Product Approval
USER: Public User

FL #	FL22551-R3
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	E.S. Windows, Inc.
Address/Phone/Email	10653 NE Quaybridge Ct. Miami, FL 33138 (305) 624-7775 achamorro@eswllc.com
Authorized Signature	Jalal Farooq veronica@afceng.com
Technical Representative	Manuel Perez
Address/Phone/Email	10653 NE Quaybridge Ct. Miami, FL 33138 maph@bellsouth.net
Quality Assurance Representative	
Address/Phone/Email	
Category	Exterior Doors
Subcategory	Swinging Exterior Door Assemblies
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer ☐ Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Jalal Farooq
Florida License	PE-81223
Quality Assurance Entity	Keystone Certifications, Inc.
Quality Assurance Contract Expiration Date	07/16/2025
Validated By	JAVAD AHMAD PE, INC. ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL22551_R3_COI_SS - Certificate of Independence.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM E1886	2013
ASTM E1996	2017
TAS 201	1994
TAS 202	1994
TAS 203	1994

Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect FL22551_R3_Equiv_SS - Equiv Ltr ASTM E1886-1996.pdf

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	10/21/2020
Date Validated	10/22/2020
Date Pending FBC Approval	10/30/2020
Date Approved	12/16/2020

Summary of Products

FL #	Model, Number or Name	Description
22551.1	Series ES-EL300 Aluminum Outswing Entrance Door	Large missile impact resistant aluminum outswing entrance door.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +80/-80 **Other:** See attached drawing W16-71 for installation instructions and span vs load combinations.		**Installation Instructions** FL22551_R3_II_SS - ES-EL300 OS Door (LMI) - DWG W16-71 2020.pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL22551_R3_AE_SS - ES-EL300OS Door (LMI) -PAE 2020.pdf Created by Independent Third Party: Yes
22551.2	Series ES-EL300 Aluminum Outswing Entrance Door	Non-impact resistant aluminum outswing entrance door.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +80/-80 **Other:** See attached drawing 20-66F for installation instructions and span vs load combinations.		**Installation Instructions** FL22551_R3_II_SS - ES-EL300OS Door (NI) -DWG 20-66F (2020).pdf Verified By: Jalal Farooq PE # 81223 Created by Independent Third Party: Yes **Evaluation Reports** FL22551_R3_AE_SS - ES-EL300OS Door (NI) -PAE 2020.pdf Created by Independent Third Party: Yes

Back Next

Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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Product Approval Accepts:

Credit Card Safe securityMETRICS

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

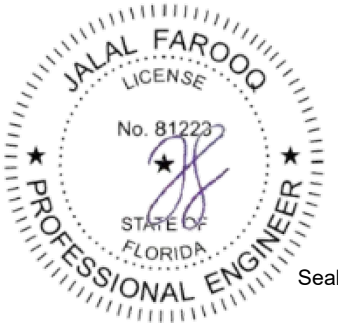
August 11, 2020

Product Approval Administrator
Building Codes & Standards Section
Department of Business & Professional Regulations
1940 North Monroe Street, Suite 90
Tallahassee, FL 32399-2100

To whom it may concern,

As the design engineer retained to prepare the product approval(s) associated with this letter as shown below on this same web page, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the referenced product(s), nor do I have or will have any financial interest with any other entity involved in the approval process of the referenced product(s).

Sincerely,



Sealed 8-11-2020

Jalal Farooq, P.E.
CFO

9360 Sunset Drive, Suite 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com

AL-FAROOQ CORPORATION
CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

August 12, 2020

Product Approval Administrator
Building Codes & Standards Section
Department of Business & Professional Regulations
1940 North Monroe Street, Suite 90
Tallahassee, FL 32399-2100

Ref: Engineer's Statement of Equivalency

To whom it may concern,

As the design engineer retained to prepare the product approval(s) associated with this letter as shown in the summary of products section below, the purpose of this letter is to state that some reference standards have changed. For the scope contained within the subject product approval, the requirements of required items within the new reference standard(s) is still met because:

- ASTM **E1886-02/05** are no longer applicable, and instead the reference standard is reduced to ASTM **E1886-12/13a**. A comparison of the older standard with the newer standard shows that they are equivalent, as relevant and applicable.
- ASTM **E1996-05/06/09** are no longer applicable, and instead the reference standards are ASTM **E1996-12a/14a/17**. A comparison of the older standard with the newer standard shows that they are equivalent, as relevant and applicable.

If you have any questions, please feel free to call our office.

Sincerely,

Sealed: 10/7/2020

Jalal Farooq, P.E.
CFO

9360 Sunset Drive, Suite 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

PRODUCT APPROVAL EVALUATION
RULE CHAPTER #61G20-3 • METHOD 1 OPTION D

FL 22551
Date: 9/22/2020

Detailed Product Description:

Manufacturer: E.S. WINDOWS, LLC.

Manufacturer Address: 3550 N.W. 49 STREET – MIAMI, FL. 33142

Model Name: SERIES ES-EL300 ALUMINUM OUTSWING ENTRANCE DOOR

Maximum Load: +80 PSF, -80 PSF (Large Missile Impact)

Installation Drawings # W16-71

This product complies with the High Velocity Hurricane Zone (HVHZ) testing requirements.

For maximum sizes, combination of span vs loads and anchor type refer to installation drawings.

Comparative analysis used _X_ Yes ___ No

Mandatory Tests (Tested in accordance with AAMA 101/I.S.2/NAFS/TAS-202)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #	Test Sealed by
ASTM E283	Air Infiltration Leakage	Blackwater Testing Inc.	06/15/2017 10/11/2018	BT-ESW-17-008 BT-ESW-18-006	Constantin Bortes, P.E.
ASTM E331 OR ASTM 547 & TAS 202	Water Penetration	Blackwater Testing Inc.	06/15/2017 10/11/2018	BT-ESW-17-008 BT-ESW-18-006	Constantin Bortes, P.E.
ASTM E330 & TAS 202	Uniform Static Air Press.	Blackwater Testing Inc.	06/15/2017 10/11/2018	BT-ESW-17-008 BT-ESW-18-006	Constantin Bortes, P.E.
AAMA 1304	Forced Entry Test	Blackwater Testing Inc.	06/15/2017 10/11/2018	BT-ESW-17-008 BT-ESW-18-006	Constantin Bortes, P.E.

Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #	Test Sealed by
FBC 1626.2 (TAS 201 & 203) ASTM E1886/1996 ANSI Z97.1	Large Missile Impact & Cyclic	Blackwater Testing Inc.	06/15/2017 10/11/2018	BT-ESW-17-008 BT-ESW-18-006	Constantin Bortes, P.E.

Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2020 Florida Building Code.

Evaluation Report Engineer:

Jalal Farooq PE # 81223
Al-Farooq Corporation EB # 3538

Sealed: 10/19/2020

9360 Sunset Drive STE 220 | Miami, FL 33173 | T: 305.264.8100 | F: 305.262.6978 | www.afceng.com | alfarooq@afceng.com

THESE DOORS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

ES-EL300
ALUMINUM OUTSWING ENTRANCE DOOR

APPROVAL APPLIES TO SINGLE (X) AND DOUBLE (XX) LEAF DOORS WITH OR WITHOUT SIDELITES.
SIDE LITES CAN BE ON ONE OR BOTH SIDES OF DOOR.

DOORS WITH STD. THRESHOLD (ES-EL300-002) APPROVED FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.
DOORS WITH ADA THRESHOLD (ES-EL300-03) NOT APPROVED FOR WATER INFILTRATION RESISTANCE.
SEE SHEET 5 FOR DETAILS.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2017 (6TH EDITION)/2020 (7TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2017/2020 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE.
LABELING TO COMPLY WITH SECTION 1709.9.2.

GLASS TYPES 'B' & 'B1' COMPLY WITH REQUIREMENTS OF ANSI Z97.1.
SAFEGUARD REQUIREMENTS TO BE VERIFIED.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.

STEP 2 FOR SINGLE (X) AND DOUBLE (XX) DOOR CAPACITIES SEE SHEETS 2 & 2.1.

STEP 3 FOR SIDELITE PANEL (O) CAPACITY SEE SHEETS 3 & 3.1.

STEP 4 FOR SIDELITE COMBINATION WITH DOOR SEE MULLION CAPACITY CHART ON SHEET 4.

STEP 5 THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

Sealed: 10/19/2020

FL #22551

JALAL FAROOQ
LICENSE
No. 81223
STATE OF FLORIDA
PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

COMP-ANL\W16-71ES

ES-EL300 ALUMINUM OUTSWING DOOR (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

no	date	by	description
A	08.15.17		UPDATED TO 2017 FBC
B	06.11.19		GENERAL REVISION
C	10.16.20		UPDATED TO 2020 FBC

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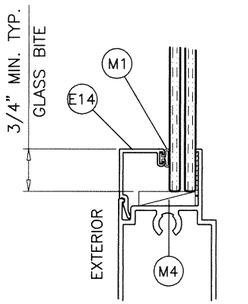
dr. by: TARIQ
chk. by:

drawing no.
W16-71



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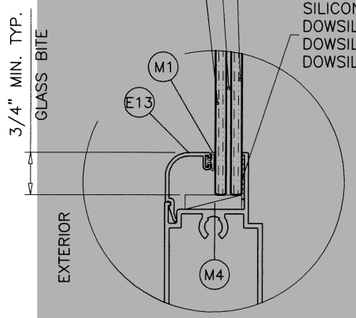
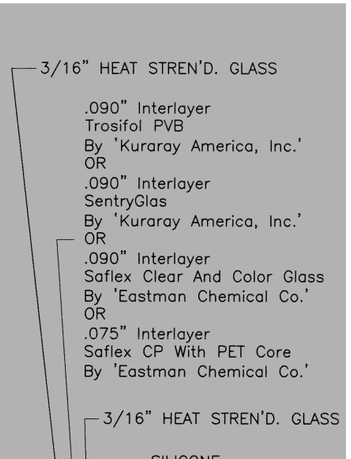
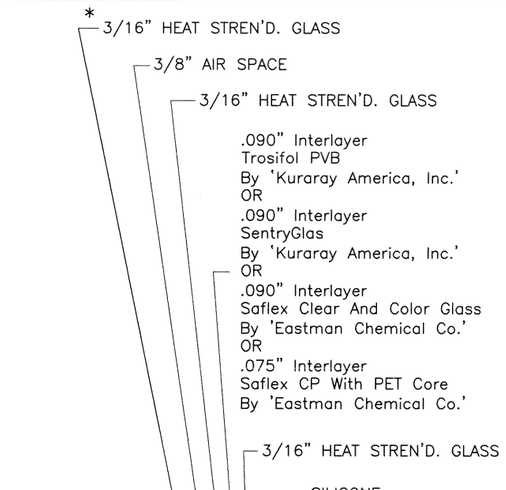




GLASS TYPE 'A'

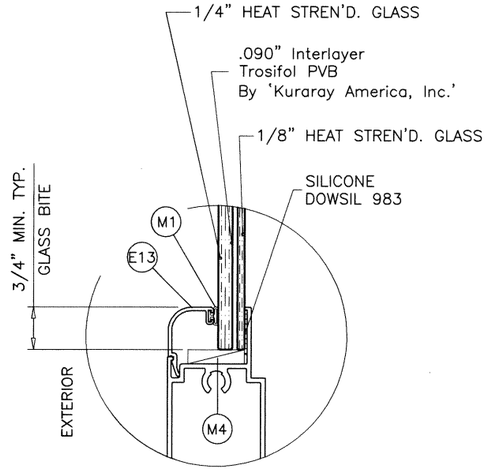
7/16" OVERALL LAM. GLASS



GLASS TYPE 'A1'

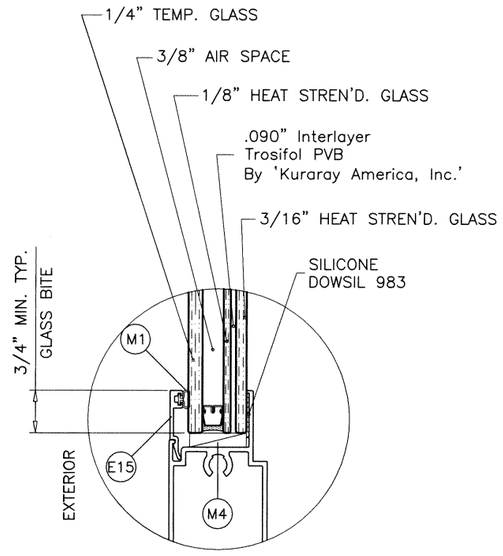
1" OVERALL INSUL. LAM. GLASS

* NOTE:
EXTERIOR LITE OF GLASS TYPE 'A1' TO BE TEMPERED FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.



