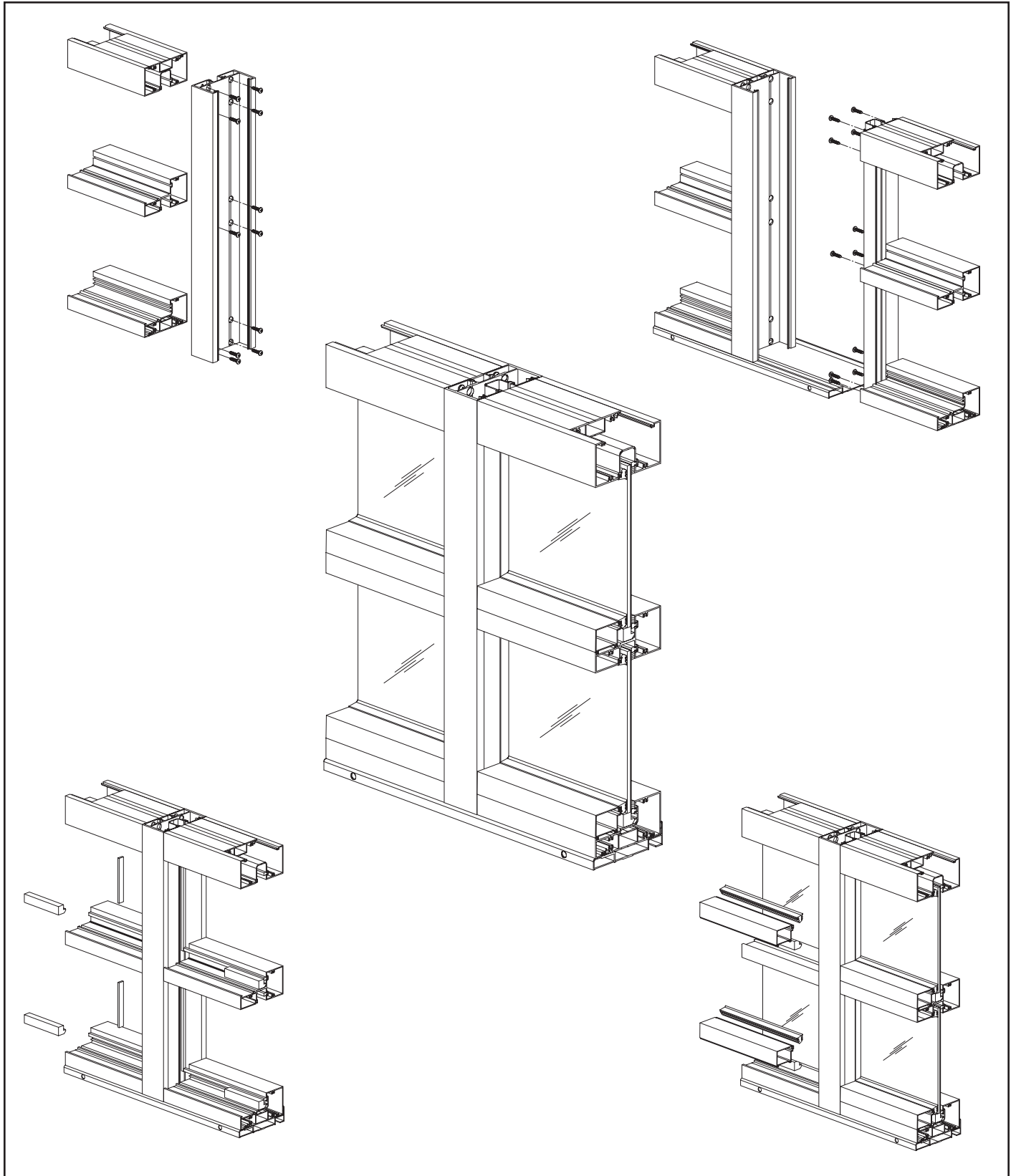


# YHS 50 Storefront System & Model 35H Door



## Installation Manual



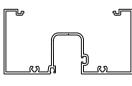

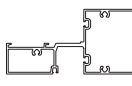

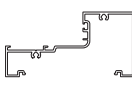




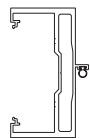
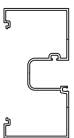
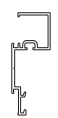


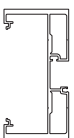



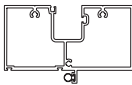

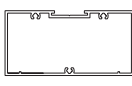
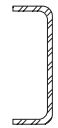
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
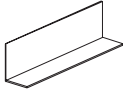

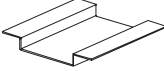

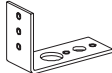














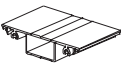

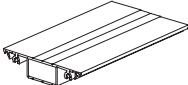

### **Installation Notes**

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 that you have proudly produced, because no one else will.
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 / ACCESSORIES

	<b>Head</b> 2-1/2" x 5"	<b>E9-0601</b>		<b>Door Stop</b> For OHCC Transom Bar Elastomer Weathering E2-0051 included	<b>AS-0215</b>
	<b>Horizontal</b> 2-1/2" x 5"	<b>E9-0603</b>		<b>Threshold Trim</b> Elastomer weathering E2-0051 included	<b>AS-0503</b>
	<b>Sill</b> 2-1/2" x 5"	<b>E9-0615</b>		<b>Water Resistant Threshold Gutter</b>	<b>E9-0502</b>
	<b>Glass Stop</b>	<b>E9-0608</b>		<b>Air Tight Threshold</b> Elastomer weathering E2-0051 included	<b>AS-0487</b>
	<b>Sill Flashing</b>	<b>E9-0616</b>		<b>Door Jamb</b> Elastomer weathering E2-0051 included	<b>AS-0504</b>
	<b>Jamb</b> 2-1/2" x 5"	<b>E9-0604</b>		<b>Transom Glazing Pocket Filler</b>	<b>E9-0505</b>
	<b>Shallow Pocket Filler</b> Use with E9-0601 or E9-0604 <b>*Not Metro-Dade Approved</b>	<b>E9-0617</b>		<b>Transom Glass Stop</b>	<b>E9-0506</b>
	<b>Vertical</b> 2-1/2" x 5"	<b>E9-0605</b>		<b>Threshold Ramp</b>	<b>E9-0511</b>
	<b>Deep Pocket Filler</b> Use with E9-0605 & E9-0504	<b>E9-0606</b>		<b>Threshold Ramp</b>	<b>E9-0512</b>
	<b>Transom Bar</b> Elastomer weathering E2-0051 included	<b>AS-0501</b>		<b>Threshold Ramp</b>	<b>E9-0513</b>
	<b>OHCC Transom Bar</b> Use with AS-0215, E9-0505 & E9-0506	<b>E9-0514</b>		<b>Steel Reinforcing</b>	<b>E1-1062</b>

## ACCESSORIES

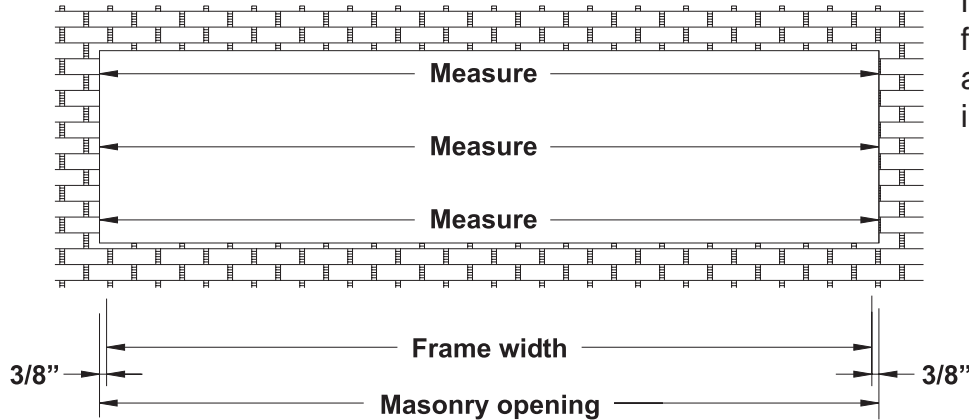
	<b>Setting Block</b>	<b>E2-0080</b>		<b>End Dam</b> For Sill Flashing E9-0616	<b>E1-1070</b>
	<b>Door Setting Block</b>	<b>E2-0086</b>		<b>Splice Sleeve</b> For Sill Flashing E9-0616	<b>E1-1072</b>
	<b>Side Block</b>	<b>E2-0094</b>		<b>Threshold Clip</b> For Air Tight Threshold E9-0487	<b>E1-1055</b>
	<b>Exterior Glazing Gasket</b> For 1/4" to 5/16" Glazing	<b>E2-0081</b>		<b>#10 x 1/4" FHSMS</b> For attachment of Threshold Clip E1-1055	<b>FM-1004</b>
	<b>Exterior Glazing Gasket</b> For 3/8" to 7/16" Glazing	<b>E2-0082</b>		<b>#10 x 1/2" FPHSMS</b> For attachment of Threshold Clip & End Dam	<b>FC-1008</b>
	<b>Exterior Glazing Gasket</b> For 1/2" to 9/16" Glazing	<b>E2-0083</b>		<b>#10 - 24 x 1/2" FPHMS</b> Type "F" For attachment of Glazing Pocket Filler to Steel Reinforcing	<b>FF-1008</b>
	<b>Interior Glazing Gasket</b> Use with 9/16" Laminated Glass for Dry Glazed Applications	<b>E2-0088</b>		<b>#10 x 5/8" PPHSMS</b> Type "B" For attachment of Transom Glazing Pocket Filler	<b>PB-1010</b>
	<b>Interior Silicone Spacer</b>	<b>E2-0084</b>		<b>#12 x 1/2" PPHSMS</b> Type "AB" For attachment of sill & threshold to flashing	<b>PC-1208</b>
	<b>Door &amp; Reglaze Silicone Spacer</b>	<b>E2-0085</b>		<b>#12 x 1" PPHSMS</b> Type "AB" For Screw Spline Attachment	<b>PC-1216</b>
	<b>Anti-Walk Block</b> For Jamb & Vertical Deep Pockets (Dry Glazed)	<b>E2-0546</b>		<b>#14 x 1/2" PPHSMS</b> Type "AB" For Threshold Gutter Attachment	<b>PC-1408</b>
	<b>Anchor Filler</b> For Jamb at Anchor Locations, 2-1/2" Long	<b>E1-1068</b>		<b>#14 x 1-1/2" PPHSMS</b> Type "AB" For Sill Gutter Attachment	<b>PC-1424</b>
	<b>Anchor Filler</b> For Head & Sill at Anchor Locations, 6-1/2" Long	<b>E1-1071</b>		<b>1/4" - 20 x 3/4" HWHMS</b> Type "F" For attachment of Steel Reinforcing to Verticals	<b>HF-2512-W1</b>

## FABRICATION

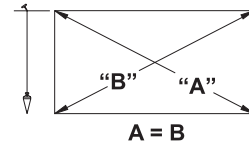
### STEP 1

#### 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.

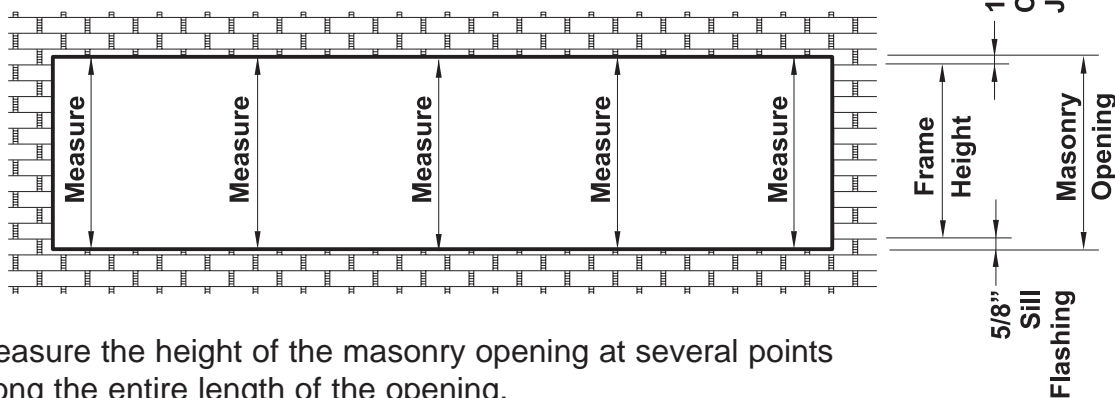


**Detail 1**

- 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**.

#### Determine Frame Height:



- Measure the height of the masonry opening at several points along the entire length of the opening.
- Select the smallest dimension measured and subtract 1-1/8" to determine the frame height:
  - 1/2" for the caulk joint at the head.
  - 5/8" for the sill flashing E9-0616.

**Detail 2**

See **Detail 2**.

**Caution:** Projects in Metro Dade County, Florida, change the shim/caulk joint at the head from 1/2" to 3/8".

**FABRICATION**

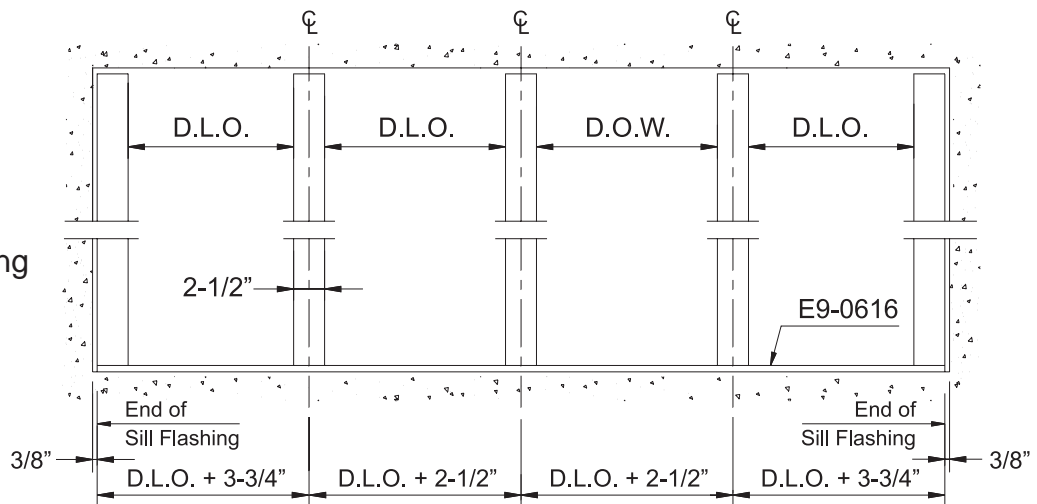
**STEP 2  
FABRICATE SILL FLASHING**

- Cut sill flashing, E9-0616, to the frame width dimension determined in Step 1.
- For openings longer than 24'-0", the sill flashing must be spliced every twelve to fifteen feet. Allow a 3/8" splice joint between members; see **Detail 15 on Page-12**. Splice is to be located at the center of the daylight opening between verticals.
- Locate and mark the centerline of each vertical on the sill flashing. See **Detail 3**.

