Fixed and Operable Aluminum Window with Nail Fin and 'T' Mullion Installation Guide

M600/M700

-Scan here for a digital version-

Part # IG-102 - V.1.4 10/15/2026

Pages 4 to 14 -- Weather Resistant Barrier (WRB) Application
Pages 15 to 25 -- Liquid Barrier Application (LBA) Application

If this set of instructions does not match your installation method or the wall conditions of the job site, please check our website listed below for other options, or call Quaker Customer Service for additional information.

Quaker Window Products
504 Highway 63 S
Freeburg, MO 65035
Phone: 800-347-0438
Fax: 573-469-4151
www.quakerwindows.com

Tools Required by Installer

Safety Glasses 

Drill/Driver 

Level 

Caulk Gun 

Utility Knife 

Metal Cutting Saw 

Tape Measure 

Staple Gun 

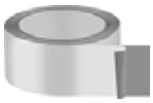
Rubber Mallet 

J-Roller 

Materials Required by Installer

Foam Backer Rod 

Plastic Shims 

Self-Adhering Flashing Tape 

Perimeter Fasteners 

Sealant 

Denatured Rubbing Alcohol 

-Carefully read these instructions before starting any installation-

Failure to install and maintain QUAKER® products according to these instructions may void any product warranty. However, these are generic instructions that cover common situations and applications, aspects of which may not be appropriate for all installations due to building design, site conditions, construction materials, or installation methods used. Refer to shop drawings, if applicable, for additional notes and details. Please consult Quaker for specific applications not covered in these installation instructions, or visit our website at www.quakerwindows.com, or call 800-347-0438 for additional information.

Tools

- Follow manufacturer's instructions and safely operate tools, ladders, or scaffolding. Always wear safety glasses. Failure to do so could result in injury, product, or property damage.

Handling

- Do not store QUAKER products outside or in an unprotected, high moisture, or high heat environment prior to installation. Doing so could result in product damage.
- Do not carry, transport, or store QUAKER products in a flat (horizontal) position. Doing so could result in product damage or injury.
- Window and door units should be kept or stored in an upright (vertical) position, with support across the sill to avoid bowing. Do not lay any units in a flat position!

Glass

- If glass gets broken, please exercise caution, as glass fragments can cause lacerations or other injuries. In many areas, local building codes require safety glass to be used in certain applications. All QUAKER products are available with safety glass if they are ordered that way.

Fastening

- Metal fasteners and components could corrode when used in contact with preservative-treated lumber. Use approved and appropriate fasteners and components to fasten QUAKER products in this application. Failure to do so could result in a product performance failure, injury, or property damage.
- Quaker does not provide anchorage or fastener calculations.
- Quaker is not responsible for determining structural adequacy of the anchorage and fasteners used to install QUAKER products, or the openings into which they are installed.

Installation

- Report any damage to dealer immediately. Do not install product if damaged. Quaker is not responsible for addressing products that are damaged after delivery, or product that is installed in a damaged condition.
- Always support window or door products in an opening until fully fastened. Failure to do so could result in the product falling out of an opening and causing injury, product, or property damage.
- Nailing flanges and drip caps (integral or applied) do not take the place of window flashing. All QUAKER products must be properly flashed and sealed with material compatible sealant for protection against water and air infiltration around the entire exterior perimeter. Failure to do so could result in a product installation failure and property damage.
- Windows and doors must be properly shimmed. To properly shim a QUAKER product, follow relevant installation guidelines, and never set a window directly on a sill plate. Failure to shim properly is an installation failure that could result in product performance failure or property damage.
- Construction directly above an opening must be engineered and designed not to transfer loads directly to any windows or doors. If live or dead loads are transferred to a QUAKER product, this may affect functionality and result in glass failure or otherwise damage frame joinery, perimeter seals, or other aspects of the product. Proper construction of the rough opening must take place prior to the installation of the QUAKER product.
- Please confirm that any necessary vertical deflection of the head condition is consistent with the selected QUAKER product. Most QUAKER products are not designed to allow any deflection at the head condition. Shop drawings may indicate the maximum allowable vertical deflection at the head condition of a QUAKER product. If vertical deflection is a concern but shop drawings are not provided, please contact Quaker for assistance.
- Windows and doors have small parts that, if swallowed, could pose a choking hazard to young children. Please dispose of unused, loose, or easily removed small parts. Failure to do so could result in injury or death.
- Do not drill through or into the sill or frame of any QUAKER products, whether to install alarm wires or for any other reason.
- During installation and positioning of any window or door products with an aluminum frame, make sure to align the thermal break of the product, with the insulation plane or air barrier of the building itself, in order to maintain continuity and integrity of the thermal envelope, and prevent thermal bridging that leads to excessive thermal transfer and/or condensation. In other words, the thermal break of the product must be recessed from the exterior plane of the wall opening, remain fully embedded within the wall opening, and not be exposed directly to exterior elements.

Sealing

- Follow supplier instructions for proper application of minimally expanding foam, sealant, water resistant barrier or liquid barrier, and flashing products and systems to ensure safety, proper material application, compatibility, and to understand the need for periodic maintenance for continued weather resistance of their products. Failure to do so could result in product performance failure or property damage.
- Minimally expanding foam insulation must be compliant with AAMA 812.
- If silicone is selected as an appropriate sealant, Quaker recommends using 100% neutral cure silicone sealant, that is ASTM C920 compliant. Always clean and prepare the surfaces where the sealant will be applied per the manufacturer's recommendation. Once applied, properly tool the sealant in place. Failure to do so could result in product performance failure or property damage.
- Flashing tape must meet ASTM-D779 performance requirements.
- Maintain and properly seal a minimum of 1/4” gap (or whatever is specified within these installation instructions or shop drawings) around the perimeter of the window or door frame and the exterior finish materials. Failure to do so could result in product installation failure or property damage.

Joining

- Do not join any Quaker product to another product that is not designed for joining. Joined products must be individually supported in the opening. Failure to do so could affect operation and product performance and could result in a product installation failure or property damage.

Cleaning

- Do not use any cleaning agent other than a mild, non-abrasive window washing solution or glass cleaner applied in accordance with any product labeling instructions and Quaker's care and maintenance instructions. The use of harsh chemicals (such as brickwash, bleach, alcohol, hydrochloric acid, or muriatic acid) for cleaning or other purposes may damage QUAKER products, glass, fasteners, hardware, seals, sealant, or metal flashing. Please protect these products by following the cleaning product's instructions for its proper use.
- Do not use a razor blade to clean a glass surface, as damage to the glass may result.

IMPORTANT

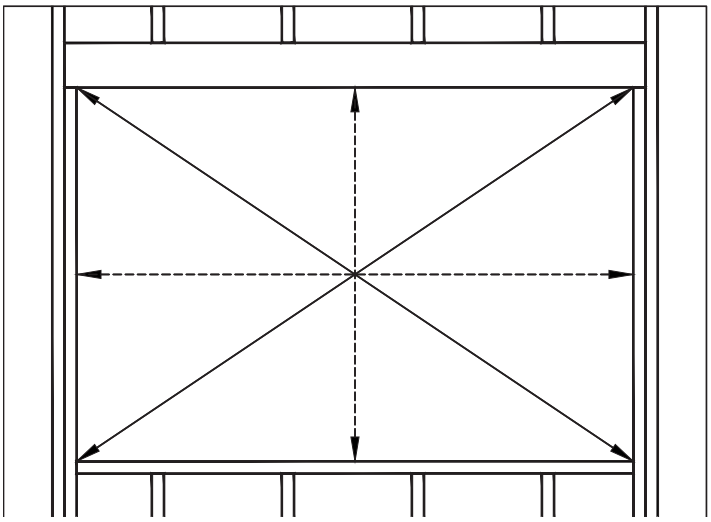
- Buildings constructed prior to 1978 may contain lead paint which could be disturbed during window or door replacement. For more information on proper management of lead paint, go to: www.epa.gov/lead
- Care must be taken to properly recycle or dispose of used or old materials. Any recyclable material should be separated from non-recyclable or hazardous materials. Please consult with local or state authorities regarding proper disposal of non-recyclable or hazardous materials.
- Inspect all window and door units for any damage or defects prior to installation. Contact the nearest QUAKER distributor if there are any problems or issues.
- **WARNING:** This product can expose you to chemicals, including titanium dioxide or methanol, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
- **WARNING:** Drilling, sawing, sanding, or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for your personal protection. For more information go to www.P65Warnings.ca.gov
- When installation is completed, operable window and door products, and related hardware or equipment, may require some adjustments. Confirming operability and making minor adjustments are within the scope of the installation services performed by others.
- **WARNING - OVERHANG NEEDED:** It is recommended that doors (swing and sliding) with ADA or Low-Profile Sills be installed with an overhang depth equal in length to the height of the door. If you choose to use an overhang depth less than the height of the door, you must confirm that it is appropriate based on code requirements and the expected local wind and rain conditions.

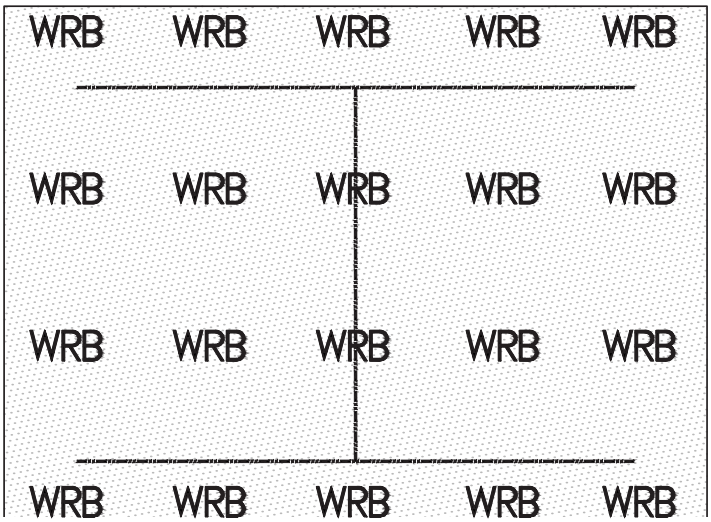
With Weather Resistant (WRB) Application (Pages 4-14)

--See FMA/AAMA 100-12 for additional information--

WB1

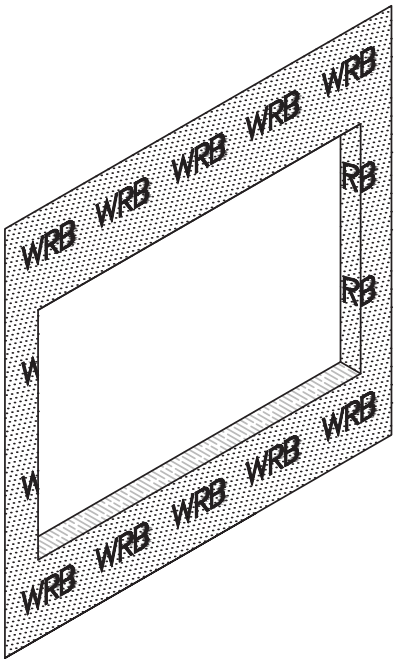
From the interior, measure and verify the size of the rough opening. The rough opening should be 3/4" wider and 1/2" taller than the Window Unit, unless otherwise specified on the shop drawings. Verify the rough opening is flat, plumb, level, and square. Take diagonal measurements to check for square. The sill plate beneath the unit must be level for proper unit operation. Go to the exterior and cut the Weather-Resistant Barrier (WRB) in an 'I' pattern.

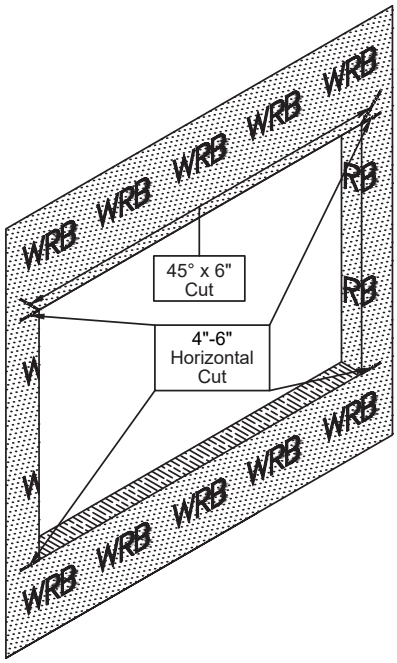


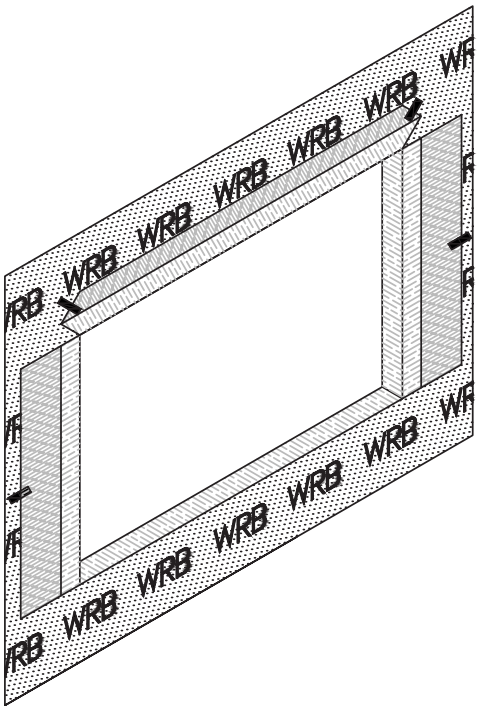


WB2

Fold the WRB sides towards the interior and trim as needed. Do not staple in place. Make 4"-6" horizontal cuts in the WRB at the head and sill jambs. Make a 45° x 6" long cut at the head condition. Fold back WRB at the cut lines, and tape into place.

