

**RELIANCE™ - TC IG CURTAIN WALL
INSTALLATION & GLAZING MANUAL**

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AND
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JUNE 2007

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GENERAL INFORMATION

PRODUCT USE

The **Reliance-TC IG™** curtain wall system is intended for installation by glazing professionals with appropriate experience. Subcontractors without experience should employ a qualified person to provide field instruction and project management.

Vistawall does not control the application or selection of its product configurations, sealant or glazing material and assumes no responsibility thereof. It is the responsibility of the owner, architect and installer to make these selections in strict compliance with applicable laws and building codes.

Consult sealant manufacturer for review and recommendation of sealant application. Follow sealant manufacturer's recommendations and literature for proper installation.

The air and water performance of the Reliance-TC IG™ curtain wall system is directly related to the completeness and integrity of the installation process. To insure top performance for this system, particular attention should be given the following procedures:

1. Surfaces to be sealed should be cleaned with isopropyl alcohol or solvent and dried as recommended by sealant manufacturer to remove all dirt and cutting oils. Sealant at shear blocks should be a minimum 3/16" diameter nominal placed completely around the top, face and bottom of the shear block without gaps in the sealant. Exposed surfaces should be cleaned after installing the horizontal. Inspect joint for complete sealant contact, especially where the horizontal meets the face of the vertical member. Repair joint as required.
2. The exterior glazing gasket should be installed so as to avoid stretching, buckles or tears. Corners must be cut square at verticals and mitered at horizontals, sealed and butted together. To avoid damage to gasket and corner joints during glazing, glass should be level and straight during installation.
3. Vertical movement of mullion at intermediate floors requires special expansion joints and glazing materials. **See page 29-30** for details that permit 1/4" movement. For designs and applications that may require greater movement or special considerations please contact your local Vistawall facility.

Variations on the details shown are inevitable and are not the responsibility of Vistawall when drawn by others. Vistawall strongly encourages its customers to utilize Vistawall supplied calculations and shop drawings.

For Structural Silicone Glazing applications, the stress on the silicone should not exceed 20 PSI. Consult sealant manufacturer for specific applications to ensure proper loading on silicone joint. Alternate spacer gaskets are available to accommodate larger sealant contact widths. Consult your nearest Vistawall facility for assistance.

Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft.

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GENERAL INFORMATION

PROTECTION AND STORAGE

Handle all material carefully. Do not drop from the truck. Stack with adequate separation so the material will not rub together. Store material off the ground, protecting against the elements and other construction hazards by using a well ventilated covering. Remove material from package if wet or located in a damp area. For further guidelines consult AAMA publication "Care and Handling of Architectural Aluminum From Shop to Site."

CHECK MATERIAL

Check glass dimensions for overall size as well as thickness. Vistawall gaskets and glazing pockets are designed to accommodate glass thickness of +/- 1/32" nominal. Vistawall cannot be held responsible for gaskets that are not water tight or difficult to install due to extreme glass tolerances.

Check all material upon arrival at job site for quality and to determine any shipping damage.

Using the contract documents, completely check the surrounding conditions that will receive your materials. Notify the general contractor by letter of any discrepancies before proceeding with the work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings, installation instructions, architectural drawings and shipping lists to become familiar with the project. The shop drawings take precedence and include specific details for the project. The installation instructions are of a general nature and cover the most common conditions. Due to varying job conditions all sealant used must be approved by the sealant manufacturer to insure it will perform per the conditions shown on the instructions and shop drawings. The sealant must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by sealant manufacturer. Properly store sealant at the recommended temperatures and check sealant for remainder of shelf life before using.

FIELD CONDITIONS

All material to be installed must be plumb, level and true. Aluminum to be placed in direct contact with masonry or incompatible material should be isolated with a heavy coat of zinc chromate, bituminous paint or non-metallic material.

After sealant is set and a representative amount of the wall has been glazed (250 square feet or more), run a water hose test in accordance with AAMA 501.2 specifications to check installation. On large projects the hose test should be repeated during the glazing operation.

CLEANING MATERIALS

Cement, plaster terrazzo, alkaline and acid based materials used to clean masonry are very harmful to finishes. Any residue should be removed with water and mild soap immediately or permanent staining will occur. A spot test is recommended before any cleaning agent is used. Refer to the Architectural Finish Guide in the Detail Catalog.

EXPANSION JOINTS

Expansion joints and perimeter joints shown in these instructions and in the shop drawings are shown at nominal size. Actual dimensions may vary due to perimeter conditions and/or differences in metal temperature between the time of fabrication and the time of installation. For example, a 12 foot unrestrained length of aluminum can expand or contract 3/32" over a temperature change of 50° F. Any movement potential should be accounted for at the time of the installation.

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GENERAL INFORMATION

SUGGESTIONS FOR IMPROVING SYSTEM THERMAL PERFORMANCE

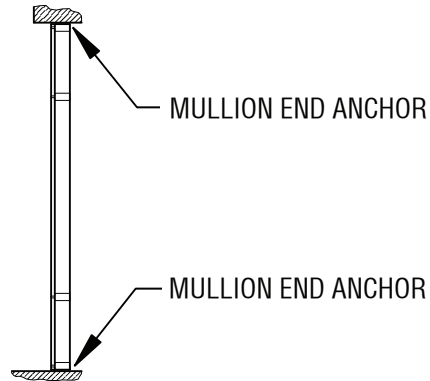
To maintain or improve your wall installation the following items should be considered.

- A. Blinds or drapes prevent warm air from adequately flowing over the window surface.
- B. Warm air ventilators too far from the window will not adequately wash the window with air to prevent condensation.
- C. In extreme conditions the fan of the heating system should not cycle on and off, but should run continuously.
- D. Some heating systems have a water injection feature that can raise humidity levels. The higher the humidity levels the more likely condensation or frost will form. Raising the temperature and reducing humidity will usually solve the problem.
- E. On rare occasions an extremely cold storm may cause frost to appear on the glass framing. A space heater and electric fan blowing along the plane of the window wall can reduce or eliminate this temporary condition.

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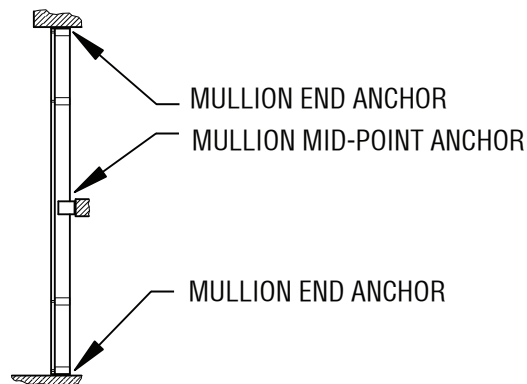
INSTALLATION TYPES

The following wall sections represent common types of installations for this product. Refer to approved shop drawings for specifics regarding splicing and anchoring of frame.



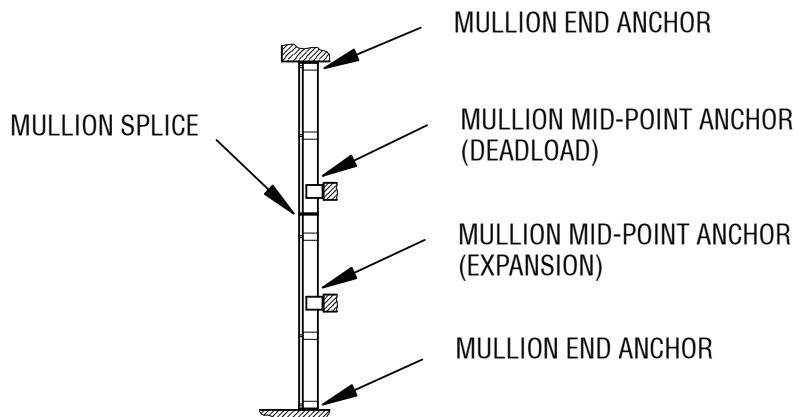
SINGLE SPAN

Refer to steps 2.1.1 through 2.1.3



TWIN SPAN

Refer to steps 2.1.4 through 2.1.8



MULTI-SPAN

Refer to steps 2.1.9 through 2.1.16

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FRAME FABRICATION

Unless otherwise noted, the details shown in these instructions reflect the 7 1/4" system for 1" glazing. Instructions for other backmember depths are similar.

- 1.1 Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/2" minimum clearance for shimming and caulking around perimeter of frame.
- 1.2 Cut material to size. **SEE FIGURE 1** for guide. NOTE: Layout vertical mullions so that two shallow pockets will not be adjacent to each other. **SEE MULLION LAYOUT below.**

Frame Members

| | |
|---------------------------|--|
| Verticals | FRAME HEIGHT (ROUGH OPENING - top & bottom joints) |
| Intermediate horizontals | Daylight opening (D.L.O.) - 1/16" |
| Head and sill | D.L.O. - 1/16" |
| Horizontal face covers | D.L.O. - 1/16" |
| Horizontal pressure plate | D.L.O. - 1/4" |

Accessories

| | |
|--------------------|--------------------------|
| Vertical gaskets | D.L.O. + 1" + allowance* |
| Horizontal gaskets | D.L.O. + allowance* |

*Glazing gaskets should be cut 1/4" longer per foot of aluminum extrusion.
Set aside and lay flat until ready to glaze.

Other Members (as required)

| | |
|-----------------------------|----------------------|
| Horizontal glazing adaptors | D.L.O. - 1/32" |
| Vertical glazing adaptors | D.L.O. + 1" |
| Glass Stops | D.L.O. - 1/16" |
| Sill Filler | D.L.O. - 1/16" |
| Door jamb subframe | DOOR OPENING + 3/4" |
| Door header subframe | DOOR OPENING - 1/32" |

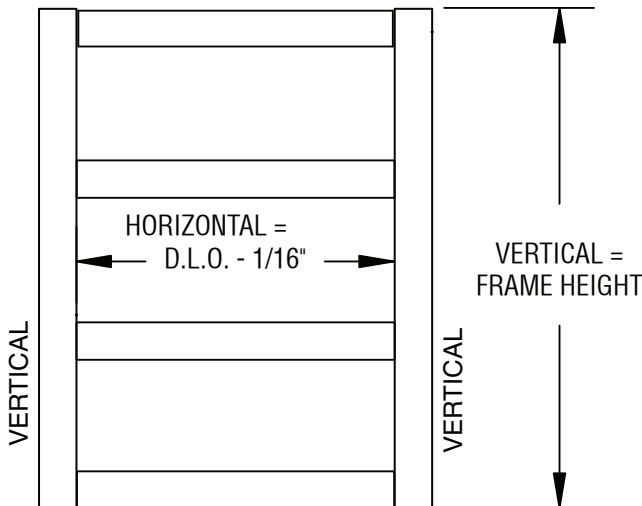
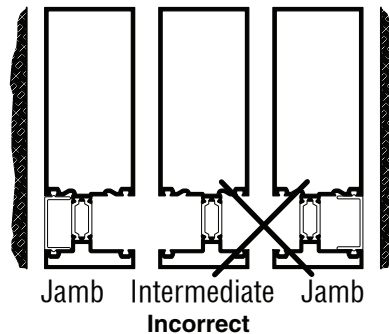
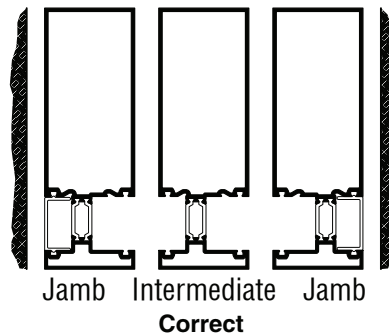


FIGURE 1
Material Fabrication Guide



Mullion Layout

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FRAME FABRICATION

- 1.3 Fabricate vertical mullions for horizontal members using the DJ-102 drill jig or layout shown in **FIGURE 2**. Drill holes for head shear blocks using holes "A" & "B" (6" system) or "A" & "C" (7 1/4" system). For horizontal shear blocks, use holes "D" and "E" (6" system) or "D" & "F" (7 1/4" system). Align top of jig with top of vertical for head members and top of horizontal for the intermediate horizontals. For sill members, align bottom of jig with bottom of vertical, using holes "G" & "H" (6" system) or "G" & "J" (7 1/4" system). **SEE FIGURE 2**.
- 1.4 Install and seal end caps to top and bottom of all jamb and intermediate vertical mullions with (4) FS-320 #10 x 1/2" U-drive screws. **SEE FIGURE 2**. Modify end cap at jambs as shown in **FIGURE 3**.
- 1.5 Drill (2) 7/32" holes on each end of horizontal for attachment to shear block. **SEE FIGURE 4, page 9**. Drill 5/16" weep holes at 1/4 points as shown in **FIGURE 5, page 9**.
- 1.6 Drill 5/16" diameter weep holes at centerline of DLO in face cap in intermediate horizontals only. **SEE FIGURE 6, page 9**.

