



IMPACT GRADE



BLAST GRADE



**Series 2800 Non-Thermal • Series 2900 Thermal*
4 1/2" Heavy Commercial Projected Window**

*BLAST & IMPACT GRADE

Manufacturer
Of
Architectural
And
Commercial
Grade
Windows,
Curtain Walls,
Entrances,
And
Storefronts

Configurations Project-In and Project-Out • Casement • Top-Hinged Inswing • Fixed

Series 2800 carries an AAMA Heavy Commercial and Architectural Grade rating to meet the most demanding specifications. Designed for educational, office or healthcare facilities, the 2800 window system is an attractive product for a wide range of applications. Multiple glazing options provide flexibility to meet specific design requirements. Offered with a complete line of sub frames, mullions and architectural sills, the 2800 window provides the complete solution for your fenestration needs.

Features

Benefits

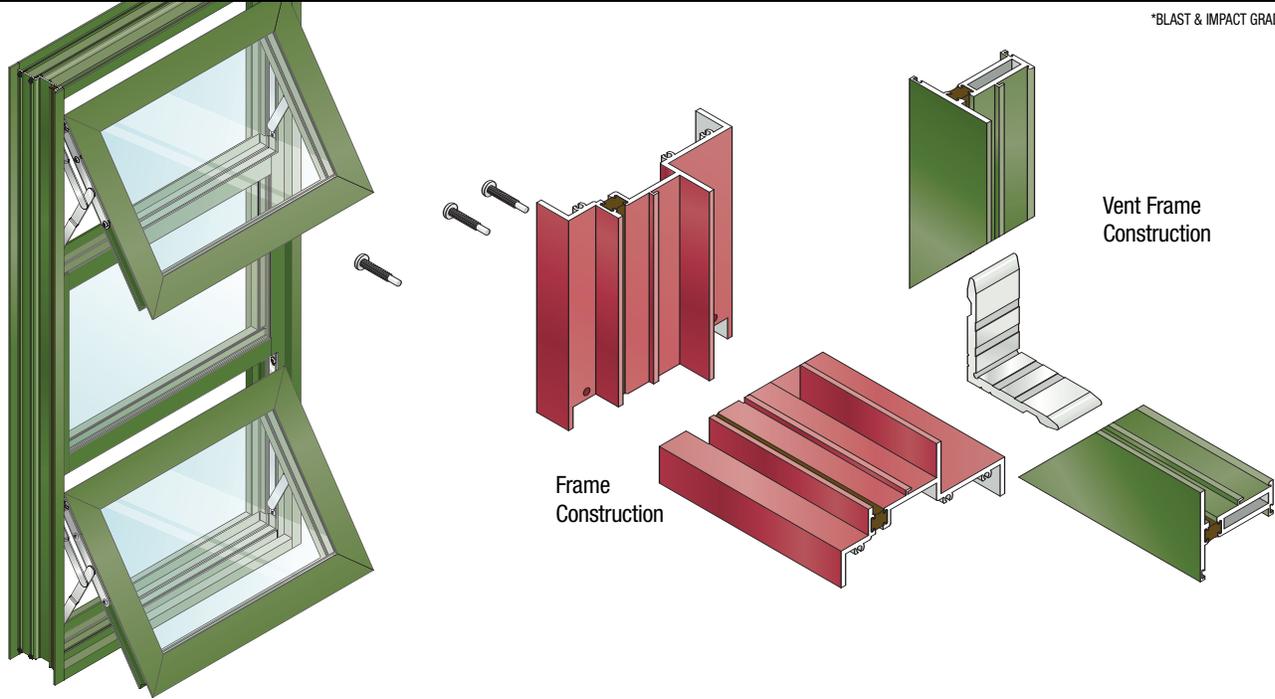
Series 2900 only - Thermal barrier in vent and frame	Enhances energy saving potential Improved thermal performance
Vertical or horizontal stacking members	Increases configuration options
Dual glazing with optional integral blinds	Improved energy savings and interior light or privacy control with low maintenance
Angle reinforced vent corners	Improves sash/vent rigidity
Wide variety of locking and operating hardware available	Permits hardware options to address specific requirements
Pressure equalization	Superior water resistance
Screens available	Ventilation
Screen frames are extruded aluminum alloy	Stronger more durable screens
Anodized and painted finishes available	Unlimited options to answer economic and aesthetic concerns
Accessory line of subframes, mullions, and architectural sills	Allows custom designs with standard product

EFCO CORPORATION
1000 COUNTY RD
MONETT, MO 65708
800.221.4169



Series 2800 Non-Thermal • Series 2900 Thermal* 4 1/2" Heavy Commercial Projected Window

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Performance Data

Projected Heavy Commercial

AAMA Rating (101-97)	AP-HC65
Air Infiltration	<.10 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±97.5 psf
CRF-Frame (1503-98)	56G
CRF-Glass (1503-98)	66G
U-Values (1503-98)	.52G

Projected Architectural Grade

AAMA Rating (101-97)	AP-AW65
Air Infiltration	<.10 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±97.5 psf
CRF-Frame (1503-98)	56G
CRF-Glass (1503-98)	66G
U-Value (1503-98)	.52G

A = Estimated values and/or designations
 B = Non-standard size or configuration
 C = Dual glazed
 D = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear
 E = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" air, 1/4" clear
 F = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" argon, 1/4" clear
 G = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear (Low Emissivity)

Casement Architectural Grade

AAMA Rating (101-97)	C-AW80
Air Infiltration	<.10 cfm/sf @ 6.24 psf
Water	No Leakage @ 12.0 psf
Structural	±120.0 psf
CRF-Frame (1503-98)	56A,G
CRF-Glass (1503-98)	66A,G
U-Value (1503-98)	.52A,G

Top-Hinged Inswing Heavy Commercial

AAMA Rating (101-97)	TH-HC40A
Air Infiltration	<.10 cfm/sf @ 6.24A psf
Water	No Leakage @ 6.0A psf
Structural	±60A psf
CRF-Frame (1503-98)	56A,G
CRF-Glass (1503-98)	66A,G
U-Value (1503-98)	.52A,G

S-2900 Hardware Chart

	Butt Hinges	4-Bar Arms	Hold Open Arms	Friction Adjuster	Key Release Limit Arm	Rotor Operator*	Cam Handle	Pole Ring Cam Handle	Pole Ring Pull**	Access Controlled Lock	Lift Lock
Project-In		S					S	0		0	
Project-Out		S					S	0	0	0	
Casement Inswing With 4-Bar Arms		S					S	0		0	
Casement Outswing With 4-Bar Arms		S					S	0		0	0
Casement Inswing With Butt Hinges	S			0	0		S	0		0	
Casement Outswing With Butt Hinges	S			S	0	0	S	0		0	0
Top-Hinged Inswing	S		S				0	0		S	

Some size restrictions may apply depending on hardware selected.
 *-Casements requiring rotor operators will be furnished with lift locks, providing vents meet minimum width requirements.
 **-Pole ring pull will be furnished on project-out vents when optional pole ring cam handle is selected.
 0-Optional
 S-Standard
 blank - N/A

S-2900 Glazing Chart

	Polycarbonate			Glass or Panel																
	1/8"	3/16"	1/4"	1/8"	.156"*	3/16"	.200"*	1/4"	1/4"***	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"	1-3/4"	2"	
Monolithic & Insulated Glass	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
Dual Glazing	Exterior Lite	I	I	I	I	I	I	I	I	I	A	A								
	Interior Lite					A	A	A												

*-Obscure Glass Thickness
 **-Laminated Glass Thickness
 A-Available Glazing Option
 I-Internal Blinds Can Be Used With This Type of Dual Glazing
 blank - N/A

Series 2800 Non-Thermal • Series 2900 Thermal* 4 1/2" Heavy Commercial Projected Window



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Frame Construction

The frame is constructed from .125" nominal material wall thickness aluminum of 6063-T6 alloy with a depth of 4 1/2". It features a standard equal leg frame. Corners are of screw spline construction and back sealed with small-joint seam sealer. See Illustration 1.

