Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 18870 (1/16/19) for additional information

Appeal ID: 18964	**Project Address:** 777 NE MLK Jr Blvd
Hearing Date: 2/6/19	**Appellant Name:** Douglas Benson
Case No.: B-017	**Appellant Phone:** 503 307-4504
Appeal Type: Building	**Plans Examiner/Inspector:** Jeff Donnelly
Project Type: commercial	**Stories:** 4 **Occupancy:** Mixed Use Non Separated **Construction Type:** 1-B
Building/Business Name: Oregon Convention Center	**Fire Sprinklers:** Yes - Throughout
Appeal Involves: Alteration of an existing structure	**LUR or Permit Application No.:** Appeal 18841
Plan Submitted Option: pdf [File 1] [File 2] [File 3] [File 4] [File 5]	**Proposed use:** Convention Center

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	Table 716.5
Requires	The frames for the entry doors into the Convention Center Ballroom require frames rated for at least 20 min of fire resistance. Because of the size of the openings (2 pairs of 4' leafs yielding 16'-8" overall width).
Proposed Design	Original Appeal Text At each opening there are two pairs of 4' doors. They are being installed in one single HM frame that is 16'-8" in width. The maximum frame width that the supplier can rate is 12'-8". However, the frame is in effect two single 8'-0" frames that have been joined together to form the single unit. Each of these individual frames is fabricated as a 20 min. rated assembly but because of the size does not carry the UL rating label. However, we believe it is equivalent to two single 20 min rated frames and it is the joining together for convenience and design intent that prevents the frame from carrying the rating label. Furthermore each opening is additionally protected by the presence of quick release sprinkler heads above each pair of doors inside of the ballroom and outside in the lobby. Reconsideration Text Replacement 16’-8” doorframes are planned for the wall between the Oregon Ballroom (main ballroom on the upper level) and the Ballroom Prefunction space of the Oregon Convention Center. Listed doorframes that are this wide are not available from the manufacturer. The proposed doorframe straightforwardly has at least 20 minutes of fire resistance when compared to a 12’-8” doorframe by the same manufacturer that has a Listed 90-minute rating.

Oregon Structural Specialty Code (OSSC), 2014 Edition allows alternative methods for determining fire resistance. The method selected here is engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determine by the test procedures set forth in ASTM E119. See OSSC-2014 703.3 4.

Curries does manufacture 12”-8” doorframe that has a 90 minute rating. This frame is constructed with 16 gauge steel minimum and 12 gauge steel maximum. See page 22 (pdf page 25) of Curries – Technical Manual Fire Rated Products Section, Revised October, 2018.

Reason for alternative

Original Text

The construction of the frames to the standards of a smaller, rated assembly provides and equivalent level of safety. It could also be interpreted as two separate frames that merely share a continuous frame at the top where the two individual frames meet.Itis, in all ways, equal to the required rated frame.

Reconsideration Text

The Curries unlisted 16’-8” doorframe easily has at least 20 minutes of fire resistance based on its construction, steel gauge (thickness), mullion and favorable comparison to a similar Curries 12’-8” doorframe with a 90-minute rating. OSSC-2014 allows determining fire resistance by engineering analysis based on comparison.

A detailed analysis and supporting opinion for the appeal from David Gessert, Fire Protection Engineer is attached

APPEAL DECISION

Alternate 1 hour fire rated door assembly: Granted provided the center mullion configuration and attachment is provided and approved prior to plan review approval.
Appellant may contact John Butler (503 823-7339) with questions.

The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

FIRE PROTECTION CONSULTING
3115 NW 132nd Place, Portland, OR 97229-7037
Phone 503-531-8717 email djgessert@gmail.com

Letter

Date:	February 1, 2019
To:	Merryman Barnes Architects Inc. 4713 N Albina Ave, Suite 304 Portland, OR 97217
Attention:	Douglas A. Benson, FAIA Principal
From:	David Gessert, P. E. Fire Protection Engineer
Subject/Project:	Oregon Convention Center Selected Door Frames Appeal Fire Resistance Analysis
Job No.:	2019-06

Total Pages: 2

Introduction/Executive Summary

Replacement 16'-8" doorframes are planned for the wall between the Oregon Ballroom (main ballroom on the upper level) and the Ballroom Prefunction space of the Oregon Convention Center. Listed doorframes that are this wide are not available from the manufacturer. The proposed doorframe straightforwardly has at least 20 minutes of fire resistance when compared to a 12'-8" doorframe by the same manufacturer that has a Listed 90-minute rating.

Oregon Convention Center – Selected Door Frames – Fire Resistance Analysis

On the upper level of the Oregon Convention Center four 16'-8" doorframes are being replaced. There is a pair of two 4' leaves in each doorframe. See drawing A203B.

The doorframe fabricator (Curries) does not have a Listing for doorframes wider 12'-8".

Oregon Structural Specialty Code (OSSC), 2014 Edition allows alternative methods for determining fire resistance. The method selected here is engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determine by the test procedures set forth in ASTM E119. See OSSC-2014 703.3 4.

Curries does manufacture 12”-8” doorframe that has a 90 minute rating. This frame is constructed with 16 gauge steel minimum and 12 gauge steel maximum. See page 22 (pdf page 25) of Curries – *Technical Manual Fire Rated Products Section*, Revised October, 2018.

Per the manufacturer of the 16’-8” doorframe it will be constructed of with 14 gauge cold rolled steel. See American Direct data sheet, Oregon Convention Center, Submittal Date: 9/17/18.

By simple comparison of the construction of the Listed 12’-8” doorframe with a 90-minute rating with the construction of the16’8” doorframe the wider door frame has at least the required 20-minute rating.

Conclusion

The Curries unlisted 16’-8” doorframe easily has at least 20 minutes of fire resistance based on its construction, steel gauge (thickness), mullion and favorable comparison to a similar Curries 12’-8” doorframe with a 90-minute rating. OSSC-2014 allows determining fire resistance by engineering analysis based on comparison.

References

Curries – *Technical Manual Fire Rated Products Section*, Revised October, 2018, Assa Abloy, Stockholm, Sweden

Data Sheet – Oregon Convention Center, Portland, OR Job No. xxxxxxx, Submittal Date: 9/17/18, American Direct, Lenexa, Kanas

Drawing A203B, Second Level Floor Plan – Sector B, Revision 1, June 26, 2018, Merryman Barnes Architects, Portland, Oregon

Oregon Structural Specialty Code, 2014 Edition, International Code Council, Country Club Hills, Illinois

End of Report

FLOOR PLAN KEYNOTES

F1 PATCH AND REPAIR EXISTING GWB AS REQUIRED FROM DEMO SCOPE PRIOR TO WALL FINISH APPLICATION

F2A EXISTING FLOOR BOX COVER PLATE TO REMAIN, INSTALL NEW CARPET INLAY.

F2B INSTALL SHOP-MODIFIED CUSTOM FLOOR BOX COVER PLATE, INSTALL NEW CARPET INLAY. SEE 1/A648 FOR MORE INFORMATION.

F5 NEW WALL-MOUNTED DOOR ACTUATOR

F7 FEC-1. SEE DETAIL 19/A601. FOR LOCATIONS IN (E) WALL PATCH AND REPAIR AS REQUIRED

F10 SEE SPEC SECTION 096813 FOR CARPET TILE LAYOUT / INSTALLATION INFORMATION

F22 SEE SHEET A628 FOR TRANSITION LOCATIONS BETWEEN NEW AND EXISTING WALL FINISHES

F23 EXISTING OPERABLE PARTITIONS TO BE REFINISHED WITH WC-5

FLOOR PLAN GENERAL NOTES:

1. EL 83'-0" CORRESPONDS TO EXISTING MAIN LEVEL FLOOR, EL 95'-6" IS INTERMEDIATE LEVEL, AND EL 108'-0" IS SECOND LEVEL.
2. REFER TO STRUCTURAL, MEP, AND FIRE PROTECTION DRAWINGS FOR MORE INFORMATION.
3. SEE FINISH SCHD AND DTLS ON SHEET A615 FOR MORE INFO AND TYP FLOOR FINISH TRANSITION DTLS

FLOOR PLAN LEGEND

- NO RENOVATION SCOPE
- EXISTING PARTITION TO REMAIN
- MATCHLINE FOR SECTOR PLANS
- NEW WALL PARTITIONS - TYPE AS INDICATED
- NEW 2-HOUR PARTITION
- OPERABLE PARTITION - TYPE AS INDICATED
- NEW FLOORING - TYPE AS INDICATED OR PER FINISH SCHED
- CG-# CORNER GUARD, TYPE AS INDICATED

NOTE:
SEE DOOR SCHEDULE AND DOOR DETAIL SHEET FOR PARTITION FRAMING DETAILS ASSOCIATED WITH REPLACEMENT OF EXISTING DOOR FRAMES WITH NEW DOOR FRAMES.

OPEN TO BELOW

CORR. 3016

CORRIDOR 3019

OREGON BALLROOM 3050

BALLROOM PREFUNCTION 3047

ELEC 3028

STORAGE 3039

CORRIDOR 3028

STORAGE 3057

CORRIDOR 3055

STOR 3049

STOR 3049A

ELEC 3048

STOR 3045

STOR 3045A

STAIR NO. 8

STAIR NO. 7

NEW BUILT-OUT FINISH WALL AS DETAILED, TYP @ ENTRIES

NEW BUILT-OUT FINISH WALL AS DETAILED

NOTE: ALONG THIS WALL SUFACE (E) WALL AND NEW WALL PARTITION TO RECEIVE ADDITIONAL LAYER OF 5/8" GWB, AS PER BASE DETAIL 2/A648

NOTE: SEE O.H. FOR DIM'S IN COMMON

CPTT-6e, CPTT-6f

CPTT-6c, CPTT-6d

CPTT-6a, CPTT-6b

CPTT-2a, CPTT-2b

CPTT-1, CPTT-2a, CPTT-2b

CPTT-6

SEE 2/ A645 FOR JAMB RETURN, SIM. TYP @ ALL EXT DOORS ON THIS SECTOR PLAN

NOTE:
SEE ARCH SITE PLAN AND LA DWGS FOR LOCATION OF NEW POST STANCHION

BRICK PAVERS PER LANDSCAPE

EQ 19' - 0" EQ

nNN nMM nLL nKK nJJ nHH nGG nFF nEE

35 34 33 32 31 30

1 LEVEL 2 FLOOR PLAN - SECTOR B
A203B 1/8" = 1'-0"

0' 4' 8' 16' 24'

PLAN NORTH

Printed: 9/11/2018 3:58:46 PM

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SECTOR KEY PLAN

OCC - RENOVATIONS

777 NE Martin Luther King Jr. Blvd.
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Submittal

CONFORMED CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description
1	June 26, 2018	ADDENDUM - 1

Drawn	CE / AD
Checked	Checker
LMN Proj No	15017-01
Date	September 14, 2018

Sheet Title

SECOND LEVEL FLOOR PLAN - SECTOR B

Sheet Number

A203B

Appeal Reference - See
Page 25

CURRIES
Technical Manual Fire Rated Products Section

Revised
October, 2018

Index

Fire Rated Products

September, 2017

Index

Fire Rated Products

CURRIES
ASSA ABLOY

September, 2017

CURRIES
ASSA ABLOY

Fire Door Limitations and Requirements

Fire Rated Products

February, 2016

CURRIES fire rated doors and frames are listed and labeled by Underwriters Laboratories, LLC (UL) and Intertek-Warnock Hersey (Intertek). Doors and frames were tested in accordance with UL 9, UL 10B, UL 10C, ASTM E2074, ASTM E152, NFPA 252, NFPA 257, UBC 7-2, CAN4S-104 and CAN4S-106. ASTM E152 and ASTM E2074 have been withdrawn and are considered obsolete although included as a reference standard in some job specifications. UBC 7-2 has largely been replaced by the International Building Code (IBC).

The fire rated labels that we apply to doors and frames signify compliance with both Neutral and Positive Pressure test requirements.

GENERAL

a) Only listed doors may be used in a fire rated opening.
b) Every labeled swinging fire door must have a self latching device.
c) Approved hardware and components are listed in the Underwriters Laboratories “UL online Certifications Directory” or ITS/Warnock Hersey “Directory of Listed Products”.
d) Labeled doors may be stainless steel.
e) Viewers must be listed. Consult manufacturers listing for limitations.
f) The rating for the opening is the rating of the lowest rated component.
g) Embossed panel doors have the same fire rating as 707 doors.
h) NFPA 80 shall be followed for installation.

ASTRAGALS

Astragals may not be used at any hourly ratings for standard pairs of any door model with Vertical Rod Exit Devices on both leaves.

Pairs of doors with rim or mortise exit devices that latch into a hardware or hollow metal mullion can be labeled to the same capabilities as two (2) single doors (check with Authority Having Jurisdiction (AHJ) prior to using this capability to verify acceptance).

Astragals, when required for fire protection, must be a steel overlapping design in accordance with our procedures. Split Astragals and Meeting Stile Gasketing that are fire rated up to 180 minutes cannot be used on CURRIES fire rated doors that require a steel overlapping astragal for fire protection. These fire rated Split Astragals and Meeting Stile Gaskets may be used on CURRIES fire rated doors that don’t require a steel overlapping astragal for fire protection.

Astragals shall be attached with welds or screws and project 3/4” minimum beyond the lock edge of the door.

A hardware coordinator must be used to ensure proper closing when astragals are used on pairs of doors equipped with Vertical Rod Exit Device on one leaf and a Mortise Exit Device on the other leaf.

ASTRAGAL USAGE REQUIREMENTS

The objective of this specification is to summarize the use of steel overlapping astragals on the meeting edge of standard swing and double egress pairs. Most of the requirements are applicable to fire rated product limitations. Underwriters Laboratories and Intertek capabilities that are different are listed separately.

Underwriters Laboratories:

Astragals (12ga. flat or 14 ga. Z-shaped) are optional on all Standard Pairs and Double Egress Model 707 doors with a fire rating up to and including 1-1/2 hours.

Astragals are required on all Model 707 doors with a fire rating of 3 hours.

Astragals are optional on all Standard Pairs and Double Egress Model 747 doors with a fire rating up to and including 3 hours.

Astragals are required on all Model 727 doors at all hourly ratings and opening sizes.

Intertek (Warnock Hersey):

Astragals are optional on the following doors up to 3 hours:

Standard Pairs:	Model 707	8080 Maximum opening size (Polystyrene and honeycomb cores)
	Model 747	80100 Maximum opting size
Double Egress:	Model 707	8080 Maximum opening size
	Model 747	80100 Maximum opening size

Astragals are optional on Model 727 doors up to and including 1-1/2 hours. Astragals are required on Model 727 doors when the hourly rating exceeds 1-1/2 hours.

CLEARANCES

a) The maximum clearance between the door and frame and between meeting edges of doors swinging in pairs is 1/8 inch (re: NFPA80). Refer to CURRIES Tech Data sections for design clearances on CURRIES doors.
b) The maximum clearances under the bottom of a fire door shall be 3/4” (19 mm) per NFPA 80.

NOTE: Doors with vertical rod devices may have bottom latches that may not engage the strike if maximum allowed clearances are used.

Fire Door Limitations and Requirements

Fire Rated Products

January, 2014

CLOSING DEVICES

a) A closing device shall be installed on every fire door.
b) Closer reinforcements are furnished as standard on CURRIES fire rated doors.
c) If the closer is installed with sex bolts, the closer reinforcement may be omitted on fire rated doors.
d) Spring hinges may be used instead of a closer and a closer reinforcing. At least two spring hinges are required per door leaf.
e) The closer may be omitted on the inactive leaf of pairs of doors to mechanical equipment rooms (re: NFPA80).
f) Overhead stops may be used if they do not inhibit the door from closing and latching.
g) If an astragal or projecting latch bolt prevents the inactive door from closing and latching before the active door, a coordinating device shall be used. A coordinating device is not required where each door leaf of a pair of doors closes and latches independently of each other.
h) Door holder/release devices are permitted when acceptable to the Authority Having Jurisdiction.These are fail-safe devices, controlled by a detection device to release the door in the event of fire (re: NFPA80).

DUTCH DOORS

a) The upper and lower leaf may latch into the frame or the upper leaf may latch in lower leaf which latches into the frame.
b) The top leaf must be equipped with a closing device and a horizontal astragal that brings the bottom leaf closed
c) Fire-rated dutch doors must have a horizontal astragal attached to the bottom of the top leaf for all hourly ratings.

EXIT DEVICES

a) CURRIES labeled fire exit doors may be prepared for any listed fire exit hardware device.
b) The door size must must not exceed the maximum door size listed for the individual hardware manufacturers devices.
c) Doors that are reinforced for fire exit hardware must bear a label which states “Fire Door to be equipped with Fire Exit Hardware.”
d) Fire Exit Hardware may be applied to doors that are not reinforced for such hardware by using sex bolts or through bolts. These doors may not bear the label “Fire Door to be Equipped with Fire Exit Hardware.”
e) Vertical rod exit devices may not be used on a single door (this does not include less bottom rod devices that have a mortise lock.)

GASKETING/EDGE SEALS

a) Only listed gasketing material may be used, consult the U.L. Certifications (online) Directory Intertek Listed Product Directories.
b) Smoke and draft control assemblies must employ gaskets listed for smoke and draft control.
c) CURRIES fire rated doors do not require the use of edge seal systems (intumescents).

GLASS/GLAZING

a) See glazing capability charts for type, size, and rating of glass.

HINGES

a) Doors up to 60 inches in height require two leaf type hinge. An additional hinge must be used for each additional 30 inches of height or fraction thereof (NFPA80).
b) CURRIES fire doors over 96 inches in height may be prepared for standard weight hinges.
c) Listed continuous hinges, pivots, or electric hinges may be used with CURRIES fire rated doors.

LABELS

a) Fire labels on CURRIES doors are metal. Metal labels may be attached with drive screws or steel pop rivets.
b) Labels may be applied only at authorized locations.
c) A field inspection is required for a label to be applied at a jobsite.

LOCKS

a) The door size used must not exceed the maximum door size listed for the individual hardware manufacturers devices.
b) Refer to the hardware manufacturer’s listing to determine capability to supply single point locks for doors over 8 feet in height.
c) Latch Throw Requirements

607 & 707 Single:	1/2 inch minimum latch throw
607 & 707 Pairs:	5/8 inch minimum latch throw on pairs to 8 feet in height.
707 Pairs:	3/4 inch minimum latch throw on pairs to 10 feet in height.
727 Single:	1/2 inch minimum latch throw
727 Pairs:	5/8 inch minimum latch throw
747 & 847 Single:	1/2 inch minimum latch throw
747 & 847 pairs:	5/8 inch minimum latch throw
747 doors may also be prepared for two and three point latching devices.	

CURRIES
ASSA ABLOY

Fire Door Limitations and Requirements

Fire Rated Products

November, 2015

LOCKS (continued)

d) Dead bolts may not be used on doors which are in a means of egress. Locks with dead bolts that are interconnected with latch bolts and retract simultaneously when the latch bolt is retracted may be used on fire doors within a means of egress.
e) Dead bolts may be used in addition to an active latch bolt on doors that are not in a means of egress, or as otherwise permitted by the Authority Having Jurisdiction.

LOUVERS

a) Any listed automatic fusible link louver may be used in CURRIES labeled doors.
b) Maximum rating for louvers is 90 minutes.
c) Maximum listed louver size is 24 x 24 inches.
d) Louvers may not be installed in the upper half of a fire door.
e) Louvers may not be installed in 20 minute doors.

MODIFICATIONS

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and CURRIES makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

PAIRS OF DOORS

a) The inactive leaf of pairs of doors may be provided with self-latching top and bottom bolts or automatic flush bolts or labeled two point latches. Manual bolts either mortise or surface may be used on doors to rooms not normally occupied by humans.
b) Double egress doors are intended to be provided with vertical rod exit devices (concealed or surface mounted).
c) Open back strikes may be used on pairs of 707 or 747 doors to a maximum of 8'0" high, maximum height for 607 doors is 7'0" high.
d) Two doors in the same frame separated by a hollow metal mullion are treated as two single doors.

PROTECTION PLATES/PLANT ONS

a) Protection plates or kick plates may be a maximum of 46" wide x 36" high and may be attached to both faces of a door. NFPA 80 states that labeling is not required on protection plates less than 16". Field installed plates must be labeled and installed in accordance with the protection plate manufacturer's listing. The protection plate manufacturer should advise size and installation limitations. Protection plates are listed under UL Category code GVUX.
b) Plant-ons, decorative moldings, or cladding may not be used on CURRIES fire doors.

SMOKE AND DRAFT CONTROL

a) All components used in a Smoke and Draft Control assembly must pass a 20 minute without hose stream fire test.
b) Only gaskets listed for smoke and draft control may be used for smoke and draft control assemblies.
c) The gaskets used for a smoke and draft control assembly must be listed for the type of door installed in the frame, i.e. hollow metal or wood.
d) Wood doors used in a smoke and draft assembly that do not have intumescent imbedded in the door edge may require an edge seal (intumescent) and a smoke and draft control qualified gasket to be installed in the door frame.

TEMPERATURE RISE DOORS

a) The L727 series door may be used in 250˚ and 450˚ temperature rise applications.
b) A steel overlapping astragal is required on all fire-rated pairs of 727 doors.
c) The 747 temperature rise door is available at a 450˚ rating only.

VISION LIGHT REQUIREMENTS

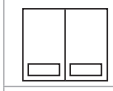
a) No glass should be used in exterior doors subject to a severe fire exposure.
b) Any listed fire door vision light kit may be used in CURRIES labeled doors. Vision kits should be listed for use in the type of door construction they are installed in.
c) CURRIES vision light kits may be used in CURRIES doors only.
d) Minimum stile between visible glass and the edge of door is 6 inches, the minimum distance between two vision light kits is 6" from visible glass to visible glass.
e) NFPA 80 allows vision lite kits up to 100 sq. inches in 250˚ and 450˚ temp. rise applications. Authority Having Jurisdiction may allow use of specialty glazing (see glazing chart for approved glazing) over 100 sq. inches.

CURRIES
ASSA ABLOY

Fire Door Capabilities Chart

Fire Rated Products

August, 2016

			Series	L607	L707	L707	L707	L727 [2]	L747	L747 TR[2]	L747	L757	L777	L777E	L847	L857
			Skin Gauges	20 or 18	20 or 18	20, 18, 16	14	18 or 16	18 or 16	18 or 16	14	16 or 14	18,16,14	18 or 16	14	14
			Door Thickness	1 – 3/4	1 – 3/8	1 – 3/4	1 – 3/4	1 – 3/4	1 – 3/4	1 – 3/4	1 – 3/4	1 – 3/4	1-3/4	1-3/4	1 – 3/4	2
			Inches (mm)	(44)	(35)	(44)	(44)	(44)	(44)	(44)	(44)	(44)	(44)	(44)	(44)	(51)
	TYPE	RATING		MAXIMUM OPENING SIZE												
	SINGLE FLUSH	180 min. 90 min. 60 min. 45 min. 20 min.		4070 (1219x2134)	3472 (1016x2184)	4080 (1219x2438)	4080 (1219x2438)	4080 (1219x2438)	40100 (1219x3048)	40100 (1219x3048)	4080 (1219x2438)	4080 (1219x2438)	4080 (1219x2438)	4080 (1219x2438) UL only, WH max. 90 minutes	4080 (1219x2438)	4080 (1219x2438)
	PAIR FLUSH	180 min. 90 min. 60 min. 45 min. 20 min.		8070 (2438x2134)		8080 (2438x2438)	8080 (2438x2438)	8080 (2438x2438)	80100 (2438x3048)	80100 (2438x3048)	8080 (2438x2438)	8080 (2438x2438)	8080 (2438x2438) 8090 (2438x2743) max 90 min.	8080 (2438x2438) UL only, WH max. 90 minutes	8080 (2438x2438)	
	DBL EGRESS FLUSH	180 min. 90 min. 60 min. 45 min. 20 min.		6070 (1829x2134)		6080 (1829x2438)	6080 (1829x2438)	8080 (2438x2438)	80100 (2438x3048)	80100 (2438x3048)	8080 (2438x2438)				8080 (2438x2438)	
	SINGLE LOUVER	90 min. 45 min.		4070 (1219x2134)		4080 (1219x2438)	4080 (1219x2438)		40100 (1219x3048)	40100 (1219x3048)	4080 (1219x2438)		4080 (1219x2438)	4080 (1219x2438)	4080 (1219x2438)	4080 (1219x2438)
	PAIR LOUVER	90 min. 45 min.		8070 (2438x2134)		8080 (2438x2438)	8080 (2438x2438)		80100 (2438x3048)	80100 (2438x3048)	8080 (2438x2438)		8080 (2438x2438)	8080 (2438x2438)	8080 (2438x2438)	
	DUTCH DOOR FLUSH	180 min. 90 min. 60 min. 45 min. 20 min.							3872 (1118X2184)	3872 (1118X2184)						
	SINGLE EMBOSSED PANEL	180 min. 90 min. 45 min. 20 min.				3470 (1016x2134) 3670[4] (1067x2134)						3470 (1016x2134)				
	PAIR EMBOSSED PANEL	180 min. 90 min. 45 min. 20 min.				6870 (2032x2134) 7070[4] (2032x2134)										
	SINGLE FULL GLASS	20 min. without hose stream				4080 (1219x2438)	4080 (1219x2438)		4080 (1219x2438)		4080 (1219x2438)		4080 (1219x2438)	4080 (1219x2438)		
	PAIR FULL GLASS	20 min. without hose stream				8080 (2438x2438)	8080 (2438x2438)		8080 (2438x2438)		8080 (2438x2438)		8080 (2438x2438)	8080 (2438x2438)		

NOTES: 1) SEE DOOR GLAZING SPECIFICATIONS FOR GLAZING REQUIREMENTS
2) 180, 90, 60, 45 MIN. LABELS ONLY
3) MINERAL CORE PANEL
4) 18 GAUGE

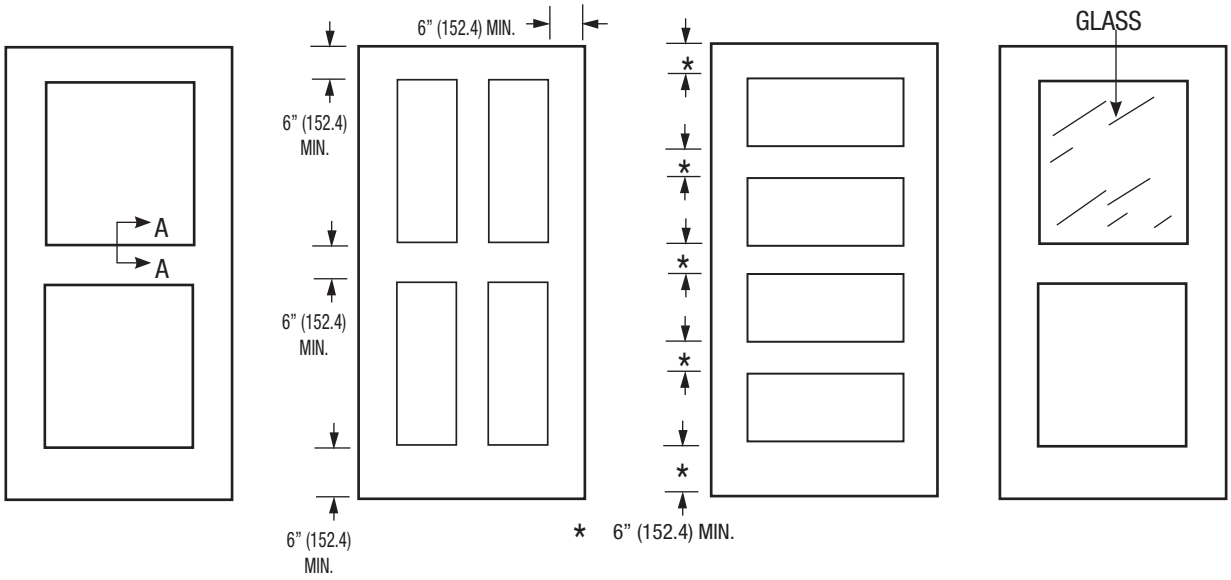
	SINGLE[3] PANEL DOOR	90 min. 45 min. 20 min.				4080 (1219x2438)	4080 (1219x2438)		4080 (1219x2438)		4080 (1219x2438)					

NOTES: SEE PAGE 9 FOR MORE INFORMATION ON PANEL DOORS

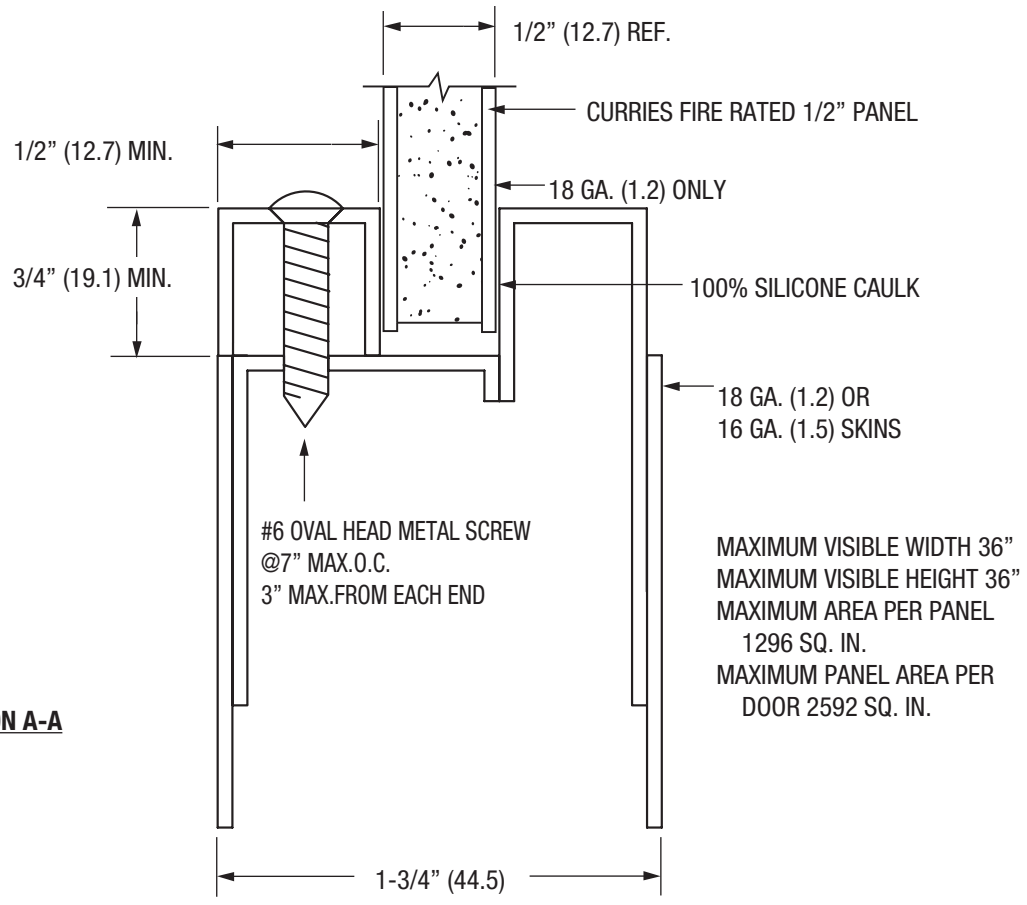
February, 2010

90 MINUTE MAXIMUM RATING.
UL ONLY

TYPICAL FACE TYPES



6" MINIMUM STILE AND RAIL



SECTION A-A

CURRIES
ASSA ABLOY

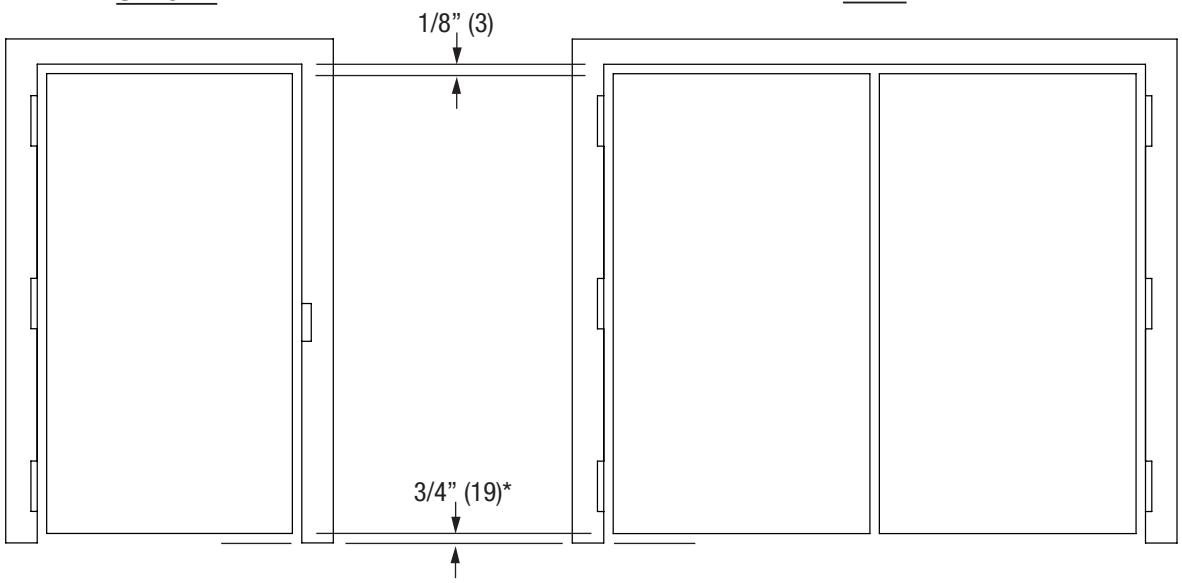
Maximum Label Door Clearances

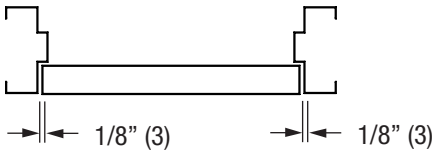
Fire Rated Products

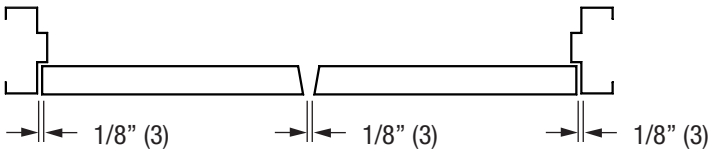
April, 2002

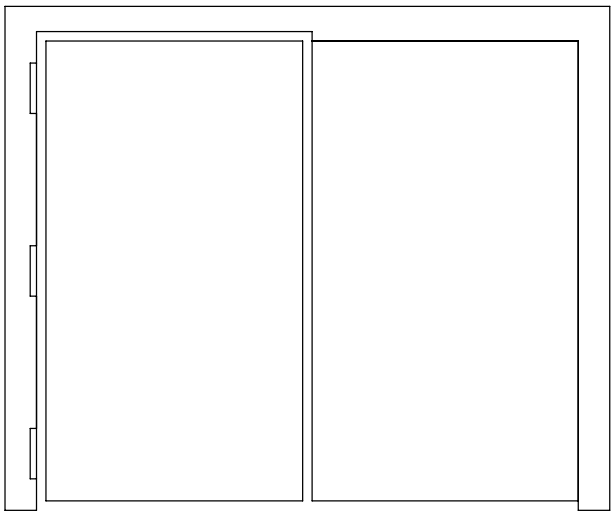
SINGLE

PAIR

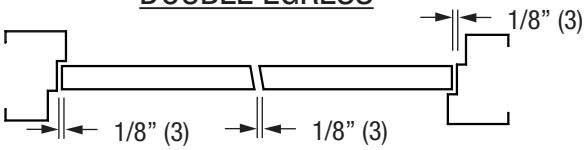








DOUBLE EGRESS



REFERENCE: MAXIMUM CLEARANCES AS PUBLISHED IN N.F.P.A. 80; FIRE DOORS AND WINDOWS.

*CURRIES STANDARD UNDERCUT IS 5/8" (16)

KD Fire Door Frame Capabilities Chart

Fire Rated Products

CURRIES
ASSA ABLOY

August, 2014

HOUR RATING		180 (3 HOUR) MASONRY WALLS ONLY	90 (1-1/2 HOUR)	45 (3/4 HOUR)	20 (20 MINUTE)
PROFILE TYPE	MAT'L GAUGE	JAMB DEPTH SIZES (7			
1" FACE FRAME M	16 14 12	4" MIN. - 14" MAX. (102) - (356)	4" MIN. - 14" MAX. (102) - (356)	4" MIN. - 14" MAX. (102) - (356)	4" MIN. - 14" MAX. (102) - (356)
1-1/4" - 4" FACE FRAME M	16 14 12	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)
CM	16 14	3-1/4"(4 MIN. - 14" MAX. (83) - (356)(2	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)
C (1, (6	16 14	NOT AVAILABLE	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX (83) - (356)
C (1, (6	16 14	NOT AVAILABLE	4-5/8" MIN. - 14" MAX. (117) - (356)	4-5/8" MIN. - 14" MAX. (117) - (356)	4-5/8" MIN. - 14" MAX. (117) - (356)
G (1	16 14 12	NOT AVAILABLE	3-1/4"(2 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)
CMG	16 14	3-1/4"(3 MIN. - 14" MAX. (83) - (356)(2	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4"(3 MIN. - 14" MAX. (83) - (356)	3-1/4" MIN. - 14" MAX. (83) - (356)
DEM	16 14 12	4-3/4" MIN. - 14" MAX. (121) - (356)	4-3/4" MIN. - 14" MAX. (121) - (356)	4-3/4" MIN. - 14" MAX. (121) - (356)	4-3/4" MIN. - 14" MAX. (121) - (356)
WM	16 14	5-1/4" MIN. - 14" MAX (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)
WCM	16 14	5-1/4" MIN. - 14" MAX. (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)	5-1/4" MIN. - 14" MAX. (133) - (356)
WG	16 14	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)
WCG	16 14	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)	4-1/8" MIN. - 14" MAX. (105) - (356)
WC (1	16	NOT AVAILABLE	4-5/8" MIN. - 14" MAX. (118) - (356)	4-5/8" MIN. - 14" MAX. (118) - (356)	4-5/8" MIN. - 14" MAX. (118) - (356)

(1 COMPRESSION ANCHOR
(2 ONLY MASONRY WALLS WITH APPROVED CORNER CLIP
(3 3-1/4"-4" JAMB DEPTH FOR 1-3/8" DOORS ONLY
(4 MASONRY WALLS ONLY
(5 18 GAUGE AVAILABLE - SEE FOLLOWING PAGES
(6 14 GA. AVAILABLE IN 2" FACE ONLY
(7 SAME PROFILE FOR HEAD & JAMB

CURRIES
ASSA ABLOY

KD Fire Door Frame Capabilities Chart

Fire Rated Products

December, 2013

NEUTRAL AND POSITIVE PRESSURE

HOUR RATING		180 (3 HOUR) MASONRY WALLS ONLY	90 (1-1/2 HOUR)	45 (3/4 HOUR)	20 (20 MINUTE)
PROFILE TYPE	**MAT'L GAUGE**	**OPENING SIZES (5**			
1" FACE FRAME M	16 14 12	SINGLE: 4'0" X 8'0" PAIRS: 8'0" X 7'0"	SINGLE: 4'0" X 8'0" PAIRS: 8'0" X 7'0"	SINGLE: 4'0" X 8'0" PAIRS: 8'0" X 7'0"	SINGLE: 4'0" X 8'0" PAIRS: 8'0" X 7'0"
1-1/4" - 4" FACE FRAME M	16 14 12	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
CM	16 14	SINGLE: 4'0" X 10'0"(1 PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
C (1, (4	16	NOT AVAILABLE	SINGLE: 3'6" X 7'0"	SINGLE: 3'6" X 7'0"	SINGLE: 3'6" X 7'0"
C (1	16	NOT AVAILABLE	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2" - OR - 7'0" X 9'0"	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2" - OR - 7'0" X 9'0"	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2" - OR - 7'0" X 9'0"
G (1	16 14 12	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
CMG	16 14	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"(2	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
DEM	16 14 12	PAIRS: 8'0" X 10'0"(2	PAIRS: 8'0" X 10'0"	PAIRS: 8'0" X 10'0"	PAIRS: 8'0" X 10'0"
WM	16 14	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
WCM	16 14	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"(2	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
WG	16 14	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
WCG	16 14	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"(2	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"	SINGLE: 4'0" X 10'0" PAIRS: 8'0" X 10'0"
WC (1	16	NOT AVAILABLE	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2"- OR - 7'0" X 9'0"	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2" - OR - 7'0" X 9'0"	SINGLE: 4'0" X 9'0" PAIRS: 8'0" X 7'2" - OR - 7'0" X 9'0"

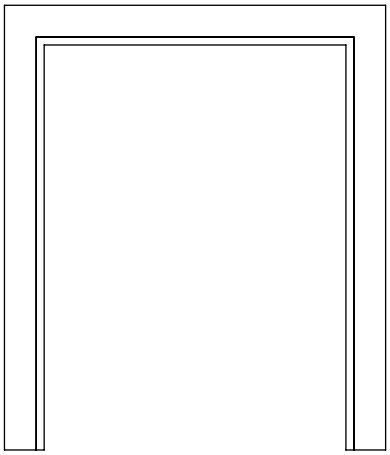
(1 COMPRESSION ANCHOR
(2 ONLY MASONRY WALLS WITH APPROVED CORNER CLIP
(3 18 GAUGE AVAILABLE - SEE FOLLOWING PAGES
(4 1-3/8" DOORS ONLY
(5 SAME PROFILE FOR HEAD & JAMB

18 Gauge Three Sided Fire Door Frame

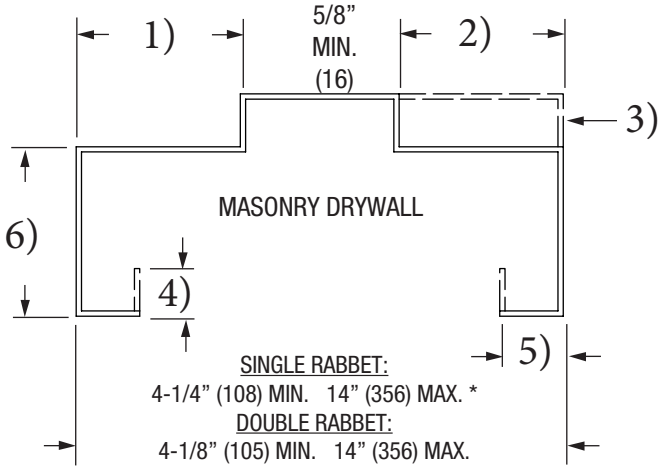
Fire Rated Products

August, 2014

90 MINUTE MAXIMUM RATING



GENERAL NOTES:
1) TO SUIT DOOR THICKNESS
2) VARIES
3) PROFILE VARIABLE
4) 3/8" (10) MIN.
   3/4" (19) MAX.
5) 3/8" (10) MIN.
   1-3/8" (35)
6) 1-1/4" (32)*
   4" (102) MAX. JAMB
   6" (152) MAX. HEAD



90 MINUTE MAXIMUM RATING - DRYWALL WALLS (WARNOCK HERSEY LISTING ONLY)	
MAXIMUM FRAME SIZES	
MASONRY, DRYWALL:	SINGLE — 4'0" (1219) W X 8'0" (2438) H PAIRS — 8'0" (2438) W X 8'0" (2438) H
WALL CONSTRUCTION:	DRYWALL OR MASONRY WALLS
FRAME CORNER CONSTRUCTION:	KD, FACE WELD, OR CONTINUOUS WELD
ANCHORS:	ANY LISTED WELD-IN OR SLIP-IN DRYWALL OR MASONRY TYPE. ANCHOR MAY BE USED IN THIS FRAME. (COMPRESSION ANCHORS NOT ALLOWED)
MATERIAL:	18 GA. (1.2) MIN. COLD ROLLED OR GALVANIZED STEEL
HARDWARE RESTRICTIONS	
A) HINGES:	STEEL (BALL BEARING - OIL LIGHT BUSHING) TYPE, POCKET PIVOT TYPE, STANDARD PIVOT TYPE, ANCHOR TYPE, AND CONTINUOUS TYPE.
B) CLOSERS:	CLOSERS ARE REQUIRED ON ALL FRAMES WHICH ARE TO BE FIRE LABELED, REGARDLESS OF THE HOURLY RATING. IF A LABEL APPROVED REINFORCEMENT IS NOT PROVIDED, THE CLOSER MUST BE THROUGH -BOLTED TO THE FRAME. IN LIEU OF A CLOSER, SPRING HINGES MUST BE USED.
C) STRIKES:	STANDARD STRIKES FOR VARIOUS TYPES OF LISTED HARDWARE MAY BE USED.
D) HARDWARE MULLION:	IT IS PERMISSIBLE TO USE A LISTED HARDWARE MULLION IN A PAIR CONFIGURATION.

