



# SERIES 4500

## CURTAIN WALL

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### 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.***

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

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

# GENERAL INSTALLATION NOTES

## RECOMMENDED GUIDELINES FOR ALL INSTALLATIONS:

- 1. REVIEW CONTRACT DOCUMENTS.** Check shop drawings, installation instructions, architectural drawings and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Note any field verified notes on the shop drawings prior to installing. The installation instructions are of a general nature and cover most conditions.
- 2. INSTALLATION.** All materials are to be installed plumb, level, and true.
- 3. INSTALLER QUALIFICATION.** The **Series 4500** 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. 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.
- 6. 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.
- 7. 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.
- 8. SEALANTS.** The fabrication and installation of a structural silicone-glazed (SSG) or wet glazed system requires more technical knowledge and experience than is required for a conventional pressure-glazed or dry glazed system. The glazing contractor should take all steps as outlined and required by the structural silicone sealant manufacturer, glass fabricator, framing manufacturer, and the project professional engineer of record as well as follow local building code requirements and industry best practices to ensure the proper installation and safe performance of the SSG system.

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

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

To ensure that nothing has changed in formulation or chemistry since the initial tests, subsequent testing during periodic time frames of the project is to be conducted to confirm continued acceptance of the material for use on the project.

To ensure the structural performance and integrity of the insulating glass unit (IGU), the glazing contractor must submit the project shop drawings to the glass fabricator to obtain approval for use of their product(s) in any 2, 3 or 4-sided SSG applications.

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

# GENERAL INSTALLATION NOTES CONT.

## RECOMMENDED GUIDELINES FOR ALL INSTALLATIONS:

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.

9. **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.
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. **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.
12. **GLAZING PRACTICES.** The air and water performance of the **Series 4500** 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 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.
- 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:

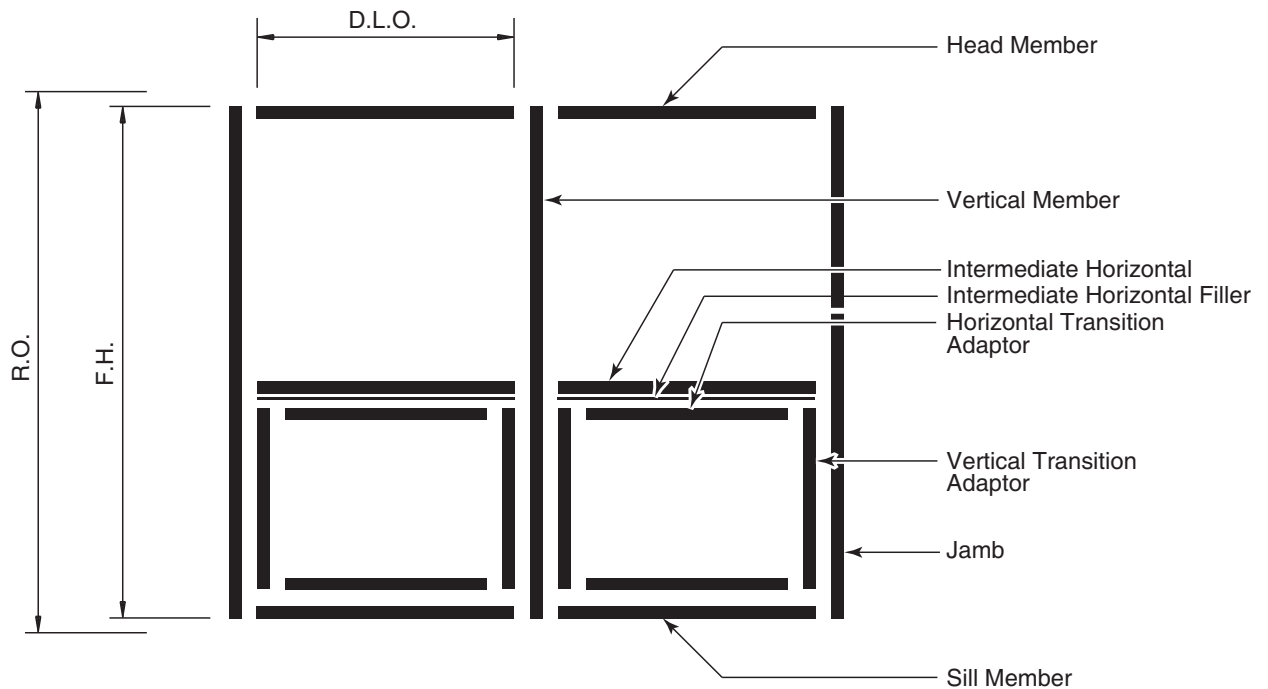
13. **COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.).
14. **CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.

# SHEAR BLOCK (STICK ERECTED) FABRICATION

The Series 4500 Curtain Wall Systems are designed for shear block (Stick erected) and screw spline (Panel erected) type assembly methods. The shear block method of assembly is recommended for multi-floor applications where mullions will be spliced. Illustrations used in these instructions depict the 5" (127) back members for 1" (25) glazing. All other back member depths are treated in a similar fashion unless otherwise noted.

**1. Cut members to length.**

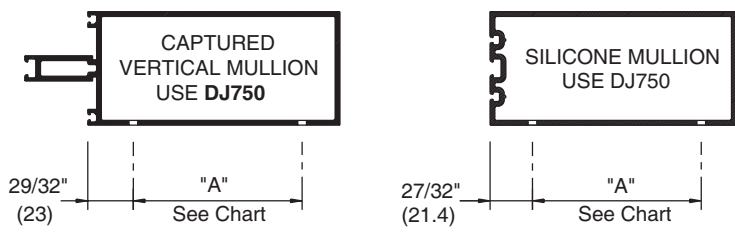
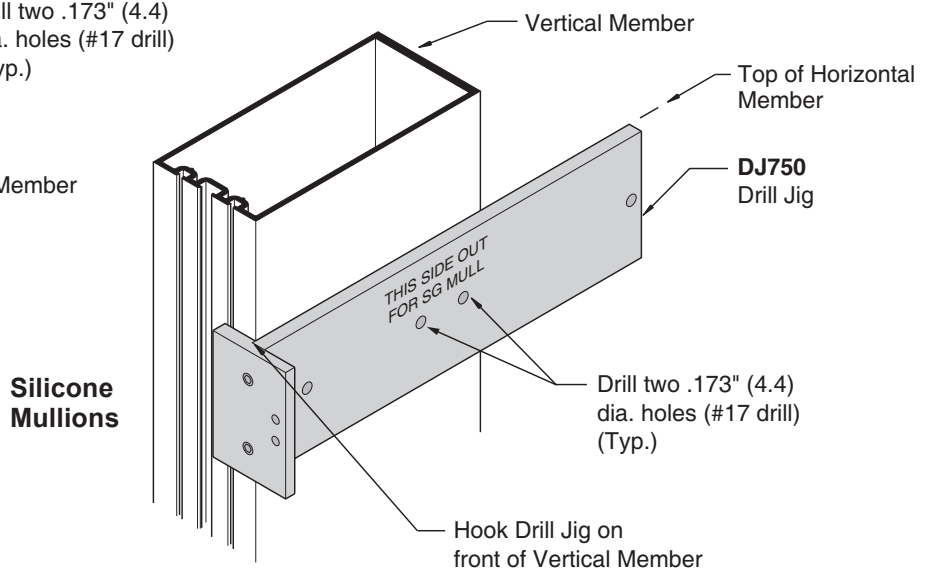
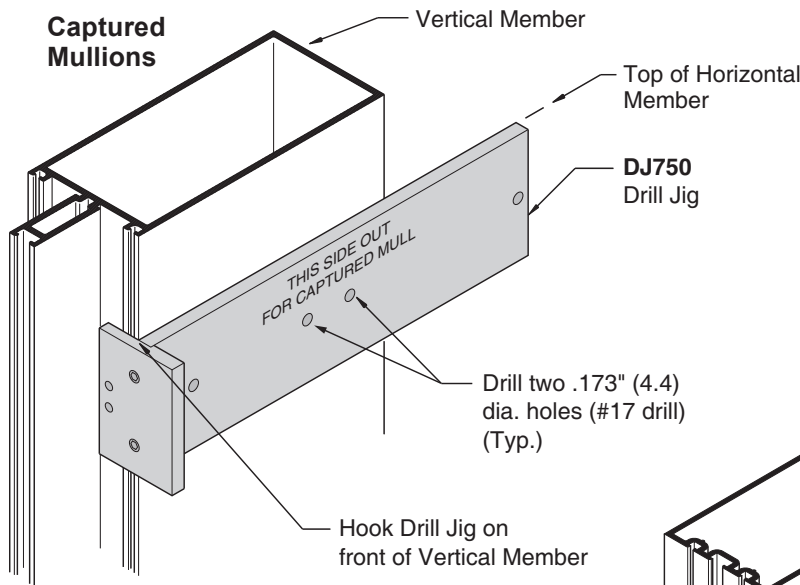
<b>Vertical Mullions, Face Covers and Adapters</b> .....	Frame Height
<b>Horizontal Members and Face Covers</b> .....	Daylight Opening
<b>Horizontal Snap-In Fillers</b> .....	Daylight Opening minus 1/32" (0.8)
<b>Vertical Transition Members</b> .....	Daylight Opening plus 1-3/8" (34.9)
<b>Horizontal Transition Members</b> .....	Daylight Opening minus 1/16" (1.6)
<b>Butt Glazed Horizontal Face Covers</b> .....	Continuous
<b>Butt Glazed Vertical Covers</b> .....	Frame Height
<b>Glass Retainer</b> .....	3" (76.2) piece of face cover
<b>Door Jamb Mullions</b> .....	Length (+) plus bottom clearance



**DETAIL A**

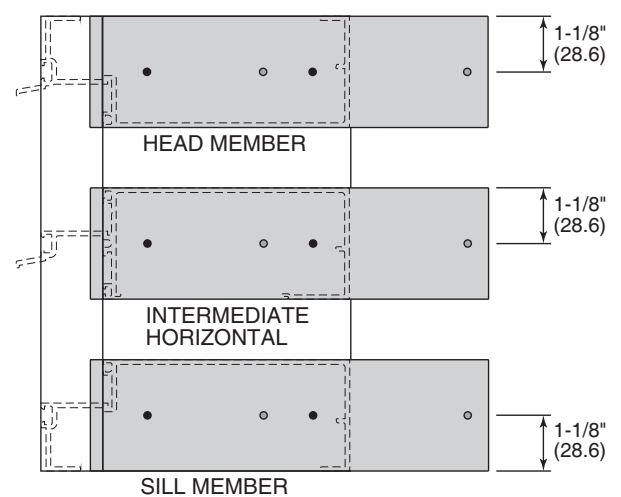
# SHEAR BLOCK (STICK ERECTED) FABRICATION

- Fabricate vertical members to receive shear blocks as shown. Mark locations of horizontal members. Use **DJ750** Drill Jig.



Dim. "A"	Back Member Depth
2 11/32" (59.5)	4" (101.6)
3 11/32" (84.9)	5" (127)
6 11/32" (161.1)	8" (203.2)

