

AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

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

FL 25959 Date: 01/25/18

Detailed Product Description:

Manufacturer: MR. GLASS DOORS AND WINDOWS INC.

Manufacturer Address: 8120 NW 84TH STREET, MEDLEY, FL 33166

Model Name: SERIES MG-1100 ALUMINUM SLIDING GLASS DOOR

Maximum Panel Width: <u>60"</u>

Maximum Frame Height: <u>120"</u>

Maximum Load: +80 PSF, -100 PSF (Small Missile Impact)

Installation Drawings # 18-16F

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

The above maximum parameters de not essur simultaneously								
The above maximum parameters do not occur simultaneously. See installation drawings for combination of span vs loads.								
· · · · · · · · · · · · · · · · · · ·								
Comparative analysis used <u>X</u> Yes <u>No</u>								
Mandatory Tests (Tested in accordance with AAMA 101/I.S.2/NAFS/TAS-202)								
TEST	DESCRIPTION	TEST LOCATION	TEST REPORT	TEST	Test			
			DATE	REPORT #	Sealed by			
ASTM E283	Air Infiltration	Fenestration Testing	10/23/2015	8595	Idalmis Ortega, P.E.			
	Leakage	Laboratory	10/25/2015	8599				
			10/25/2015	8594				
		Hurricane Engineering	11/28/2017	HETI-17-5078	Rafael E.Droz-Seda, P.E.			
		& Testing, Inc.	, -, -	HETI-17-5084				
ASTM E331	Water	Fenestration Testing	10/23/2015	8595	Idalmis Ortega, P.E.			
OR ASTM 547 &	Penetration	Laboratory		8599				
TAS 202			10/25/2015	8594				
		Hurricane Engineering	11/28/2017	HETI-17-5078	Rafael E.Droz-Seda, P.E.			
		& Testing, Inc.	11/28/2017	HETI-17-5078	Ralael E.Druz-Seud, P.E.			
ASTM E330	Uniform Static	Fenestration Testing	10/23/2015	8595	Idalmis Ortega, P.E.			
& TAS 202	Air Press.	Laboratory	10/ 20/ 2010	8599				
G 11 10 202	7 11 1 1 6 5 5 1	Laboratory	10/25/2015	8594				
		Hurricane Engineering						
		& Testing, Inc.	11/28/2017	HETI-17-5078 HETI-17-5084	Rafael E.Droz-Seda, P.E.			
ASTM F842	Forced Entry	Fonostration Tosting	10/23/2015	8595	Idalmis Ortega, P.E.			
A311VI F042	Forced Entry	Fenestration Testing Laboratory	10/23/2013	8599	idamiis Ortega, r.L.			
		Laboratory	10/25/2015	8594				
		Hurricane Engineering						
		& Testing, Inc.	11/28/2017	HETI-17-5078	Rafael E.Droz-Seda, P.E.			
				HETI-17-5084				

	Supplemental Tests (Tested in accordance with TAS-201 and TAS-203)							
TEST	DESCRIPTION	TEST LO	CATION	TEST REPORT	TEST	Test		
				DATE	REPORT #	Sealed by		
FBC 1626.3	Small Missile	Fenestratio	on Testing	10/23/2015	8595	Idalmis Ortega, P.E.		
(TAS 201 & 203)	Impact & Cyclic	Labor	atory		8599			
				10/25/2015	8594			
		Hurricane Engineering & Testing, Inc.		11/28/2017	HETI-17-5079	Rafael E.Droz-Seda, P.E.		
				11/20/2017	HETI-17-5085	Raidel L.DIOZ-Seua, F.L.		
	Under the limitations of the attached installation drawings, to the best of my knowledge and ability, the above product conforms to the requirements of the 2017 Florida Building Code.							
Evaluation Repo	Evaluation Report Engineer:							
			No 70592					
Javad Ahmad	Javad Ahmad PE # 70592		P. STATE OF					
Al-Farooq Corporation EB # 3538			Sonal Ender Sealed: 1/26/2018					



AL-FAROOQ CORPORATION

CONSULTING ENGINEERS & PRODUCT DEVELOPMENT

January 26, 2018

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

Ref: Mr. Glass Doors & Windows, Inc. Series MG-1100 Aluminum Sliding Glass Door (L.M.I. and S.M.I.) Certificate of Independence

Dear Sirs,

As the design engineer retained by Mr. Glass Doors & Windows, Inc. on the product referenced above, I do hereby declare that I do not have and will not have any financial interest in any company manufacturing or distributing the above referenced product, nor do I have or will have any financial interest with any other entity involved in the approval process of the product.

No 70592 D. STATE OF NO RID. OF SONAL ENGINE Sealed: 1/26/2018

Javad Ahmad, P.E. Chief Engineer

Sincerely,

								LOAD CAPAC		
					ANCHOR	TYPE	ANCHORS	5 'A', 'B',		
						SHIM S	PACE	3/8" SHIM	1/2" M	AX. SHI
	DOOR DES							6 ANCHORS	6 ANCHORS	8 ANCH
		GLASS	TYPES 'C'	, 'C1', 'D'	& 'D1'		DOOR FRAME	AT MTG. STILE ENDS	AT MTG. STILE ENDS	AT MT STILE E
AVERAGE PANEL WIDTH	DOOR FRAME HEIGHT	STD. AS	STRAGAL	REINF. A	STRAGAL	PANEL WIDTH	1	EXT. (+)	EXT. (+)	EXT. (
INCHES	INCHES	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	INCHES	INCHES	INT. (-)	INT. (-)	INT. (
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42	82-7/8	80.0	100.0	80.0	100.0	42	82-7/8	100.0	100.0	100.
48	02-//0	80.0	100.0	80.0	100.0	48	01 //0	100.0	100.0	100.
54		71.1	88.9	80.0	88.9	54		100.0	100.0	100.
60		64.0	80.0	64.0	80.0	60		100.0	100.0	100.
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42		80.0	100.0	80.0	100.0	42	84	100.0	100.0	100.
48	84	80.0	100.0	80.0	100.0	48	04	100.0	100.0	100.
54		71.1	88.9	71.1	88.9	54		100.0	100.0	100.
60		64.0	80.0	64.0	80.0	60		100.0	100.0	100.
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42	00	80.0	100.0	80.0	100.0	42	90	100.0	100.0	100.
48	90	80.0	100.0	80.0	100.0	48		100.0	100.0	100.
54		71.1	88.9	71.1	88.9	54		100.0	100.0	100.
60			-	64.0	80.0	60		100.0	100.0	100.
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42	96	80.0	100.0	80.0	100.0	42	96	100.0	100.0	100.
48	90	80.0	100.0	80.0	100.0	48	50	100.0	100.0	100.
54		71.1	88.9	71.1	88.9	54		100.0	98.7	100.
60		-	-	64.0	80.0	60		100.0	88.8	100.
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42		80.0	100.0	80.0	100.0	42		100.0	100.0	100.
48	102	80.0	100.0	80.0	100.0	48		100.0	100.0	100.
50	102	-	-	76.8	96.0	50	102	100.0	100.0	100.
52		-	-	73.8	92.3	52		100.0	96.4	100.
54		-	_	71.1	88.9	54		100.0	92.9	100.
56		-	-	68.6	85.7	56		100.0	89.5	100.
30		80.0	100.0	80.0	100.0	30		100.0	100.0	100.
36		80.0	100.0	80.0	100.0	36		100.0	100.0	100.
42	100	80.0	100.0	80.0	100.0	42	108	100.0	100.0	100.
48	108	80.0	100.0	80.0	100.0	48	100	100.0	98.7	100.
50		-	-	76.8	96.0	50		100.0	94.7	100.
52		-	-	73.8	92.3	52		100.0	91.1	100.
30		-	-	80.0	100.0	30		100.0	100.0	100.
36		-	-	80.0	100.0	36		100.0	100.0	100.
42	114	-		80.0	100.0	42	114	100.0	100.0	100.
48		-	-	80.0	100.0	48		100.0	93.5	100.
50				76.8	96.0	50		100.0	89.7	100.
30		-	-	80.0	100.0	30		100.0	100.0	100.
36	100		-	80.0	100.0	36	120	100.0	100.0	100.
42	120	-	_	80.0	100.0	42	120	100.0	100.0	100.
48			_	80.0	100.0	48		100.0	88.8	100.

