 1/4" Glazing Adaptors (Where Required)	
	-
FRAME ASSEMBLY Assemble Frame	Pages 17 to 21
Install Steel Reinforcing (Optional)	
Install Perimeter Fillers	
Install Foam Plugs at Head	
Install Weather Seal	
Install Water Deflector.	
Install PVC FIller at Jamb Glazing Pocket	
Install Dart Gaskets	Pages 28 & 29
GLAZING	
Install Setting / Side Blocks	
Install Glass	
Install Anti-Walk Blocks	
Install Glass Stops (Outside Glazing)	
Install Glass Stops (Inside Glazing) Seal Glass to PVC Fillers at Jambs	
Install Wedge Gaskets	•
Ŭ	
FRAME INSTALLATION	D
Install Sill Flashing End Dams	
Install Sill Flashing Install Flashing Splice Sleeve	
Install Slab Edge Covers	
Install Sill Flashing at Corners	
Sill Preparation	
Install Frames	Pages 56 to 59
Apply Perimeter Sealant	
Install Interior Covers	Page 63
DOOR FRAME INSTALLATION	
Install Door Frame	Pages 64 & 65
Glaze Door Transom	

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 quality and quantity 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 will 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 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. If any questions arise concerning YKK AP products or their installation, contact YKK AP for clarification before proceeding.

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

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

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

YWW 50 TU FRAMING MEMBERS

	Female Mullion	BE9-2764		Sill (IG)	BE9-2778
	Male Mullion	BE9-2765		Sill Flashing	BE9-2774
	Jamb 2-1/4" x 5"	BE9-2766		Sill Flashing for Slab Edge	BE9-2775
	Tubular Jamb 2-1/4" x 5"	BE9-2790		Head Receptor	BE9-7635
50 100 100 100 100 100	Corner Mullion Half 2-1/4" x 5"	BE9-2779		Optional Head Receptor	BY7-8426
f 	Head (IG) 2-1/2" x 5"	BE9-2785		Head Receptor w/ Plate Adaptor	BE9-2819
h u la contra c	Optional Head (IG)	BE9-2776	<u>الم</u>	Receptor Snap Cover Used with BE9-7635	E9-8720
har ju	Head (OG) 2-1/2" x 5"	BE9-2771		HD Receptor Snap Cover Used with BE9-2819 & BY7-8426	E9-8157
	Horizontal (IG)	BE9-2786		90° Corner Cover (Large)	E9-2783
frant and the second se	Optional Horizontal (IG)	BE9-2777	E T	90° Corner Cover (Small)	E9-2741
	Horizontal (OG)	BE9-2789	1 as	135° Corner Cover (Large)	E9-2784
r i v	Sill (OG)	BE9-2773		135° Corner Cover (Small)	E9-2743



YWW 50 TU FRAMING MEMBERS (Continued)

	Glass Stop	E9-7852		8" Slab Edge Cover For Use with 7" Slab	E9-8589
	Interior Cover	E9-2782		9" Slab Edge Cover For Use with 8" Slab	E9-8428
·	Flush Filler	E9-2780		Anchor	E9-2732
2	Glass Stop With Trim Cover	E9-2781		Door Jamb Adaptor Subframe For 20D/35D/50D Doors Used with AS-0417	E9-2344
E.	Exterior Glass Stop	E9-1715	J.	Door Stop For 20D/35D/50D Doors Used with E9-2344	AS-0417
	Aluminum Plate Adaptor For BE9-2735	E9-8222	ci Ci	4-1/2" x 1-3/4" Door Head For 20D/35D/50D Doors E2-0051 Included	AS-0402
ŀ	6-1/8" Slab Edge Cover For Use with 5-1/8" Slab	E9-8059		Flat Filler	BY7-9241
	6-5/8" Slab Edge Cover For Use with 5-5/8" Slab	E9-7723		Door Jamb Adaptor Subframe For 25T/35T/50T Doors Used with AS-1539	BE9-1526
	7-3/8" Slab Edge Cover For Use with 6-3/8" Slab	E9-8223	(interpretation)	Door Head Subframe For 25T/35T/50T Doors E2-0051 Not Included	BE9-2582
	7-7/8" Slab Edge Cover For Use with 7-7/8" Slab	E9-8231	Ц _.	Door Stop for 2" Door For 25T/35T/50T Doors E2-0051 Included Used with BE9-1526	AS-1539

YWW 60 TU FRAMING MEMBERS

	Female Mullion	BE9-2746		Sill (IG)	BE9-2760
	Male Mullion	BE9-2747	Late Co	Sill Flashing	BE9-2756
	Jamb 2-1/4" x 6"	BE9-2748		Sill Flashing for Slab Edge	BE9-2757
	Tubular Jamb 2-1/4" x 6"	BE9-2793		Head Receptor	BE9-7736
Diam Fil	Corner Mullion Half 2-1/4" x 6"	BE9-2761		Head Receptor w/ Plate Adaptor	BE9-7299
	Head (IG)	BE9-2787		HD Receptor Snap Cover Used with BE9-7736 & BE9-7299	E9-8157
	Optional Head (IG)	BE9-2758	<u>e</u> e	90° Corner Cover (Large)	E9-2740
	Head (OG) 2-1/2" x 6"	BE9-2753	E T	90° Corner Cover (Small)	E9-2741
	Horizontal (IG)	BE9-2788	Jas-	135° Corner Cover (Large)	E9-2784
f	Optional Horizontal (IG)	BE9-2759	Í.	135° Corner Cover (Small)	E9-2743
	Horizontal (OG)	BE9-2792		Glass Stop	E9-7852
	Sill (OG)	BE9-2755		Interior Cover	E9-7853



YWW 60 TU FRAMING MEMBERS (Continued)

2	Glass Stop With Trim Cover	E9-2763		Head Anchor	E9-2732
	Flush Filler	E9-2762	<u> </u>	Strap Anchor	E9-2733
E.	Exterior Glass Stop	E9-1715		Door Jamb Adaptor Subframe For 20D/35D/50D Doors Used with AS-0417	E9-2344
	Aluminum Plate Adaptor For BE9-2735	E9-8222		Door Stop For 20D/35D/50D Doors Used with E9-2344	AS-0417
l k	6-1/8" Slab Edge Cover For Use with 5-1/8" Slab	E9-8059	Cắ Lỹ-Tr	4-1/2" x 1-3/4" Door Head For 20D/35D/50D Doors	AS-0402
ŀ	6-5/8" Slab Edge Cover For Use with 5-5/8" Slab	E9-7723		Flat Filler	BY7-9241
ŀ	7-3/8" Slab Edge Cover For Use with 6-3/8" Slab	E9-8223		Door Jamb Adaptor Subframe For 25T/35T/50T Doors Used with AS-1539	BE9-1526
	7-7/8" Slab Edge Cover For Use with 7-7/8" Slab	E9-8231		Door Head Subframe For 25T/35T/50T Doors E2-0051 Not Included	BE9-2582
	8" Slab Edge Cover For Use with 7" Slab	E9-8589	I.	Door Stop for 2" Door For 25T/35T/50T Doors E2-0051 Included Used with BE9-1526	AS-1539
	9" Slab Edge Cover For Use with 8" Slab	E9-8428			

ACCESSORIES

Head Anchor 10" Cut Length, for Non- Impact Glazing	E1-1190	J	Strap Anchor 10" Cut Length For YWW 60 TU	E1-1191
---	---------	---	--	---------

ACCESSORIES (Continued)

	Jamb Strap Anchor 6" Cut Length For YWW 50 T	E1-1143	6	End Cap For E9-8223 Slab Edge Cover Plate	E1-9953
	Jamb Strap Anchor 6" Cut Length For YWW 60 T	E1-1149	le le	End Cap For E9-8231 Slab Edge Cover Plate	E1-9954
00	Door Jamb Mullion Anchor (1-7/8")	E1-1195	le	End Cap For E9-8589 Slab Edge Cover Plate	E1-9955
0	Door Jamb Anchor (3-5/8")	E1-1199	le	End Cap For E9-8428 Slab Edge Cover Plate	E1-9956
e e	End Dam For YWW 50 TU Sill Flash- ing	E1-1141		Splice Sleeve For Sill Flashing at Slab Edge	E1-9959
e	End Dam For YWW 60 TU Sill Flash- ing	E1-1142		Head Receptor Splice Sleeve (YWW 50 TU) For BE9-2819	E1-2813
0	End Cap (YWW 50 TU) For BE9-7635 & BY7-8426 Head Receptor	E1-9841		Head Receptor Splice Sleeve (YWW 60 TU) For BE9-7299	E1-9824
	End Cap (YWW 50 TU) For BE9-2819 Slab Edge Head Receptor	E1-9952		Head Receptor Splice Sleeve For Slab Edge	E1-9961
	End Cap (YWW 60 TU) For BE9-7736 Head Receptor	E1-9855		Silicone Splice Sleeve	E2-0070
° °	End Cap (YWW 60 TU) For BE9-7299 Slab Edge Head Receptor	E1-9822	<u>د</u>	Flat Filler PVC For YWW 50 TU	E3-0032
	End Cap For Slab Edge Sill Flashing Adaptor	E1-1196	<u>۸ــــــــــــــــــــــــــــــــــــ</u>	Flat Filler PVC For YWW 60 TU	E3-0023
e le	End Cap For E9-8059 Slab Edge Cover Plate	E1-9984	<u>1</u> }	PVC Perimeter/Pocket Filler	E3-3664
le	End Cap For E9-7723 Slab Edge Cover Plate	E1-9985		Airtight Gasket	E2-0051

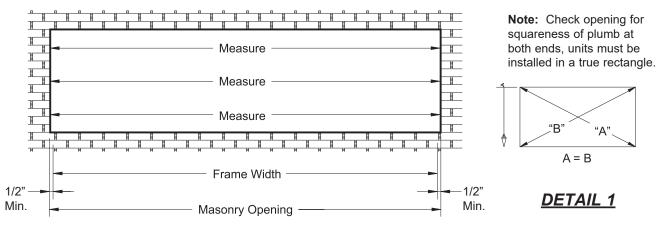


ACCESSORIES (Continued)

T	Weather Seal Gasket For Mullion Halves	E2-7010	<u>S</u>	Wedge Gasket 1/4" F.C.	E2-0808
2	Weathering Gasket For Slab Edge Cover	E2-0065		Weep Baffle	E2-0099
Z	Anti-Walk Block For Female Mullion	E2-0546		Drill Fixture	H-7264
	Side Block For Male Mullion	E2-0133	Smm	#10" x 3/8" PHMS Stainless Steel, For Corner Cover Attachment	PM-1006 -SS
	Setting Block	E2-0150		#12 x 3/4" UFHSMS Type A , Zinc Plated Steel, For End Dam Attachment	UA-1212
	Side Block for Jambs	E2-0628		#12 x 1" FHSMS Type AB , Used with Jamb Strap Anchor	FC-1216
1.0.*	Setting Block for Top of Glass	E2-0068	Jannannanna	#12 x 1-1/2" FHSMS Type AB , Zinc Plated Steel, Used at Female Mullion at Door Jamb	FC-1224
	Setting Block for Intermediate Horizontals	E2-0178	Junning Junning	#12 x 2-1/2" FHSMS Type AB , Used at Door Transom Bar	FC-1240
	Setting Block For Slab Edge Cover	E2-0054	(]111111>	#12 x 5/8" PHSMS Type AB , Zinc Plated Steel	PC-1210
	Water Deflector	E2-0047	()1111111111	#12 x 1" PHSMS Type AB , Zinc Plated Steel, Used at Male Mullion at Door Jamb	PC-1216
	Foam Backer Tape 1" x 1-1/4" (Roll)	E2-0259		#12 x 1-1/4" PHSMS Type AB , Zinc Plated Steel	PC-1220
	1/4" x 1/4" Spacer Tape	E2-0110		#1/4"-20 x 1/2" PHMS , Stainless Steel	PM-2508- SS
	Dart Gasket 1/4" F.C.	E2-0801	WARNING!	"This Side Down" Static Label	E4-0008

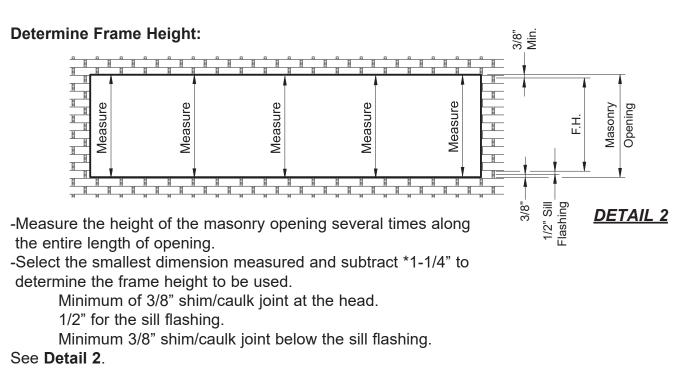
STEP 1 DETERMINE FRAME SIZE

Determine Frame Width:



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

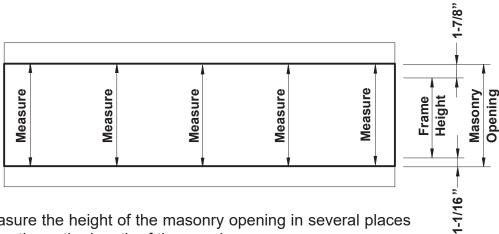
Note: For additional possibilities such as slab edge cover application, it is recommended to increase the caulk joint at the jambs to facilitate installation of the last framed unit. (Unit width will proportionally affect caulk joint width.)



