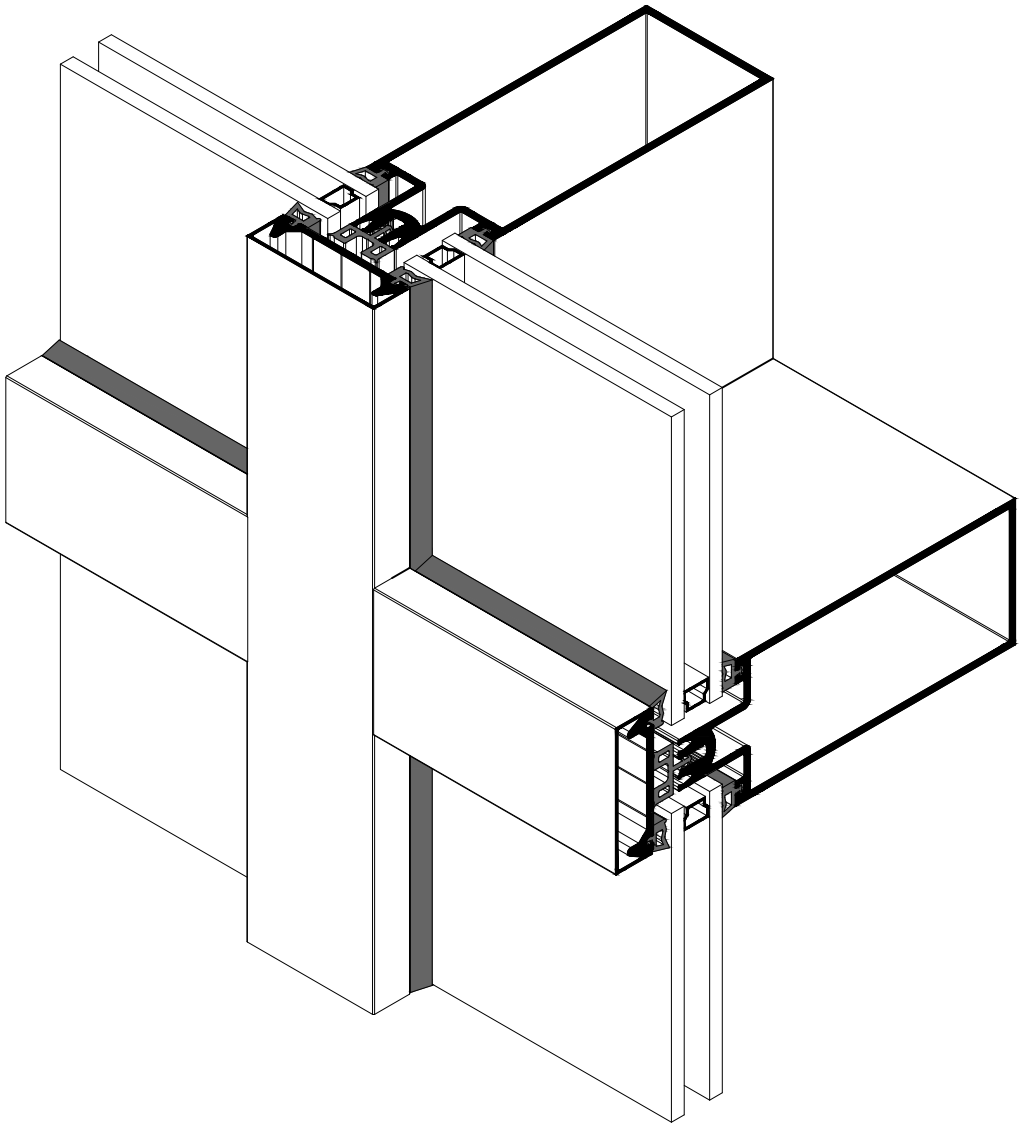
TUBELITE®

DEPENDABLE

LEADERS IN ECO-EFFICIENT STOREFRONT, CURTAINWALL AND ENTRANCE SYSTEMS



400T SERIES

BLAST RESISTANT CURTAIN WALL

INSTALLATION INSTRUCTIONS

3056 Walker Ridge Dr. NW, Suite G •• Walker, Mi 49544 • 800-866-2227

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GENERAL CONSTRUCTION NOTES

GENERAL CONSTRUCTION NOTES

1. These instructions cover typical product application, fabrication, installation and standard conditions and are general in nature. They provide useful guidelines, but the final shop drawings may include additional details specific to the project. Any conflict or discrepancies must be clarified prior to execution.

2. Materials stored at the job site must be kept in a safe place protected from possible damage by other trades. Stack with adequate separation so materials will not rub together and store off the ground. Cardboard or paper wrapped materials must be kept dry. Check arriving materials for quantity and keep a record of where various materials are stored.

3. All field welding must be done in accordance with AISC guidelines. All aluminum and glass should be shielded from field welding to avoid damage from weld splatter. Results will be unsightly and may be structurally unsound. Advise general contractor and other trades accordingly.

4. Coordinate protection of installed work with general contractor and/or other trades.

5. Coordinate sequence of other trades which affect framing installation with the general contractor (e.g. fire proofing, back up walls, partitions, ceilings, mechanical ducts, HVAC, etc.).

6. General contractor should furnish and guarantee bench marks, offset lines and opening dimensions. These items should be checked for accuracy before proceeding with erection. Make certain that all adjacent substrate construction is in accordance with the contract documents and/or approved shop drawings. If not, notify the general contractor in writing before proceeding with installation because this could constitute acceptance of adjacent substrate construction by others.

7. Isolate all aluminum to be placed directly in contact with masonry or other incompatible materials with a heavy coat of zinc chromate or bituminous paint. Fasteners attaching framing to building structure are typically not provided by Tubelite.

8. Sealant selection is the responsibility of the erector, installer and/or glazing contractor and must be approved by the sealant manufacturer with regard to application and compatibility for its intended use. All sealants must be used in strict accordance with the manufacturer's instructions and applied only by trained personnel to surfaces that have been properly prepared.

9. Sealant must be compatible with all materials with which they have contact, including other sealant surfaces. Consult the sealant manufacturer for recommendations relative to shelf life, compatibility, cleaning of substrate, priming, tooling adhesion, etc. Recommend sealant manufacturer perform adhesion "pull test" at "wet" glazing for quality assurance.

10. Drainage gutters and weep holes must be kept clean at all times. Tubelite will not accept responsibility for improper drainage as a result of clogged gutters and weep holes.

11. This product requires clearances at the head, sill and jambs to allow for thermal expansion and contraction as well as construction tolerances. Refer to final distribution drawings for joint sizes. Joints smaller than 1/2 ” may be subject to failure. Consult the sealant manufacturer for proper sizing of joints.

12. All framing members, entrances and other materials are to be installed plumb, level and true with regard to established bench marks, column center lines or other working points established by the general contractor and checked by the erector, installer and/or glazing contractor.

13. After sealant is set and a representative amount of the wall has been glazed (500 square feet or more), Tubelite recommends a water hose test to check installation. On large projects, a hose test should be repeated during glazing operation. This testing should be conducted in accordance with AAMA 501.2 specifications.

14. Cleaning of exposed aluminum surfaces should be done per AAMA recommendations.

15. Care must be taken when assembling aluminum framing components. Over tightening any fastener may cause stripping or fastener failure. Tubelite recommends the use of drill motors with clutches engaged to provide satisfactory tightening of the screw while preventing over torque. The use of impact drill motors is not recommended due to the absence of a clutch device.

16. Check **www.tubeliteinc.com** for any installation instruction updates.

GENERAL CONSTRUCTION NOTES

QUICK REFERENCE CHECKLIST

1. Make sure the opening is square and the caulk joints are $\frac{1}{2}$" minimum around the frame.
2. Ensure surfaces that will be sealed are free of contaminants that can lead to adhesion issues.
3. Check that all weeps and baffles (if required) conforms to the locations and sizes called out in these instructions.
4. Butter seal ends of horizontal frame members that are joined to vertical members.
5. Water dam installation and sealing is critical. Check installation against instructions to ensure conformity.
6. Apply sealant between all corner gasket joints.
7. Glass bites must be equal on all sides.
8. Double check anchor size and location against installation instructions or approved shop drawings.
9. Ensure pressure plate fasteners are torqued to 60 in-lbs.

GLASS SIZE CALCULATION

(Glass size assumes MINIMUM 1/2" bite captured mullion. See approved shop drawings)

Captured Mullion	= D.L.O. + 1"
SSG Vertical Mullions	= D.L.O. + 2"
SSG Horizontal Mullions	= D.L.O. + 1 3/4"
SSG Vertical Mullion at Captured Jamb	= Width **ONLY** D.L.O. + 1 1/2"
Corner Mullions	= See Approved Shop Drawings

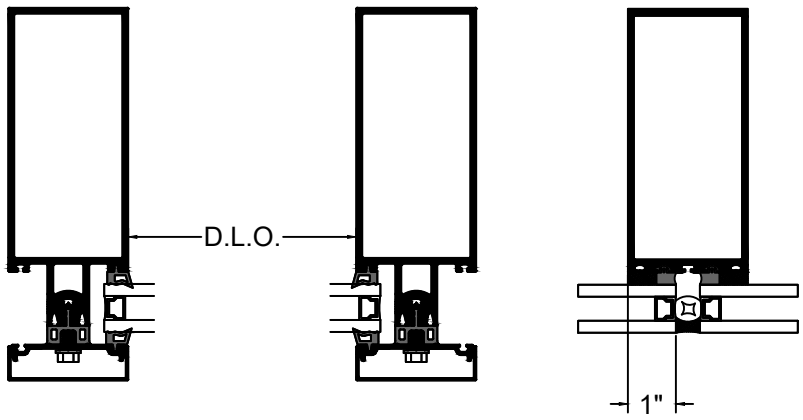

Fig.5.1

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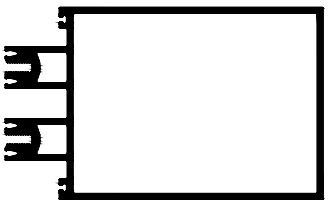
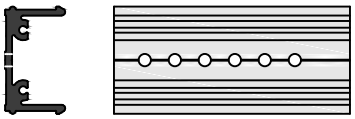
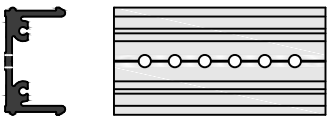
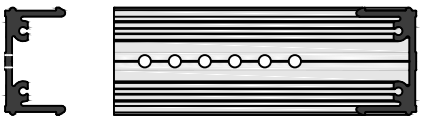
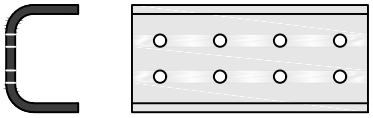
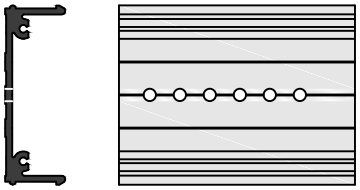
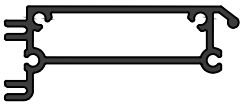
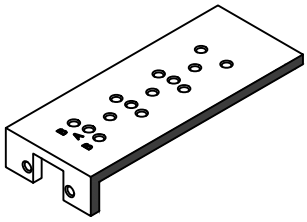
HORIZONTAL/VERTICAL EXTRUSIONS

SHAPE	DESCRIPTION	PART No.
	Captured Mullion/Horizontal	**E55TB32FB**
	Slide Over Horizontal	**E55TB08FB**
	Heavy Vertical	**E55TB332FB**
	SSG Back Member Horizontal/Vertical	**E55TB140FB**
	Open Back Perimeter	**E55TB245FB**
	Liveload Horizontal	**E55TB182FB**
	Roll Over Horizontal	**E55TB03FB**
	4" Horizontal/Vertical	**E55TB151FB**

Contact *www.tubeliteinc.com* for additional system extrusions for enhanced project applications.

SHEAR BLOCK EXTRUSIONS and Drill Guide

SHAPE	DESCRIPTION	PART No.
	Shear Block for Horizontals Standard	**PTB140FB**
	Shear Block for Horizontals Slide Over	**PTB141FB**
	Shear Block for Horizontals Corner	**PTB142FB**
	Shear Block for Horizontals High Load	**PTB143FB**
	Shear Block for Horizontals 4" Horizontal	**PTB144FB**
	Shear Block for Roll Over Horizontal	**PTB112**
	Drill Guide	**PTB149FB**

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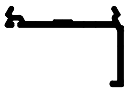
TYPICAL FRAMING EXTRUSIONS

SHAPE	DESCRIPTION	PART No.
	Pressure Plate	**M4TB224FB**
	Perimeter Pressure Plate	**M4TB325FB**
	Pressure Plate 4" Width	**M4TB290FB**
	Pressure Plate Liveload Horizontal	**M4TB324FB**
	Screw Applied Horn	**E4TB45FB**
	Glass Pocket Filler	**E4TB278FB**
	Perimeter Anchor	**E3162FB**
	Setting Chair	**P4623**
	Snap In Adapter for 1/4" and 1/8" Glass	**E4TB69FB**
	Slide Over Horizontal Cap	**E4TB84FB**
	Snap In Filler For Rollover Horizontal	**E55TB06FB**
	2 1/2" Wide x 3/4" Snap Cover (Standard)	**E4TB64FB**
	4" Wide x 3/4" Snap Cover	**E4TB285FB**

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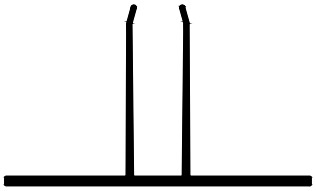
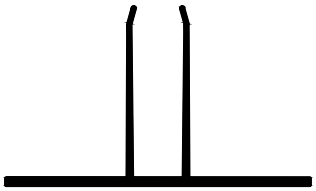
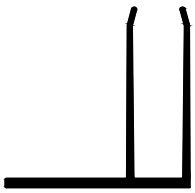
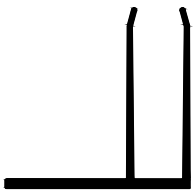
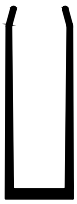
ANCHOR EXTRUSIONS

SHAPE	DESCRIPTION	PART No.
	'T' Anchor for Standard and SSG Mullions	**PTB11BFB**
	'T' Anchor for Heavy Vertical Mullion	**PTB11CFB**
	'F' Anchor for Standard and SSG Mullions	**PTB10BFB**
	'F' Anchor for Heavy Vertical Mullion	**PTB10CFB**
	'U' Anchor for Door Jambs	**P6516**

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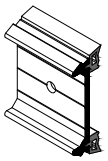
ACCESSORIES

SHAPE	DESCRIPTION	PART No.
	Temporary Glass Retainer	**PTB194**
	Water Dam for Captured Glazing	**PTB103**
	Thermal Isolator Gasket	**PTB108**
	1/8" Glazing Gasket	**PTB28**
	Typical Glazing Gasket	**P4606**
	SSG 1/4" Gasket	**P4631**
	Optional Infill Glazing Gasket	**PTB33**
	Optional Infill Glazing Gasket	**PTB31**
	Setting Block for 1" Glazing	**P946**
	Setting Block for 1/4" Glass	**P948**
	Setting Block for SSG Horizontal	**P4603**

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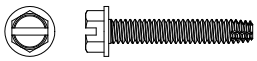
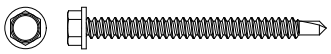
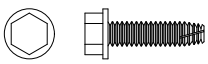
FASTENERS

SHAPE	DESCRIPTION	PART No.
	#10-24 x 1/2" PH type 'F' For Roll Over Horizontal	**S128**
	#14-14 x 1/2" HH type 'F' Stainless Steel 18-8 For Shear Blocks (Refer to Approved Shop Drawings for For Correct Usage)	**S139**
	#10-24 x 1 1/2" For Steel Reinforcement	**S207**
	1/4-20 x 2 1/4" For Captured Outside Corner	**S211**
	#10-24 x 3/4" PH Self Tapping For Fastening Horizontal to Shear Block	**S270**
	1/4 -20 x 1 1/2" Type 'F' Stainless Steel 18-8 For Roll Over Shear Clip	**S359**
	#14-14 x 1/2" HH Type 'F' Grade 8 For Shear Blocks (Refer to Approved Shop Drawings for For Correct Usage)	**S410**
	#12-14 x 2 1/2" For Optional Screw Applied Horn	**S466**
	1/4-20 x 1" Type 'F' Grade 5 For Pressure Bars	**S469**
	1/4-20 x 2 1/2" For Standard Outside SSG Corner	**S473**

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ELEVATION and WALL SECTION

The 400T Series Blast Resistant curtain wall system is designed for single and multi span construction.

