



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

E.S. Windows, LLC
3550 NW 49th Street
Miami, FL 33142

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/ or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "9500" Aluminum Window Wall System - L.M.I.

APPROVAL DOCUMENT: Drawing No. **W09-25**, titled "Series 9500 Alum Window Wall System (L.M.I.)", sheets 1, 2, 2.1 and 3 through 17 of 17, dated 04/16/09, with revision **G** dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, **Barranquilla, Colombia**, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/ or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

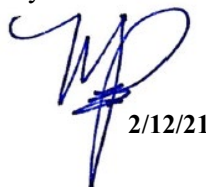
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises **NOA No. 19-0708.05** and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**




2/12/21

NOA No. 20-1208.10
Expiration Date: October 28, 2024
Approval Date: February 18, 2021
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED


1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under NOA No. 03-0314.07)
2. Drawing No. **W09-25**, titled "Series 9500 Alum Window Wall System (L.M.I.)", sheets 1, 2, 2.1 and 3 thru 17 of 17, dated 04/16/09, with revision F dated 09/28/18, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under NOA No. 19-0708.05)

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-5991**, dated 10/02/09, both signed and sealed by Jorge A. Causo, P.E.
(Submitted under NOA No. 10-0504.01)
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-6129**, dated 03/10/10, signed and sealed by Jorge A. Causo, P.E.
(Submitted under NOA No. 10-0504.01)
3. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94
along with marked-up drawings and installation diagram of series 9500 aluminum window wall system, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5546**, dated 01/09/09, signed and sealed by Michael R. Wenzel, P.E.
(Submitted under NOA No. 09-0623.01)


Manuel Perez, P.E.
Product Control Examiner
NOA No. 20-1208.10
Expiration Date: October 28, 2024
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's (CONTINUED)

B. TESTS (CONTINUED)

4. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94
along with marked-up drawings and installation diagram of an aluminum outswing entrance door, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5554**, dated 05/10/08, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under NOA No. 09-0623.01)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)**, dated 01/19/18 and 09/12/18, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under NOA No. 19-0708.05)
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS


1. Notice of Acceptance No. **17-0808.02** issued to **Kuraray America, Inc.** for their "**SentryGlas® (Clear and White) Glass Interlayers**" dated 12/28/17, expiring on 07/04/23.
2. Notice of Acceptance No. **19-0305.02** issued to **Kuraray America, Inc.** for their "**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**" dated 05/09/19, expiring on 07/08/24.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 6th Edition (2017)**, and of no financial interest, dated September 12, 2018, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under NOA No. 19-0708.05)

G. OTHERS

1. Notice of Acceptance No. **18-0221.02**, issued to E.S. Windows, LLC for their Series "9500" Aluminum Window Wall System - L.M.I., approved on 05/03/18 and expiring on 10/28/19.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 20-1208.10
Expiration Date: October 28, 2024
Approval Date: February 18, 2021

E.S. Windows, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **W09-25**, titled “Series 9500 Alum Window Wall System (L.M.I.)”, sheets 1, 2, 2.1 and 3 thru 17 of 17, dated 04/16/09, with revision **G** dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

B. TESTS

1. **None.**

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)**, dated 01/19/18 and 09/12/18, then updated on 11/16/20 to comply with **FBC 7th Edition (2020)**, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

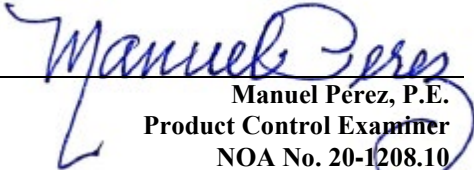
1. Notice of Acceptance No. **18-0725.11** issued to **Kuraray America, Inc.** for their “**Kuraray SentryGlas® Xtra™ (SGX™) Clear Glass Interlayer**” dated 05/23/19, expiring on 05/23/24.
2. Notice of Acceptance No. **19-0305.02** issued to **Kuraray America, Inc.** for their “**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**” dated 05/09/19, expiring on 07/08/24.

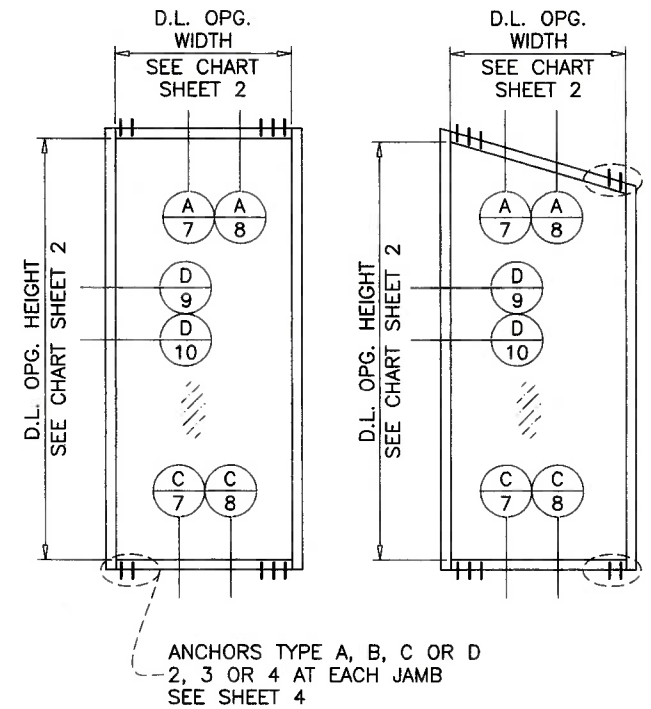
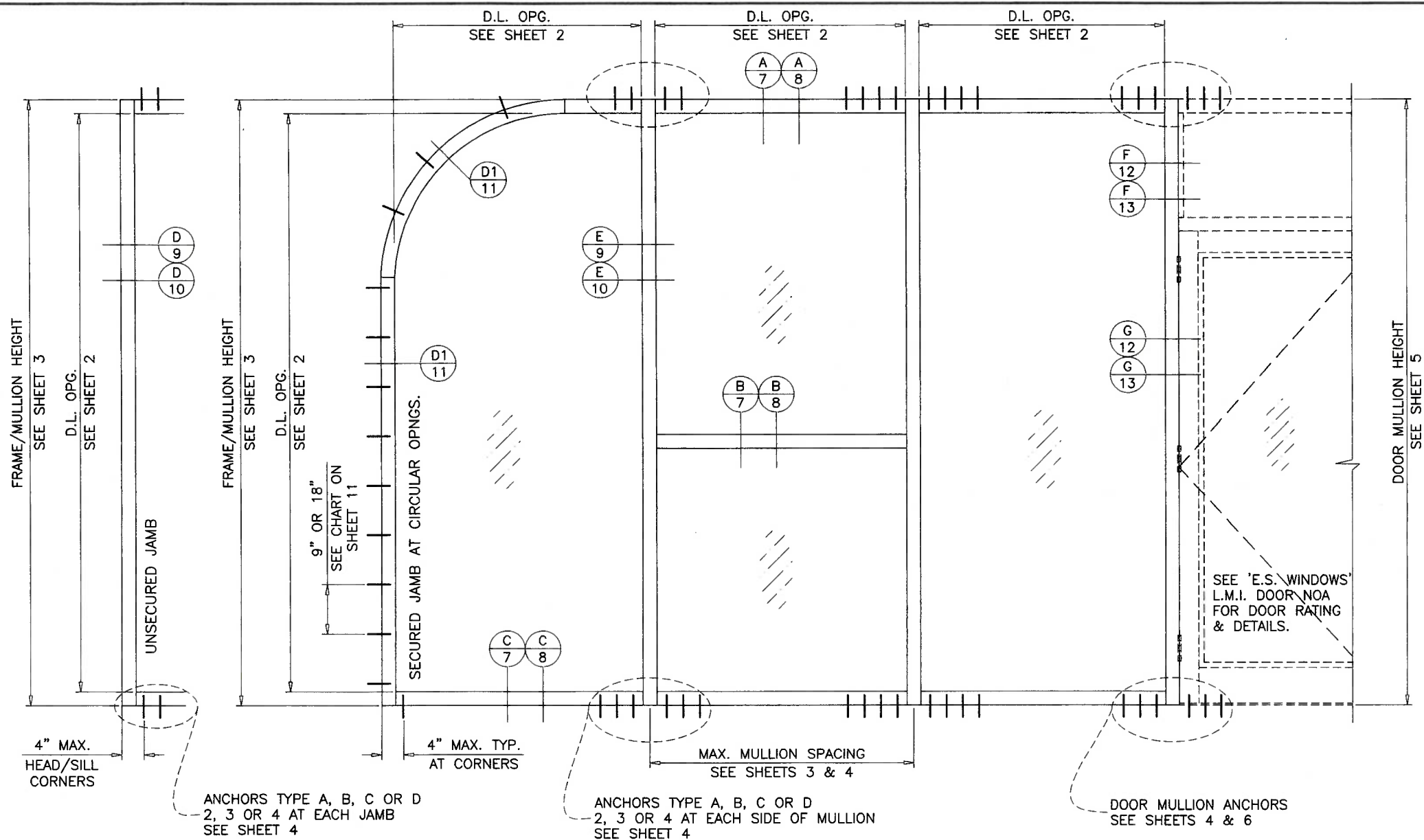
F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 6th Edition (2017)**, with **FBC 7th Edition (2020)**, and of no financial interest, dated November 16, 2020, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

G. OTHERS

1. Notice of Acceptance No. **19-0708.05**, issued to E.S. Windows, LLC for their Series “9500” Aluminum Window Wall System - L.M.I., approved on 08/01/19 and expiring on 10/28/24.


Manuel Pérez, P.E.
Product Control Examiner
NOA No. 20-1208.10
Expiration Date: October 28, 2024
Approval Date: February 18, 2021



TYPICAL ELEVATIONS SINGLE LITE

SERIES 9500 ALUMINUM WINDOW WALL SYSTEM **TYPICAL ELEVATION**

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

CODE REQUIREMENTS FOR SAFEGUARDS MUST BE OBSERVED.

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

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

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

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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

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

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

INSTRUCTIONS:

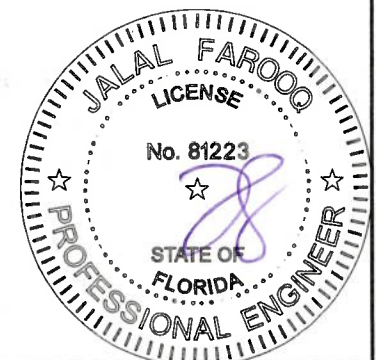
USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND PRESSURE REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** SEE CHARTS ON SHEET 2 FOR GLASS DESIGN LOAD CAPACITY.
- STEP 3** CHECK MULLION DESIGN LOAD CAPACITY FOR A GIVEN SPACING AND HEIGHT USING CHARTS ON SHEET 3 FOR STOREFRONT MULLION AND SHEET 5 FOR DOOR MULLION. THE CAPACITY SHOULD EXCEED THE DESIGN LOAD.
- STEP 4** USING CHARTS ON SHEET 4 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 SYSTEMS WITH UNANCHORED JAMBS, USING SHEETS 9 & 10, 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.

WINDOW WALL SYSTEM WITH GLASS TYPES 'A' & 'B'
COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control

LAMINATED GLASS
INSUL. LAM. GLASS
LARGE MISSILE IMPACT



DEC 0 1 2020

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
STORE W09-25ES

revisions:		date	by	description
C	03.13.12	08.04.14	D	UPDATED TO 2010 FBC
D	08.04.14	01.26.18	E	UPDATED TO 2014 FBC
E	01.26.18	09.28.18	F	UPDATED TO 2017 FBC
F	09.28.18	11.18.20	G	NO CHANGE THIS SHEET
G	11.18.20			UPDATED TO 2020 FBC

date:	04-16-09
scale:	1/2" = 1'-0"
dr. by:	TARIQ
chk. by:	