* Note: 1-1/4" is based on 3/8" perimeter caulk joint, which can vary per project.

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.

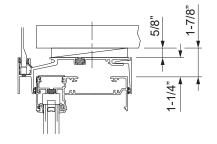
- -1-1/4" for the head receptor.
- -7/16" for the sill flashing.

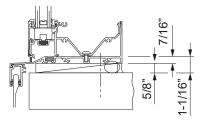
-5/8" for the shim/caulk joint below the sill flashing.

See Detail 3.

* Note: 2-15/16" is based on 5/8" perimeter caulk joint, which can vary per project.









STEP 2 FABRICATE VERTICAL MEMBERS

-Cut all jamb and two piece vertical members to the frame height determined in Step 1.

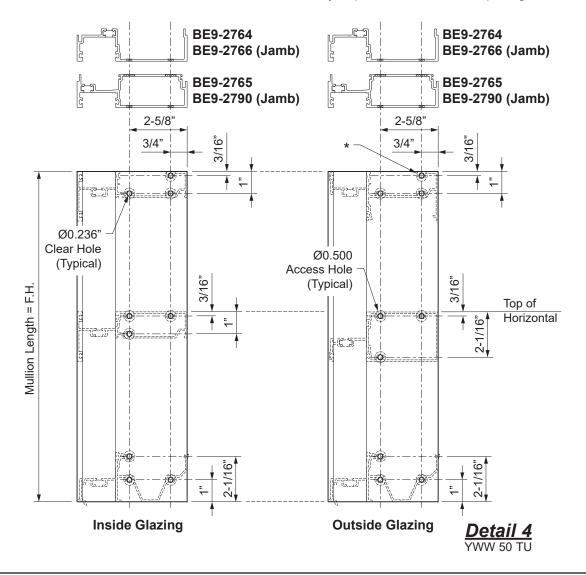
-Fabricate holes in the vertical members for screw spline attachment using one of the methods below: -Using the H-7264 drill fixture as a template, line up the glazing pockets and mark hole locations through the screw splines of the templates.

OR

-Layout hole locations on vertical members as shown in **Detail 4**. -Drill 0.236" diameter (#B drill bit) holes at each location marked.

Notes: Drill fixture plate can be used. Additional fabrication will be required for the inclusion of steel reinforcing.

* A 5/16" diameter access hole can be used at the very top to eliminate sharp edges.

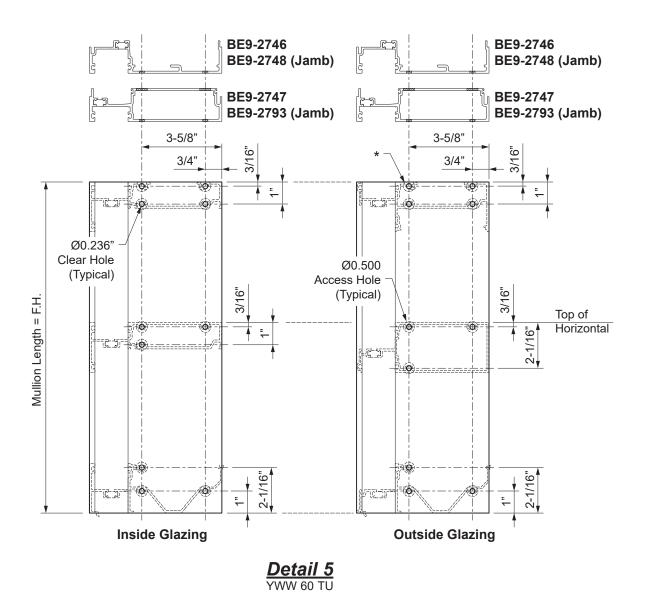


STEP 2 (Continued) FABRICATE VERTICAL MEMBERS

-For hollow vertical members, fabricate access holes in addition to the clear holes according to the methods previously shown and in **Detail 5**.

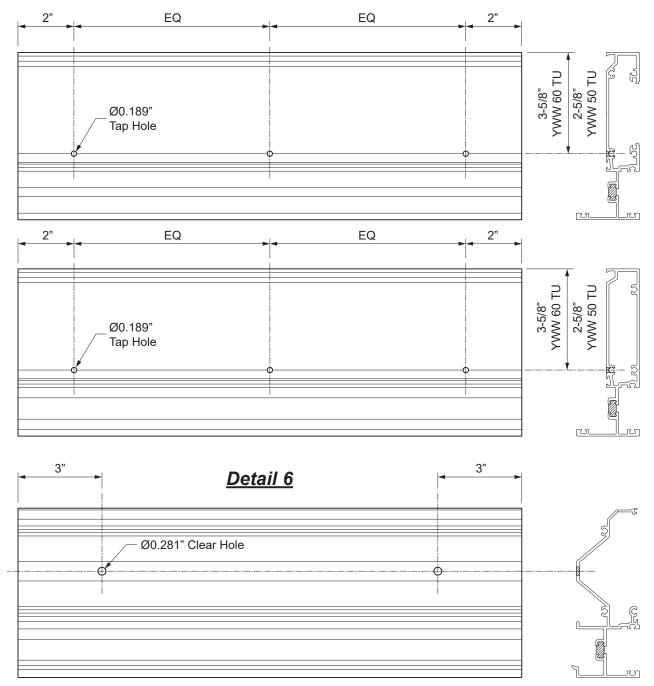
Notes: Additional fabrication will be required for the inclusion of steel reinforcing.

* A 5/16" diameter access hole can be used at the very top to eliminate sharp edges.



STEP 3 FABRICATE HORIZONTALS

-Cut all horizontals, head, and sill members to the horizontal daylight opening. -Inside glazed head and intermediate horizontal members will require 0.189" diameter holes for the glass stops, at 2" from the ends and one at the midpoint, as shown in **Detail 6**. -Sill members will require 0.281" diameter clear holes at 3" from the ends of the daylight opening, centered along the V-groove as shown in **Detail 6**.





STEP 3 (Continued) FABRICATE HORIZONTALS

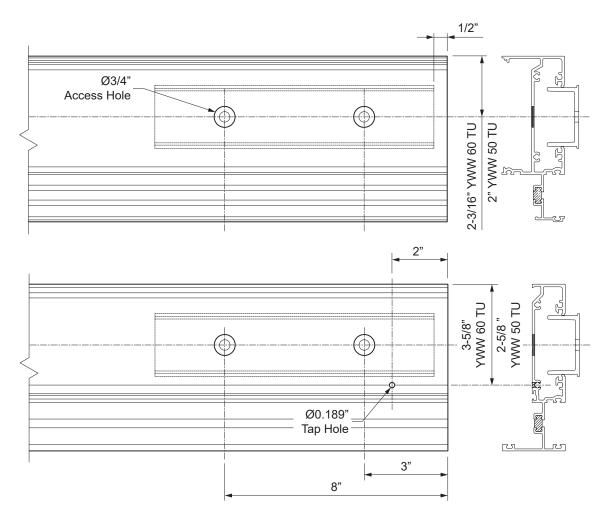
When the head is anchored to the substrate with the E1-1190 anchor, access holes will need to be drilled into the head member.

-Temporarily clamp the E1-1190 anchor onto the head where it will be in relation to the head member once anchored to the substrate.

-Drill 5/16" diameter holes into the head in line with the holes in the anchor. Unclamp the anchor. Then drill the access holes out to 3/4" diameter.

Notes: This is in addition to the 0.189" diameter tap holes for the glass stop. Refer to FPA drawings or shop drawings for appropriate fastener and hole locations as determined by a qualified engineer.

See Detail 7.



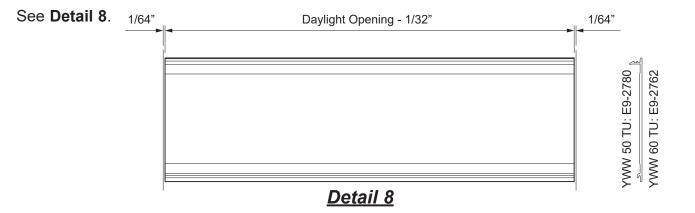
<u>Detail 7</u>



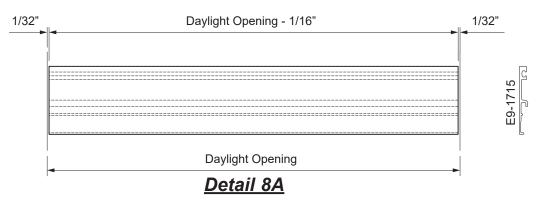
STEP 4 FABRICATE FILLERS & GLASS STOPS

-Cut all vertical perimeter PVC fillers to the length of the jambs, except where strap anchors would interfere with the jamb filler.

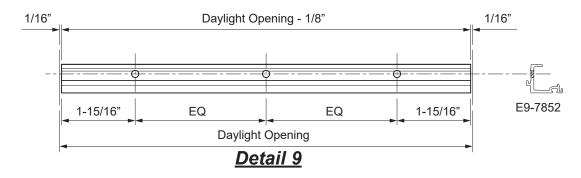
-Cut all horizontal flush fillers, flat fillers, and interior covers to horizontal daylight opening minus(-) 1/32".



-Cut E9-1715 exterior glass stops to horizontal daylight opening minus(-) 1/16". See Detail 8A.



-Cut E9-7852 glass stops to horizontal daylight opening minus(-) 1/8". Drill two 0.236" diameter clear holes along the v-groove in the glass stop as shown in **Detail 9**. -Add a third hole at centerline for glass stops over 48" in length.





STEP 5 FABRICATE SILL FLASHING

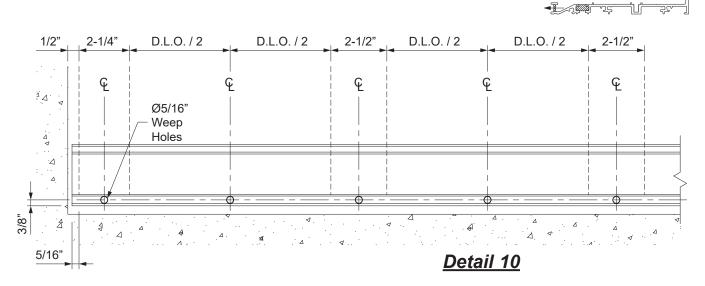
-Cut the sill flashing to the frame width plus(+) 5/16" at each jamb.

Note: For additional possibilities such as slab edge cover application, it is recommended to provide additional space between the edge of the sill flashing and the jamb substrate.

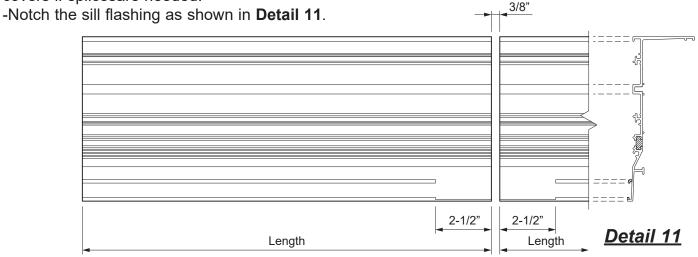
-For frame openings longer than 24'-0", allow for a 3/8" splice joint between sill flashing members every twelve to fifteen feet at the center of a daylight opening.

-Mark the front face of the sill flashing at the center of each vertical location and the midpoint of the daylight opening between the verticals.

-Drill a 5/16" diameter weep hole in the face of the sill flashing at each location marked. See **Detail 10**.



Additional fabrication will be required for BE9-2775 and BE9-2757 sill flashings used at slab edge covers if splices are needed.



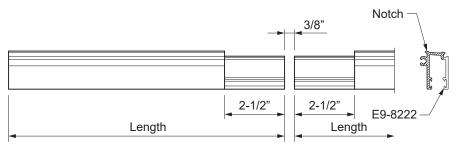


STEP 5A FABRICATE SLAB EDGE PLATE ADAPTOR

-Cut the aluminum plate adaptor E9-8222 to the same length as the sill fashing.

-Notch the aluminum plate adaptor 2-1/2" from each end at each splice joint location as shown in **Detail 12**.

-Cut slab edge cover plates to length as indicated on the approved shop drawings

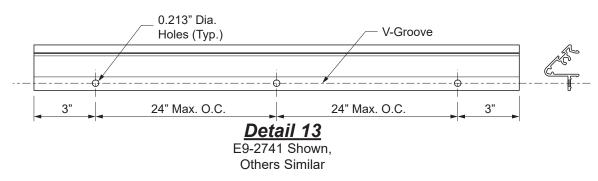




STEP 6 FABRICATE CORNER COVERS

-Cut the corner cover components to the mullion length. Drill 0.213" diameter holes into the cover at the v-groove where the cover will be fastened to the mullion at 3" from each end and at 24" maximum on center.