Vent Frame Construction

The vent consists of a tubular member with .125" nominal material wall thickness aluminum of 6063-T6 alloy with a depth of 2". Vent corners are mitered, angle reinforced, crimped, cold epoxy welded, and back sealed with small-joint seam sealer. See Illustration 2.

Weather Stripping

All vents are dual weather-stripped with a dual durometer Santoprene® gasket. The exterior gasket is intentionally omitted at the vent bottom rail for project-out vents and at the vent top rail for project-in vents, allowing air to pressure equalize the void between the vent and frame. Each vent utilizes the pressure equalization technique for superior water resistance performance. Two holes or slots per vent through the window frame facilitate weepage.

Screens

Screen frames are extruded 6063-T6 aluminum alloy frames. Full width hinged wickets or fully hinged screens are available. 18 x 16 mesh screens are available in fiberglass and .011" diameter aluminum. 18 x 18 mesh screens are available in .009" diameter stainless steel.

Thermal Barrier

All frames and vents are thermally improved using the latest technology in two part high density polyurethane. See Illustration 3.

Hardware

Locking cam handles, access controlled locks, and keepers are of cast white bronze with a US25D finish. 4-bar hinges are fabricated of stainless steel meeting AAMA 904.1 requirements. Butt hinges are fabricated from extruded aluminum of 6063-T5 or T6 alloy with stainless steel pins. See the Hardware Chart for available hardware types.

Glazing

Windows are inside glazed with an extruded aluminum, snap-in glazing bead. Glazings of 1/8" to 1 1/2" can be utilized. Dual glazing is also available in 1/8", 3/16", and 1/4" glass. Aluminum blinds between the glass are available with dual glazed windows. See the Glazing Chart for exact size. See Field Glazing Notes for glazing construction.

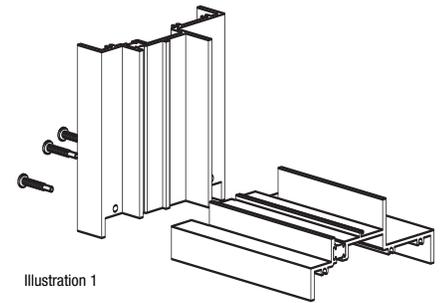


Illustration 1

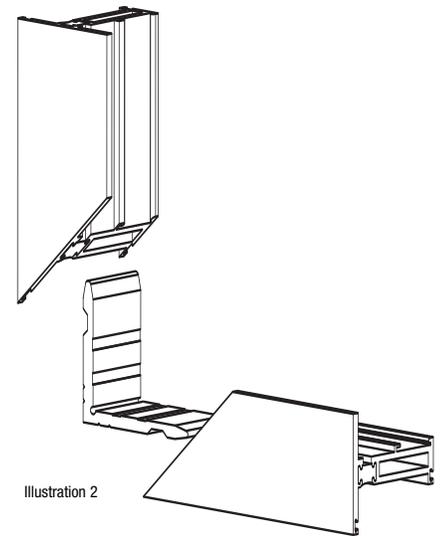


Illustration 2

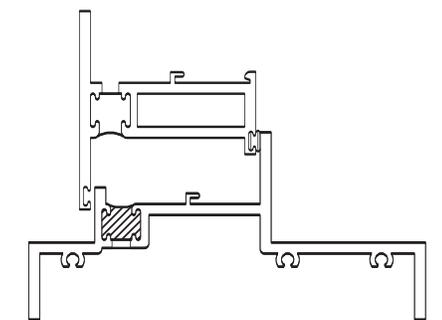
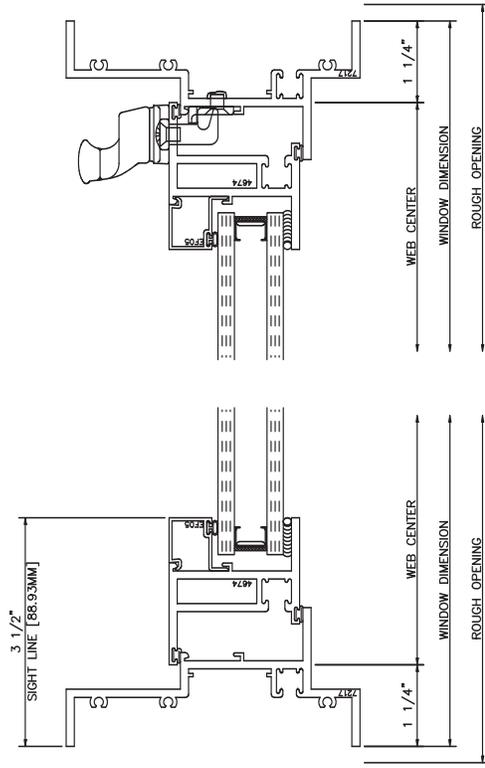
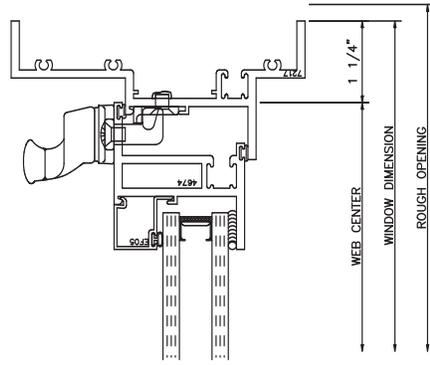


Illustration 3

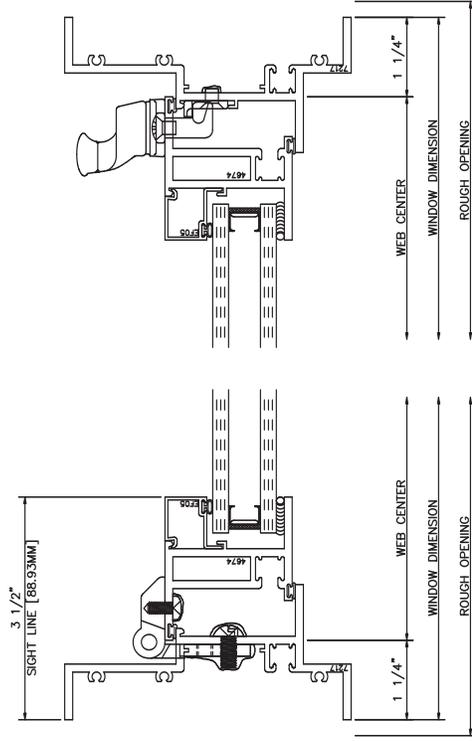
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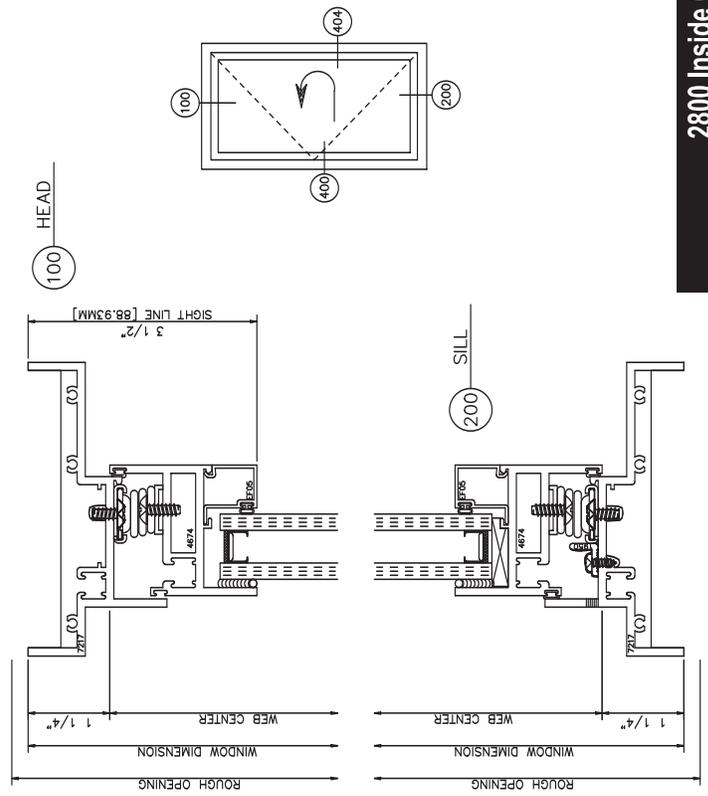
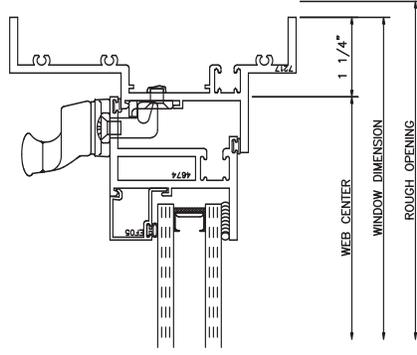
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406 LEFT JAMB

