



RELIANCE™ CASSETTE 4-SIDED STRUCTURALLY GLAZED CURTAIN WALL

INSTALLATION AND GLAZING MANUAL

NOTE:

The installation details found in this package are generic and are for representation only with the intent of giving the installation team a visual representation as to how the assemblies typically install. The shop drawings and details are the governing documents and as such this package is to be used only as a resource.

Follow sealant manufacturers recommendations for use and application of structural silicone sealant and weather seal silicone sealant.

Note: Customer / Project quality assurance procedures are separate documents and are to be followed in conjunction with this manual.

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GENERAL INFORMATION

PRODUCT USE

The **Reliance™ Cassette** curtain wall system is intended for fabrication, assembly, sealing, installation and glazing by professionals with appropriate knowledge and experience of the system(s) and their incorporation into various building conditions.

The cassette system is a barrier weather control system. For projects which incorporate a spandrel and/or shadow box configuration with integral hermetically sealed metallic back pans please reference the Reliance Cassette installation manual instructions regarding the dual seal configuration.

The Reliance Cassette system with spandrel and/or shadow boxes incorporating a metallic hermetically sealed back pan is designed to mitigate trace amounts of collected condensation by evaporation through the vent holes. It is not designed to collect and weep water infiltration which has penetrated the exterior weather plane barrier. For proper system performance it is critical that the barrier seal be applied so as to maintain a homogenous and complete seal.

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

STRUCTURAL SEALANTS

The fabrication and installation of a structural silicone-glazed (SSG) or wet glazed system requires more technical knowledge and experience than is required for a conventional pressure-glazed or dry glazed system. The glazing contractor should take all steps as outlined and required by the structural silicone sealant manufacturer, glass fabricator, framing manufacturer, and the project professional engineer of record as well as follow local building code requirements and industry best practices to ensure the proper installation and safe performance of the SSG system.

The glazing contractor for each project needs to ensure compliance with each step, including, but not limited to, design reviews, formal adhesion testing, formal compatibility testing, project specification compliance, validating procedures, field testing, and quality control validation of installed product and surrounding conditions.

Testing of component materials for use in a SSG or wet glazed system is mandatory to fulfill project specifications and warranty requirements and must be submitted by the glazing contractor to the structural silicone manufacturer. All materials that comprise the structural silicone joint, such as the framing system (with the job-specific finish) and job-specific glass must be tested by the structural silicone manufacturer for compatibility and adhesion. All other accessory materials in contact with the structural silicone, such as setting blocks, spacers, gaskets, sweeps, air seals and expansion joints, must also be submitted to the silicone sealant manufacturer for compatibility testing.

To ensure that nothing has changed in formulation or chemistry since the initial tests, subsequent testing during periodic time frames of the project is to be conducted to confirm continued acceptance of the material for use on the project. To ensure the structural performance and integrity of the insulating glass unit (IGU), the glazing contractor must submit the project shop drawings to the glass fabricator to obtain approval for use of their product(s) in any 2, 3 or 4-sided SSG applications.

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Quality control procedures for field glazing are to be increased beyond those required for shop glazing. Job conditions will normally have dust, dirt, and other construction debris on the surfaces where structural silicone is to be applied. Great care should be exercised in cleaning and preparing these surfaces for silicone application. The recommendations of the silicone sealant manufacturer are to be strictly enforced and followed. The fabrication and installation of the SSG system and its components, whether shop or field glazed, should be governed by a quality control program, and all steps, procedures, and test reports should be documented throughout the project.

Prior to installation of any SSG system, refer to industry documents (e.g., AAMA Curtain Wall Design Guide Manual, ASTM C1401-14, and AAMA SSGDG-17) for detailed instructions and recommendations.

THE GLAZING CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ENSURING COMPLIANCE WITH THE ABOVE AND ASSUMES FULL LIABILITY FOR ANY ISSUES ARISING FROM NONCOMPLIANCE.

GLAZING PRACTICES

The air and water performance of the **Reliance™ Cassette** curtain wall system is directly related to the completeness and integrity of the installation process, including but not limited to the assembly seals of the framing joinery, the installed glazing gaskets, and the alignment of the framing joinery glazing plane. Before glazing, verify the glazing pocket width and glazing infill thickness, as both must be in tolerance to assure adequate edge pressure and to achieve the desired air and water performance levels. (In general, framing systems utilizing 1" insulating glass are designed to accommodate a thickness variance of +/- 1/32"). Note: Excessive pressure can cause glass breakage and/or IGU failure. Consult the glass manufacturer for their recommended edge pressure per lineal inch. To achieve the designed and tested air and water performance, best practices include:

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. Glazing gaskets should be cut 1/4" longer per foot, and lay flat, preferably for 24 hours.
3. Gaskets should be cut as single monolithic pieces and "crowded" during their installation to avoid corner gaps caused by post-installation relaxation.
4. The interior glazing gasket should be installed so as to avoid stretching, buckles, or tears.
5. Corners must be cut square, and at a slight angle when required to conform to the bevel on the intersecting gasket; sealed and butted together.
6. Gasket corner joinery must also be crowded, and sealant applied onto the gasket contact frame surface and into gasket reglet raceway where applicable.
7. Gasket corner seals are to be done just prior to installing glass, while the sealant is still wet and uncured, and ensure exterior gaskets are installed so as to place the glass into it's final in service condition and allow the sealant to conform to optimum configuration. Note: If the sealant cures prior to glazing, the cured sealant could create excessive edge pressure onto the glass and has the potential to cause glass breakage.

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8. The glass must be checked for squareness, size dimension, and thickness along the edges paying attention to any variances from center edge to corner edge.
9. Check the placement of the installed glass and verify there is proper edge bite into the pocket, and proper edge clearance from framing elements.
10. After sealant has set and a representative amount of the wall has been installed and 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. Consult and follow NGA's GANA Manual and FGMA Glazing Manual for proper glazing technique and procedure.

Vertical movement of mullion at intermediate floors requires special expansion joints and glazing materials. See pages 26 & 27 (VHB Cassette) or pages 43 & 44 (SSG Cassette) for details which permit 1/4" movement. For designs and applications that may require greater movement or special considerations, please contact your local Oldcastle BuildingEnvelope® facility.

Variations on the details shown are inevitable and are not the responsibility of Oldcastle BuildingEnvelope when drawn by others. Oldcastle BuildingEnvelope strongly encourages its customers to utilize Oldcastle BuildingEnvelope 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 Oldcastle BuildingEnvelope facility for assistance.

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

BUILDING CODES

Oldcastle BuildingEnvelope® does not control the application nor selection of its product configurations, sealant, or glazing materials, 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.

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 CW-10 "Care and Handling of Architectural Aluminum From Shop to Site."

CHECK MATERIAL

Check glass dimensions for overall size as well as thickness. Oldcastle BuildingEnvelope cannot be held responsible for gaskets that are not water tight due to extreme glass tolerances.

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

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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 ensure 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.

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.

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- 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.

3M VHB SGT AND SILICONE MANUFACTURER GUIDELINES

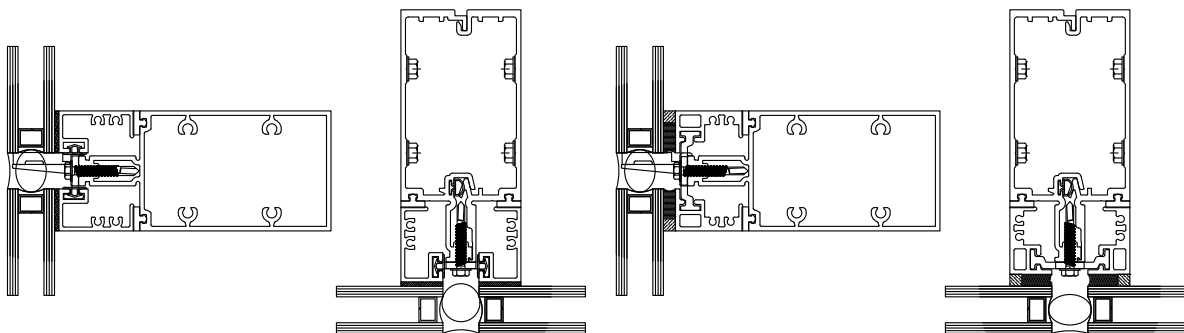
When using any 4-sided cassette product, it is critical to involve 3M or the silicone supplier at the earliest stage of the project as possible. Building loads and glass sizes may be restricted based on structural capabilities of tape or silicone used on project. Supplier must review shop drawings and make recommendations prior to ordering of materials.

When using 3M VHB structural glazing tape, you must involve 3M's technical services to obtain approval, have SOP written for project-specific materials, order materials and schedule training prior to assembling any cassette or window frames.

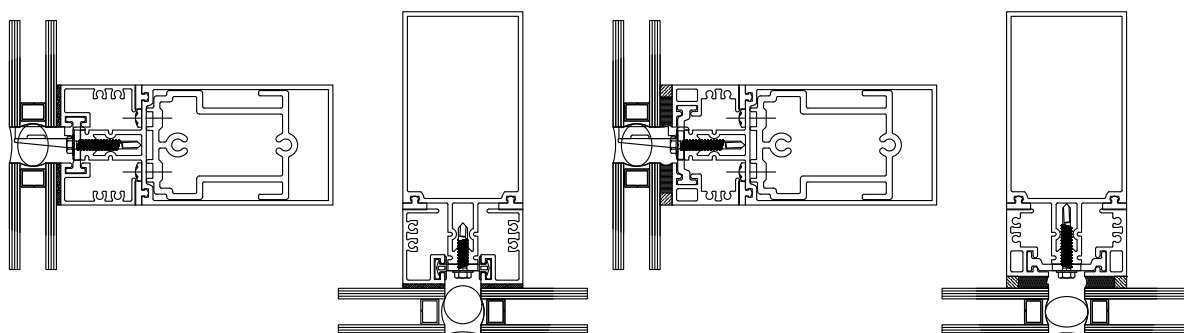
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SYSTEM CONFIGURATIONS

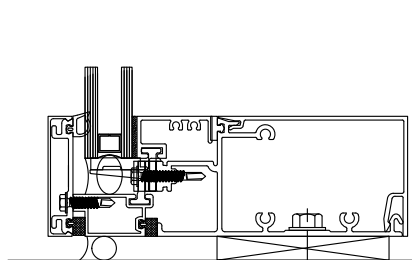
Reliance™ Cassette may be installed on all Reliance exterior glazed curtain wall products. Cassettes may be attached to glass using VHB tape or Silicone. See details below for system details.



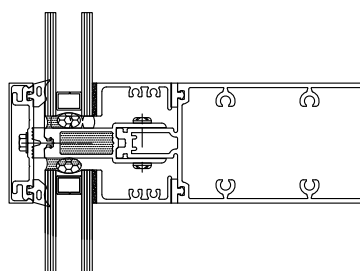
Reliance Cassette
Installed on Reliance-SS



Reliance Cassette
Installed on Reliance



Perimeter Captured Details



Intermediate Captured Details

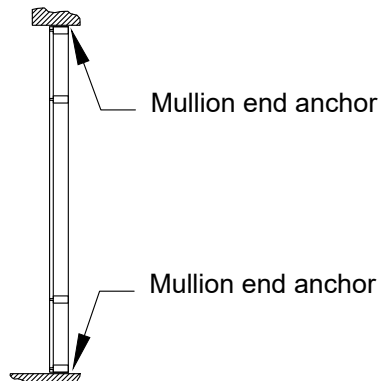
Details in this manual show extrusions for the Reliance™-SS, 6" system. Alternate products and depths are also available. See our website: www.oldcastle.com/products/curtain-wall/pressure-wall/reliance-cassette for additional information.

*Reference Oldcastle BuildingEnvelope® Installation Manuals for information regarding fabrication and installation of the chosen curtain wall system for more additional information.

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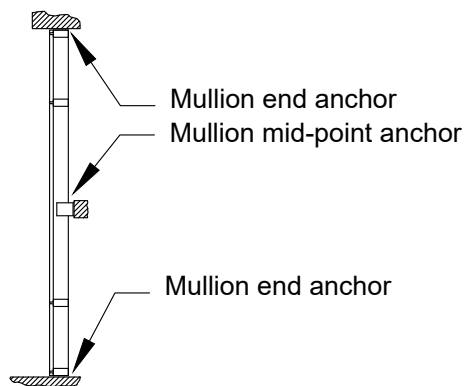
INSTALLATION TYPES

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.



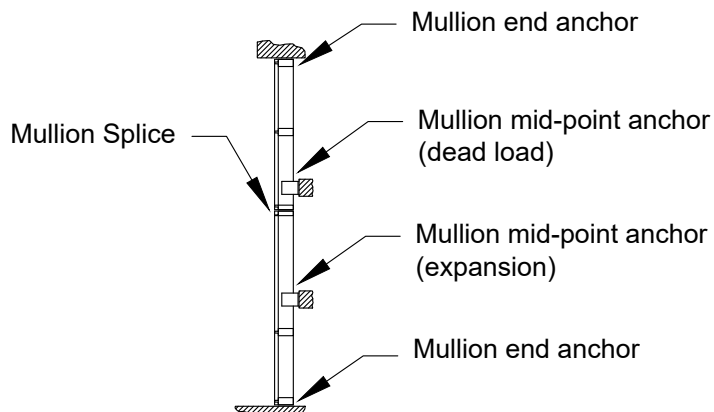
SINGLE SPAN

Refer to steps 2.1.1 through 2.1.3



TWIN SPAN

Refer to steps 2.1.4 through 2.1.8



MULTI-SPAN

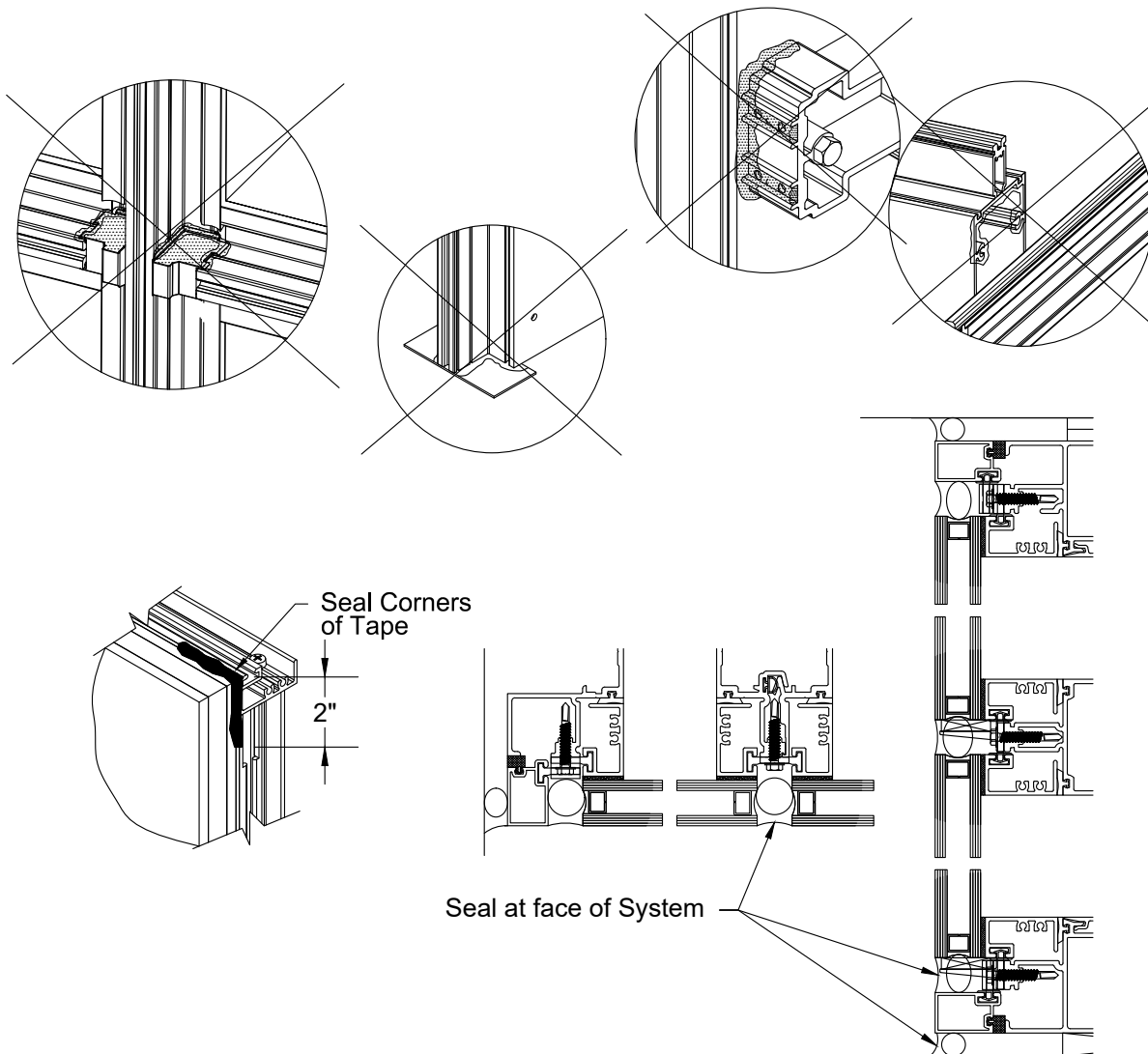
Refer to steps 2.1.9 through 2.1.16

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GENERAL SEALANT INSTRUCTIONS BARRIER SEAL

The standard installation of Reliance™ Cassette is for a "Barrier Sealed" installation. In this installation the only seals within the curtain wall or cassette wall are to the exterior face of the system. This seal therefore is critical as the single barrier to prevent water infiltration and should be performed by a competent installer. A few of the key points are listed below along with exceptions to the normal installation of the Reliance™ or Reliance™ -SS curtain walls.

- 1.1 Curtain wall will not require any joinery be sealed. It is not required to install mull caps at ends of vertical mullions, zone plugs, cap seal of fasteners or seals between horizontals and verticals.
- 1.2 The cassette frames will not be sealed between the verticals to horizontal connections. The VHB tape will require a seal around each corner.
- 1.3 The exterior seals will be a minimum 3/4 " wide between all lites of glass and between ends of perimeter closures. These seals will marry directly into the perimeter seal of the framing.

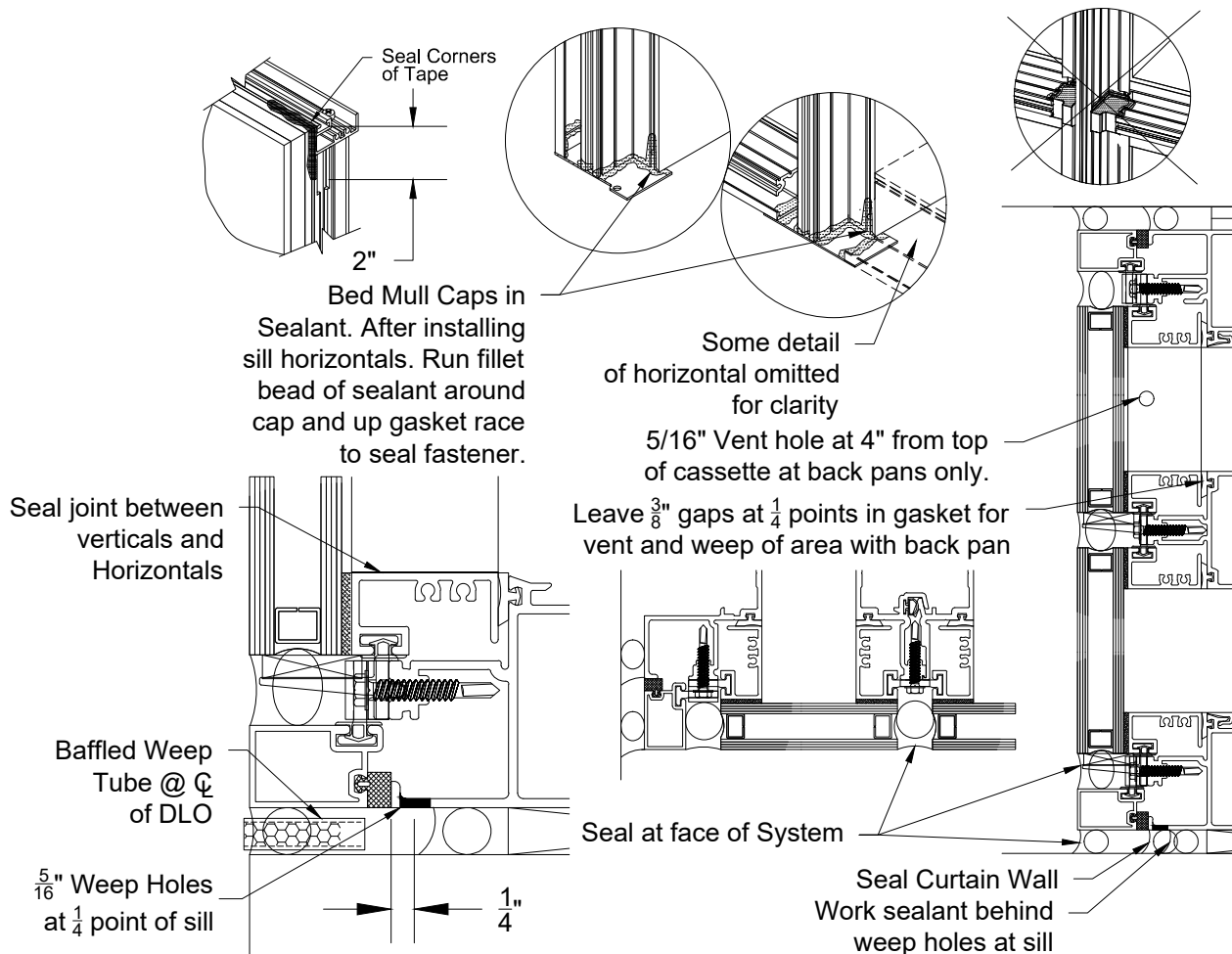


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GENERAL SEALANT INSTRUCTIONS W/ BACK PANS

Reliance™ Cassette may be installed using back pans at spandrel areas and a "Dual Seal" installation. In this installation all seals typically shown in the Reliance™ and Reliance™ -SS manuals will be ran prior to installing the cassette system, excluding the zone plugs. The Reliance™ Cassette is not a zone glazed system since the exterior seal will always be the primary seal of the system. Back pan areas also require venting of the cavity so special fabrication and installation steps must be taken to handle any condensation. See key points below.

- 1.4 Curtain wall will require sealing of horizontal to vertical connections, shear block seals, cap sealing of fasteners and mull caps per the Reliance™ or Reliance™ -SS manuals. Omit all zone plugs. Perimeter of curtain wall will be sealed prior to installing cassette system as well. The perimeter leg of the sill member must also be weeped and perimeter seal below worked around this hole to allow any condensation to drain.
- 1.5 The cassette frames will be sealed between the verticals to horizontal connections per detail below. The VHB tape will also require a seal around each corner.
- 1.6 The spandrel areas requiring back pans will require a vent hole be drilled into the upper portion of each vertical cassette. The gasket at the sill of the lite will be cut to allow a 3/8" wide vent / weep gap at 1/4 points of the day lite opening. This step omitted where back pans not required.
- 1.7 The exterior seals will be a minimum 3/4" wide between all lites of glass and between ends of perimeter closures. These seals will marry directly into the perimeter seal of the framing. The perimeter at the sill will also require installation of baffled weep tubes at center line of day light opening when back pans are used.



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FRAME FABRICATION

Unless otherwise noted, the details shown in these instructions reflect the 6 3/4" system for 1" glazing. Instructions for other back member depths are similar. Reference Reliance™ -SS or Reliance manuals for fabrication for the curtain wall system. Reliance™ Cassette will be applied to the face of the curtain wall system. Fabrication below is for cassettes and perimeter members for this product only. When using Reliance™ -SS curtain wall it will be necessary to add fasteners at mull stem at centerline of horizontals to set mullions in position. SEE FIGURE 1. .

- 1.8 Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/2" minimum clearance for shimming and caulking around perimeter of frame.
- 1.9 Cut material to size. SEE FIGURE 2, page 13 for guide. Glass bites and cut sizes are different for intermediate captured areas and typical 4-sided silicone glazed areas. Close attention to the layout for these areas is critical. SEE FIGURE 3, page 13 .

Vertical Cassette (RCS-100 & RCS-208)	Daylight Opening (D.L.O.)
Horizontal Cassette (RCS-100,RCS-107, RCS-208 & RCS-207)	D.L.O. plus 1-3/4"
Captured Vertical Cassette (RCS-101 & RCS-201)	D.L.O
Captured Horizontal Cassette (RCS-101 & RCS-201)	D.L.O. plus 1-3/8"
Horizontal Perimeter Closure (RCS-104)	Frame Width **
Vertical Perimeter Closure (RCS-104)	Frame Height minus 3-1/4"
Captured Horizontal Perimeter (RCS-112)	Frame Width **
Captured Vertical Perimeter (RCS-112)	Frame Height minus 3-1/4"

Accessories

Vertical gaskets	D.L.O. plus 1-3/4"
Horizontal gaskets	D.L.O.

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

**with expansion joints every 4 or 5 lites. Joint to match and align with joint width between lites.

Quick Reference Guide:

1. Torque RCS-102-01 (RCS-209-01) cassette clips to 40 in/lbs.
2. Cassette Clips will be located at 12 "o.c. typical. Project requirements may vary per engineer's review.
3. Perimeter Closure Clips will be located at 18" o.c.
4. Pressure Plate fasteners to be located at 9" o.c. Torque fasteners to 90 in/lbs.

Glass Sizing:

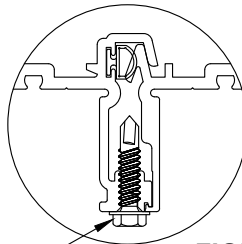
4-Sided System: D.L.O. plus 1-3/4" for width and height.

Captured system: DLO plus 1-3/8" for width and height

Glass sizes on lites with captured on a single side must be adjusted to accommodate the different glass bite.

