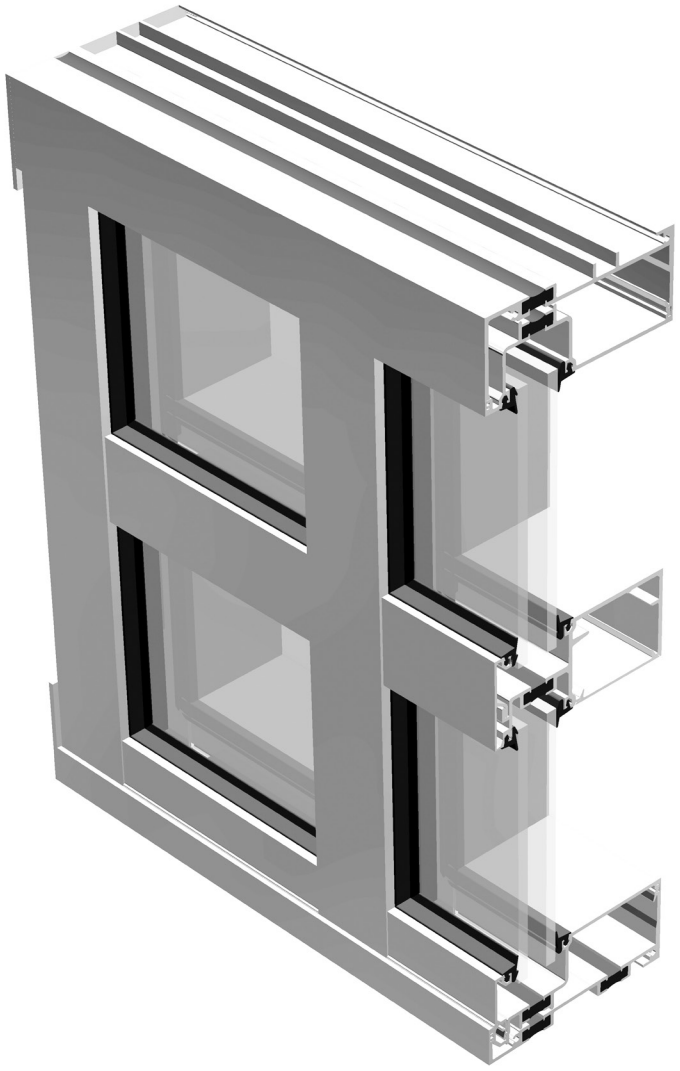
INSTALLATION INSTRUCTIONS

SERIES OST451 and OST451SSG
OFFSET GLAZED WINDOW WALL



A CRH COMPANY

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11M0402_1-15-20

HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

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

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

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

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

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

IMPORTANT: READ THIS MANUAL THOROUGHLY BEFORE BEGINNING INSTALLATION

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. **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.
4. **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.
5. **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.
6. **ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.
7. **SEALANTS.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the ***Glazing Contractor*** to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. This is required on every project.

GENERAL INSTALLATION NOTES (CONTINUED)

8. **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.

9. **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.

10. **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.

11. **WATER HOSE TEST.** As soon as a representative amount of the wall has been glazed (500 square feet or 46.5 m^2) a water hose test should be conducted in accordance with AAMA 501.2 specifications to check the installation. On all jobs the hose test should be repeated every 500 square feet (46.5 m^2) during the glazing operation.

12. **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.)

13. **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.

14. **SEALANTS.** Check shop drawings, installation instructions, architectural drawings and shipping lists to become thoroughly familiar with all sealants referenced in these instructions, which must be a one part elastomeric acetic or neutral cure silicone and must be applied according to the silicone manufacturer's recommendations.

15. **APPLICATION.** Structural silicone must be applied from the interior, and weather seal from the exterior, after the interior structural silicone has fully cured.

16. **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.

17. **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.

18. **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.

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

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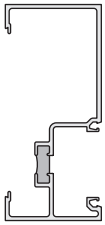
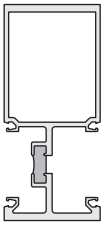
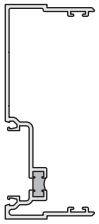
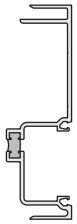
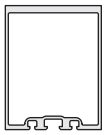
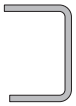
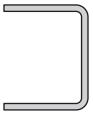
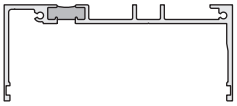
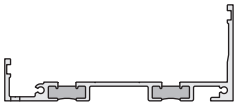
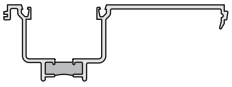
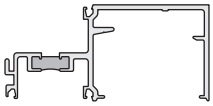
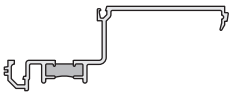
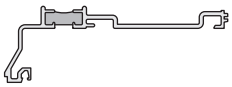
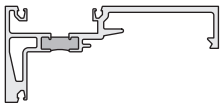
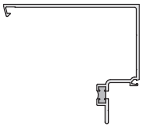
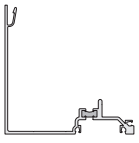
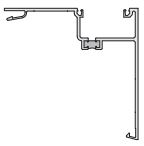
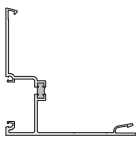
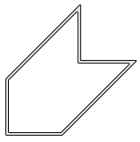
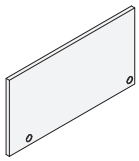
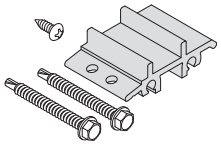
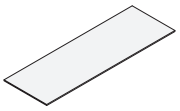
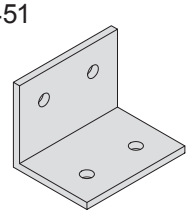
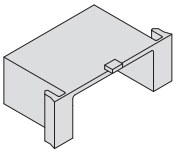
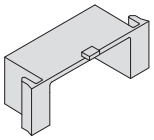
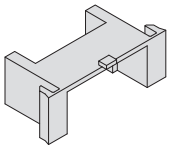
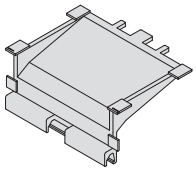
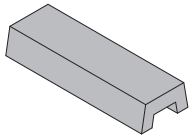
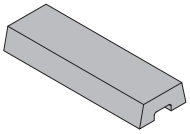
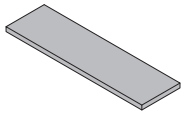
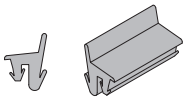
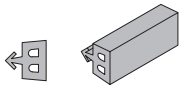
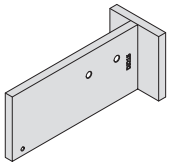
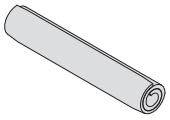
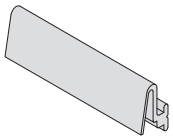
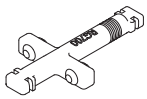
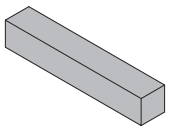
PARTS IDENTIFICATION

PROFILES

0T652  Jamb	0T655  Vertical Mullion	FF561  Male Expansion Mullion	FF569  Female Expansion Mullion
0G551  SSG Vertical	SS520000016  Optional Stiffener for 0G551	SS569  Optional Stiffener Expansion Mullion	SS555  Optional Stiffener for 0T655
PV100  Jamb Filler	P125  Pocket Filler	0G539  Face Plate Sill Exterior Glaze	0G534  Face Plate Intermediate Horizontal Exterior Glaze
0T668  Head Channel Exterior Glazing Sill Channel Interior Glazing	0T662  Sill Channel Exterior Glazing Head Channel Interior Glazing	0T666  Head Insert Exterior Glazing Sill Insert Interior Glazing	0T633  Intermediate Horizontal Exterior Glazing
0T676  Sill Insert Exterior Glazing	0T664  Head Insert Interior Glazing	0T663  Intermediate Horizontal Interior Glazing	0T673  Glass Stop Interior Glazing
0G532  Insert Intermediate Horizontal Exterior Glaze	TT245  Threshold	FF570  90 Degree Male Inside Corner	FF575  90 Degree Female Inside Corner
FF580  90 Degree Male Outside Corner	FF590  90 Degree Female Outside Corner	0G535  135 Degree SSG Corner	0G590  90 Degree SSG Corner

PARTS IDENTIFICATION (CONTINUED)

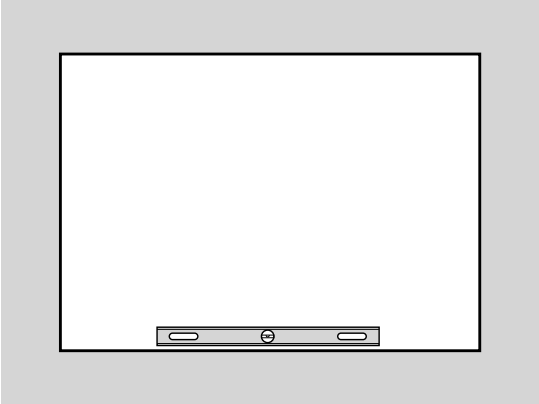
ACCESSORIES

EC451  End Dam	AP563  Anchor Clip	UW466  2" Silicone Sheet Splice	CLP451  SSG Clip Angle
WD200  Deep Pocket Water Deflector	WD210  Shallow Pocket Water Deflector for FF561	WD215  Shallow Pocket Water Deflector	WD551  SSG Water Deflector
SB230  Setting Block Sill Interior and Exterior Glaze	SB451  Setting Block Exterior Glaze Intermediate	SB452  1/8" x 1-1/8" Setting Block Interior Glaze Intermediate	WB452  "W" Edge Block
NP225  Gasket	SP450  Vertical SSG Gasket	ST206  #8 x 1/2" PH SMS Attach Anchor to Horizontal	ST269  #12 x 2" PH SMS Attach Anchor to Vertical
DJ215  Drill Jig	201757  3/32 x .5 Coiled Spring Support Pin	NC539  Retainer Clip	EC539  Splice End cap
RG700  Temporary Glass Retainer	UB635  Weep Baffle		

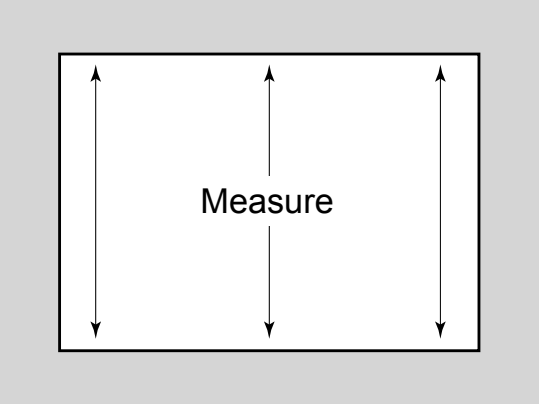
SITE PREPARATION

BEFORE INSTALLATION

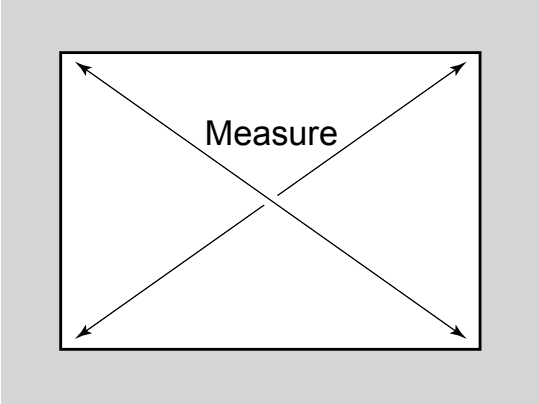
1. Review and measure the opening. Verify framing is plumb, straight, and true around window opening.
2. Verify rough window opening size has 1/2" (12.7) clearance in both width and height to the window. Measure opening at each end and at center vertically and horizontally. Make corrections to openings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



LEVEL



VERTICAL DIMENSION



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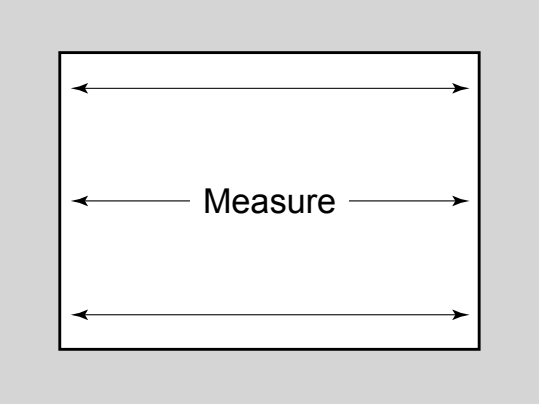
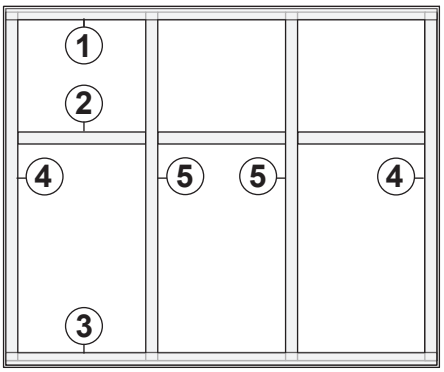