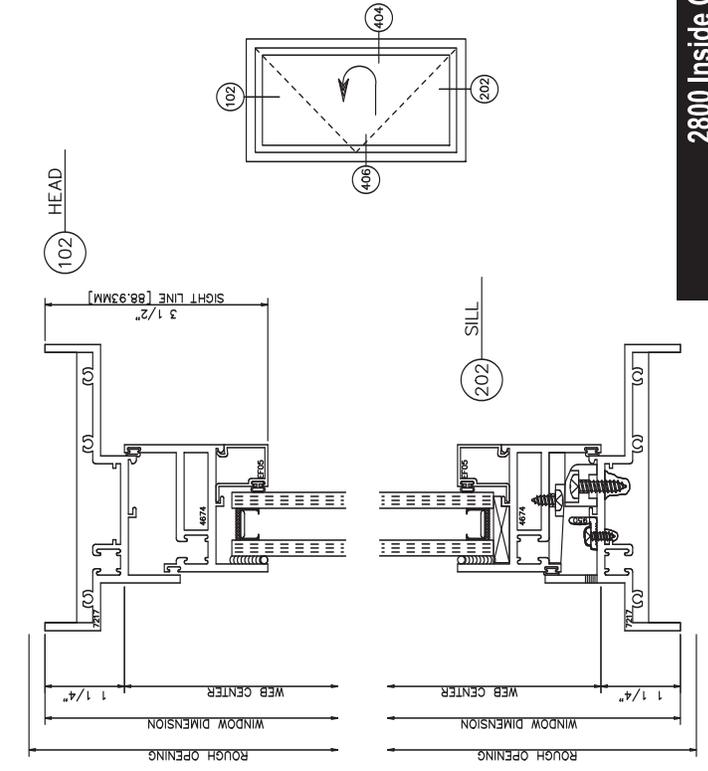


404 RIGHT JAMB



2800 Inside Glazed

Casement In • Left Swing • 4 Bar Arms • Cam Locks

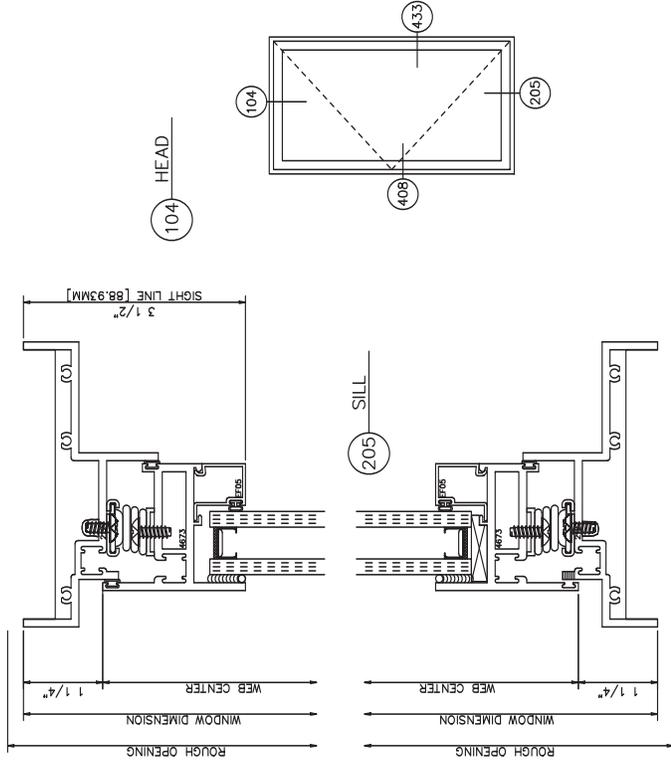
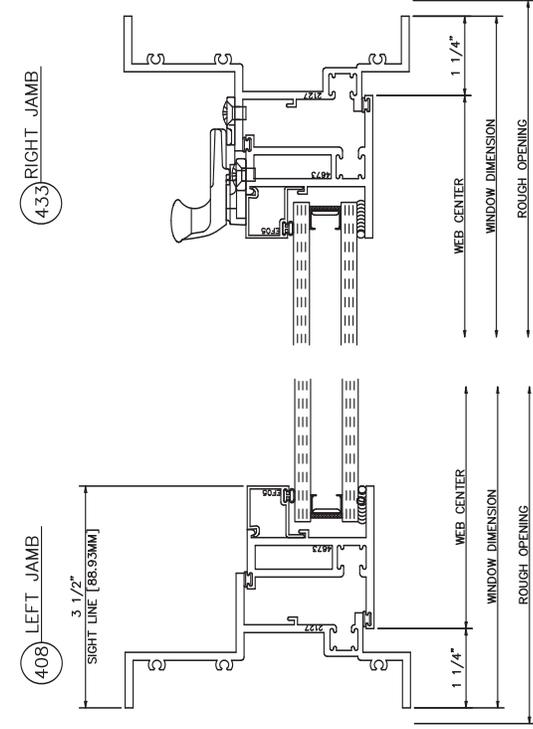


