Series 810-I Thermal
3 1/2" Heavy Commercial Projected Window

CONFIGURATIONS

Project-In • Project-Out • Casement • Fixed • Vertical and Horizontal Pivot

Series 810-I retains an AAMA Architectural Grade rating to meet the most demanding specifications. Designed for educational, office or healthcare facilities, the 810-I window system is an attractive product for a wide range of applications. Multiple glazing options provide flexibility to meet specific design requirements. E-Strut™ thermal isolators provide outstanding thermal performance and allows dual finish capability. Offered with a complete line of sub frames, mullions and architectural sills, the 810-I window provides the complete solution for your fenestration needs.

Features	Benefits
E-Strut™ thermal isolator	Improves U-Value performance Dual finish capability Completely eliminates dry shrinkage
Vertical or horizontal stacking members	Increases configuration options
Pressure equalization	Superior water resistance
Accommodates glazing units from 3/16" to 3" depth	Flexibility in design requirements for glazing
Dual glazing with optional integral blinds	Improved energy savings and interior light or privacy control with low maintenance
Wide variety of locking and operating hardware available	Permits hardware options to address specific requirements
Screen frames of extruded aluminum alloy are available	Stronger more durable screens
Accessory line of subframes, mullions, and architectural sills	Allows custom designs with standard product
Anodized or painted finishes available	Multiple options to answer economic and aesthetic concerns

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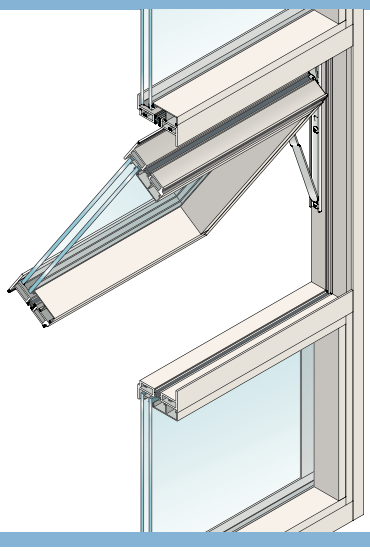

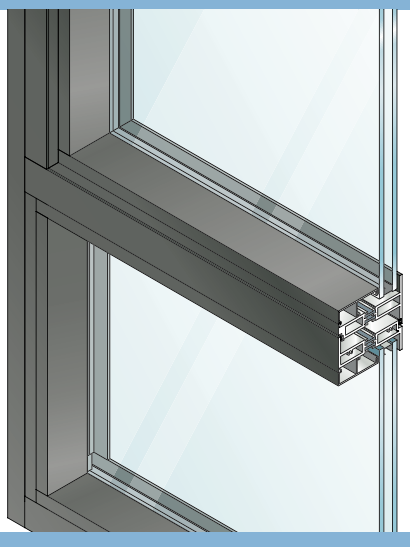

PERFORMANCE DATA

PROJECTED ARCHITECTURAL GRADE

AAMA RATING (A440-05)	AP-AW90
AIR INFILTRATION	<.10 CFM/SF @ 6.24
WATER	NO LEAKAGE @ 12.0 PSF
STRUCTURAL	±135.0 PSF
CRF-FRAME (1503-98)	54[E]
CRF-GLASS (1503-98)	69[E]

PIVOT ARCHITECTURAL GRADE

AAMA RATING (101-93)	VP-AW60
AIR INFILTRATION	<.10 CFM/FT. @ 6.24 PSF
WATER	NO LEAKAGE @ 12.0 PSF
STRUCTURAL	±90 PSF
CRF-FRAME (1503.1)	57[D]
CRF-GLASS (1503.1)	52[D]

CASEMENT ARCHITECTURAL GRADE

AAMA RATING (A440-05)	C-AW100
AIR INFILTRATION	<.10 CFM/FT. @ 6.24 PSF
WATER	NO LEAKAGE @ 12.0 PSF
STRUCTURAL	±150 PSF
CRF-FRAME (1503-98)	61[G]
CRF-GLASS (1503-98)	61[G]

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 (LowEmissivity),1/2" argon,1/4" clear
G = 1" Insulated - 1/4" clear,1/2" air,1/4" clear (Low Emissivity)

