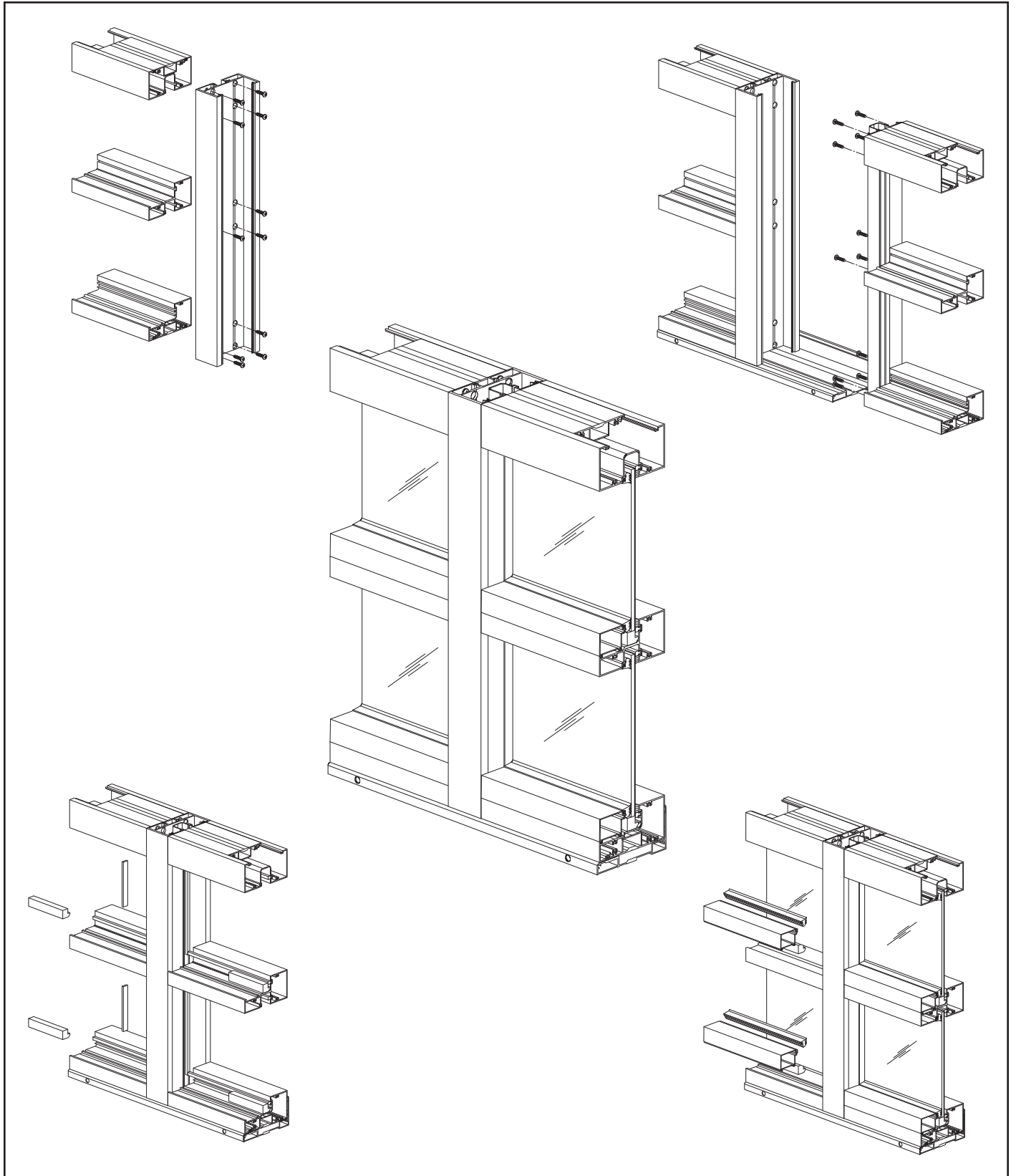


# YHS 50 FS Storefront System



## Installation Manual



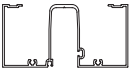

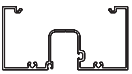

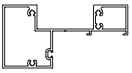



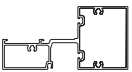
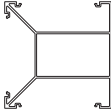
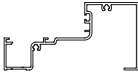

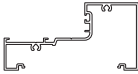

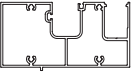



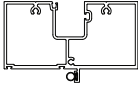


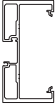
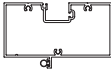


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## Installation Notes

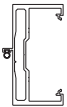

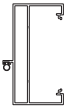

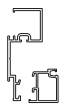

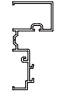



1. Do not drop, roll or drag boxes of aluminum framing. Move and stack boxes with proper support to prevent distortion. If fork lifts are used be especially careful about striking the boxes when lifting or moving.
2. Store in a dry, out of the way area. If rain exposure, condensation or any water contact 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 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:
  - A. Specified metal to metal joints use Dow Corning<sup>®</sup> 795 or 995.
  - B. All metal to glazing must use Dow Corning<sup>®</sup> 995.
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 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.
13. Cutting tolerances are plus zero (0"), minus one thirty second (-1/32") unless otherwise noted.
14. Check our website, [www.ykkap.com](http://www.ykkap.com), for the latest installation manual update prior to commencing work.

## FRAMING MEMBERS

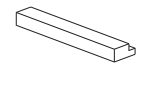






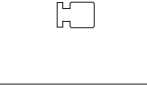



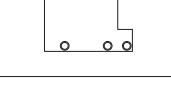
	<b>Head</b> 2-1/2" x 5" For up to ±50 PSF	<b>E9-0622</b>		<b>Deep Pocket Filler</b> Use with E9-0605 & E9-0659	<b>E9-0606</b>
	<b>Head</b> 2-1/2" x 5" For up to +70/-90 PSF*	<b>E9-0601</b>		<b>Expansion Mullion (Female)</b>	<b>E9-0518</b>
	<b>IG Head</b> 2-1/2" x 5"	<b>E9-8649</b>		<b>Expansion Mullion (Male)</b>	<b>E9-0519</b>
	<b>IG Head Anchor</b>	<b>E9-8650</b>		<b>Flat Filler</b> Use with 90° Corner Mullion E9-0659	<b>E9-0657</b>
	<b>Horizontal</b> 2-1/2" x 5"	<b>E9-0603</b>		<b>90° Corner Mullion</b> Use with E9-0656 and E9-0657	<b>E9-0659</b>
	<b>Sill</b> 2-1/2" x 5" For up to ±50 PSF	<b>E9-0624</b>		<b>Sill Flashing</b> For up to ±50 PSF	<b>E9-0625</b>
	<b>Sill</b> 2-1/2" x 5" For up to +70/-90 PSF*	<b>E9-0615</b>		<b>Sill Flashing</b> For up to +70/-90 PSF*	<b>E9-0619</b>
	<b>IG Sill</b> 2-1/2" x 5"	<b>E9-8646</b>		<b>IG Sill Flashing</b>	<b>E9-7993</b>
	<b>Snap Cover</b>	<b>E9-8647</b>			
	<b>Glass Stop</b>	<b>E9-0608</b>		<b>Transom Bar</b> Elastomer weathering E2-0051 included	<b>AS-0501</b>
	<b>Jamb / Mullion</b> 2-1/2" x 5"	<b>E9-0623</b>		<b>OHCC Transom Bar</b> Use with AS-0218 Pile Weathering included	<b>AS-0520</b>
	<b>Heavy Duty Vertical</b> 2-1/2" x 5"	<b>E9-0605</b>		<b>Transom Bar</b> For 35HL/50HL Doors Use with AS-0218 Pile Weathering include	<b>AS-0552</b>
	<b>Shallow Pocket Filler</b> Use with E9-0623	<b>E9-0617</b>		<b>Door Stop</b> For OHCC Transom Bar Elastomer Weathering E2-0051 included	<b>AS-0218</b>

\* Per Florida Product Approvals as tested with steel reinforcing.

## FRAMING MEMBERS

	<b>Door Jamb</b> Elastomer weathering E2-0051 included	<b>AS-0504</b>		<b>Water Resistant Threshold Gutter</b>	<b>E9-0502</b>
	<b>Door Jamb</b> For 35HL/50HL Doors Elastomer weathering E2-0051 included	<b>AS-0551</b>		<b>Threshold Ramp</b>	<b>E9-0511</b>
	<b>Transom Glazing Pocket Filler (35H)</b>	<b>E9-0505</b>		<b>Threshold Ramp</b>	<b>E9-0512</b>
	<b>Transom Glass Stop</b>	<b>E9-0506</b>			
	<b>Transom Glazing Pocket Filler (35HL)</b>	<b>E9-0554</b>		<b>Threshold Ramp</b>	<b>E9-0513</b>
	<b>Threshold Trim</b> Elastomer weathering E2-0051 included	<b>AS-0503</b>		<b>Air Tight Threshold</b> Elastomer weathering E2-0051 included	<b>AS-0487</b>

## ACCESSORIES

	<b>Setting Block</b>	<b>E2-0080</b>		<b>End Dam</b> For Sill Flashing E9-0619	<b>E1-1050</b>
	<b>OHCC Transom Bar Setting Block</b>	<b>E2-0737</b>		<b>End Dam</b> For Sill Flashing E9-0625	<b>E1-1139</b>
	<b>Door Setting Block</b>	<b>E2-0086</b>		<b>End Dam</b> For Sill Flashing E9-7993	<b>E1-1140</b>
	<b>Setting Block</b> For Inside Glazing	<b>E2-0019</b>		<b>Splice Sleeve</b> For Sill Flashing	<b>E2-0070</b>
	<b>Side Block</b>	<b>E2-0094</b>		<b>Anti-Walk Block</b> For Dry Glazing Use with E9-0606 pocket filler	<b>E2-0546</b>
	<b>Push-in Glazing Gasket (7/16" F.C.)</b> Not Florida Approved	<b>E2-0081</b>		<b>Anti-Walk Block</b> For Dry Glazing Use with E9-0623 Jamb/Mullion	<b>E2-0807</b>
	<b>Exterior Glazing Gasket</b> For 1/2" to 9/16" Glazing	<b>E2-0083</b>		<b>Anchor Filler</b> For Jamb at Anchor Locations, 2-1/2" Long	<b>E1-1068</b>
	<b>Interior Glazing Gasket</b> Use with 9/16" Laminated Glass for Dry Glazed Applications	<b>E2-0088</b>		<b>Anchor Filler</b> For Head & Sill at Anchor Locations, 11" Long	<b>E1-1071</b>
	<b>Interior Silicone Spacer</b>	<b>E2-0084</b>		<b>Shear Block</b> For Use with AS-0520 OHCC Transom B	<b>E1-0370</b>
	<b>Door &amp; Reglaze Silicone Spacer</b>	<b>E2-0085</b>		<b>Steel Reinforcing</b>	<b>E1-1062</b>
	<b>Weathering Gasket</b> Use with E9-0518 Expansion Mullion	<b>K2-2441</b>		<b>Drill Fixture</b>	<b>H-7202</b>
	<b>Water Deflector</b> For Intermediate Horizontals	<b>E2-0079</b>			

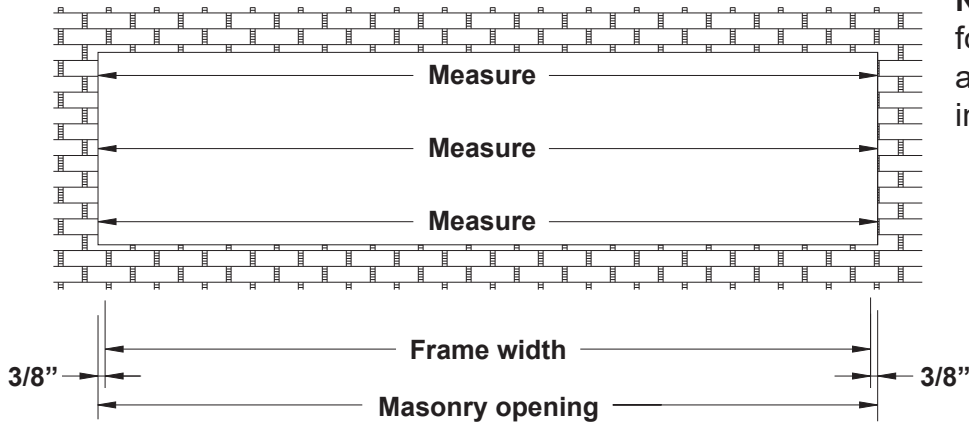
## FASTENERS

	<b>#10 x 1/4" FHMS</b> Zinc Plated Steel For attachment of Threshold Clip E1-1055	<b>FM-1004</b>		<b>#12 x 3/4" UFHSMS</b> <b>Type A</b> , Zinc Plated Steel, For End Dam Attachment	<b>UA-1212</b>
	<b>#10 x 3/8" FHMS</b> For attachment of Glazing Pocket filler to 50 PSF mullion	<b>FM-1006</b>		<b>#12 x 1-1/4" PHSMS</b> Type "AB", Zinc Plated Steel, For Screw Spline Attachment	<b>PC-1220</b>
	<b>#10 x 1/2" FHSMS</b> Zinc Plated Steel For attachment of AS-0503 Threshold Trim	<b>FC-1008</b>		<b>#14 x 1/2" PHSMS</b> Type "AB", Zinc Plated Steel, For Threshold Gutter Attachment	<b>PC-1408</b>
	<b>#10 - 24 x 1/2" FHMS</b> Type "F", Stainless Steel, For attachment of Glazing Pocket Filler to Steel Reinforcing	<b>FF-0808</b> <b>-SS</b>		<b>#14 x 1-1/2" PHSMS</b> Type "AB", Zinc Plated Steel, For Sill Gutter Attachment	<b>PC-1424</b>
	<b>#10 x 5/8" FHSMS</b> Type "B", Zinc Plated Steel For attachment of Transom Glazing Pocket Filler	<b>PB-1010</b>		<b>#1/4-20 x 1-1/2" PHMS</b> Stainless Steel For IG Sill Gutter Attachment	<b>PM-2524</b> <b>-SS</b>
	<b>#10 x 1-3/4" PHSMS</b> Type "AB", Zinc Plated Steel, For Attachment of E1-0370 Shear Block	<b>PC-1228</b>		<b>#10 x 1/2" PHMS</b> Stainless Steel, For Attach- ment of E9-0624 Sill to E9-0625 Sill Flashing	<b>PM-1008</b> <b>-SS</b>
	<b>#12 x 3/4" FHSMS</b> Type "AB", Zinc Plated Steel, For attachment of OHCC Transom Bar to E2-0370 Shear Block	<b>FC-1212</b>		<b>1/4" - 20 x 3/4"</b> <b>HWHMS</b> , Type "F", Zinc Plated Steel For attachment of Steel Reinforcing to Verticals	<b>HF-2512</b> <b>-W1</b>
	<b>#8 x 3/8" PHSMS</b> Zinc Plated Steel For End Dam for E1-1140 Sill Flashing (for I.G.)	<b>PC-0806</b>			

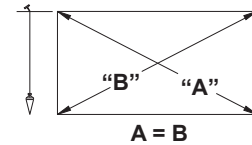
## FABRICATION

### STEP 1 DETERMINE FRAME SIZE

#### Determine Frame Width:



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



**Detail 1**

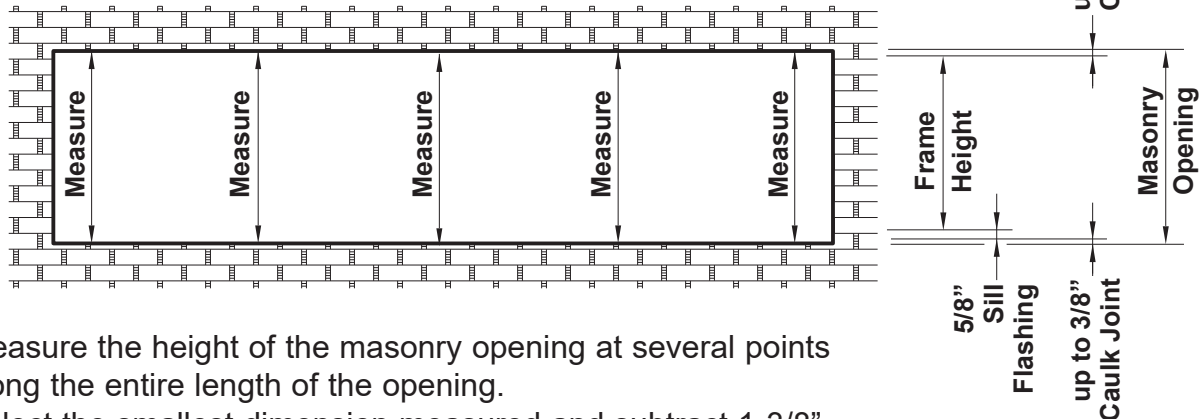
- Measure the width of the masonry opening at the top, middle and bottom.
- Select the smallest dimension measured and subtract 3/4" to determine the frame width size to be used.

See **Detail 1**.

**NOTE:** Frame widths over 24'-0" require expansion mullions every 12 to 15 feet (best location at vertical next to the door jamb.)