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

INSTRUCT	
	ISE CHARTS AS FOLLOW
C	DETERMINE DESIGN WIND DN WIND VELOCITY, BLDC ISING APPLICABLE ASCE
STEP 2 D	ETERMINE DOOR CAPACI OR THE GLASS TYPE US
v	ISING CHARTS ON SHEE VITH DESIGN RATING MO N STEP 1 ABOVE.
STEP 4 T	HE LOWEST VALUE RESU HALL APPLY TO ENTIRE
<u>STEP 5</u>	EE SHEET 8 TO DETERN IMENSIONS FOR UNANC
F.B.C. APPRO	RS ARE RATED FOR SI OVED IMPACT RESISTA IS UP TO 30 FT. OF OT REQD. FOR INSTAL
	<u>100 (S.M.I.)</u> I SLIDING GLASS
THIS PRODUC REQUIREMENTS	T HAS BEEN DESIGNE S OF THE 2017 (6TH GH VELOCITY HURRICA
1BY OR 2BY DESIGNED AND	WOOD BUCKS & BUC INSTALLED ADEQUAT DING STRUCTURE.
AND INSTALLE	ALL BE CORROSION R D PER MANUF'S INST LL BE BEYOND WALL
A LOAD DURA	TION INCREASE IS US
) BE HIGH IMPACT, NO CLUDING BUT NOT LIM
COME INTO CO	ONTACT WITH OTHER I S OF THE 2017 FLOR
FOR A SITE S OF STRUCTURI WATER INFILTR CONDITIONS N	F APPROVAL IS GENEF PECIFIC PROJECT, i.e. E RECEIVING THIS PRO ATION RESISTANCE ET OT SHOWN IN THIS D EVIEWED BY BUILDING
IN ACCORDANC	R'S LABEL SHALL BE DE WITH SECTION 170 COMPLY WITH SECTION
A- CONTRACTOR TO BE RESPON INSTALLATION OF THIS PROL PROVIDED HE/SHE DOES NO ON THIS DOCUMENT.	OUCT BASED ON THIS PRO
B- THIS PRODUCT EVALUATION ALTERED BY ANY MEANS.	DOCUMENT WILL BE CONSI

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.

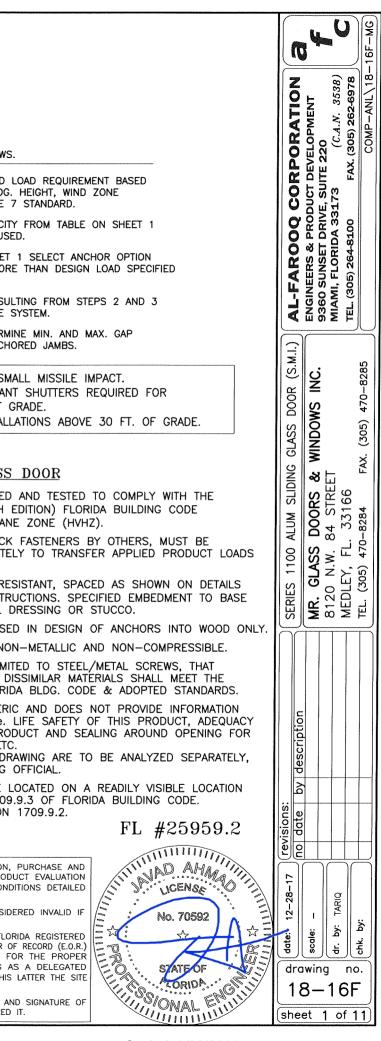
D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

LIMIT ALL EXTERIOR(+) LOADS TO +76.7 PSF FOR 2-13/16" SILL HEIGHTS SEE SHEET 5 FOR DETAILS

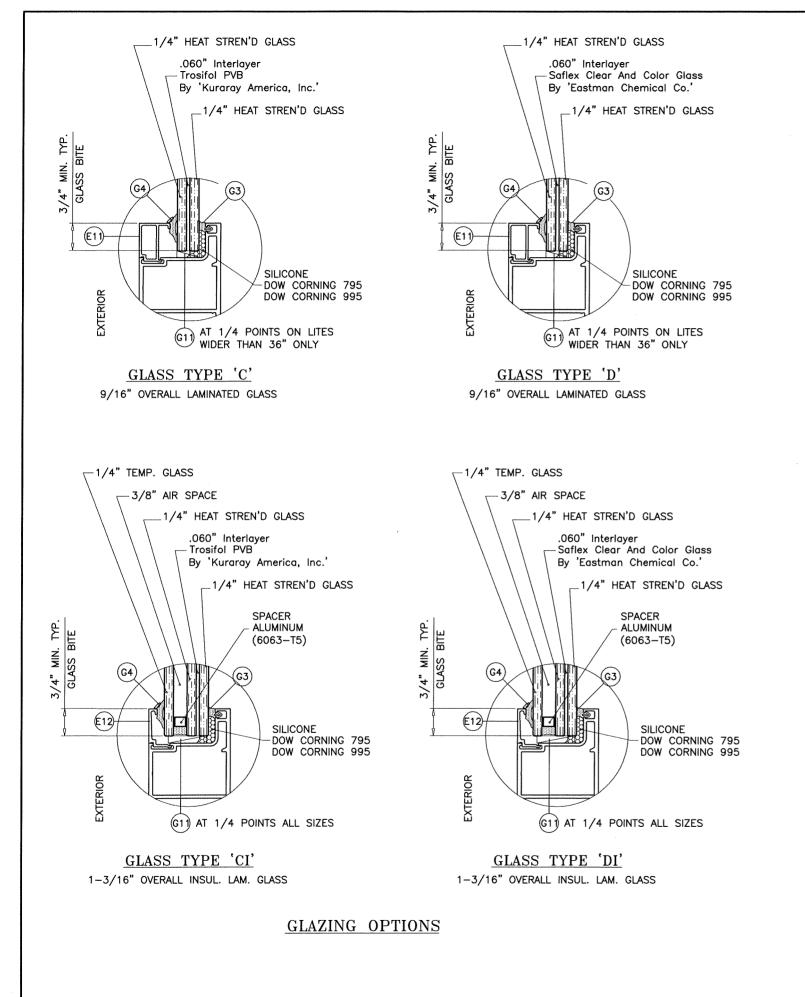
REINF. ASTRAGAL ONLY IN CONFIGURATIONS THAT REQUIRE ASTRAGAL.