810-I THERMAL U-FACTORS*

CENTER OF GLASS U-FACTOR	CONFIGURATION AND SIZE							
	FIXED** 47" X 59"	FIXED 60" X 108"	PROJECT OUT** 59" X 24"	PROJECT OUT 60" X 66"	PI CSMT** 24" X 59"	PI CSMT 54" X 84"	PO CSMT 24" X 59"	PO CSMT 54" X 84"
0.47	0.58	0.54	0.67	0.58	0.68	0.58	0.69	0.58
0.34	0.48	0.43	0.60	0.48	0.61	0.49	0.61	0.49
0.29	0.44	0.39	0.57	0.44	0.58	0.45	0.59	0.45
0.25	0.41	0.36	0.55	0.41	0.56	0.42	0.56	0.43
0.20	0.37	0.32	0.51	0.38	0.53	0.39	0.54	0.39

* Based on NFRC 100
**NFRC Gateway size

S-810I HARDWARE CHART	BUTT HINGES	4-BAR 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	O		O	
PROJECT-OUT		S				S	O	O	O	
CASEMENT INSWING WITH 4-BAR ARMS		S				S	O		O	
CASEMENT OUTSWING WITH 4-BAR ARMS		S				S	O		O	O
CASEMENT INSWIN WITH BUTT HINGES	S		O	O		S	O		O	
CASEMENT OUTSWING WITH BUTT HINGES	S		S	O	O	S	O		O	O
VERTICAL PIVOT				O		O	O		S	
HORIZONTAL PIVOT				S		O	O		S	

Some size restrictions may apply depending on hardware selected.

***-Casements requiring roto 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.

O -Optional
S -Standard
Blank - N/A

S-810I 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
DUAL GLAZING	EXTERIOR LITE		I	I			I	I	I	I	I		I		I	I	I			
	INTERIOR LITE		A	A			A	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

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Main Frame Construction
The frame is constructed from .125" nominal material wall thickness aluminum of 6063-T6 alloy with a depth of 3 1/2". An equal leg frame is standard. Corners are of screw spline construction and back sealed with a small-joint seam sealer. Pivot frame corners are mitered, angle reinforced, crimped, cold epoxy welded, and back sealed with a small-joint seam sealer. See Illustration 1.

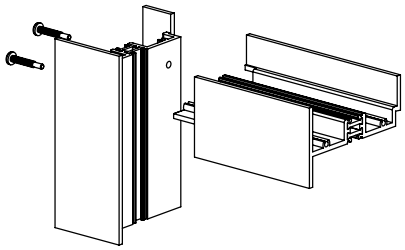

Illustration 1

Vent Frame Construction
The 3 1/2" deep vent consists of tubular aluminum members with .125" nominal material wall thickness of 6063-T6 alloy. Vent corners are mitered, angle reinforced, crimped, cold epoxy welded, and back sealed with a small-joint seam sealer. Vents present a flush appearance with the frame in the closed position. 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. Pivot vents are dual weather-stripped with two rows of neoprene leaf sweeps. Two holes or slots per vent through the window frame facilitate weepage.

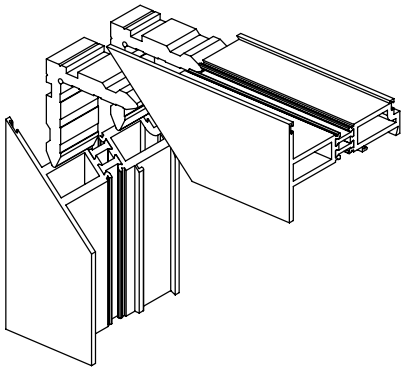

Illustration 2

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

Thermal Barrier
All frames and vents are thermally isolated with two thermal struts consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions. See Illustration 3.

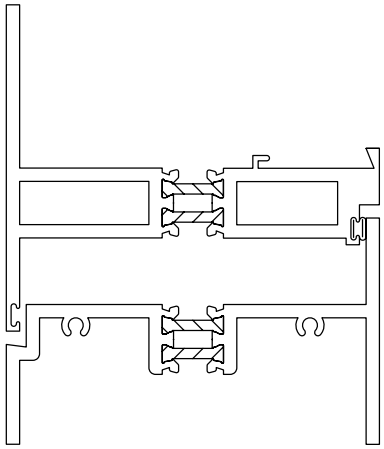

Illustration 3

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

Glazing
Windows are inside glazed with an extruded aluminum snap-in glazing bead with vinyl gasket. Glazing of 3/16" to 3" can be utilized. Insulated dual glazing is also available in 3/16" and 1/4" glass. Aluminum blinds between the glass are available with dual glazed windows.