#### Determine Frame Height:

**Detail 2**



- Measure the height of the masonry opening at several points along the entire length of the opening.
- Select the smallest dimension measured and subtract 1-3/8" to determine the frame height:

- up to 3/8" for the caulk joint at the head.
- 5/8" for the sill flashing E9-0619.
- up to 3/8" for the caulk joint under the sill flashing (excluding FPA-HVHZ applications).

See **Detail 2**.

**Note:** Refer to current FPA-HVHZ for anchoring guidelines.



## FABRICATION

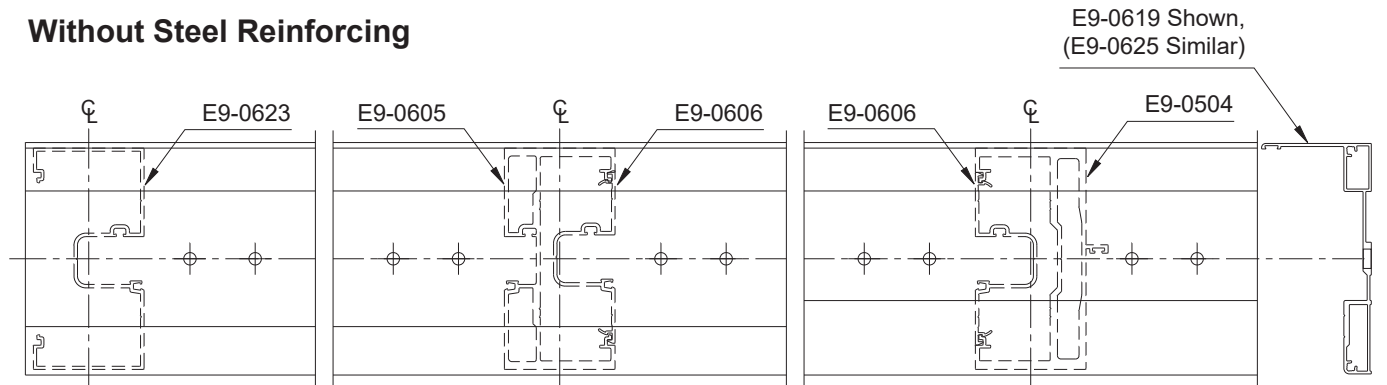
### STEP 2 FABRICATE SILL FLASHING (Continued)

-Locate and drill clearance holes in sill flashing for perimeter anchors. Refer to Florida Product Approval drawings or shop drawings for appropriate fastener and hole locations as determined by a qualified engineer or contact YKK AP.

#### For Dade County Applications:

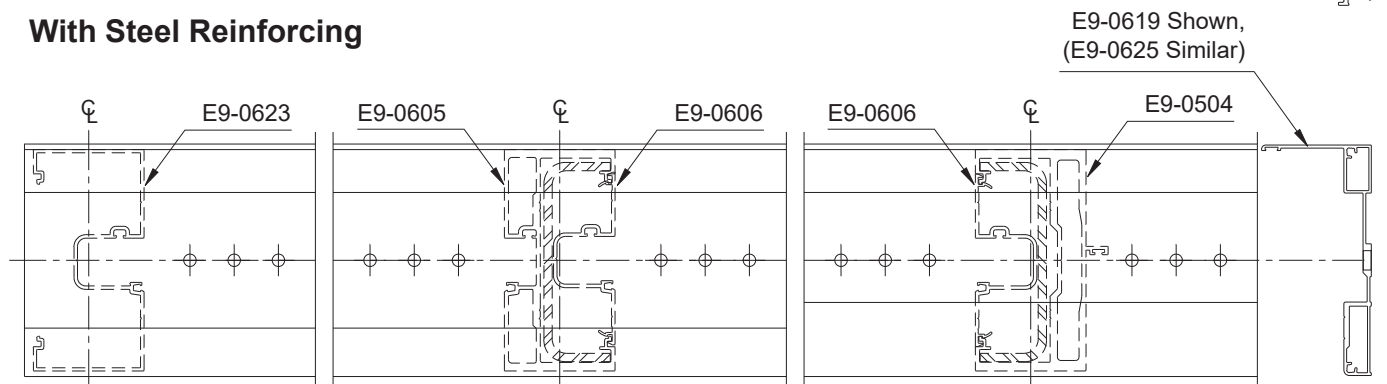
- Refer to FPA-HVHZ.
- See **Detail 4** for anchor hole locations.

#### Without Steel Reinforcing



#### Detail 4

#### With Steel Reinforcing



**FABRICATION**

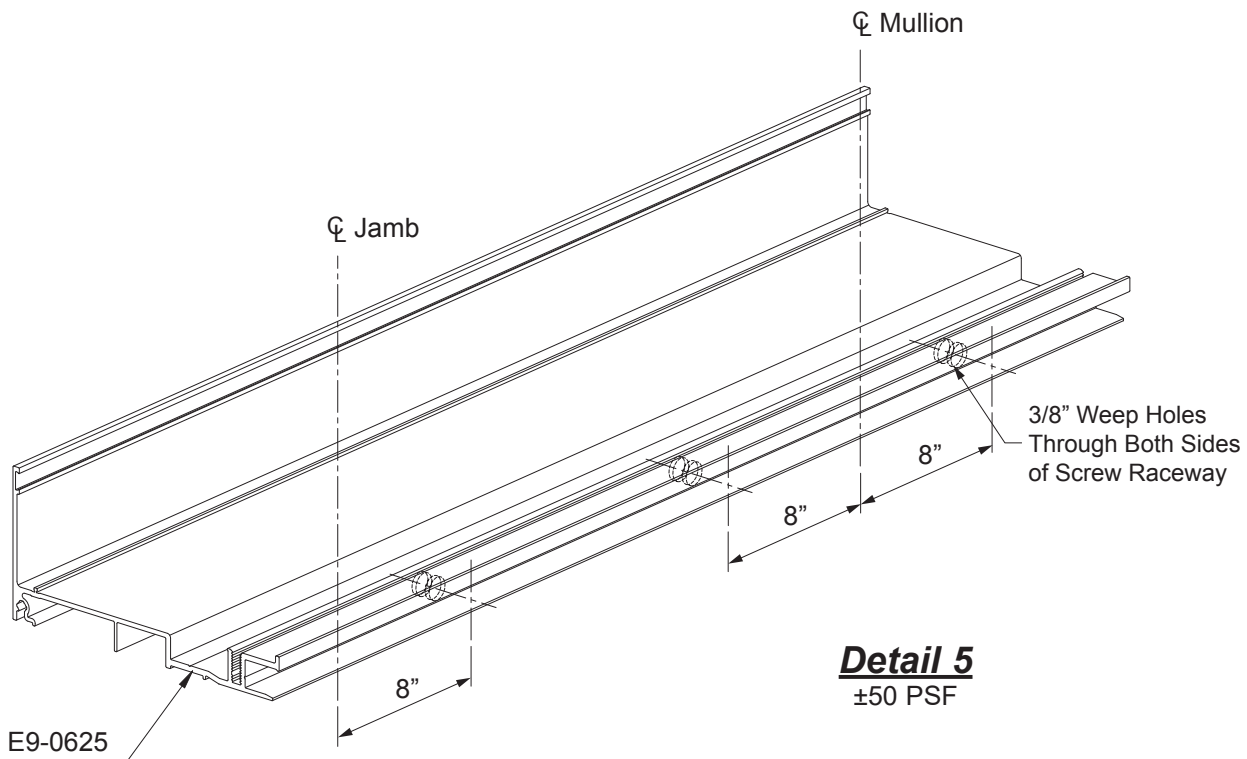
**STEP 2  
FABRICATE SILL FLASHING (Continued)**

Fabricate weep holes in the sill flashing:

-Measure 8" in each direction of the mullion centerline and mark on the front face of the sill flashing the location for the weep holes.

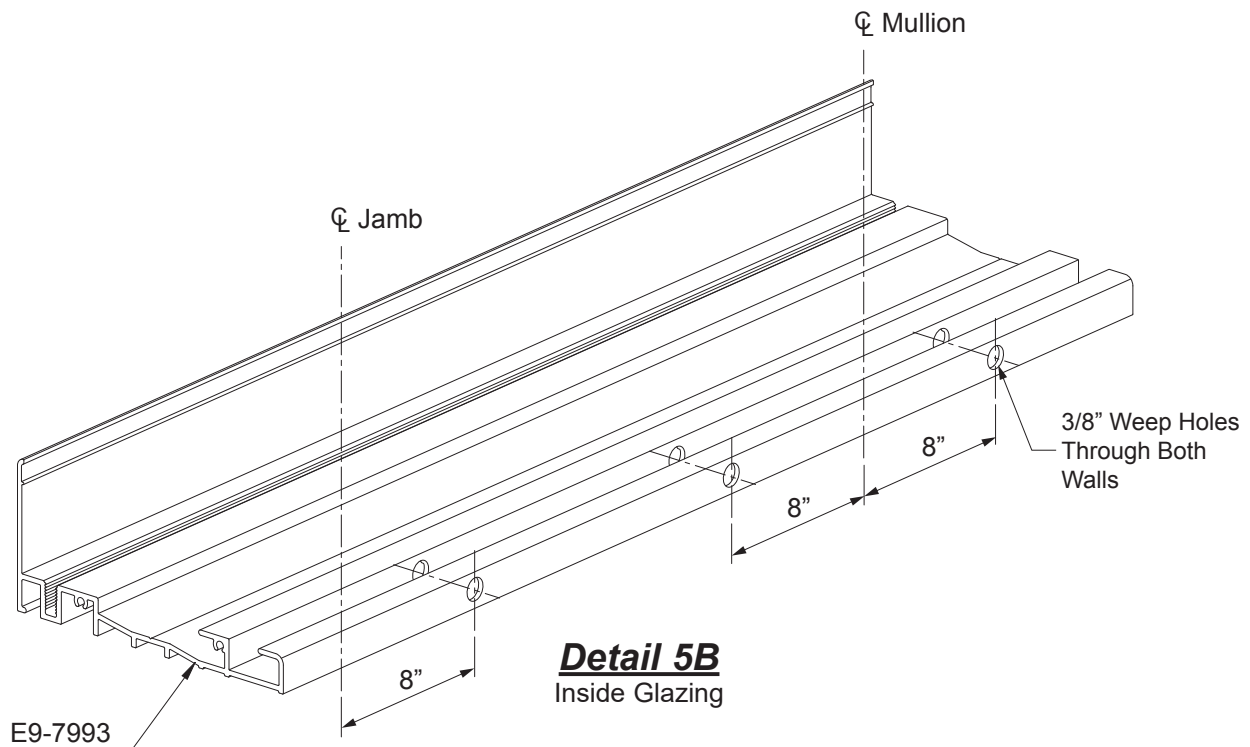
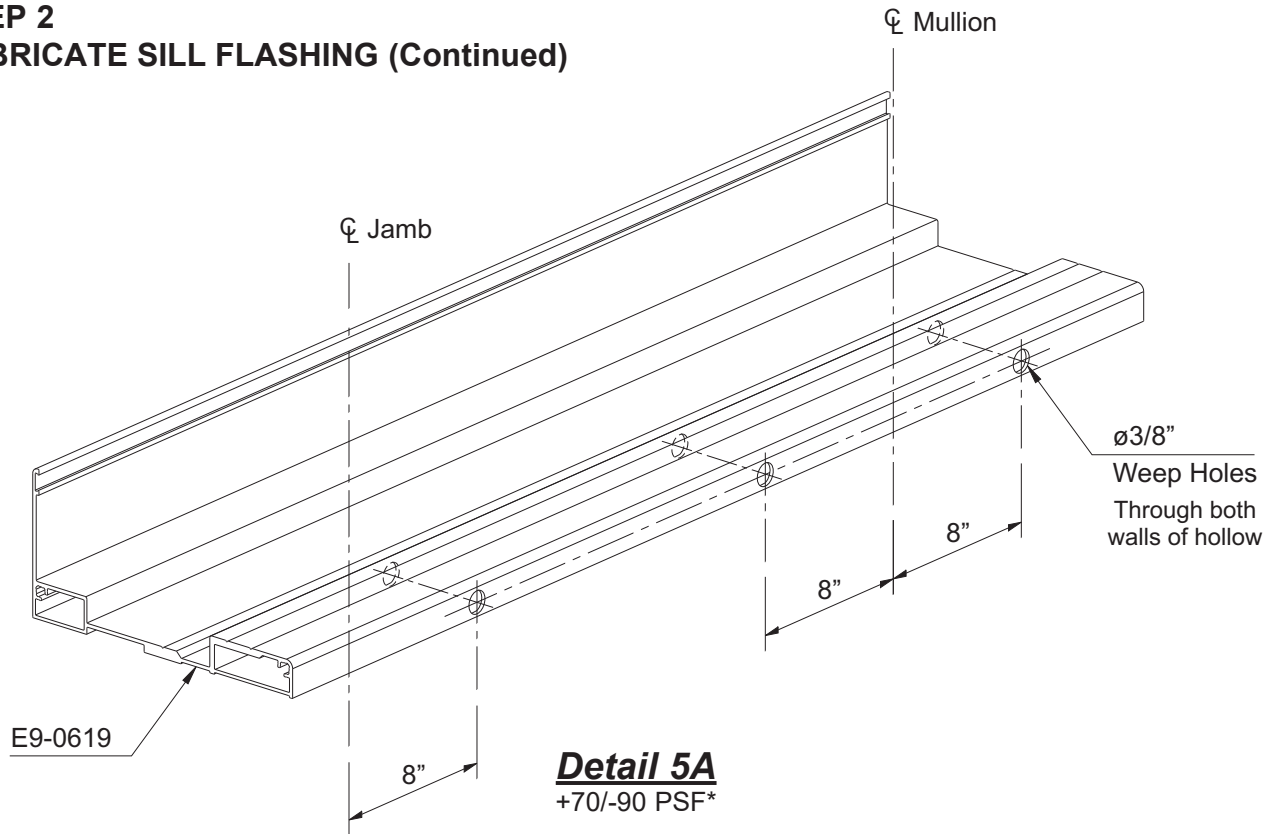
-Drill a 3/8" diameter (#V drill bit) hole through both walls of the hollow in the sill flashing at each location marked.

See **Detail 5** for ±50 psf, **Detail 5A** on **page 9** for +70/-90 psf, and **Detail 5B** on **Page 9** for inside glazing.



## FRAME FABRICATION

### STEP 2 FABRICATE SILL FLASHING (Continued)

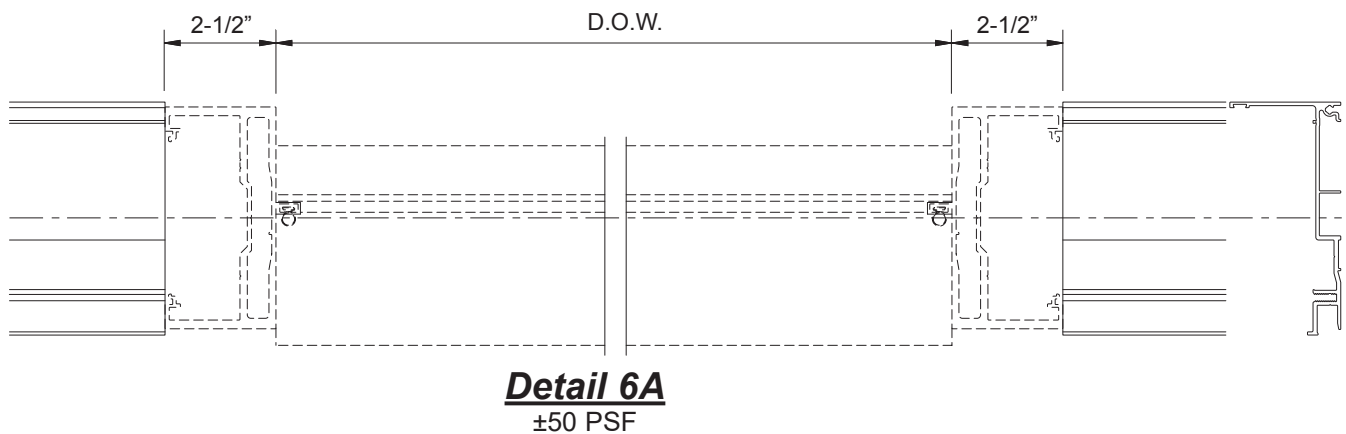
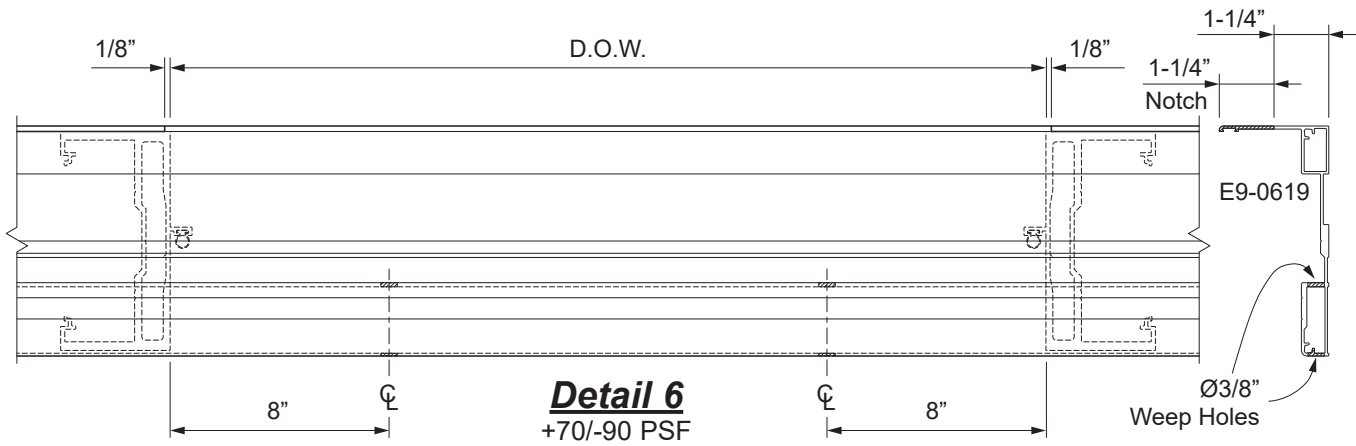


\* Per Florida Product Approvals as tested with steel reinforcing.

