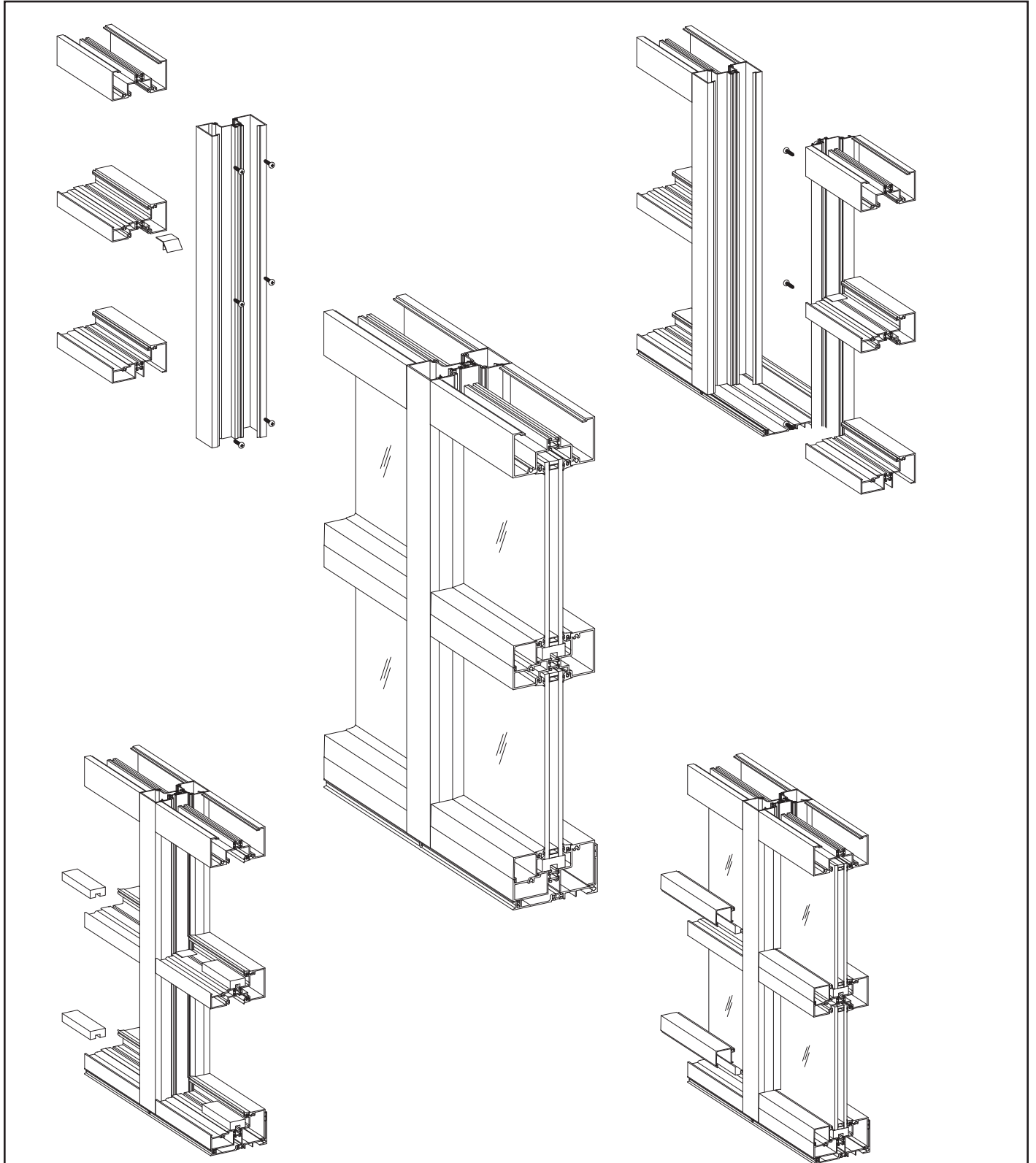


**YES 45 FT Thermal Storefront System**



**Installation Manual**



## TABLE OF CONTENTS

|   |                |
|---|----------------|
| Installation Notes .....                                      | Page ii        |
| <b>PARTS DESCRIPTION</b>                                      |                |
| Framing Members .....   | Pages 1 & 2    |
| Door Framing Members.....                                     | Pages 2 & 3    |
| Accessories .....   | Pages 3 & 4    |
| <b>FRAME FABRICATION</b>                                      |                |
| Determine Frame Size .....                                    | Pages 5 & 6    |
| Fabricate Sill Flashing .....                                 | Page 7         |
| Fabricate Head Receptor.....                                  | Page 8         |
| Fabricate Two Piece Verticals for Screw Spline Assembly ..... | Page 9         |
| Fabricate Tubular Verticals for Shear Block Assembly .....    | Page 10        |
| Fabricate Head, Horizontal & Sill Members.....                | Pages 11 & 12  |
| Fabricate Glazing Adaptors .....                              | Page 12        |
| <b>FRAME ASSEMBLY</b>   |                |
| Assemble Frames For Screw Spline Assembly.....                | Page 13        |
| Assemble Frames For Shear Block Assembly .....                | Page 14        |
| Install Foam Plugs at Head (Optional).....                    | Page 15        |
| <b>FRAME INSTALLATION</b>                                     |                |
| Install Sill Flashing End Dams .....                          | Page 16        |
| Install Sill Flashing.....                                    | Pages 17 & 18  |
| Install Sill Flashing for Corners.....                        | Page 19        |
| Attach Head Receptor End Caps.....                            | Page 20        |
| Install Head Receptor .....                                   | Page 21        |
| Sill Preparation .....  | Page 22        |
| Prepare Door Jambs.....                                       | Page 22        |
| Install Frames .....  | Pages 23 & 24  |
| Install Expansion Mullions Where Required .....               | Page 25        |
| Install Corner Assemblies .....                               | Page 26        |
| Install Optional Compound Mullions .....                      | Pages 27 & 28  |
| Apply Perimeter Sealant.....                                  | Pages 29 & 30  |
| Install Water Deflectors.....                                 | Page 31        |
| Apply Internal Sealant.....                                   | Page 32        |
| Install Glazing Adaptors.....                                 | Page 32        |
| Install Optional Compound Horizontals .....                   | Pages 33 to 35 |
| <b>GLAZING</b>  |                |
| Install Glazing Gaskets.....                                  | Page 36        |
| Install Glass .....   | Page 37        |
| Install Anti-Walk Blocks .....                                | Page 38        |
| Install Glass Stops.....                                      | Page 38        |

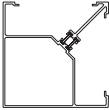

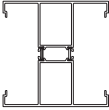



## **Installation Notes**

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. 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.

YES 45 FT FRAMING MEMBERS (2-1/4" x 4-1/2")

|  |   |                 |  |   |                 |
|--|---|-----------------|--|---|-----------------|
|  | <b>Head/Jamb/Vertical</b>   | <b>BE9-1503</b> |  | <b>Sidelite Base</b><br>(4-1/2" x 4-1/2")                                 | <b>BE9-1513</b> |
|  | <b>Horizontal</b>   | <b>BE9-1506</b> |  | <b>Vertical/Horizontal</b><br>(4-1/2" x 4-1/2")                           | <b>BE9-1514</b> |
|  | <b>Sill/Horizontal</b>  | <b>BE9-1504</b> |  | <b>Expansion Mullion</b><br>Male  | <b>BE9-1516</b> |
|  | <b>Glass Stop</b>   | <b>E9-1015</b>  |  | <b>Expansion Mullion</b><br>Female  | <b>BE9-1517</b> |
|  | <b>Tubular Vertical</b>   | <b>BE9-1507</b> |  | <b>Hinged Mullion</b><br>0° to 15° Male                                   | <b>BE9-1522</b> |
|  | <b>Heavy Duty</b><br><b>Two Piece Vertical</b>                                | <b>BE9-1515</b> |  | <b>Hinged Mullion</b><br>0° to 15° Female                                 | <b>BE9-1523</b> |
|  | <b>Shallow Pocket</b><br><b>Filler</b><br>Use with BE9-1503<br>& BE9-1515     | <b>BE9-2605</b> |  | <b>Head Receptor</b><br>Elastomer Weathering<br>E2-0051 Not Included      | <b>BE9-2562</b> |
|  | <b>Two Piece</b><br><b>Vertical/Jamb</b>                                      | <b>BE9-1518</b> |  | <b>Head Receptor Stop</b><br>Elastomer Weathering<br>E2-0051 Not Included | <b>E9-1033</b>  |
|  | <b>Shallow Pocket</b><br><b>Filler (MegaTherm®)</b><br>Use with BE9-1518 Only | <b>BE9-1519</b> |  | <b>Glazing Adaptor</b><br>For 5/8" & 3/4" Glazing                         | <b>E9-1039</b>  |
|  | <b>Sill Flashing</b>  | <b>BY7-7792</b> |  | <b>Glazing Adaptor</b><br>For 3/16", 1/4", 5/16",<br>& 3/8" Glazing       | <b>E9-1040</b>  |

## YES 45 FT FRAMING MEMBERS (2-1/4" x 4-1/2")

|   |  |                        |   |                        |
|---|--|------------------------|---|------------------------|
|  | <p><b>Two Way<br/>90° Corner Post</b><br/>Use with BE9-1509</p>    | <p><b>BE9-1511</b></p> |  <p><b>2-1/2" x 3/4" Face<br/>Cover *</b><br/>For Custom Mullions<br/>and Horizontals</p> | <p><b>E9-1206</b></p>  |
|  | <p><b>Vertical<br/>(4-1/2" x 4-1/2")</b><br/>Use with BE9-1509</p> | <p><b>BE9-1521</b></p> |  <p><b>Deep Pocket Filler</b></p>  | <p><b>BE9-1509</b></p> |
|  | <p><b>Adaptor for High Sill</b><br/>Use at Vertical</p>            | <p><b>BY7-9478</b></p> |  <p><b>Flat Filler</b></p>   | <p><b>E9-1038</b></p>  |

\* Other sizes available. Contact YKK AP for more information.

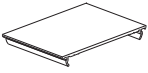

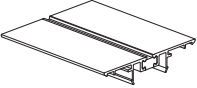

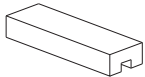

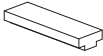













## YES 45 FT THERMAL DOOR FRAMING MEMBERS

|  |   |                        |  |  |
|--|---|------------------------|--|--|
|  | <p><b>Single Acting Door Jamb</b><br/>For 25T/35T/50T Doors<br/>Elastomer Weathering E2-0051<br/>Not Included</p> | <p><b>BE9-2581</b></p> |  | <p><b>Transom Glazing Pocket</b><br/>For 1" Glazing</p> <p><b>BE9-2583</b></p>             |
|  | <p><b>Deep Pocket Filler</b></p>  | <p><b>BE9-2609</b></p> |  | <p><b>Snap-in Pocket Filler</b></p> <p><b>BE9-2571</b></p>                                 |
|  | <p><b>Transom Bar</b><br/>For 25T/35T/50T Doors<br/>Elastomer Weathering E2-0051<br/>Not Included</p>             | <p><b>BE9-2582</b></p> |  | <p><b>Threshold</b><br/>1/2" x 4-1/2"<br/>For 25T/35T/50T Doors</p> <p><b>BE9-0465</b></p> |
|  | <p><b>Transom Glass Stop</b><br/>For 1" Glazing</p>   | <p><b>E9-1592</b></p>  |  |  |

## YES 45 FT Accessories

|  |   |                       |  |   |
|--|---|-----------------------|--|---|
|  | <p><b>Shear Block</b><br/>For Head, Horizontal<br/>&amp; Sill (Interior Side)</p> | <p><b>E1-1014</b></p> |  | <p><b>End Cap</b><br/>For Head Receptor<br/>BE9-2562</p> <p><b>E1-2603</b></p>                |
|  | <p><b>Shear Block</b><br/>For Head, Horizontal<br/>&amp; Sill (Exterior Side)</p> | <p><b>E1-1015</b></p> |  | <p><b>Splice Sleeve</b><br/>For Sill Flashing and Head<br/>Receptor</p> <p><b>E2-0070</b></p> |
|  | <p><b>End Dam</b><br/>For Sill Flashing<br/>BY7-7792</p>                          | <p><b>E1-0199</b></p> |  | <p><b>Head Anchor</b><br/>4" Long</p> <p><b>E1-2602</b></p>                                   |

## YES 45 FT Accessories (Continued)

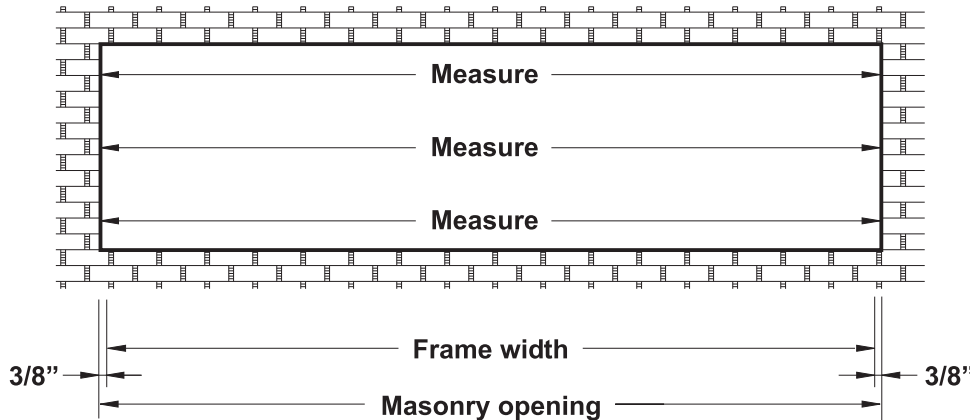
|   |   |                |   |   |                   |
|---|---|----------------|---|---|-------------------|
|    | <b>Flat Filler</b><br>Use at all Head & Jamb Anchor Locations     | <b>E1-1054</b> |    | <b>Pile Weathering</b>  | <b>E2-0062</b>    |
|     | <b>Adaptor for High Sill</b><br>For compound horizontals, 4" Long | <b>E1-9836</b> |    | <b>Weathering Gasket</b>  | <b>K2-2441</b>    |
|    | <b>Setting Block</b>  | <b>E2-0020</b> |    | <b>Foam Backer Tape</b><br>1" x 1-1/4" (Roll)   | <b>E2-0259</b>    |
|    | <b>Setting Block</b><br>For Transom Head 1" Glazing               | <b>E2-0056</b> |    | <b>#10 x 1-3/4" PHSMS</b><br>Type AB, Zinc Plated Steel<br>For Attachment of Shear Blocks to Verticals      | <b>PC-1028</b>    |
|    | <b>Water Deflector</b>  | <b>E2-0047</b> |    | <b>#10-24 x 3/8" PHMS</b><br>Stainless Steel<br>For Attachment of Sill to Sill Flashing                     | <b>PM-1006-SS</b> |
|   | <b>Anti-Walk Block</b><br>For Deep Pockets                        | <b>E2-0154</b> |  | <b>#12 x 1/2" FHSMS</b><br>Type AB, Zinc Plt. Stl., For Attachment of Receptor End Cap E1-2603              | <b>FC-1208</b>    |
|  | <b>Glazing Gasket</b>   | <b>E2-0052</b> |  | <b>#12 x 3/4" FHSMS</b><br>Type AB, Zinc Plated Steel<br>For Attachment of Head to Shear Block              | <b>FC-1212</b>    |
|  | <b>Glazing Gasket</b>   | <b>E2-0053</b> |  | <b>#12 x 5/8" PHSMS</b><br>Type AB, Zinc Plated Steel<br>For Attachment of Horizontal & Sill to Shear Block | <b>PC-1210</b>    |
|  | <b>Glazing Gasket</b>   | <b>E2-0064</b> |  | <b>#12 x 1-1/4" PHSMS</b><br>Type AB, Zinc Plated Steel<br>For Screw Spline Attachment                      | <b>PC-1220</b>    |
|  | <b>Elastomer Weathering</b>                                       | <b>E2-0051</b> |  | <b>#12 x 3/4" UFHMS</b><br>Type A, Zinc Plt. Stl., For Attachment of End Dam to Sill Flashing               | <b>UA-1212</b>    |



