

DESIGN LOAD CAPACITY – PSF					
AVERAGE PANEL WIDTH INCHES	DOOR FRAME HEIGHT INCHES	GLASS TYPES 'A' & 'A1'			
		INTERLOCKS WITH REINFORCING			
		TOP & BOTTOM RAIL WITHOUT REINF.		TOP & BOTTOM RAIL WITH REINF.	
		EXT.(+)	INT.(–)	EXT.(+)	INT.(–)
36	126"	120.0	125.0	–	–
42		120.0	125.0	–	–
48		120.0	125.0	–	–
50		115.0	120.0	120.0	125.0
52		111.0	115.0	120.0	125.0
54		106.0	111.0	120.0	125.0
36	132"	120.0	125.0	–	–
42		120.0	125.0	–	–
48		120.0	125.0	–	–
50		115.0	120.0	120.0	125.0
52		111.0	115.0	120.0	125.0
36	138"	120.0	125.0	–	–
42		120.0	125.0	–	–
48		120.0	125.0	–	–
50		115.0	120.0	120.0	125.0
52		111.0	115.0	120.0	125.0
36	144"	120.0	125.0	–	–
42		120.0	125.0	–	–
48		120.0	125.0	–	–

DOOR HEIGHT AND WIDTH SIZE MUST COMPLY
EGRESS REQUIREMENTS PER FBC AS REQUIRED.

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

**SERIES ES-6500 ULTRA
ALUMINUM SLIDING GLASS DOOR**

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE
REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH 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.

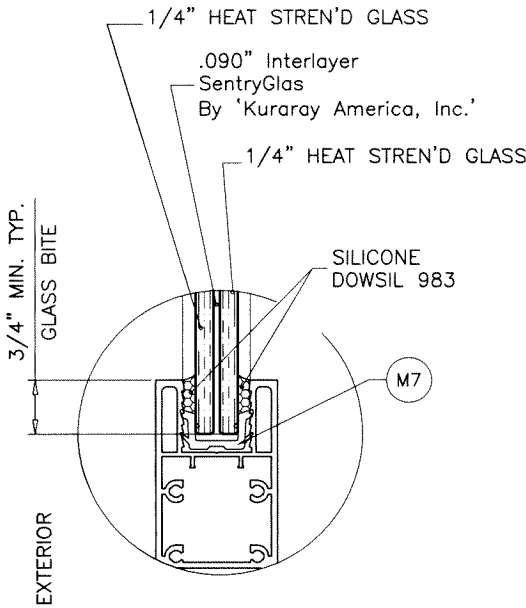
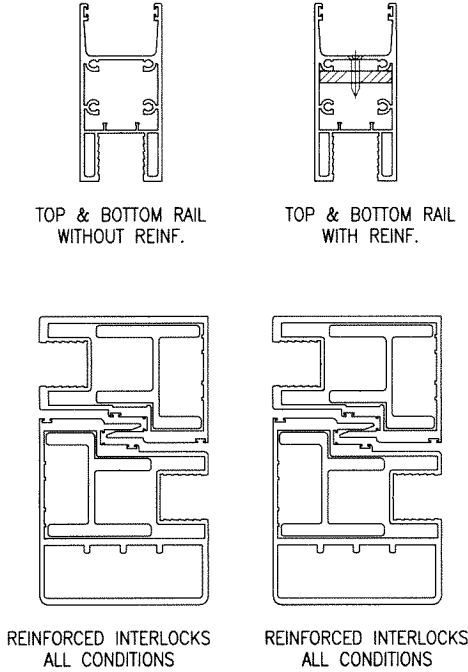
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT
COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE
REQUIREMENTS OF THE 2020/2023 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.

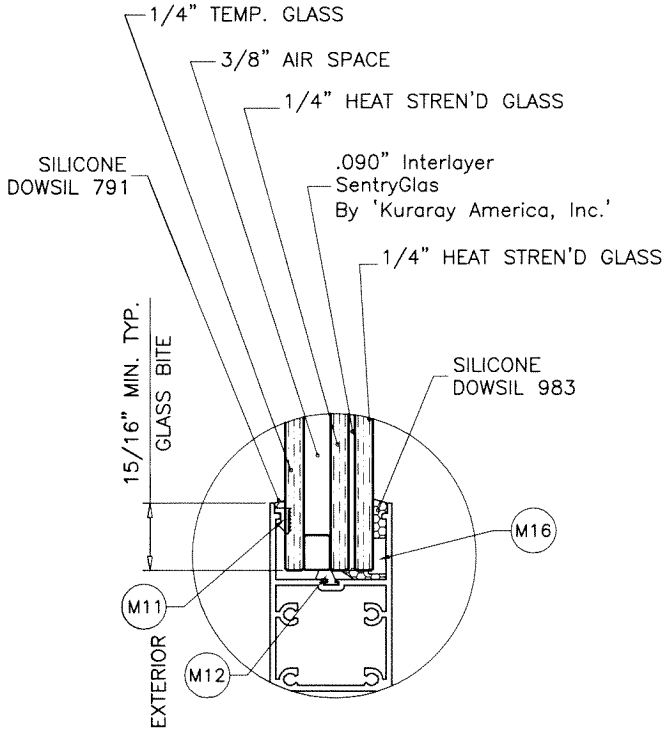
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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 TYPE 'A'

9/16" OVERALL LAMINATED GLASS



GLASS TYPE 'A1'

1-1/4" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

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

LAMINATED GLASS
INSUL. LAM. GLASS
LARGE MISSILE IMPACT

Sealed: 9/15/2023

FL #17893

- 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.



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

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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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SERIES ES-6500 ULTRA ALUM S.G. DOOR (L.M.I.)

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

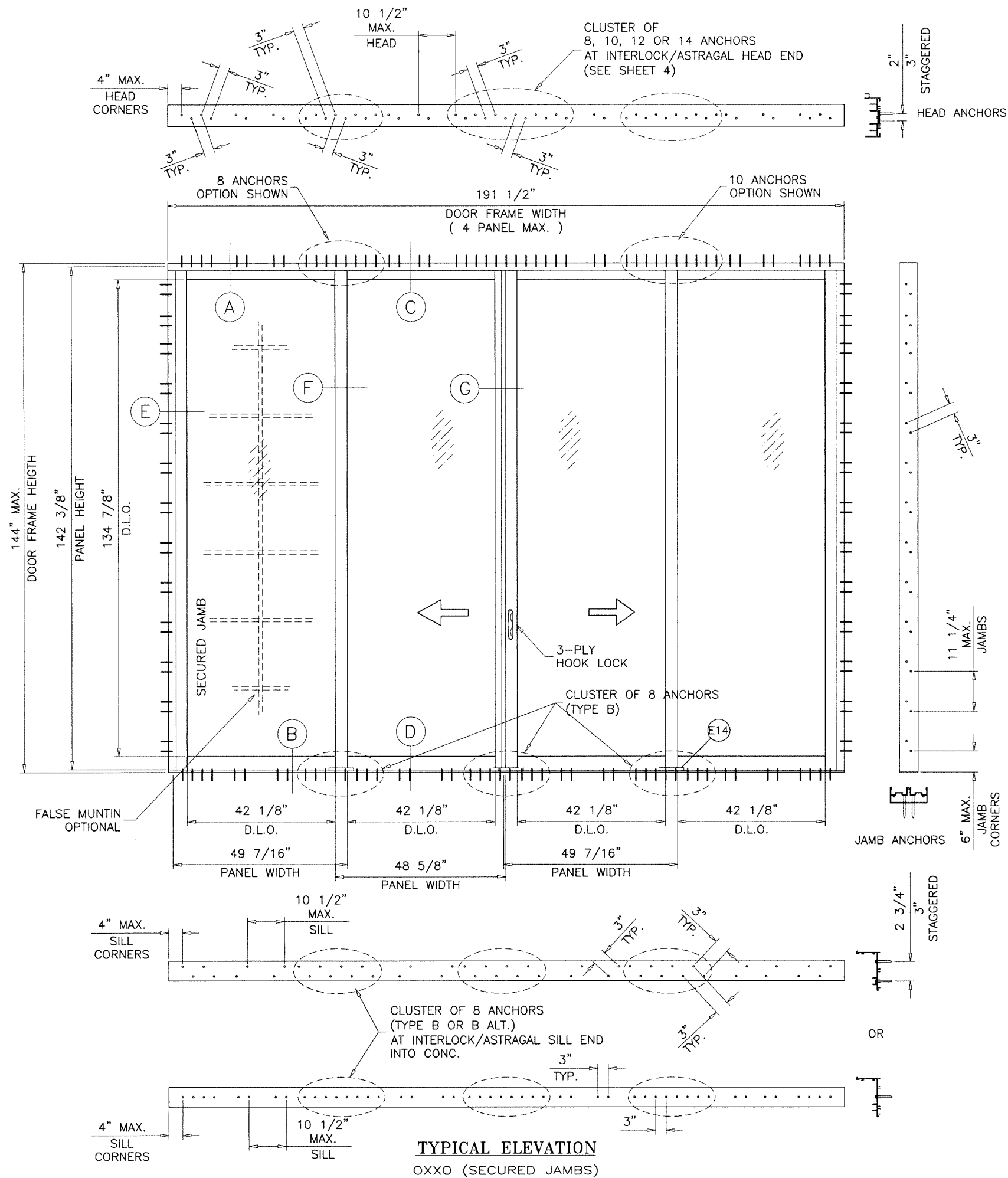
no	date	by	description
A	09.30.20		UPDATED TO 2020 FBC
B	09.12.23		UPDATED TO 2023 FBC

revisions:

date: 04-19-18
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
18-45F

sheet 1 of 13



DAYLITE OPENINGS WIDTHS:
 FIXED STILE-INTERLOCK = NOM. PANEL WIDTH - 7.437"
 INTERLOCK-ASTRAGAL = NOM. PANEL WIDTH - 6.375"
 LOCK STILE-INTERLOCK = NOM. PANEL WIDTH - 7.187"

DAYLITE OPENING HEIGHT:
 PANEL HEIGHT - 7.375"
 PANEL HEIGHT = DOOR FRAME HEIGHT - 1.625"

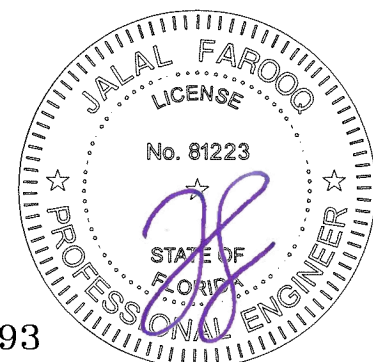
MAX. FRAME AREA OF S.G.D. SHALL NOT EXCEED
 FRAME AND PANEL AREA OF TESTED UNIT PER FBC REQUIREMENTS.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS FOR SECURED JAMB S.G.D.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** DETERMINE DOOR CAPACITY FROM TABLE ON SHEET 1 FOR THE GLASS TYPE USED.
- STEP 3** USING CHARTS ON SHEET 4 SELECT HEAD ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

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FL #17893

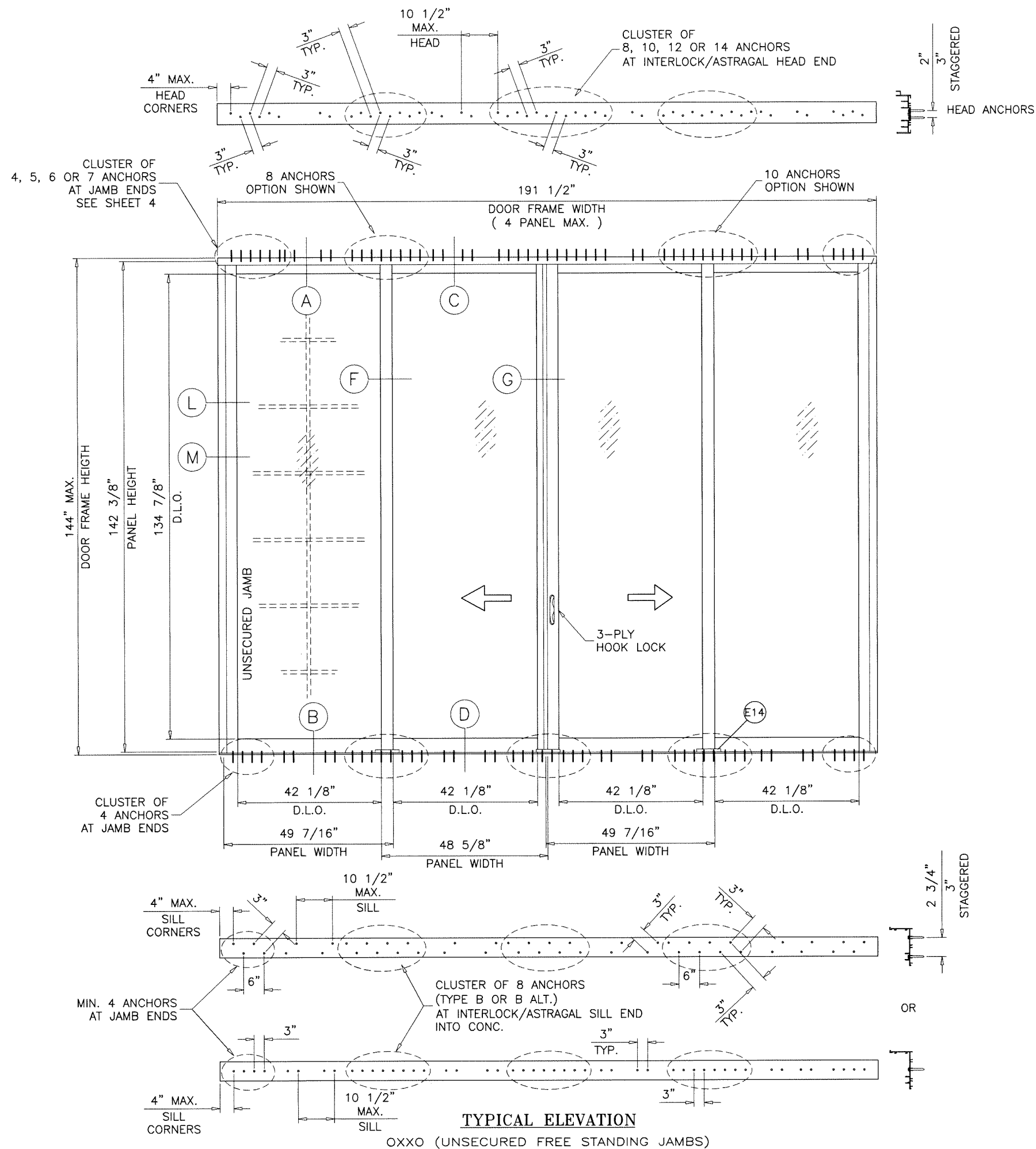
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 sheet 2 of 13

