

# CHAPTER 9A

## INTEGRITY WOOD-ULTREX OUTSWING FRENCH DOOR

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### **ATTENTION:**

- Specifications and technical data are subject to change without notice.
  - Number in parentheses () following measurements are the metric equivalents in millimeters rounded to the nearest whole number
  - Allow 1/16" (2) tolerance on all measurements.
  - Interior mullion trim are shipped loose for field installation.
  - For answers to technical questions about Integrity products you may call our Integrity Support Line: 1-800-587-2712.
- Website: [www.marvin.com](http://www.marvin.com)

**UNIT FEATURES**

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**FRAME AND PANEL:**

The frame and panel exteriors are made of Ultrex<sup>®</sup>, an advanced fiber reinforced material that is resistant to thermal conductance. Ultrex patented coating system meets all the requirements of AAMA 624-10. Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony. The interior is non finger-jointed pine, kiln dried to a moisture content of 6-12% at time of fabrication. Water-repellant, preservative treated in accordance with WDMA I.S.4. Interior wood is available as Pine bare wood or factory-applied white interior finish.

**FRAME:**

Composite frame thickness is 1 5/16" (33). Frame width of 4 9/16" (116). The sill is Ultrex beige in color, with oak interior sill liner. 4/4 non finger-jointed pine interior stop is applied to all units. Ultrex is .080" (2) thick.

**PANEL:**

Composite sash thickness of 1 3/4" (44), stiles and top rail width, 3 5/8" (92), bottom rail width 6" (152) Ultrex is .110" (3) thick.

**JAMB EXTENSION:**

6 9/16" (167) or 6 13/16" (173) jamb extension available factory applied or shipped loose for field application. Assemblies with 6 9/16" and 6 13/16" jamb extensions add 1/4" to width and 1/8" to height of Rough Opening.

**HARDWARE:**

Multi-point lock, latch, and deadbolt assembly included with each door. Handle has a standard deadbolt and a top and bottom shoot bolts operated by handle set. Handle set interior and exterior selected separately. Standard finish is Almond Frost. Optional White, Bright Brass PVD, Oil Rubbed Bronze PVD, and Satin Nickel PVD. Standard locking strike plate will be stainless steel, with an optional brass strike on "X" doors. Hinges contain both a horizontal, vertical adjustment feature, and non-removable pin. Three hinges are used on all units. Hinges will be White, Dark Brown, Evergreen, Pebble, Ebony, or Cashmere to match the exterior of the frame. Coastal brass, Oil Rubbed Bronze, or coastal satin nickel hinges with brass substrates. Keyed alike option is available.

**INSTALLATION:**

Factory applied folding nailing fin and drip cap system. Optional installation brackets for masonry available. Factory supplied field mulling kits are available for standard assemblies. Impact glazed units require installation clips.

**GLAZING:**

All units are manufactured with a 3/4" (19) Tempered Insulating Glass with Low E2, E3 and E1 coatings including argon gas fill. All glass is of a select quality complying with ASTM C 1036. Insulating glass is manufactured and tested to pass level ASTM E 2190 and is IGCC certified. The glazing seal is a silicone bedding on both interior and exterior surfaces utilized in a sandwich style sash. STC/OITC values are available for 3.1/3.1 standard glass. Optional 3.1/4.7 STC/OITC Upgrade glass is available. STC and OITC ratings are tested in accordance with ASTM E 90-09. See the Product Performance chapter for values.

**IMPACT GLAZING:**

Optional Impact Zone 3 available on selected sizes. Zone 3 for winds up to 140 miles per hour. Glass is laminated insulated Low E2 or E3 Argon, consisting of annealed or tempered glass exterior and laminated glass interior. The laminated glass is comprised of two pieces of glass with either a SGP or PVB laminate layer between. Interior and exterior glazing compound is silicone, in a sandwich style glazing system.

**WEATHER STRIP:**

Beige colored PVC standard. All units are constructed with two weather strip at all jamb/panel perimeter joints. The primary weather strip is attached to the head/jamb interior wood stops, and the secondary weather strip is attached to the panels. Jambs, head jamb, sill and interior astragal utilize an extruded santoprene hollow bulb weather strip. The exterior aluminum astragal uses a hollow bulb type weather strip. Weather strip exposed to the exterior is of UV (ultraviolet) resistant material.

**REMOVABLE INTERIOR GRILLES:**

Bar: Pine wood, 3/4" (19) Pattern: Standard rectangular pattern. Available in Pine bare wood or factory applied white finish.

**INTERIOR / EXTERIOR SIMULATED DIVIDED LITES (SDL):**

Interior bar: 7/8" (22) wide bars. Pine bare wood with optional white interior finish. Exterior bar: Ultrex, 7/8" (22) wide bars, finish to match exterior. Pattern: Standard rectangular pattern, 6 or 9 lite per panel prairie cut, 6 lite prairie cut on transom or Cottage style cut. Simulated check rail option: 2 11/32" (60). Patterns available: simulated rail in standard center or customer specified location with 7/8" pattern above, below, or both in pattern of rectangular equal lite or prairie lite cuts/

**GRILLES-BETWEEN-THE-GLASS (GBG):**

23/32" (18) white contoured aluminum bar placed between two panes of glass. Pattern: Standard rectangular pattern, 6 or 9 lite Prairie cut per panel or Cottage style cut, or 6 lite prairie cut on transom. Exterior color: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony. Interior Colors: White or Bronze. GBGs are not available with Impact glazed doors.

**EXTERIOR CASING:**

Non-integral to the unit. Fastened to the exterior wall with barb and kerf 2" (51) brick mould available as a header and jamb surround. 3 1/2" (89) flat casing available as a header and jamb surround. Also available with 1" (25) ranch style header overhang.

## MINIMUM AND MAXIMUM GUIDELINES AND CERTIFIED SIZES

Operator/Stationary Units								
Unit Type	Frame Size							
	Min Width		Min Height		Max Width		Max Height	
	in	mm	in	mm	in	mm	in	mm
1 - PanelOperator	30 5/16	(770)	79 1/2	(2019)	36 5/16	(922)	95 1/2	(2426)
2 - PanelOperator	59	(1499)	79 1/2	(2019)	71	(1803)	95 1/2	(2426)
Door Transom	36 5/16	(922)	15 3/4	(400)	71	(1803)	15 3/4	(400)

NOTE: Special sizes are available in 1/64" increments, not to exceed the minimum or maximum listed above.

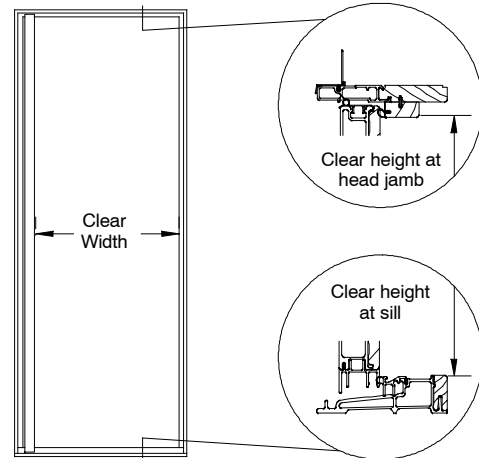
Product	Air Tested to psf	Water Tested to psf	Design Pressure (DP)	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Integrity Outswing French Door (O)	1.57	7.50	50	LC-PG50-FD	36.319	(923)	95.5	(2426)
Integrity Outswing French Door (X)	1.57	7.50	50	LC-PG50-SHD	36.319	(923)	95.5	(2426)
Integrity Outswing French Door (XX)	1.57	7.50	50	LC-PG50-SHD	71	(1803)	95.5	(2426)

Product	Air Tested to psf	Water Tested to psf	Design Pressure (DP)	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Integrity Outswing Impact French Door (O)	1.57	8.25	+55/- 65	LC-PG55-FD	36.319	(923)	95.5	(2426)
Integrity Outswing Impact French Door (X)	1.57	8.25	+55/- 65	LC-PG55-SHD	36.319	(923)	95.5	(2426)
Integrity Outswing Impact French Door (XX)	1.57	8.25	55	LC-PG55-SHD	71	(1803)	95.5	(2426)

**EGRESS MEASUREMENTS**

Net Clear Opening Wood Ultrex Out-Swing French Door			
Width			
Unit Type	Call Number	Net Clear Openings	
		ft-in	mm
1 Panel Operator (X)	2-6	2- 1 19/32	(650)
	2-8	2- 3 19/32	(701)
	3-0	2- 7 19/32	(802)
2 Panel Operator (XX)	5-0	4- 4 7/32	(1326)
	5-4	4- 8 7/32	(1428)
	6-0	5- 4 7/32	(1631)
Height			
Unit Type	Call Number	Net Clear Openings	
		ft - in	mm
1 Panel (X) and 2 Panel (XX) Configurations	6-5	6- 4 9/16	(1944)
	6-8	6- 7 1/16	(2008)
	7-0	6- 11 1/16	(2109)
	8-0	7- 8 9/16	(2351)

**EGRESS MEASUREMENTS**



**SWINGING DOOR UNIT**

NOT TO SCALE

Code restrictions may vary depending on your local building codes. For additional information contact your local code department for IBC and IRC requirements.

Egress Conversions		
Standard Outswing French Door		
Minimum Value for Net Clear Opening	Desired Dimension	Formula
32"	Egress opening width, in	<b>1 Panel Door</b>
		= IOFD Frame Width - 4.738
		<b>2 Panel Door (XX)</b>
		= IOFD Frame Width - 6.788
78" (IRC 2012) 80" (IBC 2012)	Egress opening height, in	= IOFD Frame Height - 2.952

## CONVERSIONS

Unit Measurements - Stationary and Operating Panels		Width 1W		Width 2W			Height	
From	To							
Frame		in	mm		in	mm	in	mm
Masonry Opening	Rough Opening	+ 1/2	(13)		+ 1/2	(13)	+ 1/4	(6)
Masonry Opening w/BMC	Rough Opening	+ 1/2	(13)		+ 1/2	(13)	+ 1/4	(6)
OM of Frame	Rough Opening	+ 1	(25)		+ 1	(25)	+ 1/2	(13)
Daylight Opening	Rough Opening	+ 9 31/32	(253)	× 2	+ 17 5/16	(440)	+ 12 29/32	(328)
Panel		in	mm		in	mm	in	mm
OM of Frame	OM of Panel	- 1 23/32	(44)	+ 2	- 29/32	(23)	- 2 25/32	(71)
Daylight Opening	OM of Panel	+ 7 1/4	(184)		+ 7 1/4	(184)	+ 9 5/8	(244)
Glass		in	mm		in	mm	in	mm
Daylight Opening	Glass	+ 1 1/4	(32)		+ 1 1/4	(32)	+ 1 3/16	(30)

Unit Measurements - Transoms		Width 1W		Height	
From	To				
Frame		in	mm	in	mm
Masonry Opening	Rough Opening	+ 1/2	(13)	+ 1/4	(6)
Masonry Opening w/BMC	Rough Opening	+ 1/2	(13)	+ 1/4	(6)
OM of Frame	Rough Opening	+ 1	(25)	+ 1/2	(13)
Daylight Opening	Rough Opening	+ 5 3/8	(137)	+ 4 7/8	(124)
Frame		in	mm	in	mm
Daylight Opening	Frame	+ 4 3/8	(111)	+ 4 3/8	(111)
Glass		in	mm	in	mm
Daylight Opening	Glass	+ 1 9/16	(40)	+ 1 9/16	(40)

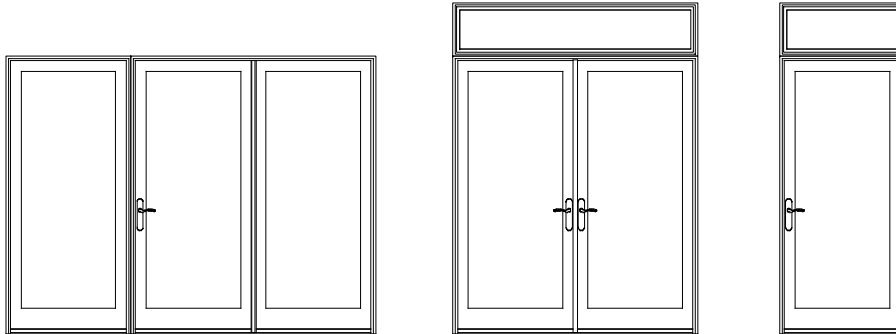
## MULLING GUIDELINES

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Multiple assemblies can be factory mulled

- Assemblies up to 3 units wide by 1 unit high
  - **MAXIMUM ROUGH OPENING** not to exceed 109 15/16" (2792) X 96" (2438)
- Assemblies up to 2 units wide by 2 units high
  - **MAXIMUM ROUGH OPENING** not to exceed 73 5/8" (1870) X 100 1/2" (2552)

**NOTE:** FIELD MULLING BEYOND 110" x 112" IS NOT RECOMMENDED



### ROUGH OPENING TABLE FOR ASSEMBLIES

WIDTH: Single unit Rough Opening width MINUS 1" = Frame width.  
ADD **all** frame widths PLUS 1" = Total Rough Opening Width.

HEIGHT: Single unit Rough Opening height MINUS 1/2" = Frame height.  
ADD **all** frame heights PLUS 1/2" = Total Rough Opening Height.

NOTE: Assemblies with 6 13/16" jamb extensions  
add 1/4" to width and 1/8" to height of Rough Opening.

**CERTIFIED MULLING GUIDELINES**

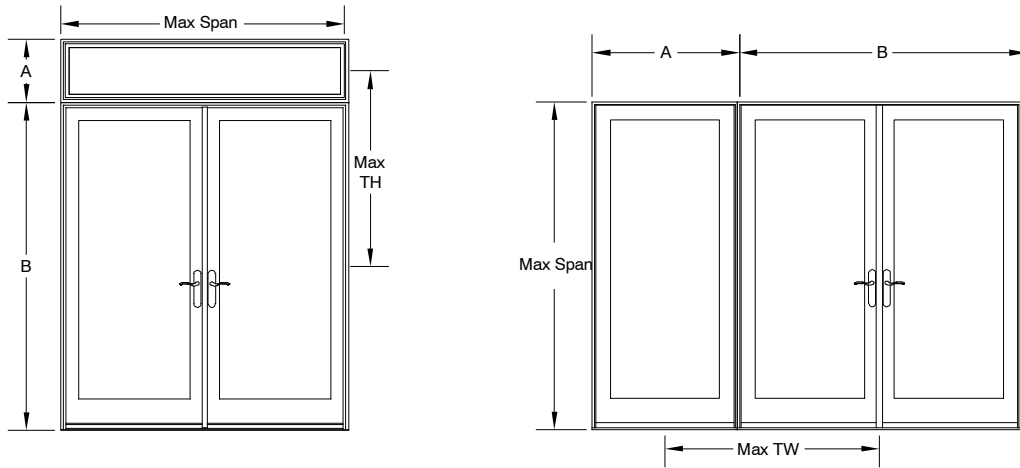
**Certified Mull Limits: WDMA Hallmark certified to AAMA 450.**

The Wood- Ultrex Outswing French Door may be mull to Direct Glaze Polygon.

- If assemblies have individual units that have a lower design pressure than the mull, the entire assembly is rated at the lower design pressure.
- Mull certification includes 4" mull clips (nail fin installation) or mull brackets (structural bracket installation) at all mull joints.
- Items not included in certified mulls: Stepped mulls, Palladians, Polygon Shapes, Through Jamb and Insert Products

Mull Limits					
Product	Configuration	Max Span	Max TW or TH	Max RO	DP
WU IOFD Frame- Frame Mulling	1W x 2H	71" (1803)	50" (1270)	72" x 100 1/2" (1829 x 2553)	50
WU IOFD Frame- Frame Mulling	2- 3W x 1H	95 1/2" (2426)	54 15/32" (1384)	109 15/16" x 96" (2792 x 2438)	50

- Tributary Width =  $(A+B)/2$
- Tributary Height =  $(A+B)/2$



**CERTIFIED 1/2" MRF MULLING GUIDELINES**

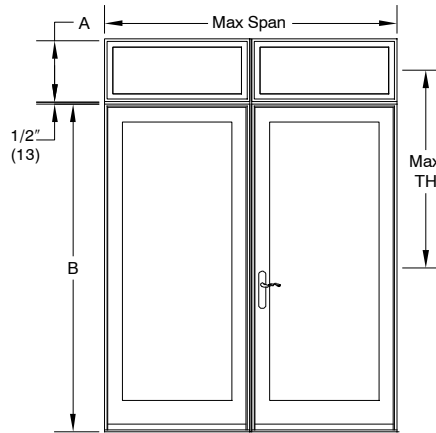
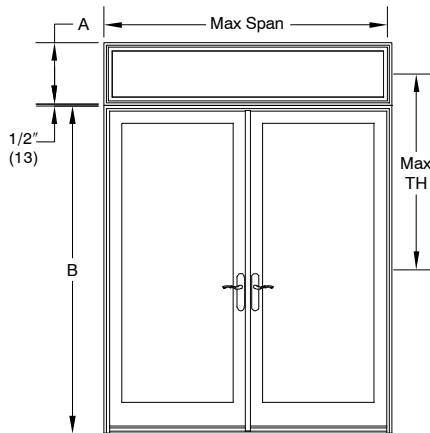
**Certified Mull Limits: WDMA Hallmark certified to AAMA 450.**

The Wood- Ultrex Outswing French Door may be mull'd to Direct Glaze Polygon.

