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## NOTES

This Product is a Vinyl Tilt-Slide Door, Dry-Glazed with Steel Reinforcement and Laminated Insulated Glazing. Fixed Window Component May be Either a Fixed Direct-Set Lite, or a Fixed Sash-Set Lite to Match Sliding Panel.

This Product Has Been Designed and Manufactured to Comply with the Requirements of the Florida Building Code, including the High Velocity Hurricane Zone (HVHZ).

This Product Meets the Requirements for Large Missile Impact Resistance up to the Design Pressures Specified Herein: Hurricane Shutters Are Not Required.

This Approval Applies to Single Units, or Combinations of Units Installed Either Side of Product-Approved Mullions Meeting the Site-Specific Design Pressure Requirements. Such Mullions Shall be Subject to the Limitations of their Specific Product Approval Documents.

Wood Buck Design by Others: Wood Bucks Shall Adequately Transfer Imposed Loads to the Surrounding Structure.

A Load Duration Increase in Allowable Stress (Cd=1.33) Has Been Used in the Design of Anchors into Wood Only.

Anchors Shall be As Listed, As Shown on Details Herein. Anchor Embedment into Base Substrate Shall be Beyond Wall Dressing or Stucco. Anchor Conditions Not Described Herein are Not Part of This Approval Document, and Shall Require a Site Specific Design Signed and Sealed by a Florida-Registered Professional Engineer.

Dissimilar Metals that Contact One Another Shall be Painted, Plated, or Otherwise Galvanically Isolated in Accordance with the Florida Building Code.

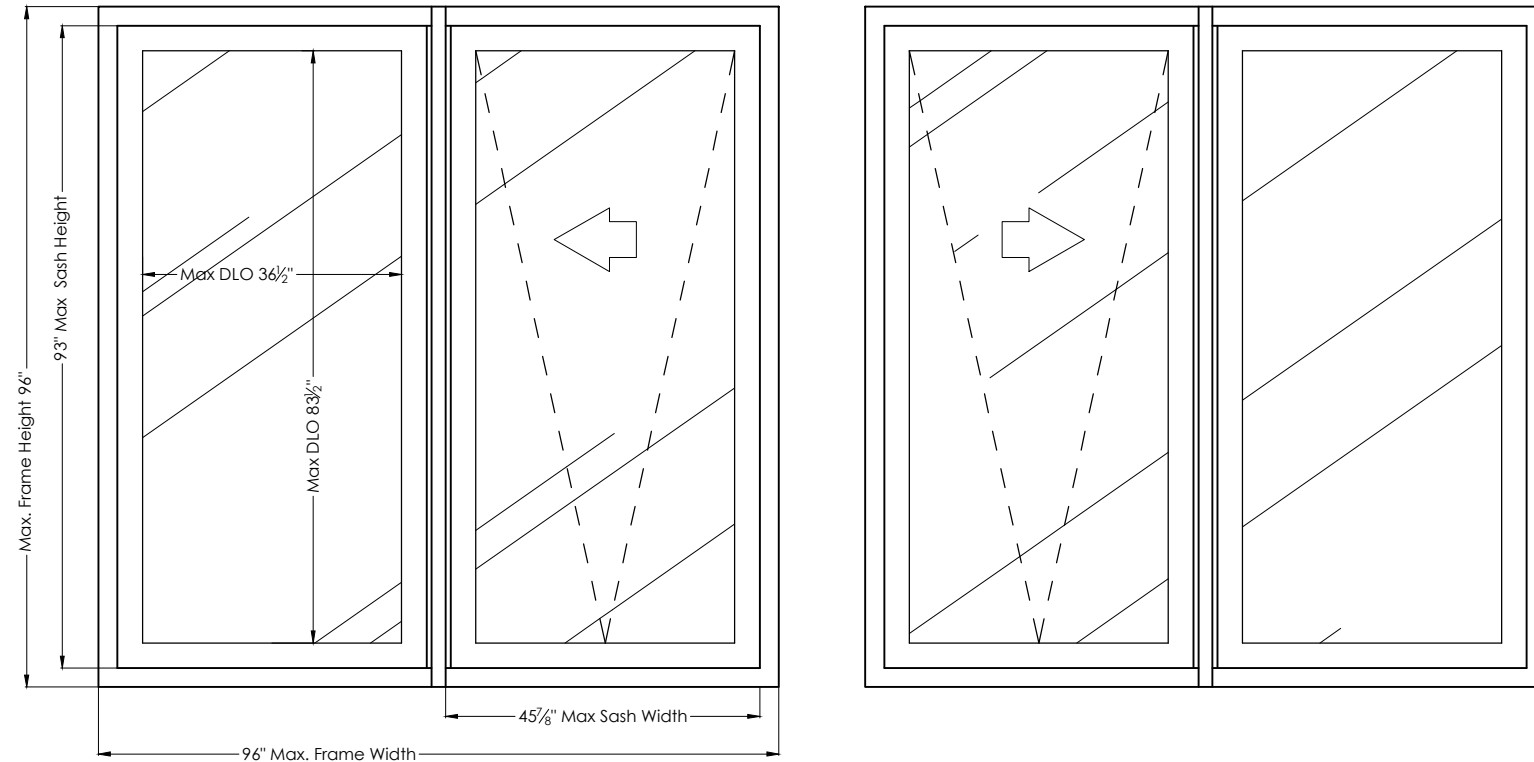
It Shall be the Responsibility of the Contractor, Engineer of Record, or End User to Determine that the Host Structure is Capable of Supporting the Loads Imposed Upon it, including Wind Loads, and the Suitability of this Product for the Specific Project.

Maximum Frame Size: 96" x 96"  
Maximum Daylight Opening: 33<sup>3</sup>/<sub>8</sub>" x 69<sup>3</sup>/<sub>8</sub>".