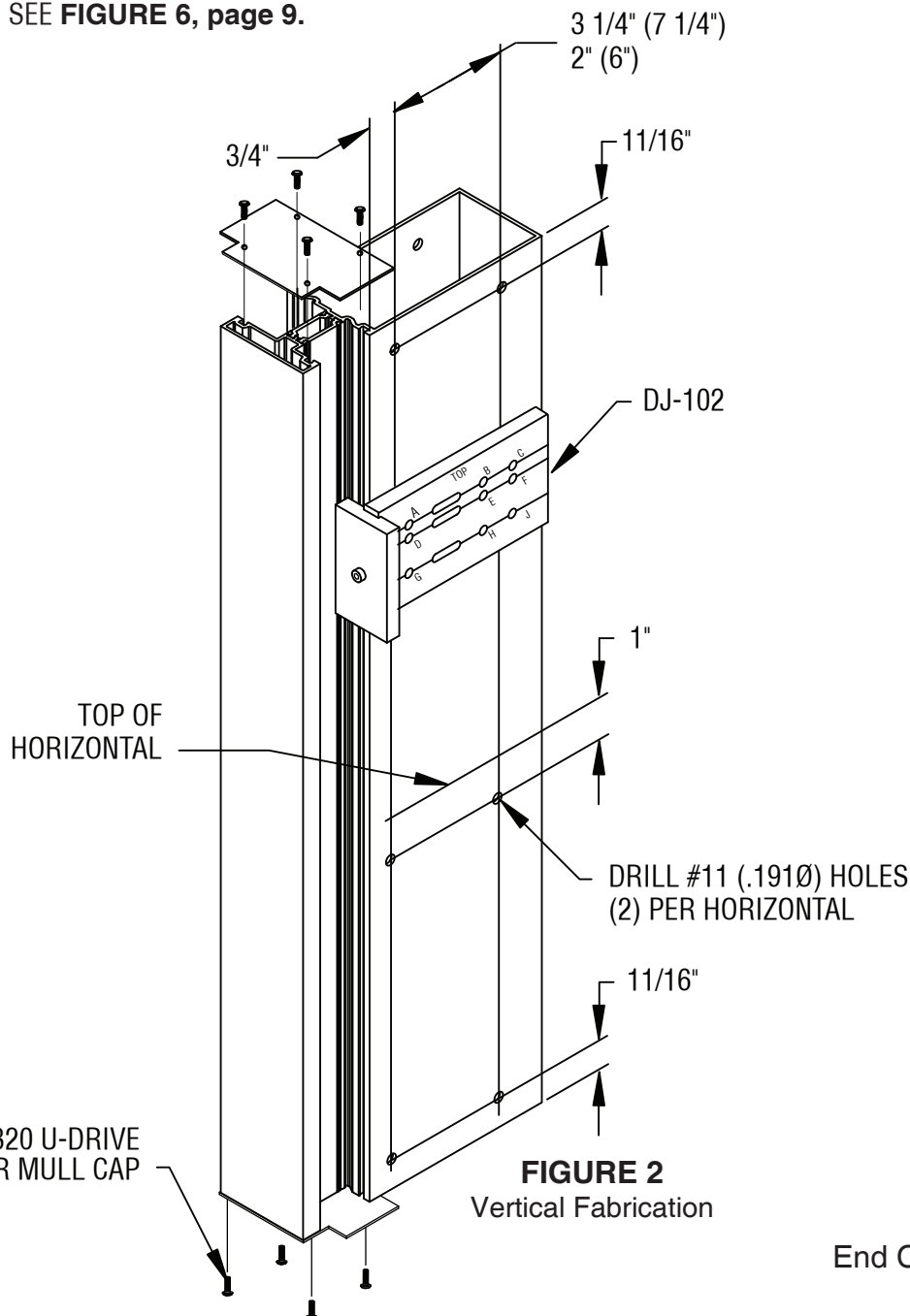


FIGURE 2
Vertical Fabrication

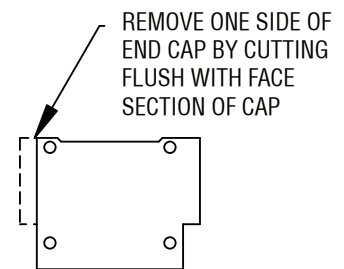


FIGURE 3
End Cap Modification for Jamb

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FRAME FABRICATION

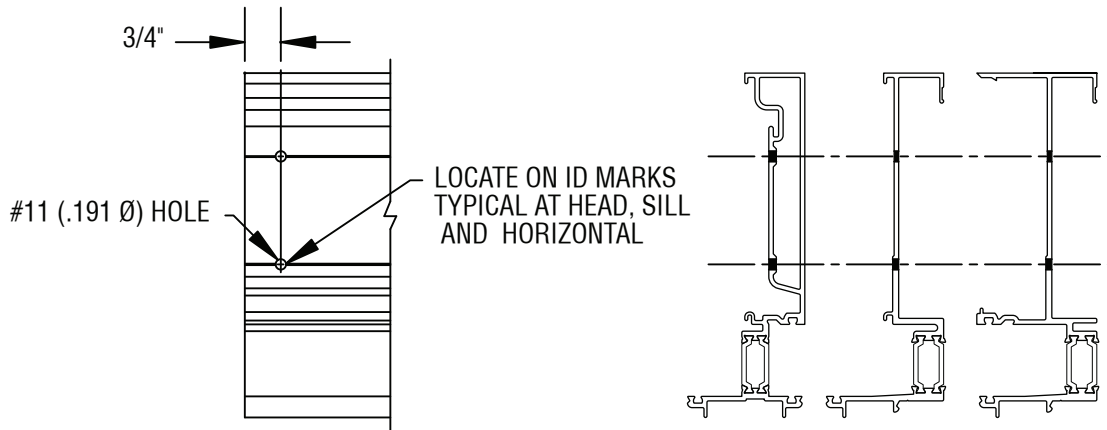


FIGURE 4
Horizontal Fabrication For Shear Blocks

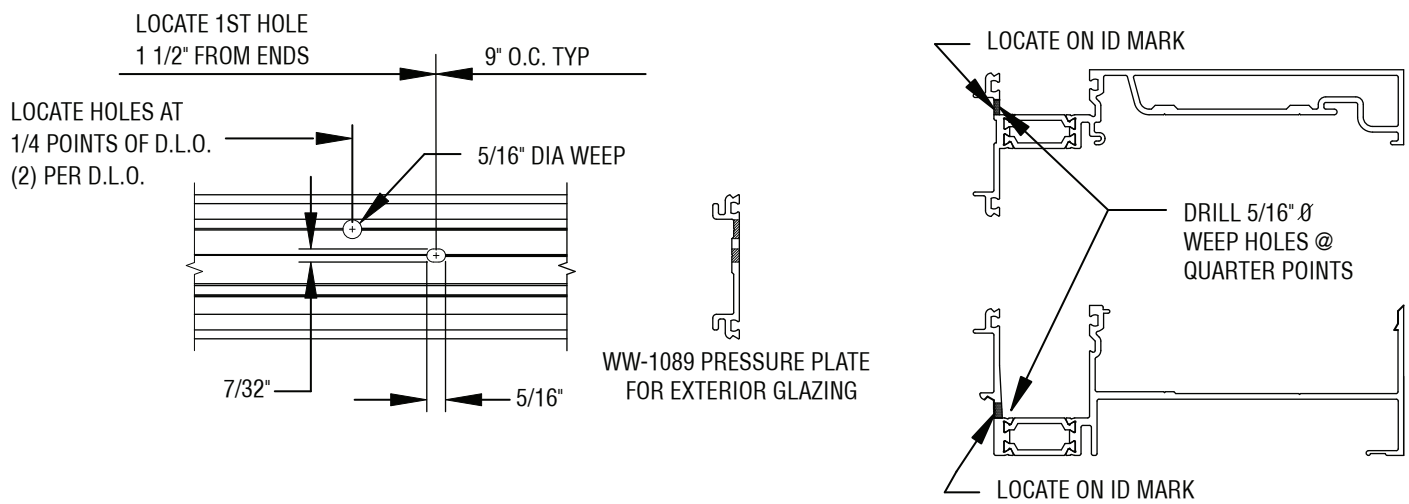


FIGURE 5
Horizontal Weep Hole Fabrication

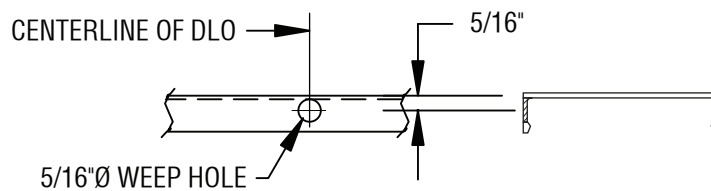


FIGURE 6
Horizontal Weep Hole Fabrication

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FRAME INSTALLATION

Anchor type and sizes vary per job requirements. Details shown in these instructions are to be used as a guide only. Refer to approved shop drawings for actual conditions.

2.1 Vertical mullion installation:

SINGLE SPAN INSTALLATION:

- 2.1.1 Attach shear blocks to all vertical members. **SEE FIGURE 7** for proper orientation and installation on mullion.
- 2.1.2 Install verticals plumb and level. Place shims between vertical mullion and anchor at sill to evenly distribute deadload from wall. Prior to installation, install (2) FS-55 (#10 x 1/2" PPH) fasteners at each end of mullion to hold jamb "F" anchor centered in vertical. Install tee anchor at head to allow for thermal movement of the vertical mullions. **SEE FIGURE 8, page 11.** Anchor type and sizes vary per job requirements. Details shown in these instructions are to be used as a guide only. Refer to approved shop drawings for actual conditions.

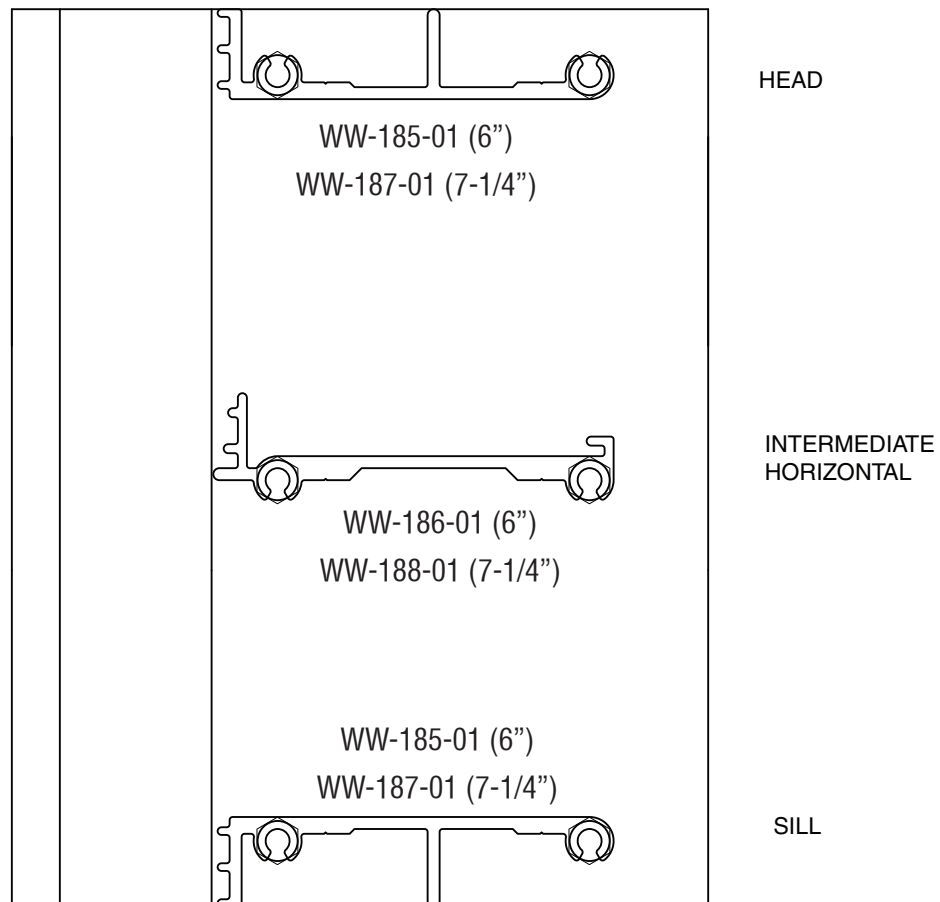


FIGURE 7
Shear Block Orientation

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FRAME INSTALLATION

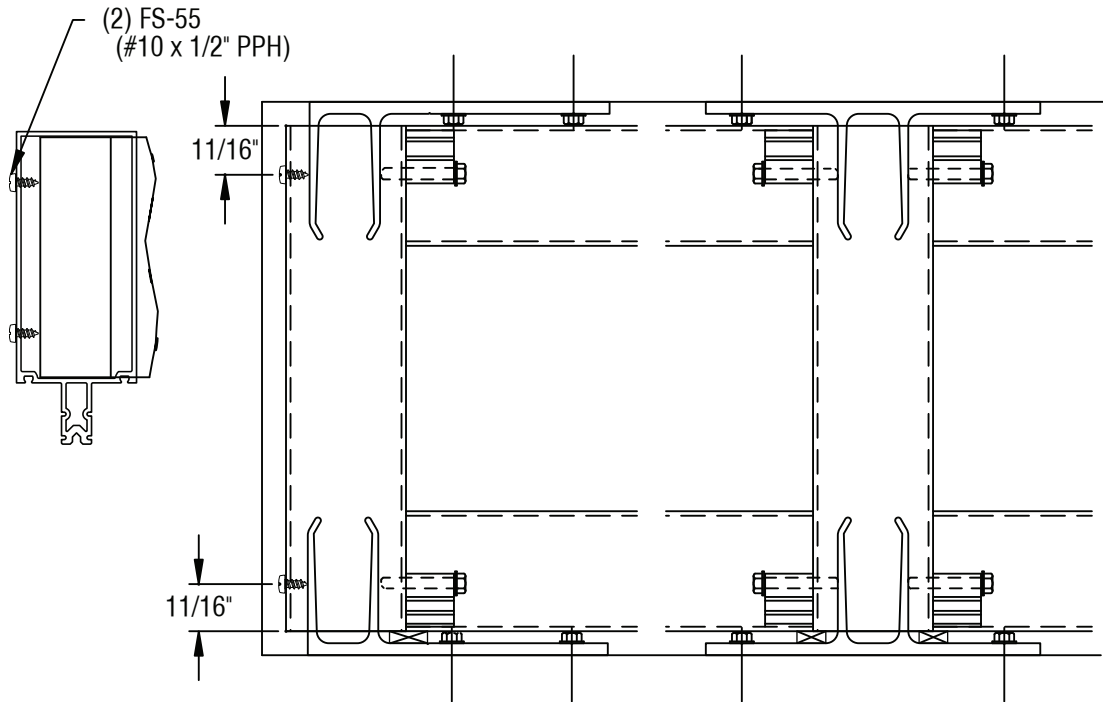


FIGURE 8
Single Span Anchorage

- 2.1.3 Check D.L.O. and diagonal dimensions every five bays to ensure correct spacing and frame squareness to prevent dimensional buildup.

TWIN SPAN INSTALLATION:

- 2.1.4 Attach shear blocks to all vertical members. **SEE FIGURE 7, page 10** for proper orientation on mullion.
- 2.1.5 When using "T" anchors, slide "T" anchors into top and bottom of vertical mullions. The "T" anchors are designed to clear the shear block fasteners. Prior to installation, when using jamb "F" anchor, install (2) FS-55 (#10 x 1/2" PPH) fasteners at each end of mullion to center "F" anchor in vertical. **SEE FIGURE 8.**
- 2.1.6 Install verticals plumb and level, ensuring proper spacing out from floor slab or beam. Place shims between vertical mullion and anchor at sill to evenly distribute deadload from wall. Anchor top and bottom of mullions to the structure.
NOTE: All vertical mullions can be installed first, followed by horizontal members.
- 2.1.7 Anchor the mullion to floor slab or beam. Do not overtighten bolt(s). For expansion anchors, back off nut 1/4 turn and stake bolt.
- 2.1.8 Check D.L.O. every five bays to ensure correct spacing to prevent dimensional buildup.

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FRAME INSTALLATION

MULTI-SPAN INSTALLATION:

- 2.1.9 Install “T” anchors at the sill condition prior to setting mullions. Prior to installing “F” anchor, install (2) FS-55 (#10 x 1/2” pph) fasteners at each end of mullion to hold jamb “F” anchor centered in vertical. Each “T” anchor must be anchored with a minimum of two anchor bolts. See approved shop drawings for bolt size and location.
- 2.1.10 Attach shear blocks to all vertical members. **SEE FIGURE 7, page 10** for proper orientation on mullion.
- 2.1.11 Install lower verticals plumb and level, ensuring proper spacing out from floor slab or beam. Place shims between vertical mullion and anchor at sill to evenly distribute deadload from wall.
- 2.1.12 Anchor the mullion to floor slab or beam. Do not overtighten bolt(s).
- 2.1.13 Repeat steps 2.1.11 and 2.1.12 until all lower verticals are in place. Check D.L.O. every five bays to ensure correct spacing to prevent dimensional buildup.
- 2.1.14 Slide “T” anchors into top of upper-most mullions. The “T” anchors are designed to clear the shear block fasteners.
- 2.1.15 Install the next vertical above, temporarily attaching mullions using fasteners on both sides of splice joint or by shimming between verticals to maintain proper splice joints (refer to approved shop drawings). **See page 29 & 30 for vertical splicing.** Attach top “T” anchor to building condition.
- 2.1.16 Anchor the mullion to floor slab or beam. Do not overtighten bolt(s). For expansion anchors, back off nut 1/4 turn and stake bolt.
- 2.1.17 When the wall is set, remove fasteners from joint at splices or remove shims.

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FRAME INSTALLATION

Continue with step 2.2 for remaining installation after all verticals have been erected.

- 2.2 Seal around shear blocks prior to installing each horizontal mullion. **SEE FIGURE 9 & 10.** Install horizontal mullions as shown in **FIGURE 12, page 15.** An alternate horizontal is available to allow exterior glazing of system. **SEE FIGURE 13, page 15.** When installing alternate horizontal, attach pressure plate using FS-322 (#12 x 1" HWH Drill Flex) @ 9" o.c. and torque to 60 in/lbs. Secure horizontals to shear block with two (2) FS-43 (#12 x 3/4" PPH) at each end of horizontal and to head and sill using (2) FS-55 (#10 x 3/4" pph).

