



SERIES 3252, 3252SG, HP3253, AND HP3253SG 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 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.*

STRUCTURAL SILICONE GLAZING

- 1. SEALANTS.** All sealants referenced in these instructions must be a one part elastomeric silicone and must be applied according to the silicone manufacturer's recommendations.
- 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.
- 4. 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.
- 5. 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.
- 6. U.S. ALUMINUM.** It is the responsibility of U.S. Aluminum to supply a system to meet the architect's specifications.

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, square, and true.
- 3. INSTALLER QUALIFICATION.** The **Series 3252/3252SSG/HP3253/HP3253SSG** curtain wall systems are 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® and 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.

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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. 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.
- 11. GLAZING PRACTICES.** The air and water performance of the **Series 3252/3252SSG/HP3253/HP3253SSG** 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 its 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.

GENERAL INSTALLATION NOTES CONT.

RECOMMENDED GUIDELINES FOR ALL INSTALLATIONS:

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. Gap 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.

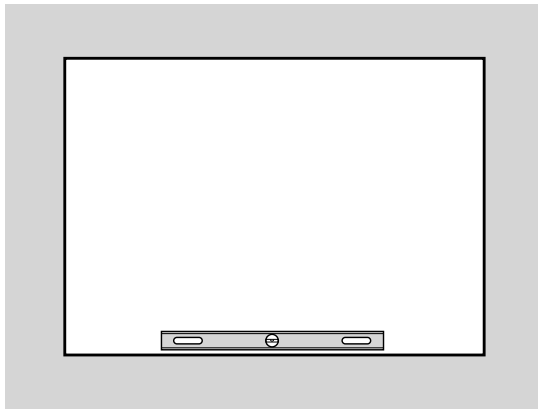
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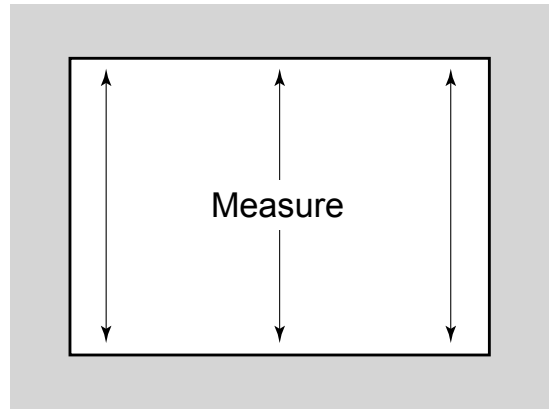
SITE PREPARATION

BEFORE INSTALLATION

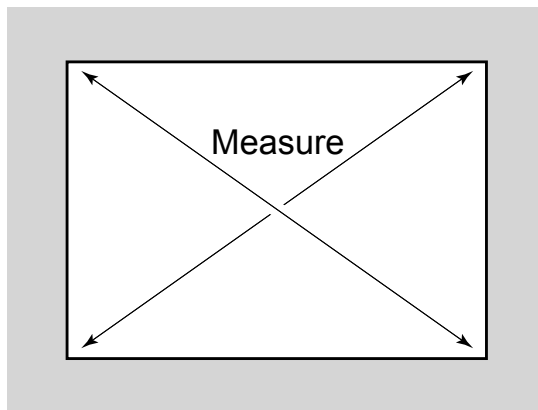
1. Review and measure the opening.
2. Verify rough window opening size 1/2" (12.7) clearance in both width and height to the window. Verify framing is plumb, straight, and true around window opening. Measure opening at each end and at center vertically and horizontally. Make corrections to openings as required. Measure opening diagonally to check squareness. Chip concrete high points to flush and rounded corners to square.



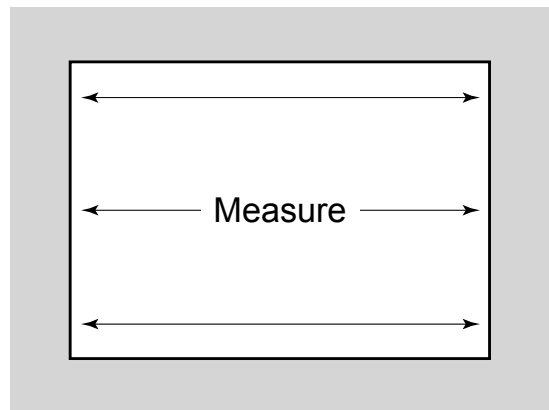
LEVEL



VERTICAL DIMENSION

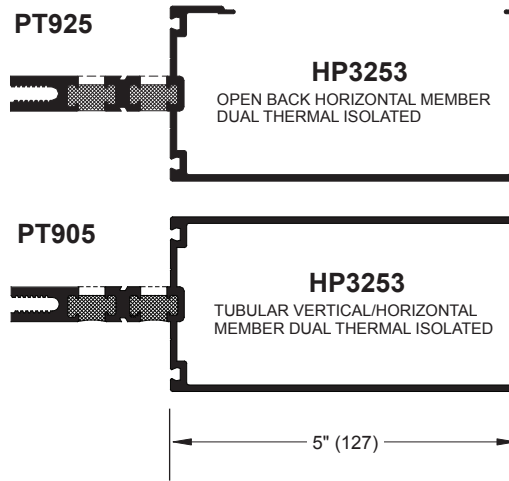
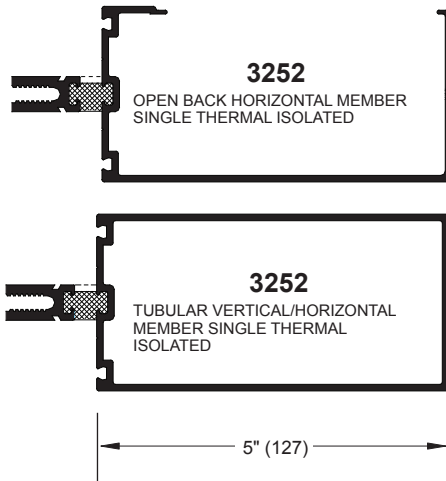
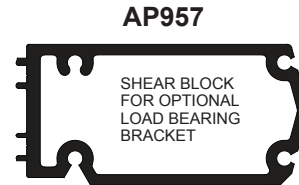
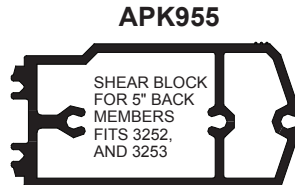
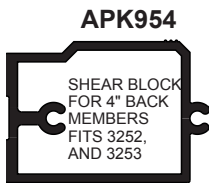


SQUARE



HORIZONTAL DIMENSION

PROFILES



PT925

PT325

PT905

PT305

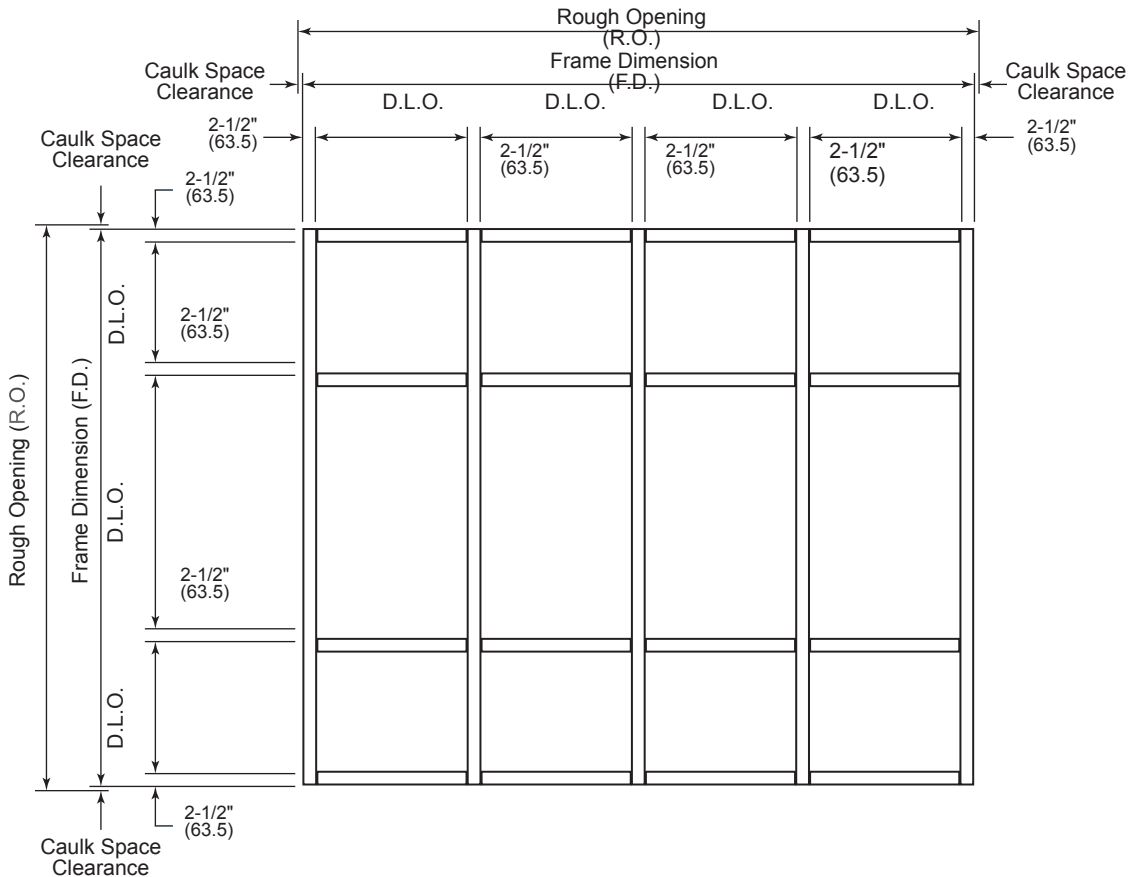
FRAME FABRICATION

CUTTING

Most of the details shown on these instructions are for 2" (51) glazing and 5" (127) back members. Details for 1" (25) glazing systems and 5" (127) back members are similar.

1. Cut members to size. Use the following information below:

| Component | Dimensioning |
|---------------------------------|--------------------------------------|
| Vertical Members: R.O. | R.O. Minus Top and Bottom Clearances |
| Vertical Pressure Bars: | F.D. Minus 1/4" (6.4) |
| Vertical Face Covers: | F.D. Minus 1/32" (0.8) |
| Horizontal Members: | D.L.O. Minus 1/32" (0.8) - plus 0" |
| Horizontal Pressure Bars: | D.L.O. Minus 1/4" (6.4) |
| Horizontal Face Covers: | D.L.O. Minus 1/32" (0.8) |
| Vertical Transition Adapters: | D.L.O. Plus 1" (25.4) |
| Horizontal Transition Adapters: | D.L.O. Minus 1/8" (3.2) |



TYPICAL ELEVATION

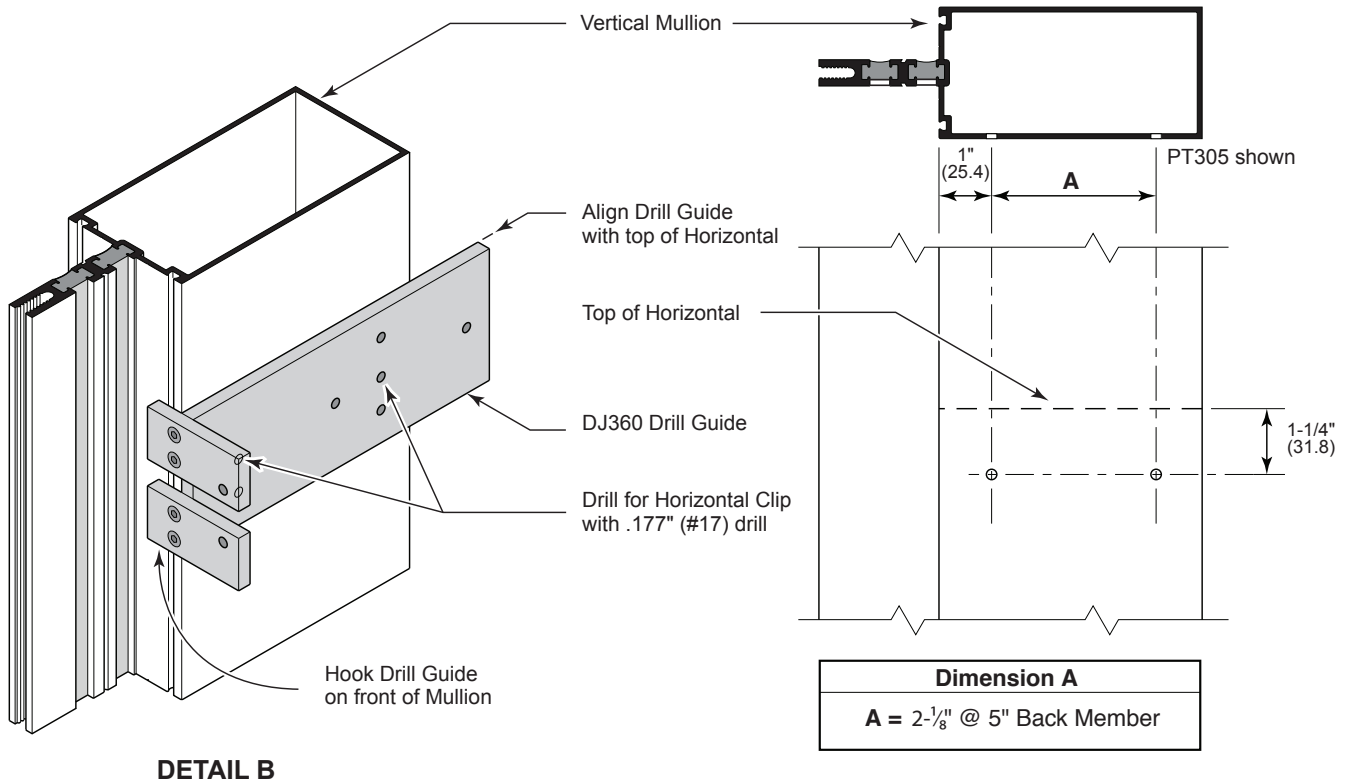
DETAIL A

FRAME FABRICATION (CONTINUED)

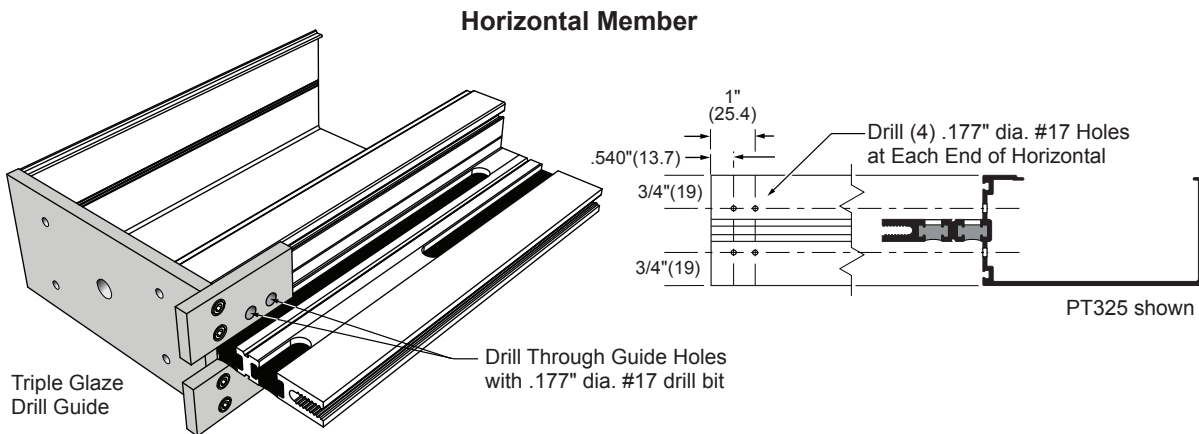
DRILLING

NOTE: See pages 42-44 for optional Horizontal Load Bearing Brackets

2. Mark on verticals the location of horizontal members and drill holes for shear blocks. Drill Jigs are available. See **DETAIL B** for drill guide usage.



3. Fabricate ends of horizontal members for shear block pick-up screws. See **DETAIL C** for drill guide usage.



NOT TO SCALE **DETAIL C**

NOTE: Triple glaze assemblies may require optional Horizontal load bearing brackets. Visit: usalum.com for more information.

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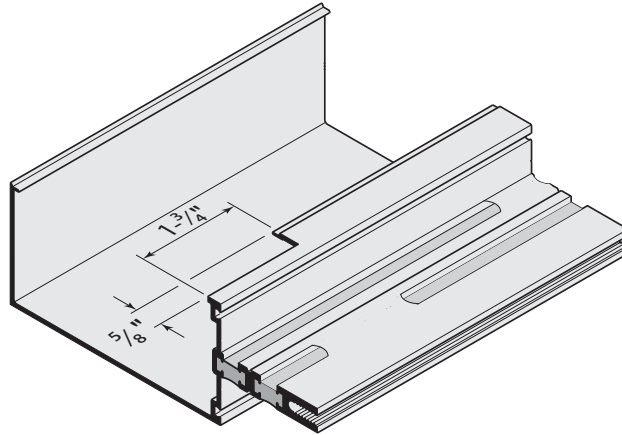
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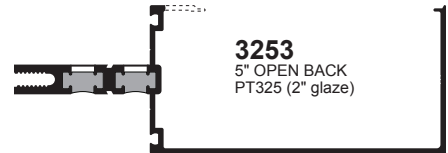
FRAME FABRICATION (CONTINUED)

NOTCHING

4. Some open back Head and Sill Members require notching at each end for shear block clearance as shown in **DETAIL D**.

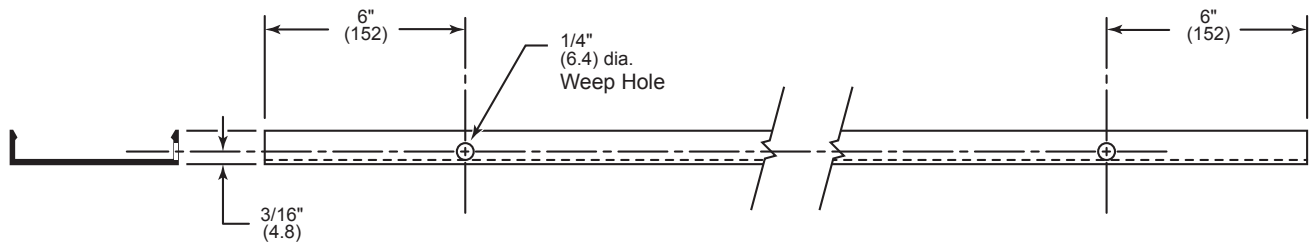


DETAIL D



WEEP HOLES

5. Fabricate bottom of horizontal face covers for weep holes 6" from each end as shown in **DETAIL E**.

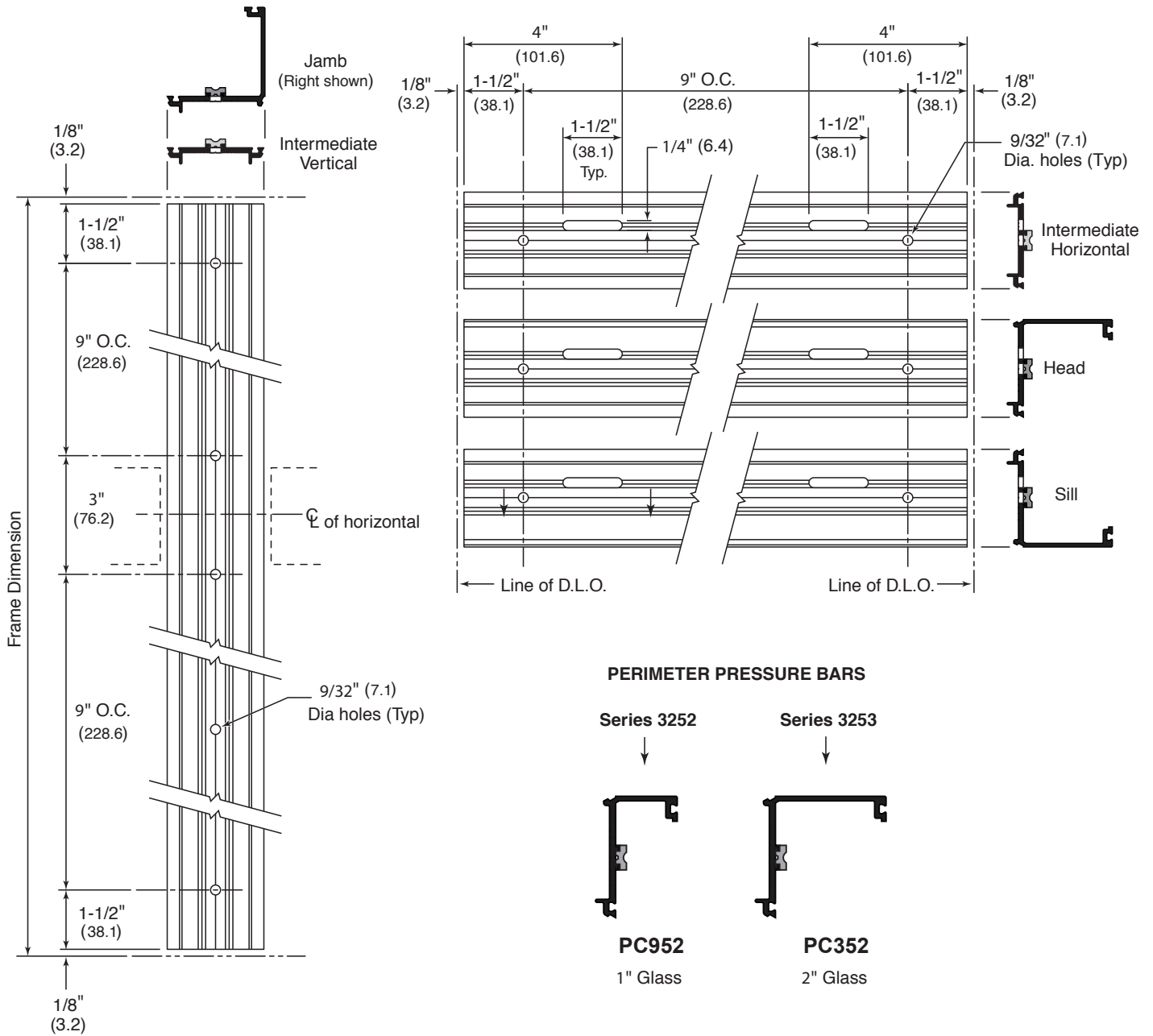


DETAIL E

NOTE: See pages 42-44 for optional Load Bearing Brackets

FRAME FABRICATION (CONTINUED)

- Vertical pressure bars feature 9/32" (7.1) dia. attachment holes 9" (228.6) On Center; additional holes should be drilled at 1-1/2" (38.1) from all ends and at vertical/horizontal intersections.
- Fabricate two 1/4" x 1-1/2" (6.4 x 38.1) weep slots 4" (101.6) from each end in horizontal pressure bars and drill 9/32" (7.1) dia. attachment holes 1-1/2" (38.1) from each end as shown on **DETAIL F**.



