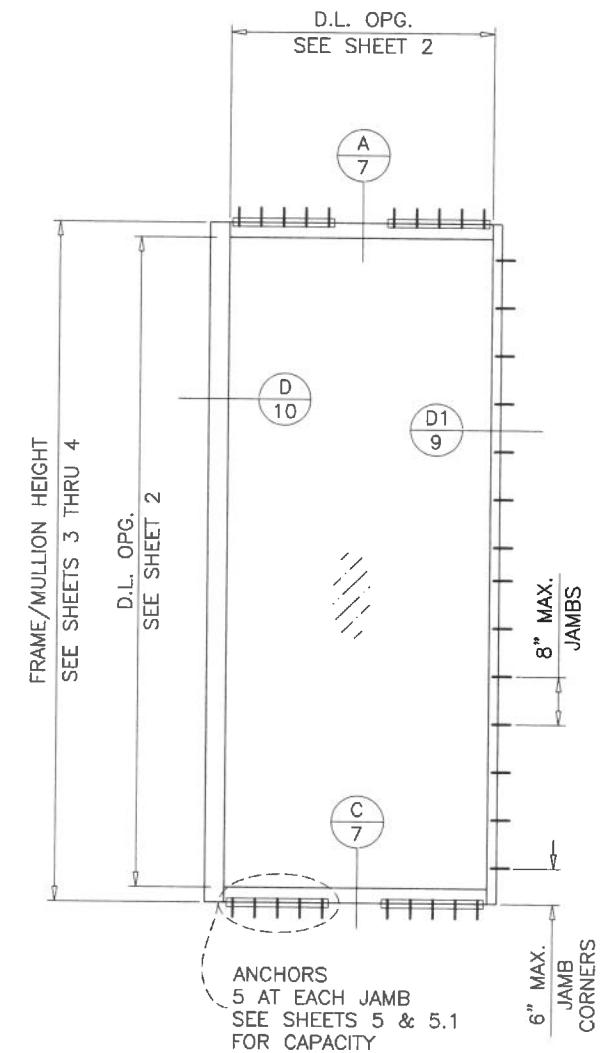
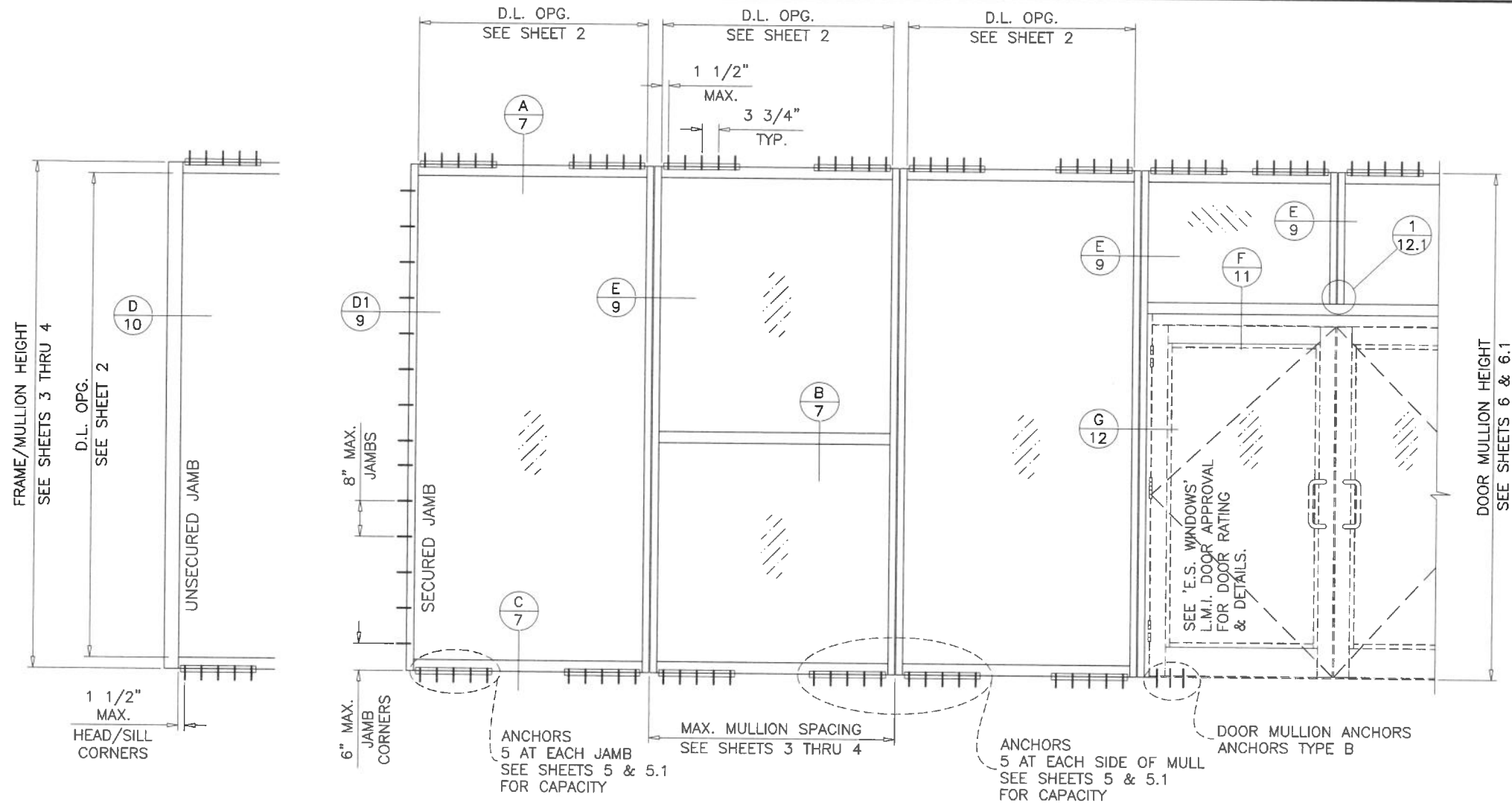




SERIES 7500 ALUMINUM WINDOW WALL SYSTEM

THIS SYSTEM MAY BE USED IN CONJUNCTION WITH F.B.C. APPR'D LARGE MISSILE IMPACT RESISTANT DOORS. LOWER DESIGN PRESSURE FROM STOREFRONT OR DOOR APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION)/2026 (9TH 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 LOAD-BEARING, (HIGH DENSITY PLASTIC/COMPOSITE, METAL OR OTHER RIGID MATERIALS).

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2023/2026 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.

TYPICAL ELEVATIONS

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEET 2 FOR GLASS DESIGN LOAD CAPACITY.
- STEP 3** CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEETS 3 THRU 4. THE CAPACITY SHOULD EXCEED THE DESIGN LOAD. FOR DOOR MULLION CAPACITY SEE CHARTS ON SHEETS 6 & 6.1.
- STEP 4** USING CHARTS ON SHEET 5 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 5** FOR SECURED JAMB OPTION CHECK JAMB ANCHOR CAPACITY USING CHART ON SHEET 9.
- STEP 6** THE LOWEST VALUE RESULTING FROM STEPS 2, 3, 4 AND 5 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.
- STEP 7** FOR SYSTEMS WITH UNANCHORED JAMBS, USING SHEET 10, DETERMINE THE MIN. & MAX. GAP DIMENSIONS.
- STEP 8** WHEN USING THIS SYSTEM WITH DOORS, THE LOWER VALUE OF THE DESIGN PRESSURE RATING FOR THE SYSTEM AND THE DOOR SHALL APPLY.

FASTENERS AND CONNECTORS (AS APPLICABLE) SHOWN IN THIS APPROVAL MAY NOT MEET CORROSION RESISTANCE REQUIREMENTS FOR COASTAL OR SALT WATER EXPOSURE ZONES. COMPLIANCE WITH THESE CONDITIONS TO BE CHECKED PER FBC 1711.

THIS SYSTEM IS RATED FOR LARGE & SMALL MISSILE IMPACT. SHUTTERS ARE NOT REQUIRED.

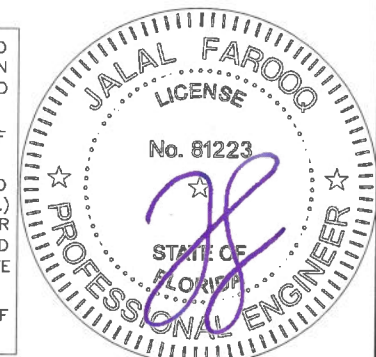
PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

LAMINATED GLASS
INSUL. LAM. GLASS
LARGE MISSILE IMPACT

Sealed: 8/20/2026

FL #26025

- 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.



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

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

revisions:		description	
no	date	by	
A	05.02.21	NEW TEST ADDED	
B	05.07.23	INSUL. MULL. & REINF. REV.	
C	02.01.24	JAMB REINF. CHANNEL REV.	
D	12.15.25	NEW TEST ADDED	
E	06.30.26	UPDATED TO 2026 FBC	

date:	01-18-18
scale:	3/8"=1'-0"
dr. by:	TARIQ
chk. by:	

drawing no.	18-22F
sheet	1 of 15

afc

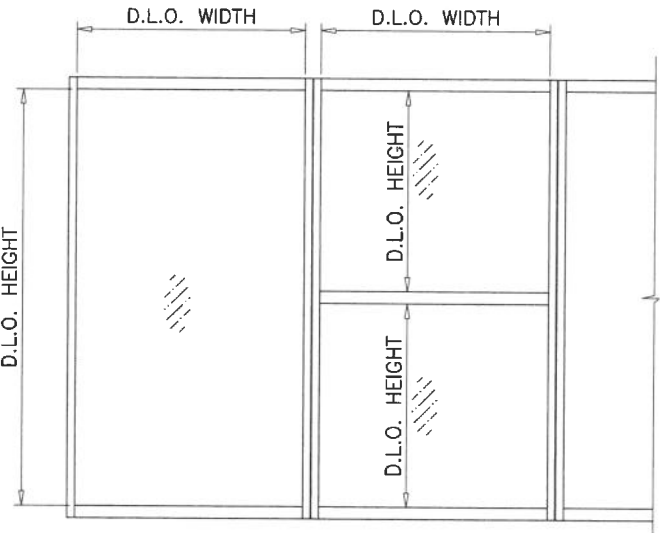
COMP-ANL\18-22F-ES

GLASS DESIGN LOAD CAPACITY - PSF					
NOMINAL DIMS.		GLASS TYPE 'A'		GLASS TYPE 'A1'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
26-3/4"	91"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	135.0
38-3/4"		100.0	140.0	90.0	135.0
44-3/4"		100.0	140.0	90.0	135.0
50-3/4"		100.0	140.0	90.0	135.0
56-3/4"		100.0	140.0	90.0	135.0
62-3/4"		92.4	127.3	81.8	122.7
68-3/4"		84.4	116.7	75.0	112.5
26-3/4"	97"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	135.0
38-3/4"		100.0	140.0	90.0	135.0
44-3/4"		100.0	140.0	90.0	135.0
50-3/4"		100.0	140.0	90.0	135.0
56-3/4"		100.0	140.0	90.0	135.0
62-3/4"		92.4	126.0	81.8	122.7
68-3/4"		84.4	116.7	45.2	45.2
26-3/4"	103"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	135.0
38-3/4"		100.0	140.0	90.0	135.0
44-3/4"		100.0	140.0	90.0	135.0
50-3/4"		100.0	140.0	90.0	135.0
56-3/4"		100.0	133.0	90.0	135.0
62-3/4"		92.4	120.0	81.8	122.7
68-3/4"		84.4	84.4	45.2	45.2
26-3/4"	109"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	135.0
38-3/4"		100.0	140.0	90.0	135.0
44-3/4"		100.0	140.0	90.0	135.0
50-3/4"		100.0	140.0	90.0	135.0
56-3/4"		100.0	127.0	90.0	135.0
62-3/4"		92.4	92.4	49.5	49.5
68-3/4"		84.4	84.4	45.2	45.2
26-3/4"	115"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	135.0
38-3/4"		100.0	140.0	90.0	135.0
44-3/4"		100.0	140.0	90.0	135.0
50-3/4"		100.0	140.0	90.0	135.0
56-3/4"		100.0	122.0	90.0	133.0
62-3/4"		92.4	92.4	49.5	49.5
68-3/4"		84.4	84.4	45.2	45.2
50-3/4"	118-5/16"	100.0	140.0	-	-
56-3/4"		100.0	120.0	-	-
26-3/4"	121"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	118.5
38-3/4"		100.0	140.0	90.0	102.9
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		100.0	139.0	80.0	80.0
56-3/4"		100.0	100.0	54.7	54.7
62-3/4"		92.4	92.4	49.5	49.5
68-3/4"		-	-	45.2	45.2
26-3/4"	127"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	117.6
38-3/4"		100.0	140.0	90.0	102.9
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		100.0	135.0	80.0	80.0
56-3/4"		100.0	100.0	54.7	54.7
62-3/4"		92.4	92.4	49.5	49.5
68-3/4"		-	-	45.2	45.2

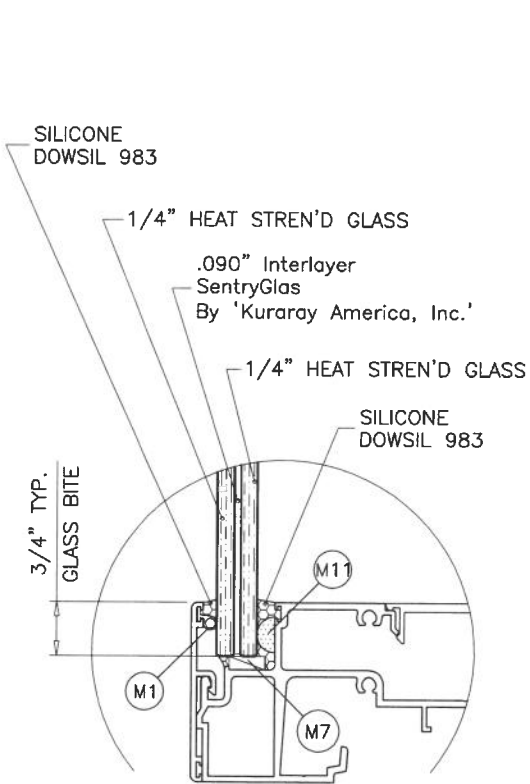
GLASS DESIGN LOAD CAPACITY - PSF					
NOMINAL DIMS.		GLASS TYPE 'A'		GLASS TYPE 'A1'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
26-3/4"	133"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	116.8
38-3/4"		100.0	140.0	90.0	102.7
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		100.0	100.0	80.0	80.0
56-3/4"		100.0	100.0	54.7	54.7
58"		100.0	100.0	49.5	49.5
62-3/4"		-	-	49.5	49.5
68-3/4"		-	-	45.2	45.2
26-3/4"	139"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	116.0
38-3/4"		100.0	140.0	90.0	101.9
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		100.0	100.0	60.0	60.0
56-3/4"		100.0	100.0	54.7	54.7
58"		100.0	100.0	49.5	49.5
62-3/4"		-	-	49.5	49.5
68-3/4"		-	-	45.2	45.2
26-3/4"	142"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	115.4
38-3/4"		100.0	140.0	90.0	101.2
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		100.0	100.0	60.0	60.0
56-3/4"		100.0	100.0	54.7	54.7
58"		100.0	100.0	49.5	49.5
26-3/4"	145"	100.0	140.0	90.0	135.0
32-3/4"		100.0	140.0	90.0	115.4
38-3/4"		100.0	140.0	90.0	101.2
44-3/4"		100.0	140.0	90.0	90.0
50-3/4"		-	-	60.0	60.0
56-3/4"		-	-	54.7	54.7
62-3/4"		-	-	49.5	49.5
26-3/4"	151"	100.0	140.0	90.0	134.8
32-3/4"		100.0	140.0	90.0	114.8
38-3/4"		100.0	140.0	90.0	100.6
44-3/4"		90.0	90.0	90.0	90.0
50-3/4"		-	-	60.0	60.0
56-3/4"		-	-	54.7	54.7
62-3/4"		-	-	49.5	49.5
26-3/4"	157"	100.0	140.0	60.0	60.0
32-3/4"		100.0	140.0	60.0	60.0
38-3/4"		100.0	140.0	60.0	60.0
44-3/4"		-	-	60.0	60.0
50-3/4"		-	-	60.0	60.0
56-3/4"		-	-	54.7	54.7
62-3/4"		-	-	49.5	49.5
26-3/4"	175"	100.0	140.0	60.0	60.0
32-3/4"		100.0	140.0	60.0	60.0
38-3/4"		-	-	60.0	60.0
44-3/4"		-	-	60.0	60.0
50-3/4"		-	-	60.0	60.0
56-3/4"		-	-	54.7	54.7
26-3/4"	192"	100.0	140.0	60.0	60.0
32-3/4"		100.0	140.0	60.0	60.0
38-3/4"		-	-	60.0	60.0
44-3/4"		-	-	60.0	60.0
50-3/4"		-	-	60.0	60.0
51-3/4"		-	-	60.0	60.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

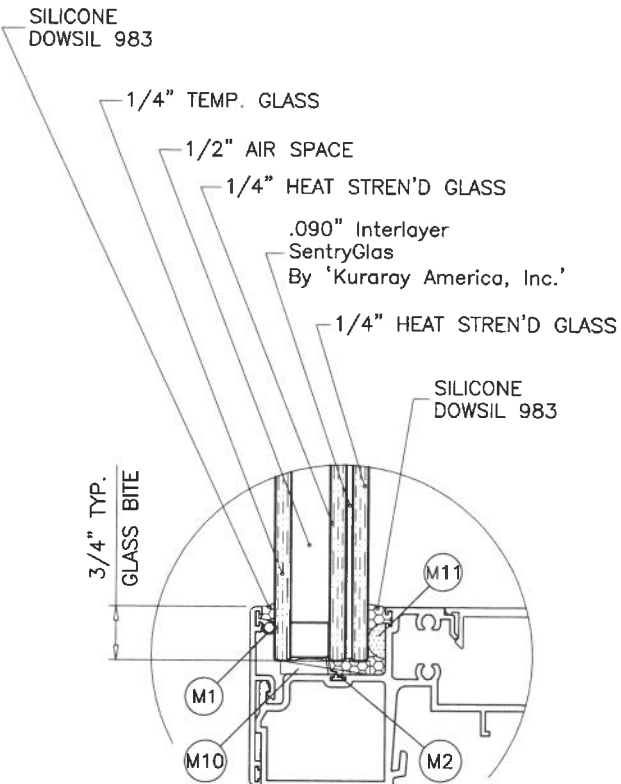
Sealed: 8/20/2026



NOTE:
GLASS CAPACITIES ARE BASED ON
ASTM E1300-16 (3 SEC. GUSTS)



GLASS TYPE 'A'



GLASS TYPE 'A1'

GLAZING OPTIONS

1/2" 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



FL #26025

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

SERIES 7500 ALUM WINDOW WALL SYSTEM (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:	01-18-18	scale:	3/8" = 1"	
dr. by:	TARIQ	chk. by:		

drawing no.