Shear Block Assembly

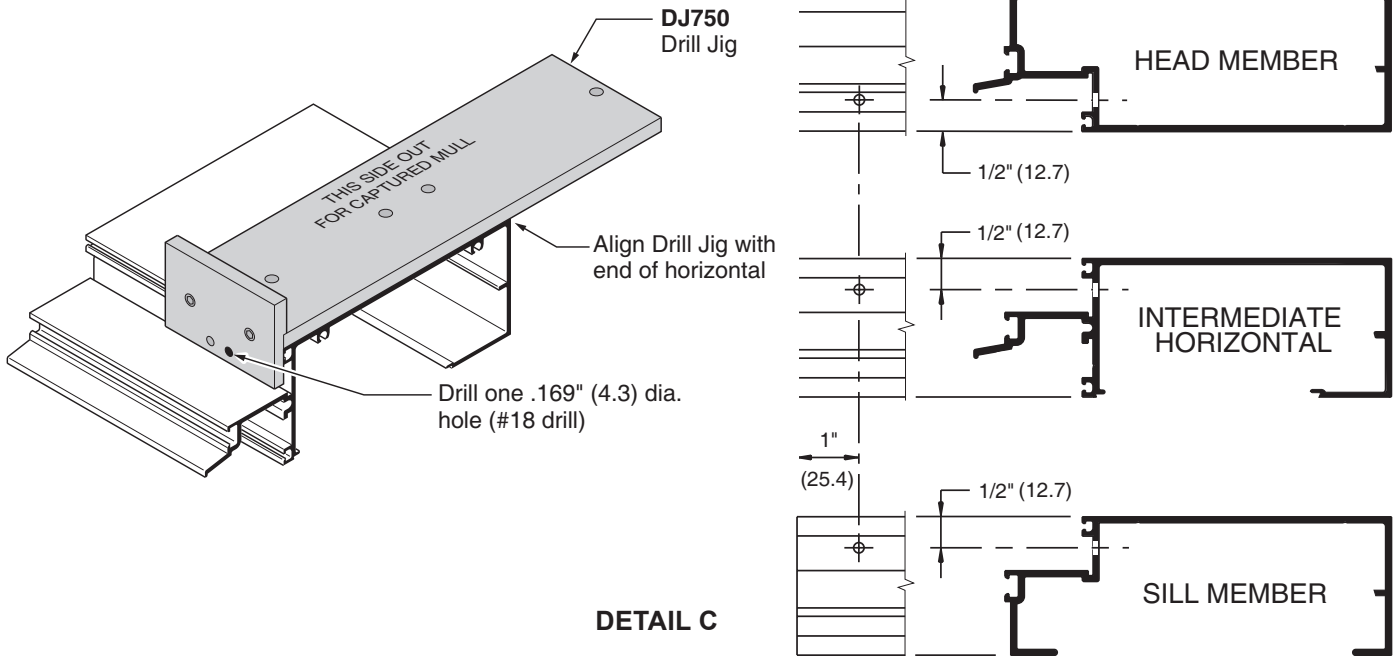


DETAIL B

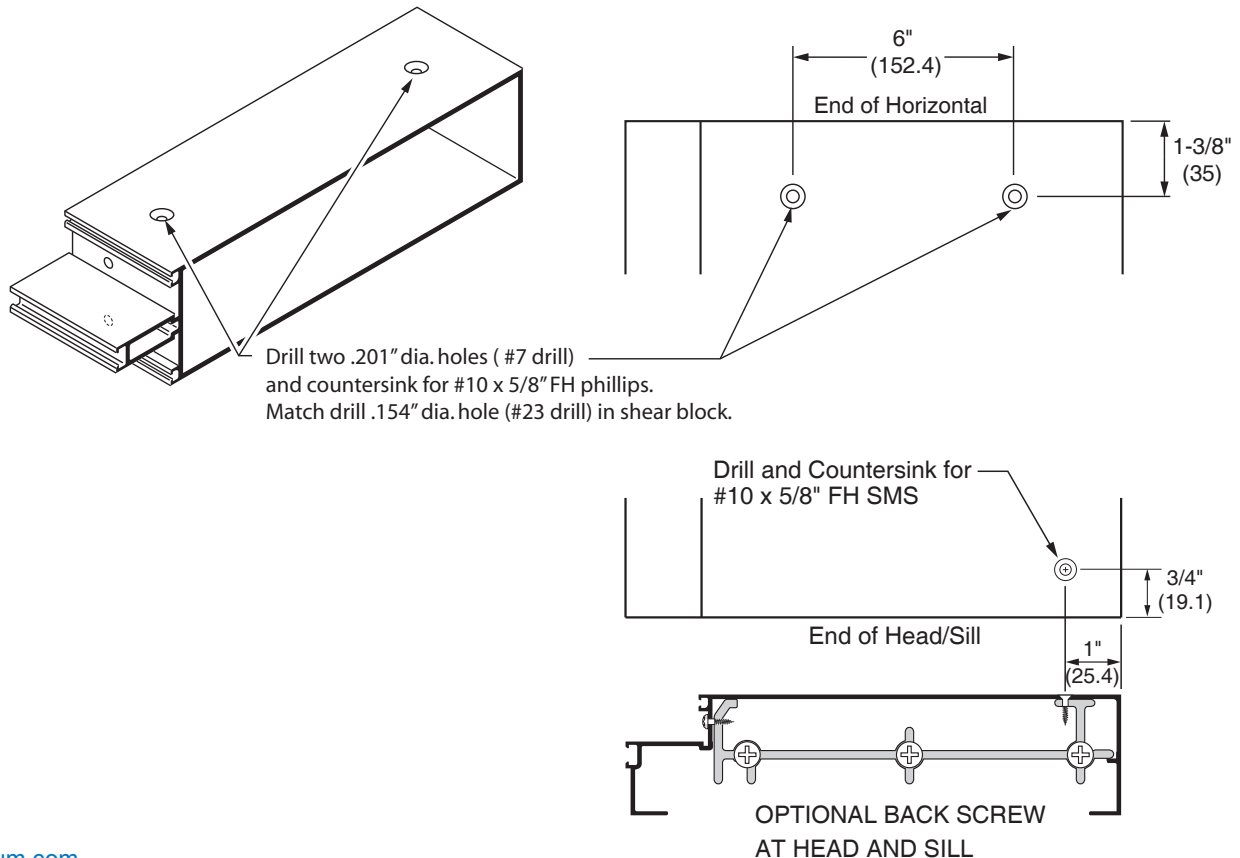
NOT TO SCALE

# SHEAR BLOCK (STICK ERECTED) FABRICATION

3. Fabricate horizontal members to receive horizontal to shear block attachment screws.



4. Fabricate 8" (203.2) horizontal members to receive horizontal to shear block attachment screws.



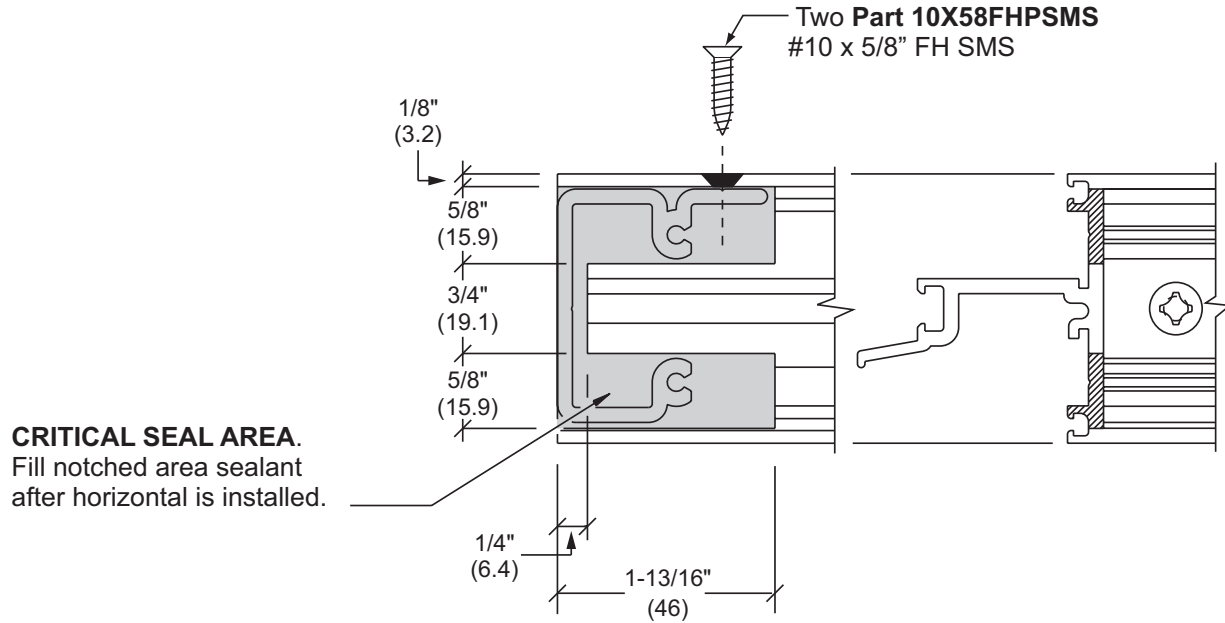
**DETAIL D**

NOT TO SCALE



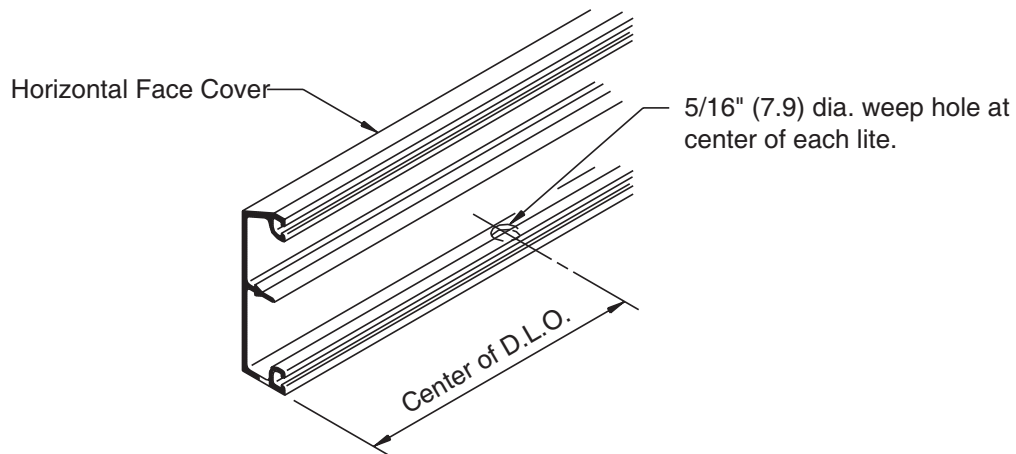
# SHEAR BLOCK (STICK ERECTED) FABRICATION

- For last bay installation of 8" (203.2) back member intermediate horizontals, a "C" notch is required. Fabricate "C" notch as shown



DETAIL E

- Fabricate weep holes in bottom of face covers. Drill 5/16" (7.9) dia. holes at mid-point of daylight opening on bottom side of covers. Butt glazed horizontal covers require one hole centered on each lite of glass.



DETAIL F

See page 29 for instructions on how to splice covers.

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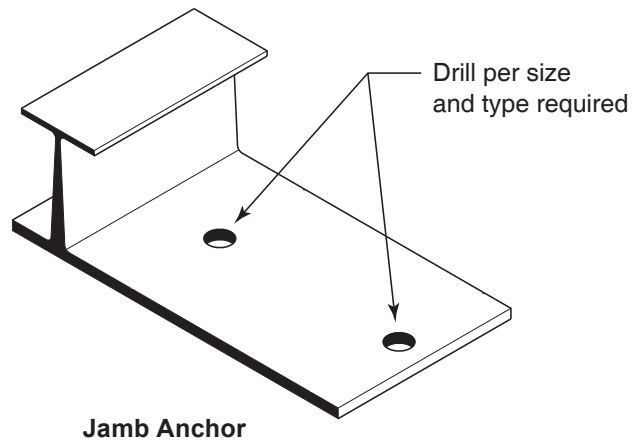
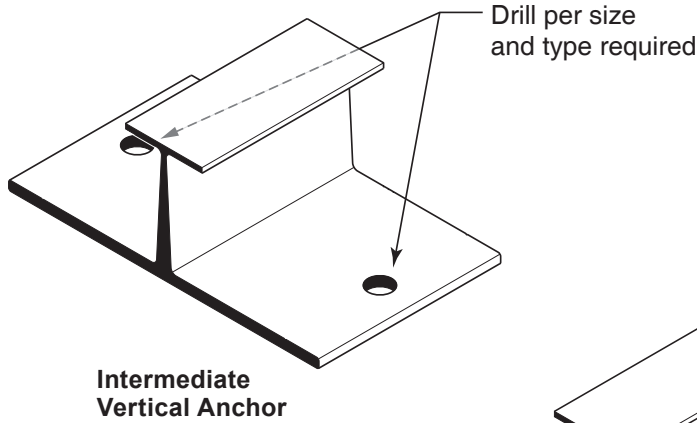
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NOT TO SCALE

# SHEAR BLOCK (STICK ERECTED) FABRICATION

7. Drill clear holes in top and bottom of "T" anchors for anchor bolts as per approved shop drawings.



**NOTE:** "T" anchors must be inserted into mullions before head and sill shear blocks can be installed.

## DETAIL G

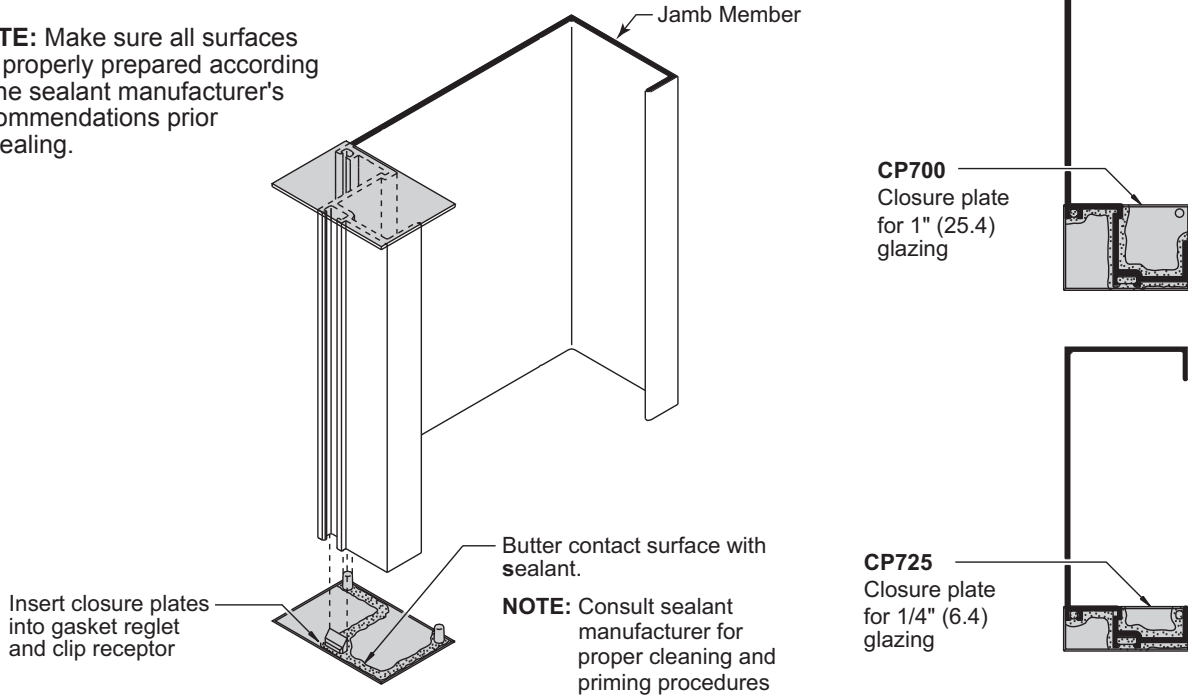
VERTICAL ANCHORS	JAMB ANCHORS FOR VERTICALS	JAMB ANCHORS
AP514 at TW441 and TW400	AP711 at TW550	AP516 at TW441 and TW400
AP513 at TW410	AP807 at TW815	AP511 at TW410
AP526 at TW424	AP811 at TW810	AP534 at TW424
AP624 at TW524	AP607 at TW841	AP634 at TW524
AP707 at TW530 and TW541		AP704 at TW530 and TW541
AP712 at TW550		
AP804 at TW815		
AP812 at TW810		
AP604 at TW841		