See Detail 13.





STEP 7 FABRICATE HEAD RECEPTOR

-Cut the head receptor to the frame width plus(+) 5/16" at each jamb.

Note: For additional possibilities such as slab edge cover application, it is recommended to provide additional space between the edge of the head receptor and the jamb substrate.

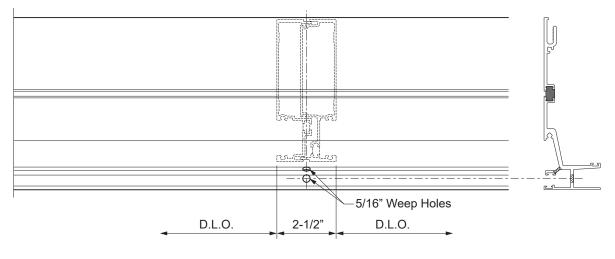
-For frame openings longer than 24'-0", allow for a 3/8" splice joint between sill flashing members every twelve to fifteen feet at the center of a D.L.O.

-Mark the front face of the head receptor at the center of each vertical location and the midpoint of the daylight opening between the verticals.

-Drill a 5/16" diameter weep holes in the head receptor at each location marked.

-Drill clear holes for anchor fasteners into the head receptor as indicated on the approved shop drawings and or P.E. calculations.

See Detail 14.



Detail 14

STEP 8 FABRICATE 1/4" GLAZING ADAPTORS (Where Required)

-Cut the vertical glazing adaptor to daylight opening dimension plus(+) 7/8". -Cut the horizontal glazing adaptor to daylight opening dimension minus(-) 1/32".



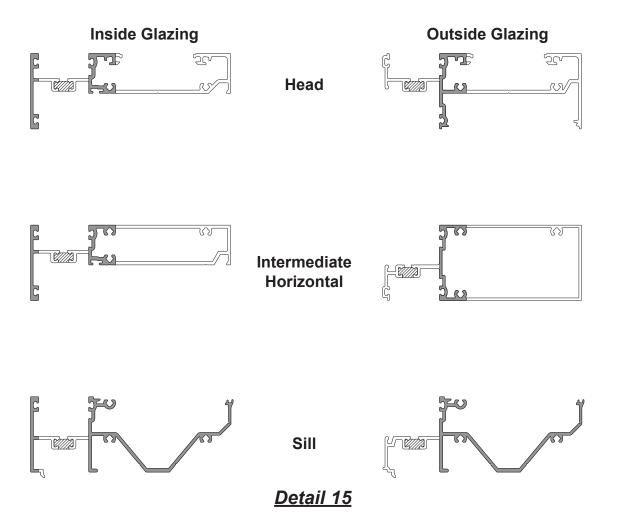
STEP 9 ASSEMBLE FRAME

Note: It is recommended to lay out the unit pieces face up on a table or saw horses during assembly, fully supporting the mullions. If using saw horses, a brace tying the two together will be required.

-If strap anchors are used at the head, insert them into the head member prior to assembly (2 per Daylight Opening, unless otherwise noted).

-Apply sealant to the end of the horizontals members to be attached to the first mullion or jamb, at the shaded areas of the head and intermediate horizontals and the entire end of the sill.

See Detail 15.

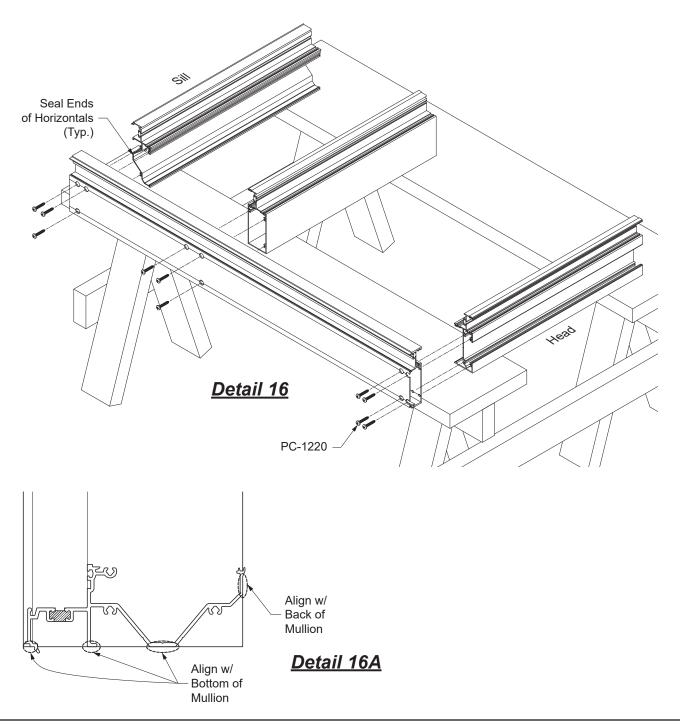




STEP 9 (Continued) ASSEMBLE FRAME

-Attach the horizontal members to the first mullion or jamb using PC-1220 screws, ensuring the bottom and back of the sill aligns with the bottom and back of the mullion as shown in **Detail 16A**.

See Detail 16.

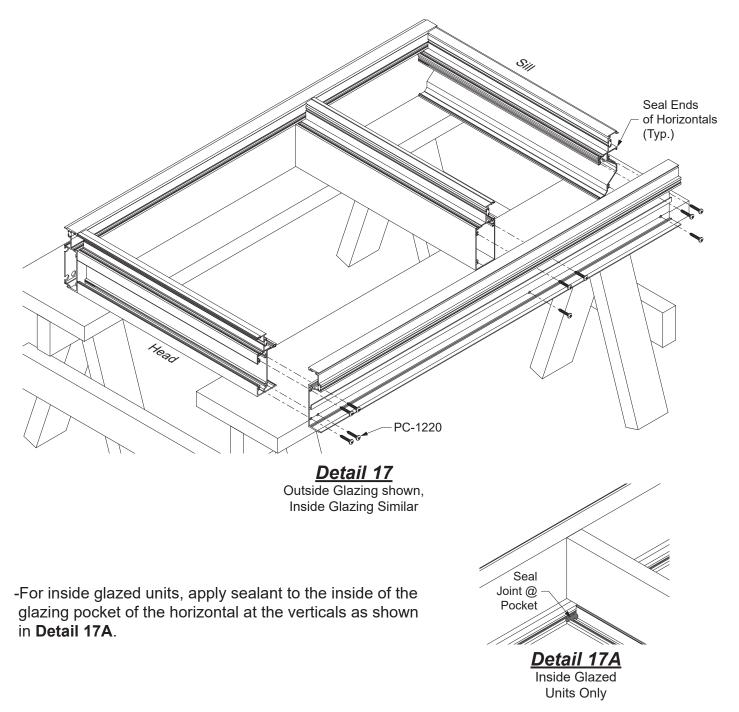




STEP 9 (Continued) ASSEMBLE FRAME

-Apply sealant to the end of the head, horizontals, and sill that is to be attached to the second mullion or jamb as previously shown in **Detail 16**, also ensuring proper alignment at the bottom of the mullion.

-Attach the horizontal members to the mullion using PC-1220 screws. See Detail 17.



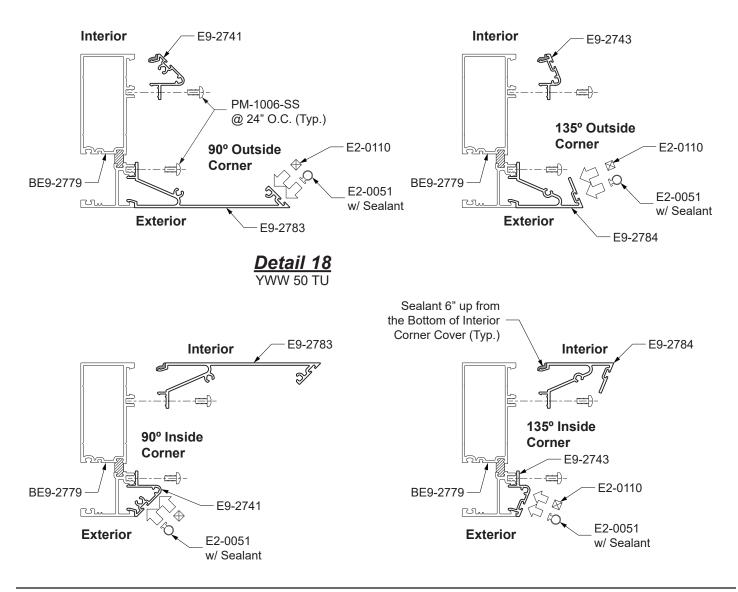


STEP 9 (Continued) ASSEMBLE FRAME -- CORNER MULLION

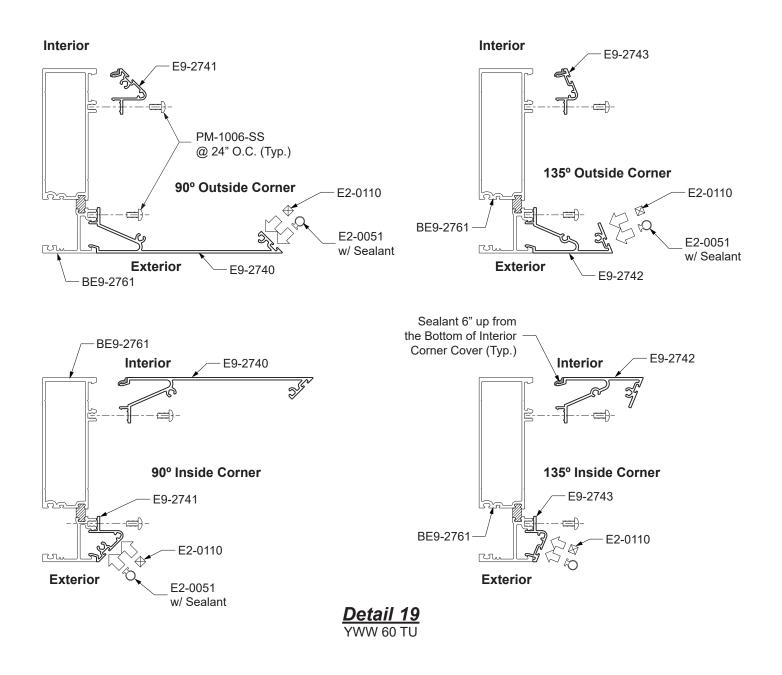
-Apply sealant to the interior snap interface of the interior corner cover, 6" up from the bottom of the mullion. Snap the cover pieces onto the corner mullion half. Fasten with PM-1006-SS fasteners at the holes previously drilled in fabrication.

-The exterior corner covers will require E2-0051 bulb gaskets cut to the length of the mullion. Apply dabs of sealant to the bottom of the bulb gasket to adhere it to the cover so that it will not slide out during unit installation. Do not overseal. Insert the gasket into the reglet at the cover. -The 90° corner cover will also require an E2-0110 spacer tape adhered to the cover for one side of the corner. This will keep the cover joint true. (The other corner half for the adjoining unit will not need this spacer tape.)

See **Details 18** for YWW 50 TU and **Detail 19** for YWW 60 TU.



STEP 9 (Continued) ASSEMBLE FRAME -- CORNER MULLION



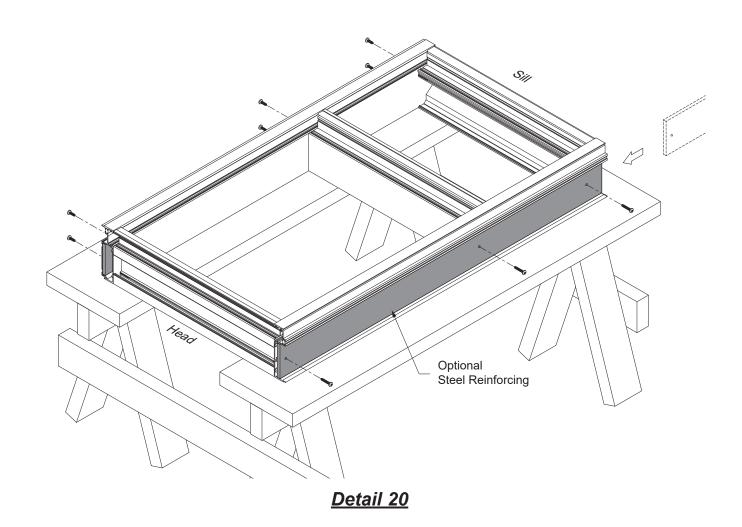
STEP 10 (Optional) INSTALL STEEL REINFORCING

-Install steel reinforcing into the mullions and jambs as required by the P.E. calculations and or approved shop drawings.

-Take care that the fasteners do not interfere with the horizontals nor would be visible when the unit is installed.

See Detail 20.

