



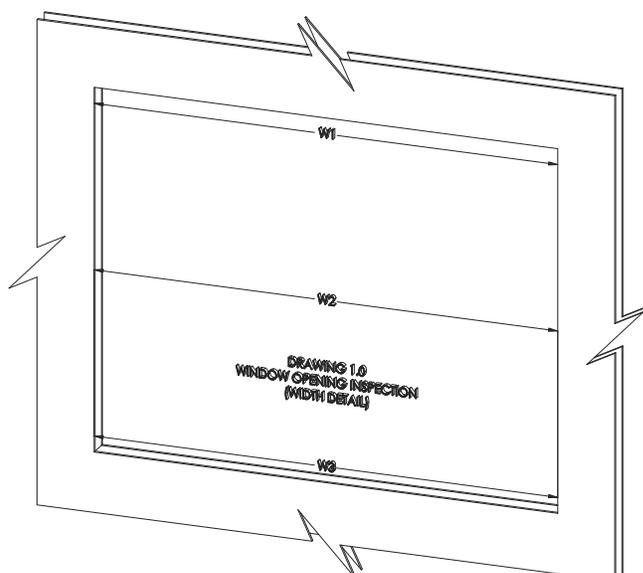
Retrofit Twin Structural Mullion

Special Note

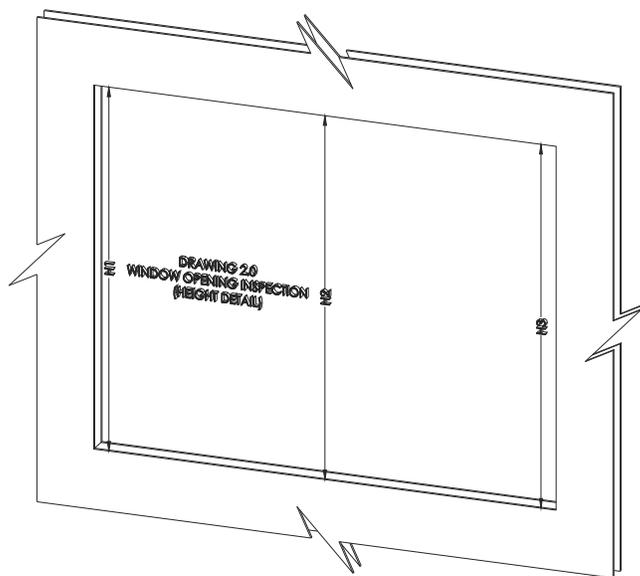
The overall rating of the mullied assembly is equal to the lowest rated individual unit in the assembly. For example, when mulling a DH/PW/DH, if the double hung has a design pressure rating of DP30 and the picture window has a design pressure rating of DP50, the mullied assembly has a design pressure rating of DP30

Window Opening Inspection

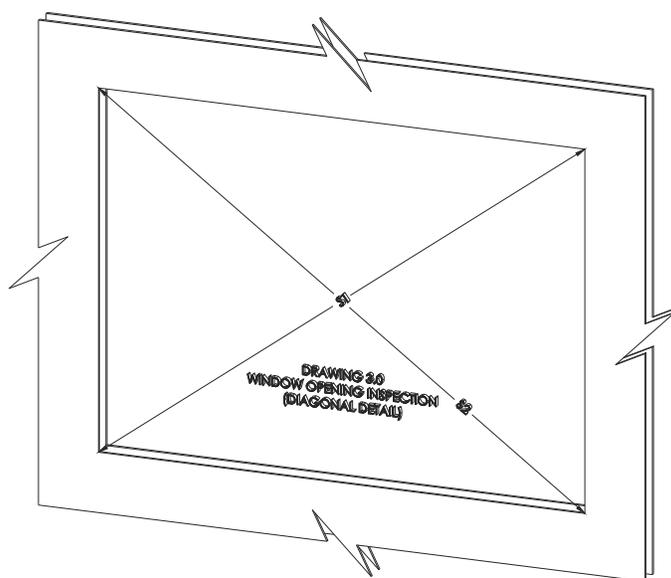
Step 1	Inspect entire perimeter of opening to ensure that there are no objects present which could potentially jeopardize the installation of the fenestration product.
Step 2	Measure the window opening width to ensure the opening is applicable to the fenestration product. Measurements should be taken in the following three areas to ensure consistency: 1) 3" down from the head of the window opening, W1 (See Figure 1.0) 2) The vertical mid-span of the jambs, W2 (See Figure 1.0) 3) 3" up from the sill of the window opening, W3 (See Figure 1.0)



