SERIES 3150

CURTAIN WALL

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 SUBMISSION 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 ALL STRUCTURAL SILICONE SEALANT AND WEATHER SEAL SILICONE SEALANT.

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

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HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY.
All aluminum materials at job site must be stored in a safe place, well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry.

B. CHECK ARRIVING MATERIALS.
Check for quantities and keep records of where various materials are stored.

C. KEEP MATERIALS AWAY FROM WATER, MUD, AND SPRAY.
Prevent cement, plaster, or other materials from damaging the finish.

D. PROTECT THE MATERIALS AFTER ERECTION.
Protect erected frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions, and acid based materials used to clean masonry are harmful to the finish. ***If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.***

NOTE: Any modifications, other than those specified in this document, could result in this product's failure to meet UL safety ratings and void the manufacturer's warranties.

The rapidly changing technology within the architectural aluminum products industry demands that U.S. Aluminum reserve the right to revise, discontinue, or change any product line, specification, or electronic media without prior written notice.

NOTE: Dimensions in parentheses ( ) are millimeters unless otherwise noted.

GENERAL INSTALLATION NOTES

Recommended guidelines for all installations:

1. **REVIEW CONTRACT DOCUMENTS.** Check shop drawings, installation instructions, architectural drawings, and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Note any ***field verified*** notes on the shop drawings prior to installing. The installation instructions are of a general nature and cover most conditions.

2. **INSTALLATION.** All materials are to be installed plumb, level, square, and true.

3. **INSTALLER QUALIFICATION.** The **Series 3150** 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.

4. **BENCH MARKS.** All work should start from bench marks and/or column lines as established by the architectural drawings and the general contractor with guaranteed accuracy. Working from these datum points and lines determine:
   a) The plane of the wall in reference to offset lines provided on each floor.
   b) The finish floor lines in reference to bench marks on the outer building columns.
   c) Mullion spacing from both ends of masonry opening to prevent dimensional build-up of daylight opening.

5. **STEEL ANCHORS.** Steel anchors that weld to steel structure are normally line set before mullions are hung. Outstanding leg of anchors must be at 90 degrees to offset lines. Mullion space should be held to ±1/32" (0.8). Anchor clips vary per job conditions. Follow approved shop drawings for size and location of clips.

6. **FIELD WELDING.** All field welding must be adequately shielded to avoid any splatter on glass or aluminum. Results will be unsightly and/or structurally unsound. Advise general contractor and other trades accordingly. All field welds of steel anchors must receive touch-up paint (zinc chromate) to avoid rust.

7. **SURROUNDING CONDITIONS.** Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with work.

8. **ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of bituminous paint. For steel reinforcement primer, use manufacturer's standard corrosion resistant primer meeting or exceeding Sherwin Williams Kem Kronik®, meeting ASTM D5894, 1008 Corrosion Resistance.

9. **SEALANTS.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the ***Glazing Contractor*** to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. ***This is required on every project.***

10. **FASTENING.** Within the body of these instructions "fastening" means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements, perimeter and anchor fasteners are not specified in these instructions. For perimeter and anchor fasteners refer to the shop drawings or consult the fastener supplier.

11. **BUILDING CODES.** Due to the diversity in state/provincial, local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to assure that products selected for use on projects comply with all the applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware, and assumes no responsibility thereof.

12. **EXPANSION JOINTS.** Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and/or difference in metal temperature between the time of fabrication and the time of installation. Gaps between expansion members should be based on temperature at time of installation.

GENERAL INSTALLATION NOTES CONT.

Recommended guidelines for all installations:

13. **COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.).

14. **CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA. 609.1 for anodized aluminum and 610.1 for painted aluminum.

STRUCTURAL SILICONE GLAZING

1. **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.

   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.

2. **APPLICATION.** Structural silicone must be applied from the interior and weatherseal from the exterior after the interior structural silicone has fully cured.

3. **MAXIMUM ALLOWABLE STRESS ON SILICONE.** The maximum allowable size of the glass lite is controlled by the width and depth of the silicone joint combined with the specified design windload (PSF or Pa). The stress on the structural silicone must not exceed 20 PSI (137 KPa) for a 6:1 safety factor. Check Structural Silicone Chart in the Architectural Design Manual for this product series.

STRUCTURAL SILICONE GLAZING CONT.

4. **GLAZING CONTRACTOR.** It is the responsibility of the Glazing Contractor to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other, and with like materials used in glass fabrication must be established. This is required on every project.

5. **GLAZING PRACTICES.** The air and water performance of the **Series 3150** 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:

   - Glazing gaskets should be cut ¼" longer per foot, and lay flat, preferably for 24 hours
   - Gaskets should be cut as single monolithic pieces and "crowded" during their installation to avoid corner gaps caused by post-installation relaxation
   - The interior glazing gasket should be installed so as to avoid stretching, buckles, or tears
   - 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.
   - Gasket corner joinery must also be crowded, and sealant applied onto the gasket contact frame surface and into gasket reglet raceway where applicable.
   - 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.
   - 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
   - Check the placement of the installed glass and verify there is proper edge bite into the pocket, and proper edge clearance from framing elements

   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.

6. **ARCHITECT.** It is the responsibility of the architect to secure approval of the system and request from the Glazing Contractor the compatibility and adhesion test reports described below.

7. **U.S. ALUMINUM.** It is the responsibility of U.S. Aluminum to supply a system to meet the architect's specifications.

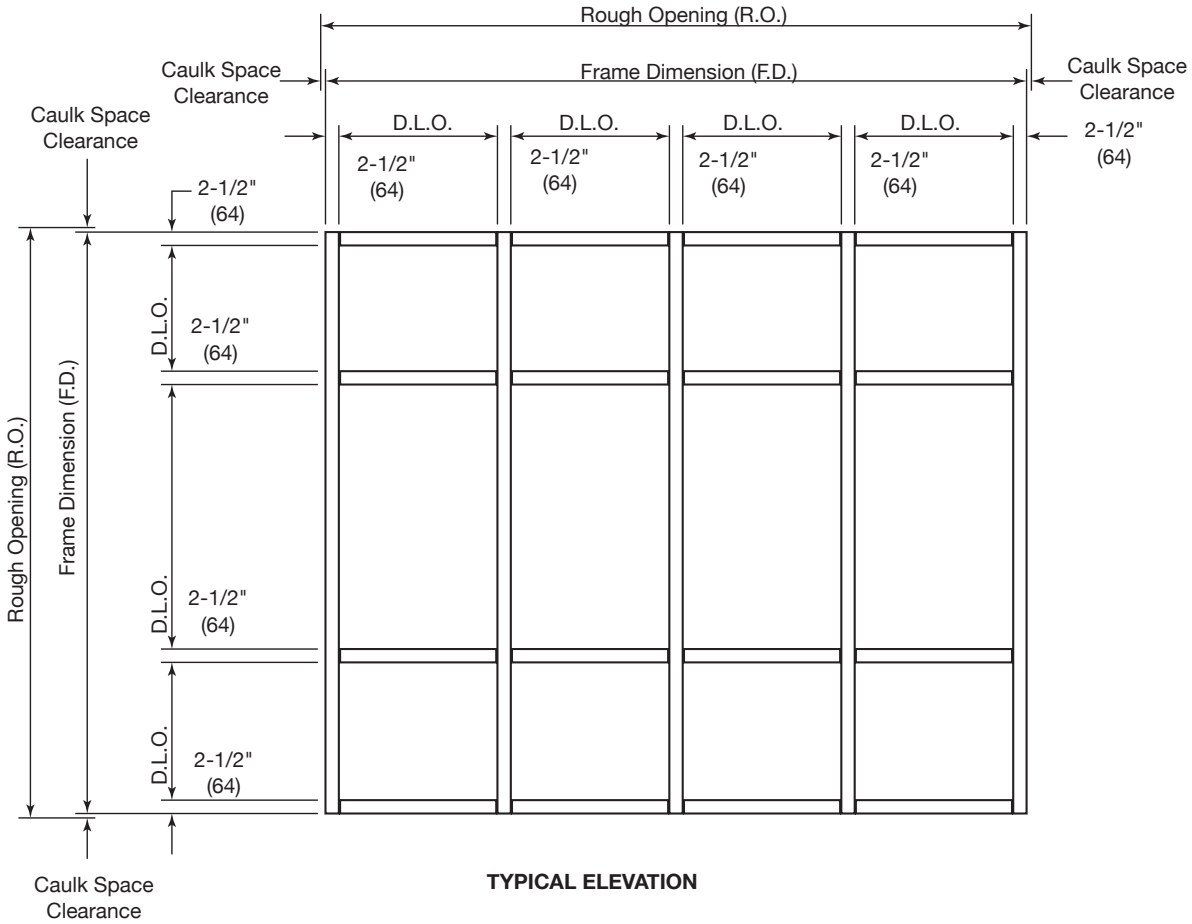
INSTALLATION INSTRUCTIONS

FRAME FABRICATION

Most of the details shown on these instructions are for 1" (25) glazing and 4" (102) back members. 5" (127) and 8" (203) back members are similar.

Cut members to size:

Vertical Members:	R.O. Minus Top and Bottom Clearances (F.D.) **(See DETAIL W for splice joint conditions)**
Vertical Pressure Bars:	F.D. Minus 1/4" (6) **(See DETAIL Y for splice joint conditions)**
Vertical Face Covers:	F.D. Minus 1/32" (0.8) **(See DETAIL Y for splice joint conditions)**
Horizontal Members:	D.L.O. Minus 1/32" (0.8) - plus 0"
Horizontal Pressure Bars:	D.L.O. Minus 1/4" (6)
Horizontal Face Covers:	D.L.O. Minus 1/32" (0.8)
Vertical Transition Adaptors:	D.L.O. Plus 1" (25)
Horizontal Transition Adaptors:	D.L.O. Minus 1/8" (3)