YKK



STEP 11 INSTALL PERIMETER FILLERS

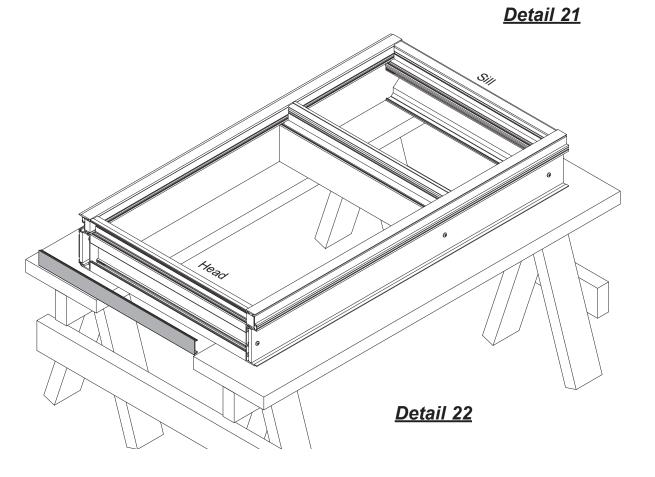
Install perimeter fillers into the jamb mullions and the head member. -For the head, cut the E3-3664 pocket filler to horizontal daylight opening minus(-) 1/32" and snap it into the perimeter glazing pocket.

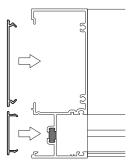
-If jamb strap anchors are used, install them into the jambs prior to installing perimeter fillers. See **Detail 21**.

-At the jamb, cut the E3-3664 pocket filler to length of vertical and install it into the jamb.

-Cut the flat filler (E3-0032 for YWW 50 TU, E3-0023 for YWW 60 TU) to the length of the jamb, except where strap anchors would interfere. Snap the filler into place.

See Detail 22.







STEP 12 (Not Necessary with Head Receptor) INSTALL FOAM PLUGS AT HEAD

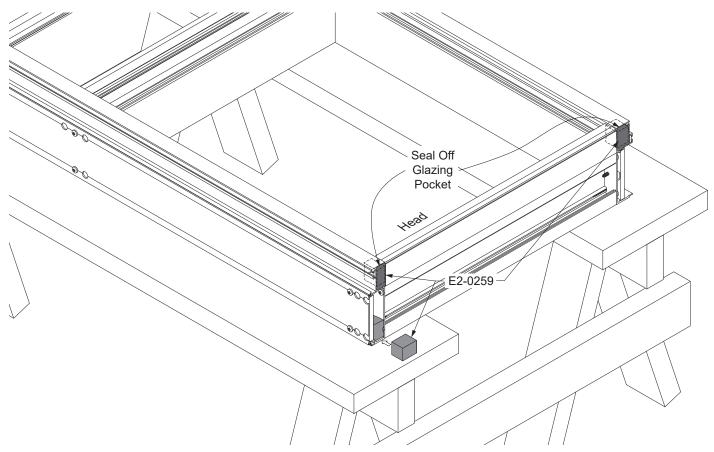
-Cut E2-0259 foam backer tape (maximum 1-1/4" long) to be installed at the head only. These will act as end caps for perimeter backer rods and sealant.

-Peel the adhesive tape from the foam and adhere it the mullion as shown in **Detail 23**. The foam can be easily compressed around physical obstacles in the assembled verticals.

-In the case where steel reinforcing is present at the head, the foam plugs may be adhered to the steel.

-Fill the cavities at the front of the verticals with sealant

Note: For best adhesion, make sure the contact surfaces of the verticals and or steel members are are clean and dry.



Detail 23

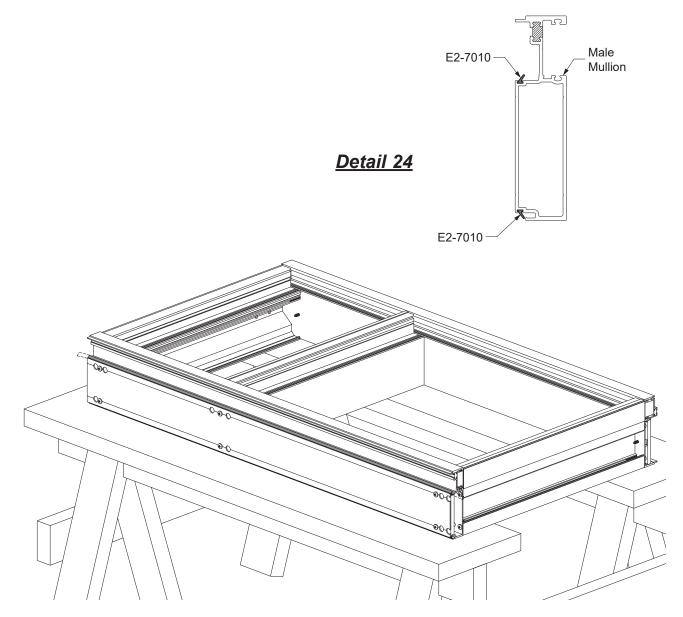
STEP 13 INSTALL WEATHER SEAL

Weather seal gaskets (E2-7010) are installed in the female mullion only.

-Cut the weather seal gasket to length of the vertical plus (+) 3", and install into the reglets of the male mullion in the proper orientation as shown in **Detail 24**.

-Apply dabs of sealant to the bottom of the weather seal gasket to adhere it to the mullion so that it will not slide out during unit installation. Do not overseal. Too much silicone will deter mullion engagement.

-Trim the gasket after shrinkage.





STEP 14 INSTALL WATER DEFLECTOR

YWW 50 TU and YWW 60 TU require the installation of a water deflector, E2-0047, at the ends of every intermediate horizontal to keep water off of the insulating glass units.

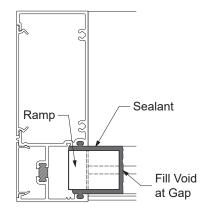
-Peel away the protective paper from the bottom of the water deflector, E2-0047, and install the water deflector at the ends of each horizontal.

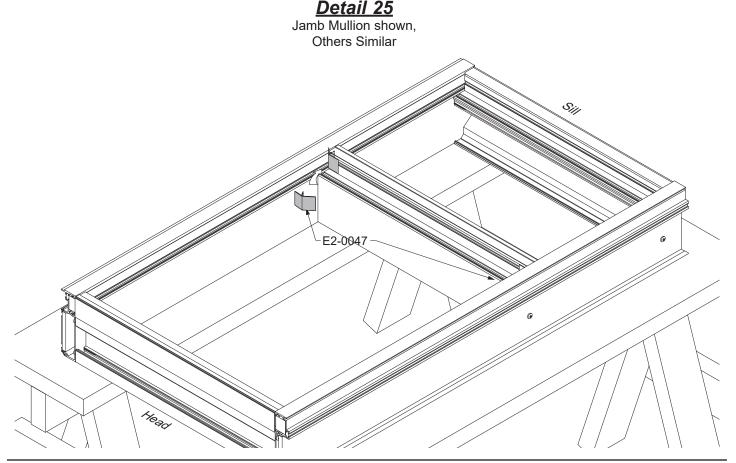
See Detail 25.

-Position the vertical leg of the water deflector against the end of the horizontal.

Note: For best adhesion, make sure that the horizontal is clean and dry.

-Apply and tool sealant along the edges of the deflector and down onto the horizontal. Seal the ramp of the water deflector to the glazing pocket, filling the gap at the thermal isolator as shown.



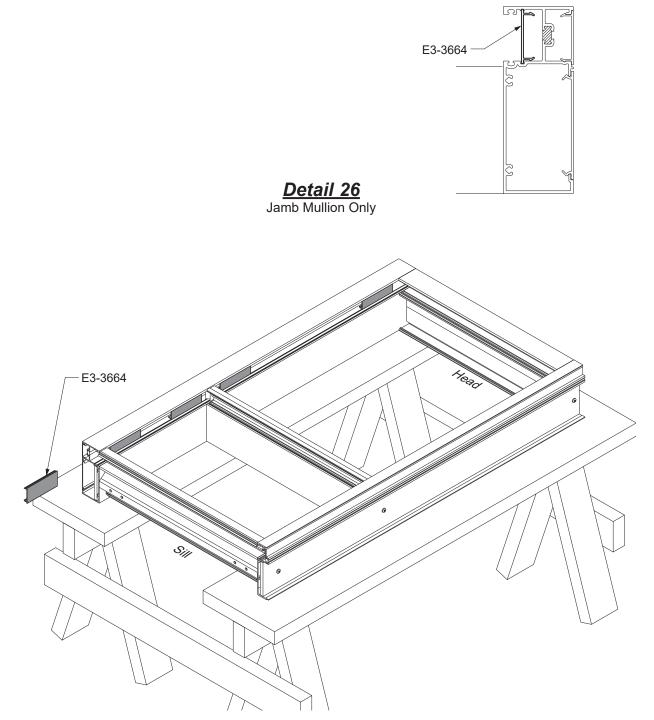


FRAME ASSEMBLY

STEP 15 INSTALL PVC FILLER AT JAMB GLAZING POCKET

-Insert E3-3664 PVC fillers, cut to 6" long, at the jamb and corner mullions, inside the glazing pocket, at each end of the vertical daylight opening.

See Detail 26.





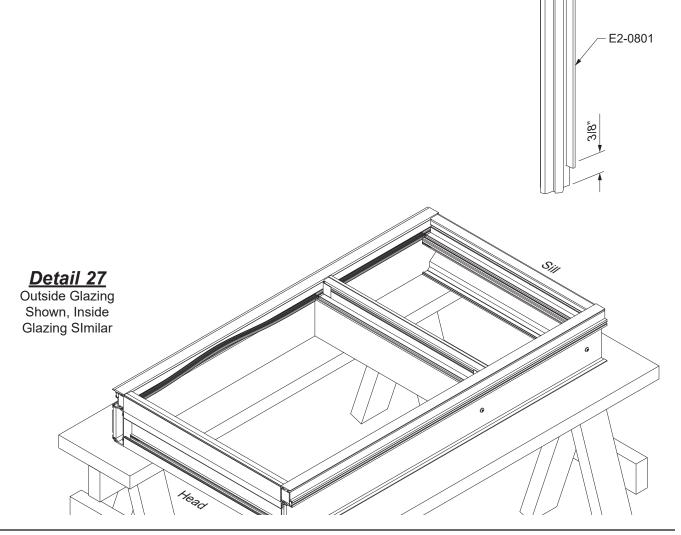
STEP 16 INSTALL DART GASKETS

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

Vertical glazing gaskets must be installed first:

-Cut vertical gaskets to the Daylight Opening plus(+) 3/4" plus(+) an additional 1/4" for each foot of length. For E2-0801 only, notch the 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 ends and work towards the midpoint.

See Detail 27.



STEP 16 (Continued) INSTALL DART GASKETS

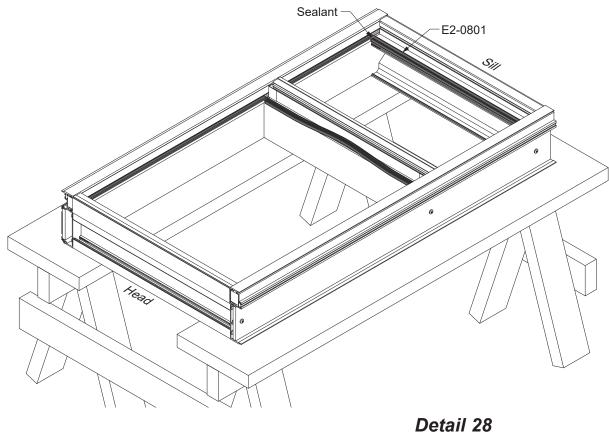
Install horizontal glazing gaskets next:

-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 each end and work towards the midpoint.

-Tool the excess sealant at the gasket corners to ensure a watertight seal.

See Detail 28.



Outside Glazing Shown, Inside Glazing Similar



GLAZING

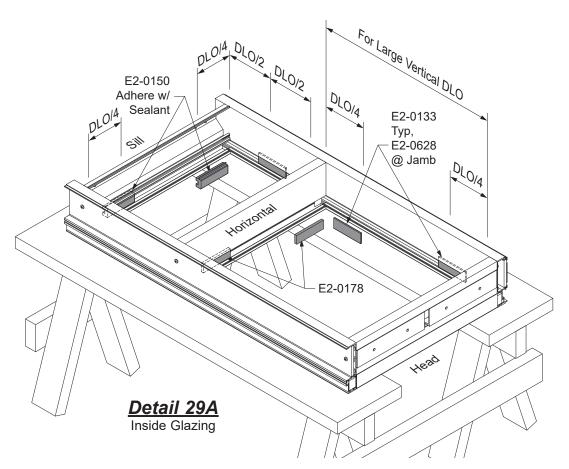
STEP 17A INSTALL SETTING / SIDE BLOCKS (INSIDE GLAZING)

-Apply setting blocks into the glazing pockets for every intermediate horizontal as shown in **Detail 29A** at quarter points at every daylight opening. Adhere the sill setting blocks with sealant.