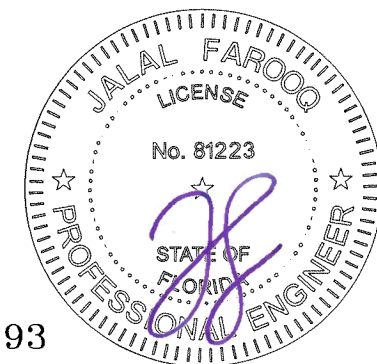


INSTRUCTIONS:

USE CHARTS AS FOLLOWS FOR UNSECURED JAMB S.G.D.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** DETERMINE DOOR CAPACITY FROM TABLE ON SHEET 1 FOR THE GLASS TYPE USED.
- STEP 3** USING CHARTS ON SHEET 4 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** USING UNANCHORED FREE STANDING JAMB AND REINFORCING OPTIONS FROM SHEET 11, SELECT THE DESIGN LOAD MORE THAN THE LOAD IN STEP 1, 2 & 3.
- STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO ENTIRE SYSTEM.

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drawing no.
18-45F
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FRAME HEAD ANCHOR CAPACITY - PSF																			
ANCHOR TYPE		ANCHORS TYPE 'A' & 'B'																ANCHORS 'C'	
		1/4" MAX. SHIM		3/8" MAX. SHIM SPACE						1/2" MAX. SHIM SPACE								3/8" MAX. SHIM	
AVERAGE PANEL WIDTH INCHES	DOOR FRAME HEIGHT INCHES	8 ANCHORS AT MTG. STILE ENDS		8 ANCHORS AT MTG. STILE ENDS		10 ANCHORS AT MTG. STILE ENDS		12 ANCHORS AT MTG. STILE ENDS		8 ANCHORS AT MTG. STILE ENDS		10 ANCHORS AT MTG. STILE ENDS		12 ANCHORS AT MTG. STILE ENDS		14 ANCHORS AT MTG. STILE ENDS		8 ANCHORS AT MTG. STILE ENDS	
		EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
36	126	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0	120.0	121.0	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0
42		120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0	103.7	103.7	120.0	124.5	120.0	125.0	120.0	125.0	120.0	125.0
48		120.0	125.0	113.1	113.1	120.0	125.0	120.0	125.0	90.8	90.8	108.9	108.9	120.0	125.0	120.0	125.0	120.0	125.0
50		120.0	125.0	108.6	108.6	120.0	125.0	120.0	125.0	87.1	87.1	104.6	104.6	120.0	122.0	120.0	125.0	120.0	125.0
52		120.0	125.0	104.4	104.4	120.0	125.0	120.0	125.0	83.8	83.8	100.5	100.5	117.3	117.3	120.0	125.0	120.0	125.0
54		120.0	125.0	100.5	100.5	120.0	120.6	120.0	125.0	80.7	80.7	96.8	96.8	112.9	112.9	120.0	125.0	120.0	125.0
36	132	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0	115.5	115.5	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0
42		120.0	125.0	120.0	123.4	120.0	125.0	120.0	125.0	99.0	99.0	118.8	118.8	120.0	125.0	120.0	125.0	120.0	125.0
48		120.0	125.0	108.0	108.0	120.0	125.0	120.0	125.0	86.6	86.6	104.0	104.0	120.0	121.3	120.0	125.0	120.0	125.0
50		120.0	125.0	103.6	103.6	120.0	124.4	120.0	125.0	83.2	83.2	99.8	99.8	116.4	116.4	120.0	125.0	120.0	125.0
52		120.0	125.0	99.7	99.7	119.6	119.6	120.0	125.0	80.0	80.0	96.0	96.0	112.0	112.0	120.0	125.0	120.0	125.0
36		138	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0	110.5	110.5	120.0	125.0	120.0	125.0	120.0	125.0	120.0
42	120.0		125.0	118.0	118.0	120.0	125.0	120.0	125.0	94.7	94.7	113.6	113.6	120.0	125.0	120.0	125.0	120.0	125.0
48	120.0		125.0	103.3	103.3	120.0	123.9	120.0	125.0	82.9	82.9	99.4	99.4	116.0	116.0	120.0	125.0	120.0	125.0
50	120.0		125.0	99.1	99.1	119.0	119.0	120.0	125.0	79.6	79.6	95.5	95.5	111.4	111.4	120.0	125.0	120.0	125.0
36	144	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0	105.9	105.9	120.0	125.0	120.0	125.0	120.0	125.0	120.0	125.0
42		120.0	125.0	113.1	113.1	120.0	125.0	120.0	125.0	90.8	90.8	108.9	108.9	120.0	125.0	120.0	125.0	120.0	125.0
48		120.0	125.0	99.0	99.0	118.8	118.8	120.0	125.0	79.4	79.4	95.3	95.3	111.2	111.2	120.0	125.0	120.0	125.0
		4 ANCHORS AT FREE STANDING JAMB ENDS		4 ANCHORS AT FREE STANDING JAMB ENDS		5 ANCHORS AT FREE STANDING JAMB ENDS		6 ANCHORS AT FREE STANDING JAMB ENDS		4 ANCHORS AT FREE STANDING JAMB ENDS		5 ANCHORS AT FREE STANDING JAMB ENDS		6 ANCHORS AT FREE STANDING JAMB ENDS		7 ANCHORS AT FREE STANDING JAMB ENDS		4 ANCHORS AT FREE STANDING JAMB ENDS	

THESE TABLES APPLY TO ANCHORS AT FRAME HEAD
SILL ANCHORS IN CLUSTER OF 8 AT INTERLOCK/ASTRAGAL ENDS, AND
4 AT FREE STANDING JAMB ENDS (ALL SIZES) MEET ALL LOAD REQUIREMENTS
AND DO NOT REQUIRE SEPARATE TABLES

Sealed: 9/15/2023



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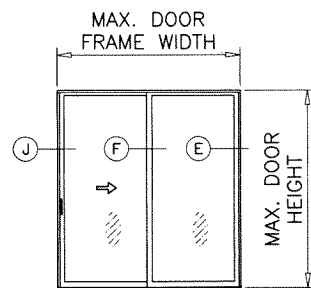
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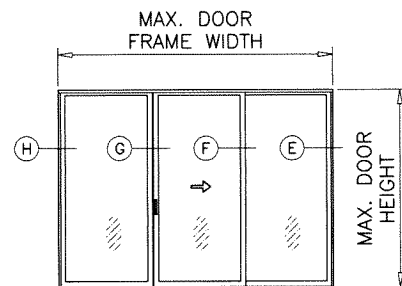
drawing no.
18-45F

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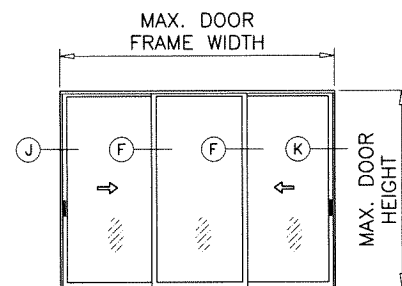
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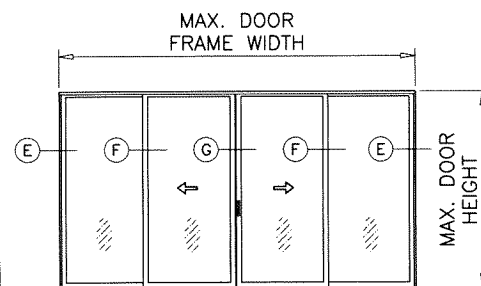
XO (SHOWN)
OX



OXO (SHOWN)



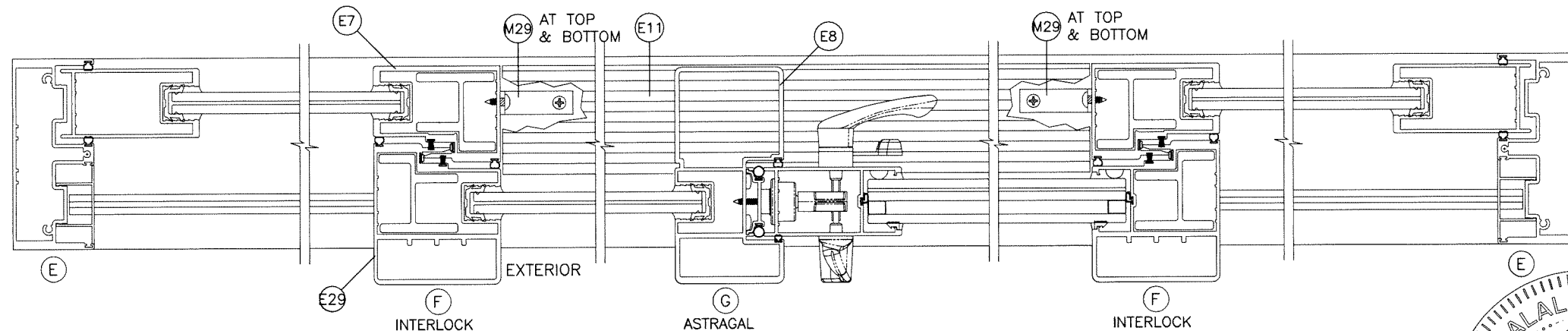
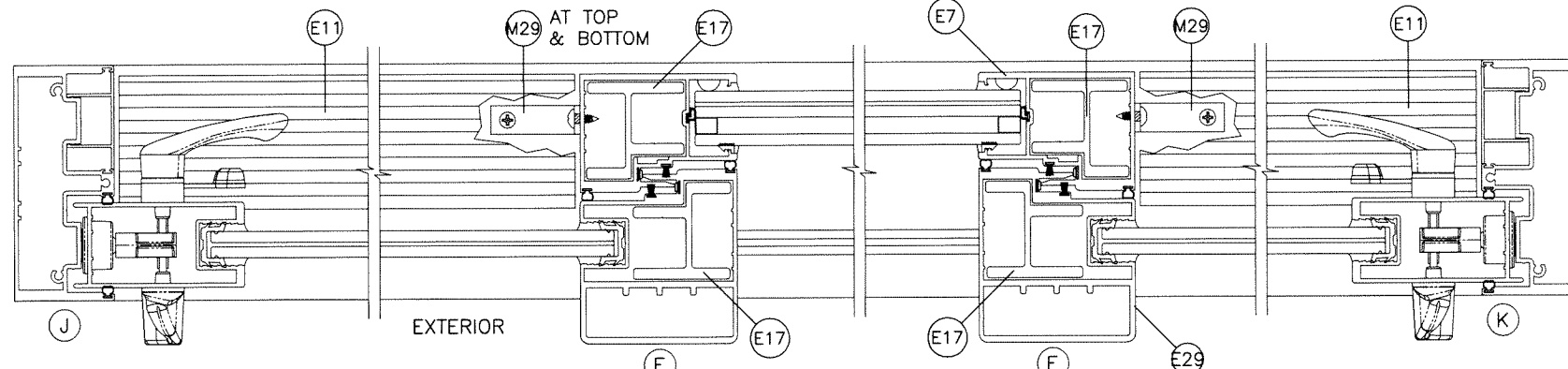
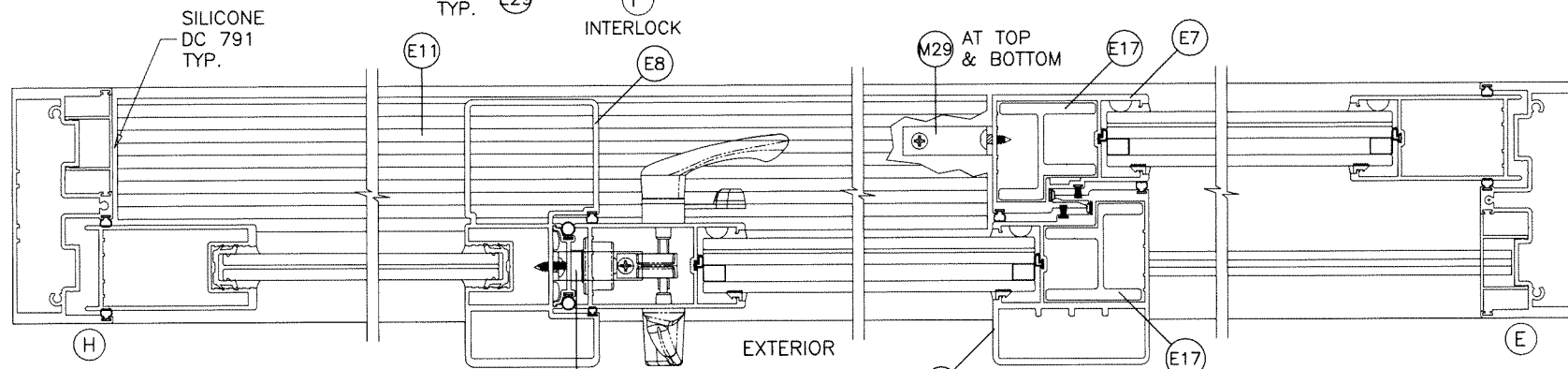
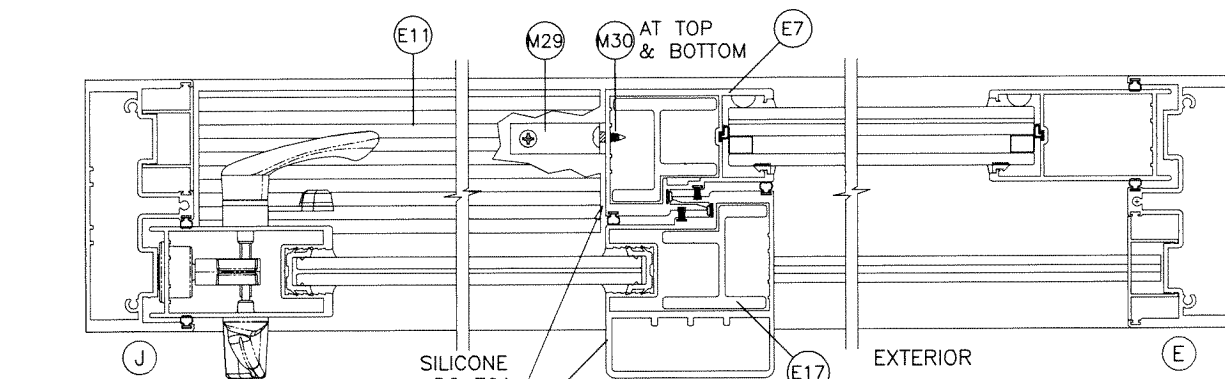
XOX (SHOWN)