NOTE: ANY HARDWARE WHICH IS TO BE USED ON FIRE RATED DOORS AND FRAMES SHOULD BE CONFIRMED FOR LABEL APPROVAL USING THE LATEST EDITION OF THE U.L. FIRE RESTRICTIVE DIRECTORY VOL. 3, OR ITS/WHI DIRECTORY OF LISTED PRODUCTS.

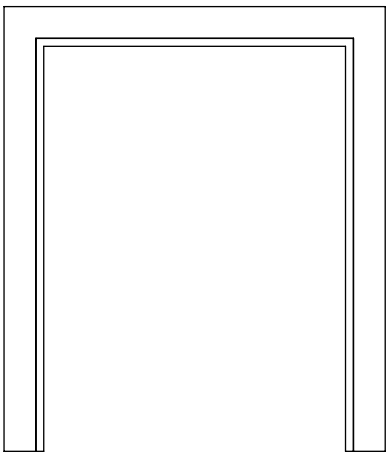
FACE WELDING COMPLETELY ASSEMBLED AND INSTALLED KD FRAMES IN THE FIELD IS AN ACCEPTABLE PRACTICE, CONTACT FACTORY FOR DETAILS.

Three Sided Fire Door Frame

Fire Rated Products

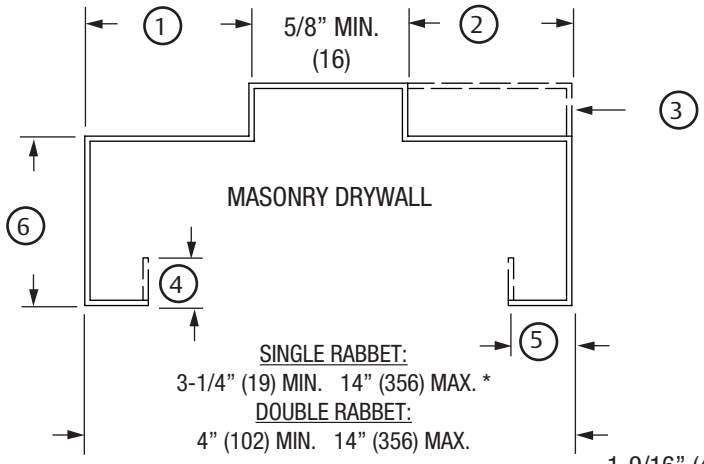
February, 2016

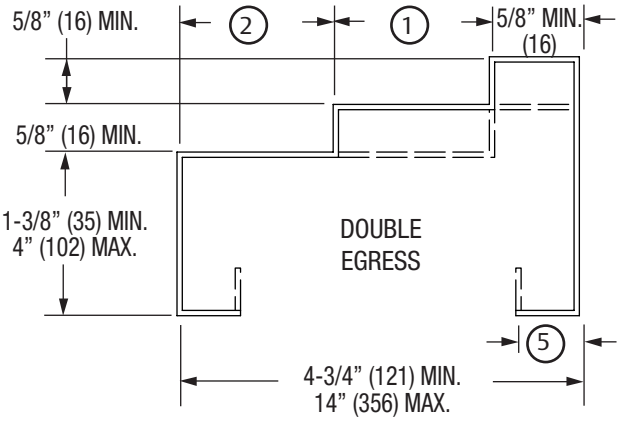
180 MINUTE MAXIMUM RATING - MASONRY WALLS
90 MINUTE MAXIMUM RATING - DRYWALL WALLS

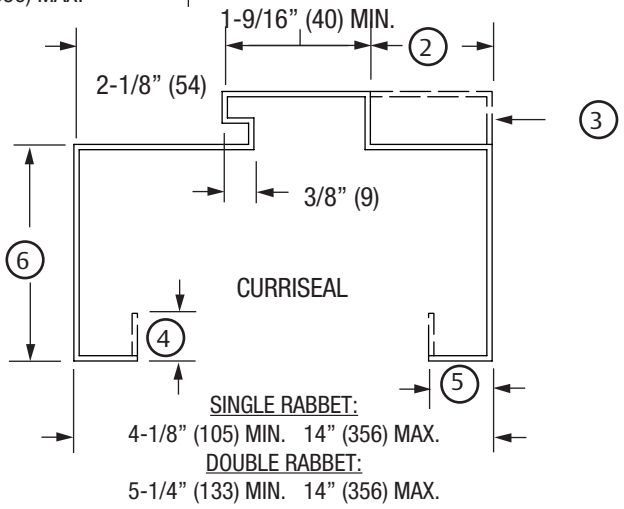


GENERAL NOTES:

1. TO SUIT DOOR THICKNESS
2. VARIES
3. PROFILE VARIABLE
4. 3/8" (10) MIN.
   3/4" (19) MAX.
5. 3/8" (10) MIN.
   1-3/8" (35)
6. 1-1/4" (32)*
   4" (102) MAX. JAMB
   8" (204)[1] MAX. HEAD







Compression anchors not available in label construction
* 3-1/4" to 4" jamb depth for 1-3/8" door only.
1) Heads with greater than 4" face are UL label only.

180 MINUTE MAXIMUM RATING - MASONRY WALLS 90 MINUTE MAXIMUM RATING - DRYWALL WALLS	
MAXIMUM FRAME SIZES	
MASONRY, DRYWALL:	SINGLE — 4'0" (1219) W X 10'0" (3048) H PAIRS — 8'0" (2438) W X 10'0" (3048) H
DOUBLE EGRESS:	PAIRS ONLY — 8'0" (2438) W X 10'0" (3048) H COMPRESSION ANCHOR NOT AVAILABLE IN LABEL CONSTRUCTION
CURRISEAL:	SINGLE — 4'0" (1219) W X 10'0" (3048) H PAIRS — 8'0" (2438) W X 10'0" (3048) H
WALL CONSTRUCTION:	DRYWALL OR MASONRY WALLS
FRAME CORNER CONSTRUCTION:	KD, FACE WELD, OR CONTINUOUS WELD
ANCHORS:	ANY LISTED WELD-IN OR SLIP-IN DRYWALL OR MASONRY TYPE ANCHOR MAY BE USED IN THIS FRAME.
MATERIAL:	16 GA. (1.5) MIN. 12 GA. (2.6) MAX. COLD ROLLED OR GALVANIZED STEEL
MULLIONS:	WELDED OR REMOVABLE HOLLOW METAL MULLIONS ARE PERMITTED.
HARDWARE RESTRICTIONS	
A) HINGES:	STEEL (BALL BEARING - OIL LIGHT BUSHING) TYPE, POCKET PIVOT TYPE, STANDARD PIVOT TYPE, ANCHOR TYPE, AND CONTINUOUS TYPE.
B) CLOSERS:	CLOSERS ARE REQUIRED ON ALL FRAMES WHICH ARE TO BE FIRE LABELED, REGARDLESS OF THE HOURLY RATING. IF A LABEL APPROVED REINFORCEMENT IS NOT PROVIDED, THE CLOSER MUST BE THROUGH -BOLTED TO THE FRAME. IN LIEU OF A CLOSER, SPRING HINGES MUST BE USED.
C) STRIKES:	STANDARD STRIKES FOR VARIOUS TYPES OF LISTED HARDWARE MAY BE USED.
D) HARDWARE MULLION:	IT IS PERMISSIBLE TO USE A LISTED HARDWARE MULLION IN A PAIR CONFIGURATION.

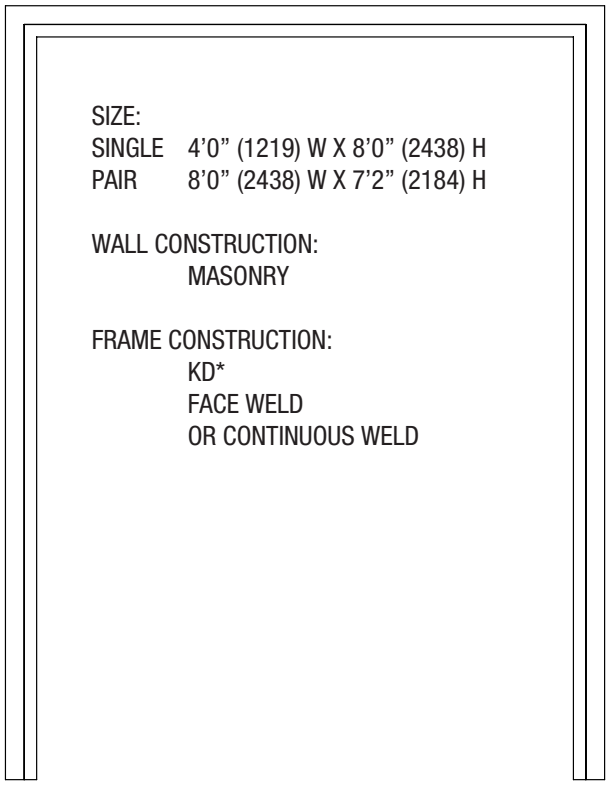
NOTE: ANY HARDWARE WHICH IS TO BE USED ON FIRE RATED DOORS AND FRAMES SHOULD BE CONFIRMED FOR LABEL APPROVAL USING THE LATEST EDITION OF THE U.L. FIRE RESTRICTIVE DIRECTORY VOL. 3, OR ITS/WHI DIRECTORY OF LISTED PRODUCTS.

FACE WELDING COMPLETELY ASSEMBLED AND INSTALLED KD FRAMES IN THE FIELD IS AN ACCEPTABLE PRACTICE, CONTACT FACTORY FOR DETAILS.

CURRIES
ASSA ABLOY

September, 2018

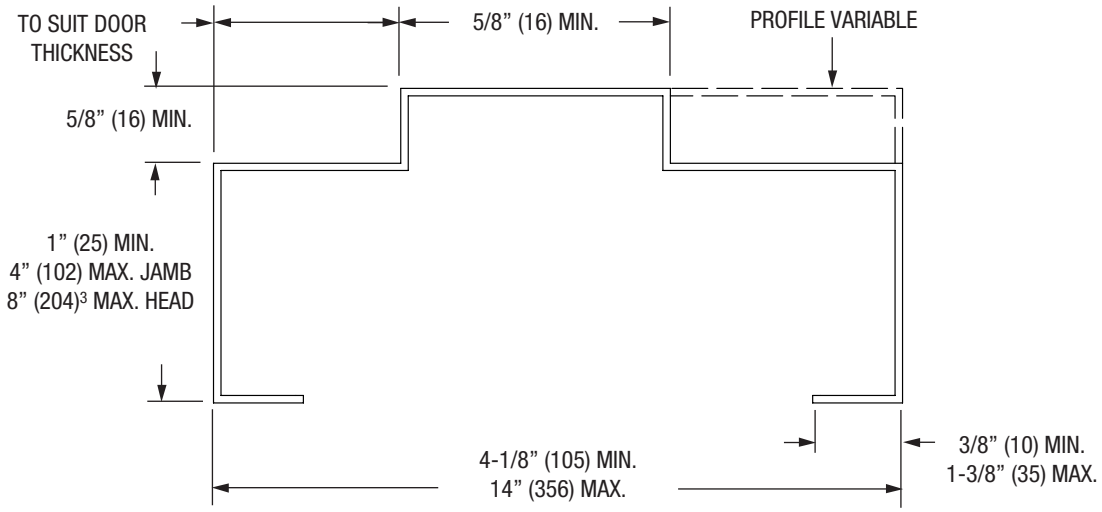
1" FACE DOOR FRAME
MASONRY WALL CONSTRUCTION
180 MINUTE MAXIMUM FIRE RATING



SIZE:
SINGLE 4'0" (1219) W X 8'0" (2438) H
PAIR 8'0" (2438) W X 7'2" (2184) H

WALL CONSTRUCTION:
MASONRY

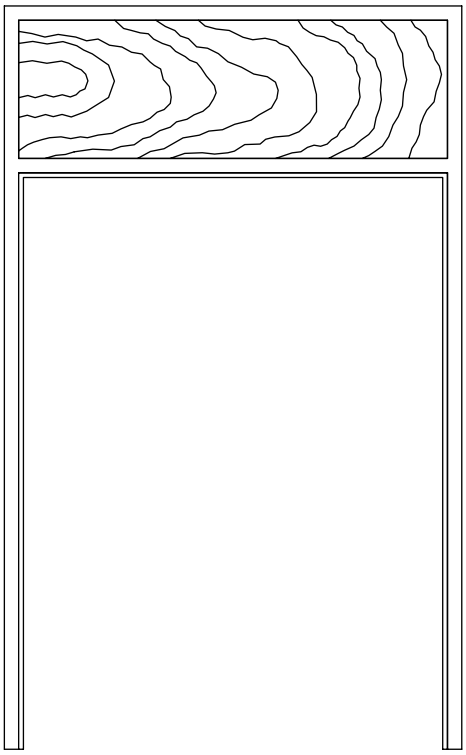
FRAME CONSTRUCTION:
KD*
FACE WELD
OR CONTINUOUS WELD

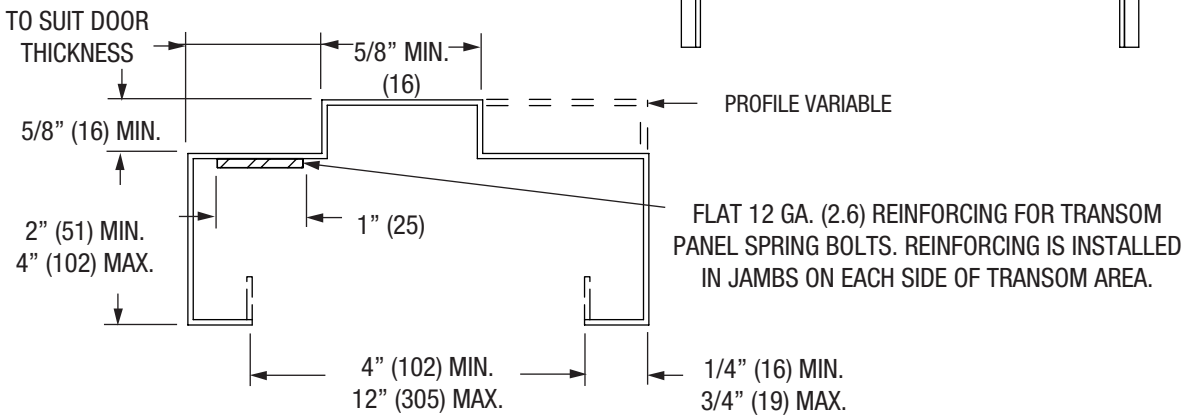


1) WELDED AND REMOVABLE MULLIONS MAY BE USED WITH THIS FRAME.
2) ANY LISTED WELD IN OR SLIP IN MASONRY ANCHOR MAY BE USED IN THIS FRAME.
3) HEADS WITH GREATER THAN 4" FACE ARE UL LABEL ONLY.

WOOD TRANSOM PANEL
90 MINUTE MAXIMUM RATING

FRAME SIZE:
4”0” (1219) W X 11’0” (3353) SINGLE SWING
WALL CONSTRUCTION:
MASONRY
DRYWALL
FRAME CONSTRUCTION:
CONTINUOUS WELD
TRANSOM PANEL:
ANY LISTED WOOD TRANSOM PANEL
MAX. PANEL SIZE:
BASED ON WOOD DOOR MANUFACTURER’S LISTING.
1-1/2 HOUR MAX. LABEL RATING
MAX. DOOR SIZE:
ANY LABELED DOOR





NOTES:

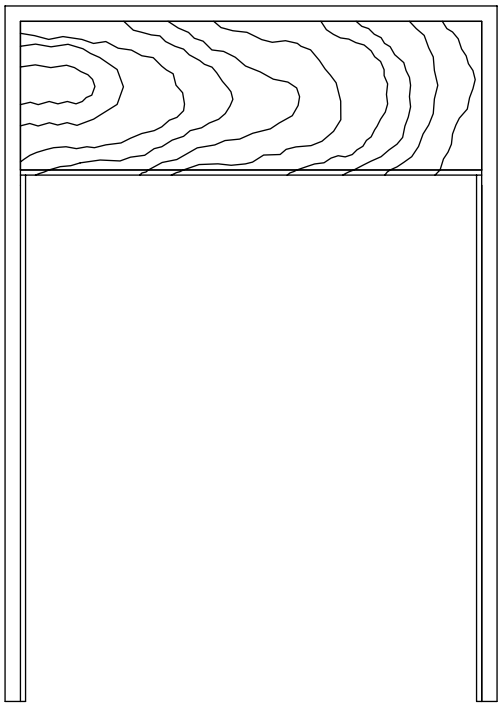
1) THIS FRAME IS CONSIDERED A TRANSOM FRAME AND MUST BEAR A LABEL WHICH STATES “FIRE DOOR FRAME WITH PANELS”
2) ATTACHMENT OF TRANSOM PANEL TO FRAME IS BY USE OF SPRING BOLTS THAT ARE PROVIDED WITH THE PANEL. (PANEL MAY ALSO BE ATTACHED TO FRAME BY OTHER MEANS AS ALLOWED BY THE PANEL MANUFACTURER’S LISTING.) SPRING BOLTS ENGAGE IN TO REINFORCED HOLES IN THE FRAME.
3) ANY LISTED WELD IN OR SLIP IN MASONRY OR DRYWALL ANCHOR MAY BE USED IN THIS FRAME. (COMPRESSION ANCHORS NOT ALLOWED).
4) SEE GLAZING CHARTS AND TRANSOM/SIDELITE FRAMES FOR ADDITIONAL CAPABILITIES.

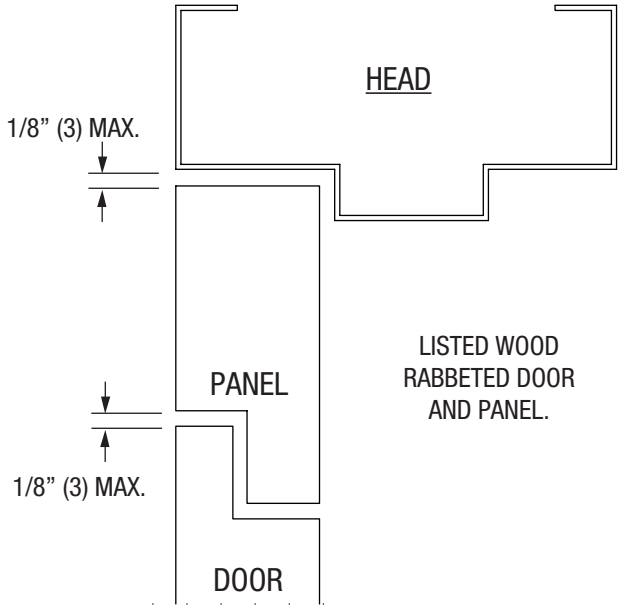
Transom Frame For Rabbeted Wood Door & Transom Panel

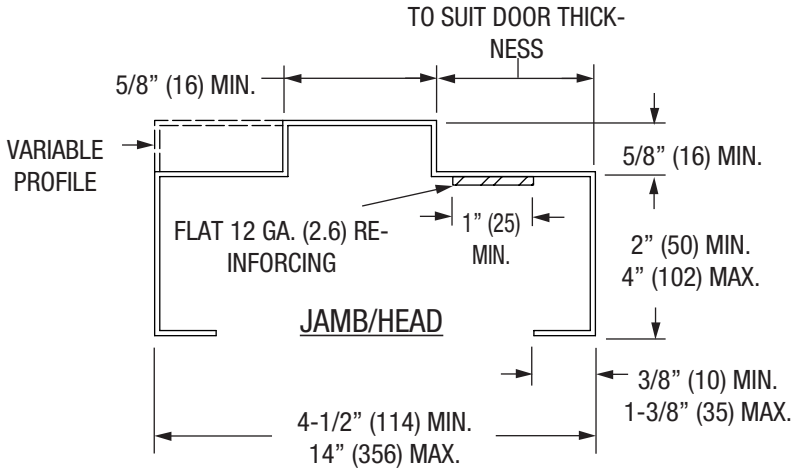
Fire Rated Products

August, 2014

90 MINUTE MAXIMUM RATING.







CURRIES
ASSA ABLOY

Transom Frame For Rabbeted Wood Door & Transom Panel

Fire Rated Products

August, 2014

90 MINUTE MAXIMUM RATING	
MASONRY, DRYWALL:	4'0" (1219) X 10'0" (3048) AS KD 4'0" (1219) X 11'0" (3353) AS WELDED
MAXIMUM DOOR HEIGHT:	8'0" (2438)
WALL CONSTRUCTION:	MASONRY OR DRYWALL
FRAME CONSTRUCTION:	KD, FACE WELD, OR CONTINUOUS WELD
ANCHORS:	ANY LISTED WELD-IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME. (COMPRESSION ANCHORS NOT ALLOWED).
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
TRANSOM PANEL:	1-3/4" (44) THICKNESS MAXIMUM SIZE: 4'0" (1219) W X 4'0" (1219) H MAXIMUM LABEL RATING: 1-1/2 HOUR

NOTE:

1) FLAT 12 GA. (2.6) REINFORCING FOR TRANSOM PANEL SPRING BOLTS. REINFORCING IS INSTALLED IN JAMBS ON EACH SIDE OF TRANSOM PANEL.

2) THIS FRAME IS CONSIDERED A TRANSOM FRAME AND MUST BEAR A LABEL WHICH STATES: "FIRE DOOR FRAME WITH PANELS."

3) ATTACHMENT OF TRANSOM PANEL TO FRAME IS BY USE OF SPRING BOLTS PROVIDED WITH THE PANEL. (PANEL MAY BE ATTACHED TO THE FRAME BY OTHER MEANS, AS ALLOWED BY THE PANEL MANUFACTURERS LISTINGS.) SPRING BOLTS ENGAGE INTO REINFORCED HOLES IN THE FRAME.

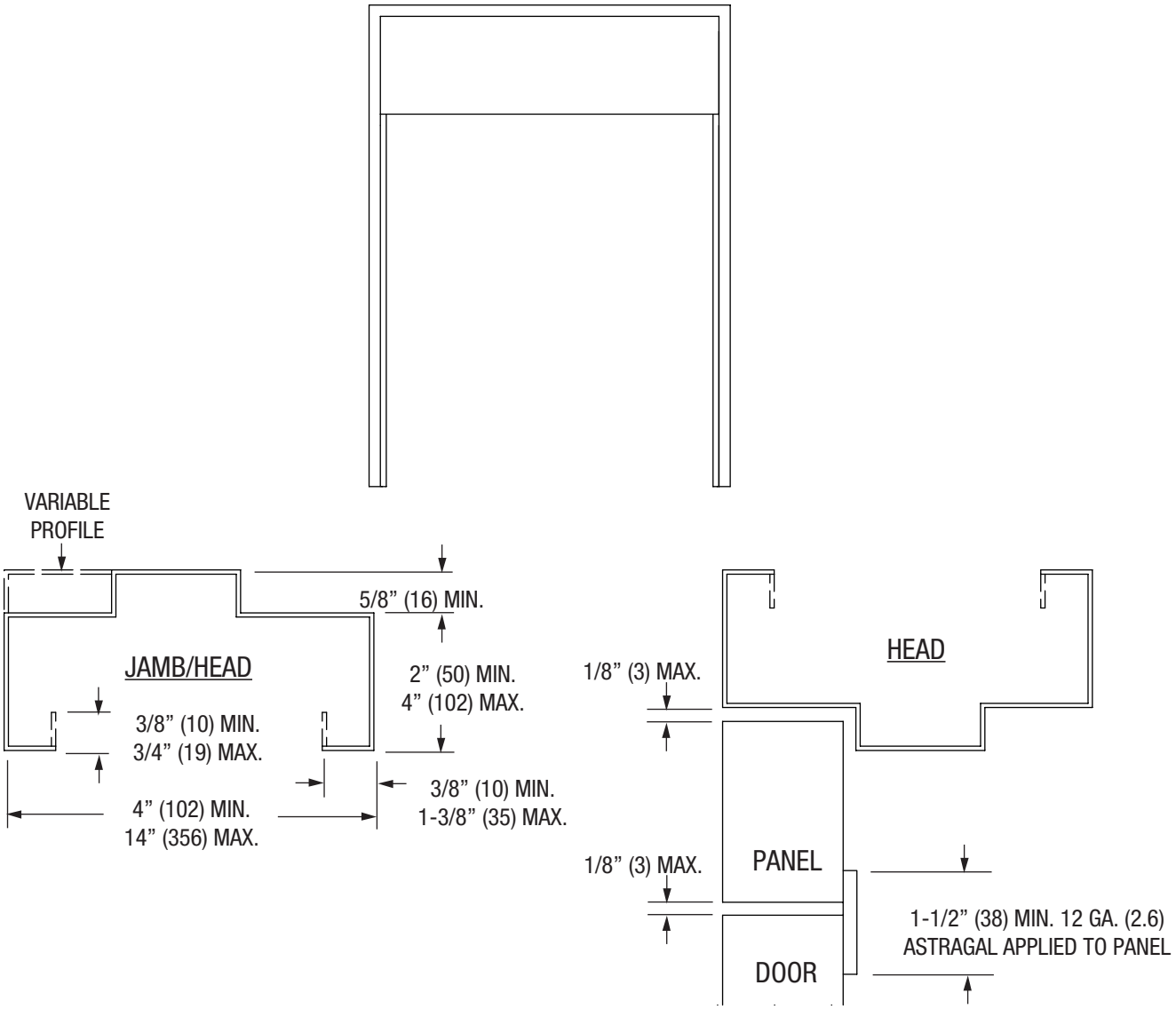
4) CONTACT WOOD DOOR & PANEL MANUFACTURER FOR PANEL AND DOOR LIMITATIONS.

Transom Frame Without Transom Bar (Fixed)

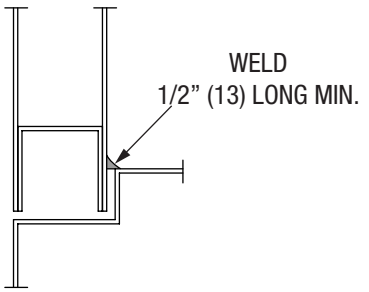
Fire Rated Products

August, 2014

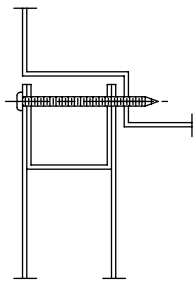
180 MINUTE MAXIMUM RATING.



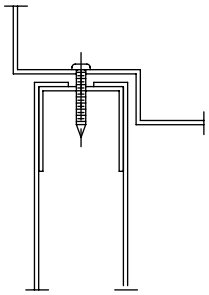
Fixed Panel Installation Options



A
STANDARD



B
OPTIONAL



C
OPTIONAL
THIS METHOD CANNOT BE
USED ON MULLION SECTIONS

SEE FRAME SECTION PAGE 134 FOR
REMOVABLE PANEL DETAILS

CURRIES
ASSA ABLOY

Transom Frame Without Transom Bar (Steel Panel)

Fire Rated Products

April, 2002

180 MINUTE MAXIMUM RATING - MASONRY WALLS 90 MINUTE MAXIMUM RATING - DRYWALL WALLS	
MAXIMUM FRAME SIZE:	SINGLE — 4’0” (1219) W X 10’0” (3048) H PAIR — 8’0” (2438) W X 10’0” (3048) H
WALL CONSTRUCTION:	MASONRY OR DRYWALL (DRYWALL WALL INSTALLATION LIMITED TO 90 MINUTES)
FRAME CONSTRUCTION:	KD, FACE WELD, OR CONTINUOUS WELD
ANCHORS:	ANY LISTED WELD IN OR SLIP IN TYPE DRYWALL OR MASONRY ANCHORSMAY BE USED IN THIS FRAME. (COMPRESSION ANCHORS NOT ALLOWED).
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
TRANSOM PANEL:	MUST BE 747 CONSTRUCTION. SINGLE: 4’0” (1219) W X 3’0” (1219) H MAX. PAIR: 8’0” (2438) W X 3’0” (1219) H
ASTRAGAL:	ASTRAGAL NOT REQUIRED ON ASSEMBLIES RATED 90.
DOORS:	MAXIMUM DOOR LEAF SIZE SINGLE & PAIRS - 707: 4’0” (1219) W X 10’0” (3048) H SINGLE & PAIRS - 747: 4’0” (1219) W X 10’0” (3048) H

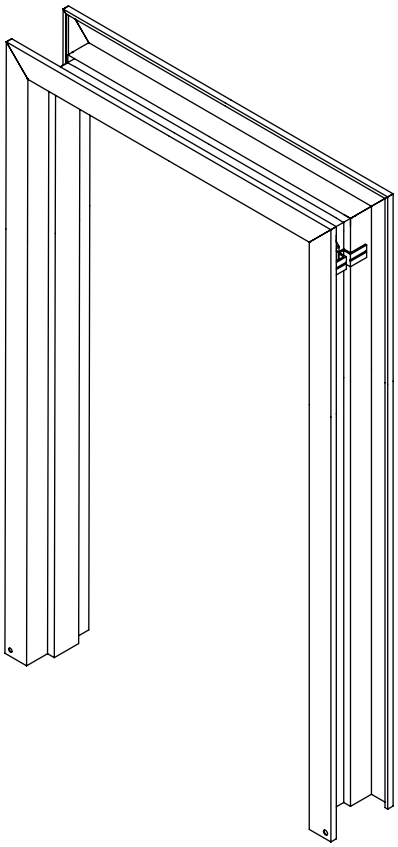
NOTE: 1) THIS FRAME IS CONSIDERED A TRANSOM FRAME AND MUST BEAR A LABEL WHICH STATES: “FIRE DOOR FRAME WITH PANELS” AND IS LIMITED TO THE SAME RESTRICTIONS AS OTHER TRANSOM FRAMES.

2) SCREWS AND WELDS FOR PANEL ANCHORING SHALL BE AT 2-1/2” (64) FROM ENDS AND A MAXIMUM OF 12” (305) APART ON TOP AND BOTTOM EDGES AND 18” (457) APART ON SIDES. PANEL SCREWS SHALL BE MINIMUM #10 SIZE.

Compression Anchor (C-Type) Slip-on Drywall Frame

Fire Rated Products

August, 2014



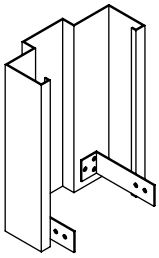
90 MINUTE MAXIMUM FIRE RATING.

SIZE:

SINGLE: 4'0" (1219) W X 9'0" (2743) H
PAIR: 8'0" (2438) W X 7'2" (2184)
7'0" (2134) W X 9'0" (2743) H

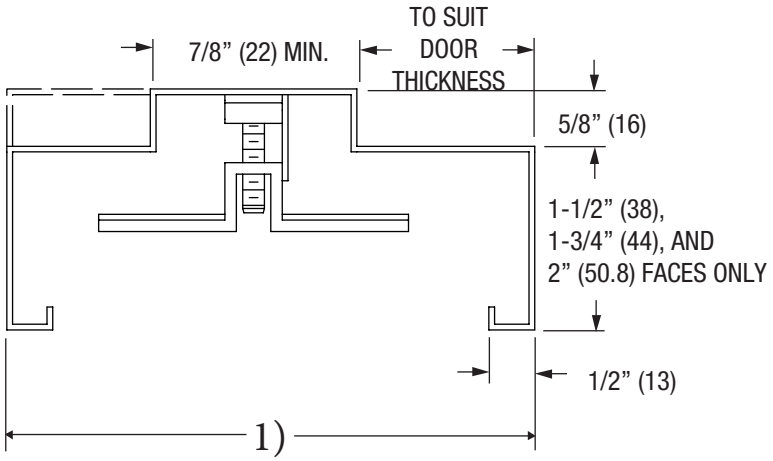
WALL CONSTRUCTION: DRYWALL

FRAME CONSTRUCTION: KD (WITH COMPRESSION ANCHOR SYSTEM)



– COUNTERSUNK BASE ANCHOR HOLE IS STANDARD ON 2" (51) FACE FRAMES, STRAP TYPE BASE ANCHOR OPTIONAL.

– STRAP TYPE BASE ANCHOR OPTIONAL ON 2" (50.8) FACE FRAMES AND MUST BE USED ON 1-1/2" (38) AND 1-3/4" (44) FACE FRAMES.

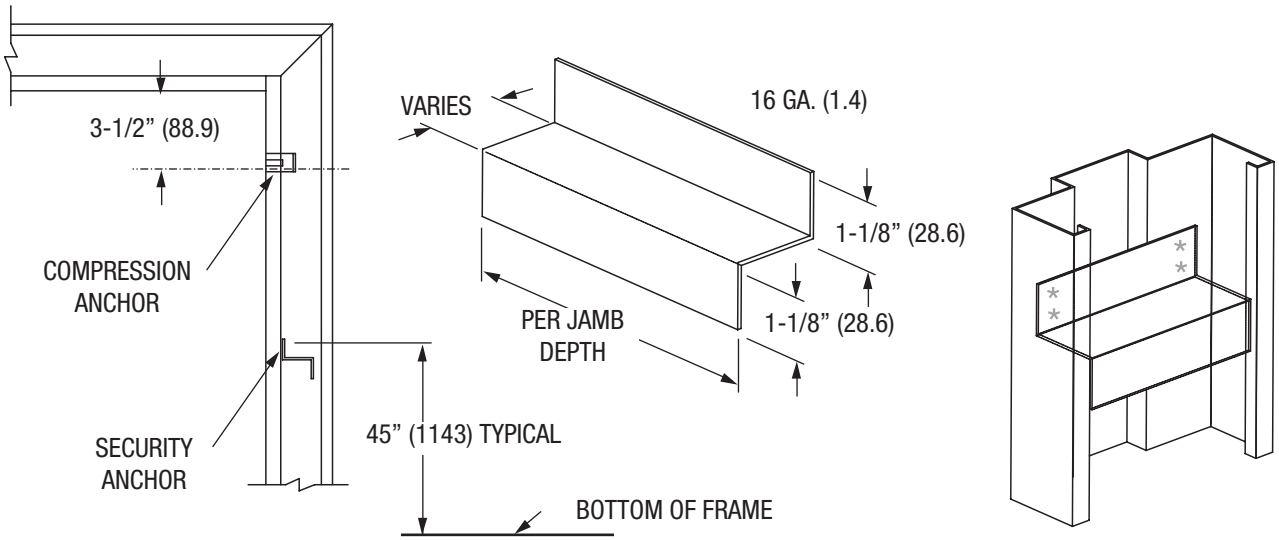


NOTE:

1) 3-1/4" (83) MIN. - 14" (356) MAX. FOR SINGLE OPENING FRAMES TO 3'6" (1067) WIDE X 7'0" (2134) HIGH
4-5/8" (118) MIN. - 14" (356) MAX. FOR SINGLE OPENING FRAMES TO
4'0" (1219) WIDE X 9'0" (2743) HIGH AND DOUBLE OPENING FRAMES TO
7'0" (2134) WIDE X 9'0" HIGH OR 8'0" (203) WIDE X 7'2" (2184) HIGH

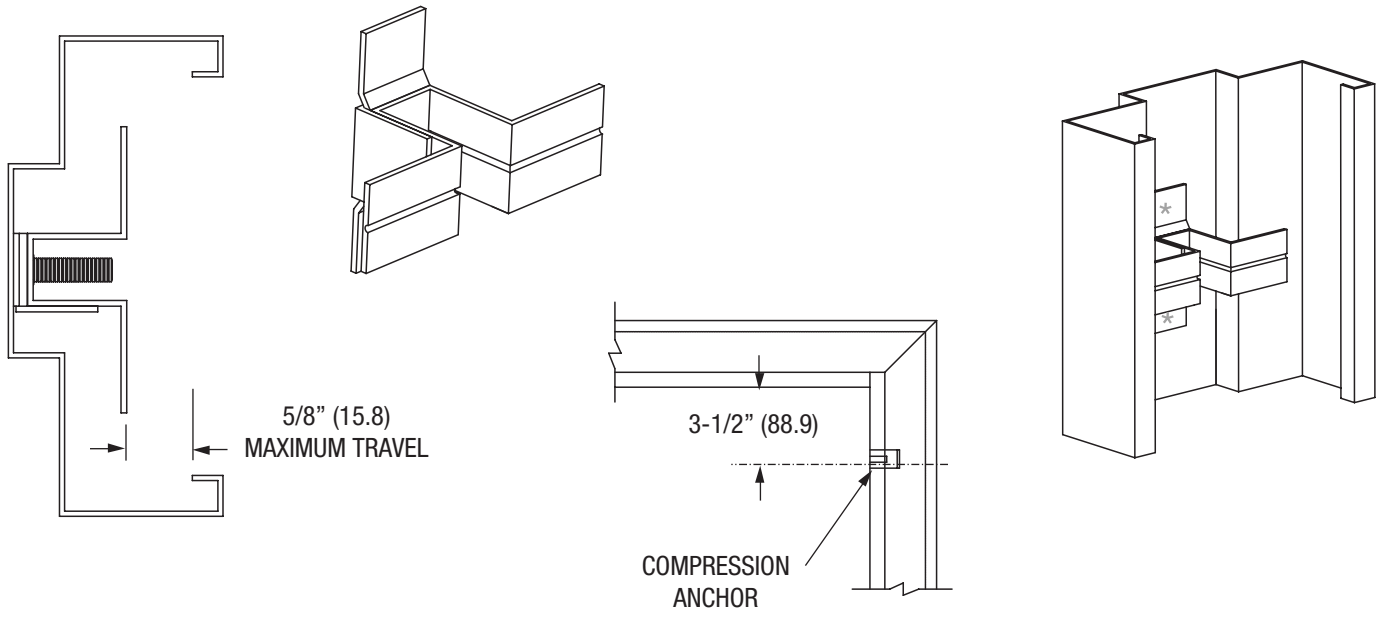
2) KD FRAMES OVER 7'2" (2136) UP TO 8' (2438.4) REQUIRE ONE SECURITY ANCHOR PER JAMB (SEE NEXT PAGE FOR DETAILS). FRAMES OVER 8' (2438.4) UP TO 9' (2743.2) REQUIRE THREE SECURITY ANCHOR IN EACH JAMB. FRAMES FOR PAIRS OF DOORS OVER 7'2" (2184.4) REQUIRE TWO SECURITY ANCHOR IN THE HEAD OF THE FRAME. ONE EACH 12" (304.8) FROM THE CENTERLINE OF THE FRAME HEAD.