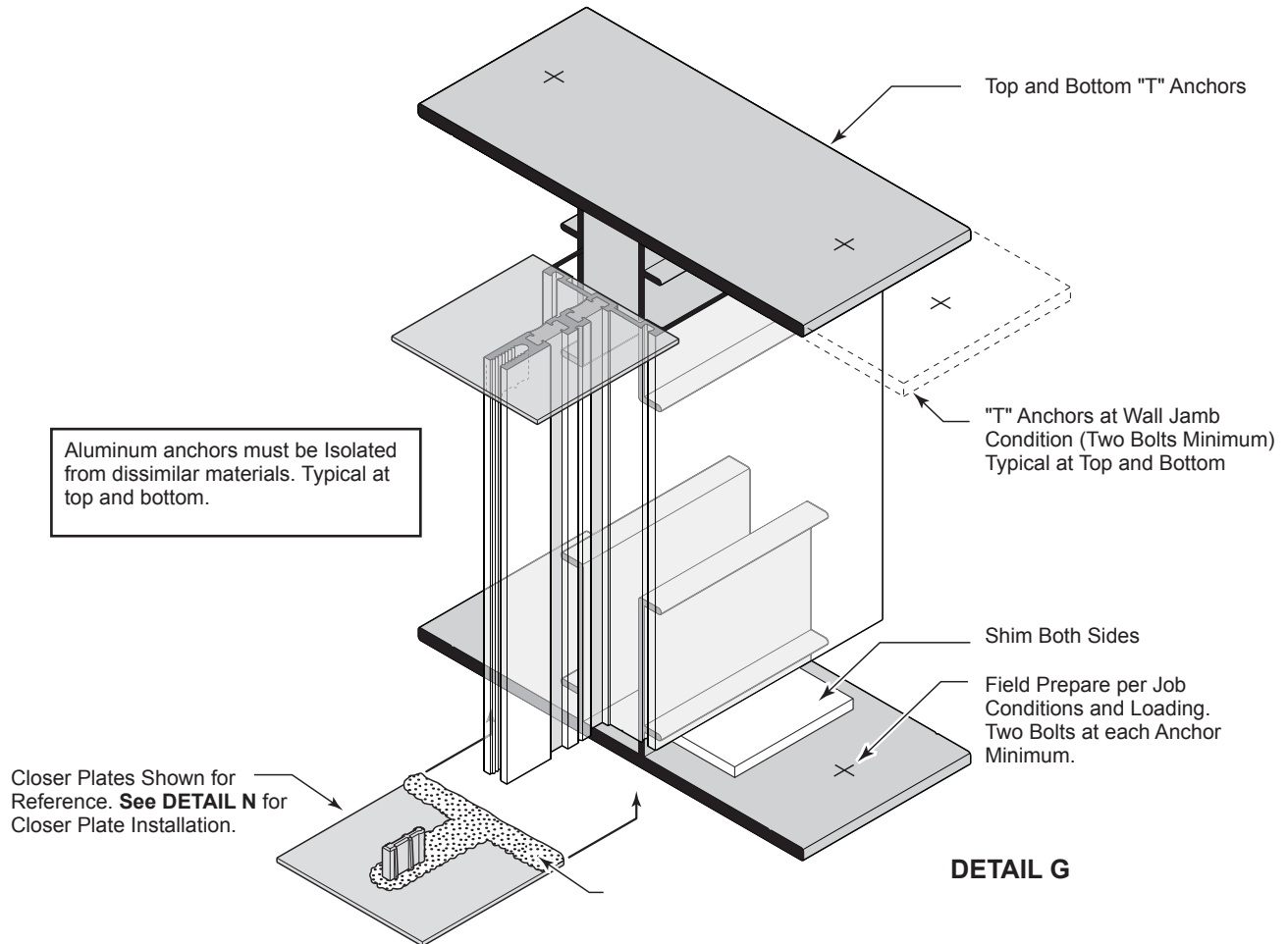
DETAIL F

FRAME INSTALLATION

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.

SINGLE SPAN CONDITION

1. Slide top and bottom "T" anchors into vertical members. **See DETAIL G.**
2. Install verticals plumb and level. If shims are required place them directly under each vertical for proper load distribution. Secure top and bottom anchors to structure.



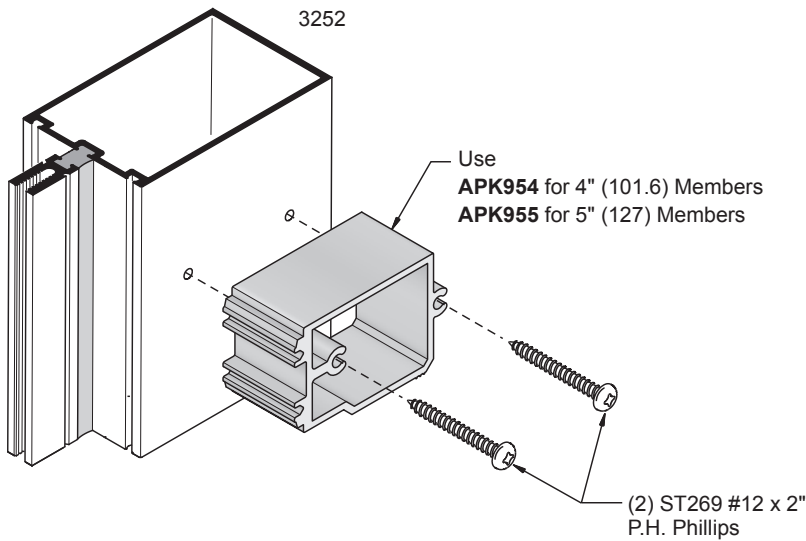
FRAME INSTALLATION (CONTINUED)

SINGLE SPAN CONDITION (CONTINUED)

4" (101.6) HORIZONTALS

5" (127) HORIZONTALS

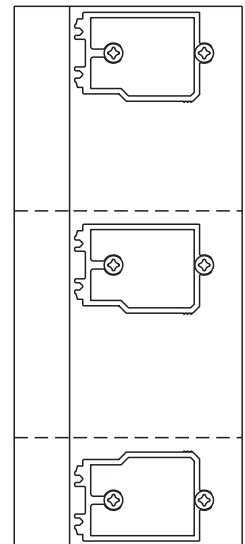
- Attach shear blocks to verticals with screws provided. **See DETAIL H** for shear blocks position.
NOTE: Use tubular horizontals when span exceeds 6'-0" (1.8 m) or deadload exceeds 250 lbs. (113.4 Kg) use optional load bearing bracket and proper horizontal mullion when glazing unit exceeds deadload chart. (See page 42)



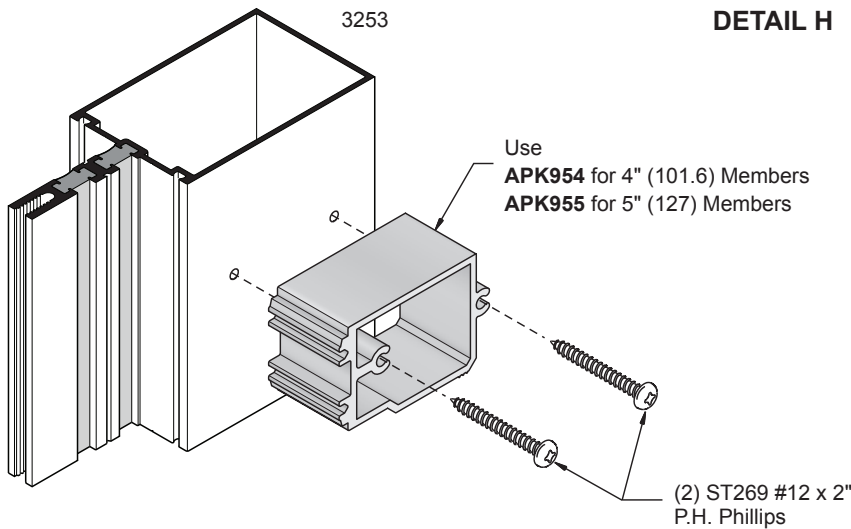
Shear Block
 Position for Header

Shear Block Position
 for Intermediate
 Horizontal.

Shear Block
 Position for
 Intermediate
 Sill



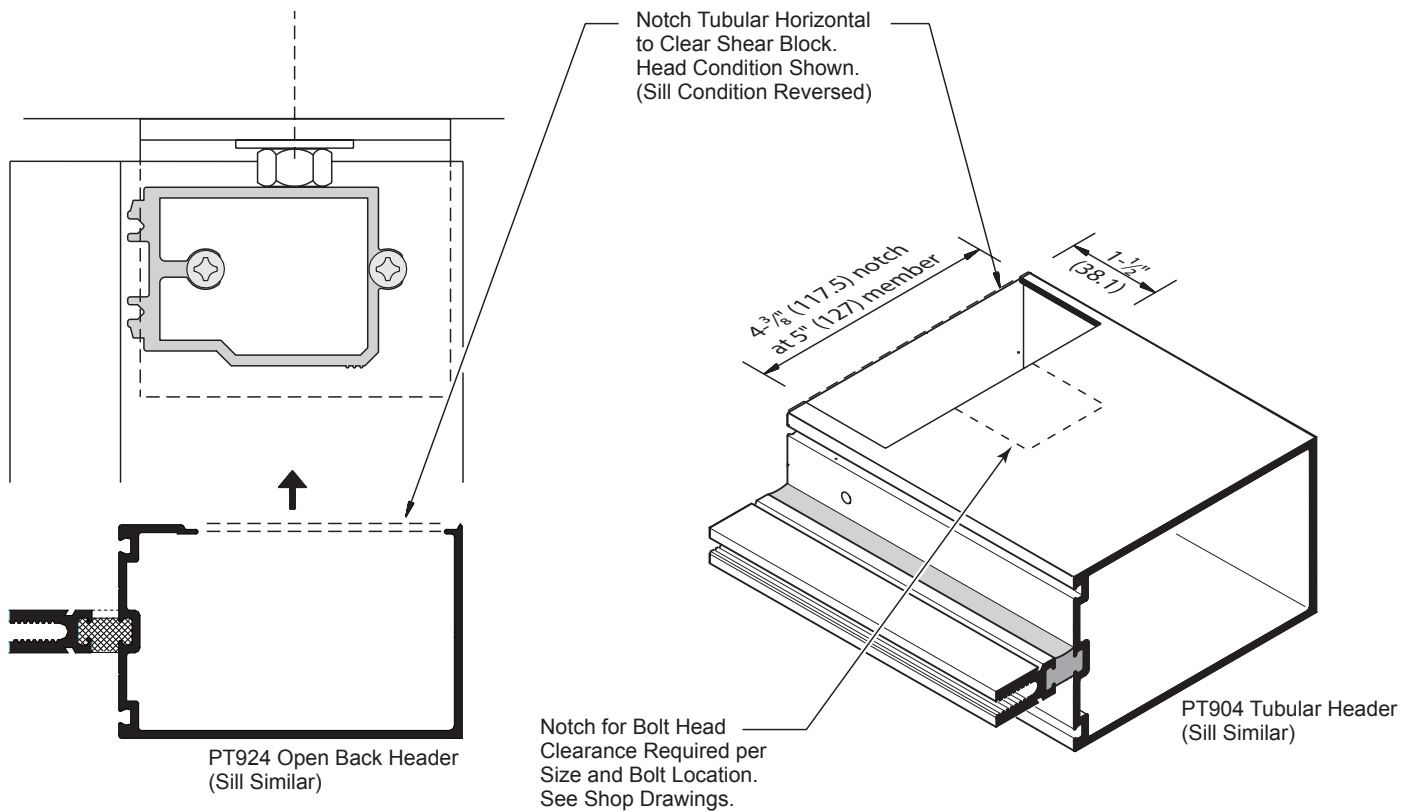
DETAIL H



FRAME INSTALLATION (CONTINUED)

SINGLE SPAN CONDITION (continued)

NOTE: Elevations using tubular horizontals must be installed per bay. See **DETAIL H** for head and sill conditions.



DETAIL J

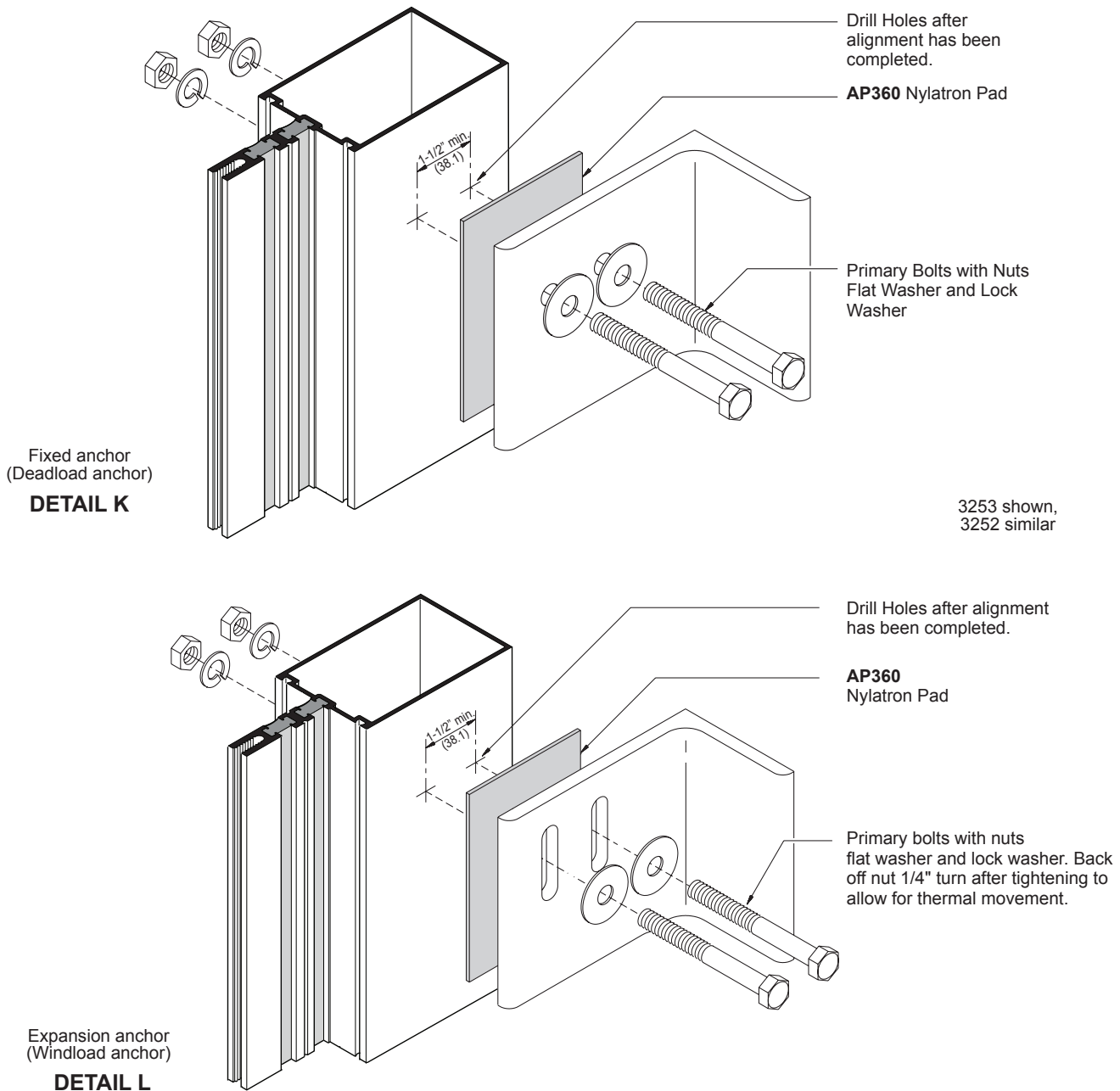
FRAME INSTALLATION (CONTINUED)

MULTI-SPAN CONDITION

Details K and L 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.

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.



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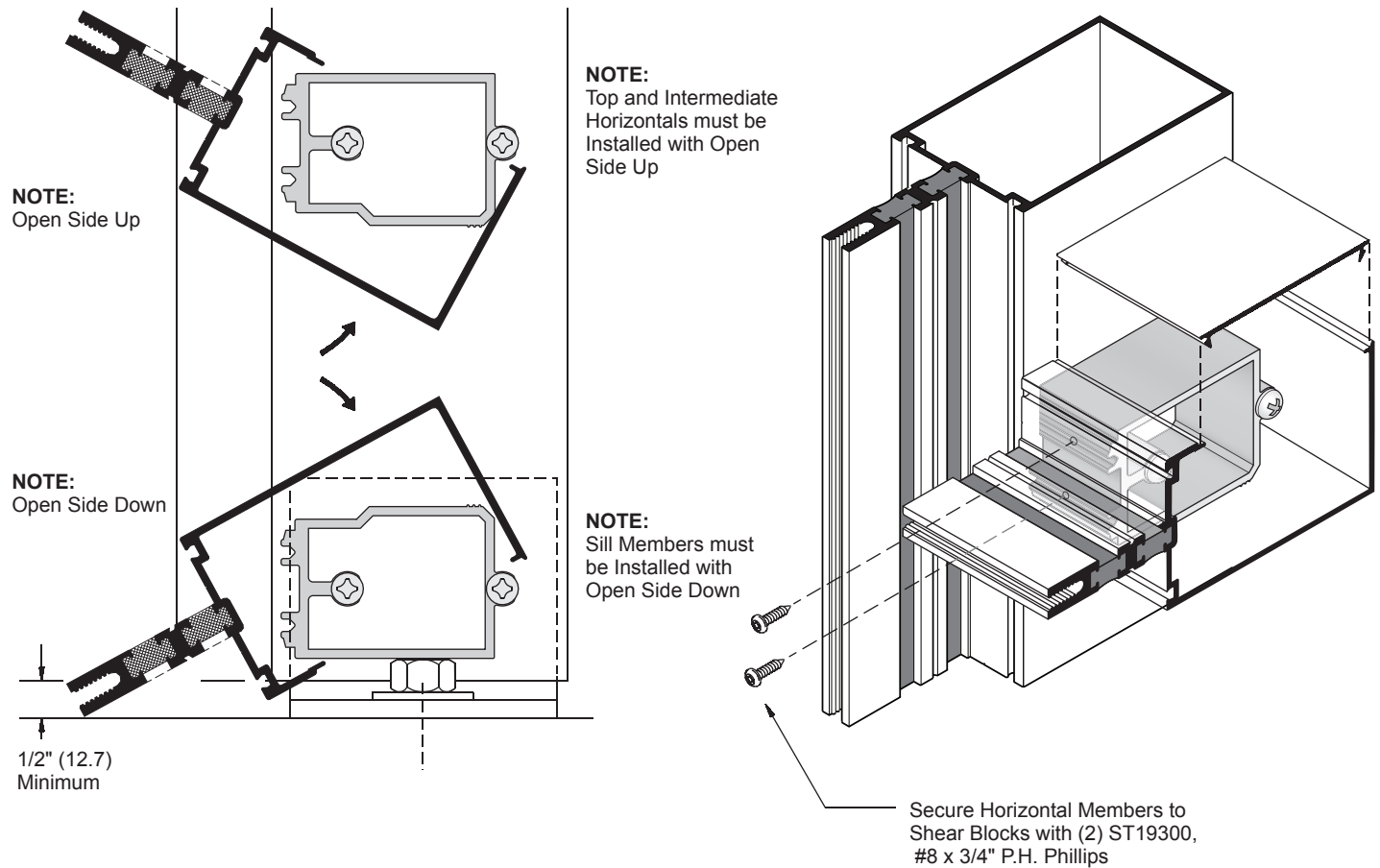
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FRAME INSTALLATION (CONTINUED)

MULTI-SPAN CONDITION (continued)

TWO PIECE HORIZONTALS

5. Roll horizontal members over shear blocks and secure them with screws provided. See **DETAIL M**.



DETAIL M

NOTE: See pages 42-44 for optional Load Bearing Brackets.