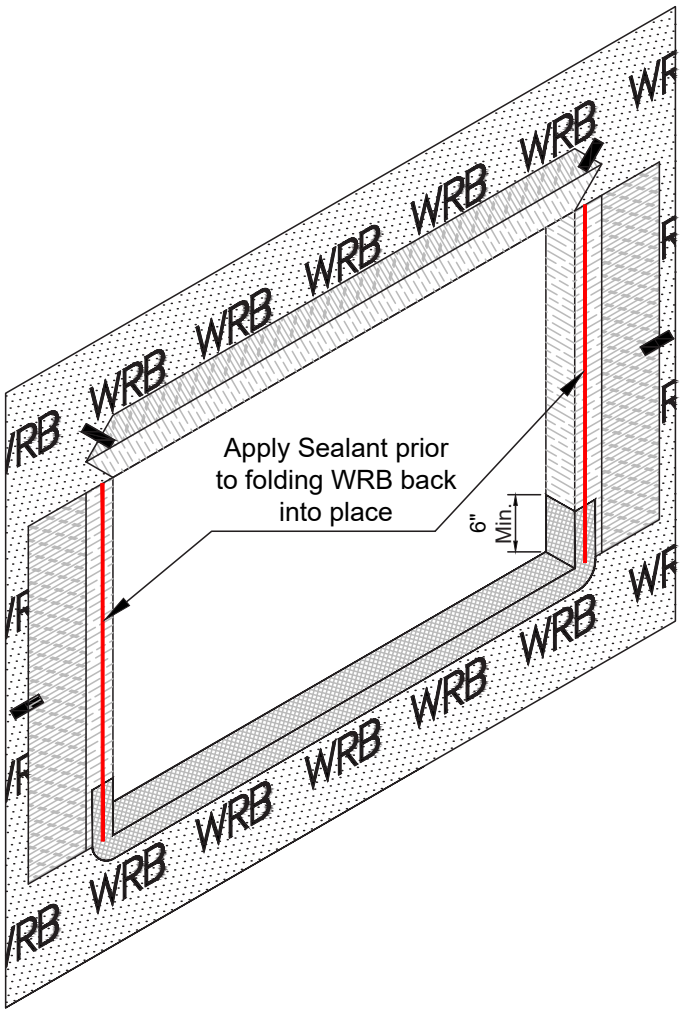


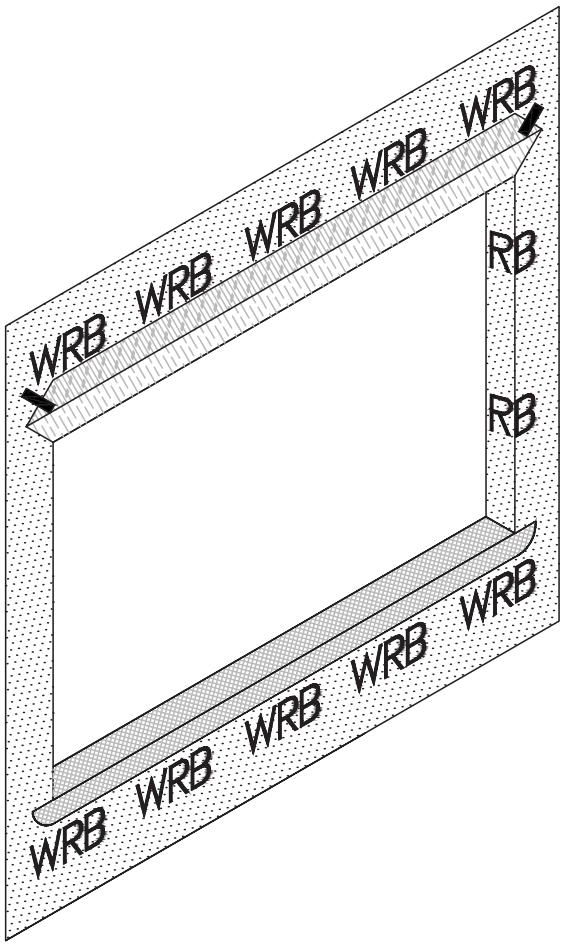




WB3

Measure the width of the rough opening,and cut a length of self-adhering flashing that is 12”, or more, than the width of the rough opening. This will allow the flashing to run 6”+ up each jamb condition. Apply the flashing to the exterior side first, allowing for a minimum of 3” below the sill and up each side. The flashing tape must cover the entire sill plate. If needed, apply an additional piece of flashing over the first one with a 1” minimum over-lap. Start from the exterior and work towards the interior. After applying the sill flashing, apply sealant at the jambs where shown. Fold the WRB jamb flaps back into place, over the sill flashing, and fix into place. Leave head flap in place.





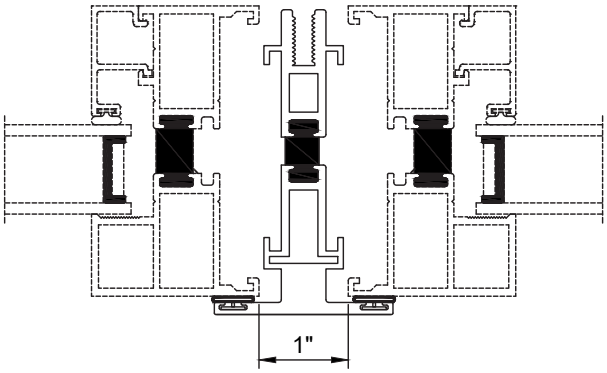
WB4

Test fit (1) Window Unit in the opening to ensure proper fit. Make sure unit can be installed square, plumb, and level. Insert plastic shims at the sill and jambs as needed. The unit will come with pre-punched holes for attachment. Match drill pilot holes in the structure per the Shop Drawings or anchorage calculations. Typically, 3” from the end of the window and 12” O.C.

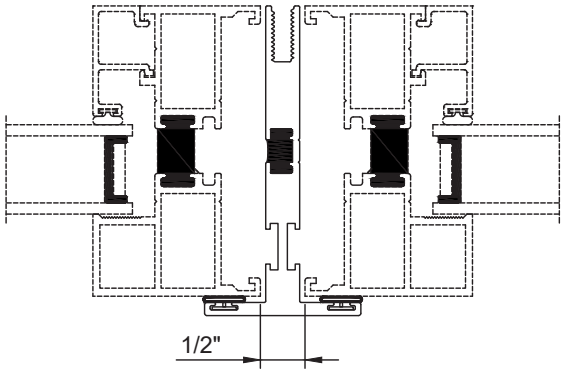
Test fit the next Window Unit per the instructions above. Locate the unit with the seperation gap width per the Shop Drawings or the standard T-Mullions shown below. If another T-Mullion is used, reference the T-Mullion Installation Instructions (IG-XXX). Repeat this step as many times as necessary.

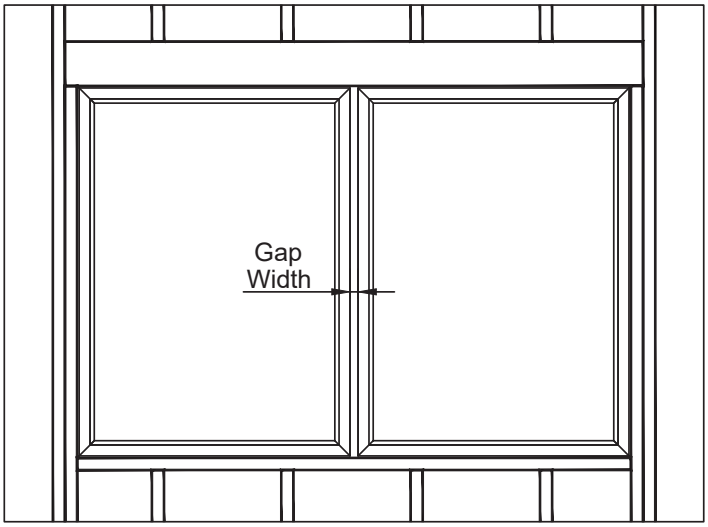
Inserting/Installing the T-Mullion is not required.

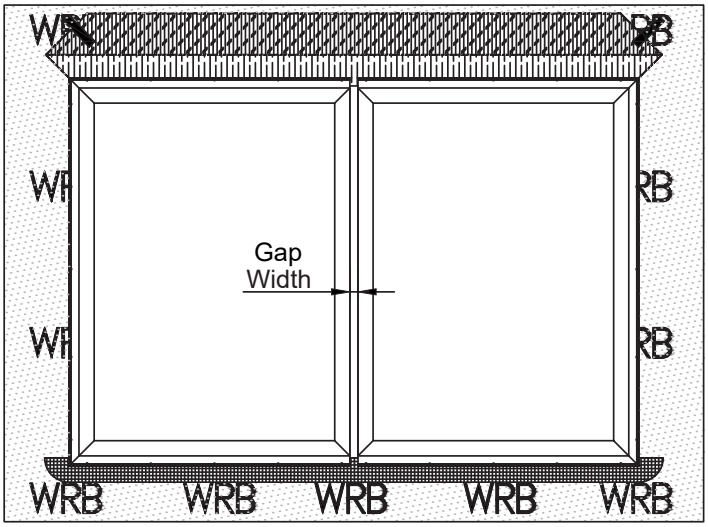
M22126 T-Mullion



M24628 T-Mullion







WB5

Apply a generous amount of Sealant around the entire Nail Fin (building/interior side) as shown in the sketch, leaving (2) 2” voids no more than 4” from jambs at the sill. Make sure placement of sealant will contact the WRB and/or Flashing.

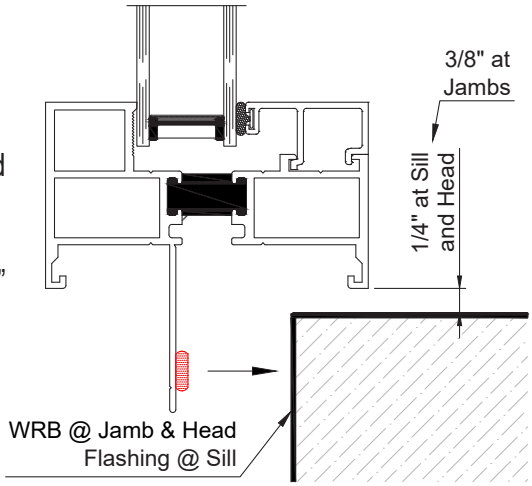
--WRB Supplier is required to specify what type of Sealant should be used for compatibility--

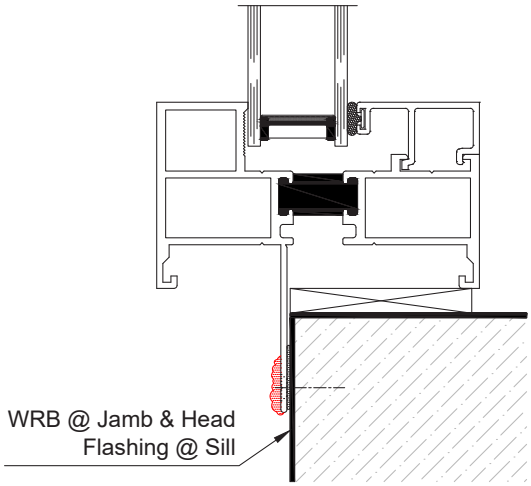
Re-Install the 1st unit in the opening by pushing unit tight against the structure. Make sure the unit is tight against the WRB, and is square, plumb, and level. Repeat with the remaining units, be sure to leavie the required gap between each unit.

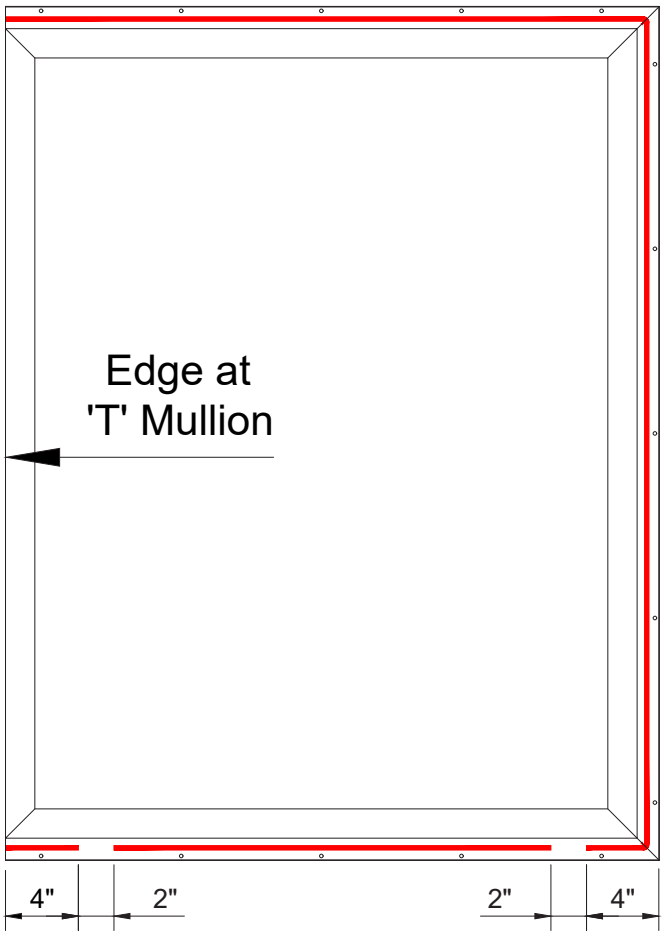
DO NOT PLACE WINDOW UNIT DIRECTLY ON THE BUILDING STRUCTURE WITHOUT SHIMS.

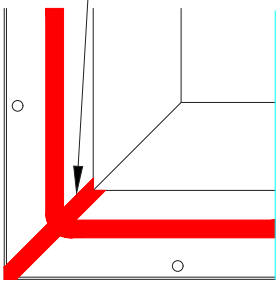
Plastic shims are required at the sill and jambs. Use the required fasteners to secure the unit in the opening. DO NOT over-tighten the fasteners and check for level several times while fastening in place. Seal securely over all the fastener heads and at the mitered Nail Fin corner joints.

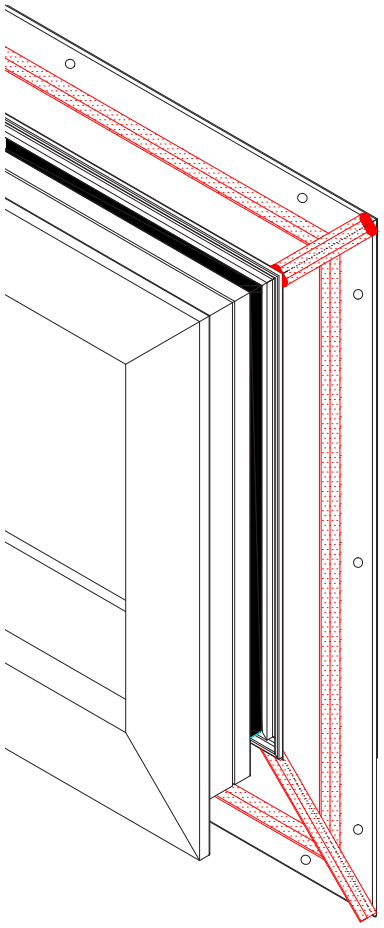
At the sill, shims should be located 3” from all window frame jambs and no greater than 12” on center.