**FRAME FABRICATION**

**STEP 2  
FABRICATE SILL FLASHING (Continued)**

**Note:** Only the standard E9-0619 sill flashing (shown on **Detail 6**) and the inside glazed flashing E9-7993 are notched at the door jambs. The light duty E9-0625 sill flashing (shown on **Detail 6A**) is used only with the air-resistant threshold and does not run under the door.



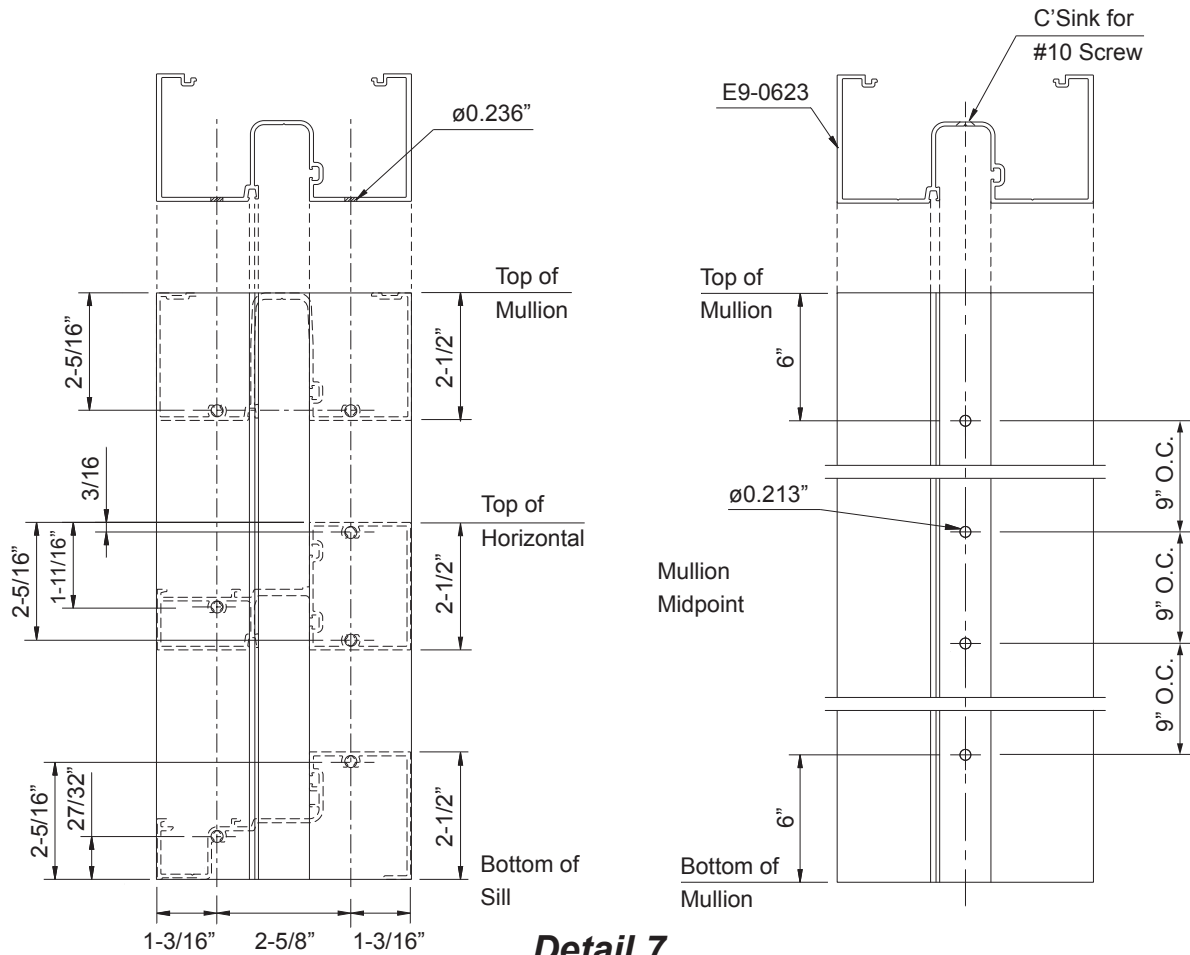
FRAME FABRICATION

STEP 3  
FABRICATE VERTICAL MULLIONS AND POCKET FILLERS

-Cut all vertical members and pocket fillers to the frame height determined in **Step 1**:

- Prepare verticals and glazing pockets for attachment of horizontal members and anchor fillers:
- Using a short piece of each horizontal member as a template, center horizontal members on the face of verticals and mark locations.
- Hole locations may also be determined by laying out locations along the face of verticals as shown below in **Details 7, 7A, and 7B**.
- Drill 0.236" diameter (#B drill bit) holes at each location marked.

**Note:** When using E9-0623 as a vertical, the vertical must be fastened to the pocket filler E9-0617. It is necessary to drill 0.213" diameter (#3 drill bit) holes countersunk for #10 flat fasteners (FM-1006) along the "V-Groove" of the glazing pocket as shown in **Detail 7**.



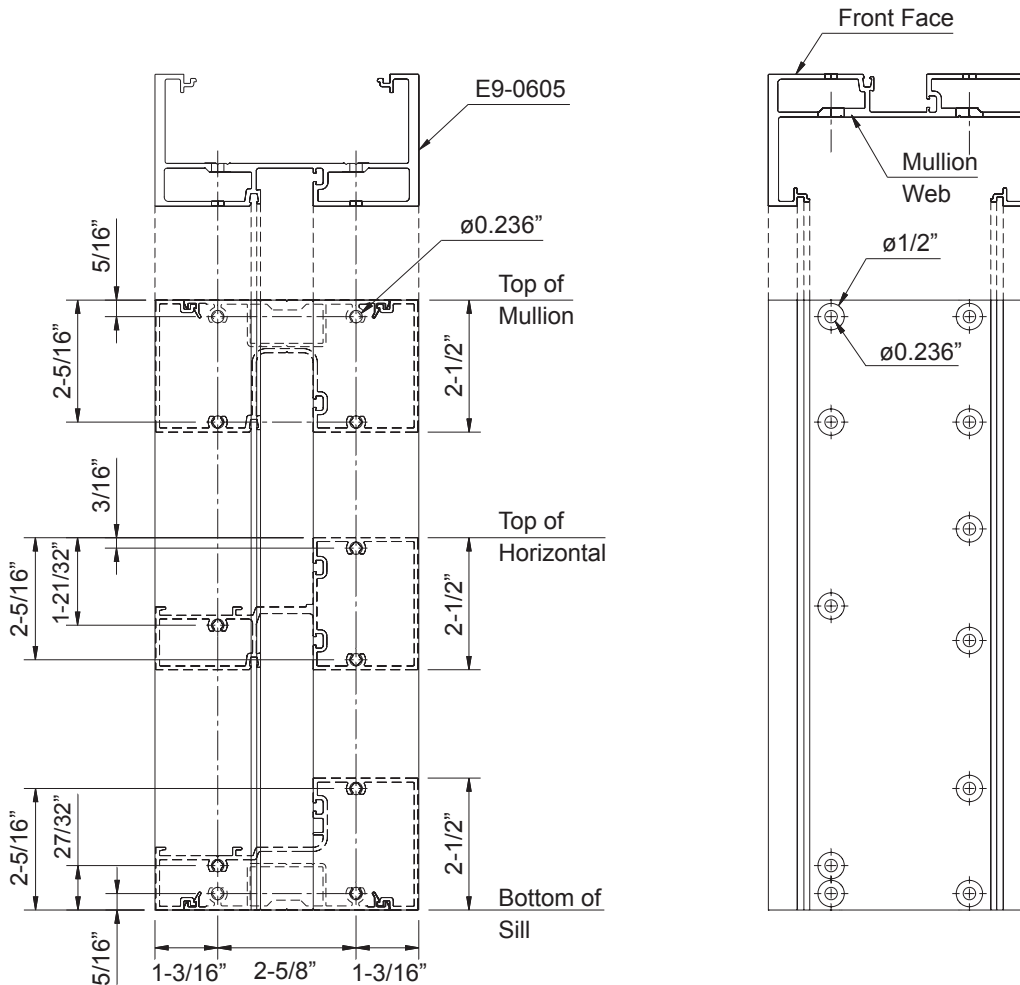
**Detail 7**  
±50 PSF

**FRAME FABRICATION**

**STEP 3**

**FABRICATE VERTICAL MULLIONS AND POCKET FILLERS (Continued)**

**Note:** For vertical member, E9-0605, drill through both the front face and web of the mullion. It is also necessary to turn the mullion over and drill 1/2" dia. holes through the mullion web only, centered on the first holes drilled, to allow the screw heads to pass through.

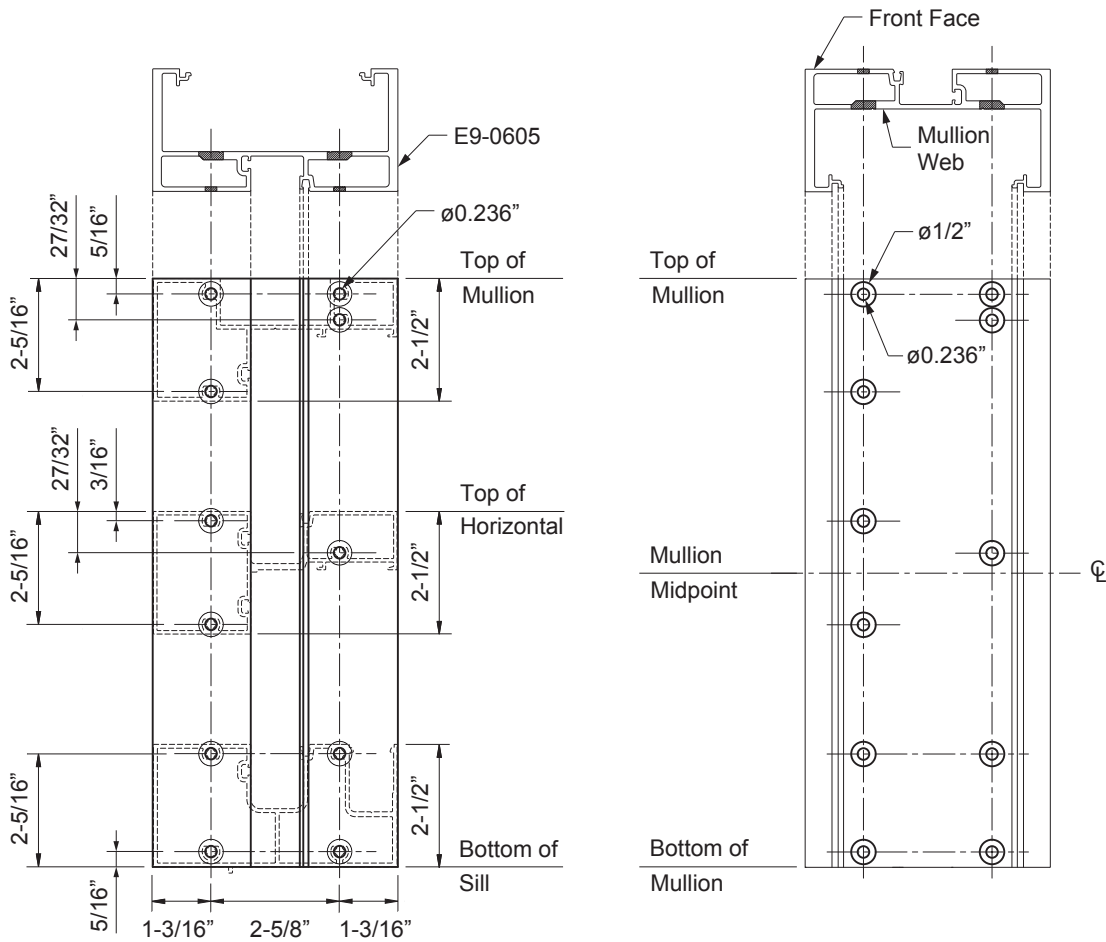


***Detail 7A***  
+70/-90 PSF

\* Per Florida Product Approvals as tested with steel reinforcing.

FRAME FABRICATION

STEP 3  
FABRICATE VERTICAL MULLIONS AND POCKET FILLERS (Continued)



**Detail 7B**  
Inside Glazing

## FRAME FABRICATION

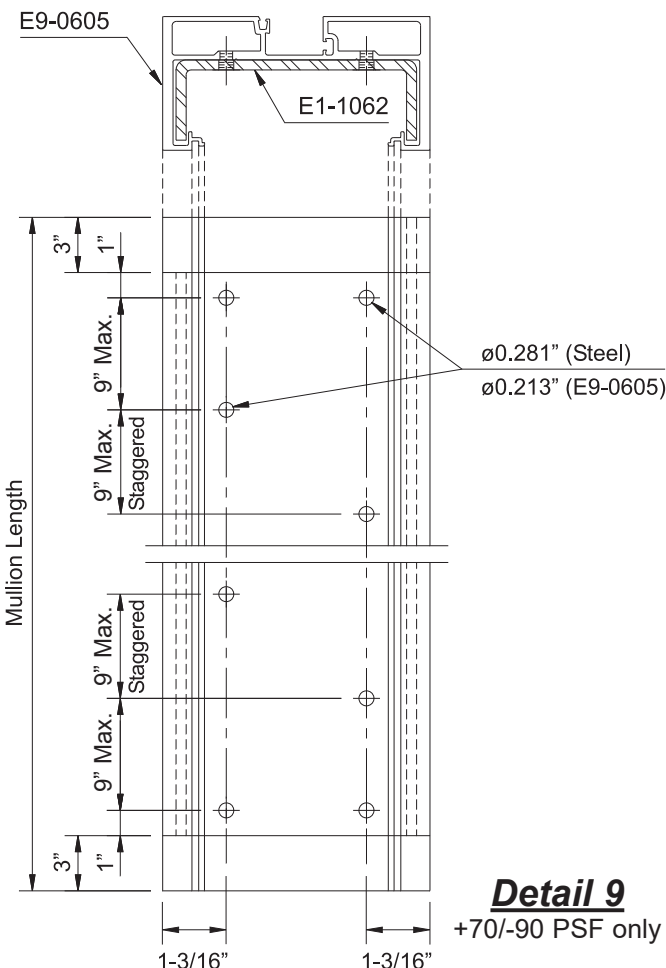
### STEP 4 FABRICATE VERTICAL MULLIONS AND POCKET FILLERS FOR STEEL REINFORCING

- Measure in 6" from each end of the pocket filler and mark locations on the "V"-Groove.
- Measure 9" on center thereafter and mark the locations on the "V"-Groove.

**Note:** Coordinate with the location of horizontals so that the horizontals do not block these holes.

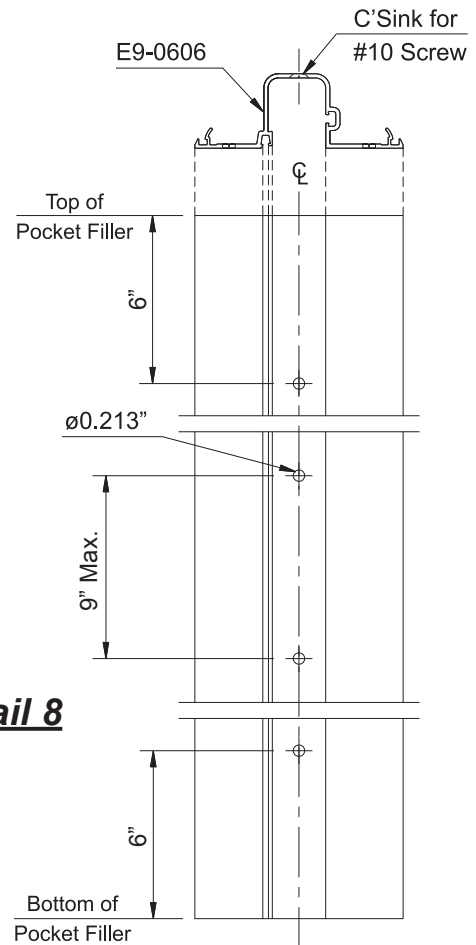
- Drill  $\varnothing 0.213"$  (#3) holes at each location marked.
- Countersink for #10 flat head fastener (FF-1008-SS). See **Detail 8**.

These four holes will later be used to attach glazing pocket filler, E9-0606, to the formed steel channel, E1-1062, during frame installation.