GLASS TYPE 'B'

7/16" OVERALL LAM. GLASS



GLASS TYPE 'B1'

1" OVERALL INSUL. LAM. GLASS

3/8" AIR SPACE CONSISTING OF:

SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.

PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

GLAZING OPTIONS

Sealed: 10/19/2020

FL #22551

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

COMP-ANL\W16-71ES

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TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

no	date	by	description

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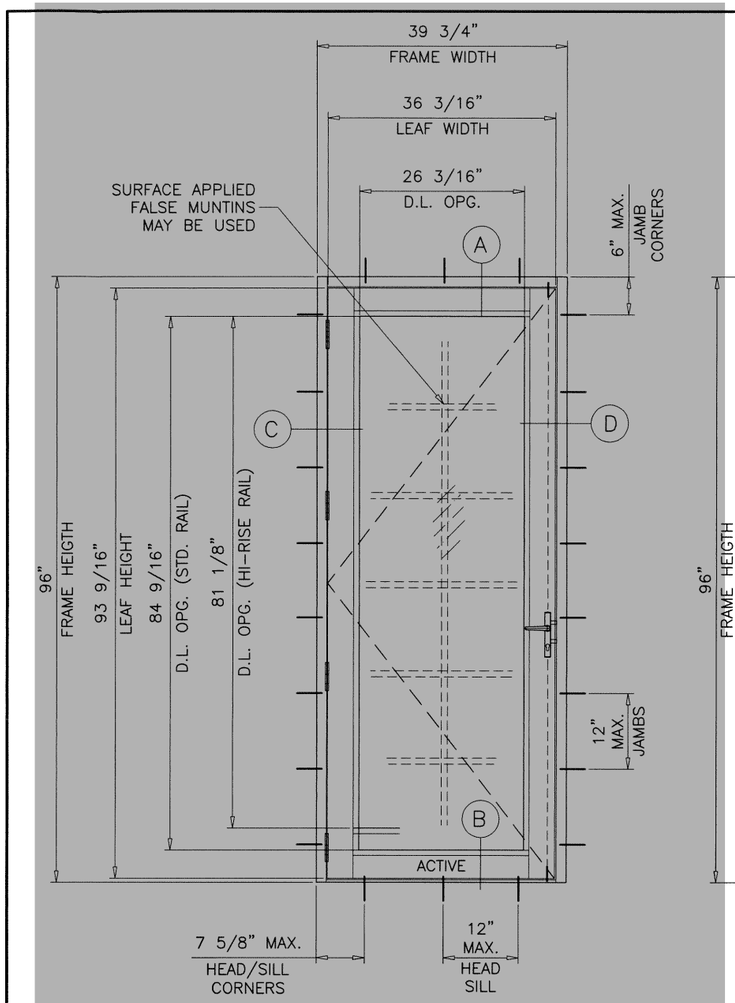
dr. by: TARIQ
chk. by:

drawing no. W16-71

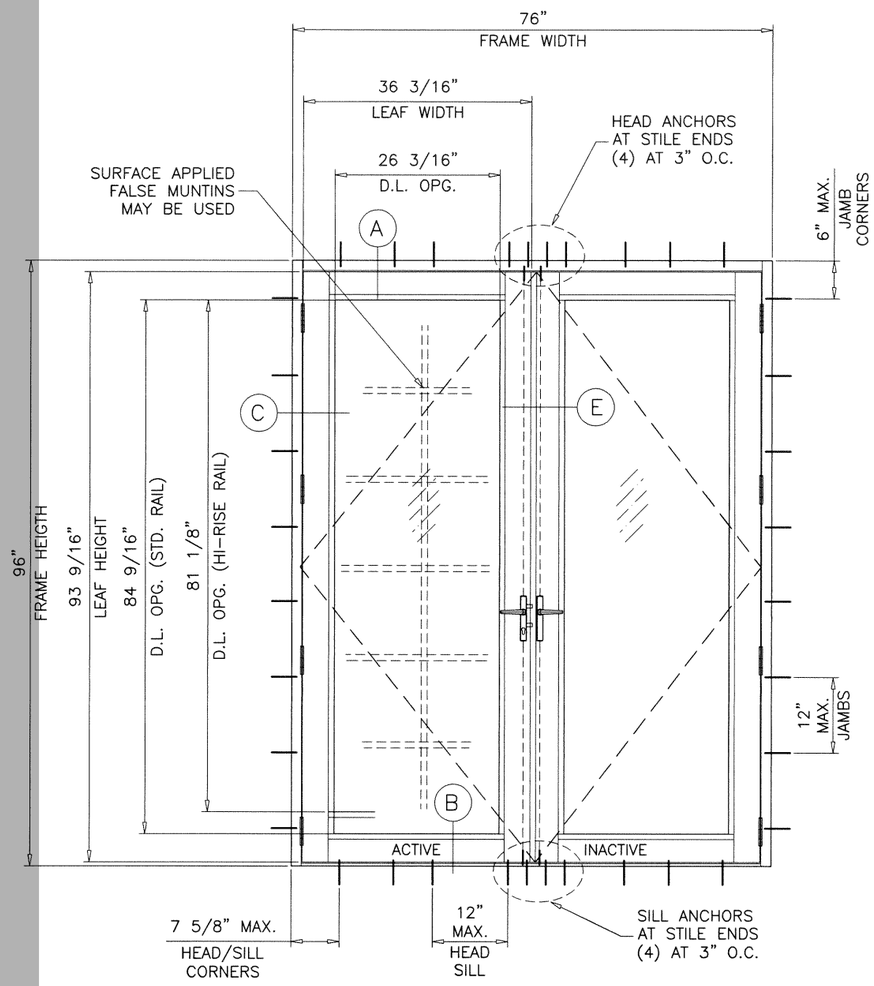
sheet 1.1 of 12



STD. SILL

TYPICAL ELEVATION

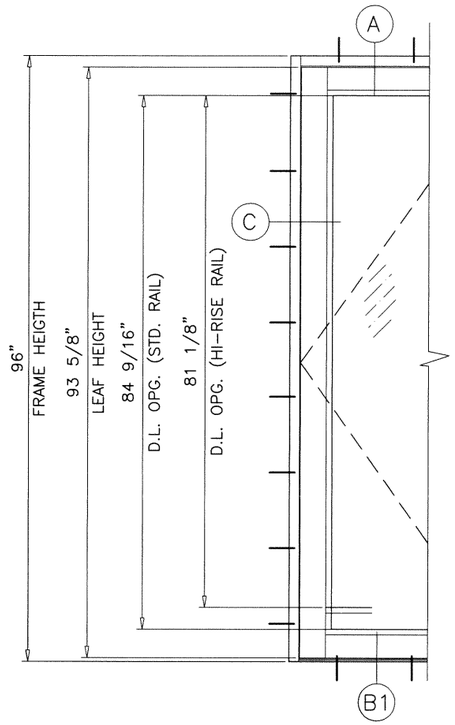
(X)



STD. SILL

TYPICAL ELEVATION

(XX)



SINGLE OR DOUBLE DOORS
WITH ADA SILL

SINGLE DOORS LOAD CAPACITY - PSF GLASS TYPES 'A', 'A1', 'B' & 'B1'						
FRAME		LEAF		THRESHOLD TYPES	EXT.(+)	INT.(-)
WIDTH	HEIGHT	WIDTH	HEIGHT			
39-3/4"	96"	36-3/16"	93-9/16"	STD.	80.0	80.0
39-3/4"	96"	36-3/16"	93-5/8"	ADA	80.0	80.0

DOUBLE DOORS LOAD CAPACITY - PSF GLASS TYPES 'A', 'A1', 'B' & 'B1'						
FRAME		LEAF		THRESHOLD TYPES	EXT.(+)	INT.(-)
WIDTH	HEIGHT	WIDTH	HEIGHT			
76"	96"	36-3/16"	93-9/16"	STD.	80.0	80.0
76"	96"	36-3/16"	93-5/8"	ADA	80.0	80.0

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219

GLASS D.L.O. FORMULAE:
D.L.O. WIDTH = FRAME WIDTH - 13.563" (X DOORS)
= (FRAME WIDTH - 23.625")/2 (XX DOORS)
D.L.O. HEIGHT = FRAME HEIGHT - 11.438" (STD. BOT. RAIL)
= FRAME HEIGHT - 14.875" (HI-RISE BOT. RAIL)

Sealed: 10/19/2020

FL #22551

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revisions:

no	date	by	description

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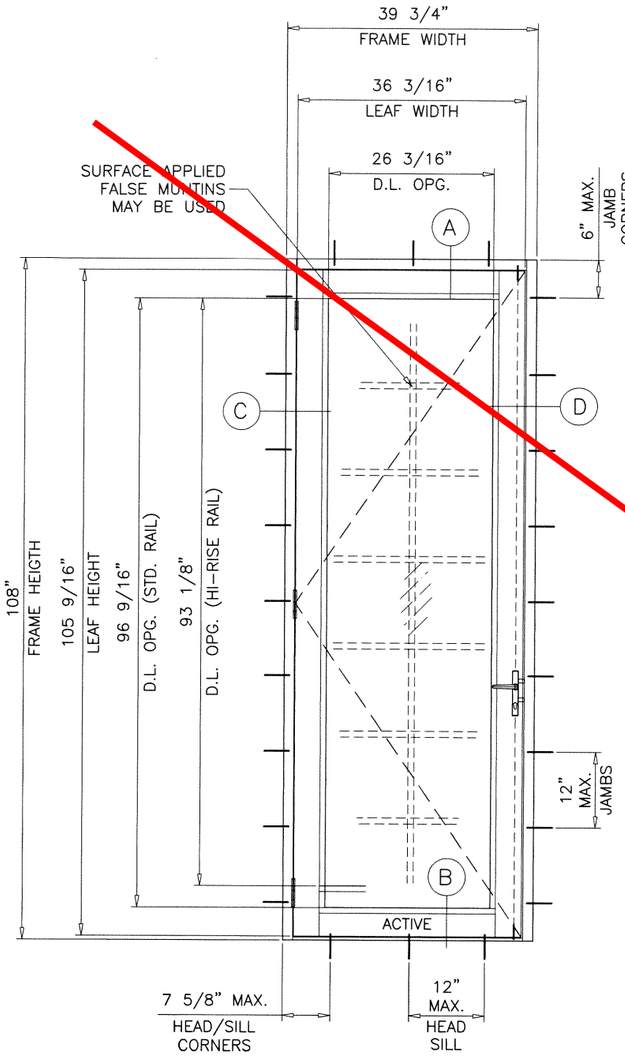
chk. by:

drawing no. W16-71

sheet 2 of 12



STD. SILL

TYPICAL ELEVATION

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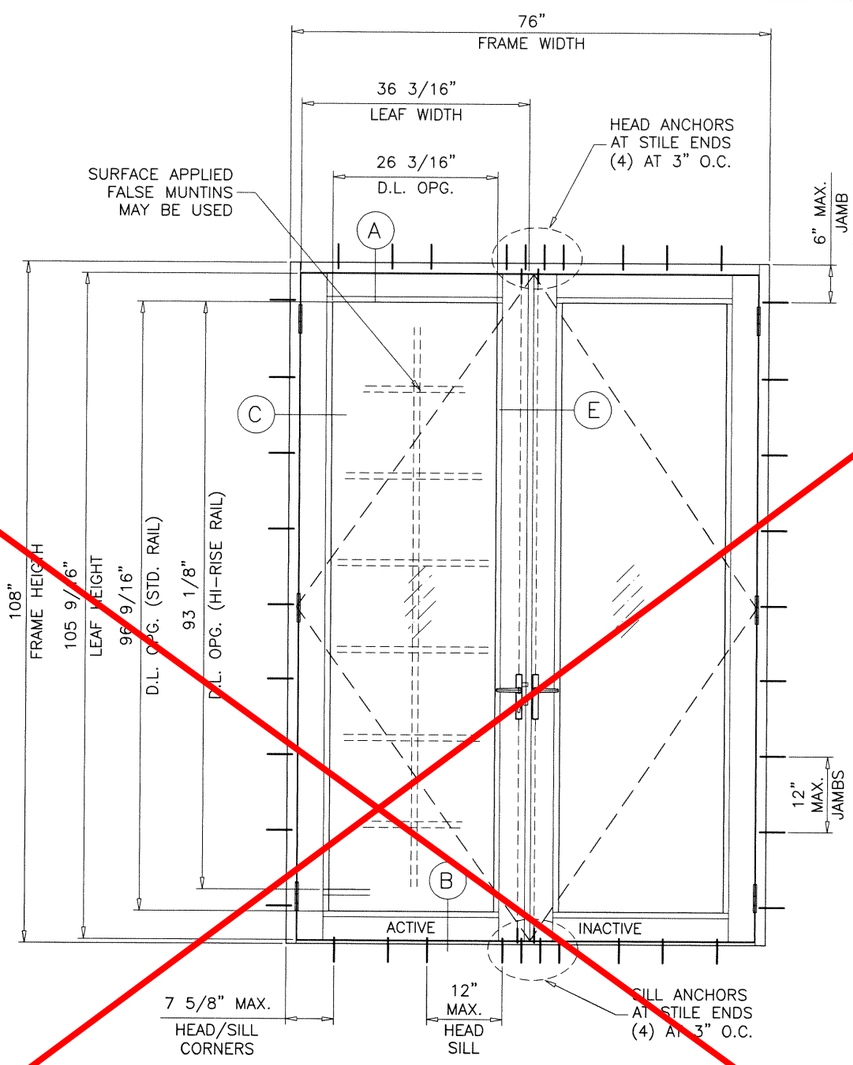