- If assemblies have individual units that have a lower design pressure than the mull, the entire assembly is rated at the lower design pressure.
- Mull certification includes 4" mull clips (nail fin installation) or mull brackets (structural installation) at all mull joints.
- Items not included in certified mulls: Stepped mulls, Palladians, Polygon Shapes, Through Jamb, and Insert Products

Mull Limits					
Product	Configuration	Max Span	Max TW or TH	Max RO	DP
WU IOFD Horizontal 1/2" MRF Mulling	1W x 2H	71" (1803)	50" (1270)	72" x 100 1/2" (1829 x 2553)	50
WU IOFD Horizontal 1/2" MRF Mulling	2W x 2H	72 5/8" (1845)	50" (1270)	73 5/8" x 100 1/2" (1870 x 2553)	50

- Tributary Width =  $(A+B+1/2)/2$
- Tributary Height =  $(A+B+1/2)/2$



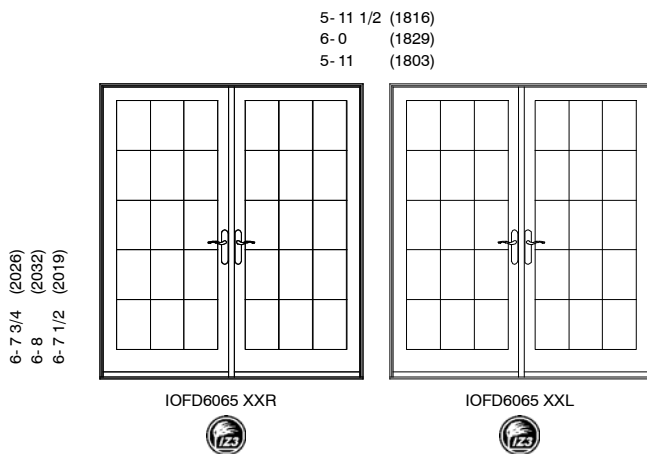
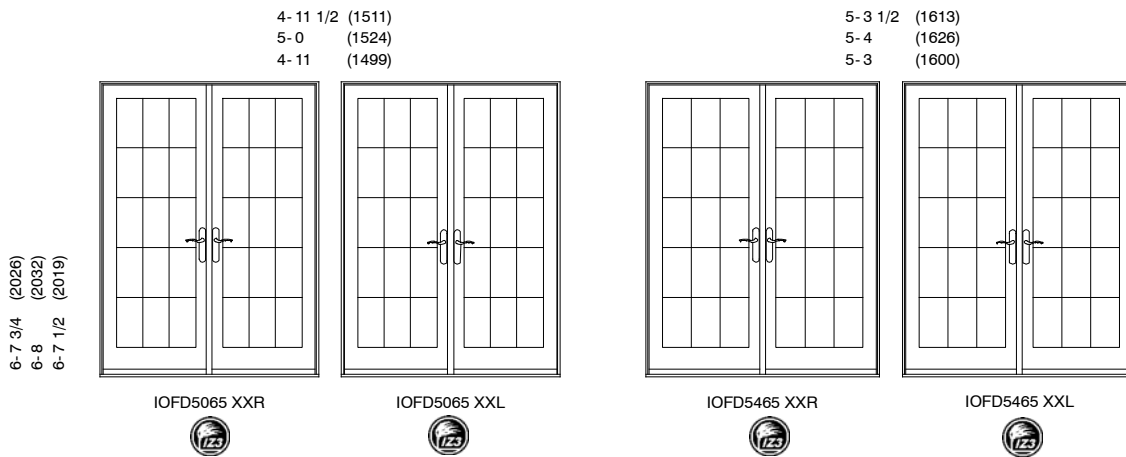
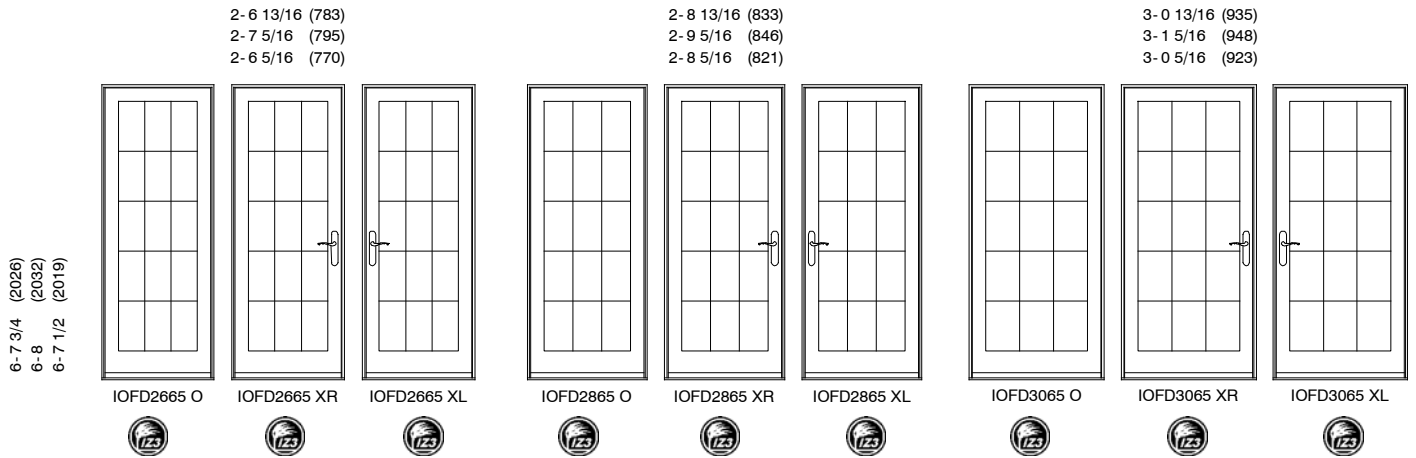


## STANDARD SIZE CHART

Standard Outswing Unit Measurements															
Width															
Unit Type	Call Number	Masonry Opening		Rough Opening		Frame Size		Panel OM		Daylight Opening		Standard Glass Size		Impact Glass Size	
		ft - in	mm	ft - in	mm	ft - in	mm	ft-in	mm	ft - in	mm	in	mm	in	mm
1 Panel	2-6	2-6 13/16	(783)	2-7 5/16	(796)	2-6 5/16	(770)	2-4 19/32	(726)	1-9 11/32	(542)	22 19/32	(574)	22 15/32	(571)
	2-8	2-8 13/16	(834)	2-9 5/16	(846)	2-8 5/16	(821)	2-6 19/32	(777)	1-11 11/32	(593)	24 19/32	(625)	24 15/32	(622)
	3-0	3-0 13/16	(935)	3-1 5/16	(948)	3-0 5/16	(923)	2-10 19/32	(879)	2-3 11/32	(695)	28 19/32	(726)	28 15/32	(723)
2 Panel	5-0	4-11 1/2	(1511)	5-0	(1524)	4-11	(1499)	2-4 19/32	(726)	1-9 11/32	(542)	22 19/32	(574)	22 15/32	(571)
	5-4	5-3 1/2	(1613)	5-4	(1626)	5-3	(1600)	2-6 19/32	(777)	1-11 11/32	(593)	24 19/32	(625)	24 15/32	(622)
	6-0	5-11 1/2	(1816)	6-0	(1829)	5-11	(1803)	2-10 19/32	(879)	2-3 11/32	(695)	28 19/32	(726)	28 15/32	(723)
Height															
Unit Type	Call Number	Masonry Opening		Rough Opening		Frame Size		Panel OM		Daylight Opening		Standard Glass Size		Impact Glass Size	
		ft - in	mm	ft - in	mm	ft - in	mm	ft-in	mm	ft - in	mm	in	mm	in	mm
All Configurations	6-5	6-7 3/4	(2026)	6-8	(2032)	6-7 1/2	(2019)	6-4 23/32	(1949)	5-7 3/32	(1704)	68 9/32	(1734)	68 5/32	(1731)
	6-8	6-10 1/4	(2089)	6-10 1/2	(2096)	6-10	(2083)	6-7 7/32	(2012)	5-9 19/32	(1768)	70 25/32	(1798)	70 21/32	(1795)
	7-0	7-2 1/4	(2191)	7-2 1/2	(2197)	7-2	(2184)	6-11 7/32	(2114)	6-1 19/32	(1869)	74 25/32	(1900)	74 21/32	(1897)
	8-0	7-11 3/4	(2432)	8-0	(2438)	7-11 1/2	(2426)	7-8 23/32	(2355)	6-11 3/32	(2111)	84 9/32	(2141)	84 5/32	(2138)

Standard Direct Glaze Door Transom Unit Measurements											
Width											
Unit Type	Call Number	Masonry Opening		Rough Opening		Frame Size		Daylight Opening		Glass Size	
		ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft-in	mm
Direct Glaze	3-6	3-0 13/16	(935)	3-1 5/16	(948)	3-0 5/16	(922)	2-7 15/16	(811)	33 1/2	(851)
	7-2	5-11 1/2	(1816)	6-0	(1829)	5-11	(1803)	5-6 5/8	(1692)	68 3/16	(1732)
	10-8	8-11 13/16	(2738)	9-0 5/16	(2751)	8-11 5/16	(2726)	8-6 15/16	(2615)	104 1/2	(2654)
Height											
Unit Type	Call Number	Masonry Opening		Rough Opening		Frame Size		Daylight Opening		Glass Size	
		ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm	ft - in	mm
All Configurations	1-6	1-4	(406)	1-4 1/4	(413)	1-3 3/4	(400)	0-11 3/8	(289)	12 15/16	(329)

ELEVATIONS 1 AND 2 PANEL DOORS 6/5 HT



O = Stationary Panel  
 X = Operating Panel  
 L = Left Panel  
 R = Right Panel

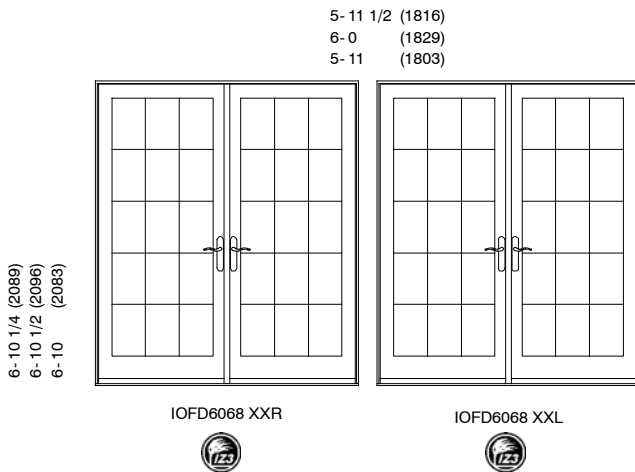
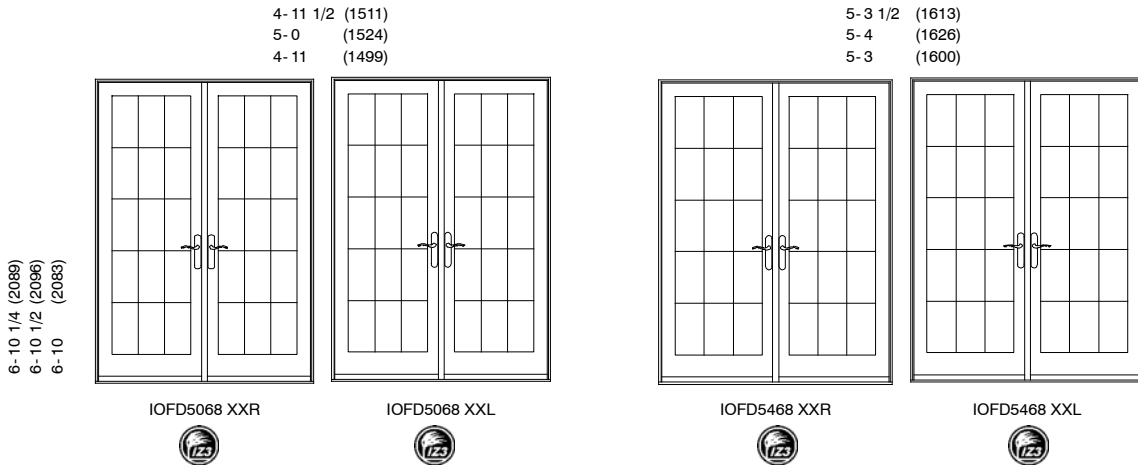
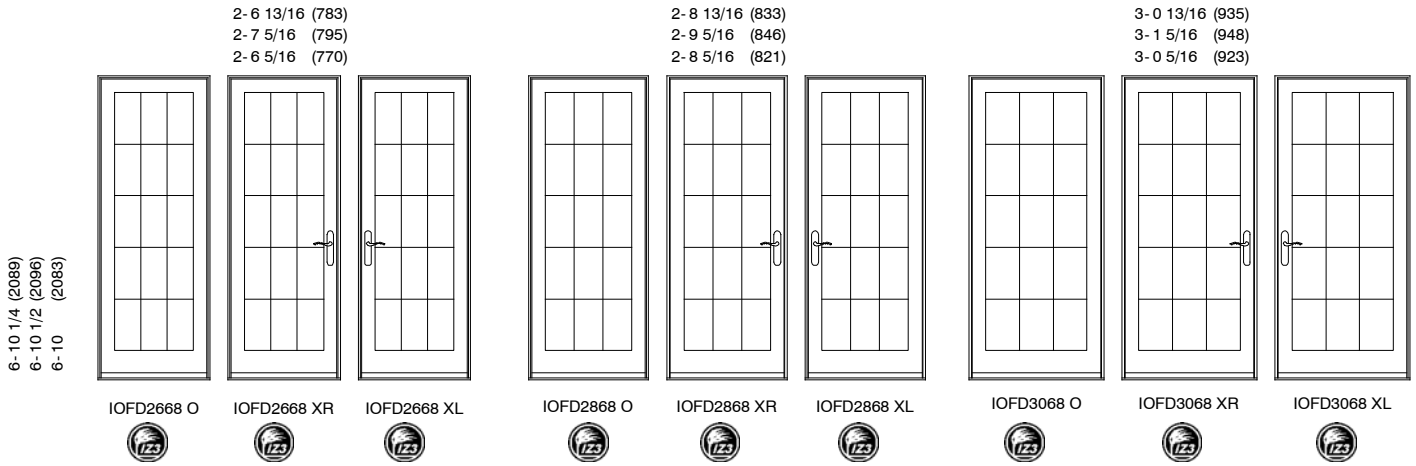
All units viewed from exterior.



Represents units that are certified for Impact glazing with a wind zone 3.