4-Sided bite = $\frac{7}{8}$ " Captured glass bite = $\frac{11}{16}$ " SEE FIGURE 2

Glass bite for expansion horizontal; Lower lite bite = 2" Upper lite = $\frac{7}{8}$ " SEE FIGURE 27



FS-322 (#12-14 X 1" HWH Drill Flex)
Locate at (2) per DLO

FIGURE 1
Reliance-SS Special
Assembly

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FRAME FABRICATION

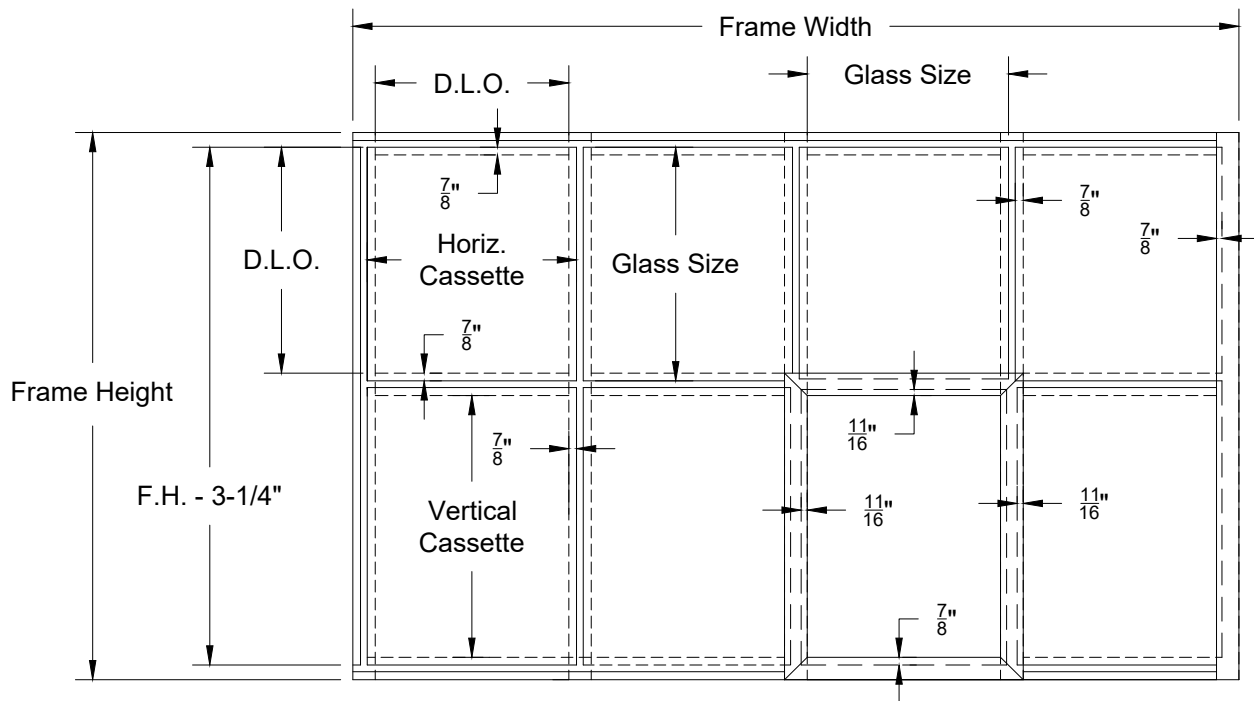


FIGURE 2
Material Fabrication Guide

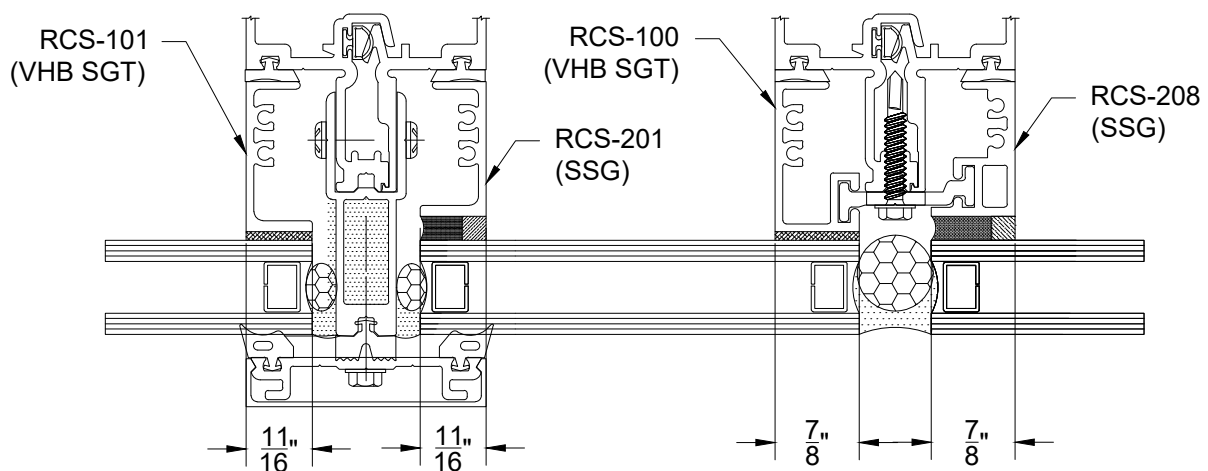


FIGURE 3
Typical Glass Bites

NOTE: For typical corner glass bites, reference web details. For non-typical details, reference approved shop drawings



VHB STRUCTURAL TAPE GLAZED CASSETTE ASSEMBLY AND GLAZING

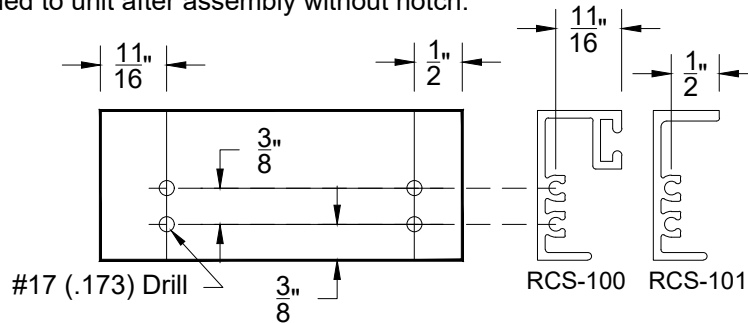
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VHB CASSETTE FABRICATION

2.1 Fabricate horizontal cassettes with (2) #17 (.173Ø) holes on each end. SEE FIGURES 4 & 4A

2.2 Fabricate vertical cassettes with slot milled at top end. Slot will be used to insert cassette clips in field. Care should be taken when notching not to damage surface where tape or structural sealant is to be applied. SEE FIGURE 5

Note: Cassette frames may be assembled without this notch, but all clips must be installed prior to cassette frame assembly and glazing. Additional clips could not be added to unit after assembly without notch.



Note: 11/16" dimension for 4-sided applications and perimeter captured face, 1/2" dimension at intermediate captured conditions.

FIGURE 4
Horizontal Cassette
Fabrication

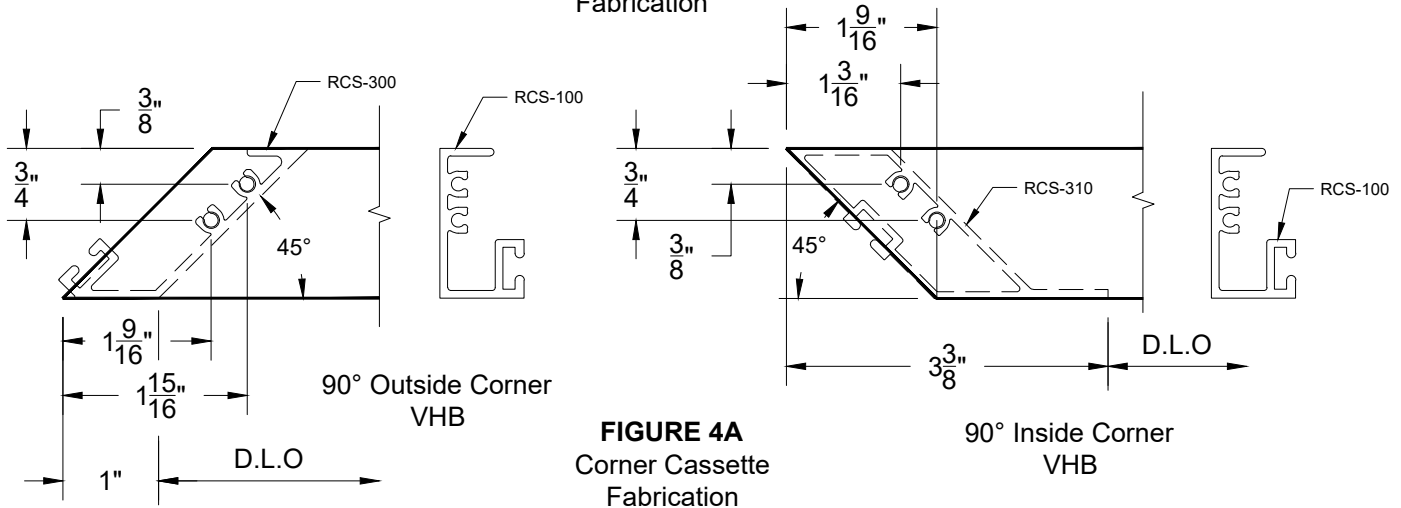


FIGURE 4A
Corner Cassette
Fabrication

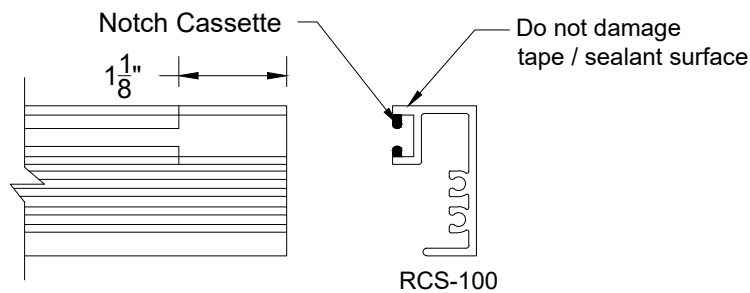
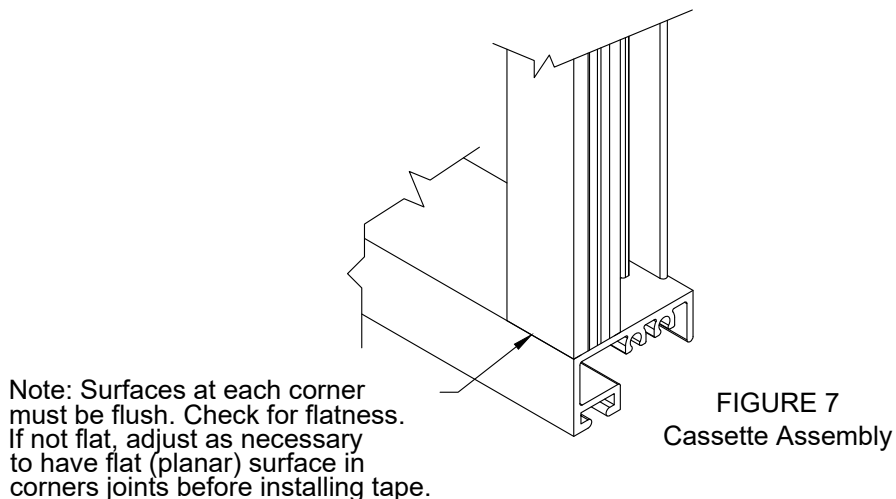
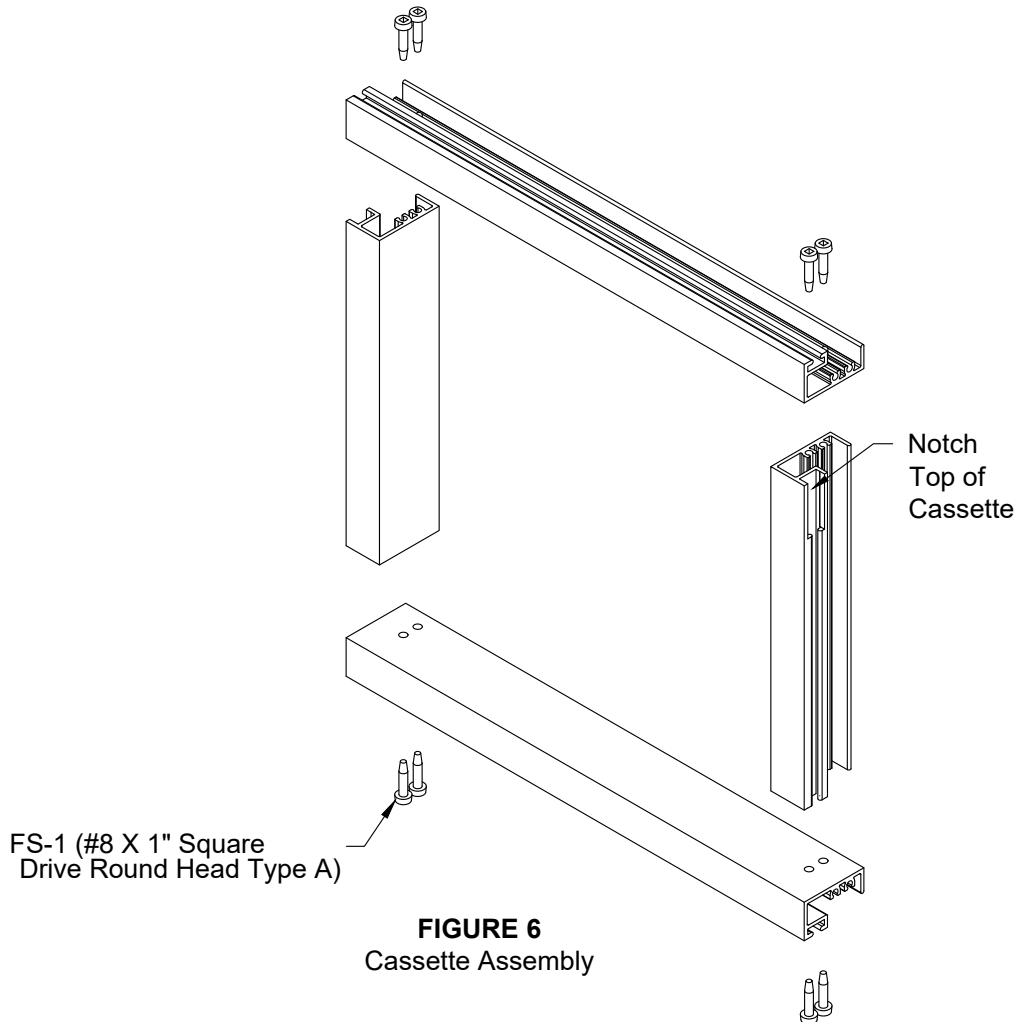


FIGURE 5
Vertical Cassette
Fabrication

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VHB CASSETTE ASSEMBLY

- 2.3 Cassettes will be assembled using (2) FS-1 (#8 x 1" Square Drive Round Head) at each corner. SEE FIGURE 6
- 2.4 Surface at each corner on tape side of cassette must be flush. Check for flatness. If not flat, adjust as necessary to have flat (planar) surface at corner joints before installing tape. SEE FIGURE 7



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VHB CASSETTE GLAZING PREP

- 2.5 Surface of cassette and glass will be cleaned and primed per 3M project instructions(SOP). Metal from project must be sent to 3M for review and primer recommendations. 3M will provide project specific instructions and hands on instructions for each project. SEE FIGURE 8
- 2.6 Vertical tape is run through at corners. Tape will be tucked into the corner to form a tight joint. SEE FIGURE 9
- 2.7 Tape applied to cassette using 3M tape applicator SEE FIGURE 10
- 2.8 Tape is rolled onto cassette using 3M tape roller applying pressure of ~15 lbs. SEE FIGURE 11

REFERENCE 3M VHB SGT TECHNICAL GUIDE, PAGES 20 & 21 FOR ADDITIONAL INFORMATION

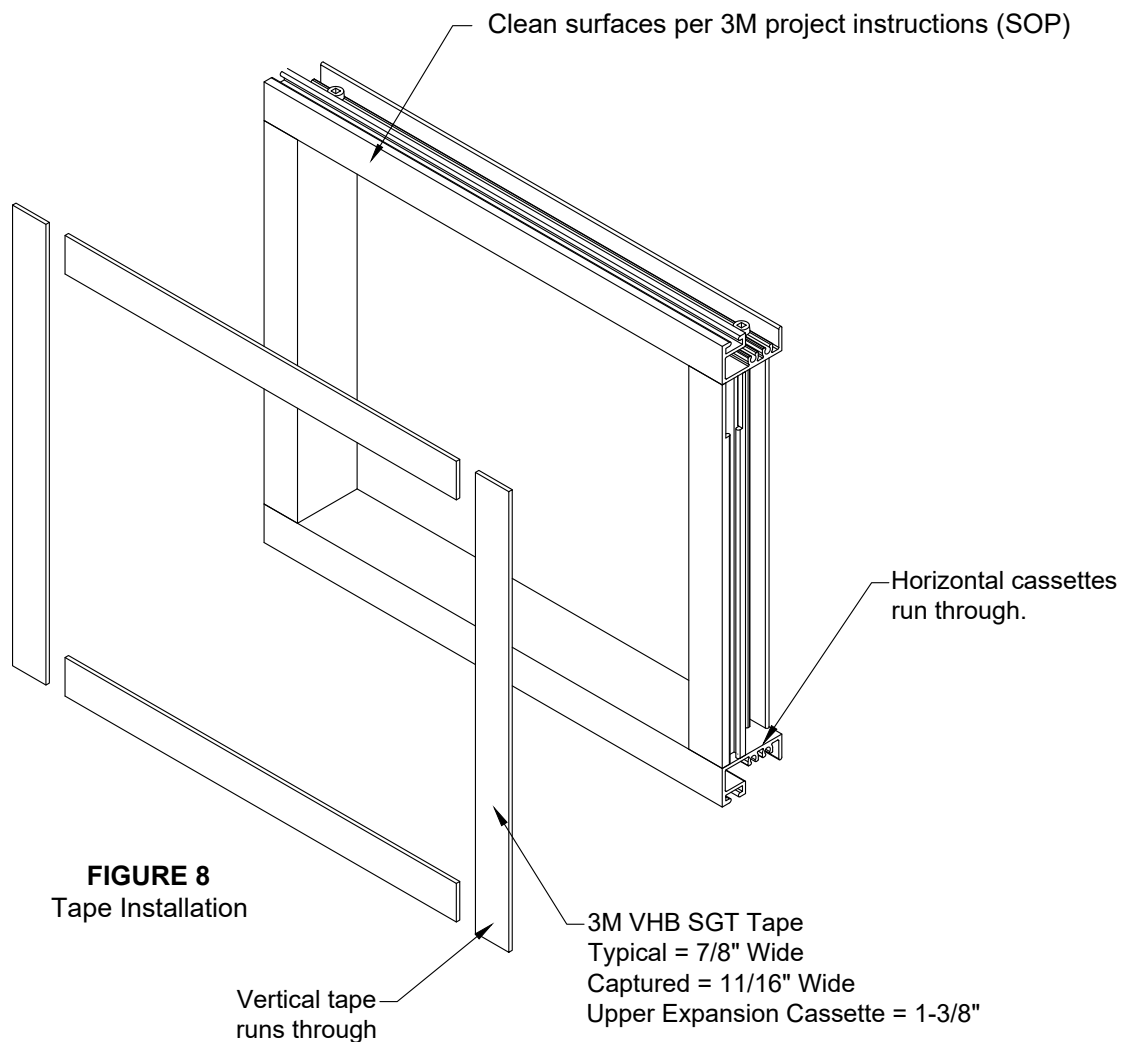


FIGURE 8
Tape Installation

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VHB CASSETTE GLAZING PREP

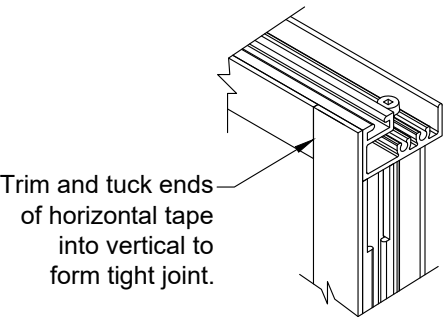


FIGURE 9
Tape Installation

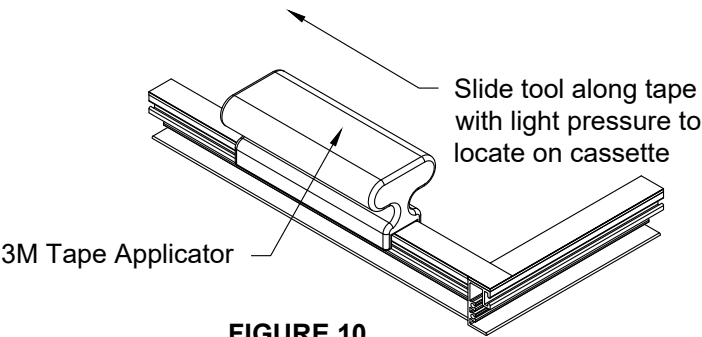


FIGURE 10
Tape Installation

Note: Application tools shown not supplied by OBE

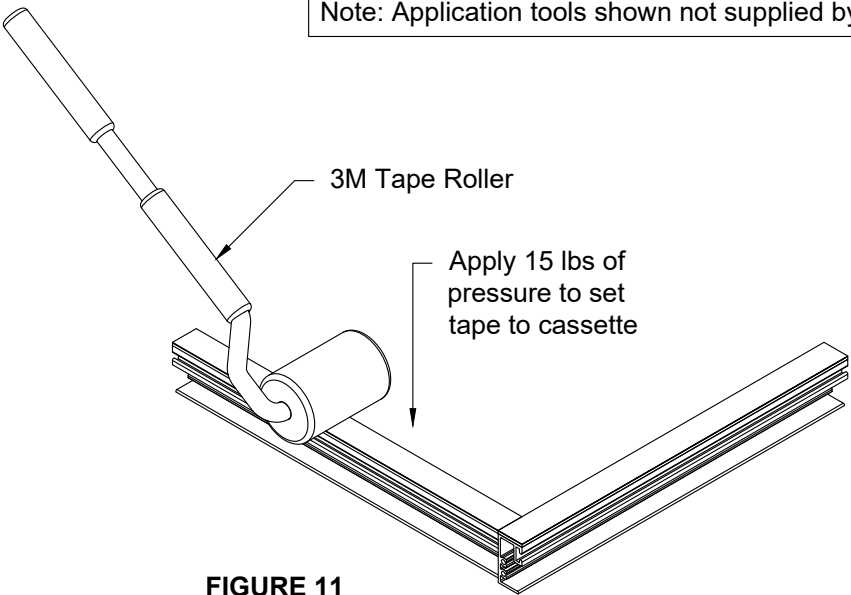


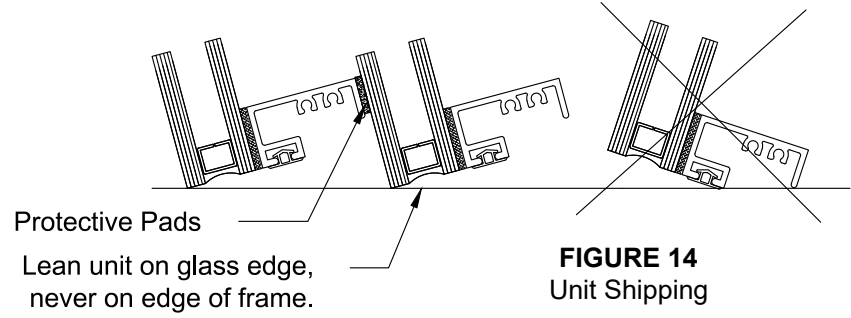
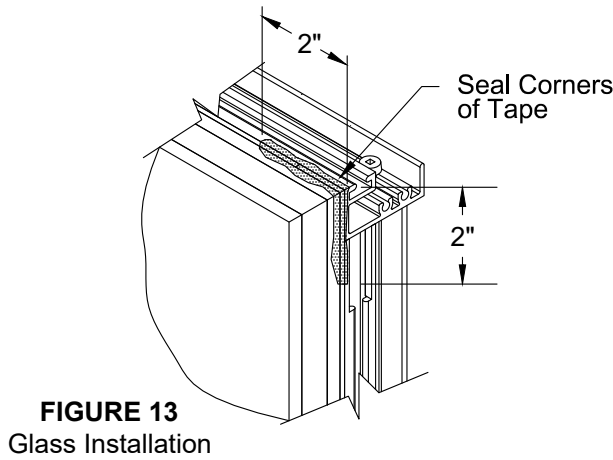
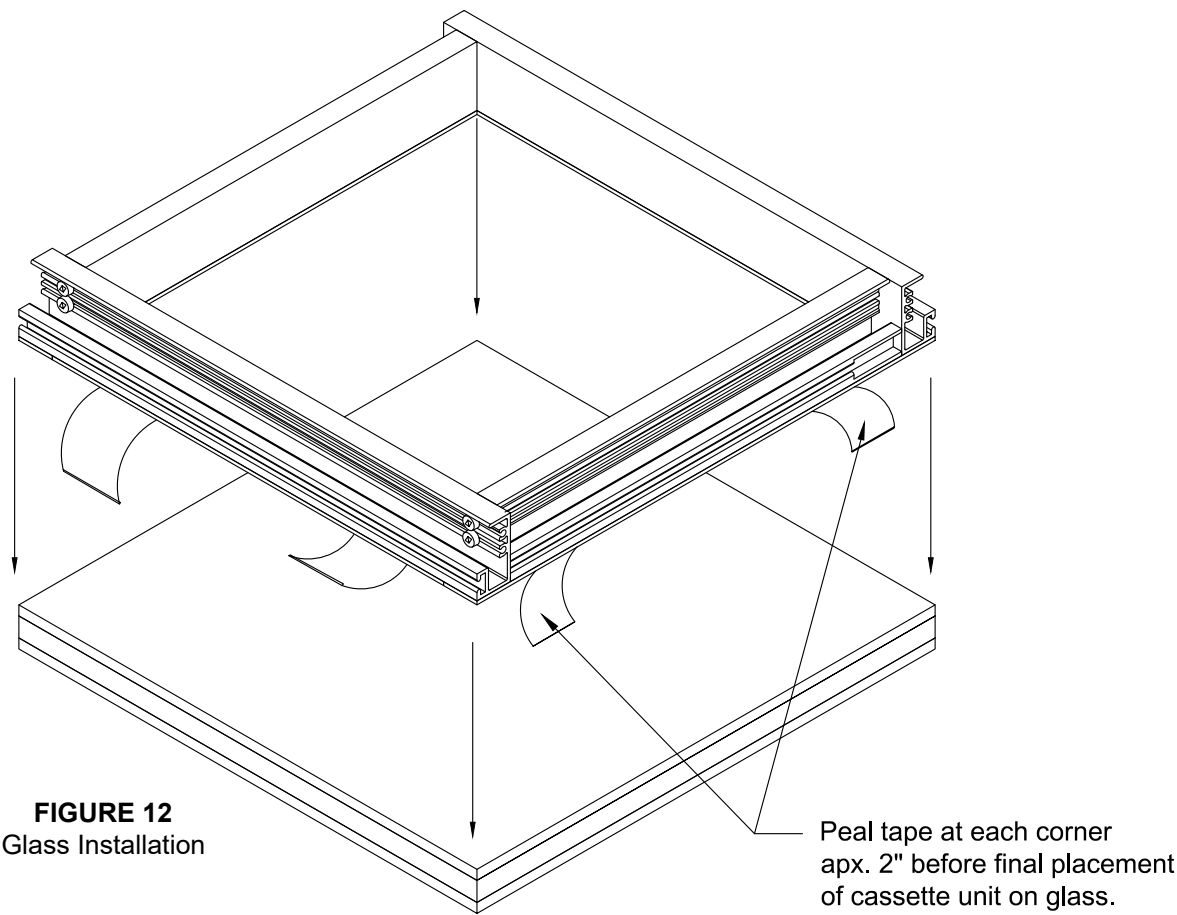
FIGURE 11
Tape Installation

RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE GLAZING

- 2.9 Dry Fit Test: Place cassette unit onto glass to ensure glass and unit align properly. Red protective liner is still in place at this point.
- 2.10 Remove cassette unit from glass. Clean and prime glass per 3M project instructions(SOP). Wipe dust/dirt from red protective liner.
- 2.11 Remove approximately 4" of protective liner at each corner from the cassette unit. Take care not to touch or contaminate the exposed adhesive. See Figure 12
- 2.12 Carefully place cassette unit onto glass. Be sure not to apply pressure to the unit in the corners so they may be moved and aligned with glass.
- 2.13 Once properly aligned, gently press down on the corners of the cassette unit to lock in place. Then working from each end, remove remainder of red protective liner. This will require lifting of the cassette unit at the centers to aid in removal and prevent tearing.
- 2.14 Once all of the red protective liner is removed, press firmly down onto the cassette on all sides to provide initial adhesion of the VHB SGT to the glass. Follow this with final application of pressure with a rolling pressure applications tool (pneumatic, gas cylinder or spring force) applying ~90 lbs of force around the entire cassette unit frame. Apply slow rolling pressure in 2 passes. See Figure 15
- 2.15 After final application of pressure. flip unit to inspect tape for adhesion (contact) to the glass. There should be at least 90% total contact. If large area of non-contact is observed, reapply pressure to this area with rolling pressure application tool. A wood furniture clamp or quick clamp may be needed to adhere areas where the rolling pressure applicator does not produce full adhesion of tape. See Figure 16
- 2.16 Apply cap bead of a 1-part neutral cure silicone sealant to the edge of the VHB SGT, between the glass and metal, in each corner. Sealant should be applied 2" in both directions around each corners. See Figure 13
- 2.17 Units may be moved to storage area. Do not stack glazed units on top of each other. If stored or crated vertically on edge, be sure there is support for the weight of the glass; i.e. stand at angle on edge of glass and not on edge of frame. See Figure 14

RELIANCE™ CASSETTE INSTALLATION MANUAL
VHB CASSETTE GLAZING

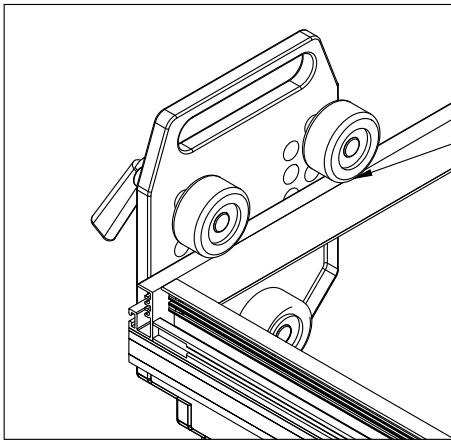


RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE GLAZING

Tape assembly tool.
(Manual tool shown,
pneumatic tool also available.)