NOT TO SCALE

# SHEAR BLOCK (STICK ERECTED) ASSEMBLY

1. Install closure plates on jamb members.

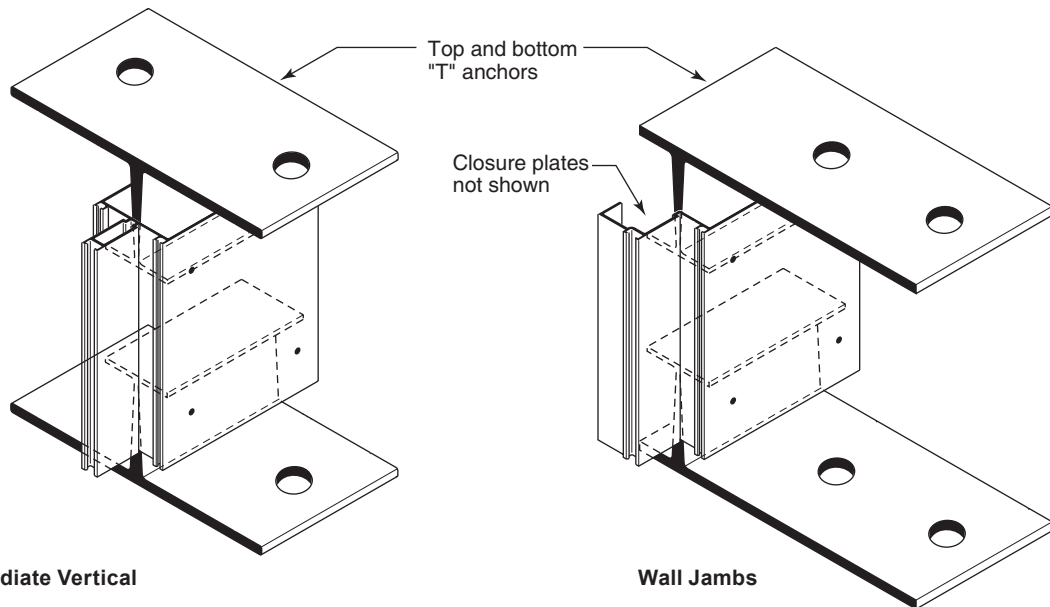
**NOTE:** Make sure all surfaces are properly prepared according to the sealant manufacturer's recommendations prior to sealing.



DETAIL H

2. Slide top and bottom "T" anchors into vertical mullions and secure temporarily. Head and sill shear blocks can not be installed until the anchors are in place.

**NOTE:** Shear blocks can be installed after mullions are set and anchored.

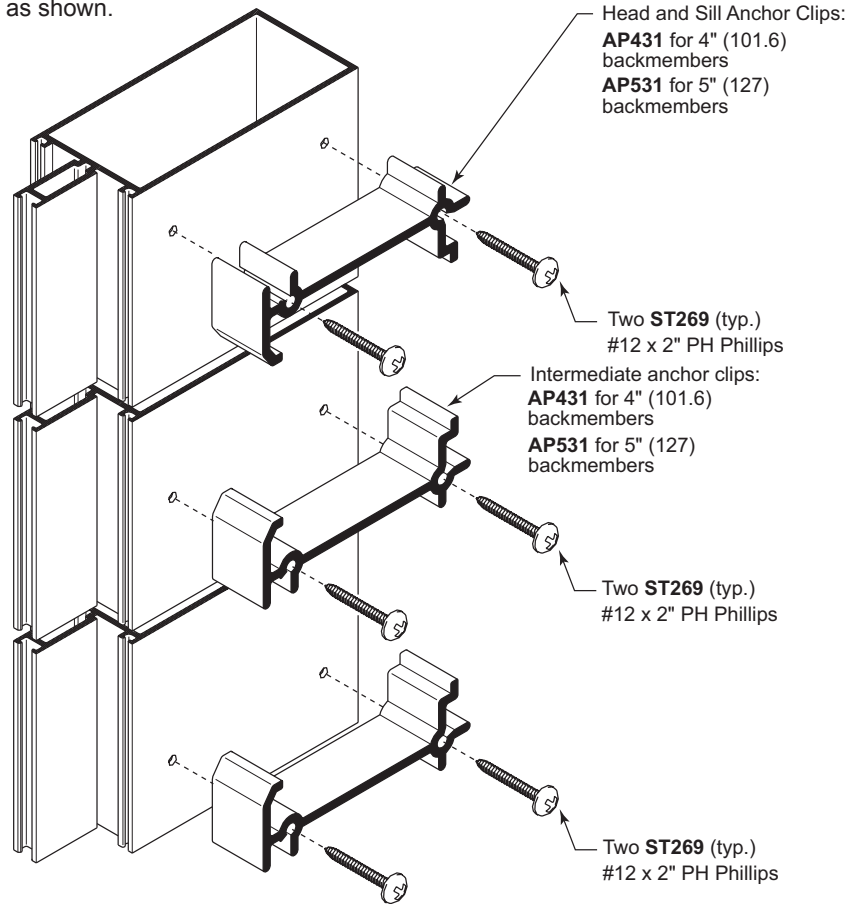


DETAIL I

NOT TO SCALE

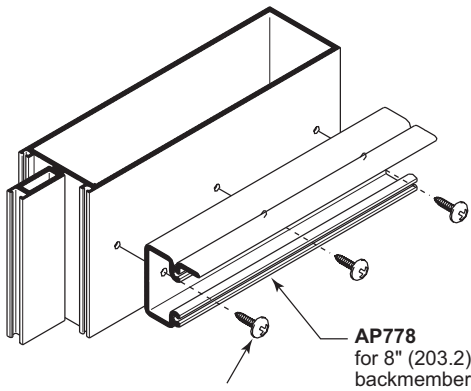
# SHEAR BLOCK (STICK ERECTED) ASSEMBLY

3. Install shear blocks as shown.



**NOTE:**  
 Head and sill shear blocks must be installed after top and bottom "T" anchors are in place.

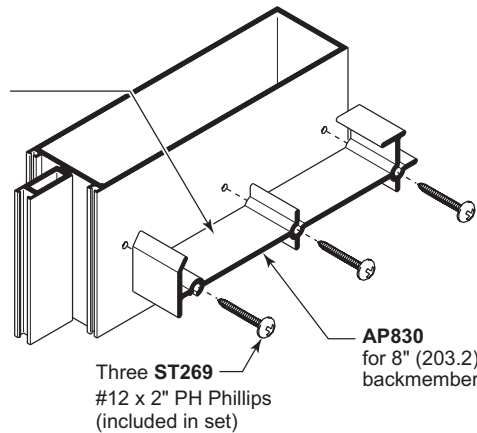
**Typical Shear Block Configuration**



Three **Part 12X34PHPSMS**  
 #12 x 3/4" PH Phillips  
 (included in set)

**SHEAR BLOCK AT 8" (203.2)  
 INTERMEDIATE HORIZONTAL**

**AP830** for 8" (203.2) backmembers



**SHEAR BLOCK AT 8" (203.2)  
 HEAD AND SILL**

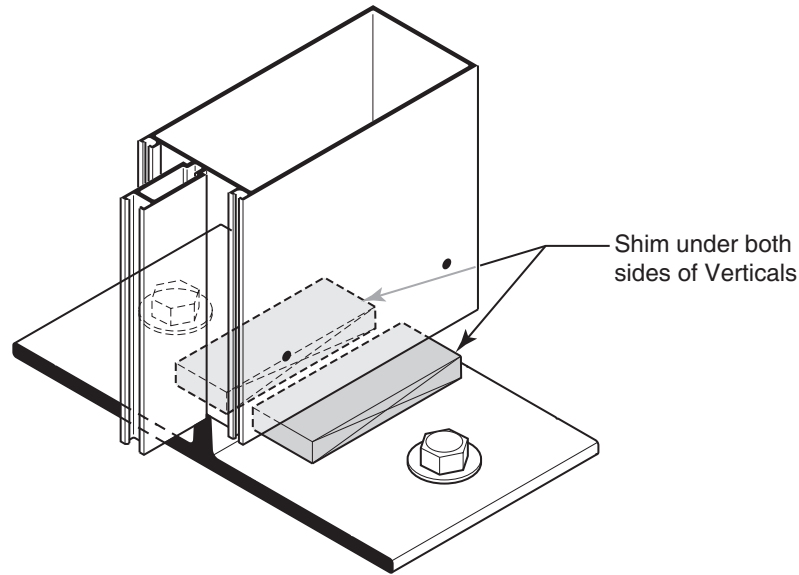
**DETAIL J**

NOT TO SCALE

## SHEAR BLOCK (STICK ERECTION) INSTALLATION

1. Start with jamb mullion, install plumb, level and true. Shim under mullion as needed. Intermediate mullions must be shimmed under both sides of mullion.

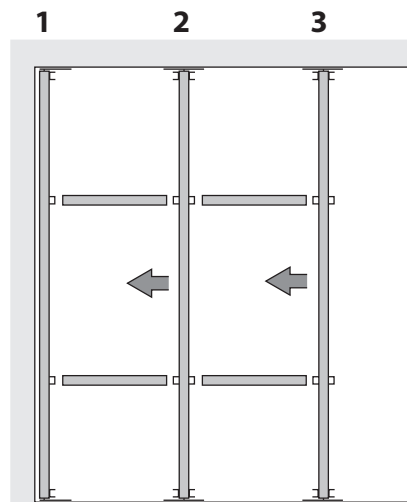
When using 8" (203.2) back members, Intermediate Horizontals must be installed at the same time as Vertical Mullions.



DETAIL K

## 8" (203.2) BACK MEMBER INSTALLATION

The 8" (203.2) horizontals require that bays be installed in a progressive manner. Intermediate horizontals are installed at the same time as vertical mullions. Intermediate horizontals in the last bay require a "C" notch to facilitate installation. See Page 11 for detailed instructions.

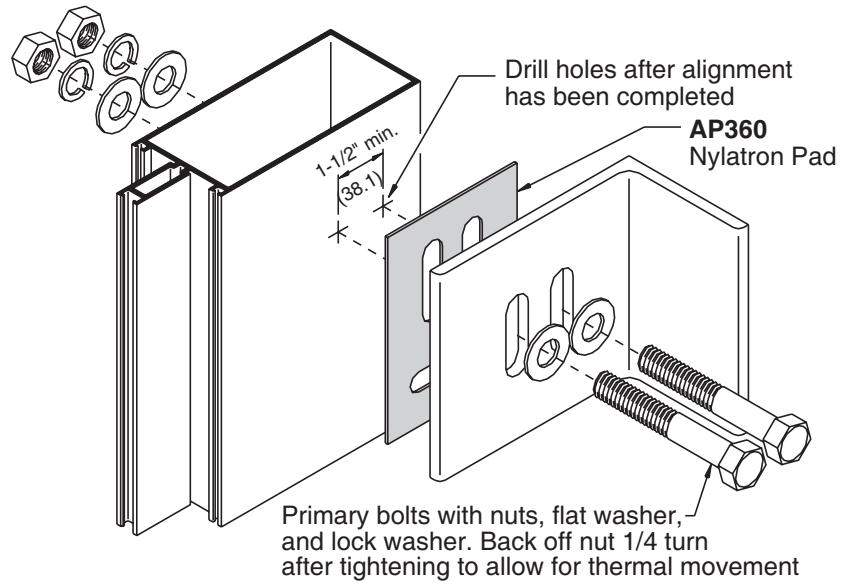


DETAIL L

NOT TO SCALE

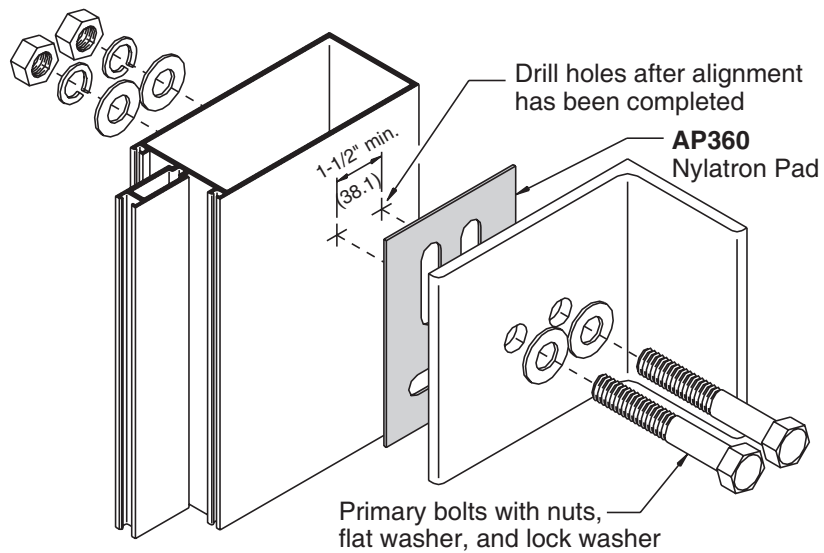
# SHEAR BLOCK (STICK ERECTION) INSTALLATION

2. Anchor Mullions at floor slab as shown or per approved shop drawings.



EXPANSION ANCHOR  
(Windload Anchor)

DETAIL M



FIXED ANCHOR  
(Deadload Anchor)

DETAIL N

NOT TO SCALE

# SHEAR BLOCK (STICK ERECTION) INSTALLATION

3. Install splice joints as shown.

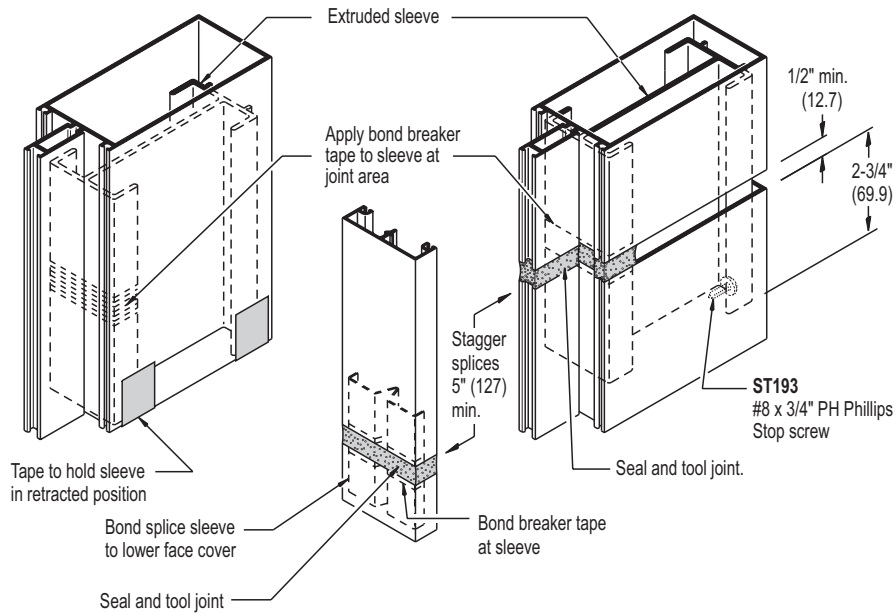
Splice joint width should be based on sealant movement capability and on the following formula:

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 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.