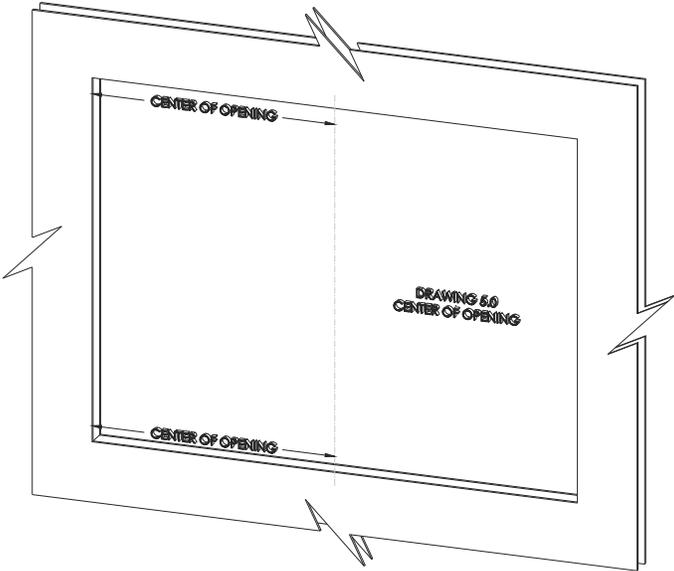
Step 3	<p>Measure the window opening height to ensure the opening is applicable to the fenestration product. Measurements should be taken in the following three areas to ensure consistency:</p> <ol style="list-style-type: none"> 1) 3" from the left jamb of the window opening, H1 (See Drawing 2.0) 2) The horizontal mid-span of the opening, H2 (See Drawing 2.0) 3) 3" from the right jamb of the window opening, H3 (See Drawing 2.0)
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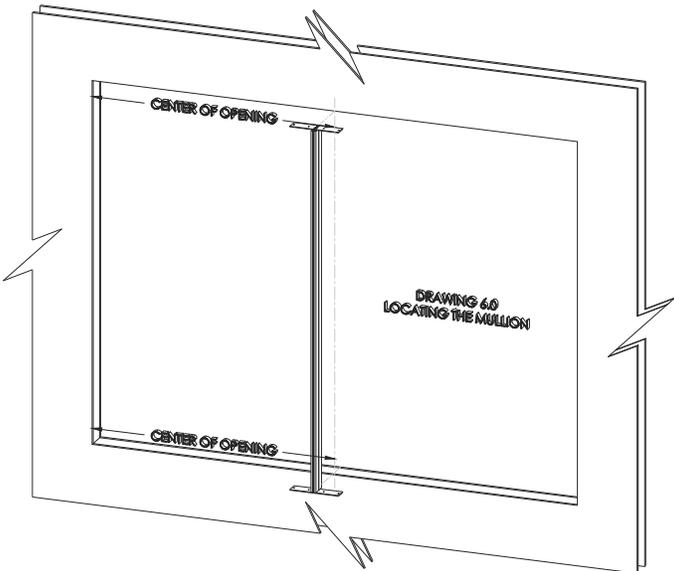
Step 4	<p>Check that the opening is square. This can be done by measuring diagonally across the window opening in both directions and comparing the two values. The opening is deemed to be square as long as the difference is no greater than 1/8", S1 & S2. (See Drawing 3.0)</p>
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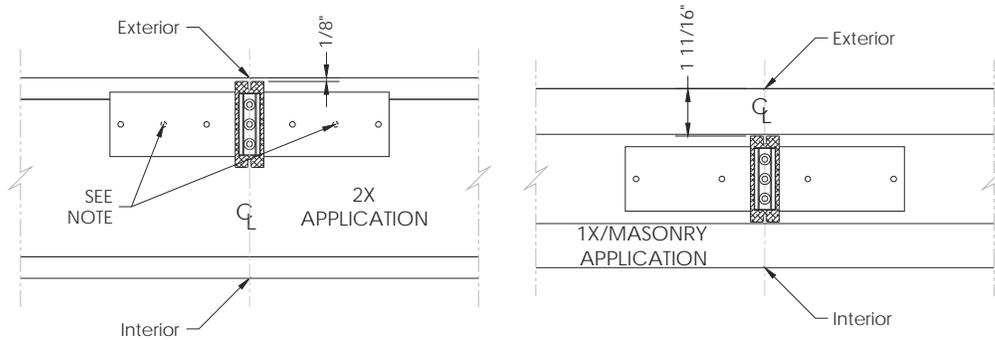
Step 5 | Locate and identify the mid-span of both the head and sill of the window opening.
(See Drawing 5.0)



Step 6 | Place the mullion into the window opening aligning the center of the mullion with the mid-span of the opening at both the head and sill. (See Drawing 6.0)