OXXO (SHOWN)

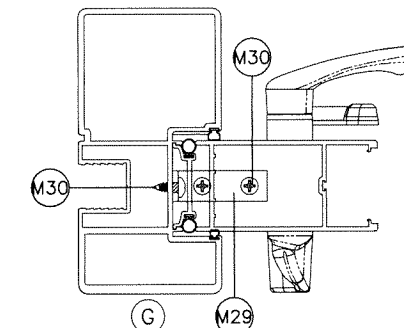
APPROVED CONFIGURATIONS

NOT TO EXCEED TESTED DOOR SIZE AND TESTED PANEL AREA



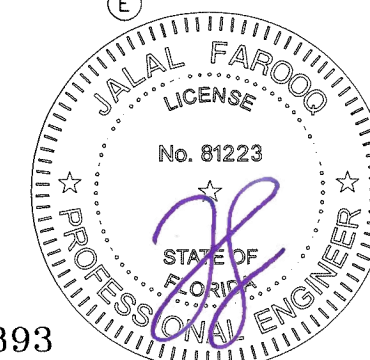
NOTE:

1. OPERABLE PANEL TO BE ON EXTERIOR TRACKS WITH SAFEGUARD.
2. CONFIGURATIONS SHOWN FOR ILLUSTRATION PURPOSES ONLY.
3. FOR APPLICABLE DESIGN PRESSURES SEE INSTRUCTIONS IN SHEETS 2 & 3.
4. FOR ANCHOR DETAILS SEE SHEETS 7 THRU 11.
5. THE FRAME AREA OF ALTERNATE SIZE UNIT SHALL NOT EXCEED FRAME & PANEL AREA OF TESTED UNIT PER FBC REQUIREMENTS.



CLIP REQUIRED AT OXO DOORS ONLY
AT TOP AND BOTTOM, SECURED WITH
(2) #10 SMS PER EXTERIOR FIXED PANEL LEG
(TOTAL 4 PER CLIP)

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COMP-ANL 18-45F-ESW

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drawing no. 18-45F			
sheet 5 of 13			

ITEM #	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-6500-001	1	STANDARD FRAME HEAD	6063-T6	-
E2	ES-6500-002	1	FRAME SILL	6063-T6	-
E4	ES-6500-004	2	FRAME JAMB	6063-T6	-
E5	ES-6500-005	2/ PANEL	TOP AND BOTTOM RAIL (INSUL. LAM. GLASS)	6063-T6	-
E5A	ES-6500-024	2/ PANEL	TOP AND BOTTOM RAIL (LAM. GLASS)	6063-T6	-
E6	ES-6500-006	1/ PANEL	LOCK STILE (INSUL. LAM. GLASS)	6063-T6	-
E6A	ES-6500-023	1/ PANEL	LOCK STILE (LAM. GLASS)	6063-T6	-
E7	ES-6500-007	1/ PANEL	INNER PANEL INTERLOCK STILE (INSUL. LAM. GLASS)	6005-T5	-
E7A	ES-6500-025	1/ PANEL	INNER PANEL INTERLOCK STILE (LAM. GLASS)	6005-T5	-
E8	ES-6500-025	1	ASTRAGAL STILE (INSUL. LAM. GLASS)	6005-T6	-
E8A	ES-6500-031	1	ASTRAGAL STILE (LAM. GLASS)	6005-T5	-
E9	ES-6500-009	1	ASTRAGAL ADAPTER	6063-T6	-
E10	ES-6500-010	1	ADD-ON TRACK	6063-T6	-
E11	ES-6500-011	1	THRESHOLD (LENGTH = OPNG. WIDTH BETWEEN FIXED PANELS)	6063-T6	-
E12	ES-6500-012	2	SNAP-IN JAMB COVER (OPTIONAL)	6063-T5	-
E13	ES-6500-013	1	TRACK INSERT	6063-T6	-
E14	ES-6500-014A	-	RETAINER CLIP, 4" LONG	6063-T6	-
E15	ES-6500-015	AS REQD.	SCREEN RAIL	6063-T6	-
E17	ES-6500-017	AS REQD.	INTERLOCK REINFORCEMENT, FULL PANEL LENGTH	6005-T5	-
E18	ES-6500-018	AS REQD.	HEAD COVER FULL LENGTH	6063-T5	-
E19	-	AS REQD.	INNER INTERLOCK STILE (LAM. GLASS)	6063-T5	-
E22	ES-6011	AS REQD.	SCREW COVER (OPTIONAL)	6063-T6	-
E29	ES-6500-028	1/ PANEL	OUTER PANEL INTERLOCK STILE (INSUL. LAM. GLASS)	6005-T5	-
E29A	ES-6500-030	1/ PANEL	OUTER PANEL INTERLOCK STILE (LAM. GLASS)	6005-T5	-
E30	ES-6500-027	1	SILL SCREW COVER	6063-T5	-
E32	ES-6500-033	2	FIXED PANEL BOTTOM GUIDE	6005-T5	-
E33	-	AS REQD.	FRAME JAMB ALUMINUM REINFORCING	6063-T6	-
E34	-	AS REQD.	FRAME JAMB STEEL REINFORCING	STEEL	ASTM A36 GRADE B
M1	#12 X 1 1/2"	3/ CORNER	FRAME ASSEMBLY SCREWS	ST. STEEL	P.H. SMS
M2	#10 X 1 1/2"	4/ CORNER	PANEL ASSEMBLY SCREWS	ST. STEEL	P.H. SMS
M3	#8 X 1"	2/ LOCK	LOCK FASTENERS	ST. STEEL	F.H. SMS
M4	#8 X 3/4"	2/ HANDLE	HANDLE SET FASTENERS	ST. STEEL	P.H. SMS
M6	#10 X 1/2"	2/ CLIP	RETAINER CLIP FASTENERS	ST. STEEL	F.H. SMS
M7	ES-6500-G01A	4/ PANEL	GLAZING GASKET (LAM. GLASS)	SILICONE	DUROMETER 65±5 SHORE A, EXTRUSIONES S.A.
M8	E-214	AS REQD.	ASTRAGAL ADAPTER W'STRIPPING	VINYL	THERMOPLASTIC ELASTOMER
M10	ES-8011	AS REQD.	SPACER GASKET	EPDM	DUROMETER 80±5 SHORE A, EXTRUSIONES S.A.
M11	27-445	AS REQD.	GLAZING WEDGE GASKET	EPDM	DUROMETER 75±5 SHORE A, SOLUCIONESENCAUCHO
M12	27-448	AS REQD.	BOTTOM RAIL GLAZING GASKET	EPDM	DUROMETER 68±5 SHORE A, SOLUCIONESENCAUCHO
M13	27-449	AS REQD.	GLAZING GASKET AT TOP RAIL AND STILES	EPDM	DUROMETER 75±5 SHORE A, SOLUCIONESENCAUCHO
M16	1/4" X 1/2"	AS REQD.	GLAZING TAPE (INSUL. LAM. GLASS)	FOAM	-
M17	Q300T190	AS REQD.	FABRIC COATED FOAM WEATHERSEAL	POLYETHYLENE	Q-LON
M18	Q200T190	AS REQD.	WEATHERSEAL EXTERIOR	POLYETHYLENE	Q-LON
M19	Q150T270	AS REQD.	INTERLOCK BUMPER	POLYETHYLENE	Q-LON
M20	W223012K	AS REQD.	PILE W'STRIPPING	POLYPROPYLENE	-
M21	-	2/ MOV. PANEL	TANDEM ACETAL WHEELS IN METALLIC HOUSING	-	-
M22	PS01-1015-00B	1	MORTISE LOCK KEEPER	-	INTERLOCK
M23	PS01-0035-00B	1	TWO POINT 3-PLY HOOK LOCK	-	INTERLOCK
M24	PS01-0016-XXX	1/ MOV. PANEL	HANDLE SET	-	INTERLOCK
M26	52019	AS REQD.	THRESHOLD W'STRIPPING	-	AMESBURY
M27	ES-7000 G01	AS REQD.	SILL W'STRIPPING	SILICONE	DUROMETER 60±5 SHORE A
M29	ALU-A-027	-	FIX. PANEL ANGLE, 2" X 2" X 1/8" X 7/8" LONG	6063-T5	HEAD/SILL (FIXED PANEL)
M30	#10 X 1"	4/ CLIP	FIX. PANEL ANGLE FASTENERS	-	HWH SMS
M32	ES-6500-S01	-	1/4" SPACER FOR JAMB	NYLON	-
M33	ES-6500-034	-	1/2" SPACER FOR ASTRAGAL	NYLON	-
M35	P6304 AFK	-	ADHESIVE PILE PAD (4" X 1" X 1/2")	-	ULTRAFAB
M36	-	AS REQD.	TOP & BOTTOM RAIL REINFORCING	6063-T6	1/4" X 1-1/2" X FULL LENGTH
M37	#10 X 1 1/4"	2/ BAR	REINFORCING BAR FASTENERS, AT 6" FROM EACH END	ST. STEEL	F.H. SMS

Sealed: 9/15/2023



FL #17893

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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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