Max. Opg.  
 Rtg. Opg.  
 Frame Size

ELEVATIONS 1 AND 2 PANEL DOORS 6/8 HT Not To Scale



O = Stationary Panel  
 X = Operating Panel  
 L = Left Panel  
 R = Right Panel

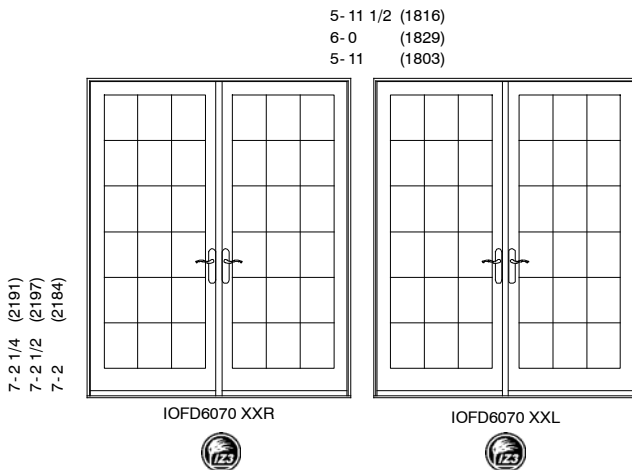
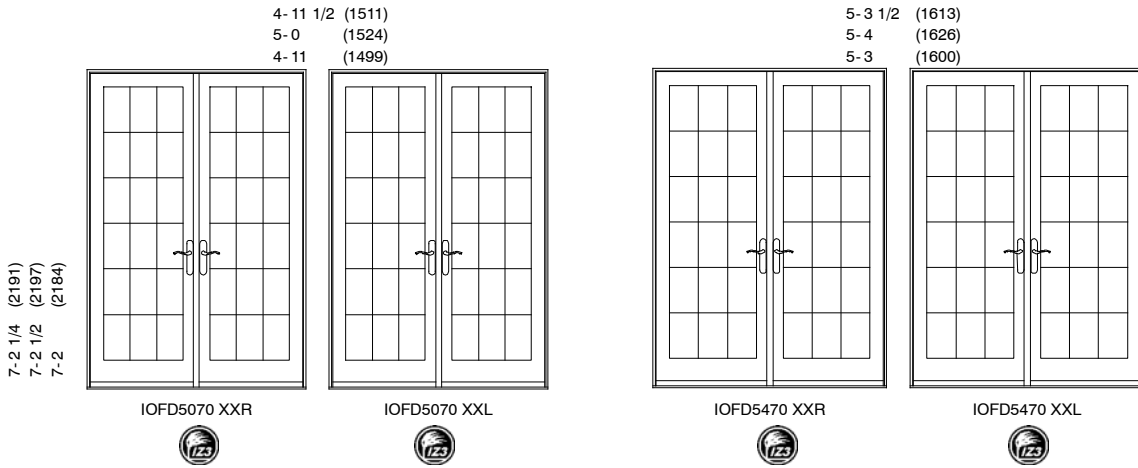
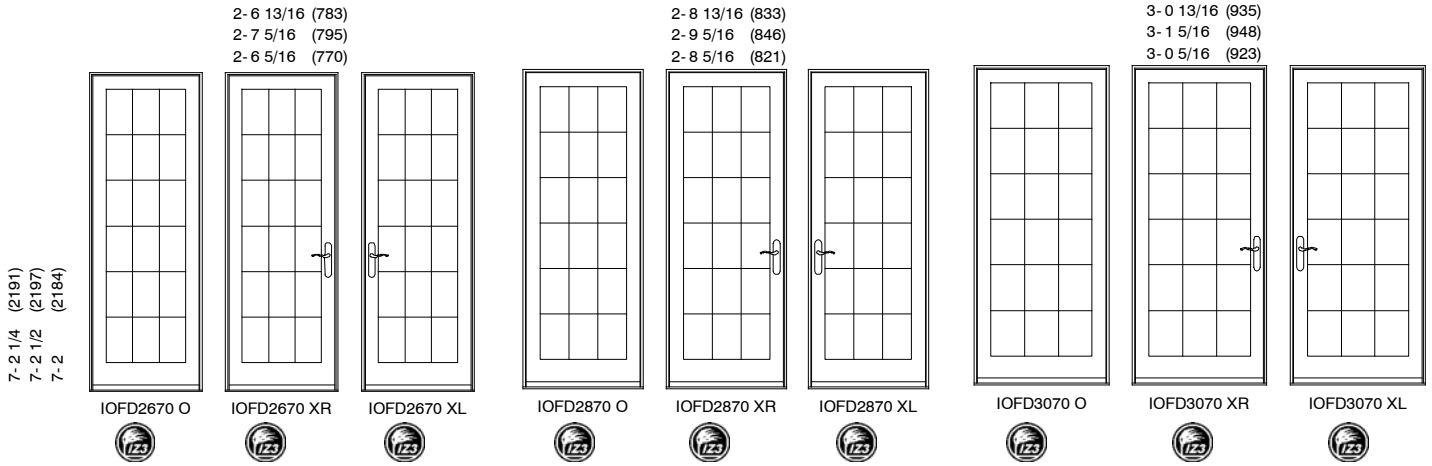


Represents units that are certified for Impact glazing with a wind zone 3.

All units viewed from exterior.

Mas. Opg.  
 Rng. Opg.  
 Frame Size

ELEVATIONS 1 AND 2 PANEL DOORS 7/0 HT



O = Stationary Panel  
 X = Operating Panel  
 L = Left Panel  
 R = Right Panel

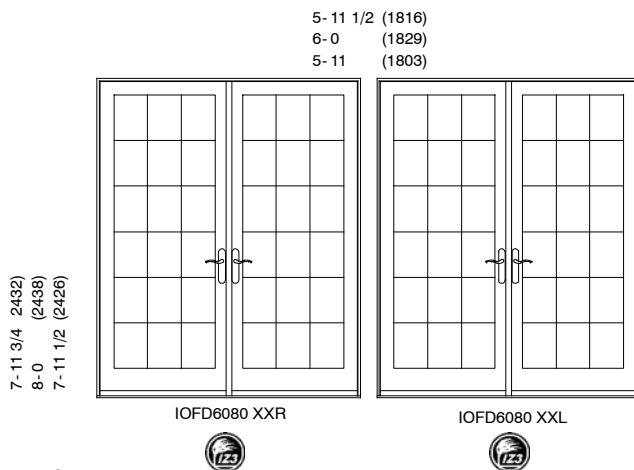
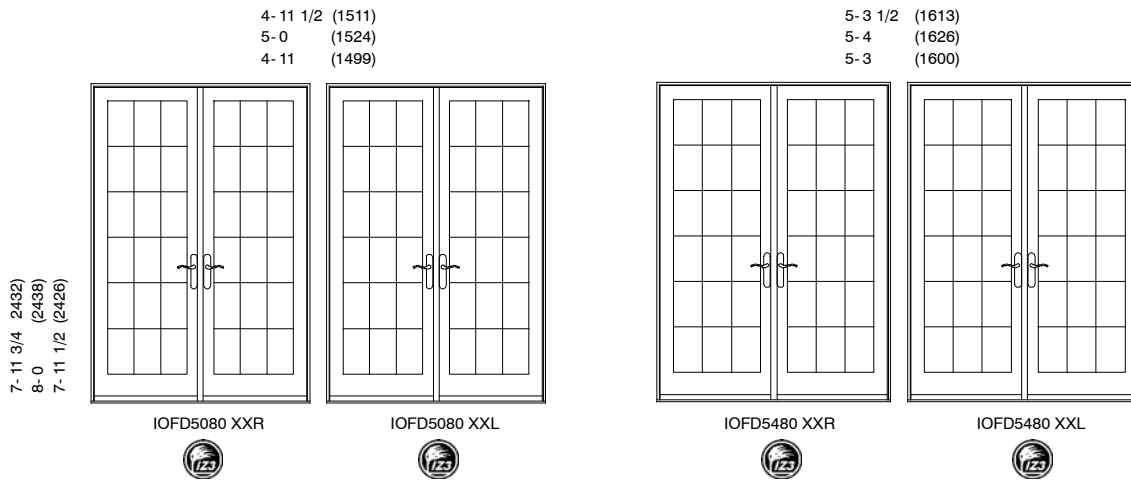
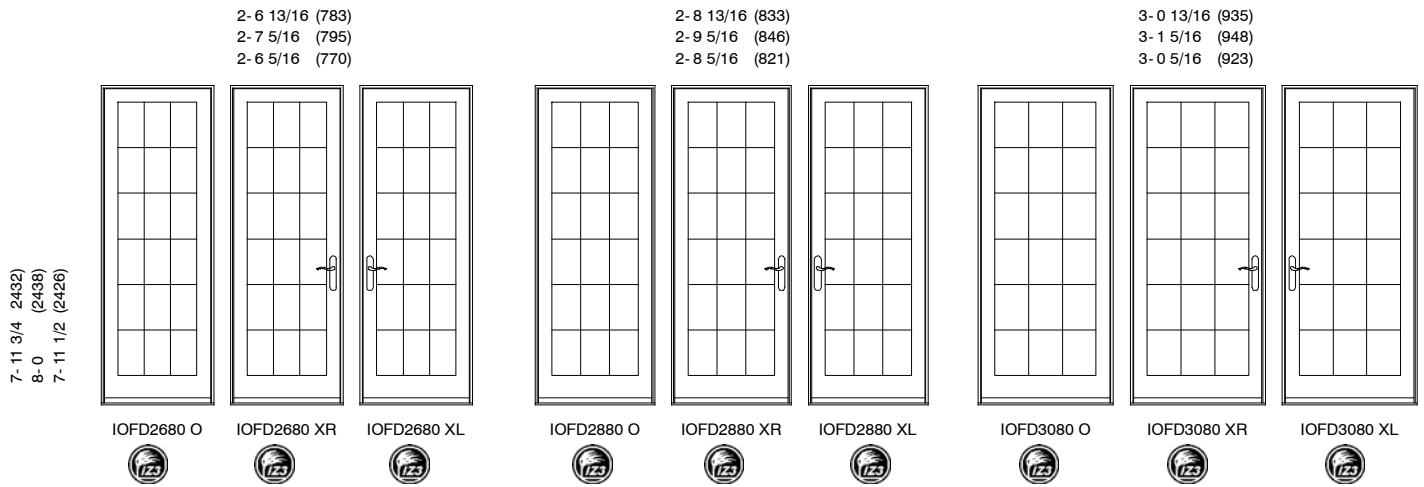


Represents units that are certified for Impact glazing with a wind zone 3.

All units viewed from exterior.

Max. Opg.  
 Rtg. Opg.  
 Frame Size

ELEVATIONS 1 AND 2 PANEL DOORS 8/0 HT



O = Stationary Panel  
 X = Operating Panel  
 L = Left Panel  
 R = Right Panel



Represents units that are certified for Impact glazing with a wind zone 3.

All units viewed from exterior.

Max. Opp.  
 Rtg. Opp.  
 Frame Size

ELEVATIONS TRANSOMS

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Mas. Opg.	3-0 13/16 (935)	5-11 1/2 (1816)	8-11 13/16(2739)
Rhg. Opg.	3-1 5/16 (948)	6-0 (1829)	9-0 5/16 (2751)
Frame Size	3-0 5/16 (923)	5-11 (1803)	8-11 5/16(2726)

(406)  
 (413)  
 (400)  
 1-4  
 1-4 1/4  
 1-3 3/4  
 Mas. Opg.  
 Rhg. Opg.  
 Frame Size



IOFDDG3616



IOFDDG7216



IOFDDG10816

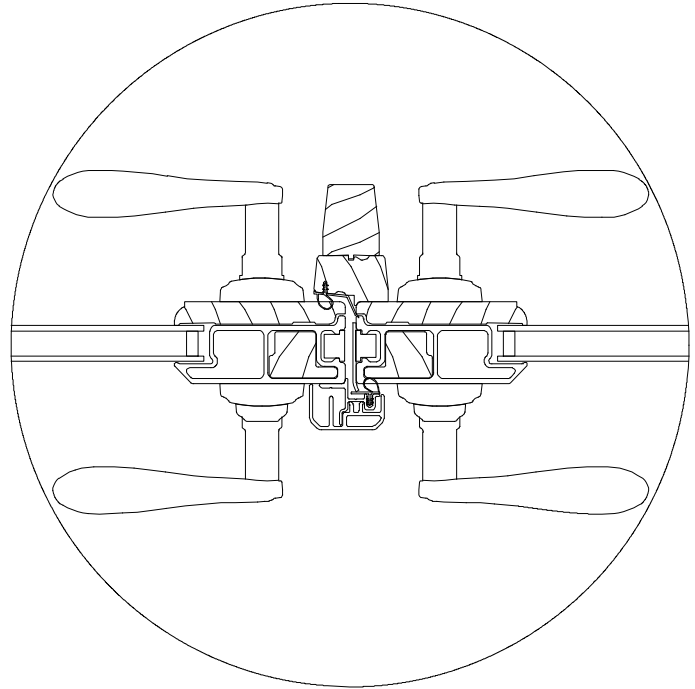
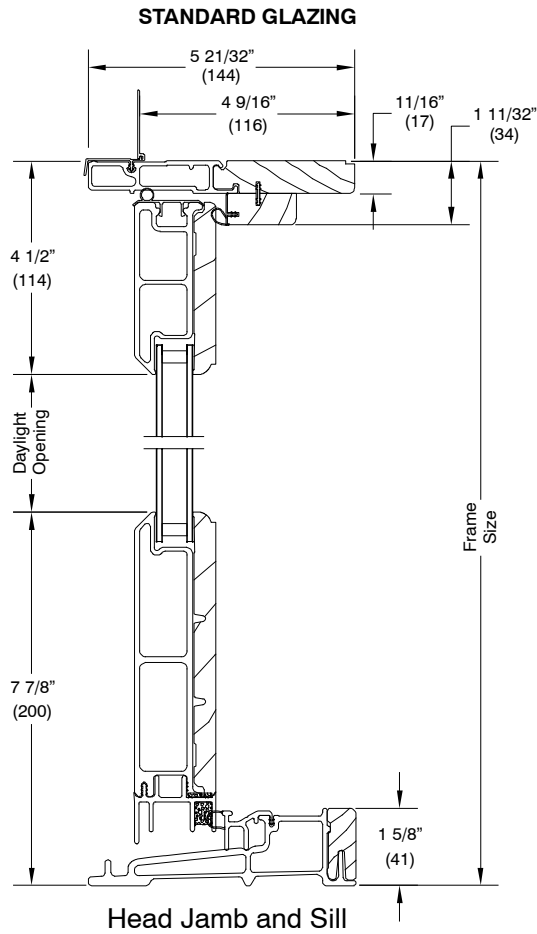
All units viewed from exterior.



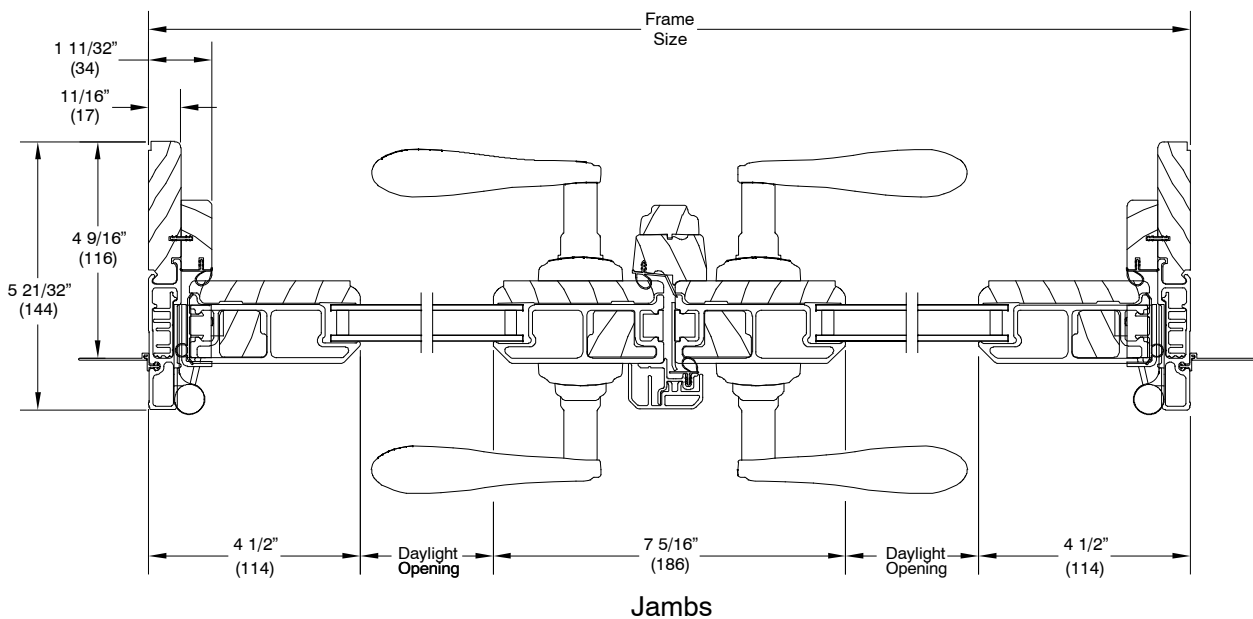
Represents units that are certified for Impact glazing with a wind zone 3.