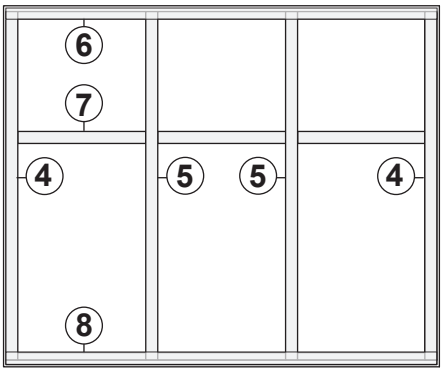
HORIZONTAL DIMENSION

TYPICAL ELEVATIONS
EXTERIOR AND INTERIOR GLAZING

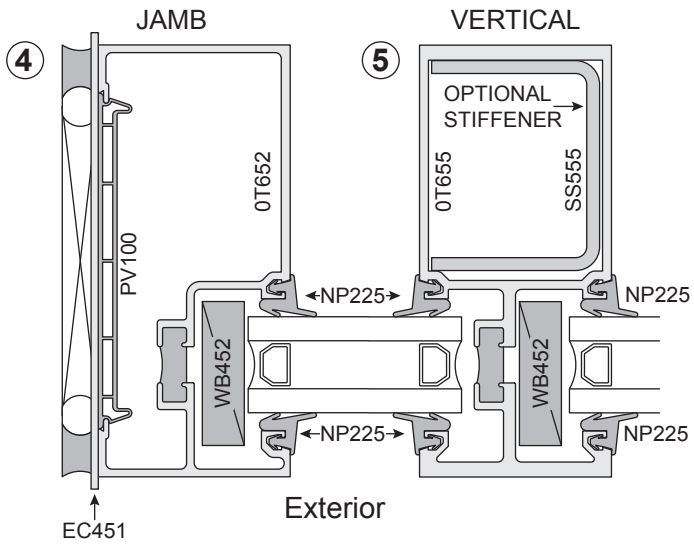
TYPICAL ELEVATION EXTERIOR GLAZING



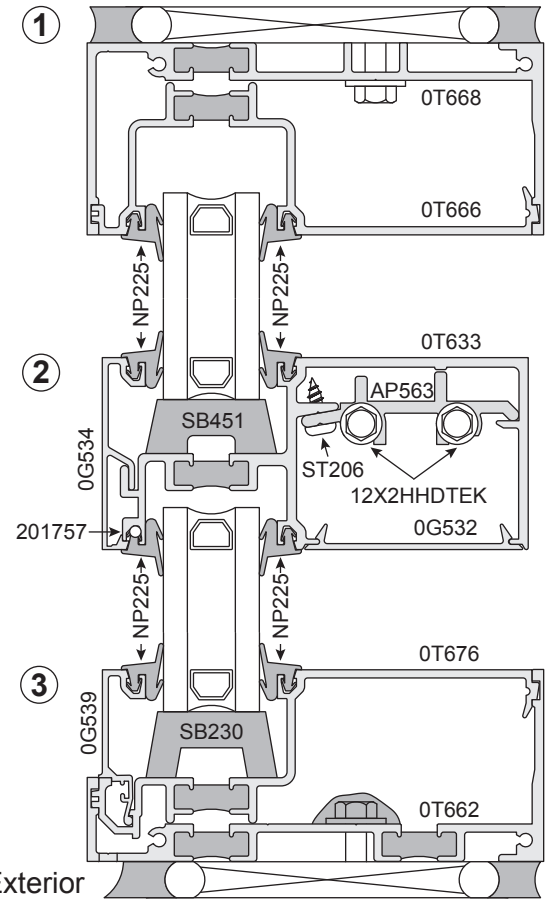
TYPICAL ELEVATION INTERIOR GLAZING



EXTERIOR AND INTERIOR GLAZING



EXTERIOR GLAZING

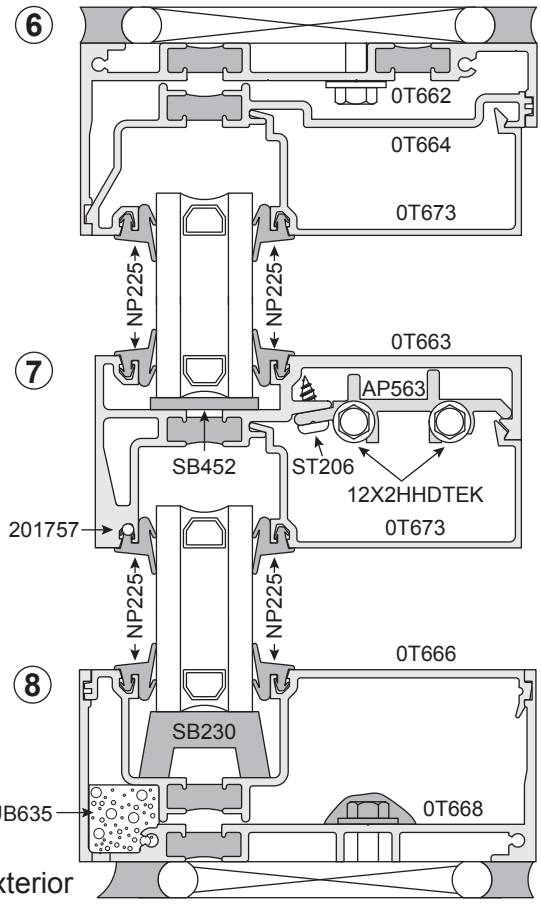


HEAD

INTERMEDIATE HORIZONTAL

SILL

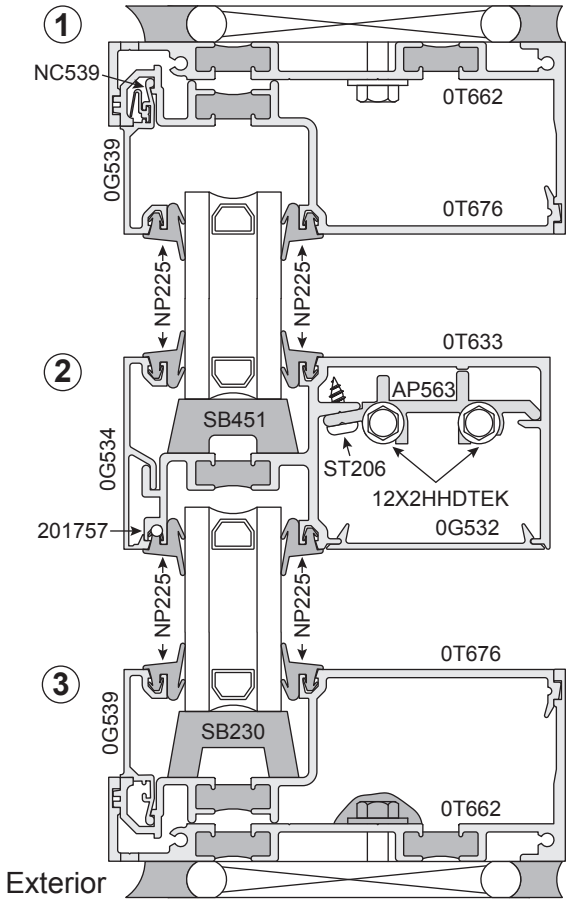
INTERIOR GLAZING

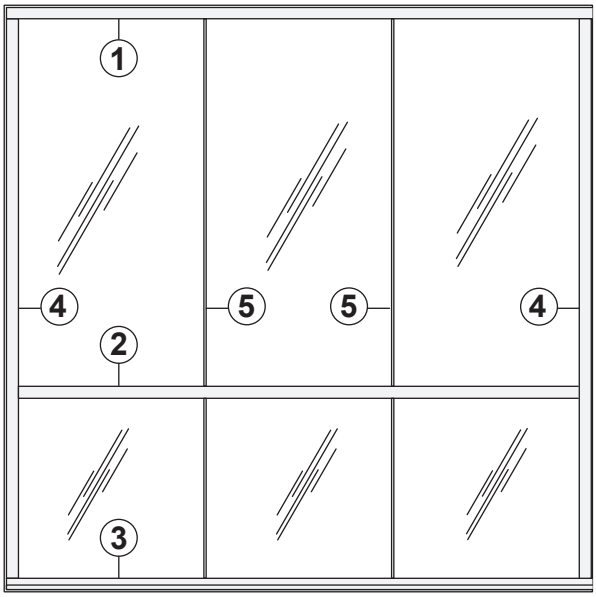


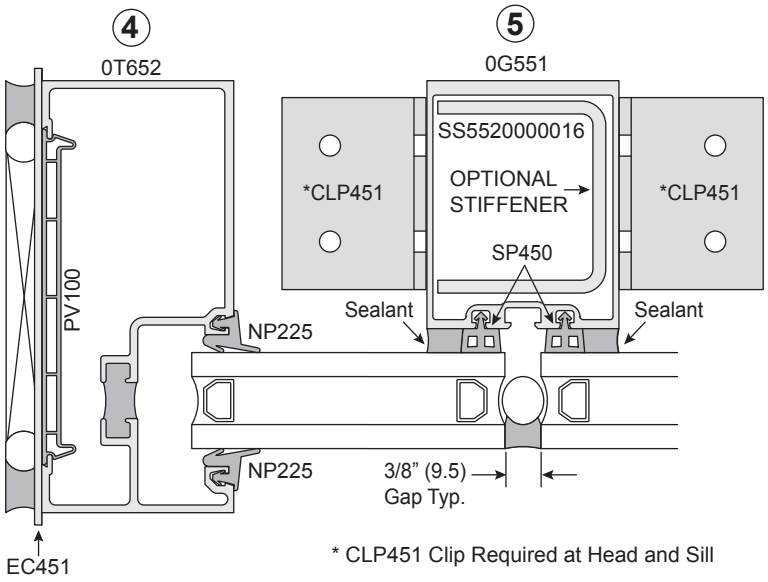
TYPICAL ELEVATIONS (CONTINUED)

EXTERIOR GLAZING FOR STRUCTURAL SILICONE APPLICATION

The following schematic details show proper member selection.







* CLP451 Clip Required at Head and Sill

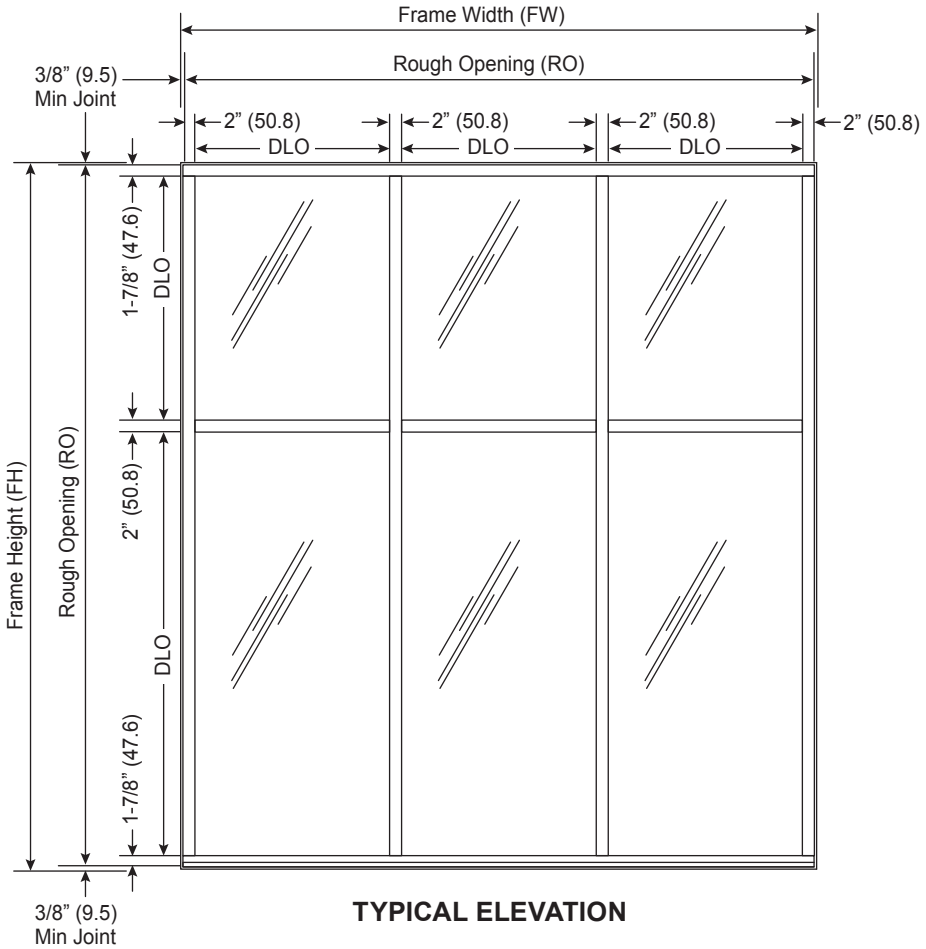
FRAME FABRICATION

Details shown in these instructions are 1" (25) glazing systems. Measure ROUGH OPENING to determine FRAME DIMENSION allowing 3/8" (9.5) minimum clearance for shimming and caulking around perimeter.

CUT MEMBERS

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

Component	Dimensioning
Head and Sill Channels:	FRAME WIDTH
Wall Jambs and Verticals:	FRAME HEIGHT minus 15/16" (23.8)
Head and Sill Fillers:	D.L.O. plus 0 minus 1/32" (0.8)
Horizontal Members:	D.L.O. plus 0 minus 1/32" (0.8)
Intermediate Horizontal Fillers:	D.L.O. minus 1/32" (0.8)
Horizontal Glazing Beads:	D.L.O. minus 1/32" (0.8)
Horizontal face Covers: OST451	D.L.O. minus 1/32" (0.8)
Horizontal face Covers: OST451SG	FRAME WIDTH minus 4-1/32" (102.4)
Vertical Spandrel Adaptors:	D.L.O. plus 1" (25.4)
Horizontal Spandrel Adaptors:	D.L.O. minus 1/8" (3.2)



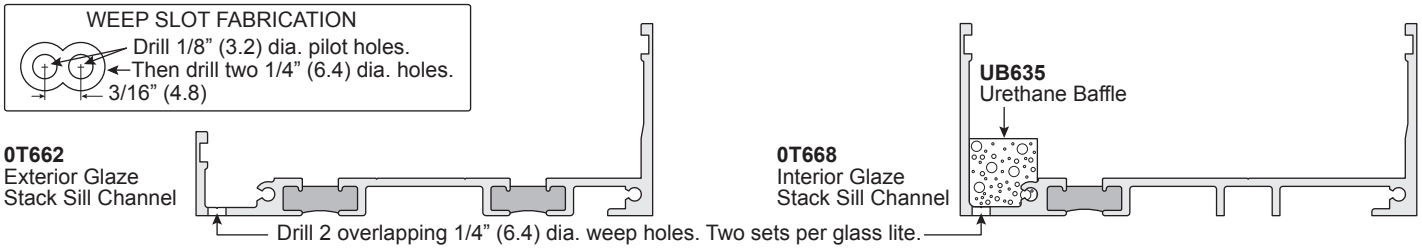
TYPICAL ELEVATION

FRAME FABRICATION (CONTINUED)

FABRICATE WEEP HOLES

2. Fabricate weep slots shown below in sill channel, two sets per glass lite at 12" (304.8) from verticals. See **DETAIL A**. Weep slots may be drilled on bottom or face of sill channel. Insert Urethane Baffle at Weep Hole locations for Interior Glaze. (Use silicone to hold them in place if necessary)

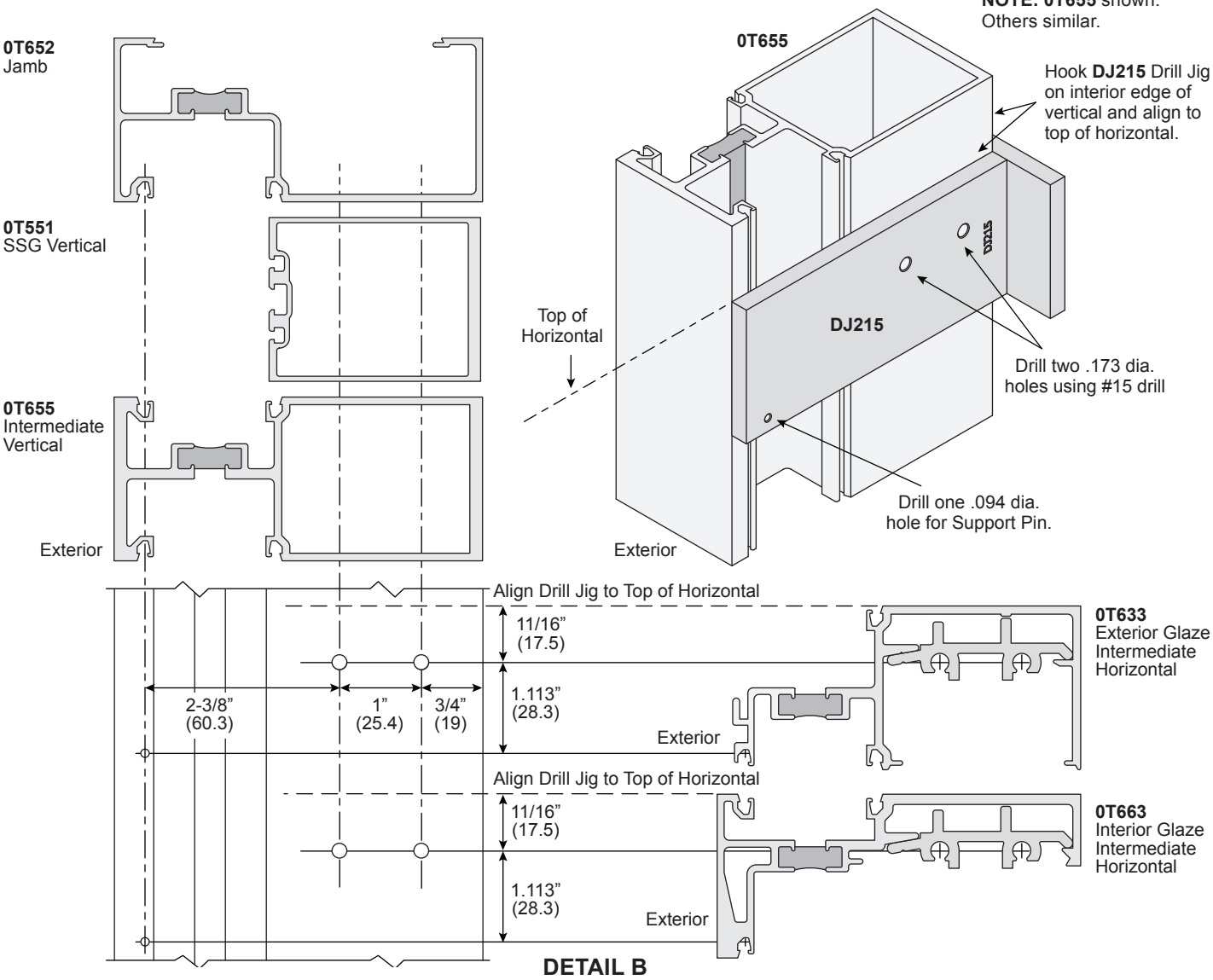
NOTE: For best water performance locate weep slots on bottom of sill channel.



DETAIL A

FABRICATE ANCHOR CLIP AND SUPPORT PIN HOLES

3. Mark on verticals the location of horizontal members and drill holes for **AP563** anchor clips. Drill Jigs are available. The use of U.S. Aluminum Drill Jigs is recommended. See **DETAIL B**.

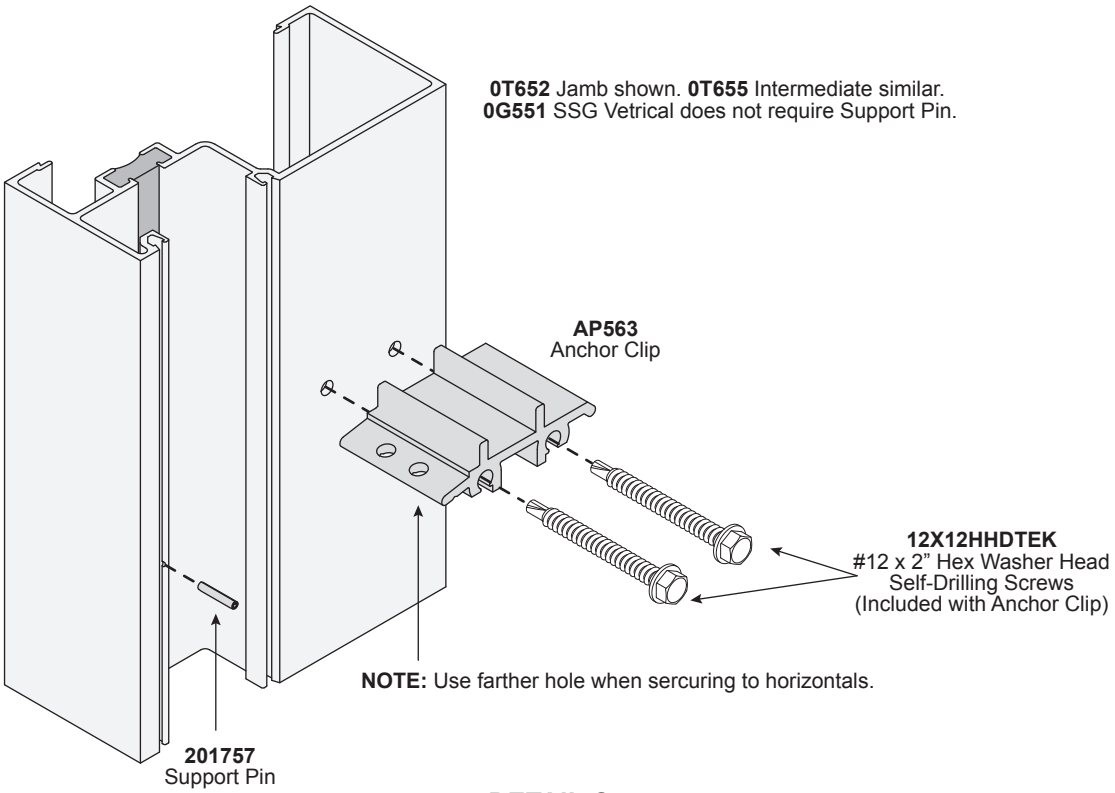


DETAIL B

FRAME ASSEMBLY

INSTALL ANCHOR CLIPS

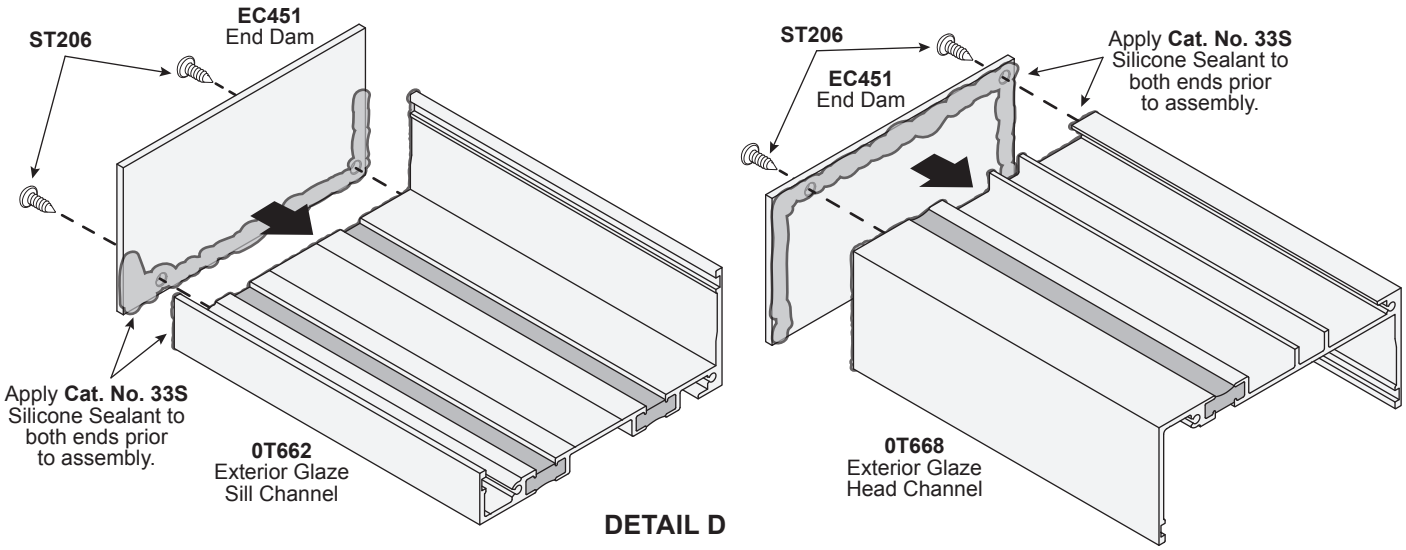
1. Attach anchor clips to verticals with screws provided. See **DETAIL C**.