A. Clean splice sleeves and all joint surfaces. Apply bond breaker tape at areas where sleeve will be sealed to avoid three sided adhesion.

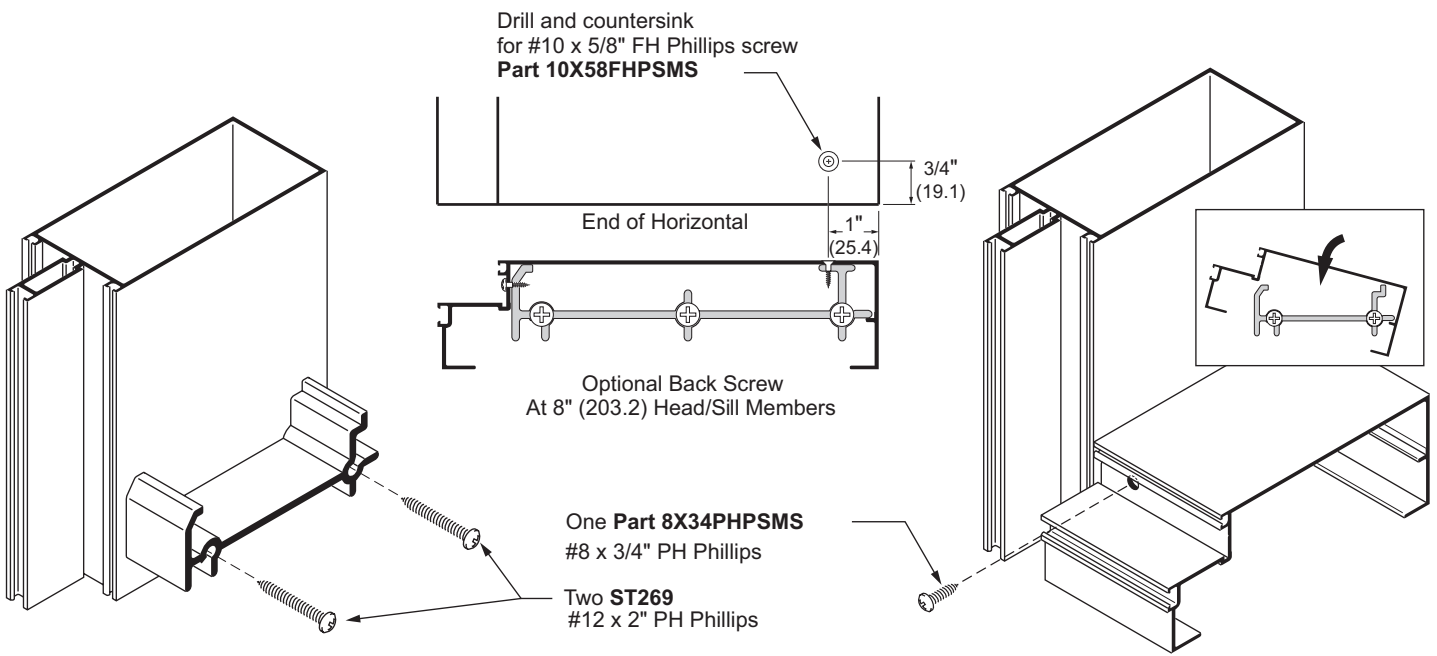
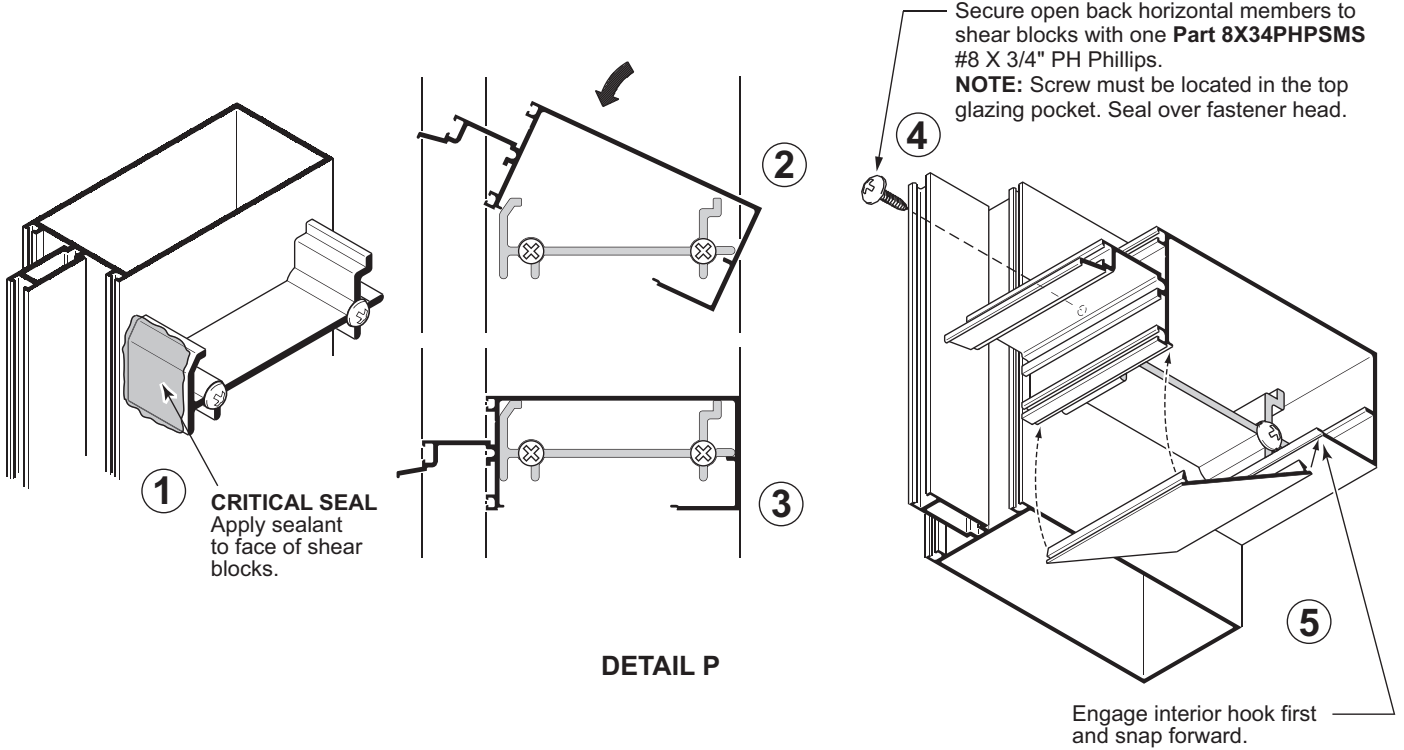


**DETAIL O**

- B. Slide sleeve into upper member before it is installed and tape to hold it in retracted position.
- C. Install **ST193** #8 x 3/4" PH Phillips stop screw 2-3/4" (69.9) down from top of extrusion at interior of lower member.
- D. Install upper member and let extruded sleeve slide down until it sits on top of stop screw.
- E. Seal joint over sleeve. Do not install vertical transition adaptors in vertical splice joint area until after splice joint is sealed. Vertical transition adaptors must be spliced at the same location as the vertical splice. The face cover splice must be located 5" (127) min. below the vertical mullion splice joint.
- F. Apply bond breaker tape to the face cover splice sleeve where it will be sealed to avoid three sided adhesion. Install face cover splice sleeve in lower cover and bond in place with sealant. After upper face cover has been installed, seal and tool joint between the face covers.

# SHEAR BLOCK (STICK ERECTION) INSTALLATION

4. Install horizontal members. Apply **RTV408 Silicone Sealant** to front face of shear blocks just prior to installing. Secure horizontal members to shear blocks as shown.
5. Install snap-in fillers.



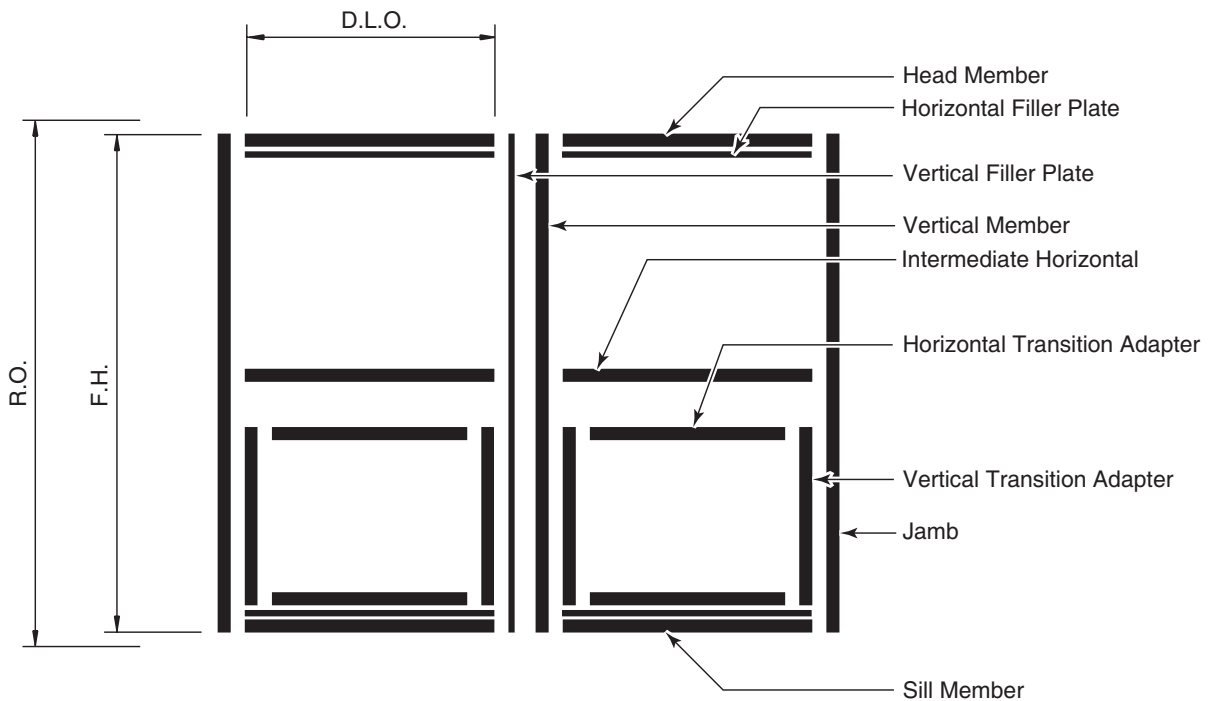


# FABRICATION FOR SCREW SPLINE (PANEL ERECTED) SYSTEM

The Series 4500 Curtain Wall Systems are designed for shear block (Stick erection) and screw spline (Panel erection) type assembly methods. The shear block method of assembly is recommended for multi-floor applications where mullions will be spliced. Illustrations used in these instructions depict the 5" (127) back members for 1" (25) glazing. All other back member depths are treated in a similar fashion unless otherwise noted.