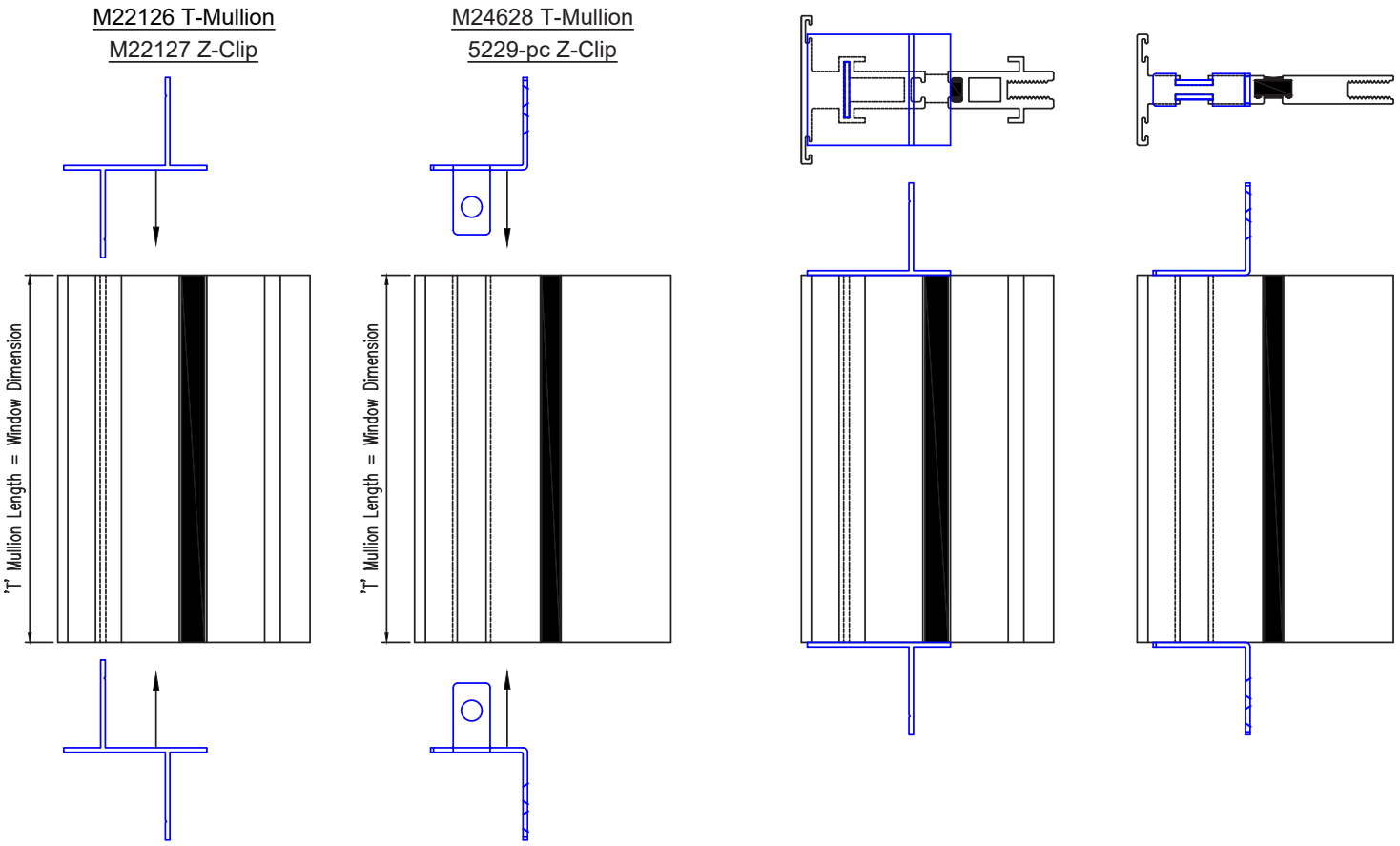






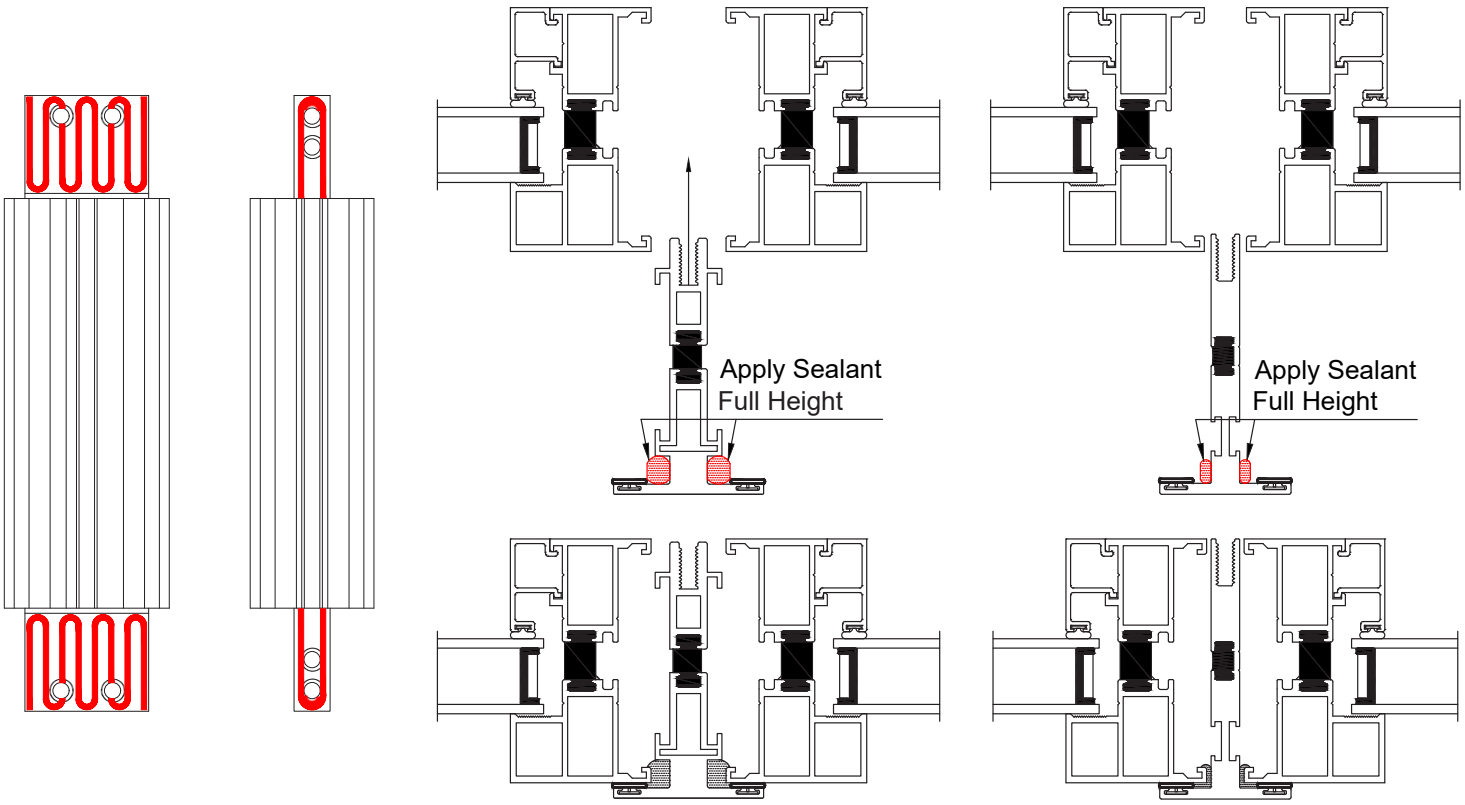
WB6

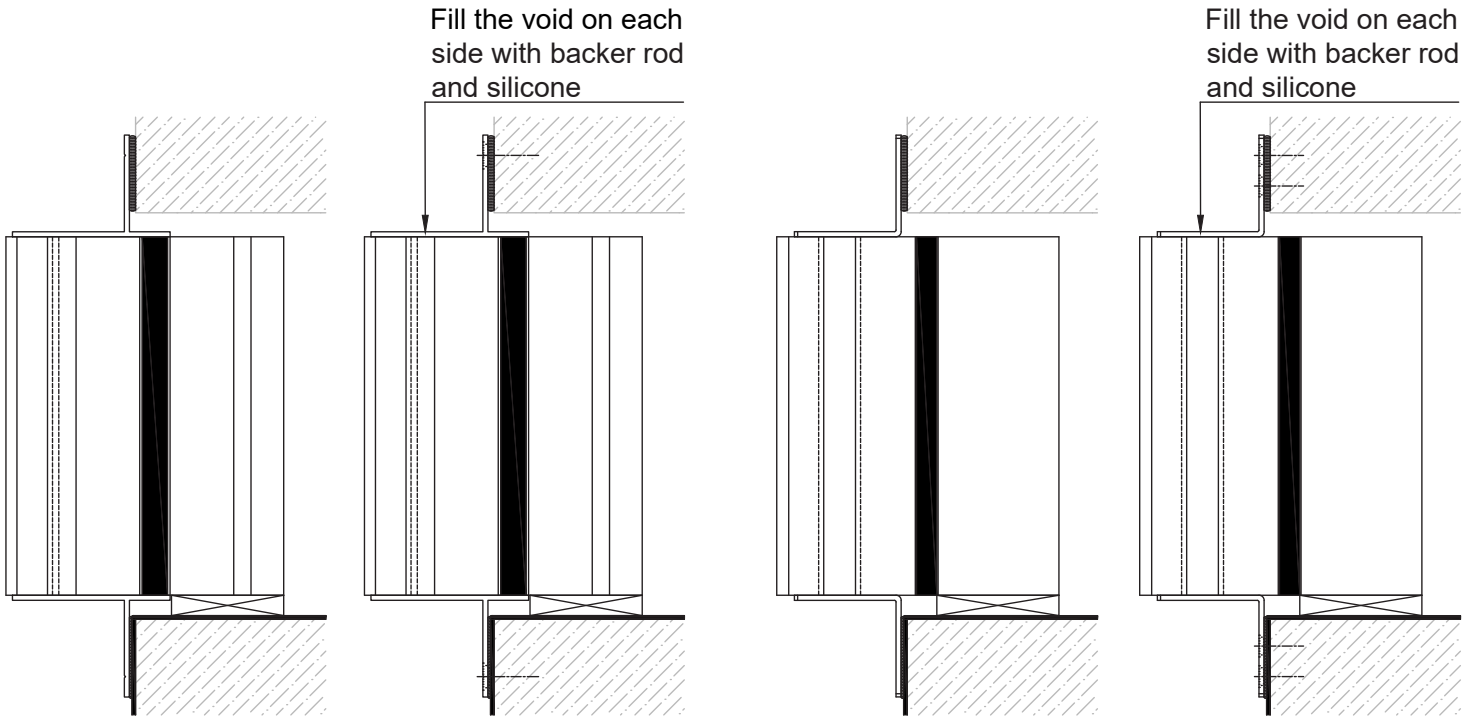
If not already done, cut the 'T' Mullion, Interior Cover, and Pressure Plate to size (eaqual to Window height).
Put a dab of silicone on the top and bottom of the 'T' Mullion where it will contact the 'Z' Clip.
Install the 'Z' Clips at the top and bottom of each 'T' Mullion.
If another T-Mullion is used (not shown below), reference the T'Mullion Installation Instructions.



WB7

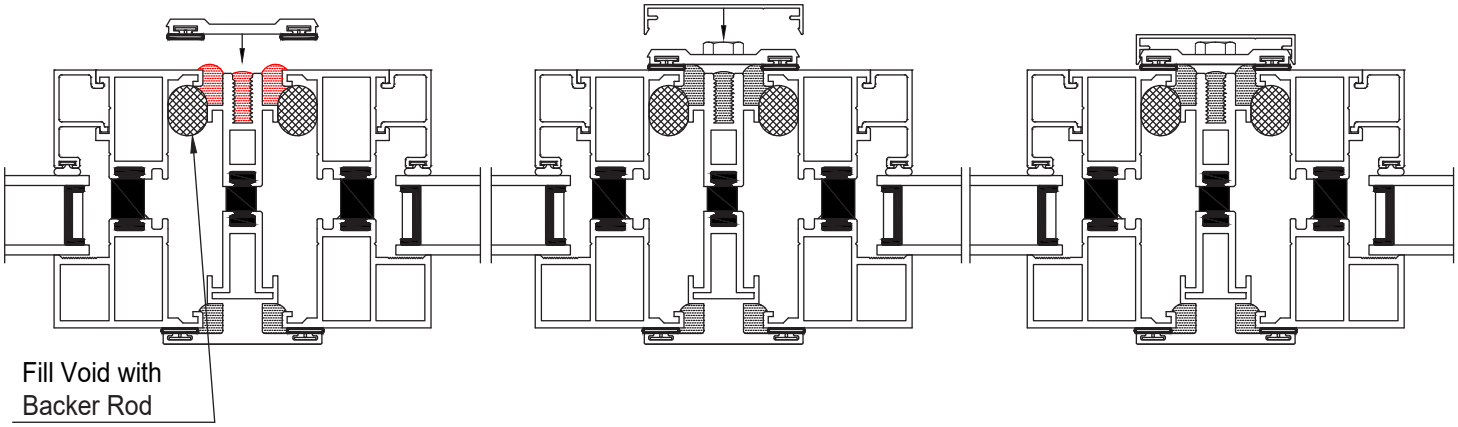
Apply a generous amount of sealant to the inside leg of the 'Z' Clip, and on the interior exterior legs of the 'T' Mullions as shown below. Then install the 'T' Mullion assembly between each window unit by sliding it into place from the exterior. The top and the bottom of the 'T' Mullion should align with the top and bottom of the window. Push firmly against the window units as shown. The exterior 'nail fin' leg should align with the nail fin of the window units. After the 'T' Mullion is in place, use the required fasteners to secure into the opening. DO NOT over-tighten the fasteners.

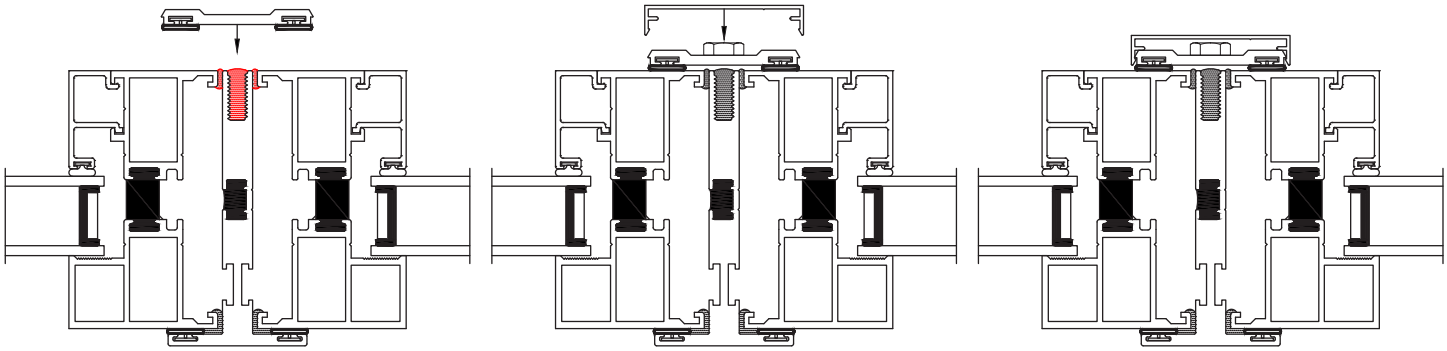




WB8

Fill the voids between the M22126 T-Mullion and the Window Frames with backer rod and apply sealant in the void.
Apply sealant full height at the window to T-Mullion area, and 6” from the top and bottom at the T-Mullion raceway as shown below.
Apply the Pressure Plate with the supplied fasteners, 3” from the ends and 12” O.C.
Make sure the fasteners are installed straight, and do not over-tighten the fasteners to ensure a uniform seal of the weathering to the mullions.
After the Pressure Plates are in place, snap the on cover.





WB9

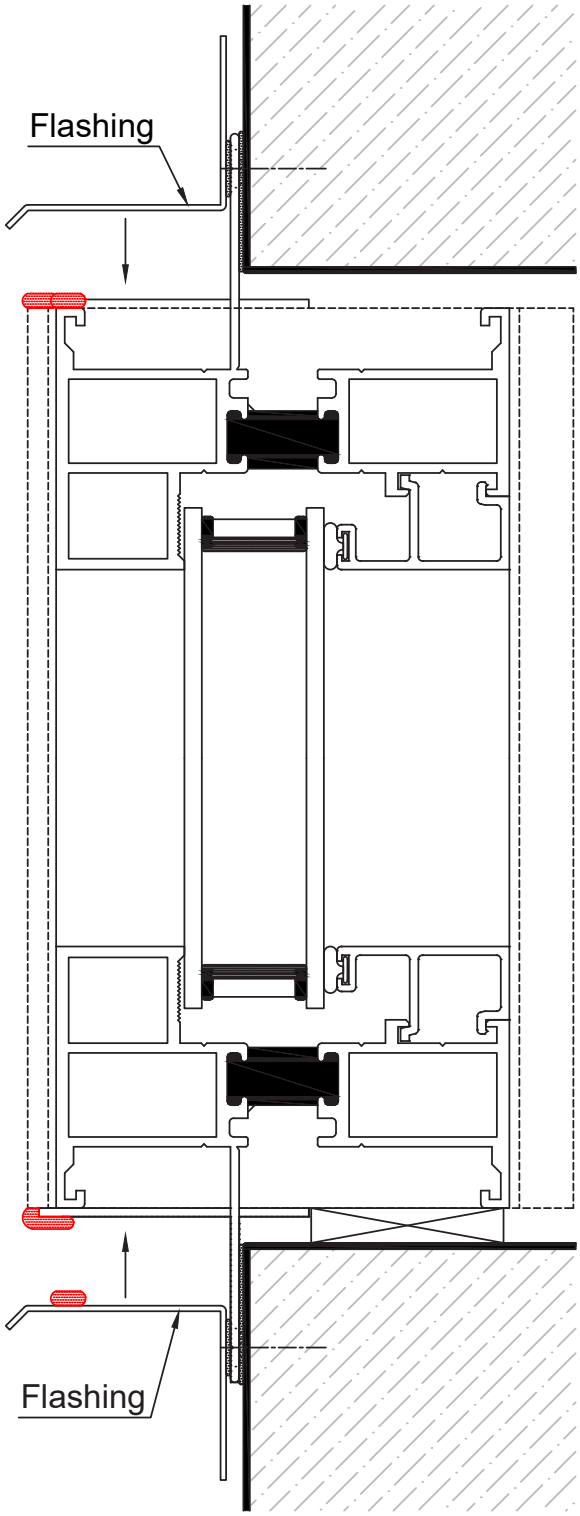
This step must be done for this application.