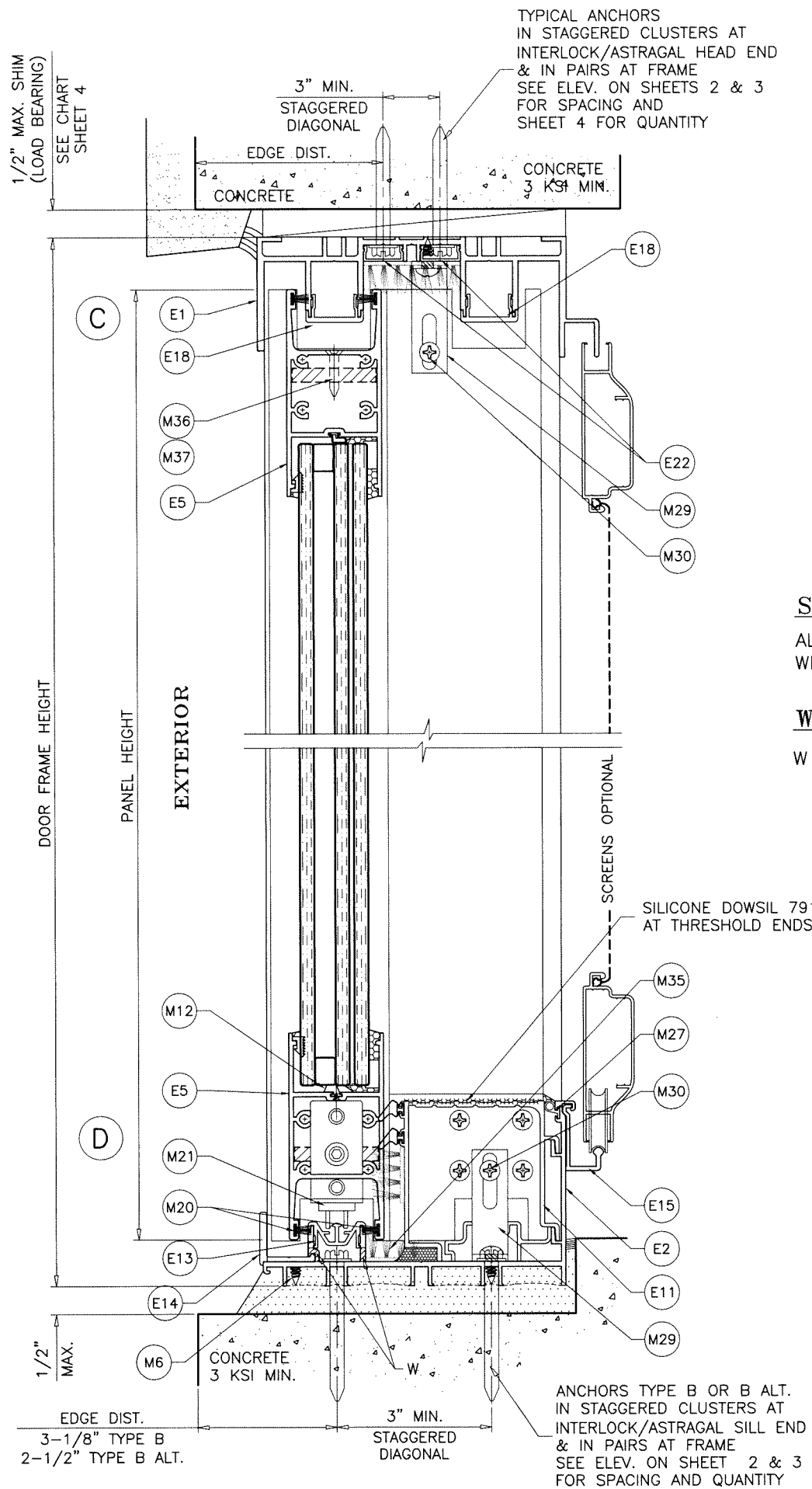
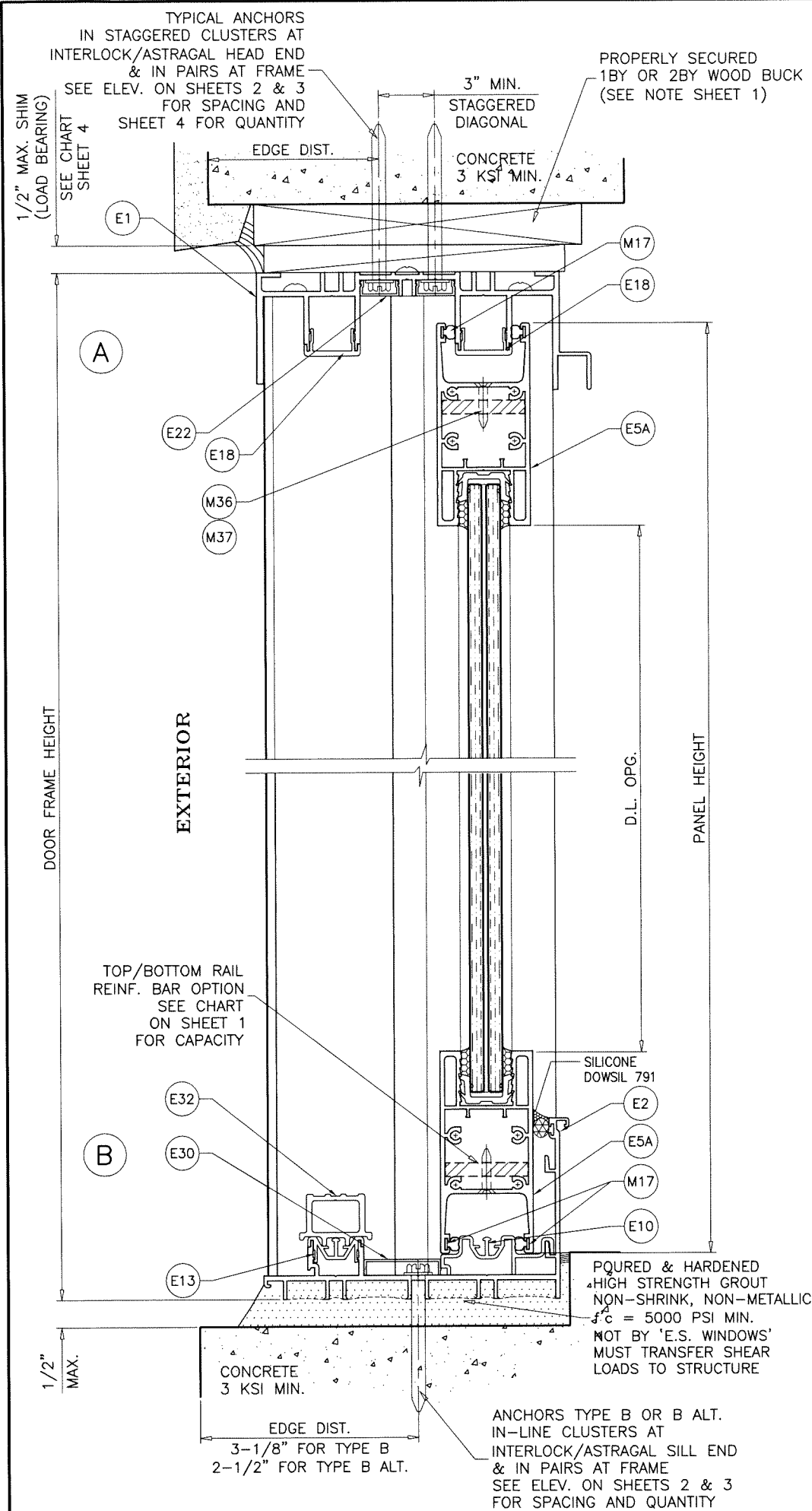
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chk. by:

drawing no.
18-45F

sheet 6 of 13

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COMP-ANL\18-45F-ESW



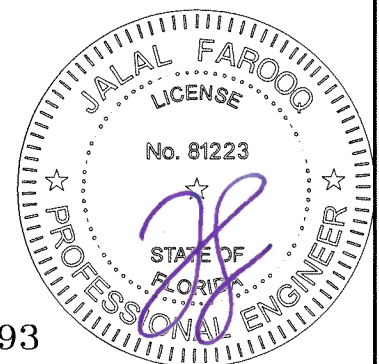
SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH WHITE/ALUMINUM COLORED SILICONE.

WEEPHOLES:

W = 1/4" X 3" LONG WEEP HOLES AT 4 1/2" FROM EACH END.

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COMP-ANL 18-45F-ESW

SERIES ES-6500 ULTRA ALUM S.G. DOOR (L.M.I.)

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MIAMI, FL. 33142
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drawing no.
18-45F

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TYPICAL ANCHORS: SEE ELEV. FOR SPACING

AT HEAD

- TYPE 'A'— **5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
INTO WOOD STRUCTURES
1-7/8" MIN. PENETRATION INTO WOOD
THRU 1BY OR 2BY WOOD BUCKS INTO CONCRETE
1-1/2" MIN. EMBED INTO CONCRETE
- TYPE 'B'— **5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE
1-1/2" MIN. EMBED
- TYPE 'C'— **5/16" DIA. TEKS OR SELF DRILLING SCREWS** (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

AT SILL

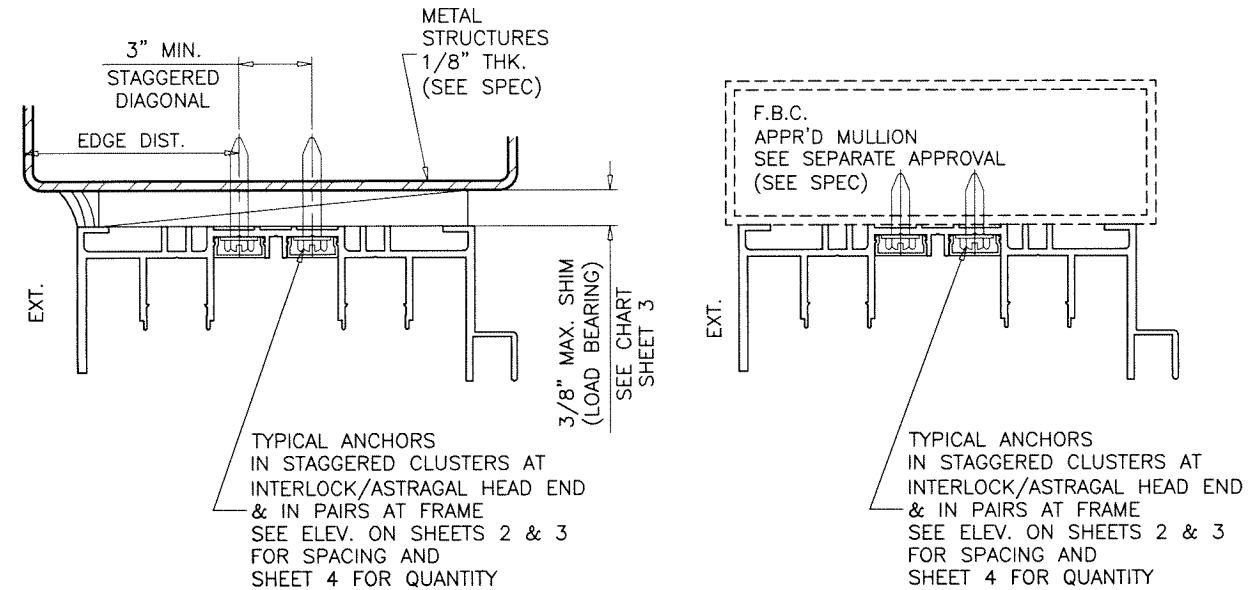
- TYPE 'B'— **5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE
1-1/2" MIN. EMBED
- TYPE 'B' ALT.— **1/4" DIA. ULTRACON+ BY 'DEWALT'** (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED

AT JAMBS

- 5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
INTO WOOD STRUCTURES
1-7/8" MIN. PENETRATION INTO WOOD
THRU 1BY OR 2BY WOOD BUCKS INTO CONCRETE OR FILLED BLOCKS
1-1/2" MIN. EMBED INTO CONCRETE OR BLOCKS
- 5/16" DIA. ULTRACON BY 'DEWALT'** (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE OR GROUT FILLED BLOCKS
1-1/2" MIN. EMBED
- 5/16" DIA. TEKS OR SELF DRILLING SCREWS** (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
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)

ANCHOR EDGE DISTANCES

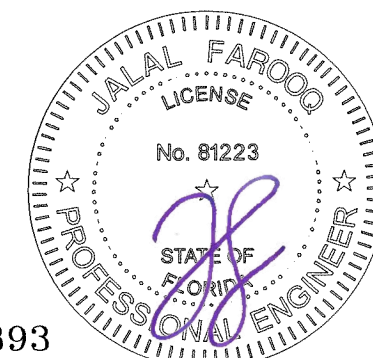
- INTO CONCRETE = 2-1/2" MIN. (1/4" ANCHORS)
INTO CONC. OR BLOCKS = 3-1/8" MIN. (5/16" ANCHORS)
INTO WOOD STRUCTURE = 1-1/4" MIN.
INTO METAL STRUCTURE = 3/4" MIN.
- WOOD AT HEAD OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.



ALTERNATE SUBSTRATES

1BY OR 2BY WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WINDOWS'
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.