STD. SILL

TYPICAL ELEVATION

(XX)

SINGLE DOORS LOAD CAPACITY - PSF GLASS TYPES 'B' & 'B1'						
FRAME		LEAF		THRESHOLD TYPE	EXT.(+)	INT.(−)
WIDTH	HEIGHT	WIDTH	HEIGHT			
39-3/4"	108"	36-3/16"	105-9/16"	STD.	80.0	80.0

DOUBLE DOORS LOAD CAPACITY - PSF GLASS TYPES 'B' & 'B1'						
FRAME		LEAF		THRESHOLD TYPE	EXT.(+)	INT.(−)
WIDTH	HEIGHT	WIDTH	HEIGHT			
76"	108"	36-3/16"	105-9/16"	STD.	80.0	80.0

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS) AND FLORIDA BUILDING COMMISSION DECLARATORY STATEMENT DCA05-DEC-219

GLASS D.L.O. FORMULAE:
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= FRAME HEIGHT − 14.875" (HI-RISE BOT. RAIL)

Sealed: 10/19/2020

FL #22551

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COMP-ANL\W16-71ES

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revisions:

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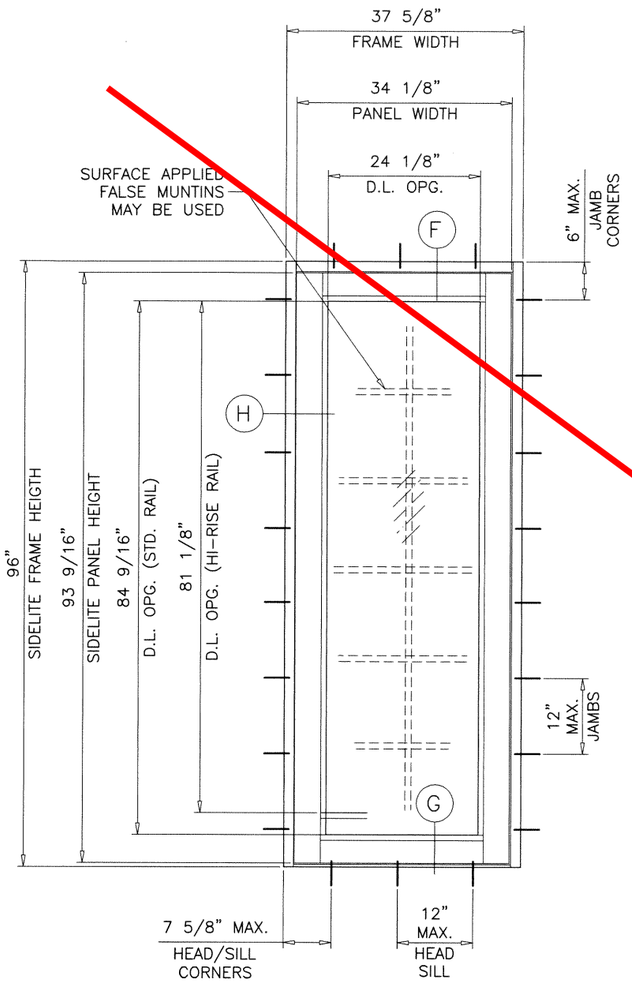
chk. by:

drawing no. W16-71

sheet 2.1 of 12



TYPICAL ELEVATION

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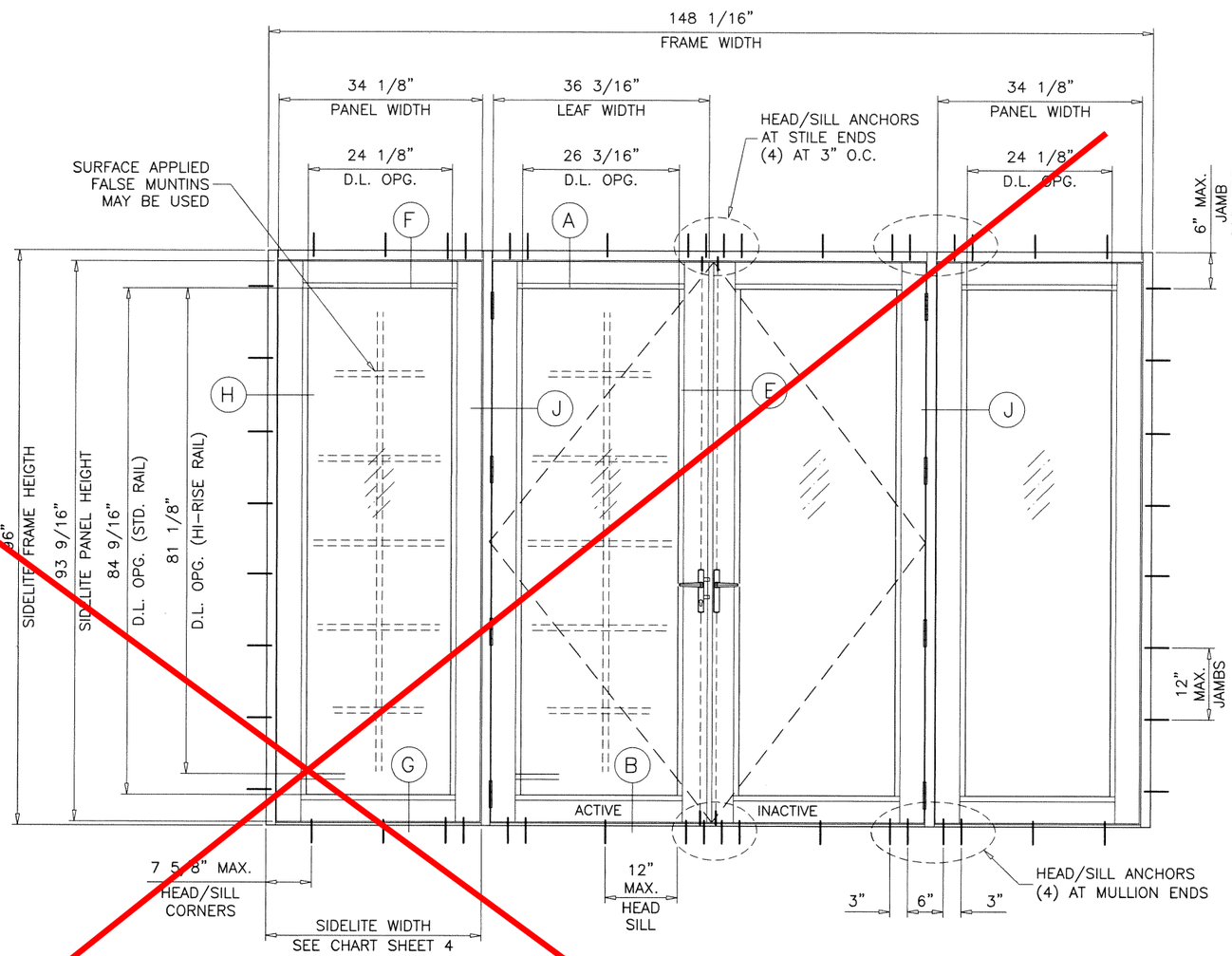

TYPICAL ELEVATION

(O–XX–O)

NOTE:
THE FRAME AREA OF ALTERNATE SIZE MUST NOT EXCEED TESTED FRAME AREA = 98.7 SQ. FT.

SIDELITE LOAD CAPACITY – PSF
OR STAND ALONE STATIONARY PANEL (O)
GLASS TYPES 'A', 'A1', 'B' & 'B1'

FRAME		PANEL		THRESHOLD TYPES	EXT.(+)	INT.(–)
WIDTH	HEIGHT	WIDTH	HEIGHT			
37–5/8"	96"	34–1/8"	93–9/16"	STD.	80.0	80.0
37–5/8"	96"	34–1/8"	93–5/8"	ADA	80.0	80.0
43–5/8"	82"	40–1/8"	79–9/16"	STD.	80.0	80.0
43–5/8"	82"	40–1/8"	79–5/8"	ADA	80.0	80.0

SIDELITE WIDTH = FRAME WIDTH – 1–5/8"
(SEE CHART ON SHEET 4)

D.L.O. HEIGHT (SIDELITE) = FRAME HEIGHT – 11.438" (STD. BOT. RAIL)
= FRAME HEIGHT – 14.875" (HI–RISE BOT. RAIL)
D.L.O. WIDTH (SIDE LITE) = FRAME WIDTH – 13.563"

Sealed: 10/19/2020

FL #22551

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978

COMP–ANL\W16–71ES

ES–EL300 ALUMINUM OUTSWING DOOR (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638–5151 FAX. (305) 638–5158

revisions:

no	date	by	description

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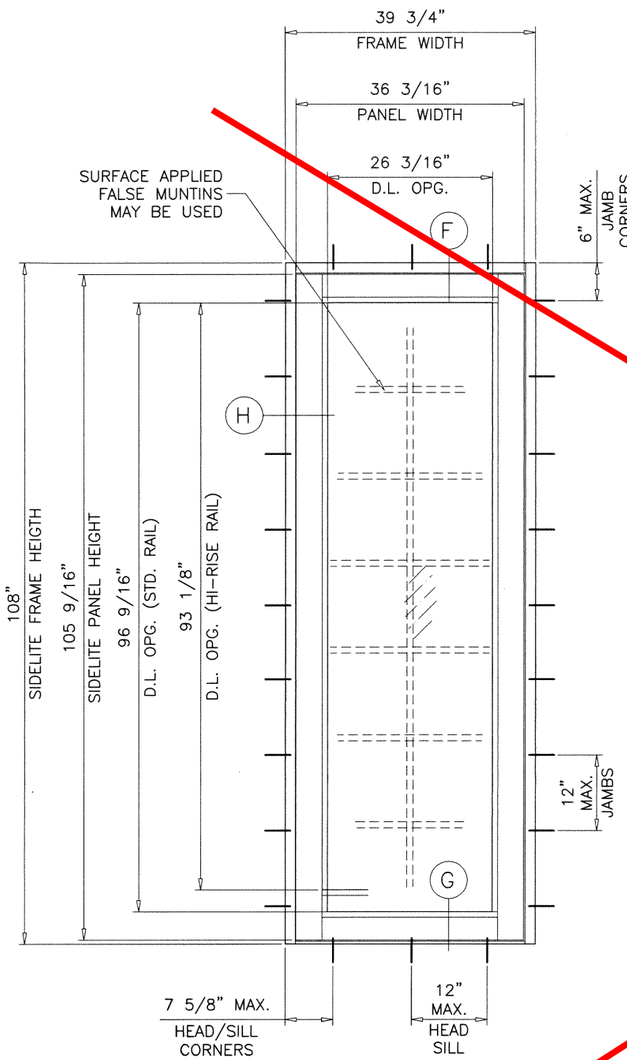
chk. by:

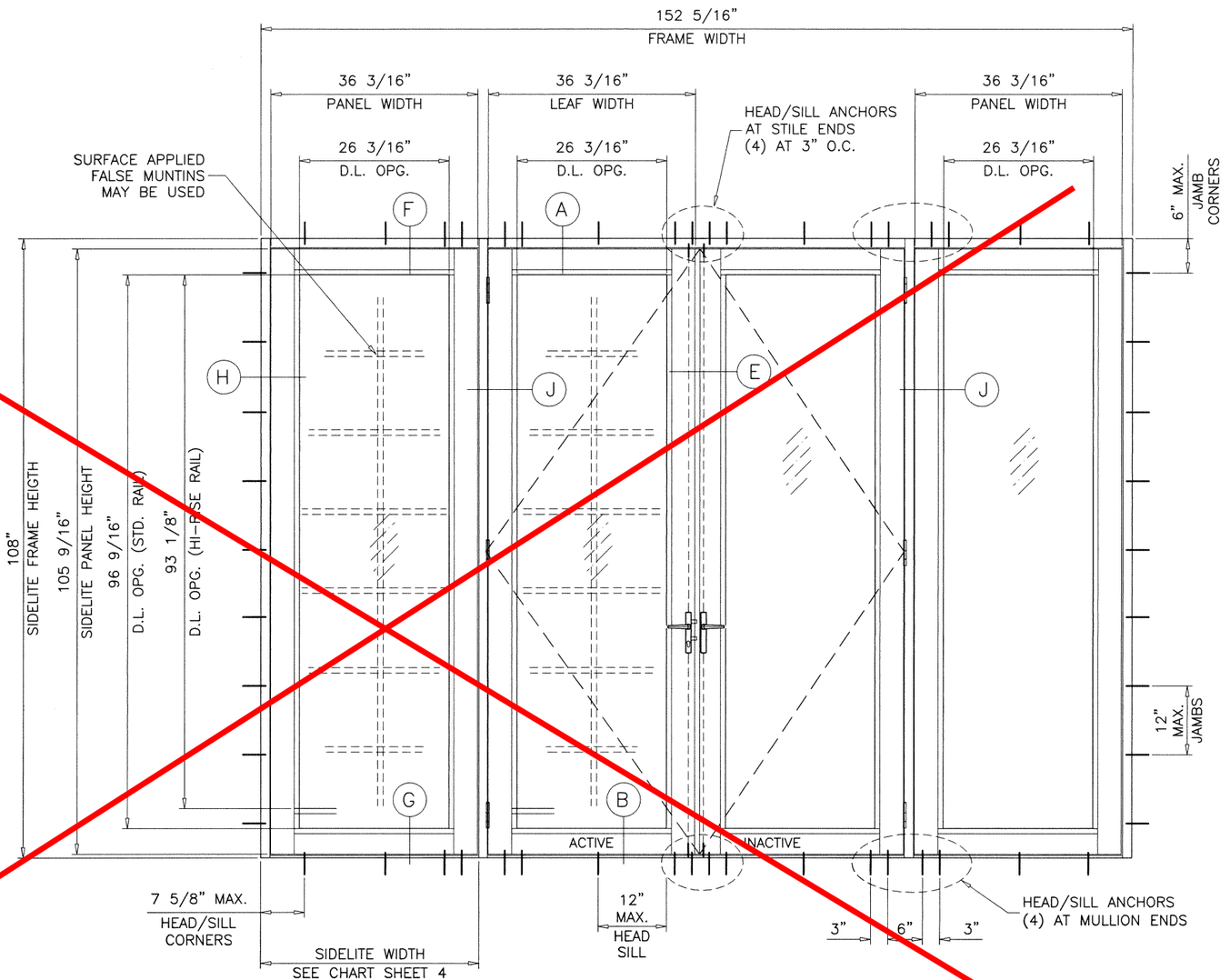
drawing no. W16–71

sheet 3 of 12



TYPICAL ELEVATION

(O)



TYPICAL ELEVATION

(O-XX-O)

NOTE:
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SIDELITE LOAD CAPACITY - PSF OR STAND ALONE STATIONARY PANEL (O) GLASS TYPES 'B' & 'B1'						
FRAME		PANEL		THRESHOLD TYPES	EXT.(+)	INT.(-)
WIDTH	HEIGHT	WIDTH	HEIGHT			
39-3/4"	108"	36-3/16"	105-9/16"	STD.	80.0	80.0
45-3/4"	92"	42-3/16"	91-9/16"	STD.	80.0	80.0

SIDELITE WIDTH = FRAME WIDTH - 1-5/8"
(SEE CHART ON SHEET 4)

D.L.O. HEIGHT (SIDELITE) = FRAME HEIGHT - 11.438" (STD. BOT. RAIL)
= FRAME HEIGHT - 14.875" (HI-RISE BOT. RAIL)
D.L.O. WIDTH (SIDE LITE) = FRAME WIDTH - 13.563"

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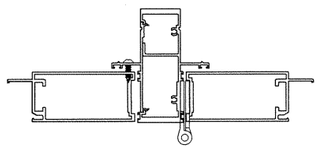
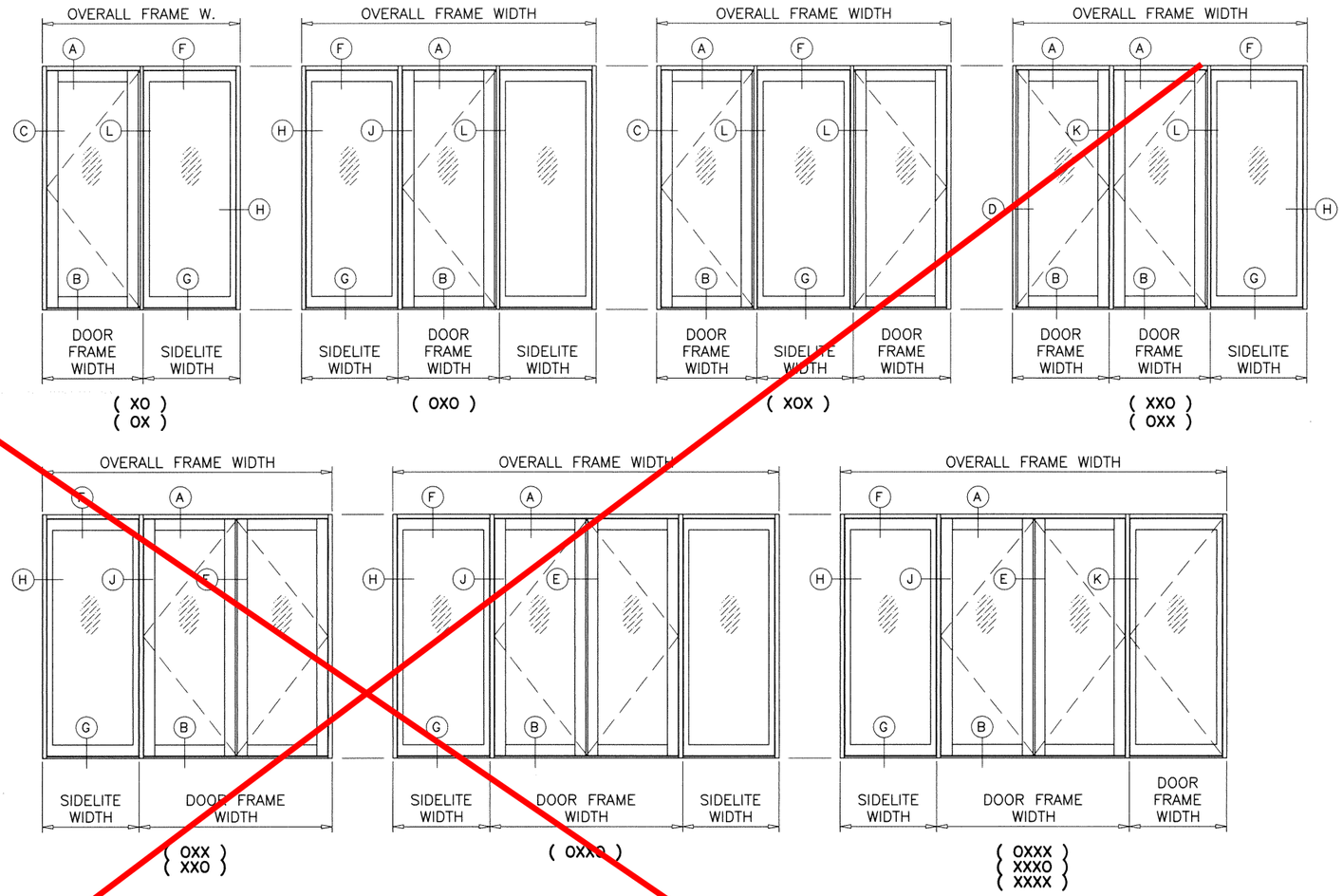
DESIGN LOAD CAPACITY – PSF DOOR TO SIDELITE OR DOOR TO DOOR MULLION		
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	EXT. (+) INT. (–)
18	84	80.0
24		80.0
30		80.0
38		80.0
42		80.0
18	90	80.0
24		80.0
30		80.0
38		80.0
42		80.0
18	96	80.0
24		80.0
30		80.0
38		76.8
40–1/2		73.0
18	108	73.2
24		66.2
30		60.0
38		54.0

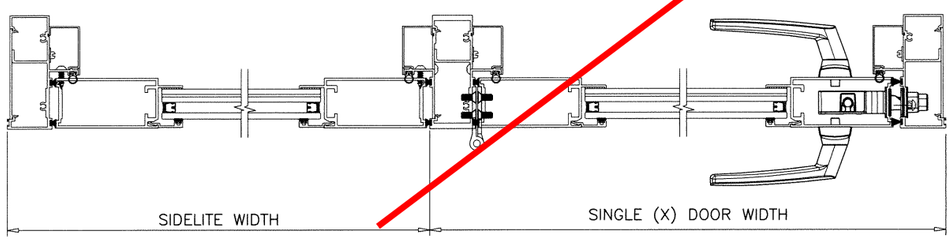


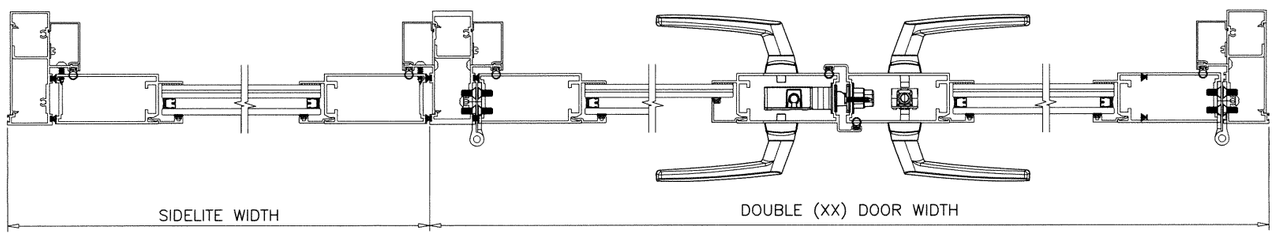
DOOR TO SIDELITE MULLION
DOOR TO DOOR MULLION

NOTE:
FOR DOORS CAPACITY SEE SHEET 2
FOR SIDELITE CAPACITIES SEE SHEET 3.
FOR SIDELITE MULLION CAPACITY SEE CHART ABOVE
LOWER VALUES FROM DOORS, SIDELITE, DOOR/SIDELITE
OR DOOR/DOOR MULLION CHART WILL APPLY TO ENTIRE SYSTEM.