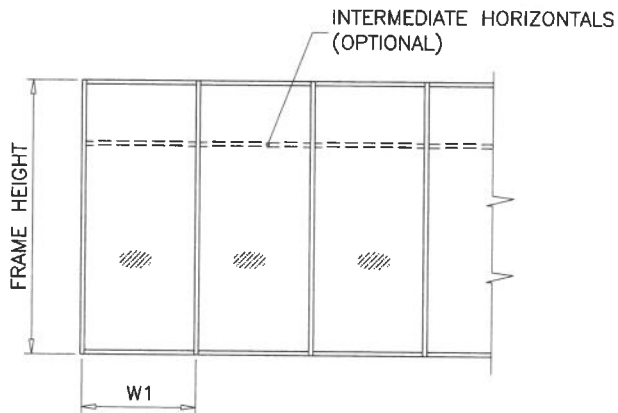
18-22F

sheet 2 of 15

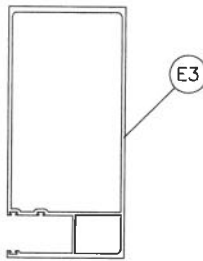
JAMB DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS							
NOMINAL DIMS.		JAMB 'J1'		JAMB 'J2'		JAMB 'J3'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	96"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	135.0	100.0	140.0
61-1/4"		100.0	135.0	100.0	135.0	100.0	140.0
66"		100.0	135.0	100.0	135.0	100.0	140.0
72"		100.0	135.0	100.0	135.0	100.0	140.0
30"	102"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	135.0	100.0	140.0
61-1/4"		100.0	135.0	100.0	135.0	100.0	140.0
66"		100.0	132.0	100.0	132.0	100.0	140.0
72"		100.0	100.0	100.0	100.0	100.0	140.0
30"	108"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	135.0	100.0	140.0
61-1/4"		100.0	128.1	100.0	128.1	100.0	140.0
66"		100.0	116.5	100.0	116.5	100.0	140.0
72"		100.0	100.0	100.0	100.0	100.0	140.0
30"	114"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	135.0	100.0	140.0
54"		100.0	126.5	100.0	126.5	100.0	140.0
60"		100.0	113.8	100.0	113.8	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	100.0	100.0	140.0
30"	120"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	135.0	100.0	140.0
48"		100.0	127.1	100.0	127.1	100.0	140.0
54"		100.0	113.0	100.0	113.0	100.0	140.0
60"		100.0	101.7	100.0	101.7	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	100.0	100.0	140.0
30"	126"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	130.4	100.0	130.4	100.0	140.0
48"		100.0	114.1	100.0	114.1	100.0	140.0
54"		100.0	101.4	100.0	101.4	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	100.0	100.0	140.0

JAMB DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS							
NOMINAL DIMS.		JAMB 'J1'		JAMB 'J2'		JAMB 'J3'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	132"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	135.0	100.0	140.0
42"		100.0	117.7	100.0	117.7	100.0	140.0
48"		100.0	103.0	100.0	103.0	100.0	140.0
54"		100.0	100.0	100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	100.0	100.0	140.0
30"	138"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	124.4	100.0	124.4	100.0	140.0
42"		100.0	106.6	100.0	106.6	100.0	140.0
48"		100.0	100.0	100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	100.0	100.0	140.0
30"	144"	100.0	135.0	100.0	135.0	100.0	140.0
36"		100.0	113.1	100.0	113.1	100.0	140.0
42"		100.0	100.0	100.0	100.0	100.0	140.0
48"		100.0	100.0	100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		-	-	100.0	100.0	100.0	140.0
66"		-	-	100.0	100.0	100.0	140.0
30"	150"	100.0	123.9	100.0	123.9	100.0	140.0
36"		100.0	103.3	100.0	103.3	100.0	140.0
42"		100.0	100.0	100.0	100.0	100.0	140.0
48"		100.0	100.0	100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		-	-	100.0	100.0	100.0	140.0
66"		-	-	100.0	100.0	100.0	140.0
30"	152"	100.0	123.9	100.0	123.9	100.0	140.0
36"		100.0	103.3	100.0	103.3	100.0	140.0
42"		100.0	100.0	100.0	100.0	100.0	140.0
48"		100.0	100.0	100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	100.0	100.0	140.0
61-1/4"		-	-	100.0	100.0	100.0	140.0
66"		-	-	100.0	100.0	100.0	140.0
30"	156"	100.0	113.5	100.0	113.5	100.0	100.0
36"		94.6	94.6	100.0	100.0	100.0	100.0
42"		81.1	81.1	100.0	100.0	100.0	100.0
48"		70.9	70.9	100.0	100.0	100.0	100.0
54"		-	-	100.0	100.0	100.0	100.0
60"		-	-	100.0	100.0	100.0	100.0
61-1/4"		-	-	100.0	100.0	100.0	100.0
66"		-	-	100.0	100.0	100.0	100.0
30"	164"	-	-	100.0	100.0	100.0	100.0
36"		-	-	100.0	100.0	100.0	100.0
42"		-	-	100.0	100.0	100.0	100.0
48"		-	-	100.0	100.0	100.0	100.0
54"		-	-	100.0	100.0	100.0	100.0
60"		-	-	100.0	100.0	93.4	93.4
61-1/4"		-	-	100.0	100.0	91.5	91.5
66"		-	-	100.0	100.0	91.5	91.5

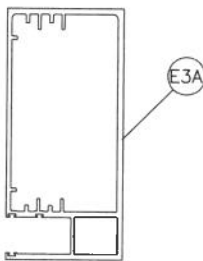
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



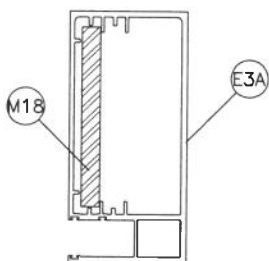
WIDTH (W) = W1
AT JAMB



JAMB 'J1'



JAMB 'J2'



JAMB 'J3'

Ix IN ⁴	Sx IN ³
17.1699	4.699

Ix IN ⁴	Sx IN ³
22.418	6.078

	Ix IN ⁴	Sx IN ³
ALUMINUM	22.418	6.078
STEEL	5.208	2.083
TOTAL	37.373	
Ix ALUM + Ix STL X 2.9		

Sealed: 8/20/2026



FL #26025

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

SERIES 7500 ALUM WINDOW WALL SYSTEM (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: 01-18-18

scale: -

dr. by: TARIQ

chk. by:

drawing no.

18-22F

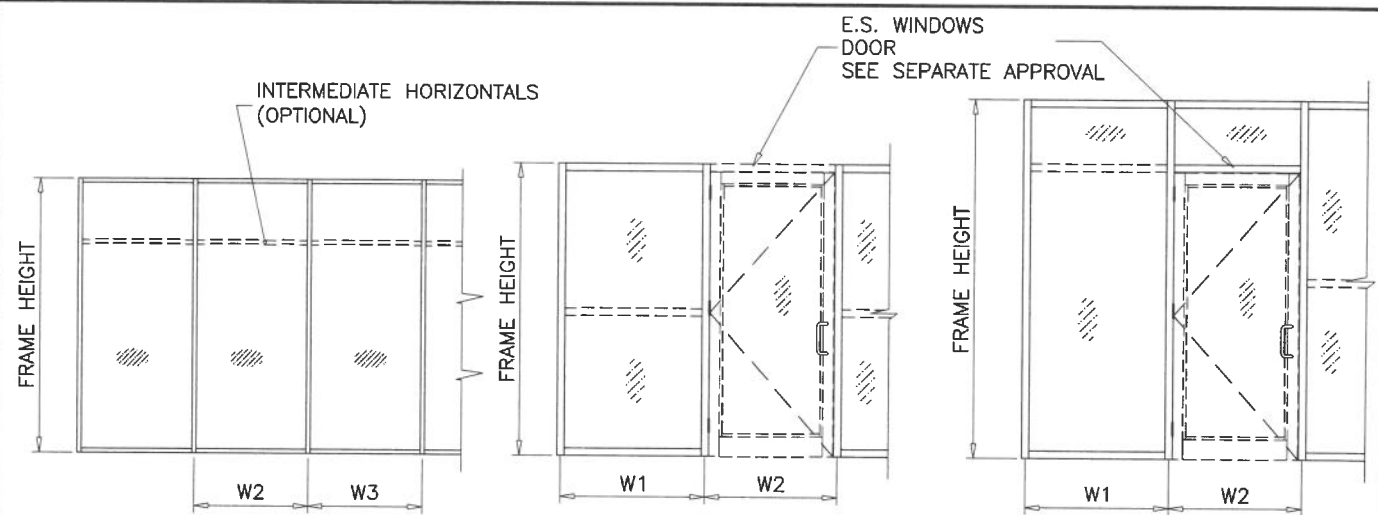
sheet 3 of 15

COMP-ANL\18-22F-ES

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS					
NOMINAL DIMS.		MULL 'M1'		MULL 'M2'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	96"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	135.0	100.0	135.0
48"		90.0	135.0	100.0	135.0
54"		90.0	135.0	100.0	135.0
60"		90.0	135.0	100.0	135.0
61-1/4"		90.0	135.0	100.0	135.0
66"		90.0	135.0	100.0	135.0
72"		90.0	135.0	100.0	135.0
30"	102"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	135.0	100.0	135.0
48"		90.0	135.0	100.0	135.0
54"		90.0	135.0	100.0	135.0
60"		90.0	135.0	100.0	135.0
61-1/4"		90.0	135.0	100.0	135.0
66"		90.0	132.0	100.0	132.0
30"	108"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	135.0	100.0	135.0
48"		90.0	135.0	100.0	135.0
54"		90.0	135.0	100.0	135.0
60"		90.0	135.0	100.0	135.0
61-1/4"		90.0	128.1	100.0	128.1
66"		90.0	116.5	100.0	116.5
72"		-	-	100.0	100.0
30"	114"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	135.0	100.0	135.0
48"		90.0	135.0	100.0	135.0
54"		90.0	126.5	100.0	126.5
60"		90.0	113.8	100.0	113.8
61-1/4"		-	-	100.0	100.0
66"		-	-	100.0	100.0
72"		-	-	100.0	100.0
30"	120"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	135.0	100.0	135.0
48"		90.0	127.1	100.0	127.1
54"		90.0	113.0	100.0	113.0
60"		90.0	101.7	100.0	101.7
61-1/4"		-	-	100.0	100.0
66"		-	-	100.0	100.0
72"		-	-	100.0	100.0
30"	126"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	130.4	100.0	130.4
48"		90.0	114.1	100.0	114.1
54"		90.0	101.4	100.0	101.4
60"		-	-	100.0	100.0
61-1/4"		-	-	100.0	100.0
66"		-	-	100.0	100.0
72"		-	-	100.0	100.0

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS					
NOMINAL DIMS.		MULL 'M1'		MULL 'M2'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	132"	90.0	135.0	100.0	135.0
36"		90.0	135.0	100.0	135.0
42"		90.0	117.7	100.0	117.7
48"		90.0	103.0	100.0	103.0
54"		90.0	91.5	100.0	100.0
60"		-	-	100.0	100.0
61-1/4"		-	-	100.0	100.0
66"		-	-	100.0	100.0
30"	138"	90.0	135.0	100.0	135.0
36"		90.0	124.4	100.0	124.4
42"		90.0	106.6	100.0	106.6
48"		90.0	93.3	100.0	100.0
54"		82.9	82.9	100.0	100.0
60"		-	-	100.0	100.0
61-1/4"		-	-	100.0	100.0
66"		-	-	100.0	100.0
30"	144"	90.0	135.0	100.0	135.0
36"		90.0	113.1	100.0	113.1
42"		90.0	97.0	100.0	100.0
48"		84.8	84.8	100.0	100.0
54"		-	-	100.0	100.0
60"		-	-	99.1	99.1
61-1/4"		-	-	79.9	79.9
66"		-	-	-	-
30"	150"	90.0	123.9	100.0	123.9
36"		90.0	103.3	100.0	103.3
42"		88.5	88.5	100.0	100.0
48"		77.5	77.5	100.0	100.0
54"		-	-	97.5	97.5
60"		-	-	87.7	87.7
61-1/4"		-	-	73.6	73.6
66"		-	-	-	-
30"	152"	90.0	113.5	100.0	113.5
36"		90.0	94.6	100.0	100.0
42"		81.1	81.1	100.0	100.0
48"		70.9	70.9	100.0	100.0
54"		-	-	93.7	93.7
60"		-	-	84.3	84.3
61-1/4"		-	-	-	-
66"		-	-	-	-
30"	156"	90.0	113.5	100.0	113.5
36"		90.0	94.6	100.0	100.0
42"		81.1	81.1	99.3	99.3
48"		70.9	70.9	86.9	86.9
54"		-	-	77.2	77.2
60"		-	-	69.5	69.5
61-1/4"		-	-	68.1	68.1
66"		-	-	-	-
30"	164"	-	-	100.0	100.0
36"		-	-	100.0	100.0
42"		-	-	89.8	89.8
48"		-	-	78.6	78.6
54"		-	-	69.9	69.9
60"		-	-	62.9	62.9
61-1/4"		-	-	61.6	61.6
66"		-	-	-	-

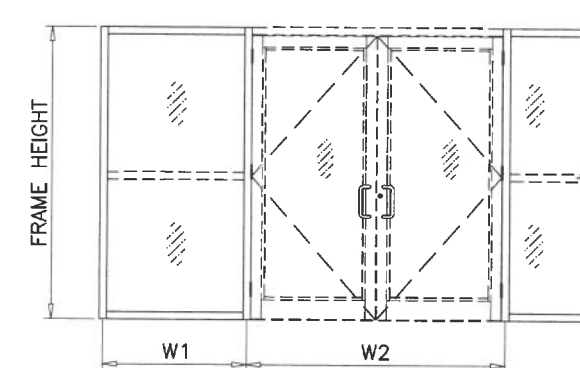
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



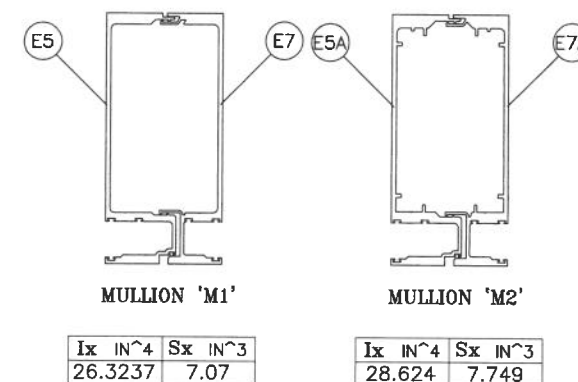
$$\text{WIDTH (W) AT MULLION} = \frac{W2 + W3}{2}$$

$$\text{WIDTH (W) AT MULLION} = \frac{W1 + W2}{2}$$

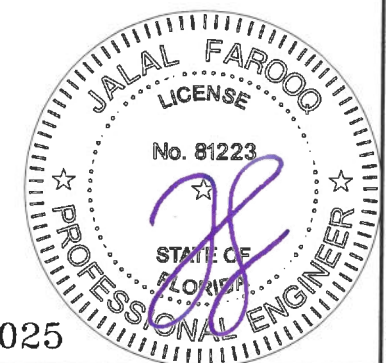
$$\text{WIDTH (W) AT MULLION} = \frac{W1 + W2}{2}$$



$$\text{WIDTH (W) AT MULLION} = \frac{W1}{2} + \frac{W2}{4}$$



Sealed: 8/20/2026



FL #26025

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

SERIES 7500 ALUM WINDOW WALL SYSTEM (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	description

date: 01-18-18 scale: - dr. by: TARIQ chk. by:

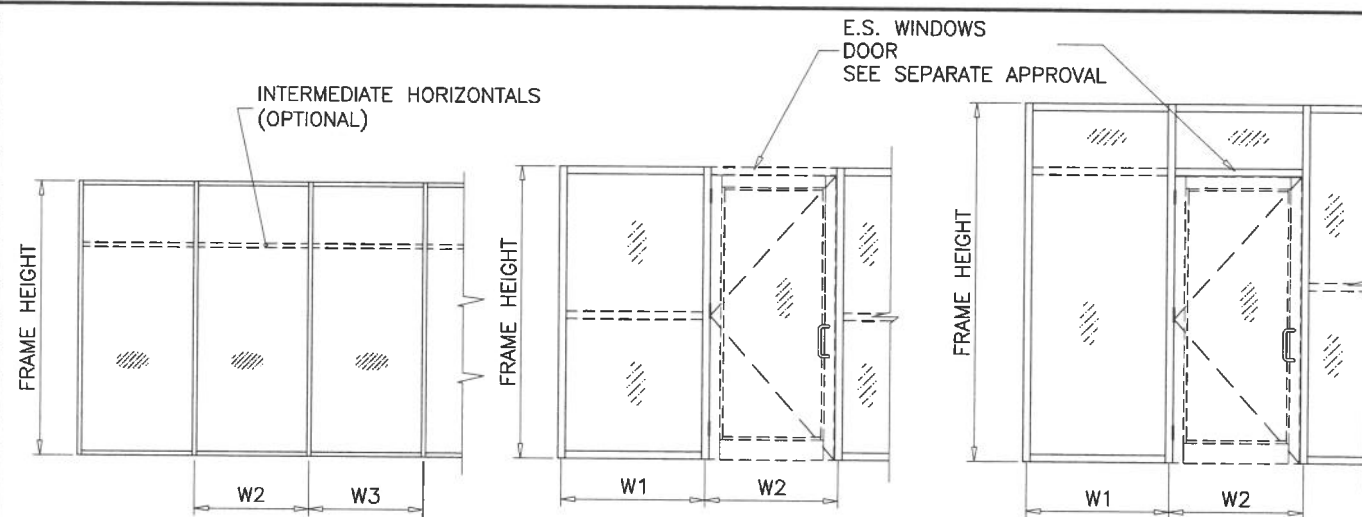
drawing no. **18-22F**

sheet **3.1** of **15**

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS					
NOMINAL DIMS.		MULL 'M3'		MULL 'M4'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	96"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	140.0
61-1/4"		100.0	135.0	100.0	140.0
66"		100.0	135.0	100.0	140.0
72"		100.0	135.0	100.0	140.0
30"	102"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	140.0
61-1/4"		100.0	135.0	100.0	140.0
66"		100.0	132.5	100.0	140.0
30"	108"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	140.0
54"		100.0	135.0	100.0	140.0
60"		100.0	135.0	100.0	140.0
61-1/4"		100.0	128.1	100.0	140.0
66"		100.0	116.5	100.0	140.0
72"		100.0	100.0	100.0	140.0
30"	114"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	140.0
48"		100.0	135.0	100.0	140.0
54"		100.0	126.5	100.0	140.0
60"		100.0	113.8	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	140.0
30"	120"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	135.0	100.0	140.0
48"		100.0	127.1	100.0	140.0
54"		100.0	113.0	100.0	140.0
60"		100.0	101.7	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	140.0
30"	126"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	130.4	100.0	140.0
48"		100.0	114.1	100.0	140.0
54"		100.0	101.4	100.0	140.0
60"		100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
72"		100.0	100.0	100.0	140.0