Sealed: 9/15/2023



FL #17893

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AL-FAROOQ CORPORATION
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(C.A.N. 3538)

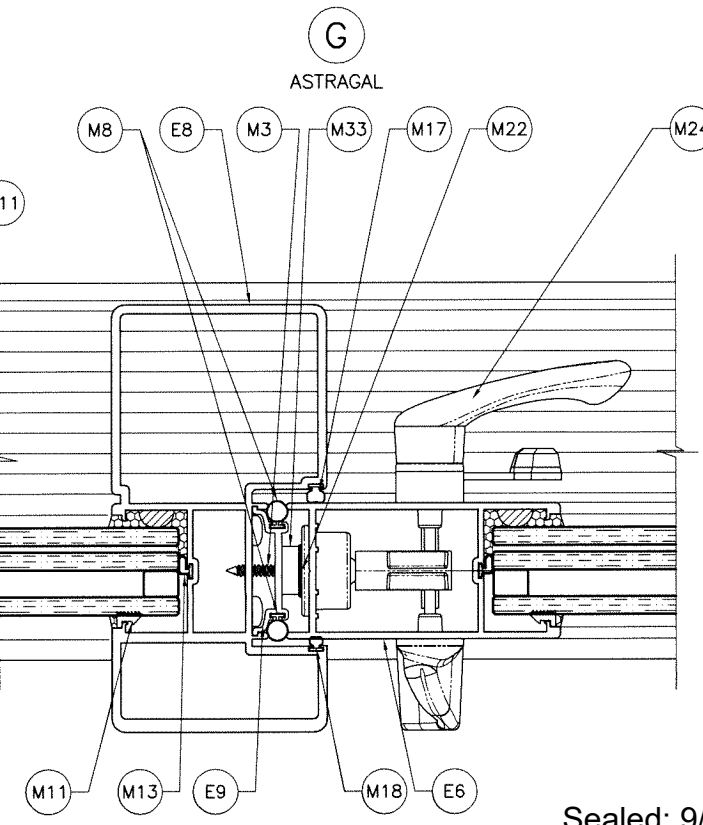
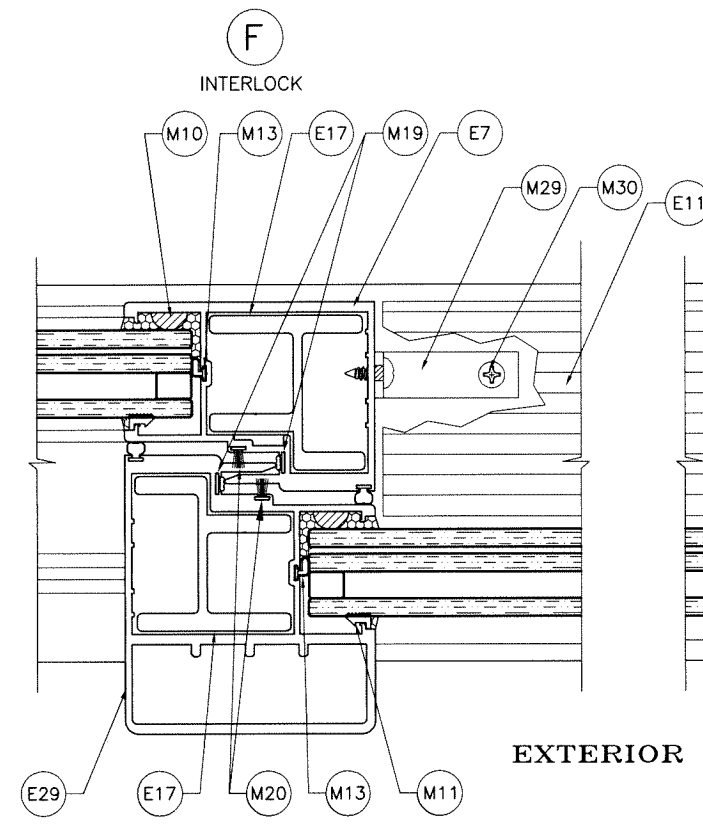
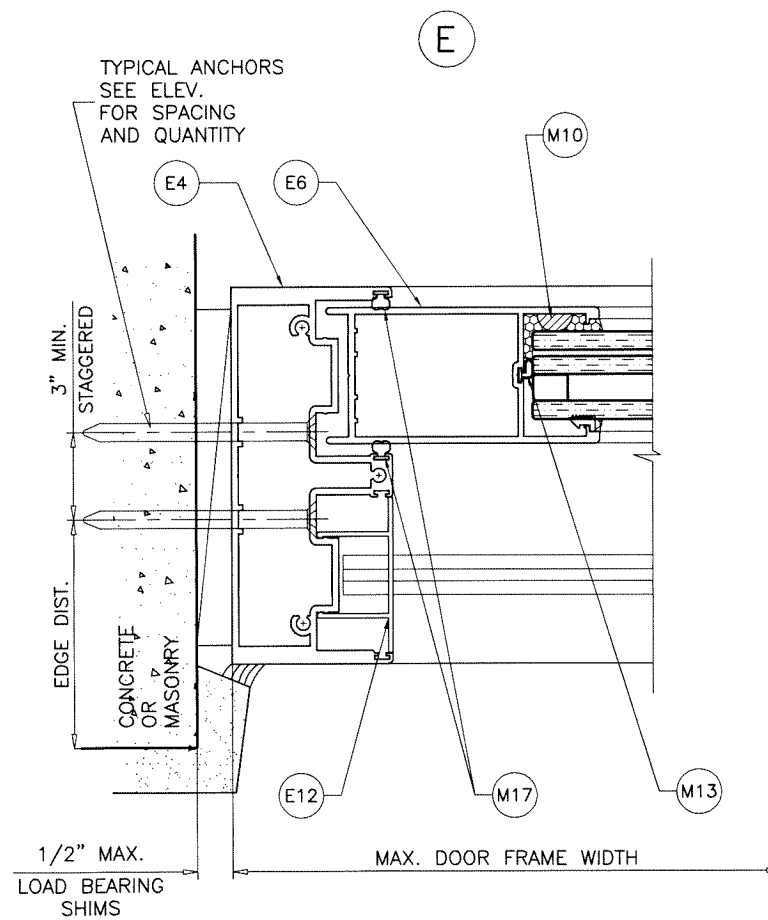
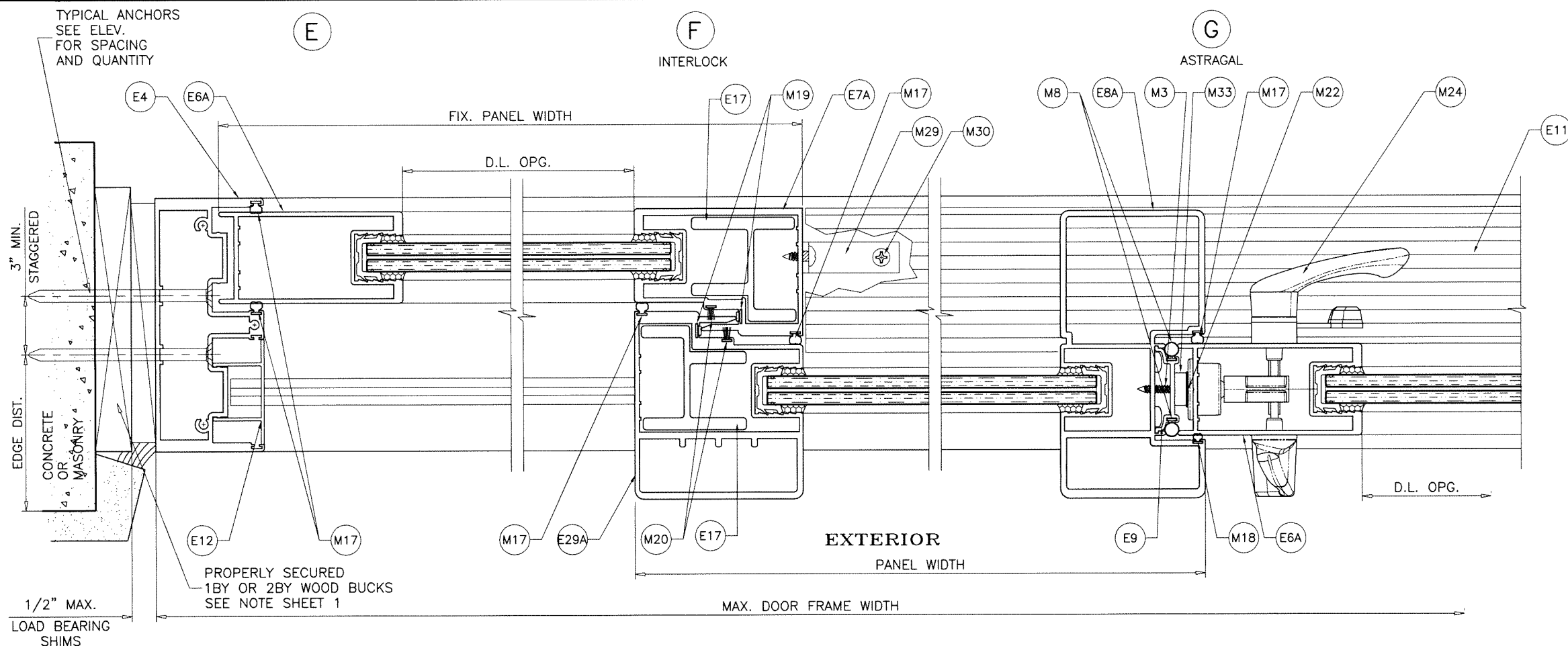
SERIES ES-6500 ULTRA ALUM S.G. DOOR (L.M.I.)

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

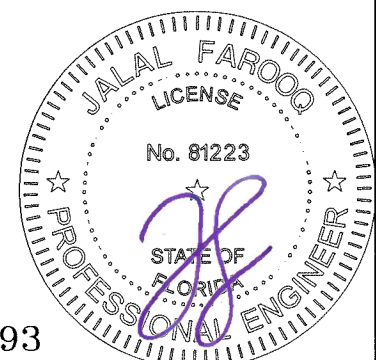
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drawing no. 18-45F			
sheet 8 of 13			