2800 Inside Glazed

Casement In • Left Swing • Butt Hinges • Cam Locks

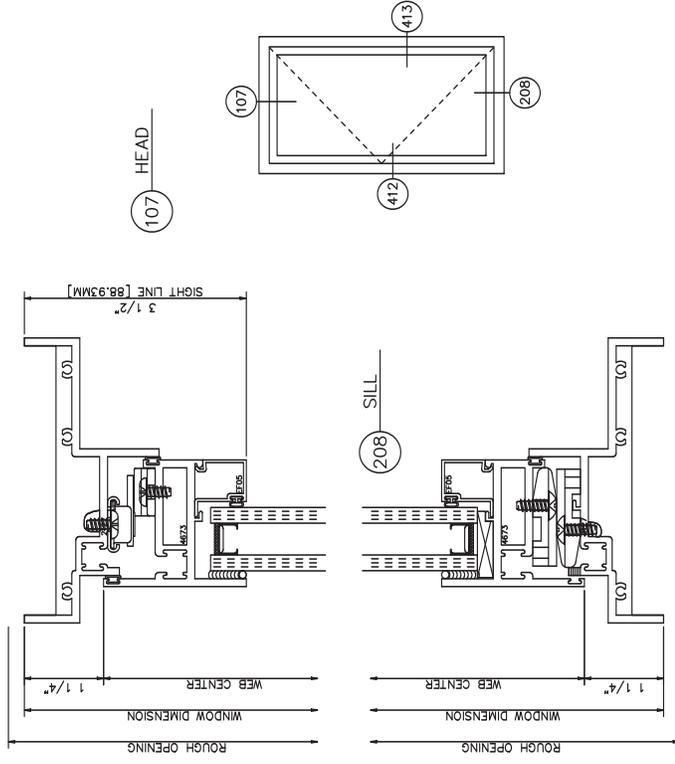
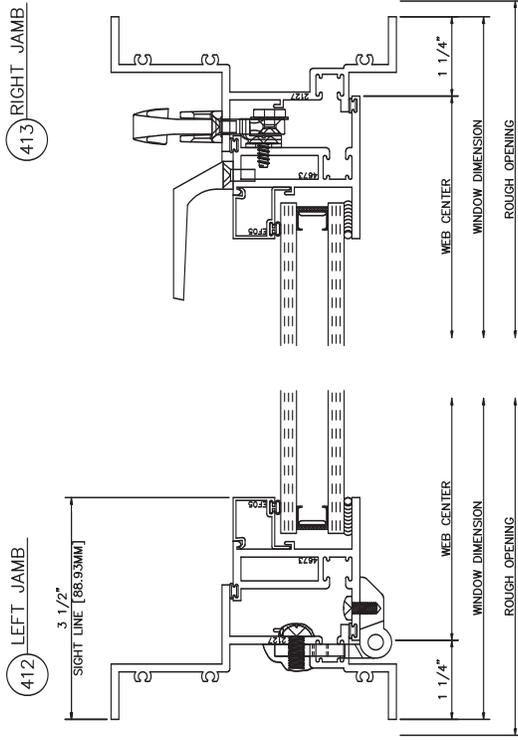
2800 Inside Glazed

Casement Out • Left Swing • 4 Bar Arms • Cam Locks

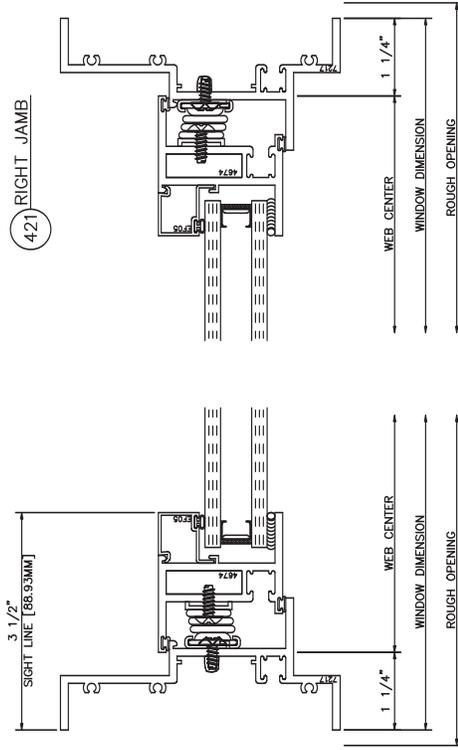


2800 Inside Glazed

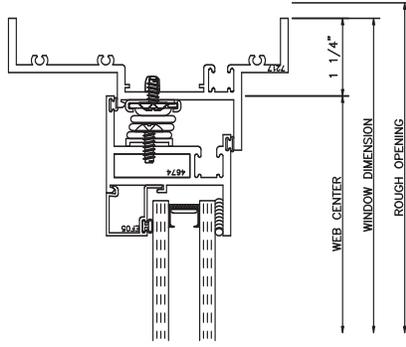
Casement Out • Left Swing • Butt Hinges • Lift Lokks • Pull Handles



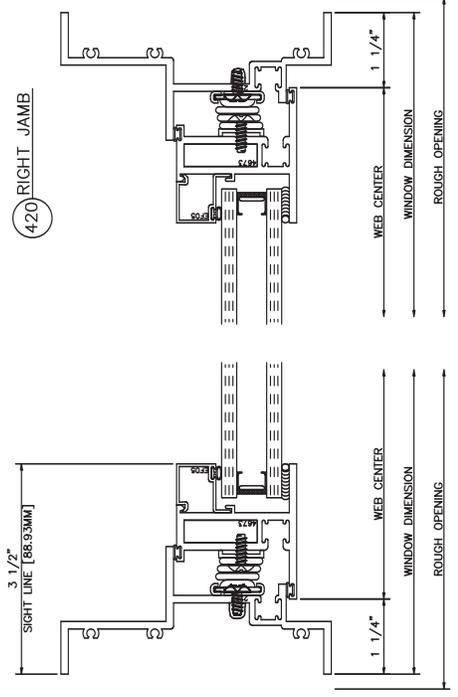
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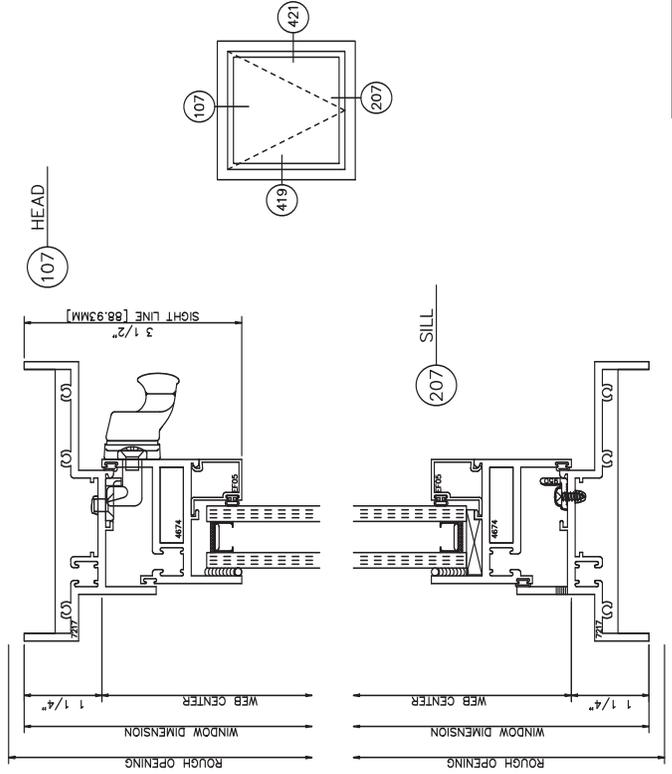
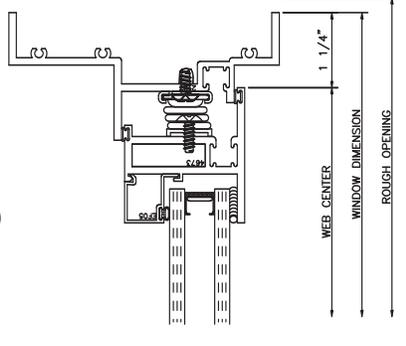
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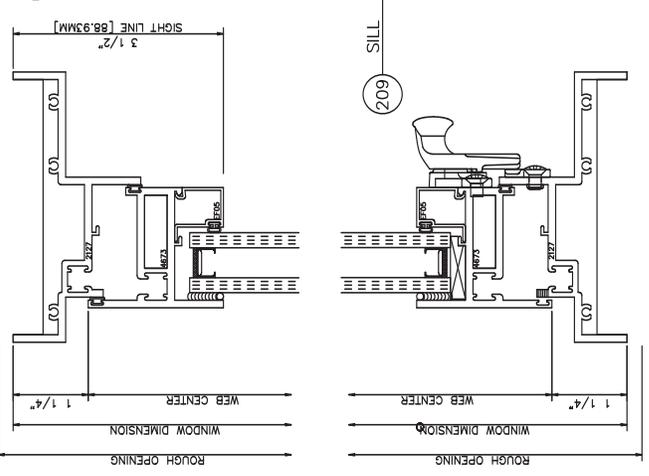
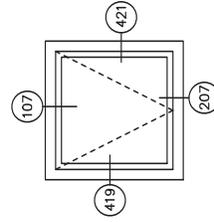
424 LEFT JAMB