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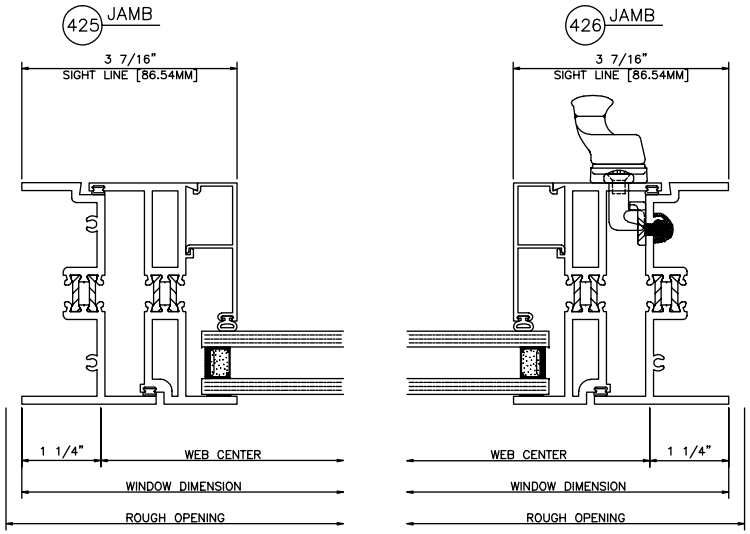
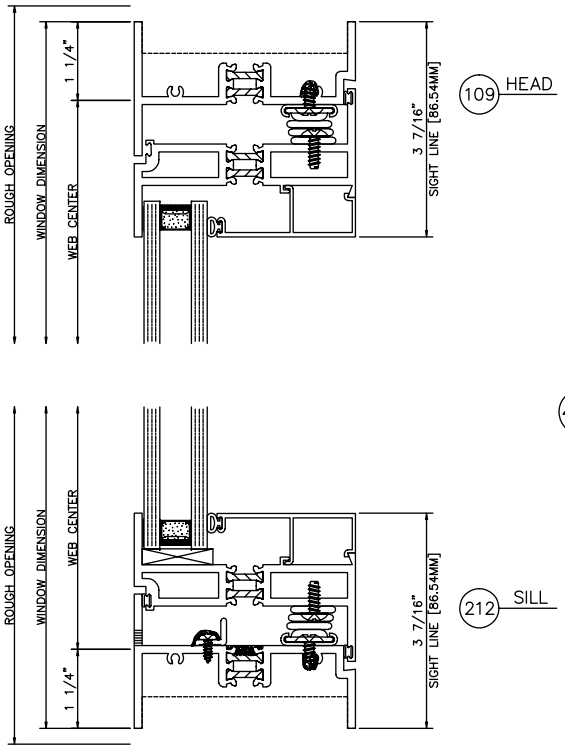
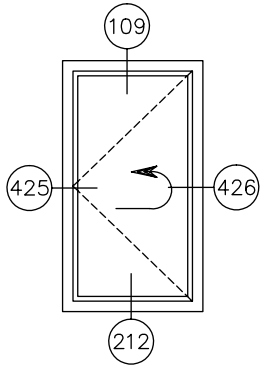
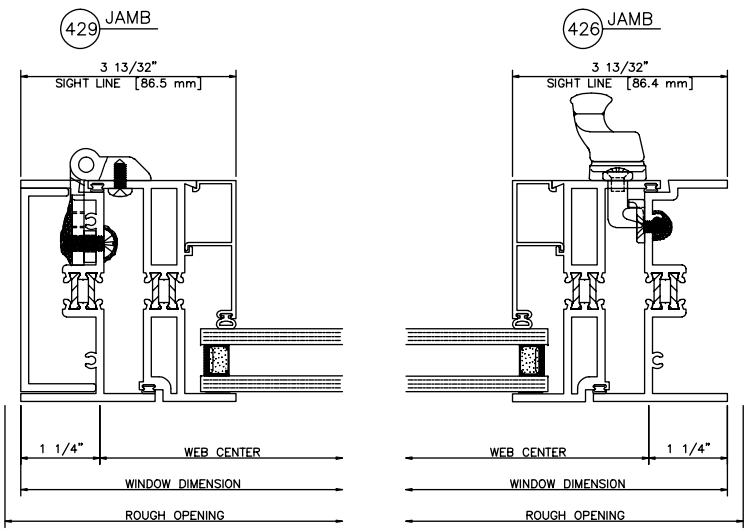