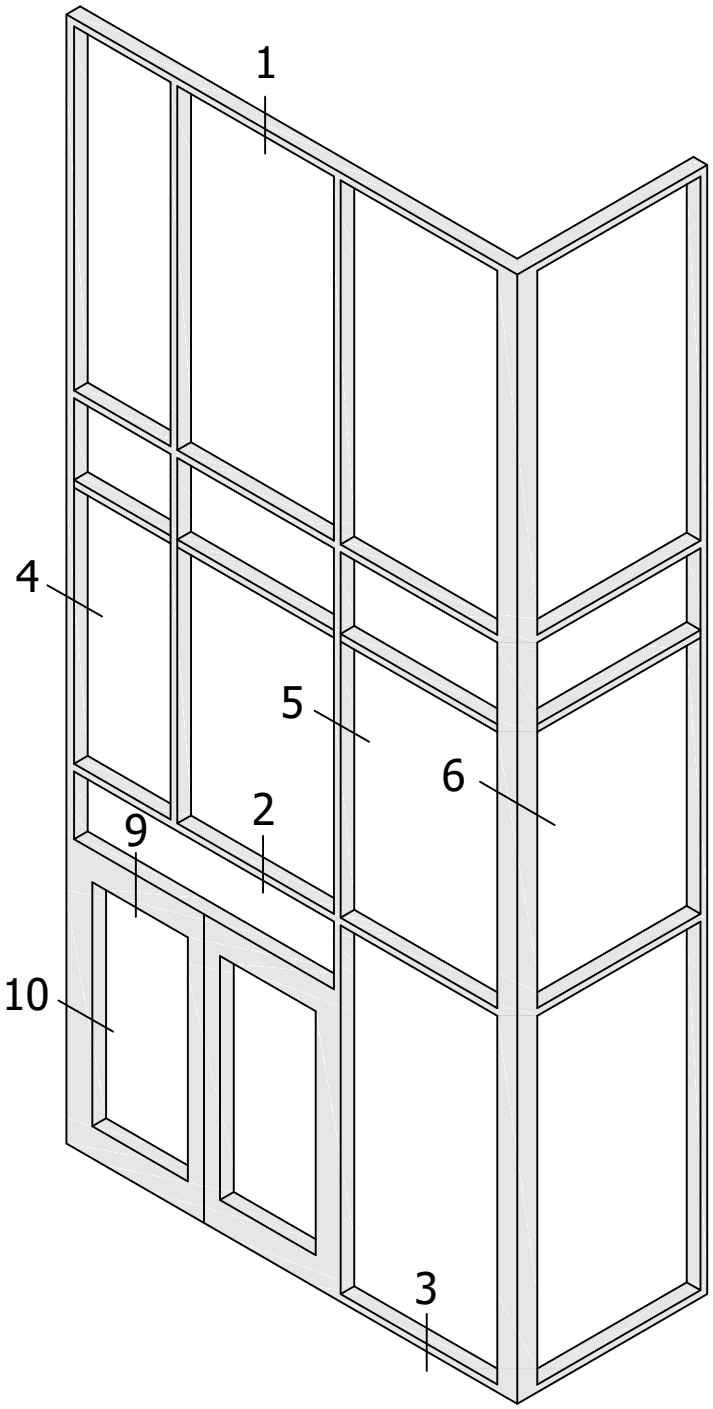

Fig.12.1

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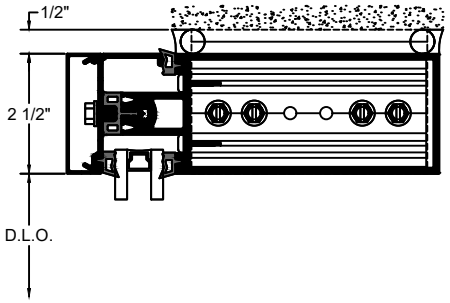
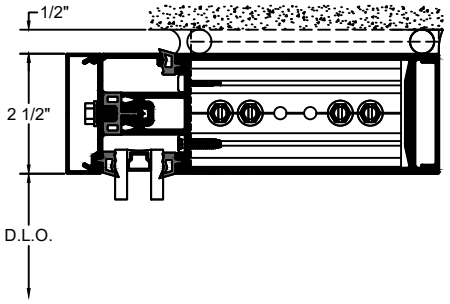
TYPICAL HORIZONTAL DETAILS

Four screws per shear block shown, consult approved shop drawing for amount of screws for your application

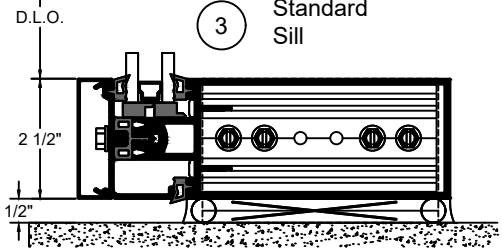
1 Standard Head



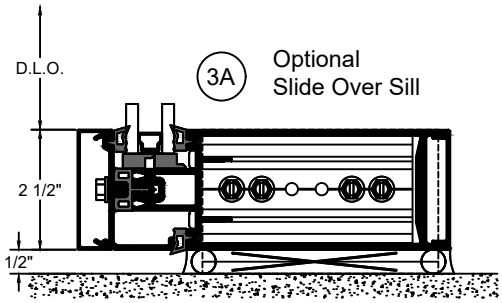
1A Optional Slide Over Head



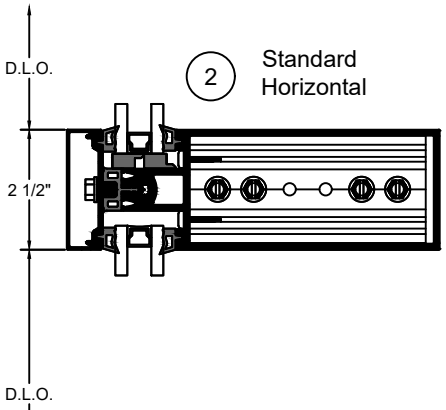
3 Standard Sill



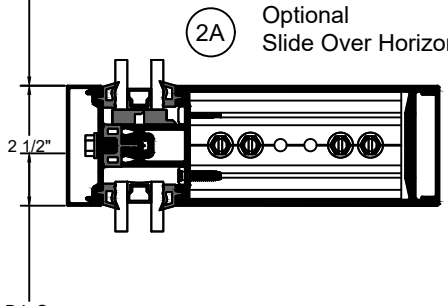
3A Optional Slide Over Sill



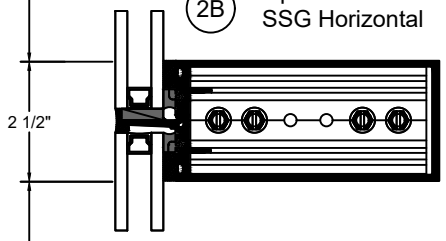
2 Standard Horizontal



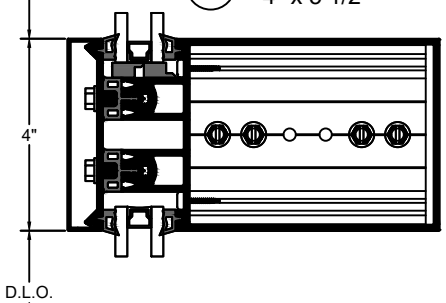
2A Optional Slide Over Horizontal



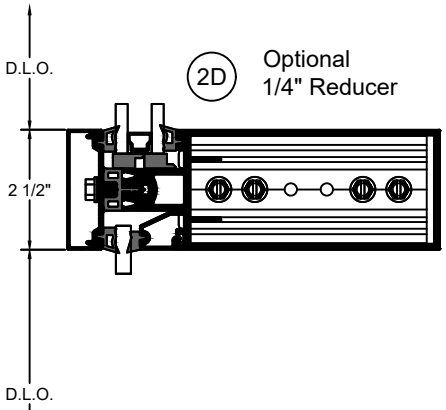
2B Optional SSG Horizontal



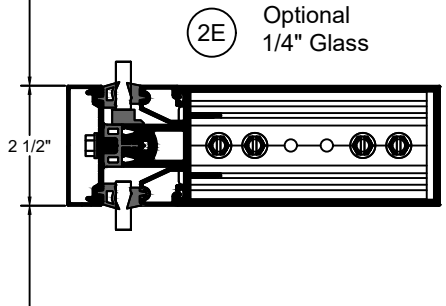
2C Optional 4" x 5 1/2"



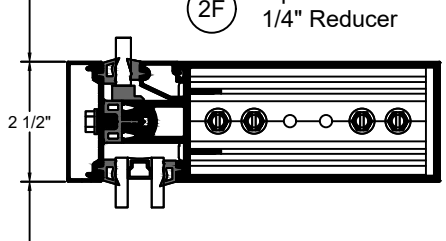
2D Optional 1/4" Reducer



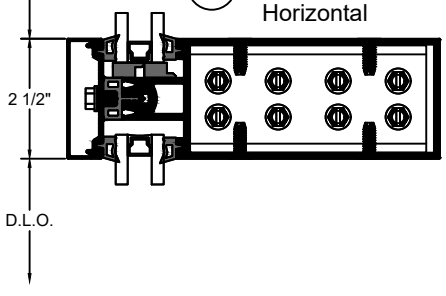
2E Optional 1/4" Glass



2F Optional 1/4" Reducer



2G Optional High Blast Horizontal



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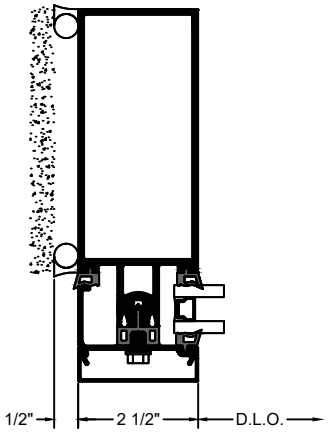
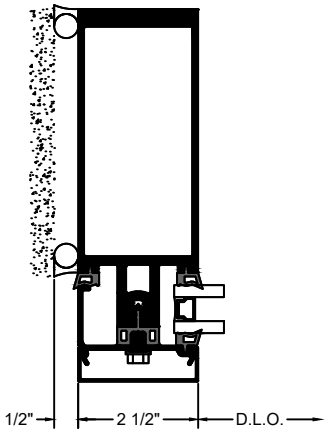
TYPICAL VERTICAL DETAILS

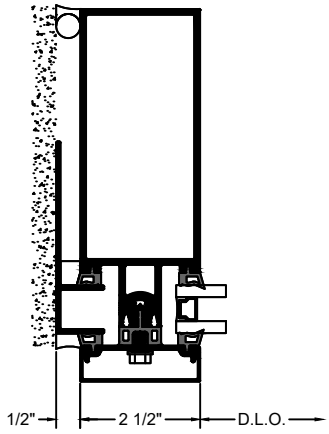
4 Standard Jamb



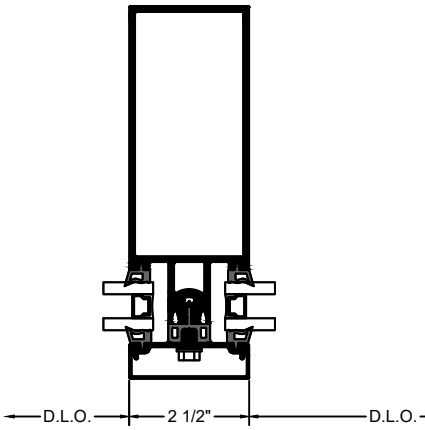
4A Optional Heavy Wall Jamb



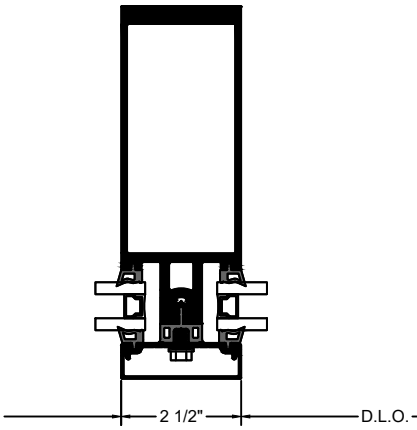
4 Optional Jamb with "F" Jamb Anchor



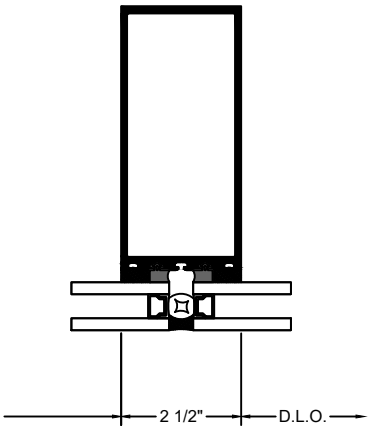
5 Standard Intermediate Vertical



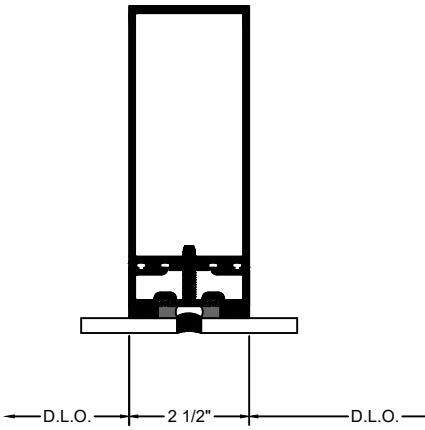
4A Optional Heavy Wall Intermediate Vertical



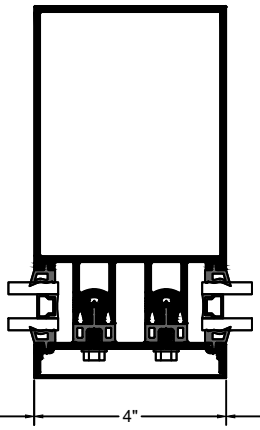
4 Optional Silicone Glazed Vertical



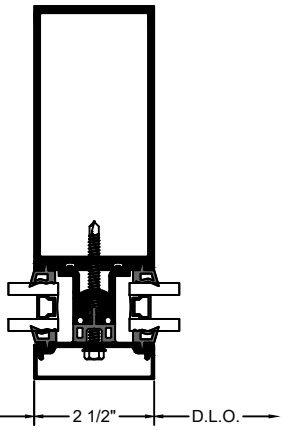
5C Optional Silicone Glazed Vertical SSG 1/4" Glass



5D Optional 4" x 5 1/2" Vertical

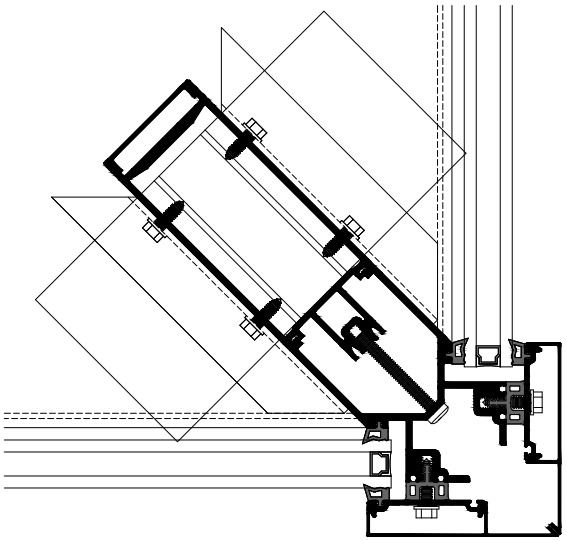


5E Optional Screw Applied Horn

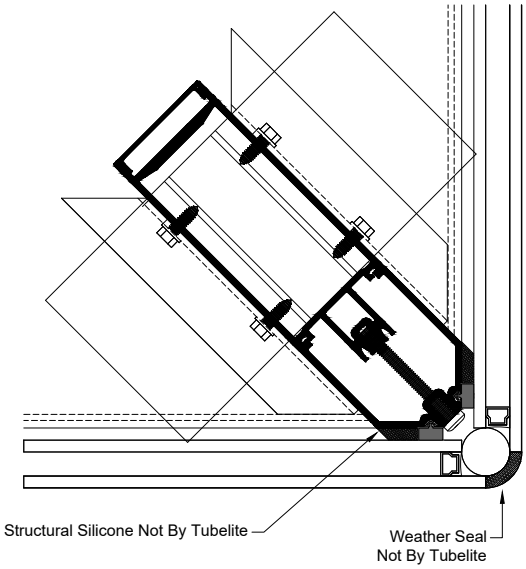


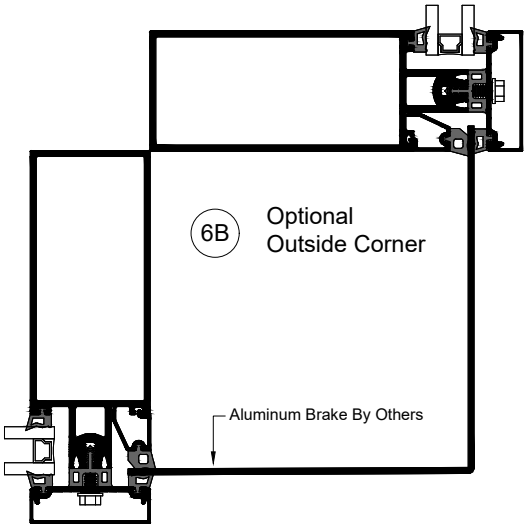
TYPICAL CORNER DETAILS

6 Standard
Outside Corner

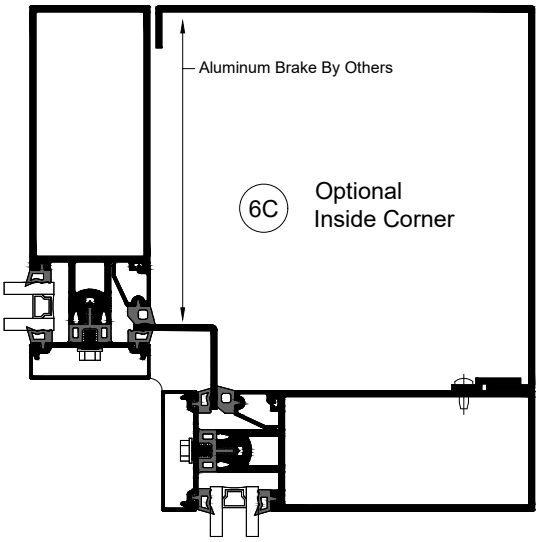


6A Standard
90° Outside Corner - SSG

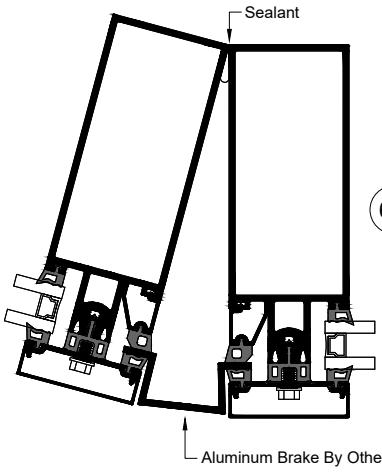




6B Optional
Outside Corner



6C Optional
Inside Corner



6D Optional
Outside Corner

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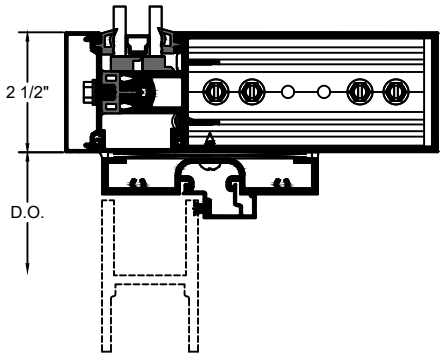
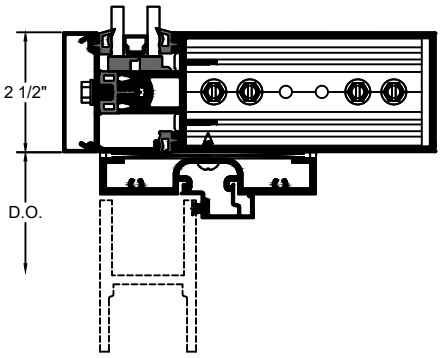
TYPICAL TRANSOM AND DOOR DETAILS

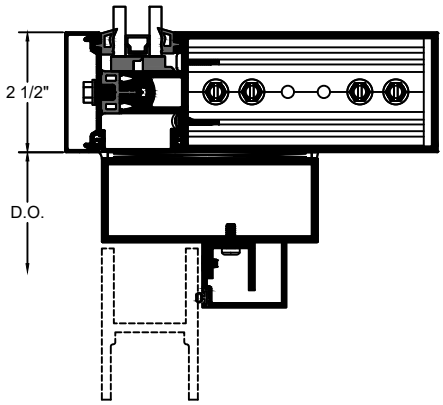
9 Standard Transom



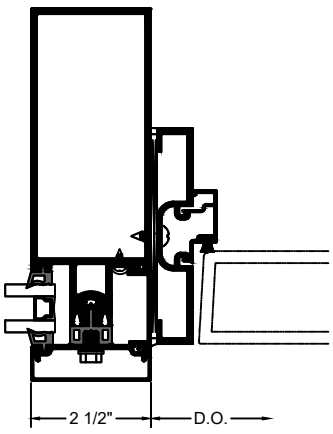
9A Optional Transom



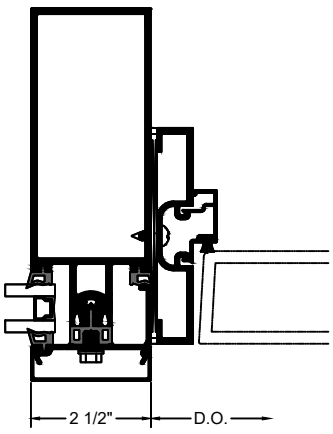
9B Optional Transom



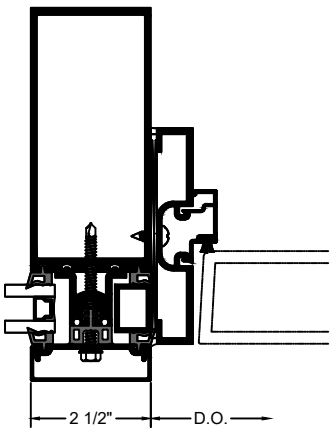
10 Standard Door Jamb



10A Optional Door Jamb



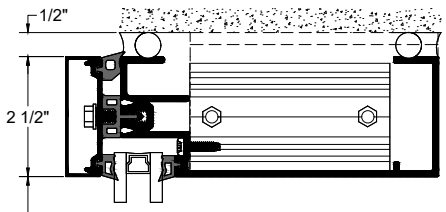
10B Optional Door Jamb



OPEN BACK DETAILS

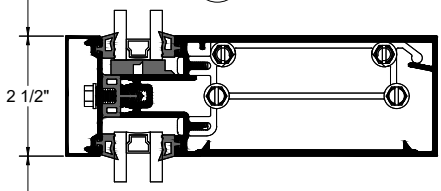
PLEASE CONTACT TUBELITE ENGINEERING BEFORE USING OPEN BACK EXTRUSIONS

1C Optional Open Back



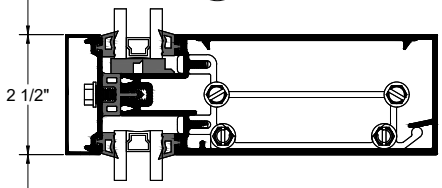
D.L.O.