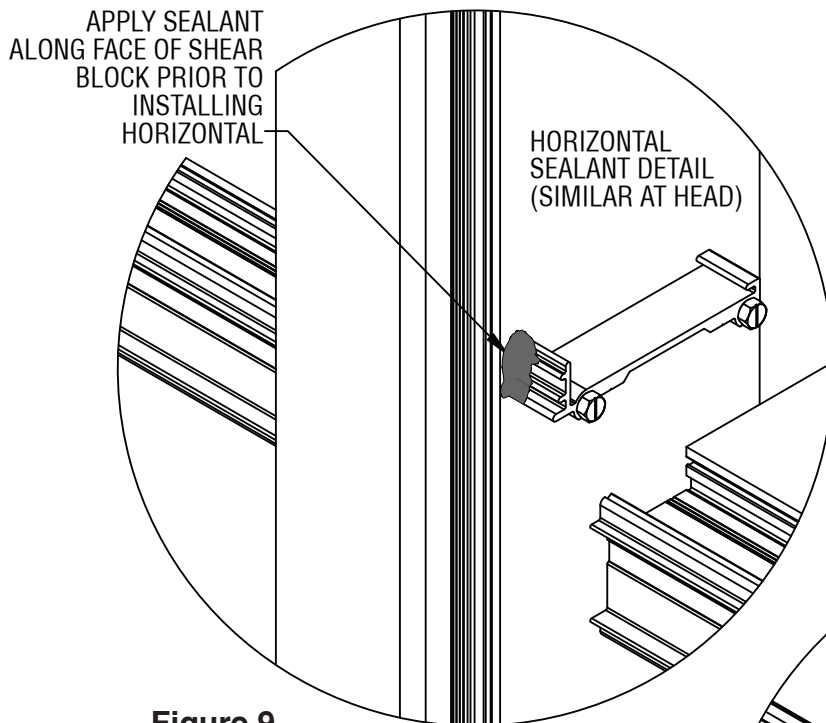
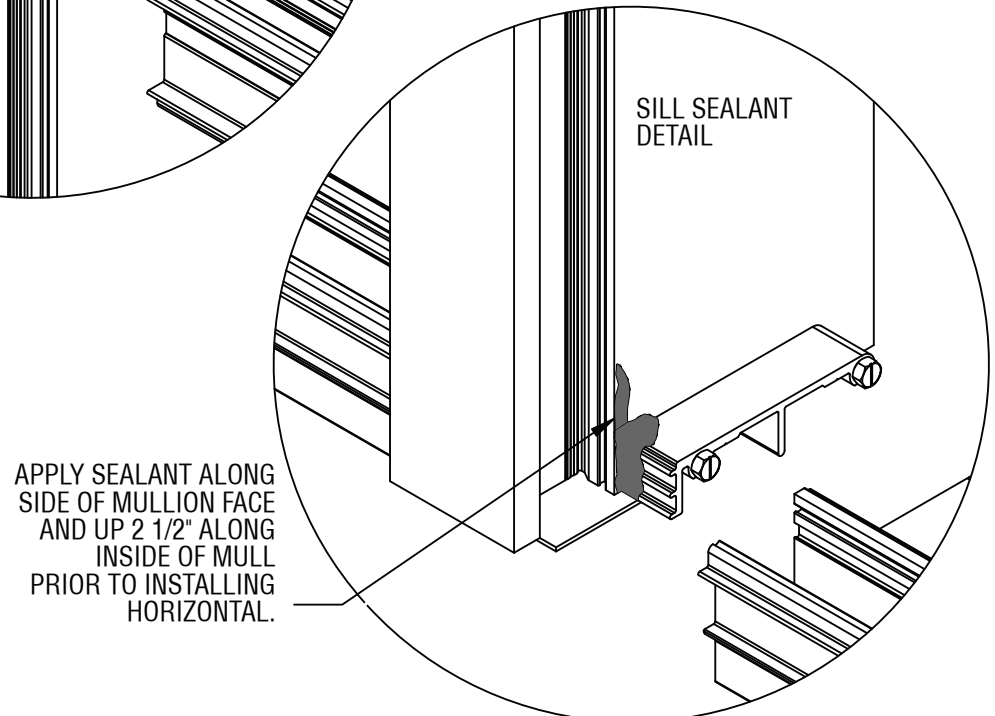


Figure 9
Shear Block Seal
@ Horizontal

Figure 10
Shear Block Seal @ Sill
(Similar @ Head)



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FRAME INSTALLATION

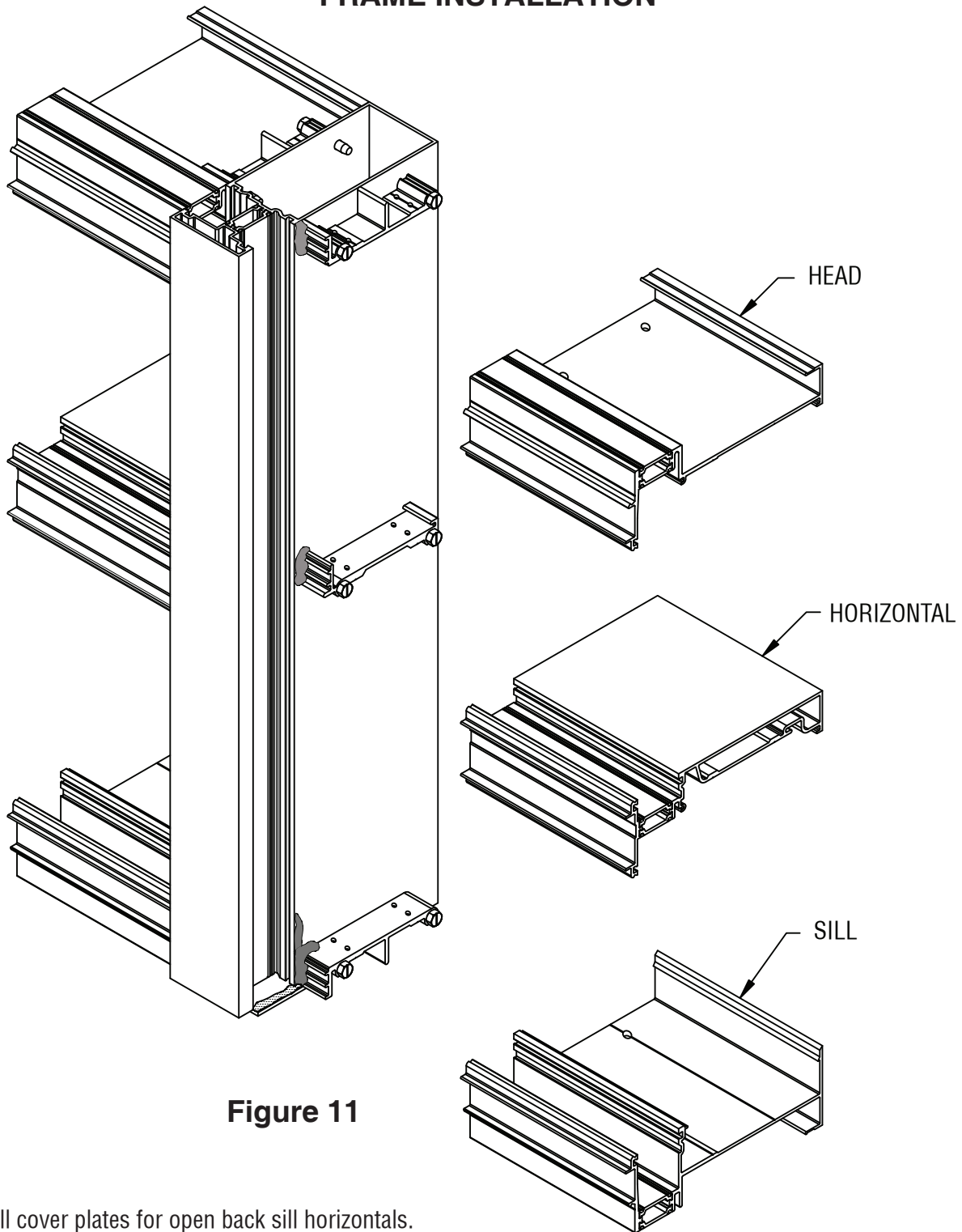


Figure 11

2.3 Install cover plates for open back sill horizontals.

2.4 Wipe excess sealant from exposed areas. Tool sealant into the joint between the horizontal and vertical at the glazing pocket. At the sill, apply a bead of sealant behind the glass pocket. **SEE FIGURE 12, page 15.** Avoid a buildup of sealant on the gasket surfaces or in the gasket reglets. Reference **figure 14, page 16** for additional sealant instructions. **TIP: Use a short piece of glazing gasket to clean out excess sealant in glazing reglets.**

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FRAME INSTALLATION

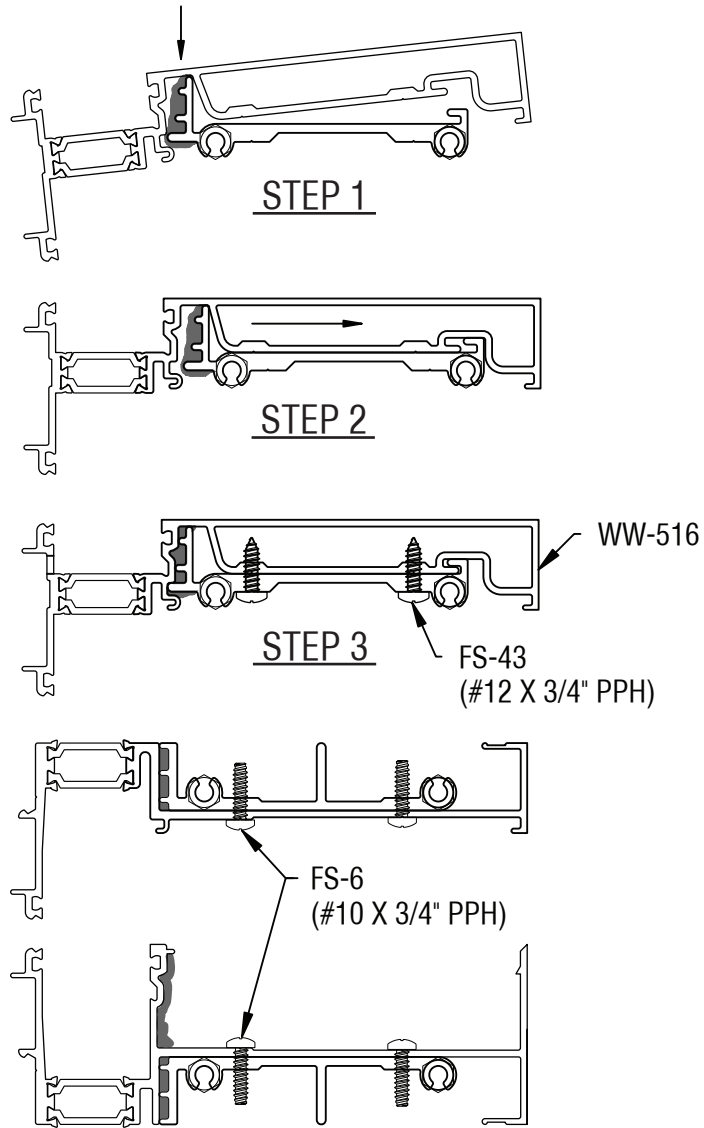


Figure 12
Horizontal Installation

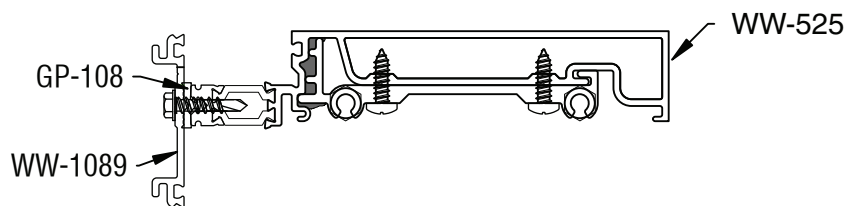


Figure 13
Alternate Horizontal for Exterior Glazing

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FRAME INSTALLATION

2.5 Zone Plug installation: See **FIGURE 14, Step 1, Step 2, (page 17) & Step 3, (page 18)**

Step 1: Seal gasket races; run sealant 1/2" down from top of stem of horizontal tooling sealant into the gasket race and glazing adaptor tracks.

Step 2: Apply generous bead of sealant to front and back legs of zone plugs.

Step 3: Apply additional sealant around glazing pocket of mullion and horizontal. Run sealant up 1" onto wall of mullion and top of horizontal, tooling sealant into edges of thermal strips.

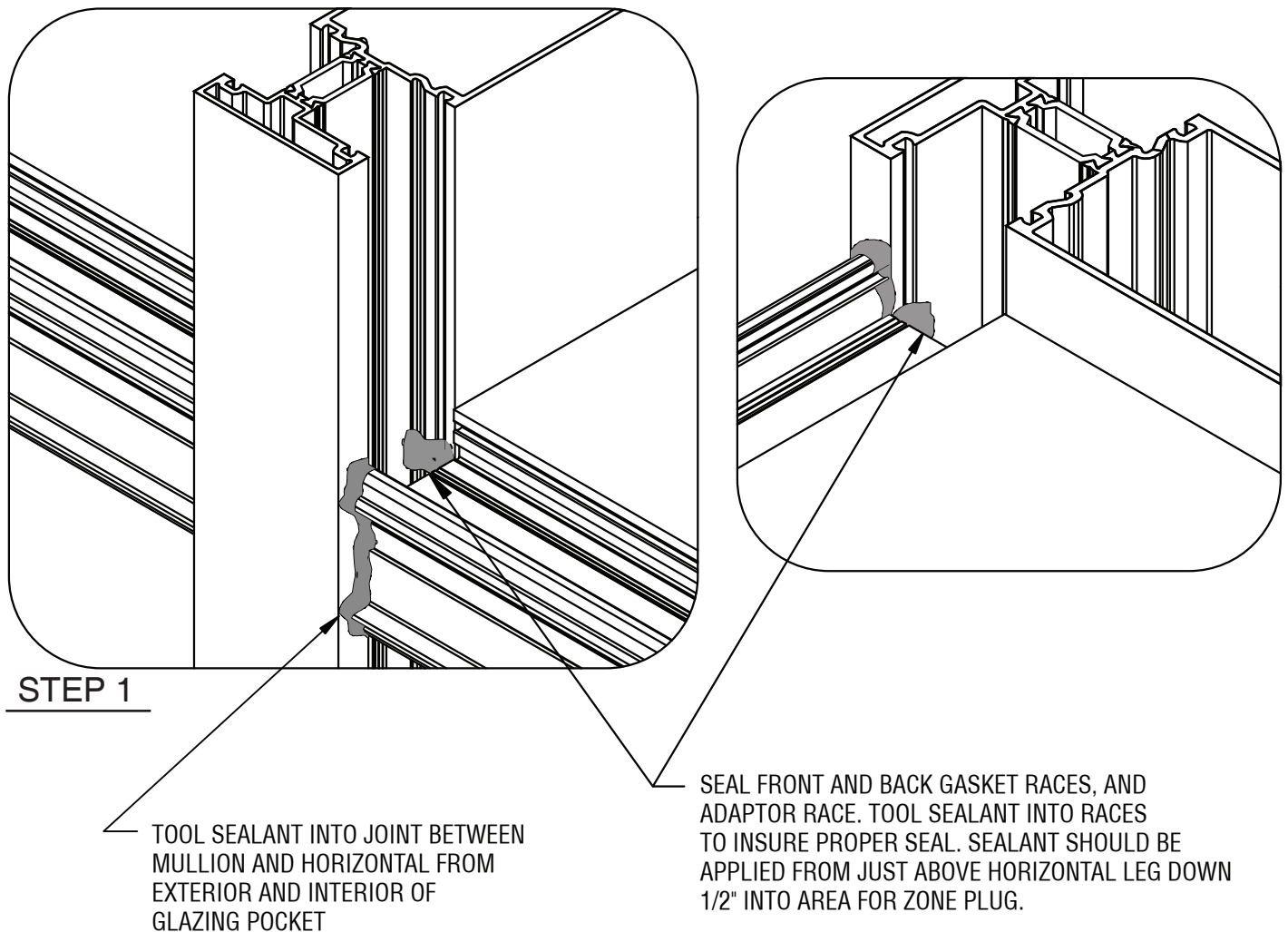


Figure 14
Zone Plug Installation
(Continued on page 17)