**Entrance Door with Water Resistant Threshold, E9-0502**

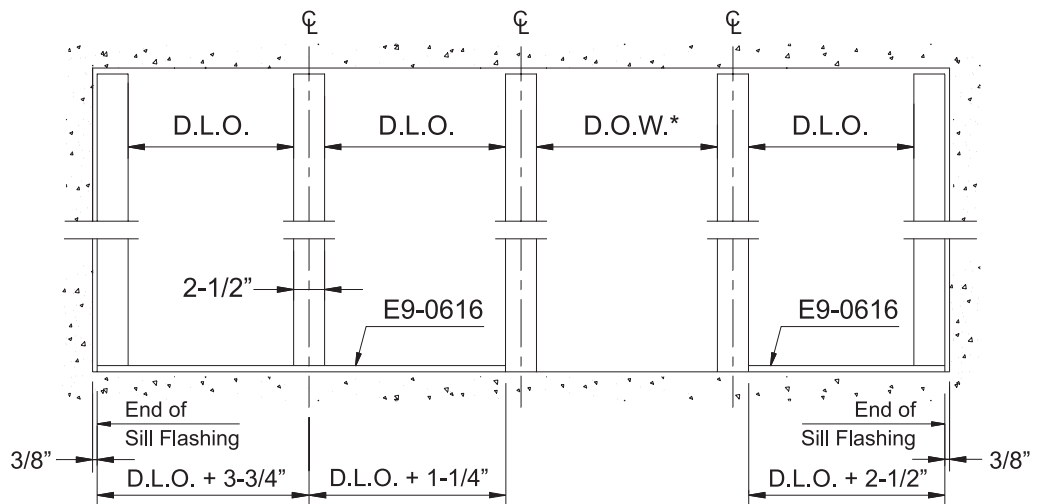
D.L.O. = Day Light Opening

D.O.W. = Door Opening Width



**Detail 3**

**Entrance Door with Air Tight Threshold, E9-0487**



**\*Note:** The sill flashing, E9-0616, does not run underneath the door frame when the air tight threshold, E9-0487, is used.



## FABRICATION

### STEP 2

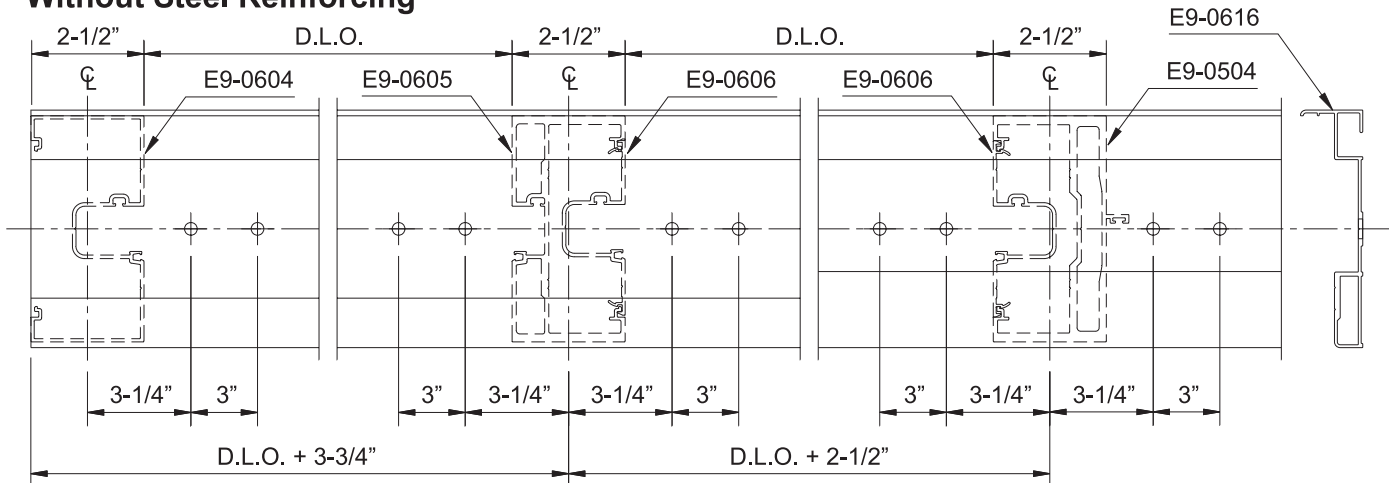
### FABRICATE SILL FLASHING (Continued)

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

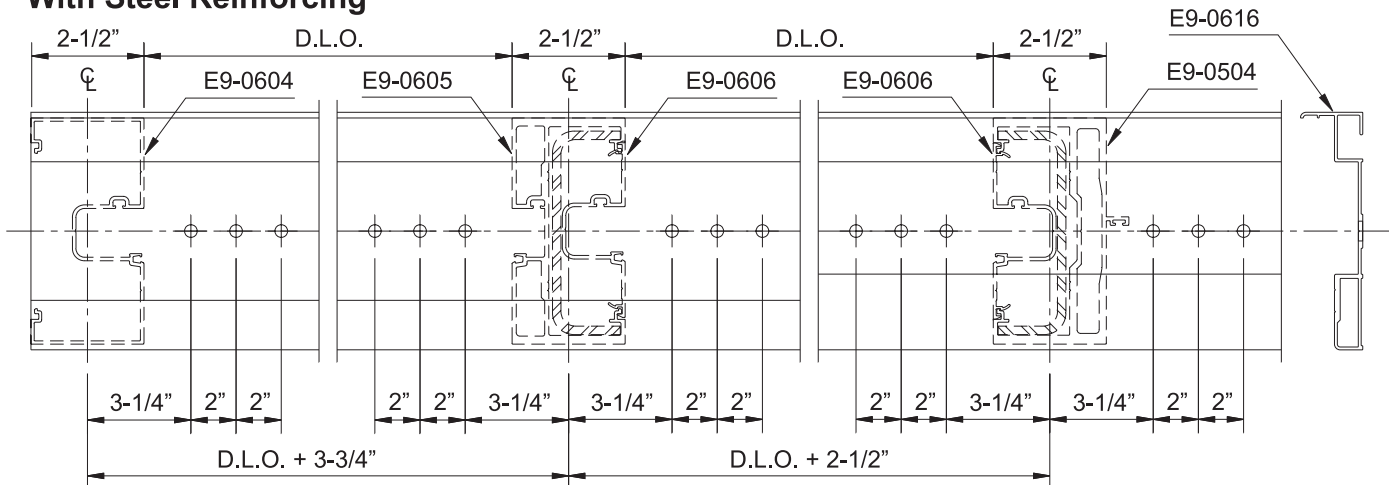
#### For Dade County Applications:

- Without Steel Reinforcing, drill 5/16" diameter clearance holes for 1/4" Tapper fasteners or 7/16" diameter clearance holes for 3/8" lag screws.
  - With Steel Reinforcing, drill 7/16" diameter clearance holes for 3/8" Tapper fasteners or 3/8" lag screws.
- See **Detail 4** for anchor hole locations.

#### Without Steel Reinforcing



#### With Steel Reinforcing



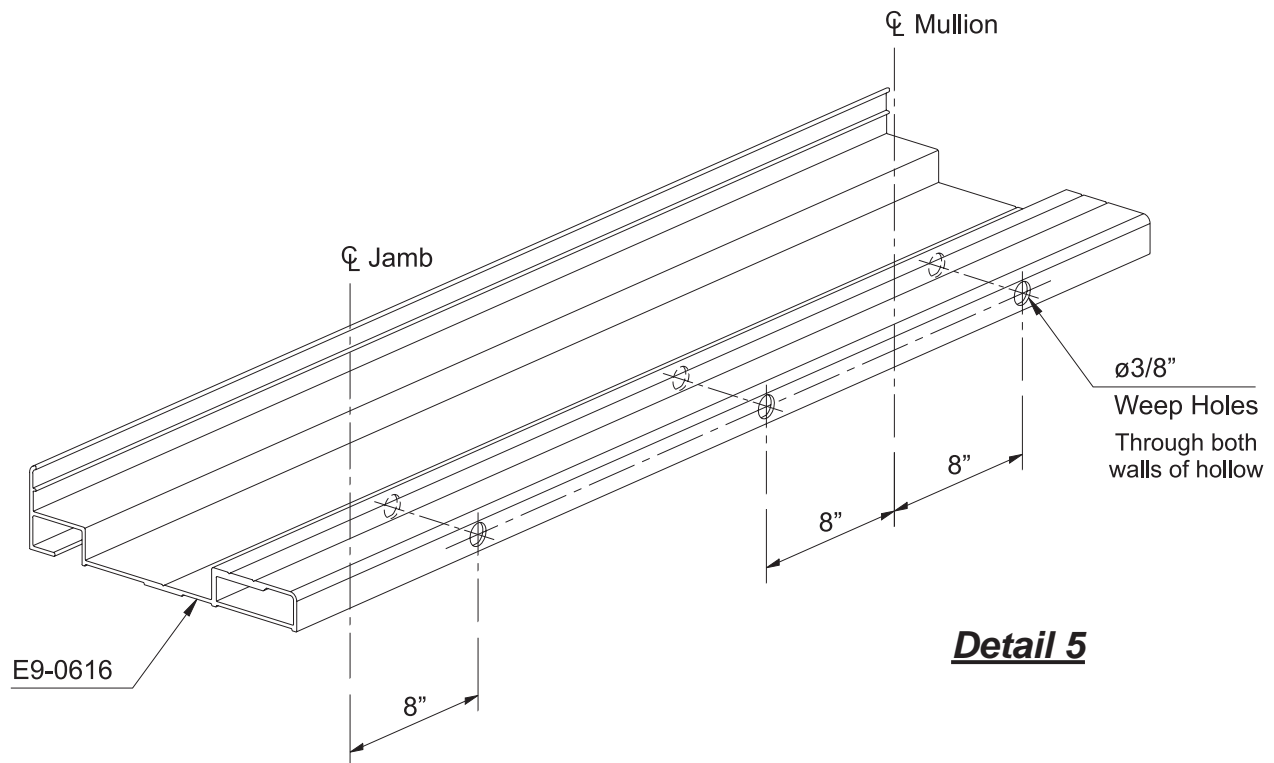
**Detail 4**

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

Fabricate weep holes in the sill flashing:

- Measure 8" in each direction of the vertical 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**.



## FRAME FABRICATION

### STEP 3

### FABRICATE VERTICAL MULLIONS AND POCKET FILLERS

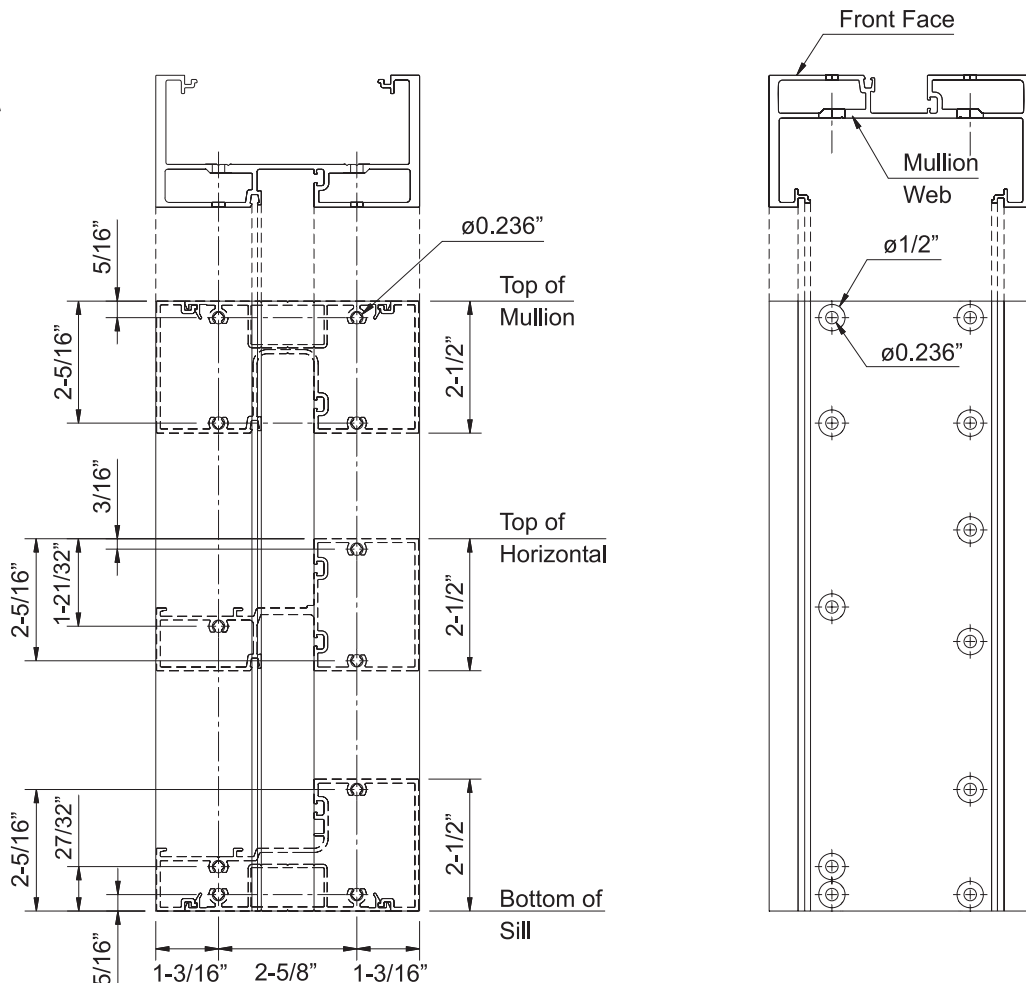
- Cut all vertical members and pocket fillers to the frame height determined in **Step 1**:  
 Masonry Opening minus(-) 1-1/8".  
 Masonry Opening minus(-) 1" (For Dade County).

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 **Detail 6**.
- Drill 0.236" diameter (#B drill bit) holes at each location marked.