### MATERIALS

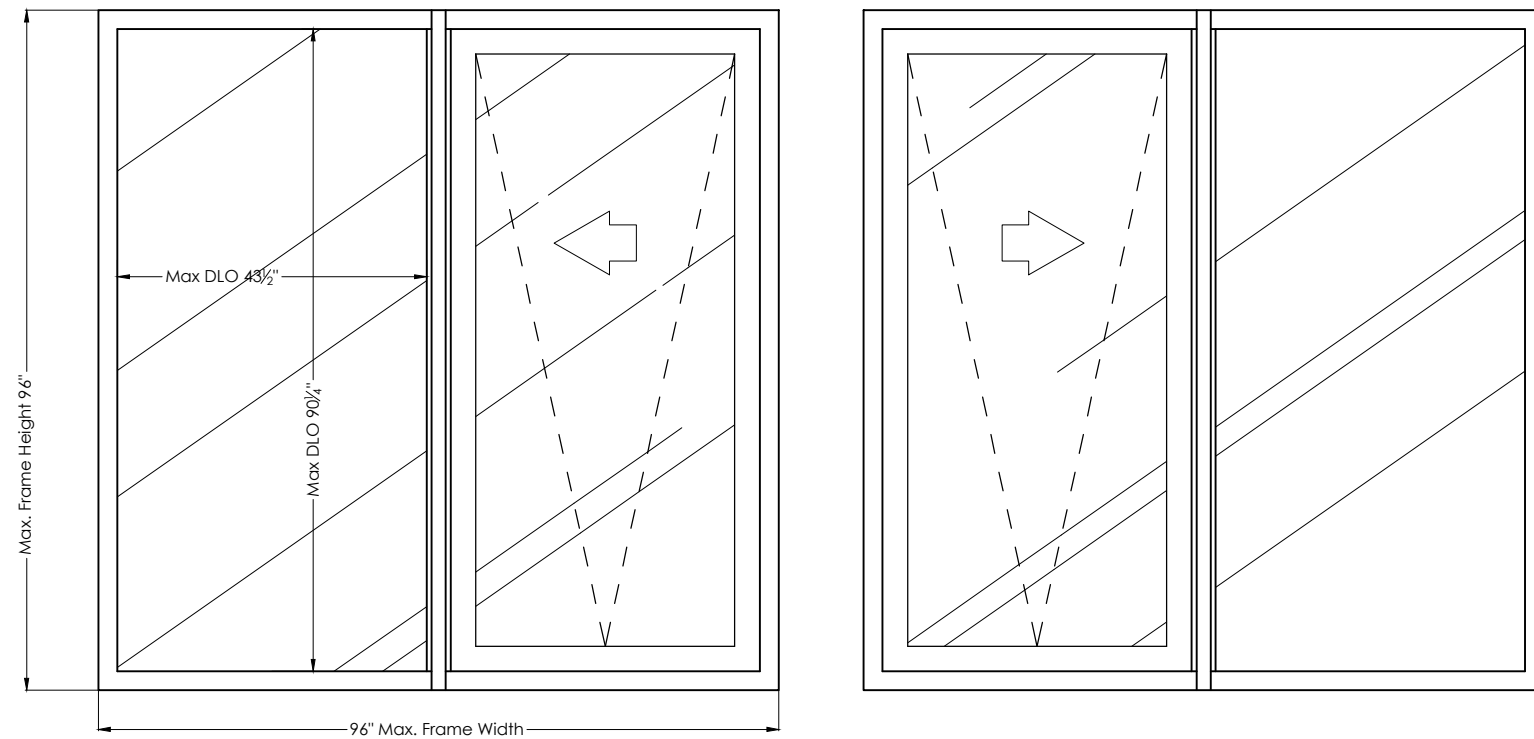
Rigid PVC Extrusions Manufactured by Rehau, Inc. Hold a Current Miami-Dade County NOA

Glazing Interlayer, Manufactured by E.I DuPont De Nemours, & Co. Holds a Current Miami-Dade County NOA



4500-SERIES TILT-SLIDE DOOR with FIXED PANEL

|   |  |
|---|--|
| <b>DESIGN PRESSURE RATING</b><br>+80 psf, -80 psf | <b>MISSILE IMPACT RATING</b><br>Large Missile Impact |
|---|--|



4500-SERIES TILT-SLIDE DOOR with DIRECT-SET PANEL

|   |  |
|---|--|
| <b>DESIGN PRESSURE RATING</b><br>+80 psf, -80 psf | <b>MISSILE IMPACT RATING</b><br>Large Missile Impact |
|---|--|