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR LAMINATED GLASS MULLIONS					
NOMINAL DIMS.		MULL 'M3'		MULL 'M4'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	132"	100.0	135.0	100.0	140.0
36"		100.0	135.0	100.0	140.0
42"		100.0	117.7	100.0	140.0
48"		100.0	103.0	100.0	140.0
54"		100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
30"	138"	100.0	135.0	100.0	140.0
36"		100.0	124.4	100.0	140.0
42"		100.0	106.6	100.0	140.0
48"		100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
30"	144"	100.0	135.0	100.0	140.0
36"		100.0	113.1	100.0	140.0
42"		100.0	100.0	100.0	140.0
48"		100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	140.0
66"		100.0	100.0	100.0	140.0
30"	150"	100.0	123.9	100.0	140.0
36"		100.0	103.3	100.0	140.0
42"		100.0	100.0	100.0	140.0
48"		100.0	100.0	100.0	140.0
54"		100.0	100.0	100.0	140.0
60"		100.0	100.0	100.0	140.0
61-1/4"		100.0	100.0	100.0	100.0
66"		100.0	100.0	100.0	100.0
30"	152"	100.0	113.5	100.0	100.0
36"		100.0	100.0	100.0	100.0
42"		100.0	100.0	100.0	100.0
48"		100.0	100.0	100.0	100.0
54"		100.0	100.0	100.0	100.0
60"		100.0	100.0	100.0	100.0
61-1/4"		100.0	100.0	100.0	100.0
66"		100.0	100.0	100.0	100.0
30"	156"	100.0	113.5	100.0	100.0
36"		100.0	100.0	100.0	100.0
42"		100.0	100.0	100.0	100.0
48"		100.0	100.0	100.0	100.0
54"		100.0	100.0	100.0	100.0
60"		100.0	100.0	100.0	100.0
61-1/4"		100.0	100.0	100.0	100.0
66"		100.0	100.0	100.0	100.0
30"	164"	100.0	100.0	100.0	100.0
36"		100.0	100.0	100.0	100.0
42"		100.0	100.0	100.0	100.0
48"		100.0	100.0	100.0	100.0
54"		100.0	100.0	100.0	100.0
60"		93.4	93.4	100.0	100.0
61-1/4"		91.5	91.5	100.0	100.0
66"		91.5	91.5	100.0	100.0

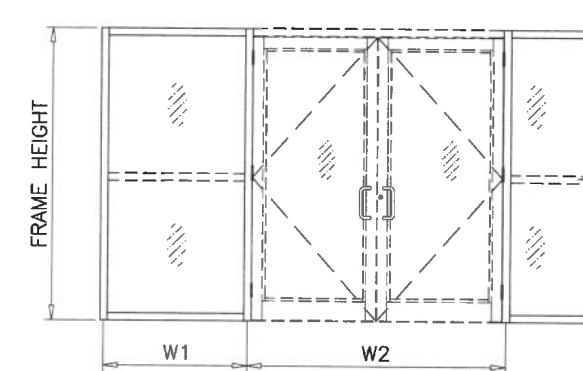
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



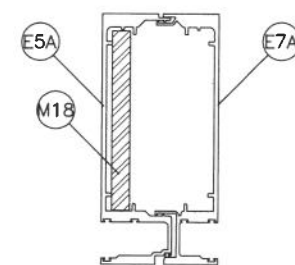
$$\text{WIDTH (W) AT MULLION} = \frac{W2 + W3}{2}$$

$$\text{WIDTH (W) AT MULLION} = \frac{W1 + W2}{2}$$

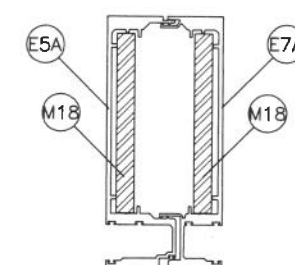
$$\text{WIDTH (W) AT MULLION} = \frac{W1 + W2}{2}$$



$$\text{WIDTH (W) AT MULLION} = \frac{W1}{2} + \frac{W2}{4}$$



MULLION 'M3'



MULLION 'M4'

	Ix IN^4	Sx IN^3
ALUMINUM	28.624	7.749
STEEL	5.2	2.08
TOTAL Ix ALUM + Ix STL X 2.9	43.579	

	Ix IN^4	Sx IN^3
ALUMINUM	28.624	7.749
STEEL	10.42	4.16
TOTAL Ix ALUM + Ix STL X 2.9	58.539	

Sealed: 8/20/2026



FL #26025

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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SERIES 7500 ALUM WINDOW WALL SYSTEM (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	description

date: 01-18-18 scale: - dr. by: TARIQ chk. by:

drawing no. **18-22F**

sheet 3.2 of 15

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR INSUL. LAM. GLASS MULLIONS					
NOMINAL DIMS.		JAMB 'J2' MULL 'M2'		JAMB 'J2' MULL 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	96"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	135.0	90.0	135.0
48"		90.0	135.0	90.0	135.0
54"		90.0	135.0	90.0	135.0
60"		90.0	135.0	90.0	135.0
66"		90.0	135.0	90.0	135.0
72"		90.0	135.0	90.0	135.0
30"	102"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	135.0	90.0	135.0
48"		90.0	135.0	90.0	135.0
54"		90.0	135.0	90.0	135.0
60"		90.0	135.0	90.0	135.0
66"		90.0	134.7	90.0	134.7
72"		-	-	60.0	60.0
30"	108"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	135.0	90.0	135.0
48"		90.0	135.0	90.0	135.0
54"		90.0	135.0	90.0	135.0
60"		90.0	130.8	90.0	130.8
66"		90.0	118.9	90.0	118.9
72"		-	-	60.0	60.0
30"	114"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	135.0	90.0	135.0
48"		90.0	135.0	90.0	135.0
54"		90.0	129.1	90.0	129.1
60"		90.0	116.2	90.0	116.2
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	120"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	135.0	90.0	135.0
48"		90.0	129.8	90.0	129.8
54"		90.0	115.4	90.0	115.4
60"		90.0	103.8	90.0	103.8
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	126"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	133.2	90.0	133.2
48"		90.0	116.6	90.0	116.6
54"		90.0	103.6	90.0	103.6
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	132"	90.0	135.0	90.0	135.0
36"		90.0	135.0	90.0	135.0
42"		90.0	120.2	90.0	120.2
48"		90.0	105.2	90.0	105.2
54"		90.0	93.5	90.0	93.5
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0

MULLION DESIGN LOAD CAPACITY - PSF CHART FOR INSUL. LAM. GLASS MULLIONS					
NOMINAL DIMS.		JAMB 'J2' MULL 'M2'		JAMB 'J2' MULL 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT. (+)	INT. (-)	EXT. (+)	INT. (-)
30"	138"	90.0	135.0	90.0	135.0
36"		90.0	127.1	90.0	127.1
42"		90.0	108.9	90.0	108.9
48"		90.0	95.3	90.0	95.3
54"		84.7	84.7	84.7	84.7
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	144"	90.0	135.0	90.0	135.0
36"		90.0	115.6	90.0	115.6
42"		90.0	99.1	90.0	99.1
48"		84.8	86.7	84.8	86.7
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	150"	90.0	126.7	90.0	126.7
36"		90.0	105.6	90.0	105.6
42"		90.0	90.5	90.0	90.5
48"		79.2	79.2	79.2	79.2
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
72"		-	-	60.0	60.0
30"	156"	90.0	116.0	90.0	116.0
36"		90.0	96.7	90.0	96.7
42"		82.9	82.9	82.9	82.9
48"		72.5	72.5	72.5	72.5
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
30"	162"	-	-	60.0	60.0
36"		-	-	60.0	60.0
42"		-	-	60.0	60.0
48"		-	-	60.0	60.0
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
30"	180"	-	-	60.0	60.0
36"		-	-	60.0	60.0
42"		-	-	60.0	60.0
48"		-	-	60.0	60.0
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0
30"	197"	-	-	60.0	60.0
36"		-	-	60.0	60.0
42"		-	-	60.0	60.0
48"		-	-	60.0	60.0
55"		-	-	60.0	60.0
60"		-	-	60.0	60.0
66"		-	-	60.0	60.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

INTERMEDIATE HORIZONTALS
(OPTIONAL)

WIDTH (W) = W1
AT JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT MULLION

E.S. WINDOWS
DOOR
SEE SEPARATE APPROVAL

WIDTH (W) = $\frac{W1 + W2}{2}$
AT MULLION

WIDTH (W) = $\frac{W1 + W2}{2}$
AT MULLION

WIDTH (W) = $\frac{W1}{2} + \frac{W2}{4}$
AT MULLION

JAMB 'J2'

Ix IN^4	Sx IN^3
16.3691	4.5932

MULLION 'M2'

Ix IN^4	Sx IN^3
26.8641	7.2864

MULLION 'M3'

Ix IN^4	Sx IN^3	
26.8641	7.2864	
STEEL	4.7955	2.2569
TOTAL	Ix ALUM + Ix STL X 2.9	40.6334

Sealed: 8/20/2026

FL #26025

JALAL FAROOQ

LICENSE

No. 81223

STATE OF FLORIDA

PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\18-22F-ES

SERIES 7500 ALUM WINDOW WALL SYSTEM (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: 01-18-18 scale: - dr. by: TARIQ chk. by:

drawing no. 18-22F sheet 4 of 15

HEAD/SILL ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)						
NOMINAL DIMS.		TYPE 'A'	TYPE 'B'	TYPE 'C'	TYPE 'AA'	TYPE 'BB'
WIDTH (W)	FRAME HEIGHT	A5	B5	C5	AA5	BB5
30"	96"	140.0	140.0	140.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	140.0
42"		140.0	140.0	140.0	140.0	140.0
48"		119.7	140.0	140.0	140.0	140.0
54"		106.4	140.0	140.0	140.0	140.0
60"		95.7	140.0	134.2	131.4	140.0
66"		87.0	140.0	122.0	119.5	140.0
72"		79.8	125.2	111.8	109.5	140.0
30"	102"	140.0	140.0	140.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	140.0
42"		128.7	140.0	140.0	140.0	140.0
48"		112.6	140.0	140.0	140.0	140.0
54"		100.1	140.0	140.0	140.0	140.0
60"		90.1	140.0	126.3	123.7	140.0
66"		81.9	128.5	114.8	112.4	140.0
72"		75.1	100.0	100.0	100.0	100.0
30"	108"	140.0	140.0	140.0	140.0	140.0
36"		140.0	140.0	140.0	140.0	140.0
42"		126.6	140.0	140.0	140.0	140.0
48"		110.8	140.0	140.0	140.0	140.0
54"		98.5	140.0	140.0	134.3	140.0
60"		88.6	138.6	127.2	120.8	140.0
66"		80.6	126.0	115.7	109.8	140.0
72"		73.9	115.5	106.0	100.7	140.0
30"	114"	140.0	140.0	140.0	140.0	140.0
36"		139.9	140.0	140.0	140.0	140.0
42"		120.0	140.0	140.0	140.0	140.0
48"		105.0	140.0	140.0	140.0	140.0
54"		93.3	140.0	133.9	127.2	140.0
60"		84.0	131.3	120.5	114.5	140.0
66"		76.3	119.4	109.6	104.1	140.0
72"		70.0	109.4	100.4	95.4	137.9
30"	120"	140.0	140.0	140.0	140.0	140.0
36"		132.9	140.0	140.0	140.0	140.0
42"		114.0	140.0	140.0	140.0	140.0
48"		99.7	140.0	140.0	135.9	140.0
54"		88.6	138.6	127.2	120.8	140.0
60"		79.8	124.8	114.5	108.7	140.0
66"		72.5	113.4	104.1	98.9	140.0
72"		66.5	104.0	95.4	90.6	131.0
30"	126"	140.0	140.0	140.0	140.0	140.0
36"		126.6	140.0	140.0	140.0	140.0
42"		108.5	140.0	140.0	140.0	140.0
48"		95.0	140.0	136.3	129.5	140.0
54"		84.4	132.0	121.2	115.1	140.0
60"		76.0	118.8	109.1	103.6	140.0
66"		69.1	108.0	99.1	94.2	136.1
72"		63.3	99.0	90.9	86.3	124.8
30"	132"	140.0	140.0	140.0	140.0	140.0
36"		120.9	140.0	140.0	140.0	140.0
42"		103.6	140.0	140.0	140.0	140.0
48"		90.6	140.0	130.1	123.6	140.0
54"		80.6	126.0	115.7	109.8	140.0
60"		72.5	113.4	104.1	98.9	140.0
66"		65.9	103.1	94.6	89.9	129.9
72"		58.0	91.0	81.3	79.7	100.0

HEAD/SILL ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)						
NOMINAL DIMS.		TYPE 'A'	TYPE 'B'	TYPE 'C'	TYPE 'AA'	TYPE 'BB'
WIDTH (W)	FRAME HEIGHT	A5	B5	C5	AA5	BB5
30"	138"	138.7	140.0	140.0	140.0	140.0
36"		115.6	140.0	140.0	140.0	140.0
42"		99.1	140.0	124.5	135.1	140.0
48"		86.7	135.6	116.7	118.2	140.0
54"		77.1	120.5	110.6	105.1	140.0
60"		69.4	108.5	99.6	94.6	136.7
66"		63.1	98.6	90.5	86.0	124.3
72"		55.5	87.1	77.8	76.2	100.0
30"	144"	132.9	140.0	140.0	140.0	140.0
36"		110.8	140.0	140.0	140.0	140.0
42"		95.0	140.0	136.3	129.5	140.0
48"		83.1	130.0	119.3	113.3	140.0
54"		73.9	115.5	106.0	100.7	140.0
60"		66.5	104.0	95.4	90.6	131.0
66"		58.0	91.0	81.3	79.7	100.0
72"		53.2	60.0	60.0	60.0	60.0
30"	150"	127.6	140.0	140.0	140.0	140.0
36"		106.4	140.0	140.0	140.0	140.0
42"		91.2	140.0	130.9	124.3	140.0
48"		79.8	124.8	114.5	108.7	140.0
54"		70.9	110.9	101.8	96.7	139.7
60"		63.8	99.8	91.6	87.0	125.8
66"		55.7	87.4	78.1	76.5	100.0
72"		51.1	60.0	60.0	60.0	60.0
30"	152"	125.9	140.0	140.0	140.0	140.0
36"		105.0	140.0	140.0	140.0	140.0
42"		90.0	140.0	129.1	122.6	140.0
48"		78.7	123.1	113.0	107.3	140.0
54"		70.0	109.4	100.4	95.4	126.1
60"		63.0	98.5	90.4	85.9	124.1
72"		63.0	98.5	90.4	85.9	124.1
30"	156"	117.8	135.0	135.0	135.0	135.0
36"		98.2	135.0	135.0	134.8	135.0
42"		84.2	132.1	118.0	115.5	135.0
48"		73.6	115.6	103.2	101.1	135.0
54"		65.5	102.7	91.7	89.9	126.4
60"		58.9	92.4	82.6	80.9	100.0
66"		53.6	60.0	60.0	60.0	60.0
42"	162"	81.1	100.0	100.0	100.0	100.0
48"		70.9	100.0	99.4	97.4	100.0
54"		63.0	98.9	88.3	86.5	100.0
60"		56.7	89.0	79.5	77.9	100.0
66"		51.6	60.0	60.0	60.0	60.0
42"	164"	80.1	100.0	100.0	100.0	100.0
48"		70.1	100.0	98.2	96.2	100.0
54"		62.3	97.7	87.3	85.5	100.0
60"		56.0	87.9	78.5	76.9	100.0
61-1/4"		54.9	86.1	76.9	75.4	100.0
42"	168"	60.0	60.0	60.0	60.0	60.0
48"		60.0	60.0	60.0	60.0	60.0
54"		59.7	60.0	60.0	60.0	60.0
60"		54.7	60.0	60.0	60.0	60.0
42"	174"	60.0	60.0	60.0	60.0	60.0
48"		60.0	60.0	60.0	60.0	60.0
54"		57.6	60.0	60.0	60.0	60.0
60"		52.8	60.0	60.0	60.0	60.0

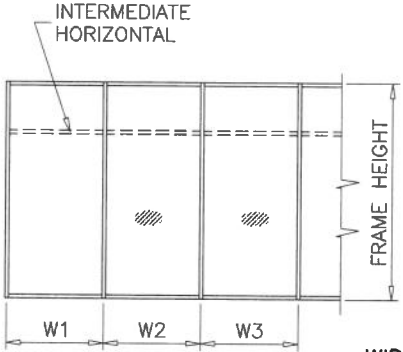
HEAD/SILL ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)						
NOMINAL DIMS.		TYPE 'A'	TYPE 'B'	TYPE 'C'	TYPE 'AA'	TYPE 'BB'
WIDTH (W)	FRAME HEIGHT	A5	B5	C5	AA5	BB5
42"	180"	60.0	60.0	60.0	60.0	60.0
48"		60.0	60.0	60.0	60.0	60.0
54"		55.7	60.0	60.0	60.0	60.0
60"		51.1	60.0	60.0	60.0	60.0
42"	186"	60.0	60.0	60.0	60.0	60.0
48"		60.0	60.0	60.0	60.0	60.0
55"		53.9	60.0	60.0	60.0	60.0
42"	192"	60.0	60.0	60.0	60.0	60.0
48"		59.8	60.0	60.0	60.0	60.0
55"		52.2	60.0	60.0	60.0	60.0
42"	197"	60.0	60.0	60.0	60.0	60.0
48"		58.3	60.0	60.0	60.0	60.0
55"		50.9	60.0	60.0	60.0	60.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION

- A5 = (5) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
B5 = (5) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
C5 = (5) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
AA5 = (5) ANCHORS TYPE 'AA' AT EACH SIDE OF JAMB AND MULLION
BB5 = (5) ANCHORS TYPE 'BB' AT EACH SIDE OF JAMB AND MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.



WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

FL #26025



Sealed: 8/20/2026

af c

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

revisions:
no date by description

date: 01-18-18
scale: -
dr. by: TARIQ
chk. by:

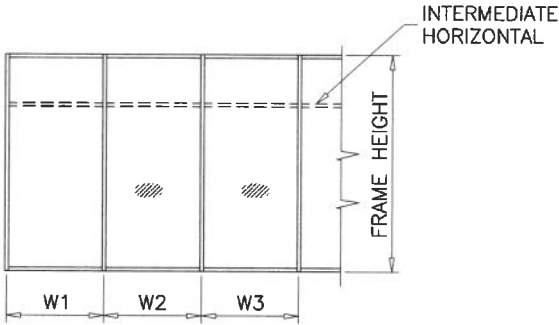
drawing no.
18-22F
sheet 5 of 15

HEAD/SILL ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)			
NOMINAL DIMS.		TYPE 'CC'	TYPE 'CC'
WIDTH (W)	FRAME HEIGHT	CC5	CC6
30"	96"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		140.0	140.0
66"		140.0	140.0
72"		140.0	140.0
30"	102"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		140.0	140.0
66"		140.0	140.0
72"		100.0	100.0
30"	108"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		140.0	140.0
66"		140.0	140.0
72"		133.1	140.0
30"	114"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		140.0	140.0
66"		137.6	140.0
72"		126.1	140.0
30"	120"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		140.0	140.0
66"		130.7	140.0
72"		119.8	140.0
30"	126"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		136.9	140.0
66"		124.5	140.0
72"		114.1	136.9
30"	132"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		140.0	140.0
60"		130.7	140.0
66"		118.8	140.0
72"		100.0	100.0

HEAD/SILL ANCHOR DESIGN LOAD CAPACITY - PSF EXT.(+) & INT.(-)			
NOMINAL DIMS.		TYPE 'CC'	TYPE 'CC'
WIDTH (W)	FRAME HEIGHT	CC5	CC6
30"	138"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		138.9	140.0
60"		125.0	140.0
66"		113.7	136.4
72"		97.6	100.0
30"	144"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		133.1	140.0
60"		119.8	140.0
66"		100.0	100.0
30"	150"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		127.8	140.0
60"		115.0	138.0
66"		98.0	100.0
30"	152"	140.0	140.0
36"		140.0	140.0
42"		140.0	140.0
48"		140.0	140.0
54"		126.1	140.0
60"		113.5	136.2
30"	156"	135.0	135.0
36"		135.0	135.0
42"		135.0	135.0
48"		129.6	135.0
54"		115.2	115.2
60"		100.0	100.0
61-1/4"		100.0	100.0
30"	162"	100.0	100.0
36"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
54"		100.0	100.0
60"		99.8	100.0
61-1/4"		97.8	100.0
30"	164"	100.0	100.0
36"		100.0	100.0
42"		100.0	100.0
48"		100.0	100.0
54"		100.0	100.0
60"		98.6	100.0
61-1/4"		96.6	100.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

ANCHORS TYPES: SEE SHEET 8 FOR DESCRIPTION
CC5 = (5) ANCHORS TYPE 'CC' AT EACH SIDE OF JAMB AND MULLION
CC6 = (6) ANCHORS TYPE 'CC' AT EACH SIDE OF JAMB AND MULLION
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.