**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 6**



## FRAME FABRICATION

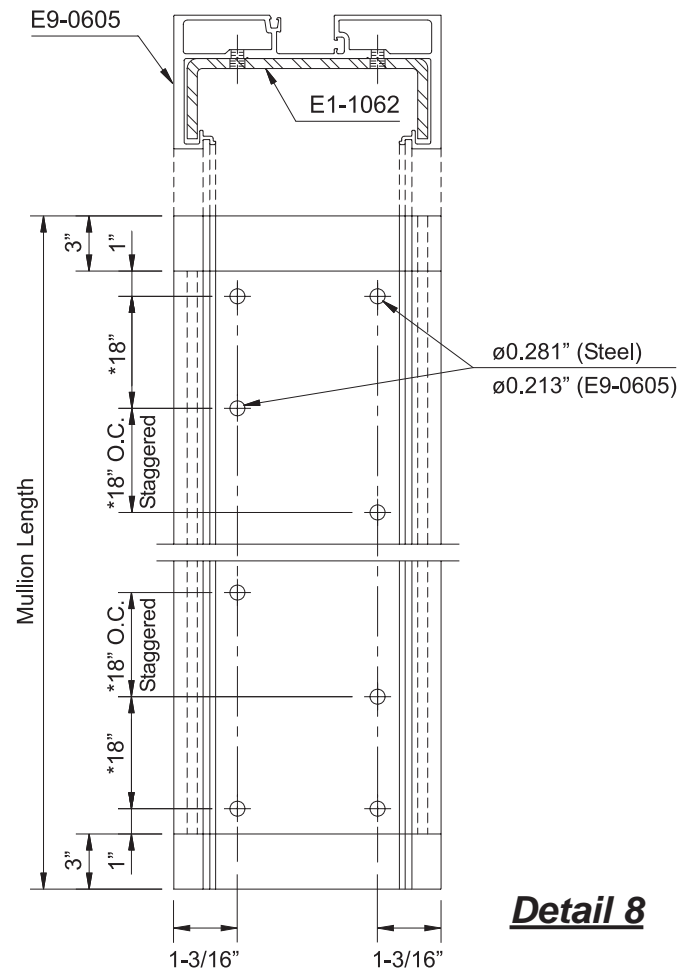
### STEP 4 FABRICATE VERTICAL MULLIONS AND POCKET FILLERS FOR STEEL REINFORCING

- Measure in 24" from each end of the pocket filler and mark locations on the "V"-Groove.
- Measure 12" in each direction from the midpoint of the pocket filler and mark the locations on the "V"-Groove.

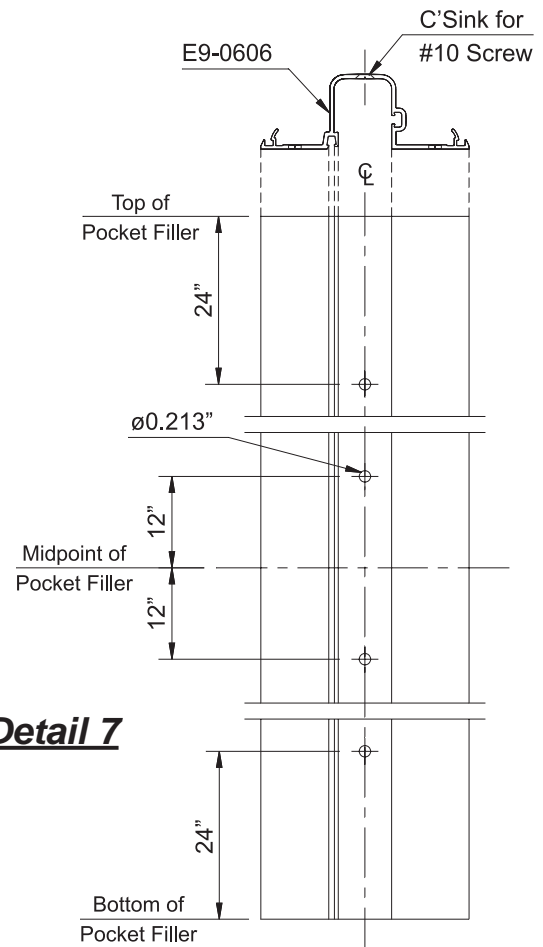
**Note:** Coordinate with the location of horizontals so that the horizontals do not block these holes.

- Drill  $\varnothing 0.213"$  (#3) holes at each location marked.
- Countersink for #10 flat head fastener (FF-1008). See **Detail 7**.

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 8**



**Detail 7**

- Cut steel channel, E1-1062, 6" shorter than mullion length.
- Layout and drill 0.281" diameter (#K drill bit) clearance holes in steel only.
- Align steel channel, E1-1062, with E9-0605 as shown in **Detail 8** 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 12** on **Page-13**.

**\*Dade County:**  
**Steel reinforcing must be attached 9" on center staggered.**

## FRAME FABRICATION

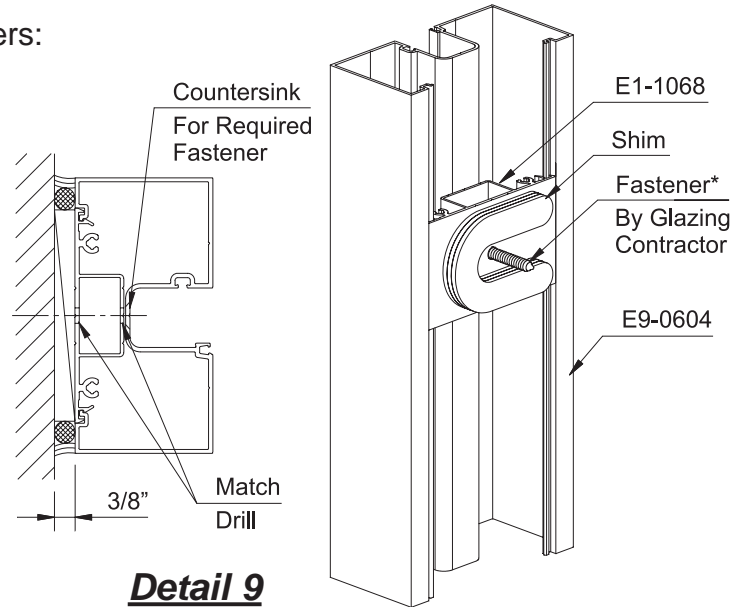
### STEP 5 FABRICATE JAMB MULLONS

Prepare jamb members for perimeter fasteners:

- Drill and countersink jamb member, E9-0604, for required fastener.
- 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 9**.

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



**Detail 9**

**For Dade County Applications see Pages 16 through 19.**

### STEP 6 FABRICATE HEAD & HORIZONTAL MEMBERS

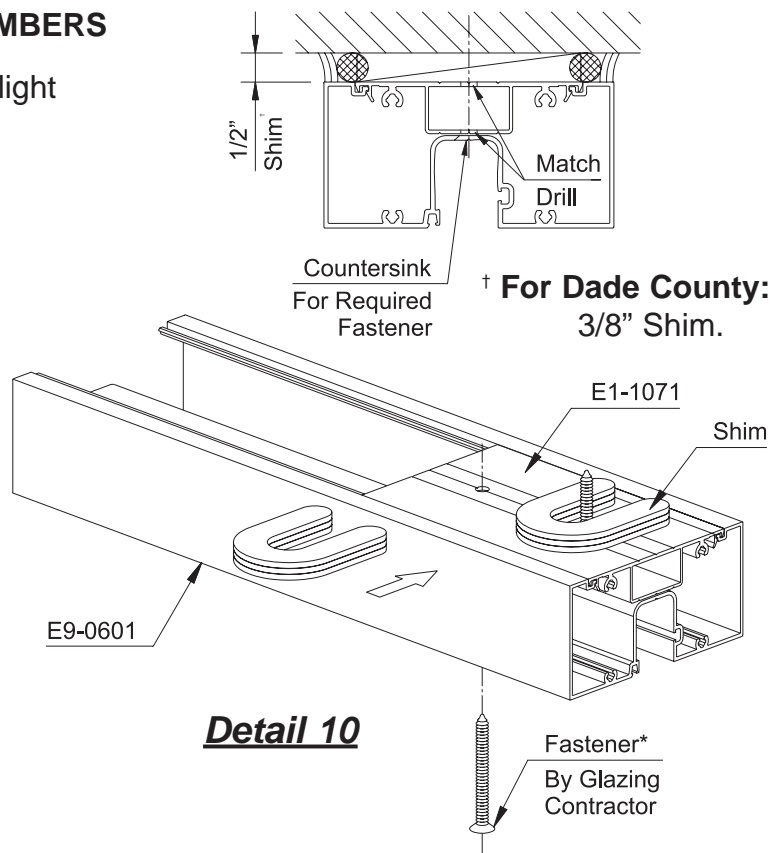
- Cut head and horizontal members to daylight opening between verticals.

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 10**.

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



**Detail 10**

**For Dade County Applications see Pages 16 through 19.**

**FRAME FABRICATION**

**STEP 7**

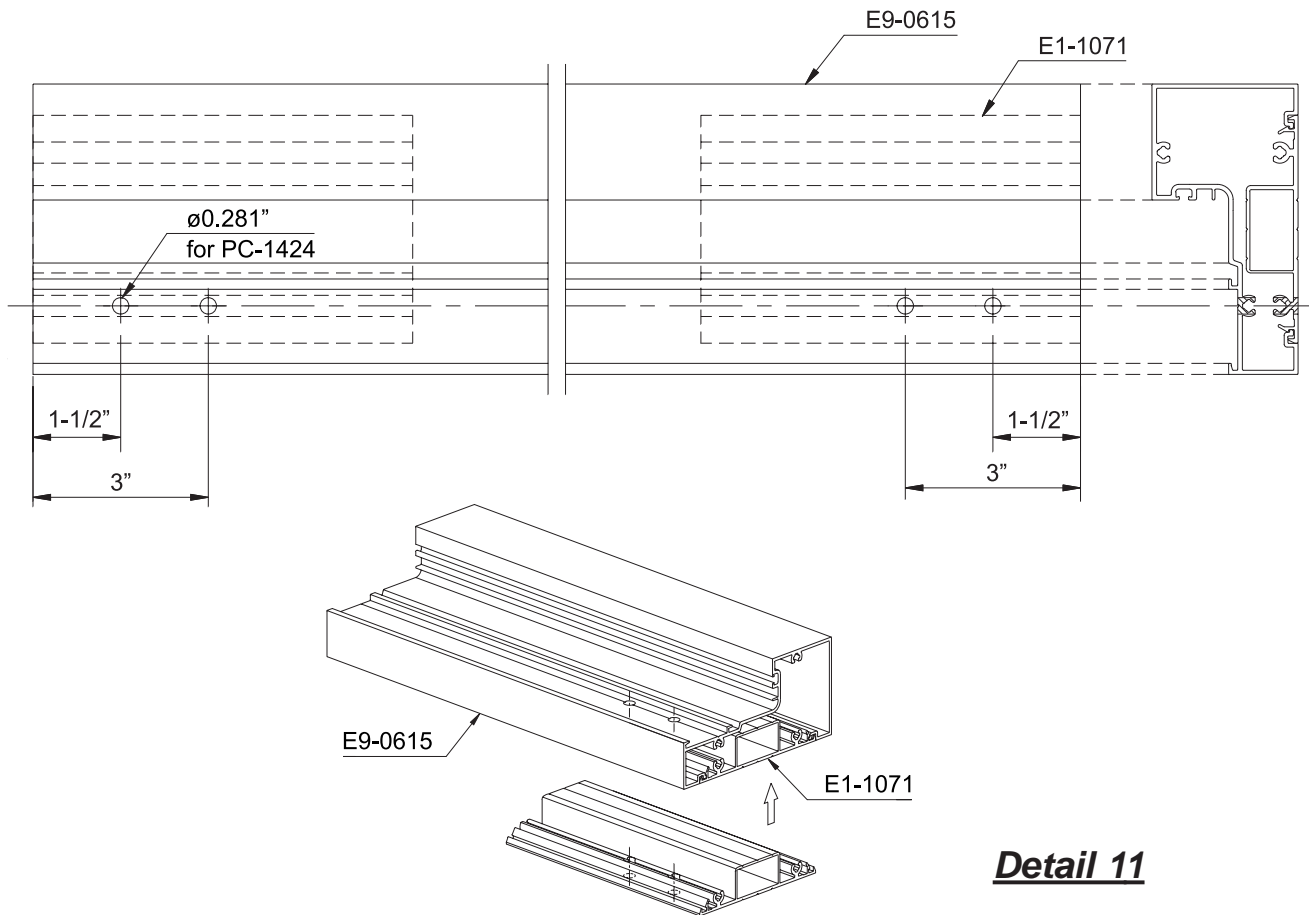
**FABRICATE SILL MEMBERS**

-Cut sill members to daylight opening between verticals.

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 11**.



**STEP 8**

**FABRICATE GLASS STOPS**

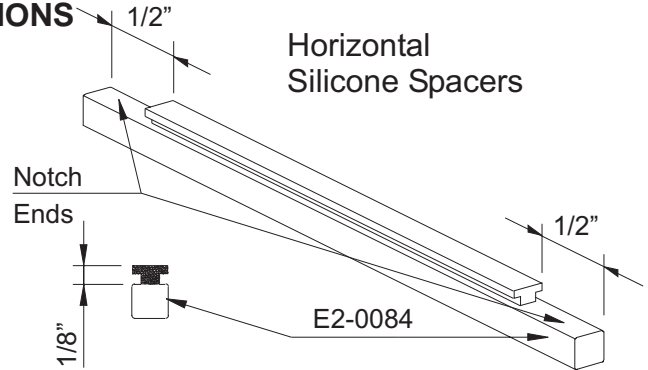
-Cut glass stops to daylight opening between verticals minus (-) 1/32".

## 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 12**.
- 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.

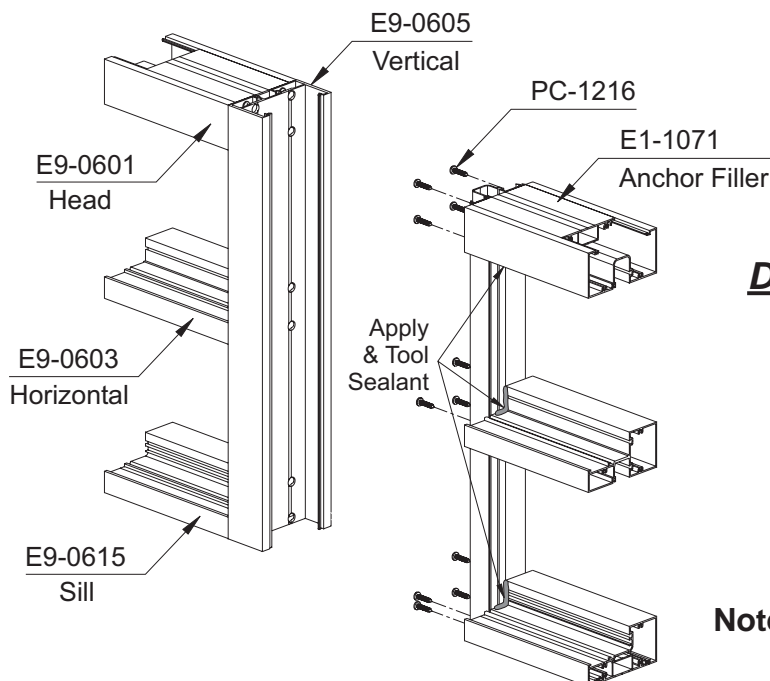


**Detail 12**

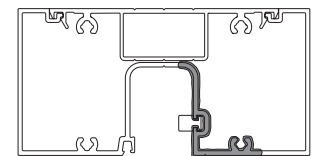
### STEP 10 ASSEMBLE FRAMES

- 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-1216 fasteners.
- Tool all sealant to ensure a water tight joint.

