



SERIES 2202

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.

11M0220_REV_A_11.21

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 quantity counts 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.***

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.

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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, and true.
- 3. INSTALLER QUALIFICATION.** The **Series 2202** 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° to offset lines. Mullion space should be held to $\pm 1/32"$ (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 Kromik®, meeting ASTM D5894, 1008 Corrosion Resistance.
- 9. 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.

GENERAL INSTALLATION NOTES CONT.

Recommended guidelines for all installations:

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.

- 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. *CRL 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.
- 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
- 15. GLAZING PRACTICES.** The air and water performance of the **Series 2202** 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 $\frac{1}{4}$ " 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.

GENERAL INSTALLATION NOTES CONT.

Recommended guidelines for all installations:

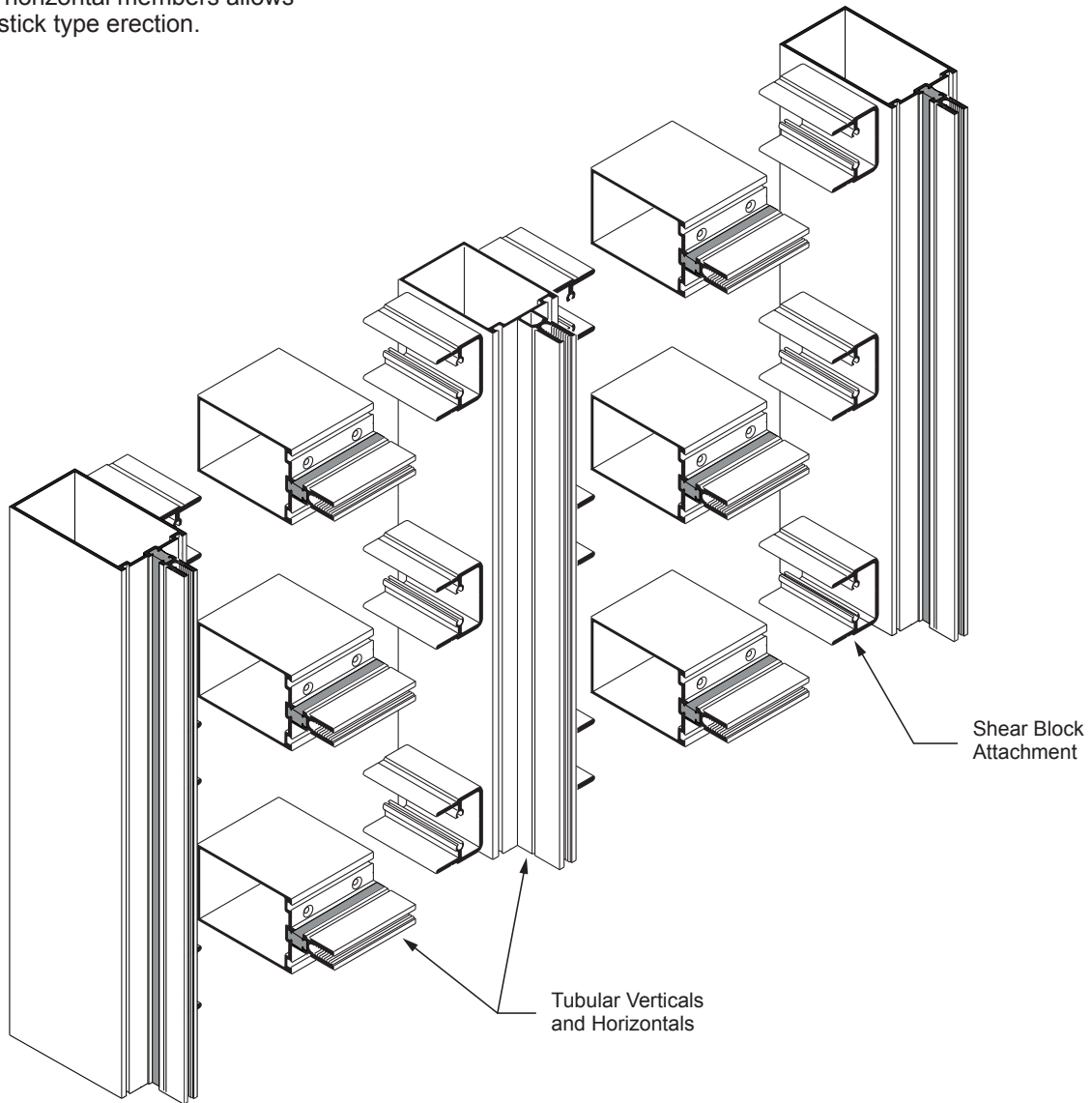
- The glass must be checked for squareness, size dimension, and thickness along the edges paying attention to any variances from center edge to corner edge
- Check the placement of the installed glass and verify there is proper edge bite into the pocket, and proper edge clearance from framing elements

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.

TYPE "A" FABRICATION PROCEDURES

SHEAR BLOCK ASSEMBLY

All tubular back members and shear block attachment of horizontal members allows for traditional stick type erection.



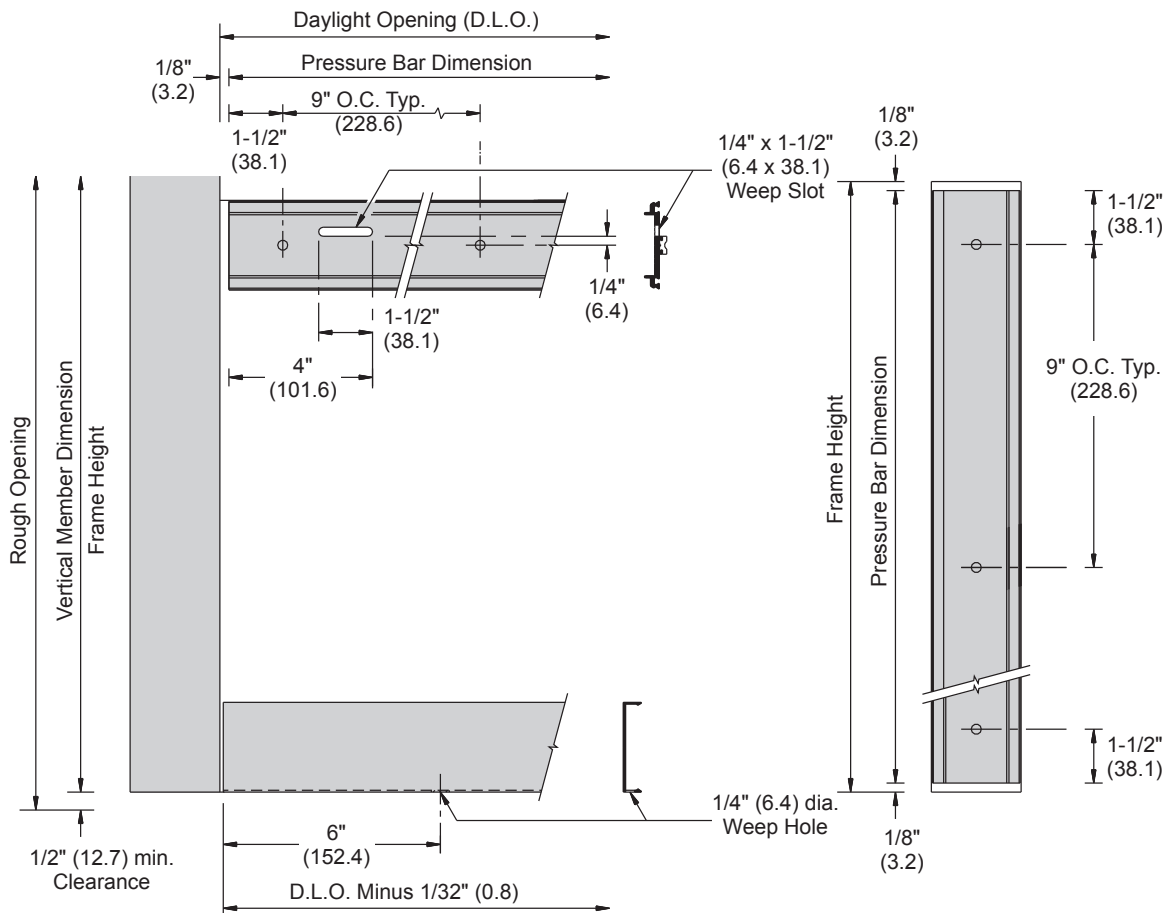
TYPE "A" FABRICATION PROCEDURES

CUTTING INSTRUCTIONS FOR SHEAR BLOCK AND SCREW SPLINE ASSEMBLY

Details shown on these instructions are for 1" (25) Glazing of 4" (101.6) back members.

1. Cut members to size:

Vertical Back Members:	Rough Opening Minus Top and Bottom Clearances (Frame Height)
Vertical Pressure Bars:	Frame Height Minus 1/4" (6.4)
Vertical Face Covers:	Frame Height
Vertical Transition Adapters:	D.L.O. Plus 1" (25)
Horizontal Transition Adapters:	D.L.O. Minus 1/16" (1.6)
Horizontal Back Members:	D.L.O. Plus 1/32" (0.8)
Horizontal Pressure Bars:	D.L.O. Minus 1/4" (6.4)
SSG Pressure Bars:	Frame Width Minus 4-1/4" (108)
Horizontal Face Members:	D.L.O. Minus 1/32" (0.8)
Horizontal Trim Members:	D.L.O. Minus 1/32" (0.8)
Jamb Perimeter Fillers:	Frame Height Minus 1/4" (6.4)
Head and Sill Perimeter Fillers:	D.L.O. Minus 1/8" (3.2)

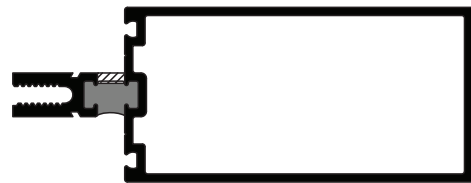
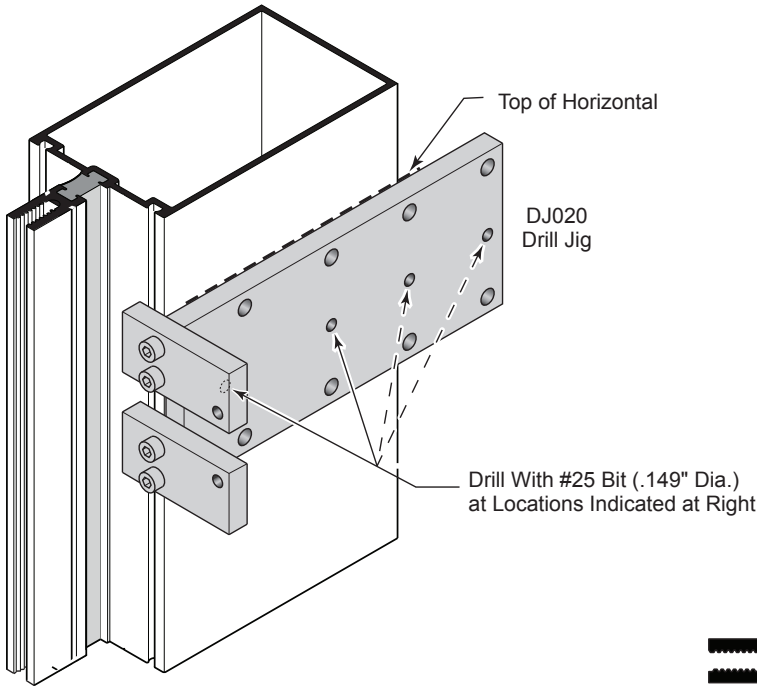


DETAIL A

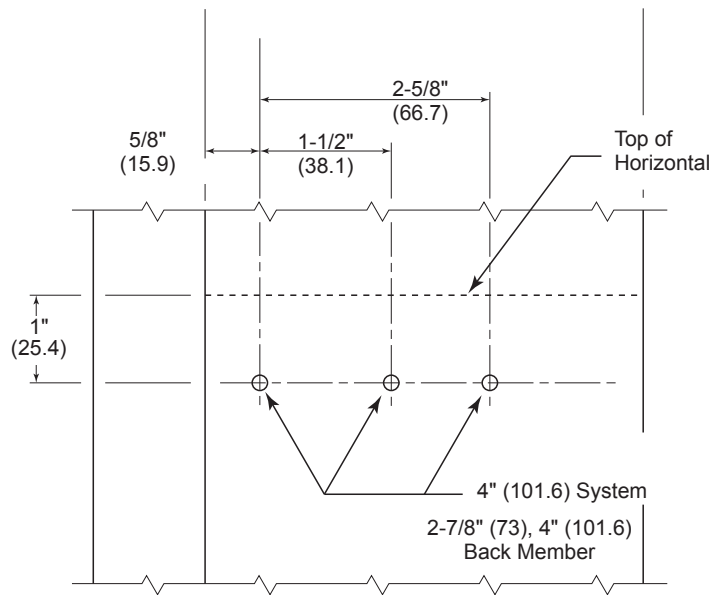
DRILL JIG PREPARATION

SHEAR BLOCK FABRICATION

- Fabricate verticals for horizontal members. Mark on verticals the location of horizontal members and drill holes for shear blocks (**Detail B**). Visit usalum.com for additional information.



NOTE: For larger projects we offer the Accufab Pro Tool. Visit usalum.com for additional information.

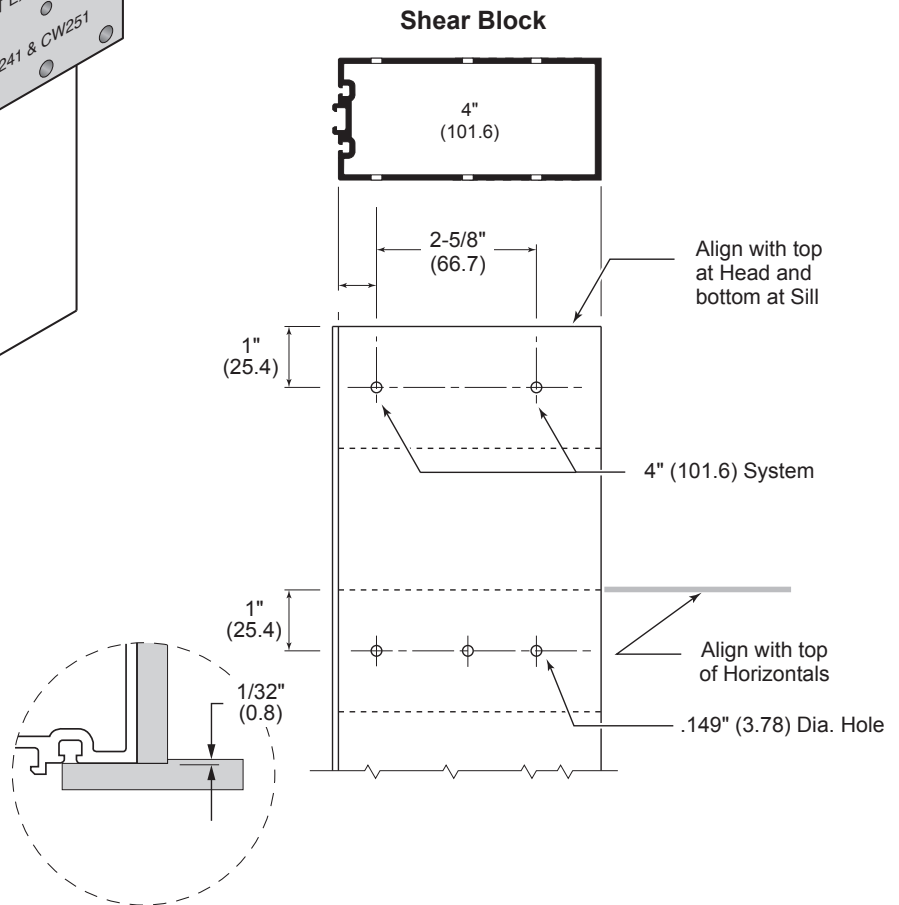
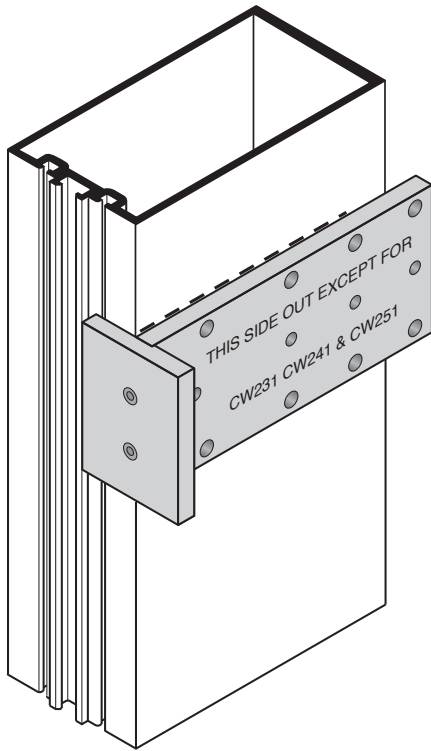


DETAIL B

NOT TO SCALE

STRUCTURAL SILICONE FABRICATION

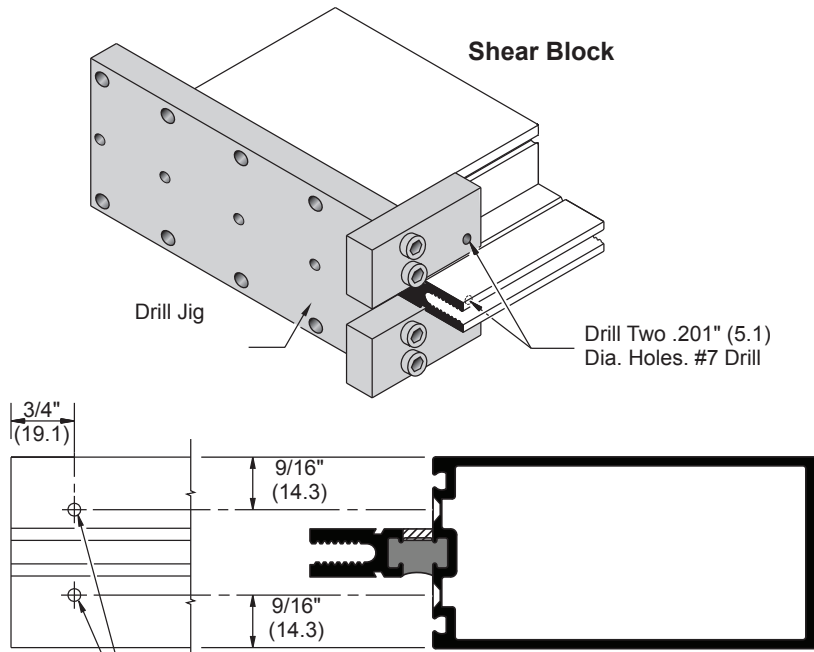
3. Fabricate structural silicone verticals for horizontal members (Detail C).



