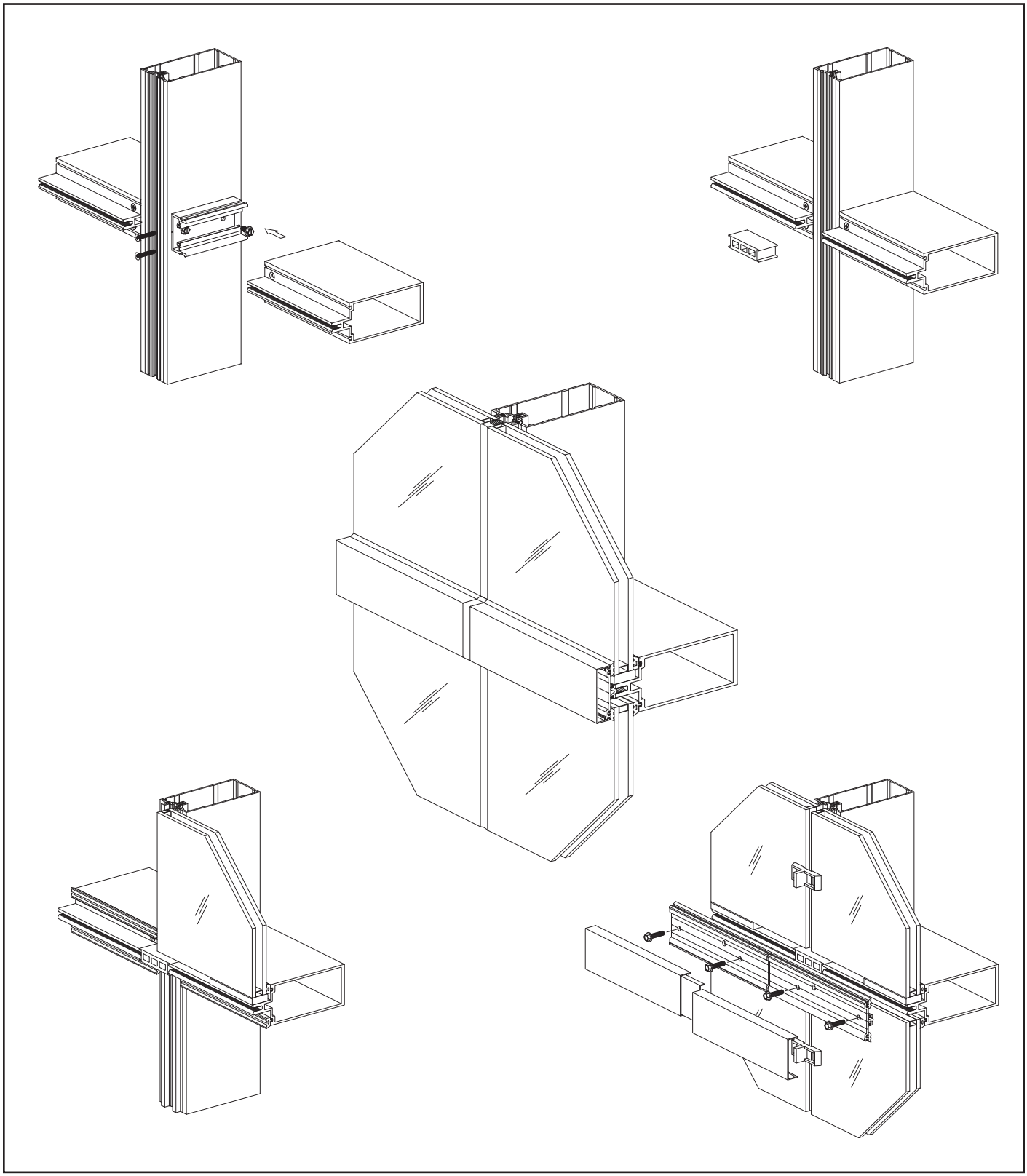
YCW 750 SSG (2-Sided) Structural Silicone Glazed Curtain Wall System



Installation Manual

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Installation Notes

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

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

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

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

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

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

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

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

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

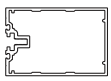
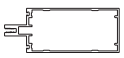
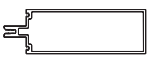
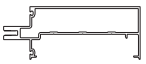
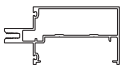
10. If any questions arise concerning YKK AP products or their installation, contact YKK AP for clarification before proceeding.

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

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

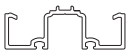
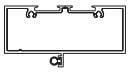
13. Check our website, www.ykkap.com, for the latest installation manual update prior to commencing work.

FRAMING MEMBERS

	**Jamb / Horizontal** 2-1/2” x 5-1/4” For 1/4” Glazing	**E9-1246**		**SSG Mullion (Standard)** 2-1/2” x 5-1/4” For 1/4” & 1” Glazing	**E9-3402**
	**Jamb / Horizontal** 2-1/2” x 3-3/4” For 1/4” Glazing	**E9-1250**		**SSG Mullion** 2-1/2” x 3-3/4” For 1/4” & 1” Glazing	**E9-3423**
	**Horizontal** Two Piece 2-1/2” x 5-1/4” For 1/4” Glazing	**E9-1258**		**SSG Mullion** 2-1/2” x 6-3/4” For 1/4” & 1” Glazing	**E9-3426**
	**Horizontal** Two Piece 2-1/2” x 3-3/4” For 1/4” Glazing	**E9-1259**		**Horizontal Cover** For 5-1/4” Back Horizontals	**E9-1256**
	**Jamb / Horizontal** 2-1/2” x 5-1/4” For 1” Glazing	**E9-1215**		**Horizontal Cover** For 3-3/4” Back Horizontals	**E9-1038**
	**Jamb / Horizontal** 2-1/2” x 5-1/4” For 1” Glazing	**E9-1225**		**Pressure Plate** E9-1216 with PVC Isolator Punched 9” O.C.	**AS-1216**
	**Jamb / Horizontal** 2-1/2” x 3-3/4” For 1” Glazing	**E9-1235**		**Perimeter Pressure Plate** For 1/4” Glazing E9-3572 with PVC Isolator Punched 9” O.C.	**AS-3572**
	**Jamb / Horizontal** 2-1/2” x 3-3/4” For 1” Glazing	**E9-3537**		**Perimeter Pressure Plate** For 1” Glazing E9-3569 with PVC Isolator Punched 9” O.C.	**AS-3569**
	**Jamb / Horizontal** 2-1/2” x 6-3/4” For 1” Glazing	**E9-1242**		**Pressure Plate** For Deep Covers With PVC Isolator For 1/4” & 1” Glazing	**AS-3574**
	**Horizontal** Open Back 2-1/2” x 5-1/4” For 1” Glazing	**E9-1255**		**Perimeter Pressure Plate** For Deep Covers With PVC Isolator For 1” Glazing	**AS-3576**
	**Horizontal** Open Back 2-1/2” x 3-3/4” For 1” Glazing	**E9-1257**		**Face Cover** 2-1/2 x 3/4”	**E9-1206**
	**Heavy SSG Mullion** 2-1/2” x 5-1/4” For 1/4” & 1” Glazing	**E9-3401**		**Face Cover** 2-1/2 x 1-3/4”	**E9-1229**

* Splay mullions and other face covers are available, contact YKK AP.

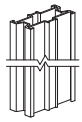
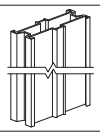
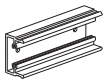
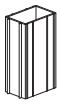
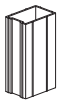
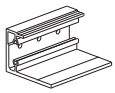
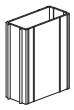
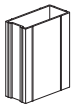
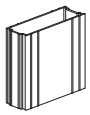
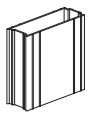
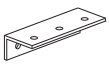
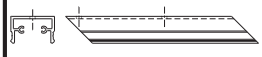
FRAMING MEMBERS

	**Face Cover** 2-1/2" x 2-3/8"	**E9-1219**		**Interior Cover Base** Use with E9-1281	**E9-1280**
	**Horizontal Face Cover** 11/16" x 2-1/2"	**E9-1207**		**Interior Cover** For 90° Outside Corner Use with E9-1280	**E9-1281**
	**Bull Nose Face Cover** 2-1/2" x 2"	**E9-1293**		**Interior Cover** For 90° Outside Corner Use with E9-1280 For 6-3/4" Depth Only	**E9-3548**
	**Glazing Adaptor** For 1/4" glazing	**E9-1220**		**SSG Glazing Adaptor** For 1/4" Glazing	**E9-3422**
	**Glazing Adaptor** For 1/2" Glazing (Used with E9-1265)	**E9-1232**		**SSG Glazing Adaptor** For 1/2" Glazing (Used with E9-1265)	**E9-1276**
	**Flush Pocket Filler** For 1" glazing	**E9-1253**		**Perimeter Trim** For SSG Door Jamb	**E9-3409**
	**Perimeter Anchor** For 1/4" Glazing	**E9-1248**		**Perimeter Trim for 1/4" Glazing** For SSG Door Jamb	**E9-3440**
	**Perimeter Anchor** For 1" Glazing	**E9-1223**		**SSG Mullion Tongue Adaptor** For 1" Glazing	**E9-1282**
	**Perimeter Channel** For 1" Glazing	**E9-1231**		**SSG Door Jamb Glazing Adaptor** For 1" Glazing	**E9-1269**
	**90° Outside Corner SSG Glazing Adaptor** Use with E9-3401, E9-3402, E9-3423, & E9-3426	**E9-3413**		**SSG Door Jamb Glazing Adaptor** For 1/4" Glazing	**E9-1270**
	**90° Outside Corner Trim Base** For 1" Glazing	**E9-3438**		**Single Acting Transom Bar** Elastomer Weathering E2-0051 Included	**AS-0402**
	**90° Outside Corner Trim Cover** For 1" Glazing	**E9-3439**		**Door Jamb** Use with AS-0417	**E9-2344**

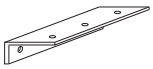
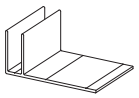
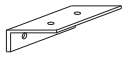
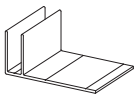
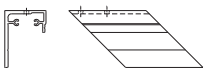
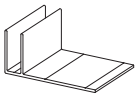
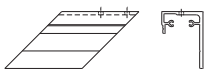
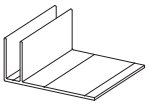
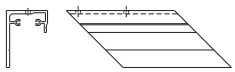
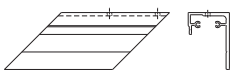
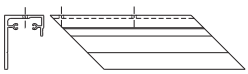
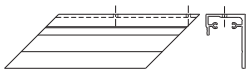
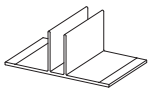
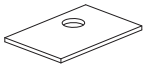
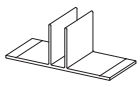
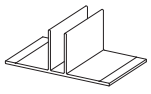
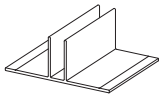
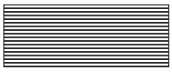
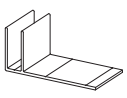
FRAMING MEMBERS

	**Snap-In Door Stop** Elastomer Weathering E2-0051 Included Use with E9-1224	**AS-0417**			

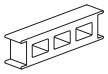
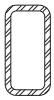
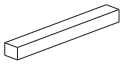
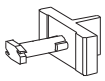
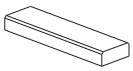
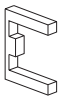
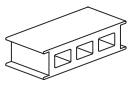
ACCESSORIES

	**Standard Shear Block** For E9-1235, E9-1250, & E9-3537, 3.125” Long	**E1-3503**		**Mullion Splice Sleeve** Use with E9-3401 & E9-3402	**E1-3548**
	**Standard Shear Block** For E9-1215, E9-1225, E9-1246, 4.375” Long	**E1-3504**		**Mullion Splice Sleeve** Use with E9-3426	**E1-3427**
	**Standard Shear Block** For E9-1242, 6.000” Long	**E1-3506**		**Mullion Splice Sleeve** Use with E9-1235, E9-1250 & E9-3537	**E1-1212**
	**“J” Anchor** For E9-1235, E9-1250, & E9-3537, 3.125” Long	**E1-3501**		**Mullion Splice Sleeve** Use with E9-1266	**E1-1211**
	**“J” Anchor** For E9-1215, E9-1225, E9-1246, 4.375” Long	**E1-3502**		**Mullion Splice Sleeve** Use with E9-1215 & E9-1225	**E1-1201**
	**“J” Anchor** For E9-1242, 6.000” Long	**E1-3505**		**Mullion Splice Sleeve** Use with E9-1265	**E1-1210**
	**Shear Block** (For E-Slot) For E9-1235, E9-1250, & E9-3537, 3.125” Long	**E1-1206**		**Mullion Splice Sleeve** Use with E9-1242	**E1-1299**
	**Shear Block** (For E-Slot) For E9-1215, E9-1225, E9-1246, 4.375” Long	**E1-1200**		**Mullion Splice Sleeve** Use with E9-3535	**E1-1365**
	**Shear Block** (For E-Slot) For E9-1242, 6.000” Long	**E1-1236**		**Shear Block for 90° Outside Corner** For E9-1235, E9-1250, E9-3557, 5.794” Long	**E1-3503A**
	**Shear Clip** For E9-1257 & E9-1259 2.736” Long	**E1-1214**		**Shear Block for 90° Outside Corner** For E9-1215, E9-1225, E9-1246, 7.562” Long	**E1-3504A**
	**Shear Clip** For E9-1255 & E9-1258 3.986” Long	**E1-1213**		**Shear Block for 90° Outside Corner** For E9-1242 9.860” Long	**E1-3506A**

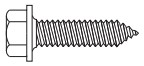
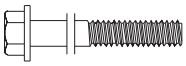
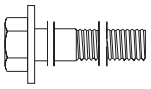
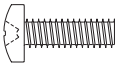
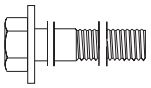
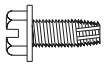
ACCESSORIES (Continued)

	**Shear Clip for 90° Outside Corner** For E9-1255 & E9-1258 7.135” Long	**E1-1213A** **E1-1213B**		**Mullion “F” Anchor** For E9-3401 4.780” Long	**E1-1234**
	**Shear Clip for 90° Outside Corner** For E9-1257 & E9-1259 5.369” Long	**E1-1214A** **E1-1214B**		**Mullion “F” Anchor** For E9-1215 4.866” Long	**E1-1233**
	**“J” Anchor for 90° Outside Corner (RH)** For E9-1235, E9-1250, & E9-3537, 5.669” Long	**E1-3501A**		**Mullion “F” Anchor** For E9-1225 & E9-1246 4.960” Long	**E1-1231**
	**“J” Anchor for 90° Outside Corner (LH)** For E9-1235, E9-1250, & E9-3537, 5.669” Long	**E1-3501B**		**Mullion “F” Anchor** For E9-1242 6.453” Long	**E1-1240**
	**“J” Anchor for 90° Outside Corner (RH)** For E9-1215, E9-1225, E9-1246, 7.437” Long	**E1-3502A**		**Temporary Glass Retainer** 2” Long	**E1-1294**
	**“J” Anchor for 90° Outside Corner (LH)** For E9-1215, E9-1225, E9-1246, 7.437” Long	**E1-3502B**		**90° Corner Temporary Glass Retainer** 3” Long	**E1-3588**
	**“J” Anchor for 90° Outside Cor. (RH)** For E9-1242 9.735” Long	**E1-3505A**		**Captured Mullion End Cap** For Insulated Glazing 2.500” x 2.313” x 0.050”	**E1-1286**
	**“J” Anchor for 90° Outside Cor. (LH)** For E9-1242 9.735” Long	**E1-3505B**		**Stainless Steel Washer** To be used as end cap	**FW-2500-SS**
	**Mullion “T” Anchor (Standard)** For E9-3402 4.866” Long	**E1-1208**		**Perimeter Trim End Cap**	**E1-3579**
	**Mullion “T” Anchor** For E9-3512 & E9-3423 3.366” Long	**E1-1229**		**Perimeter Trim Clip**	**E1-3543**
	**Mullion “T” Anchor** For E9-3401 4.780” Long	**E1-1222**		**Face Cover Splice Sleeve** For E9-1206	**E1-1202**
	**Mullion “T” Anchor** For E9-3426 6.345” Long	**E1-3580**		**Silicone Splce Sheet** For Deep Face Cover	**E2-0070**
	**Mullion “F” Anchor** For E9-1235, E9-1250 & E9-3537, 3.462” Long	**E1-1232**		**Wind Load Anchor** Steel with Zinc Oxide Paint Refer to Shop Drawings for Anchor Dimensions	**E1-1204*** Project Specific

ACCESSORIES (Continued)

	**Dead Load Anchor** Steel with Zinc Oxide Paint Refer to Shop Drawings for Anchor Dimensions	**E1-1205*** Project Specific		**SSG Joint Plug** For 1/4” Glazing	**E2-3616**
	**Jamb Anchor Plate**	**E1-3536**		**Joint Plug for SSG 90° Corner** For 1” Glazing	**E1-1312**
	**Reinforcing Steel** 2” x 4” x 1/4” For 5-1/4” Back Verticals Steel with Zinc Oxide Paint	**E1-0162**		**Left Joint Plug for SSG 90° Corner** For 1/4” Glazing	**E1-1313**
	**Setting Block** For 1/4” Glazing EPDM with Pressure Sensitive Adhesive	**E2-0112**		**Right Joint Plug for SSG 90° Corner** For 1/4” Glazing	**E1-1314**
	**Side Block** For 1/4” Glazing EPDM with Pressure Sensitive Adhesive	**E2-0113**		**Temporary Glass Retainer** For 1” Glazing	**E3-0001**
	**Setting Block** For 1” Glazing EPDM	**E2-0104**		**Temporary Glass Retainer** For 1/4” Glazing	**E3-0006**
	**Standard Joint Plug** For 1/4” Glazing EPDM Sponge	**E2-0125**		**Isolator Tape** 1/8” x 7/16” Use with Perimeter Pressure Plate	**E2-0239**
	**Standard Joint Plug** For 1” Glazing EPDM Sponge	**E2-0102**		**Anchor Slip Pad** For Dead Load & Wind Load Anchors	**E3-0103**
	**Joint Plug** For slide in mullion at end bays, 1/4” glazing Use with E2-0123	**E2-0129**		**Interior Glazing Spacer** Silicone Use with SSG Verticals	**E2-0126**
	**Joint Plug** For slide in mullion at end bays, 1” glazing Use with E2-0123	**E2-0124**		**Exterior Glazing Gasket** Silicone	**E2-0127**
	**Joint Plug** Use with E9-1223 & E9-1231	**E2-0505**		**Interior Glazing Gasket** Silicone	**E2-0128**
	**E-Slot Plug** For slide in mullion at end bays	**E2-0123**		**Interior Glazing Spacer (5/16” Depth)** Silicone Use with SSG Verticals	**E2-0261**
	**SSG Joint Plug** For 1” Glazing	**E2-3614**		**Glazing Spacer Tape** For Perimeter Trim	**E2-0110**

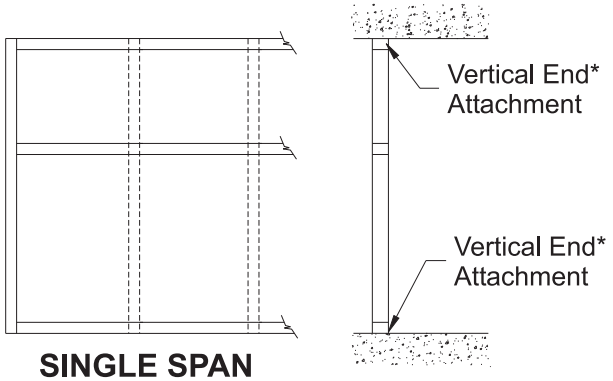
FASTENERS

	**#8 x 3/8" PHSMS** Zinc Plated Steel For Attachment of Glazing Adaptors	**PC-0806**		**1/4"-20 x 1" HWHS** Type F, Zinc Plate Steel, For Attachment of Shear Block to Vertical with Steel Reinforcing	**HF-2516-W1**
	**#8 x 1/2" PHSMS** Zinc Plated Steel For Attachment of SSG Corner Trim	**PC-0808**		**1/4"-20 x 1" HWHMS** Stainless Steel For Attachment of Pressure Plate to Mullion	**HD-2516-W3-SS**
	**#10 x 5/8" PHSMS** Type AB Zinc Plated Steel For Attachment of Interior Cover Base	**PC-1010**		**1/4"-20 x 1" HWHMS** Zinc Plate Steel For Attachment of "J" Anchor at Jamb	**HM-2516**
	**#12 x 5/8" PHSMS** Type AB Zinc Plated Steel For Attachment of Perim.Trim End Cap	**PC-1210**		**1/4"-20 x 3-1/2" HWHMS** Zinc Plate Steel For Attachment of "J" Anchor at Intermediate Vertical	**HM-2556**
	**#10-24 x 5/8" PHSMS Type F,** Stainless Steel For Attachment of Interior Cover Base	**PF-1010-SS**		**1/4"-20 x 1-1/2" PHMS** Stainless Steel For Attachment of Corner Mullion Adaptor	**PM-2524-SS**
	**#10 x 3/8" PHMS** Stainless Steel For Attachment of Perimeter Trim Clip to Perimeter Trim	**PM-1006-SS**		**1/2"–13 x 2" HWHMS** Zinc Plated Steel, For Attachment of Windload/ Deadload Anchor at Jamb	**HM-5032**
	**1/4"-20 x 3/4" PHMS** Stainless Steel For Attachment of Perimeter Trim Clip to Mullion	**PM-2512-SS**		**1/2"–13 x 4-1/2" HWHMS** Zinc Plated Steel, For Attachment of Windload/ Deadload Anchor at Mullion	**HM-5072**
	**#8 x 1/2" FHSMS** Type AB, Zinc Plated Steel, Undercut For Attachment of Face Cover Splice Sleeve	**FC-0808**		**1/2"-13 Nut HHMS** Zinc Plated Steel For Attachment of Mid-Anchors (Wind Load / Dead Load)	**HM-5000**
	**#12 x 3/4" FHSMS** Type AB, Zinc Plt. Stl., Exposed Fasteners For Attachment of Horizontal to Shear Block	**FC-1212**		**1/2" Flat Washer** Zinc Plated Steel, For Attachment of Mid-Anchors (Wind Load / Dead Load)	**WW-5000**
	**#12 x 1-1/4" FHSMS** Type AB, Zinc Plt. Stl., Concealed Fasten. For Attachment of Horizontal to Shear Block	**FC-1220**		**1/2" Lock Washer** Zinc Plated Steel, For Attachment of Mid-Anchors (Wind Load / Dead Load)	**WS-5000**
	**#10 x 5/8" FHSMS** Type AB, Zinc Plated Steel For Attachment of Mullion End Cap E1-1288	**FC-1010**		**1/4"-20 Nut HHMS** Zinc Plate Steel, For Attachment of "J" Anchor at Intermediate Vertical & Jamb	**HM-2500**
	**#14 x 5/8" FHSMS** Type AB, Zinc Plated Steel, For Attachment of Mullion End Caps E1-1286 & FW-2500-SS	**FC-1410**		**1/4" Flat Washer** Zinc Plate Steel, For Attachment of "J" Anchor at Intermediate Vertical & Jamb	**WW-2500**
	**1/4"-20 x 5/8" HWHS** Type F, Zinc Plated Steel For Attachment of Shear Block to Vertical	**HF-2510-W1**		**1/4" Lock Washer** Zinc Plate Steel, For Attachment of "J" Anchor at Intermediate Vertical & Jamb	**WS-2500**

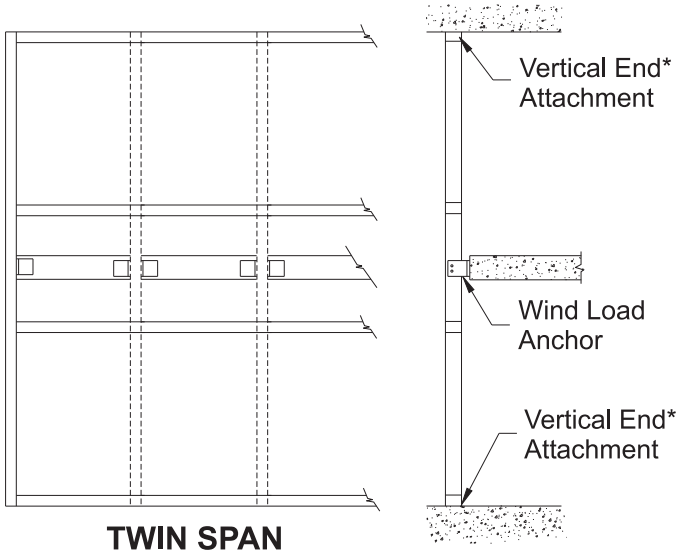
FRAME FABRICATION

FRAME TYPES / ANCHORING METHODS

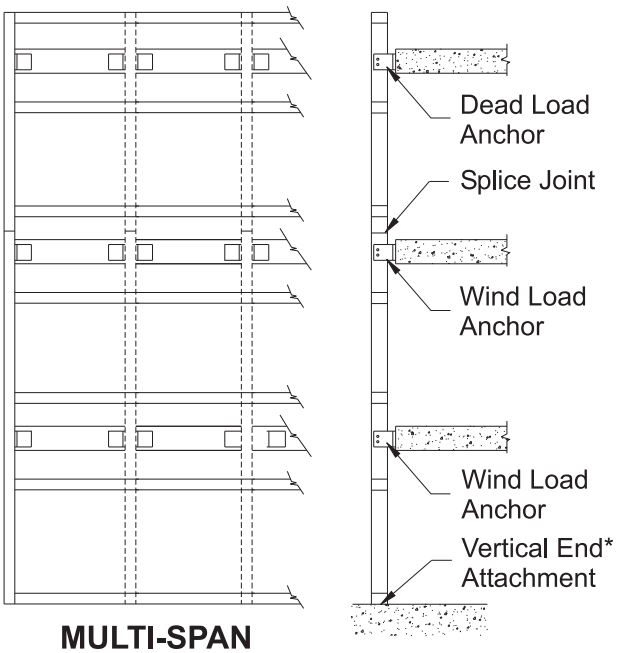
The following is a guideline for common types of frames. Refer to shop drawings for exact layout of frames.



SINGLE SPAN



TWIN SPAN



MULTI-SPAN

Smaller units may be assembled on the ground and tipped in place. Larger units require being stick assembled in place.

Note: If YKK does not prepare the shop drawings for the project, a qualified engineer must approve all anchors and mullions for wind load and dead load.

All anchors must be attached to structurally sound material that will accommodate the anchor reactions.

* Vertical end attachment will be continuous perimeter anchor, “J” anchor, or mullion end anchor.

Fabrication of YCW 750 SSG varies depending on the type of vertical end attachment required for a given project:

Perimeter Anchors are for low load anchoring conditions (maximum 500lb. end load reaction): E9-1248, E9-1223, & E9-1231

“J” Anchors are for medium to high load conditions: E1-3501, E1-3502, & E1-3505.

Mullion End Anchors “F” & “T” are for high load conditions. See Accessories on **Page-5**.

FRAME FABRICATION

FRAME TYPES / ANCHORING METHODS

Using Perimeter Anchors:

-Jamb mullions must be notched as shown in **Detail 1** on **Page 9**.

Using Mullion End Anchors:

YCW 750 SSG has three possible end anchoring conditions: “J”, “T”, and “F”.

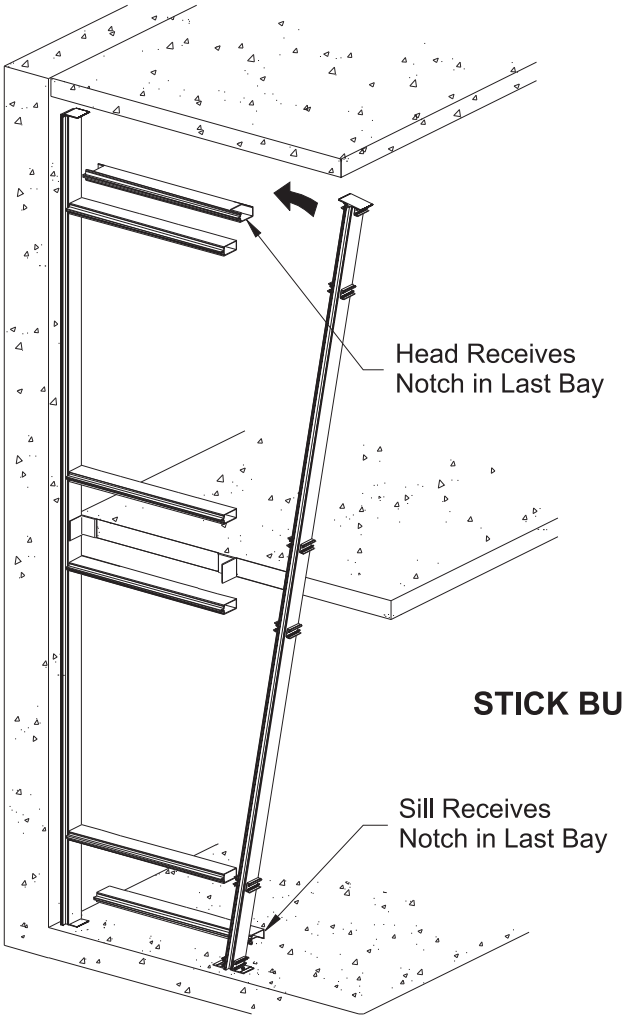
-”J” anchors are used with jambs and intermediate verticals at the sill only.
-”T” anchors are used with intermediate verticals at the head and sill.
-”F” anchors are used with jamb mullions at the head and sill.
-”Door Jamb” anchors are used with mullions at a door jamb and are specified by the approved shop drawings or P.E. calcs.
-Anchor usage depends on end reaction, stress, and attachment.

Mullions should be pre-assembled with shear blocks/clips, end anchors, and steel or aluminum reinforcing if necessary.

Framing Members for Stick Build:

-Head and sill members must be notched as shown **Detail 19** on **Page 21** to clear the mullion end anchors.
-Closed horizontal members are used at all intermediate locations except at end bays.
-Open back intermediate horizontals are used at end bays to clear the shear clips.

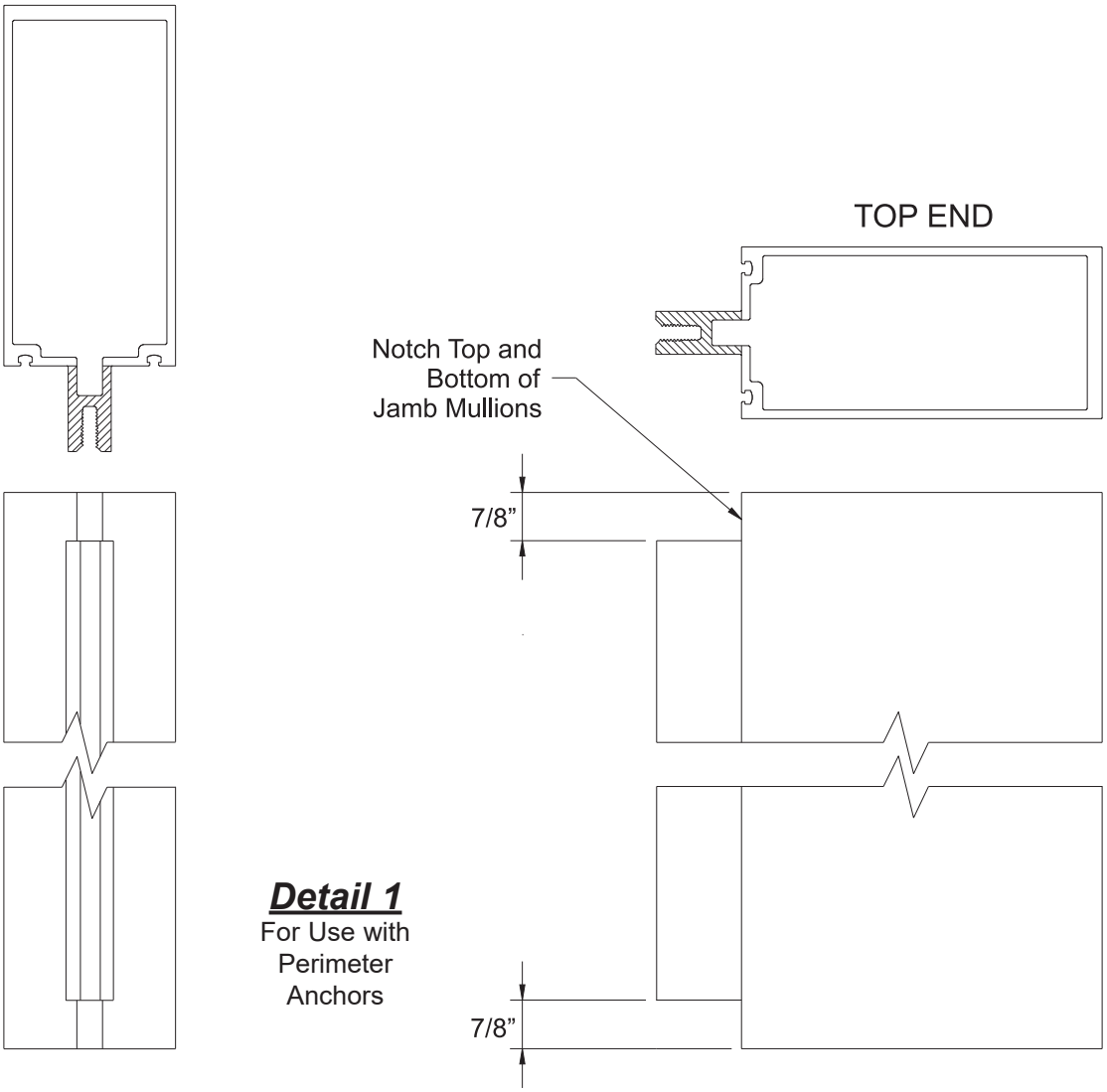
Note: When using stick build construction, check overall frame width every fifth mullion as the wall is installed to prevent the buildup of cumulative tolerance errors.