**CATEGORY 5**  
Engineering Services, Inc.

1600 S. Federal Highway, #207  
Pompano Beach, FL 33062  
(954) 784-6991 • CA #25854

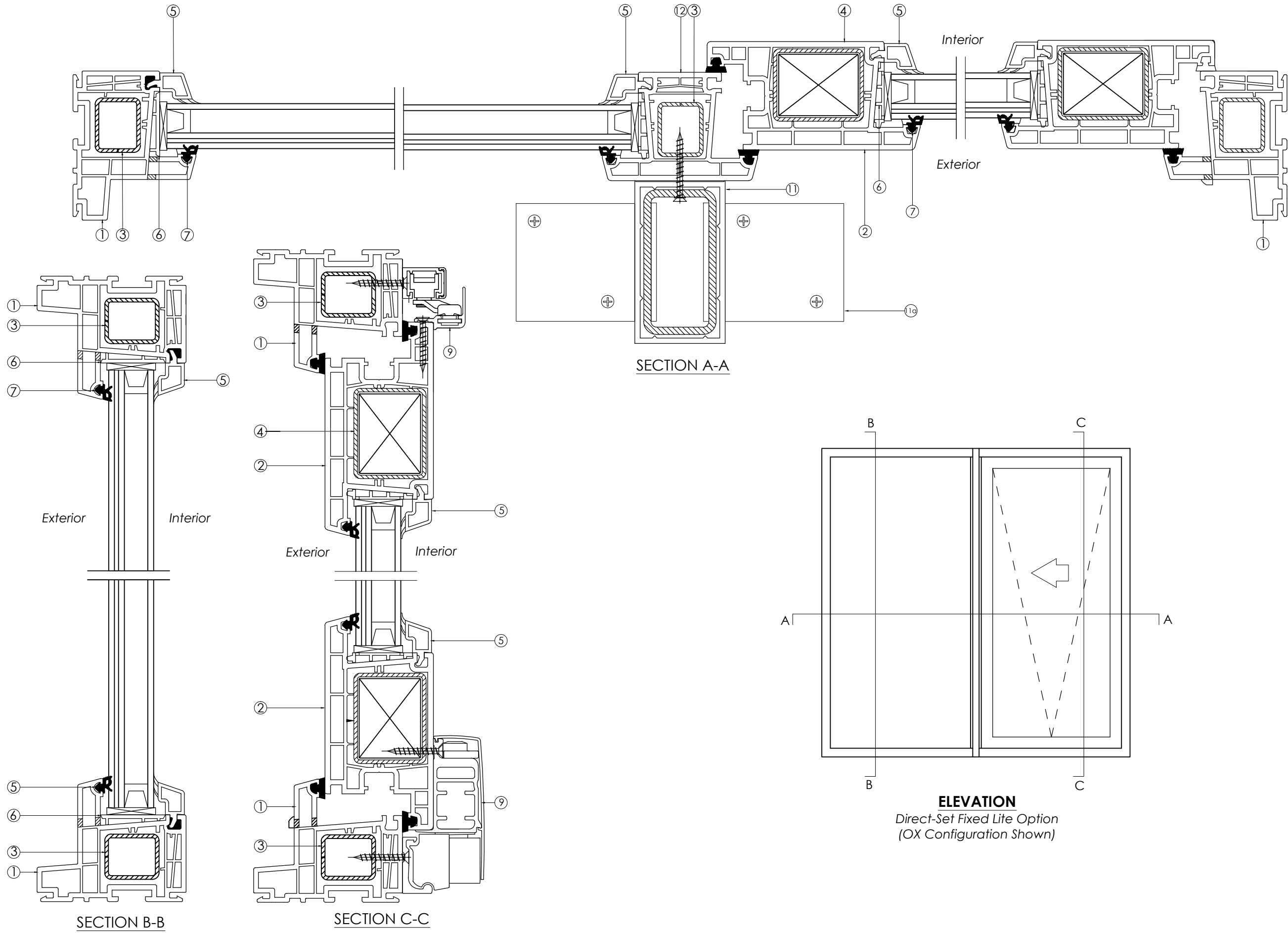
**DRAWING No. :**  
ESWD4500SD-Install

| REVISIONS |  |
|-----------|--|
| No        | Description                            |
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| 1         | 07/23/13<br>EM<br>No change this sheet |
| 2         | 03/03/16<br>EM<br>No change this sheet |

**4500-SERIES TILT-SLIDE DOOR**  
**Large Missile Impact Resistant**

**EUROSTYLE**  
**IMPACT WINDOWS & DOORS**  
217 NW 4th Ave., Hallandale Beach, FL 33009

Sheet **1** of **6**



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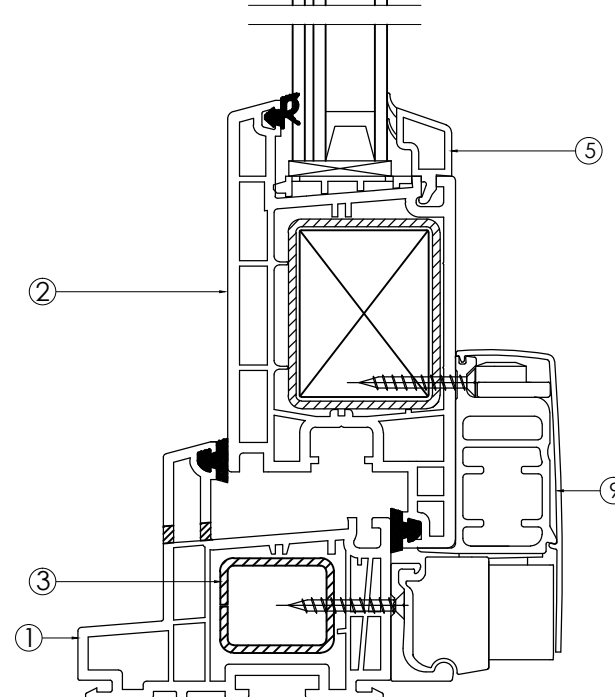
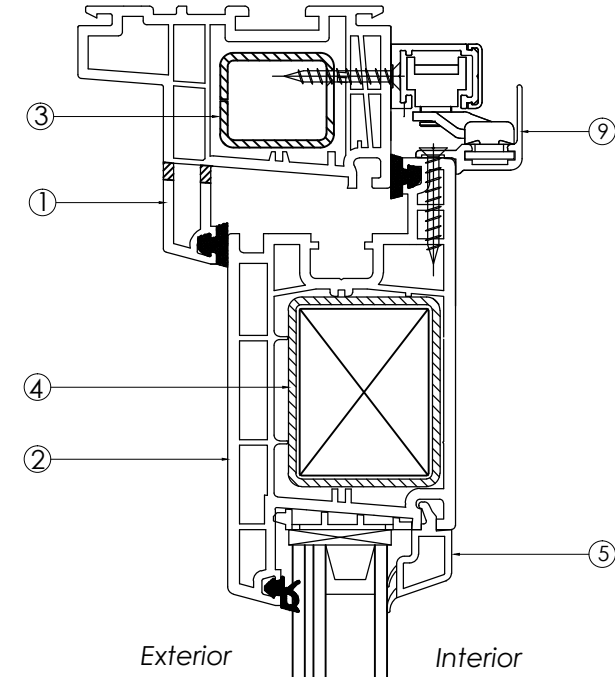
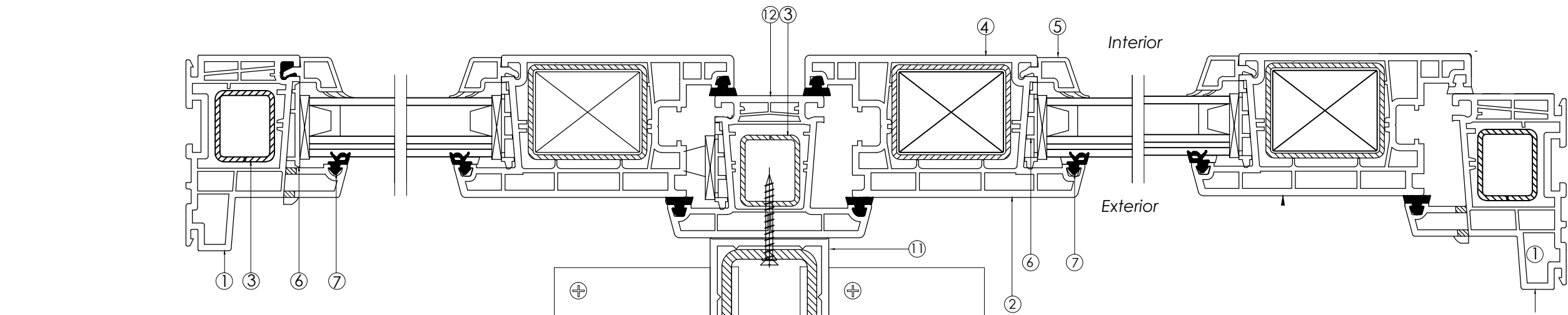
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| 1         | 07/23/13 | EM | Add active panel symbol to schematic |  |
| 2         | 03/03/16 | EM | Add Item 11a                         |  |