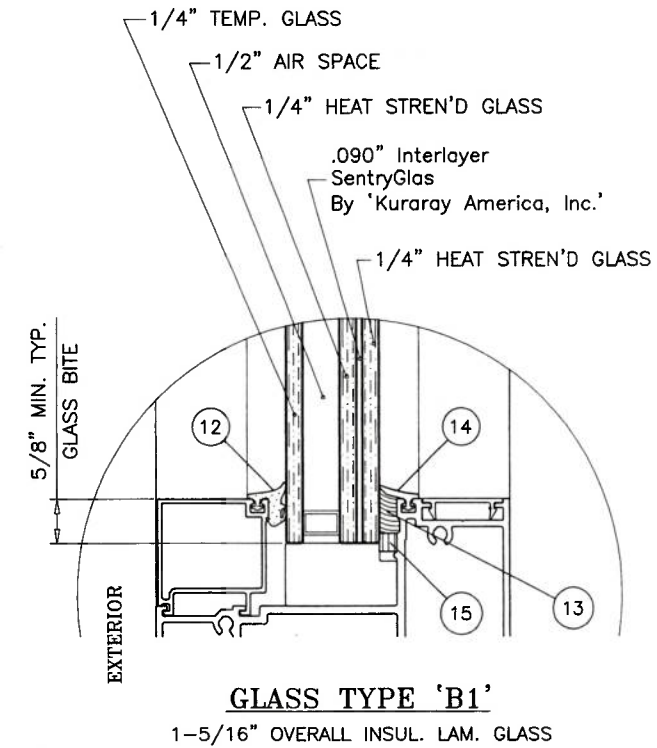
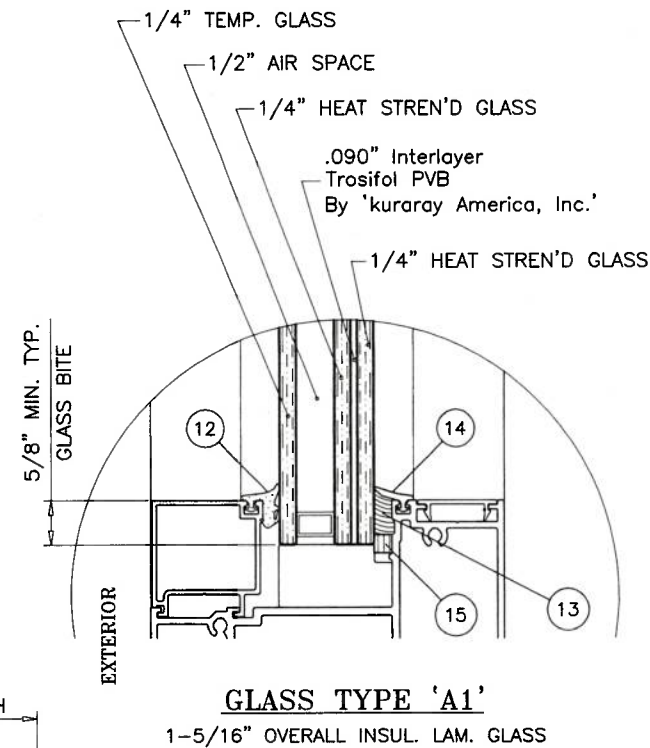
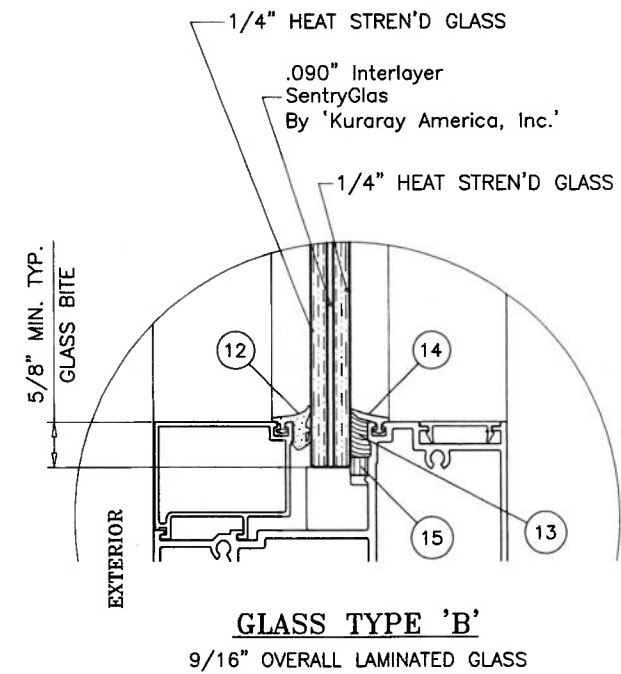
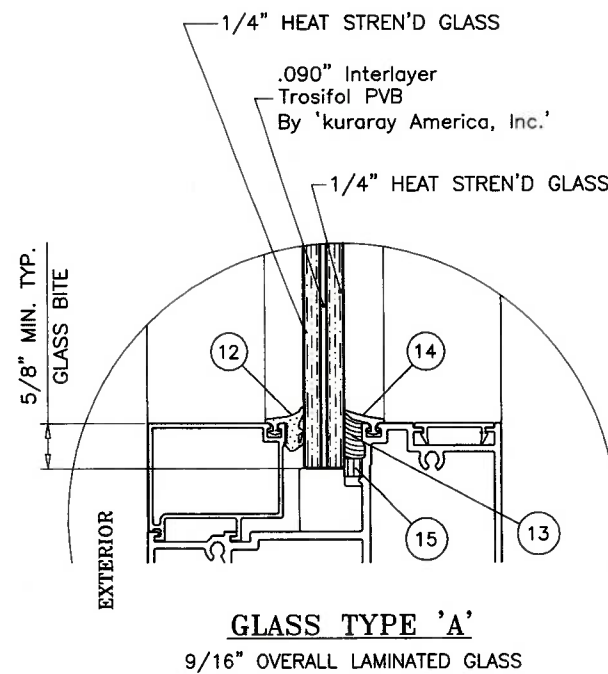
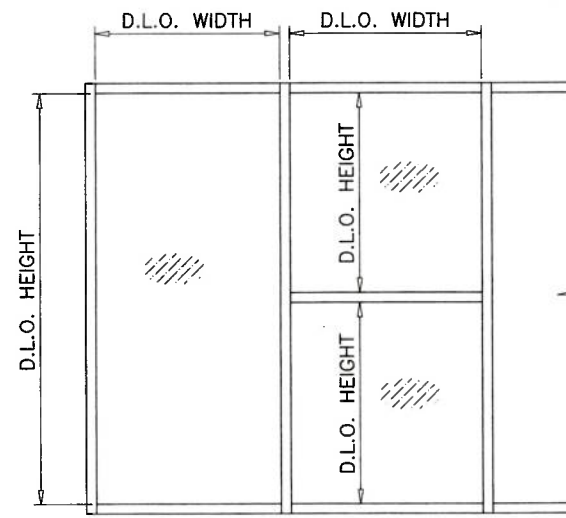
drawing no.	W09-25
sheet	1 of 17

CHART #1

GLASS LOAD CAPACITY - PSF				
NOMINAL DIMS.		GLASS TYPE 'A'	GLASS TYPE 'B'	GLASS TYPES 'A1' & 'B1'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)
28"	91"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
57-1/4"		65.0	120.0	90.0
28"	93-1/2"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"	97-1/2"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"	105"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"	109"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0
28"	115"	65.0	120.0	90.0
32"		65.0	120.0	90.0
36"		65.0	120.0	90.0
40"		65.0	120.0	90.0
45-1/2"		65.0	120.0	90.0
48"		65.0	120.0	90.0
52"		65.0	120.0	90.0

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS).

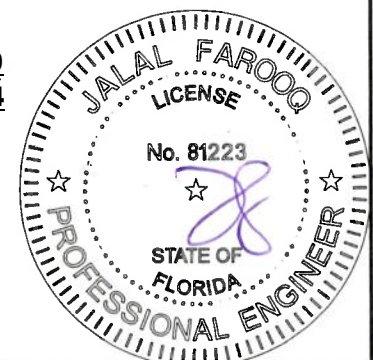
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



GLAZING OPTIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Fern*
Miami-Dade Product Control

DEC 01 2020



GLASS

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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)
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3550 N.W. 49 STREET
MIAMI, FL. 33142
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revisions:	no	date	by	description
	C	03.13.12		NO CHANGE THIS SHEET
	D	08.04.14		UPDATED TO 2014 FBC
	E	01.26.18		UPDATED TO 2017 FBC
	F	09.28.18		NO CHANGE THIS SHEET
	G	11.18.20		UPDATED TO 2020 FBC

date: 04-16-09
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

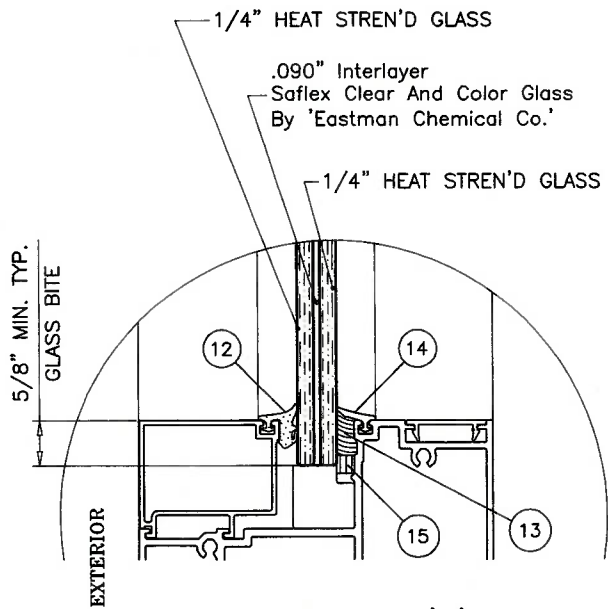
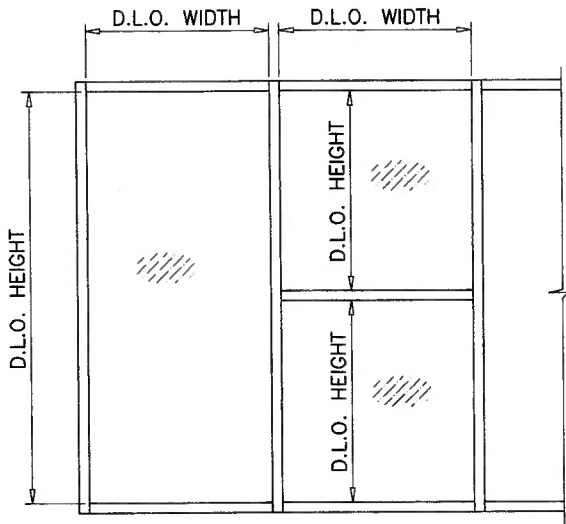
drawing no.
W09-25
sheet 2 of 17

CHART #1.1

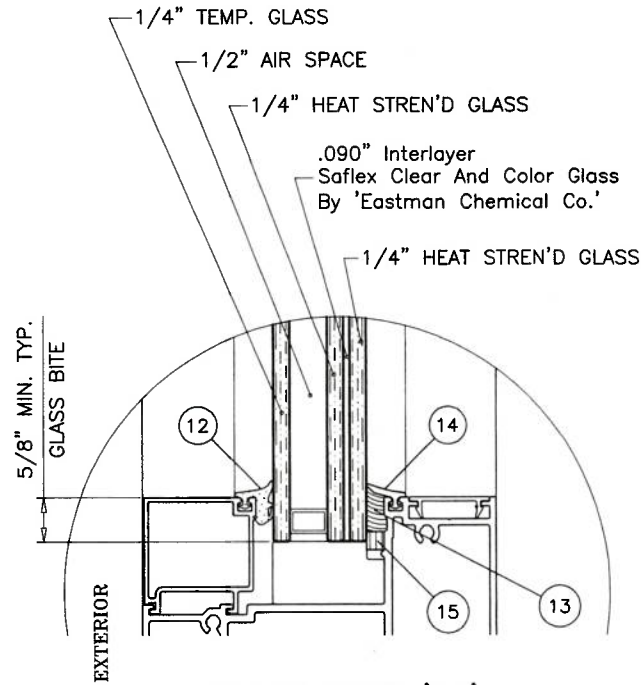
GLASS LOAD CAPACITY - PSF		
NOMINAL DIMS.		GLASS TYPES 'C' & 'C1'
D.L.O. WIDTH	D.L.O. HEIGHT	EXT.(+)/INT.(-)
28"	91"	90.0
32"		90.0
36"		90.0
40"		90.0
45-1/2"		90.0
48"		90.0
52"		90.0
28"	93-1/2"	90.0
32"		90.0
36"		90.0
40"		90.0
45-1/2"		90.0
48"		90.0
52"		90.0
28"	97-1/2"	90.0
32"		90.0
36"		90.0
40"		90.0
45-1/2"		90.0
48"		90.0
28"	105"	90.0
32"		90.0
36"		90.0
40"		90.0
45-1/2"		90.0
28"	109"	90.0
32"		90.0
36"		90.0
40"		90.0
28"	115"	90.0
32"		90.0
36"		90.0
40"		90.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS).



GLASS TYPE 'C'
9/16" OVERALL LAMINATED GLASS



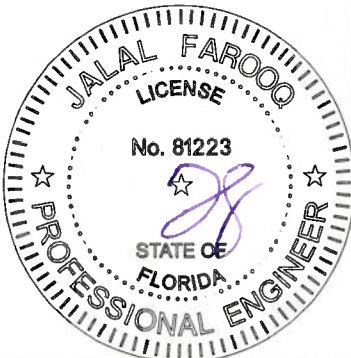
GLASS TYPE 'C1'
1-5/16" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-1208.10
Expiration Date: 10/28/2024
By: *Manuel Perez*
Miami-Dade Product Control

DEC 01 2020

GLASS



af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
STORE W09-25ES

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

Revisions:
no date by description
F 09.28.18 GLASS OPTION ADDED
G 11.18.20 UPDATED TO 2020 FBC

date: 04-16-09
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:
drawing no.
W09-25
sheet 2.1 of 17

CHART #2

MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS		
NOMINAL DIMS.		JAMB 'J1' MULL 'M1'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
30"	72"	100.0
36"		100.0
42"		100.0
48"		100.0
54"		100.0
60"		100.0
30"	78"	100.0
36"		100.0
42"		100.0
48"		100.0
54"		100.0
59"		100.0
60"		65.0
30"	86-1/2"	100.0
36"		100.0
42"		100.0
48"		100.0
53"		100.0
54"		65.0
60"		65.0
30"	90"	100.0
36"		100.0
42"		100.0
48"		100.0
51"		100.0
54"		65.0
60"		65.0
30"	96"	100.0
36"		100.0
42"		100.0
48"		100.0
54"		65.0
60"		65.0
30"	98-1/2"	65.0
36"		65.0
42"		65.0
48"		65.0
54"		65.0
58"		65.0
30"	102"	65.0
36"		65.0
42"		65.0
48"		65.0
54"		65.0
56"		65.0

MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS		
NOMINAL DIMS.		JAMB 'J1' MULL 'M1'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)
30"	108"	65.0
36"		65.0
42"		65.0
48"		65.0
53"		65.0
60"		65.0
30"	110-1/2"	65.0
36"		65.0
42"		65.0
48"		65.0
52"		65.0
60"		65.0
30"	114"	65.0
36"		65.0
42"		65.0
48"		65.0
50"		65.0
60"		65.0
30"	120"	65.0
36"		65.0
42"		65.0
48"		65.0
50"		65.0
60"		64.5

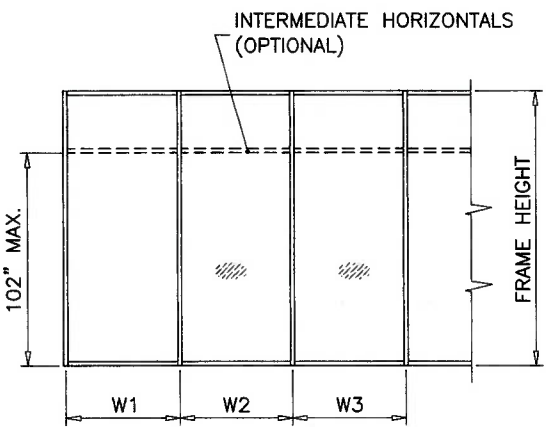
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

CHART #3

MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINAL DIMS.		JAMB 'J1' MULL 'M2'	JAMB 'J1' MULL 'M3'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
30"	72"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
54"		90.0	120.0
60"		90.0	120.0
30"	78"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
54"		90.0	120.0
60"		90.0	120.0
30"	86-1/2"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
53"		90.0	120.0
60"		90.0	120.0
30"	90"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
51"		90.0	120.0
60"		90.0	120.0
30"	96"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
54"		90.0	120.0
60"		90.0	116.4
30"	98-1/2"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
54"		90.0	120.0
58"		90.0	114.4
30"	102"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	120.0
54"		90.0	114.6
56"		90.0	110.5
30"	108"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	115.0
53"		90.0	104.1