FRAME INSTALLATION (CONTINUED)

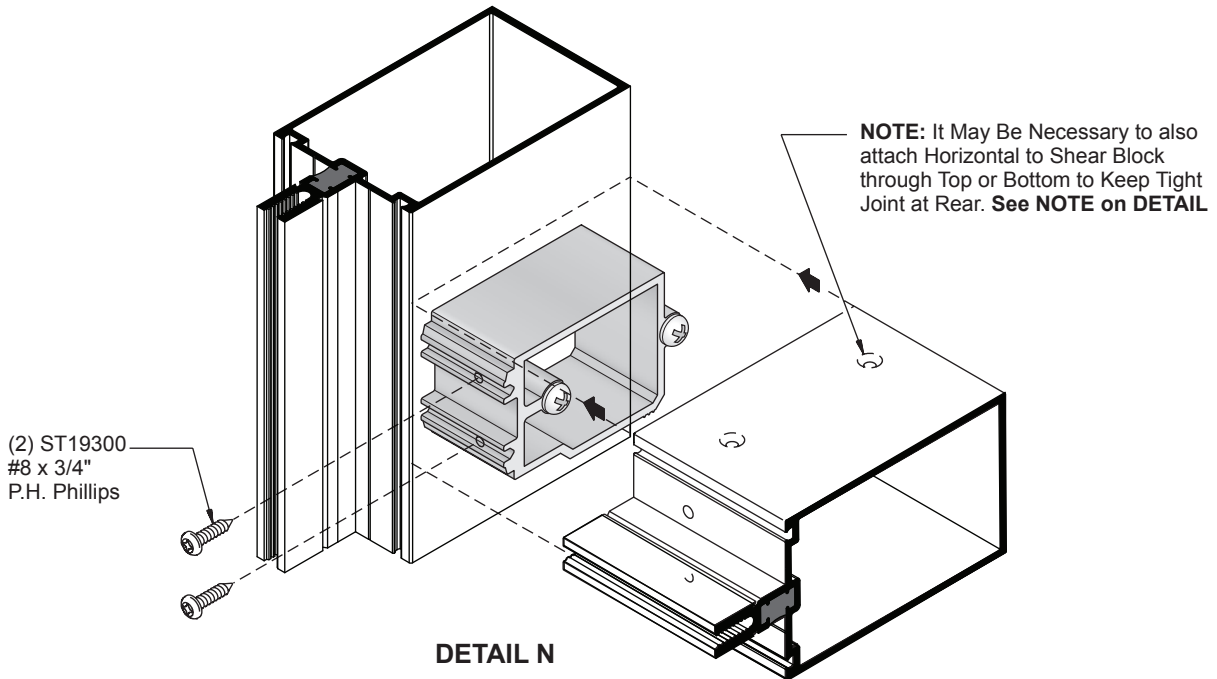
MULTI-SPAN CONDITION (continued)

TUBULAR HORIZONTALS

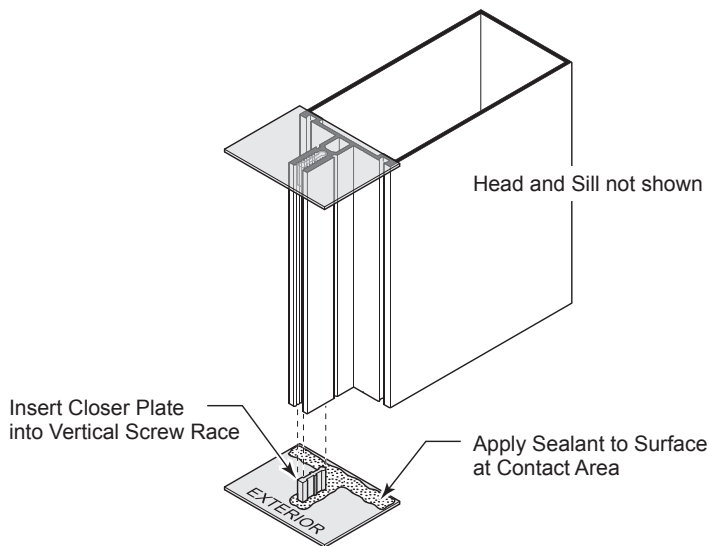
Install snap-in horizontal filler where open back of horizontal member is exposed.

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)

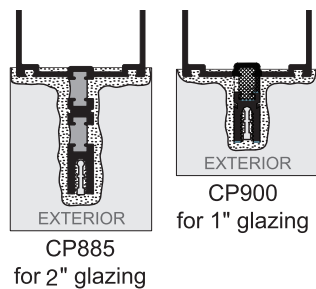
- Slide horizontals over shear blocks and secure them with screws provided. **See DETAIL N.**



- Apply sealant to closer plates as shown in **DETAIL O**. Install at top and bottom of jambs and mullions after head and Sill Members are in place.



NOTE:
Clean All Surfaces prior to Applying Sealants. See Sealant Manufacturer Requirements.
TYPICAL AT ALL CONDITIONS

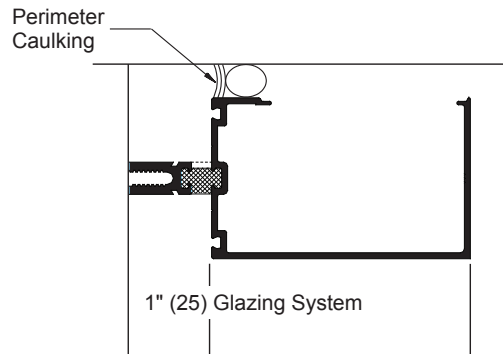


Position closer plate properly.
Raised letters "EXTERIOR"

FRAME INSTALLATION (CONTINUED)

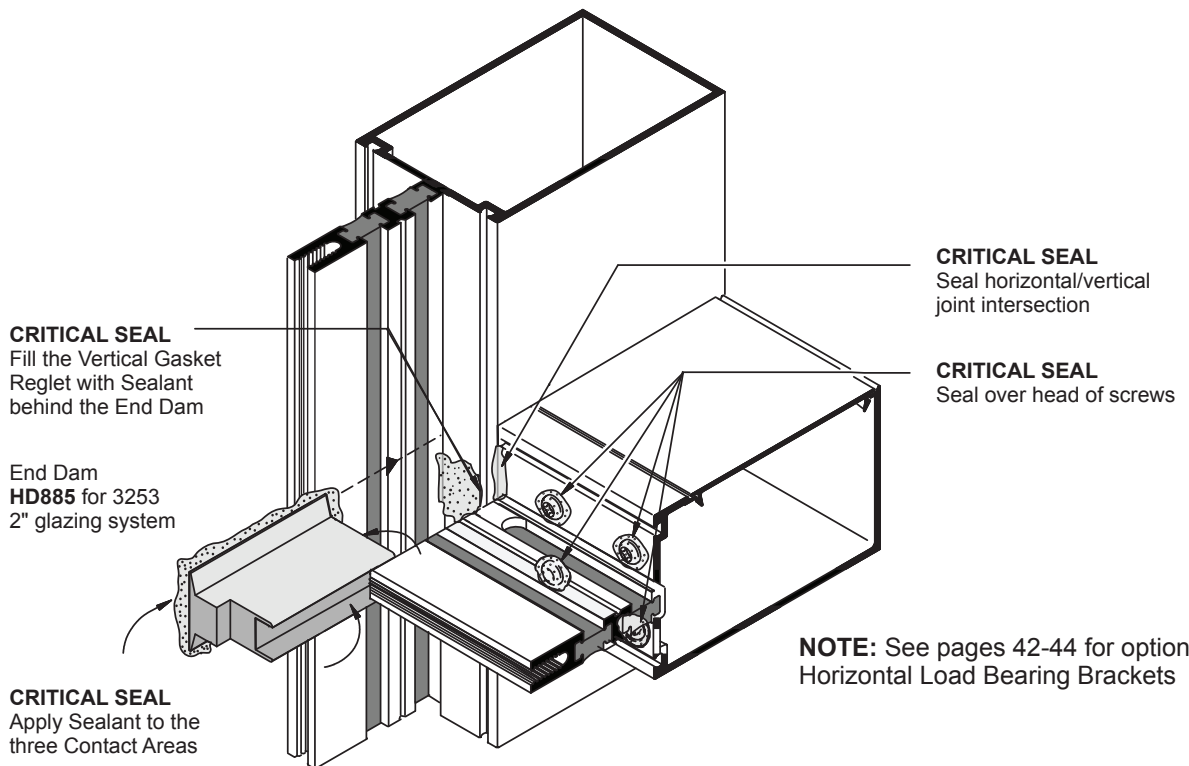
MULTI-SPAN CONDITION (continued)

- Once all verticals and perimeter members are installed, seal around perimeter. Perimeter caulking must be completed prior to installation of glass and pressure bars. Insure perimeter sealant has smooth transition across vertical end dams.



DETAIL P

- Seal joint between horizontal and vertical. Also seal over heads of screws in the glazing pockets.
- Apply sealant at the three contact areas of end dams. Also fill the vertical gasket reglet with sealant at the end dam location. **See DETAIL P.** Slide end dams into place.
NOTE: End dams occur at head and sill also.



NOTE: See pages 42-44 for optional Horizontal Load Bearing Brackets

DETAIL Q

NOTE: Consult sealant manufacturer for proper cleaning and priming recommendations

GLAZING

GLASS SIZES

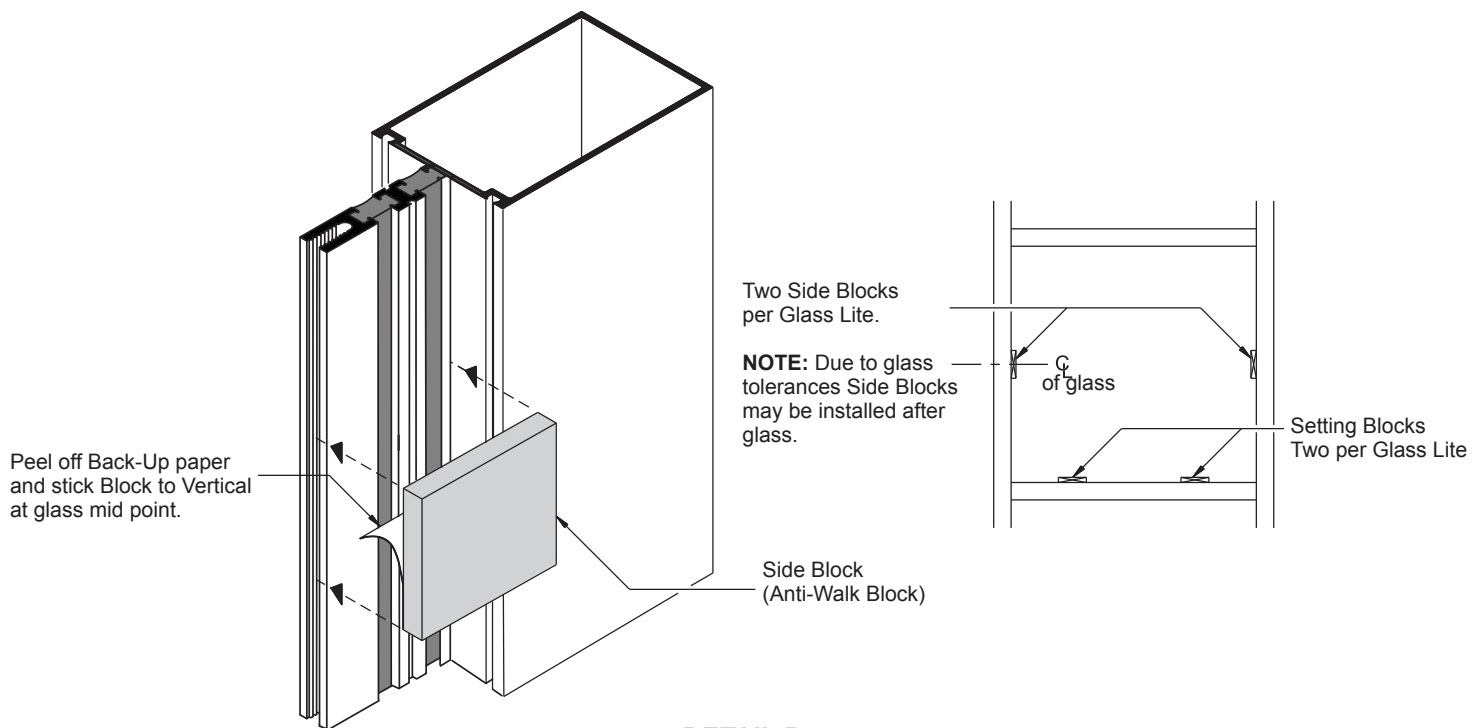
GLASS WIDTH & HEIGHT = DAYLIGHT OPENING + 1" (25.4)

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

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 (4.44°C). If necessary warm gaskets in a hot box prior to installing.

Use **NP430** dense gasket at exterior and **NP420** sponge at interior.

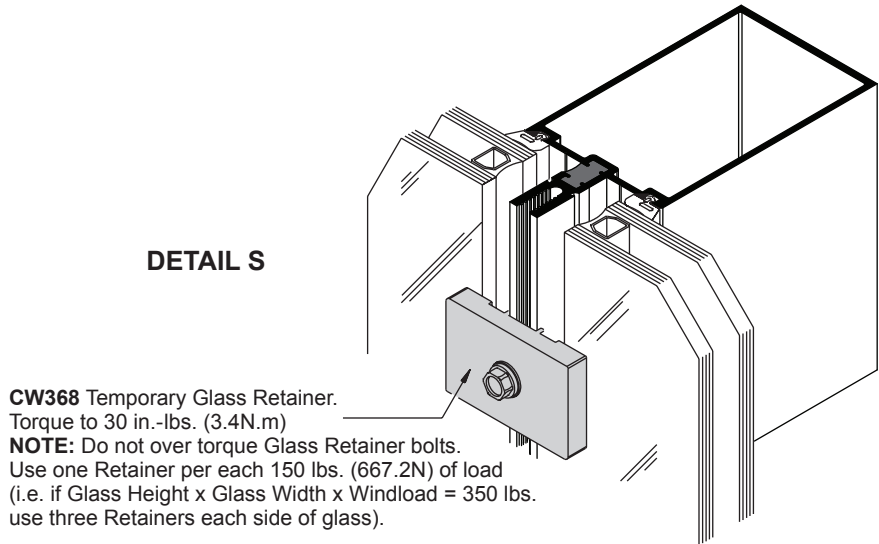
1. Cut gaskets allowing 1/8" (3.2) extra length per foot of extrusion to allow for shrinkage. Vertical gaskets on mullion run past horizontal gaskets by 5/8" (15.9). **See DETAIL R**
Horizontal gaskets butt against vertical gaskets.
2. Install back gaskets into vertical and horizontal members and front 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.
3. Position two setting blocks for each glass lite as directed by the deadload charts and shop drawings.
4. Peel off side blocks' paper backing and locate them, two per glass lite, at approximately mid-height of glass. **See DETAIL R.**



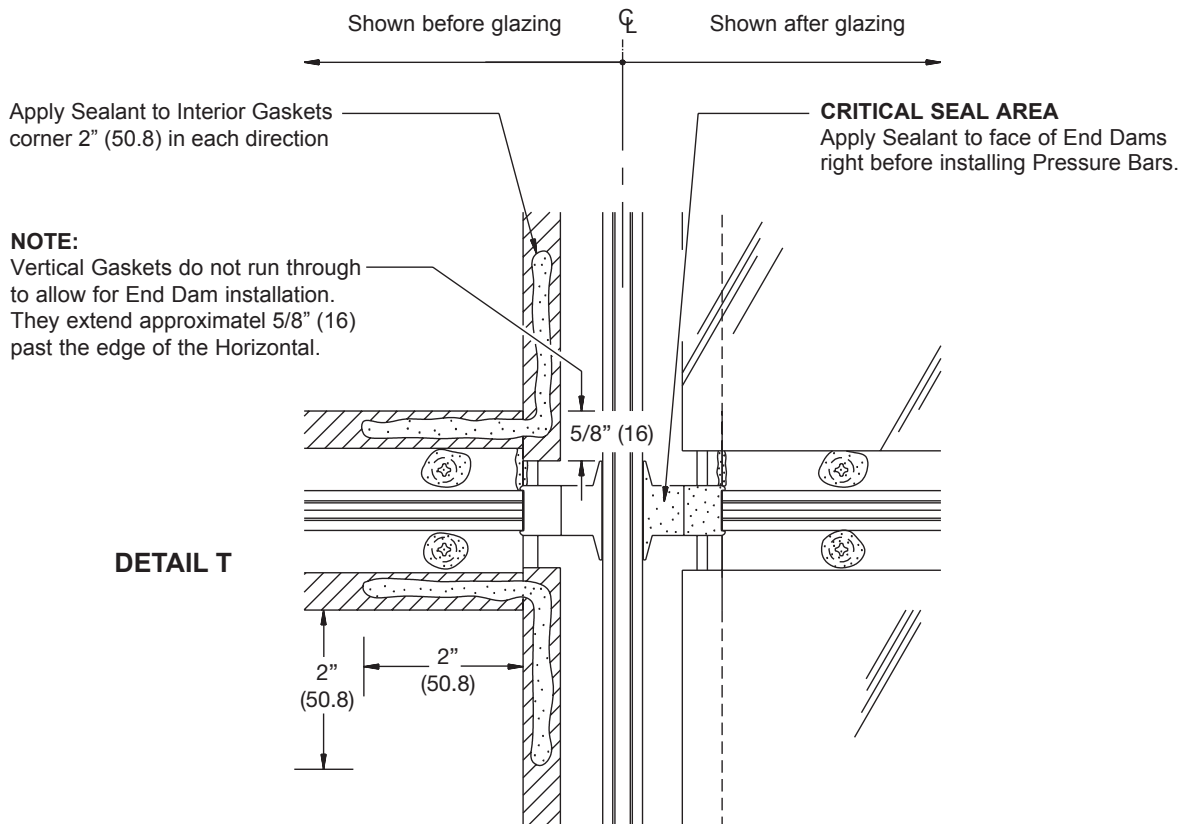
DETAIL R

GLAZING (CONTINUED)

- Apply bead of sealant at interior gaskets' corners 2" (50.8) in each direction. **See DETAIL T.**
- Install glass and center in opening. Use **CW368** temporary glass retainers to hold glass in place until pressure bars are installed. **See DETAIL S.**



- Apply sealant to face of dams. This is a critical seal area. **See DETAIL T.**



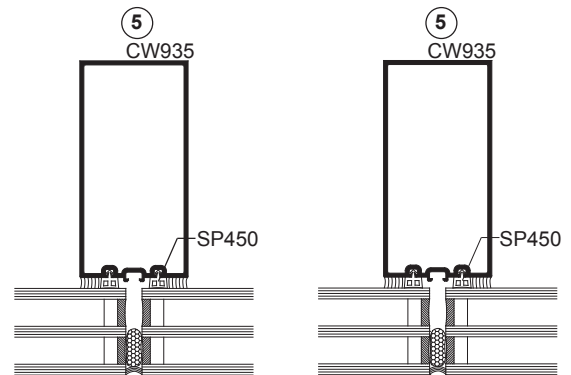
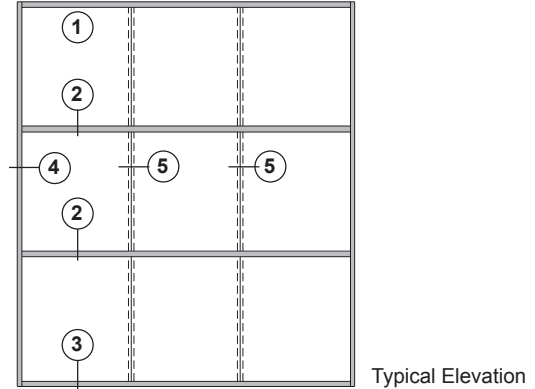
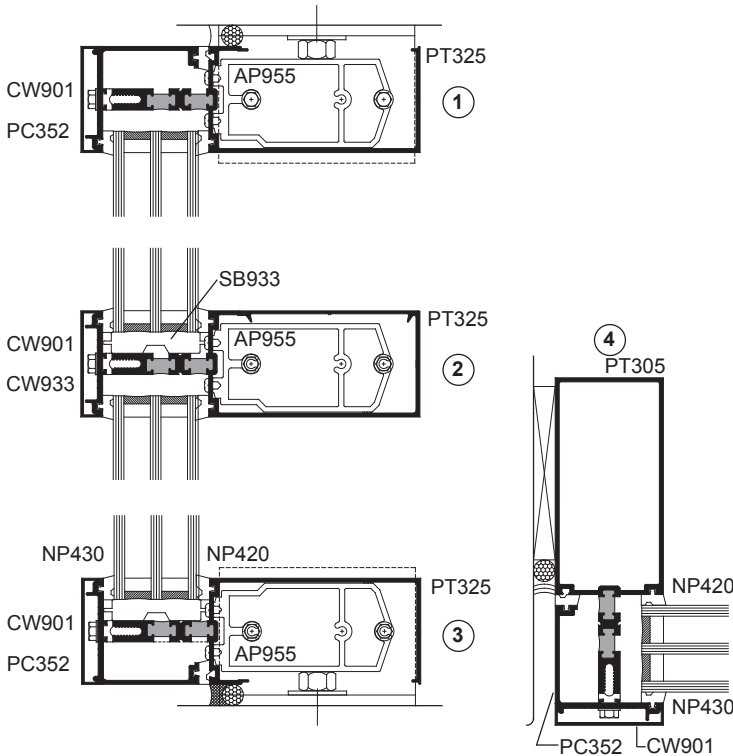
STRUCTURAL SILICONE GLAZING VERTICAL MULLIONS

Series HP3253SG Triple glaze is shown below, Series 3252SG dual glaze is similar.