ANCHOR PART NUMBER: P0028



Drywall Frame Compression Anchor

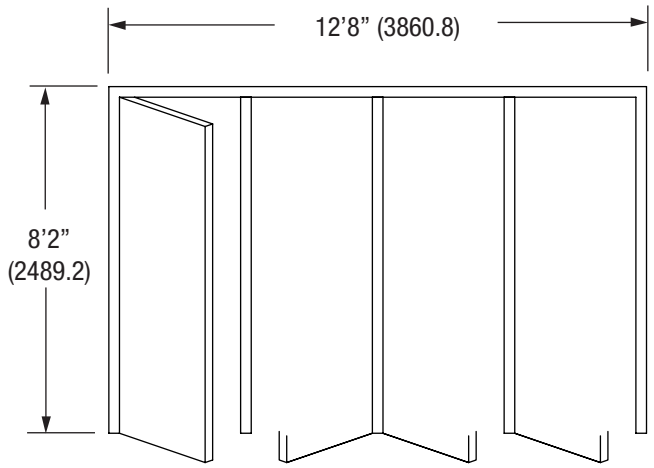
ANCHOR PART NUMBER: P0026



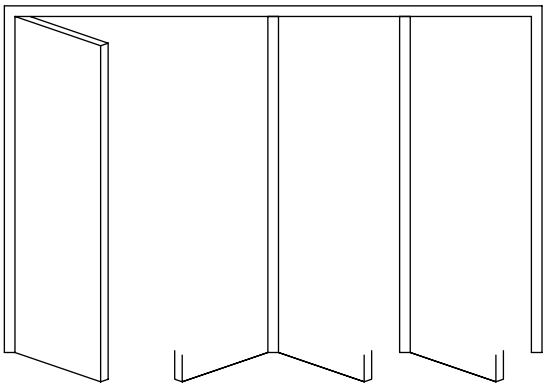
August, 2014

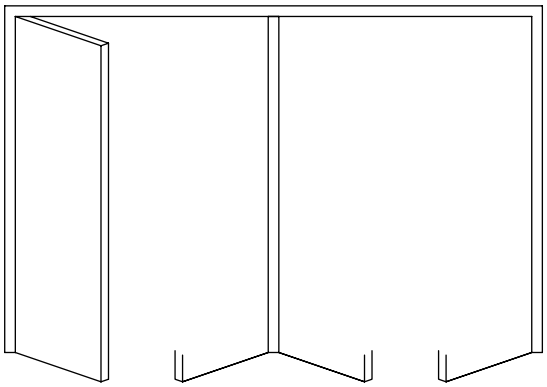
90 MINUTE MAXIMUM FIRE RATING.
ELEVATION/SECTIONS

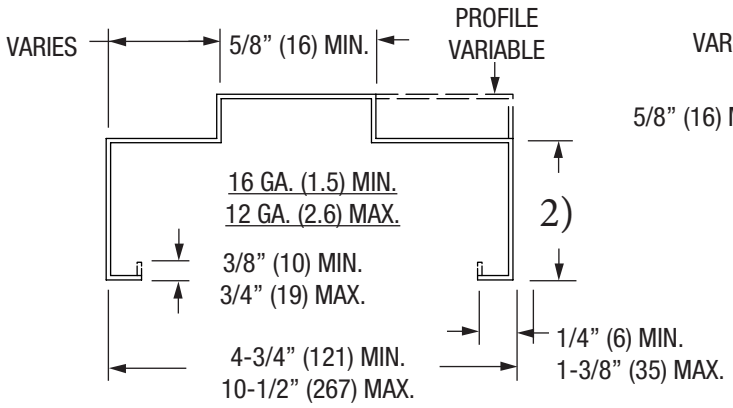
FRAME AND DOOR CONFIGURATION MAY VARY



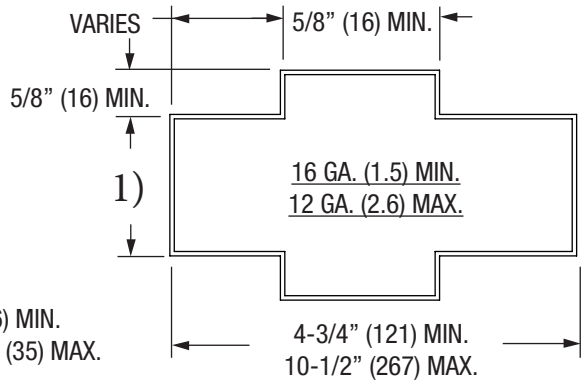
NOTES:
1) MAX. FOUR DOORS IN ANY COMBINATION OF SINGLE SWING, PAIRS, OR DOUBLE EGRESS PAIRS.
2) CURRIES MODEL 707.
3) 3/4” (19) LATCH BOLT THROW IS REQUIRED.
4) CYLINDRICAL, MORTISE, OR FIRE EXIT HARDWARE IS ACCEPTABLE.
5) WELDED CONSTRUCTION ONLY.
6) ANY LISTED WELD IN OR SLIP-IN DRYWALL OR MASONRY ANCHOR MAY BE USED IN THIS FRAME.
7) MAY BE PROVIDED AS A FOUR SIDED FRAME, REFER TO SILL ANCHOR REQUIREMENTS, SILL MUST BUTT BETWEEN VERTICAL FRAME MEMBERS.







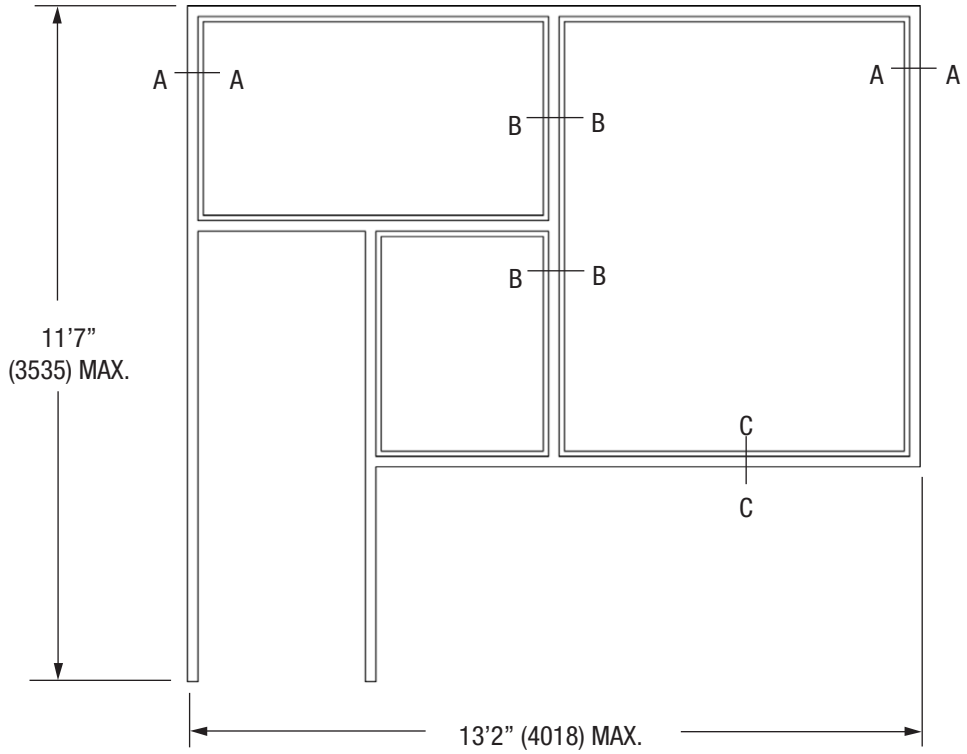
HEAD AND JAMB SECTION



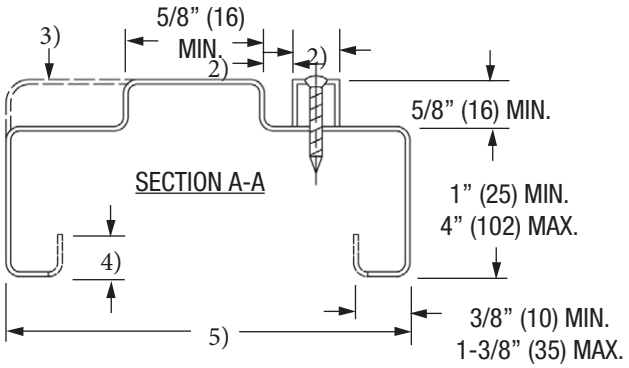
1) 2” (51) MIN.
4” (102) MAX.

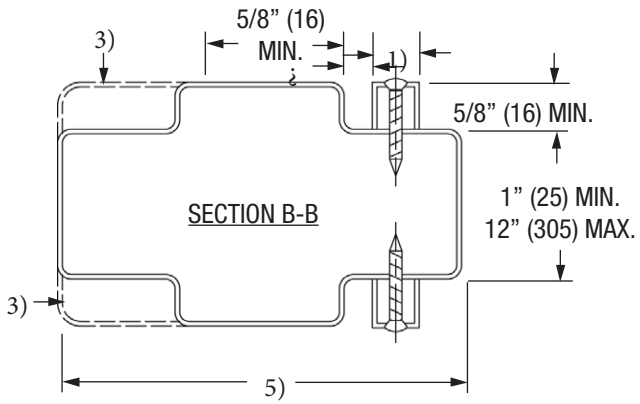
2) 2” (51) MIN.
2” (51) MAX. HEAD
4” (102) MAX. JAMB

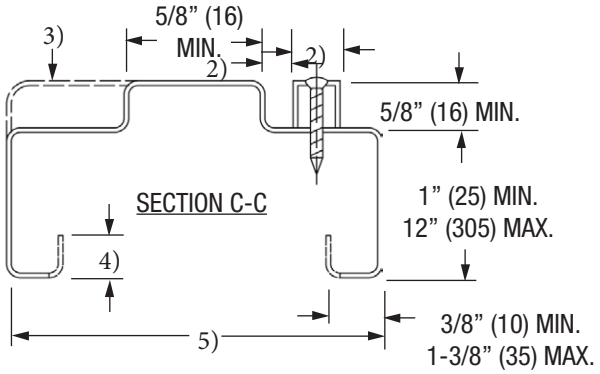
20 MINUTE WITHOUT HOSE STREAM MAXIMUM RATING
ELEVATION DETAILS



GENERAL NOTES:
1) 3/8" (10) MIN. GLASS POCKET
2) 5/8" (16) MIN.
3) VARIABLE PROFILE
4) 3/8" (10) MIN.
   3/4" (19) MAX.
5) 4-1/2" (124) MIN.
   14" (356) MAX.







Transom/Sidelite Frame

Fire Rated Products

August, 2014

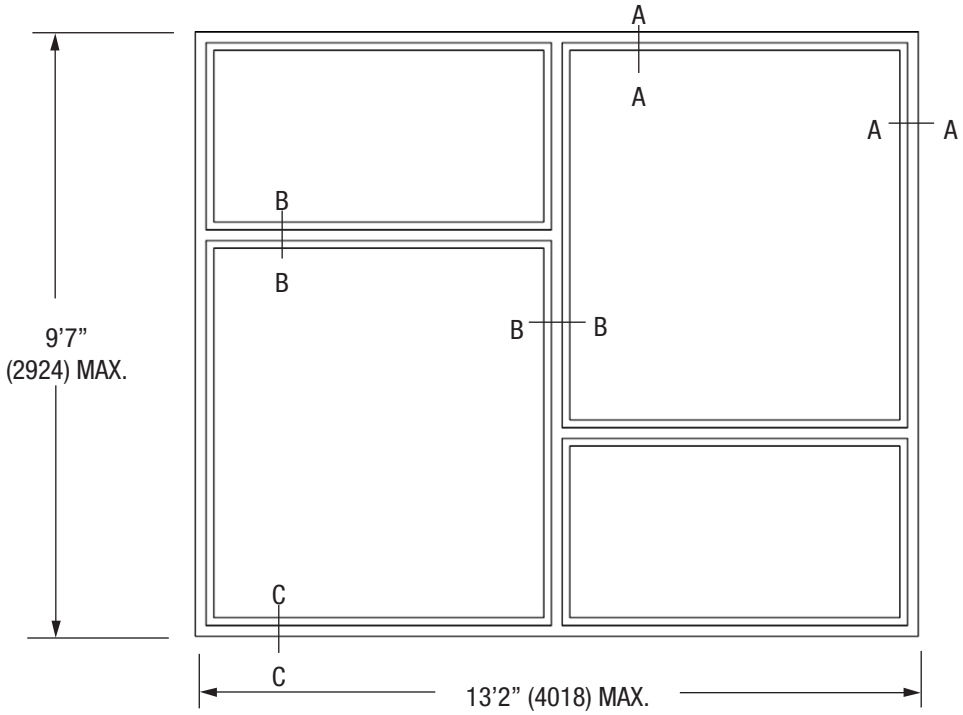
20 MINUTE WITHOUT HOSE STREAM MAXIMUM RATING.	
MAXIMUM FRAME SIZE:	13’2” (4013) W X 11’7” (3531) H
MAXIMUM DOOR SIZE:	SINGLE — 4’0” (1219) W X 10’0” H PAIR — 8’0” (2438) W X 10’0” H
MAX. GLASS AREA: **SEE NOTES 1&2	5/8” (16) H X 5/8” (16) W MIN. STOP; MAX W OR H IS 109-3/4” (2788) NOT TO EXCEED 5268 SQ. IN. (3398703) OF VISIBLE GLASS
WALL CONSTRUCTION:	MASONRY OR DRYWALL
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

NOTE:

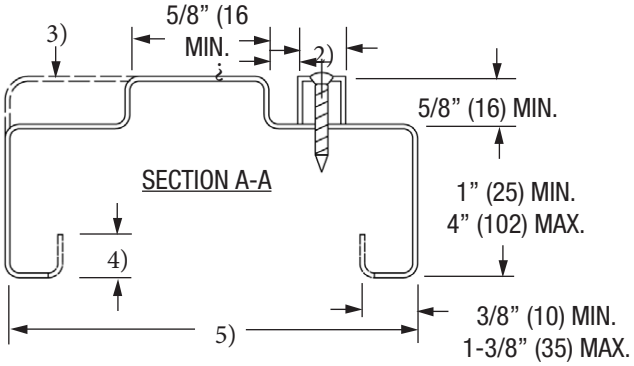
1) IF FIRE WINDOW FRAME DOES NOT EXTEND TO THE FLOOR AND IS SUSPENDED OVER A DRYWALL SILL, A SUITABLE ANCHOR MUST BE USED IN THE SILL MEMBER FOR EACH 30” (762) OF LENGTH OR FRACTION THEREOF.

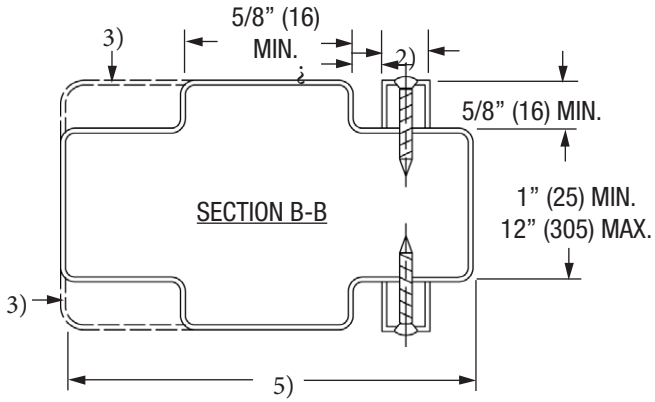
2) THE CONFIGURATION OF TRANSOM AND LIGHT AREAS MAY VARY! ONLY LISTED GLAZING MATERIALS MAY BE USED IN THIS FRAME. SEE FRAME GLAZING CHARTS FOR ADDITIONAL GLAZING OPTIONS.

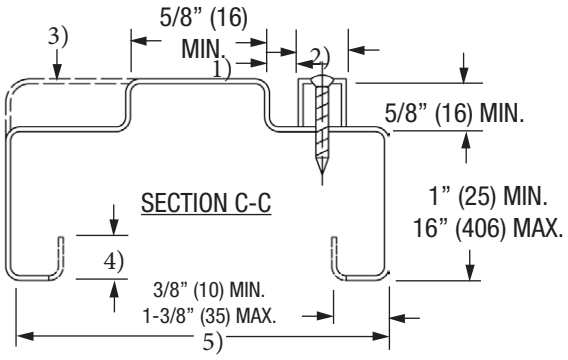
20 MINUTE WITHOUT HOSE STREAM MAXIMUM RATING
ELEVATION/SECTIONS DETAIL



GENERAL NOTES:
1) 3/8" (10) MIN. GLASS POCKET
2) 5/8" (16) MIN.
3) VARIABLE PROFILE
4) 3/8" (10) MIN.
   3/4" (19) MAX.
5) 4-1/2" (124) MIN.
   14" (356) MAX.







August, 2014

20 MINUTE WITHOUT HOSE STREAM MAXIMUM RATING.	
MAXIMUM FRAME SIZE:	13'2" (4013) W X 9'7" (2924) H
MAXIMUM GLASS AREAS	5/8" (16) H X 5/8" (16) W MIN. STOP; MAX. W OR H IS 109-3/4" (2788); NOT TO EXCEED 5268 SQ. IN. (3398703) VISIBLE GLASS SEE FRAME GLAZING CHARTS FOR ADDITIONAL GLAZING OPTIONS.
WALL CONSTRUCTION:	MASONRY OR DRYWALL
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

NOTE:
1) IF THE FIRE WINDOW FRAME DOES NOT EXTEND TO THE FLOOR AND IS SUSPENDED OVER A DRYWALL SILL, A SUITABLE ANCHOR MUST BE USED IN THE SILL MEMBER FOR EACH 30" (762) OF LENGTH OR FRACTION THEREOF.

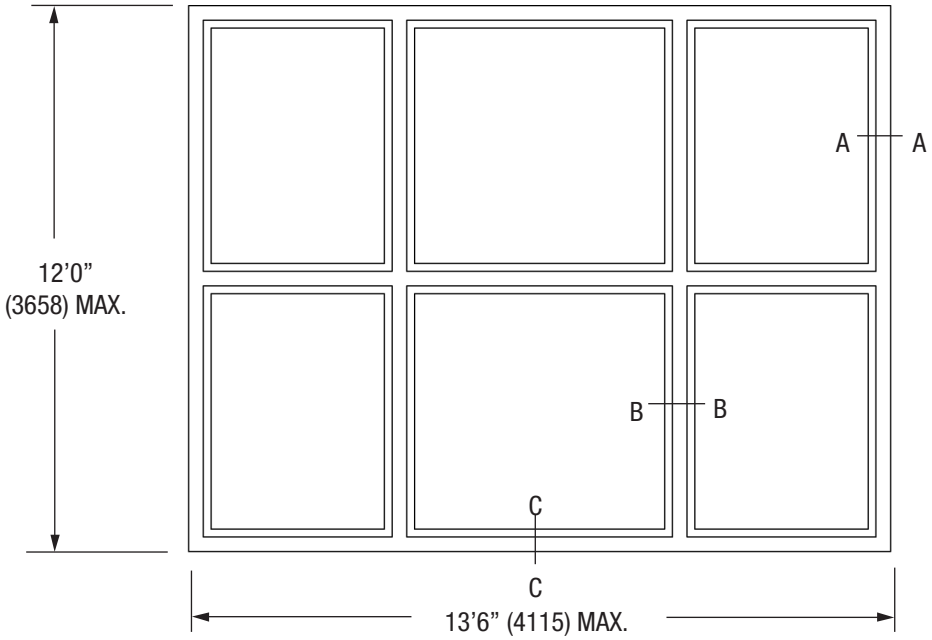
2) THE CONFIGURATION OF GLASS LIGHT AREAS MAY VARY. ONLY LISTED GLAZING MATERIALS MAY BE USED IN THIS FRAME.

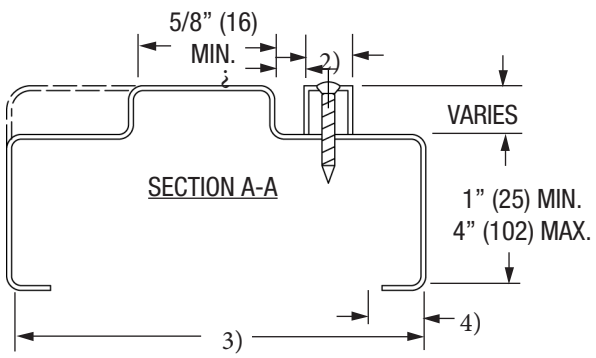
3) THE AUTHORITY HAVING JURISDICTION SHOULD REVIEW THE USE OF A FIRE WINDOW FRAME WITH A 20 MINUTE - WITHOUT HOSE STREAM RATING.

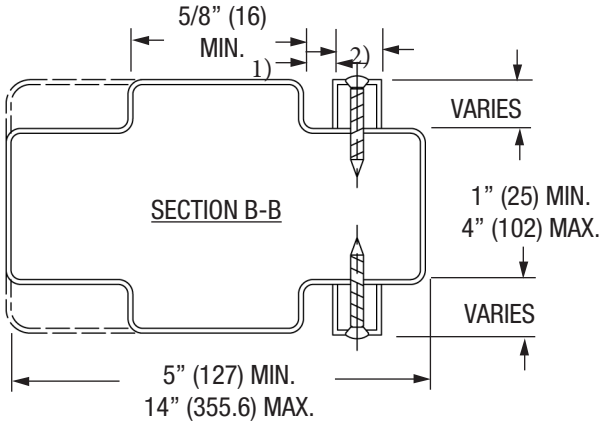
4) GLASS STOP SCREW SPACING #8 OVAL HEAD SHEET METAL SCREW 2" FROM EACH END AND 12" (304.8) ON CENTER MAX.

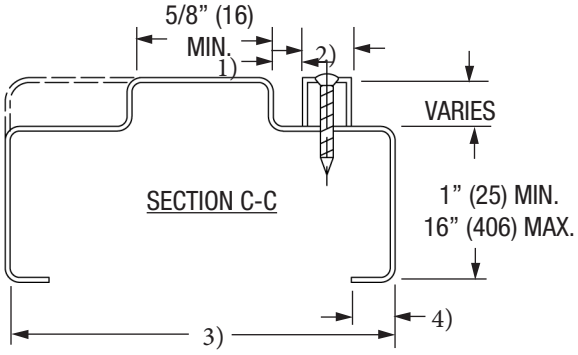
5) GLASS STOP EXTENDER MAY BE USED WITH THIS FRAME.

90 MINUTE MAXIMUM RATING
IN MASONRY WALLS ONLY
ELEVATION/SECTIONS DETAIL









GENERAL NOTES:
1) 3/8" (10) MIN. GLASS POCKET
2) 5/8" (16) MIN.
3) 5" (127) MIN.
14" (356) MAX.
4) 3/8" (10) MIN.
1-3/8" (35) MAX.

Fire Window Frame (Masonry Walls Only)

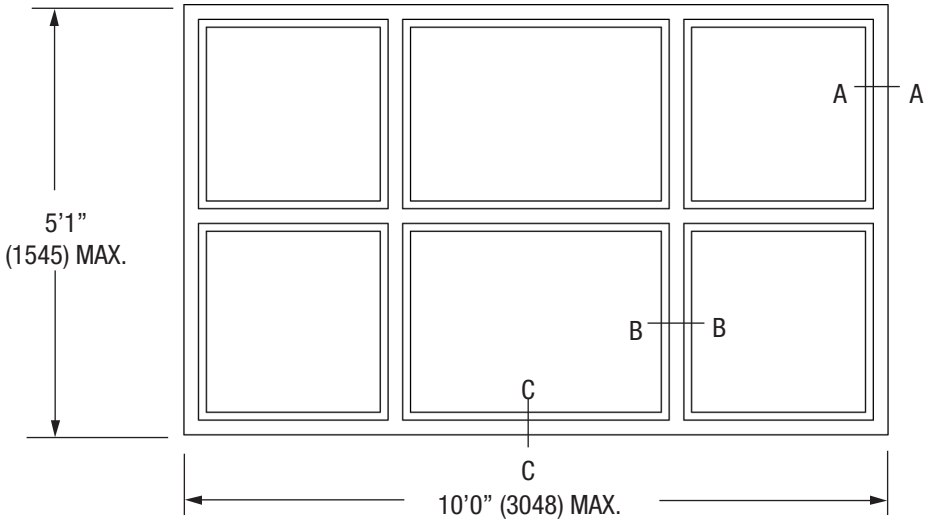
Fire Rated Products

August, 2014

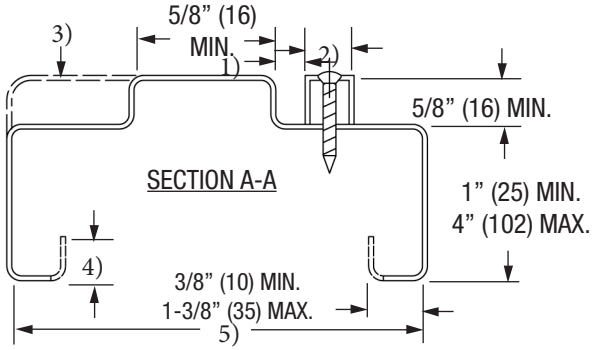
90 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	13'6" (4115) W X 12'0" (3658) H
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR GLASS OPTIONS.
WALL CONSTRUCTION:	MASONRY OR DRYWALL
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

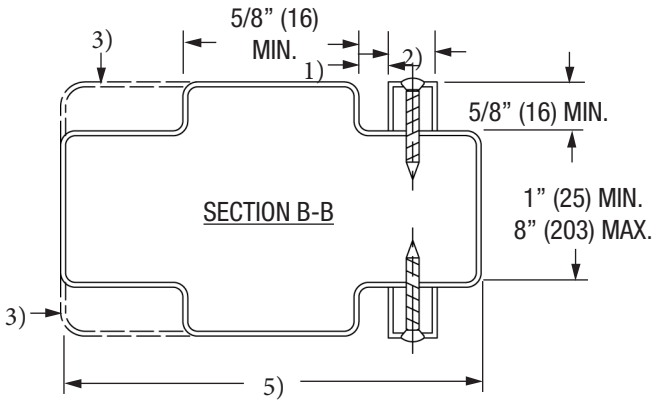
NOTE:
1) GLASS STOP SCREW SPACING; NO. 8 OVAL HEAD SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (304.8) ON CENTER
2) THE CONFIGURATION OF GLASS LIGHT AREAS MAY VARY.
3) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
4) GLASS STOP EXTENDER MAY BE USED WITH THIS FRAME.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

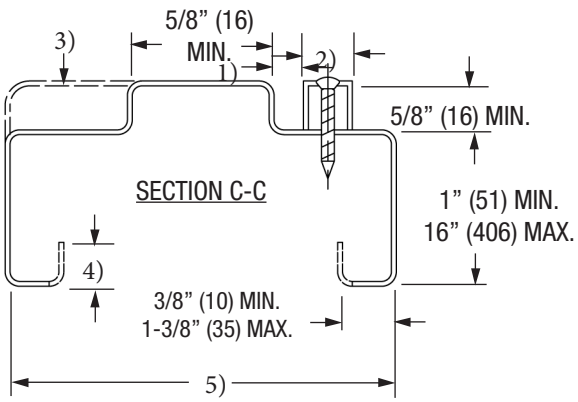
90 MINUTE MAXIMUM RATING
DRYWALL WALLS ELEVATION/SECTIONS DETAIL



GENERAL NOTES:
1) 3/8" (10) MIN. GLASS POCKET
2) 5/8" (16) MIN.
3) VARIABLE PROFILE
4) 3/8" (10) MIN.
3/4" (19) MAX.
5) 4-1/2" (114) MIN.
14" (356) MAX.







Fire Window Frame

Fire Rated Products

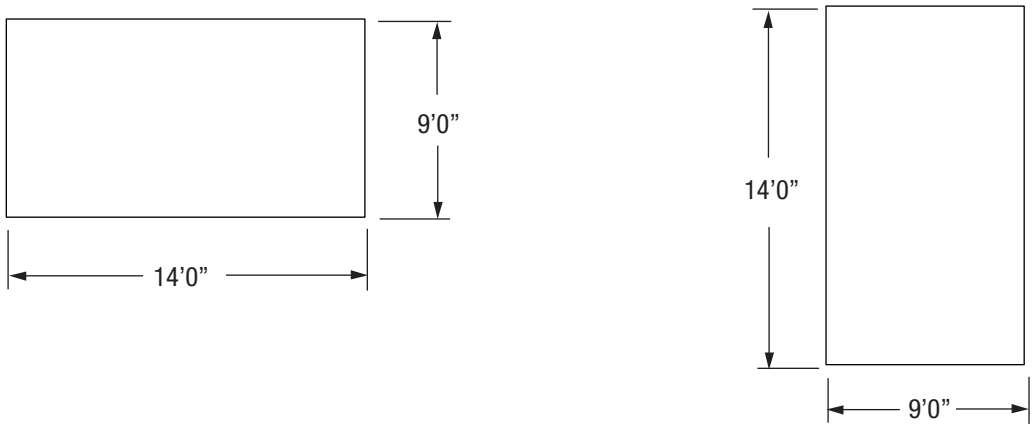
October, 2008

90 MINUTE MAXIMUM RATING	
OVERALL FRAME SIZE:	10'0" (3048) W X 5'1" (1549) H; FOR USE IN DRYWALL WALLS.
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR GLASS OPTIONS.
WALL CONSTRUCTION:	DRYWALL
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL ANCHOR

NOTE:
1) IF FIRE WINDOW FRAME IS INSTALLED OVER DRYWALL SILL, A SUITABLE ANCHOR MUST BE USED IN THE SILL MEMBER FOR EACH 30" (762) OF SILL LENGTH.
2) STOP HEIGHT EXTENDER MAY BE USED ON THESE FRAMES.
3) GLASS STOP SCREW SPACING: NO. 8 OVAL HEAD SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (304.8) ON CENTER.
4) THE CONFIGURATION OF GLASS LIGHT AREAS MAY VARY.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

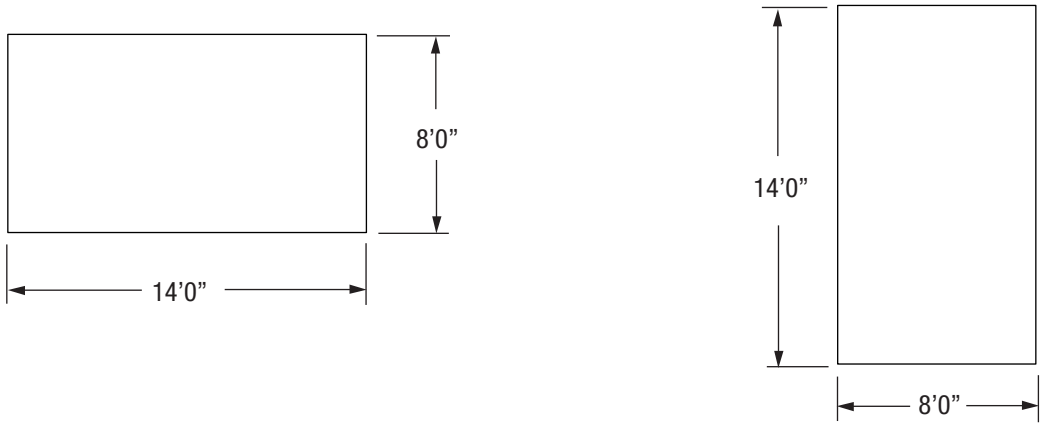
FRAMES WELDED AT CURRIES:

PROVIDE FIELD SPLICES FOR FRAMES THAT EXCEED SIZE SHOWN.



FIELD SPLICING BRACKETS ON WELDED FRAMES WILL BE PROVIDED.
SEE NEXT PAGE FOR SPLICE EXAMPLES.

FRAMES WELDED AT SERVICE CENTERS:



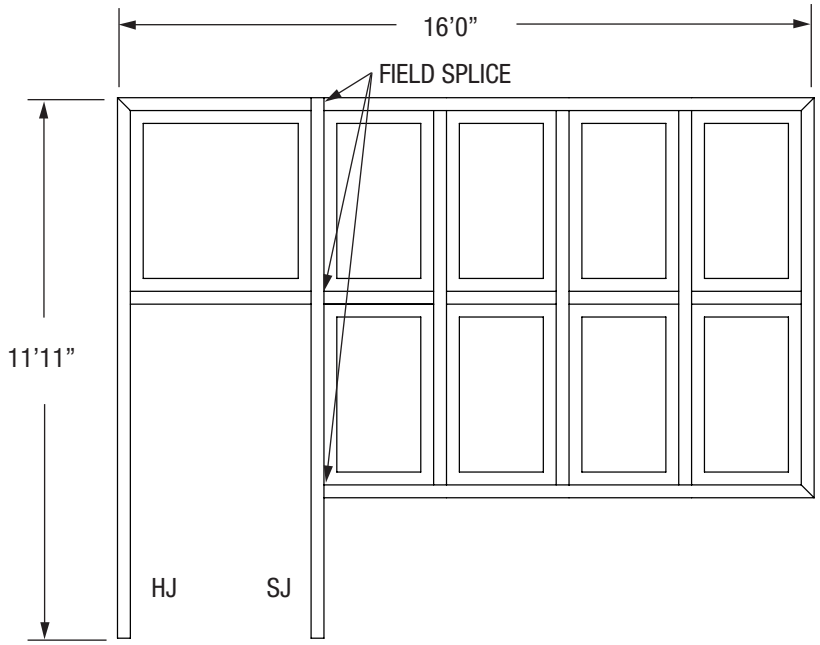
FIELD SPLICING BRACKETS ON WELDED FRAMES WILL BE PROVIDED.
SEE NEXT PAGE FOR SPLICE EXAMPLES.

Field Splice Frame

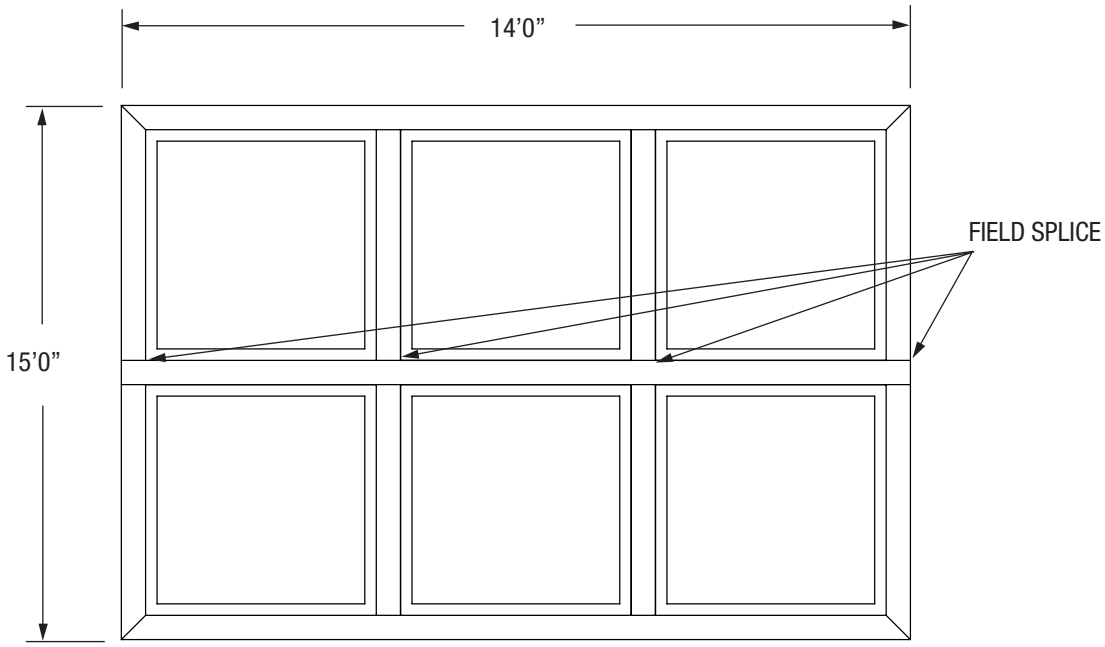
Fire Rated Products

April, 2002

FRAMES WELDED AT CURRIES:

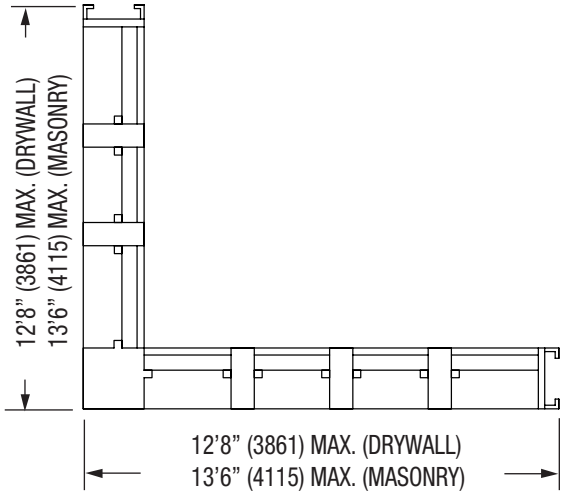


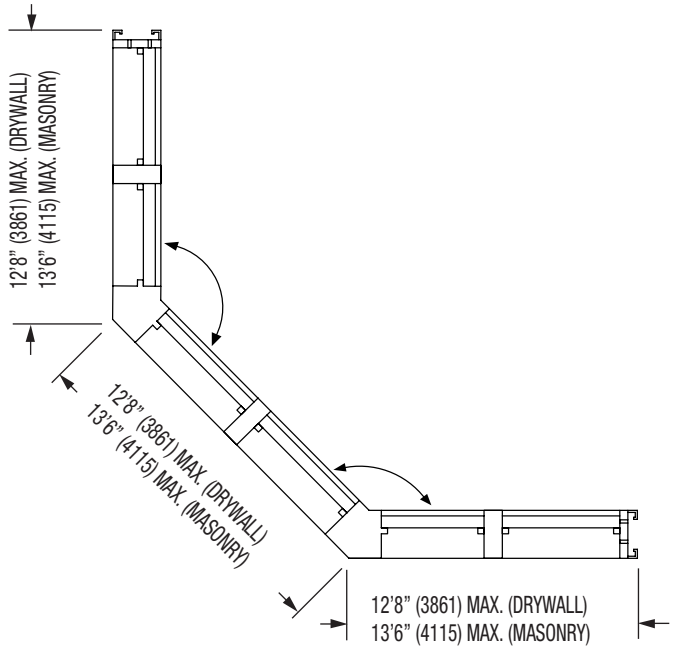
FIELD SPLICE SLEEVES, WILL BE APPLIED TO STRIKE JAMB, ONE FOR EACH ATTACHING HORIZONTAL RAIL.