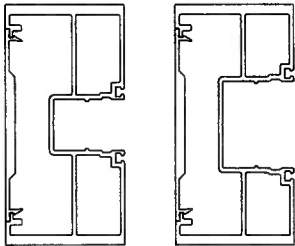
MULLION LOAD CAPACITY - PSF WITH OR WITHOUT INTERMEDIATE HORIZONTALS			
NOMINAL DIMS.		JAMB 'J1' MULL 'M2'	JAMB 'J1' MULL 'M3'
WIDTH (W)	FRAME HEIGHT	EXT. (+) INT. (-)	EXT. (+) INT. (-)
30"	110-1/2"	90.0	120.0
36"		90.0	120.0
42"		90.0	120.0
48"		90.0	109.8
52"		90.0	101.4
60"		90.0	120.0
30"	114"	90.0	120.0
36"		90.0	120.0
42"		90.0	117.9
48"		90.0	103.2
50"		90.0	99.1
60"		90.0	120.0
30"	120"	90.0	120.0
36"		90.0	120.0
42"		90.0	106.4
48"		90.0	93.1

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

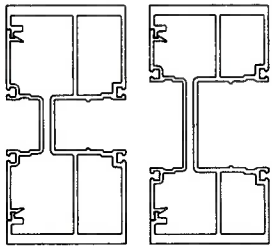


WIDTH (W) = W1
AT FRAME JAMB

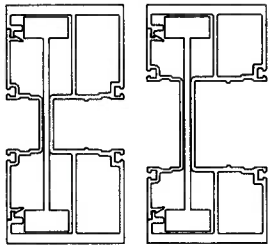
WIDTH (W) = $\frac{W2 + W3}{2}$
AT FRAME MULLION



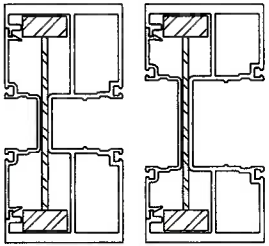
J1	ALUM
Ix IN^4	8.7605
Sx IN^3	3.5042



M1	ALUM
Ix IN^4	8.7132
Sx IN^3	3.4853



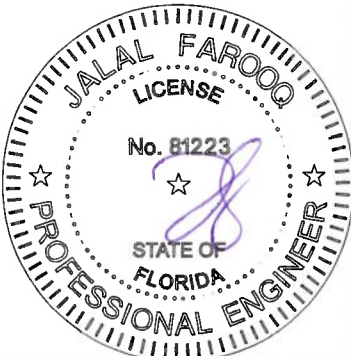
M2	ALUM
Ix IN^4	12.6724
Sx IN^3	5.069



M3	ALUM	STEEL
Ix IN^4	8.7132	2.7858
Sx IN^3	3.4853	1.2381

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control

DEC 0 1 2020



MULLIONS

afC
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
STORE W09-25ES

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

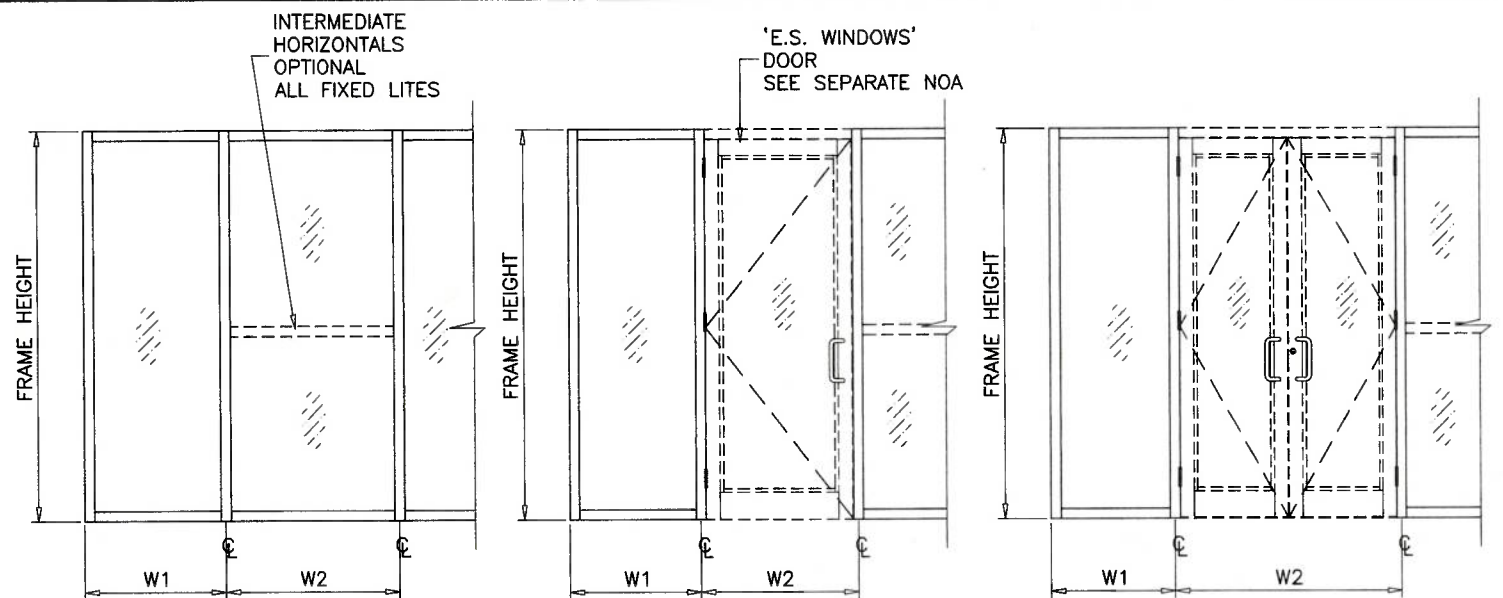
revisions:

no	date	description
C	03.13.12	NO CHANGE THIS SHEET
D	08.04.14	NO CHANGE THIS SHEET
E	01.26.18	UPDATED TO 2017 FBC
F	09.28.18	NO CHANGE THIS SHEET
G	11.18.20	UPDATED TO 2020 FBC

date: 04-16-09
scale: -
dr. by: TARIQ
chk. by:
drawing no. **W09-25**
sheet **3** of **17**

CHART #4		ANCHOR LOAD CAPACITY - PSF EXT.(+) & INT.(-)										
NOMINAL DIMS.		ANCHORS TYPE 'A' 1/4" MAX. SHIM			ANCHORS TYPE 'B' 3/8" MAX. SHIM			ANCHORS TYPE 'C' 3/8" MAX. SHIM			ANCHORS 'D' 1/4" MAX. SHIM	
WIDTH (W)	FRAME HEIGHT	A2	A3	A4	B2	B3	B4	C2	C3	C4	D2	D3
30"	72"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"		120.0	120.0	120.0	112.4	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		105.9	120.0	120.0	96.4	120.0	120.0	106.3	120.0	120.0	120.0	120.0
48"		92.7	120.0	120.0	84.3	120.0	120.0	93.0	120.0	120.0	120.0	120.0
54"		82.4	120.0	120.0	75.0	112.4	120.0	82.7	120.0	120.0	120.0	120.0
60"		74.1	111.2	120.0	67.5	101.2	120.0	74.4	111.6	120.0	119.5	120.0
30"	78"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"		114.1	120.0	120.0	103.8	120.0	120.0	114.5	120.0	120.0	120.0	120.0
42"		97.8	120.0	120.0	89.0	120.0	120.0	98.1	120.0	120.0	120.0	120.0
48"		85.5	120.0	120.0	77.8	116.8	120.0	85.8	120.0	120.0	120.0	120.0
54"		76.0	114.1	120.0	69.2	103.8	120.0	76.3	114.5	120.0	120.0	120.0
60"		68.4	102.6	120.0	62.3	93.4	120.0	68.7	103.0	120.0	110.3	120.0
30"	86-1/2"	120.0	120.0	120.0	112.3	120.0	120.0	120.0	120.0	120.0	120.0	120.0
36"		102.8	120.0	120.0	93.6	120.0	120.0	103.2	120.0	120.0	120.0	120.0
42"		88.2	120.0	120.0	80.2	120.0	120.0	88.5	120.0	120.0	120.0	120.0
48"		77.1	115.7	120.0	70.2	105.3	120.0	77.4	116.1	120.0	120.0	120.0
54"		68.6	102.8	120.0	62.4	93.6	120.0	68.8	103.2	120.0	110.5	120.0
60"		61.7	92.6	120.0	56.2	84.2	112.3	61.9	92.9	120.0	99.4	120.0
30"	90"	118.6	120.0	120.0	107.9	120.0	120.0	119.0	120.0	120.0	120.0	120.0
36"		98.8	120.0	120.0	90.0	120.0	120.0	99.2	120.0	120.0	120.0	120.0
42"		84.7	120.0	120.0	77.1	115.7	120.0	85.0	120.0	120.0	120.0	120.0
48"		74.1	111.2	120.0	67.5	101.2	120.0	74.4	111.6	120.0	119.5	120.0
54"		65.9	98.8	120.0	60.0	90.0	119.9	66.1	99.2	120.0	106.2	120.0
60"		59.3	89.0	118.6	54.0	81.0	107.9	59.5	89.3	119.0	95.6	120.0
30"	96"	111.2	120.0	120.0	101.2	120.0	120.0	111.6	120.0	120.0	120.0	120.0
36"		92.7	120.0	120.0	84.3	120.0	120.0	93.0	120.0	120.0	120.0	120.0
42"		79.4	119.1	120.0	72.3	108.4	120.0	79.7	119.6	120.0	120.0	120.0
48"		69.5	104.3	120.0	63.3	94.9	120.0	69.8	104.6	120.0	112.0	120.0
54"		61.8	92.7	120.0	56.2	84.3	112.4	62.0	93.0	120.0	99.6	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	98-1/2"	108.4	120.0	120.0	98.6	120.0	120.0	108.8	120.0	120.0	120.0	120.0
36"		90.3	120.0	120.0	82.2	120.0	120.0	90.6	120.0	120.0	120.0	120.0
42"		77.4	116.1	120.0	70.5	105.7	120.0	77.7	116.5	120.0	120.0	120.0
48"		67.7	101.6	120.0	61.6	92.5	120.0	68.0	102.0	120.0	109.2	120.0
54"		60.2	90.3	120.0	54.8	82.2	109.6	60.4	90.6	120.0	97.0	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	102"	104.7	120.0	120.0	95.2	120.0	120.0	105.0	120.0	120.0	120.0	120.0
36"		87.2	120.0	120.0	79.4	119.1	120.0	87.5	120.0	120.0	120.0	120.0
42"		74.8	112.1	120.0	68.0	102.1	120.0	75.0	112.5	120.0	120.0	120.0
48"		65.4	98.1	120.0	59.5	89.3	119.1	65.6	98.5	120.0	105.4	120.0
54"		58.1	87.2	116.3	52.9	79.4	105.8	58.4	87.5	116.7	93.7	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	108"	98.8	120.0	120.0	90.0	120.0	120.0	99.2	120.0	120.0	120.0	120.0
36"		82.4	120.0	120.0	75.0	112.4	120.0	82.7	120.0	120.0	120.0	120.0
42"		70.6	105.9	120.0	64.3	96.4	120.0	70.9	106.3	120.0	113.8	120.0
48"		61.8	92.7	120.0	56.2	84.3	112.4	62.0	93.0	120.0	99.6	120.0
54"		58.1	87.2	116.3	52.9	79.4	105.8	58.4	87.5	116.7	93.7	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	110-1/2"	96.6	120.0	120.0	87.9	120.0	120.0	97.0	120.0	120.0	120.0	120.0
36"		80.5	120.0	120.0	73.3	109.9	120.0	80.8	120.0	120.0	120.0	120.0
42"		69.0	103.5	120.0	62.8	94.2	120.0	69.3	103.9	120.0	111.2	120.0
48"		60.4	90.6	120.0	55.0	82.4	109.9	60.6	90.9	120.0	97.3	120.0
54"		58.1	87.2	116.3	52.9	79.4	105.8	58.4	87.5	116.7	93.7	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	114"	93.6	120.0	120.0	85.2	120.0	120.0	94.0	120.0	120.0	120.0	120.0
36"		78.0	117.1	120.0	71.0	106.5	120.0	78.3	117.5	120.0	120.0	120.0
42"		66.9	100.3	120.0	60.9	91.3	120.0	67.1	100.7	120.0	107.8	120.0
48"		58.5	87.8	117.1	53.3	79.9	106.5	58.7	88.1	117.5	94.3	120.0
54"		58.1	87.2	116.3	52.9	79.4	105.8	58.4	87.5	116.7	93.7	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
30"	120"	89.0	120.0	120.0	81.0	120.0	120.0	89.3	120.0	120.0	120.0	120.0
36"		74.1	111.2	120.0	67.5	101.2	120.0	74.4	111.6	120.0	119.5	120.0
42"		63.5	95.3	120.0	57.8	86.7	115.7	63.8	95.7	120.0	102.4	120.0
48"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0
54"		58.1	87.2	116.3	52.9	79.4	105.8	58.4	87.5	116.7	93.7	120.0
60"		55.6	83.4	111.2	50.6	75.9	101.2	55.8	83.7	111.6	89.6	120.0

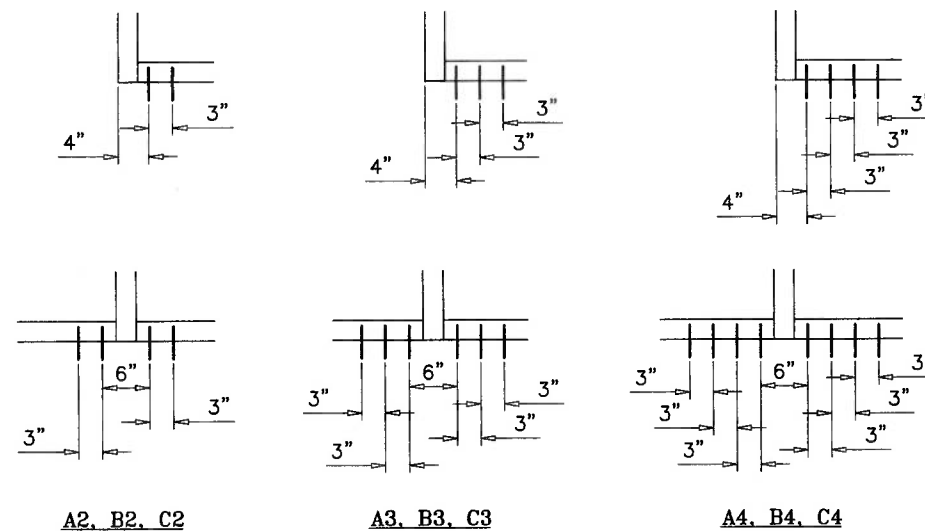
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