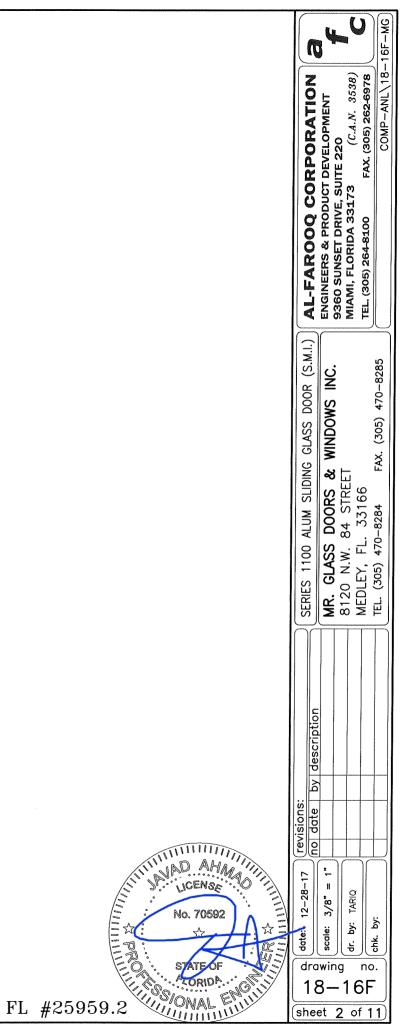
DOOR FRAME WIDTH AVERAGE PANEL WIDTH =

NUMBER OF PANELS

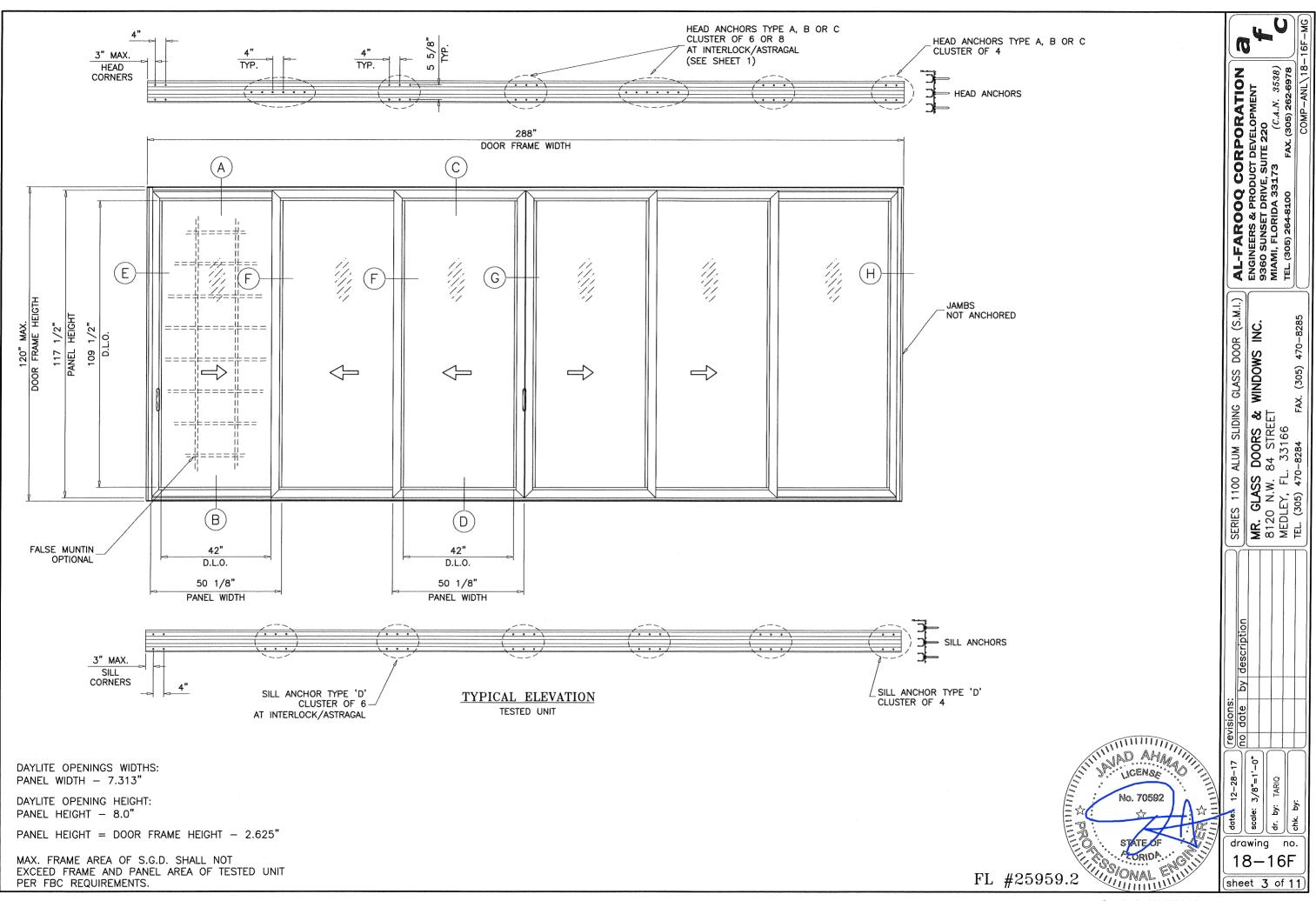


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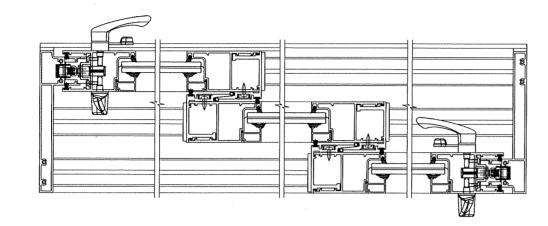
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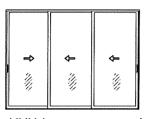


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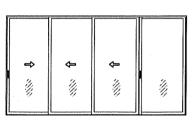
NOTE:

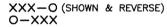
- SHEET 1.