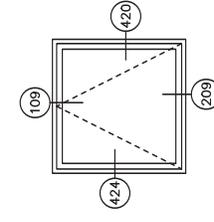
420 RIGHT JAMB



107 HEAD

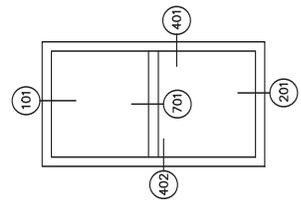
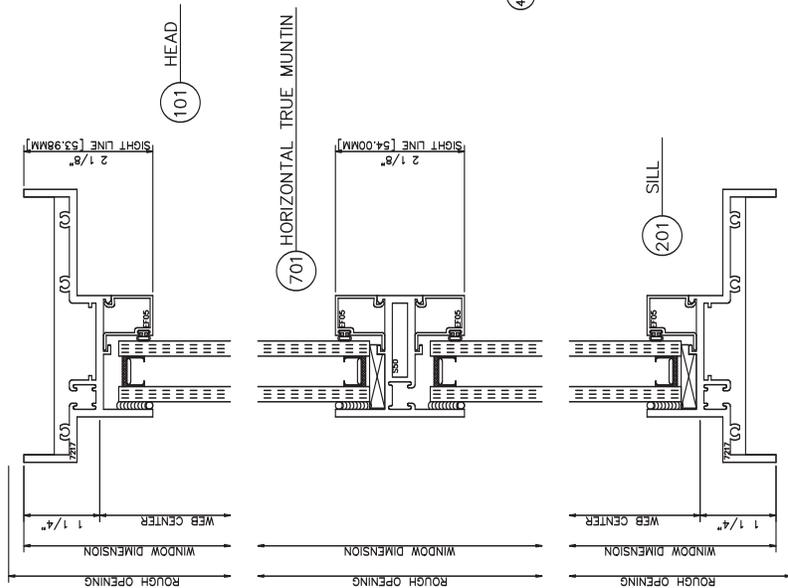
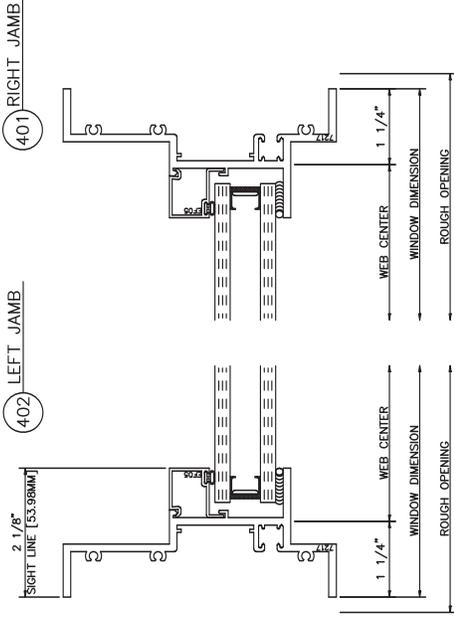


209 SILL



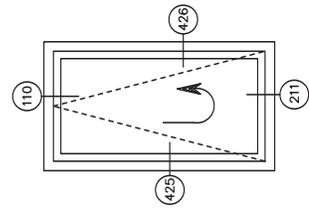
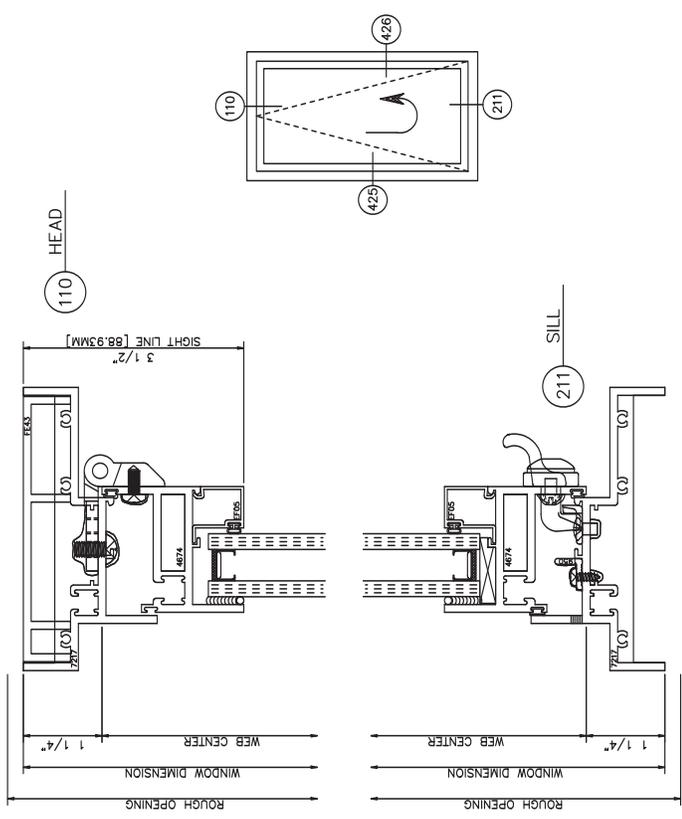
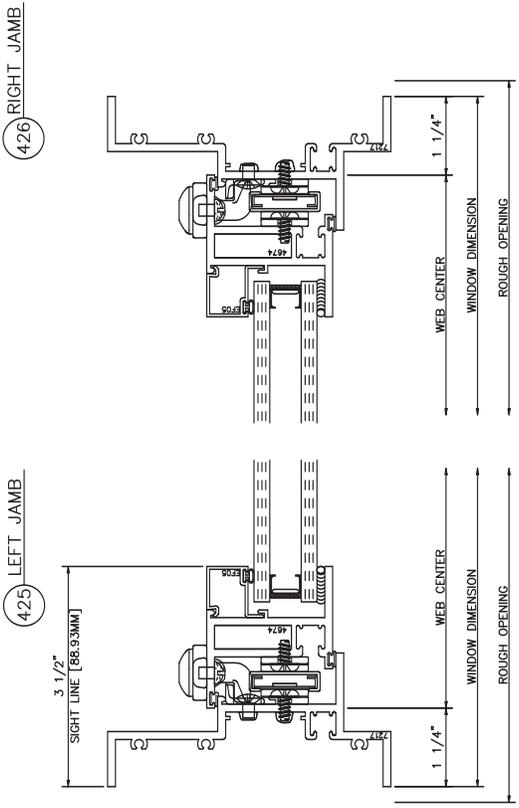
2800 Inside Glazed