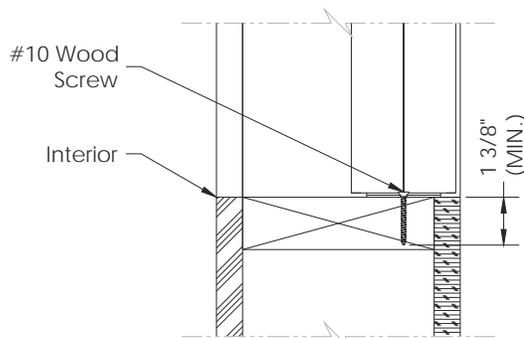
Step 7	<p>With the mullion aligned with the mid-span of the opening, index the mullion (front to back) in the applicable manners detailed below.</p> <ol style="list-style-type: none"> 1) For a masonry application, index the exterior edge of the mullion 1-11/16" from the exterior edge of the opening. This will allow the minimum center of fastener to edge of opening distance of 2-5/8". (See Drawing 8.0) 2) For a wood or 2X application, index the exterior edge of the mullion 1/8" from the exterior edge of the opening. This will allow for a center of fastener to edge of opening distance that will ensure the fasteners do not split the wood during insertion. (See Drawing 8.0)
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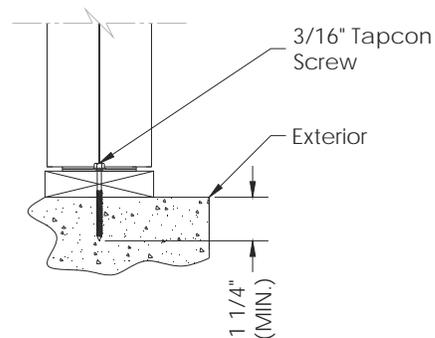
NOTE: WHEN USING THE FULL BRACKET IN A 2X APPLICATION, TWO ADDITIONAL SCREW HOLES ARE REQUIRED. THE HOLE DIAMETER IS 0.194" AND HAS TO BE ADDED IN THE FIELD

DRAWING 8.0
MULLION INDEXING

Step 8	<p>Once the mullion is aligned and indexed properly, anchor the mullion through the mullion plate into both the head and sill of the opening, beginning with the head first. Anchoring methods are as follows:</p> <ol style="list-style-type: none"> 1) For anchoring into masonry, use 3/16" ITW Tapcons with sufficient length to achieve a 1-1/4" minimum embedment into the substrate. (See Drawing 9.0) [All fasteners used must be corrosion resistant] 2) For anchoring into wood framing or 2X buck, use #10 wood screws with sufficient length to achieve a 1-3/8" minimum embedment into the substrate. (See Drawing 10.0) [All fasteners used must be corrosion resistant]
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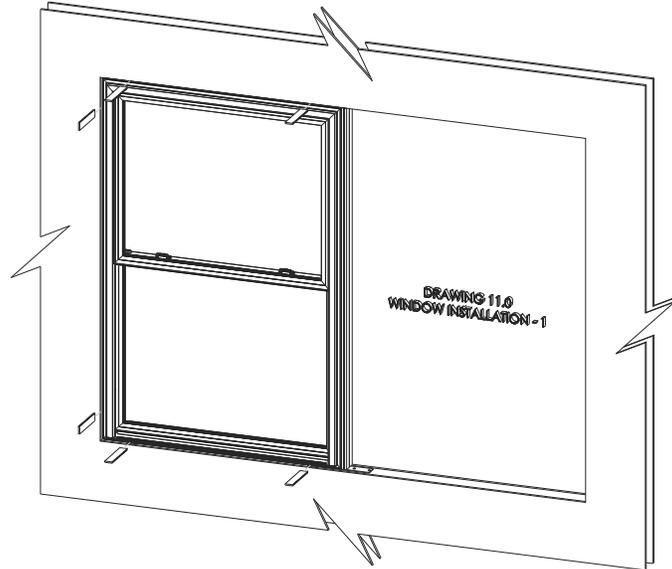
DRAWING 10.0
2X SCREW APPLICATION



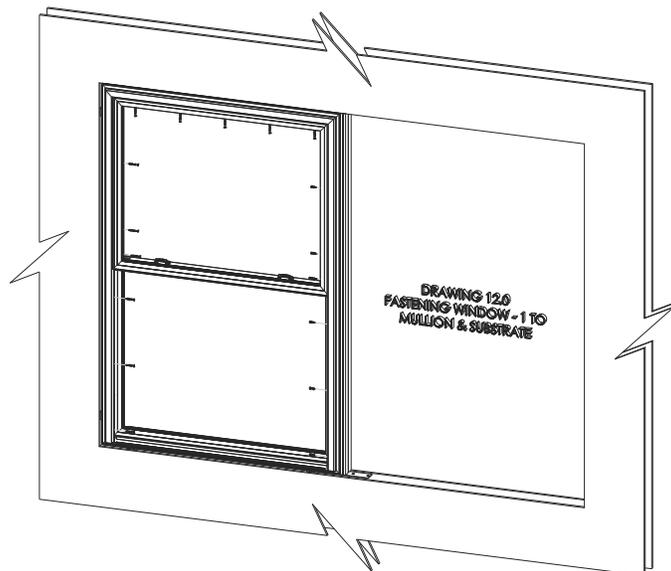
DRAWING 9.0
1X/MASONRY SCREW APPLICATION