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

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

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

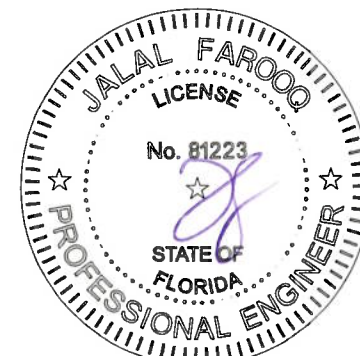


ANCHORS TYPES: SEE SHEET 7 FOR DESCRIPTION

- A2 = (2) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
 B2 = (2) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
 C2 = (2) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
 D2 = (2) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION
- A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
 B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
 C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
 D3 = (3) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION
- A4 = (4) ANCHORS TYPE 'A' AT EACH SIDE OF JAMB AND MULLION
 B4 = (4) ANCHORS TYPE 'B' AT EACH SIDE OF JAMB AND MULLION
 C4 = (4) ANCHORS TYPE 'C' AT EACH SIDE OF JAMB AND MULLION
 D4 = (4) ANCHORS TYPE 'D' AT EACH SIDE OF JAMB AND MULLION

PRODUCT REVISED
 as complying with the Florida Building Code
NOA-No. 20-1208.10
Expiration Date: 10/28/2024
 By: *Manuel Perez*
 Miami-Dade Product Control

DEC 01 2020



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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

revisions:	no	date	description
	C	03.13.12	UPDATED TO 2010 FBC
	D	08.04.14	UPDATED TO 2014 FBC
	E	01.26.18	UPDATED TO 2017 FBC
	F	09.28.18	NO CHANGE THIS SHEET
	G	11.18.20	UPDATED TO 2020 FBC

date: 04-16-09

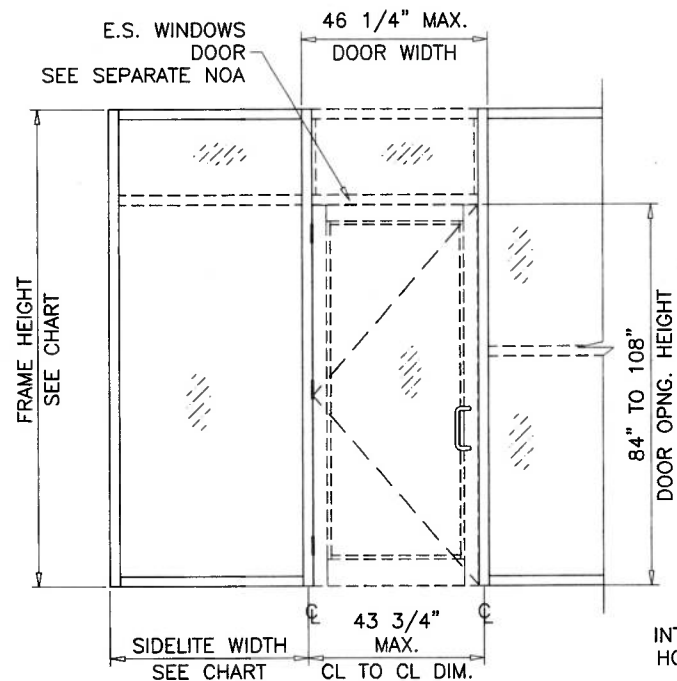
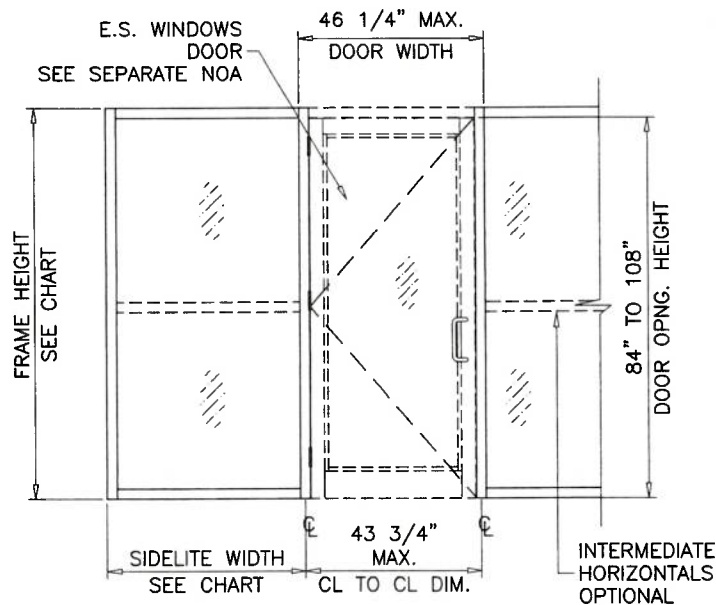
scale: -

dr. by: TARIQ

chk. by:

drawing no.
W09-25

sheet 4 of 17



INTERMEDIATE
HORIZONTALS
OPTIONAL

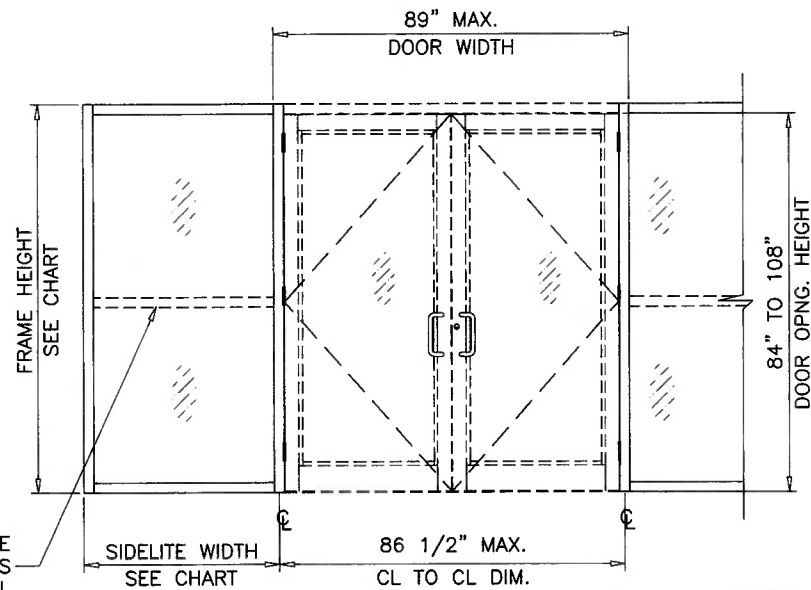
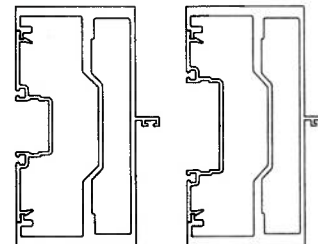


CHART #5

DOOR MULLION LOAD CAPACITY-PSF			
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	MULL 'MD1' EXT. (+) INT. (-)	MULL 'MD2' EXT. (+) INT. (-)
32	86-1/2"	120.0	120.0
36		120.0	120.0
42		120.0	120.0
48		120.0	120.0
54		120.0	120.0
60		120.0	120.0
32	98-1/2"	120.0	120.0
36		120.0	120.0
42		120.0	120.0
48		120.0	120.0
54		115.7	120.0
58		111.3	120.0
32	110-1/2"	116.2	120.0
36		110.5	120.0
42		103.0	120.0
48		96.5	120.0
52		92.5	120.0
32	114"	106.1	120.0
36		101.0	120.0
42		94.1	120.0
48		88.1	120.0
50		86.3	120.0
32	120"	91.0	120.0
36		86.6	120.0
42		80.7	120.0
48		75.5	118.9

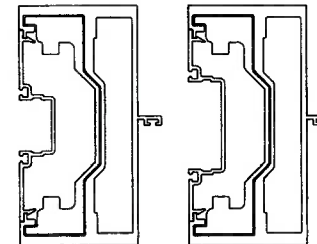
INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control



MULLION 'MD1'
NO REINF.

MD1	ALUM
Ix IN ⁴	9.9140
Sx IN ³	3.9615



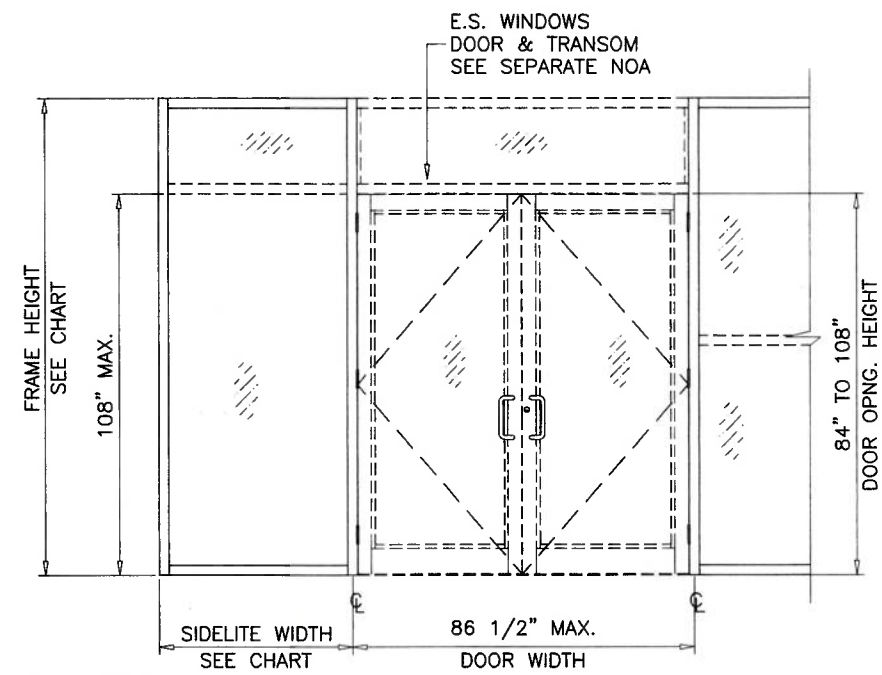
MULLION 'MD2'
ALUM REINF.

MD2	ALUM
Ix IN ⁴	15.5994
Sx IN ³	6.2333

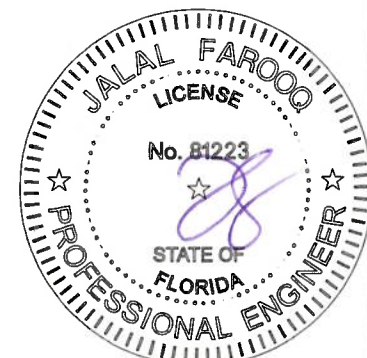
CHART #6

DOOR MULLION LOAD CAPACITY-PSF			
SIDELITE WIDTH INCHES	FRAME HEIGHT INCHES	MULL 'MD1' EXT. (+) INT. (-)	MULL 'MD2' EXT. (+) INT. (-)
30	96	90.0	90.0
36		90.0	90.0
42		90.0	90.0
48		90.0	90.0
54		90.0	90.0
60		90.0	90.0
30	102	90.0	90.0
36		90.0	90.0
42		90.0	90.0
48		90.0	90.0
54		90.0	90.0
30	108	90.0	90.0
36		90.0	90.0
42		90.0	90.0
48		89.3	90.0
30	114	90.0	90.0
36		90.0	90.0
42		84.9	90.0
48		80.2	90.0
30	120	81.7	90.0
36		76.8	90.0
42		72.5	90.0
48		68.7	90.0

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.



DEC 0 1 2020



**DOOR-WINDOW WALL
TRANSITION MULLION**

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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

revisions:	no	date	by	description
	C	03.13.12		NO CHANGE THIS SHEET
	D	08.04.14		NO CHANGE THIS SHEET
	E	01.26.18		UPDATED TO 2017 FBC
	F	09.28.18		DOOR HT. REV.
	G	11.18.20		UPDATED TO 2020 FBC

date: 04-16-09

scale: -

dr. by: TARIQ

chk. by:

drawing no.
W09-25

sheet 5 of 17

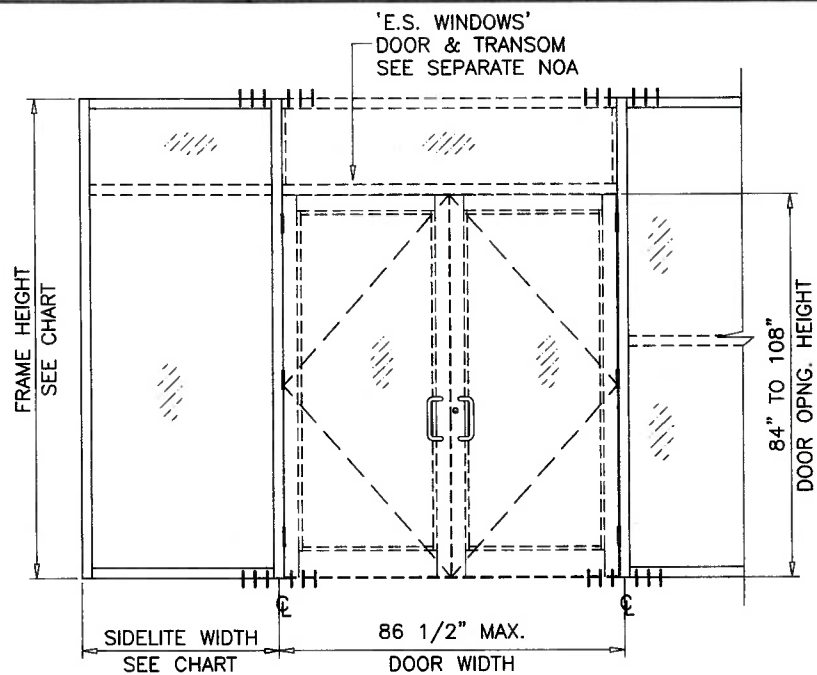


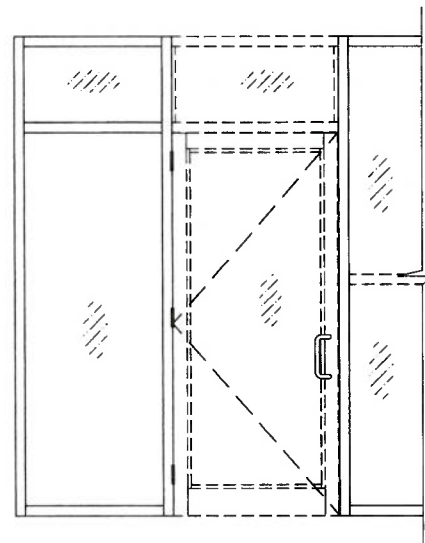
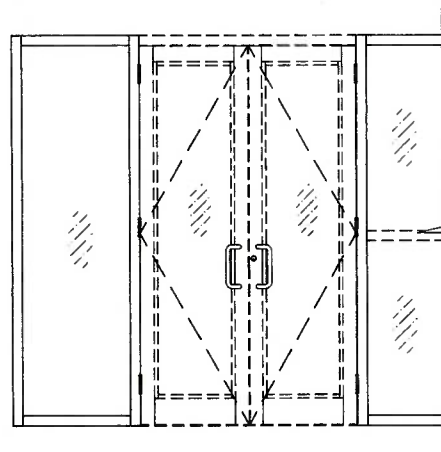
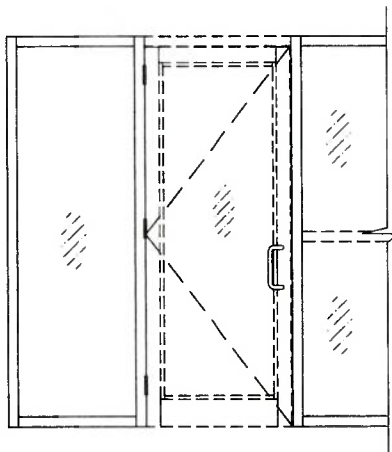
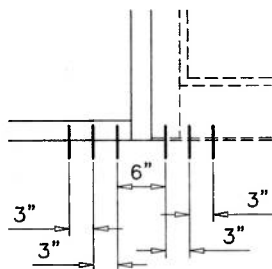
CHART #7