**SECTION DETAILS - 4 9/16" JAMB - XXR OPERATOR**

Scale 3" = 1'-0"



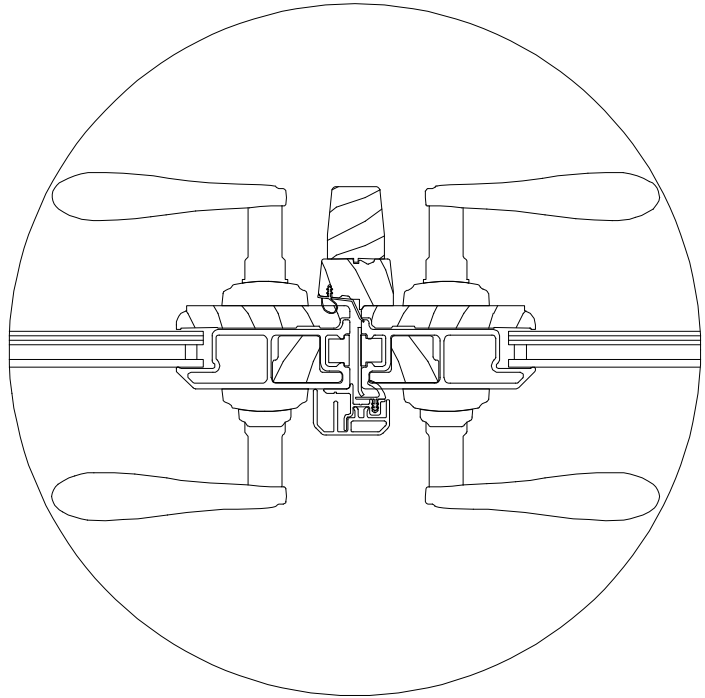
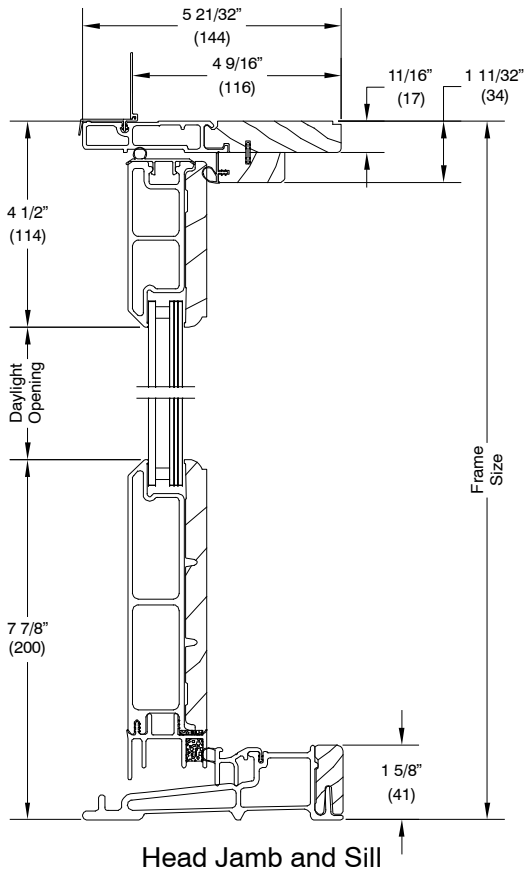
**W9608 Astragal**  
 For Heights Over 6-8



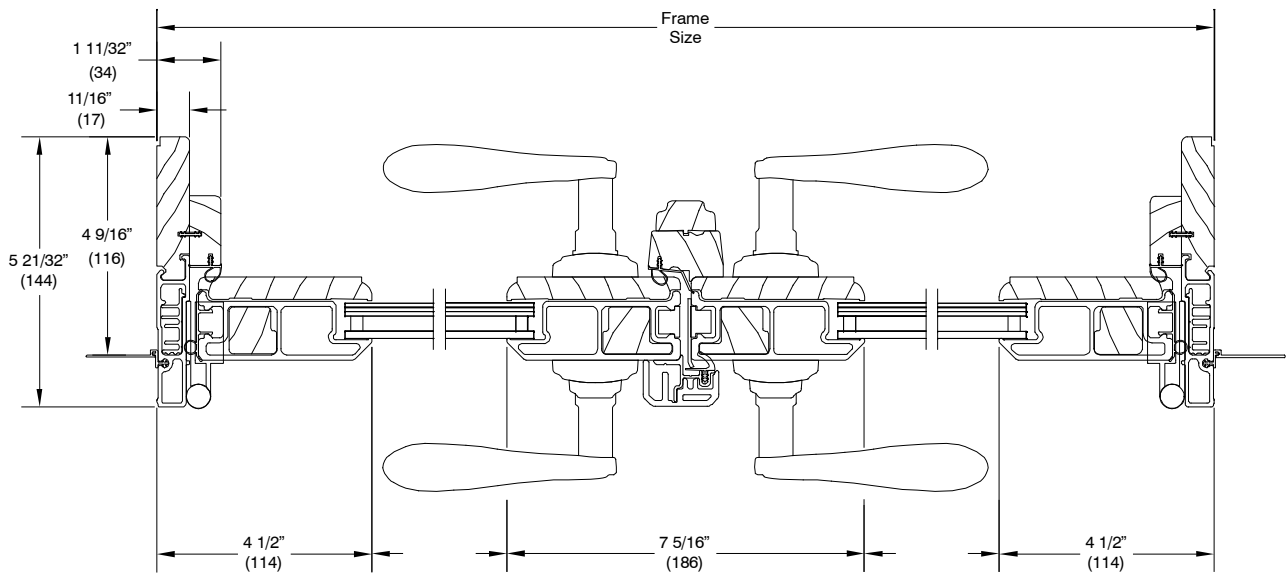
**SECTION DETAILS - 4 9/16" JAMB - XXR OPERATOR**

Scale 3" = 1'-0"

**IMPACT GLAZING**



**W9608 Astragal**  
**For Heights Over 6- 8**

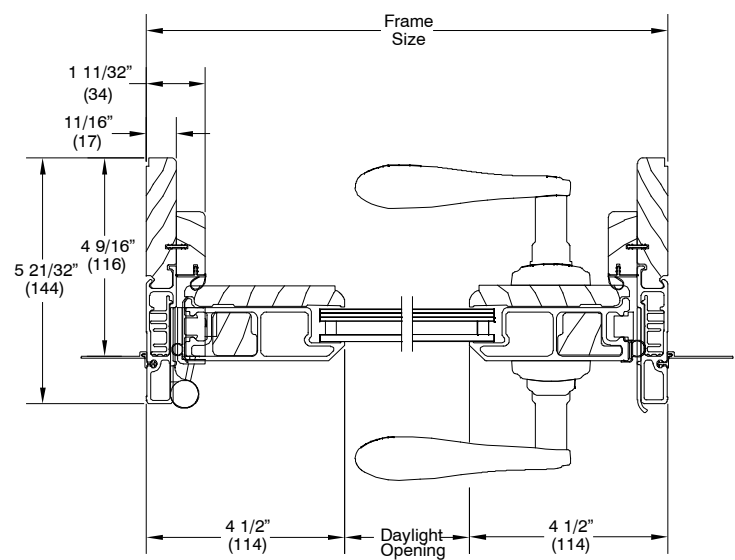
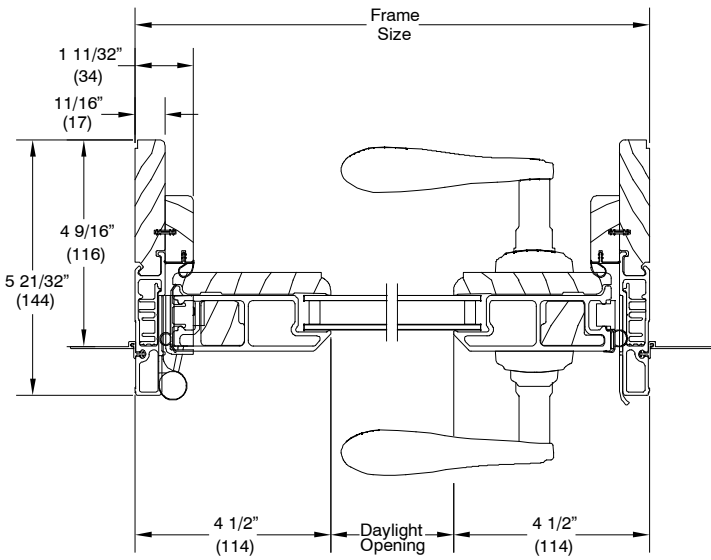
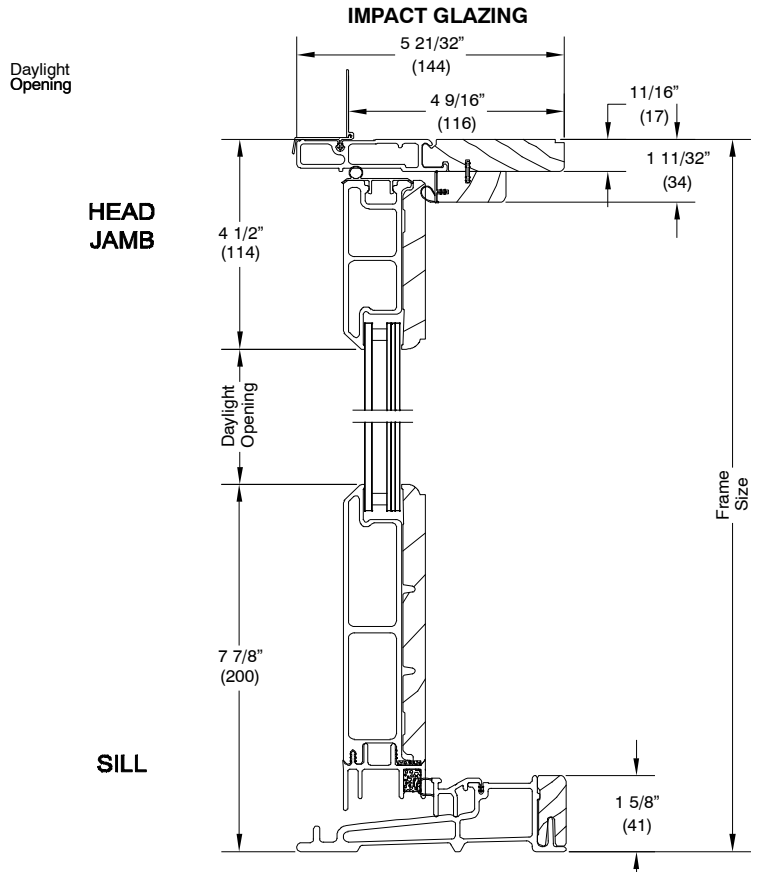
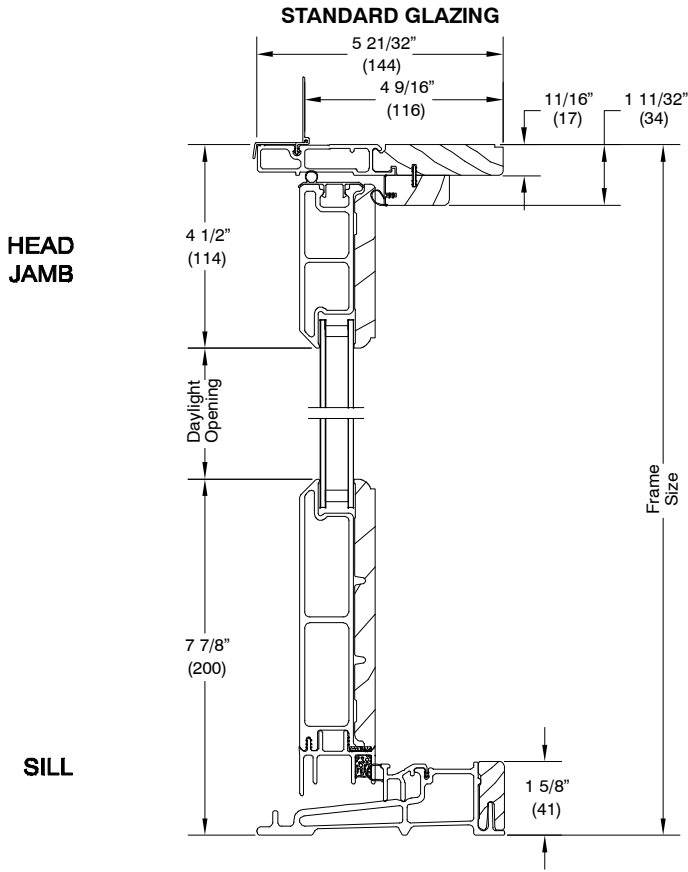


**Jamba**



**SECTION DETAILS - 4 9/16" JAMB - X - OPERATOR**

Scale 3" = 1'-0"

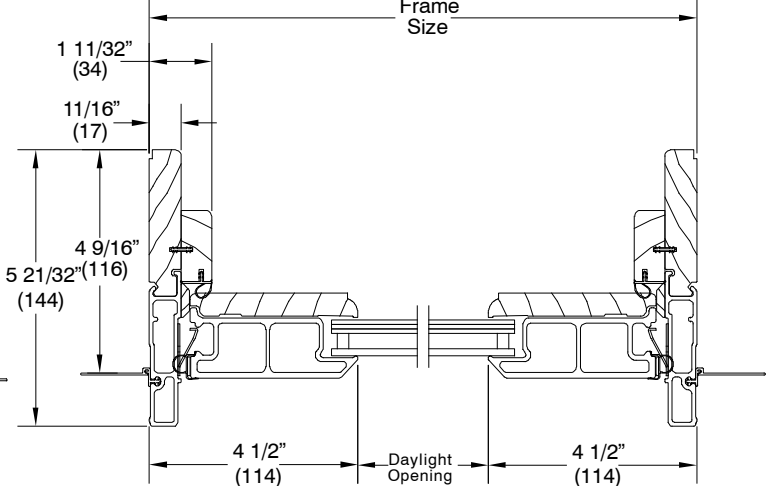
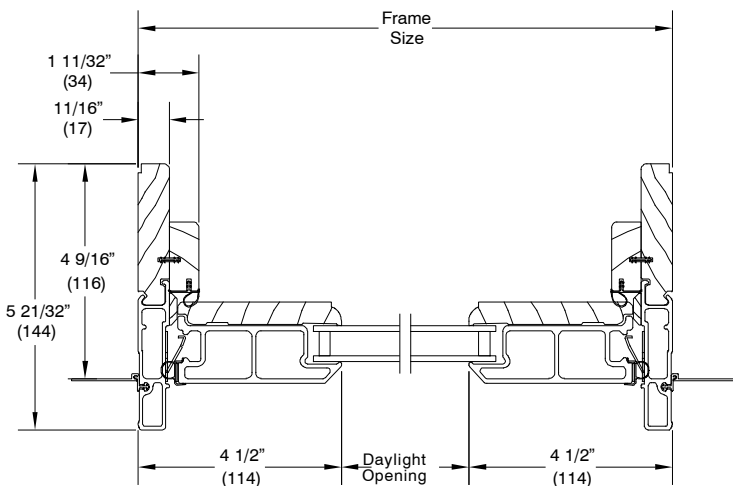
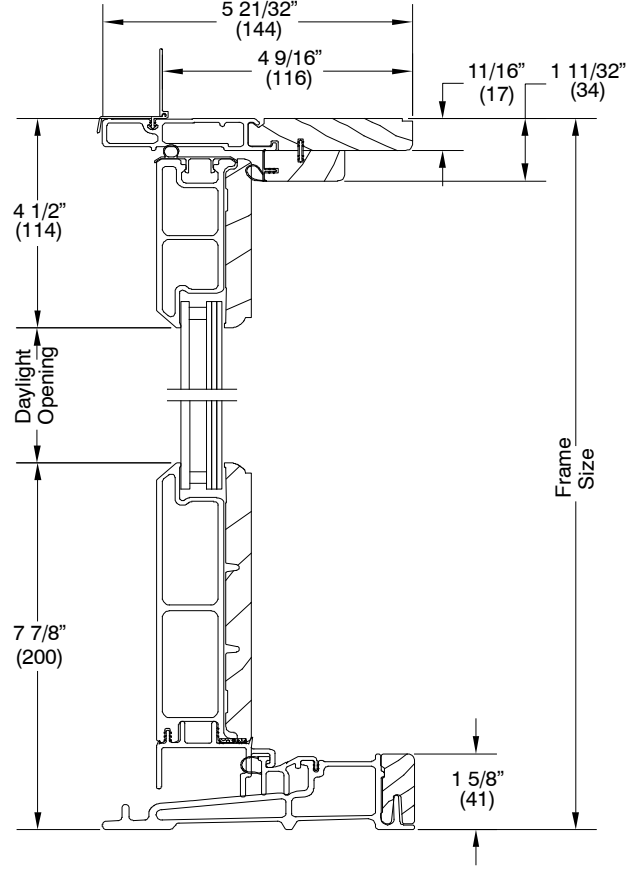
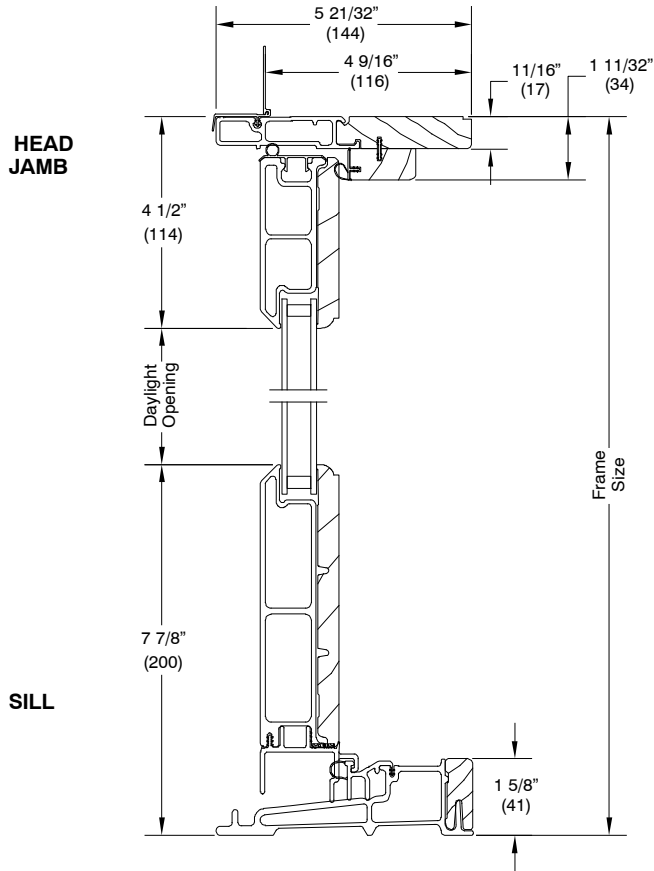