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

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

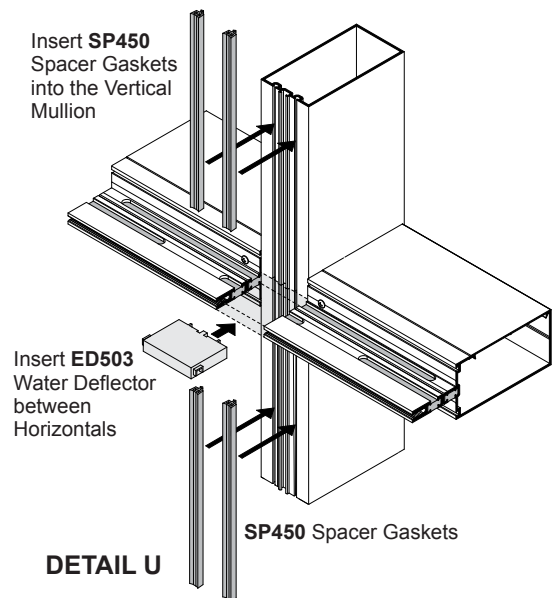
Refer to item 9 of the General Installation Notes on page 03 regarding structural sealants.



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 (4.44°C). If necessary warm gaskets in a hot box prior to installing.

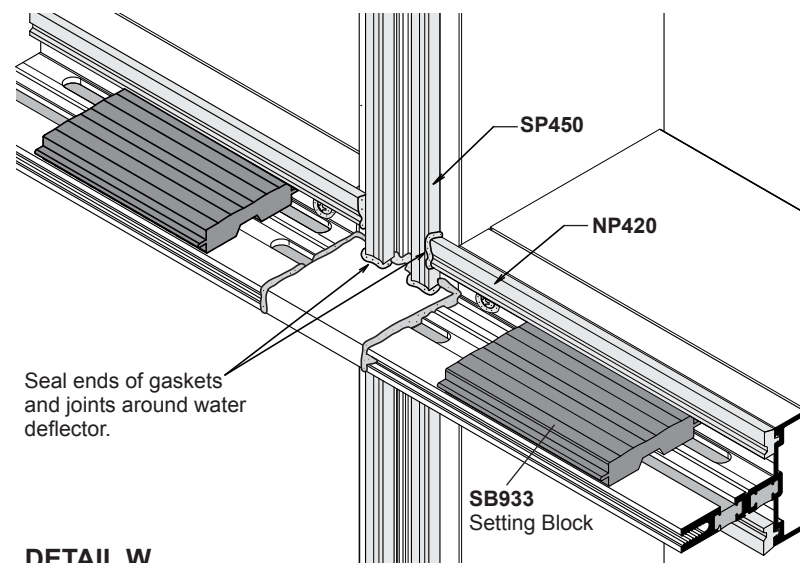
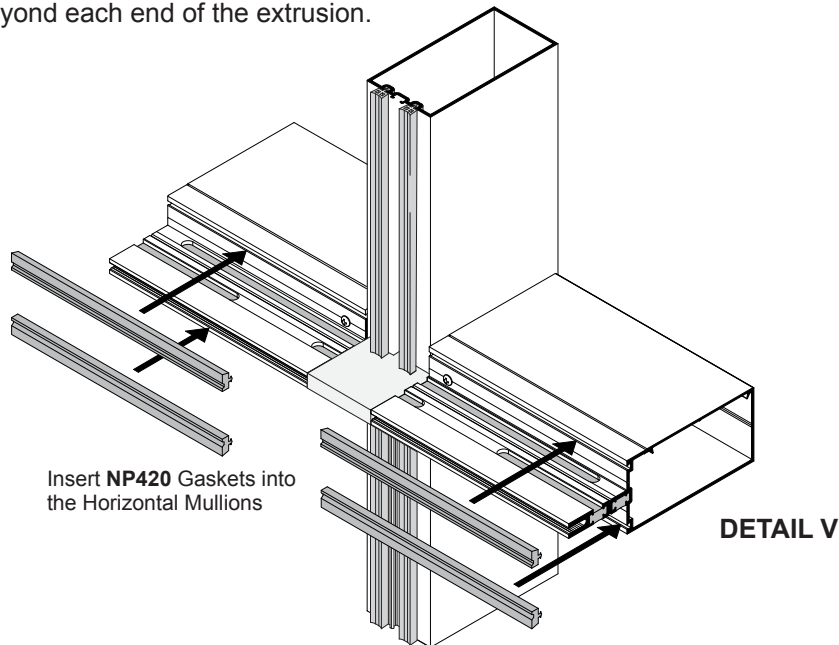
For the intermediate horizontal mullions, use **NP430** dense gasket at the exterior and **NP420** sponge gasket for the interior. Use **SP450** spacer gasket on the Intermediate Vertical Mullions.

1. Cut gaskets 1/8" (3.2) long per foot of extrusion to allow for shrinkage.
Vertical gaskets on mullion run past horizontal gaskets by 5/8" (15.9). **See DETAIL W.**
Horizontal gaskets butt against vertical gaskets.
Insert a water deflector between the two horizontal members and install spacer gaskets into verticals.
See DETAIL U.



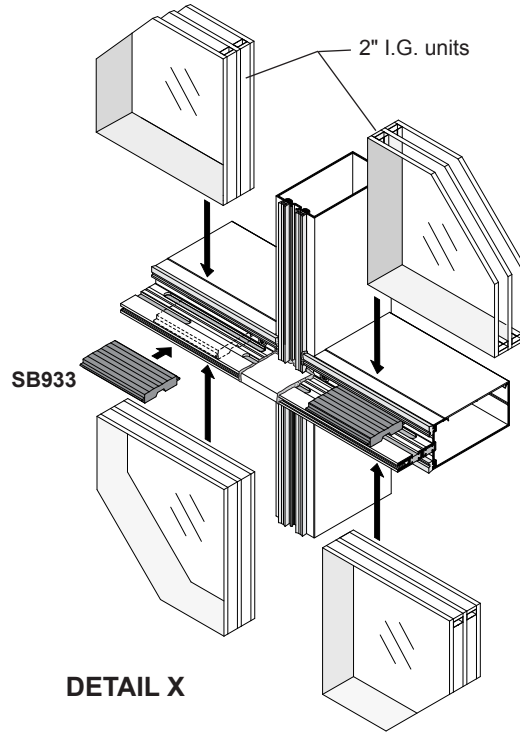
STRUCTURAL SILICONE GLAZING (CONTINUED)

2. Install the **NP420** back gaskets into the intermediate horizontal mullions. See **DETAIL V**. Seal the horizontal gaskets to the vertical gaskets and the joints around all water deflectors with *CRL RTV408 silicone sealant as shown in **DETAIL W**.
3. Position the two setting blocks on the horizontal mullions for each glass lite as directed by the deadload charts and shop drawings. See **DETAIL W**.
4. Remove paper backing from the side blocks and apply to the Jambes only, at approximately mid-height of glass. See **DETAIL R** on page 20.
5. Install front gaskets, **NP430**, into horizontal pressure bars. The pressure bar gaskets should extend 1/8" (3.2) beyond each end of the extrusion.

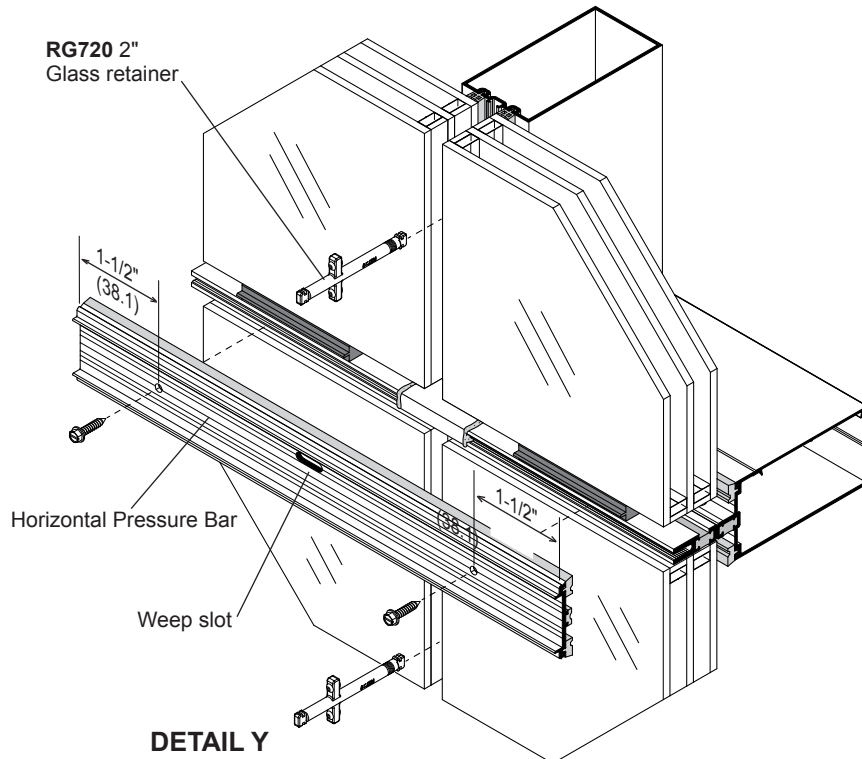


STRUCTURAL SILICONE GLAZING (CONTINUED)

6. Install the glass unit and center it in the opening and on top of the two setting blocks. See **DETAIL X**. Openings with Jamb members should have the glass units flush with the side blocks.

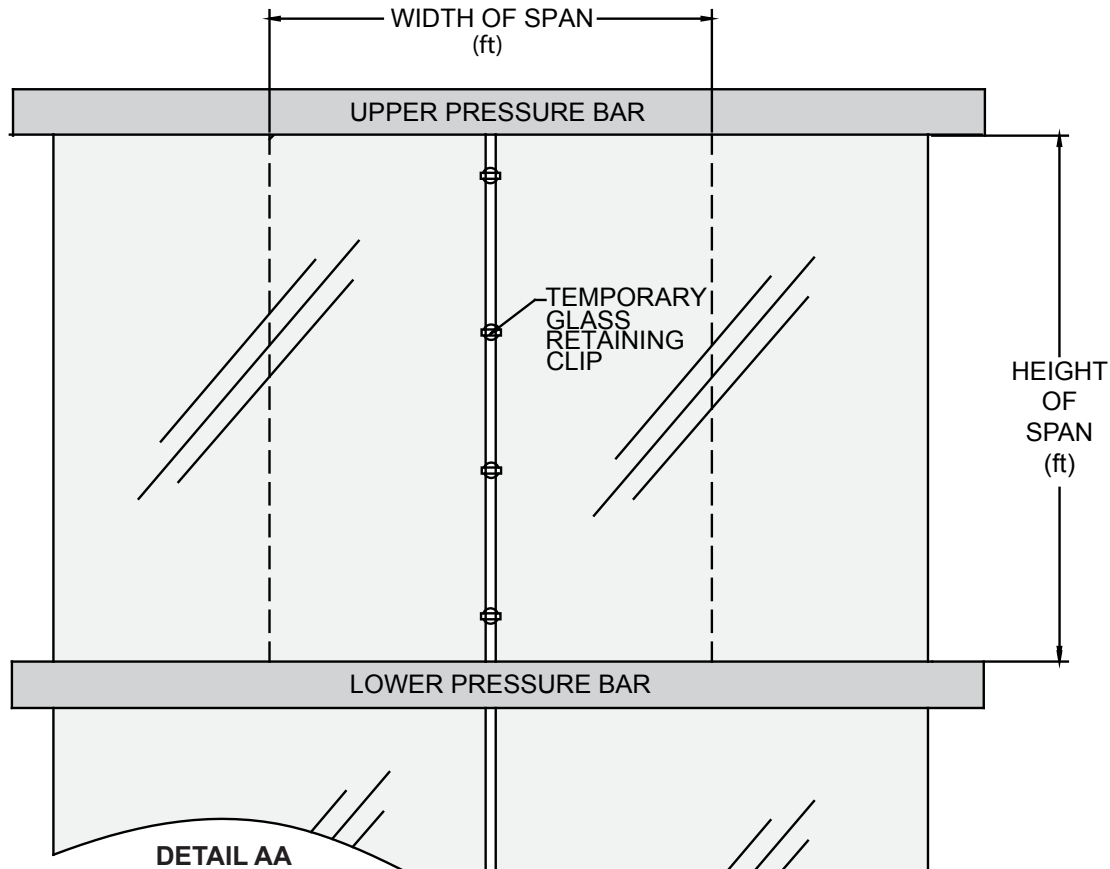
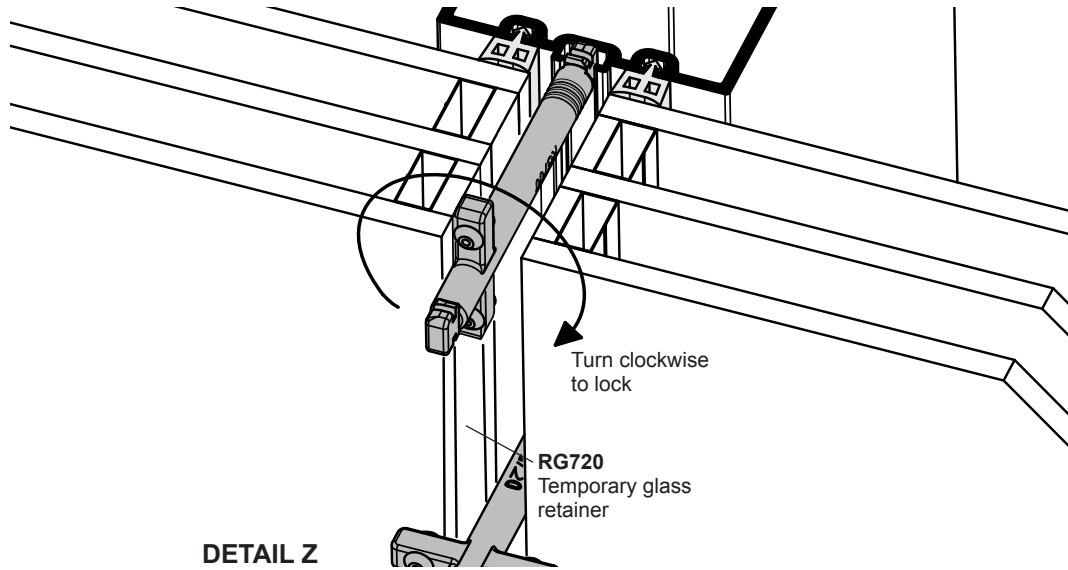


7. Partially secure the glass units in place by installing the Horizontal Pressure Bar to the horizontal mullions with screws, **Part MS222**. Weep slots should be to the top of the bar when installed. See **DETAIL Y**.



STRUCTURAL SILICONE GLAZING (CONTINUED)

8. At the Intermediate Verticals, install **RG720** temporary glass retainers. (See **DETAIL AA** for number of clips per mullion). Insert the long end of the retainer in between the glass units and turn clockwise to engage with the mullion. See **DETAIL Z**.

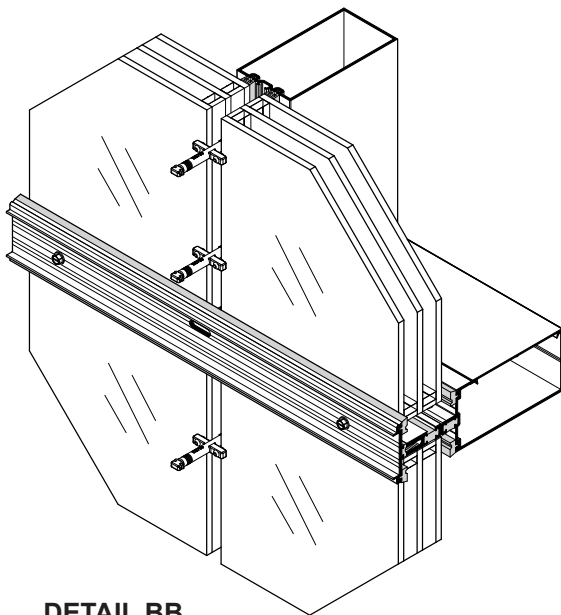


STRUCTURAL SILICONE GLAZING (CONTINUED)

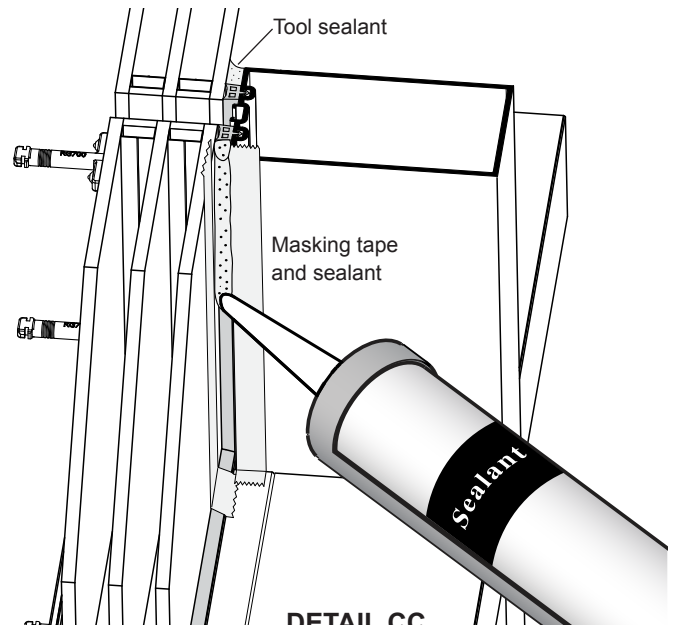
9. Securing the glass from the exterior with the horizontal pressure bars and temporary retainers. See **DETAIL BB**. Apply structural silicone to the intermediate vertical mullions on the interior side.

The gap between the intermediate vertical mullion and the glass will be filled with structural silicone. Use masking tape along the edge of the mullion and on the glass to achieve a clean bead after tooling. See **DETAIL CC**. Remove the masking tape before the silicone cures.

NOTE: Always follow structural silicone manufacturer's instructions and recommendations for surface preparation and silicone application.