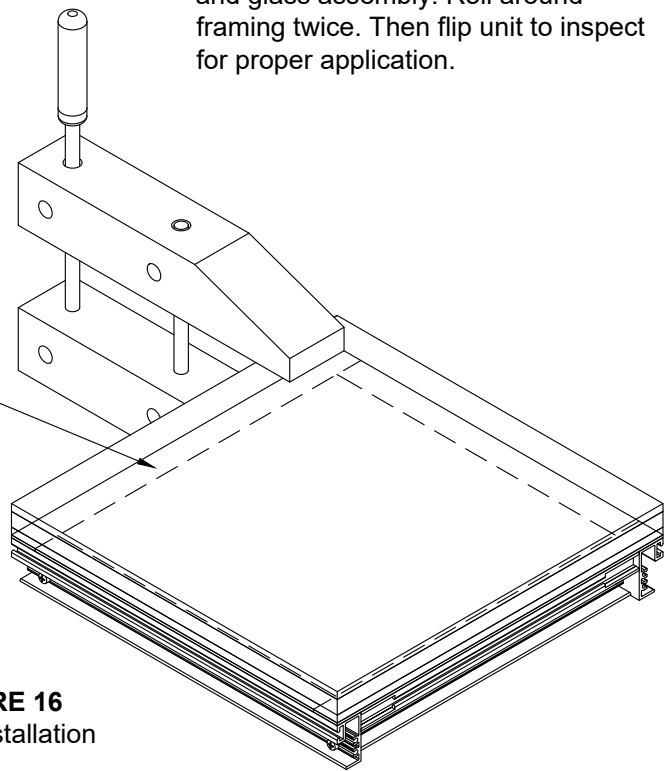
FIGURE 15
Glass Installation



Final application of tape requires
using pinching roller machine to
apply 90 in. lbs of force to cassette
and glass assembly. Roll around
framing twice. Then flip unit to inspect
for proper application.

Inspect through glass to confirm
proper compression of tape to
glass. Light spots will need to be
rolled again and may require use
of wood screw furniture clamp to
adhere small section in particular
corner areas.

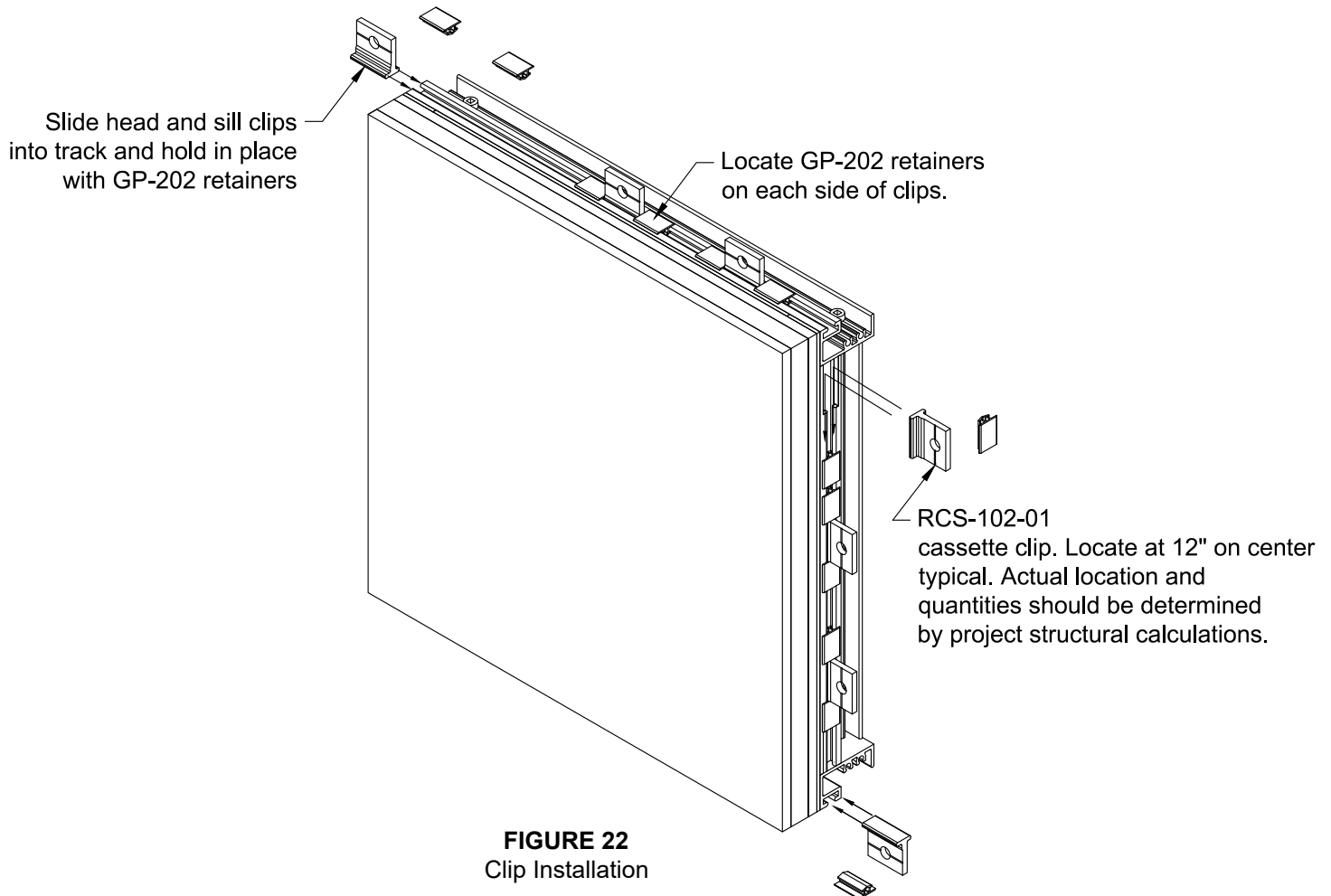
FIGURE 16
Glass Installation



RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE UNIT INSTALLATION

- 2.18 Slide horizontal clips into head and sill of unit. Hold clips in position using GP-202 retainers. See notes below for further instructions.
- 2.19 Install vertical cassette clips by inserting into slot of cassette from top of cassette. Retain clips with GP-202.
- 2.20 Note: Final clip locations will be adjusted on units during installation onto curtain wall.



Note: It is recommended to install cassette clips in field at the sill of each unit to avoid damage to clips and cassette frame. Clips at verticals and head may be installed either in shop or field.

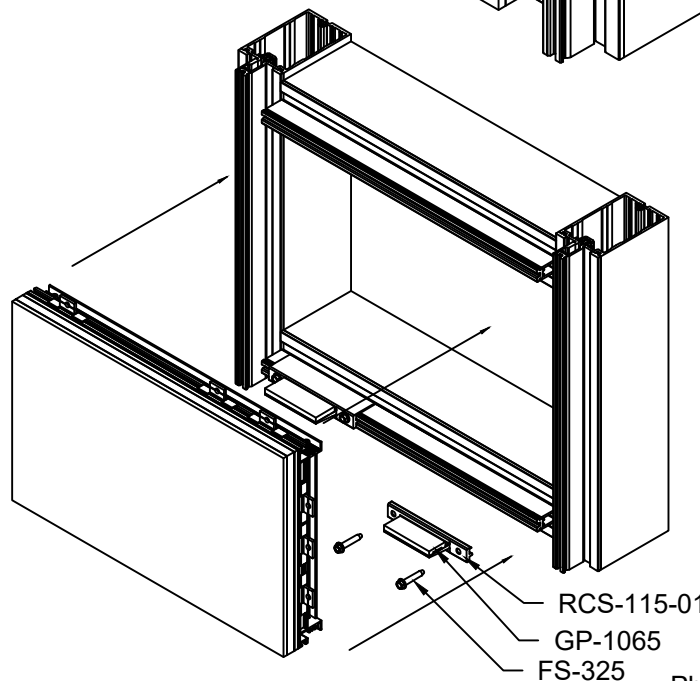
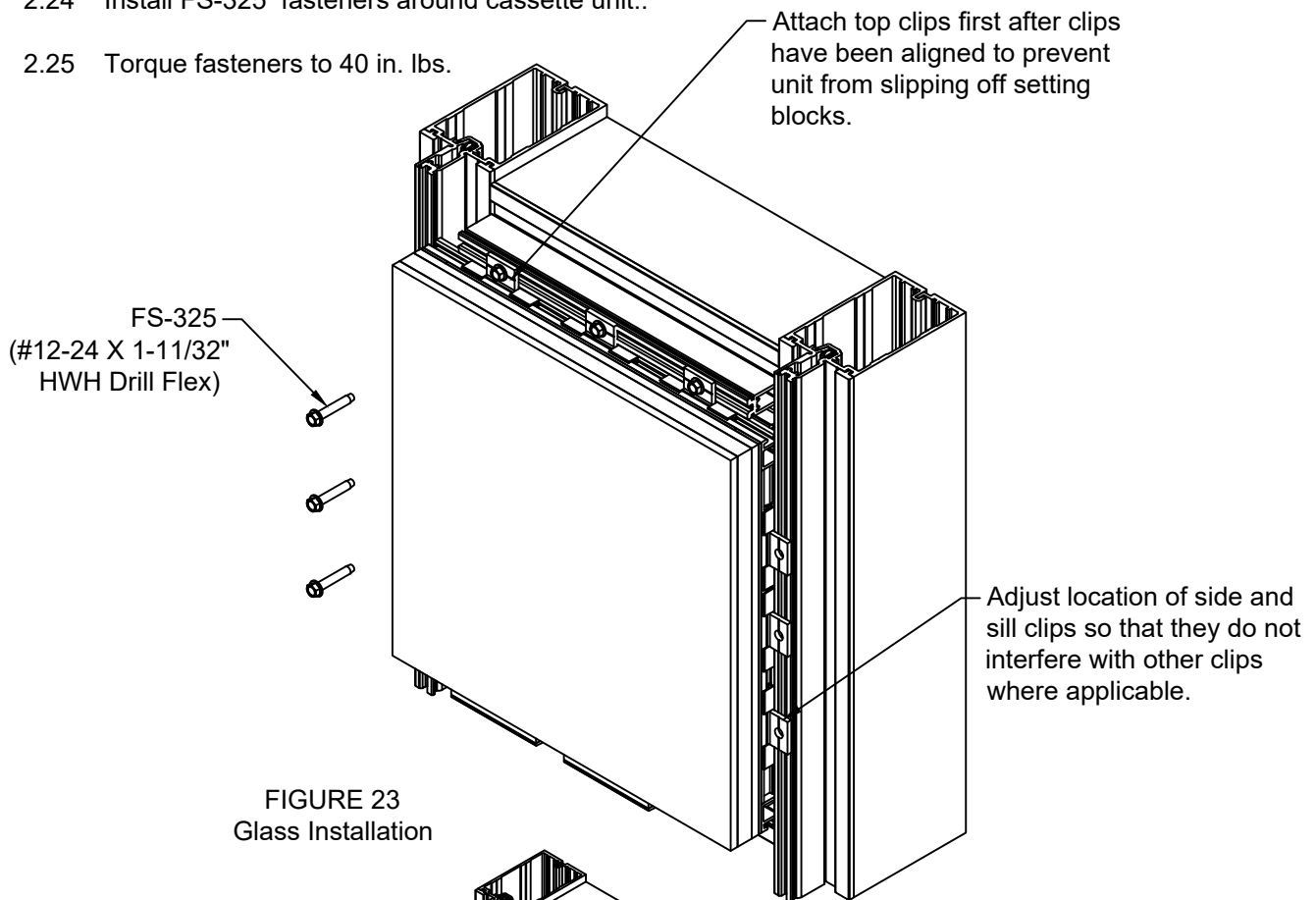
When RCS-101 are used at intermediate captured areas. They will not use cassette clips, but are held in place with WW-162 pressure plates which will be attached with FS-325 fasteners at 9" on center or at spacing as required by engineers calculations.

Perimeter captured areas will use the RCS-102-01 clip in combination with an RCS-112 perimeter closure, RCS-111 pressure plate and WW-110 face cap. The RCS-102-01 clips are attached through the RCS-108 molded isolator with FS-325 and located at 18" on center or minimum 3 per daylight opening. Use FS-322 to attach pressure plate to closure.

RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE INSTALLATION

- 2.21 Install RCS-115-01 setting chair with GP-1065 setting block to horizontal. Attach setting chair w/(2)FS-325 (#12-24 X 1-11/32" HWH Drill Flex).
- 2.22 Locate cassette frame unit and glass in opening. Set unit on setting blocks and rotate into position, center in opening so clips align properly. Adjust location of clips on sides and sill so they do not interfere with other clips.
- 2.23 Attach clips at head of unit with FS-325 fasteners.
- 2.24 Install FS-325 fasteners around cassette unit..
- 2.25 Torque fasteners to 40 in. lbs.



RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE EXPANSION HORIZONTAL SCREW SPLINE FABRICATION

- 2.27 When using the WW-427 & WW-428, horizontals for the expansion horizontal connection fabricate top and bottom of mullion as shown in **FIGURE 17**. If using WW-527 & WW-528 fabricate per **FIGURE 18**.

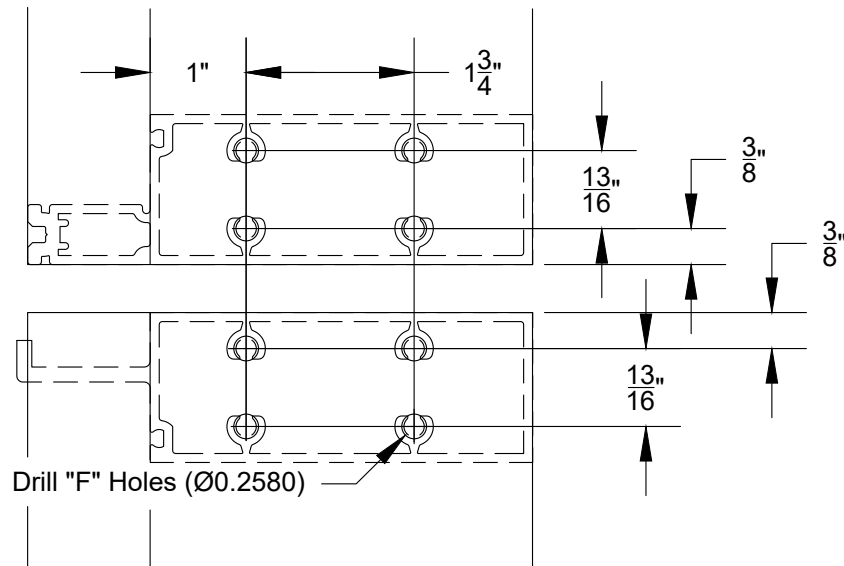


FIGURE 17
Fabrication for
WW-427 & WW-428

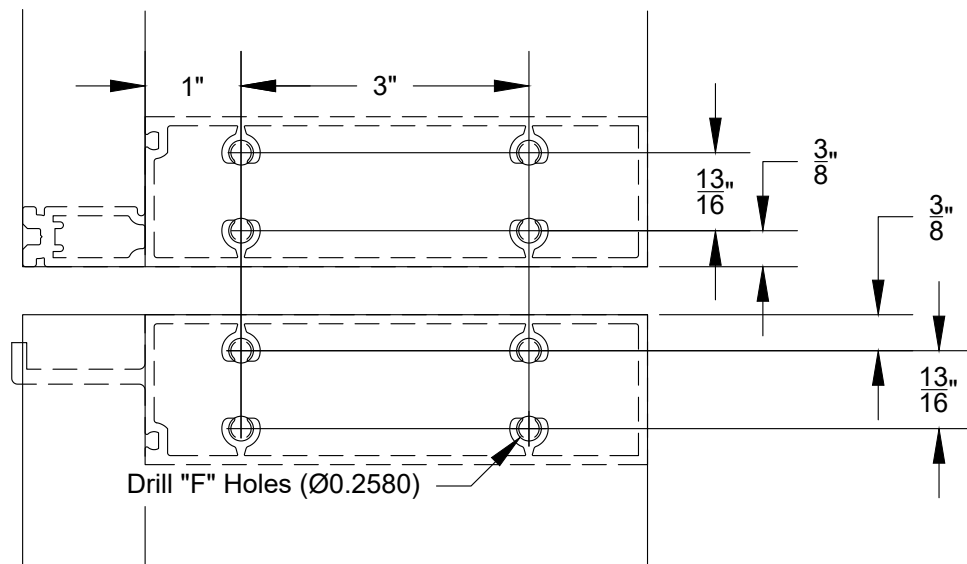
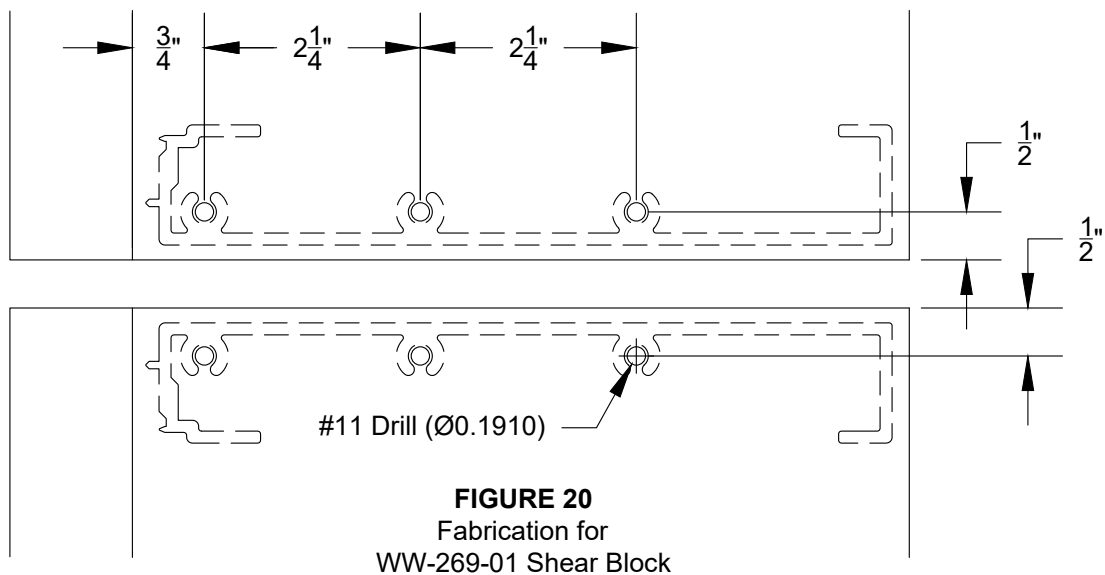
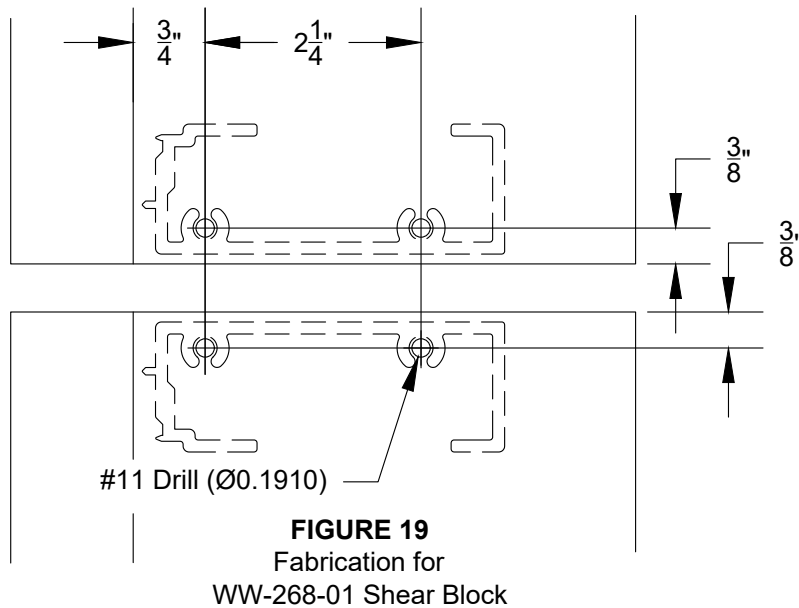


FIGURE 18
Fabrication for
WW-527 & WW-528

RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE EXPANSION HORIZONTAL SHEAR BLOCK FABRICATION

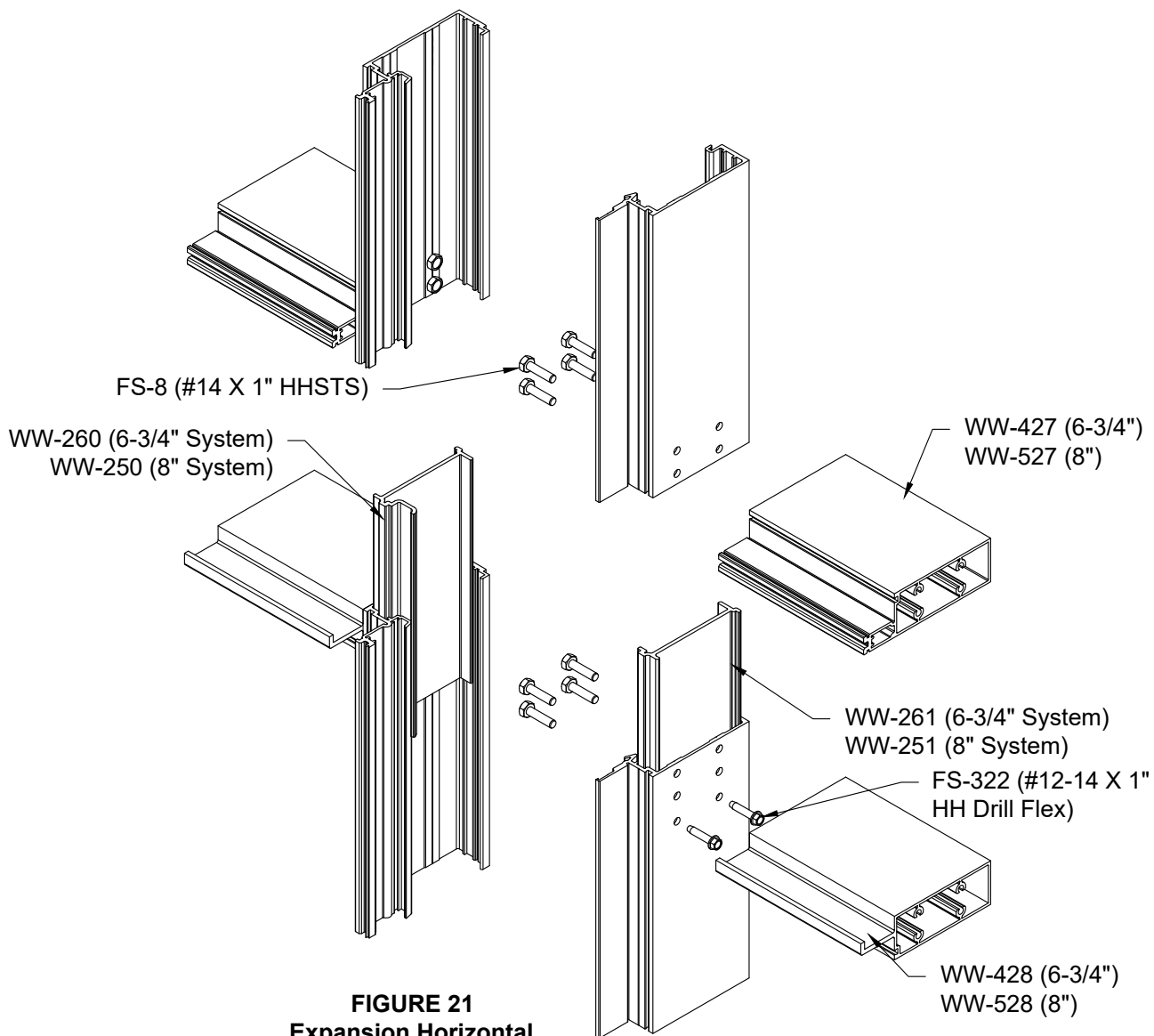
- 2.28 When using the WW-436, WW-437, WW-536, WW-537 horizontals for the expansion horizontal connection fabricate top and bottom of mullion as shown in FIGURE 19. If using WW-836 & WW-837 fabricate per FIGURE 20. Note that the dimension from the end of mullions to hole center line is different in these two drawings.



RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE EXPANSION HORIZONTAL SCREW SPLINE ASSEMBLY

- 2.29 FIGURE 21 below shows the screw spline assembly for the dual horizontal expansion assembly. Use the Reliance™-SS Installation Manual for typical wall assembly.
- 2.30 Attach horizontals to vertical mullions using FS-8 (#14 x 1" HHSTS). Four (4) fasteners per connection will be required.
- 2.31 Once horizontal are installed. Slide splices into vertical mullion and attach using (2) two FS-322 (#12-24 x 1" HH Drill Flex). Splices may be installed in upper or lower mullion depending on project requirements.



RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE EXPANSION HORIZONTAL SHEAR BLOCK ASSEMBLY

- 2.32 FIGURE 23 below shows the shear block assembly for the dual horizontal expansion assembly. Use the Reliance Installation Manual for typical wall assembly.
- 2.33 Fabricate horizontals per FIGURE 22. Drill #11 (.191Ø) holes at each end for #10 Phillips Flat head fasteners.
- 2.34 Attach WW-268-01 (WW-269-01) shear blocks to mullion using (2) FS-9 (#14 x 1-1/2" PFH) fasteners. Horizontal will attach to shear block using (1) FS-7 (#10 x 3/4" PFH) at each end.
- 2.35 Once horizontal are installed. Slide splices into vertical mullion and attach using (2) FS-319 w/ FSN-37 nut and FSW-65 flat washers. Splices may be installed in upper or lower mullion depending on project requirements.