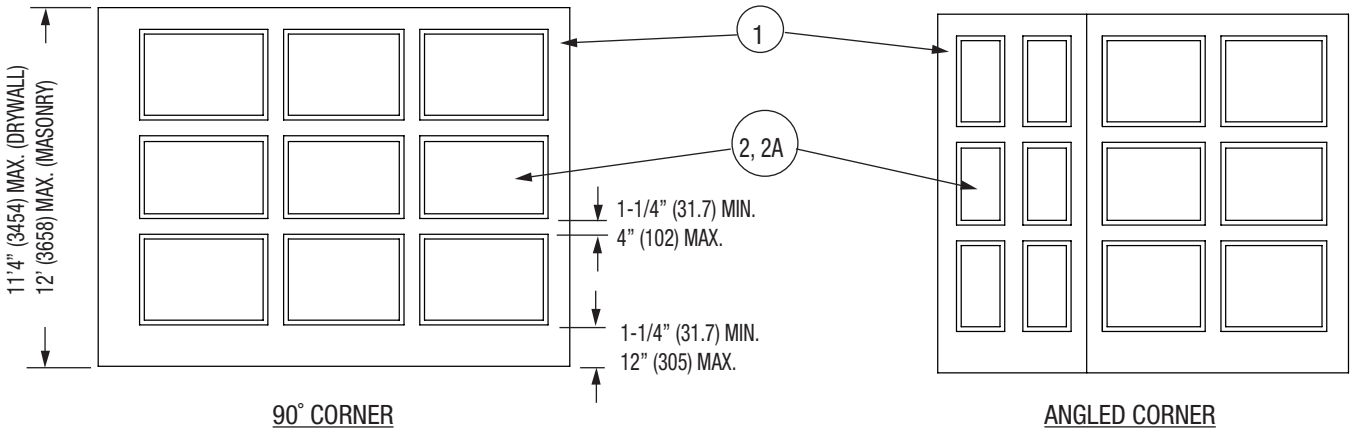


FIELD SPLICE SLEEVES, WILL BE APPLIED TO HORIZONTAL MULLION, ONE FOR EACH ATTACHING VERTICAL RAIL.

ASSEMBLY NO. WA-3-01
FIRE RATINGS - 60 MINUTE
MEETS THE CRITERIA OF STANDARD UL 9 (2000) AND UBC STANDARD 7-4, (1997)
U.L. RATED ONLY







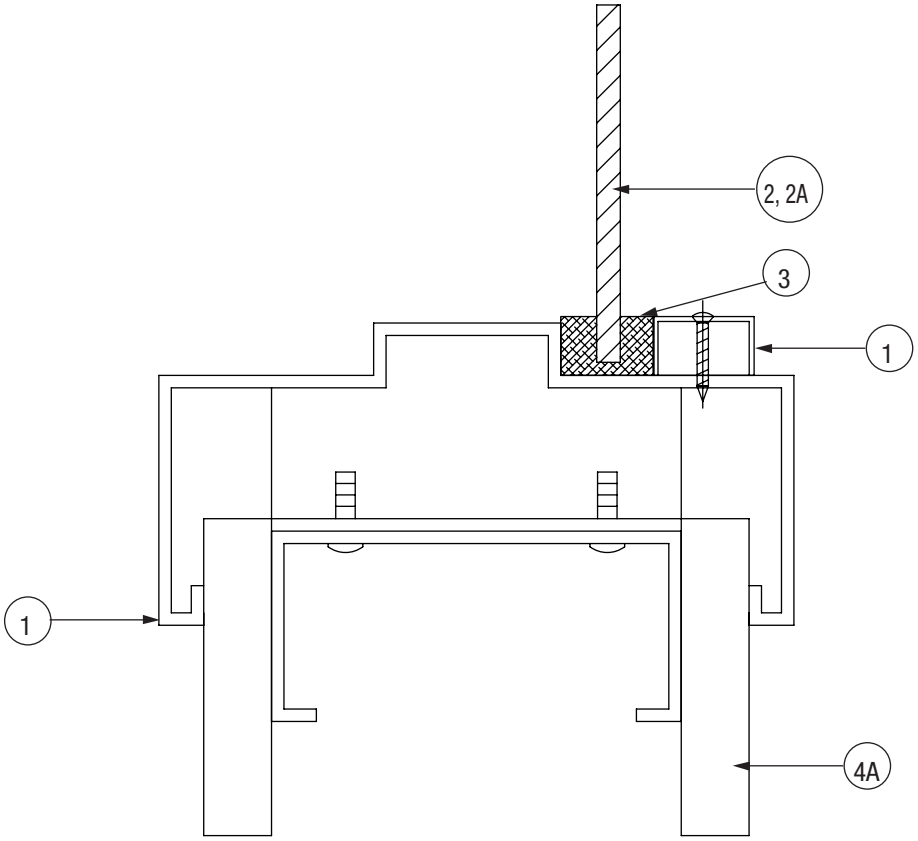
90˚ CORNER

ANGLED CORNER

Fire Window Frame Bow Window

Fire Rated Products

May, 2015



CROSS SECTION

1. **FIRE WINDOW FRAME +** THE FRAME IS TO BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDED INSTALLATION PRACTICES PRESENTED IN NFPA 80, “FIRE-RATED HOLLOW METAL DOORS AND WINDOWS,” AND NAAMM STANDARD 850-00, “FIRE-RATED HOLLOW METAL DOORS AND FRAMES.” THE WINDOW FRAME MAY INCLUDE A DOOR FRAME THAT IS PART OF A FIRE RATED DOOR ASSEMBLY HAVING A MIN. 60 MINUTE RATING. THE BASIC FRAME CONSTRUCTION AND LIMITATIONS ARE AS FOLLOWS:

   A) OPENING SIZE-MAXIMUM WALL OPENING SIZE SHALL BE 152 IN. FOR GYPSUM WALLBOARD CONSTRUCTION AND 162 IN. FOR MASONRY CONSTRUCTION. FRAME PROJECTION FROM FACE OF WALL SHALL NOT EXCEED THE MAX. ALLOWABLE OPENING WIDTH.

   B) MULLION AND JAMB FACE DIMENSIONS 1-1/4 MIN. – 4 IN. MAX. SILL FACE DIMENSION 1-1/4 IN. MIN. - 12 IN. MAX.

   C) THE FRAME IS TO BE PROVIDED WITH ANCHORS SUITABLE FOR THE WALL CONDITIONS IN ACCORDANCE WITH NAAMM STANDARD 850-00.

   D) THE INSIDE ANGLE BETWEEN FRAME SEGMENTS MAY VARY. INSIDE ANGLES OF 90˚ AND 135˚ ARE SHOWN IN THE ILL. FRAME CURVATURE TO BE CONTINUOUS OR SEGMENTED.

   E) SPLICES - THE FRAME MAY BE PROVIDED WITH SPLICES FOR SHIPMENT PURPOSES.

2) **GLAZING MATERIALS*** 1/4 IN. THICK WIRED GLASS. SEE GLAZING MATERIALS CATEGORY (KCMZ) FOR NAMES OF CLASSIFIED COMPANIES AND THE MAXIMUM SIZE OF GLAZING MATERIAL. GLAZING MATERIAL SHALL HAVE A MINIMUM RATING OF 3/4 HR.

2A) **GLAZING MATERIALS (ALTERNATE)*** AS AN ALTERNATE TO WIRED GLASS, THE FOLLOWING GLAZING MATERIALS MAY BE USED. SEE GLAZING MATERIALS (KCMZ) FOR THE MAXIMUM SIZE OF GLAZING MATERIAL. GLAZING MATERIAL SHALL HAVE A MINIMUM RATING OF 3/4 HR.
NIPPON ELECTRIC GLASS CO LTD - NON-WIRED 3/16 IN. FIRELITE, FIRELITE NT, 5/16 IN. THICK FIRELITE PLUS, FIRELITE IGU
MESTEK CO.
ANEMOSTAT PRODUCTS - NON-WIRED 3/16 IN. FIRELITE, FIRELITE NT, 5/16 IN. THICK FIRELITE PLUS, FIRELITE IGU
TECHNICAL GLASS PRODUCTS - NON WIRED 3/16 IN. FIRELITE, FIRELITE NT, 5/16 IN. THICK FIRELITE PLUS, FIRELITE IGU

3) **GLAZING COMPOUND*** GLAZING COMPOUND SHALL COMPLETELY FILL THE GLAZING POCKET WITH A MIN. THICKNESS OF 1/16 IN. BETWEEN THE GLAZING AND THE FRAME. SEE GLAZING MATERIALS CATEGORY (KCMZ) FOR NAMES OF GLAZING COMPOUNDS TO BE USED WITH GLAZING MATERIALS (ITEM 2).

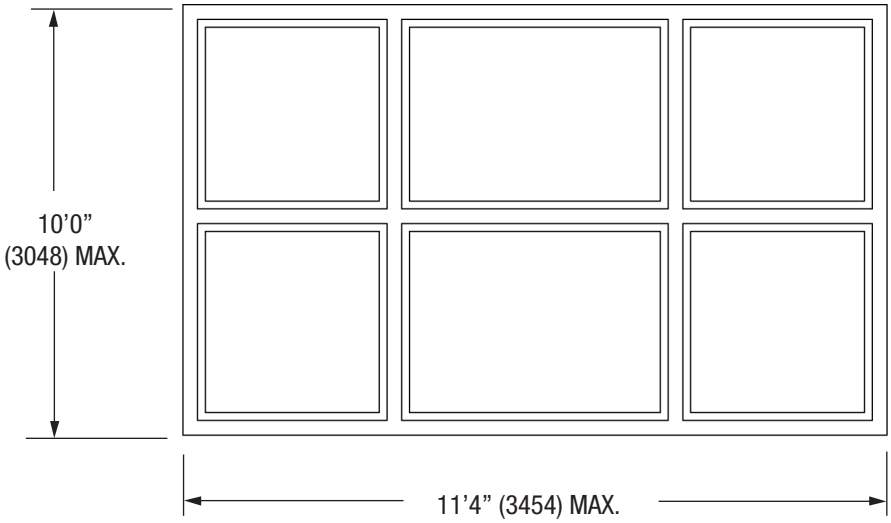
4) **WALL CONSTRUCTION** MASONRY OR DRYWALL CONSTRUCTION (STEEL STUD GYPSUM WALLBOARD WALL SHOWN).

A) **GYPSUM WALLBOARD** THE ONE HOUR MINIMUM FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY. THE FIRE WINDOW FRAME IS ANCHORED TO THE STEEL STUDS OR WOOD STUDS USING THE APPROPRIATE ANCHORS SHIPPED WITH THE FRAME. WHERE FRAME IS ADJACENT TO GYPSUM WALL BOARD ASSEMBLY, THE OPENING IS TO BE FRAMED WITH DOUBLE STUDS. GYPSUM WALLBOARD TO BE INSERTED INTO THE FRAME THROAT 1/2 IN. MINIMUM.

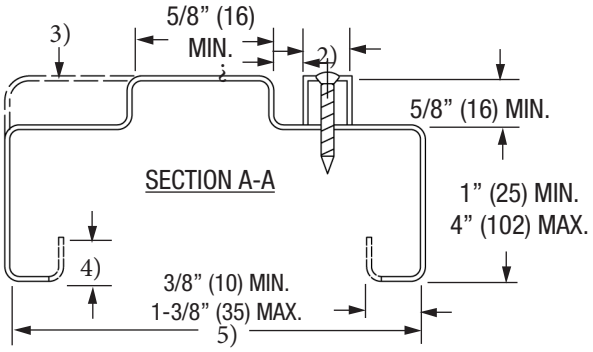
B) **MASONRY** FRAME TO BE INSTALLED INTO MASONRY CONSTRUCTION (BRICK CONCRETE BLOCK) WITH A ONE-HOUR MINIMUM FIRE RATING USING MASONRY TYPE ANCHORS.

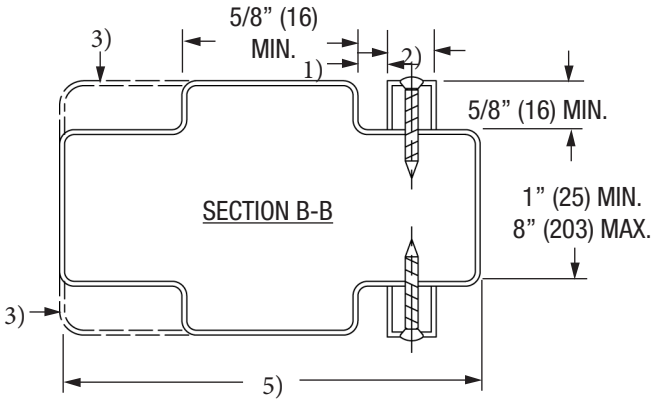
+BEARING THE UL LISTING MARK.
*BEARING THE UL CLASSIFICATION MARK.

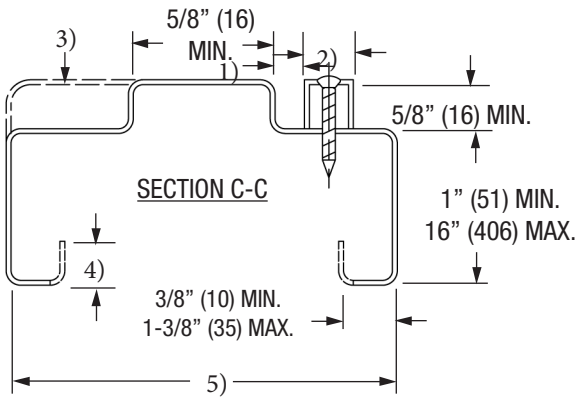
90 MINUTE MAXIMUM RATING
DRYWALL WALLS WITH NONCOMBUSTIBLE SILL
ELEVATION/SECTIONS DETAIL



GENERAL NOTES:
1) 3/8" (10) MIN. GLASS POCKET
2) 5/8" (16) MIN.
3) VARIABLE PROFILE
4) 3/8" (10) MIN.
3/4" (19) MAX.
5) 4-1/2" (114) MIN.
14" (356) MAX.







CURRIES
ASSA ABLOY

Fire Window Frame (Drywall Walls with Non Combustible Sill)

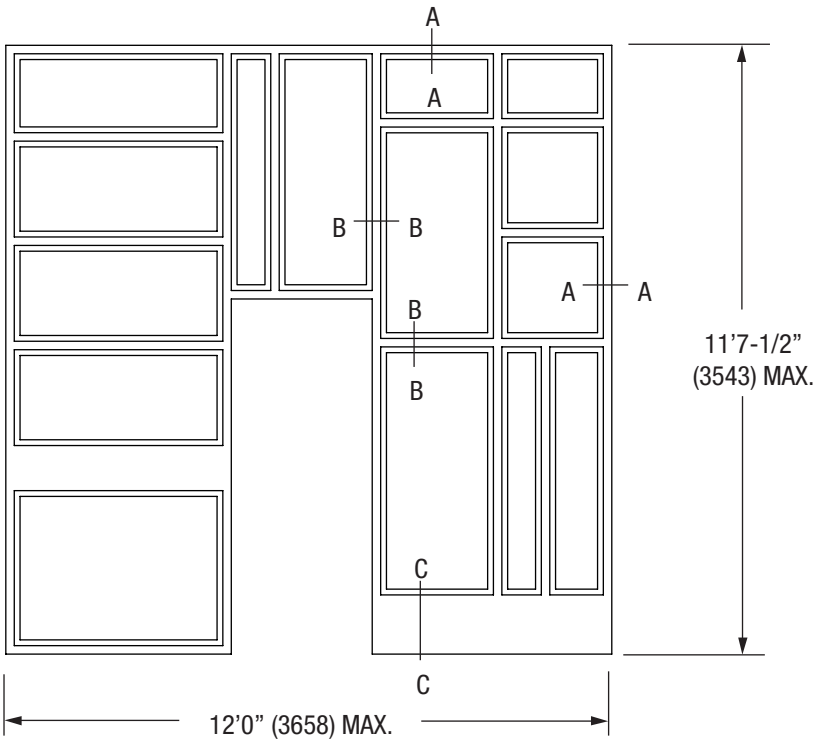
Fire Rated Products

August, 2014

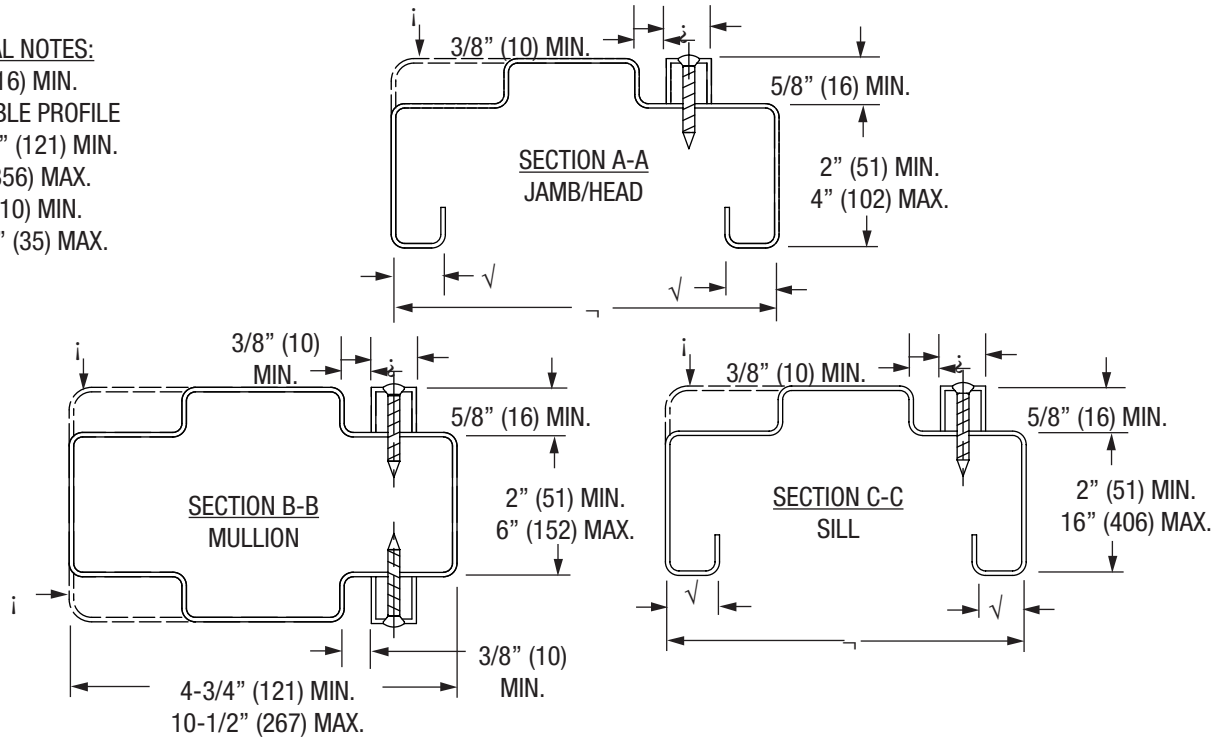
90 MINUTE MAXIMUM RATING	
OVERALL FRAME SIZE:	11'4" (3454) W X 10'0" (3048) H; FOR USE IN DRYWALL WALLS WITH A NON-COMBUSTIBLE MASONRY OR CONCRETE SILL.
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR OPTIONS.
WALL CONSTRUCTION:	DRYWALL WITH NON-COMBUSTIBLE SILL
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

NOTE:
1) GLASS STOP SCREW SPACING; NO. 8 OVAL HEAD SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (304.8) ON CENTER
2) THE CONFIGURATION OF GLASS LIGHT AREAS MAY VARY.
3) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
4) GLASS STOP EXTENDERS MAY BE USED WITH THIS FRAME.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

45 MINUTE MAXIMUM RATING IN DRYWALL WALLS
ELEVATION DETAILS



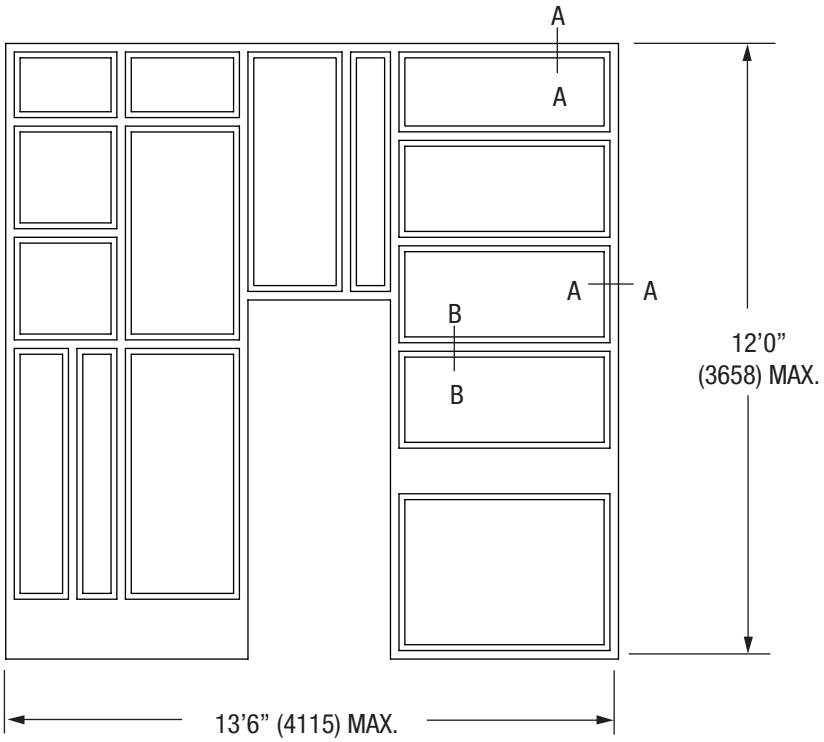
GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.
√ 3/8" (10) MIN.
1-3/8" (35) MAX.



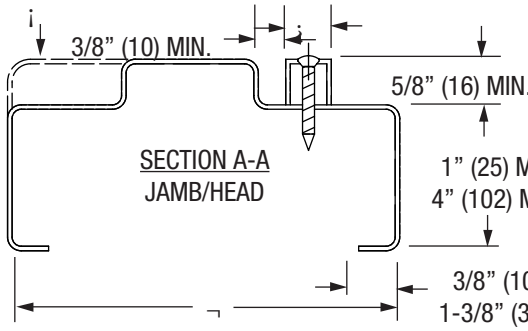
45 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	12’0” (3658) W X 11’7-1/2” (3543) H.
MAXIMUM DOOR SIZE:	SINGLE — 4’0” (1219) X 10’0” (3048) PAIR — 8’0” (2438) X 10’0”(3048)
MAX. GLASS AREA:	FOR LISTED 1/4” WIRED GLASS 5/8” (16) H X 5/8” (16) W MINIMUM STOP; MAXIMUM W OR H SHALL BE 54” (1372) NOT TO EXCEED 1296 (836127) SQUARE INCHES OF VISIBLE GLASS. MUST USE LISTED GLAZING COMPOUND OR 100% SILICON. FOR PEMKO FG3000 WITH 1/4” WIRED PILKINGTON GLASS: 5/8” (16) H 5/8” (16) W MINIMUM STOP; MAXIMUM W OR H SHALL BE 106” (2692) NOT TO EXCEED 4704 SQ. IN. SEE FRAME GLAZING CHARTS FOR ADDITIONAL GLAZING OPTIONS.
WALL CONSTRUCTION:	DRYWALL ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

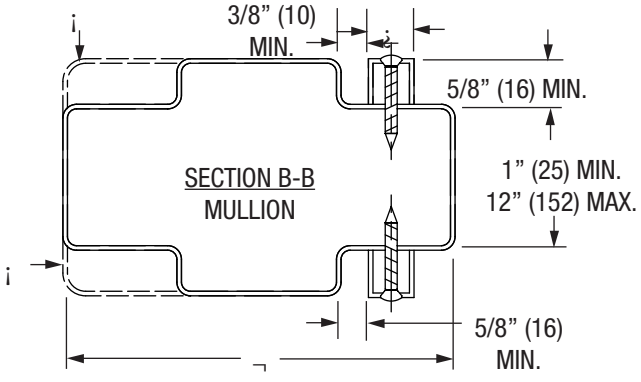
NOTE:
1) THE CONFIGURATION OF THE TRANSOM AND SIDE AREAS MAY VARY.
2) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
3) GLASS STOP SCREW SPACING IS 2” (51) FROM EACH END AND 12” (304.8) ON CENTER.

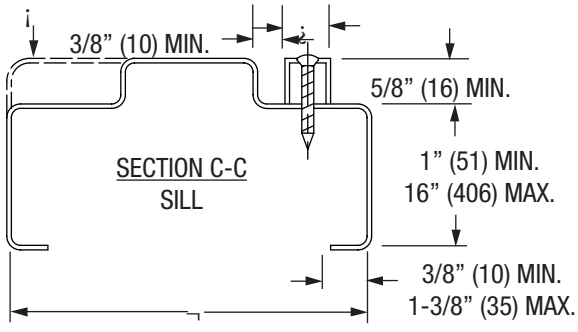
45 MINUTE MAXIMUM RATING IN MASONRY WALLS
ELEVATION DETAILS



GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.







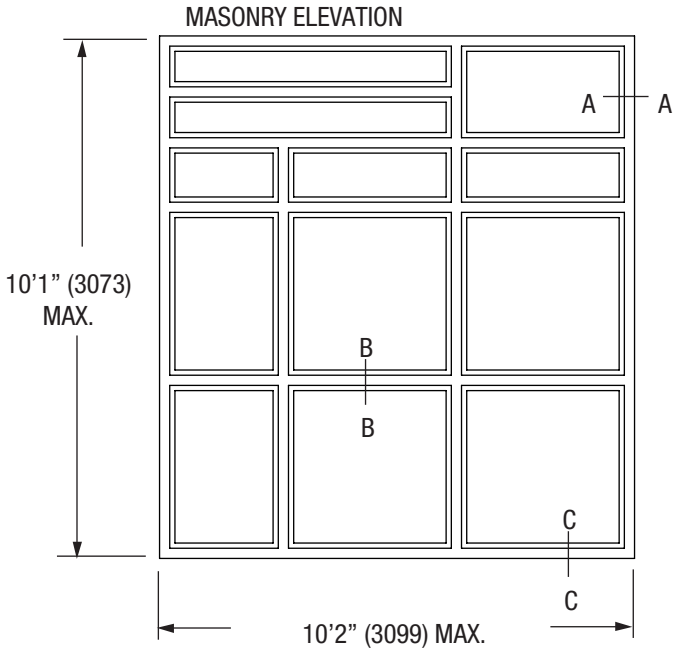
45 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	13’6” (4115) W X 12’0” (3658) H
MAXIMUM DOOR SIZE:	SINGLE — 4’0” (1219) X 10’0” (3048) PAIR — 8’0” (2438) X 10’0”(3048)
MAX. GLASS AREA:	FOR LISTED 1/4” WIRED GLASS 5/8” (16) H X 5/8” (16) W MINIMUM STOP; MAXIMUM W OR H SHALL BE 54” (1372) NOT TO EXCEED 1296 (836127) SQUARE INCHES OF VISIBLE GLASS. MUST USE LISTED GLAZING COMPOUND OR 100% SILICON. FOR PEMKO FG3000 WITH 1/4” WIRED PILKINGTON GLASS: 5/8” (16) H 5/8” (16) W MINIMUM STOP; MAXIMUM W OR H SHALL BE 106” (2692) NOT TO EXCEED 4704 SQ. IN. SEE FRAME GLAZING CHARTS FOR ADDITIONAL GLAZING OPTIONS.
WALL CONSTRUCTION:	MASONRY ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

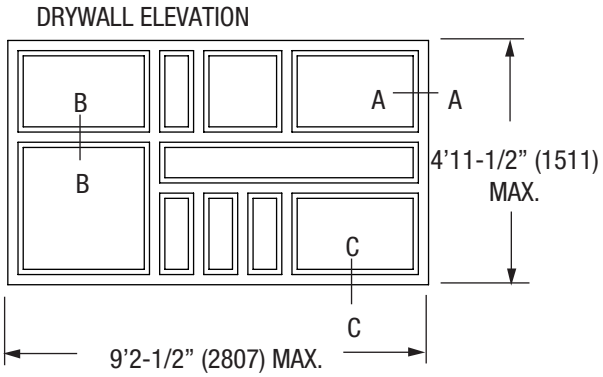
NOTE:
1) THE CONFIGURATION OF THE TRANSOM AND SIDE AREAS MAY VARY.
2) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
3) GLASS STOP SCREW SPACING IS 2” (51) FROM EACH END AND 12” (304.8) ON CENTER.

CURRIES
ASSA ABLOY

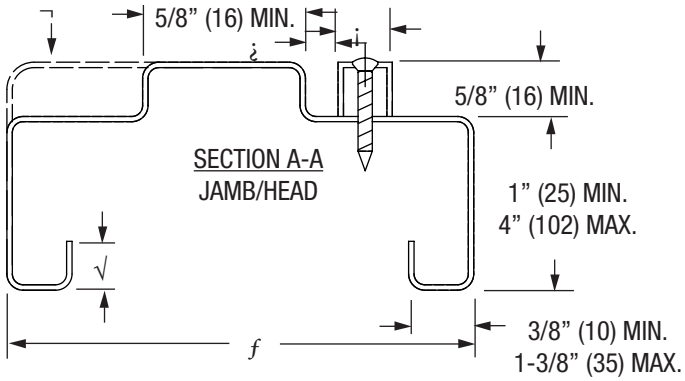
August, 2014

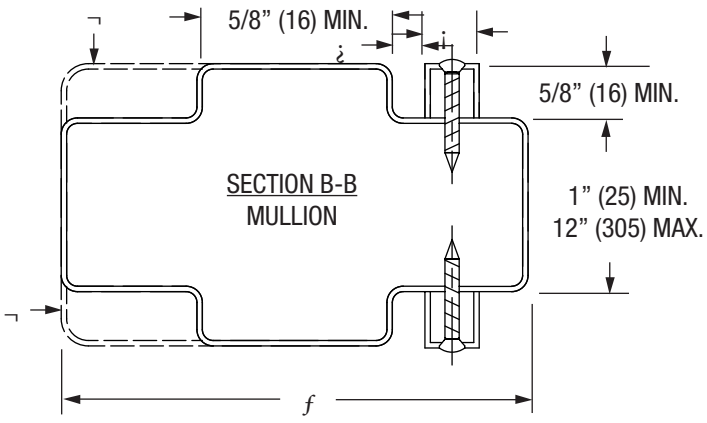
60 MINUTE MAXIMUM RATING
ELEVATION/SECTION DETAILS

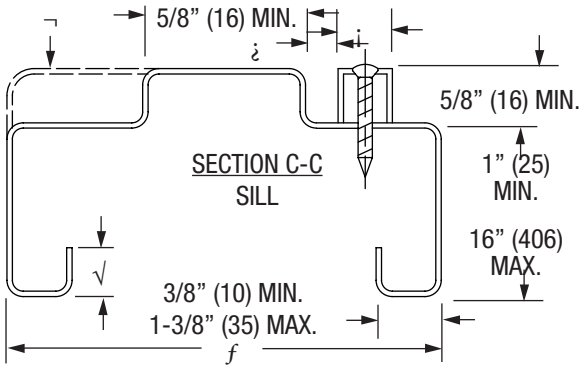




GENERAL NOTES:
¿ 3/8" (10) MIN. GLASS POCKET
¡ 5/8" (16) MIN.
¬ VARIABLE PROFILE
√ 3/8" (10) MIN.
3/4" (19) MAX.
ƒ 4-7/8" (124) MIN.
14" (356) MAX.





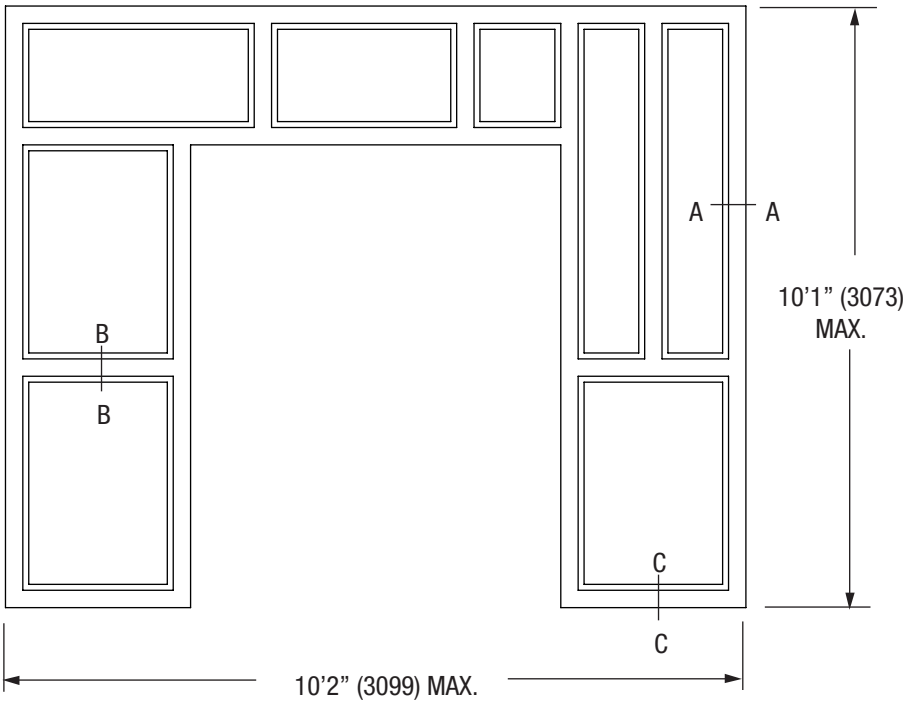


60 MINUTE MAXIMUM RATING	
OVERALL FRAME SIZE:	A) 10'2" (3099) W X 10'1" (3073) H; FOR USE IN EITHER MASONRY WALLS OR DRYWALL WALLS WITH A NON-COMBUSTIBLE SILL. B) 9'2-1/2" (2807) W X 4'11-1/2" (1511) H; FOR USE IN EITHER MASONRY WALLS OR DRYWALL WALLS WITH A DRYWALL SILL.
MAX. GLASS AREA:	5/8" (16) H X 5/8" (16) W GLASS STOP; MAX. WIDTH: 54" (1372); MAX. HEIGHT: 77-3/4" (1975) 2721 SQ. INCHES (1755480) OF VISIBLE GLASS. - GLAZING MATERIAL: 3/16" (5) THICK "FIRELITE" OR 5/16" (8) THICK "FIRELITE PLUS" GLASS ONLY! - GLAZING COMPOUNDS: 100% SILICON, DAP "33", OR METACAULK 990.
WALL CONSTRUCTION:	DRYWALL OR MASONRY
FRAME CONSTRUCTION:	WELDED JOINTS ONLY!
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 14 GA. (1.9) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

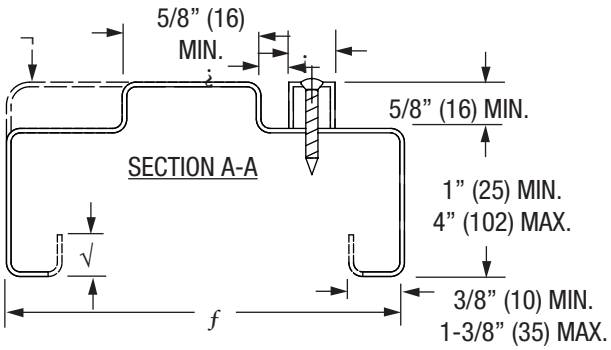
NOTE: 1) IF FIRE WINDOW FRAME IS INSTALLED OVER DRYWALL SILL, A SUITABLE ANCHOR MUST BE USED IN THE SILL MEMBER FOR EACH 30" (762) OF SILL LENGTH OR FRACTION THEREOF.

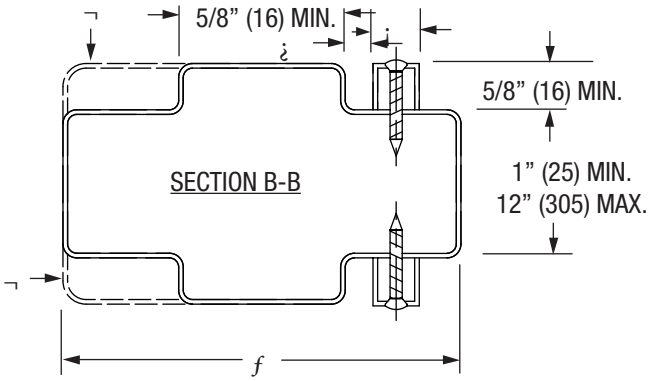
2) GLASS STOP SCREW SPACING: NO. 8 SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (304.8) ON CENTER.

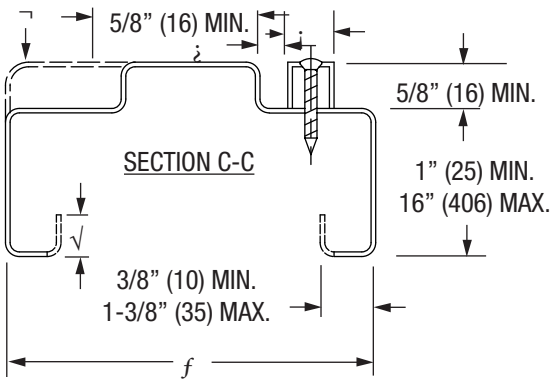
60 MINUTE MAXIMUM RATING
ELEVATION DETAILS



GENERAL NOTES:
¿ 3/8" (10) MIN. GLASS POCKET
¡ 5/8" (16) MIN.
¬ VARIABLE PROFILE
√ 3/8" (10) MIN.
3/4" (19) MAX.
ƒ 4-7/8" (124) MIN.
14" (356) MAX.





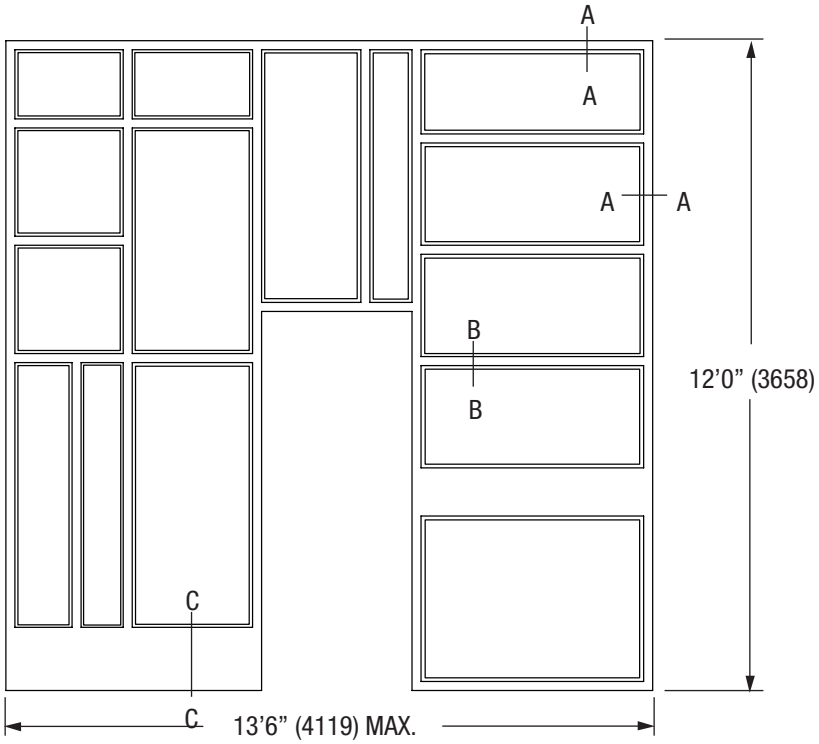


60 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	10’2” (3099) W X 10’1” (3073) H
MAXIMUM DOOR SIZE:	SINGLE — 4’0” (1219) W X 10’0” (3048) H PAIR — 8’0” (2438) W X 10’0” (3048) H
MAX. GLASS AREA: **SEE NOTES 1 & 2	5/8” (16) H X 5/8” (16) W GLASS STOP; MAX. WIDTH: 54” (1372); MAX. HEIGHT: 77-3/4” (1975) 2721 SQ. INCHES (1755480) OF VISIBLE GLASS.
WALL CONSTRUCTION:	DRYWALL OR MASONRY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME

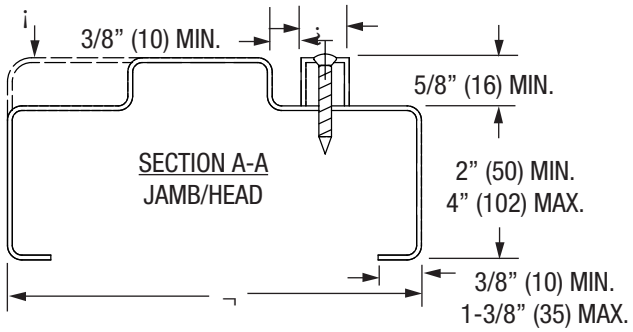
NOTE:
1) GLAZING MATERIAL SHALL BE “FIRELITE” GLASS ONLY.
2) GLAZING COMPOUNDS ARE EITHER 100% SILICON, DAP, “33”, OR METACAULK 990.
3) IF SIDELIGHT IS INSTALLED OVER DRYWALL SILL, A SUITABLE ANCHOR MUST BE USED IN THE SILL MEMBER FOR EACH 30 INCHES (762) OF SILL LENGTH OR FRACTION THEREOF.
4) GLASS STOP SCREW SPACING: NO. 8 SHEET METAL SCREWS SPACED 2” (51) FROM EACH END AND 12” (304.8) ON CENTER.