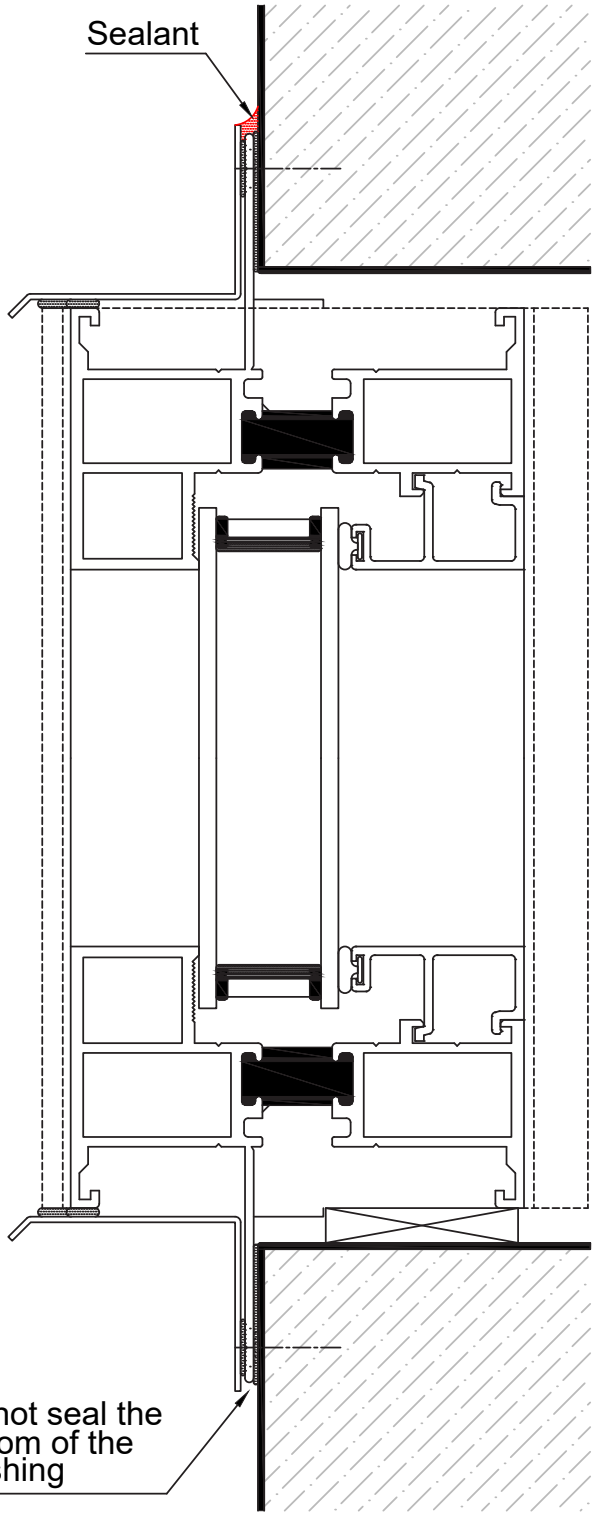
Apply sealant to the top of the Window Unit, T-Mullion, and 'Z' Clip. Then apply sealant to the top of the sill flashing (where shown), and to the bottom of the T-Mullion and 'Z' Clip. Push the supplied Flashing into place, and attach the flashing to building at the jambs, centerline of the D.L.O., and at each side of the 'Z' Clip. Apply sealant over the fastener heads, then tool all sealant as needed.

Make sure the flashings are completely sealed.

Seal the top and sides of the Head Flashing, and the sides of the Sill Flashing to the building.

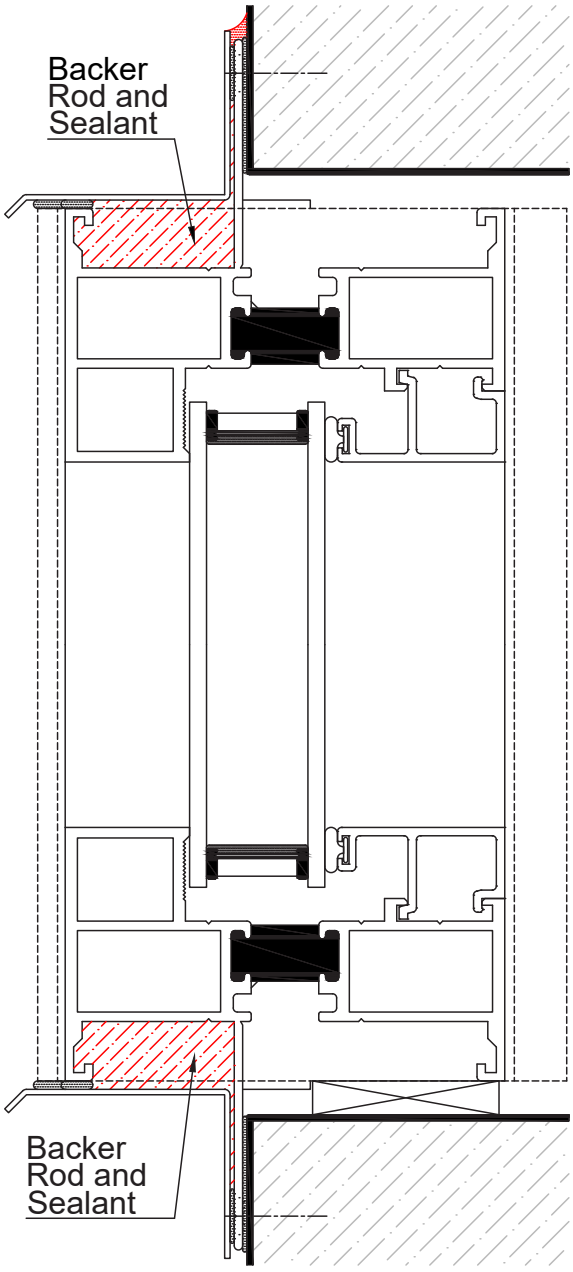
DO NOT seal the bottom of the Flashing at the sill.





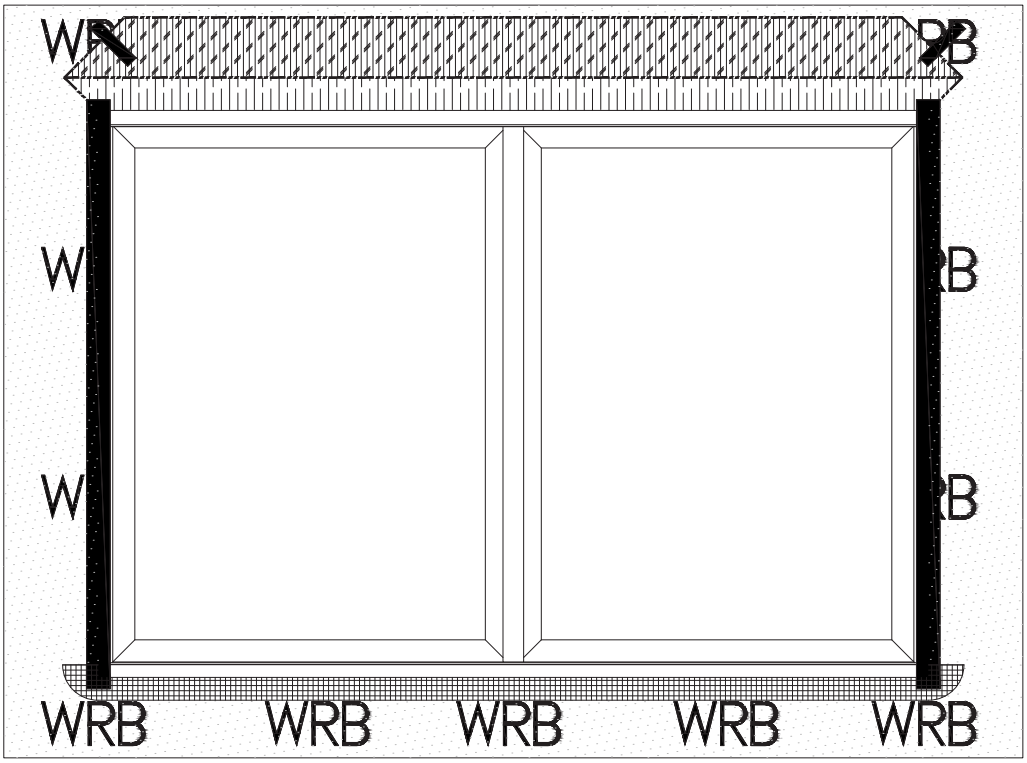
WB10

Insert backer rod at the openings at the jambs, then seal entire open void as shown below.



WB11

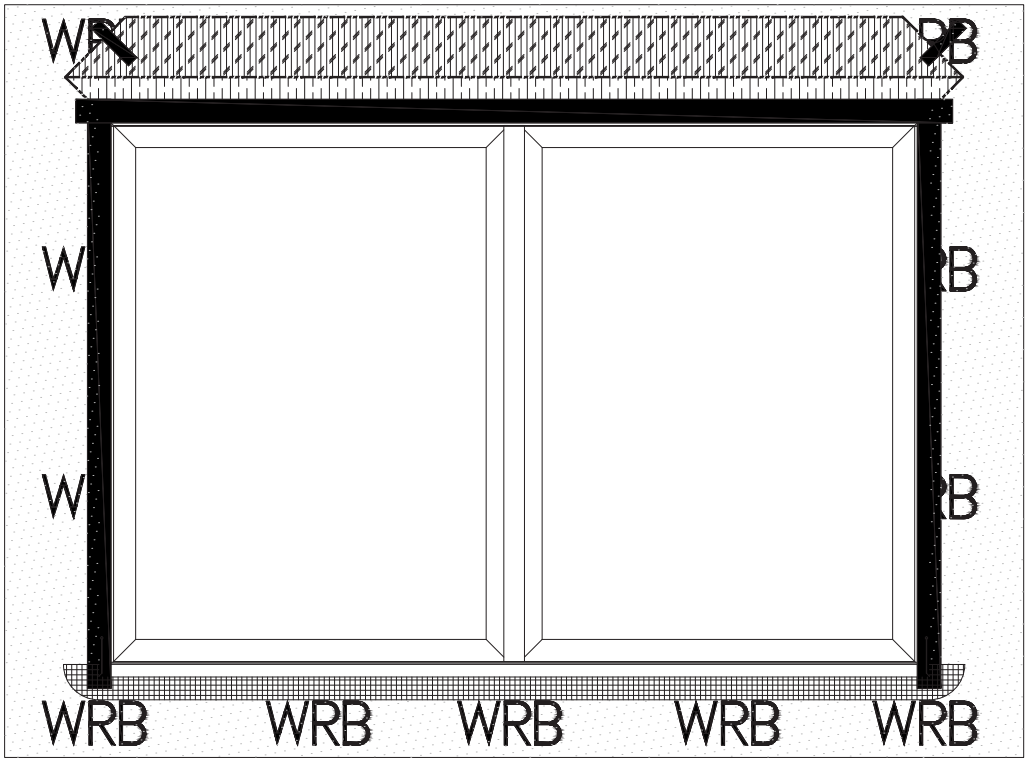
Apply flashing tape at the sides of the window frame as shown. Extend tape a minimum of 1” past the Nail Fin, but not more than the width of the flashing tape. Smooth the tape using a J-Roller.



WB12

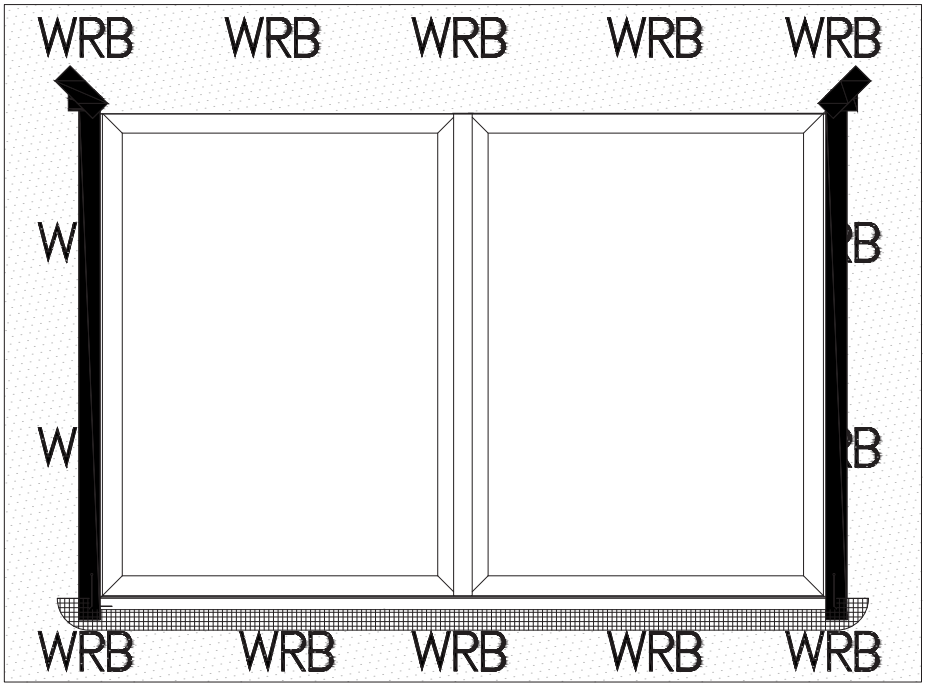
Apply flashing tape at the top of the window frame as shown, overlapping the side flashing tape. Smooth the tape using a J-Roller.

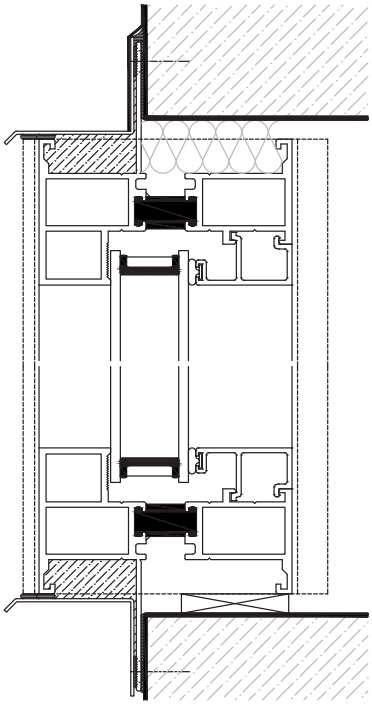
Side flashing tape cannot extend above the top flashing tape. Doing so could result in product or property damage.

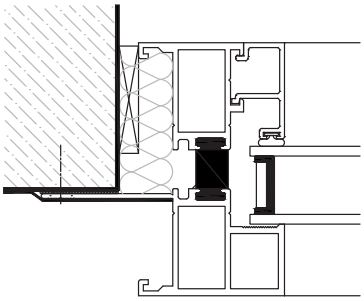


WB13

Unfold the top flap of the wrap, and tape the angled seams as shown. Smooth the tape using a J-Roller.