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FRAME INSTALLATION

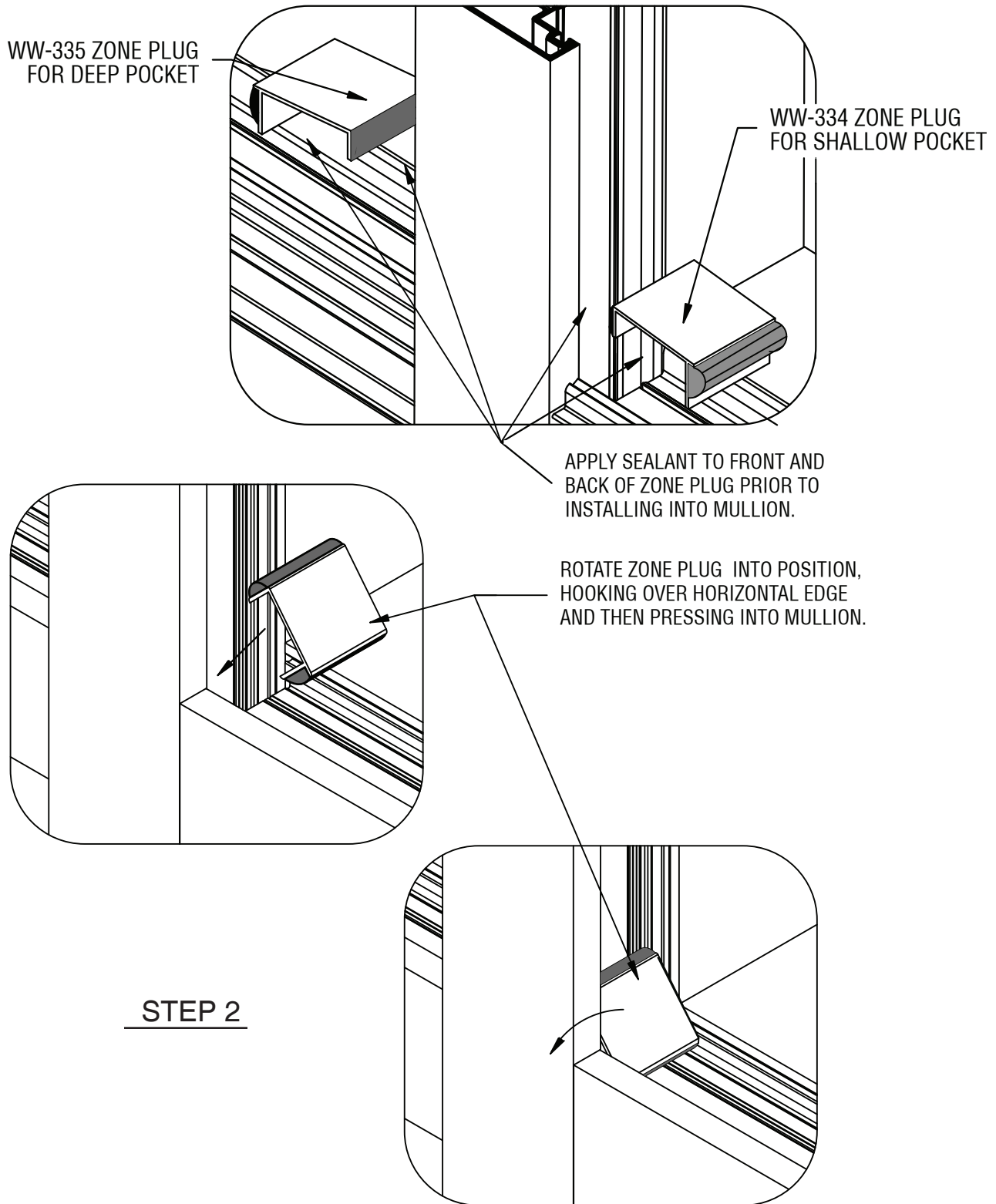


Figure 14 - continued
Zone Plug Installation

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FRAME INSTALLATION

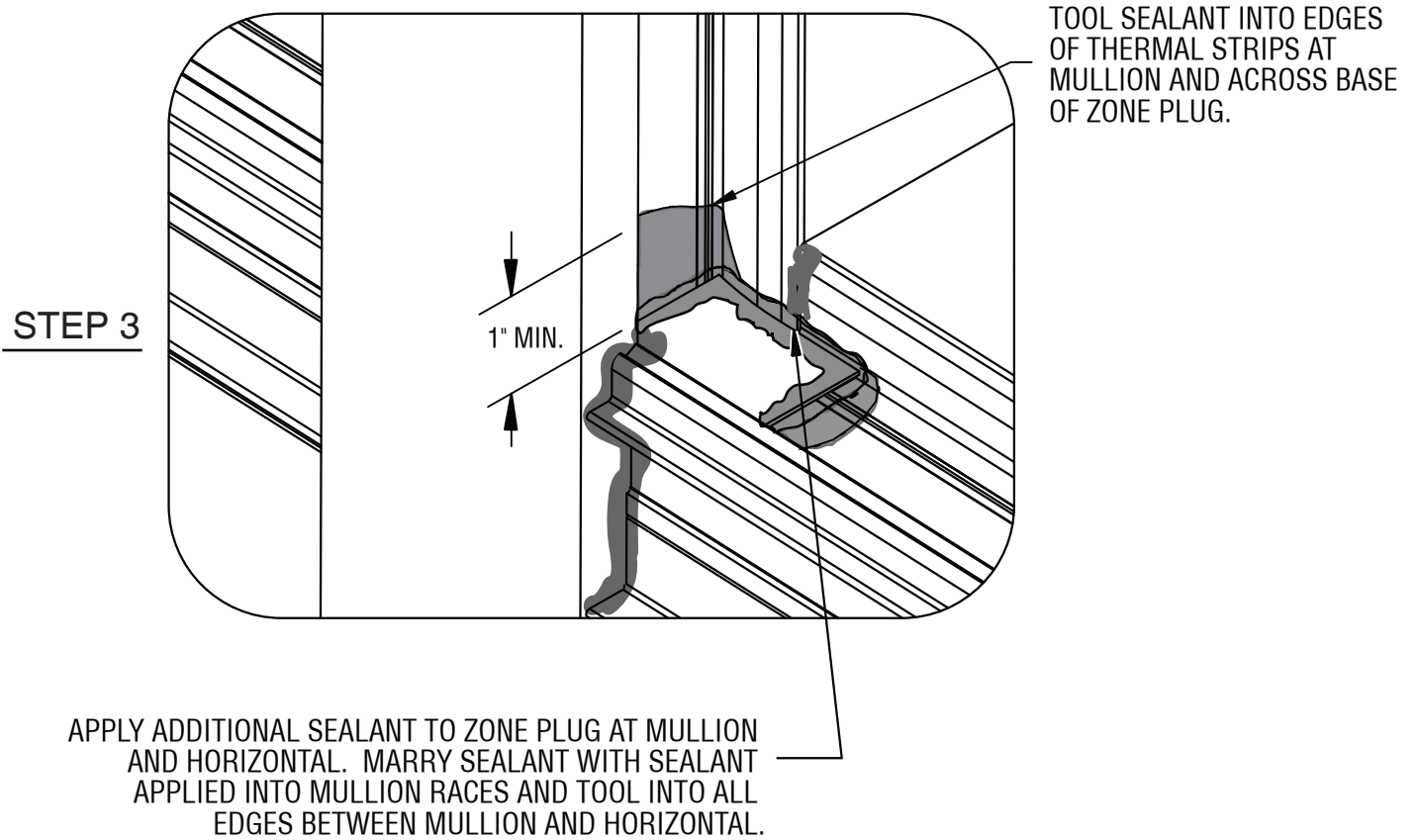


Figure 14 - continued
Zone Plug Installation

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FRAME INSTALLATION

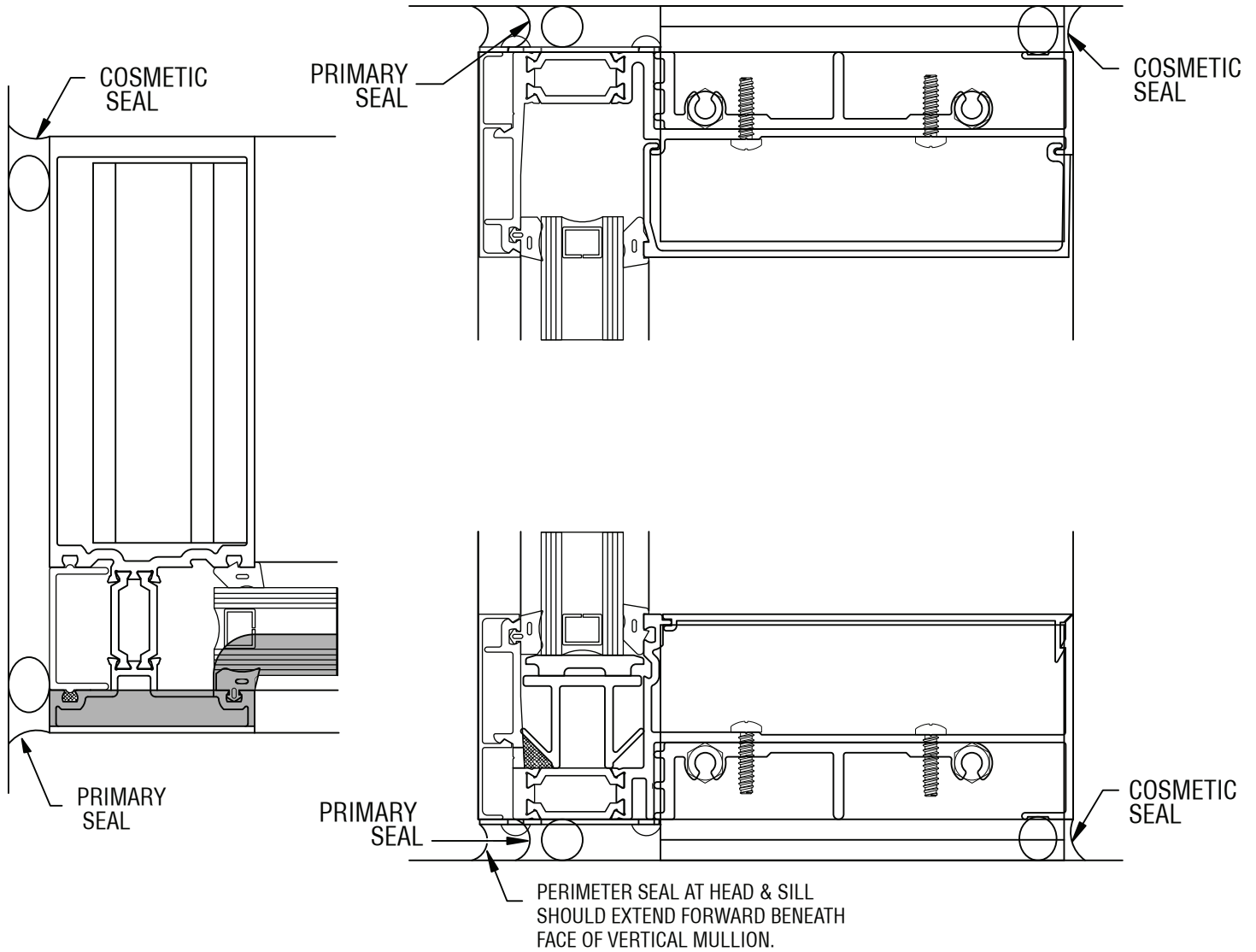


Figure 15
Perimeter Seal

- 2.6 When all framing members are installed, apply the perimeter seal. **SEE FIGURE 15.**
The interior perimeter seal is not required for system performance, but can be installed for cosmetic purposes.

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GLAZING

GLASS SIZE CALCULATION:

| | |
|------------------------------|---|
| Captured verticals and jambs | D.L.O. + 1" |
| All horizontals | D.L.O. + 1" |
| SSG verticals | Mullion Centerline to Centerline minus 1/2" |
| Corner verticals | SEE FIGURE 16 below |

Note: Steps 3.1 through 3.7 refer to standard glazing of 1" infill. For openings requiring transition glazing with adaptors, refer to "TRANSITION GLAZING", page 28.

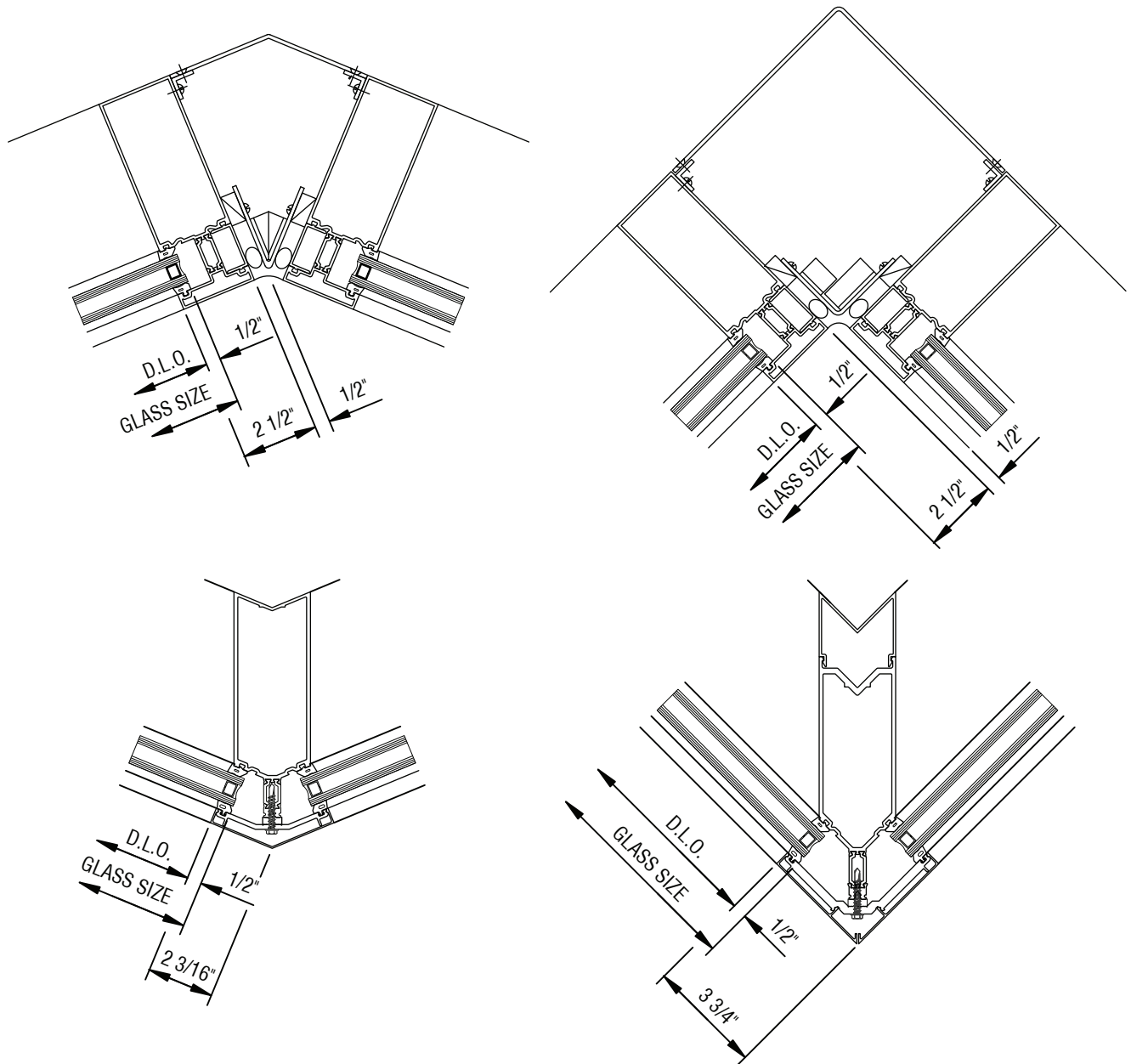


Figure 16
Glass Size Calculation at Corners

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GLAZING

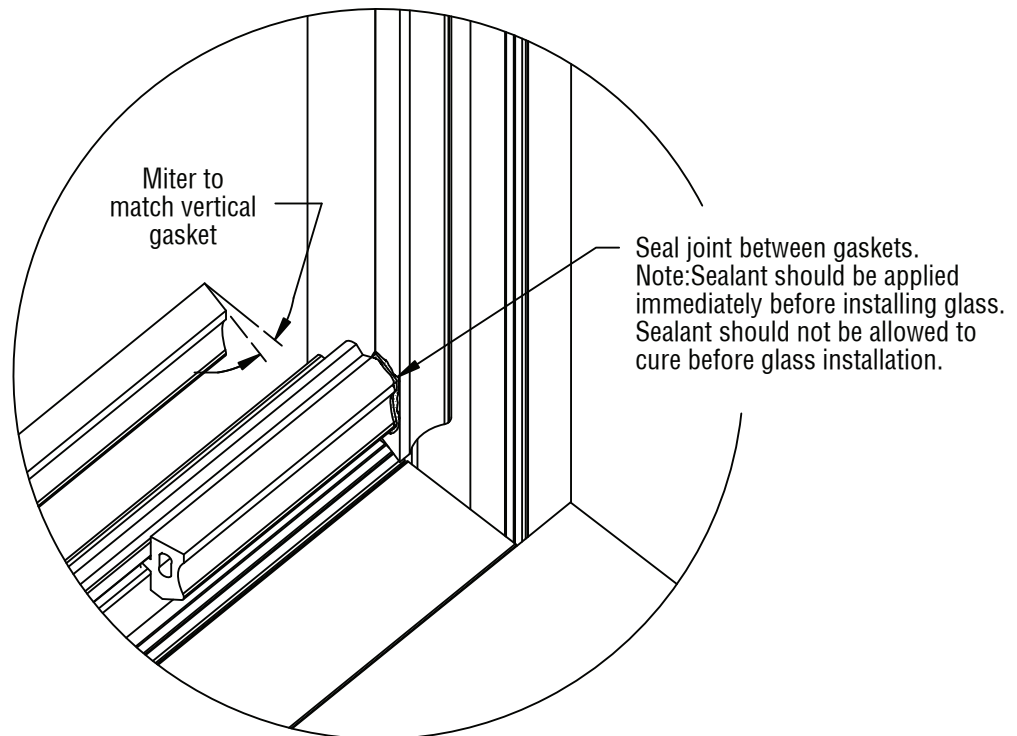


Figure 17

Seal at Gasket Corners

- 3.1 **Note:** To avoid silicone curing before glass is set in place and contamination from job-site debris, glazing prep must be performed as each opening is glazed. Do not pre-seal the gaskets in the entire frame; install and seal gaskets as you are ready to set glass in each opening.

Install exterior gaskets, both horizontal and vertical, installing vertical gaskets first. If the vertical mullion is spliced, run gasket through the splice joint, setting gasket in fresh silicone at splice joint, trimming the gasket dart as necessary to form an airtight seal. Glazing gaskets at verticals run through; horizontal gaskets butt into vertical gaskets. Crowd the gaskets into corners, cutting the horizontal gaskets at an angle to match bevel on vertical gaskets. Pulling the horizontal gasket back, seal joint between the corners of the gaskets just prior to setting the glass. Release the gasket back to its original position, making sure sealant fills the entire joint.