-Apply E2-0133 to every male mullion (shallow pocket)

Adhere the E2-0628 side blocks to the jamb members with sealant.

E2-0133		For Male Mullion
E2-0178		For Int. Horizontals
E2-0150	٠.	For Sill Members
E2-0628		For Jambs



Packing/Shipping Notes:

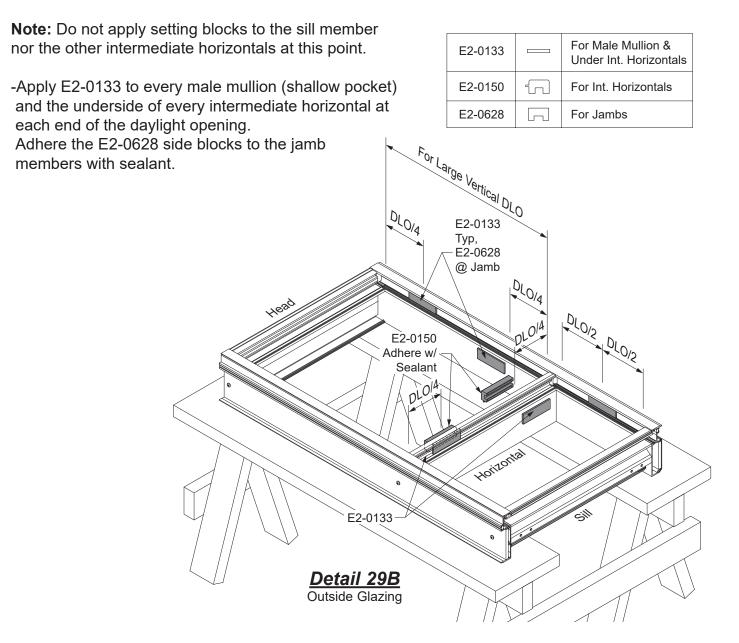
If packing units horizontally, set units with shallow pocket down. Also on conditions with a double pocket, like a jamb/jamb punched opening or similar corner condition, use a setting block on one jamb (ship this side down.) See **Page 40** for application of "This Side Down" label.



GLAZING

STEP 17B INSTALL SETTING / SIDE BLOCKS (OUTSIDE GLAZING)

-Apply setting blocks into the glazing pockets for the uppermost intermediate horizontal as shown in **Detail 29B** at quarter points at every daylight opening. Adhere the setting blocks with sealant.



Packing/Shipping Notes:

If packing units horizontally, set units with shallow pocket down. Also on conditions with a double pocket, like a jamb/jamb punched opening or similar corner condition, use a setting block on one jamb (ship this side down.) See **Page 40** for application of "This Side Down" label.



GLAZING

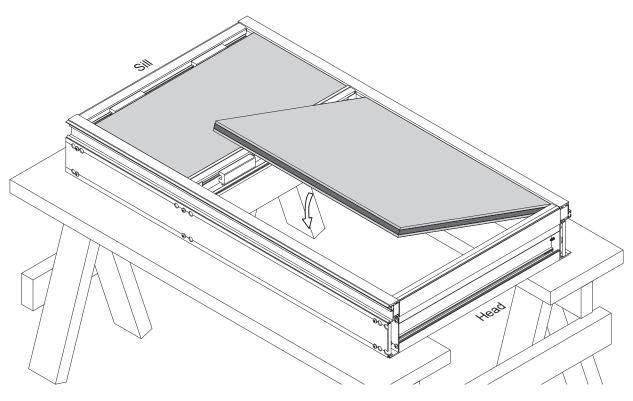
STEP 18 INSTALL GLASS

Determine the glass size:

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

-Install the glass lites into the daylight openings. Bring the glass lites into the deep glazing pocket first. Then move the glass lites to their proper positions ensuring a 7/16" glass bite all around and tight against the setting and side blocks.

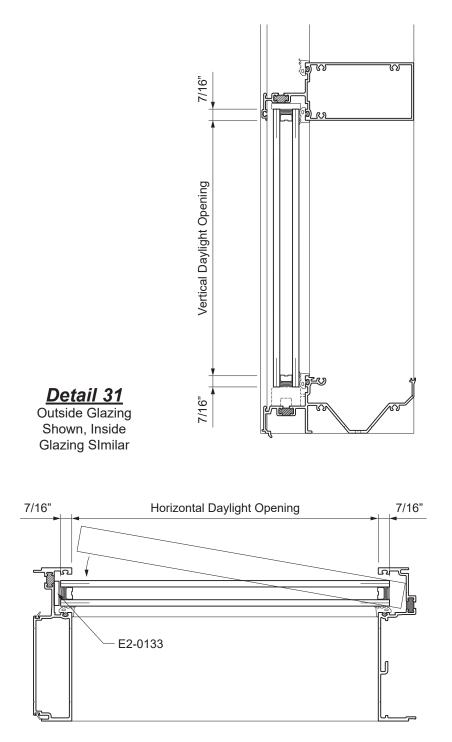
See Details 30 & 31.



Detail 30 Outside Glazing Shown, Inside Glazing SImilar



STEP 18 (Continued) INSTALL GLASS





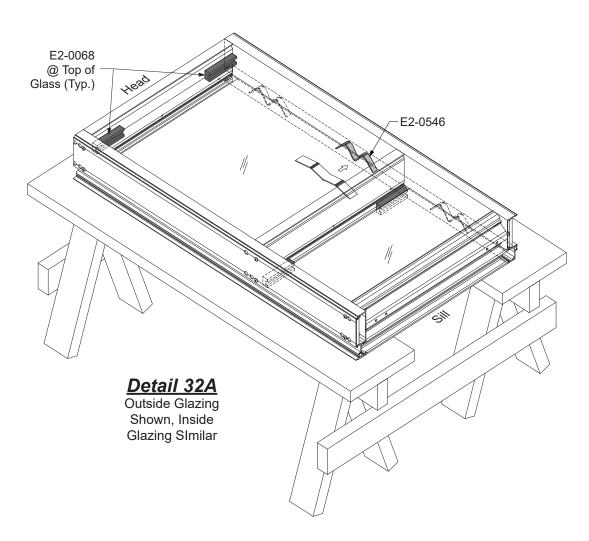
STEP 19A INSTALL ANTI-WALK BLOCKS (INSIDE GLAZING)

Anti-walk blocks must be installed in the vertical deep glazing pocket of each lite centered along the daylight opening.

E2-0546 for all female mullions

-Flatten the anti-walk block against the surface of the glass and push it into the opening between the glass and the mullion until it is released into the glazing pocket.

-Adhere E2-0068 setting blocks with silicone to the frame at the topside of each lite at each end of the daylight opening. Be sure to set the inside face of the setting block flush with the glass and in the proper orientation as shown in **Detail 32A**. This will keep the glass from shifting as the unit is raised for installation. If the glass is oversized, trim the blocks to fit.





STEP 19B INSTALL ANTI-WALK BLOCKS (OUTSIDE GLAZING)

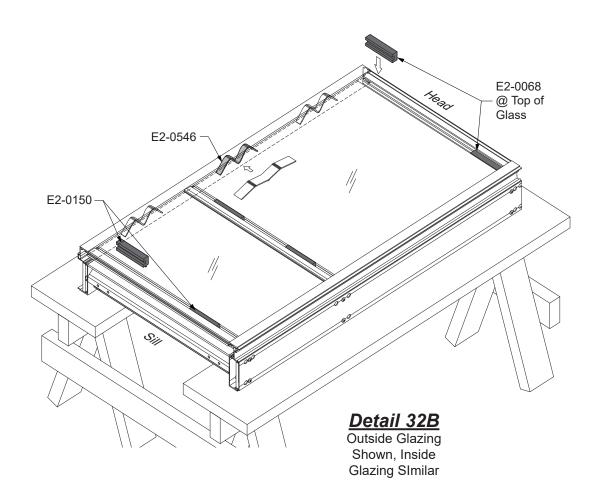
Anti-walk blocks must be installed in the vertical deep glazing pocket of each lite centered along the daylight opening.

E2-0546 for all female mullions

-Flatten the anti-walk block against the surface of the glass and push it into the opening between the glass and the mullion until it is released into the glazing pocket.

-Adhere E2-0068 setting blocks with silicone to the frame at the topside of the uppermost glass lite at each end of the daylight opening. Be sure to set the inside face of the setting block flush with the glass and in the proper orientation as shown in **Detail 32B**. This will keep the glass from shifting as the unit is raised for installation. If the glass is oversized, trim the blocks to fit.

-Also adhere setting E2-0150 setting blocks to the sill member and remaining horizontal members at quarter points of the daylight opening.



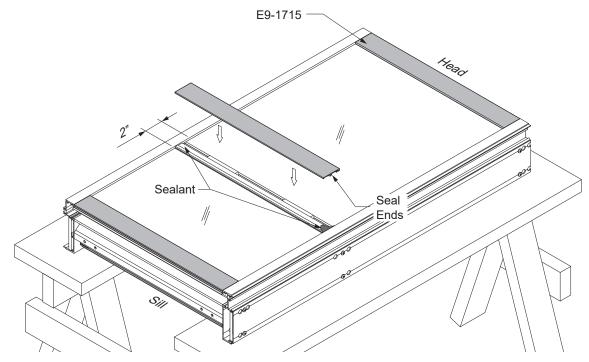


STEP 20 INSTALL GLASS STOPS (OUTSIDE GLAZING)

-Apply sealant to the top corners of the D.L.O. where the E9-1715 glass stops will be joined. -Set the glass stops in place.

-Tool sealant at intersection of the glass stop to the vertical mullion.

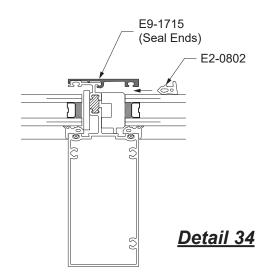
See Detail 33.



Detail 33

-To secure the intermediate glass stop to the unit, insert the wedge gasket (cut to D.L.O.) into the exterior of the glazing pocket, leaving the ends of the gasket out until the vertical gaskets are inserted.

See Detail 34.





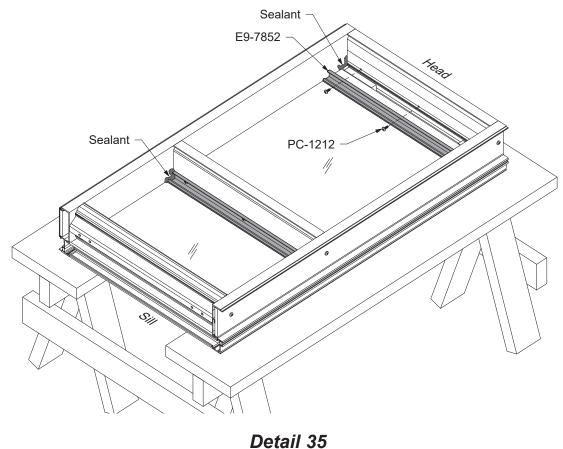
STEP 21 INSTALL GLASS STOPS (INSIDE GLAZING)

-Apply sealant to the top corners of the mullions where the E9-7852 glass stops will be joined against the mullion.

-Set the glass stops in place at the top of each daylight opening and secure the stop in place by drilling #12 tap holes (0.189" dia.) and using PC-1210 fasteners.

-Tool sealant at intersection of the glass stop to the vertical mullion.

See Detail 35.



Note: Interior glass stops can be used on outside glazed units with inside reglazing option.

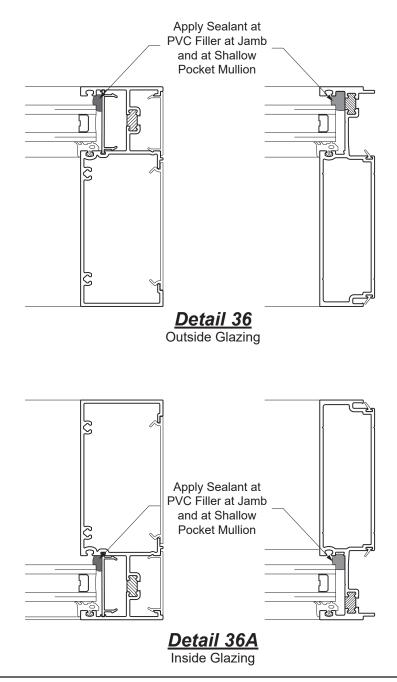


STEP 22 SEAL GLASS TO PVC FILLERS AT JAMBS

-In order to ensure the glass will not shift during transit, apply 6" of silicone sealant between the glass and the pvc fillers at the jamb mullions, starting at the ends of the glass. Do not let the sealant cure before inserting the wedge gasket.

-Apply 6" of silicone sealant between the glass and the inside of the glass pocket.

See Details 36 & 36A.