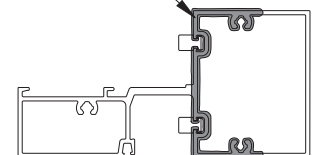
See **Detail 13**.



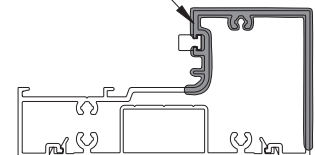
**Detail 13**



Sealant



Sealant



(SSG Application Shown, Dry Glaze Similar)

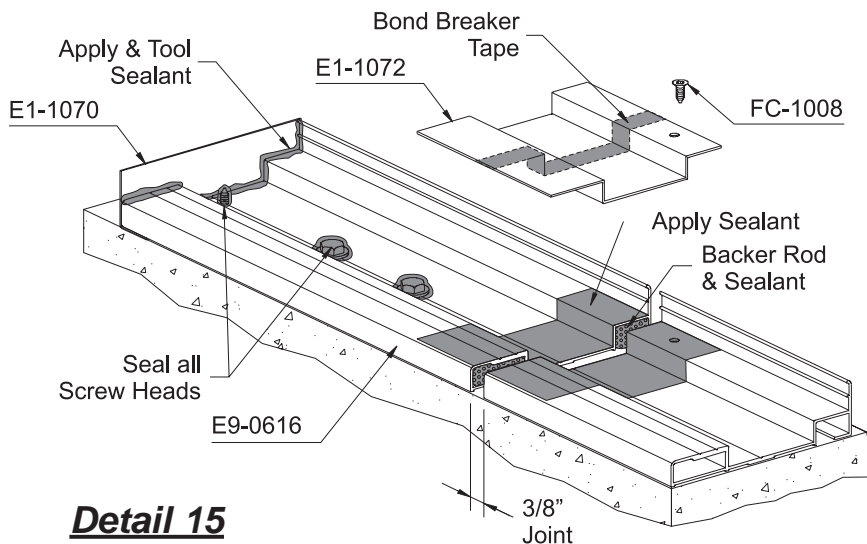
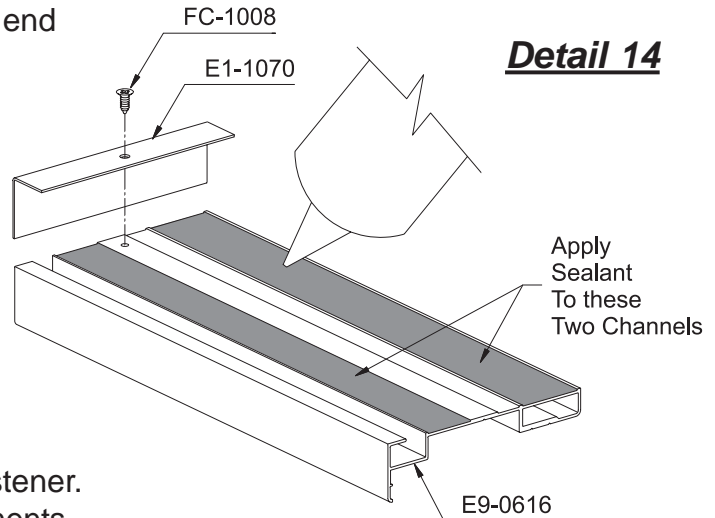
**Note:** In all metal to metal applications use Dow Corning® 795 or 995.

**FRAME INSTALLATION**

**STEP 11  
INSTALL SILL FLASHING**

-Install brake metal end dam, E1-1070, to each end of sill flashing with one FC-1008 fastener. See **Detail 14**.

- Drop a chalk line to mark the back of sill flashing on the anchoring surface.
- Transfer the location for sill flashing anchors to the anchoring surface.
- Clean the sill flashing and the anchoring surface and apply Dow Corning® 795 or 995 sealant to the front and back channels on the underside of the sill flashing. See **Detail 14**.
- Drill the anchoring surface to accept proper fastener. See **Table 1** on **Page 13** for minimum embedments.



- Set sill flashing in place making sure that it is level.
- Anchor sill flashing in place with appropriate fasteners.
- Seal all fastener heads with silicone sealant.

Install splice sleeve, E1-1072:  
 -Push backer rod 1/2" into the hollow areas of the sill flashing at the splice joint and seal with silicone sealant.  
 -Apply a sealant bed on each side of the sill flashing at the splice joint about as wide as the splice sleeve.

- Apply bond breaker tape to the bottom of the splice sleeve along the middle of the splice.
- Set splice sleeve in place and attach at one end only with one FC-1008 fastener.

**Seal sill flashing:**

- Apply and tool sealant to the intersection of end dam and sill flashing.
- Apply and tool sealant to the edges of the splice sleeve.
- Apply and tool sealant to completely cover all fastener heads in sill flashing.
- Apply and tool additional sealant to the perimeter of sill flashing to completely seal areas that have been shimmed or spliced.

See **Detail 15**.

**Caution:** See **Page 21** for sill flashing installation for air tight thresholds.



## FRAME INSTALLATION

### STEP 12 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 **Detail 17**.

-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 vertical with HF-2512 fasteners and attach pocket filler, E9-0606, to the steel with FF-1008 fasteners.

See **Detail 16**.

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

-Set frame into place on the sill flashing.

-Always shim at anchor locations:

3/8" at jamb.

1/2" at head (3/8" for Dade County).

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

Wood: #24 x 4" FPH wood screws.

Masonry (w/o reinforcing): 1/4" x 4" FPH Tappers.

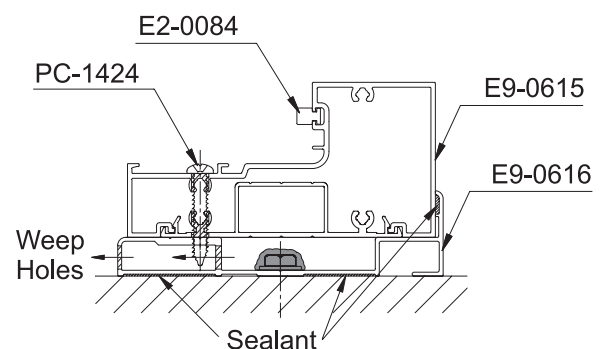
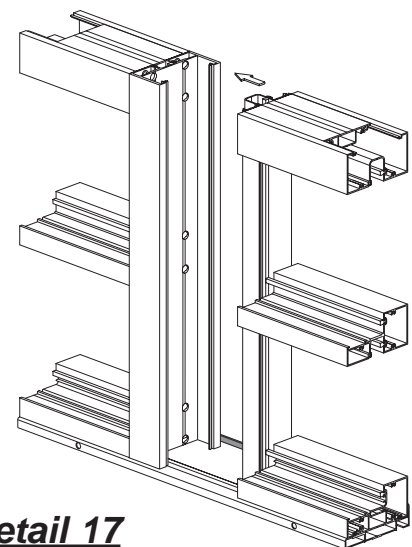
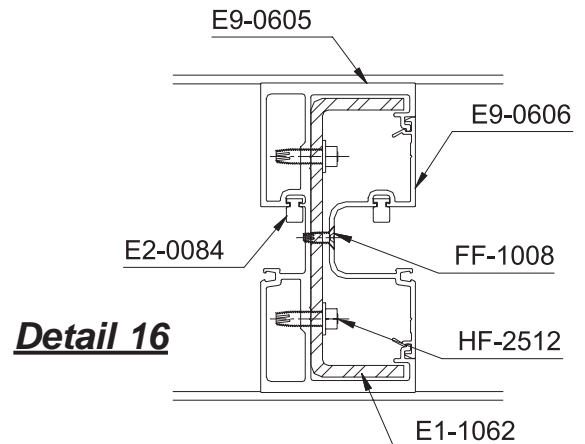
Masonry (w/ reinforcing): 3/8" x 4" FPH Tappers.

For Dade County Applications see **Pages 16 through 19**.

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 **Page-10**.

-Drill 0.201" diameter (#7 drill bit) holes and attach sill member using PC-1424 fasteners.



**Table 1 - Minimum Embedment into Structure**

Condition*	Minimum Embedment	
	Wood	Masonry
At Jamb & Head (w/o Reinforcing)	2-1/4"	1-1/2"
At Sill Flashing (w/o Reinforcing)	2-1/4"	1-1/2"
At Jamb & Head (w/ Reinforcing)	2-1/4"	1-3/4"
At Sill Flashing (w/ Reinforcing)	2-1/4"	1-3/4"

\*Use specified fasteners in Dade County.

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

**FRAME & DOOR INSTALLATION**

**STEP 13  
INSTALL YHS 50 DOOR FRAMES  
WITH WATER RESISTANT THRESHOLD**

Doors are shipped assembled, and door frames will be fabricated and shipped k.d.

-Before assembly of head, transom bar and jambs make sure that silicone spacer, E2-0084, and elastomer weathering, E2-0051, are installed.

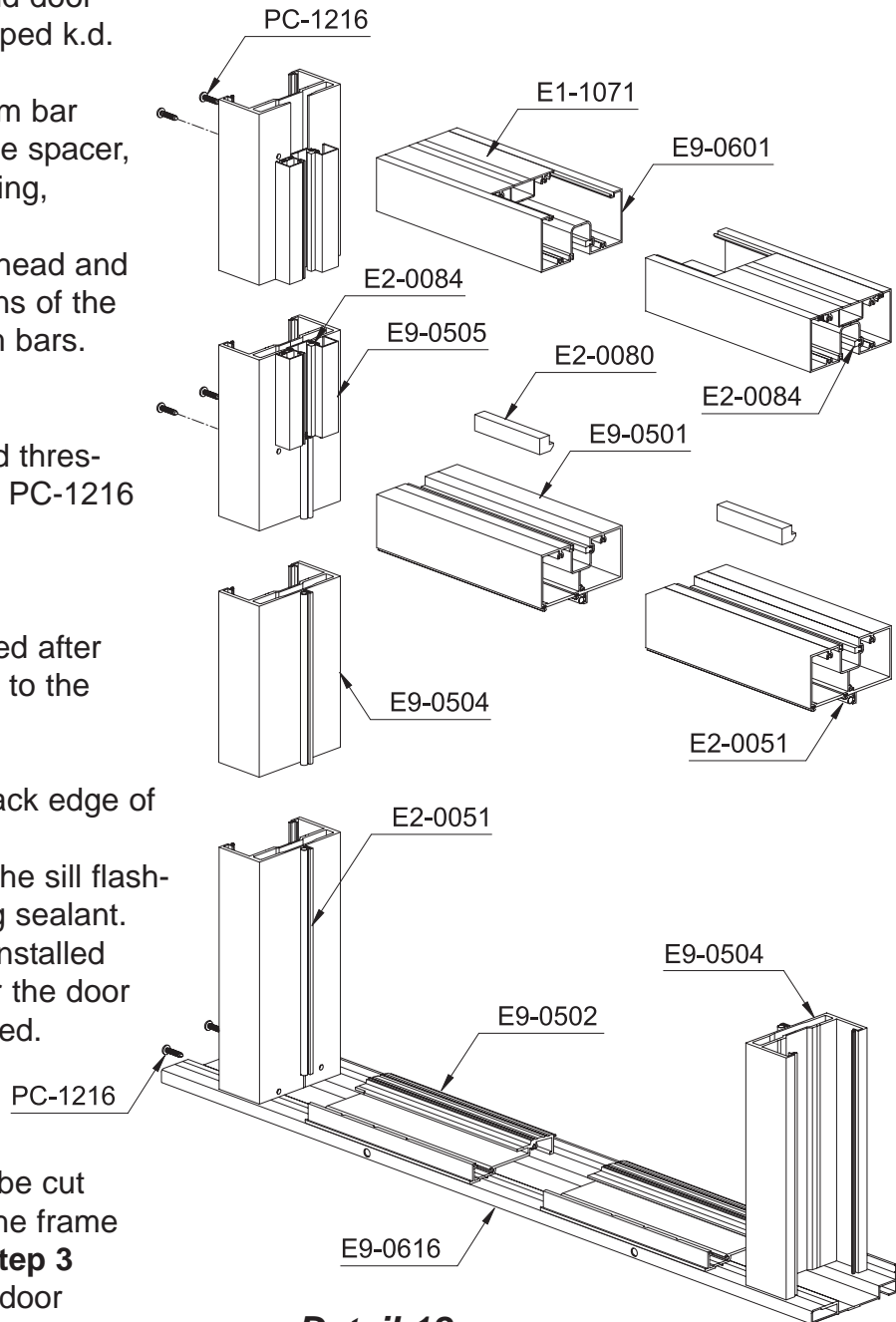
-Apply sealant to the ends of the head and transom bar. Seal the intersections of the jambs with the head and transom bars. See **Detail 13** on **Page-11**.

-Attach the head, transom bar and threshold members to the frames with PC-1216 fasteners at each end. See **Detail 18**.

-Attach steel reinforcing as required after horizontal members are attached to the frame. See **Step 4** on **Page-8**.

-Run silicone sealant along the back edge of the sill flashing, E9-0616.  
-Set assembled door frame onto the sill flashing within ten minutes of applying sealant.  
-Assembled door frame must be installed plumb, square, level, and true for the door to swing properly. Shim as required.

**Note:** If the door frame needs to be cut down, cut from the top of the frame and follow instructions in **Step 3** on **Page 7** to fabricate the door jamb to accept the head member.