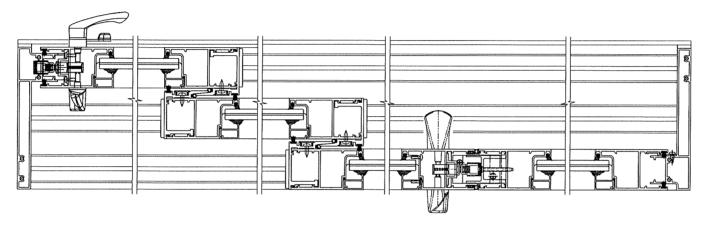


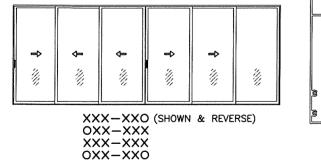


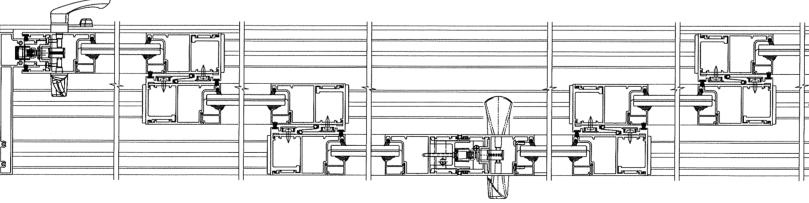
XXX (SHOWN & REVERSE) XXO OXX



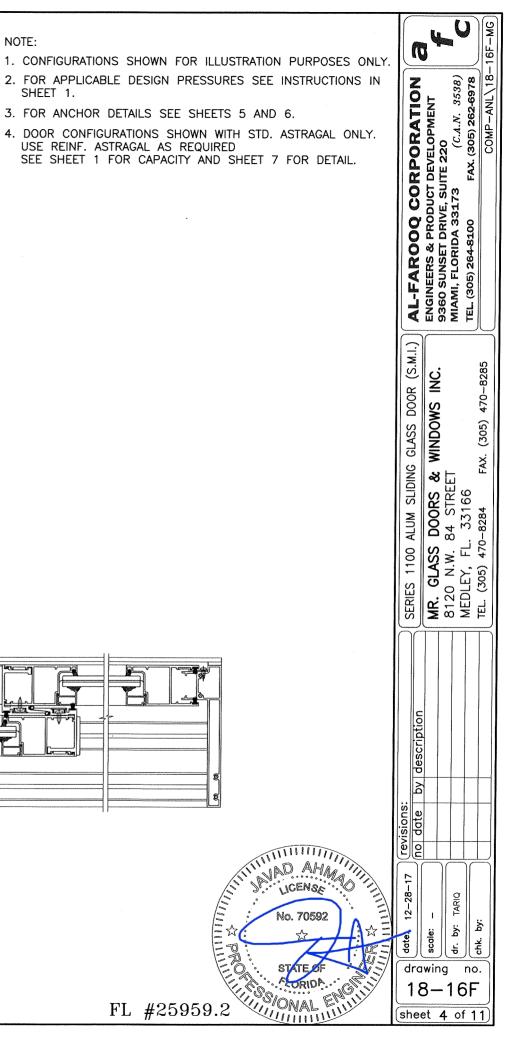




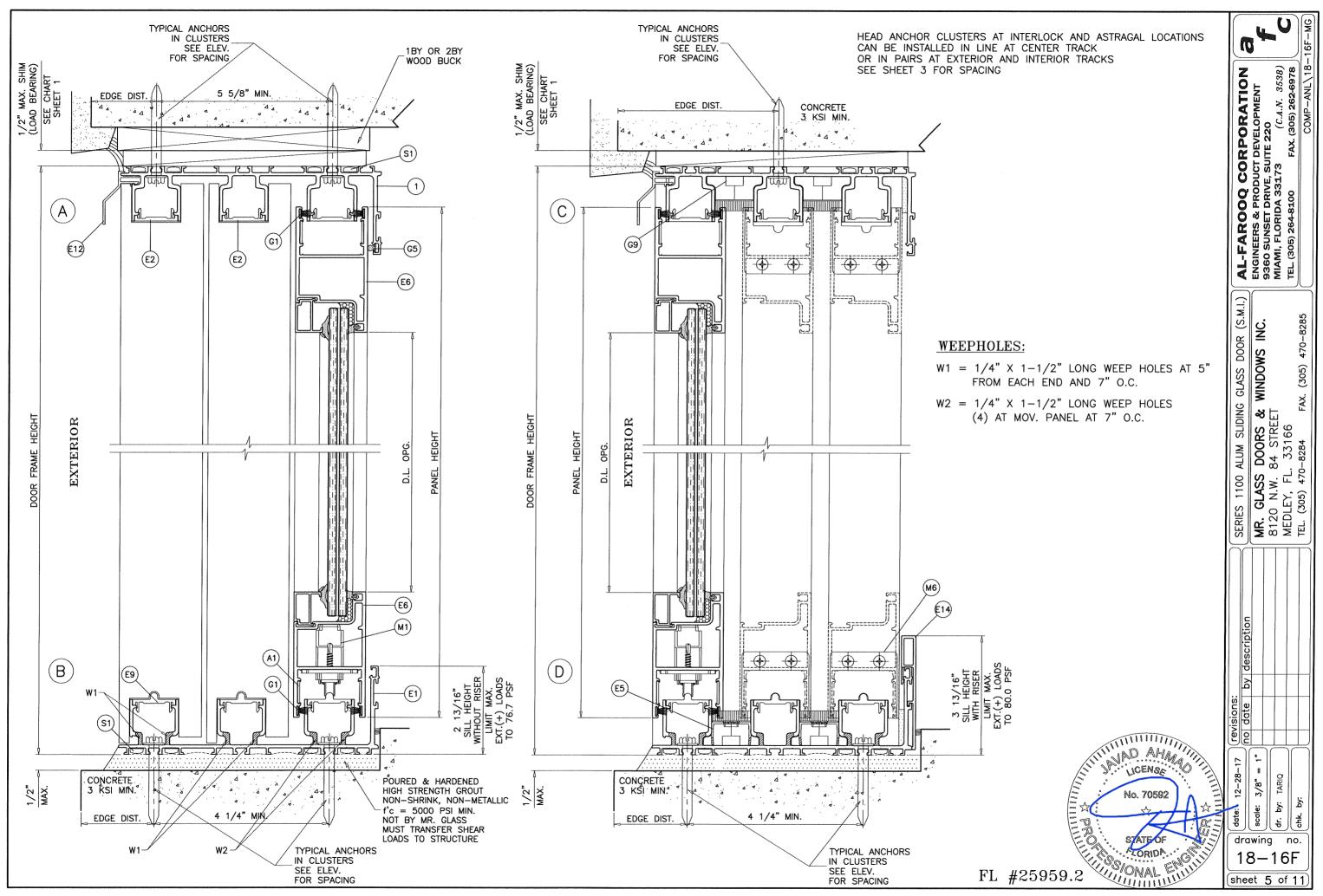




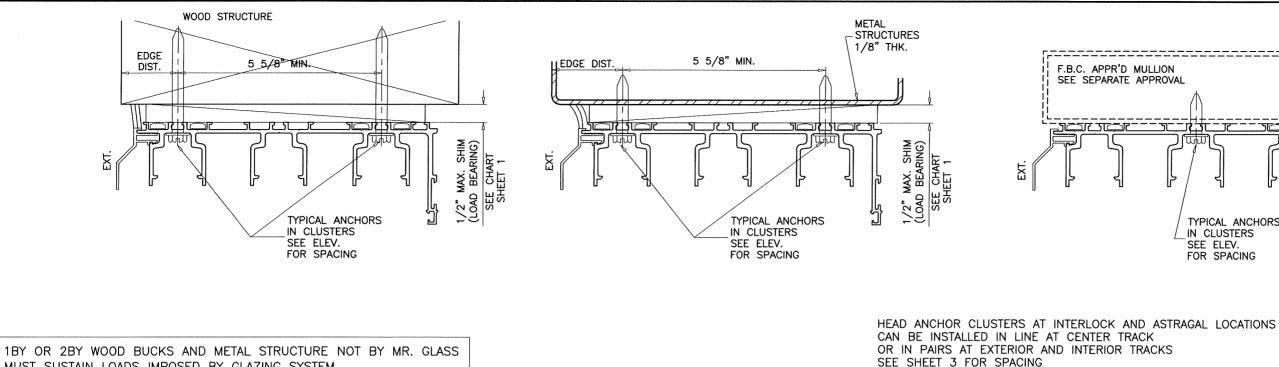
APPROVED CONFIGURATIONS



Sealed: 1/26/2018



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MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

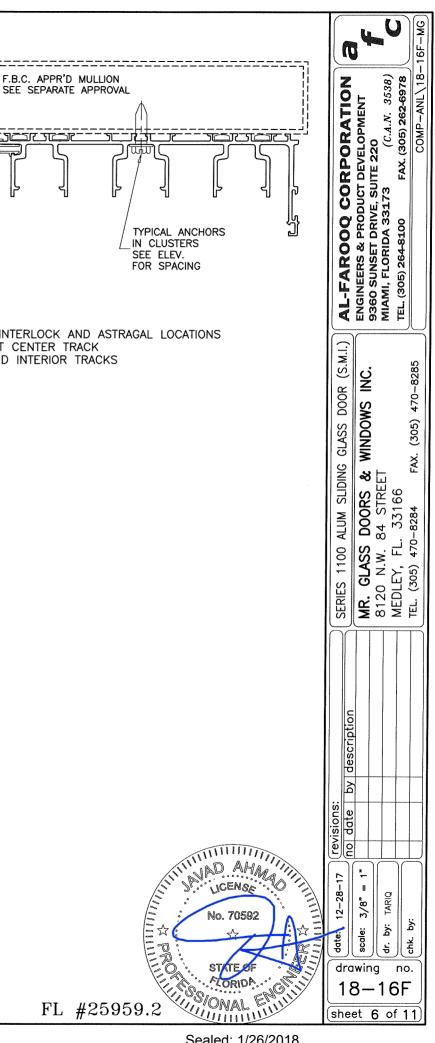
TYPE 'A'-	5/16" X 2-3/4" ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
	INTO WOOD STRUCTURES 1-7/8" MIN. PENETRATION INTO WOOD
	THRU 1BY OR 2BY BUCKS INTO CONCRETE
TYPE 'B'-	5/16" X 2-3/4" ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI) DIRECTLY INTO CONCRETE 1-3/4" MIN. EMBED
TYPE 'C'-	5/16" DIA. TEKS SELF DRILLING SCREWS (GRADE 5 CRS) INTO F.B.C. APPROVED MULLIONS OR INTO METAL STRUCTURES (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.) STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)
	- $ -$