2G Optional Roll Over Horizontal



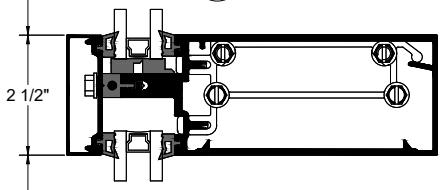
D.L.O.

2H Optional Roll Over Horizontal



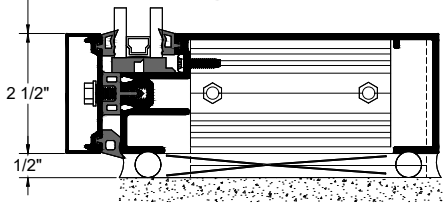
D.L.O.

2I Optional Live Load Horizontal

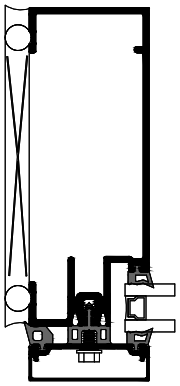


D.L.O.

3B Optional Open Back Sill



4C Optional Open Back Jamb



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FRAME FABRICATION

Step 1: Determine Frame Size

Frame Width

A. Make sure the opening is square and plumb. Measure each diagonal of the opening. **SEE Fig.18.1**
B. Measure the width of the opening (Rough Opening) at the top, middle, and bottom. Select the smallest of these dimensions and subtract the left and right caulk joint width per approved shop drawing (1/2" minimum caulk joint at jambs). **SEE Fig.18.2**
C. Allow a larger clearance to accommodate building tolerances, an out-of-square opening, anticipated thermal expansion within the unit, or as required by shop drawings.

Frame Height

D. Measure the height of the opening (Rough Opening) at several points along the entire width of the opening. Select the smallest of these dimensions and subtract 1" to allow a minimum of 1/2" at sill and head for shim and caulking. **SEE Fig.18.3**
E. Allow a larger clearance to accommodate building tolerances, an out-of-square opening, anticipated thermal expansion within the unit, or as required by shop drawings.

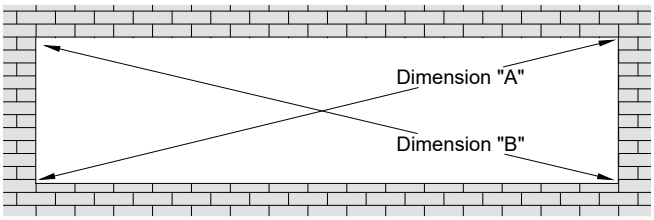


Fig.18.1
Dimension "A" = "B"

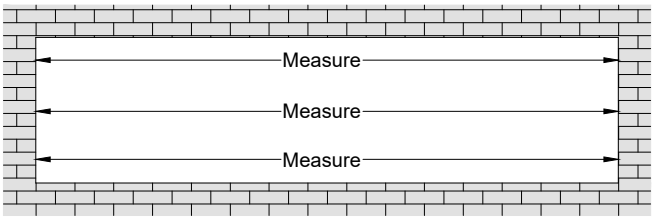


Fig.18.2

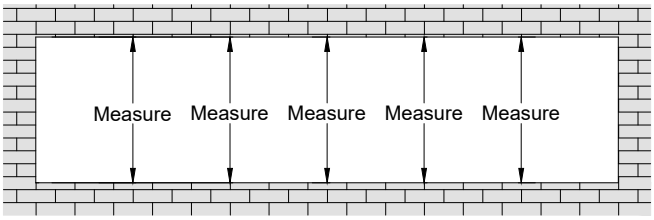


Fig.18.3

FRAME FABRICATION

Step 2: Cut Materials to Size

Captured Framing

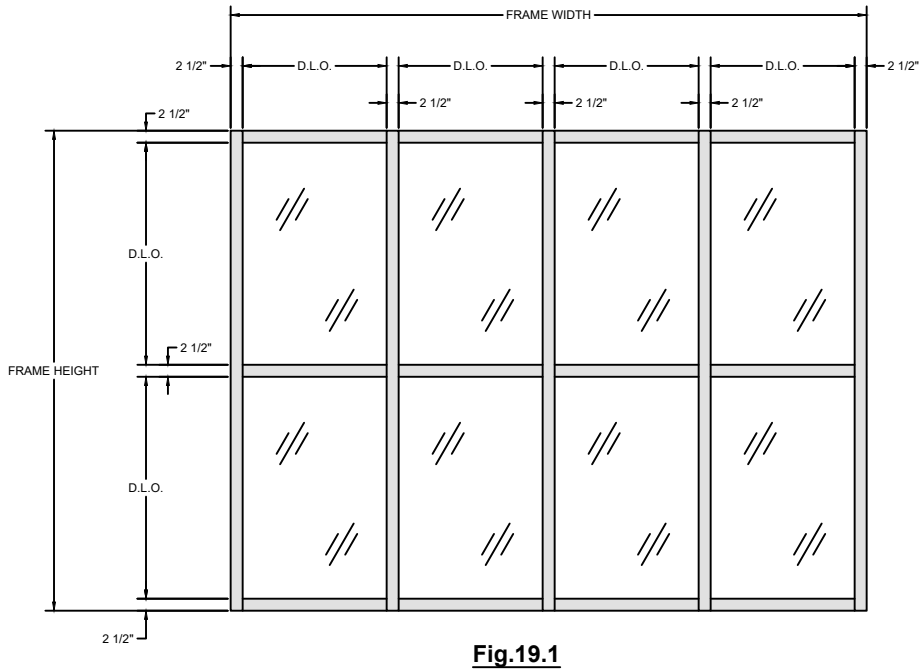


Fig.19.1

Cut extrusions to lengths as shown below:

Vertical Profiles:

Vertical Mullion	= Frame Height
Pressure Plates	= Frame Height
Face Caps	= Frame Height
Pocket Filler at Perimeter	= D.L.O. *MINUS* (-) 1/16" used with PTB120 thermal pressure plate

Horizontal Profiles:

Head, Sill, & Horizontal	= D.L.O.
Pressure Plates	= D.L.O. *MINUS* (-) 3/8"
Face Caps	= D.L.O. *MINUS* (-) 1/32"
Pocket Filler at Perimeter	= D.L.O. *MINUS* (-) 1/16"

Accessories:

Exterior Vertical Gasket	= Pressure Plate Length *PLUS* (+) Allowance*
Exterior Horizontal Gasket	= Pressure Plate Length *PLUS* (+) Allowance*
Interior Vertical Gasket	= D.L.O. *PLUS* (+) 1" *PLUS* (+) Allowance*
Interior Horizontal Gasket	= D.L.O. *PLUS* (+) Allowance*

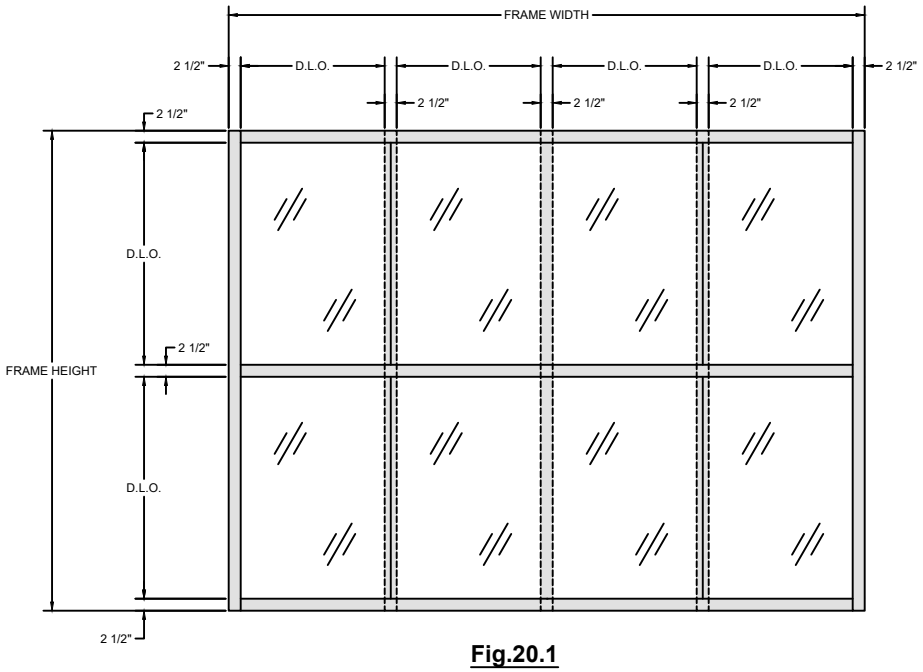
*Allowance = 1/8" extra length per foot of D.L.O. or aluminum length

Note: Door framing material is cut to size from the factory.

FRAME FABRICATION

Step 2: <u>Cut Materials to Size</u> (Continued)

SSG Framing



<u>Fig.20.1</u>

Cut extrusions to lengths as shown below:

Vertical Profiles:

Vertical Mullion	= Frame Height
Pressure Plates (at Jambs)	= Frame Height
Face Caps (at Jambs)	= Frame Height
Glazing Adaptors	= D.L.O. *PLUS* (+) 1"
Pocket Filler at Perimeter	= D.L.O. *MINUS* (-) 1/16" (used with PTB120 thermal pressure plate)

Horizontal Profiles:

Tubular Head, Sill, & Horizontal	= D.L.O.
Open Back Head, Sill, & Horizontal	= D.L.O. *MINUS* (-) 1/32"
Pressure Plates	= 3 Lites Wide Maximum
Face Caps	= 3 Lites Wide Maximum
Glazing Adaptors	= D.L.O. *MINUS* (-) 1/32"

Accessories:

Exterior Vertical Gasket (at Jambs)	= Pressure Plate Length *PLUS* (+) Allowance*
Exterior Horizontal Gasket	= Pressure Plate Length *PLUS* (+) Allowance*
Interior Vertical Gasket	= D.L.O. *PLUS* (+) 1" *PLUS* (+) Allowance*
Interior Horizontal Gasket	= D.L.O. *PLUS* (+) Allowance*
Interior Horizontal Gasket	= D.L.O. *PLUS* (+) 1" *PLUS* (+) Allowance*

*Allowance = 1/8" extra length per foot of D.L.O. or aluminum length

FRAME FABRICATION

Step 3: Drill Holes in Vertical Members for Shear Blocks

A. Drill .201" diameter pilot holes for #14 screws in the vertical members. Use the PTB149FB drill fixture to locate these holes. Holes in rows marked "B" are for high load shear block, row marked "A" for all other shear blocks.

Standard and Slide Over
Shear Block Pattern (A)

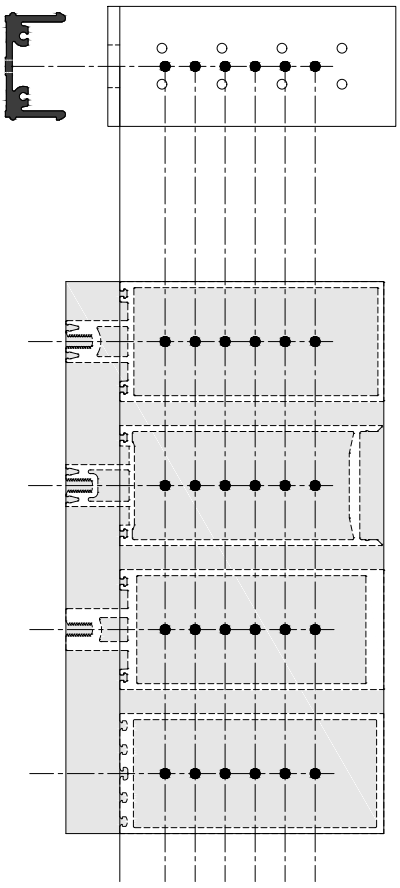


Fig.21.1
Standard and Slide Over
Shear Block Pattern

High Load
Shear Block Pattern (B)

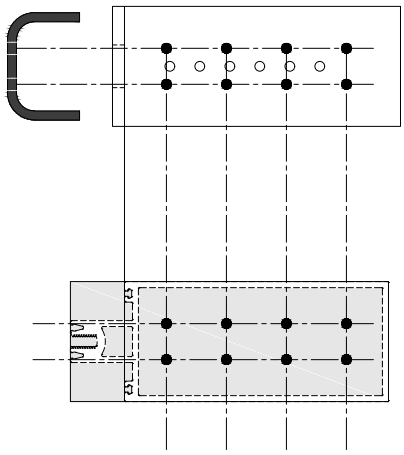


Fig.21.2
High Load
Shear Block Pattern

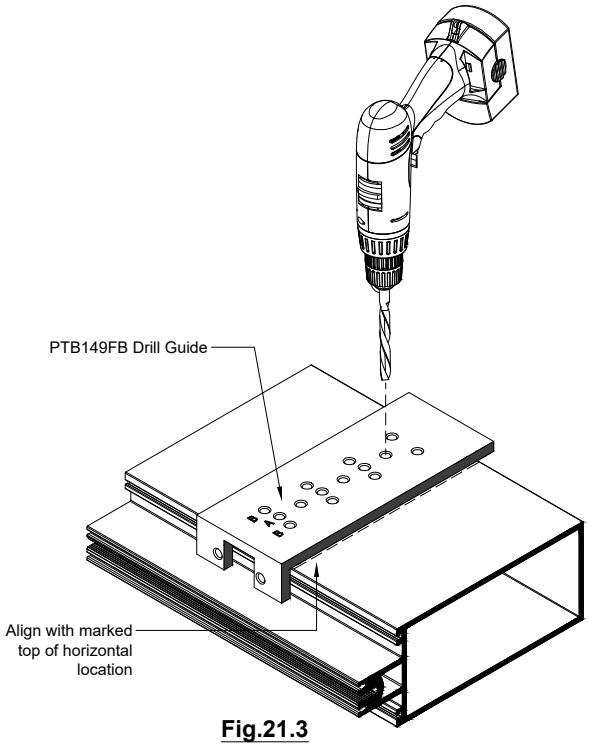


Fig.21.3

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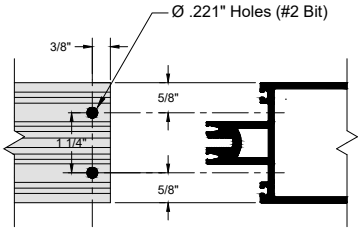
FRAME FABRICATION

Step 4: Drill Holes in Horizontal for Attachment to Shear Blocks

A. Drill .201" diameter clearance holes for #10 screws in the horizontal sections for attachment to the shear blocks. Use PTB149FB drill fixture to locate holes. See **Fig.22.1**.



Head, Horizontal, and Sill

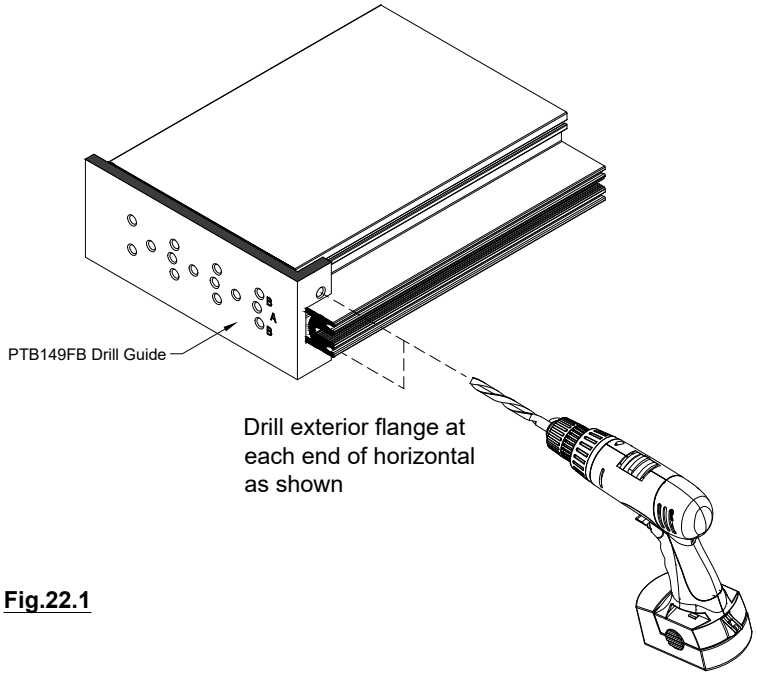
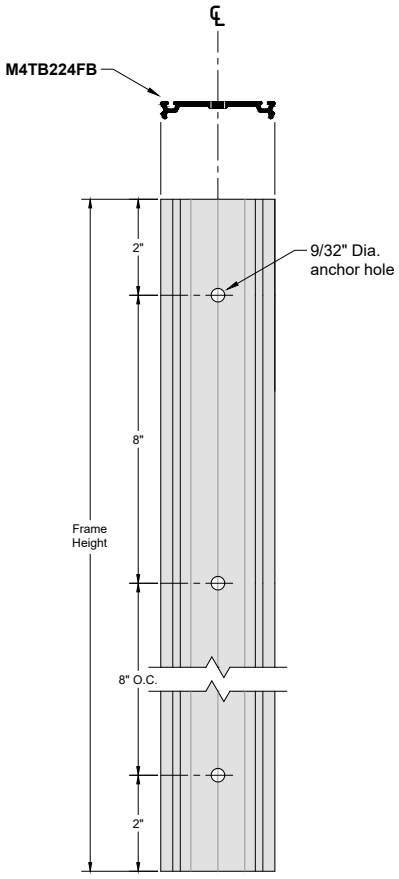


Fig.22.1

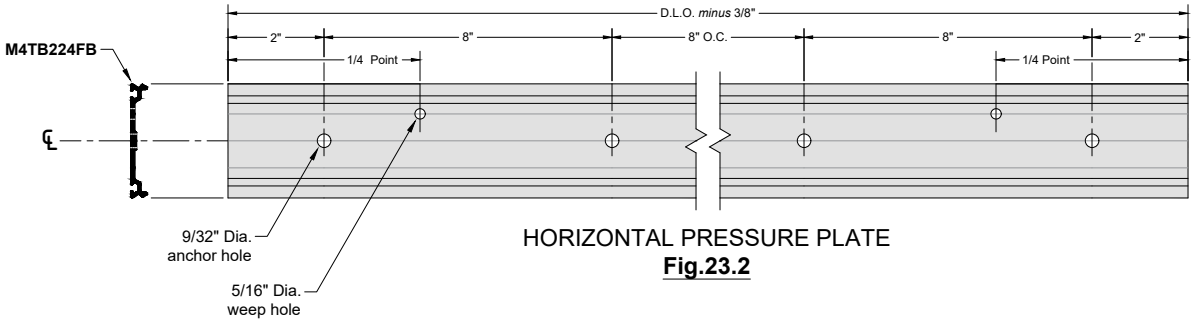
FRAME FABRICATION

Step 5: Drill Weep Holes in Horizontal Pressure Plates

A. Drill 5/16" diameter weep holes in horizontal pressure plate at 1/4 points at each end. Locate the holes on the V-groove above the center line of the pressure plate.
B. Pressure plates are factory punched on the center for pressure plate screws. Drill additional hole(s) as required to ensure a maximum of 2" from the ends of the plates.