DETAIL C

SHEAR BLOCK ASSEMBLY

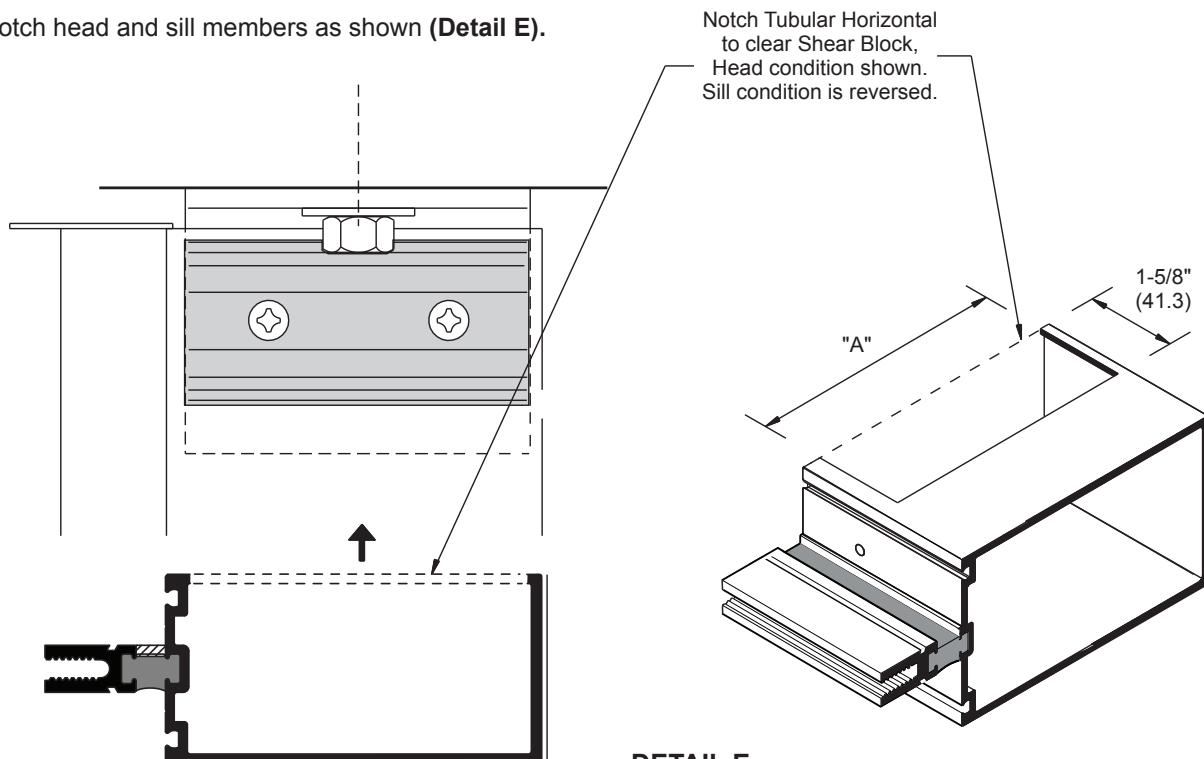
- Fabricate ends of horizontal members for shear block attachment screws. See **(Detail D)** for drill usage.



NOTE: Drill lower hole only at head and upper hole only at sill. Countersink for a #8 FHSMS

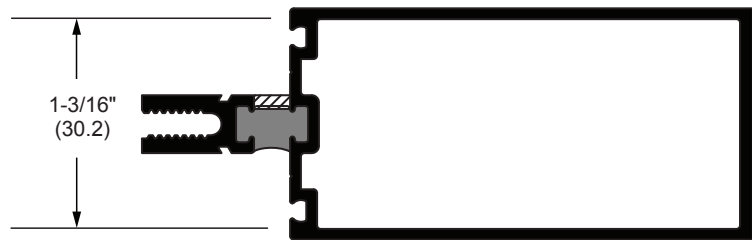
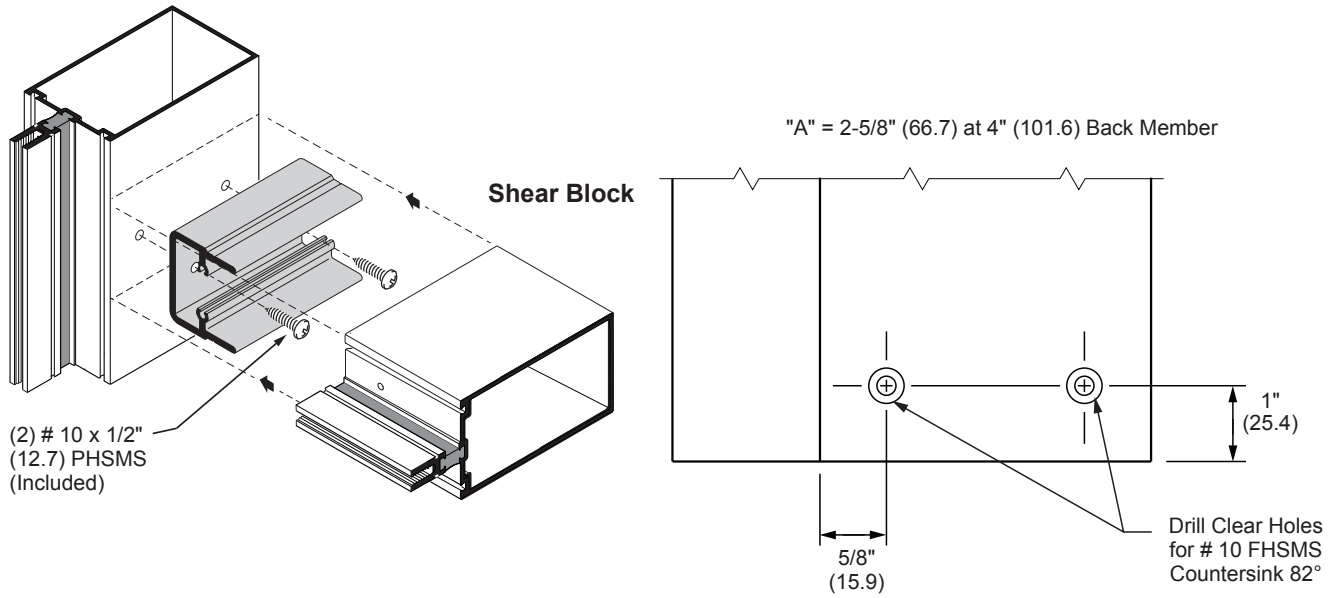
DETAIL D

- Notch head and sill members as shown **(Detail E)**.



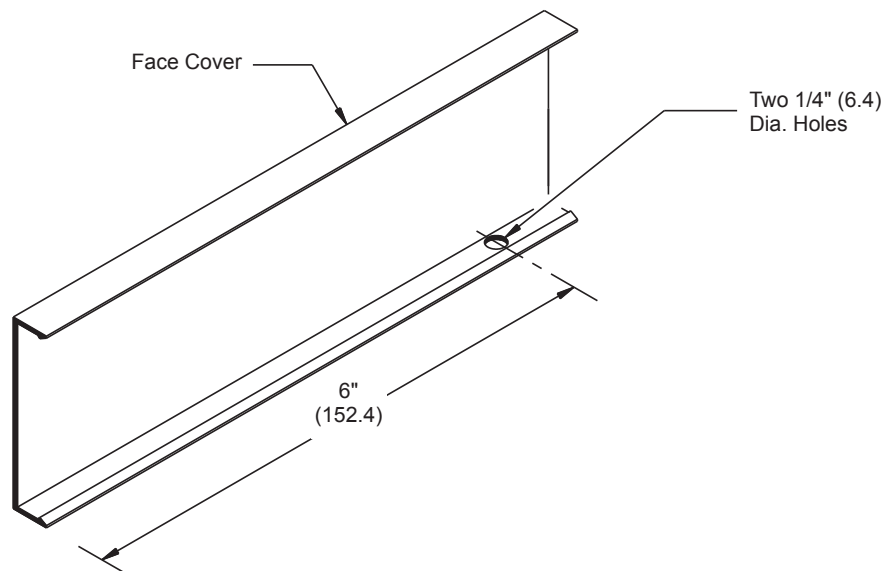
DETAIL E

SERIES 2202 CURTAIN WALL



DETAIL F

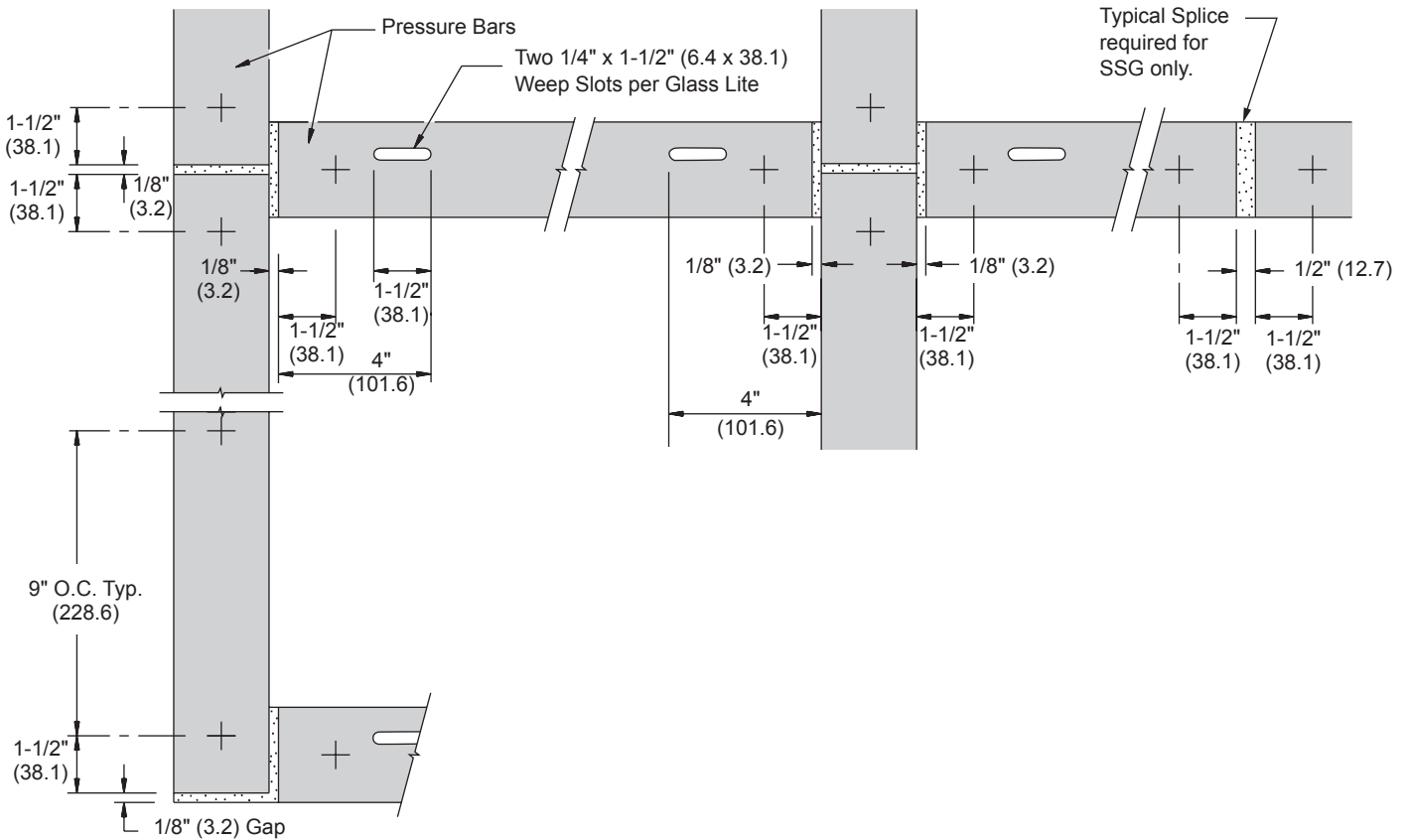
6. Drill two 1/4" (6.4) dia. holes in bottom of horizontal face covers 6" (152.4) from each end (**Detail G**).



DETAIL G

SHEAR BLOCK PRESSURE BAR FABRICATION

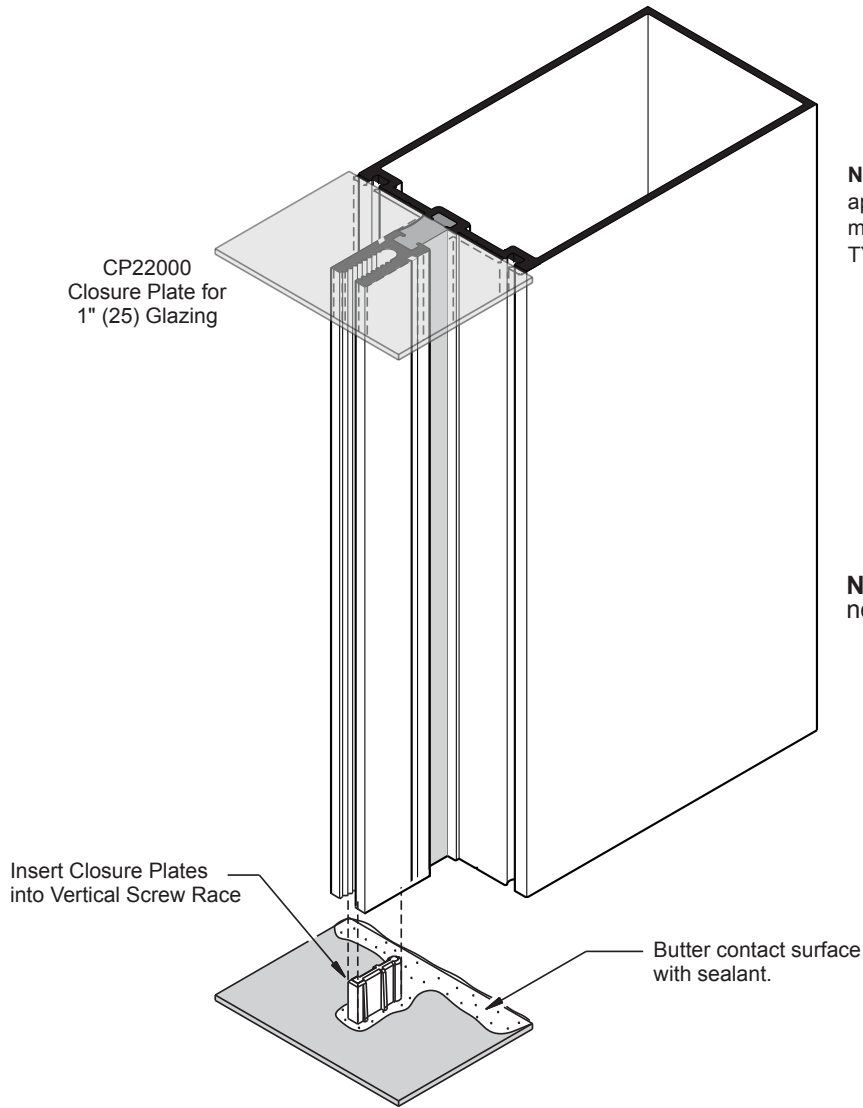
- Fabricate horizontal pressure bar members for slots and holes. Pressure bars are supplied with 9/32" (7.1) attachment holes at 9" (228.6) O.C.. Additional holes are required in pressure bars at 1-1/2" (38.1) from each end (**Detail H**).