Window Opening Inspection

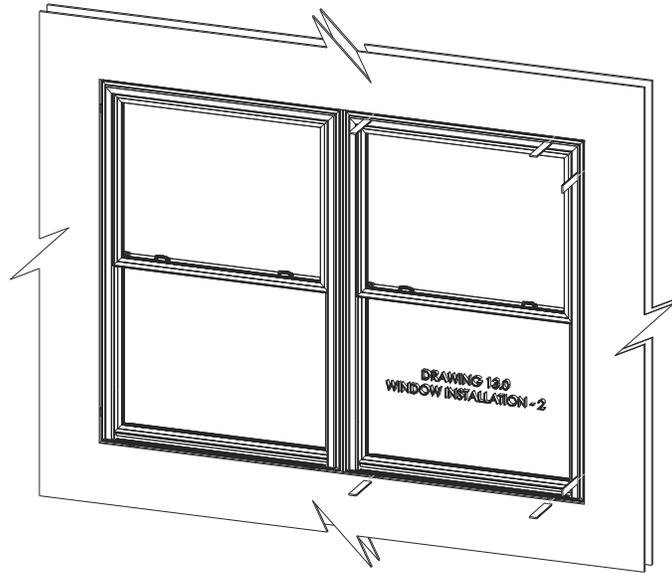
Step 9	Once the mullion is secured properly, place the first window into the opening and shim accordingly. (See Drawing 11.0)
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Step 10	Once the first window is shimmed properly, fasten the window to the mullion utilizing #10 TEK screws with sufficient length to achieve a minimum embedment of three threads past the mullion wall. To determine correct screw size and location, reference the applicable installation drawings for the production being installed. [All fasteners used must be corrosion resistant]
Step 11	Once the first window is secured to the mullion properly, fasten the window to the opposing substrates. For window anchorage into opposing substrates, please refer to the approved installation method via the 3 rd party test report. (See Drawing 12.0) [All fasteners used must be corrosion resistant]

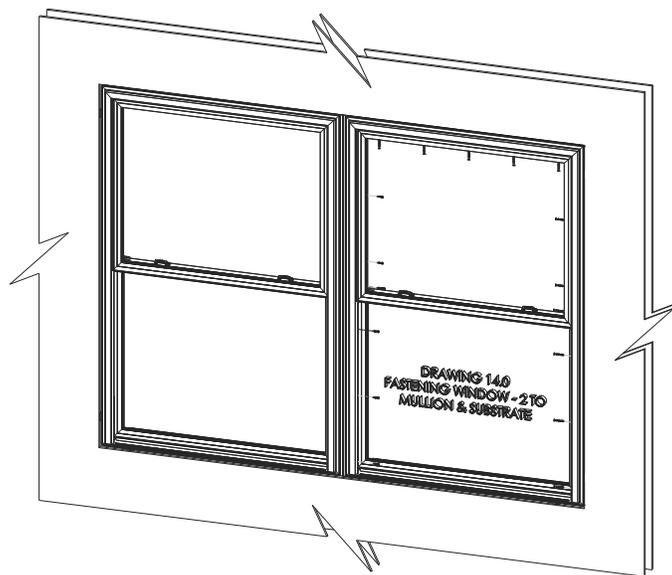


Step 12	Once the first window is secured to the opening and mullion properly, place the second window into the opening and shim accordingly. (See Drawing 13.0)
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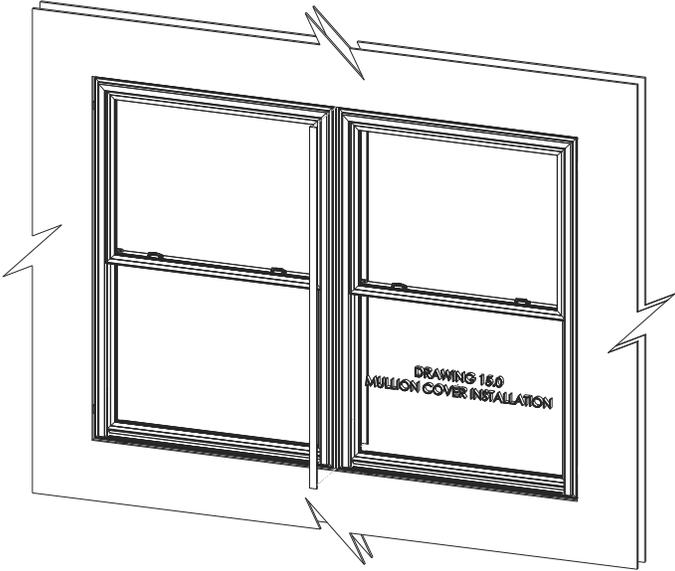