WIDTH (W) = W1
AT FRAME JAMB

WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION

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FL #26025

SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
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no date by description

date: 01-18-18

scale: -

dr. by: TARIQ

chk. by:

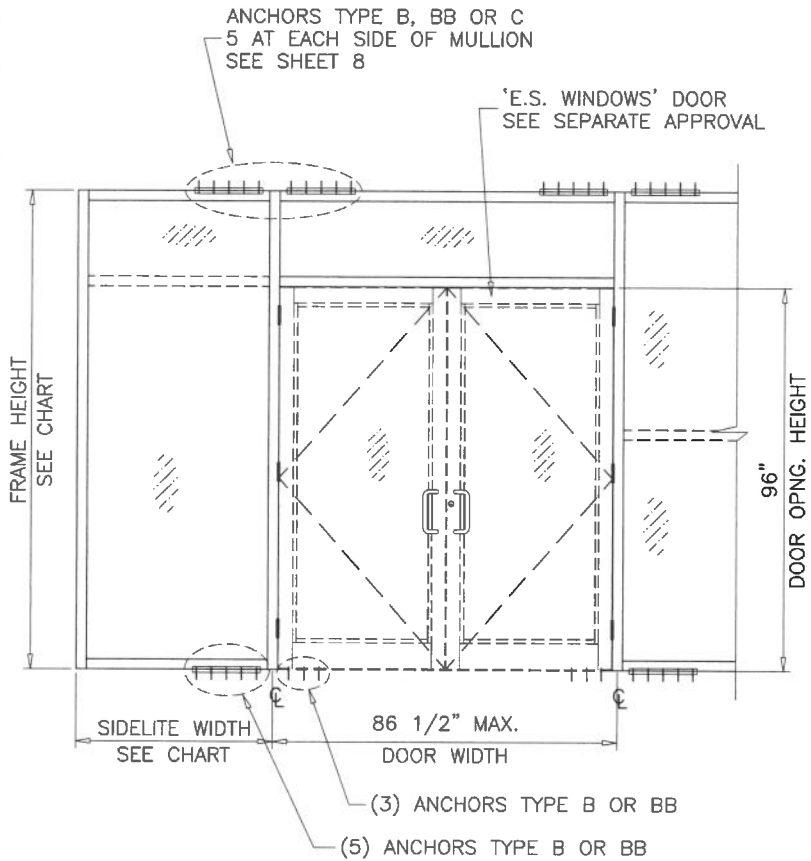
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sheet 5.1 of 15

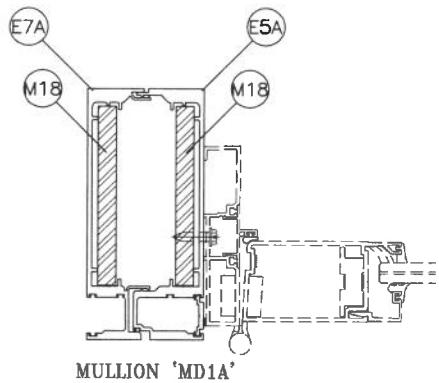
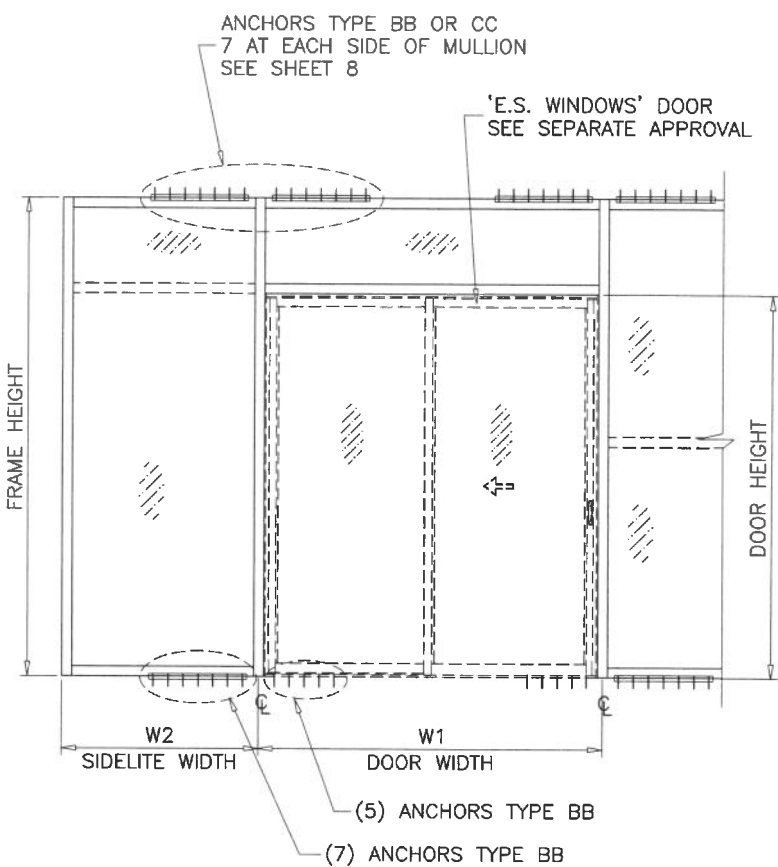
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

COMP - ANL \ 18-22F - ES

DOOR MULLION DESIGN LOAD CAPACITY-PSF		
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	MULL 'MD1' EXT. (+) INT. (-)
30	120	90.0
36		90.0
42		90.0
48		90.0
54		90.0
57		89.8
30	126	90.0
36		90.0
42		90.0
48		90.0
54		87.3
30	132	90.0
36		90.0
42		87.9
48		83.7
52		81.1
30	138	87.5
36		83.0
42		78.9
48		75.2
50		74.1
30	144	79.1
36		75.1
42		71.4
48		68.1

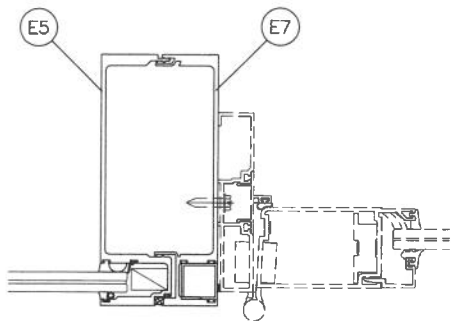


DOOR MULLION DESIGN LOAD CAPACITY-PSF					
NOMINAL DIMS.				MULLION 'MD1A'	
WIDTH (W1) INCHES	WIDTH (W2) INCHES	FRAME HEIGHT INCHES	DOOR HEIGHT INCHES	EXT.(+)	INT.(-)
120	30	120	102	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	126	108	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	132	108	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	138	120	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	144	120	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	150	142	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	156	142	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0
	30	164	142	100.0	100.0
	36			100.0	100.0
	42			100.0	100.0
	48			100.0	100.0
	54			100.0	100.0
	61-1/4			100.0	100.0



	Ix IN^4	Sx IN^3
ALUMINUM	28.6	7.9
STEEL	10.42	4.16
TOTAL Ix ALUM + Ix STL X 2.9	58.539	

LAMINATED GLASS MULLIONS



MULLION 'MD1'

Ix IN^4	Sx IN^3
26.3237	7.07

LAMINATED GLASS MULLIONS

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FL #26025



a f c
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FAX. (305) 262-6978
C.A.N. 3538

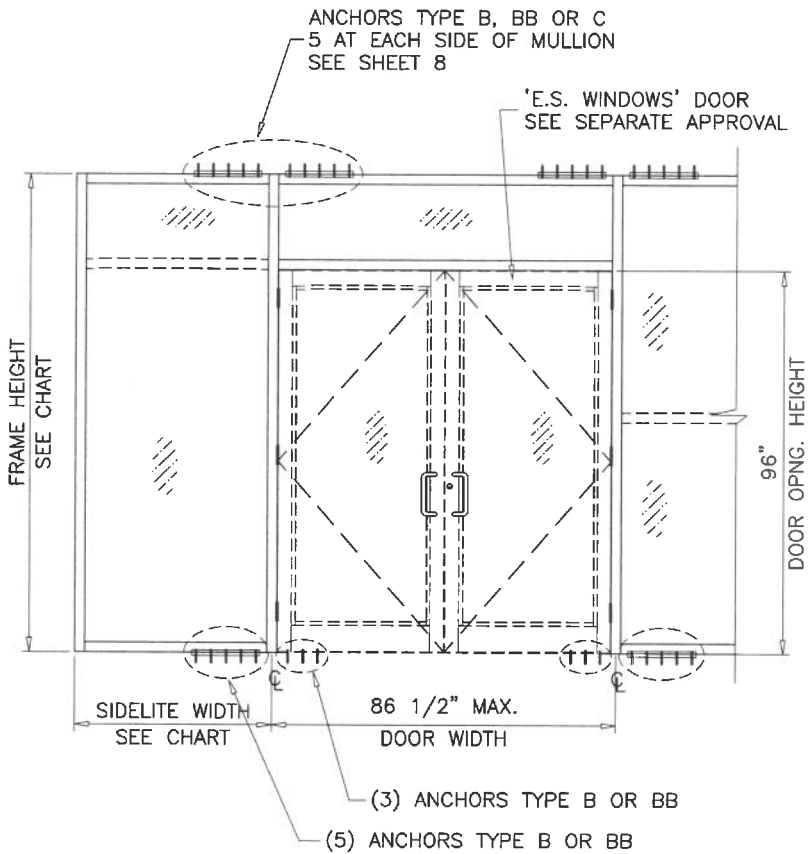
SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151
FAX. (305) 638-5158

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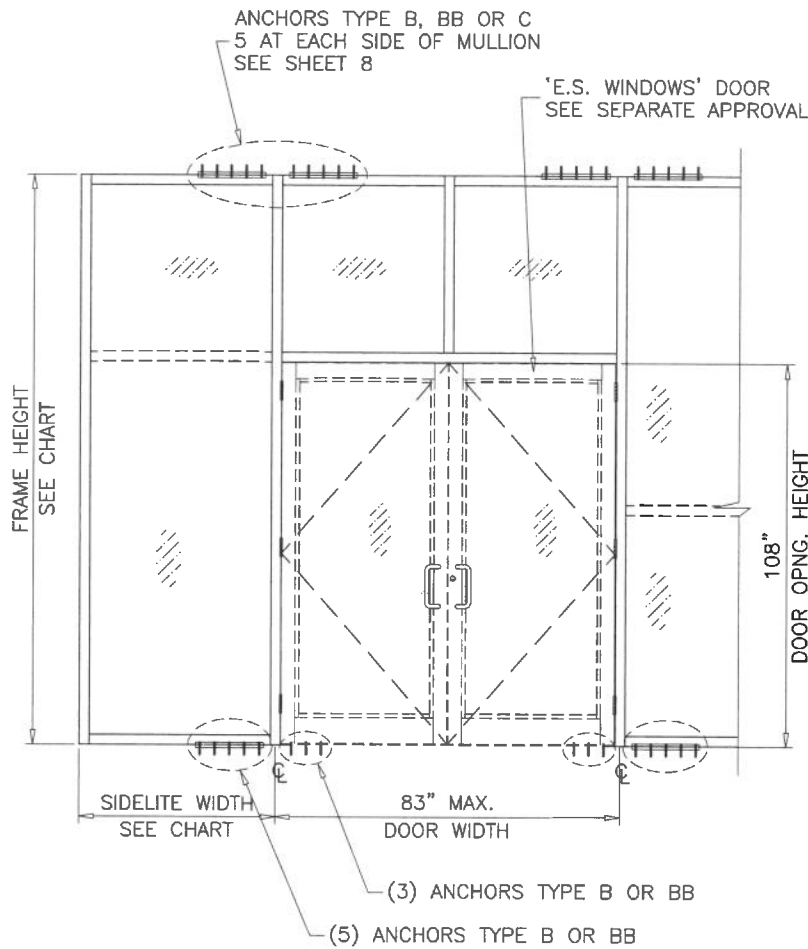
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18-22F
sheet 6 of 15

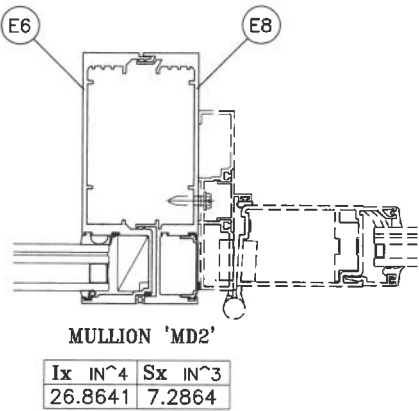
DOOR MULLION DESIGN LOAD CAPACITY-PSF		
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	MULL 'MD2' EXT. (+) INT. (-)
30	120	90.0
36		90.0
42		90.0
48		90.0
54		90.0
57		89.8
30	126	90.0
36		90.0
42		90.0
48		90.0
54		87.3
30	132	90.0
36		90.0
42		89.8
48		85.5
52		82.8
30	138	89.4
36		84.7
42		80.6
48		76.8
50		75.6
30	144	80.7
36		76.6
42		72.9
48		69.5



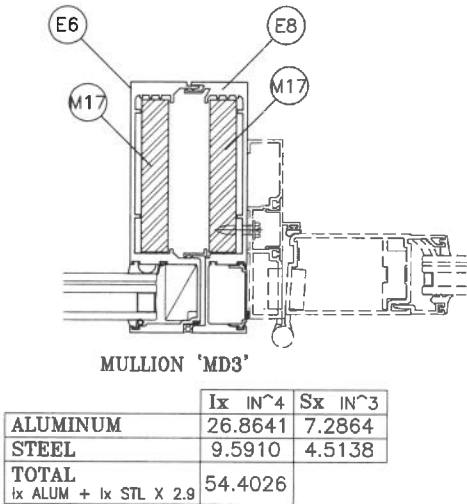
DOOR MULLION DESIGN LOAD CAPACITY-PSF		
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	MULL 'MD3' EXT. (+) INT. (-)
30	150	60.0
36		60.0
42		60.0
48		60.0
54		60.0
60		60.0
66		60.0
72		60.0
30	162	60.0
36		60.0
42		60.0
48		60.0
54		60.0
60		60.0
66		60.0
30	180	60.0
36		60.0
42		60.0
48		60.0
54		60.0
60		60.0
30	197	60.0
36		60.0
42		60.0
48		60.0
55		60.0