VERTICAL PRESSURE PLATE
Fig.23.1

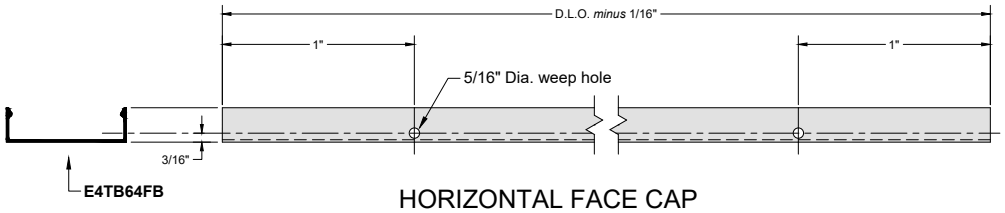


HORIZONTAL PRESSURE PLATE
Fig.23.2

FRAME FABRICATION

Step 6: Fabricate Weep Holes in Horizontal Face Covers

A. Drill a 5/16" diameter weep hole on the bottom of each horizontal face cover a maximum of 1" from each end of the cover.



HORIZONTAL FACE CAP
Fig.24.1

Step 7: Notch Heads and Sills to Clear Shear Clips

A. Notches must be cut in the slide over horizontal members to provide clearance for the shear blocks. Standard horizontal not to be notched.
See **Fig.24.2** for proper notch size.

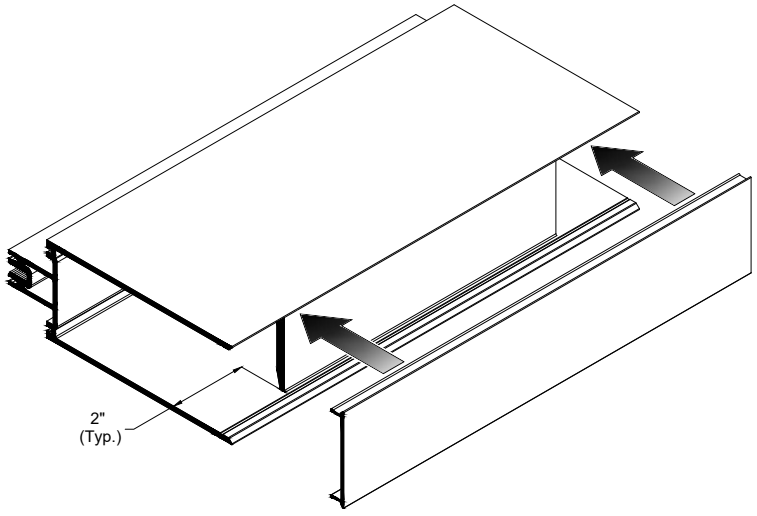


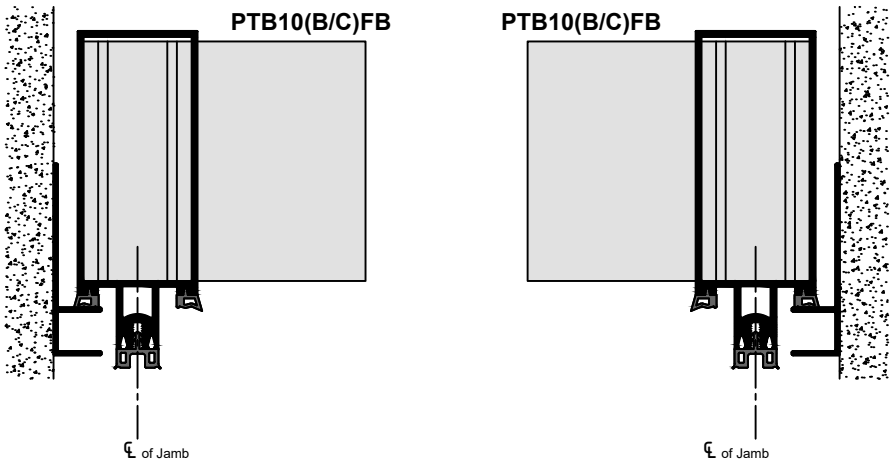
Fig.24.2

FRAME FABRICATION

Step 8: Fabricate F-Clip Perimeter Anchor (OPTIONAL)

A. Cut and fabricate to fit along the vertical as shown in **Fig.25.1**.
Vertical anchor clip runs continuous from head to sill.

NOTE: F-Clip is optional to limit jamb mullion deflection. See approved shop drawings.



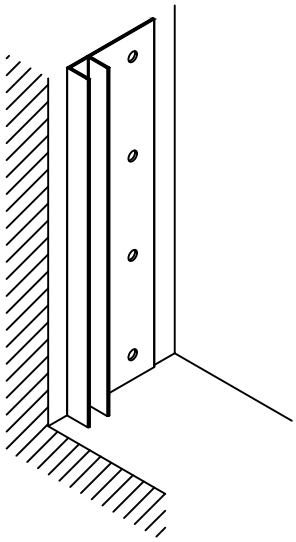


Fig.25.1
Optional F Anchor Extrusion

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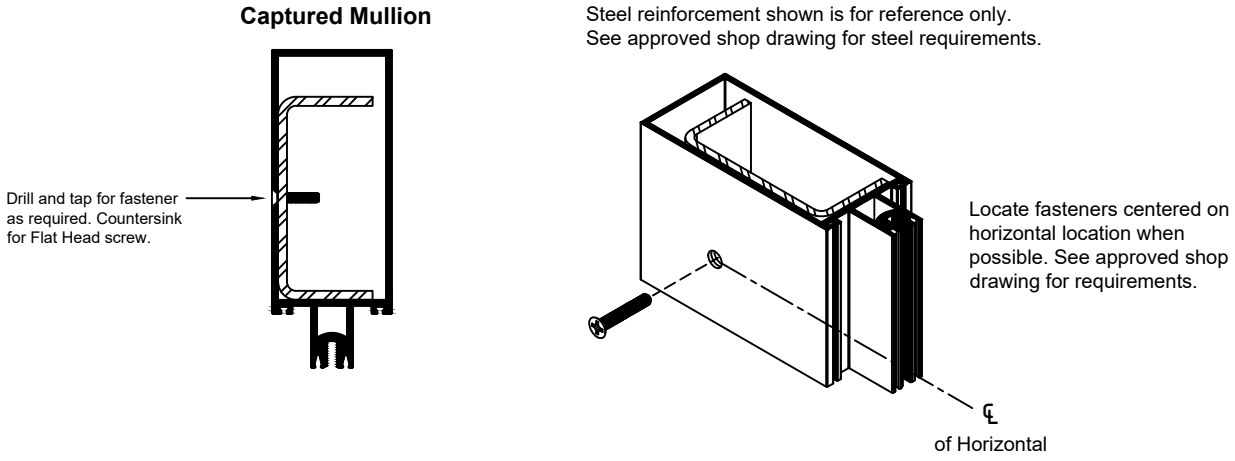
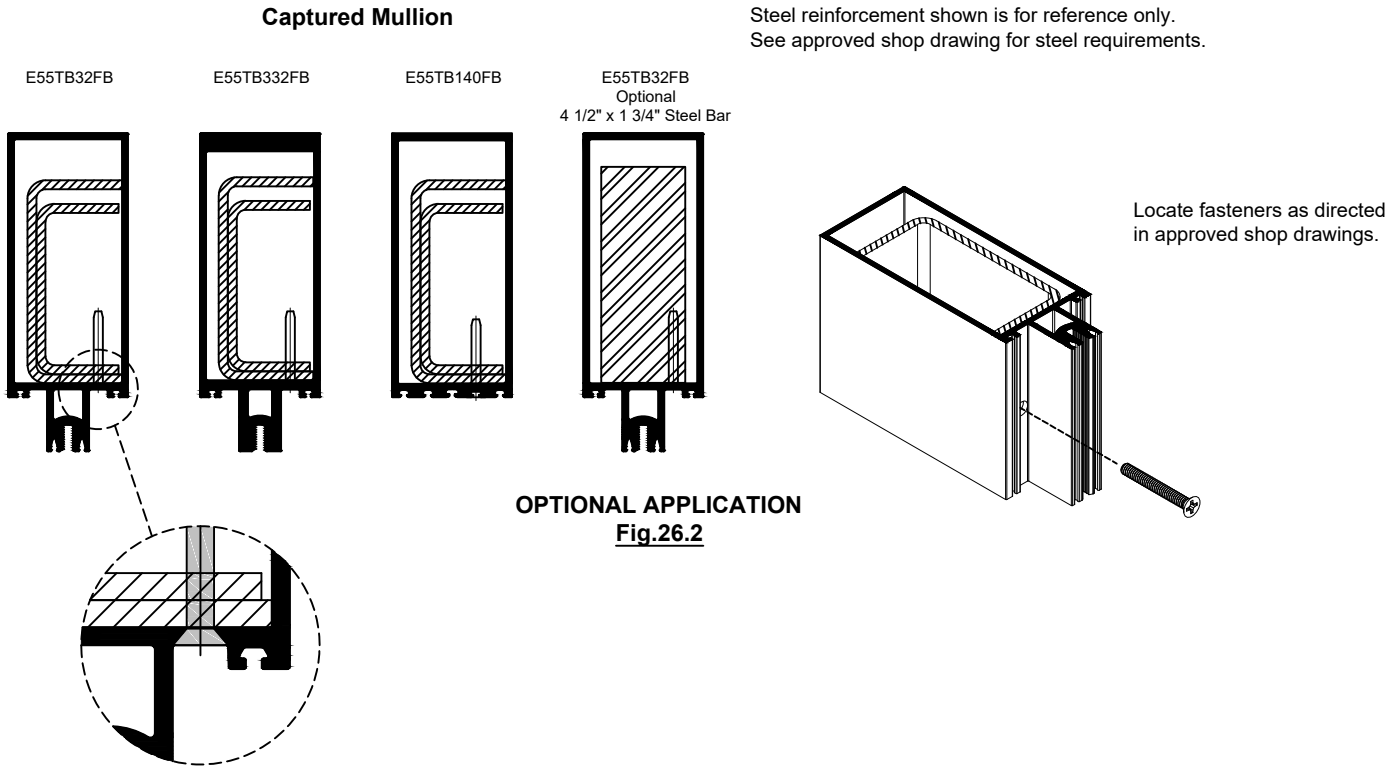
FRAME FABRICATION

Step 9: Install Steel Reinforcement As Required

A. Refer to approved shop drawings to determine where steel reinforcing may be required.
B. Steel should be installed prior to the attachment of shear blocks.
C. Steel should be sized to stop short of the top and bottom of the vertical for clearance.
D. Locate and prep for attachment of the steel located under the horizontal shear blocks if possible. Otherwise, steel can be secured to the vertical mullion through the tongue. Anchor the steel to the vertical using fasteners and spacing per approved shop drawings (not supplied by Tubelite).



TYPICAL APPLICATION
Fig.26.1



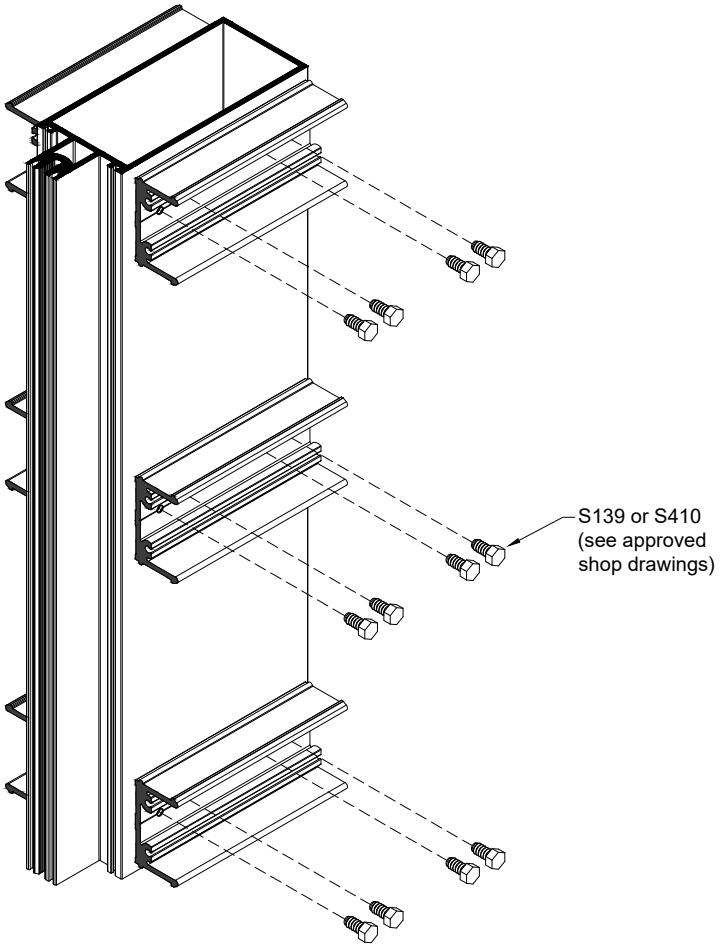
OPTIONAL APPLICATION
Fig.26.2

FRAME FABRICATION

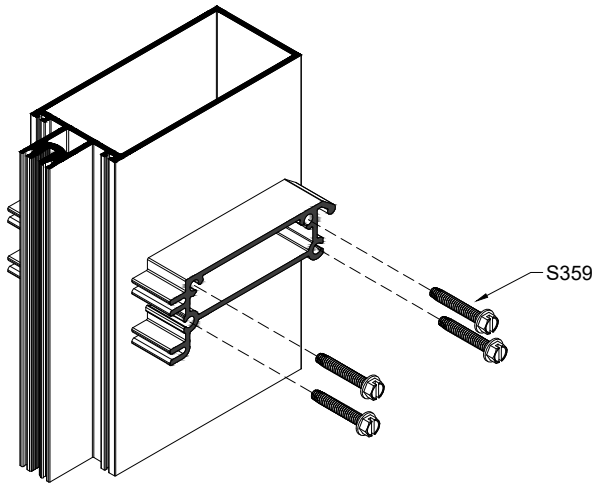
Step 10: Fasten Shear Block to Vertical

A. Fasten the shear blocks for tubular horizontals to the verticals using S139 or S410 fasteners, depending on structural load requirements. Consult approved shop drawing for fastener type and number of fasteners per clip.
B. Fasten the shear clips for roll-over horizontals to the verticals using S359 fasteners.

NOTE: If steel reinforcement is required, it must be installed prior to shear block attachment.



Shear Block Attachment
for Tubular Horizontals
Fig.27.1



Shear Block Attachment
for Roll-Over Horizontals
Fig.27.2

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FRAME FABRICATION

Step 11: Install Head and Sill 'F' and 'T' Anchors

A. Fasten a shear block to the vertical mullion using S139 screws at the head or sill. Refer to Step 10 for shear block installation.
B. F and T anchors can be pre-loaded into the top and bottom of the verticals and temporarily secured with tape for transit to the job site.

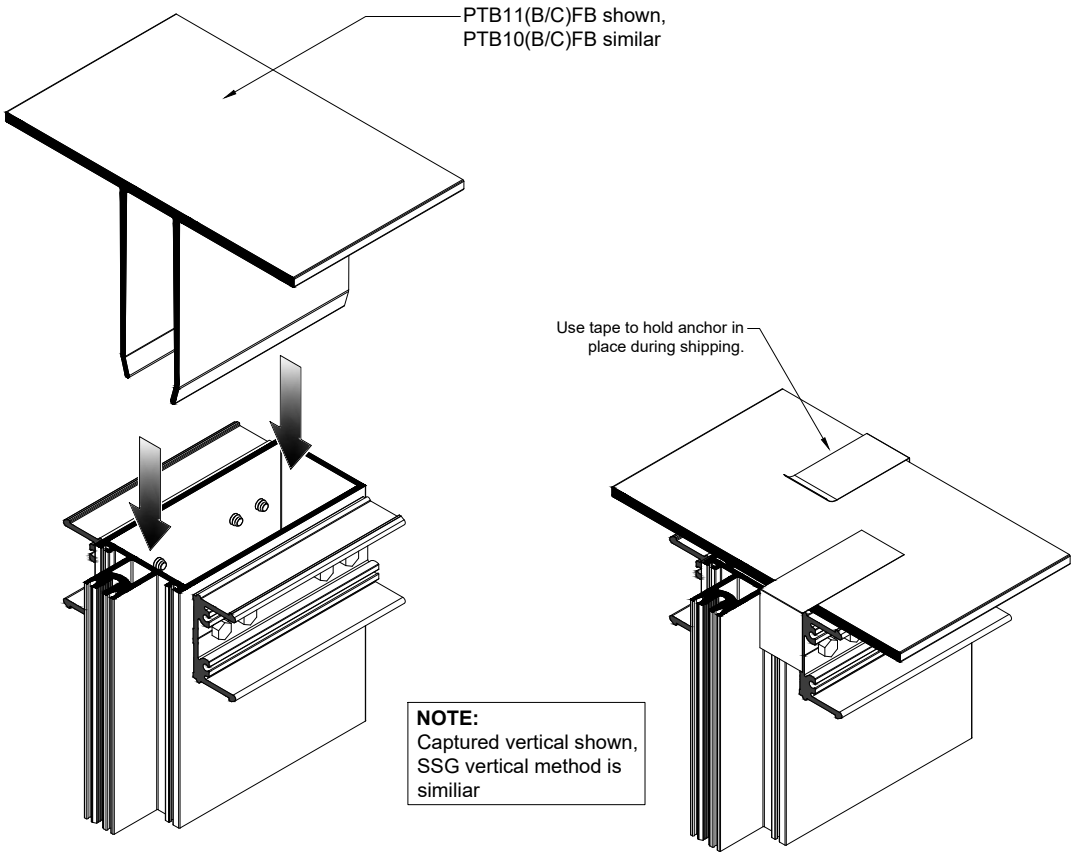


Fig.28.1

FRAME INSTALLATION

Step 12: Installing Vertical Mullions

NOTE: *Check D.L.O. and diagonal dimensions every four bays to ensure correct spacing and frame squareness.*

T or F Anchor Installation

A. Install vertical mullions plumb and level, shimming between the bottom of the vertical and T or F anchor for proper deadload distribution.
B. Anchor Top F anchor to building per approved shop drawings.
NOTE: Do not shim the top of the vertical to allow for thermal and liveload movement.