ANCHOR LOAD CAPACITY - PSF EXT.(+) & INT.(-)					
NOMINAL DIMS.		ANCHORS TYPE 'A3'	ANCHORS TYPE 'B3'	ANCHORS TYPE 'C3'	ANCHORS TYPE 'D3'
WIDTH (W)	FRAME HEIGHT				
30	96	99.5	108.5	99.9	120.0
36		88.9	96.9	89.2	120.0
42		80.4	87.6	80.6	120.0
48		73.3	79.9	73.6	118.1
54		67.4	73.4	67.6	108.6
60		62.3	67.9	62.6	100.5
30	102	93.5	101.9	93.9	120.0
36		83.6	91.1	83.9	120.0
42		75.5	82.3	75.8	120.0
48		68.9	75.1	69.1	111.0
54		63.3	69.0	63.6	102.1
30	108	88.2	96.1	88.5	120.0
36		78.8	85.9	79.1	120.0
42		71.3	77.7	71.5	114.8
48		65.0	70.9	65.2	104.8
30	114	83.5	91.0	83.8	120.0
36		74.6	81.3	74.9	120.0
42		67.4	73.5	67.7	108.7
48		61.5	67.1	61.7	99.2
30	120	80.9	88.2	81.2	120.0
36		72.2	78.7	72.4	116.3
42		65.1	71.0	65.4	105.0
48		59.3	64.7	59.6	95.6

INTERPOLATION BETWEEN WIDTHS OR HEIGHTS ALLOWED.

ANCHORS TYPES: SEE SHEET 7 FOR DESCRIPTION

- A3 = (3) ANCHORS TYPE 'A' AT EACH SIDE OF MULLION
 B3 = (3) ANCHORS TYPE 'B' AT EACH SIDE OF MULLION
 C3 = (3) ANCHORS TYPE 'C' AT EACH SIDE OF MULLION
 D3 = (3) ANCHORS TYPE 'D' AT EACH SIDE OF MULLION

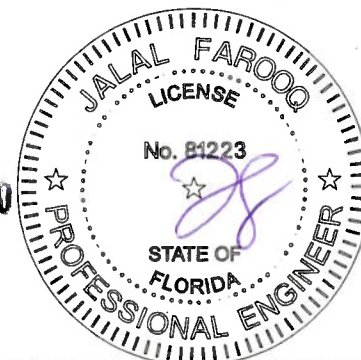


FOR ANCHOR CAPACITIES FOR THE ABOVE CASES
SEE SHEET 4.

TRANSITION MULLION ANCHORS
DOUBLE DOOR WITH TRANSOM

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Ferraz*
Miami-Dade Product Control

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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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

revisions:	no	date	by	description
	C	03.13.12		UPDATED TO 2010 FBC
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	F	09.28.18		CHART REV.
	G	11.18.20		UPDATED TO 2020 FBC

date: 04-16-09

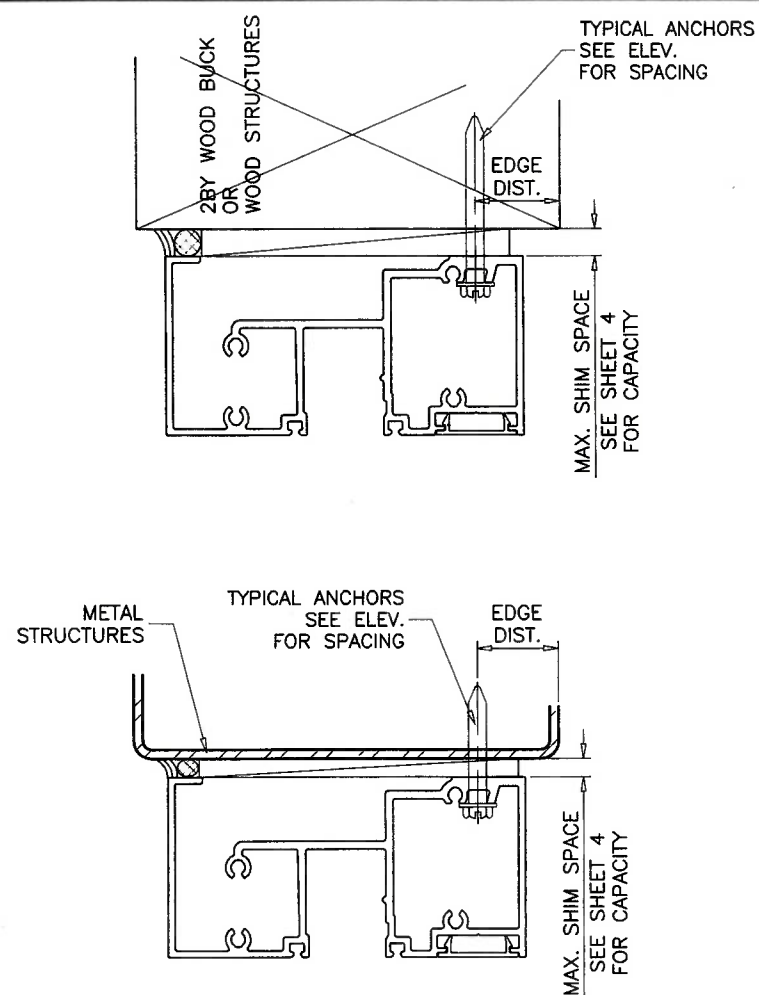
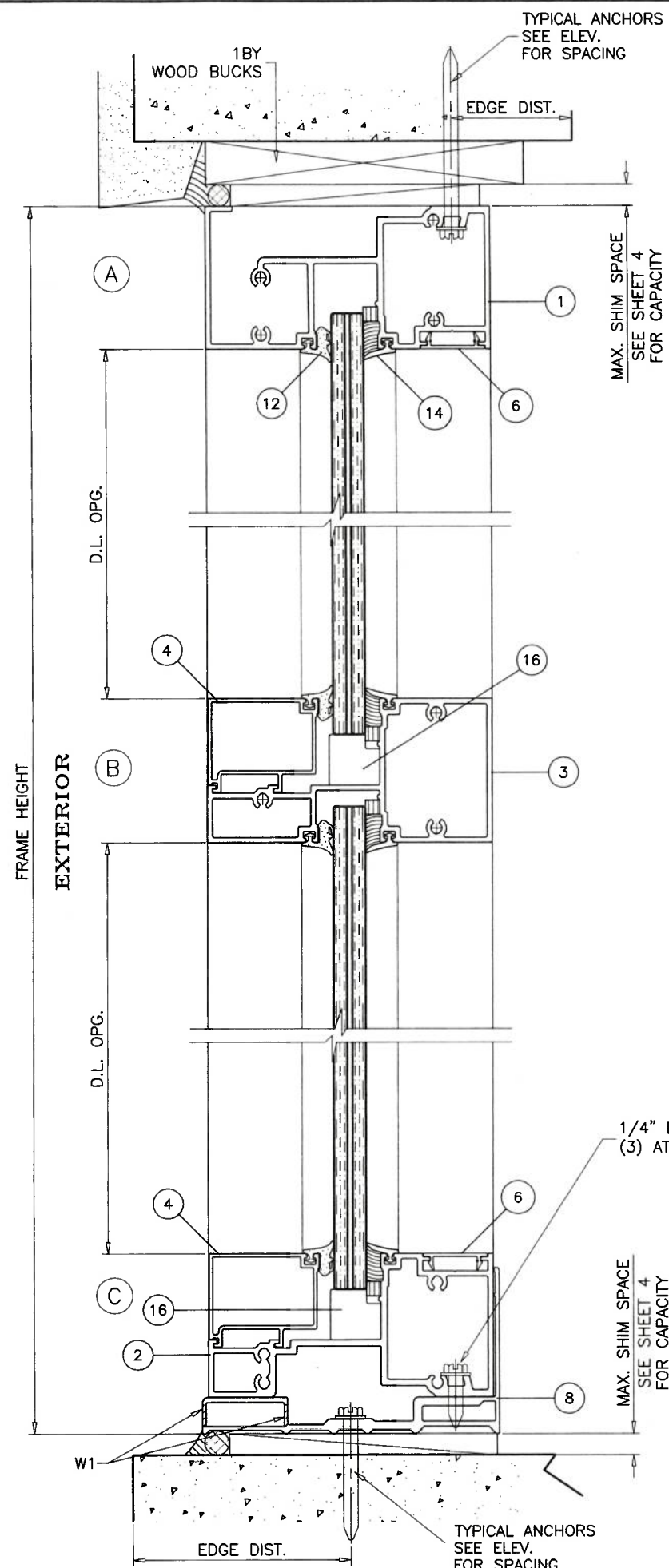
scale: -

dr. by: TARIQ

chk. by:

drawing no. **W09-25**

sheet 6 of 17



WEEP HOLES:

- W1 = 3/8" WEEP HOLES
 (1) AT 3" FROM EACH END
 (2) AT EACH MULLION AT 3" FROM MULLION CENTERLINE.

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

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TYPICAL ANCHORS: SEE ELEV. FOR SPACING

TYPE 'A' - 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD
 THRU 1BY WOOD BUCKS INTO CONCRETE
 1-1/4" MIN. EMBED INTO CONCRETE
 DIRECTLY INTO CONCRETE
 1-1/4" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN. (1/4" ANCHORS)
 INTO WOOD STRUCTURE = 1-1/4" MIN. (5/16" ANCHORS)

TYPE 'B' - 1/4" DIA. KWIK-CON II BY 'HILTI' (Fu=138 KSI, Fy=137 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD
 THRU 1BY WOOD BUCKS INTO CONCRETE
 1-1/4" MIN. EMBED INTO CONCRETE
 DIRECTLY INTO CONCRETE
 1-1/4" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.

TYPE 'C' - 5/16" DIA. ULTRACON BY 'DEWALT' (Fu=177 KSI, Fy=155 KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD
 THRU 1BY WOOD BUCKS INTO CONCRETE
 1-1/4" MIN. EMBED INTO CONCRETE
 DIRECTLY INTO CONCRETE
 1-1/2" MIN. EMBED INTO CONC.

ANCHOR EDGE DISTANCES

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN. (1/4" ANCHORS)
 INTO WOOD STRUCTURE = 1-1/4" MIN. (5/16" ANCHORS)

TYPE 'D' - 1/4" DIA. TEKS OR SELF DRILLING SCREWS ST/ST (GRADE 5 CRS)
 INTO METAL STRUCTURES
 (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

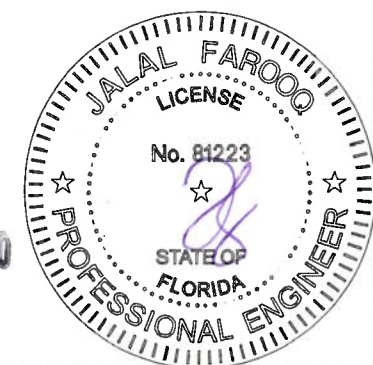
ANCHOR EDGE DISTANCES

INTO METAL STRUCTURE = 1/2" MIN.