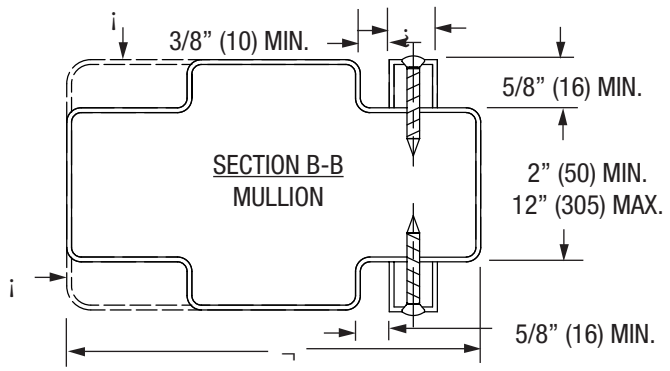
August, 2014

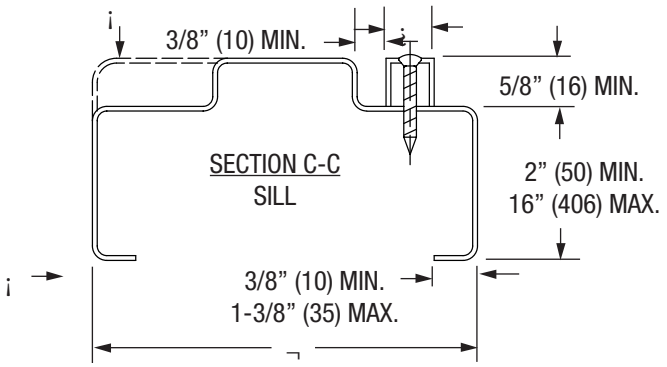
90 MINUTE MAXIMUM RATING IN MASONRY WALL
ELEVATION/SECTION DETAILS



GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.







CURRIES
ASSA ABLOY

Transom/Sidelite Frame (Masonry Walls Only)

Fire Rated Products

August, 2014

90 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	13'6" (4013) W X 12'0" (3632) H
MAXIMUM DOOR SIZE:	SINGLE — 4'0" (1219) W X 10'0" (3048) H PAIR — 8'0" (2438) W X 10'0" (3048) H
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR OPTIONS.
WALL CONSTRUCTION:	MASONRY ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME
MAXIMUM PANEL DIMENSIONS TRANSOM PANEL	1-3/4" (44) THICK HOLLOW METAL TRANSOM PANEL NO GREATER THAN 96" (2438) W X 48" (1219) H 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 96" (2438) W X 48" (1272) H ANY LISTED MANUFACTURER'S WOOD PANEL
SIDE PANELS	1-3/4" (44) THICK HOLLOW METAL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN. 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN.

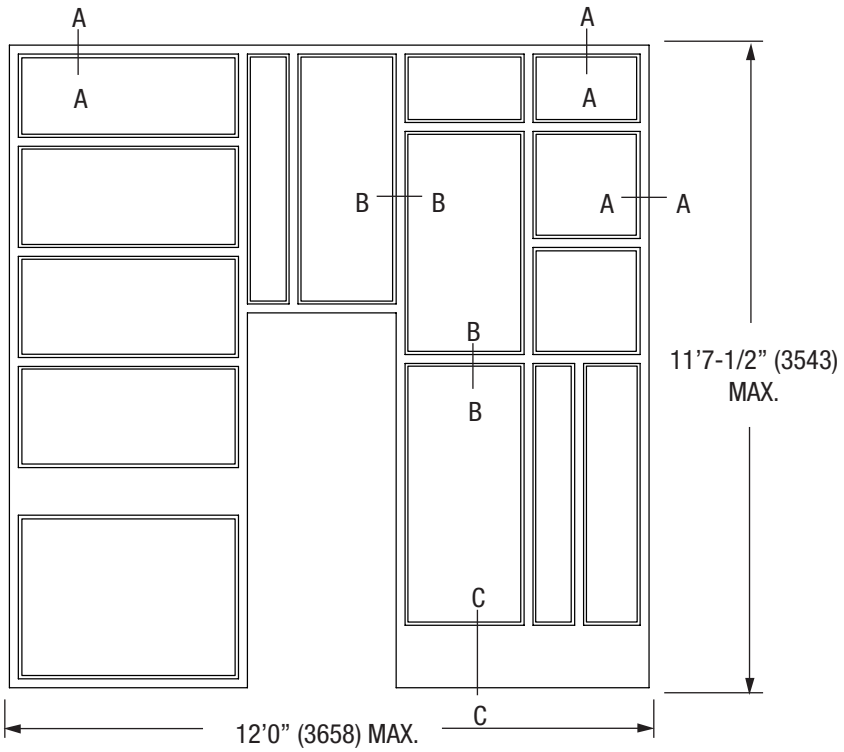
NOTE:
1) THE CONFIGURATION OF THE TRANSOM AND SIDE AREAS MAY VARY.
2) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
3) GLASS STOP SCREW SPACING: NO. 8 OVAL HEAD SHEET METAL SCREW 2" (50) FROM EACH END AND 12" (304.8) ON CENTER MAX.
4) STOP EXTENDERS MAY BE USED WITH THIS FRAME.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

Transom/Sidelite Frame (Drywall Walls Only)

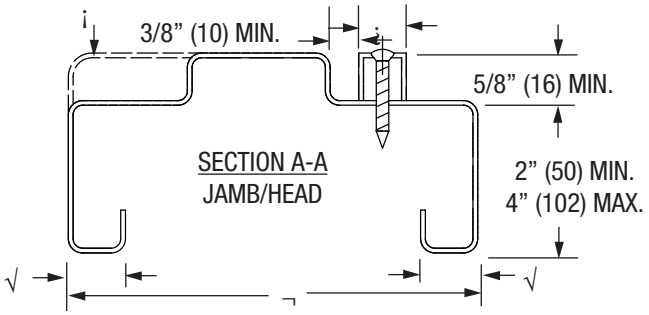
Fire Rated Products

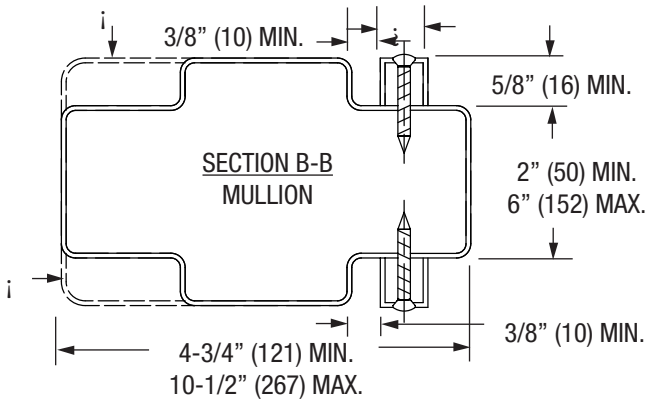
August, 2014

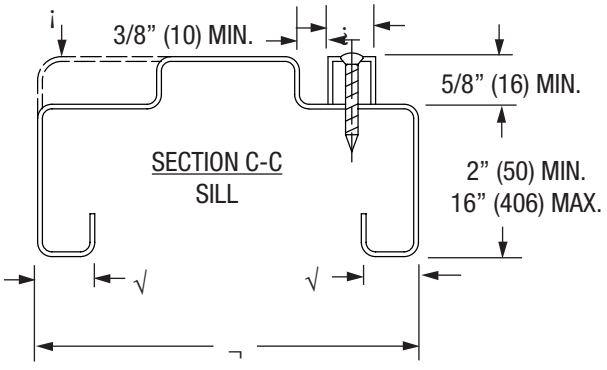
90 MINUTE MAXIMUM RATING IN DRYWALL WALLS
ELEVATION/SECTION DETAIL



GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.
√ 3/8" (10) MIN.
1-3/8" (35) MAX.







Transom/Sidelite Frame (Drywall Walls Only)

Fire Rated Products

August, 2014

90 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	12'0" (3658) W X 11'7-1/2" (3543) H
MAXIMUM DOOR SIZE:	SINGLE — 4'0" (1219) W X 10'0" (3048) H PAIR — 8'0" (2438) W X 10'0" (3048) H
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR OPTIONS.
WALL CONSTRUCTION:	DRYWALL ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME
MAXIMUM PANEL DIMENSIONS TRANSOM PANEL	1-3/4" (44) THICK HOLLOW METAL TRANSOM PANEL NO GREATER THAN 96" (2438) W X 48" (1219) H 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 96" (2438) W X 48" (1272) H ANY LISTED MANUFACTURER'S WOOD PANEL
SIDE PANELS	1-3/4" (44) THICK HOLLOW METAL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN. 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN.

NOTE:
1) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
2) CONFIGURATION OF THE PANEL AREAS MAY VARY.
3) GLASS STOP SCREW SPACING: NO. 8 OVAL HEAD SHEET METAL SCREW 2" (51) FROM EACH END AND 12" (304.8) ON CENTER MAX.
4) GLASS STOP EXTENDER MAY BE USED WITH THIS FRAME.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

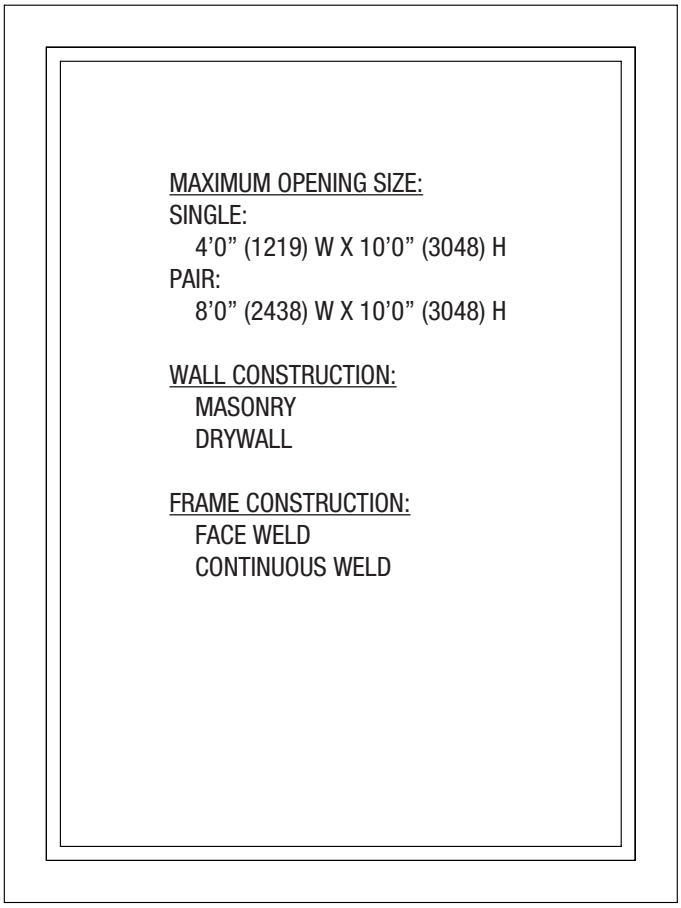
Four Sided Fire Door Frame

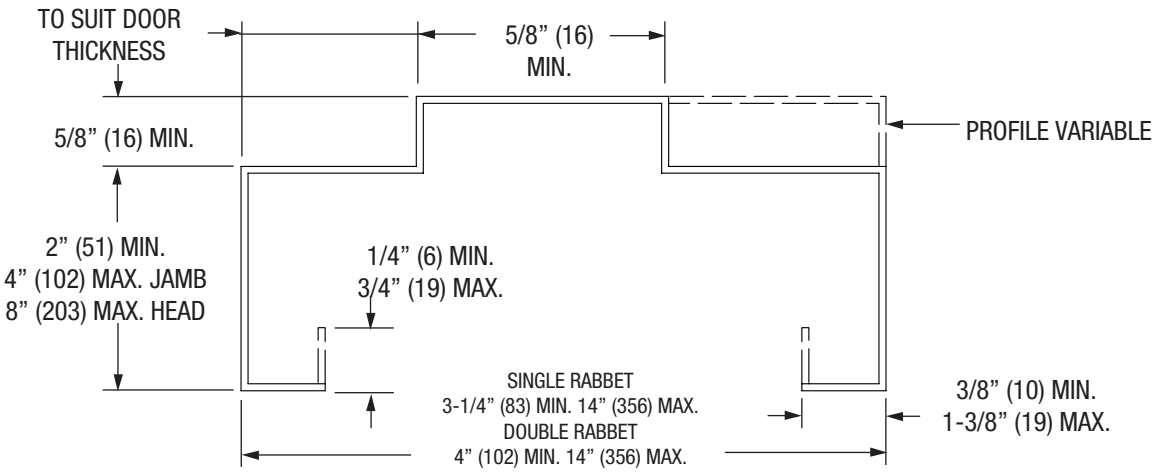
Fire Rated Products

CURRIES
ASSA ABLOY

August, 2014

180 MINUTE MAXIMUM RATING - MASONRY WALLS
90 MINUTE MAXIMUM RATING - DRYWALL WALLS

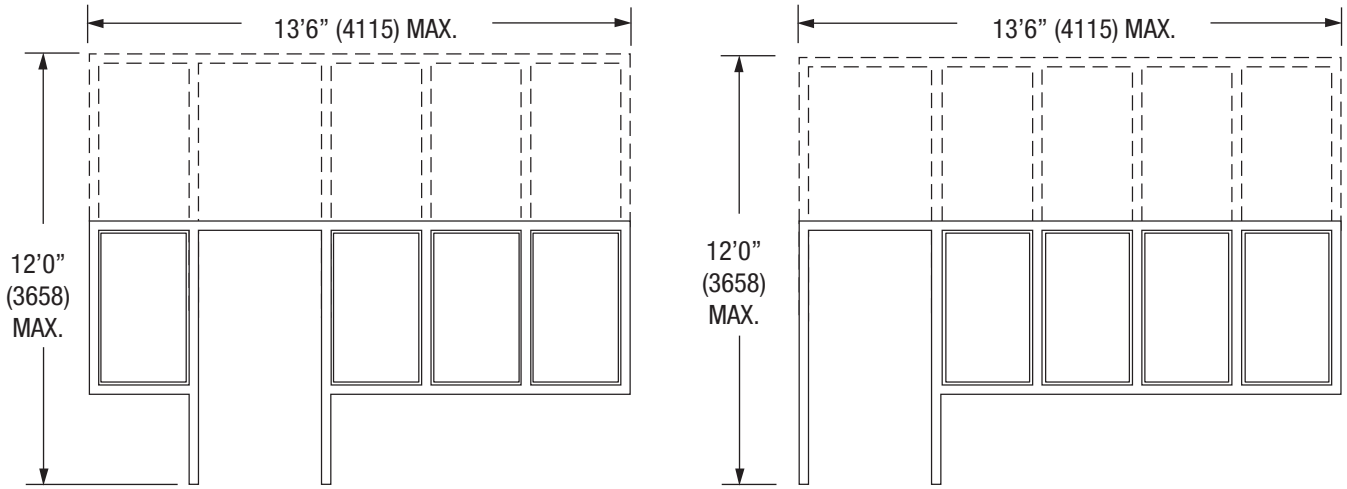




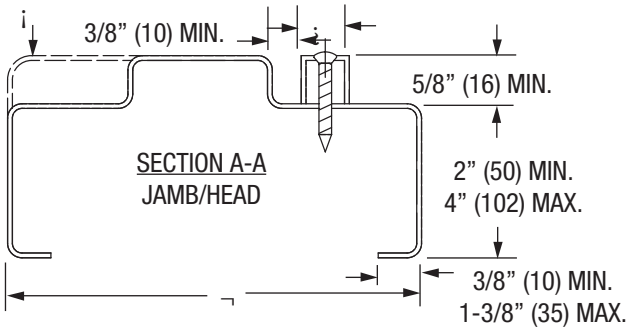
NOTES:

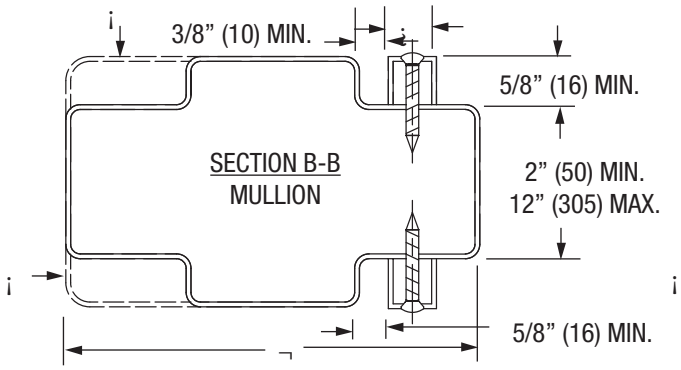
1) FOR OPENINGS OVER 48" (1219) WIDE THE SILL MUST BE FITTED WITH A MULLION BASE ANCHOR AT ITS MIDPOINT.
2) FOR USE WITH DOORS ONLY.
3) 3-1/4" (83) TO 4" (102) JAMB DEPTH 1-3/8" (35) DOOR ONLY.
4) ANY LISTED WELD IN OR SLIP-IN MASONRY OR DRYWALL ANCHOR MAY BE USED IN THIS FRAME. (COMPRESSION ANCHOR NOT ALLOWED)

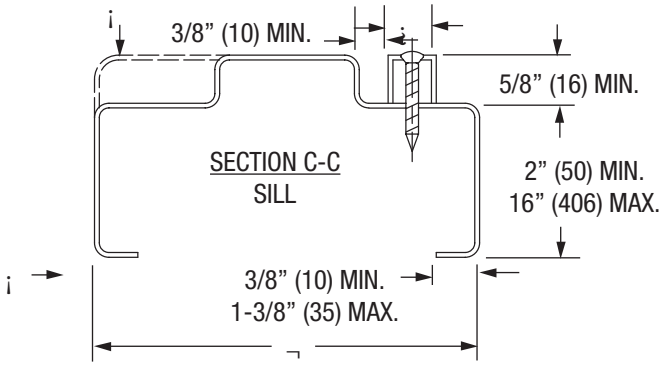
90 MINUTE MAXIMUM RATING IN MASONRY WALL
ELEVATION/SECTION DETAILS



GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.







Half/Sidelite Frame (Masonry Walls Only)

Fire Rated Products

CURRIES
ASSA ABLOY

August, 2014

90 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	13'6" (4115) W X 12'0" (3658) H
MAXIMUM DOOR SIZE:	SINGLE — 4'0" (1219) W X 10'0" (3048) H PAIR — 8'0" (2438) W X 10'0" (3048) H
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR OPTIONS.
WALL CONSTRUCTION:	MASONRY ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME
MAXIMUM PANEL DIMENSIONS TRANSOM PANEL	1-3/4" (44) THICK HOLLOW METAL TRANSOM PANEL NO GREATER THAN 96" (2438) W X 48" (1219) H 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 96" (2438) W X 48" (1272) H ANY LISTED MANUFACTURER'S WOOD PANEL
SIDE PANELS	1-3/4" (44) THICK HOLLOW METAL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN. 1/2" (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 54" (1372) W X 54" (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN.

NOTE:

1) THE CONFIGURATION OF THE TRANSOM AND SIDE AREAS MAY VARY.

2) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.

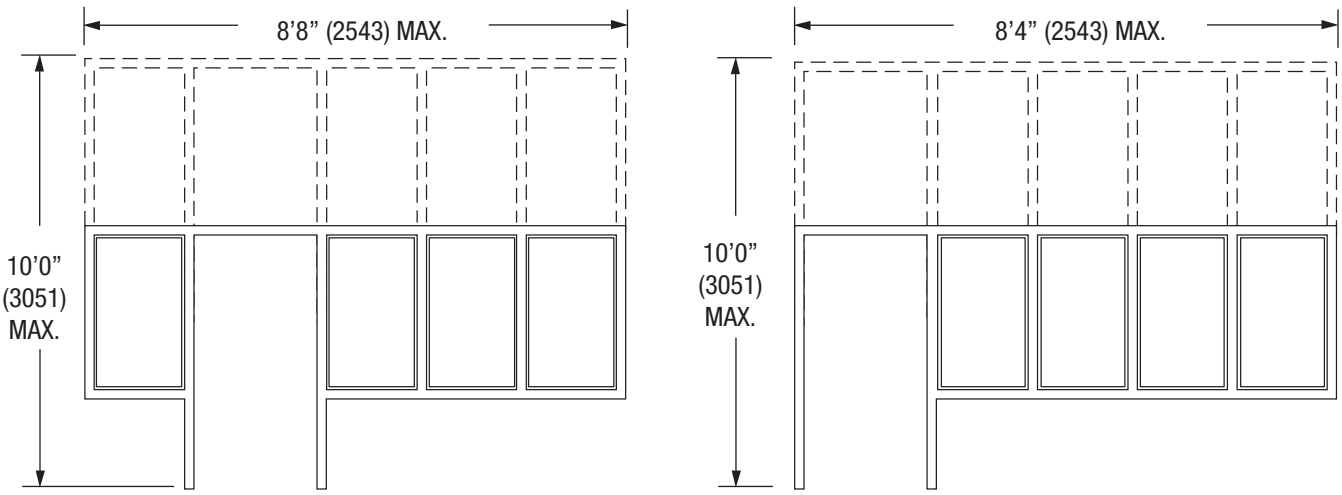
3) GLASS STOP SCREW SPACING: NO. 8 OVAL HEAD SHEET METAL SCREW 2" (50) FROM EACH END AND 12" (305) ON CENTER MAX.

4) STOP EXTENDERS MAY BE USED WITH THIS FRAME.

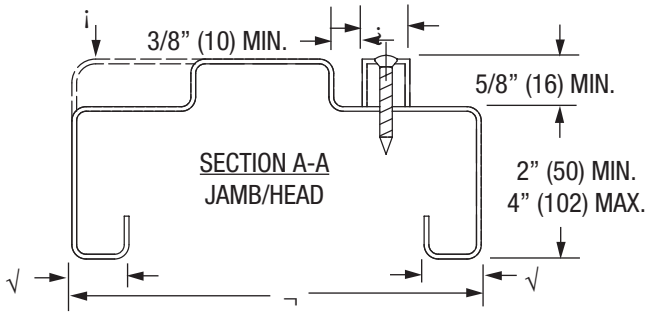
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.

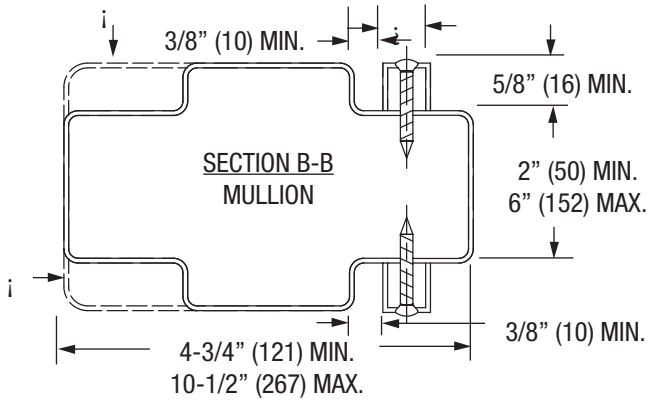
6) ANCHORS NOT REQUIRED IN HEAD.

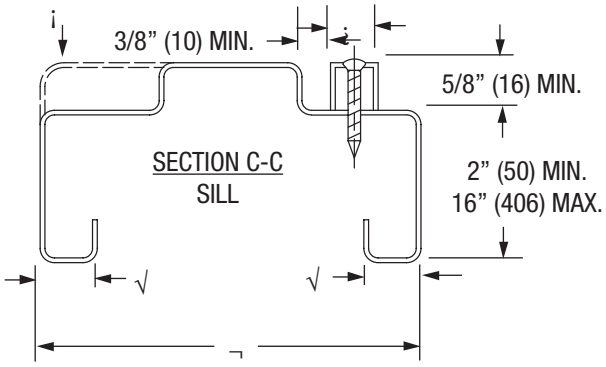
90 MINUTE MAXIMUM RATING IN DRYWALL WALLS
ELEVATION/SECTION DETAIL



GENERAL NOTES:
¿ 5/8" (16) MIN.
¡ VARIABLE PROFILE
¬ 4-3/4" (121) MIN.
14" (356) MAX.
√ 3/8" (10) MIN.
1-3/8" (35) MAX.







Half/Sidelite Frame (Drywall Walls Only)

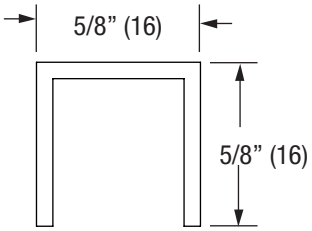
Fire Rated Products

CURRIES
ASSA ABLOY

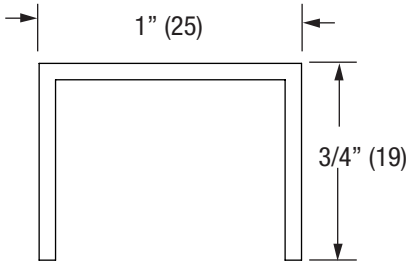
August, 2014

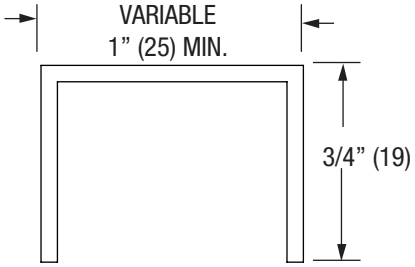
90 MINUTE MAXIMUM RATING	
MAXIMUM FRAME SIZE:	8’4” (2543) W X 10’0” (3051) H
MAXIMUM DOOR SIZE:	SINGLE — 4’0” (1219) W X 10’0” (3048) H PAIR — 8’0” (2438) W X 10’0” (3048) H
GLAZING REQUIREMENTS:	SEE FRAME GLAZING CHARTS FOR GLAZING OPTIONS INCLUDING MAXIMUM HOURLY RATINGS. MAXIMUM VISIBLE AREA, MAXIMUM HEIGHT AND WIDTH, MINIMUM STOP HEIGHT, AND GLASS POCKET WIDTH FOR EACH GLAZING OPTION IS LISTED IN THE CHART. LISTED GLAZING COMPOUND, 100% SILICONE, OR CLOSED CELL FOAM TAPE MAY BE USED. SEE GLAZING MANUFACTURER’S INSTALLATION INSTRUCTIONS FOR OPTIONS.
WALL CONSTRUCTION:	DRYWALL ONLY
FRAME CONSTRUCTION:	FACE OR CONTINUOUS WELDS.
MATERIAL:	COLD ROLLED AND GALVANIZED STEEL 16 GA. (1.5) MINIMUM TO 12 GA. (2.6) MAXIMUM
ANCHORS:	ANY LISTED WELD IN OR SLIP-IN TYPE DRYWALL OR MASONRY ANCHORS MAY BE USED IN THIS FRAME
MAXIMUM PANEL DIMENSIONS TRANSOM PANEL	1-3/4” (44) THICK HOLLOW METAL TRANSOM PANEL NO GREATER THAN 96” (2438) W X 48” (1219) H 1/2” (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 96” (2438) W X 48” (1272) H ANY LISTED MANUFACTURER’S WOOD PANEL
SIDE PANELS	1-3/4” (44) THICK HOLLOW METAL THAT SHALL BE NO GREATER THAN 54” (1372) W X 54” (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN. 1/2” (13) THICK SOLID PANEL THAT SHALL BE NO GREATER THAN 54” (1372) W X 54” (1372) H MAX NOT TO EXCEED 1296 (836127) SQ. IN.

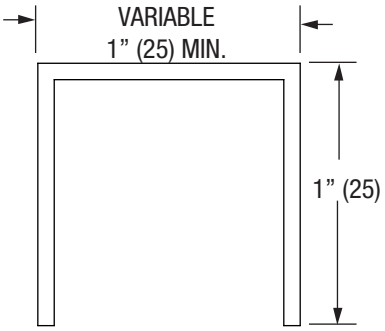
NOTE:
1) THIS FRAME MAY BE PROVIDED WITH A SCREW APPLIED FIELD SPLICE FOR CONNECTION AT THE JOB SITE.
2) CONFIGURATION OF THE PANEL AREAS MAY VARY.
3) GLASS STOP SCREW SPACING: NO. 8 OVAL HEAD SHEET METAL SCREW 2” (51) FROM EACH END AND 12” (305) ON CENTER MAX.
4) GLASS STOP EXTENDER MAY BE USED WITH THIS FRAME.
5) ASSEMBLY HAS NO TEMPERATURE RISE RATING.
6) ANCHORS NOT REQUIRED IN HEAD.
7) HORIZONTAL SILL REQUIRES ANCHORS FOR EACH 30” (762) OF LENGTH.

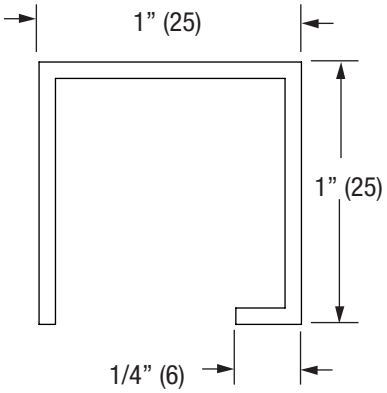


18 GA. (1.1) MIN.
R.K., OR S.S.



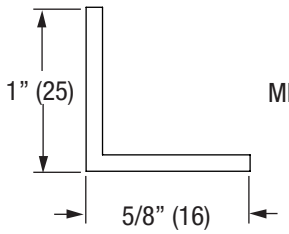






NOTE: SCREW SPACING: #8 OVAL HEAD SHEET METAL SCREWS 2" (51) FROM EACH END AND 12" (305) ON CENTER MAX.

14 GA. (1.9) MIN.
R.K., OR S.S.

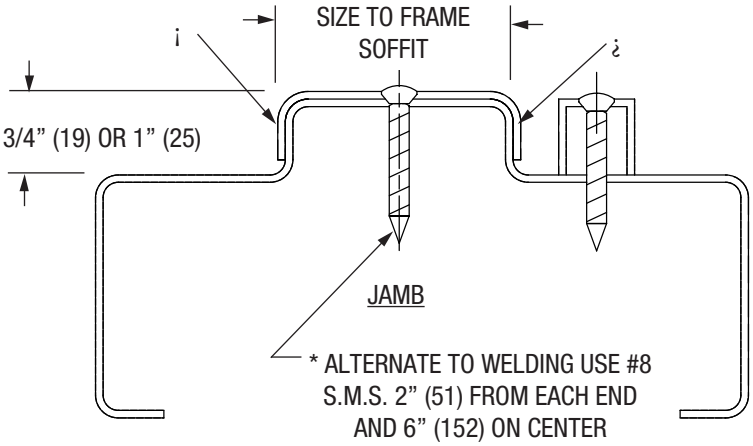


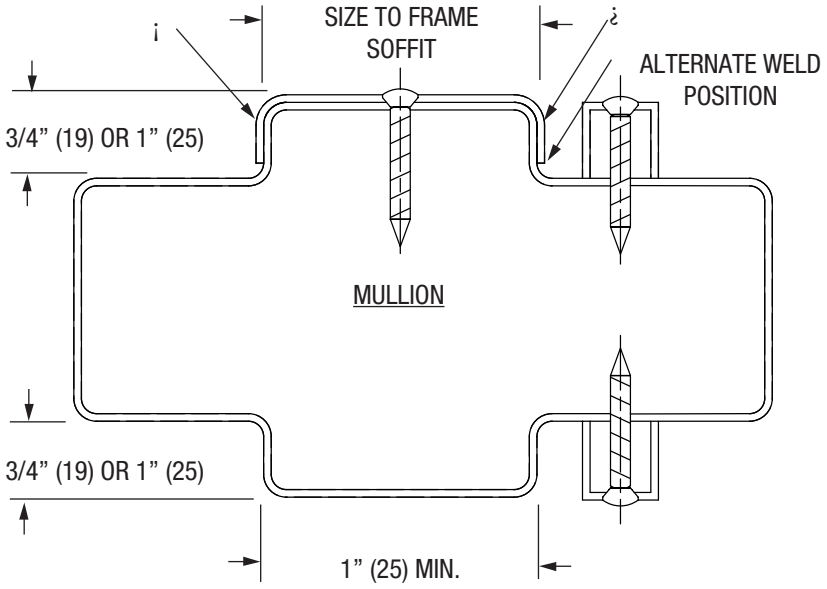
MINIMUM #8 MACHINE OR SELF DRILLING SCREW.

Stop Extensions for Glass Lites and Transom/Sidelites

Fire Rated Products

April, 2002



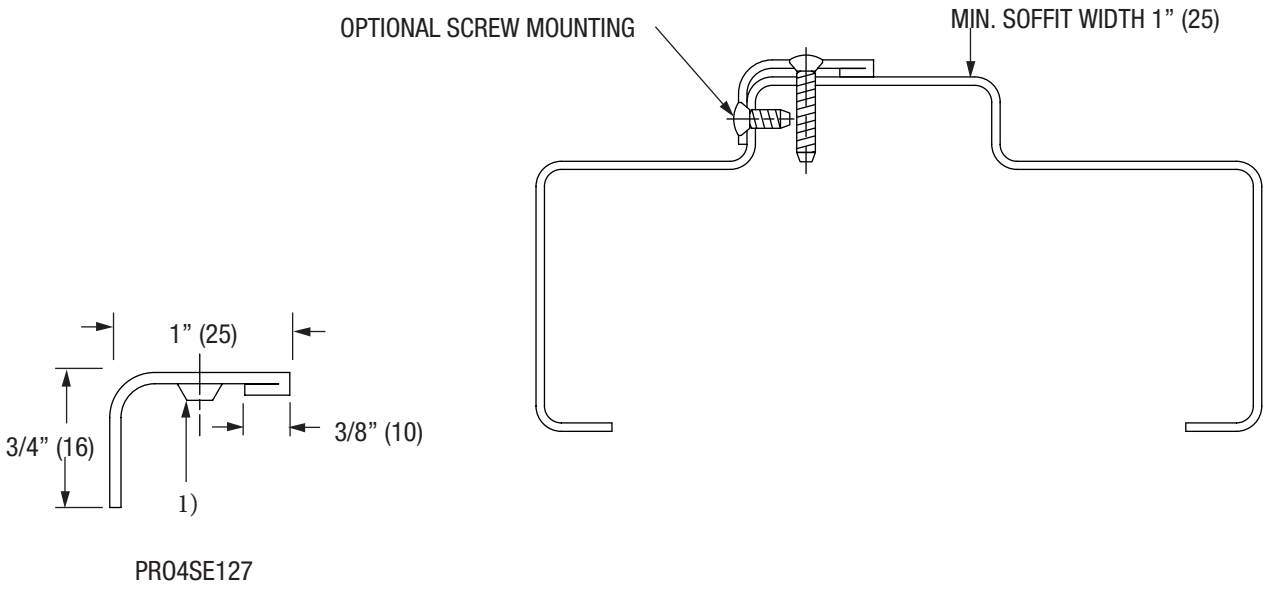


GENERAL NOTES:

¿ WELDS 2” (51) FROM ENDS AND 12” (305) ON CENTERS

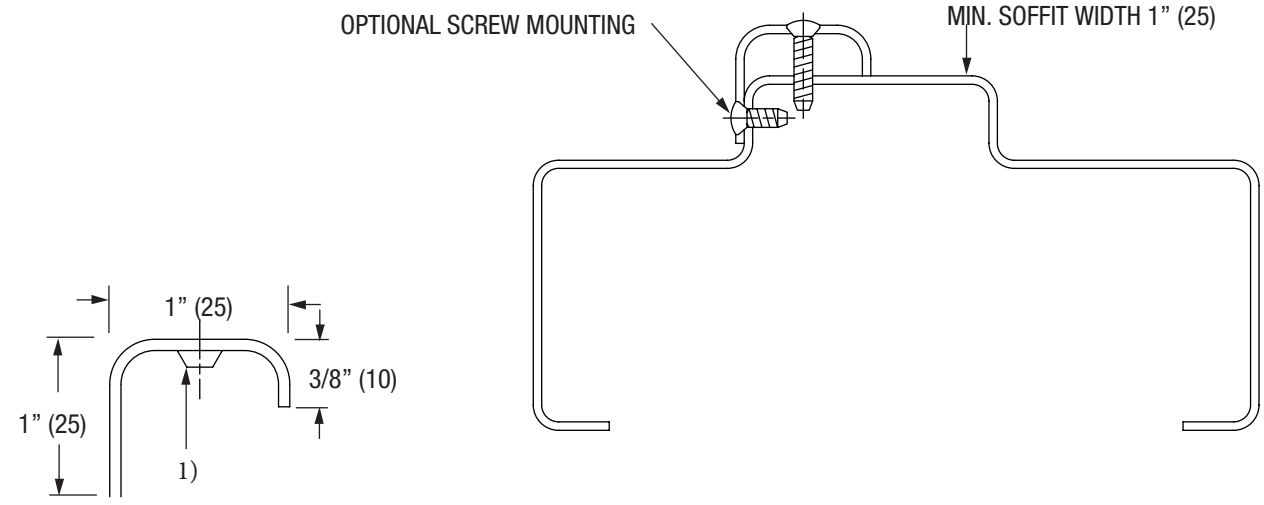
¡ 16 GA. (1.5) STEEL STOP EXTENSION

STOP HEIGHT EXTENDER 5/8" (16) TO 3/4" (19)
MAT'L 16 GA. (1.5) STEEL



PR04SE127

STOP HEIGHT EXTENDER 5/8" (16) TO 3/4" (19)



PR01SE128

GENERAL NOTES:
1) OPTIONAL PUNCH AND COUNTERSINK FOR #8 OVAL HEAD S.M.S.
   2" (51) FROM EACH END AND 6" (152) ON CENTER MAX.
2) MAY BE USED ON JAMB OR MULLION FRAME MEMBERS.
3) MATERIAL 16 GA. (1.5) STEEL AVAILABLE IN 60" (1524) LENGTHS MAX.

Frame Glazing Chart

Fire Rated Products

CURRIES
ASSA ABLOY

August, 2014

FOR USE WITH CURRIES FIRE RATED WINDOW FRAMES AND TRANSOM SIDELITE FRAMES

GLASS TYPE BRAND OR DESCRIPTION	RATING	MAX EXPOSED AREA SQ. IN.	MAX VISIBLE WIDTH INCHES	MAX VISIBLE HEIGHT INCHES	GLASS THICKNESS INCHES	MIN STOP HEIGHT INCHES	MIN POCKET WIDTH INCHES
LISTED WIRE GLASS	20 MIN W/O HOSE	5268	109-3/4	109-3/4	1/4	5/8	3/8
LISTED WIRE GLASS	20 AND 45 MINUTE	1296	54	54	1/4	5/8	3/8
CENTRAL/ASAHI OR PILKINGTON WIRE GLASS WITH PEMKO FG3000	20 AND 45 MINUTE	4704	106	106	1/4	5/8	7/16
FIREGLAS 20 [3] (TECHNICAL GLASS)	20 MIN W/O HOSE	6936	106-1/2	106-1/2	SEE NOTE 1	5/8	SEE NOTE 1
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[3] (TECHNICAL GLASS)	20 MIN W/O HOSE	3325	95	95	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[3] (TECHNICAL GLASS)	20 AND 45 MINUTE	3325	95	95	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[3] (TECHNICAL GLASS)	60 MINUTE	2721	77	77	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU (TECHNICAL GLASS)[3]	90 MINUTE	2627	46-1/2	56-1/2	SEE NOTE 2	5/8	SEE NOTE 2
PYRO-EDGE 20 [3] (INTEREDGE TECHNOLOGIES)	20 MIN W/O HOSE	3698	40-3/4	90-3/4	1/4	5/8	3/8
PYROSTOP[3]	60 MINUTES	5605	95	95	1-1/16	5/8	1-3/16
PYROSTOP[3]	90 MINUTES	3724	89-3/4	89-3/4	1-9/16	5/8	1-11/16

NOTE 1	FIREGLAS IS AVAILABLE IN 1/4", 3/8", 1/2", AND 3/4" THICKNESS. POCKET WIDTH IS 1/8" GREATER THAN GLASS THICKNESS
NOTE 2	FIRELITE AND FIRELITE NT ARE 3/16" THICK, 3/8" MINIMUM POCKET WIDTH; FIRELITE PLUS IS 5/16" THICK 1/2" MINIMUM POCKET WIDTH; FIRELITE IGU IS 1" THICK, 1-1/8" MINIMUM POCKET WIDTH.
NOTE 3	GLASS CAPABILITIES AVAILABLE THROUGH UL ONLY. NOT OFFERED THROUGH INTERTEK.

