

Oldcastle BuildingEnvelope®

*RELIANCE UNIT WALL
STRUCTURAL SILICONE GLAZE
ASSEMBLY & GLAZING INSTRUCTIONS*

NOTE:

THE ASSEMBLY DETAILS FOUND IN THIS PACKAGE ARE GENERIC AND ARE FOR REPRESENTATION ONLY WITH THE INTENT OF GIVING THE ASSEMBLY TEAM A VISUAL REPRESENTATION AS TO HOW THE ASSEMBLIES TYPICALLY ASSEMBLE. THE SHOP SUBMISSION DRAWINGS AND DETAILS ARE THE GOVERNING DOCUMENTS AND AS SUCH THIS PACKAGE IS TO BE USED ONLY AS A RESOURCE.

FOLLOW STRUCTURAL SEALANT MANUFACTURER'S RECOMMENDATIONS FOR USE AND APPLICATION OF THE STRUCTURAL GLAZING SILICONE AND WEATHER SEALANT.

NOTE: CUSTOMER / PROJECT QUALITY ASSURANCE PROCEDURES ARE SEPARATE DOCUMENTS AND ARE TO BE FOLLOWED IN CONJUNCTION WITH THIS MANUAL.

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

General Information

SHEET

Product Use	1
Protection and Storage	2
Check Material	2
Field Conditions	2
Cleaning Materials	2

Fabrication

Cut to Length Material	3
Starter Sill Fabrication	3
Pressure Plate / Face Cap Cut Lengths	4
Stack Horizontal Fabrication	5-6
Captured Verticals (8" System)	7-10
Corners (8" System)	11-12
Non Captured Verticals (8" System)	13-16
Vent / Drain Hole Location	17

Frame Assembly

Layout Parts	18
Apply Silicone Sealant	18
Frame Assembly & Sealant (captured)	19
Frame Assembly & Sealant (Non Captured)	20
Frame Assembly at Stack	21
Sealant / Fastener Notes	22

Gasket Application	23
---------------------------	----

Glass Installation	24
---------------------------	----

Pressure Plate / Face Cap Installation

Vertical	25
Horizontal	26

Parts List

27-28

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

GENERAL INFORMATION

PRODUCT USE

The unitized curtain wall system is intended for assembly and installation by glazing professionals with appropriate experience. Subcontractors must be qualified to provide field instruction and project management.

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

Consult silicone sealant manufacturer for review and recommendation of sealant application. Complete all necessary sealant adhesion and compatibility tests prior to assembly. Follow sealant manufacturer's recommendations and literature for proper cleaning, testing and application of silicone sealant.

The air and water performance of the unitized curtain wall is directly related to the completeness and integrity of the assembly and installation process. Please give strict attention to the critical areas of the seal installed at the horizontal to vertical connections and the glazing gasket installed at the interior side of the glass. All pressure plates must also be installed properly. To ensure top performance for this system, particular attention should be given to the following procedures:

1. Surface to be sealed should be cleaned with isopropyl alcohol or solvent and dried as recommended by sealant manufacturer to remove dirt and cutting oils. Sealant at horizontal to vertical connections should be a minimum 3/16" diameter bead on surfaces where horizontal abutts vertical per glazing instructions herein. No gap should be visible in the sealant. Exposed surfaces should be cleaned of excess sealant 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 interior glazing gasket should be installed so as to avoid stretching, buckles or tears. The glazing gasket should run continuously around perimeter; cut the gasket at corners when required. Gasket should be sealed and butted together at joint. To avoid damage to gasket during glazing, glass should be level and straight during installation.

Vertical movement of mullion at intermediate floors requires special expansion joints and glazing materials. The system permits maximum +/-3/4" movement. For designs and applications that may require greater movement or special considerations, please contact your local Oldcastle BuildingEnvelope® facility.

Variations on details shown may occur but are not the responsibility of Oldcastle BuildingEnvelope®.

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

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. Oldcastle BuildingEnvelope® cannot be held responsible for gaskets that are not water tight due to extreme glass tolerances. The unitized curtain wall system is designed to accommodate glass or panels measuring 1" in thickness (+/- 1/32").

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 assembly and installation instructions are of a general nature and cover the most common conditions.

Due to varying job conditions all sealant must be approved by the sealant manufacturer to ensure it will perform per 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 expiry and shelf life before using.

FIELD CONDITIONS

All material to be installed 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 unless otherwise specified. After sealant is set and a representative amount of the wall has been glazed (250 sq. ft. or more), perform a water hose test in accordance with AAMA 501.2 "Field Check of Metal Storefront, Curtain Walls and Slope Glazing Systems for Water Leakage". On large projects the hose test must be repeated during the glazing operation. Review anchors or embeds in structure as early as possible to confirm that 'as built' building structure can accommodate anticipated anchor tolerances.

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.

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

MEASURING & CUTTING MATERIAL

Unless otherwise noted, the details shown in these instructions reflect 1 " glazing, and are representative of typical non corner conditions.

- 1.1 Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 3/4" minimum clearance at jamb vertical & 1 1/4" at head frame installation.
- 1.2 Cut material to size.

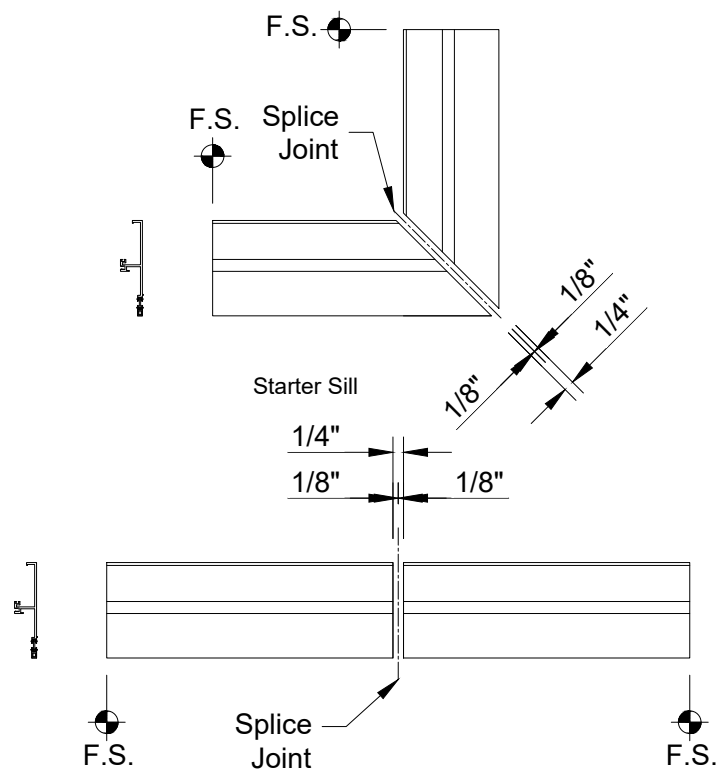
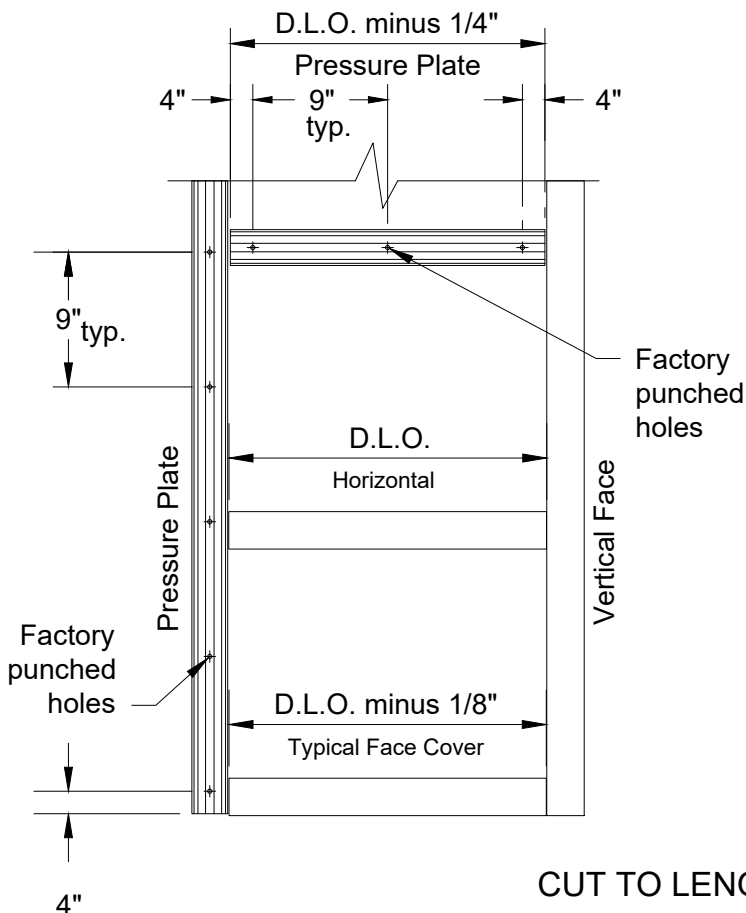
Frame Members

Verticals
Vertical Pressure Plates
Vertical Face Covers
Vertical Pocket Filler (Non Capt.)
Vertical Pocket Filler Trim (Non Capt.)
Horizontals
Horizontal Interior Trim
Horizontal Stack

Horizontal Pocket Filler

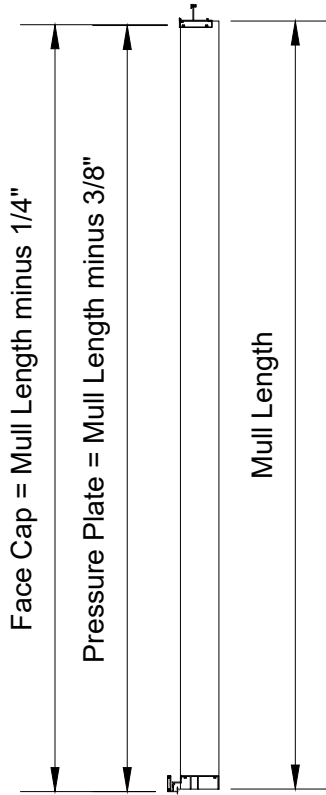
Horizontal Pressure Plates
Horizontal Face Covers
Horizontal Pocket Filler (Non Capt.)
Horizontal Pocket Filler (Non Capt.)
Starter Sill

Reference Project Shop Drawings.
See Page 4 for Cut Lengths
See Page 4 for Cut Lengths
Mull Height
Mull Height
D.L.O.
D.L.O. minus 1/16"
D.L.O. plus 3 5/8" (jamb unit)
D.L.O. plus 2 1/4" (typ. unit)
D.L.O. plus 3 5/8" (jamb unit)
D.L.O. plus 2" (typ. unit)
D.L.O. minus 1/4"
D.L.O. minus 1/8"
D.L.O. plus 3 1/4" (jamb unit)
D.L.O. plus 1 1/2" (typ. unit)
Frame size w/ 1/4" splice joints
as required

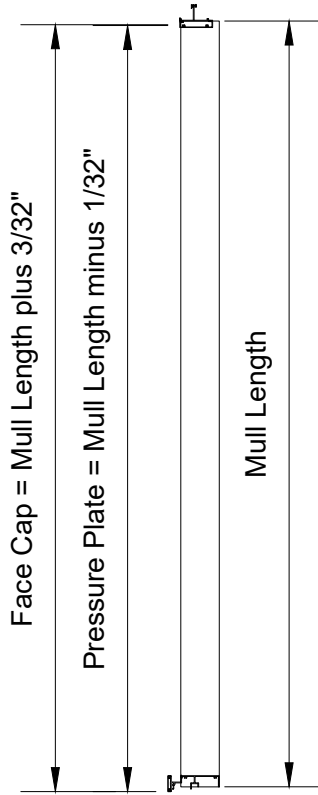


CUT TO LENGTH MATERIAL

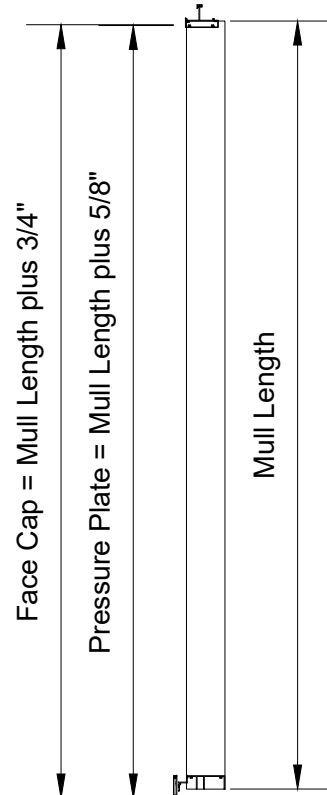
RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