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

PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. **20-1208.10**
 Expiration Date: **10/28/2024**
 By: *Manuel Perez*
 Miami-Dade Product Control

DEC 01 2020



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

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

no	date	description
C	03.13.12	NO CHANGE THIS SHEET
D	08.04.14	UPDATED TO 2014 FBC
E	01.26.18	UPDATED TO 2017 FBC
F	09.28.18	NO CHANGE THIS SHEET
G	11.18.20	UPDATED TO 2020 FBC

date: 04-16-09

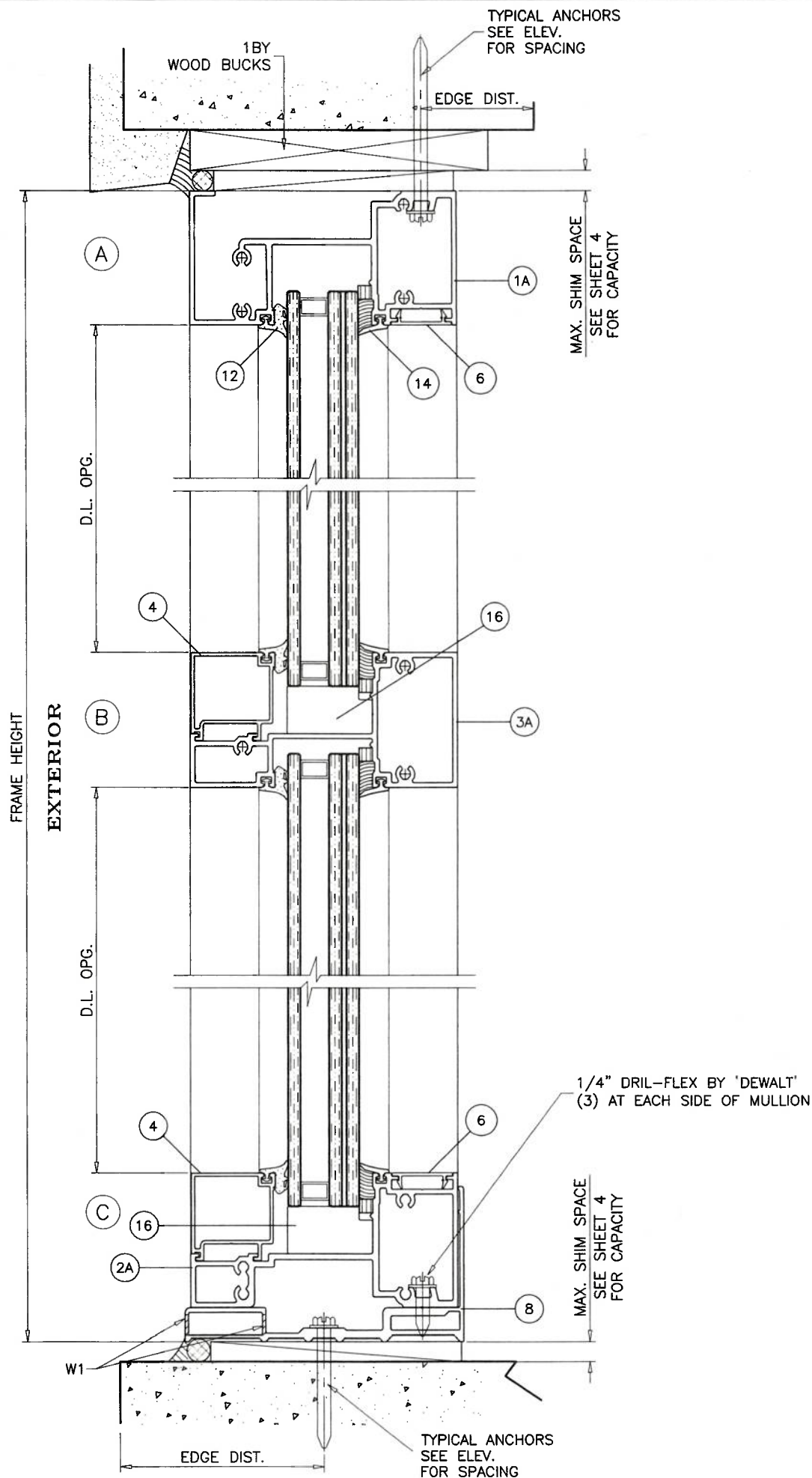
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dr. by: TARIQ

chk. by:

drawing no.
W09-25

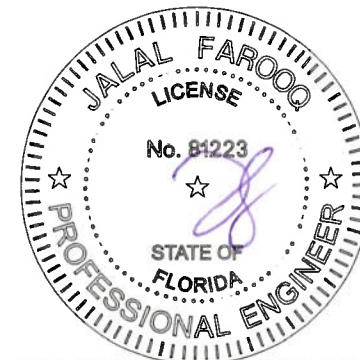
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PRODUCT REVISED
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NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control

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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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STORE W09-25ES

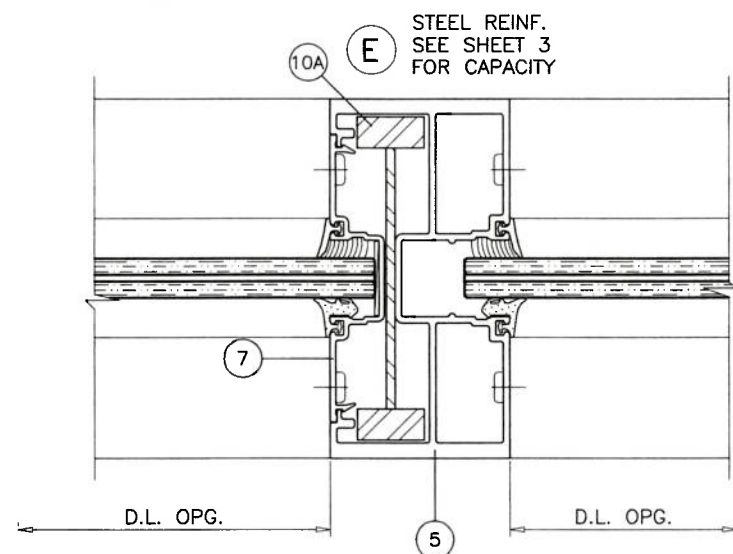
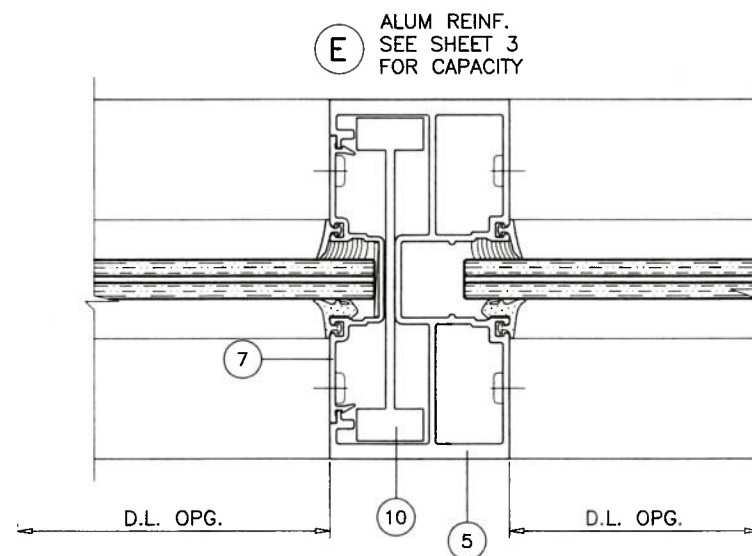
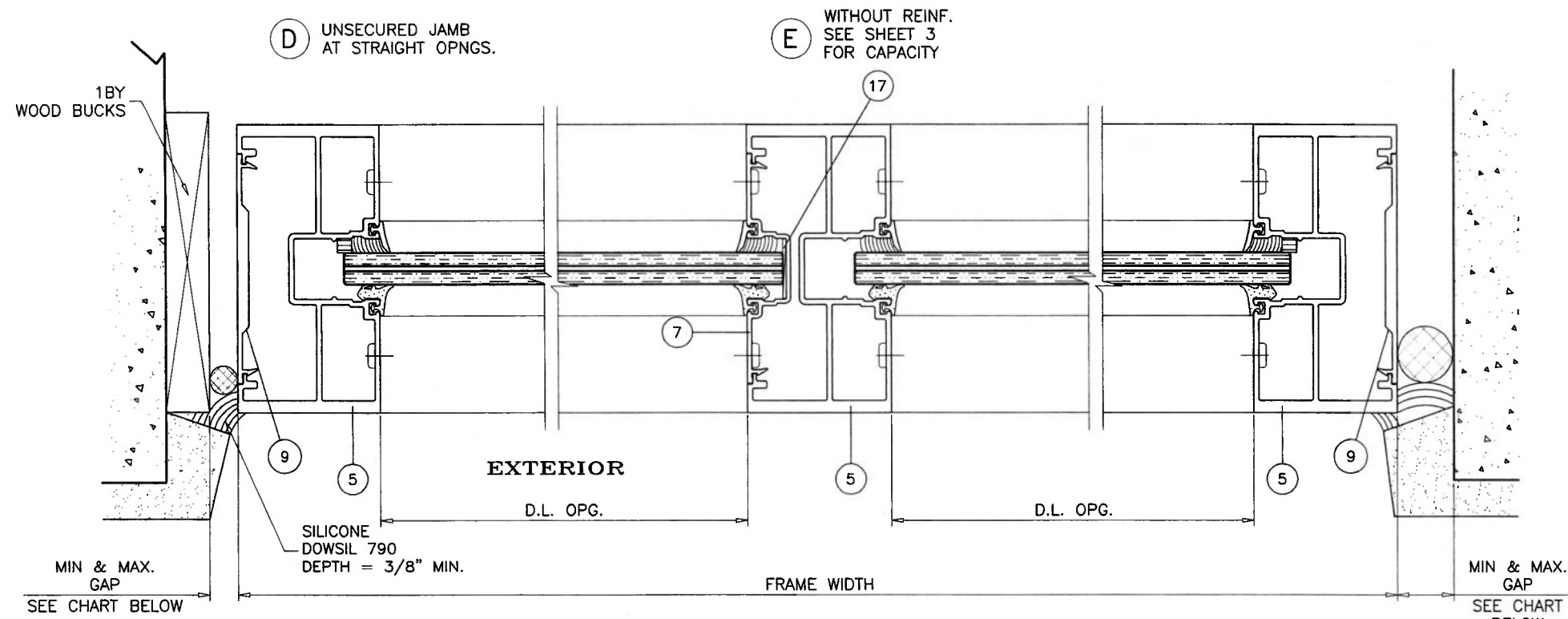
SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

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date: 04-16-09
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W09-25
sheet 8 of 17



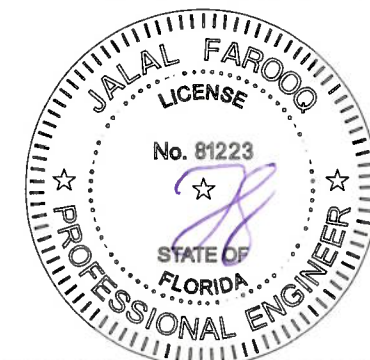
FRAME HEIGHTS UPTO	GAP	
	MIN.	MAX.
96"	3/16"	3/4"
108"	5/16"	3/4"
120"	3/8"	3/4"

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

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Torres*
Miami-Dade Product Control

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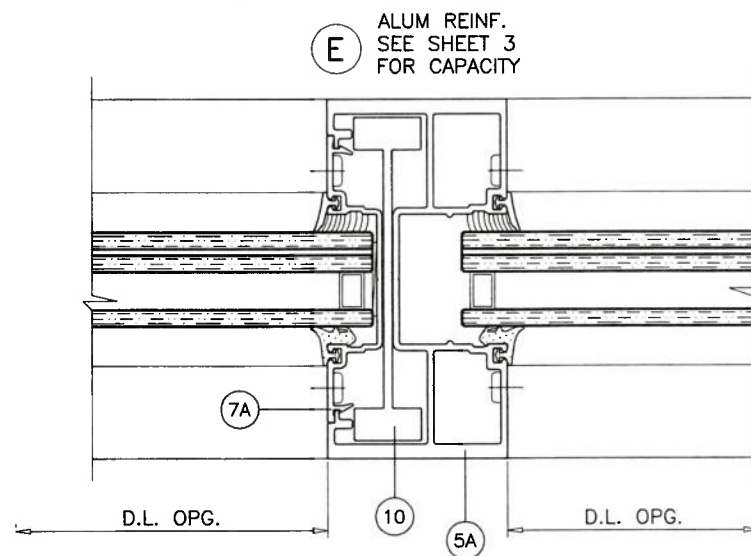
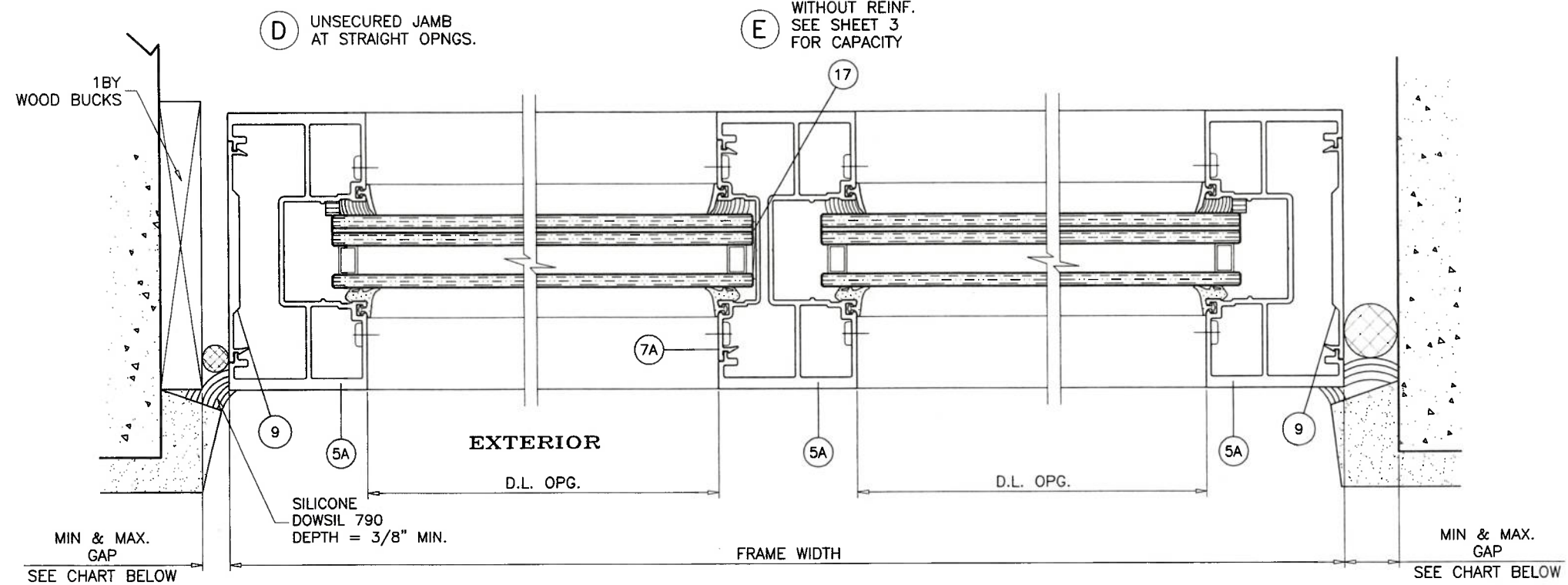
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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
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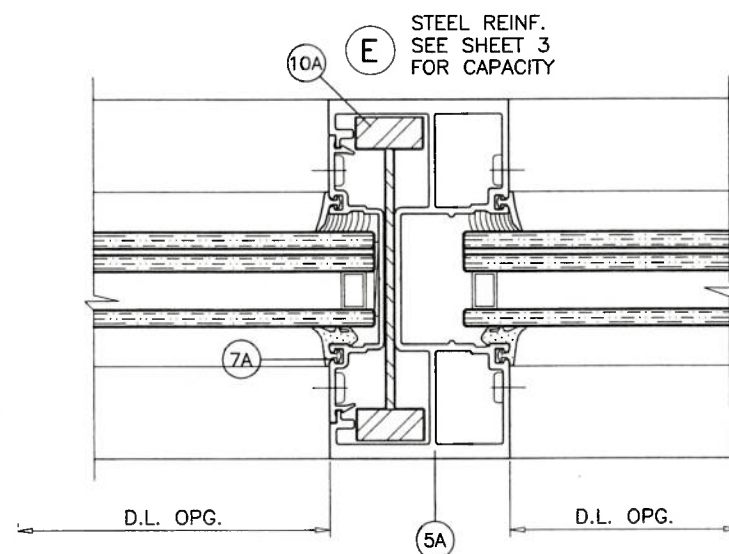
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dr. by:	TARIQ
chk. by:	

drawing no.	W09-25
sheet	9 of 17



FRAME HEIGHTS UPTO	GAP	
	MIN.	MAX.
96"	3/16"	3/4"
108"	5/16"	3/4"
120"	3/8"	3/4"