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COMP-ANL 18-45F-ESW

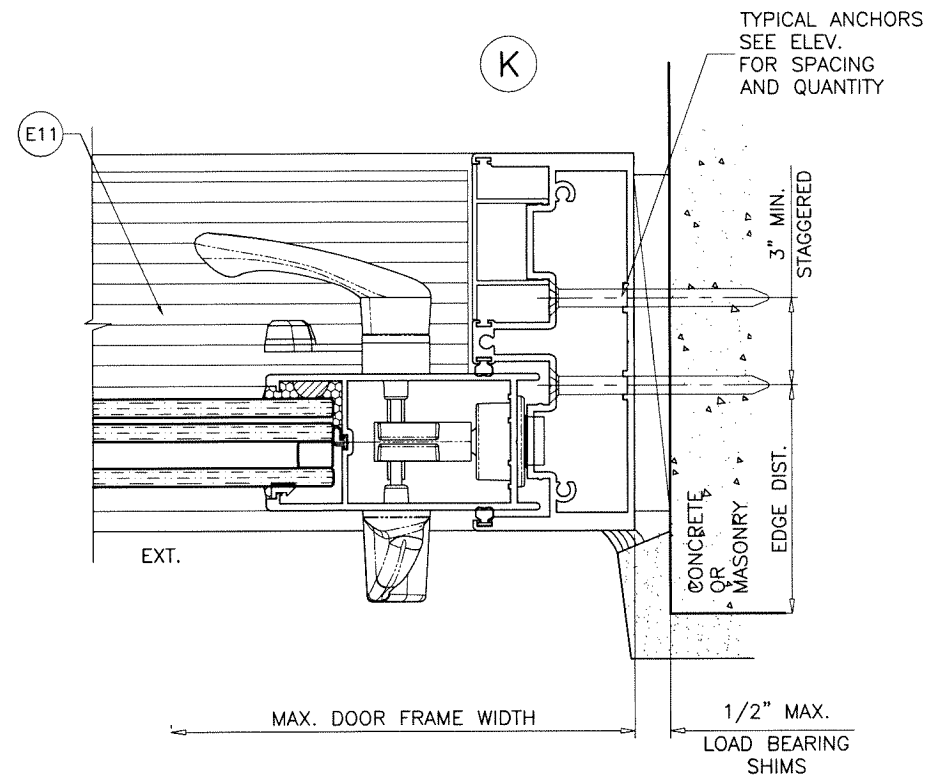
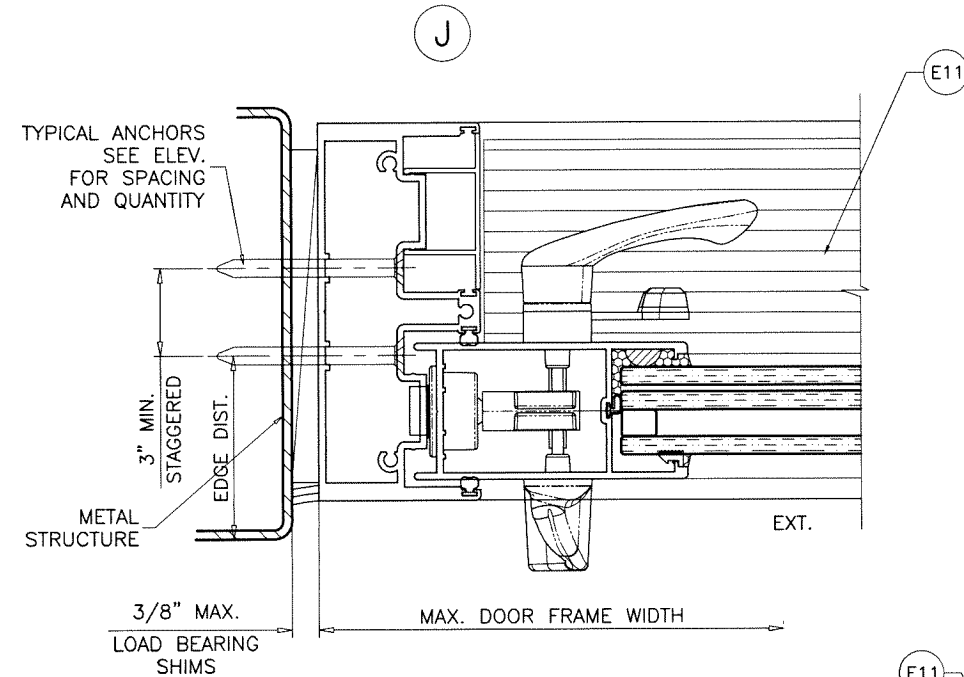
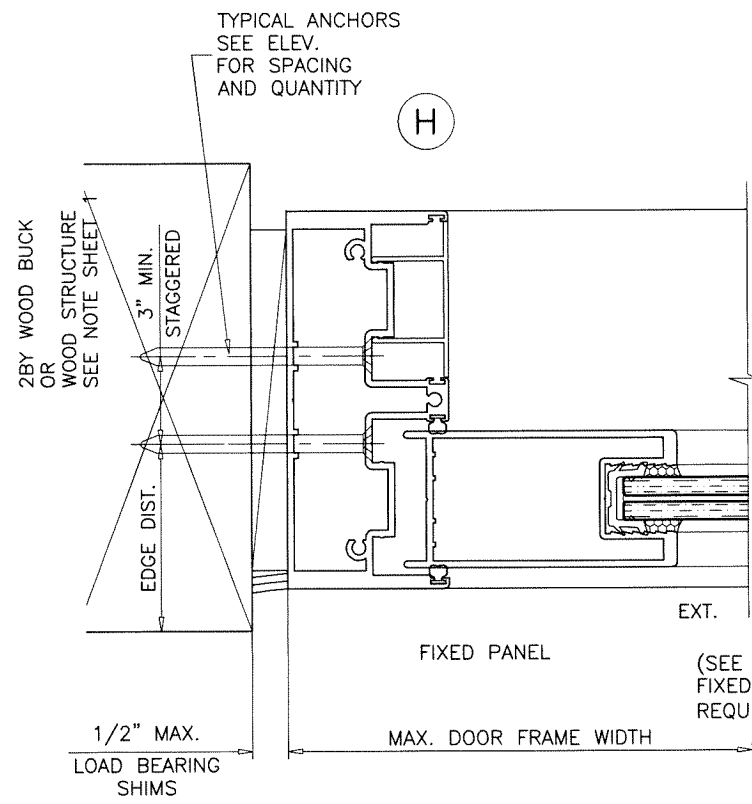
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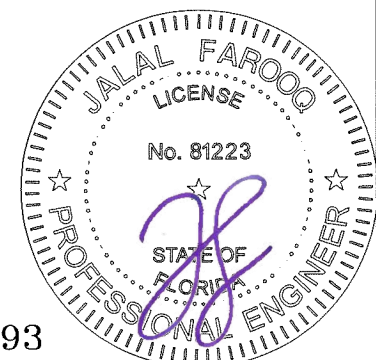
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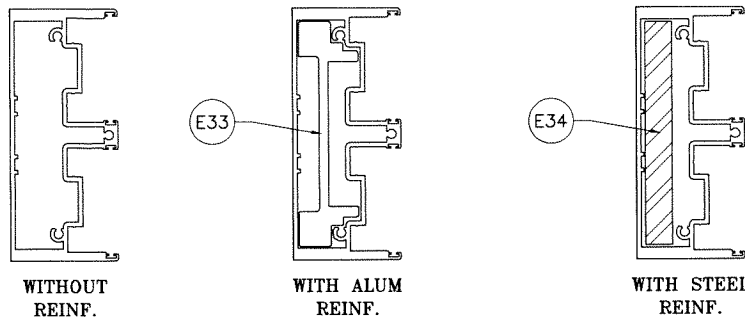
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drawing no.
18-45F
sheet 10 of 13



Ix IN ⁴	Sx IN ³
8.204	3.125

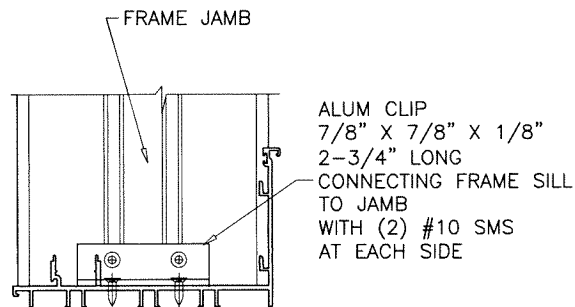
Ix IN ⁴	Sx IN ³
13.592	5.720

	Ix IN ⁴	Sx IN ³
ALUMINUM	8.204	3.125
STEEL	4.694	2.021
TOTAL Ix ALUM + Ix STL X 2.9	21.808	

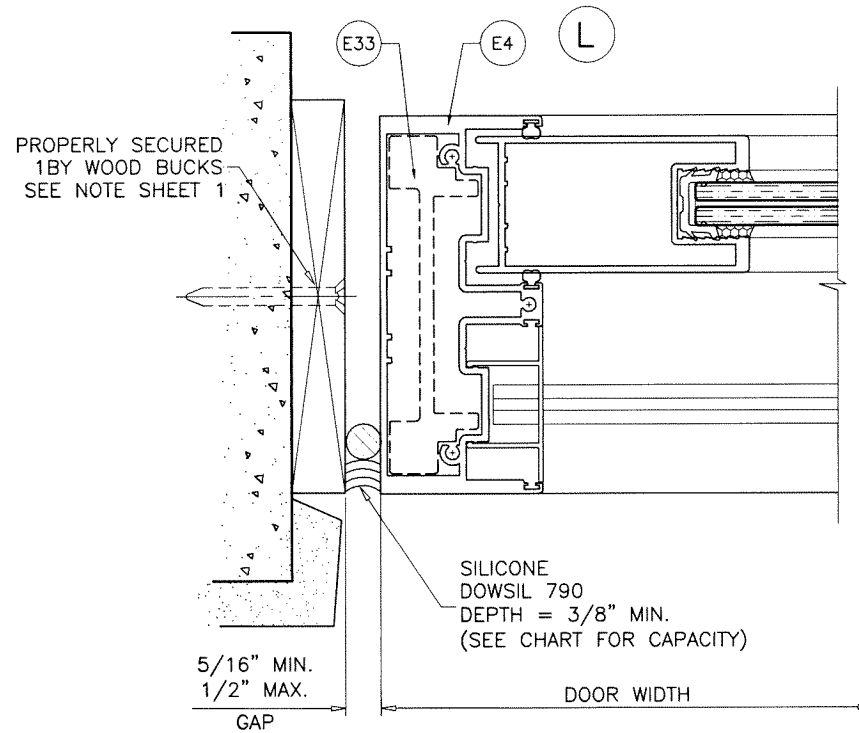
FREE STANDING JAMB DESIGN LOAD CAPACITY - PSF							
AVERAGE PANEL WIDTH INCHES	DOOR FRAME HEIGHT INCHES	WITHOUT REINF.		WITH ALUM REINF.		WITH STEEL REINF.	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36	126"	113.6	113.6	120.0	125.0	120.0	125.0
42		98.6	98.6	120.0	125.0	120.0	125.0
48		87.5	87.5	120.0	125.0	120.0	125.0
54		79.0	79.0	120.0	125.0	120.0	125.0
36	132"	94.1	94.1	120.0	125.0	120.0	125.0
42		81.5	81.5	120.0	125.0	120.0	125.0
48		72.2	72.2	115.7	115.7	120.0	125.0
52		67.3	67.3	107.8	107.8	120.0	125.0
36	138"	78.6	78.6	120.0	125.0	120.0	125.0
42		68.0	68.0	108.9	108.9	120.0	125.0
48		60.2	60.2	96.4	96.4	120.0	125.0
50		58.0	58.0	92.9	92.9	120.0	125.0
36	144"	66.1	66.1	105.9	105.9	120.0	125.0
42		57.2	57.2	91.6	91.6	120.0	125.0
48		50.6	50.6	81.0	81.0	120.0	125.0

NOTE:
DATA IN THIS SHEET MAY BE USED TO QUALIFY SPECIFIED JOINT SEALANT TO BE USED AT UNANCHORED FREE STANDING JAMBS.
PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION MANUAL FOR COMPATABILITY OF SEALANT TO SUBSTRATE & DOOR MATERIAL FINISH AND COMPLIANCE FOR WARRANTY. (UNDER SEPARATE REVIEW)

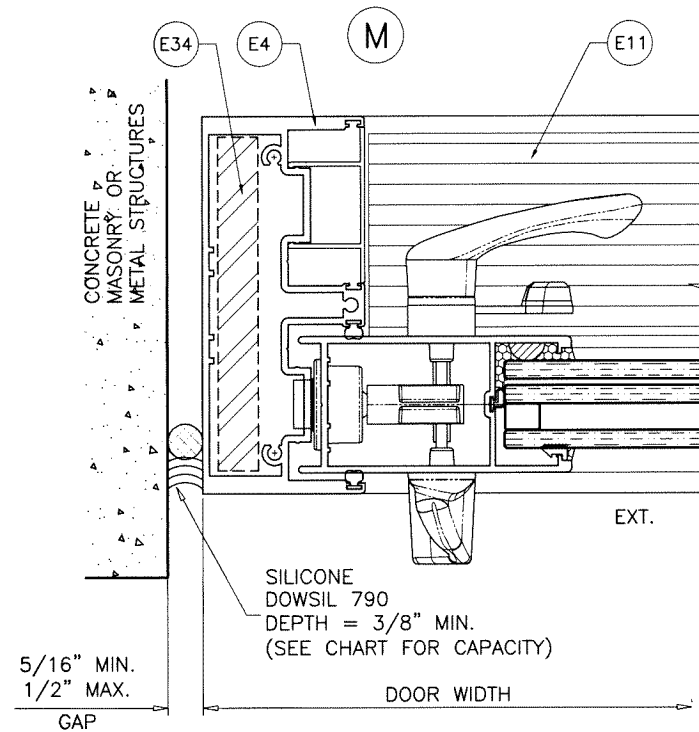
CONDITIONS OR OTHER SEALANTS NOT COVERED IN THIS SHEET TO BE ENGINEERED SEPARATELY AND TO BE REVIEWED BY AHJ.



REINFORCEMENT CLIP REQUIRED AT
FREE STANDING JAMB WITH STEEL REINFORCING ONLY

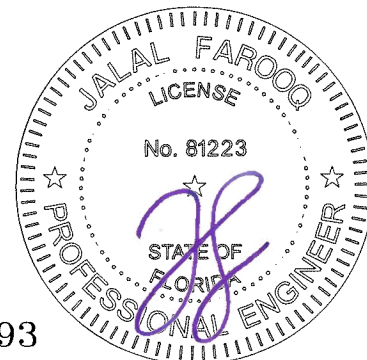


**FREE STANDING JAMB
FIXED SIDE**



**FREE STANDING JAMB
OPERABLE SIDE**

Sealed: 9/15/2023



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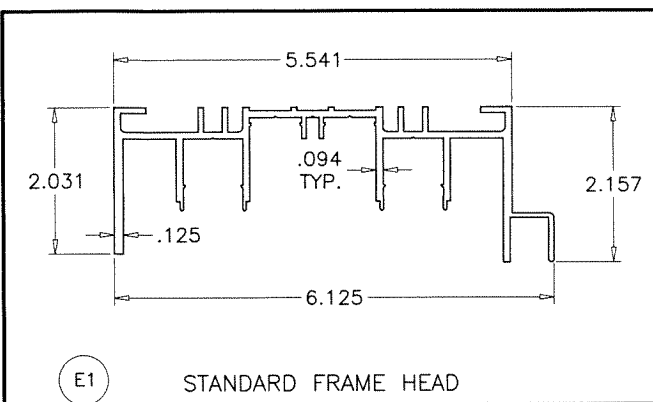
SERIES ES-6500 ULTRA ALUM S.G. DOOR (L.M.I.)