TYPICAL ELEVATION

DETAIL A

NOT TO SCALE

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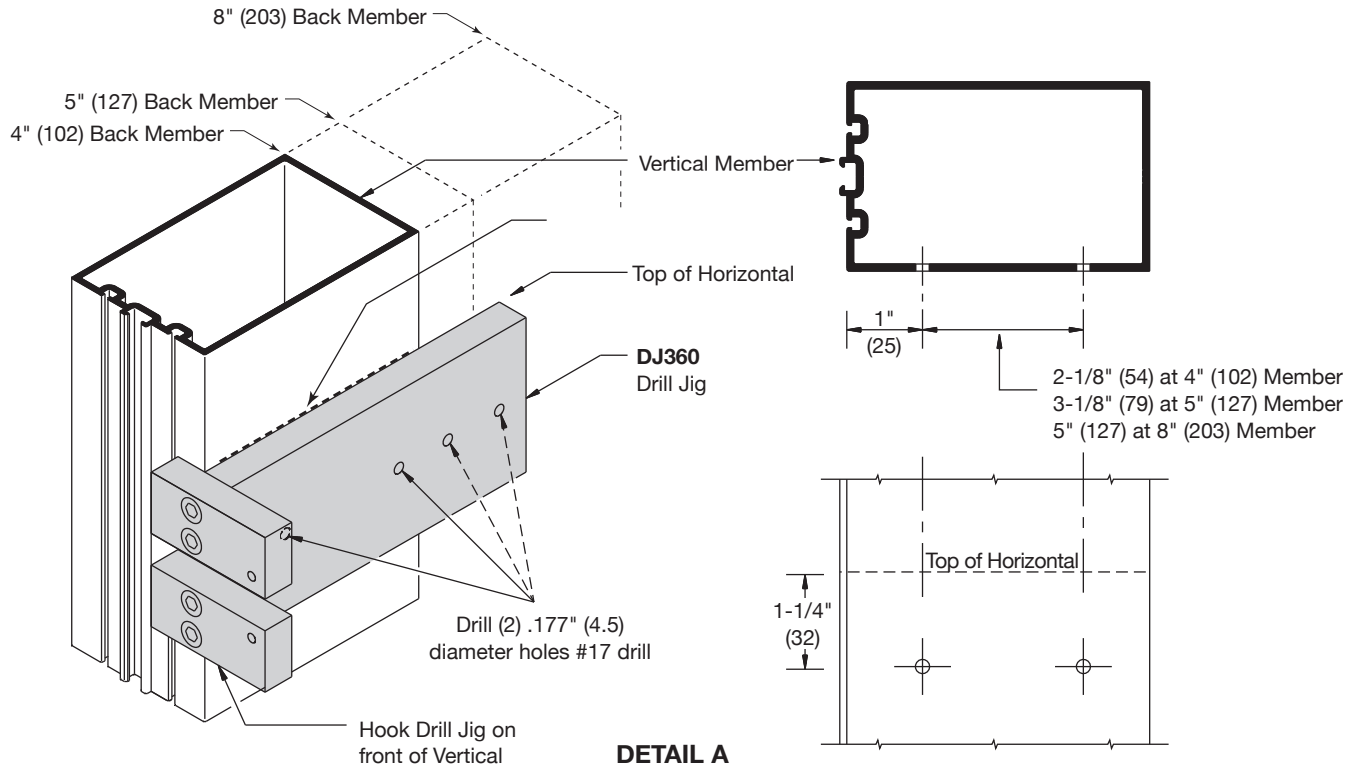
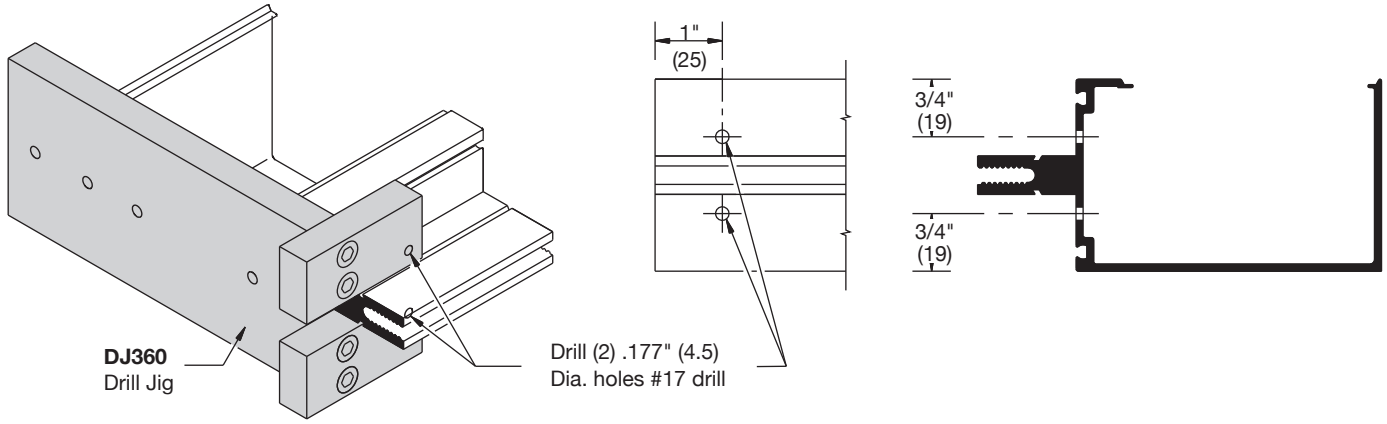
2. Mark on verticals the location of horizontal members and drill holes for Shear Blocks. Drill Jigs are available. **See DETAIL A**. Visit **usalum.com** for additional information.



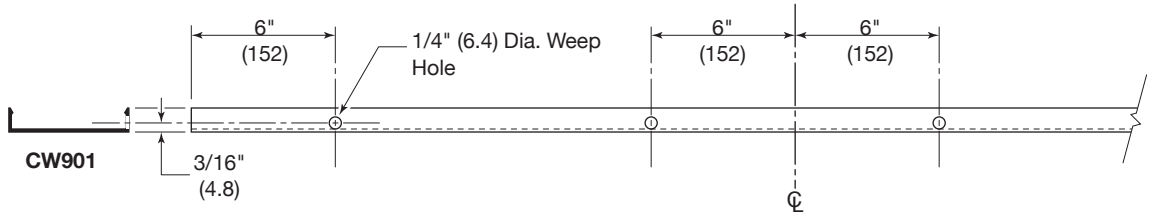
DETAIL A

3. Fabricate ends of horizontal members for shear blocks pick-up screws. **See DETAIL B**.



DETAIL B

4. Fabricate bottom of Face Caps for weep holes 6" (152) from each end and 6" (152) each side of Mullions. **See DETAIL C**.



DETAIL C

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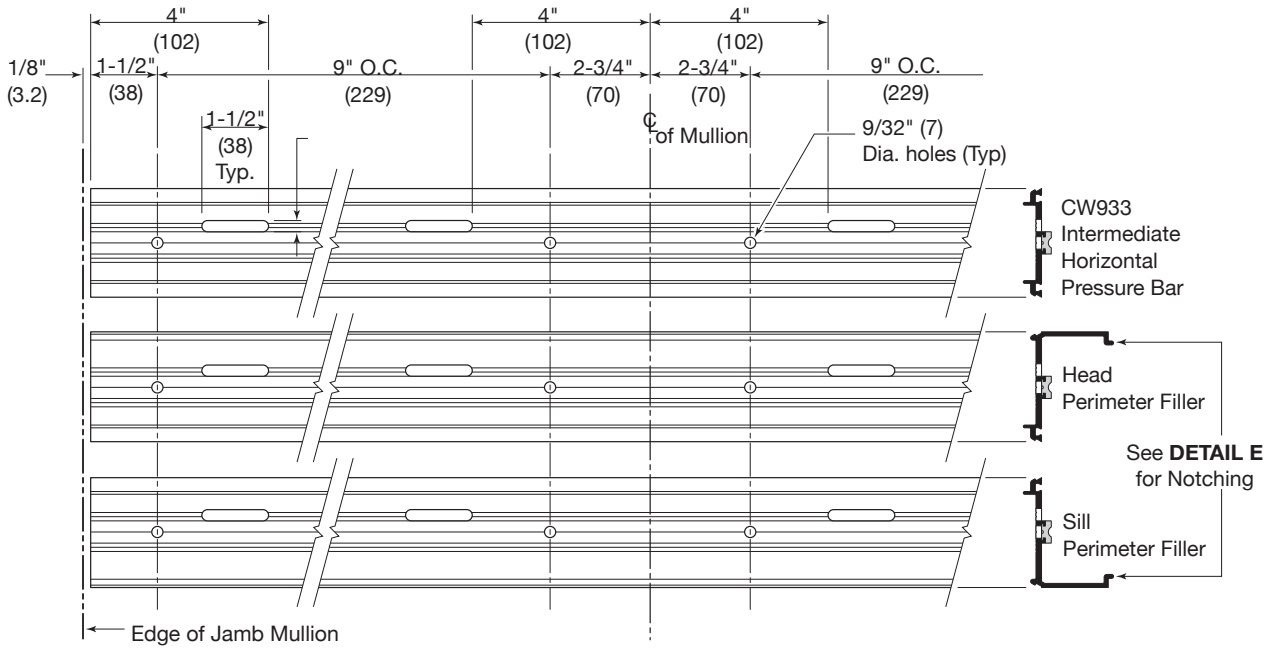
NOT TO SCALE

5. Jamb Pressure Bars are provided with 9/32" (7) dia. attachment holes spaced at 9" (229) on center. Additional holes should be drilled at 1-1/2" (38) from each end and 1-1/2" (38) from each edge of horizontal locations.

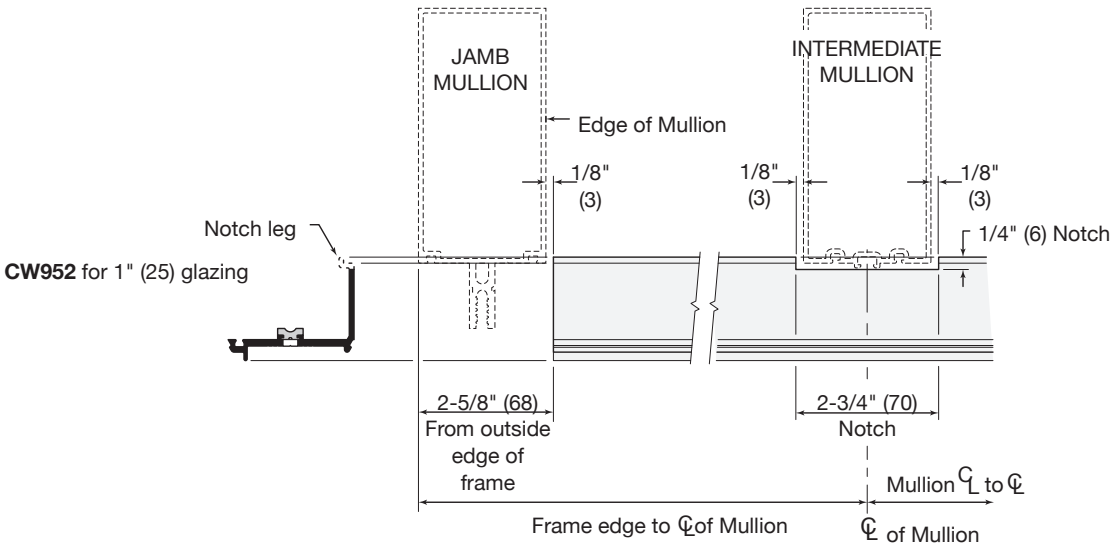
6. Horizontal pressure bars are factory punched for attachment hole at 9" (229) on center. Additional holes should be drilled at 1-1/2" (38) from all ends and at vertical/horizontal intersections. **See DETAIL D**.

7. Fabricate (2) 1/4" x 1-1/2" (6.4 x 38) weep slots in horizontal pressure bars. **See DETAIL D**.
   NOTE: Intermediate horizontal pressure bars run continuous between wall jambs. Splice joints are required at long run elevations. **See DETAILS W and X on pages 17 and 18.**



DETAIL D

8. Notch head and sill pressure bar leg as shown in **DETAIL E** for mullion clearance.



DETAIL E

NOT TO SCALE

FRAME INSTALLATION

SINGLE SPAN CONDITION

1. Slide top and bottom anchors into vertical members. **See DETAIL F** for anchor types.

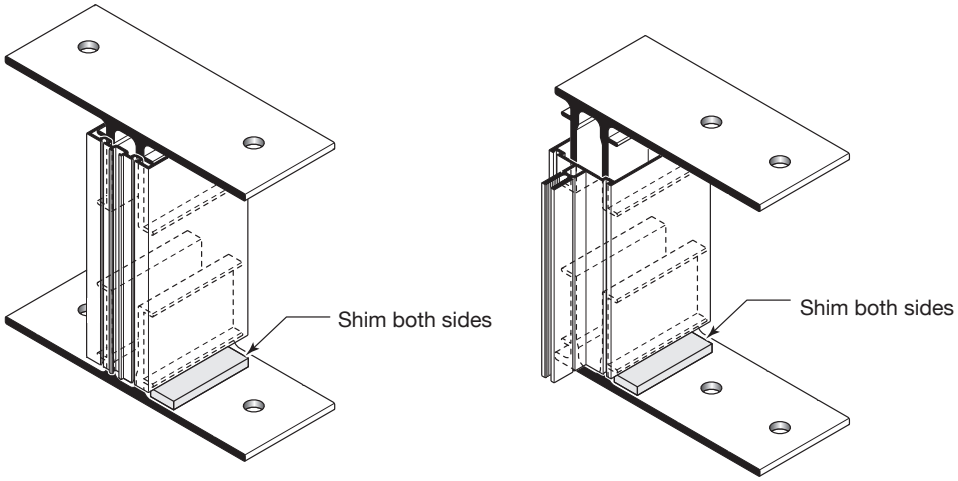
2. Install verticals plumb and level. Shim directly under each side of each vertical as shown in **DETAIL F** for proper caulk joint and leveling. Secure top and bottom anchors to structure.