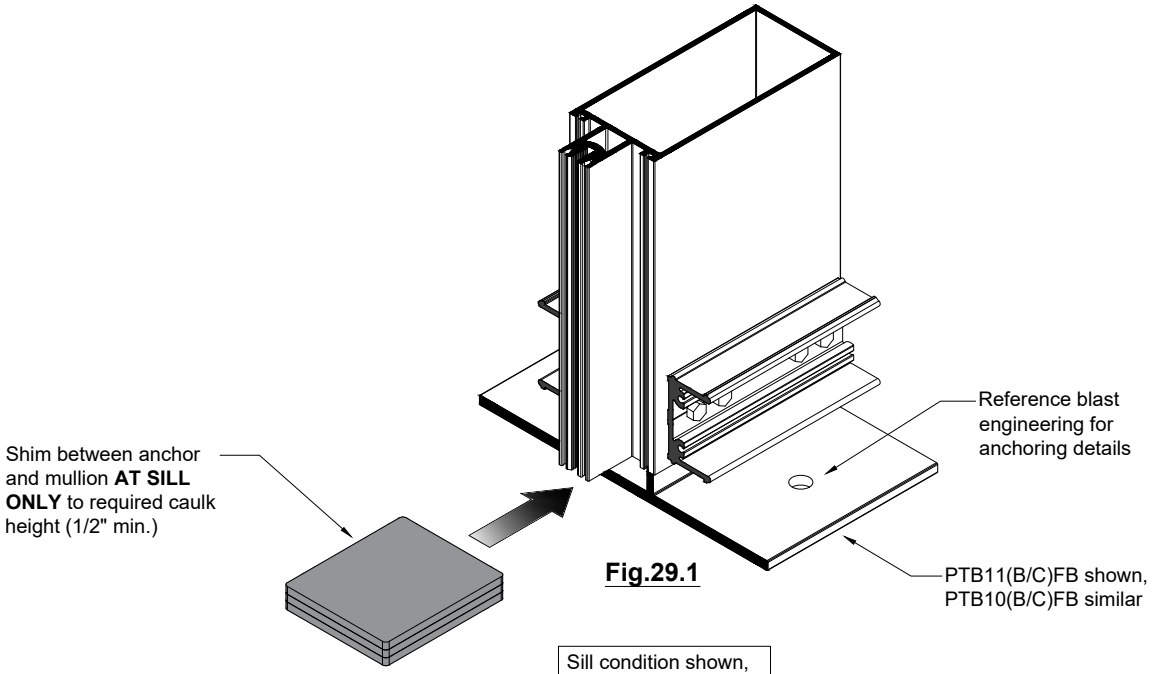


Fig.29.1

Sill condition shown, head condition similar

FRAME FABRICATION

Step 13: Attach Horizontals to Shear Blocks and Anchor Clips

A. Seal shear block prior to installing the horizontal member. See **Fig.30.1**.
B. Seal the ends of the horizontal back member and attach to the shear block using S270 screws. Seal the heads of the screws as shown in **Fig.30.2**.
C. Tool sealant at the horizontal/vertical intersection. See **Fig.30.3**.

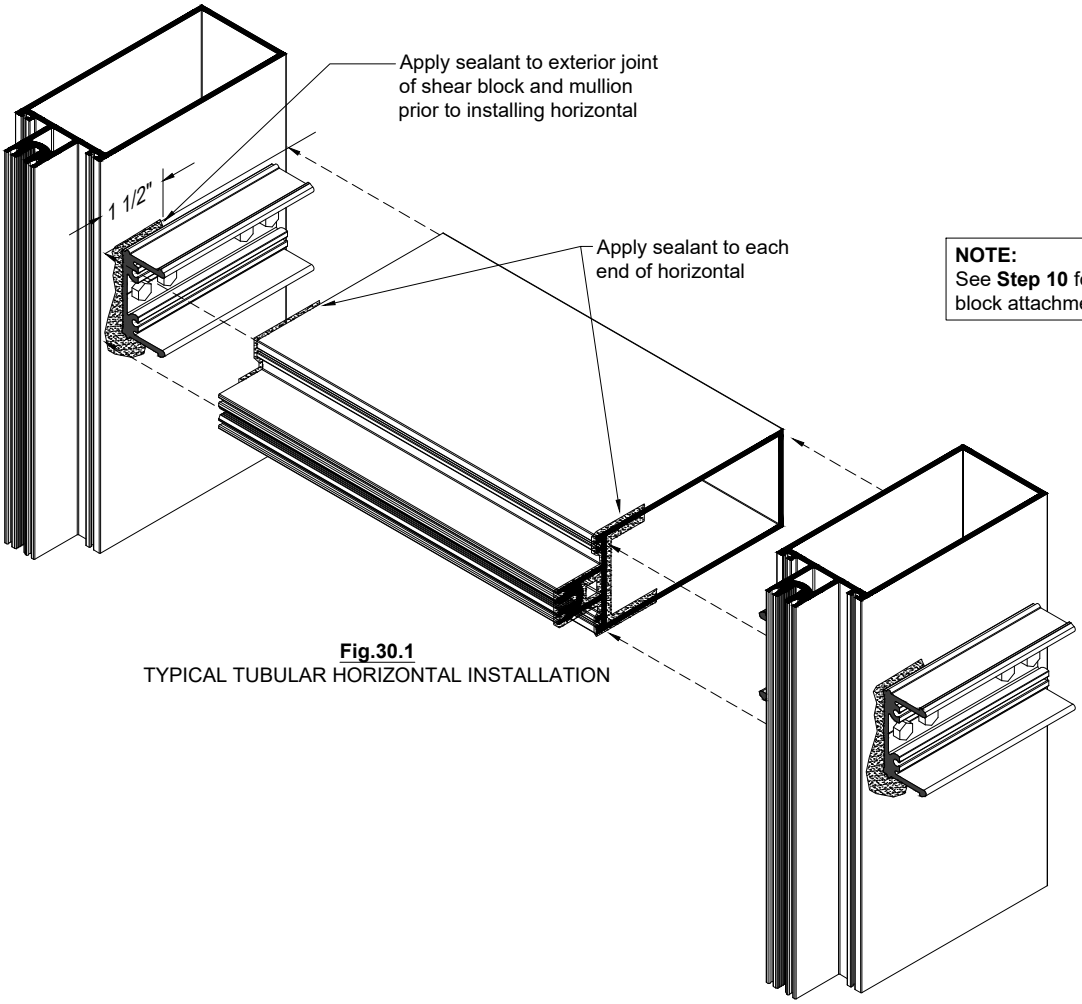


Fig.30.1
TYPICAL TUBULAR HORIZONTAL INSTALLATION

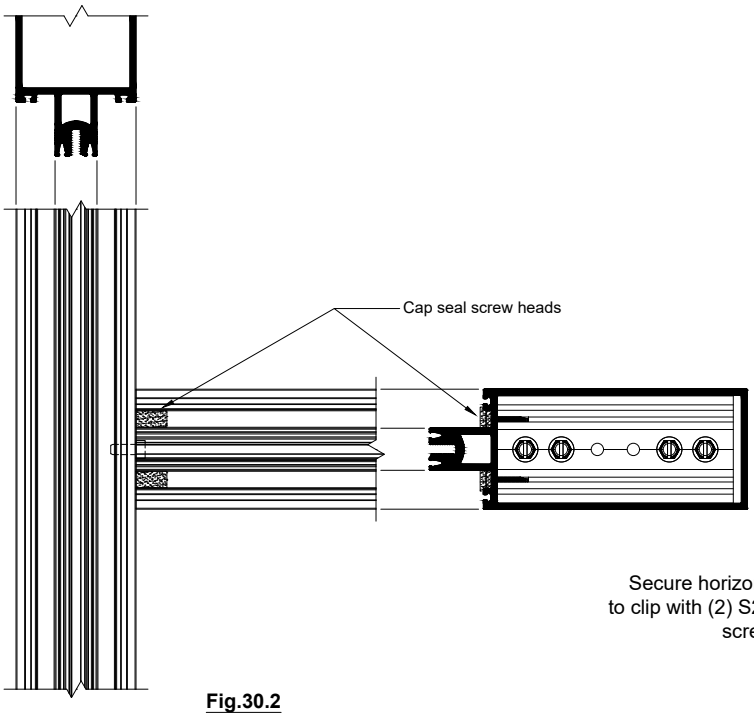


Fig.30.2

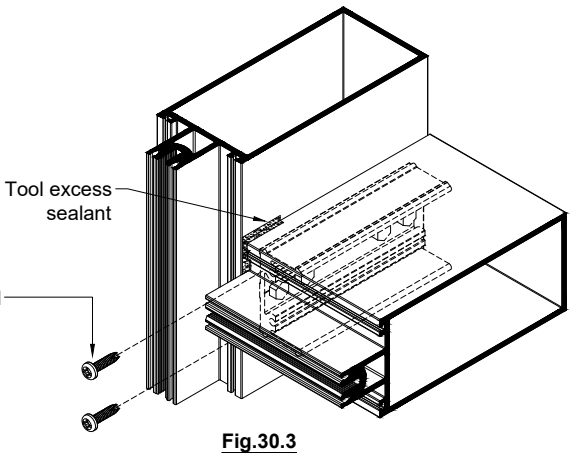


Fig.30.3

FRAME INSTALLATION

Step 13: Attach Horizontals to Shear Blocks and Anchor Clips (Continued)

LAST BAY TUBULAR HORIZONTAL INSTALLATION

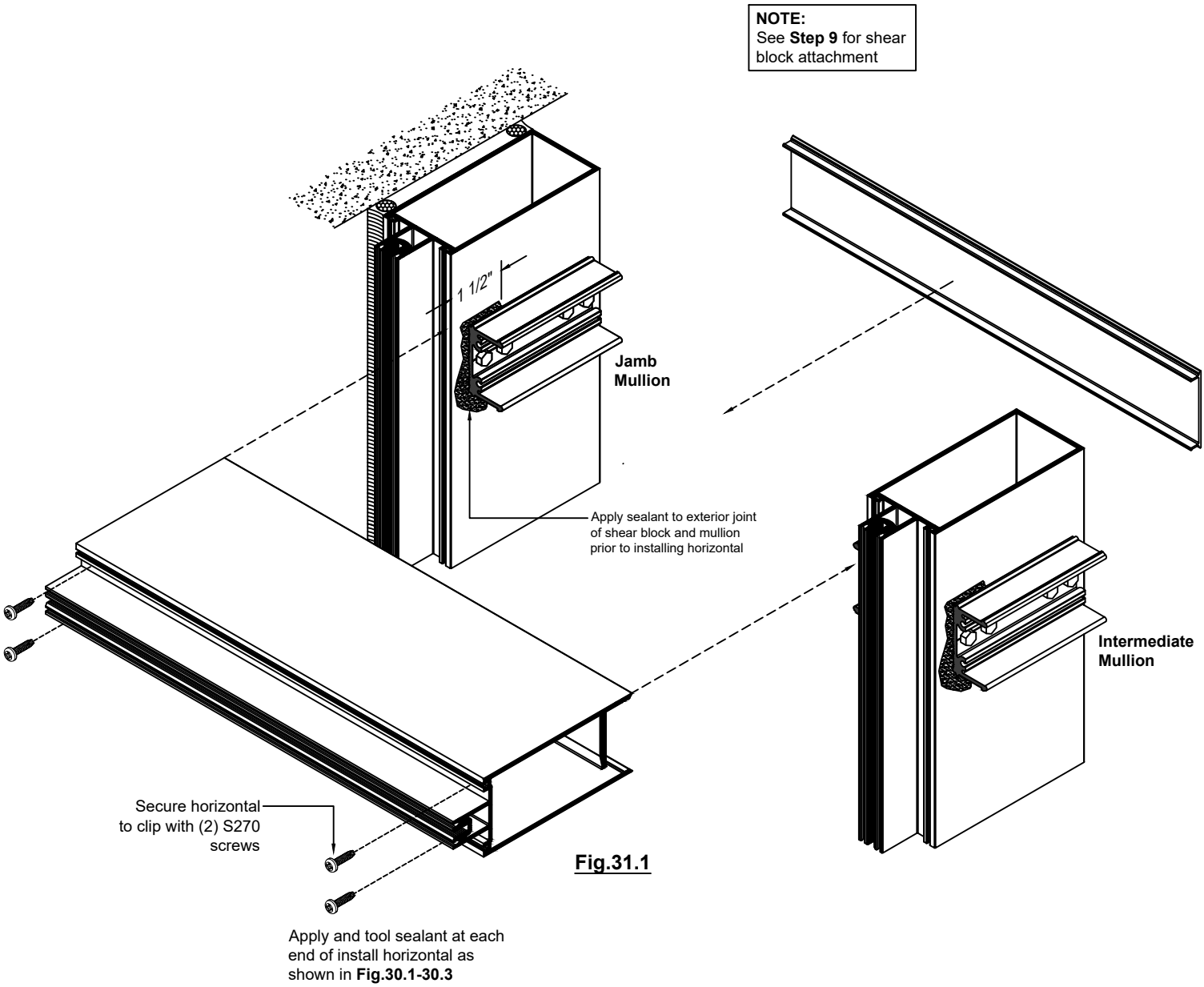


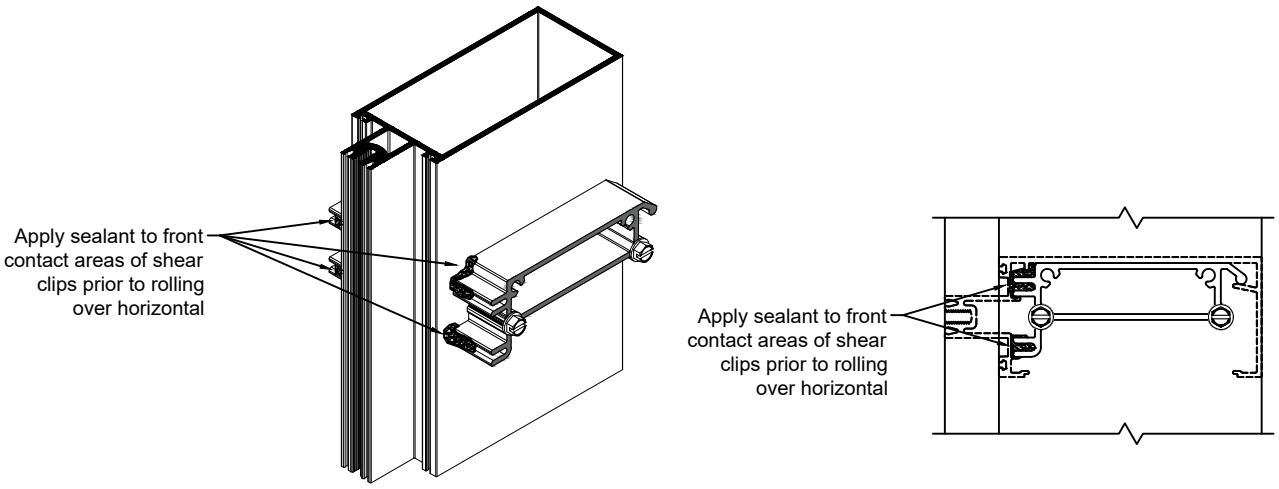
Fig.31.1

FRAME INSTALLATION

Step 13: Attach Horizontals to Shear Blocks and Anchor Clips

D. When roll-over horizontal is used, seal face of clip, horizontal ends, and screw heads. See **Fig.32.1**, **Fig.32.2**, and **Fig.32.3**.

NOTE: See **Step 10** for shear block attachment



Shear Clip for Open Back Horizontals

Fig.32.1

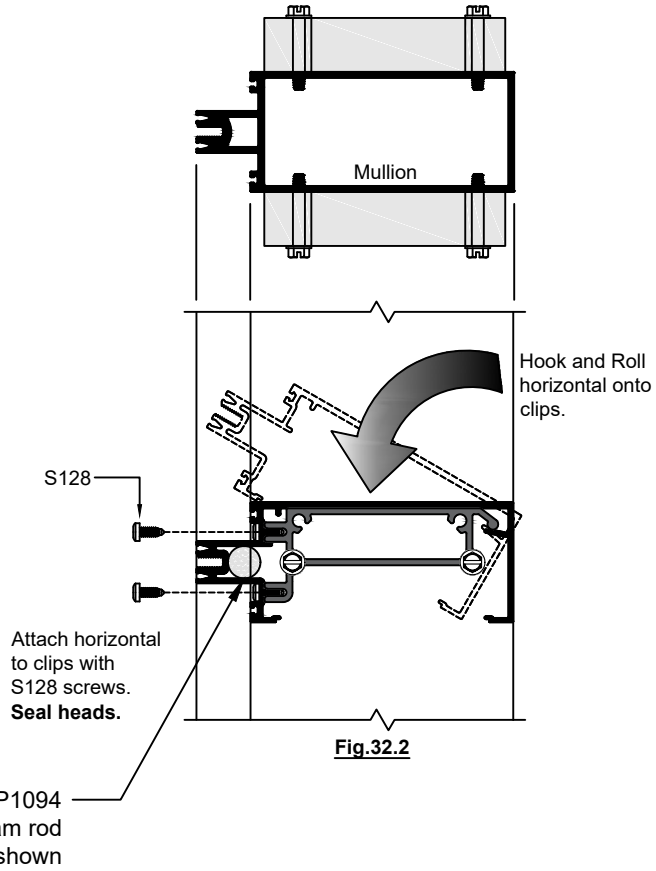
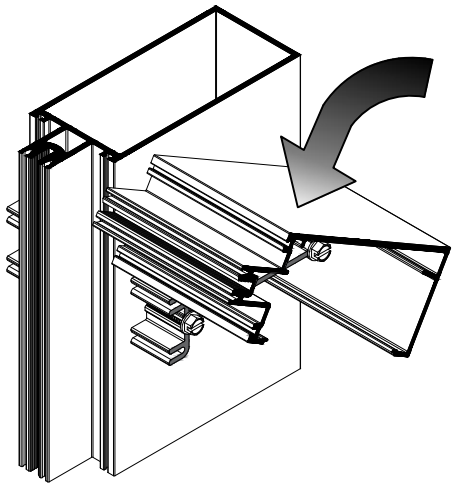


Fig.32.2



Shear Clip for Open Back Horizontals

Fig.32.3

FRAME INSTALLATION

Step 14: Install Water Dams

A. Seal the end of the horizontal member across the vertical member. This sealant should be applied liberally.
B. Push the PTB103 water dam into the void between the horizontal member and the vertical tongue. This is a pressure fit; the water dam should be level with the top of the horizontal tongue.
C. Seal over the top of of the PTB103 onto the horizontal tongue, damming the end of the horizontals. THIS IS A CRITICAL SEAL. See Fig. 33.2.