DETAIL H

INSTALLATION PROCEDURE FOR SHEAR BLOCK ASSEMBLY

1. Apply Closure Plates to vertical mullions (**Detail I**).



NOTE: Clean all surfaces prior to applying sealants. See sealant manufacturer requirements. TYPICAL AT ALL CONDITIONS

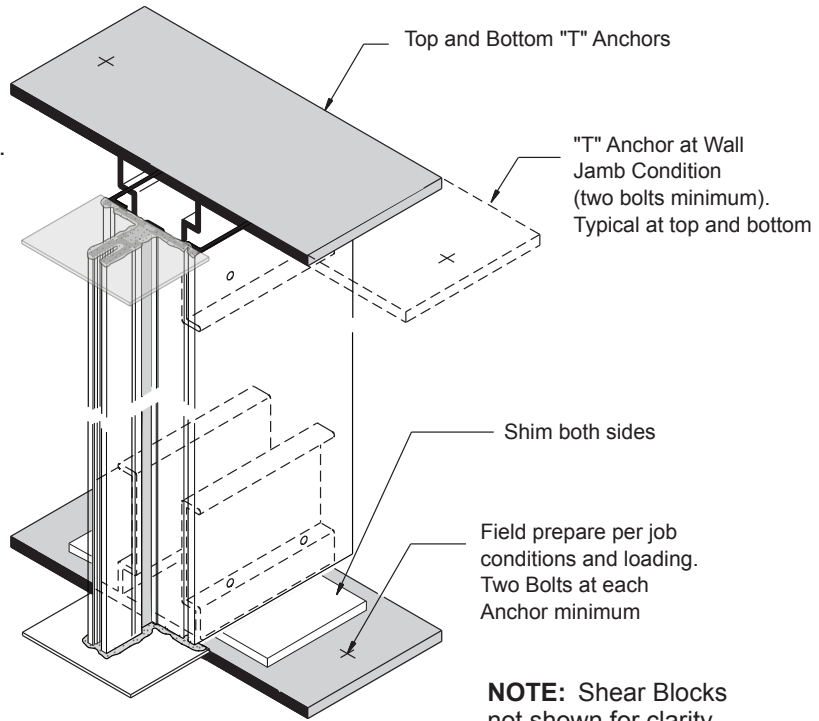
NOTE: Shear Blocks not shown for clarity.

DETAIL I

INSTALLATION PROCEDURE FOR SHEAR BLOCK ASSEMBLY

- Slide anchors into ends of vertical mullions (**Detail J**). If shims are required place them directly under each side of vertical for proper load distribution. Secure anchors to structure plumb, level, and true. See approved shop drawings for anchor bolt type and size.

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

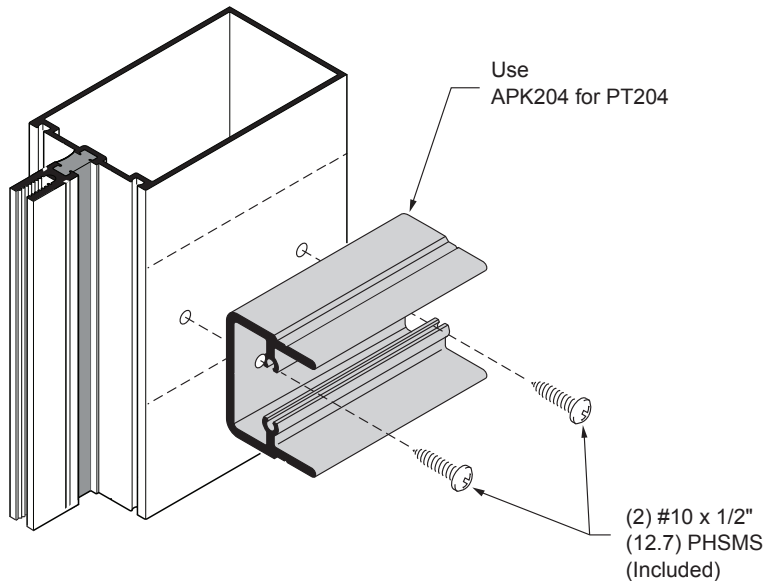


DETAIL J

NOTE: Shear Blocks not shown for clarity.

- Attach Shear Blocks to verticals with screws provided (**Detail K**).

NOTE: Tubular intermediate horizontals must be installed per bay along with verticals. Head and sill members are notched. Last bay intermediate horizontal is notched. (See Page 10)



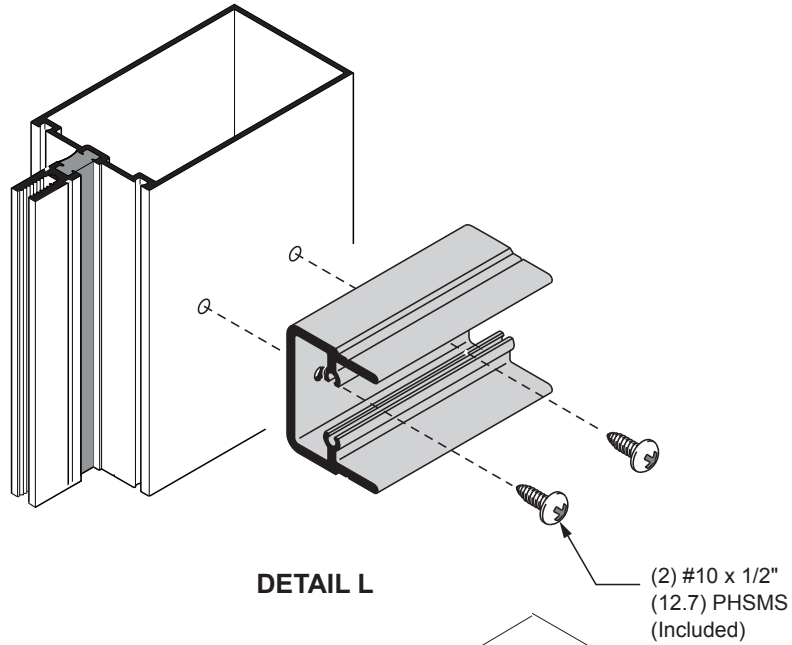
DETAIL K

NOT TO SCALE

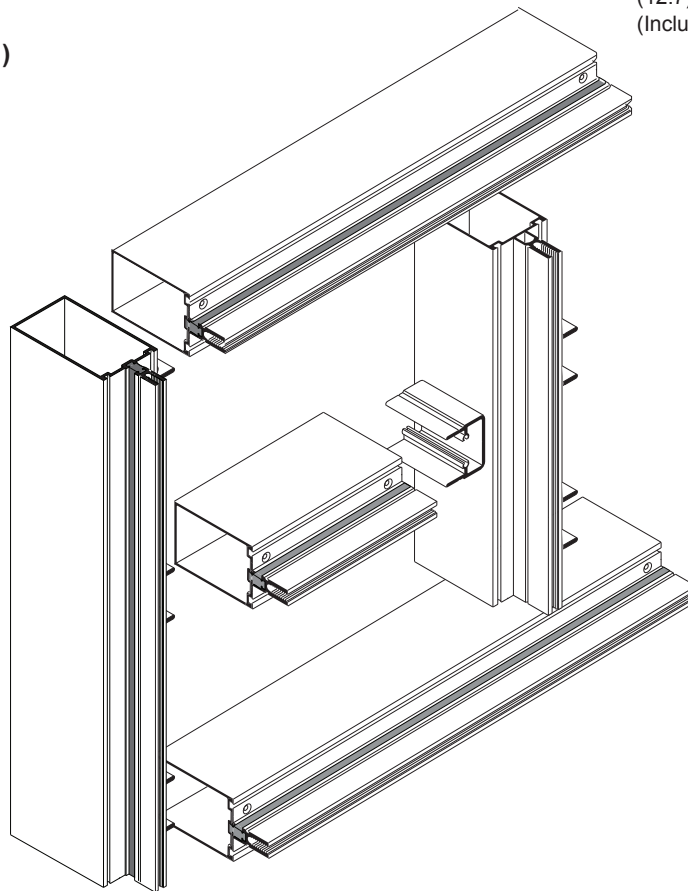
ASSEMBLY PROCEDURE

INSTALLATION PROCEDURE FOR PRE-ASSEMBLED MULTI-LITE ASSEMBLY

1. Attach shear blocks to mullion and jambs (**Detail L**)

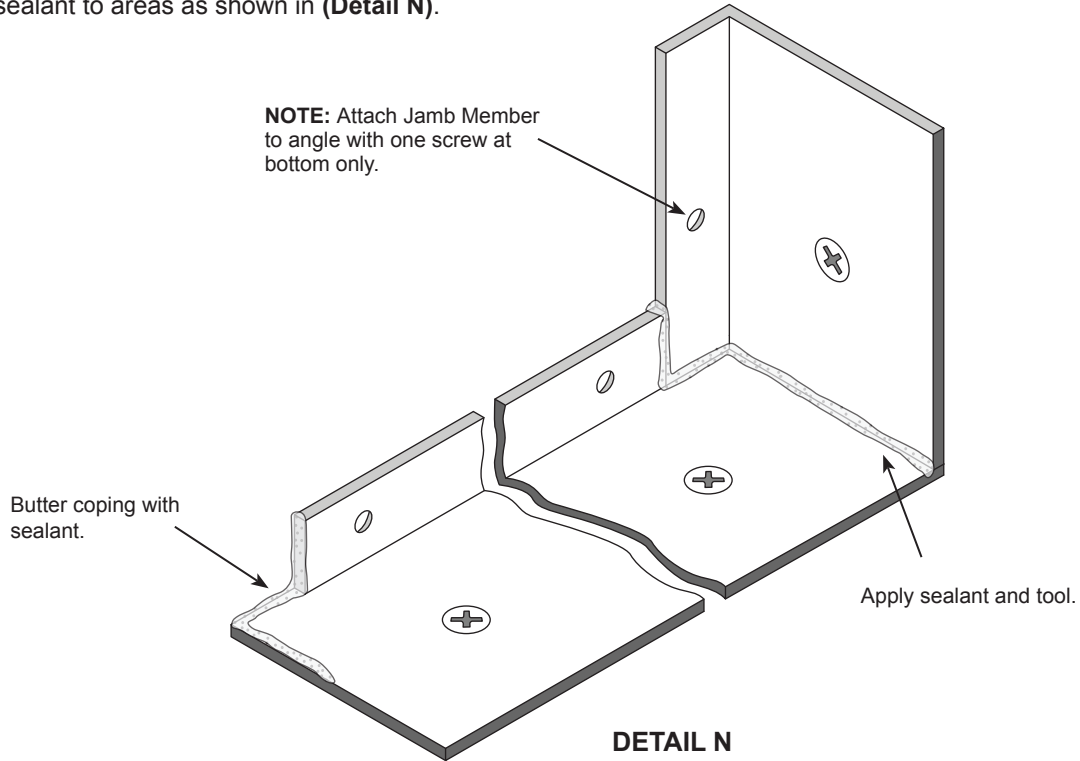


2. Assemble frame (**Detail M**)

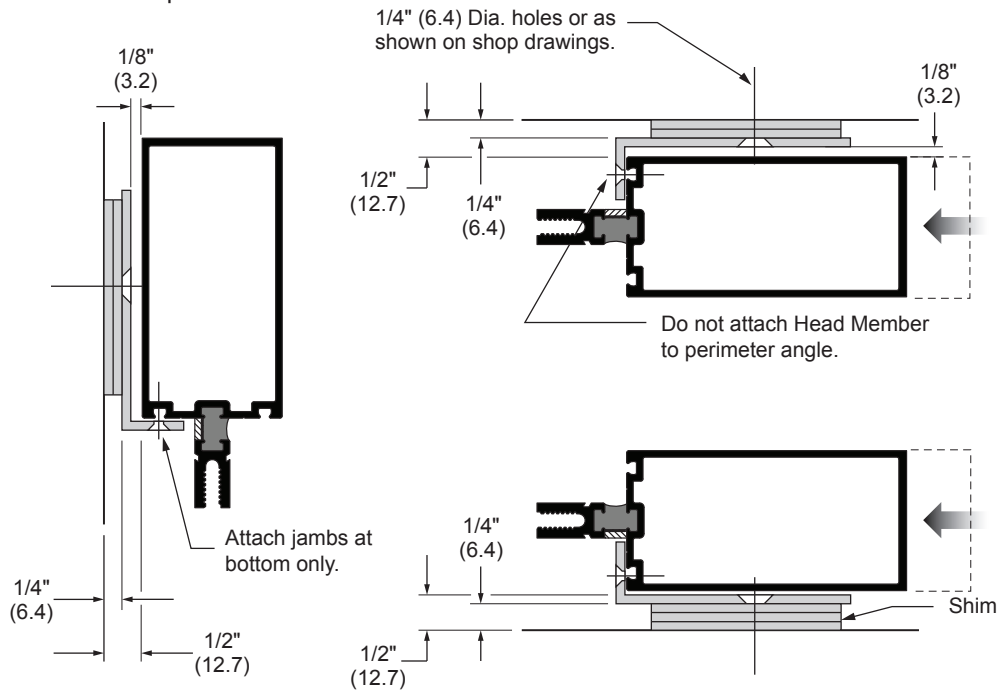


ASSEMBLY PROCEDURE

3. Install perimeter angle into opening. See approved shop drawings for proper anchor bolt and size. Apply sealant to areas as shown in **(Detail N)**.