APPROVED CONFIGURATIONS





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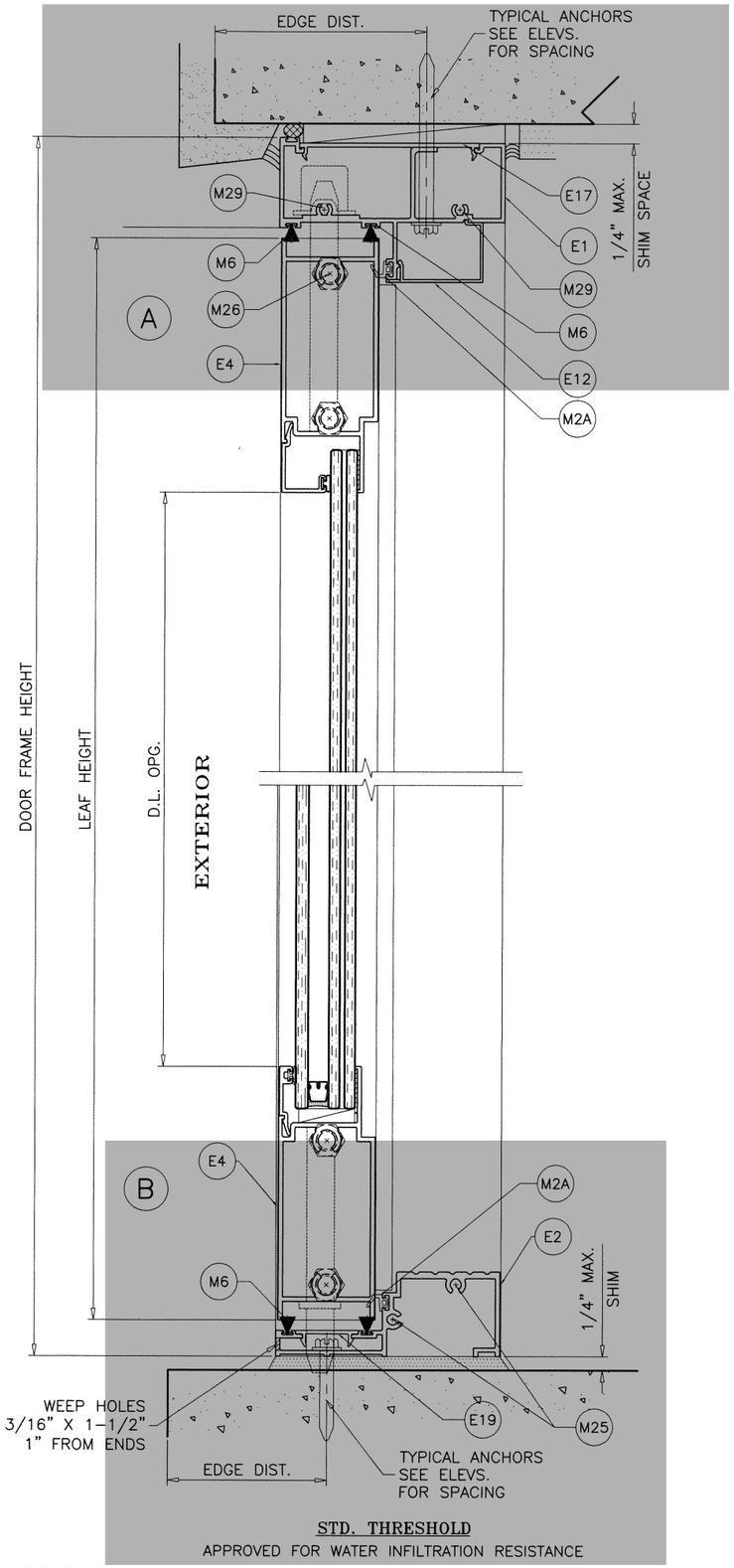
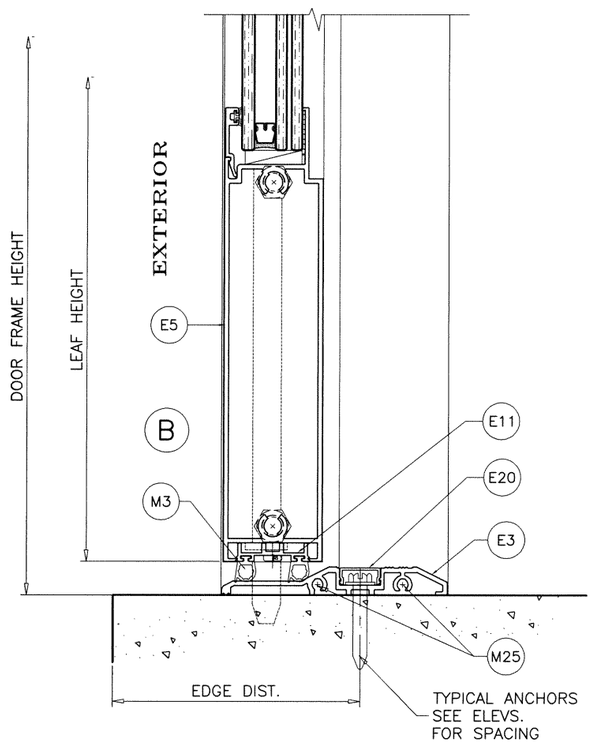


STD. THRESHOLD

APPROVED FOR WATER INFILTRATION RESISTANCE



ADA THRESHOLD

NOT APPROVED FOR WATER INFILTRATION RESISTANCE

DOOR DETAILS

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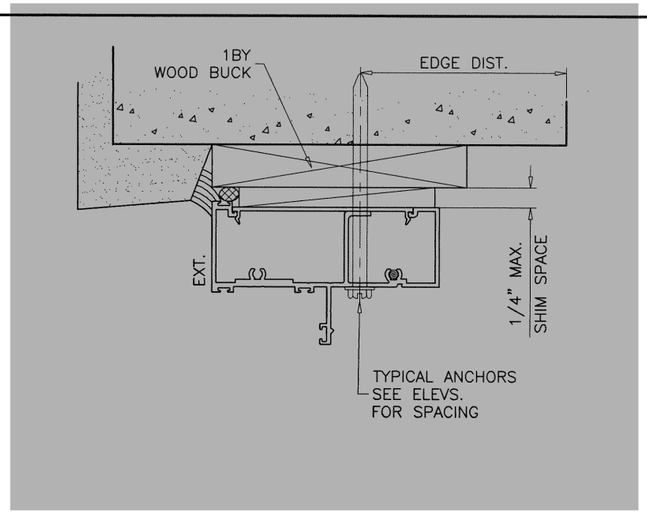

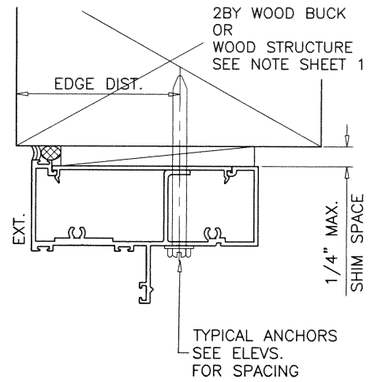

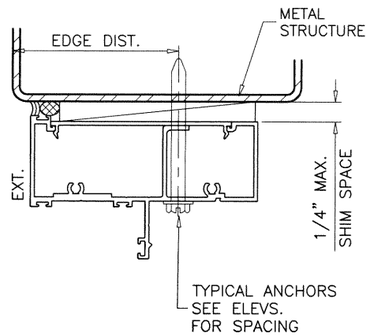

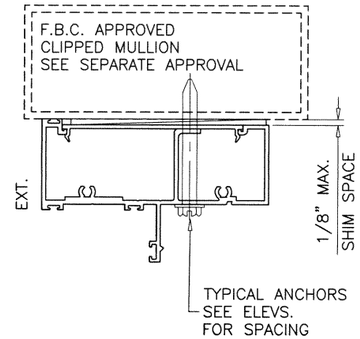

WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WINDOWS' MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD (HEAD/JAMBS)

THRU 1BY BUCKS INTO CONC. OR BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

DIRECTLY INTO CONCRETE OR GROUT FILLED BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-3/4" MIN. EMBED INTO GROUT FILLED BLOCKS (JAMBS)

1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES (HEAD/JAMBS)
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND MASONRY = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

DOOR DETAILS

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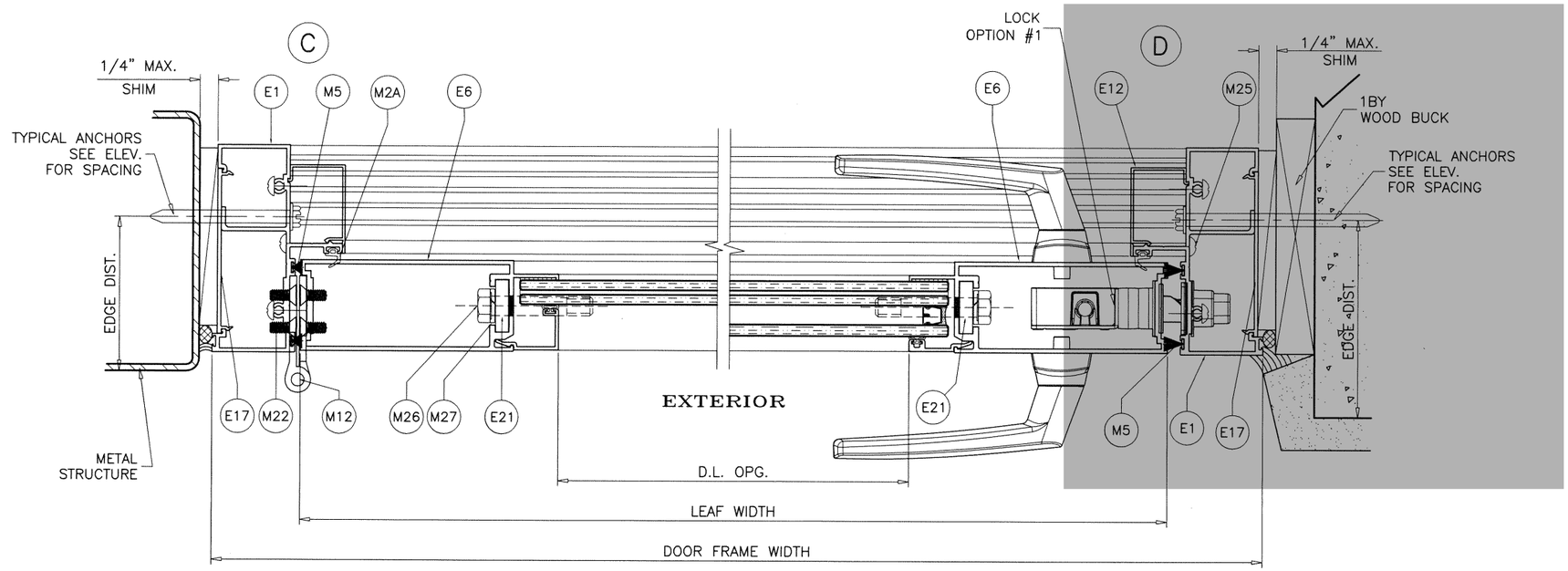
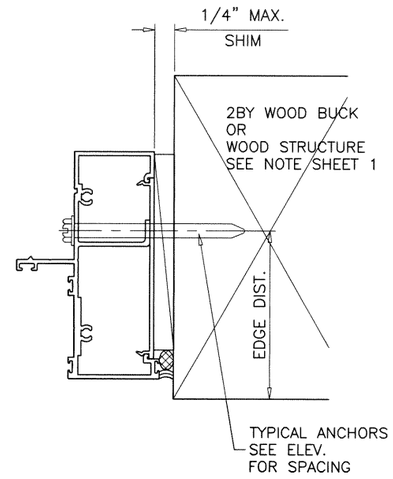
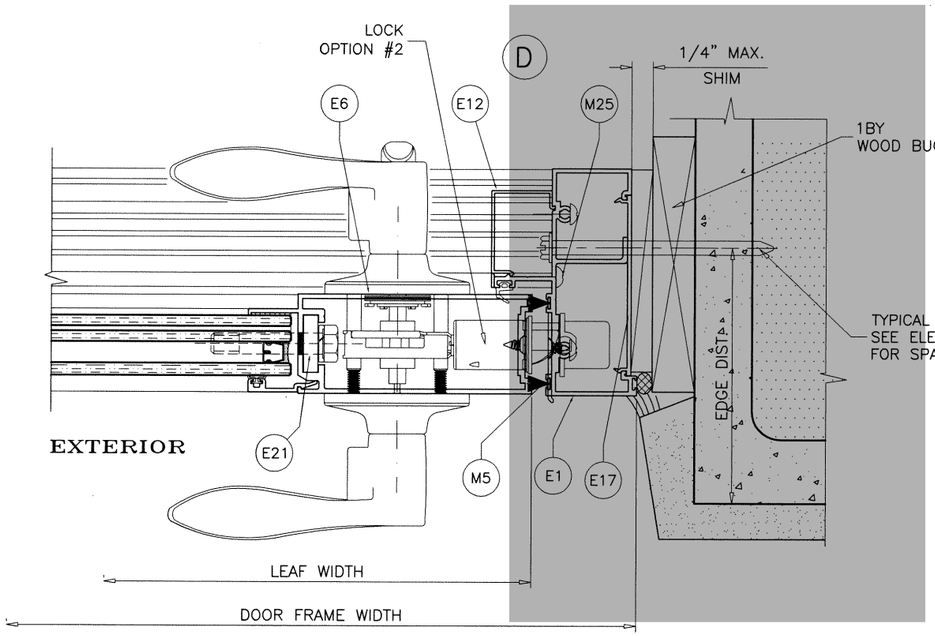
sheet 6 of 12