**Detail 9**

+70/-90 PSF only



**Detail 8**

- Cut steel channel, E1-1062, 6" shorter than mullion length.
- Layout and drill 0.281" diameter (#K drill bit) clearance holes in steel only, if not already fabricated.
- Align steel channel, E1-1062, with E9-0605 as shown in **Detail 9** and transfer hole locations to the vertical.
- Drill 0.213" dia. (#3) tap holes in the vertical.

Do not attach the steel channel at this time. Steel reinforcing is attached to the vertical just prior to snapping the frame portions together. See **Step 17** on **Page 26**.

## FRAME FABRICATION

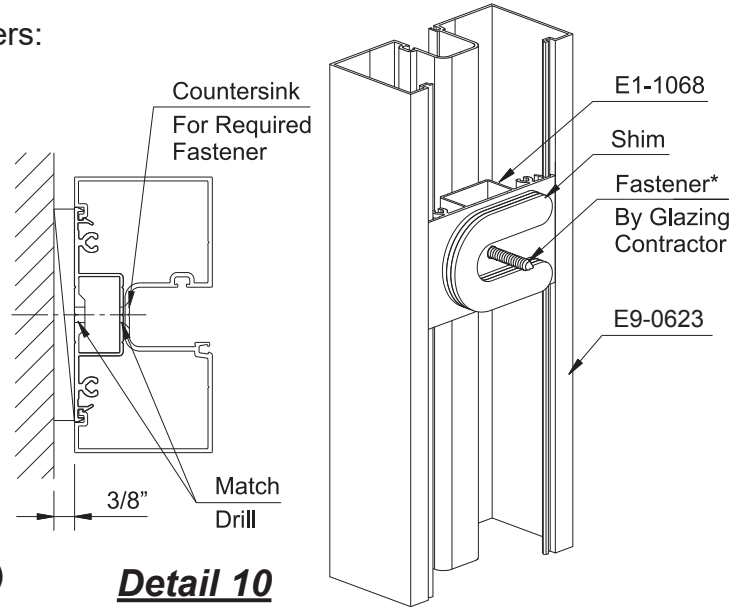
### STEP 5 FABRICATE JAMB MULLIONS

Prepare jamb members for perimeter fasteners:

- Drill and countersink jamb member, E9-0623, for required fastener. (Countersinking not required for E9-0622.)
- Install anchor filler, E1-1068, at each anchor location and crimp the snap legs at the ends to hold it in place.
- Match drill a clearance hole through anchor filler, E1-1068, at each anchor location for appropriate fastener.

See **Detail 10**.

\*Refer to FPA drawings or shop drawings for appropriate fastener and hole locations as determined by a qualified engineer or contact YKK AP. (Flat Head Fasteners Only)



**Detail 10**

### STEP 6 FABRICATE HEAD & HORIZONTAL MEMBERS

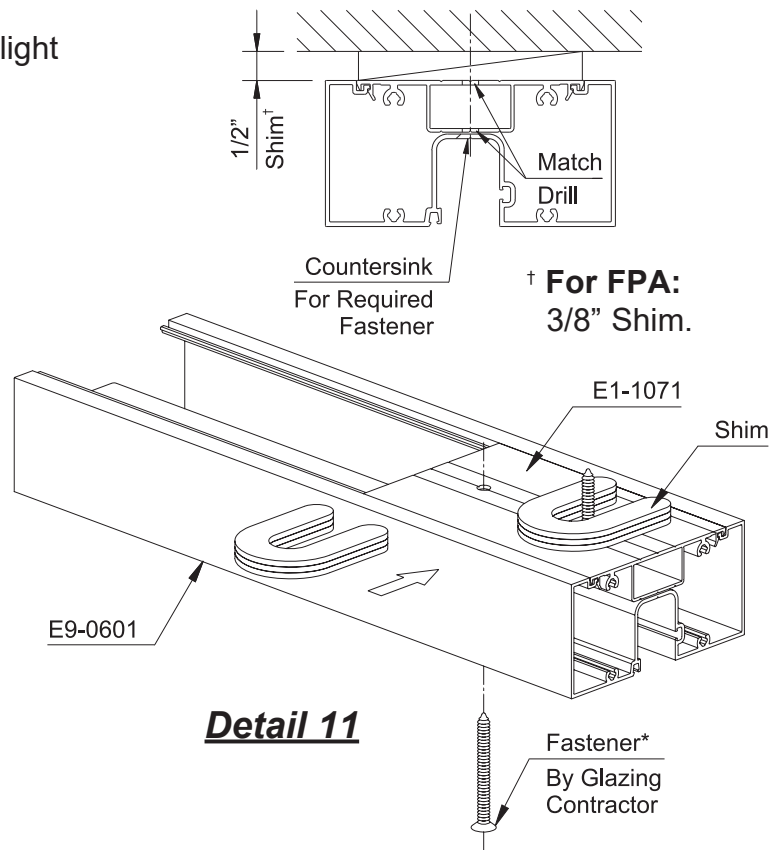
- Cut head and horizontal members to daylight opening between verticals.

Fabricate the ends of head members for perimeter anchor fasteners:

- Drill and countersink head member, E9-0601, for required fastener.
- Install anchor filler, E1-1071, at each end of the head member and crimp the snap legs at the ends to hold it in place.
- Match drill a clearance hole through anchor fillers, E1-1071, at each anchor location for appropriate fastener.

See **Detail 11**.

\*Refer to FPA drawings or shop drawings for appropriate fastener and hole locations as determined by a qualified engineer or contact YKK AP. (Flat Head Fasteners Only)



**Detail 11**

**FRAME FABRICATION**

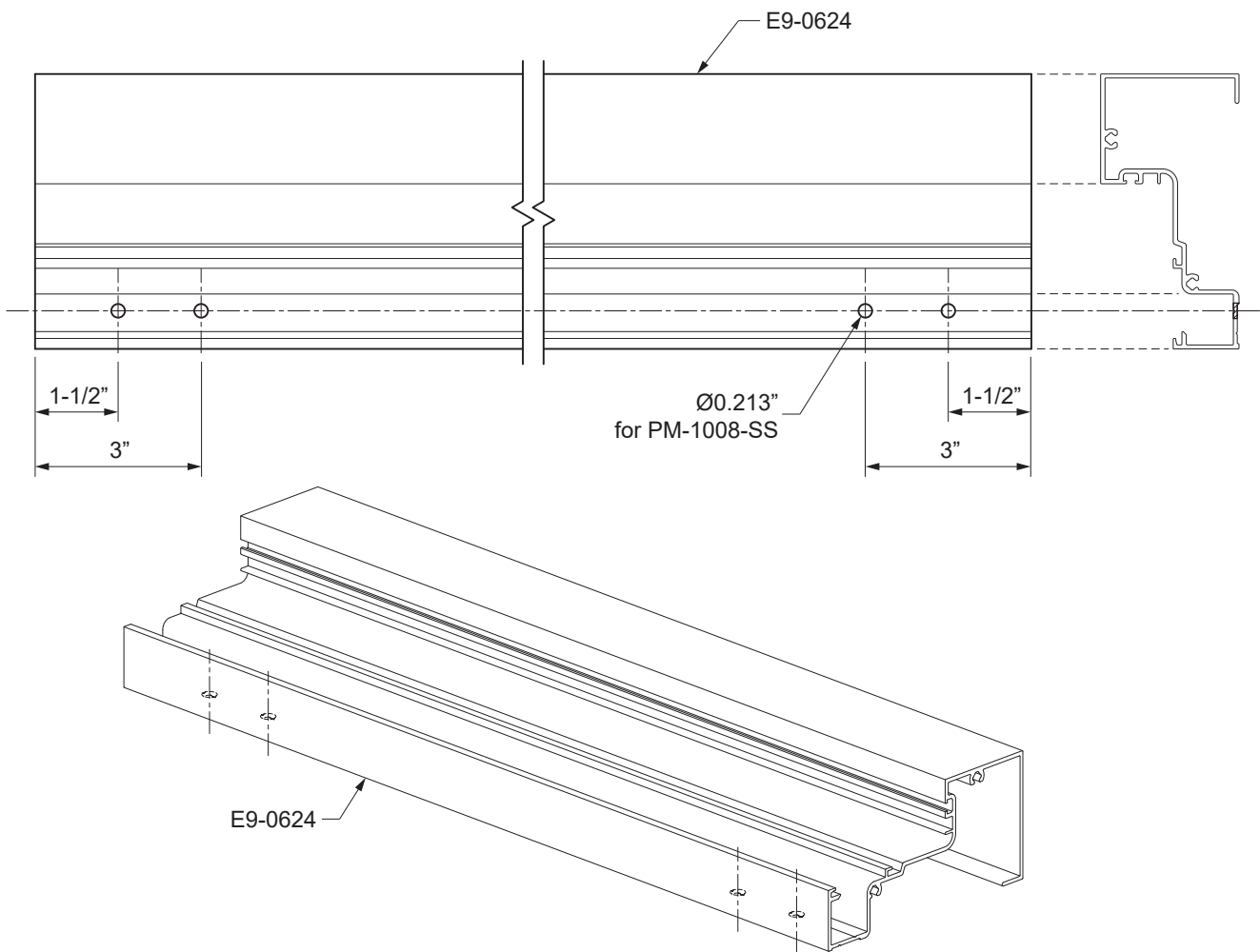
**STEP 7A  
FABRICATE SILL MEMBERS (±50 PSF)**

-Cut sill members to daylight opening between mullions.

Fabricate sill member for sill gutter anchors:

- Measure in 1-1/2" and 3" from both ends of sill members and mark locations along "V"-Groove.
- Drill 0.213" diameter (#3 drill bit) holes at each location marked for sill gutter anchor fasteners.

See **Detail 12**.



**Detail 12**  
±50 PSF

## FRAME FABRICATION

### STEP 7B

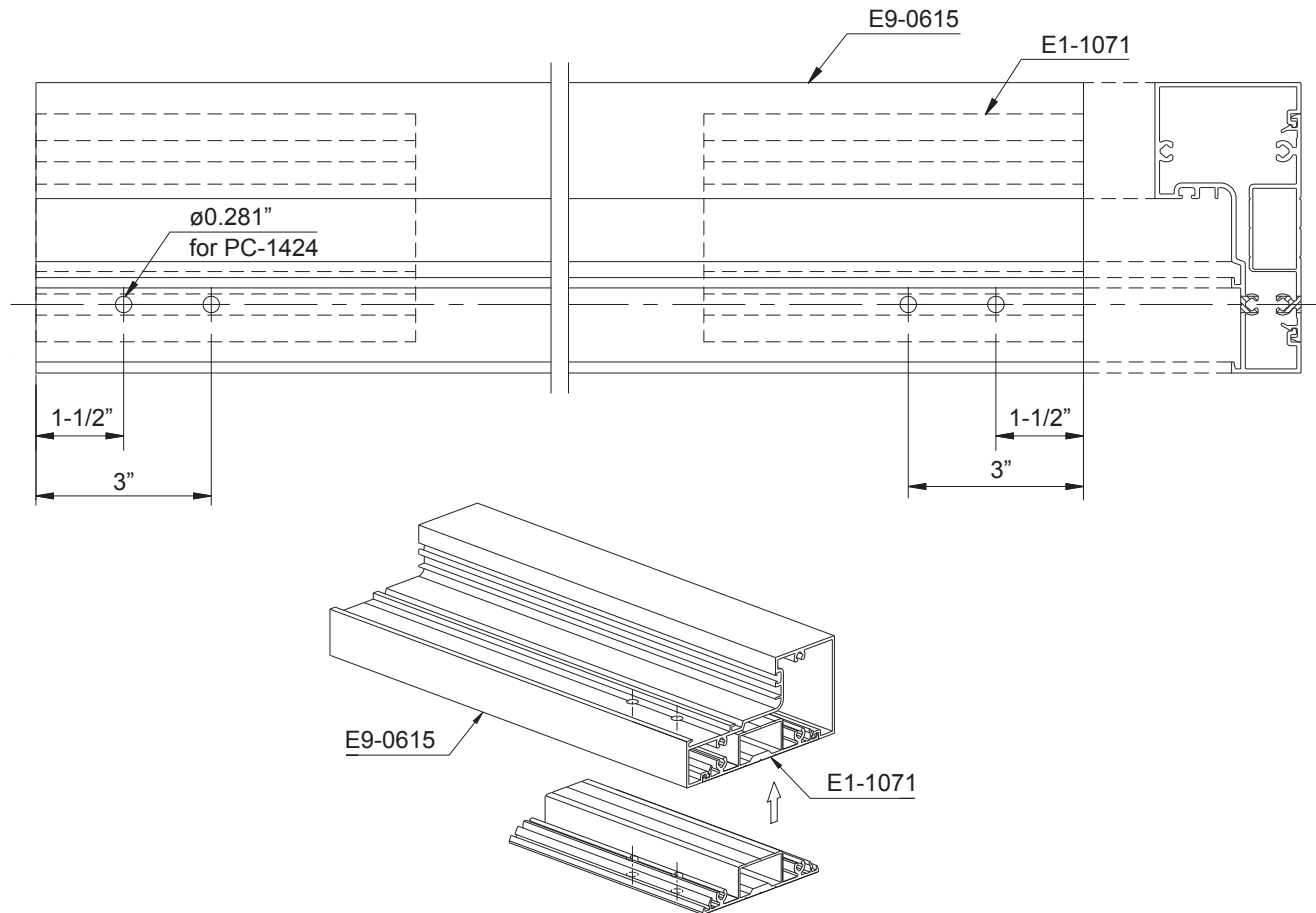
#### FABRICATE SILL MEMBERS (+70/-90 PSF\*)

-Cut sill members to daylight opening between mullions.

Fabricate sill member for sill gutter anchors:

- Measure in 1-1/2" and 3" from both ends of sill members and mark locations along "V"-Groove.
- Drill 0.281" diameter (#K drill bit) holes at each location marked for sill gutter anchor fasteners.
- Install anchor filler, E1-1071, at each end of the sill member and crimp the snap legs at the ends to hold it in place.
- Match drill 0.281" diameter (#K) holes through anchor fillers, E1-1071, at each anchor location.

See **Detail 13**.



**Detail 13**  
+70/-90 PSF\*

\* Per Florida Product Approvals as tested with steel reinforcing.

**FRAME FABRICATION**

**STEP 7C**

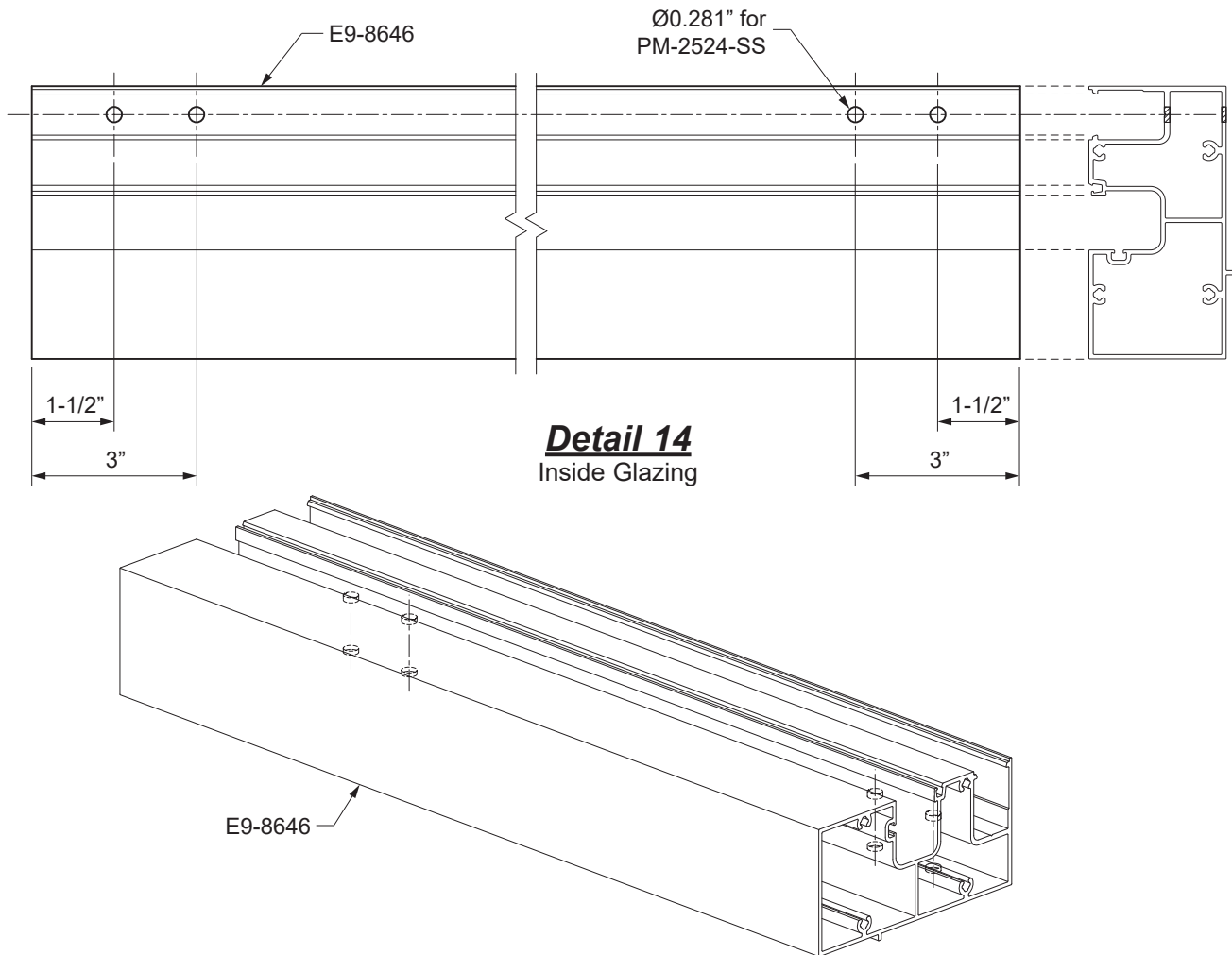
**FABRICATE SILL MEMBERS (Inside Glazing)**

-Cut sill members to daylight opening between mullions.