STICK BUILD

FRAME FABRICATION

FABRICATE VERTICAL MULLIONS



Detail 1
For Use with Perimeter Anchors

Step 1
-Cut all vertical and jamb mullions to dimensions as shown on shop drawings.
Allow for 1/2” caulk joint around the frame & 1/2” joint at vertical splices.
Note: Mullions at door jambs are sealed against the substrate at the sill without a shim space at that location.

Step 2
-If you are using continuous perimeter anchors, E9-1223 or E9-1248, the top and bottom of jamb mullions must be notched as shown in **Detail 1**.

Note: **Do not** notch jamb mullions when using mullion end anchors: “J”, “T”, or “F”.

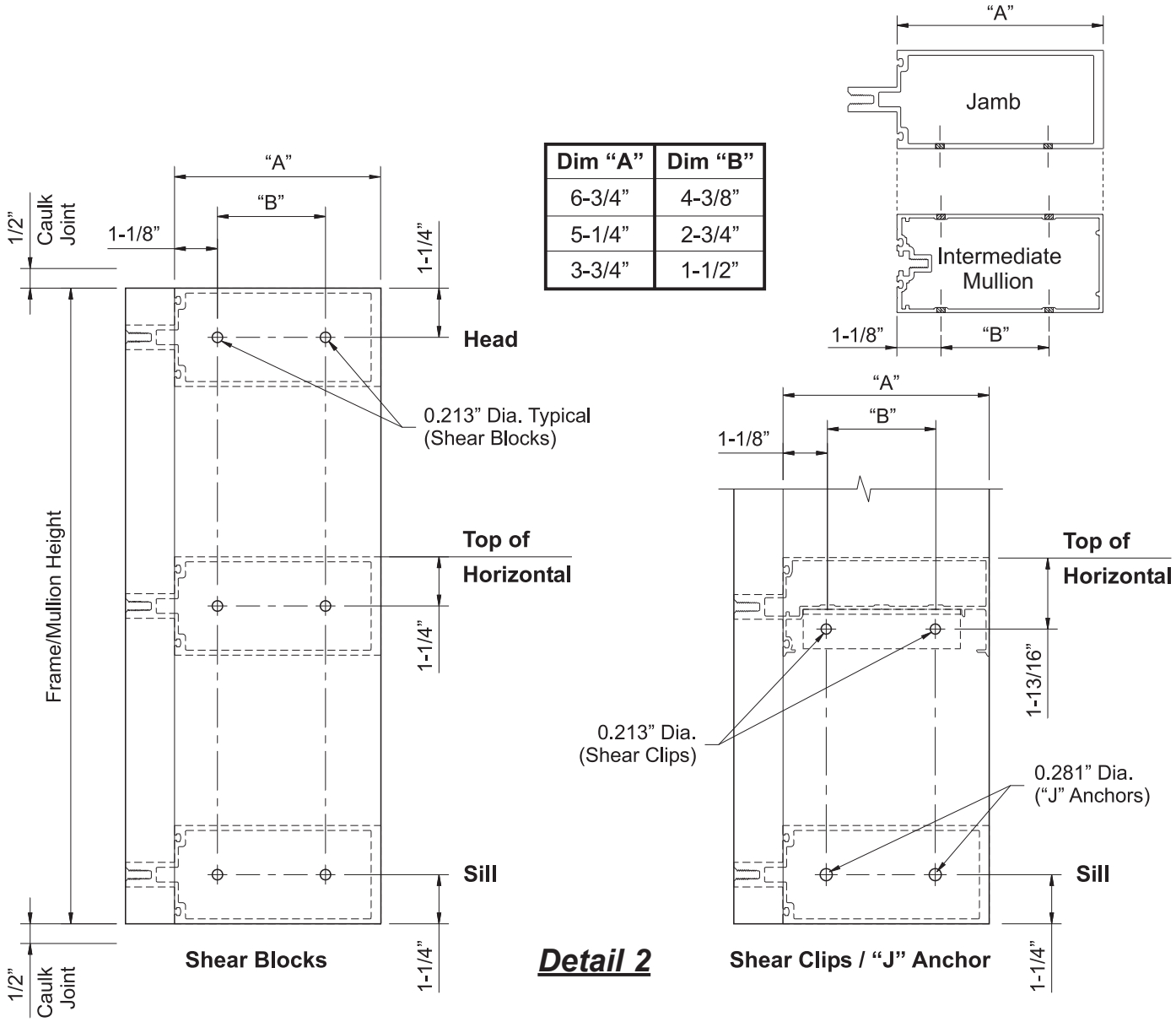
FRAME FABRICATION

STEP 3
FABRICATE VERTICAL MULLIONS

-Mullion hole locations for shear blocks, shear clips, and “J” anchors are shown below.
-Drill 0.213” dia. (#3 drill bit) holes for shear block/clip attachment at the locations indicated.
Drill 0.281” dia. (#9/32 drill bit) holes for “J” anchor attachment at the sill.
See **Details 2 & 3**.

Note: Hole locations for shear clips, E1-1213 & E1-1214, are not the same as for shear blocks and “J” anchors.

Dim “A”	Dim “B”
6-3/4”	4-3/8”
5-1/4”	2-3/4”
3-3/4”	1-1/2”

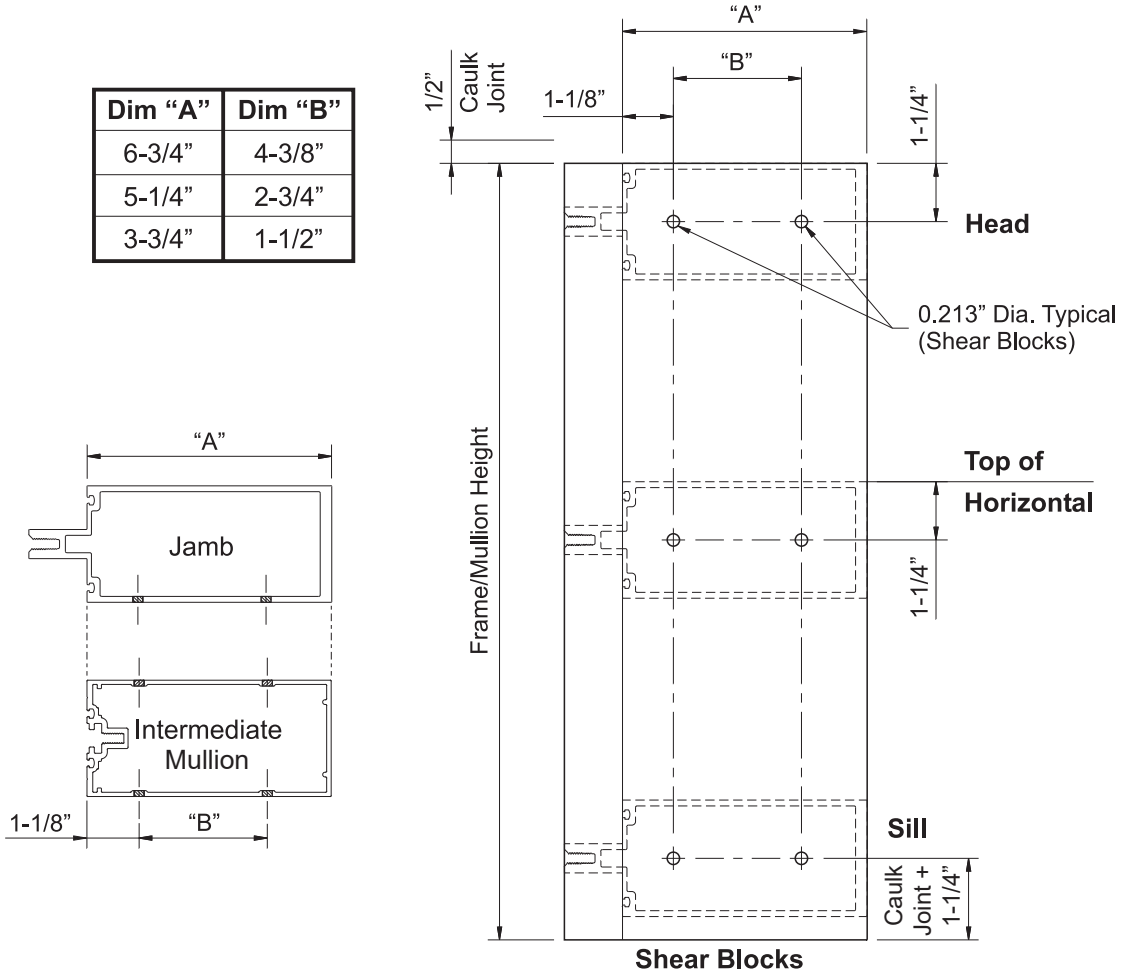


Detail 2

FRAME FABRICATION

STEP 3 (Continued)
FABRICATE VERTICAL MULLIONS

Dim "A"	Dim "B"
6-3/4"	4-3/8"
5-1/4"	2-3/4"
3-3/4"	1-1/2"



Detail 3
Door Jamb Mullion Fabrication

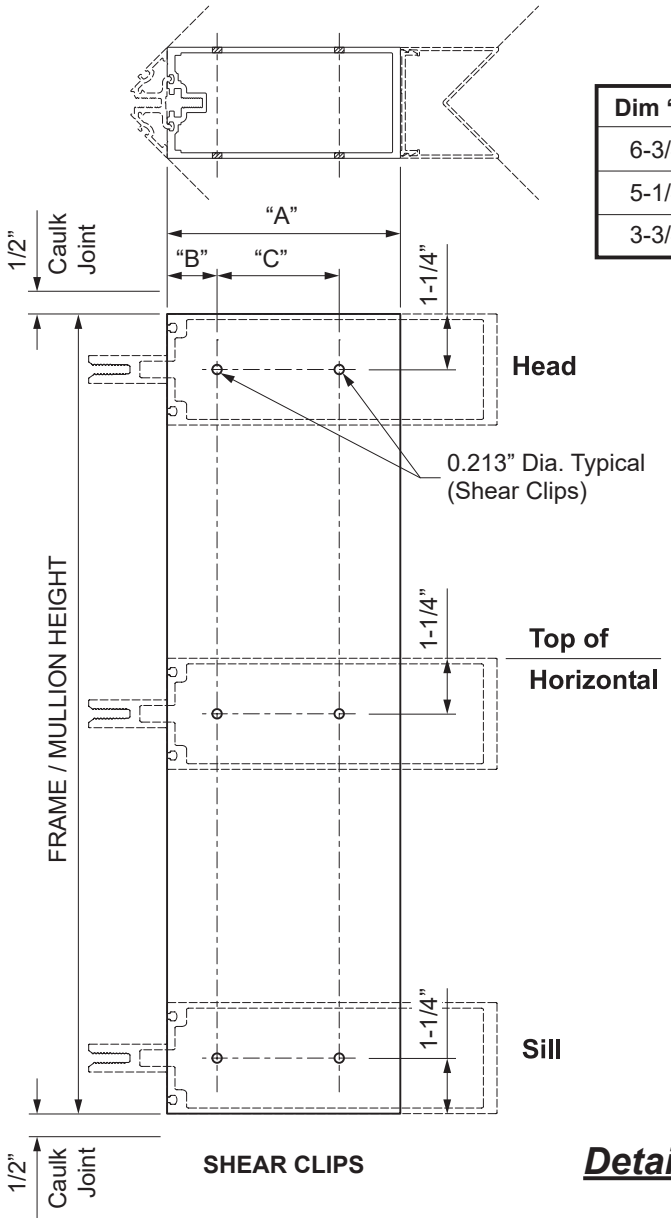
FRAME FABRICATION

STEP 3 (Continued)
FABRICATE CORNER MULLIONS

-Mullion hole locations for shear blocks, shear clips, and “J” anchors are shown below.
-Drill 0.213” dia. (#3 drill bit) holes for shear block/clip attachment at the locations indicated.
Drill 0.281” dia. (#9/32 drill bit) holes for “J” anchor attachment at the sill.
See **Detail 4**.

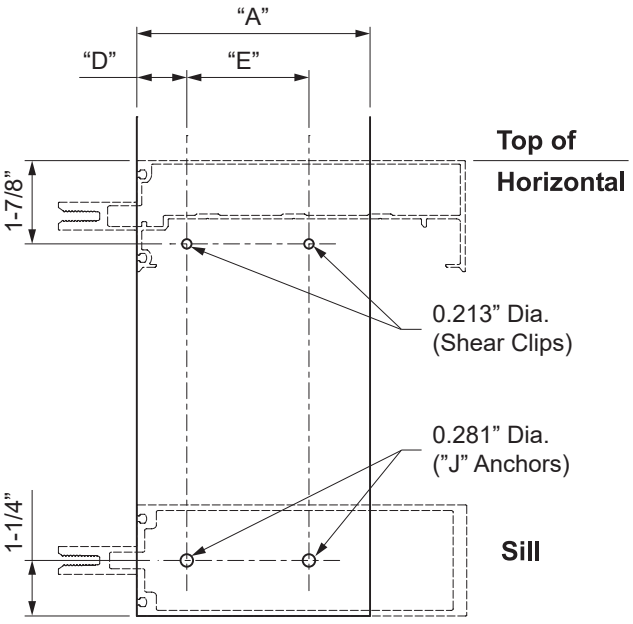
Note: Hole locations for corner shear clips, E1-1213A/B & E1-1214A/B, are not the same as for shear blocks and “J” anchors. Split horizontal not available for 6-3/4” back depth.

Dim “A”	Dim “B”	Dim “C”	Dim “D”	Dim “E”
6-3/4”	1-1/8”	4-3/8”	1-1/8”	4-3/8”
5-1/4”	1-1/8”	2-3/4”	1-1/8”	2-3/4”
3-3/4”	1-1/8”	1-1/2”	1-5/16”	1-1/2”



SHEAR CLIPS

Detail 4



2-PC. HORIZ / J-ANCHOR @ SILL

FRAME FABRICATION

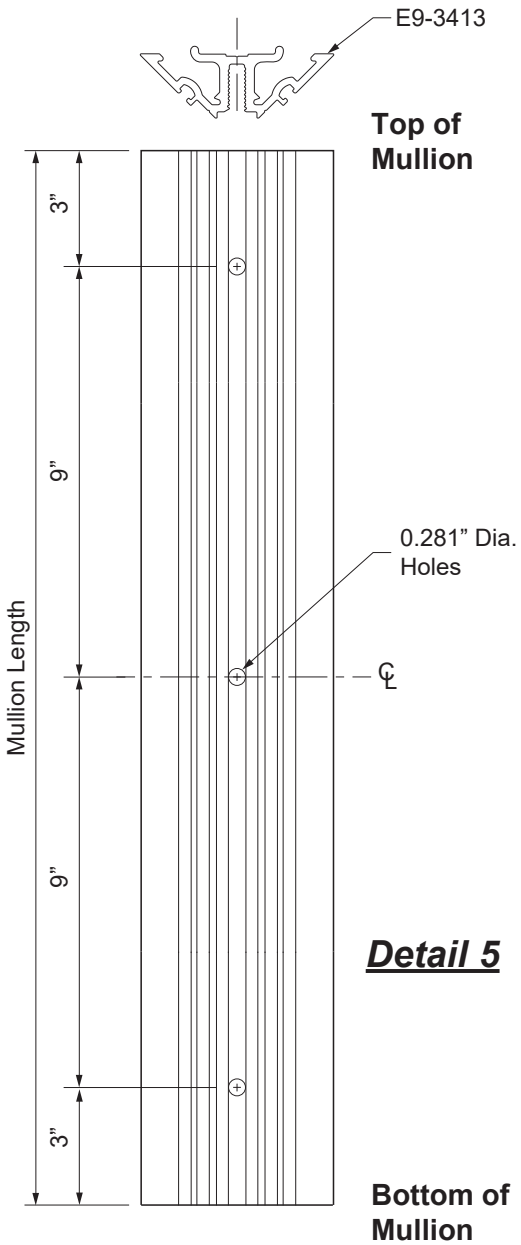
STEP 3 (Continued)
FABRICATE CORNER GLAZING ADAPTOR FOR SSG MULLION

-Cut E9-3413 outside corner mullion adaptor to mullion length.
-Drill 0.281” dia. (9/32 bit) clear holes every 9” on center, and 3” maximum from each end.

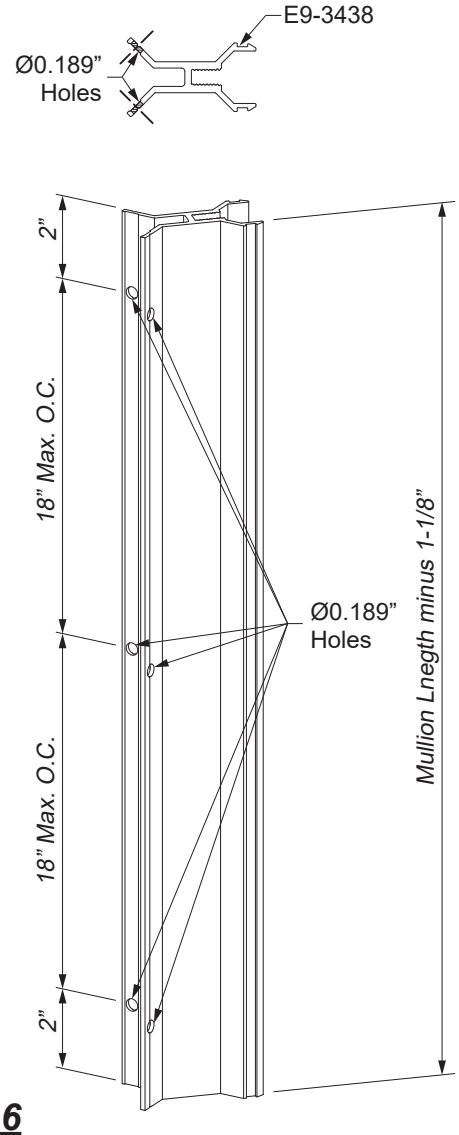
See **Detail 5**.

-Cut the E9-3438 90° Outside Corner Trim Base and E9-3439 Corner Trim adaptor to the mullion length minus 1-1/8”. Drill 0.189” diameter holes as shown in **Detail 5** at 2” from each end and at 18” maximum on center.

See **Detail 6**.



Detail 5



Detail 6

FRAME FABRICATION

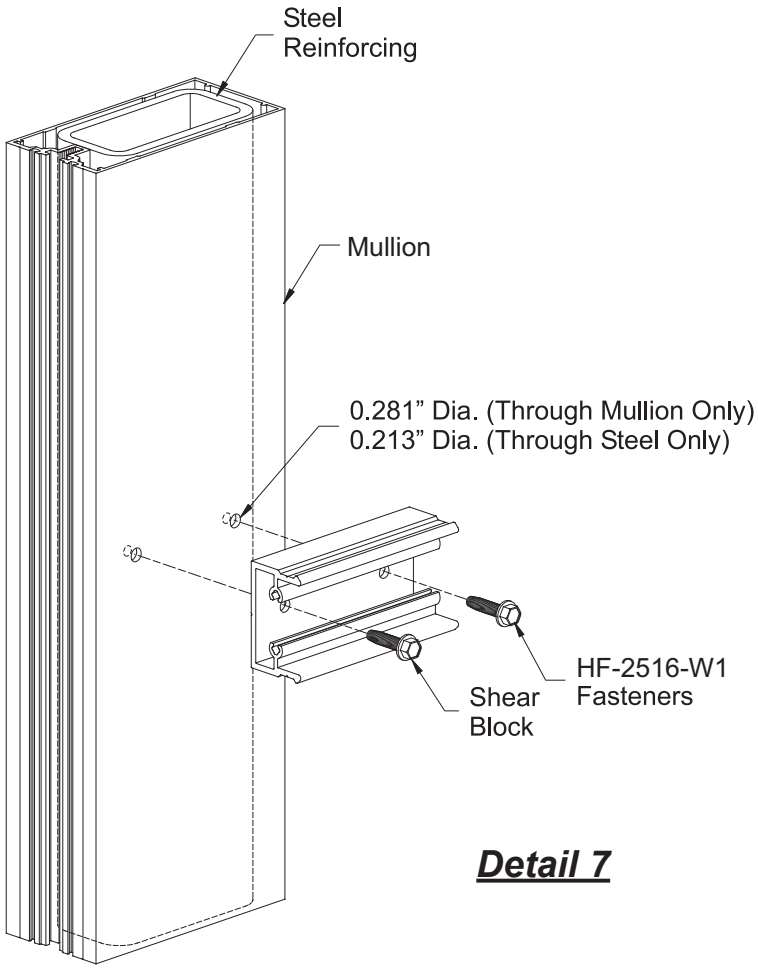
STEP 4
USING ALTERNATE REINFORCING

Engineering calculations may require the vertical mullions to be reinforced with either steel or aluminum.

-Steel reinforcing is always fastened through the shear blocks.
-Slide the steel reinforcing into the mullion and into position.
-Drill a 0.281” diameter (#9/32 bit) hole in the vertical mullion being careful not to drill a hole in steel reinforcing.
-Drill a 0.213” diameter (#3 bit) hole in the steel reinforcing through the previous holes.
-Attach the shear blocks to the mullion and steel with two HF-2516 fasteners per block.

See **Detail 7**.

Note: Exact size of reinforcing to be determined by a qualified engineer.



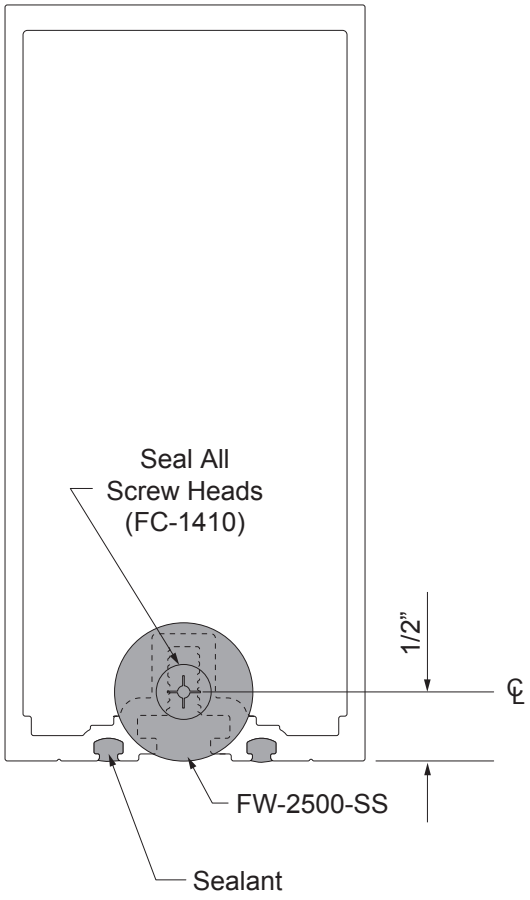
Detail 7

FRAME FABRICATION

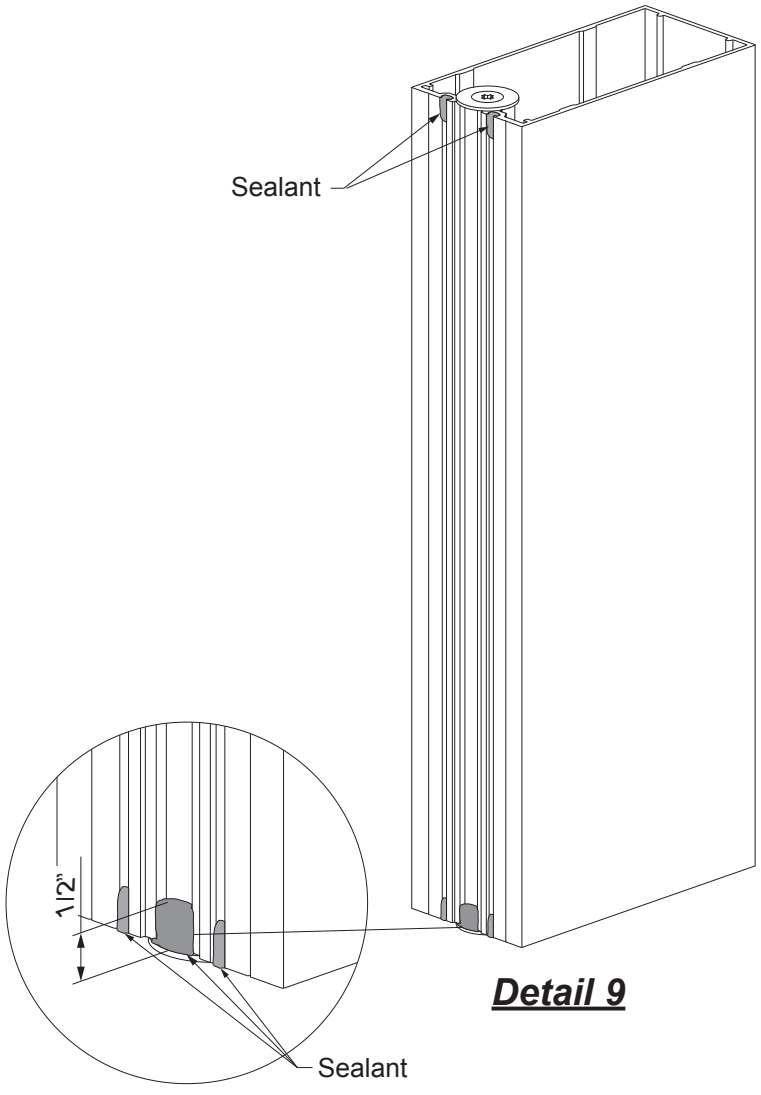
STEP 5
ATTACH SSG MULLION END CAPS

Mullion end caps are required at the head and sill of jamb and mullions.

-Clean the mullion ends and mullion end caps with a cleaner and method approved by the sealant manufacturer.
-Apply sealant to the spline cavity and along the front of the mullions on both ends prior to installing mullion end caps, FW-2500-SS. Also apply sealant to the reglets at both ends of the mullion.
-Attach the mullion end caps to each end of the mullion with FC-1410-SS fasteners as shown **Detail 8**.
-Tool the excess sealant flush between the mullion end cap and the mullion and at the reglets.
-Seal over all screw heads.
-At the bottom of the mullions, apply sealant to the center cavity to a height of 1/2”.
See **Detail 9**.



Detail 8



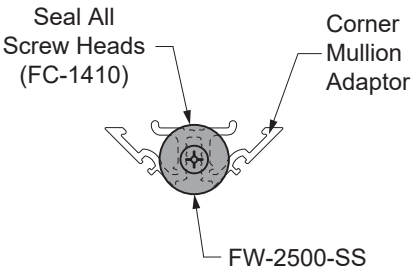
Detail 9

FRAME INSTALLATION

STEP 5 (Continued)
ATTACH MULLION END CAPS AT CORNER MULLIONS

At the outside corners, end caps are installed on the ends of the outside corner mullion adaptors.

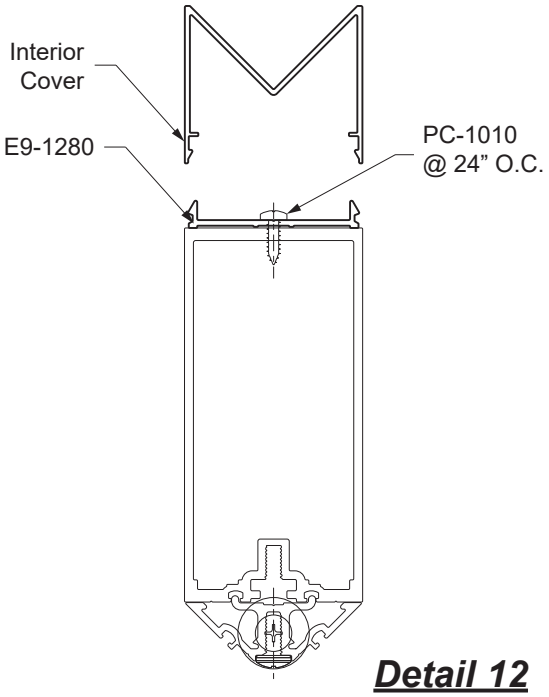
-Clean the corner adaptor ends and mullion end caps with a cleaner and method approved by the sealant manufacturer.
-Apply sealant to the spline cavity and along the front of the adaptor on both ends prior to installing mullion end caps, FW-2500-SS.
-Attach the mullion end caps to each end of the adaptor with FC-1410 fasteners as shown **Detail 10**.
-Tool the excess sealant flush between the corner adaptor end cap and the mullion.
-Seal over all screw heads.
-Fasten the corner mullion adaptor onto the corner mullion using PM-2524-SS screws at 9” on center. Tighten the screws to 70 inch-pounds. See **Detail 11**.



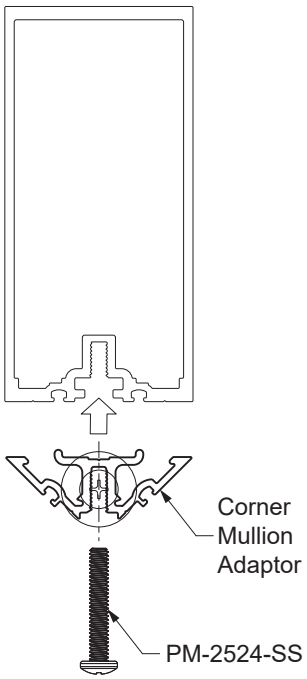
Detail 10

-Prior to attaching the corner shear blocks to the corner mullion, the interior covers must be installed. Attach the interior cover base E9-1280 to the back of the corner mullion with PC-1010 screws at 24” maximum on center. Then snap on the interior cover.

See **Detail 12**.



Detail 12



Detail 11

FRAME FABRICATION

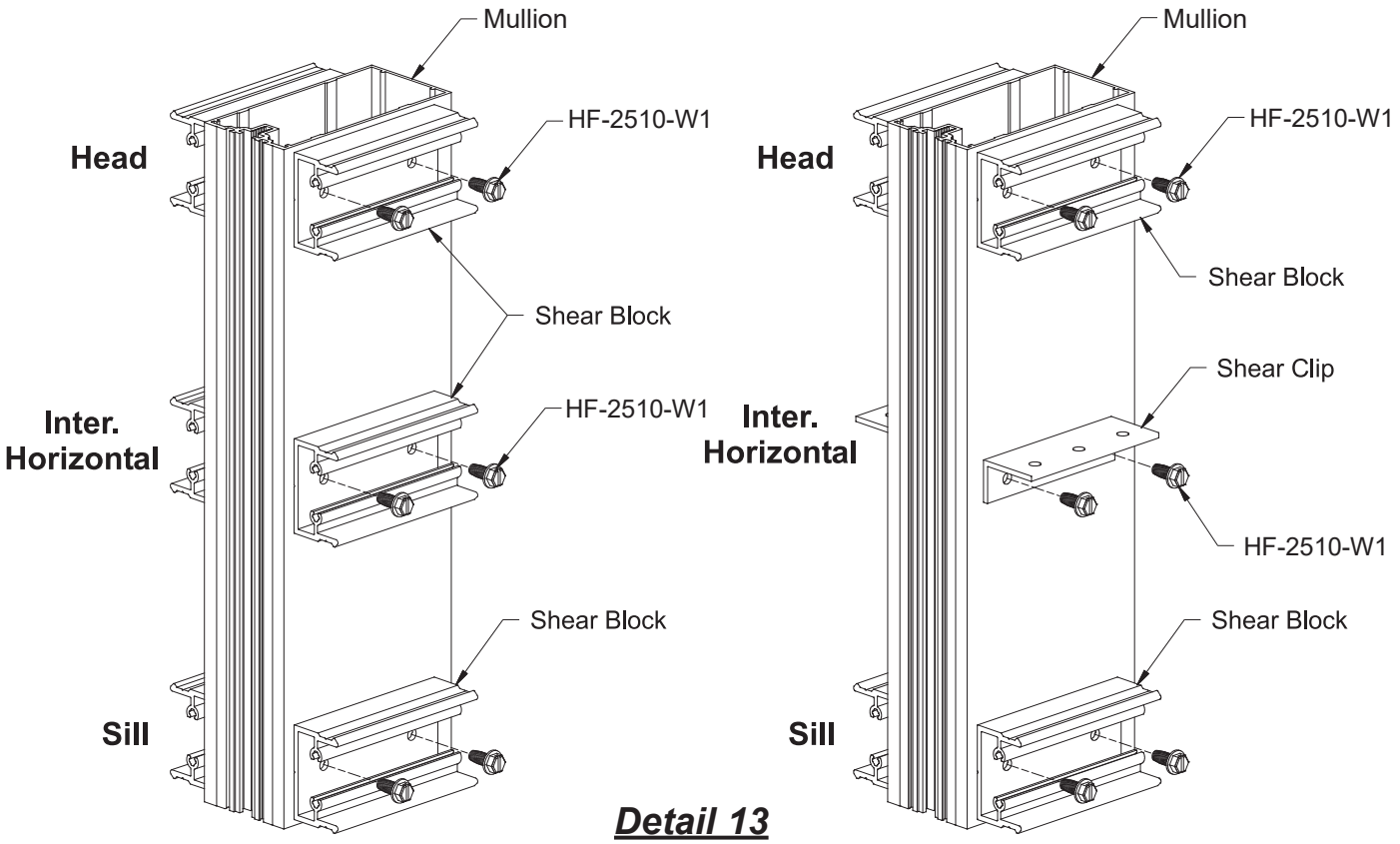
STEP 6
ATTACH SHEAR BLOCKS/CLIPS FOR HORIZONTALS

Shear blocks are used to attach one piece horizontal members to the jamb and vertical mullions:
- E1-3503 for 3-3/4” back members.
- E1-3504 for 5-1/4” back members.
- E1-3506 for 6-3/4” back members.

Shear clips are used to attach two piece intermediate horizontal members to the jamb and vertical mullions:
- E1-1213 for 5-1/4” back members.
- E1-1214 for 3-3/4” back members.

-Attach the shear blocks/clips to jambs and verticals with two HF-2510 fasteners per block. See **Detail 13**.