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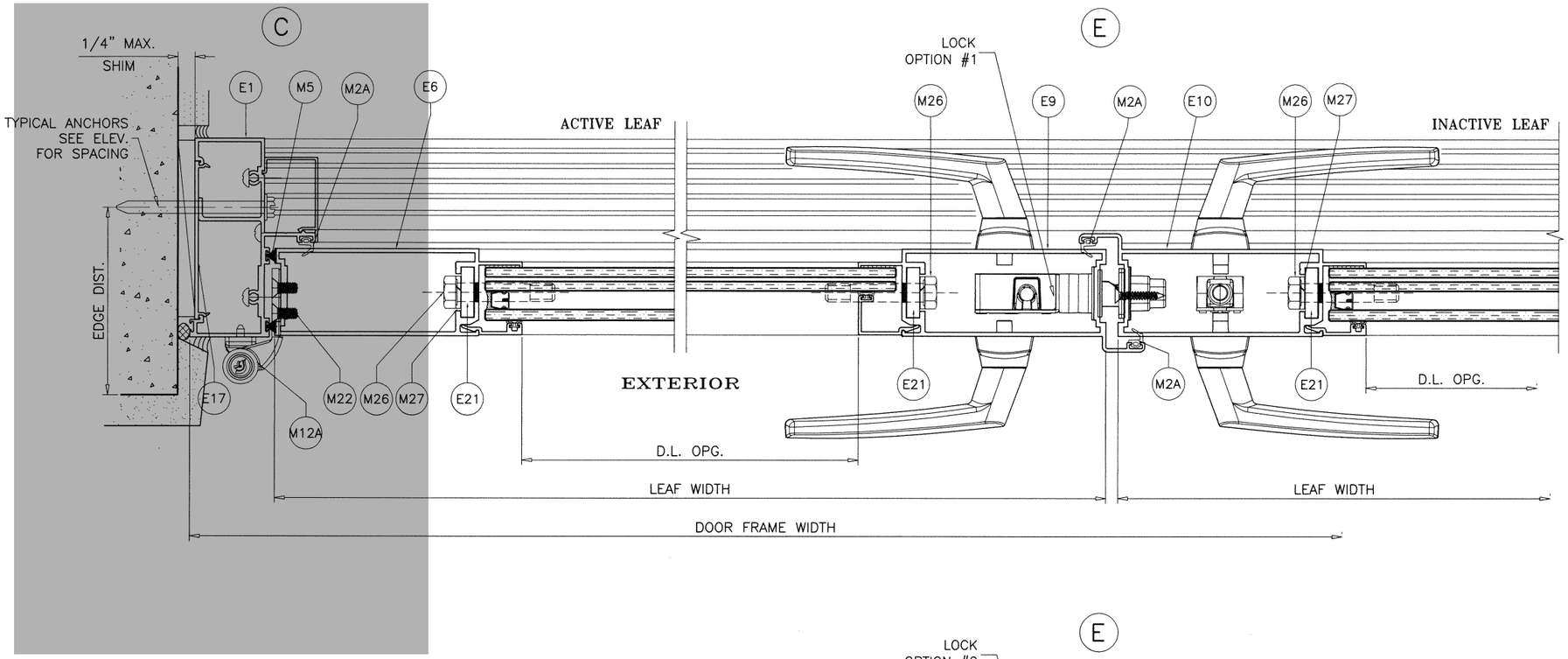

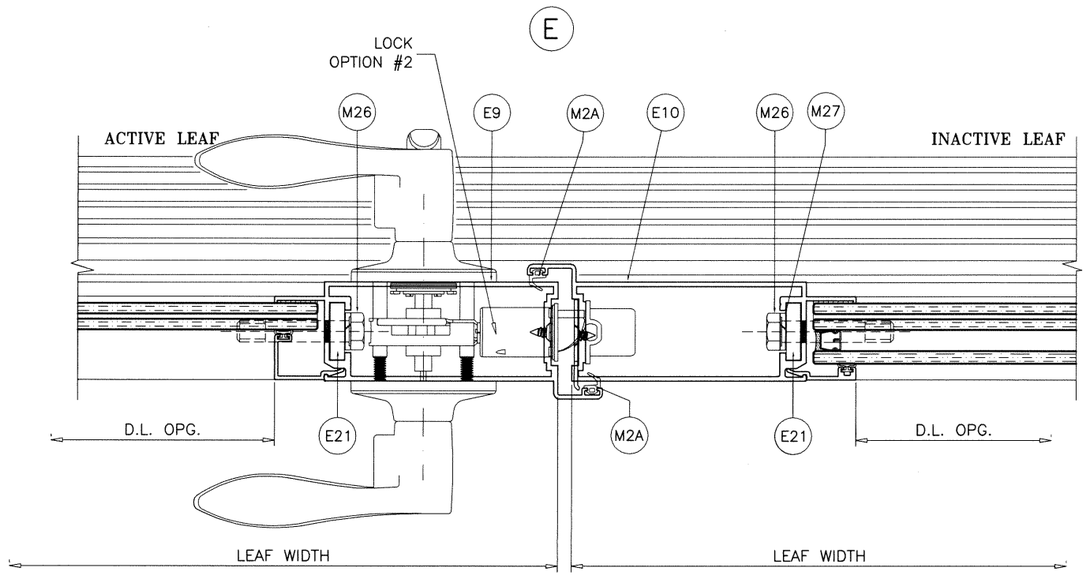

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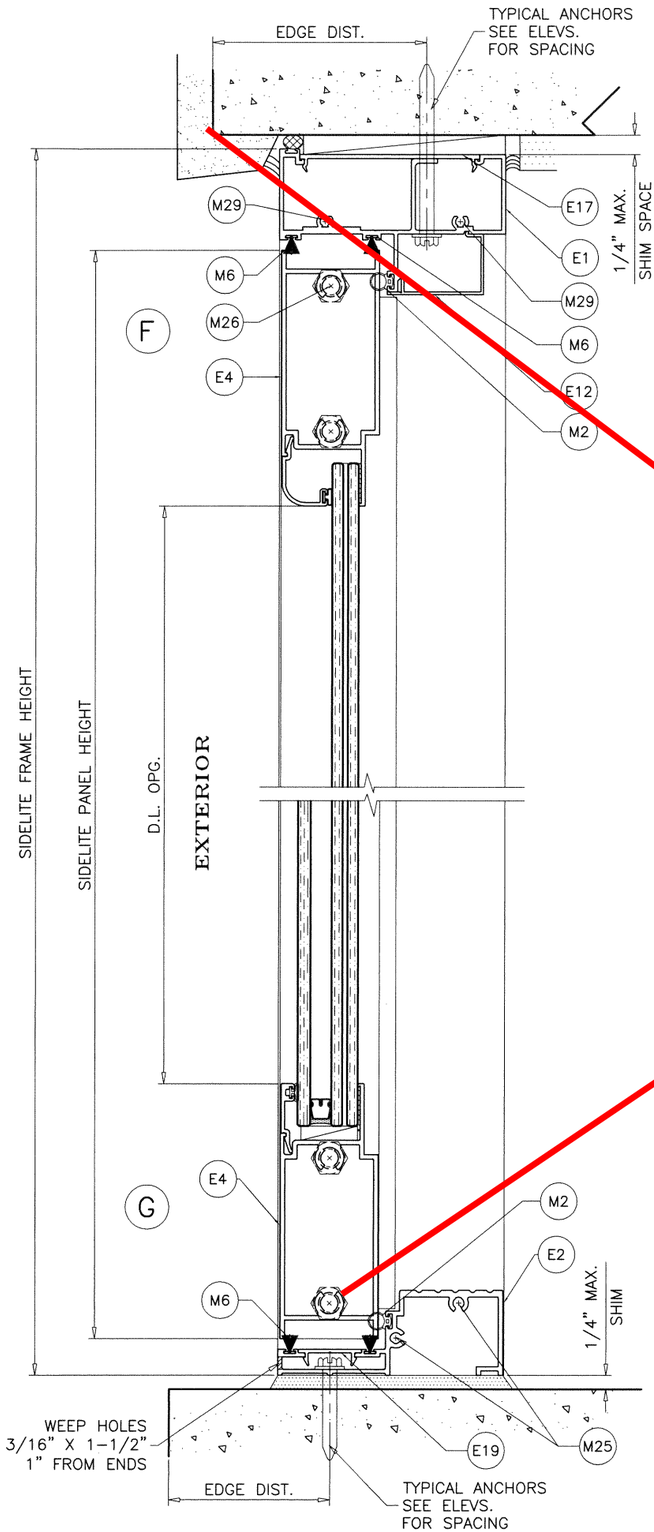

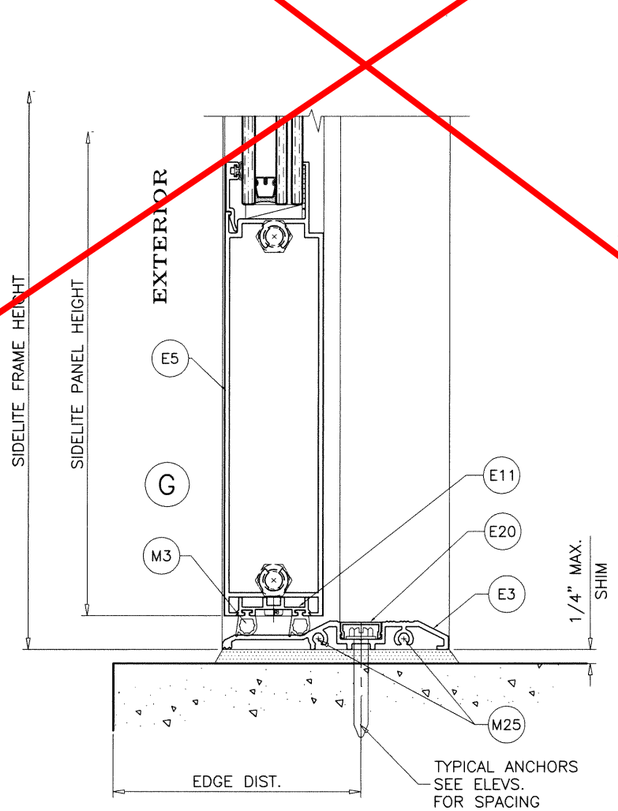

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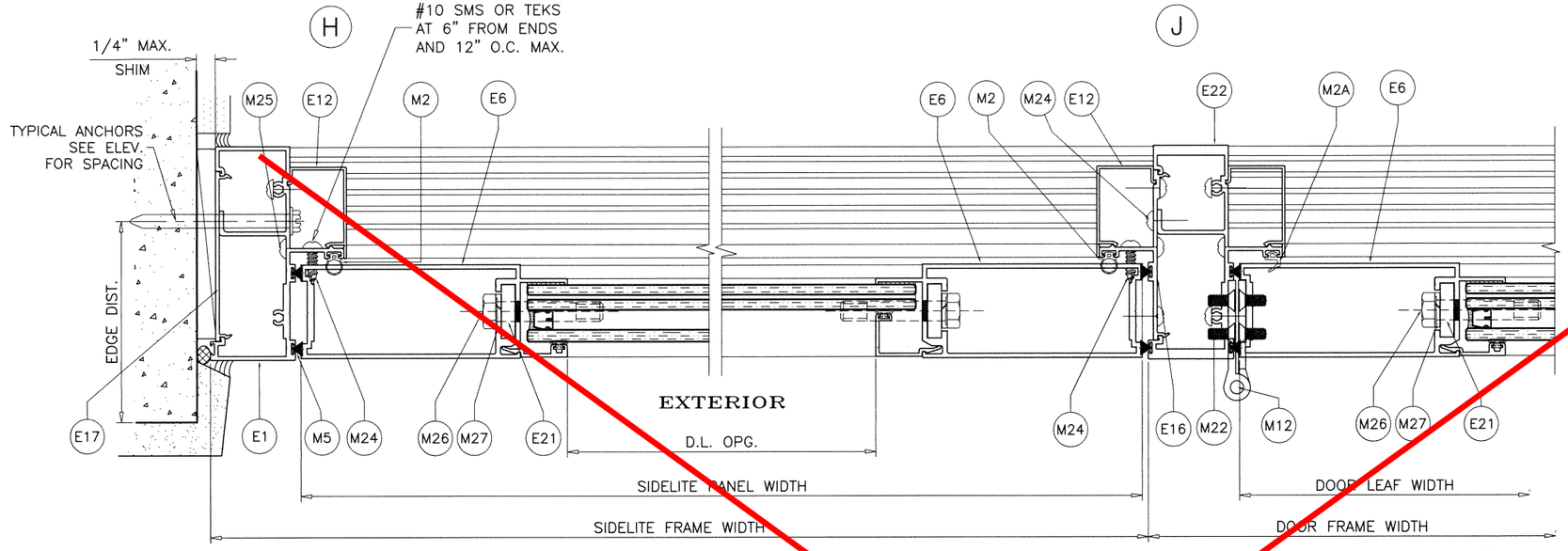