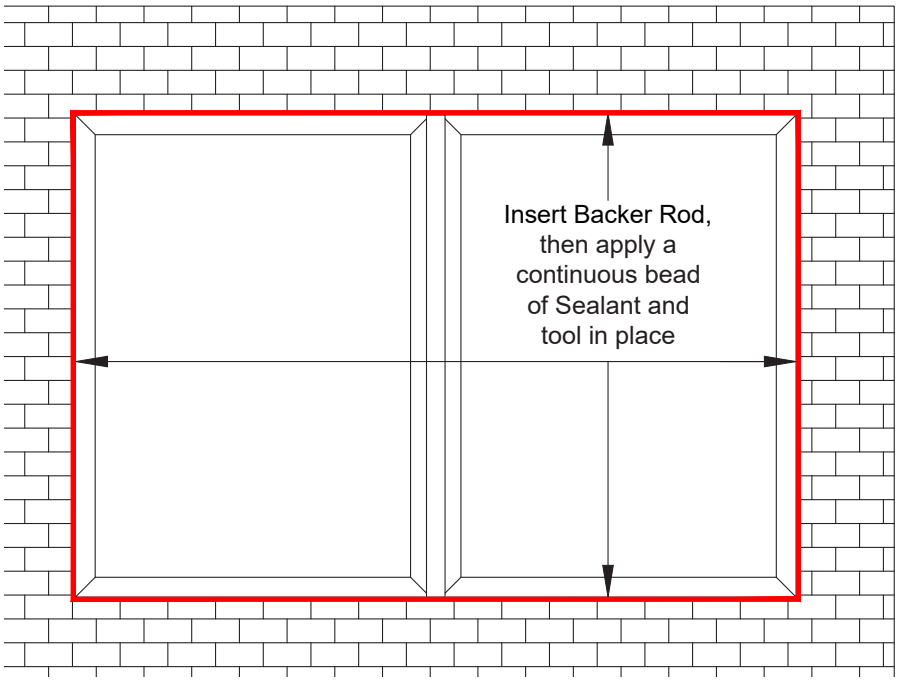


WB14

Refer to the Shop Drawings if additional flashing or other material is required. After exterior building construction is completed, install back rod, then apply a continuous bead of sealant around entire perimeter of window frame and tool in place.

Note:
Installer to verify that Sealant being used is compatible with Quaker window frame and the surrounding building construction materials.

Note:
Please inform the exterior facade installer that they must maintain a minimum 1/4" gap between the facade material and the Window Unit, and that the facade material should never come in contact with the Window Unit.



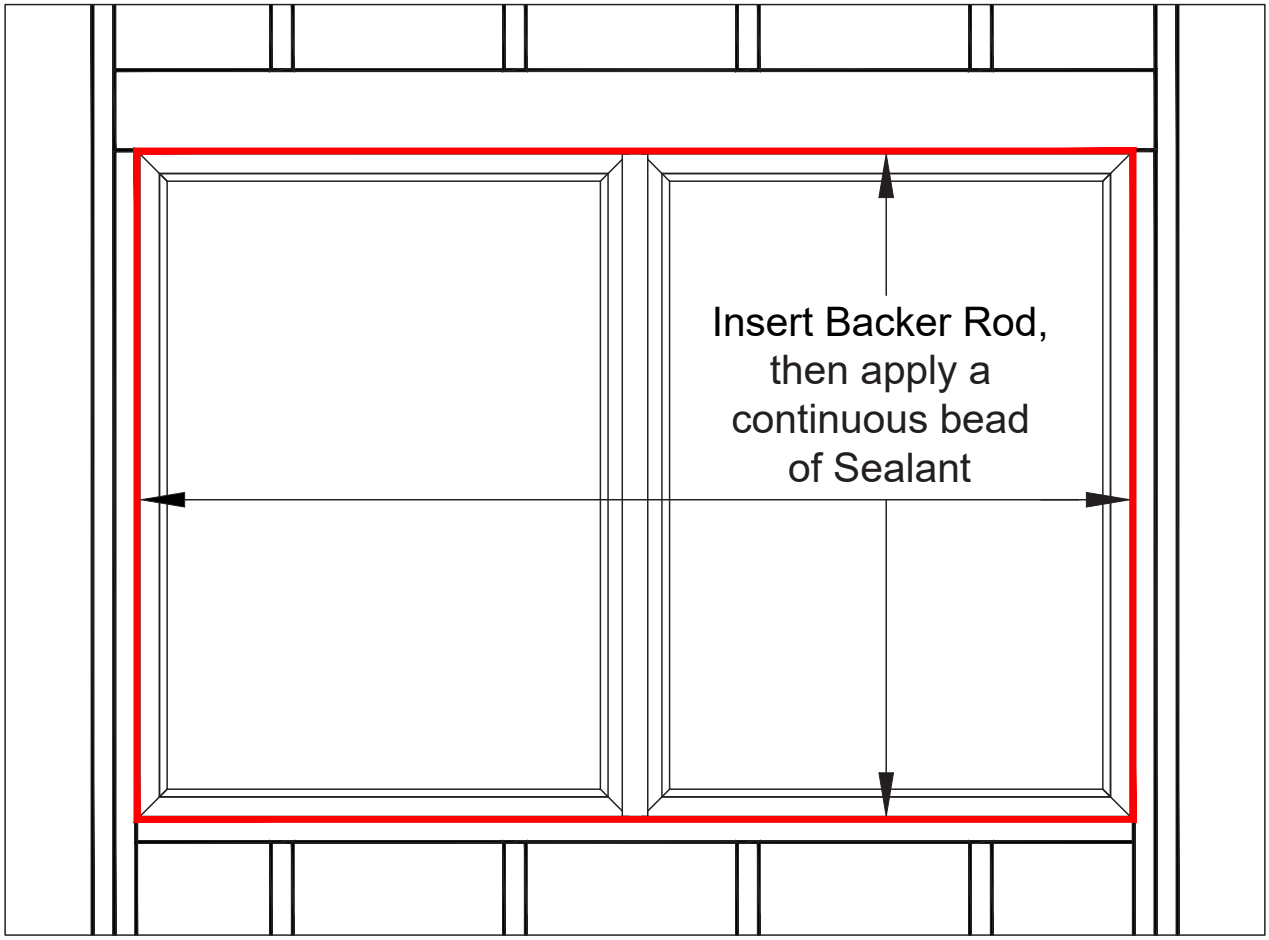
WB15

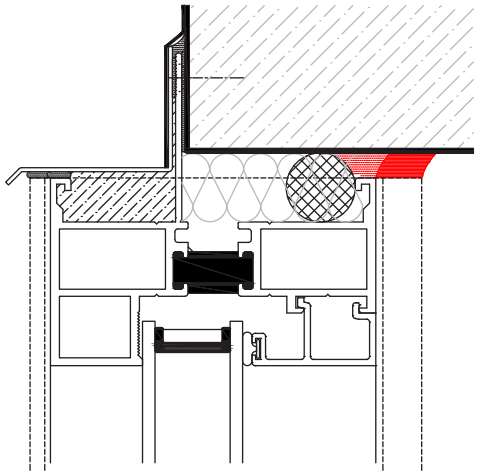
This step must be done for this application.

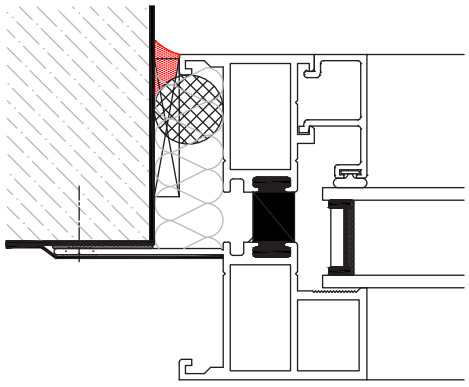
At the interior, stuff insulation in the head and jambs between the frame and the building condition. Then install a backer rod and apply a continuous bead of sealant around the entire perimeter of the frame. Tool sealant in place as needed.

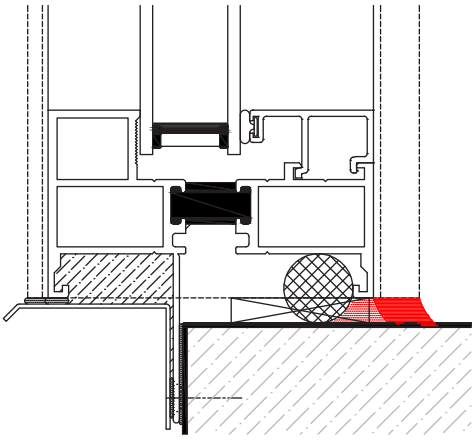
Note:

Installer to verify that Sealant being used is compatible with Quaker window frame and the surrounding building construction materials.







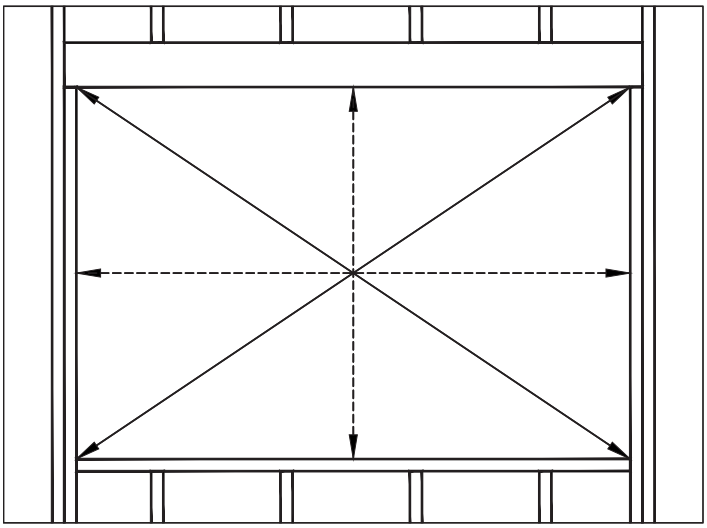


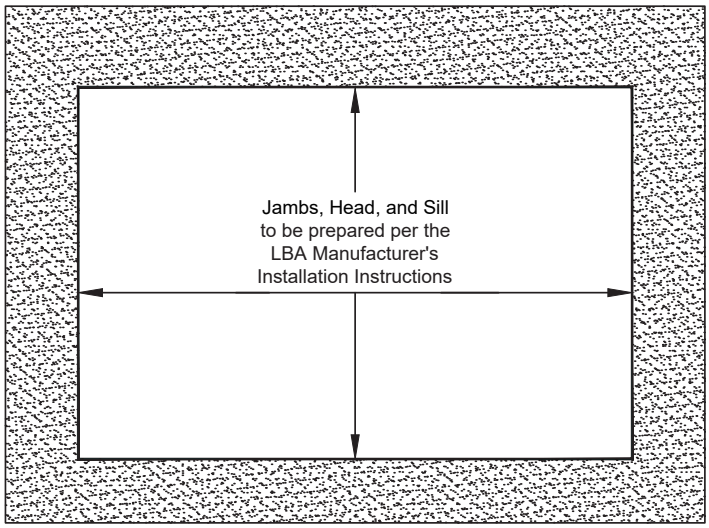
This Completes the Installation when a Weather Resistant Barrier is being used

Liquid Barrier Application (LBA) ALLOWING Sill Weeping (Pages 15-25)

LB1

After the initial LBA has been applied, from the interior measure and verify the size of the rough opening. The rough opening should be 3/4” wider and 1/2” taller than the Window Unit, unless otherwise specified on the shop drawings. Verify the rough opening is flat, plumb, level, and square. Take diagonal measurements to check for square. The sill plate beneath the unit must be level for proper unit operation.





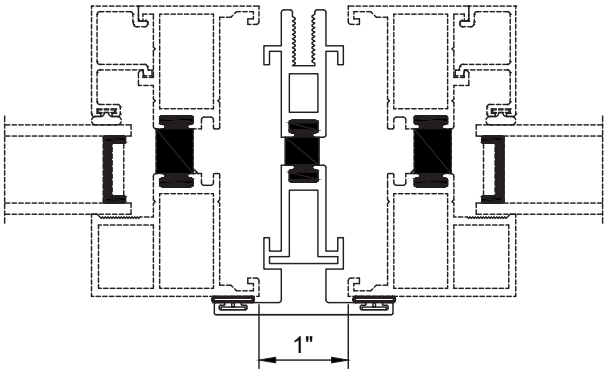
LB2

Test fit (1) Window Unit in the opening to ensure proper fit. Make sure unit can be installed square, plumb, and level. Insert plastic shims at the sill and jambs as needed. The unit will come with pre-punched holes for attachment. Match drill pilot holes in the structure per the Shop Drawings or anchorage calculations. Typically, 3” from the end of the window and 12” O.C.

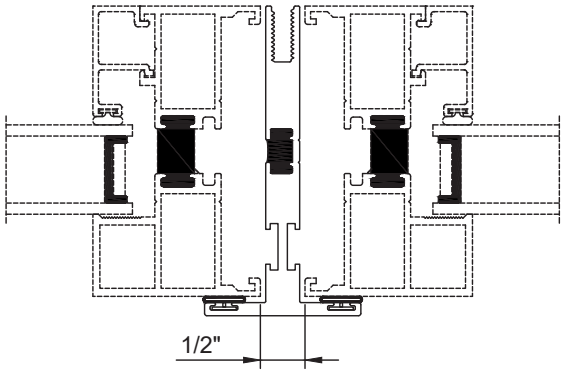
Test fit the next Window Unit per the instructions above. Locate the unit with the seperation gap width per the Shop Drawings or the standard T-Mullions shown below. If another T-Mullion is used, reference the T-Mullion Installation Instructions (IG-XXX). Repeat this step as many times as necessary.

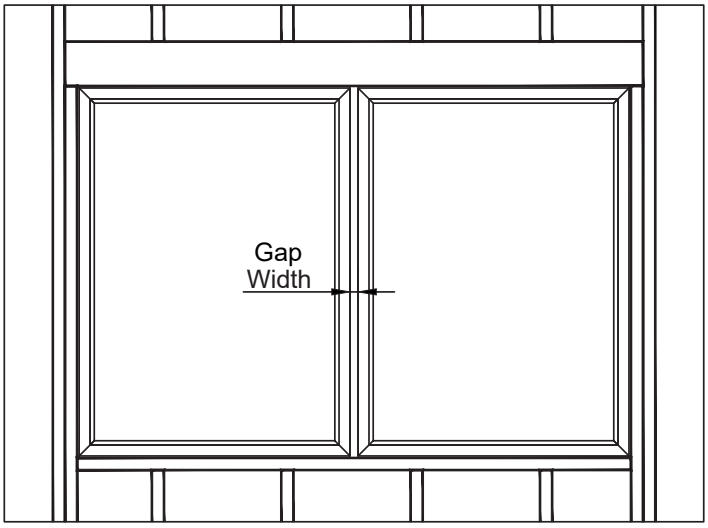
Inserting/Installing the T-Mullion is not required.

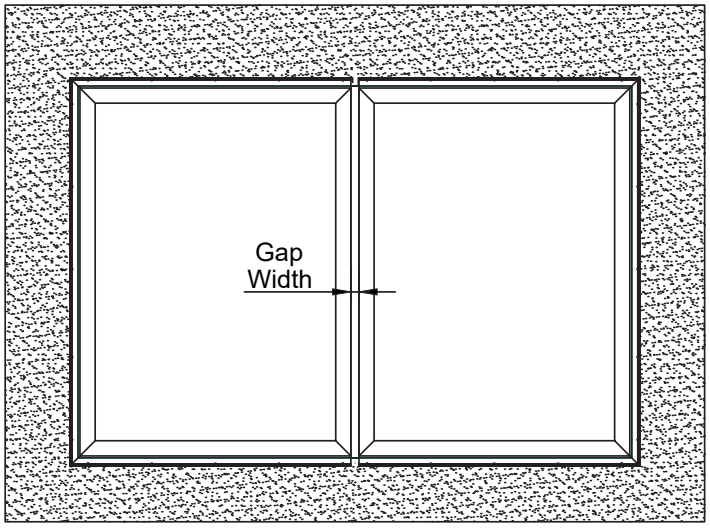
M22126 T-Mullion



M24628 T-Mullion







LB3

Apply a generous amount of Sealant around the entire Nail Fin (building/interior side) as shown in the sketch, leaving (2) 2” voids no more than 4” from jambs at the sill. Make sure placement of sealant will contact the WRB and/or Flashing.