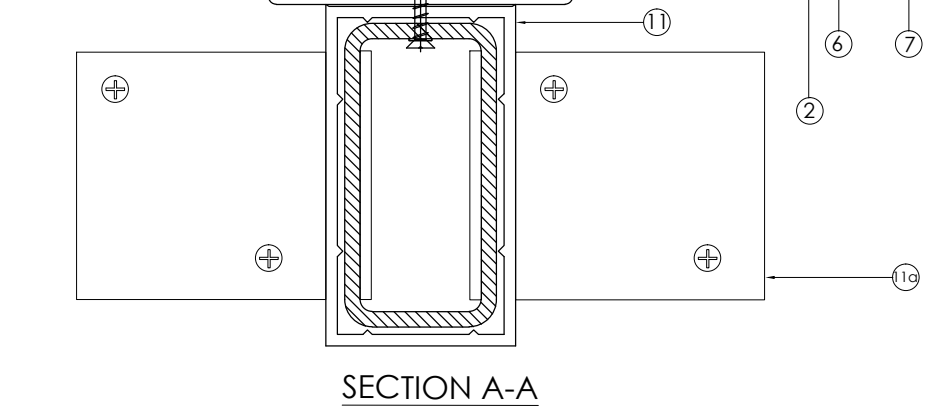
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**Large Missile Impact Resistant**

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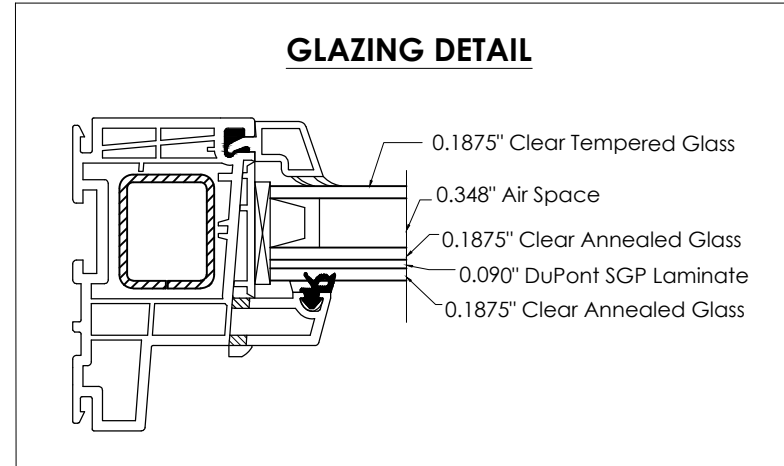
Sheet **2** of **6**



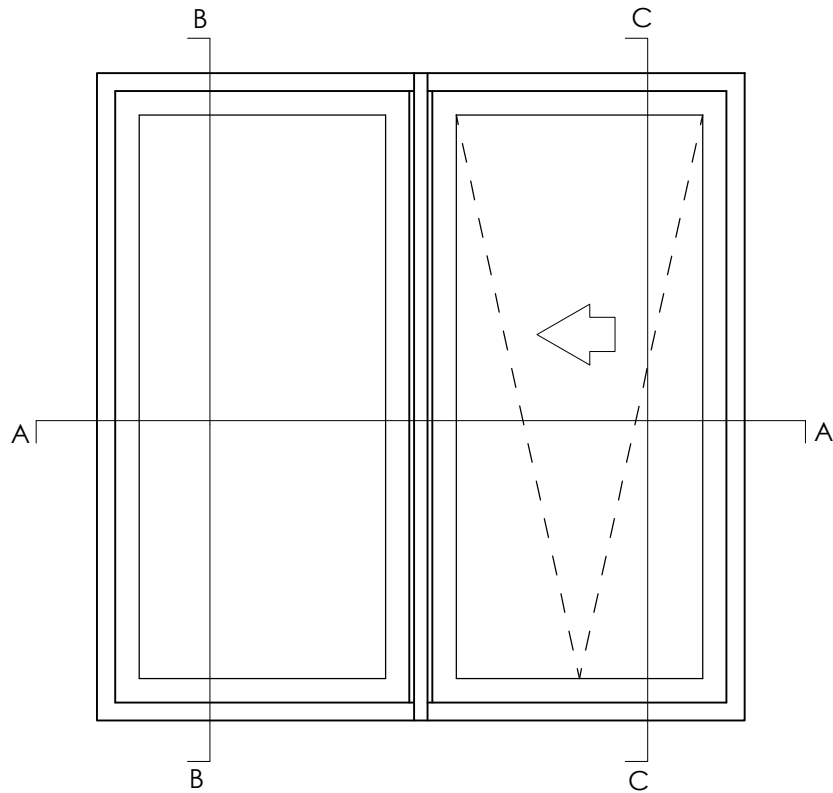
SECTION B-B



SECTION A-A



GLAZING DETAIL



**ELEVATION**  
Sash-Set Fixed Lite Option  
(OX Configuration Shown)

**REVISIONS**

| No | Date     | By | Description                        |
|----|----------|----|------------------------------------|
| 0  | 05/06/13 | EM | Original Issue                     |
| 1  | 07/23/13 | EM | Add sash panel symbol to schematic |
| 2  | 03/03/16 | EM | Add Item 1a                        |

**4500-SERIES TILT-SLIDE DOOR**  
**Large Missile Impact Resistant**

Sheet **3** of **6**  
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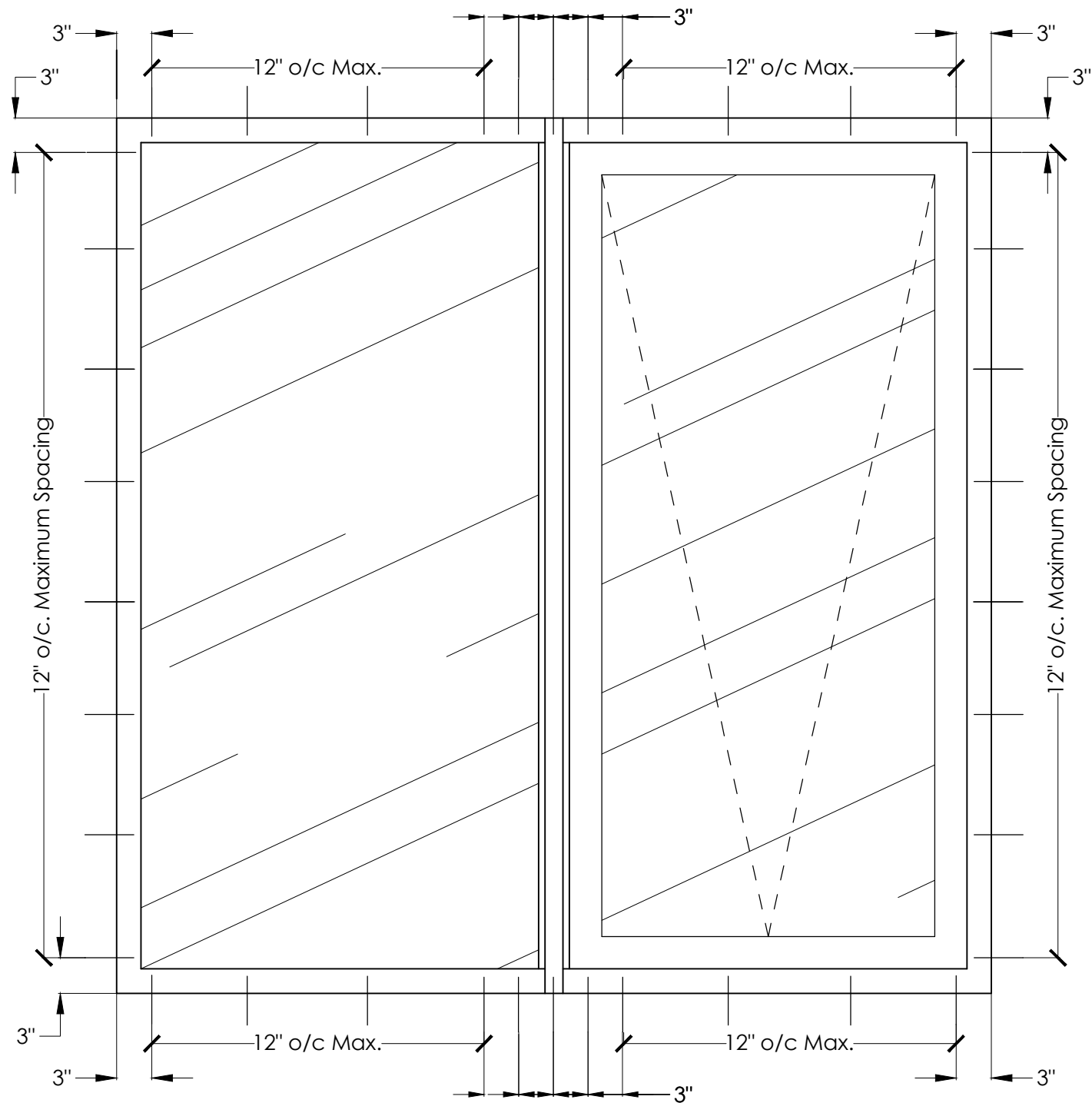
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**DRAWING No. :**  
ESWD4500SD-Install