Note: See **Step 4** on the **Page 14** when using reinforcing.



Detail 13

FRAME FABRICATION

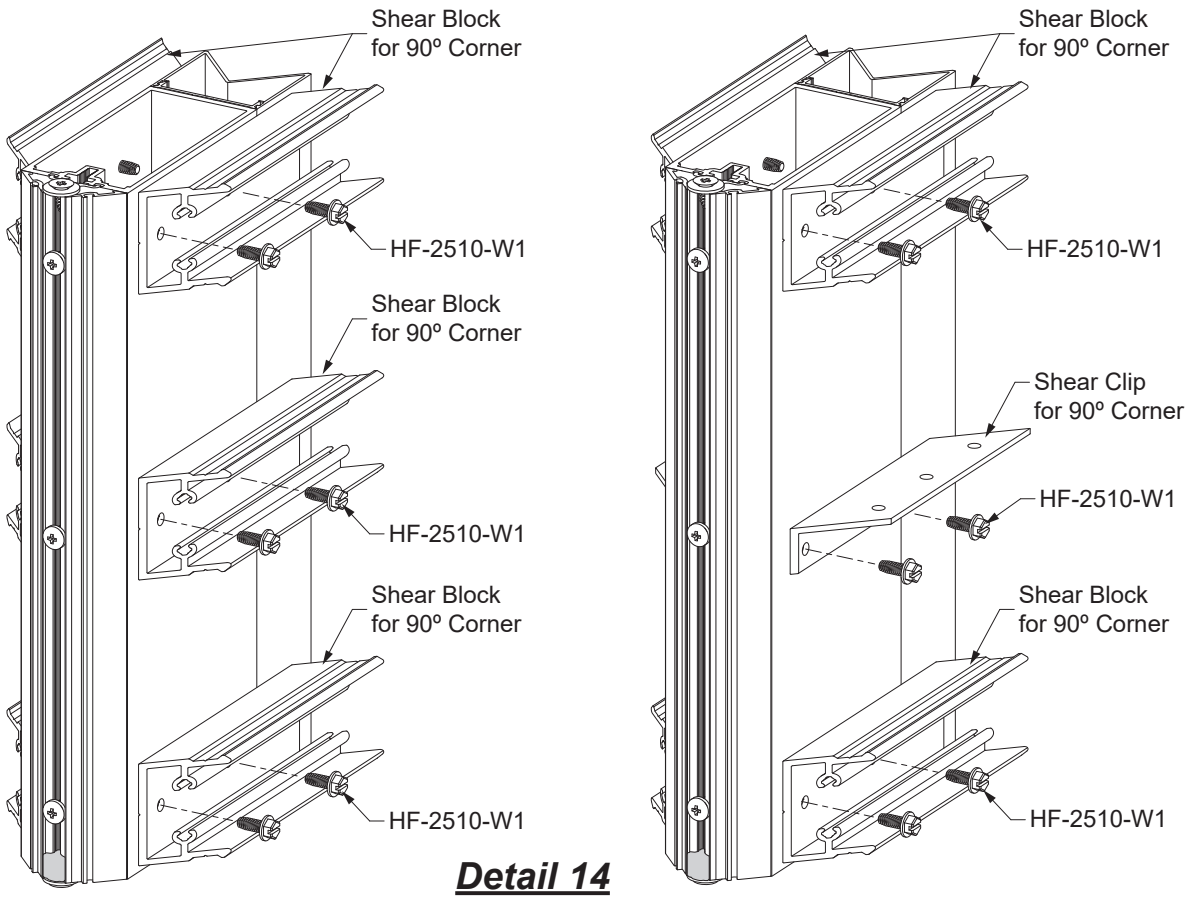
STEP 6
ATTACH SHEAR BLOCKS/CLIPS FOR HORIZONTALS

Corner Shear blocks are used to attach one piece horizontal members to the 90° corner mullions:
E1-3503A for 3-3/4” back members.
E1-3504A for 5-1/4” back members.
E1-3506A for 6-3/4” back members.
Shear clips are used to attach two piece intermediate horizontal members to the jamb and vertical mullions:
E1-1213A/B for 5-1/4” back members.
E1-1214A/B for 3-3/4” back members.

-Attach the shear blocks to jambs and verticals with two HF-2510-W1 fasteners per block (HF-2516-W1 where steel reinforcing is used.)

See **Detail 14**.

-Additional fasteners may be required to accomodate special project conditions.
-Alternate holes can be utilized to correct fabrication errors.



Detail 14

FRAME FABRICATION

STEP 7
ATTACH “J” ANCHORS

In addition to anchoring the curtain wall frame to the structure, “J” anchors are used to attach sill members to jamb and vertical mullions:

E1-3501 for 3-3/4” back members.
E1-3502 for 5-1/4” back members.
E1-3505 for 6-3/4” back members.

Note: “J” anchors are used at the sill only.

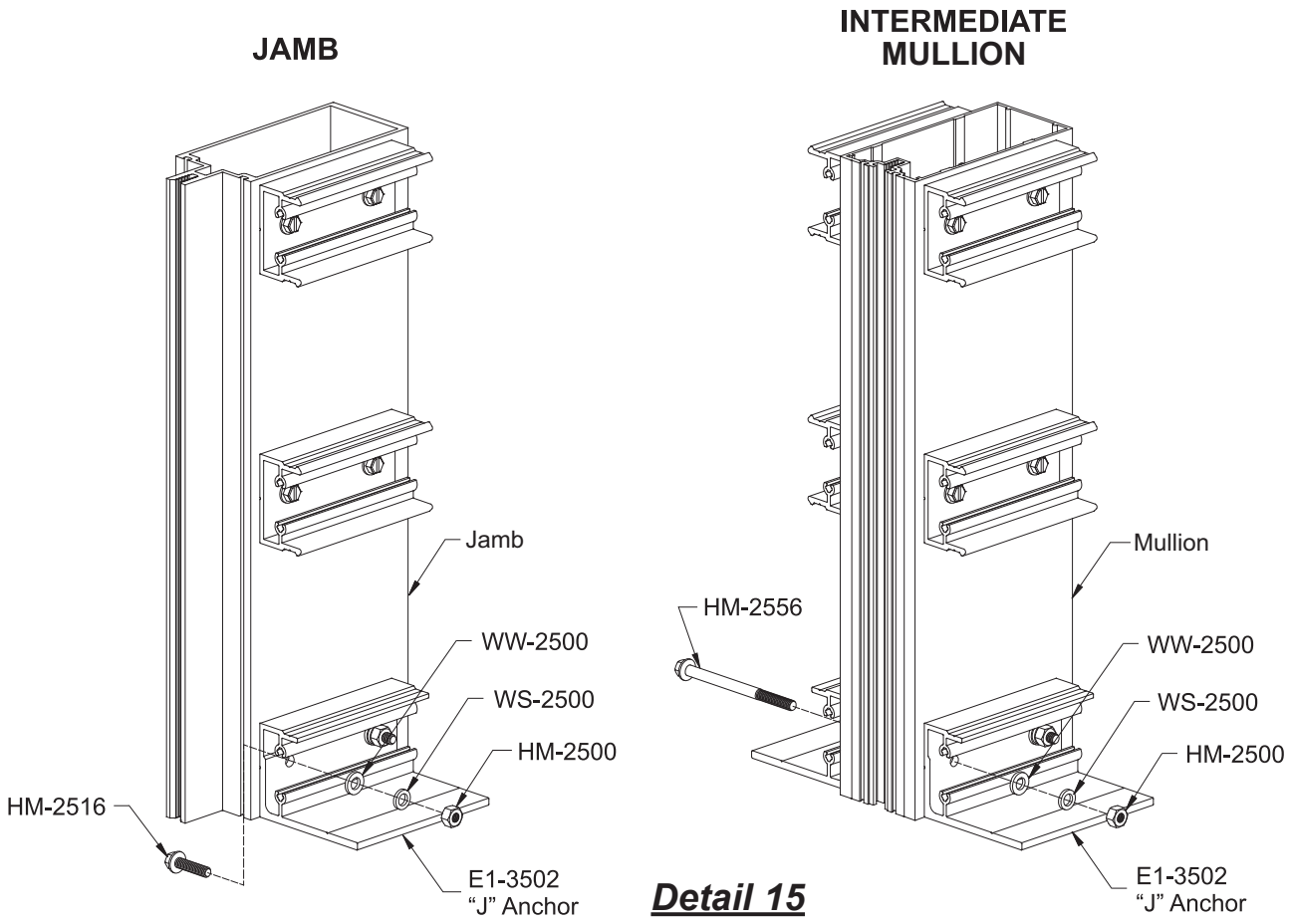
Attach “J” anchors at jambs:

-Align the “J” anchor with the mullion and insert the HM-2516 bolts through the inside of the mullion and out the “J” anchor.
-Install 1/4” flat and lock washers between the anchor and HM-2500 hex nuts.

Attach “J” anchors at intermediate verticals:

-Align the “J” anchors and insert the HM-2556 bolts through both anchors and the mullion.
-Install 1/4” flat and lock washers between the anchor and HM-2500 hex nuts.

See **Detail 15**.



Detail 15

FRAME FABRICATION

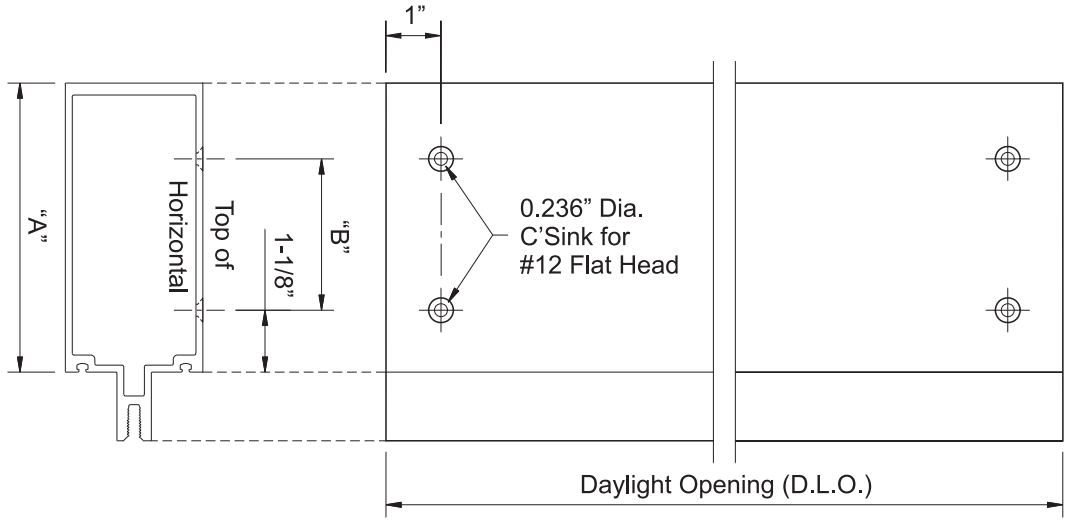
STEP 8
FABRICATE HORIZONTAL MEMBERS

-Cut all horizontal members to the daylight opening as shown in shop drawings.
-Horizontal members must be fabricated as shown below to attach to shear blocks or clips.

Horizontals with Exposed Fasteners:

-Layout hole locations on the top of the horizontal at both ends as shown below.
-Drill 0.236” diameter (#B bit) holes and countersink for #12 flat head fasteners.
See **Detail 16**.

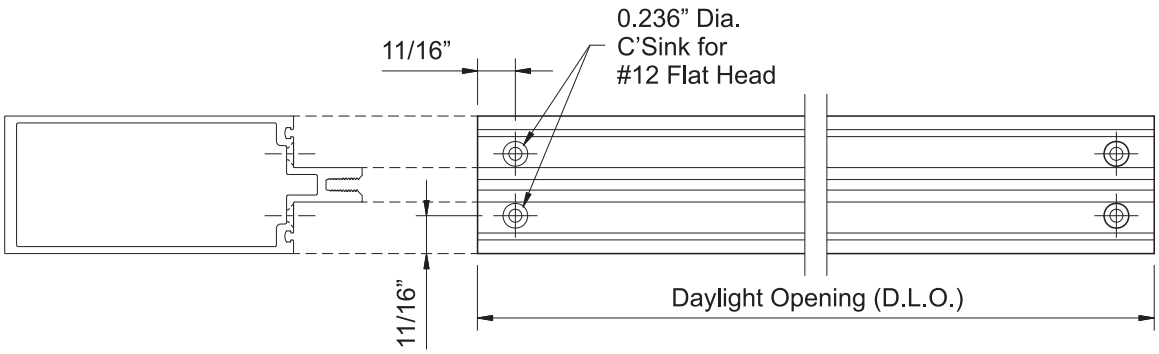
Dim “A”	Dim “B”
6-3/4”	4-3/8”
5-1/4”	2-3/4”
3-3/4”	1-1/2”



Detail 16

Horizontals with Concealed Fasteners:

-Layout hole locations on the face of the horizontal at both ends as shown below.
-Drill 0.236” diameter (#B bit) holes and countersink for #12 flat head fasteners.
See **Detail 17**.



Detail 17

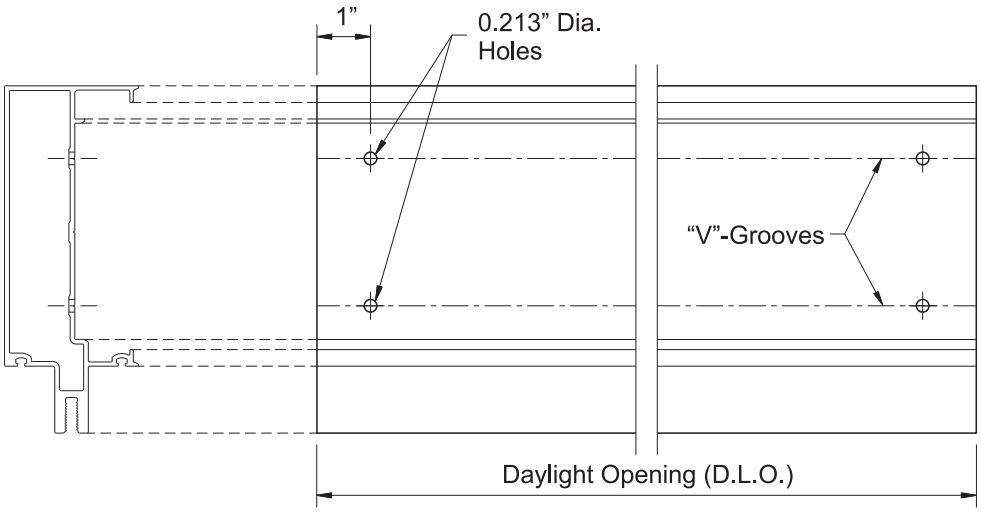
FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS

Two Piece Horizontals:

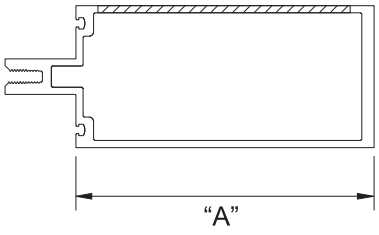
-Layout hole locations on the bottom of the horizontal along the “V”-grooves at both ends.
-Drill 0.213” diameter (#3 bit) holes at each location.
Be careful not to penetrate the outer wall of the horizontal.
See **Detail 18**.

Detail 18



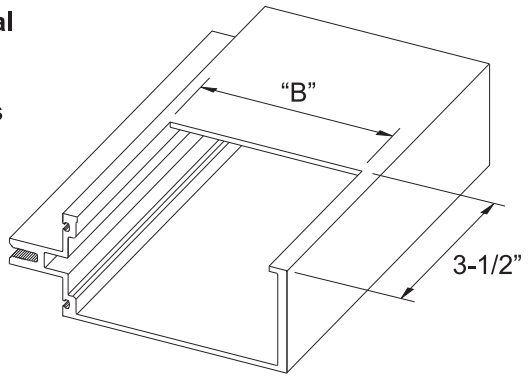
If Mullion End Anchors Are Used
Head and Sill Members Require Additional Fabrication:

-Head and sill members must be notched out at each end to clear mullion end anchors and anchor bolts.
-See **Detail 19** below for notch dimensions.



Dim “A”	Dim “B”
6-3/4”	6-1/4”
5-1/4”	4-3/4”
3-3/4”	3-1/4”

Notch Horizontal Ends to Clear End Anchors & Anchor Bolts



Detail 19

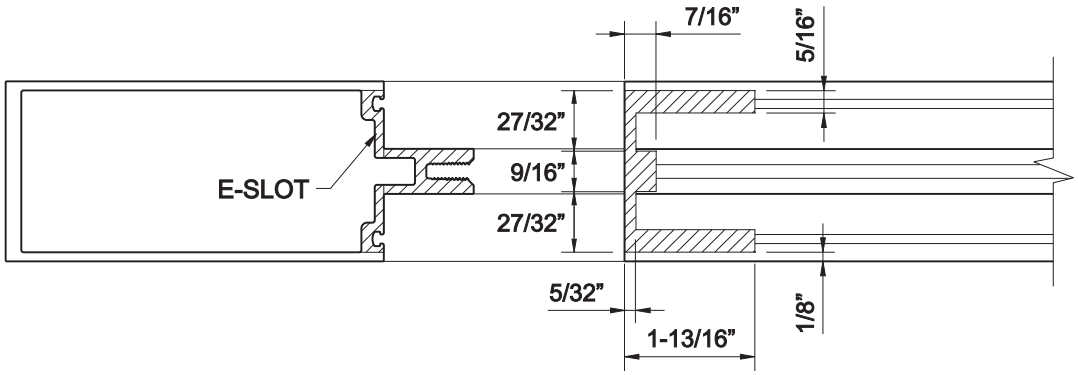
FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS

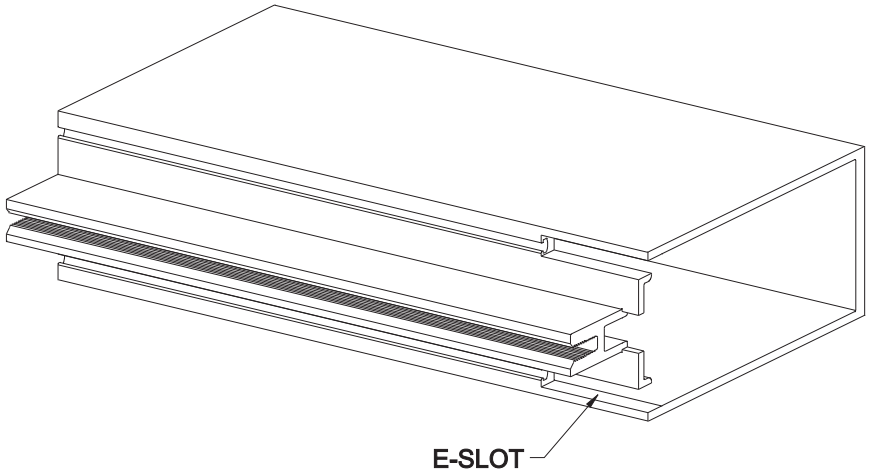
One Piece Horizontals at End Bays (E-SLOT):

When using one piece horizontals at end bays, horizontals must slide in from the interior. In order to clear the shear blocks on the verticals:

-Notch the face and tongue of the horizontal at both ends as shown below.
See **Detail 20**.



Detail 20

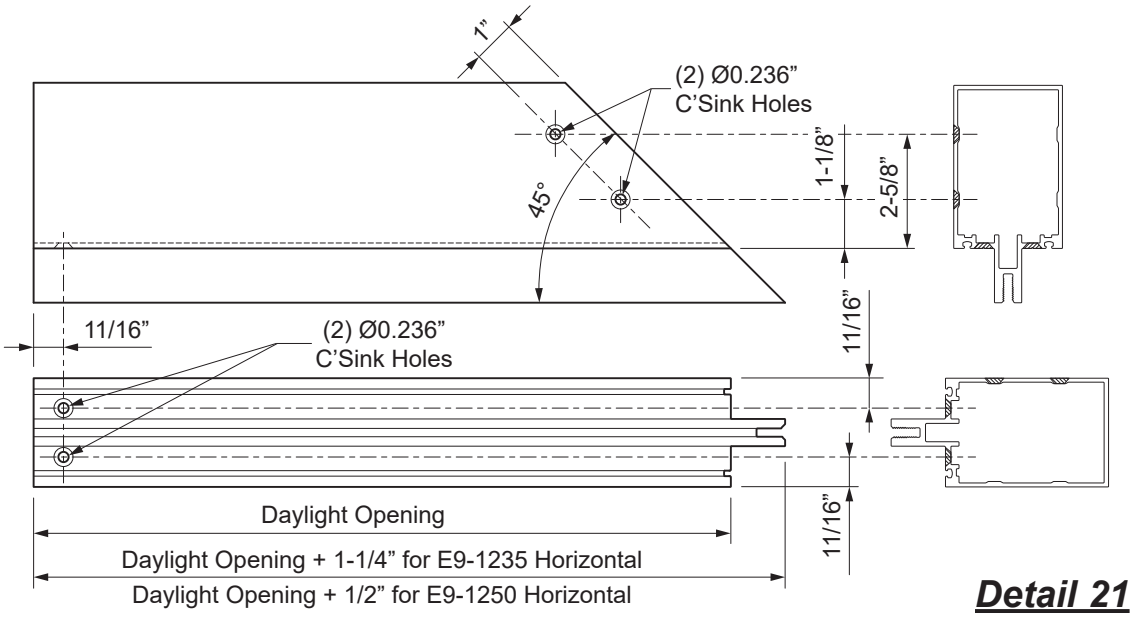


FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS

Horizontals at 90° O.S. Corner:

-Cut all horizontal members to the daylight opening as shown in shop drawings.
-Horizontal members must be fabricated as shown below to attach to shear blocks or clips.
-Layout hole locations on the top of the horizontal at the mitered ends as shown below.
-Drill 0.236” diameter (#B bit) holes and countersink for #12 flat head fasteners.
See **Details 21, 23 & 25**.



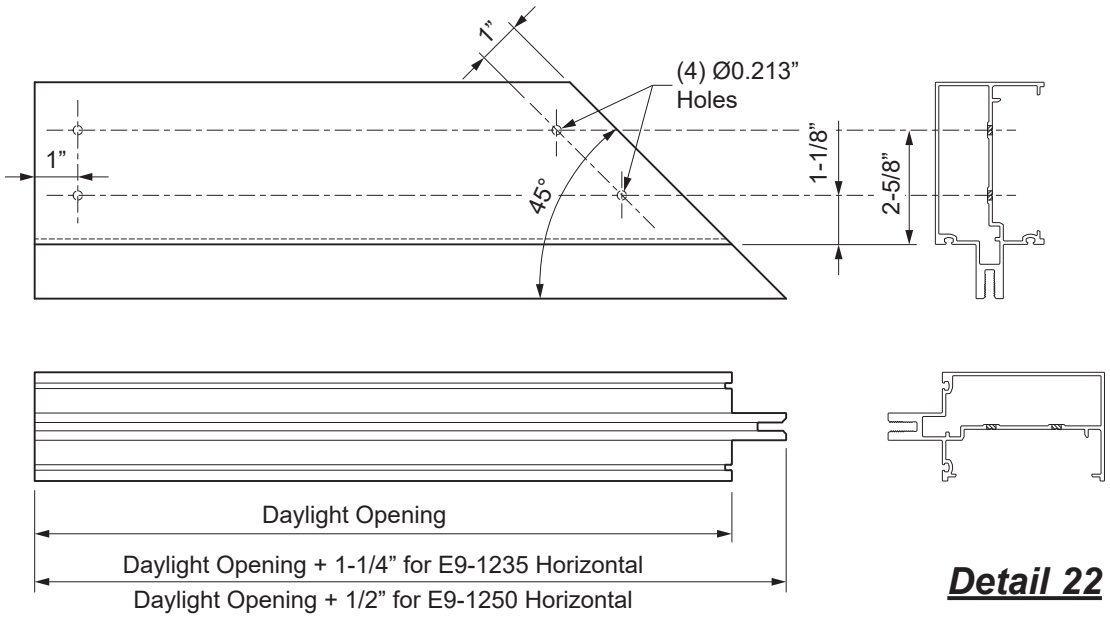
Detail 21

FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS

Horizontals at 90° O.S. Corner:

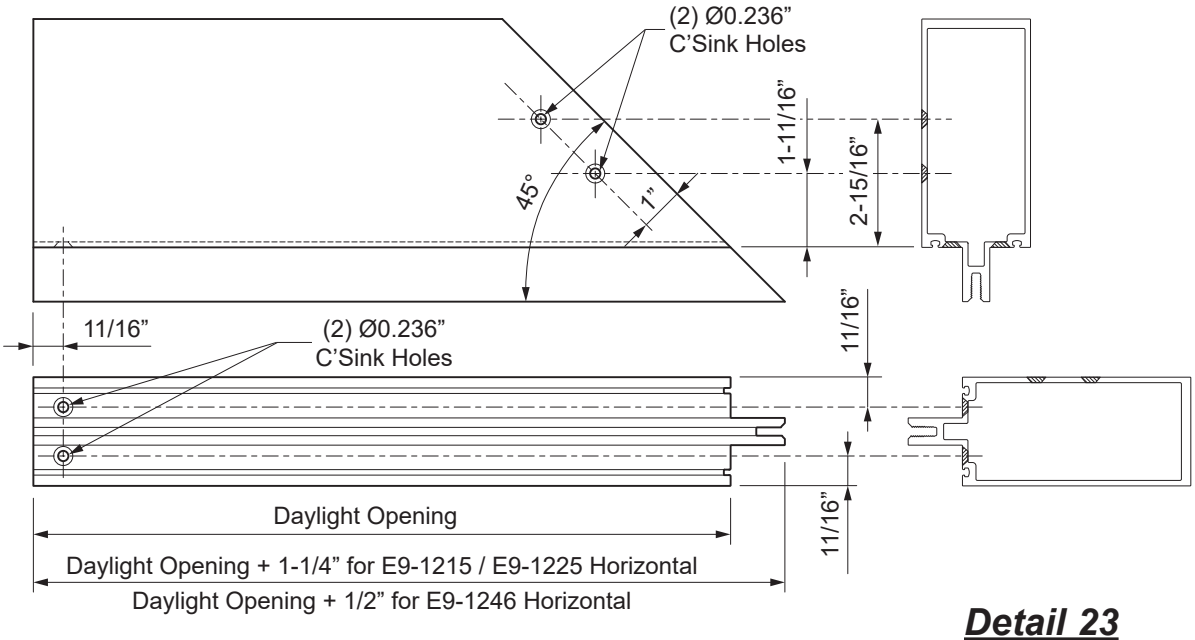
-Layout hole locations on the bottom of the horizontal along the “V”-grooves at both ends.
-Drill 0.213” diameter (#3 bit) holes at each location.
Be careful not to penetrate the outer wall of the mullion.
See **Details 22 & 24**.



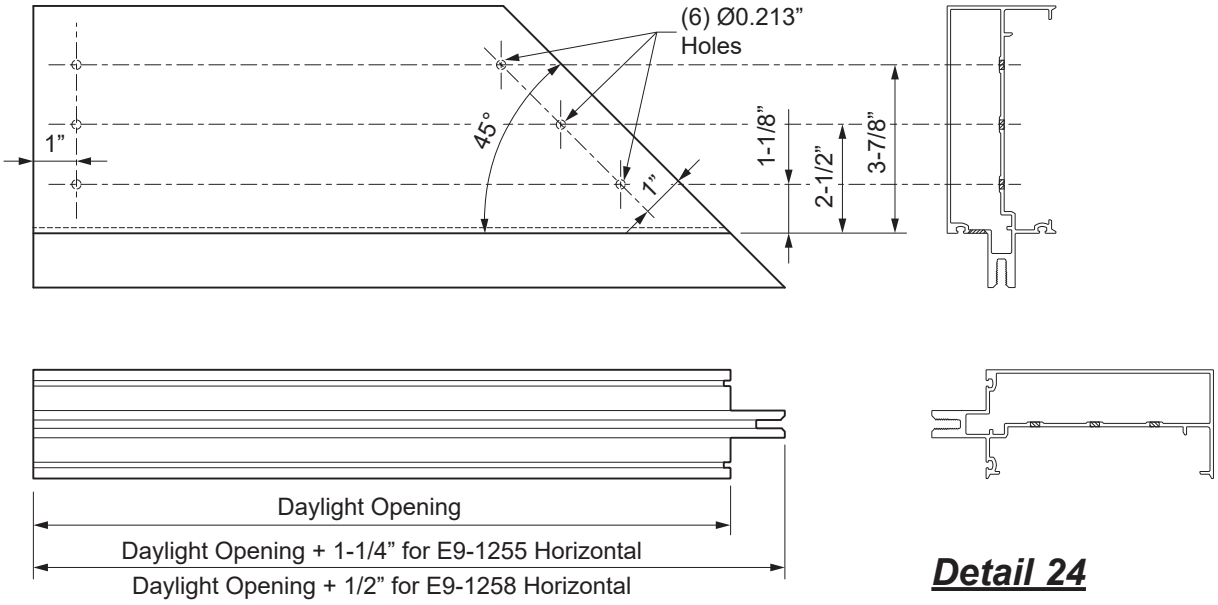
Detail 22

FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS



Detail 23

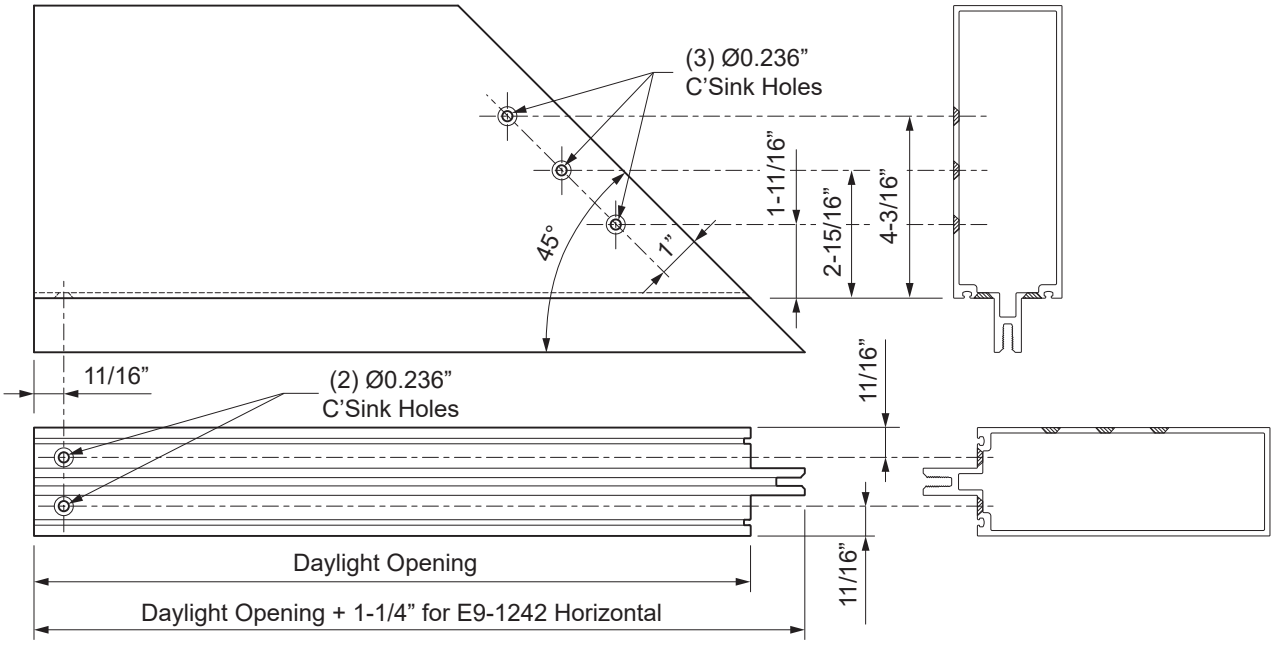


Detail 24

FRAME FABRICATION

STEP 8 (Continued)
FABRICATE HORIZONTAL MEMBERS

Note: Two-piece horizontal not available for 6-3/4” mullion back depth.