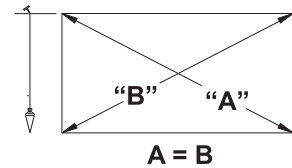
## FRAME FABRICATION

### STEP 1 DETERMINE FRAME SIZE

#### Determine Frame Width:



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

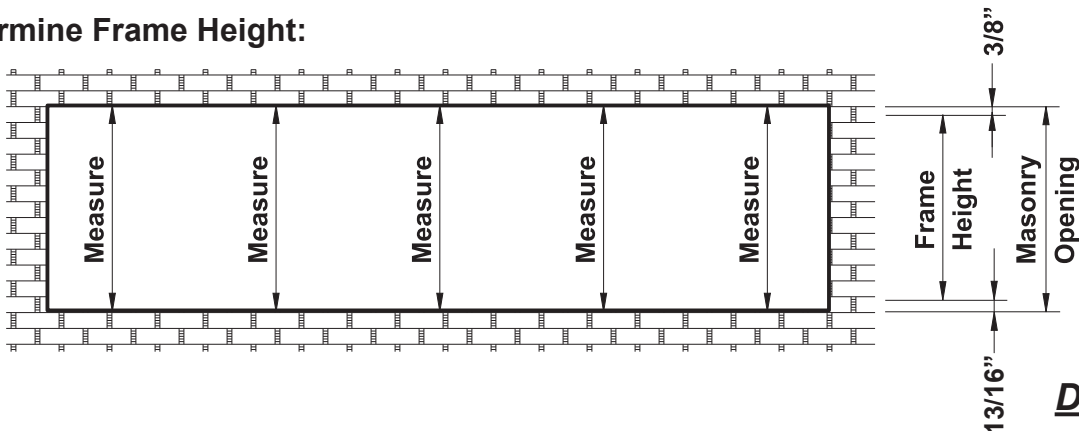


**Detail 1**

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

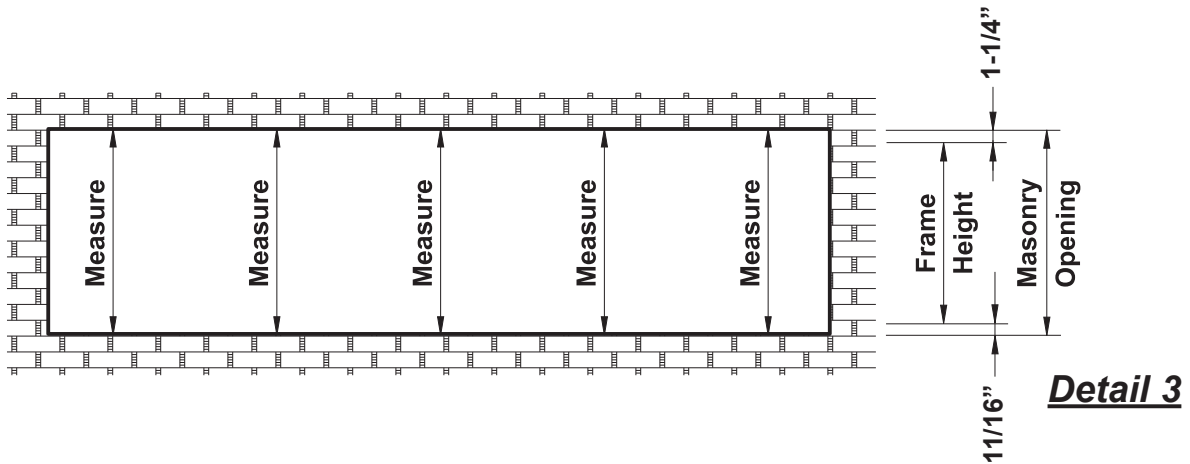
- Measure the height of the masonry opening in several places along the entire length of the opening.
- Select the smallest dimension measured and subtract 1-3/16" to determine the frame height to be used:
  - 3/8" shim/caulk joint at the head.
  - 7/16" for sill flashing, BY7-7792.
  - 3/8" shim/caulk joint below the sill flashing.

See **Detail 2**.

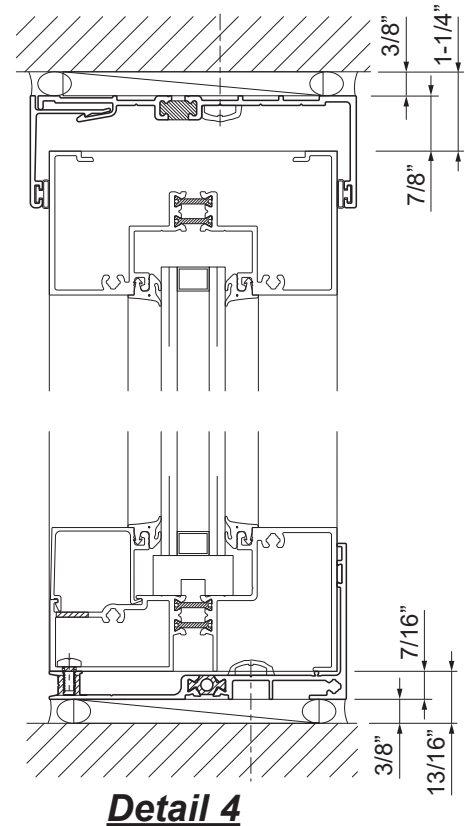
**FRAME FABRICATION**

**STEP 1  
DETERMINE FRAME SIZE**

**Determine Frame Height for Receptor 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 2-1/16" to determine the frame height to be used:
    - Minimum 3/8" shim/caulk joint at the head.
    - 7/8" for the head receptor
    - 7/16" for sill flashing.
    - Minimum 3/8" shim/caulk joint below the sill flashing.
- See **Details 3 & 4**.



## FRAME FABRICATION

### STEP 2 FABRICATE SILL FLASHING

**For elevations without door framing:**

-Cut sill flashing, BY7-7792, to the frame width determined in **Step 1** plus (+) 1/8" at each jamb.

**For elevations with door framing:**

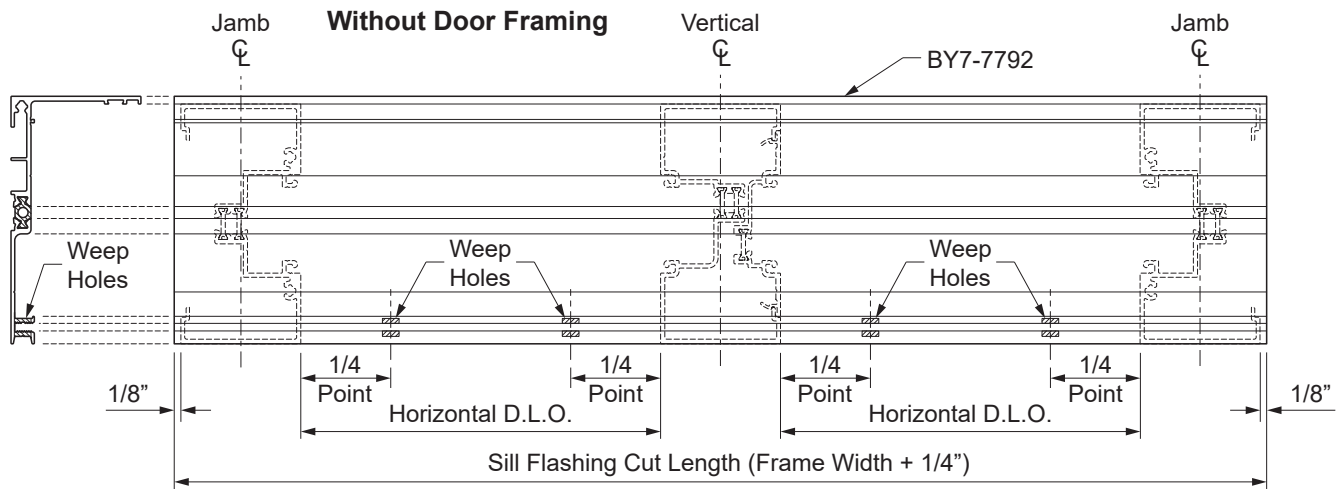
-Cut the sill flashing, BY7-7792, from the end of the frame plus(+) 1/8" to the door jamb.  
(See approved shop drawings for this dimension)

See **Detail 5**.

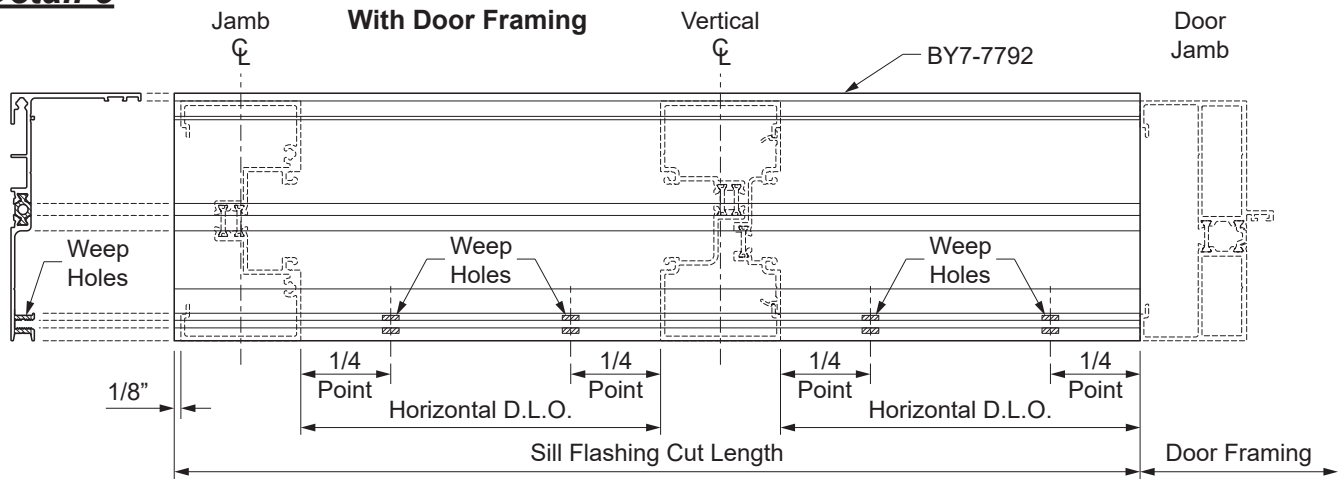
**Fabricate Weep Holes in Sill Flashing:**

-Drill two 5/16" diameter weep holes in the front of the sill flashing at each D.L.O. quarter point.

**Note:** For openings longer than 24'-0" the sill flashing needs to be spliced every twelve to fifteen feet. Allow a 3/8" joint for expansion between sill flashing members.



**Detail 5**



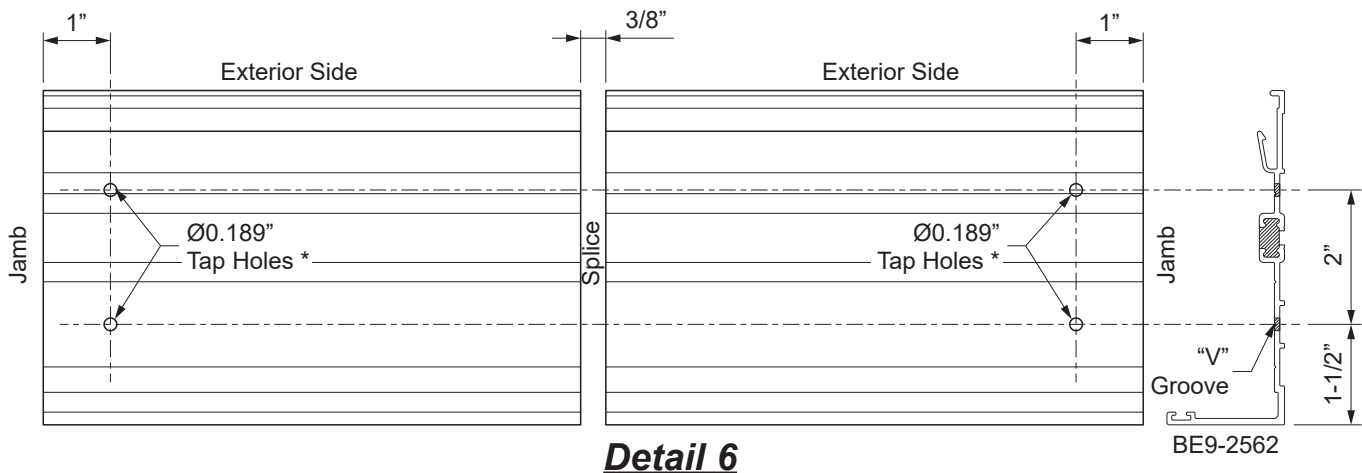
**FRAME FABRICATION**

**STEP 2A  
FABRICATE HEAD RECEPTOR**

- Cut the head receptor BE9-2562 and the E9-1033 snap cover to the frame width + 1/8" at each jamb or as indicated on the approved shop drawings.
- At each jamb, drill two Ø0.189" tap holes in to the BE9-2562 head receptor as shown.
- For openings longer than 24'-0" the head receptor needs to be spliced every twelve to fifteen feet at the center of a D.L.O.
- Allow for a 3/8" joint for expansion between head receptor members.

See **Detail 6**.

\* **Note:** The Ø0.189" tap hole in the exterior side of the receptor will be slightly off the V-Groove. Drilling this hole from the top side of the receptor after the interior side hole is recommended.



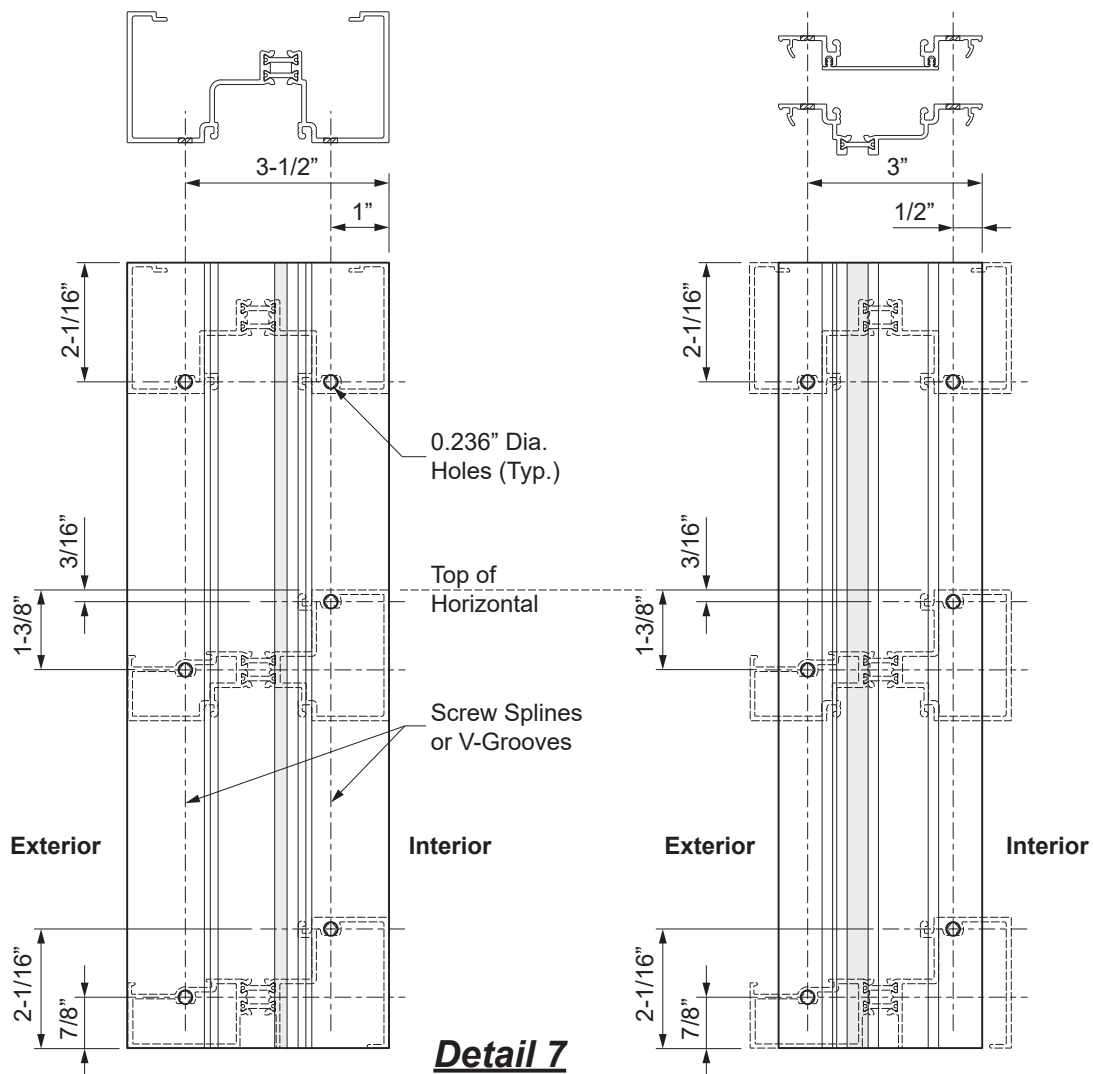
## FRAME FABRICATION

### STEP 3 FABRICATE TWO PIECE VERTICALS FOR SCREW SPLINE ASSEMBLY

-Cut the vertical, pocket filler, and jamb members to the frame height determined in **Step 1**.