DETAIL C

INSTALL END DAMS AT HEAD AND SILL CHANNELS

2. Apply End Dams to head and sill channels at ends of opening and secure with screws. See **DETAIL D**.



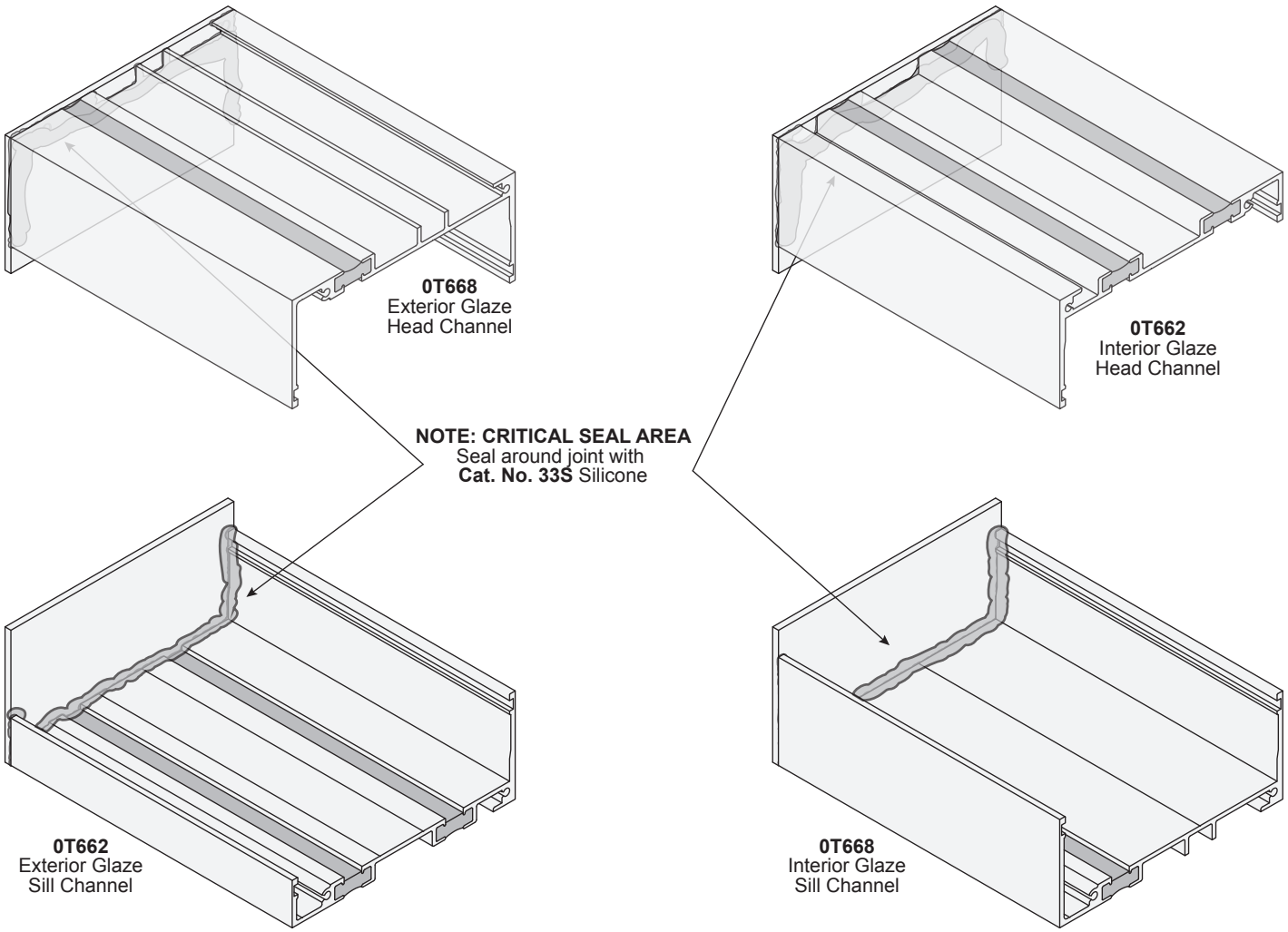
DETAIL D

FRAME ASSEMBLY (CONTINUED)

INSTALL END DAMS AT HEAD AND SILL CHANNELS (CONTINUED)

3. Seal around joint with **Cat. No. 33S** Silicone to control water infiltration. See **DETAIL E**.

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



DETAIL E

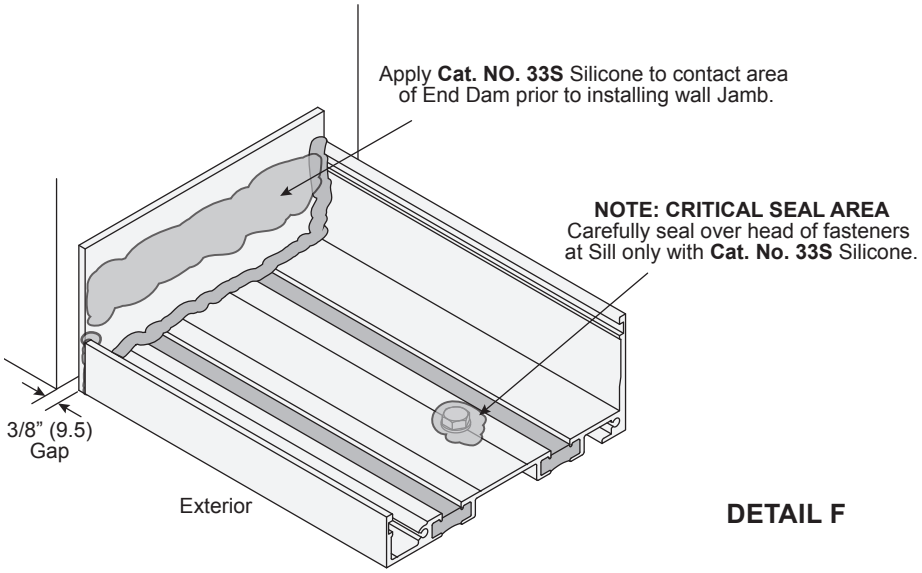
FRAME INSTALLATION

INSTALL HEAD AND SILL CHANNELS

1. Set head and sill channels in place plumb and square; shim as required to level and anchor to structure. Locate fasteners 6" (152.4) each side of verticals and 24" (609.6) on center or as required. Holes for fasteners should be elongated laterally to allow for thermal expansion. Seal over head of fasteners with **Cat. No. 33S** Silicone. See **DETAIL F**. **Pin head and sill to structure at one point only per cut length.** (This hole is not elongated). Sill should be shimmed at fastener's location and under loading points.

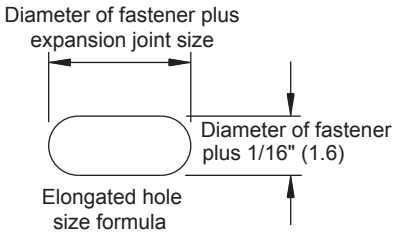
Ensure sill channel remains clean of debris during installation to prevent blockage of weep holes.

2. Install urethane baffles into sill channel at weep slot locations (Use Cat. No. 95C Silicone to hold them in place if necessary). See **DETAIL I** on Page 15.



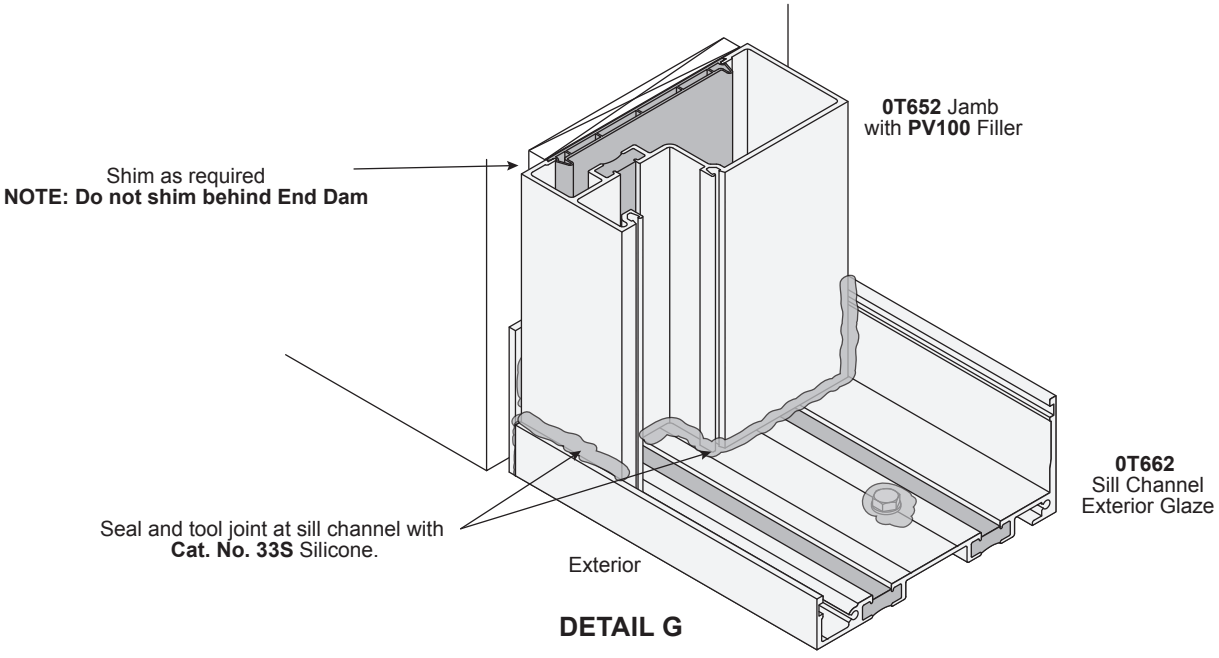
DETAIL F

NOTE: The projection of some wedge type fasteners in close proximity to Vertical members will require a simple clearing notch on Vertical for installation. Sleeve type anchors offer minimal projection.



INSTALL WALL JAMB

3. Install wall jamb into head and sill channels. Shim and plumb as required. See **DETAIL G**.



DETAIL G

FRAME INSTALLATION (CONTINUED)

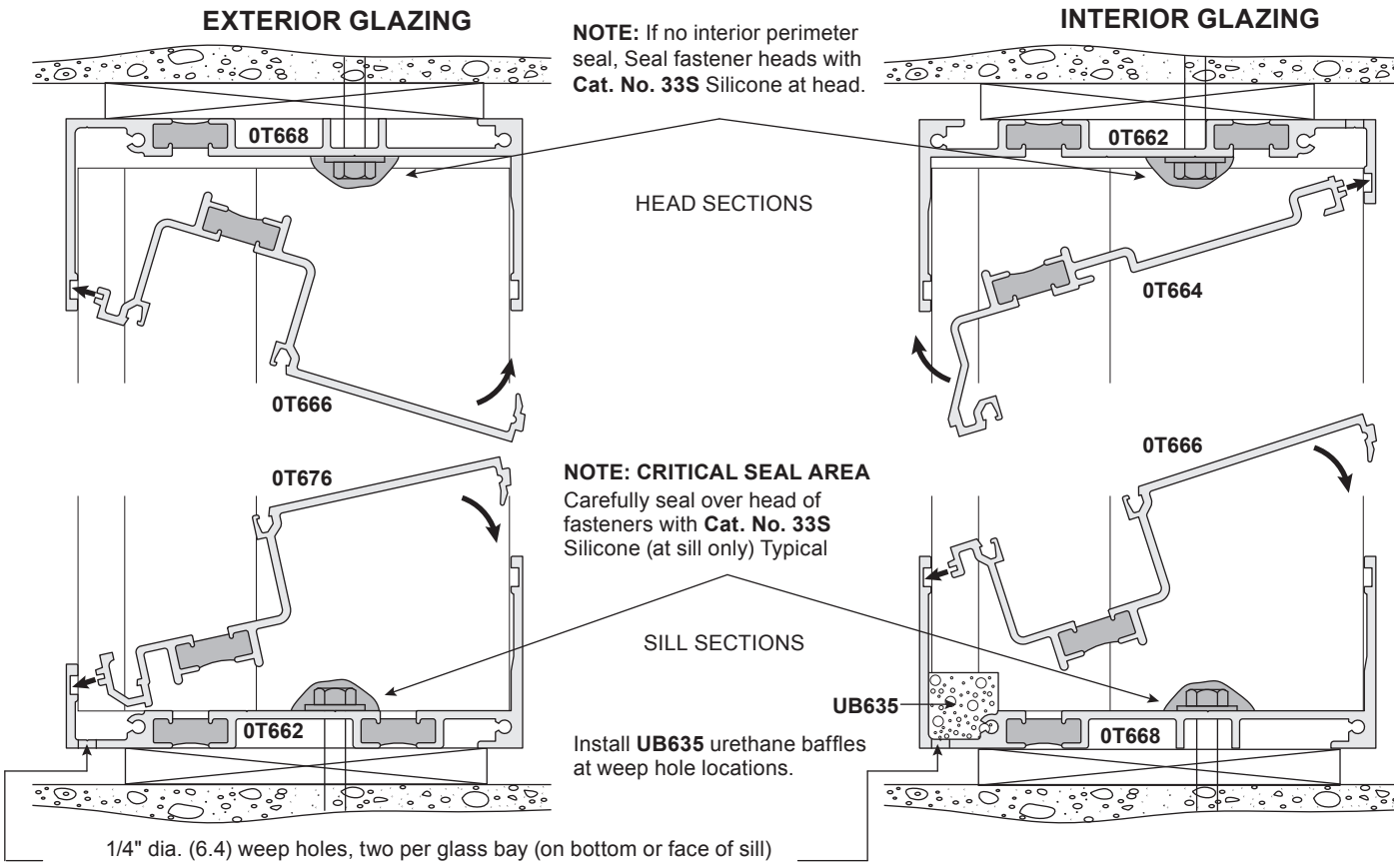
4. Snap-in head and sill fillers for the first glass bay. See **DETAIL H**.
5. Install next vertical tight against head and sill fillers.

NOTE: Verticals are not symmetrical. Never allow two shallow pockets to face each other.
Verticals must be secured to head/sill channels when end reactions exceed 500 lbs. (2224 N)

6. Snap-in head and sill fillers for the second glass bay and repeat Steps 4 and 5 until all verticals are installed and all head and sill inserts are snapped-in place. At the last glass bay install wall jamb in place before snapping-in head and sill fillers.

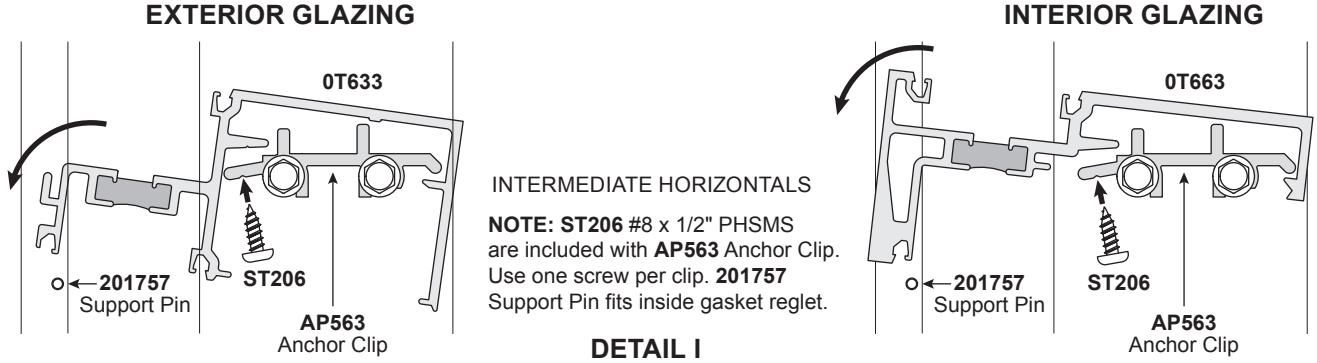
NOTE: A check should be made every four bays to monitor accumulation of horizontal members cutting tolerances.

7. Seal joint where verticals meet head and sill. See **DETAIL G** on Page 14.



DETAIL H

8. Roll horizontal over anchor clip and support pin. Secure with provided screw. See **DETAIL I**.



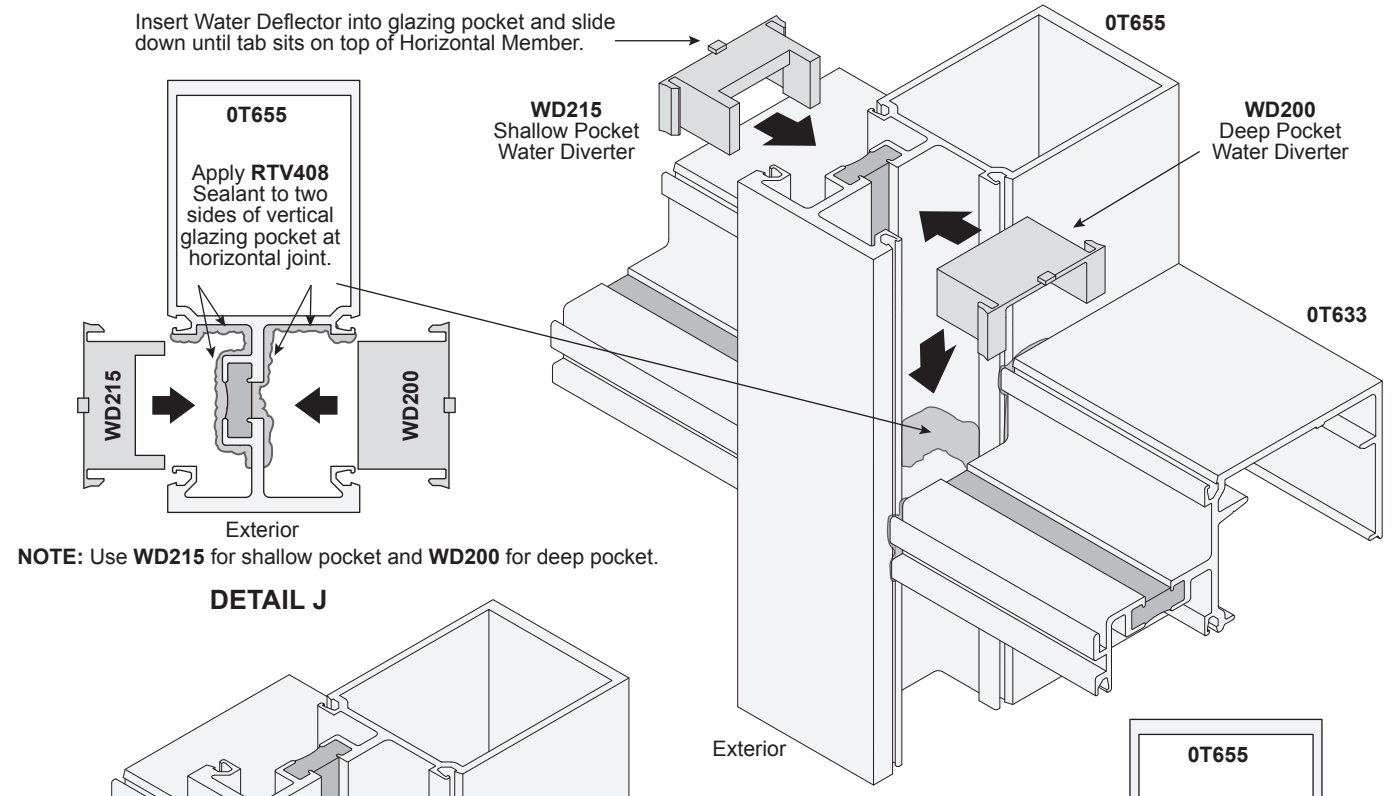
DETAIL I

FRAME INSTALLATION (CONTINUED)

INSTALL WATER DEFLECTORS

NOTE: Exterior Glazing shown. See Page 17 for Interior Glazing. For Structural Glazing See Page 22.