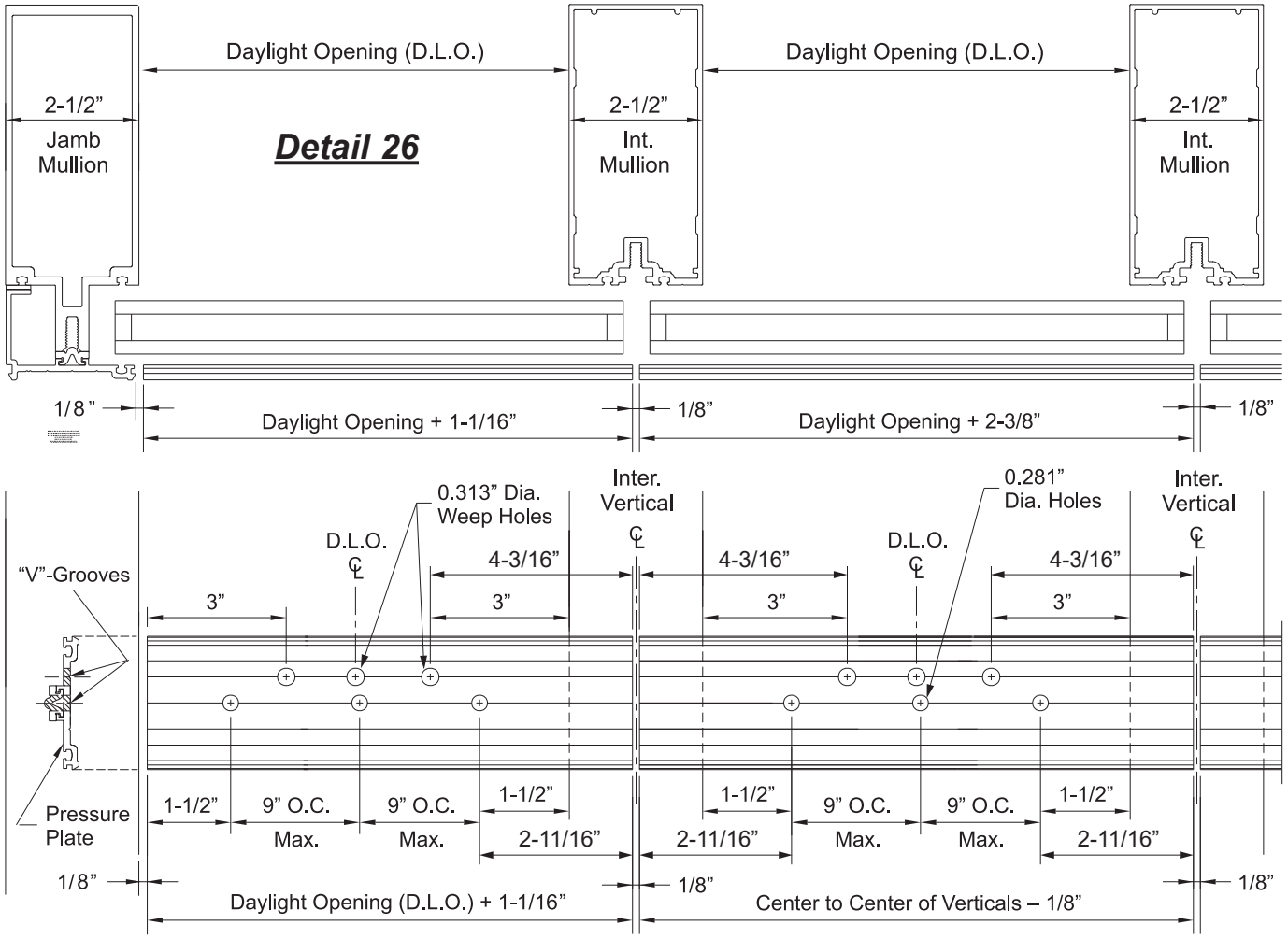
Detail 25

FRAME FABRICATION

STEP 9
FABRICATE PRESSURE PLATES

-Pressure plate stock lengths have 0.281” dia. holes factory punched every 9” o.c.
-Cut all jamb pressure plates to the same length as the jamb mullions.
-Drill additional holes if required to ensure that end holes are at 1-1/2” of each end.
-If jamb members are spliced, cut pressure plates to accommodate for 1/2” expansion joint as shown in **Step 11** on **Pages 31 & 32**.

-Cut horizontal pressure plates as shown in **Detail 26**.
  -Cut pressure plates between jamb and intermediate mullions to D.L.O. plus(+) 1-1/16”.
  -Cut pressure plates between intermediate verticals to D.L.O. plus(+) 2-3/8”.
  -For pressure plates spanning more than one bay, cut them to the centerline to centerline dimension between mullions minus(–) 1/8”.
-Drill additional fastener holes if required to ensure that end holes are at 1-1/2” from the end at the jamb and at 2-11/16” from the end at the SSG mullion.
-Drill three 0.313” diameter weep holes per horizontal daylight opening as shown below.

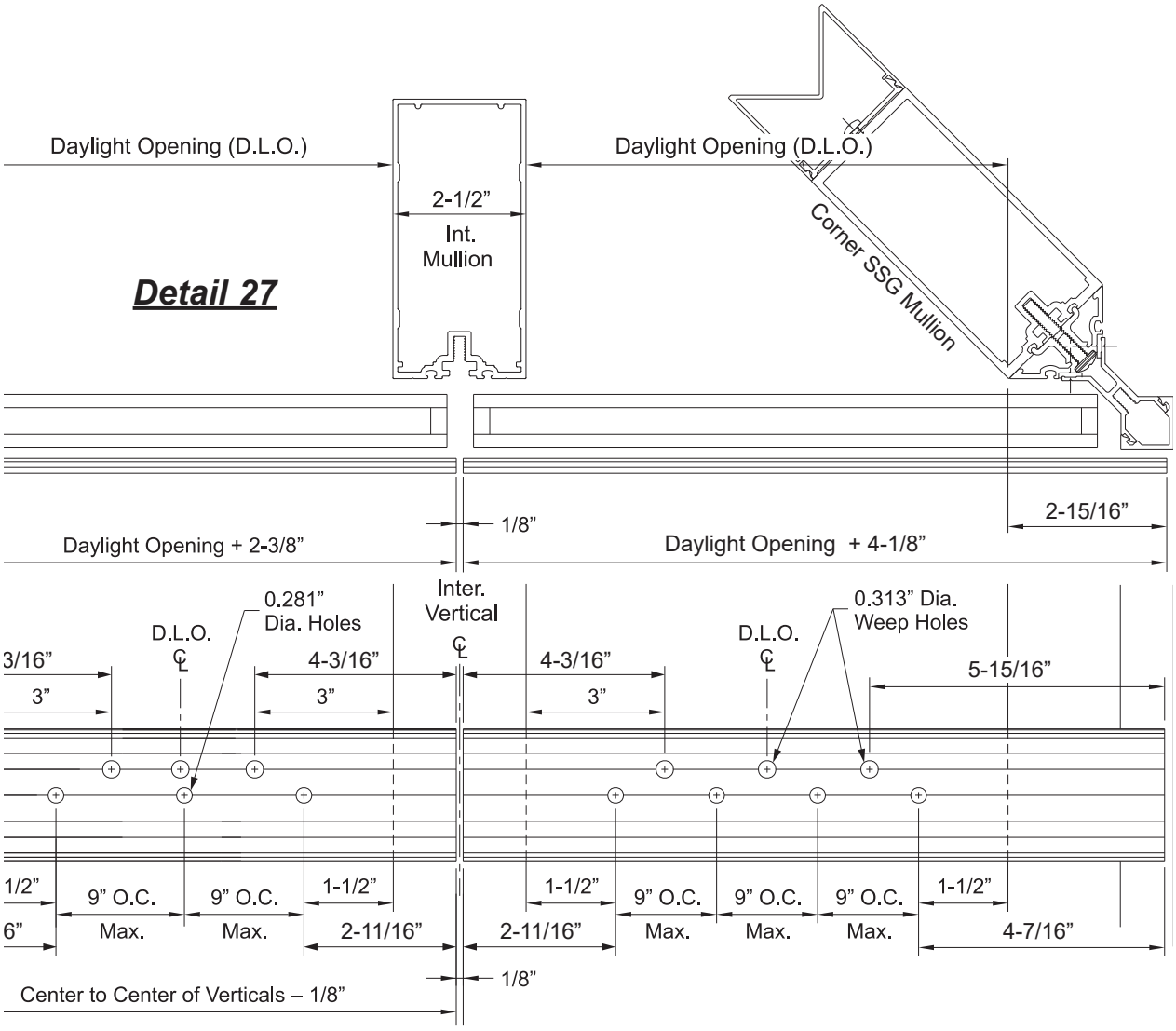


FRAME FABRICATION

STEP 9 (Continued)
FABRICATE PRESSURE PLATES

-Cut horizontal pressure plates at 90° SSG corner mullion as shown in **Detail 27**.
  -Cut pressure plates between intermediate mullions and 90° SSG corner mullion to D.L.O. plus(+) 4-1/8”.
  -If a 90° SSG corner mullion is adjacent to a jamb mullion, cut pressure plates to D.L.O. plus(+) 2-13/16”.
-Drill additional fastener holes if required to ensure that end holes are at 1-1/2” from the end at the jamb and at 2-11/16” from the end at the SSG mullion.
-Drill three 0.313” diameter weep holes per horizontal daylight opening as shown below.

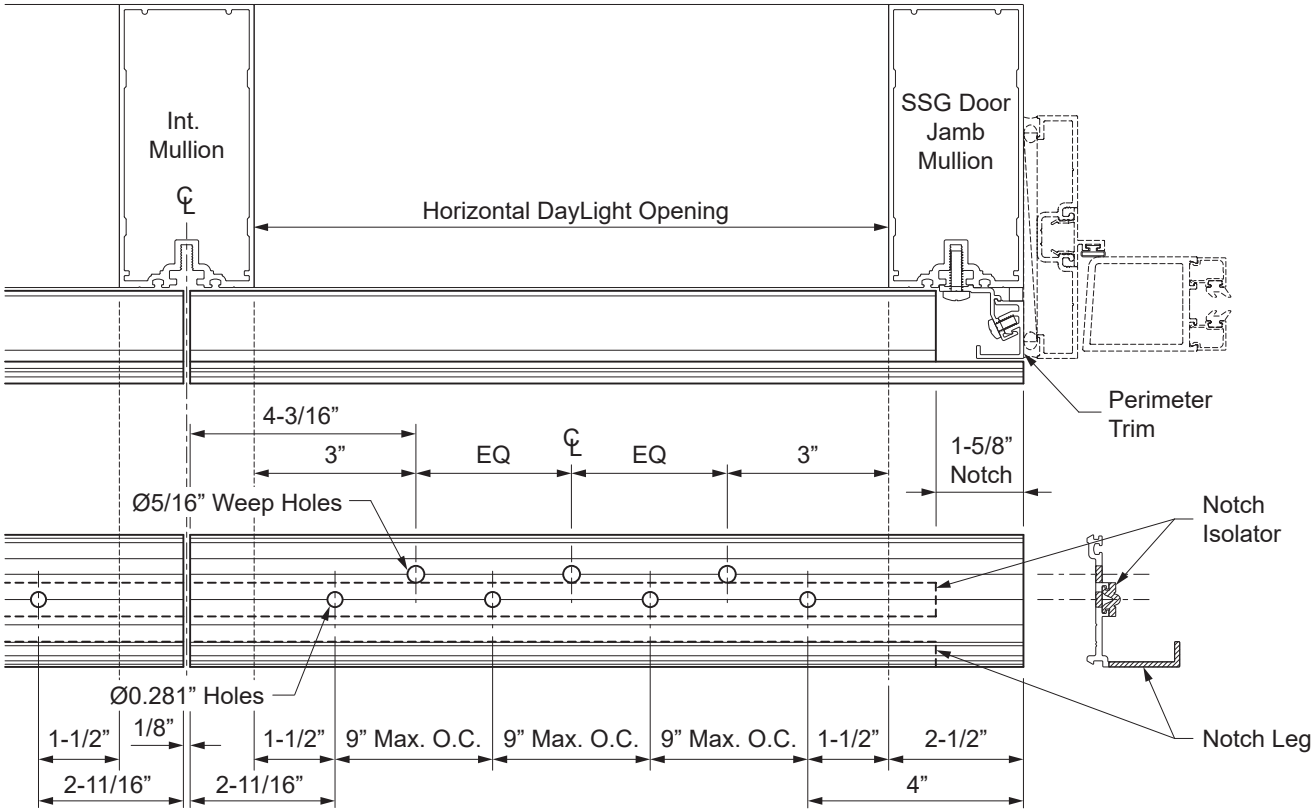
Detail 27



FRAME FABRICATION

STEP 9 (Continued)
FABRICATE PRESSURE PLATES

-At the SSG mullion at the door jamb, the pressure plate is cut to overlap the mullion, flush with the inside of the SSG door jamb mullion as shown in **Detail 28**. Notch all affected thermal isolators 1-5/8” to accomodate the perimeter trim. At the sill, notch the leg of the perimeter pressure plate 1-5/8” as well.
  -Cut pressure plates between intermediate mullions and SSG door jamb mullion mullion to D.L.O. plus(+) 3-11/16”.
  -If an SSG door jamb mullion is adjacent to a jamb, cut pressure plate to D.L.O. plus(+) 2-3/8”.
  -If an SSG door jamb mullion is adjacent to a 90° SSG corner mullion, cut the pressure plate to D.L.O. plus(+) 5-7/16”.
-Drill additional fastener holes if required to ensure that end holes are at 1-1/2” from the end at the jamb and at 2-11/16” from the end at the SSG mullion.
-Drill three 0.313” diameter weep holes per horizontal daylight opening as shown below.



Detail 28
See note below

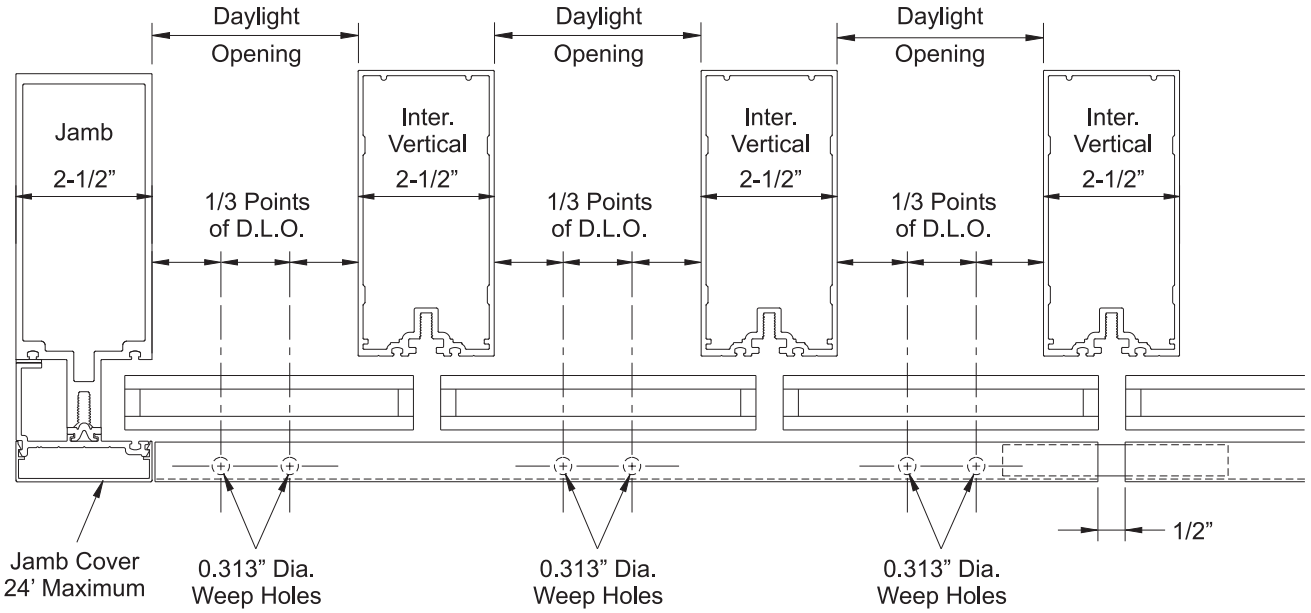
Note: Sill perimeter pressure plate shown. Pressure plates at intermediate horizontals require only the isolator to be notched the the SSG door jamb.

FRAME FABRICATION

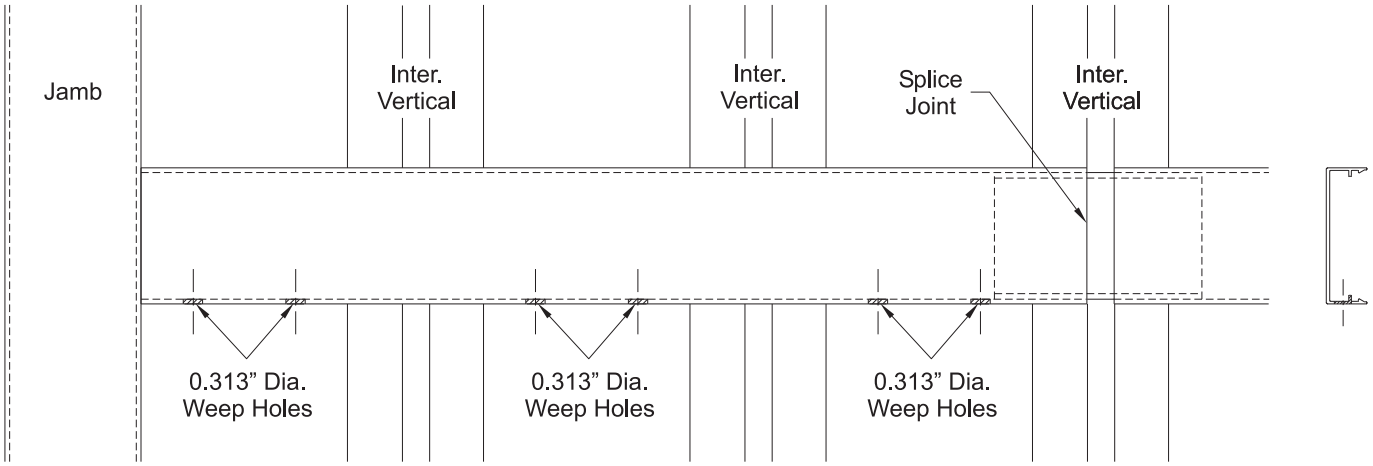
STEP 10
FABRICATE FACE COVERS

-Cut jamb face covers to the same length as the jamb mullions unless the mullions are spliced. If jamb mullions are spliced, cut jamb covers to accommodate for the 1/2" expansion joint as shown in **Step 11** on **Pages 32 & 33**.

-Cut horizontal covers 1/32" short of jamb mullion on jamb side of frame. Covers are to be spliced at every third light of glass at the centerline of vertical mullion. Optionally, covers may be spliced at every centerline of vertical mullions.
-Drill two 0.313" diameter weep holes as shown, at 1/3 points of each daylight opening. See **Detail 29**.



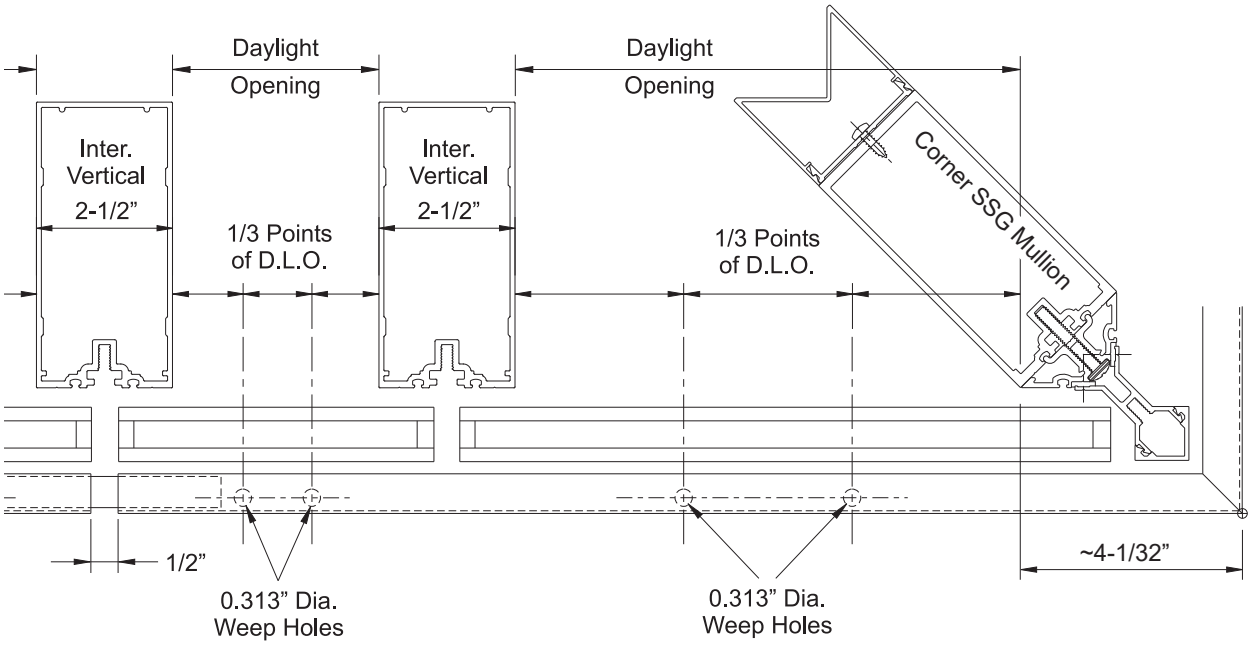
Detail 29



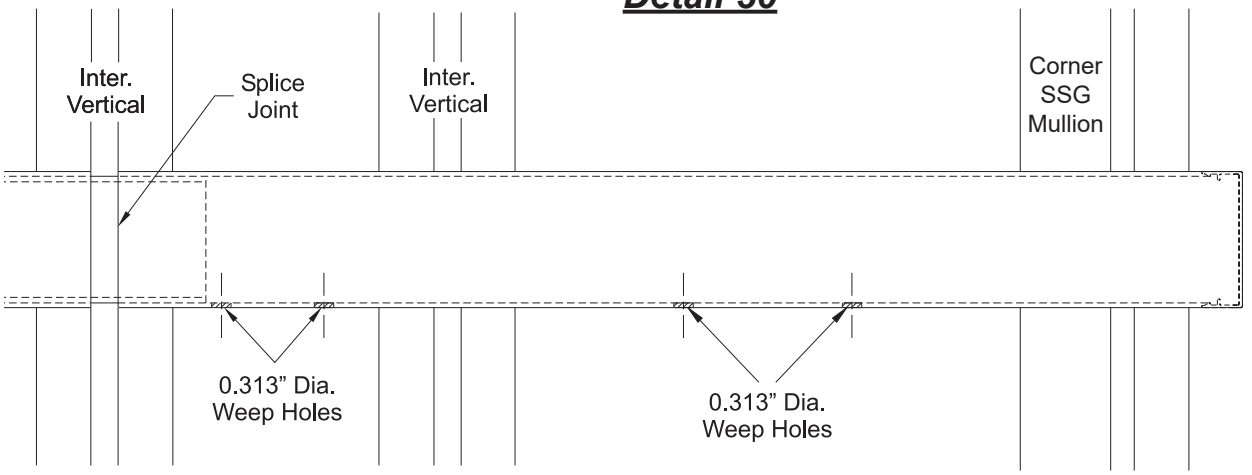
FRAME INSTALLATION

STEP 10 (Continued)
FABRICATE FACE COVERS

-For face covers used at 90° SSG corner mullion, cut horizontal covers to the corner work point as shown in the approved shop drawings.
-Drill two 0.313” diameter weep holes as shown, at 1/3 points of each daylight opening.
-At the door jamb, horizontal and sill face covers are cut to run flush with the pressure plate, flush with the inside edge of the mullion, as previously detailed on **Page 28**.
See **Detail 30**.



Detail 30

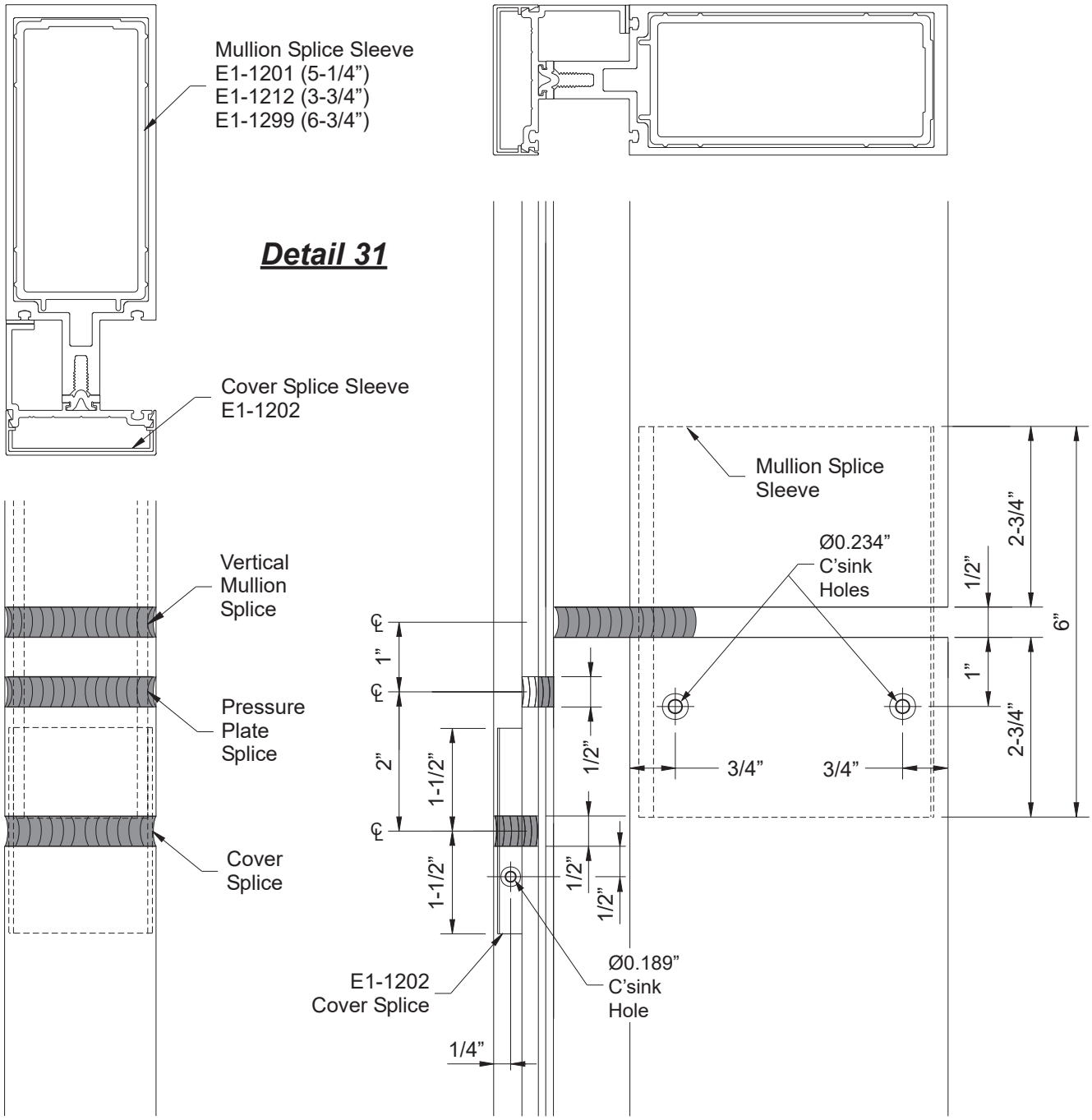


FRAME INSTALLATION

STEP 11
TYPICAL VERTICAL SPLICE

Stagger Mullion, Pressure Plate, and Cover Splice Joints as Shown Below.

-Fabricate holes for splice sleeve fasteners as shown below in **Detail 30**.



FRAME INSTALLATION

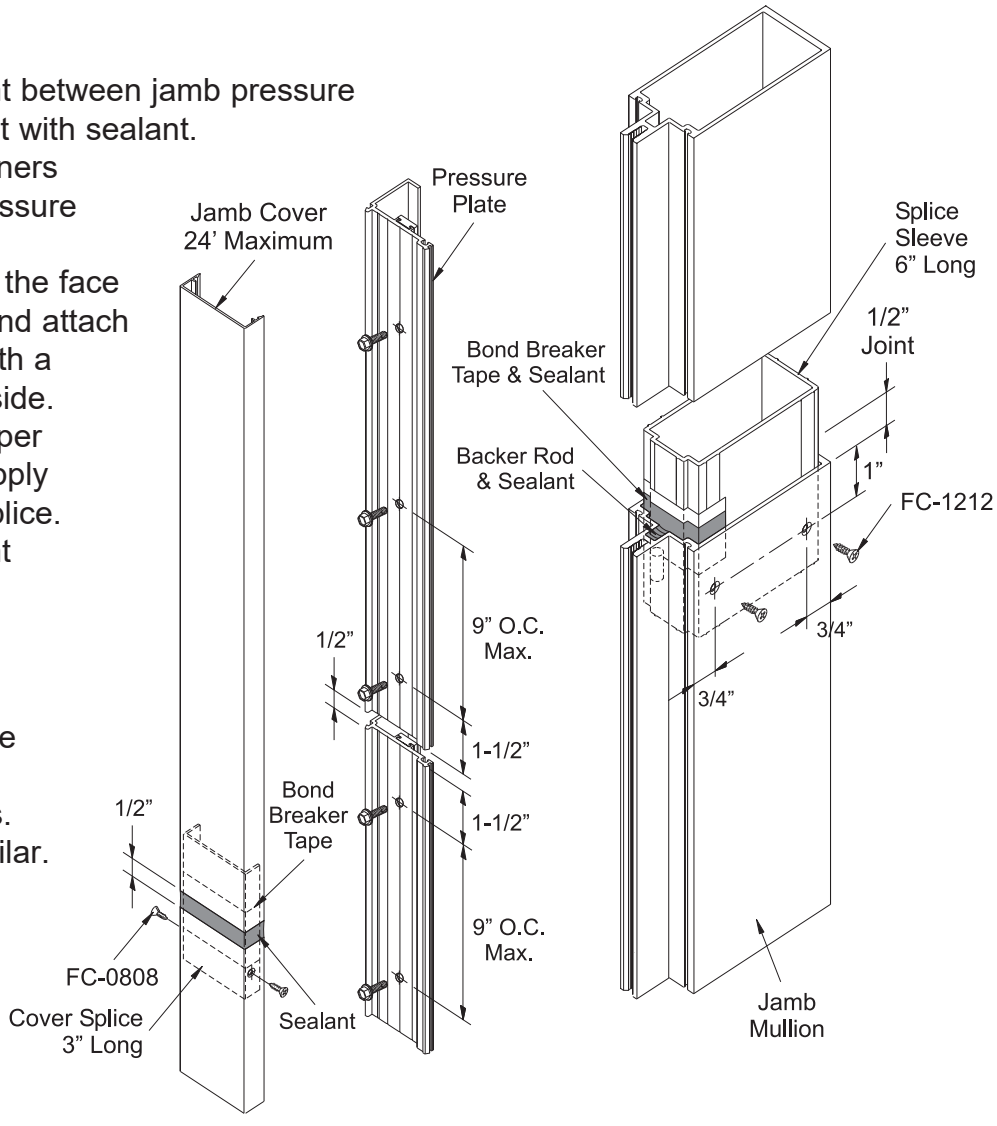
STEP 11 (Continued)
TYPICAL VERTICAL SPLICE

-Clean all surfaces as recommended by sealant manufacturer.
-Apply bond breaker tape to the face of the splice sleeve at its midpoint (3” from top or bottom).
-Lower the splice sleeve into top of lower mullion 2-3/4” and attach with two FC-1212 fasteners on both sides of the mullion. Screws should be installed 3/4” from the front and back of mullion and 1” down from the top.
-When using 1” glazing jamb mullions, stuff a small piece of backer rod 1/2” down the cavity behind mullion tongue and pump in sealant to fill the cavity.
-Apply non-curing sealant to the face of splice sleeve on the upper half.
-Carefully slide the upper mullion down onto the splice sleeve and place a 1/2” temporary shim between the mullions to properly locate them.
-Secure the upper mullion to the mid anchors and remove the temporary shims.
-Apply and tool sealant to the face and sides of the splice sleeve to create a water tight joint.

-Leave a 1/2” expansion joint between jamb pressure plate splices and fill the joint with sealant.
-Locate pressure plate fasteners 1-1/2” from each end of pressure plate splice as shown.
-Apply bond breaker tape to the face of the cover splice sleeve and attach it to the lower face cover with a FF-0808 fastener on each side.
-Prior to snapping on the upper portion of the face cover, apply sealant to the face of the splice.
-Leave a 1/2” expansion joint between face cover splices.

See **Details 31 & 32**.

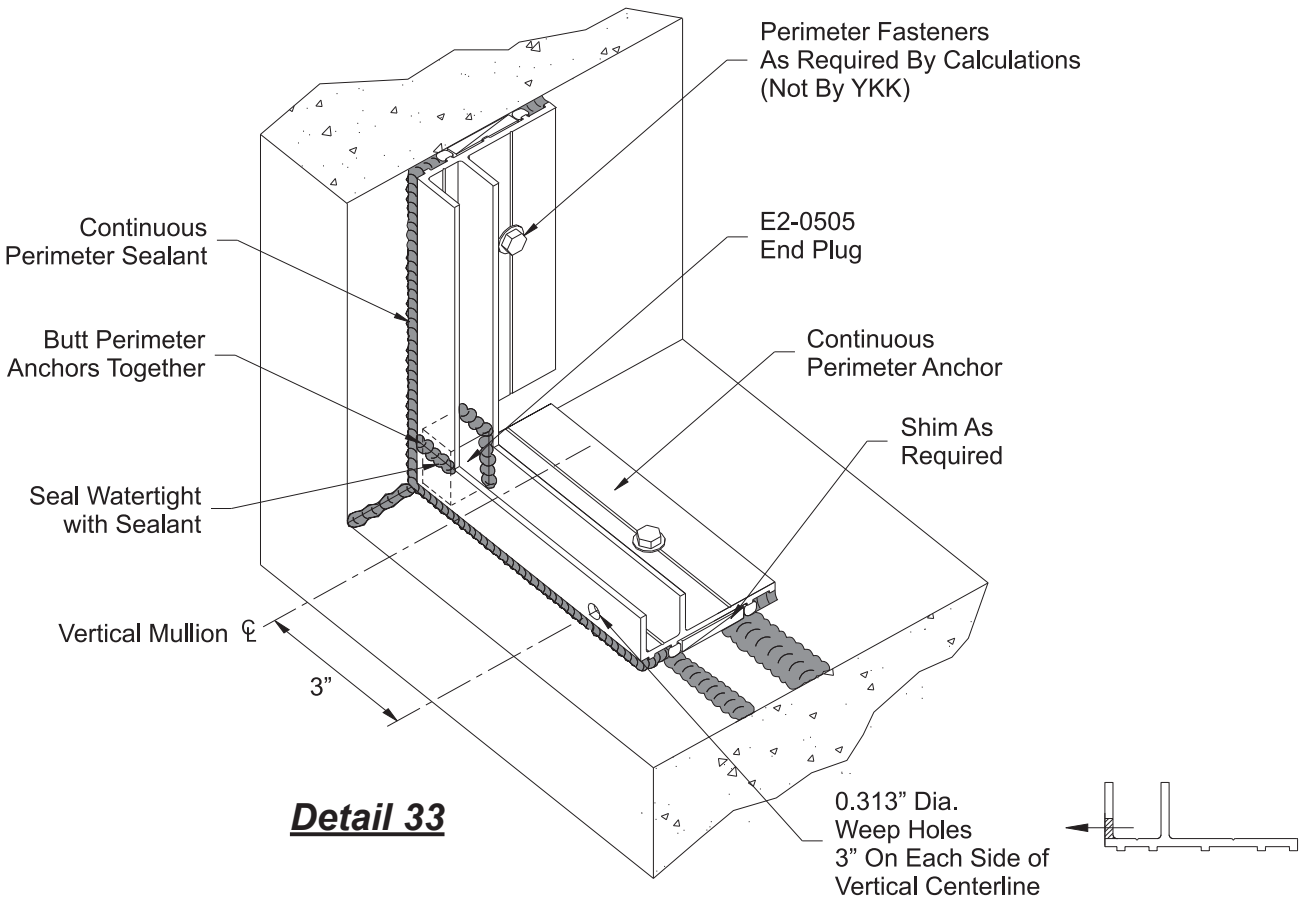
Note: Face covers, pressure plates, and mullions are staggered at splice locations. SSG vertical splices are similar.