**SECTION DETAILS - 4 9/16" JAMB - STATIONARY**

Scale 3" = 1'-0"

**STANDARD GLAZING**

**IMPACT GLAZING**

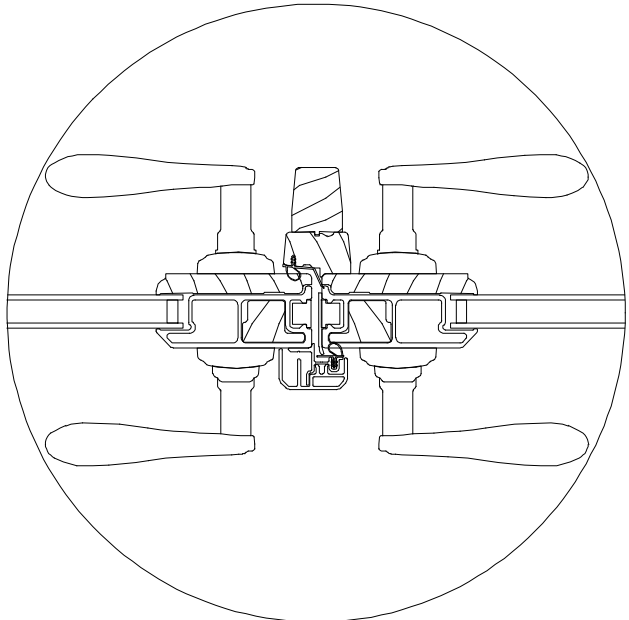
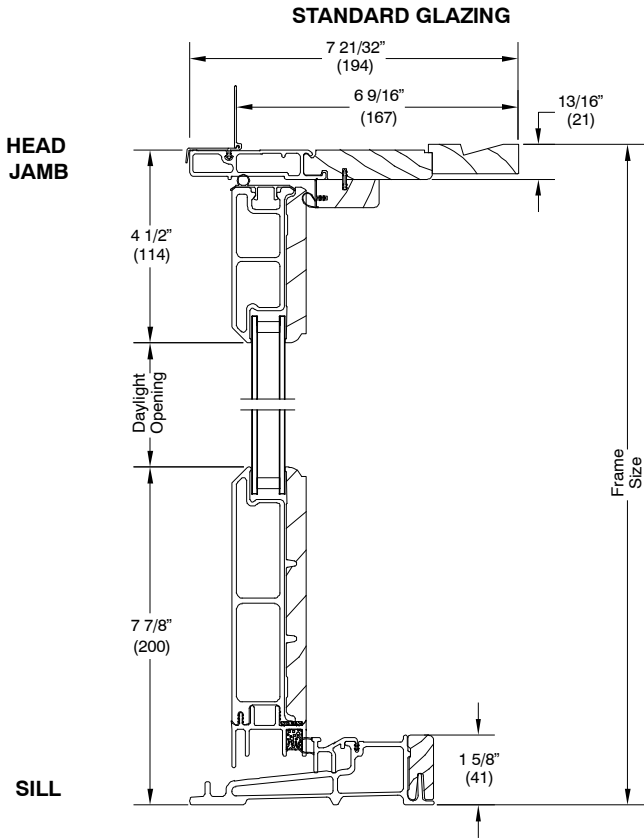


**SINGLE PANEL JAMB - O STATIONARY**

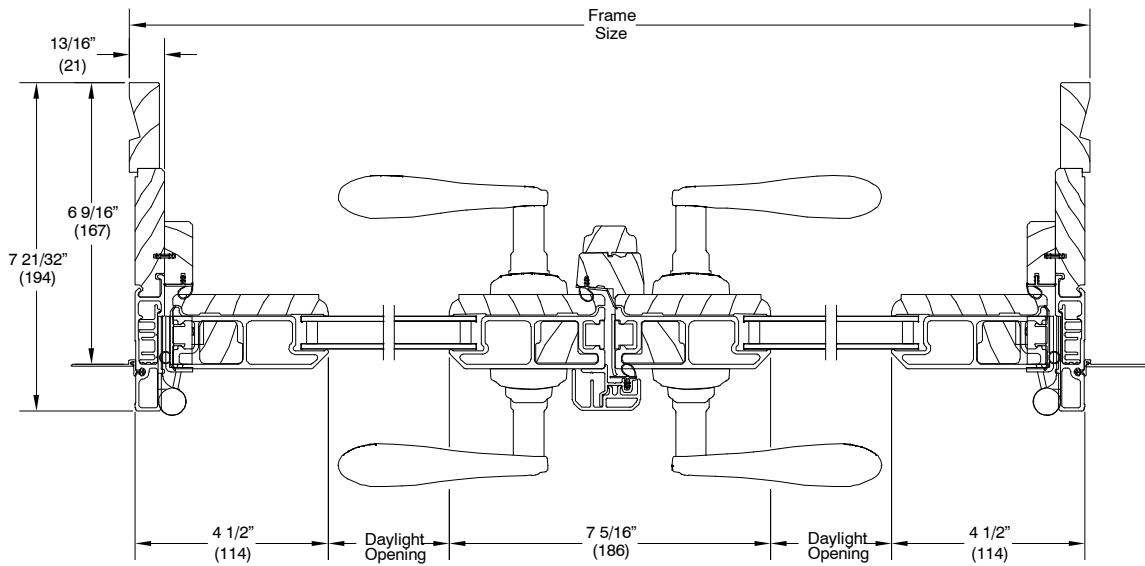
**SINGLE PANEL JAMB - O STATIONARY**

**SECTION DETAILS - 6 9/16" JAMB - XXR OPERATOR**

Scale 3" = 1'-0"



**W9608 Astragal**  
 For Heights Over 6-8



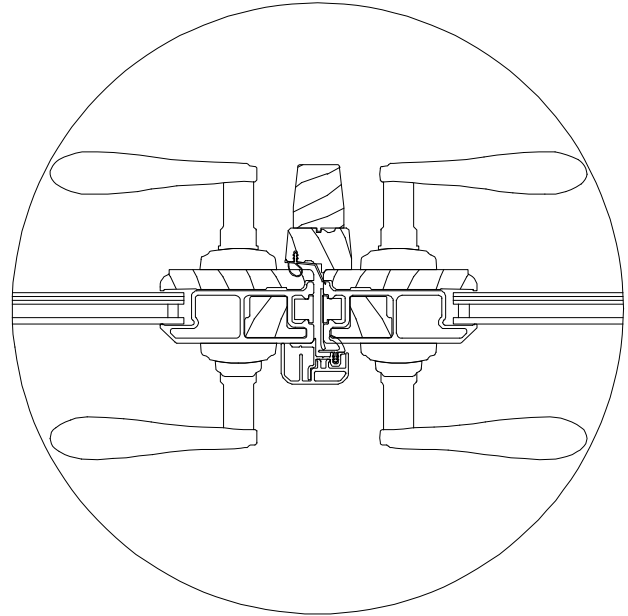
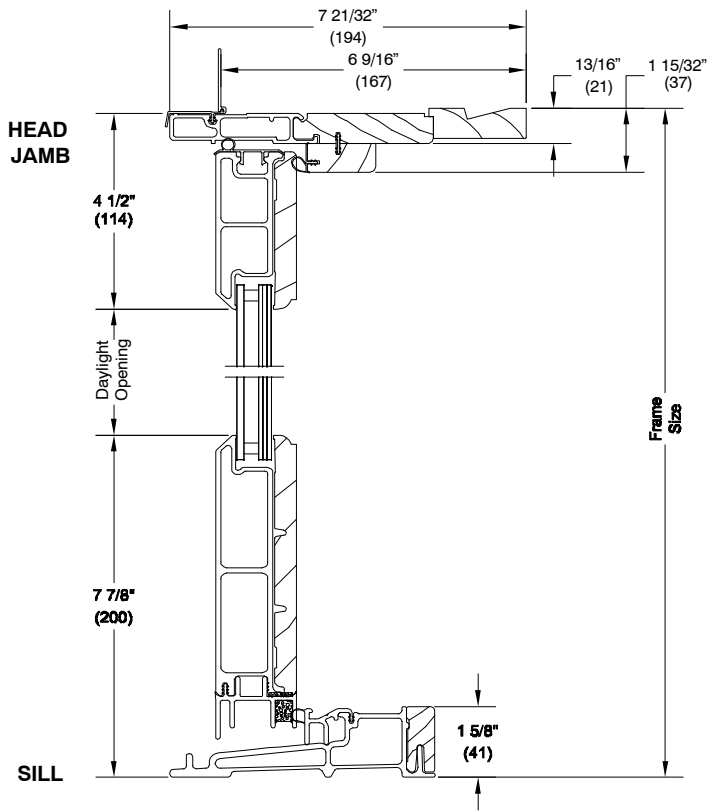
**2 PANEL JAMB - XXR**

**Integrity** **OUTSWING FRENCH DOOR**  
from MARVIN  
Windows and Doors

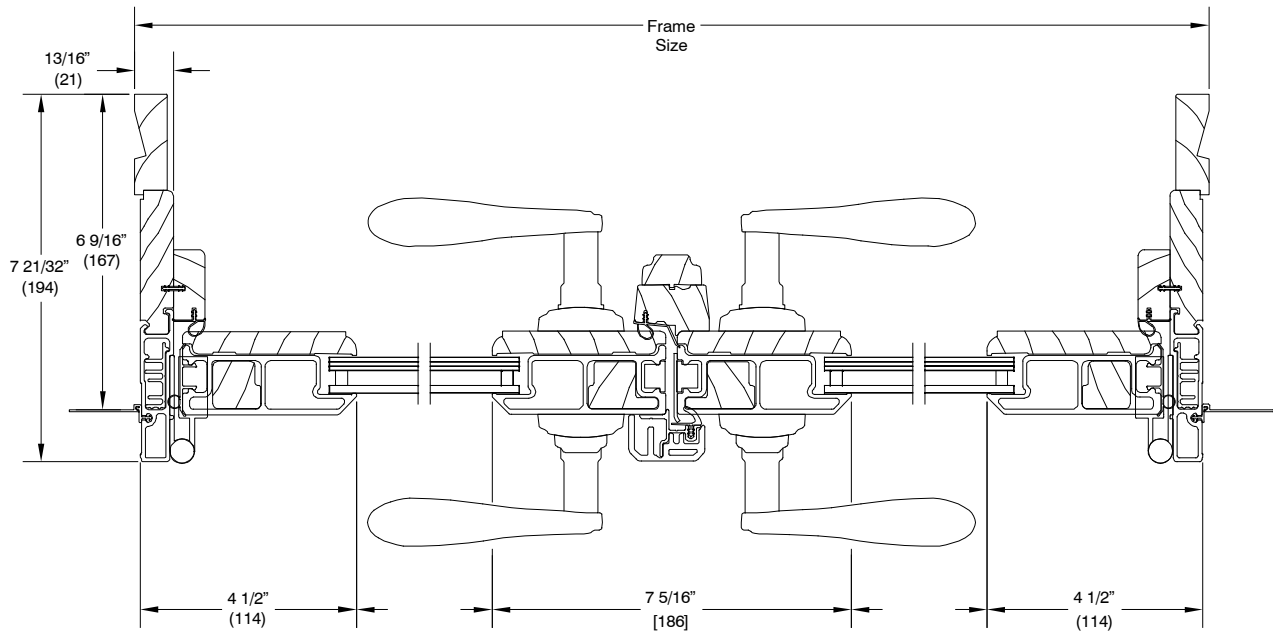
**SECTION DETAILS - 6 9/16" JAMB - XXR OPERATOR**

Scale 3" = 1'-0"