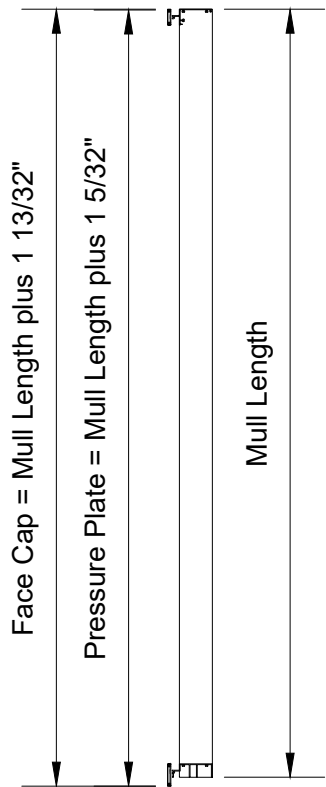
Live Load
Starter Sill to Stack



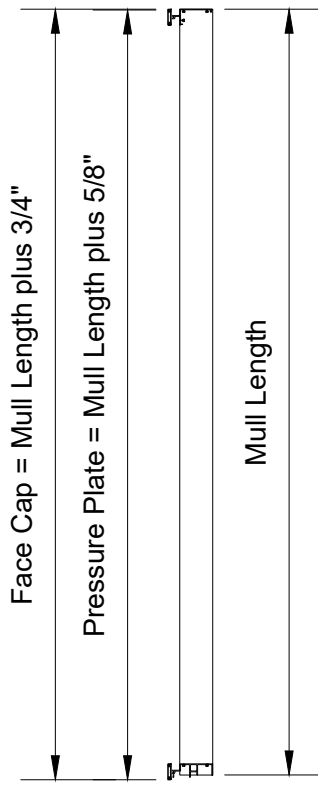
Dead Load
Starter Sill to Stack



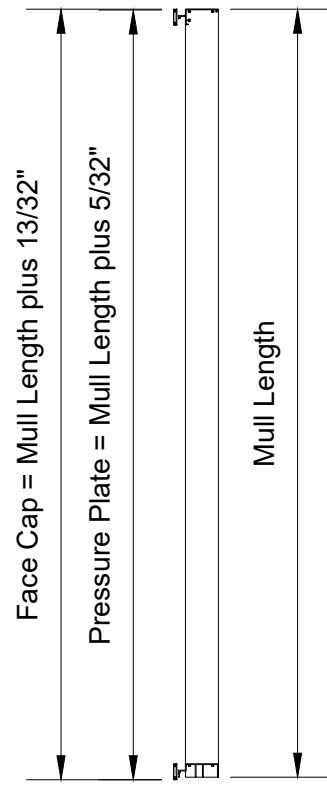
Stack to Stack



Stack to Head

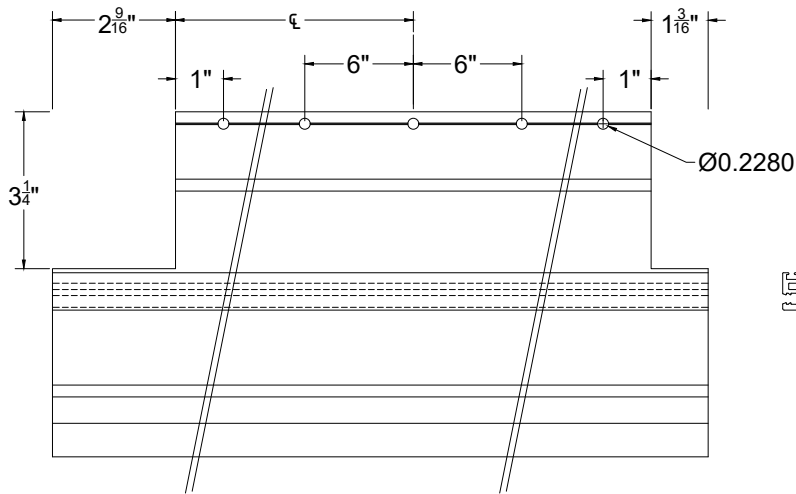


Dead Load
Starter Sill to Head



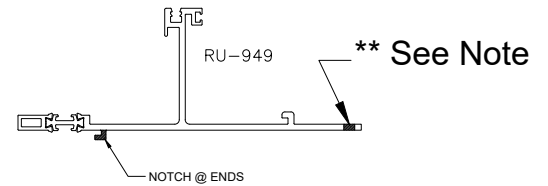
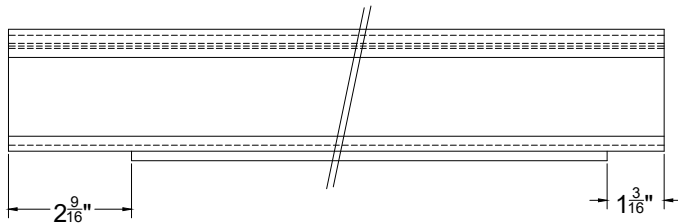
Live Load
Starter Sill to Head

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

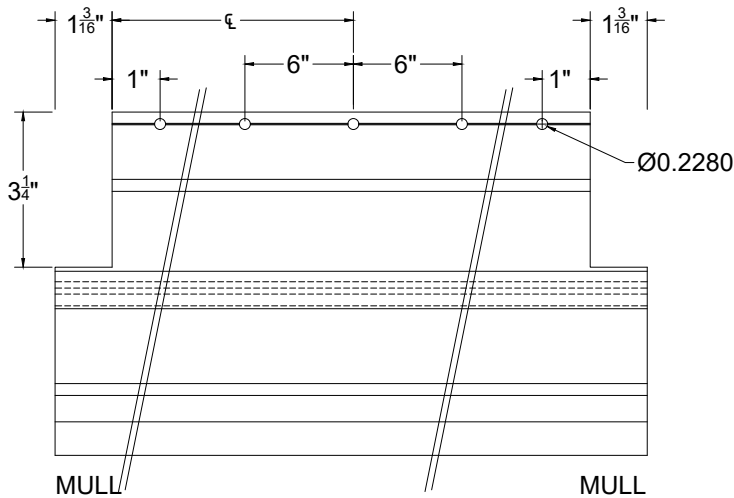


JAMB

MULL

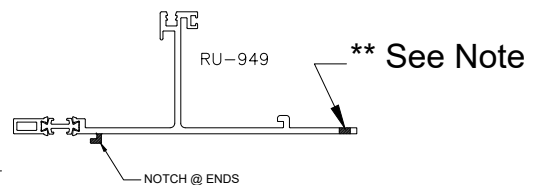
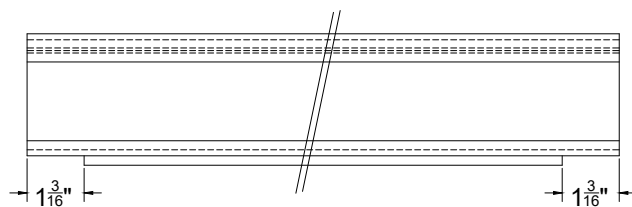


****Additional fasteners may be required to meet project specific structural requirements.**



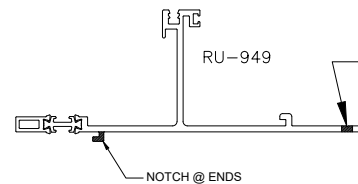
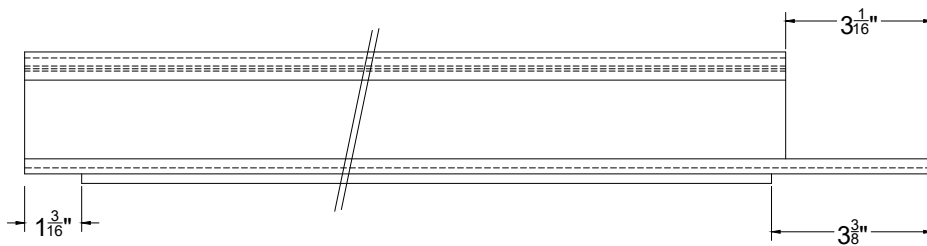
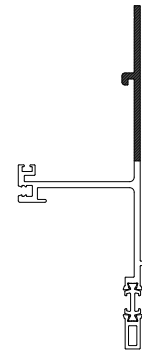
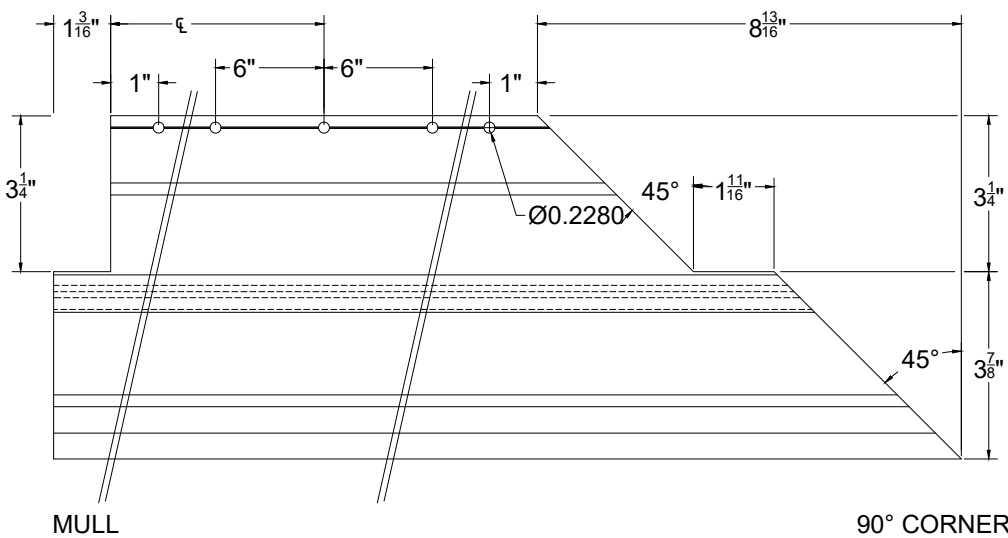
MULL

MULL



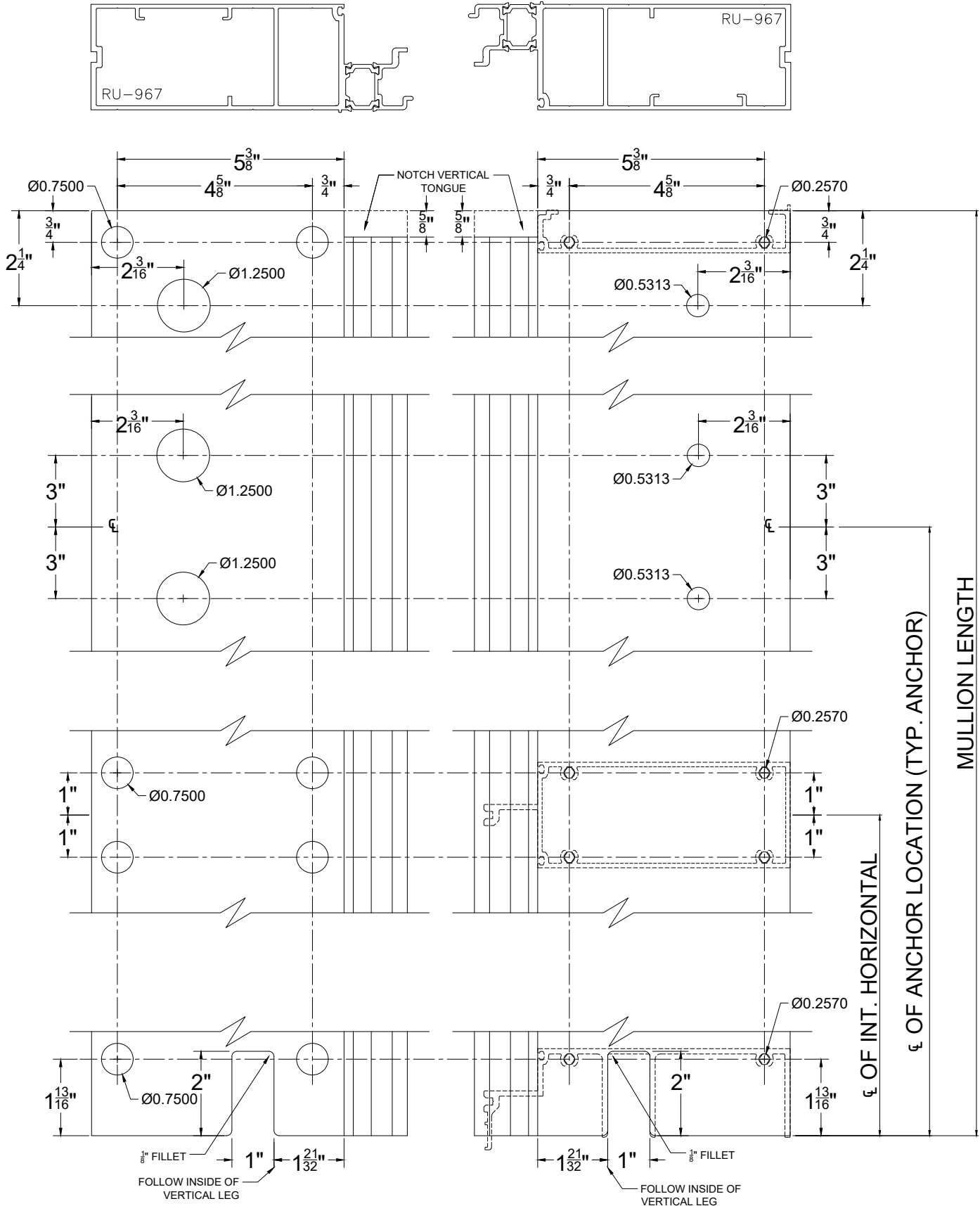
RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