INTERMEDIATE VERTICALS
Use **AP994** for 4" (102) Members
AP995 for 5" (127) Members
AP998 for 8" (203) Members
(Typical top and bottom)

WALL JAMBS
Use **AP974** for 4" (102) Members
AP975 for 5" (127) Members
AP978 for 8" (203) Members
(Typical top and bottom)

NOTE: Aluminum anchors must be isolated from dissimilar materials. Typ. at top and bottom

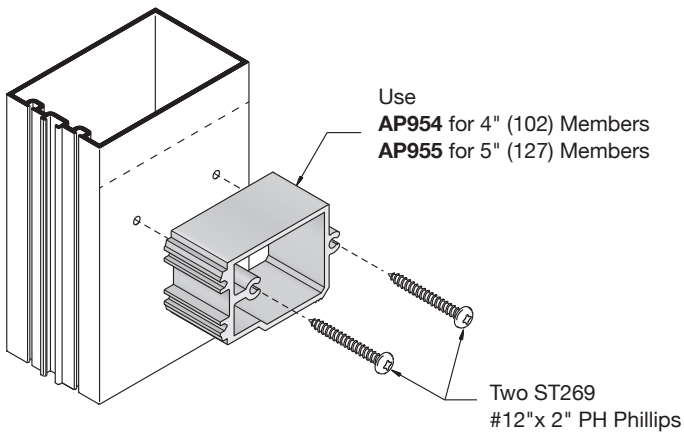
Field Drill Anchor Holes:
Refer to approved shop drawings for anchor hole size and locations.
Two fasteners per anchor. (Typical)

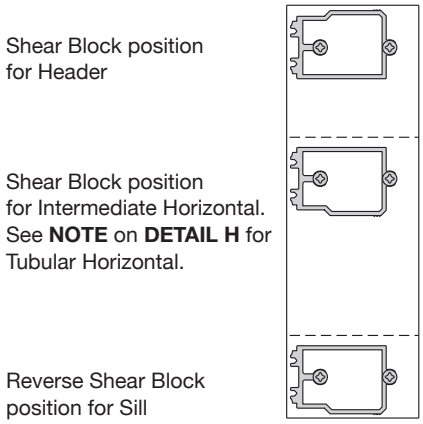


DETAIL F

3. Attach shear blocks to verticals with screws provided. **See DETAILS G** and **H** for shear block positions. 4" (102) and 5" (127) horizontals shown.

NOTE: Use tubular horizontals when span exceeds 6'-0" (1.8 m) or deadload exceeds 250 lbs. (113.4 Kg) Elevations using tubular horizontals must be installed per bay.
See tubular horizontal notes at **DETAILS H** and **I**.

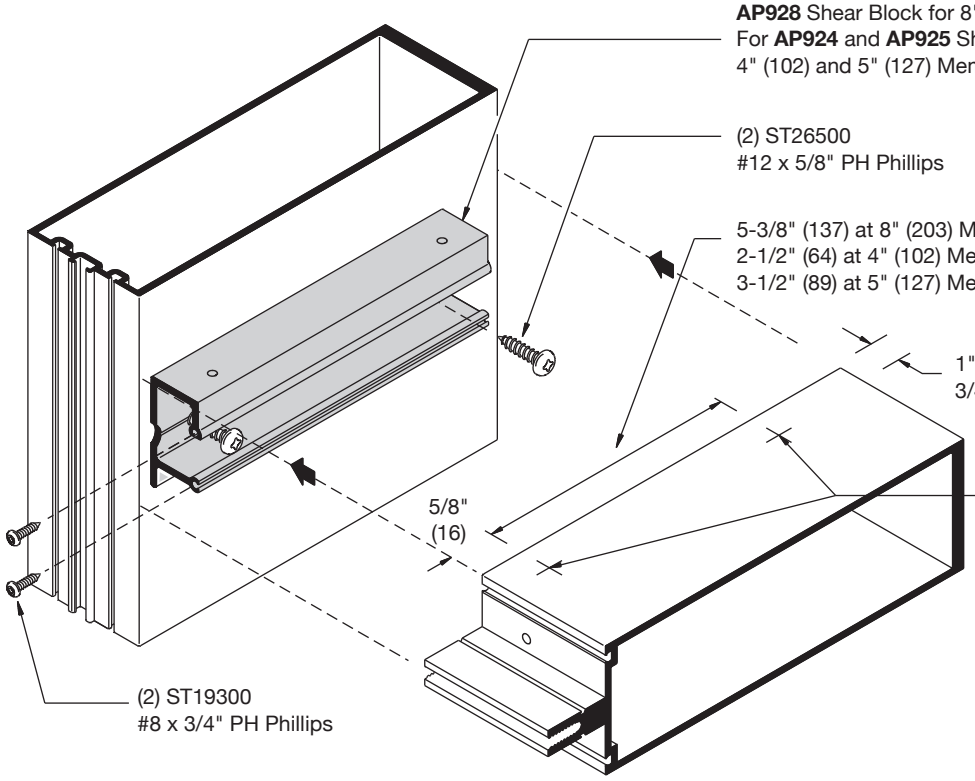




DETAIL G

NOT TO SCALE

8" HORIZONTALS

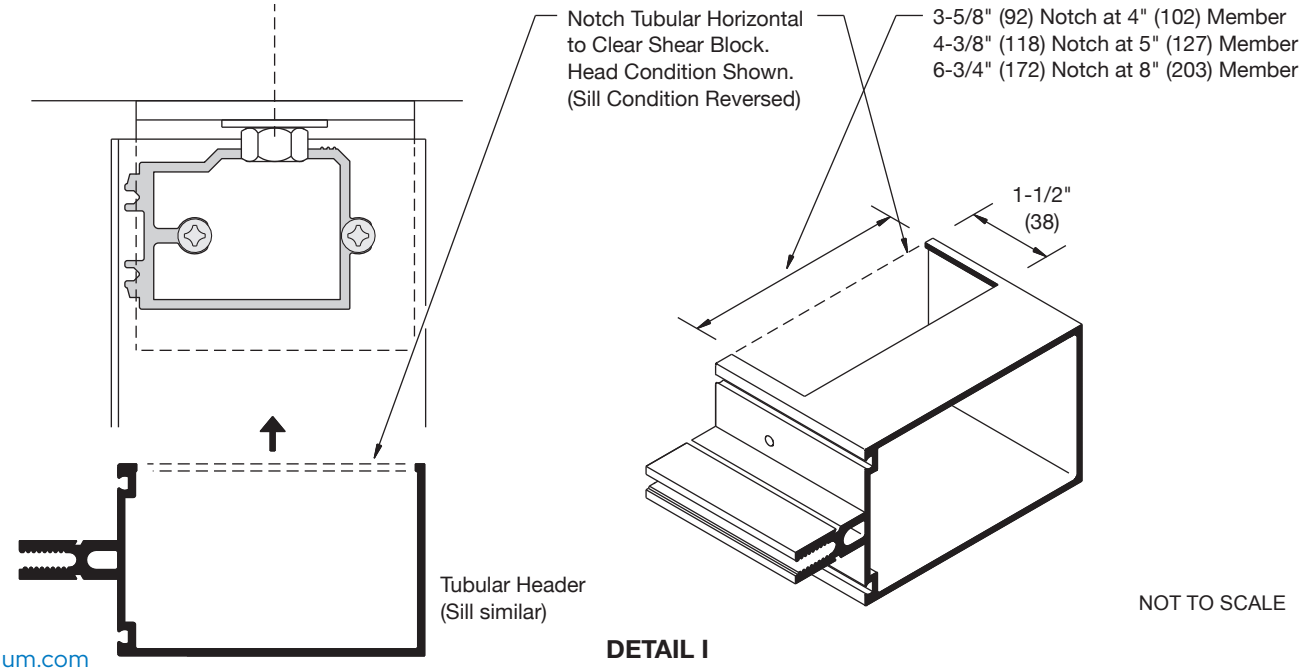


DETAIL H

NOTE:
8" (203) HORIZONTALS
It is necessary to also attach horizontal to shear block through top or bottom, as shown, to keep tight joint in rear.

4" (102) and 5" (127) TUBULAR HORIZONTALS
Additional pick up screws may also be required for special conditions. Pick up screw locations on top or bottom of horizontal will determine shear block position. (See location of holes for pick up screws on shear block).

NOTE: If project requires tubular horizontals, fabricate heads and sills as shown in **DETAIL I**.



NOT TO SCALE

DETAIL I

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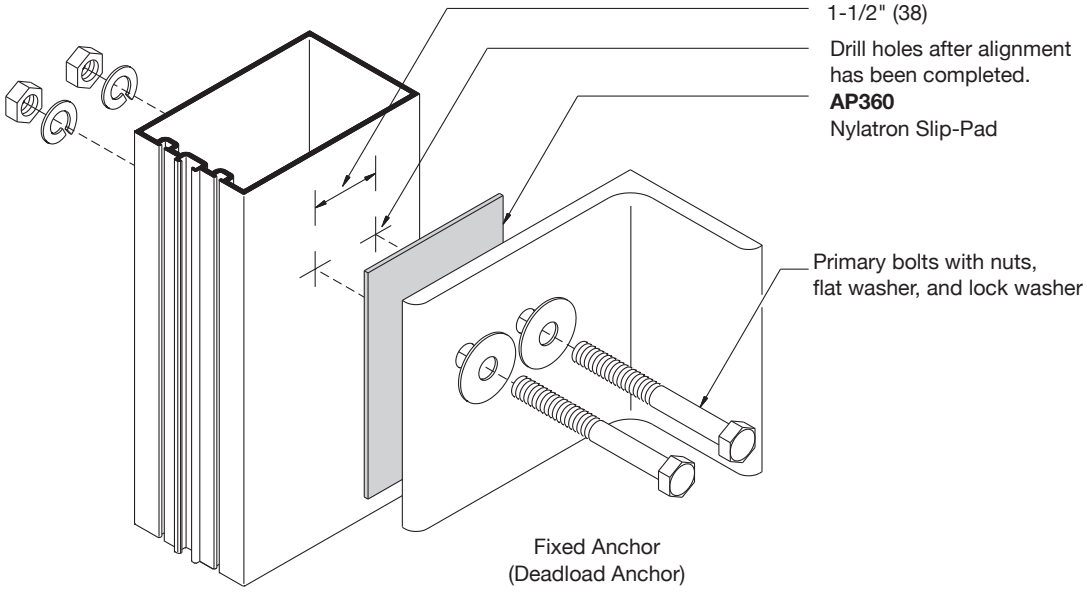
MULTI-SPAN CONDITION

DETAILS J and **K** show fixed (deadload) and expansion (windload) anchors. Anchor type and size vary per job requirement. Details shown are to be used as a guide only. See approved shop drawings for actual conditions.

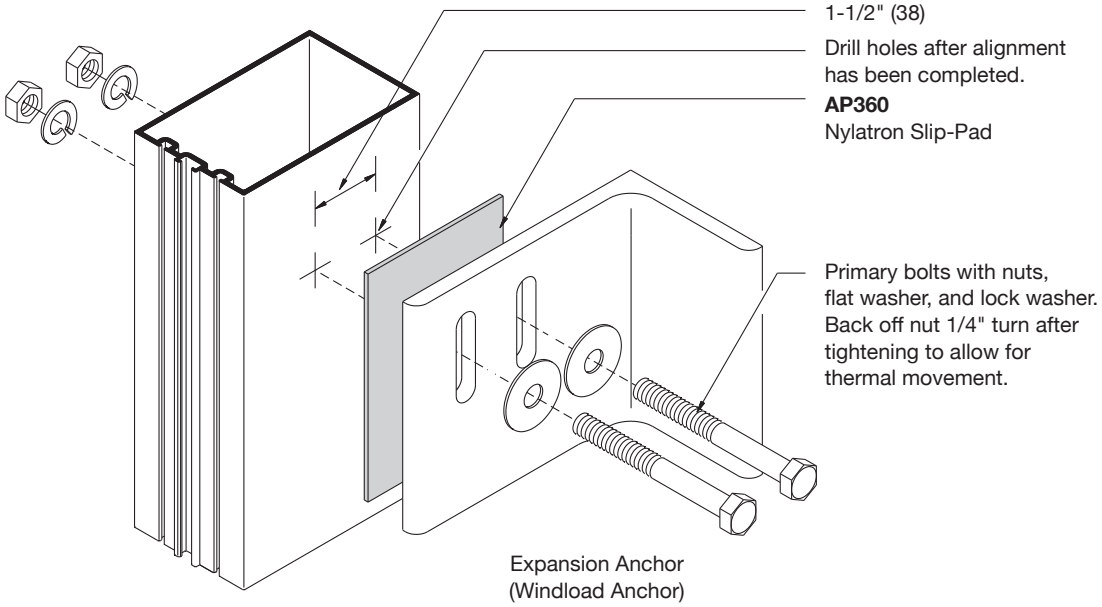
NOTE: Anchor type and sizes vary per job requirements. Details shown are to be used as a guide only. See approved shop drawings for actual conditions.