-Fabricate vertical members for screw spline attachment using one of the methods below:

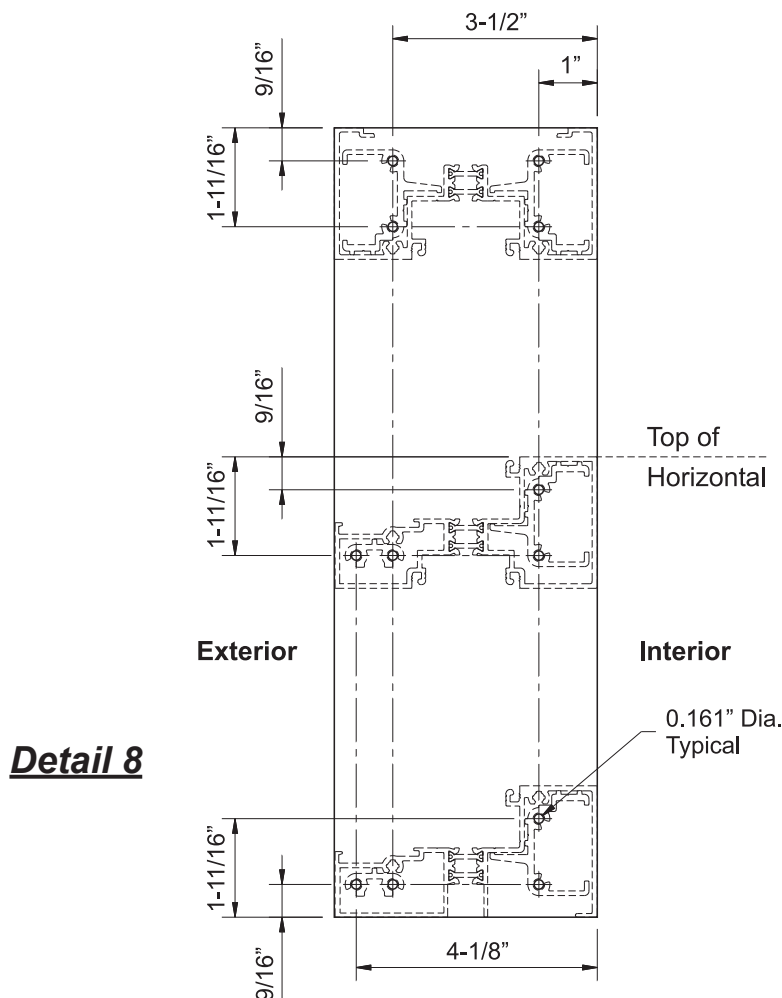
1. Using a short piece of each horizontal member as a template, center the template on the face of the vertical member, mark the location of each hole, and drill 0.236" diameter holes at each location.
2. Lay out the hole locations as shown in **Detail 7** and drill 0.236" diameter holes at each location.
3. Use the YKK AP drill fixture, H-7201, to drill the holes.
4. Use punch press with appropriate die set.



**FRAME FABRICATION**

**STEP 4  
FABRICATE TUBULAR VERTICALS  
FOR SHEAR BLOCK ASSEMBLY**

- Cut the vertical and jamb members to the frame height determined in **Step 1**.
  - Tubular verticals require shear blocks for the attachment of head, horizontal & sill members.
  - Mark the location for each shear block using one of the methods below:
    1. Using a short piece of each horizontal member with shear blocks installed as a template, center the template on the face of the vertical and mark each hole location.
- OR**
2. Layout the hole locations for the shear blocks as shown in **Detail 8**.
- Drill a 0.161" diameter (#20 drill bit) hole at each location marked.

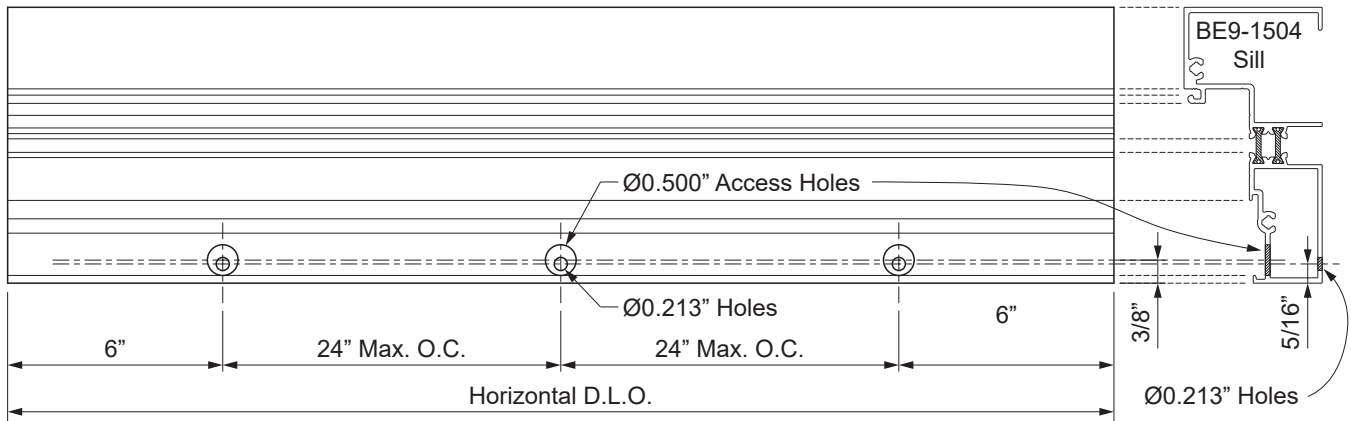


## FRAME FABRICATION

### STEP 5 FABRICATE HEAD, HORIZONTAL & SILL MEMBERS

- Cut head, horizontal and sill members to the appropriate daylight opening indicated on the shop drawings.
- Sill members will require attachment holes for anchoring into the sill flashing.
  - Measure in 6" from each end of the sill member and mark hole locations according to the dimensions shown on **Detail 9**.
  - Mark additional hole locations a maximum of 24" on center (O.C.).
  - Drill a 0.213" diameter (#3 drill bit) hole at the underside of the sill at each location marked, at 5/16" from the face of the sill.
  - Drill a 0.500" diameter access hole at each location marked, at 3/8" from the face of the sill.

**Note:** Wherever the sill flashing is spliced, add one 0.213" diameter hole and one 0.500" diameter access hole 2" from each side of the splice location.



**Detail 9**

**FRAME FABRICATION**

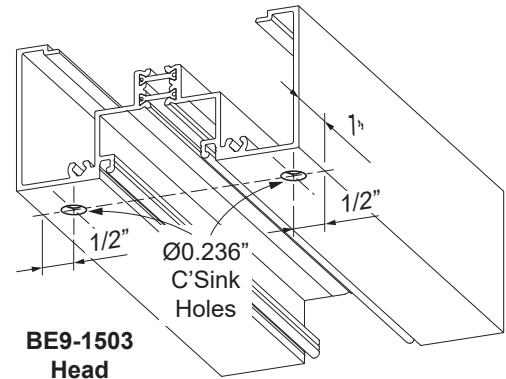
**STEP 5  
FABRICATE HEAD, HORIZONTAL  
& SILL MEMBERS (Continued)**

-Horizontal members that will be attached to shear blocks require additional fabrication:

**Detail 10**

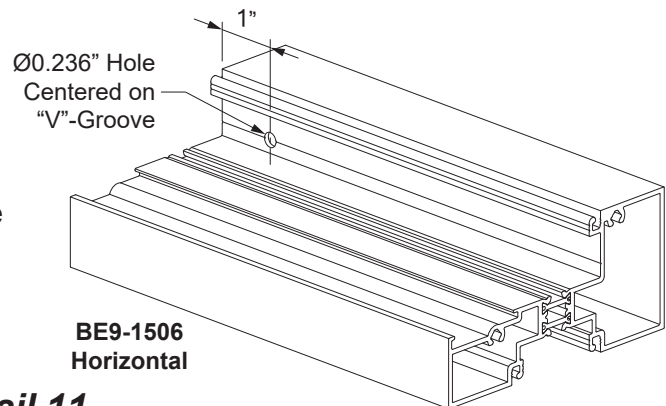
**Head Members:**

- Mark two hole locations at each end, 1" from the ends and 1/2" from the sides of the head.
  - Drill a 0.236" diameter (# B drill bit) hole at each location marked and countersink for a #12 flat head fastener (FC-1212).
- See **Detail 10**.



**Horizontal Members:**

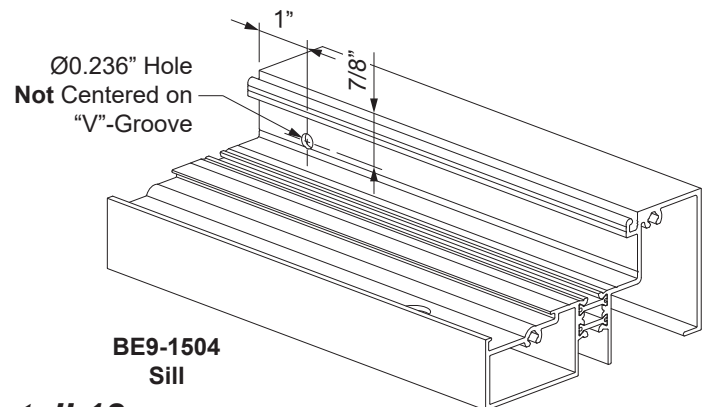
- Mark a hole location at each end, 1" from the ends centered along the "V"-groove.
  - Drill a 0.236" (# B drill bit) diameter hole at each location marked.
- See **Detail 11**.



**Detail 11**

**Sill Members:**

- Mark a hole location at each end, 1" from the ends 7/8" below the top of the sill. Note that this will not be centered on the "V"-Groove.
  - Drill a 0.236" (# B drill bit) diameter hole at each location marked.
- See **Detail 12**.



**Detail 12**

**STEP 6  
FABRICATE GLASS STOPS & GLAZING ADAPTORS**

- Cut glass stops to the same dimension their respective horizontals minus(-) 1/32".
- Cut glazing adaptors to the daylight opening minus(-) 1/32".



## FRAME ASSEMBLY

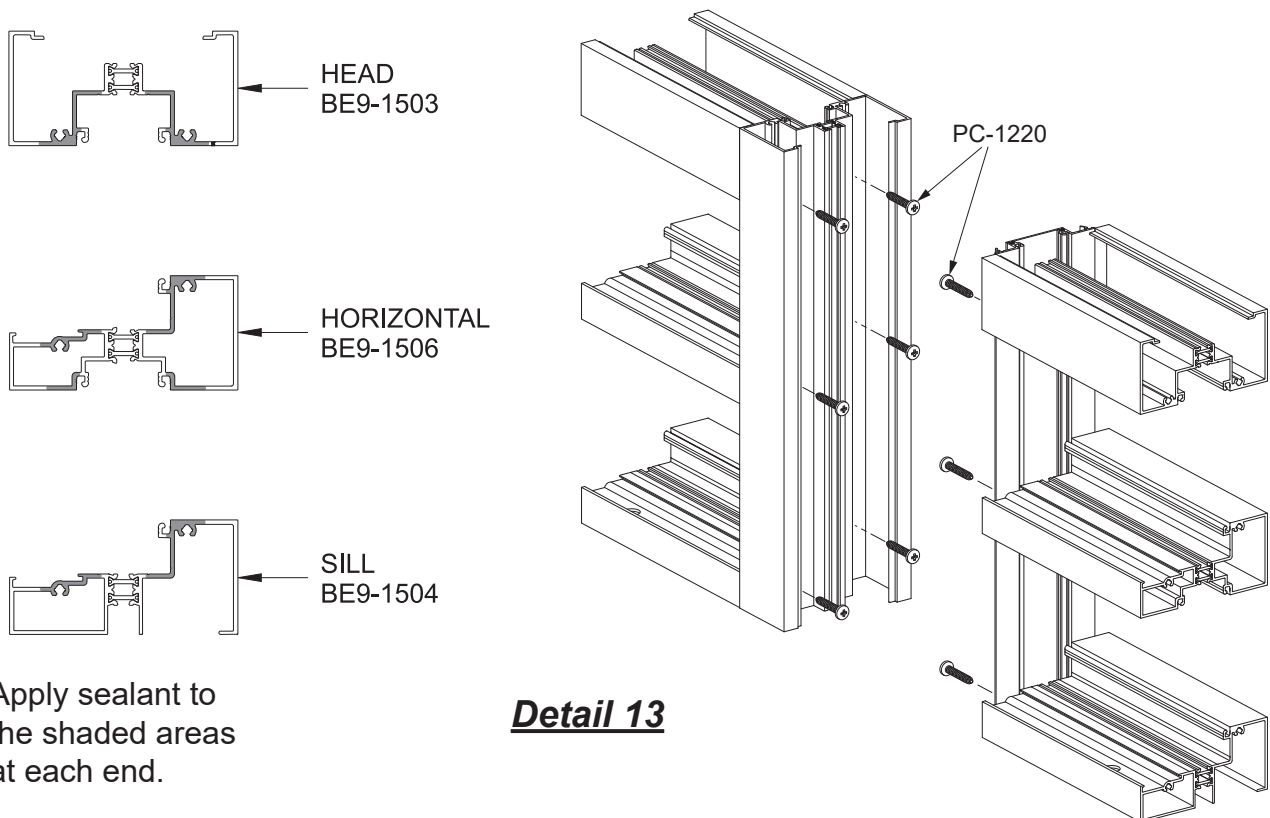
### STEP 7 ASSEMBLE FRAMES

#### Screw Spline Assembly:

- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to both ends of head, horizontal and sill members just prior to assembly.
- Attach head, horizontal, and sill members to vertical members with two (2) PC-1220 fasteners at each end.
- Tool the sealant into the joints and wipe away any excess sealant.

See **Detail 13**.

**CAUTION:** Always assemble frames such that each lite of glass will have a minimum of one deep vertical glazing pocket.



Apply sealant to the shaded areas at each end.

**Detail 13**

## FRAME ASSEMBLY

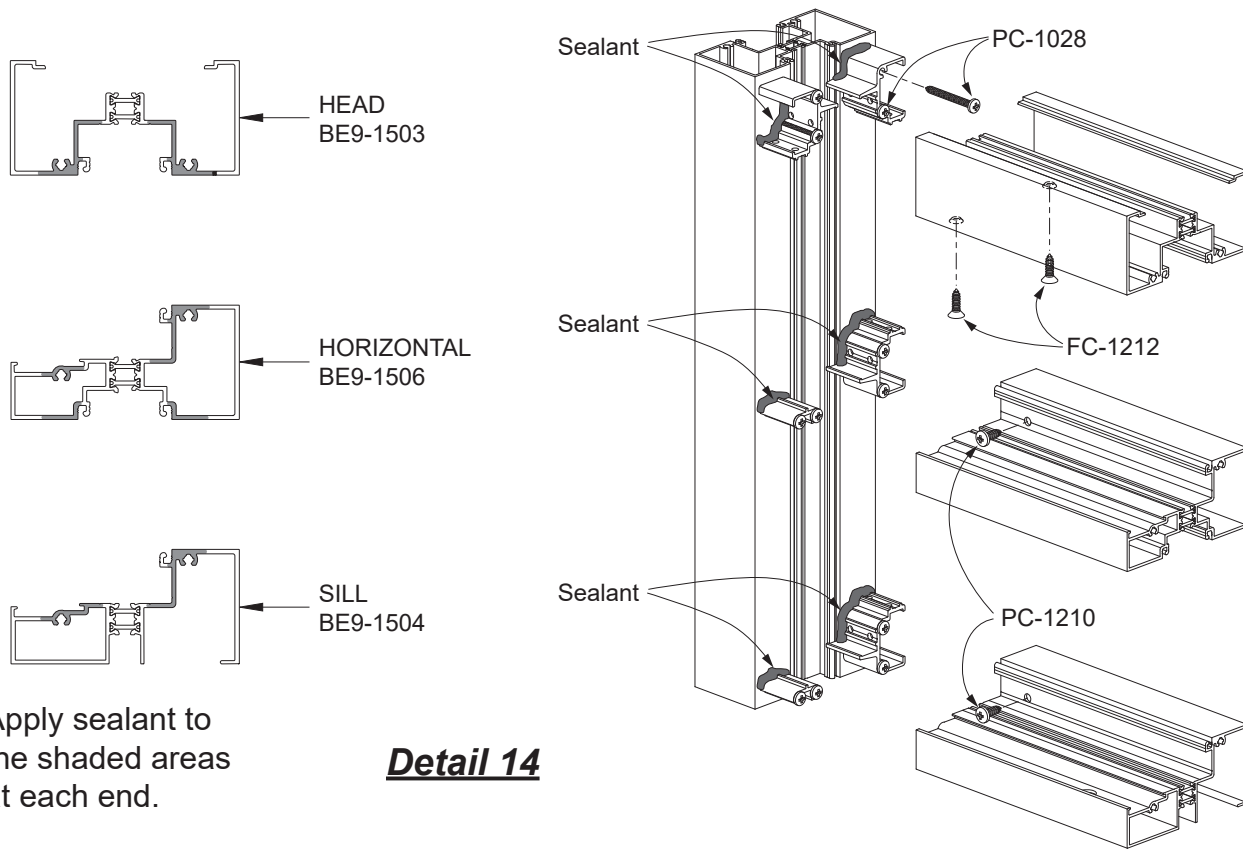
### STEP 7 (Continued) ASSEMBLE FRAMES

#### Shear Block Assembly:

- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to both ends of head, horizontal and sill members just prior to assembly.
- Apply sealant to the shear blocks as shown.
- Attach head members to shear blocks with two (2) FC-1212 fasteners at each end.
- Attach horizontal and sill members to shear blocks with one (1) PC-1210 fastener at each end.