Fabricate sill member for sill gutter anchors:

- Measure in 1-1/2" and 3" from both ends of sill members and mark locations along "V"-Groove.
- Drill 0.281" diameter (#K drill bit) holes at each location marked for sill gutter anchor fasteners.

See **Detail 14**.



**STEP 8**

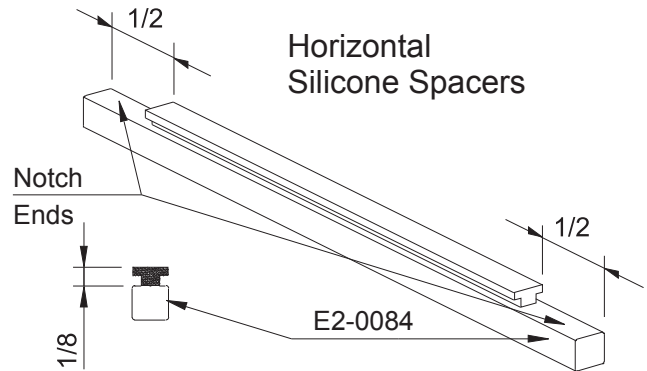
**FABRICATE GLASS STOPS / SNAP FILLER**

-Cut glass stops (E9-0608) and snap fillers (E9-8647) to daylight opening between verticals minus (-) 1/32".

## FRAME ASSEMBLY

### STEP 9 (SKIP TO STEP 10 FOR DRY GLAZE APPLICATIONS) STRUCTURAL SILICONE GLAZE (SSG) APPLICATIONS INSTALL STRUCTURAL SILICONE SPACERS

- Install all structural silicone spacers, E2-0084, in all horizontals and verticals **prior** to frame assembly.
  - Horizontal silicone spacers are to be cut to D.L.O. + 7/8" and must be notched as shown in **Detail 15**.
  - Vertical silicone spacers are to be cut to the full length of the vertical mullion and are not notched.
- Caution:** Be careful not to stretch silicone spacers when installing.

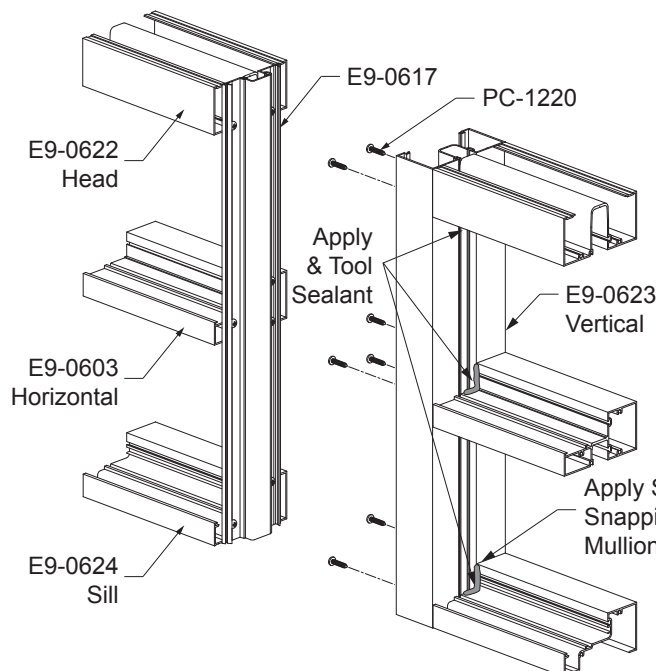


**Detail 15**

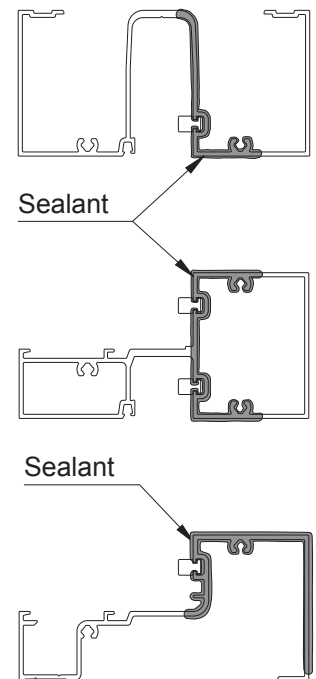
### STEP 10 ASSEMBLE FRAMES

- Clean all joints with isopropyl alcohol (50%) and wipe clean with white lint free cotton cloth using the two cloth method.
- Apply sealant to each end of head, horizontal and sill members prior to attaching to vertical.
- Attach head, horizontal, sill members and anchor fillers, E1-1071 to verticals and pocket fillers with PC-1220 fasteners. Note that anchor fillers apply only to the +70/-90 psf application at the head and sill.
- Tool all sealant to ensure a water tight joint.

See **Details 16, 16A, and 16B**.



**Detail 16**  
±50 PSF

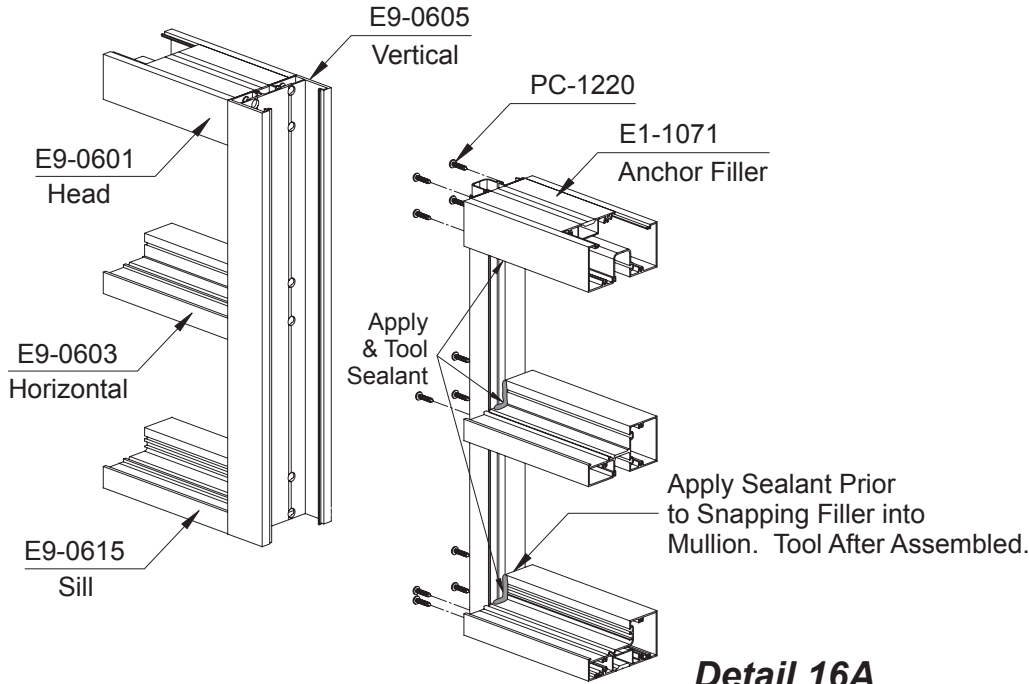


(SSG Application Shown, Dry Glaze Similar)

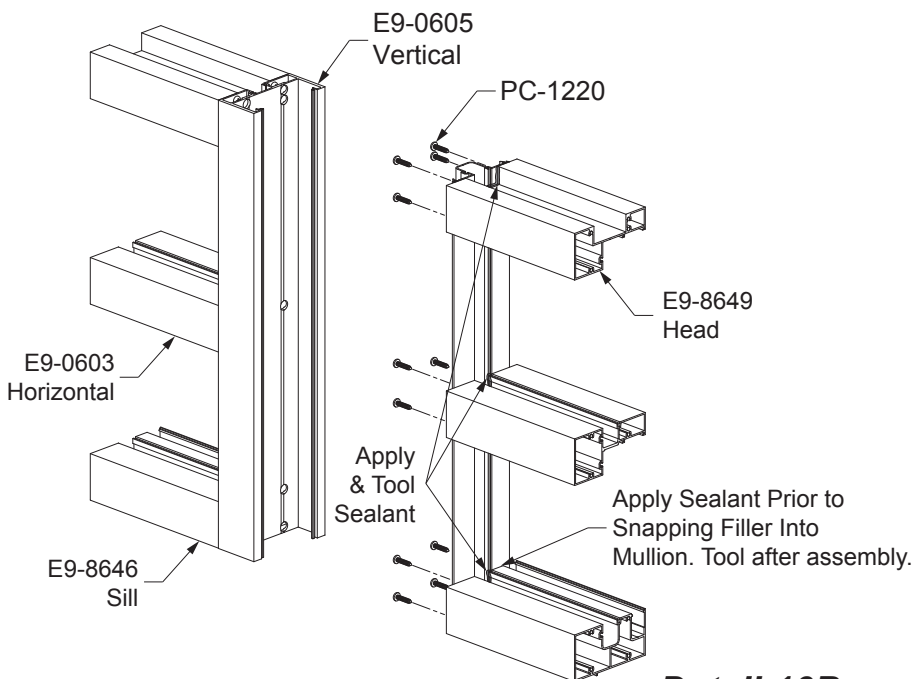
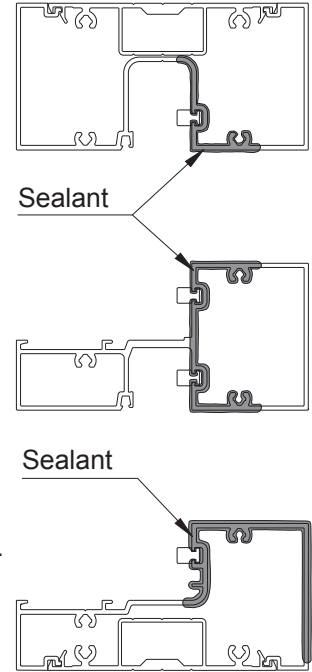
**Note:** In all metal to metal applications use Dow Corning® 795 or Tremco Spectrum 2.

**FRAME ASSEMBLY**

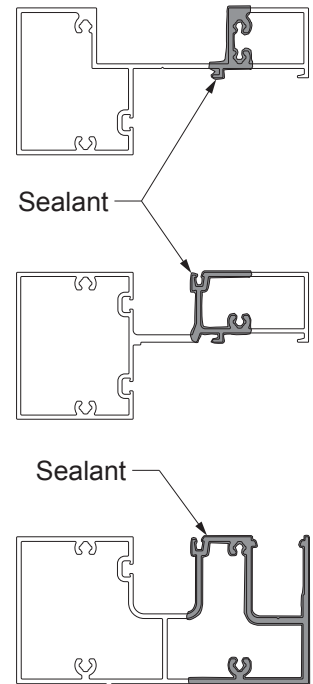
**STEP 10 (Continued)  
ASSEMBLE FRAMES**



**Detail 16A**  
+70/-90 PSF\*



**Detail 16B**  
Inside Glazing



\* Per Florida Product Approvals as tested with steel reinforcing.

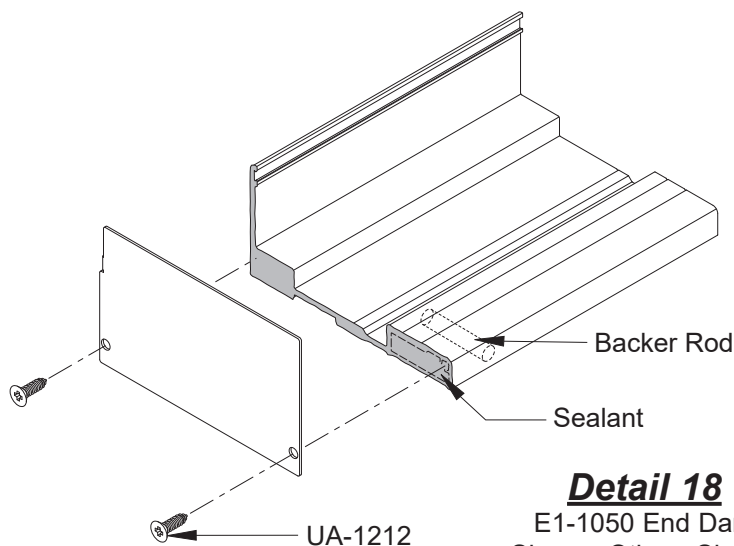
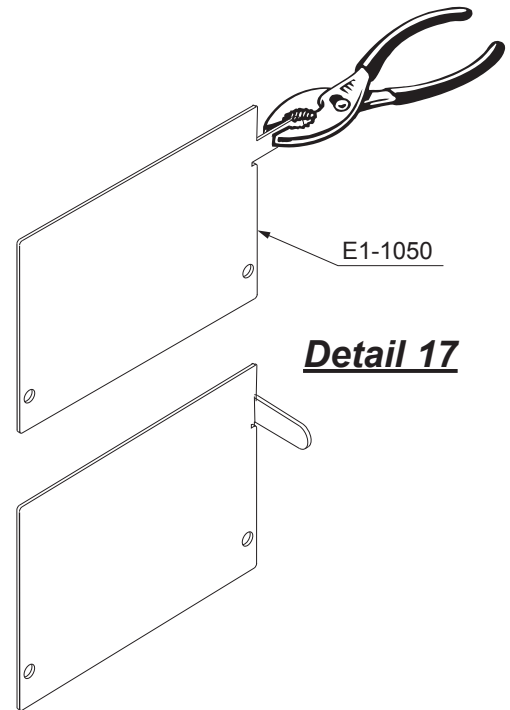
## FRAME INSTALLATION

### STEP 11 INSTALL SILL FLASHING END DAMS

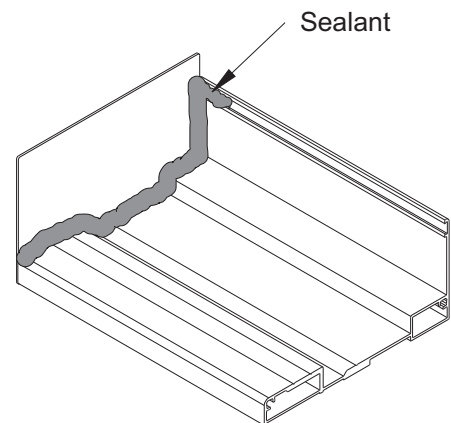
**Note:** The end dam tab for E1-1050 and E1-1139 must be bent in the correct position for the left or right end of the sill flashing.

See **Detail 17**.

- Clean all joint surfaces using Isopropyl Alcohol.
- Insert backer rod into the front cavity of the sill flashing. Fill the cavity flush with silicone sealant as shown in **Detail 18**.
- Apply sealant to the end of sill flashing.
- 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. (Use PC-0806 for E1-1140 end dam for I.G. sill flashing.)
- Tool sealant along the joint between the end dam and the sill flashing as shown in **Detail 19**.
- Seal over any exposed screw threads.



**Detail 18**  
E1-1050 End Dam  
Shown, Others Similar



**Detail 19**

## FRAME INSTALLATION

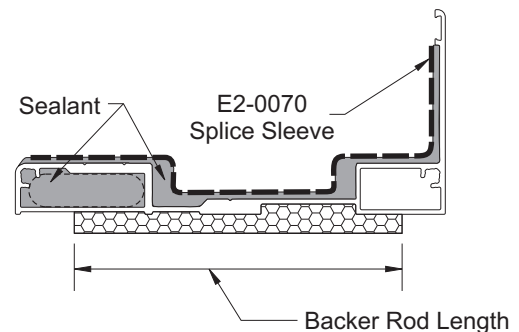
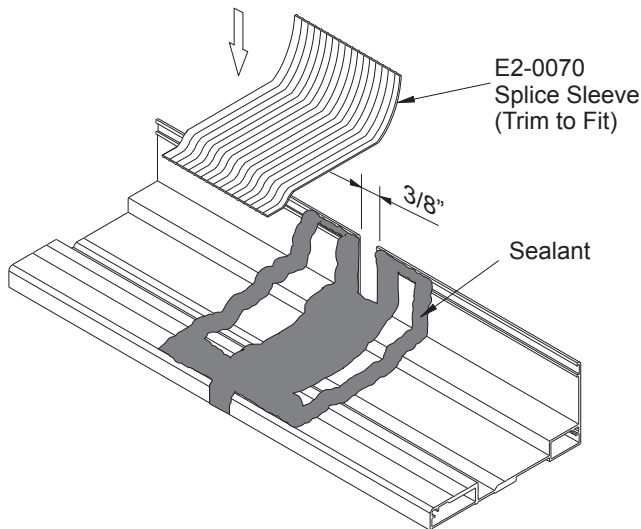
### STEP 12 INSTALL SILL FLASHING

- Install the sill flashing with a maximum 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, or per FPA drawings or P.E. calculations.
- Apply and tool sealant to cover the heads of all anchor screws.