4. Secure verticals to anchor clips after alignment has been completed.
   NOTE: Mullion spacing must be held to within ±1/32" (0.8). Check overall frame dimension every four bays to monitor dimension build up.



Fixed Anchor
(Deadload Anchor)

DETAIL J



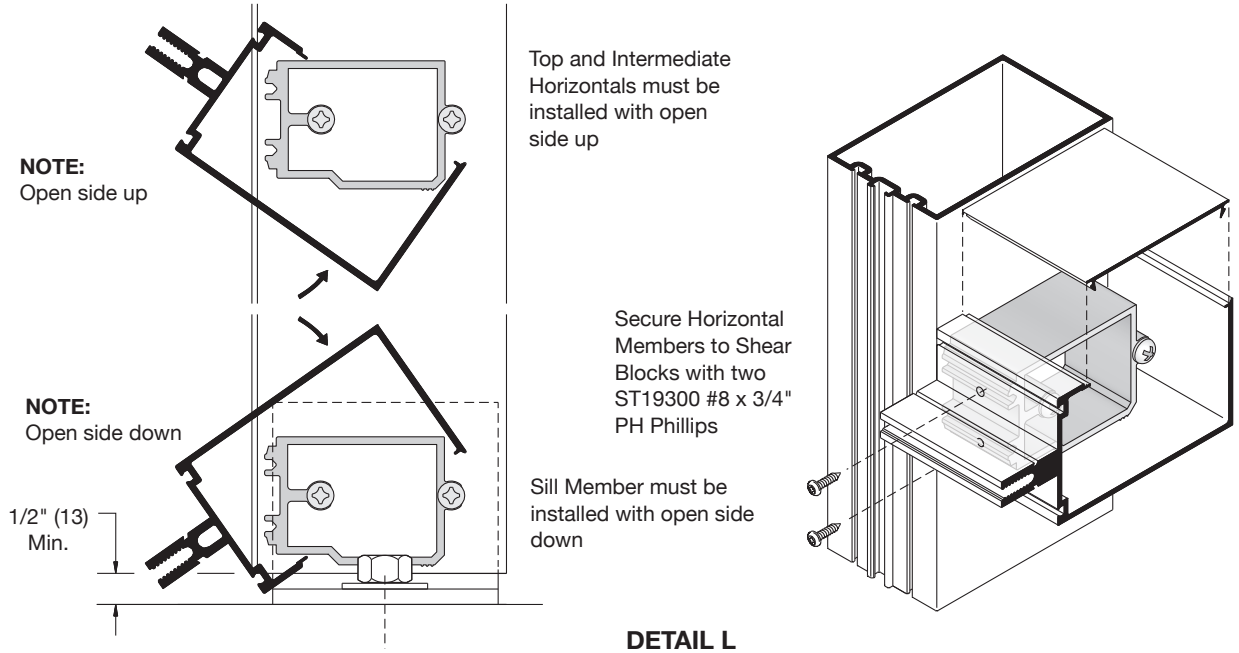
Expansion Anchor
(Windload Anchor)

DETAIL K

NOT TO SCALE

OPEN BACK HORIZONTALS

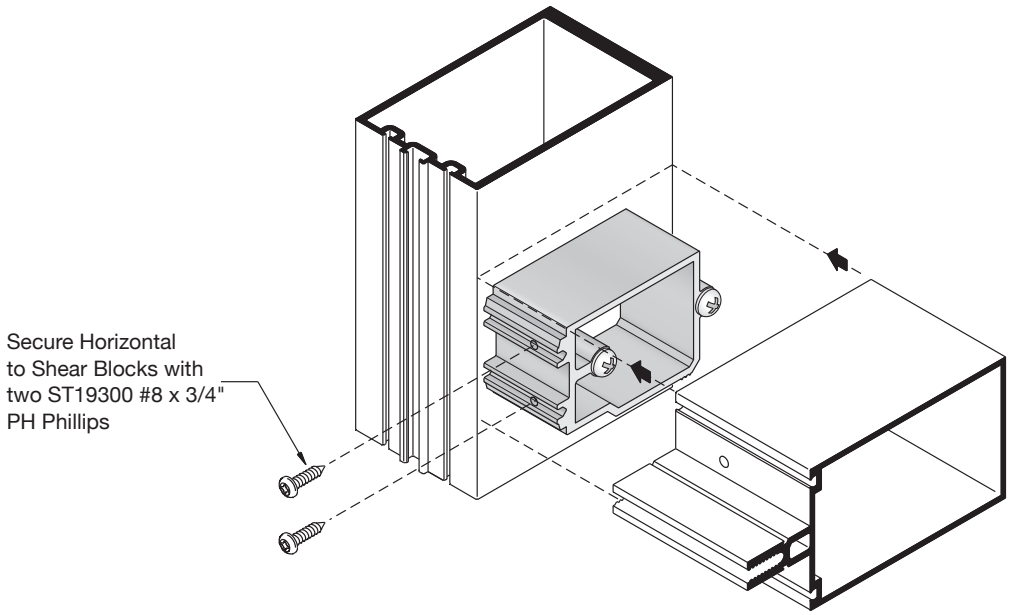
5. Roll open back horizontal members over shear blocks and secure them with screws provided. **See DETAIL L**. Install snap-in horizontal filler where open back of horizontal member is exposed.
   NOTE: Snap-in fillers are optional at head and sill to facilitate interior caulking.
   (Cut fillers short to clear shear blocks and snap them in before installing).



DETAIL L

TUBULAR HORIZONTALS

6. Slide horizontals over shear blocks and secure them with screws provided. **See DETAIL M.**

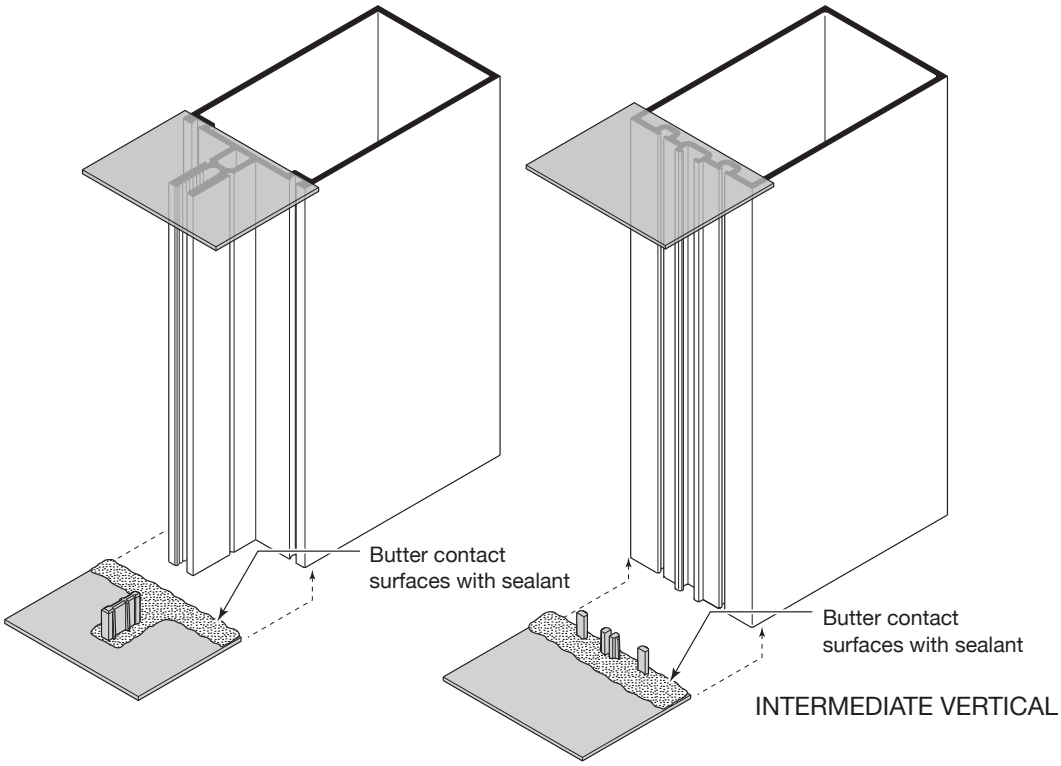


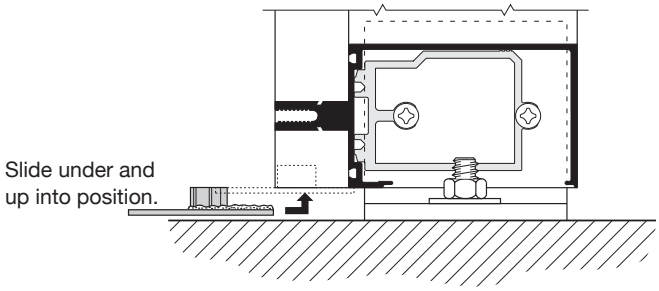
DETAIL M

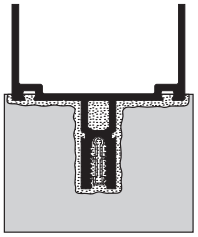
NOT TO SCALE

7. Clean vertical and caps and cover areas of contact with silicone sealant as shown in **DETAIL N**.

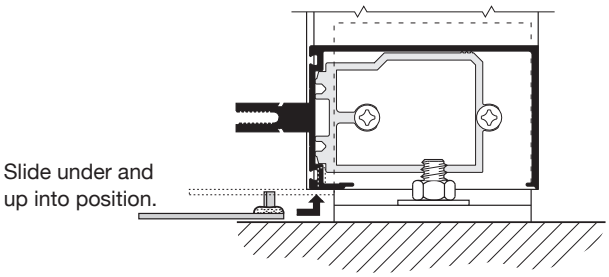
8. Install end caps at top and bottom of wall jamb and intermediate verticals to ensure continuous perimeter caulking. **See DETAIL N**. Tool sealant.