- 3.2 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or deadload charts. Lubricating the top of the setting block will help insure proper setting of glass. If required, install GP-101 side block in shallow pocket of vertical before glass is installed. Hold GP-101 in place with silicone. **SEE FIGURE 18, page 22.** **Note: Consult glass manufacturer for correct setting block location & length for glass sizes in excess of 40 sq. ft. REFER TO STEP 3.10, PAGE 24 IF GLAZING SSG VERTICALS.**
- 3.3 Set glass in opening from the interior. System should be glazed from bottom to top. Place one edge of the glass into the deep pocket of the vertical. Swing the glass into the adjacent vertical pocket and lower onto setting blocks, ensuring that the glass bite is equal on all sides.

CAUTION: Be certain that glass is placed firmly against exterior gasket to ensure a proper seal and to avoid binding of the glass on the setting block.

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GLAZING

- 3.4 Temporarily hold glass in place at each corner with 4" long interior wedge gaskets. Locate at the corners for proper sealing of the gasket joint. Temporary pieces of wedge may also be required at the center of each horizontal if glass edges are greater than 4' in length.
- 3.5 If required, install GP-115 "W" blocks at centerline of each lite along vertical edges (Deep Pocket). For framing that may be subjected to seismic events, consult glass manufacturer for preferred location.
- 3.6 Repeat steps 3.1 through 3.5 until all glass is set, working row by row up the elevation.

For elevations requiring vertical mullion splices, refer to the **VERTICAL SPLICING SECTION, page 29 & 30, before continuing the installation.**

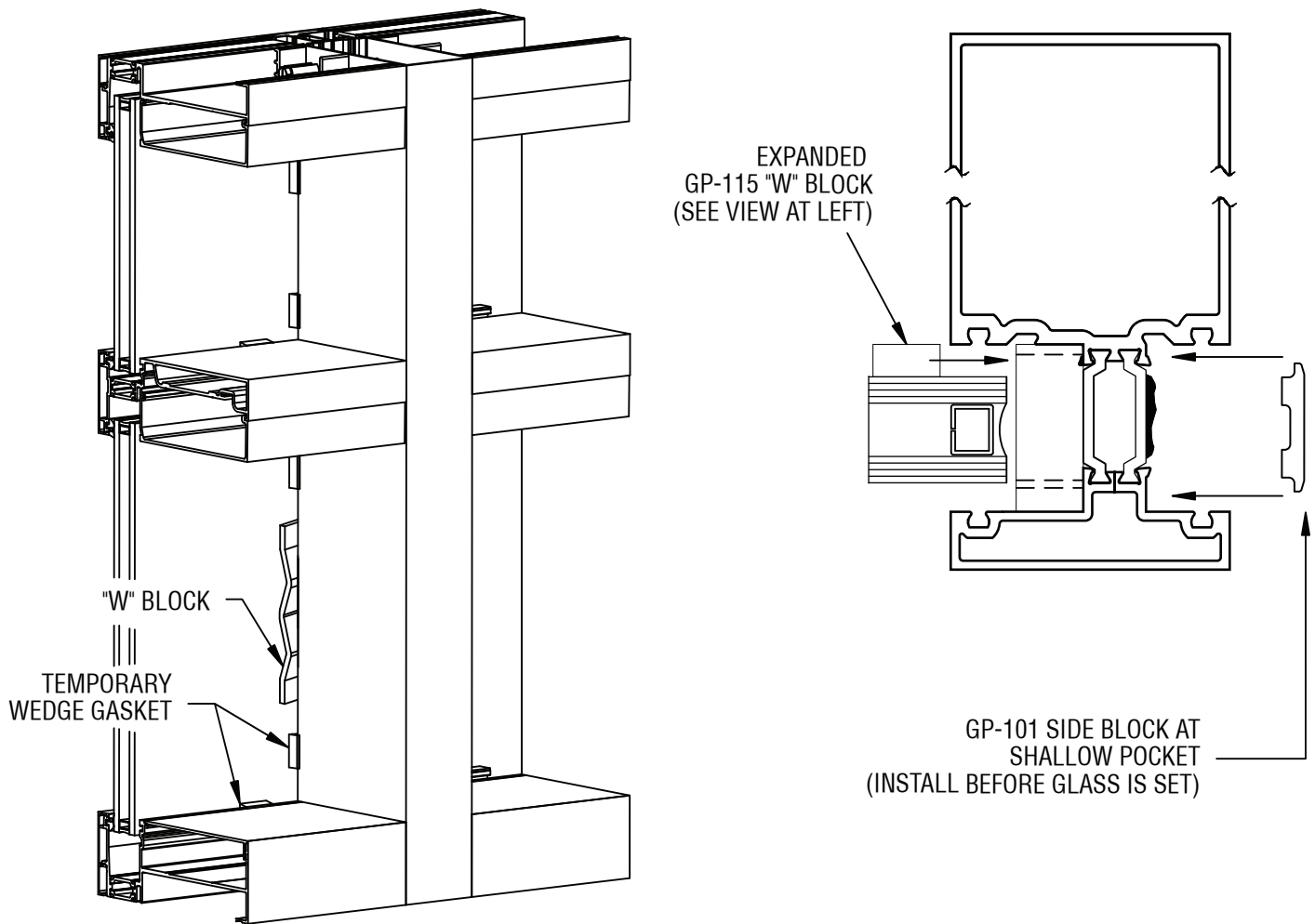


Figure 18
Glazing Retainers

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

GLAZING

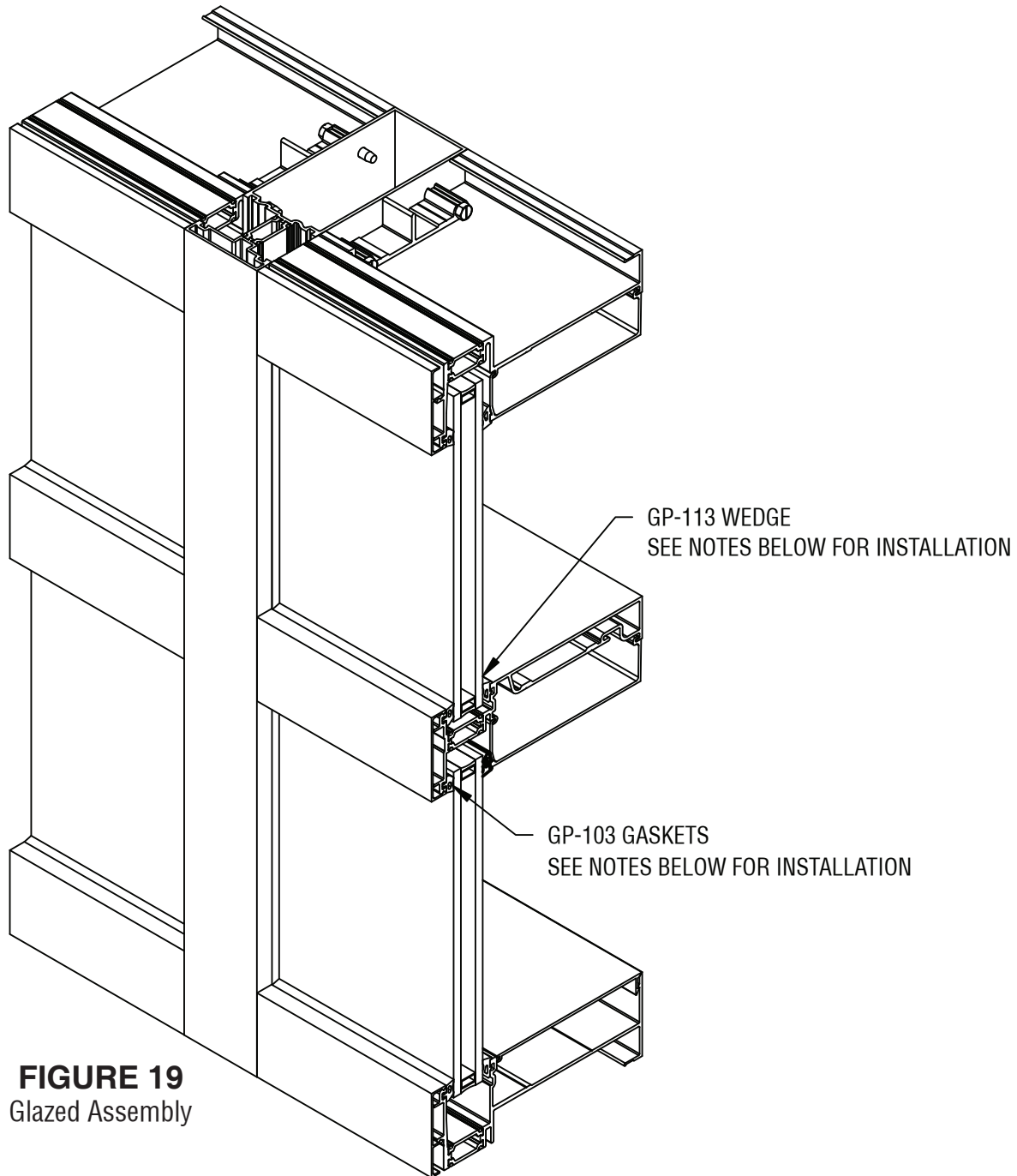


FIGURE 19
Glazed Assembly

GLAZING NOTES:

- 1) INTERIOR GASKETS: GP-113 WEDGE GASKET
EXTERIOR GASKETS: GP-103 PUSH-IN GASKET
- 2) REMOVE GASKETS FROM REELS AND ALLOW TO RELAX OVERNIGHT BEFORE INSTALLING.
- 3) CUT GASKETS 1/4" LONGER PER FOOT OF ALUMINUM EXTRUSION TO ALLOW FOR RELAXATION.

- 3.7 Install horizontal face covers, leaving an equal gap at each end. Make sure the weep hole is on the bottom. Install covers using a wood block to protect the cover and a dead blow soft face hammer.

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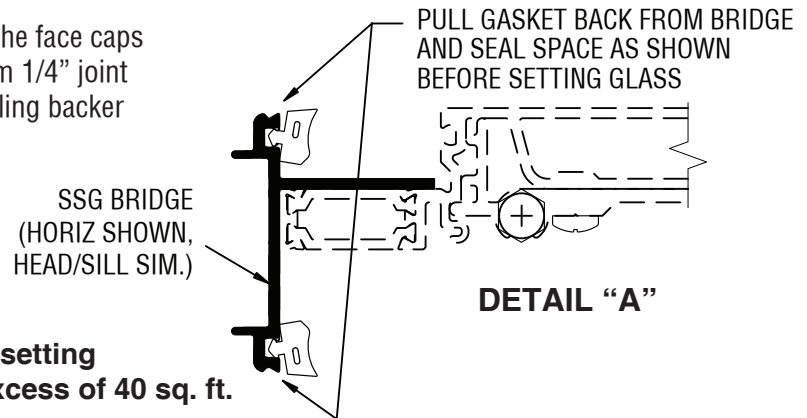
GLAZING @ SSG MULLIONS

- 3.8 Glazing using the SSG mullions typically will be accomplished by setting glass from the interior of the building. If special conditions exist which mandate setting glass from exterior, see page 26.
- 3.9 Prior to installing glass, horizontal bridges must be installed and sealed (**See FIGURES 21 thru 23, page 25**).
Note: The bridges shown are for interior glazing only.

- 3.10 Horizontal face caps should be installed before glass. The face caps should be spliced every three bays and have a minimum 1/4" joint between each cap. This joint should be sealed by installing backer rod between caps and then applying sealant.

- 3.11 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or deadload charts. Lubricating the top of setting block will help insure proper setting of glass.

Note: Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft.



- 3.12 Install horizontal exterior gasket, running gasket across horizontals and bridges. Apply sealant along top edge of gasket at each bridge, at upper and lower gasket, just prior to installing glass. **See DETAIL "A" above.** If a gasket must be spliced, ends must be sealed and butted together. Cut gaskets 1/4" longer per foot of aluminum extrusion to allow for relaxation."
- 3.13 Set glass in opening from the interior. Place one edge of glass in front of the SSG mullion and swing the glass into the adjacent vertical pocket. Lower onto setting blocks. It may be necessary to leave glass offset in openings until the end of the run is complete, then slide each lite over to center into openings. The glass should be positioned to leave a 1/2" joint between each lite of glass.
- 3.14 Once glass is centered into opening, install temporary clips (SPW-PP-3) at 24" o.c. or minimum 3 per lite. Install GP-102 spacer along each side of vertical mullion pushing spacer behind glass to create a sealant joint of minimum 3/8" depth. Spacer should be cut vertical opening plus 1" and placed in opening to extend 1/2" above and below edge of horizontals. This joint should then cleaned using isopropyl alcohol and sealed using an approved structural silicone. **See FIGURE 20.**
- 3.15 The exterior joint between the glass should be sealed by installing backer rod and sealant into the joint.