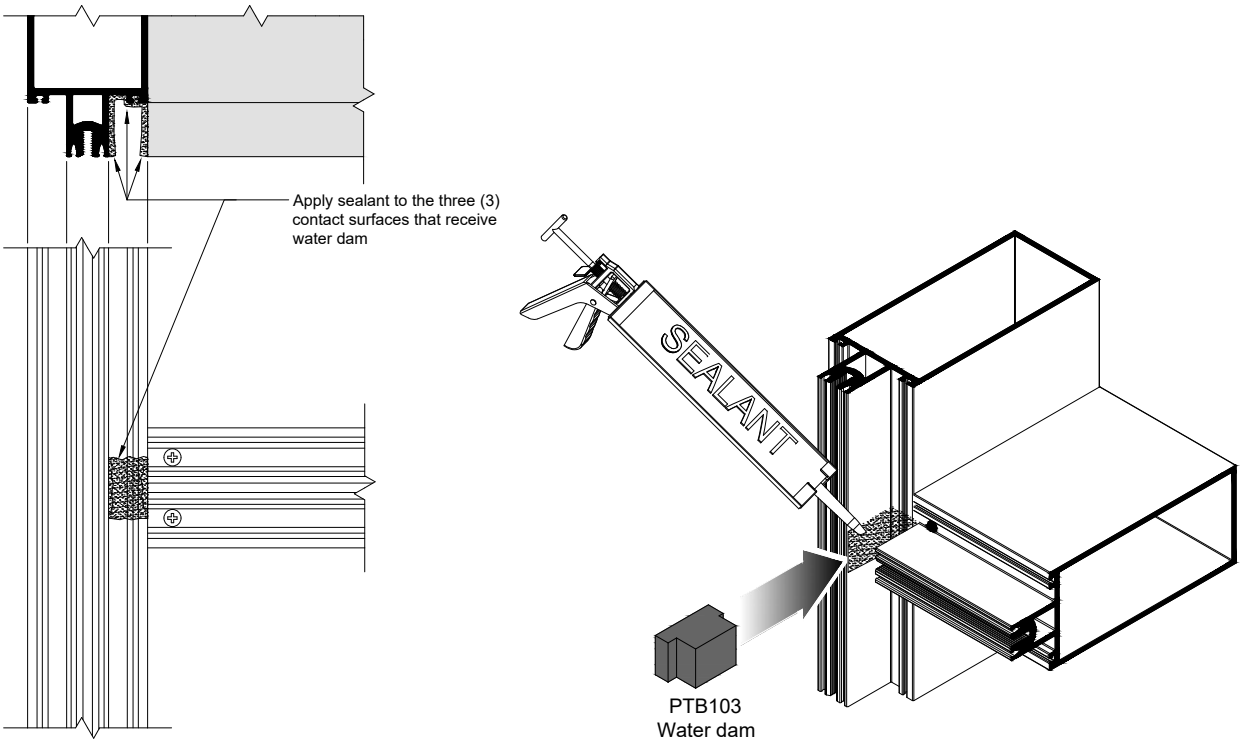


Fig.33.1

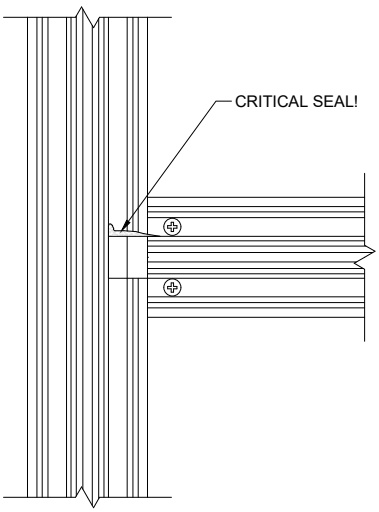


Fig.33.2

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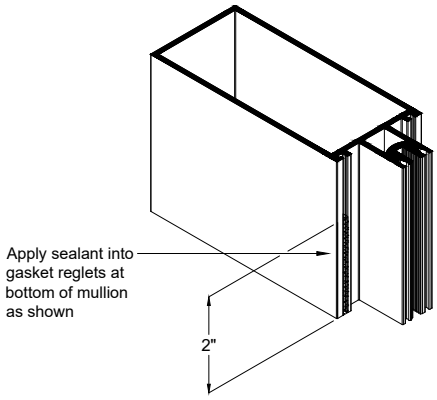
FRAME INSTALLATION

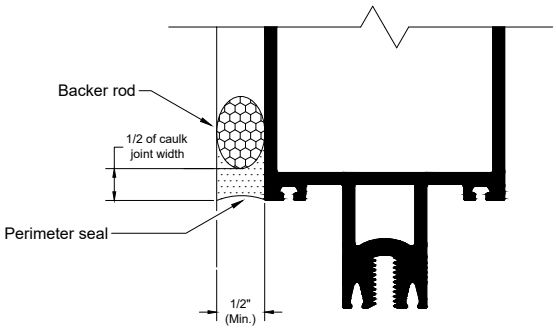
Step 15: Seal Perimeter of Installation

A. Apply sealant into gasket reglet as shown in **Fig.34.1**.
B. Insert backer rod into the gap between the building substrate and curtain wall frame.
C. Apply sealant around the perimeter of the frame and tool the sealant. See **Fig.34.2** and **Fig.34.3**.



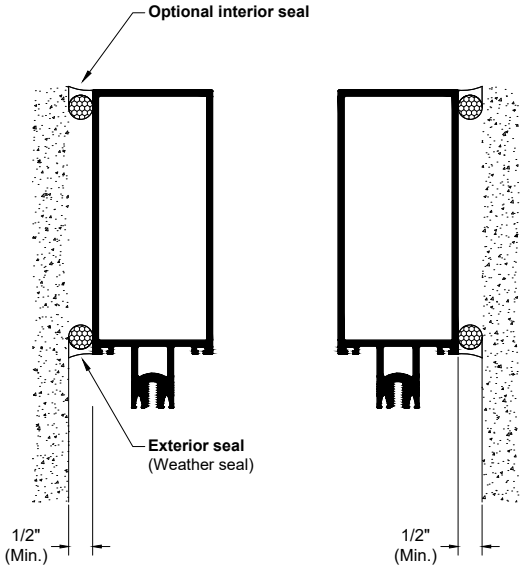
Sill application shown, head application similar

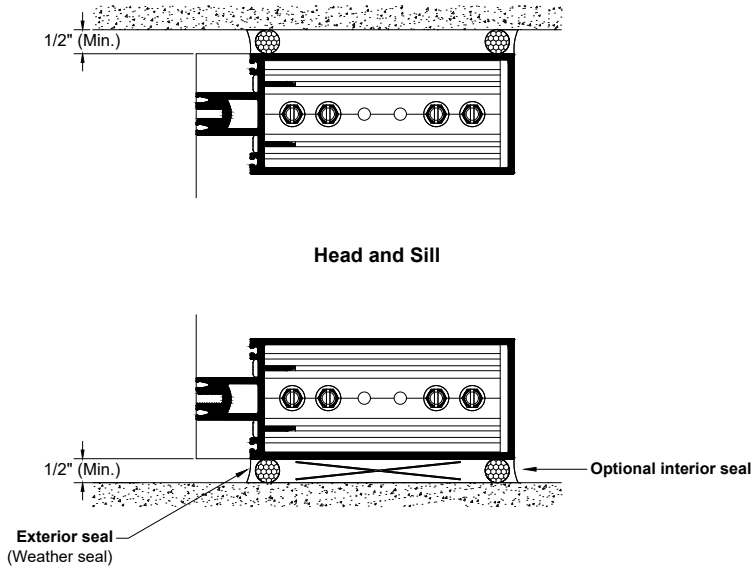
Fig.34.1



Exterior (shown)
Interior (similar)

Fig.34.2





NOTE: Exterior and Interior perimeter seals must run continuous full perimeter of framing.

Fig.34.3

GLAZING

Step 16: Glazing Preparation

A. Remove any debris from the glazing pockets.
B. Trim excess silicone from edges of glazing units to allow for maximum glazing clearance.

Glazing pockets are designed to accept a variety of infill thickness. Refer to perimeter sheet available on our website.

Step 17: Install Gaskets

NOTE: Crowd gaskets toward the center of the member during installation to avoid gaps caused by relaxation of the gasket material.
A. Install P4606 gasket into vertical and horizontal pressure plates. See **Fig.35.1**.

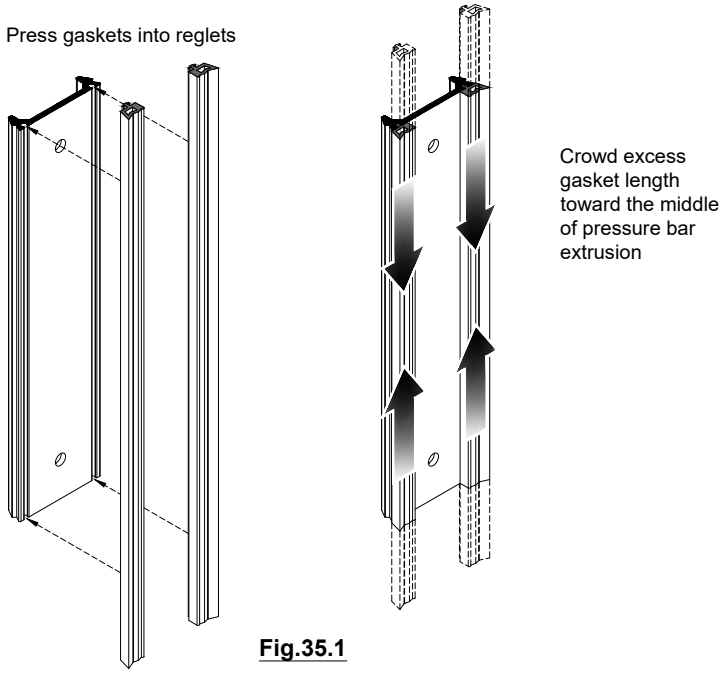


Fig.35.1

See **Step 2 pages 19-20** for gasket cut length

GLAZING

Step 17: Install Gaskets (Continued)

B. Install PTB108 isolator gasket into vertical and horizontal tongues. Run the isolator through the vertical splice joints. See **Fig.36.1**

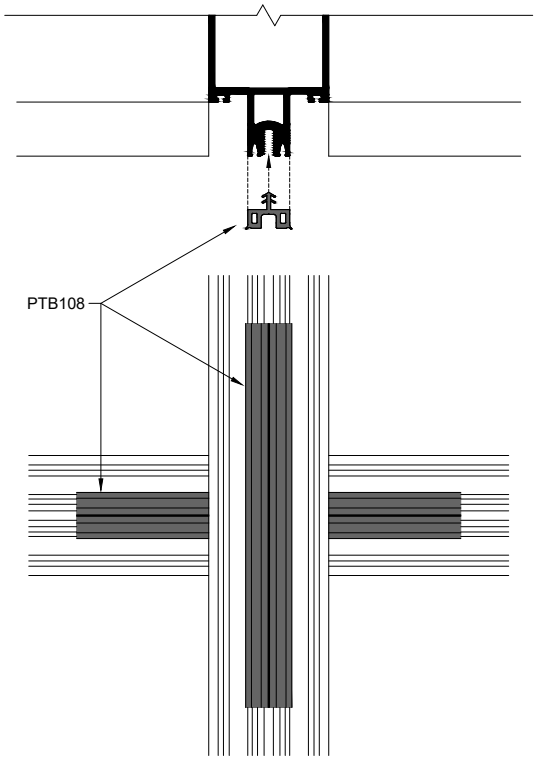


Fig.36.1

Step 18: Install Glass

NOTE: Pre-seal gaskets only in the opening to be glazed to avoid sealant curing and contamination before glass is set in place.

A. Pull interior horizontal gaskets away from vertical gaskets and seal corners where gaskets abut. Release horizontal gasket back to its original position. See **Fig.36.2**.

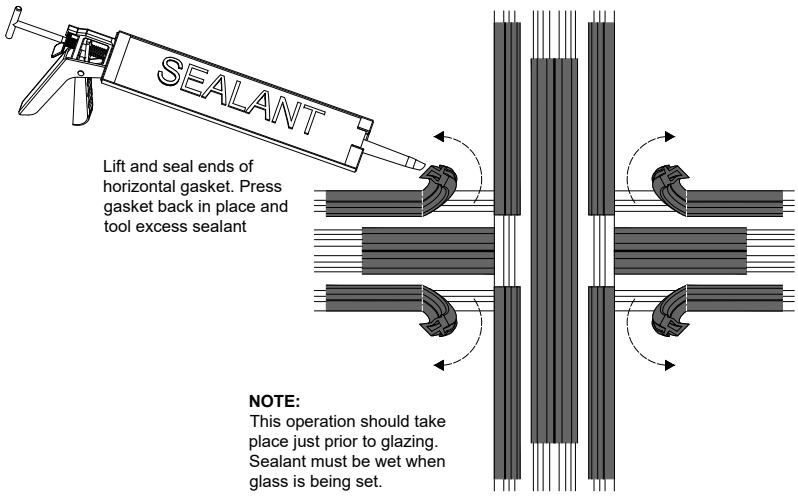


Fig.36.2

GLAZING

Step 18: Installing Glass (Continued)

A. Install two P946 setting blocks for 1" glass at quarter points or as indicated on approved shop drawings.
NOTE: Consult the glass manufacturer for correct length and location for glass size over 40 sq. ft.
B. Install glass onto setting blocks, positioning glass for proper bite into vertical mullions. Make sure the glass is firmly against interior gaskets before installing temporary glazing clips or pressure plates.
C. Make sure sealant is not bridging or blocking the water flow area between the edges of the glass and the framing system.

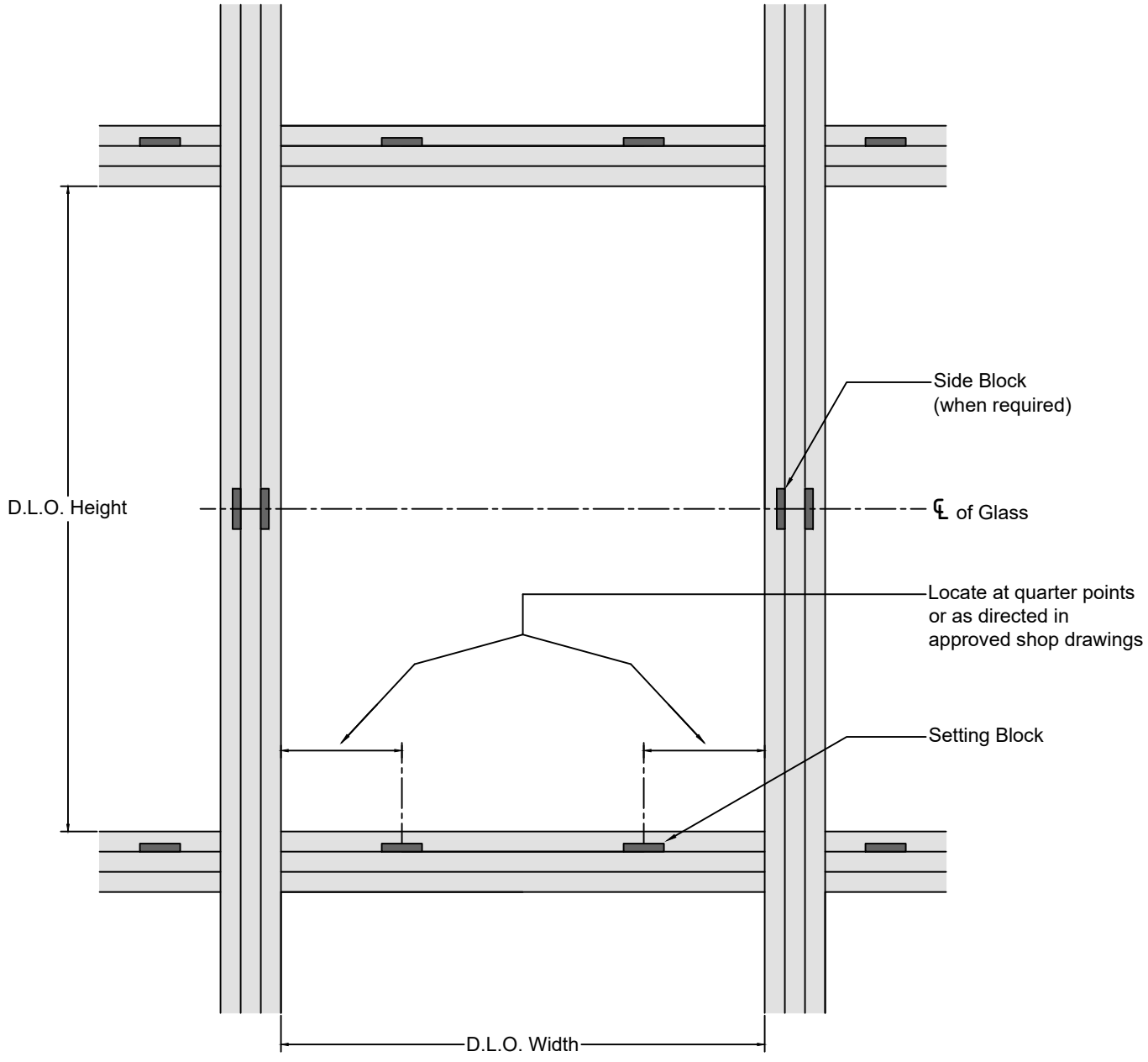


Fig.37.1

GLAZING

Step 18: Installing Glass (Continued)

E. Hold the glass in place using PTB194 temporary glazing clips. Locate clips near each corner of the glass and at mid points.