Detail 32

FRAME INSTALLATION

STEP 12
INSTALL CONTINUOUS PERIMETER ANCHOR



Detail 33

-Cut perimeter anchors to size:
  Head and sill anchors stop 1/8” short of the jambs.
  Vertical jamb anchors butt in between head and sill anchors.
-Install perimeter anchors with appropriate perimeter fasteners. Refer to shop drawings or engineering calculations for type and spacing of fasteners. Shim as required to install anchors level.
-When splicing head and sill pieces together, leave 3/8” joint for expansion and install end plug, E2-0505, that has been buttered with sealant on the front, back, and bottom at the joint.
-Run continuous sealant along the perimeter between the anchors and the substrate.
-Seal corners of butted perimeter anchors watertight with sealant.
-Butter E2-0505 end plug with butyl on all sides that touch the anchors. Then push end plug into place and tool excess sealant that comes through the cracks.
-Field drill 0.313” diameter weep holes in perimeter anchor (exterior face only) at sill 3” from center line of vertical on each side.

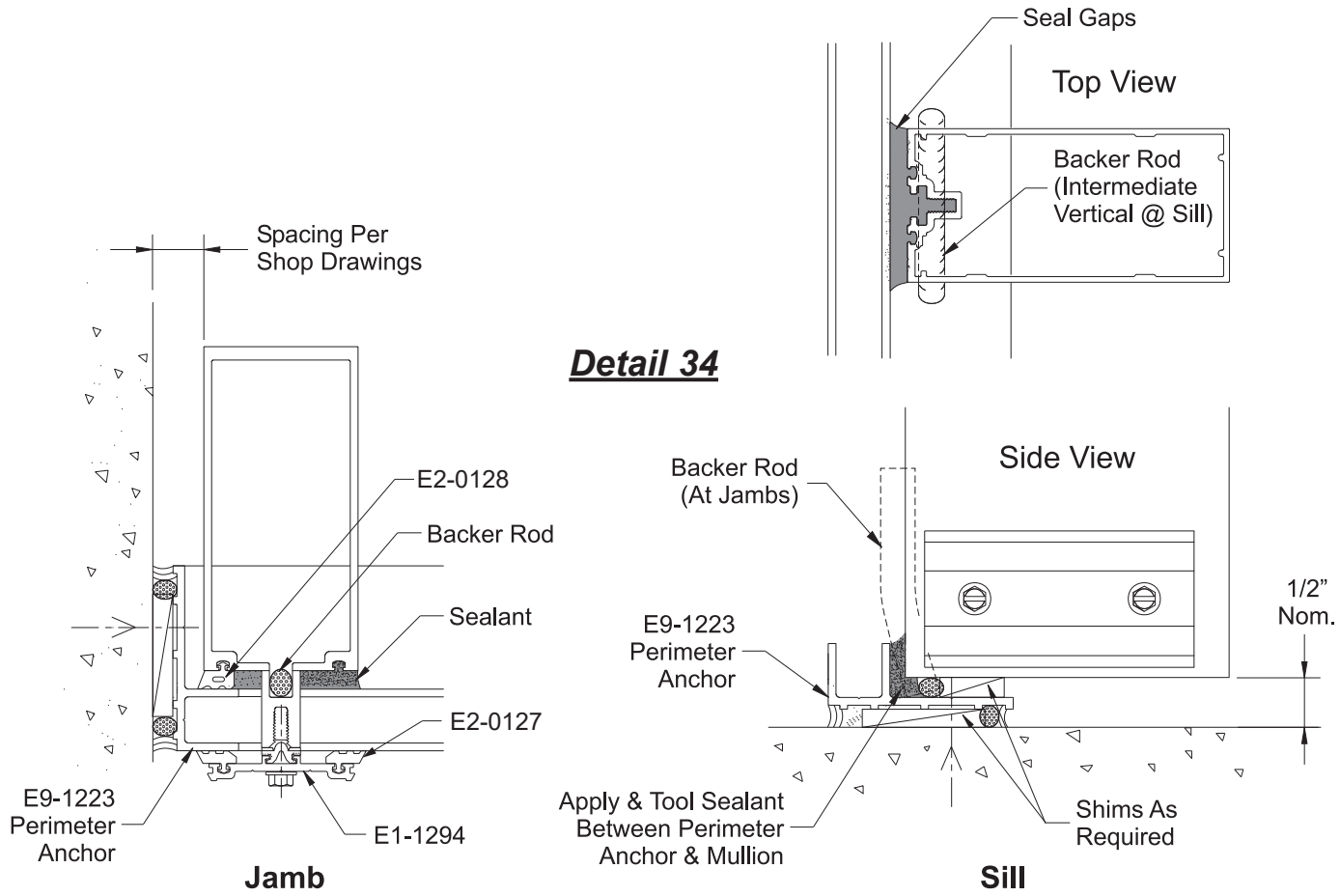
See **Detail 33**.

FRAME INSTALLATION

STEP 13
JAMB/VERTICAL INSTALLATION
WITH PERIMETER ANCHORS

-The notched ends of jamb mullions for 1” glazing leaves the interior of the mullion exposed and must be plugged prior to installation.
  -Install a small piece of backer rod into the notched out space directly behind the tongue at the top and bottom of the jamb mullions.
  -Push the backer rod into the opening at the face of the mullion.
  -Apply and tool sealant to seal off the opening made by the notch.
-Install interior gasket, E2-0128, to jamb mullion (jamb side only) the full length of the mullion.
-Position jamb into opening as shown in **Detail 34**.
-Seal the gap between the perimeter anchor and vertical glazing pocket with sealant.
-Install temporary retainer clip, E1-1294, at the top and bottom of the mullion.

-Place a small length of backer rod below each SSG vertical and set the mullion onto the perimeter anchors as shown below.
-Seal all gaps between the SSG vertical and the perimeter anchor at the sill.
See **Detail 34.**

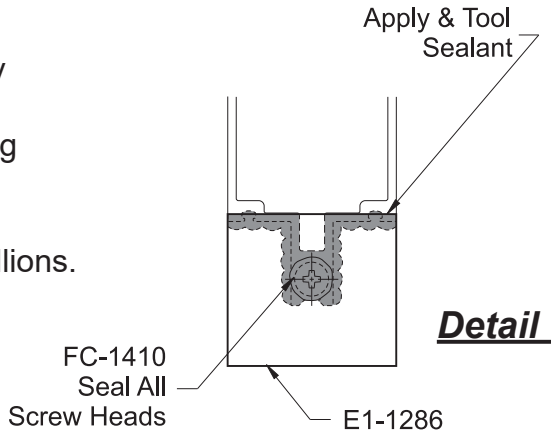


Detail 34

FRAME INSTALLATION

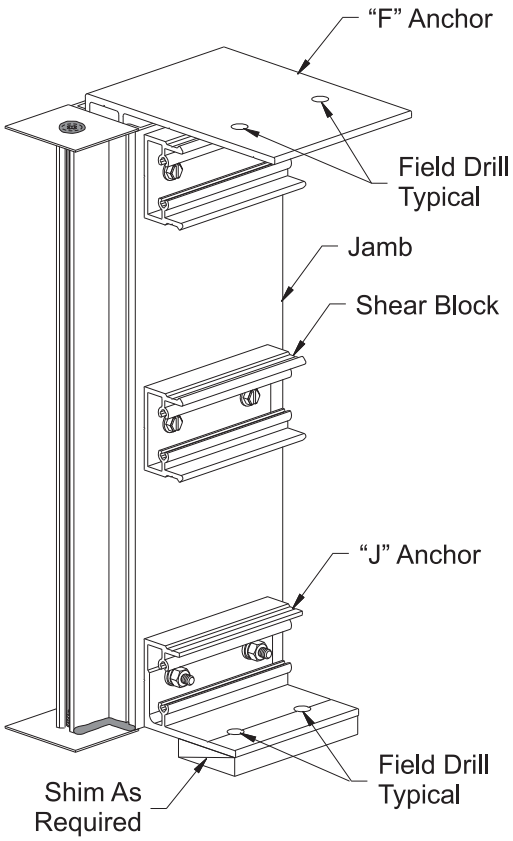
STEP 14A
JAMB/VERTICAL INSTALLATION
WITH MULLION END ANCHORS

-Clean all contact surfaces as recommended by sealant manufacturer.
-Apply sealant into the screw raceway and along the front edge of the jamb mullion at each end.
-Prior to erecting jambs, install end caps, E1-1286 at the top and bottom of the jamb mullions.
-Apply and seal mullion end caps.
-Seal all screw heads with sealant.
See **Detail 35**.

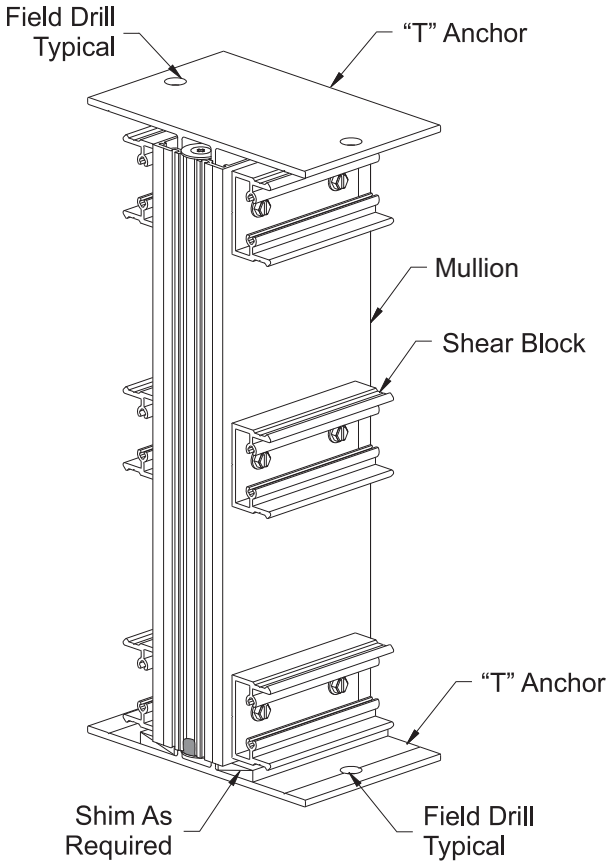


Detail 35

-Insert mullion “T” and “F” anchors into the top and bottom of the mullions before erecting them into the opening.
-Erect and locate the jamb and vertical mullions and temporarily attach them to the structure. All mullions must be installed plumb and true.
-Field drill holes in “T”, “F”, and “J” anchors for the appropriate anchor fasteners according to shop drawings or engineering calculations. Consult YKK if load requirements are in question.
See **Detail 36**.



Detail 36



FRAME INSTALLATION

STEP 14B
VERTICAL INSTALLATION
AT DOOR JAMB END ANCHORS

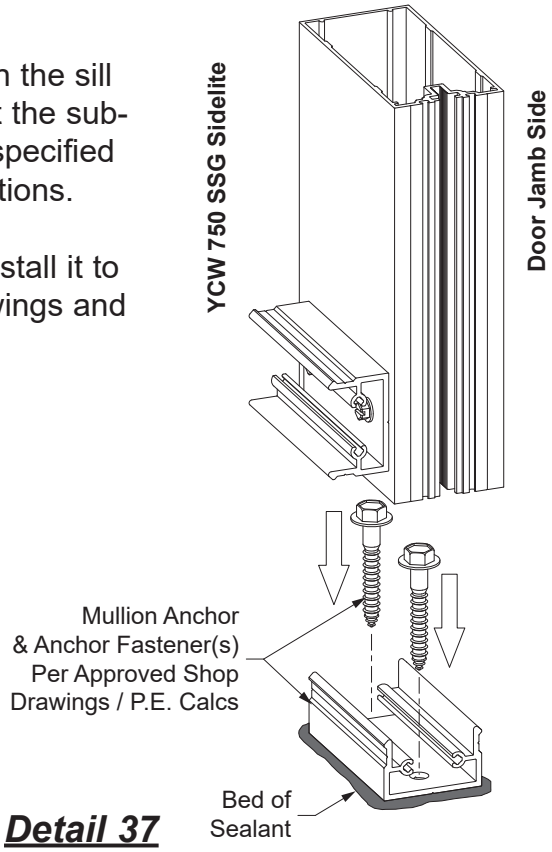
The mullions at the door jambs are set directly upon the sill substrate without any shims and are sealed against the substrate. The anchors to be used at this location are specified by the approved shop drawings and or P.E. calculations.

-Locate the mullion anchor for the door jamb and install it to the substrate according to the approved shop drawings and P.E. calculations.

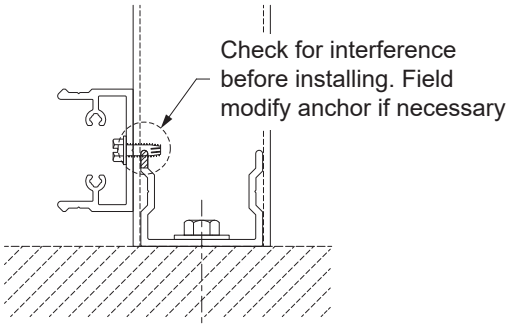
Note: if using an exposed fasteners shear block as a mullion anchor, check to ensure the sill shear block fasteners will not cause interference. Field modify the shear block anchor as required.
See **Detail 37**.

-Clean all contact surfaces as recommended by sealant manufacturer.
-Set the mullion on the anchor, directly onto the sill substrate in a bed of sealant. Avoid using shims at this location.
See **Detail 38**.

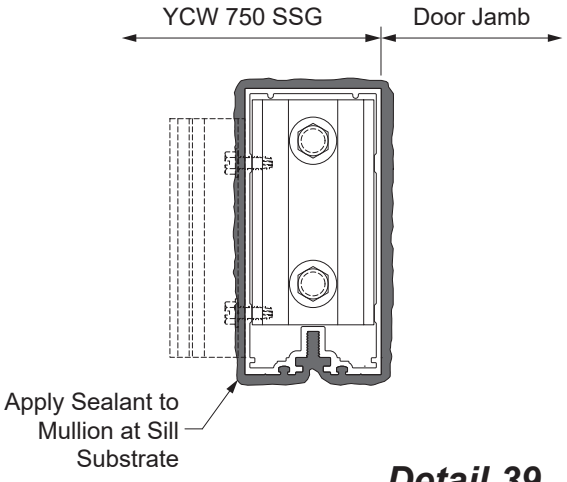
-Refer to the approved shop drawings for any additional fasteners required at anchor.
-Tool sealant at the bottom of the mullion at the sill substrate around the perimeter of the mullion.
See **Detail 39**.



Detail 37



Detail 38
For Exposed Fasteners Shear Block Used as Anchor

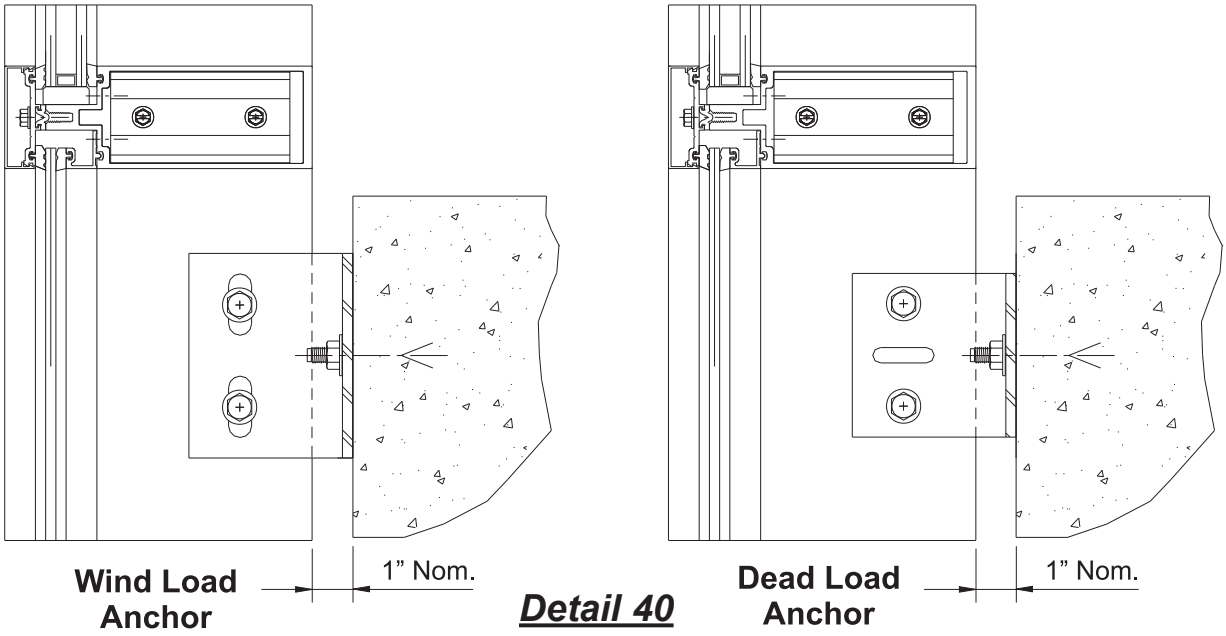


Detail 39

FRAME INSTALLATION

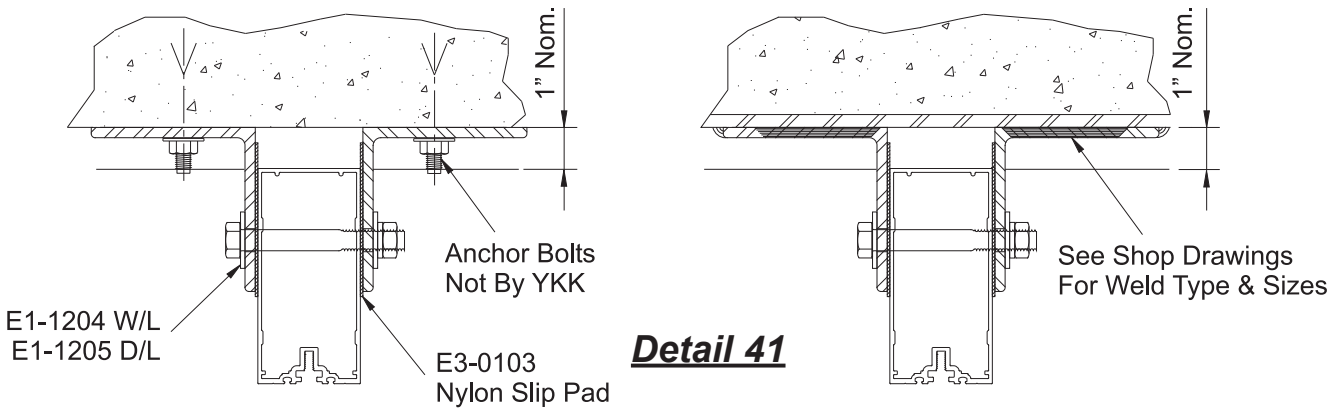
STEP 15
INSTALL WIND LOAD / DEAD LOAD ANCHORS

-Install steel wind load and dead load anchor clips. Anchor clips are normally template or line set before mullions are hung. Outstanding leg of clip must be set at 90° to offset line. The back of the vertical mullion should set 1” from the anchoring substrate.
See **Detail 40**.



Detail 40

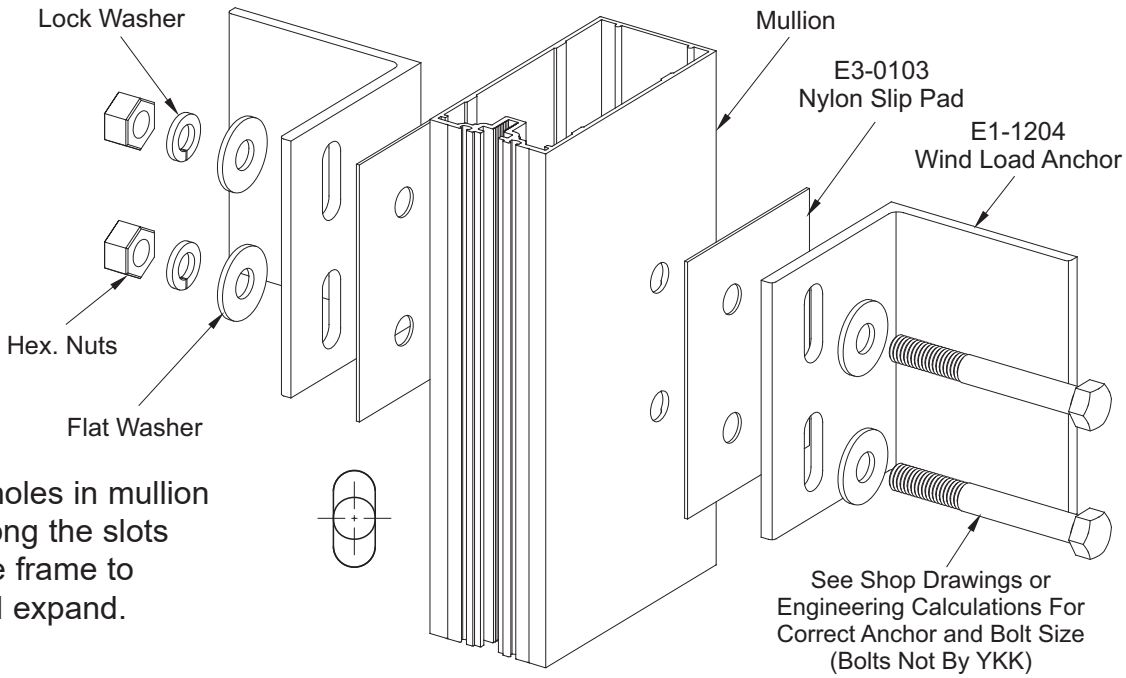
-Install, plumb, and align vertical mullions. Drill and install appropriate diameter anchor bolts. If shop drawings are not prepared by YKK AP, all anchors and bolts must be checked by a qualified engineer.
-Nylon slip pads, E3-0103, must be installed between mullion and anchor.
See **Detail 41**.



Detail 41

FRAME INSTALLATION

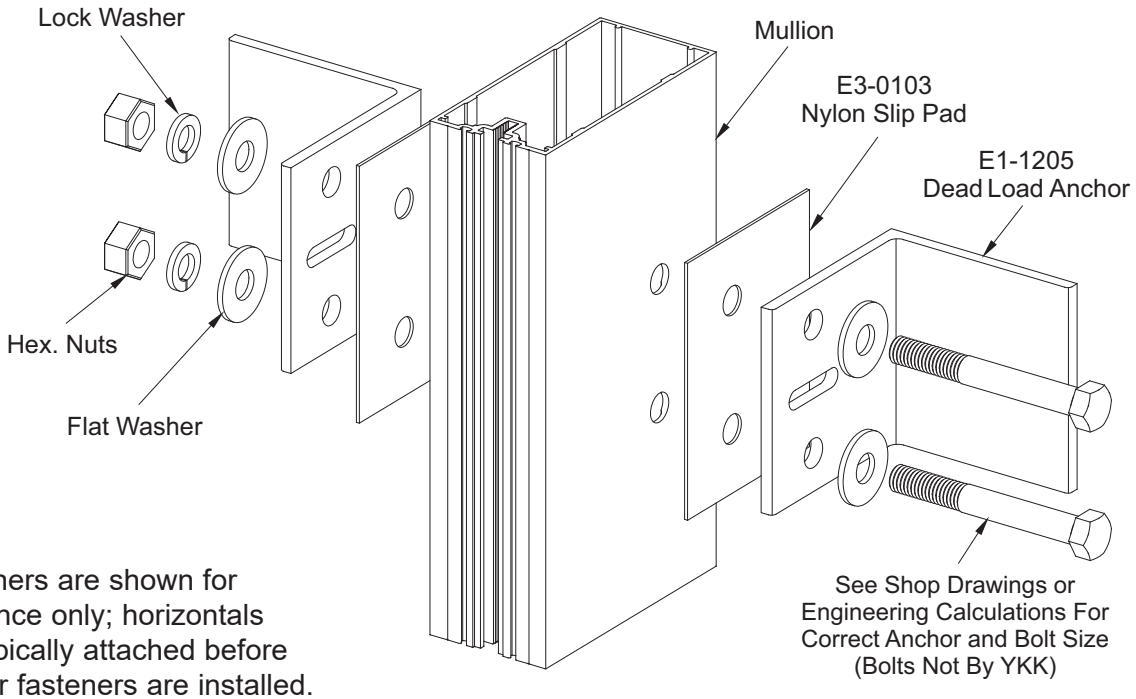
TYPICAL WIND LOAD ANCHOR



Note: Drill holes in mullion centered along the slots to permit the frame to contract and expand.

Detail 42

TYPICAL DEAD LOAD ANCHOR

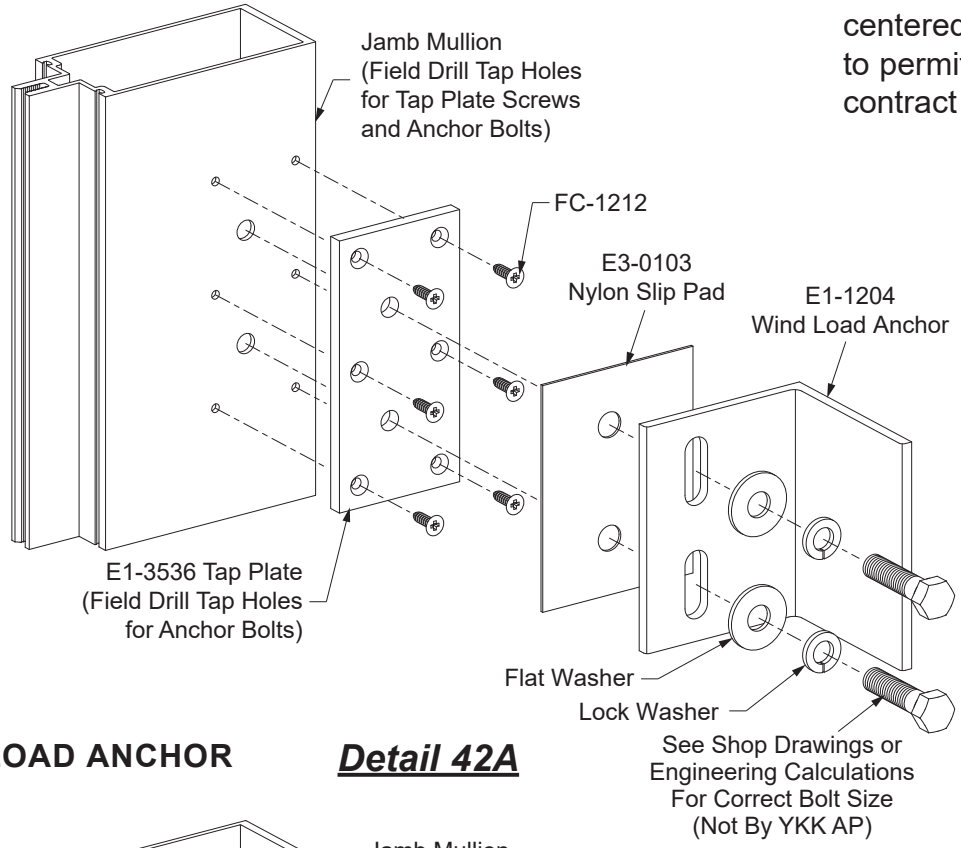


Note: Fasteners are shown for reference only; horizontals are typically attached before anchor fasteners are installed.

FRAME INSTALLATION

JAMB WIND LOAD ANCHOR

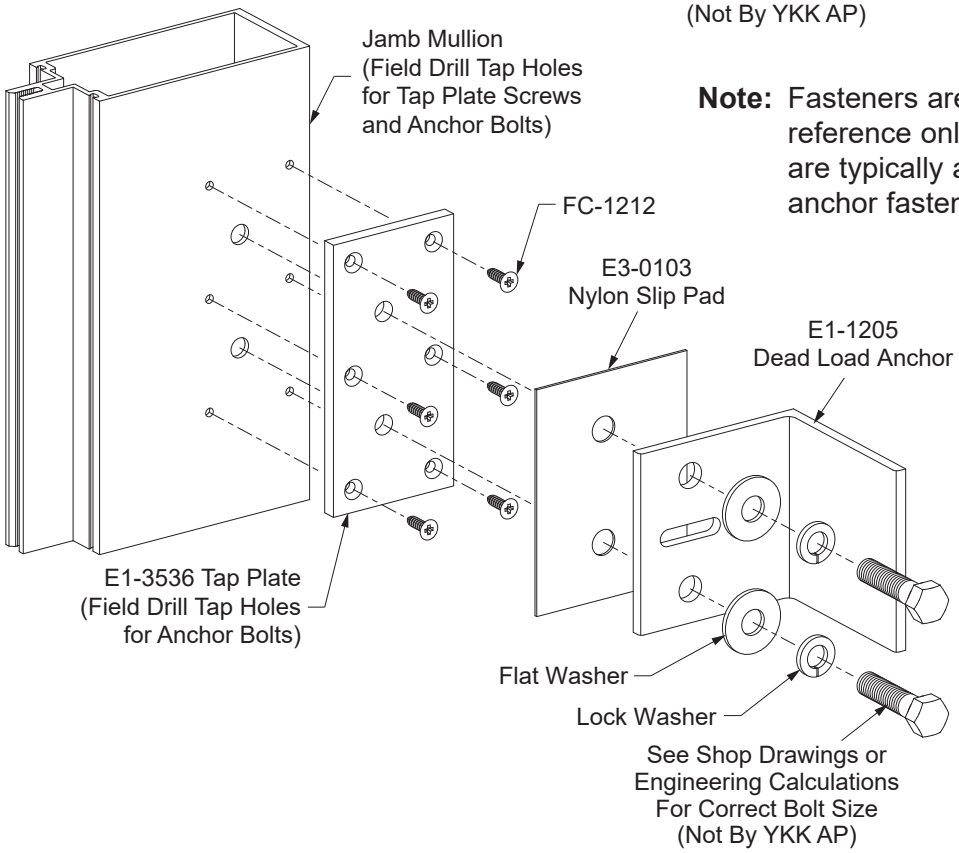
Note: Drill holes in mullion centered along the slots to permit the frame to contract and expand.



JAMB DEAD LOAD ANCHOR

Detail 42A

Note: Fasteners are shown for reference only; horizontals are typically attached before anchor fasteners are installed.



FRAME INSTALLATION

STEP 16
ATTACH HORIZONTAL MEMBERS

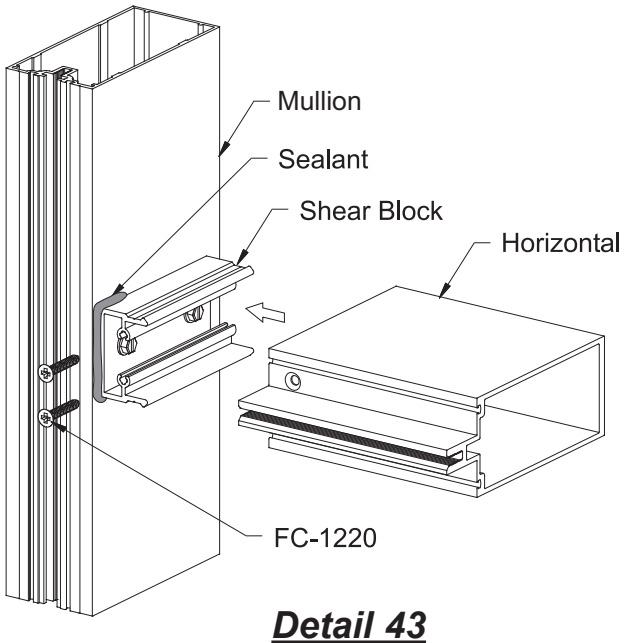
-Just prior to attaching the horizontal members to the vertical, apply sealant to the front of the shear block as shown below.

Note: Before applying any sealant, clean aluminum surfaces using cleaner and method approved by sealant manufacturer.

For Concealed Fasteners:

-Slide the horizontal members towards the vertical and attach them to the shear blocks at each end with two FC-1220 fasteners.
-Tool and wipe away any excess sealant at the vertical to horizontal joints.
See **Detail 43**.

CONCEALED FASTENERS

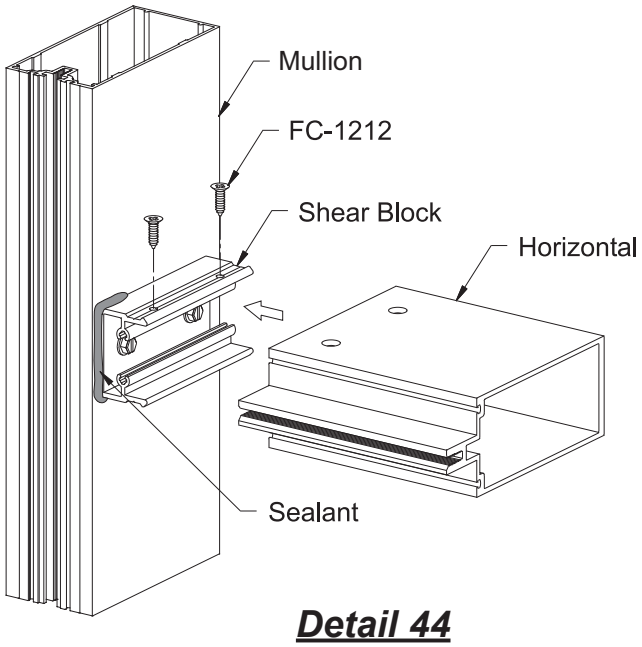


Detail 43

For Exposed Fasteners:

-Slide the horizontal members towards the vertical and transfer the hole locations on top of the horizontal to the shear block.
-Remove the horizontal and drill a 0.189” dia. (#12 bit) hole at each hole location.
-Slide the horizontal back against the vertical and attach it to the shear block with two FC-1212 fasteners at each end.
-Tool and wipe away any excess sealant at the vertical to horizontal joints.
See **Detail 44**.