**1. Cut members to length.**

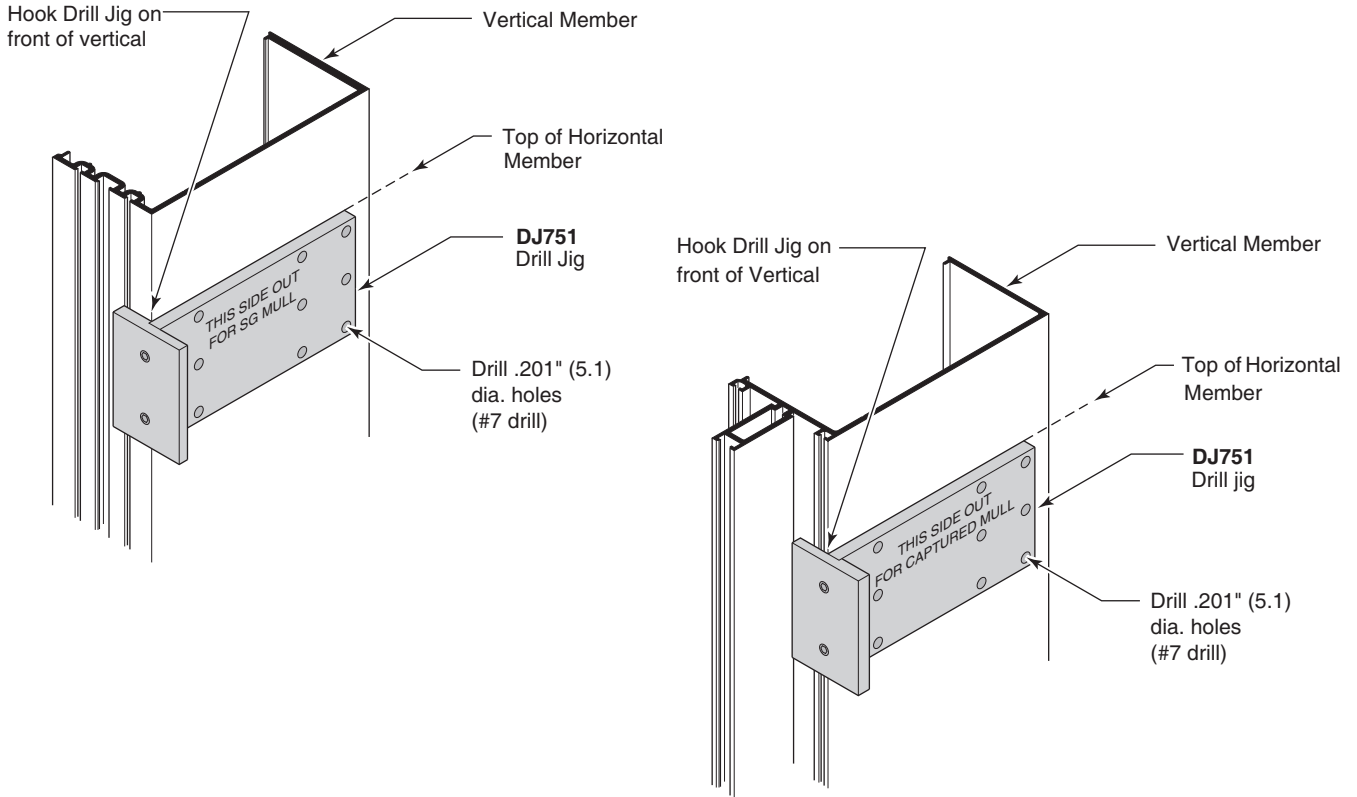
<b>Vertical Mullions, Face Covers and Adapters</b> .....	Frame Height
<b>Horizontal Members and Face Covers</b> .....	Daylight Opening
<b>Horizontal Snap-In Fillers</b> .....	Daylight Opening minus 1/32" (0.8)
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<b>Horizontal Transition Members</b> .....	Daylight Opening minus 1/16" (1.6)
<b>Butt Glazed Horizontal Face Covers</b> .....	Continuous
<b>Butt Glazed Vertical Covers</b> .....	Frame Height
<b>Glass Retainer</b> .....	3" (76.2) piece of face cover
<b>Door Jamb Mullions</b> .....	Length (+) plus bottom clearance



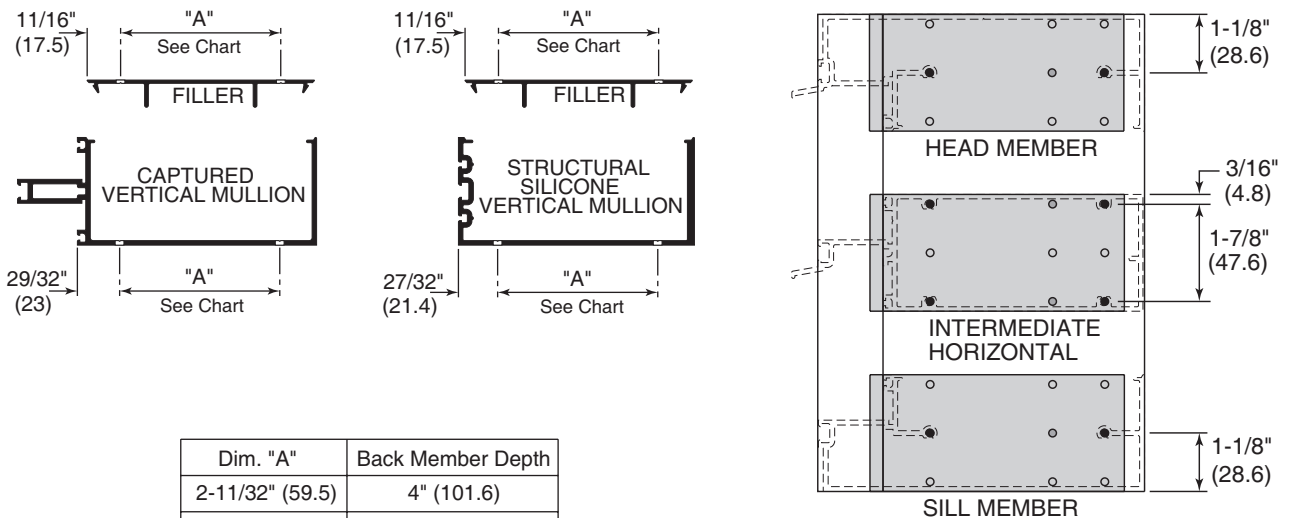
**DETAIL R**

# FABRICATION FOR SCREW SPLINE (PANEL ERECTED) SYSTEM

2. Fabricate vertical mullions for horizontal attachment as shown. Use **Part DJ751** Drill Jig.



DETAIL S

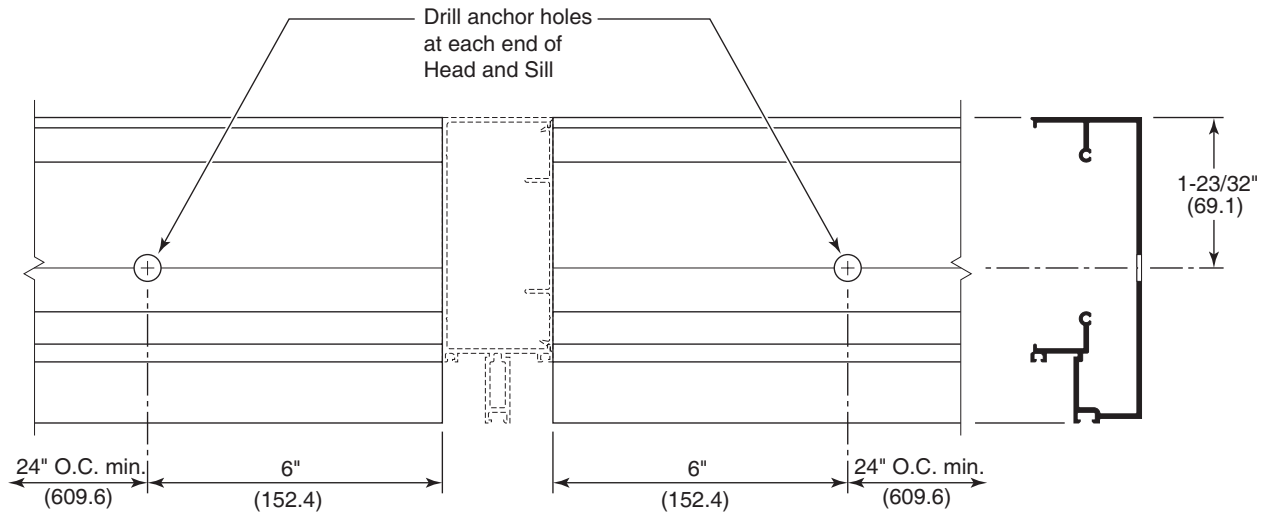


Dim. "A"	Back Member Depth
2-11/32" (59.5)	4" (101.6)
3-11/32" (84.9)	5" (127)

Screw Spline Assembly

# FABRICATION FOR SCREW SPLINE (PANEL ERECTED) SYSTEM

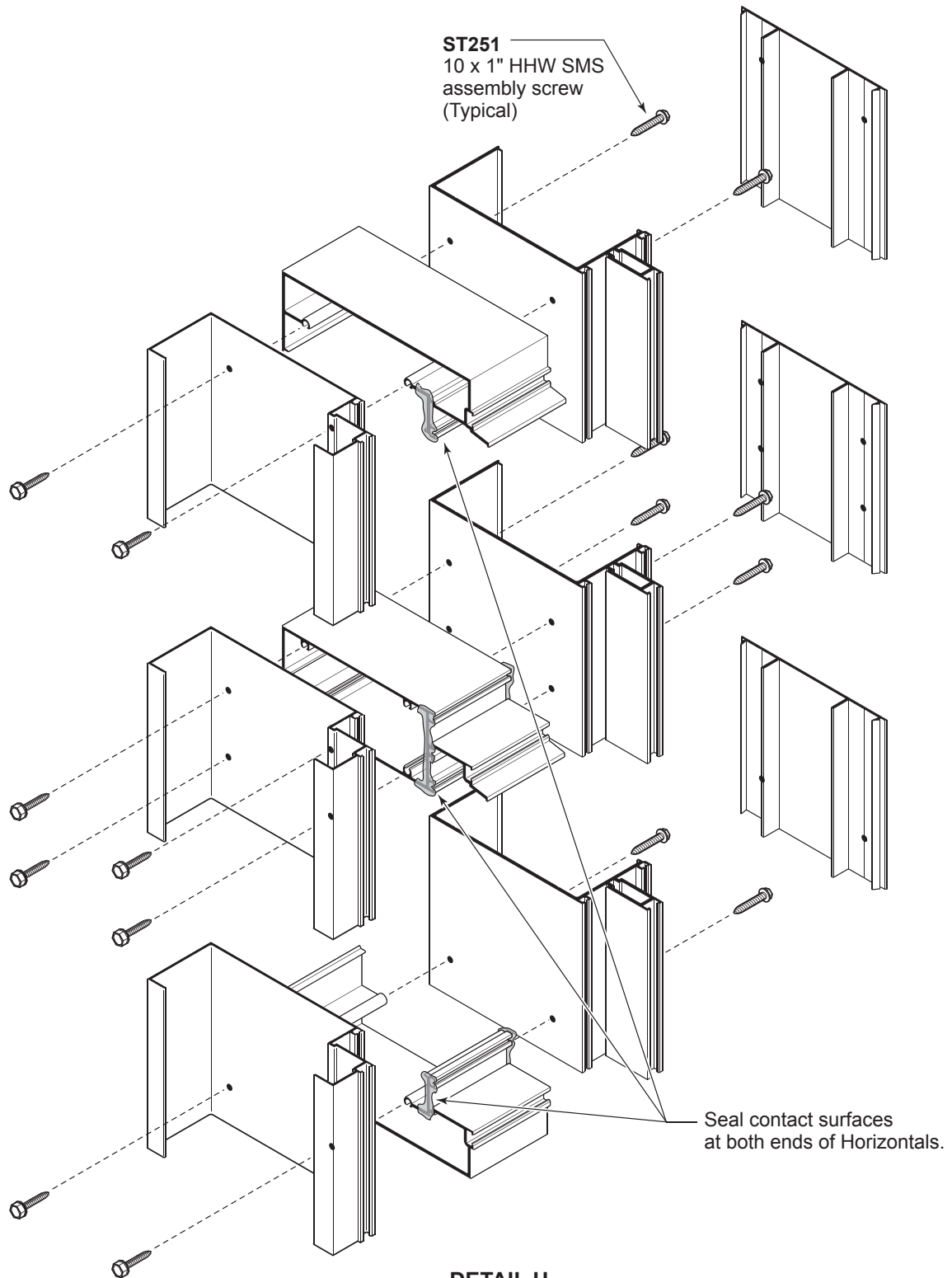
- Fabricate head and sill members for anchor holes. Drill clear holes as shown or per approved shop drawings.



**DETAIL T**

# ASSEMBLY FOR SCREW SPLINE (PANEL ERECTED) SYSTEM

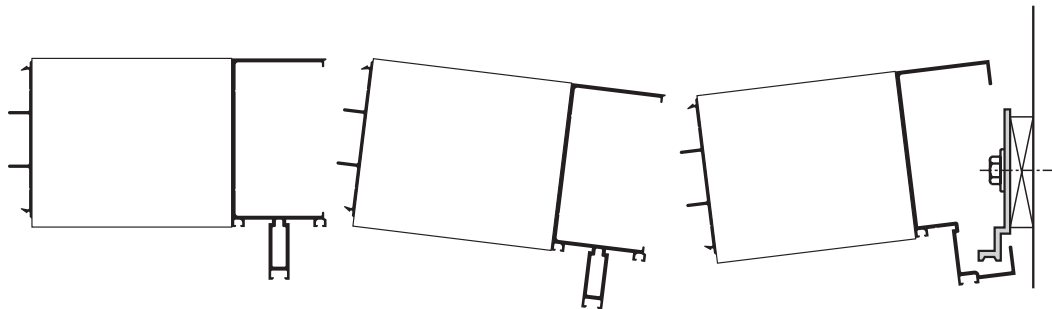
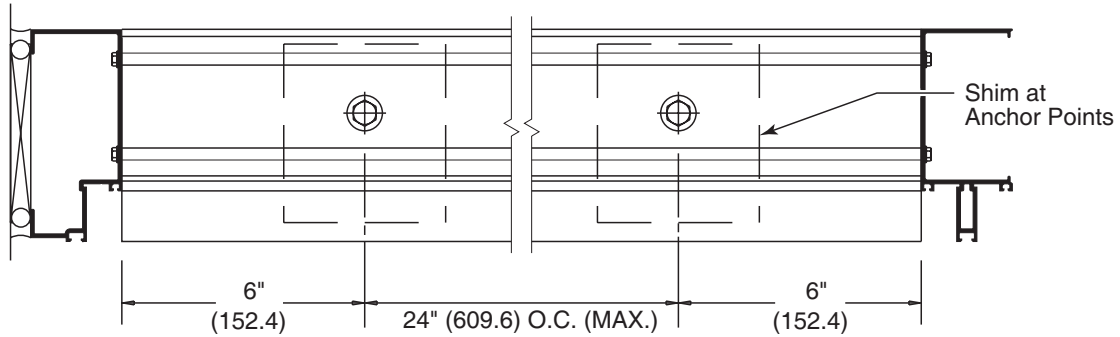
1. Assemble panels as shown. Apply sealant to the ends of all horizontal members at vertical joints just prior to assembly.