Temporary glazing retainers are intended for short term use only. Additional retainers or full length pressure plates may be required if high windload pressures are anticipated before the installation is complete.

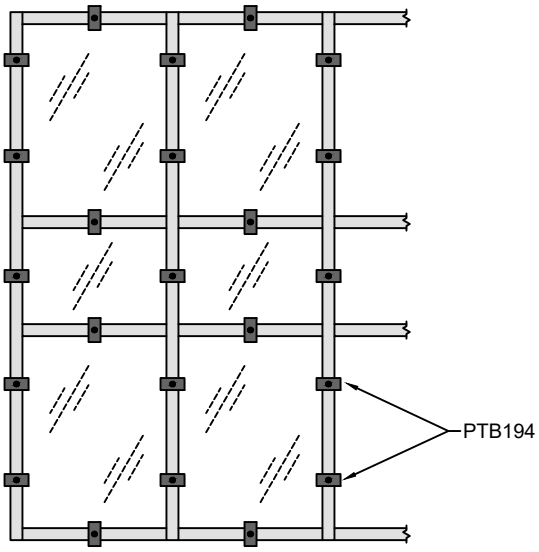


Fig.38.1

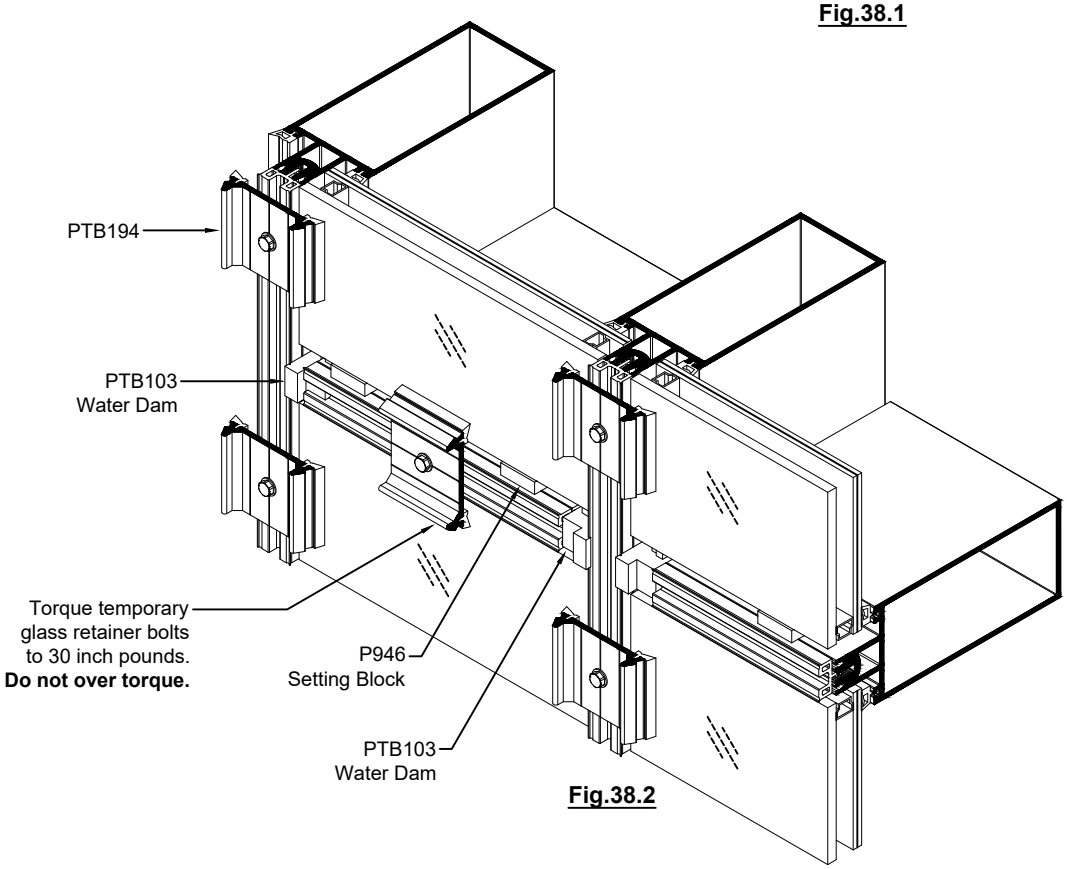


Fig.38.2

GLAZING

Step 19: Install Pressure Plates and Face Covers

A. Remove temporary glazing retainers from verticals as required.
B. Vertical pressure plates must be installed first. Prior to installing, apply sealant to the face of each water dam.
C. Install the vertical pressure plates using S469 screws.
D. Remove temporary glazing retainers from horizontals as required.
E. Install the horizontal pressure plates using S469 screws, ensuring that weep holes are on the bottom side of the pressure plate.
F. Ensure there are anchor holes in the pressure plates 2" max from the ends and 2" max from each horizontal/vertical intersection to maintain proper compression on the glass.
G. Torque all pressure plate screws to 30 - 40 in-lbs. When using a cordless drill with a torque limiter, check torque periodically against a torque wrench.
H. Install the vertical face covers using a wood block to protect the face cover.
I. Seal the horizontal pressure plates to the vertical face covers, tooling the sealant into the joint.
J. Install the horizontal face covers with equal gaps on each end. Make sure the weep holes in the face cover are pointing down.

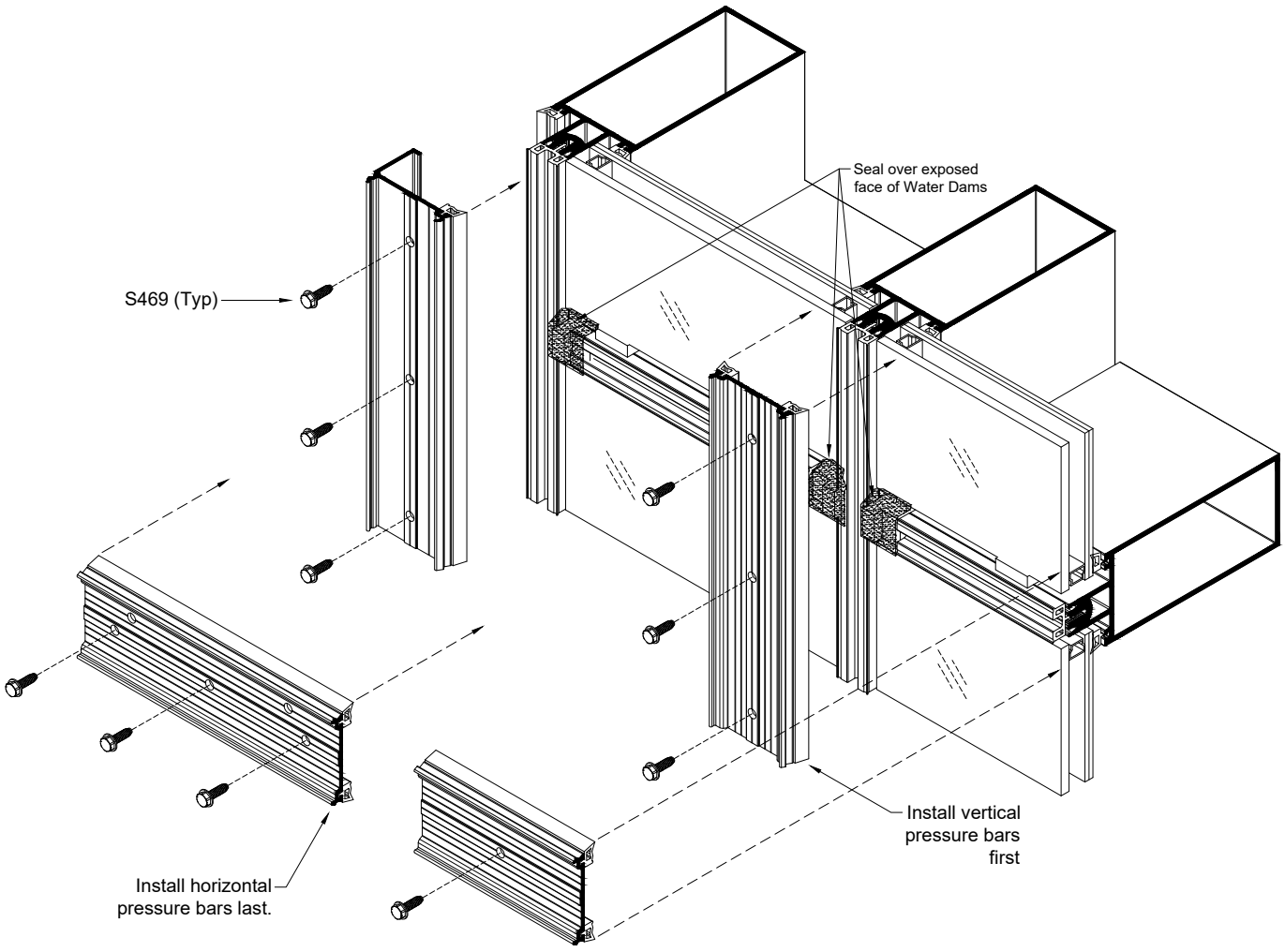


Fig.39.1

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GLAZING

Step 19: Install Pressure Plates and Face Covers (Continued)

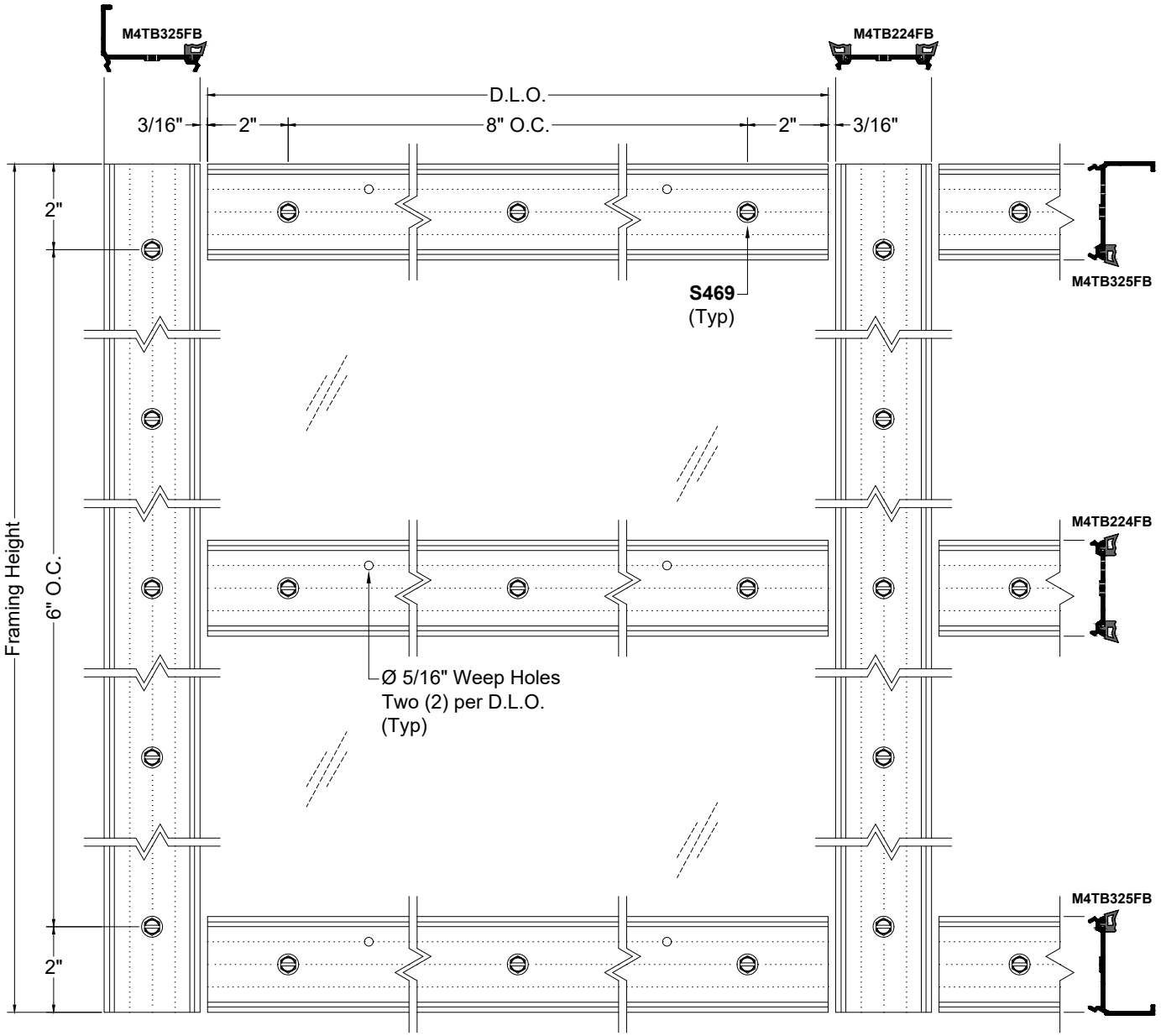
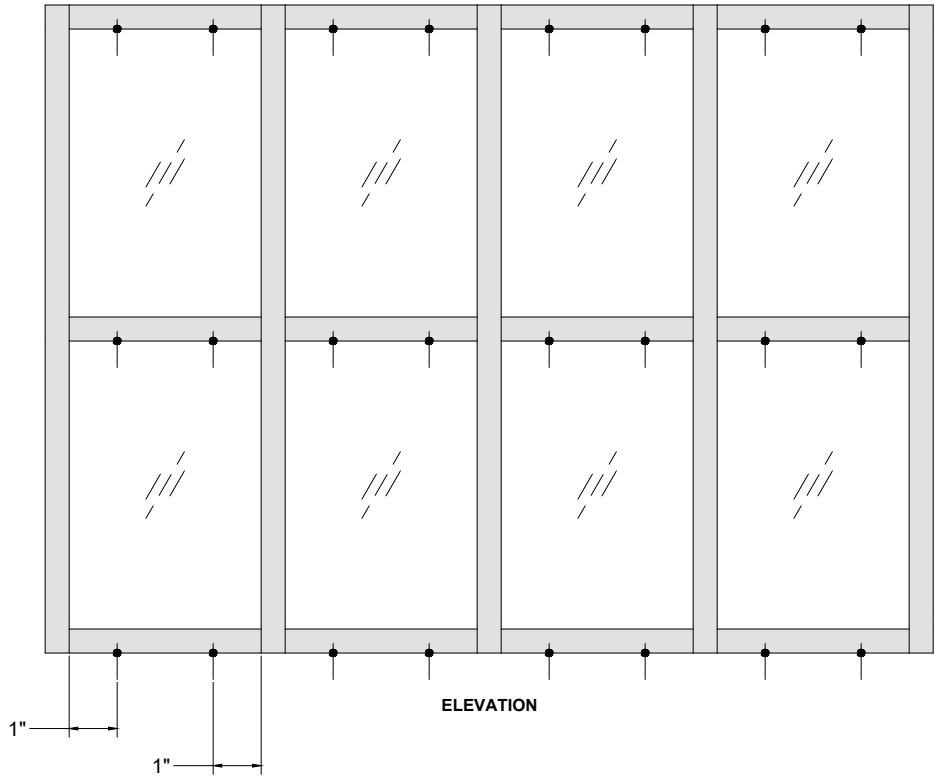


Fig.40.1
PRESSURE PLATE INSTALLATION

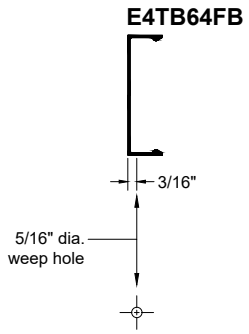
GLAZING

Step 19: Install Pressure Plates and Face Covers (Continued)

H. Attach vertical pressure plate to back member with S469 screw see Fig.42.1
I. Install the vertical face covers using a wood block to protect the face cover. Also see **Fig.41.1**.
J. Attach horizontal pressure plates
K. Seal the horizontal pressure plates to the vertical face covers, tooling the sealant into the joint.See Fig.42.2.
L. Install the horizontal face covers with equal gaps on each end. Make sure the weep holes in the face cover are pointing down.