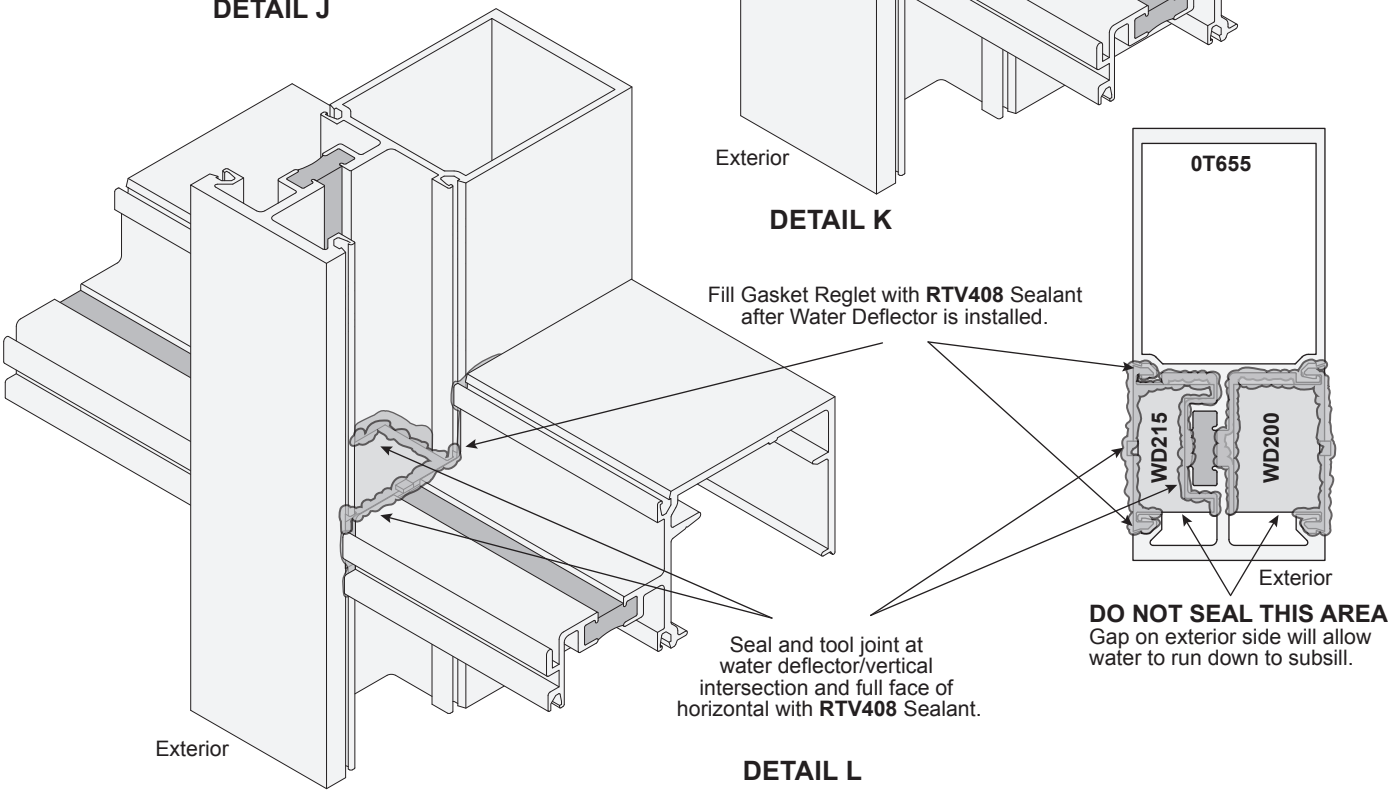
9. Apply **RTV408** Silicone Sealant to vertical glazing pocket at vertical/horizontal intersection. Silicone must be applied to two sides of pocket only. Clearance at outside will allow infiltrated water to run down to subsill. See **DETAIL J**.
10. Insert water deflectors into glazing pocket and slide them down to position. Top of deflector must be flush with horizontal glazing pocket. See **DETAIL K**.
11. After water deflector is installed, fill Gasket Reglets and seal and tool Water Deflector/Horizontal Joint and full face of Horizontal at Vertical intersection with **RTV408** Sealant. See **DETAIL L**.



NOTE: Use **WD215** for shallow pocket and **WD200** for deep pocket.

DETAIL J

DETAIL K



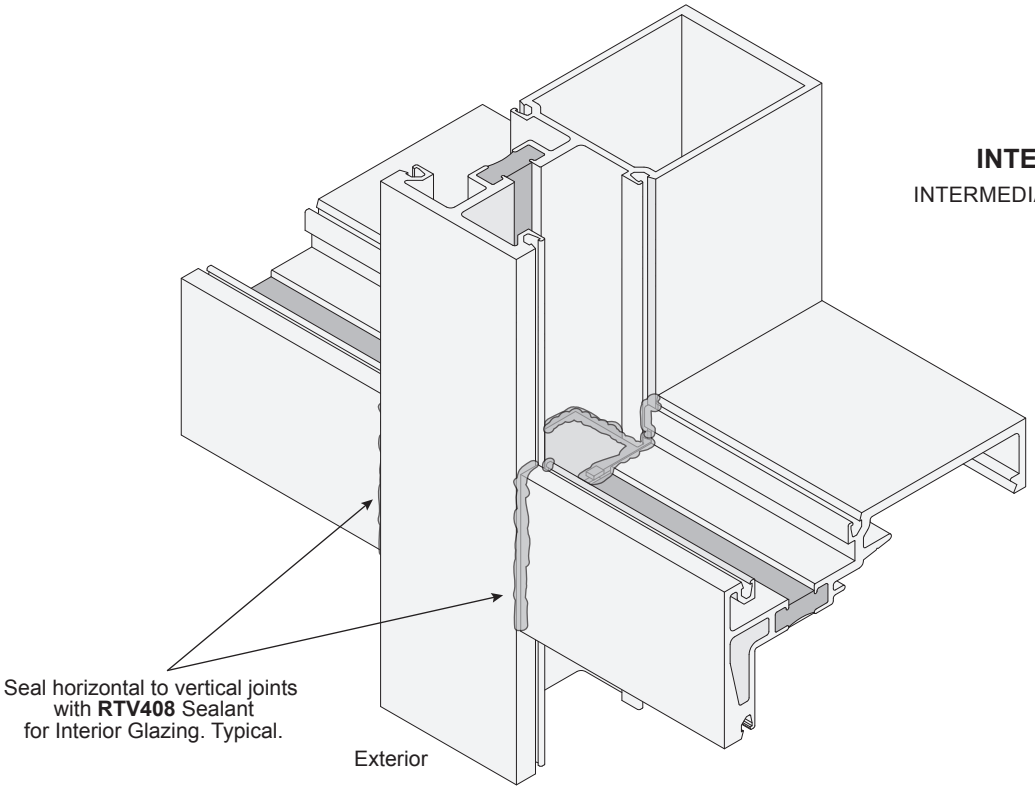
DETAIL L

FRAME INSTALLATION (CONTINUED)

INSTALL WATER DEFLECTORS (CONTINUED)

12. For interior glazing applications, seal horizontal to vertical joints. See **DETAIL M**.

NOTE: Water deflectors applied to door jambs must be sealed all around to prevent water from running to floor (water will drain at opposite end).



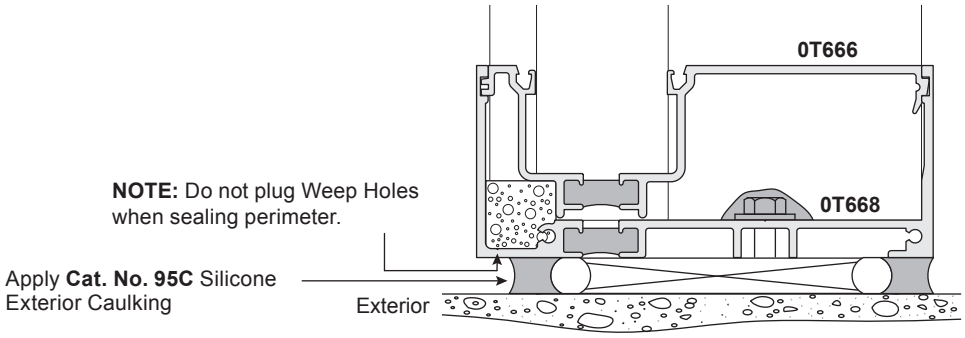
INTERIOR GLAZING
INTERMEDIATE HORIZONTAL SECTION

DETAIL M

PERIMETER SEALING

INTERIOR GLAZING. When interior glazing a multistory building exterior perimeter sealing must be done before glazing, unless caulking is to be done from the exterior as a secondary operation. See **DETAIL N**.

EXTERIOR GLAZING. Perimeter sealing may be done later.



INTERIOR GLAZING
SILL SECTION

DETAIL N

GLAZING

GLASS SIZES FOR EXTERIOR AND INTERIOR GLAZING

Glass Size: Daylight Opening + 7/8" (22.2)

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

GLAZING GASKETS

Cut glazing gaskets to size. Gaskets should be cut 1/8" (3.2) longer per foot of aluminum member to allow for shrinkage. Same gaskets are used for interior and exterior.

EXTERIOR GLAZING GLASS INSTALLATION

1. Install interior gaskets. Horizontal gaskets run through. Start at corners and work towards center. Tight butt joined corners are critical to avoid leakage.
2. Install setting blocks in horizontal/sill members. Check deadload charts and shop drawings for correct setting block locations. Rest glass on setting blocks pressed against interior gaskets.
3. Set glass in place following the four step procedure. See **DETAIL O**. Be careful not to disturb interior gasket while installing glass. Center glass in the opening.

NOTE: All glazing pockets must be clean of debris before glazing to prevent blockage of weeps or drains.

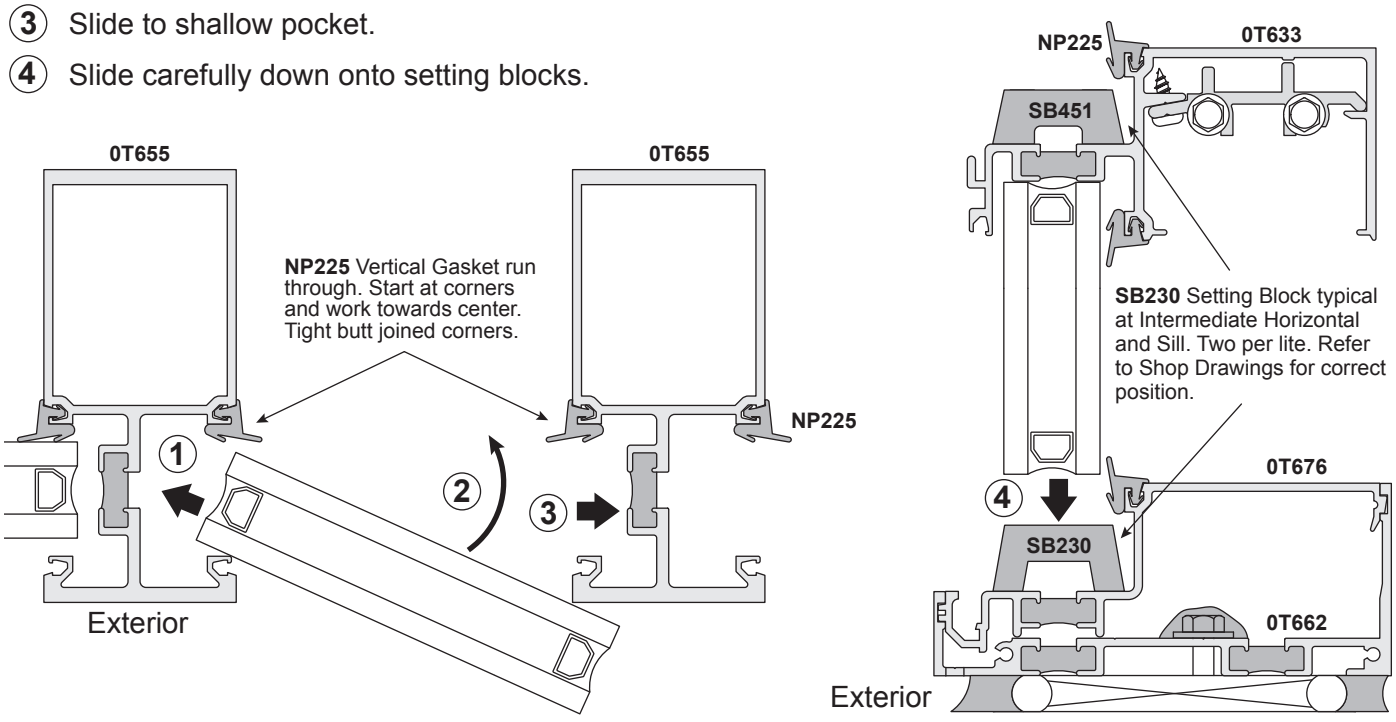
EXTERIOR GLAZING SEQUENCE

① Angle panel into deep pocket.

② Swing into plane.

③ Slide to shallow pocket.

④ Slide carefully down onto setting blocks.



DETAIL O

GLAZING (CONTINUED)

INTERIOR GLAZING GLASS INSTALLATION

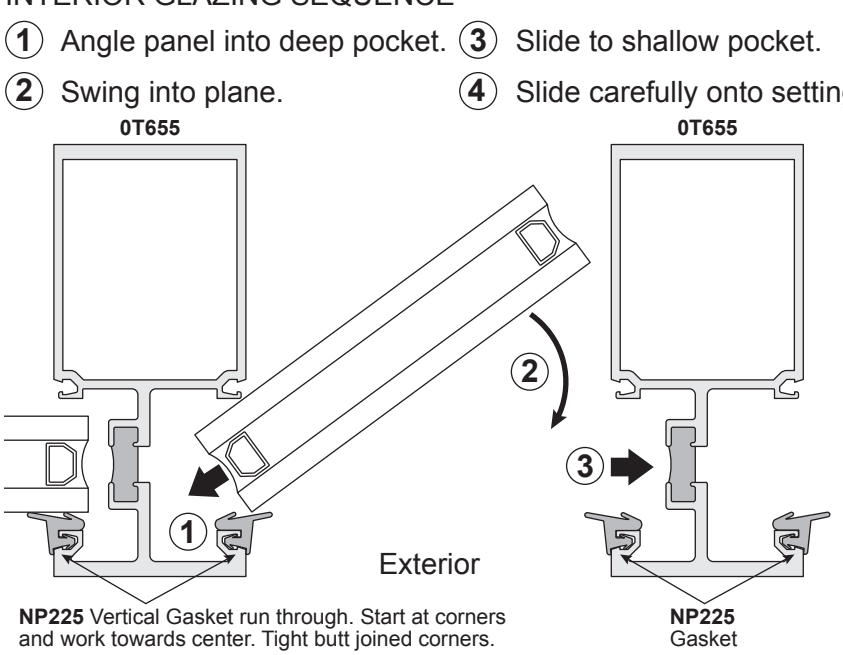
1. Install setting blocks, two per glass lite, into horizontal and sill members. Check deadload charts and shop drawings for correct setting block locations.
2. Install exterior gaskets. Vertical gaskets run through. Start at corners and work towards center. Tight butt joined corners are critical to avoid leakage.
3. Set glass in place following four step procedure. See **DETAIL P**. Be careful not to disturb exterior gasket while installing glass. Center glass in opening and rest on setting blocks. Press against exterior gaskets.

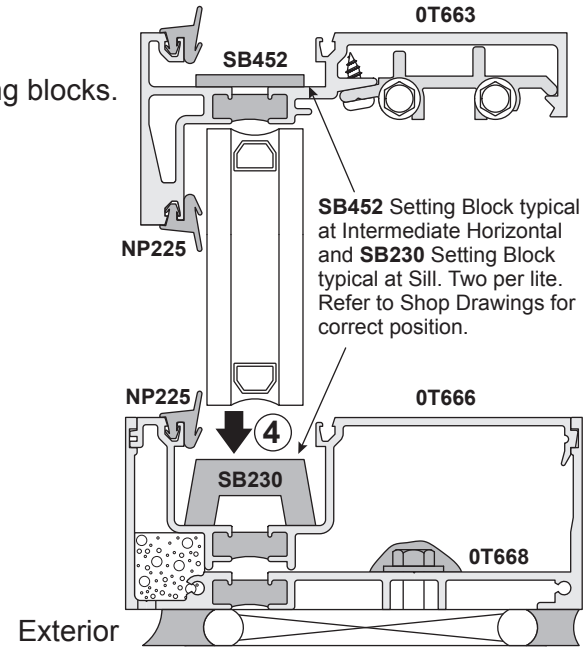
NOTE: All glazing pockets must be clean of debris before glazing to prevent blockage of weeps or drains.

INTERIOR GLAZING SEQUENCE

① Angle panel into deep pocket. ③ Slide to shallow pocket.

② Swing into plane. ④ Slide carefully onto setting blocks.