**IMPACT GLAZING**



**W9608 Astragal**  
 For Heights Over 6-8



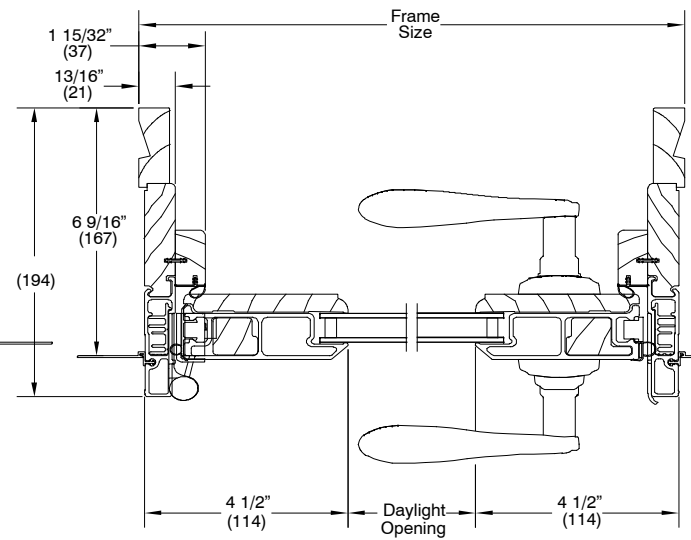
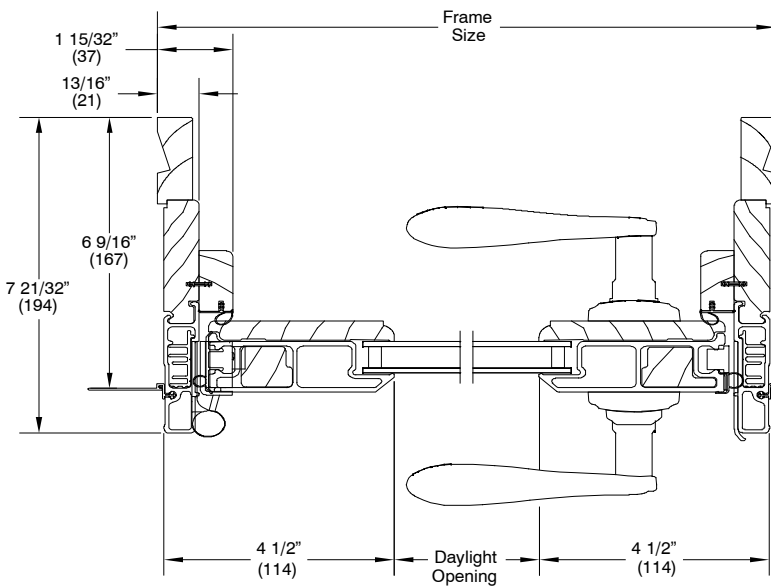
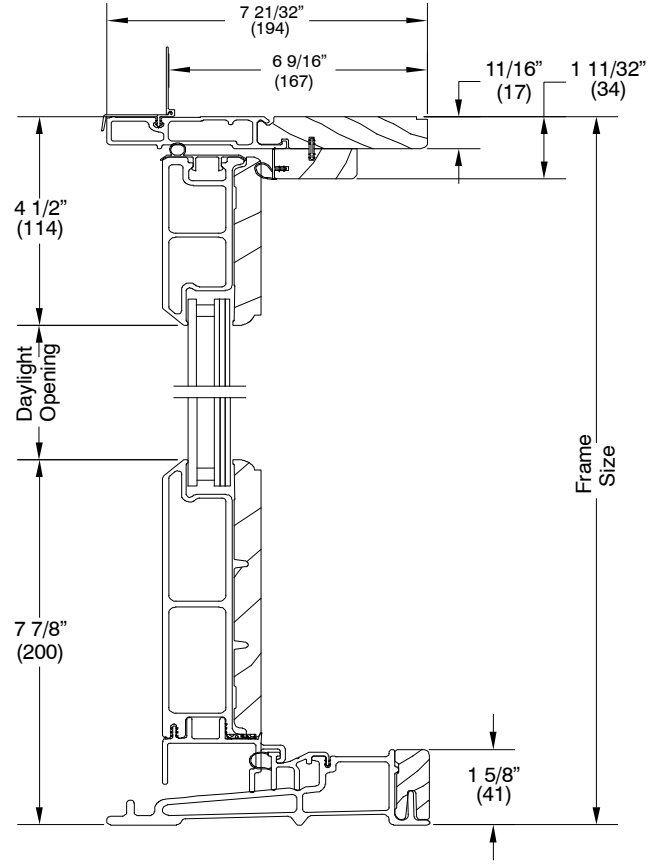
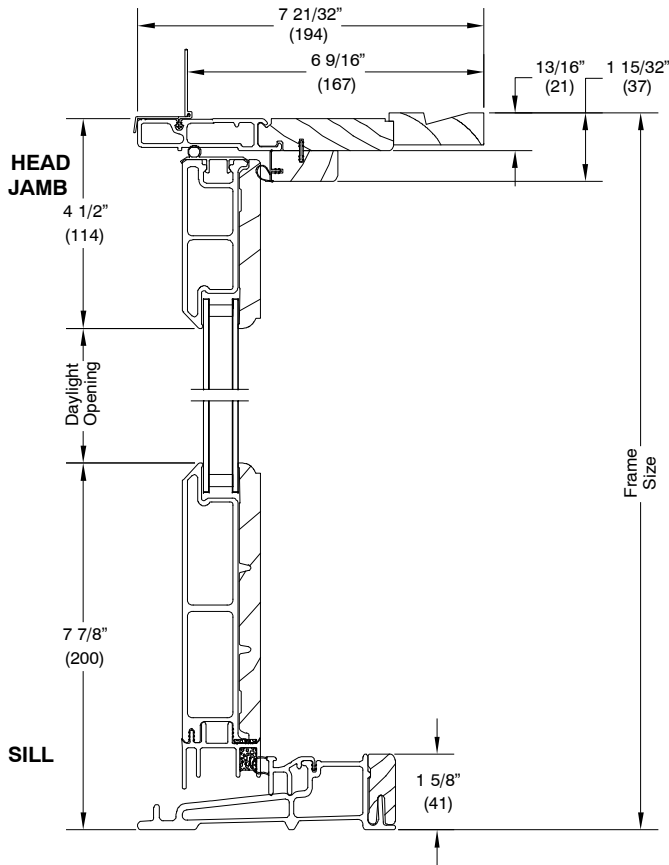
**2 PANEL JAMB - XXR**

SECTION DETAILS - 6 9/16" JAMB - X - OPERATOR

Scale 3" = 1'-0"

STANDARD GLAZING

IMPACT GLAZING



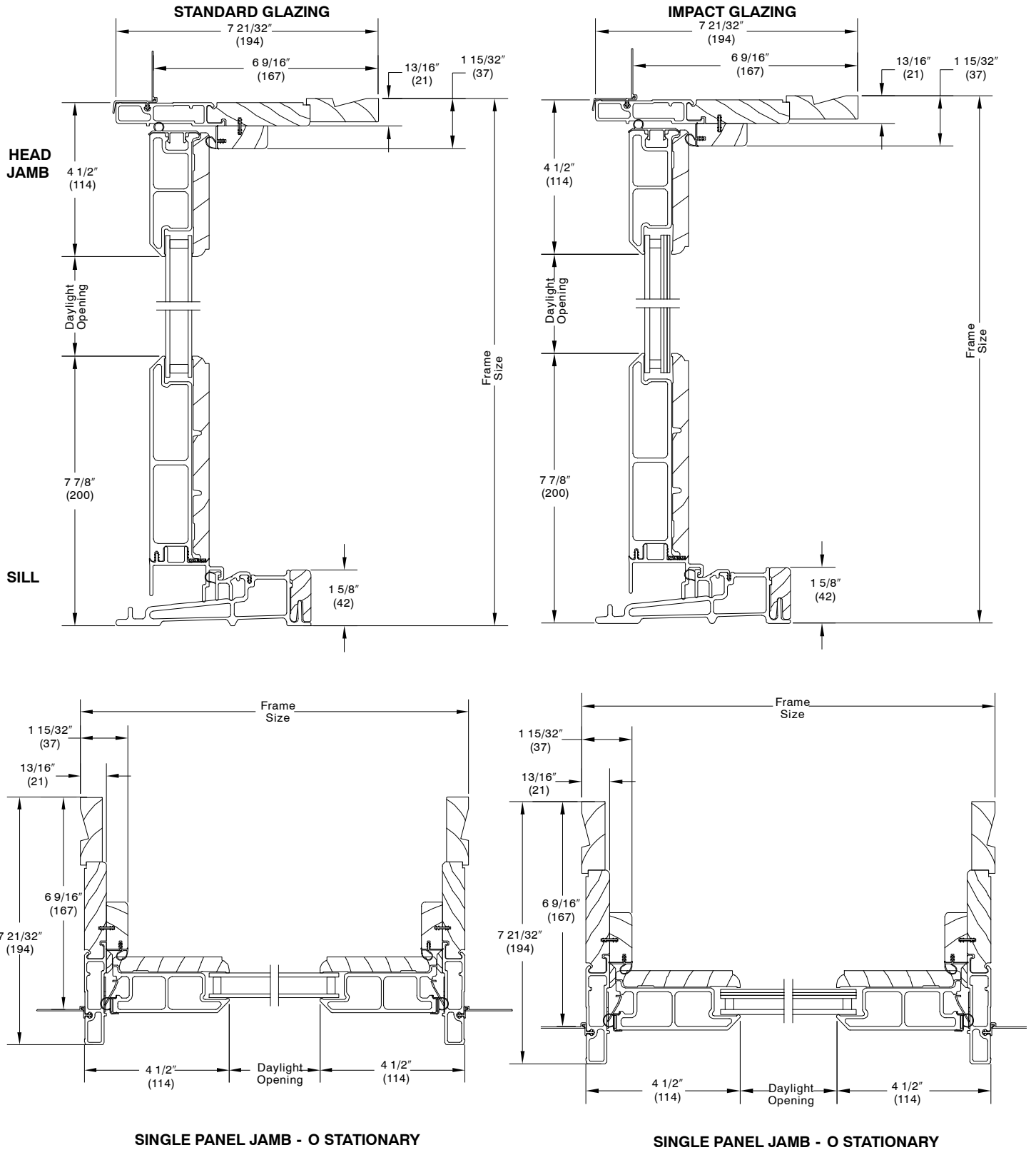
SINGLE PANEL JAMB - X R

SINGLE PANEL JAMB - X R

NOTE: Swinging screen available on single panel operation X and 2 panel operation XX.

**SECTION DETAILS - 6 9/16" JAMB - STATIONARY**

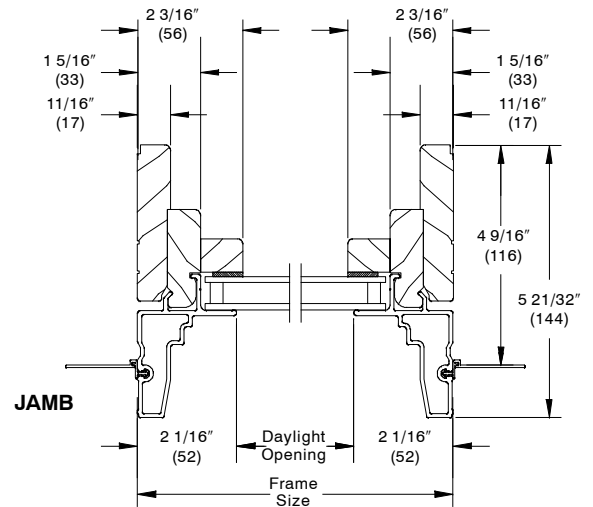
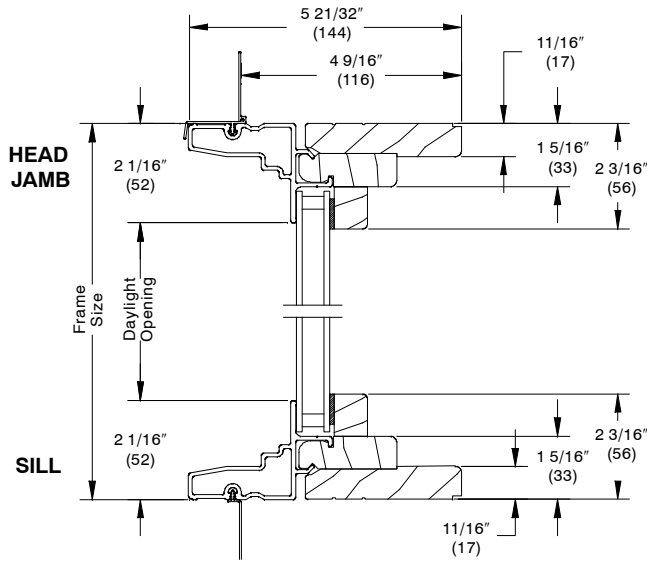
Scale 3" = 1'-0"



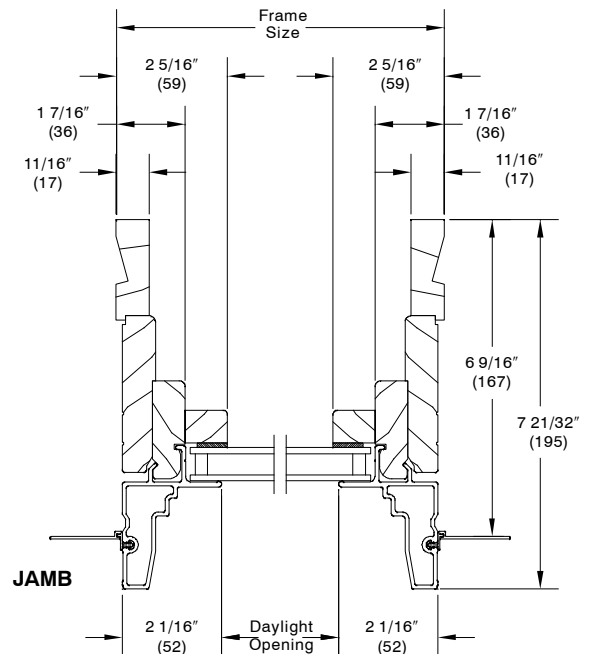
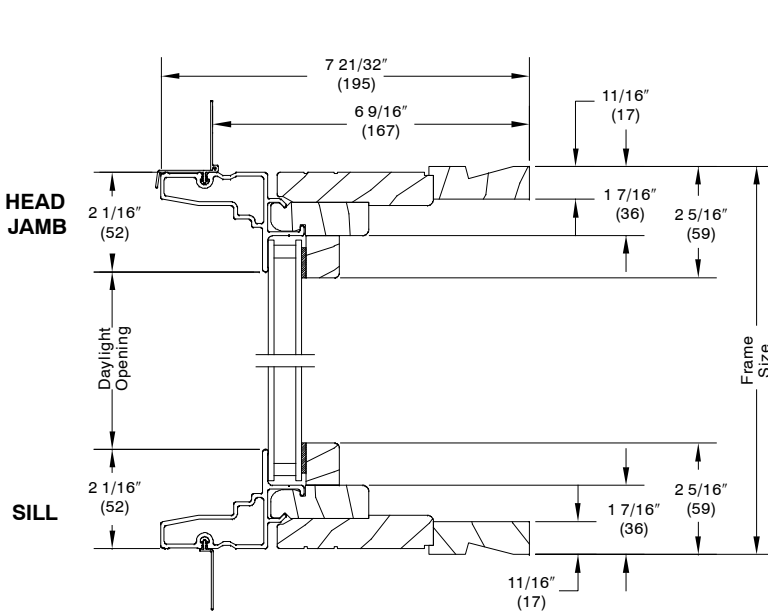
**SECTION DETAILS - TRANSOM STAND ALONE - 4 9/16" AND 6 9/16" JAMB**

Scale 3" = 1'-0"

**STANDARD GLAZE DIRECT GLAZE TRANSOM - 4 9/16" Jamb**



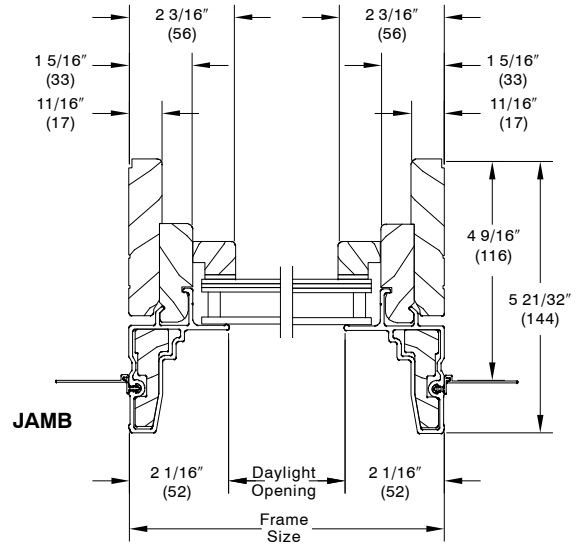
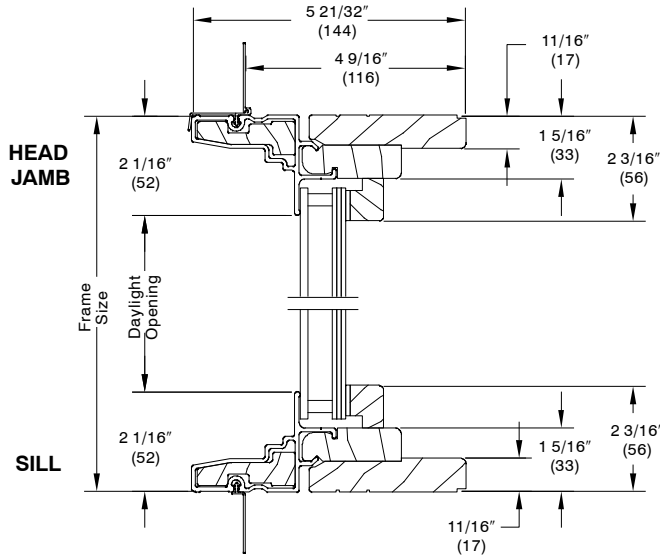
**STANDARD GLAZE DIRECT GLAZE TRANSOM - 6 9/16" Jamb**