# INSTALLATION FOR SCREW SPLINE (PANEL ERECTED) SYSTEM

- Starting at the wall jamb, set first panel in place, plumb, level and true. Attach head and sill 6" (152.4) from each side of verticals and 24" (609.6) on center, or as shown on approved shop drawings. Always shim at anchor points.

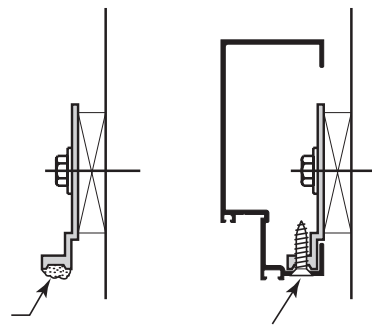
**NOTE:** Install jamb anchors first if required. Jamb anchors are required if deflection exceeds one half of caulk joint space. See approved shop drawings for jamb anchor locations.



Assembling last bay using optional jamb anchor

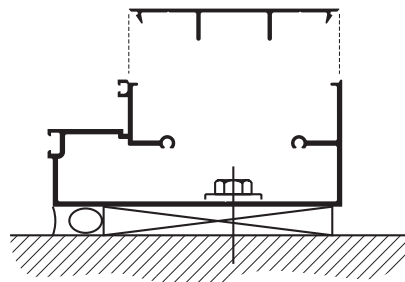
## DETAIL V

Apply sealant full length prior to frame installation.



Attach with three #12 x 1" FH Phillips Part 12X1FHPSMS (included in package).  
Tool excess sealant.

- Install remainder of panels. It may be necessary to install the last two bays as a unit.
- Install head and sill fillers.

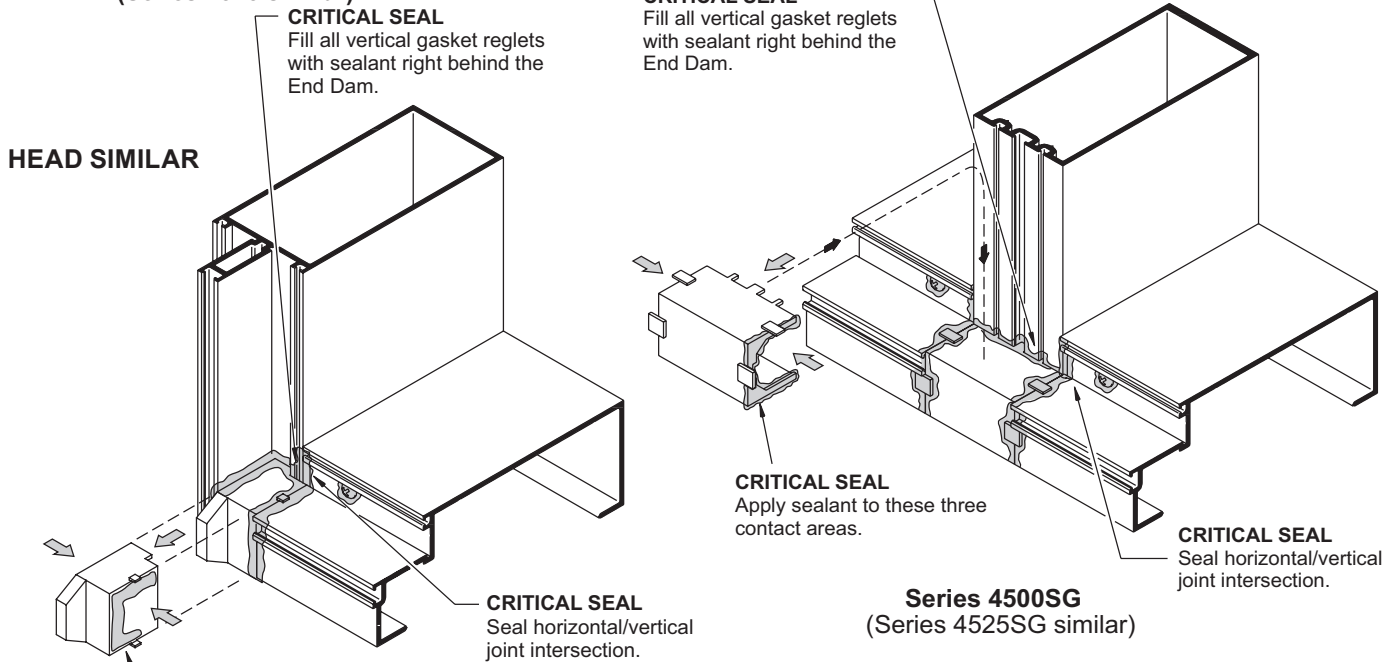
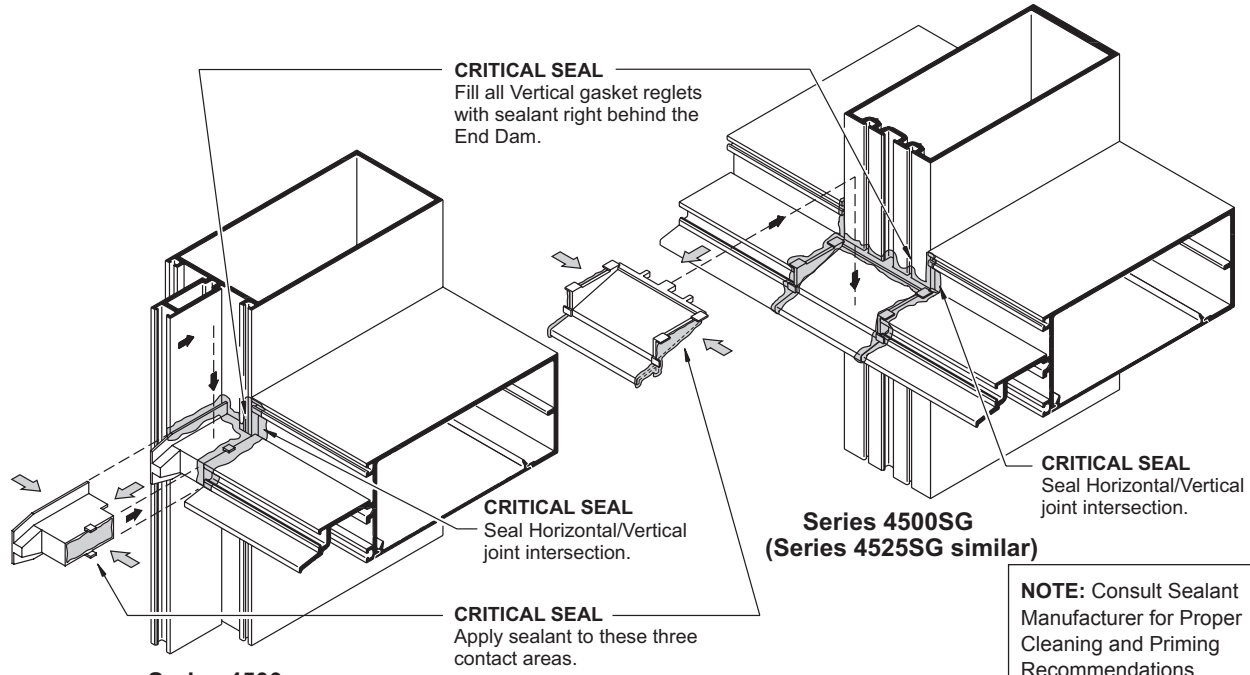


## DETAIL W

NOT TO SCALE

# INSTALLATION OF WATER DEFLECTORS AND PERIMETER SEALS (ALL SYSTEMS)

1. Apply sealant at three contact surfaces of the plastic water deflectors. Fill the vertical gasket reglets with sealant at the water deflector locations. Seal joints at the face of perimeter water deflectors where it intersects the head and sill members.
2. Snap tabs on the water deflectors into front lip of tongue on vertical and slide down into place. Water deflectors should rest on the horizontal member tongue.