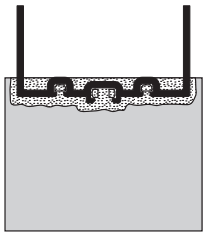






Use **CP900** for 1" (25) glazing at wall jambs

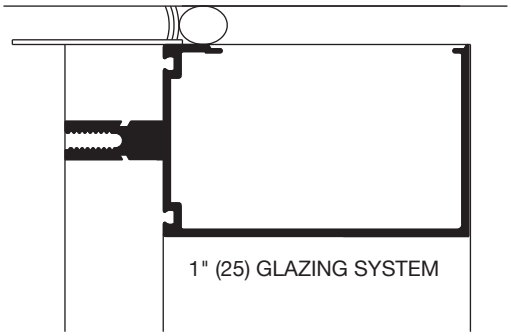




Use **CP951** for 1" (25) glazing at Intermediate Verticals

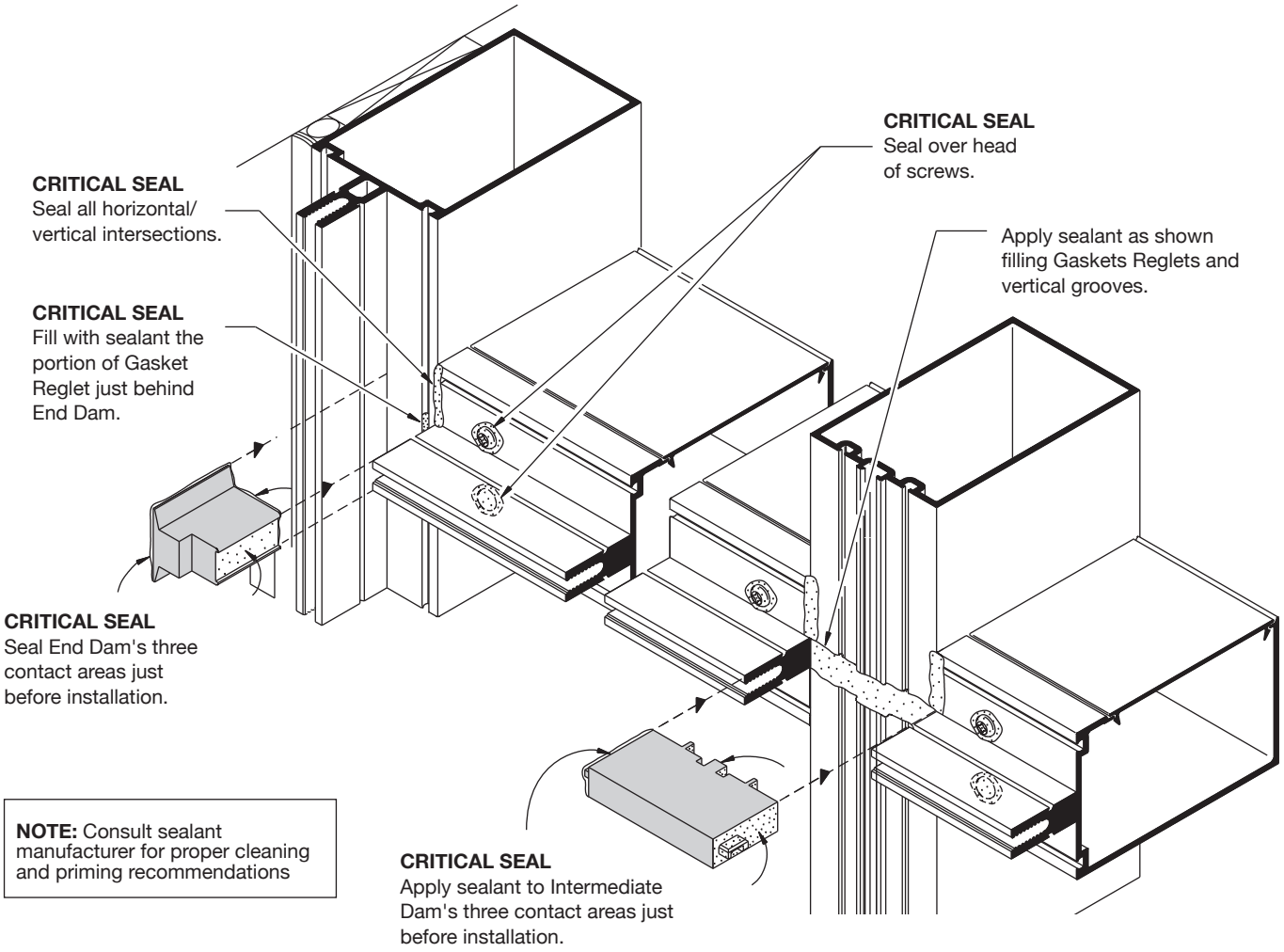
DETAIL N

9. Once all verticals and perimeter members are installed, apply seal around perimeter. Perimeter caulking must be completed prior to installation of glass and pressure bars. Ensure perimeter sealant has smooth transition across vertical End Dams. **See DETAIL O**.



DETAIL O

10. Seal joints between horizontals and verticals and over heads of screws in the glazing pockets. **See DETAIL P**.
11. Apply sealant at the three contact areas of End and Intermediate Dams and to all areas shown on **DETAIL P** just prior to installation. Slide End Dams and Water Deflectors into place. Seal joints and tool sealant. **NOTE:** End and Intermediate Dams occur at head and sill also.



NOTE: Consult sealant manufacturer for proper cleaning and priming recommendations

DETAIL P

NOT TO SCALE

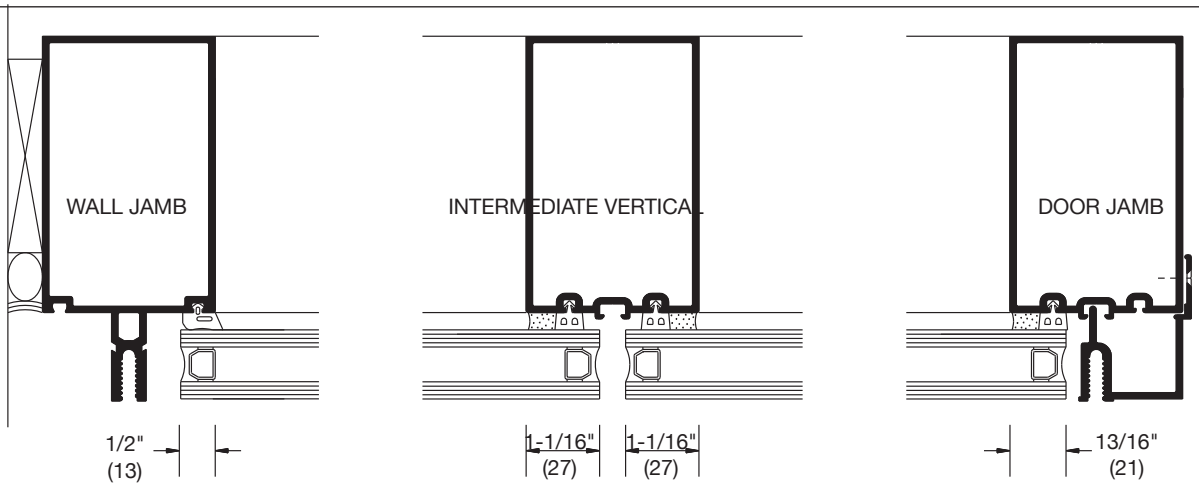
GLAZING

GLASS SIZES

GLASS HEIGHT: DAYLIGHT OPENING + 1" (25)
GLASS WIDTH : DAYLIGHT OPENING + Glass Lites

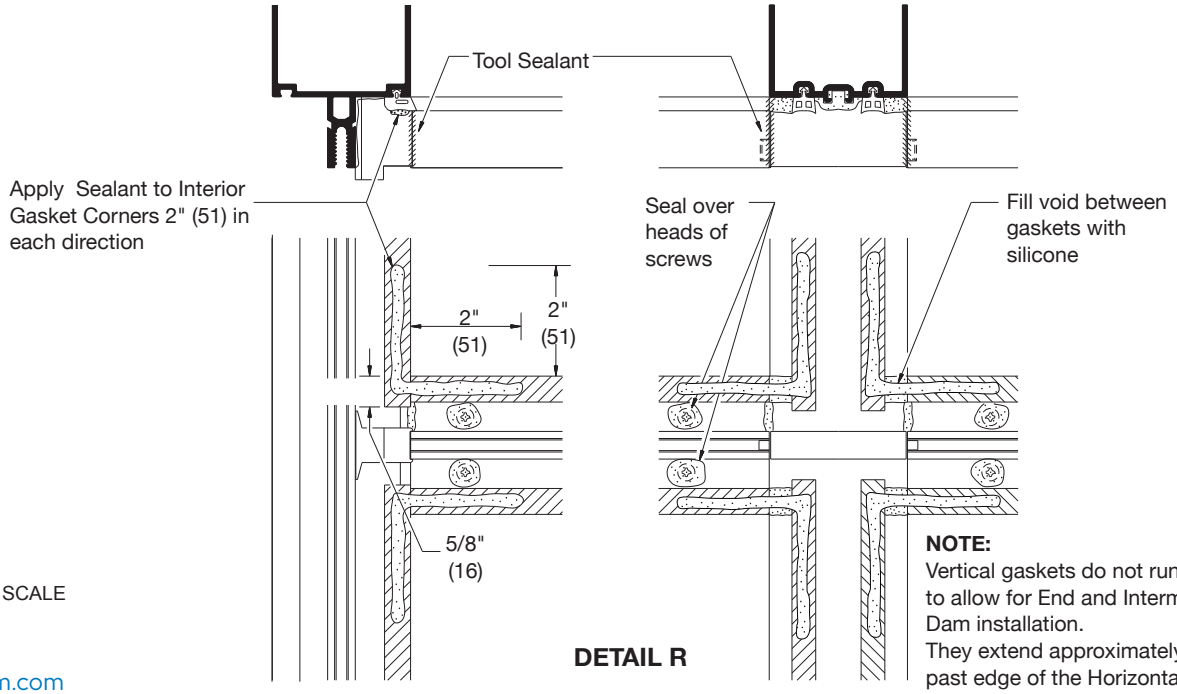
Glass lite at vertical members vary. **See DETAIL Q**

NOTE: These formulae do not take into account glass tolerances. Consult glass manufacturer before ordering glass.



DETAIL Q

1. Cut gaskets allowing 1/8" (3) extra length per foot of extrusion to allow for shrinkage. Vertical gaskets on mullion run past horizontal gaskets by 5/8" (16). **See DETAIL R** horizontal gaskets run between verticals.
2. Install back gaskets into vertical and horizontal members. Just prior to glazing fill with sealant the void between vertical and horizontal gaskets at intermediate verticals. Also apply sealant to interior gaskets corner at wall jamb/horizontal intersection 2" (51) in each direction. **See DETAIL R**.
3. Install front gaskets into pressure bars. Wall jamb pressure bar gaskets run continuous; **Horizontal pressure bar gaskets should extend 1/8" (3) beyond ends of extrusions.**
4. Position two setting blocks for each glass lite, as directed by deadload charts and shop drawings.

