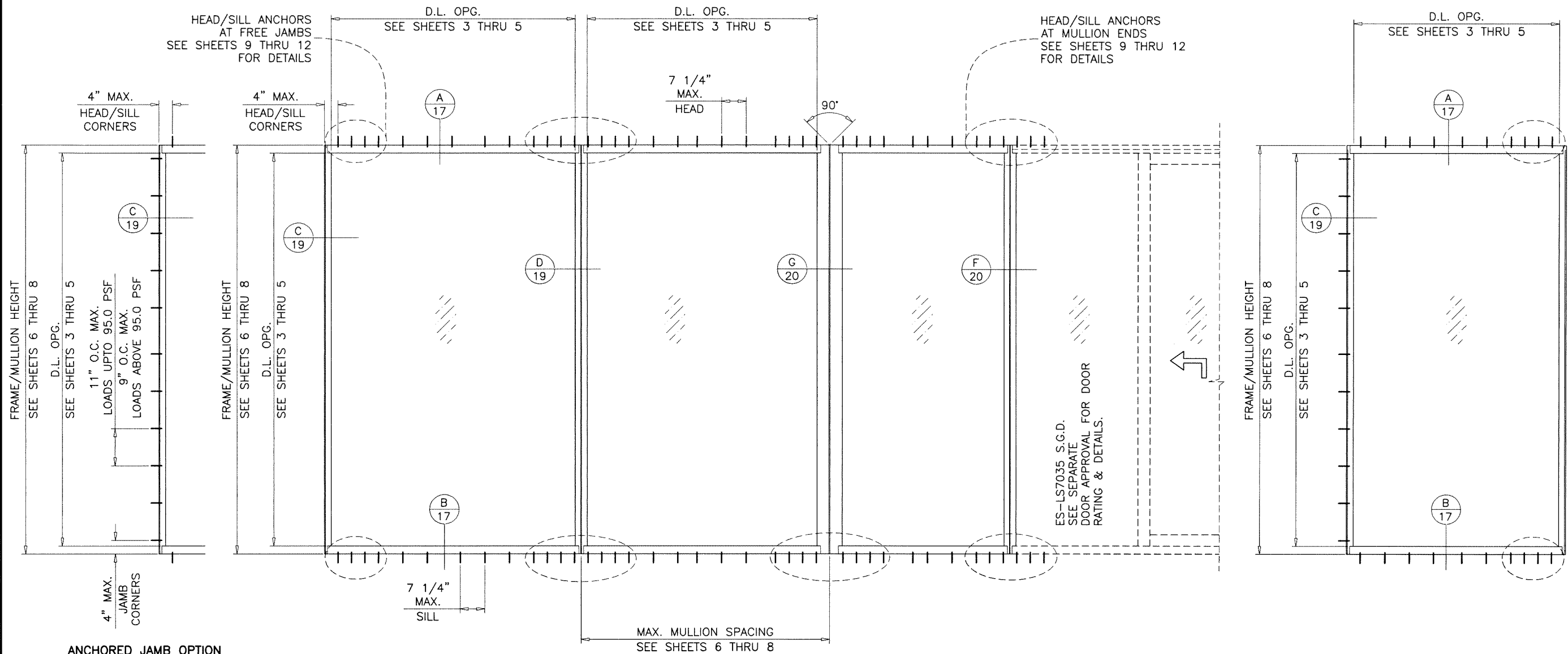




ES-LS7035
ALUMINUM WINDOW WALL SYSTEM

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) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

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.

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 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.

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 SHEETS 3 THRU 5 FOR GLASS DESIGN LOAD CAPACITY.
- STEP 3** CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEETS 6 THRU 8 THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.
- STEP 4** USING CHARTS ON SHEETS 9 THRU 16 SELECT ANCHOR OPTION WITH DESIGN LOAD CAPACITY MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2, 3 AND 4 THAT EXCEED THE DESIGN WIND PRESSURES DETERMINED THRU STEP 1 SHALL APPLY TO ENTIRE SYSTEM.
- STEP 6** FOR UNANCHORED JAMBS, USING SHEET 19, DETERMINE THE MIN. & MAX. GAP DIMENSIONS.
- STEP 7** WHEN USING THIS SYSTEM WITH DOORS, THE LOWER VALUE OF THE DESIGN PRESSURE RATING FOR THE SYSTEM AND THE DOOR SHALL APPLY.

NOTE:
GLASS CAPACITIES ARE **Sealed: 8/19/2025**
BASED ON ASTM E1300-09 (3 SEC. GUSTS).

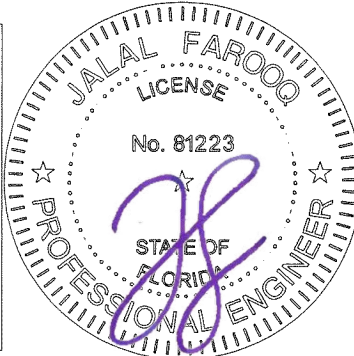
- A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- C- 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.

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1. SAFEGUARD REQUIREMENTS TO BE VERIFIED.

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

LARGE MISSILE IMPACT

FL #29515



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\19-22F-ES

ES-LS7035 ALUM WINDOW WALL SYS. (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	12.10.20		UPDATED TO 2020 FBC
B	02.03.23		NEW TESTS ADDED
C	09.27.23		UPDATED TO 2023 FBC
D	02.17.25		PRODUCT SERIES REVISED
E	06.20.25		GENERAL REVISION

date: 03-27-19

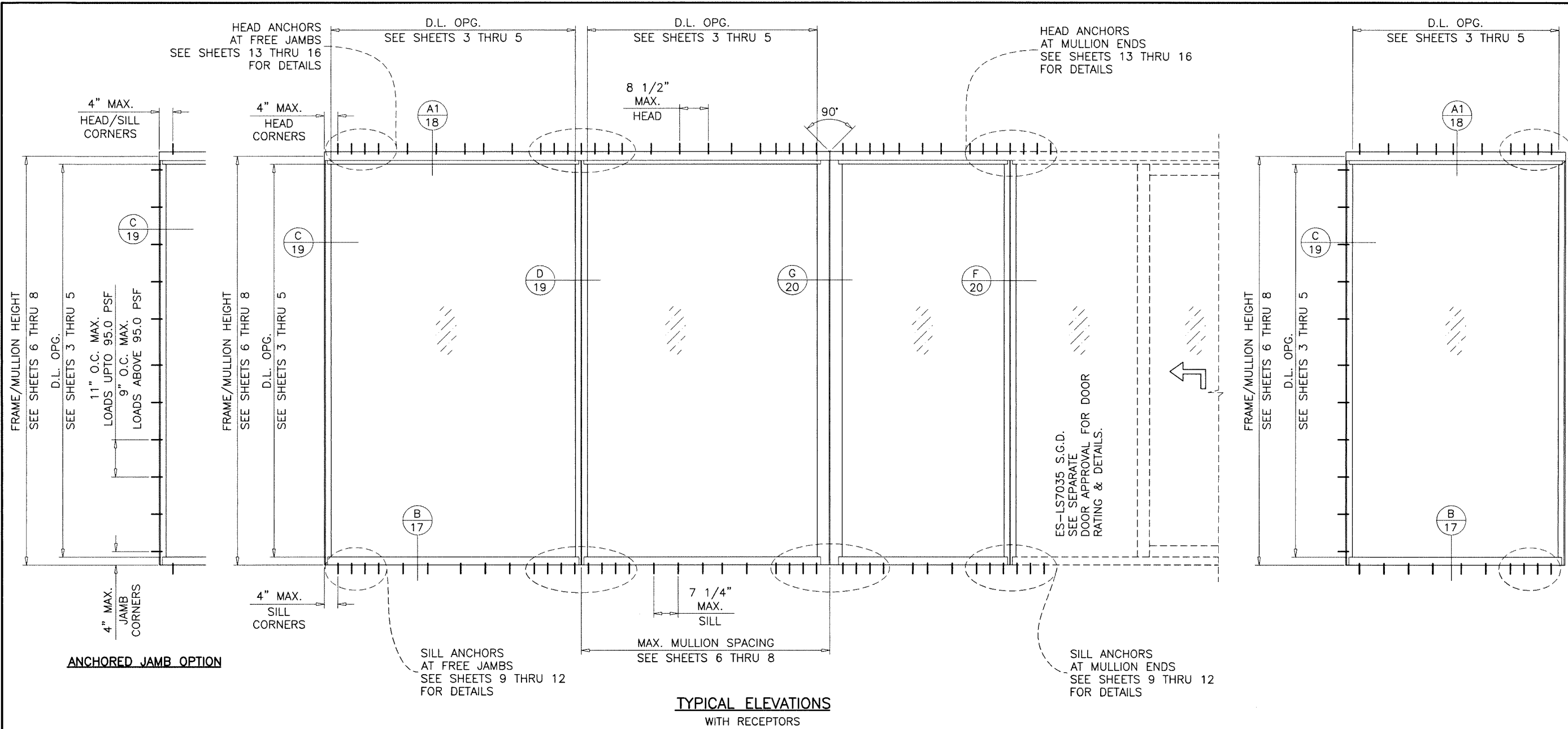
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dr. by: TARQ

chk. by:

drawing no.
19-22F

sheet **1** of **22**



ANCHORED JAMB OPTION

TYPICAL ELEVATIONS
WITH RECEPTORS

Sealed: 8/19/2025



FL #29515

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 \ 19-22F-ES

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revisions:	
no	date by description

date: 03-27-19

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dr. by: TARIQ

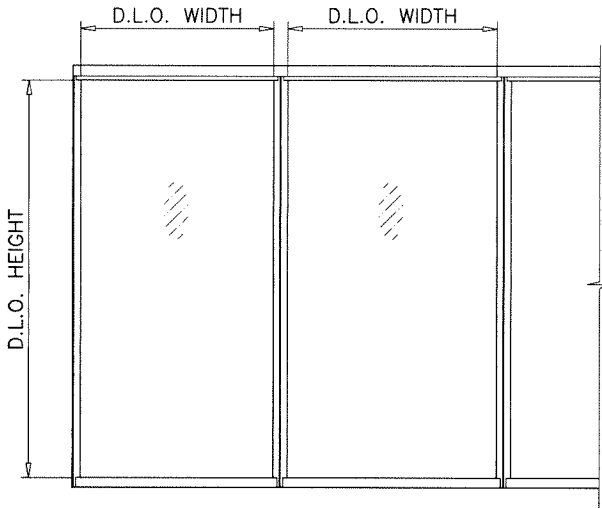
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drawing no.
19-22F

sheet 2 of 22

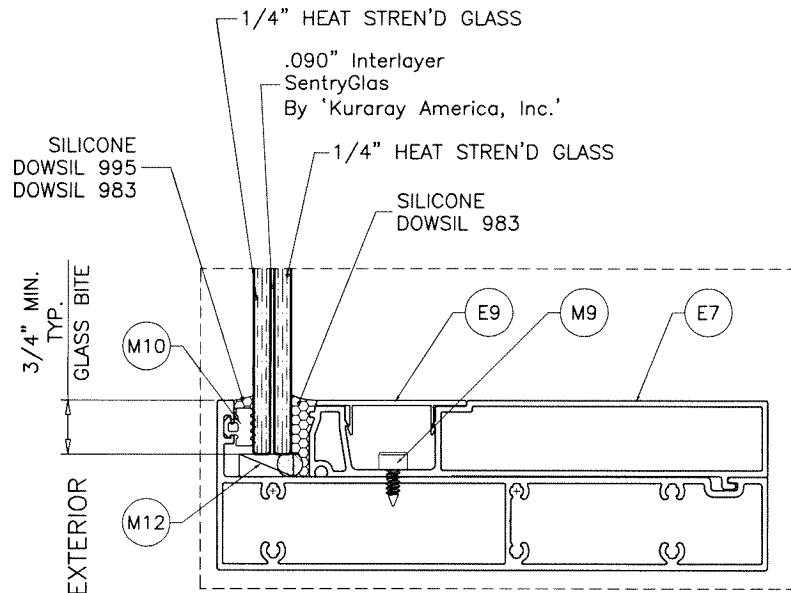
GLASS DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		GLASS TYPE 'A'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)
32-1/4"	103-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		120.0	120.0
56-1/4"		113.2	113.2
62-1/4"		102.9	102.9
64-1/4"		100.0	100.0
68-1/4"		94.4	94.4
74-1/4"		87.1	87.1
32-1/4"	115-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		117.9	117.9
56-1/4"		109.6	109.6
62-1/4"		102.9	102.9
64-1/4"		100.0	100.0
32-1/4"	119-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		116.8	116.8
56-1/4"		108.4	108.4
62-1/4"		101.8	101.8
64-1/4"		100.0	100.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

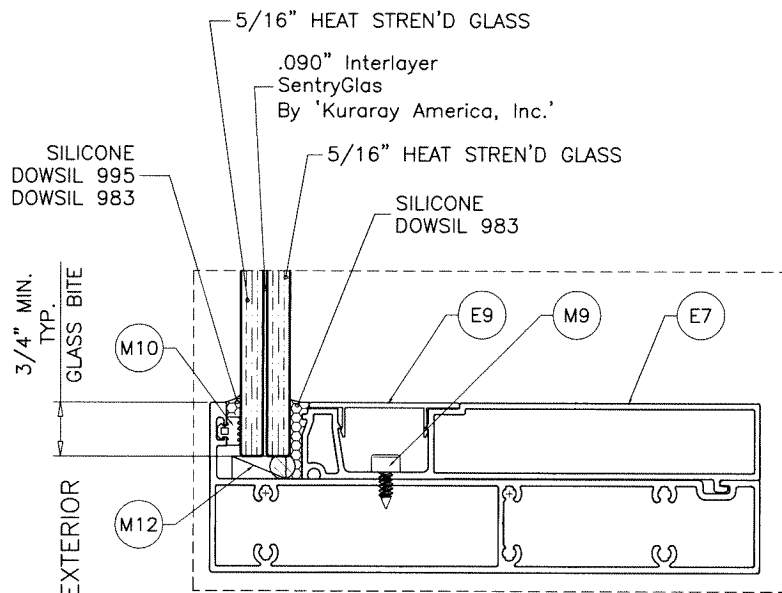


GLASS DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		GLASS TYPE 'AA'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)
32-1/4"	127-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		120.0	120.0
56-1/4"		120.0	120.0
62-1/4"		120.0	120.0
64-1/4"		120.0	120.0
68-1/4"		120.0	120.0
68-1/4"		119.9	119.9
74-1/4"		110.7	110.7
32-1/4"	139-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		120.0	120.0
56-1/4"		120.0	120.0
62-1/4"		120.0	120.0
64-1/4"		120.0	120.0
68-1/4"		120.0	120.0
68-1/4"		119.9	119.9
32-1/4"	151-1/4"	120.0	120.0
38-1/4"		120.0	120.0
44-1/4"		120.0	120.0
50-1/4"		120.0	120.0
56-1/4"		120.0	120.0
62-1/4"		120.0	120.0
64-1/4"		120.0	120.0
68-1/4"		120.0	120.0
68-1/4"		119.9	119.9
68-1/4"		120.0	120.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



GLASS TYPE 'A'
9/16" OVERALL LAM. GLASS

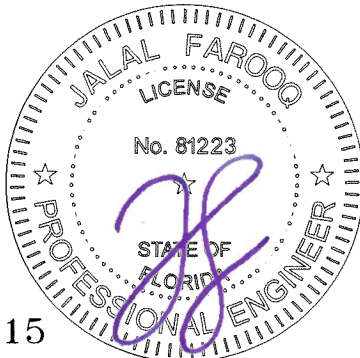


GLASS TYPE 'AA'
11/16" OVERALL LAM. GLASS

Sealed: 8/19/2025

FL #29515

GLASS
LAMINATED



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

revisions:
no date by description

date: 03-27-19
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

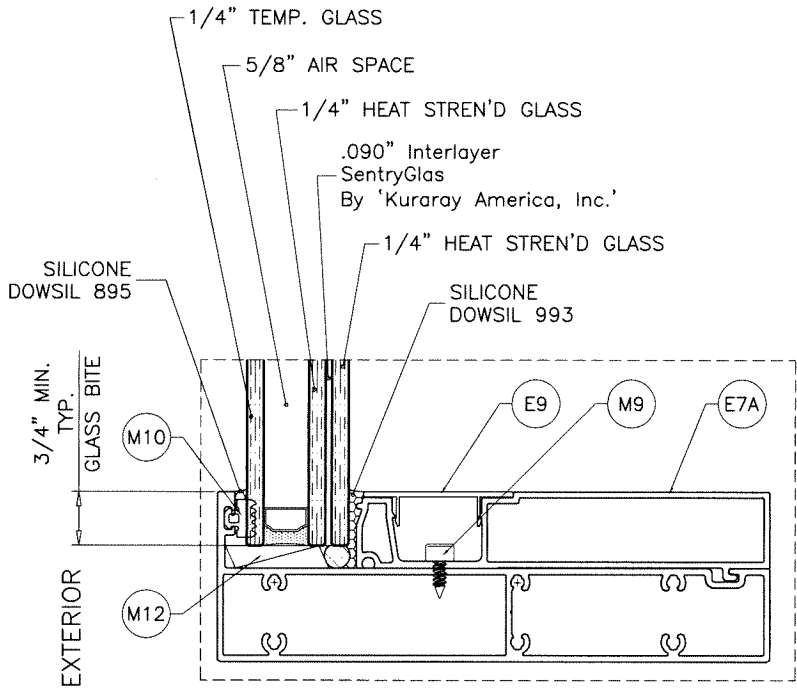
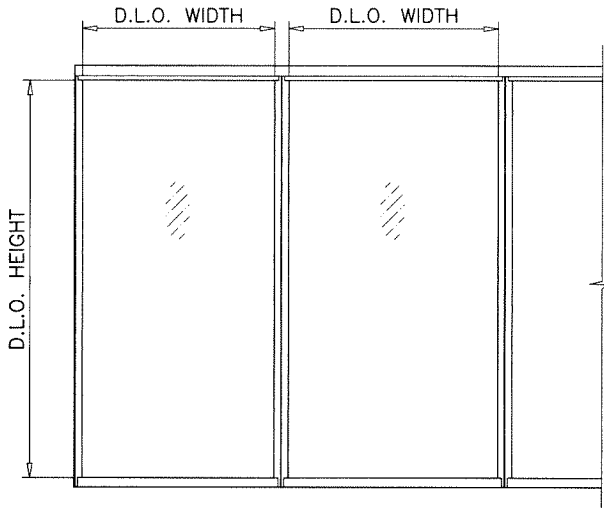
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19-22F
sheet **3** of **22**

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COMP-ANL \ 19-22F-ES

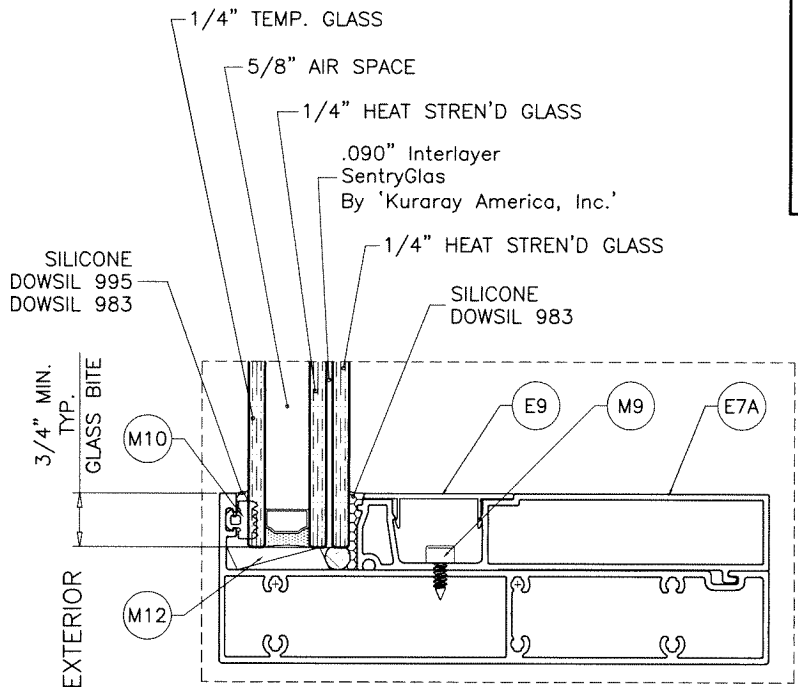
GLASS DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		GLASS TYPE 'B'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)
46"	96"	120.0	120.0
48"		115.4	115.4
50"		111.1	111.1
56"		98.0	98.0
62"		98.0	98.0
68"		98.0	98.0
74"		98.0	98.0
80"		98.0	98.0
86"		98.0	98.0
92"		98.0	98.0
46"	102"	120.0	120.0
48"		115.4	115.4
50"		111.1	111.1
56"		98.0	98.0
62"		98.0	98.0
68"		98.0	98.0
74"		98.0	98.0
80"		98.0	98.0
86"		98.0	98.0
92"		98.0	98.0
46"	108"	120.0	120.0
48"		115.4	115.4
50"		98.0	98.0
56"		98.0	98.0
62"		98.0	98.0
68"		98.0	98.0
74"		98.0	98.0
80"		98.0	98.0
86"		98.0	98.0
92"		98.0	98.0
46"	114"	120.0	120.0
48"		98.0	98.0
50"		98.0	98.0
56"		98.0	98.0
62"		98.0	98.0
68"		98.0	98.0
74"		98.0	98.0
80"		98.0	98.0
86"		98.0	98.0
92"		96.6	96.6
46"	116"	120.0	120.0
48"		98.0	98.0
50"		98.0	98.0
56"		98.0	98.0
62"		98.0	98.0
68"		98.0	98.0
74"		98.0	98.0
80"		98.0	98.0
86"		98.0	98.0
92"		95.3	95.3

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



GLASS TYPE 'B'
1-7/16" OVERALL INSUL. LAM. GLASS

5/8" 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



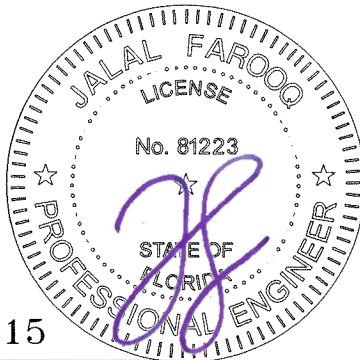
GLASS TYPE 'C'
1-7/16" OVERALL INSUL. LAM. GLASS

GLASS DESIGN LOAD CAPACITY - PSF			
NOMINAL DIMS.		GLASS TYPE 'C'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)
32-1/4"	127-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		94.4	94.4
74-1/4"		87.1	87.1
76-1/4"		85.0	85.0
80-1/4"		80.9	80.9
32-1/4"	139-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		92.3	92.3
74-1/4"		87.1	87.1
76-1/4"		85.0	85.0
32-1/4"	145-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		91.1	91.1
74-1/4"		86.4	86.4
76-1/4"		85.0	85.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