# 4500-SERIES TILT-SLIDE WINDOW

Anchor Schedule Applies to Both Options, and Mirror Image Orientation



## INSTALLATION NOTES

- Anchors Shall be of a Type Listed on This Sheet, Depending on the Substrate.
- Manufacturer's Vinyl Block Shall be Secured with Caulking at Each Anchor Location So That the Fastener Penetrates the Block, and No Portion of the Fastener is Exposed or Unsupported.
- Anchors Shall be Located a Maximum of 3" From Corners.
- A Cluster of (5) Anchors Shall be Located at the Center of the Head and Sill, Spaced 3" Max. o/c.
- The Balance of Anchors at the Head Jamb and Sill Shall be Spaced at a Maximum of 12" o/c.
- Wood Bucks Shall Fully Back the Window Frame, Supporting its Entire Depth.
- A 1" x Wood Buck Shall be a Wood Buck Having a Thickness of Less Than 1 1/2". 1" x Wood Bucks Shall be Optional if the Window Can be Installed Directly to the Substrate.
- The Installation of 2" x Wood Bucks Shall be Engineered by Others, as Approved by the Authority Having Jurisdiction.
- A Structural Shim Shall be Used at Each Anchor Location Where a Gap of 1/8-inch or More Exists Between the Window Frame and the Substrate. Such Shims Shall Extend the Entire Depth of the Frame, and be No More than

1/4-inch in Thickness, Unless Otherwise Specified.

- Anchor Embedments and Edge Distances Indicated Shall be Beyond Wall Dressing or Stucco, into Structural Substrate.

## ANCHORS FOR EXTERNAL MULLION:

- Shall be of Type I Only, Fastened Directly to Reinforced Concrete - No Wood Buck or Shim Space Permitted. Minimum Embedment is 1 3/4" into Concrete. Space Fasteners 3" Minimum on Center, and 2 1/2" Minimum Edge Distance in Concrete

## ANCHORS SHALL BE OF THE FOLLOWING TYPES:

- **TYPE I:** For Installation into **Concrete Substrates** ( $f_c \text{ min.} = 2730 \text{ psi}$ ), Use Approved 1/4" ELCO Ultracons of Sufficient Length to Achieve at Least 1 1/4" Embedment.
- **TYPE II:** For Installation into **CMU Substrates** (Hollow or Grout-Filled;  $f_c \text{ min.} = 1924 \text{ psi}$ ), Use Approved 1/4" ELCO Ultracons of Sufficient Length to Achieve at Least 1 1/4" Embedment. **Note: Hollow CMU Substrate Shall be Permitted at Jamb Only.**
- **TYPE III:** For Installation into **Wood Substrates**, Use #12 Self-Drilling Screws (Hilti Kwik-Flex or Eq.), of Sufficient Length to Achieve at Least 1 1/2" Embedment.
- **TYPE IV:** For Installation into **Metal Substrates**, at Least 1/8" Thick, Use #12 Self-Drilling Screws (Hilti Kwik-Flex or Eq.), of Sufficient Length to Achieve a Minimum Penetration through the Metal of Three Full Thread Pitches. No Shim Space is Permitted.