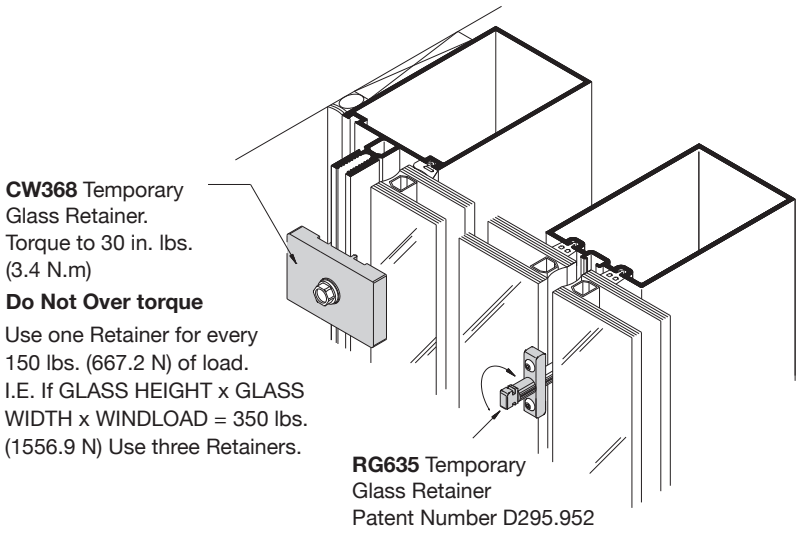


NOT TO SCALE

DETAIL R

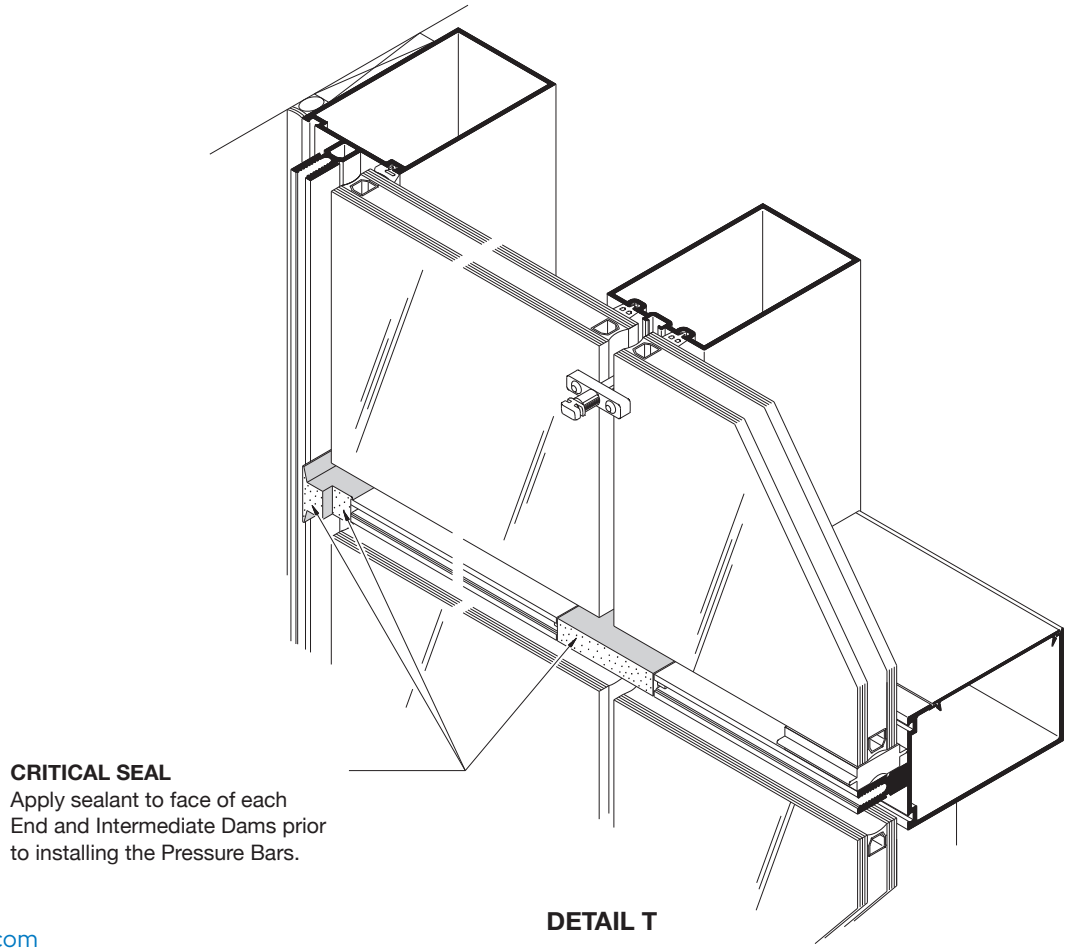
NOTE:
Vertical gaskets do not run through to allow for End and Intermediate Dam installation.
They extend approximately 5/8" (16) past edge of the Horizontal.

5. Install glass in place and center in opening. Support glass with Temporary Retainers. Use CW368 for wall jambs and RG635 for intermediate verticals. **See DETAIL S**. RG635 should remain in place until structural silicone has fully cured as required by silicone manufacturer's recommendations.



DETAIL S

6. Apply sealant to face of End and Intermediate Dams just prior to installing the pressure bars. **See DETAIL T**.



DETAIL T

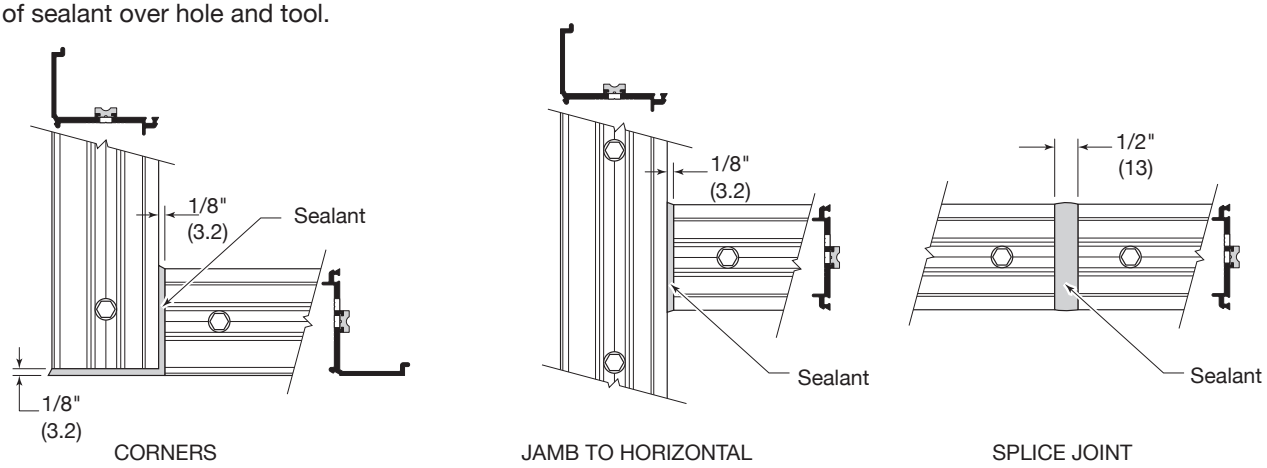
NOT TO SCALE

PRESSURE BAR INSTALLATION

Install wall jamb pressure bar bolts from bottom to top and horizontal pressure bar bolts from center outward.

7. Install wall jamb pressure bars first leaving 1/8" (3) gaps at top and bottom. Using a torque wrench, torque bolts to 30 inch pound (3.4 N). Increase torque to 50 to 60 inch pound (5.7 to 6.8 N) after all four sides have been secured.
8. Center horizontal pressure bars in opening leaving 1/8" (3) gaps at ends and 1/2" (13) at splice joints. **See DETAIL U**. **Be sure pressure bar spacer is not disengaged.** **NOTE:** Weep slots must be on top side and level with bottom of glazing pocket to ensure proper drainage.
9. Seal gaps at wall jamb/horizontal intersections, top and bottom of wall jambs, pressure bars, and splice joints. Tool sealant. **See DETAIL U**.

NOTE (Horizontal Pressure Bar): If pre punched attachment hole occurs at intermediate mullion location, hole must be sealed as follows: Clean area around hole. Inject small amount of silicone sealant into hole then apply 3/4" (19) diameter bead of sealant over hole and tool.

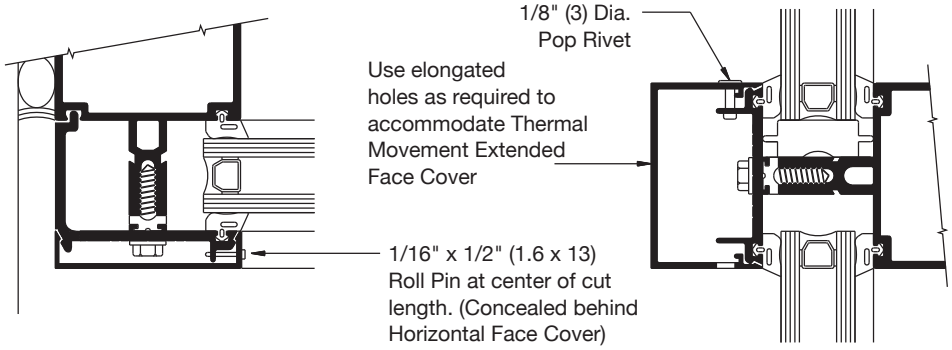


DETAIL U

FACE COVER INSTALLATION

Care must be taken to prevent damage of Face Covers during installation. Use a piece of wood such as 2" x 4" x 12" (51 x 102 x 305) and a Dead Blow Hammer.

10. Install Wall Jamb Face Covers first. Do not disturb vertical's top and bottom closure plates when installing face covers. Pinning of wall jamb face covers is required to prevent slippage. Use one pin per cut length, concealed behind horizontal face cover closer to center point or as shown on shop drawings. **See DETAIL V.**
11. Install Horizontal Face Covers with weep holes located on bottom side. **NOTE:** Extended face cover requires a special pressure bar. Pin wall jamb extended covers with one 1/2" (13) dia. pop rivet per stock length. Extended horizontal face caps must be pinned on top side with 1/2" (13) dia. pop rivets at 6'-0" (1.83 m) maximum (optional #10 x 1/2" FHSMS). **See DETAIL W**. Inject small amount of silicone sealant into hole then apply 3/4" (19) Dia. bead of sealant over hole and tool.



DETAIL V **DETAIL W** NOT TO SCALE

STRUCTURAL SILICONE APPLICATION

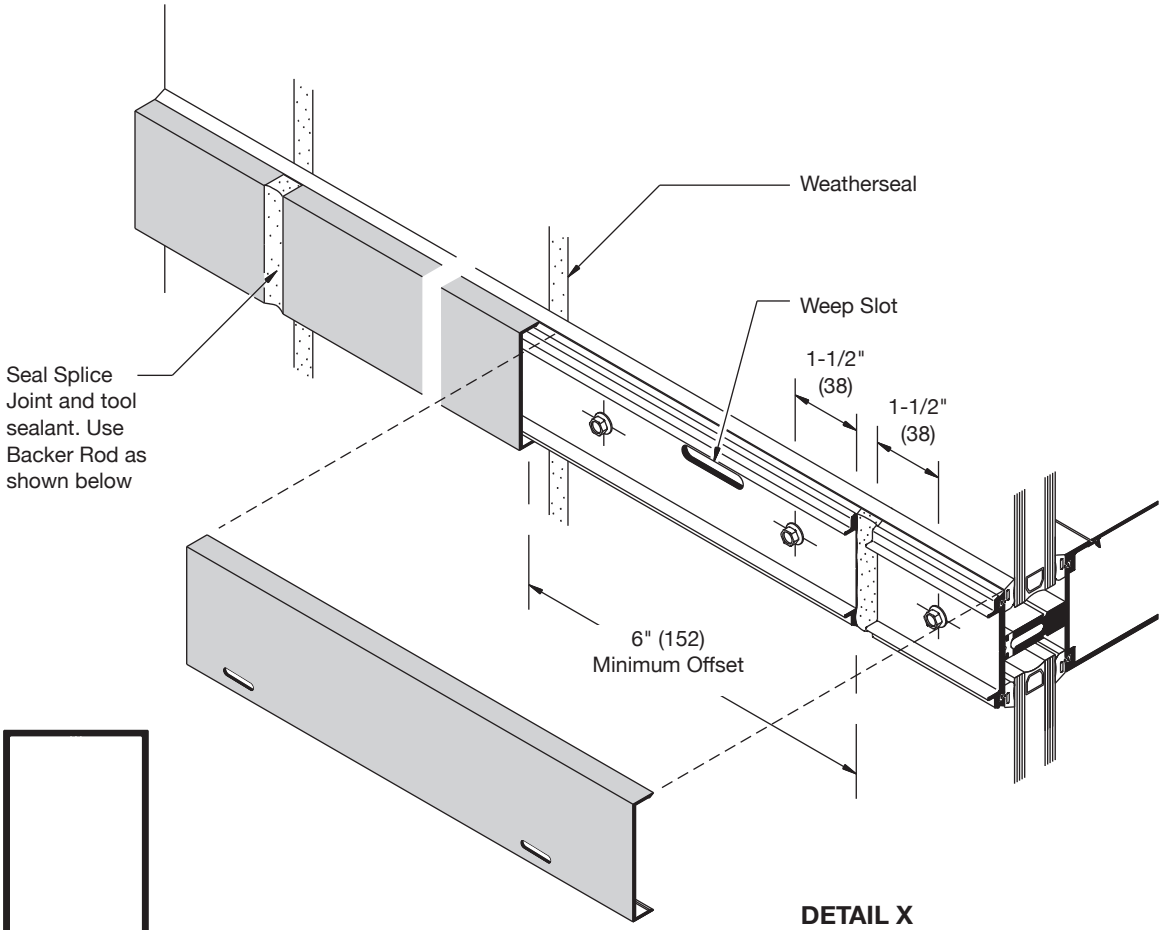
12. Structural silicone is applied from the interior. Follow silicone manufacturer's instructions and recommendations for surface preparation and silicone application.
13. After structural silicone has fully cured, remove Temporary Glass Retainers from intermediate verticals. Insert open cell polyurethane rod between glass edges. Mask aluminum and glass adjacent to joint, and apply outside weatherseal.