GLASS
INSULATED LAMINATED

Sealed: 8/19/2025



FL #29515

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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COMP-ANL\19-22F-ES

ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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

no	date	by	description

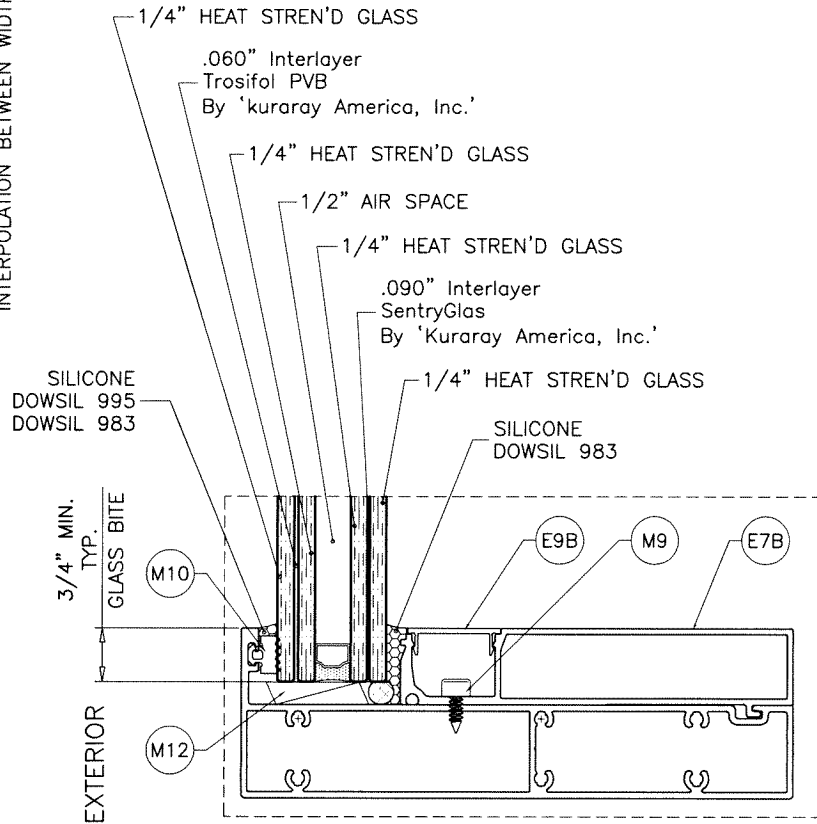
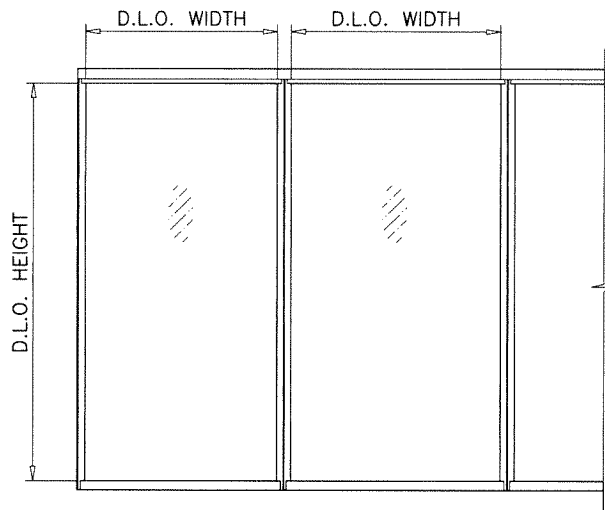
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dr. by: TARIQ
chk. by:

drawing no.
19-22F
sheet 4 of 22

GLASS DESIGN LOAD CAPACITY - PSF

NOMINAL DIMS.		GLASS TYPE 'E'	
D.L.O. WIDTH	D.L.O. HEIGHT	EXT. (+)	INT. (-)
32-1/4"	127-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		94.4	94.4
74-1/4"		87.2	87.2
76-1/4"		85.0	85.0
80-1/4"		81.0	81.0
32-1/4"	139-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		92.3	92.3
74-1/4"		87.2	87.2
76-1/4"		85.0	85.0
32-1/4"	145-1/4"	95.0	95.0
38-1/4"		95.0	95.0
44-1/4"		95.0	95.0
50-1/4"		95.0	95.0
56-1/4"		95.0	95.0
62-1/4"		95.0	95.0
68-1/4"		91.1	91.1
74-1/4"		86.4	86.4
76-1/4"		85.0	85.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



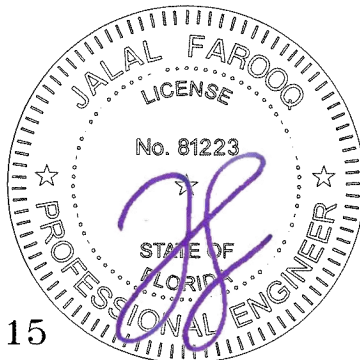
GLASS TYPE 'E'

1-1/2" OVERALL INSUL. LAM. GLASS

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

GLASS
DOUBLE LAMINATED

Sealed: 8/19/2025



FL #29515

afc

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
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COMP-ANL\19-22F-ES

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revisions:		date: 03-27-19		scale: 3/8" = 1"		dr. by: TARIQ		chk. by:	
no	date	no	date	no	date	no	date	no	date

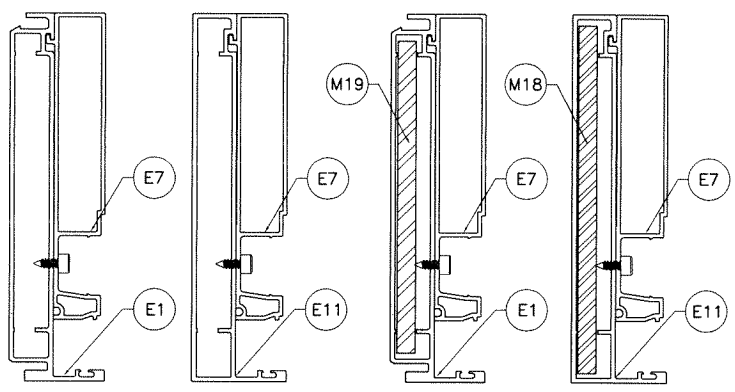
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19-22F

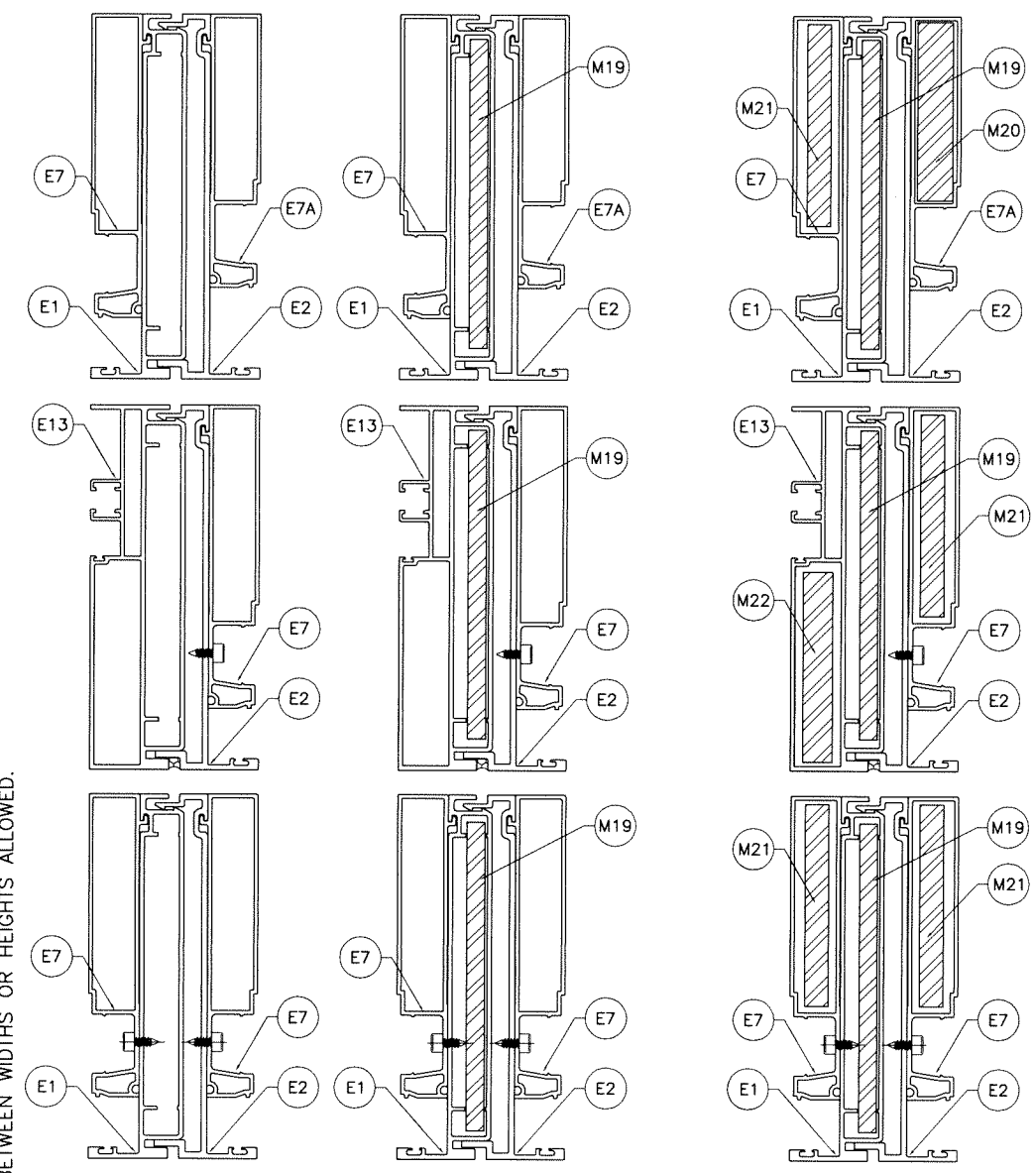
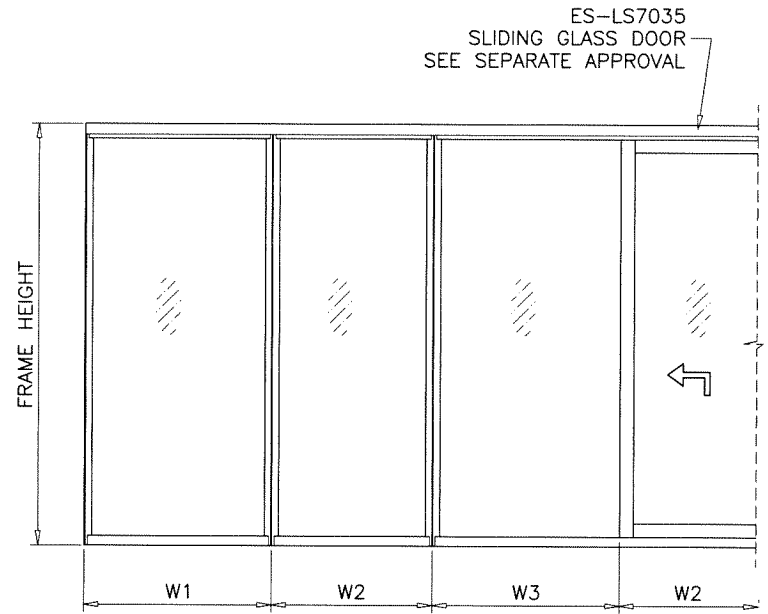
sheet 5 of 22

MULLION DESIGN LOAD CAPACITY - PSF LAMINATED GLASS											
NOMINAL DIMS.		JAMB 'J1'		JAMB 'J2'		MULLION 'M1'		MULLION 'M2'		MULLION 'M3'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	111.2	111.2	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	103.1	103.1	120.0	120.0	120.0	120.0
72"		115.9	115.9	120.0	120.0	96.6	96.6	120.0	120.0	120.0	120.0
78"		109.6	109.6	120.0	120.0	91.3	91.3	120.0	120.0	120.0	120.0
36"	124"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	112.4	112.4	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	102.7	102.7	120.0	120.0	120.0	120.0
66"		114.3	114.3	120.0	120.0	95.1	95.1	120.0	120.0	120.0	120.0
67-15/16"		111.8	111.8	120.0	120.0	92.9	92.9	120.0	120.0	120.0	120.0
72"	132"	106.9	106.9	120.0	120.0	88.9	88.9	120.0	120.0	120.0	120.0
78"		100.9	100.9	120.0	120.0	83.9	83.9	120.0	120.0	120.0	120.0
36"	144"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	107.7	107.7	120.0	120.0	120.0	120.0
54"		116.9	116.9	120.0	120.0	96.8	96.8	120.0	120.0	120.0	120.0
60"		106.6	106.6	120.0	120.0	88.4	88.4	120.0	120.0	120.0	120.0
66"		98.4	98.4	120.0	120.0	81.6	81.6	120.0	120.0	120.0	120.0
72"		91.8	91.8	120.0	120.0	76.1	76.1	120.0	120.0	120.0	120.0
78"	156"	86.4	86.4	120.0	120.0	71.6	71.6	120.0	120.0	120.0	120.0
36"		120.0	120.0	120.0	120.0	110.8	110.8	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	95.7	95.7	120.0	120.0	120.0	120.0
48"		106.4	106.4	120.0	120.0	84.4	84.4	120.0	120.0	120.0	120.0
54"		95.5	95.5	120.0	120.0	75.8	75.8	120.0	120.0	120.0	120.0
60"		87.0	87.0	120.0	120.0	69.0	69.0	120.0	120.0	120.0	120.0
66"		80.1	80.1	120.0	120.0	63.5	63.5	112.0	112.0	120.0	120.0
72"	168"	74.4	74.4	120.0	120.0	59.1	59.1	104.2	104.2	120.0	120.0
36"		116.5	116.5	120.0	120.0	86.9	86.9	120.0	120.0	120.0	120.0
42"		100.5	100.5	120.0	120.0	75.0	75.0	120.0	120.0	120.0	120.0
48"		88.6	88.6	120.0	120.0	66.1	66.1	116.5	116.5	120.0	120.0
54"	180"	79.4	79.4	120.0	120.0	59.2	59.2	104.4	104.4	120.0	120.0
60"		72.1	72.1	120.0	120.0	53.8	53.8	94.9	94.9	120.0	120.0
66"		66.3	66.3	120.0	120.0	49.4	49.4	87.2	87.2	120.0	120.0
71-15/16"	192"	61.5	61.5	120.0	120.0	45.9	45.9	80.9	80.9	113.9	113.9

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



JAMB 'J1'		JAMB 'J2'	
Ix IN^4	Sx IN^3	Ix IN^4	Sx IN^3
17.367	4.198	17.367	4.198
ALUMINUM		ALUMINUM	
STEEL		STEEL	
TOTAL		TOTAL	
Ix ALUM + Ix STL X 2.9		Ix ALUM + Ix STL X 2.9	



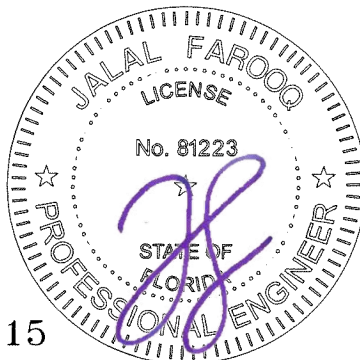
MULLION 'M1'		MULLION 'M2'		MULLION 'M3'	
Ix IN^4	Sx IN^3	Ix IN^4	Sx IN^3	Ix IN^4	Sx IN^3
32.286	7.538	32.286	7.538	32.286	7.538
ALUMINUM		ALUMINUM		ALUMINUM	
STEEL		STEEL		STEEL	
TOTAL		TOTAL		TOTAL	
Ix ALUM + Ix STL X 2.9		Ix ALUM + Ix STL X 2.9		Ix ALUM + Ix STL X 2.9	

WIDTH (W) = W1
AT JAMB

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

Sealed: 8/19/2025

MULLIONS
LAMINATED GLASS



FL #29515

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

ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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

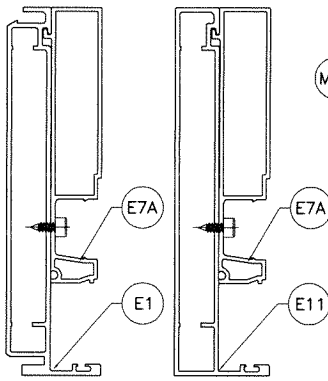
revisions:
no date by description

date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:

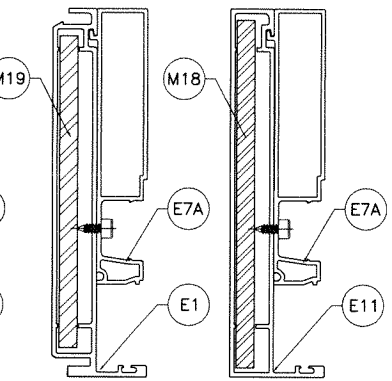
drawing no.
19-22F
sheet 6 of 22

MULLION DESIGN LOAD CAPACITY - PSF INSULATED LAM. GLASS											
NOMINAL DIMS.		JAMB 'J1A'		JAMB 'J2A'		MULLION 'M1A'		MULLION 'M2A'		MULLION 'M3A'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36"	96"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
78"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
84"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
36"	108"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
78"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
84"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
36"	120"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	92.9	92.9	95.0	95.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	90.2	90.2	95.0	95.0	95.0	95.0
78"		95.0	95.0	95.0	95.0	85.3	85.3	95.0	95.0	95.0	95.0
84"		95.0	95.0	95.0	95.0	81.3	81.3	95.0	95.0	95.0	95.0
36"	132"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	90.5	90.5	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	82.6	82.6	95.0	95.0	95.0	95.0
66"		92.1	92.1	95.0	95.0	76.2	76.2	95.0	95.0	95.0	95.0
72"		85.9	85.9	95.0	95.0	71.1	71.1	95.0	95.0	95.0	95.0
78"		80.9	80.9	95.0	95.0	66.9	66.9	93.9	93.9	95.0	95.0
84"		76.7	76.7	95.0	95.0	63.5	63.5	89.0	89.0	95.0	95.0
36"	144"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	90.5	90.5	95.0	95.0	95.0	95.0
48"		93.8	93.8	95.0	95.0	80.0	80.0	95.0	95.0	95.0	95.0
54"		84.4	84.4	95.0	95.0	72.0	72.0	95.0	95.0	95.0	95.0
60"		77.0	77.0	95.0	95.0	65.7	65.7	95.0	95.0	95.0	95.0
66"		71.1	71.1	95.0	95.0	60.6	60.6	88.6	88.6	95.0	95.0
72"		66.3	66.3	95.0	95.0	56.6	56.6	82.4	82.4	95.0	95.0
78"		62.4	62.4	95.0	95.0	53.2	53.2	77.2	77.2	95.0	95.0
79-15/16"		61.3	61.3	95.0	95.0	52.2	52.2	75.8	75.8	95.0	95.0
36"	150"	95.0	95.0	95.0	95.0	92.4	92.4	95.0	95.0	95.0	95.0
42"		93.6	93.6	95.0	95.0	79.8	79.8	95.0	95.0	95.0	95.0
48"		82.7	82.7	95.0	95.0	70.5	70.5	95.0	95.0	95.0	95.0
54"		74.3	74.3	95.0	95.0	63.4	63.4	95.0	95.0	95.0	95.0
60"		67.8	67.8	95.0	95.0	57.8	57.8	88.2	88.2	95.0	95.0
66"		62.5	62.5	95.0	95.0	53.3	53.3	81.2	81.2	95.0	95.0
72"		58.2	58.2	95.0	95.0	49.6	49.6	75.4	75.4	95.0	95.0
78"		54.6	54.6	95.0	95.0	46.6	46.6	70.6	70.6	95.0	95.0
79-15/16"		53.6	53.6	85.0	85.0	45.7	45.7	69.2	69.2	85.0	85.0

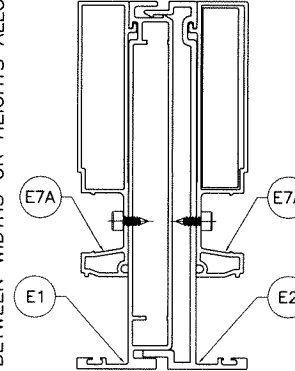
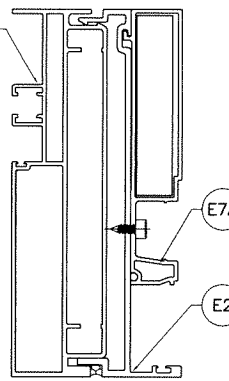
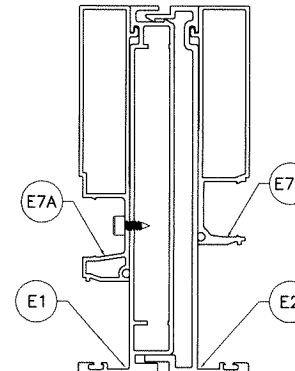
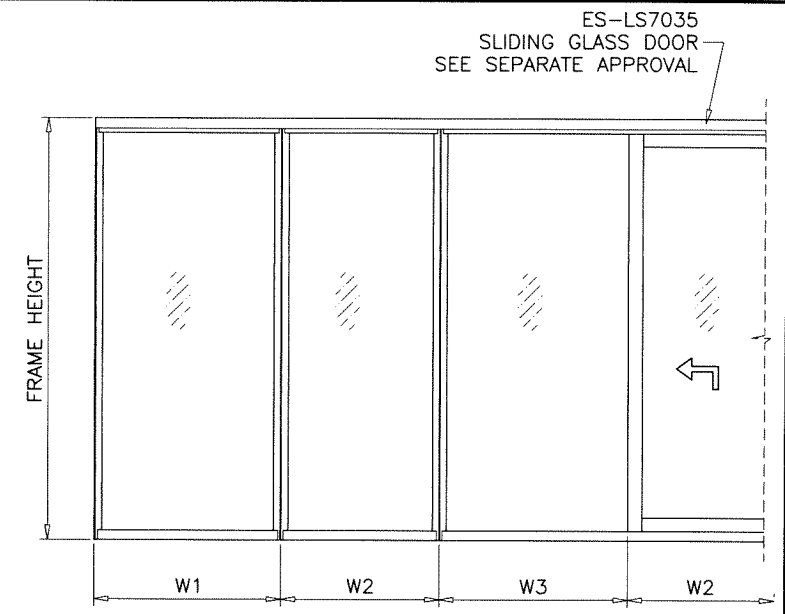
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