****Additional fasteners may be required to meet project specific structural requirements.**

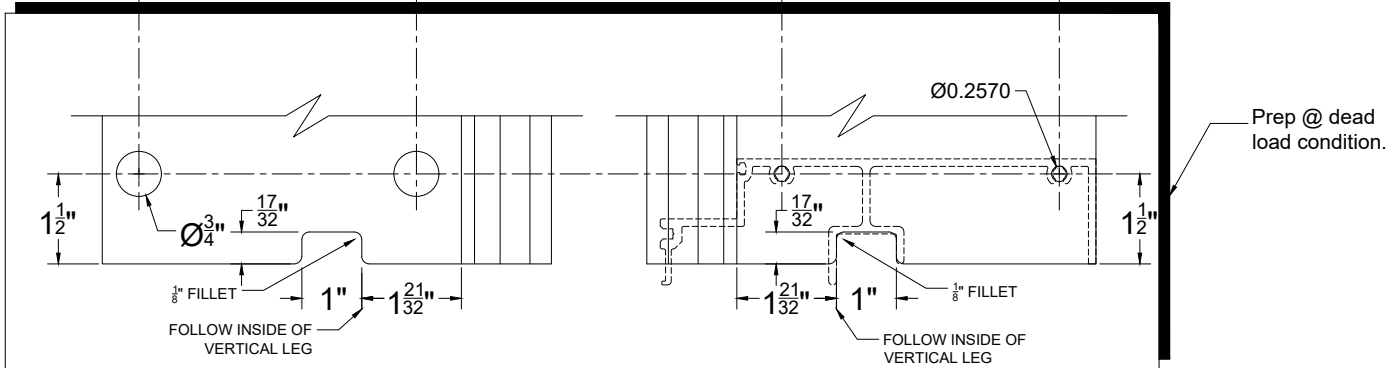
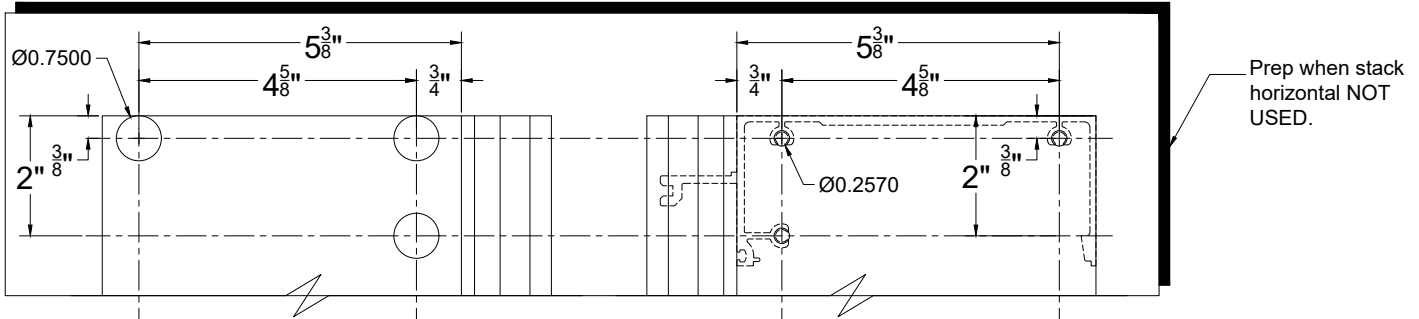
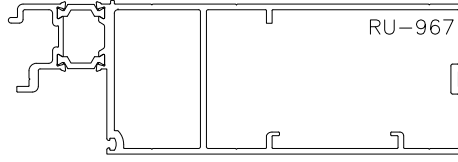
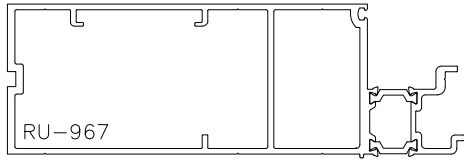


**** See Note**

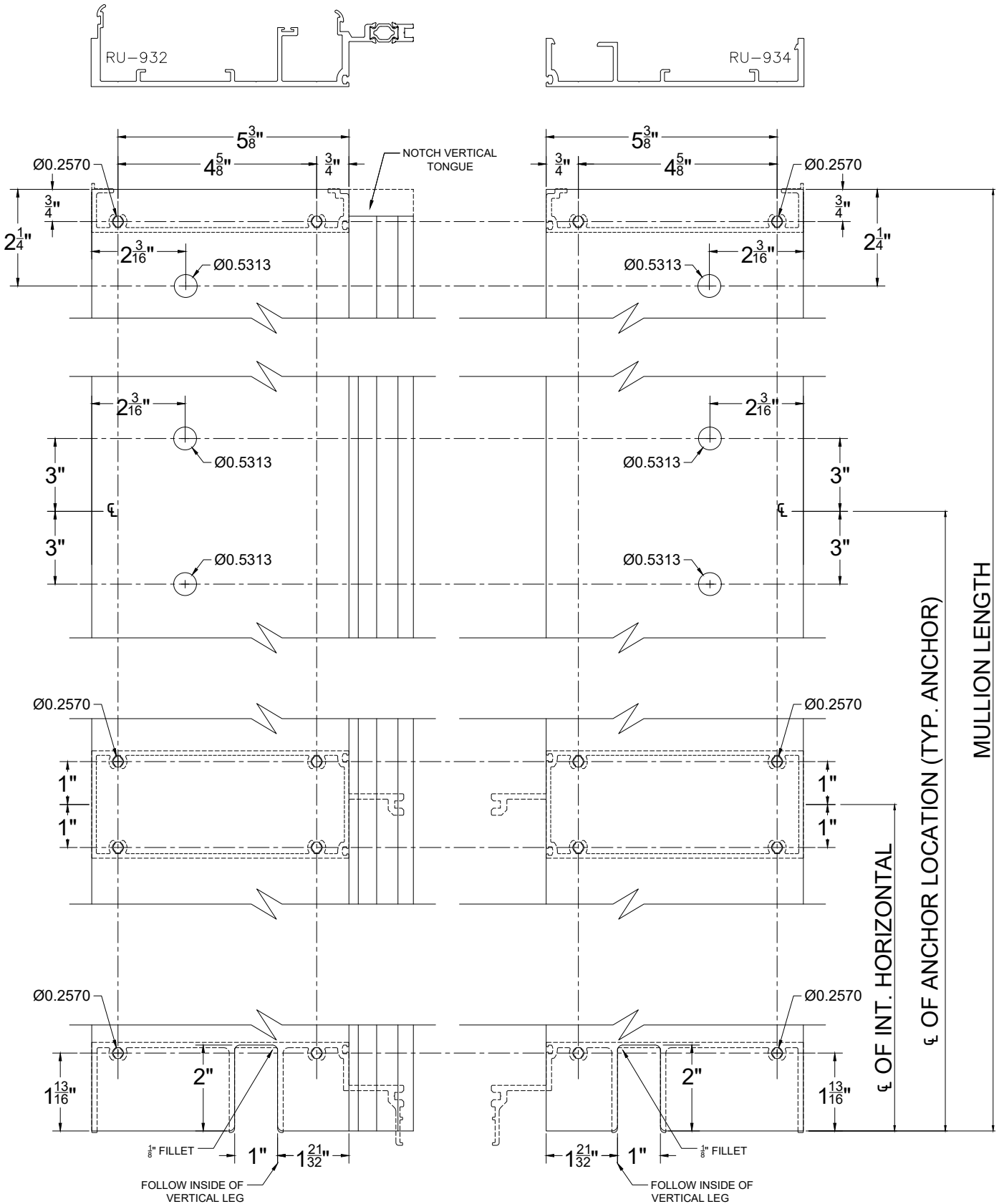
RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

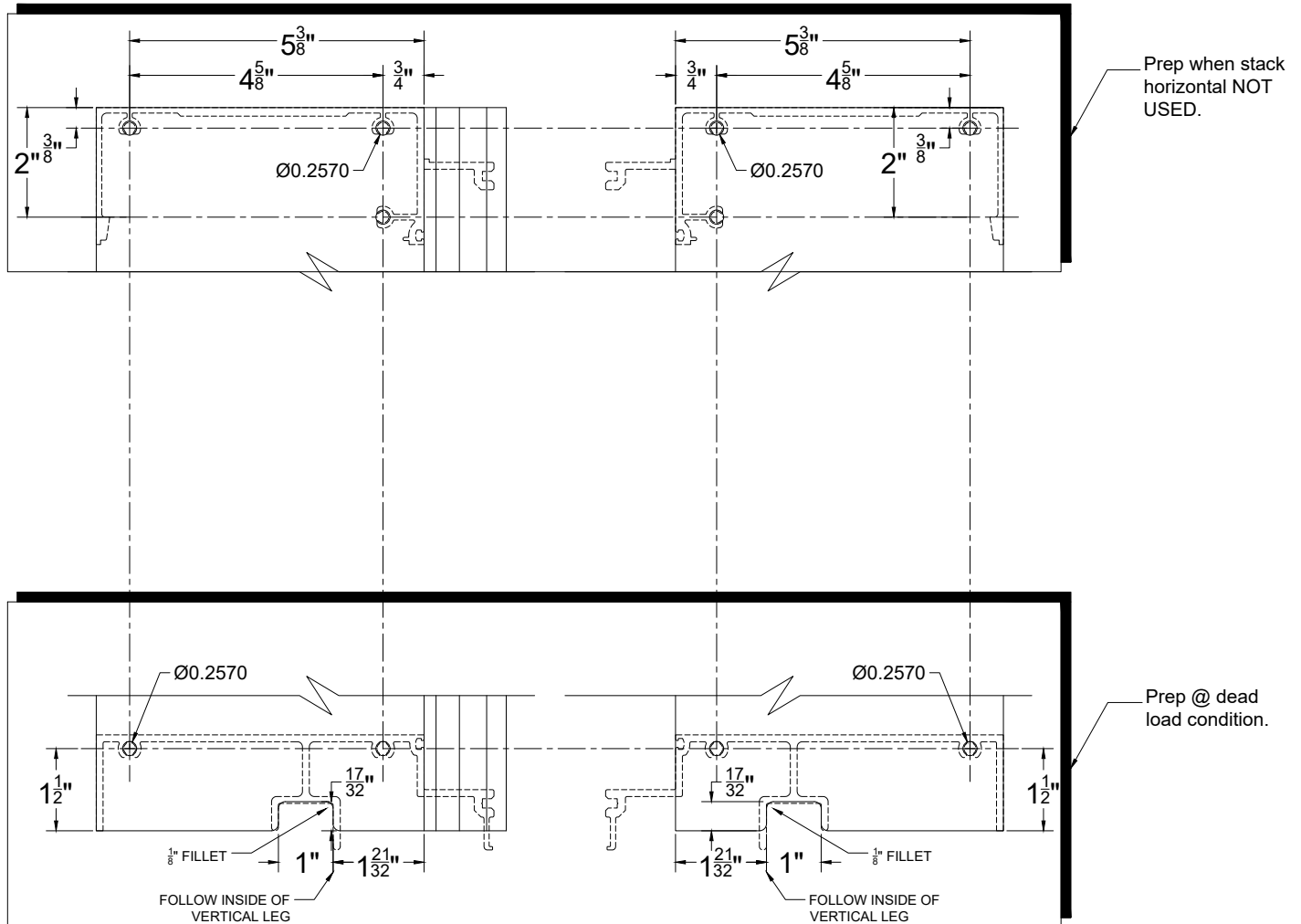
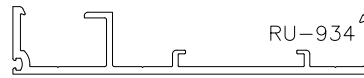
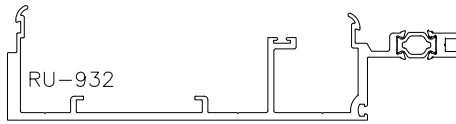


RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



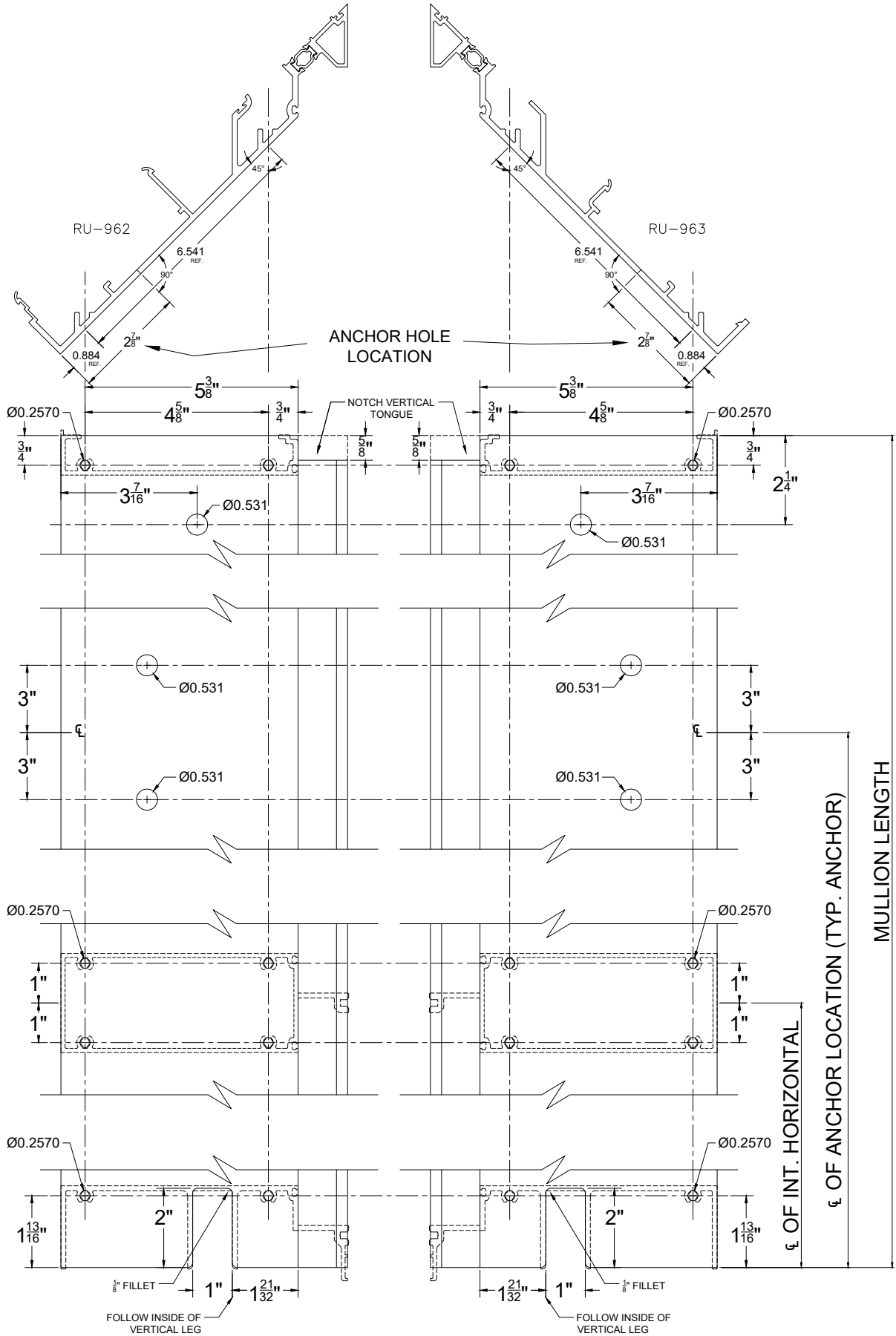
8" VERTICAL REFERENCE INFORMATION (CAPTURED INTERMEDIATE MULL)

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

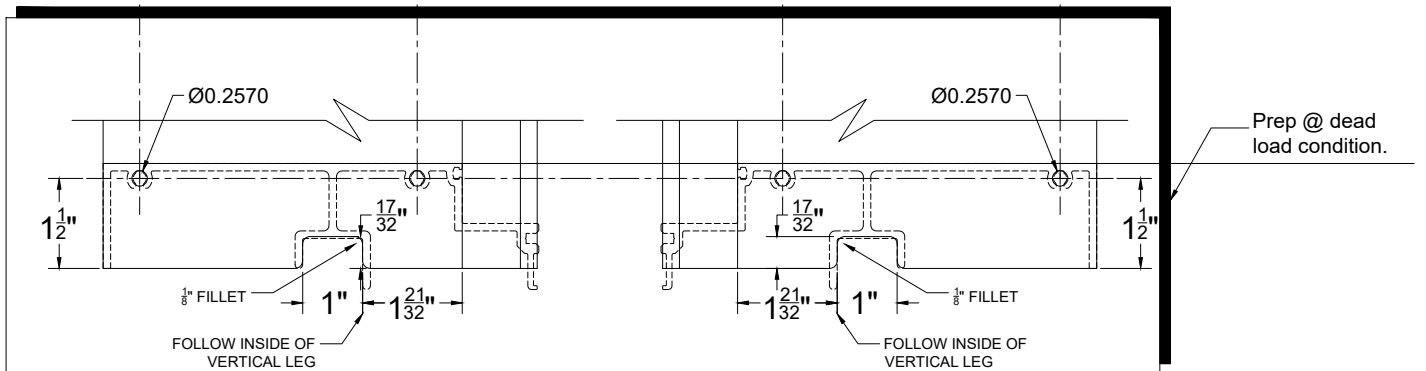
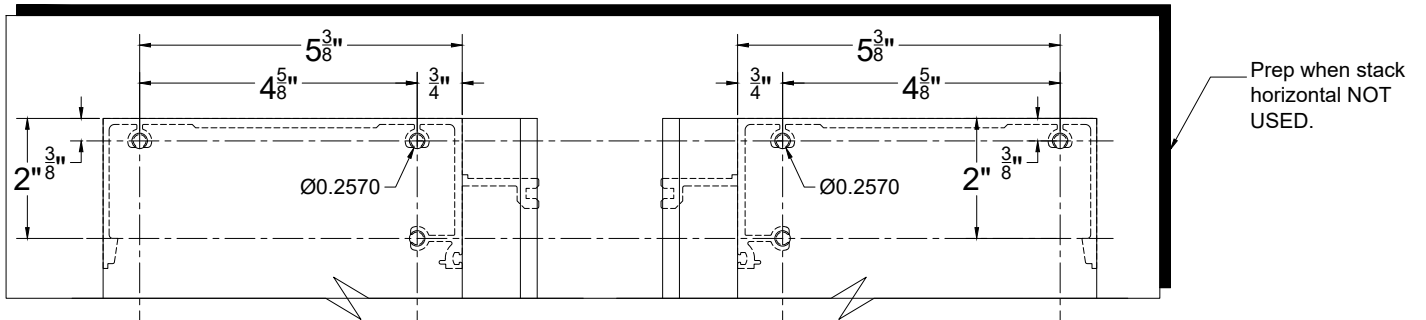
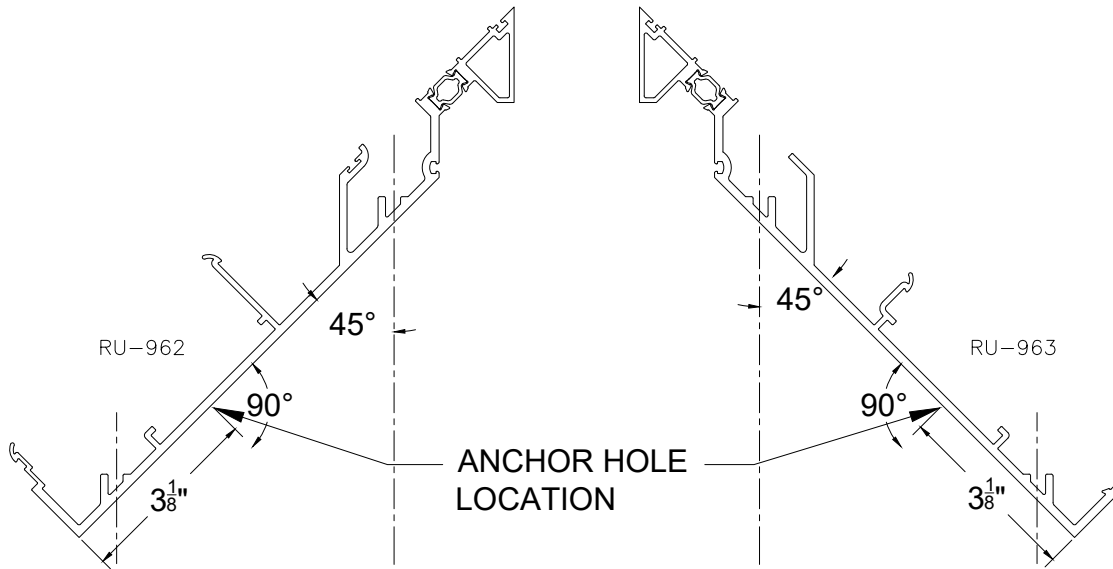


8" VERTICAL REFERENCE INFORMATION (CAPTURED INTERMEDIATE MULL)

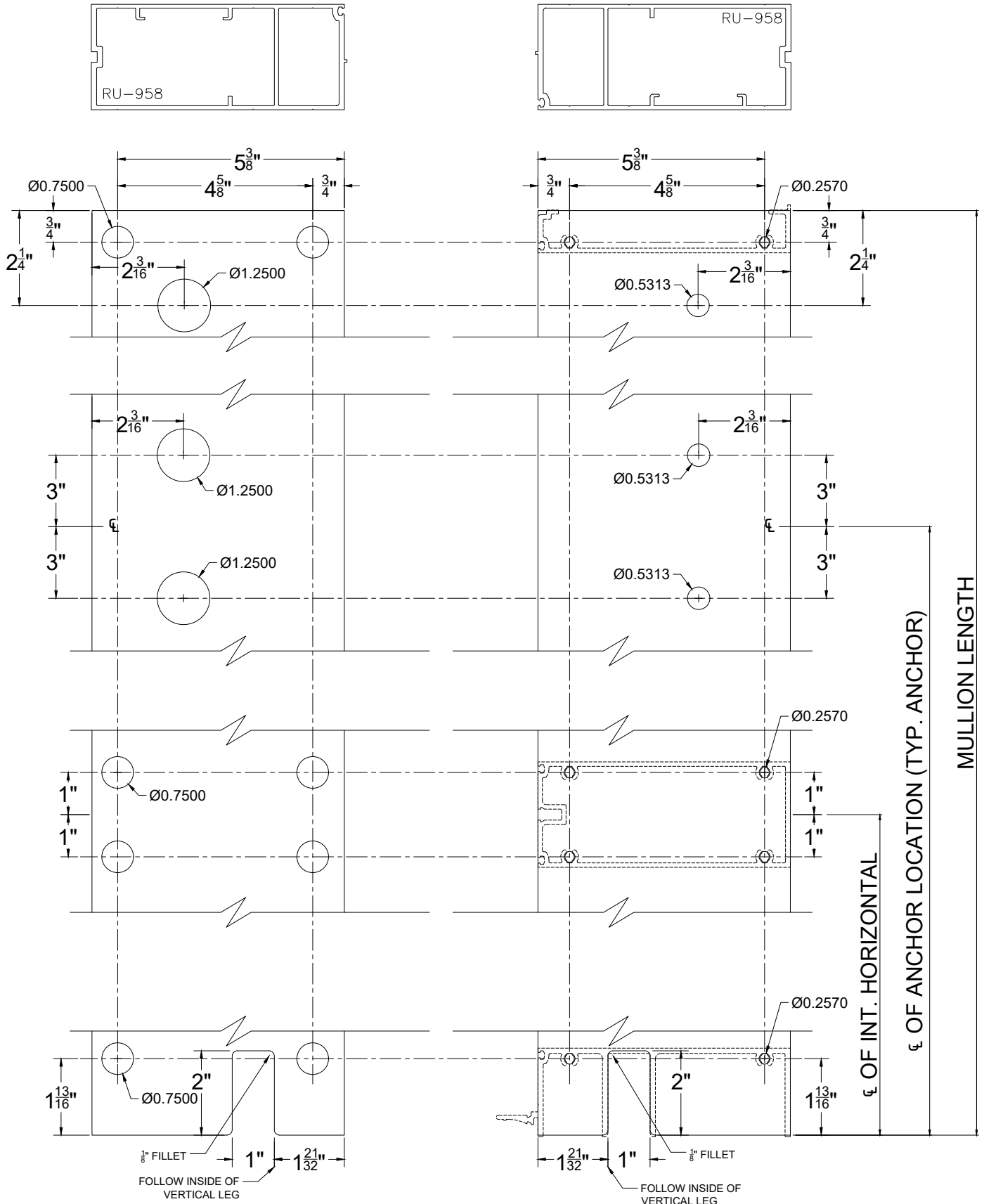
RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