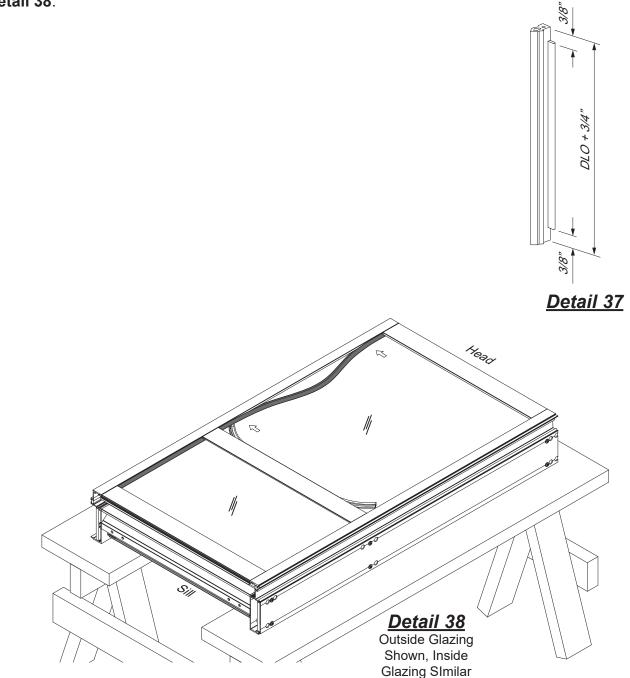


STEP 23 INSTALL WEDGE GASKETS

-Cut vertical E2-0808 wedge gasket to Daylight Opening plus(+) 3/4", plus(+) an additional 1/4" every foot of length. Notch the ends of the gasket by 3/8" as shown in **Detail 37**.

-Insert the wedge gasket into the glazing pocket at end points first, then work towards the midpoint.

See Detail 38.





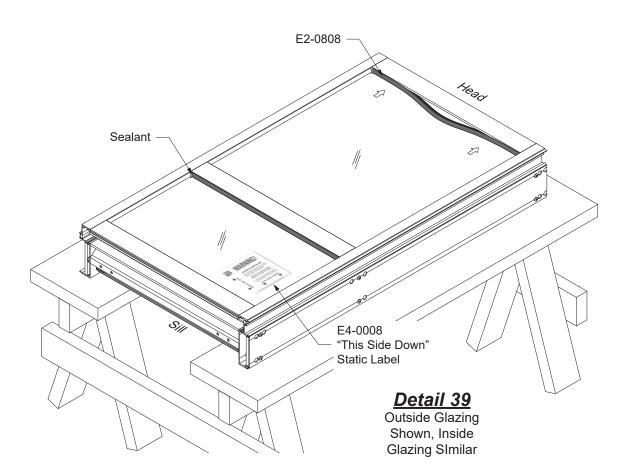
STEP 23 (Continued) INSTALL WEDGE GASKETS

-Cut E2-0808 head and sill gaskets to Daylight Opening.

-Apply silicone to each end of the gasket and also to the ends of the intermediate horizontal gaskets already inserted.

-Next, insert the horizontal gasket into the glazing pocket, centered on the Daylight Opening at each end first; then insert the gasket at the midpoint of the opening and work towards each end. Ensure the horizontal and vertical gaskets are sealed together. Tool excess silicone smooth. -Affix E4-0008 (This Side Down) Static label to the glass, orienting the arrows to the sill and the mullion with the shallow pocket or the jamb with the setting blocks.

See Detail 39.

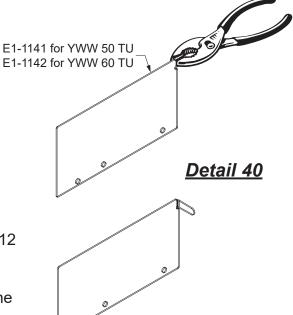


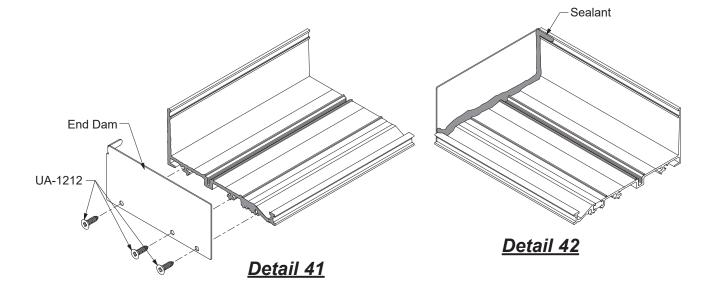
STEP 24 INSTALL SILL FLASHING END DAMS

-Bend the end dam tab left or right 90 degrees in order to "hand" the end dam for the left or right end of the flashing.

See Detail 40.

- -Clean all joint surfaces using cleaner approved by sealant manufacturer.
- -Apply sealant to the end of the sill flashing as shown in **Detail 41.**
- -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 of the flashing.
- -Fasten the end dam to the sill flashing with three UA-1212 screws, starting at the back, followed by the front as shown in **Detail 41**.
- -Tool sealant along the joint between the end dam and the sill flashing as shown in **Detail 42**.







STEP 24A INSTALL SILL FLASHING END DAMS FOR SLAB EDGE COVER

-Sill flashings with slab edge covers will require an aluminum plate adaptor E9-8222 to be attached prior to field installation.

-Insert (2) E2-0065 weathering gaskets cut to the length of the reglets on the adaptor.

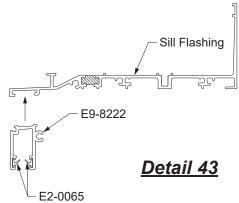
-Slide the slab edge adaptor onto the sill flashing.

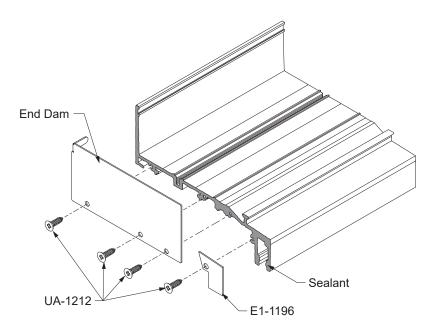
See Detail 43.

-Installation of the E1-1196 end dam is the same as illustrated in the previous page, except that the end of the installed slab edge adaptor will also require sealant.

-Fasten an E1-1196 end cap onto the slab edge assembly using an additional UA-1212 screw.

See Detail 44.





Detail 44

STEP 25 INSTALL BE9-2729 SILL FLASHING

-Prior to installing the sill flashing, slide in E1-1191 strap anchors (2 per DLO) if they are being used. -Install the sill flashing with a minimum of 3/8" shim space 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, per P.E. calculations, or per FPA drawings.

E2-0070 Splice Sleeve (Trim to Fit)

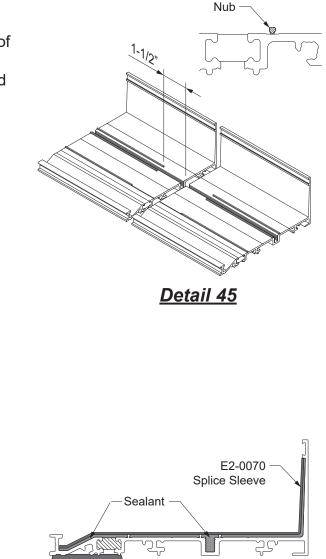
Sealant

Detail 46

-Apply and tool sealant to cover the heads of all anchors and screws.

STEP 26 INSTALL SILL FLASHING SPLICE SLEEVE

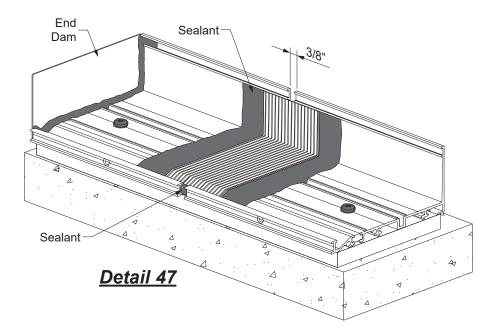
- -Remove the nub with a chisel or pliers on both sides of the splice joint 1-1/2" as shown in **Detail 45**. -After the sill flashing has been shimmed and anchored
- to the building structure, insert a small backer rod under the sill flashing as shown in **Detail 46**.
- -Position the Silicone Splice 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 isopropyl alcohol at the splice location.
- -Seal the flashing at the splice location as shown in **Detail 46**, before positioning the flashing. Set the Silicone Splice Sleeve into the sealant.
- -Tool sealant tight as shown in **Detail 46**, squeezing the sheet flat with a seam roller.





STEP 26 (Continued) INSTALL SILL FLASHING SPLICE SLEEVE

-Thoroughly seal the small joint directly in front of the Silicone Splice Sleeve as shown in Detail 47.





STEP 27 SLAB EDGE COVER INSTALLATION

Slab edge covers are installed from the head of the lowest elevation on upward. The head receptors are installed first, then slab edge plates, then the BE9-2735 sill flashings with the E9-8222 slab edge adaptors.

STEP 27A INSTALL HEAD RECEPTOR END DAMS & WEATHERING GASKETS

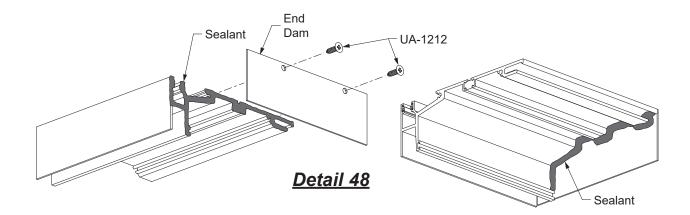
-Clean all joint surfaces using cleaner approved by sealant manufacturer.

-Apply sealant to the end of the head receptor as shown in Detail 48.

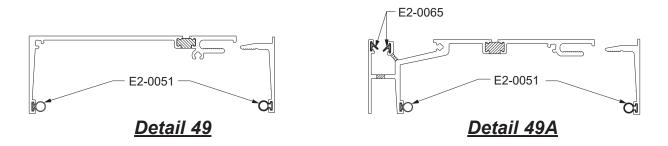
-Fasten the end dam to the head receptor with two UA-1212 screws, starting at the back, followed by the front.

-Tool sealant along the joint between the end dam and the head receptor as shown in Detail 50.

-Tape down the top corners to hold the end cap in place until the sealant cures.



-Cut the E2-0051 airtight gasket to head receptor length plus 3/16" at each end for the splice joint, and insert it into its reglet for both the receptor and snap cover as shown in **Details 49 & 49A**. -Cut the E2-0065 slab edge weathering gaskets to head receptor length. Insert the gaskets into the slab edge reglets in the orientation as shown in **Details 49A**.



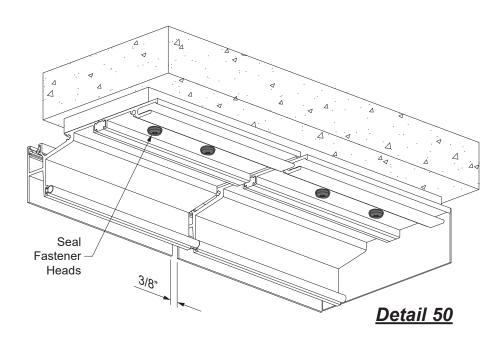


STEP 27B INSTALL HEAD RECEPTOR

-Starting at the smallest opening height, install the head receptor with the appropriate shim (1/2" minimum) to ensure the dimensions from the approved shop drawings. Head receptor must be installed level.

-Anchor the head receptor to the structure according to approved shop drawings and or P.E. calculations.

-Apply and tool sealant to the heads of all fasteners as shown in **Detail 50**.



STEP 27B (Continued) INSTALL HEAD RECEPTOR

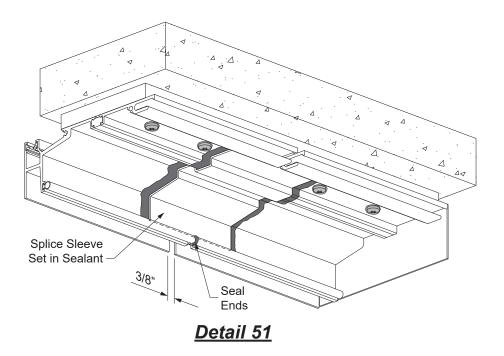
-Prior to installing the Splice Sleeve, clean head receptor and Splice Sleeve with isopropyl alcohol at the splice location.

-Refer to the splice chart at the right for proper splice selection per head receptor used.

System	Head Receptor	Splice
YWW 50 TU	BE9-7635	E2-0070
YWW 50 TU	BY7-8426	E2-0070
YWW 50 TU	BE9-2819	E1-2813
YWW 60 TU	BE9-7736	E2-0070
YWW 60 TU	BE9-7299	E1-9824

Position the Splice Sleeve against the front wall inside the head receptor, set in sealant centered on the splice joint as shown in **Detail 51**. For E2-0070 sheet, trim as necessary to fit.
Tool the sealant. For E2-0070 sheet, use a seam roller to press the sheet tight against the receptor.

-Seal the ends of the E2-0051 gasket together at the splice.