EXPOSED FASTENERS



Detail 44

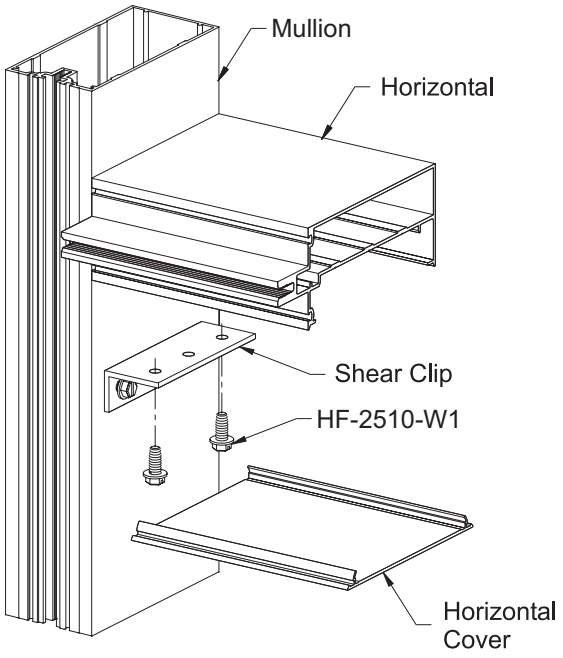
FRAME INSTALLATION

STEP 16 (Continued)
ATTACH HORIZONTAL MEMBERS

For Two Piece Horizontals:

-Lower the horizontal down onto the shear clip. Make sure the horizontal and vertical glazing pockets are flush.
-Attach the horizontal to the shear clip from the underside of the horizontal using two HF-2510-W1 fasteners at each end.
-Snap on the horizontal cover.
See **Detail 45**.

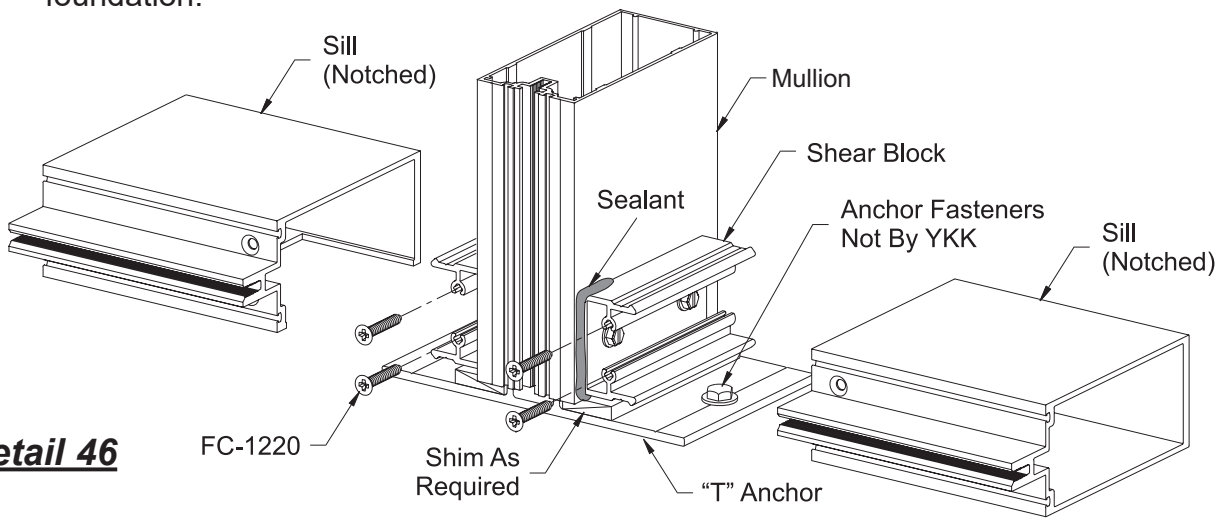
TWO PIECE HORIZONTAL



Detail 45

At Head and Sills:

-Mullion end anchors must be installed before head and sill members are attached.
  -Provide anchor fasteners as per job requirements. See approved shop drawings or engineering calculations for appropriate anchor fasteners.
  -Install the anchor fasteners as recommended by fastener manufacturer.
-Attach head and sill members according to the procedures previously outlined with the notched out portion facing the anchors.
See **Detail 46**.
Caution: There must always be a shim under the mullion to transfer glazing dead loads to the foundation.



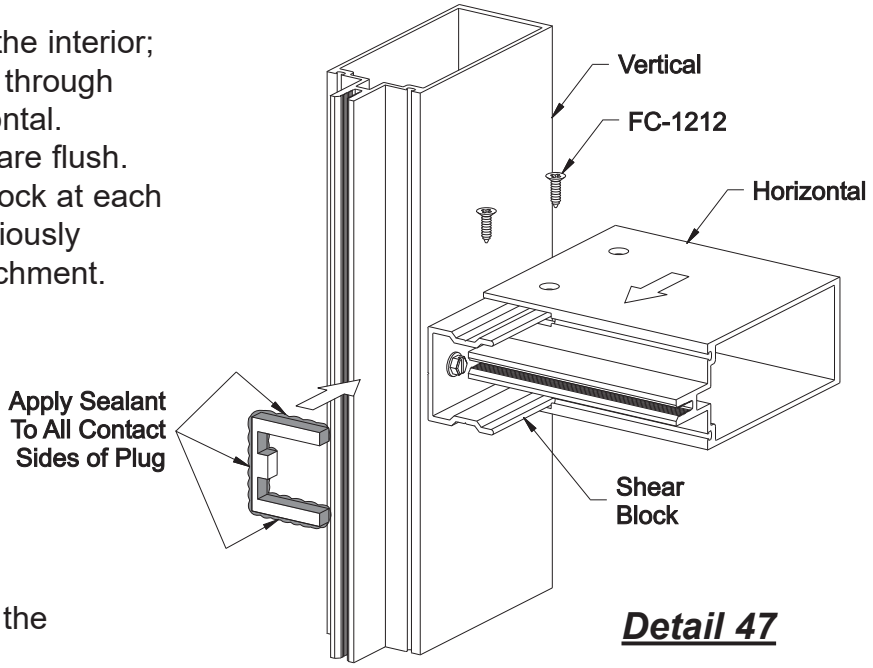
Detail 46

FRAME INSTALLATION

STEP 16 (Continued)
ATTACH HORIZONTAL MEMBERS

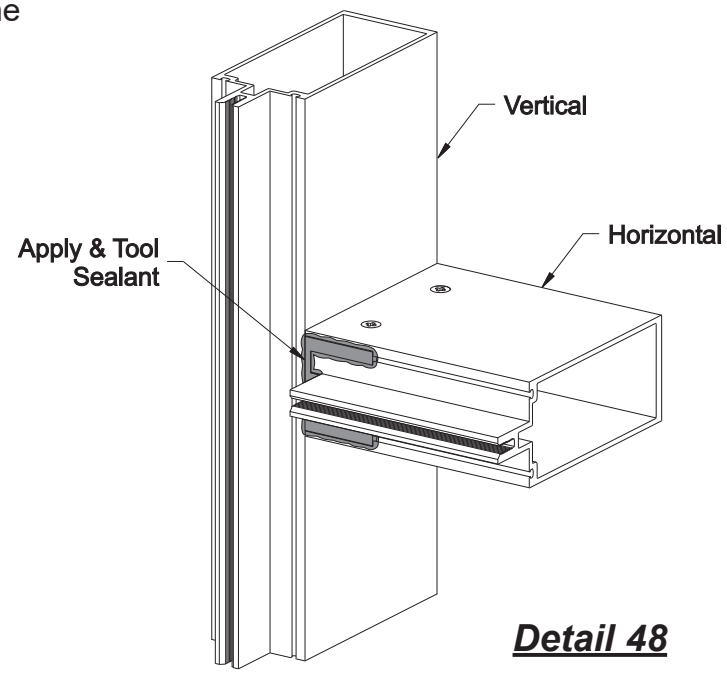
For One Piece Horizontals at End Bays:

-Slide the horizontal into place from the interior; the shear blocks should easily pass through the E-Slots at the ends of the horizontal. Make sure that the glazing pockets are flush.
-Attach the horizontal to the shear block at each end with FC-1212 fasteners as previously instructed for exposed fastener attachment.
See **Detail 47**.



Detail 47

-Apply sealant to all contact sides of the E-Slot plug, E2-0123.
-Insert the E-Slot plugs into place and press them firmly against the shear blocks.
-Cover the entire slot with sealant and tool the sealant to ensure a watertight seal.
See **Detail 48**.



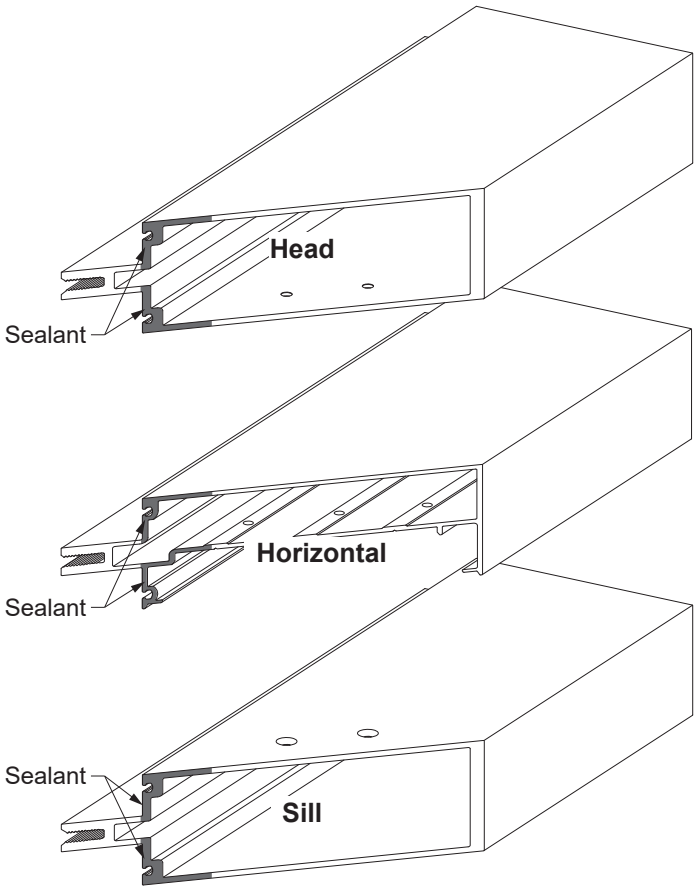
Detail 48

FRAME INSTALLATION

STEP 16 (Continued)
ATTACH HORIZONTAL MEMBERS AT CORNER MULLIONS

Note: Before applying any sealant, clean aluminum surfaces using cleaner and method approved by sealant manufacturer.

-Just prior to attaching the horizontal members to the corner mullion, apply sealant to the front of the horizontal at the mitered end as shown in **Detail 49**.



Detail 49

FRAME INSTALLATION

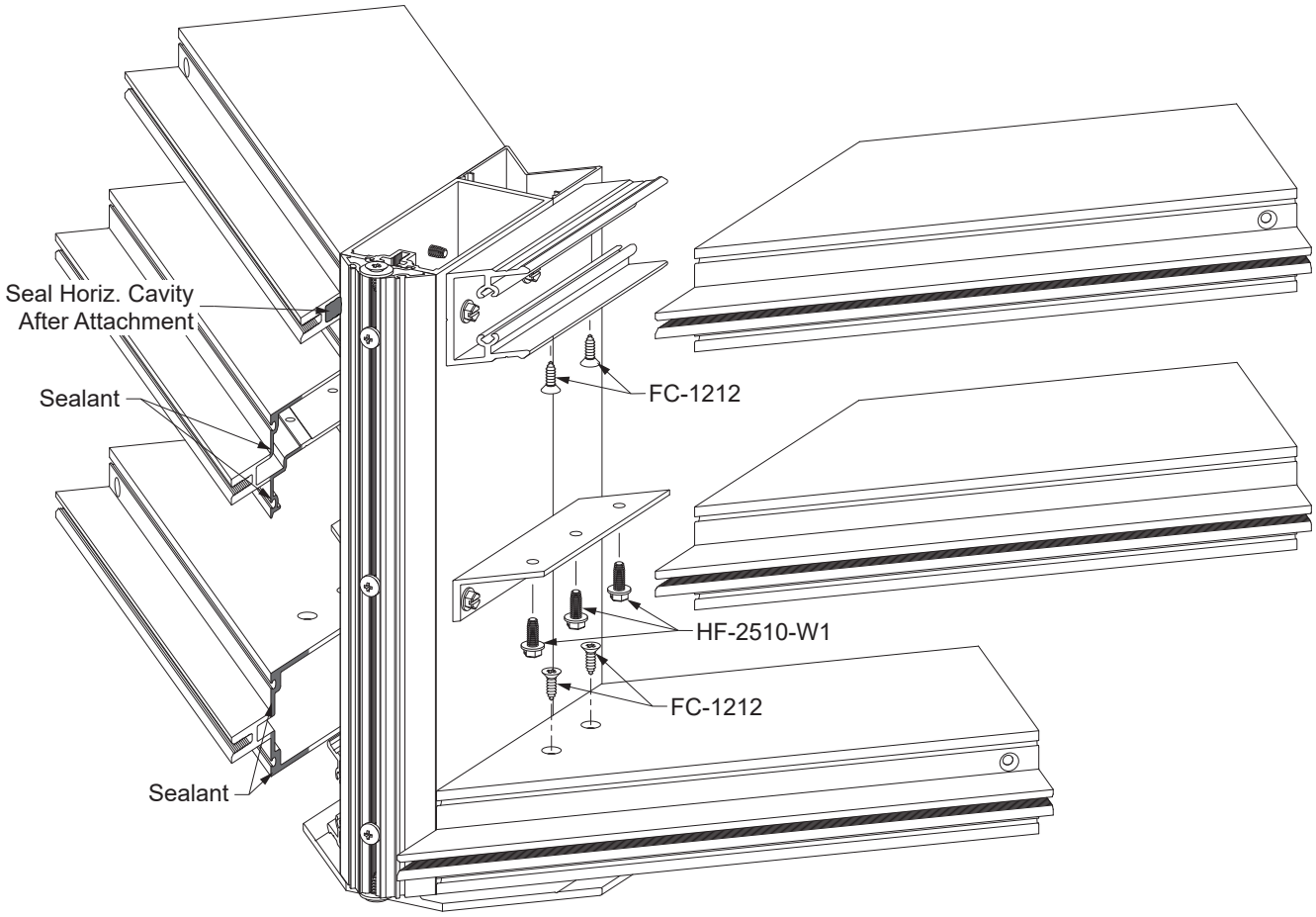
STEP 16 (Continued)
ATTACH HORIZONTAL MEMBERS AT 90° OUTSIDE CORNER MULLIONS

-Attach the horizontal members at the mitered end to the corner mullion at the shear blocks with fasteners as shown below in **Detail 50**.

-Tool and wipe away any excess sealant at the vertical to horizontal joints.

-After the horizontals are attached, fill the cavity at the glazing tongue with sealant.

See **Detail 50**.



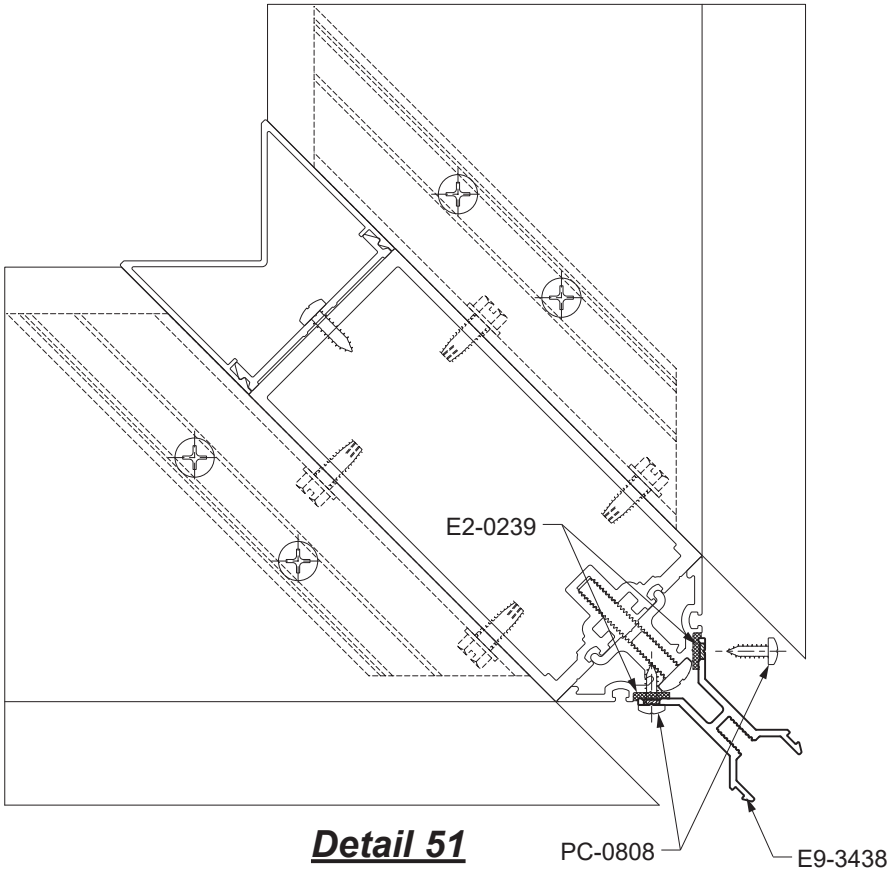
Detail 50
2-Pc. Horiz. Shown,
Tubular Horiz. attachment
Similar to Head and Sill

FRAME INSTALLATION

STEP 17
ATTACH 90° OUTSIDE CORNER SSG TRIM

-Adhere E2-0239 isolator tape to the glazing adaptor (full length of the adaptor) where the corner trim will engage with it.
-Set the E9-3438 corner trim onto the adaptor, 9/16” up from the bottom and 9/16” down from the top, and drill Ø0.141” tap holes using the pilot holes in the corner trim.
-Secure the corner trim with PC-0808 fasteners.

See **Detail 51**.



Detail 51

STEP 18
INSTALL DOOR SUBFRAMES

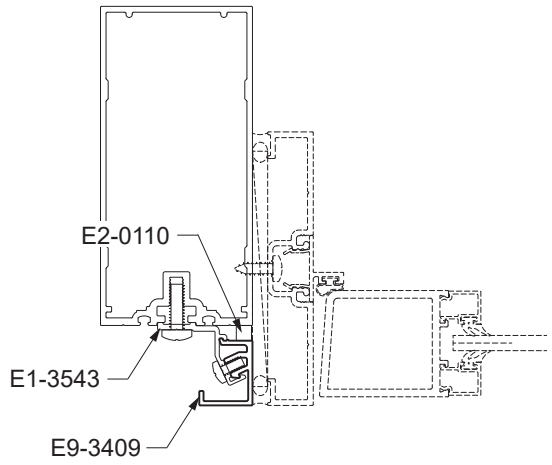
-Fabricate and and assemble the perimeter trim for the door jamb as shown on **Detail 52** on the next page.

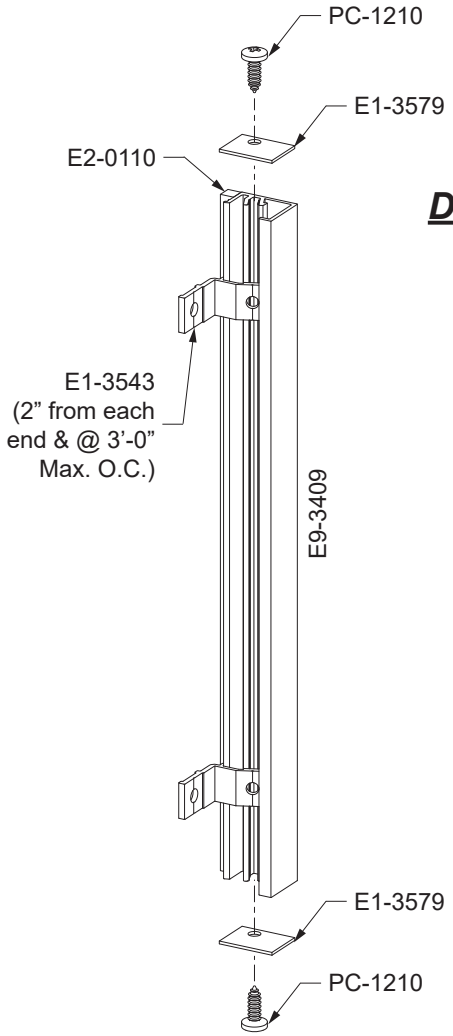
-Attach the E1-3543 trim clips onto the E9-3409 perimeter trim, locating them at 2” from each end of the trim and at 3’-0” maximum on center.

-Fasten E1-3579 end caps to the ends of the perimeter trim with PC-1210 screws.

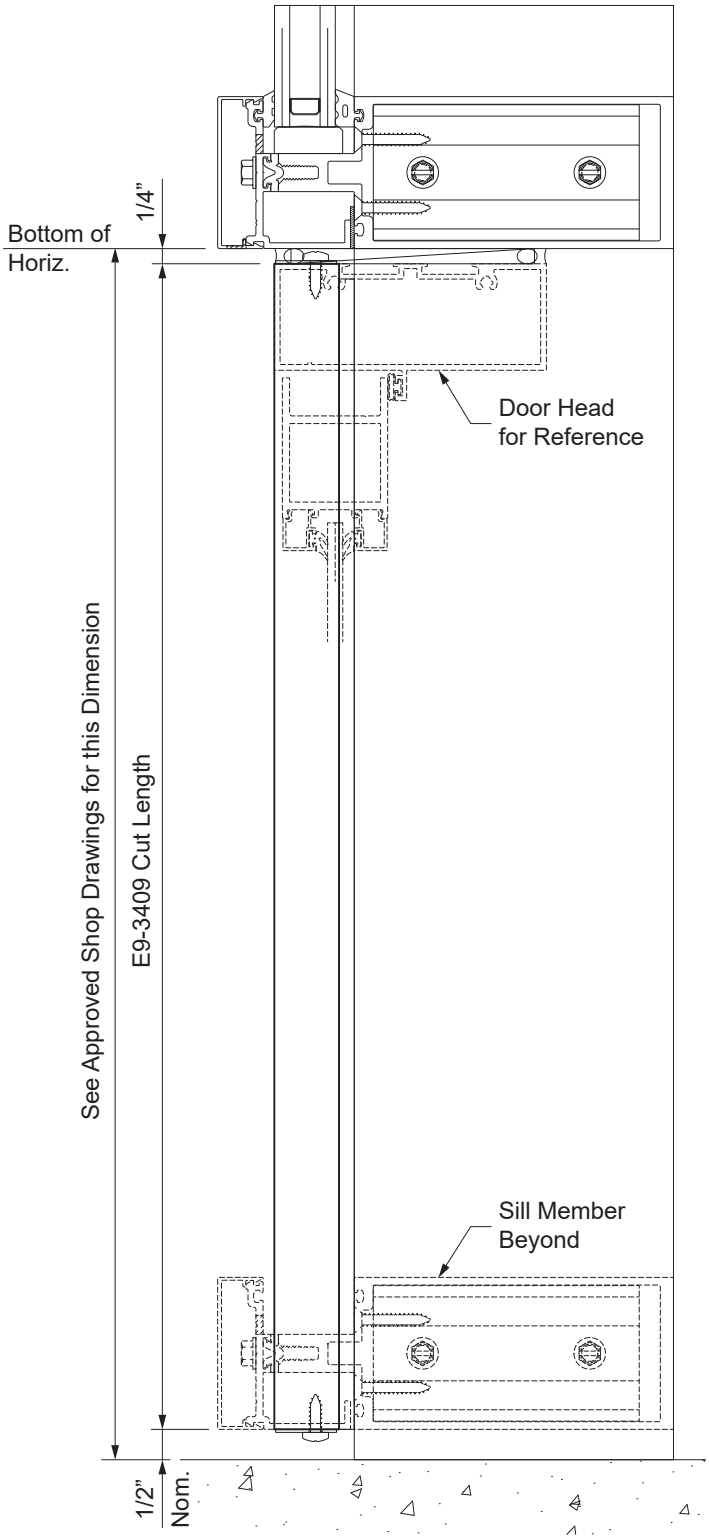
FRAME INSTALLATION

STEP 18
INSTALL DOOR SUBFRAMES





Detail 52



FRAME INSTALLATION

STEP 18
INSTALL DOOR SUBFRAMES

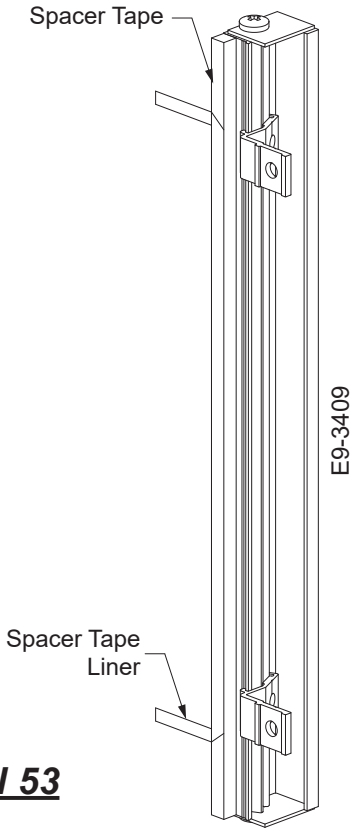
-Clean all sealant contact surfaces as recommended by the sealant manufacturer. Adhere E2-0110 spacer tape onto the perimeter trim.

-Peel back tape liner of the perimeter trim 2” from each end to expose the adhesive backing as shown in **Detail 53**.

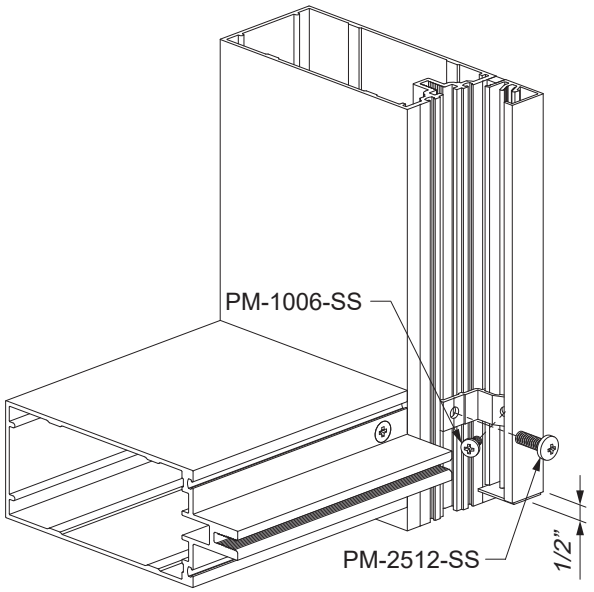
-Press the perimeter trim onto the SSG door jamb member, leaving a 1/2” caulk joint at the sill. Peel the remaining tape liner from the perimeter trim while continuing to press the trim against the mullion.

-Fasten the perimeter trim clips to the spline of the SSG mullion using PM-2512-SS fasteners.
-Fasten the perimeter trim clips to the spline of the perimeter trim using PM-1006-SS fasteners.

See **Detail 54**.



Detail 53



Detail 54

FRAME INSTALLATION

STEP 18 (Continued)
INSTALL DOOR SUBFRAMES

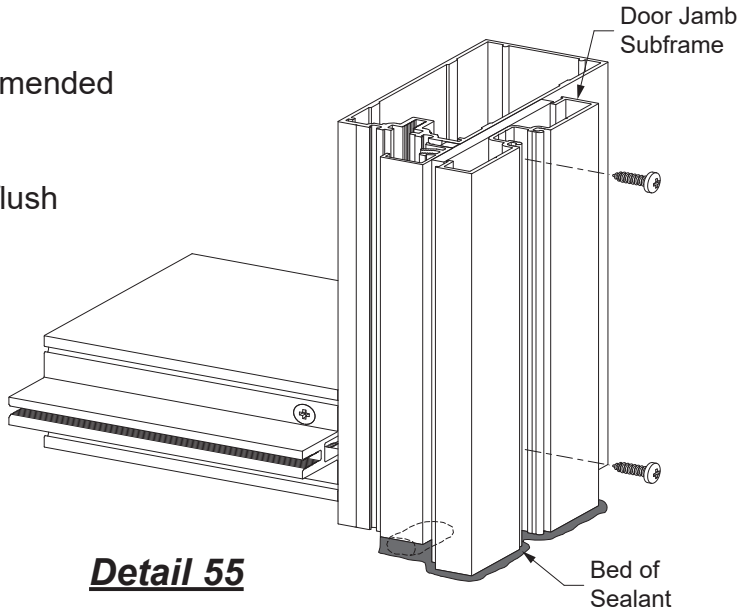
Refer to the **Entrances Installation Manual** for assembly of the door subframes. These subframes are typically installed into the curtain wall framing at the jambs, and set directly upon the sill substrate. The subframe members are determined by the approved shop drawings.

-Clean all sealant contact surfaces as recommended by the sealant manufacturer.

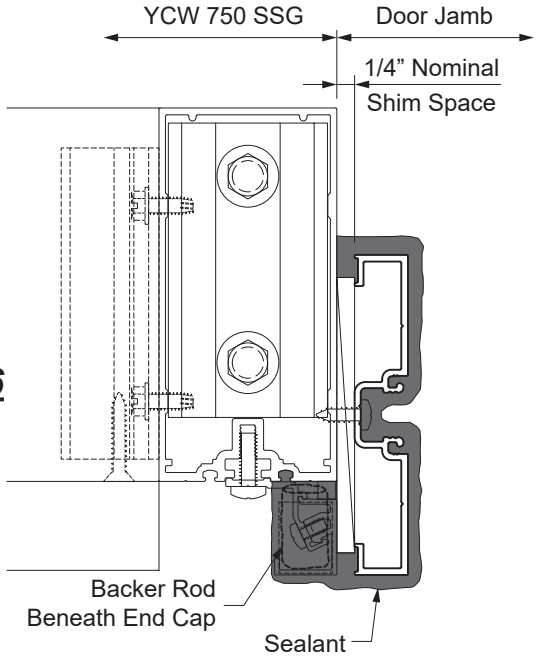
-Install the jamb subframe onto the mullion, flush with the face of the mullion trim, with fasteners according to the approved shop drawings and/or P.E. calculations, setting the subframe jambs in beds of sealant as shown in **Detail 55**, and aligning the face of the subframe with the face of the perimeter trim.

-Insert a backer rod under the mullion trim end cap and fill the cavity with sealant, ensuring a transition to the door jamb subframe.

-Apply and tool sealant to the bottom of the jamb subframe as shown in **Detail 56**.



Detail 55

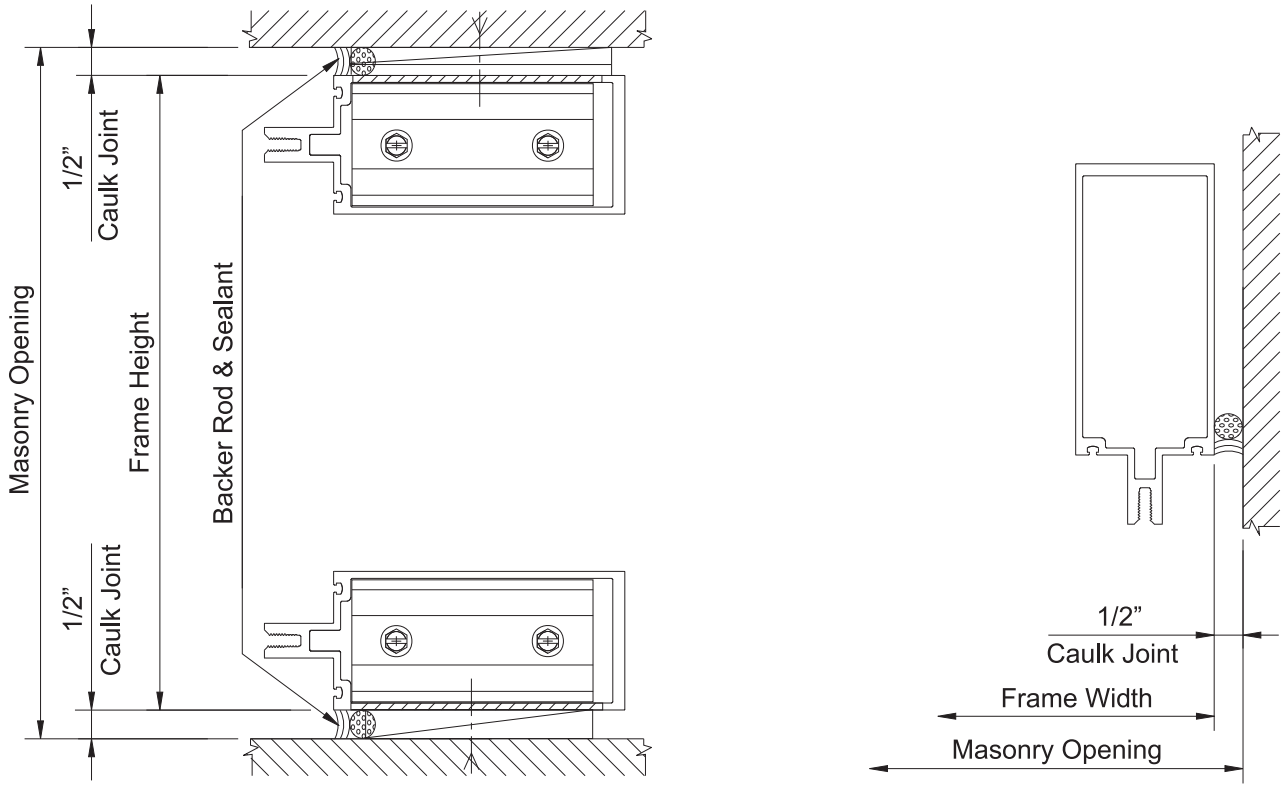


Detail 56

FRAME INSTALLATION

STEP 19
APPLY PERIMETER SEALANT

-Clean the area around the perimeter of the frame with cleaner and method approved by sealant manufacturer.
-Push in backer rod between the perimeter of the frame and the substrate about 1/4”.
-Apply sealant to the perimeter of the frame.
-Tool the sealant making sure that sealant does not get into the gasket reglets.
See **Detail 57**.