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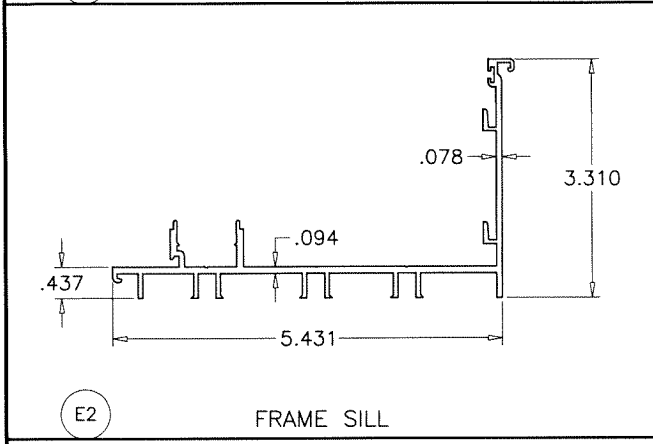
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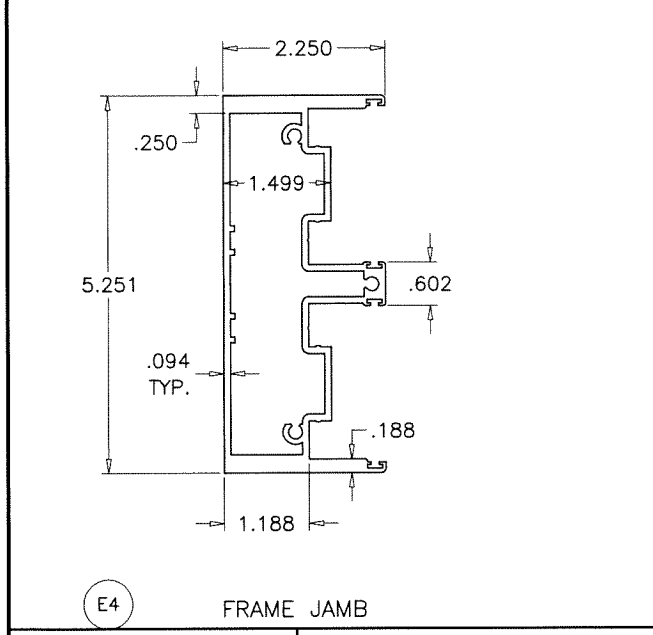
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sheet 11 of 13



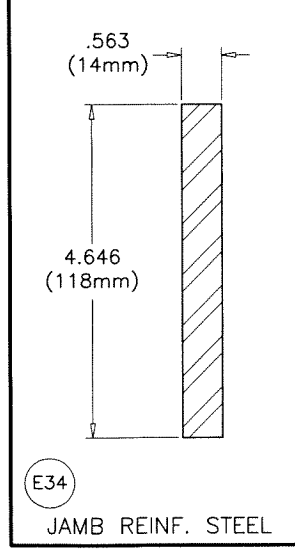
E1 STANDARD FRAME HEAD



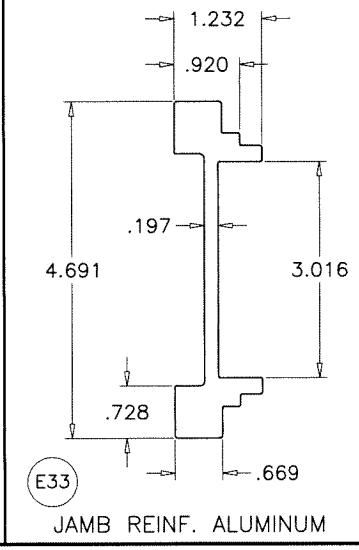
E2 FRAME SILL



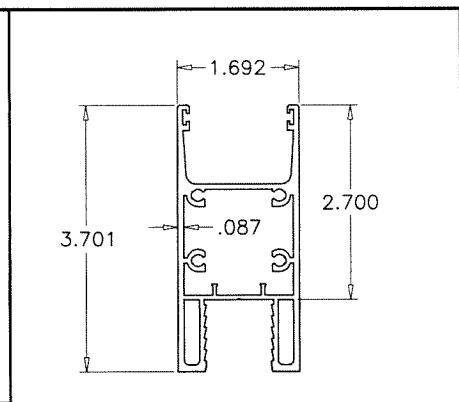
E4 FRAME JAMB



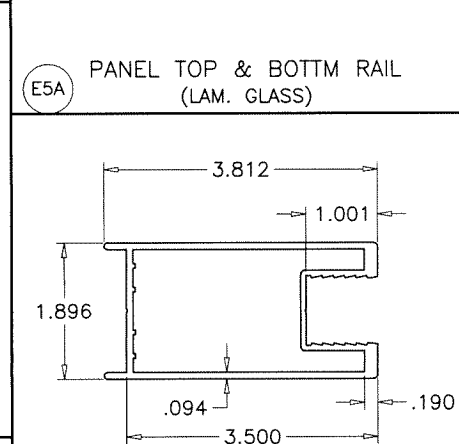
E34 JAMB REINF. STEEL



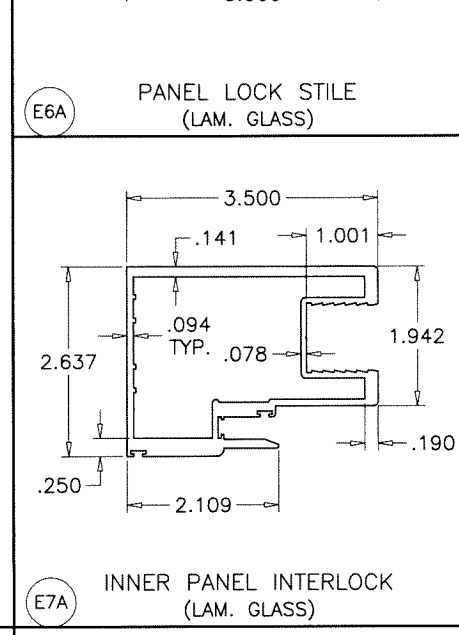
E33 JAMB REINF. ALUMINUM



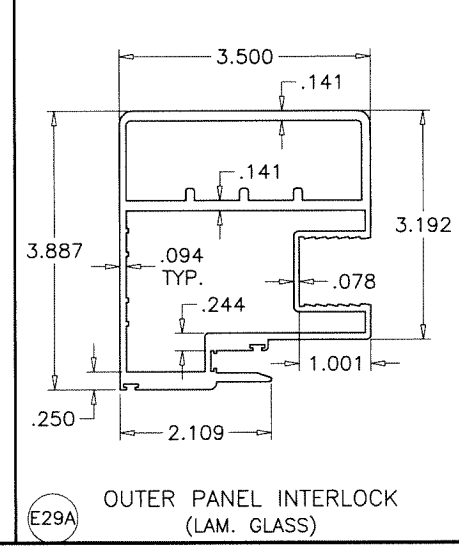
E5A PANEL TOP & BOTTM RAIL (LAM. GLASS)



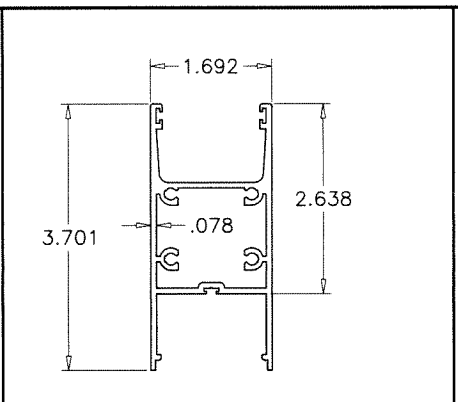
E6A PANEL LOCK STILE (LAM. GLASS)



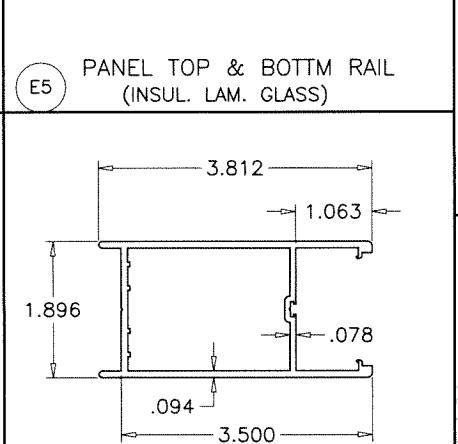
E7A INNER PANEL INTERLOCK (LAM. GLASS)



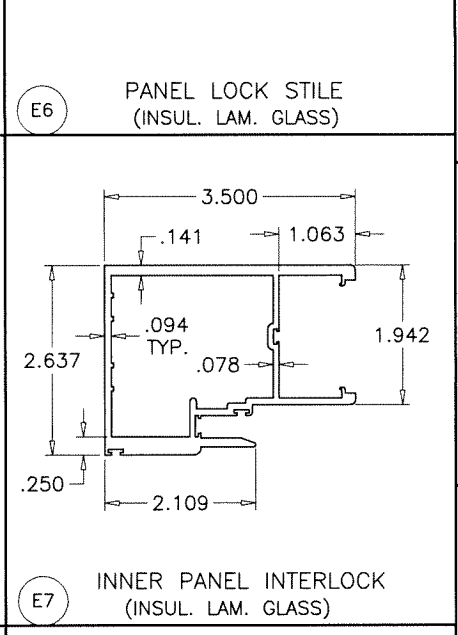
E29A OUTER PANEL INTERLOCK (LAM. GLASS)



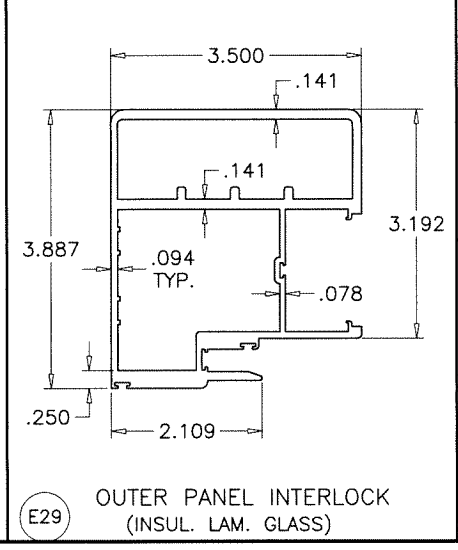
E5 PANEL TOP & BOTTM RAIL (INSUL. LAM. GLASS)



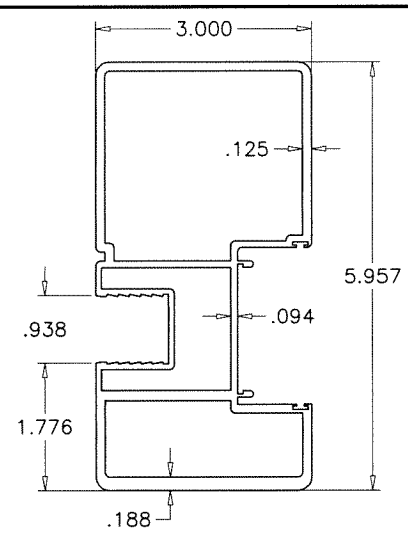
E6 PANEL LOCK STILE (INSUL. LAM. GLASS)



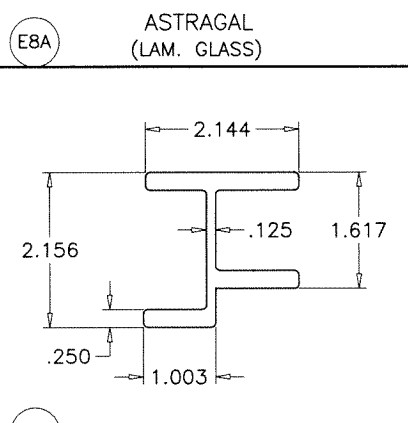
E7 INNER PANEL INTERLOCK (INSUL. LAM. GLASS)



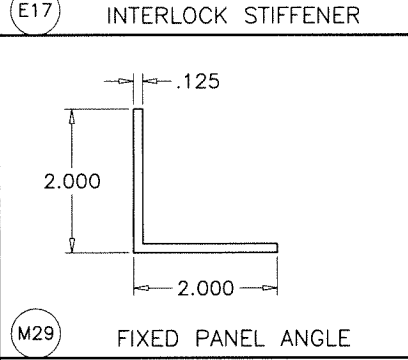
E29 OUTER PANEL INTERLOCK (INSUL. LAM. GLASS)



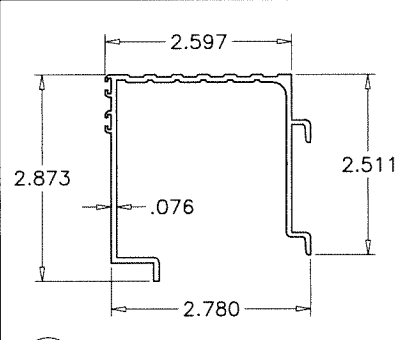
E8A ASTRAGAL (LAM. GLASS)