INSUL. LAM. GLASS MULLIONS



INSUL. LAM. GLASS MULLIONS



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COMP-ANL 18-22F-ES

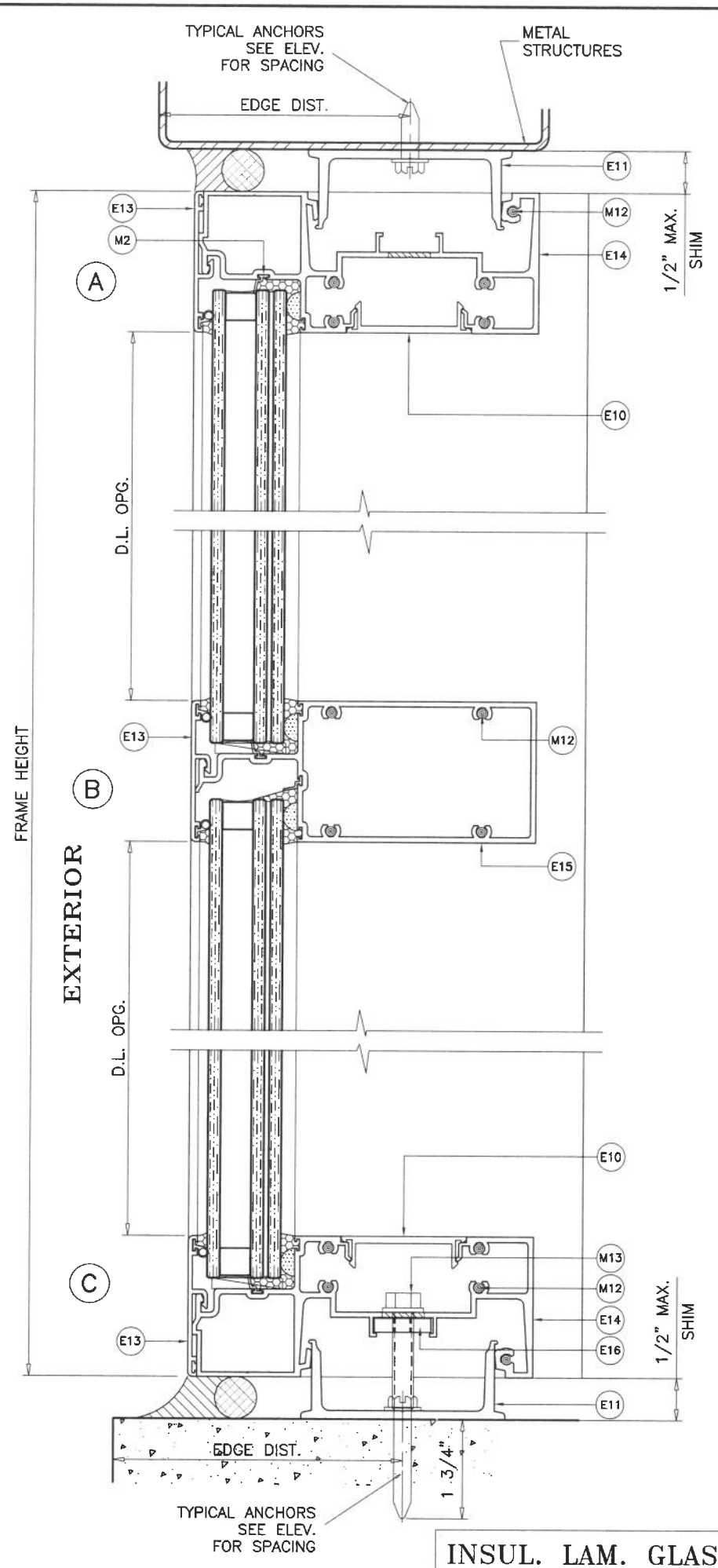
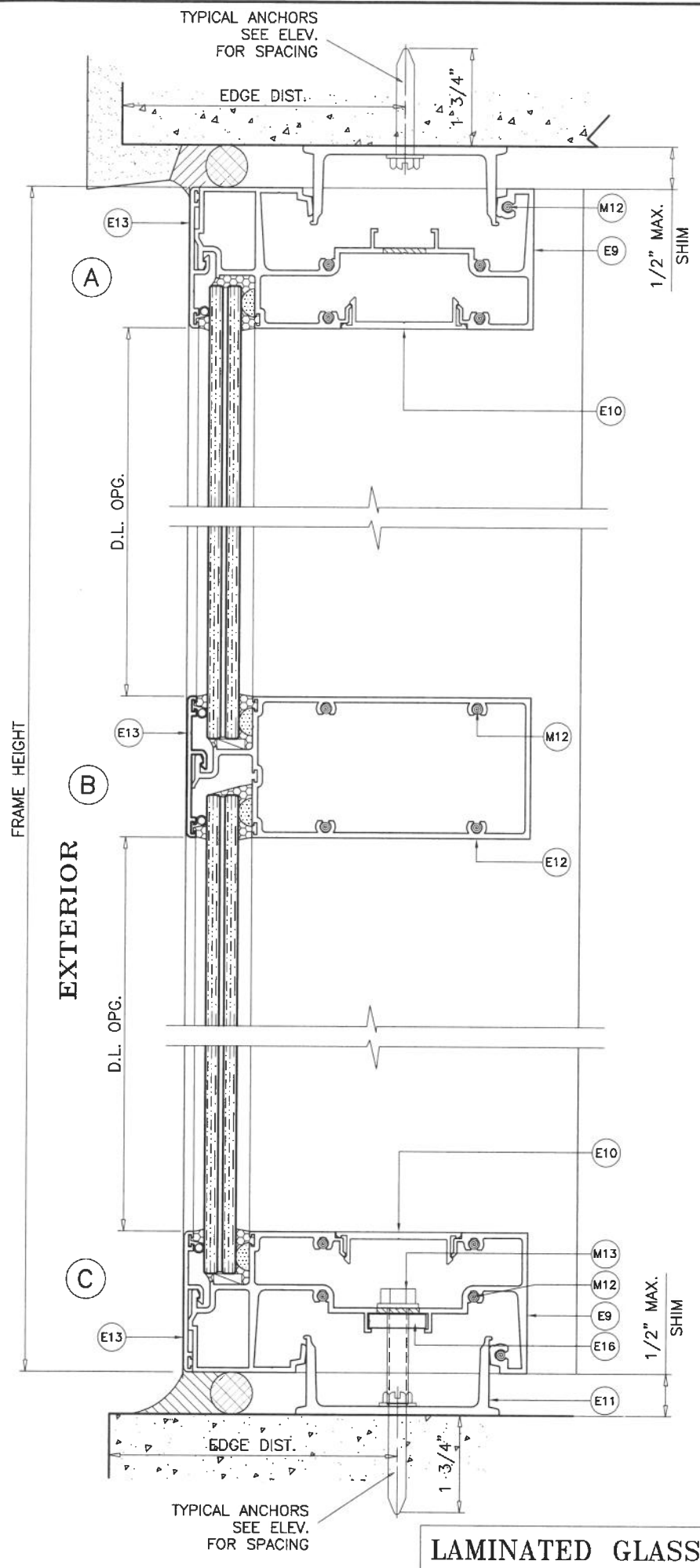
SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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MIAMI, FL. 33142
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drawing no. 18-22F
sheet 6.1 of 15



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SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)	
E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305) 638-5158	
date: 01-18-18 scale: 3/8" = 1" dr. by: TARIQ chk. by:	revisions: no. date by description
drawing no. 18-22F sheet 7 of 15	

FL #26025

METAL STRUCTURES NOT BY 'E.S. WDW.'
MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND
TRANSFER THEM TO THE BUILDING STRUCTURE.

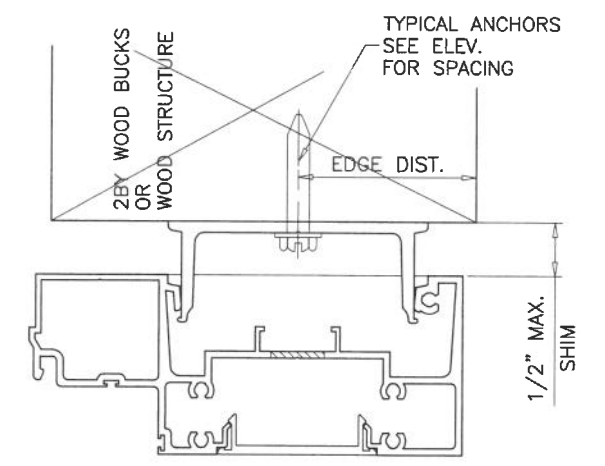
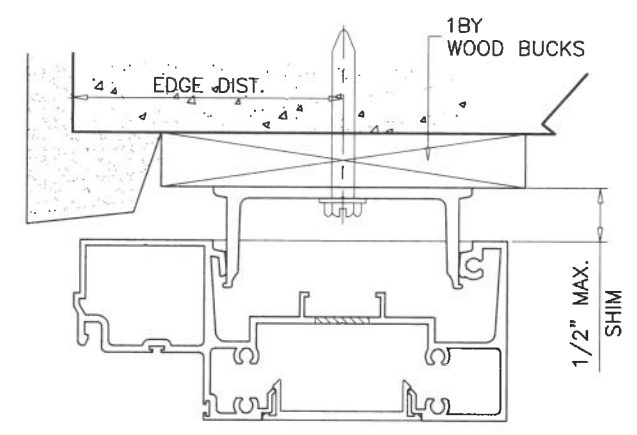
TYPICAL ANCHORS: SEE ELEV. FOR SPACING

- TYPE 'A'- 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/SILL/JAMBS)
THRU 1BY BUCKS INTO CONC. OR BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'B'- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE OR BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'B1'- 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO BLOCKS
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'C'- 1/4" DIA. TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/8" THK. MIN. (6063-T6 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 BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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



- TYPE 'AA'- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)
THRU 1BY OR 2BY WOOD BUCKS INTO CONC. OR BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'BB'- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO CONCRETE OR BLOCKS
2" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'BB1'- 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
DIRECTLY INTO BLOCKS
1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)
- TYPE 'CC'- 5/16" DIA. TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/8" THK. MIN. (6063-T6 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 BLOCKS = 3-1/8" MIN.
INTO WOOD STRUCTURE = 1-1/4" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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

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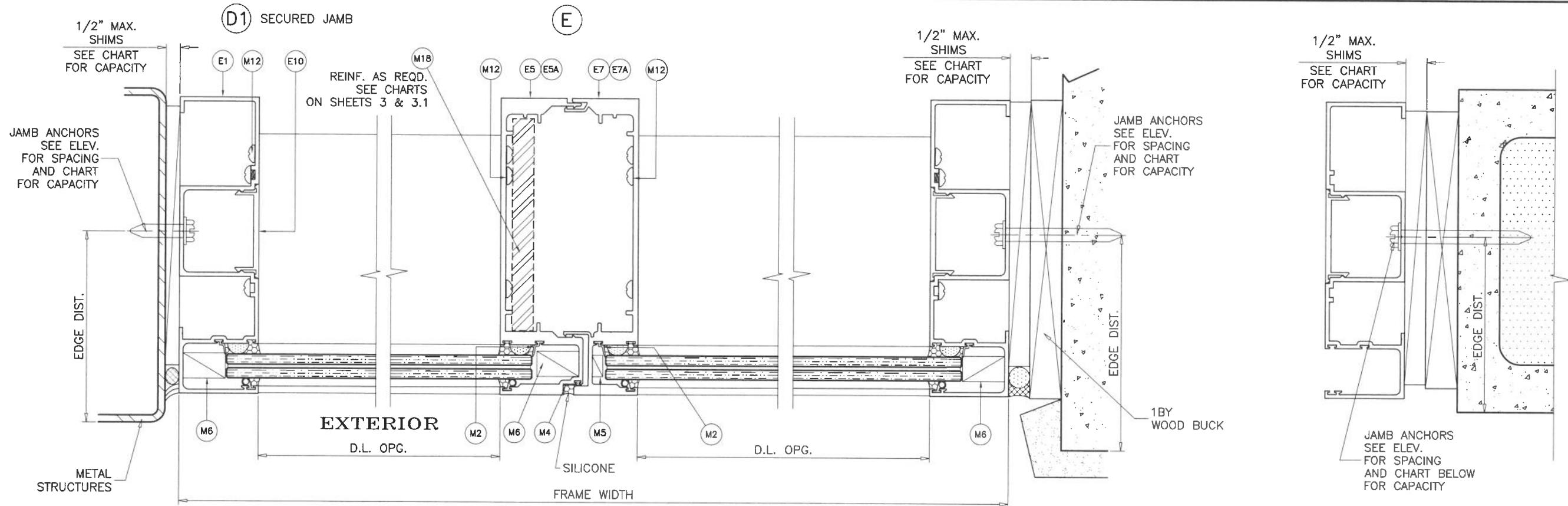


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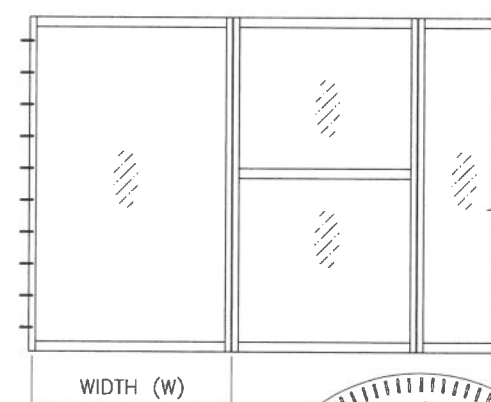
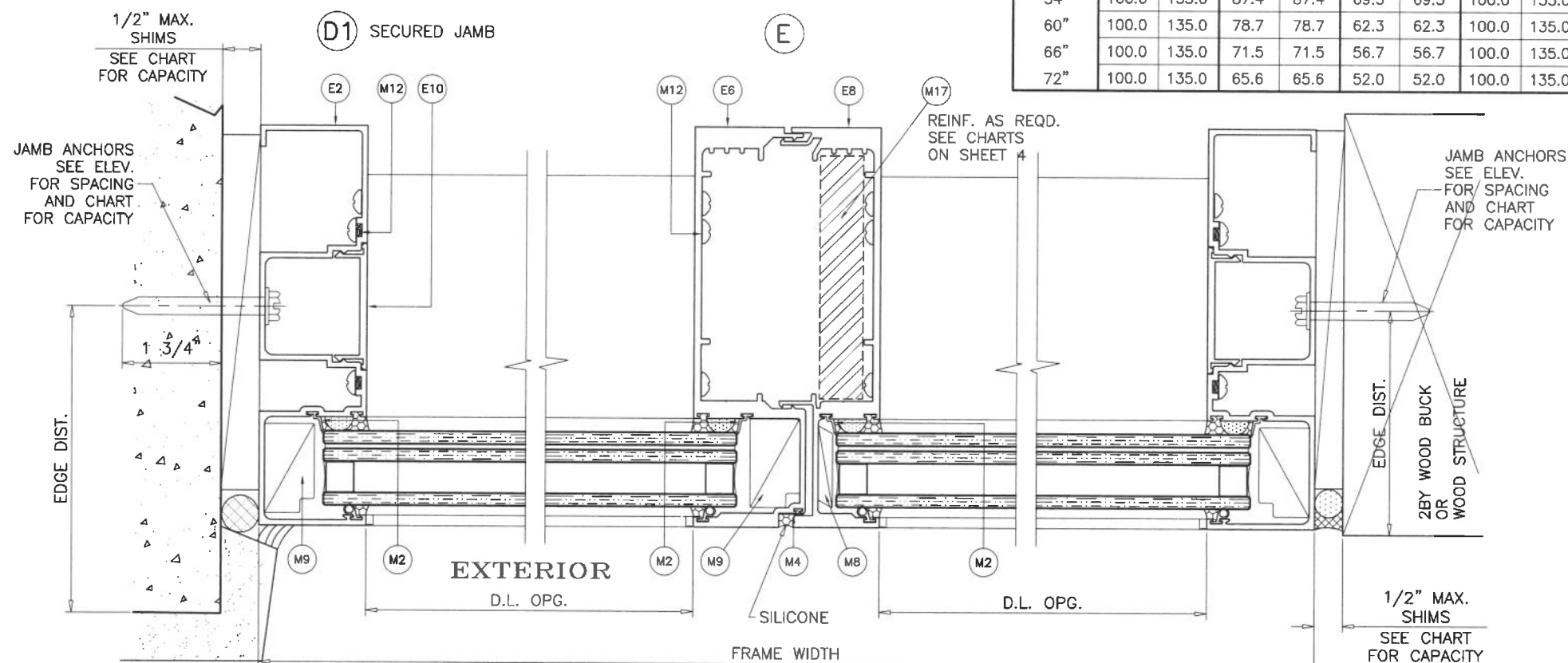
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MIAMI, FLORIDA 33173
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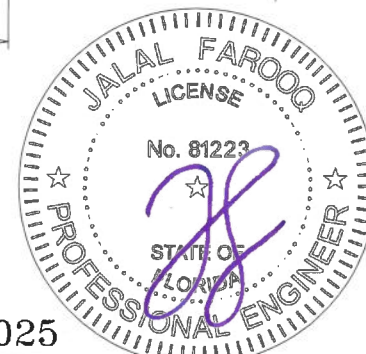


JAMB ANCHORS DESIGN LOAD CAPACITY - PSF																		
	ANCHOR TYPES 'A', 'B', 'B1'						ANCHOR TYPES 'AA', 'BB', 'BB1'						ANCHOR TYPE 'C'					
WIDTH (W)	1/4" SHIMS		3/8" SHIMS		1/2" SHIMS		1/4" SHIMS		3/8" SHIMS		1/2" SHIMS		1/4" SHIMS		3/8" SHIMS		1/2" SHIMS	
	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)	EXT.(+)	INT.(−)
36"	100.0	135.0	100.0	131.1	100.0	103.9	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0
42"	100.0	135.0	100.0	112.4	89.1	89.1	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	131.1
48"	100.0	135.0	100.0	98.3	77.9	77.9	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	114.7
54"	100.0	135.0	87.4	87.4	69.3	69.3	100.0	135.0	100.0	135.0	100.0	135.0	100.0	135.0	100.0	129.3	100.0	101.9
60"	100.0	135.0	78.7	78.7	62.3	62.3	100.0	135.0	100.0	135.0	100.0	123.2	100.0	135.0	100.0	116.4	91.7	91.7
66"	100.0	135.0	71.5	71.5	56.7	56.7	100.0	135.0	100.0	135.0	100.0	112.0	100.0	135.0	100.0	105.8	83.4	83.4
72"	100.0	135.0	65.6	65.6	52.0	52.0	100.0	135.0	100.0	130.5	100.0	102.7	100.0	135.0	97.0	97.0	76.5	76.5



Sealed: 8/20/2026

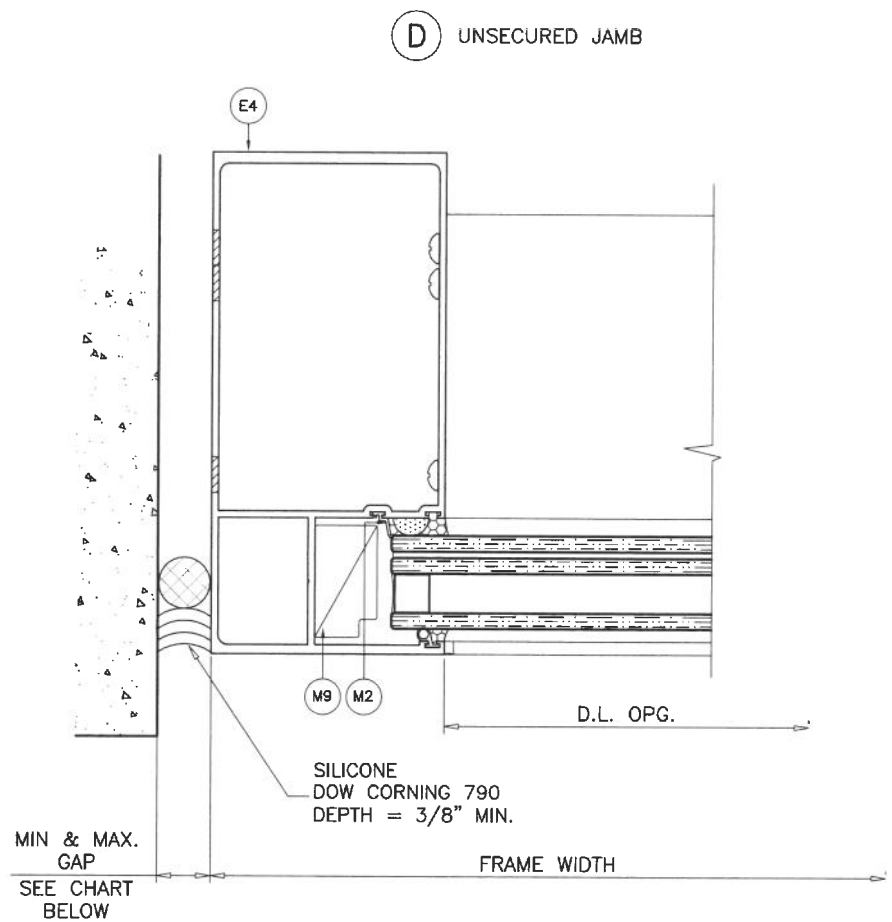
FL #26025



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\18-22F-ES

SERIES 7500 ALUM WINDOW WALL SYSTEM (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:		01-18-18		scale:		3/8" = 1"		dr. by: TARIQ	
drawing no.		18-22F		sheet		9 of 15		chk. by:	



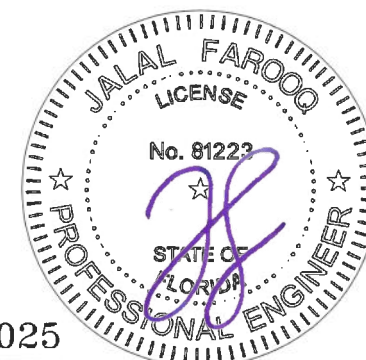
MAX. FRAME HEIGHT	GAP	
	MIN.	MAX.
96"	5/16"	3/4"
120"	3/8"	3/4"
156"	1/2"	3/4"
197"	5/8"	3/4"

NOTE:
MAX. MOVEMENT CONSIDERED=100% STRETCH.
PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION MANUAL
FOR COMPATABILITY OF SEALANT TO SUBSTRATE & WINDOW WALL
MATERIAL/FINISH AND COMPLIANCE FOR WARRANTY.
REFER TO ACI-117-10 FOR CONSTRUCTION TOLERANCES.