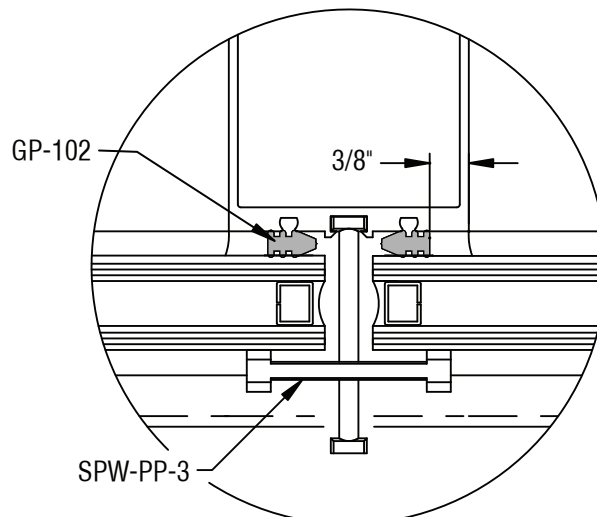


FIGURE 20
Glazing Retainer

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

GLAZING @ SSG MULLIONS

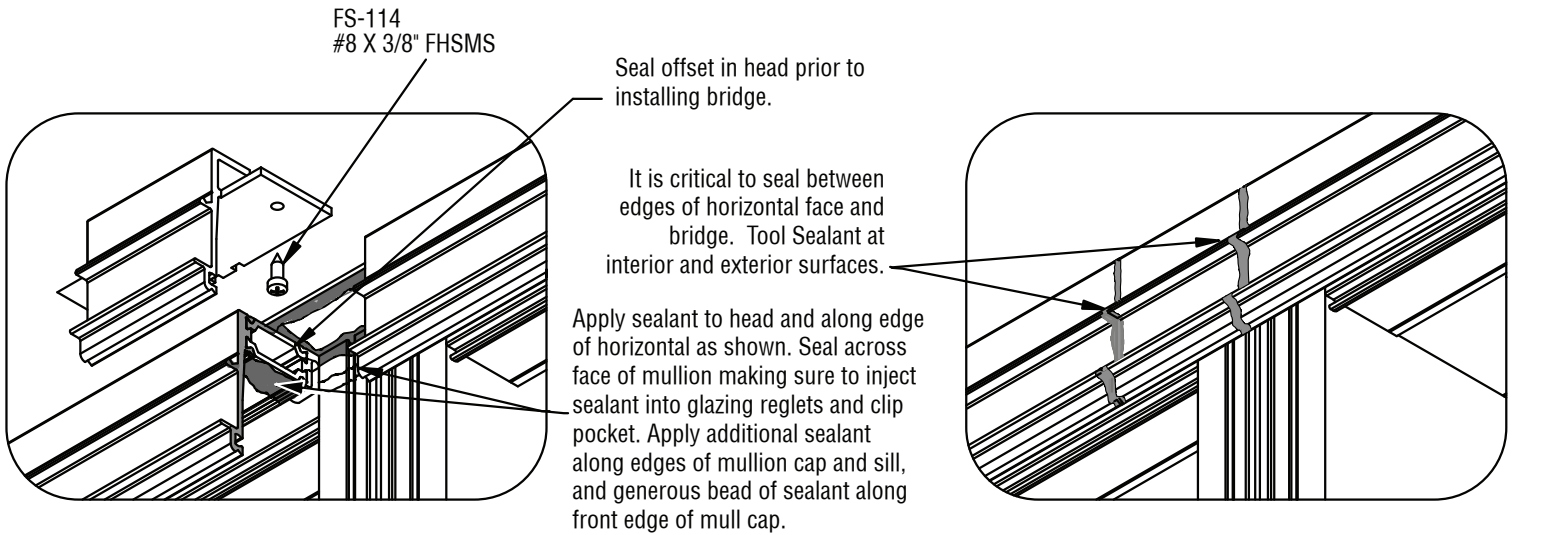


FIGURE 21

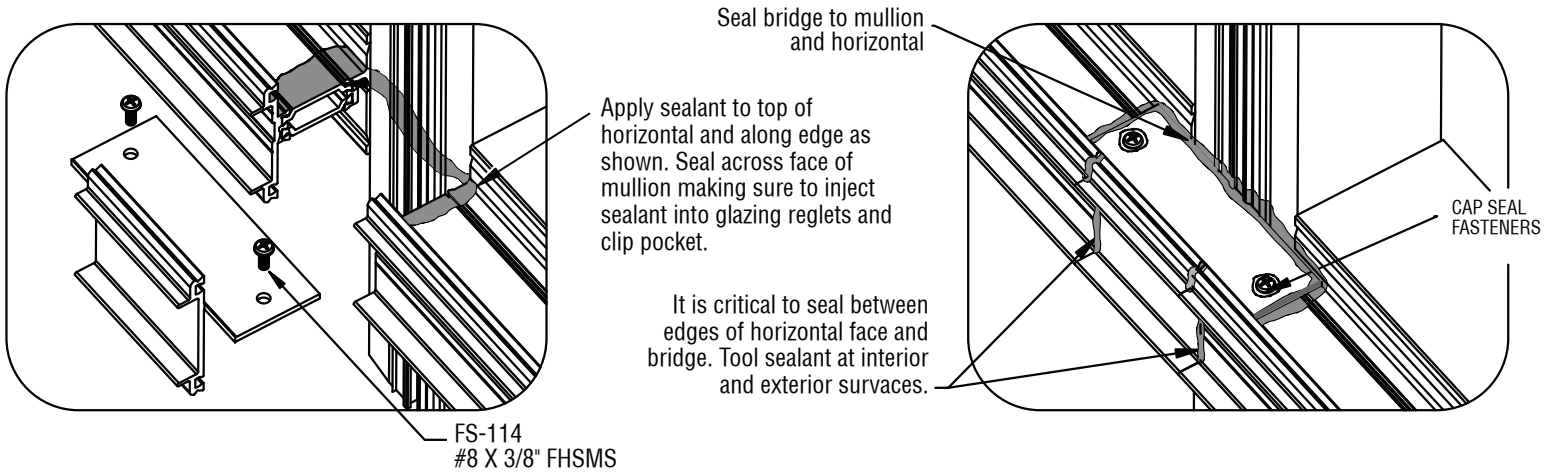


FIGURE 22

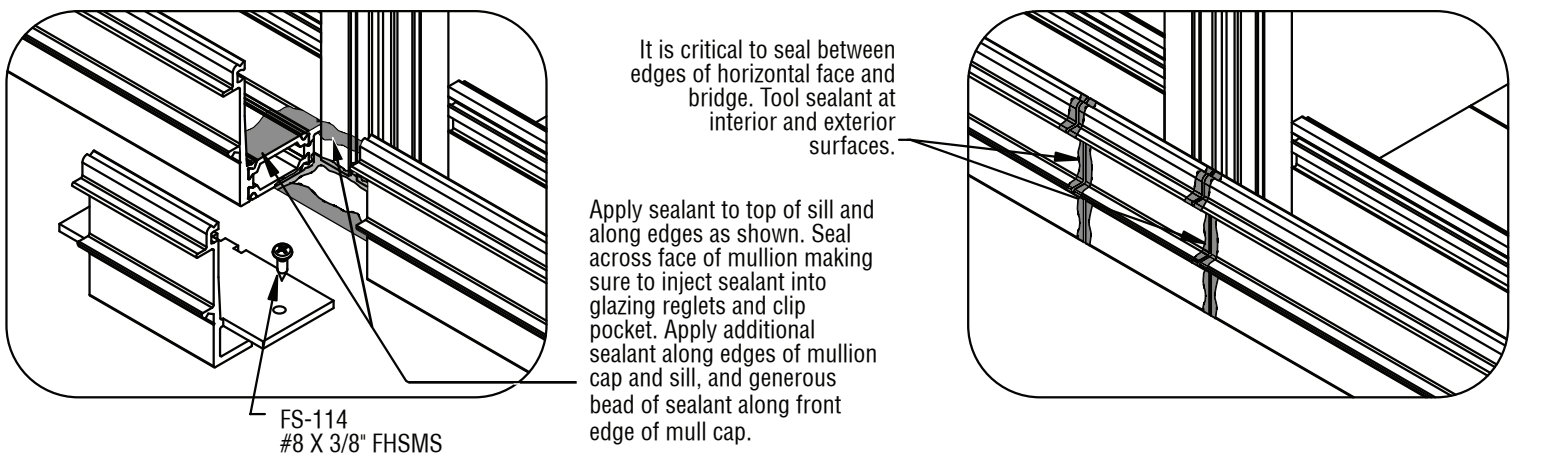


FIGURE 23

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

EXTERIOR GLAZING

- 3.16 It may be necessary on lites located adjacent to building floors and mid-anchors to glaze from exterior. A horizontal with removable pressure plate must be used at top of lite to allow for exterior glazing. See FIGURE 13, page 15. If exterior glazing SSG system, WW-300 bridges will be installed at each horizontal. **See FIGURES 37 & 38, page 34.**
- 3.17 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or deadload charts. Lubricating the top of setting block will help insure proper setting of glass. **Note: Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft.**
- 3.18 Glazing captured system: Install exterior gaskets running the vertical gasket through and butting horizontal gaskets between. Joint between vertical and horizontal gaskets must be sealed. Horizontal gaskets should be mitered per **FIGURE 17, page 20.** Crowd gasket using formula of 1/4" per foot of aluminum extrusion. Note: Gaskets will be installed at verticals and sill of opening when using pressure plate horizontal at head prior to installing glass.
- 3.19 Glazing SSG system: Install horizontal gaskets continuous across opening at lower horizontal. Crowd gasket using formula of 1/4" per foot of aluminum extrusion.
- 3.20 Set glass in opening from the exterior. Place one edge of glass in deep vertical pocket or in front of the SSG mullion and swing the glass into the adjacent vertical pocket. Lower onto setting blocks. When glazing captured system, slide glass until centered in opening which should provide 1/2" glass bite on all edges. It may be necessary to leave glass offset in openings on the SSG system until the end of the run is complete, then slide each lite over to center into openings. The glass for SSG system should be positioned to leave a 1/2" joint between each lite of glass.
- 3.21 Install pressure plate on horizontal at top of opening. Gaskets should be installed into pressure plates prior to installation. The GP-108 thermal isolator must be installed onto horizontal prior to attaching pressure plate. Attach pressure plate using FS-322 (#12-14 x 1" HWH Drill Flex) @ 9" o.c. torque to 60 in/lbs.
- 3.22 Seal ends of pressure plate to sides of vertical mullions. Seal ends of horizontal gaskets to vertical gaskets. **See FIGURE 24, page 27.**
- 3.23 After installation of glass is complete, install GP-113 interior wedge around. At SSG verticals install GP-102 spacer along each side of vertical mullion pushing spacer behind glass to create a sealant joint of minimum 3/8" depth. **See FIGURE 20, page 24.** Spacer should be cut D.L.O. plus 1" and placed in opening to extend 1/2" above and below edge of horizontal. This joint should then cleaned using isopropyl alcohol and sealed using a structural silicone. When using pressure plates for SSG system, extend a maximum of 3 bays, leaving a 1/2" joint located at mullion centerline. Insert backer rod between pressure plates and seal. **See FIGURE 25, page 27.**
- 3.24 On SSG system, seal the exterior joint between the glass by installing backer rod and sealant between the lites. Marry this seal into the gaskets on each end.
- 3.25 Horizontal face caps should be centered in opening. The face caps on SSG system should be spliced every three bays and have a minimum 1/4" joint between each cap. This joint should be sealed by installing backer rod and sealant between caps. **See FIGURE 26, page 27.**

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EXTERIOR GLAZING

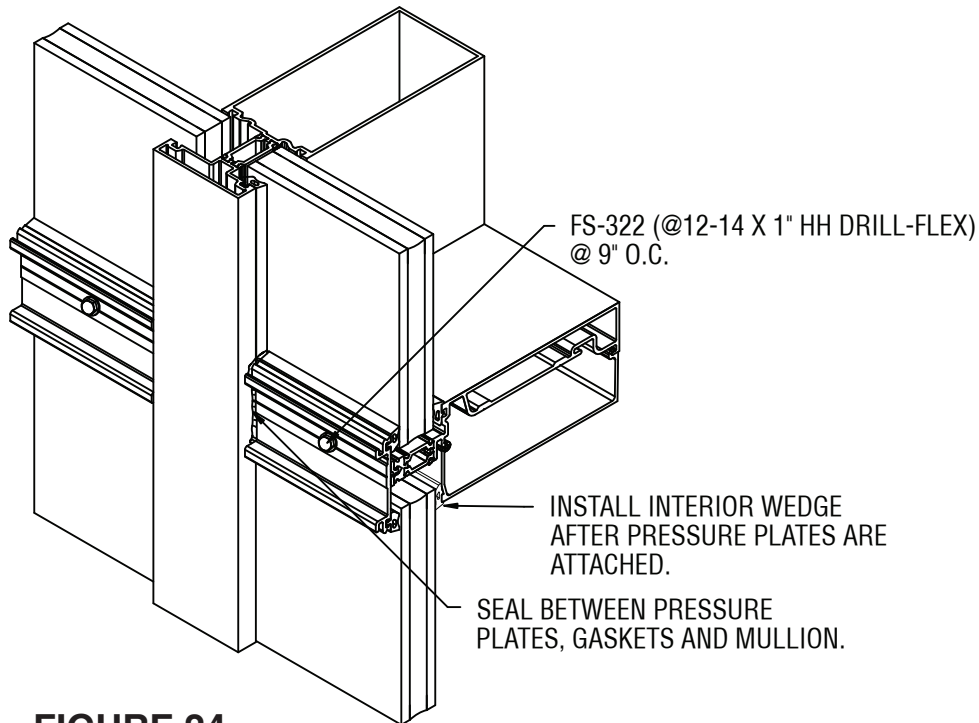


FIGURE 24

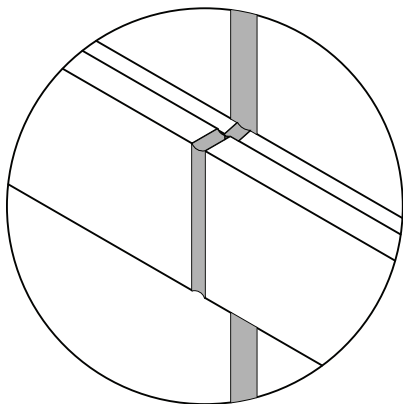


FIGURE 26

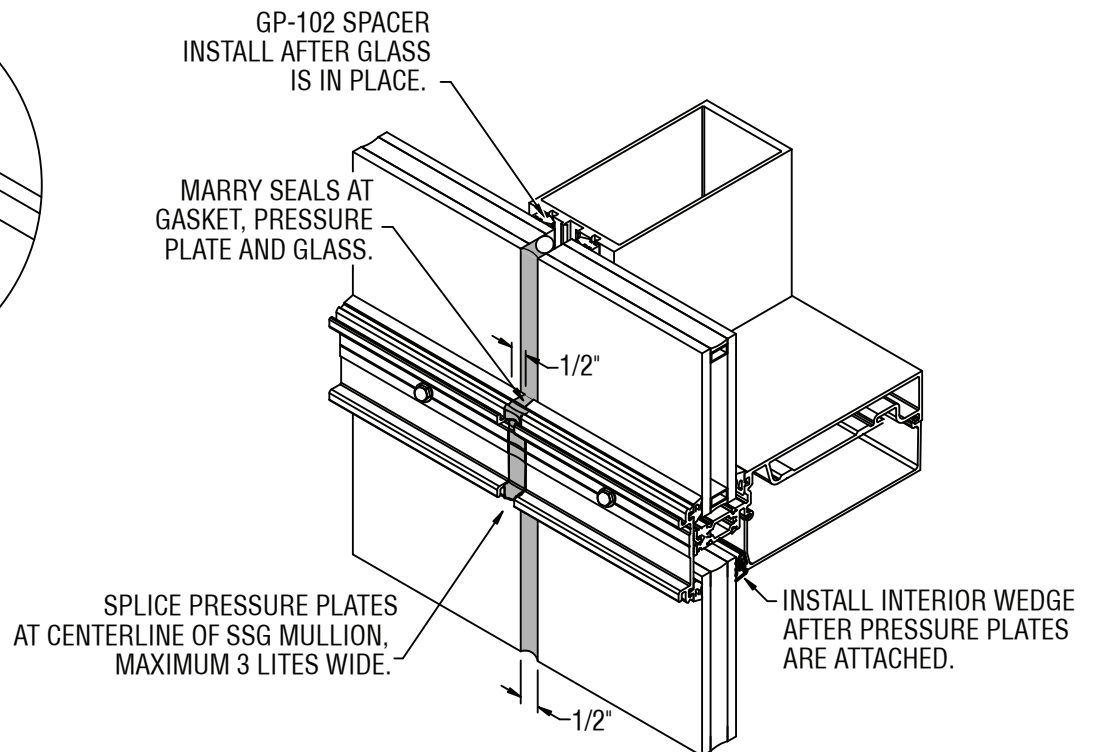


FIGURE 25

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

TRANSITION GLAZING

- A.1 Install vertical adaptors first, leaving an equal overlap into each pocket. **SEE FIGURE 27.** Refer to **VERTICAL SPLICING, page 29** if vertical mullion is spliced within a spandrel lite. Transition adaptors must be installed after mullion splice is sealed.
- A.2 Install horizontal adaptors maintaining an equal gap at each end. Once all adaptors have been installed in the opening, seal all corner joints. Run a bead of sealant in the groove formed between the adaptor and mullions. This seal must be continuous around the opening and must marry with the seal at the corner joints. **SEE FIGURE 28.**

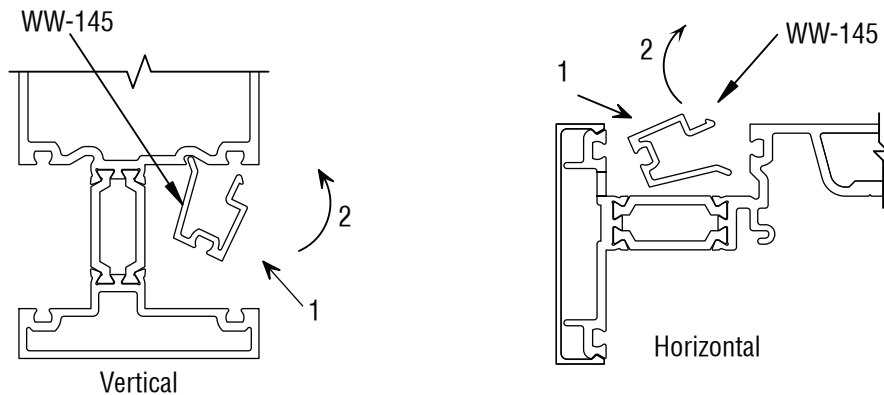


Figure 27
Installing Glazing Adaptors

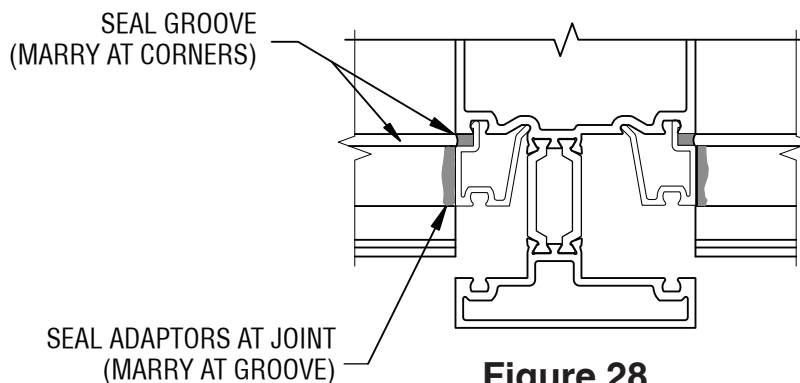


Figure 28
Sealing Glazing Adaptors

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

VERTICAL SPLICING

Refer to **MULTI-SPAN INSTALLATION**, page 12 for splice sleeve installation.

Follow sealant manufacturer's guidelines for proper joint width based on anticipated movement. A minimum 1/2" joint is recommended. **Note: Standard splice sleeves are engineered to accommodate thermal expansion only. They do not allow for movement in floor levels.** Refer to approved shop drawings for special circumstances, or contact your nearest Vistawall facility.