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



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Miami-Dade Product Control

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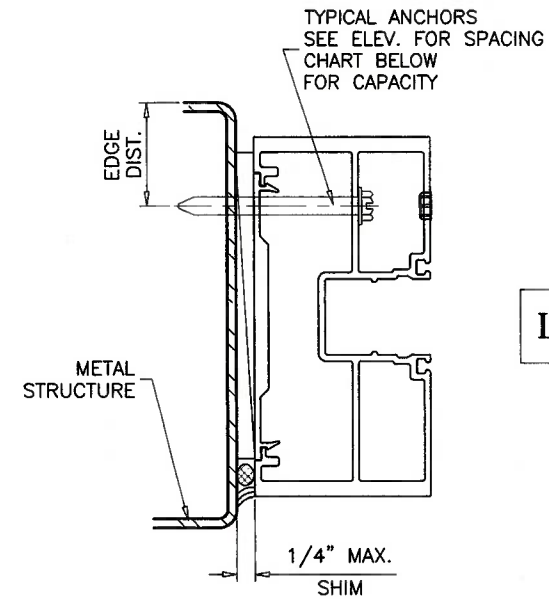
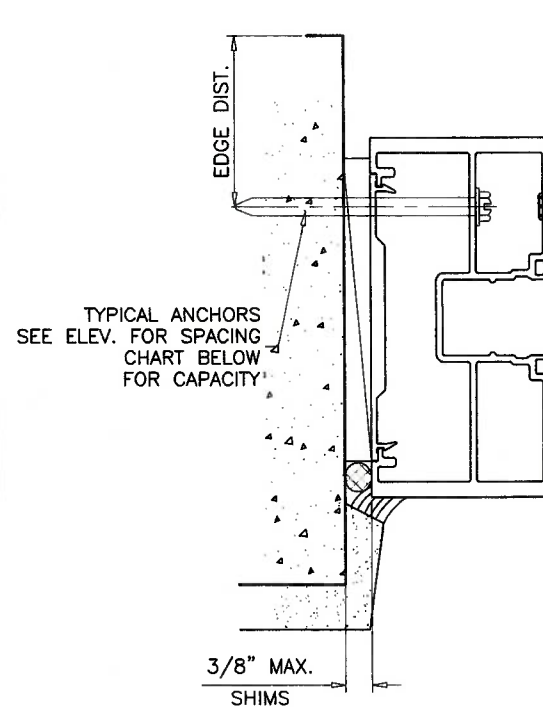
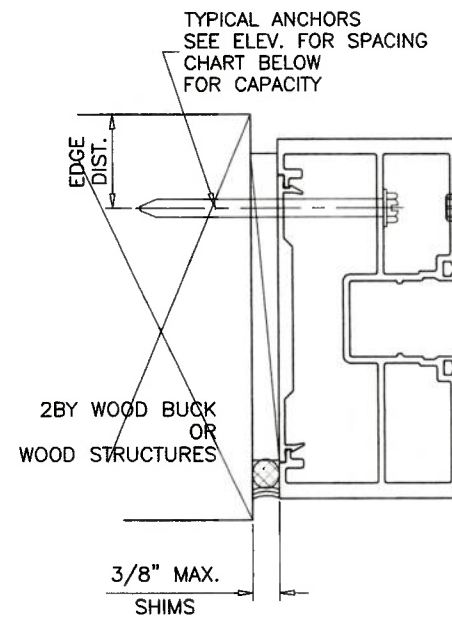
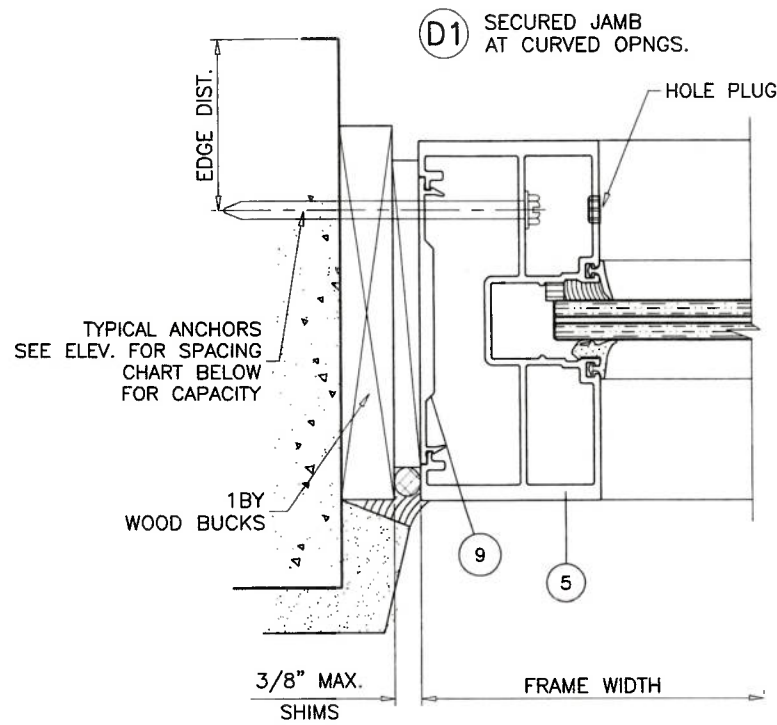
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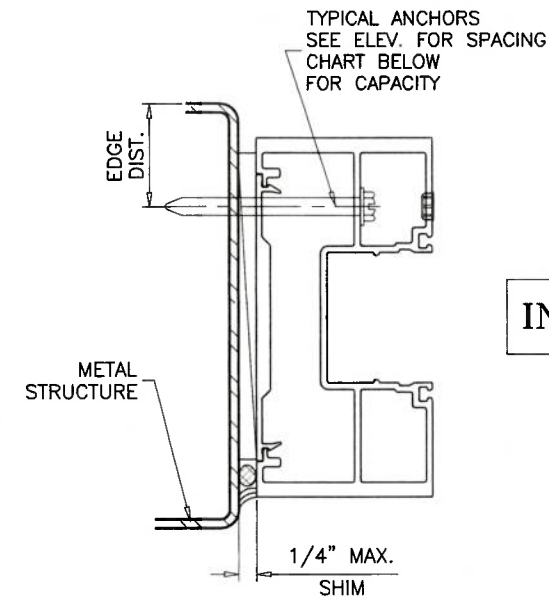
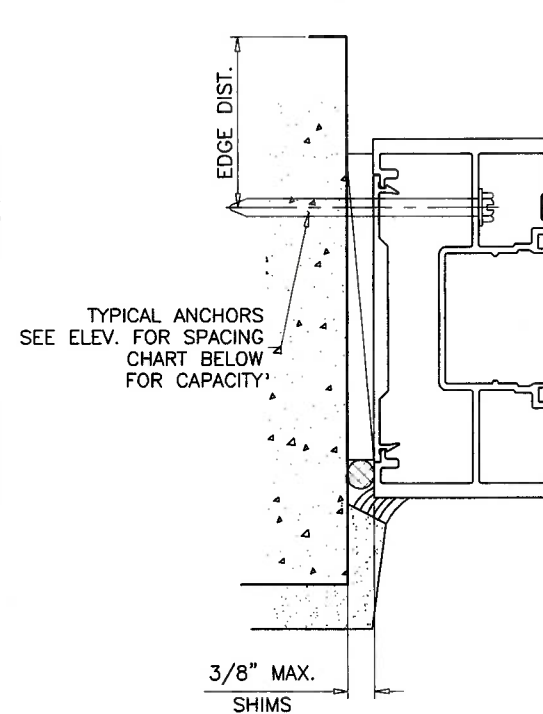
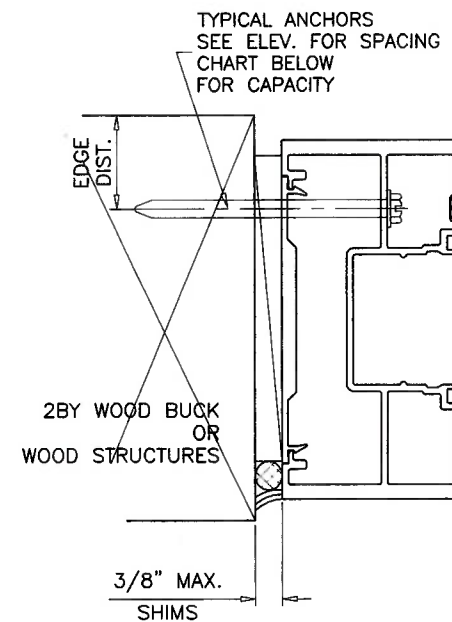
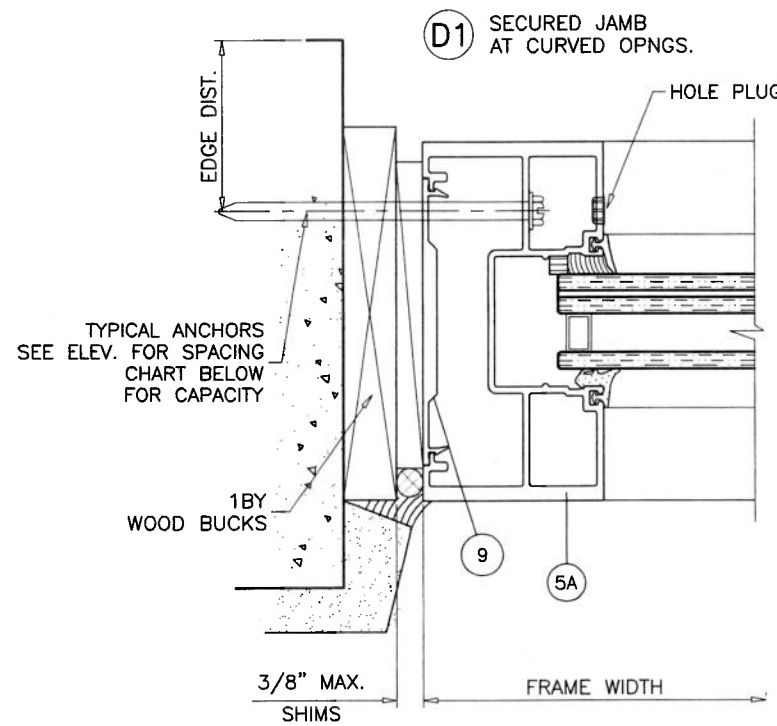
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no	date	by	Description	
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chk. by:	

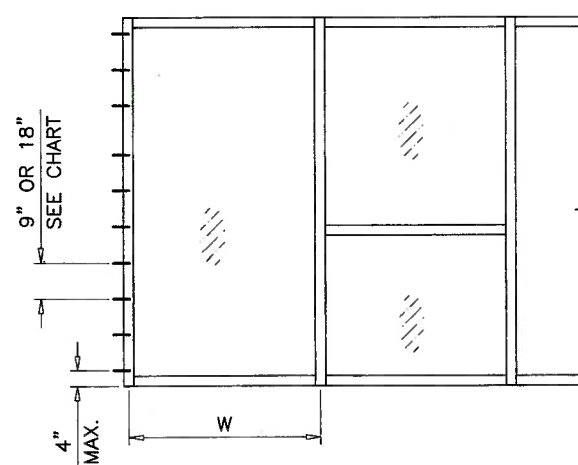
drawing no.	W09-25
sheet	10 of 17



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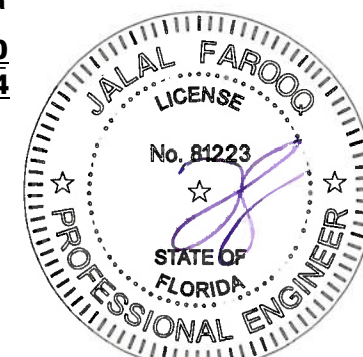
INSUL. LAM. GLASS



WIDTH (W)	JAMB ANCHORS DESIGN LOAD CAPACITY - PSF					
	ANCHORS TYPE 'B'		ANCHORS TYPE 'C'		ANCHORS TYPE 'D'	
	AT 9" O.C.		AT 18" O.C.		AT 9" O.C.	AT 18" O.C.
	1/4" SHIMS	3/8" SHIMS	1/4" SHIMS	3/8" SHIMS	1/4" SHIMS	1/4" SHIMS
30"	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)	EXT.(+)/INT.(-)
36"	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
48"	120.0	120.0	120.0	120.0	120.0	113.7
54"	120.0	120.0	112.0	112.0	120.0	101.0
60"	120.0	120.0	100.8	100.8	120.0	90.9