Step 13	Once the second window is shimmed properly, fasten the window to the mullion utilizing #10 TEK screws with sufficient length to achieve a minimum embedment of three threads past the mullion wall. To determine correct screw size and location, reference the applicable installation drawings for the production being installed. [All fasteners used must be corrosion resistant]
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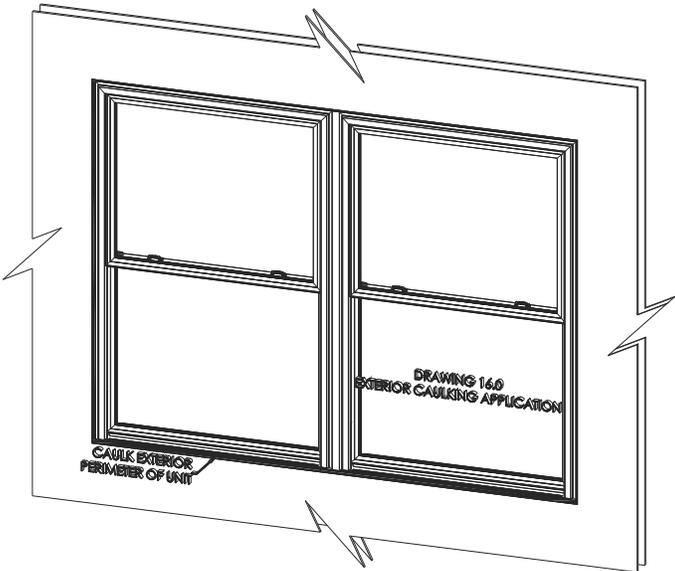
Step 14	Once the second window is secured to the mullion properly, fasten the window to the opposing substrates. For window anchorage into opposing substrates, please refer to the approved installation method via the 3 rd party test report. (See Drawing 14.0) [All fasteners used must be corrosion resistant]
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Step 15	Once both windows are secured properly to both the opening and the mullion, insert the mullion cover to both interior and exterior of the mullied unit. The cover is placed directly over the mullion joint and snaps into place. Prior to installing the exterior cover, seal the exterior joint of the mullied unit. Trimming of the mullion cover may be needed depending on the application. At this time, please insert screw hole caps if needed. <i>(See Drawing 15.0)</i>
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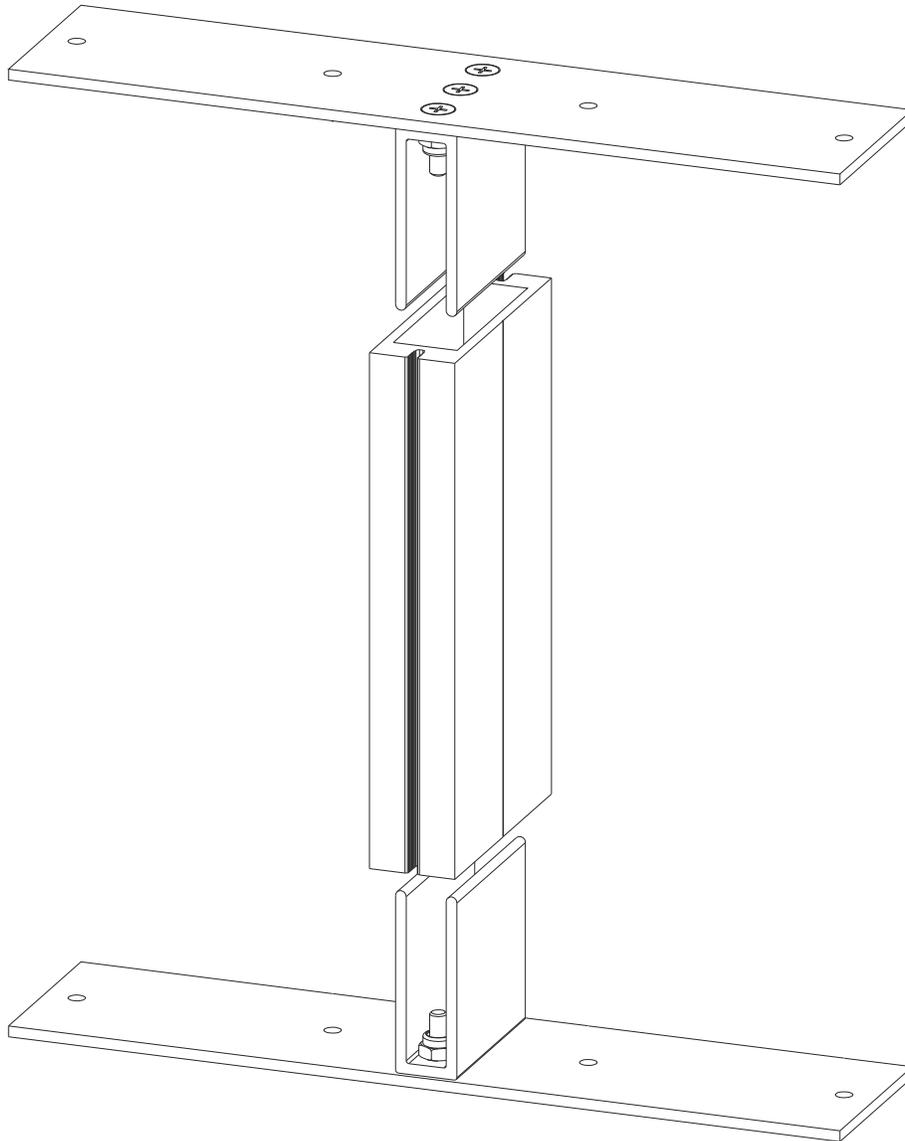