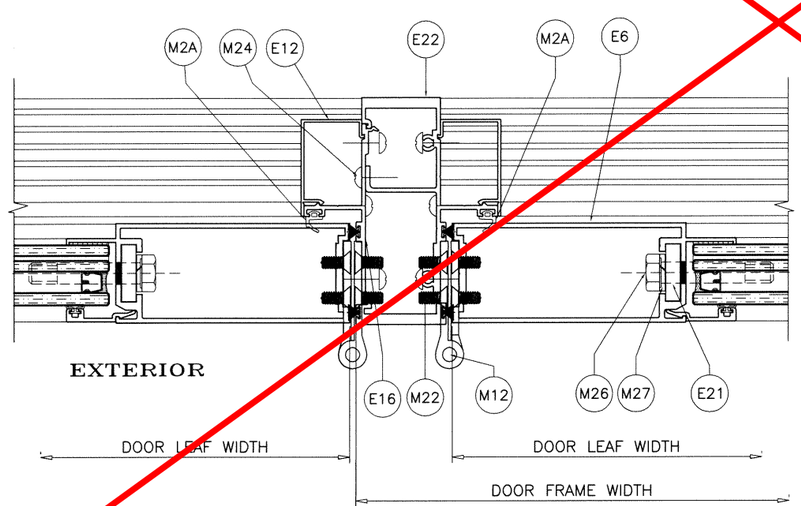

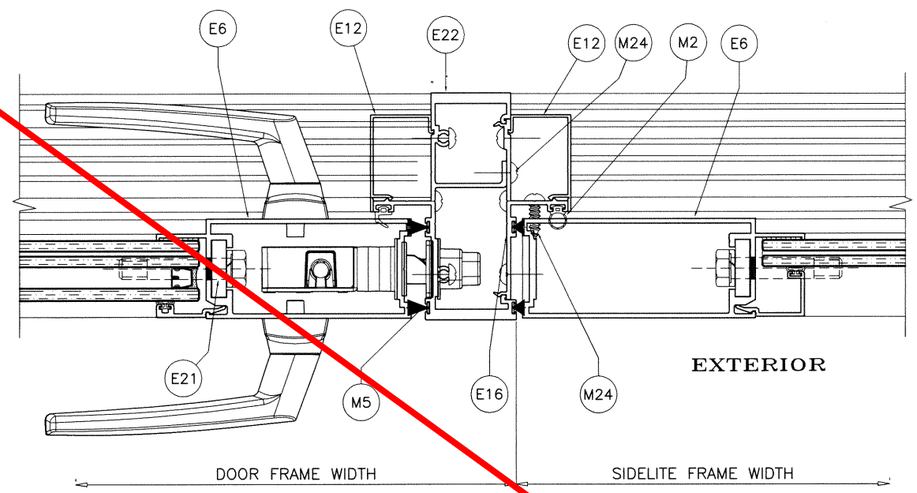

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LOCK OPTIONS:

OPTION #1:

MAX. FRAME HEIGHT = 96 IN.
MAX. LEAF WIDTH = 36-3/16 IN.
MAX. DESIGN LOAD = 80 PSF

ACTIVE LEAF:

SURFACE MOUNT 3 POINT MORTISE LOCK SYSTEM
BY 'INTERLOCK USA'
KEY OPERATED ON EXTERIOR AND THUMB TURN ON INTERIOR
LEVER TYPE HANDLE AT 43-5/8" FROM BOTTOM
ACTIVATES SHOOT BOLTS ENGAGING 3/4" MIN. AT HEAD AND SILL
FASTENED WITH
(2) #10 X 3/4" FH SMS

INACTIVE LEAF:

SURFACE MOUNT 2 POINT LOCK SYSTEM
BY 'INTERLOCK USA'
LEVER TYPE HANDLE AT 43-5/8" FROM BOTTOM
ACTIVATES SHOOT BOLTS ENGAGING 3/4" MIN. AT HEAD AND SILL
FASTENED WITH
(2) #10 X 3/4" FH SMS

OPTION #2:

MAX. FRAME HEIGHT = 108 IN.
MAX. LEAF WIDTH = 36-3/16 IN.
MAX. DESIGN LOAD = 80 PSF

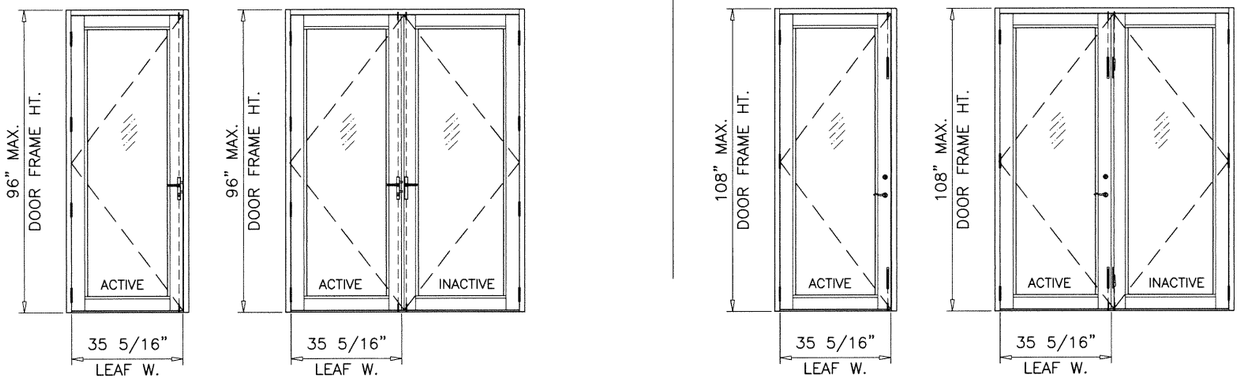
ACTIVE LEAF:

CONVENTIONAL DOOR LOCKSET WITH HANDLE
BY 'BALDWIN' LOCATED AT 37" FROM BOTTOM
KEY OPERATED ON EXTERIOR AND THUMB TURN ON
INTERIOR THROW BOLT LOCATED AT 45" FROM BOTTOM

CONCEALED FLUSH BOLTS FB-1202 BY 'SULLIVAN & ASSOCIATES'
1/2" X 2" THROW BOLTS ENGAGING FRAME AT HEAD AND SILL
MANUALLY OPERATED LEVERS MOUNTED ON STILE FACE
LOCATED AT 12" FROM TOP AND BOTTOM
LOCK FASTENED TO STILE WITH (2) #8-32 X 1/2" FH MS

INACTIVE LEAF:

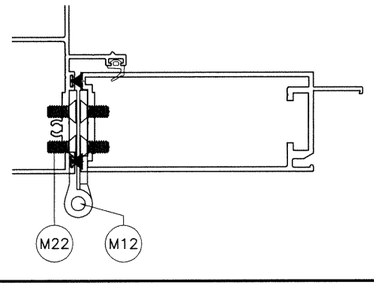
CONCEALED FLUSH BOLTS FB-1202 BY 'SULLIVAN & ASOCIATES'
1/2" X 2" THROW BOLTS ENGAGING FRAME AT HEAD AND SILL
MANUALLY OPERATED LEVERS MOUNTED ON INSIDE FACE
OF LEAF STILE LOCATED AT 12" FROM TOP AND BOTTOM
LOCK FASTENED TO STILE WITH (2) #8-32 X 1/2" FH MS



HINGE OPTIONS:

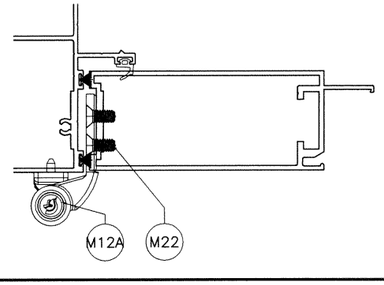
OPTION #1:

4-1/2" LONG FLUSH MOUNT STEEL BUTT HINGES BY 'HAGER'
FASTENED WITH 12-24 X 1/2" FH MACHINE SCREWS
FOUR PER HASP(LEAF).
TOP AND BOTTOM HINGES AT 7-7/8" FROM EACH END
(1) HINGE REQD. AT MIDSPAN FOR 82" HIGH DOORS WITH STANDARD THRESHOLD ONLY.
ALL OTHER DOORS TO HAVE INTERMEDIATE HINGES AT 26-3/8" O.C. MAX.



OPTION #2:

STAINLESS STEEL ATHENA HINGES BY 'SECURISTYLE'
FASTENED WITH 12-24 X 1/2" FH MACHINE SCREWS
FOUR PER HASP(LEAF).
TOP HINGES AT 9" FROM TOP
BOTTOM HINGES AT 7-1/2" FROM BOTTOM
(1) HINGE AT MIDSPAN



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FL #22551

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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
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COMP-ANL\W16-71ES

ES-EL300 ALUMINUM OUTSWING DOOR (L.M.I.)

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MIAMI, FL. 33142
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scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. W16-71

sheet 10 of 12

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-EL300-001	3	FRAME HEAD/JAMB	6063-T6	-
E2	ES-EL300-002	1	FRAME SILL (STD.)	6063-T6	-
E3	ES-EL300-003	1	FRAME SILL (ADA)	6063-T6	-
E4	ES-EL300-004	2/ LEAF	TOP AND BOTTOM RAIL	6063-T6	-
E5	ES-EL300-005	1/ LEAF	HI-RISE BOTTOM RAIL	6063-T6	-
E6	ES-EL300-020	1/ LEAF	JAMB STILE	6063-T6	-
E9	ES-EL300-021	1	ASTRAGAL STILE (ACTIVE)	6063-T6	-
E10	ES-EL300-022	1	ASTRAGAL STILE (INACTIVE)	6063-T6	-
E11	ES-EL300-011	1	ADA SILL W'STRIP ADAPTER	6063-T6	-
E12	ES-EL300-012	1	FRAME COVER	6063-T5	-
E13	ES-EL300-013	4/ LEAF	GLASS STOP (LAM. GLASS)	6063-T5	-
E14	ES-EL300-014	4/ LEAF	GLASS STOP (LAM. GLASS)	6063-T5	-
E15	ES-EL300-015	4/ LEAF	GLASS STOP (INSUL. LAM. GLASS)	6063-T5	-
E16	ES-EL300-016	AS REQD.	SNAP IN FILLER	6063-T6	-
E17	ES-EL300-017	AS REQD.	EXTERIOR TRIM	6063-T6	-
E18	ES-EL300-018	AS REQD.	FRAME COVER	6063-T5	-
E19	ES-EL300-019	1	COVER STD. SILL	6063-T6	-
E20	ES-6011	1	COVER ADA SILL	6063-T6	-
E21	ACC-PL-020	1	BACK UP PLATE	6063-T6	-
E22	ES-EL300-026	1	MULLION	6063-T6	-
M1	ES-5008A	AS REQD.	GLAZING GASKET	SILICONE	DUROMETER 65±5 SHORE A
M2	ES-P251-G05A	AS REQD.	SIDELITE GASKET	SILICONE	DUROMETER 70±5 SHORE A
M2A	ES-EL300-G01	AS REQD.	DOOR LEAF GASKET	SILICONE	DUROMETER 65±5 SHORE A
M3	ES-45T-G09	AS REQD.	ADA SILL GASKET	EPDM	DUROMETER 70±5 SHORE A
M4	ES-21-B04A	2/ LITE	SETTING BLOCKS AT 1/4 POINTS	SILICONE	DUROMETER 80±5 SHORE A
M5	W23221NG	AS REQD.	PILE W'STRIPPING	POLYPROPYLENE	-
M6	W23221NK	AS REQD.	PILE W'STRIPPING	POLYPROPYLENE	-
M7	W23381NK	AS REQD.	PILE W'STRIPPING	POLYPROPYLENE	-
M12	-	4/ LEAF	HINGE ASSEMBLY	-	HAGER
M12A	DH01-6005	4/ LEAF	ATHENA HINGE	-	-
M22	#12-24 X 1/2"	-	HINGE FASTENERS	ST/ST	FH SMS
M23	#8 X 1/2"	-	W'STRIP ADAPTER FASTENERS	ST/ST	PH SMS
M24	#10 X 3/4"	-	FIX. PANEL FASTENERS, AT 6" FROM ENDS & 12" O.C.	ST/ST	PH SMS
M25	#12 X 1-3/4"	-	FRAME ASSEMBLY FASTENERS	ST/ST	PH SMS
M26	3/8-16 X 2"	-	LEAF/PANEL ASSEMBLY FASTENERS	ST/ST	HEX CAP FULL THREAD 18-8
M27	-	-	3/8" WASHER	ST/ST	HEX CAP FULL THREAD 18-8
M29	#10 X 1-3/4"	AS REQD.	HEAD ASSEMBLY FASTENERS	ST/ST	PH SMS

SEALANTS:

ALL FRAME AND LEAF JOINTS AND SEAMS SEALED WITH DOWSIL 791 SILICONE.