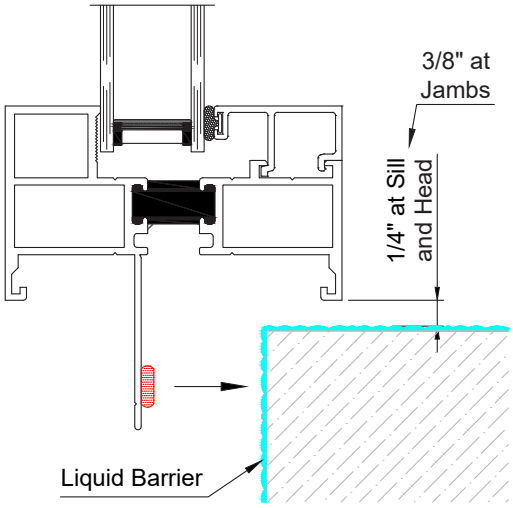
--WRB Supplier is required to specify what type of Sealant should be used for compatibility--

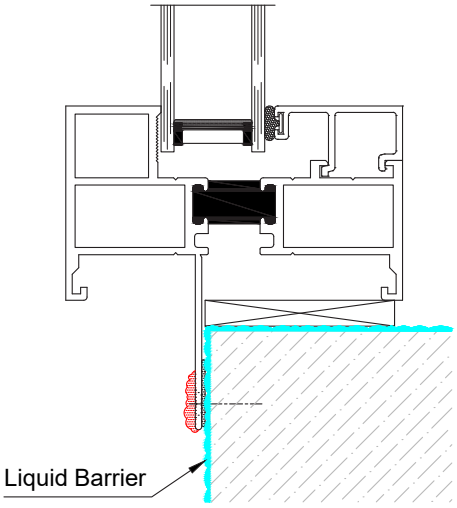
Re-Install the 1st unit in the opening by pushing unit tight against the structure. Make sure the unit is tight against the WRB, and is square, plumb, and level. Repeat with the remaining units, be sure to leavie the required gap between each unit.

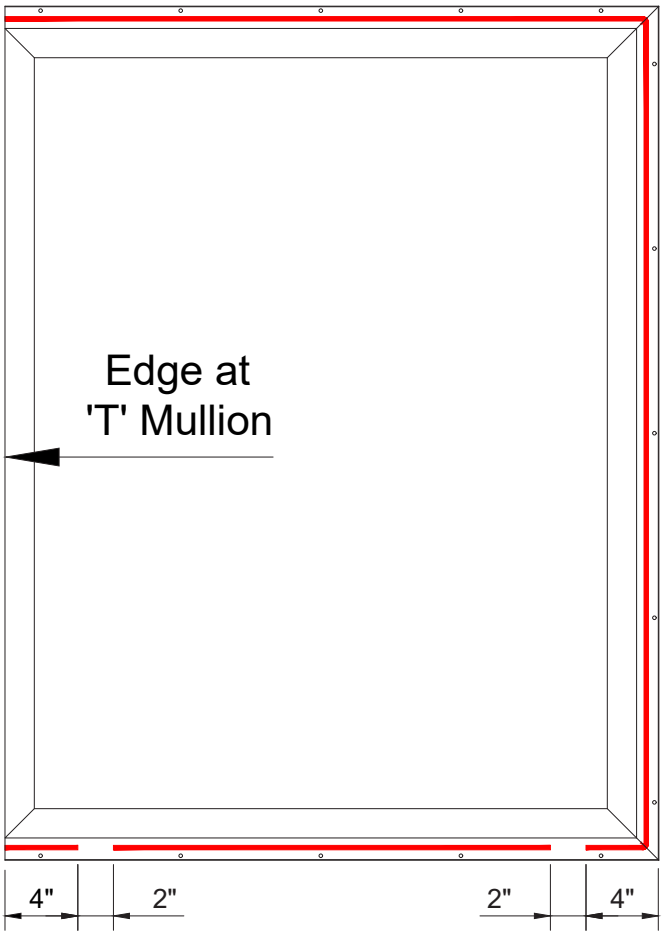
DO NOT PLACE WINDOW UNIT DIRECTLY ON THE BUILDING STRUCTURE WITHOUT SHIMS.

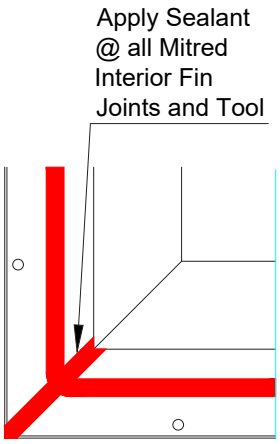
Plastic shims are required at the sill and jambs. Use the required fasteners to secure the unit in the opening. DO NOT over-tighten the fasteners and check for level several times while fastening in place. Seal securely over all the fastener heads and at the mitered Nail Fin corner joints.

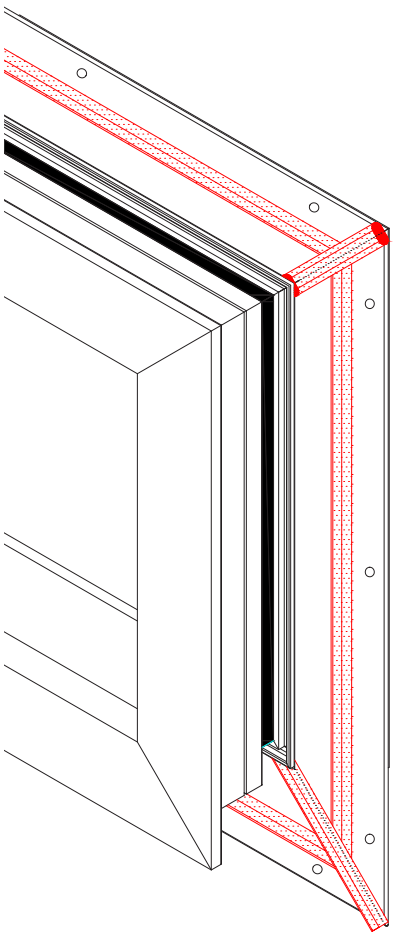
At the sill, shims should be located 3” from all window frame jambs and no greater than 12” on center.





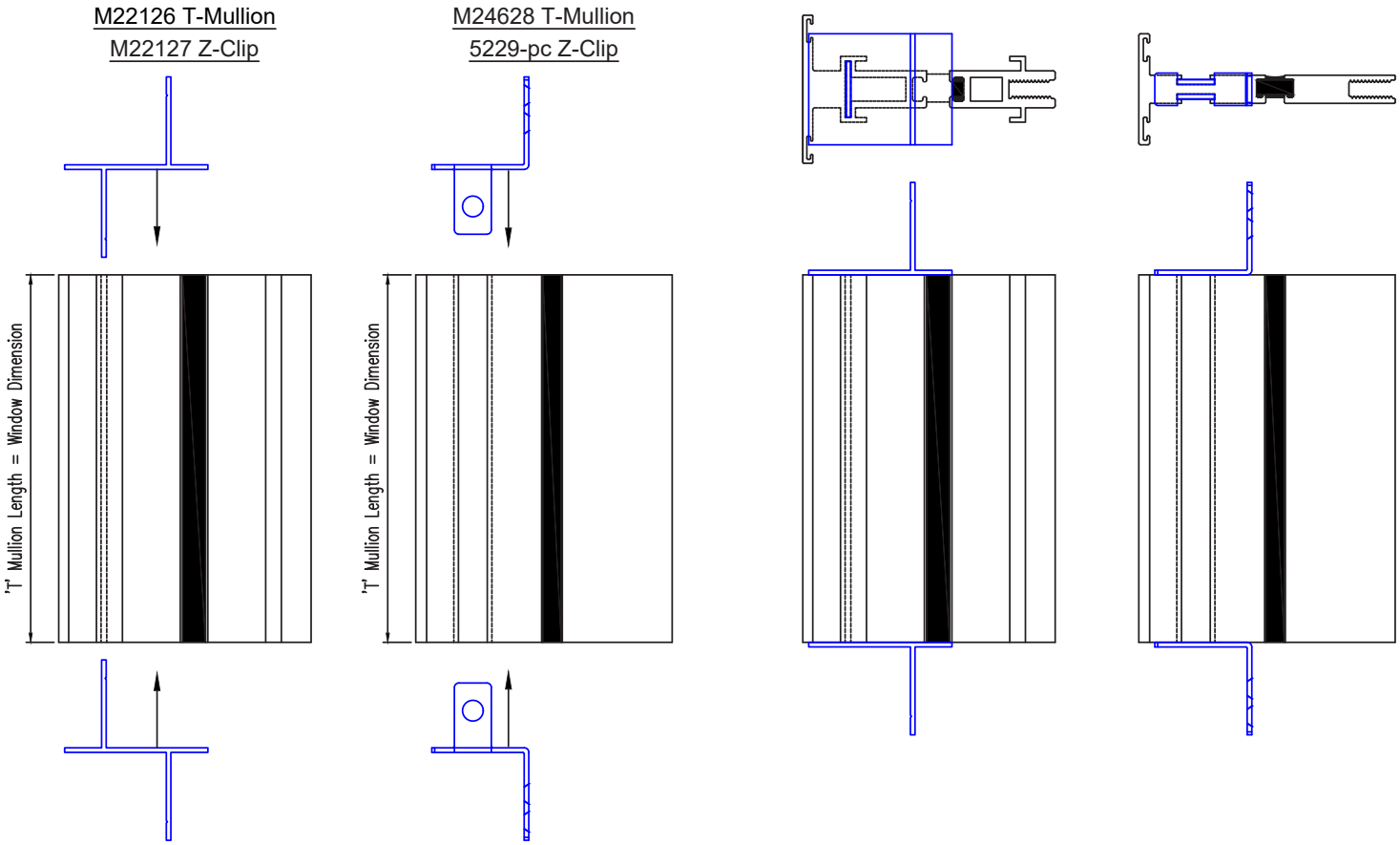






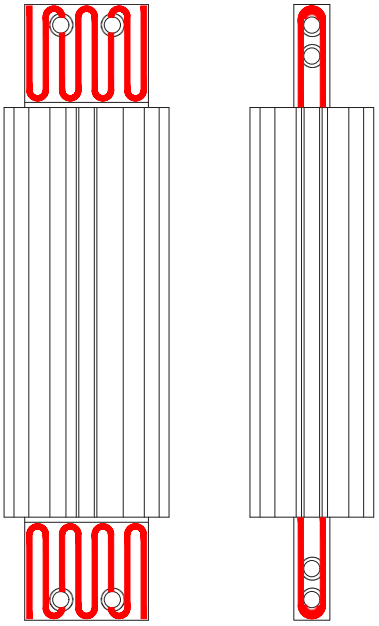
LB4

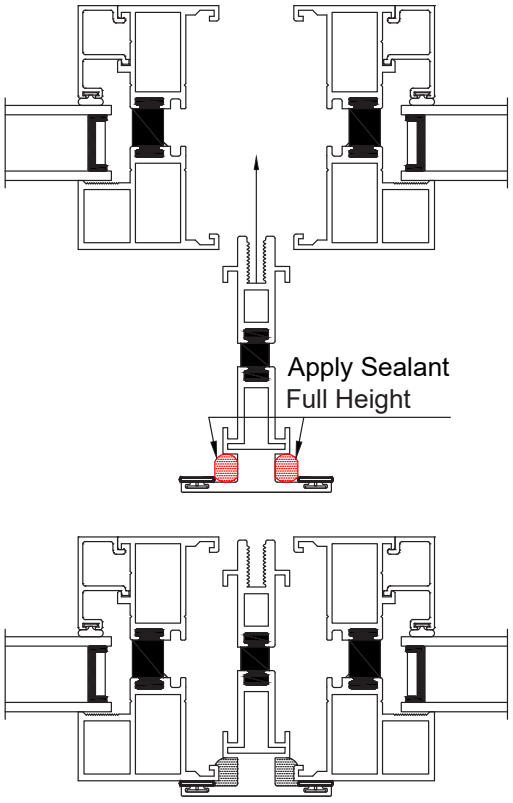
If not already done, cut the ‘T’ Mullion, Interior Cover, and Pressure Plate to size (eaqual to Window height).
Put a dab of silicone on the top and bottom of the ‘t’ Mullion where it will contact the ‘Z’ Clip.
Install the ‘Z’ Clips at the top and bottom of each ‘T’ Mullion.
If another T-Mullion is used (not shown below), reference the T’Mullion Installation Instructions.

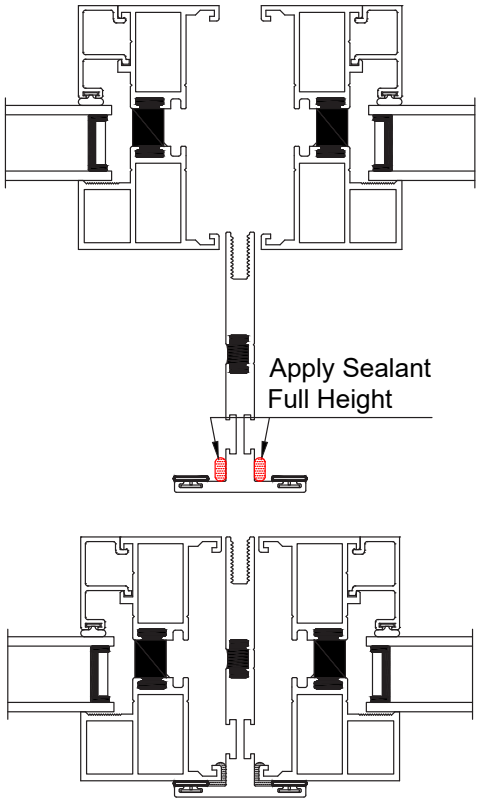


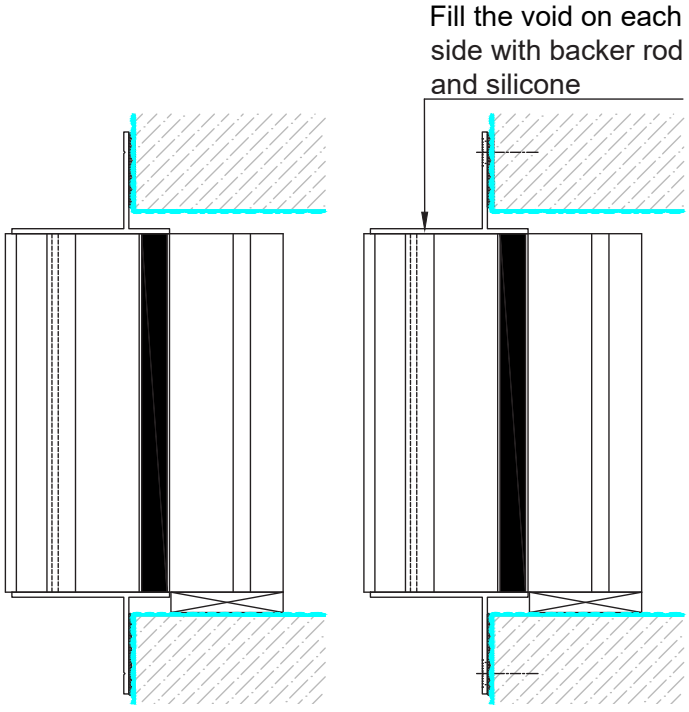
LB5

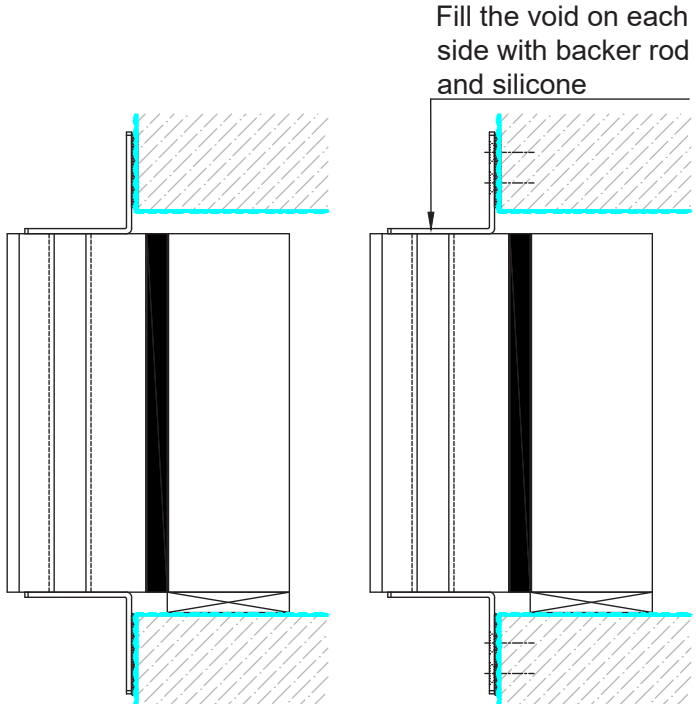
Apply a generous amount of sealant to the inside leg of the 'Z' Clip, and on the interior exterior legs of the 'T' Mullions as shown below. Then install the 'T' Mullion assembly between each window unit by sliding it into place from the exterior. The top and the bottom of the 'T' Mullion should align with the top and bottom of the window. Push firmly against the window units as shown. The exterior 'nail fin' leg should align with the nail fin of the window units. After the 'T' Mullion is in place, use the required fasteners to secure into the opening. DO NOT over-tighten the fasteners.