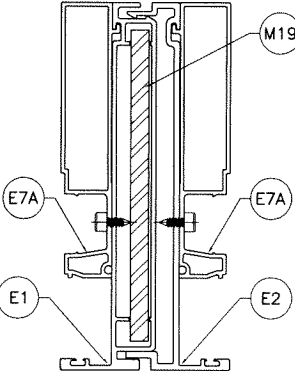
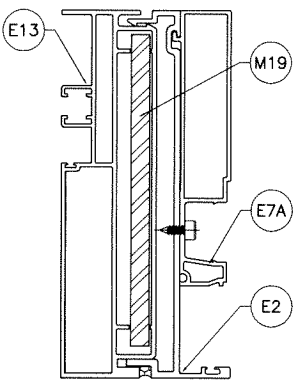
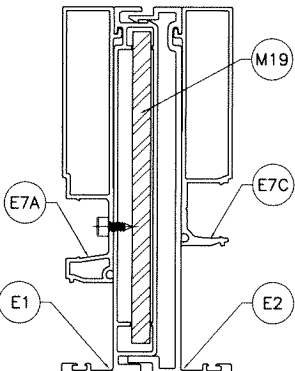
JAMB 'J1A'	
Ix IN^4	Sx IN^3
16.036	3.882



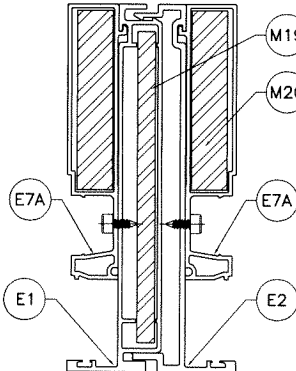
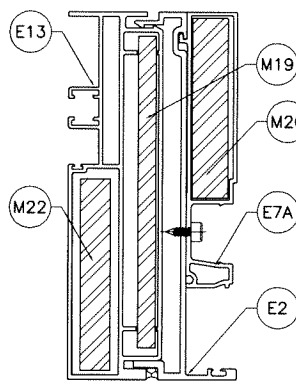
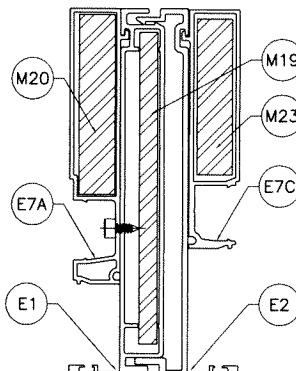
JAMB 'J2A'	
Ix IN^4	Sx IN^3
ALUMINUM	16.036
STEEL	8.582
TOTAL	40.677
Ix ALUM + Ix STL X 2.9	



MULLION 'M1A'	
Ix IN^4	Sx IN^3
29.707	6.936



MULLION 'M2A'	
Ix IN^4	Sx IN^3
ALUMINUM	29.707
STEEL	8.582
TOTAL	54.348
Ix ALUM + Ix STL X 2.9	



MULLION 'M3A'	
Ix IN^4	Sx IN^3
ALUMINUM	29.707
STEEL	14.022
TOTAL	69.968
Ix ALUM + Ix STL X 2.9	

WIDTH (W) = W1
AT JAMB

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

Sealed: 8/19/2025

MULLIONS
INSUL. LAMINATED GLASS



FL #29515

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\19-22F-ES

ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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

revisions:

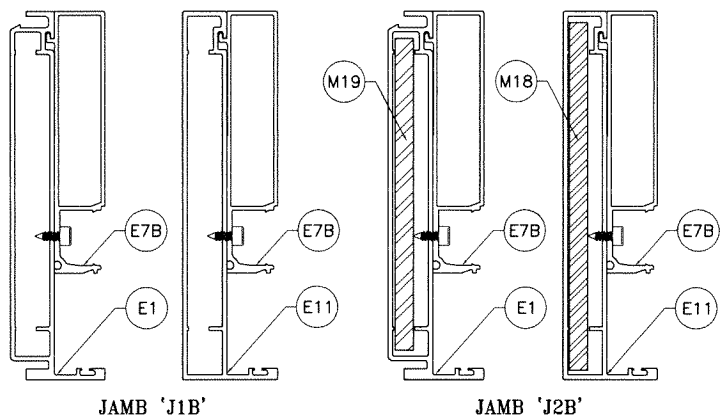
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date: 03-27-19 scale: - dr. by: TARIQ chk. by:

drawing no. 19-22F sheet 7 of 22

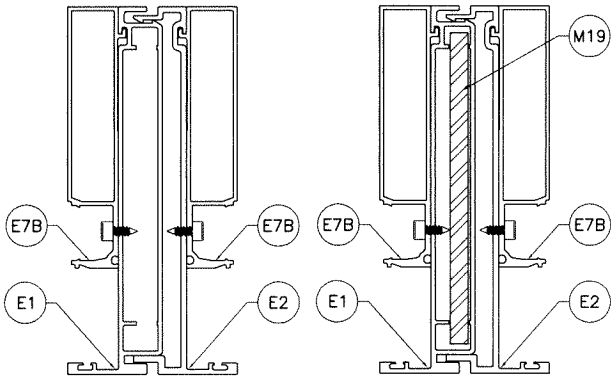
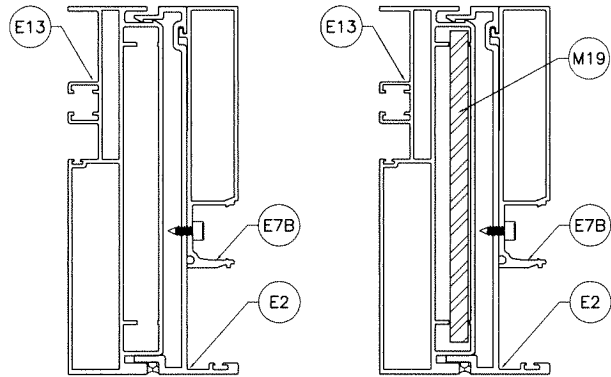
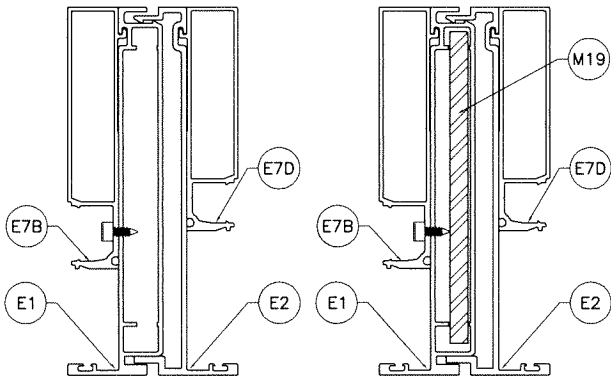
MULLION DESIGN LOAD CAPACITY - PSF DOUBLE LAM. GLASS									
NOMINAL DIMS.		JAMB 'J1B'		JAMB 'J2B'		MULLION 'M1B'		MULLION 'M2B'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36"	96"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
78"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
84"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
36"	108"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
78"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
84"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
36"	120"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
60"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
66"		95.0	95.0	95.0	95.0	94.0	94.0	95.0	95.0
72"		95.0	95.0	95.0	95.0	88.1	88.1	95.0	95.0
78"		95.0	95.0	95.0	95.0	83.3	83.3	95.0	95.0
84"		95.0	95.0	95.0	95.0	79.5	79.5	95.0	95.0
36"	132"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
54"		95.0	95.0	95.0	95.0	88.5	88.5	95.0	95.0
60"		95.0	95.0	95.0	95.0	80.7	80.7	95.0	95.0
66"		90.0	90.0	95.0	95.0	74.5	74.5	95.0	95.0
72"		83.9	83.9	95.0	95.0	69.5	69.5	95.0	95.0
78"		79.0	79.0	95.0	95.0	65.4	65.4	95.0	95.0
84"		74.9	74.9	95.0	95.0	62.1	62.1	95.0	95.0
36"	144"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	91.0	91.0	95.0	95.0
48"		95.0	95.0	95.0	95.0	80.3	80.3	95.0	95.0
54"		87.4	87.4	95.0	95.0	72.1	72.1	95.0	95.0
60"		79.6	79.6	95.0	95.0	65.6	65.6	95.0	95.0
66"		73.3	73.3	95.0	95.0	60.4	60.4	95.0	95.0
72"		68.1	68.1	95.0	95.0	56.1	56.1	95.0	95.0
78"		63.9	63.9	95.0	95.0	52.7	52.7	95.0	95.0
80"		62.6	62.6	95.0	95.0	51.6	51.6	94.0	94.0
36"	150"	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
42"		95.0	95.0	95.0	95.0	82.2	82.2	95.0	95.0
48"		88.7	88.7	95.0	95.0	72.5	72.5	95.0	95.0
54"		79.6	79.6	95.0	95.0	65.1	65.1	95.0	95.0
60"		72.4	72.4	95.0	95.0	59.2	59.2	95.0	95.0
66"		66.6	66.6	95.0	95.0	54.4	54.4	95.0	95.0
72"		61.8	61.8	95.0	95.0	50.5	50.5	93.7	93.7
78"		57.9	57.9	95.0	95.0	47.3	47.3	87.7	87.7
80"		56.7	56.7	85.0	85.0	46.4	46.4	85.0	85.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



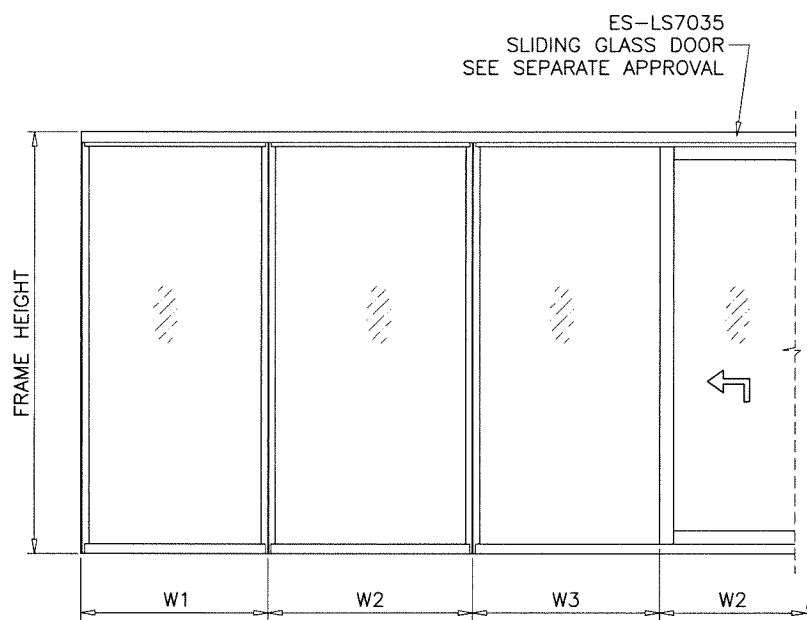
Ix IN^4	Sx IN^3
15.572	3.772

ALUMINUM	Ix IN^4	Sx IN^3
STEEL	15.572	3.772
TOTAL	8.582	2.641
Ix ALUM + Ix STL X 2.9	40.213	



Ix IN^4	Sx IN^3
28.863	6.739

ALUMINUM	Ix IN^4	Sx IN^3
STEEL	28.863	6.739
TOTAL	8.582	2.641
Ix ALUM + Ix STL X 2.9	53.504	

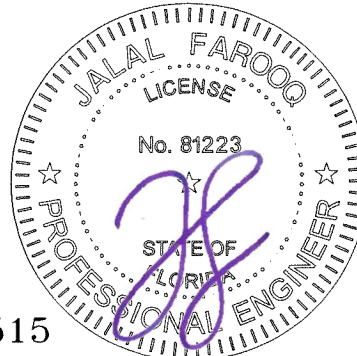


WIDTH (W) = W1
AT JAMB

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

Sealed: 8/19/2025

MULLIONS
DOUBLE LAMINATED GLASS



FL #29515

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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revisions:
no date by description

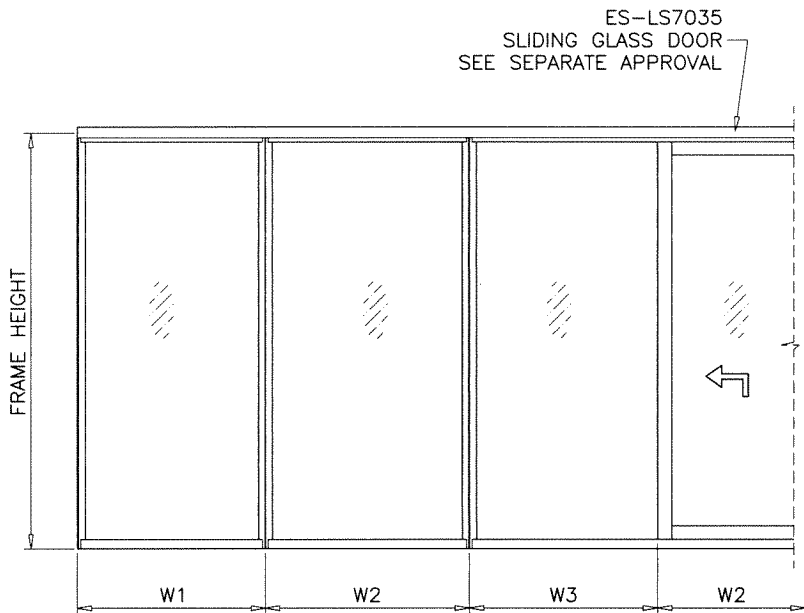
date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:

drawing no.
19-22F
sheet 8 of 22

COMP-ANL\19-22F-ES

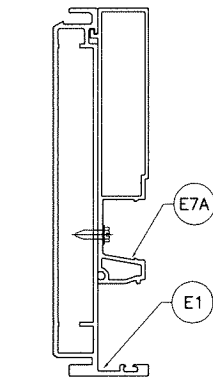
MULLION DESIGN LOAD CAPACITY - PSF					
NOMINAL DIMS.		JAMB 'J1C' MULL 'M1C'		JAMB 'J1C' MULL 'MC'	
WIDTH (W)	FRAME HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
48"	100-11/16"	98.0	98.0	120.0	120.0
54"		98.0	98.0	120.0	120.0
60"		98.0	98.0	98.0	98.0
66"		98.0	98.0	98.0	98.0
72"		98.0	98.0	98.0	98.0
78"		98.0	98.0	98.0	98.0
84"		98.0	98.0	98.0	98.0
90"		98.0	98.0	98.0	98.0
96"		98.0	98.0	98.0	98.0
48"	106-11/16"	98.0	98.0	120.0	120.0
54"		98.0	98.0	120.0	120.0
60"		98.0	98.0	98.0	98.0
66"		98.0	98.0	98.0	98.0
72"		98.0	98.0	98.0	98.0
78"		98.0	98.0	98.0	98.0
84"		98.0	98.0	98.0	98.0
90"		98.0	98.0	98.0	98.0
96"		98.0	98.0	98.0	98.0
48"	112-11/16"	98.0	98.0	120.0	120.0
52"		98.0	98.0	120.0	120.0
54"		98.0	98.0	98.0	98.0
60"		98.0	98.0	98.0	98.0
66"		98.0	98.0	98.0	98.0
72"		98.0	98.0	98.0	98.0
78"		98.0	98.0	98.0	98.0
84"		98.0	98.0	98.0	98.0
90"		98.0	98.0	98.0	98.0
96"		98.0	98.0	98.0	98.0
48"	118-11/16"	98.0	98.0	120.0	120.0
50"		98.0	98.0	120.0	120.0
54"		98.0	98.0	98.0	98.0
60"		98.0	98.0	98.0	98.0
66"		98.0	98.0	98.0	98.0
72"		98.0	98.0	98.0	98.0
78"		98.0	98.0	98.0	98.0
84"		98.0	98.0	98.0	98.0
90"		98.0	98.0	98.0	98.0
96"		98.0	98.0	98.0	98.0
48"	120-11/16"	98.0	98.0	120.0	120.0
50"		98.0	98.0	120.0	120.0
54"		98.0	98.0	98.0	98.0
60"		98.0	98.0	98.0	98.0
66"		98.0	98.0	98.0	98.0
72"		98.0	98.0	98.0	98.0
78"		98.0	98.0	98.0	98.0
84"		98.0	98.0	98.0	98.0
90"		97.1	97.1	97.1	97.1
96"		94.0	94.0	94.0	94.0
48"	50-3/16"	78.0	78.0	-	-
50-3/16"		78.0	78.0	-	-

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



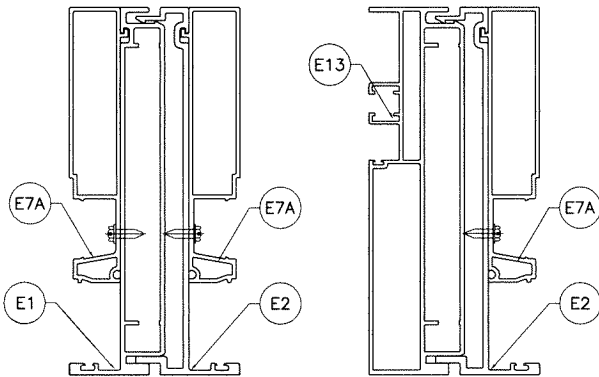
WIDTH (W) = W1
AT JAMB

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



JAMB 'J1C'

Ix IN^4	Sx IN^3
16.3632	3.8643



MULLION 'M1C'

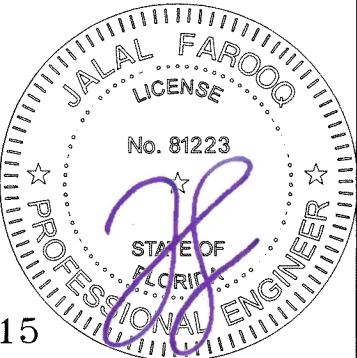
Ix IN^4	Sx IN^3
30.9448	7.2321

MULLION 'MC'

Ix IN^4	Sx IN^3
53.6877	9.4212

MULLIONS
INSUL. LAM. GLASS

Sealed: 8/19/2025



FL #29515

AL-FAROOQ CORPORATION
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revisions:
no. date by description

date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:

drawing no.
19-22F
sheet **8.1** of **22**

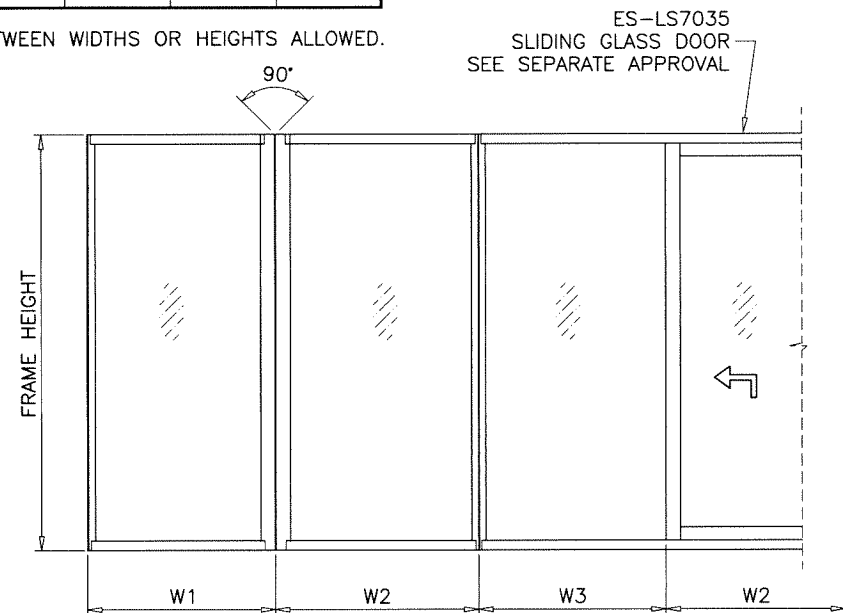
afc

COMP-ANL \ 19-22F-ES

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(-)									
		ANCHOR TYPE 'A'							
NOMINAL DIMS.		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	A3	A4	A3	A4	A3	A4	A3	A4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	119.7	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	116.6	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	114.8	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	114.2	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	116.6	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	108.2	120.0
60"		120.0	120.0	120.0	120.0	119.8	120.0	101.8	120.0
66"		120.0	120.0	120.0	120.0	114.1	120.0	96.9	120.0
72"		120.0	120.0	120.0	120.0	109.8	120.0	93.3	120.0
78"		120.0	120.0	120.0	120.0	106.7	120.0	90.6	120.0
84"		120.0	120.0	120.0	120.0	104.6	120.0	88.8	118.5
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	110.3	120.0
48"		120.0	120.0	120.0	120.0	117.6	120.0	99.9	120.0
54"		120.0	120.0	120.0	120.0	108.4	120.0	92.1	120.0
60"		120.0	120.0	120.0	120.0	101.4	120.0	86.1	114.8
66"		120.0	120.0	116.4	120.0	95.8	120.0	81.4	108.5
72"		120.0	120.0	111.1	120.0	91.5	120.0	77.7	103.6
78"		120.0	120.0	107.0	120.0	88.1	117.5	74.9	99.8
84"		120.0	120.0	103.9	120.0	85.6	114.1	72.7	96.9
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	109.7	120.0
42"		120.0	120.0	120.0	120.0	114.1	120.0	96.9	120.0
48"		120.0	120.0	120.0	120.0	102.9	120.0	87.5	116.6
54"		120.0	120.0	114.7	120.0	94.5	120.0	80.2	107.0
60"		120.0	120.0	106.7	120.0	87.8	117.1	74.6	99.5
66"		120.0	120.0	100.3	120.0	82.6	110.1	70.2	93.6
72"		115.3	120.0	95.3	120.0	78.4	104.6	66.6	88.8
78"		110.4	120.0	91.2	120.0	75.1	100.1	63.8	85.0
84"		106.5	120.0	87.9	117.2	72.4	96.5	61.5	82.0
36"	132"	120.0	120.0	120.0	120.0	115.6	120.0	98.2	120.0
42"		120.0	120.0	120.0	120.0	101.7	120.0	86.4	115.2
48"		120.0	120.0	111.1	120.0	91.5	120.0	77.7	103.6
54"		120.0	120.0	101.6	120.0	83.7	111.5	71.1	94.8
60"		114.0	120.0	94.1	120.0	77.5	103.3	65.8	87.8
66"		106.8	120.0	88.2	117.6	72.6	96.8	61.7	82.2
72"		100.9	120.0	83.4	111.1	68.6	91.5	58.3	77.7
78"		96.2	120.0	79.4	105.9	65.4	87.2	55.6	74.1
84"		92.3	120.0	76.2	101.6	62.7	83.7	53.3	71.1
36"	144"	120.0	120.0	120.0	120.0	104.6	120.0	88.8	118.5
42"		120.0	120.0	111.5	120.0	91.8	120.0	78.0	104.0
48"		120.0	120.0	100.0	120.0	82.4	109.8	70.0	93.3
54"		110.4	120.0	91.2	120.0	75.1	100.1	63.8	85.0
60"		102.0	120.0	84.2	112.3	69.3	92.5	58.9	78.6
66"		95.2	120.0	78.6	104.9	64.7	86.3	55.0	73.3
72"		89.7	119.6	74.1	98.8	61.0	81.3	51.8	69.1
78"		85.2	113.6	70.3	93.8	57.9	77.2	49.2	65.6
80"		83.8	111.8	69.2	92.3	57.0	76.0	48.4	64.6

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(-)									
		ANCHOR TYPE 'A'							
NOMINAL DIMS.		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	A3	A4	A3	A4	A3	A4	A3	A4
36"	150"	120.0	120.0	120.0	120.0	99.8	120.0	84.8	113.1
42"		120.0	120.0	106.3	120.0	87.5	116.7	74.4	99.2
48"		115.3	120.0	95.3	120.0	78.4	104.6	66.6	88.8
54"		105.0	120.0	86.7	115.7	71.4	95.2	60.7	80.9
60"		96.9	120.0	80.0	106.7	65.9	87.8	56.0	74.6
66"		90.3	120.0	74.6	99.5	61.4	81.9	52.2	69.6
72"		85.0	113.3	70.2	93.6	57.8	77.1	49.1	65.5
78"		80.6	107.4	66.5	88.7	54.8	73.0	46.5	62.1
80"		79.3	105.7	65.5	87.3	53.9	71.9	45.8	61.1
36"	156"	120.0	120.0	116.0	120.0	95.5	120.0	81.1	108.2
42"		120.0	120.0	101.6	120.0	83.7	111.5	71.1	94.8
48"		110.1	120.0	90.9	120.0	74.9	99.8	63.6	84.8
54"		100.1	120.0	82.7	110.3	68.1	90.8	57.8	77.1
60"		92.3	120.0	76.2	101.6	62.7	83.7	53.3	71.1
66"		85.9	114.6	71.0	94.6	58.4	77.9	49.6	66.2
71-15/16"		80.8	107.7	66.7	89.0	54.9	73.2	46.7	62.2

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



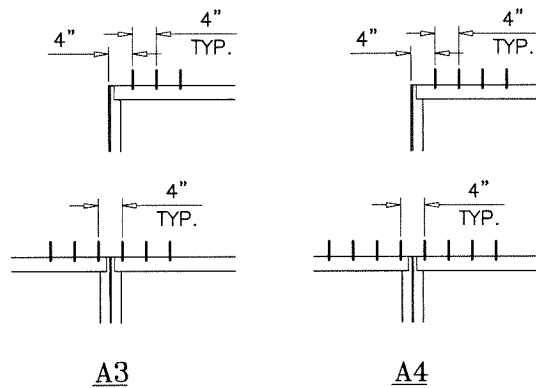
WIDTH (W) = W1
AT JAMB

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

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

HEAD/SILL ANCHORS
WITHOUT RECEPTORS

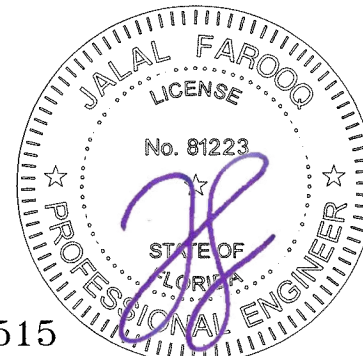
Sealed: 8/19/2025



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB & MULLION
A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.