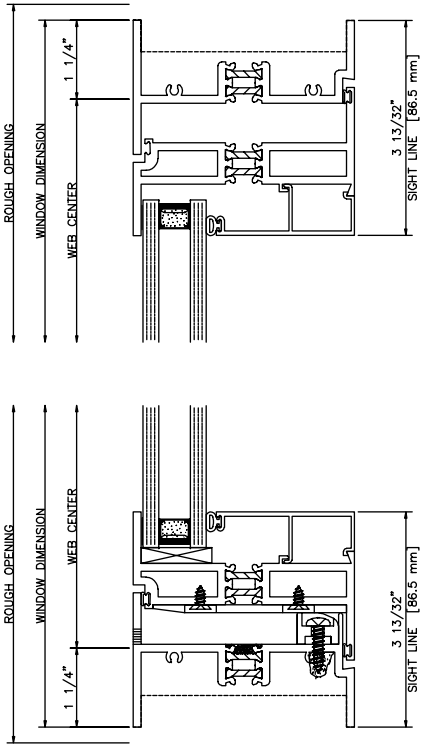


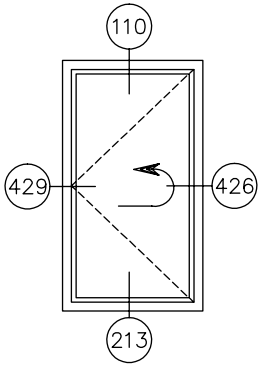


810-I Inside Glazed

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





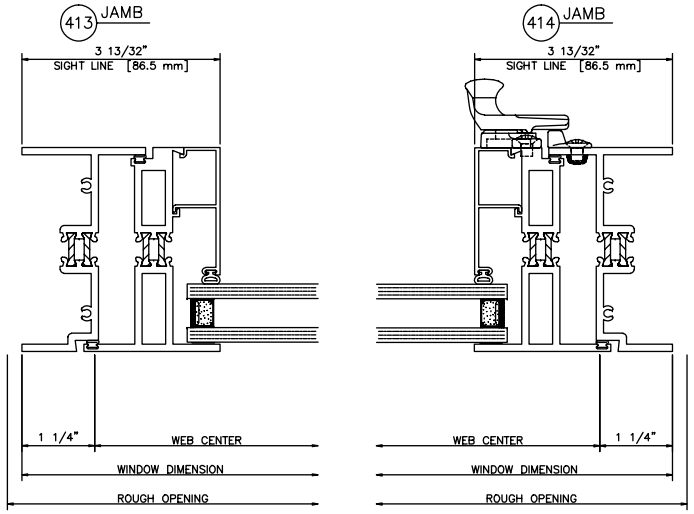


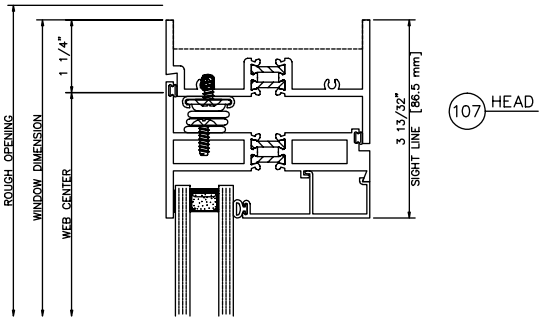
810-I Inside Glazed

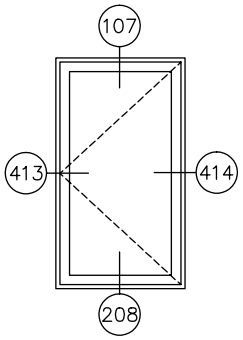
Casement In • Left Swing • Butt Hinges • Lift Blocks • Cam locks