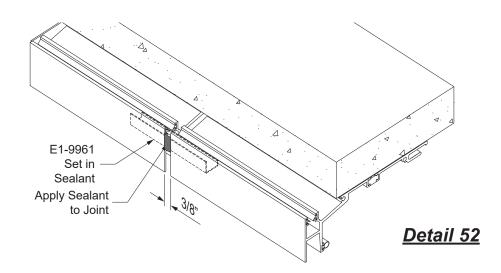




STEP 27B (Continued) INSTALL HEAD RECEPTOR SPLICE SLEEVE

-At the slab edge receptacle of the head receptor, position an E1-9961 splice sleeve centered on the splice joint. Set the splice sleeve in sealant, similar to the procedure previously outlined for the underside of the head receptor.

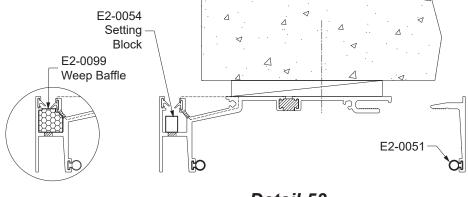
See Detail 52.



STEP 27B (Continued) INSTALL HEAD RECEPTOR GASKETS

-Install E2-0054 setting blocks at 1/4 points of the aluminum plate. -Install a weep baffle, E2-0099, over every weep hole location. -Do not install the snap cover yet.

See Detail 53.



<u>Detail 53</u>

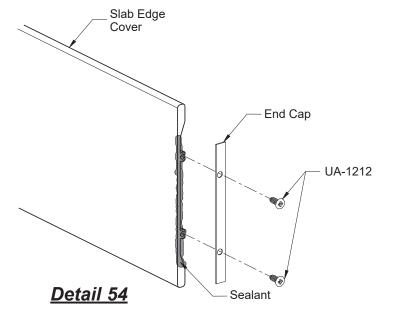
STEP 27C ASSEMBLE SLAB EDGE COVER PLATES

-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 54.



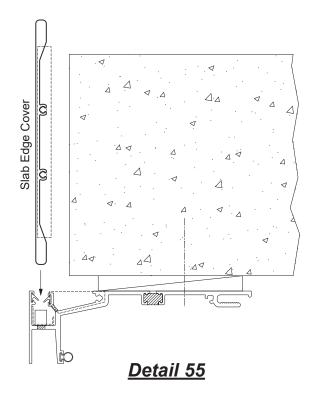
STEP 27D INSTALL SLAB EDGE COVER FASCIA

-Slide the slab edge cover plate into the head receptor receptacle, seating it on top of the setting blocks.

-Be sure to leave a 3/8" joint between the plates for runs longer than 24'-0".

See Detail 55.

YKK

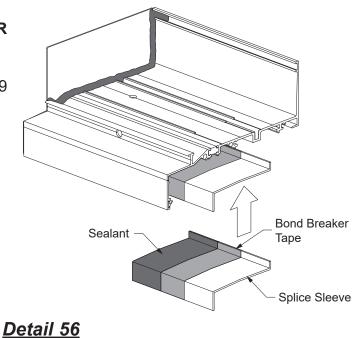


STEP 27E INSTALL SILL FLASHING SPLICE SLEEVE FOR SLAB EDGE COVER

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 56**.

-Adhere the sealed half of the splice sleeve to the underside of the sill flashing.

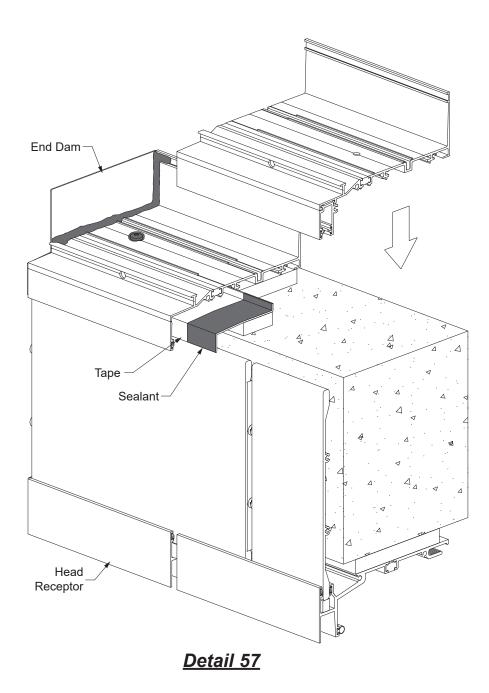




STEP 27E (Continued) INSTALL SILL FLASHING SPLICE SLEEVE AT SLAB EDGE

-Install the sill flashing assembly onto the substrate, with 1/2" minimum shim space, engaging the slab edge cover plates below and sealing all anchor fastener heads.

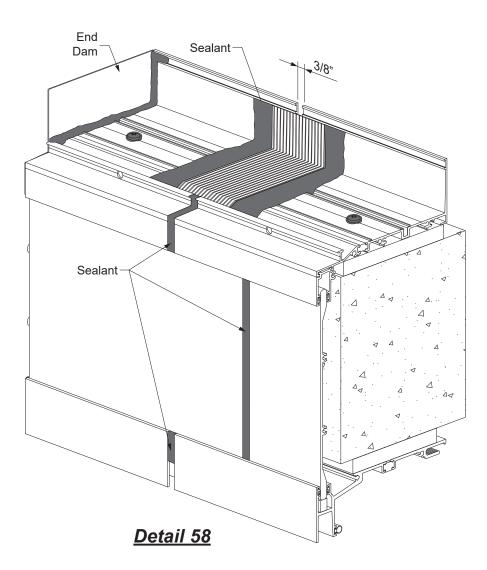
-Install the next slab edge sill flashing assembly onto the splice sleeve as shown in **Detail 57**. Be sure to leave a 3/8" splice joint between the sill flashing assemblies.





STEP 27E (Continued) INSTALL SILL FLASHING SPLICE SLEEVE AT SLAB EDGE

-Installation of the E2-0070 splice sleeve is the same as previously outlined in **Step 27**, except to apply sealant to the joint at the slab edge cover plate, adaptor, and head receptor as shown in **Detail 58**.





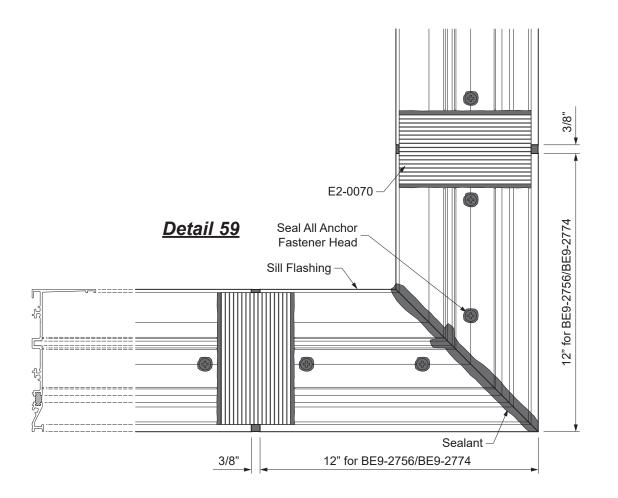
STEP 28 INSTALL BE9-2274 / BE9-2756 SILL FLASHING AT CORNERS

-Cut two 12" long pieces of sill flashing and miter(45° for 90° corners).

-Align the two pieces 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 59.

-Continue installing the rest of the sill flashing providing a 3/8" expansion joint at splices as shown in **Step 25 & 26** on **Page 43 & 44**.





STEP 28A INSTALL BE9-2775 / BE9-2757 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.

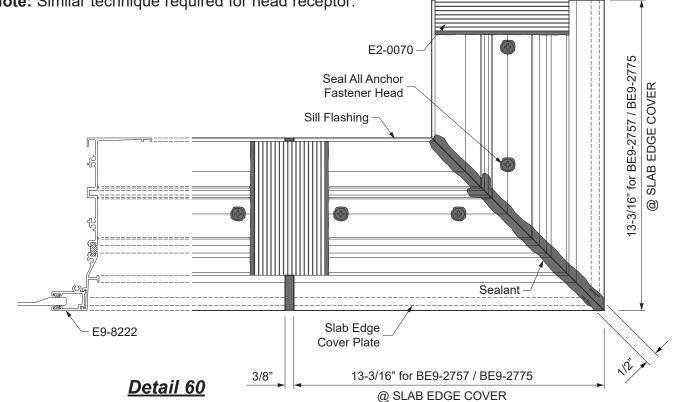
-Align the two pieces of the sill flashing at the corner condition with the mitered ends pushed together tight and anchor the sill flashing as indicated on the approved shop drawings and or P.E. calculations.

-Apply and tool sealant to the mitered joint and anchor heads.

See Detail 60.

-Continue installing the rest of the sill flashing providing a 3/8" expansion joint at splices as shown in **Step 27 Pages 45 to 52**.

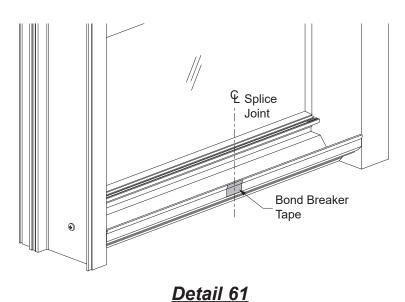
* Note: Similar technique required for head receptor.



3/8"

STEP 29 SILL PREPARATION

At every splice condition, apply bond breaker tape to the back of the sill member before the joint is sealed between the sill and sill flashing. See **Detail 61.**

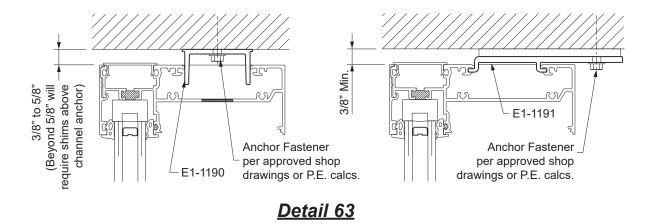


STEP 30 INSTALL FRAMES

-The female mullion half of the second unit engages into the male mullion half of the previously installed unit, from the side.

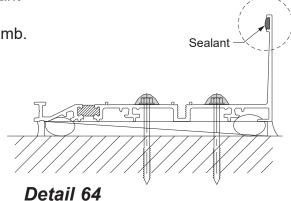
-For frames that utilize the E1-1190 channel shaped head anchor, secure the anchor to the head using masking tape as shown in **Detail 62** prior to installation into the frame opening. -Set the frame into place. See **Detail 63** for shim space at head. -Taking care to ensure the framing unit is plumb, level, square, and true, anchor the framing unit to the substrate, first at the head using fasteners as specified by engineering calculations. Tape Securely or Field Install Detail 62

See Detail 63.



-Immediately prior to installing each unit, apply 6" of sealant to the back of the sill flashing centered on where each vertical meets the back of the flashing, and 3" at each jamb.

See Detail 64.



STEP 30 (Continued) INSTALL FRAMES

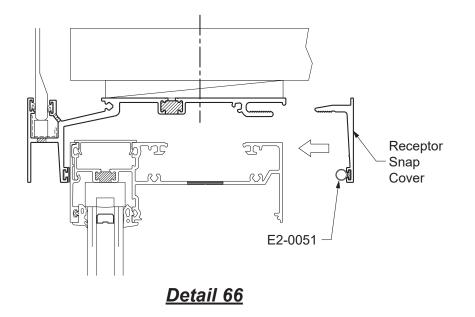
Note: If sill has not fully engaged into the sill flashing, tap down with a block of wood to ensure proper engagement prior to fastening (after mullion has been properly placed.) See **Detail 65**.

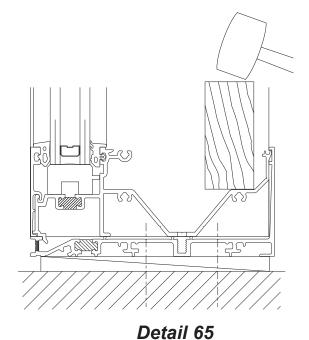
INSTALL FRAMES WITH HEAD RECEPTOR

-Set the frame into place, taking care to ensure the unit is plumb, level, square, and true.

-Snap on the receptor snap cover with the E2-0051 airtight gasket onto the head receptor.

See Detail 66.







YWW 50 TU / YWW 60 TU Window Wall System

FRAME INSTALLATION

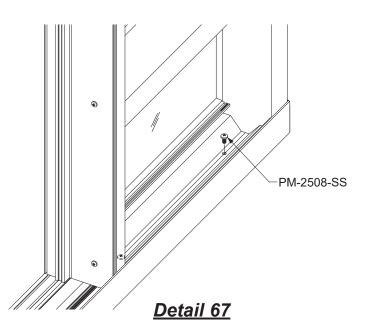
STEP 30 (Continued) INSTALL FRAMES

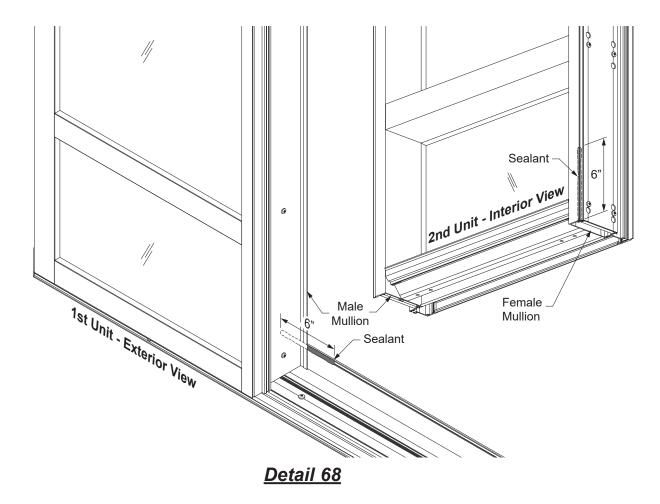
YKK

-Fasten the sill to the sill flashing using two (2) PM-2508-SS screws, one at 3" from each end of the sill. See **Detail 67**.