Fixed

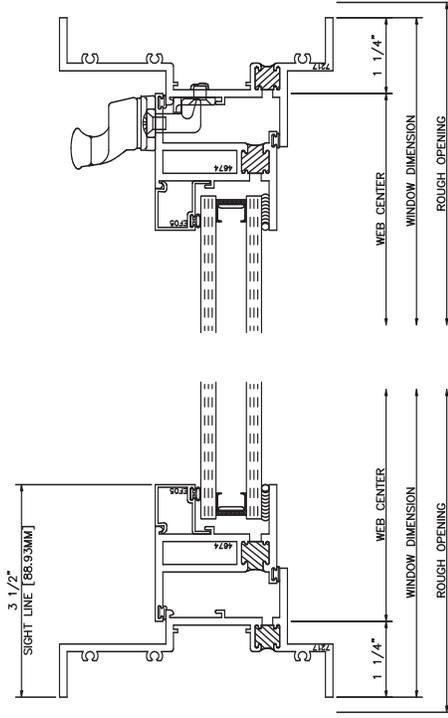


2800 Inside Glazed

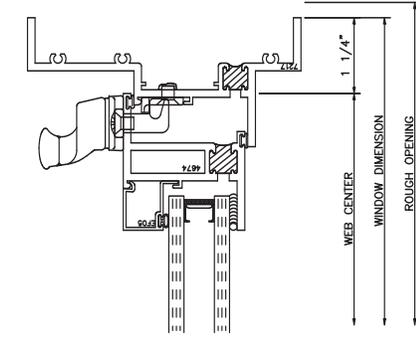
Top Hinge Inswing • Butt Hinges • Concealed Key Locks



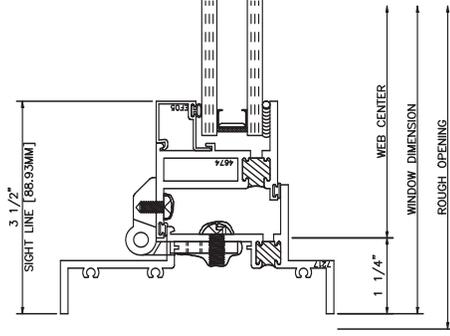
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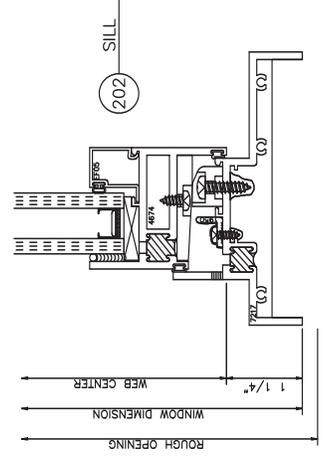
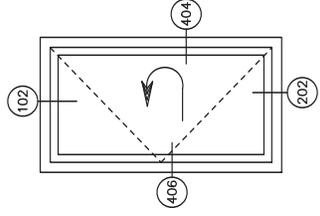
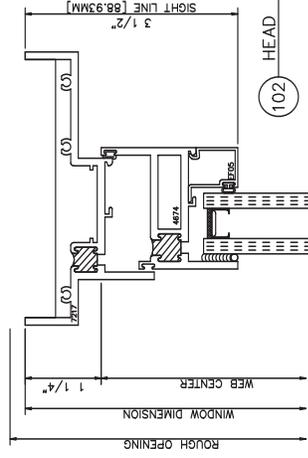
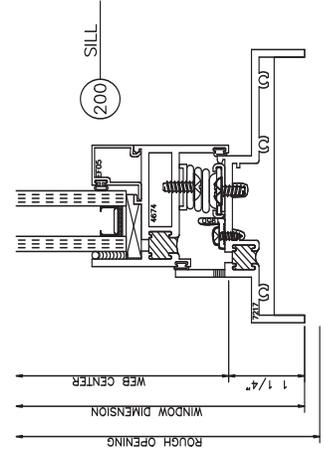
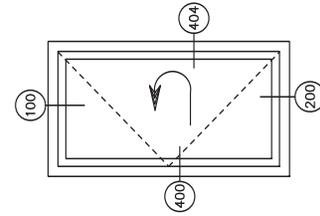
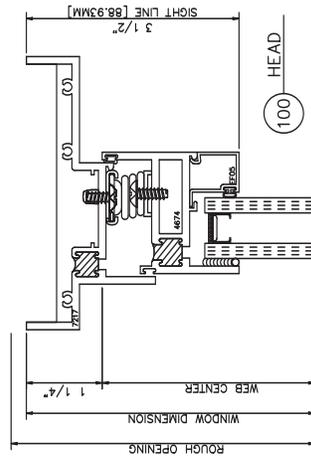
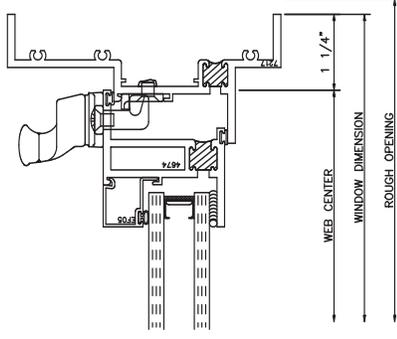
404 RIGHT JAMB



406 LEFT JAMB



404 RIGHT JAMB



2900 Inside Glazed

Casement In • Left Swing • 4 Bar Arms • Cam Locks

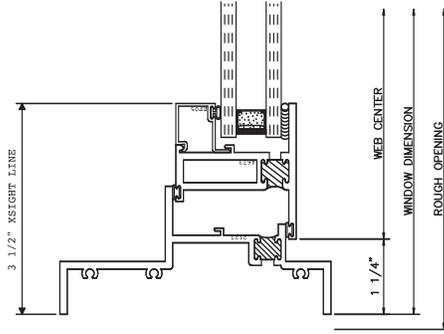
2900 Inside Glazed

Casement In • Left Swing • Butt Hinges • Cam Locks

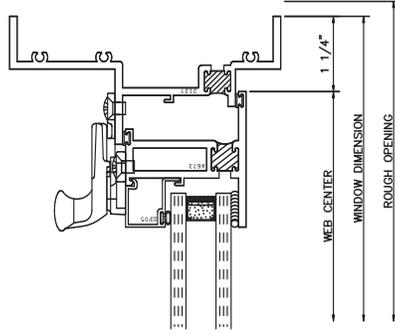
2900 Inside Glazed

Casement Out • Left Swing • 4 Bar Arms • Cam Locks

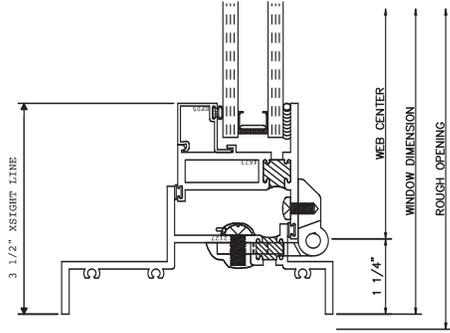
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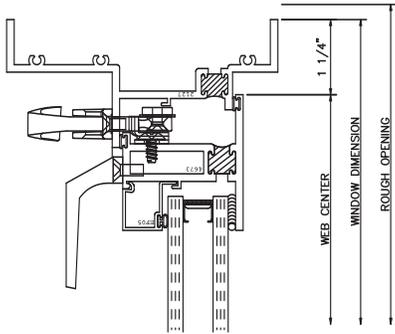
433 RIGHT JAMB



412 LEFT JAMB



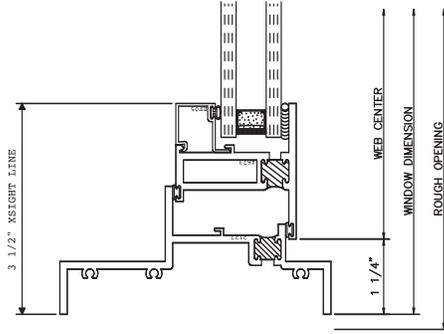
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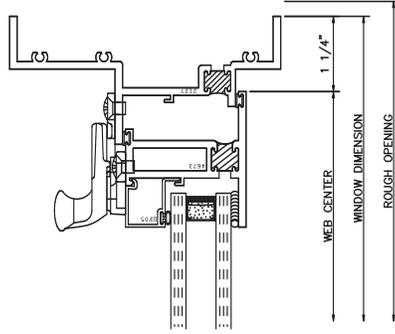
2900 Inside Glazed