**HEAD SIMILAR**

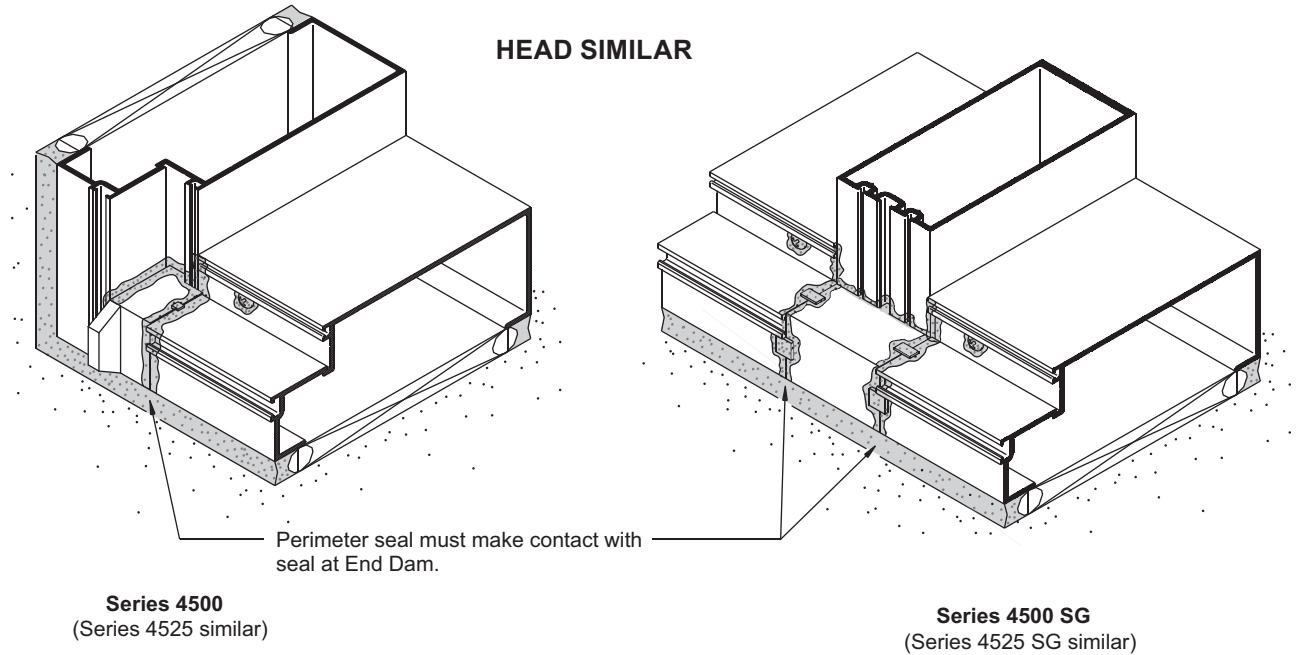
**DETAIL X**

NOT TO SCALE

# INSTALLATION OF WATER DAMS AND PERIMETER SEALS (ALL SYSTEMS)

3. After all water deflectors are installed, apply continuous perimeter seal. See **DETAIL Y**.

**PERIMETER CAULKING MUST BE INSTALLED PRIOR TO INSTALLING GLASS OR FACE COVERS.**

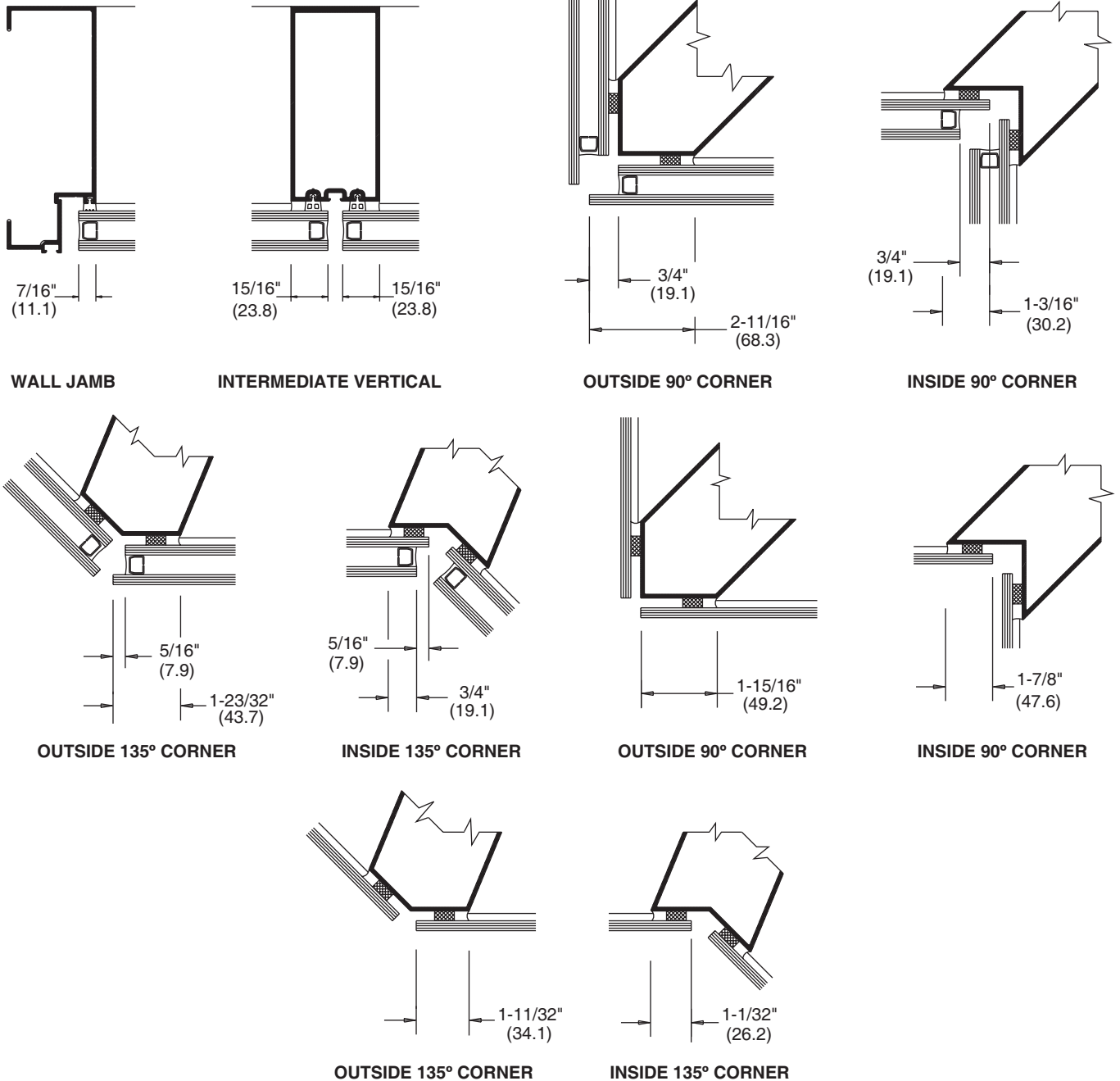


## DETAIL Y

# GLASS INSTALLATION (ALL SYSTEMS)

**CAPTURED GLASS WIDTH AND HEIGHT** = DAYLIGHT OPENING + (PLUS) 1" (25.4)  
**SILICONE GLAZED GLASS HEIGHT** = DAYLIGHT OPENING + (PLUS) 1" (25.4)  
**GLASS WIDTH** = DAYLIGHT OPENING + (PLUS) CALCULATED BITES  
**GLASS BITES VARY AT CORNER CONDITIONS**

These formulas do not take into consideration glass tolerances. Consult glass manufacturer before ordering glass.  
 Glass sizes for special conditions must be calculated according to approved drawings.  
 In temperatures below 40 degrees Fahrenheit gaskets (4 degrees Celsius) should be warmed and installed before they are allowed to cool again.



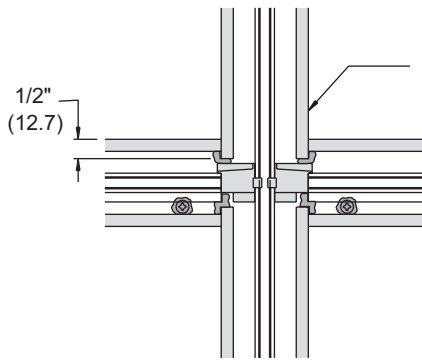


# GLASS INSTALLATION (ALL SYSTEMS)

**NP716** Sponge Glazing gasket is used on the interior framing members. **NP726** EPDM Glazing gasket is used on the exterior framing members. **SP250** Spacer Gasket is used at structural silicone glazed verticals for the 4500SG and 4525SG Systems.

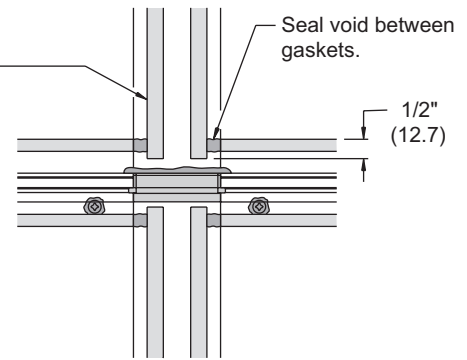
1. Insert push-in gaskets into all back members and face covers. Vertical gaskets on the mullion run past horizontal gaskets by 1/2" (12.7). Horizontal gaskets butt against vertical gaskets. Face cover gaskets run continuous and should be cut 1" (25.4) long on each end to allow for shrinkage.

**NOTE:** All glazing gaskets should be cut 1/8" (3.2) longer per foot of aluminum member to allow for shrinkage.



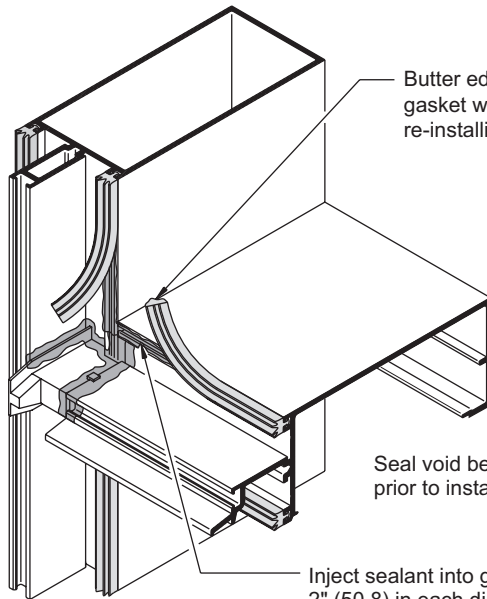
**Series 4500**

**NOTE:** Vertical gaskets do not run through to allow for End Dam and Water Diverter installation. They extend approximately 1/2" (12.7) past edge of Horizontal Mullion.



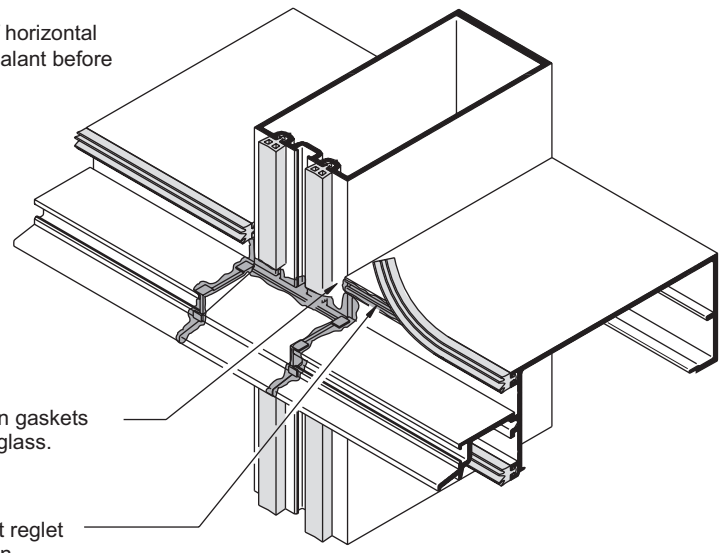
**Series 4500SG**

Start glazing at bottom and work up.



**Series 4500**  
(Series 4525 similar)

**DETAIL AA**

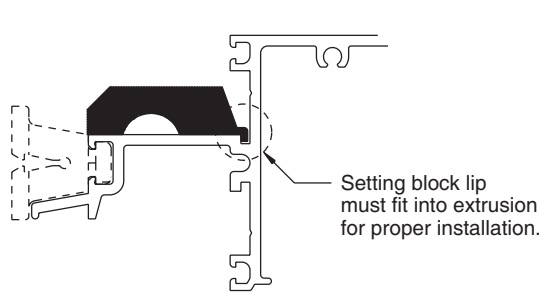


**Series 4500SG**  
(Series 4525 SG similar)

**SERIES 4500 CURTAIN WALL**

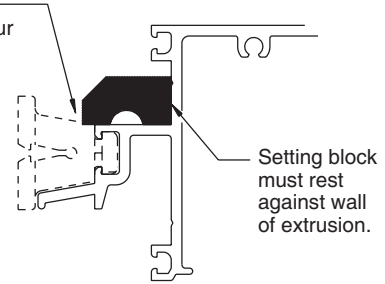
**GLASS INSTALLATION (ALL SYSTEMS)**

2. Locate two setting blocks at quarter points or as shown on approved shop drawings.



**Series 4500 and 4500SG**

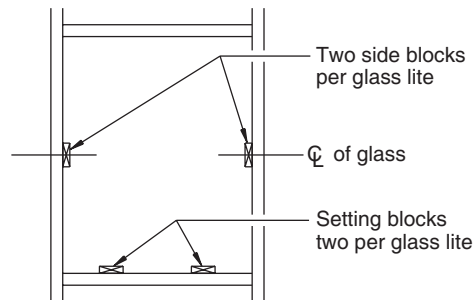
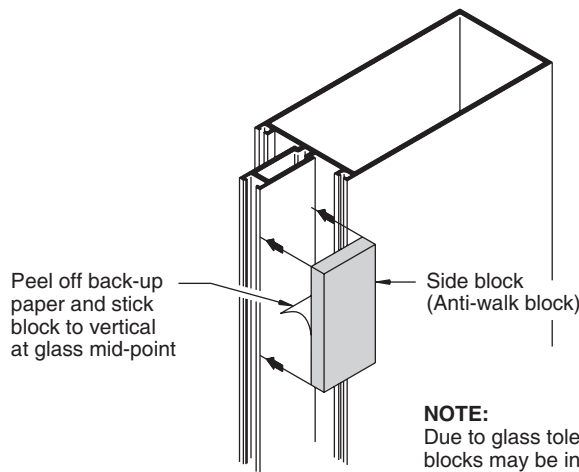
**NOTE:** Interference must not occur between setting block and NC900 clip. Stagger as required.



**Series 4525 and 4525SG**

**DETAIL BB**

3. Peel off paper backing from anti-walk blocks and locate one on each vertical at mid-points of the glass height.



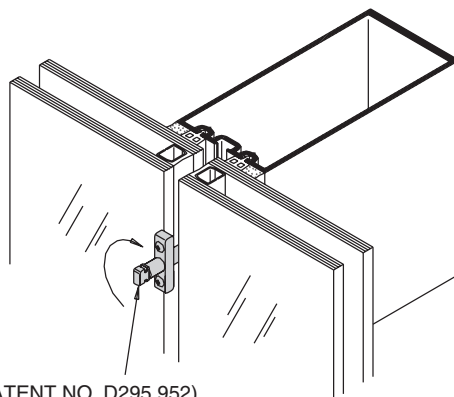
**Schematic View**

**NOTE:** Due to glass tolerances side blocks may be installed after glass is in place.

**DETAIL CC**

4. Install glass, centering in opening. Hold glass in place temporarily at corners and center of lites with a 3" (76.2) long piece of cover at horizontals and captured verticals. For silicone glazing, hold glass in place with **RG700** glass retainers.

**USE THREE RETAINERS IF LITE OF GLASS WEIGHS MORE THAN 350 POUNDS (159 kg).**



**RG700** (PATENT NO. D295,952) temporary glass retainer for butt glazed verticals

**NOTE:** For butt glazed applications, **RG700** should remain in place until the silicone has fully cured. See manufacturer's specifications for curing times. Fill hole after removal of retainer.

**DETAIL DD**

NOT TO SCALE

# GLASS INSTALLATION (ALL SYSTEMS)

5. Install **NC900** Face Cap Clips as described below. To install clips, twist clockwise.

**NC900** Face Cap Clip spacing

**Horizontal Members:**

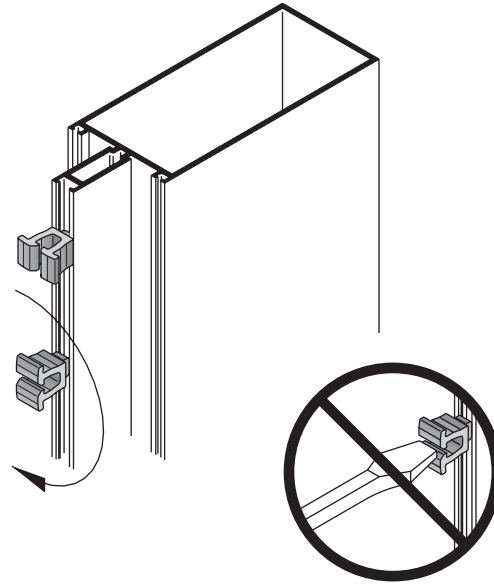
- 2" (50.8) from each end
- 2" (50.8) from center of each lite
- 6" (152.4) on center

**Vertical Members:**

- 2" (50.8) from each end
- 2" (50.8) from center of horizontal member
- 6" (152.4) on center

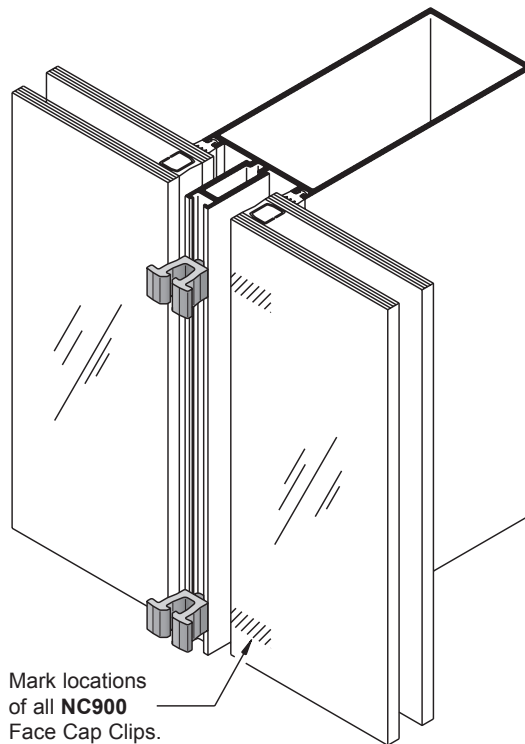
**Splice Joints:**

- 2" (50.8) from each side of joint



DETAIL EE

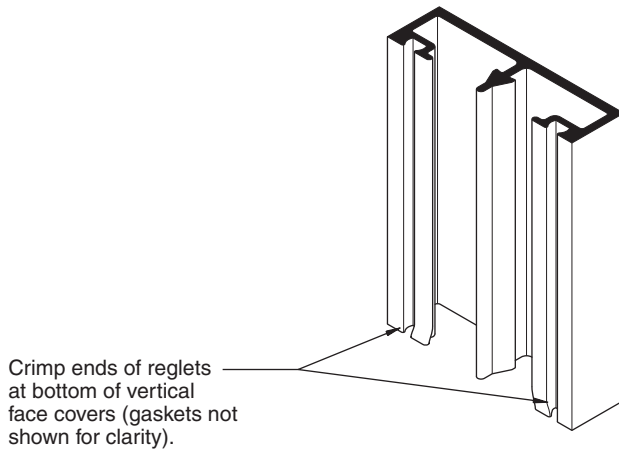
6. Mark locations of each **NC900** Face Cap Clip on the glass. This will assist in knowing where clips are when installing covers.