TYPE 'D'- <u>5/16" DIA. ULTRACON BY 'ELCO'</u> (Fu=177 KSI, Fy=155 KSI) DIRECTLY INTO CONCRETE 1-3/4" MIN. EMBED

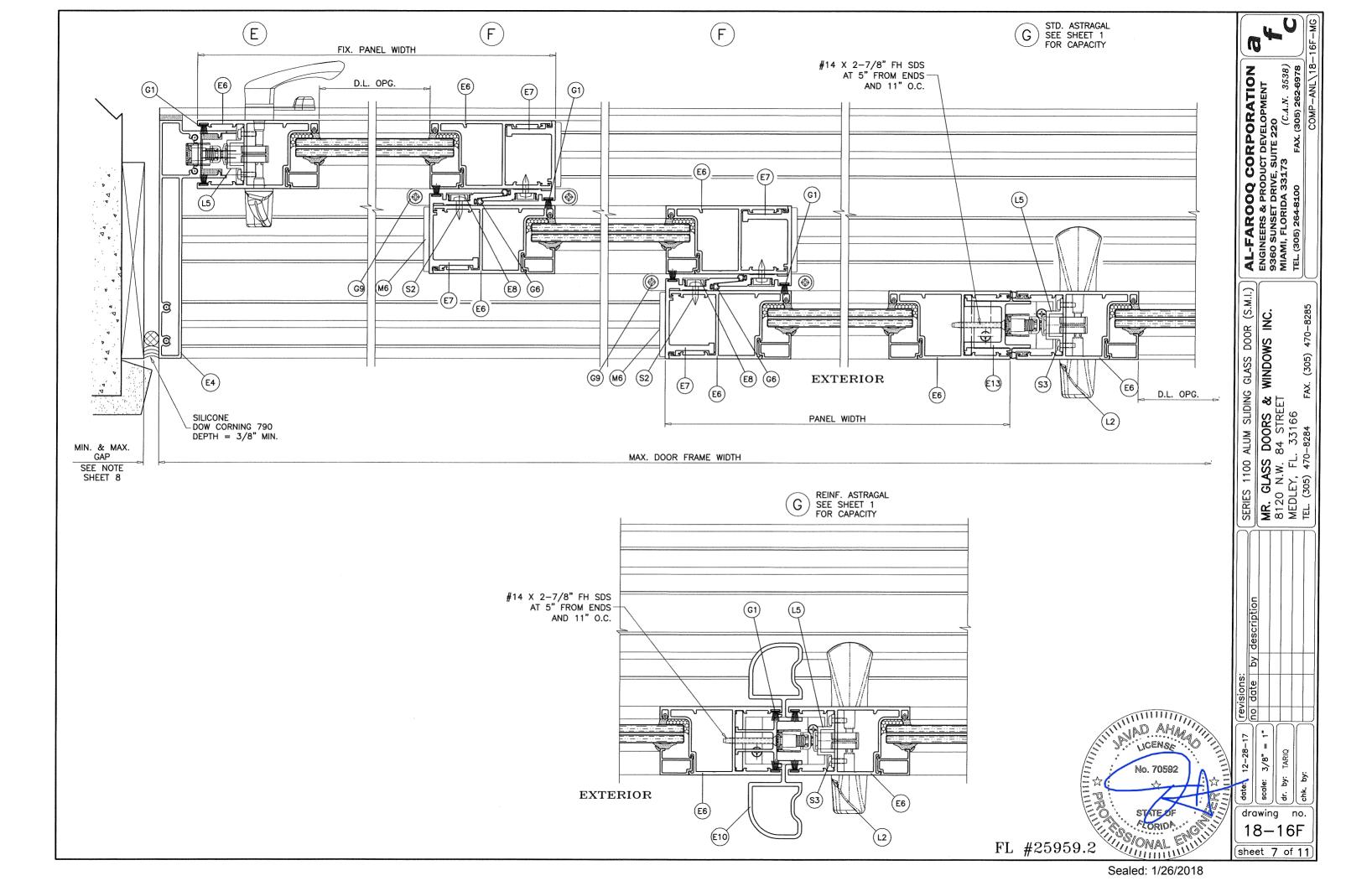
ANCHOR EDGE DISTANCES

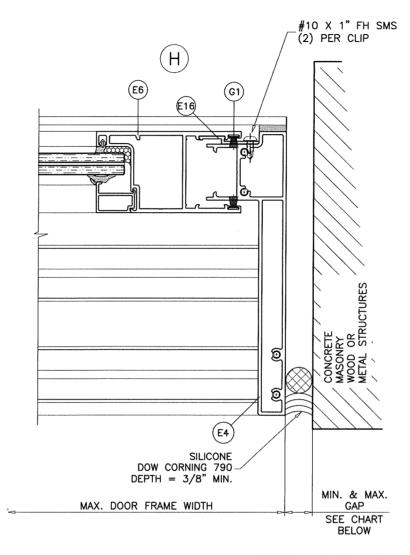
INTO CONCRETE AT HEAD/SILL = 1-3/4" MIN. INTO WOOD STRUCTURE = 1-1/4" MIN. INTO METAL STRUCTURE = $3/4^{"}$ MIN.

WOOD AT HEAD SG = 0.55 MIN. CONCRETE AT HEAD, SILL f'c = 3000 PSI MIN.