FL #29515

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revisions:

no	date	by	description

date: 03-27-19 scale: - dr. by: TARIQ chk. by:

drawing no. **19-22F**

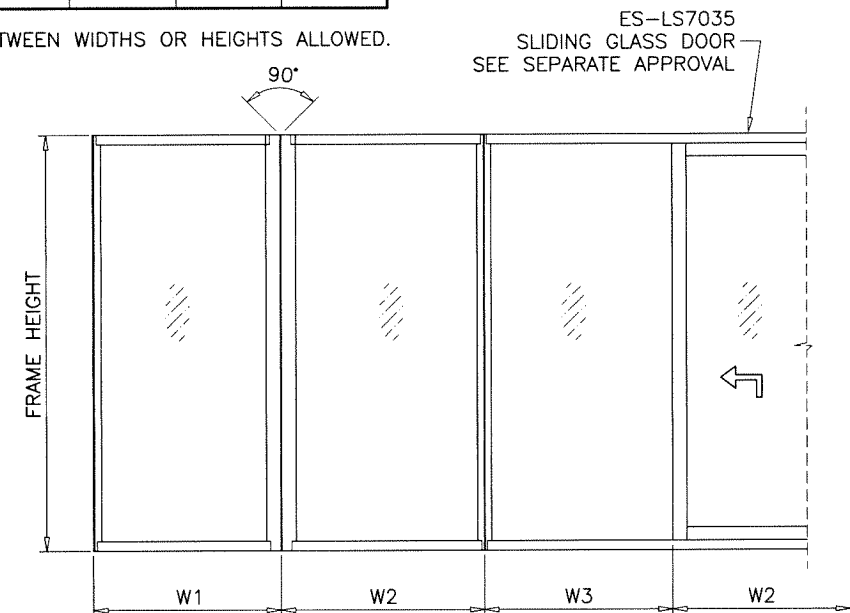
sheet **9** of **22**

COMP-ANL 19-22F-ES

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(–)									
		ANCHOR TYPE 'B'							
NOMINAL DIMS.		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	B3	B4	B3	B4	B3	B4	B3	B4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	115.6	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	109.9	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	105.8	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	103.0	120.0
78"		120.0	120.0	120.0	120.0	118.5	120.0	101.4	120.0
84"		120.0	120.0	120.0	120.0	117.9	120.0	100.9	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	113.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	103.0	120.0
54"		120.0	120.0	120.0	120.0	111.7	120.0	95.5	120.0
60"		120.0	120.0	120.0	120.0	105.1	120.0	89.9	119.9
66"		120.0	120.0	120.0	120.0	100.1	120.0	85.6	114.1
72"		120.0	120.0	116.0	120.0	96.3	120.0	82.4	109.9
78"		120.0	120.0	112.7	120.0	93.6	120.0	80.1	106.8
84"		120.0	120.0	110.4	120.0	91.7	120.0	78.5	104.6
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	109.9	120.0
42"		120.0	120.0	120.0	120.0	113.9	120.0	97.4	120.0
48"		120.0	120.0	120.0	120.0	103.2	120.0	88.3	117.7
54"		120.0	120.0	114.5	120.0	95.1	120.0	81.4	108.5
60"		120.0	120.0	107.0	120.0	88.9	118.5	76.1	101.4
66"		120.0	120.0	101.2	120.0	84.1	112.1	71.9	95.9
72"		120.0	120.0	96.6	120.0	80.3	107.0	68.7	91.6
78"		116.9	120.0	93.1	120.0	77.3	103.1	66.1	88.2
84"		113.5	120.0	90.4	120.0	75.1	100.1	64.2	85.6
36"	120"	120.0	120.0	120.0	120.0	113.3	120.0	96.9	120.0
42"		120.0	120.0	120.0	120.0	100.1	120.0	85.6	114.1
48"		120.0	120.0	108.7	120.0	90.3	120.0	77.3	103.0
54"		120.0	120.0	99.8	120.0	82.9	110.5	70.9	94.5
60"		116.5	120.0	92.8	120.0	77.1	102.7	65.9	87.9
66"		109.6	120.0	87.2	116.3	72.5	96.6	62.0	82.7
72"		104.0	120.0	82.8	110.4	68.8	91.7	58.9	78.5
78"		99.6	120.0	79.3	105.7	65.9	87.8	56.3	75.1
84"		96.0	120.0	76.5	101.9	63.5	84.7	54.3	72.4
36"	132"	120.0	120.0	120.0	120.0	101.4	120.0	86.7	115.6
42"		120.0	120.0	107.5	120.0	89.3	119.0	76.4	101.8
48"		120.0	120.0	96.6	120.0	80.3	107.0	68.7	91.6
54"		111.0	120.0	88.4	117.8	73.4	97.8	62.8	83.7
60"		102.8	120.0	81.9	109.1	68.0	90.7	58.2	77.6
66"		96.3	120.0	76.7	102.2	63.7	84.9	54.5	72.6
72"		91.0	120.0	72.5	96.6	60.2	80.3	51.5	68.7
78"		86.7	115.6	69.1	92.1	57.4	76.5	49.1	65.4
84"		83.2	111.0	66.3	88.4	55.0	73.4	47.1	62.8
36"	144"	120.0	120.0	110.4	120.0	91.7	120.0	78.5	104.6
42"		120.0	120.0	97.0	120.0	80.5	107.4	68.9	91.9
48"		109.2	120.0	87.0	116.0	72.2	96.3	61.8	82.4
54"		99.6	120.0	79.3	105.7	65.9	87.8	56.3	75.1
60"		92.0	120.0	73.2	97.7	60.8	81.1	52.0	69.4
66"		85.9	114.5	68.4	91.2	56.8	75.7	48.6	64.8
72"		80.9	107.9	64.4	85.9	53.5	71.3	45.8	61.0
78"		76.8	102.4	61.2	81.6	50.8	67.7	43.5	58.0
80"		75.6	100.8	60.2	80.3	50.0	66.7	42.8	57.0

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(–)									
		ANCHOR TYPE 'B'							
NOMINAL DIMS.		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	B3	B4	B3	B4	B3	B4	B3	B4
36"	150"	120.0	120.0	105.4	120.0	87.6	116.8	74.9	99.9
42"		116.1	120.0	92.5	120.0	76.8	102.4	65.7	87.6
48"		104.0	120.0	82.8	110.4	68.8	91.7	58.9	78.5
54"		94.7	120.0	75.4	100.6	62.6	83.5	53.6	71.5
60"		87.4	116.5	69.6	92.8	57.8	77.1	49.4	65.9
66"		81.5	108.6	64.9	86.5	53.9	71.8	46.1	61.5
72"		76.7	102.2	61.0	81.4	50.7	67.6	43.4	57.8
78"		72.7	96.9	57.9	77.1	48.1	64.1	41.1	54.8
80"		71.5	95.3	56.9	75.9	47.3	63.0	40.5	53.9
36"	156"	120.0	120.0	100.8	120.0	83.8	111.7	71.7	95.5
42"		111.0	120.0	88.4	117.8	73.4	97.8	62.8	83.7
48"		99.3	120.0	79.1	105.4	65.7	87.6	56.2	74.9
54"		90.3	120.0	71.9	95.9	59.7	79.6	51.1	68.1
60"		83.2	111.0	66.3	88.4	55.0	73.4	47.1	62.8
66"		77.5	103.3	61.7	82.3	51.3	68.3	43.8	58.5
71–15/16"		72.9	97.2	58.0	77.4	48.2	64.3	41.2	55.0

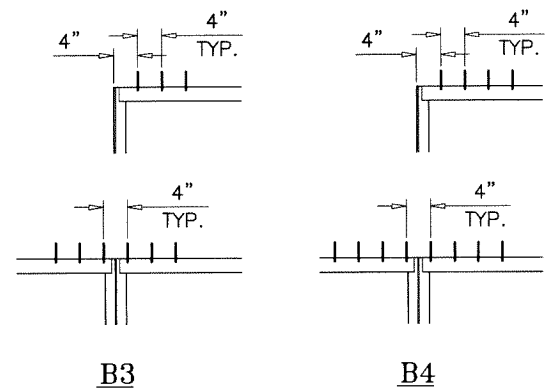
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



WIDTH (W) = W1
AT JAMB

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

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



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

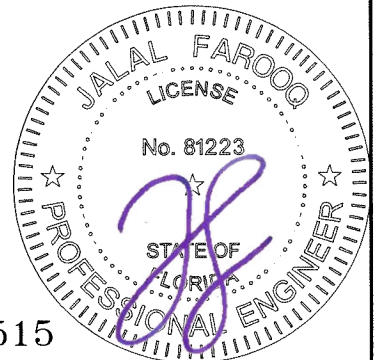
B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB & MULLION

B4 = (4) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

HEAD/SILL ANCHORS
WITHOUT RECEPTORS

Sealed: 8/19/2025



FL #29515

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ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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revisions:

no	date	by	description

date: 03-27-19

scale: -

dr. by: TARIQ

chk. by: -

drawing no.

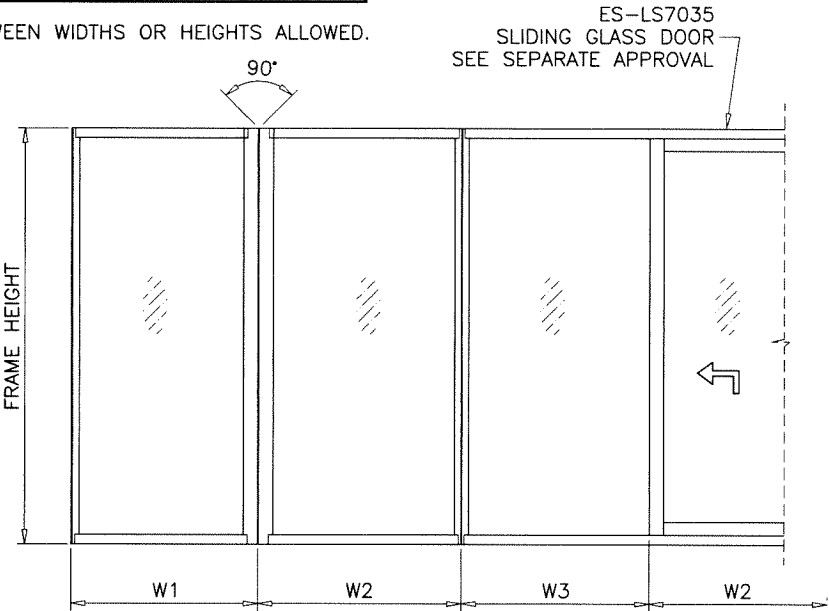
19-22F

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HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(-)									
NOMINAL DIMS.		ANCHOR TYPE 'C'							
		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	C3	C4	C3	C4	C3	C4	C3	C4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	118.9	120.0
36"	132"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	115.0	120.0
72"		119.5	120.0	119.5	120.0	119.5	120.0	108.7	120.0
84"		113.8	120.0	113.8	120.0	113.8	120.0	103.6	120.0
36"	144"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	118.9	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	109.8	120.0
66"		112.7	120.0	112.7	120.0	112.7	120.0	102.5	120.0
72"		106.2	120.0	106.2	120.0	106.2	120.0	96.6	120.0
80"		100.8	120.0	100.8	120.0	100.8	120.0	91.7	120.0
84"		99.2	120.0	99.2	120.0	99.2	120.0	90.3	120.0

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(-)									
NOMINAL DIMS.		ANCHOR TYPE 'C'							
		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	C3	C4	C3	C4	C3	C4	C3	C4
36"	150"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	113.1	120.0
60"		114.7	120.0	114.7	120.0	114.7	120.0	104.3	120.0
66"		106.9	120.0	106.9	120.0	106.9	120.0	97.3	120.0
72"		100.6	120.0	100.6	120.0	100.6	120.0	91.5	120.0
80"		95.4	120.0	95.4	120.0	95.4	120.0	86.8	115.7
36"	156"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	118.6	120.0
54"		118.5	120.0	118.5	120.0	118.5	120.0	107.8	120.0
60"		109.2	120.0	109.2	120.0	109.2	120.0	99.4	120.0
66"		101.7	120.0	101.7	120.0	101.7	120.0	92.5	120.0
71-15/16"		95.6	120.0	95.6	120.0	95.6	120.0	87.0	116.0

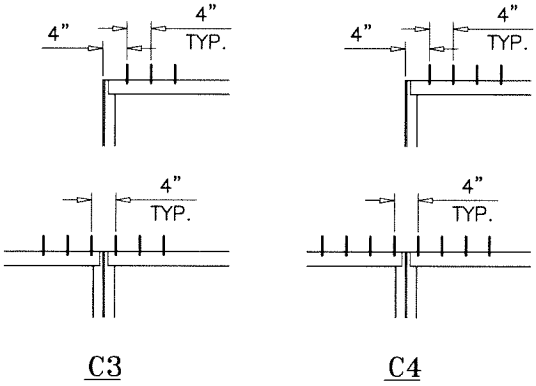
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



WIDTH (W) = W1
AT JAMB

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

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



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB & MULLION

C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

HEAD/SILL ANCHORS
WITHOUT RECEPTORS

Sealed: 8/19/2025



FL #29515

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revisions:

no	date	by	description

date: 03-27-19

scale: -

dr. by: TARIQ

chk. by:

drawing no.

19-22F

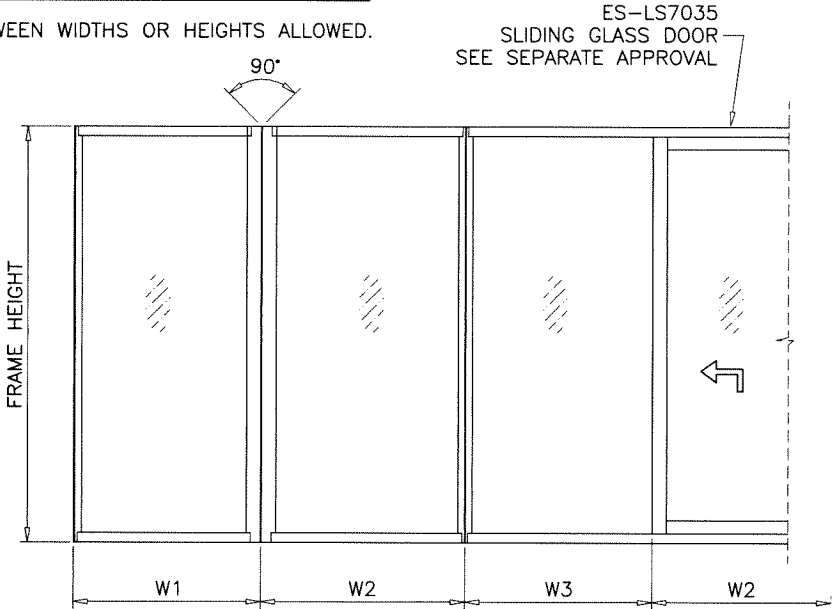
sheet 11 of 22

COMP-ANL\19-22F-ES

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(–)									
NOMINAL DIMS.		ANCHOR TYPE 'D'							
		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	D3	D4	D3	D4	D3	D4	D3	D4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	117.5	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	112.2	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	108.1	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	104.9	120.0
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	115.8	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	107.7	120.0
66"		120.0	120.0	120.0	120.0	118.0	120.0	101.3	120.0
72"		120.0	120.0	120.0	120.0	112.0	120.0	96.2	120.0
78"		120.0	120.0	120.0	120.0	107.2	120.0	92.1	120.0
84"		120.0	120.0	120.0	120.0	103.4	120.0	88.8	118.4
36"	132"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	112.2	120.0
54"		120.0	120.0	120.0	120.0	119.5	120.0	102.6	120.0
60"		120.0	120.0	120.0	120.0	110.7	120.0	95.0	120.0
66"		120.0	120.0	120.0	120.0	103.7	120.0	89.0	118.7
72"		120.0	120.0	117.3	120.0	98.0	120.0	84.2	112.2
78"		120.0	120.0	111.8	120.0	93.4	120.0	80.2	106.9
84"		120.0	120.0	107.2	120.0	89.6	119.5	76.9	102.6
36"	144"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	112.6	120.0
48"		120.0	120.0	120.0	120.0	117.6	120.0	101.0	120.0
54"		120.0	120.0	120.0	120.0	107.2	120.0	92.1	113.4
60"		120.0	120.0	118.5	120.0	99.0	120.0	85.0	120.0
66"		120.0	120.0	110.7	120.0	92.5	120.0	79.4	105.9
72"		120.0	120.0	104.3	120.0	87.1	116.1	74.8	99.7
78"		117.2	120.0	99.0	120.0	82.7	110.3	71.0	94.7
80"		115.4	120.0	97.4	120.0	81.4	108.6	69.9	93.2

HEAD/SILL ANCHOR LOAD CAPACITY – PSF (WITHOUT RECEPTOR) EXT.(+) & INT.(–)									
NOMINAL DIMS.		ANCHOR TYPE 'D'							
		3/8" MAX. SHIMS		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS	
WIDTH (W)	FRAME HEIGHT	D3	D4	D3	D4	D3	D4	D3	D4
36"	150"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	107.4	120.0
48"		120.0	120.0	120.0	120.0	112.0	120.0	96.2	120.0
54"		120.0	120.0	120.0	120.0	102.0	120.0	87.6	116.8
60"		120.0	120.0	112.6	120.0	94.1	120.0	80.8	107.7
66"		120.0	120.0	105.0	120.0	87.7	117.0	75.3	100.4
72"		117.0	120.0	98.8	120.0	82.5	110.0	70.9	94.5
78"		110.9	120.0	93.6	120.0	78.2	104.3	67.2	89.6
80"		109.1	120.0	92.1	120.0	77.0	102.6	66.1	88.1
36"	156"	120.0	120.0	120.0	120.0	120.0	120.0	117.1	120.0
42"		120.0	120.0	120.0	120.0	119.5	120.0	102.6	120.0
48"		120.0	120.0	120.0	120.0	106.9	120.0	91.8	120.0
54"		120.0	120.0	116.4	120.0	97.2	120.0	83.5	111.3
60"		120.0	120.0	107.2	120.0	89.6	119.5	76.9	102.6
66"		118.3	120.0	99.9	120.0	83.4	111.3	71.6	95.5
71–15/16"		111.2	120.0	93.9	120.0	78.4	104.6	67.4	89.8

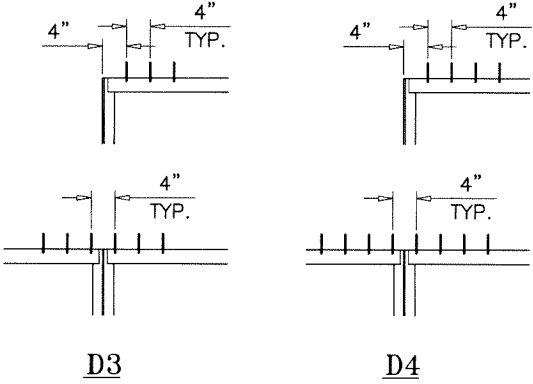
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



WIDTH (W) = W1
AT JAMB

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

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



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION
D3 = (3) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB & MULLION
D4 = (4) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB & MULLION
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

HEAD/SILL ANCHORS
WITHOUT RECEPTORS

Sealed: 8/19/2025



FL #29515

AL-FAROOQ CORPORATION
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ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
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revisions:

no	date	by	description

date: 03-27-19

scale: -

dr. by: TARIQ

chk. by:

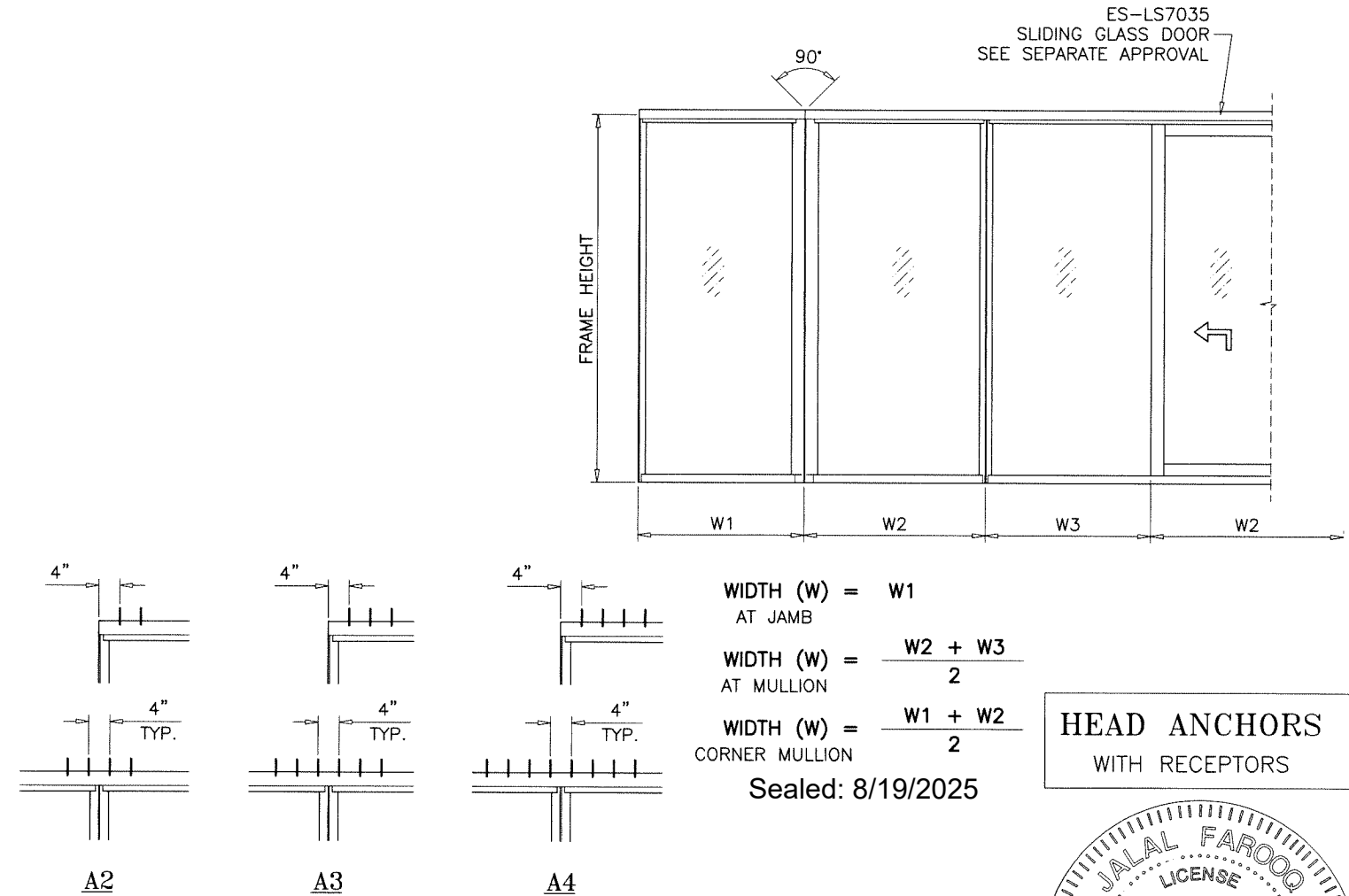
drawing no.
19-22F

sheet 12 of 22

HEAD ANCHOR LOAD CAPACITY – PSF (WITH RECEPTOR) EXT.(+) & INT.(–)										
NOMINAL DIMS.		ANCHOR TYPE 'A'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	A2	A3	A4	A2	A3	A4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	113.2	120.0	120.0
54"		120.0	120.0	120.0	118.6	120.0	120.0	105.9	120.0	120.0
60"		120.0	120.0	120.0	112.7	120.0	120.0	100.7	120.0	120.0
66"		120.0	120.0	120.0	108.5	120.0	120.0	96.9	120.0	120.0
72"		119.9	120.0	120.0	105.6	120.0	120.0	94.4	120.0	120.0
78"		118.1	120.0	120.0	104.0	120.0	120.0	92.9	120.0	120.0
84"		117.5	120.0	120.0	103.5	120.0	120.0	92.4	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	116.1	120.0	120.0
42"		120.0	120.0	120.0	115.9	120.0	120.0	103.5	120.0	120.0
48"		119.9	120.0	120.0	105.6	120.0	120.0	94.4	120.0	120.0
54"		111.3	120.0	120.0	98.0	120.0	120.0	87.5	120.0	120.0
60"		104.7	120.0	120.0	92.2	120.0	120.0	82.4	120.0	120.0
66"		99.7	120.0	120.0	87.8	120.0	120.0	78.4	117.6	120.0
72"		96.0	120.0	120.0	84.5	120.0	120.0	75.5	113.2	120.0
78"		93.2	120.0	120.0	82.1	120.0	120.0	73.3	110.0	120.0
84"		91.4	120.0	120.0	80.5	120.0	120.0	71.9	107.8	120.0
36"	108"	120.0	120.0	120.0	112.7	120.0	120.0	100.7	120.0	120.0
42"		113.4	120.0	120.0	99.9	120.0	120.0	89.2	120.0	120.0
48"		102.8	120.0	120.0	90.5	120.0	120.0	80.9	120.0	120.0
54"		94.8	120.0	120.0	83.5	120.0	120.0	74.6	111.8	120.0
60"		88.6	120.0	120.0	78.0	117.0	120.0	69.7	104.5	120.0
66"		83.7	120.0	120.0	73.8	110.6	120.0	65.9	98.8	120.0
72"		80.0	119.9	120.0	70.4	105.6	120.0	62.9	94.4	120.0
78"		77.0	115.5	120.0	67.8	101.8	120.0	60.6	90.9	120.0
84"		74.8	112.2	120.0	65.9	98.8	120.0	58.8	88.2	117.6
36"	120"	112.9	120.0	120.0	99.4	120.0	120.0	88.8	120.0	120.0
42"		99.7	120.0	120.0	87.8	120.0	120.0	78.4	117.6	120.0
48"		90.0	120.0	120.0	79.2	118.8	120.0	70.8	106.2	120.0
54"		82.5	120.0	120.0	72.7	109.0	120.0	64.9	97.4	120.0
60"		76.8	115.1	120.0	67.6	101.4	120.0	60.4	90.6	120.0
66"		72.2	108.3	120.0	63.6	95.4	120.0	56.8	85.2	113.6
72"		68.5	102.8	120.0	60.4	90.5	120.0	53.9	80.9	107.8
78"		65.6	98.4	120.0	57.8	86.7	115.6	51.6	77.4	103.2
84"		63.3	94.9	120.0	55.7	83.6	111.4	49.8	74.7	99.5
36"	132"	101.0	120.0	120.0	89.0	120.0	120.0	79.5	119.2	120.0
42"		88.9	120.0	120.0	78.3	117.5	120.0	70.0	104.9	120.0
48"		80.0	119.9	120.0	70.4	105.6	120.0	62.9	94.4	120.0
54"		73.1	109.7	120.0	64.4	96.6	120.0	57.5	86.3	115.0
60"		67.7	101.6	120.0	59.7	89.5	119.3	53.3	79.9	106.6
66"		63.4	95.2	120.0	55.9	83.8	111.7	49.9	74.9	99.8
72"		60.0	90.0	119.9	52.8	79.2	105.6	47.2	70.8	94.4
78"		57.1	85.7	114.3	50.3	75.5	100.7	45.0	67.4	89.9
84"		54.8	82.2	109.7	48.3	72.4	96.6	43.1	64.7	86.3
36"	144"	91.4	120.0	120.0	80.5	120.0	120.0	71.9	107.8	120.0
42"		80.2	120.0	120.0	70.7	106.0	120.0	63.1	94.7	120.0
48"		72.0	108.0	120.0	63.4	95.1	120.0	56.6	84.9	113.2
54"		65.6	98.4	120.0	57.8	86.7	115.6	51.6	77.4	103.2
60"		60.6	90.9	120.0	53.4	80.1	106.7	47.7	71.5	95.4
66"		56.6	84.9	113.2	49.8	74.8	99.7	44.5	66.8	89.0
72"		53.3	80.0	106.6	46.9	70.4	93.9	41.9	62.9	83.9
78"		50.6	75.9	101.2	44.6	66.9	89.2	39.8	59.7	79.6
80"		49.8	74.7	99.6	43.9	65.8	87.8	39.2	58.8	78.4

HEAD ANCHOR LOAD CAPACITY – PSF (WITH RECEPTOR) EXT.(+) & INT.(–)										
NOMINAL DIMS.		ANCHOR TYPE 'A'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	A2	A3	A4	A2	A3	A4
36"	150"	87.2	120.0	120.0	76.8	115.2	120.0	68.6	102.9	120.0
42"		76.5	114.8	120.0	67.4	101.1	120.0	60.2	90.3	120.0
48"		68.5	102.8	120.0	60.4	90.5	120.0	53.9	80.9	107.8
54"		62.4	93.6	120.0	55.0	82.4	109.9	49.1	73.6	98.2
60"		57.6	86.4	115.1	50.7	76.1	101.4	45.3	67.9	90.6
66"		53.7	80.5	107.4	47.3	70.9	94.6	42.2	63.3	84.5
72"		50.5	75.8	101.0	44.5	66.7	89.0	39.7	59.6	79.5
78"		47.9	71.8	95.8	42.2	63.3	84.3	37.7	56.5	75.3
80"		47.1	70.7	94.2	41.5	62.2	83.0	37.1	55.6	74.1
36"	156"	83.4	120.0	120.0	73.5	110.2	120.0	65.6	98.5	120.0
42"		73.1	109.7	120.0	64.4	96.6	120.0	57.5	86.3	115.0
48"		65.4	98.1	120.0	57.6	86.4	115.2	51.5	77.2	102.9
54"		59.5	89.3	119.0	52.4	78.6	104.8	46.8	70.2	93.6
60"		54.8	82.2	109.7	48.3	72.4	96.6	43.1	64.7	86.3
66"		51.1	76.6	102.1	45.0	67.5	89.9	40.2	60.3	80.3
71–15/16"		48.0	72.0	96.0	42.3	63.4	84.6	37.8	56.7	75.5

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

A2 = (2) PAIRS OF ANCHOR TYPE 'A' AT EACH SIDE OF JAMB & MULLION
A3 = (3) PAIRS OF ANCHOR TYPE 'A' AT EACH SIDE OF JAMB & MULLION
A4 = (4) PAIRS OF ANCHOR TYPE 'A' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

FL #29515



AL-FAROOQ CORPORATION
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ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)
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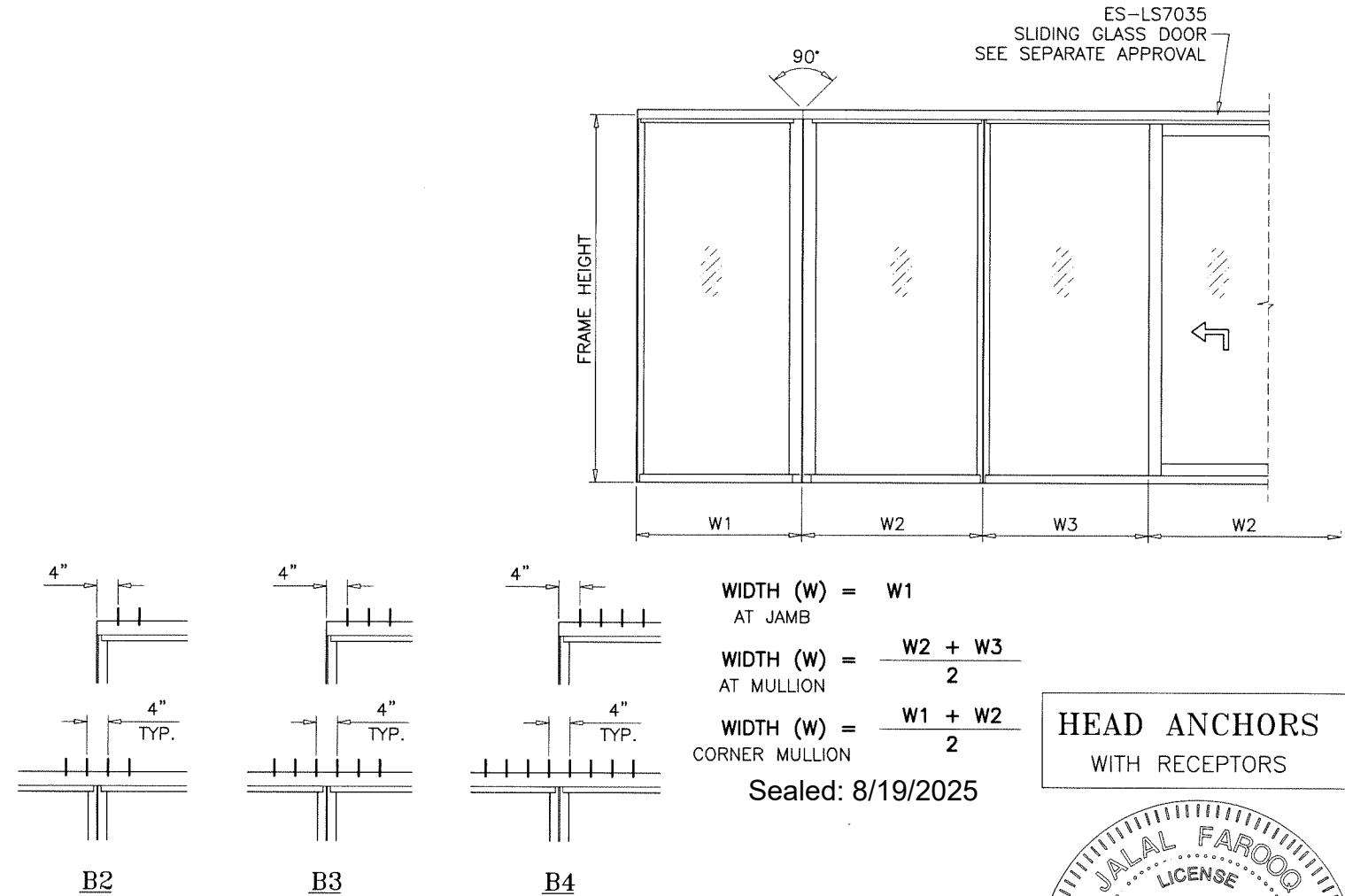
revisions:
no date by description
date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:
drawing no.
19-22F
sheet 13 of 22

COMP-ANL\19-22F-ES

HEAD ANCHOR LOAD CAPACITY – PSF (WITH RECEPTOR) EXT.(+) & INT.(–)										
NOMINAL DIMS.		ANCHOR TYPE 'B'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	B2	B3	B4	B2	B3	B4	B2	B3	B4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	118.6	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	114.2	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	111.2	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	109.5	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	108.9	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	111.2	120.0	120.0
54"		120.0	120.0	120.0	117.8	120.0	120.0	103.1	120.0	120.0
60"		120.0	120.0	120.0	110.9	120.0	120.0	97.1	120.0	120.0
66"		120.0	120.0	120.0	105.6	120.0	120.0	92.4	120.0	120.0
72"		118.5	120.0	120.0	101.6	120.0	120.0	89.0	120.0	120.0
78"		115.2	120.0	120.0	98.7	120.0	120.0	86.4	120.0	120.0
84"		112.9	120.0	120.0	96.8	120.0	120.0	84.7	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	118.6	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	105.2	120.0	120.0
48"		120.0	120.0	120.0	108.9	120.0	120.0	95.3	120.0	120.0
54"		117.0	120.0	120.0	100.4	120.0	120.0	95.3	120.0	120.0
60"		109.4	120.0	120.0	93.8	120.0	120.0	87.9	120.0	120.0
66"		103.4	120.0	120.0	88.7	120.0	120.0	82.1	116.5	120.0
72"		98.8	120.0	120.0	84.7	120.0	120.0	77.6	111.2	120.0
78"		95.1	120.0	120.0	81.6	120.0	120.0	71.4	107.1	120.0
84"		92.3	120.0	120.0	79.2	118.8	120.0	69.3	104.0	120.0
36"	120"	120.0	120.0	120.0	119.5	120.0	120.0	104.7	120.0	120.0
42"		120.0	120.0	120.0	105.6	120.0	120.0	92.4	120.0	120.0
48"		111.1	120.0	120.0	95.3	120.0	120.0	83.4	120.0	120.0
54"		101.9	120.0	120.0	87.4	120.0	120.0	76.5	114.8	120.0
60"		94.8	120.0	120.0	81.3	120.0	120.0	71.2	106.8	120.0
66"		89.2	120.0	120.0	76.5	114.7	120.0	66.9	100.4	120.0
72"		84.7	120.0	120.0	72.6	108.9	120.0	63.5	95.3	120.0
78"		81.0	120.0	120.0	69.5	104.2	120.0	60.8	91.2	120.0
84"		78.1	117.2	120.0	67.0	100.5	120.0	58.7	88.0	117.3
36"	132"	120.0	120.0	120.0	107.0	120.0	120.0	93.6	120.0	120.0
42"		109.8	120.0	120.0	94.2	120.0	120.0	82.4	120.0	120.0
48"		98.8	120.0	120.0	84.7	120.0	120.0	74.1	111.2	120.0
54"		90.3	120.0	120.0	77.4	116.1	120.0	67.8	101.7	120.0
60"		83.7	120.0	120.0	71.7	107.6	120.0	62.8	94.2	120.0
66"		78.4	117.5	120.0	67.2	100.8	120.0	58.8	88.2	117.6
72"		74.1	111.1	120.0	63.5	95.3	120.0	55.6	83.4	111.2
78"		70.6	105.9	120.0	60.5	90.8	120.0	53.0	79.5	106.0
84"		67.7	101.6	120.0	58.1	87.1	116.1	50.8	76.3	101.7
36"	144"	112.9	120.0	120.0	96.8	120.0	120.0	84.7	120.0	120.0
42"		99.1	120.0	120.0	85.0	120.0	120.0	74.4	111.6	120.0
48"		88.9	120.0	120.0	76.2	114.3	120.0	66.7	100.1	120.0
54"		81.0	120.0	120.0	69.5	104.2	120.0	60.8	91.2	120.0
60"		74.8	112.3	120.0	64.2	96.3	120.0	56.2	84.3	112.4
66"		69.9	104.8	120.0	59.9	89.9	119.8	52.5	78.7	104.9
72"		65.8	98.8	120.0	56.5	84.7	112.9	49.4	74.1	98.9
78"		62.5	93.8	120.0	53.6	80.4	107.2	46.9	70.4	93.9
80"		61.5	92.3	120.0	52.8	79.1	105.5	46.2	69.3	92.4

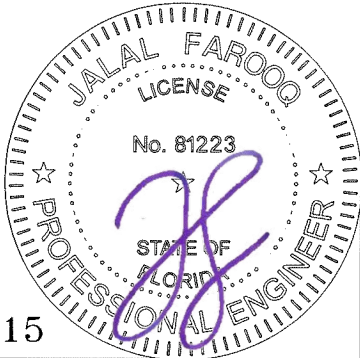
HEAD ANCHOR LOAD CAPACITY – PSF (WITH RECEPTOR) EXT.(+) & INT.(–)										
NOMINAL DIMS.		ANCHOR TYPE 'B'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	B2	B3	B4	B2	B3	B4	B2	B3	B4
36"	150"	107.7	120.0	120.0	92.4	120.0	120.0	80.9	120.0	120.0
42"		94.5	120.0	120.0	81.0	120.0	120.0	70.9	106.4	120.0
48"		84.7	120.0	120.0	72.6	108.9	120.0	63.5	95.3	120.0
54"		77.1	115.6	120.0	66.1	99.1	120.0	57.9	86.8	115.7
60"		71.1	106.7	120.0	61.0	91.5	120.0	53.4	80.1	106.8
66"		66.3	99.4	120.0	56.8	85.3	113.7	49.8	74.7	99.5
72"		62.4	93.6	120.0	53.5	80.2	107.0	46.8	70.2	93.6
78"		59.1	88.7	118.3	50.7	76.1	101.4	44.4	66.6	88.8
80"		58.2	87.3	116.4	49.9	74.8	99.8	43.7	65.5	87.3
36"	156"	103.1	120.0	120.0	88.4	120.0	120.0	77.4	116.0	120.0
42"		90.3	120.0	120.0	77.4	116.1	120.0	67.8	101.7	120.0
48"		80.8	120.0	120.0	69.3	103.9	120.0	60.7	91.0	120.0
54"		73.5	110.2	120.0	63.0	94.5	120.0	55.2	82.8	110.3
60"		67.7	101.6	120.0	58.1	87.1	116.1	50.8	76.3	101.7
66"		63.1	94.6	120.0	54.1	81.1	108.1	47.3	71.0	94.7
71–15/16"		59.3	88.9	118.6	50.8	76.3	101.7	44.5	66.8	89.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION
B2 = (2) PAIRS OF ANCHOR TYPE 'B' AT EACH SIDE OF JAMB & MULLION
B3 = (3) PAIRS OF ANCHOR TYPE 'B' AT EACH SIDE OF JAMB & MULLION
B4 = (4) PAIRS OF ANCHOR TYPE 'B' AT EACH SIDE OF JAMB & MULLION
ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

FL #29515



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)

ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

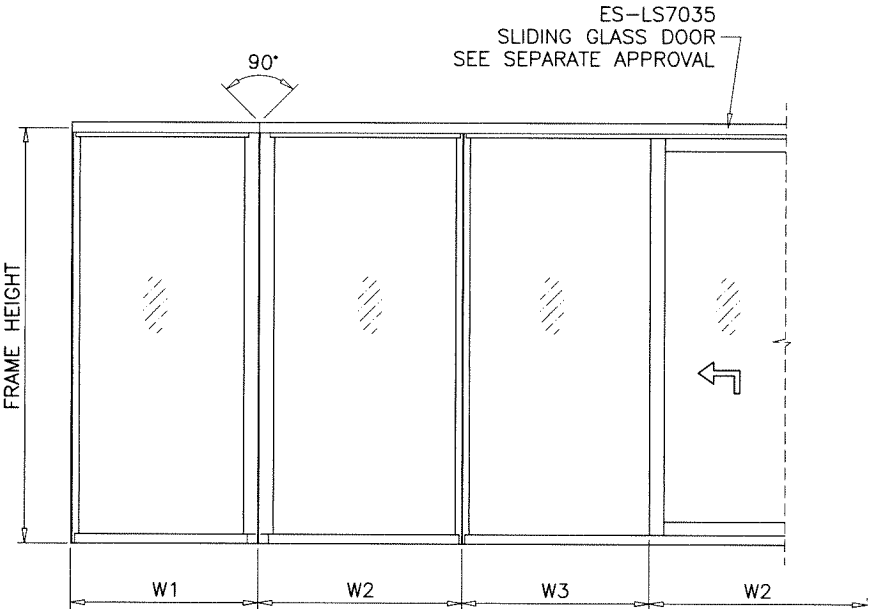
revisions:
no date by description
date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:
drawing no.
19-22F
sheet 14 of 22