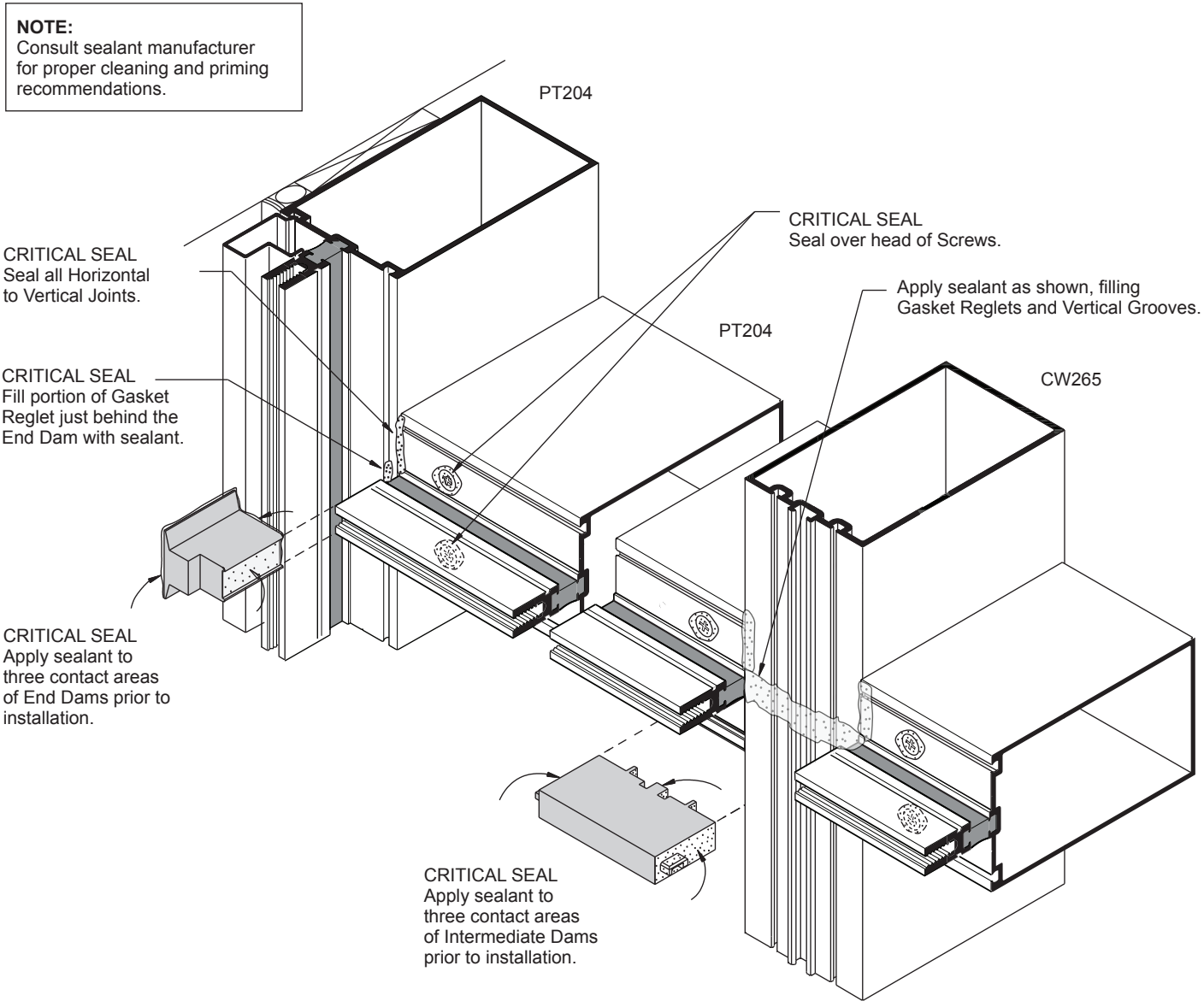


4. Install frame into opening plumb, level and true. Attach frame to angle at sill and one screw at bottom of jambs with **ST035 #10 x 5/8" (15.9)** screws, 12" (304.8) on center. Attach a piece of the perimeter pressure bar at the head to temporarily hold the frame in place.



FRAME SEALANT PROCEDURE

1. Seal joint at horizontal and vertical intersection. Seal over heads of screws in the glazing pockets (**Detail P**).
2. Apply sealant at the three contact areas of end dams. Fill the vertical gasket reglet with sealant at the end dam location.
3. Slide end dams into place. **NOTE:** End dams occur at head and sill also.



DETAIL P

GLAZING

GLASS SIZES (Captured)

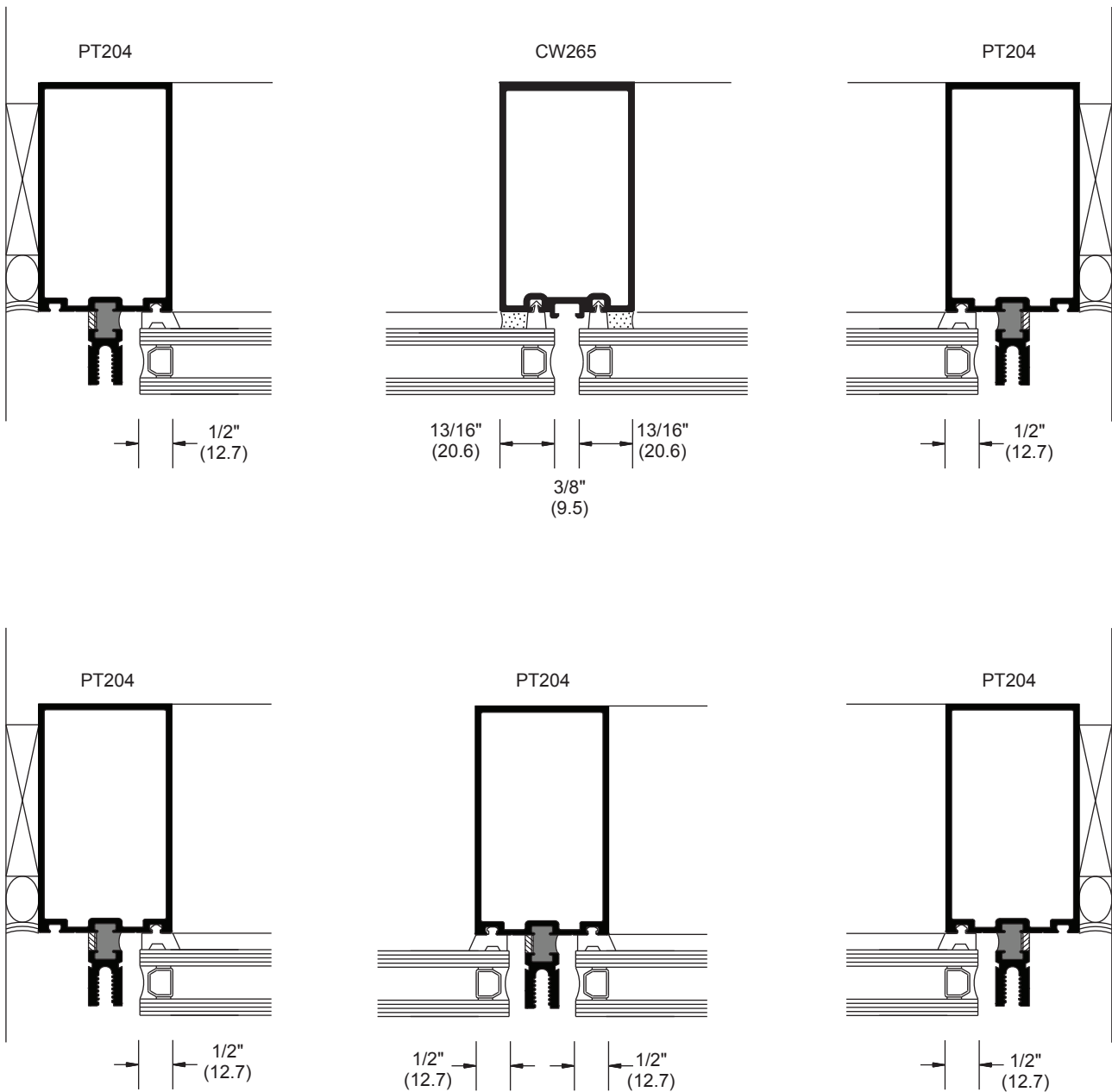
GLASS WIDTH and HEIGHT = DAYLIGHT OPENING + 1" (25.4)

GLASS SIZES (Structural Silicone Glazed)

GLASS HEIGHT = DAYLIGHT OPENING + 1" (25.4)

GLASS WIDTH = DAYLIGHT OPENING + GLASS BITES

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

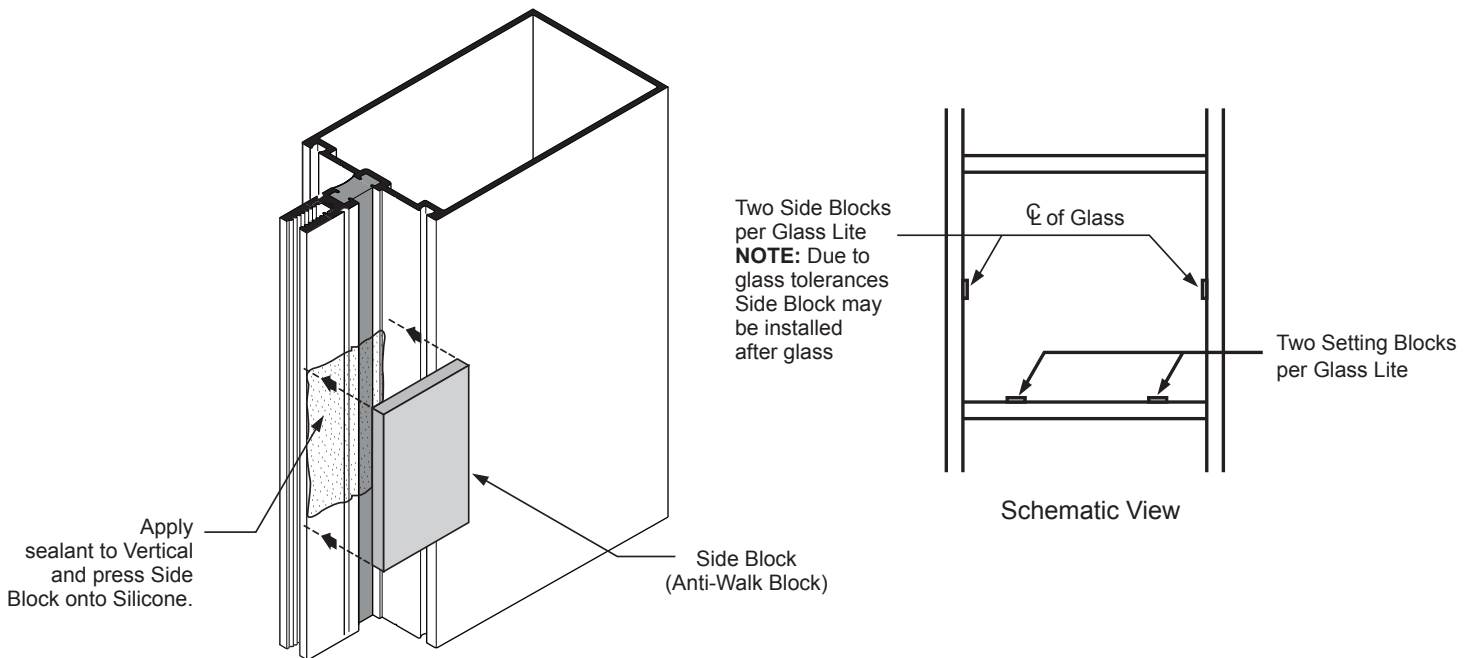


DETAIL Q

NOT TO SCALE

GLAZING

1. Remove gaskets from carton and lay flat in a clean, dry area in order to recover shape. Allow gaskets to relax at least two hours at temperatures above 50°F (10°C). Glaze with gaskets above 40°F (4°C). If necessary warm gaskets in a hot box before installing.
Use **NP430** dense gasket at exterior and **NP420** sponge gasket at interior.
2. Cut gaskets allowing 1/8" (3.2) extra length per foot of extrusion to allow for shrinkage.
Vertical gaskets on mullion run past horizontal gaskets by 5/8" (15.9).
Horizontal gaskets butt against vertical gaskets.
3. Install back gaskets into vertical and horizontal members and front gaskets into pressure bars. Horizontal pressure bar gaskets should extend 1/8" (3.2) beyond each end of the extrusions. Vertical pressure bar gaskets run continuous.
4. Position two setting blocks for each glass lite as directed by the deadload charts and shop drawings.
5. Apply sealant to vertical mullion and press on two side blocks per glass lite, at approximately mid-height of glass (**Detail R**).

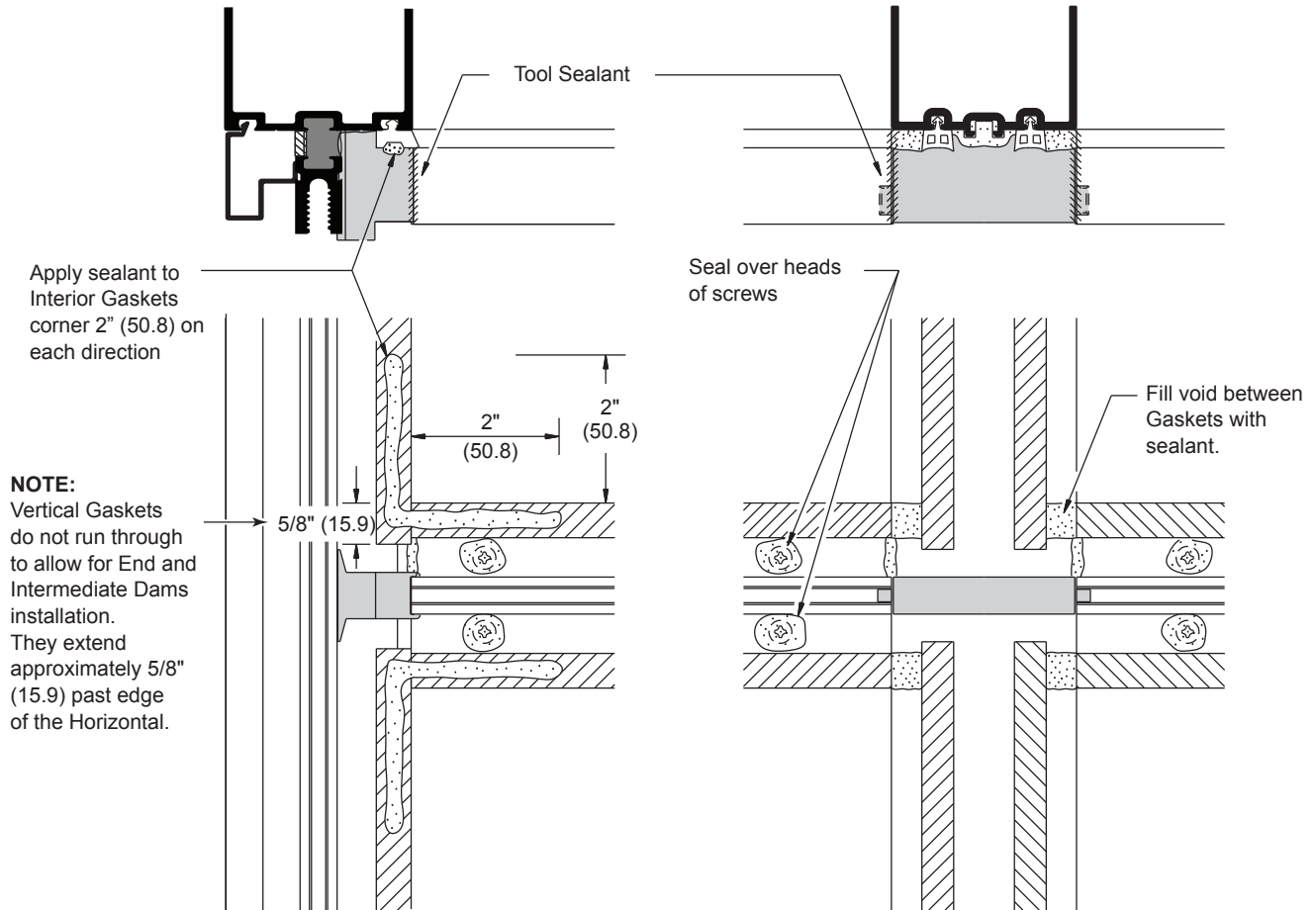


DETAIL R

6. Apply bead of sealant at interior gasket corners 2" (50.8) in each direction (**Detail S**).
7. Install glass and center in opening. Use **CW368** Temporary Glass Retainers to hold glass in place until pressure bars are installed (**Detail T**).

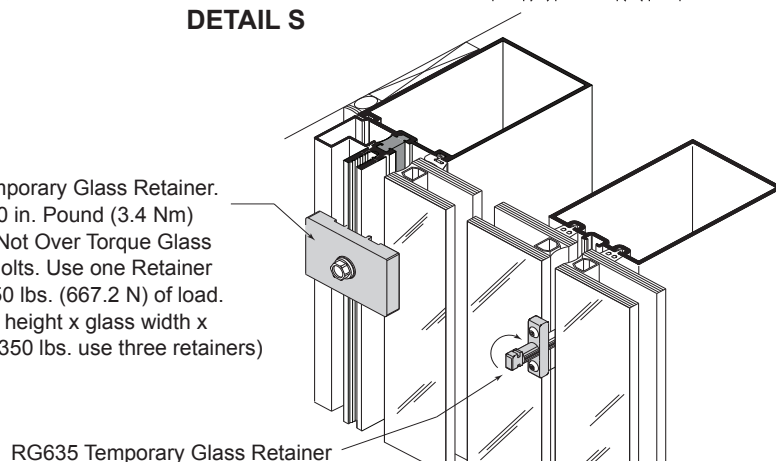
GLAZING STRUCTURAL SILICONE APPLICATION

8. Structural silicone is applied from the interior. Follow silicone manufacturer's instructions and recommendations for surface preparation and silicone application. Mask glass and aluminum and tool sealant.
9. After structural silicone has fully cured remove temporary glass retainers from intermediate verticals; insert a polyurethane rod between glass edges; mask glass adjacent to joint, and apply outside weatherseal.