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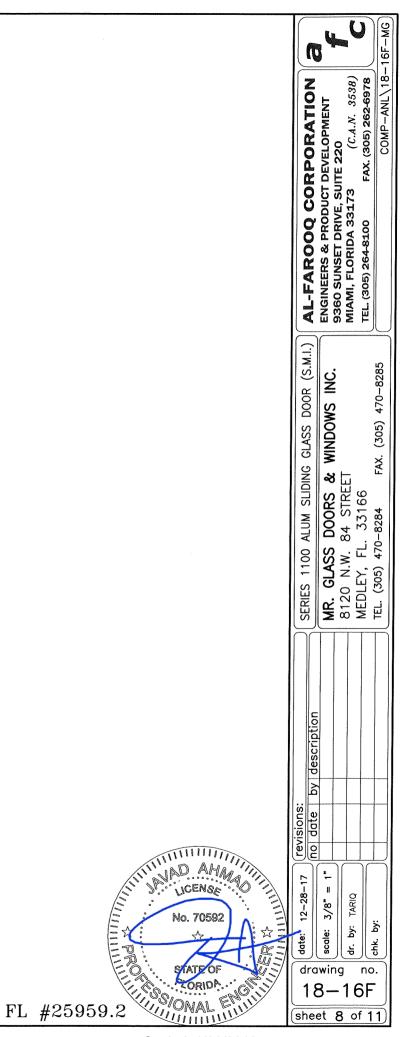
MAX. FRAME	GAP		
HEIGHT	MIN.	MAX.	
90"	1/4"	3/4"	
108"	5/16"	3/4"	
120"	3/8"	3/4"	

NOTE:

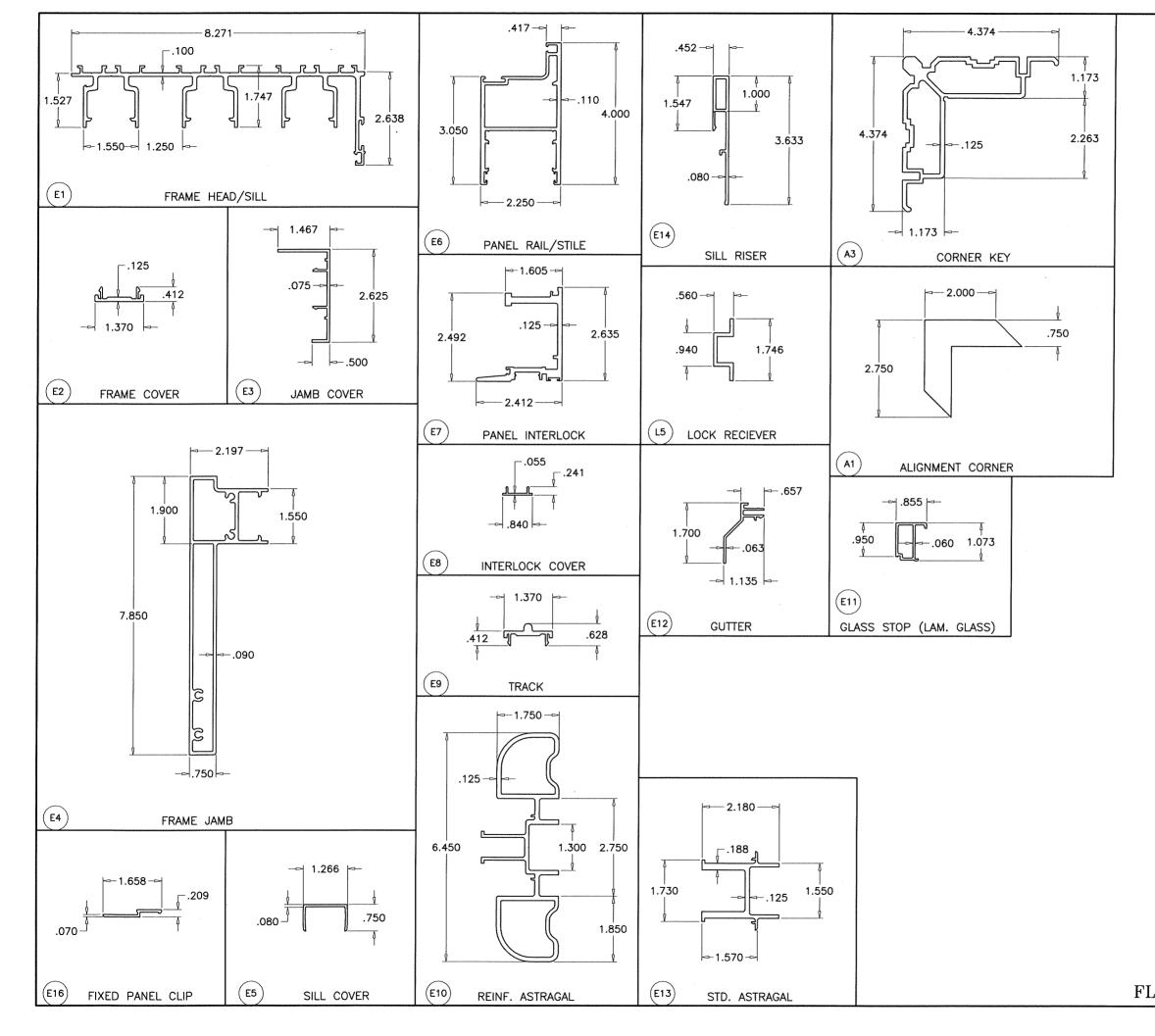
MAX. MOVEMENT CONSIDERED=100% STRETCH. PLEASE REFER TO SEALANT MANUFACTURER'S DATA AND APPLICATION MANUAL FOR COMPATABILITY OF SEALANT TO SUBSTRATE & WINDOWALL MATERIAL/FINISH AND COMPLIANCE FOR WARRANTY. REFER TO ACI-117-10 FOR CONSTRUCTION TOLERANCES.