- B.1 Apply bond breaker tape to the face of backmember splice sleeve, returning back on the sides 1" minimum. Apply bond breaker tape around entire perimeter of face splice sleeve. Insert backer rod into the hollow section at the struts. Seal all around splice joint from the face to the 1" return on the backmember. Tool sealant to follow the contour of the glazing reglets to insure a good seal when gaskets are installed. **SEE FIGURE 29.**
- B.2 Discontinue glazing adaptors at splice joints. Install backer rod into cavity and seal between adaptors. Marry this seal with the main seal at the mullion. Refer to step B.1 above for sealing notes at the glazing reglets.

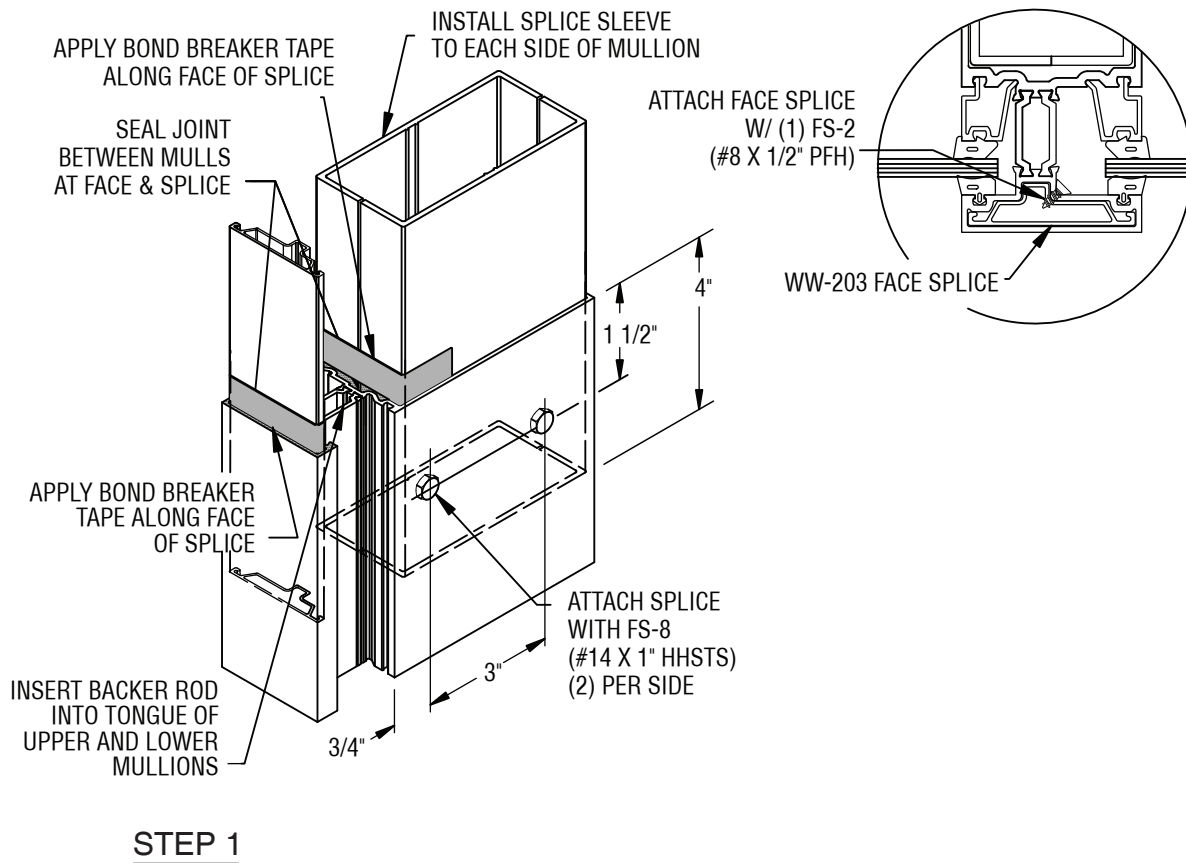


Figure 29
Sealing Glazing Adaptors

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

VERTICAL SPLICING

ATTACH SPLICE WITH FS-8 (#14 X 1" HHSTS)
(2) PER SIDE (FASTENERS REQUIRED
FOR DEADLOAD SPLICE ONLY.
REMOVE FOR EXPANSION CONNECTION)

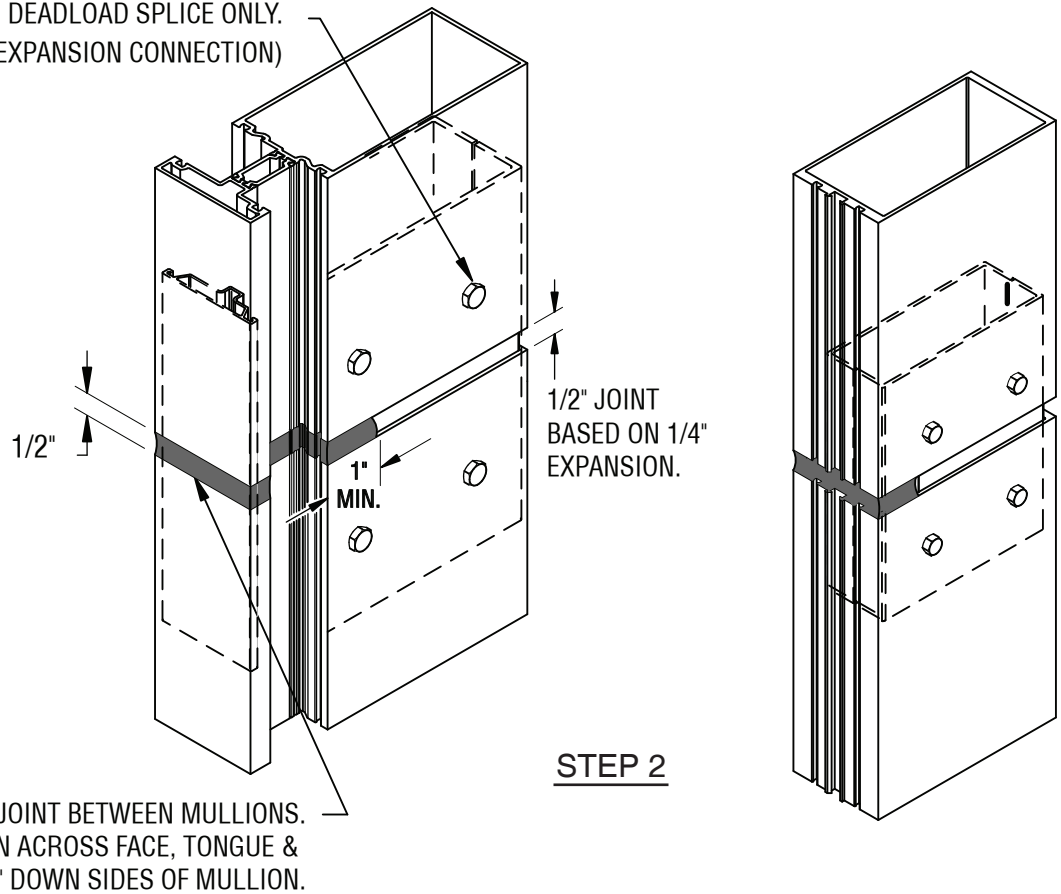


Figure 29 - continued
Sealing Splice Joint

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

ENTRANCE FRAMES

All door framing components are shipped fabricated from the factory. The main curtain wall framing can be erected prior to installing the door subframe.

- C.1 Curtain wall verticals and door subframe run through to finish floor. Bed adjacent curtain wall verticals in sealant and anchor to floor per approved shop drawings.
- C.2 SUBFRAME INSTALLATION:
- C.2.1 Attach TH-44 threshold clip to bottom of each jamb subframe with two (2) FS-256 #8 x 1 1/2" Phillips Round Head Screws.
- C.2.2 Install WW-341 pocket filler into pocket of vertical facing the door opening. Install horizontal glass stop, then install CH-93 channel and attach channel with FS-55 (#10 x 1/2" pph) at 12" O.C. through face of horizontal. Cap seal all fasteners, then install the horizontal face cap.
- C.2.3 Bed subframe in sealant and anchor to curtain wall framing members with FS-325 #12-14 x 1 1/2" Drillflex at 18" O.C. Seal joint between jamb and header subframe. Seal also the tops of the jamb subframe. **SEE FIGURE 30.**

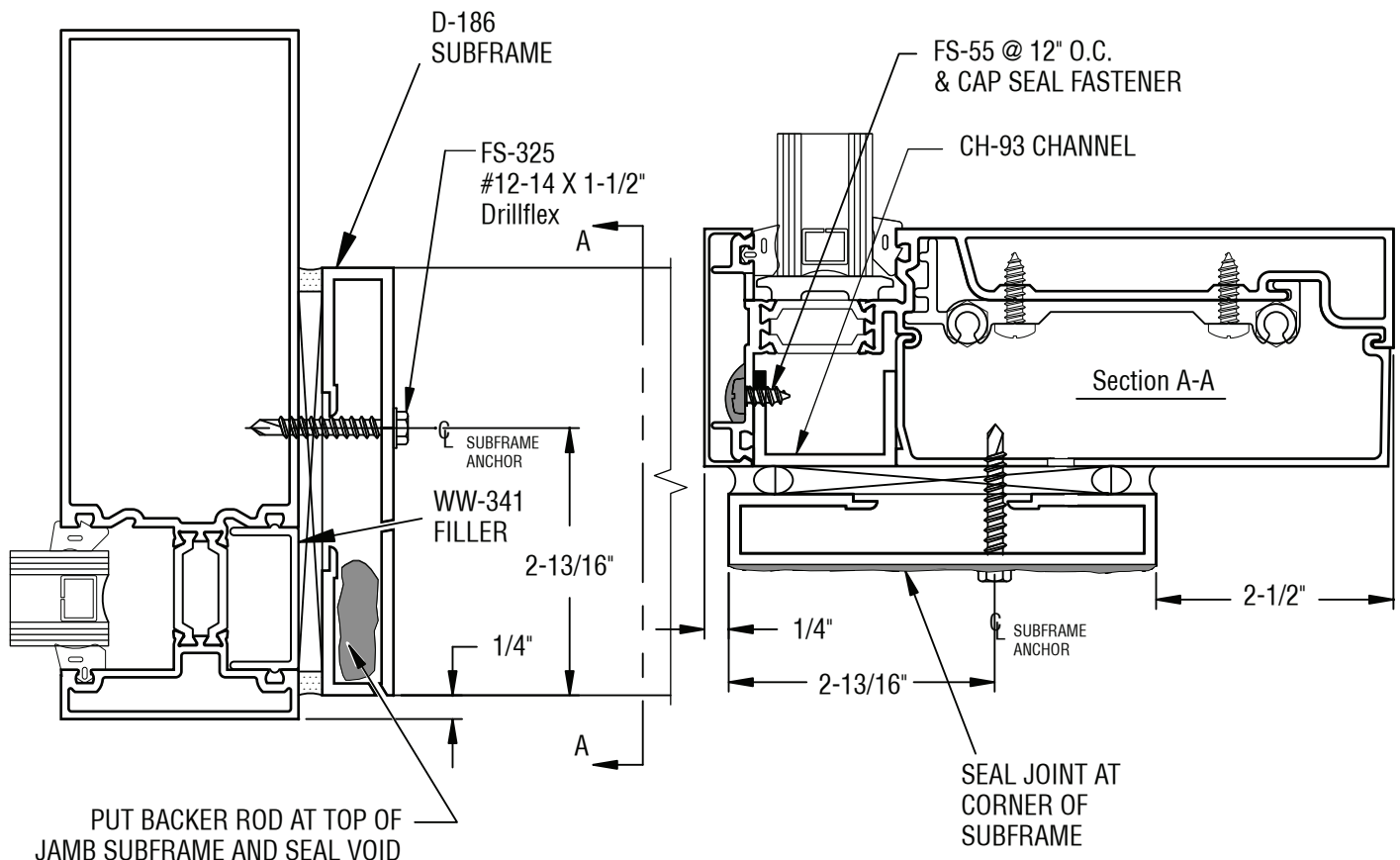


Figure 30
Attaching Subframe

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

ENTRANCE FRAMES

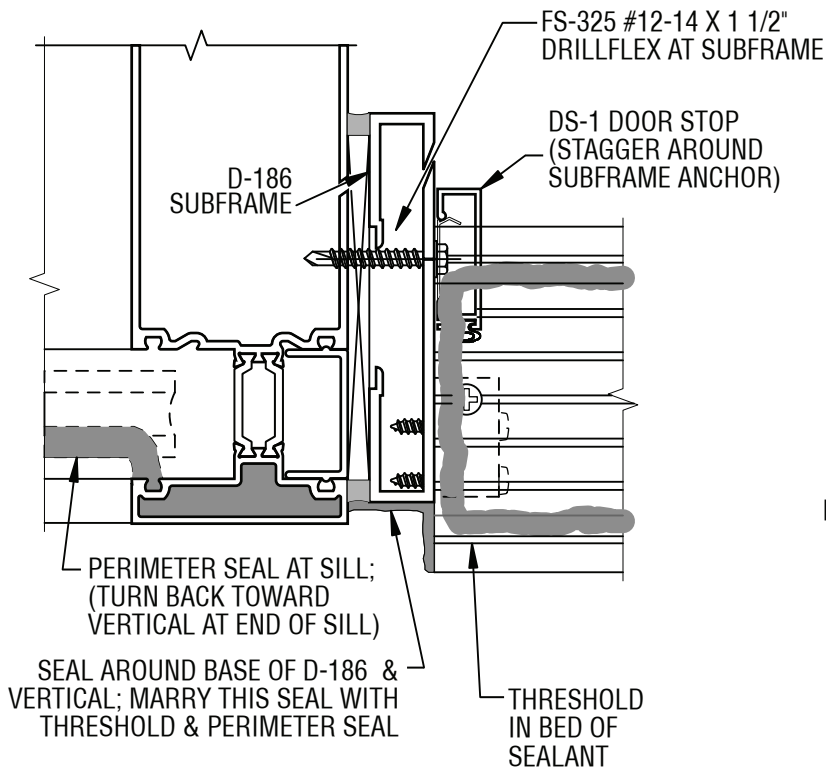


Figure 31
Sealing Verticals at Entrance Doors

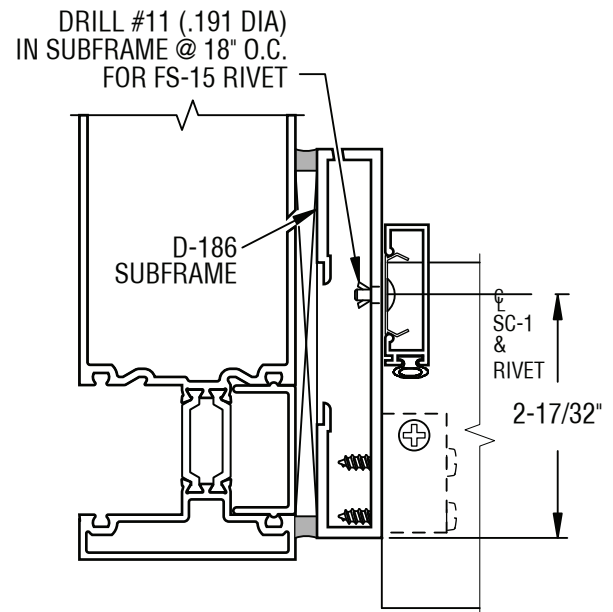


Figure 32
Door Stop Attachment

- C.2.4 Bed threshold in sealant, attaching to TH-44 clips with FS-42, #12 x 1/2" Phillips Flat Head screws. Marry threshold seal with subframe and main system seal. **SEE FIGURE 31.**
- C.2.5 Drill #11, .191 diameter holes in D-186 subframe for FS-15 rivets. Install door stops onto subframe with SC-1 clips at 18" O.C. Locate clips around the subframe anchor screws. **SEE FIGURE 32.** Vertical stops run through.
- C.2.6 Install door per DOOR AND FRAME INSTALLATION AND GLAZING MANUAL.