HORIZONTAL FACE COVER SPLICE JOINTS

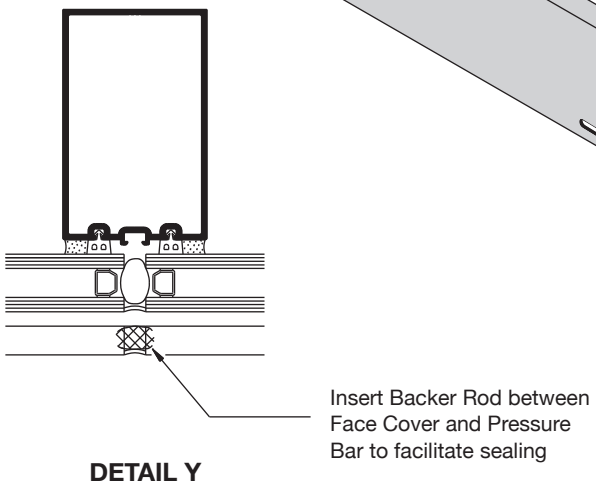
Locate splice joints at centerline of vertical members.

Splice joint width should be based on formula for linear expansion for aluminum (page 20), specifications and sealant movement capability.

Do not align face cover splices with pressure bar splices. Offset 6" (152) minimum. **See DETAIL X**.
Set backer rod between face cover and pressure bars at joint and seal. Tool sealant. **See DETAIL Y**.



DETAIL X

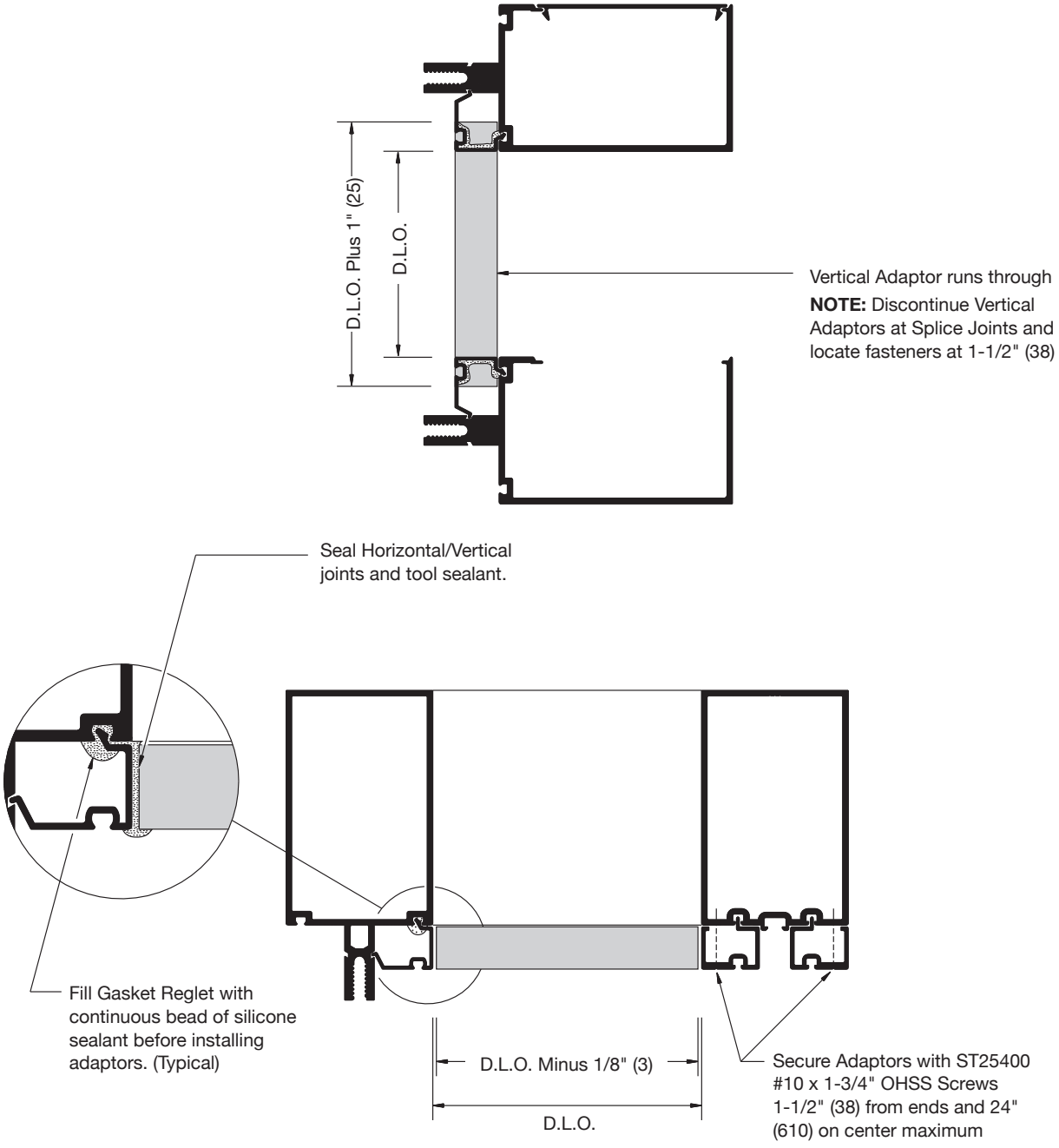


DETAIL Y

NOT TO SCALE

TRANSITION GLAZING

1. Apply sealant into gasket reglets before installing snap-in transition adaptors.
2. Install vertical adaptors first.
   NOTE: Discontinue vertical adaptors at splice joints and locate fasteners 1-1/2" (38) each side of splice. Attach adaptors to back members with ST25400 #10 x 1-3/4" FHSS screws 1-1/2" (38) from ends and 24" (607) on center maximum.
3. Install snap-in horizontal adaptors and seal horizontal/vertical joints. Tool sealant. **See DETAIL Z**.



DETAIL Z

NOT TO SCALE

VERTICAL SPLICE JOINTS

Splice joint width should be based on sealant movement capability and on the following formula:

Linear expansion for aluminum, in inches	**=**	**Length (") x F° difference in temperature x .0000129**
Linear expansion for aluminum, in millimeters	**=**	**Length (mm) x C° difference in temperature x .02322**

A 1/2" (13) minimum joint is recommended. Use a 1/2" (13) spacer shim to set and hold the mullion joint constant during erection. Remove the shim after attaching the verticals to the anchors. **Splice joints must occur at spandrel areas.**

NOTE: Splice joints are designed to accommodate thermal movement only. They do not compensate for variations in floor levels.

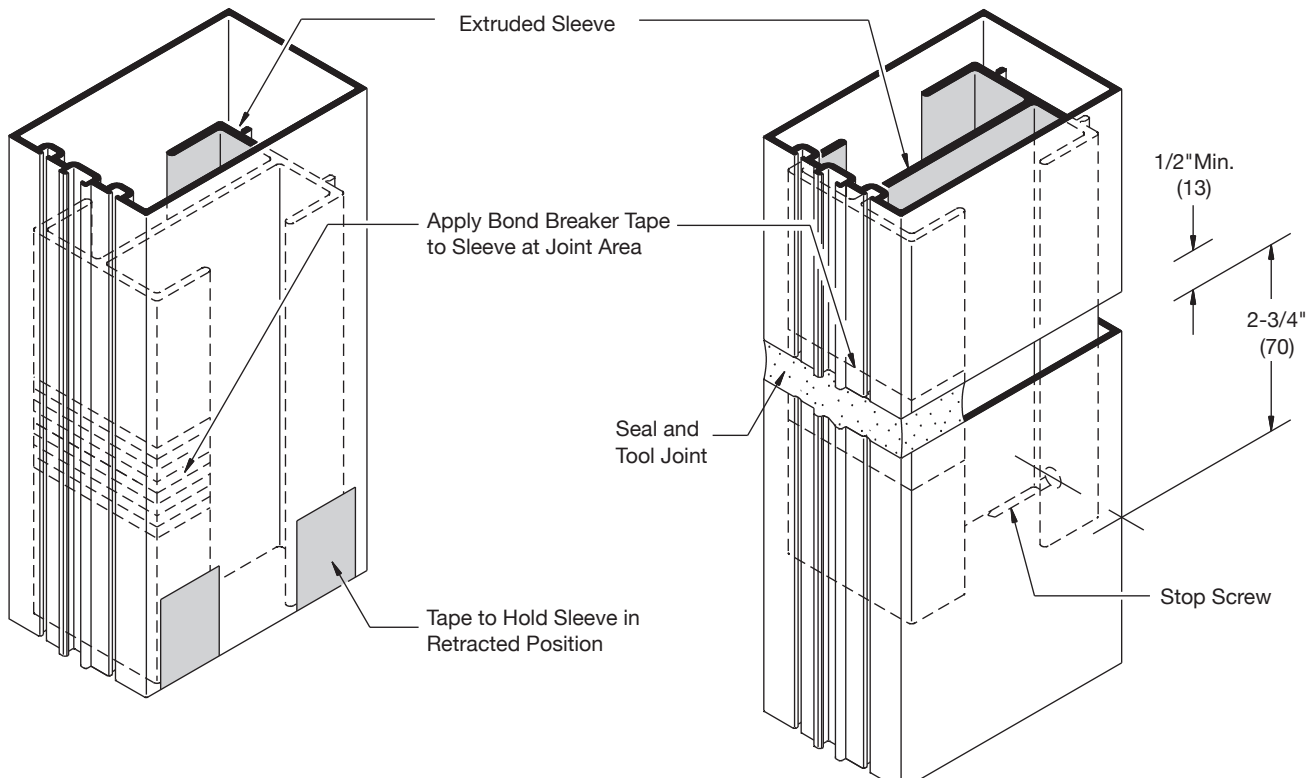
1. Clean splice sleeves and all joint surfaces. Apply bond breaker tape at areas where sleeve will be sealed to avoid three side adhesion. **See DETAIL AA**.

2. Slide sleeve into the upper member before it is installed, and tape to hold it in retracted position. **See DETAIL AA**.

3. Install stop screw, 2-3/4" (70) down from top of extrusion centered on interior wall of lower member. **See DETAIL AA**.

4. Install upper member and let extruded sleeve slide down until it sits on top of stop screw.

5. Seal joint over sleeve as shown on **DETAIL AA**. When transition adaptors for 1/4" (6) spandrel are used they should be discontinued at splice joint and installed after splice joint is sealed.