Step 16	Once the mullion covers are applied correctly, seal the exterior perimeter of the mullied unit with an approved sealant for the particular application. <i>(See Drawing 16.0)</i>
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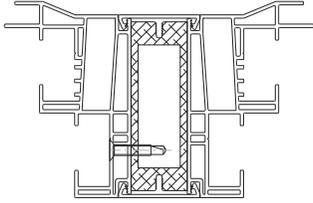


Structural Mull Assembly

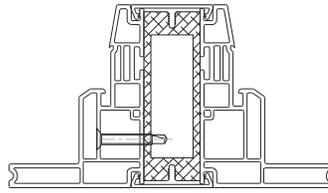
Step 1	Unpackage the structural mullion and inspect for any visual flaws
Step 2	Insert mullion base plates into each end of the mullion. Make sure that the base plates are seated properly so the overall length of the mullion is correct



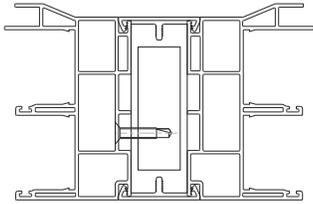
5400 & 7700 Products



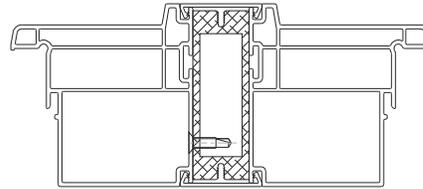
5400 Double Hung
#10 x 1" Screw



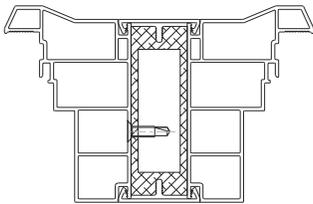