CURRIES
ASSA ABLOY

Door Glazing Chart

Fire Rated Products

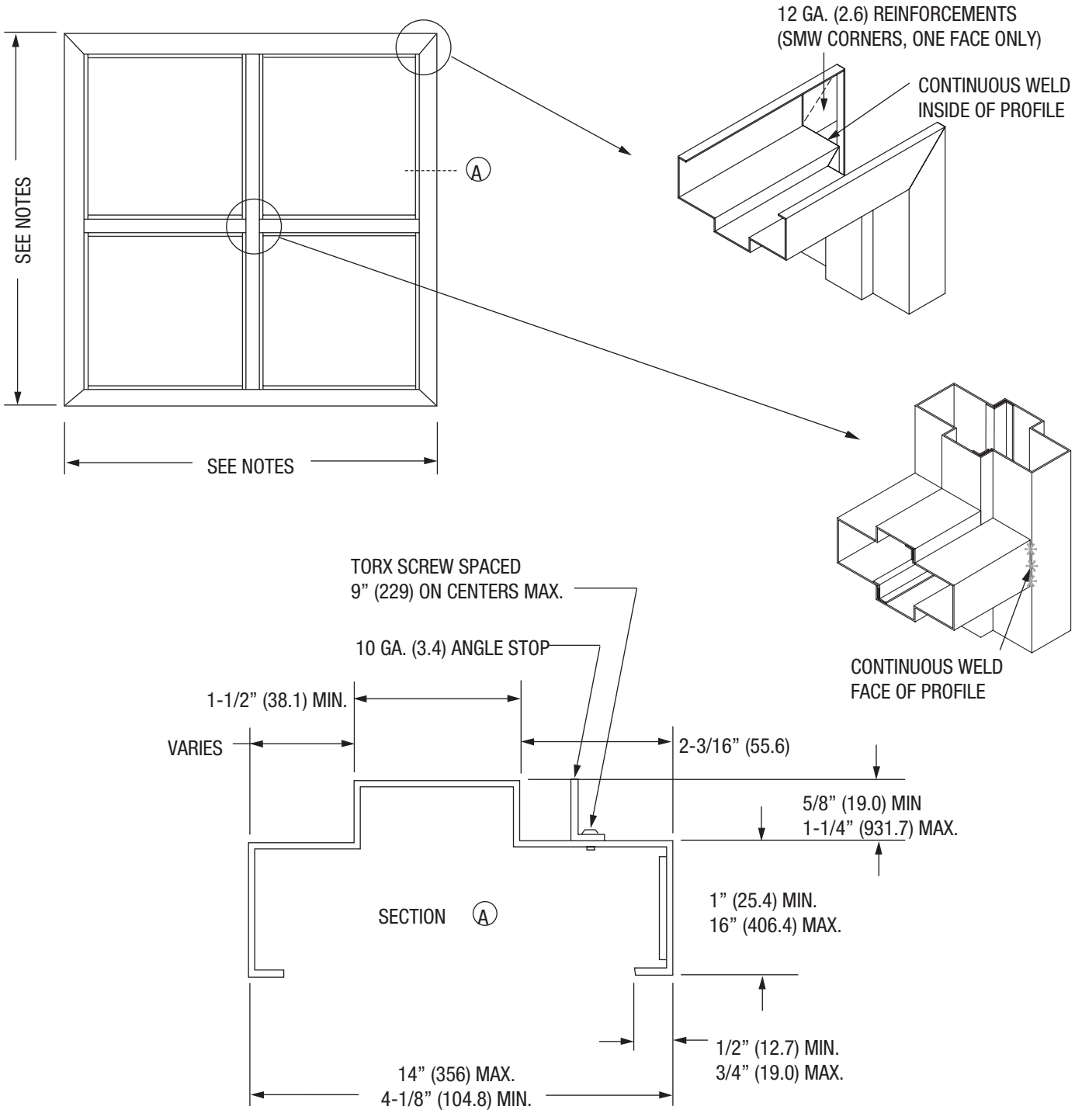
For use with CURRIES' Vision Light Frames

August, 2014

GLASS TYPE BRAND OR DESCRIPTION	RATING	MAX EXPOSED AREA SQ. IN. (SEE NOTE 6)	MAX WIDTH INCHES (SEE NOTE 6)	MAX HEIGHT INCHES (SEE NOTE 6)	GLASS THICKNESS INCHES	MIN STOP HEIGHT INCHES	MIN POCKET WIDTH INCHES
LISTED WIRE GLASS	20 MIN W/O HOSE	2294	35-13/16	83-5/8	1/4	5/8	3/8
LISTED WIRE GLASS	20 AND 45 MINUTE	1296	54	54	1/4	5/8	3/8
LISTED WIRE GLASS	90 MINUTE	100 PER LEAF	12	33	1/4	5/8	3/8
CENTRAL/ASAHI OR PILKINGTON WIRE GLASS WITH PEMKO FG3000	20 AND 45 MINUTE	2856	34	84	1/4	5/8	7/16
CENTRAL/ASAHI OR PILKINGTON WIRE GLASS WITH PEMKO FG3000	90 MINUTE	552 PER LITE 2204 PER LEAF	12	46	1/4	5/8	7/16
FIREGLAS 20[7] (TECHNICAL GLASS)	20 MIN W/O HOSE	3024	36	89	SEE NOTE 1	5/8	SEE NOTE 1
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[7] (TECHNICAL GLASS)	20 MIN W/O HOSE	3204	36	89	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[7] (TECHNICAL GLASS)	20 AND 45 MINUTE	3204	36	89	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[7] (TECHNICAL GLASS)	60 MINUTE (SEE NOTE 5)	3204	36	89	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[7] (TECHNICAL GLASS)	90 MINUTE (SEE NOTE 5)	1296 PER LEAF	36	54	SEE NOTE 2	5/8	SEE NOTE 2
FIRELITE, FIRELITE PLUS, FIRELITE NT, OR FIRELITE IGU[7] (TECHNICAL GLASS)	180 MINUTE (SEE NOTE 5)	100 PER LEAF	33	33	SEE NOTE 2	5/8	SEE NOTE 2
PYROSTOP [7] SEE NOTE 3	60 MINUTES (SEE NOTE 5)	1080	36	36	1-1/16	5/8	1-3/16
PYROSTOP [7] SEE NOTE 3	90 MINUTES (SEE NOTE 5)	1080	36	36	1-9/16	5/8	1-11/16
UL PANEL 1/2"	90 MINUTES	1296 PER PANEL 2592 PER LEAF	36	36	1/2" PANEL	3/4	1/2

NOTE 1	FIREGLAS IS AVAILABLE IN 1/4", 3/8", 1/2", AND 3/4" THICKNESS. POCKET WIDTH IS 1/8" GREATER THAN GLASS THICKNESS
NOTE 2	FIRELITE AND FIRELITE NT ARE 3/16" THICK, 3/8" MINIMUM POCKET WIDTH; FIRELITE PLUS IS 5/16" THICK 1/2" MINIMUM POCKET WIDTH; FIRELITE IGU IS 1" THICK, 1-1/8" MINIMUM POCKET WIDTH.
NOTE 3	PYROSTOP MAY BE USED ON CURRIES DOORS WITH 250 OR 450 DEGREE TEMPERATURE RISE RATINGS.
NOTE 4	ALL GLASS AREAS ARE PER VISION LIGHT, UNLESS OTHERWISE INDICATED. MULTIPLE VISION LIGHTS ARE ALLOWED.
NOTE 5	CODE REQUIREMENTS MAY LIMIT USE IN 60 MINUTE OR GREATER DURATIONS. USE IS SUBJECT TO THE APPROVAL OF AUTHORITY HAVING JURISDICTION.
NOTE 6	WARNOCK HERSEY LIMITATIONS MAY BE LESS THEN PUBLISHED DIMENSIONS.
NOTE 7	UL LISTING ONLY.

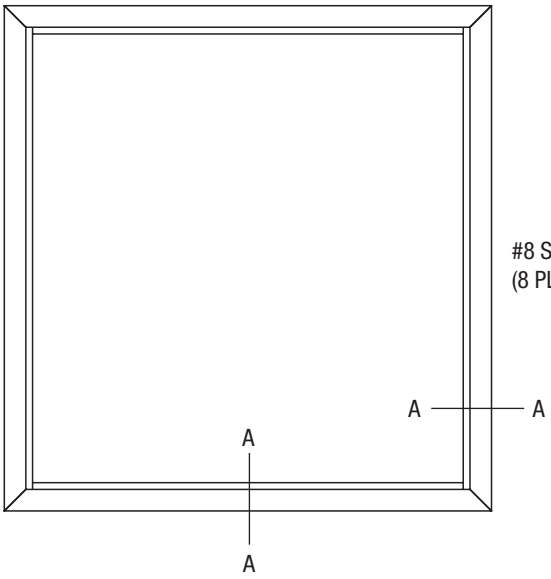
NOTES:
1. MAX. WINDOW OPENINGS: PER GLASS MANUFACTURER'S LIMITS.
2. GAUGE: 12 (2.6) GA. ONLY.
3. WALL CONSTRUCTION: MASONRY ONLY.
4. FRAME CONSTRUCTION: SAW BUTT WELD (SBW) OR SAW MITER WELD (SMW) ONLY.
5. MASONRY ANCHORS ONLY.

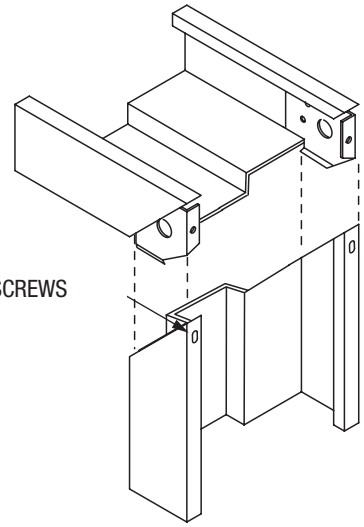


KD Fire Window Frame (20 Min. Without Hose Stream)

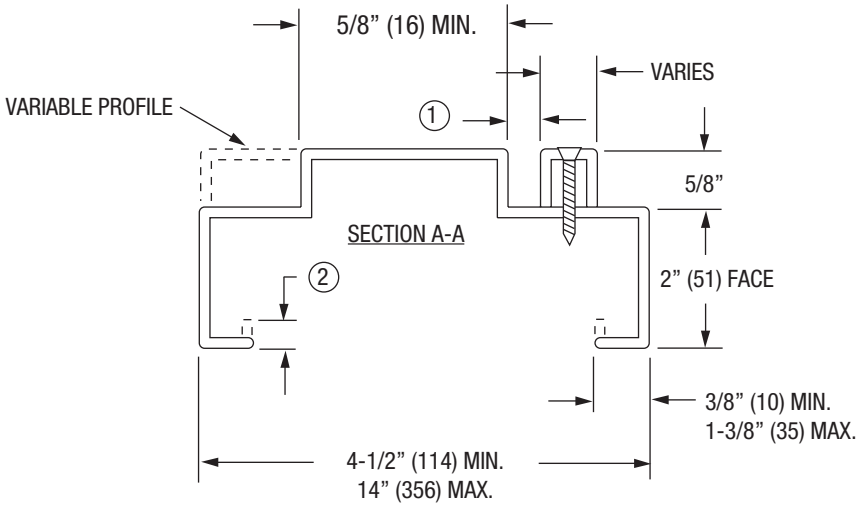
Fire Rated Products

December, 2013





#8 SHEET METAL SCREWS
(8 PLACES)



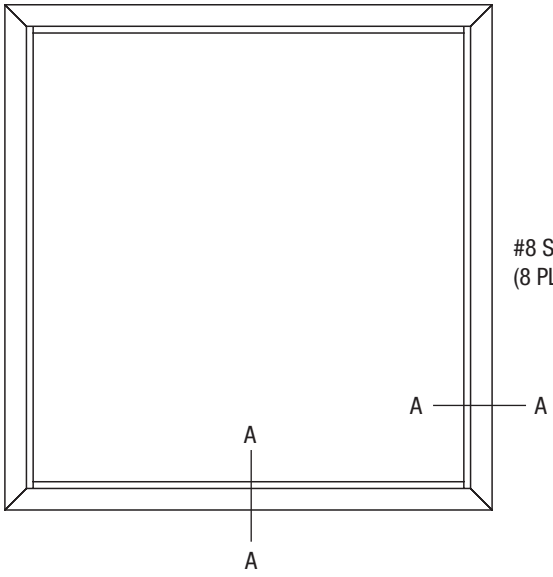
GENERAL NOTES:

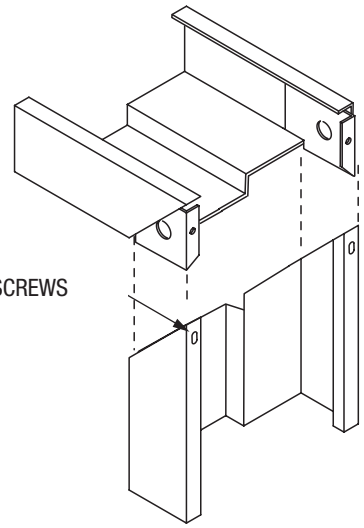
1. 3/8" (10) MIN. GLASS POCKET
2. 3/8" (10) MIN. 3/4" (19) MAX.

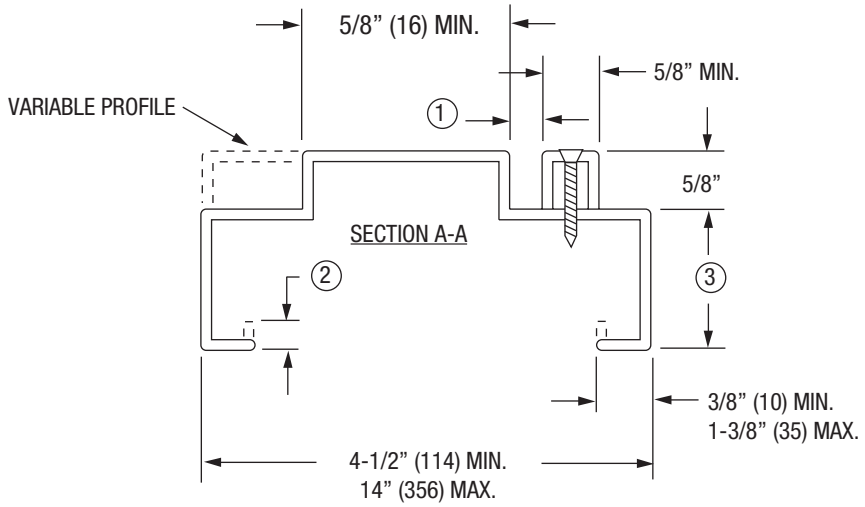
SPECIFICATIONS:

A) SIZE: MAX. INDIVIDUAL VISIBLE GLASS SIZE IS 109-3/4" (2788) WIDE AND 109-3/4" (2788) HIGH, NOT TO EXCEED 5268 SQ. INCHES.
B) POCKET DEPTH: 5/8" (16) MIN.
C) WALL CONSTRUCTION: DRYWALL
D) FRAME CONSTRUCTION: KD
E) ANCHORS: FIRE WINDOW FRAME SHALL BE PROVIDED WITH LABEL APPROVED DRYWALL ANCHORS. IF COMPRESSION TYPE ANCHORS ARE USED THEY SHALL BE INSTALLED IN THE SILL AND HEAD MEMBERS.
F) MATERIAL: COLD ROLLED OR GALVANIZED STEEL
G) GAUGE: 16 GA. (1.5) MIN., 14 GA. (1.8) MAX.
H) GLASS STOP SCREWS: NO. 8 SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (305) ON CENTER.

December, 2013







GENERAL NOTES:
1. 3/8" (10) MIN. GLASS POCKET
2. 3/8" (10) MIN. 3/4" (19) MAX.
3. 1-1/2" (38) 1-3/4" (45) AND 2" (51) FACES ONLY

SPECIFICATIONS:

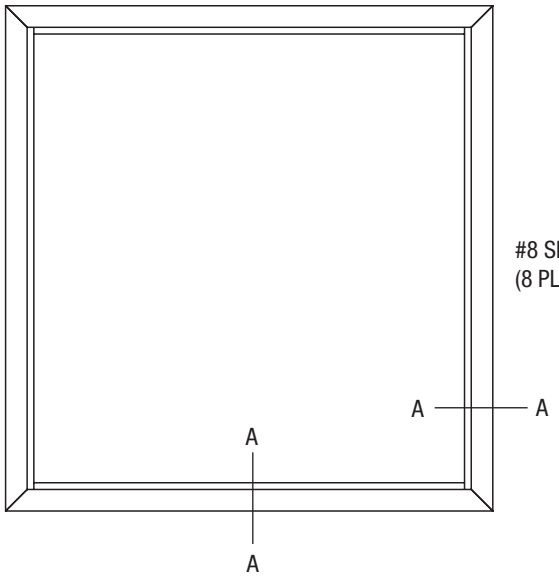
A) WALL CONSTRUCTION: DRYWALL
B) FRAME CONSTRUCTION: KD
C) ANCHORS: FIRE WINDOW FRAME SHALL BE PROVIDED WITH LABEL APPROVED DRYWALL ANCHORS. IF COMPRESSION TYPE ANCHORS ARE USED THEY SHALL BE INSTALLED IN THE SILL AND HEAD MEMBERS.
D) MATERIAL: COLD ROLLED OR GALVANIZED STEEL
E) GAUGE: 16 GAUGE (1.5) MIN., 14 GA. (1.9) MAX.
F) GLASS STOP SCREWS: NO. 8 SHEET METAL SCREWS SPACED 2" (51) FROM EACH END AND 12" (305) ON CENTER.
G) MUST USE NORTON NORSEAL TAPE V980 OR 100% SILICON.

MAX. AREA EXPOSED GLASS SQ. IN.	MAX. WIDTH IN.	MAX. HEIGHT IN.	MIN. DEPTH OF POCKET IN.
1296 (836,127)	54 (1372)	54 (1372)	5/8 (16)

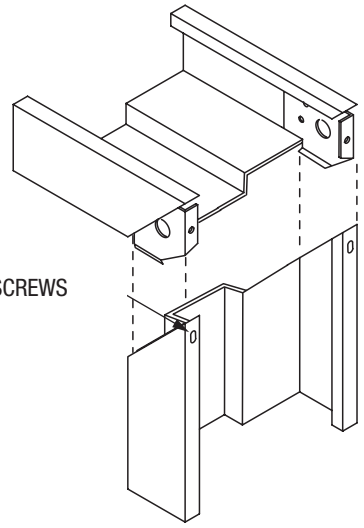
KD Fire Window Frame (1 Hr. Fire Rated Frame with “Firelite” Glass)

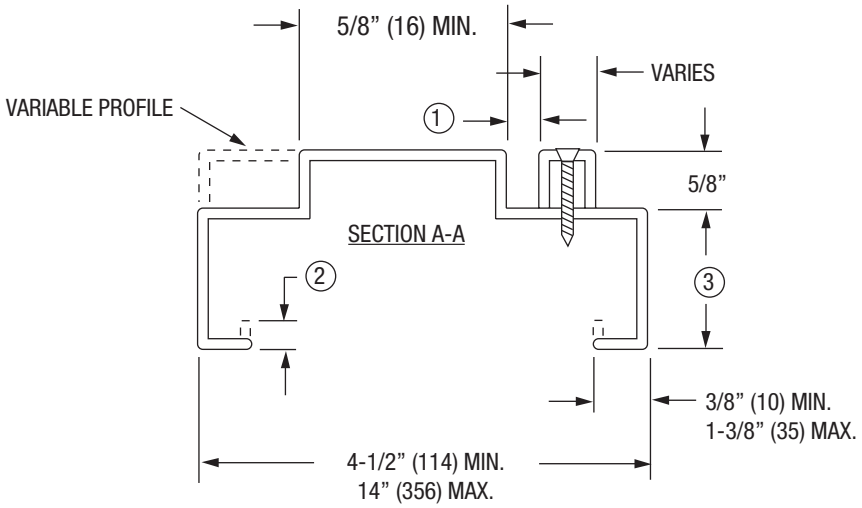
Fire Rated Products

August, 2014



#8 SHEET METAL SCREWS
(8 PLACES)





GENERAL NOTES:

1. 3/8” (10) MIN. GLASS POCKET
2. 3/8” (10) MIN. 3/4” (19) MAX.
3. 1-1/2” (38) 1-3/4” (45) AND 2” (51) FACES ONLY

SPECIFICATIONS:

A) SIZE: MAX. INDIVIDUAL VISIBLE GLASS SIZE IS 54” (1372) WIDE AND 77-3/4” (1975) HIGH, NOT TO EXCEED 2721 SQ. INCHES.
B) POCKET DEPTH: 5/8” (16) MIN.
C) WALL CONSTRUCTION: DRYWALL
D) FRAME CONSTRUCTION: KD
E) ANCHORS: FIRE WINDOW FRAME SHALL BE PROVIDED WITH LABEL APPROVED DRYWALL ANCHORS. IF COMPRESSION TYPE ANCHORS ARE USED THEY SHALL BE INSTALLED IN THE SILL AND HEAD MEMBERS.
F) MATERIAL: COLD ROLLED OR GALVANIZED STEEL
G) GAUGE: 16 GA. (1.5) MIN., 14 GA. (1.9) MAX.
H) GLASS STOP SCREWS: NO. 8 SHEET METAL SCREWS SPACED 2” (51) FROM EACH END AND 12” (305) ON CENTER.
I) GLAZING MATERIAL: “FIRELITE” OR “FIRELITE PLUS” GLASS INSTALLED WITH EITHER 100% SILICON, DAP 33, OR METACAULK 990 GLAZING COMPOUND.
J) MAY NOT BE USED FOR POSITIVE PRESSURE APPLICATIONS.

CURRIES
ASSA ABLOY

Frame Panel and Glazing Chart

Fire Rated Products

May, 2017

PANEL DESCRIPTION	RATING	MAX EXPOSED AREA SQ. IN.	MAX VISIBLE WIDTH INCHES	MAX VISIBLE HEIGHT INCHES	MIN STOP HEIGHT INCHES	MATERIAL THICKNESS INCHES	MIN POCKET WIDTH INCHES
SIDE PANELS							
CURRIES POLYSTYRENE CORE	90 MINUTES	4608	48	96	5/8	1-3/4	1-7/8
CURRIES TEMPERATURE RISE CORE	90 MINUTES	4608	48	96	5/8	1-3/4	1-7/8
CURRIES STEEL STIFFENED CORE	90 MINUTES	4608	48	96	5/8	1-3/4	1-7/8
CURRIES 1/2” COMPOSITE CORE	90 MINUTES	4608	48	96	5/8	1/2	5/8
WOOD PANELS	90 MINUTES	SEE NOTE 2					
TRANSOM PANELS							
CURRIES POLYSTYRENE CORE	90 MINUTES	4608	96	48	5/8	1-3/4	1-7/8
CURRIES TEMPERATURE RISE CORE	90 MINUTES	4608	96	48	5/8	1-3/4	1-7/8
CURRIES STEEL STIFFENED CORE	90 MINUTES	4608	96	48	5/8	1-3/4	1-7/8
CURRIES 1/2” COMPOSITE CORE	90 MINUTES	4608	96	48	5/8	1/2	5/8
WOOD PANELS	90 MINUTES	SEE NOTE 2					
NOTE 2	LISTED WOOD PANELS MAY BE USED IN CURRIES FRAMES AS ALLOWED BY THE WOOD PANEL MANUFACTURER’S LISTINGS.						
NOTE 3	USE SPRING BOLT SPACING FROM WOOD PANEL MANUFACTURER.						

UL LISTING ONLY

Oversized Fire Door (UL)

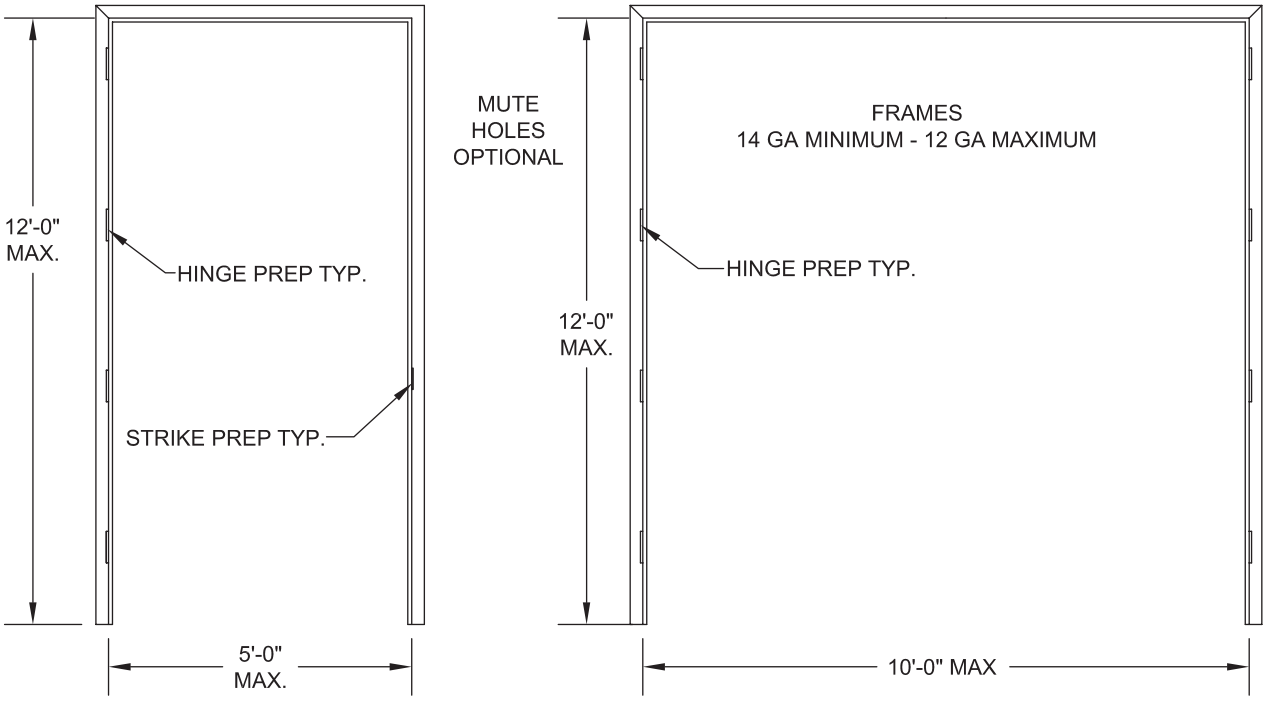
Fire Rated Products

CURRIES
ASSA ABLOY

April, 2011

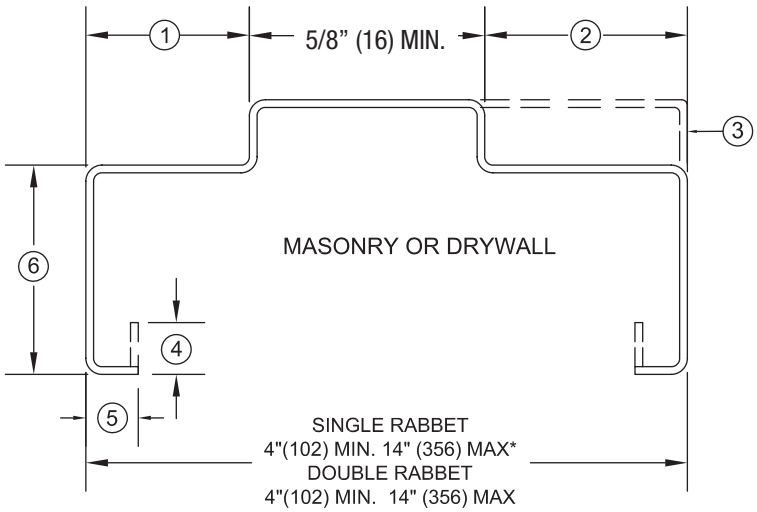
90 MINUTE MAXIMUM RATING 5'0" X 12'0" SINGLES 10'0" X 12'0" PAIRS NO DOUBLE EGERESS ALLOWED UL LISTING ONLY	
DOOR TYPE	747T ONLY
DOOR GAUGE	16 GA. (1.4) OR 14 GA. (1.9)
FACE TYPE	FLUSH OR GLAZED USING ANY UL CLASSIFIED GLAZING MATERIAL CLASSIFIED FOR USE IN HOLLOW METAL FIRE DOORS
RIB GAUGE	22 GA. (.75) OR 20 GA. (.9)
RIB SPACING	6" ON CENTER MAX.
HINGE CHANNEL	12 GA. (2.6)
LOCK CHANNEL	14 GA. (1.9)
EDGE WELDING	CONTINUOUS EDGE WELDING REQUIRED
END CHANNEL	14 GA. (1.9)
TOP CAP (REQUIRED)	16 GA. (1.4) SCREW APPLIED OR WELDED
HARDWARE	
HINGES	FULL MORTISE HINGES MEETING REQUIREMENTS OF BHMA A156.1 AMERICAN NATIONAL STANDARD FOR BUTTS AND HINGES FOR STANDARD WEIGHT, GRADE 1 HINGES. FIVE HINGES REQUIRED FOR DOORS OVER 10' TALL.
ACTIVE DOOR	MORTISE LOCK WITH 3/4 IN. MINIMUM THROW MUST BE USED. MORTISE LOCK MUST BE UL LISTED FOR USE ON A 4'0" X 10'0" 90 MINUTE FIRE RATED HOLLOW METAL DOOR TO BE USED ON DOORS UP TO AND INCLUDING 5'0" X 12'0". 10 GAUGE TABE REQUIRED.
INACTIVE DOOR	FLUSH OR SURFACE BOLTS, AUTOMATIC TYPE, MANUAL TYPE OR SELF-LATCHING WITH 3/4 IN. MINIMUM THROW MAY BE USED. BOLTS MUST BE UL LISTED FOR USE ON 4'0" X 10'0" 90 MIN. FIRE RATED HOLLOW METAL DOOR TO BE USED ON DOORS UP TO AND INCLUDING 5'0" X 12'0". BOLTS WITH EXTENSIONS UP TO 60" LONG MAY BE USED. 10 GAUGE FLUSH BOLT AND E1 STRIKE TABS ARE REQUIRED. 12 GAUGE FLUSH BOLT TABS IN END CHANNELS REQUIRED. AUXILIARY LATCHES FOR SINGLES GREATER THAN 4'0" WIDE, PAIRS GREATER THAN 8'0" WIDE OR THE HEIGHT EXCEEDS 10'0" UL LISTED AUXILIARY FIRE LATCH; MORTISE TYPE FUSIBLE LINK "POPPER" INSTALLED IN THE TOP OF THE ACTIVE LEAF AT THE LOCK STILE, ENGAGING INTO THE FRAME HEAD DOOR RABBET. REINFORCE PER TEMPLATE.
CLOSER	DOORS MUST BE EQUIPPED WITH UL LISTED SWINGING DOOR CLOSERS. 12 GAUGE CLOSER REINFORCEMENT REQUIRED.
ASTRAGALS	DOOR PAIRS MUST BE EQUIPPED WITH A 1-1/2" X 12 GA. (2.4) STEEL FLAT ASTRAGAL INSTALLED ON THE ACTIVE OR INACTIVE DOOR.

90 MINUTE MAXIMUM RATING
3 SIDED FRAMES
NO DOUBLE EGRESS ALLOWED
UL LISTING ONLY



GENERAL NOTES:

① TO SUIT DOOR THICKNESS
② VARIES
③ PROFILE VARIABLE
④ 3/8" (10) MIN
3/4" (19) MAX
⑤ 1/2" (13) MIN
3/4" (19) MAX
⑥ 1-1/2"(38) MIN
4" (102) MAX JAMB
4" (102) MAX HEAD



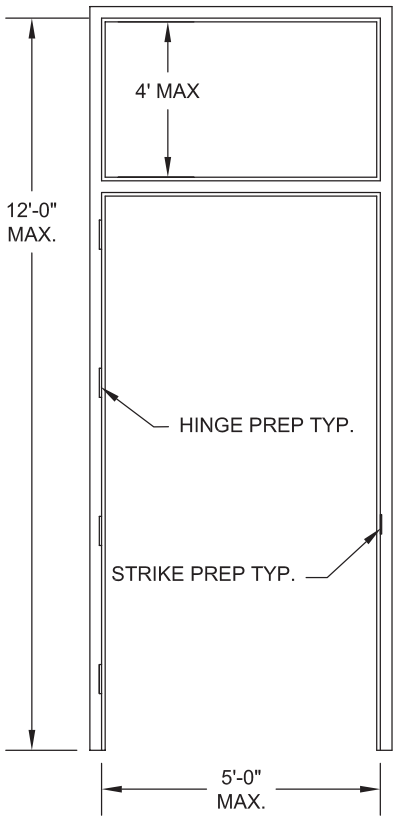
Three Sided Fire Door Frame (UL)

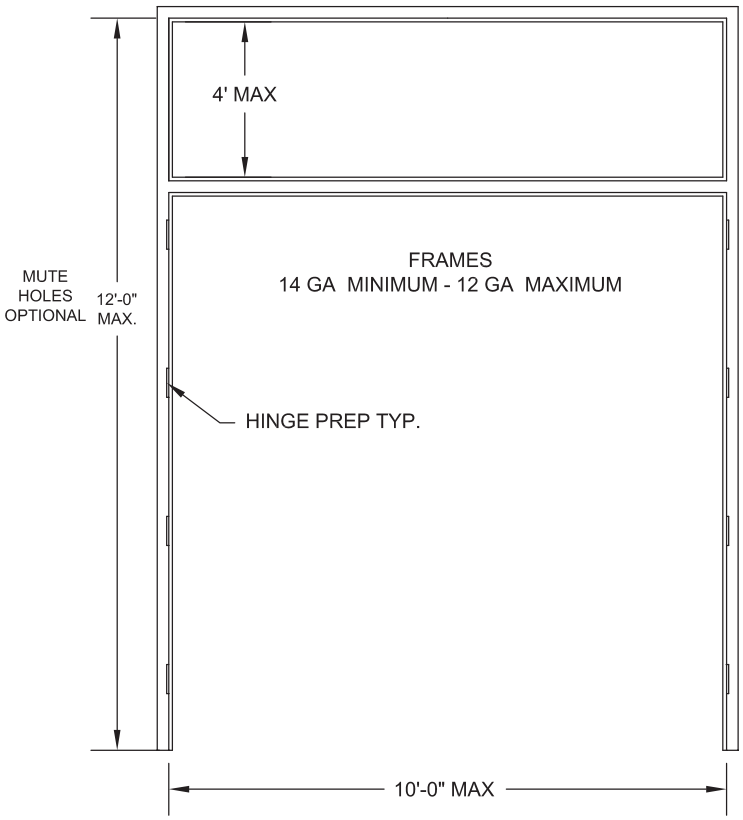
Fire Rated Products

June, 2010

90 MINUTE MAXIMUM RATING 3 SIDED FRAMES NO DOUBLE EGERESS ALLOWED UL LISTING ONLY	
MAXIMUM FRAME SIZES	
MASONRY/DRYWALL	SINGLE: 5'0" (1524) W X 12'0" (3658) H PAIRS: 10'0" (3048)W X 12'0" (3658) H
WALL CONSTRUCTION	MINIMUM 90 MIN. RATED DRYWALL OR MASONRY
FRAME CORNER CONSTRUCTION	FACE WELD, CONTINUOUS WELD, FIELD SPLICE INSTALLED IN ACCORDANCE WITH RECOMMENDED PRACTICES PRESENTED IN NFPA 80 AND NAAMM STANDARD HMMA 850-0.
ANCHORS	ANY LISTED MASONRY TYPE OR WELD-IN DRYWALL TYPE ANCHORS MAY BE USED IN THIS FRAME (COMPRESSION ANCHORS NOT ALLOWED).
MATERIAL	14 GA. (1.7) MIN. 12 GA. (2.4) MAX. COLD ROLLED OR GALVANIZED STEEL
HARDWARE RESTRICTIONS - FOR DOOR LEAVES GREATER THAN 4' WIDE OR 10' TALL	
HINGES	FULL MORTISE HINGES MEETING REQUIREMENTS OF BHMA A156.1 AMERICAN NATIONAL STANDARD FOR BUTTS AND HINGES FOR STANDARD WEIGHT, GRADE 1 HINGES. FIVE HINGES REQUIRED FOR DOORS OVER 10' TALL.
ACTIVE DOOR	SINGLE POINT, MORTISE TYPE ONLY
INACTIVE DOOR	FLUSH OR SURFACE BOLTS, AUTOMATIC TYPE, MANUAL TYPE OR SELF-LATCHING WITH 3/4 IN. MINIMUM THROW AUXILIARY LATCHES FOR SINGLES GREATER THAN 4'0" WIDE, PAIRS GREATER THAN 8'0" WIDE OR THE HEIGHT EXCEEDS 10'0" UL LISTED AUXILIARY FIRE LATCH; MORTISE TYPE FUSIBLE LINK "POPPER" INSTALLED IN THE TOP OF THE ACTIVE LEAF AT THE LOCK STILE, ENGAGING INTO THE FRAME HEAD DOOR RABBET. REINFORCE PER TEMPLATE.
CLOSER	12 GAUGE REINFORCEMENT REQUIRED
FLUSH BOLT	7 GA. (4.5) MIN. REINFORCEMENT REQUIRED

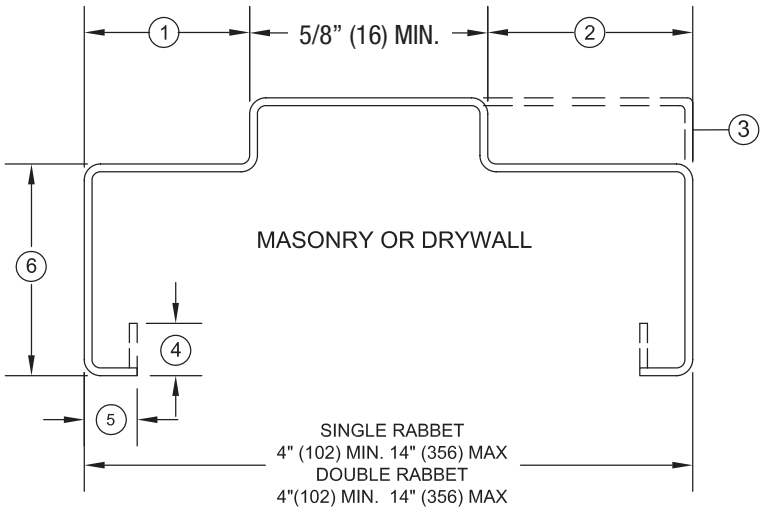
90 MINUTE MAXIMUM RATING
3 SIDED FRAMES WITH TRANSOM
NO DOUBLE EGRESS ALLOWED
UL LISTING ONLY





GENERAL NOTES:

① TO SUIT DOOR THICKNESS
② VARIES
③ PROFILE VARIABLE
④ 3/8" (10) MIN
3/4" (19) MAX
⑤ 1/2" (13) MIN
3/4" (19) MAX
⑥ 1-1/2 "(38) MIN
4" (102) MAX JAMB
4" (102) MAX HEAD



Three Sided Fire Door Frame with Transom

Fire Rated Products

CURRIES
ASSA ABLOY

September, 2008

90 MINUTE MAXIMUM RATING 3 SIDED FRAMES WITH TRANSOM NO DOUBLE EGERESS ALLOWED UL LISTING ONLY	
MAXIMUM FRAME SIZES	
MASONRY/DRYWALL	SINGLE: 5'0" (1524) W X 12'0" (3658) H PAIRS: 10'0" (3048)W X 12'0" (3658) H
WALL CONSTRUCTION	MINIMUM 90 MIN. RATED DRYWALL OR MASONRY
FRAME CORNER CONSTRUCTION	FACE WELD, CONTINUOUS WELD, FIELD SPLICE INSTALLED IN ACCORDANCE WITH RECOMMENDED PRACTICES PRESENTED IN NFPA 80 AND NAAMM STANDARD HMMA 850-0.
TRANSOM PANEL	TO BE SUPPLIED WITH THE FRAME BY THE FRAME MANUFACTURER. TRANSOM PANEL MAX SIZE SINGLE 4'0" H X 5'0" W, PAIRS 4'0" H X 10' W.
TRANSOM LITE	TO BE GLAZED WITH GLAZING MATERIAL. UL CLASSIFIED FOR USE IN FIRE DOOR FRAMES WITH LITES. THE MAXIMUM EXPOSED AREA PER INDIVIDUAL LITE, MAXIMUM EXPOSED AREAS, THE MINIMUM GROOVE DEPTH, GLAZING COMPOUND AND THE RATING SHALL BE AS INDICATED IN THE INDIVIDUAL GLAZING MANUFACTURER'S CLASSIFICATIONS. THE TRANSOM LITE SHALL NOT EXCEED 4 FT. IN HEIGHT.
ANCHORS	ANY LISTED MASONRY TYPE OR WELD-IN DRYWALL TYPE ANCHORS MAY BE USED IN THIS FRAME (COMPRESSION ANCHORS NOT ALLOWED).
MATERIAL	14 GA. (1.7) MIN. 12 GA. (2.4) MAX. COLD ROLLED OR GALVANIZED STEEL
HARDWARE RESTRICTIONS - FOR DOOR LEAVES GREATER THAN 4' WIDE OR 10' TALL	
HINGES	FULL MORTISE HINGES MEETING REQUIREMENTS OF BHMA A156.1 AMERICAN NATIONAL STANDARD FOR BUTTS AND HINGES FOR STANDARD WEIGHT, GRADE 1 HINGES. FIVE HINGES REQUIRED FOR DOORS OVER 10' TALL.
ACTIVE DOOR	SINGLE POINT, MORTISE TYPE ONLY
INACTIVE DOOR	FLUSH OR SURFACE BOLTS, AUTOMATIC TYPE, MANUAL TYPE OR SELF-LATCHING WITH 3/4 IN. MINIMUM THROW AUXILISRY LATCHES FOR SINGLES GREATER THAN 4'0" WIDE AND PAIRS GREATER THAN 8'0" WIDE. UL LISTED AUZILIARY FIRE LATCH; MORTISE TYPE FUSIBLE LINK "POPPER" INSTALLED IN THE TOP OF THE ACTIVE LEAF AT THE LOCK STILE, ENGAGING INTO FRAME HEAD RABBET. REINFORCE PER TEMPLATE.
CLOSER	12 GAUGE REINFORCEMENT REQUIRED
FLUSH BOLT	7 GA. (4.5) MIN. REINFORCEMENT REQUIRED