Casement Out • Left Swing • Butt Hinges • Lift Locks • Pull Handles

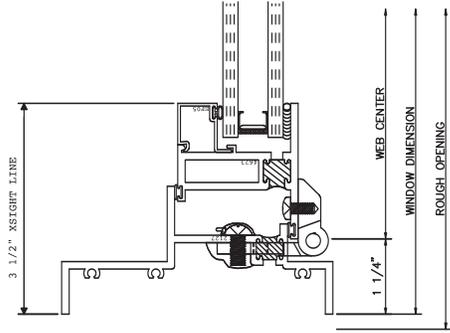
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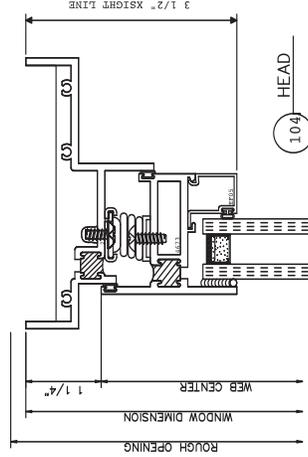
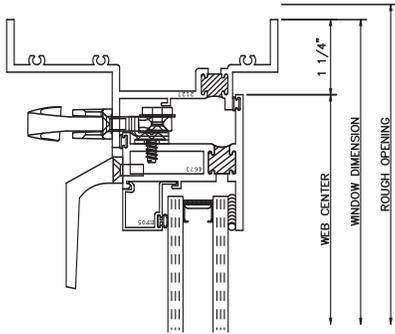
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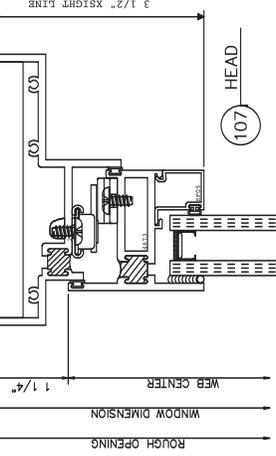
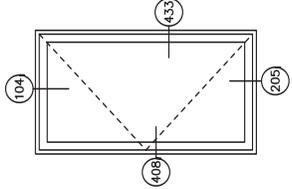
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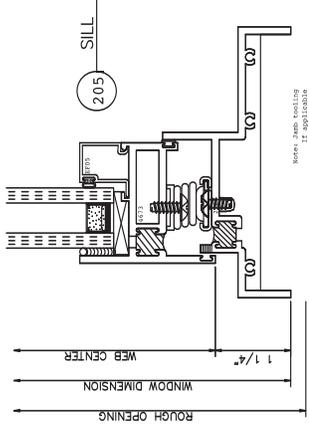
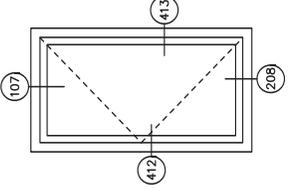
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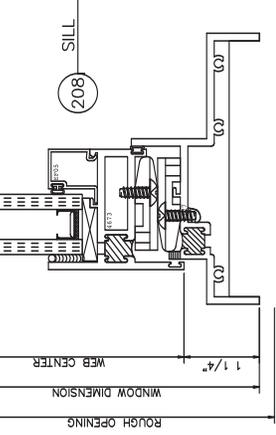
104 HEAD



107 HEAD



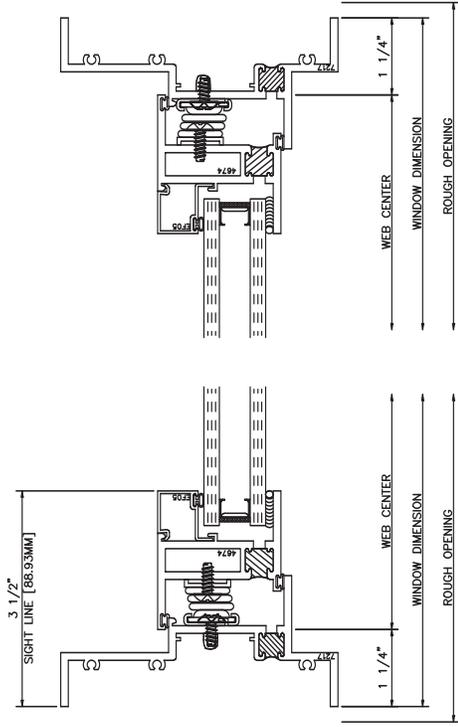
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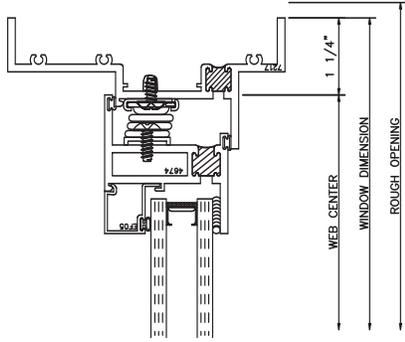
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EFCCO 2900 6/06

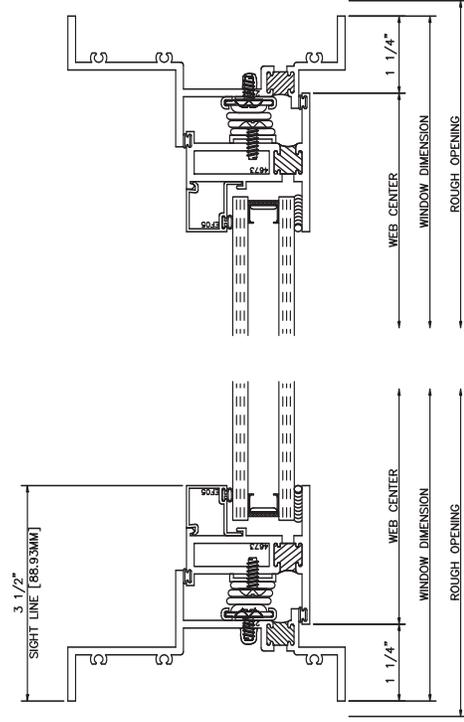
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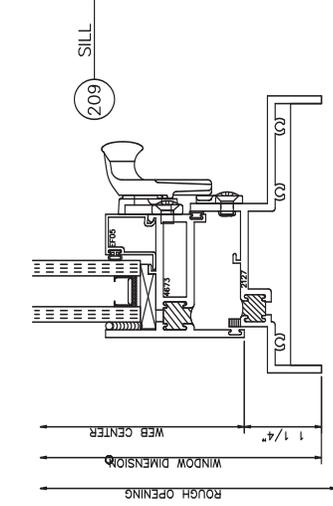
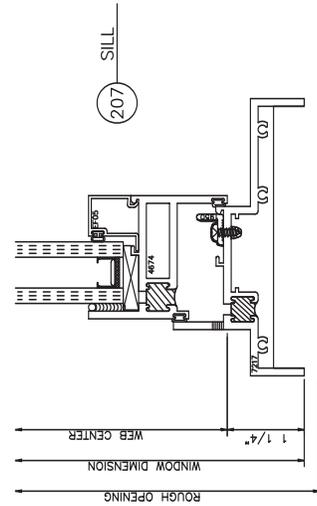
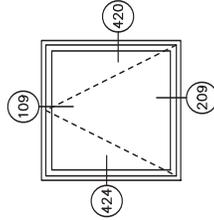
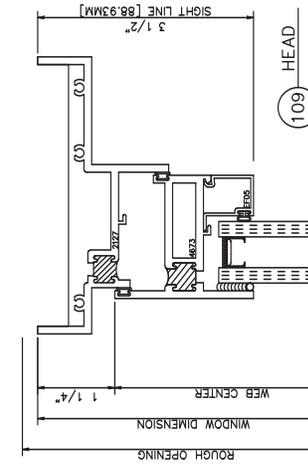
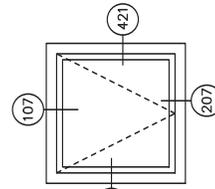
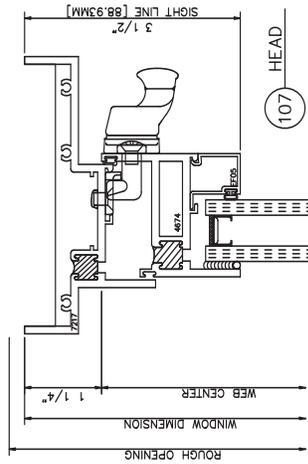
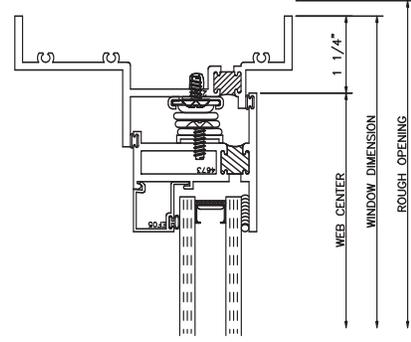
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424 LEFT JAMB