7700 Casement/Awning
#10 x 1-1/4" Screw



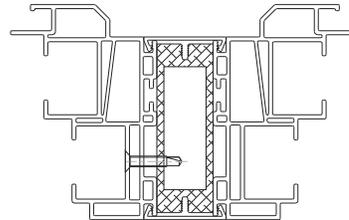
5400 Double Slider
#10 x 1" Screw



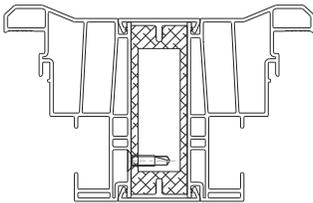
7700 No Hinge
#10 x 3/4" Screw



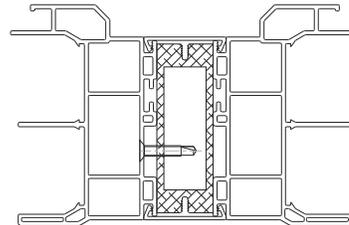
5400 Picture Window
#10 x 3/4" Screw



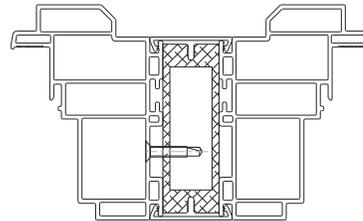
7700 Double Hung
#10 x 1" Screw



5400 Single Hung
#10 x 3/4" Screw



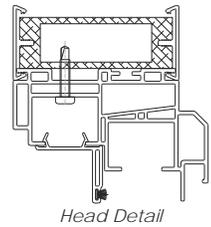
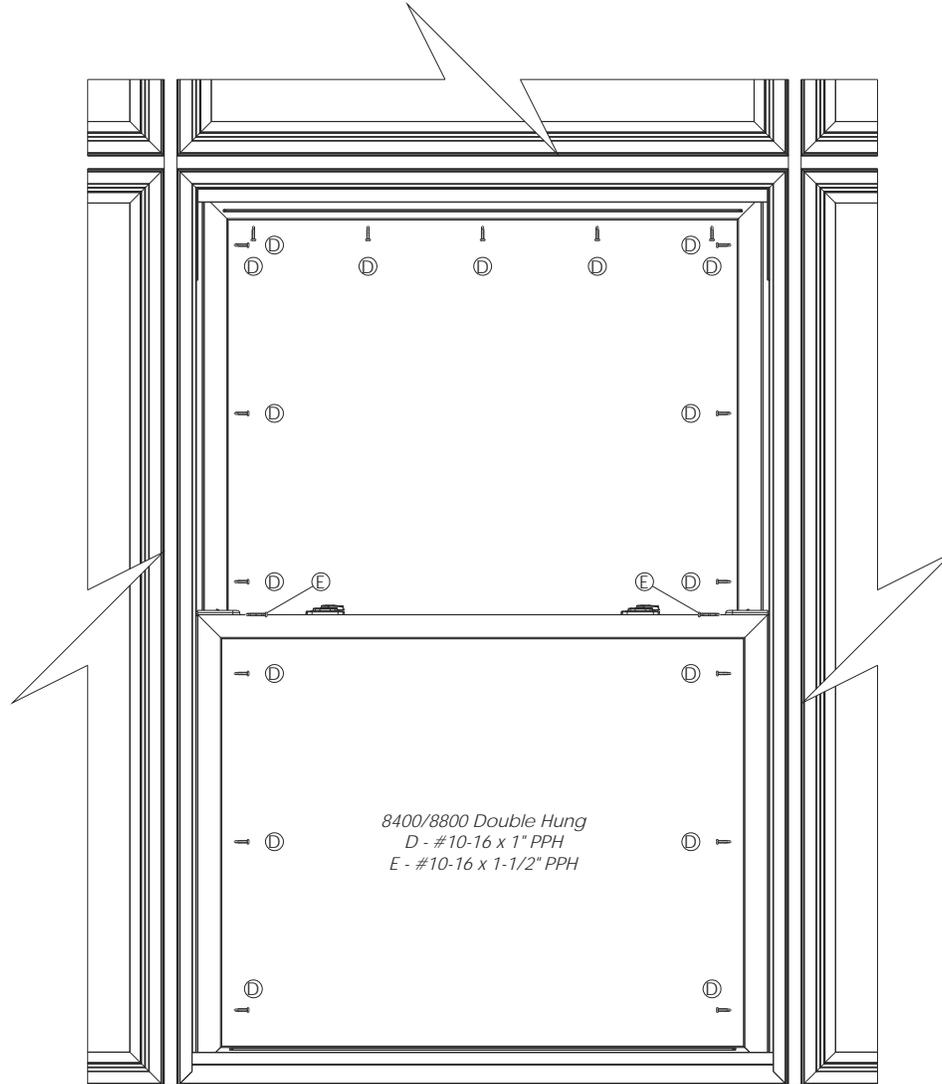
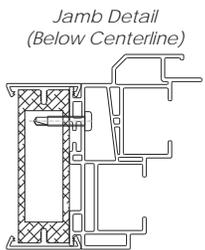
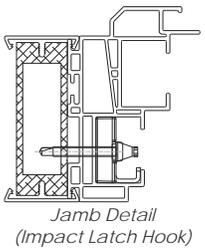
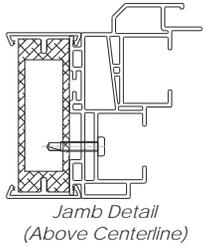
7700 Double Slider
#10 x 1" Screw



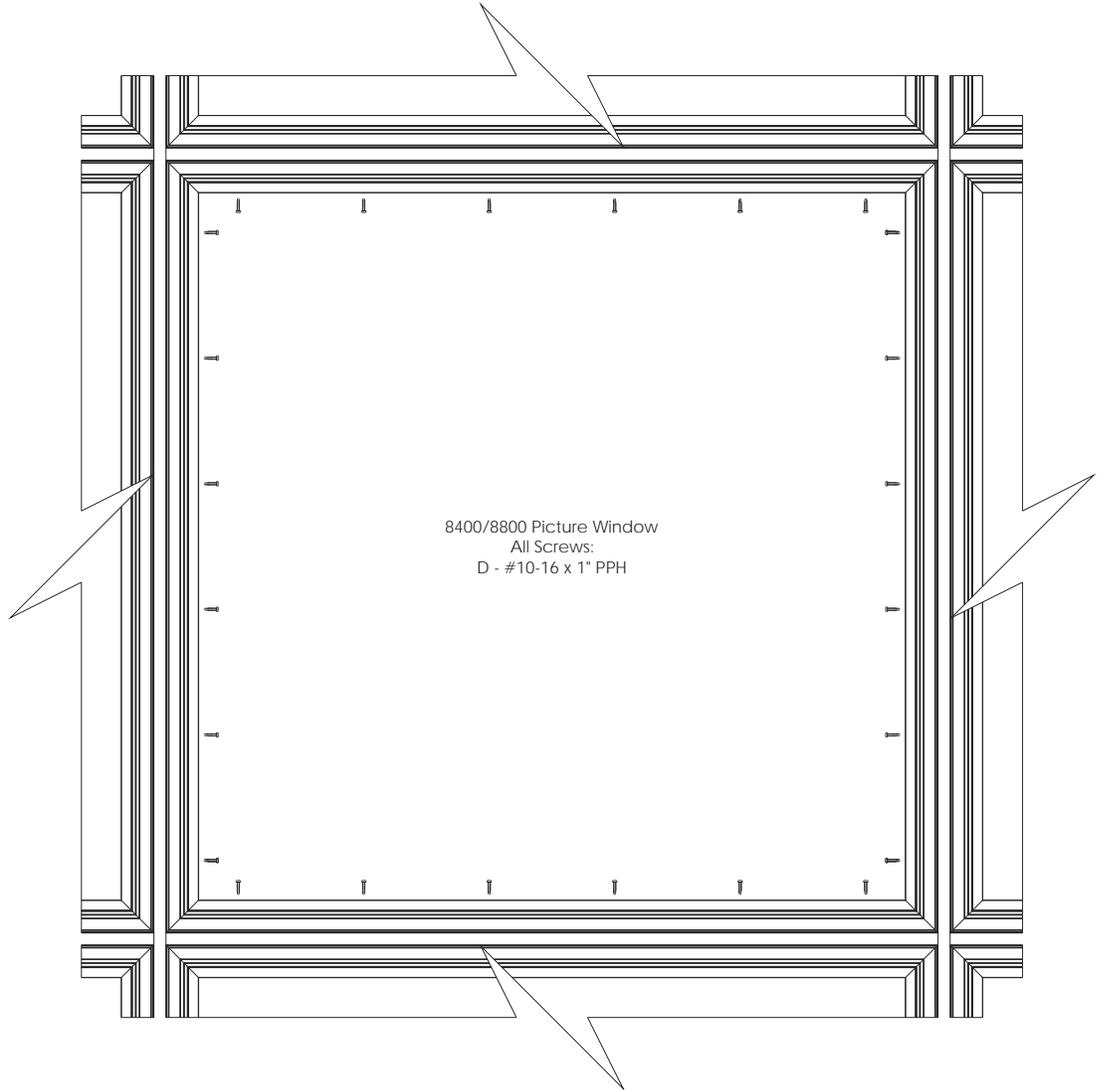
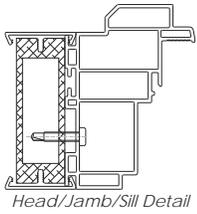
7700 Picture Window
#10 x 1" Screw