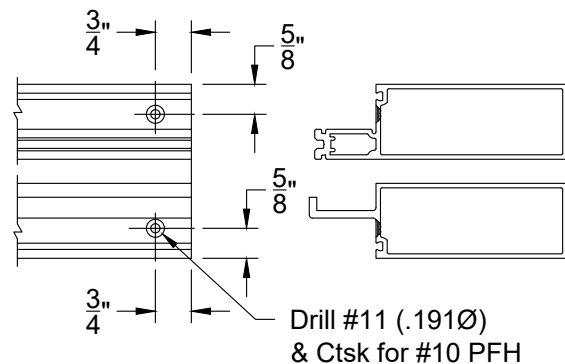


FIGURE 22
Horizontal Fabrication

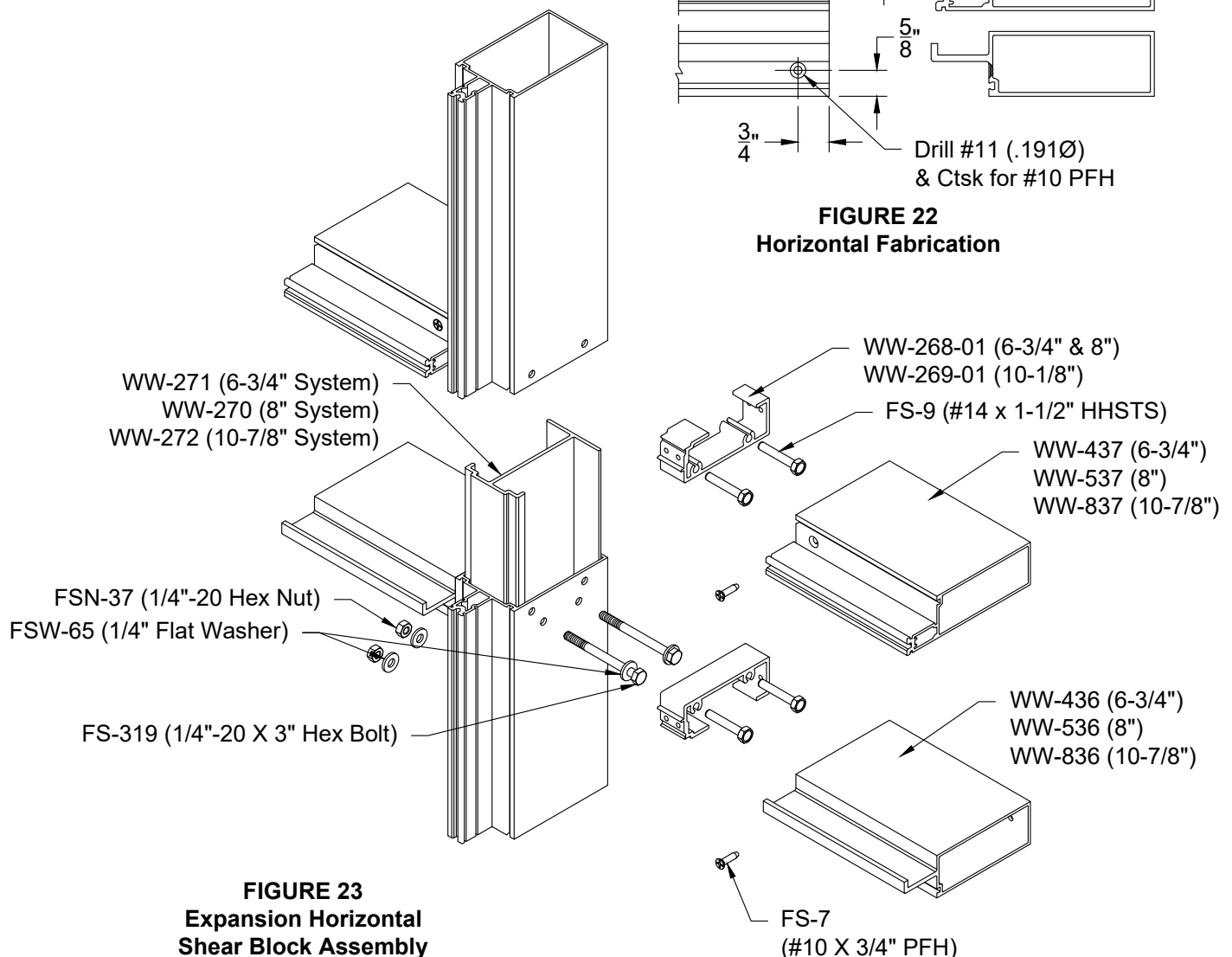


FIGURE 23
Expansion Horizontal
Shear Block Assembly

RELIANCE™ CASSETTE INSTALLATION MANUAL

VHB CASSETTE EXPANSION HORIZONTAL GLAZING

- 2.36 Glazing of screw spline and shear block systems will use same methods and sequence. Install lower lite first, leaving setting chair and block off of horizontal above will increase clearances for installation.
- 2.37 Install lower lite by dropping hook of RCS-107 over tongue of horizontal and rotating into position as shown in FIGURES 24 & 25. Once glass is in position secure in place using RCS-102-01 cassette clips using a FS-325 fastener. Locate clips at 12" on center at verticals and sill of lite.
- 2.38 Install RCS-115-01 setting chair on upper horizontal using (2) FS-325 fasteners. Install GP-1065 setting block onto chair. FIGURE 26
- 2.39 Glaze upper lite above and secure using RCS-102-01 cassette clips using FS-325 fasteners and locate at 12" on center. FIGURE 27

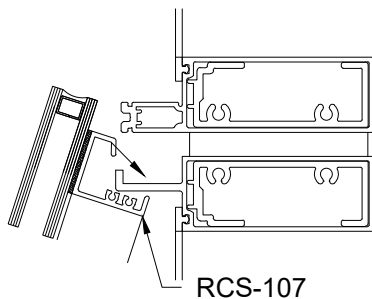


FIGURE 24
Set lower cassette
over tongue of horizontal

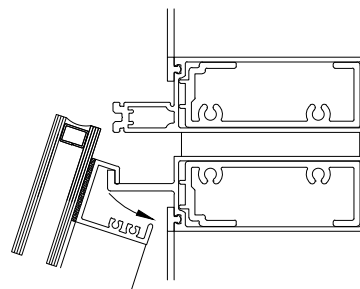


FIGURE 25
Rotate into opening
and attach using cassette
clips and FS-325

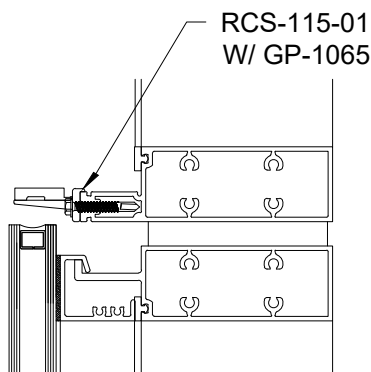


FIGURE 26
Install setting chair
& setting block for
lite above

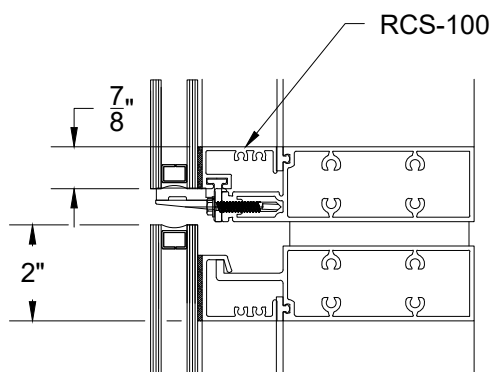
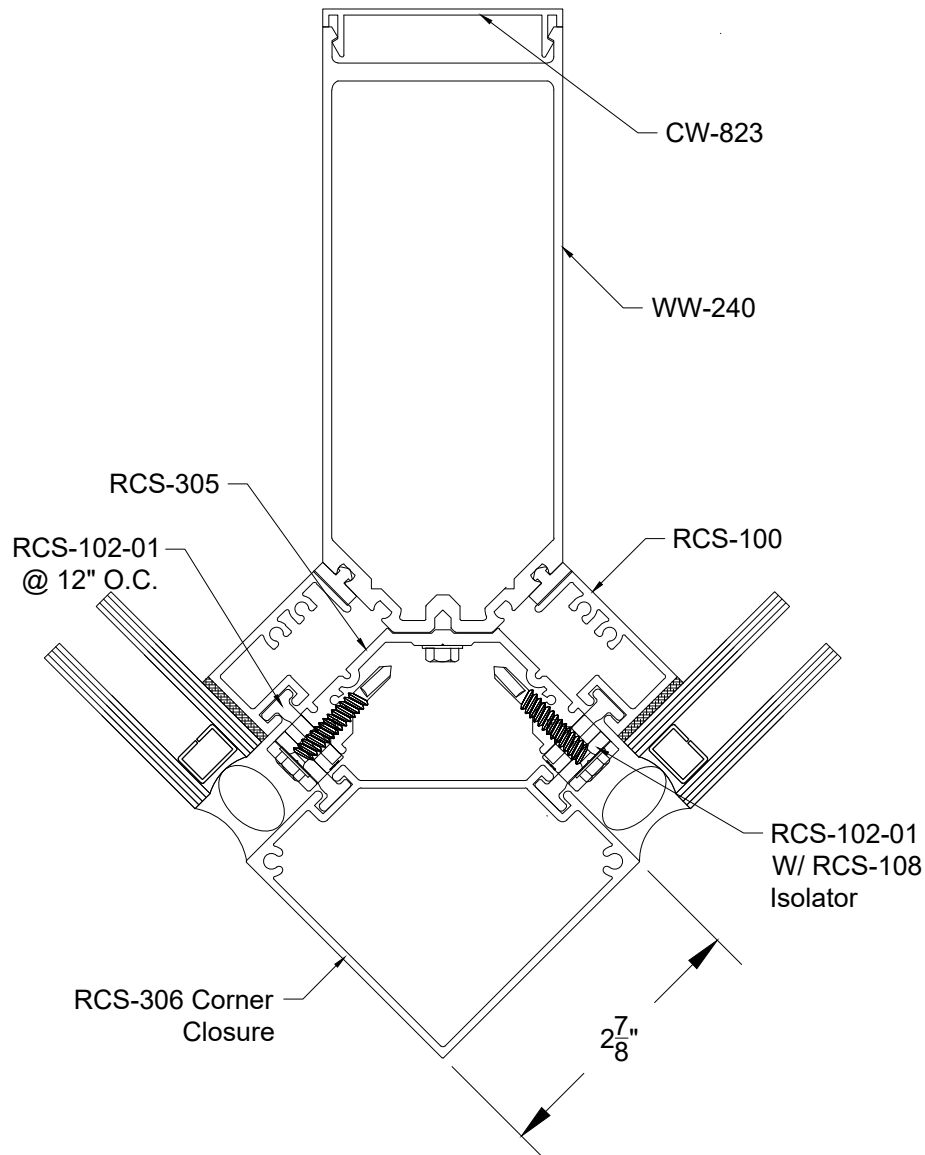


FIGURE 27
Install upper lite and
secure in place using
clips and FS-325

RELIANCE™ CASSETTE INSTALLATION MANUAL

90° OUTSIDE CORNER INSTALLATION - VHB

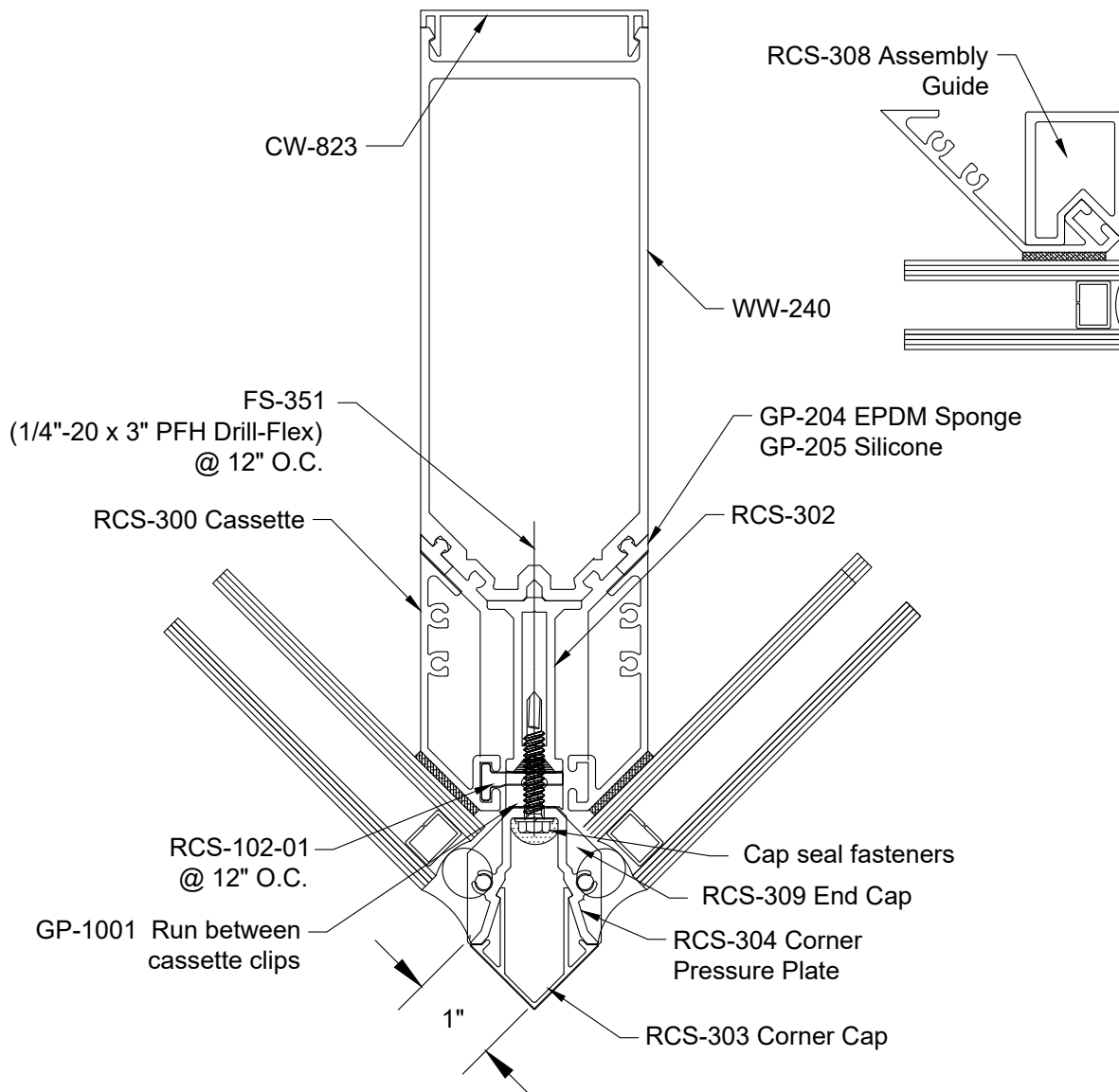
- 2.40 Installation of RCS-306 corner will use typical cassette installation as shown in sections 1 through 4. RCS-100 cassettes will be used and attach to RCS-305 with RCS-102-01cassette clip and FS-325 fasteners.
- 2.41 RCS-305 will attach to corner mullion with FS-325 fasteners at 12" on center.
- 2.42 RCS-307-01 mull cap will be attached to each end of RCS-306 and bed in sealant.
- 2.43 RCS-108 isolators will be used at cassette clips on RCS-306 similar to perimeter cassettes
- 2.44 Seal between glass and RCS-306 and perimeter as shown in perimeter sealant instructions.



RELIANCE™ CASSETTE INSTALLATION MANUAL

90° OUTSIDE CORNER INSTALLATION - VHB

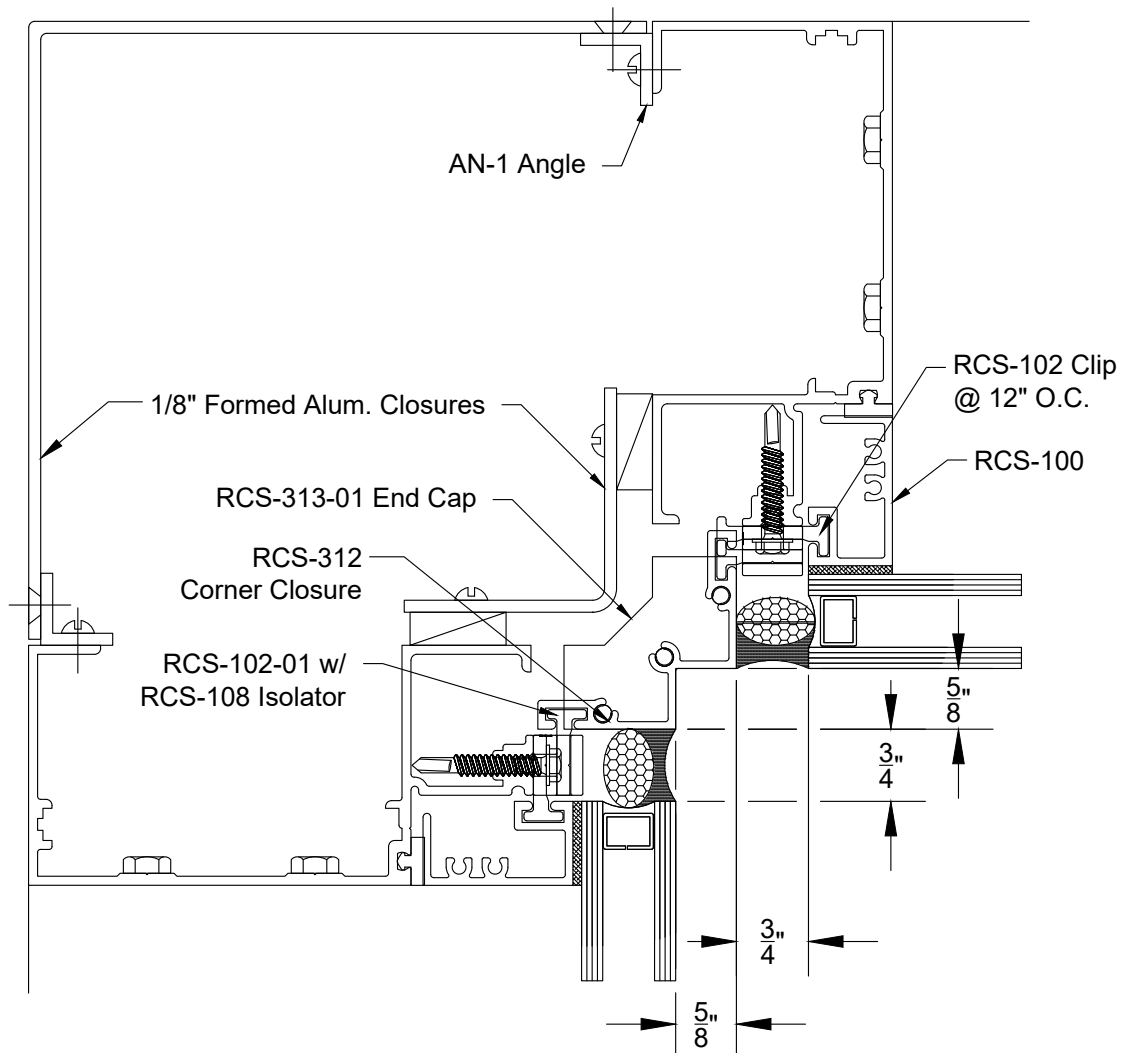
- 2.45 RCS-302 will attach to corner mullion with FS-351 (1/4"-20 x 3" PFH Drill Flex) fasteners at 12" on center.
- 2.46 RCS-308 assembly guide must be used to apply RCS-300 cassette to glass. Guide should be cut to fit full length of cassette. RCS-100 cassettes will be used typically on other edges of glass.
- 2.47 Installation of corner will use typical cassette installation as shown in sections 1 through 4. RCS-300 cassettes will be used at corner and attach to RCS-302 with RCS-102-01 cassette clip and FS-325 fasteners.
- 2.48 Install GP-1001 isolator gasket to face of RCS-302 and attach RCS-304 pressure plate using FS-325 fasteners at 9" on center. Cap seal FS-325 fasteners.
- 2.49 RCS-309 mull cap will be attached to each end of RCS-304 using FS-320 drive screws and bed in sealant. Snap RCS-303 face cap to the RCS-304 pressure plate as shown.
- 2.50 Seal between glass and RCS-304 and perimeter as shown in perimeter sealant instructions.



RELIANCE™ CASSETTE INSTALLATION MANUAL

90° INSIDE CORNER INSTALLATION - VHB

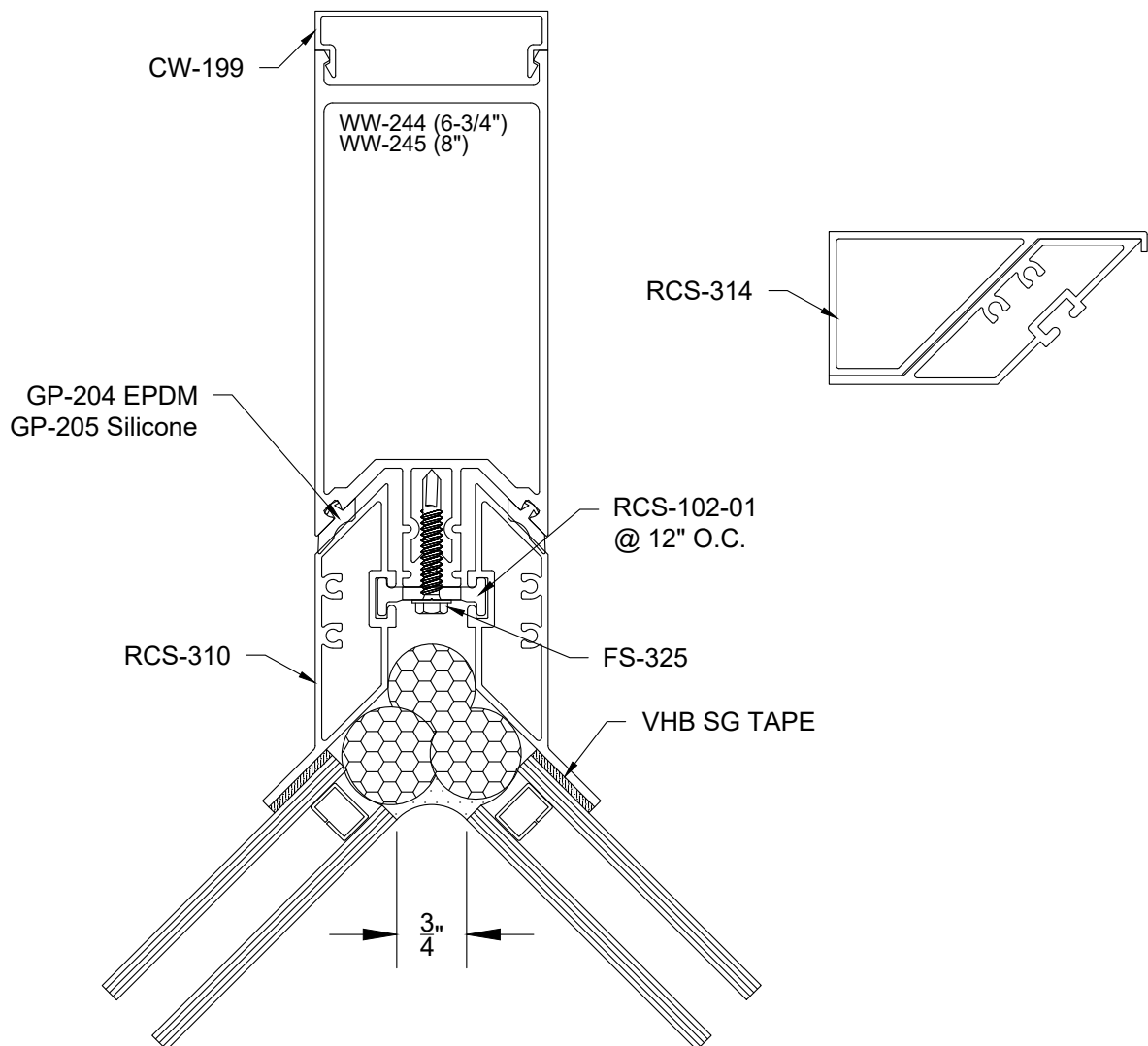
- 2.51 Assemble two mull inside 90 degree corners using RCS-312 corner closure. Closure will attach to mullion stem using RCS-102-01 cassette clips with RCS-108 isolator located at 12" on center. Attach with FS-325 fasteners.
- 2.52 Corner will be assembled using 1/8" formed aluminum closure. An 2-1/4" x 2-1/4" angle closure will be used to tie the two jamb mullions together, shim as required and attach using FS-115 (#10 x 1" pph) fastener at 18" on center.
- 2.53 Interior of corner will be closed off when required using 1/8" formed aluminum closure. AN-1 angles will be attached to jamb mullions using FS-115 fasteners at 24" on center and closure attached to angles using FS-7 (#10 x 3/4" PFH) @ 24" on center.
- 2.54 Glaze corner using RSC-100 cassettes per glazing instructions on Sections 1 thru 4 of manual.



RELIANCE™ CASSETTE INSTALLATION MANUAL

90° INSIDE CORNER INSTALLATION - VHB

- 2.55 Inside 90 single mullion corner will be glazed using standard glazing process as shown in Sections 1 through 4 of this manual.
- 2.56 Using RCS-310 cassette at corner and RCS-100 cassette at other sides of cassette unit. Attach cassette to corner mullion using RCS-102-01 cassette clip at 12" on center. Attach using FS-325 fasteners.
- 2.57 RCS-310 cassette will be applied to glass using VHB structural glazing tape. The RCS-314 assembly guide will be required to roll cassette onto glass, reference page 16 for cassette glazing. Assembly guide should be cut to full length of RCS-310.





STRUCTURAL SILICONE GLAZED CASSETTE ASSEMBLY AND GLAZING

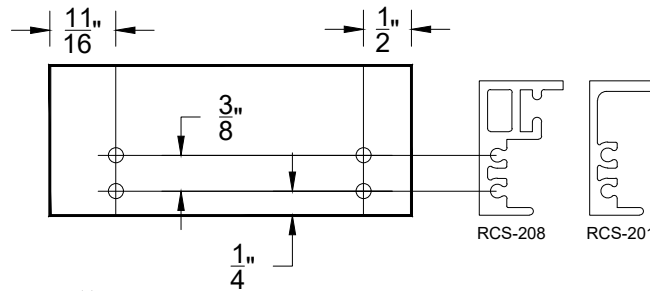
RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE FABRICATION

3.1 Fabricate horizontal cassettes with (2) #17 (.173Ø) holes on each end. SEE FIGURES 28 & 28A

3.2 Fabricate vertical cassettes with slot milled at top end. Slot will be used to insert cassette clips in field. Care should be taken when notching not to damage surface where tape or structural sealant is to be applied. SEE FIGURE 29

Note: Cassette frames may be assembled without this notch, but all clips must be installed prior to cassette frame assembly and glazing. Additional clips could not be added to unit after assembly without notch.



Note: $\frac{11}{16}$ dimension for 4-sided applications and perimeter captured face, $\frac{1}{2}$ dimension at intermediate captured conditions.