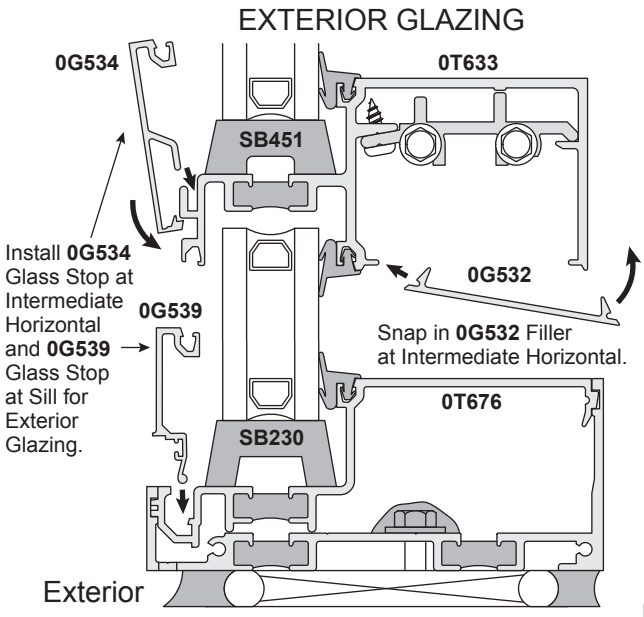


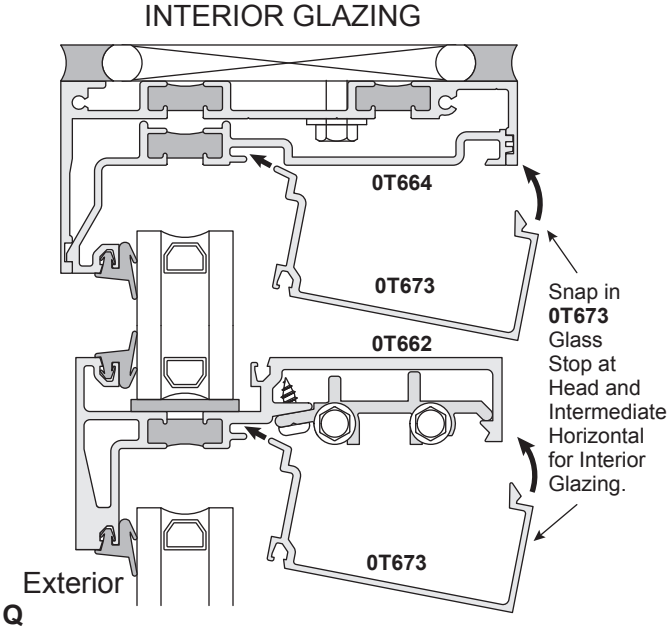


DETAIL P

GLASS STOP INSTALLATION

4. Install glass stops as shown in **DETAIL Q**.



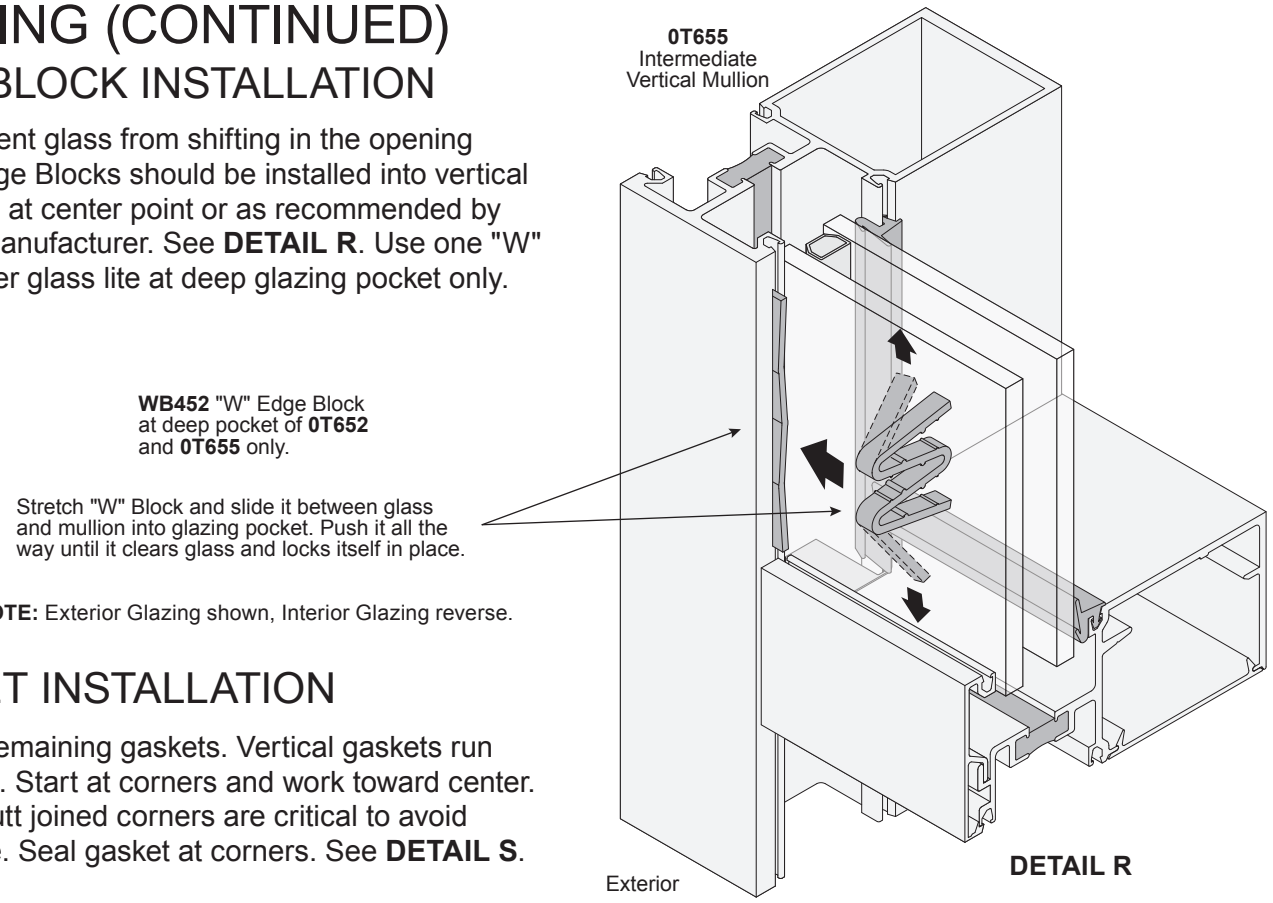


DETAIL Q

GLAZING (CONTINUED)

EDGE BLOCK INSTALLATION

5. To prevent glass from shifting in the opening "W" Edge Blocks should be installed into vertical pockets at center point or as recommended by glass manufacturer. See **DETAIL R**. Use one "W" block per glass lite at deep glazing pocket only.

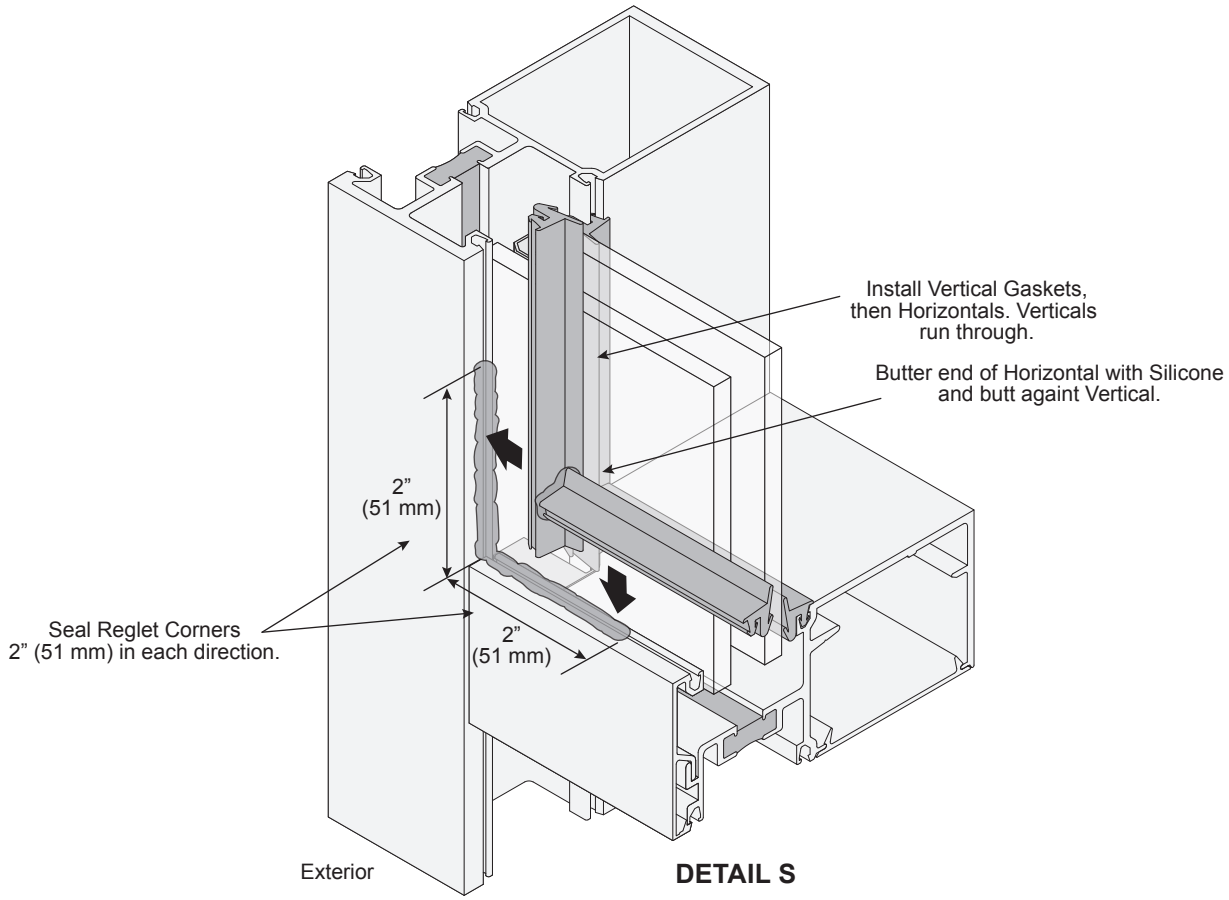


DETAIL R

NOTE: Exterior Glazing shown, Interior Glazing reverse.

GASKET INSTALLATION

6. Install remaining gaskets. Vertical gaskets run through. Start at corners and work toward center. Tight butt joined corners are critical to avoid leakage. Seal gasket at corners. See **DETAIL S**.



DETAIL S

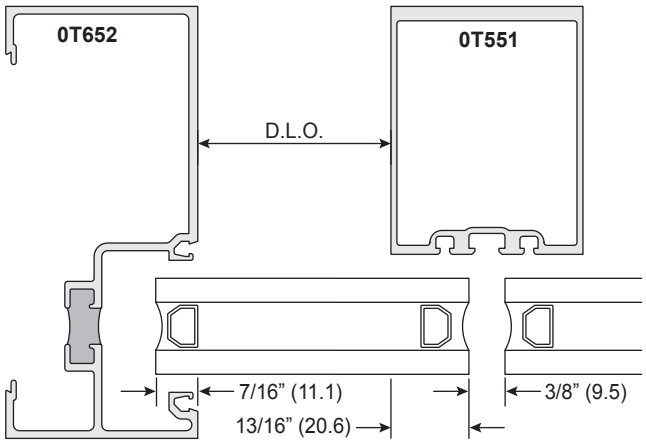
STRUCTURAL SILICONE GLAZING

GLASS SIZES FOR STRUCTURAL SILICONE GLAZING

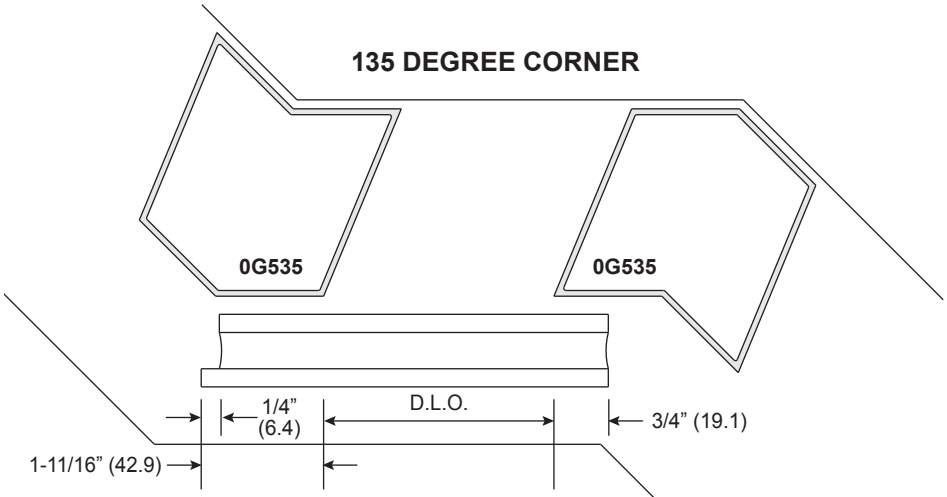
Glass Height: Daylight Opening + 7/8" (22.2) **Glass Width: Daylight Opening + Glass Bites**

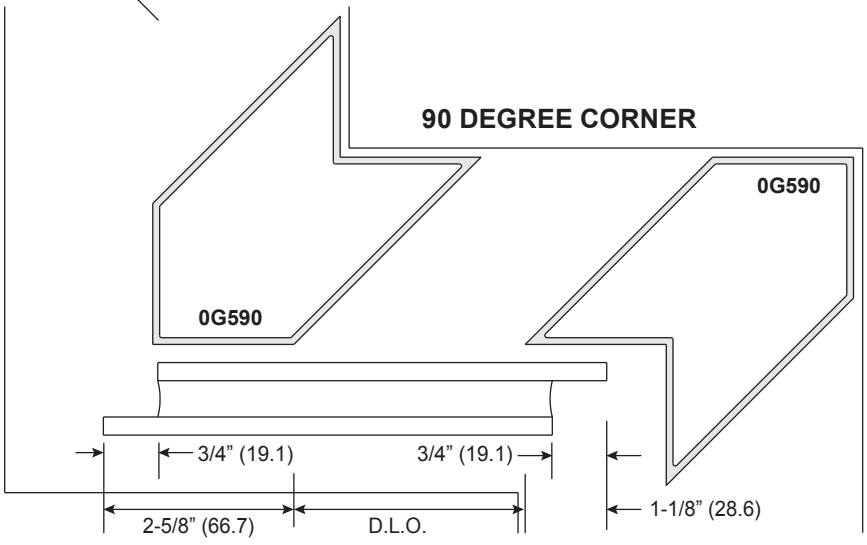
NOTE: These formulae do not take into account glass tolerance. Consult glass manufacturer before ordering glass.

GLASS BITES: NON-CORNERS



GLASS BITES: CORNER CONDITIONS



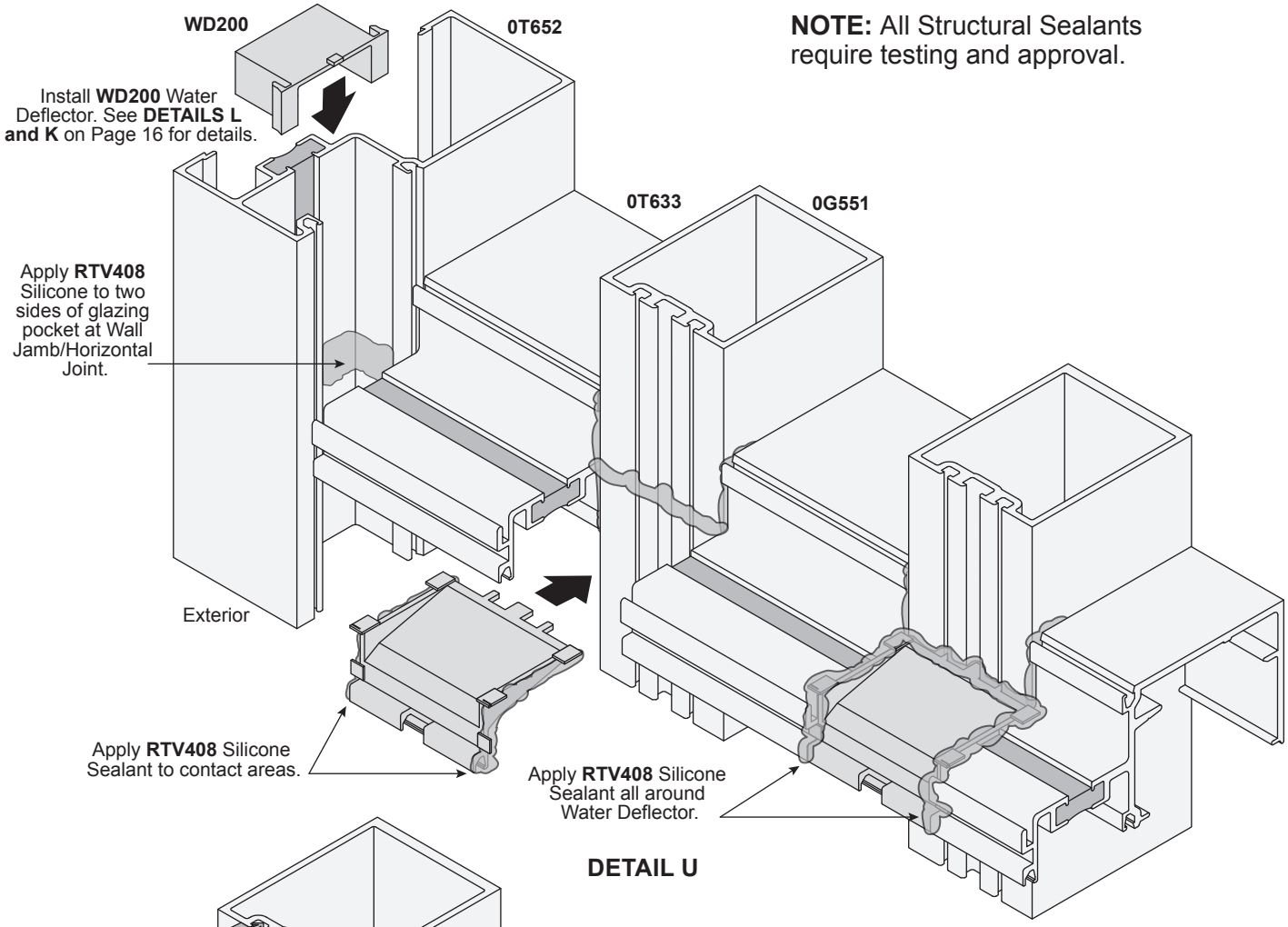


DETAIL T

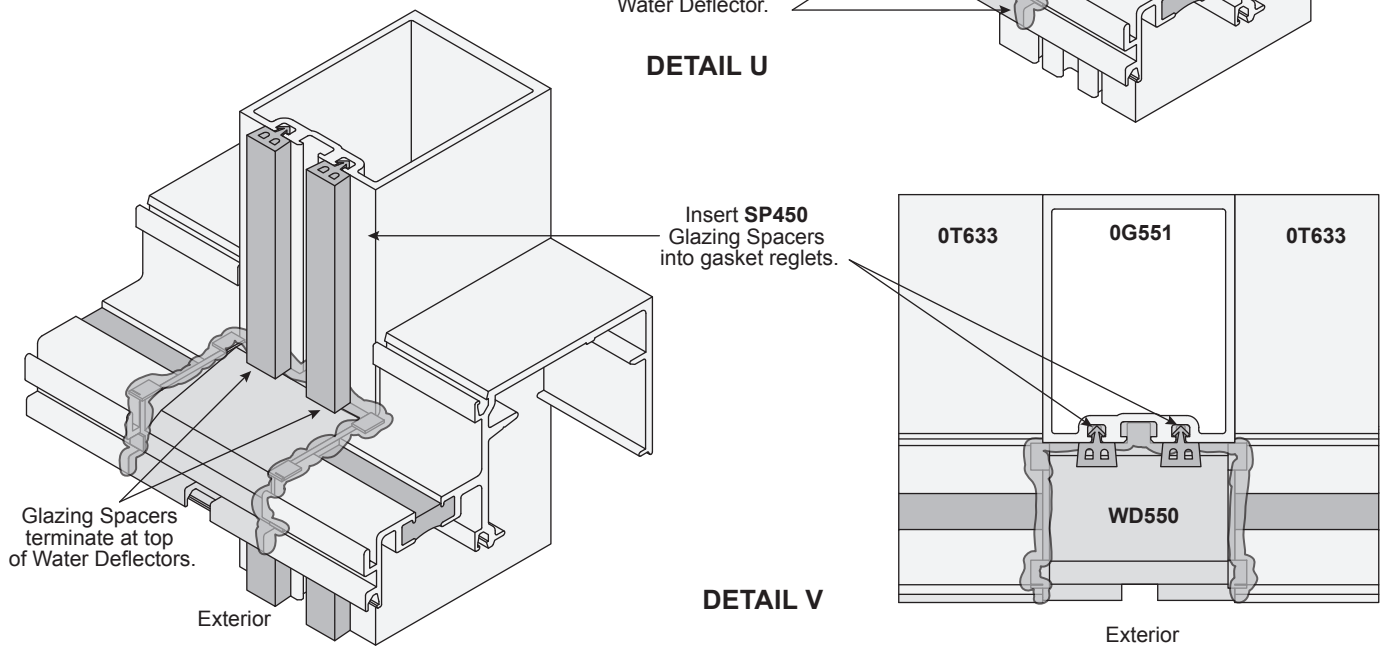
STRUCTURAL SILICONE GLAZING (CONTINUED)

1. Seal joints between horizontals and verticals. Apply sealant across face of intermediate verticals at water deflectors location. See **DETAIL U**.
2. Apply **RTV408** Silicone Sealant to deflectors contact areas and set them in place. See **DETAIL V**.
3. Insert **SP450** Spacers into intermediate verticals. See **DETAIL V**. NOTE: **SP450** Glazing Spacers terminate at top of Water Deflectors.