8400 & 8800 Products

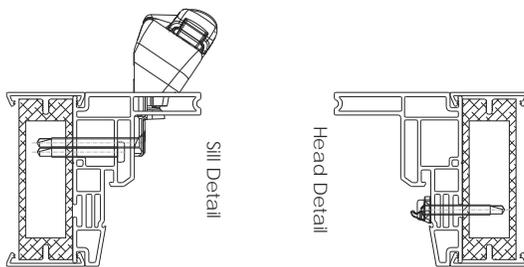
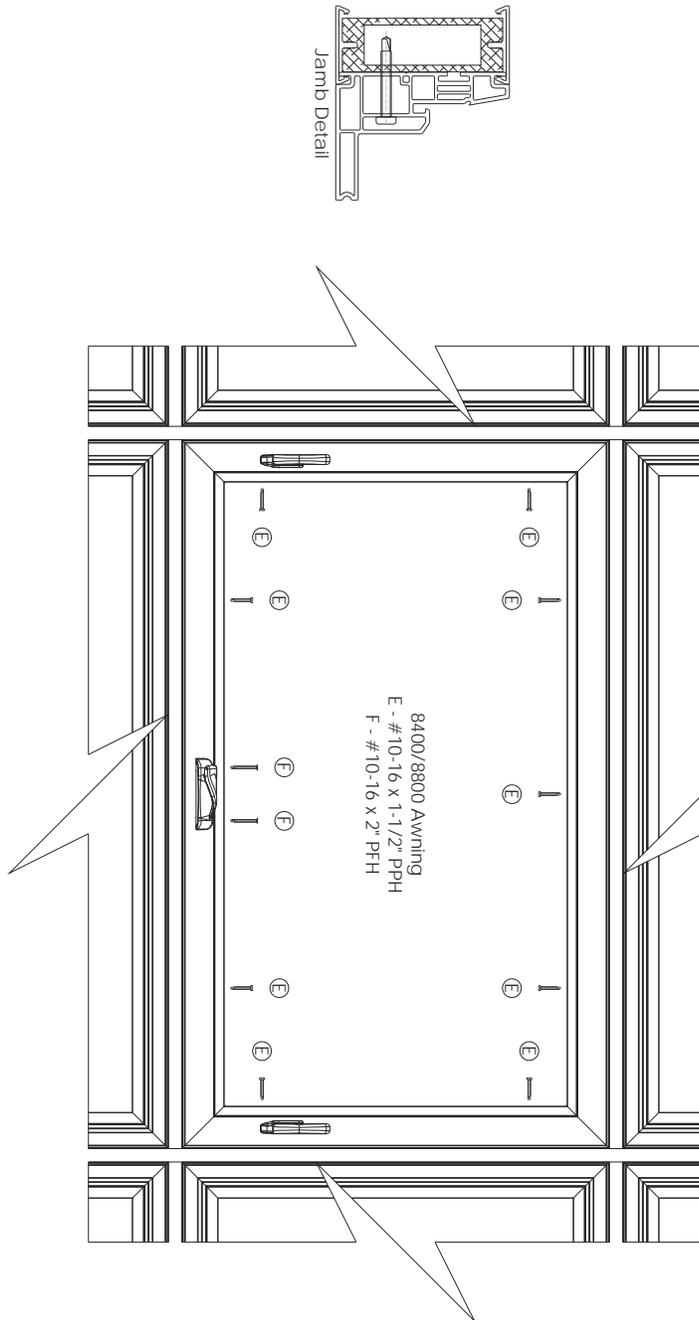
NOTE: Screw detail is for structural mull installation only. For installation screw detail into the substrate, reference applicable FBC installation document.



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