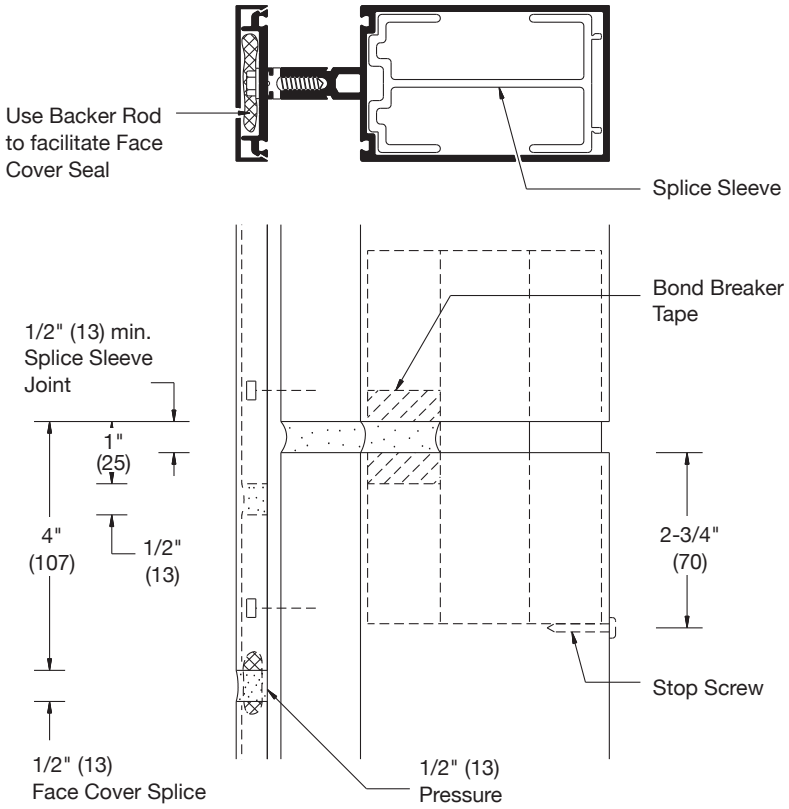
DETAIL AA

NOT TO SCALE

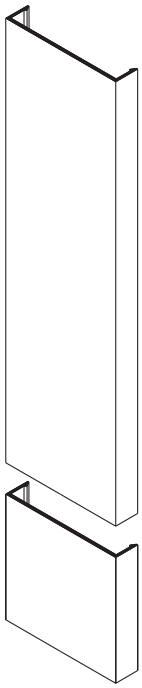
WALL JAMBS SPLICE

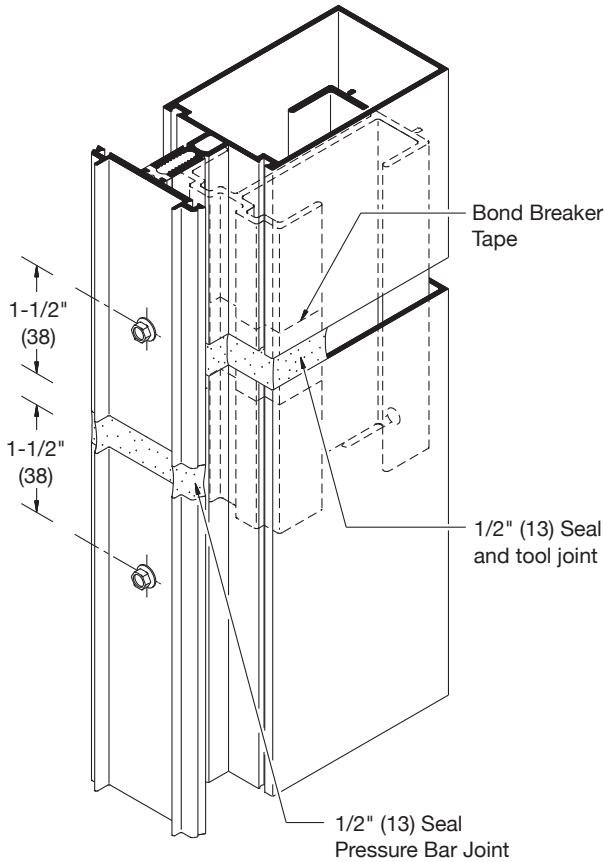
Stagger joints on back member, pressure bar and face cap. **See DETAIL BB**.

6. Seal pressure bar joint. **See DETAIL CC**.
7. Install face cover and seal joint using backer rod as required. **See DETAIL BB**.



DETAIL BB





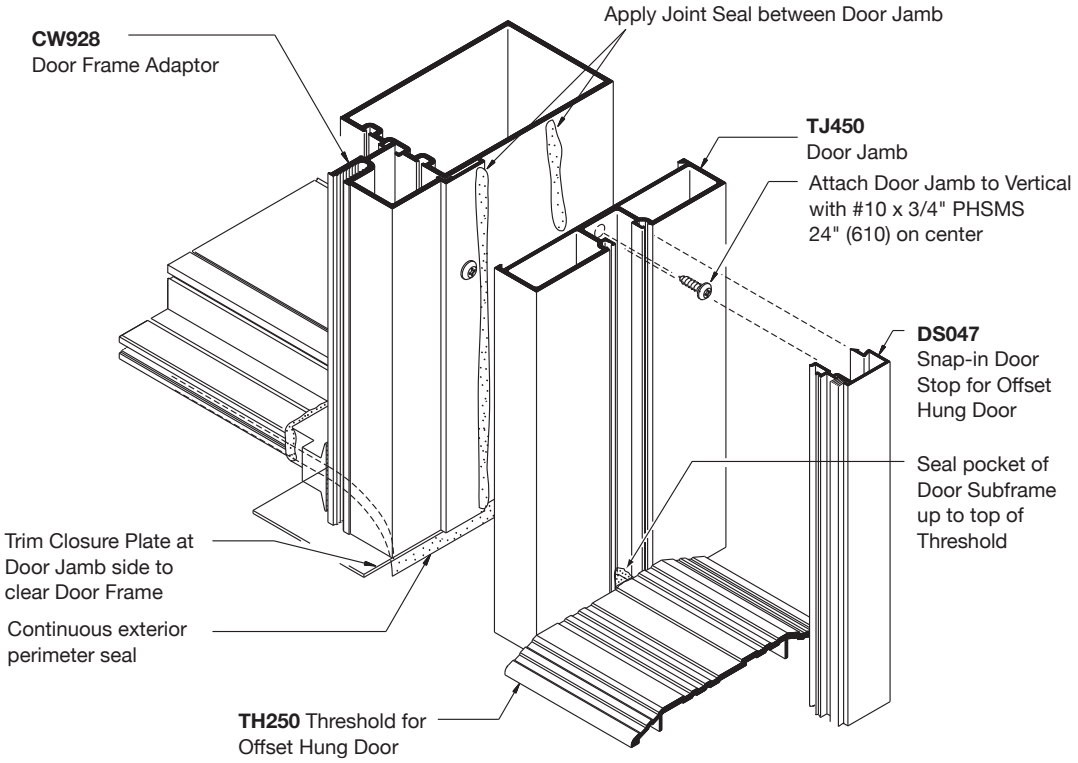
DETAIL CC

NOT TO SCALE

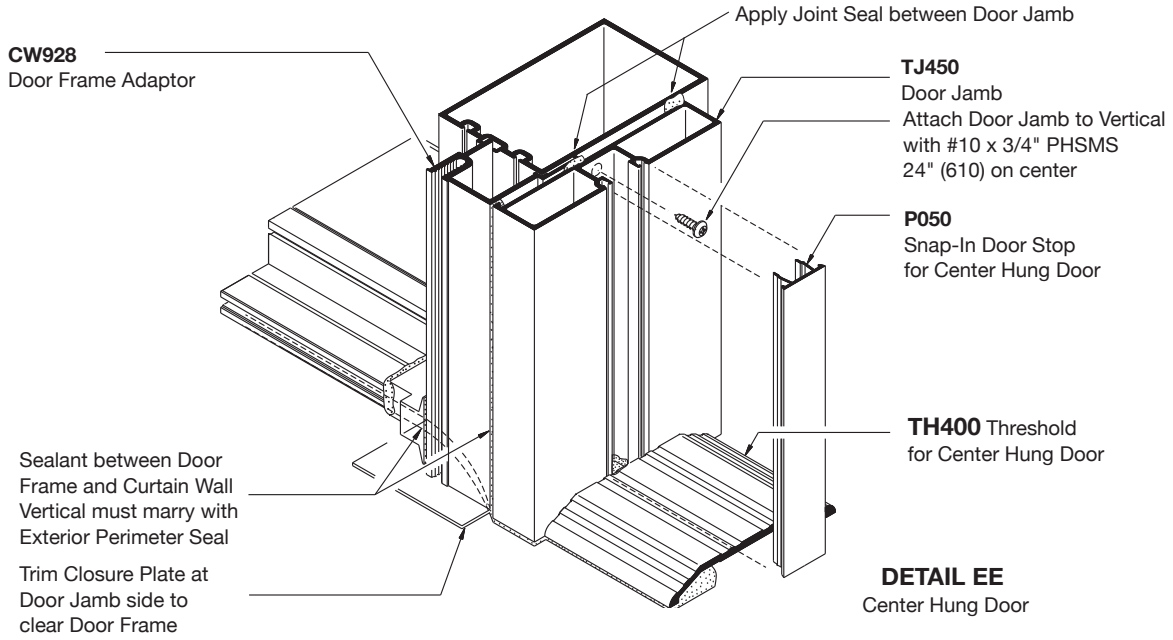
ENTRANCE FRAMES

Entrance Frames may be installed simultaneously with Curtain Wall or after Curtain Wall installation has been completed.

Use CW928 or CW929 Pocket Fillers to close glazing pocket at door side.



DETAIL DD
Offset Hung Door



DETAIL EE
Center Hung Door

NOT TO SCALE

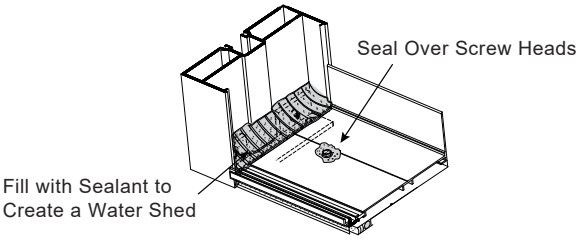
GUIDE TO SEALANTS

NOTE: All sealants must be tooled to ensure proper adhesion.

WATERPROOFING

- **Typical Weather Sealant**

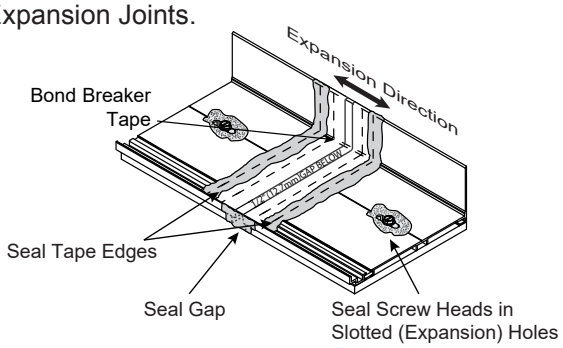
Sill to Subsill, End Dams, Screw Heads, and Threshold to Door Frame Sealing.



EXPANSION

- **Typical Weather Sealant**

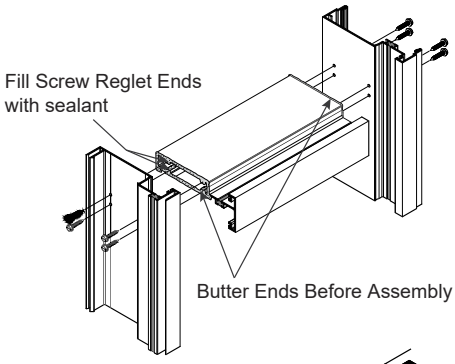
Expansion Joints.

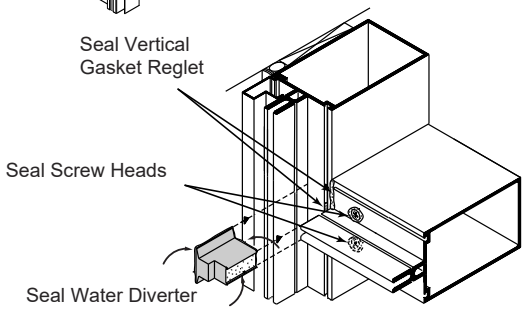


JOINT ADHESIVE

- **Typical Weather Sealant**

Small Joints, End Joints and Buttered Surfaces, Water Diverters, End Dams, and Reglet Fills.

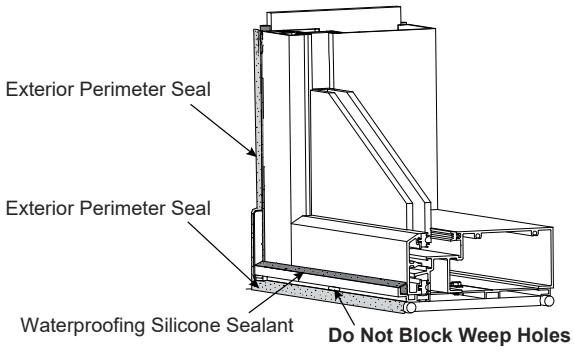




PERIMETER

- **Typical Weather Sealant**

Perimeter Seals, Expansion Joints, Sill and Threshold Beds, Concrete, Wood, and Steel Openings.



STRUCTURAL

- **ALL STRUCTURAL SEALANTS REQUIRE TESTING AND APPROVAL.**

Glass-to-Glass or Glass-to-Metal

NOT TO SCALE