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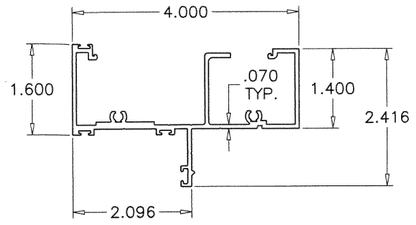
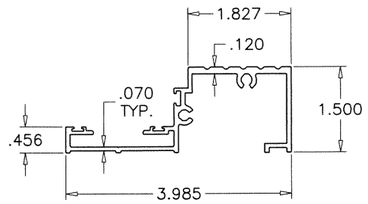
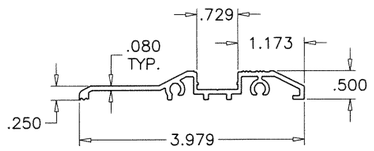


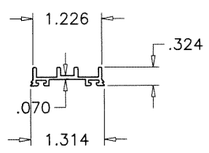
E1 FRAME HEAD/JAMB



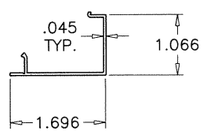
E2 FRAME SILL (STD.)



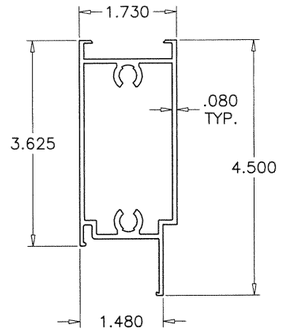
E3 FRAME SILL (ADA)



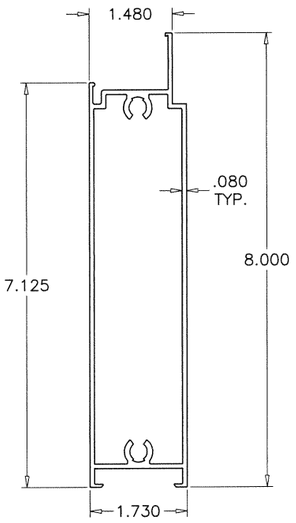
E11 ADA W'STRIP ADAPTER



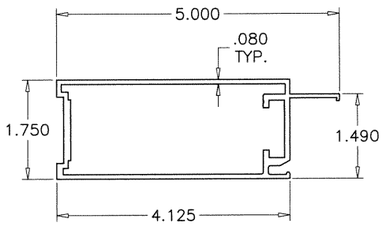
E12 FRAME COVER



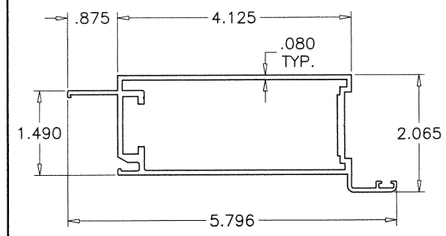
E4 TOP AND BOTTOM RAIL



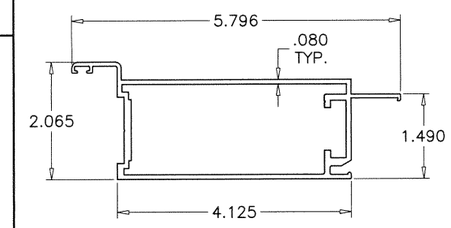
E5 HI–RISE BOTTOM RAIL



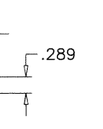
E6 JAMB STILE



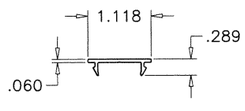
E9 ASTRAGAL STILE (ACTIVE)



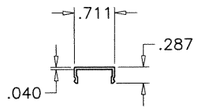
E10 ASTRAGAL STILE (INACTIVE)



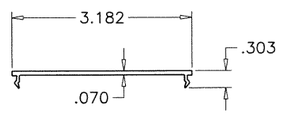
E18 FRAME COVER



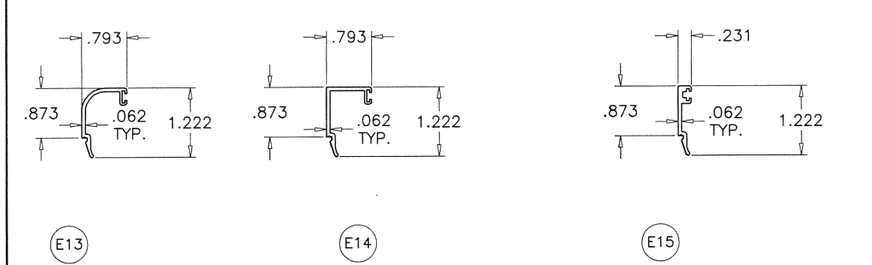
E19 COVER STD. SILL



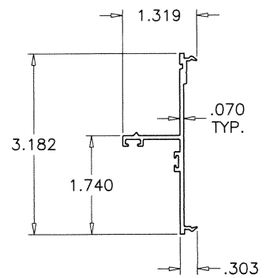
E20 COVER ADA SILL



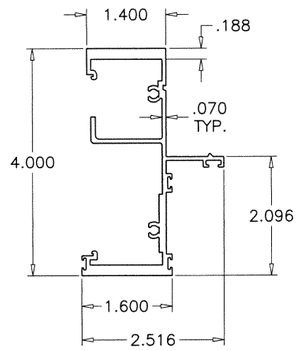
E17 EXTERIOR TRIM



E13 GLASS STOP (LAM. GLASS) E14 E15 GLASS STOP (INSUL. LAM. GLASS)



E16 SNAP IN FILLER



E22 MULLION

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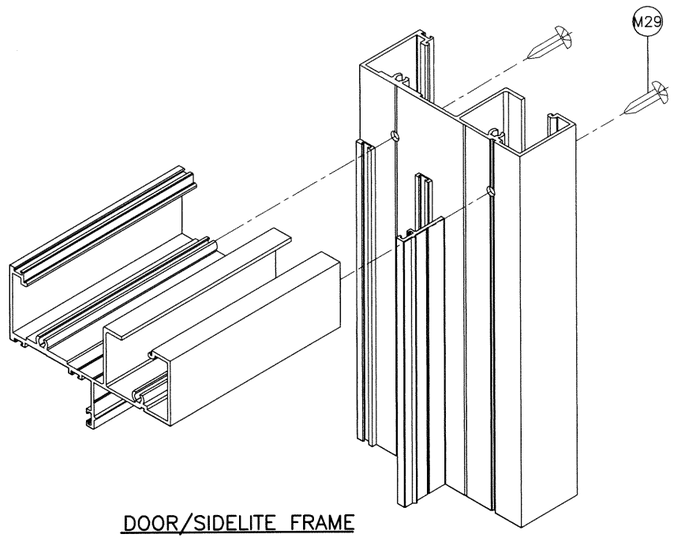
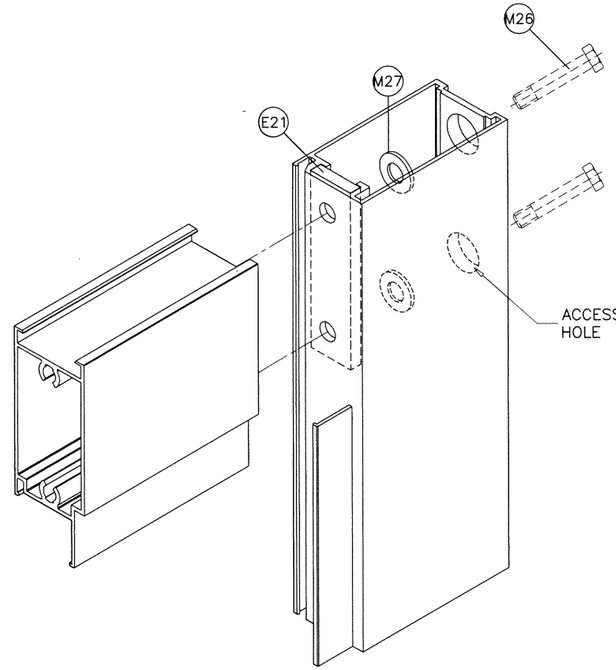
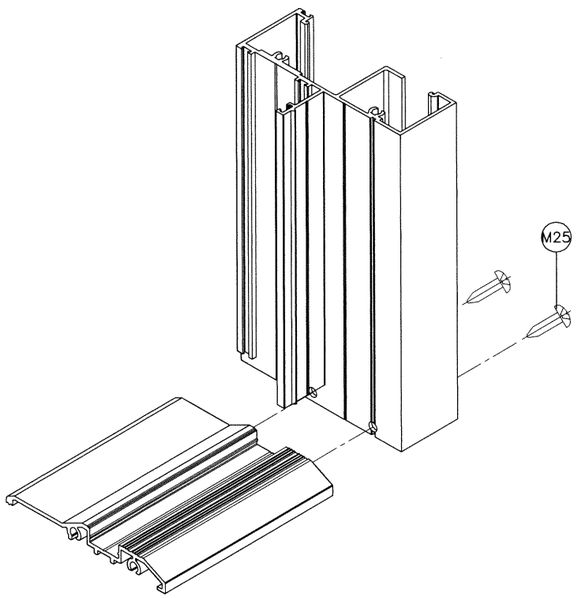


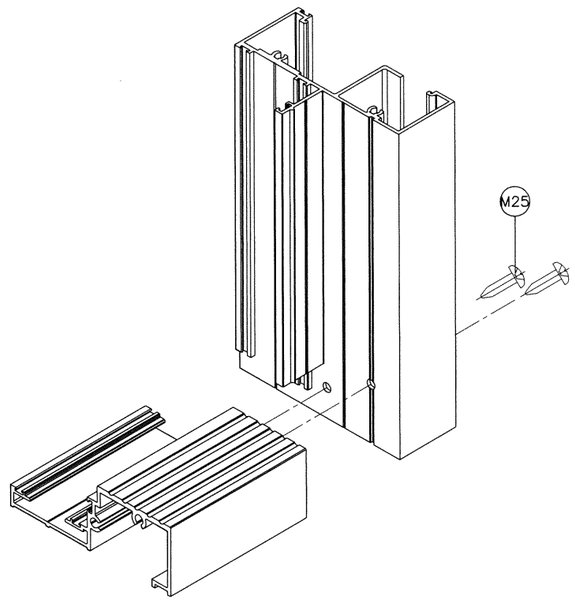
DOOR/SIDELITE FRAME
TOP CORNER



DOOR LEAF CORNER
SIDELITE PANEL CORNER



DOOR FRAME
BOTTOM CORNER



DOOR/SIDELITE FRAME
BOTTOM CORNER

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