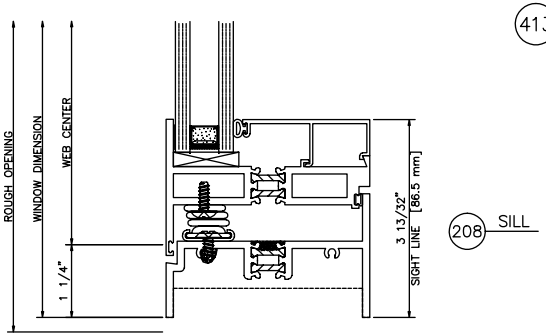
810-I Inside Glazed

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



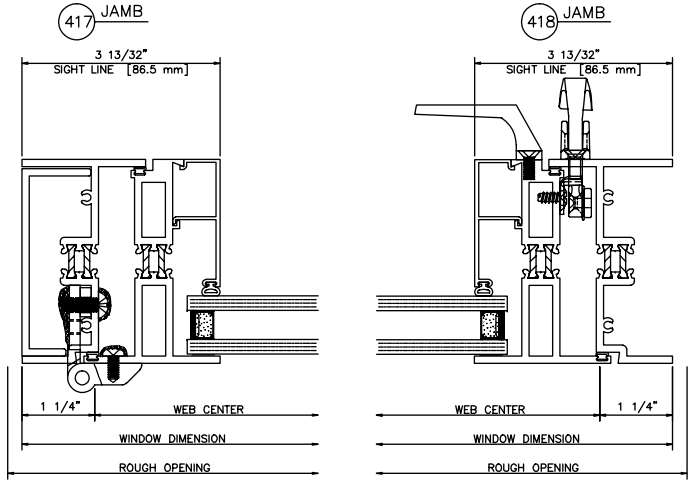


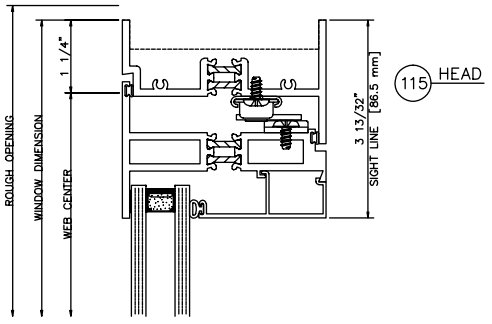


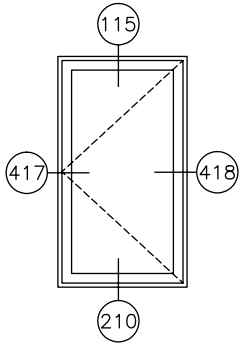


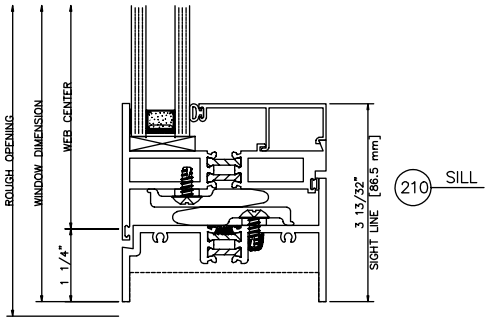
810-I Inside Glazed

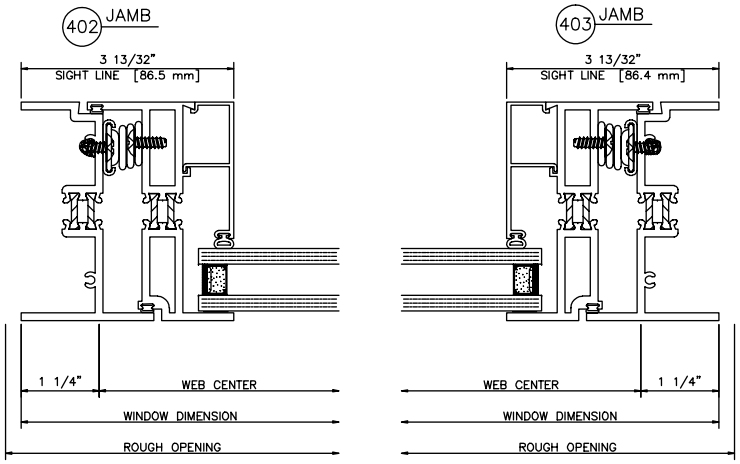
Casement Out • Left Swing • Butt Hinges • Lift Blocks • Pull Handles