DETAIL S

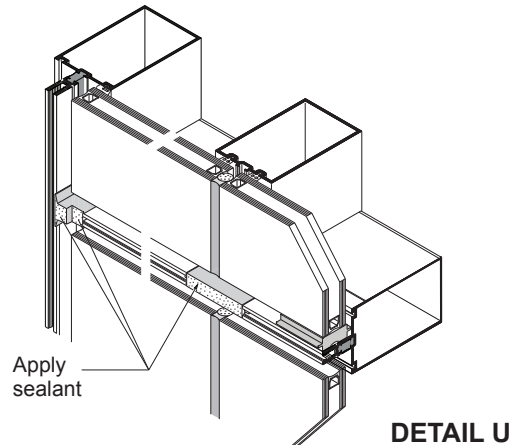
CW368 Temporary Glass Retainer.
Torque to 30 in. Pound (3.4 Nm)
NOTE: Do Not Over Torque Glass Retainers Bolts. Use one Retainer per each 150 lbs. (667.2 N) of load. (I.e. if glass height x glass width x windload = 350 lbs. use three retainers)



DETAIL T

PRESSURE BAR INSTALLATION

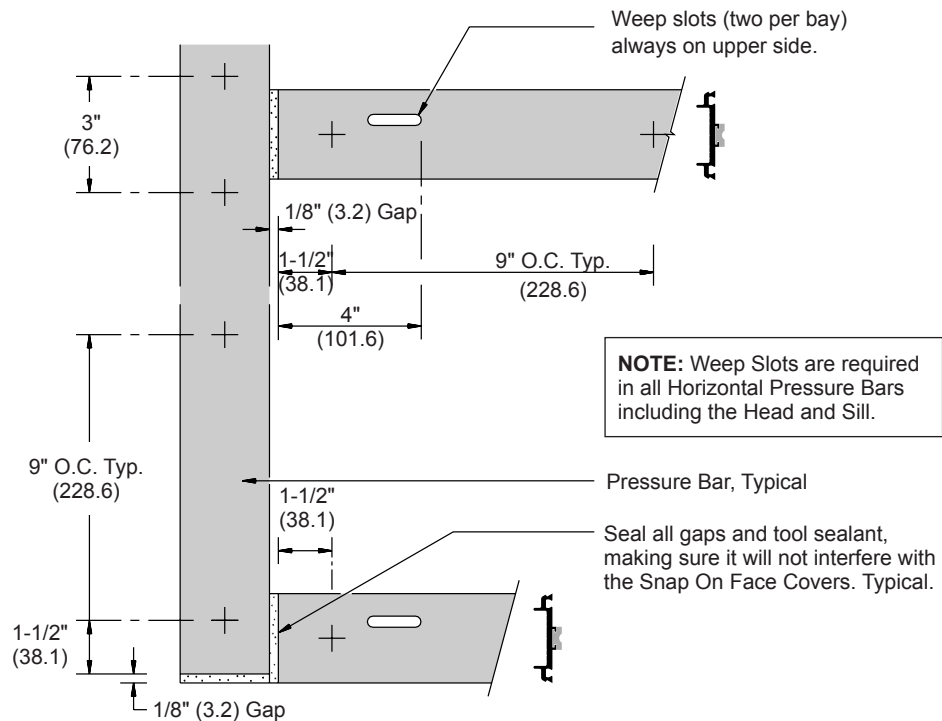
Apply sealant to faces of end dams prior to installing pressure bars. Pressure bars should be installed while sealant is wet (**Detail U**).



DETAIL U

Install vertical pressure bar bolts from bottom to top and horizontal pressure bar bolts from center outward. Always locate bolts 1-1/2" (38.1) maximum from vertical/horizontal intersections to ensure proper pressure over end dams. (**Detail V**) **NOTE: Be sure pressure bar spacer is not disengaged.**

1. Install vertical pressure bars first, leaving 1/8" (3.2) gaps at top and bottom. Using a torque wrench, torque bolts to 30 inch pound (3.4 Nm). Increase torque to 50 to 60 inch pound (5.7 to 6.8 Nm) minimum after all four sides have been secured.
2. Center horizontal pressure bars in opening, leaving 1/8" (3.2) gaps at each end. **NOTE:** Weep slots must be on top side of all horizontal pressure bars and level with bottom of glazing pocket to ensure proper drainage (**Detail V**).
3. Seal gaps at vertical/horizontal intersections and at top and bottom of vertical pressure bars (**Detail V**).



DETAIL V

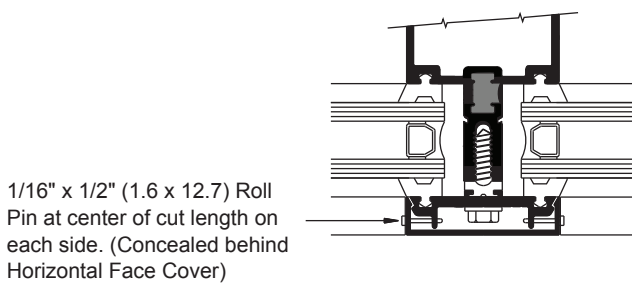
NOT TO SCALE

FACE COVER INSTALLATION

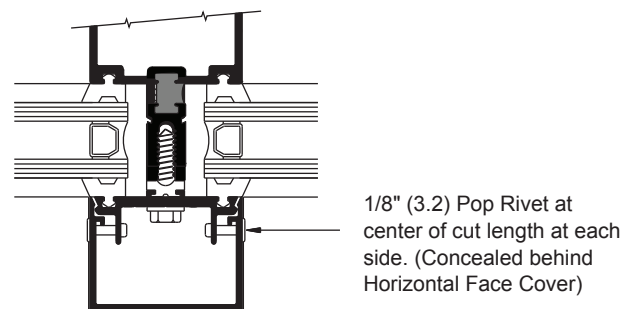
Care must be taken to prevent damage of face covers during installation. Use a piece of wood such as a 2" x 4" x 12" (51 x 102 x 305) and a Dead Blow Hammer.

1. Install vertical face covers first. Do not disturb top and bottom closure plates when installing face covers. Pinning of vertical face cover is required to prevent slippage. Use one pin on each side per cut length, concealed behind horizontal face cover closer to center line or as shown on shop drawings (**Detail W**).
2. Install snap-in horizontal face covers with the weep holes located on the bottom side.

NOTE: Extended face covers require a special pressure bar. Pin vertical extended covers with one 1/8" (3.2) Dia. pop rivet on each side per cut length (optional #10 x 1/2" (12.7) FHSMS) (**Detail X**). Extended horizontal covers must be pinned on top side at both ends.

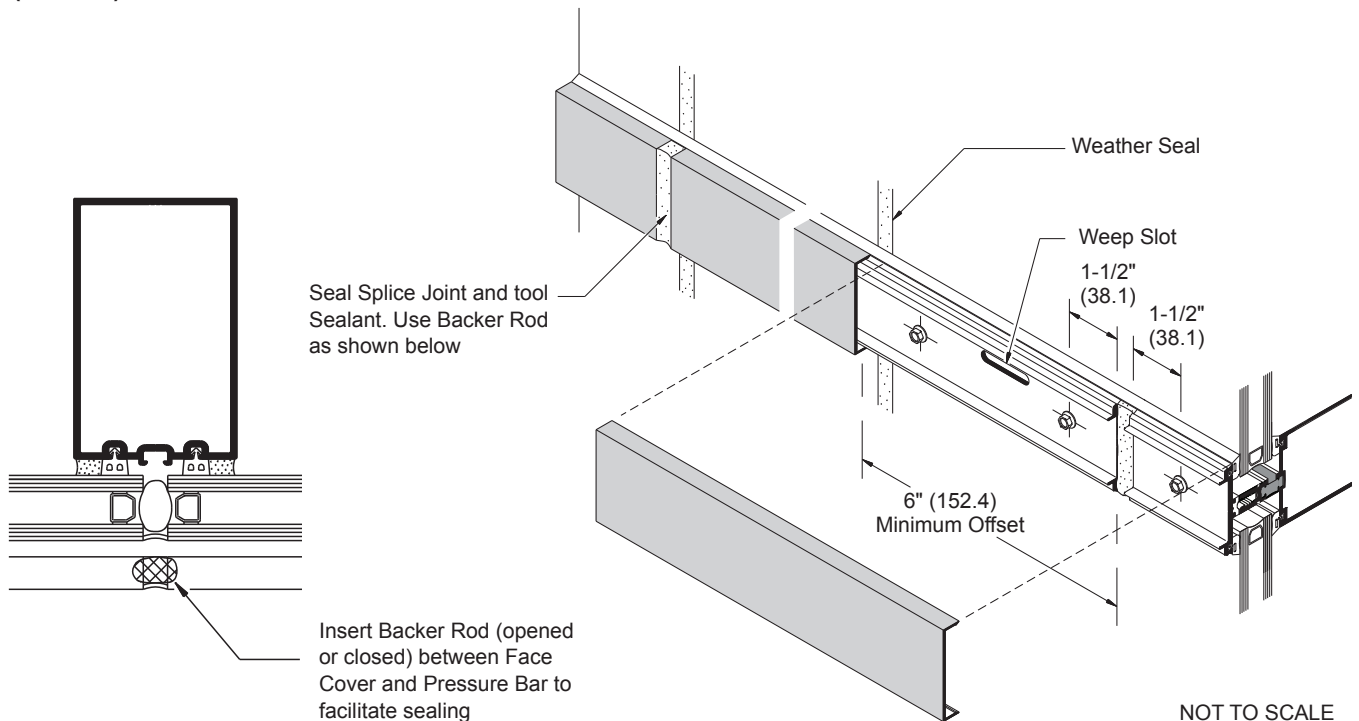


DETAIL W



DETAIL X

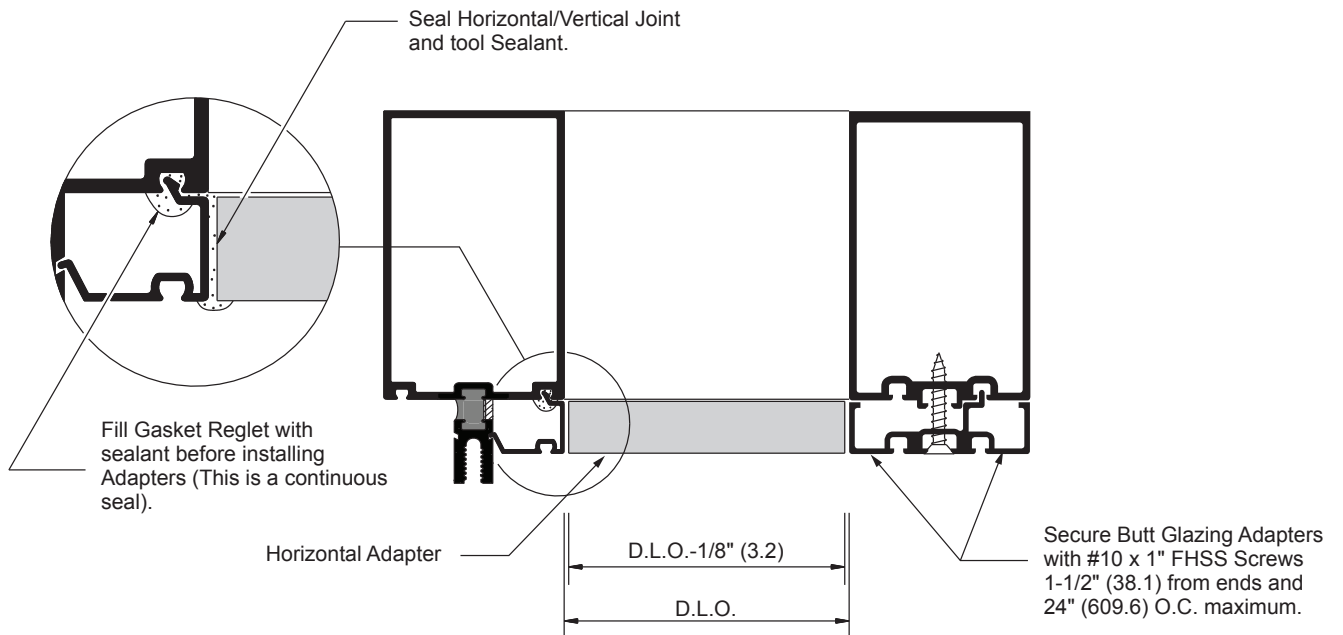
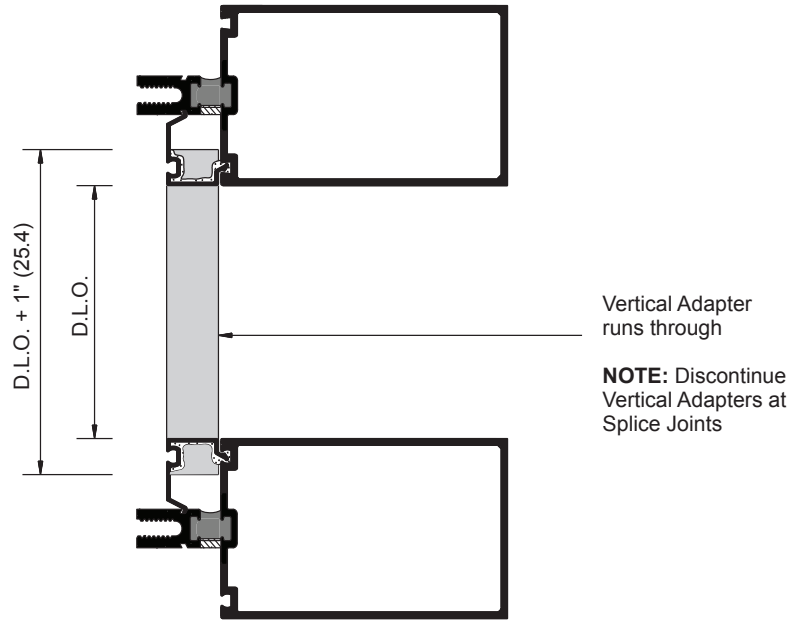
NOTE: Locate splice joints at center line of vertical members. Splice joint width should be based on linear expansion for aluminum specifications and sealant movement capability. Do not align face cover splices with pressure bar splices; offset by 6" (152) minimum. Set Backer Rod (open or closed) between face cover and pressure bars at joint and seal (**Detail Y**).



DETAIL Y

TRANSITION GLAZING

1. Inject sealant into gasket reglets before installing snap-in transition adapters.
2. Install vertical adapters first.
3. Install horizontal adapters and seal horizontal/vertical joints. Tool sealant (**Detail Z**).



DETAIL Z

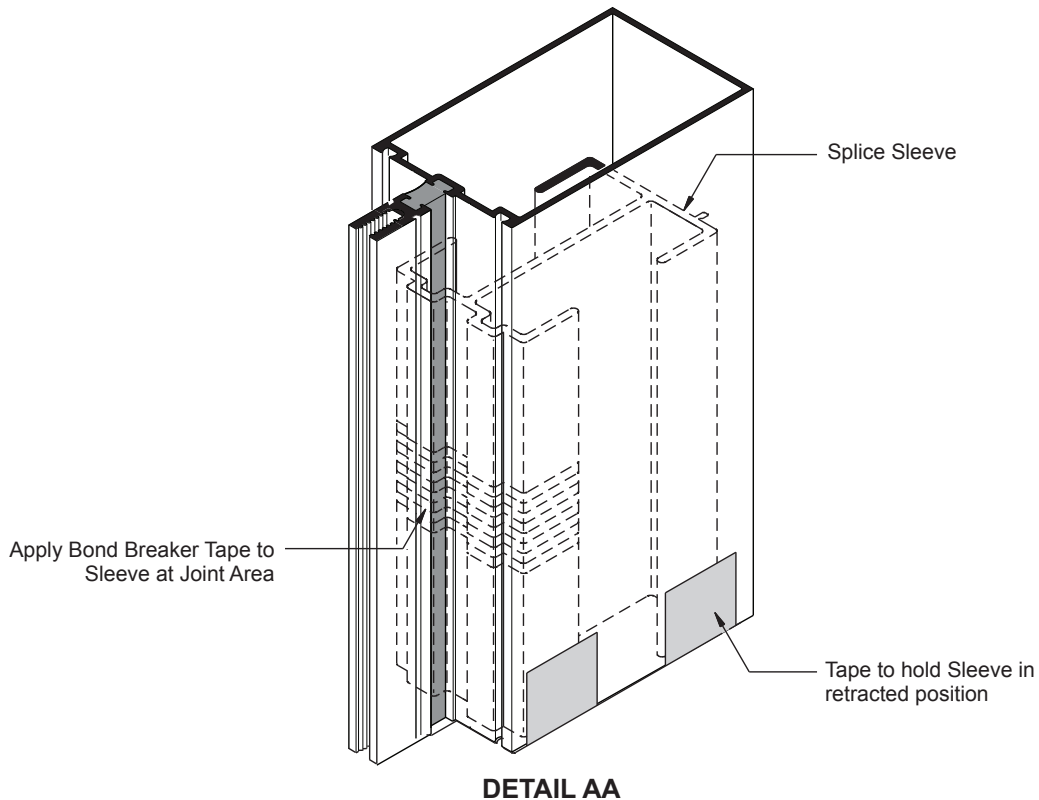
VERTICAL SPLICE JOINTS

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 .0232

A 1/2" (12.7) minimum joint is recommended. Use a 1/2" (12.7) 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.