ELEVATION



TYPICAL WEEP HOLE
(Located at bottom of horizontal Face Caps)

CUSTOM EXTENDED FACE CAPS
(Available upon request)

Fig.41.1

GLAZING

Step 19: Install Pressure Plates and Face Covers (Continued)

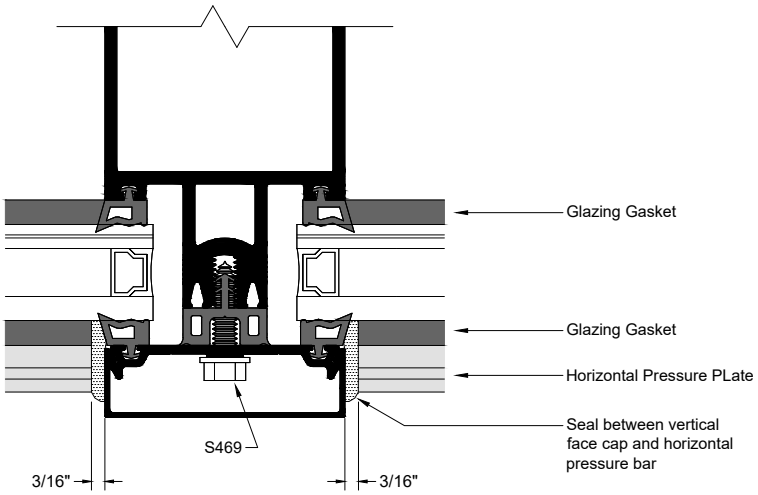


Fig.42.1

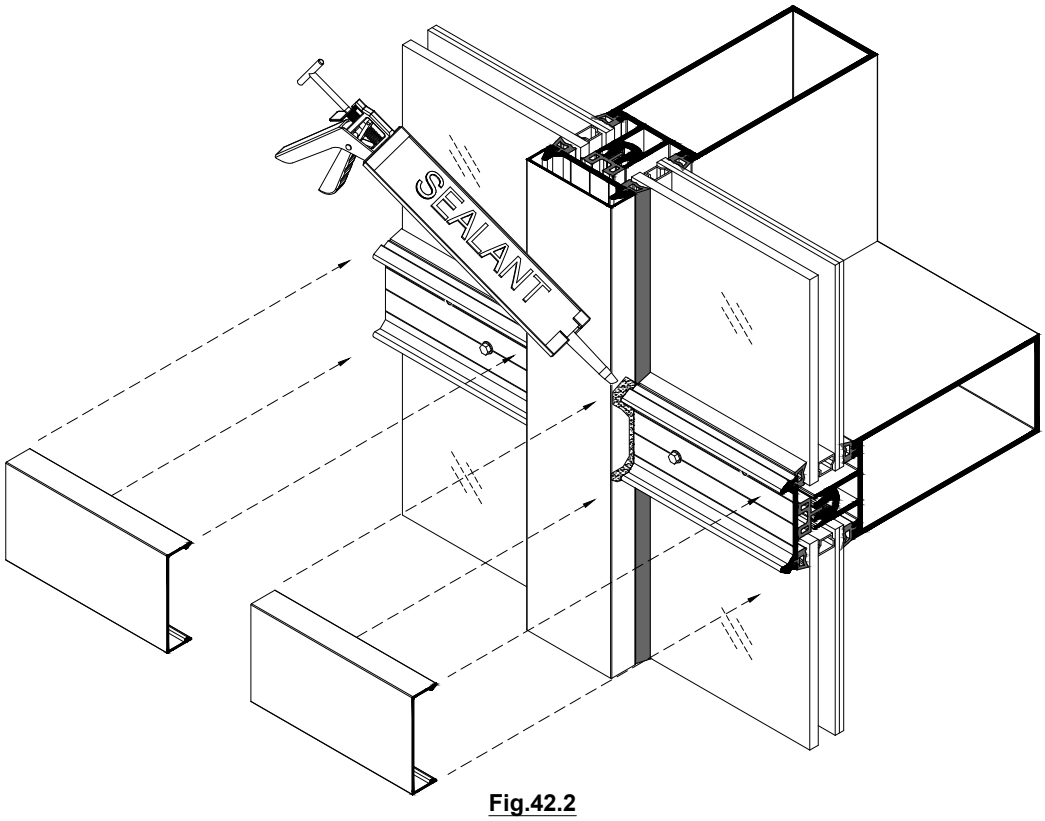


Fig.42.2

GLAZING

Step 19: Install Pressure Plates and Face Covers (Continued)

M. Pressure plate and face cap installation.

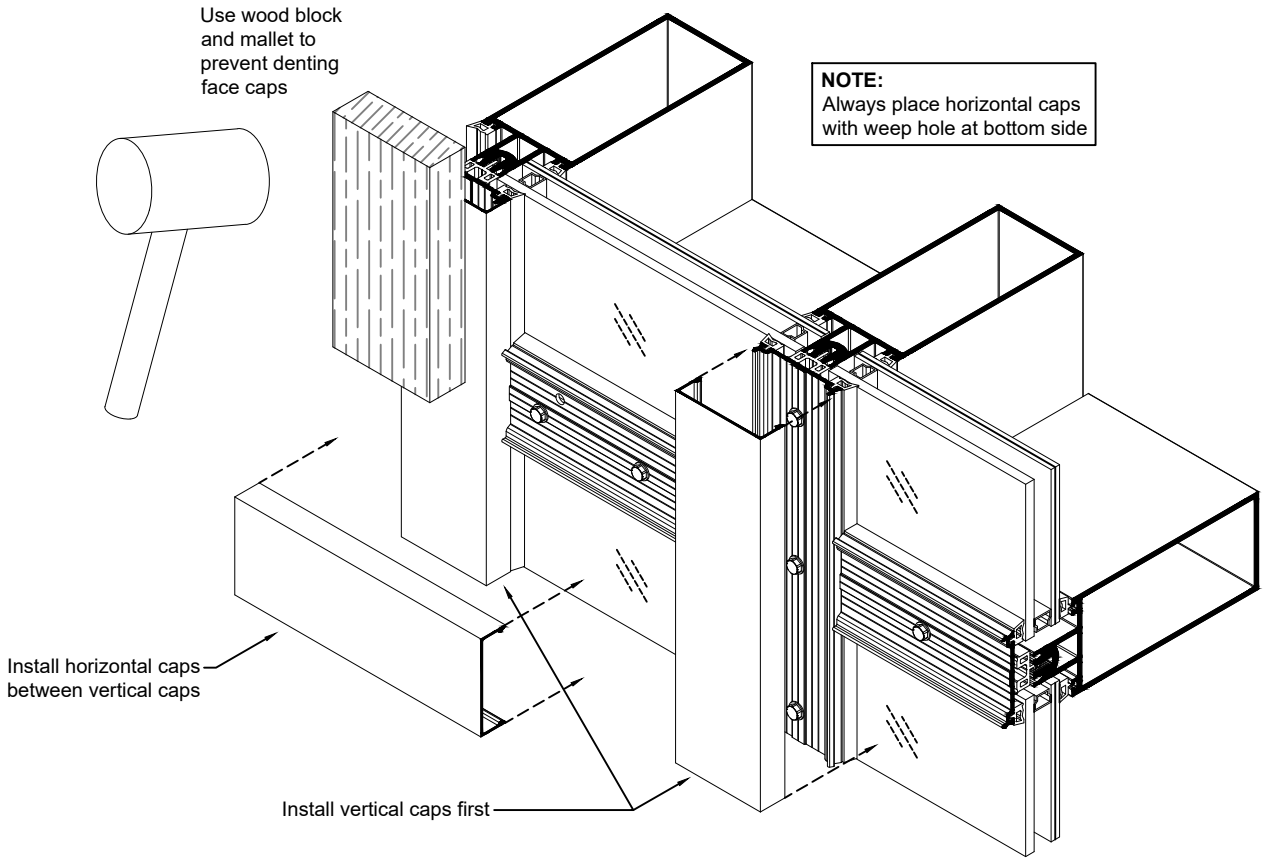


Fig.43.1
FACE CAP INSTALLATION

ENTRANCE FRAMING

ENTRANCE FRAMING

A. All door framing is shipped fabricated from the factory. Curtain wall frames can be installed in the field prior to installing the doors.

B. Curtain wall verticals and door subframes run to floor. Bed verticals in sealant and anchor to building per approved shop drawings. See **Fig.44.1** and **Fig.44.2** for possible anchoring methods.
Always refer to approved shop drawings for specific requirements.

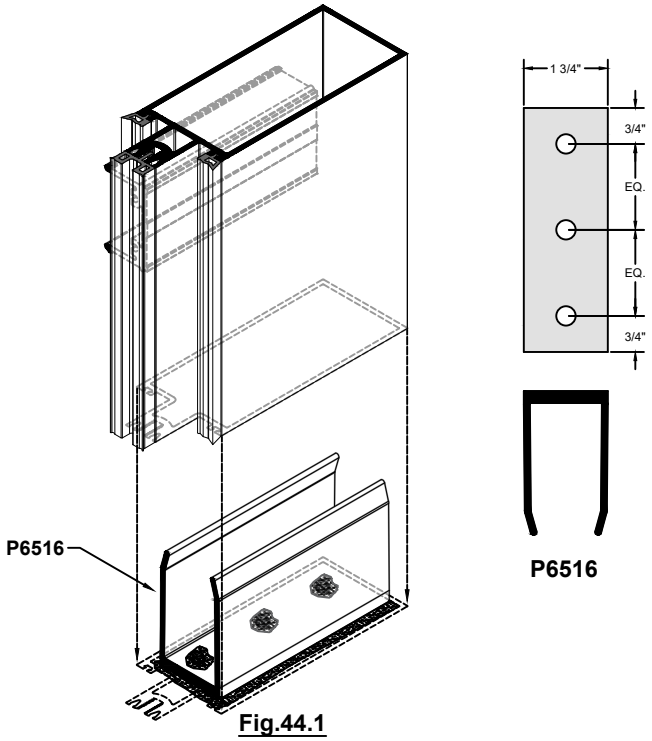


Fig.44.1

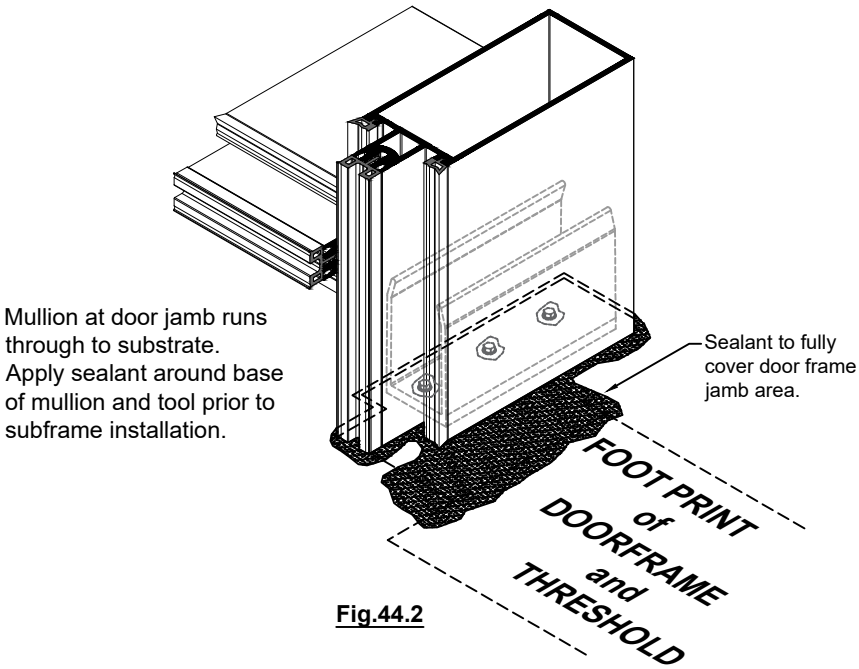


Fig.44.2

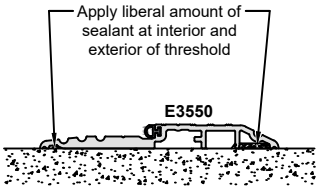


Fig.44.3

ENTRANCE FRAMING

ENTRANCE FRAMING (Continued)

C. SUBFRAME INSTALLATION

- Prep the curtain wall frame with pocket closures or as detailed on approved shop drawings.
- Prior to installing the subframe, lay down a bed of sealant where the threshold will be installed. See **Fig.45.2** and **Fig.45.3**.
- Install subframe onto curtain wall mullion, shimming equally from side to side. Attach subframe per approved shop drawings. Seal joint between subframe and curtain wall.
- Seal the top of the jamb subframe as shown in **Fig.45.3**.
- Attach threshold to building per approved shop drawings.
- Install door per Tubelite's Entrances and Frames Installation Manual.

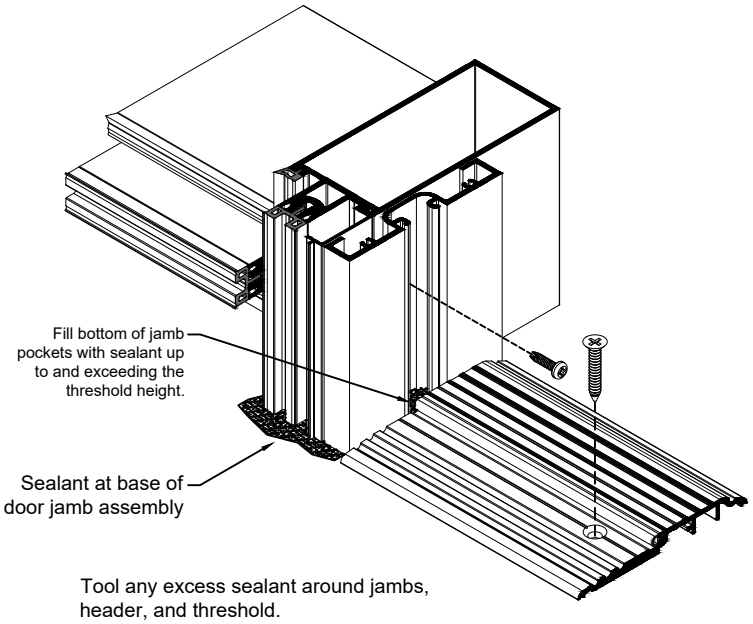


Fig.45.1

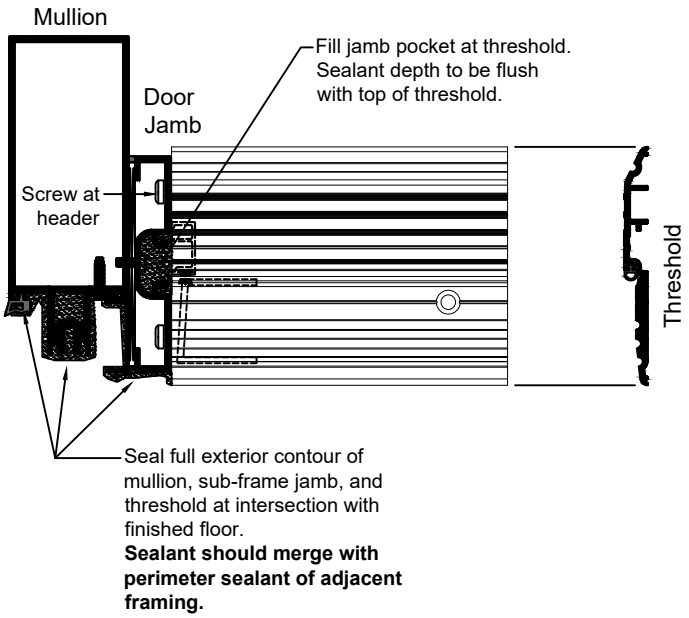


Fig.45.2

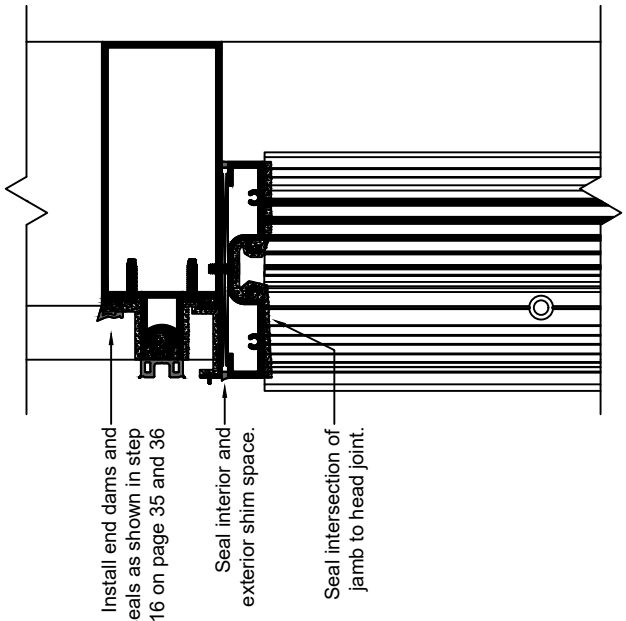


Fig.45.3

REGLAZING

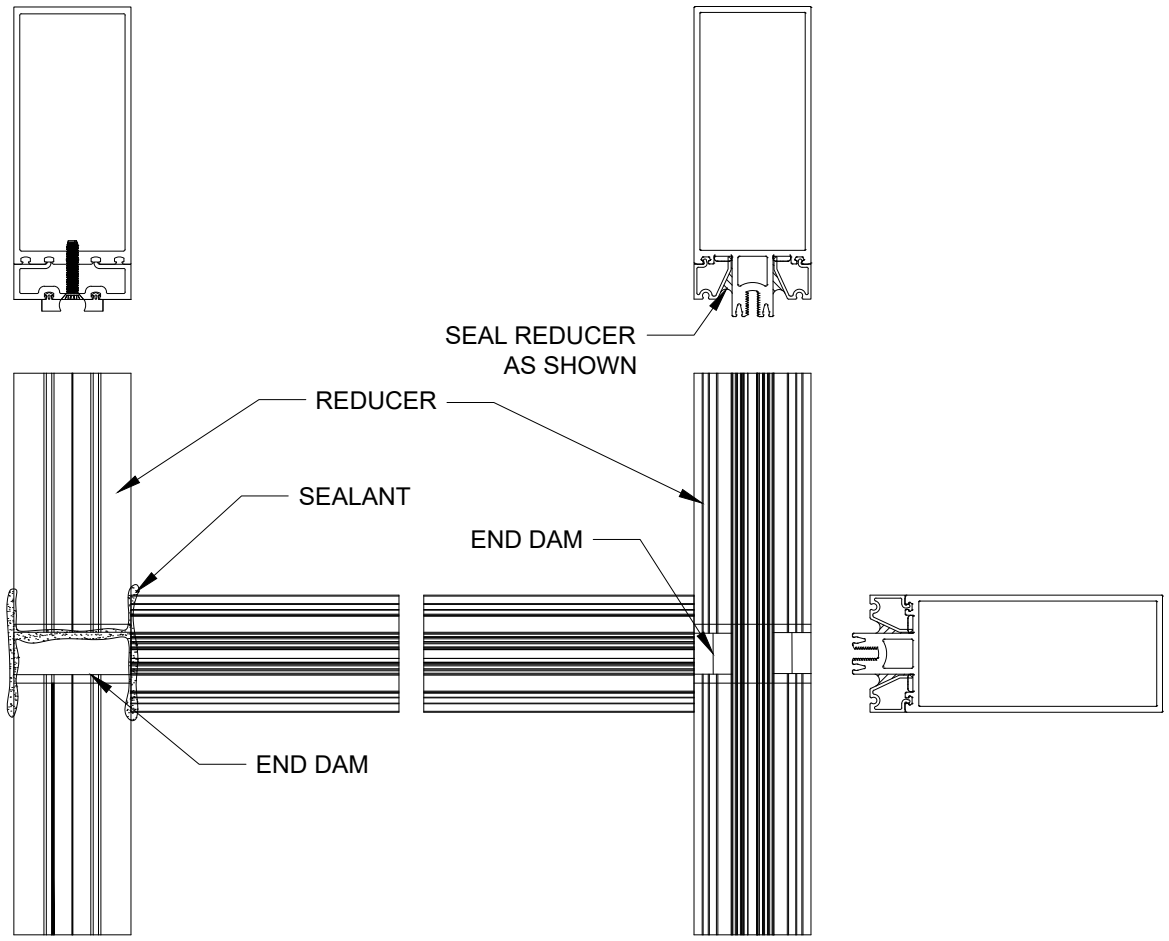
REGLAZING

A. Reglazing is done from the exterior.
B. Carefully remove face covers surrounding the lite to be removed.
C. Remove vertical and horizontal pressure plates adjacent to affected lite.
D. Temp surrounding glass in place with PTB194 temporary clips per Step 18, page 39.
E. Remove lite of glass and gaskets from opening. Clean debris and sealant from the glass pocket and glazing reglets.
F. Install new glass in opening per Steps 16 through 18, pages 36 through 44.

TRANSITION GLAZING

TRANSITION GLAZING

A. Install vertical adaptors first, overlapping an equal amount into each glazing pocket. When adaptors are located at vertical mullion splices, discontinue adaptor at the splice. insert a backer rod into the gap and seal thoroughly.
B. Install horizontal adaptors with equal gaps on each end. Notching around shear block screws may be required.
C. Seal all joints between the vertical and horizontal adaptors.
D. Using Dow 995 seal adaptors into place.



CORNERS

REGLAZING

A. Attach E4TB52 captured mullion adaptor to the back member using S211, spaced 18" on center.
B. Install horizontals to corner mullion.
C. install water dams as noted in Step 15.
D. Attach glazing gaskets and isolator gaskets and seal as noted in steps 19 and 20.
E. Install glass, pressure plates, and face covers per steps 18 and 21.