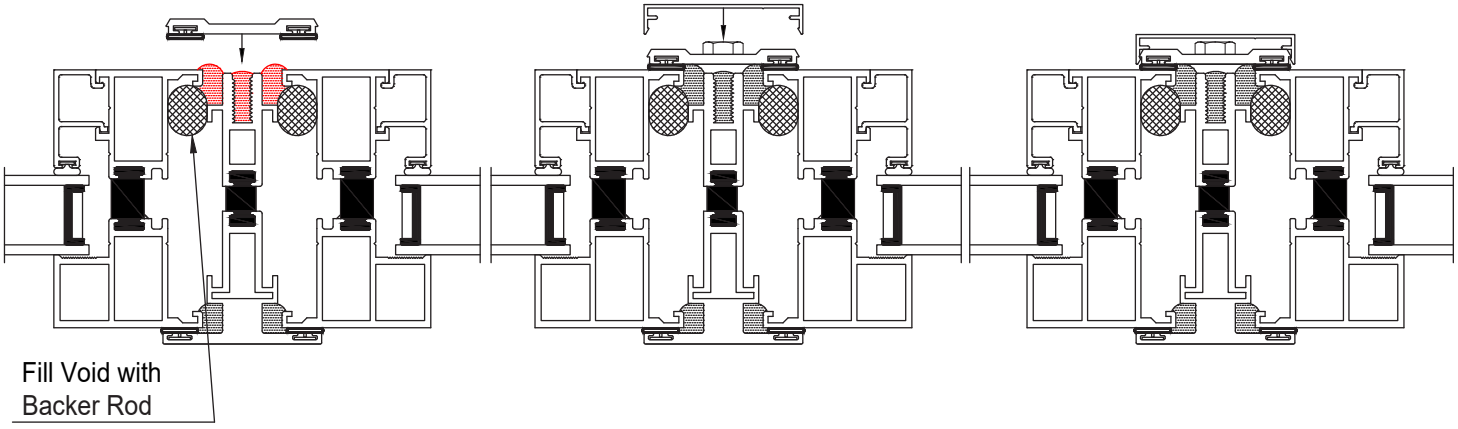


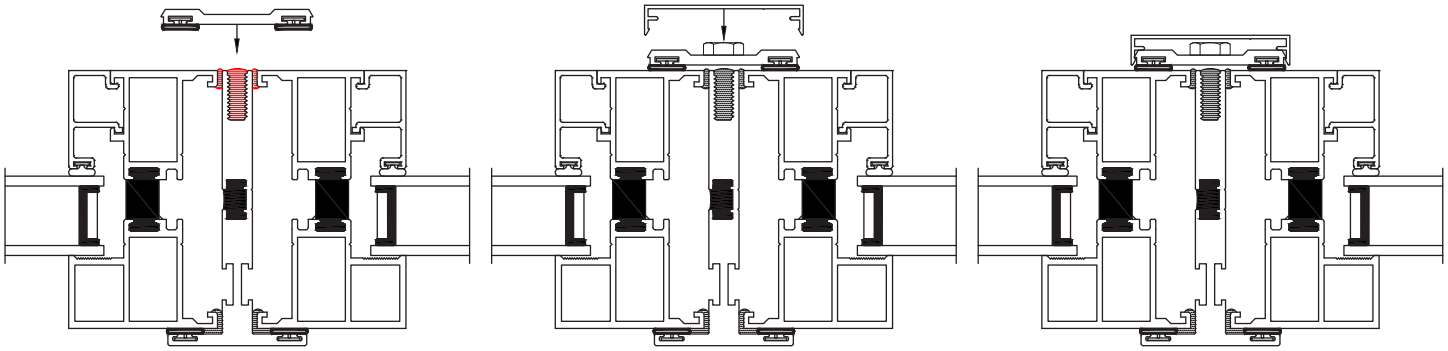




LB6

Fill the voids between the M22126 T-Mullion and the Window Frames with backer rod and apply sealant in the void.
Apply sealant full height at the window to T-Mullion area, and 6” from the top and bottom at the T-Mullion raceway as shown below.
Apply the Pressure Plate with the supplied fasteners, 3” from the ends and 12” O.C.
Make sure the fasteners are installed straight, and do not over-tighten the fasteners to ensure a uniform seal of the weathering to the mullions.
After the Pressure Plates are in place, snap the on cover.





LB7

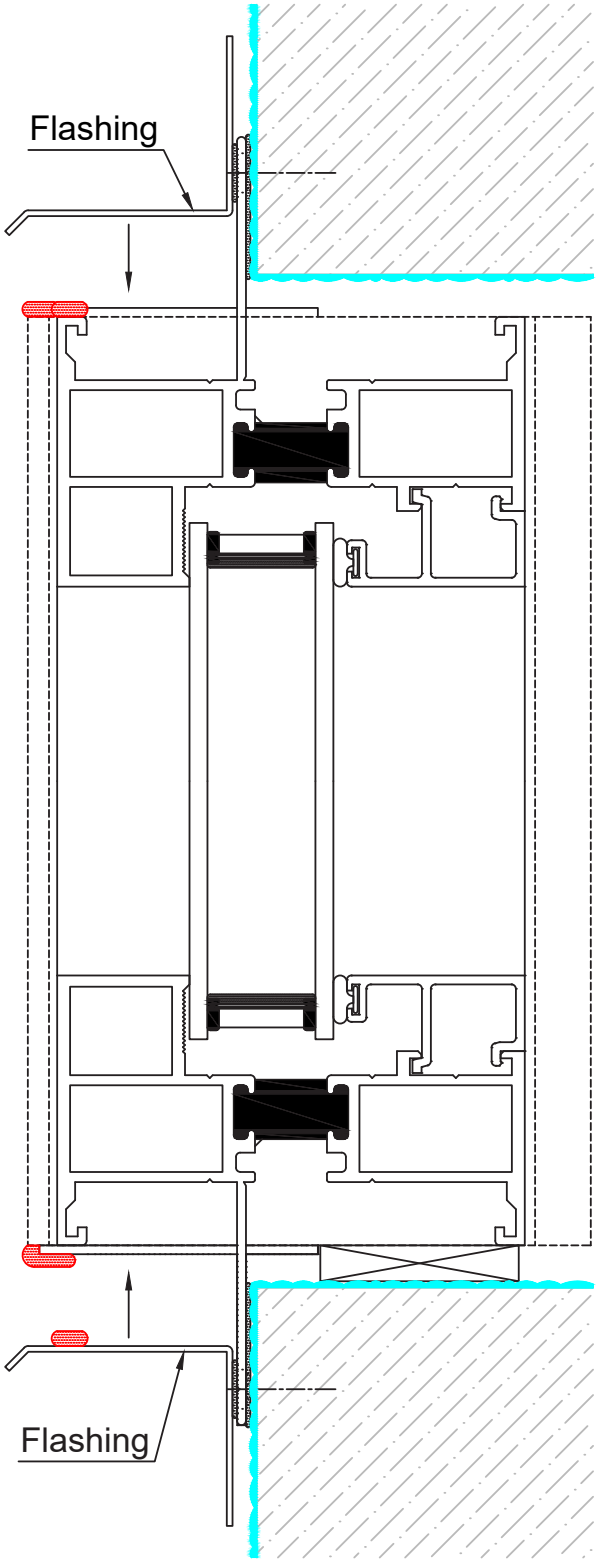
This step must be done for this application.

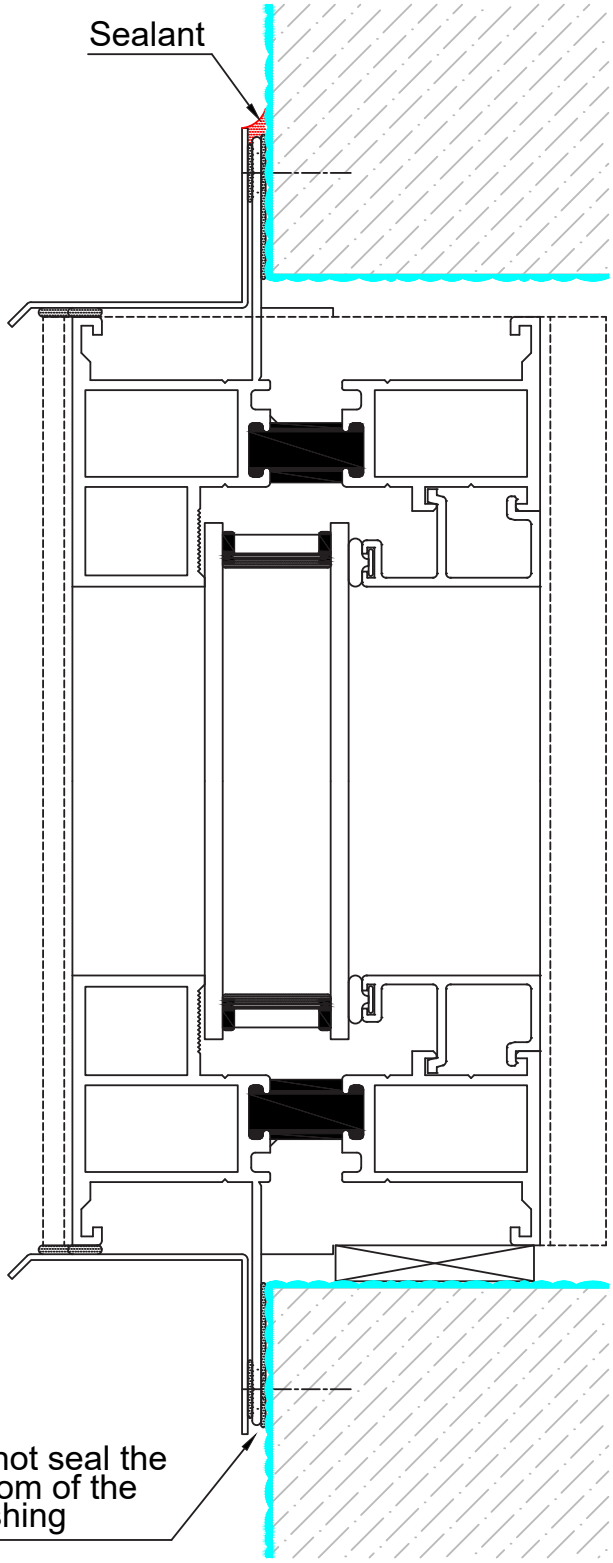
Apply sealant to the top of the Window Unit, T-Mullion, and 'Z' Clip. Then apply sealant to the top of the sill flashing (where shown), and to the bottom of the T-Mullion and 'Z' Clip. Push the supplied Flashing into place, and attach the flashing to building at the jambs, centerline of the D.L.O., and at each side of the 'Z' Clip. Apply sealant over the fastener heads, then tool all sealant as needed.

Make sure the flashings are completely sealed.

Seal the top and sides of the Head Flashing, and the sides of the Sill Flashing to the building.

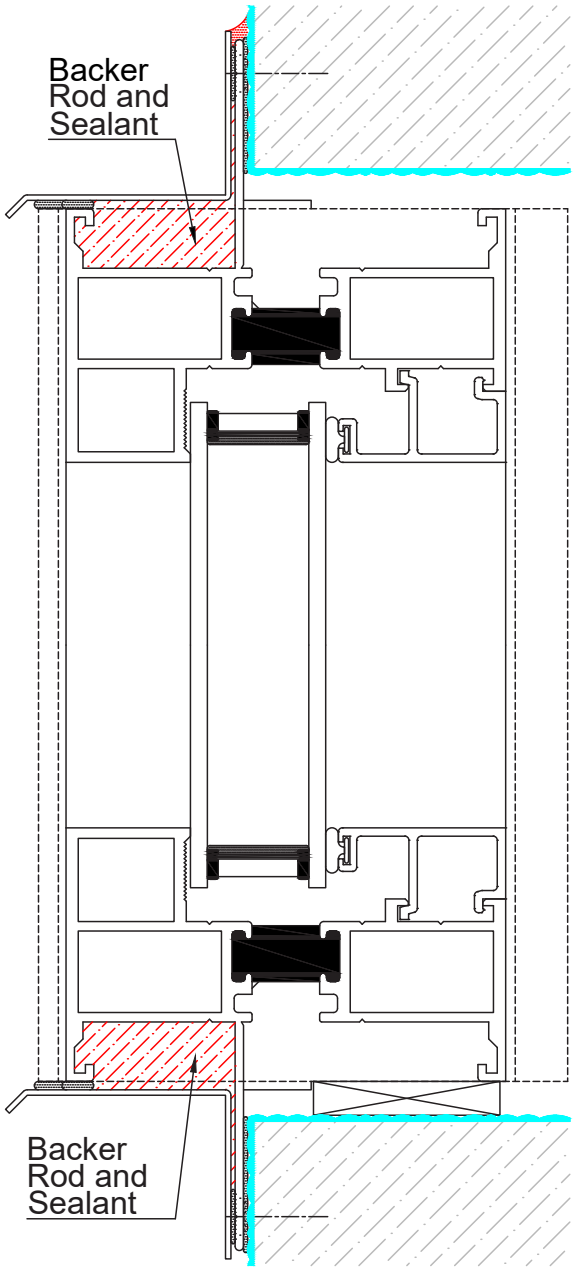
DO NOT seal the bottom of the Flashing at the sill.