**Detail 18**

## FRAME & DOOR INSTALLATION

### STEP 13 (Continued)

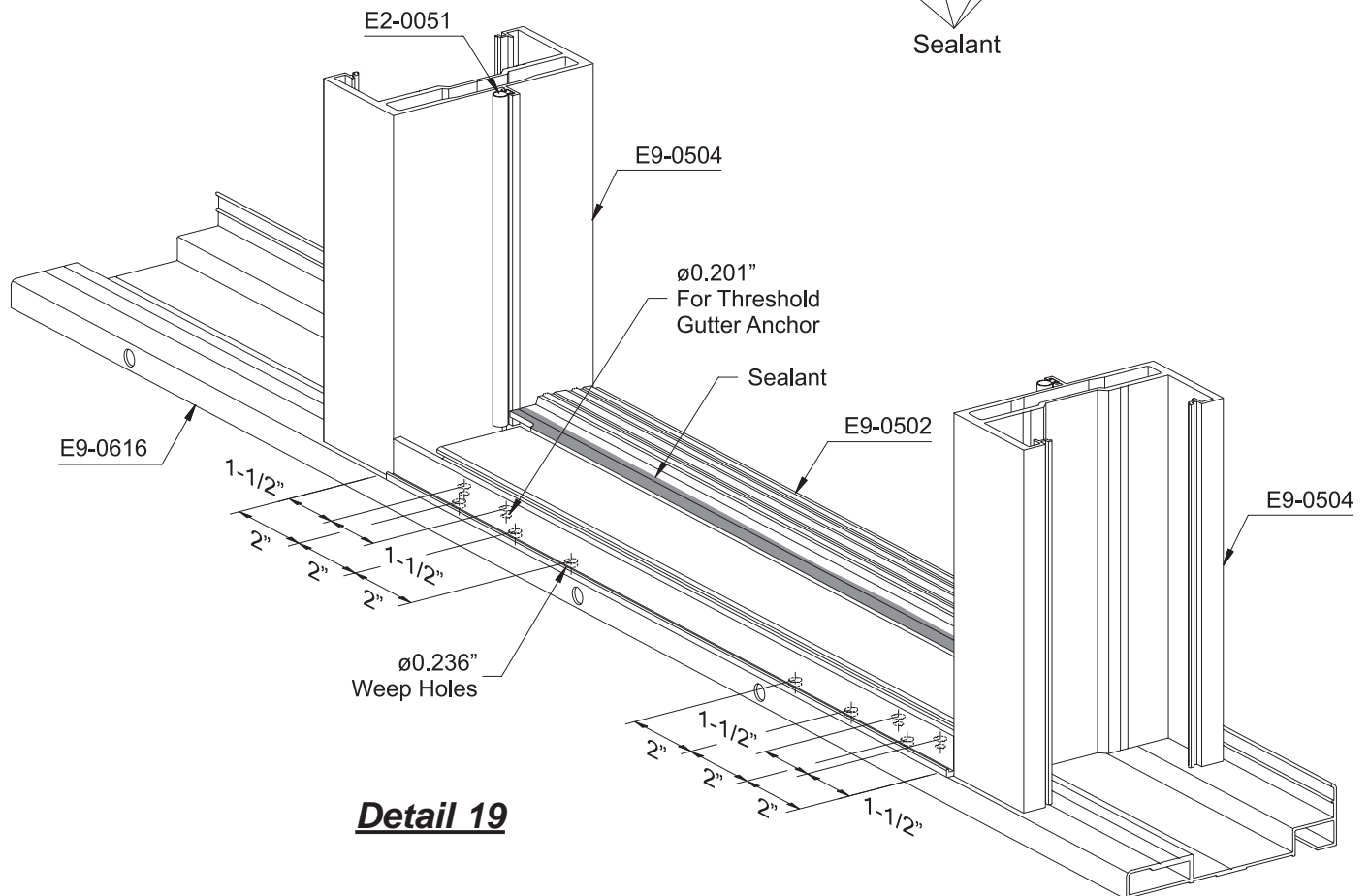
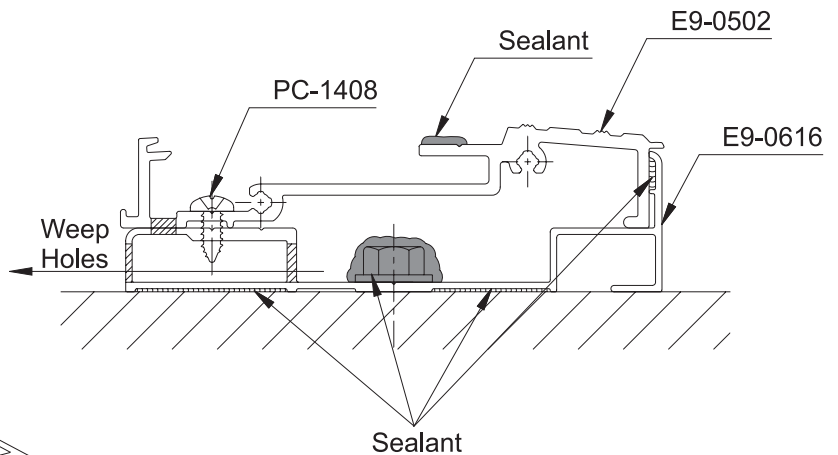
### INSTALL YHS 50 DOOR FRAMES WITH WATER RESISTANT THRESHOLD

Anchor water resistant threshold of assembled door frame to sill flashing:

- Match drill the two holes at each end of the threshold, E9-0502, to sill flashing, E9-0616.
- Drill  $\varnothing 0.201$ " (#7) holes and attach using PC-1408 fasteners.

See **Detail 19**.

- Match drill the three weep holes at each end of the threshold using a  $\varnothing 0.238$ " (#B) drill bit to sill flashing.
- Run sealant along the sill flashing back edge.
- Slide next frame section into place and snap together.
- Attach sill member to sill flashing as shown in **Step 12** on **Page 13**.
- Run sealant along the top leg of E9-0502 before attaching E9-0503.



**Detail 19**

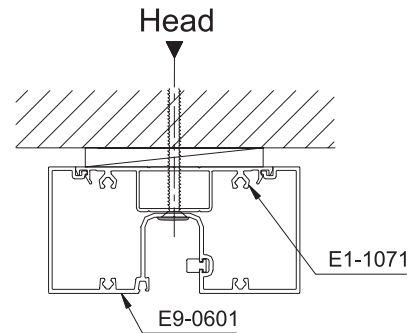
## FRAME & DOOR INSTALLATION

### STEP 13 (Continued) INSTALL YHS 50 DOOR FRAMES WITH WATER RESISTANT THRESHOLD

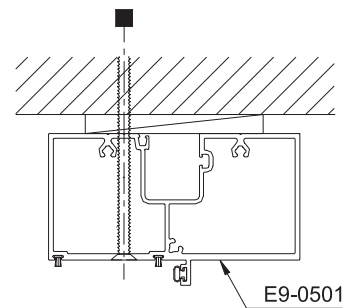
#### Dade County Applications without Steel Reinforcing:

- 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 20**:

- △ = Sill Flashing Anchor:  
Masonry: 1/4" x 2" HH Tapper masonry fastener  
Wood: 3/8" x 3" Lag Screw with Flat Washer
- ▼ = Head Anchor:  
Masonry: 1/4" x 4" FPH Tapper masonry fastener  
Wood: #24 x 4" FPH Wood Screw
- = Threshold Gutter Anchor:  
#14 x 1/2" PPHSMS Type AB
- = Sill Gutter Anchor:  
#14 x 1-1/2" PPHSMS Type AB
- = Jamb Anchor:  
Masonry: 1/4" x 4" FPH Tapper masonry fastener  
Wood: #24 x 4" FPH Wood Screw
- = Door Jamb / T-Bar w/o Transom Lite Anchor:  
Masonry: 1/4" x 5" FPH Tapper masonry fastener  
Wood: #24 x 5" FPH Wood Screw



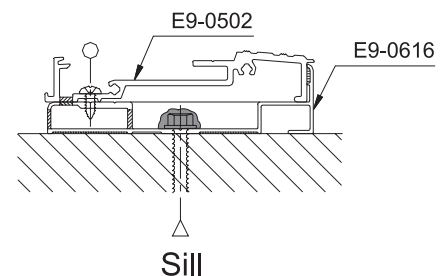
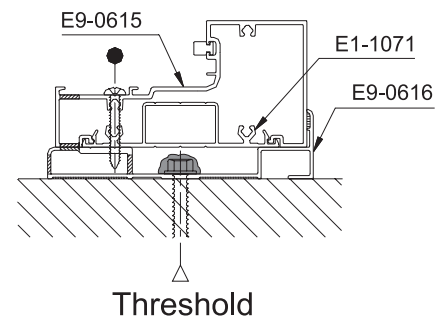
\*T-Bar w/o Transom Lite



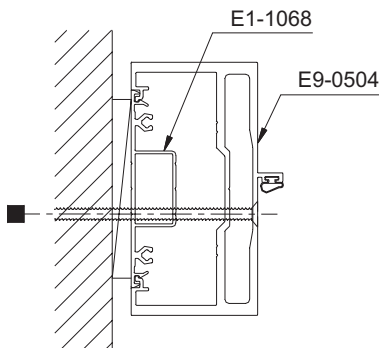
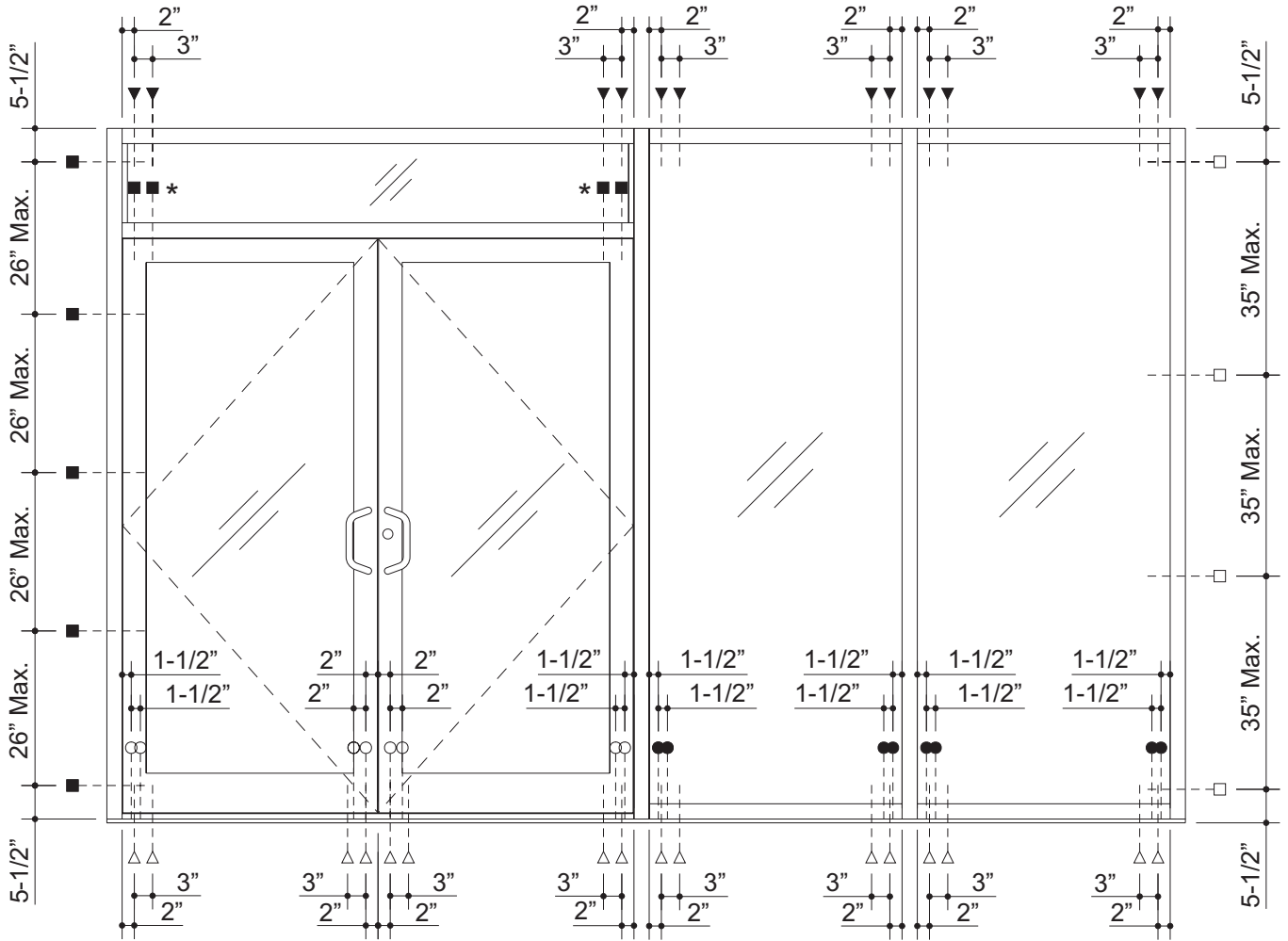
**Table 1 - Minimum Embedment into Structure**

Condition*	Minimum Embedment	
	Wood	Masonry
At Jamb & Head (w/o Reinforcing)	2-1/4"	1-1/2"
At Sill Flashing (w/o Reinforcing)	2-1/4"	1-1/2"
At Jamb & Head (w/ Reinforcing)	2-1/4"	1-3/4"
At Sill Flashing (w/ Reinforcing)	2-1/4"	1-3/4"

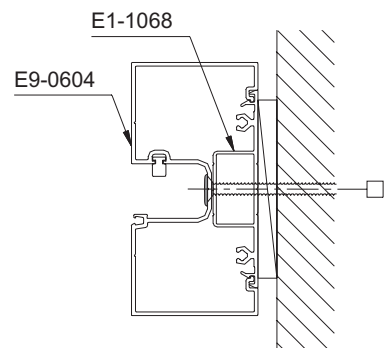
\*Use specified fasteners in Dade County.  
Structure must be capable of resisting all loads imposed by fasteners and anchors.