See **Detail 14**.

**CAUTION:** Always assemble frames such that each lite of glass will have a minimum of one deep vertical glazing pocket.



Apply sealant to the shaded areas at each end.

**Detail 14**

## FRAME ASSEMBLY

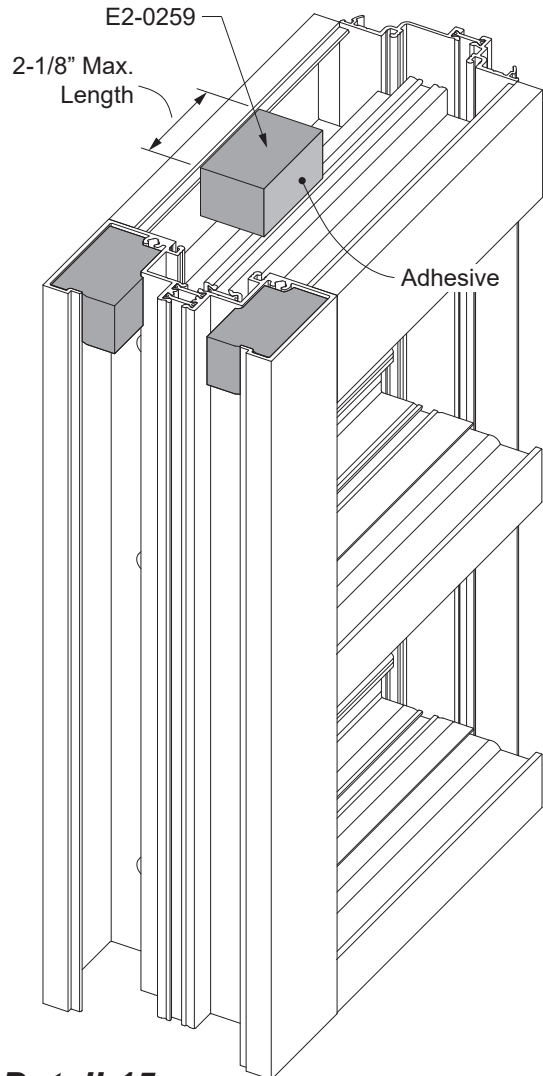
### STEP 8 (Not necessary with Head Receptor) INSTALL FOAM PLUGS AT HEAD (Optional)

-Cut pieces of E2-0259 foam backer tape (maximum 2-1/8" long for typical mullion) to be adhered at the head only.

These will serve as end cap support for perimeter backer rods and sealant.

-Peel the adhesive tape from the foam pieces and adhere them to the front and back of the mullion as shown in **Detail 15**. The foam can be easily compressed to accommodate obstacles in the assembled verticals.

**Notes:** For best adhesion, ensure the contact surfaces of the verticals are clean and dry.  
Backer tape application is similar for expansion and corner mullions



**Detail 15**

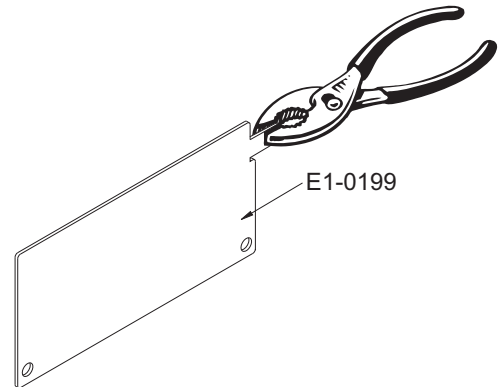
**FRAME INSTALLATION**

**STEP 9  
INSTALL SILL FLASHING END DAMS**

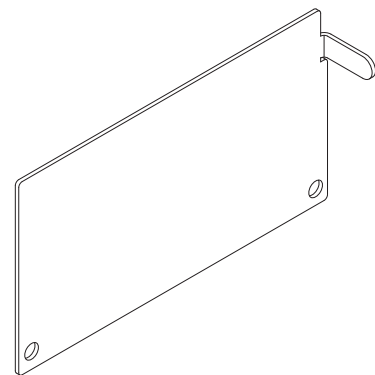
-Bend the end dam tab left or right 90 degrees in order to “hand” the end dam for the left or right end of the flashing.

See **Detail 16 & 17**.

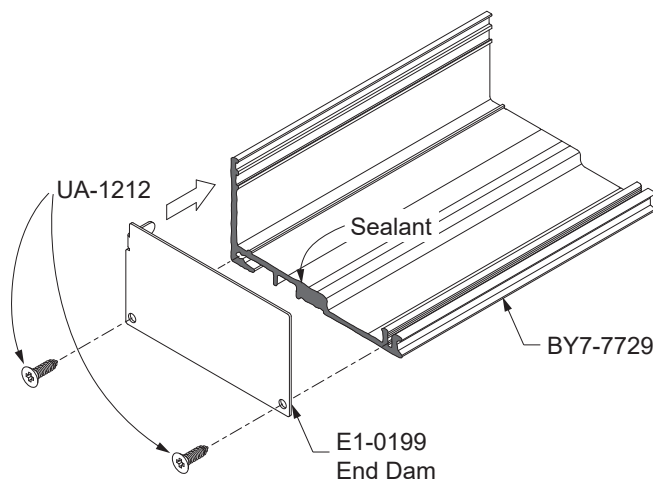
- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to the end of the sill flashing as shown in **Detail 18**.
- Slide the tab into the top portion of the sill flashing.
- Tap the tab into place with a small tool until the end dam is snug against the end cut of the flashing.
- Fasten the end dam to the sill flashing with two UA-1212 screws, starting at the back, followed by the front as shown in **Detail 18**.
- Tool sealant along the joint between the end dam and the sill flashing as shown in **Detail 19**.
- Seal over any exposed screw threads.



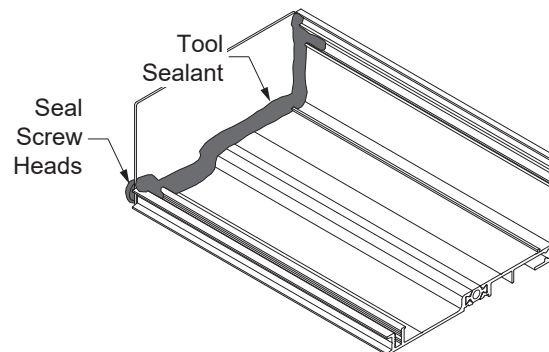
**Detail 16**



**Detail 17**



**Detail 18**

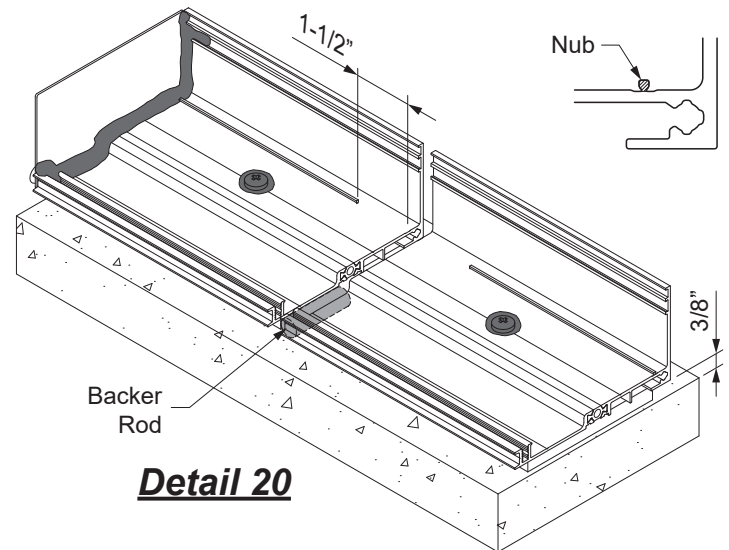


**Detail 19**

## FRAME INSTALLATION

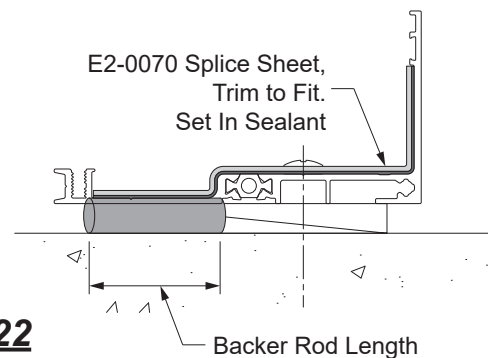
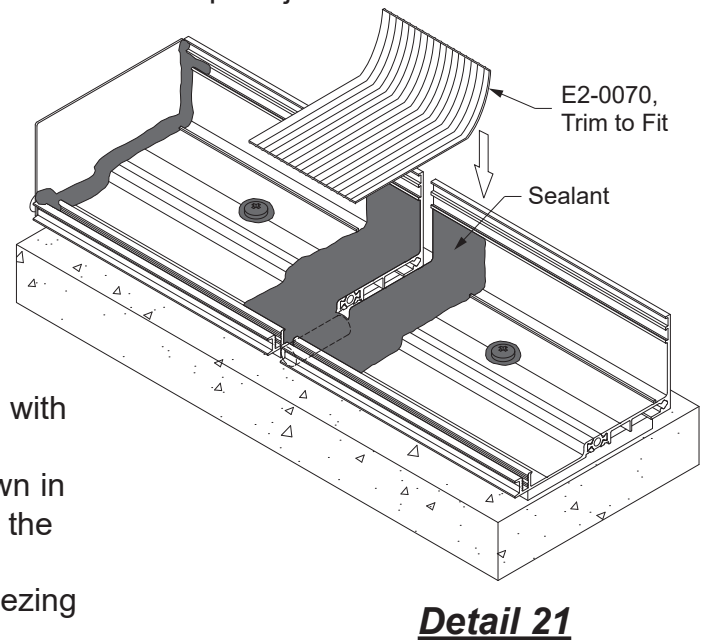
### STEP 10 INSTALL SILL FLASHING

- Install the sill flashing with a minimum of 3/8" shim underneath. Sill flashing must be installed level.
- Anchor the sill flashing to the structure a maximum of 4" from each end and then 18" to 24" on center, or per P.E. calculations.
- Apply and tool sealant to cover the heads of all anchors and screws.



### STEP 11 INSTALL SILL FLASHING SPLICE SLEEVE

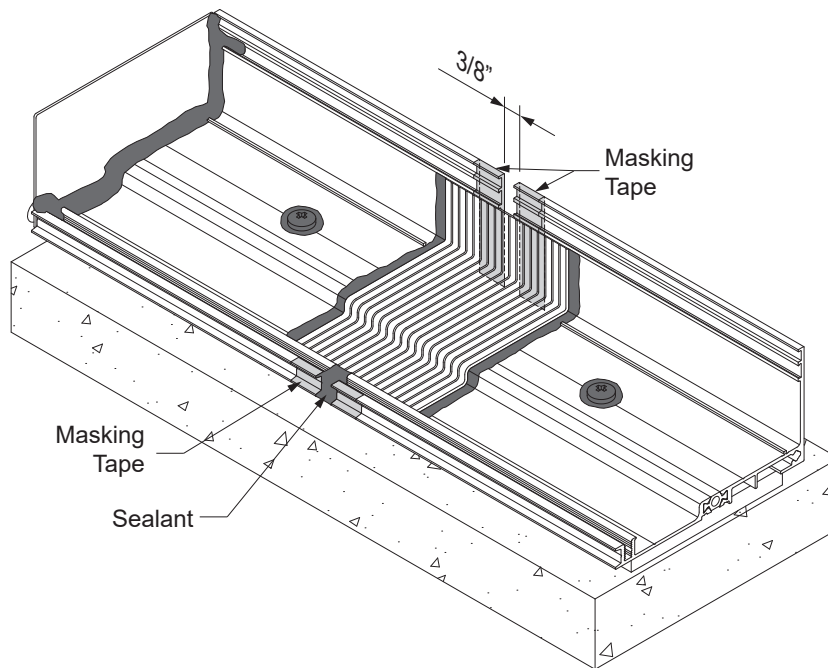
- Remove the nub with a chisel or pliers on both sides of the splice joint 1-1/2" as shown in **Detail 20**.
- After the sill flashing has been shimmed and installed to the building structure, insert a small backer rod under the sill flashing at the joint as shown in **Detail 20**.
- Position the Silicone 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 21**, before positioning the flashing. Set the Silicone Splice Sleeve into the sealant.
- Tool sealant tight as shown in **Detail 21**, squeezing the sheet flat with a seam roller.



**FRAME INSTALLATION**

**STEP 11  
INSTALL SILL FLASHING SPLICE SLEEVE (Continued)**

- Apply masking tape to the back of the sill flashing at the splice and at the front as shown in **Detail 23**.
- Thoroughly seal the small joint directly in front of the Silicone Splice Sleeve. Carefully remove masking tape from the front gap before the sealant skins over.