NOTE: All Structural Sealants require testing and approval.



DETAIL U



DETAIL V

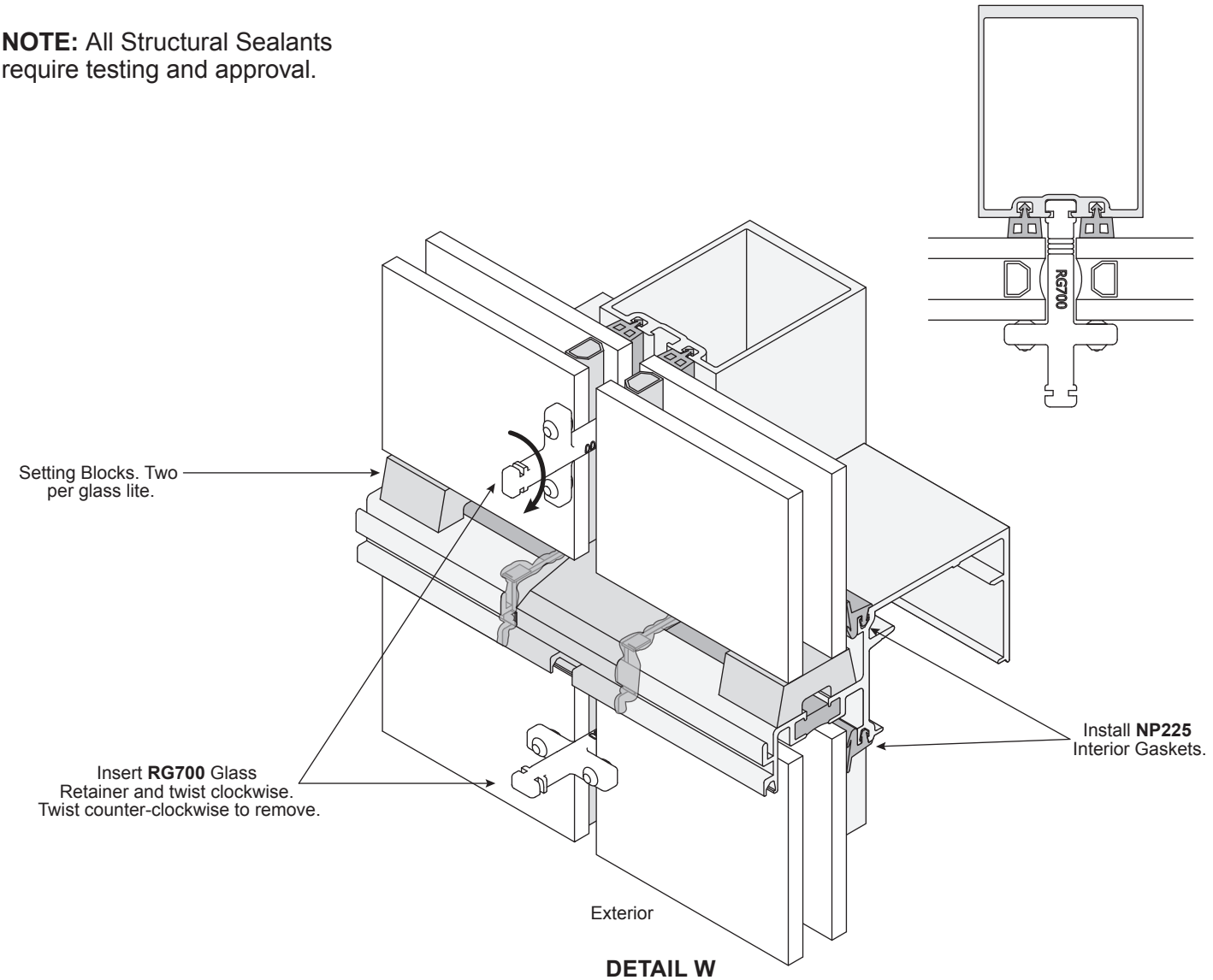
STRUCTURAL SILICONE GLAZING (CONTINUED)

NOTE: All glazing pockets must be clean of debris before glazing. Always protect edges of glass carefully to avoid damage.

1. Install two setting blocks per glass lite in horizontal and sill members. Check deadload charts and shop drawings for correct positioning of setting blocks.
2. Cut glazing gaskets 1/8" (3.2) longer per foot of aluminum member to allow for shrinkage.
3. Install interior gaskets into wall jambs, horizontals, head and sill members.
4. Set lower glass onto setting blocks, holding 3/8" (9.5) joints between lites.
5. Hold glass in place with temporary retainers. See **DETAIL W**.

NOTE: Use one retainer for every 150 lbs. (667.2 N) of load I.E. If GLASS HEIGHT x GLASS WIDTH x WINDLOAD = 350 lbs. (1556.9 N) use three temporary retainers.

NOTE: All Structural Sealants require testing and approval.



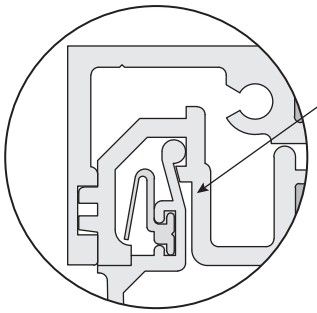
DETAIL W

STRUCTURAL SILICONE GLAZING (CONTINUED)

6. Install exterior face plates at head, sill and intermediate horizontals. See **DETAIL X**.

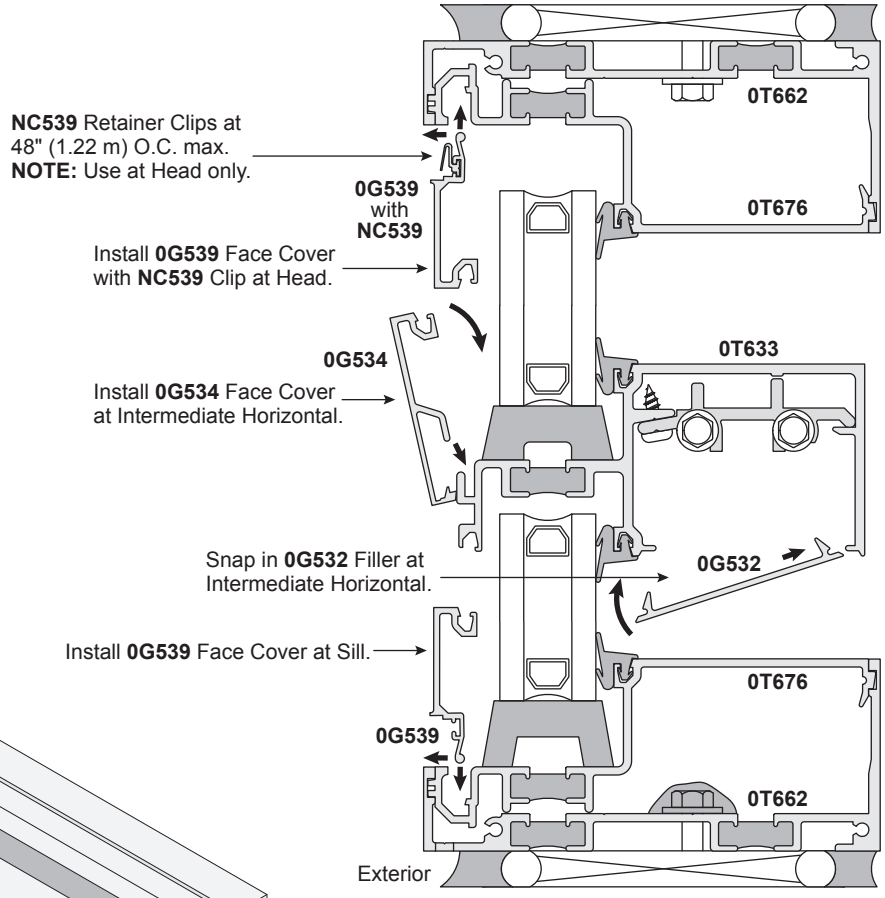
NOTE: Head face plate requires the use of **NC539** Clips at 48" (1.22 m) on center maximum. See **DETAIL Y**. Exterior face plates run through and should be spliced as required. See page 25.

7. Use pieces of exterior gasket to temporarily hold glass tight against interior gaskets. See **DETAIL Z**.

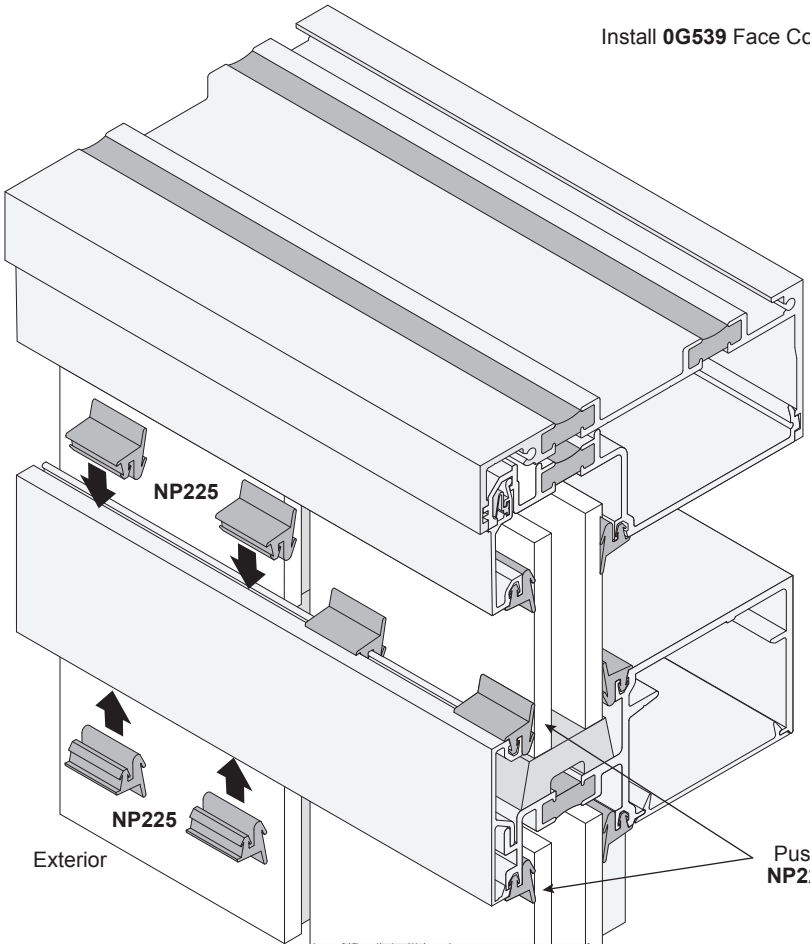


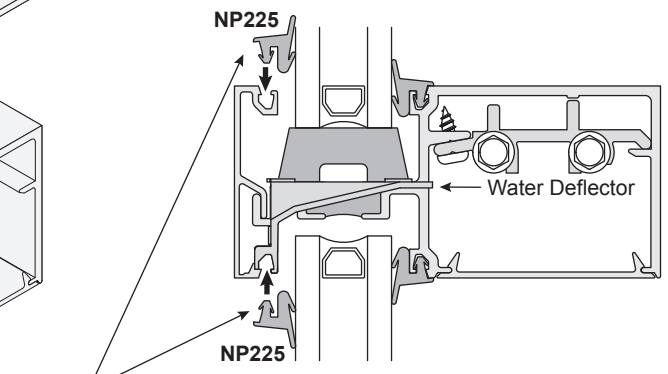
DETAIL Y

NOTE: All Structural Sealants require testing and approval.



DETAIL X





Push in temporary short wedges of **NP225** Gasket to hold glass in place.

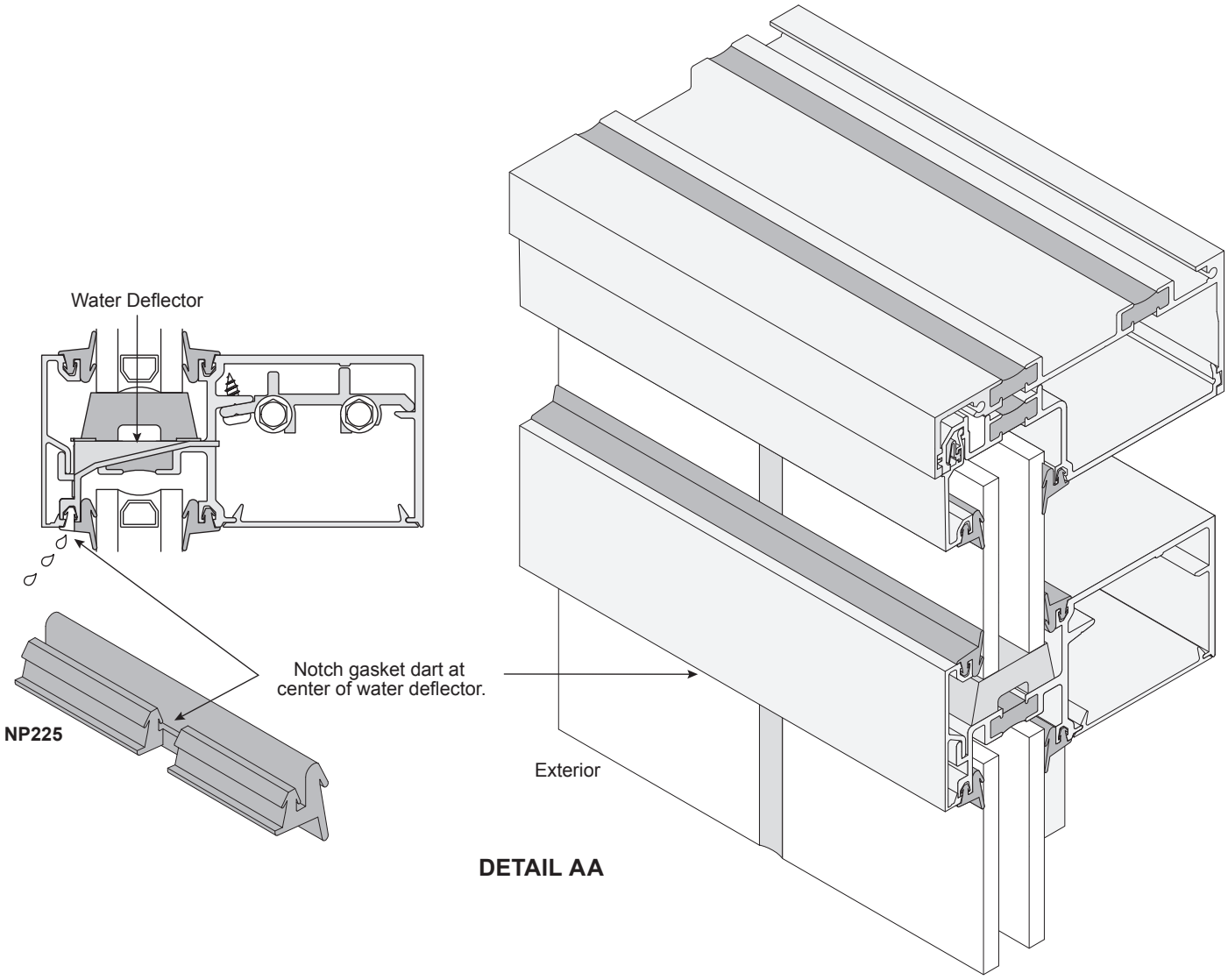
DETAIL Z

STRUCTURAL SILICONE GLAZING (CONTINUED)

Structural silicone is applied from the interior. **Follow silicone manufacturer's instructions and recommendations for surface preparation and silicone application.**

8. Mask face of glass and aluminum adjacent to silicone glazing joint.
9. Apply silicone making sure it completely fills the space behind the glass. Air pockets or voids are not acceptable.
10. Remove masking tape right after tooling, before skin cure begins. Do not remove temporary retainers until silicone has completely cured.
11. After structural silicone has fully cured remove temporary retainers, insert open cell polyurethane rod between glass edges, mask glass and aluminum adjacent to joint, and then apply exterior weatherseal.
12. Install exterior gaskets after removing temporary pieces. Horizontal gaskets run through. Start at corners and work toward center. Tight butt joined corners are critical to avoid leakage.

NOTE: On bottom side of intermediate horizontal notch the dart of the glazing gasket at center of verticals to create a 1/2" (12.7) wide weep slot. See **DETAIL AA**.