FIGURE 28
Horizontal Cassette
Fabrication

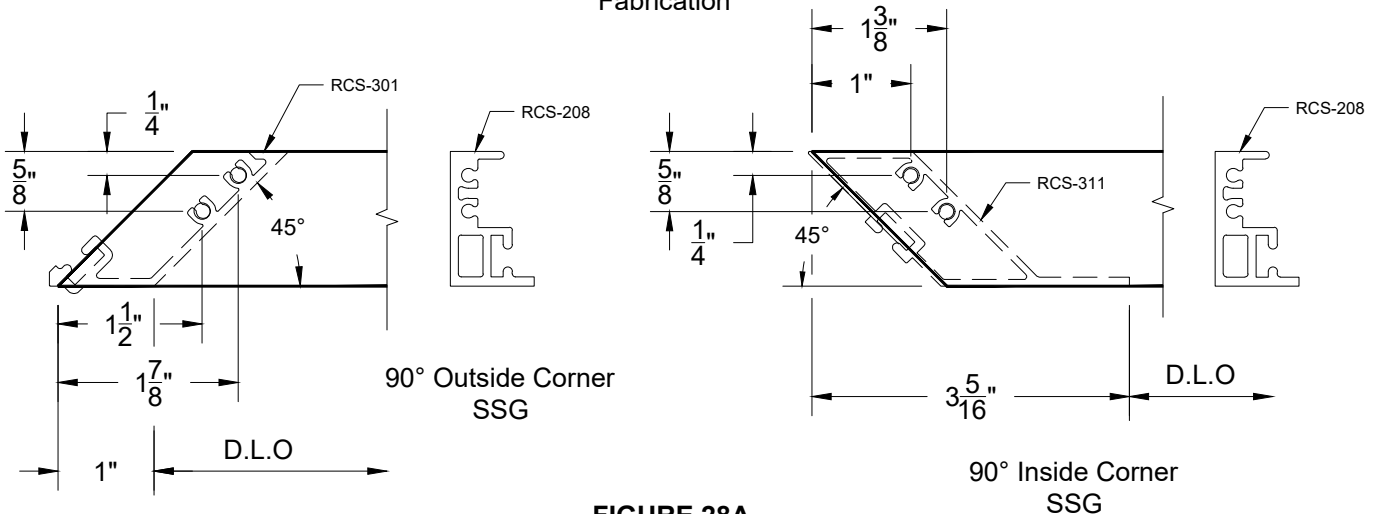


FIGURE 28A
Corner Cassette
Fabrication

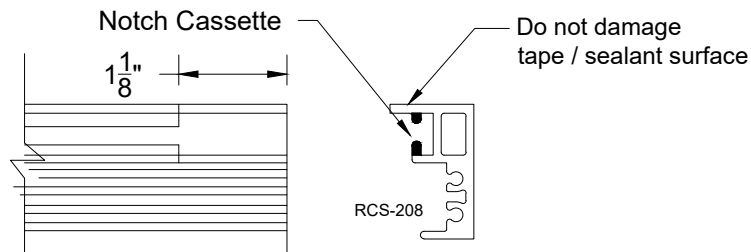
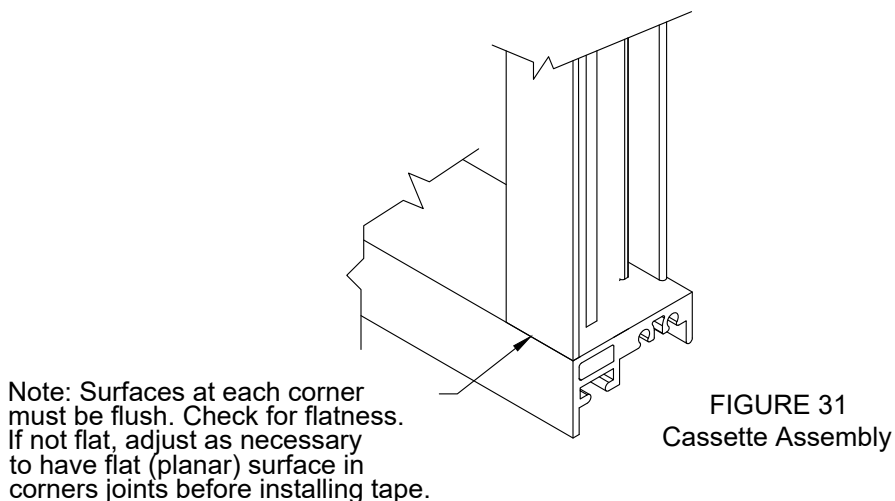
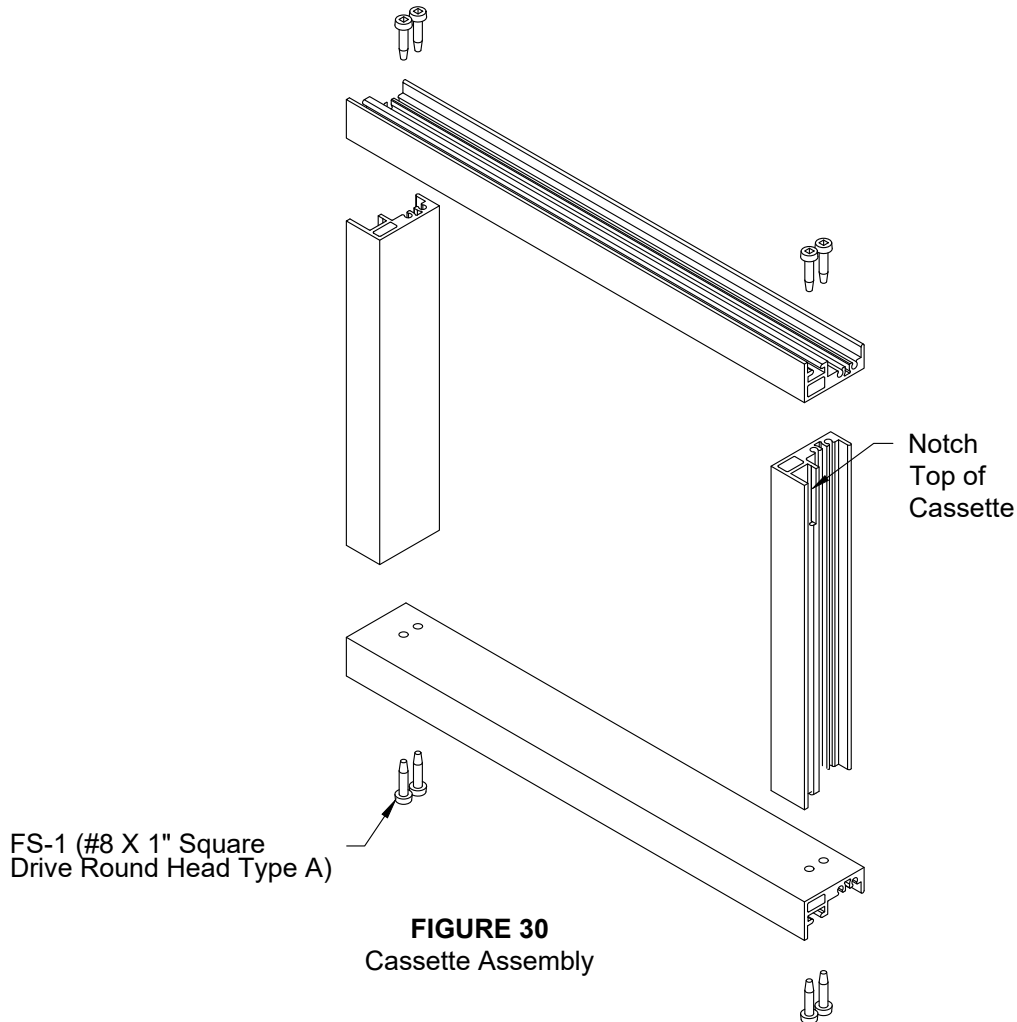


FIGURE 29
Vertical Cassette
Fabrication

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE ASSEMBLY

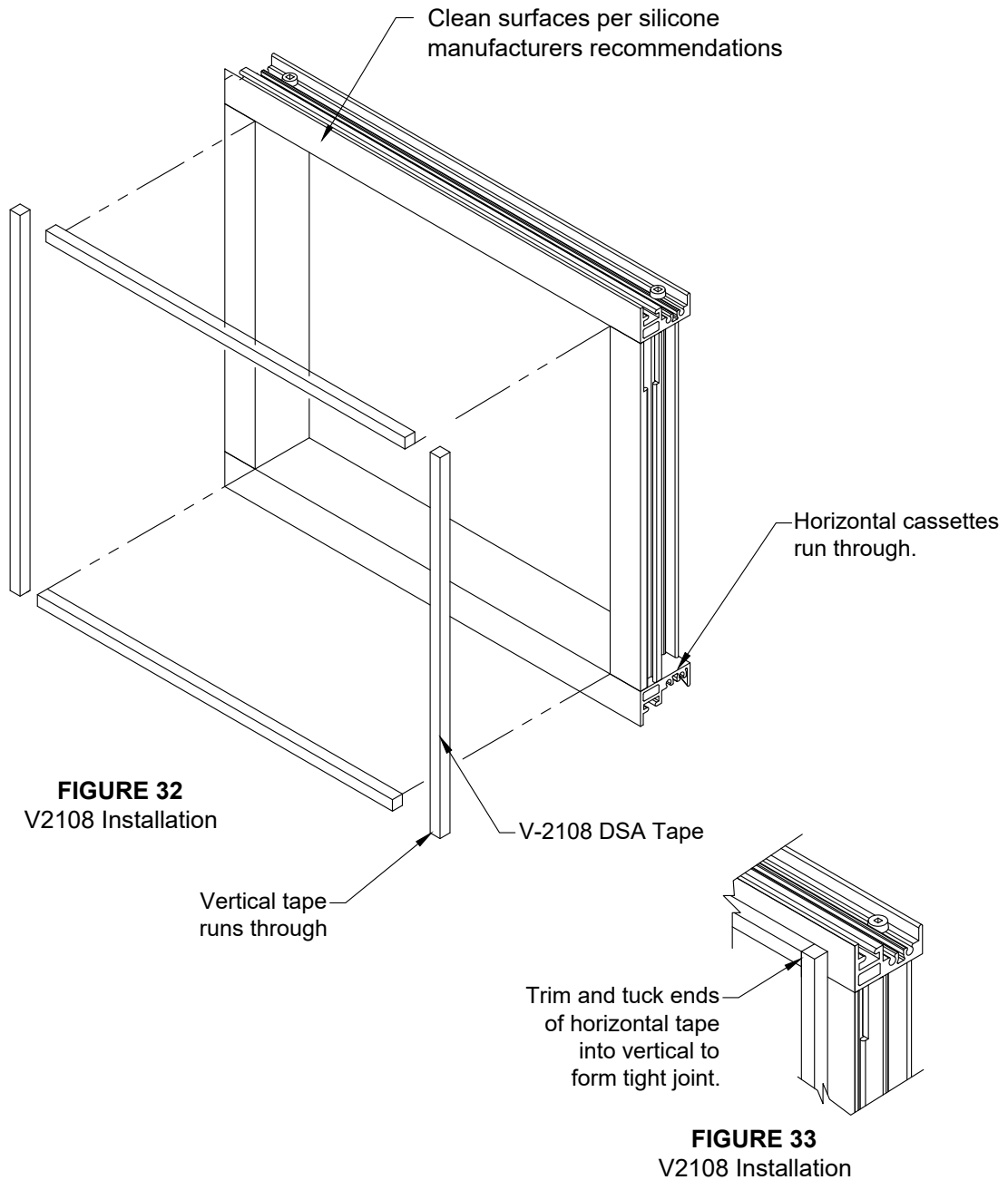
- 3.3 Cassettes will be assembled using (2) FS-1 (#8 x 1" Square Drive Round Head) at each corner. SEE FIGURE 3.
- 3.4 Surface at each corner on tape side of cassette must be flush. Check for flatness. If not flat, adjust as necessary to have flat (planar) surface at corner joints before installing tape. SEE FIGURE 31



RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE GLAZING PREP

- 3.5 Surface of cassette and glass will be cleaned and primed per silicone manufacturers recommendations. **SEE FIGURE 32**
- 3.6 Vertical tape is run through at corners. Tape will be tucked into the corner to form a tight joint. **SEE FIGURE 33**. Tape will be aligned with inside of cassettes.



RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE GLAZING

- 3.7 Dry Fit Test: Place cassette unit onto glass to ensure glass and unit align properly. Blue protective liner is still in place at this point.
- 3.8 Remove cassette unit from glass. Clean and prime glass per sealant manufacturers instructions. Wipe dust/dirt from protective liner.
- 3.9 Remove approximately 4" of protective liner at each corner from the cassette unit. Take care not to touch or contaminate the exposed adhesive. See FIGURE 34
- 3.10 Carefully place cassette unit onto glass. Be sure not to apply pressure to the unit in the corner so they may be moved and aligned with glass.
- 3.11 Once properly aligned, gently press down on the corners of the cassette unit to lock in place. Then working from each end, remove remainder of protective liner. This will require lifting of the cassette unit at the centers to aid in removal and prevent tearing.
- 3.12 Once all of the protective liner is removed, press firmly down onto the cassette on all sides to provide initial adhesion of the V2108 tape to the glass.
- 3.13 Using Structural Silicone as recommended by your choice of manufacturers. Apply sealant around perimeter of cassette unit and tool. Take care to keep sealant out of clip tracks. See FIGURE 35
- 3.14 Once sealant is cured the units may be moved to storage area. Do not stack glazed units on top of each other. If stored or crated vertically on edge, be sure there is support for the weight of the glass; i.e. stand at angle on edge of glass and not on edge of frame. See FIGURE 36

RELIANCE™ CASSETTE INSTALLATION MANUAL
SSG CASSETTE GLAZING

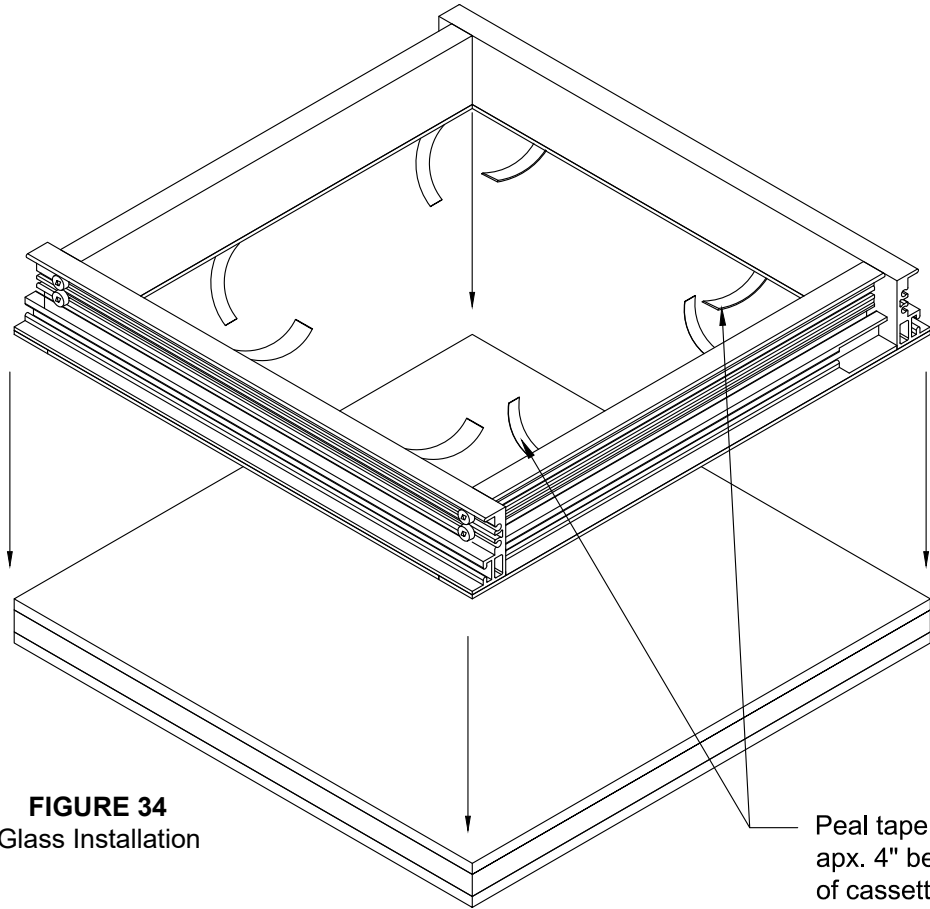


FIGURE 34
Glass Installation

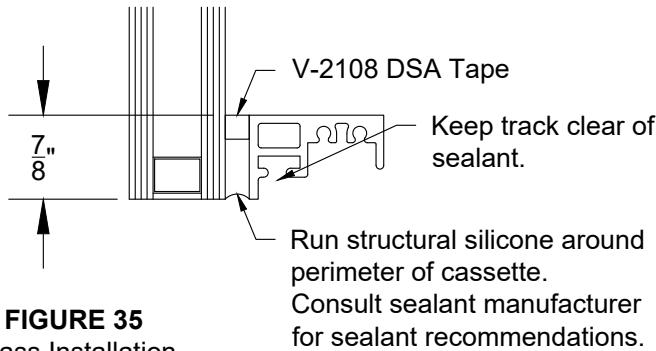


FIGURE 35
Glass Installation

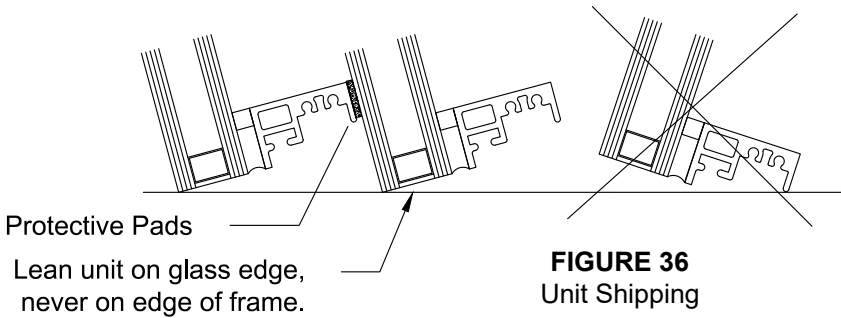
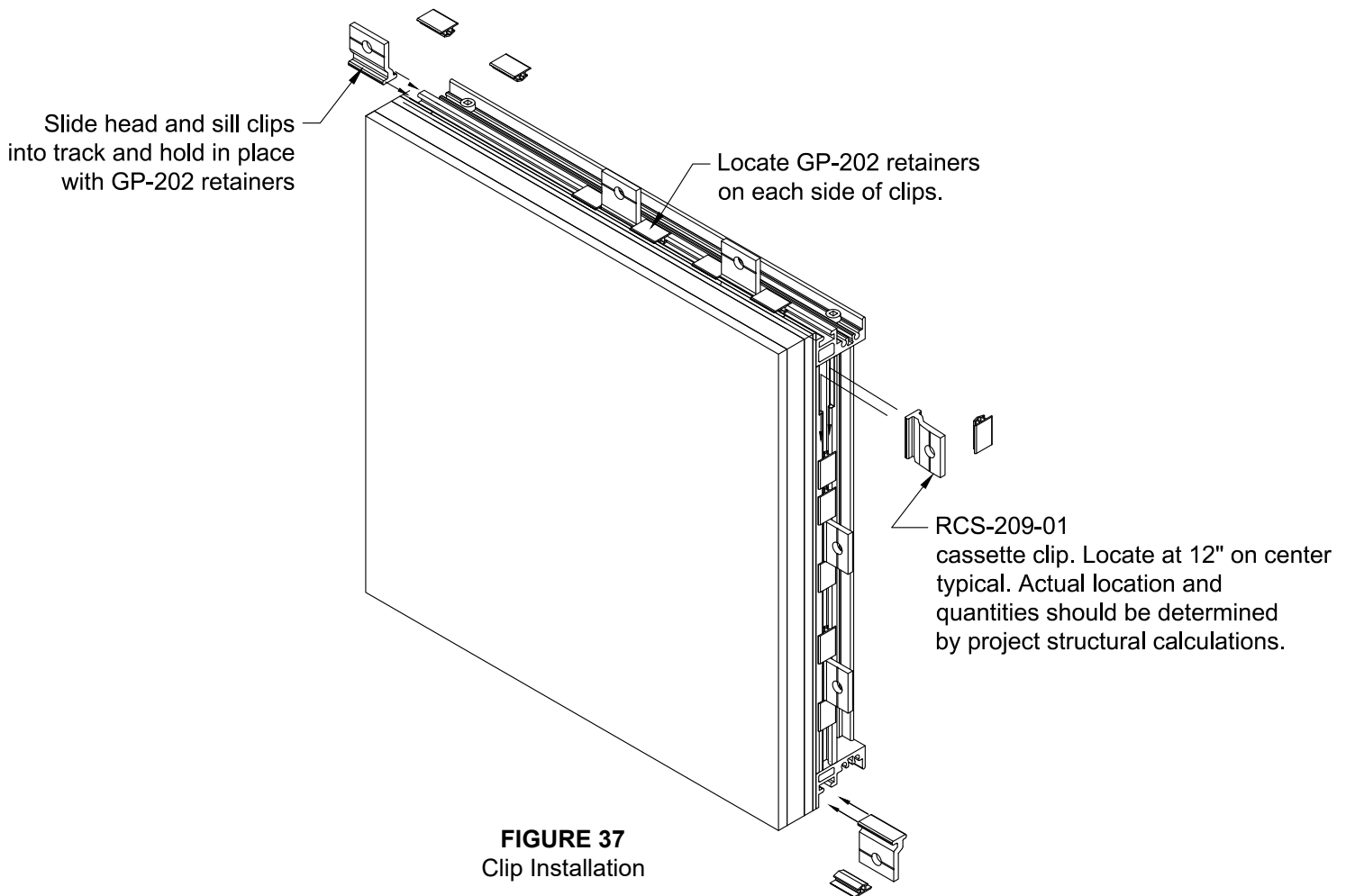


FIGURE 36
Unit Shipping

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE UNIT INSTALLATION

- 3.15 Slide RCS-209-01 horizontal clips into head and sill of unit. Hold clips in position using GP-202 retainers. See notes below for further instructions.
- 3.16 Install RCS-209-01 vertical cassette clips by inserting into slot of cassette from top of cassette. Retain clips with GP-202.
- 3.17 Note: Final clip locations will be adjusted on units during installation onto curtain wall.



Note: It is recommended to install cassette clips in field at the sill of each unit to avoid damage to clips and cassette frame. Clips at verticals and head may be installed either in shop or field.

When RCS-201 are used at intermediate captured areas. They will not use cassette clips, but are held in place with WW-162 pressure plates which will be attached with FS-325 fasteners at 9" on center or at spacing as required by engineers calculations.

Perimeter captured areas will use the RCS-102-01 clip in combination with an RCS-112 perimeter closure, RCS-111 pressure plate and WW-110 face cap. The RCS-102-01 clips are attached through the RCS-108 molded isolator with FS-325 and located at 18" on center or minimum 3 per daylight opening. Use FS-322 to attach pressure plate to closure.

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE UNIT INSTALLATION

- 3.18 Install RCS-115-01 setting chair with GP-1065 setting block to horizontal. Attach setting chair w/(2)FS-325 (#12-24 X 1-11/32" HWH Drill Flex).
- 3.19 Locate cassette frame unit and glass in opening. Set unit on setting blocks and rotate into position, center in opening so clips align properly. Adjust location of clips on sides and sill so they do not interfere with other clips.
- 3.20 Attach clips at head of unit with FS-325 fasteners.
- 3.21 Install FS-325 fasteners around cassette unit..
- 3.22 Torque fasteners to 40 in. lbs.

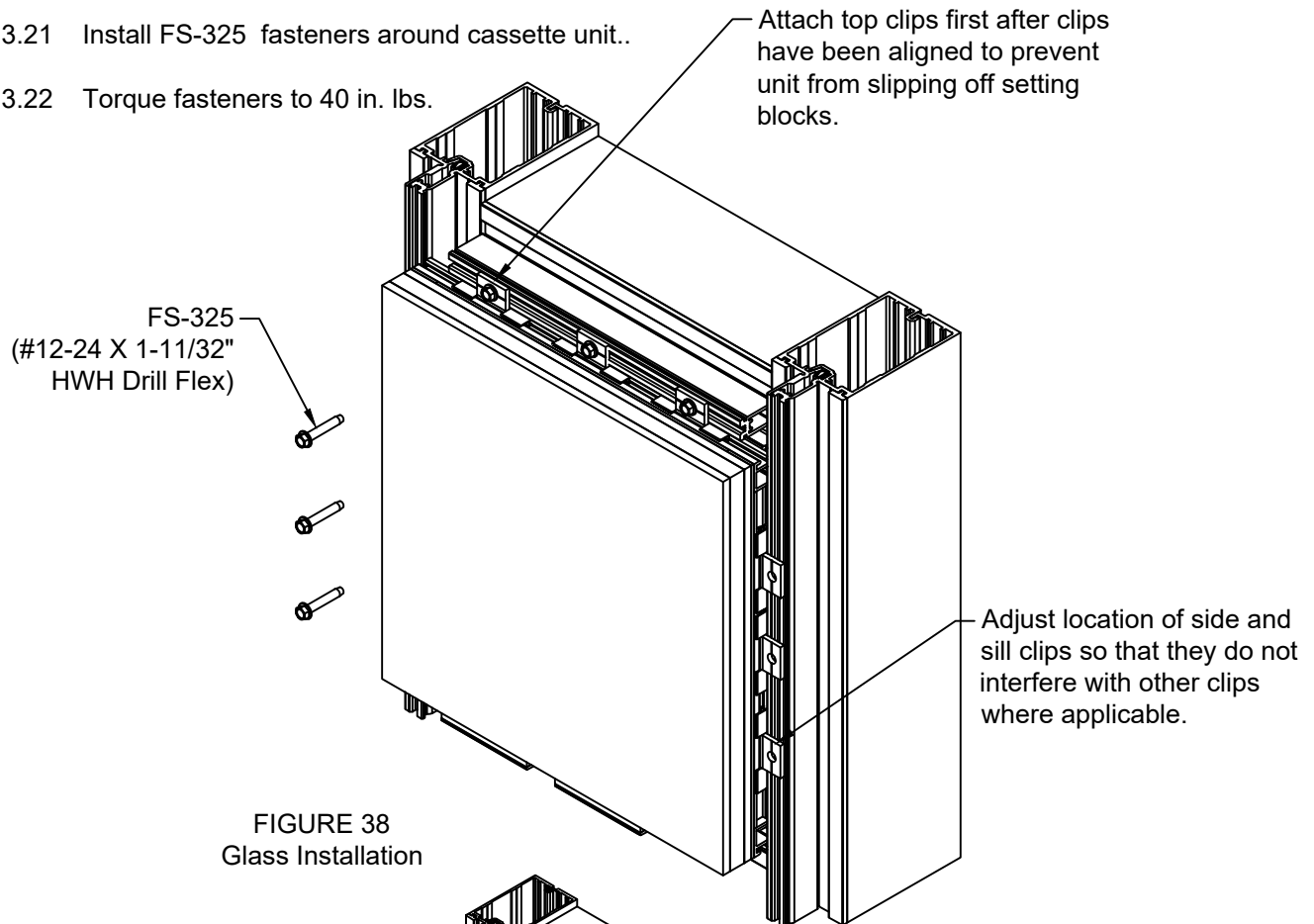
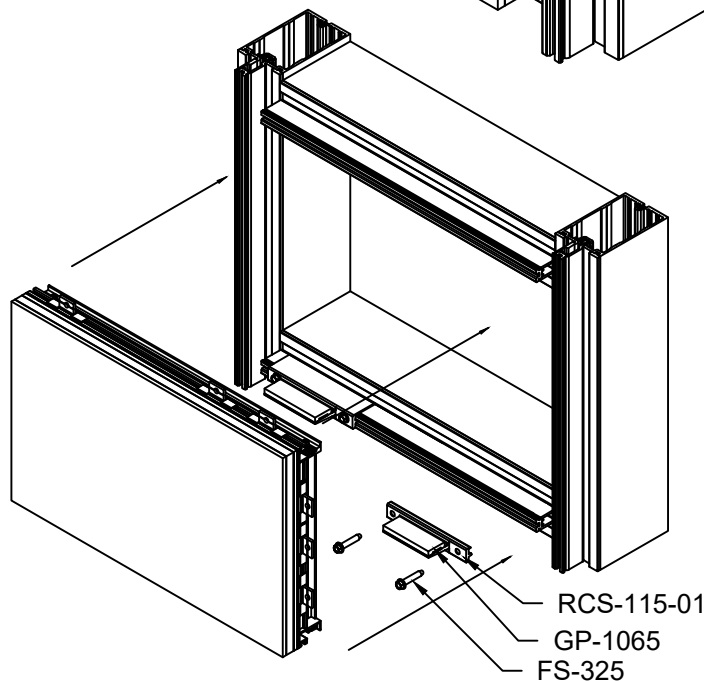


FIGURE 38
Glass Installation



SSG CASSETTE EXPANSION HORIZONTAL SCREW SPLINE FABRICATION

-
- Technical drawing showing a cross-section of a mechanical assembly. The drawing includes dimensions and a drill hole specification.
- Dimensions:
- Horizontal dimensions: 1" and $1\frac{3}{4}$ "
 - Vertical dimensions: $\frac{13}{16}$ " and $\frac{3}{8}$ "
- Drill "F" Holes ($\varnothing 0.2580$)

Technical drawing showing a cross-section of a wall assembly. The drawing includes dimensions for the wall thickness (1" and 3") and the spacing of the studs (3"). The wall is shown with two layers of sheathing (13.16" and 13.16") and a central cavity (3.8"). The drawing also shows the location of the studs (3.8") and the location of the insulation (13.16"). The drawing is labeled with dimensions in inches (").