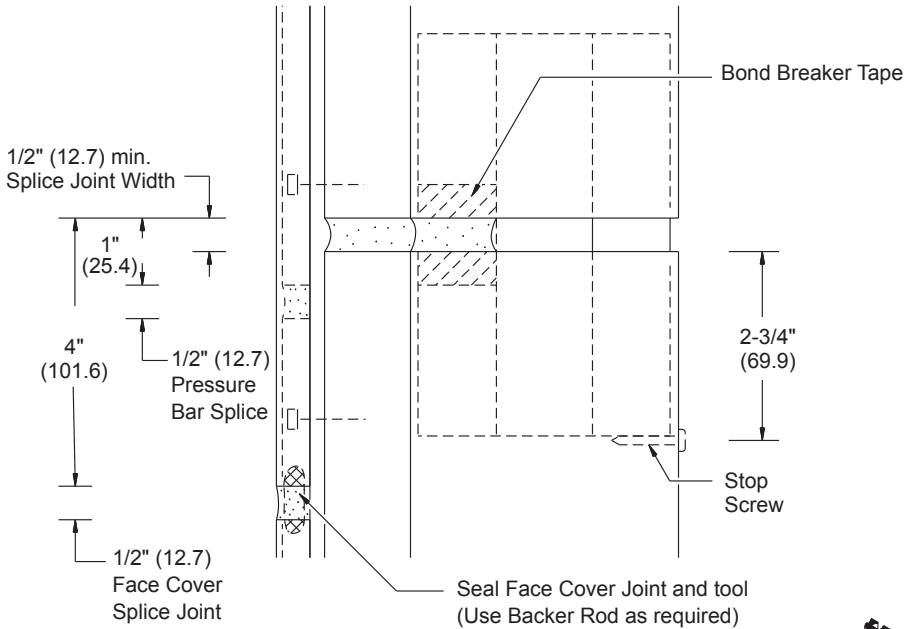
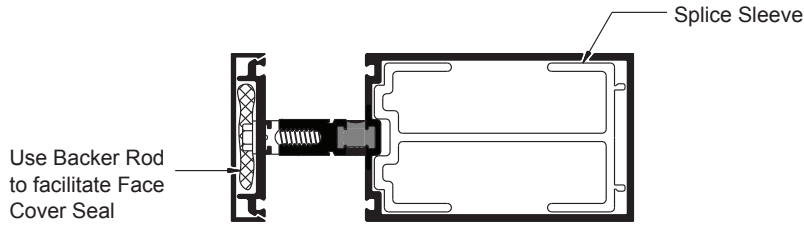
1. Clean splice sleeves and all joint surfaces. Apply bond breaker tape to areas where sleeve will be sealed to avoid three side adhesion (**Detail AA**).
2. Slide sleeve into the upper member before it is installed and tape to hold it in retracted position (**Detail AA**).



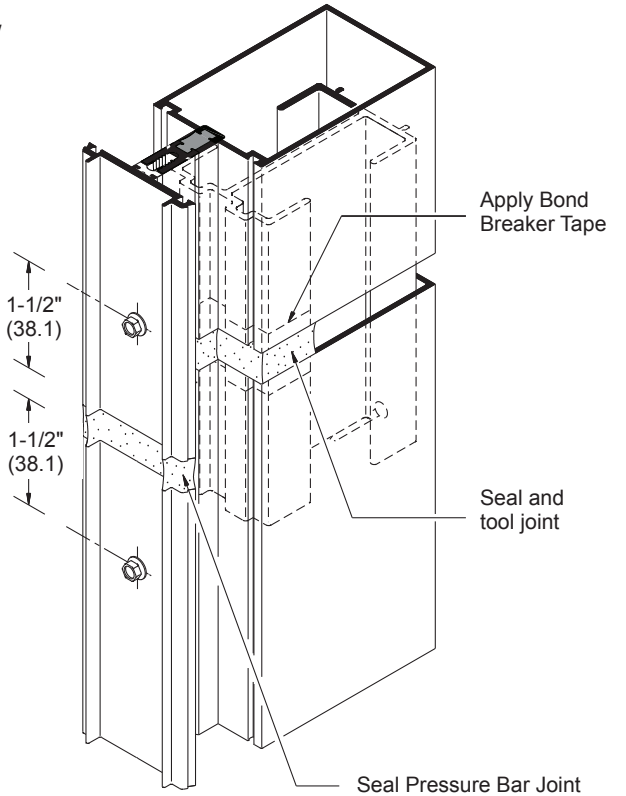
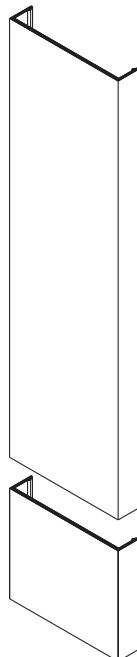
3. Install stop screw, 2-3/4" (69.9) down from top of extrusion at inside of lower member (**Detail BB**).
4. Install upper member and let extruded sleeve slide down until it sits on top of stop screw.
5. Seal joint over sleeve (**Detail CC**). When transition adapters for 1/4" (6.4) spandrel are used they should be discontinued at splice joint and installed after splice joint is sealed. Stagger joints on back members, pressure bars and face caps (**Detail BB**).
6. Seal pressure bar joint (**Detail CC**).
7. Install face covers and seal joint using backer rod (open or closed) as required (**Detail CC**).

NOT TO SCALE

SERIES 2202 CURTAIN WALL



DETAIL BB

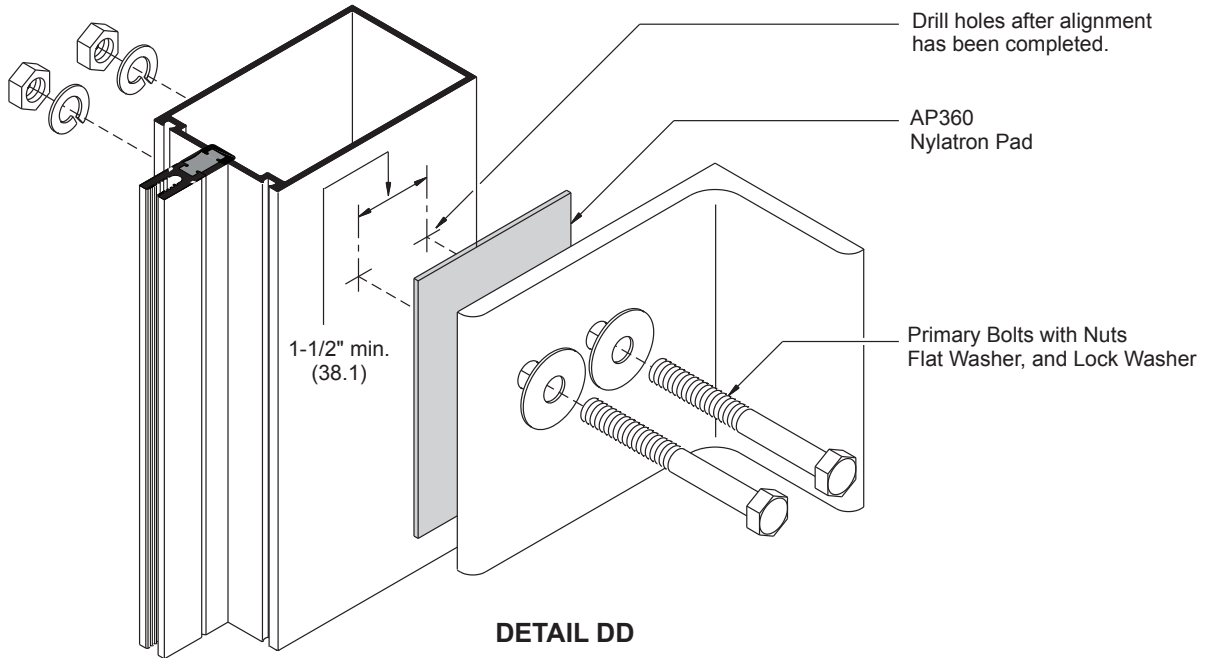


DETAIL CC

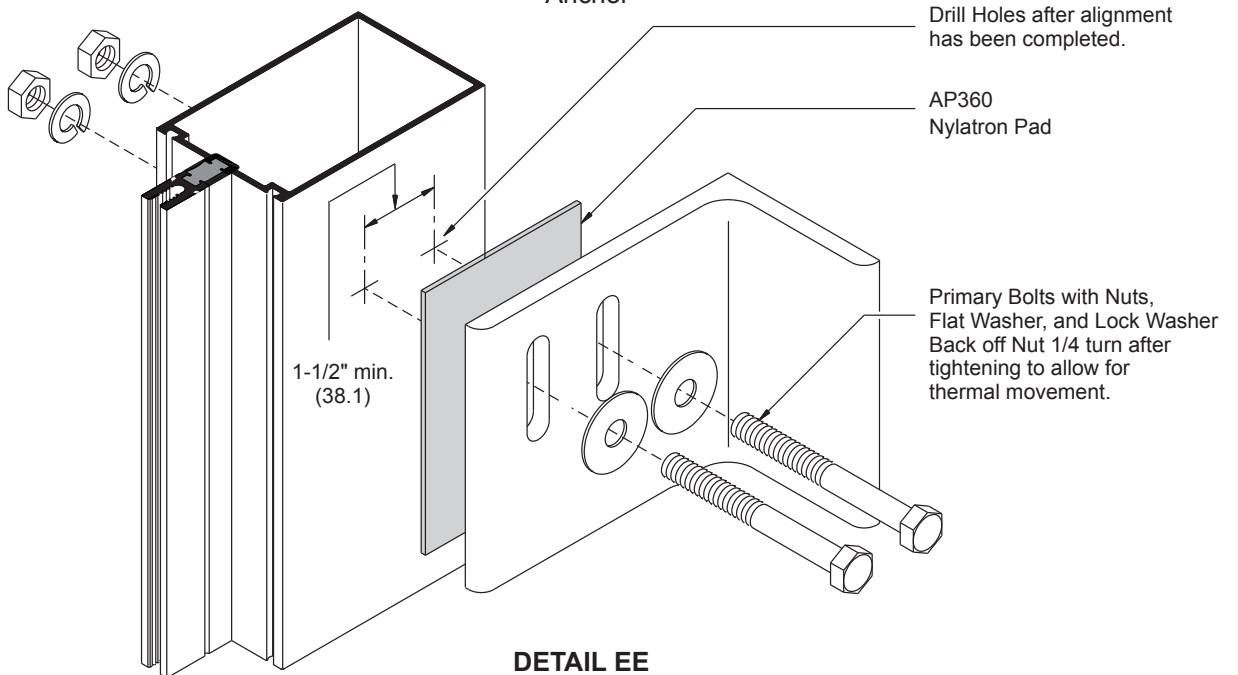
NOT TO SCALE

MULTI-SPAN CONDITION

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



DETAIL DD
Fixed (Deadload)
Anchor



DETAIL EE
Expansion (Windload)
Anchor

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.**

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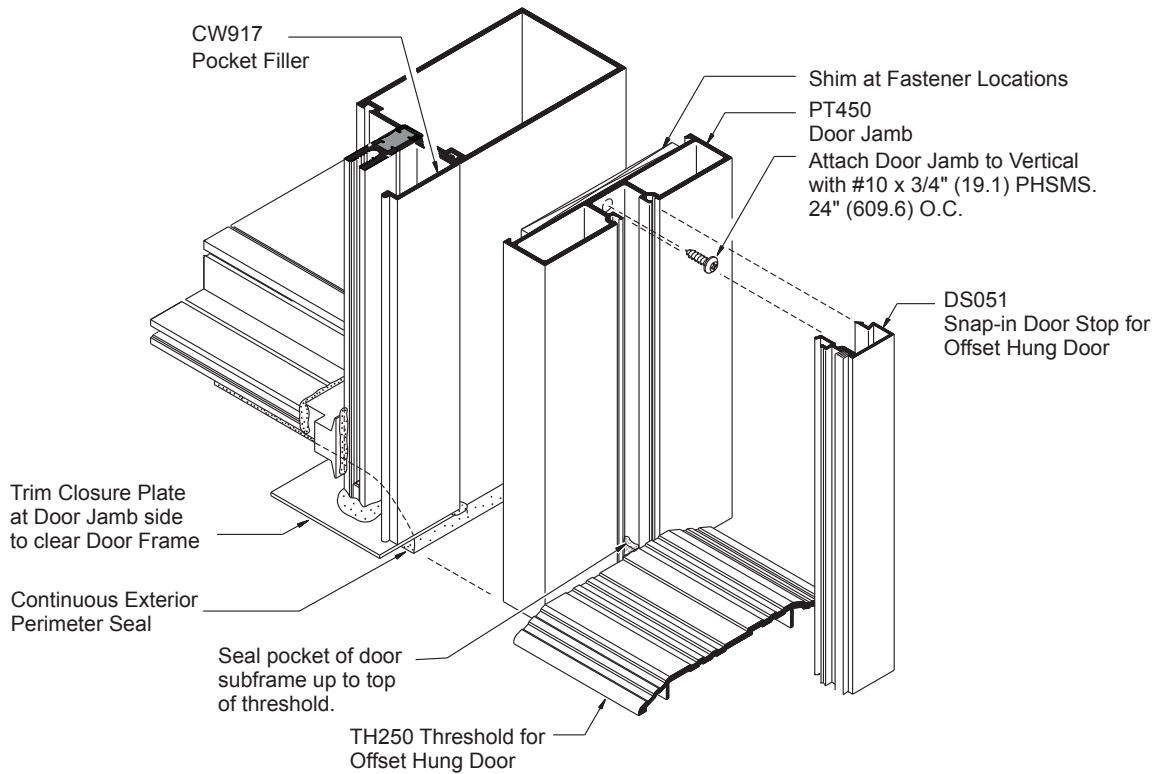
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NOT TO SCALE

ENTRANCE FRAMES

Entrance Frames may be installed simultaneously with Curtain Wall or after Curtain Wall installation has been completed. Use **CW917** or **CW916** pocket fillers to close glazing pocket at door side.



DETAIL FF
Offset Hung Door

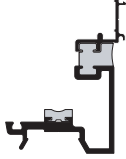
NOT TO SCALE

FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

FABRICATION

NOTE: Flush door adaptors are not available for Series 2100 butt glaze applications

1. Cut door adaptor members to length.



CW207

Header Adaptor Length = DOOR OPENING WIDTH Minus 1/32" (0.8).
 Jamb Adaptor Length = DOOR OPENING HEIGHT Plus 7/16" (11.1).



CW206

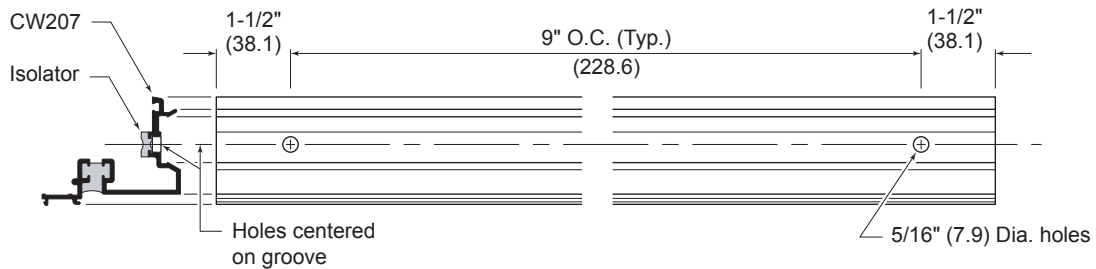
Header Cap Length = DOOR OPENING WIDTH Minus 1/32" (0.8).
 Jamb Cap Length = DOOR OPENING HEIGHT Plus 7/16" (11.1).
 (Field cutting may be required to obtain a tight joint with vertical cap above)



CW209

Header Door Stop Length = DOOR OPENING WIDTH Minus 1/32" (0.8).
 Jamb Door Stop Length = DOOR OPENING HEIGHT Minus 1-1/32" (26.2).