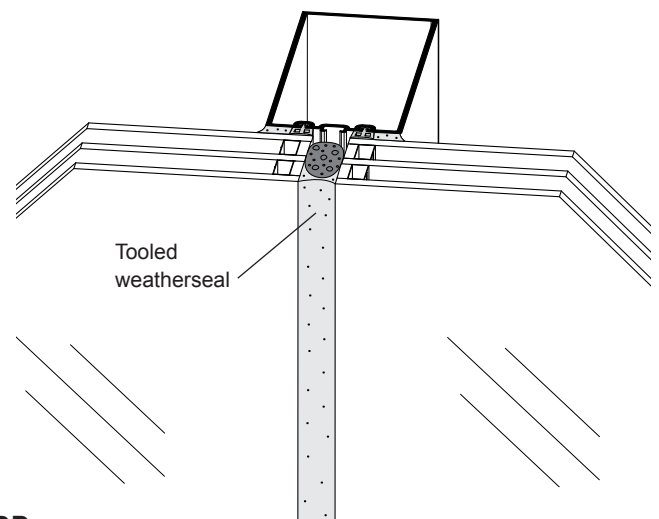
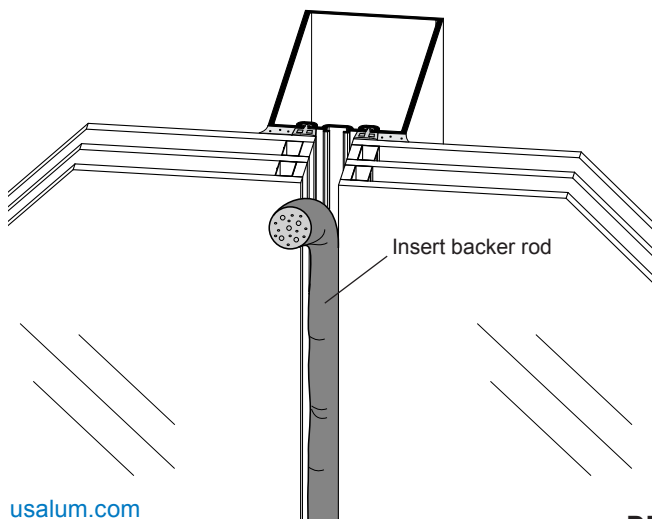


DETAIL BB



DETAIL CC

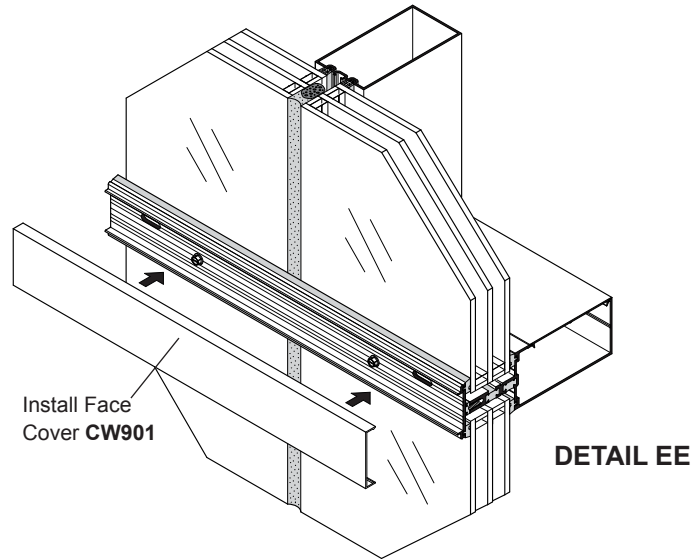
10. Following the manufacturer's specifications, allow the silicone to fully cure before removing the temporary glass retainers. After removing the glass retainers, insert open cell polyurethane backer rod between the glass edges on the exterior side. Mask glass and aluminum adjacent to joint and apply sealant for an exterior weatherseal. See **DETAIL DD**.



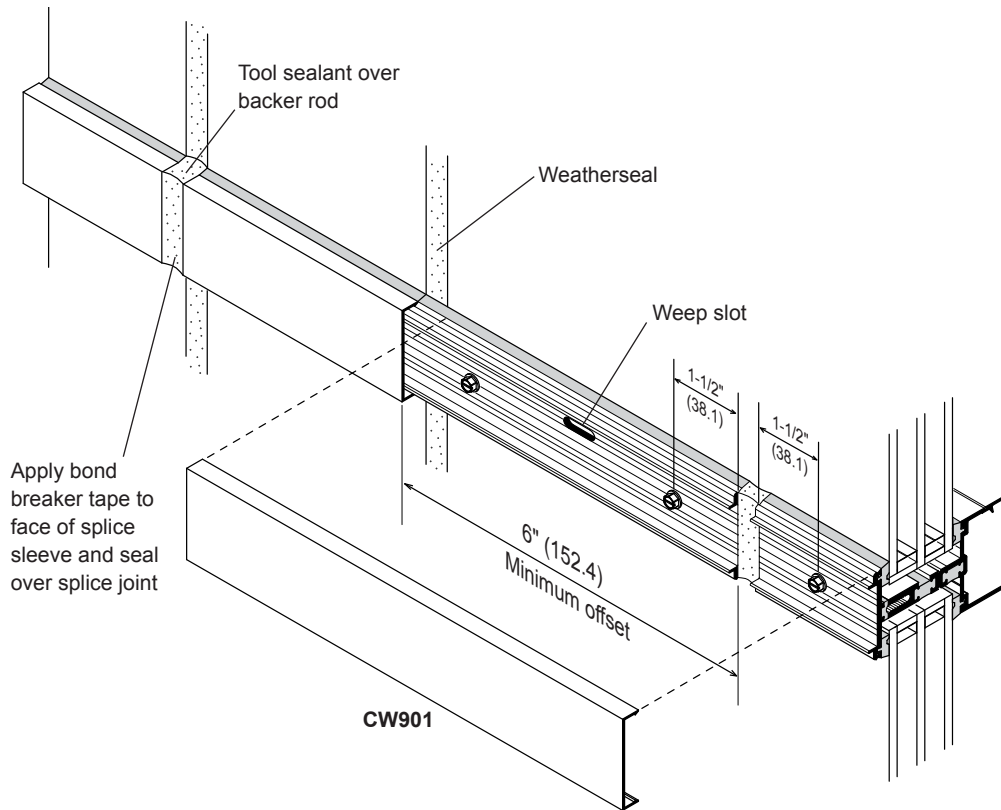
DETAIL DD

STRUCTURAL SILICONE GLAZING (CONTINUED)

11. Install the horizontal face cover onto the pressure bar, see **DETAIL EE**. Locate splice joints at center line of vertical glass butt joints. Splice joint width should be based on formula for linear expansion for aluminum specifications and sealant movement capability. **NOTE: Do not align face cover splices with pressure bar splices.** Offset 6" (152.4) minimum. See **DETAIL FF**. Set backer rod between face cover and pressure bar at joint and seal.



HORIZONTAL FACE COVER SPLICE JOINTS



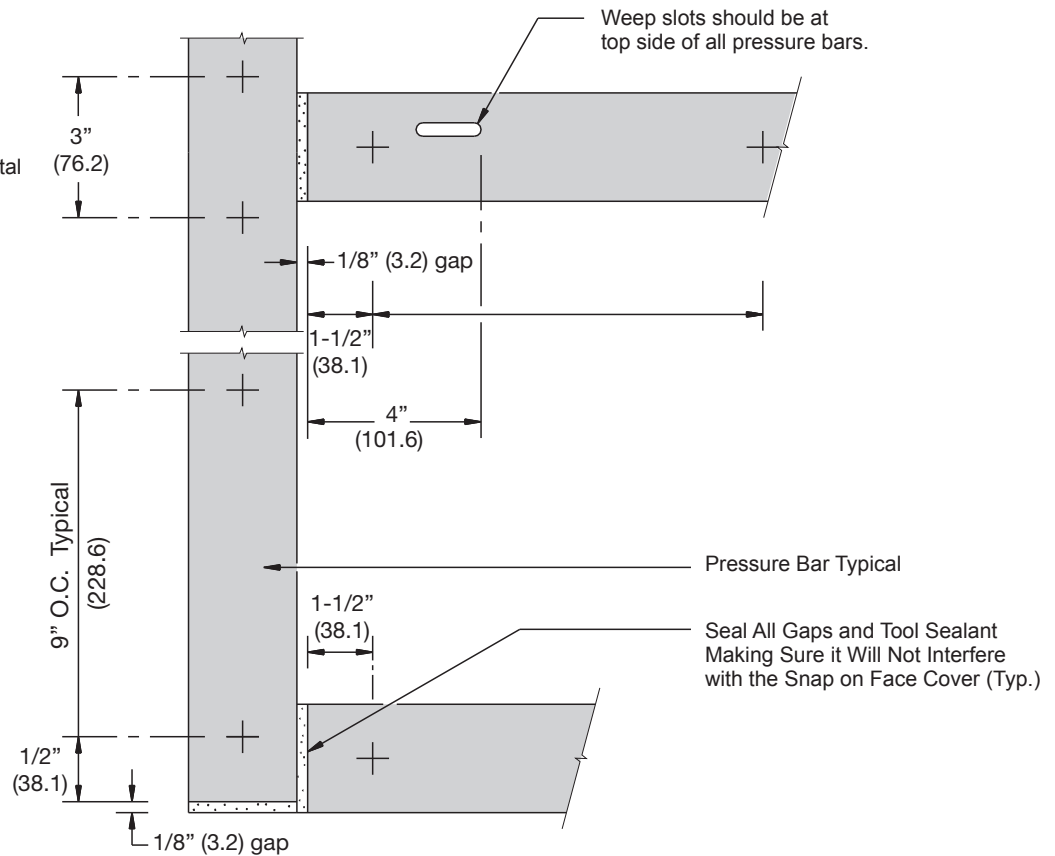
DETAIL FF

PRESSURE BAR INSTALLATION

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. **See DETAIL S.** 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 speed wrench, torque bolts to 30 inch pound (3.4N.m). Increase torque to 50 to 60 inch pound (5.7 to 6.8N.m) 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 in top side of all horizontal pressure bars and level with bottom of glazing pocket to ensure proper drainage. **See DETAIL T.**
3. Seal gaps at vertical/horizontal intersections and at top and bottom of vertical pressure bars. **See DETAIL U.**

NOTE: Weep slots are required in all Horizontal Pressure Bars Including the Head or Top Horizontal



DETAIL U

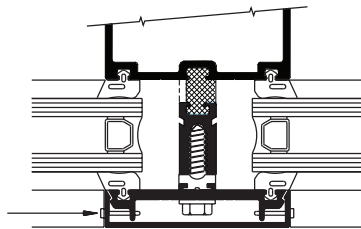
FACE COVER INSTALLATION

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 soft face hammer.

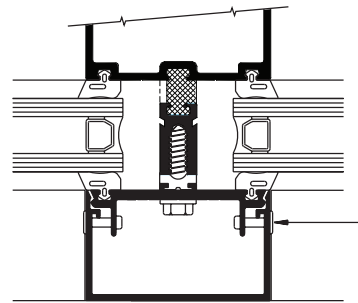
4. Install vertical face covers first. Do not disturb top and bottom closure plates when installing face covers. Pinning of vertical face cover is required to prevent slippage. Use one pin on each side per cut length, concealed behind horizontal face cover closer to center line or as shown on shop drawings. **See DETAIL U.**
5. Install snap-in horizontal face covers with the weep holes located on the bottom side. Seal gaps at vertical/horizontal intersections and at top and bottom of vertical pressure bars. **See page 11 DETAIL E.**

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" F.H.S.M.S.) **See DETAIL V.** Extended horizontal covers must be pinned on top side at both ends.

1/16" x 1/2" (1.6 x 12.7) roll pin at center of cut length on each side. (Concealed behind horizontal face cover)



DETAIL V

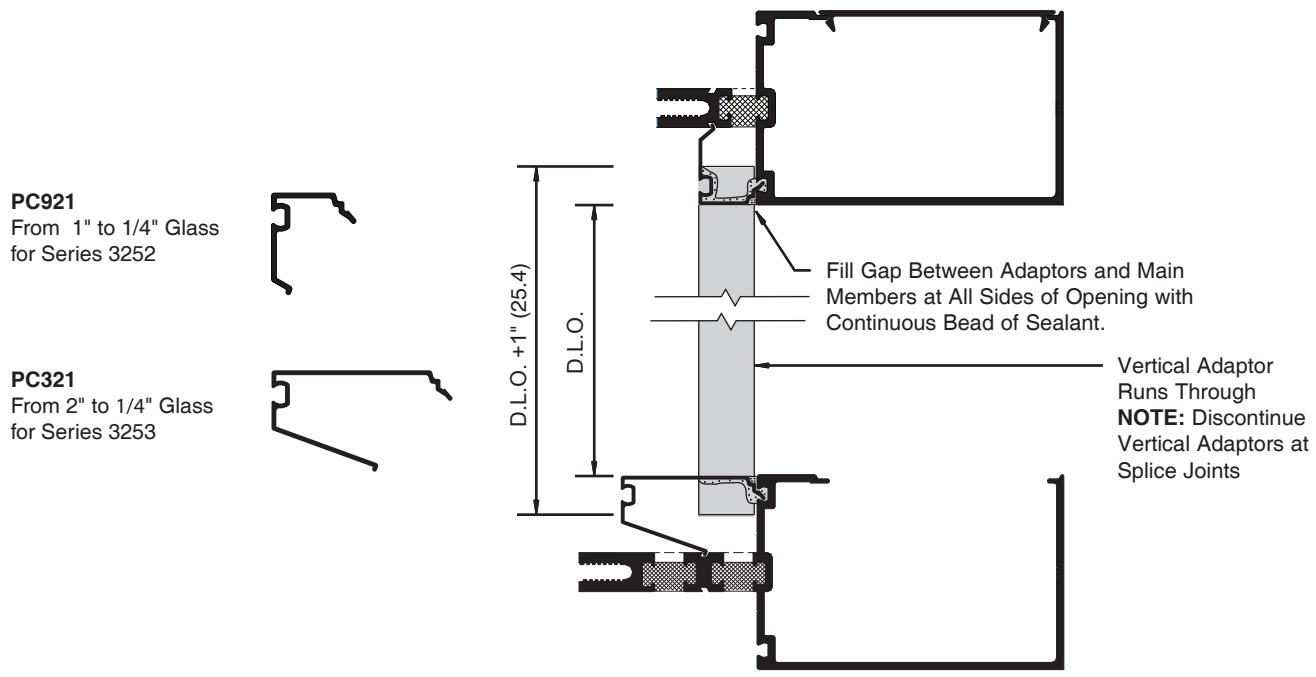


1/8" (3.2) pop rivet at center of cut length at each side. (Concealed behind horizontal face cover)

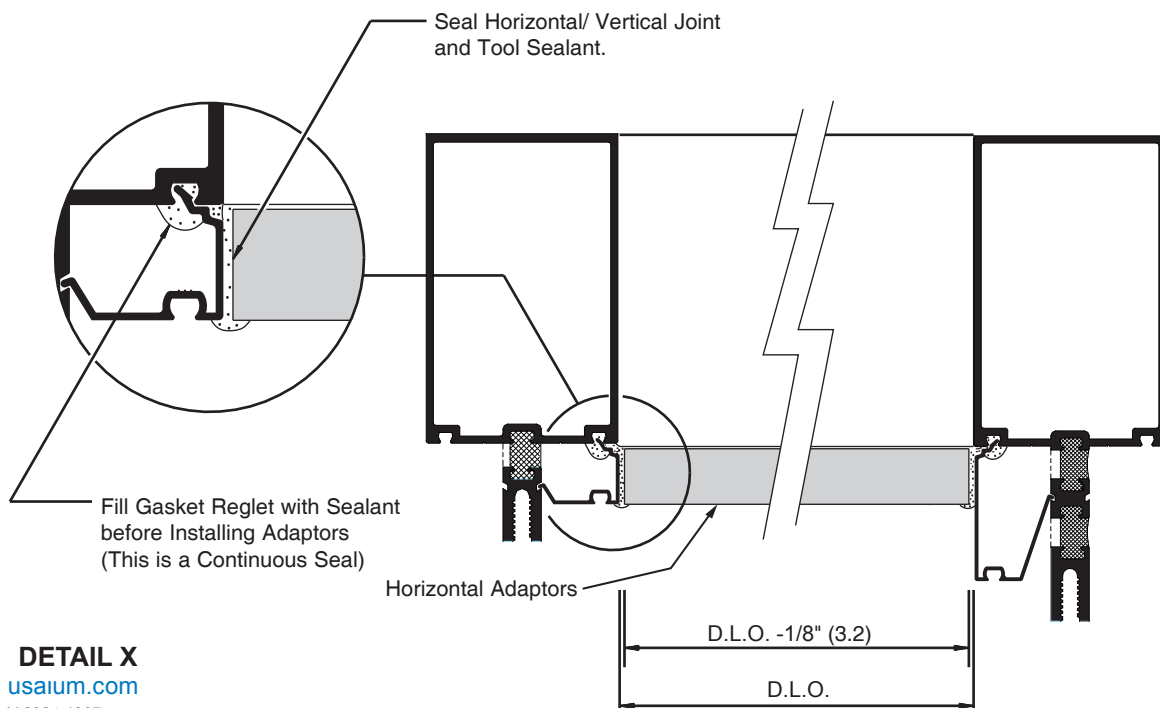
DETAIL W

TRANSITION GLAZING

1. Apply sealant into gasket reglets before installing snap-in transition adaptors.
2. Install vertical adaptors first.
3. Install horizontal adaptors and seal horizontal/vertical joints. Tool sealant. **See DETAIL X.**



NOTE: See Pages 42-44 for optional Load Barring Brackets



DETAIL X

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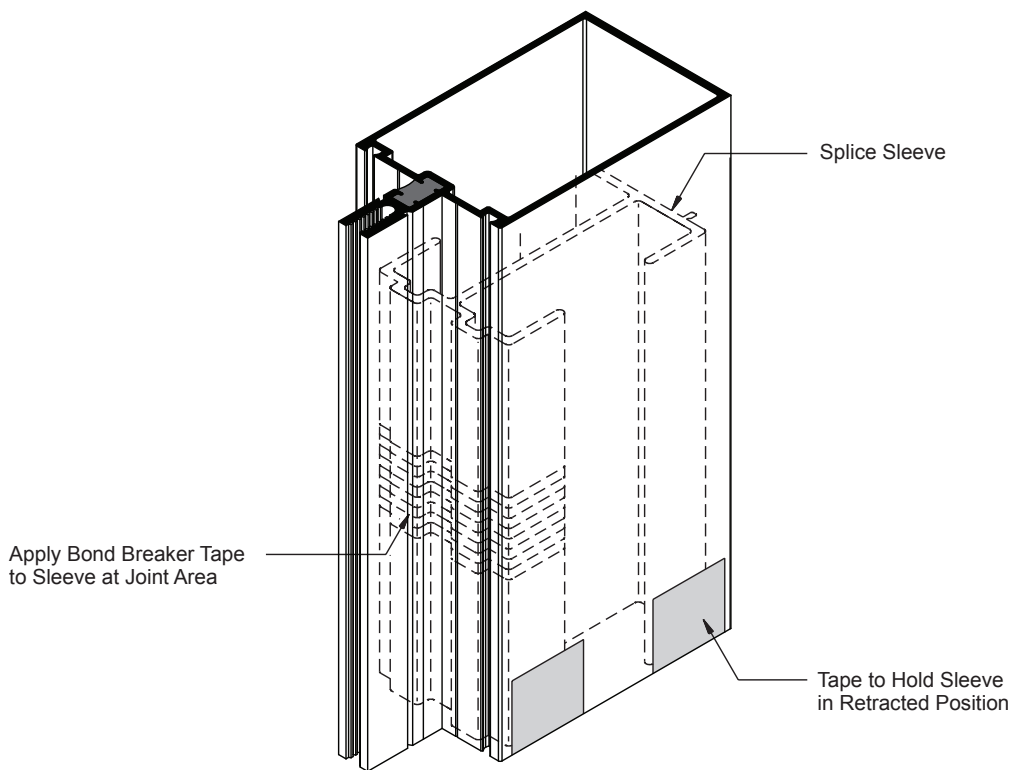
VERTICAL SPLICE JOINTS

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 (m) x C° difference in temperature x .02322

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.