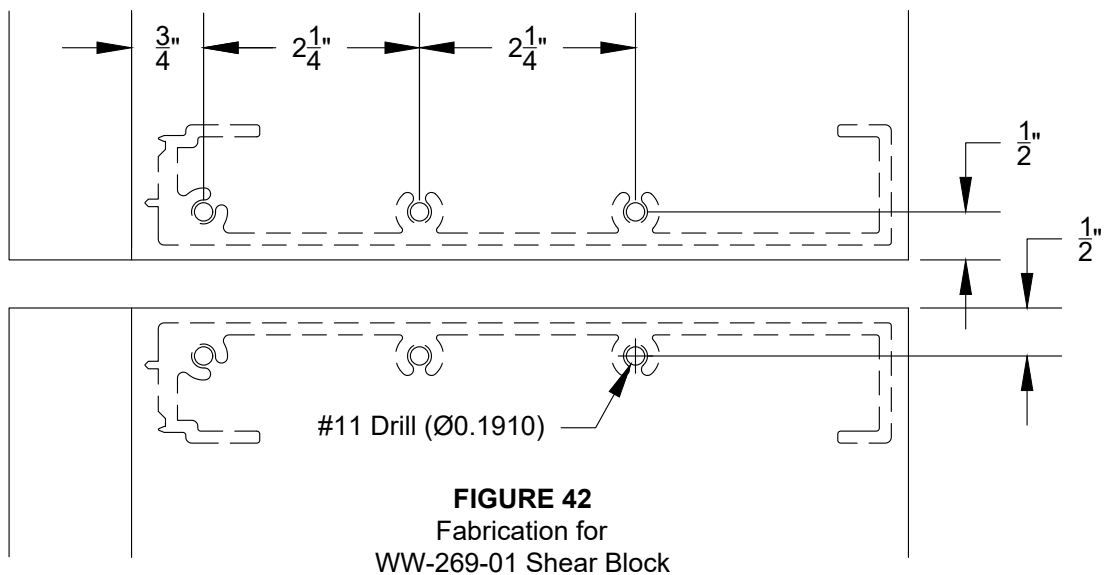
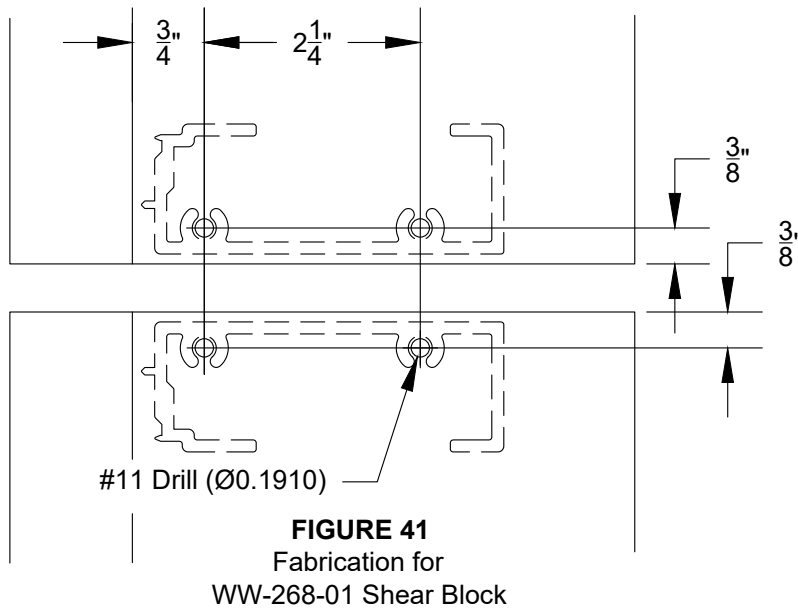
Drill "F" Holes (Ø0.2580)

Phone: 1-866-OLDCASTLE (653-2278)
Web: www.obe.com

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE EXPANSION HORIZONTAL SHEAR BLOCK FABRICATION

- 3.25 When using the WW-436, WW-437, WW-536, WW-537 horizontals for the expansion horizontal connection fabricate top and bottom of mullion as shown in FIGURE 41. If using WW-836 & WW-837 fabricate per FIGURE 42. Note that the dimension from the end of mullions to hole center line is different in these two drawings.



RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE EXPANSION HORIZONTAL SCREW SPLINE ASSEMBLY

- 3.26 FIGURE 43 below shows the screw spline assembly for the dual horizontal expansion assembly. Use the Reliance™-SS Installation Manual for typical wall assembly.
- 3.27 Attach horizontals to vertical mullions using FS-8 (#14 x 1" HHSTS). Four (4) fasteners per connection will be required.
- 3.28 Once horizontal are installed. Slide splices into vertical mullion and attach using (2) two FS-322 (#12-24 x 1" HH Drill Flex). Splices may be installed in upper or lower mullion depending on project requirements.

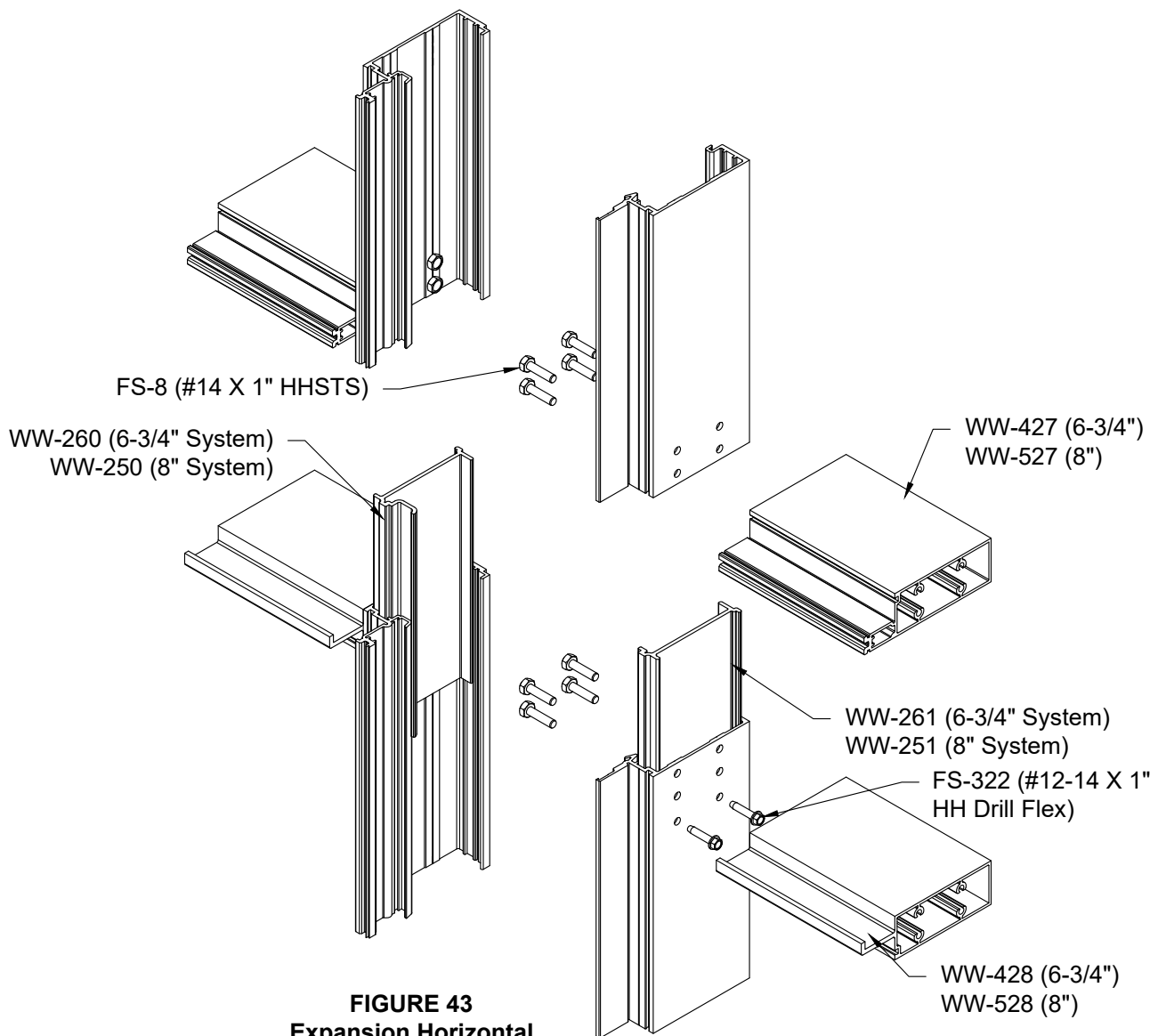


FIGURE 43
Expansion Horizontal
Screw Spline Assembly

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE EXPANSION HORIZONTAL SHEAR BLOCK ASSEMBLY

- 3.29 FIGURE 45 below shows the shear block assembly for the dual horizontal expansion assembly. Use the Reliance Installation Manual for typical wall assembly.
- 3.30 Fabricate horizontals per FIGURE 44. Drill #11 (.191Ø) holes at each end for #10 Phillips Flat head fasteners.
- 3.31 Attach WW-268-01 (WW-269-01) shear blocks to mullion using (2) FS-9 (#14 x 1-1/2" PFH) fasteners. Horizontal will attach to shear block using (1) FS-7 (#10 x 3/4" PFH) at each end.
- 3.32 Once horizontal are installed. Slide splices into vertical mullion and attach using (2) FS-319 w/ FSN-37 nut and FSW-65 flat washers. Splices may be installed in upper or lower mullion depending on project requirements.

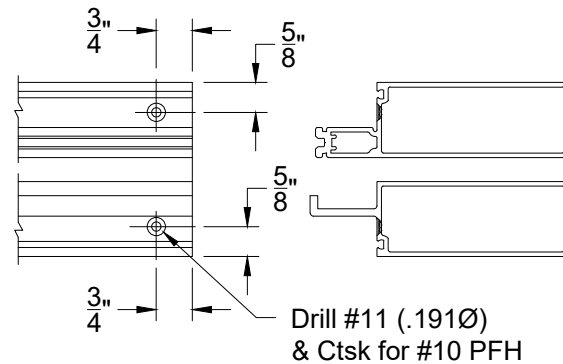


FIGURE 44
Horizontal Fabrication

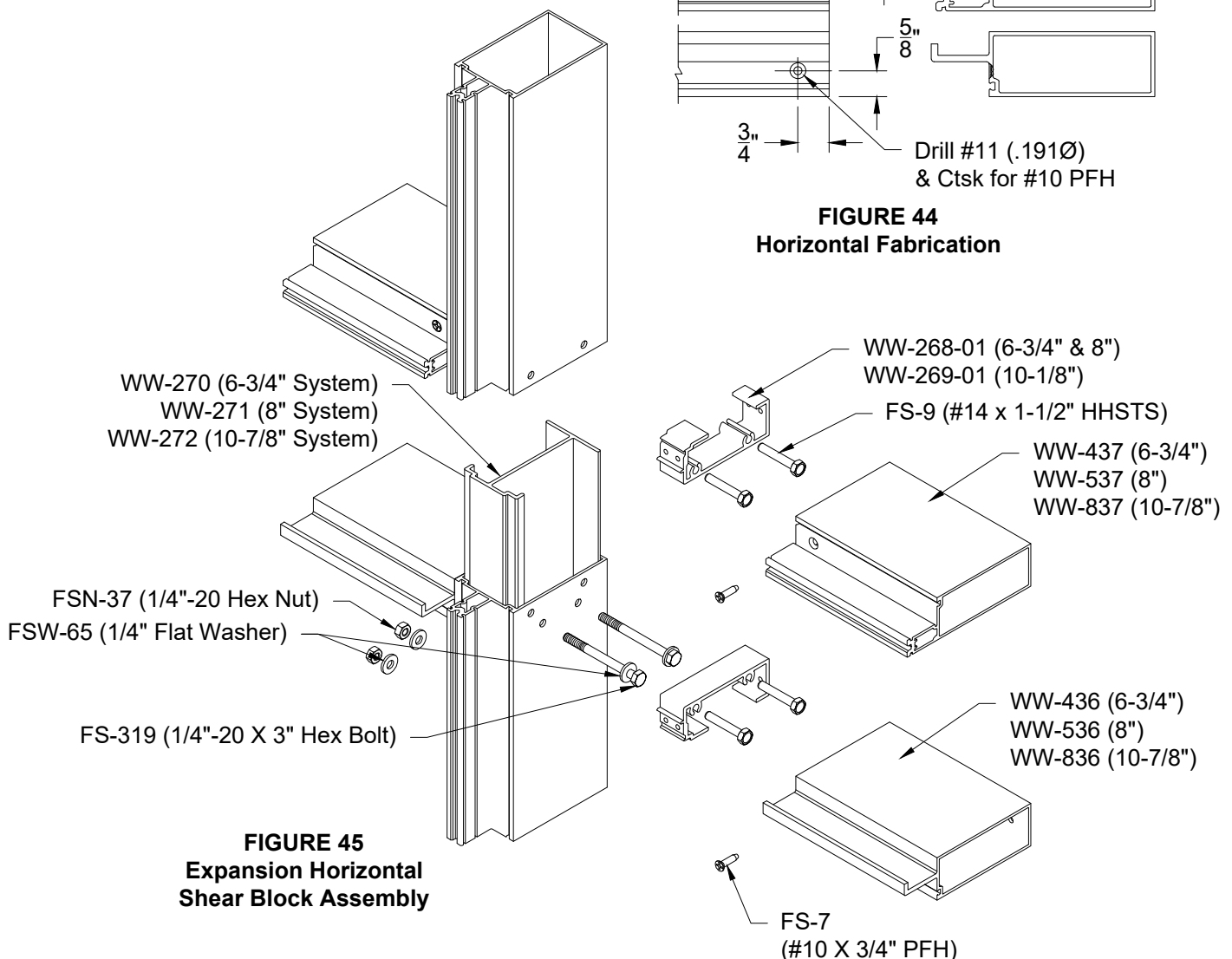
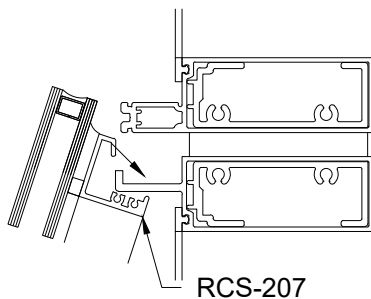


FIGURE 45
Expansion Horizontal
Shear Block Assembly

RELIANCE™ CASSETTE INSTALLATION MANUAL

SSG CASSETTE EXPANSION HORIZONTAL GLAZING

- 3.33 Glazing of screw spline and shear block systems will use same methods and sequence. Install lower lite first, leaving setting chair and block off of horizontal above will increase clearances for installation.
- 3.34 Install lower lite by dropping hook of RCS-207 over tongue of horizontal and rotating into position as shown in **FIGURES 46 & 47**. Once glass is in position secure in place using RCS-202-01 cassette clips using a FS-325 fastener. Locate clips at 12" on center at verticals and sill of lite.
- 3.35 Install RCS-115-01 setting chair on upper horizontal using (2) FS-325 fasteners. Install GP-1065 setting block onto chair. **FIGURE 48**
- 3.36 Glaze upper lite above and secure using RCS-209-01 cassette clips using FS-325 fasteners and locate at 12" on center. **FIGURE 49**



RCS-207

FIGURE 46
Set lower cassette
over tongue of horizontal

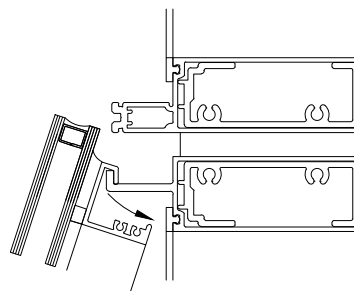
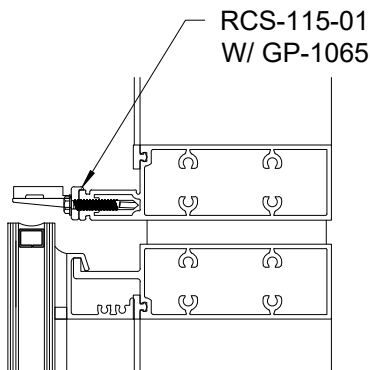
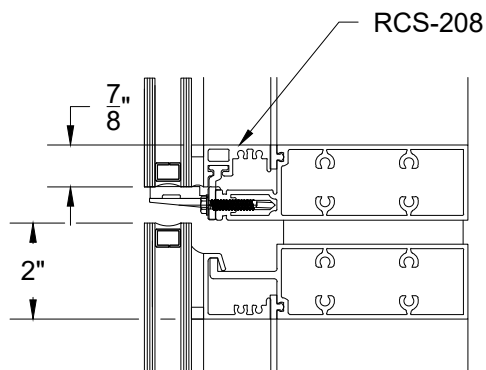


FIGURE 47
Rotate into opening
and attach using cassette
clips and FS-325



RCS-115-01
W/ GP-1065

FIGURE 48
Install setting chair
& setting block for
lite above

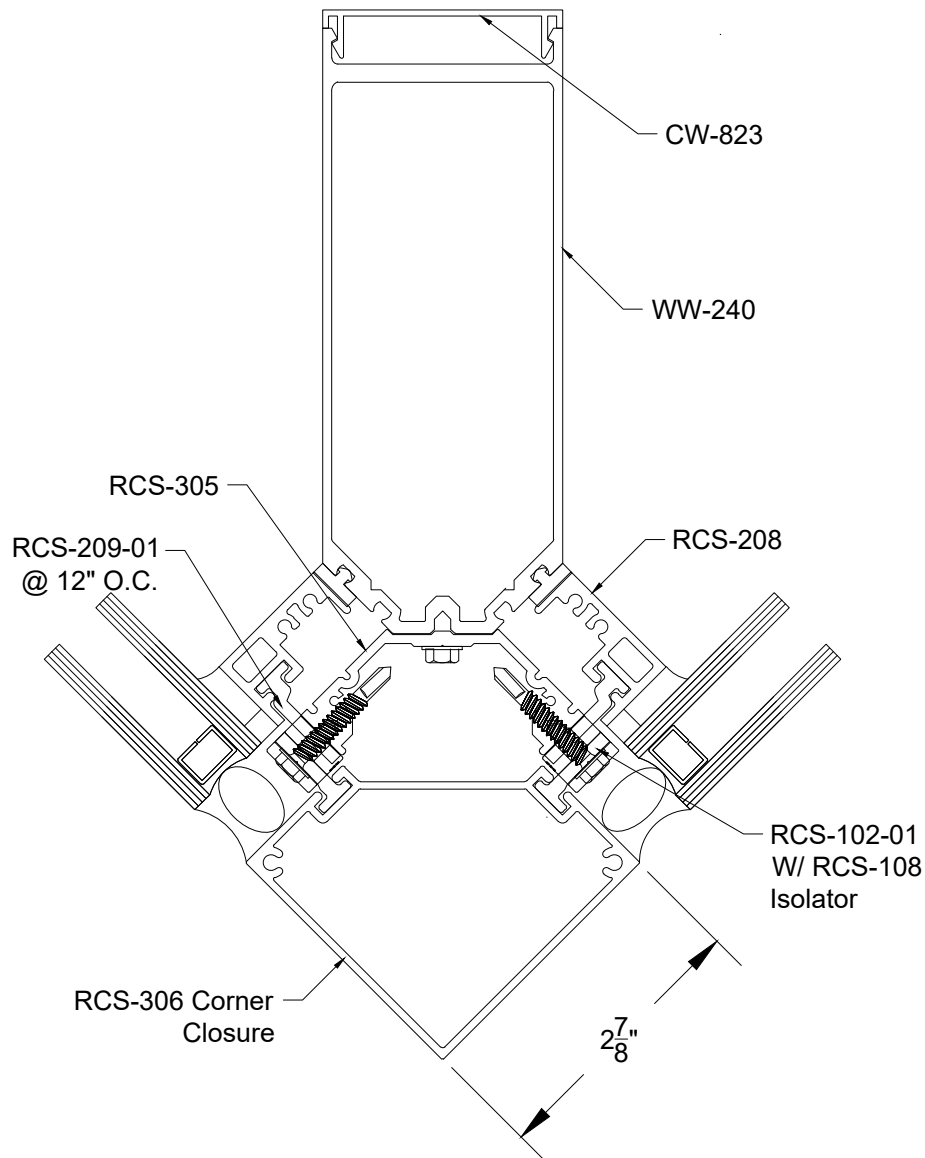


RCS-208

FIGURE 49
Install upper lite and
secure in place using
clips and FS-325

90° OUTSIDE CORNER INSTALLATION - SSG

- 3.37 Installation of RCS-306 corner will use typical cassette installatoin as shown in sections 1 through 4. RCS-208 cassettes will be used and attach to RCS-305 with RCS-209-01cassette clip and FS-325 fasteners.
- 3.38 RCS-305 will attach to corner mullion with FS-325 fasteners at 12" on center.
- 3.39 RCS-307-01 mull cap will be attached to each end of RCS-306 and bed in sealant.
- 3.40 RCS-108 isolators will be used with RCS-102-01 cassette clips on RCS-306 similar to perimeter cassettes
- 3.41 Seal between glass and RCS-306 and perimeter as shown in perimeter sealant instructions.



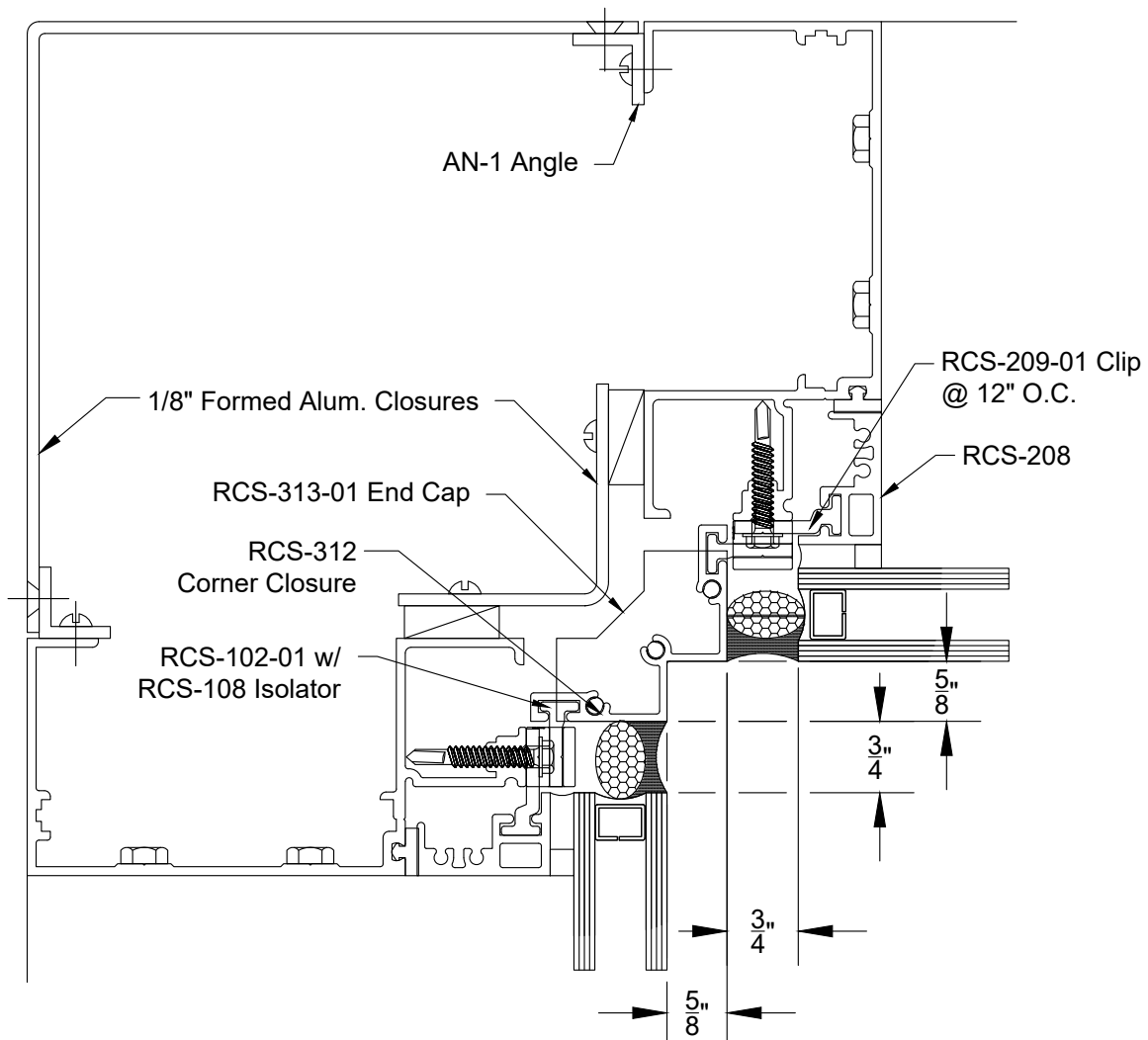
90° OUTSIDE CORNER INSTALLATION - SSG

-
- Technical cross-section diagram of a window corner assembly. The diagram illustrates the internal structure and components of a window corner, including the frame, sash, and various seals and fasteners. Key components and labels include:
- CW-823**: Label pointing to the top frame component.
 - WW-240**: Label pointing to the right frame component.
 - FS-351 (1/4"-20 x 3" PFH Drill-Flex) @ 12" O.C.**: Label pointing to the central vertical fastener.
 - RCS-301 Cassette**: Label pointing to the left sash component.
 - RCS-302**: Label pointing to the right sash component.
 - GP-204 EPDM Sponge** and **GP-205 Silicone**: Labels pointing to the seals on the right sash.
 - GP-1001 Run between cassette clips**: Label pointing to the bottom sash component.
 - RCS-202-01 @ 12" O.C.**: Label pointing to the bottom vertical fastener.
 - Structural Silicone**: Label pointing to the sealant at the bottom corner.
 - V-2108**: Label pointing to the bottom corner fastener.
 - RCS-309 End Cap**: Label pointing to the bottom corner cap.
 - RCS-304 Corner Pressure Plate**: Label pointing to the bottom corner pressure plate.
 - Cap seal fasteners**: Label pointing to the fasteners securing the cap seal.
 - RCS-303 Corner Cap**: Label pointing to the bottom corner cap.
 - 1"**: Dimension line indicating a 1-inch gap or thickness at the bottom corner.

RELIANCE™ CASSETTE INSTALLATION MANUAL

90° INSIDE CORNER INSTALLATION - SSG

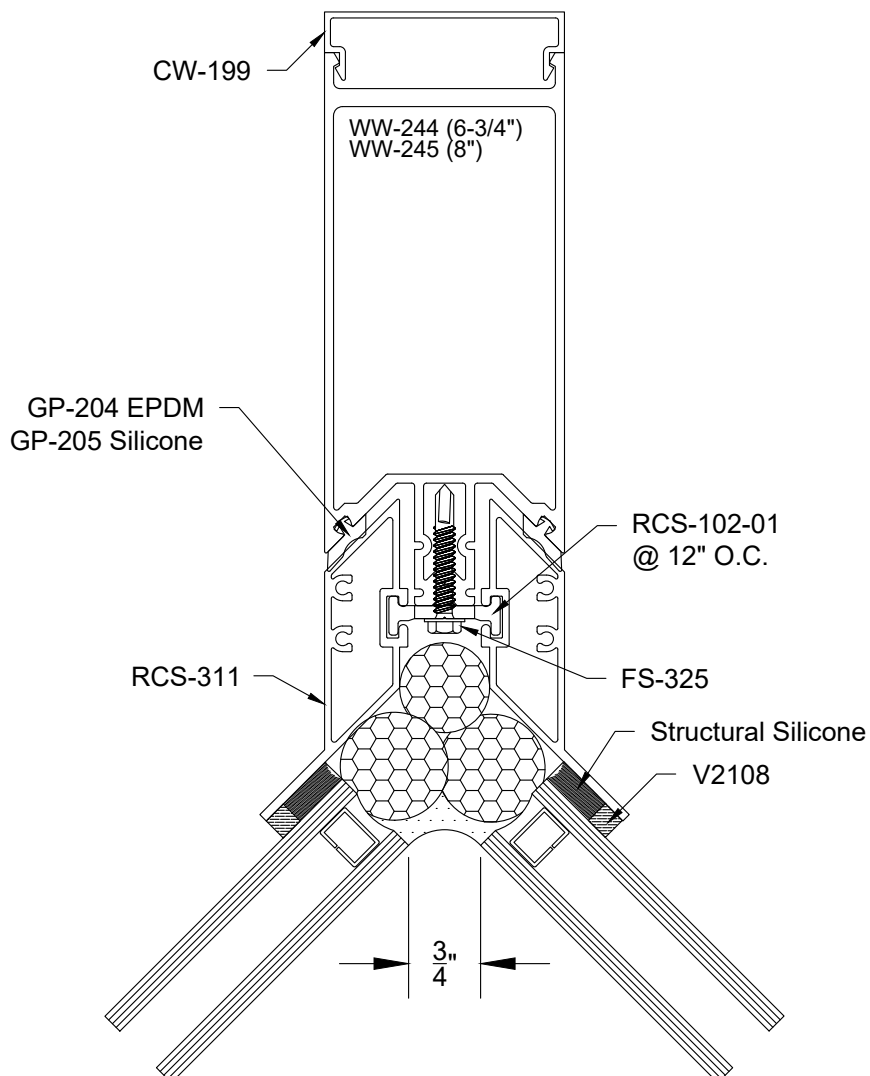
- 3.51 Assemble two mull inside 90 degree corners using RCS-312 corner closure. Closure will attach to mullion stem using RCS-102-01 cassette clips with RCS-108 isolator located at 12" on center. Attach with FS-325 fasteners.
- 3.52 Corner will be assembled using 1/8" formed aluminum closure. An 2-1/4" x 2-1/4" angle closure will be used to tie the two jamb mullions together, shim as required and attach using FS-115 (#10 x 1" pph) fastener at 18" on center.
- 3.53 Interior of corner will be closed off when required using 1/8" formed aluminum closure. AN-1 angles will be attached to jamb mullions using FS-115 fasteners at 24" on center and closure attached to angles using FS-7 (#10 x 3/4" PFH) @ 24" on center.
- 3.54 Glaze corner using RCS-208 SSG cassettes per glazing instructions In Sections 1 thru 4 of manual.