COMP-ANL\19-22F-ES

HEAD ANCHOR LOAD CAPACITY - PSF (WITH RECEPTOR) EXT.(+) & INT.(-)								
		ANCHOR TYPE 'C'						
NOMINAL DIMS.		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	C2	C3	C2	C3	C2	C3	C4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	114.9	120.0	120.0
72"		120.0	120.0	120.0	120.0	109.1	120.0	120.0
78"		118.9	120.0	117.0	120.0	104.4	120.0	120.0
84"		114.7	120.0	112.9	120.0	100.7	120.0	120.0
36"	132"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	116.3	120.0	120.0
60"		120.0	120.0	120.0	120.0	107.8	120.0	120.0
66"		115.0	120.0	113.2	120.0	101.0	120.0	120.0
72"		108.7	120.0	107.0	120.0	95.4	120.0	120.0
78"		103.6	120.0	101.9	120.0	90.9	120.0	120.0
84"		99.4	120.0	97.8	120.0	87.3	120.0	120.0
36"	144"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	114.5	120.0	120.0
54"		118.9	120.0	117.0	120.0	104.4	120.0	120.0
60"		109.8	120.0	108.1	120.0	96.4	120.0	120.0
66"		102.6	120.0	100.9	120.0	90.0	120.0	120.0
72"		96.6	120.0	95.1	120.0	84.8	120.0	120.0
78"		91.7	120.0	90.3	120.0	80.5	120.0	120.0
80"		90.3	120.0	88.9	120.0	79.3	118.9	120.0

HEAD ANCHOR LOAD CAPACITY - PSF (WITH RECEPTOR) EXT.(+) & INT.(-)								
		ANCHOR TYPE 'C'						
NOMINAL DIMS.		1/2" MAX. SHIMS		5/8" MAX. SHIMS		3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	C2	C3	C2	C3	C2	C3	C4
36"	150"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	109.1	120.0	120.0
54"		113.1	120.0	111.3	120.0	99.3	120.0	120.0
60"		104.3	120.0	102.7	120.0	91.6	120.0	120.0
66"		97.3	120.0	95.8	120.0	85.4	120.0	120.0
72"		91.5	120.0	90.1	120.0	80.4	120.0	120.0
78"		86.8	120.0	85.4	120.0	76.2	114.3	120.0
80"		85.4	120.0	84.0	120.0	75.0	112.4	120.0
36"	156"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	116.3	120.0	120.0
48"		118.6	120.0	116.7	120.0	104.1	120.0	120.0
54"		107.9	120.0	106.1	120.0	94.7	120.0	120.0
60"		99.4	120.0	97.8	120.0	87.3	120.0	120.0
66"		92.5	120.0	91.1	120.0	81.3	120.0	120.0
71-15/16"		87.0	120.0	85.6	120.0	76.4	114.6	120.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



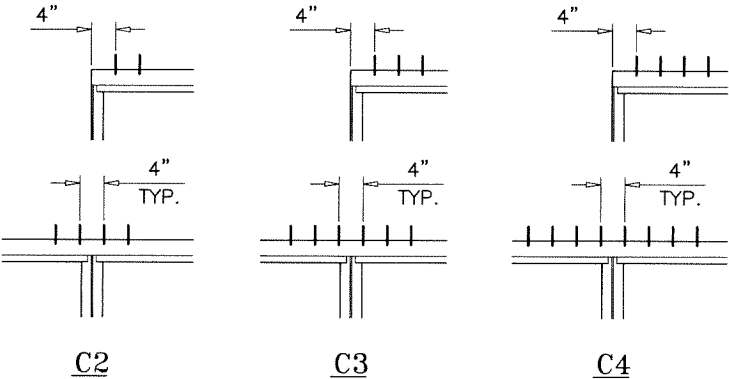
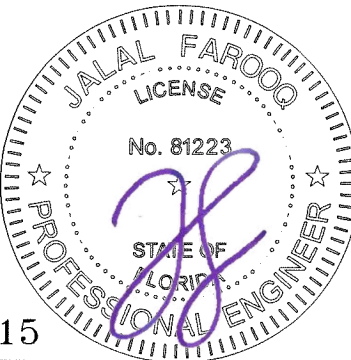
WIDTH (W) = W1
AT JAMB

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

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

Sealed: 8/19/2025

HEAD ANCHORS
WITH RECEPTORS



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

C2 = (2) PAIRS OF ANCHOR TYPE 'C' AT EACH SIDE OF JAMB & MULLION
C3 = (3) PAIRS OF ANCHOR TYPE 'C' AT EACH SIDE OF JAMB & MULLION
C4 = (4) PAIRS OF ANCHOR TYPE 'C' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

FL #29515

afC

AL-FAROOQ CORPORATION
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revisions:

no	date	by	description

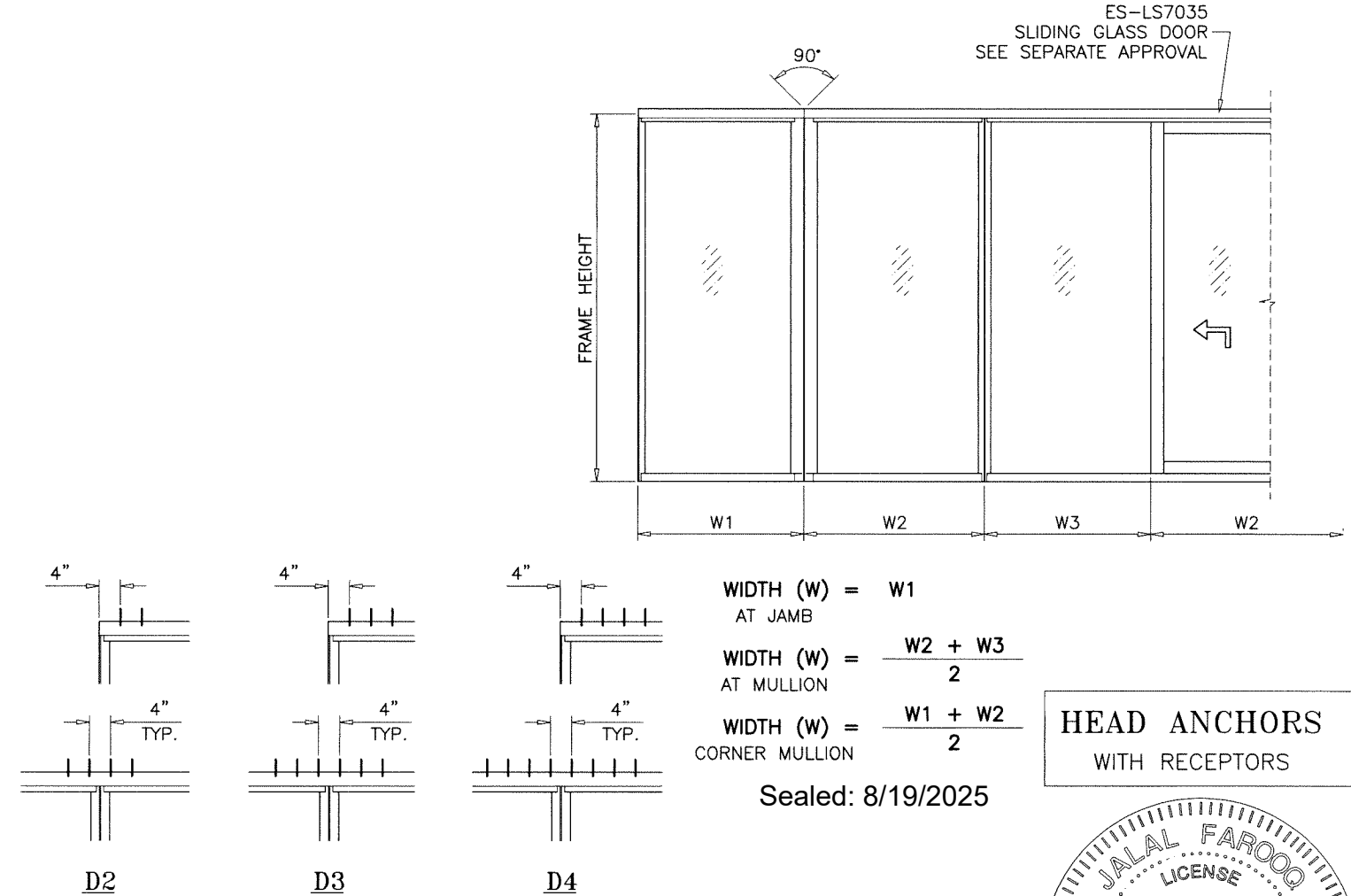
date: 03-27-19 scale: - dr. by: TARIQ chk. by:

drawing no. 19-22F sheet 15 of 22

HEAD ANCHOR LOAD CAPACITY - PSF (WITH RECEPTOR) EXT.(+) & INT.(-)										
NOMINAL DIMS.		ANCHOR TYPE 'D'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D2	D3	D4	D2	D3	D4
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
72"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
78"		120.0	120.0	120.0	120.0	120.0	120.0	119.7	120.0	120.0
84"		120.0	120.0	120.0	120.0	120.0	120.0	117.3	120.0	120.0
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0	120.0	120.0	113.7	120.0	120.0
66"		120.0	120.0	120.0	120.0	120.0	120.0	107.5	120.0	120.0
72"		120.0	120.0	120.0	115.2	120.0	120.0	102.6	120.0	120.0
78"		120.0	120.0	120.0	111.0	120.0	120.0	98.8	120.0	120.0
84"		120.0	120.0	120.0	107.7	120.0	120.0	96.0	120.0	120.0
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0	120.0	120.0	115.4	120.0	120.0
54"		120.0	120.0	120.0	118.9	120.0	120.0	105.9	120.0	120.0
60"		120.0	120.0	120.0	110.6	120.0	120.0	98.5	120.0	120.0
66"		118.6	120.0	120.0	104.0	120.0	120.0	92.6	120.0	120.0
72"		112.6	120.0	120.0	98.8	120.0	120.0	88.0	120.0	120.0
78"		107.8	120.0	120.0	94.5	120.0	120.0	84.2	120.0	120.0
84"		103.9	120.0	120.0	91.2	120.0	120.0	81.2	120.0	120.0
36"	132"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0	120.0	120.0	114.1	120.0	120.0
48"		120.0	120.0	120.0	115.2	120.0	120.0	102.6	120.0	120.0
54"		120.0	120.0	120.0	105.3	120.0	120.0	93.8	120.0	120.0
60"		111.2	120.0	120.0	97.6	120.0	120.0	86.9	120.0	120.0
66"		104.2	120.0	120.0	91.4	120.0	120.0	81.4	120.0	120.0
72"		98.5	120.0	120.0	86.4	120.0	120.0	77.0	115.4	120.0
78"		93.8	120.0	120.0	82.3	120.0	120.0	73.3	110.0	120.0
84"		90.0	120.0	120.0	79.0	118.5	120.0	70.4	105.6	120.0
36"	144"	120.0	120.0	120.0	120.0	120.0	120.0	117.3	120.0	120.0
42"		120.0	120.0	120.0	115.6	120.0	120.0	103.0	120.0	120.0
48"		118.2	120.0	120.0	103.7	120.0	120.0	92.4	120.0	120.0
54"		107.8	120.0	120.0	94.5	120.0	120.0	84.2	120.0	120.0
60"		99.5	120.0	120.0	87.3	120.0	120.0	77.8	116.7	120.0
66"		92.9	120.0	120.0	81.5	120.0	120.0	72.6	108.9	120.0
72"		87.5	120.0	120.0	76.8	115.2	120.0	68.4	102.6	120.0
78"		83.1	120.0	120.0	72.9	109.4	120.0	65.0	97.4	120.0
80"		81.8	120.0	120.0	71.8	107.7	120.0	63.9	95.9	120.0

HEAD ANCHOR LOAD CAPACITY - PSF (WITH RECEPTOR) EXT.(+) & INT.(-)										
NOMINAL DIMS.		ANCHOR TYPE 'D'								
		1/2" MAX. SHIMS			5/8" MAX. SHIMS			3/4" MAX. SHIMS		
WIDTH (W)	FRAME HEIGHT	D2	D3	D4	D2	D3	D4	D2	D3	D4
36"	150"	120.0	120.0	120.0	120.0	120.0	120.0	112.0	120.0	120.0
42"		120.0	120.0	120.0	110.2	120.0	120.0	98.2	120.0	120.0
48"		112.6	120.0	120.0	98.8	120.0	120.0	88.0	120.0	120.0
54"		102.5	120.0	120.0	89.9	120.0	120.0	80.1	120.0	120.0
60"		94.6	120.0	120.0	83.0	120.0	120.0	73.9	110.8	120.0
66"		88.2	120.0	120.0	77.3	116.0	120.0	68.9	103.3	120.0
72"		82.9	120.0	120.0	72.8	109.1	120.0	64.8	97.2	120.0
78"		78.6	117.9	120.0	69.0	103.5	120.0	61.4	92.2	120.0
80"		77.4	116.0	120.0	67.9	101.8	120.0	60.5	90.7	120.0
36"	156"	120.0	120.0	120.0	120.0	120.0	120.0	107.1	120.0	120.0
42"		120.0	120.0	120.0	105.3	120.0	120.0	93.8	120.0	120.0
48"		107.4	120.0	120.0	94.3	120.0	120.0	84.0	120.0	120.0
54"		97.7	120.0	120.0	85.7	120.0	120.0	76.4	114.6	120.0
60"		90.0	120.0	120.0	79.0	118.5	120.0	70.4	105.6	120.0
66"		83.9	120.0	120.0	73.6	110.4	120.0	65.5	98.3	120.0
71-15/16"		78.8	118.3	120.0	69.2	103.8	120.0	61.6	92.4	120.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



ANCHORS TYPES: SEE SHEET 17 FOR DESCRIPTION

D2 = (2) PAIRS OF ANCHOR TYPE 'D' AT EACH SIDE OF JAMB & MULLION
D3 = (3) PAIRS OF ANCHOR TYPE 'D' AT EACH SIDE OF JAMB & MULLION
D4 = (4) PAIRS OF ANCHOR TYPE 'D' AT EACH SIDE OF JAMB & MULLION

ALL OTHER ANCHORS TO BE SPACED AS PER ELEVATION.

FL #29515

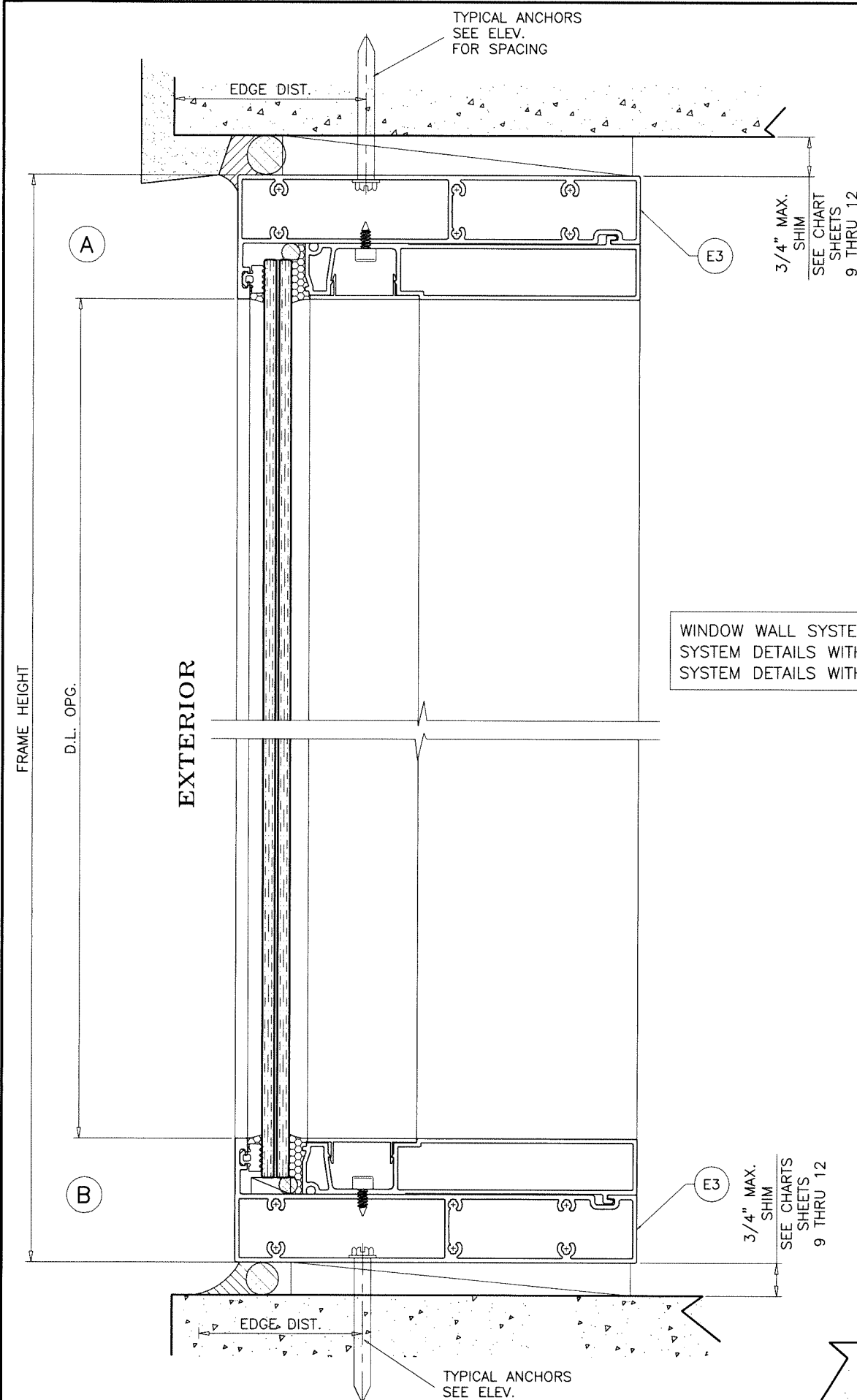
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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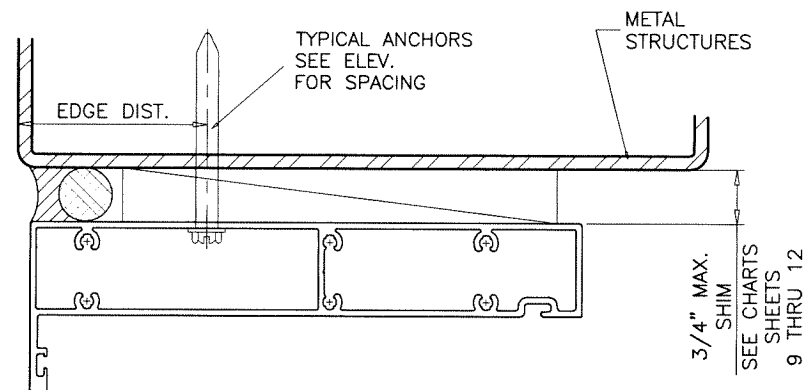
revisions:
no date by description

date: 03-27-19
scale: -
dr. by: TARIQ
chk. by:

drawing no.
19-22F
sheet 16 of 22



WINDOW WALL SYSTEM SHOWN WITH LAMINATED GLASS ONLY
SYSTEM DETAILS WITH INSULATED LAMINATED GLASS SEE SHEET 4
SYSTEM DETAILS WITH DOUBLE LAMINATED GLASS SEE SHEET 5



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'— 5/16" DIA. ULTRACON BY 'DEWALT' ($F_u=177$ KSI, $F_y=155$ KSI)
DIRECTLY INTO CONCRETE OR FILLED BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)

TYPE 'B'— 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: 1/4" THK. MIN. (6063-T5 MIN.)
STEEL: 3/16" THK. MIN. ($F_y = 36$ KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPE 'C'— 3/8" SCREW-BOLT+ BY 'DEWALT'
DIRECTLY INTO CONCRETE OR FILLED BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
2" MIN. EMBED INTO BLOCKS (JAMBS)

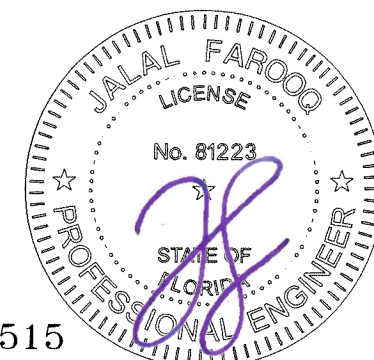
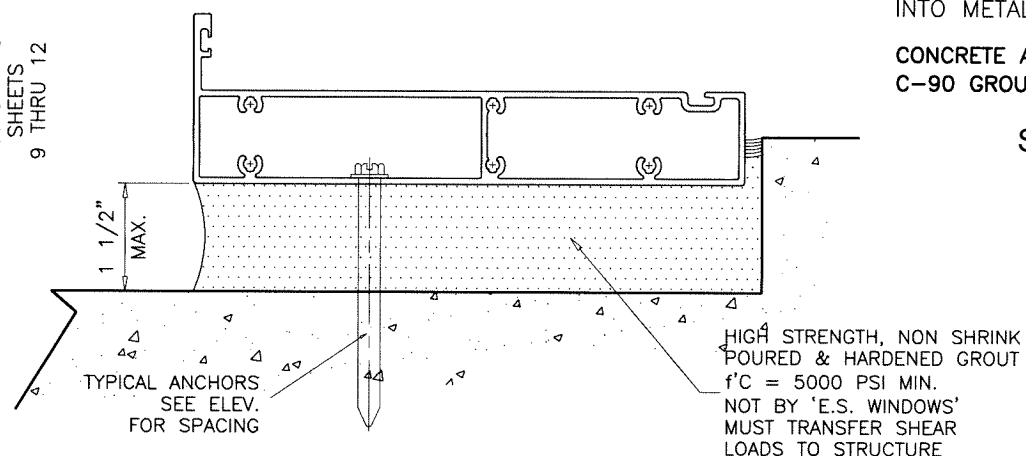
TYPE 'D'— 3/8" DIA. TAP-FLEX OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES (HEAD/SILL/JAMBS)
(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
ALUMINUM: 1/4" THK. MIN. (6063-T5 MIN.)
STEEL: 3/16" THK. MIN. ($F_y = 36$ KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND GROUT FILLED BLOCKS = 2-1/2" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS $f'_c = 3000$ PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS $f'_m = 2000$ PSI MIN.