FRAME & DOOR INSTALLATION



***Detail 20***



## FRAME & DOOR INSTALLATION

### STEP 13 (Continued) INSTALL YHS 50 DOOR FRAMES WITH WATER RESISTANT THRESHOLD

#### Dade County Applications with 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 21**:

△ = Sill Flashing Anchor:

- Masonry: 3/8" x 2" HH Tapper masonry fastener
- Wood: 3/8" x 3" Lag Screw with Flat Washer

▼ = Head Anchor:

- Masonry: 3/8" x 4" FPH Tapper masonry fastener
- Wood: #24 x 4" FPH Wood Screw

○ = Threshold Gutter Anchor:

- #14 x 1/2" PPHSMS Type AB

● = Sill Gutter Anchor:

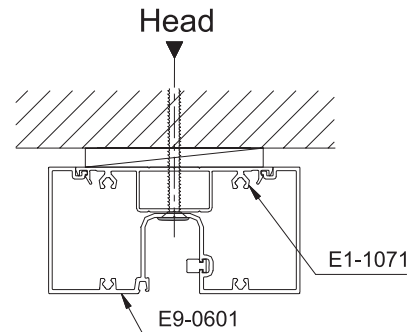
- #14 x 1-1/2" PPHSMS Type AB

□ = Jamb Anchor:

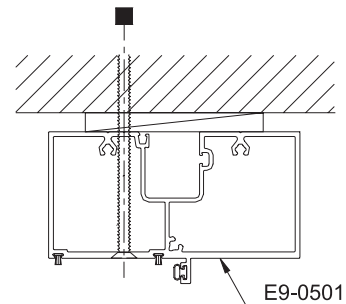
- Masonry: 3/8" x 4" FPH Tapper masonry fastener
- Wood: #24 x 4" FPH Wood Screw

■ = Door Jamb / T-Bar w/o Transom Lite Anchor:

- Masonry: 3/8" x 5" FPH Tapper masonry fastener
- Wood: #24 x 5" FPH Wood Screw



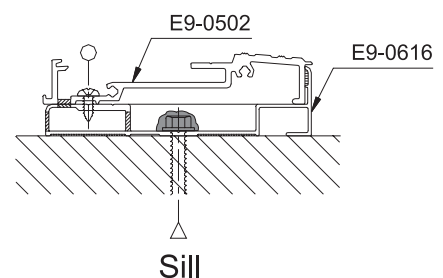
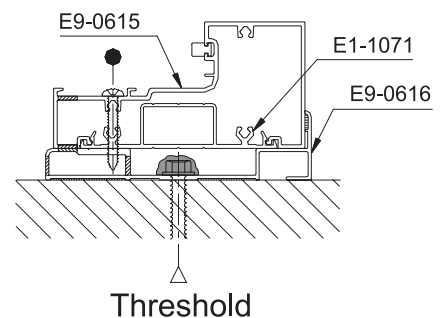
\*T-Bar w/o Transom Lite



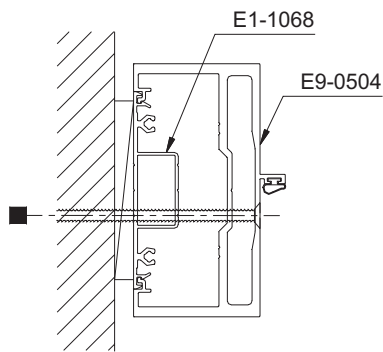
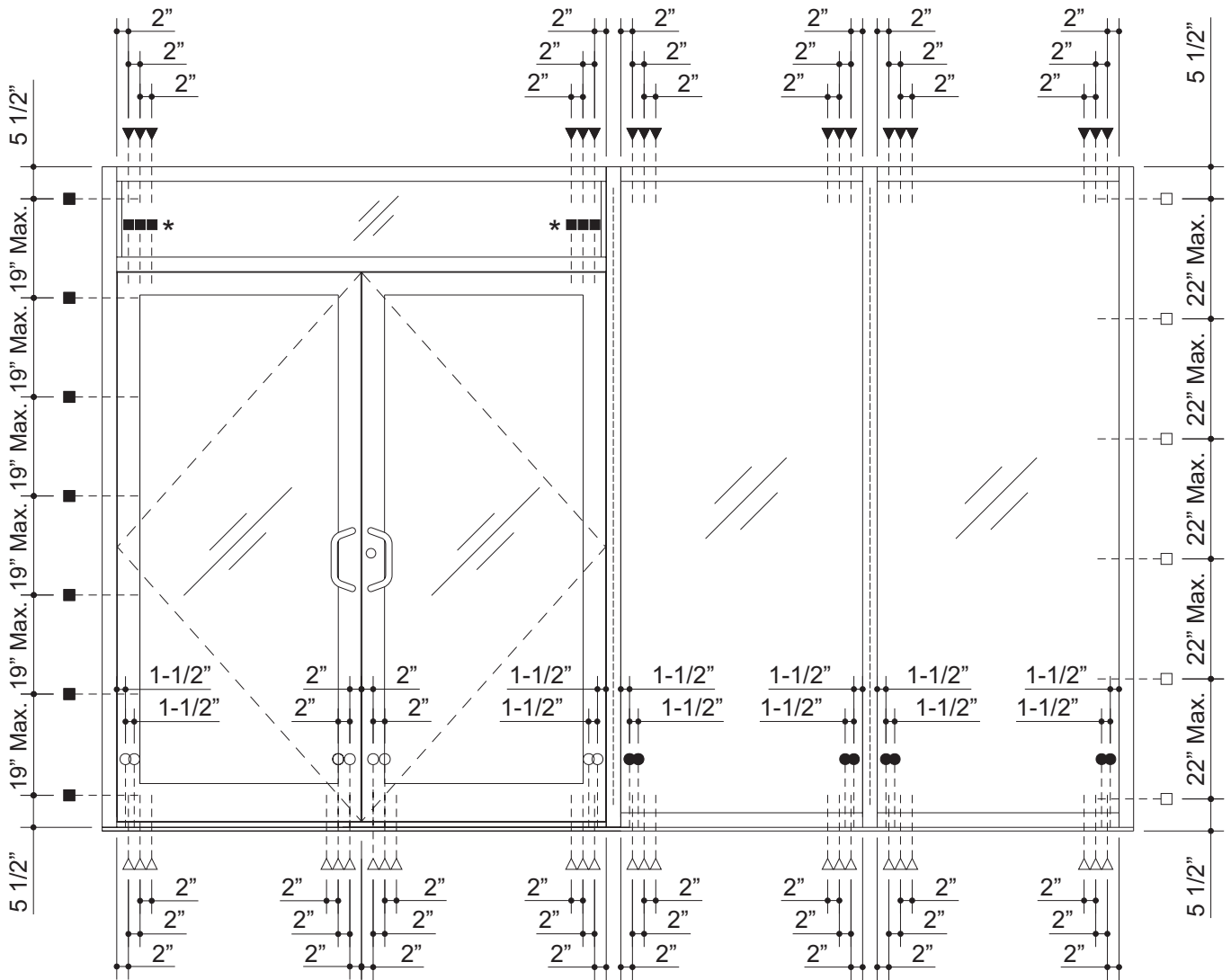
**Table 1 - Minimum Embedment into Structure**

Condition*	Minimum Embedment	
	Wood	Masonry
At Jamb & Head (w/o Reinforcing)	2-1/4"	1-1/2"
At Sill Flashing (w/o Reinforcing)	2-1/4"	1-1/2"
At Jamb & Head (w/ Reinforcing)	2-1/4"	1-3/4"
At Sill Flashing (w/ Reinforcing)	2-1/4"	1-3/4"

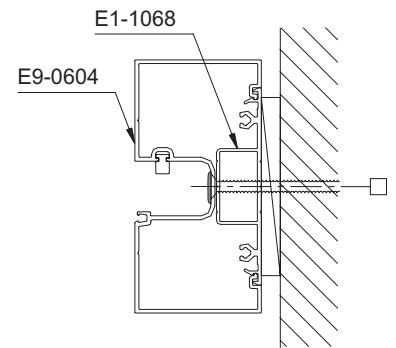
\*Use specified fasteners in Dade County.  
Structure must be capable of resisting all loads imposed by fasteners and anchors.



FRAME & DOOR INSTALLATION



**Detail 21**



## FRAME & DOOR INSTALLATION

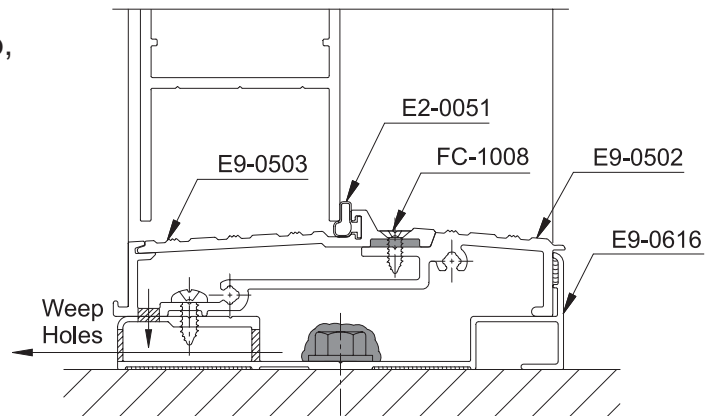
### STEP 13 (Continued)

### INSTALL YHS 50 DOOR FRAMES WITH WATER RESISTANT THRESHOLD

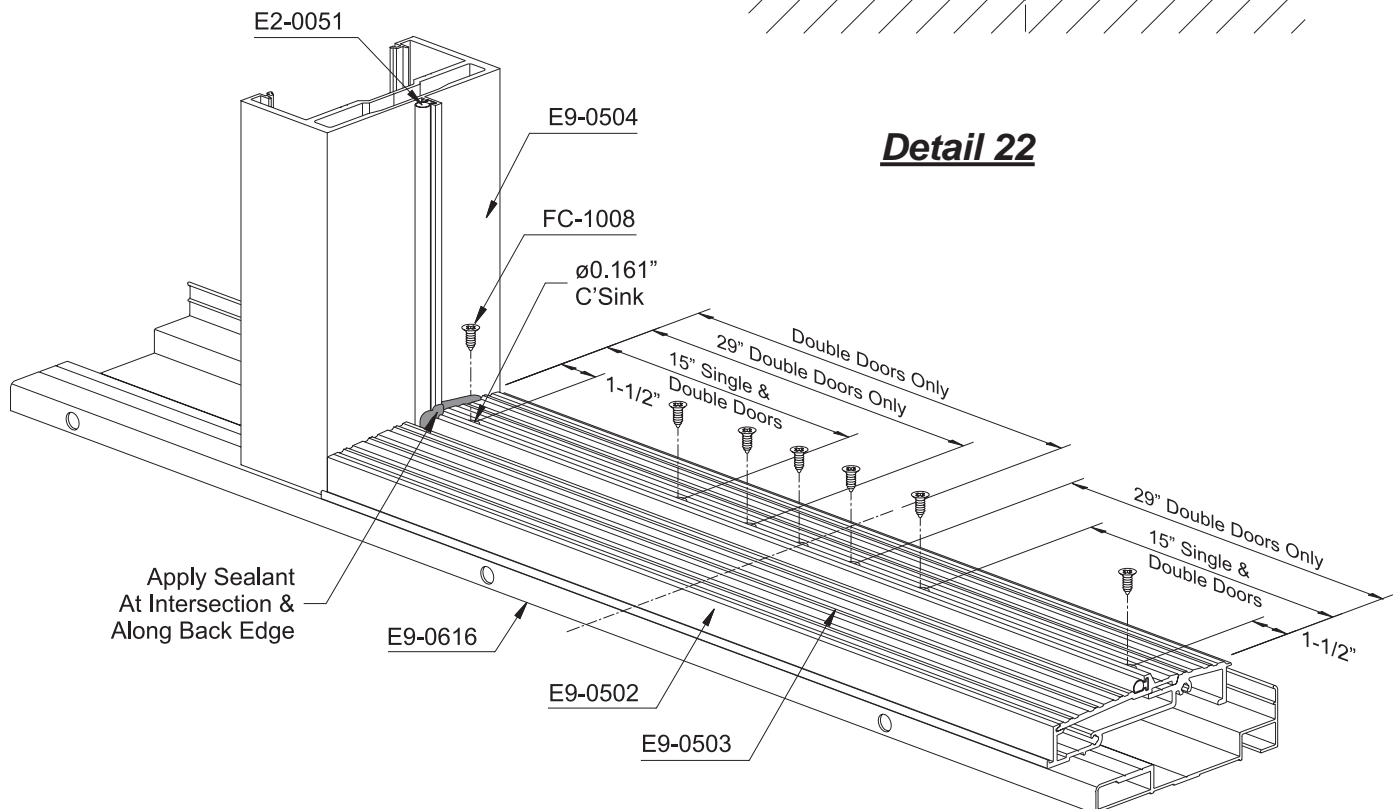
- Slide elastomer bulb E2-0051 into threshold trim E9-0503.
- Install threshold trim by hooking the outside edge and rotating towards the inside.
- Match drill top countersink holes to E9-0502 using a  $\varnothing 0.161$ " (#20) drill bit.
- Fasten the inside edge with FC-1008 fasteners.

See **Detail 22**.

- Carefully align the holes in the butt hinges with the holes in the back plates and secure the door to the frame using fasteners supplied with door package. Completely support door during this step.
- Assembled door frame must be installed plumb, square, level, and true to swing properly.



***Detail 22***



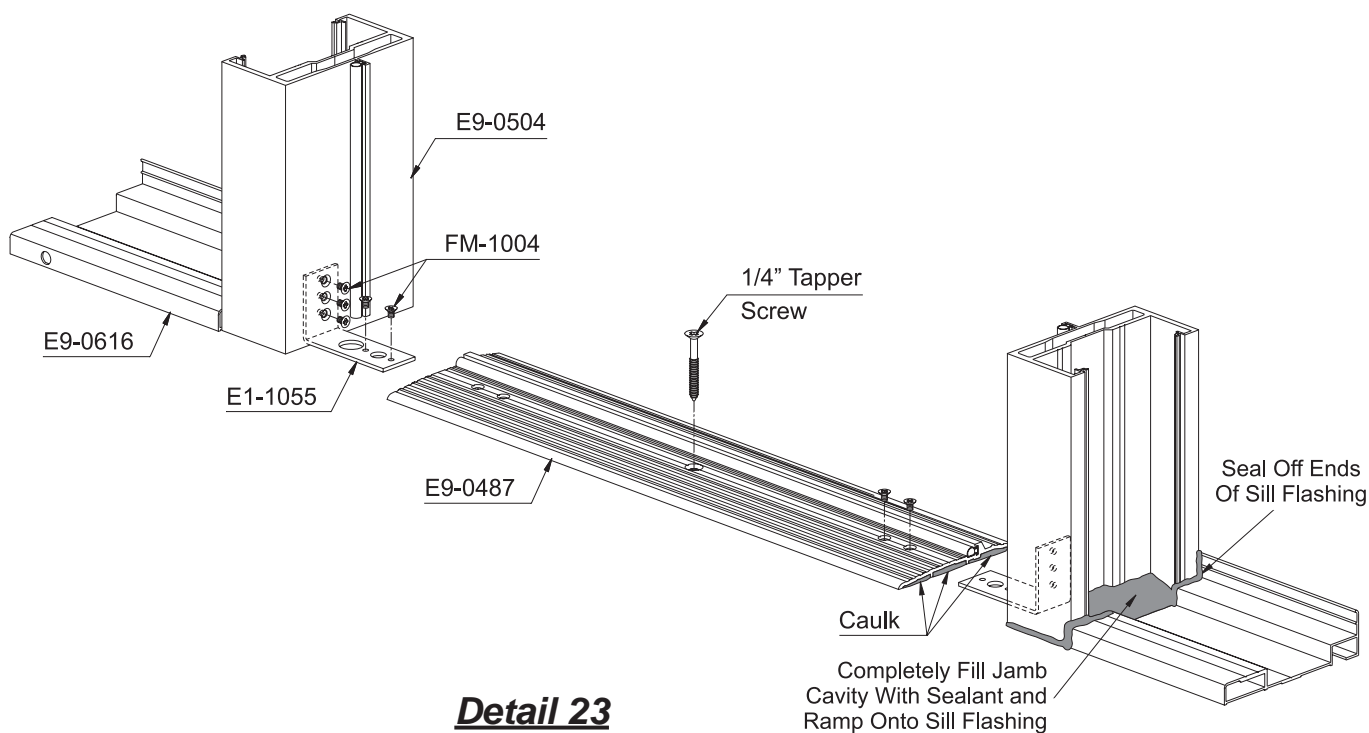


## FRAME & DOOR INSTALLATION

### STEP 14 INSTALL YHS 50 DOOR FRAMES WITH AIR TIGHT THRESHOLD (E9-0487)

-Fasten E1-1055 steel angles to door jambs, E9-0504, using three FM-1004 screws.  
 -Apply sealant to the ends of the heads and transom bars and to the intersections of the jambs with the head and transom bar.  
 See **Detail 13** on **Page-11**.