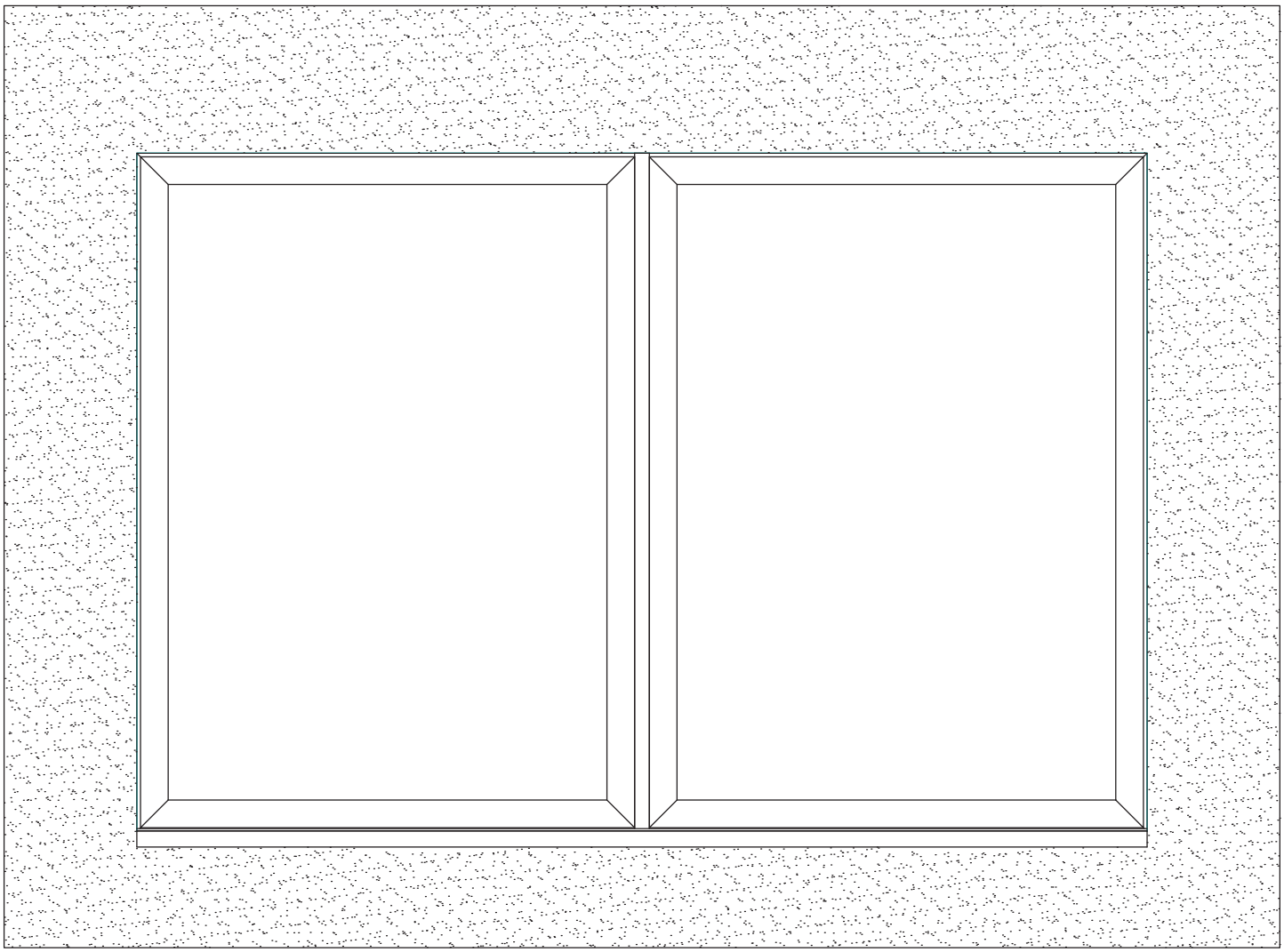
LB8

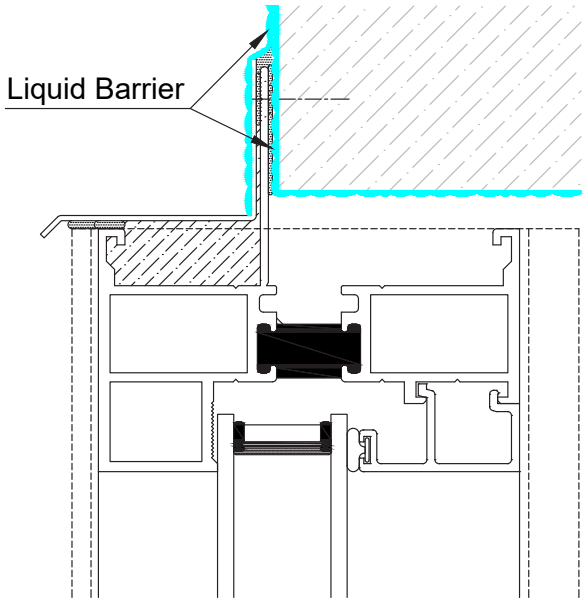
Insert backer rod at the openings at the jambs, then seal entire open void as shown below.

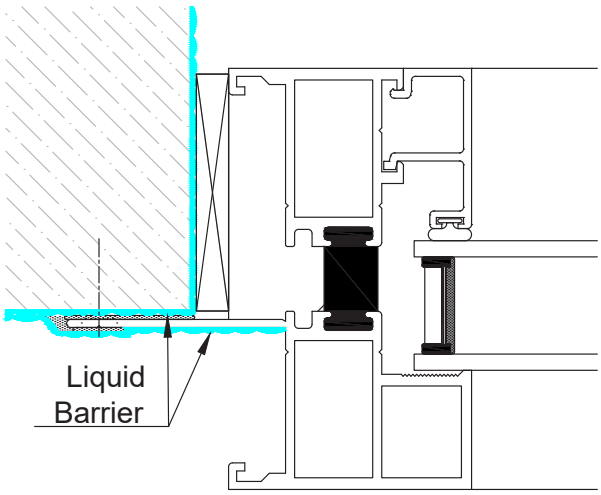


LB9

Apply a Liquid Barrier over the Nail Fins and perimeter fasteners at the head and jambs only.
Liquid Barrier must be continuous and cover entire face as shown without any gaps or holes.
DO NOT APPLY THE LIQUID BARRIER OVER THE NAIL FIN AT THE SILL.

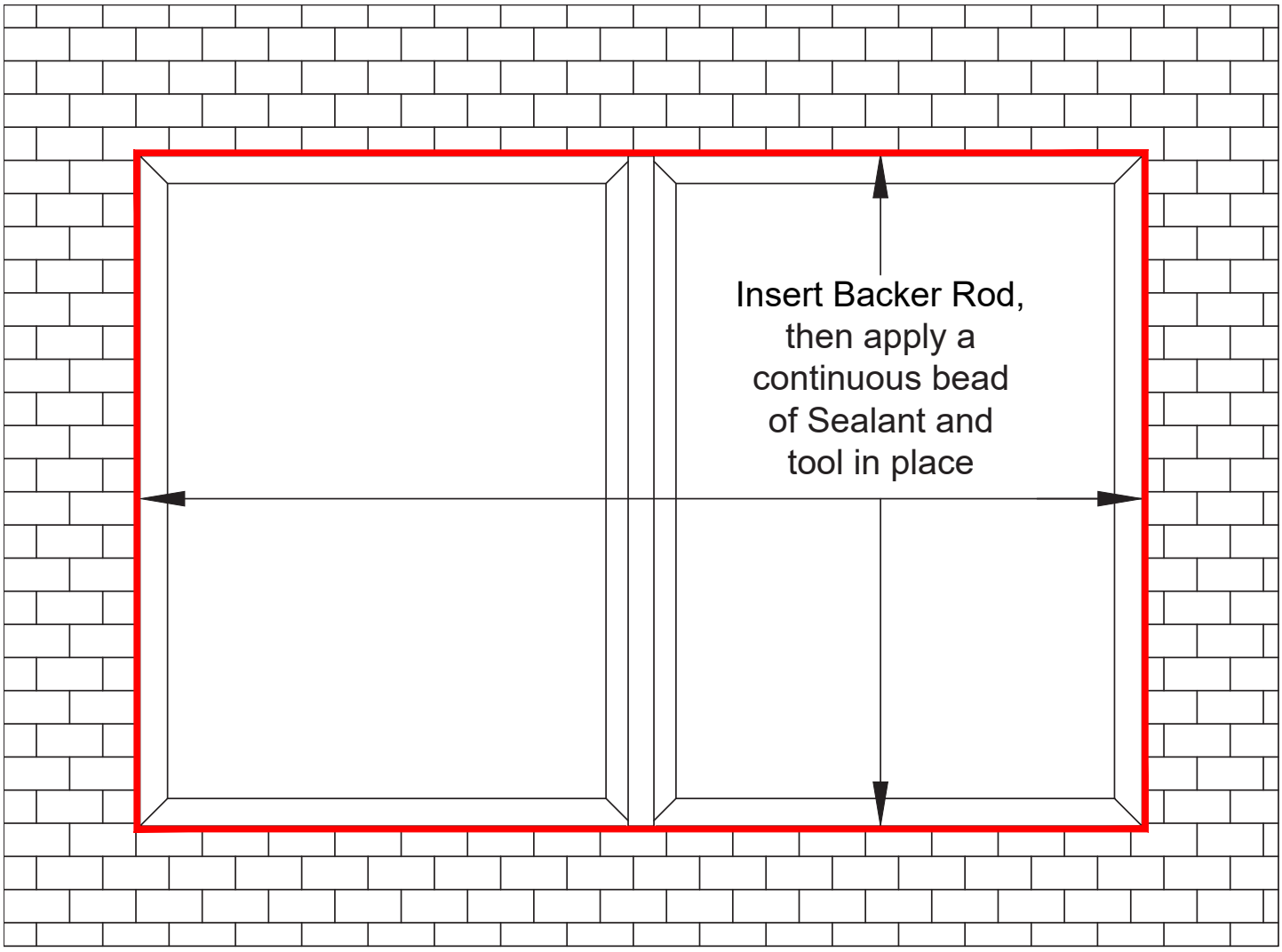






LB10

Refer to the Shop Drawings if additional flashing or other material is required. After exterior building construction is completed, install backer rod, then apply a continuous bead of sealant around entire perimeter of window frame.



Note:
Installer to verify that Sealant being used is compatible with Quaker window frame and the surrounding building construction materials.

Note:
Please inform the exterior facade installer that they must maintain a minimum 1/4” gap between the facade material and the Window Unit, and that the facade material should never come in contact with the Window Unit.

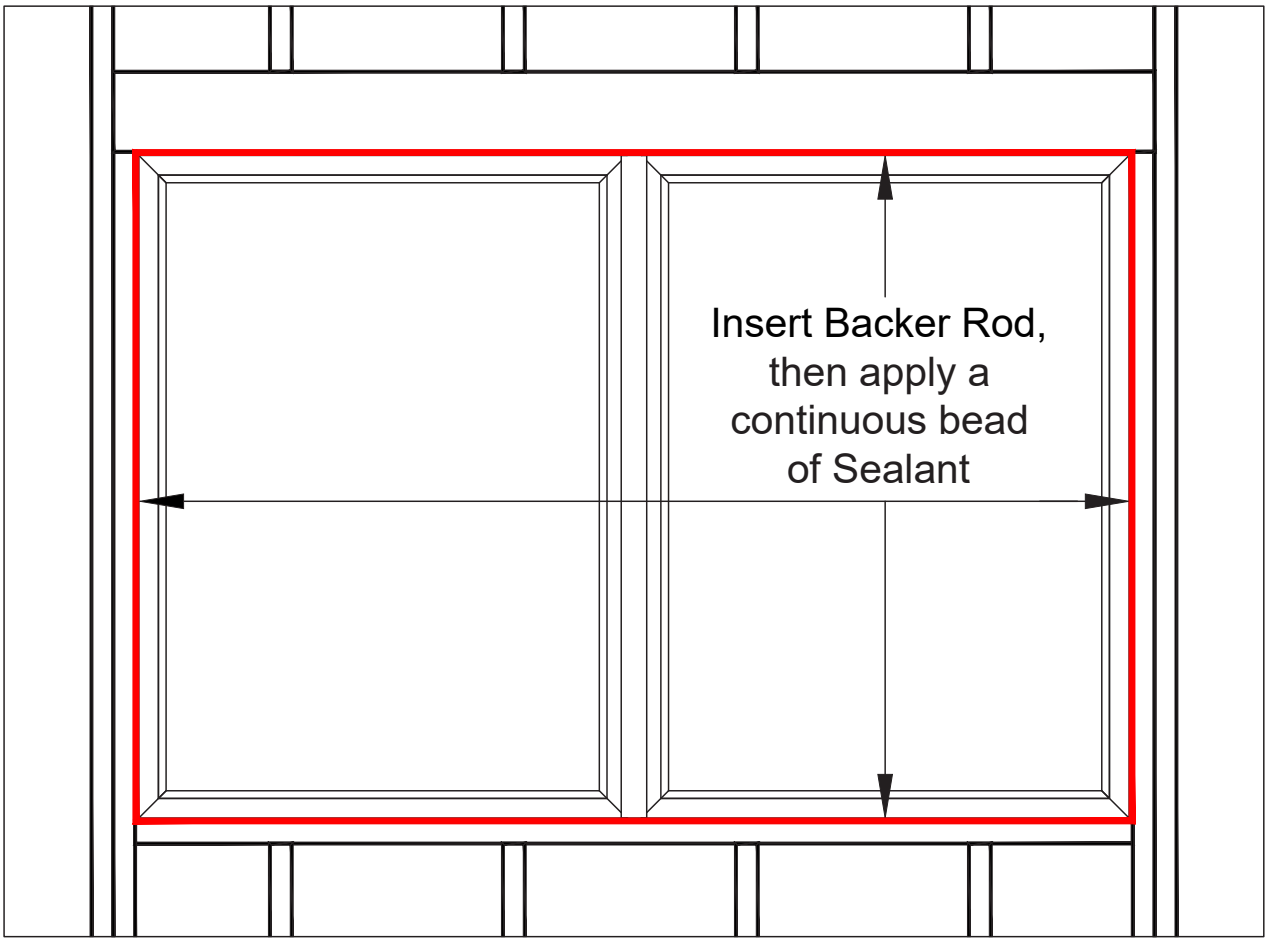
LB11

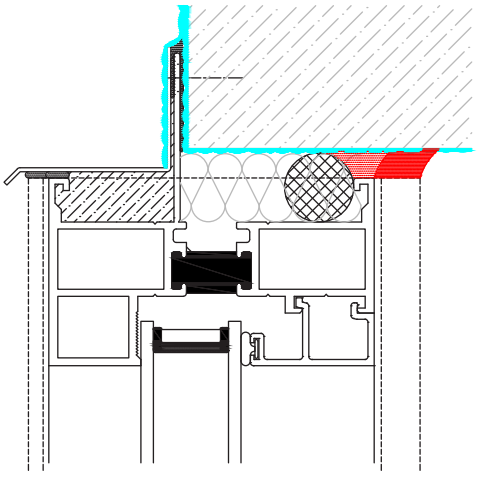
This step must be done for this application.

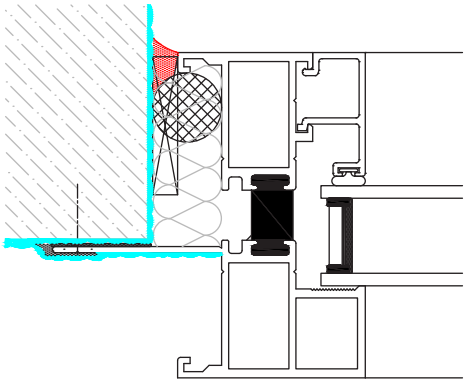
At the interior, stuff insulation in the head and jambs between the frame and the building condition. Then install a backer rod and apply a continuous bead of sealant around the entire perimeter of the frame. Tool sealant in place as needed.

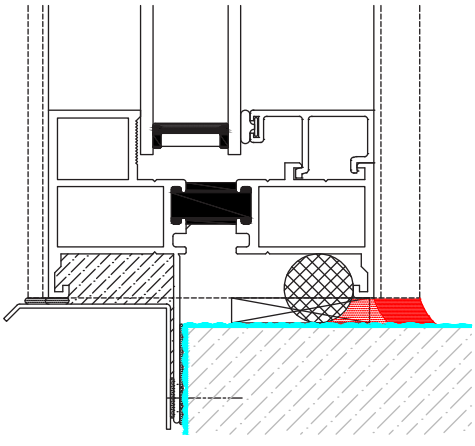
Note:

Installer to verify that Sealant being used is compatible with Quaker window frame and the surrounding building construction materials.









This Completes the Installation when a Liquid Barrier Application (LBA) ALLOWING Sill Weeping is being used