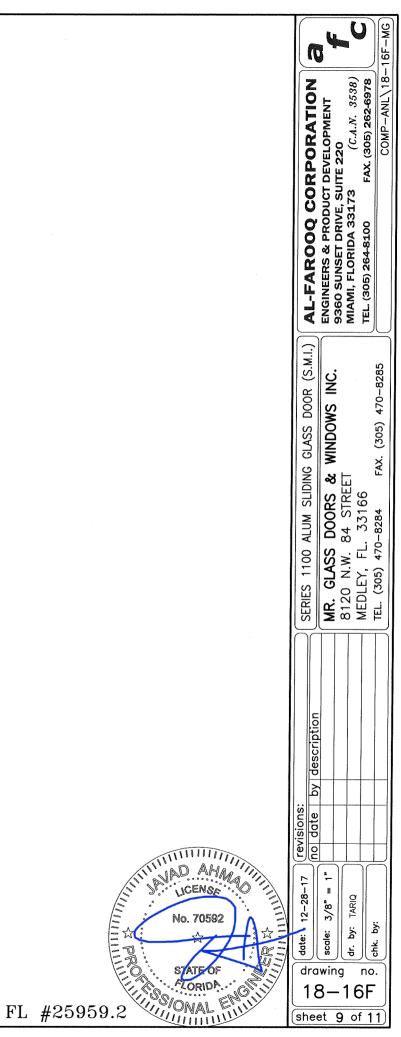
ALTERNATE SEALANTS AT JAMB GAPS CAN BE DESIGNED BY ENGINEER OF RECORD BASED ON MANUFACTURER GUIDE LINES.

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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ITEM #	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	E-1101	2	FRAME HEAD/SILL	6063-T6	-
E2	E-1008	AS REQD.	FRAME COVER	6063-T5	-
E3	_	AS REQD.	JAMB COVER	6063-T5	-
E4	E-1102	2	FRAME JAMB	6063-T6	-
E5	E-9006	AS REQD.	SILL COVER	6063-T5	-
E6	E-1010	AS REQD.	PANEL RAIL/STILE	6005-T5	-
E7	E-1011	AS REQD.	PANEL INTERLOCK	6005-T5	-
E8	E-1018	AS REQD.	INTERLOCK COVER	6063-T5	-
E9	E-1007	1/ MOV. PANEL	TRACK	6063-T5	-
E10	E-1013	AS REQD.	REINF. ASTRAGAL	6005-T5	-
E11	E-9001	4/ PANEL	GLASS STOP (LAM. GLASS)	6063-T6	-
E12	E-1016	AS REQD.	GUTTER	6063-T5	-
E13	E-1012	AS REQD.	STD. ASTRAGAL	6005-T5	-
E14	E-1014	AS REQD.	3–5/8" SILL RISER	6063-T6	-
E16	E-1021	3/ PANEL	FIXED PANEL CLIP, AT 17" FROM ENDS & 40" O.C.	6063-T5	EACH FASTENED WITH (2) #10 X 1" FH SMS
G1	W71325NK	AS REQD.	TRI FIN PILE W'STRIPPING	-	ULTRAFAB
G2	. –	AS REQD.	COMPRESSION GASKET	EPDM	DUROMETER 70±5 SHORE A
G3	G10-03	AS REQD.	OFFSET GLAZING GASKET	SANTOPRENE	DUROMETER 70±5 SHORE A
G4	G10-04	AS REQD.	WEDGE GASKET	EPDM	DUROMETER 70±5 SHORE A
G5	G10-06	AS REQD.	AIR SEAL GASKET	SANTOPRENE	ULTRAFAB
G6	G10-06	AS REQD.	INTERLOCK GASKET	POLYPROPYLENE	ULTRAFAB
G8	-	-	1/4" THK. FOAM PAD	POLYETHYLENE	-
G9	G10-09	-	AIR SEAL BRIDGE AT INTERLOCK	POLYAMIDE	-
G10		_	AIR SEAL BRIDGE AT MTG. STILE	POLYAMIDE	-
G11	-	AS REQD.	SETTING BLOCKS	EPDM	DUROMETER 80±5 SHORE A
A1	A10-01	_	ALIGNMENT CORNER	6063-T5	-
A3	E-9005	-	CORNER KEY	6063-T6	-
L1	L10-01	_	2 POINT MORTISE LOCK & HANDLE	_	INTERLOCK
L2	PS01-7102	_	2 POINT MORTISE LOCK & HANDLE	-	INTERLOCK
L3	PS01-1005	-	ADJUSTABLE STRIKER	-	INTERLOCK
L5	E-1017	_	LOCK RECIEVER	6063-T5	
M1	M10-10A	2 PANEL	ROLLER ASSEMBLY AT 9" FROM ENDS	ST. STEEL/ACETAL	FASTENED WITH (2) 12-24 X 3/4" PH MS
M6	M10-06	AS REQD.	PANEL GUIDES	NYLON	-
M7	M10-07	AS REQD.	PANEL GUIDES	NYLON	-
S1	#12 X 1 1/2"	4/ CORNER	FRAME ASSEMBLY FASTENERS	ST. STEEL	HWH SDS
S2	10-24 X 1/2"	AS REQD.	INTERLOCK FASTENERS, AT 6" FROM ENDS AND 12" O.C.	ST. STEEL	PH TC MS
S3	#8-18 X 1/2"	AS REQD.	LOCK RECIEVER FASTENERS	AISI 304	PHILIP PH SMS
S4	#10 X 1/2"	AS REQD.	PANEL ASSEMBLY FASTENERS	ST. STEEL	FH SMS