### STEP 13 INSTALL SILL FLASHING SPLICE SLEEVE

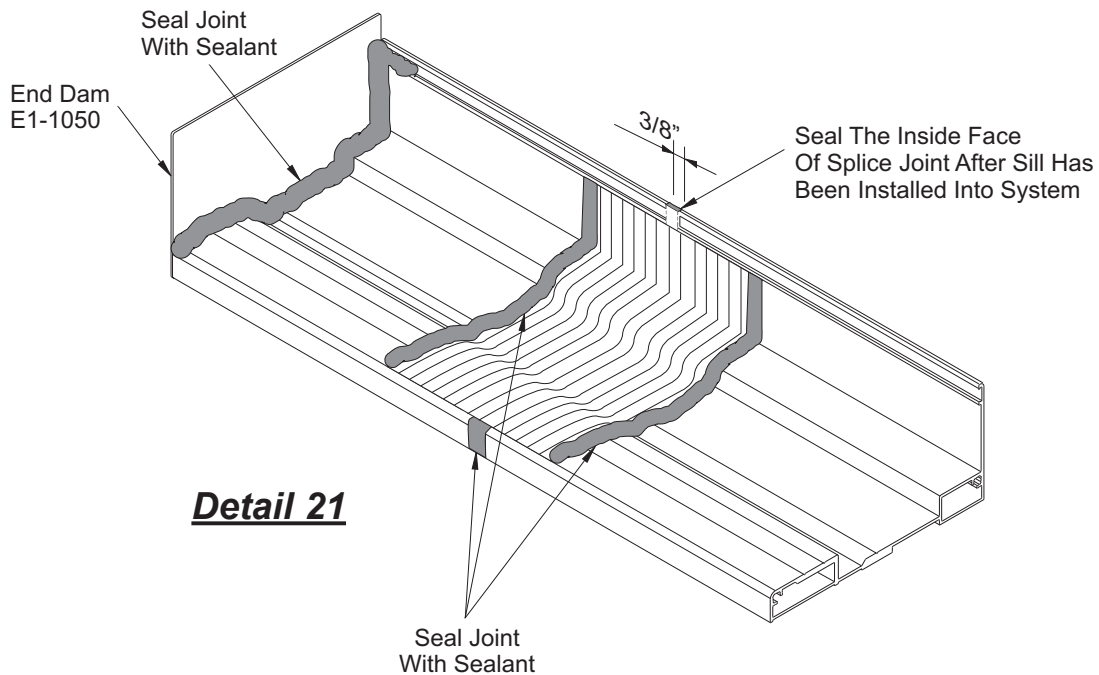
- After the sill flashing has been shimmed and installed to the building structure, insert a small backer rod under the sill flashing and inside the front cavities of the sill flashing as shown in **Detail 20**.
- Position the Silicone Splice Sleeve against the back wall below the groove.
- Bend the 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 20**, before positioning the flashing. Fill the two front cavities with silicone sealant prior to setting the silicone splice sleeve onto the sealant.
- Tool sealant tight as shown in **Detail 21** on **Page 23**, squeezing the sheet flat using a seam roller.
- Thoroughly seal the small joint directly in front of the Silicone Splice Sleeve as shown in **Detail 21**.

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 20**

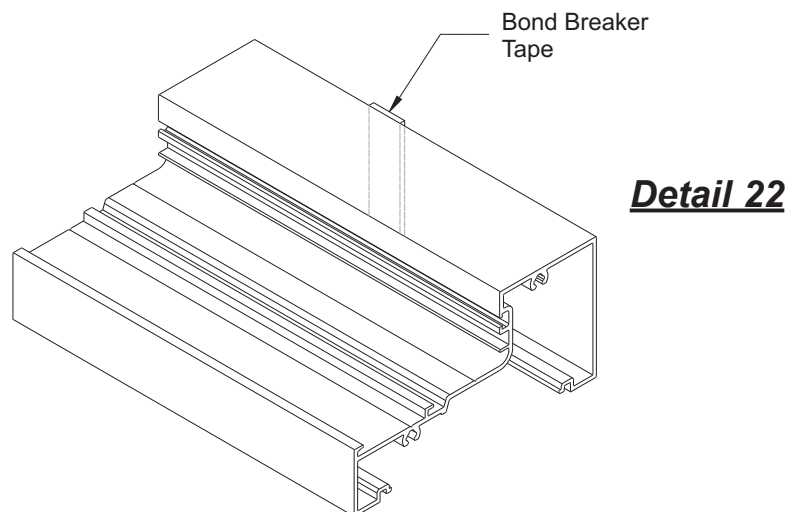
## FRAME INSTALLATION



### STEP 14 SILL PREPARATION

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

See **Detail 22**.



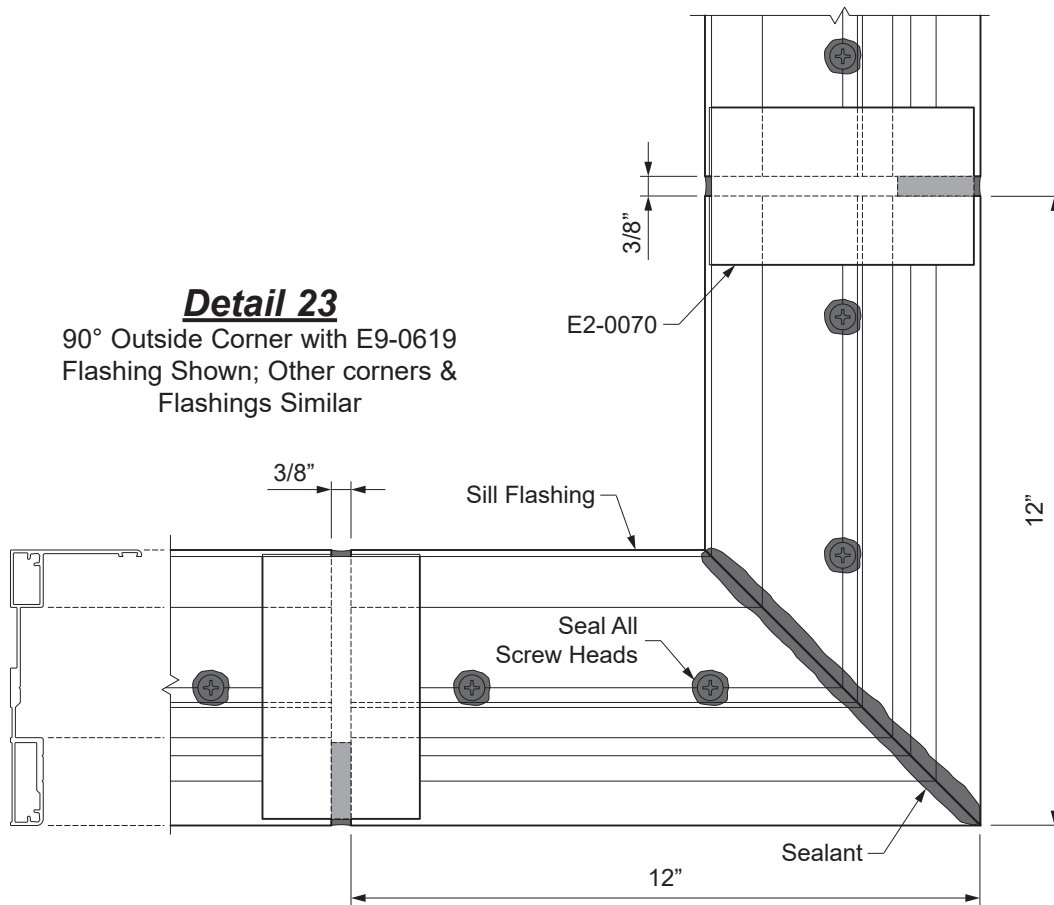
**FRAME INSTALLATION**

**STEP 15  
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 indicated on approved shop drawings.
- Apply and tool sealant to the mitered joint and anchor heads.

See **Detail 23**.

- Continue installing the rest of the sill flashing, providing a 3/8" expansion joint at splices shown in **Step 13** on **Page 22**.



## FRAME INSTALLATION

### STEP 16

#### PREPARE DOOR JAMBS (AIR THRESHOLD ONLY)

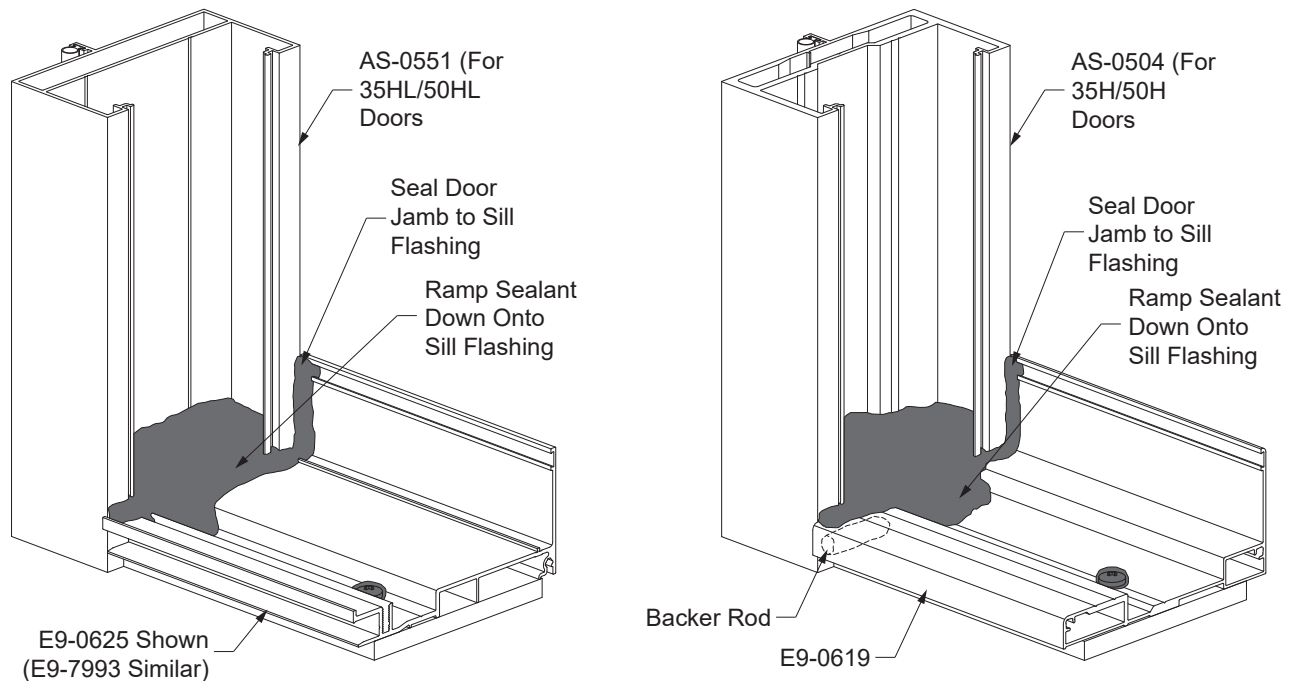
-Prior to snapping the assembled frames into the door jamb, the end of the sill flashing needs to be sealed to the door jamb.

-Apply and tool sealant to all sill flashing to door jamb joints.

-Apply sealant to completely fill the door jamb cavity and ramp the sealant down onto the sill flashing.

See **Detail 24**.

Refer to the **35H/50H or 35HL/50HL Entrances Installation Manual** for door installation instructions.



**Detail 24**

## FRAME INSTALLATION

### STEP 17 INSTALL STOREFRONT FRAMES

-Immediately before installing frames, apply sealant to face of back leg of sill flashing.

**Note: Only apply sealant to areas being installed so that sealant does not cure.**

See **Details 26, 26A, and 26B.**

-Snap the pocket filler framing portions to the vertical mullion framing portions to complete the frame.

**Note: Mullions cannot be unsnapped once installed.**

-When using steel reinforcing, attach steel to mullion with HF-2512 fasteners and attach pocket filler, E9-0606, to the steel with FF-1008 fasteners.

-For 50 PSF systems, secure the mullions to the pocket filler with FM-1006 fasteners.

See **Details 25, 25A, and 25B.**

**Note:** Steel reinforcing must be attached to mullions before framing portions are snapped together.

-Set frame into place on the sill flashing.

-Always shim anchor locations at head, sill and jams:

1/4" maximum at 1/4" shim.

3/8" maximum at 5/16" shim.

-Attach head and jamb members to the structure with flat head fasteners:

Wood: 5/16" or 1/4" Tapcons.

Steel: 1/4" or 5/16" Tapcons.

Concrete/Masonry: 5/16" or 1/4" Tapcons.

Refer to FPA drawings for other substrates.

Anchor sill member to sill flashing:

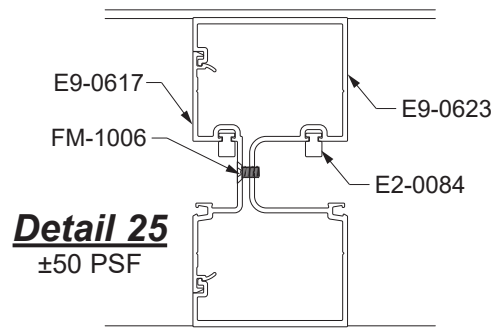
-Match drill sill flashing for sill gutter anchors using holes already drilled in the sill members from **Step 7** on **Pages 16, 17, & 18.**

-For +70/-90 psf application, drill 0.201" diameter (#7 drill bit) holes in the sill flashing and attach sill member using PC-1424 fasteners. For 50 psf, use PM-1008-SS fasteners, and for Inside Glazing, use PM-2524-SS. (Seal the fastener head for inside glazing).

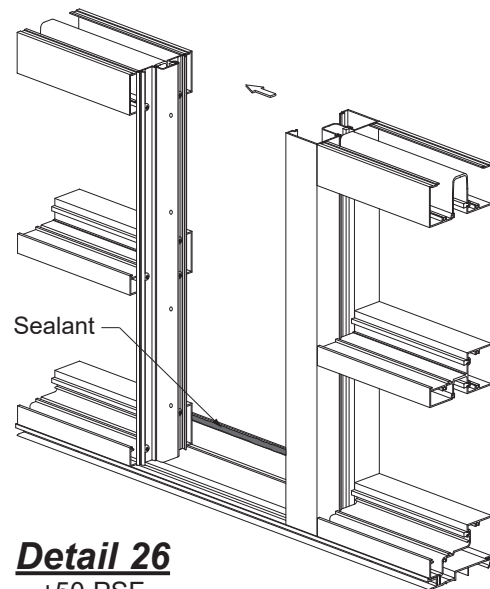
**Table 1 - Minimum Embedment into Structure**

Condition*	Minimum Embedment	
	Wood	Concrete/Masonry
At Jamb & Head	1-3/8"	1-1/4"
At Sill Flashing	1-3/8"	1-1/4"

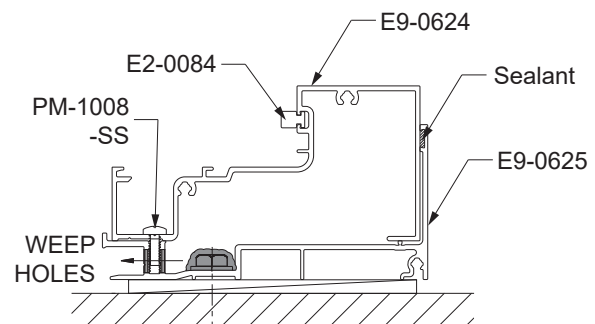
\*Use specified fasteners in Florida Product Approvals. Structure must be capable of resisting all loads imposed by fasteners and anchors.