RELIANCE™ CASSETTE INSTALLATION MANUAL

90° INSIDE CORNER INSTALLATION - SSG

- 3.58 Inside 90 single mullion corner will be glazed using standard glazing process as shown in Sections 1 through 4 of this manual.
- 3.59 Using RCS-311 cassette at corner and RCS-100 cassette at other sides of cassette unit. Attach cassette to corner mullion using RCS-102-01 cassette clip at 12" on center. Attach using FS-325 fasteners.
- 3.60 RCS-311 cassette will be applied to glass using V2108 DSA glazing tape. Joint to interior of cassette will then be sealed using structural silicone. Silicone manufacturer should recommend sealant and primers as needed.

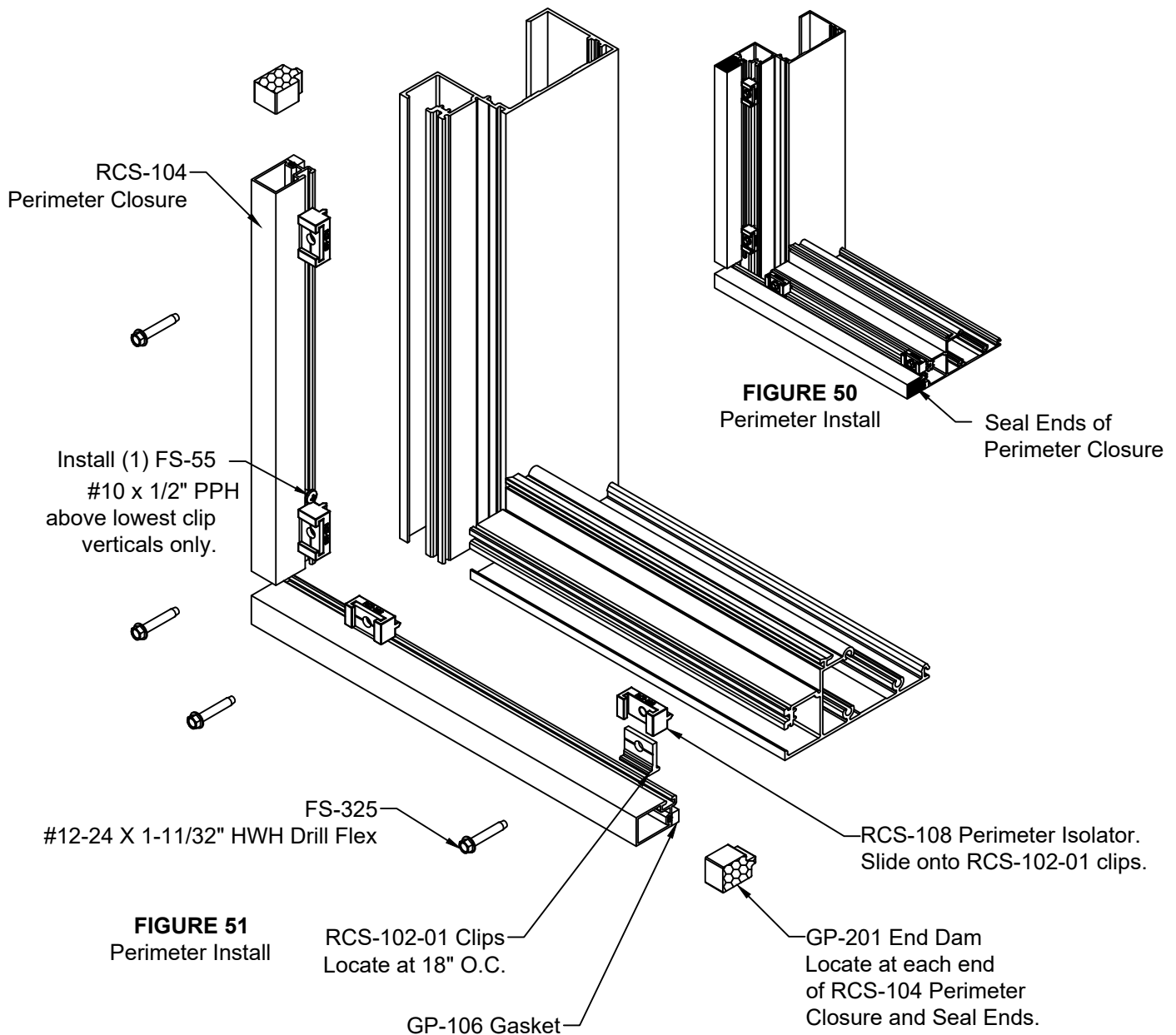




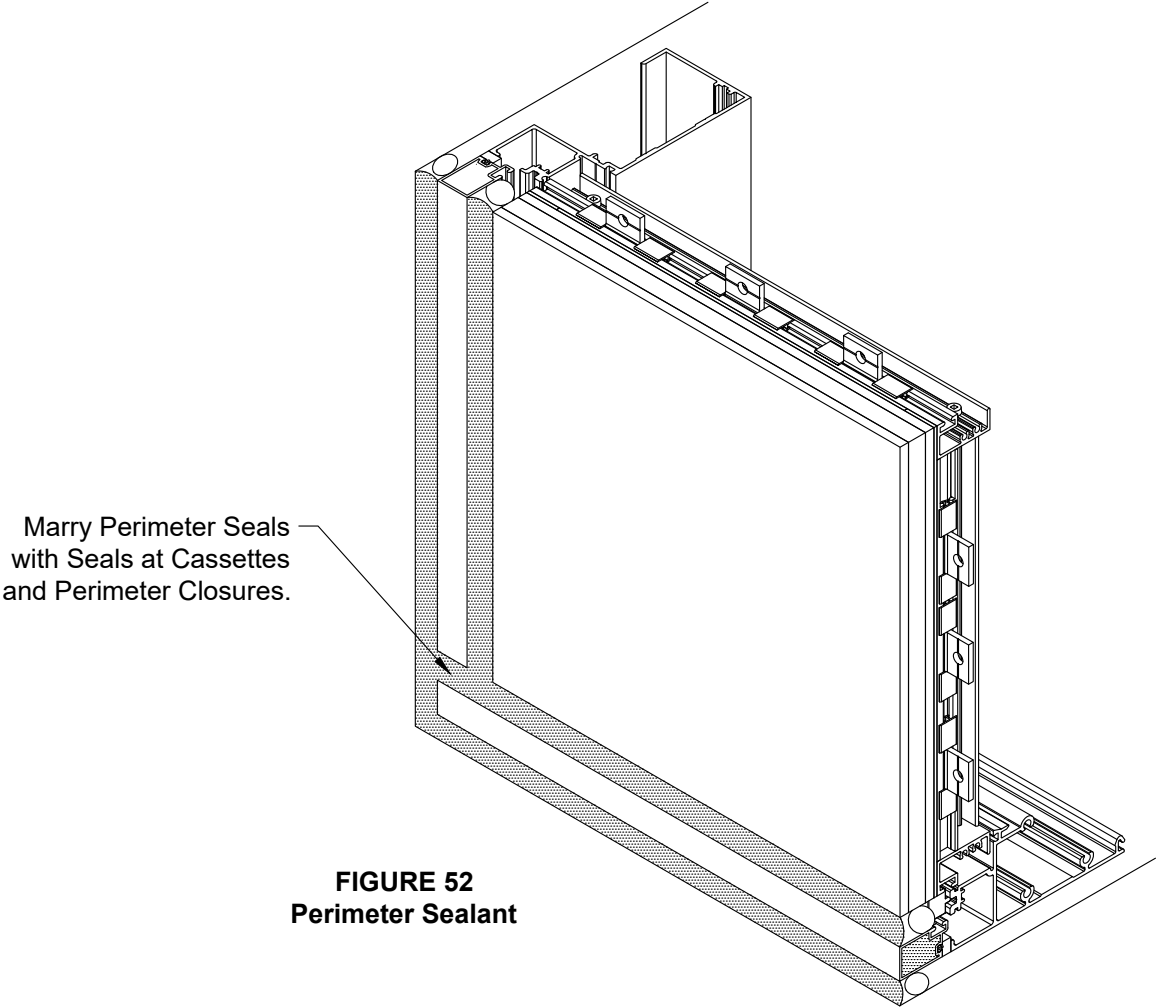
PERIMETER CLOSURE ASSEMBLY & GLAZING

PERIMETER CLOSURE ASSEMBLY

- 4.1 Install GP-201 end dams at ends of RCS-104 perimeter closures and seal. SEE FIGURE 50
- 4.2 Install RCS-102-01 cassette clips into perimeter closure at 18" on center maximum. Slip RCS-108 isolator onto each clip. SEE FIGURE 51
- 4.3 Install perimeter closure onto framing system using FS-325 (#12-24 X 1-11/32" HWH Drill Flex).
- 4.4 Head and sill closures will run through with vertical closures between. Maintain 3/4" sealant joint between closures to match joints in cassettes. SEE FIGURE 51
- 4.5 Perimeter sealant will marry into seals between perimeter closures and cassette seals to form uninterrupted primary sealant. SEE FIGURE 52, page 52



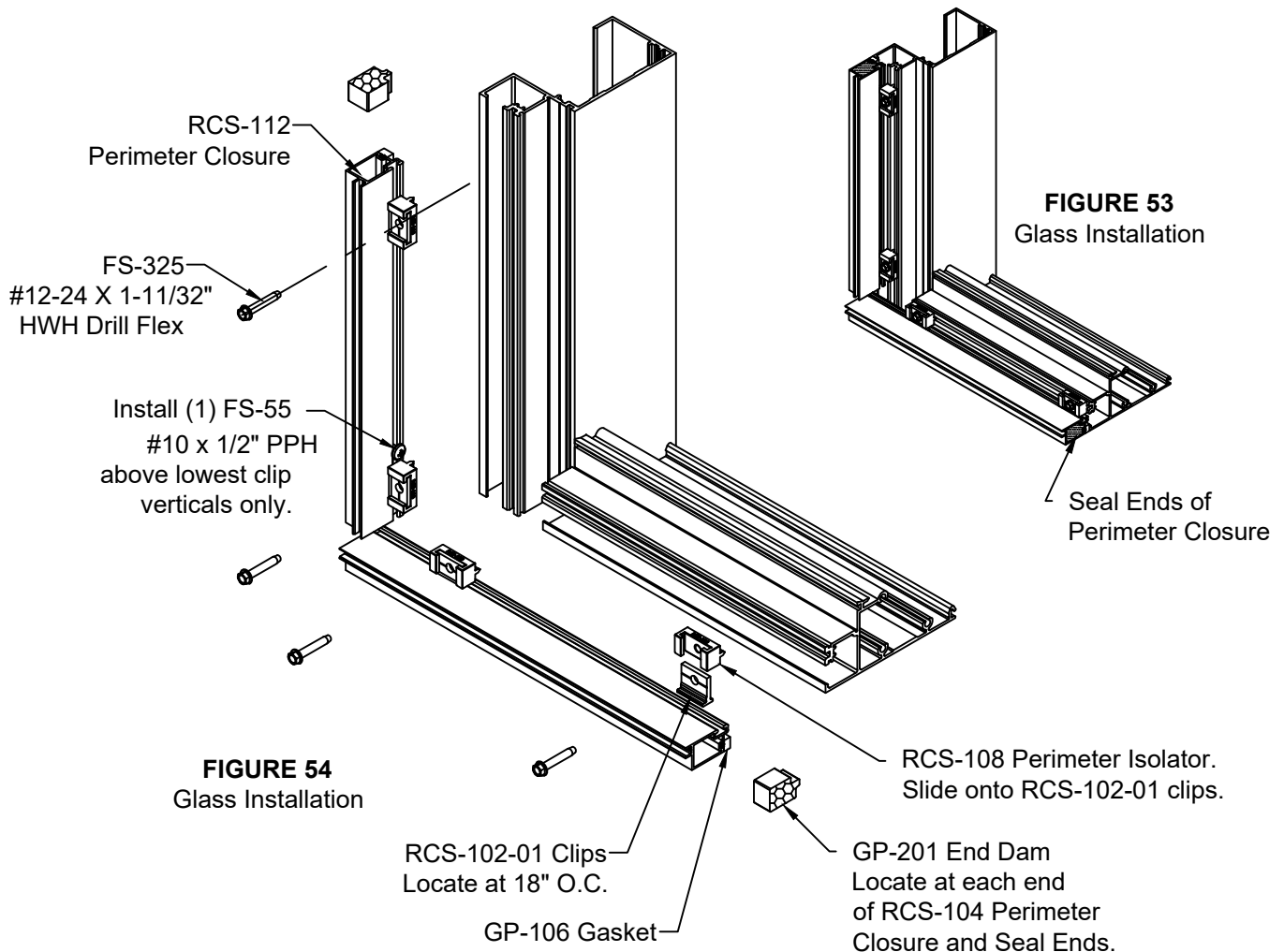
RELIANCE™ CASSETTE INSTALLATION MANUAL
PERIMETER CLOSURE INSTALLATION



RELIANCE™ CASSETTE INSTALLATION MANUAL

CAPTURED PERIMETER CLOSURE A

- 4.6 Install GP-201 end dams at ends of RCS-112 perimeter closures and seal. SEE FIGURE 53
- 4.7 Install RCS-102-01 cassette clips into perimeter closure at 18" on center maximum. Slip RCS-108 isolator onto each clip. SEE FIGURE 54
- 4.8 Install perimeter closure onto framing system using FS-325 (#12-24 X 1-11/32" HWH Drill Flex).
- 4.9 Head and sill closures will run through with vertical closures between. Maintain 3/4" sealant joint between closures to match joints in cassettes SEE FIGURE 53
- 4.10 Perimeter sealant will marry into seals between perimeter closures and cassette seals to form uninterrupted primary sealant. SEE FIGURE 55, page 54

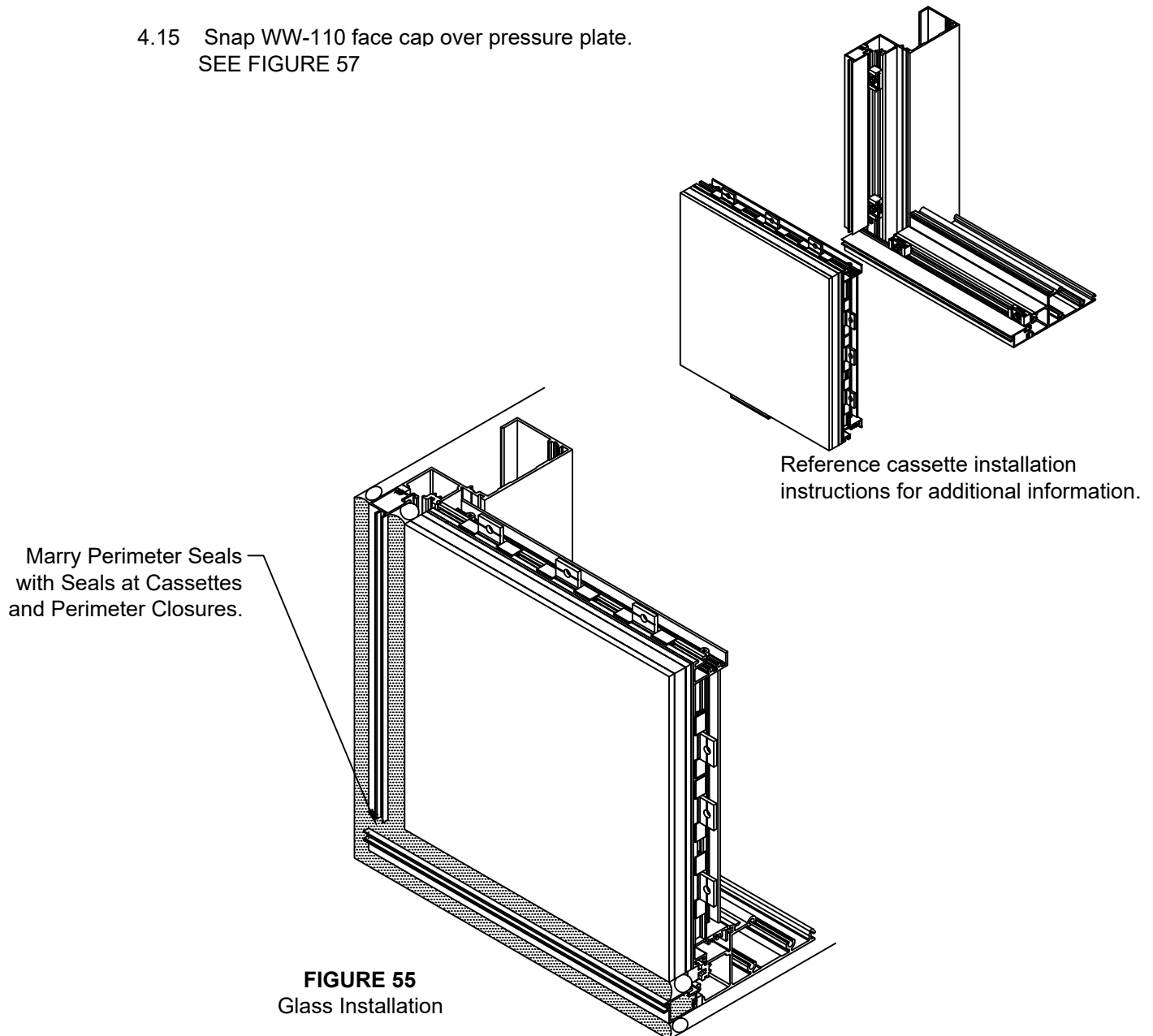


RELIANCE™ CASSETTE INSTALLATION MANUAL

CAPTURED PERIMETER CLOSURE INSTALLATION

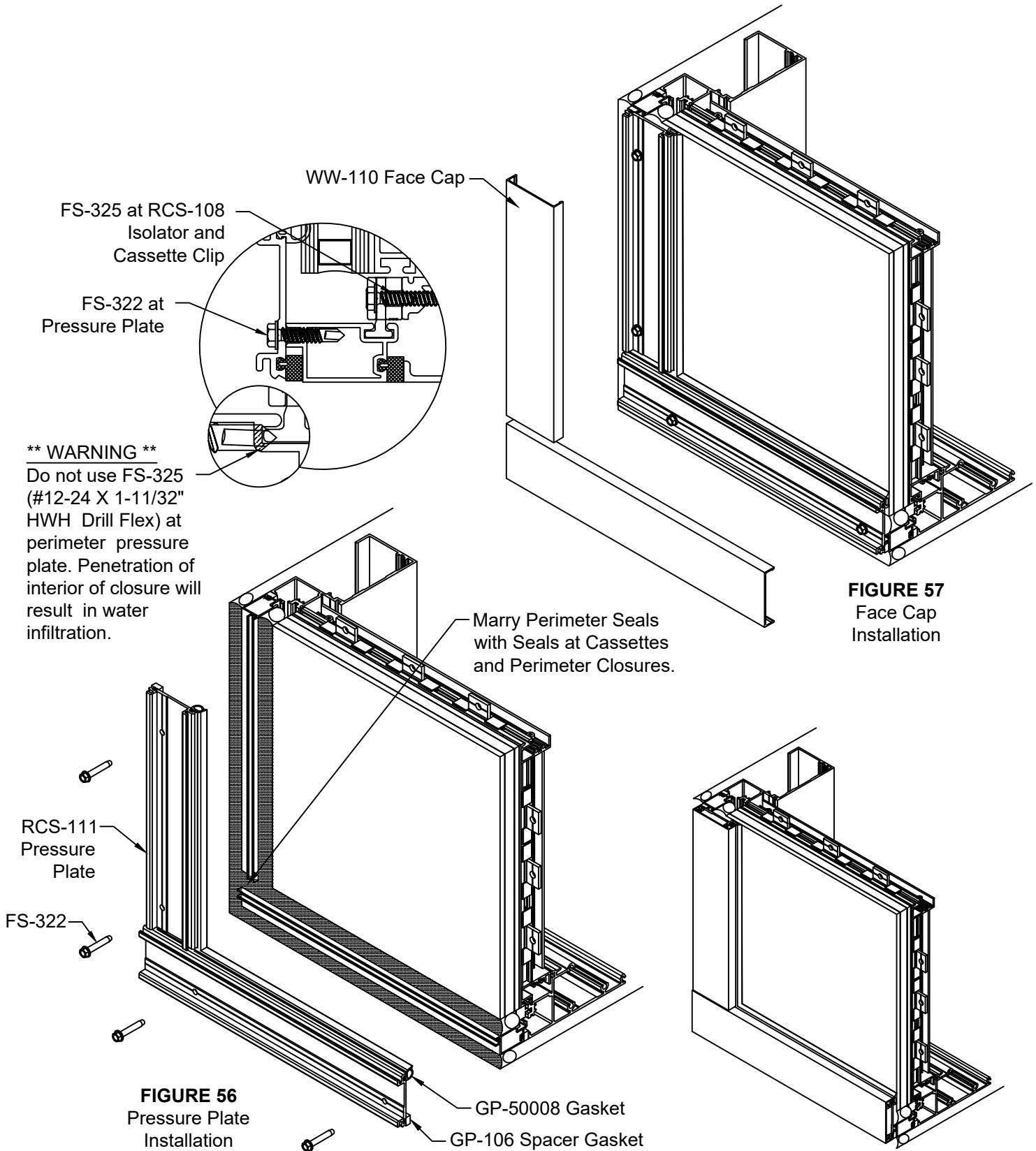
Notes:

- 4.11 Reference cassette installation instructions for additional glazing information.
- 4.12 Seal perimeter and joinery between all lites of glass prior to installing perimeter pressure plates or face cap. SEE FIGURE 55
- 4.13 RCS-111 pressure plate will be used at perimeter only. Install GP-50008 gasket at glazing side of pressure plate and GP-106 at perimeter. SEE FIGURE 56
- 4.14 Attach pressure plate with FS-322 (#12-14 x 1" HWH Drill-Flex) at 18" on center. SEE FIGURE 56, page 53 (Note: Do not use FS-325, #12-24 X 1-11/32" HWH at RCS-112, will result in penetration of interior of closure and water infiltration, See FIGURE 31, page 35)
- 4.15 Snap WW-110 face cap over pressure plate. SEE FIGURE 57



RELIANCE™ CASSETTE INSTALLATION MANUAL

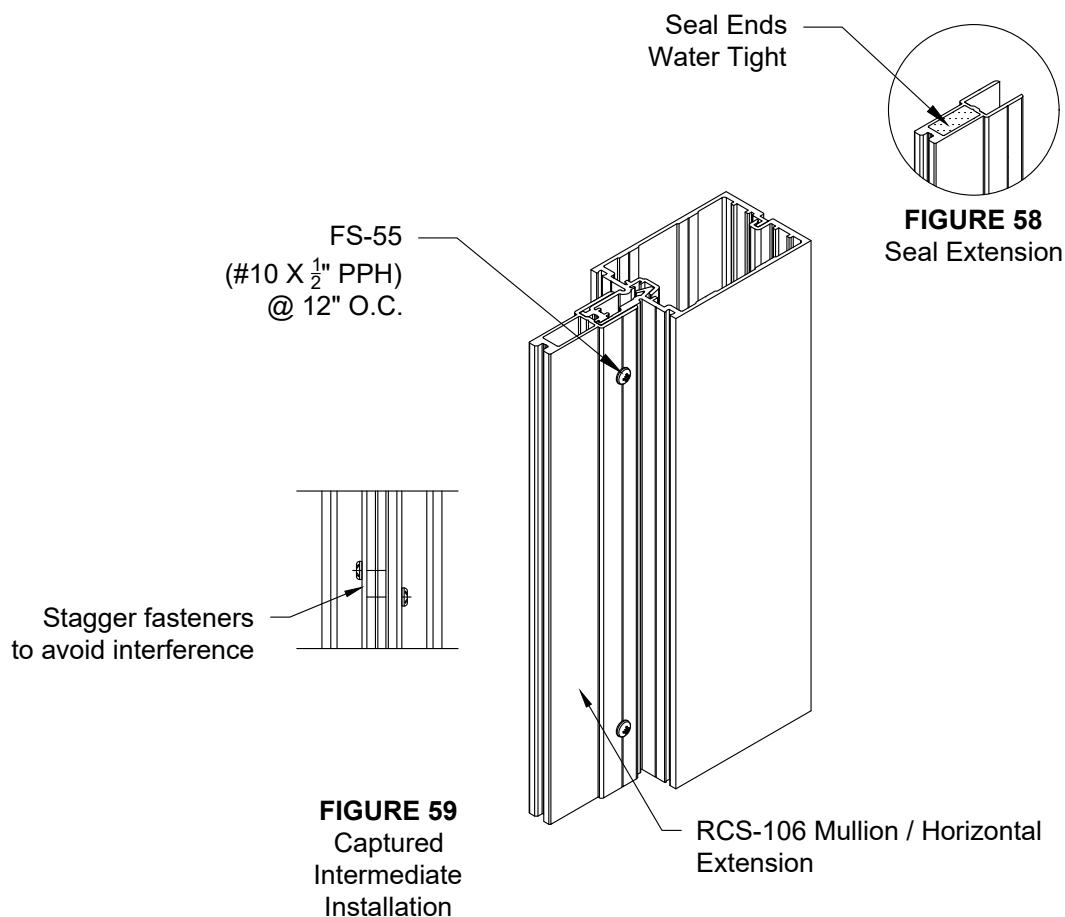
CAPTURED PERIMETER CLOSURE INSTALLATION



RELIANCE™ CASSETTE INSTALLATION MANUAL

CAPTURED INTERMEDIATE INSTALLATION

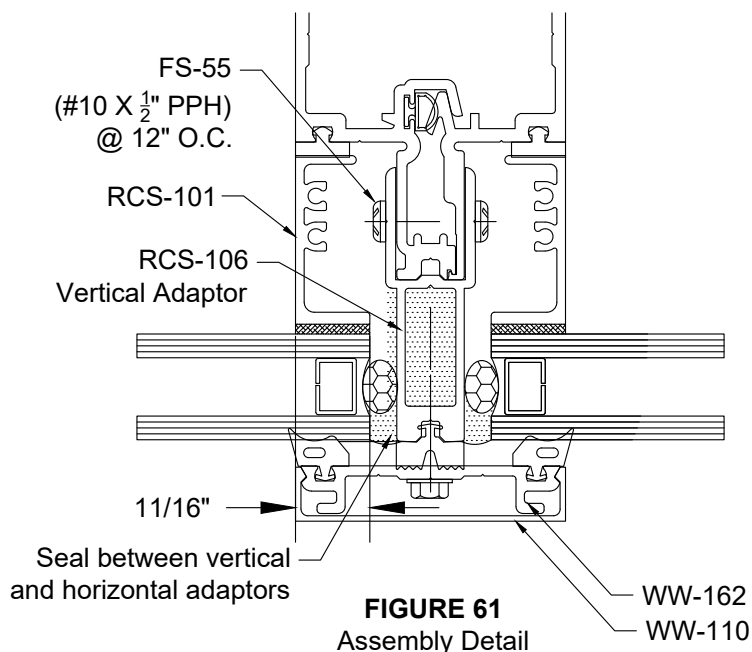
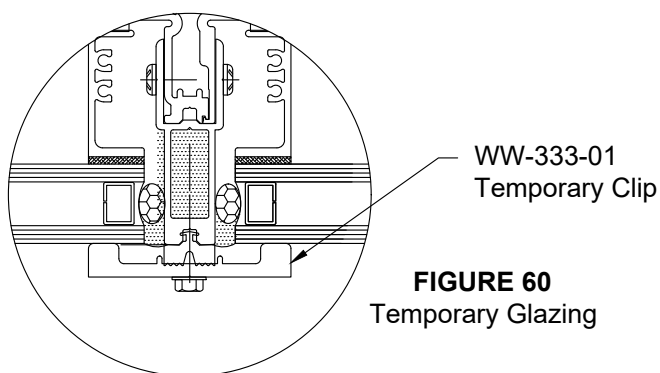
- 4.16 Cut extensions for vertical extensions to run through. Cut length = $DLO + 1-11/16"$. Horizontal extensions cut to match horizontals and may be field or shop installed.
- 4.17 Insert open cell backer rod in end of extension and seal water tight. End seals should be done prior to installation on mulls and horizontals. See FIGURE 58
- 4.18 Install RCS-106 stem extension to verticals or horizontals as required using FS-55 (#10 x $1\frac{1}{2}"$ PPH) @ 12" O.C. Stagger fasteners on each side per detail below. See FIGURE 59