ALTERNATE SEALANTS AT JAMB GAPS CAN BE DESIGNED BY
ENGINEER OF RECORD BASED ON MANUFACTURER GUIDE LINES.

GAPS LESS THAN 1/4" MAY BE DESIGNED BY ENGINEER OF RECORD BY
THE USE OF BOND BREAKER TAPE OR 15% OF GAP ALLOWED MOVEMENT.

Sealed: 8/20/2026



SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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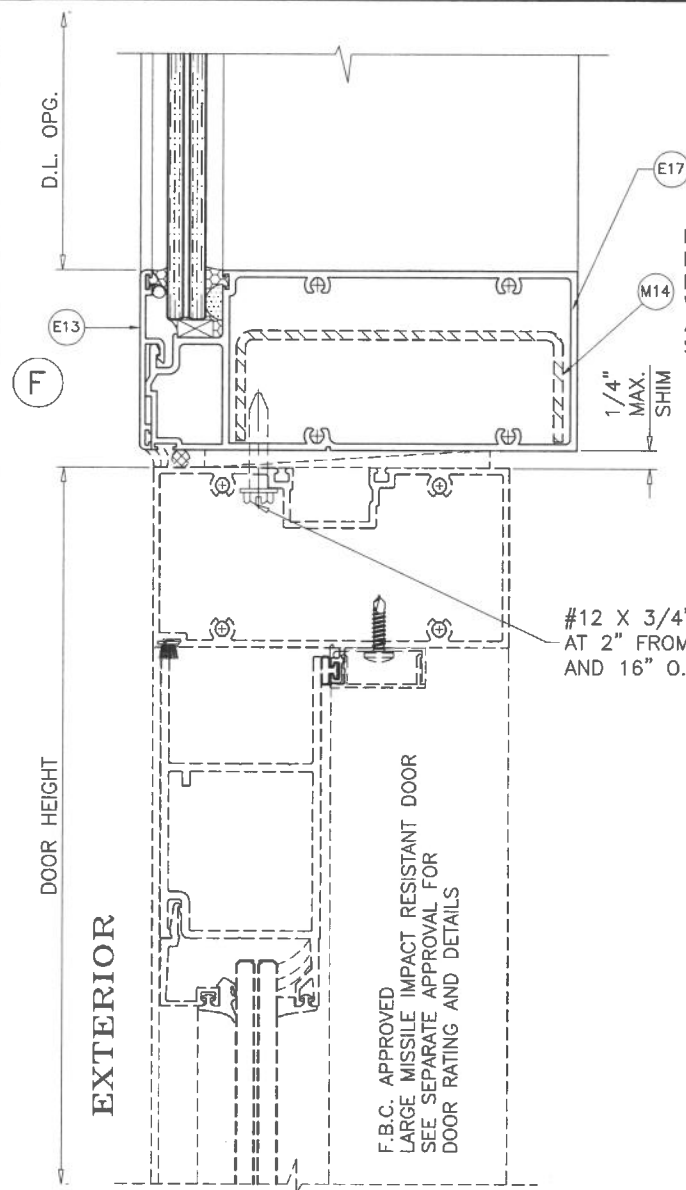
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

FAX. (305) 638-5158

COMP-ANL\18-22F-ES

date: 01-18-18		revisions:	
scale: $3/8" = 1"$	no	date	by description
dr. by: TARIQ			
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drawing no. 18-22F			
sheet 10 of 15			

FL #26025

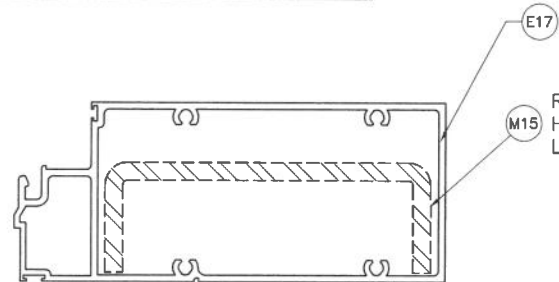


REINF. NOT REQD. FOR HORIZONTAL WIDTHS UPTO 83-1/4" MAX. REQD. ONLY FOR INSTALLATIONS WHERE VERTICAL MULLION IS USED ABOVE HORIZONTAL SEE SHEET 6.1

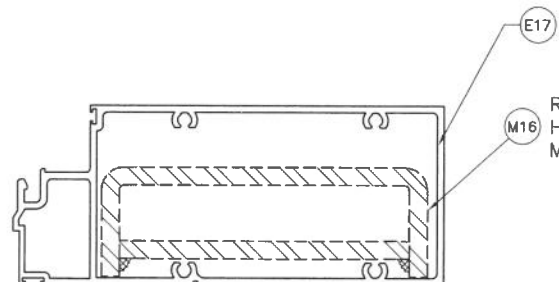
#12 X 3/4" SMS AT 2" FROM ENDS AND 16" O.C. MAX.

F.B.C. APPROVED LARGE MISSILE IMPACT RESISTANT DOOR SEE SEPARATE APPROVAL FOR DOOR RATING AND DETAILS

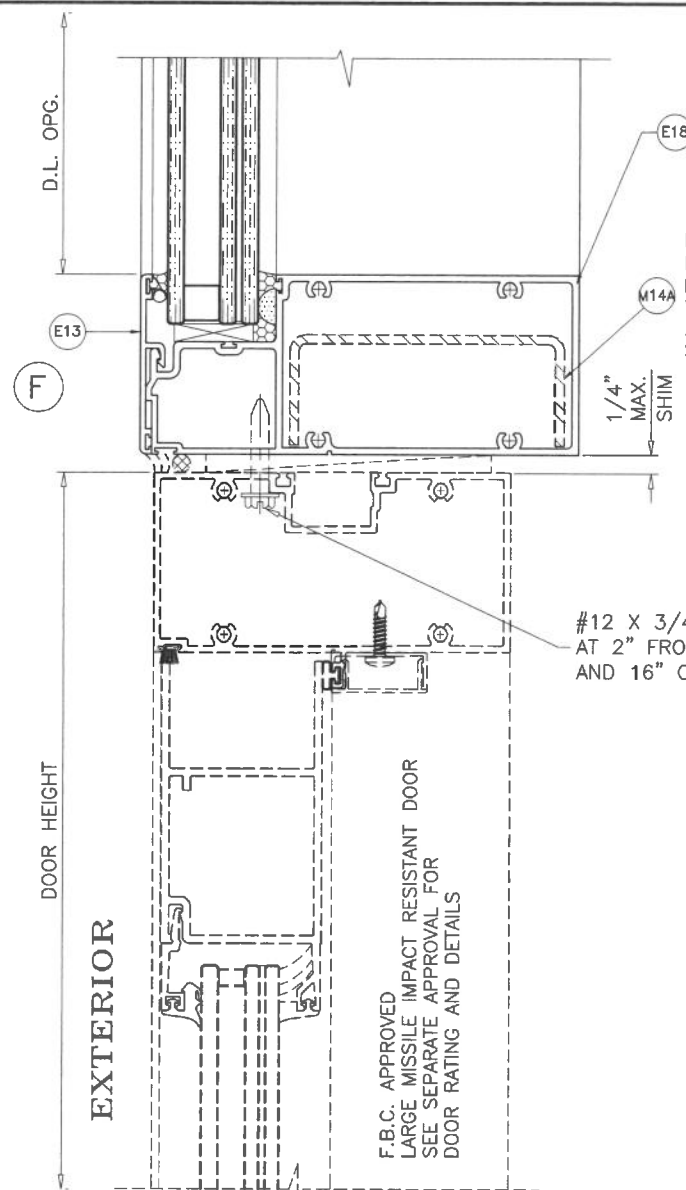
LAMINATED GLASS



REINF. REQD. FOR HORIZONTAL WIDTHS ABOVE 83-1/4" LIMIT MAX. DESIGN LOADS TO = 87.6 PSF



REINF. REQD. FOR HORIZONTAL WIDTHS ABOVE 83-1/4" MAX. DESIGN LOADS = 100.0 PSF MAX.

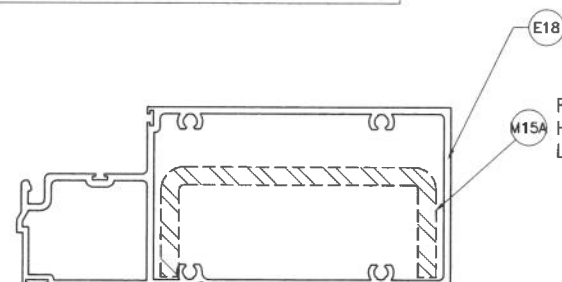


REINF. NOT REQD. FOR HORIZONTAL WIDTHS UPTO 83-1/4" MAX. REQD. ONLY FOR INSTALLATIONS WHERE VERTICAL MULLION IS USED ABOVE HORIZONTAL SEE SHEET 6.1

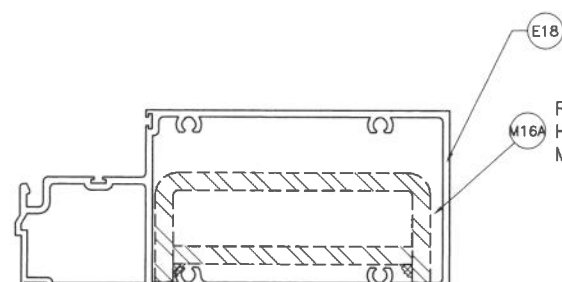
#12 X 3/4" SMS AT 2" FROM ENDS AND 16" O.C. MAX.

F.B.C. APPROVED LARGE MISSILE IMPACT RESISTANT DOOR SEE SEPARATE APPROVAL FOR DOOR RATING AND DETAILS

INSUL. LAM. GLASS



REINF. REQD. FOR HORIZONTAL WIDTHS ABOVE 83-1/4" LIMIT MAX. DESIGN LOADS TO = 87.6 PSF



REINF. REQD. FOR HORIZONTAL WIDTHS ABOVE 83-1/4" MAX. DESIGN LOADS = 100.0 PSF MAX.

SEE SEPARATE APPROVAL FOR DESIGN LOAD CAPACITY OF DOORS AND DOOR ANCHORS.
LOWER VALUES FROM DOORS APPROVAL OR WINDOWALL SYSTEM CAPACITY CHARTS WILL APPLY TO ENTIRE SYSTEM.

Sealed: 8/20/2026

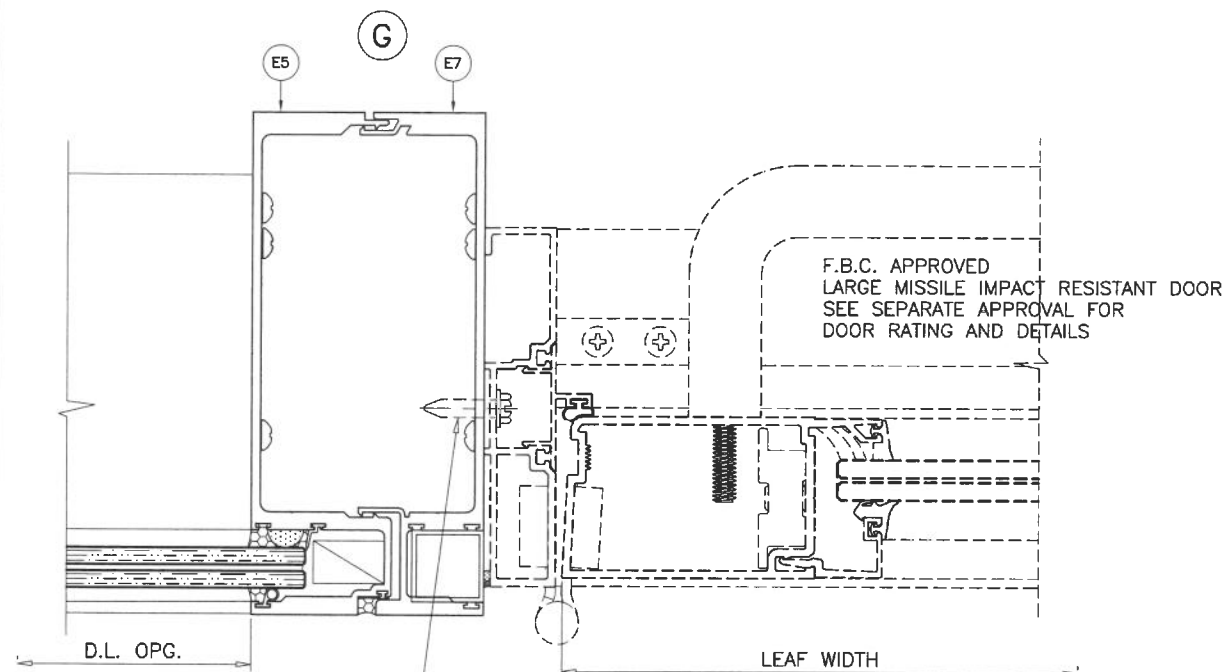


FL #26025

AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
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C.A.N. 3538

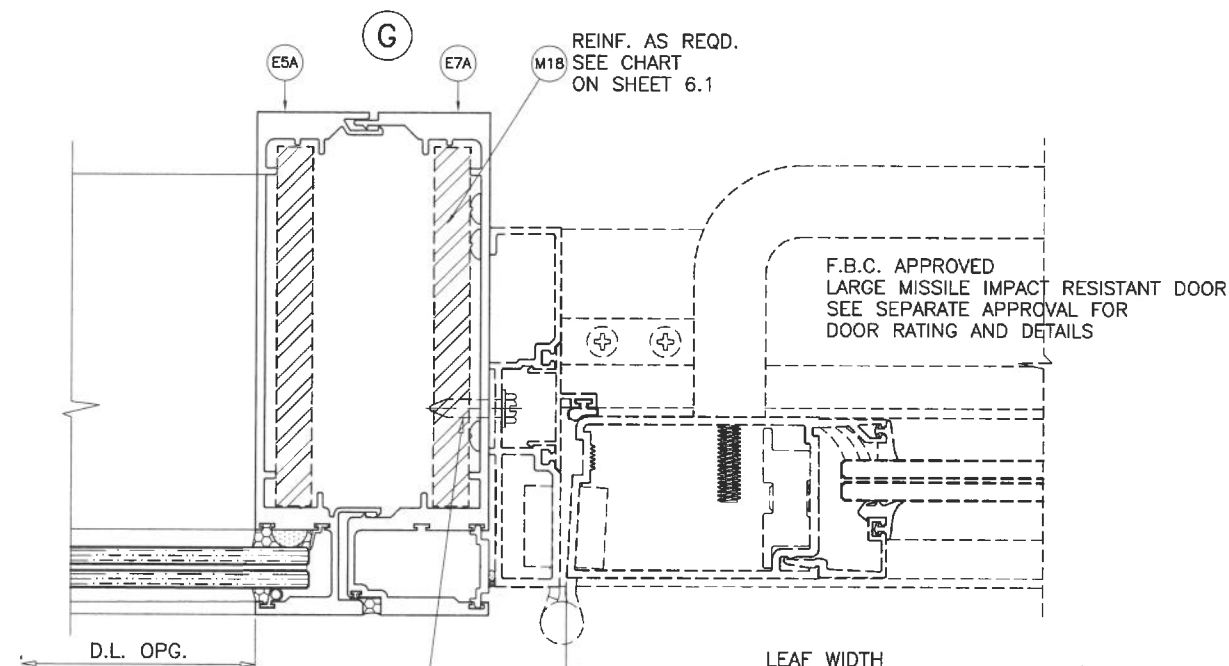
SERIES 7500 ALUM WINDOW WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:		no date by description	
date:	01-18-18	scale:	3/8" = 1"
dr. by:	TARIQ	chk. by:	
drawing no.	18-22F	sheet	11 of 15



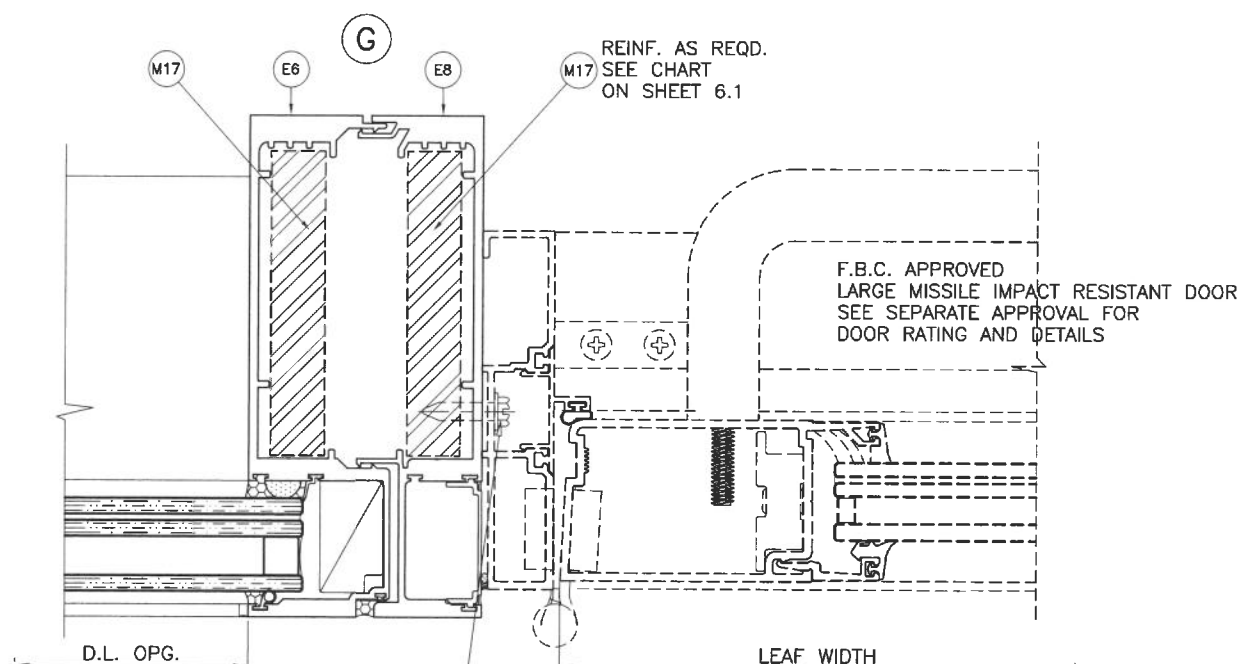
#12 X 3/4" SMS
AT 5-1/2" FROM ENDS
AND 14" O.C. MAX.

LAMINATED GLASS



#12 X 3/4" SMS
AT 5-1/2" FROM ENDS
AND 14" O.C. MAX.

LAMINATED GLASS



#12 X 3/4" SMS
AT 5-1/2" FROM ENDS
AND 14" O.C. MAX.

INSUL. LAM. GLASS

SEE SEPARATE APPROVAL FOR DESIGN LOAD
CAPACITY OF DOORS AND DOOR ANCHORS.

LOWER VALUES FROM DOORS APPROVAL
OR WINDOWALL SYSTEM CAPACITY CHARTS
WILL APPLY TO ENTIRE SYSTEM.

Sealed: 8/20/2026

FL #26025



SERIES 7500 ALUM WINDOW WALL SYSTEM (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: 01-18-18

scale: 3/8" = 1"

dr. by: TARIQ

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drawing no.