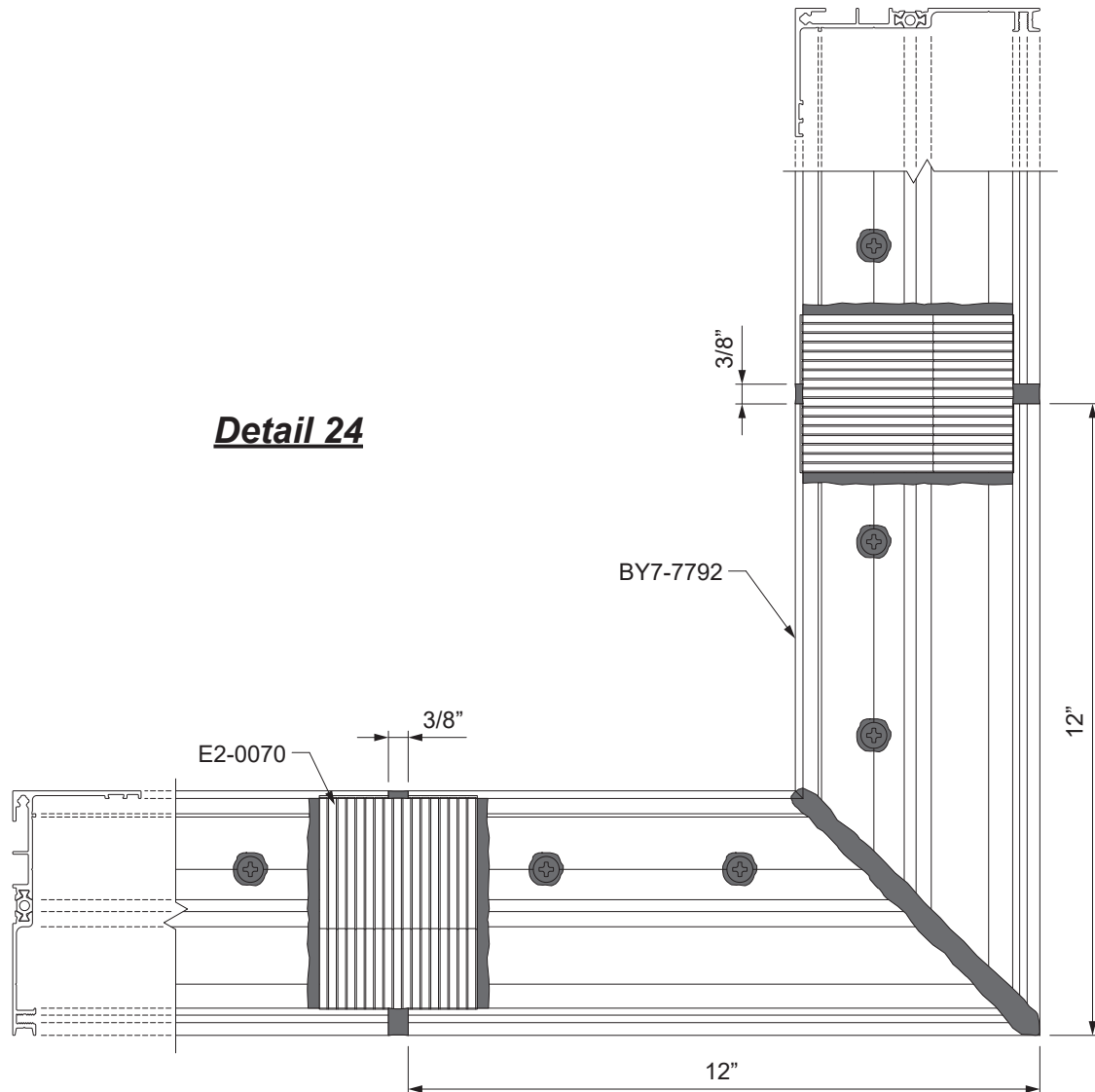
**Detail 23**

## FRAME INSTALLATION

### STEP 11 INSTALL SILL FLASHING FOR CORNERS \*

- Cut two 12" long pieces of sill flashing BY7-7792 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 called out on the approved shop drawings.
- Apply and tool sealant to the mitered joint and anchor heads.
- See **Detail 24**.
- Continue installing the rest of the sill flashing, providing a 3/8" expansion joint at splices as shown in **Step 11** on **Page 17**.

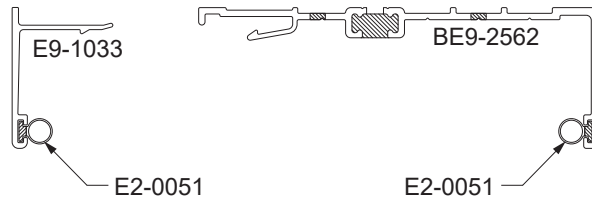
\* **Note:** Similar technique required for BE9-2562 head receptor.



**FRAME INSTALLATION**

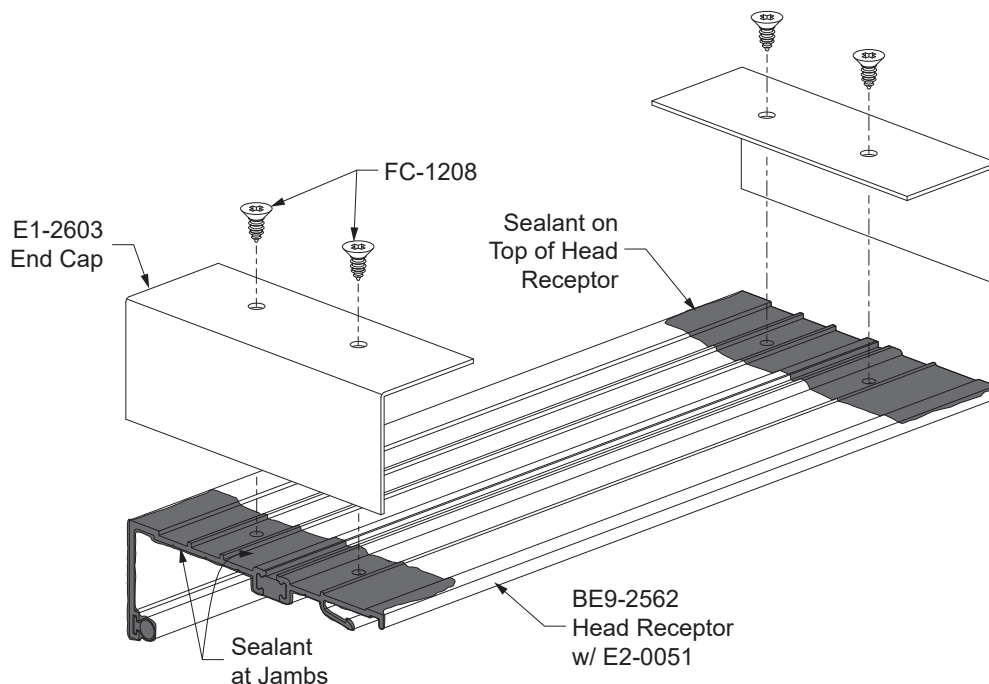
**STEP 12  
ATTACH HEAD RECEPTOR END CAPS**

-Cut E2-0051 bulb gaskets to the same length as the head receptor and insert them into the reglet of both the BE9-2562 head receptor and E9-1033 snap cover. See **Detail 25**.



**Detail 25**

- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to the end of the head receptor as shown in **Detail 26**.
- Fasten the E1-2603 end caps to each jamb using two FC-1208 fasteners.
- Tool sealant to the inside of the end caps at the jambs similar to that for the sill flashing end dams (see **Detail 28**). Tape down the top corners to hold the end cap in place until the sealant cures.



**Detail 26**



## FRAME INSTALLATION

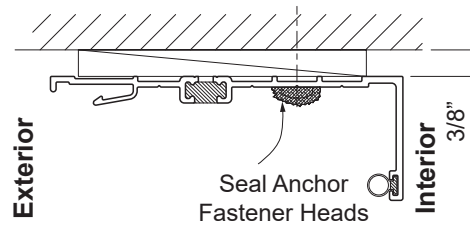
### STEP 12 INSTALL RECEPTOR

-Install the BE9-2562 head receptor to the substrate using fasteners per approved shop drawing or P.E. calculations.

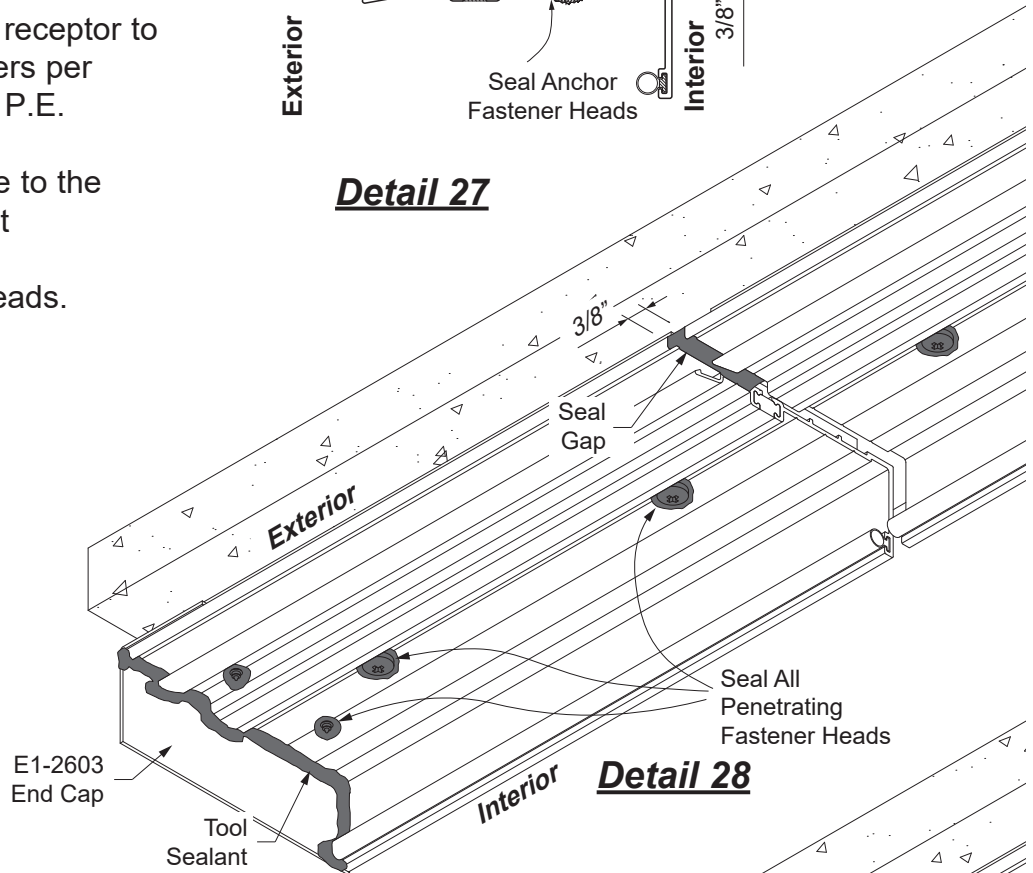
Allow for a 3/8" shim space to the substrate and a 3/8" gap at the splice joints.

-Seal all anchor fastener heads.

See **Details 27 & 28.**



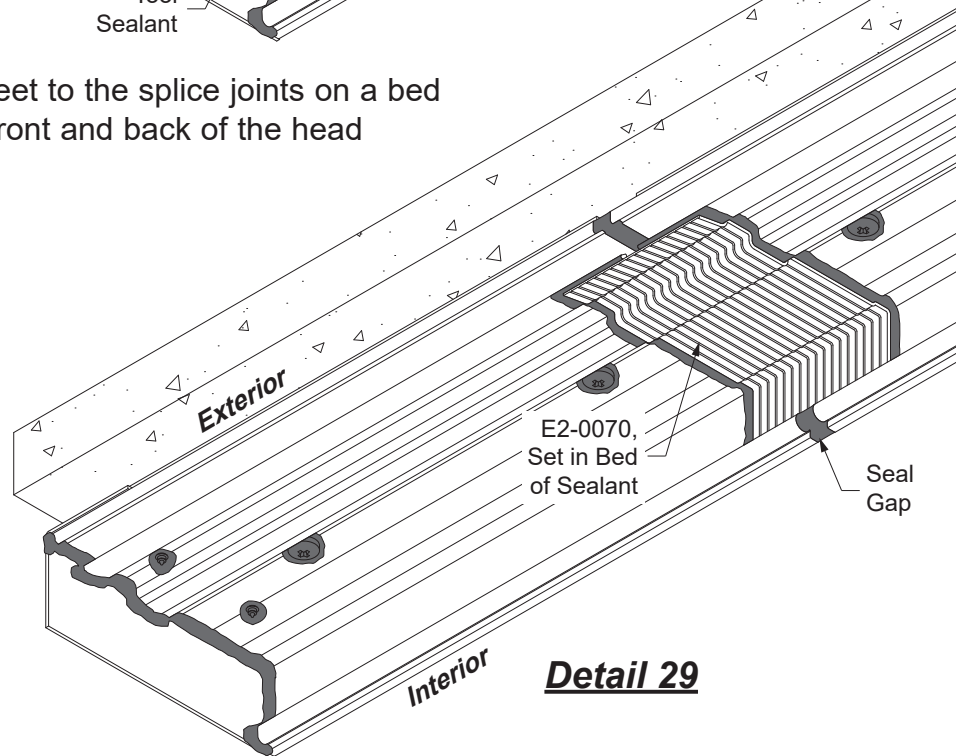
**Detail 27**



**Detail 28**

-Adhere an E2-0070 silicone sheet to the splice joints on a bed of sealant. Fill the gaps at the front and back of the head receptor with sealant.

See **Detail 29.**



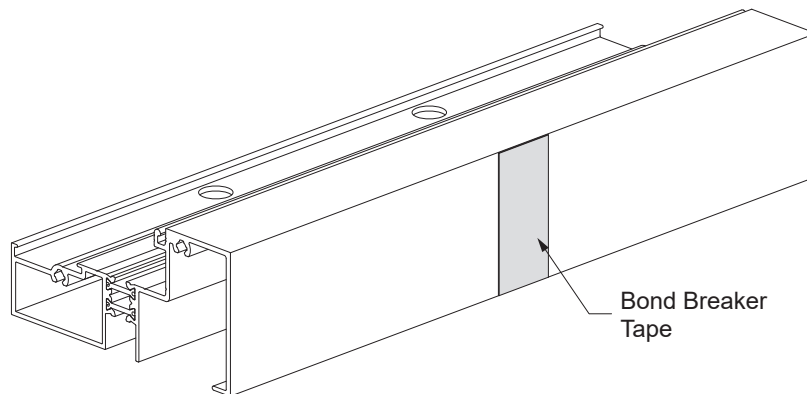
**Detail 29**

**FRAME INSTALLATION**

**STEP 13  
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 30**.



**Detail 30**

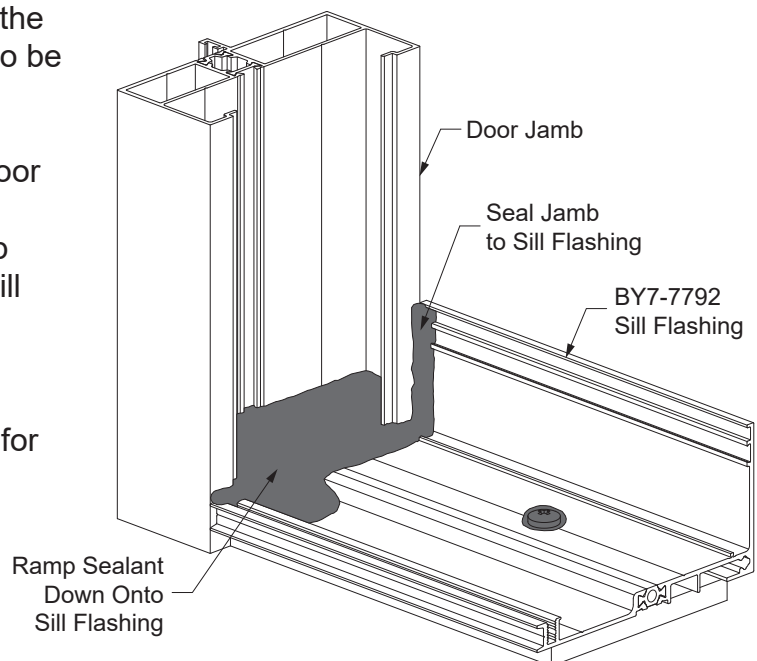
**STEP 14  
PREPARE DOOR JAMBS**

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 31**.

Refer to the **Entrances Installation Manual** for door installation instructions.



**Detail 31**

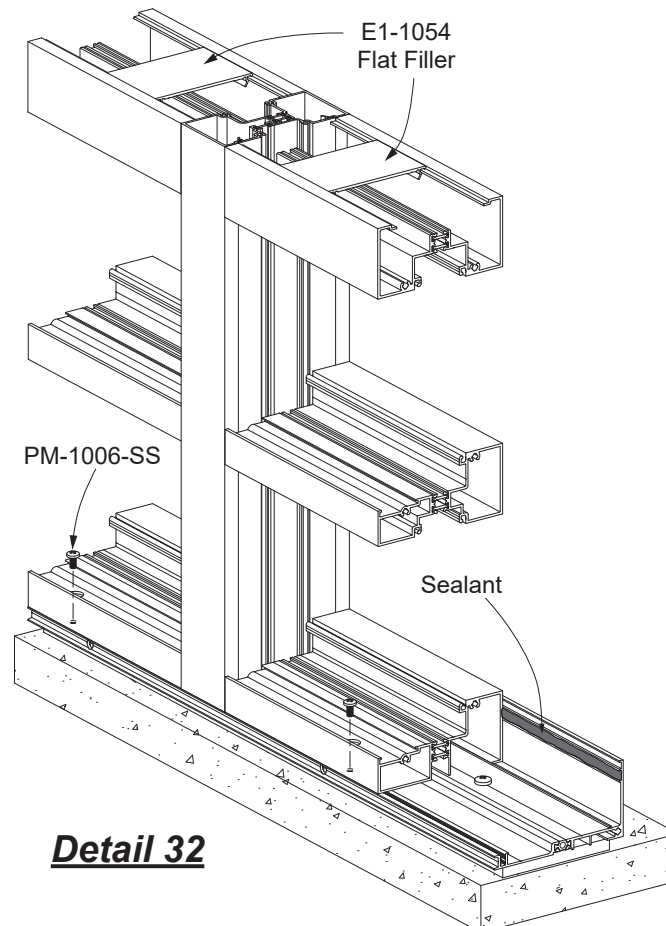
## FRAME INSTALLATION

### STEP 15 INSTALL FRAMES

- Snap in flat fillers, E1-1054, at head and jamb anchor locations.
- Snap assembled frames together if using screw spline assembly.
- Apply sealant to the front of the back leg of the sill flashing and immediately set the frame into the opening.