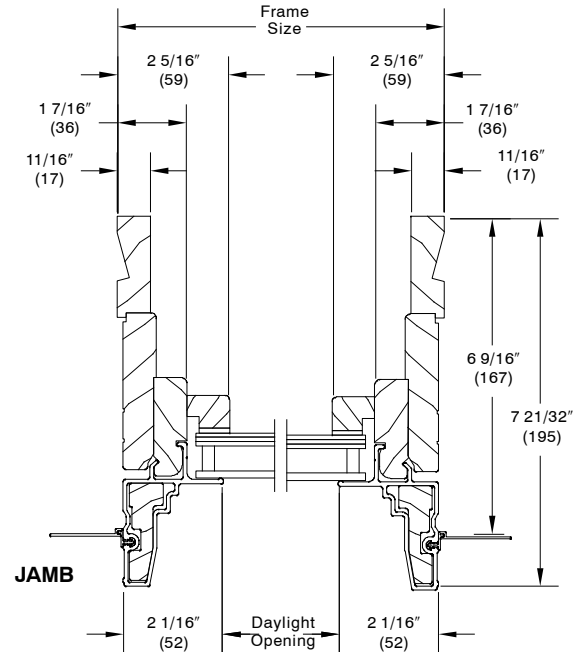
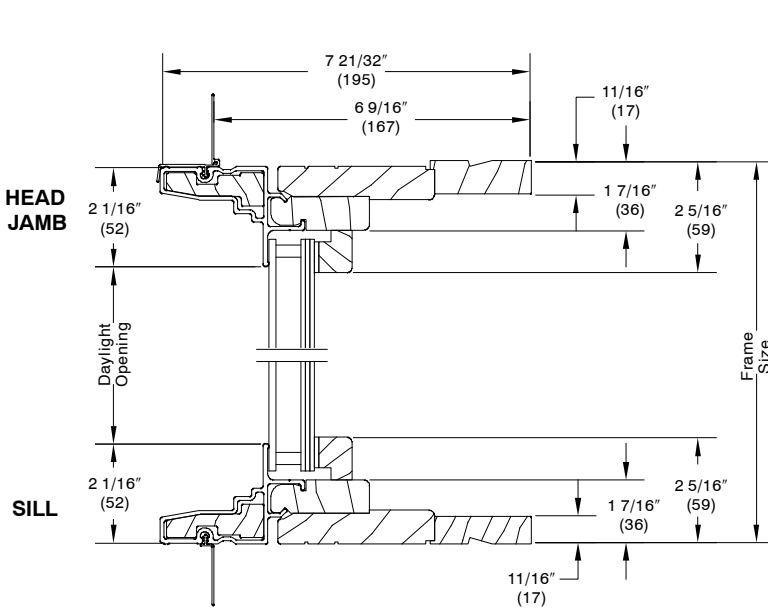
**SECTION DETAILS - TRANSOM STAND ALONE - 4 9/16" AND 6 9/16" JAMB**

Scale 3" = 1'-0"

**IMPACT GLAZE DIRECT GLAZE TRANSOM - 4 9/16" Jamb**



**IMPACT GLAZE DIRECT GLAZE TRANSOM - 6 9/16" Jamb**





**IMPACT MULLING GUIDELINES**

**Factory Mulling**

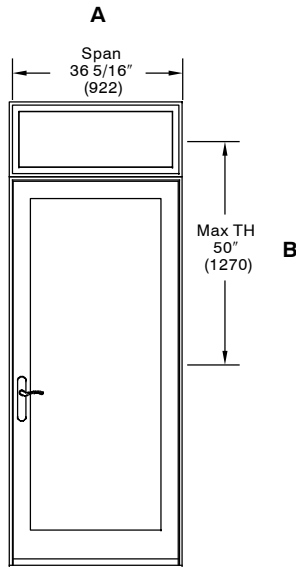
The Wood- Ultrex Outswing Door may be mulled to WU Outswing Door, Direct Glaze Polygon, and Integrity Round Tops.

- Standard mull limits (all factory mulls)
  - Maximum Mullled Assembly RO Size
    - 3 units wide x 1 unit high – 109- 15/16" (2792) x 96" (2438)
    - 2 units wide x 2 units high – 73- 5/8" (1870) x 100- 1/2" (2553)
- Field Mulling beyond 110" (2794) x 112" (2845) is not recommended

**Impact Certified Mull Limits: WDMA Hallmark certified to AAMA 450.**

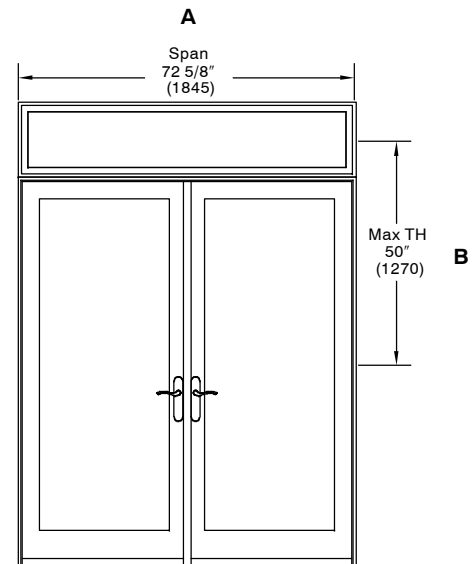
- If assemblies have individual units that have a lower design pressure than the mull; the entire assembly is rated at the lower design pressure.
- Mull certification includes 12" mull brackets fastened at all mull joints
- Items not included in certified mulls: Standard mull assemblies, Integrity Round Tops, Impact XX + (X or O) assembly

1 Directional Mull Limits				
Product	Max Span	Max TW or TH	Max R.O.	DP
WU Outswing Vertical Mulling IZ3	95 1/2" (2426)	36 5/16" (922)	109 15/16" x 96" (2792) x (2438)	55/65
WU Outswing Horizontal Mulling IZ3	71" (1803)	50" (1270)	72" x 100 1/2" (1829) x (2553)	55/65



**2 Wide 2 High Directional Mull Limits**

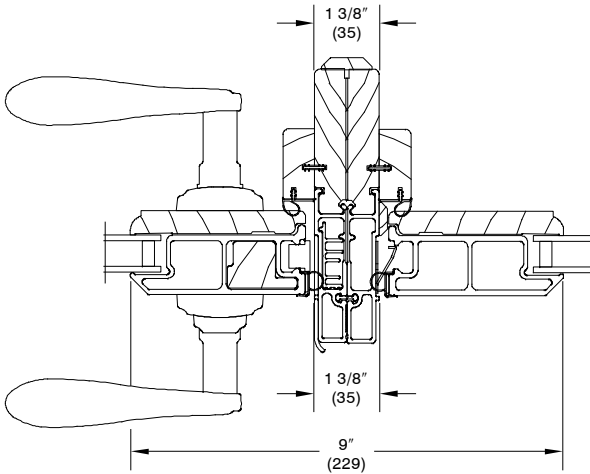
- Standard Mulls are not certified
- Maximum assembly RO Size - 73 5/8" (1870) x 100 1/2" (2553)
- Maximum TH - 50" (1270), Span - 72 5/8" (1845)
- DP Rating 55/60
- No un- reinforced mull joints



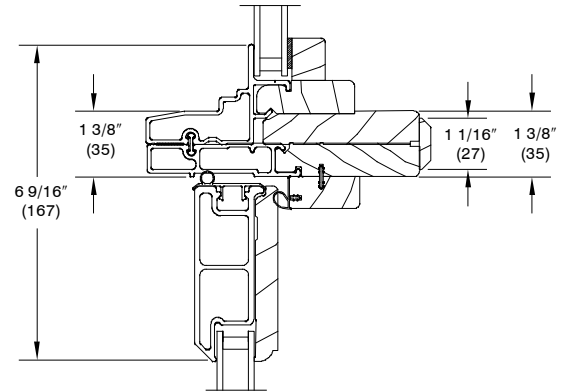
SECTION DETAILS

Scale 3" = 1'-0"

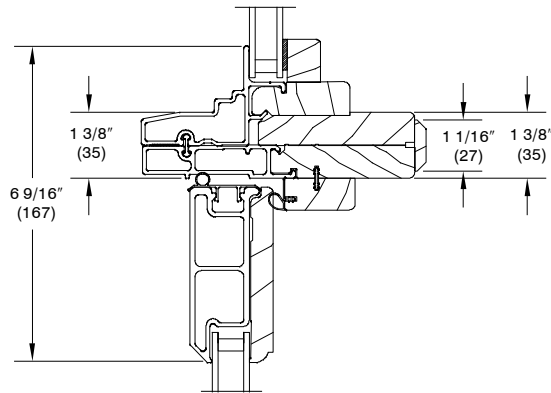
**MULLIONS**



**VERTICAL MULLION  
 X-O OPERATOR**



**DIRECT GLAZE TRANSOM  
 OVER OUTSWING FRENCH DOOR - 4 9/16\"/>**

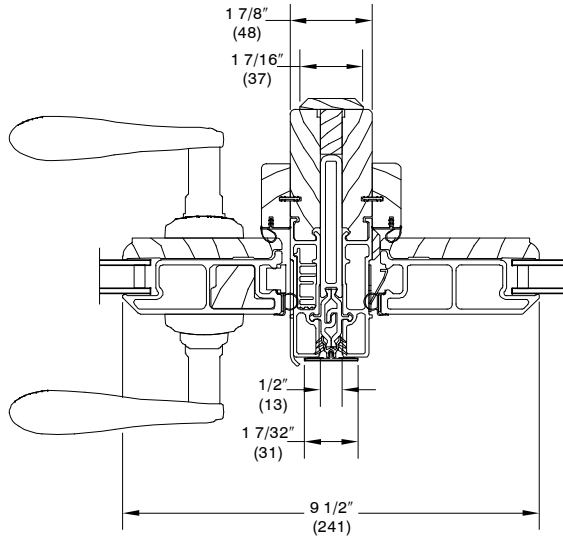


**DIRECT GLAZE TRANSOM  
 OVER OUTSWING FRENCH DOOR - 6 9/16\"/>**

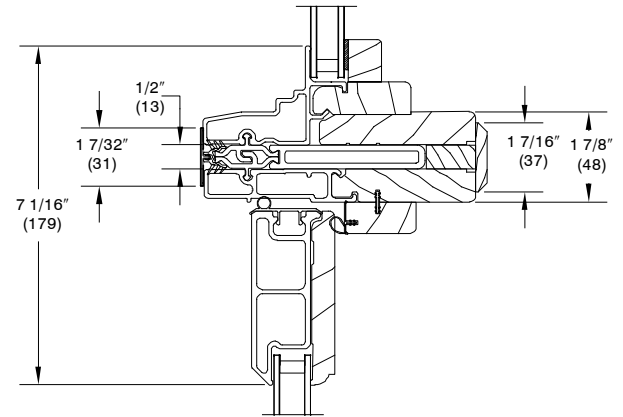
**SECTION DETAILS**

Scale 3" = 1'-0"

**MULLIONS**



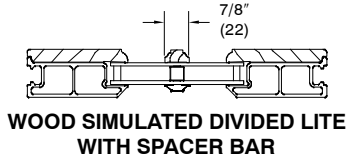
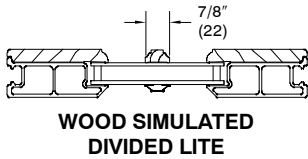
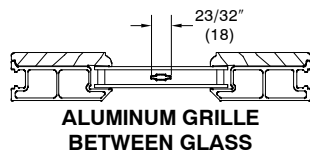
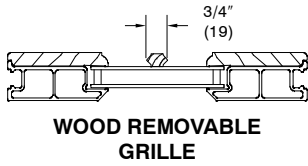
**VERTICAL MULLION  
 XR-O With 1/2" MRF**



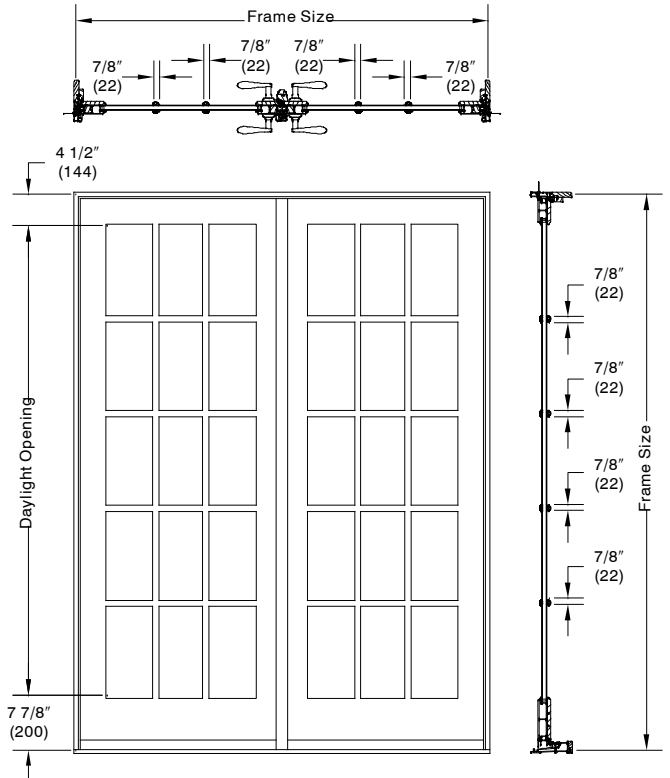
**DIRECT GLAZE TRANSOM  
 OVER OUTSWING FRENCH DOOR WITH 1/2" MRF  
 - 4 9/16" Jamb**

DIVIDED LITE OPTIONS

**DIVIDED LITE OPTIONS**

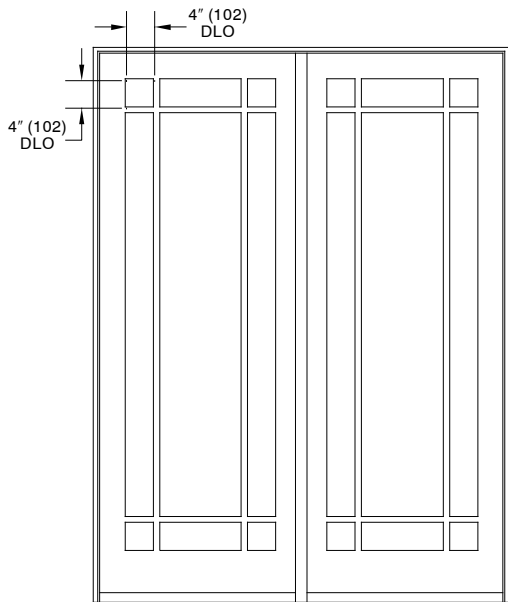
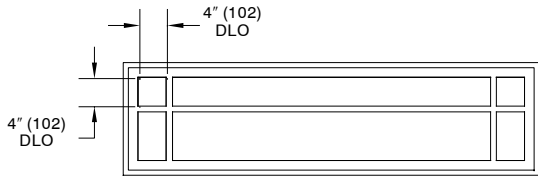


**RECTANGLE SDL EXAMPLE SHOWN**



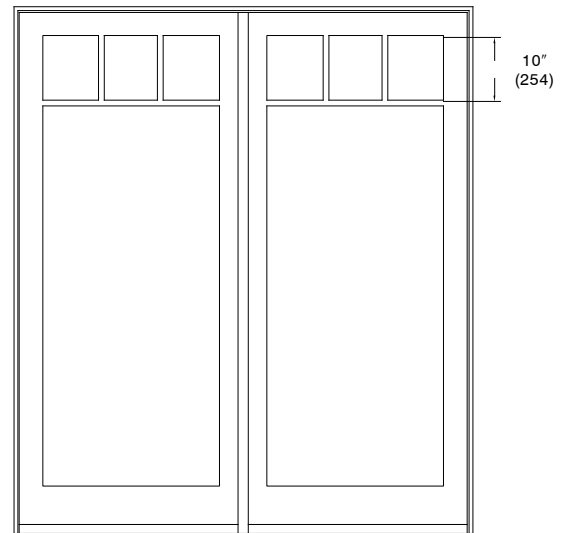
**GBG or SDL (SDL SHOWN)**

\* 6 lite prairie lite cuts on IOFDDG 7216 or IOFDDG 10716 due to height limitations. GBGs not available in IOFDDG 10716.



**COTTAGE LITE CUT**

\* Only in GBG or SDL.