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



DETAIL Y

3. Install stop screw, 2-3/4" (70) down from top of extrusion at inside of lower member. **See DETAIL Z.**
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 in **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. Stagger joints on back members, pressure bars and face caps as shown in **DETAIL Z**.
6. Seal pressure bar joint. **See DETAIL AA.**
7. Install face covers and seal joint using backer rod as required. **See DETAIL Z.**

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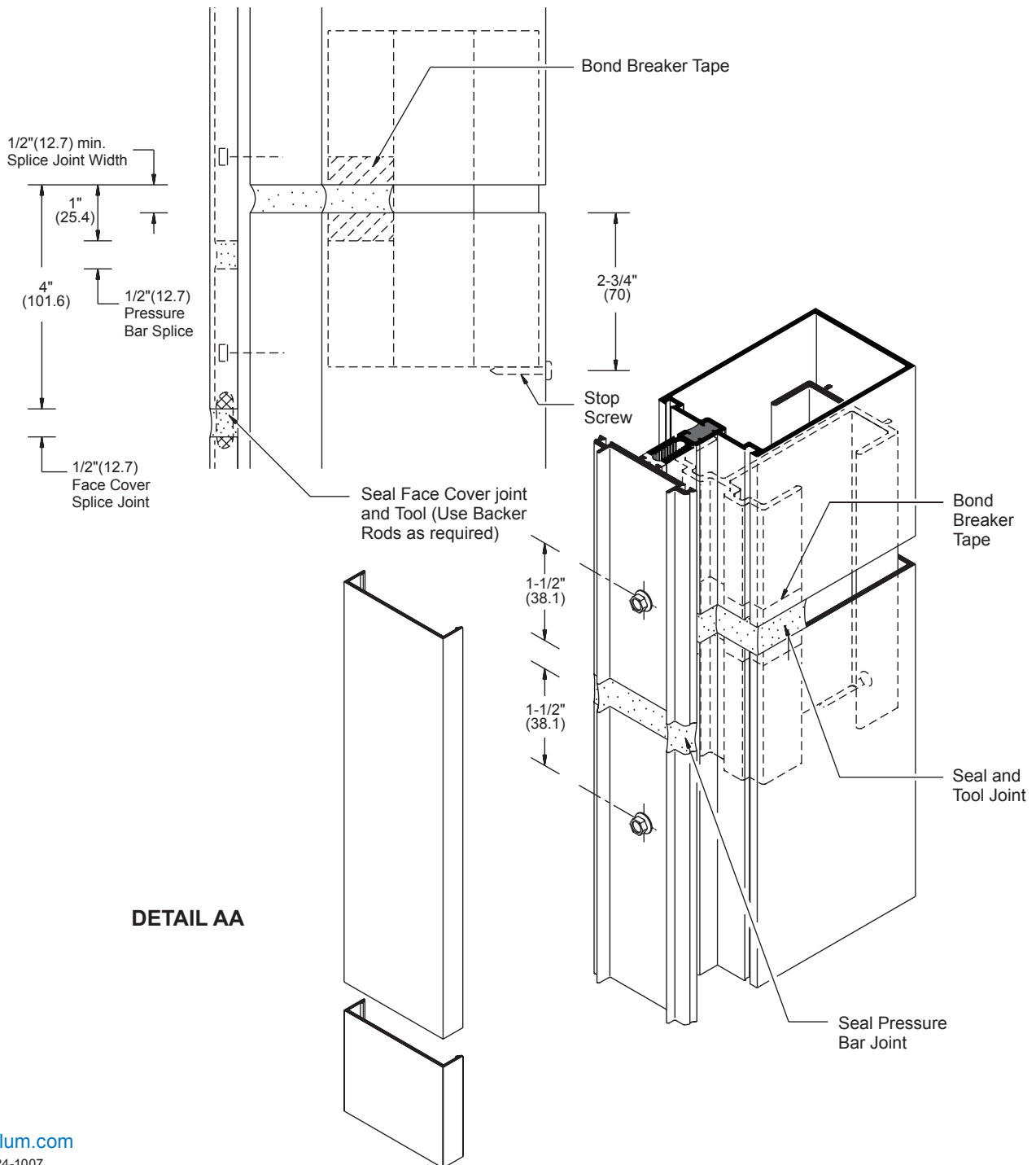
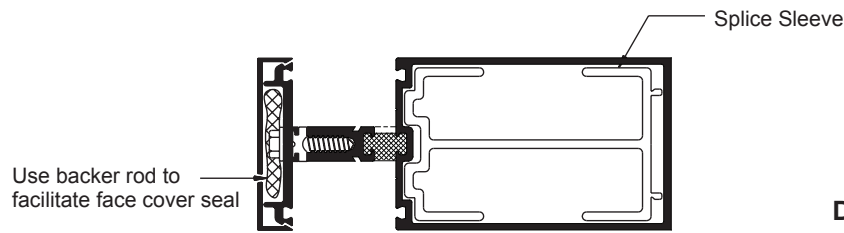
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VERTICAL SPLICE JOINTS



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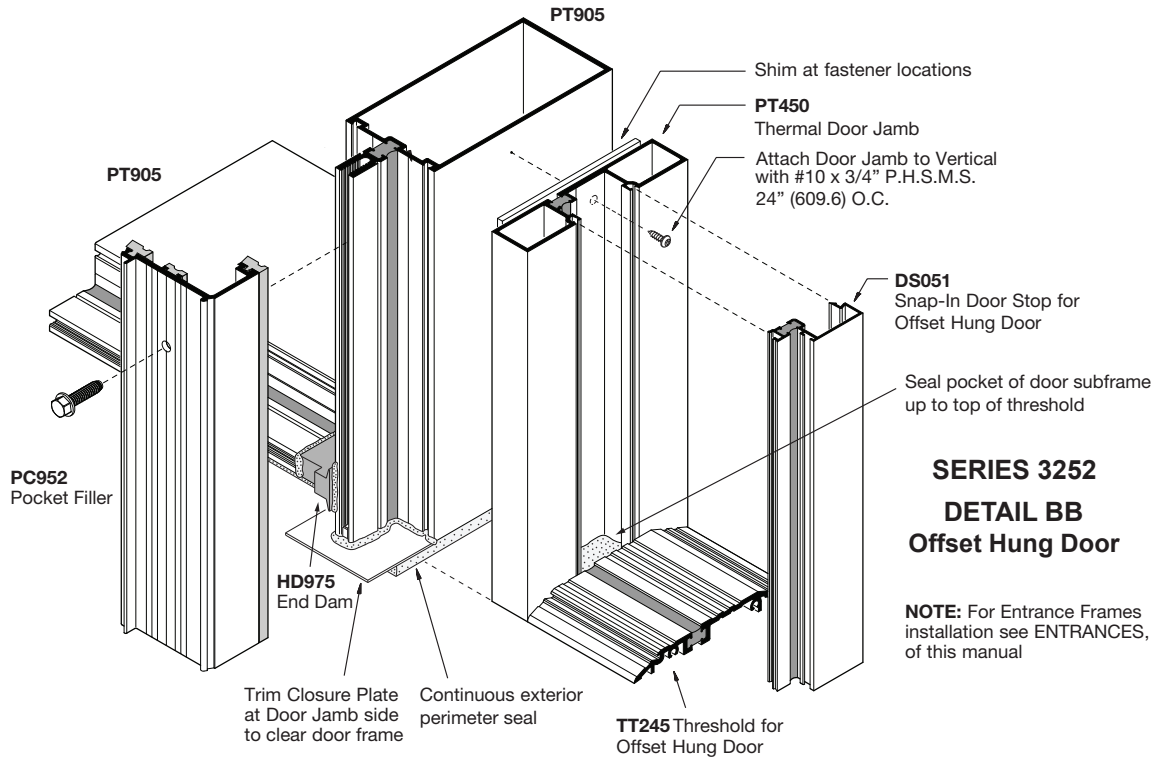
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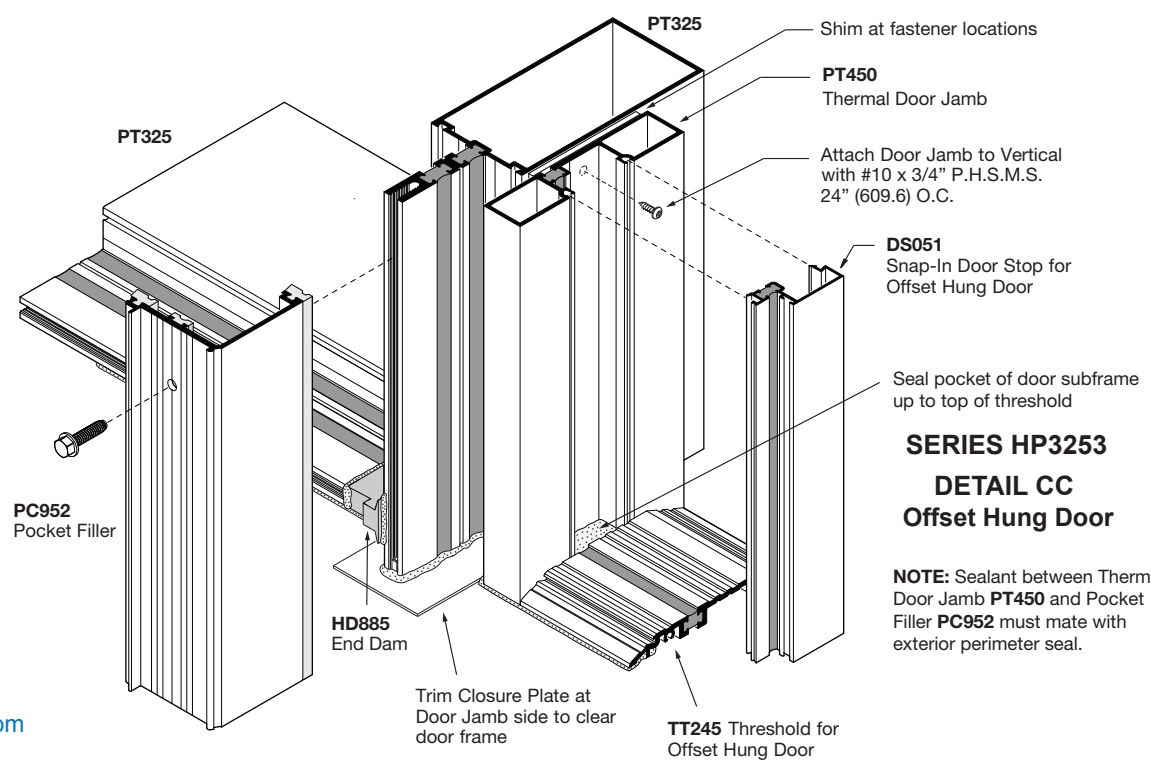
ENTRANCE FRAMES

Entrance Frames may be installed simultaneously with Curtain Wall or after Curtain Wall installation has been completed. Use PC952 or PC352 pocket fillers to close glazing pocket at door side.



**SERIES 3252
DETAIL BB
Offset Hung Door**

NOTE: For Entrance Frames installation see ENTRANCES, of this manual

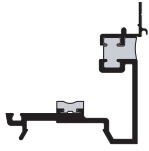


**SERIES HP3253
DETAIL CC
Offset Hung Door**

NOTE: Sealant between Thermal Door Jamb **PT450** and Pocket Filler **PC952** must mate with exterior perimeter seal.

FLUSH DOOR ADAPTER - FABRICATION

1. Cut Door adaptor members to length.



CW907

Header adapter length = DOOR OPENING WIDTH minus 1/32" (.8)
 Jamb adapter length = DOOR OPENING HEIGHT plus 9/16" (14)



CW906

Header cap length = DOOR OPENING WIDTH minus 1/32" (.8)
 Jamb cap length = DOOR OPENING HEIGHT plus 9/16" (14)

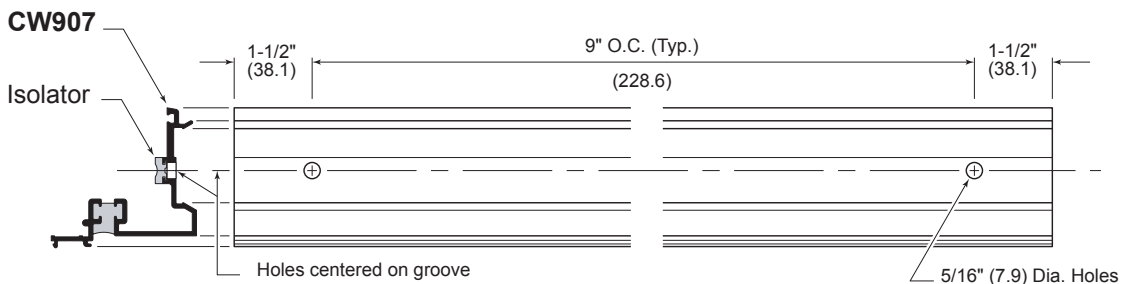


CW209

Header door stop length = DOOR OPENING WIDTH minus 1/32" (.8)
 Jamb door stop length = DOOR OPENING HEIGHT plus 1-3/32" (27.8)

2. Drill 5/8" (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. **See DETAIL DD.**

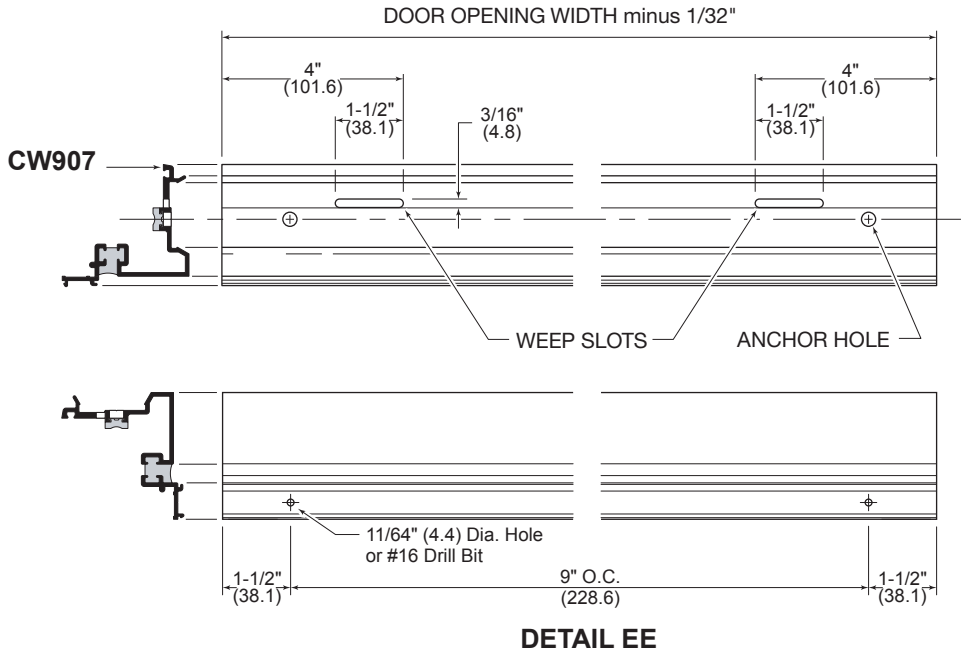
NOTE: Isolator must be in place prior to drilling anchor holes.



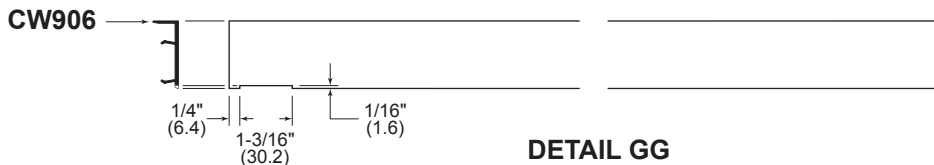
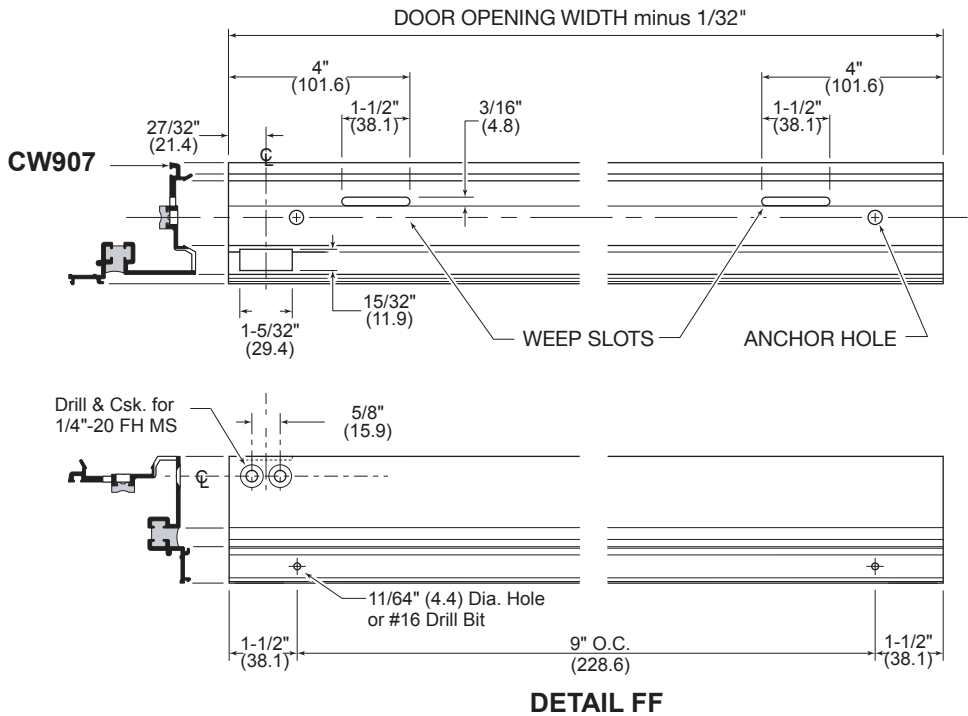
DETAIL DD

FLUSH DOOR ADAPTER - FABRICATION

3. Fabricate header adaptor for weep slots and additional anchor holes as shown in **DETAIL EE**.

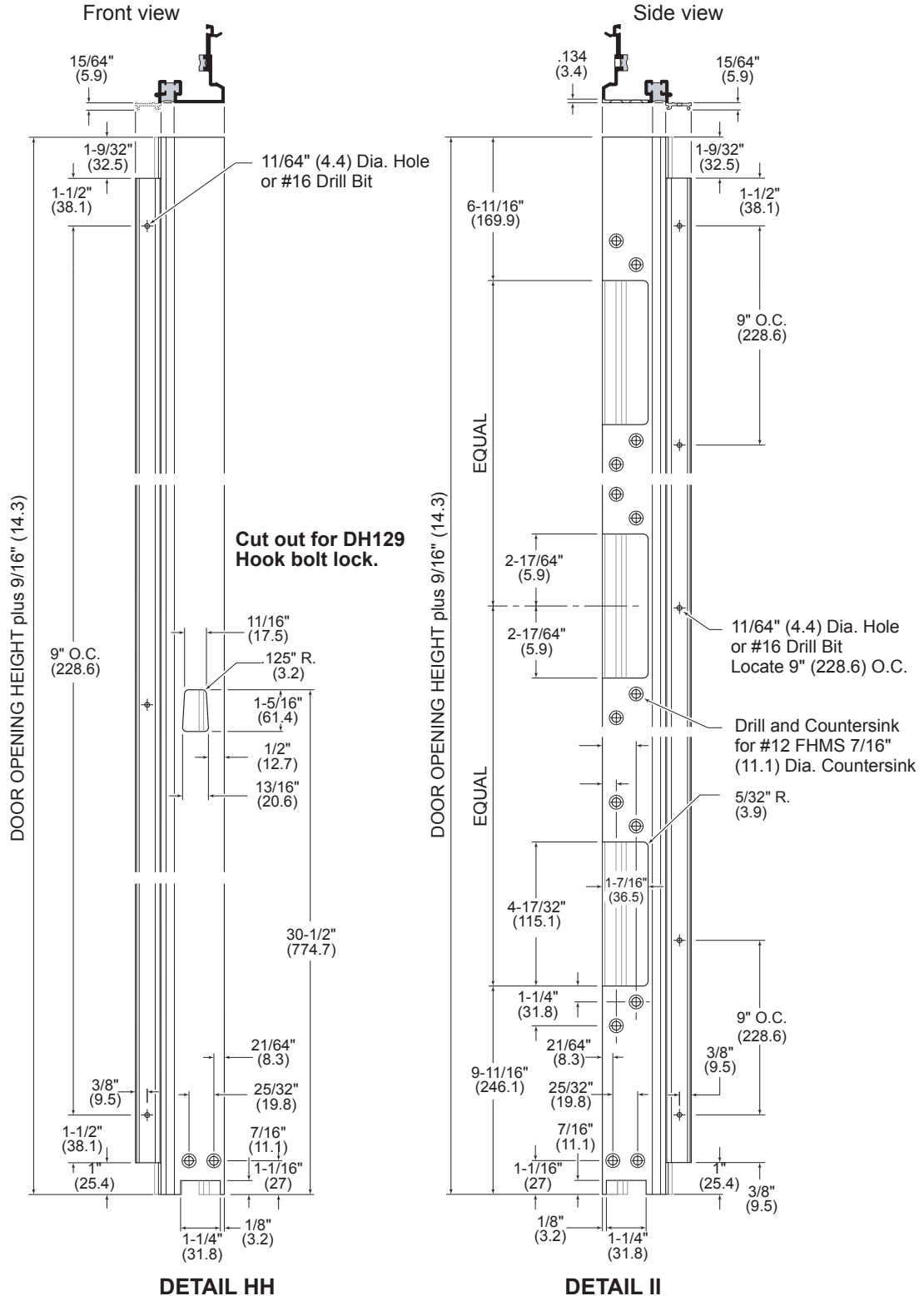


4. For offset pivot doors, fabricate header adaptor for pivot (left hand shown), weep slots and additional anchor holes as shown in **DETAIL FF**. Notch face cap for pivot clearance as shown in **DETAIL GG**.