18-22F

sheet 12 of 15

AL-FAROOQ CORPORATION

ENGINEERS & PRODUCT DEVELOPMENT

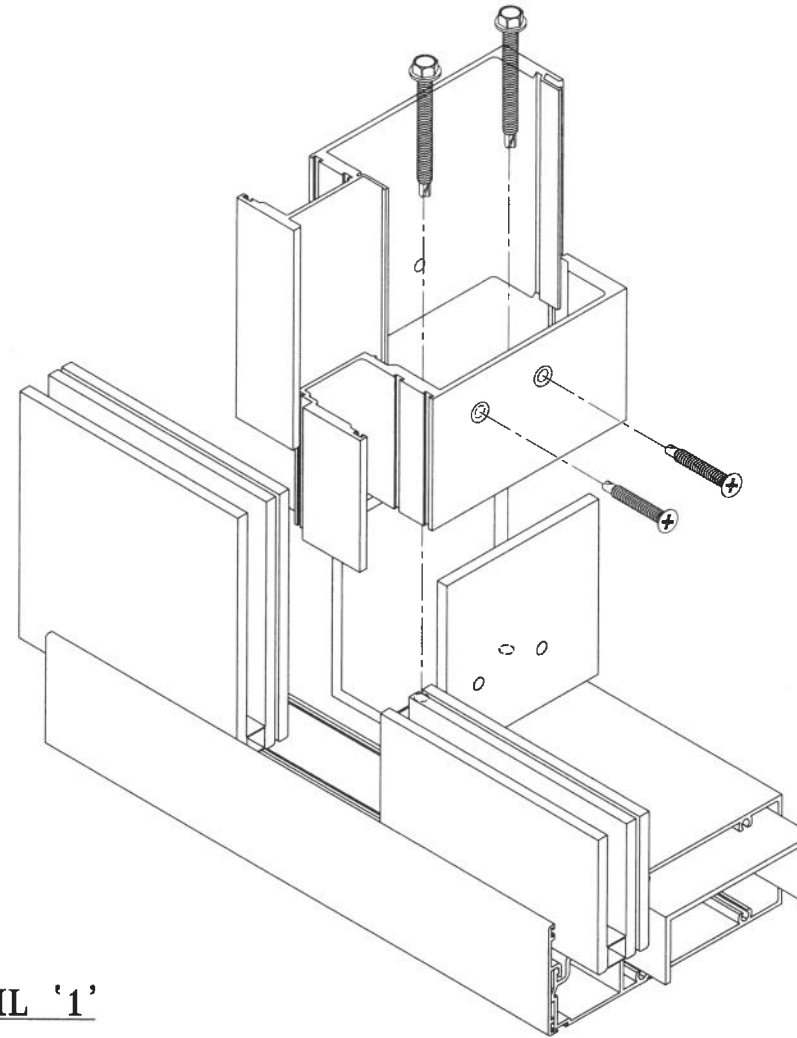
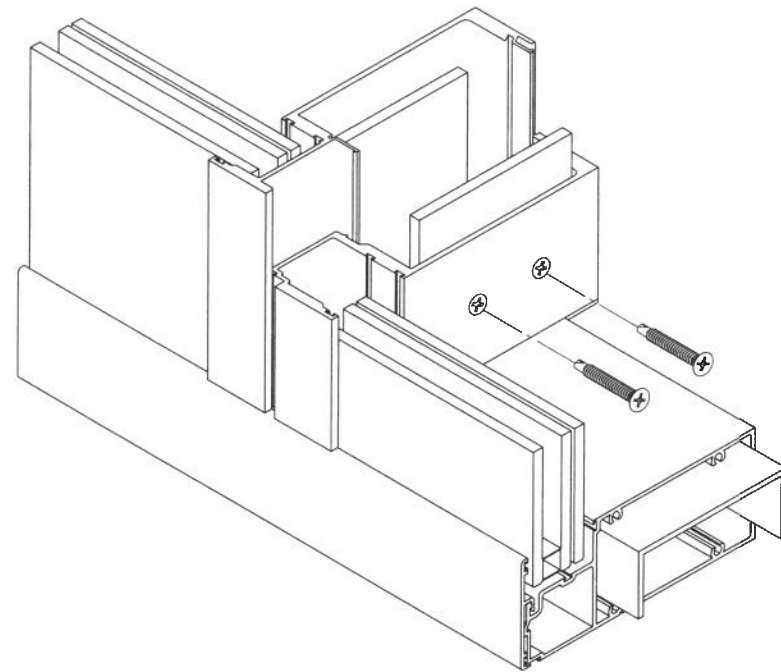
9360 SUNSET DRIVE, SUITE 220

MIAMI, FLORIDA 33173

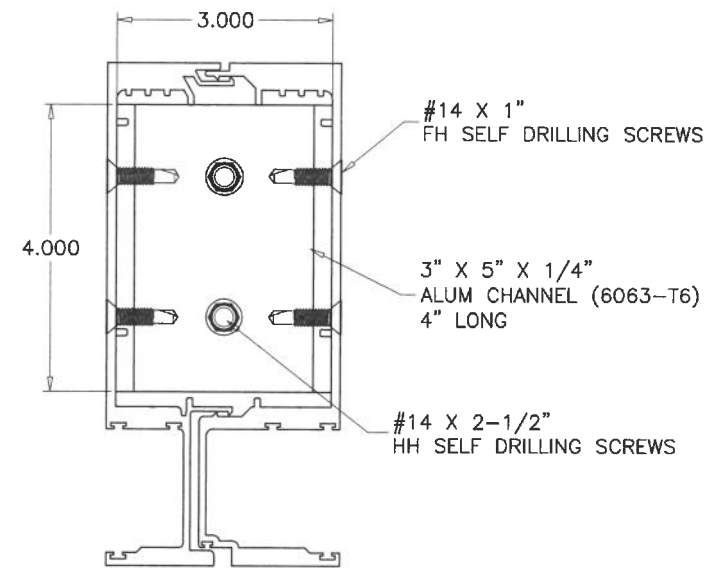
TEL. (305) 264-8100

FAX. (305) 262-6978

COMP-ANL\18-22F-ES



DETAIL '1'



Sealed: 8/20/2026

FL #26025



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

SERIES 7500 ALUM WINDOW WALL SYSTEM (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:	01-18-18	scale:	3/8" = 1"	dr.	by:	TARIQ	chk.	by:	
drawing no.	18-22F								
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COMP-ANL\18-22F-ES

ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-7500-001	AS REQD.	SECURED JAMB (LAM. GLASS)	6063-T6	-
E2	ES-7500-002	AS REQD.	SECURED JAMB (INSUL. LAM. GLASS)	6063-T6	-
E3	ES-7500-003	AS REQD.	UNSECURED JAMB (LAM. GLASS)	6063-T6	-
E3A	ES-7500-404	AS REQD.	UNSECURED JAMB (LAM. GLASS)	6005-T5	-
E4	ES-7500-004	AS REQD.	UNSECURED JAMB (INSUL. LAM. GLASS)	6005-T5	-
E5	ES-7500-005	AS REQD.	MALE MULLION (LAM. GLASS)	6063-T6	-
E5A	ES-7500-403	AS REQD.	MALE MULLION (LAM. GLASS)	6063-T6	-
E6	ES-7500-400	AS REQD.	MALE MULLION (INSUL. LAM. GLASS)	6063-T6	-
E7	ES-7500-007	AS REQD.	FEMALE MULLION (LAM. GLASS)	6063-T6	-
E7A	ES-7500-402	AS REQD.	FEMALE MULLION (LAM. GLASS)	6063-T6	-
E8	ES-7500-401	AS REQD.	FEMALE MULLION (INSUL. LAM. GLASS)	6063-T6	-
E9	ES-7001B	AS REQD.	FRAME HEAD/SILL (LAM. GLASS)	6005-T5	-
E10	ES-7003A	AS REQD.	SNAP COVER	6063-T5	-
E11	ES-7004	AS REQD.	ANCHOR BASE, 13" LONG	6005-T5	-
E12	ES-7005	AS REQD.	INTERMEDIATE HORIZONTAL (LAM. GLASS)	6005-T5	-
E13	ES-7006	AS REQD.	GLAZING STOP	6063-T6	-
E14	ES-7021B	AS REQD.	INTERMEDIATE HORIZONTAL (INSUL. LAM. GLASS)	6005-T5	-
E15	ES-7022	AS REQD.	INTERMEDIATE HORIZONTAL (INSUL. LAM. GLASS)	6005-T5	-
E16	ALU-P-020	AS REQD.	LEVELER	6063-T6	-
E17	ES-7013	AS REQD.	TRANSOM MULLION (LAM. GLASS)	6005-T5	-
E18	-	AS REQD.	TRANSOM MULLION (INSUL. LAM. GLASS)	6005-T5	-
M1	ES-7000-G01	AS REQD.	EXTERIOR BULB	SILICONE	DUROMETER 60±5 SHORE A
M2	ES-7000-G02	AS REQD.	SILICONE DAM	SILICONE	DUROMETER 60±5 SHORE A
M4	ES-7000-G03	AS REQD.	FEMALE	SILICONE	DUROMETER 65±5 SHORE A
M5	80-378A	AS REQD.	SIDE BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M6	ES-21-B02A	AS REQD.	SIDE BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M7	80-334A	AS REQD.	SETTING-SIDE BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M8	ES7000-B01A	AS REQD.	SETTING BLOCK (INSUL. GLASS)	SILICONE	DUROMETER 80±5 SHORE A
M9	ES-9550-B02A	AS REQD.	SIDE BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M10	ES-4520-B02A	AS REQD.	SETTING BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M11	ES-8011A	AS REQD.	BUMPON SPACER, 4" LONG	EPDM	-
M12	#12 X 1"	AS REQD.	FRAME ASSEMBLY SCREWS	-	PH SMS
M13	3/8-16 X 2"	AS REQD.	LEVELING SCREW	ST/ST	HH BOLT
M14	-	AS REQD.	HORIZONTAL REINF. CHANNEL (LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M14A	-	AS REQD.	HORIZONTAL REINF. CHANNEL (INSUL. LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M15	-	AS REQD.	HORIZONTAL REINF. CHANNEL (LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M15A	-	AS REQD.	HORIZONTAL REINF. CHANNEL (INSUL. LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M16	-	AS REQD.	HORIZONTAL REINF. CHANNEL (LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M16A	-	AS REQD.	HORIZONTAL REINF. CHANNEL (INSUL. LAM. GLASS)	STEEL	A36, Fu MIN. = 58 KSI
M17	-	AS REQD.	MULLION REINF. BAR	STEEL	A36, Fu MIN. = 58 KSI
M18	-	AS REQD.	MULLION REINF. BAR	STEEL	A36, Fu MIN. = 58 KSI

SEALANTS:

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.



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FL #26025

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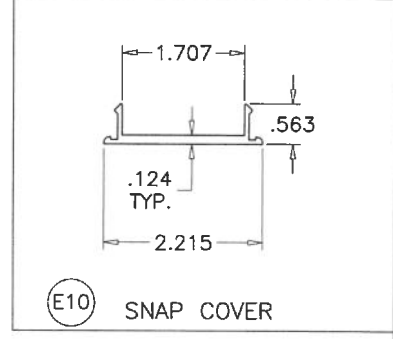
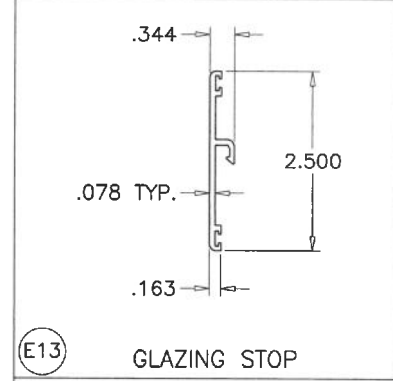
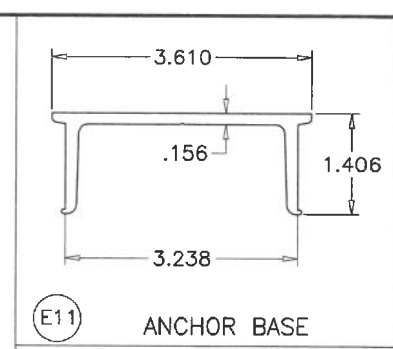
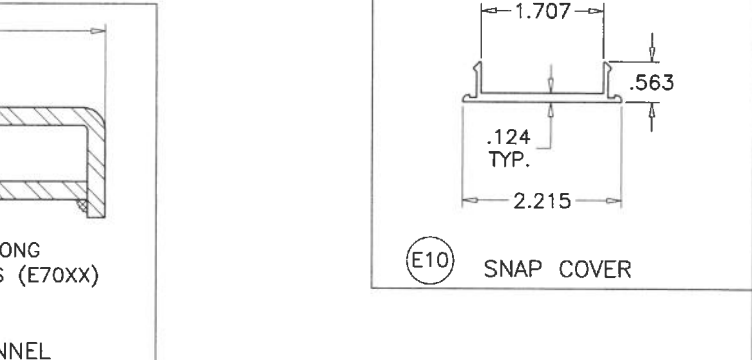
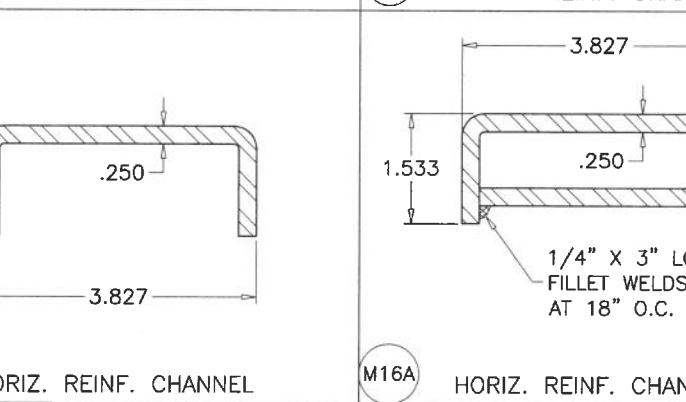
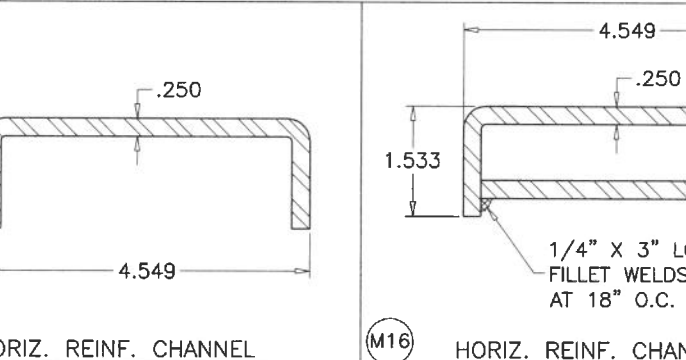
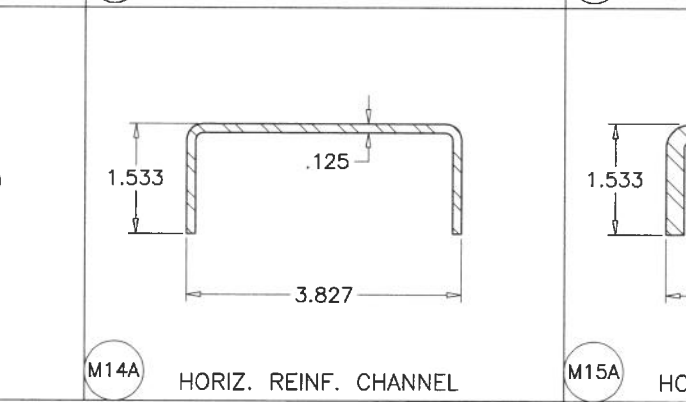
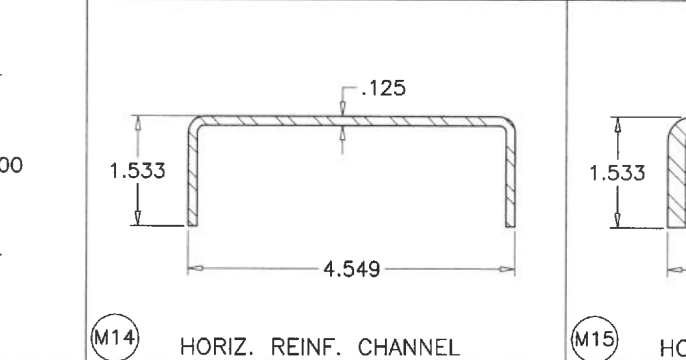
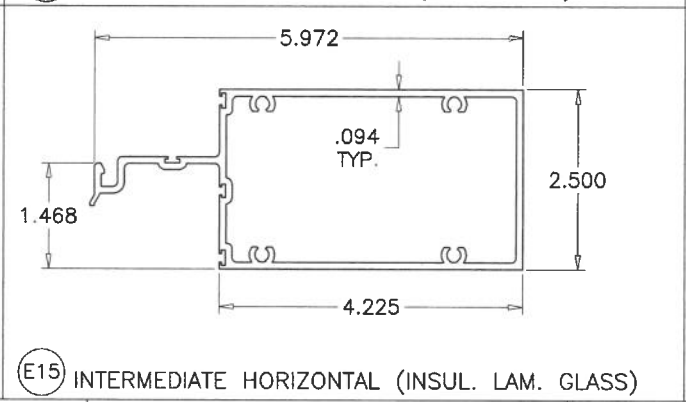
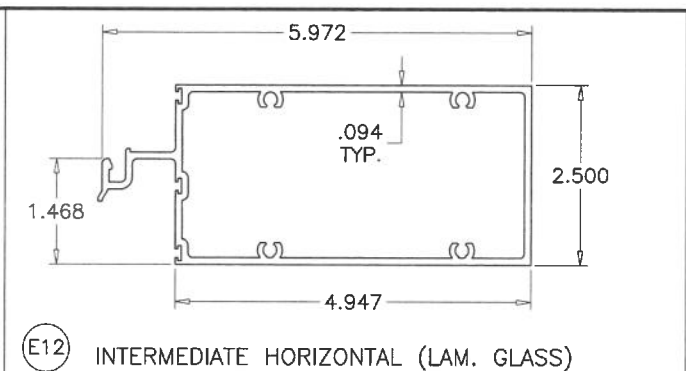
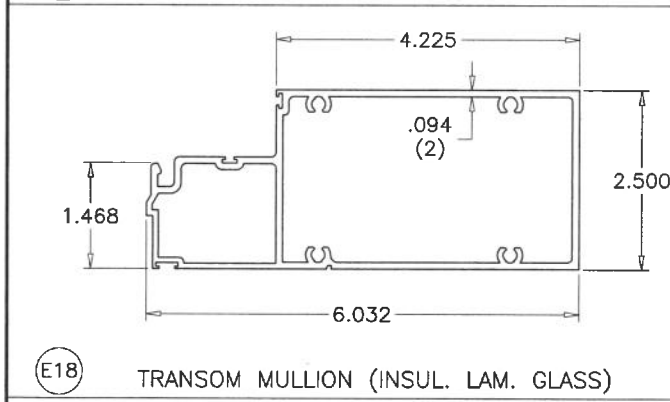
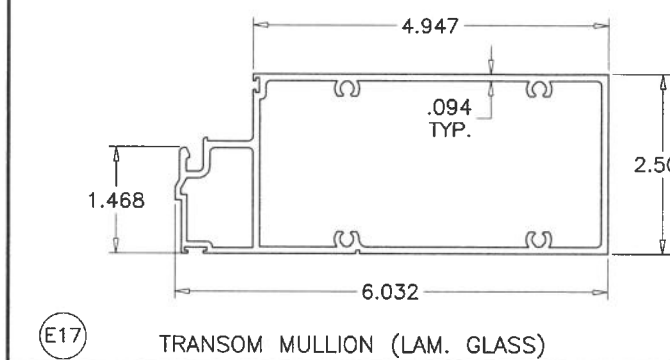
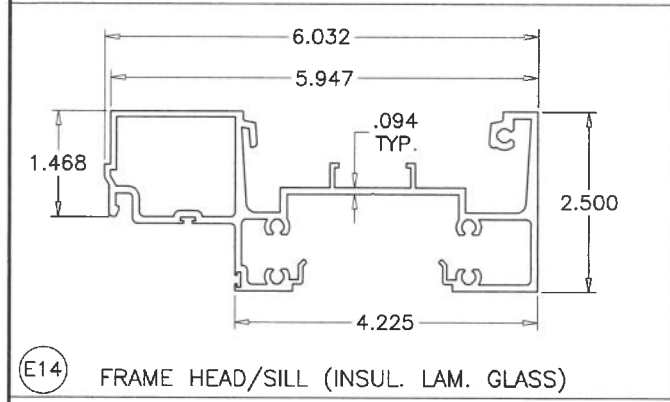
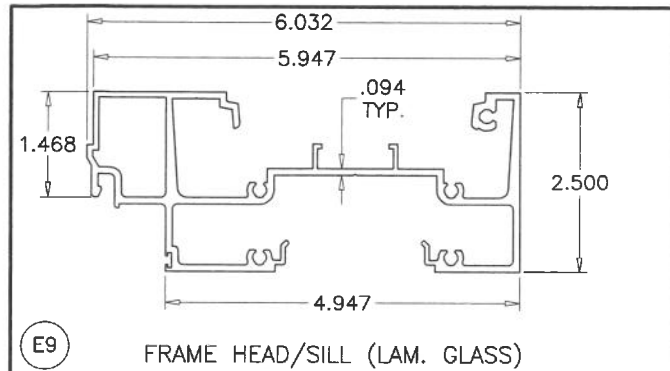
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drawing no.				18-22F			
sheet 13 of 15							

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ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.