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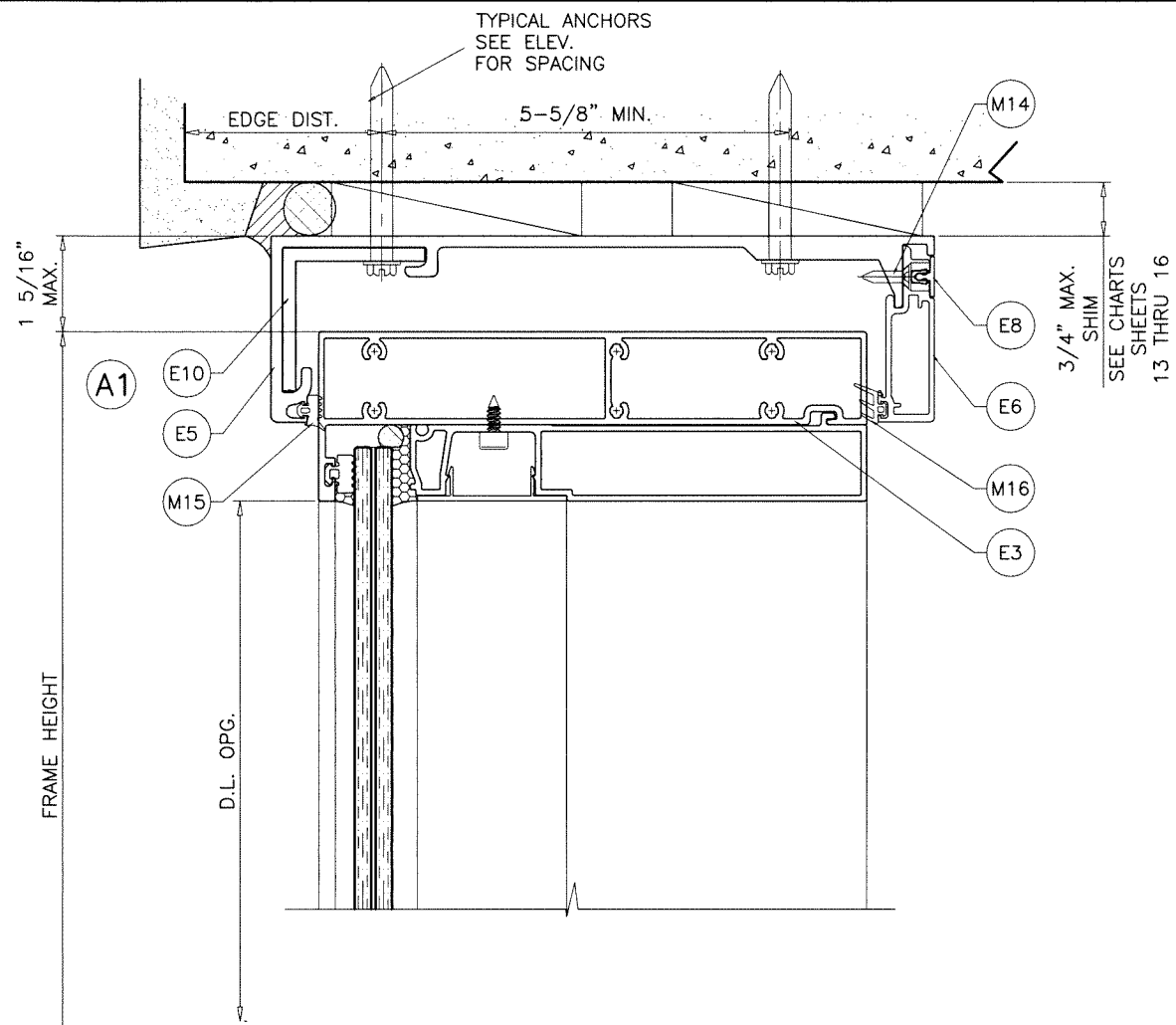
FL #29515

AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\19-22F-ES

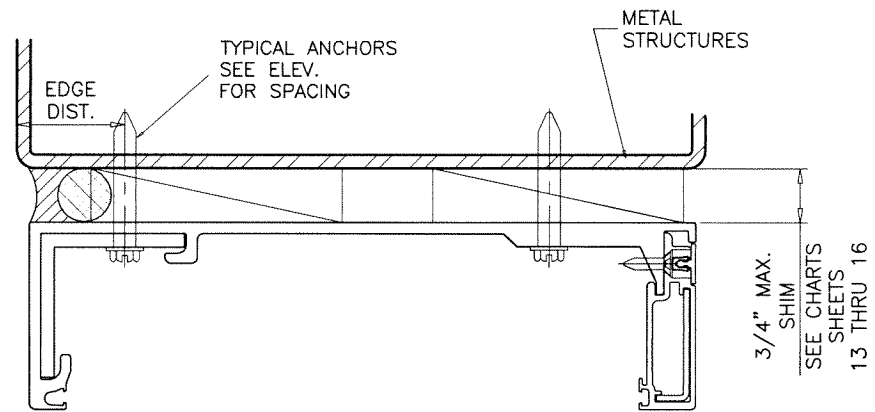
ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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

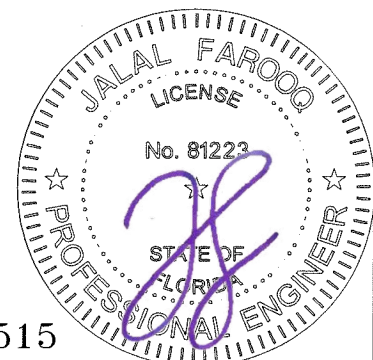
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drawing no.	19-22F	sheet	17 of 22



WINDOW WALL SYSTEM SHOWN WITH LAMINATED GLASS ONLY
 SYSTEM DETAILS WITH INSULATED LAMINATED GLASS SEE SHEET 4
 SYSTEM DETAILS WITH DOUBLE LAMINATED GLASS SEE SHEET 5

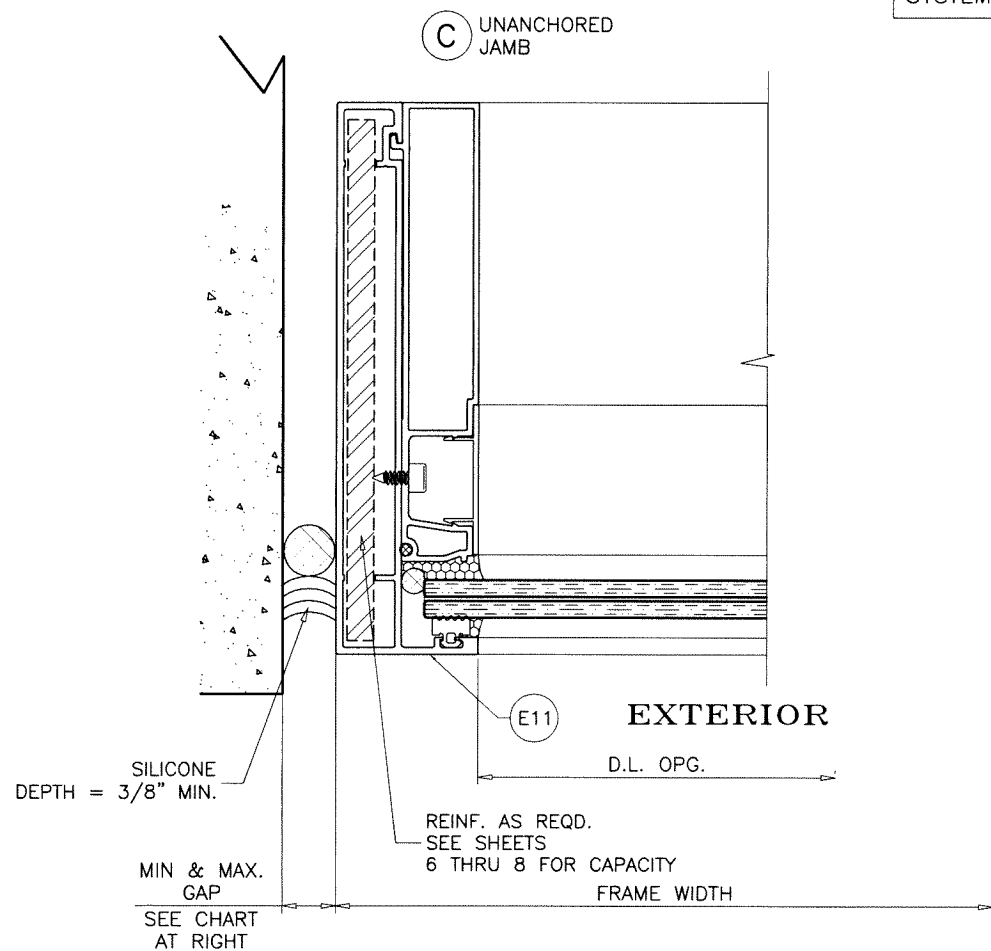
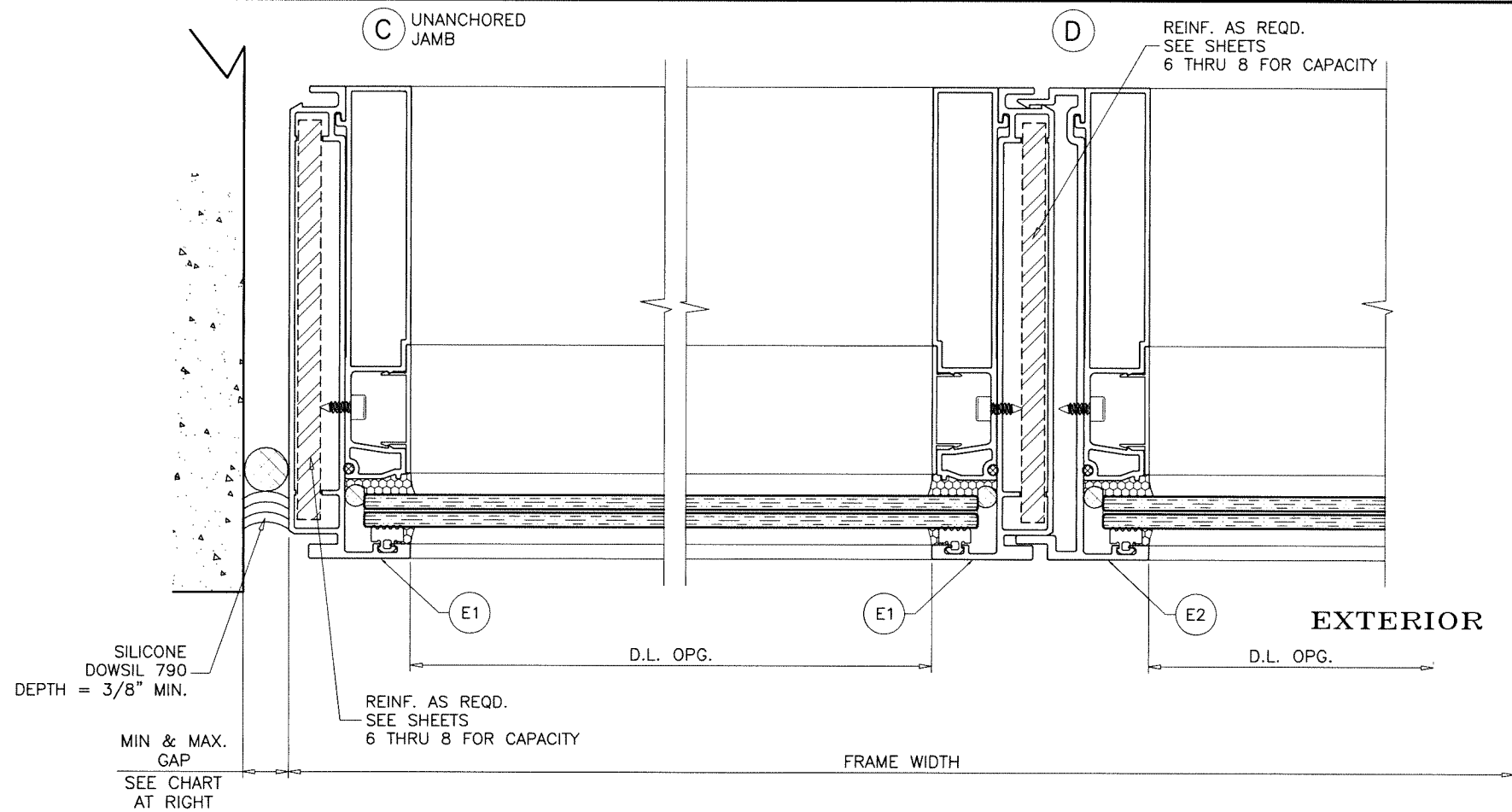


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AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 TEL. (305) 264-8100 FAX. (305) 262-6978 (C.A.N. 3538)		COMP-ANL 19-22F-ES																					
ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)																							
E.S. WINDOWS, LLC 3550 N.W. 49 STREET MIAMI, FL. 33142 TEL. (305) 638-5151 FAX. (305) 638-5158																							
date: 03-27-19 scale: 3/8" = 1" dr. by: TARIQ chk. by:		revisions: <table border="1"> <thead> <tr> <th>no</th> <th>date</th> <th>by</th> <th>description</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		no	date	by	description																
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drawing no. 19-22F		sheet 18 of 22																					



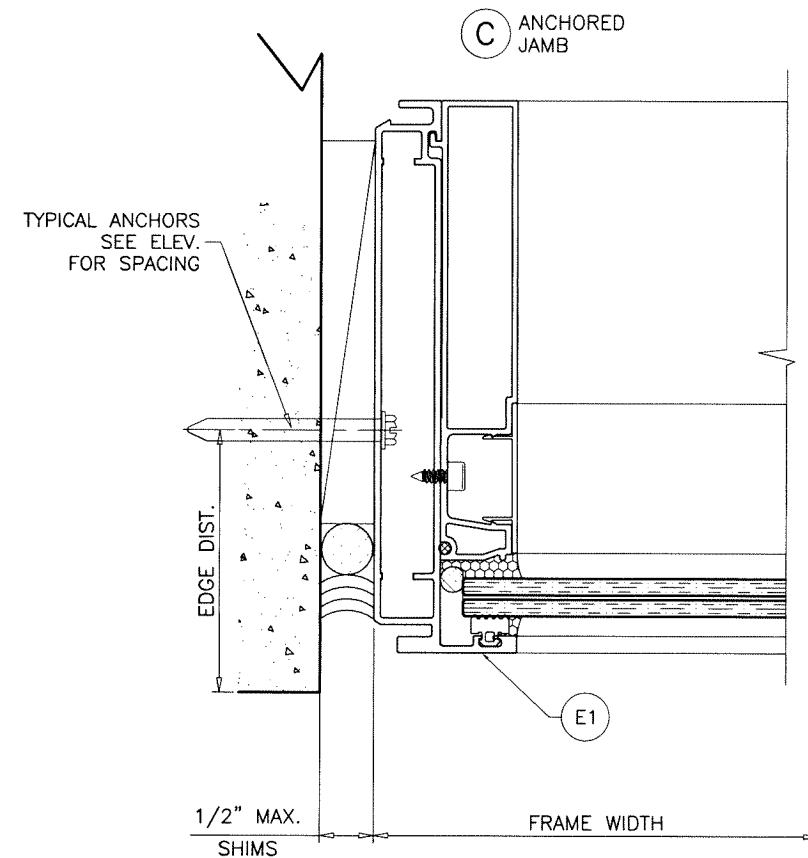
WINDOW WALL SYSTEM SHOWN WITH LAMINATED GLASS ONLY
 SYSTEM DETAILS WITH INSULATED LAMINATED GLASS SEE SHEET 4
 SYSTEM DETAILS WITH DOUBLE LAMINATED GLASS SEE SHEET 5

GAPS FOR UNANCHORED JAMBS				
MAX. FRAME HEIGHT	DOWSIL 790		DOWSIL 795	
	MIN.	MAX.	MIN.	MAX.
96"	5/16"	3/4"	1/2"	3/4"
102"	3/8"	3/4"	9/16"	3/4"
114"	3/8"	3/4"	5/8"	3/4"
124"	7/16"	3/4"	5/8"	3/4"
132"	7/16"	3/4"	11/16"	3/4"
138"	1/2"	3/4"	11/16"	3/4"
156"	1/2"	3/4"	-	-

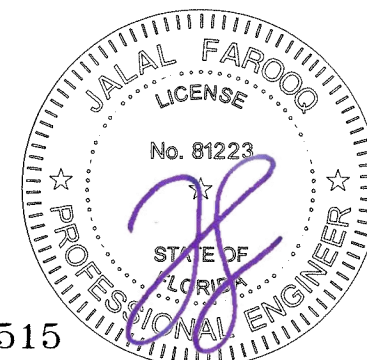
NOTE:
 MAX. MOVEMENT CONSIDERED=100% STRETCH.
 PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION MANUAL FOR COMPATABILITY OF SEALANT TO SUBSTRATE & WINDOW WALL MATERIAL/FINISH AND COMPLIANCE FOR WARRANTY.
 REFER TO ACI-117-10 FOR CONSTRUCTION TOLERANCES.

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.



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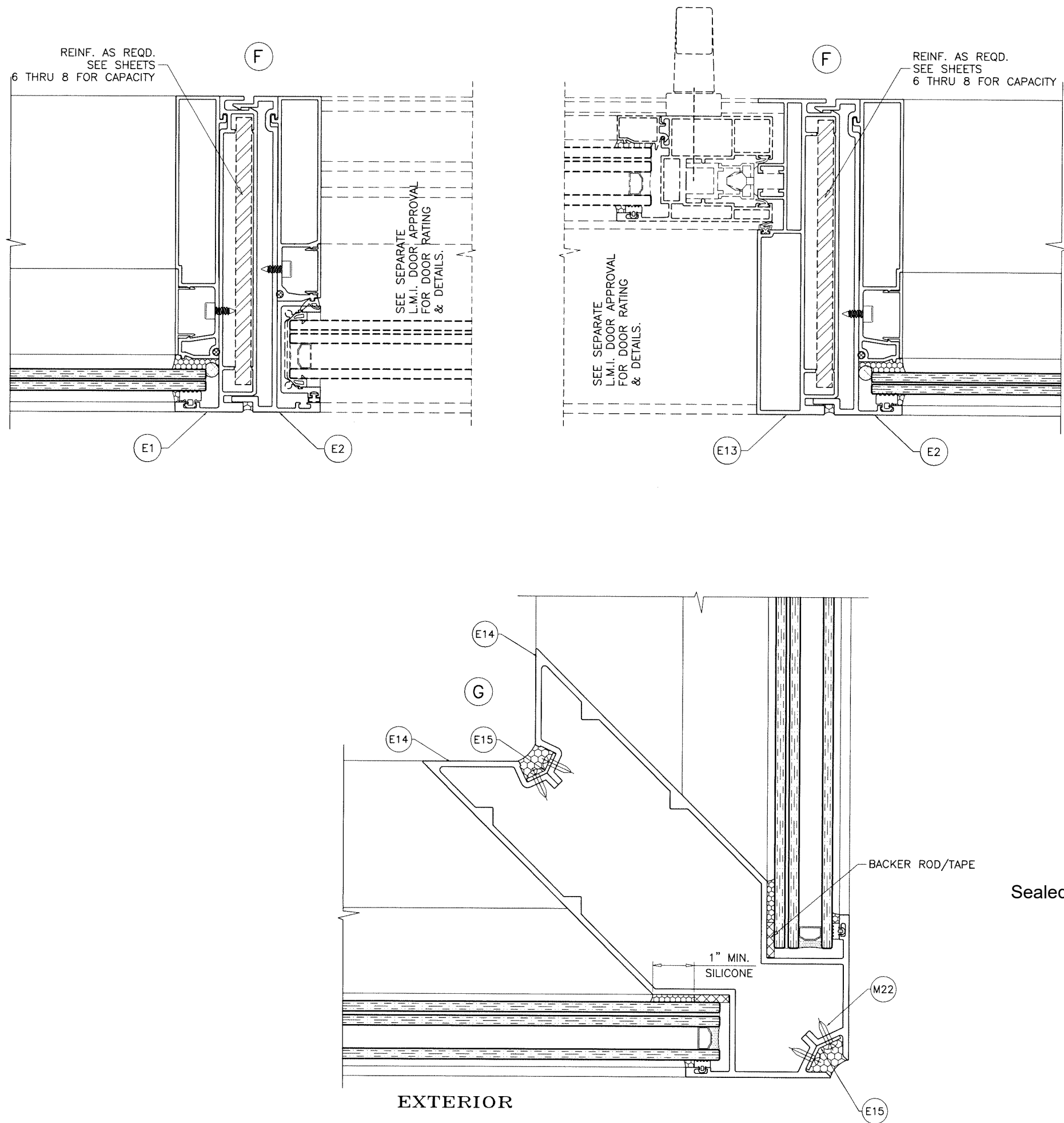


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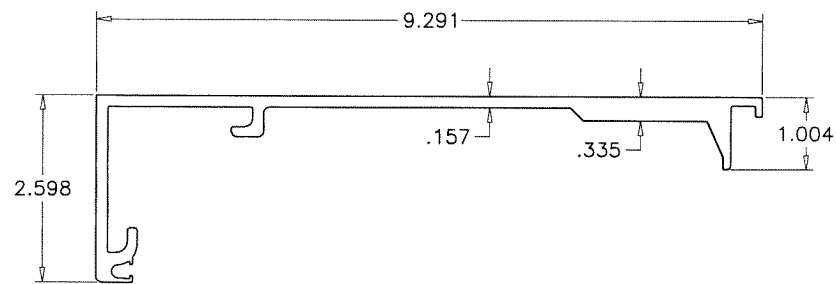
ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)

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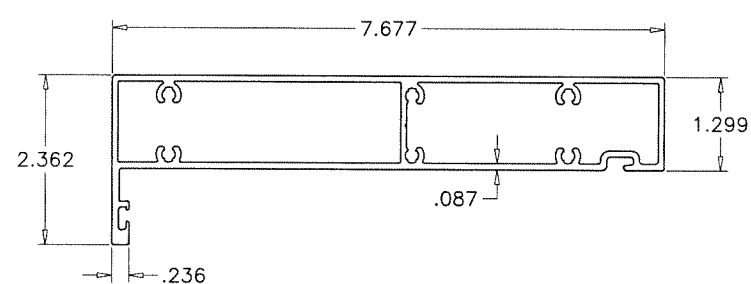
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sheet 20 of 22			

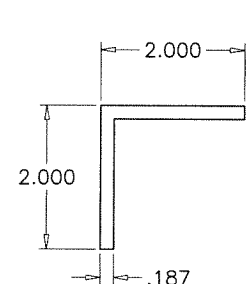
FL #29515



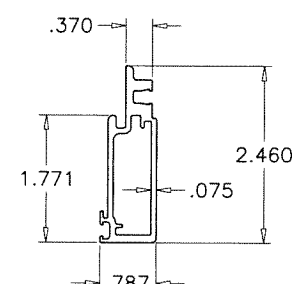
E5 HEAD RECEPTOR



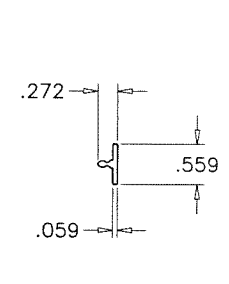
E3 TOP AND BOTTOM FRAME



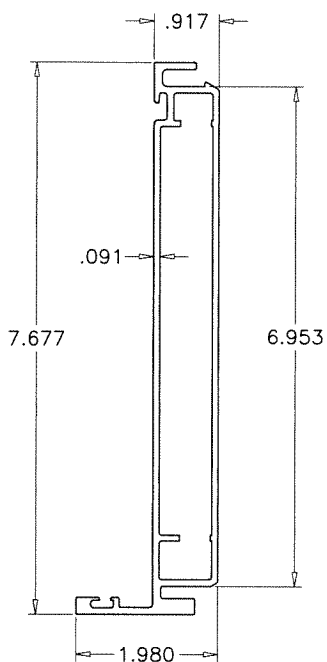
E10 RECEPTOR REINF.