FLUSH DOOR ADAPTER - FABRICATION

- Fabricate for lock jamb **see DETAIL HH.** (Right hand shown left hand opposite)
- Fabricate for butt hinges **see DETAIL II.** (Left hand shown right hand opposite)



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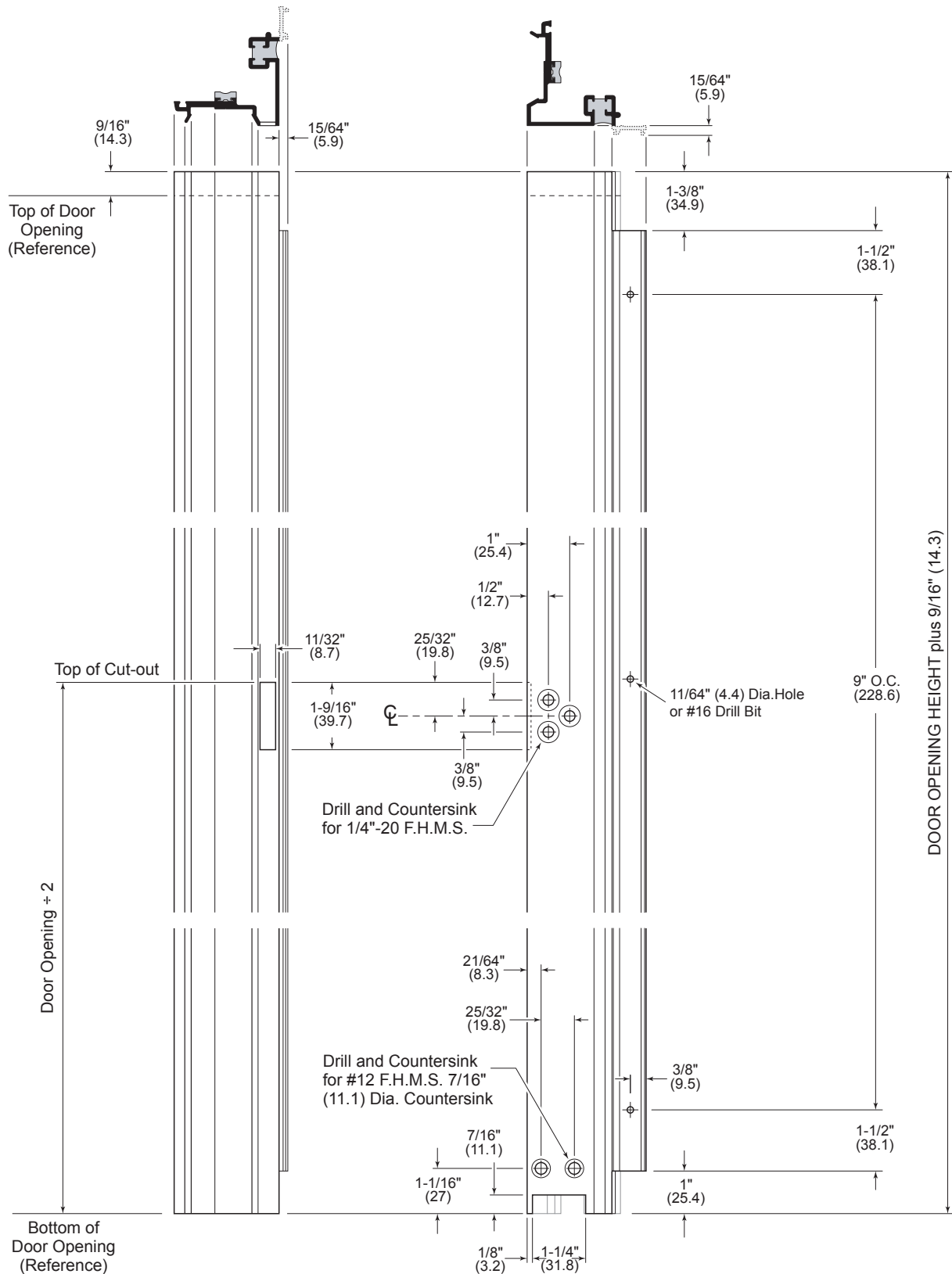
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FLUSH DOOR ADAPTER - FABRICATION



DETAIL JJ

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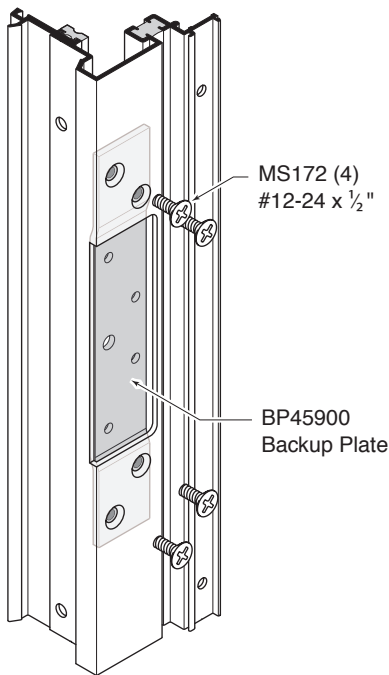
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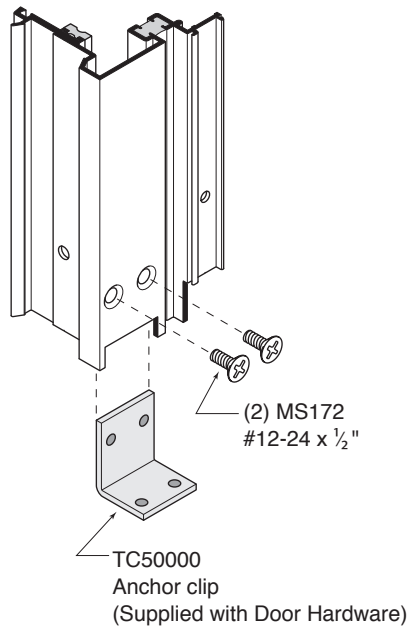
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FLUSH DOOR ADAPTER - FABRICATION

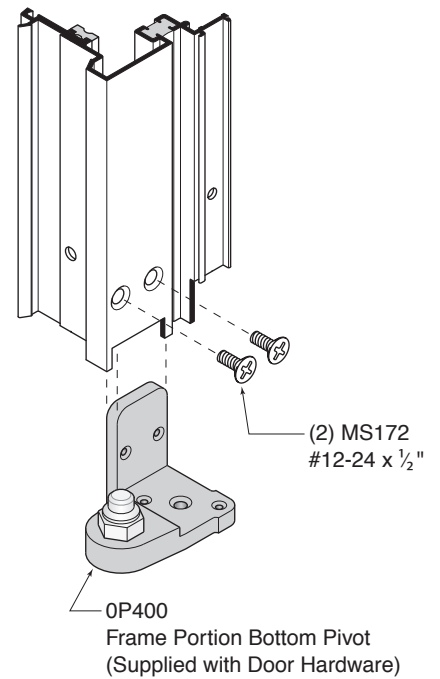
7. For butt hung application, install hinge back up plates and threshold clips as shown in **DETAIL KK** and **DETAIL LL**. For offset pivot application, install bottom frame portion pivot(s) as shown in **DETAIL MM**. Single doors require threshold clip at lock jamb. See **DETAIL LL**.
8. Install gaskets in door adaptors.



DETAIL KK



DETAIL LL



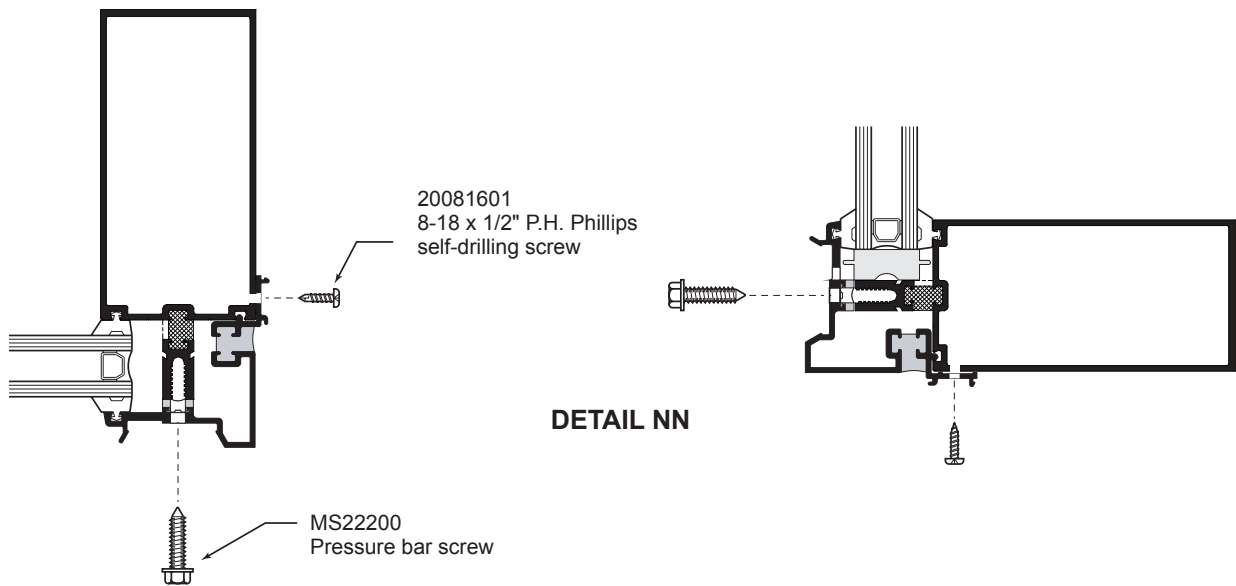
DETAIL MM

These hardware items must be applied prior to door adaptor installation.

FLUSH DOOR ADAPTER - INSTALLATION

NOTE: PRIOR TO ADAPTOR INSTALLATION ALL END DAMS MUST BE INSTALLED AND SEALED. TRANSOM AND SIDELIGHT GLASS MUST BE IN PLACE.

1. Seal face of end dams **DETAIL S**.
2. Install jamb door adapters using MS22200 pressure bar bolts as shown in **DETAIL NN**. Vertical adapters extend from floor to 9/16" above bottom of door header/horizontal. Install head door adaptor using MS22200 pressure bar bolts as shown in **DETAIL NN**.
3. Secure adaptors to mullion and head side walls with 20081601 self-drilling screws as shown in **DETAIL NN**.



4. Seal all pressure bar bolt heads.
See DETAIL OO.
5. Seal gaps at intersections of pressure bars and door adaptors.

NOTE: This is a critical seal

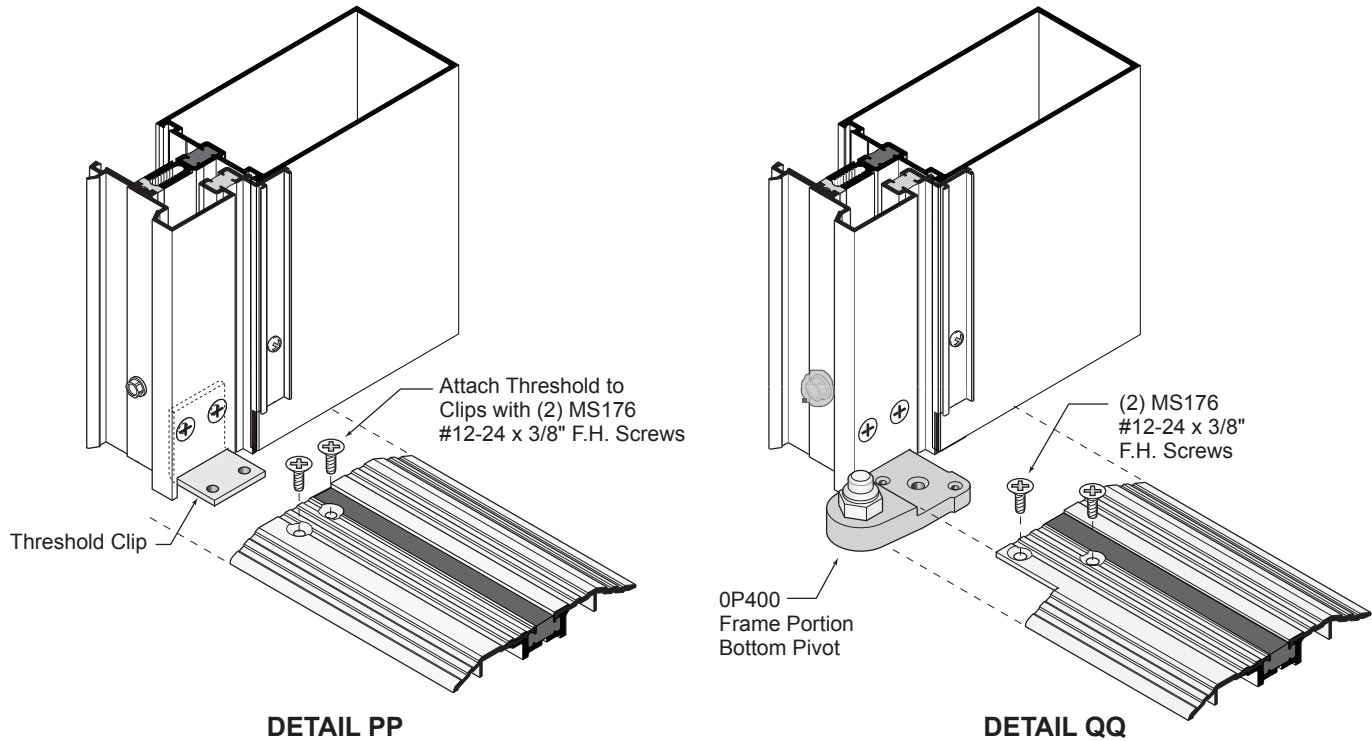
Seal Pressure Bar Bolt Heads

Seal Intersecting Pressure Bar and Adaptors Joints

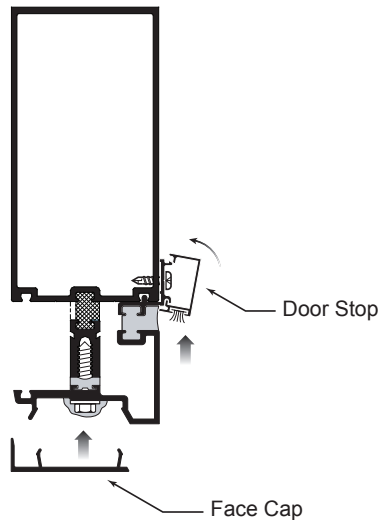
DETAIL OO

THRESHOLD - INSTALLATION

6. Install thresholds into opening using screws provided with door hardware. See **DETAIL PP** for butt hung and **DETAIL QQ** for offset pivot application.



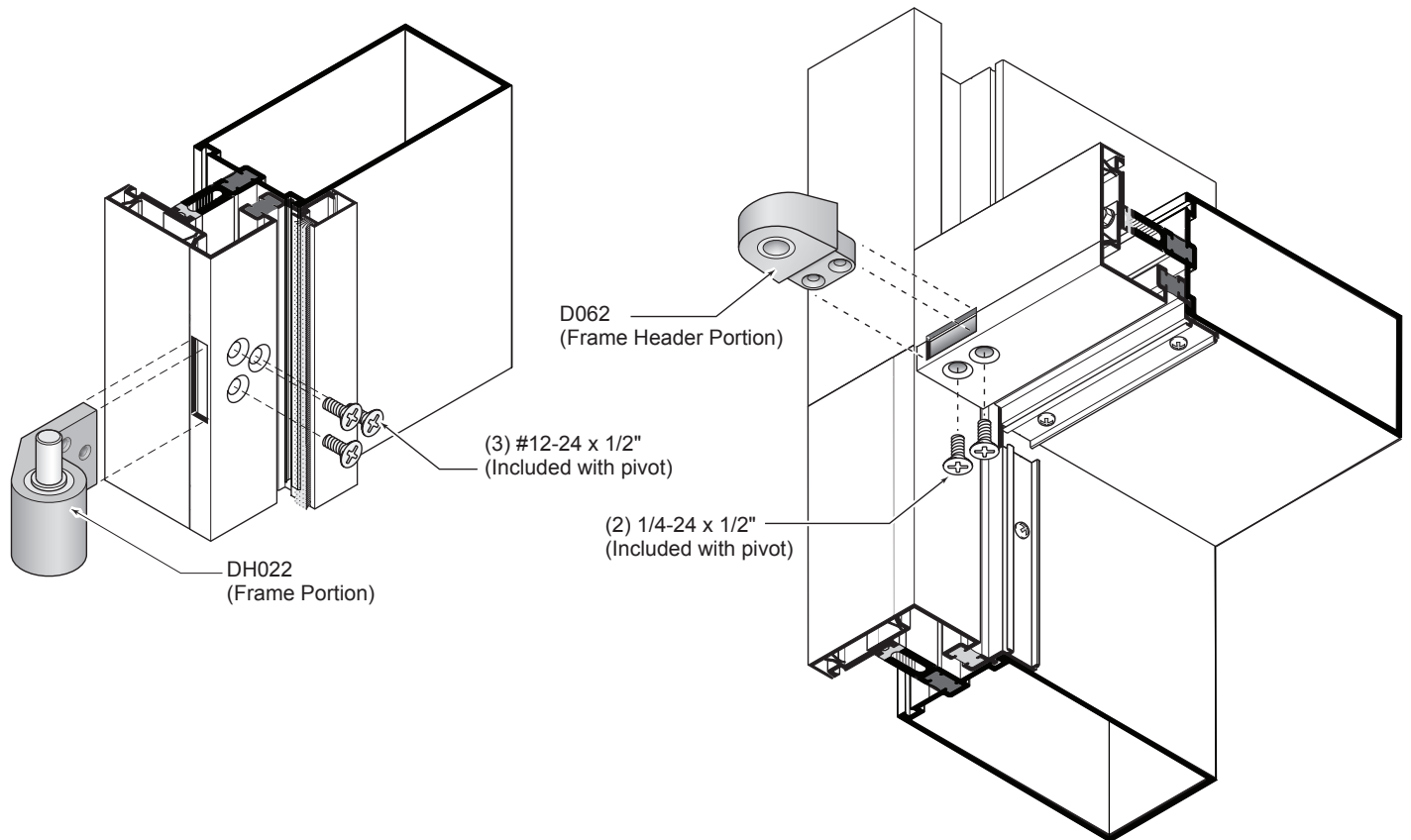
7. Snap on face caps. See **DETAIL RR**. Vertical face caps run from floor to 9/16" above bottom of header. (Field cutting to length is recommended).
8. Snap door stop on header adaptor. See **DETAIL RR**. (Head door stop runs through)
9. Snap door stops on jamb members. See **DETAIL RR**.