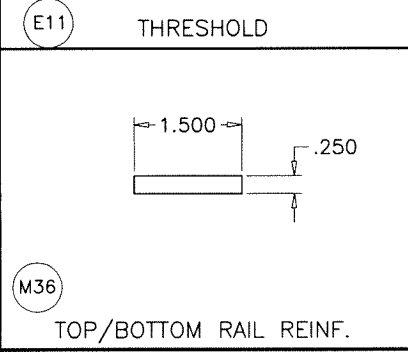
E17 INTERLOCK STIFFENER



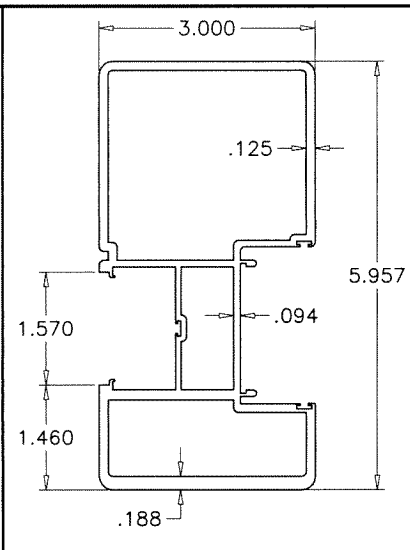
M29 FIXED PANEL ANGLE



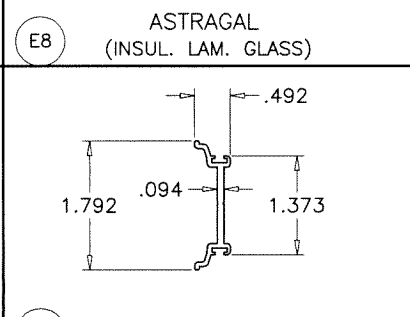
E11 THRESHOLD



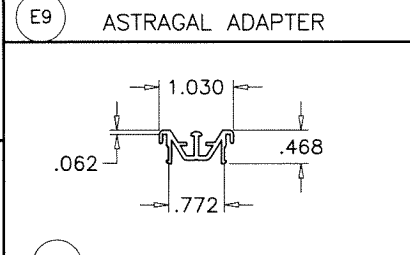
M36 TOP/BOTTOM RAIL REINF.



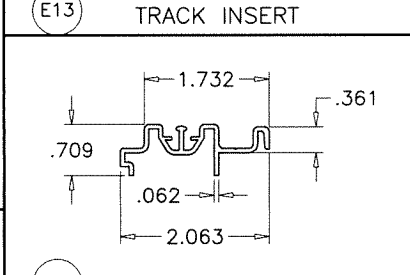
E8 ASTRAGAL (INSUL. LAM. GLASS)



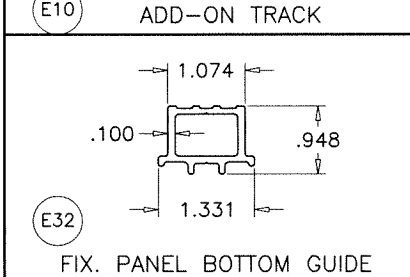
E9 ASTRAGAL ADAPTER



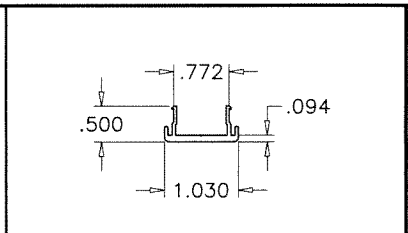
E13 TRACK INSERT



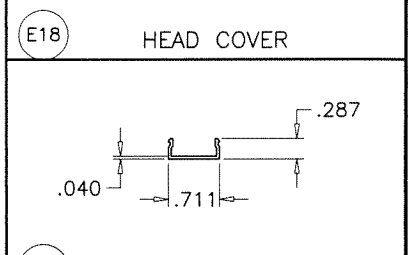
E10 ADD-ON TRACK



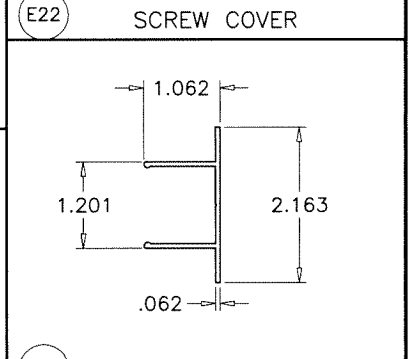
E32 FIX. PANEL BOTTOM GUIDE



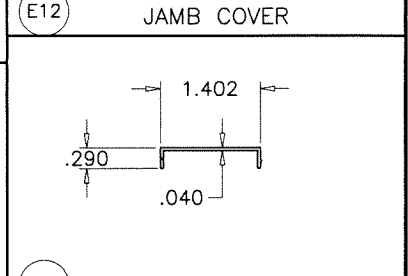
E18 HEAD COVER



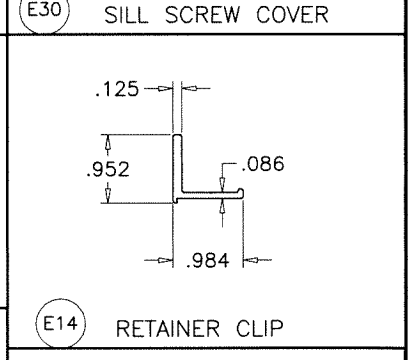
E22 SCREW COVER



E12 JAMB COVER



E30 SILL SCREW COVER



E14 RETAINER CLIP

Sealed: 9/15/2023

FL #17893



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

COMP-ANL 18-45F-ESW

SERIES ES-6500 ULTRA ALUM S.G. 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

date: 04-19-18

scale: 3/8" = 1"

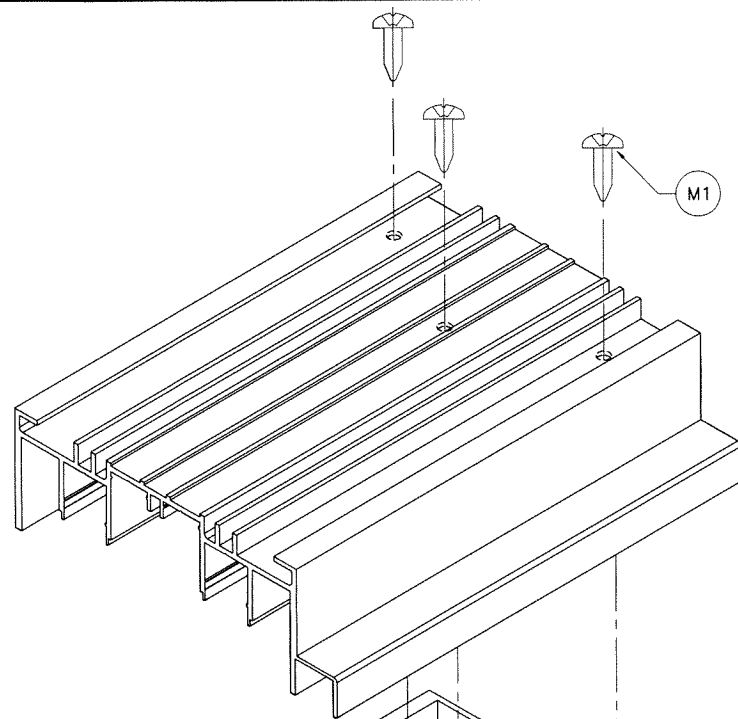
dr. by: TARIQ

chk. by:

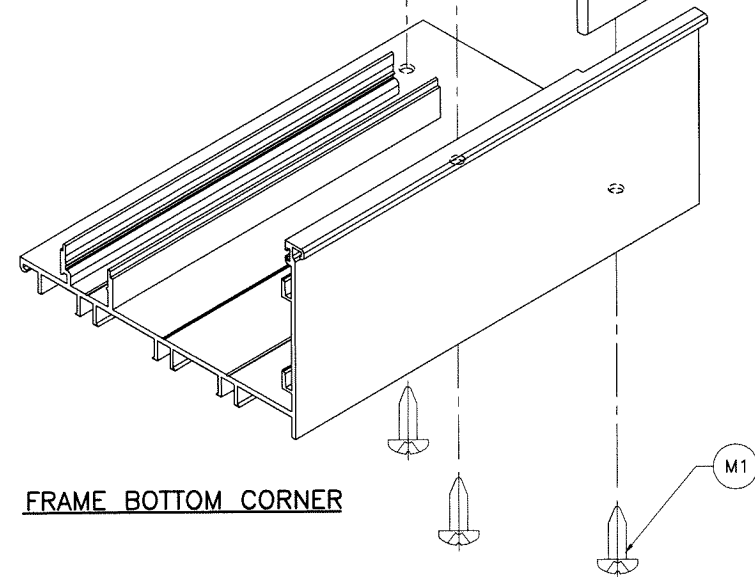
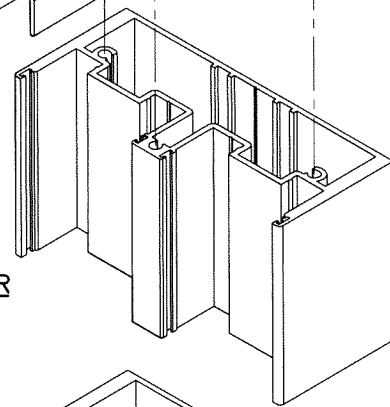
drawing no.

18-45F

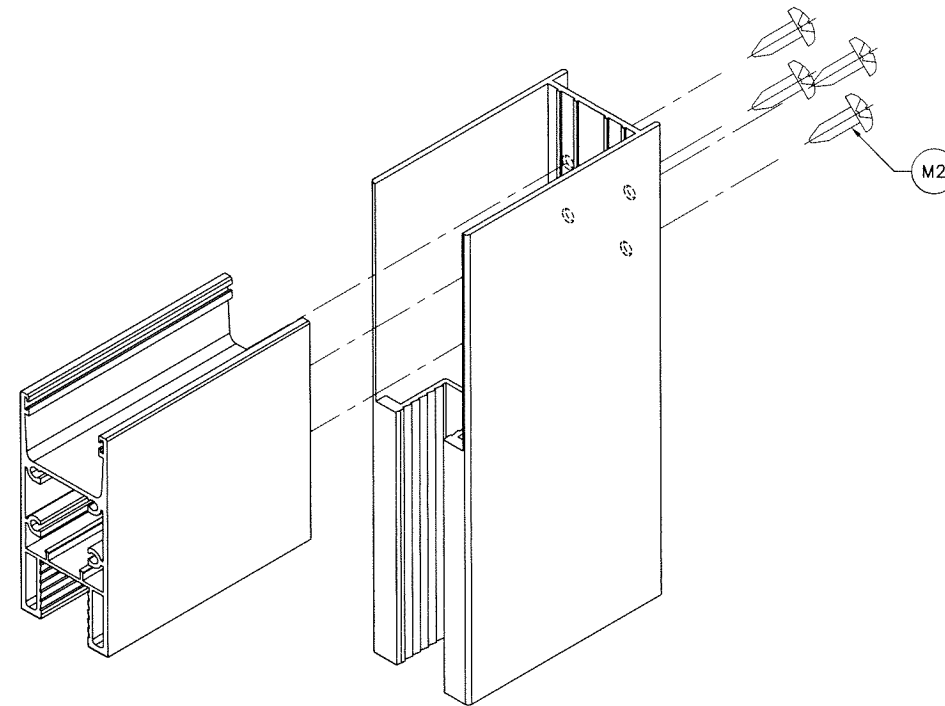
sheet 12 of 13



FRAME TOP CORNER

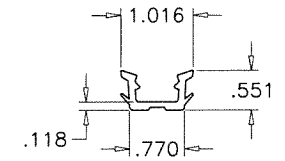


FRAME BOTTOM CORNER



PANEL TOP/BOTTOM CORNER

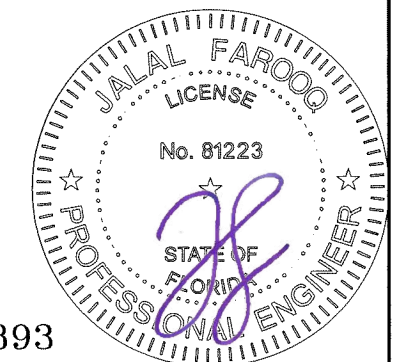
LAM. GLASS RAIL & STILE (SHOWN)
INSUL. LAM. GLASS RAIL & STILE (SIMILAR)



M7 GLAZING GASKET

BASE POLYMER = EPDM RUBBER
DENSITY = 10.26 Lbs/Gal
HARDNESS = 70±5
TENSILE STRENGTH = 905 PSI
ELONGATION AT BREAK = 273%
TEAR STRENGTH = 1.343 Kip/ft
BRITTLENESS TEMPERATURE = -40° F
COMPRESSION SET = 27% (22h@158°F)

Sealed: 9/15/2023



FL #17893

af c
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revisions:		by description	
no	date	no	date

date: 04-19-18
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:
drawing no.
18-45F
sheet 13 of 13