DETAIL AA

STRUCTURAL SILICONE GLAZING (CONTINUED)

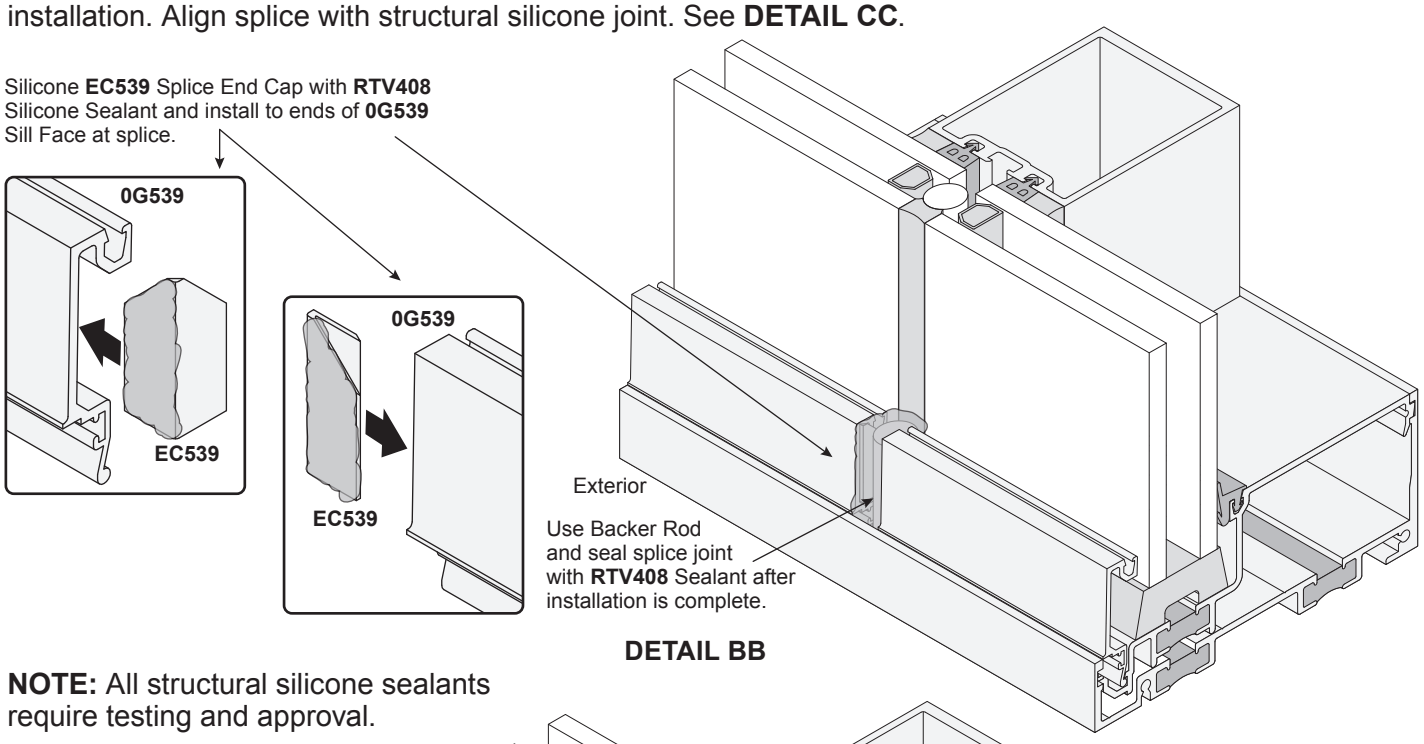
HORIZONTAL EXPANSION JOINTS

EXTERIOR FACE SPLICE JOINTS

Head and sill faces should be spliced at a different point than head and sill channels. Silicone end caps to edge of sill faces. See **DETAIL BB**. Leave required gap between adjacent pieces.

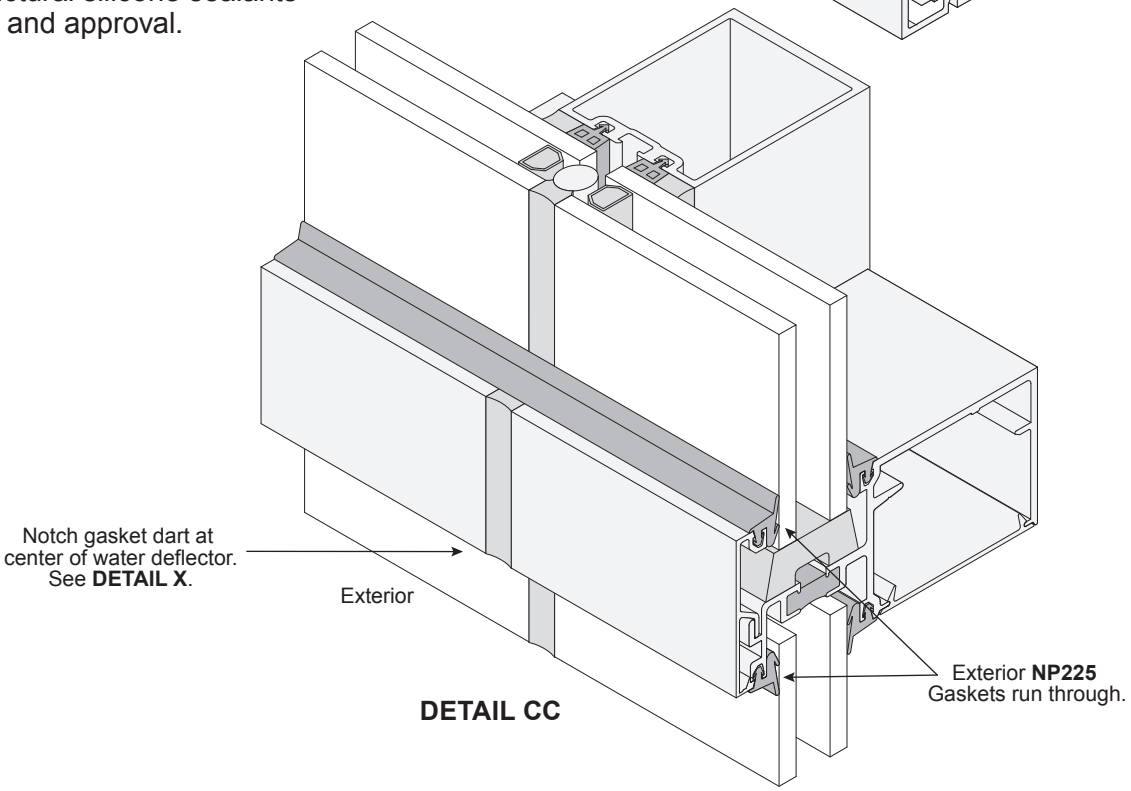
Insert backer rod between end caps to facilitate joint sealing.

Intermediate horizontal exterior faces should be spliced every three bays or 15' (4.5 m) maximum for easier installation. Align splice with structural silicone joint. See **DETAIL CC**.



DETAIL BB

NOTE: All structural silicone sealants require testing and approval.



DETAIL CC

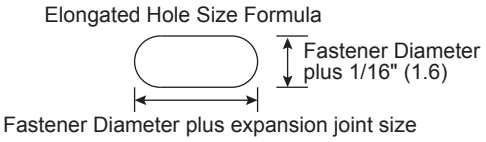
HORIZONTAL EXPANSION JOINTS

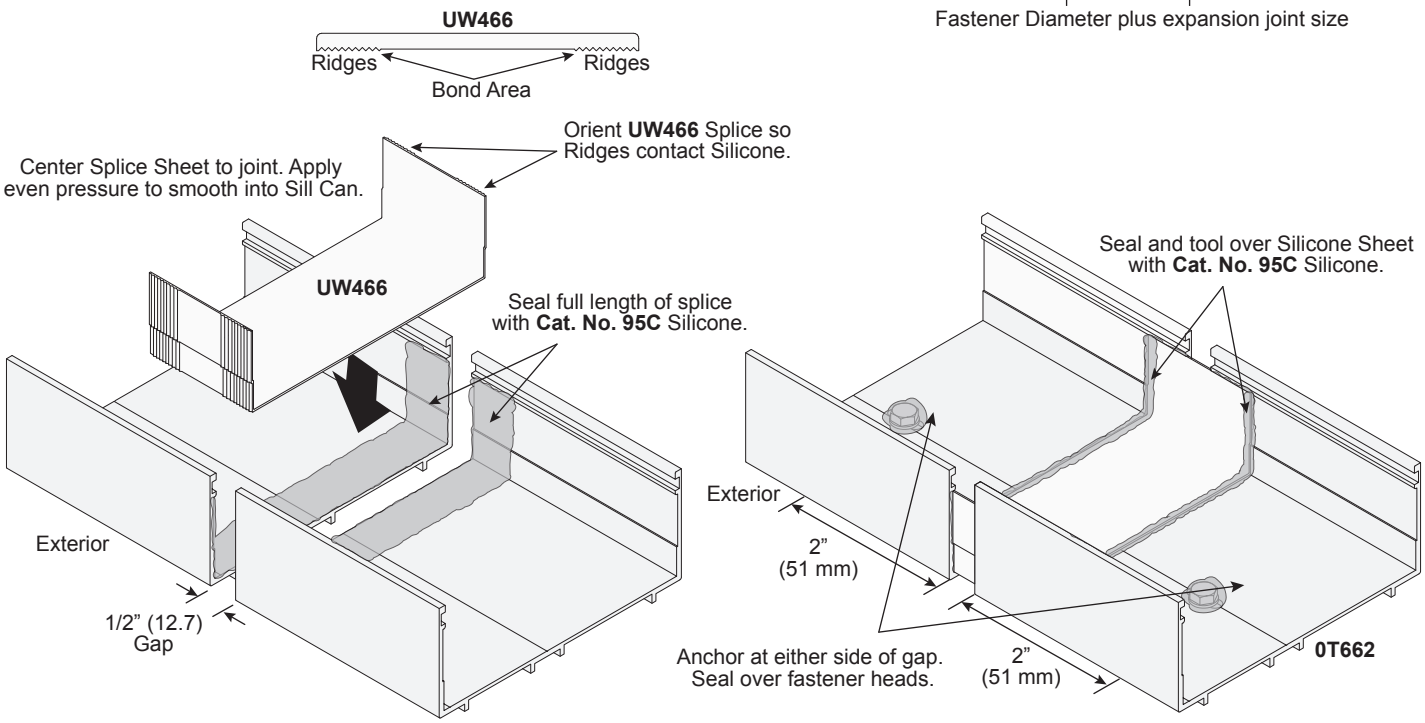
Elevations exceeding 24' (7.32 m) in width require splice sleeves to accommodate thermal movement. Joints width should be calculated according to job conditions and architectural specifications.

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

Locate splice joints near center of D.L.O. Elongate holes for installation fasteners at head and sill channels to allow for thermal movement. **Pin head and sill channels at one point only per cut length.** (This hole is not elongated)

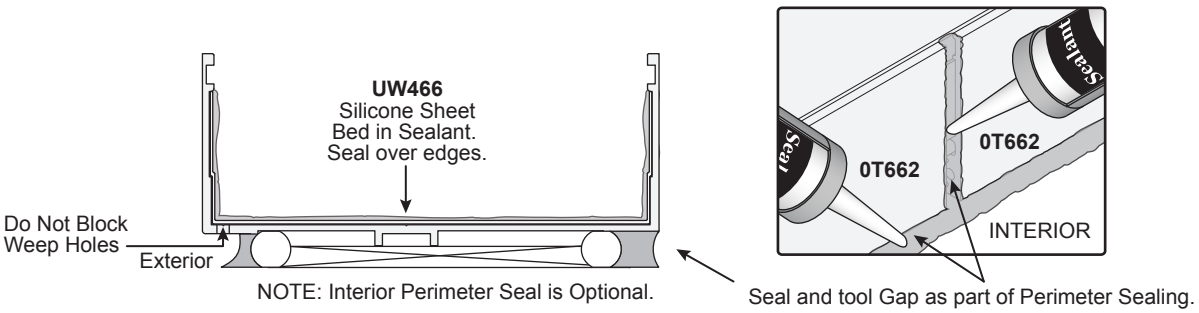
NOTE: A minimum 1/2" (12.7) Expansion Joint is required every 24' (7.32 m)





DETAIL DD

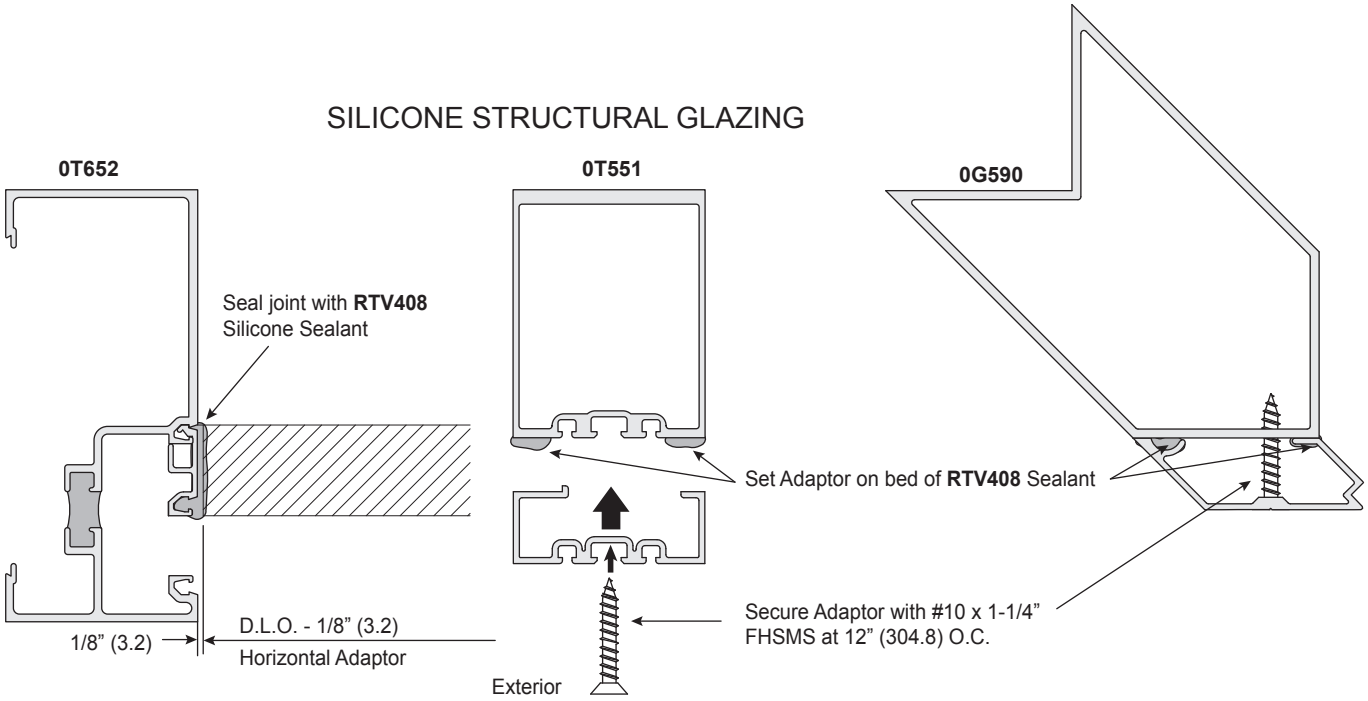
NOTE: Sill Channel for Exterior Glazing Shown. Head Channel for Exterior Glazing and Head and Sill Channels for Interior Glazing similar.



DETAIL EE

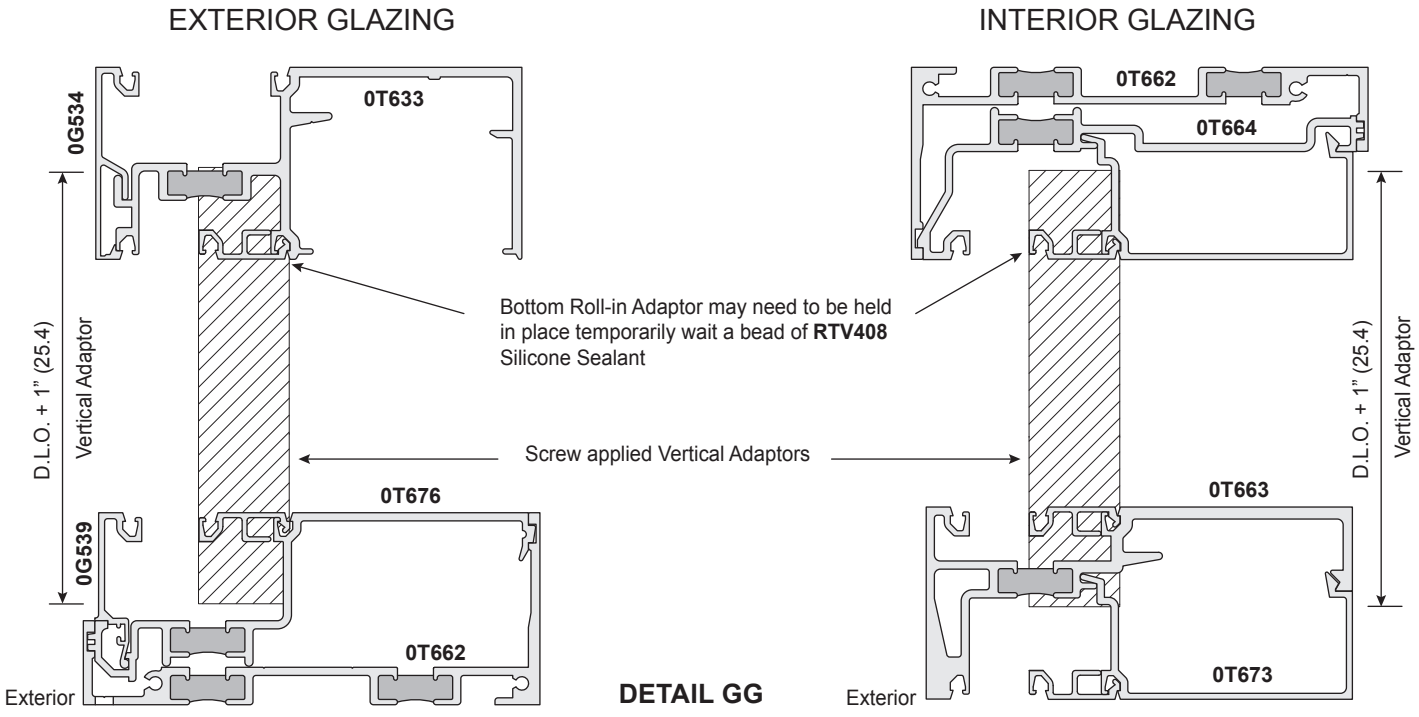
TRANSITION GLAZING

Vertical adaptors run through. Adaptors for intermediate verticals are screw applied. Run a bead of **RTV408** Silicone Sealant in vertical member or in the back of adaptor before setting it in place. See **DETAIL FF**.



DETAIL FF

Horizontal adaptors run between Verticals. Roll-in adaptors need to be installed when setting glass and held in place temporarily with a piece of gasket. When inside access is not possible the adaptor on the bottom of the Horizontal may be held in place with a bead of silicone. Glazing beads for 1/4" (6) spandrel are used for interior glazing applications. See **DETAIL GG**.