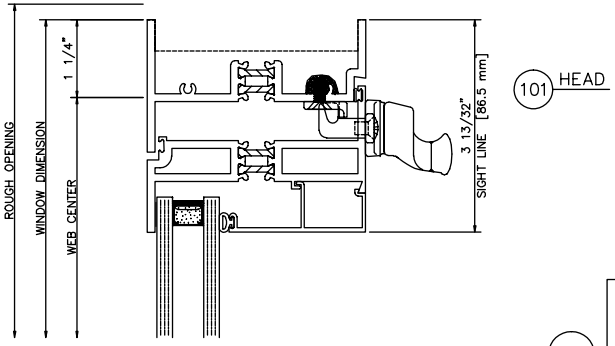


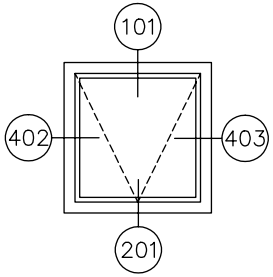


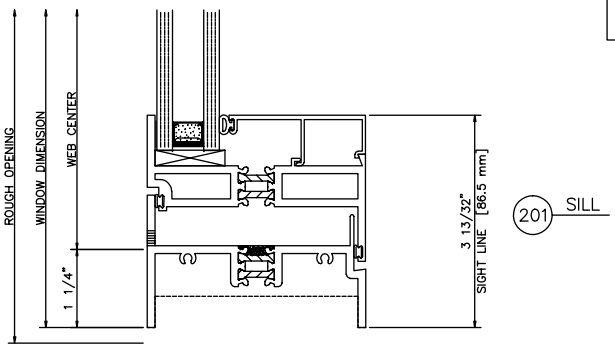






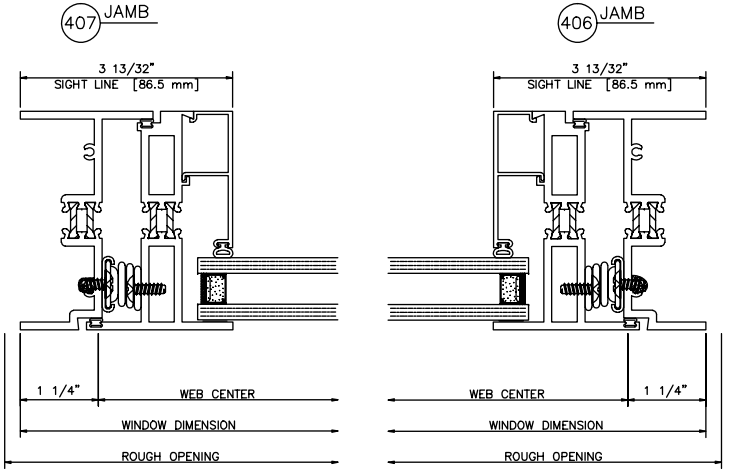


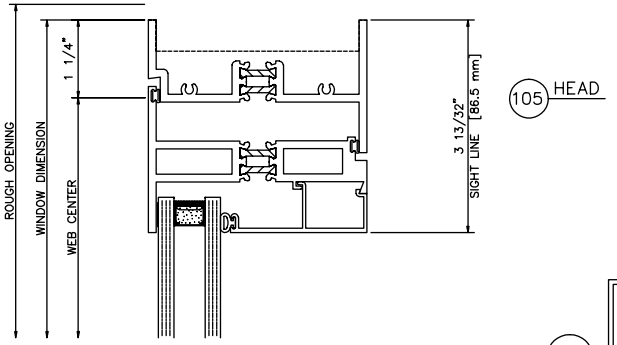


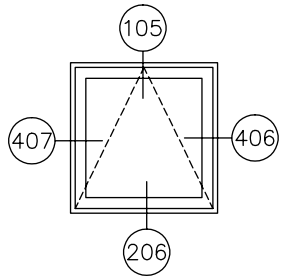


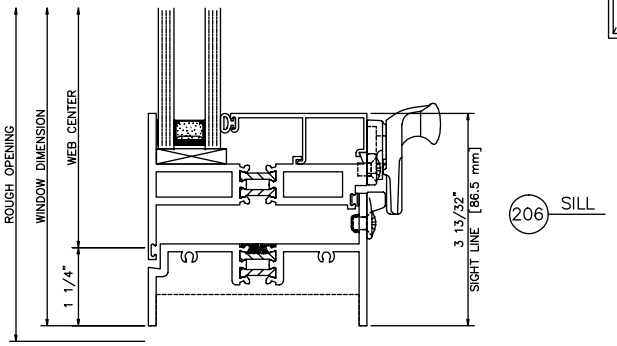