See **Detail 32**.

- Shim jamb and head members with a minimum of 3/8" shim.
- Anchor the frame to the structure at the head and jamb: 3" from the ends and then 18" to 24" on center. Make sure to locate anchors away from thermal break material.
- Anchor the frame to the sill flashing using PM-1006-SS screws. Do not seal these fasteners.
- Always install a shim at anchor locations.
- Alternate anchors from front to back for head and jamb members.



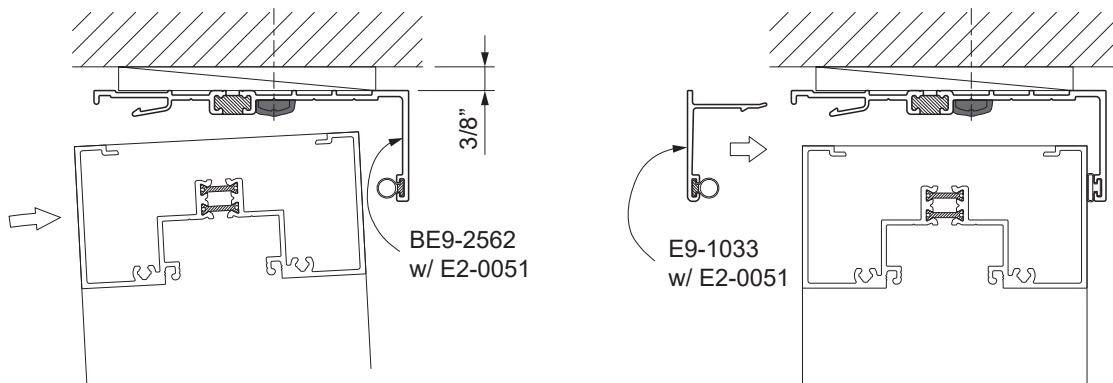
**Detail 32**

**FRAME INSTALLATION**

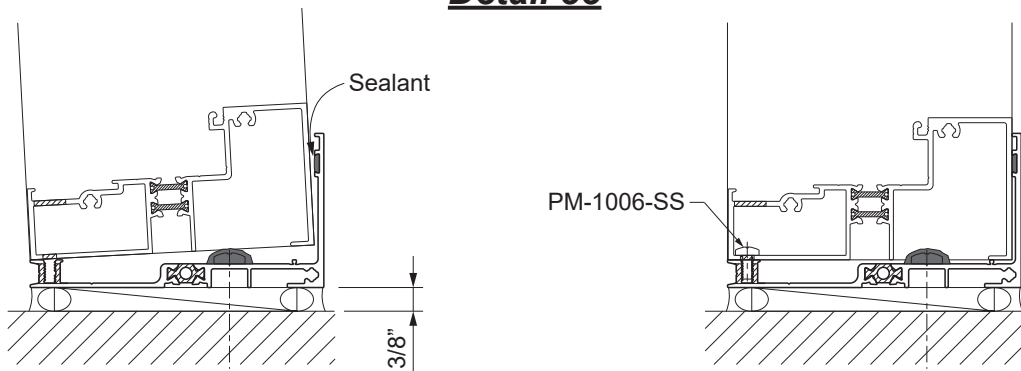
**STEP 15 (Continued)  
INSTALL FRAMES W/ HEAD RECEPTOR**

- Rotate the assembled frames into position from the exterior, ensuring engagement into the sill flashing.
- Snap on the E9-1033 snap cover (with E2-0051 bulb gasket) into the head receptor.
- Attach the sill to the sill flashing using PM-1006-SS screws. Also add one (1) PM-1006-SS fastener 2" in both directions from the center line of the splice.

See **Detail 33**.



**Detail 33**



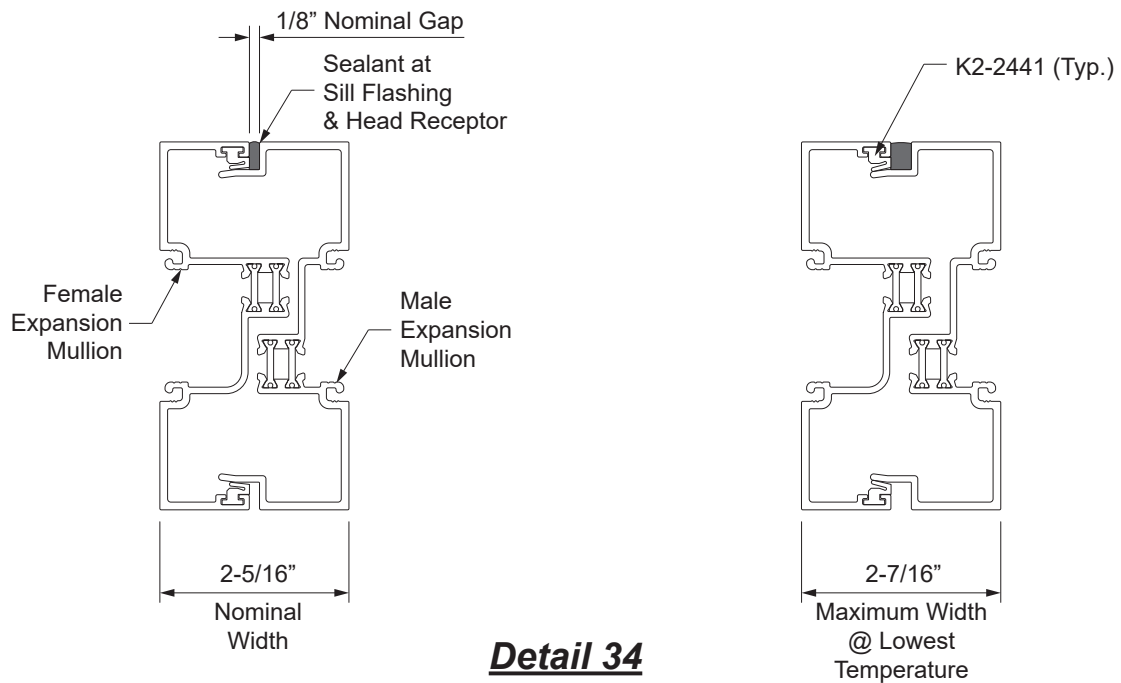
## FRAME INSTALLATION

### STEP 15 (Continued)

### INSTALL EXPANSION MULLIONS WHERE REQUIRED

- Expansion mullions require the K2-2441 weathering gasket in both front and rear reglets.
- During installation, the current air temperature should be taken into account to determine the proper spacing between the mullion halves such that the expansion mullion stays within its allowable width limits during its service in hot and cold weather conditions.
- Fill the interior gap between the mullion halves with sealant at the sill flashing and head receptor.

See Detail 34.

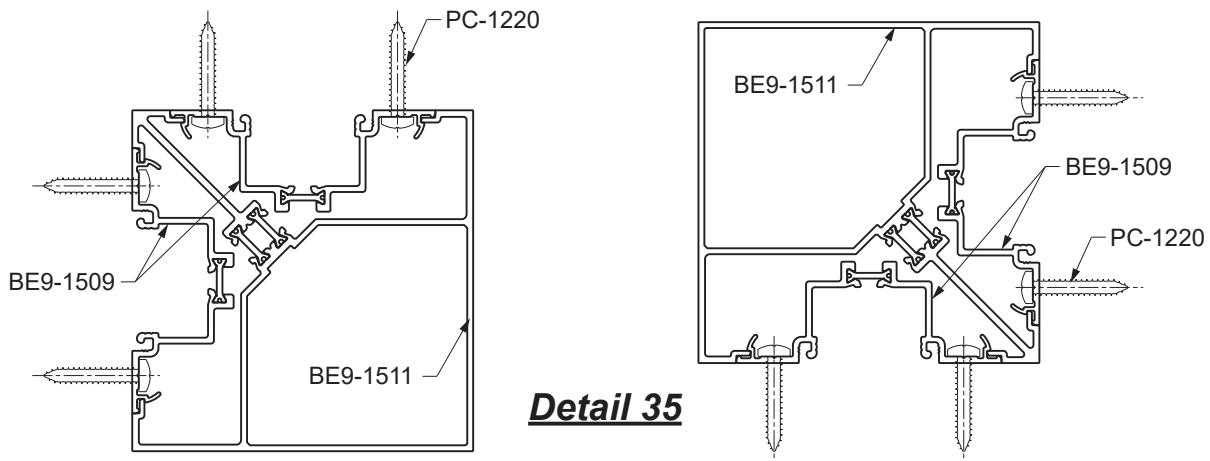


**FRAME INSTALLATION**

**STEP 15 (Continued)  
INSTALL CORNER ASSEMBLIES**

- Attach horizontal members to standard mullions as shown before in **Step 7**.
- Attach the other end of the horizontal to the deep pocket fillers to be used at the corners.
- Snap the corner framing members together to form the corner assemblies.
- Carefully move the corner assembly into place and snap it into the rest of the frame one side at a time.

**See Detail 35.**



## FRAME INSTALLATION

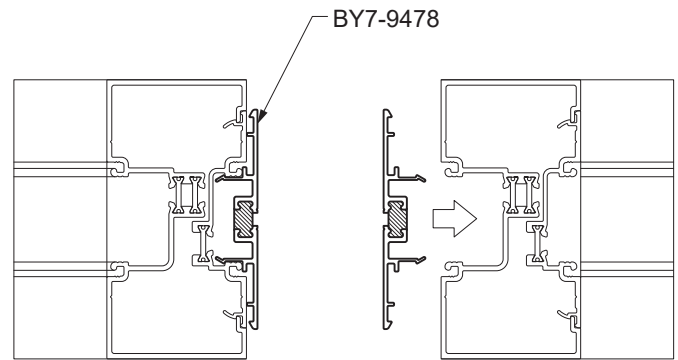
### STEP 15 (Continued) INSTALL OPTIONAL COMPOUND MULLIONS

-Snap in the BY7-9478 adaptors (cut full length of the mullion) into the mullions for each frame as shown in **Detail 36**.

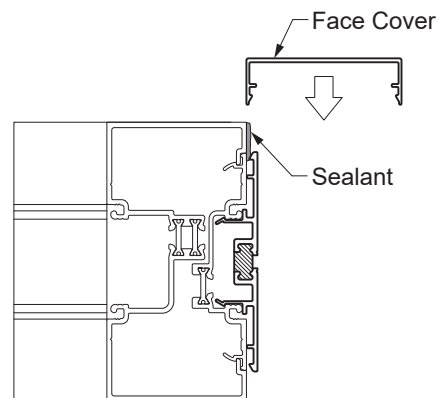
-Apply Sealant to the full length of the first mullion for which the rear face cover will snap into.

-Snap the face cover into place.

See **Detail 37**.



**Detail 36**



**Detail 37**

**FRAME INSTALLATION**

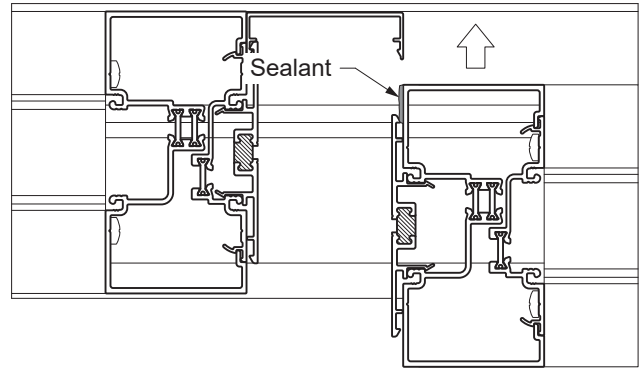
**STEP 15 (Continued)  
INSTALL OPTIONAL COMPOUND MULLIONS**

-Apply sealant to the full length of the mullion for the second frame.

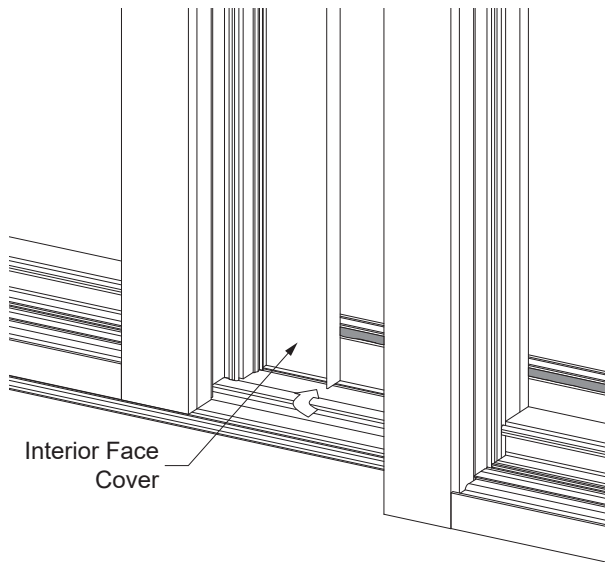
-Snap the second frame into place from the front, engaging the face cover as shown in **Details 38 & 38A**.

-Snap the front face cover into both frames. Start at the sill to clear the front lip of the sill flashing.

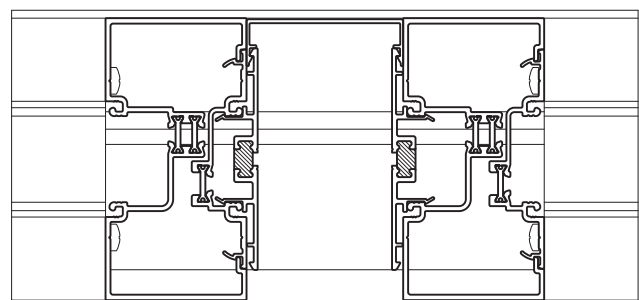
See **Detail 39**.



**Detail 38A**



**Detail 38**



**Detail 39**

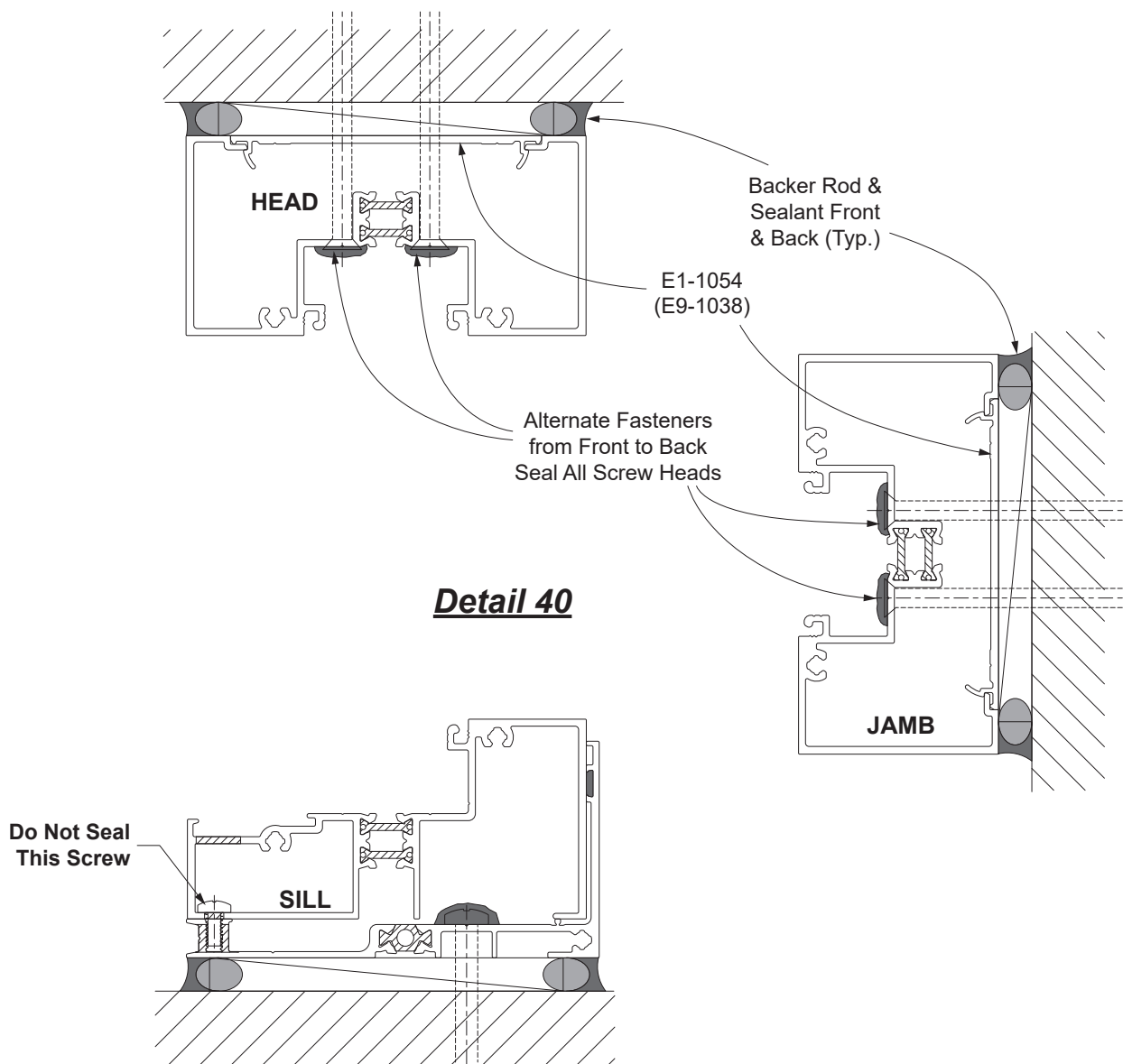


## FRAME INSTALLATION

### STEP 16 APPLY PERIMETER SEALANT

- Perimeter seal is required on interior and exterior.
- Install backer rod around the perimeter of the frame.
- Apply perimeter sealant to the joint between the frame and the structure.
- Do not** seal the screw that attaches the sill to the sill flashing.
- Make sure all screw heads are sealed.