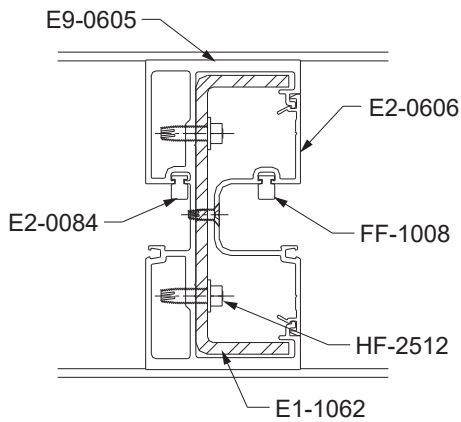
**Detail 25**  
±50 PSF



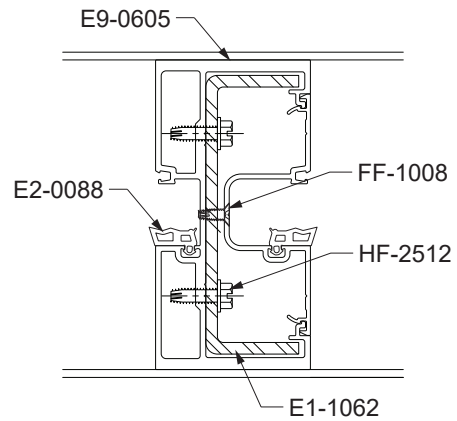
**Detail 26**  
±50 PSF



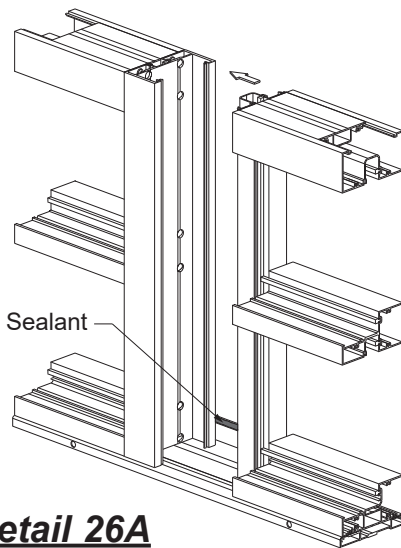
## FRAME INSTALLATION



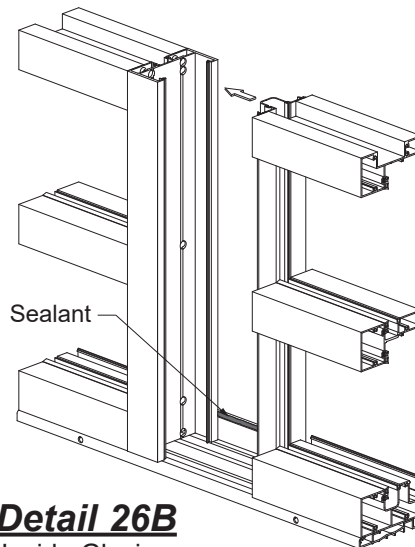
**Detail 25A**  
+70/-90 PSF\*



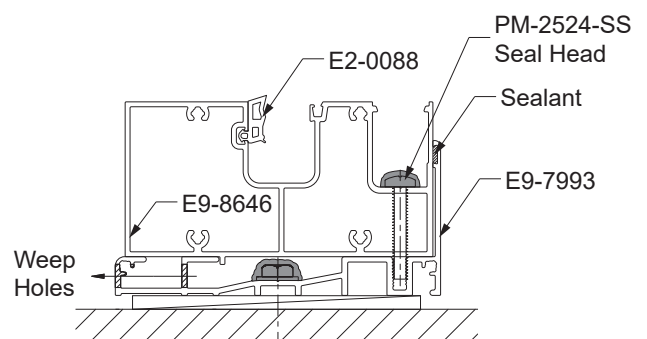
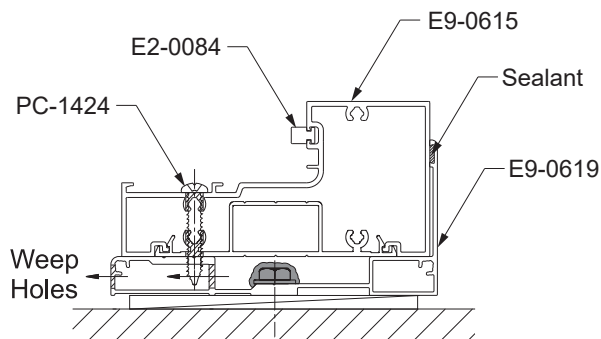
**Detail 25B**  
Inside Glazing



**Detail 26A**  
+70/-90 PSF\*



**Detail 26B**  
Inside Glazing



\* Per Florida Product Approvals as tested with steel reinforcing.

## FRAME & DOOR INSTALLATION

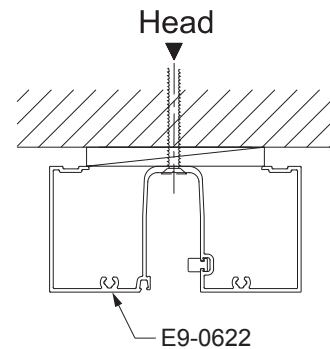
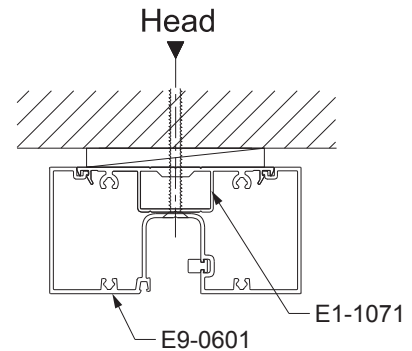
### STEP 17 (Continued) INSTALL YHS 50 FS STOREFRONT FRAMES

#### Dade County Applications without Steel Reinforcing:

- The door frame must be installed plumb, square, level, and true.
- Shim as required (3/8" caulk joint at head and jambs).
- Anchor the frame to the structure according to **Detail 27 & 28**:

- △ = Sill Flashing Anchor:
  - Wood: #14, 1/4" or 5/16" Wood Screw
  - Concrete: 1/4" or 5/16" Tapcon Fastener
- ▼ = Head Anchor:
  - Wood: #14, 1/4" or 5/16" Wood Screw
  - Concrete: 1/4" or 5/16" Tapcon Fastener
- = Sill Gutter Anchor:
  - Wood: #14, 1/4" or 5/16" Wood Screw
  - Concrete: 1/4" or 5/16" Tapcon Fastener
- = Jamb Anchor:
  - Wood: #14, 1/4" or 5/16" Wood Screw
  - Concrete: 1/4" or 5/16" Tapcon Fastener

Refer to FPA Drawings for locations and other substrates.

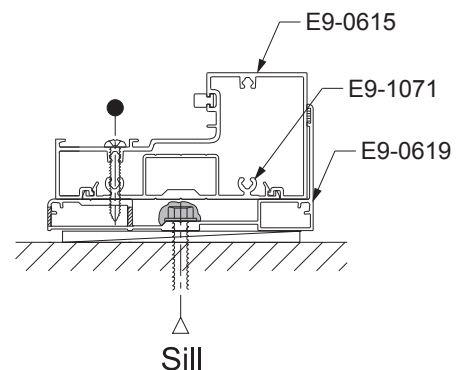


### Detail 27

**Table 1 - Minimum Embedment into Structure**

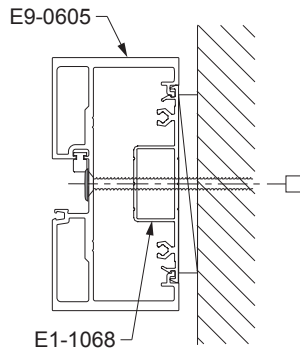
Condition*	Minimum Embedment	
	Wood	Concrete/ Masonry
At Jamb & Head	1-3/8"	1-1/4"
At Sill Flashing	1-3/8"	1-1/4"

\*Structure must be capable of resisting all loads imposed by fasteners and anchors.

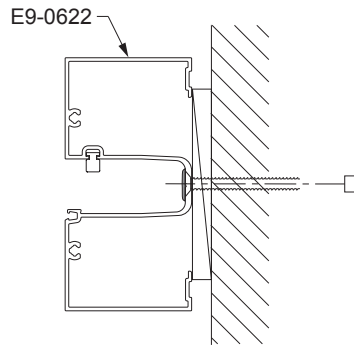


## FRAME & DOOR INSTALLATION

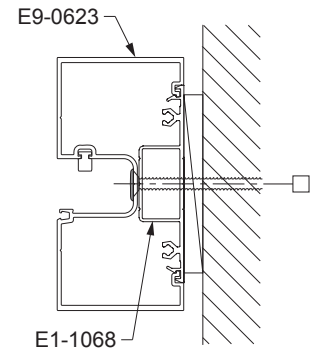
### STEP 17 (Continued) INSTALL STOREFRONT FRAMES



Jamb  
+70/-90 PSF\*



Jamb  
± 50 PSF



Jamb  
+70/-90 PSF\*

### **Detail 28**

**FRAME INSTALLATION**

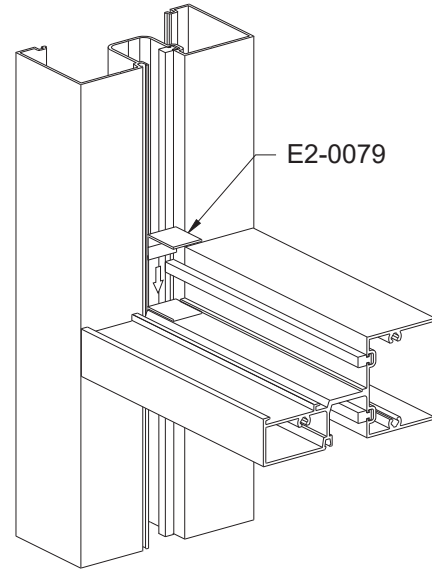
**STEP 18  
INSTALL WATER DEFLECTORS**

YHS 50 FS requires the installation of a water deflector, E2-0079, at the ends of every intermediate horizontal to keep water off of the insulated units. For best adhesion, make sure that the horizontal is clean and dry.

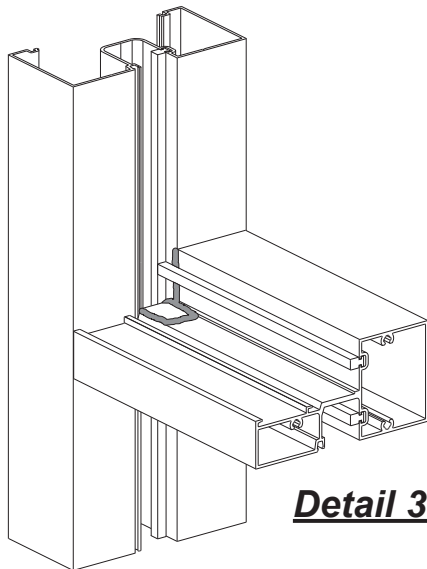
-Peel away the protective paper from the bottom of the water deflector, E2-0079, and install the water deflector at the ends of each horizontal. Position the vertical leg of the water deflector against the end of the horizontal.

See **Detail 29**.

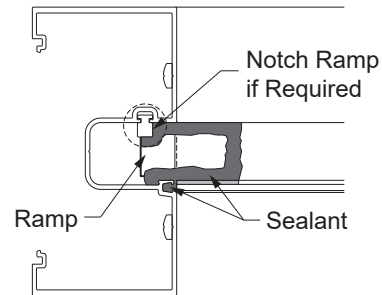
**Note:** For Wet Glazing applications, it may be necessary to notch ramp of the water deflector around the vertical spacer. Ensure the water deflector is sealed to the spacer.



**Detail 29**



**Detail 30**



**Detail 31**

-Apply and tool sealant along the edges of the water deflector and down onto the horizontal. See **Detail 30**.

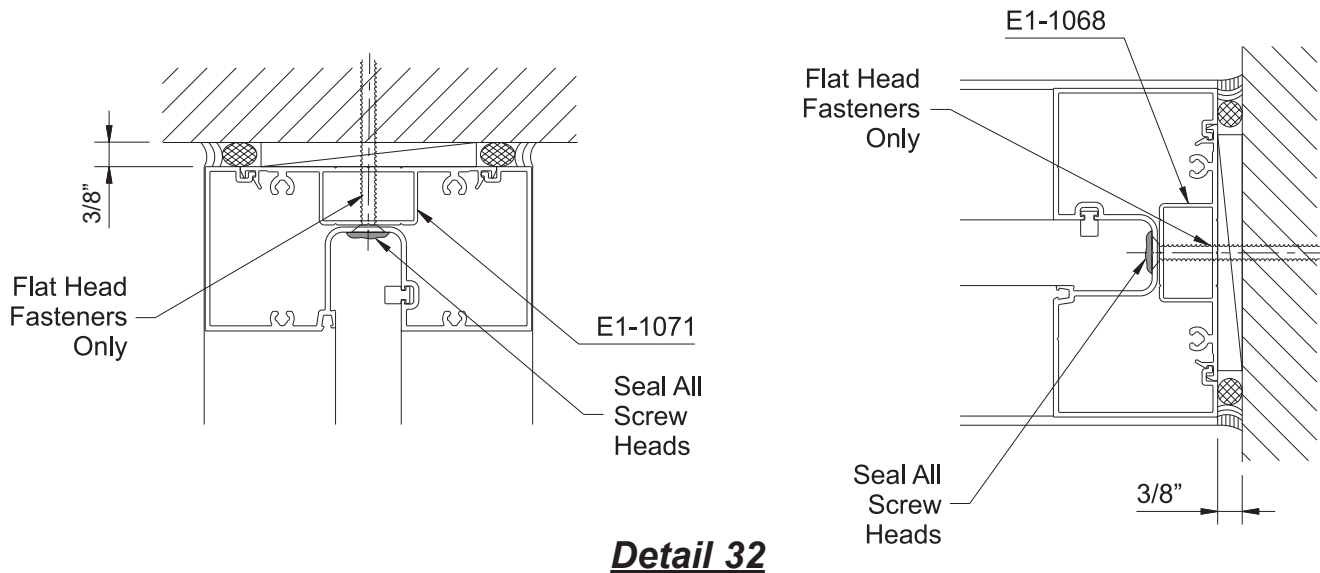
-Seal the ramp of the water deflector to the interior side of the glazing pocket. See **Detail 31**.

## FRAME INSTALLATION

### STEP 19 PERIMETER SEALANT

- Must be applied at interior and exterior.
- Position backer rod around perimeter of frame.
- Apply and tool sealant to the joint between frame and masonry at both interior and exterior.
- Make sure all screw heads are sealed.

See **Detail 32**.



**Detail 32**

## GLAZING

### STEP 20 (SKIP TO STEP 22 FOR WET GLAZING APPLICATIONS)

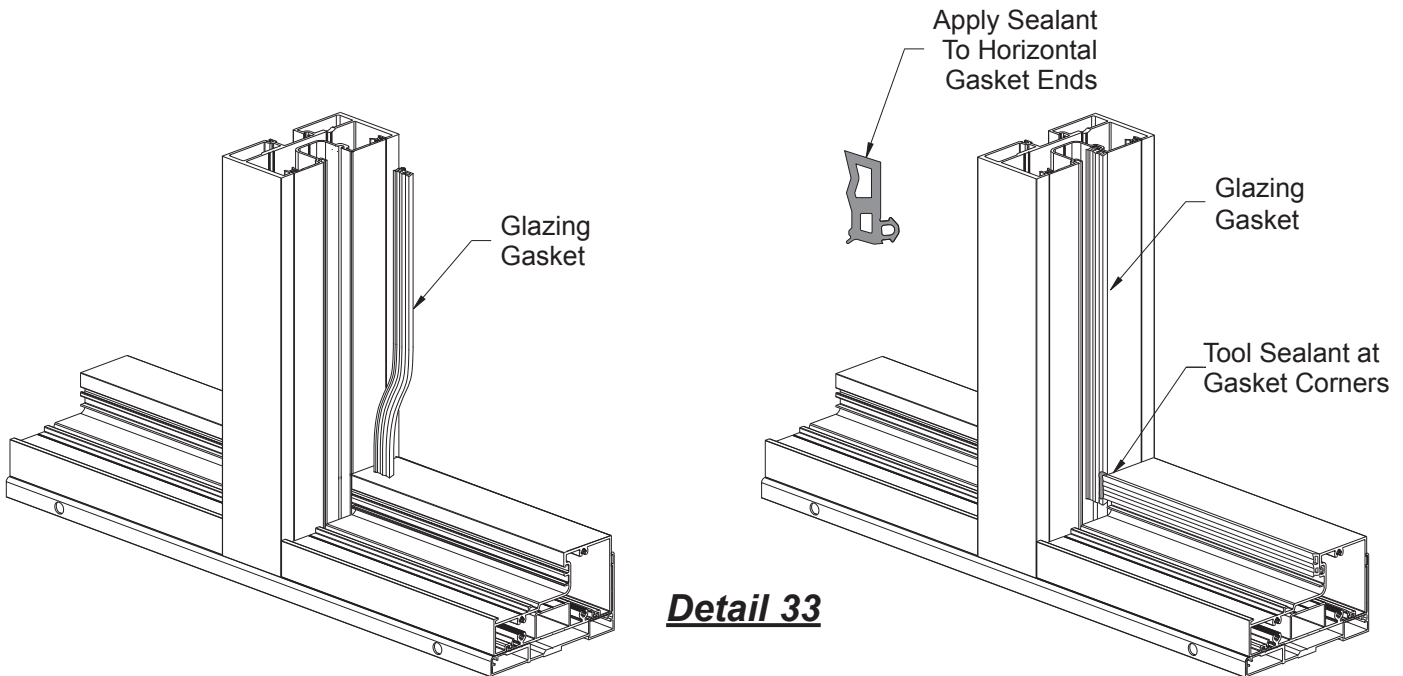
#### GLAZING: DRY GLAZING APPLICATIONS

**Note:** Inside glazed applications are dry glazed only.  
The interior glazing gaskets must be installed prior to the glazing process.

-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 Daylight Opening plus(+) 1-1/4" plus(+) 3/16" for each foot of length.
- Insert the gasket into the reglet at each end first, and 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.



Install horizontal glazing gaskets next:

- Cut horizontal glazing gaskets to Daylight Opening plus(+) 3/16" 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 and push each end tight against the vertical gasket.
- Then insert the gasket at the midpoint of the opening and 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 33**.