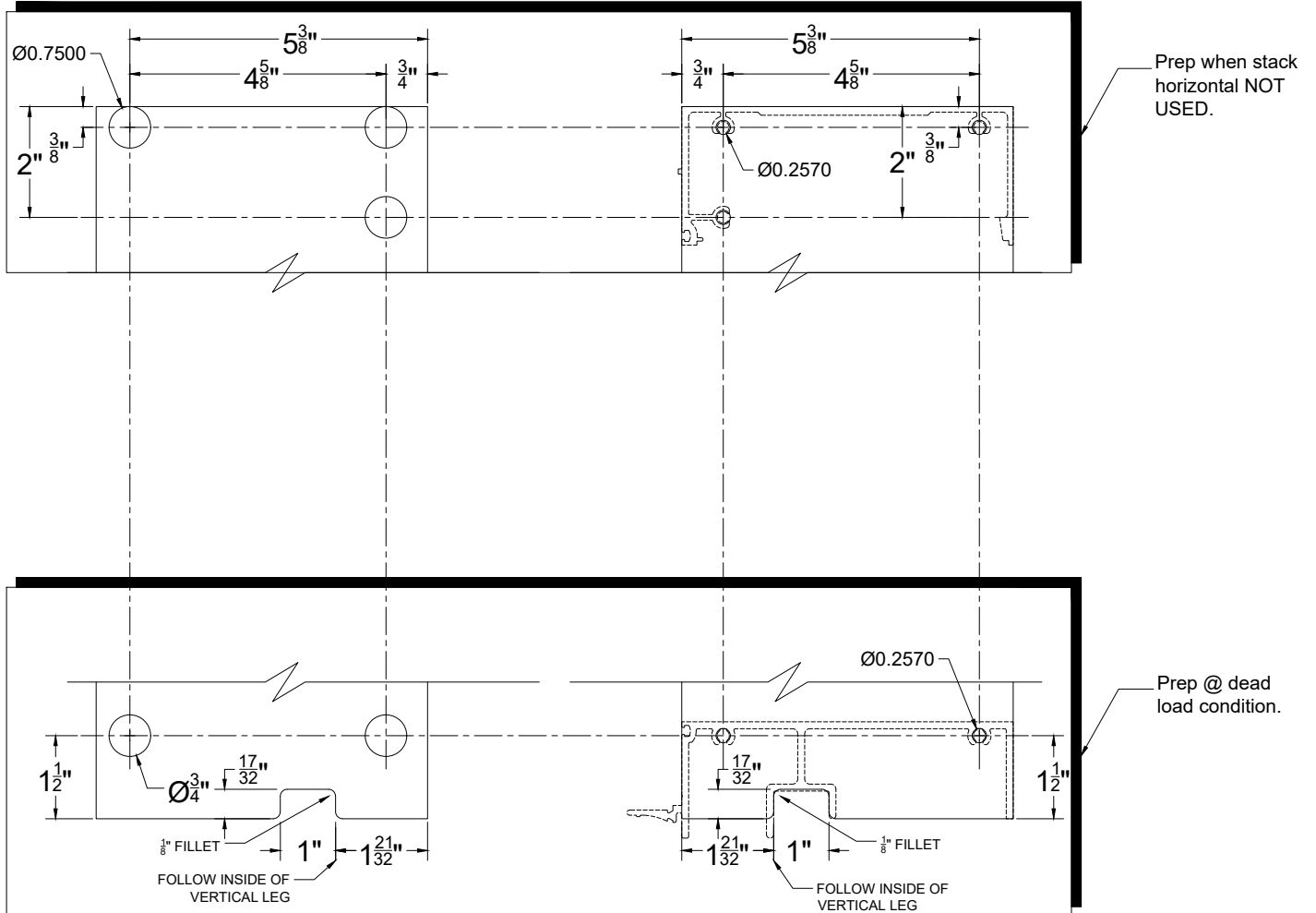
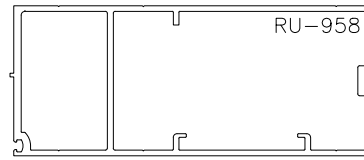
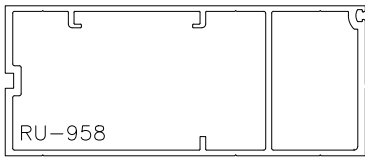
RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



January 2024

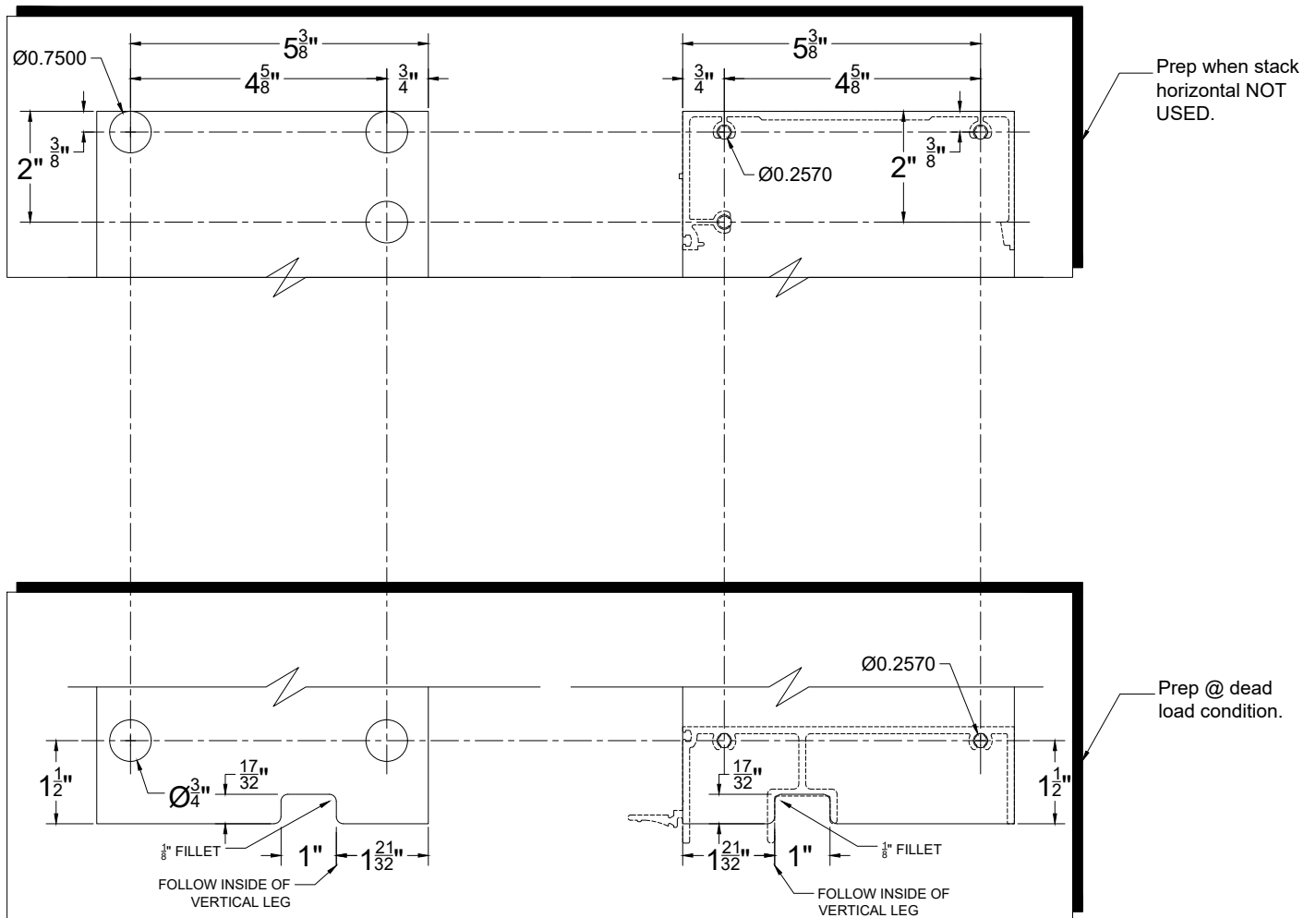
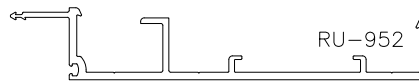
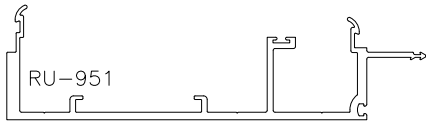
8" VERTICAL REFERENCE INFORMATION (NON CAPTURED JAMB)

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



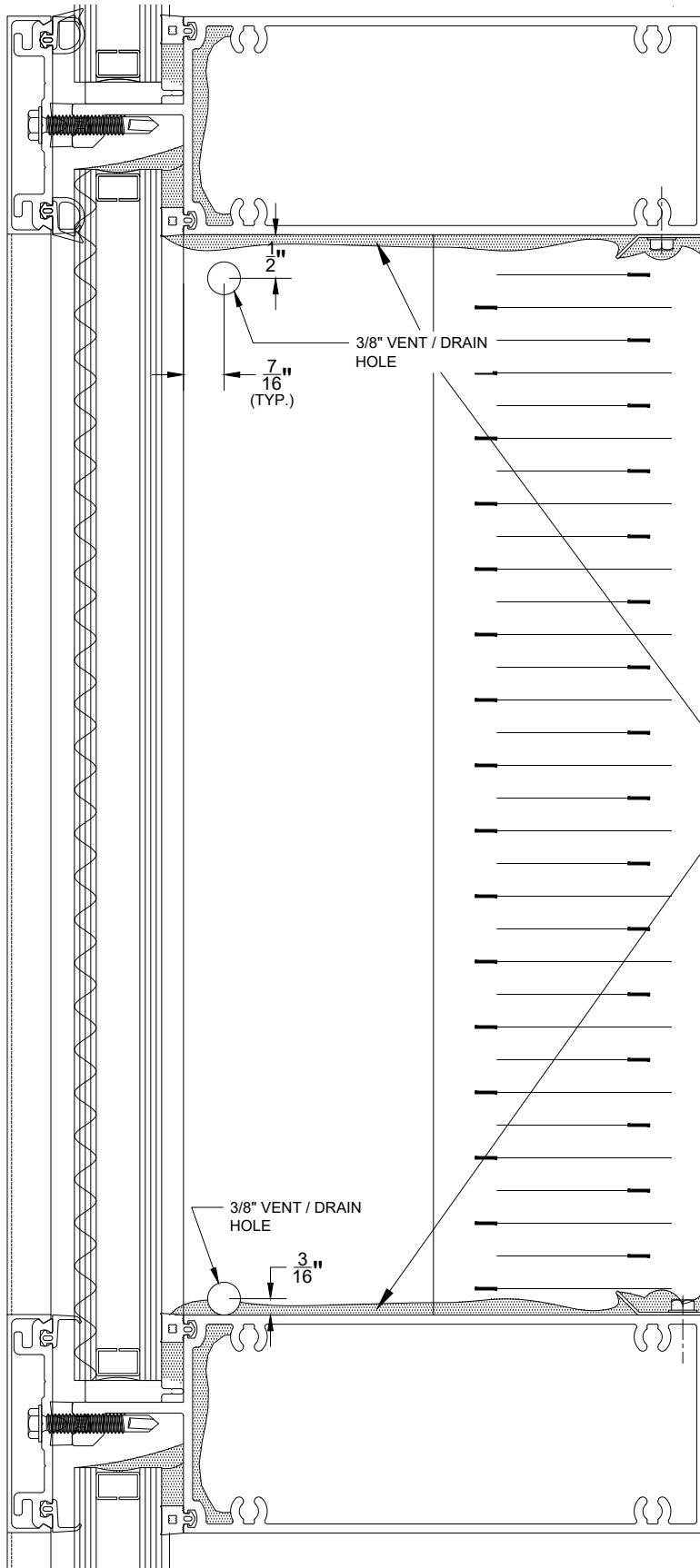
RU-952

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



8" VERTICAL REFERENCE INFORMATION (NON CAPTURED INTERMEDIATE MULLS)

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



NOTE: Vent holes are designed for use with metal back pans which are hermetically sealed to glazing cavity openings on the back face. If the cavity is left open, or if FSK tape is used to seal the insulation to the framing, consideration must be given to the effect of vent holes at elevated structural loads during testing.

NOTE: Completely seal, water tight, all metal to metal joints within the spandrel cavity.

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

1. LAYOUT PARTS

Typically units are to be assembled with Female Mullion Half on the left of the unit and with the Male Mullion Half on the right of the unit (viewed from exterior of the unit). Please refer to shop drawings for proper mullion half required at left and right jamb units.

Check that all preps have been applied and located in the proper position per approved shop drawings.

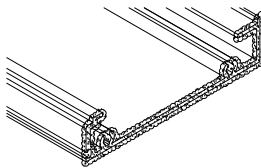
2. APPLY SILICONE SEALANT

Clean and butter top of the vertical mullions and both ends of horizontals with silicone sealant per approved shop drawings.

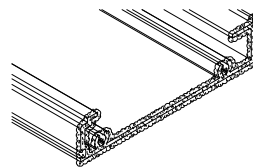
NOTE: ALL ASSEMBLY WORK MUST BE COMPLETED IMMEDIATELY AFTER SEALANT APPLICATION BEFORE SEALANT SKINS.