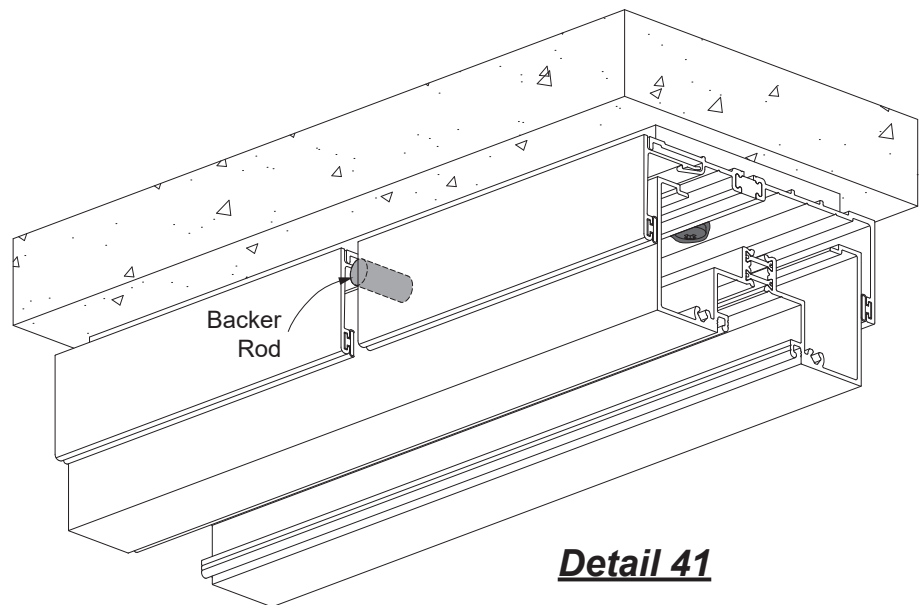
See **Detail 40**.



**FRAME INSTALLATION****STEP 16A****APPLY PERIMETER SEALANT @ HEAD RECEPTOR**

-Insert backer rods as required into the head receptor snap cover to provide support for sealant at the exterior gap.

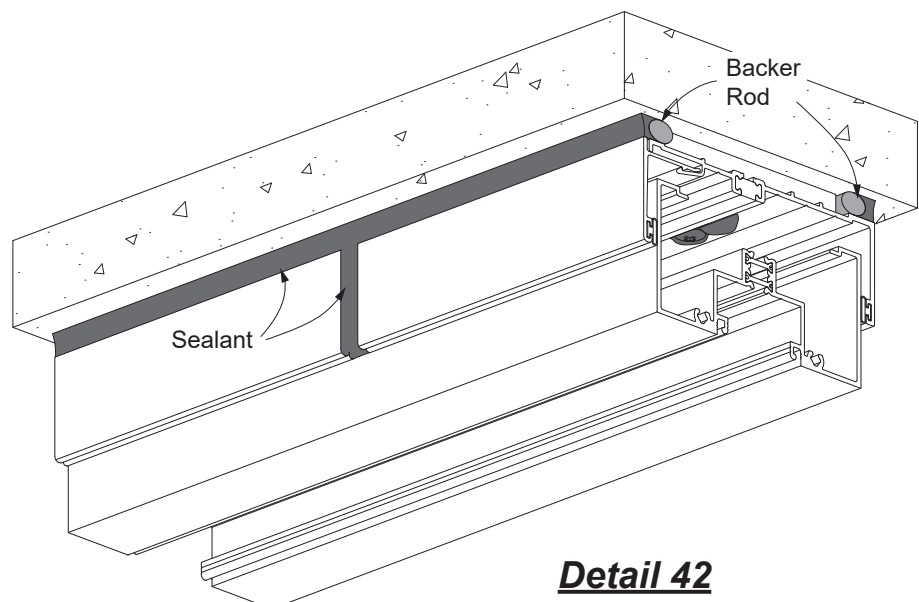
See **Detail 41**.



-Insert a continuous backer rod between the head receptor and substrate on both the interior and exterior of the frame.

-Apply and tool continuous sealant along the caulk joint and fill the gap at the exterior snap cover with sealant.

See **Detail 42**.



## FRAME INSTALLATION

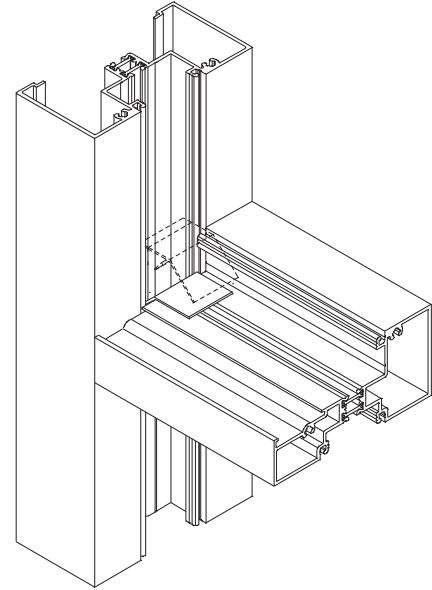
### STEP 17 INSTALL WATER DEFLECTORS

YES 45 FT requires the installation of a water deflector, E2-0047, at the ends of every intermediate horizontal to keep water off of the insulating glass units.

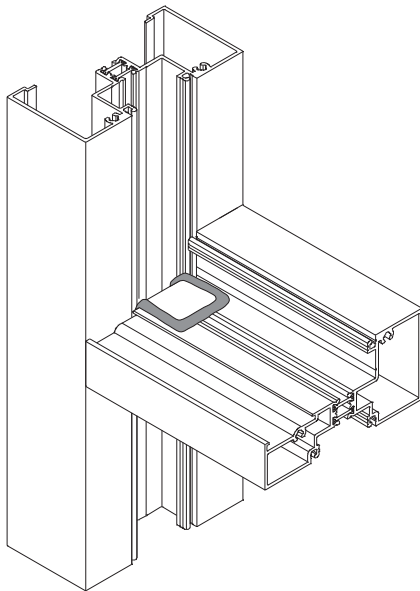
- Peel away the protective paper from the bottom of the water deflector, E2-0047, and install the water deflector by rotating it over each end of the horizontal.
- Position the vertical leg of the water deflector against the end of the horizontal.

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

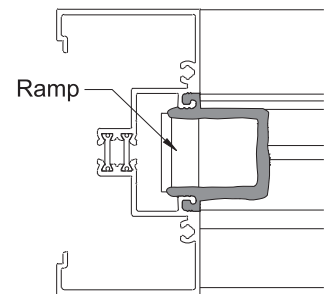
See **Detail 43**.



**Detail 43**



**Detail 44**



**Detail 45**

-Apply and tool sealant along the edges of the water deflector and down onto the horizontal.  
See **Detail 44**.

-Seal the ramp of the water deflector to the sides of the vertical gasket reglets.  
See **Detail 45**.

## FRAME INSTALLATION

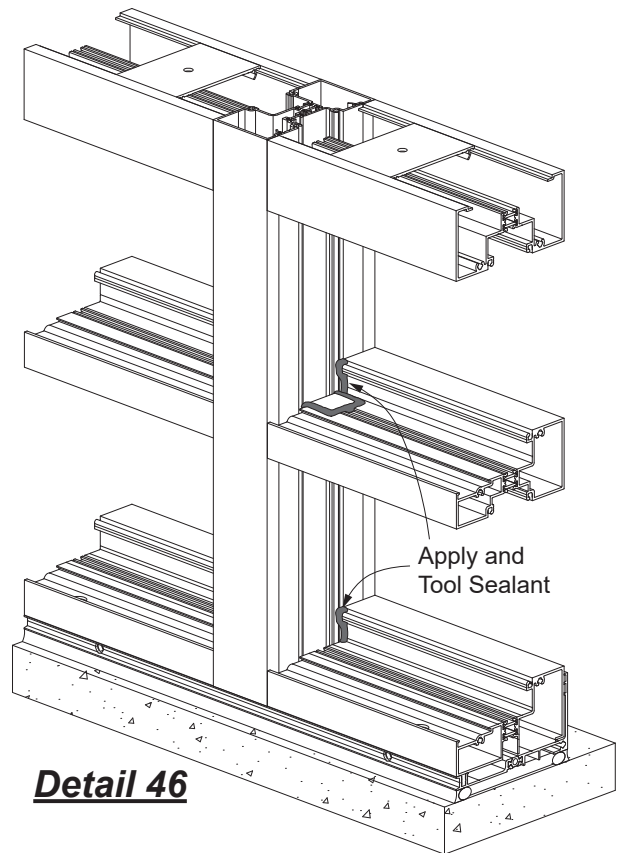
### STEP 18 APPLY INTERNAL SEALANT

- Apply a generous amount of sealant to the vertical intersection of the horizontal and vertical members.
- Seal all screw heads.
- Tool all of the sealant to ensure a water tight joint.

See **Detail 46**.

**Glazing Table - YES 45 T**

| Glass Thickness | Adaptor | Exterior | Interior |
|-----------------|---------|----------|----------|
| 3/16"           | E9-1040 | E2-0052  | E2-0064  |
| 1/4"            | E9-1040 | E2-0052  | E2-0052  |
| 5/16"           | E9-1040 | E2-0053  | E2-0052  |
| 3/8"            | E9-1040 | E2-0053  | E2-0053  |
| 1/2"            | E9-1039 | E2-0064  | E2-0064  |
| 5/8"            | E9-1039 | E2-0052  | E2-0052  |
| 3/4"            | E9-1039 | E2-0053  | E2-0053  |
| 7/8"            | —       | E2-0064  | E2-0064  |
| 1"              | —       | E2-0052  | E2-0052  |

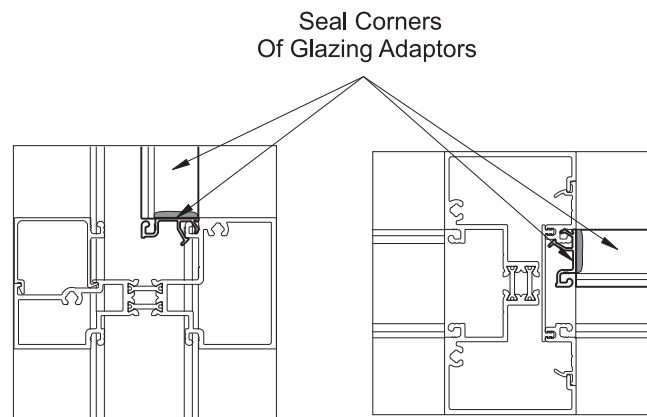


### STEP 19 (Optional) INSTALL GLAZING ADAPTORS

Glazing adaptors, E9-1039 and E9-1040, allow for glazing infills other than the standard 1". Please refer to the glazing tables above for possible adaptor/gasket combinations.

- Snap glazing adaptors into the interior gasket reglets of the verticals.
- Snap glazing adaptors into the interior gasket reglets of the horizontals.
- Apply and tool sealant to the joint between vertical and horizontal glazing adaptors.

See **Detail 47**.



**Detail 47**

## FRAME INSTALLATION

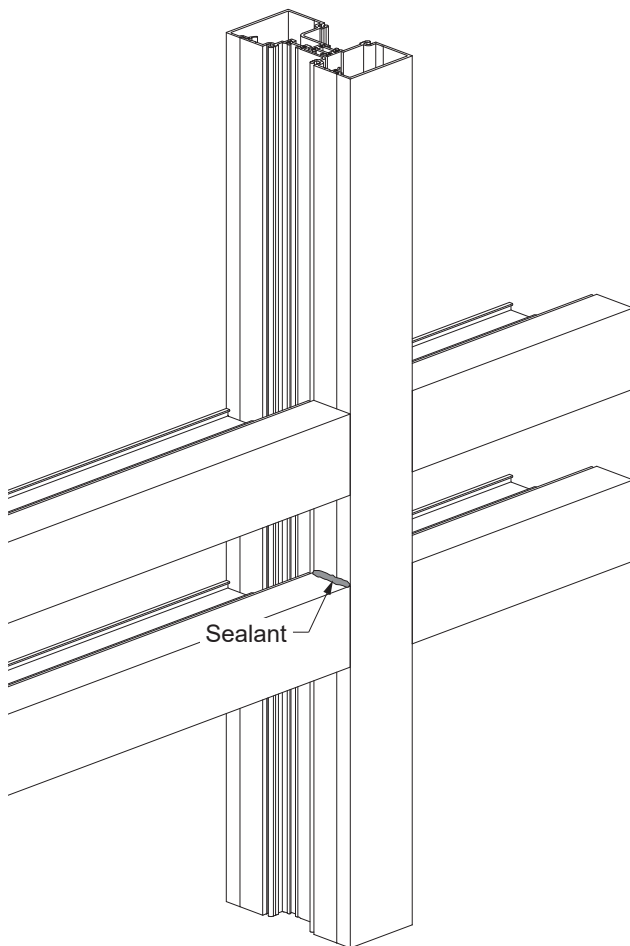
### STEP 20 (Optional) INSTALL OPTIONAL COMPOUND HORIZONTALS

-Apply sealant to the top of of the lower horizontals where they intersect with the vertical. Tool the sealant. Do not seal the upper horizontal.

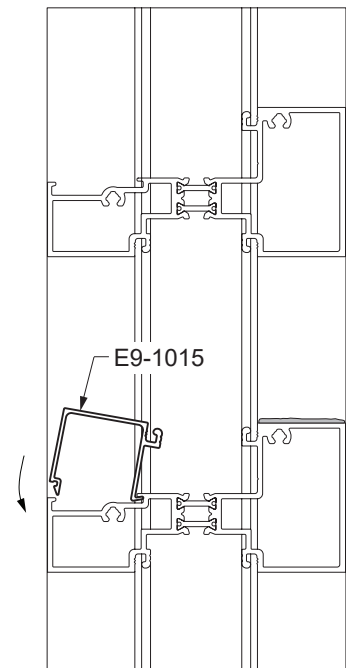
See **Detail 48**.

-Snap the E9-1015 glass stop into the lower horizontal as shown in **Detail 49**. Do not snap glass stops into the upper horizontals yet.