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## REVISIONS

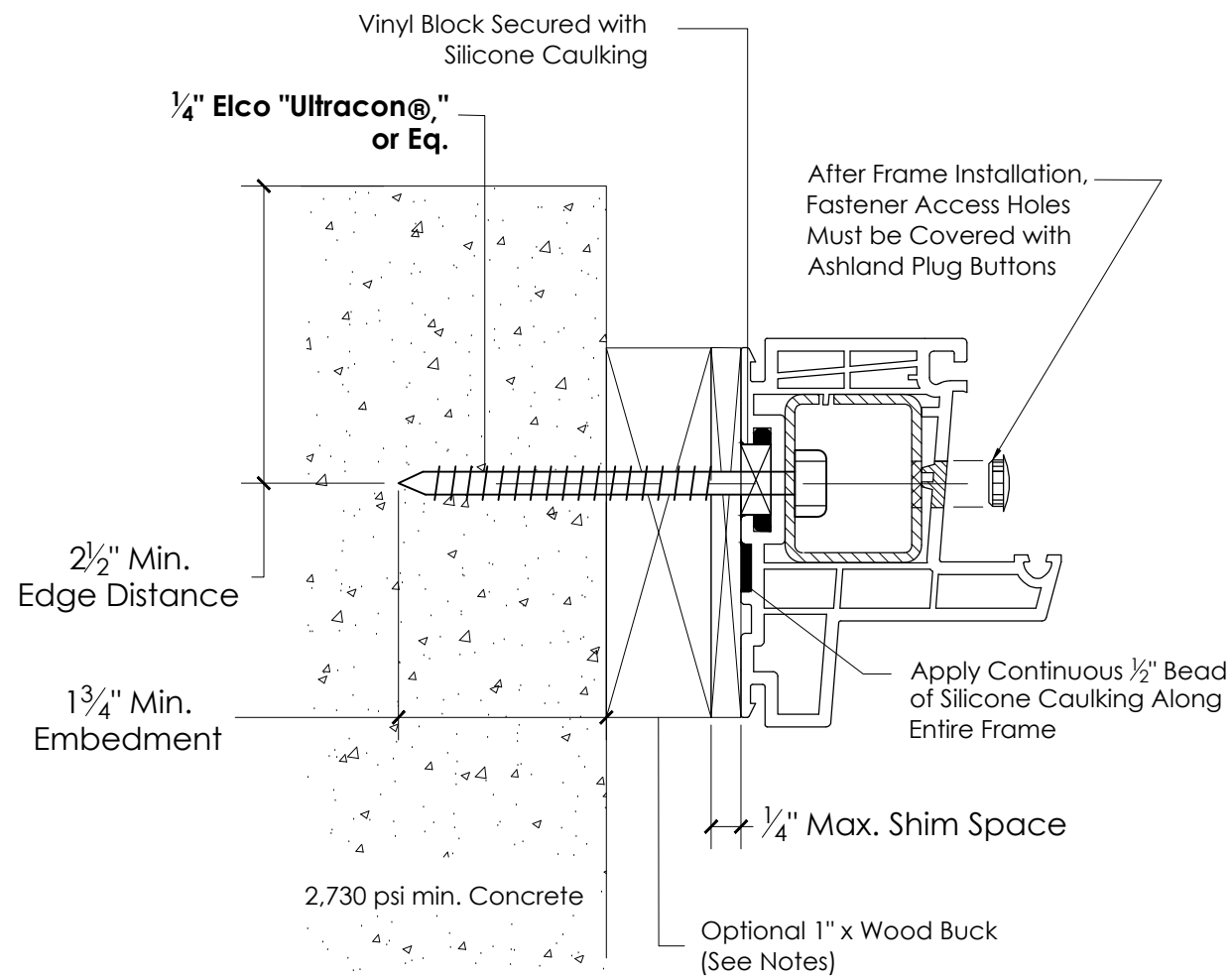
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| 0  | 05/06/13 | EM | Original Issue           |
| 1  | 07/23/13 | EM | No change this sheet     |
| 2  | 03/03/16 | EM | Add Note for Ex. Mullion |

**4500-SERIES TILT-SLIDE DOOR**  
**Large Missile Impact Resistant**

**EUROSTYLE**  
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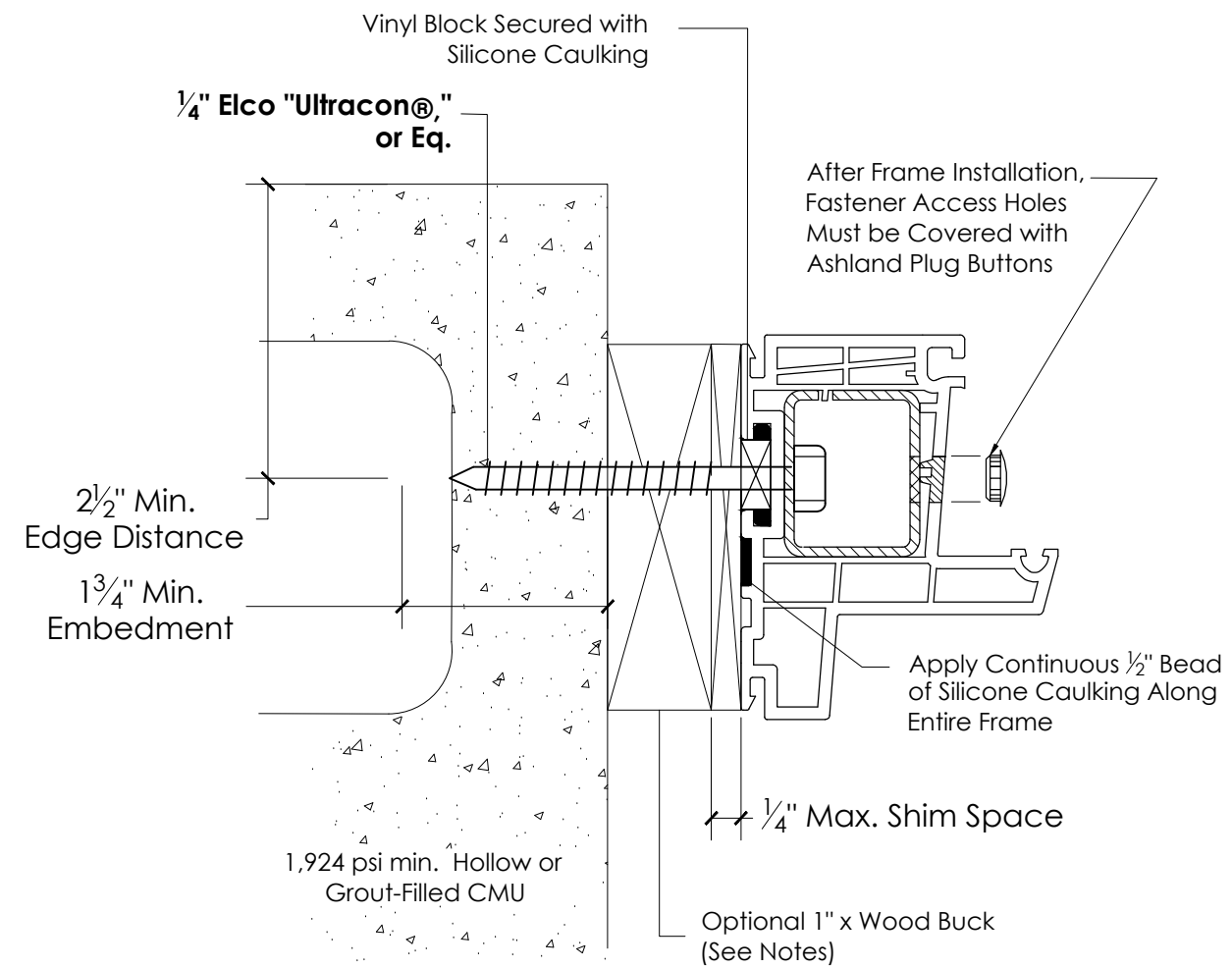
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**4** of **6**