Butter both ends of the head horizontal from the front leg continuously around the perimeter including screw chase. (SEE BELOW)

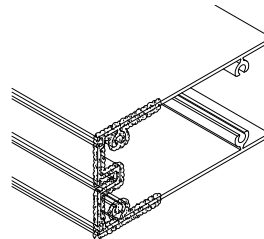
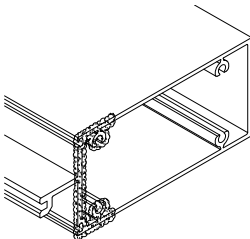
CAPTURED



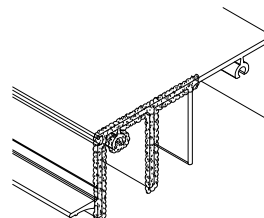
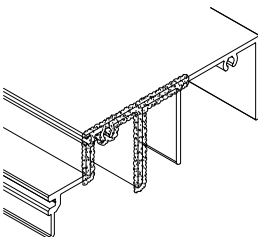
NON CAPTURED



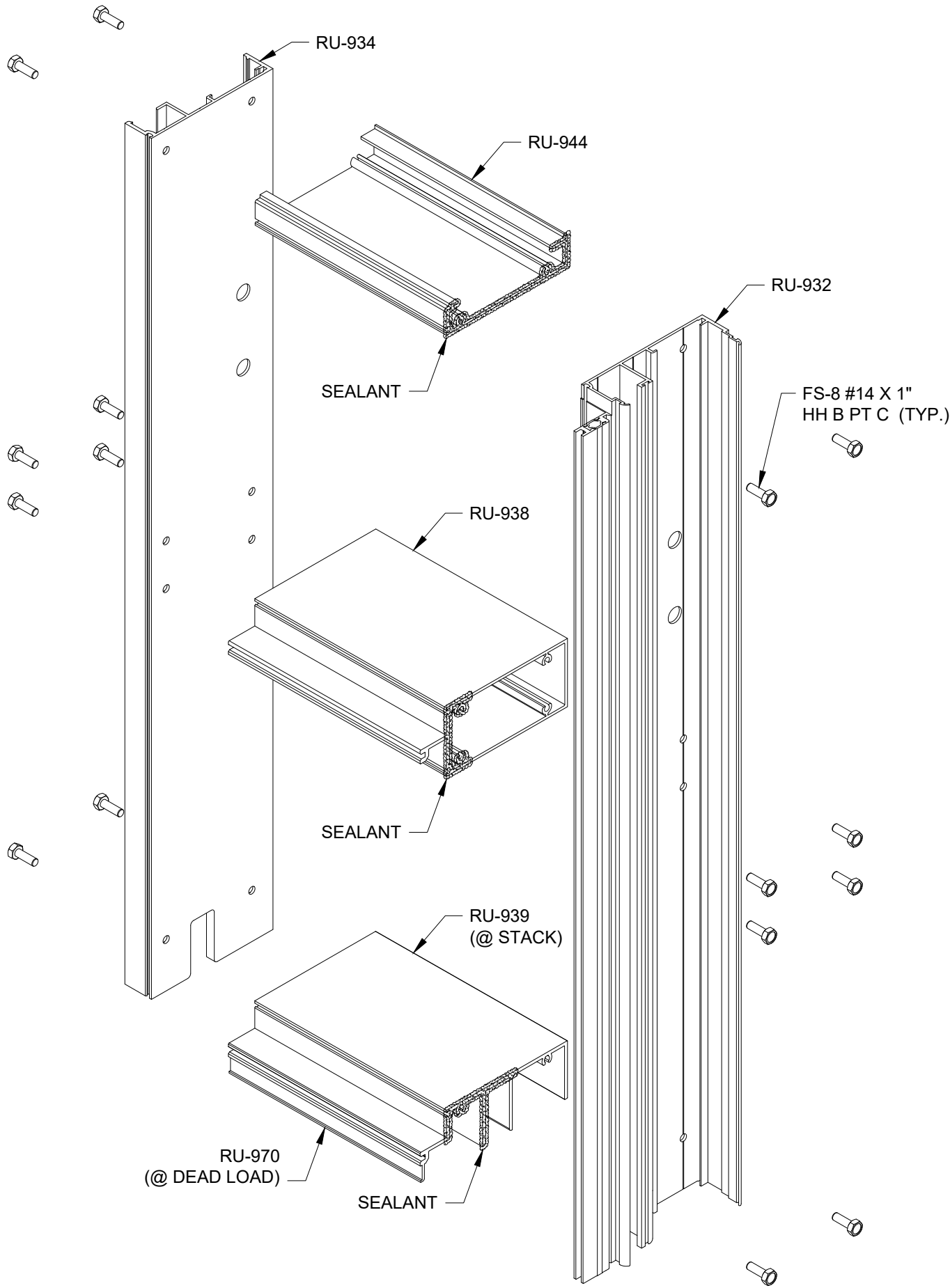
Butter both ends of the intermediate transom from the lower screw chase inboards to the upper screw chase.
(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)
(SEE BELOW)



Butter both ends of the transom.
(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)
(SEE BELOW)

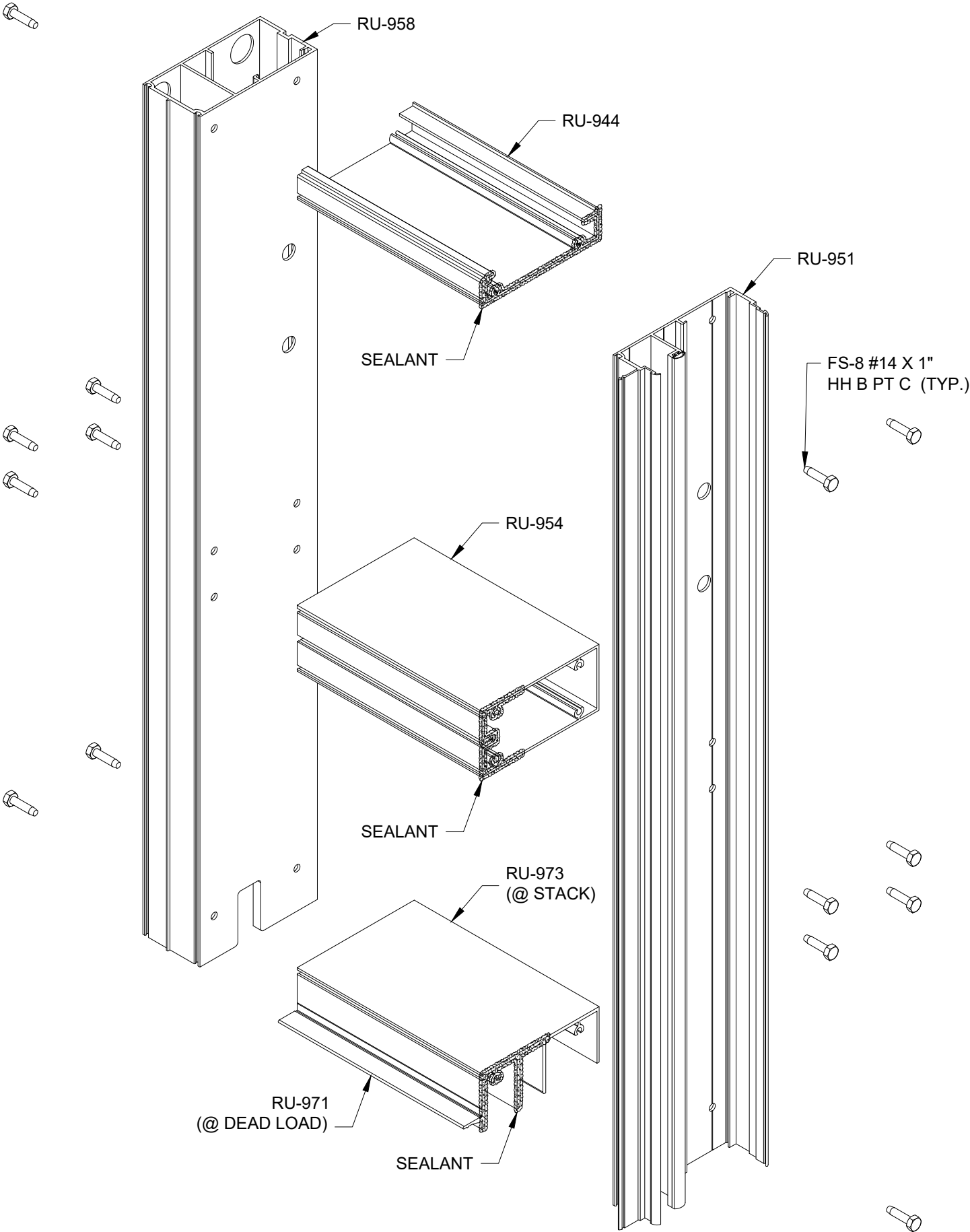


RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

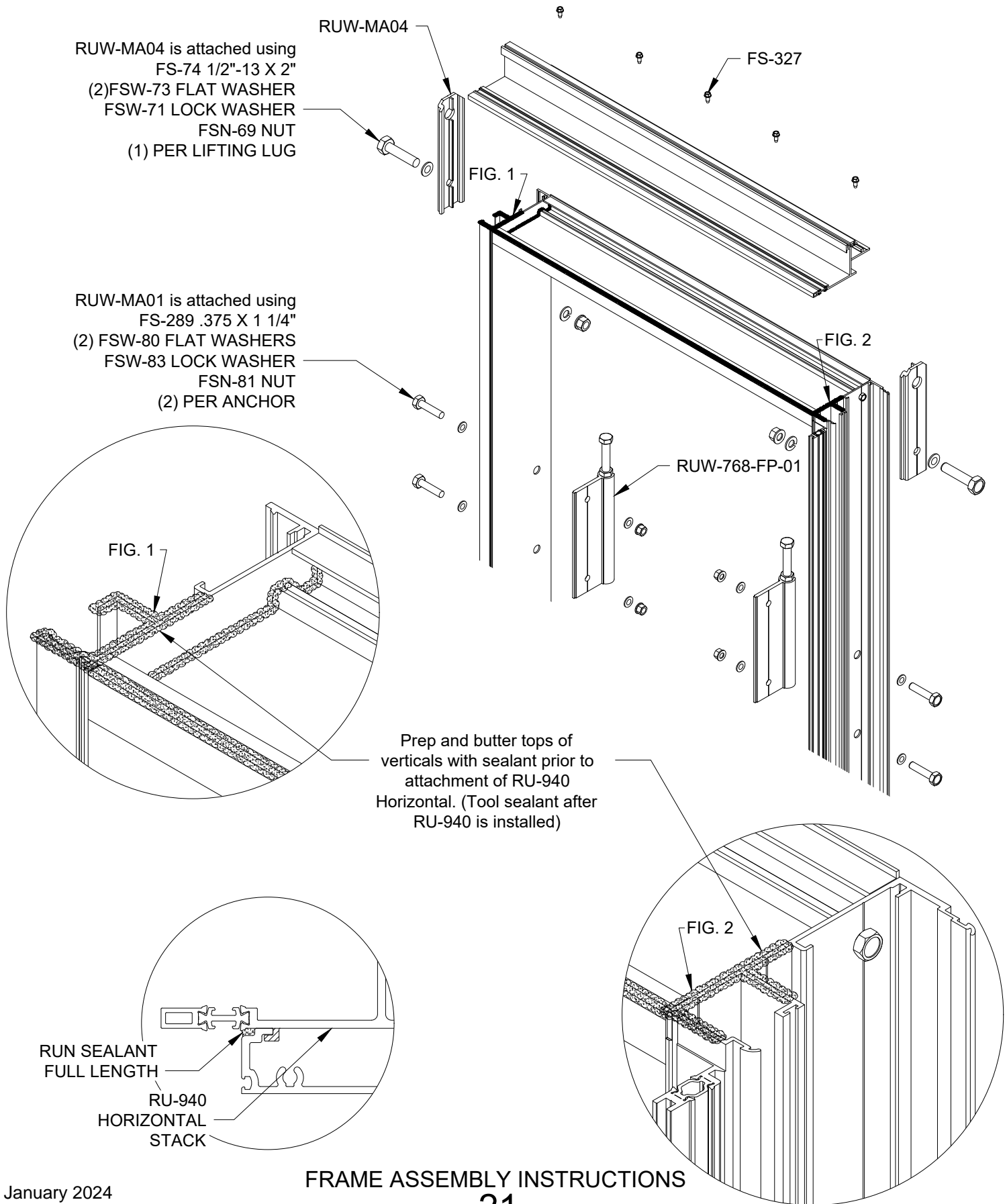


FRAME ASSEMBLY INSTRUCTIONS (CAPTURED)

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS



RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

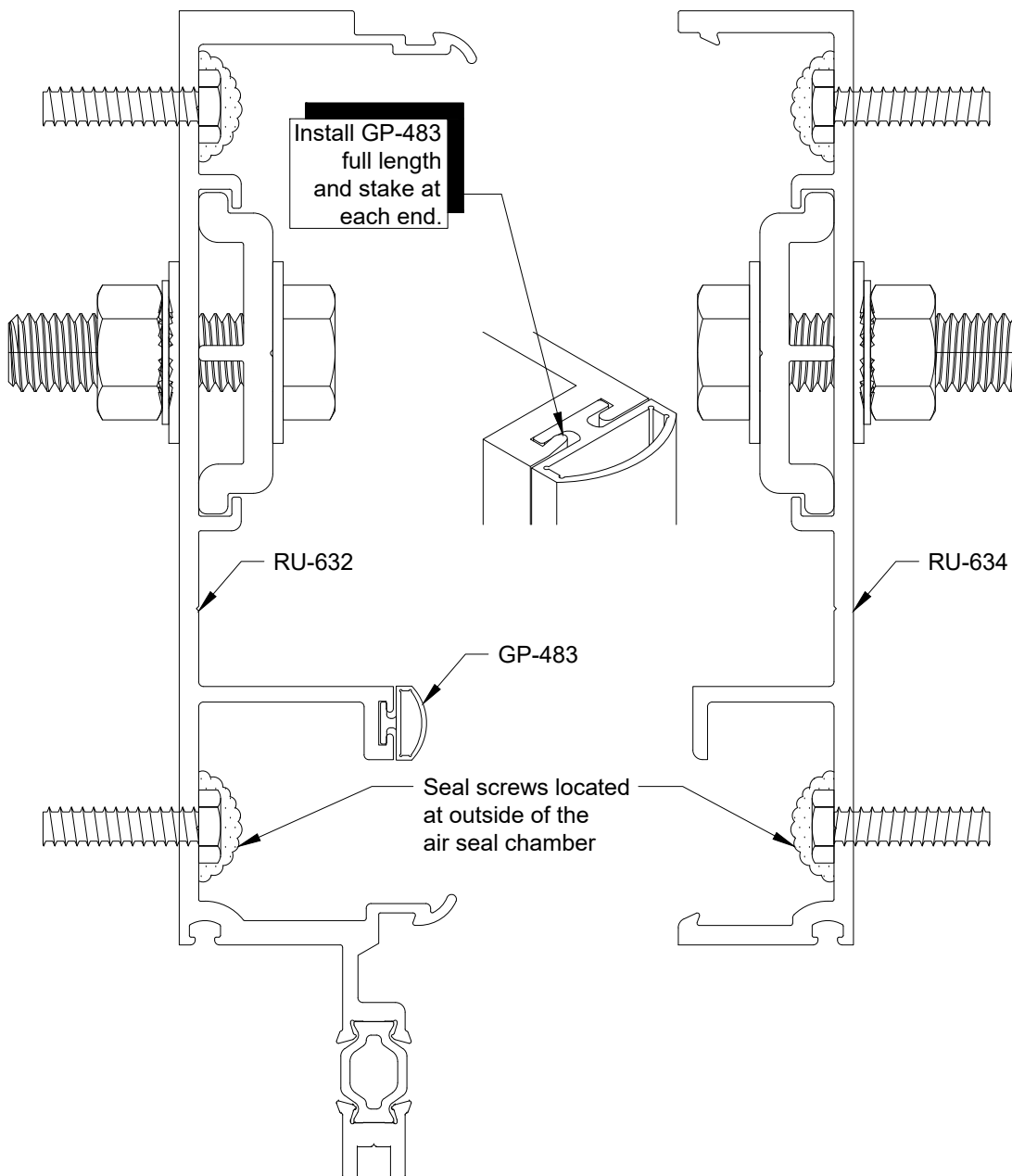
ASSEMBLING FRAME

Position horizontal members aligning with splines with screw holes and assemble with FS-8 #14 x 1" long hex washer head Type B pt assembly screws.