Detail 57

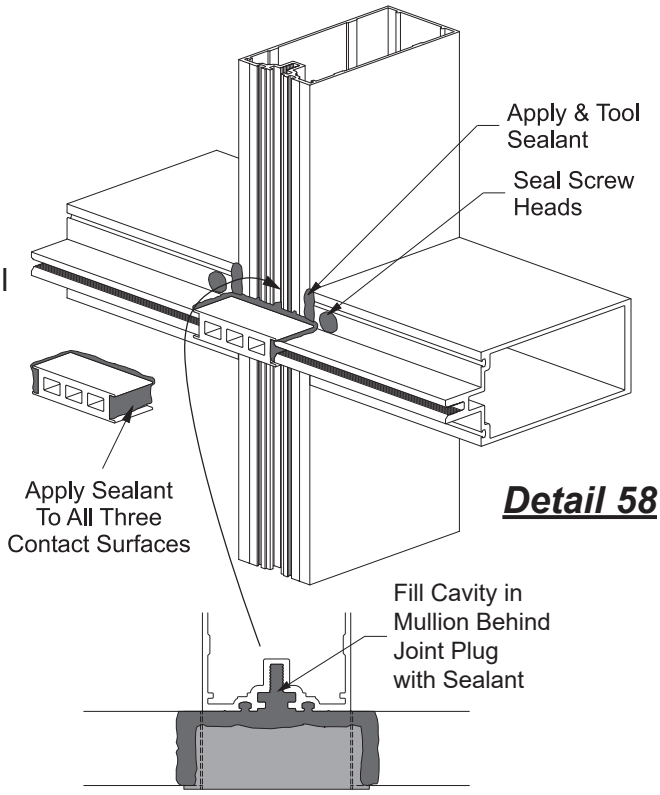
FRAME INSTALLATION

STEP 20
INSTALL JOINT PLUGS

At Intermediate SSG Verticals:

The space between the horizontals at each SSG vertical must be closed with joint plugs, E2-3614 for 1” glazing or E2-3616 for 1/4” glazing.

-Clean the area around the vertical and horizontal intersection with an approved cleaner.
-Apply and tool sealant to the intersection of the horizontal and vertical.
-Apply sealant to the three contact sides of the joint plug and into all cavities behind where the joint plug will go.
-Press joint plug firmly against face of mullion.
-Tool the sealant to ensure a watertight seal.
-Seal all exposed screw heads on the face of the mullion.
See **Detail 58**.

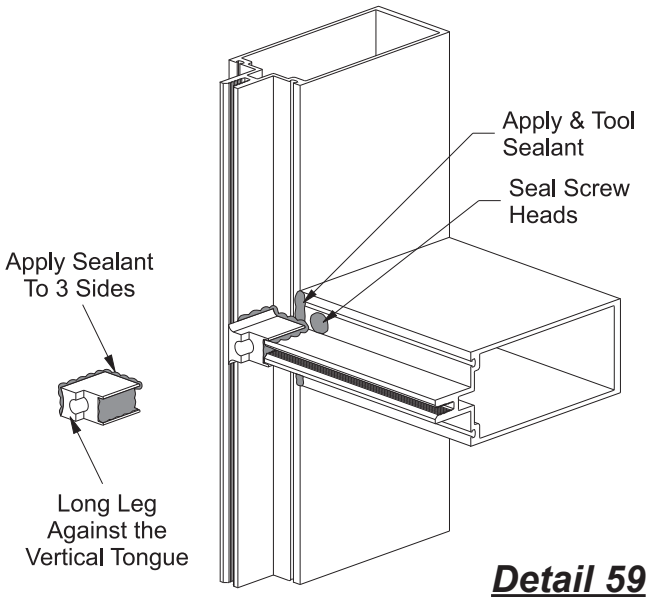


Detail 58

At Jamb Mullions:

The tongue of the horizontal mullion must be sealed to the tongue of the jamb mullion with joint plugs, E2-0102 for 1” glazing or E2-0125 for 1/4” glazing.

-Clean the area around the tongue intersection with an approved cleaner.
-Apply and tool sealant to the intersection of the horizontal and jamb mullions.
-Apply sealant to the three contact sides of the joint plug and at the intersection of the vertical and horizontal glazing pocket.
-Install joint plug as shown with the long leg of plug against the vertical tongue.
-Press joint plug firmly against face of mullion.
-Tool the sealant to ensure a watertight seal.
-Seal all exposed screw heads on the face of the mullion.
See **Detail 59**.



Detail 59

FRAME INSTALLATION

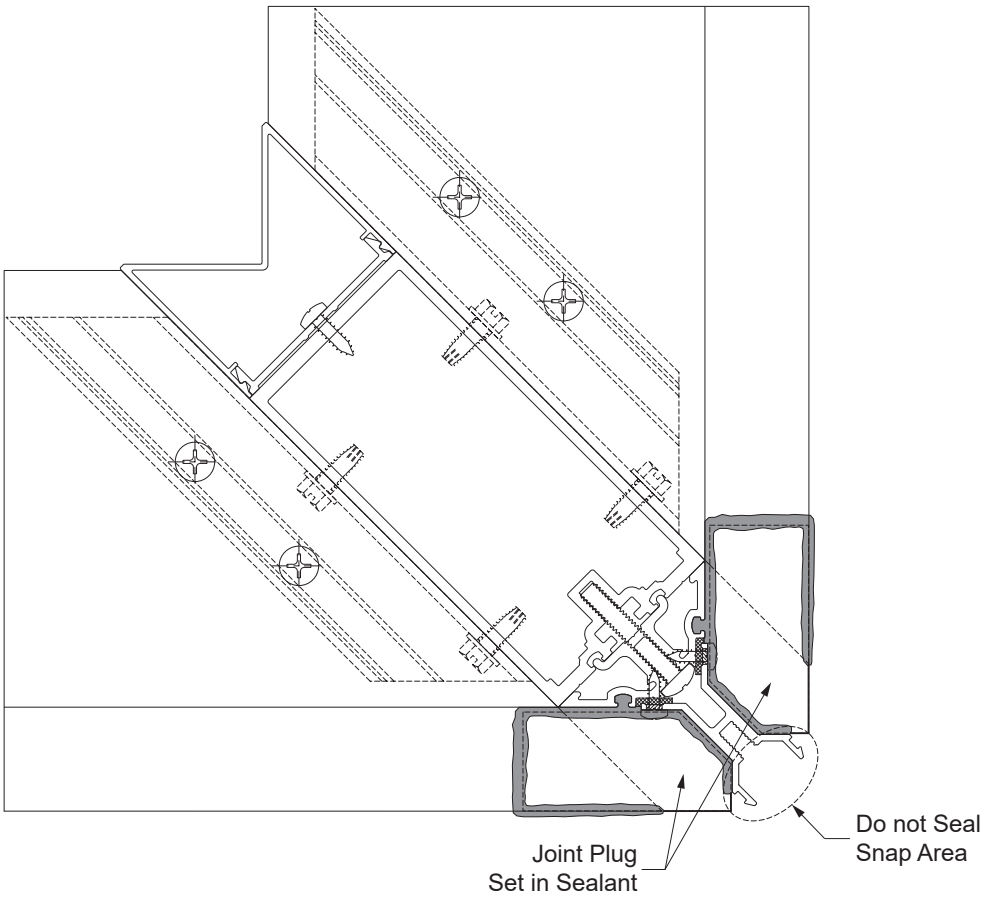
STEP 20 (Continued)
INSTALL JOINT PLUGS

At 90° Outside Corner SSG Mullions:

Outside corner mullions also require joint plugs: E1-1312 with 1” Glazing; and E1-1313 and E1-1314 for 1/4” glazing.

-Clean the area around the vertical and horizontal intersection with an approved cleaner.
-Adhere the joint plug to the end of the horizontal and against the corner trim with sealant to the mullion as shown in **Detail 60**. Ensure the sealant covers all contact areas of the joint plug, including the glazing spacer reglets in the corner adaptor. Do not seal to the area where the snap cover engages.

See **Detail 60**.

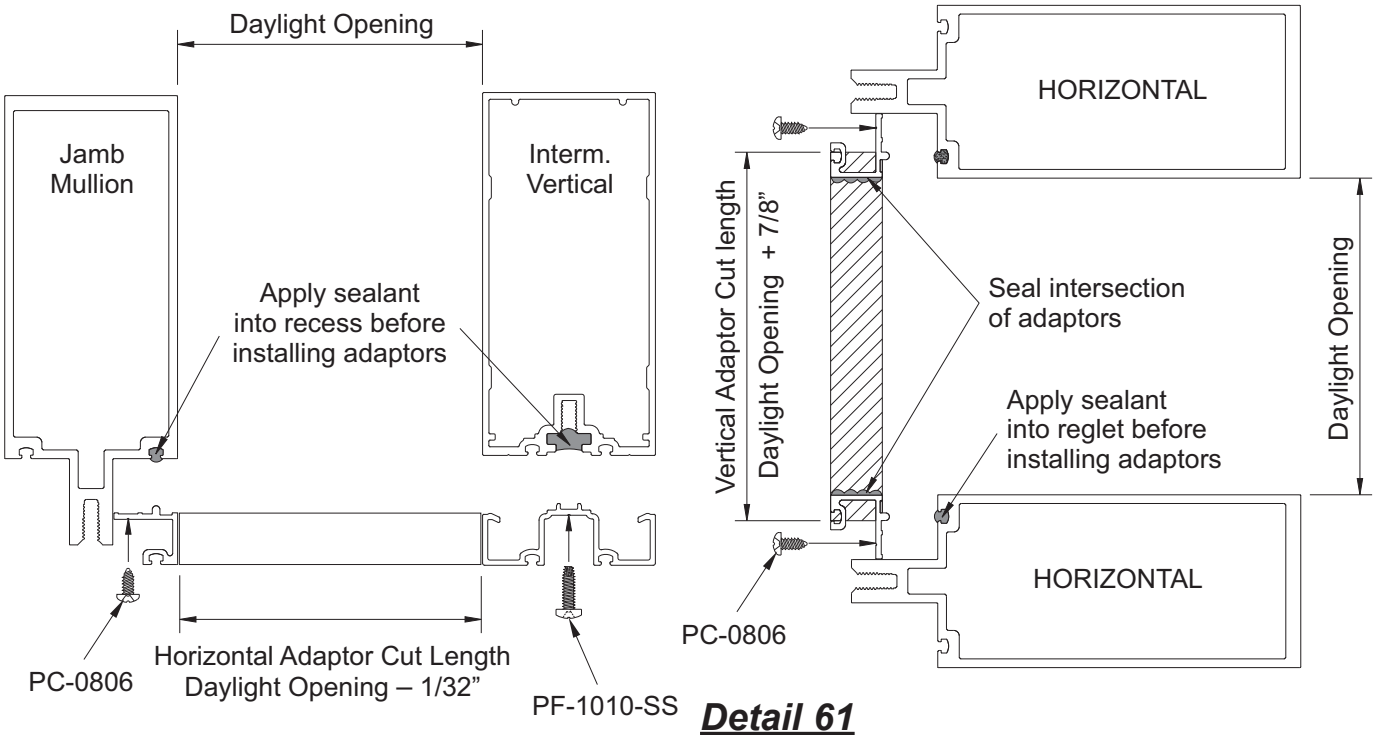


Detail 60

GLAZING

STEP 21
INSTALL GLAZING ADAPTORS
(When Required)

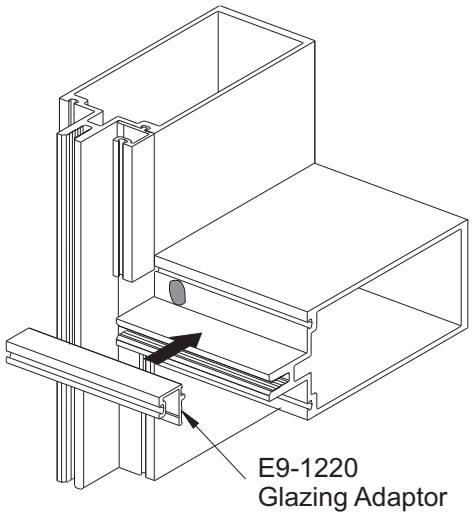
Note: 1/4” glazing adaptors shown
1/2” glazing adaptors similar.



Detail 61

-Cut glazing adaptors to size:
Vertical Cut Length = Daylight Opening plus(+) 7/8”.
Horizontal Cut Length = Daylight Opening minus(–) 1/32”.

-Predrill each adaptor with 0.189” dia. (#12) holes 2” from each end and 24” O.C.
-Dry fit adaptors and match drill 0.141” diameter (#28) holes on mullion to receive PC-0806 and PF-1010-SS screws.
-Clean the area around the mullion glazing reglet and the glazing adaptor with a cleaner approved by the sealant manufacturer.
-Apply sealant to the glazing reglets of the mullion, SSG mullion recesses, and the ends of the horizontal adaptors.
-Install the adaptors with PC-0806 screws 2” from each end and at the center of the adaptor. Install the vertical adaptors first and make sure they are centered along the day light opening.
-Tool sealant at all adaptor intersections and seal all screw heads.
See **Detail 61**.

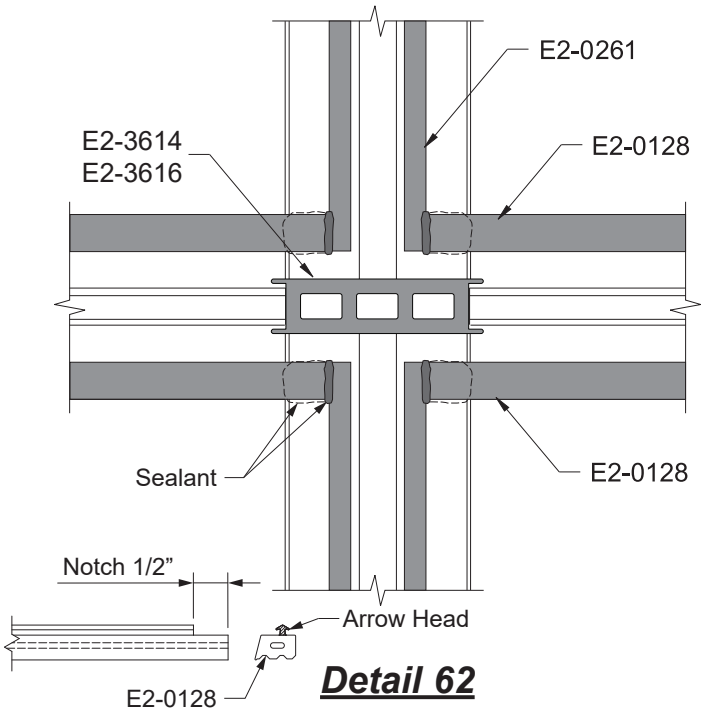


GLAZING

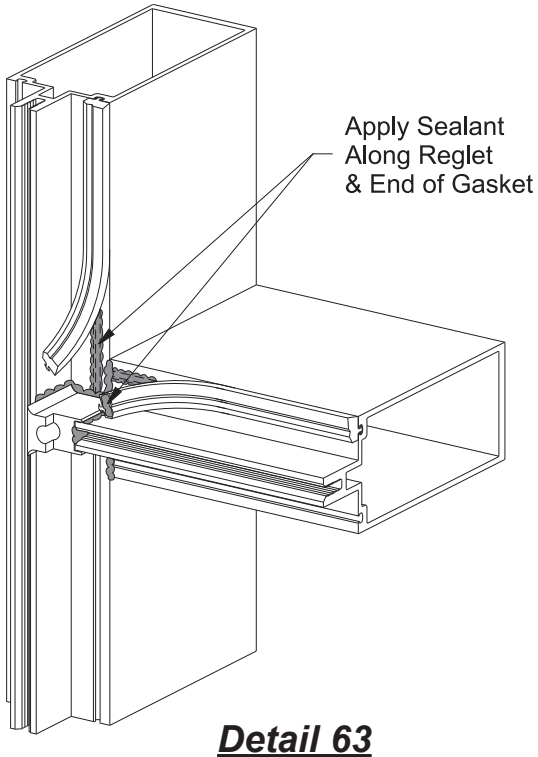
STEP 22
INSTALL INTERIOR GLAZING GASKETS & SPACERS AT SSG MULLION

-Cut vertical gaskets and spacers to Daylight Opening plus(+) 1-1/2”.
-Cut horizontal gaskets to Daylight Opening plus(+) 1” plus(+) 1/4” per each foot of opening width.
-Notch horizontal gasket arrow heads 1/2” at each end.
-Apply sealant where the notched horizontal gasket overlaps the mullion and where it meets the vertical spacer.
-Install vertical gaskets and spacers first, centered along the daylight opening.
-Install horizontal glazing spacers by pushing each end into the reglet. Next press the center of gasket into the reglet and then push the rest of the gasket into the reglet working from the center towards each end.

See **Detail 62**.



Detail 62



Detail 63

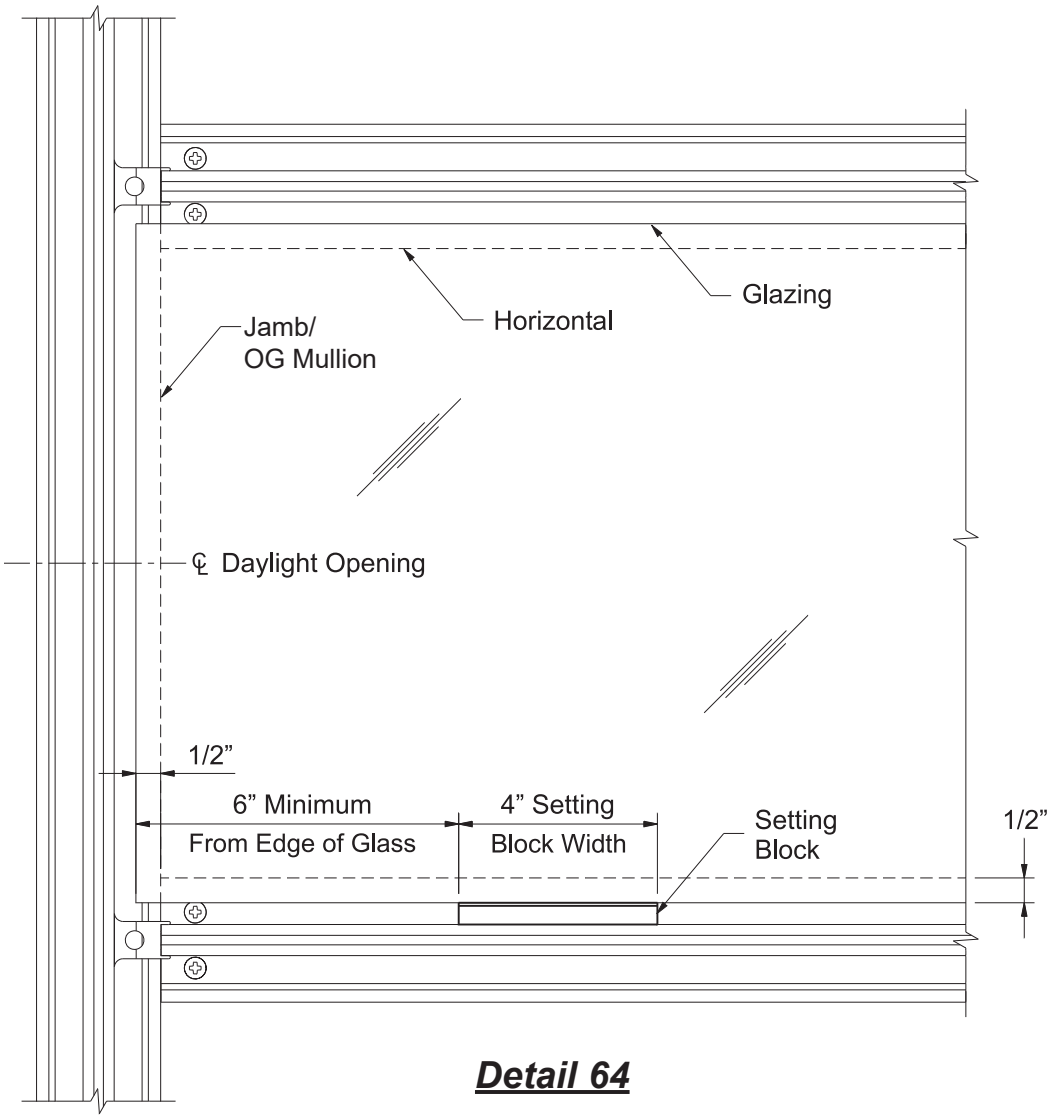
Glazing gaskets require additional sealant at the jamb and horizontal intersection.

-Pull the last 3” of each gasket away from the reglet.
-With gasket end held out of the way, run a 2” to 3” bead of sealant into the reglet at each end.
-Apply sealant to each end of the horizontal gasket.
-Reinsert the gasket ends and press them firmly against the face of the mullion.
-Apply and tool sealant at the intersection of the vertical and horizontal gaskets.

See **Detail 63**.

GLAZING

STEP 23
INSTALL SETTING & SIDE BLOCKS



Detail 64

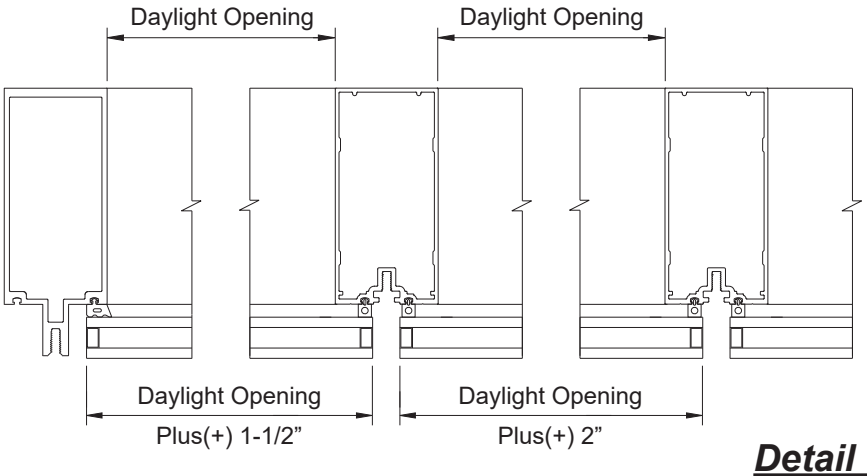
-Install setting blocks, E2-0104 for 1” glazing or E2-0112 for 1/4” glazing, at 1/4 points of daylight opening or minimum of 6” from edge of glass, whichever is greater.
Consult YKK AP for setting block requirements on units that exceed 60” x 90” or 40 sq. ft.

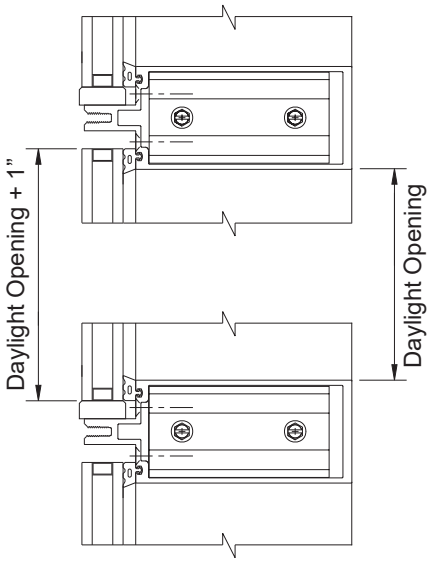
See **Detail 64**.

GLAZING

STEP 24
INSTALL EXTERIOR GLAZING GASKETS

-Cut exterior jamb glazing gaskets to the same length as the jamb pressure plates.



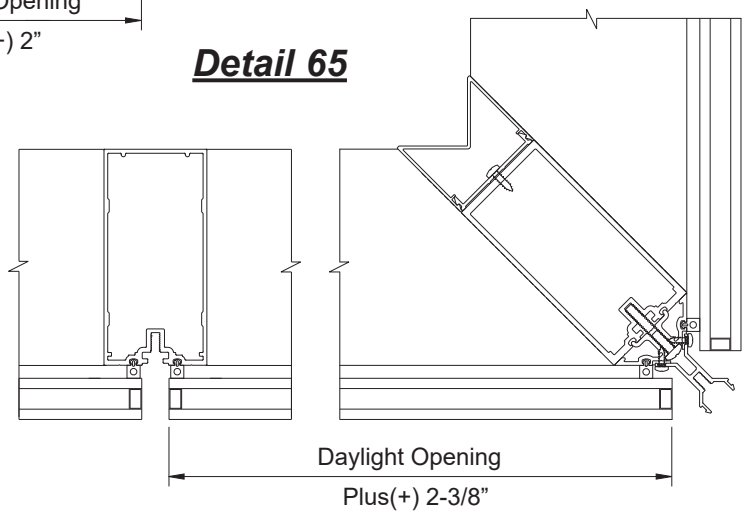


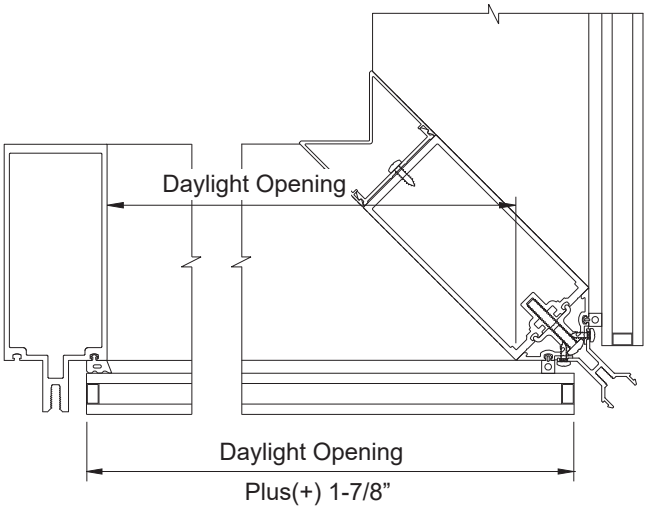
-Cut exterior jamb glazing gaskets to the same length as the jamb pressure plates.
-Cut exterior horizontal glazing gaskets to daylight opening plus 3/16” per foot of opening width.
-Install jamb glazing gaskets centered along the jamb pressure plates.
-Install horizontal gaskets by pushing each end into the reglet of the pressure plate. Next press center of gasket into reglet; then push gasket into reglet working from center towards the ends.

Caution: Do not stretch the gaskets.

See **Detail 65**.

Detail 65



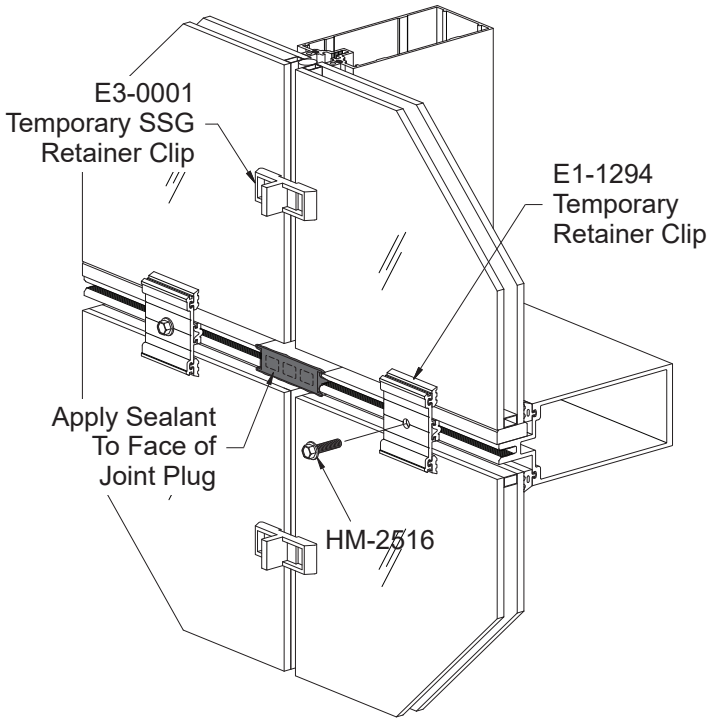


GLAZING

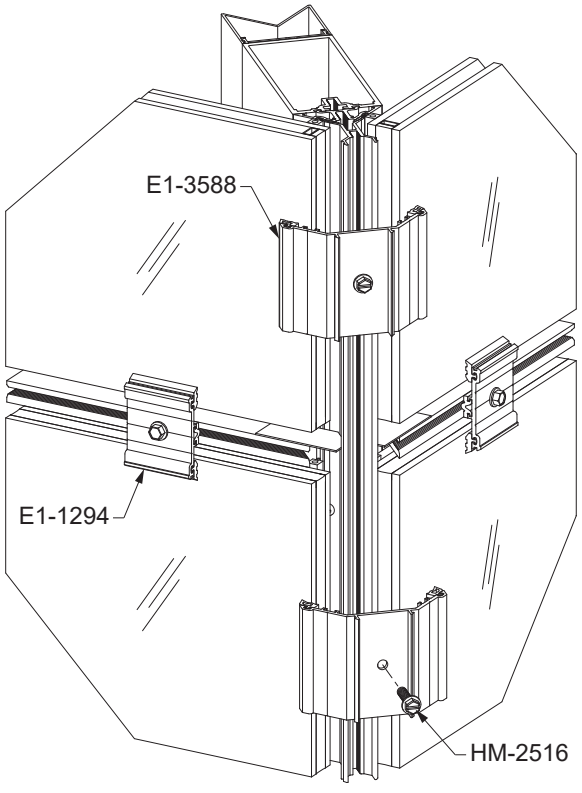
STEP 25
INSTALL GLASS

-Install glass at this time. See **Detail 65** on **Page 56** for glass sizes.
-As each lite is installed, attach a temporary retaining clip, E1-1294, in the middle of each horizontal and 4” from glass edge at each end with HM-2516 fasteners.
-Additionally, secure glass with SSG temporary glass retainers every 2’-0” maximum along the SSG verticals.
-At 90° outside corner mullions, use E1-3588 with HM-2516 fasteners at every 2’-0” maximum on center.
-Apply sealant to the face of the joint plug just prior to installing pressure plates. Do not allow sealant to skin over prior to installing pressure plates.
See **Details 66 & 66A**.

Note: Sealant must form a complete seal between the exterior gasket, pressure plate, thermal isolator, and the joint plug.



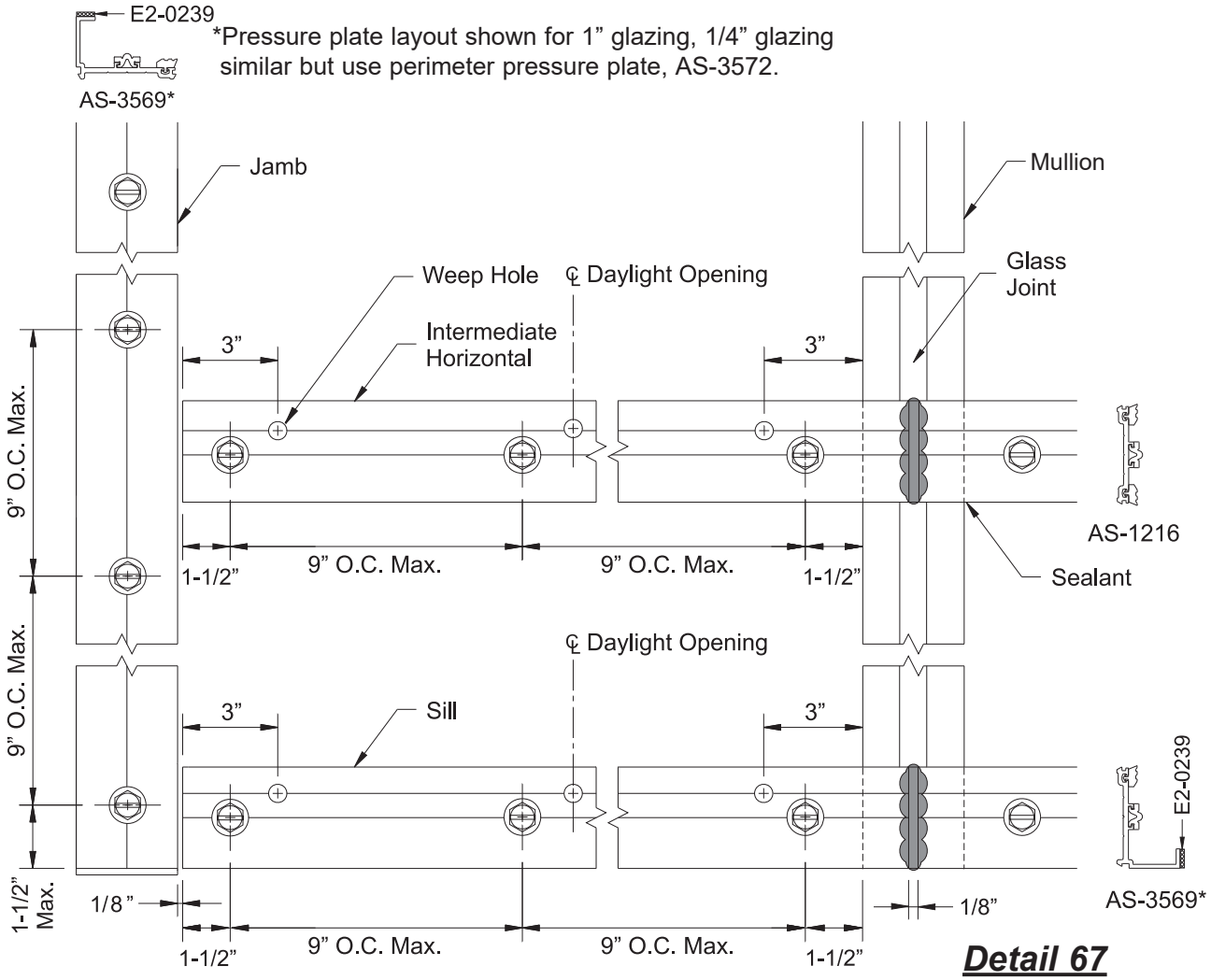
Detail 66



Detail 66A

GLAZING

STEP 26
PRESSURE PLATE LAYOUT AND ASSEMBLY



Detail 67

-Install isolator tape, E2-0239, onto the back leg of the perimeter pressure plates.
-Install jamb pressure plates using HD-2516-W3-SS bolts. Initially torque bolts to 30 inch-pounds with a speed wrench or torque limiting screw gun. Work from the bottom up.
-Install vertical face cover E9-1206 using a mallet and a clean piece of lumber. Start at the top of the cover and work block and mallet down the vertical. See **Detail 71** on **Page 72**. For installation of deep face covers, see **Step 28A** on **Page 63**.
-Center and install horizontal pressure plates in opening, leaving gaps at the ends as shown.
-Starting at the center of each pressure plate, tighten each retainer bolt to 50 inch-pounds.
-Apply and tool sealant to completely seal gaps at the pressure plate ends, including at corners..
-Torque all vertical pressure plate bolts to 50 inch-pounds.
See **Detail 67**.