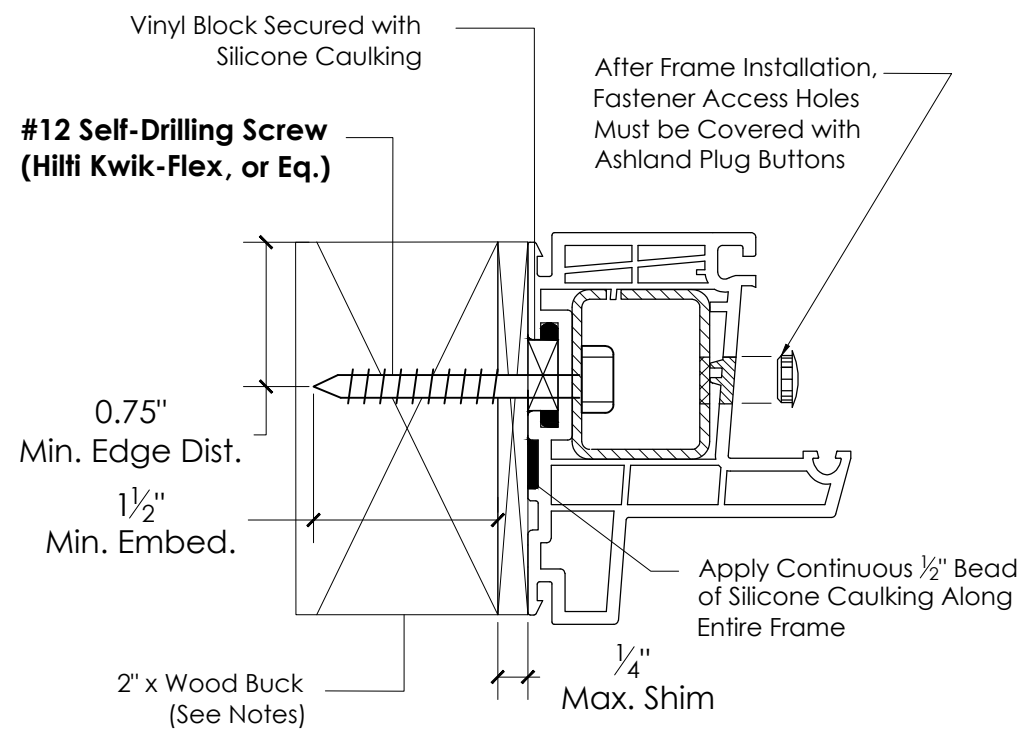


See Important Note on Sheet 4  
Concerning Anchors For External Mullion

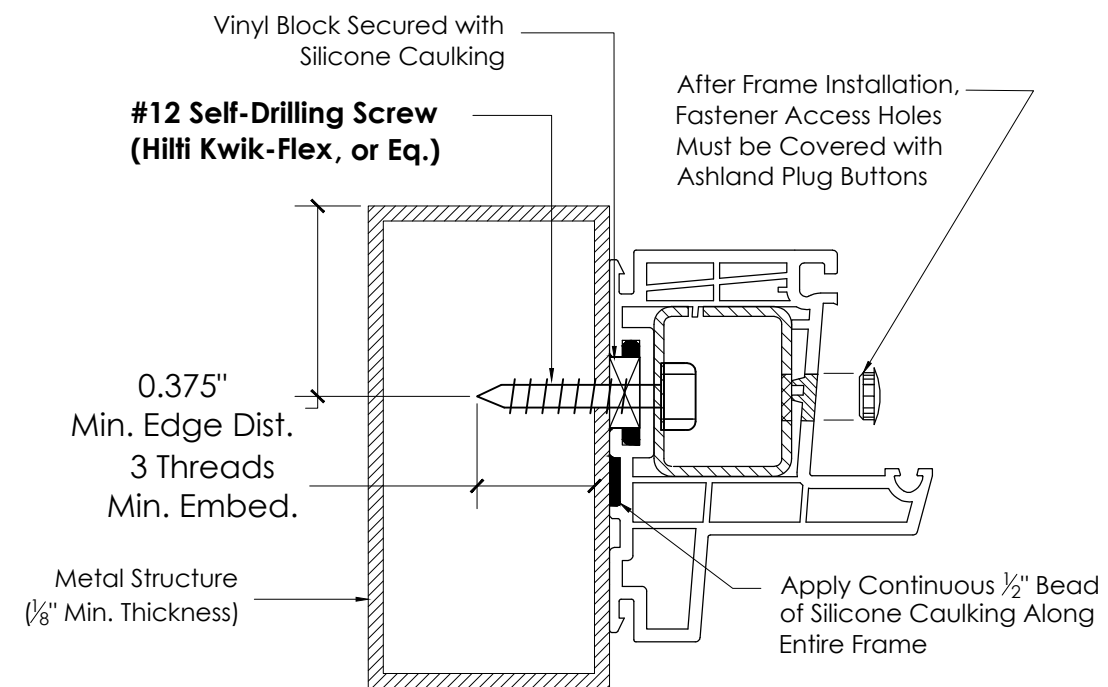
**ANCHOR TYPE I**



**ANCHOR TYPE II**



**ANCHOR TYPE III**



**ANCHOR TYPE IV**

| REVISIONS |          |    |  |
|-----------|----------|----|--|
| No        | Date     | By | Description  |
| 0         | 05/06/13 | EM | Original Issue   |
| 1         | 07/23/13 | EM | No change this sheet   |
| 2         | 03/03/16 | EM | Add Anchor Type IV Edge Dist. and Embed. Add Note on Anchor Type I |

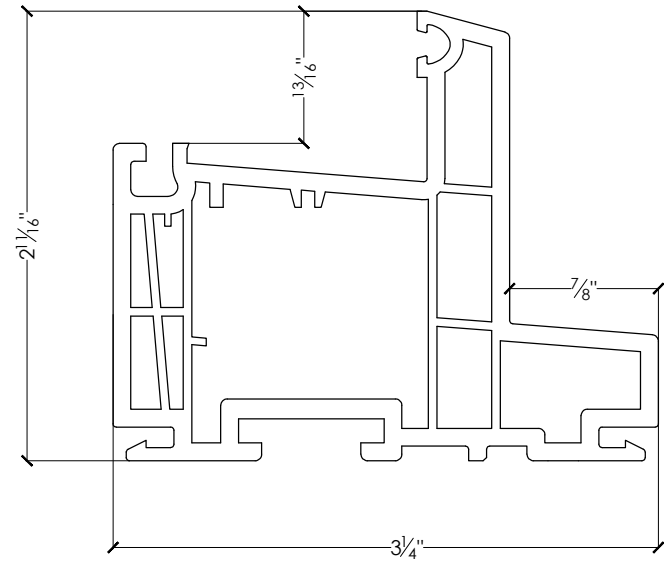
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**DRAWING No. :**  
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**4500-SERIES TILT-SLIDE DOOR**  
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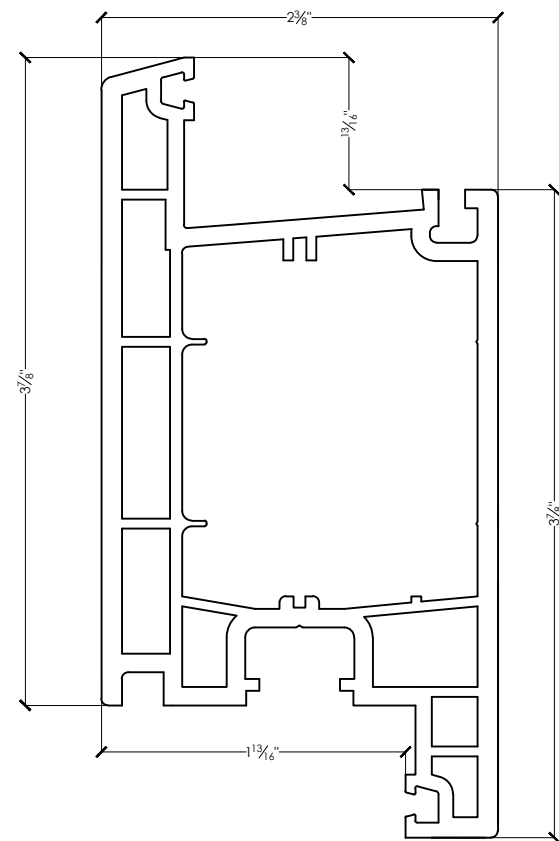
Sheet **5** of **6**