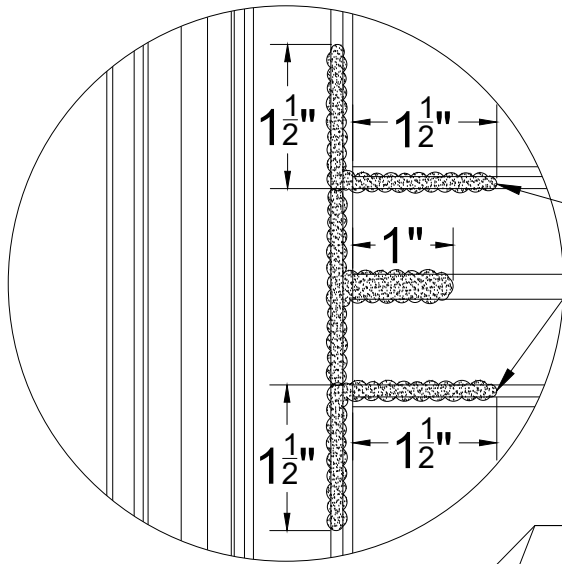
When applying opposite side of mullion half, do not tighten screws until all horizontals have been applied to keep from wiping off the sealant with mullion during installation.

A RING OF SEALANT SHOULD APPEAR AROUND EVERY SCREW HEAD LOCATED IN WET AREAS. (SEE FIGURE BELOW)

THOROUGHLY SEAL OVER SCREW HEADS WHICH ARE LOCATED OUTSIDE OF THE AIR SEAL CHAMBER.

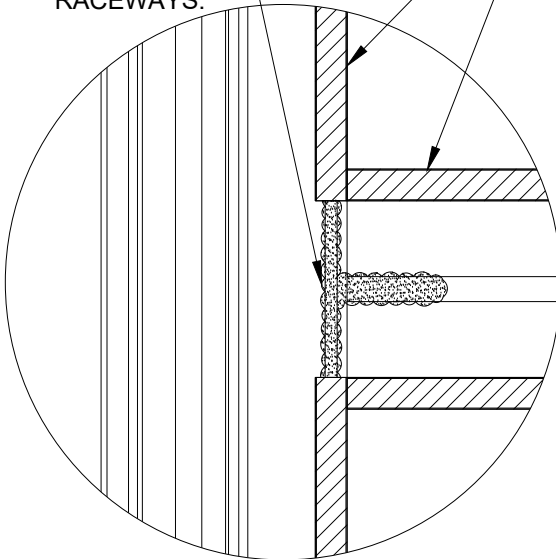


RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

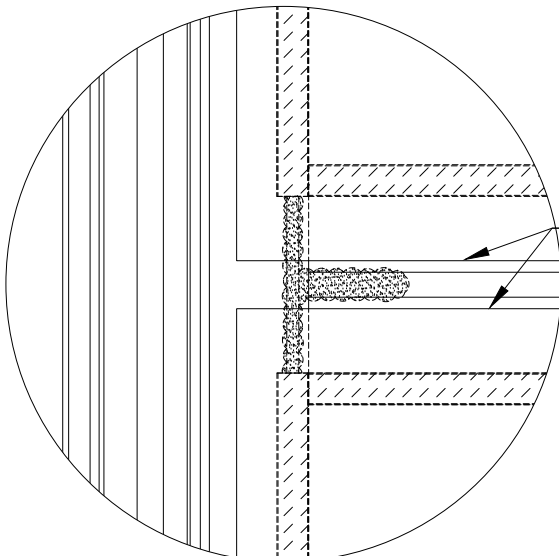
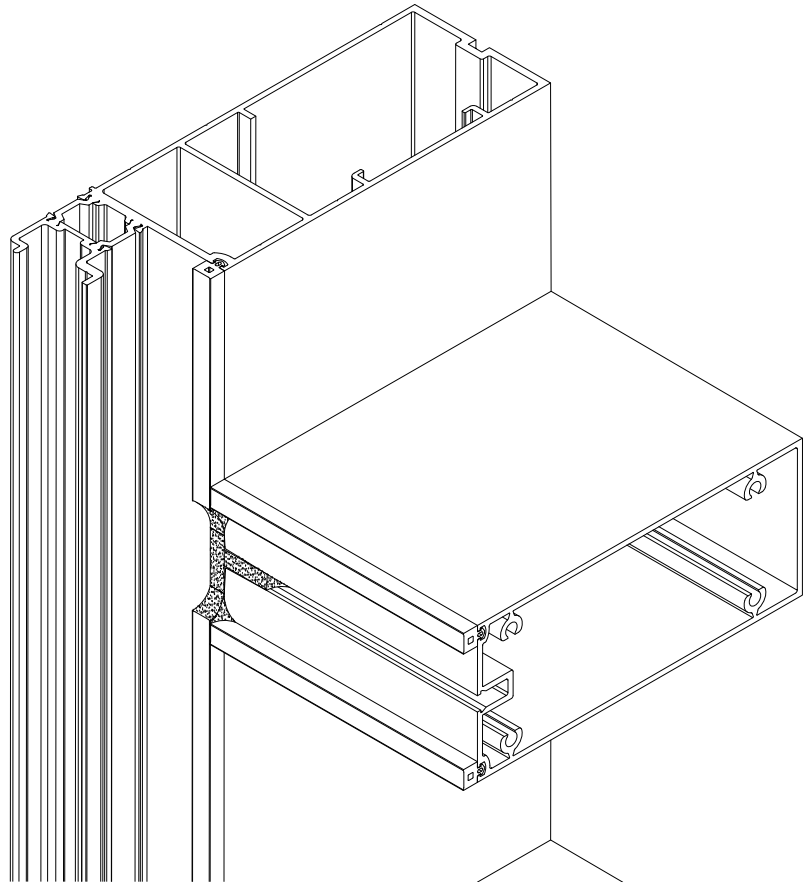


SILICONE SEALANT IS A 3" CORNER WRAP APPLIED JUST PRIOR TO INSTALLATION OF GASKETS. ENSURE SEALANT DOES NOT EXTEND MORE THAN 1/4" FROM SIDE OF MULLION. SEALANT SHOULD NOT INTRUDE ON STRUCTURAL SEAL.

SILICONE SEALANT MARRY TO SEALANT IN VERTICAL AND HORIZONTAL GASKET RACEWAYS.



INSTALL SPACER GASKETS, AND CLEAN EXCESS SEALANT FROM GASKET EXPOSED SURFACE.



GLASS

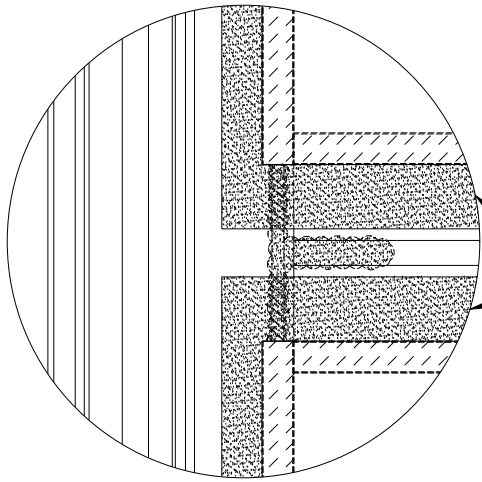
SHOP NOTE: Silicone sealant must be applied into vertical gasket raceways, adjacent to horizontals.

NOTE: Sealant must be applied before gasket is installed and tooled fully into raceway to fill designated raceway area completely.

NOTE: Ensure filler sealant bead is constrained to raceway area only. Do not "Trowel" on a wide band of sealant.

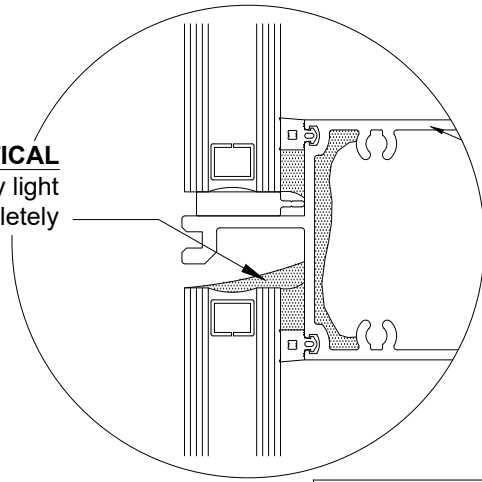
NOTE: Ensure surface preparation (cleaning, priming, etc.) per sealant manufacturer is followed without fail.

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

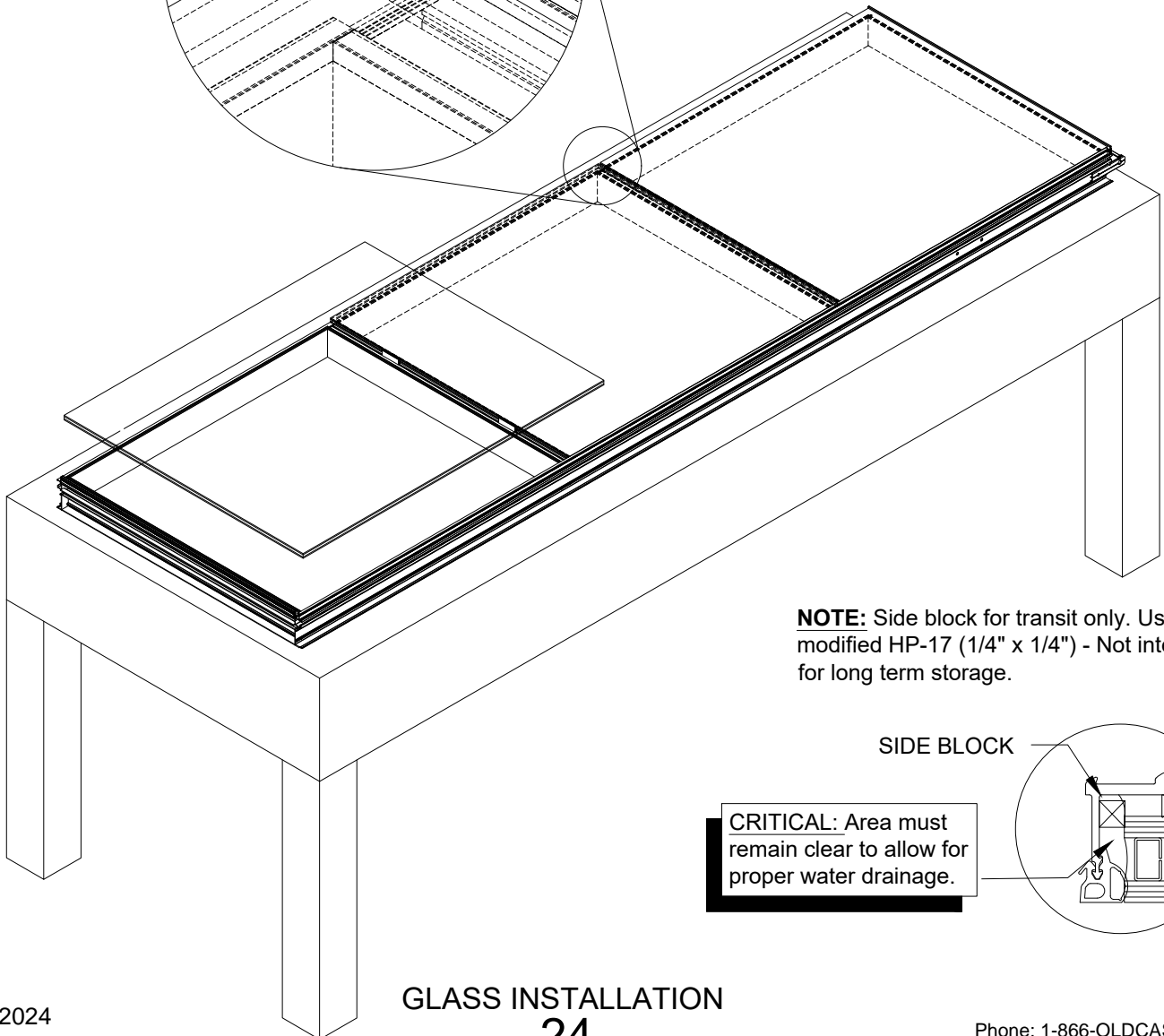
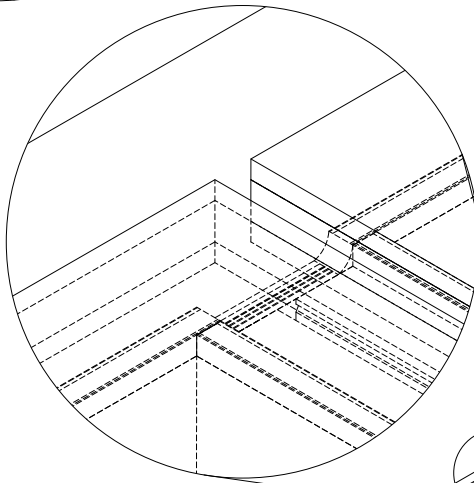


***CRITICAL**
Sweep seal head of every light completely

Structural Sealant



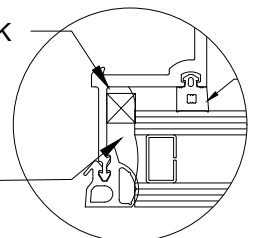
ENSURE FRAME IS SQUARE PRIOR TO SETTING GLASS.