DETAIL GG

CORNER CONDITIONS

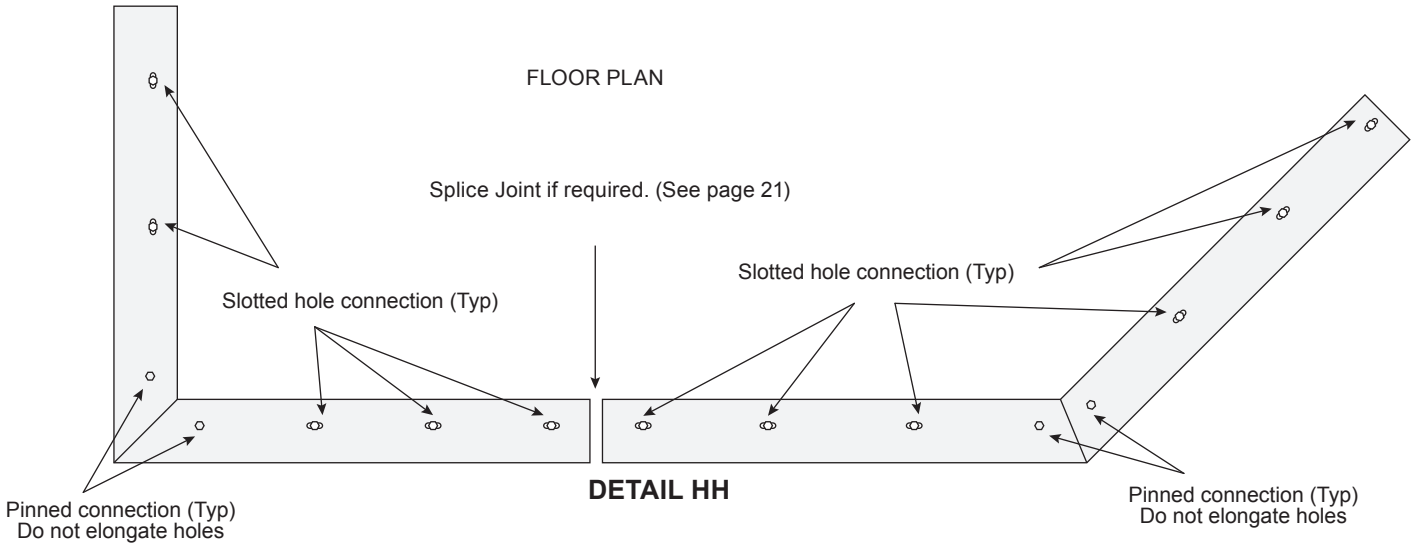
AVAILABLE CORNER OPTIONS: 90° INSIDE AND OUTSIDE CORNERS FOR INTERIOR AND EXTERIOR GLAZING. 90° AND 135° INSIDE AND OUTSIDE CORNERS FOR STRUCTURAL SILCONE GLAZING.

Head and sill channels should be mitered as required.

Corner members should be cut the same length as intermediate verticals.

Head and sill channel **must be pinned to structure on both sides of corner**, to prevent movement at mitered joint. (Do not elongate the hole where it is pinned).

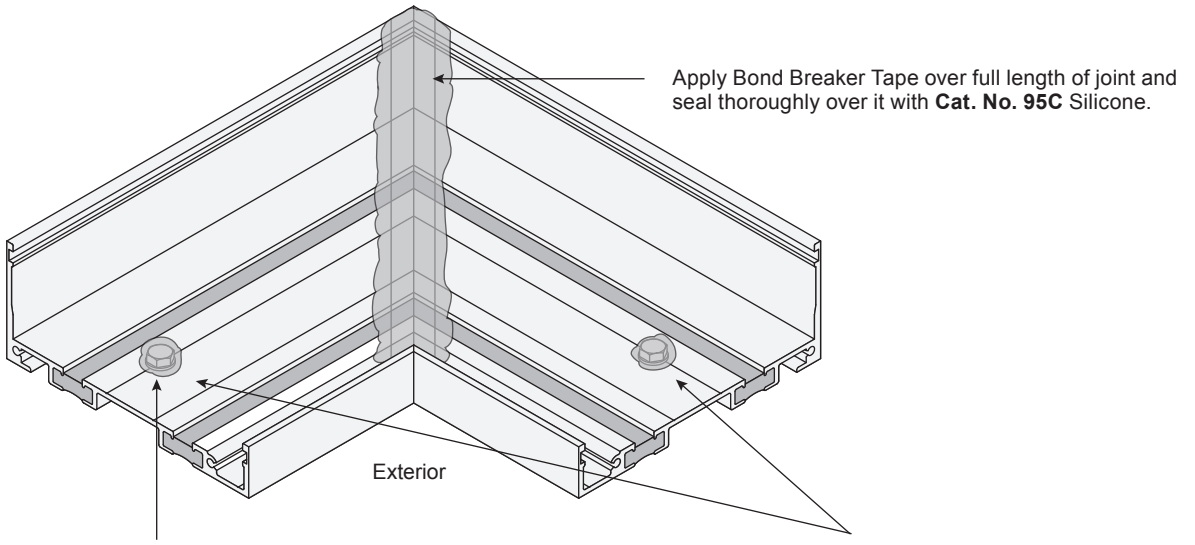
Elevations with corners at both ends may require a splice joint to accommodate thermal movement. See **DETAIL HH**.



DETAIL HH

CORNER INSTALLATION

1. Install mitered head and sill channels in place and secure them to structure. See **DETAIL II**.
2. Seal joint thoroughly with **Cat. No. 95C** Silicone. See **DETAIL II**.



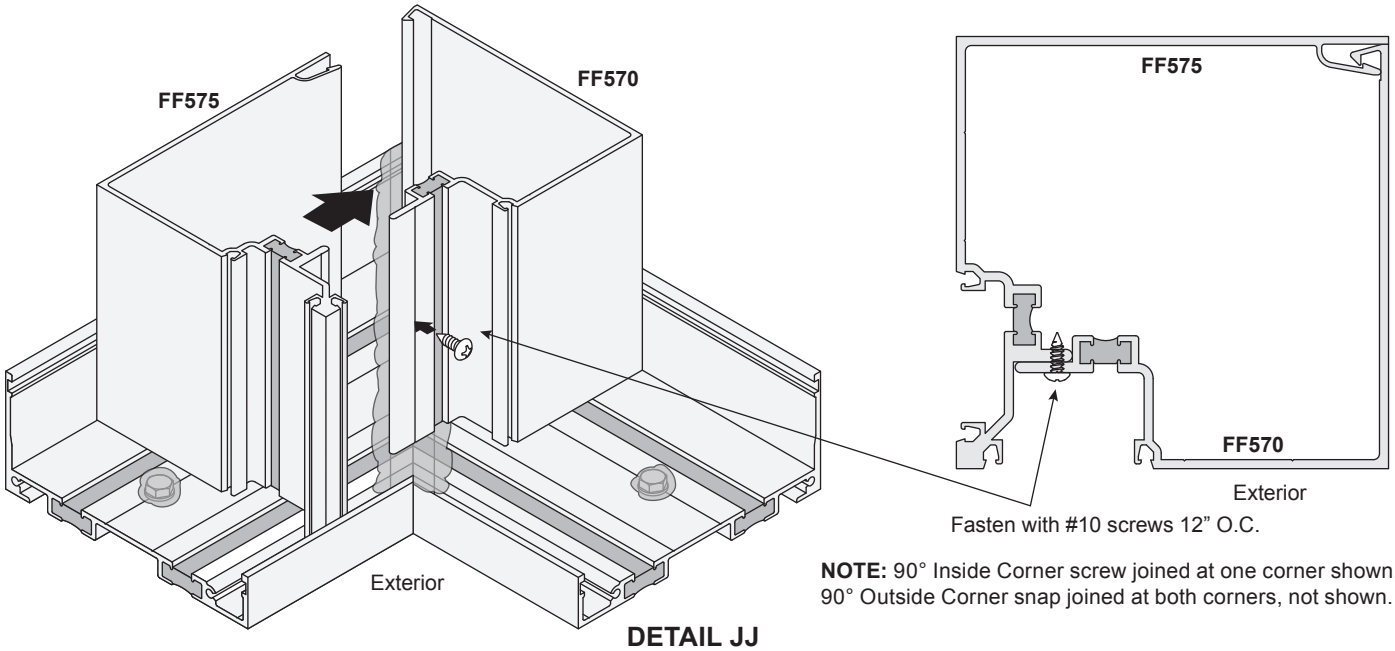
NOTE: The projection of some wedge type fasteners in close proximity to Vertical Members will require a simple clearing notch on Vertical for installation.

DETAIL II

CORNER INSTALLATION (CONTINUED)

3. Install corner components. Corner components should be installed before adjacent head and sill fillers are snapped-in. Corner components may be installed as a unit. Inside Corner components should be fastened together with #10 screws every 24" (609.6) O.C. See **DETAIL JJ**.

Optional: Corners may be preassembled and installed as a unit to avoid blind sealing of mitered joint. Attach corner members to preassembled head/sill corner components with clip angles at both sides of vertical.

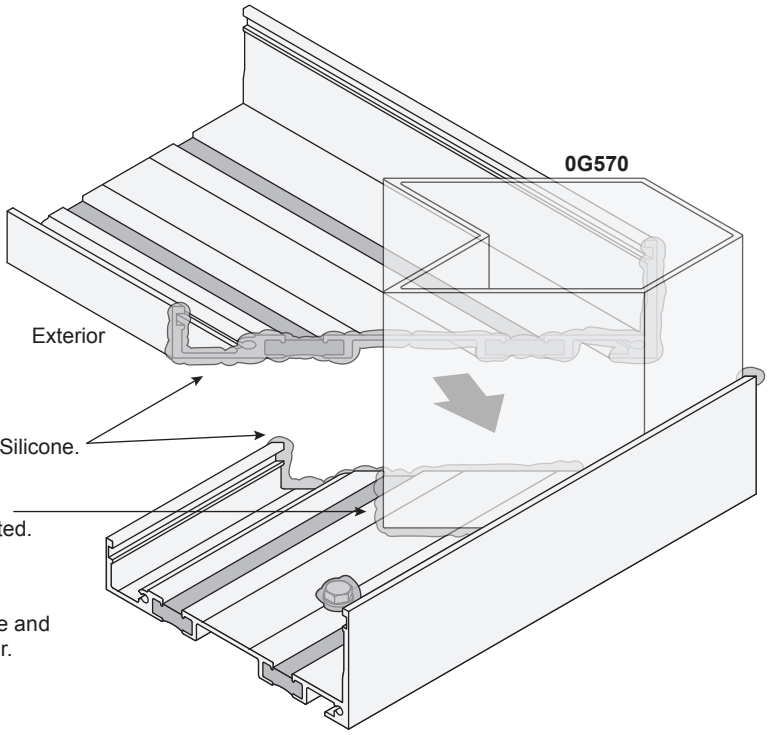


NOTE: 90° Inside Corner screw joined at one corner shown. 90° Outside Corner snap joined at both corners, not shown.

DETAIL JJ

SPECIAL INSTALLATION SEQUENCE FOR FIELD ASSEMBLY

1. Install head and sill channels on one side of corner only and secure to structure.
2. Apply **RTV408** Silicone Sealant to mitered edge.
3. Set corner member in place.
4. Butter mitered edge of head and sill channels with **RTV408** Silicone Sealant for the other side and install tight against previously installed half. Seal over head of fasteners with **Cat. No. 33S** Silicone.



DETAIL KK

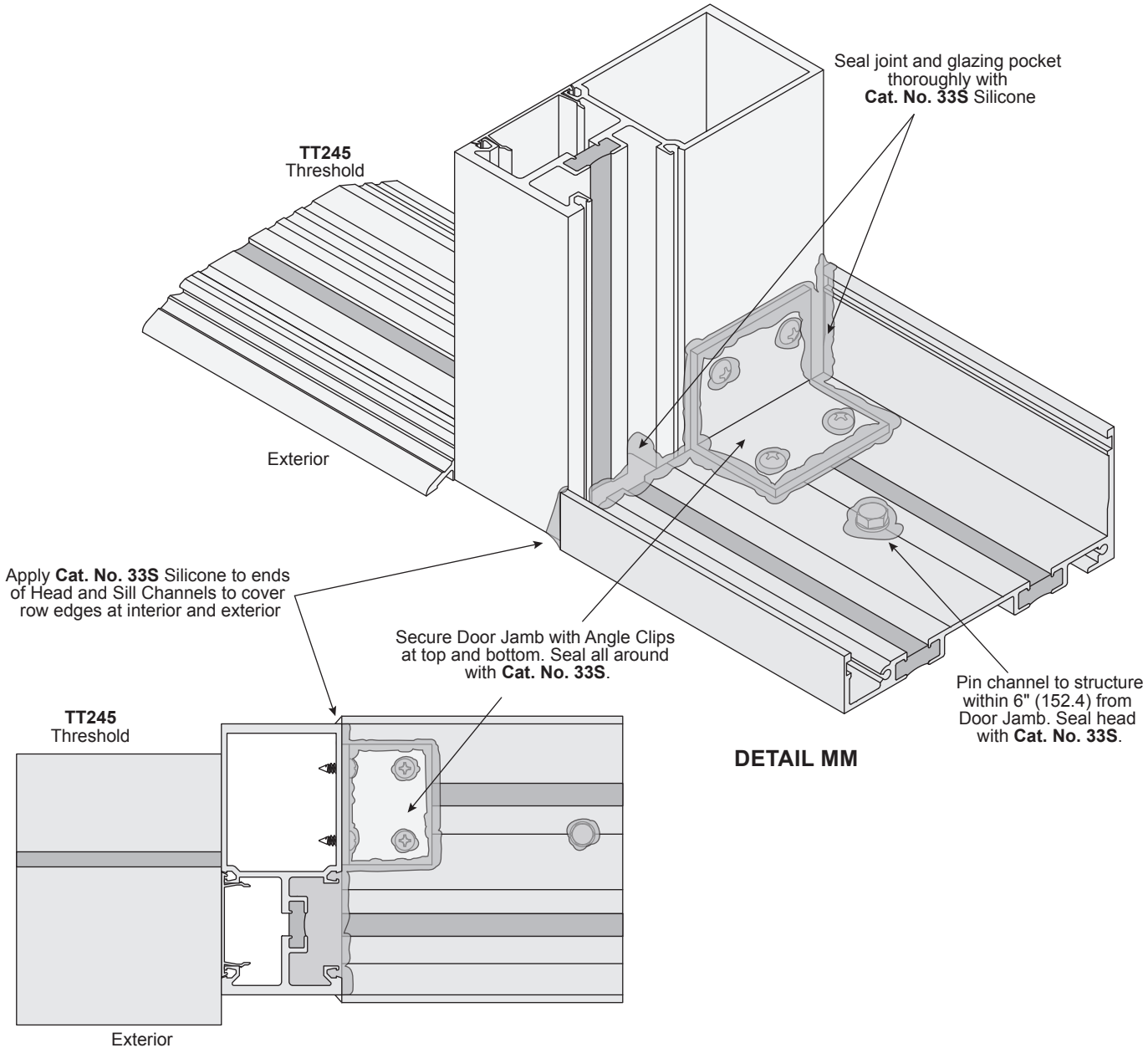
NOTE: 90° Inside SSG Corner shown. 135° Inside and Outside SSG and 90° Outside SSG Corner similar.

ENTRANCE FRAMES

Door jambs run to floor. Door jambs must be anchored at top and bottom. Sill and head channels are 1/4" (6.4) deeper than vertical members. In conditions where they butt against door jamb, apply **Cat. No. 33S** Silicone to end of channels to cover row edges. See **DETAIL LL**.

SILL CHANNEL

Butt Sill Channel against door jamb and pin to prevent movement. Seal thoroughly around joint with **Cat. No. 33S** Silicone. See **DETAIL LL**.



DETAIL MM

ENTRANCE FRAMES (CONTINUED)

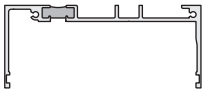
HEAD CHANNEL

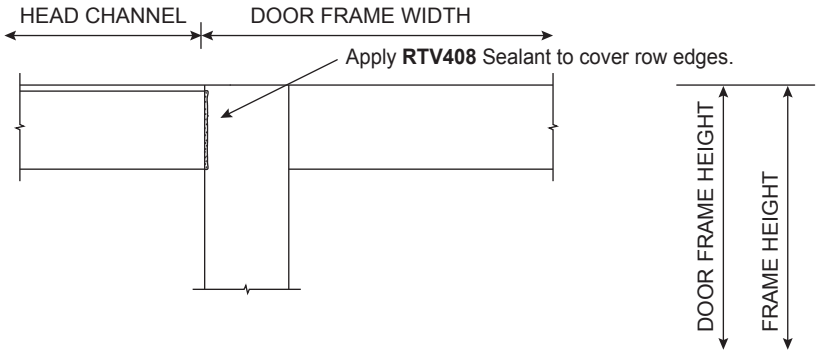
DOOR WITHOUT TRANSOM:

Head channel may run continuous or butt against door jamb. See **DETAIL MM**.

Condition 1:

Head Channel butts against door frame

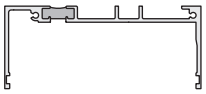


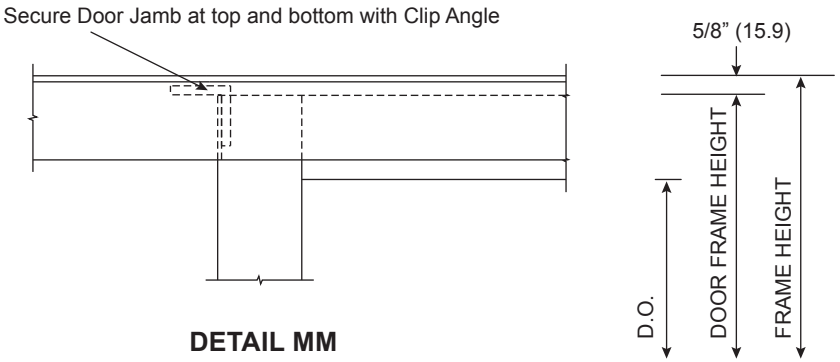


Condition 2:

Head Channel runs continuous

NOTE: Cut door jambs to FRAME HEIGHT minus 5/8" (15.9).





DETAIL MM

DOOR WITH TRANSOM:

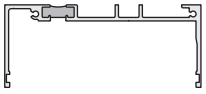
Head channel runs continuous. See **DETAIL NN**.

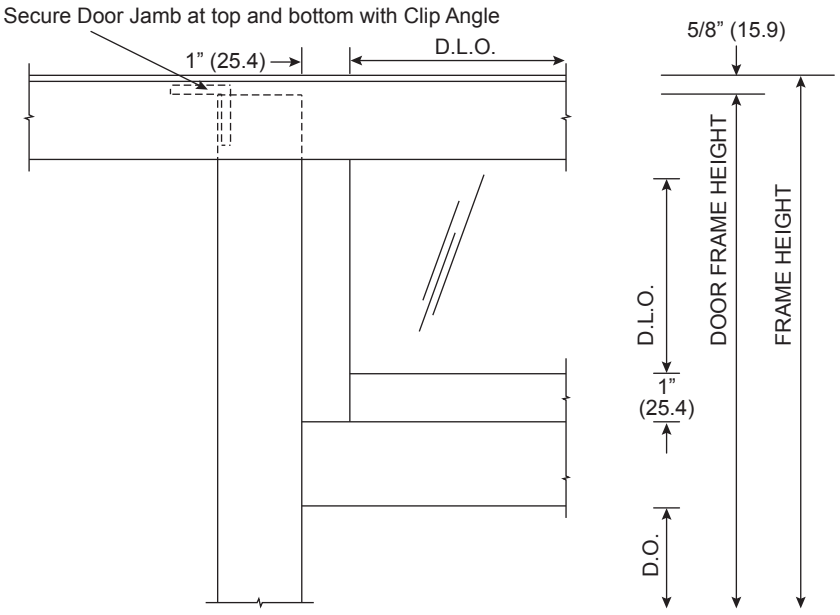
Transom glazing requires the use of profiles **1425/1M425** for 1" (25) glazing sash at jambs and door header.

Condition 3:

Head Channel runs continuous

NOTE: Cut door jambs to FRAME HEIGHT minus 5/8" (15.9).





DETAIL NN