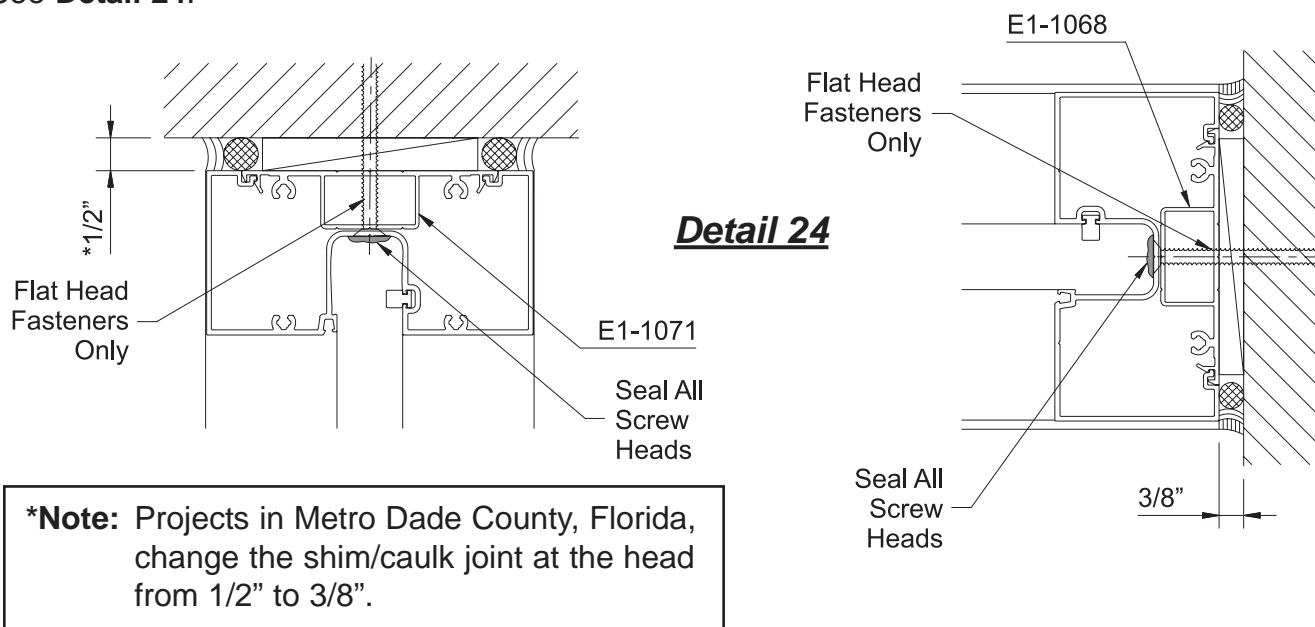
-Install backer rod into the cavities at each end of the sill flashing and seal with sealant.  
 -Install sill flashing according to **Step 11** on **Page-12**.  
 -Position and drill installation anchor holes in predrilled air tight threshold, E9-0487.  
 -Caulk all three recessed tracks on the underside of threshold and anchor to structure.  
 -Prior to installing the frame, seal the ends of the sill flashing to the door jambs as shown below.  
 See **Detail 23**.



## FRAME INSTALLATION

### STEP 15 PERIMETER SEALANT

- Position backer rod around perimeter of frame.
  - Apply a high grade of sealant to the joint between frame and masonry (Dow Corning 795 or equal).
  - Make sure all screw heads are sealed.
- See **Detail 24**.



### STEP 16 DETERMINE GLASS SIZE

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

**Transom Areas:** Glass Width = Daylight Opening plus(+)  $1-1/8''$   
 Glass Height = Daylight Opening plus(+)  $1-1/8''$

**Single Doors:** Glass Width = Door Opening Width minus(-)  $8-7/16''$   
 Glass Height = Door Opening Height minus(-)  $12-3/4''$

**Double Doors:** Glass Width = Door Opening Width/2 minus(-)  $8-7/16''$   
 Glass Height = Door Opening Height minus(-)  $12-3/4''$

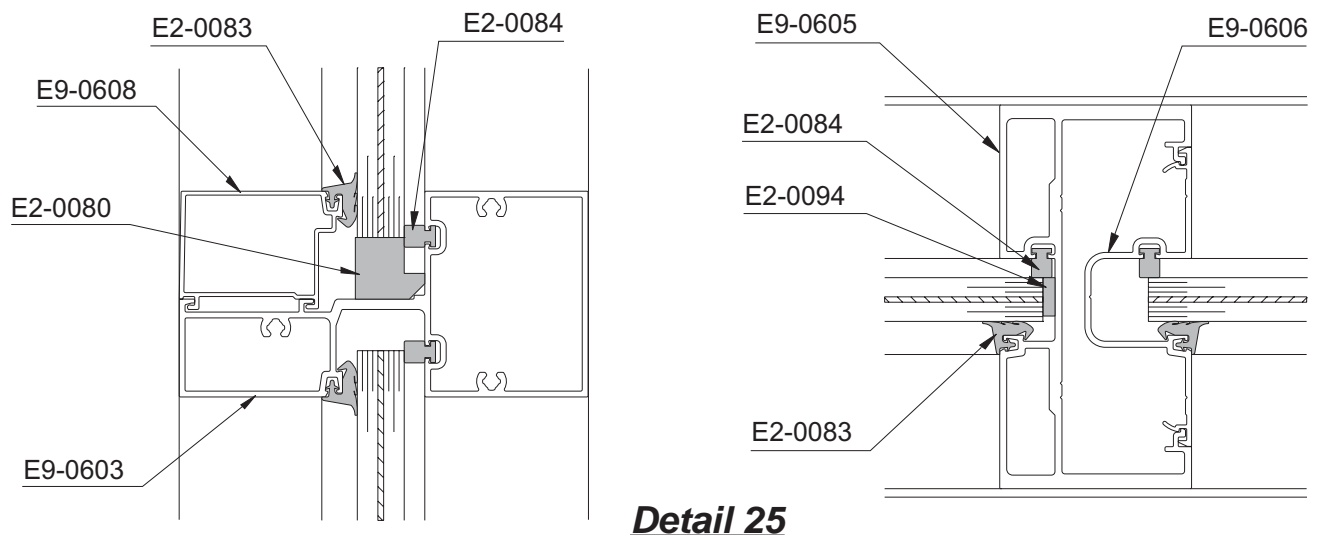
For doors with frames employing the air tight threshold, E9-0487:

Glass Height = Door Opening Height minus(-)  $11-3/8''$

## GLAZING

### STEP 17 (SKIP TO STEP 18 FOR DRY GLAZE APPLICATIONS) GLAZING: STRUCTURAL SILICONE APPLICATIONS

- Locate setting blocks, E2-0080, at quarter points or according to engineering calculations and side blocks, E2-0094, into the shallow pocket, centered along the vertical opening.
- Cut horizontal & vertical exterior gaskets to daylight opening plus 3/16" 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.
- Clean all surfaces and joints with isopropyl alcohol (50%) and wipe clean with a lint free cotton cloth using the "two cloth method". Priming may be required for certain finishes.



- Carefully install glass into the frame making sure that the setting and 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.
  - Install glass stop, E9-0608.
  - 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 25**.

- Install glass into the door using the same technique described above.

**GLAZING**

**STEP 17 (Continued)  
GLAZING**

-Apply masking tape to the aluminum and glass according to **Detail 26**.

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

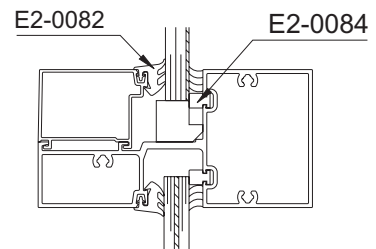
- Apply Dow Corning® 995 structural silicone sealant from the bottom to the top of joint.
- Use positive pressure so that sealant completely fills the cavity between glass and aluminum.
- Using a 30° nylon beveled spatula, or other non-scratching implement, tool the structural silicone sealant immediately 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.

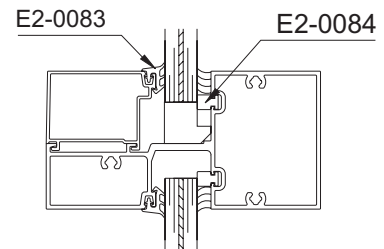
The finished joint should be 30° beveled around the glass.

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

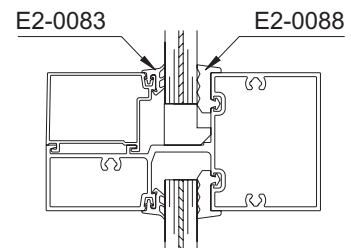
**Glazing Options**



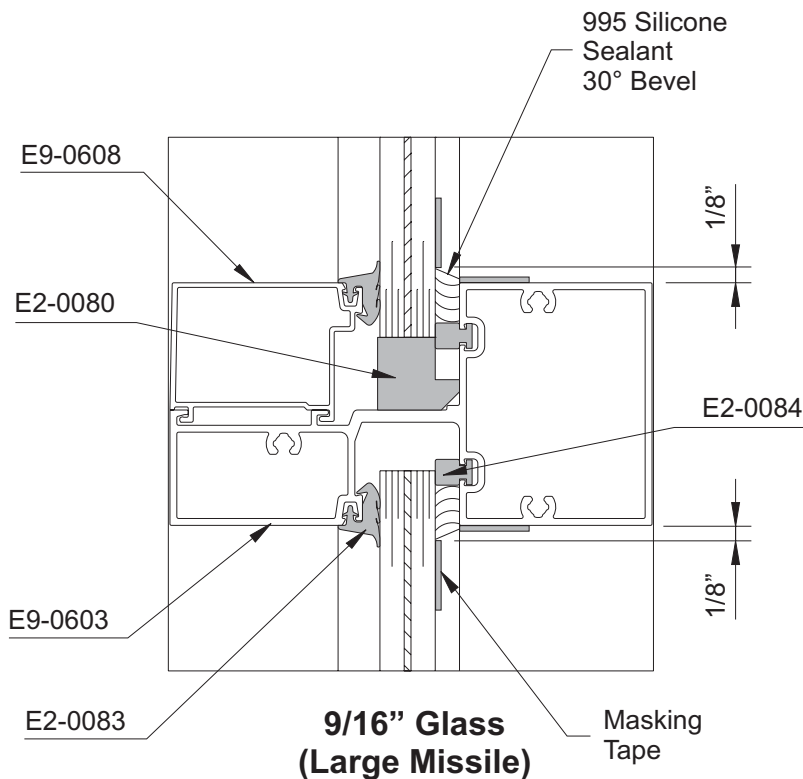
**3/8" or 7/16" Glass (Large Missile)**



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



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



**Detail 26**

## GLAZING

### STEP 18 (SKIP TO STEP 20 FOR SSG APPLICATIONS)

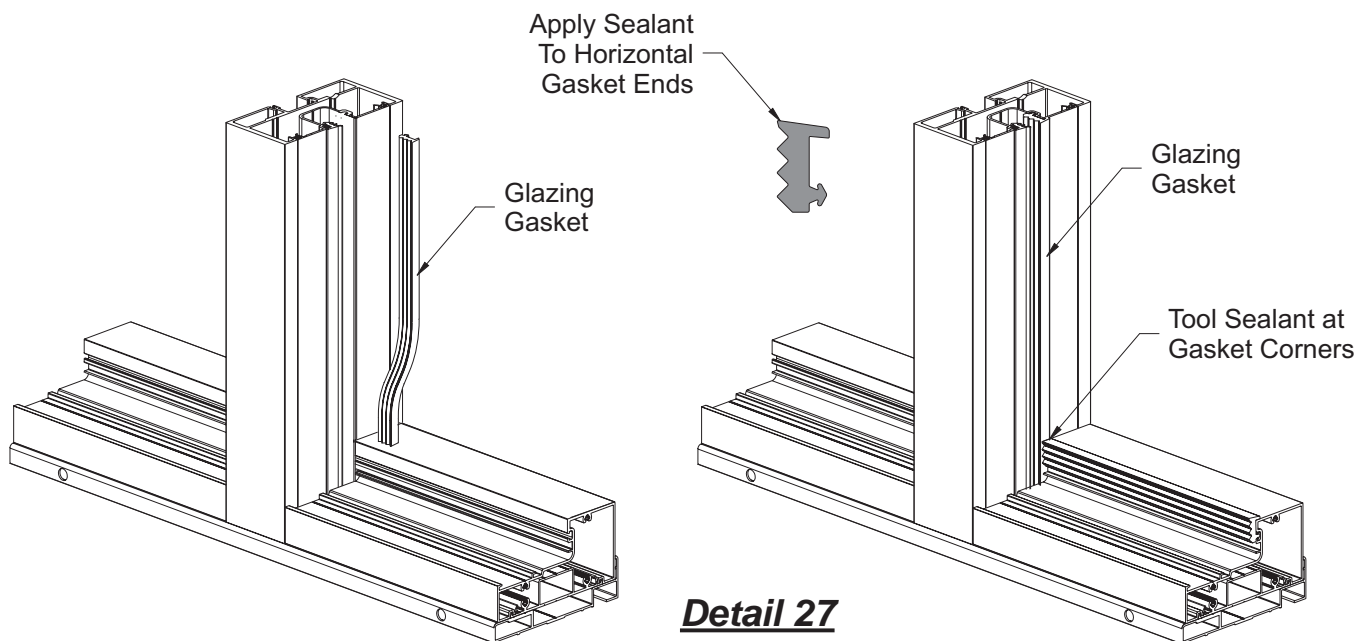
#### GLAZING: DRY GLAZING APPLICATIONS

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 27**.

**GLAZING**

**STEP 18 (Continued)**

-Install side block into the shallow pocket at centerline.

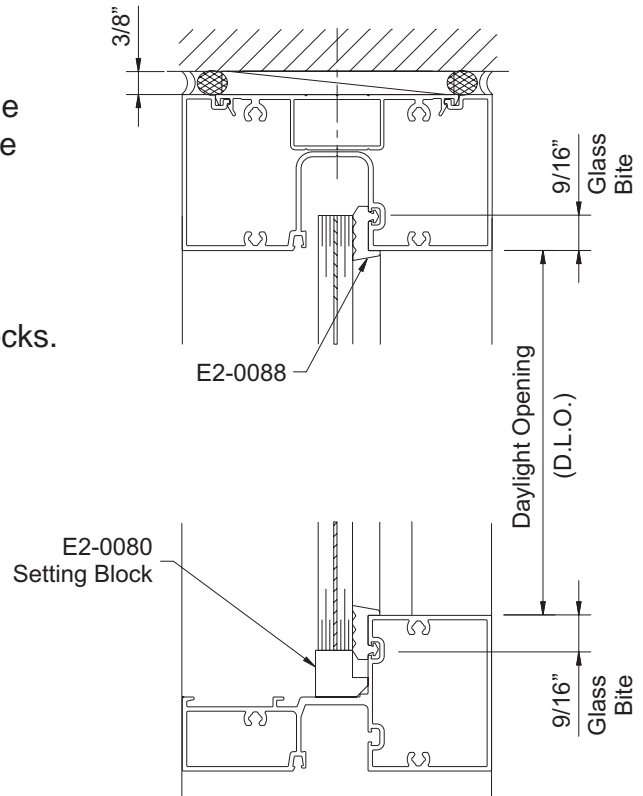
See **Detail 29**.