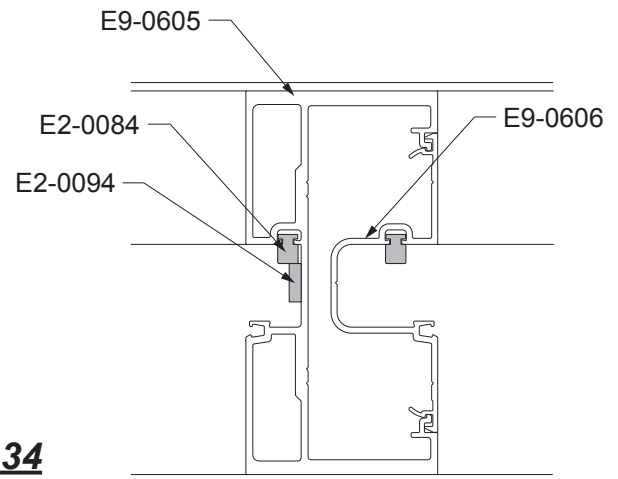
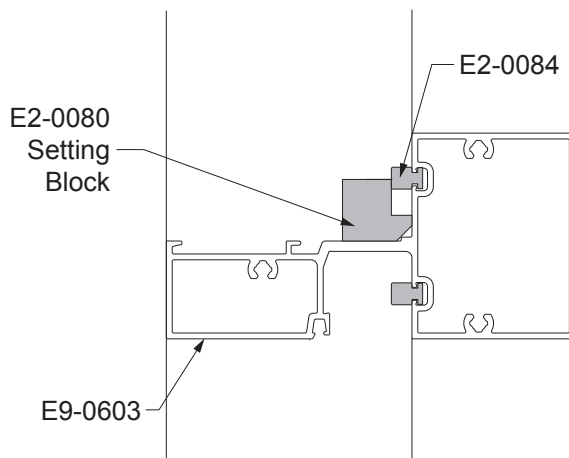
## GLAZING

### STEP 21 DETERMINE GLASS SIZE

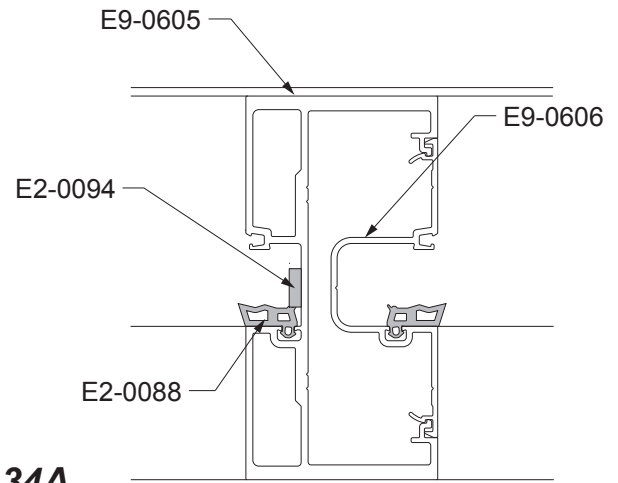
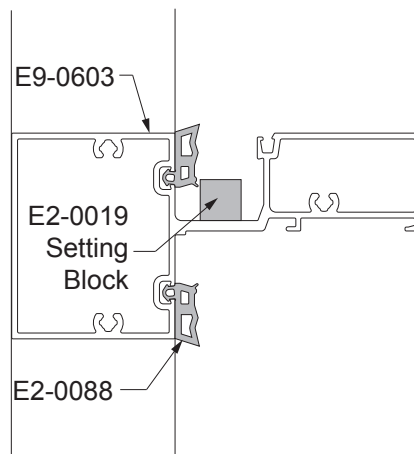
Typical Framing:     **Glass Width = Daylight Opening plus(+) 1-1/8"**  
                               **Glass Height = Daylight Opening plus(+) 1-1/8"**

### STEP 22 GLAZING

- Install side blocks, E2-0094, centered along the vertical opening of the shallow pocket.
- Install setting blocks into the glazing pocket at 1/4 points of D.L.O. unless otherwise specified.
- Cut horizontal & vertical exterior gaskets to daylight opening plus(+) 1/4" for each foot of length.
- Clean all glazing surfaces and joints of foreign matter and contaminants such as grease, oil, dust, frost, and surface dirt. **Do not** use water or soap solutions to clean surfaces or tool sealant. See **Details 34 & 34A**.



**Detail 34**  
Outside Glazing



**Detail 34A**  
Inside Glazing

## GLAZING

### STEP 22 (Continued) GLAZING

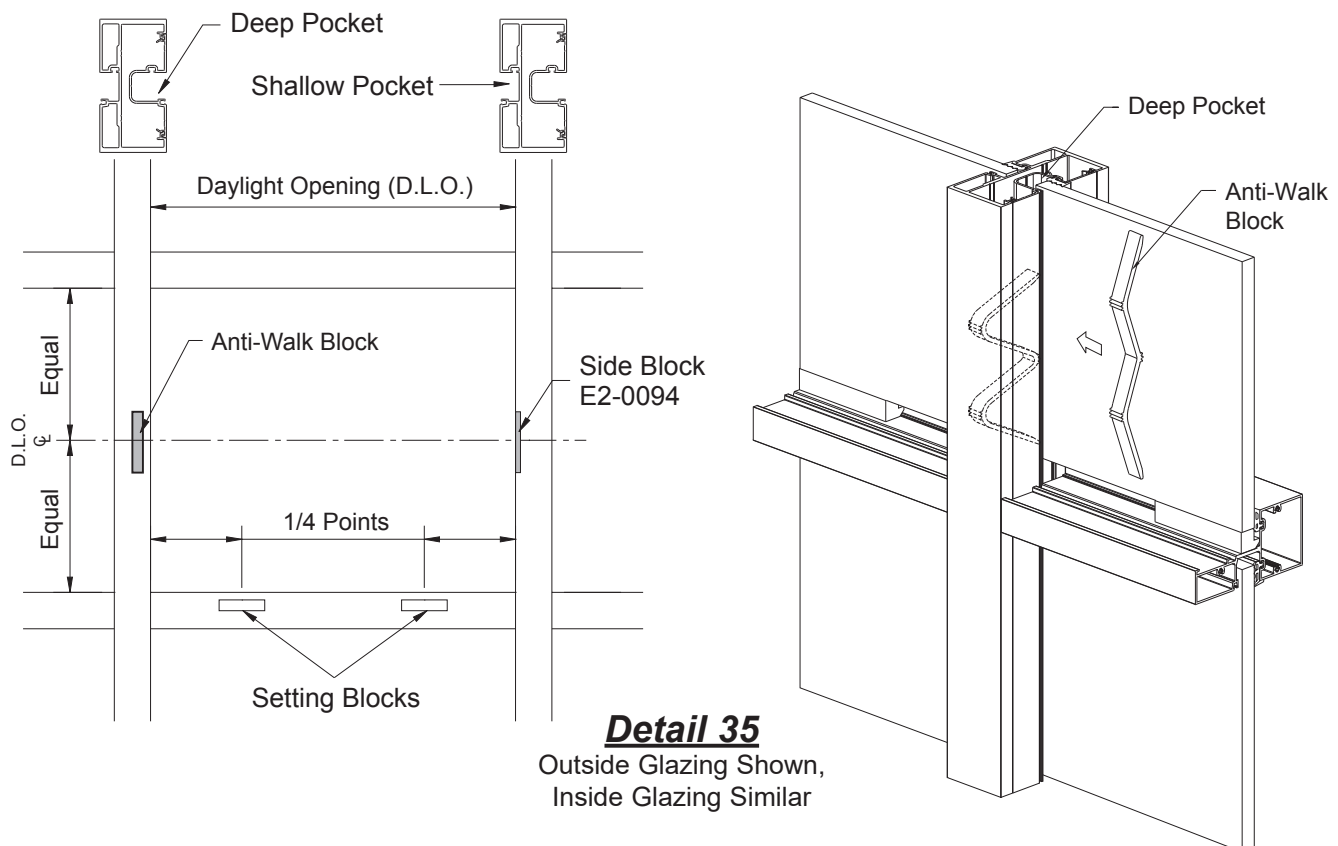
- Carefully install glass into the frame making sure that the side blocks are properly aligned with the glass.
- Slide the glass into the deep vertical pocket and then slide over until contact is made with the side block in the shallow glazing pocket. This will ensure proper location of the glass.
- Lift the glass and place setting blocks at 1/4 points or according to the engineering calculations.

YHS 50 Dry Glaze applications require the installation of an anti-walk block into each jamb and vertical deep glazing pocket of each lite centered along the daylight opening.

Use E2-0807 at E9-0623 jambs and mullions.

Use E2-0546 at E9-0606 deep pocket fillers for heavy duty mullions.

- Flatten the anti-walk block against the exterior surface of the glass and push it into the opening between the glass and the mullion until it is released into the glazing pocket. See **Detail 35**.

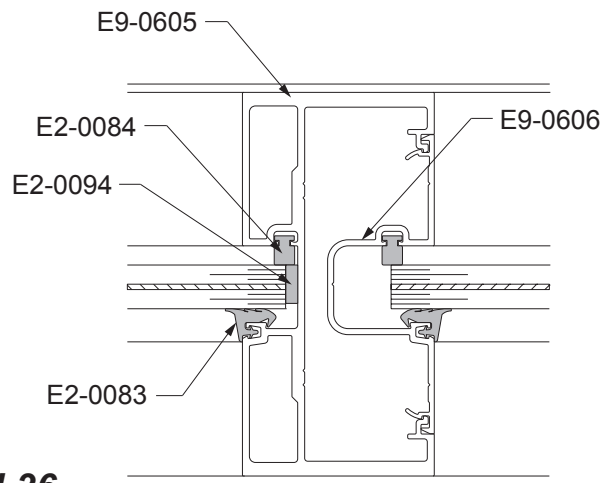
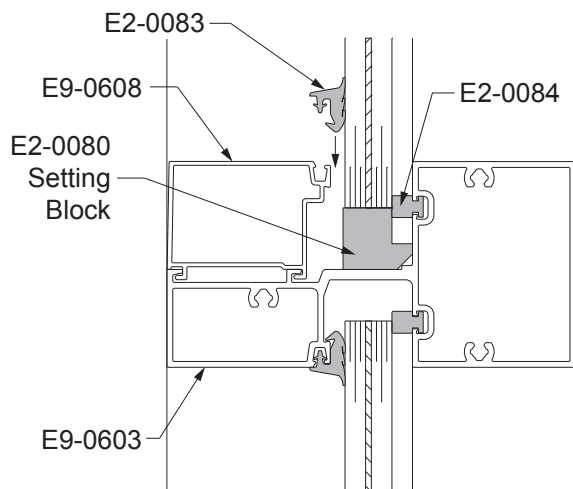


## GLAZING

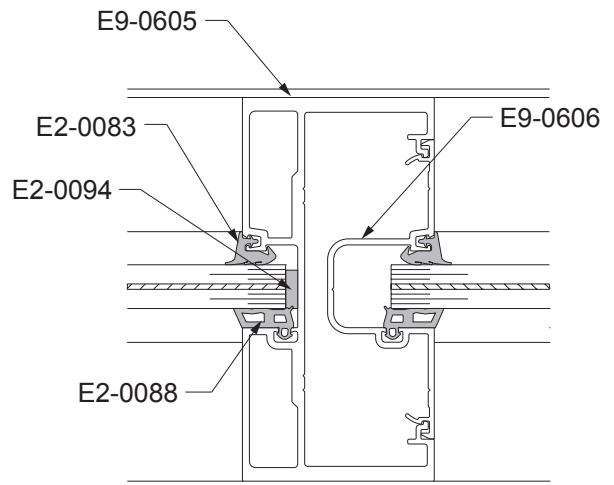
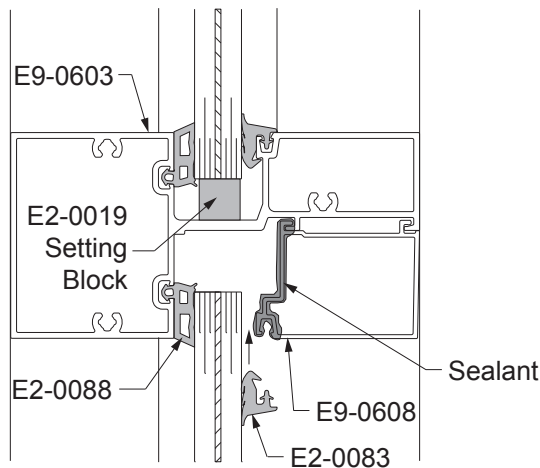
### STEP 22 (Continued) GLAZING

- Install glass stop, E9-0608.
- For Inside Glazing applications, apply sealant to the ends of the glass stop E9-0608 as shown in **Detail 36A**.
- Install the vertical exterior gaskets first. Roll the gasket in working from the center towards each end.
- Then install the horizontal exterior gaskets. Install each end and the center of the gasket into the reglet and roll in the remainder of gasket working from the center towards each end.

See **Detail 36 & 36A**.



**Detail 36**  
Outside Glazing



**Detail 36A**  
Inside Glazing

**GLAZING**

**STEP 22 (Continued)  
GLAZING**

-Apply masking tape to the aluminum and glass according to **Detail 37**.

**Note:** Apply tape to the glass 1/8" away from the aluminum to provide a 30° bevel.

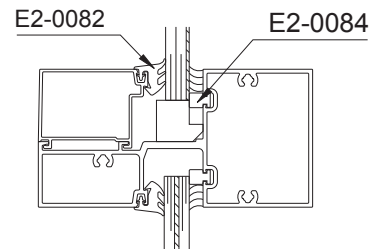
- Apply Dow Corning® 995 structural silicone sealant from the bottom to the top of joint.
- Use positive pressure so that sealant completely fills the cavity between glass and aluminum.
- Using a 30° nylon beveled spatula, or other non-scratching implement, tool the structural silicone sealant immediately after running the joint. Exert positive pressure while tooling sealant to ensure that the silicone makes complete contact with all surfaces.

**Note:** Be careful not to remove too much silicone.

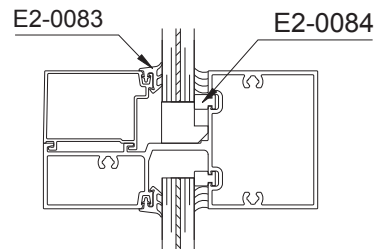
The finished joint should be 30° beveled around the glass.

-Immediately remove masking tape while wet; do not allow silicone to skin. Masking tape must be removed within 10 minutes of tooling.

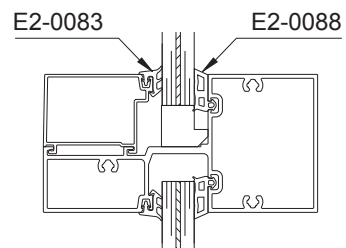
**Glazing Options**



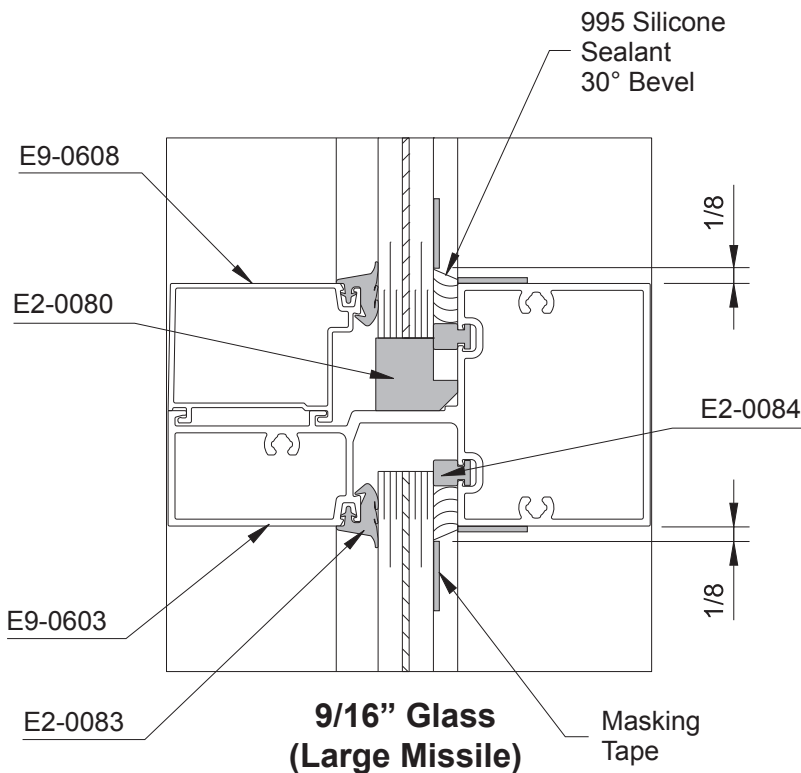
**3/8" or 7/16" Glass (Large Missile)**



**9/16" Glass (Large Missile)**



**9/16" Glass (Small Missile)**



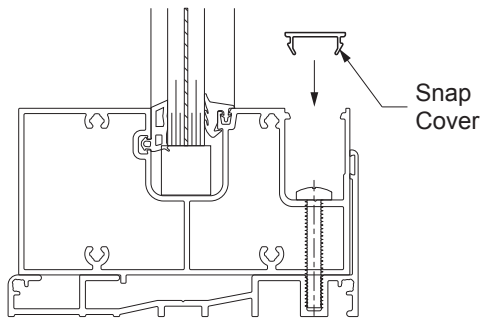
**9/16" Glass  
(Large Missile)**

**Detail 37**  
Outside Glazing shown, Inside Glazing Similar

## GLAZING

### STEP 23 INSTALL INTERIOR SNAP COVER

-For Inside Glazing applications, snap the E9-8647 snap cover into the sill as shown in **Detail 38**.



**Detail 38**  
Inside Glazing



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