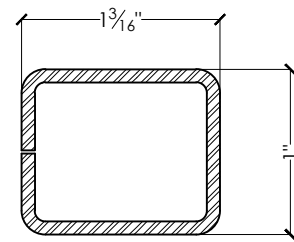
① 4500-Series Frame

**Bill of Materials**

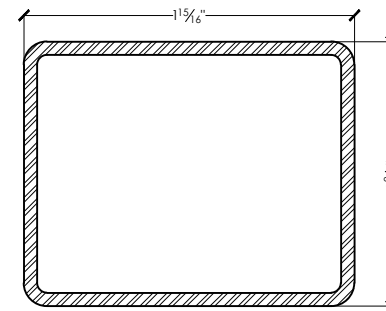
| Item # | Part # | Description                       | Material     | Vendor  |
|--------|--------|-----------------------------------|--------------|---------|
| 1      | 601205 | Frame                             | Vinyl        | Rehau   |
| 2      | 541130 | Sash                              | Vinyl        | Rehau   |
| 3      | 256172 | Reinforcement - Frame             | Galv. Steel  | Rehau   |
| 4      | 251886 | Reinforcement - Sash              | Galv. Steel  | Rehau   |
| 5      | 560600 | Glazing Stop                      | Vinyl        | Rehau   |
| 6      | 268651 | Shim Support                      | Vinyl        | Rehau   |
| 7      | 864952 | Glazing Spline                    | EPDM         | Rehau   |
| 8      | 261528 | Drain Cover Caps                  | Vinyl        | Rehau   |
| 9      | -      | Roto T&S Hardware                 | Steel        | Roto    |
| 10     | 13856  | Plug Buttons                      | Vinyl        | Ashland |
| 11/11a | 627061 | External Mullion with Angle Clips | Steel/ Vinyl | Rehau   |
| 12     | 554091 | T Mullion                         | Vinyl        | Rehau   |



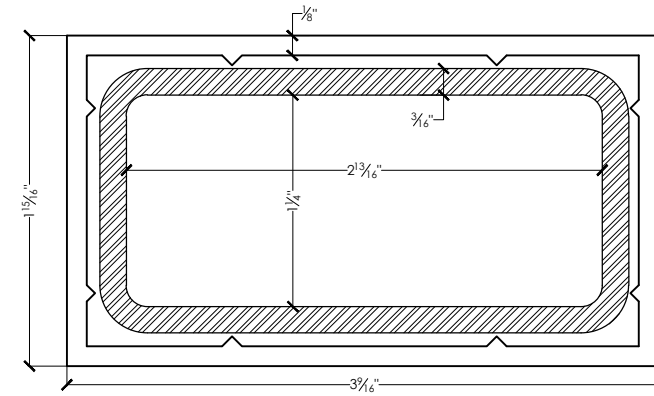
② 4500-Series Sash



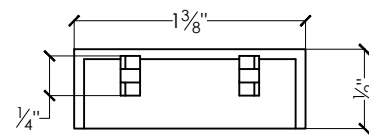
③ 4500-Series Frame Reinforcement



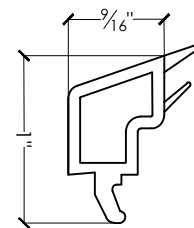
④ 4500-Series Sash Reinforcement



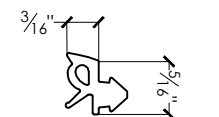
⑪ External Mullion  
Angle Clips Shown on Sheets 2 and 3



⑧ Drain Cover Cap



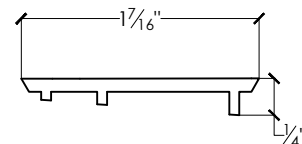
⑤ Glazing Stop



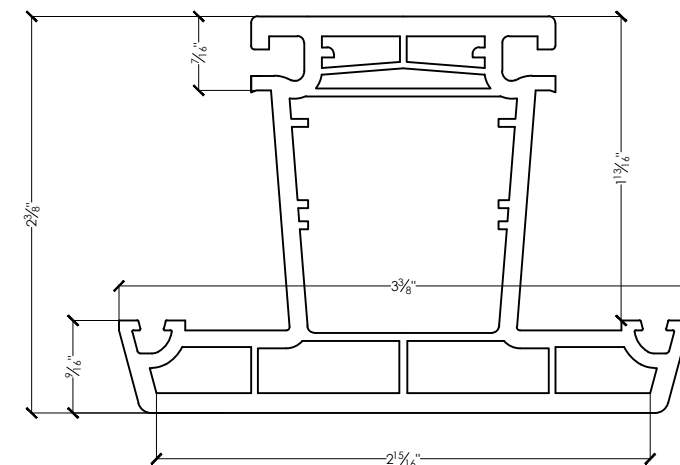
⑦ Glazing Spline



⑩ Plug Button



⑥ Shim Support



⑫ T-Mullion

**REVISIONS**

| No | Date     | By | Description          |
|----|----------|----|----------------------|
| 0  | 05/06/13 | EM | Original Issue       |
| 1  | 07/23/13 | EM | No change this sheet |
| 2  | 03/03/16 | EM | Add Item 11a         |

**4500-SERIES TILT-SLIDE DOOR**  
**Large Missile Impact Resistant**

**EUROSTYLE**  
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Sheet **6** of **6**

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**DRAWING No. :**

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