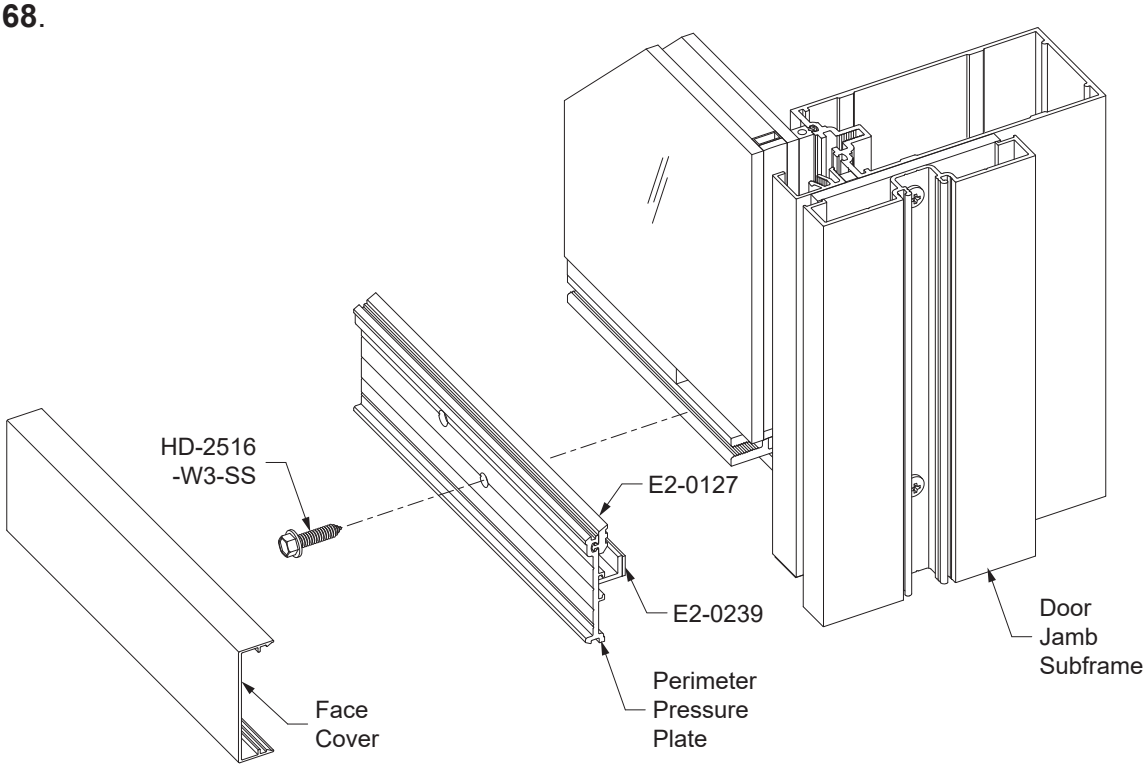
Note: Pressure plate AS-1216 must be used instead of AS-3569 on the perimeter when using perimeter anchors. Mullion end cap, E1-1286, must be installed at jambs when using mullion end anchors: “F” or “J”.

GLAZING

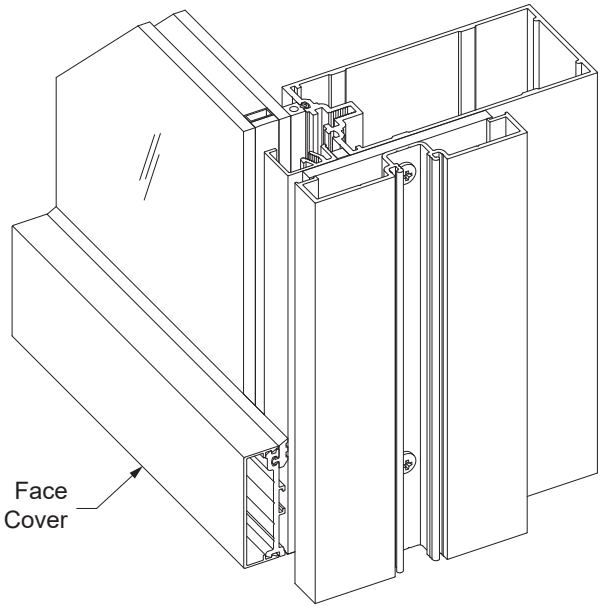
STEP 26 (Continued)
PRESSURE PLATE LAYOUT AND ASSEMBLY

-At the door jamb, the horizontal and sill pressure plates and face covers overlap the perimeter trim.

See **Detail 68**.



Detail 68

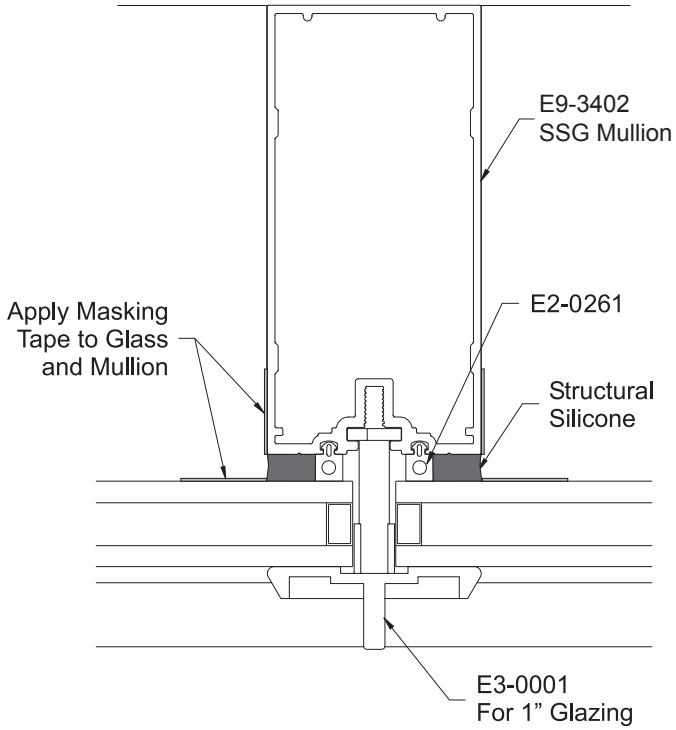


GLAZING

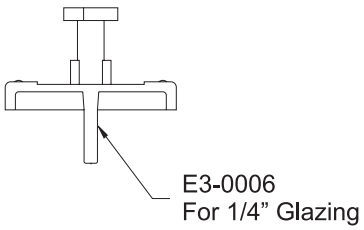
STEP 27
INTERIOR STRUCTURAL SILICONE SEALANT

-Carefully read and follow sealant manufacturers sealant recommendations.
-Make sure all silicone contact surfaces and joints have been cleaned with cleaner and method recommended by sealant manufacturer.
-Apply masking tape to the mullion and glass as shown in **Detail 69**.
-Apply an approved structural silicone from the bottom to the top of the joint. Use positive pressure to completely fill the cavity between the glass and vertical mullion.
-Using a nylon spatula or other non-scratching implement, tool the silicone immediately after running the vertical joint. Exert positive pressure while tooling to ensure that the silicone completely fills the cavity.
-Be careful not to remove too much silicone. The silicone should make complete contact with the glass and aluminum surfaces. The finished joint should be flush with the edge of the vertical.
See **Detail 69**.

-Allow silicone to cure as per manufacturer's recommendations. Temporary retainers should be left in place until silicone has cured.



Detail 69



Caution: Do not permit the silicone to skin over before it is tooled. Immediately remove masking tape after tooling the silicone.

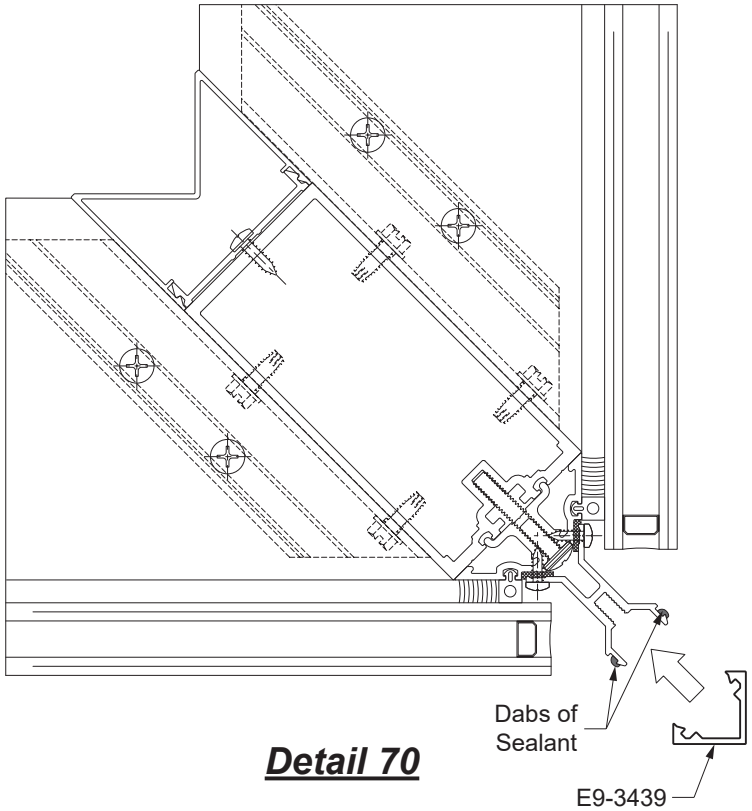
GLAZING

STEP 27
INTERIOR STRUCTURAL SILICONE SEALANT

-After structural silicone has cured and before installing the horizontal pressure plates at the corner mullion, remove the E1-3588 corner temporary retainer.

-Apply dabs of sealant along corner trim base and snap on the E9-3439 corner trim cover.

See **Detail 70**.



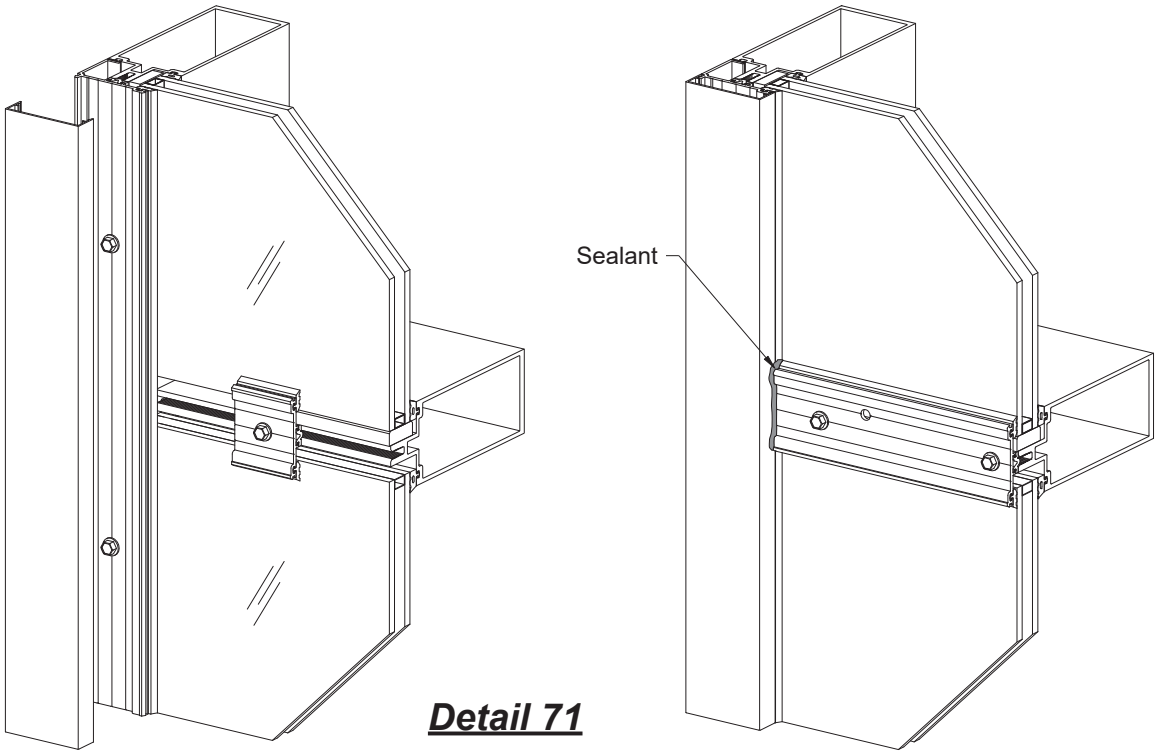
Detail 70

GLAZING

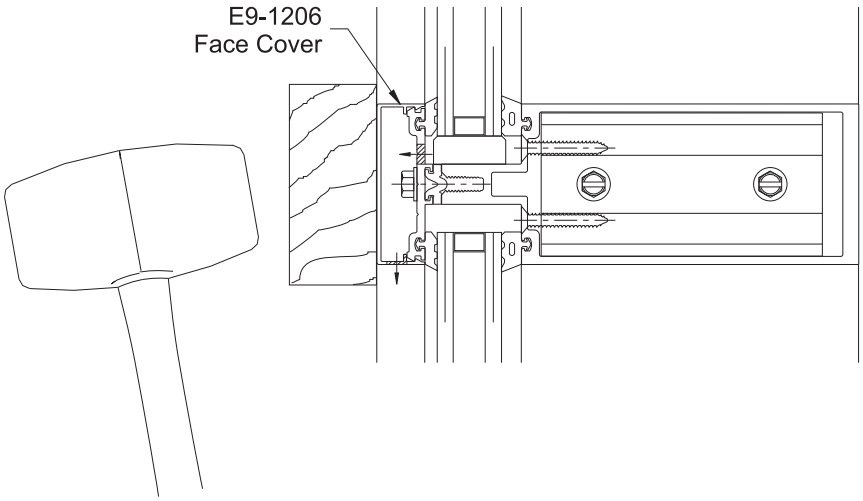
STEP 28
INSTALL EXTERIOR JAMB FACE COVERS

-Apply and tool sealant to the gap between horizontal pressure plate and the jamb face cover.
-Install horizontal face cover E9-1206. Start at one end and work block and mallet across the horizontal.

See **Detail 71**.



Detail 71



GLAZING

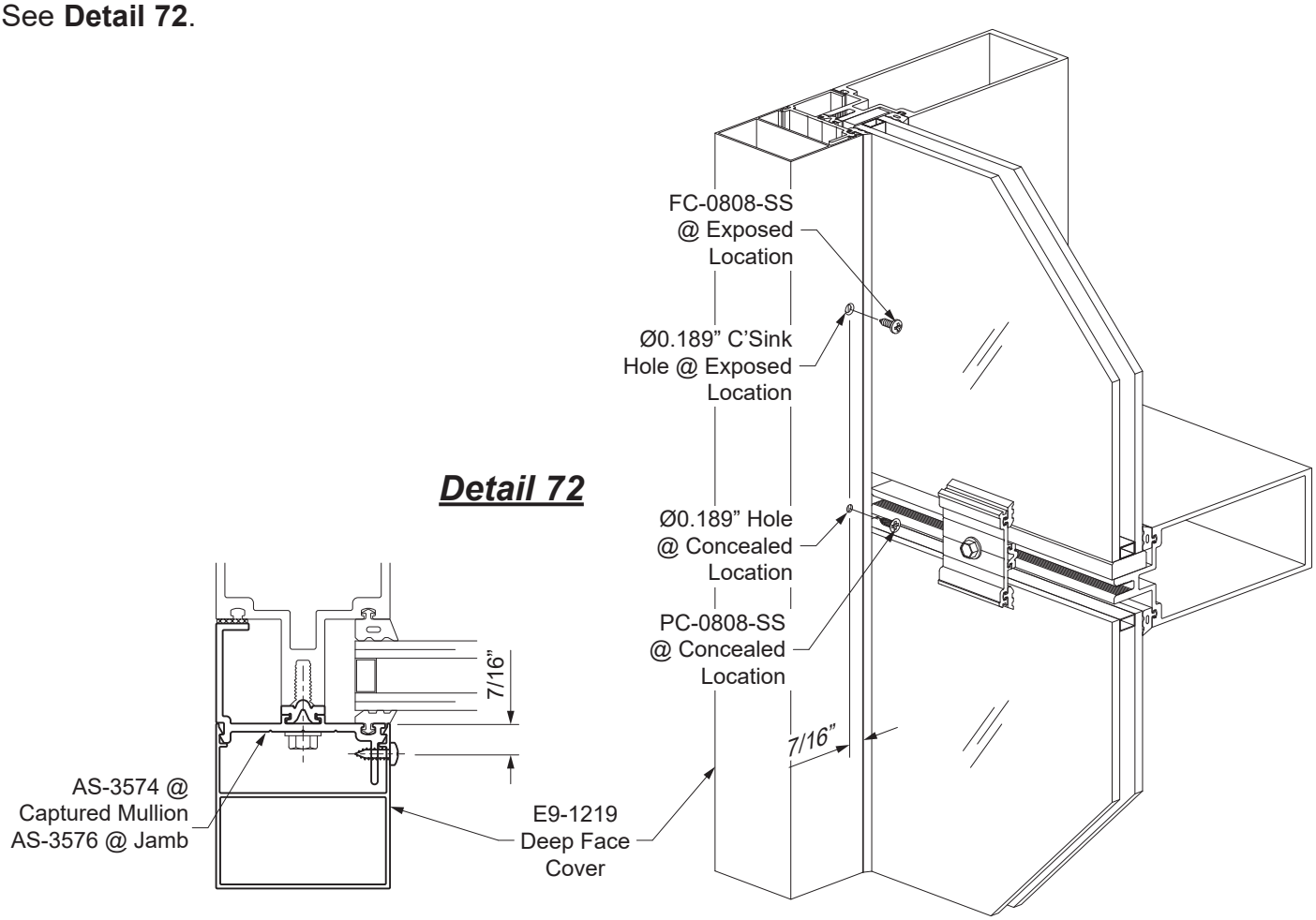
STEP 28A
INSTALL OPTIONAL DEEP FACE COVERS

Installation of a deep vertical cover is similar to that of the standard face cover, except a fastener is required to keep the cover from possibly sliding down over time. Typically, the face cover is fastened with one PC-0808-SS screw at a horizontal to be concealed by the horizontal face cover, unless otherwise specified on the approved shop drawings.

-For concealed fastener locations, drill a 0.189” diameter hole into the side of the face cover, 7/16” from the snap interface of the cover. Snap on the deep cover at its intended location. Using the clear hole as a pilot hole, drill a 0.141” diameter tap hole into the leg on the deep pressure plate. Secure the face cover in place with a PC-0808-SS.
-If the face cover requires it to be fastened at an exposed location, drill a 0.189” diameter countersunk hole into the side of the cover. Snap on the deep cover at its intended location. Using the clear hole as a pilot hole, drill a 0.141” diameter tap hole into the leg on the deep pressure plate. Secure the face cover in place with an FC-0808-SS screw.
-Continue to install the horizontal pressure plate and face cover as specified on **Pages 55 & 58**.

See **Detail 72**.

Detail 72



GLAZING

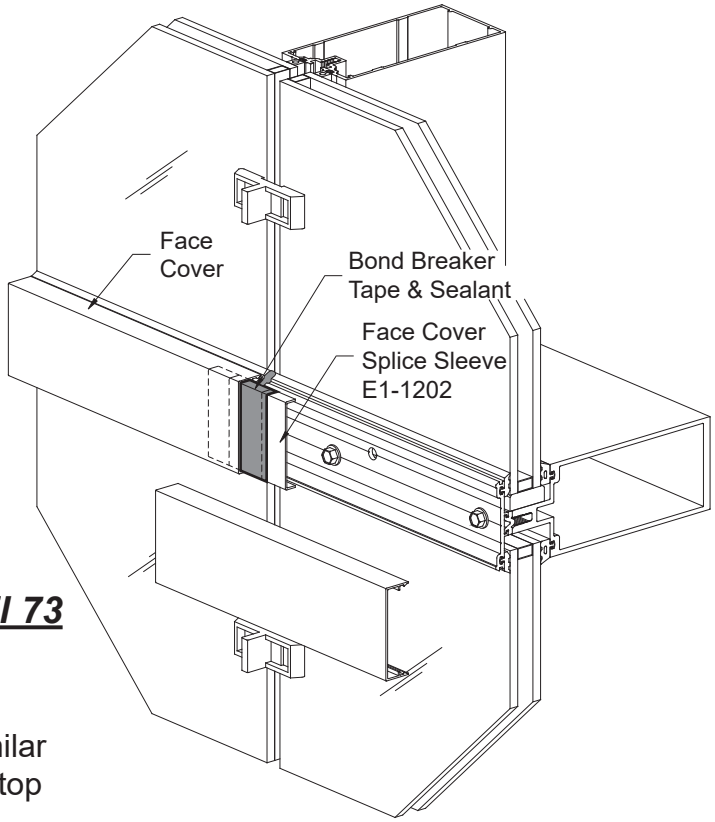
STEP 28B
INSTALL EXTERIOR HORIZONTAL FACE COVERS

For E9-1206 Horizontal Face Cover:

-Snap on exterior horizontal face covers using a mallet and clean piece of lumber. Start at one end. Work block and mallet across the horizontal.

-If horizontal face covers are spliced, apply bond breaker tape and sealant to the face of the splice sleeve, E1-1202, and insert it at the end of the first cover.
-Attach the second face cover leaving a 1/2" joint between the two covers.
-Seal the joint between the face covers with sealant.
See **Detail 73**.

Note: Face cover splice joint should align with the vertical glass joint.

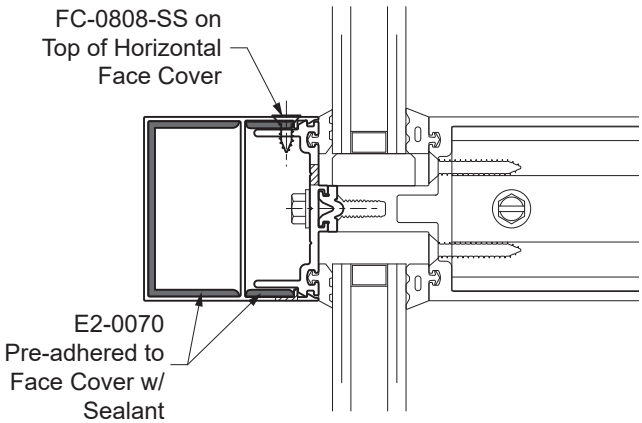


Detail 73

For Deep Horizontal Face Cover:

Installation of horizontal deep face covers is similar except the FC-0808-SS screw is always on the top of the face cover.

-If the deep horizontal face cover is to be spliced, pre-adhere an E2-0070 silicone sheet with sealant to the first deep face cover on one side of where the face cover splice is to occur. Trim the silicone sheet to fit as required. Allow the sealant for the silicone sheet to cure before installing the second face cover.
-Install the second deep face cover, inserting the protruding end of the silicone sheet into the cavity of the face cover and leaving a 1/2" joint between the two face covers.
-Seal the joint between the two face covers.
See **Detail 74**.



Detail 74

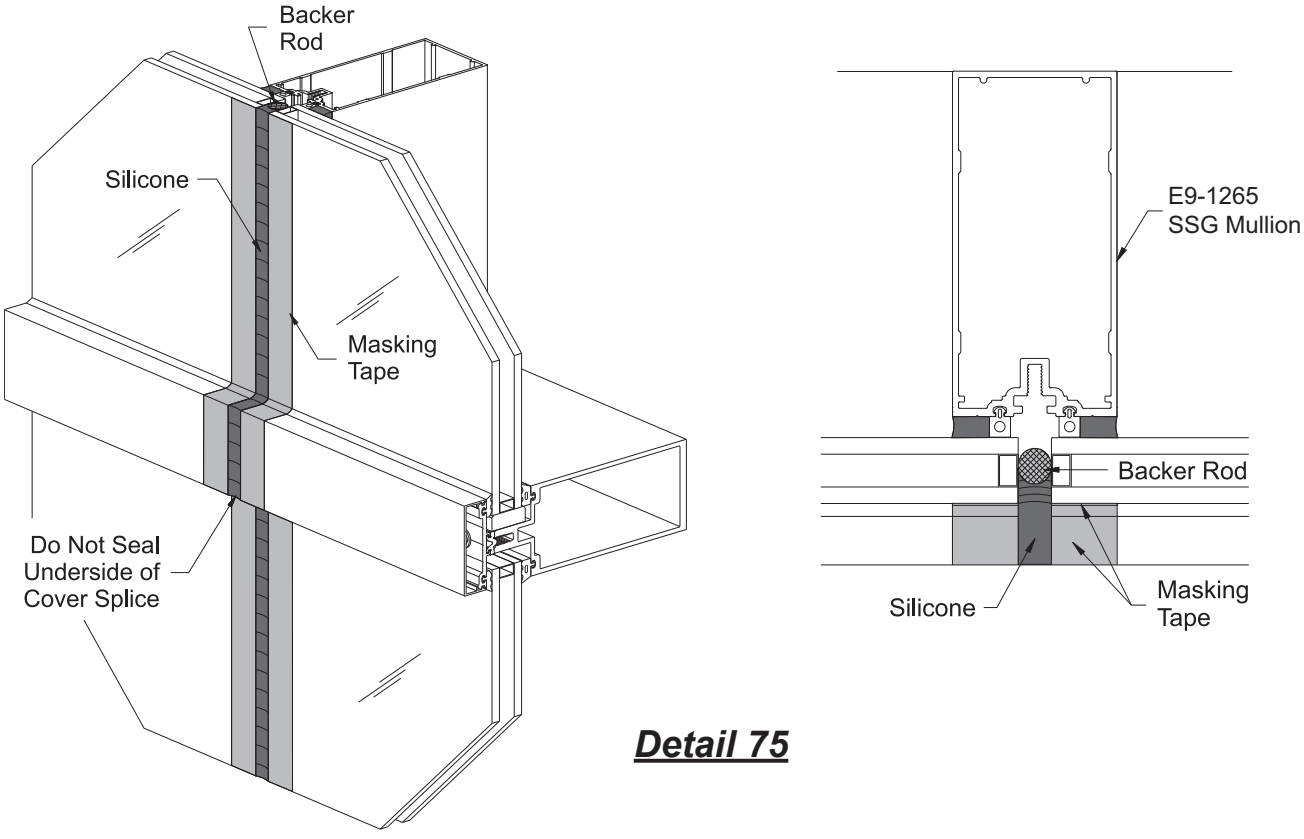
GLAZING

STEP 29
APPLY EXTERIOR WEATHERSEAL

-Once interior structural silicone has cured, remove the temporary retainer clips and insert an approved open cell polyurethane backer rod into the glass joint.
-Clean all silicone contact surfaces and joints with cleaner and method recommended by sealant manufacturer.
-Apply masking tape to the edges of the glass and aluminum as shown in **Detail 75**.
-Apply silicone sealant into the cavity between the mullion and glass starting from the bottom and work towards the top. Use positive pressure so that the silicone sealant completely fills the cavity.

Note: The underside of face cover splices are left unsealed to allow for weepage.

-Using a spatula or other non-scratching implement, tool the silicone sealant immediately after running the joint. Exert positive pressure while tooling to ensure that the silicone sealant makes complete contact with all surfaces. Be careful not to remove too much silicone.



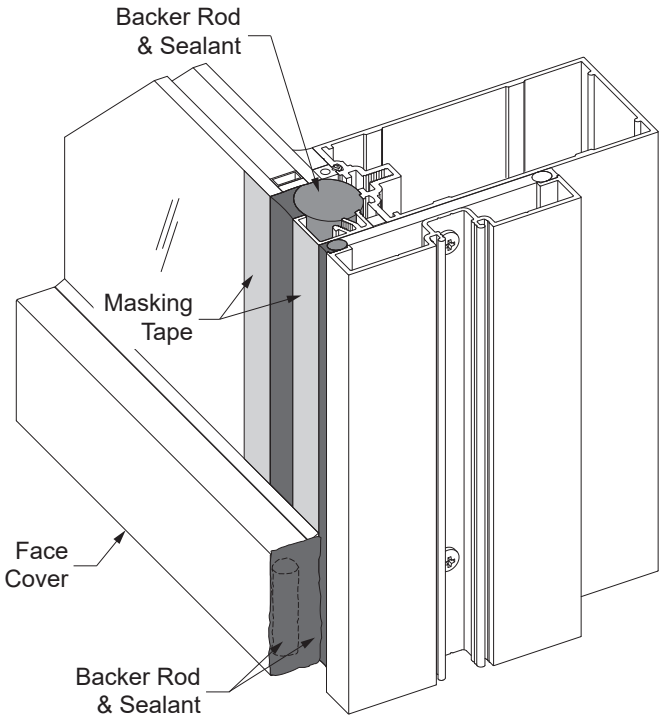
Detail 75

Caution: Do not permit the silicone to skin over before it is tooled. Immediately remove masking tape after tooling the silicone.

STEP 29 (Continued)
APPLY EXTERIOR WEATHER SEAL

-At the door jamb, seal the cavity at the exposed edge off the horizontal and sill face covers. Insert backer rods as required to facilitate this sealant closure.
-Also, apply backer rod and seal between the glass and the perimeter trim.

See **Detail 76**.



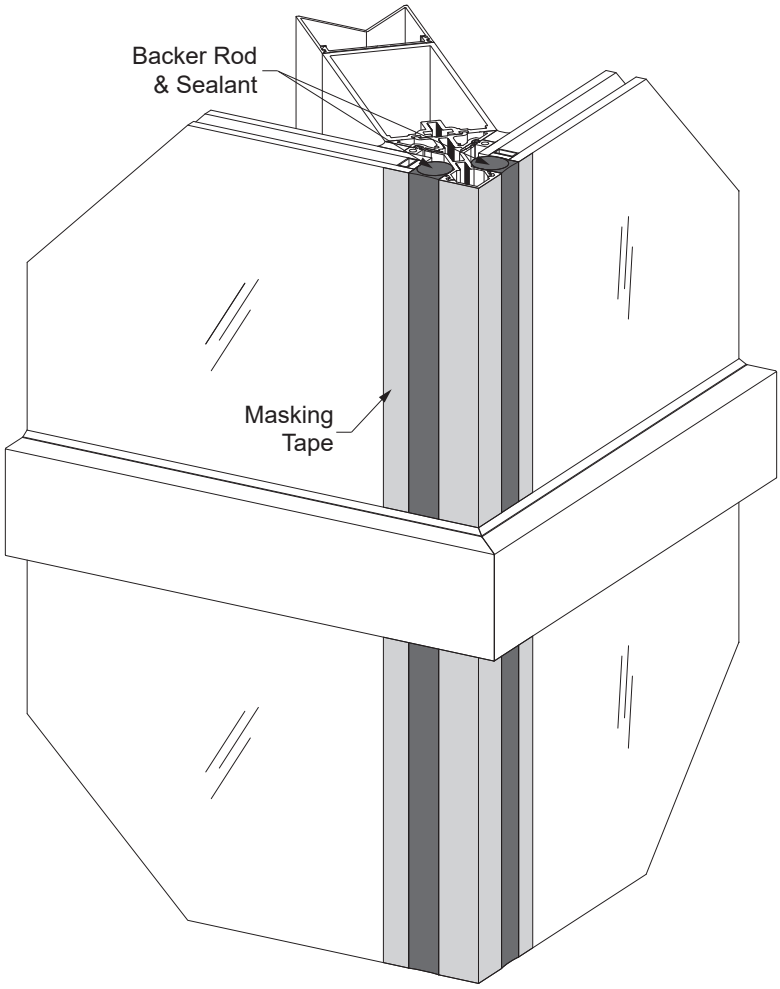
Detail 76

GLAZING

STEP 29 (Continued)
APPLY EXTERIOR WEATHER SEAL

-Sealing the glass to the corner trim cover is similar to that of an intermediate mullion.
-Fill the gap in the face covers at the outside corner with sealant. Wipe away excess sealant.

See **Detail 77**.



Detail 77

YKK AP America Inc.

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