NOTE: Side block for transit only. Use modified HP-17 (1/4" x 1/4") - Not intended for long term storage.

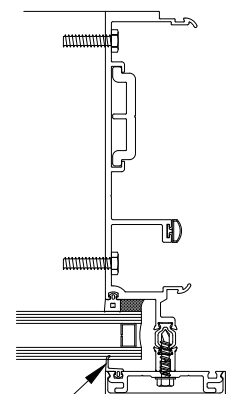
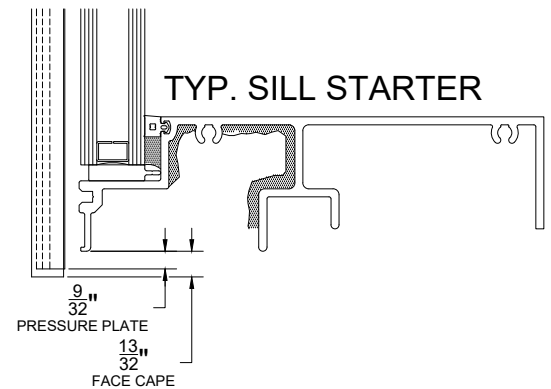
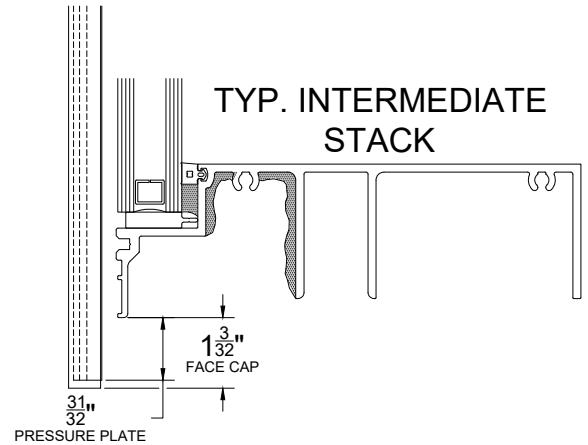
SIDE BLOCK

CRITICAL: Area must remain clear to allow for proper water drainage.



RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

VERTICAL FACE CAP & PRESSURE PLATE LOCATING DIMENSIONS

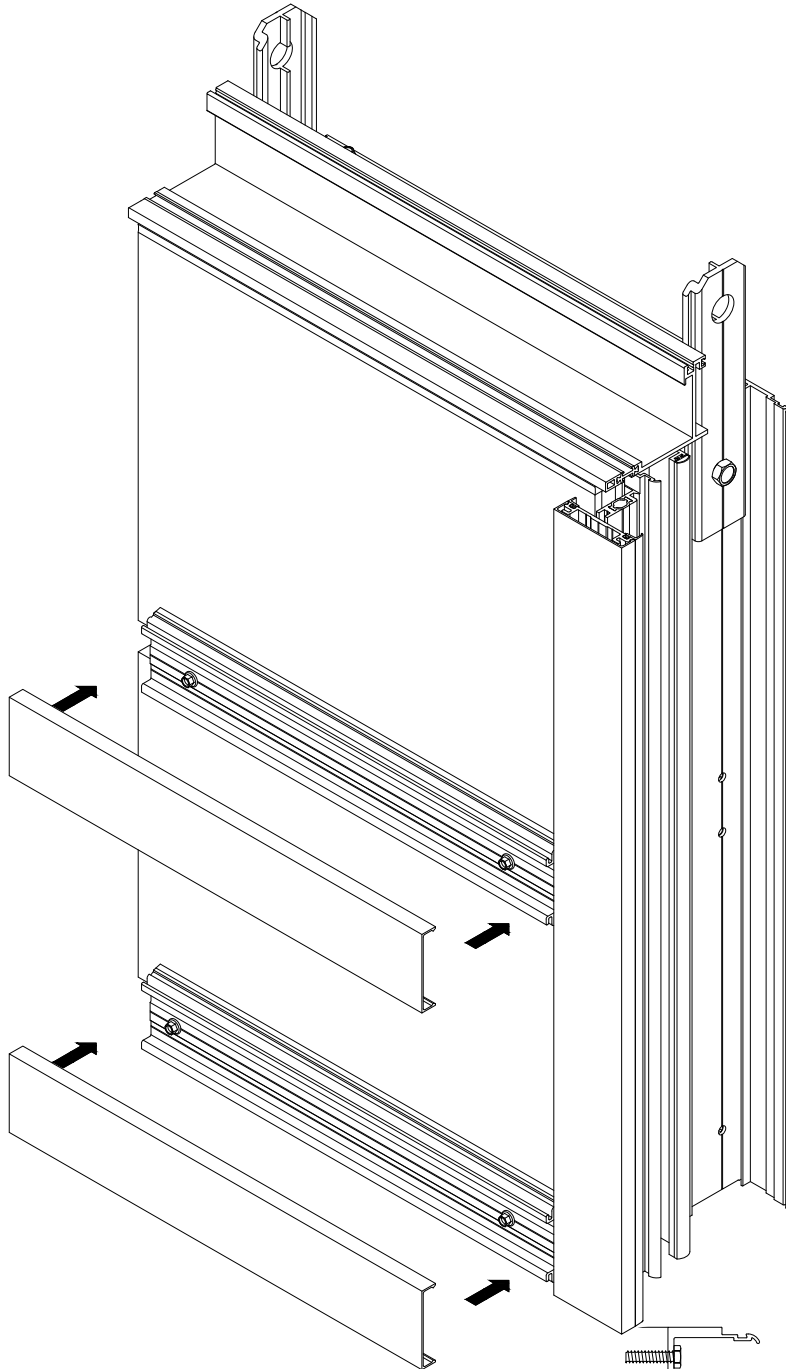


CRITICAL: Pressure plate stock lengths will come pre-prepped for fasteners at 9" O.C. After cutting to length, drill additional holes 4" from ends. If pre-fabricated holes/slots exist less than 4" from end, seal over thoroughly. Attach w/ FS-322 and torque to 35 in-lbs.

NOTE: Different fastener used to secure horizontal pressure plate.

PRESSURE PLATE INSTALLATION

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

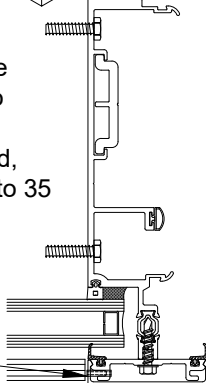


CRITICAL: Pressure plate stock lengths will come pre-prepped for fasteners at 9" O.C. After cutting to length, drill additional holes 4" from ends. If pre-fabricated holes/slots exist less than 4" from end, seal over thoroughly. Attach w/ FS-322 and torque to 35 in-lbs.

NOTE: Different fastener used to secure vertical pressure plate.

(FS-317 Pin) (1) required at vertical cap only. Location of pin to be concealed behind horizontal cap.)

See Figure **



VERTICAL

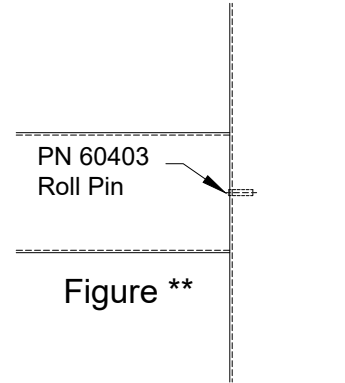
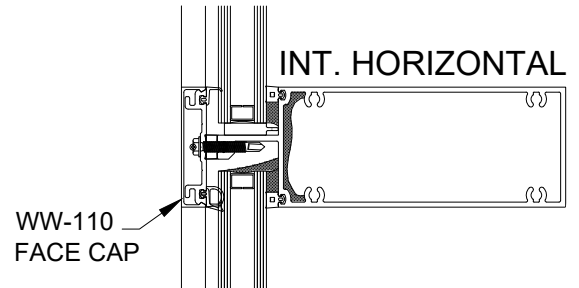
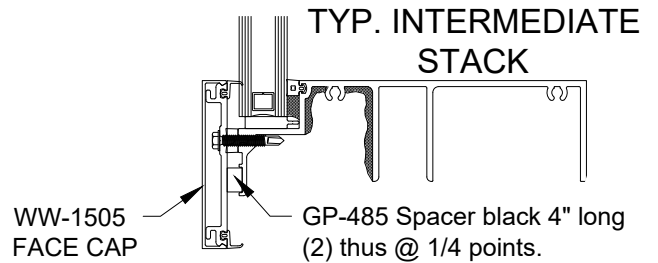


Figure **



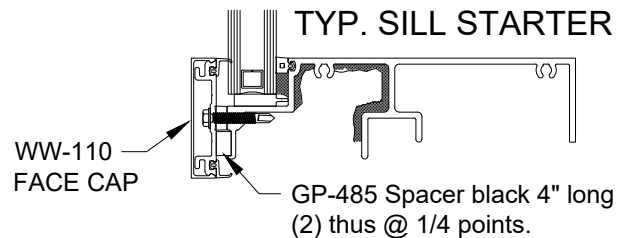
WW-110
FACE CAP



WW-1505
FACE CAP

TYP. INTERMEDIATE
STACK

TYP. SILL STARTER


















WW-110
FACE CAP










GP-485 Spacer black 4" long
(2) thus @ 1/4 points.

HORIZONTAL FACE CAP INSTALLATION

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

8" SYSTEM	
 RU-962	Male Corner Mullion 90° Outside Captured
 RU-963	Female Corner Mullion 90° Outside Captured
 RU-932	Male Mullion Captured
 RU-934	Female Mullion Captured
 RU-967	Jamb Captured
 RU-958	Jamb Non Captured
 RU-951	Male Mullion Non Captured
 RU-952	Female Mullion Non Captured
 RU-953	Head Horizontal Non Captured
 RU-937	Filler Trim for Head Horizontal
 RU-950	Dead Load Sill Starter
 RU-949	Stack Horizontal @ Stack Condition
 RU-944	Head Horizontal @ Stack Condition
 RU-939	Sill 1" Infill, Captured
 RU-938	Standard Horizontal Captured

[illegible]

COMMON EXTRUSIONS	
 RU-642	Pressure Plate for 3 1/2" Face Cap @ Stack, Captured
 WW-1505	3 1/2" Face Cap @ Stack Condition, Captured
 WW-162	Pressure Plate for 2 1/2" Face Cap (Typ.), Captured
 WW-110	2 1/2" Face Cap @ Typical Condition, Captured
 RU-941	Pocket Filler, Captured
 RU-957	Perimeter Filler, Non Captured
 SPW-1482	Perimeter Filler Cap, Non Captured
 RU-230	Pressure Plate for 90° Corner Face Cap Captured
 RU-931	Face Cap for 90° Corner Condition Captured

RELIANCE UNIT WALL SSG - ASSEMBLY AND SEALING INSTRUCTIONS

ACCESSORIES	
	Hex Head Bolt 3/8" X 1 1/4"
	Flat Washer For 3/8" Bolt
	Nut For 3/8" Bolt
	Hex Head Bolt 1/2"-13 X 2"
	Flat Washer For 1/2" Bolt
	Lock Washer For 1/2" Bolt
	Nut For 1/2"-13 Bolt
	Typical Assembly Fastener
	Vertical Pressure Plate, Pocket Filler / Chicken Head 1" Fastener
	Horizontal Pressure Plate 1-11/32" Fastener
	Adjustment Bolt 3/8"-16x5" Square Head Cup Point Bolt
	Taplock Threaded Insert 3/8"-16x11/16"
	Attachment Pin
	Silicone Splice 4"
	Silicone Splice 2"