2. Drill 5/16" (7.9) diameter anchor holes in all cut to length adaptors 1-1/2" (38.1) from each end and 9" (228.6) O.C. (**Detail GG**)
NOTE: Isolator must be in place prior to drilling anchor holes.

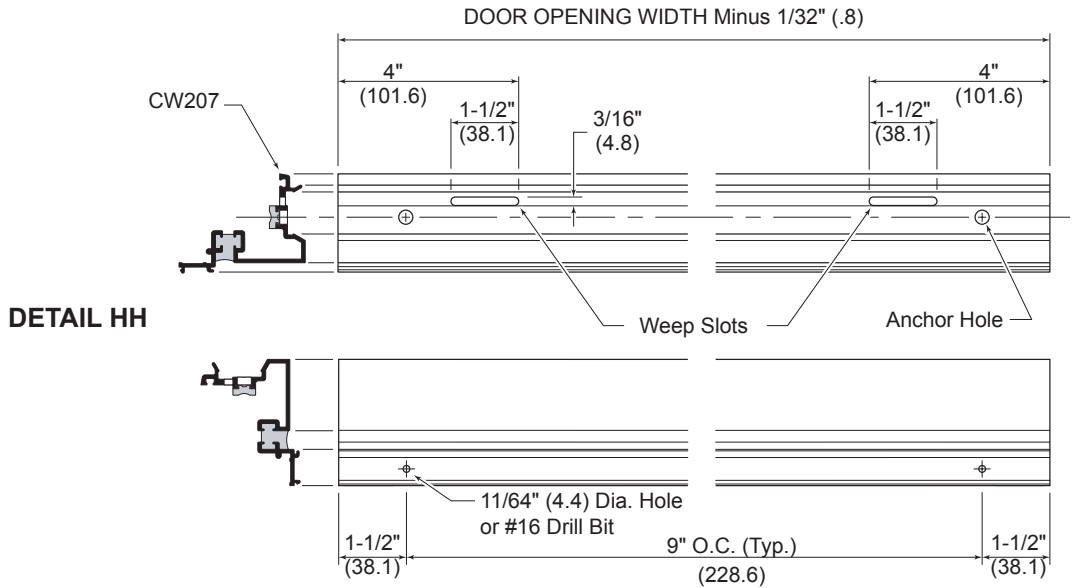


DETAIL GG

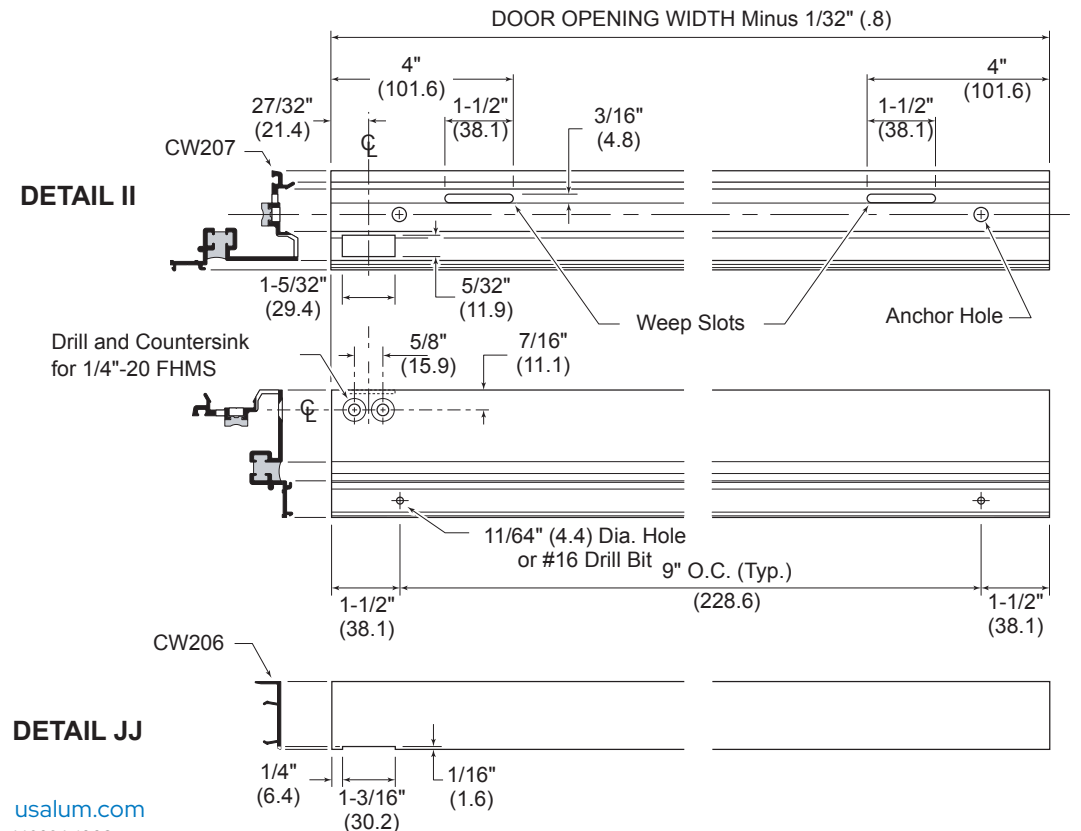
FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

FABRICATION

- For butt hung doors, fabricate header adaptor for weep slots and additional anchor holes (**Detail HH**).
(Refer to the **Entrances and Frames** section of this manual for flush bolt and panic rod strike fabrication.)



- For offset pivot doors, fabricate header adaptor for pivot (Left hand shown), weep slots and additional anchor holes. (**Detail II**) Notch face cap for pivot clearance (**Detail JJ**).
(Refer to the **Entrances and Frames** section of this manual for flush bolt and panic rod strike fabrication.)

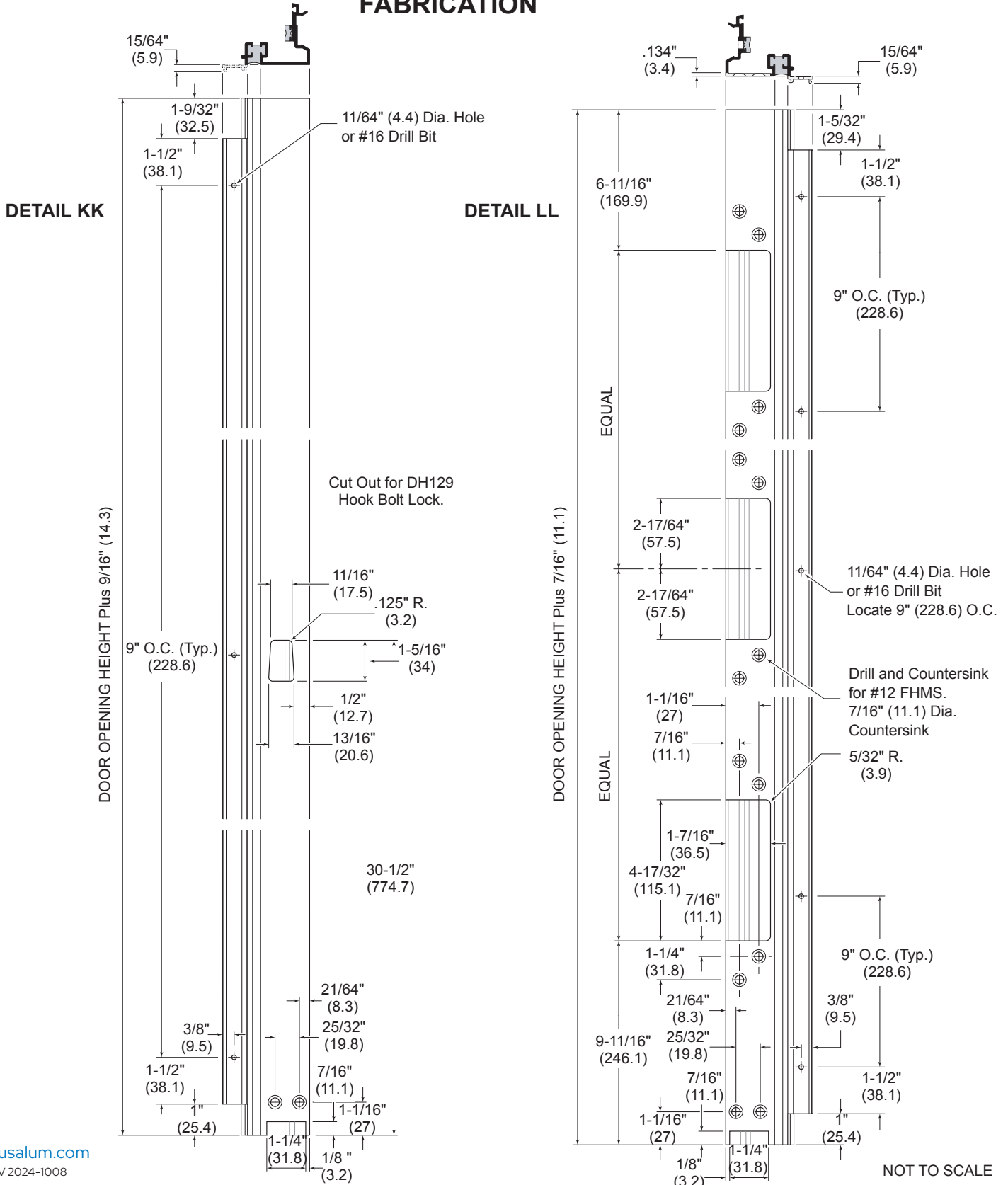


FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

5. Fabricate for lock jamb (**Detail KK**).
(Right hand shown; left hand opposite)

6. Fabricate for butt hinges (**Detail LL**).
(Left hand shown; right hand opposite)

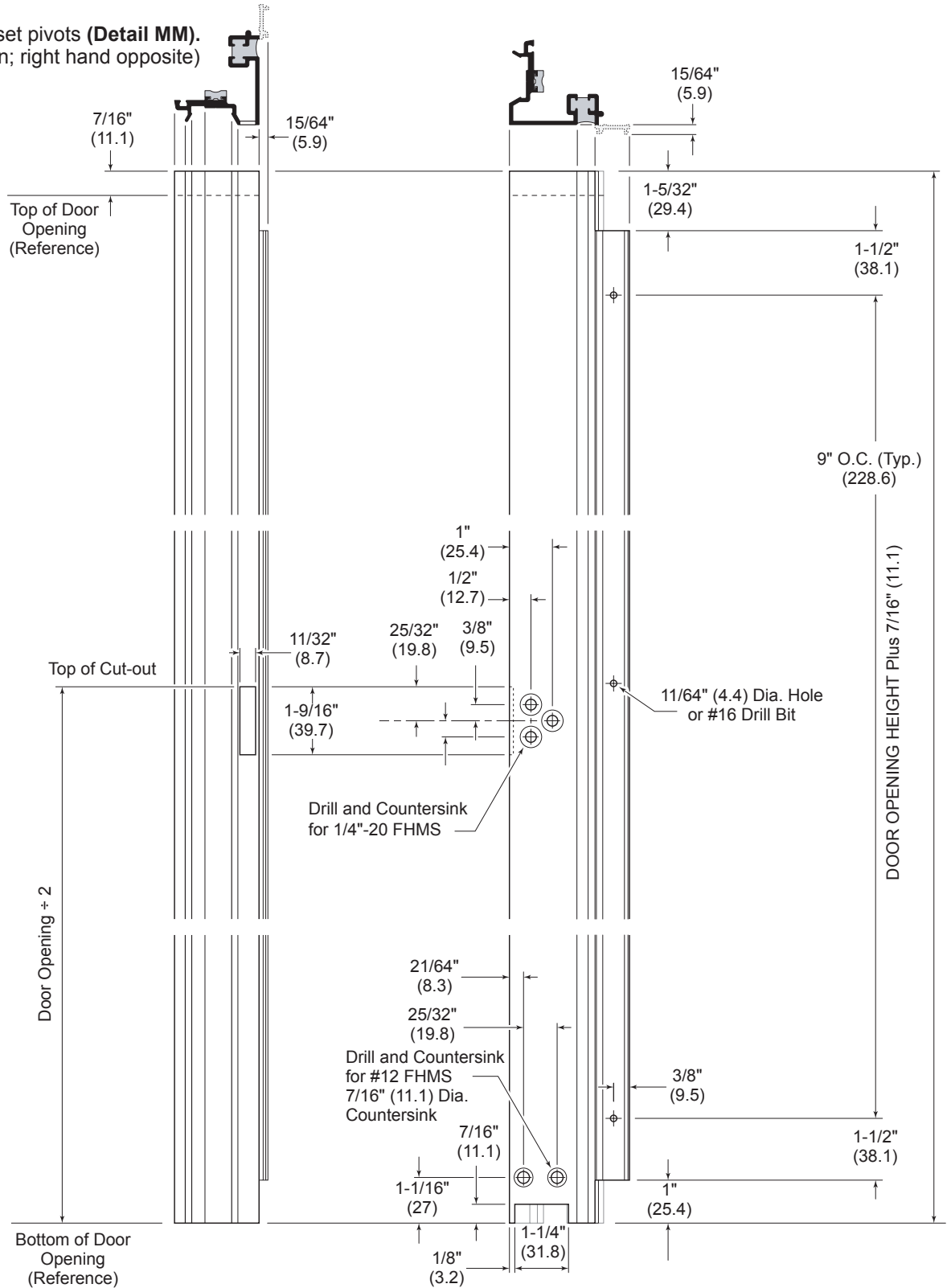
FABRICATION



FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

FABRICATION

7. Fabricate for offset pivots (**Detail MM**).
(Left hand shown; right hand opposite)



DETAIL MM

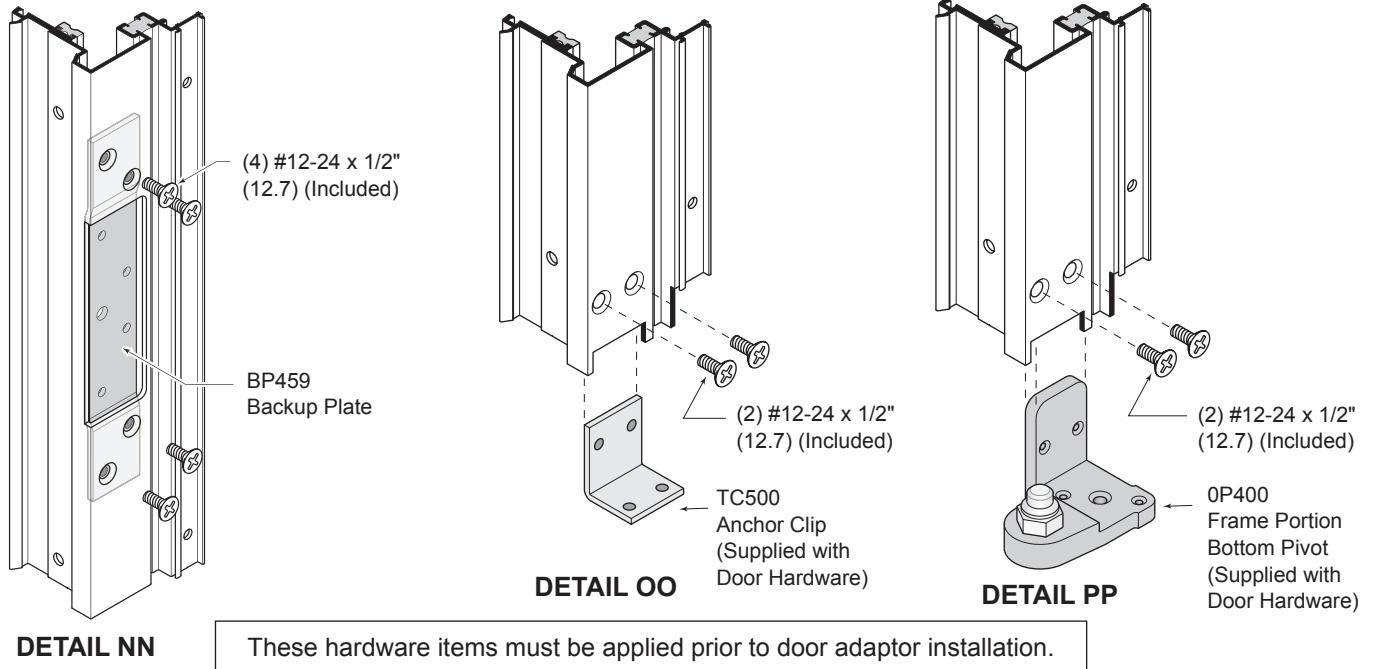
NOT TO SCALE

FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

FABRICATION

8. For butt hung application, install hinge back up plates and threshold clips (**Detail NN** and **Detail OO**).
For offset pivot application, install bottom frame portion pivot(s) (**Detail PP**). Single doors require threshold clip at lock jamb (**Detail OO**).