**NOTE:** \* Optional 9 lite per panel Prairie cut GBG or SDL.

**Conversion Formula:**

$$\frac{\text{Total DLO} - \text{Total bar width}}{\text{Number of lites}} = \text{Individual DLO}$$

**NOTE:** GBGs are not available on Impact IZ3 units.

## DIVIDED LITE OPTIONS - Not to Scale

### OUTSWING FRENCH DOOR

#### Default Rectangular Lite Pattern per Panel - GBG, SDL, Wood Grille

Standard CN Height	Standard CN Width					
	26	28	30	50	54	60
65	3W5H	3W5H	3W5H	3W5H	3W5H	3W5H
68	3W5H	3W5H	3W5H	3W5H	3W5H	3W5H
70	3W5H	3W5H	3W5H	3W5H	3W5H	3W5H
80	3W6H	3W6H	3W6H	3W6H	3W6H	3W6H

#### Optional Standard Cottage Lite Pattern per Panel - GBG, SDL

Standard CN Height	Standard CN Width					
	26	28	30	50	54	60
All Heights	4- Lite	4- Lite	4- Lite	4- Lite	4- Lite	4- Lite

### OUTSWING FRENCH DOOR DIRECT GLAZE TRANSOM

#### Default Rectangular Lite Pattern per Panel - GBG, SDL, Wood Grille

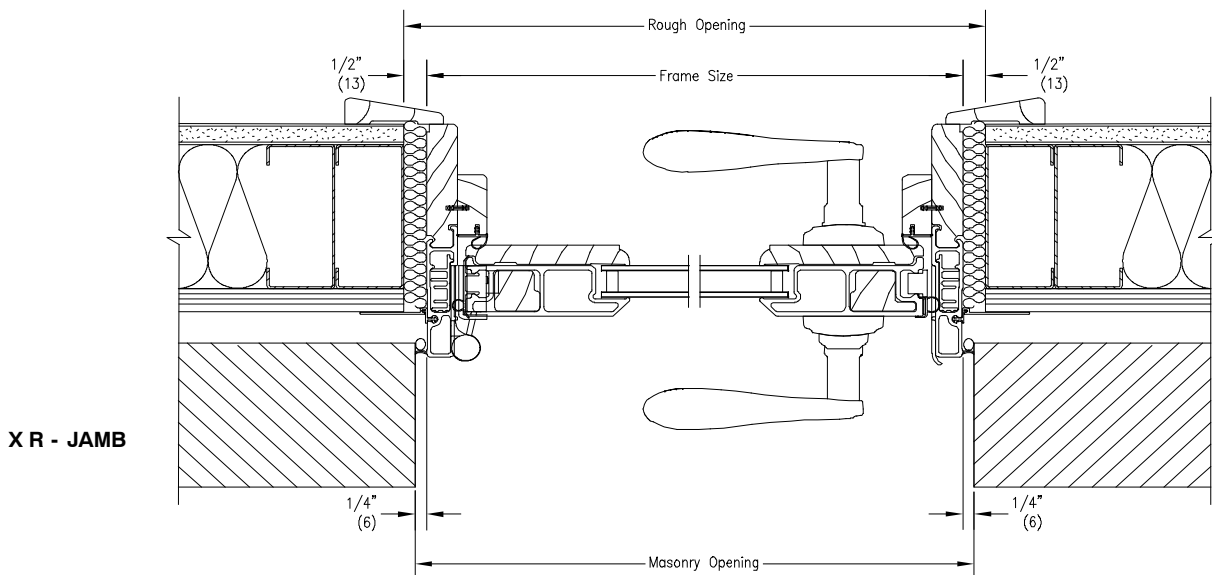
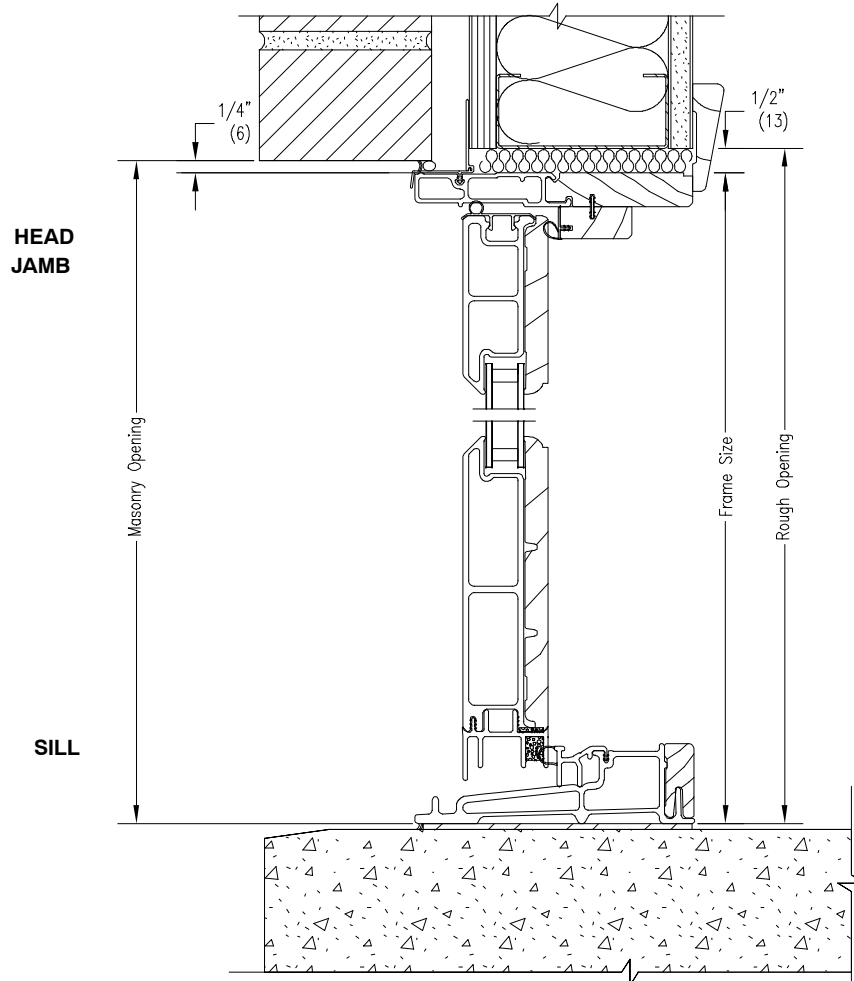
Standard CN Height	Standard CN Width		
	36	72	108
16	3W1H	6W1H	9W1H

#### Notes:

- Wood Grilles for special size units will default to the next smaller standard size lite pattern. Wood Grilles are not available in lite patterns other than the Wood Grille patterns listed in the following pages.
- Rectangle GBGs for special size units will default to the next smaller standard size lite pattern. Also available will be Prairie patterns, Cottage patterns, and customer specified equal rectangular lite patterns.
- Rectangular SDL for special size units will default to the next smaller standard size lite pattern. Also available will be Prairie patterns, Cottage patterns, and customer specified equal rectangular lite patterns.
- Prairie GBG and SDL available in 9 lite and 6 lite top, bottom, left, and right patterns.
- Cottage GBGs and SDL for special sizes units will default to the next smaller standard size lite pattern. Cottage GBGs and SDL are also available in customer selected lite patterns.
- Direct Glaze Transoms with GBGs or SDL will only align with the cut of the door it is intended to be mulled with and may not have equally spaced lites unless otherwise indicated. For alternative GBG or SDL lite alignment, order a Direct Glaze Rectangle with the divided lite option.
- An IOFDDG 3616 with GBGs or SDL will align over an IOFD CN30 width only.
- An IOFDDG 7216 with GBGs or SDL will align over an IOFD CN60 width only.
- An IOFDDG 10816 is available field- mulled or stand- alone only. Rectangular GBGs or SDL in a field- mulled IOFDDG 10816 will align over an IOFD CN30/60 or CN 60/30 width assembly only. Rectangular GBGs or SDL in a stand- alone IOFDDG 10816 will be equally spaced.
- Maximum number of lites wide and high for equal lite SDL option is 11 lites.
- Minimum DLO measurement for equal lite SDL option is 4" (102) and will be validated by OMS.
- Minimum DLO measurement for equal lite GBG option is 3" (76) and will be validated by OMS.
- Standard DLO measurement for Prairie GBG and SDL options is 4" (102). Special DLO corners are n/a.
- Standard DLO height measurement for Cottage SDL option is 10" (254). Minimum DLO height is 8" (203) for one high pattern. Minimum DLO height is 4" (102) for two high pattern.
- Standard DLO height measurement for Cottage GBG option is 10" (254). Minimum DLO height is 3" (76) for both one and two high patterns.
- Simulated Rail: Rectangular, Prairie 6- Lite and 9- Lite SDL patterns are available with Simulated Rail.
- Simulated Rail: Custom ratio and specified DLO are available with Simulated Rail and will be validated by OMS.
- GBGs are not available on Impact IZ3.
- GBGs are not available with an unsupported bar length > 72".

**INSTALLATION SUGGESTION**

Scale 3" = 1'-0"



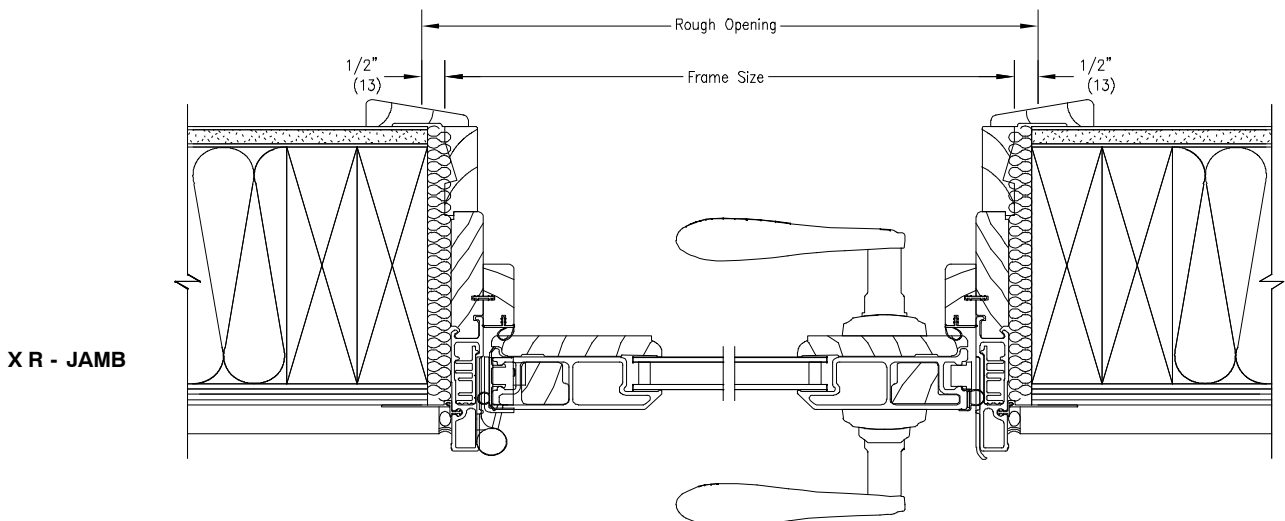
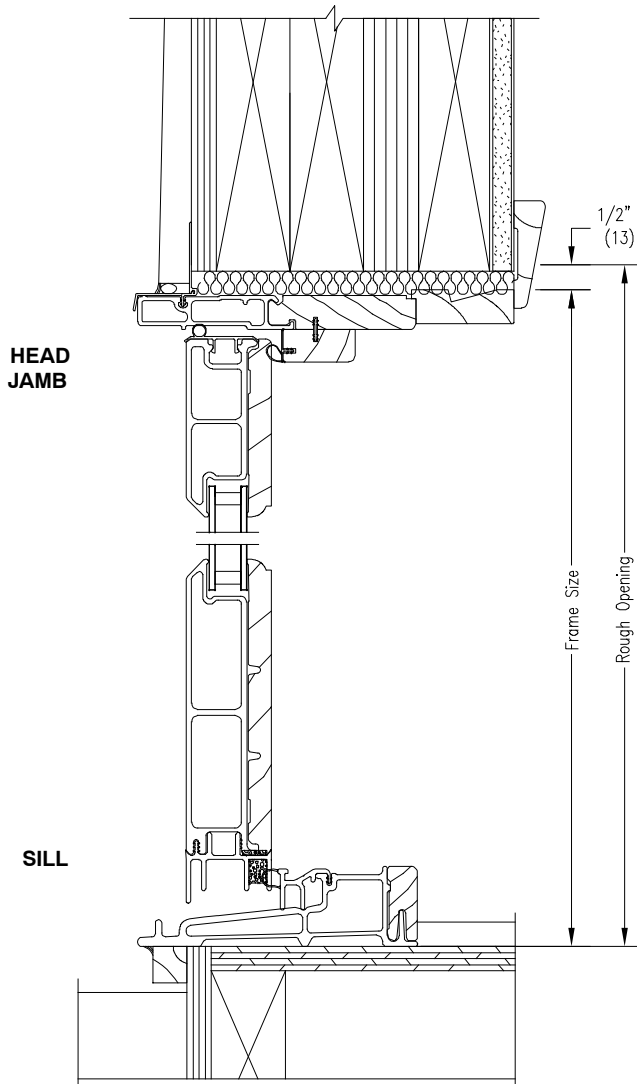
**BRICK VENEER WITH STEEL FRAME CONSTRUCTION**

**NOTE:**

The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.

**INSTALLATION SUGGESTION**

Scale 3" = 1'-0"



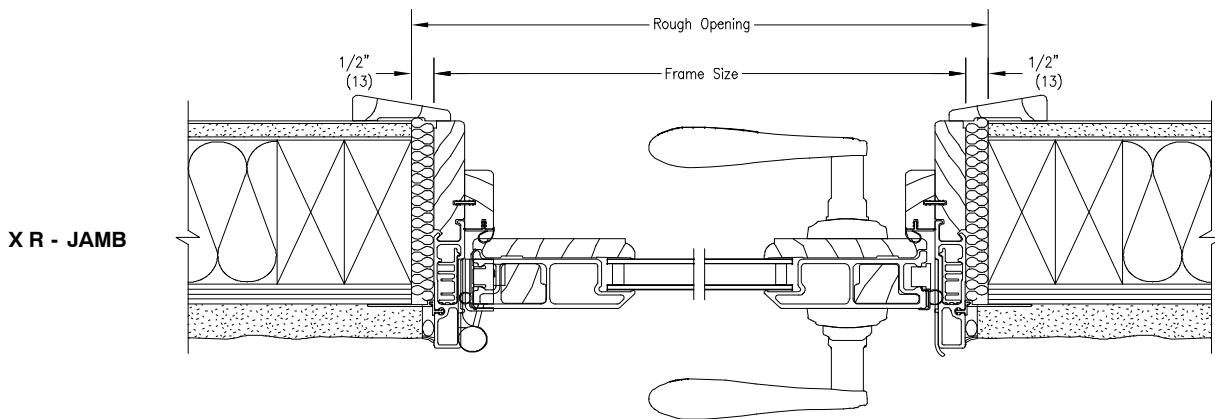
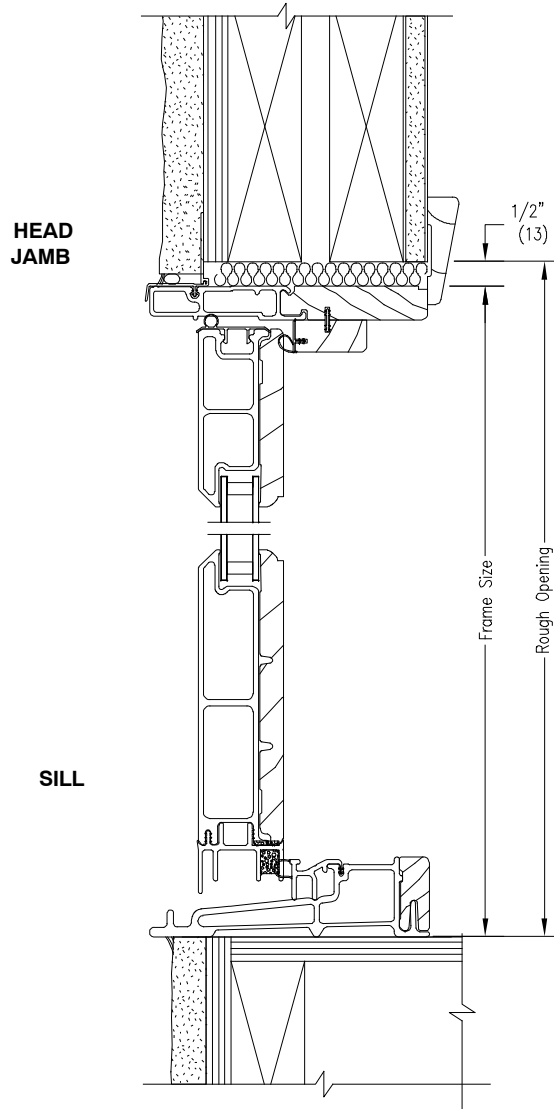
**NOTE:**

**WOOD SIDING WITH 2 X 6 FRAME CONSTRUCTION**

The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.

**INSTALLATION SUGGESTION**

Scale 3" = 1'-0"



**STUCCO WITH 2X4 FRAME CONSTRUCTION**

**NOTE:**

The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.