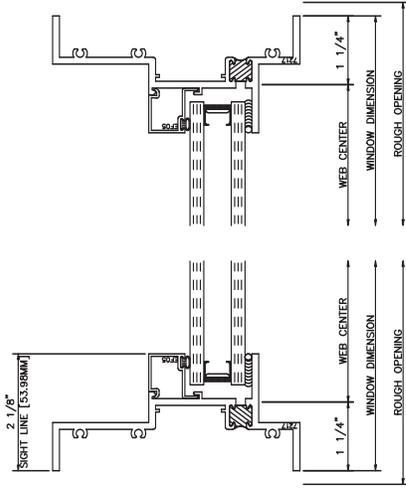
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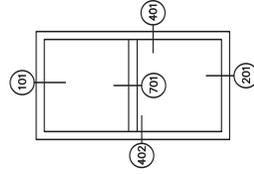
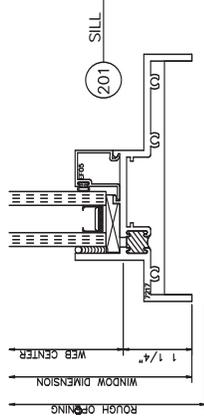
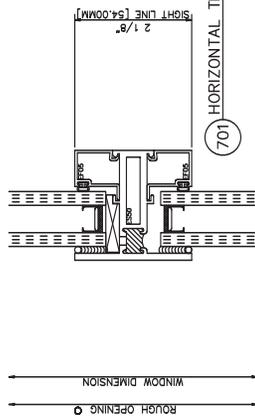
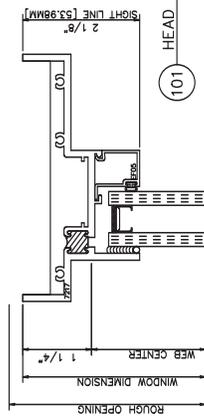
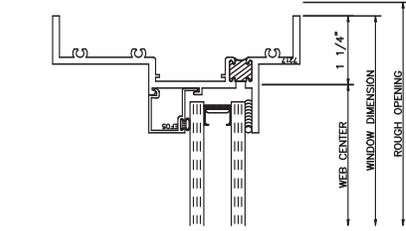
2900 Inside Glazed

Fixed

402 LEFT JAMB



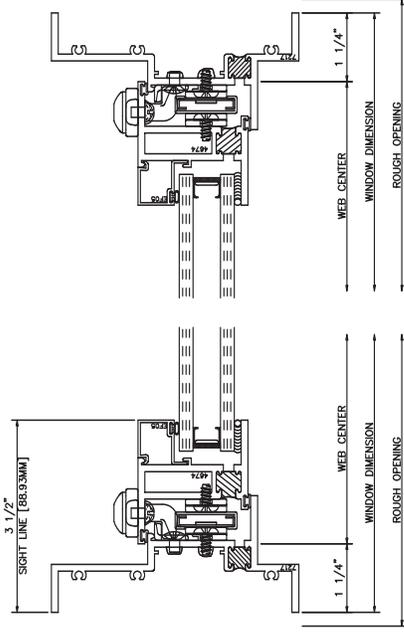
401 RIGHT JAMB



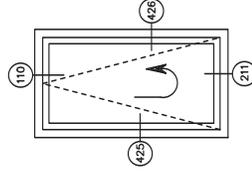
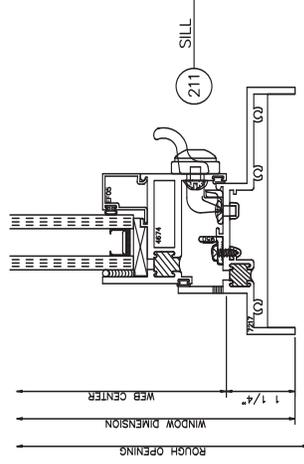
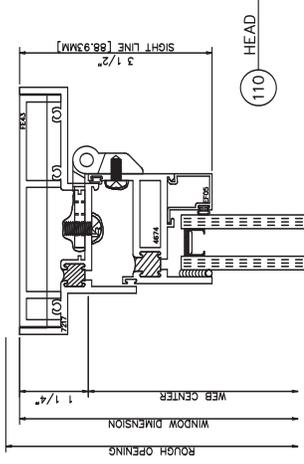
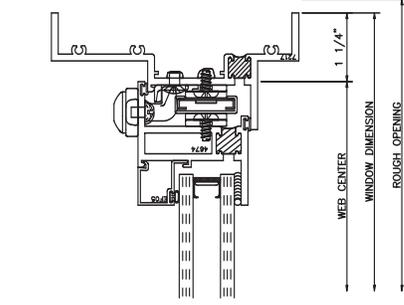
2900 Inside Glazed

Top Hinge Inswing • Butt Hinges • Concealed Key Locks

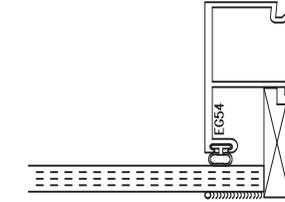
425 LEFT JAMB



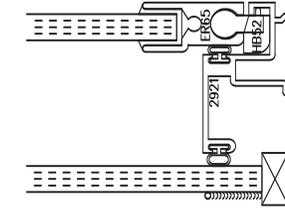
426 RIGHT JAMB



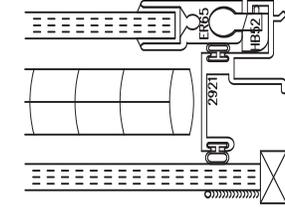
1/4" GLAZE
EK89 GRID



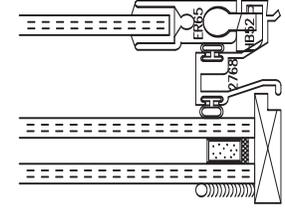
ER65 - 1/4" INTERIOR PANEL
1/4" GLAZE



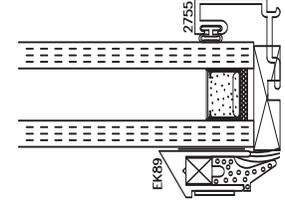
ER65 - 1/4" INTERIOR PANEL
1/4" GLAZE
5/8" BLIND



ER65 - 3/16" INTERIOR PANEL
5/8" INSULATED
3/16" - 3/16"



1" INSULATED
1/4" - 1/4"
EK89 GRID



1/4" GLAZE
EK89 GRID