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

REGLAZING PROCEDURES

- D.1 WHEN REGLAZING FROM THE INTERIOR. Remove interior wedge, remove old glass and clean glazing pocket of any debris or glass and reglaze per glazing instruction on pages 20 thru 22.
- D.2 WHEN REGLAZING FROM THE EXTERIOR. Carefully remove horizontal face covers surrounding the lite of glass to be deglazed. **SEE FIGURE 33.**
- D.2.1 Remove lower section of upper horizontal as shown in **FIGURE 34.**
- D.2.2 Remove lite of glass and existing interior gaskets from the opening. Clean debris and sealant from the framing members.
- D.2.3 Install GP-100 gaskets into framing. Set new lite of glass, centered in opening.
- D.2.4 Install TCR-130 reglaze leg. Set in continuous bead of sealant and attach with FS-55 fastener @ 12" O.C., cap seal all fasteners. **See FIGURES 35 & 36.**

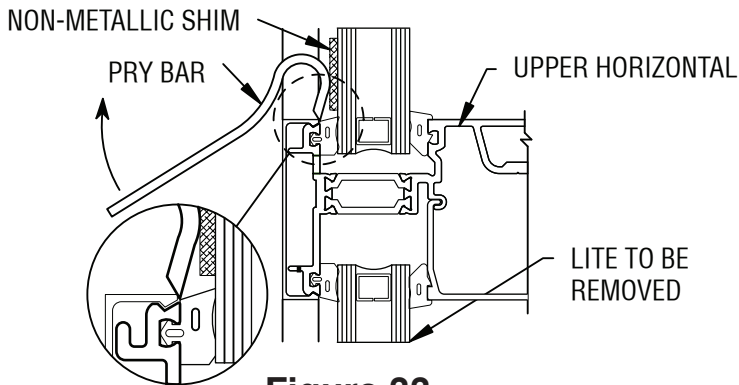


Figure 33
Cap Removal

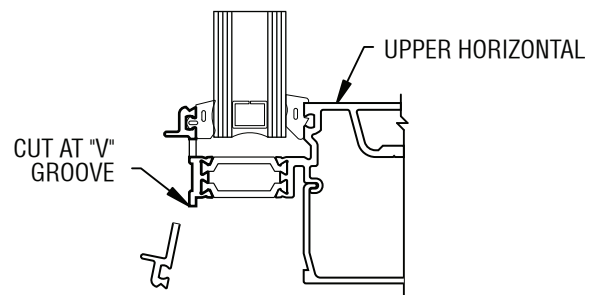


Figure 34
Deglazing

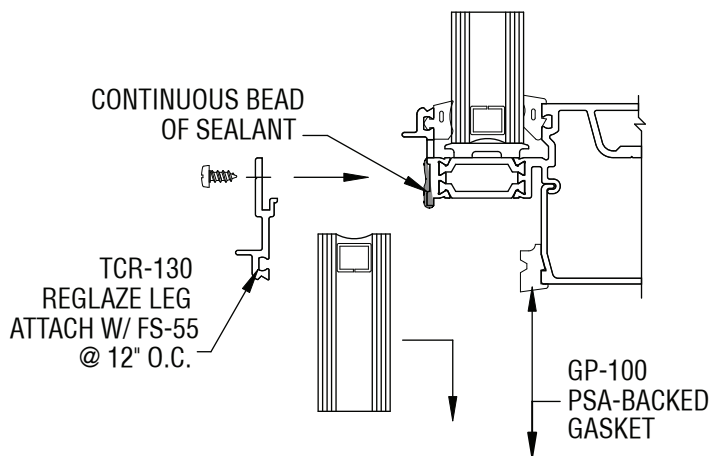


Figure 35
Reglazing

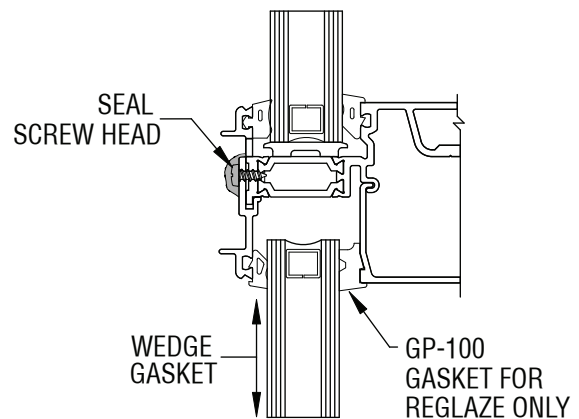


Figure 36
Reglazing

RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

REGLAZING PROCEDURES FOR EXTERIOR GLAZED SSG SYSTEM

- E.1 **WHEN REGLAZING FROM THE INTERIOR.** Remove interior wedge, remove old glass and clean glazing pocket of any debris or glass and reglaze per glazing instruction on page 24.
- E.2 **WHEN REGLAZING FROM THE EXTERIOR.** Carefully remove horizontal face covers and pressure plates surrounding the lite of glass to be deglazed.
- E.2.1 Remove pressure plate from top of damaged lite and remove horizontal bridge from vertical intersection. Clean excess sealant from horizontal and face of mullion.
- E.2.2 Remove lite of glass and existing interior gaskets from the opening. Clean debris and sealant from the framing members and horizontal pressure plates.
- E.2.3 Install GP-101 gaskets into framing. Set new lite of glass, centered in opening.
- E.2.4 Install WW-300 horizontal bridge at vertical intersection where original bridge was removed. Seal bridge as shown in **Figures 37 & 38**.
- E.2.5 Install GP-108 gasket across face of horizontal and bridge.
- E.2.6 Reattach pressure plate using FS-322 fasteners. Torque fastener to 90 in/lbs. Seal ends of pressure plates to vertical face or joints as shown on page 26. Reinstall face cap allowing equal gap at each end.

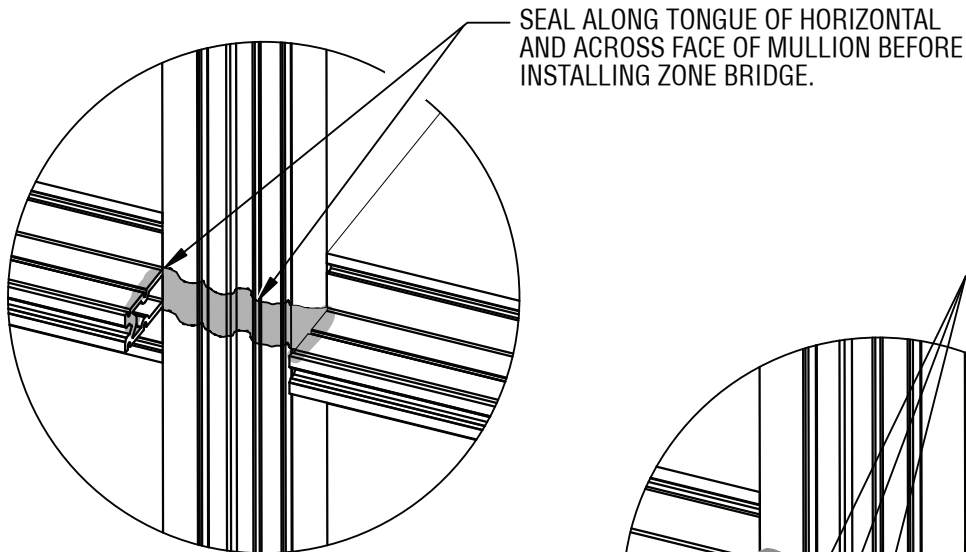


Figure 37

TOOL SEALANT ALONG TOP AND SIDES OF ZONE BRIDGE TO FORM A WATER TIGHT SEAL.

WW-300 ZONE BRIDGE

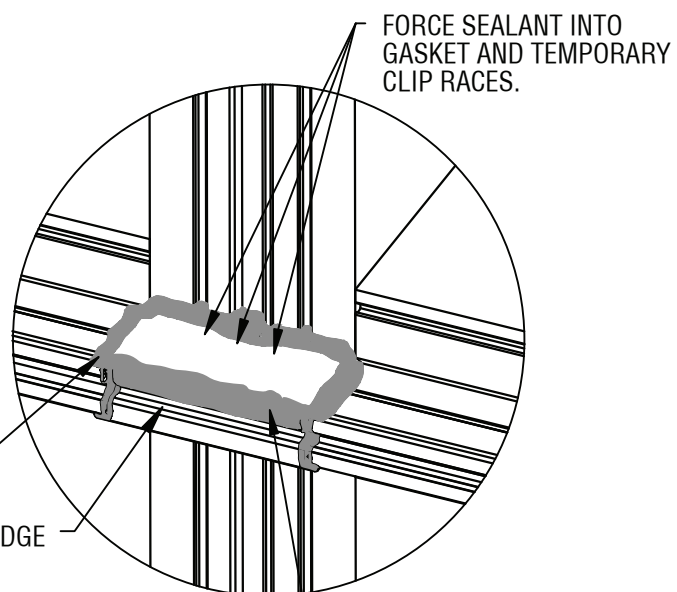












Figure 38

APPLY BEAD OF SEALANT ACROSS FACE OF BRIDGE JUST PRIOR TO INSTALLING SPACER GASKET AND PRESSURE PLATE.

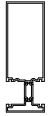









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PARTS LIST

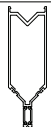
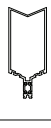







6" SYSTEM

| | |
|--|---|
|  | Typical Vertical & Jamb |
| WW-420 | |
|  | Heavy Vertical & Jamb |
| WW-430 | |
|  | SSG Vertical |
| WW-404 | |
|  | Head |
| WW-414 | |
|  | Intermediate Horizontal |
| WW-416 | |
|  | Sill |
| WW-418 | |
|  | Optional Horizontal for Exterior Glazing |
| WW-425 | |
|  | Glass Stop 1" Infill |
| WW-148 | |
|  | Glass Stop 1/4" Infill |
| WW-149 | |
|  | Sill Filler |
| WW-126 | |

7 1/4" SYSTEM

| | |
|--|---|
|  | Typical Vertical & Jamb |
| WW-520 | |
|  | Heavy Vertical & Jamb |
| WW-530 | |
|  | SSG Vertical |
| WW-504 | |
|  | Head |
| WW-514 | |
|  | Intermediate Horizontal |
| WW-516 | |
|  | Sill |
| WW-518 | |
|  | Optional Horizontal for Exterior Glazing |
| WW-525 | |
|  | Glass Stop 1" Infill |
| WW-150 | |
|  | Glass Stop 1/4" Infill |
| WW-151 | |
|  | Sill Filler |
| WW-127 | |

























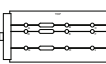




CORNER EXTRUSIONS

| | |
|--|---|
|  | O.S. 90 Corner Mullion 6" & 7 1/4" Systems |
| WW-243 | |
|  | O.S. 135 Corner Mullion 6" System |
| WW-233 | |
|  | O.S. 135 Corner Mullion 7 1/4" System |
| WW-234 | |
|  | O.S. 90 Corner Pressure Plate |
| WW-170 | |
|  | O.S. 135 Corner Pressure Plate |
| WW-171 | |
|  | O.S. 90 Corner Face Cap |
| WW-153 | |
|  | O.S. 135 Corner Face Cap |
| WW-154 | |
|  | O.S. 90 Interior Cover 6" System |
| WW-227 | |
|  | O.S. 90 Interior Cover 7 1/4" System |
| WW-228 | |
















RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL

PARTS LIST

COMMON EXTRUSIONS All System Depths and Infills

| | | | |
|--|---|--|--|
|  FG-1128 | Transom for OHCC |  WW-214-01 | Splice Sleeve Use with WW-234 |
|  FG-1184 | Transom Filler |  WW-215-01 | Splice Sleeve Use with WW-243 |
|  F-16 | Door Header Subframe |  WW-203-01 | Face Splice Sleeve For WW-520, WW-530, WW-420 & WW-430 |
|  D-186 | Door Subframe |  WW-102-08 | "T" Anchor Use with WW-520 |
|  CH-93 | Door Header Channel |  WW-102-09 | "T" Anchor Use with WW-420 |
|  DS-104 | Door Stop Use with SC-1 Clip |  WW-102-10 | "T" Anchor Use with WW-530 & WW-504 |
|  DS-1 | Door Stop Use with SC-1 Clip |  WW-102-11 | "T" Anchor Use with WW-430 & WW-404 |
|  WW-110 | Intermediate Horizontal Face Cover |  WW-103-05 | Jamb "F" Anchor Use with WW-520 |
|  WW-108 | Head/Sill Face Cover |  WW-103-06 | Jamb "F" Anchor Use with WW-420 |
|  WW-1089 | Pressure Plate @ Exterior Glazed Horizontal |  WW-103-07 | Jamb "F" Anchor Use with WW-530 & WW-504 |
|  CW-66 | Splice Sleeve Use with WW-520 |  WW-103-08 | Jamb "F" Anchor Use with WW-430 & WW-404 |
|  CW-90 | Splice Sleeve Use with WW-420 | STANDARD ACCESSORIES All System Depths and Infills | |
|  CW-542 | Splice Sleeve Use with WW-430 |  DJ-102 | Drill Jig Vertical Mullions |
|  CW-1496 | Splice Sleeve Use with WW-530 |  HP-1004 | Optional Weep Baffle |
|  WW-213-01 | Splice Sleeve Use with WW-233 |  WW-341 | PVC Pocket Filler for WW-520, WW-530, WW-420 & WW-430 Verticals |

STANDARD ACCESSORIES All System Depths and Infills















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|---|---|
|  GP-103 | Standard EPDM Dense Gasket (Exterior) |
|  GP-104 | Optional EPDM Sponge Gasket (Exterior) |
|  GP-113 | Standard Wedge Gasket (Interior) |
|  GP-102 | Spacer Gasket SSG Verticals |
|  GP-108 | Thermal Isolator at Optional Exterior Glazed Horizontal |
|  SC-1 | Spring Clip for Door Stops |
|  SPW-PP-3 | Temporary Glazing Retainer for SSG Verticals |
|  WW-131 | SSG Glazing Adaptor 1/4" Infill |
|  WW-145 | Transition Glazing Adaptor 1" to 1/4" Infill |
|  HP-17 (mod.) | EPDM Setting Block at 1/4" Infill |
|  GP-101 | EPDM Setting Block at 1" Infill |
|  GP-121-01 | PVC Setting Chair at Sill |
|  GP-115 | EPDM "W" Side Block Vertical Deep Pocket |
|  WW-334 | PVC Zone Plug Vertical Deep Pocket |
|  WW-335 | PVC Zone Plug Vertical Shallow Pocket |











RELIANCE™ - TC IG CURTAIN WALL INSTALLATION & GLAZING MANUAL









PARTS LIST

STANDARD ACCESSORIES

All System Depths and Infills

| | |
|--|--|
|  WW-343 | Aluminum Mullion Cap WW-420, WW-520, WW-430 & WW-530 |
|  TCR-300 | PVC Bridge at Horizontals (SSG Verticals) |
|  WW-351 | PVC Bridge at Head & Sill (SSG Verticals) |
|  WW-300 | SSG Mullion Bridge |
|  WW-185-01 | Head & Sill Shear Block (6" System) |
|  WW-186-01 | Horizontal Shear Block (6" System) |
|  WW-187-01 | Head & Sill Shear Block (7 1/4" System) |
|  WW-188-01 | Horizontal Shear Block (7 1/4" System) |
|  WW-177-03 | O.S. 135 Head & Sill Shear Block 6" System (Left & Right) |
|  WW-177-04 | |
|  WW-176-03 | O.S. 135 Horizontal Shear Block 6" System (Left & Right) |
|  WW-176-04 | |
|  WW-179-03 | O.S. 135 Head & Sill Shear Block 7 1/4" System (Left & Right) |
|  WW-179-04 | |

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|--|---|
|  WW-178-03 | O.S. 135 Horizontal Shear Block 7 1/4" System (Left & Right) |
|  WW-178-04 | |
|  WW-177-01 | O.S. 90 Head & Sill Shear Block 6" System (Left & Right) |
|  WW-177-02 | |
|  WW-176-01 | O.S. 90 Horizontal Shear Block 6" System (Left & Right) |
|  WW-176-02 | |
|  WW-179-01 | O.S. 90 Head & Sill Shear Block 7 1/4" System (Left & Right) |
|  WW-179-02 | |
|  WW-178-01 | O.S. 90 Horizontal Shear Block 7 1/4" System (Left & Right) |
|  WW-178-02 | |

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|---|---|
|  FS-6 | #10 x 3/4" Phillips Pan Head Fastens Head & Sill to Shear Block |
|  FS-8 | #14 x 1" Phillips Hex Head Fastens Splice Sleeves |
|  FS-9 | #14 x 1 1/2" Hex Head Shear Block to Vertical |
|  FS-15 | 3/16" x 7/16" Drive Rivet Fastens SC-1 Clip |
|  FS-43 | #12 x 3/4" Phillips Pan Head Fastens Horizontal to Shear Block |
|  FS-318 | #12 x 1 3/4" Phillips Flat Head Fastens WW-131 |
|  FS-320 | #10 x 1/2" U-Drive Fastens Mull Caps |
|  FS-325 | #12-14 x 1 1/2" Hex Washer Head Drillflex @ Press. Plate to WW-425, WW-525 Horizontal |