810-I Inside Glazed

Project In







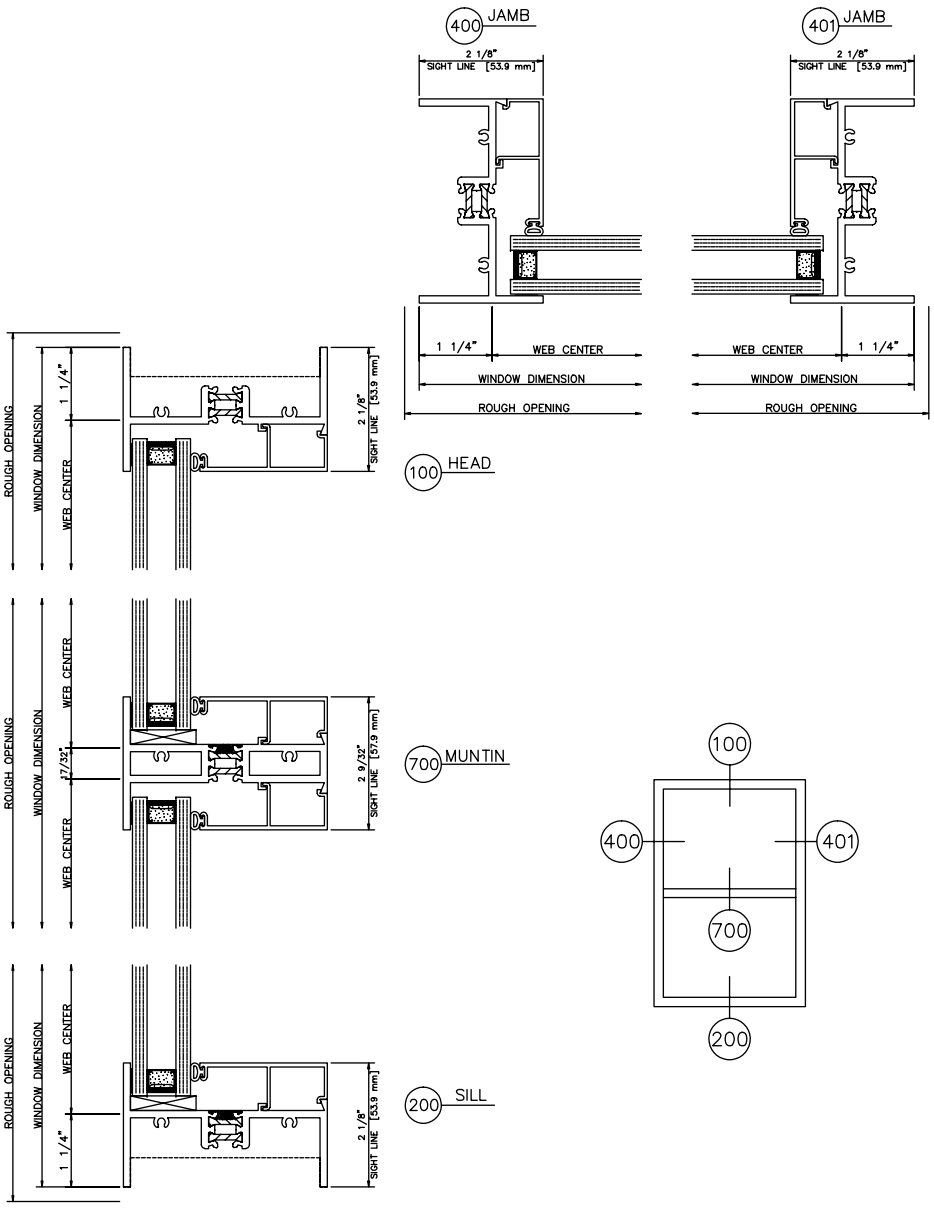


810-I Inside Glazed

Project Out

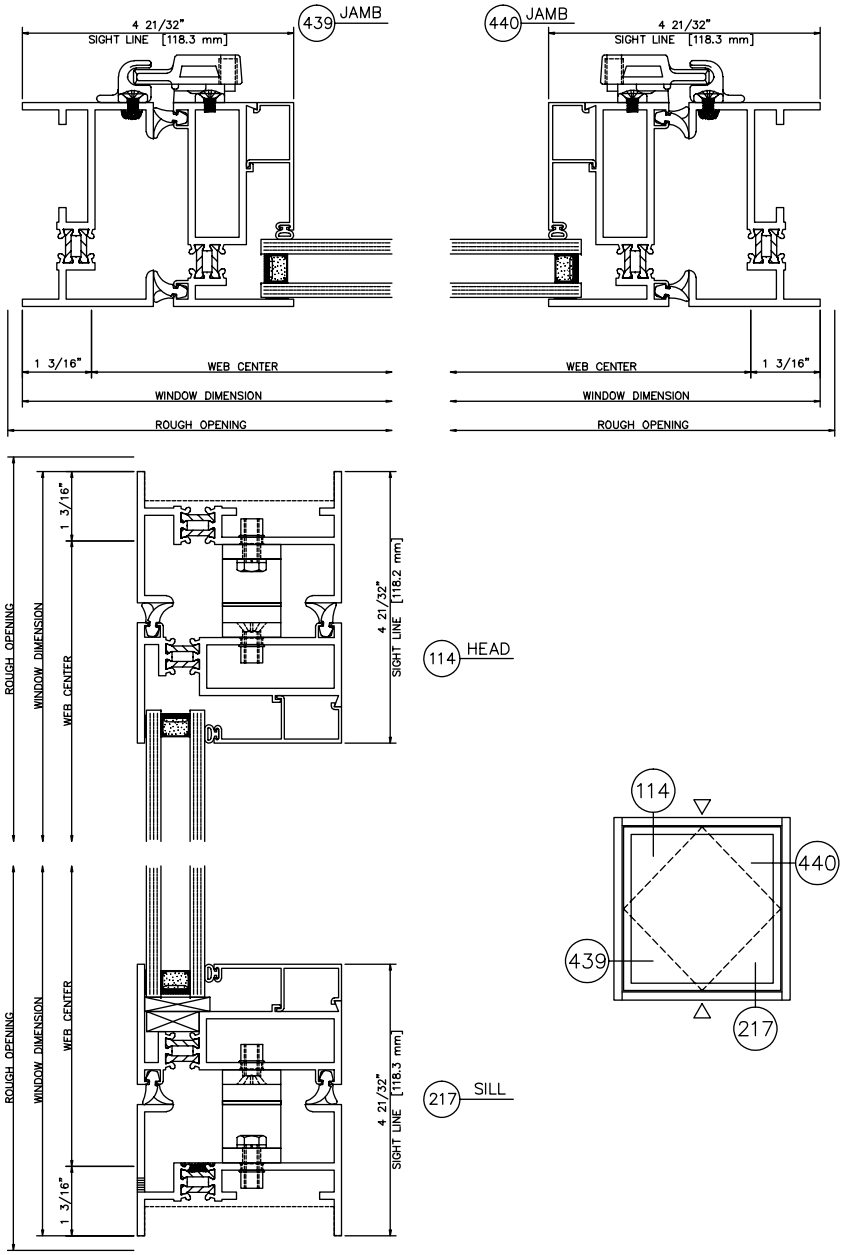
810-I Inside Glazed

Fixed

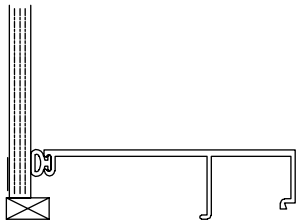


810-I Inside Glazed

Vertical Pivot

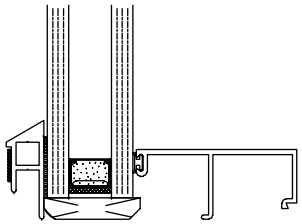


1/4" GLAZE



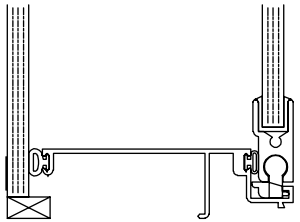
1" INSULATED
1/4"–1/4"

WITH GRID



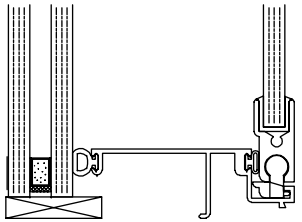
ER65 – 1/4"
INTERIOR PANEL

1/4" GLAZE



ER65 – 1/4"
INTERIOR PANEL

3/4" INSULATED
1/4"–1/4"



ER65 – 1/4"
INTERIOR PANEL

1/4" GLAZE

5/8" BLINDS