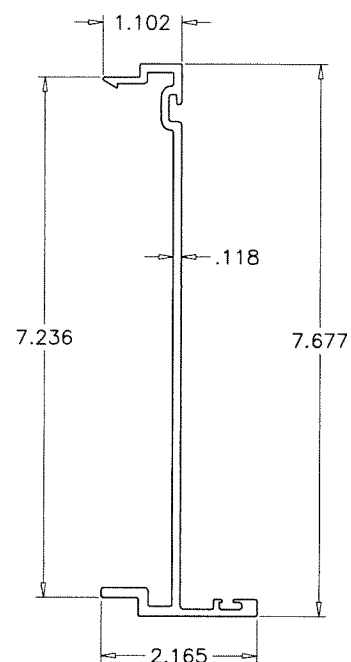
E6 RECEPTOR INSERT



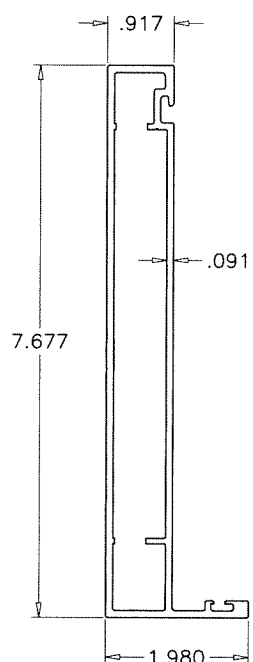
E8 INSERT COVER



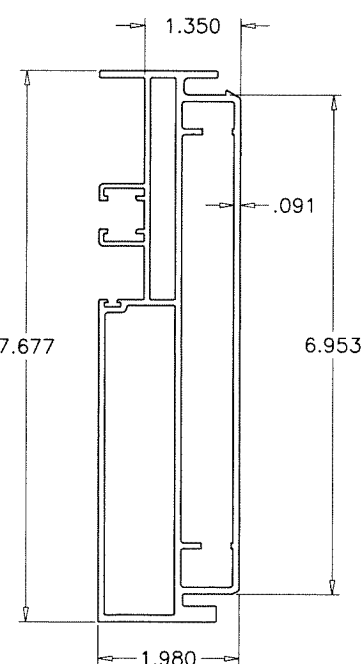
E1 FEMALE MULLION



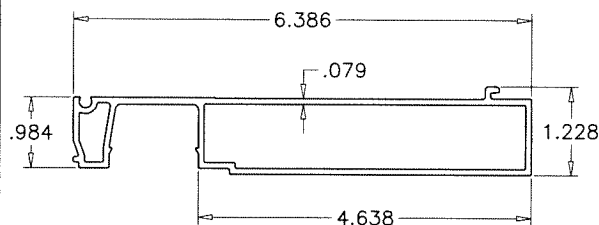
E2 MALE MULLION



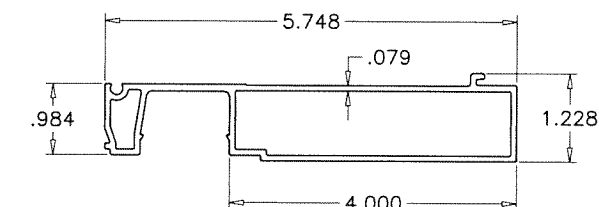
E11 JAMB CLOSED



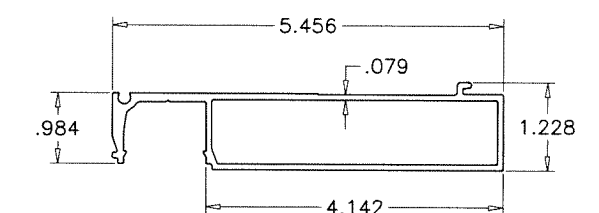
E13 SGD FEMALE MULLION



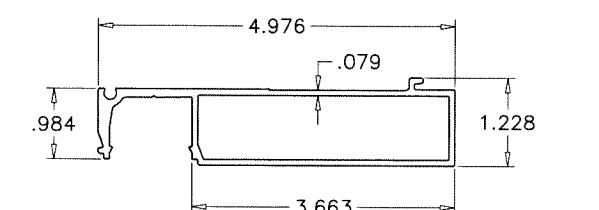
E7 GLASS STOP (LAM. GLASS)



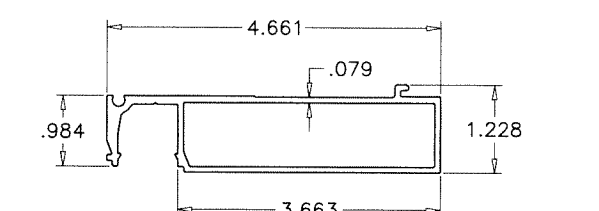
E7A GLASS STOP (LAM. GLASS) (INSUL. LAM. GLASS)



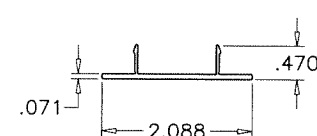
E7B GLASS STOP (DOUBLE LAM. INSUL. GLASS)



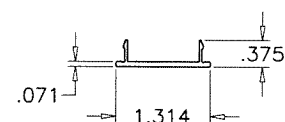
E7C GLASS STOP (INSUL. LAM. GLASS)



E7D GLASS STOP (DOUBLE LAM. INSUL. GLASS)

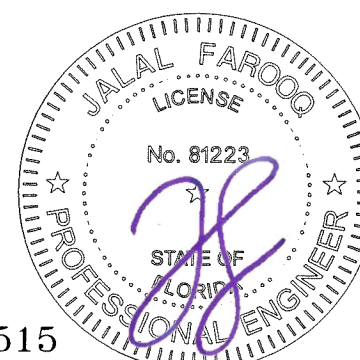


E9 GLASS STOP COVER (LAM. GLASS) (INSUL. LAM. GLASS)



E9B GLASS STOP COVER (DOUBLE LAM. INSUL. GLASS)

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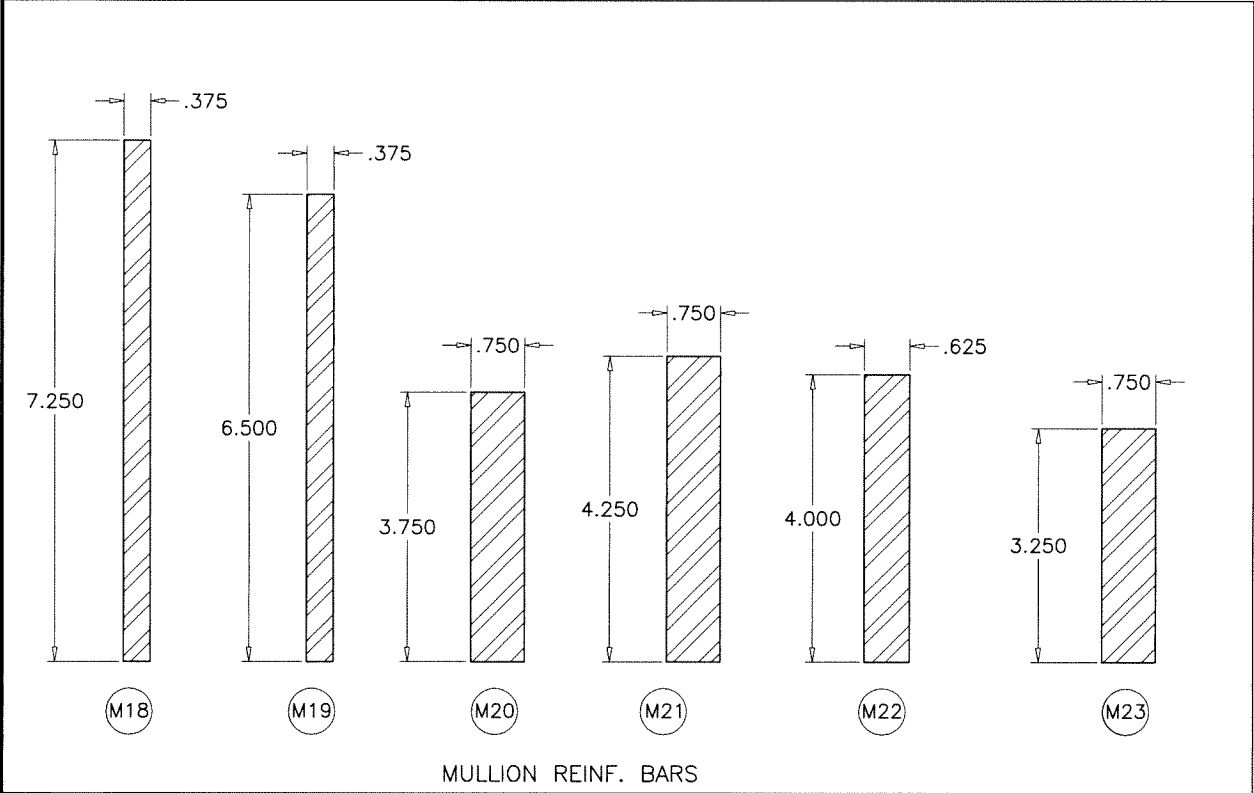
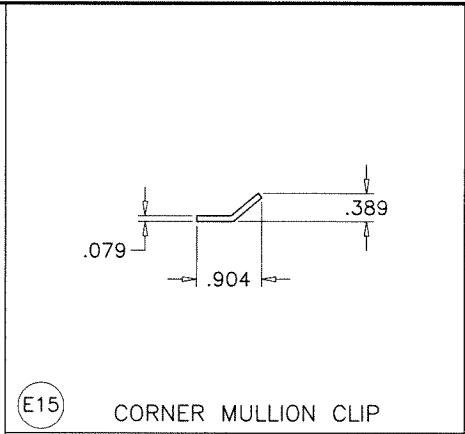
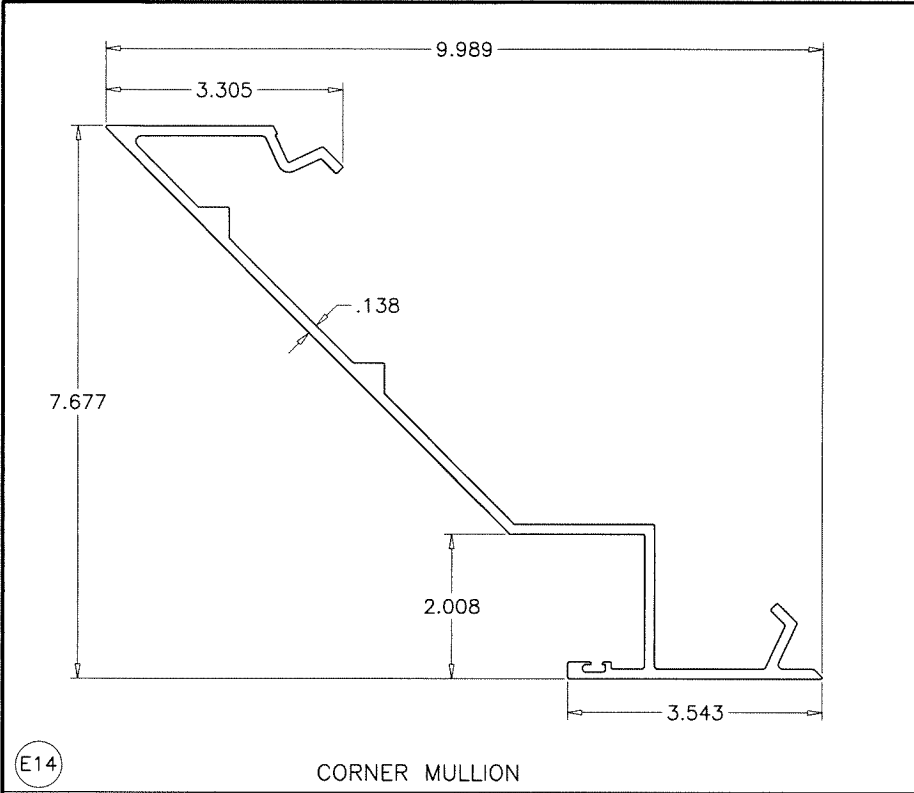
FL #29515

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AL-FAROOQ CORPORATION
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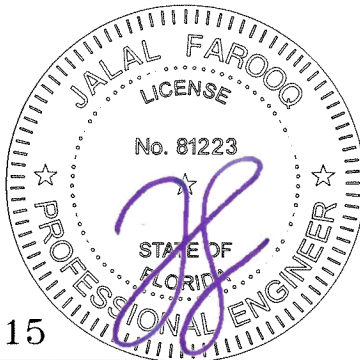
ES-LS7035 ALUM WINDOW WALL SYS. (L.M.I.)
E.S. WINDOWS, LLC
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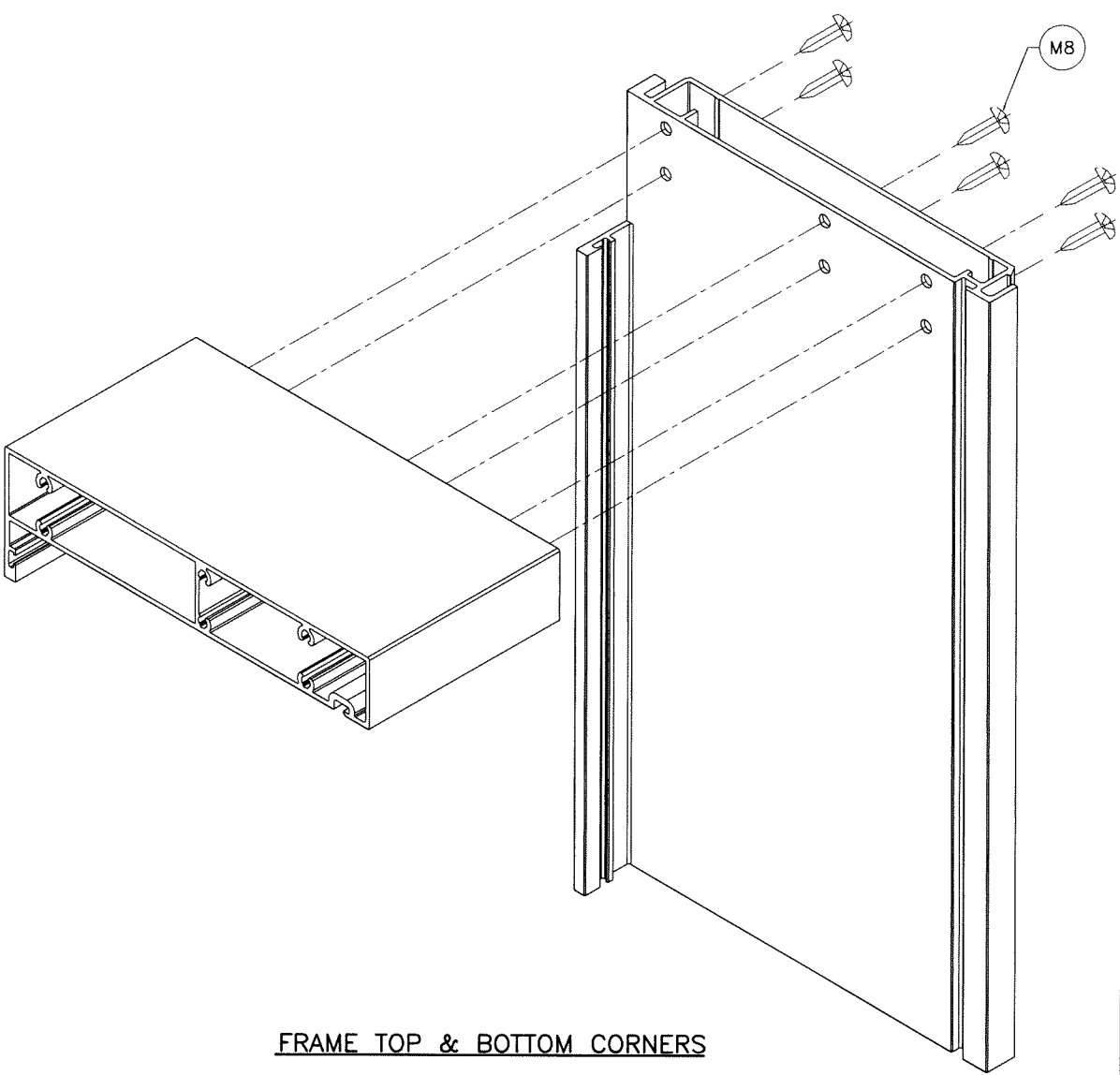
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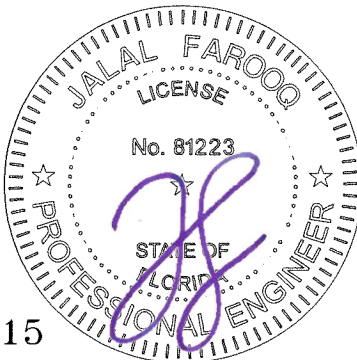
drawing no.
19-22F
sheet 21.1 of 22

ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-LS7035-001	AS REQD.	FEMALE MULLION	6063-T6	-
E2	ES-LS7035-002	AS REQD.	MALE MULLION	6063-T6	-
E3	ES-LS7035-003	AS REQD.	TOP AND BOTTOM FRAME	6063-T6	-
E5	ES-LS7035-005	AS REQD.	HEAD RECEPTOR	6063-T6	-
E6	ES-LS7035-009	AS REQD.	HEAD RECEPTOR INSERT	6063-T6	-
E7	ES-LS7035-064	AS REQD.	GLASS STOP (LAM. GLASS)	6063-T6	-
E7A	ES-LS7035-016	AS REQD.	GLASS STOP (LAM. GLASS) (INSUL. LAM. GLASS)	6063-T6	-
E7B	ES-LS7035-065	AS REQD.	GLASS STOP (DOUBLE INSUL. LAM. GLASS)	6063-T6	-
E7C	ES-LS7035-048	AS REQD.	GLASS STOP (INSUL. LAM. GLASS)	6063-T6	-
E7D	ES-LS7035-054	AS REQD.	GLASS STOP (DOUBLE INSUL. LAM. GLASS)	6063-T6	-
E8	ES-LS7035-019	AS REQD.	HEAD RECEPTOR INSERT COVER	6063-T6	-
E9	ES-LS7035-020	AS REQD.	GLASS STOP COVER	6063-T6	-
E9B	ES-LS7035-047	AS REQD.	GLASS STOP COVER	6063-T6	-
E10	ALU-A-028	AS REQD.	RECEPTOR REINF. AT MULLION LOCATION	6063-T6	-
E11	ES-LS7035-033	AS REQD.	JAMB CLOSED	6063-T6	-
E13	ES-LS7035-007	AS REQD.	SGD FEMALE MULLION	6063-T6	-
E14	ES-LS7035-060	AS REQD.	CORNER MULLION	6063-T6	-
E15	-	AS REQD.	CORNER MULLION CLIP	6063-T6	-
M3	ES-LS7035-G07 S	AS REQD.	INTERIOR GLAZING GASKET (LAM. GLASS)	SILICONE	DUROMETER 65±5 SHORE A
M3A	ES-LS7035-G02 S	AS REQD.	INTERIOR GLAZING GASKET (INSUL. LAM. GLASS)	SILICONE	DUROMETER 65±5 SHORE A
M3B	ES-LS7035-G06 S	AS REQD.	INTERIOR GLAZING GASKET (DOUBLE LAM. GLASS)	SILICONE	DUROMETER 65±5 SHORE A
M4	203087	AS REQD.	COVER	PLASTIC	-
M8	#10 X 1"	AS REQD.	FRAME ASSEMBLY SCREWS	ST. STEEL	FH SMS
M9	M4.8 X 13	AS REQD.	GLASS STOP AT FIXED PANEL SCREWS	ST. STEEL	HEX HEAD
M10	ES-LS7035-G01 S	AS REQD.	EXTERIOR GLAZING GASKET	SILICONE	DUROMETER 65±5 SHORE A
M12	ES-7000-B01A	AS REQD.	SETTING BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M12A	GW7000-B01 S	AS REQD.	SETTING BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M13	ES-4520-B02A	AS REQD.	SIDE BLOCK	SILICONE	DUROMETER 80±5 SHORE A
M14	M4.8 X 16	AS REQD.	RECEPTOR INSERT FASTENERS	ST. STEEL	FH SMS
M15	224267	AS REQD.	RECEPTOR EXTERIOR GASKET	SILICONE	DUROMETER 65±5 SHORE A
M16	224316	AS REQD.	RECEPTOR INTERIOR GASKET	SILICONE	DUROMETER 65±5 SHORE A
M17	V2208	AS REQD.	T-BOND	-	-
M18	-	-	MULLION REINF. BAR (3/8" X 7-1/4")	STEEL	A36, Fu MIN. = 58 KSI
M19	-	-	MULLION REINF. BAR (3/8" X 6-1/2")	STEEL	A36, Fu MIN. = 58 KSI
M20	-	-	MULLION REINF. BAR (1/2" X 3-3/4")	STEEL	A36, Fu MIN. = 58 KSI
M21	-	-	MULLION REINF. BAR (1/2" X 4-1/4")	STEEL	A36, Fu MIN. = 58 KSI
M22	#12 X 1/2"	AS REQD.	MULL CLIP FASTENERS, AT 6" FROM ENDS & 24" O.C.	ST. STEEL	PH SMS



FRAME TOP & BOTTOM CORNERS

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FL #29515



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