RELIANCE™ CASSETTE INSTALLATION MANUAL

CAPTURED INTERMEDIATE GLAZING

- 4.19 RCS-101 cassette will be used on captured sides of units. This cassette utilizes 11/16" glass bite and will not require RCS-102-01 clips.
- 4.20 Install glass into opening similar to Figure 23, page 21 . Use WW-333-01 temporary clips to hold glass into opening. Locate the clips at minimum 2 per head and sill and 36" on center on vertical edge or minimum 2 clips. See FIGURE 60
- 4.21 Install GP-107 thermal isolator between extension and WW-162 pressure plate. WW-110 face cap to be used typically, but actual face cap may vary based on project requirements. See FIGURE 61

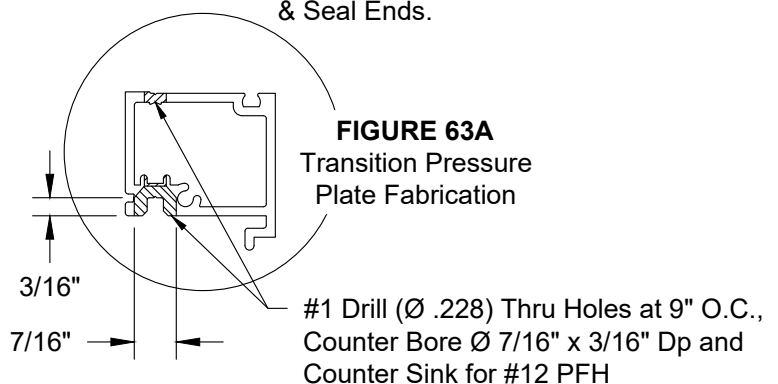
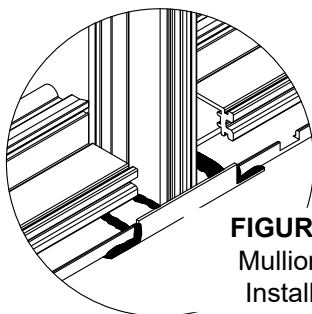
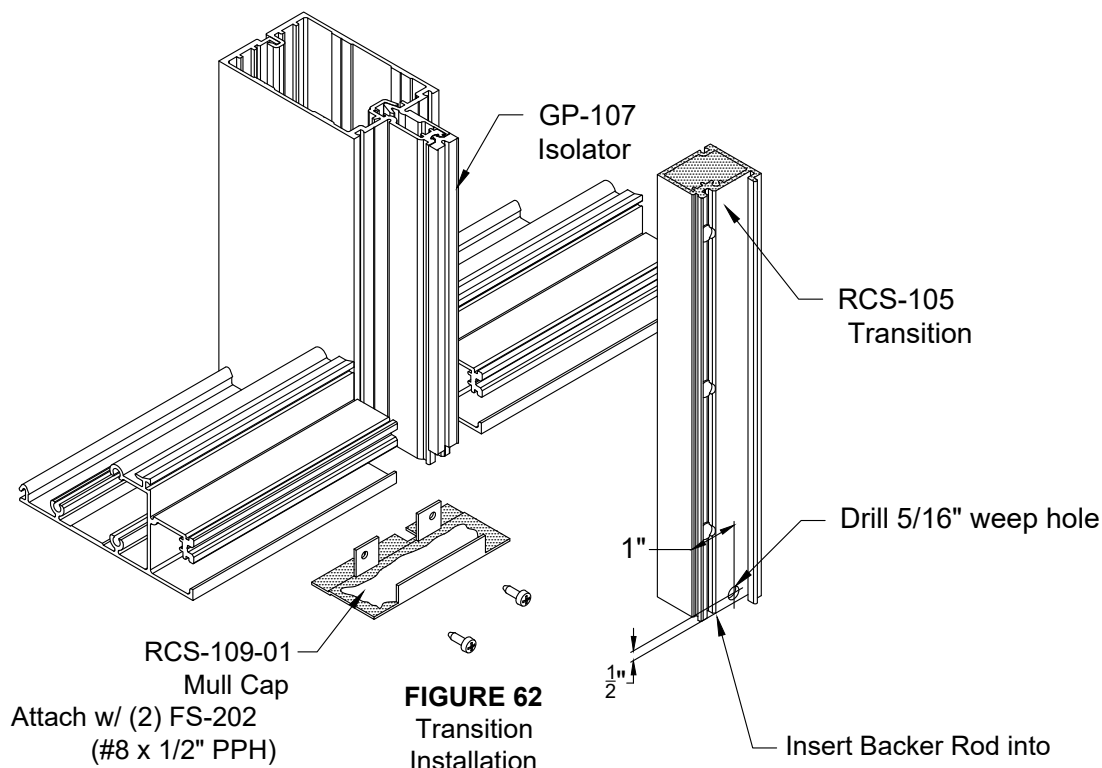


Note: VHB Cassettes shown above. Cassette part number RCS-201 will be used with SSG installations.

RELIANCE™ CASSETTE INSTALLATION MANUAL

CASSETTE TRANSITION INSTALLATION

- 5.1 Install curtain wall per Reliance or Reliance-SS Manual. Installation shown is for use when transitioning from Reliance Cassette to a standard captured Reliance or Reliance-SS curtain wall system. SEE FIGURE 62
- 5.2 Insert backer rod into ends of RCS-105 at the head and sill and seal ends. Using a #1 (Ø.228) bit, drill thru holes at 9" on center, counter bore Ø7/16" by 3/16" deep, then counter sink for #12 flat head. SEE FIGURE 63A. Drill 5/16" weep hole at 1/2" from bottom of RCS-105. SEE FIGURE 62
- 5.3 Install RCS-109-01 end cap at the head and sill of vertical mullion. Bed end cap in sealant and attach with FS-202 (#8 x 1/2" PPH). Cap seal fasteners. Tool sealant to form a water tight seal at mullions, horizontals and along front leg of sill. SEE FIGURE 63B



RELIANCE™ CASSETTE INSTALLATION MANUAL

CASSETTE TRANSITION INSTALLATION

- 5.4 Prior to installing RCS-105 transition pressure plate, seal face of RCS-109-01 mull cap as shows in FIGURE 64. Glaze captured areas of curtain wall first. SEE FIGURE 65. Retain glass using temporary clips on horizontals and typical captured verticals per Reliance or Reliance-SS manual instructions.
- 5.6 Once glass is installed in captured section of elevation with temporary clips on horizontals, align RCS-105 transition pressure plate to mullions, match drill the stem of the mullion using a 3/16" drill bit, then attach with FS-350 (#12 x 2-1/2" A pt. Stainless Steel). Locate fasteners at 9" on center and torque to 90 in. lbs.
- 5.7 Install RCS-104 perimeter closure per instructions on page 49. End cap RCS-104 using GP-201 end dam and sealant as shown in FIGURE 51, page 49. Seal between RCS-104 and RCS-105 as shown in FIGURE 66.

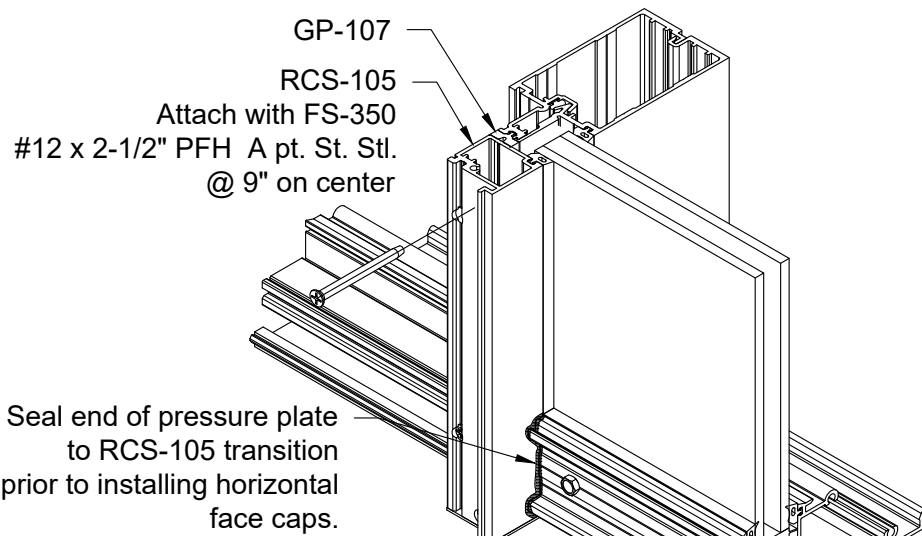


FIGURE 65

Captured Glazing

Zone Captured areas

Run bead of sealant across face of mull cap just prior to installing RCS-105.

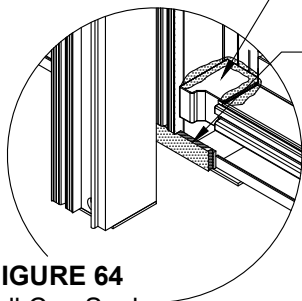


FIGURE 64

Mull Cap Seal

Seal between RCS-104 and RCS-105. Marry with perimeter seal.

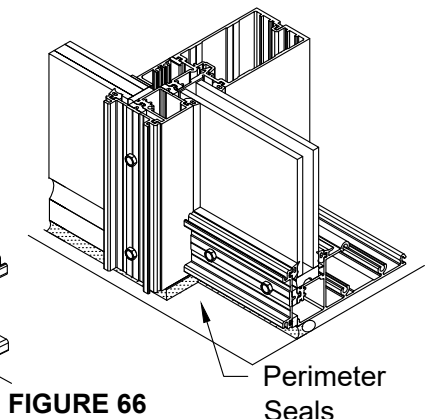
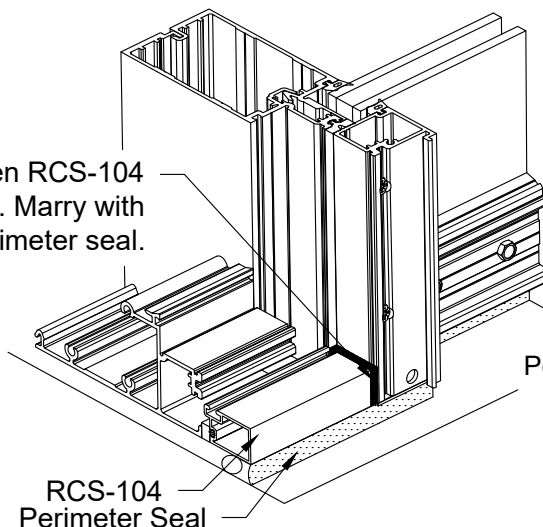


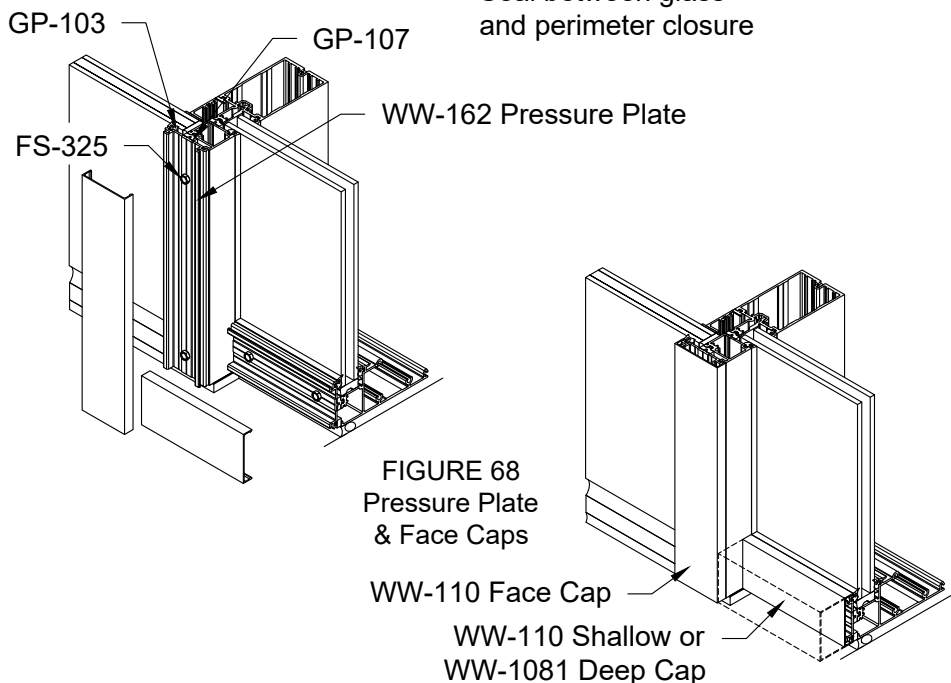
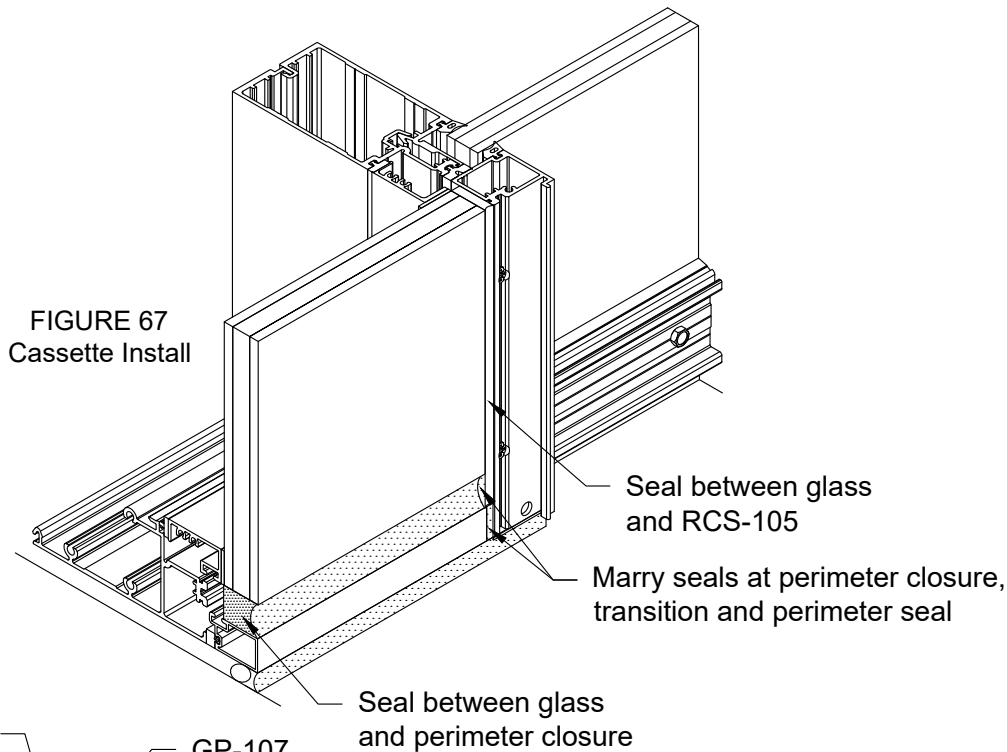
FIGURE 66

Perimeter Seals

RELIANCE™ CASSETTE INSTALLATION MANUAL

CASSETTE TRANSITION INSTALLATION

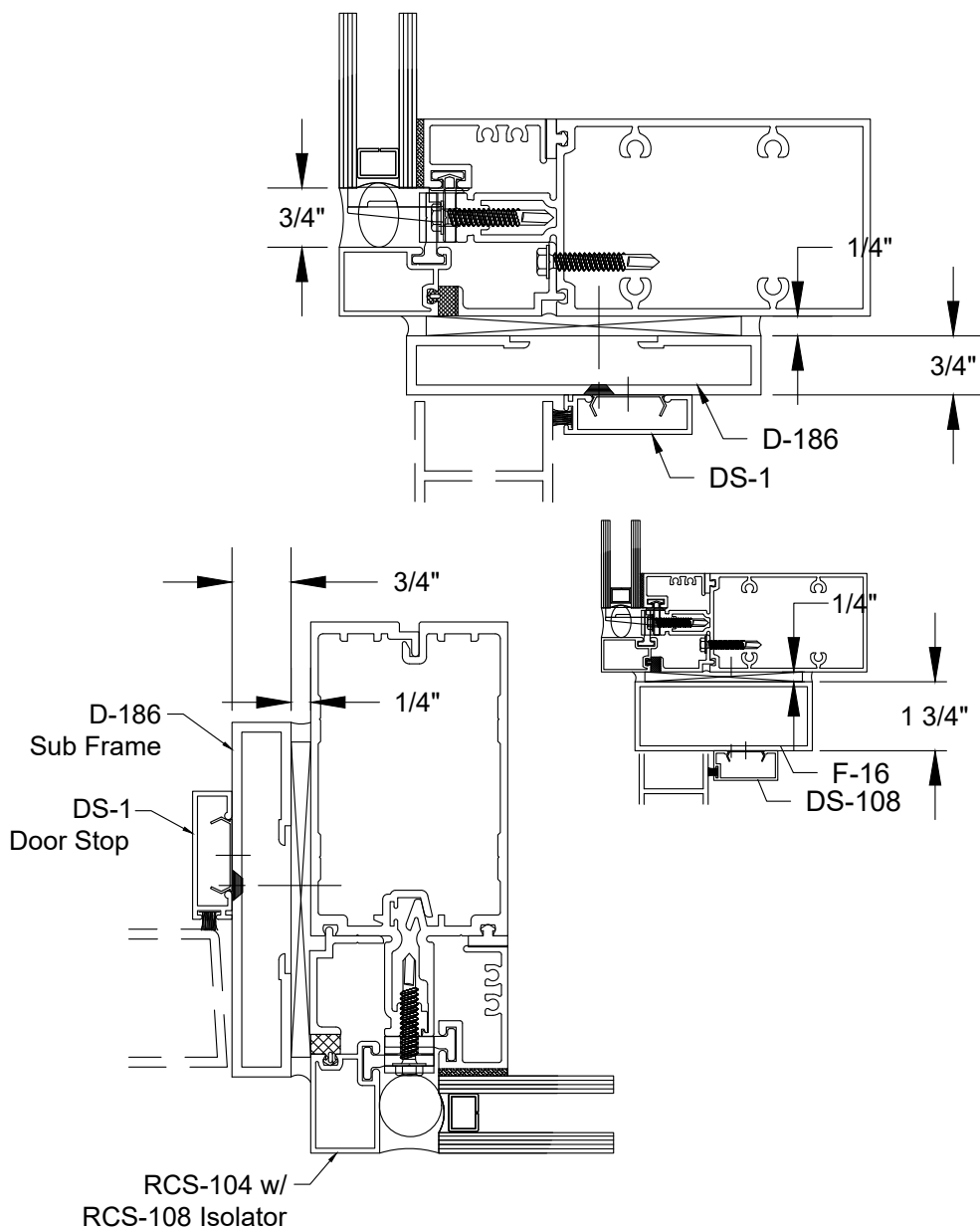
- 5.7 Glaze Cassette curtain wall per glazing section of this manual. Reference section for VHB tape glazing or SSG glazing based on project requirements.
- 5.8 Install WW-162 pressure plate onto RCS-105 transition using FS-325 fasteners at 9" on center. Torque to 90 inch pounds.
- 5.9 Install appropriate face cap to RCS-105 and captured curtain wall as specified for project.



RELIANCE™ CASSETTE INSTALLATION MANUAL

ENTRANCE INSTALLATION

- 6.1 Install curtain wall per Reliance or Reliance-SS Manual.
- 6.2 Install RCS-104 perimeter closure around door opening using RCS-108 isolator with FS-325 fastener at 18" on center.
- 6.3 D-186 door sub-frame will be used around opening. F-16 door header may be used for concealed overhead closures. Attach sub-frame to curtain wall beneath door stop per engineer recommendations. DS-1 door stops will be used with D-186 frame and attached with FS-15 drive rivet and SC-1 clips at 24" on center. Where concealed closures are used door stops will vary depending on hardware.



RELIANCE™ CASSETTE INSTALLATION MANUAL

REGLAZING INSTRUCTIONS

1. Cut out and remove all silicone at the face of the glass, to access the fasteners holding in the glazed cassette.
2. Remove the fasteners and carefully remove the damaged unit.
3. Board up the opening if you are re-using the cassette extrusions. If you are using a new pre-glazed and fully cured unit, proceed to step 9.
4. Clamp the unit on a table and cut the 3M Tape or SSG sealant between the glass and the cassette. Discard the broken glass.
5. Inspect the existing extrusions and parts for damage. Damaged material cannot be reused. If everything is straight and intact, clean and prep the extrusions, completely removing all tape or silicone. Extrusions must be clean and prepped per 3M Tape or sealant manufacturer's instructions.
6. Reinstall the new glass on to the frame per the installation instructions.

Section 2: VHB Cassette Assembly, Glazing & Installation

Section 3: SSG Cassette Assembly, Glazing & Installation

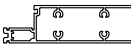
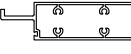
7. For Structural Silicone Glazing, a fast cure SSG sealant is recommended.
8. Remove the board temporarily enclosing the opening.
9. Clean the entire surrounding perimeter of the unit. Cut and remove all perimeter sealant at the front face of glass.
10. Install the new unit, making sure existing holes from the previously held unit are not used again. If the clips align with the existing fastener holes, slide the clips and retainers down a minimum of 1/2" away from the existing tapped holes.
11. After the unit is installed, seal the glazed unit per **Section 4: Perimeter Closure Installation & Captured Installation**

RELIANCE™ CASSETTE INSTALLATION MANUAL

PARTS LIST

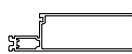

4" BACKMEMBERS

6" system depth

	Upper Expansion Horizontal
WW-427	
	Lower Expansion Horizontal
WW-428	

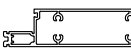
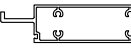
4" BACKMEMBERS

6" system depth

	Upper Expansion Horizontal
WW-437	
	Lower Expansion Horizontal
WW-436	

5 1/4" BACKMEMBERS

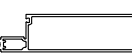

7 1/4" system depth

	Upper Expansion Horizontal
WW-527	
	Lower Expansion Horizontal
WW-528	

Note: See system installation manual for additional extrusions required for Reliance Curtain Walls.




5 1/4" BACKMEMBERS

7 1/4" system depth

	Upper Expansion Horizontal
WW-537	
	Lower Expansion Horizontal
WW-536	

Note: See system installation manual for additional extrusions required for Reliance Curtain Walls.

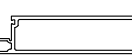
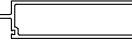
Shear Block System Splices

	Splice for WW-400 Mullion
WW-271	
	Splice for WW-500 Mullion
WW-270	
	Splice for WW-800 Mullion
WW-272	

Note: See system installation manual for splices for Reliance-SS Curtain Wall. Special splices required for shear block only.

8" BACKMEMBERS

10 1/2" system depth




	Upper Expansion Horizontal
WW-837	
	Lower Expansion Horizontal
WW-836	

Note: See system installation manual for additional extrusions required for Reliance Curtain Walls.




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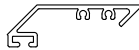
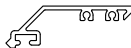
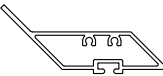

SSG CASSETTE PROFILES

	Standard Cassette
RCS-208	
	Intermediate Captured Cassette
RCS-201	
	Cassette for Lower Expansion Horizontal
RCS-207	






VHB CASSETTE PROFILES

	Standard Cassette
RCS-100	
	Intermediate Captured Cassette
RCS-101	
	Cassette for Lower Expansion Horizontal
RCS-107	

CORNER CASSETTE PROFILES

	OS90 Cassette for VHB SG Tape
RCS-300	
	OS90 Cassette for SSG
RCS-301	
	IS90 Cassette for VHB SG Tape
RCS-310	
	IS90 Cassette for SSG
RCS-311	

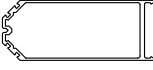
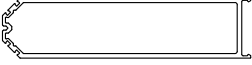
MISC. CASSETTE PROFILES

	Standard Perimeter Closure
RCS-104	
	4-Sided to Standard Curtain Wall Transition
RCS-105	
	Captured Stem Extension
RCS-106	
	Pressure Plate for Captured Perimeter
RCS-111	
	Captured Perimeter Closure
RCS-112	



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OUTSIDE 90 CORNER MULLIONS




	OS90 Corner Mullion for 6-3/4" and 8" Systems
WW-240	
	OS90 Mullion for 10-7/8" System (Shear Block Only)
WW-1175	

INSIDE 90 CORNER MULLIONS




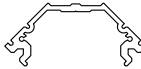
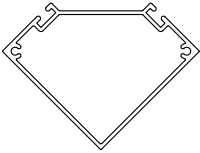


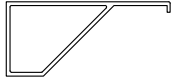
	IS90 Mullion for 6-3/4" System
WW-244	
	IS90 Mullion for 8" System
WW-245	

Note: See system installation manual for additional extrusions required for Reliance Curtain Walls.

CORNER MULLION BACK FILLERS

	OS90 Mullion Filler for 6-3/4" System
CW-823	
	IS90 Mullion Filler for 6-3/4" & 8" Systems
CW-199	
	OS90 Mullion Filler for 8" and 10-7/8" Systems
WW-220	


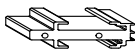

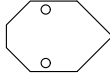

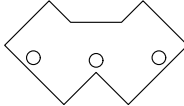








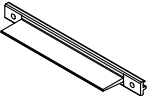



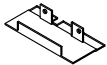
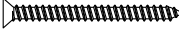


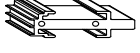
CORNER CASSETTE PROFILES

	OS90 Corner Mull Extension
RCS-302	
	OS90 Corner 1" Face Cap
RCS-303	
	OS90 Corner Mull Face Cap Retainer
RCS-304	
	OS90 Corner Mull Extension for RCS-306
RCS-305	
	2-7/8" OS90 Corner Closure
RCS-306	
	IS90 2-Mull Corner Closure
RCS-312	
	OS90 Cassette Assembly Guide
RCS-308	
	IS90 Cassette Assembly Guide
RCS-314	

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RELIANCE CASSETTE ACCESSORIES

 GP-106	Spacer Gasket for Perimeter Closures	 WW-282-02	OS90 Shear Block Stack Horizontal
 GP-1065	Setting Block for RCS-115-01	 RCS-309-01	End Cap for RCS-304
 GP-200	Standard Sponge Gasket	 RCS-313-01	End Cap for RCS-312
 GP-201	Sponge End Dam for Perimeter Closures	 FS-1	#8 X 1" Square Drive Round Head
 GP-202	Cassette Clip Retainer	 FS-55	#10 x 1/2" Phillips Pan Head AB Pt.
 GP-203	Optional Silicone Gasket for Custom Colors	 FS-202	#8 x 1/2" Phillips Pan Head A Pt.
 RCS-102-01	Cassette Clip	 FS-320	M4 x 16mm Headed Helical Pin
 RCS-115-01	Setting Chair	 FS-322	#12-14 x 1" Hex Washer Head Drill Flex
 RCS-108	Isolator for Perimeter Closures	 FS-325	#12-24 x 1-11/32" Hex Washer Head Drill Flex
 RCS-109-01	End Cap for RCS-105 Transition	 FS-350	#12 x 2-1/2" Phillips Flat Head A Pt. Stainless Steel
 RCS-202-01	SSG Cassette Clip	 FS-351	1/4"-20 x 3" Phillips Flat Head Drill Flex
 WW-282-01	OS90 Shear Block Stack Horizontal		