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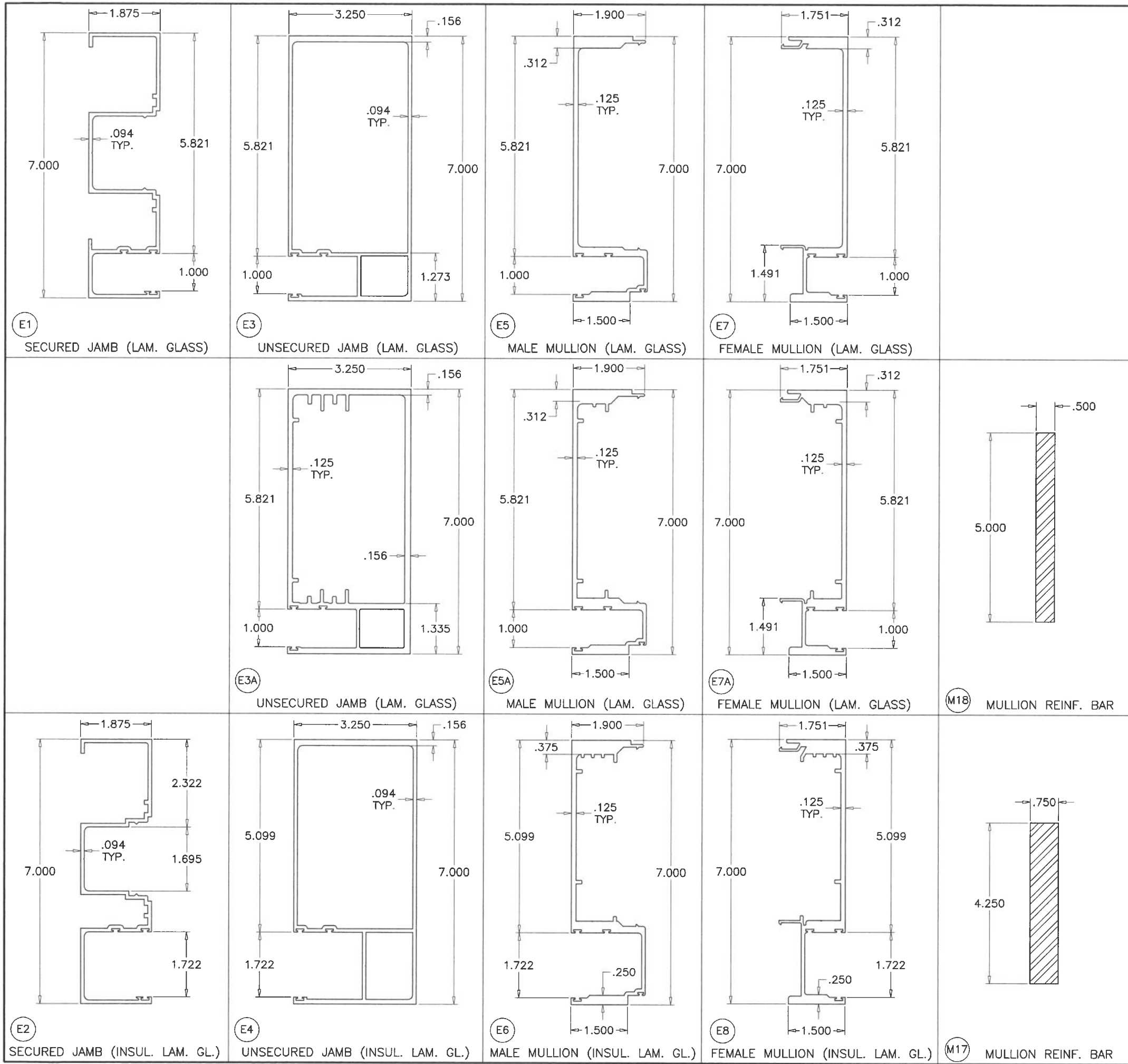
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sheet 13.1 of 15



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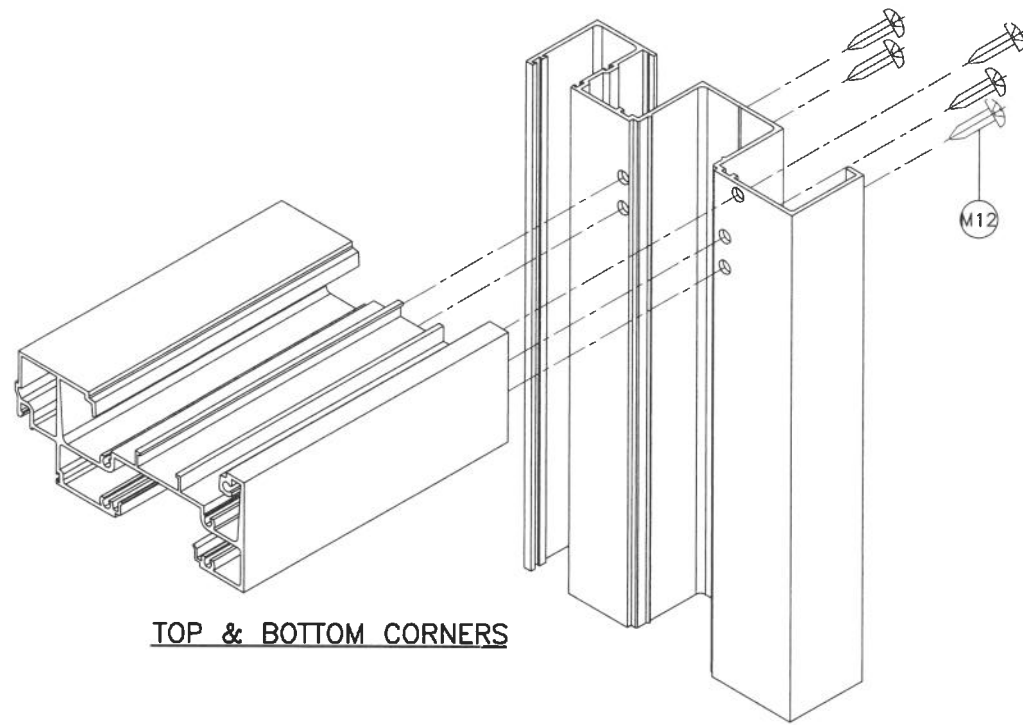
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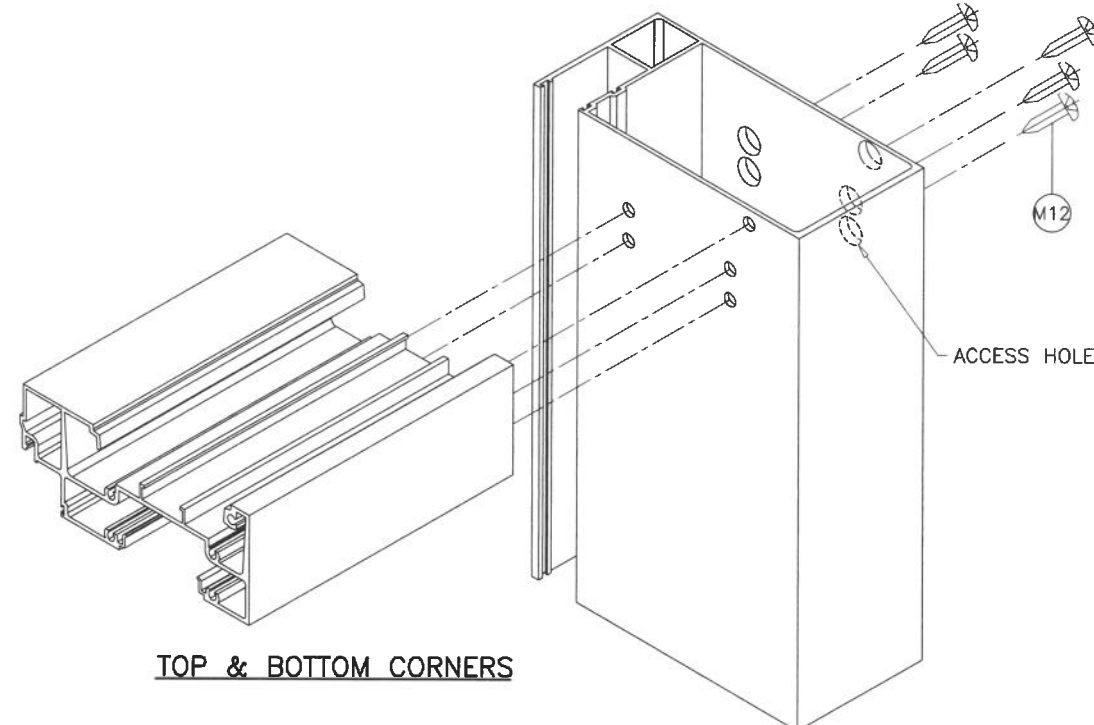
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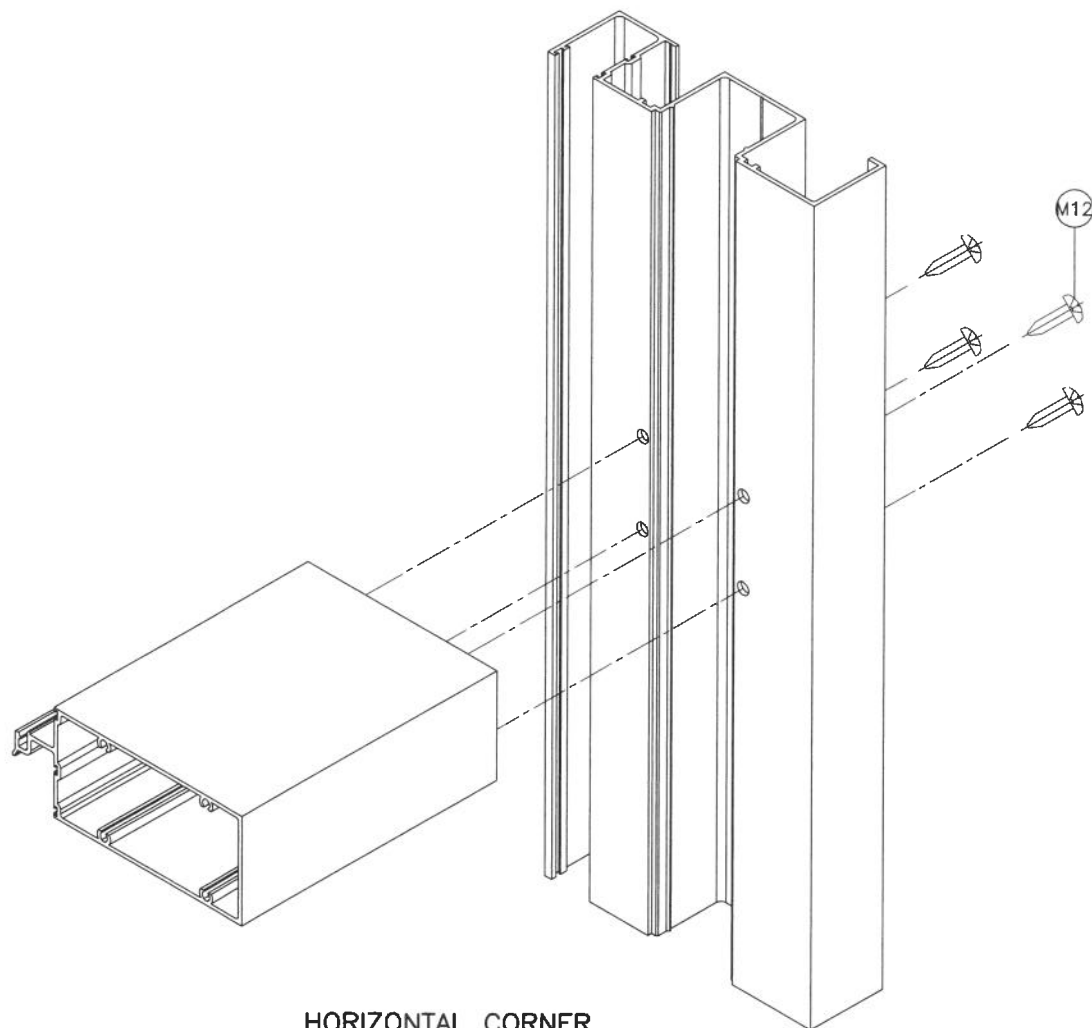
sheet 14 of 15



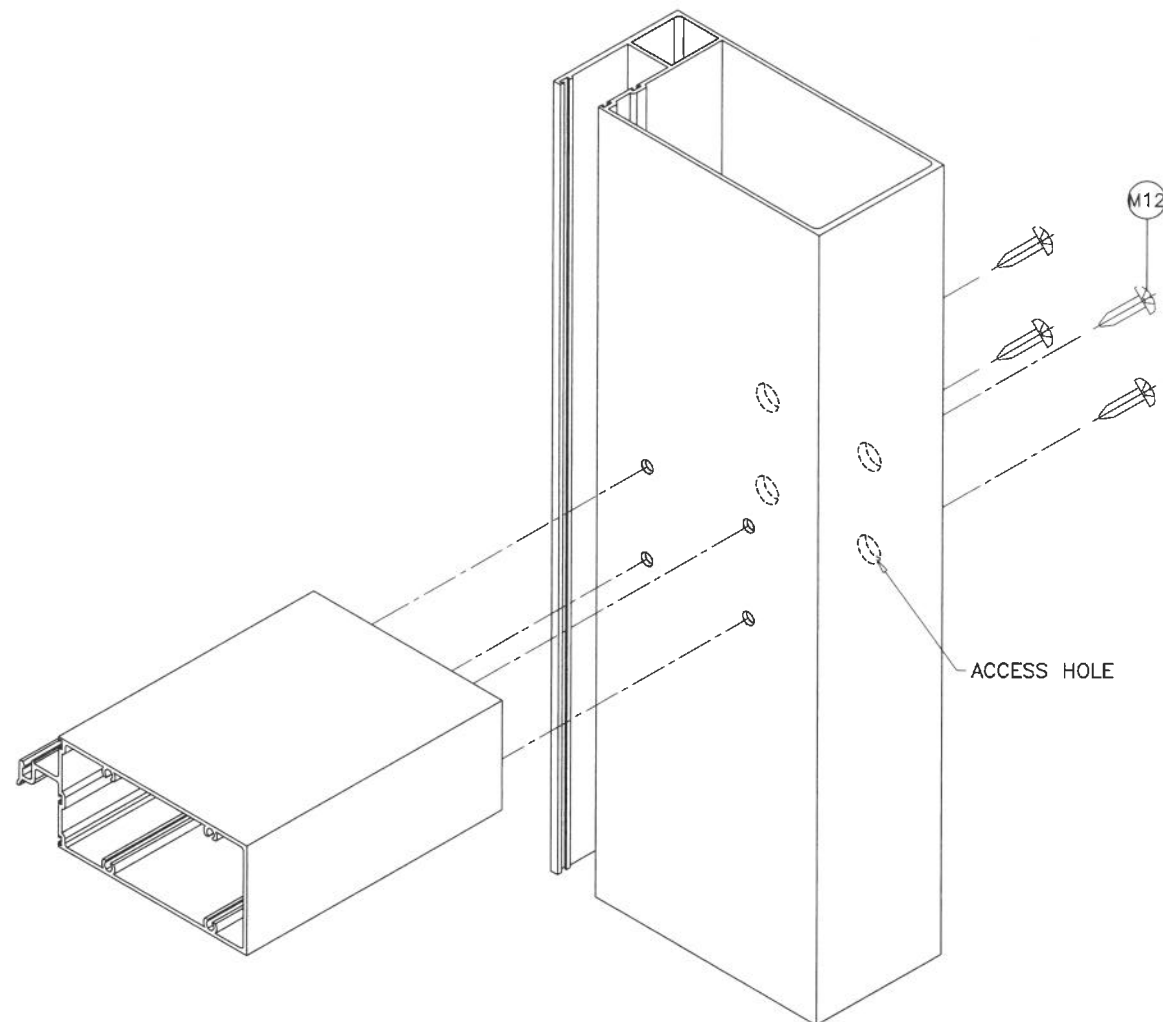
TOP & BOTTOM CORNERS



TOP & BOTTOM CORNERS



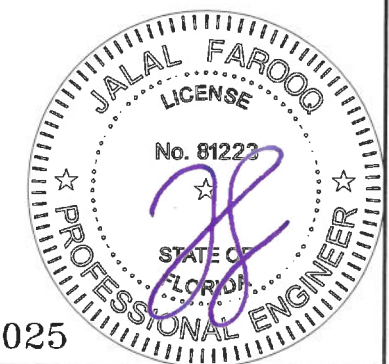
HORIZONTAL CORNER



HORIZONTAL CORNER

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