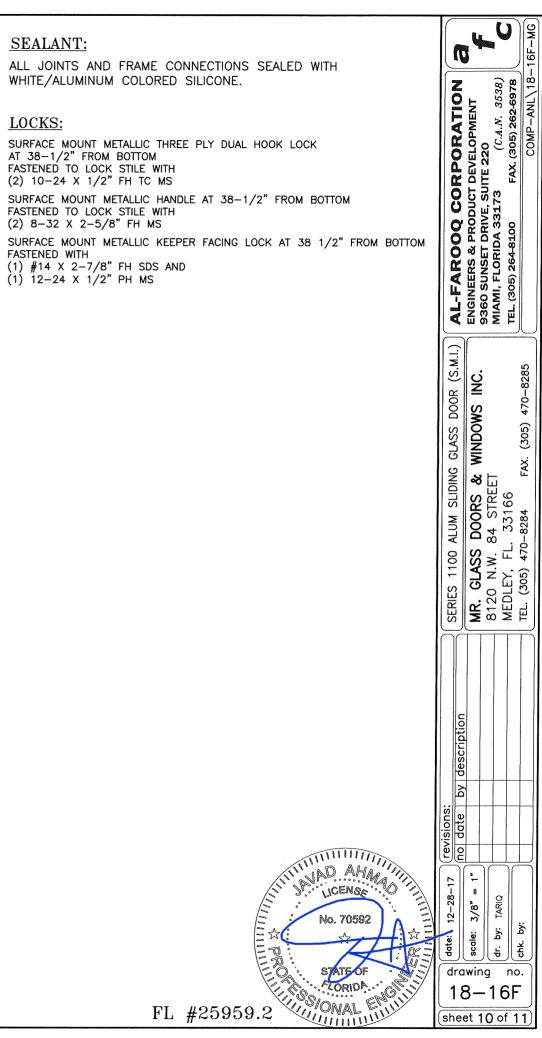
SEALANT:

WHITE/ALUMINUM COLORED SILICONE.

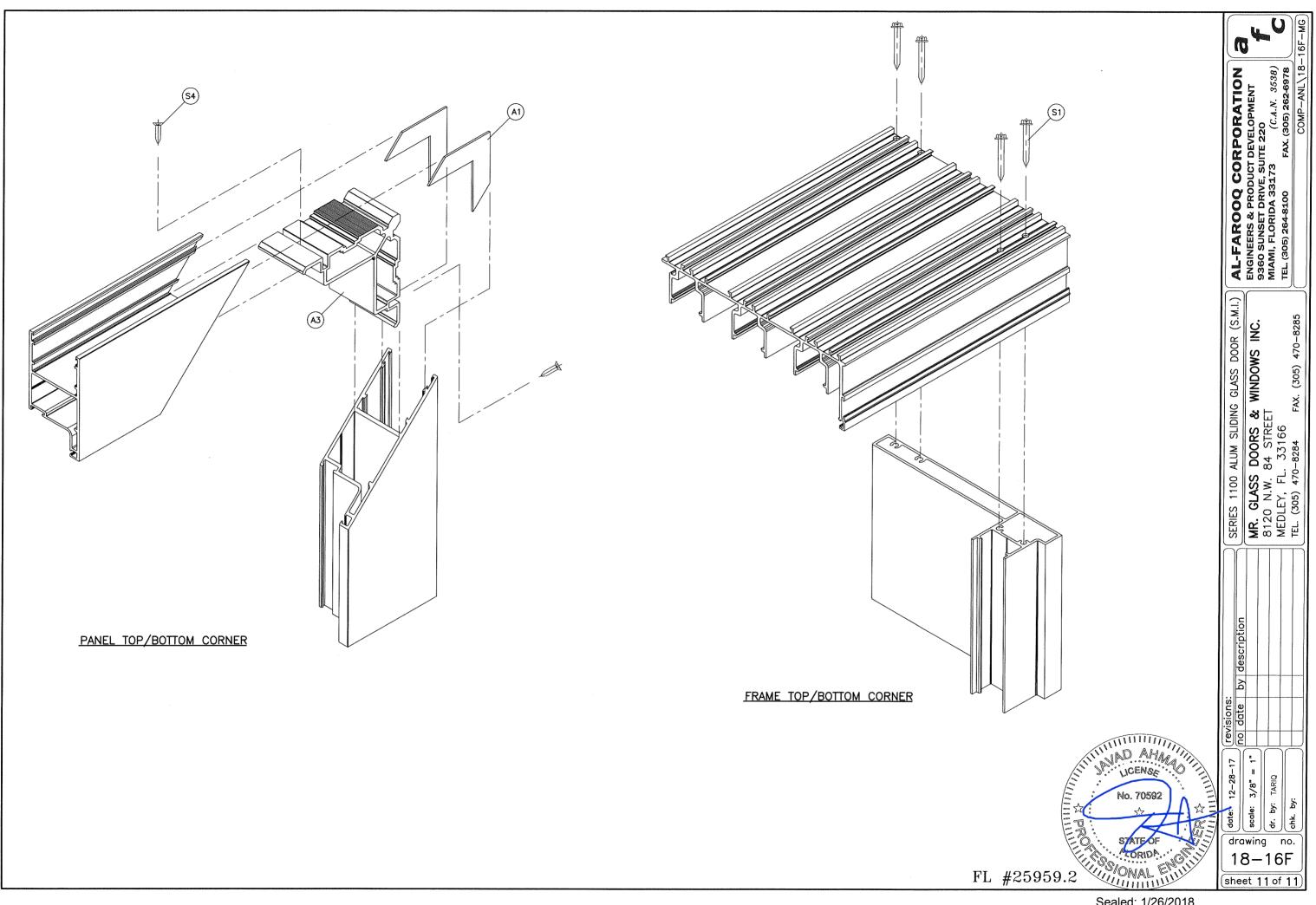
LOCKS:

(2) 10-24 X 1/2" FH TC MS

FASTENED WITH (1) $\#14 \times 2-7/8$ " FH SDS AND (1) 12-24 X 1/2" PH MS



Sealed: 1/26/2018



Sealed: 1/26/2018