**Note:** Outside glazing shown, inside glazing similar.



**Detail 48**

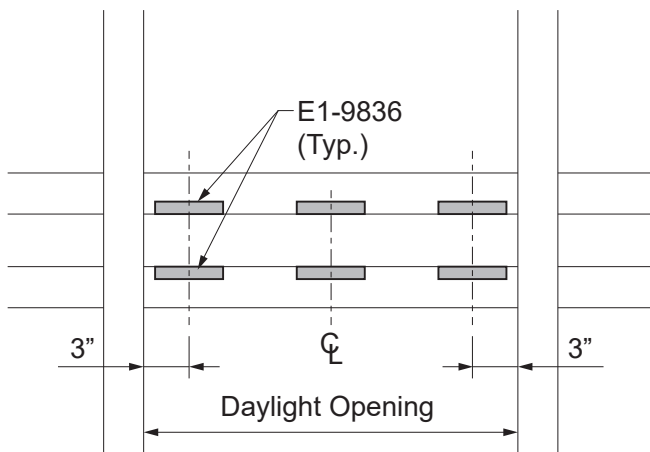


**Detail 49**

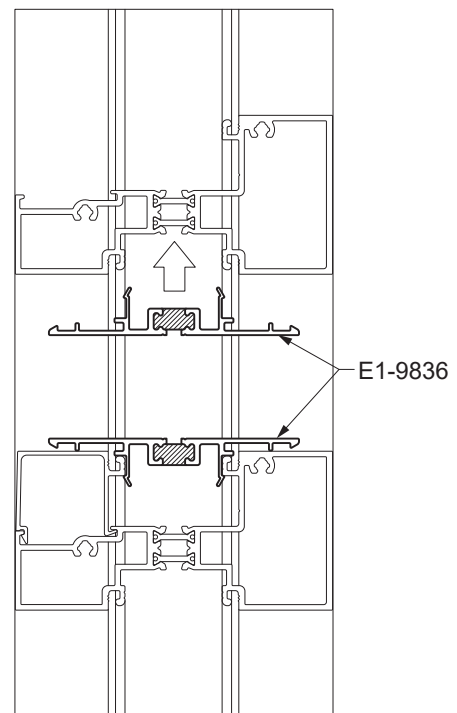
**FRAME INSTALLATION**

**STEP 20 (Optional, Continued)  
INSTALL OPTIONAL COMPOUND HORIZONTALS**

-Snap in the E1-9836 adaptors into the horizontals, one at 3" from each end of each horizontal and one at the middle of each horizontal as shown in **Details 50 & 51**.



**Detail 50**



**Detail 51**

## FRAME INSTALLATION

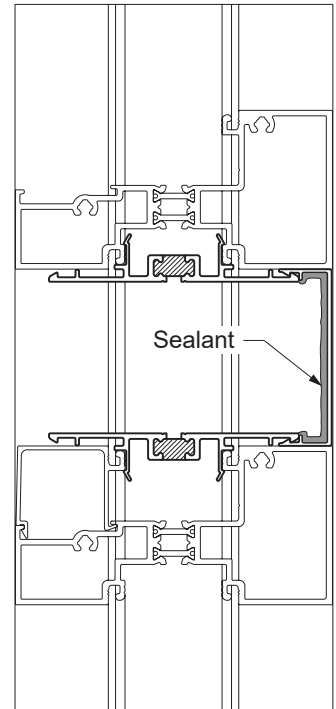
### STEP 20 (Optional, Continued) INSTALL OPTIONAL COMPOUND HORIZONTALS

-Cut the front and rear horizontal face covers to Daylight Opening minus(-) 1/16". Apply continuous sealant to the full length of the back of both horizontals where the rear face cover will snap into as shown in **Detail 52**. Snap the rear face cover into place.

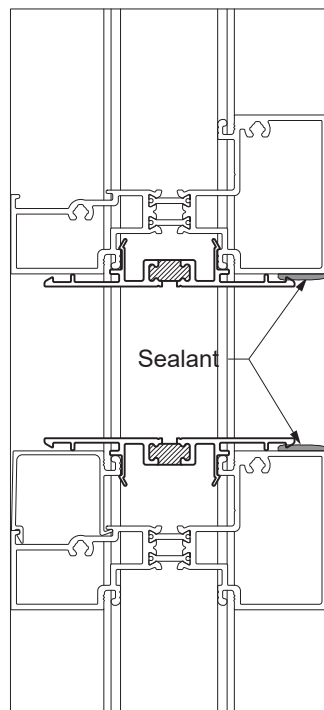
-Seal the joint between the edge of the face cover and the verticals as shown in **Detail 53**.

-Snap the front face cover into place.

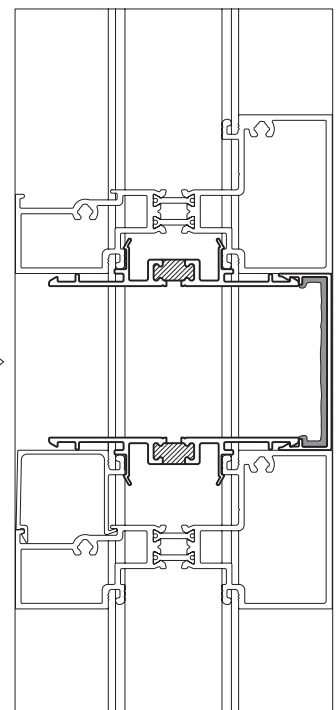
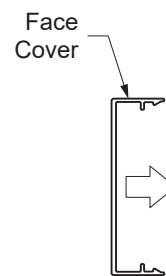
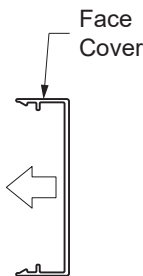
See **Detail 54**.



**Detail 53**



**Detail 52**



**Detail 54**

## GLAZING

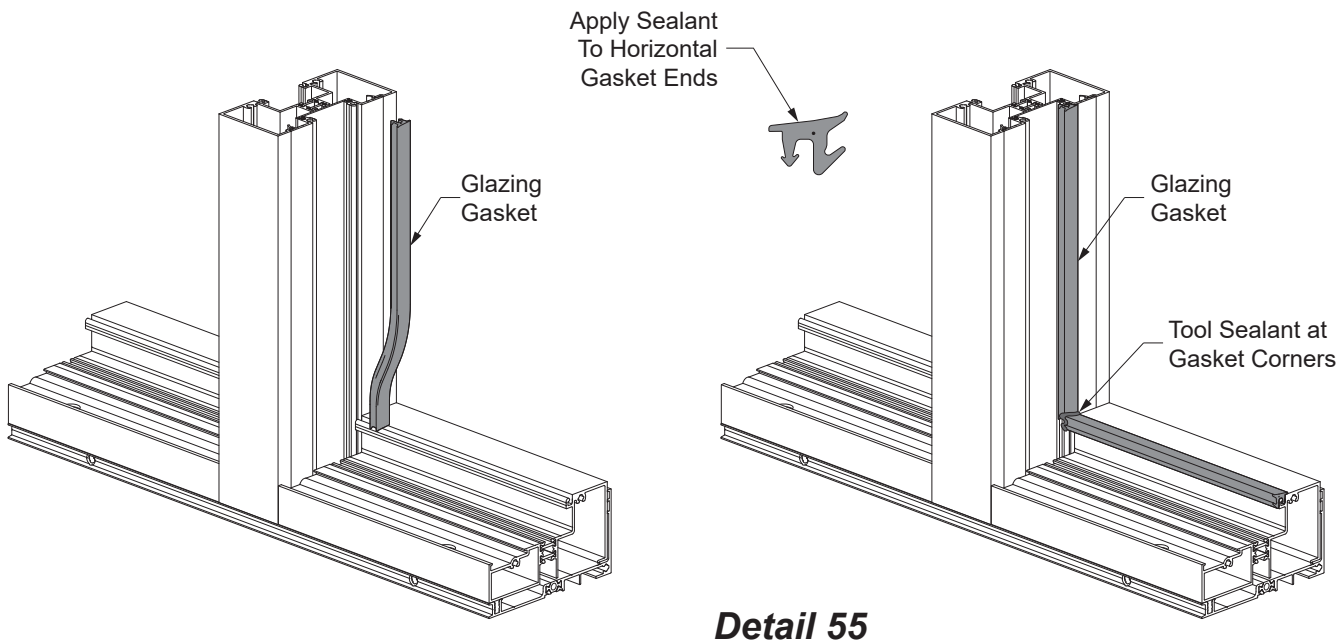
### STEP 21 INSTALL GLAZING GASKETS

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(+) 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 55**.



## GLAZING

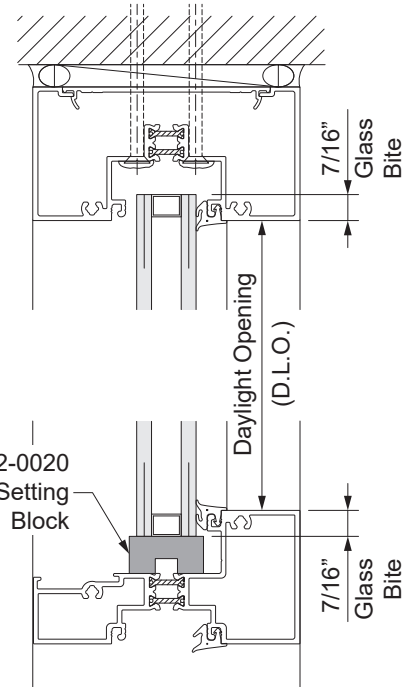
### STEP 22 INSTALL GLASS

Determine the glass size:

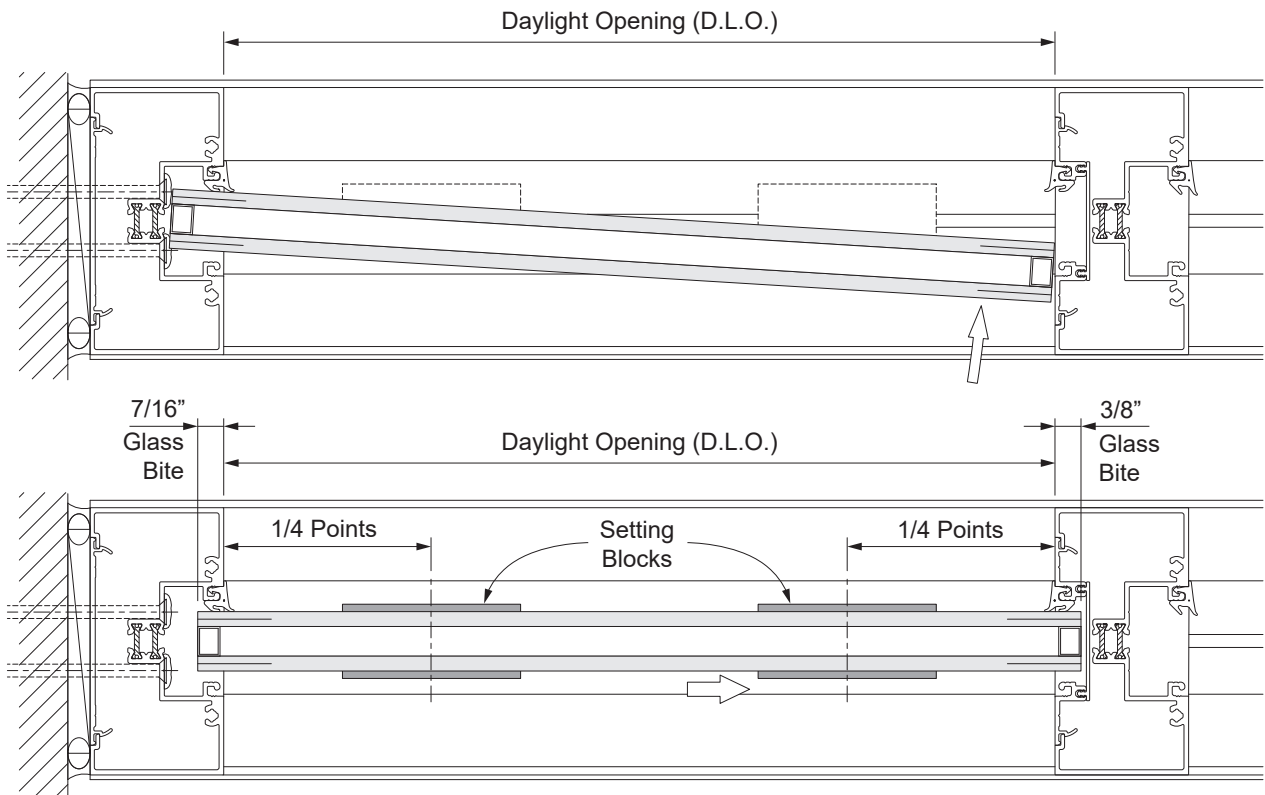
**Horizontal Glass Size = D.L.O. plus(+) 7/8"**  
**Vertical Glass Size = D.L.O. plus(+) 7/8"**

- Carefully install the glass into the opening: bring the lite up and into the deep pocket first and then rotate the other end in place.
- Carefully lift lite of glass, install setting blocks at quarter points of horizontal D.L.O. or according to engineering calculations.
- Make sure the glass is engaged with all setting blocks.

See **Detail 56**.



***Detail 56***



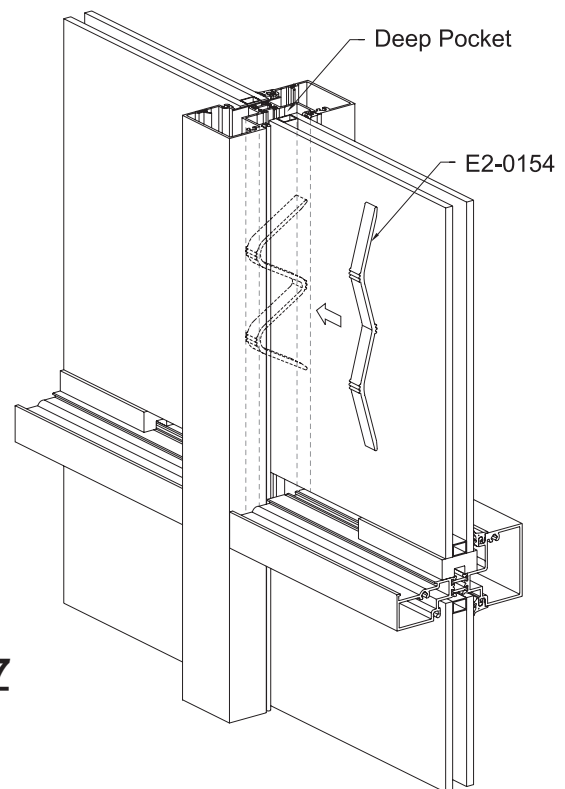
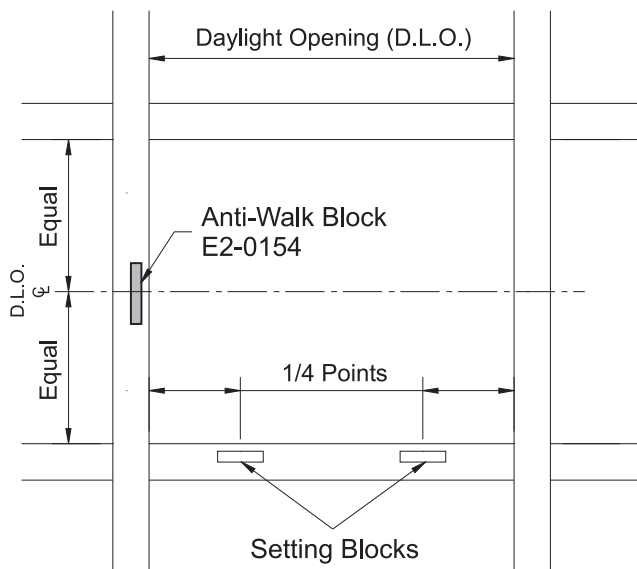
**GLAZING**

**STEP 23  
INSTALL ANTI-WALK BLOCKS**

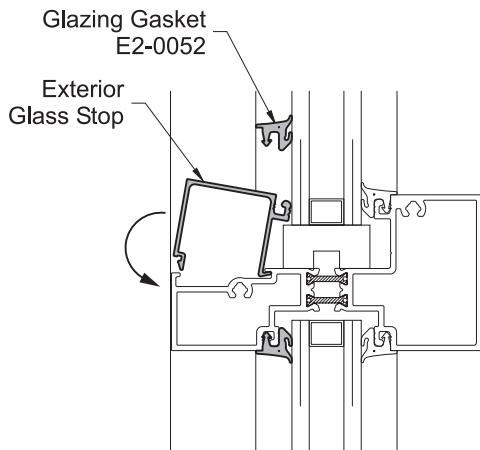
YES 45 FT frames require the installation of an anti-walk block, E2-0154, in the vertical deep glazing pocket of each lite centered along the daylight opening.

- 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 57**.



**Detail 57**



**Detail 58**

**STEP 24  
INSTALL EXTERIOR GLASS STOPS  
& GLAZING GASKETS**

- Snap the exterior glass stops into place as shown in **Detail 58**.
- Install the exterior glazing gaskets using the same technique described in **Step 21** on **Page 36**. Always install the vertical glazing gasket first.

Repeat **Steps 21 through 23** until all lites are installed.





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