-Then anchor the jamb strap anchors to the substrate, if applicable.

-Just prior to installing the next unit, apply sealant to the interior reglet of the female mullion where it will interface with the male mullion of the installed unit (from bottom of mullion and 6" up.) Also, apply 6" of sealant to the sill flashing centered on the mullion centerline as shown in **Detail 68**.





STEP 30 (Continued) INSTALL FRAMES

-Install the next framing unit, taking care to ensure that the unit is plumb, level, square, and true, and that the female mullion fully interfaces with the male mullion from the previous unit.

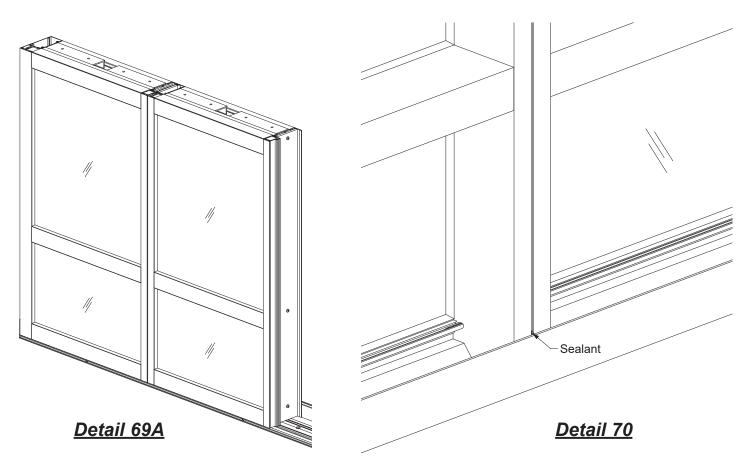
-Continue installation to the opposite jamb unit. Previously installed units can be moved (if not already fastened at the sill) to make room for the final unit.

See Detail 69 & 69A.

-Fill the void between the two units at the back of the sill flashing with sealant.

See Detail 70.

-Repeat Step 30 until all units are installed.



Male Mullion

Detail 69





STEP 31 APPLY PERIMETER SEALANT

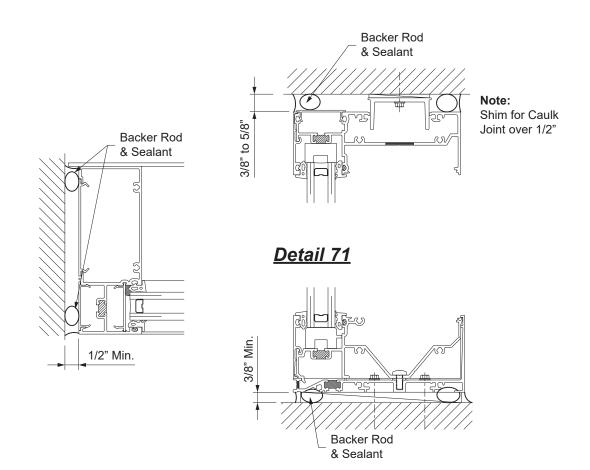
-Once all the units are installed, apply perimeter sealant required on interior and exterior of the window wall system.

-Install backer rod around the perimeter of the frame.

-Apply perimeter sealant to the joint between the frame and the structure.

-Avoid getting sealant into the sill flashing weep holes.

See Detail 71.





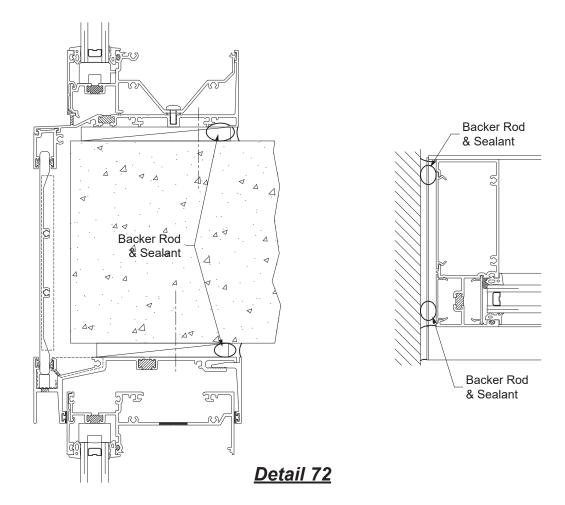
STEP 31A APPLY PERIMETER SEALANT AT SLAB EDGE COVERS

-For slab edge covers at the head and sill, install a backer rod and apply sealant to the back of the sill flashing and head receptor.

-Tool sealant prior to skinning over.

-Install a backer rod and seal the jamb edge of the slab edge covers.

See Detail 72.

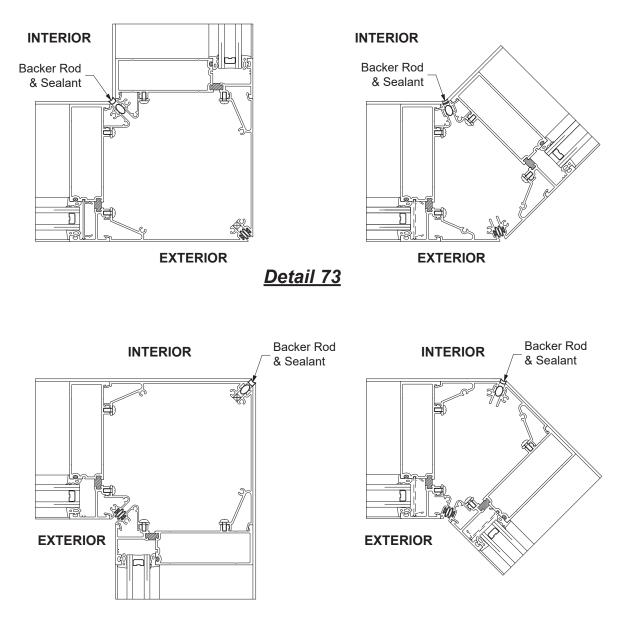


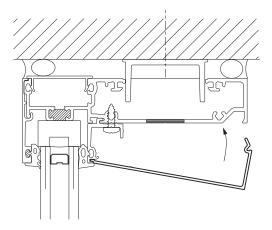


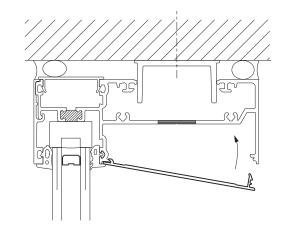
STEP 31B APPLY SEALANT AT CORNER MULLIONS

-Apply backer rod and sealant the at the interior of the corner mullion, the full height of the mullion. Do not seal the exterior side.

See Detail 73.







<u>Detail 74</u>

STEP 32 INSTALL INTERIOR COVERS

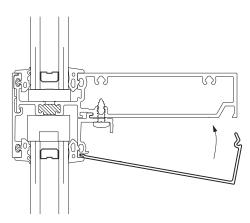
-Immediately prior to installing the interior covers, apply continuous sealant to the back the sill member (the length of the sill) of the installed units at the sill flashing as shown in **Detail 74**.

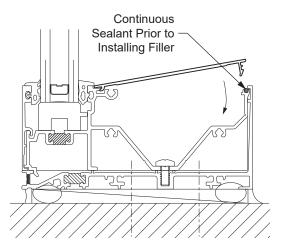
-Snap on the interior covers at the head, horizontals, and sills. YWW 50 TU E9-2782 IG head & IG horizontals E9-2780 sill and OG head

YWW 60 TU

E9-7853 @ IG head & IG horizontals E9-2762 @ sill and OG head

See Details 74.





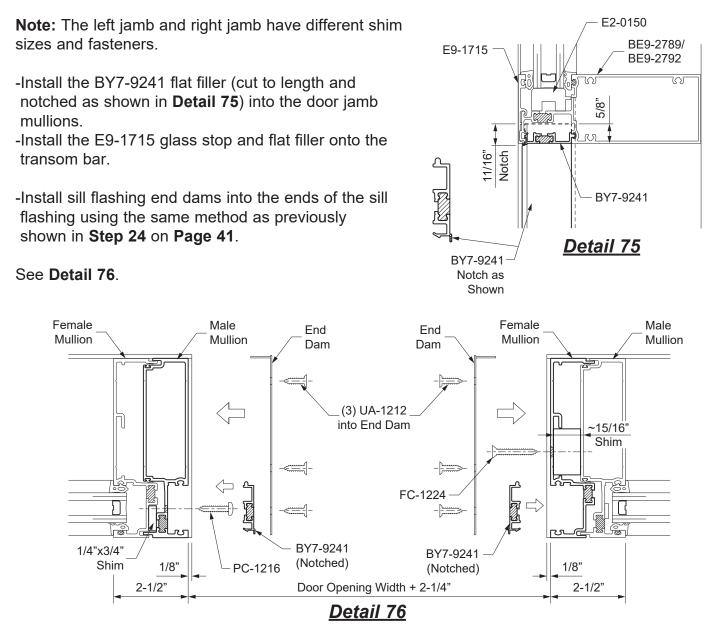


DOOR FRAME INSTALLATION

STEP 33 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.

-Door jamb mullions are made from male and female mullions for the preglazed application, shimmed and fastened together as shown below in **Detail 76**. Spacing of fasteners to be determined by approved shop drawings and or P.E. calculations. Door transoms bars are made with tubular horizontals and BY7-9241 pocket filler (cut to transom horizontal length minus(-) 1/32") and E9-1715 glass stop.



DOOR FRAME INSTALLATION

STEP 33 (Continued) **INSTALL DOOR FRAME**

-Assemble the door subframe and install the door jamb subframes to the door jambs with PC-1220 fasteners, spaced according to the approved shop drawings and or P.E. calculations. Provide a 3/8" shim space between the jamb subframes and the jamb mullions, 1/4" shim space at the transom bar. Maintain a 1/2" inset between the subframe and the front of the window wall framing. -Snap in the AS-0417 fillers into the door jamb subframes.

See Details 77 & 78.

-Install backer rods between the subframes and the window wall framing, both front and back. Apply and tool sealant to the backer rods to ensure a water-tight seal.

Male

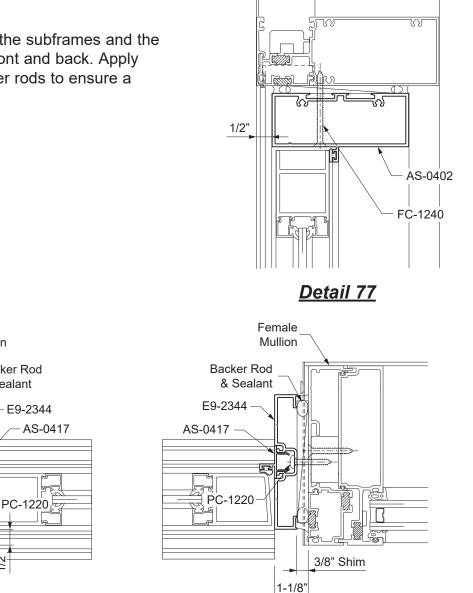
Mullion

Backer Rod

& Sealant

1/2

1-1/8"



Detail 78

Door Opening Width + 2-1/4"

3/8" Shim

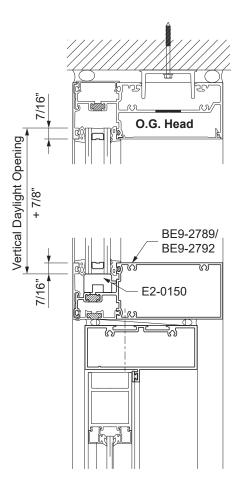


DOOR FRAME INSTALLATION

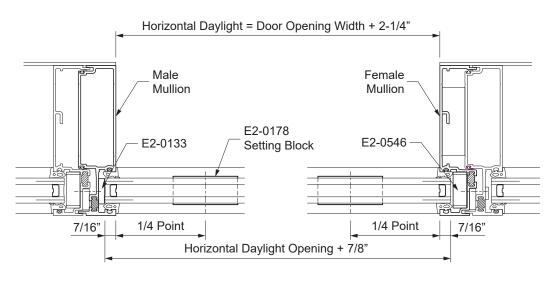
STEP 34 GLAZE DOOR TRANSOM

Door transoms for YWW 50 TU and YWW 60 TU are outside glazed only.

See Details 79 & 80.



Detail 79



Detail 80

YKK AP America Inc.

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