-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 28**.



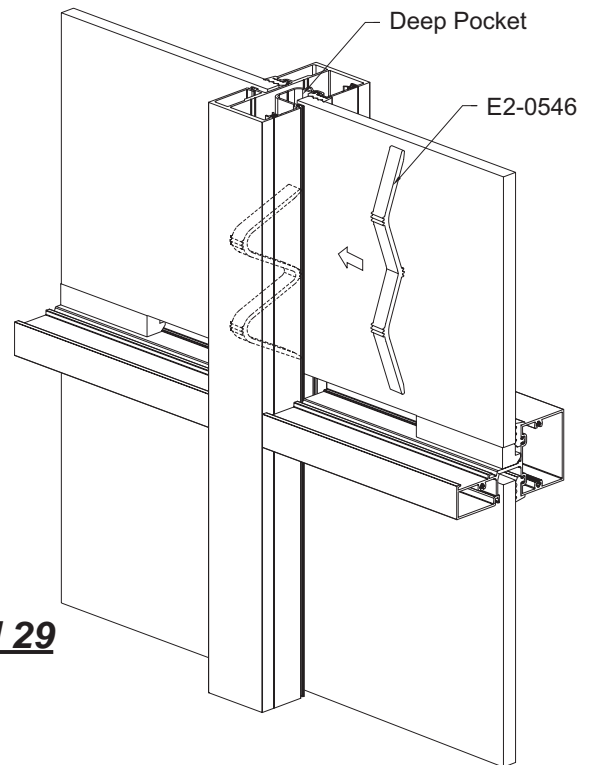
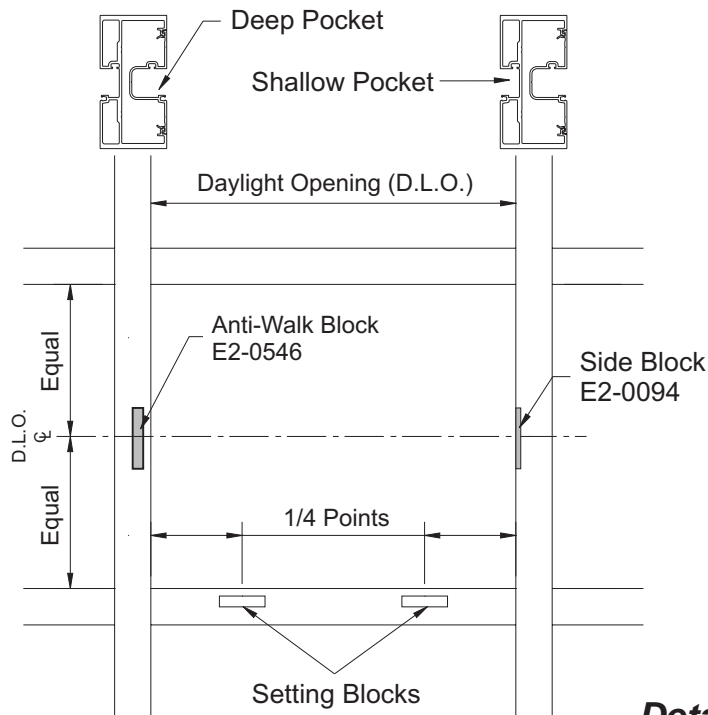
**Detail 28**

## GLAZING

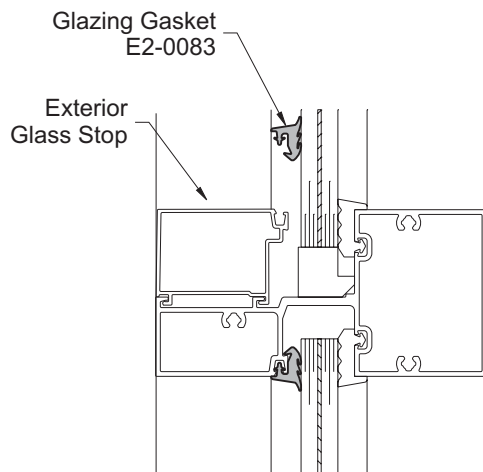
### STEP 18 (Continued) INSTALL ANTI-WALK BLOCKS

YHS 50 Dry Glaze applications require the installation of an anti-walk block, E2-0546, 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 29**.



**Detail 29**



**Detail 30**

### STEP 19 INSTALL EXTERIOR GLASS STOPS & GLAZING GASKETS

-Install exterior glass stop E9-0608 as shown in **Detail 30**.

-Install the exterior glazing gaskets using the same technique described in **Step 18** on **Page-25**. Always install the vertical glazing gasket first.

Repeat **Steps 16 through 18** until all lites are installed.

## INSTALL HARDWARE

### STEP 20 ADJUST ALIGNMENT OF MODEL 35H DOOR

-If necessary, adjust the alignment of the door by turning the screw located in the top rail of the door:

Clockwise to raise corner.

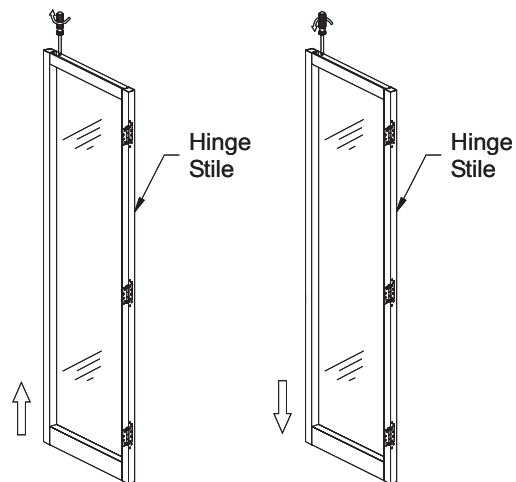
Counterclockwise to lower the corner.

See **Detail 31**.

-Check the alignment of the door with frame.

-Apply structural silicone to interior glass stop according to instructions in **Step 16**.

**Note:** Door must be adjusted before applying structural silicone.



**Detail 31**

### STEP 21 INSTALL MODEL 35H DOOR HARDWARE

Attach pull handle:

-Remove from the door carton the push/pull hardware and accessory package.

-Fasten the pull handle to the lock stile with the 2-7/8" shoulder bolt at the top and with the 3" oval head machine screw at the bottom. Make sure the washer is properly seated under the screw head.

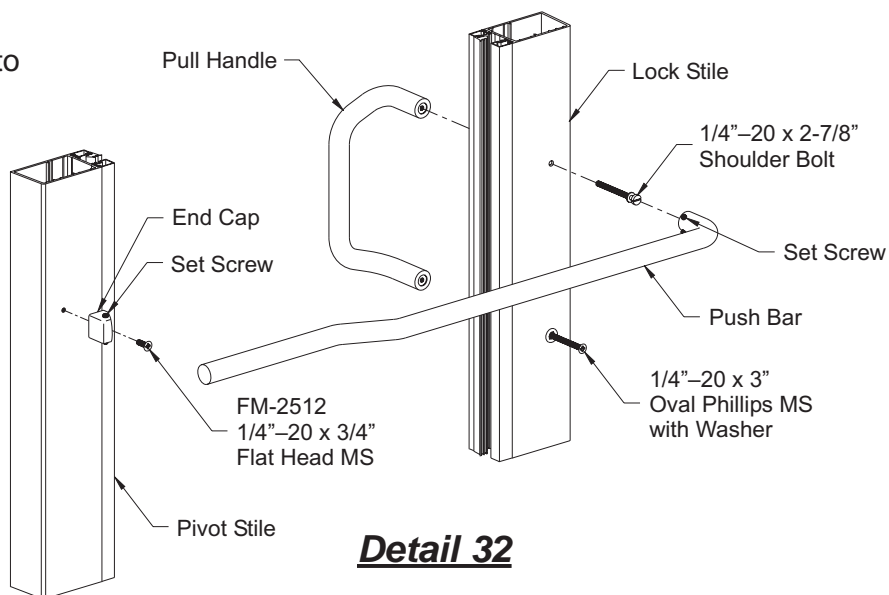
Attach push bar:

-Attach the end cap to the pivot stile with the FM-2512 3/4" machine screw.

-Insert the straight end of the push bar into the end cap and swing the curved end onto the shoulder bolt head. Tighten the set screws at each end of the push bar using a 1/8" Allen wrench.

See **Detail 32**.

-Install the door closer according to manufacturer's instructions.



**Detail 32**



## INSTALL HARDWARE

### STEP 22

### INSTALL THRESHOLD RAMP FOR ADA COMPLIANCE

-ADA designated entrances require additional considerations:

Frames that employ the water resistant threshold, E9-0502, and are designated as ADA entrances require a 1:12 sloped ramp, or a maneuvering clearance\* on both sides of the door. Maneuvering surfaces must be level and free of obstructions.

**Note:** Maneuvering surfaces on the exterior must drain water away from the entrance.

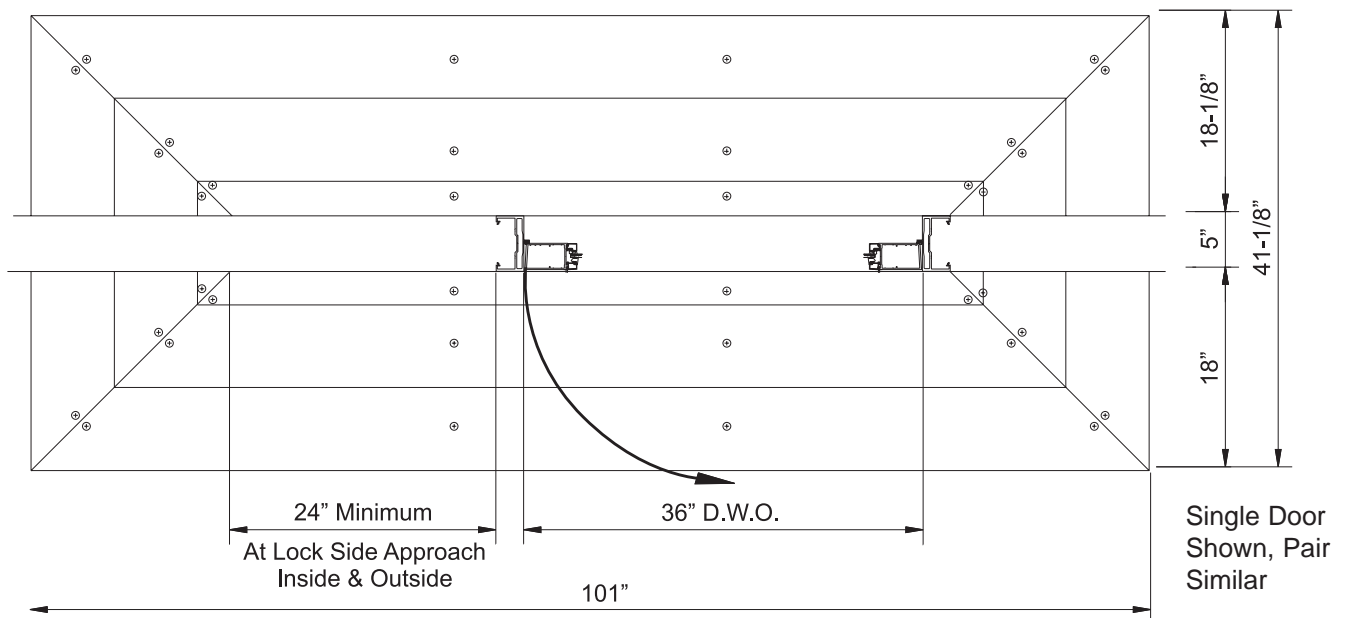
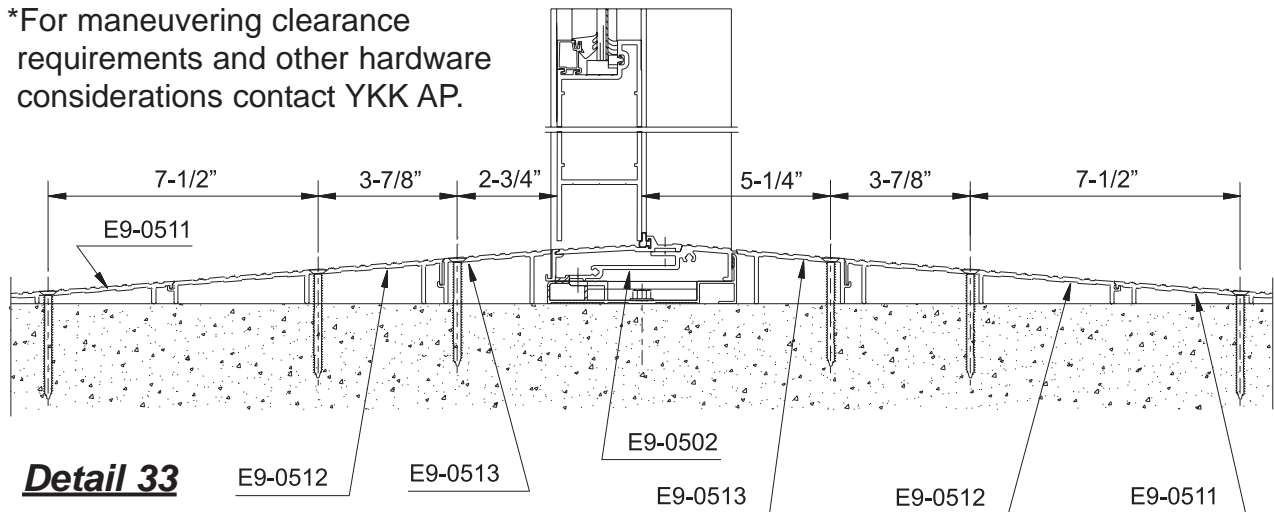
-YKK AP recommends a threshold ramp whenever the E9-0502 threshold is selected.

-Follow the instructions below for the installation of a threshold ramp offered by YKK AP.

-Assemble the fabricated threshold and anchor to the structure according to **Detail 33**.

**Note:** Threshold ramp anchors are to provide a minimum of 1-1/2" embedment into structure.

\*For maneuvering clearance requirements and other hardware considerations contact YKK AP.



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