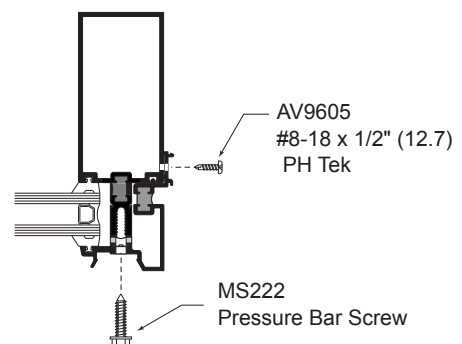
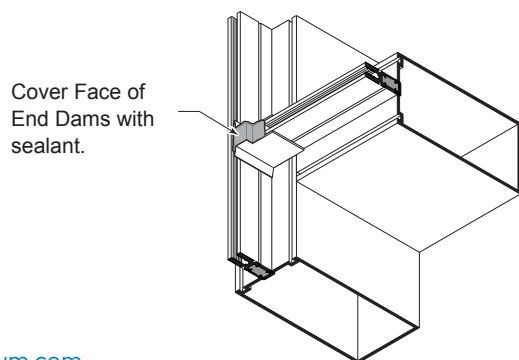
9. Install gaskets in door adaptors.



INSTALLATION

NOTE: Prior to adaptor installation all End Dams must be installed and sealed. Transom and sidelite glass must be in place.

1. Seal face of end dams (**Detail QQ**).
2. Install jamb and head adaptors using MS222 pressure bar screws (**Detail QQ**). Refer to page 27 for bolt tightening procedures. Vertical adaptors extend from floor to 7/16" (11.11) above bottom of door header/horizontal and must be installed prior to head adaptor installation.
3. Secure adaptors to mullion side walls with AV9605 Pan Head Phillips tek screws (**Detail QQ**).



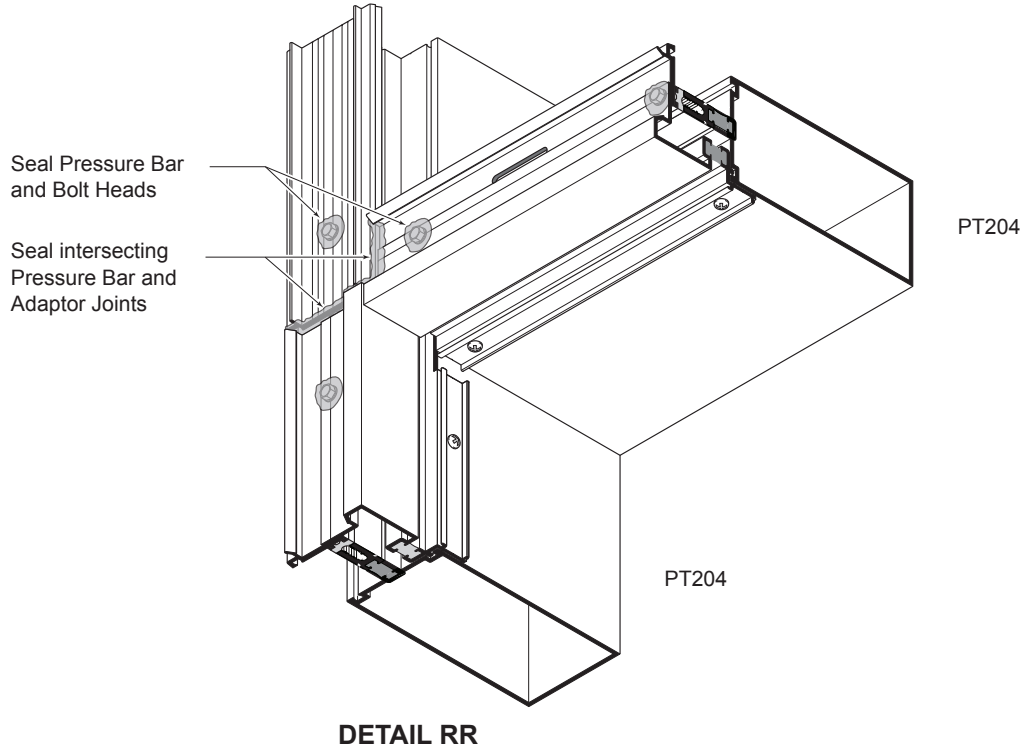
DETAIL QQ

NOT TO SCALE

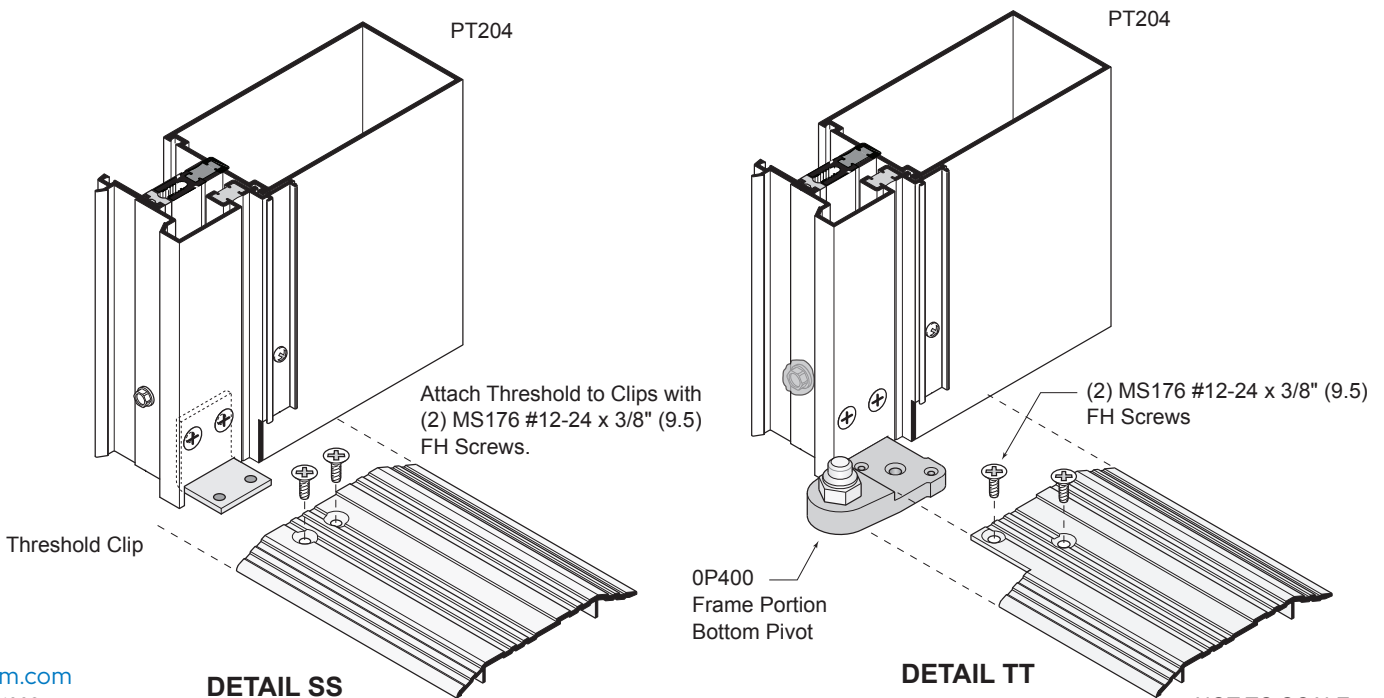
FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

- 4. Seal all pressure bar bolt heads (**Detail RR**).
- 5. Seal gaps at intersections of pressure bars and door adaptors.

NOTE: THIS IS A CRITICAL SEAL.



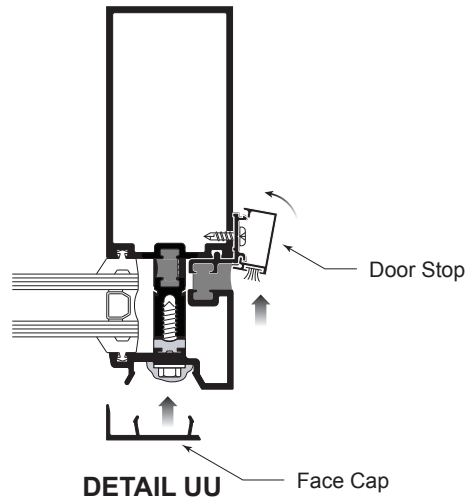
- 6. Install thresholds into opening using screws provided with door hardware (**Detail SS for butt hung, Detail TT for offset pivot application**).



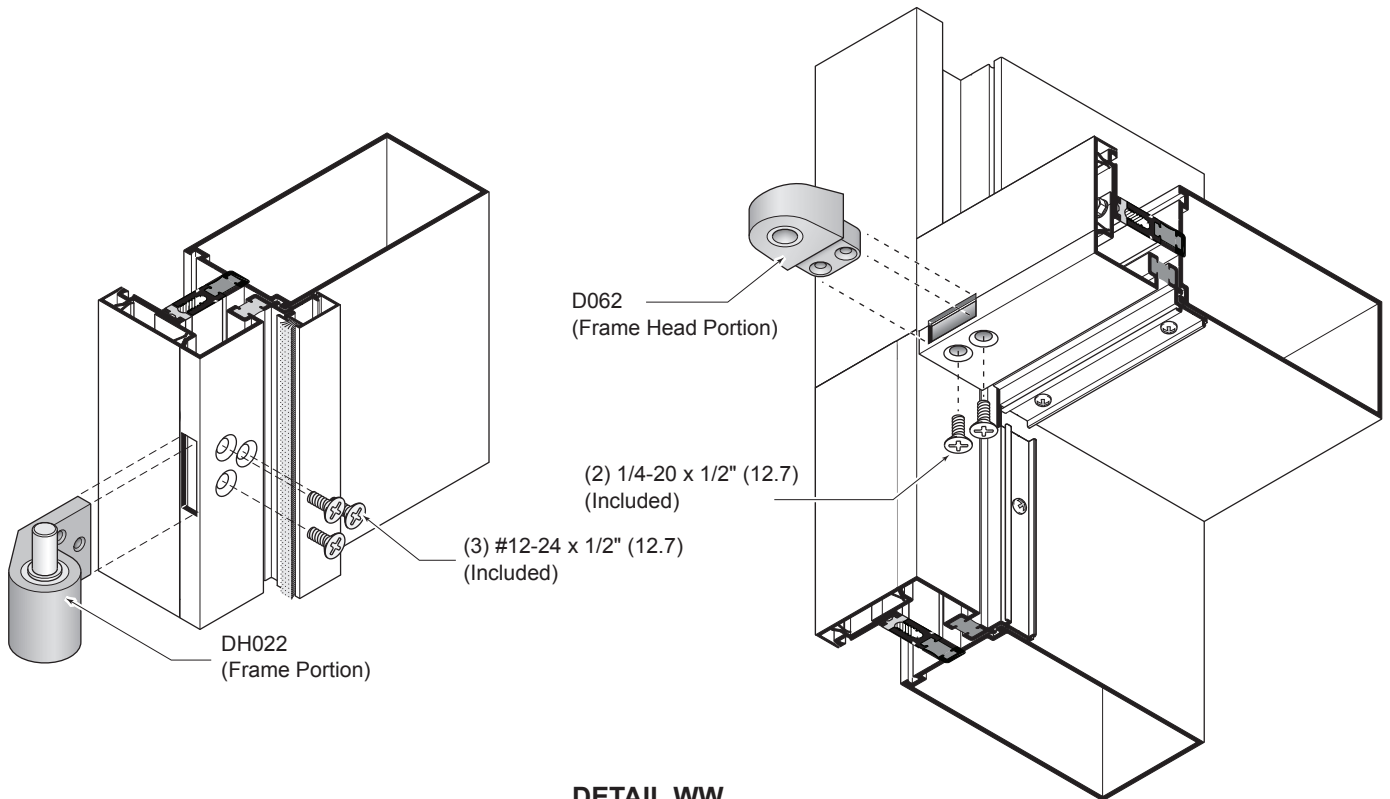
FLUSH DOOR ADAPTOR FABRICATION AND INSTALLATION

INSTALLATION

7. Snap on face caps (**Detail UU**). Vertical face caps run from floor to 9/16" (14.3) above bottom of header. (Field cutting to length is recommended)
8. Snap door stop on header adaptor (**Detail UU**). (Head door stop runs through)
9. Snap door stops on jamb members (**Detail UU**).



10. For offset pivot doors, install frame portion pivots (**Detail WW**).



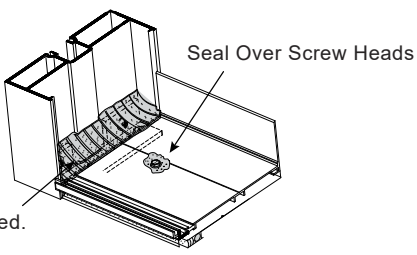
GUIDE TO SEALANTS

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.



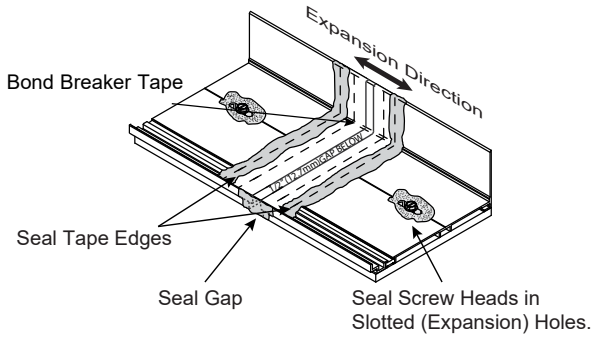
Seal Over Screw Heads

Fill with Sealant to Create a Water Shed.

EXPANSION

- **Typical Weather Sealant**

Expansion Joints.



Expansion Direction

Bond Breaker Tape

Seal Tape Edges

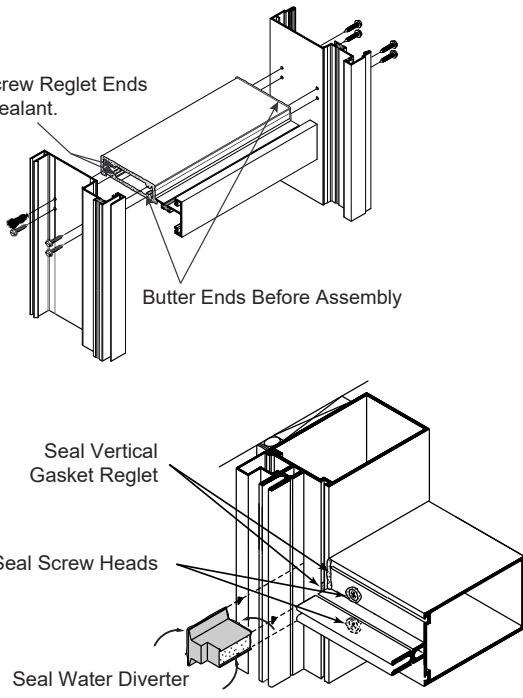
Seal Gap

Seal Screw Heads in Slotted (Expansion) Holes.

JOINT ADHESIVE

- **Typical Weather Sealant**

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



Fill Screw Reglet Ends with sealant.

Butter Ends Before Assembly

Seal Vertical Gasket Reglet

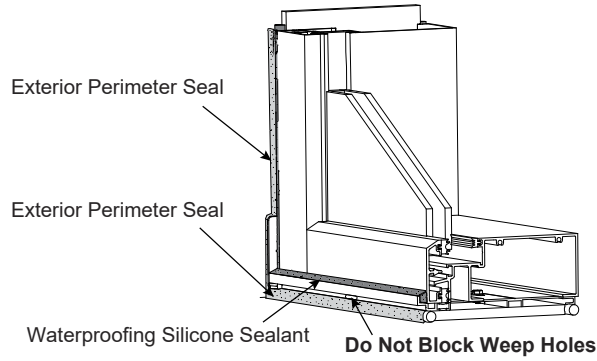
Seal Screw Heads

Seal Water Diverter

PERIMETER

- **Typical Weather Sealant**

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



Exterior Perimeter Seal

Exterior Perimeter Seal

Waterproofing Silicone Sealant

Do Not Block Weep Holes

STRUCTURAL

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

Glass-to-Glass or Glass-to-Metal