90 MINUTE MAXIMUM RATING 3 SIDED FRAMES DOUBLE EGERESS ALLOWED INTERTEK (WARNOCK HERSEY) LISTING ONLY	
MAXIMUM FRAME SIZES	
MASONRY/DRYWALL	SINGLE: 5'0" (1524) W X 10'0" (3048) H PAIRS: 10'0" (3048)W X 10'0" (3048) H
WALL CONSTRUCTION	MAXIMUM 90 MIN. RATED DRYWALL OR MASONRY
FRAME CORNER CONSTRUCTION	FACE WELD, CONTINUOUS WELD, FIELD SPLICE INSTALLED IN ACCORDANCE WITH RECOMMENDED PRACTICES PRESENTED IN NFPA 80 AND NAAMM STANDARD HMMA 850-0.
ANCHORS	ANY LISTED MASONRY TYPE OR WELD IN DRYWALL TYPE ANCHORS MAY BE USED IN THIS FRAME (COMPRESSION ANCHORS NOT ALLOWED)
MATERIAL	16 GA. (1.4) MIN. 12 GA. (2.4) MAX. COLD ROLLED OR GALVANIZED STEEL
HARDWARE RESTRICTIONS - ANY LABEL APPROVED HARDWARE MAY BE USED THAT IS RATED FOR USE UP TO 10' IN HEIGHT	

90 MINUTE MAXIMUM RATING 5'0" X 10'0" SINGLES 10'0" X 10'0" PAIRS INTERTEK (WARNOCK HERSEY) LISTING ONLY	
DOOR TYPE	747 OR 747 (450° TEMP RISE)
DOOR GAUGE	16 GA. (1.4) OR 14 GA. (1.9) ON 747 DOOR, 16 GA. (1.4) ONLY ON 747 TEMP. RISE DOOR
FACE TYPE	FLUSH OR GLAZED USING ANY WH CLASSIFIED GLAZING MATERIAL. CLASSIFIED FOR USE IN HOLLOW METAL FIRE DOORS.
RIB GAUGE	22 GA. (.75) OR 20 GA. (.9) ON 747 DOOR, 22 GA. (.95) ONLY ON 747 TEMP. RISE DOOR
RIB SPACING	6" ON CENTER MAX.
HINGE CHANNEL	12 GA. (2.6)
LOCK CHANNEL	14 GA. (1.9)
EDGE WELDING	S, N, OR T
END CHANNEL	16 GA. (1.4)
HARDWARE - ANY LABEL APPROVED HARDWARE MAY BE USED THAT IS RATED FOR USE UP TO 10' IN HEIGHT	

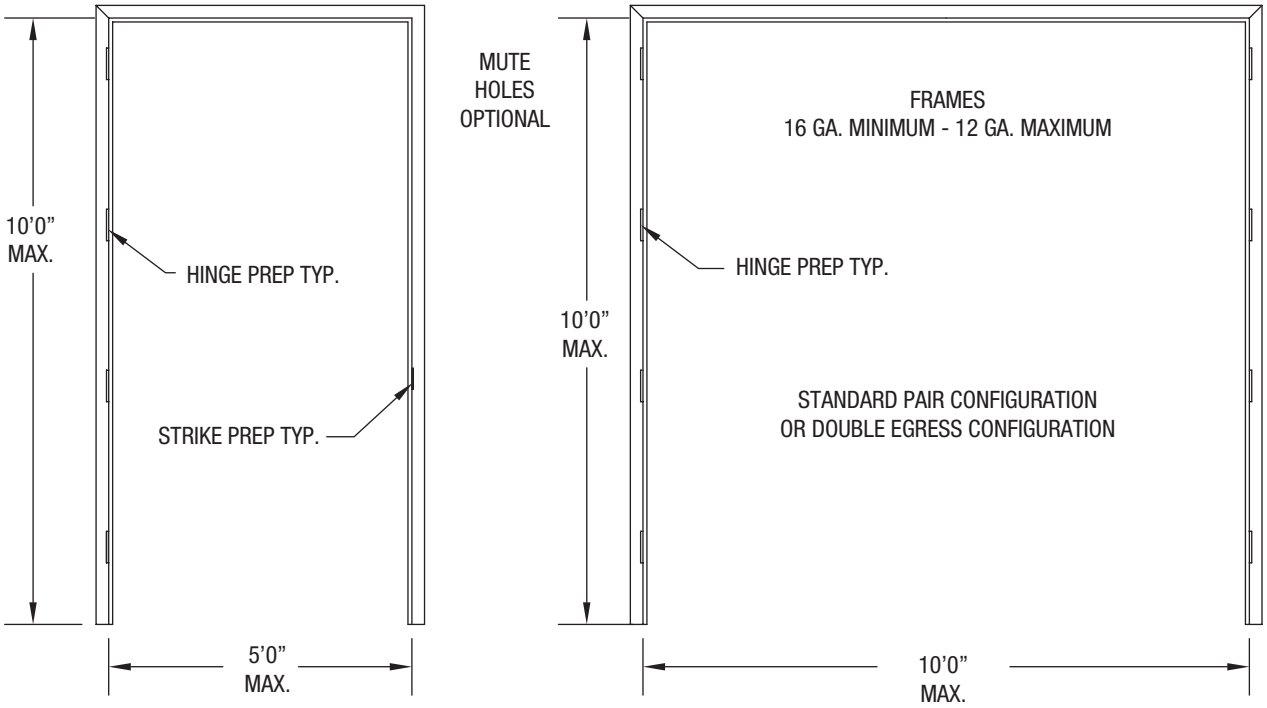
Oversize Fire Door and Frame (WH)

Fire Rated Products

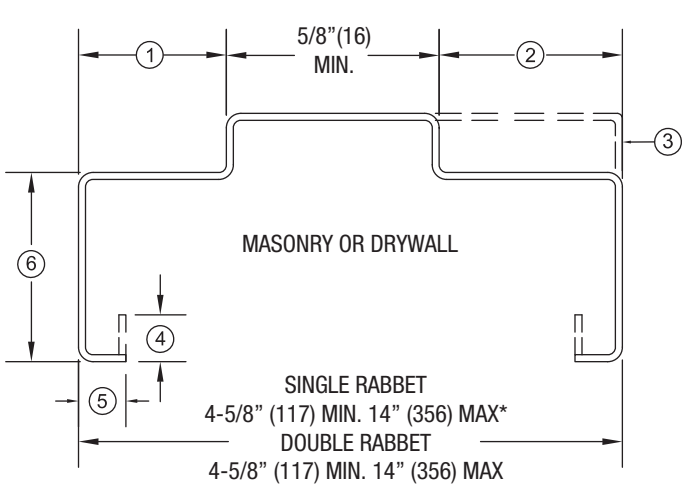
CURRIES
ASSA ABLOY

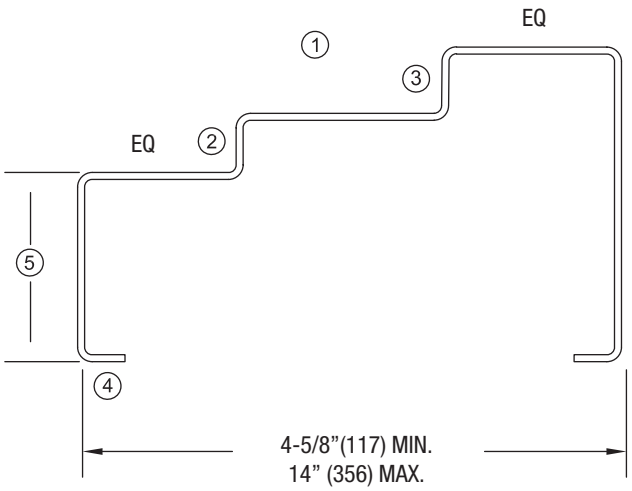
February, 2015

90 MINUTE MAXIMUM RATING
3 SIDED FRAMES
DOUBLE EGRESS ALLOWED
INTERTEK (WARNOCK HERSEY) LISTING ONLY



NOTE: 10'0" X 10'0" DOUBLE EGRESS FRAMES CAN ONLY BE LABELED TO 20 MINUTE MAXIMUM RATING. 8'0" x 10'0" MAXIMUM AT RATINGS ABOVE 20 MINUTE.





GENERAL NOTES:

1. TO SUIT DOOR THICKNESS
2. VARIES
3. PROFILE VARIABLE
4. 3/8" (10) MIN.
5. 3/4" (19) MAX.*
5. 3/8" (10) MIN.
5. 3/4" (19) MAX.
6. 1-1/4" (32) MIN.
6. 4" (102) MAX. JAMB
6. 4" (102) MAX. HEAD

GENERAL NOTES:

1. TO SUIT DOOR THICKNESS
2. PROFILE VARIABLE
3. PROFILE VARIABLE
4. 3/8" (10) MIN. 3/4" (19) MAX.
5. 1-3/8" (35) MIN. 4" (102) MAX.

* LARGER THAN 3/8" MAY REQUIRE #5 DIMENSION TO INCREASE

60 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES)FURNISHED. E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD OVER GLAZING BEAD SCREW.

10. GLASS: VETROTECH CONTRAFLAM 60.

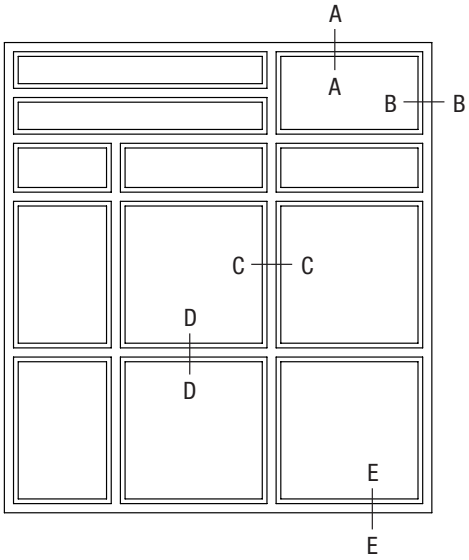
11. MAXIMUM VISIBLE GLASS 94-13/16" X 94-13/16" NOT TO EXCEED 3283 SQ. IN.

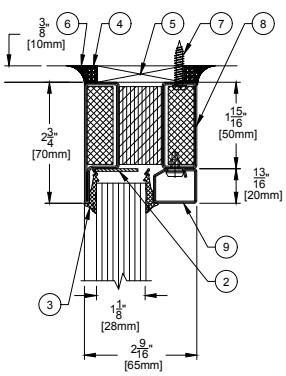
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

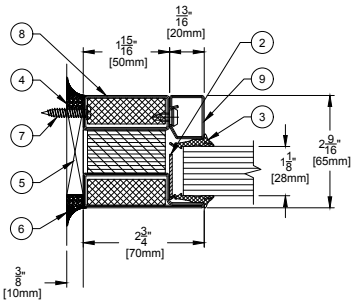
14. CENTER GLAZED FRAMES ALSO AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

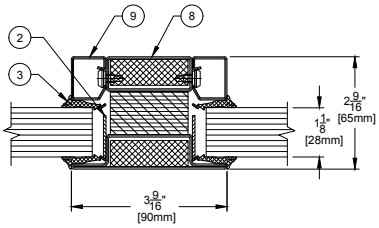




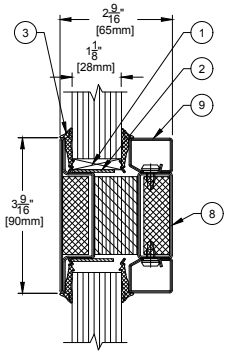
A HEAD DETAIL
6"=1'-0"



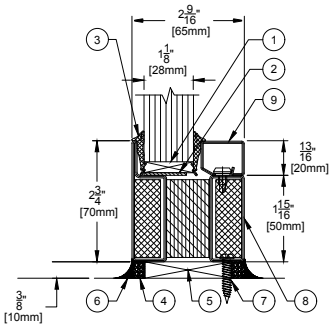
B JAMB DETAIL
6"=1'-0"



C VERT. MULLION
6"=1'-0"



D HORIZ. MULLION
6"=1'-0"



E SILL DETAIL
6"=1'-0"

CURRIES
ASSA ABLOY

September, 2017

60 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES)FURNISHED. E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM STRUCTURE 60.

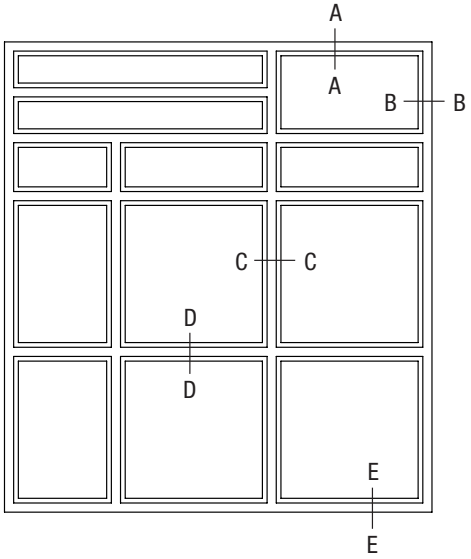
11. MAXIMUM VISIBLE GLASS 138-1/2" X 138-1/2"
    NOT TO EXCEED 7574 SQ. IN.

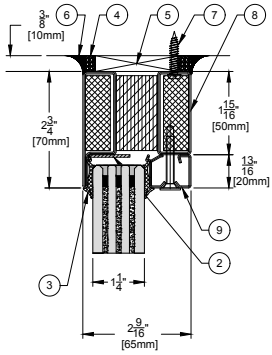
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

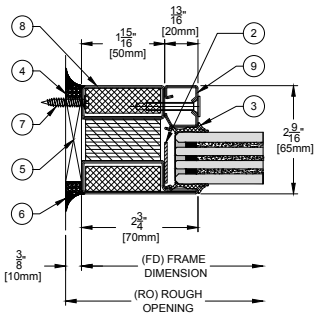
14. CENTER GLAZED FRAMES NOT AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

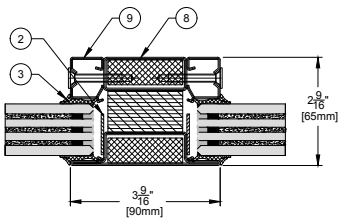




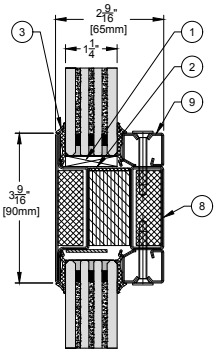
A HEAD DETAIL 6"=1'-0"



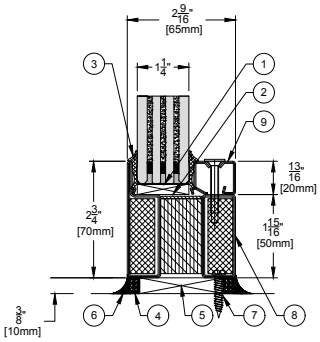
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"



D HORIZ. MULLION 6"=1'-0"



E SILL DETAIL 6"=1'-0"

90 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES) FURNISHED. E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM 90.

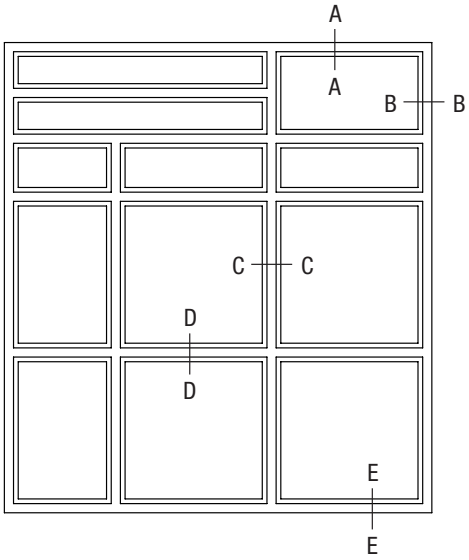
11. MAXIMUM VISIBLE GLASS 94-13/16" X 94-13/16" NOT TO EXCEED 4435 SQ. IN.

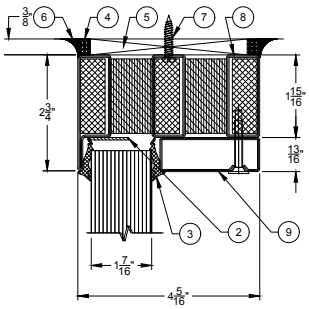
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

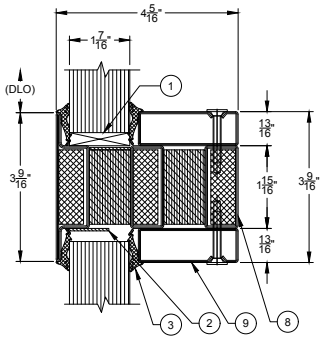
14. CENTER GLAZED FRAMES ALSO AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

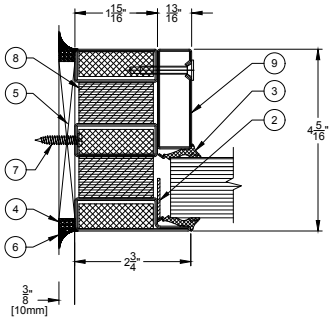




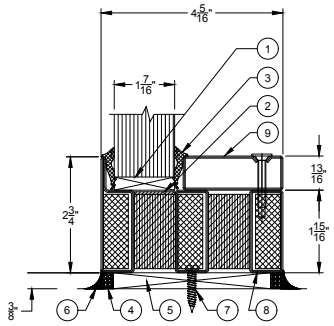
A HEAD DETAIL 6"=1'-0"



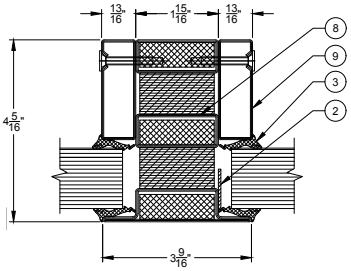
B HORIZ. MULLION 6"=1'-0"



C JAMB DETAIL 6"=1'-0"



D SILL DETAIL 6"=1'-0"



E VERT. MULLION 6"=1'-0"

Fire Window Frame

Fire Resistive Products

CURRIES
ASSA ABLOY

September, 2017

120 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS.

3. *GLAZING GASKET (BOTH SIDES)FURNISHED. E119 FRAME INSTALLED BY OTHERS.

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM 120.

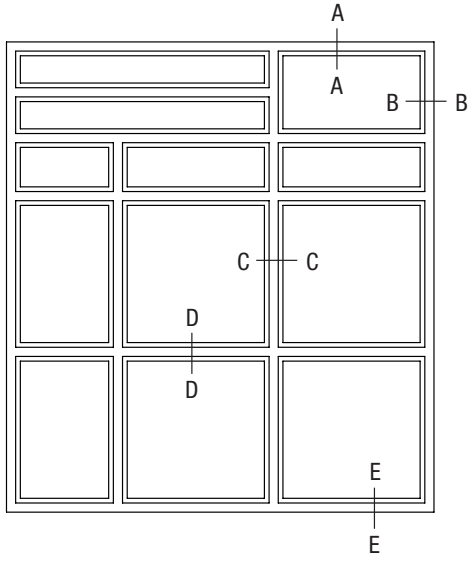
11. MAXIMUM VISIBLE GLASS 94-5/8" X 94-5/8"
    NOT TO EXCEED 4435 SQ. IN.

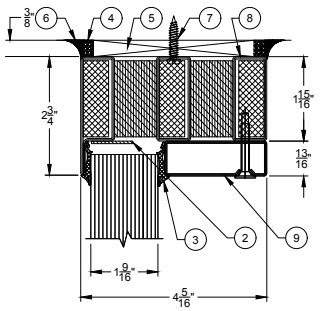
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

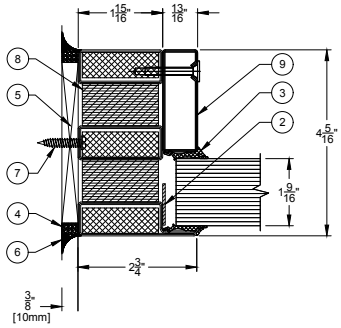
14. CENTER GLAZED FRAMES AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

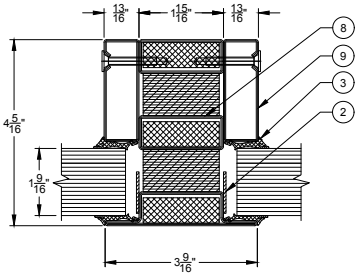




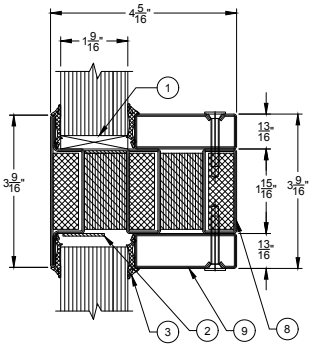
A HEAD DETAIL 6"=1'-0"



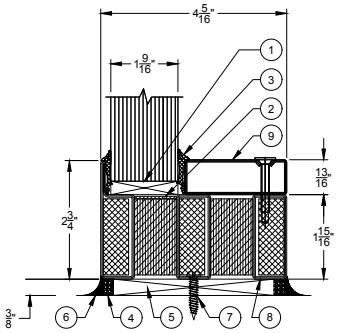
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"



D HORIZ. MULLION 6"=1'-0"



E SILL DETAIL 6"=1'-0"

120 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS.

3. *GLAZING GASKET (BOTH SIDES)FURNISHED. E119 FRAME INSTALLED BY OTHERS.

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM STRUCTURE 120.

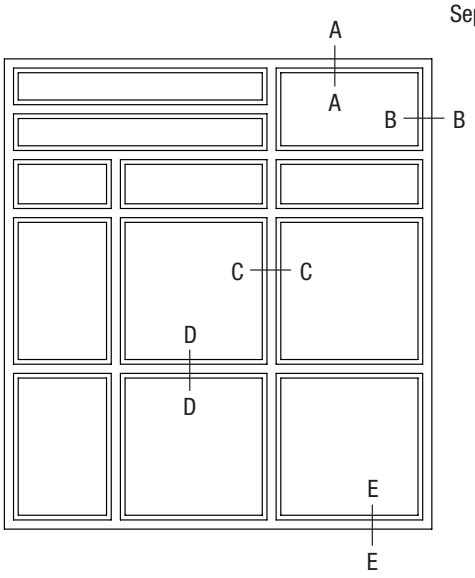
11. MAXIMUM VISIBLE GLASS 126" X 126"
    NOT TO EXCEED 4536 SQ. IN.

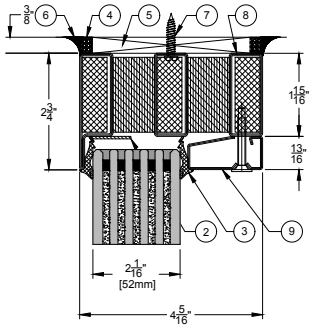
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

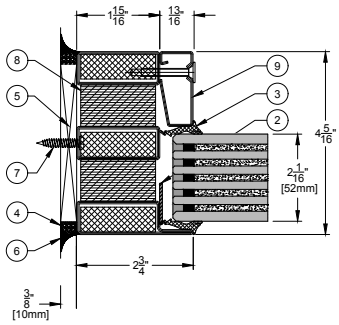
14. CENTER GLAZED FRAMES AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

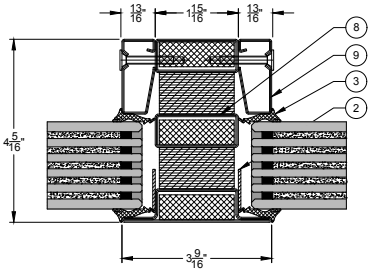




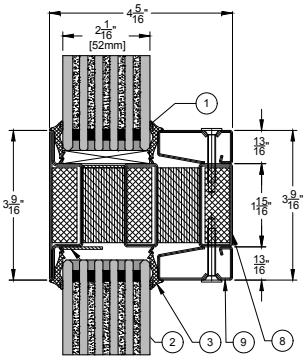
A HEAD DETAIL 6"=1'-0"



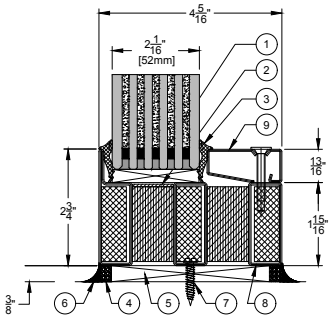
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"



D HORIZ. MULLION 6"=1'-0"



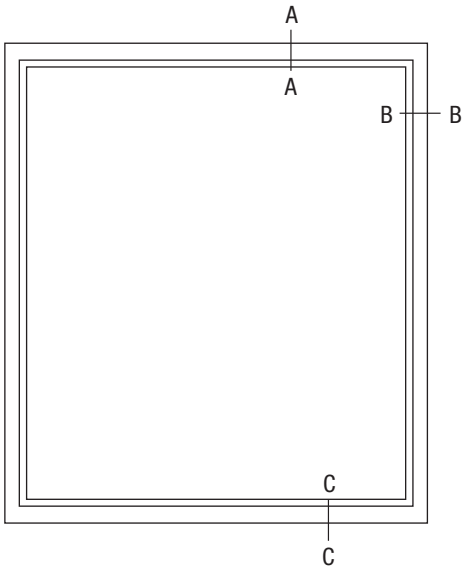
E SILL DETAIL 6"=1'-0"

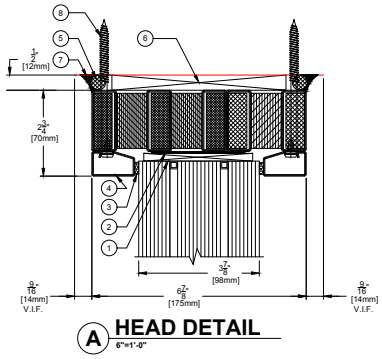
September, 2017

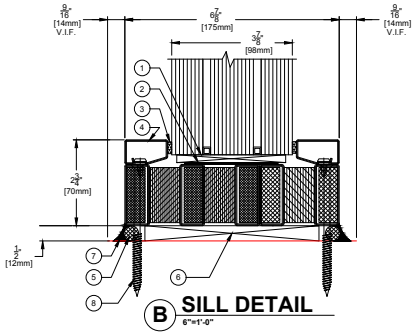
180 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

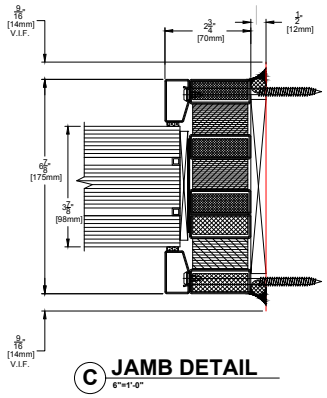
NOTES:

1. SETTING BLOCK (SILL ONLY) ALTERNATES BY OTHERS:
   A. CALCIUM SILICATE
2. CONTINUOUS FLEXPAN 200 AROUND PERIMETER (3.750" X .188") FURNISHED WITH E119 FRAME.
3. GLAZING TAPE (.125" X .750")
4. GLAZING SNAP ON BEADS (1.38" X .750" X .094")
5. FIRE RATED SEAL ALTERNATES BY OTHERS:
   A. WELL PACKED ROCKWOOL
6. SHIM AS REQUIRED
7. FINISH SEALANT BY OTHERS
8. ANCHOR SCREWS SUITABLE FOR GROUT FILLED CMU BY OTHERS (TYPE AND SIZE TBD). OFFSET ACCESS HOLE FROM BEAD SCREW LOCATIONS AS NECESSARY
9. GLASS: VETROTECH CONTRAFLAM 180
10. MAXIMUM VISIBLE GLASS 48” X 48”
    NOT TO EXCEED 2304 SQ. IN.
11. MAXIMUM OVERSIZE **IS** LIMITED TO 52" X 52"









60 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS.

3. *GLAZING GASKET (BOTH SIDES) FURNISHED. W/E1 FRAME INSTALLED BY OTHERS.

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD OVER GLAZING BEAD SCREW.

10. GLASS: VETROTECH CONTRAFLAM 60.

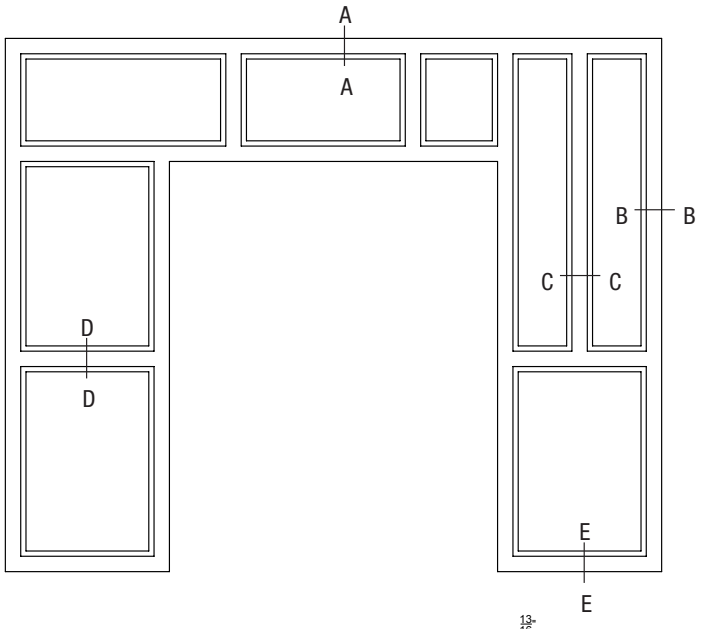
11. MAXIMUM VISIBLE GLASS 94-13/16" X 94-13/16" NOT TO EXCEED 3283 SQ. IN.

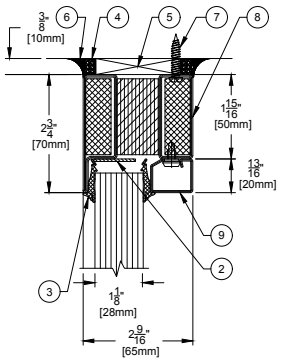
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

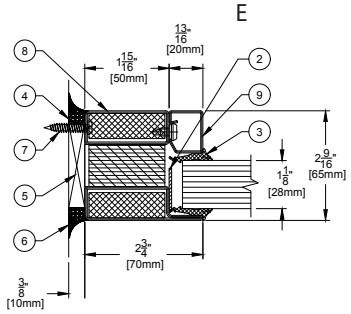
14. CENTER GLAZED FRAMES AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

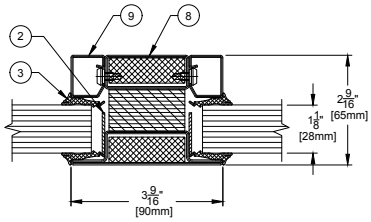




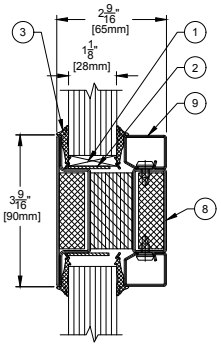
A HEAD DETAIL 6"=1'-0"



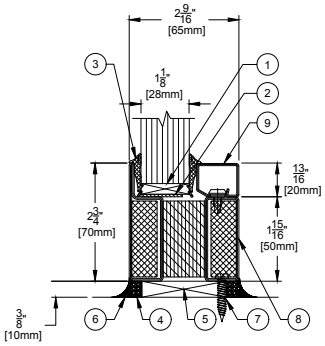
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"



D HORIZ. MULLION 6"=1'-0"



E SILL DETAIL 6"=1'-0"

Transom/Sidelight Frame

Fire Resistive Products

CURRIES
ASSA ABLOY

September, 2017

60 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS.

3. *GLAZING GASKET (BOTH SIDES) FURNISHED. E119 FRAME INSTALLED BY OTHERS.

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM STRUCTURE 60.

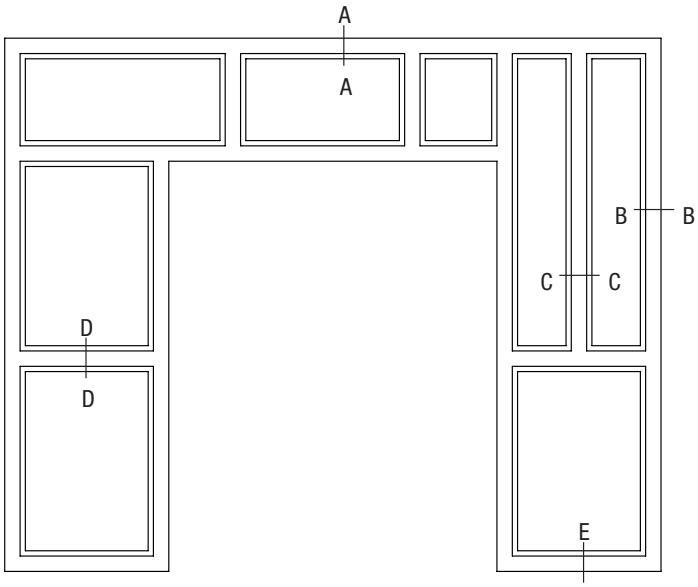
11. MAXIMUM VISIBLE GLASS 138-1/2" X 138-1/2"
    NOT TO EXCEED 7574 SQ. IN.

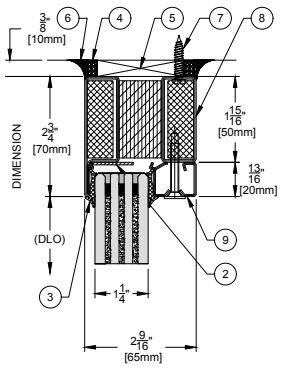
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

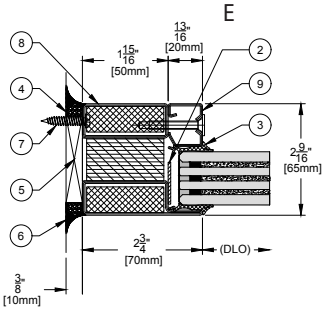
14. CENTER GLAZED FRAMES **NOT** AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

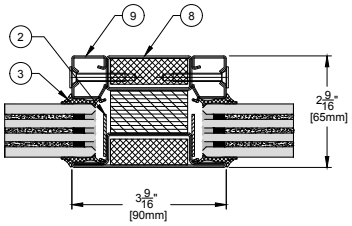




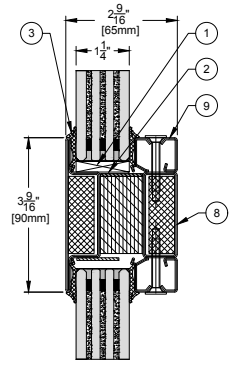
A HEAD DETAIL 6"=1'-0"



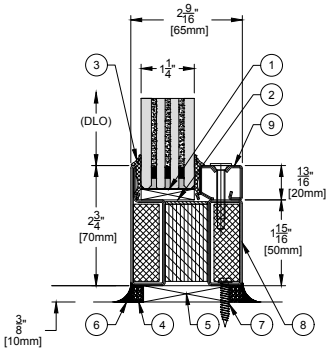
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"

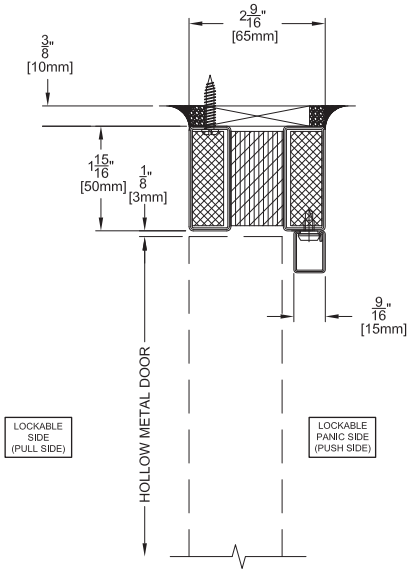


D HORIZ. MULLION 6"=1'-0"

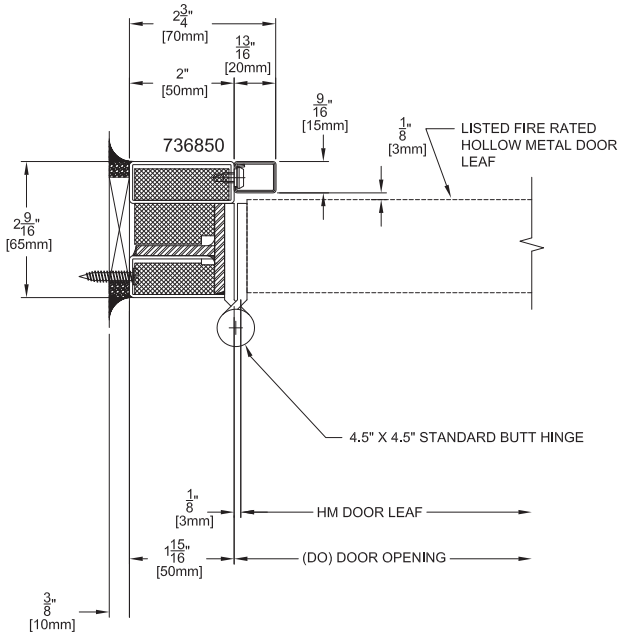


E SILL DETAIL 6"=1'-0"

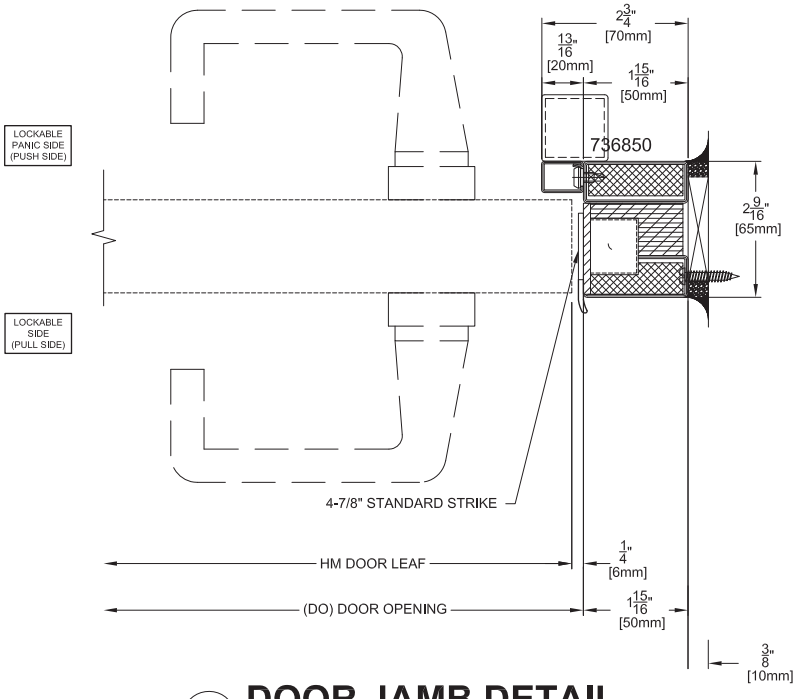
60 MINUTE MAXIMUM RATING
TYPICAL DOOR INSTALLATION DETAIL E119 FRAME WITH VETROTECH CONTRAFLAM 60



A DOOR HEADER DETAIL
SCALE: 6"= 1'-0"



B DOOR JAMB DETAIL
6"=1'-0"



C DOOR JAMB DETAIL
6"=1'-0"

Transom/Sidelight Frame

Fire Resistive Products

CURRIES
ASSA ABLOY

September, 2017

90 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES) FURNISHED. E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM 90.