DETAIL FF

# FACE COVER INSTALLATION (ALL SYSTEMS)

1. Remove temporary retainers. Install all vertical face covers first.

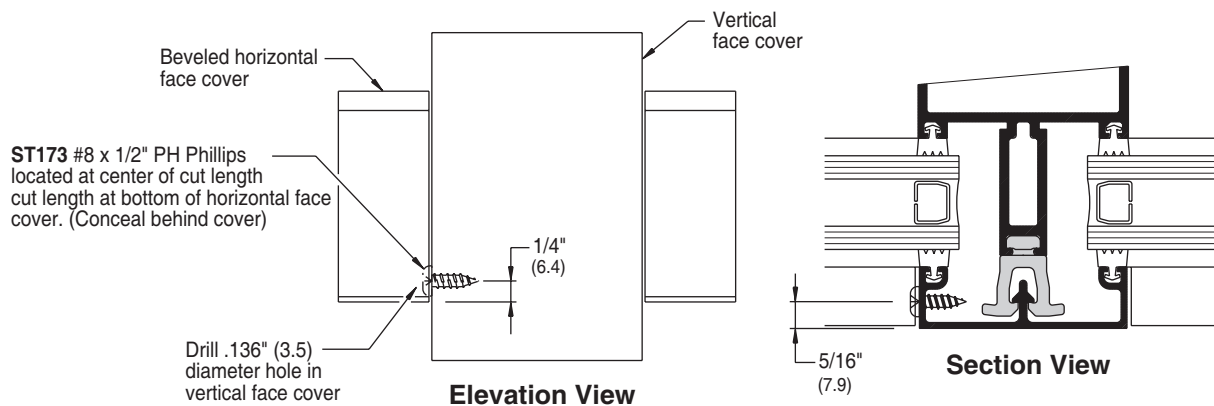


**DETAIL GG**

Prior to installing face covers, trim previously installed gaskets to length of cover. On vertical face covers, it may be necessary to crimp each reglet at the bottom of the cover to retain gaskets during installation.

Install vertical face covers from top to bottom and horizontal face covers from the center outward. Care must be taken to prevent damage to face covers during installation. Use a 2" (50.8) x 4" (101.6) x 12" (304.8) piece of wood and a Dead Blow Hammer to engage face covers. Use the marks on the glass locating **NC900** Face Cap Clips to engage covers at clips. Only hit covers at clip locations.

2. Pinning of vertical face covers is required to prevent covers from sliding. Use one screw per cut length nearest the center of the length. Locate the screw so that it rests on the top edge of the bottom wall of the horizontal face cover, concealed from view. Install as shown.

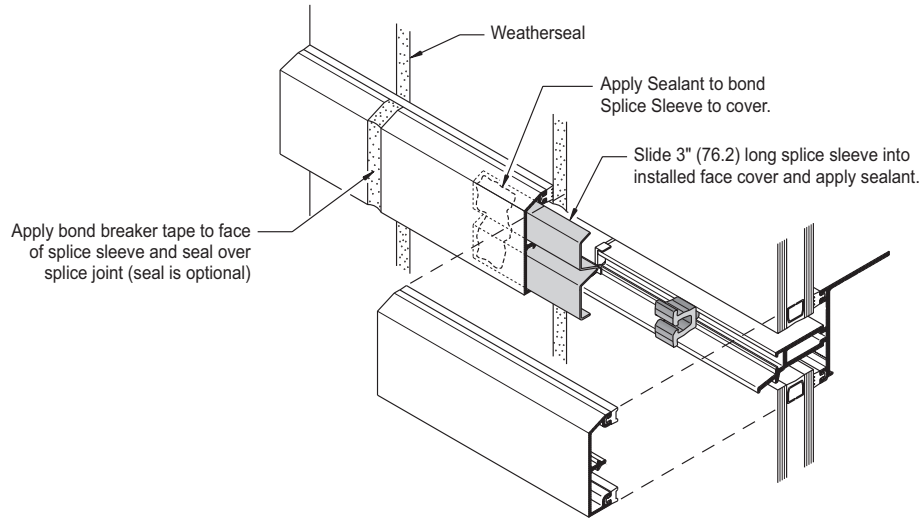


**DETAIL HH**

# FACE COVER INSTALLATION (ALL SYSTEMS)

3. Install horizontal face covers. Use same procedure as vertical covers, striking the covers only at clip locations. Always install horizontal face covers with beveled edge on top.

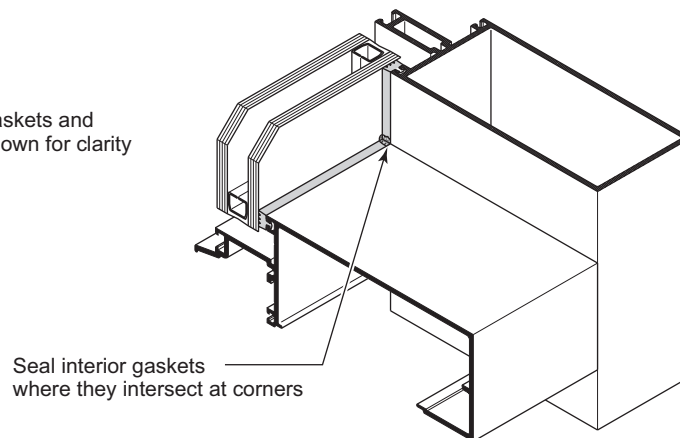
When splicing horizontal face covers, always locate splice at centerline of glass butt joints. Splice should be 1/2" (12.7) or based on formula for linear expansion for aluminum specification and sealant movement capability. See page 24 for formula.



DETAIL II

4. After frame has been glazed and face covers installed, seal corners of all interior gaskets. Tool excess sealant.

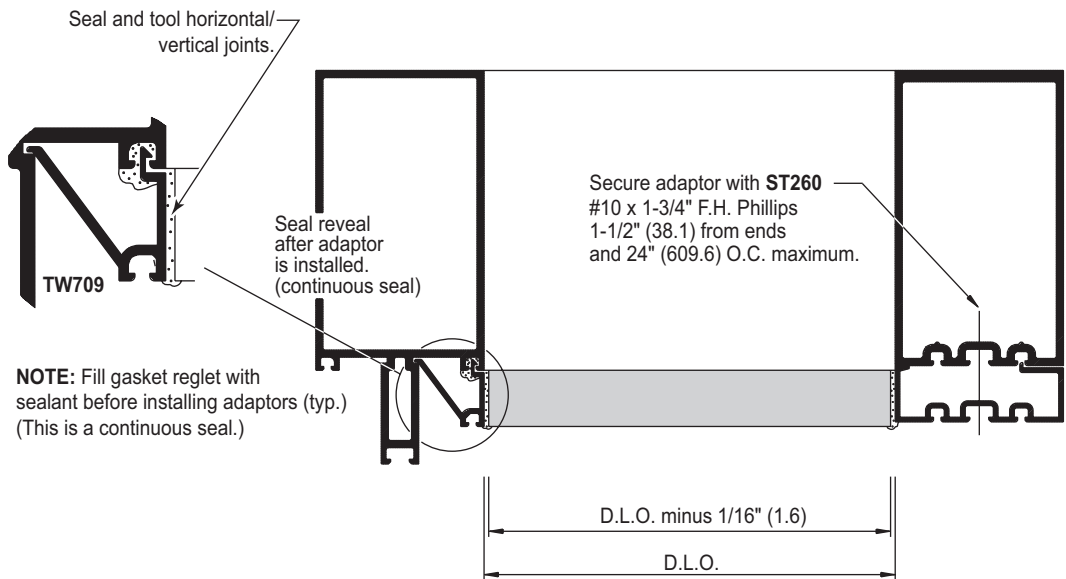
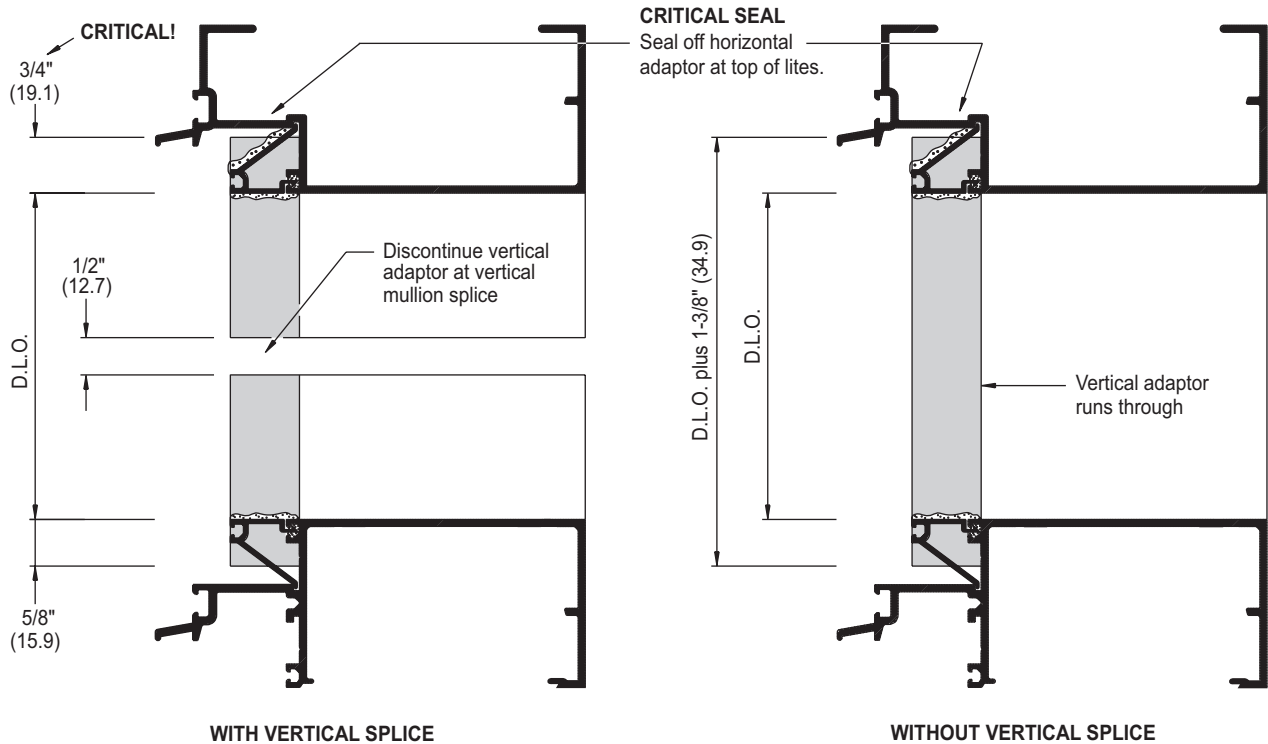
NOTE: Exterior gaskets and face covers not shown for clarity



DETAIL JJ

# TRANSITION GLAZING (ALL SYSTEMS)

1. Apply sealant into gasket reglets before installing snap-in transition members.
2. Install vertical adapters first. Center in daylight opening.
3. Install horizontal adapters and seal horizontal to vertical joints. Tool sealant into joints.
4. Follow normal glazing procedures.



# DOOR FRAME INSTALLATION (ALL SYSTEMS)

1. Cut vertical mullions that will accept door subframe to frame height plus bottom clearance. Mullions that will accept door subframes run to the floor. For multiple span installations, cut to typical mullion length plus clearance.
2. Cut horizontal member above door header subframe to standard cut dimension as shown on page 17.
3. Drill holes at the bottom of the door jamb mullion for anchor screws.
4. **STICK TYPE ERECTION:**  
Prior to installing sill horizontal adjacent to door frame, secure and seal vertical mullion door jamb to the floor.  
**PANEL TYPE ERECTION:**  
Secure mullion to the floor before the next panel is installed.
5. Prior to installing door frame, apply pocket fillers to curtain wall header and jambs. Seal screw heads at pocket filler for Series 4525 applications.

**NOTE: Horizontal member above door frame must be installed with screw heads sealed before pocket fillers can be installed.**

6. Assemble and install door frame and door in opening per instructions as shown in the Entrance Doors and Frames section of the Installation Manual.