DETAIL RR

PIVOT - INSTALLATION

10. For offset pivot doors, install frame portion pivots as shown. See **DETAIL SS**.

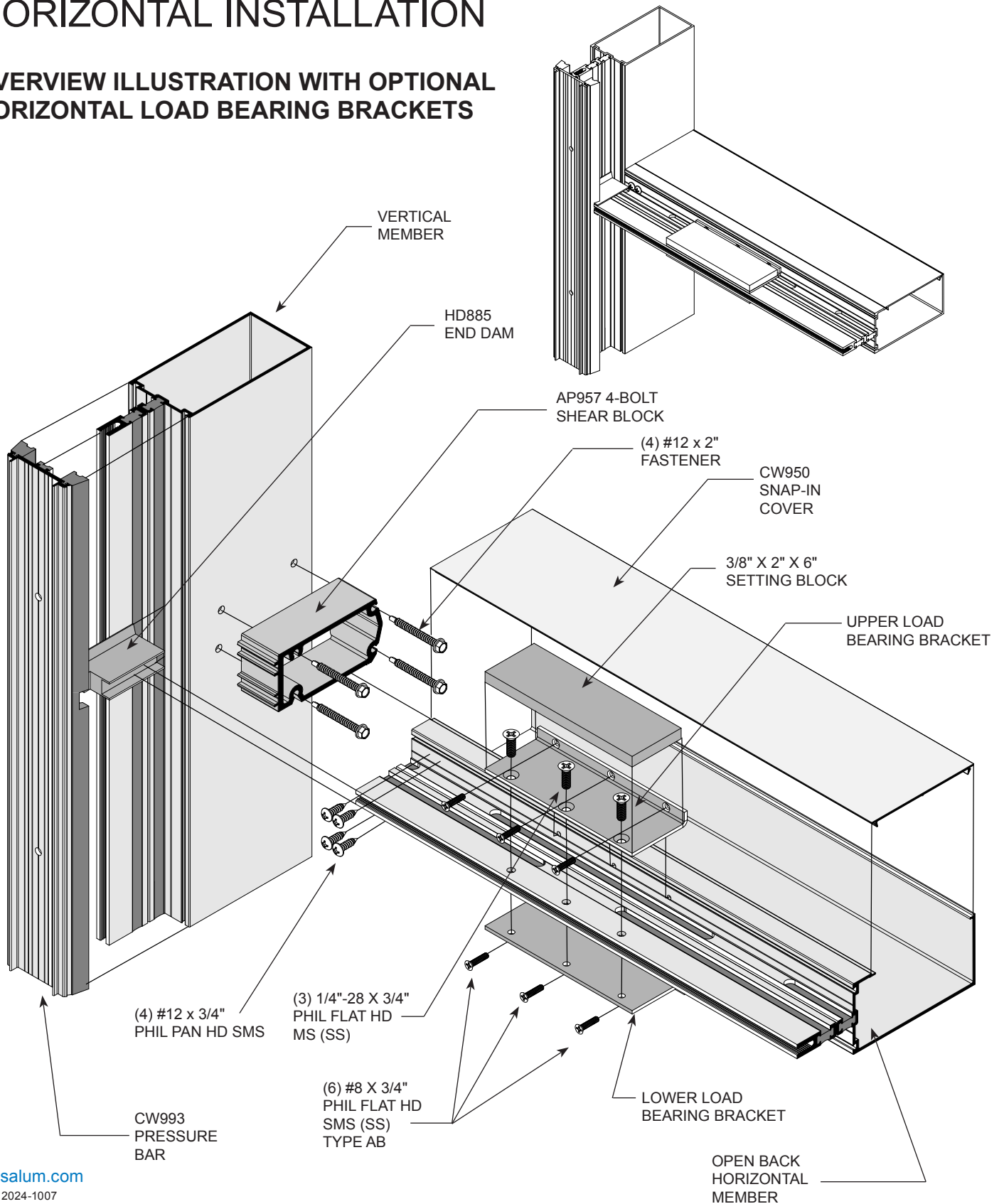


DETAIL SS

SUPPLEMENTAL INSTRUCTIONS

HORIZONTAL INSTALLATION

OVERVIEW ILLUSTRATION WITH OPTIONAL HORIZONTAL LOAD BEARING BRACKETS



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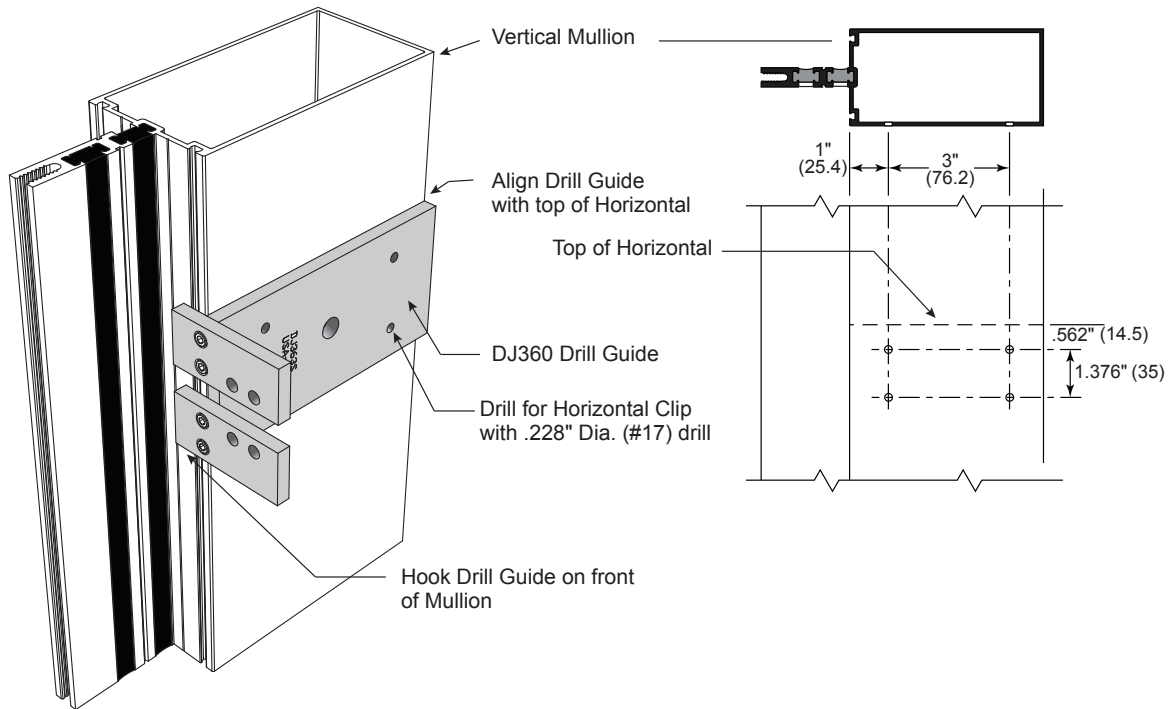
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HORIZONTAL INSTALLATION (CONTINUED)

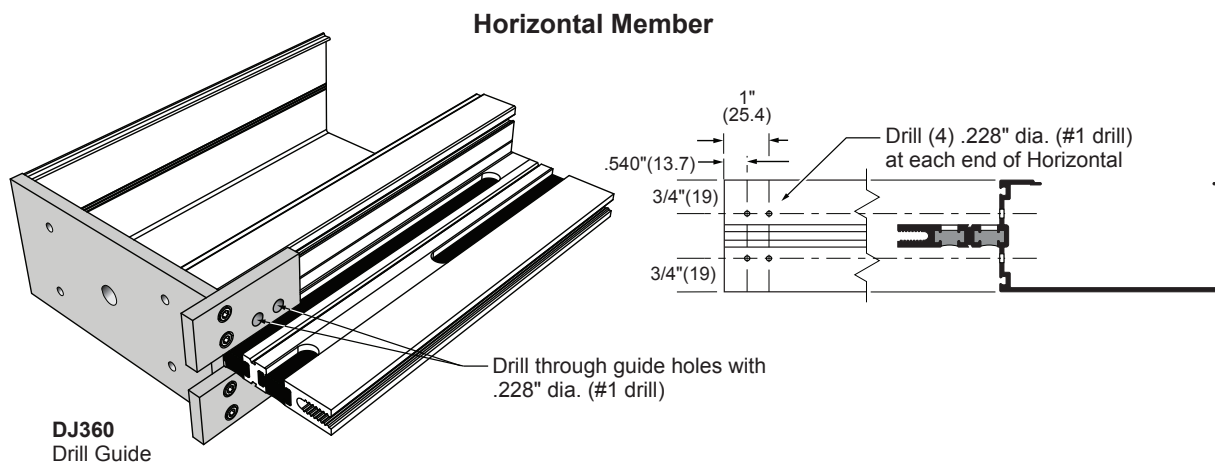
DRILLING

1. Mark on verticals the location of horizontal members and drill holes for shear blocks. Drill jigs are available. See **DETAIL B1** for drill guide usage.



DETAIL B1

2. Fabricate ends of horizontal members for shear block pick-up screws. See **DETAIL B2** for drill guide usage.

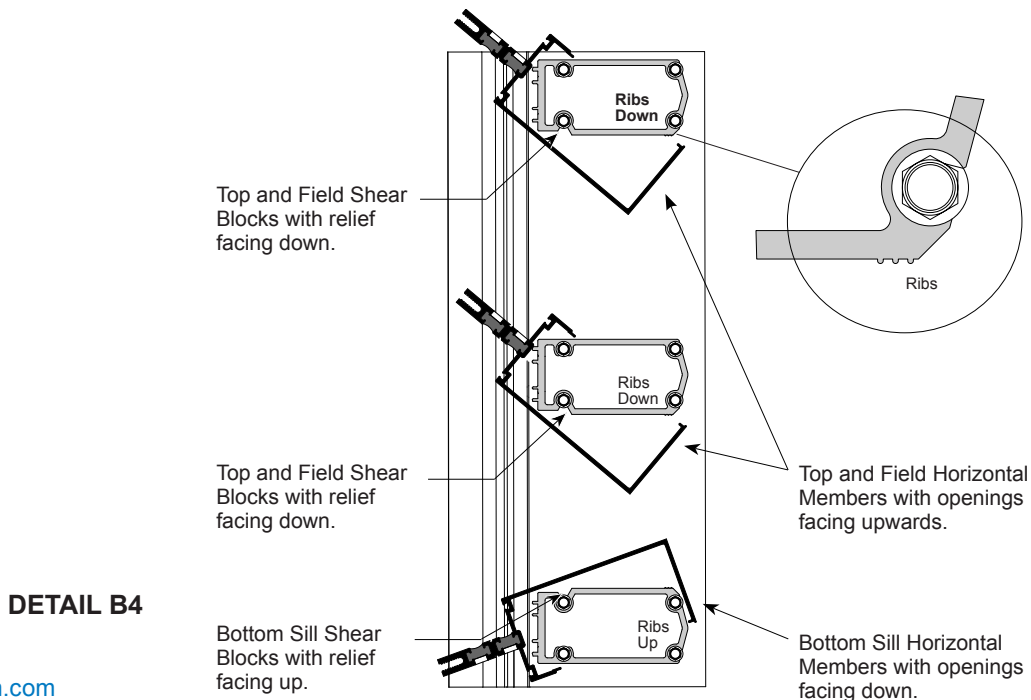
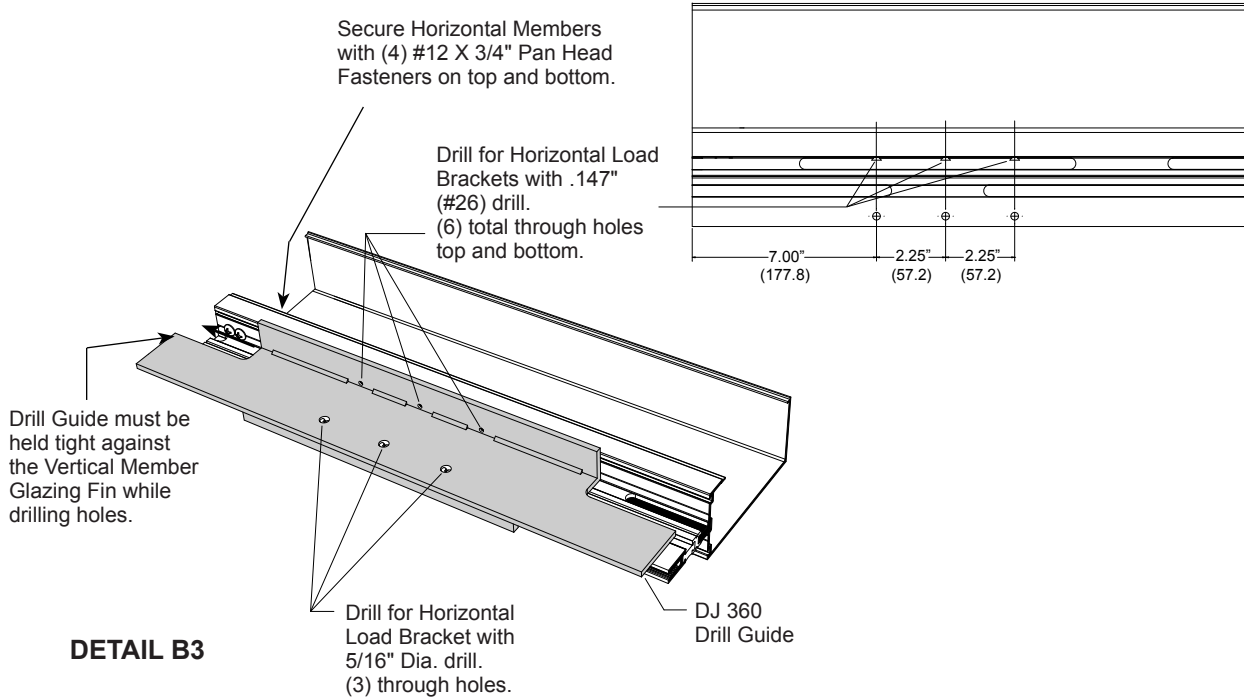


DETAIL B2

HORIZONTAL INSTALLATION (CONTINUED)

ATTACHING AND SEALING THE HORIZONTAL MEMBERS

1. Roll horizontal members over shear blocks and secure them with screws provided. **See DETAIL B4.**
2. Seal joint between horizontal and vertical. Also seal over head of screws in the glazing pockets.
3. Apply sealant at the **three contact areas** of end dams. Also fill the vertical gasket reglet with sealant at the end dam location. **See DETAIL B5.** Slide end dams into place. **NOTE:** End dams occur at head and sill also.
4. Using the Drill Jig DJ360, drill holes as illustrated below. **See DETAIL B3**



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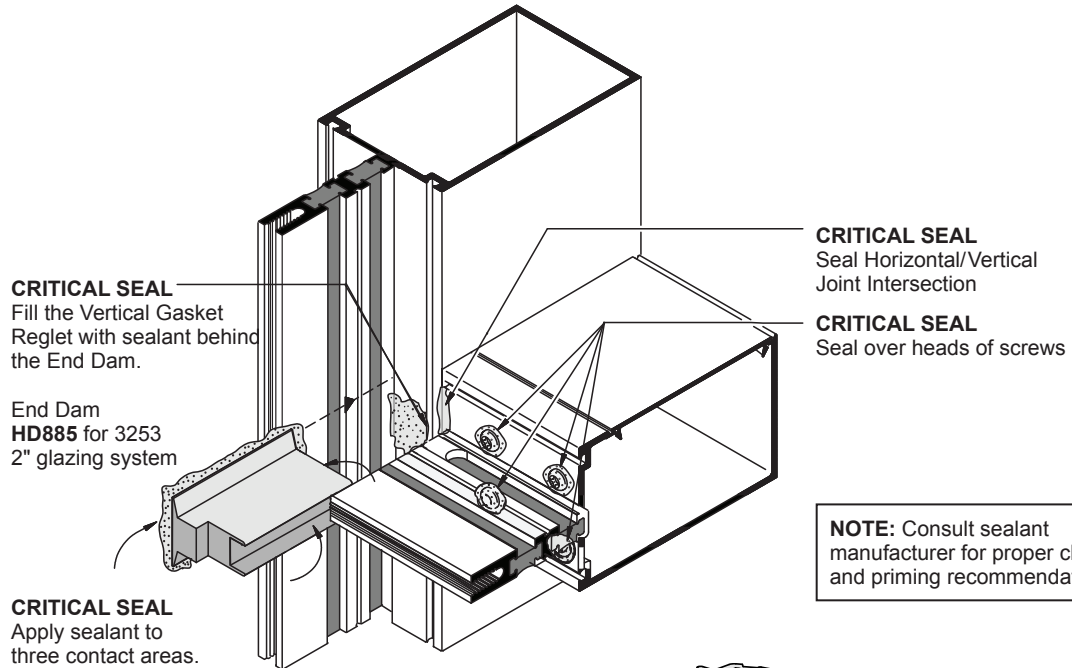
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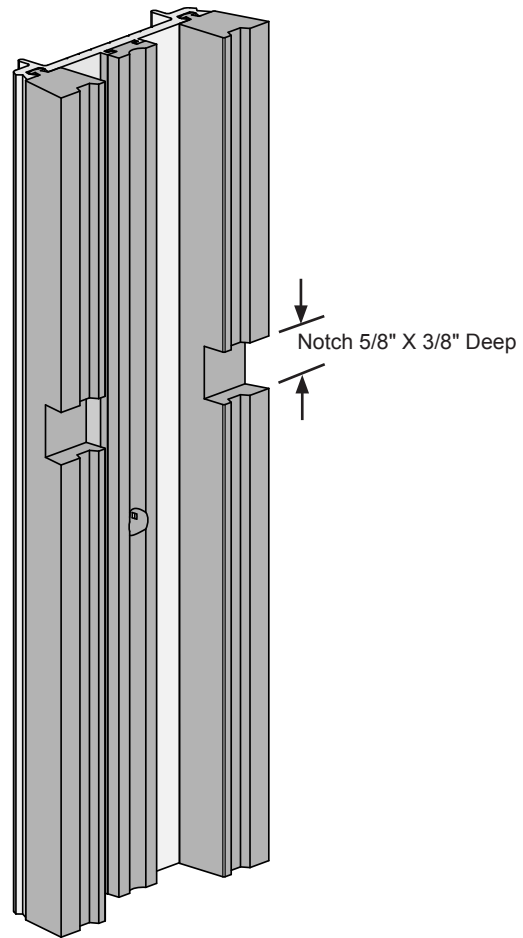
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HORIZONTAL INSTALLATION (CONTINUED)



DETAIL B5

The NP430 Gaskets must be notched on all vertical pressure bars in order to provide clearance for the HD885 End Dams.



Please return to the Standard 3250 Installation Manual for the completion of the installation procedure.

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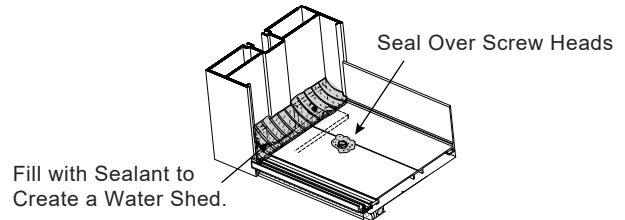
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*CRL items listed above or equivalent

GUIDE TO SEALANTS

WATERPROOFING

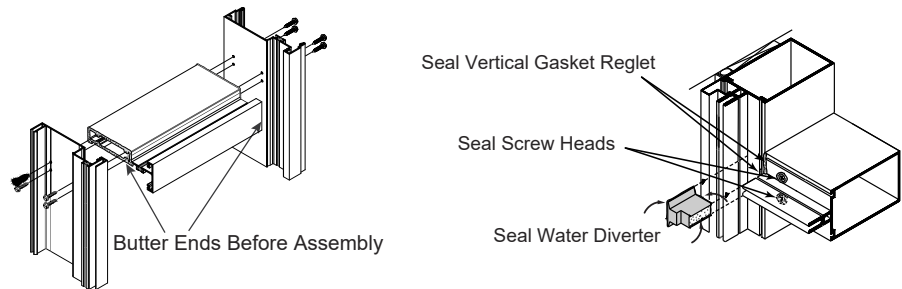
- Typical Weather Sealant



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

JOINT ADHESIVE

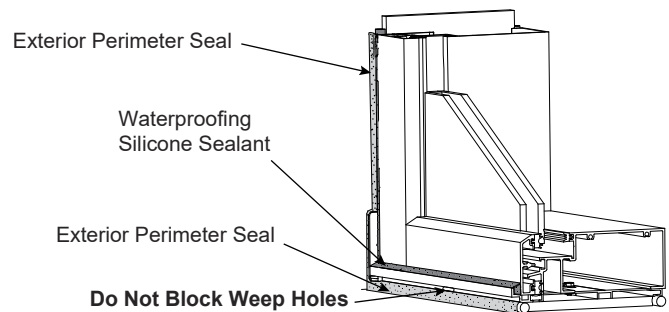
- Typical Weather Sealant



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

PERIMETER

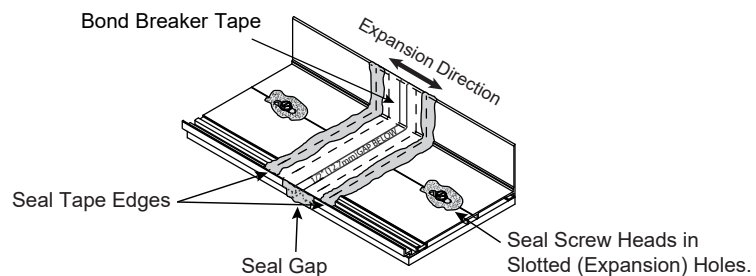
- Typical Weather Sealant



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

EXPANSION

- Typical Weather Sealant



Expansion Joints.

STRUCTURAL

- ALL STRUCTURAL SEALANTS REQUIRE TESTING AND APPROVAL.

Glass-to-Glass or Glass-to-Metal.

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