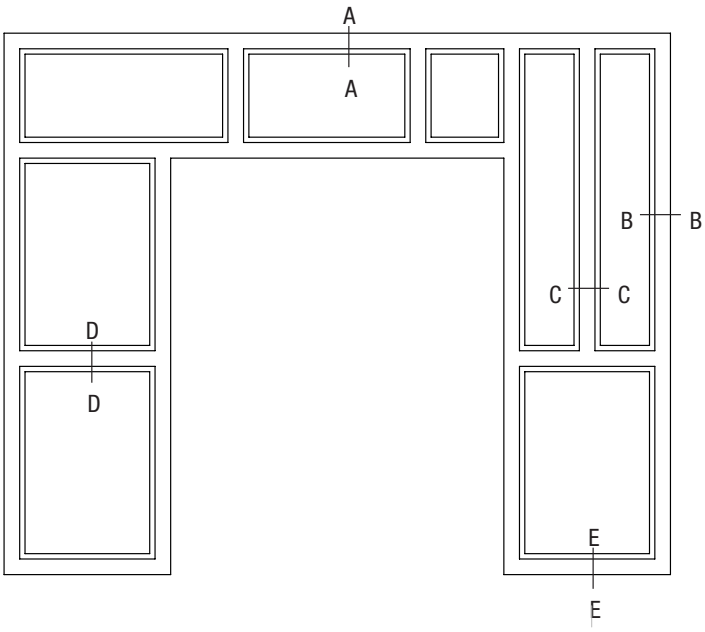
11. MAXIMUM VISIBLE GLASS 94-13/16" X 94-13/16" NOT TO EXCEED 4435 SQ. IN.

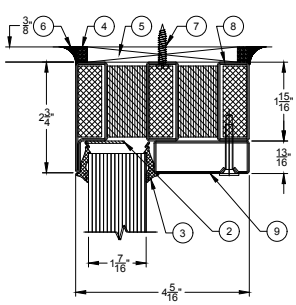
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

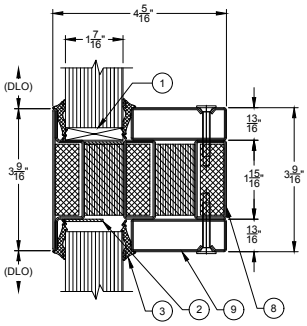
14. CENTER GLAZED FRAMES ALSO AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

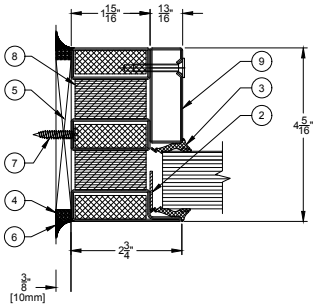




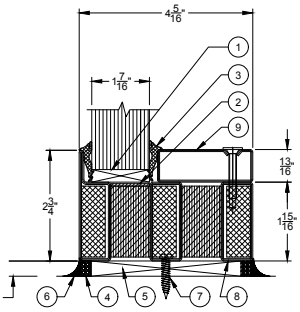
A HEAD DETAIL 6"=1'-0"



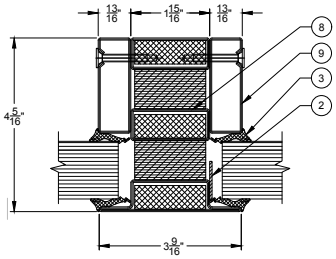
B HORIZ. MULLION 6"=1'-0"



C JAMB DETAIL 6"=1'-0"



D SILL DETAIL 6"=1'-0"



E VERT. MULLION 6"=1'-0"

September, 2017

120 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED. E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES) FURNISHED. E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM 120.

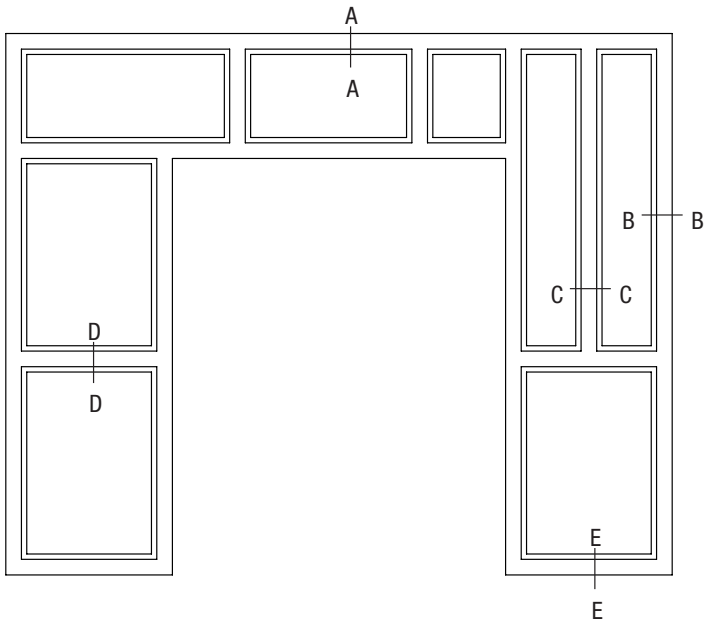
11. MAXIMUM VISIBLE GLASS 94-5/8" X 94-5/8"
    NOT TO EXCEED 4435 SQ. IN.

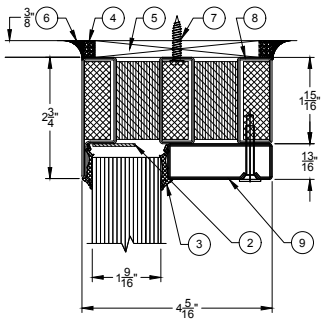
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

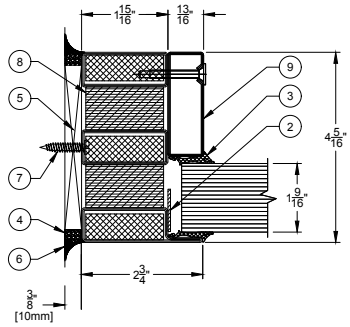
14. CENTER GLAZED FRAMES ALSO AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

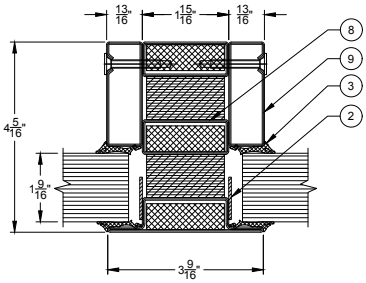




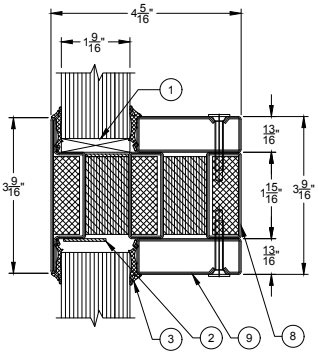
A HEAD DETAIL 6"=1'-0"



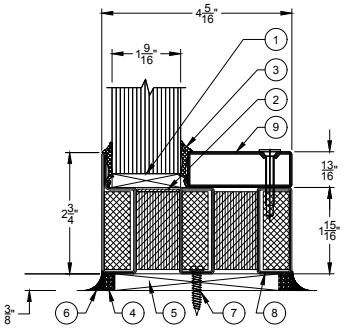
B JAMB DETAIL 6"=1'-0"



C VERT. MULLION 6"=1'-0"



D HORIZ. MULLION 6"=1'-0"



E SILL DETAIL 6"=1'-0"

Transom/Sidelight Frame

Fire Resistive Products

September, 2017

120 MINUTE MAXIMUM RATING
FIRE RESISTIVE E119 FRAME ASSEMBLY

NOTES:

1. SETTING BLOCK (SILL ONLY) BY OTHERS
   ALTERNATES BY OTHERS:
   A. HARDWOOD
   B. CALCIUM SILICATE
   C. NEOPRENE (90 DUROMETER)

2. CONTINUOUS INTUMESCENT TAPE FURNISHED E119 FRAME INSTALLED BY OTHERS

3. *GLAZING GASKET (BOTH SIDES) FURNISHED E119 FRAME INSTALLED BY OTHERS

4. FIRE RATED SEAL IN SHIM SPACE BY OTHERS. ACCEPTABLE ALTERNATIVES: WELL PACKED ROCKWOOL, CONTINUOUS INTUMESCENT CAULKING, OR CONTINUOUS INTUMESCENT TAPE.

5. SHIMS BY OTHERS. ACCEPTABLE ALTERNATES: HARDWOOD, CALCIUM SILICATE, OR CEDAR SHINGLES.

6. FINISH SEALANT BY OTHERS

7. ANCHOR SCREWS BY OTHERS. PLACE 20" O.C. MAX. HEAD DIA. 3/8"; MAX. SHANK DIA. 1/4".

8. FIRE RATED E119 FRAME.

9. STEEL GLAZING BEAD. INSTALL IN FIELD WITH SCREWS FURNISHED.

10. GLASS: VETROTECH CONTRAFLAM STRUCTURE 120.

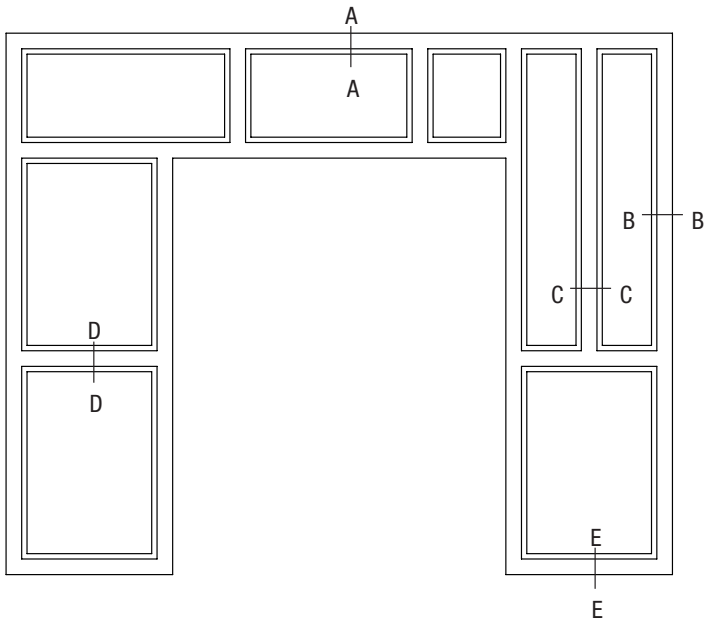
11. MAXIMUM VISIBLE GLASS 126" X 126"
    NOT TO EXCEED 4536 SQ. IN.

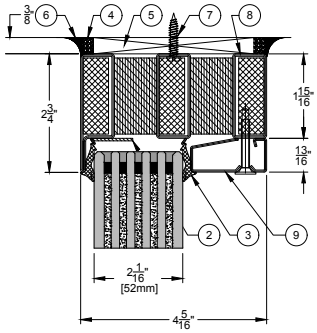
12. MAXIMUM FRAME SIZE NOT LIMITED. ASSEMBLY IS CONSIDERED A WALL.

13. PRODUCT IS NOT LOAD BEARING. ADDITIONAL BUILDING DESIGN FEATURES MAY BE REQUIRED FOR UNITS OVER 12' TALL.

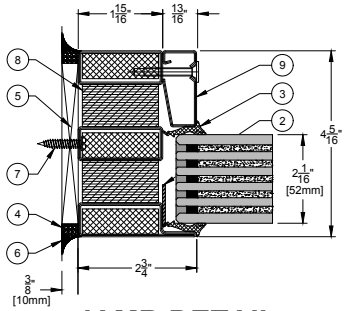
14. CENTER GLAZED FRAMES ALSO AVAILABLE.

*NOTE: DUE TO GLASS TOLERANCE, SEALANT MAY BE NEEDED TO HOLD ON VINYL GLAZING GASKET (PROVIDEDAND INSTALLED BY OTHERS).

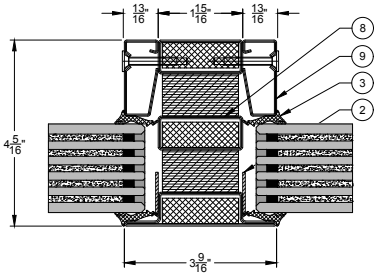




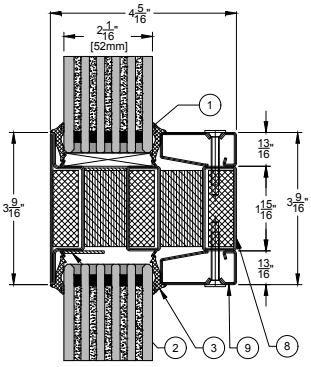
A HEAD DETAIL
6"=1'-0"



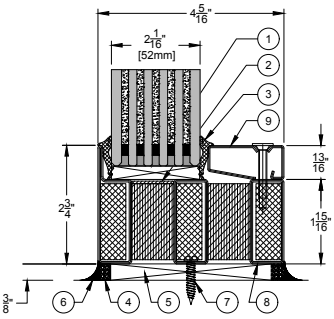
B JAMB DETAIL
6"=1'-0"



C VERT. MULLION
6"=1'-0"



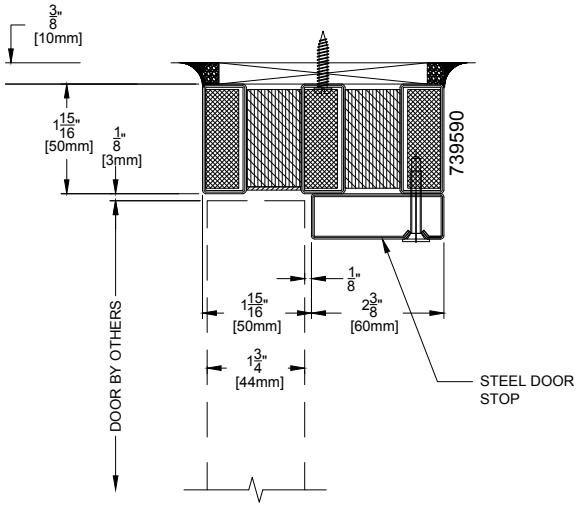
D HORIZ. MULLION
6"=1'-0"



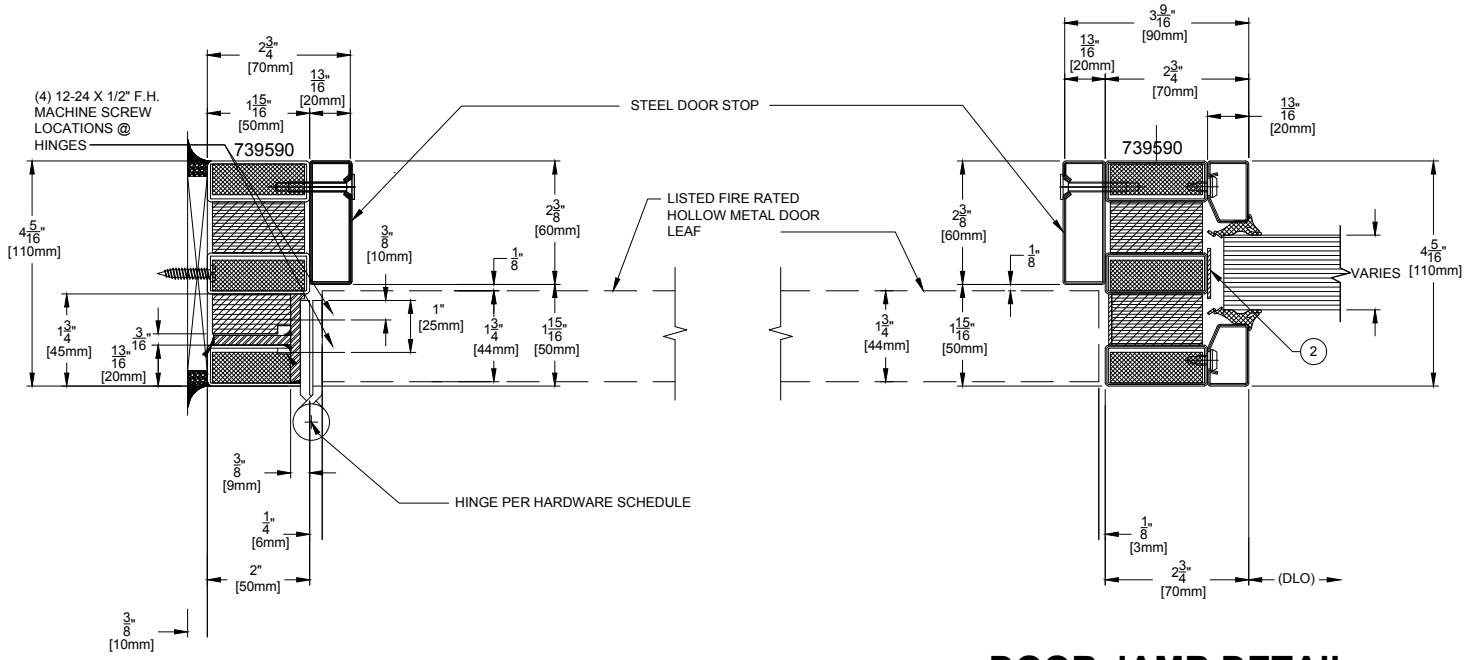
E SILL DETAIL
6"=1'-0"

September, 2017

90 and 120 MINUTE FIRE RATING
TYPICAL DOOR INSTALLATION DETAIL E119 FRAME WITH VETROTECH CONTRAFLAM 90, CONTRAFLAM 120, OR CONTRAFLAM STRUCTURE 120



DOOR HEADER DETAIL



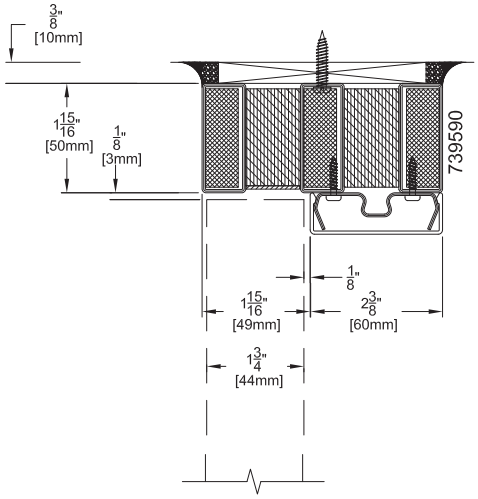
DOOR JAMB DETAIL

DOOR JAMB DETAIL

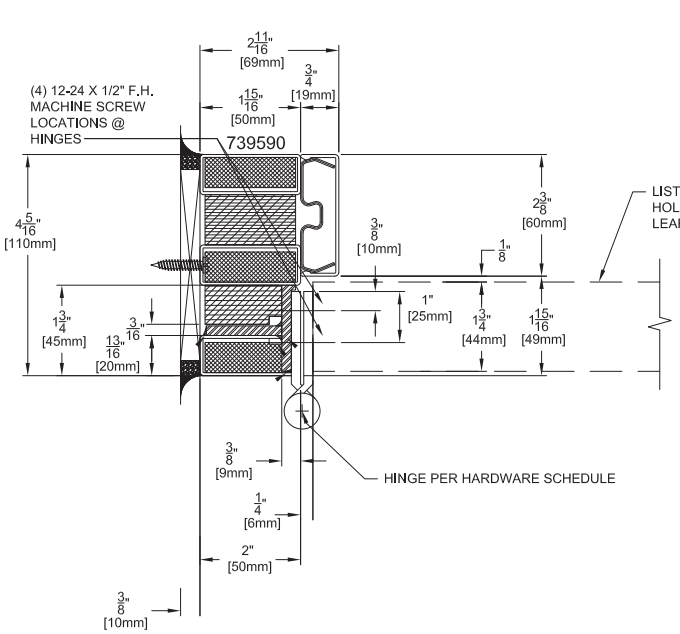
CURRIES
ASSA ABLOY

September, 2017

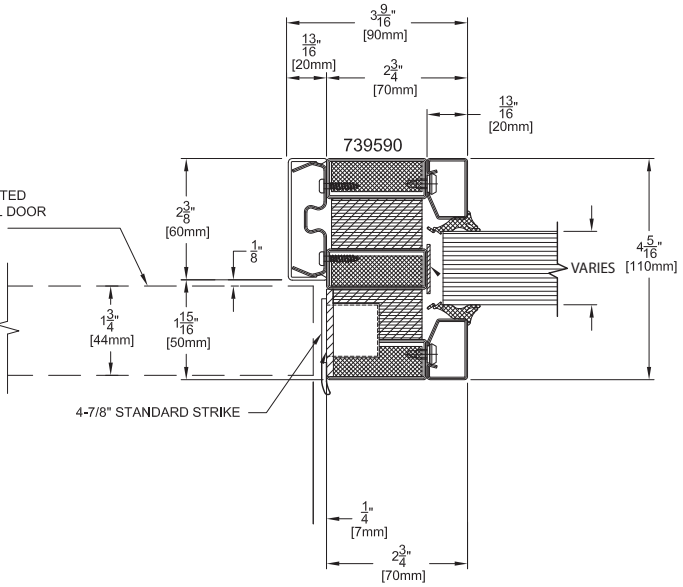
90 and 120 MINUTE FIRE RATING
TYPICAL DOOR INSTALLATION DETAIL E119 FRAME WITH VETROTECH CONTRAFLAM 90, CONTRAFLAM 120, OR CONTRAFLAM STRUCTURE 120



DOOR HEADER DETAIL



DOOR JAMB DETAIL



DOOR JAMB DETAIL

Section 081113 - Hollow Metal Frames

Manufacturer:	Curries Door Products
Construction:	Interior Single Frames: 16 Gauge CRS cold rolled steel
	Interior Double Frames: 14 Gauge CRS cold rolled steel
	All frames set-up with continuous full profile weld V3
Profile:	M Series - Standard unequal rabbet with single backbend at frame throat.
Elevation:	3F – Three sided frame
	3FV – Three sided frame with vertical mullion
Face:	2" Face Head, 2" Face Jambs
Anchors:	WSCR – Welded Steel Channel Recessed, 3 per 7' jamb, 4 per 8' & 9' jamb.
	FC-ADJ – Foot Clip Adjustable
	Additional welded anchors in head section for frames over 4' wide.
Glazing Bead:	N/A
Finish:	Standard Factory Primer
Lead-time:	8 weeks after receipt of approved submittals
Fire Labels:	Applied UL labels at fire rated doors – do not paint labels

LEED QUALIFICATIONS: MR-4 Recycled Content

American Direct Standards for Electrical Hardware Preps

Standard location for electric hinge:
Openings with 3 hinges locate at middle hinge
Openings with 4 hinges locate at 3rd hinge from top

Standard location for electric power transfer (EPT):
Openings with 3 hinges locate 6" from bottom of top hinge to top of EPT
Openings with 4 hinges locate 6" from bottom of 2nd hinge from top to top of EPT

EPT prep for Continuous Hinge locate at 40" CL AFF: Select Cont Hinges, VD EPT-10 Power Transfer ~~(There are exceptions to this, such as when the hinge manufacturer cannot accommodate) Pemko will not prep an SER at 40", but will at 40 ½", then we need to prep it at 40 ½" and make the note on the preamble and/or hardware~~. We will need to check with the hardware manufacturers prior to any frames being ordered.

Standard location for deadbolts:
Center line of lock 48" AFF

LEGEND

Hollow Metal Frame

Add On

Hd Anc 2	Welded Steel Channel Recessed 30"oc in Head
Hd Anc 3	Welded Steel Channel Recessed 30"oc in Head

Anchor

FC-ADJ	Footclip - Adjustable
WSCR	Steel Channel - Recessed (Welded)

Construction

FW	Full Welded die miter corner

Elevation Type

3F	Three sided frame
3FV	Three sided frame w/vertical mullion

Gauge

16	16 Gauge
14	14 Gauge

Head Face

2"	2" Face Head

Jamb Face

2"	2" Face Jambs

Label

L20S	UL 20 Minute (for Single Opening)
L20D	UL 20 Minute (for Double Opening)

Profile

M	Masonry

Steel Type

CR	Cold Rolled

Hollow Metal Door

Add On

UC58	Undercut Bottom of Door 5/8"
Bevel G	Hinge edge 1/8" in 2" - Lock edge 1/8" in 2"

Edge

T	Seamless edge - continuously welded

Face Type

F	Flush

Gauge

18	18 Gauge

Label

U20	UL '20' (20 Minute Fire Door)

Series

707	Polystyrene Core

Steel Type

CR	Cold rolled

Wood Door

Add On

UC34	Undercut Bottom of Door 3/4"

Construction

PC5	Particleboard Core (Edge Banded)

Face Type

F	Flush Door

Finish

257863C	Masonite Architectural Reference #257863C

Label

A20	Positive Pressure with (20 minute Intumescent Seal) Cat. A

Mfr Location

CU	Curries

Series

LD2000	Lynden Series LD2000

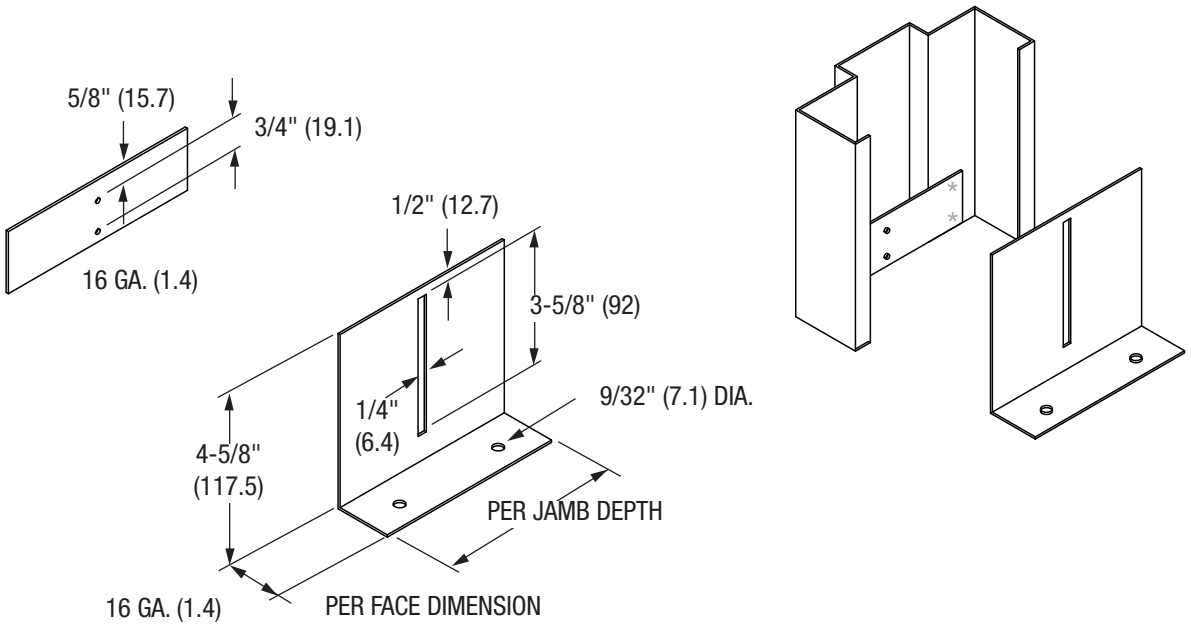
Species

SMW	Oak-Rift White (Slip Match)

L

ANCHOR PART NUMBER: P0078

FOOT CLIP SHIPPED LOOSE WITH 2-#12 SHEET METAL SCREWS

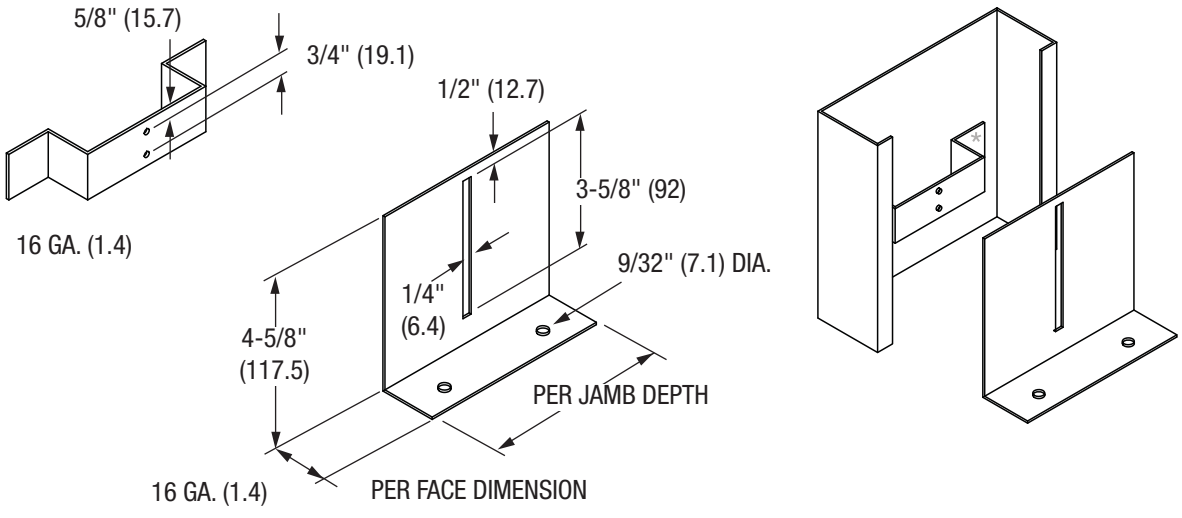


Adjustable Foot Clip - Cased Opening

L

ANCHOR PART NUMBER: P0151

FOOT CLIP SHIPPED LOOSE WITH 2-#12 SHEET METAL SCREWS



CURRIES
ASSA ABLOY

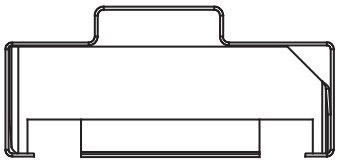
Steel Channel Anchor - Slip-In

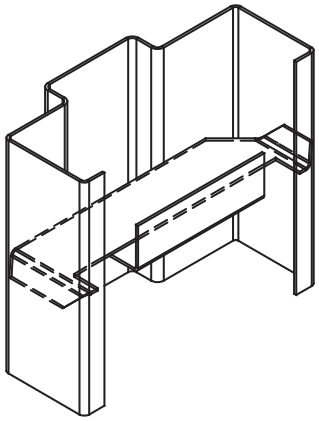
Frame Technical Data

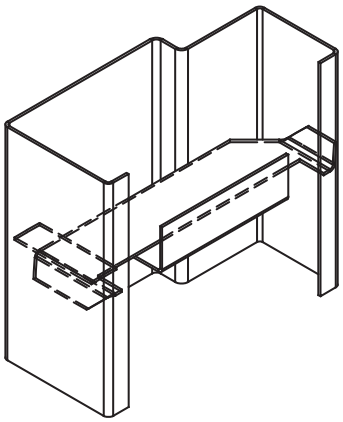
November, 2014

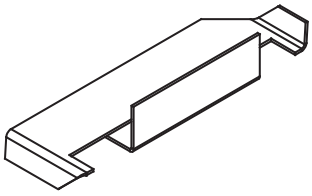
L

STANDARD (FLUSH)
ORDER CODE LOOSE: SCF



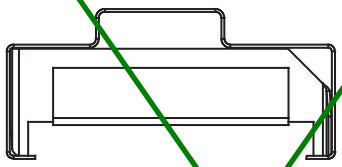




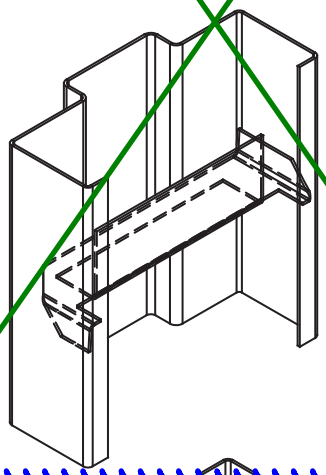


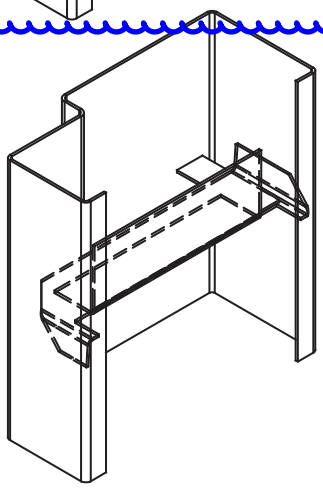
Flush clips please

OPTIONAL (RECESSED)
ORDER CODE LOOSE: SCR

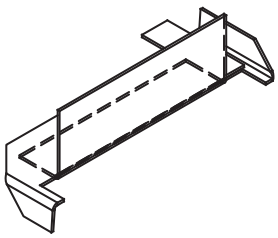


DOUBLE
RABBET





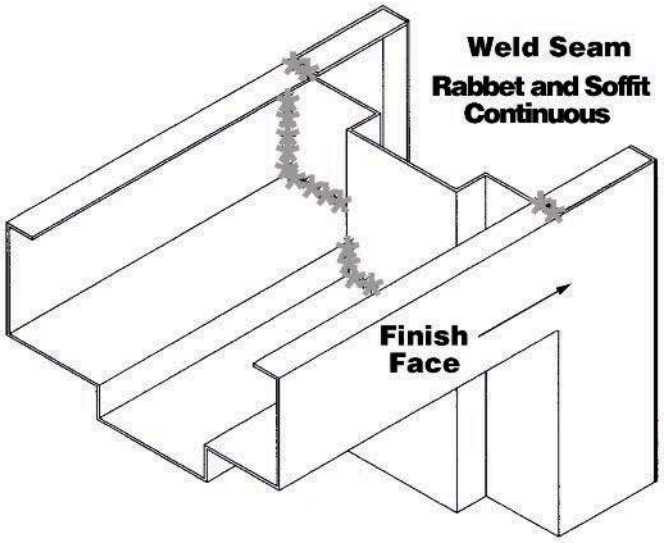
SINGLE
RABBET/DE



NOTE: MINIMUM FACE OF 1-1/4" (31.8) REQUIRED FOR THIS ANCHOR TYPE

L

WELD CODE BEW (≤3)



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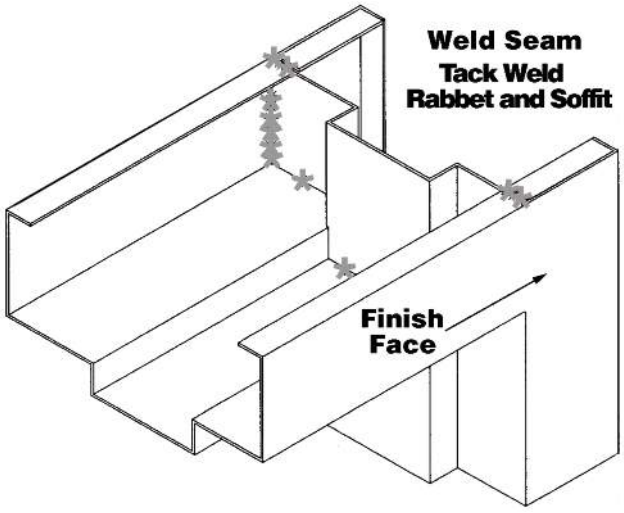

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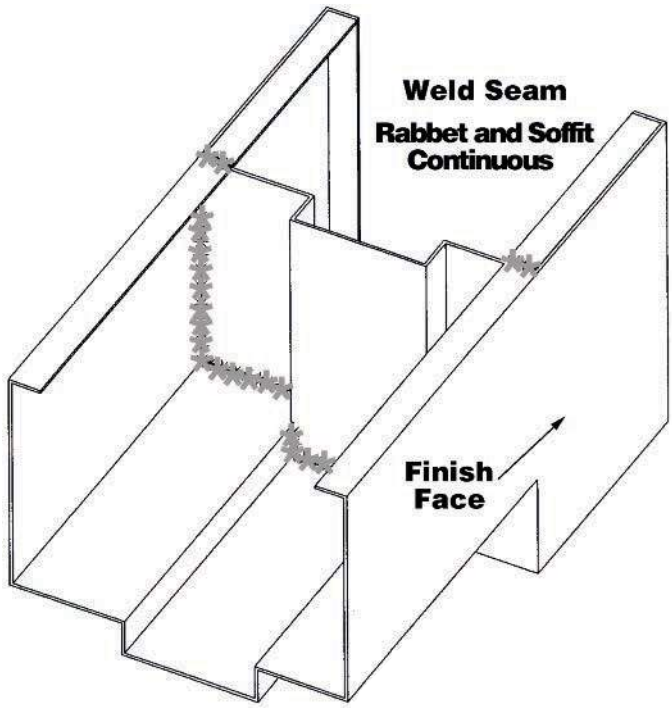
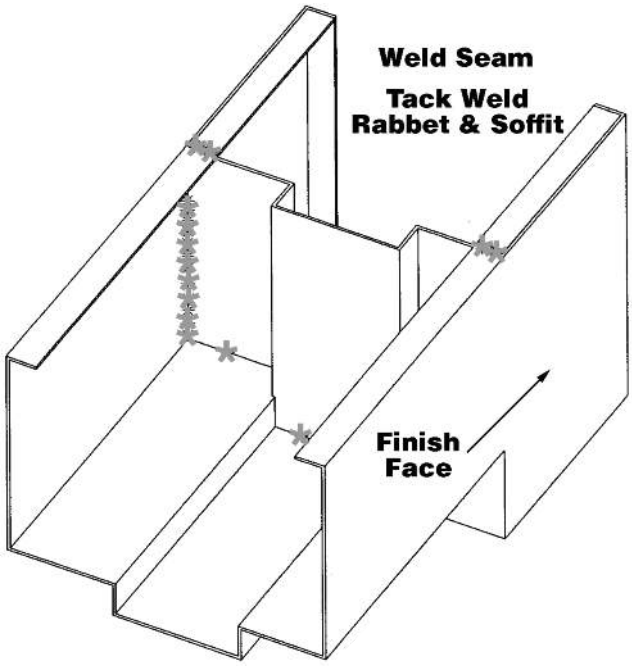
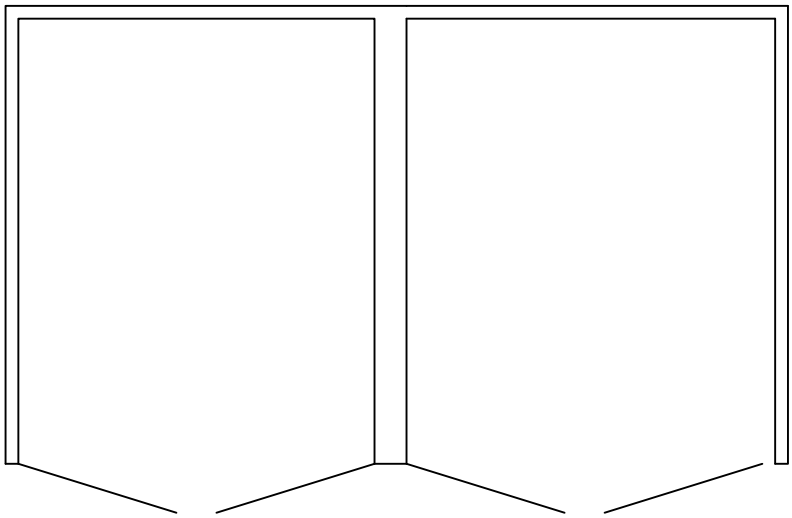
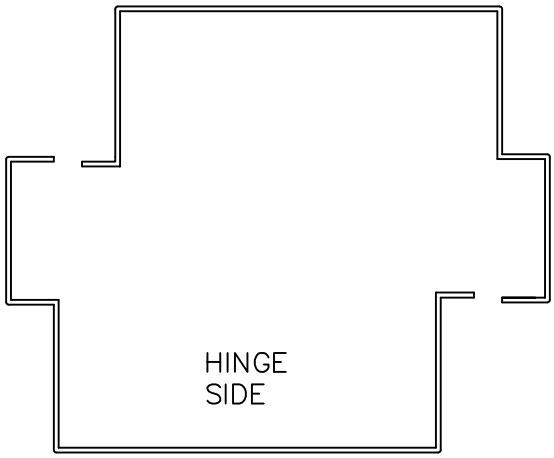


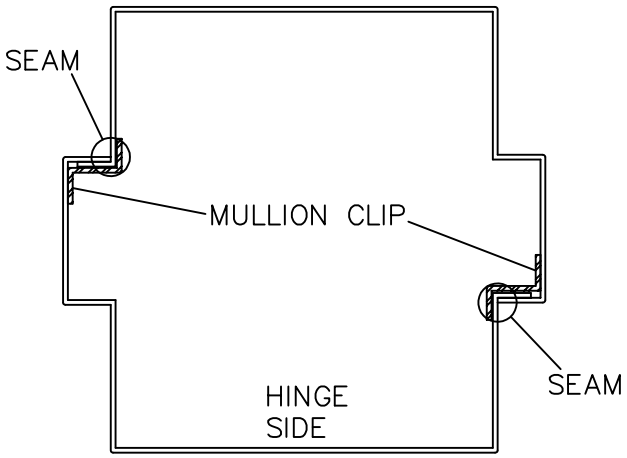
WELD CODE SBT (>3)



HINGE / HINGE MULLION







HINGE / HINGE MULLION

BENSON IND. DRAWN BY: CSP DATE: 1.10.2019 SHEET#