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control

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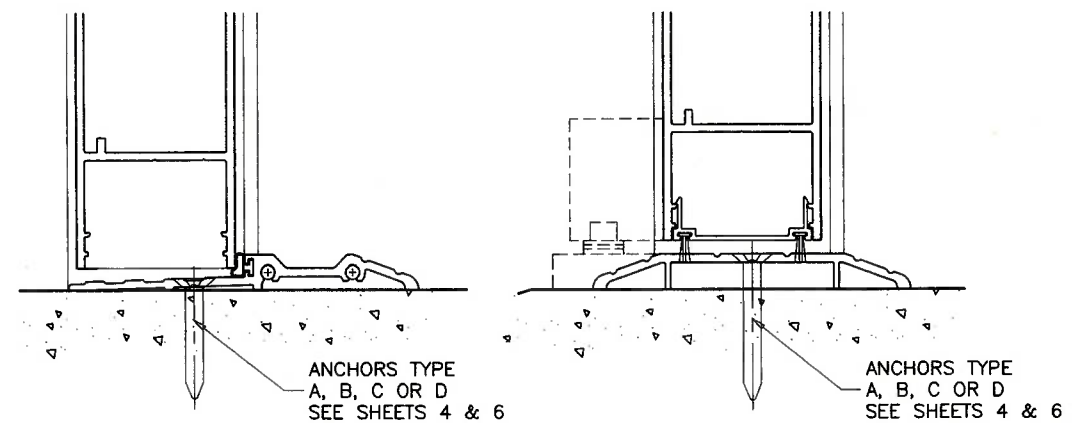
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STORE W09-25ES

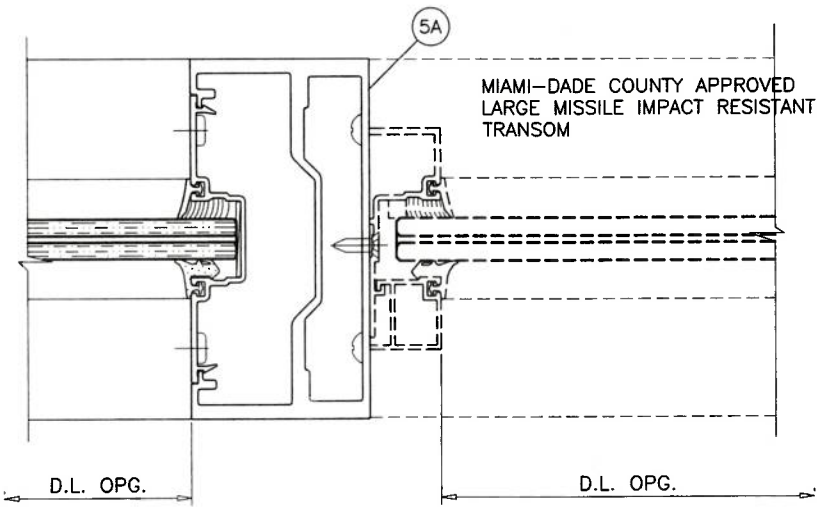
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E	01.26.18	UPD TO 2017 FBC	
F	09.28.18	NO CHANGE THIS SHEET	
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date: 04-16-09
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. **W09-25**
sheet 11 of 17

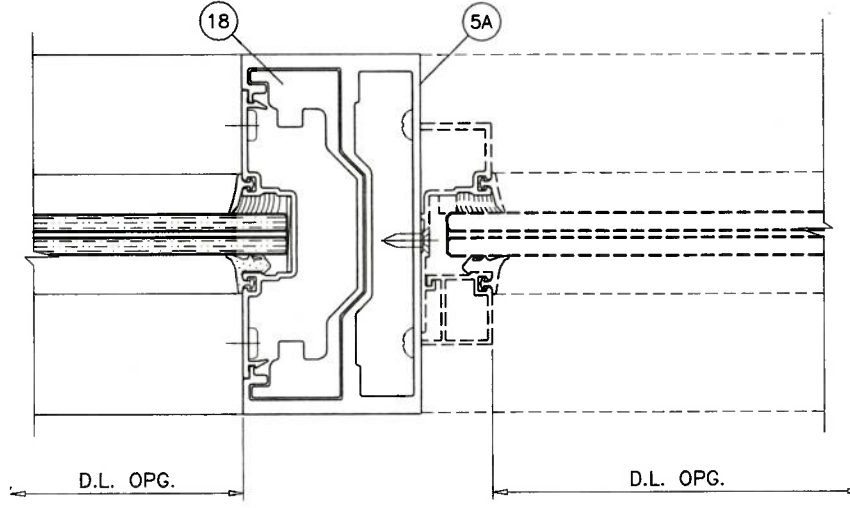


F WITHOUT REINF.
SEE SHEET 5
FOR CAPACITY



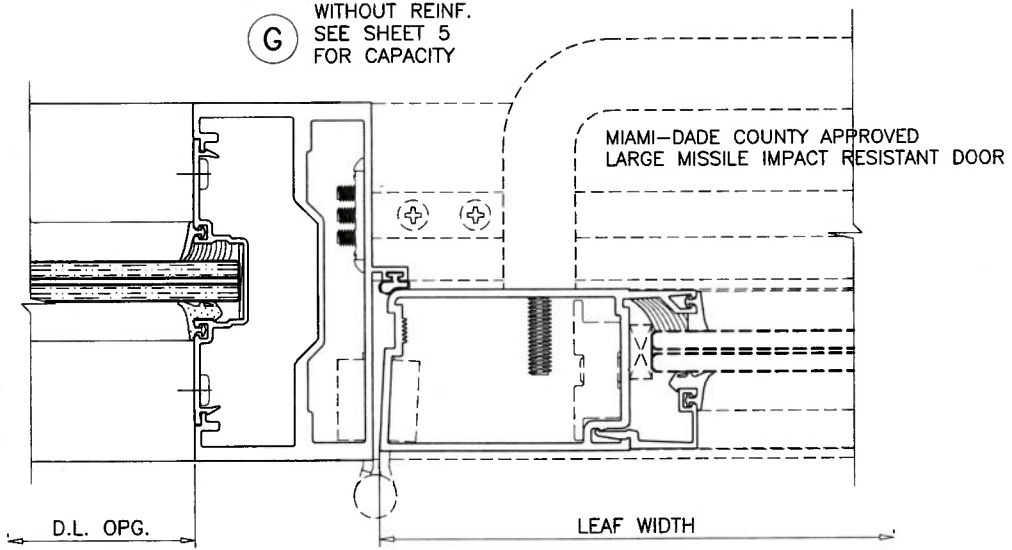
EXTERIOR

F WITH REINF.
SEE SHEET 5
FOR CAPACITY



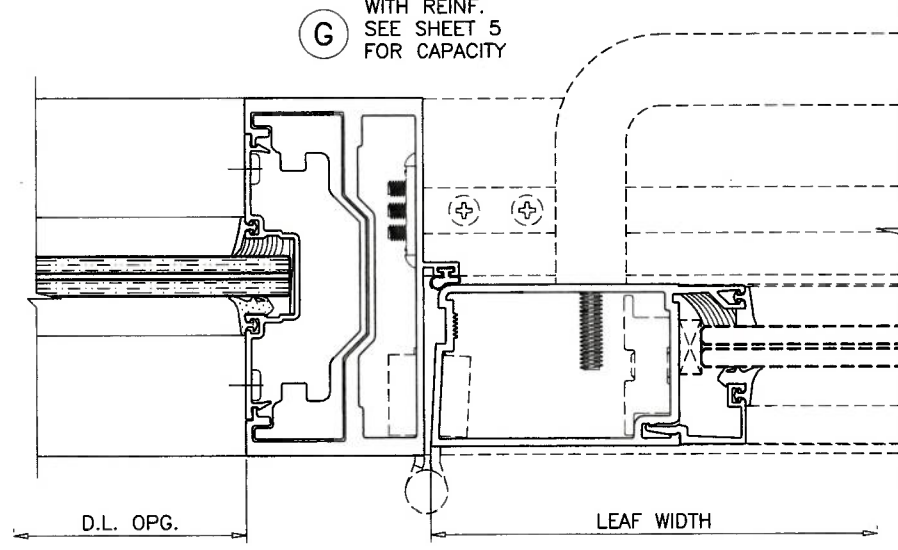
EXTERIOR

G WITHOUT REINF.
SEE SHEET 5
FOR CAPACITY



EXTERIOR

G WITH REINF.
SEE SHEET 5
FOR CAPACITY

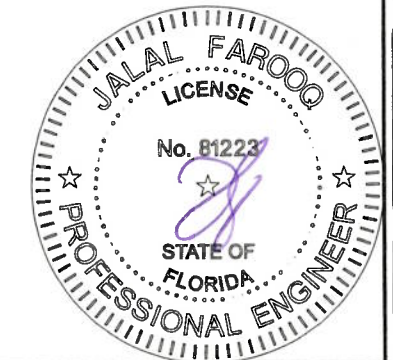


EXTERIOR

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

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **20-1208.10**
Expiration Date: **10/28/2024**
By: *Manuel Perez*
Miami-Dade Product Control

LAMINATED GLASS



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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

STORE W09-25ES

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

no	date	by	description
C	03.13.12		NO CHANGE THIS SHEET
D	08.04.14		UPDATED TO 2014 FBC
E	01.26.18		UPDATED TO 2017 FBC
F	09.28.18		NO CHANGE THIS SHEET
G	11.18.20		UPDATED TO 2020 FBC

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scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
W09-25

sheet 12 of 17

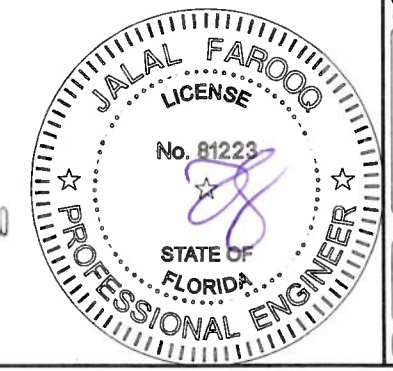
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chk. by:	
drawing no.	W09-25
sheet	13 of 17

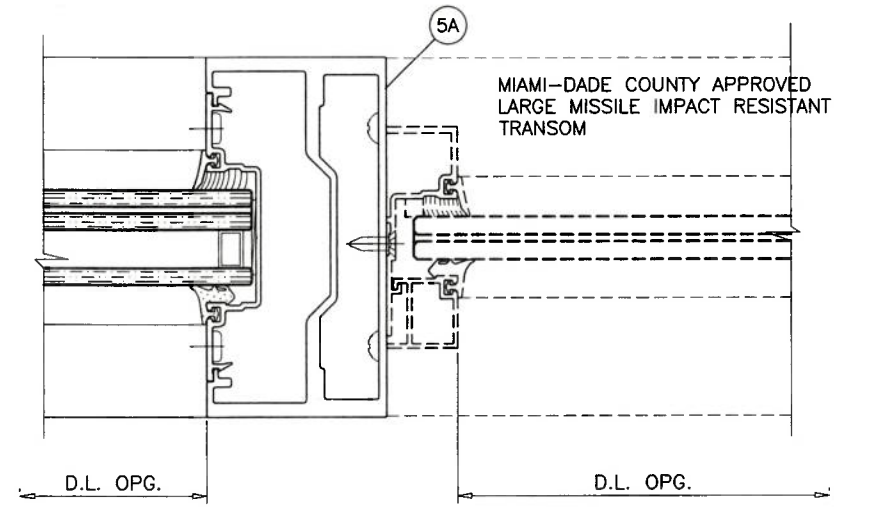
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 Miami-Dade Product Control

INSUL. LAM. GLASS

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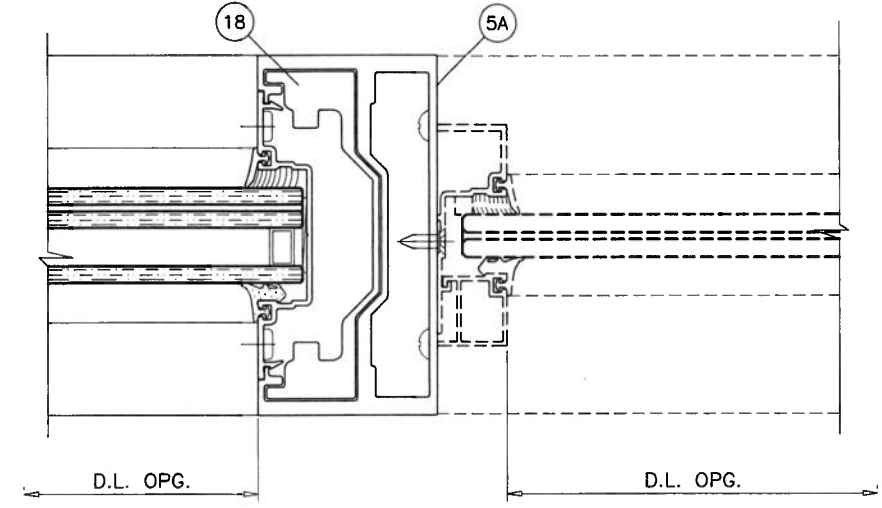


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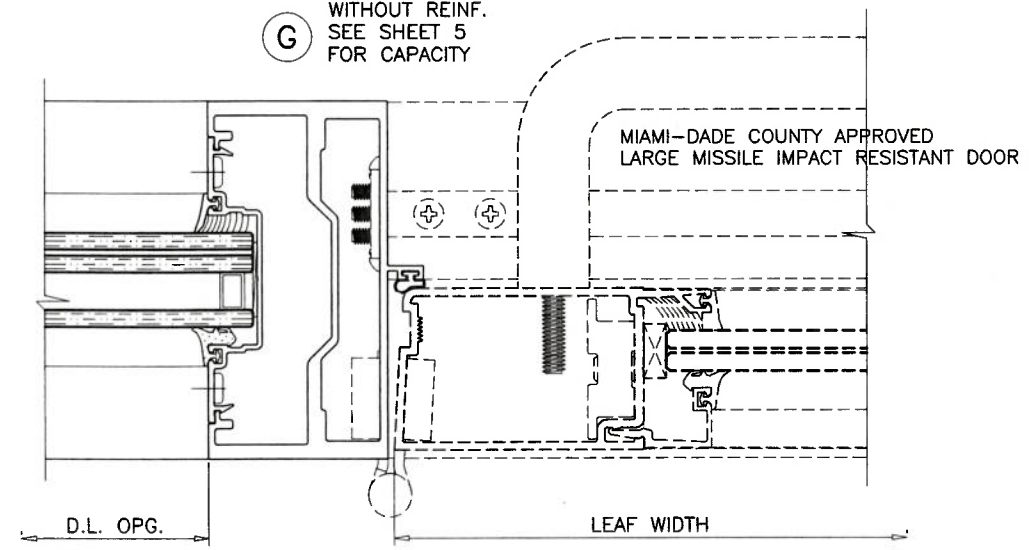
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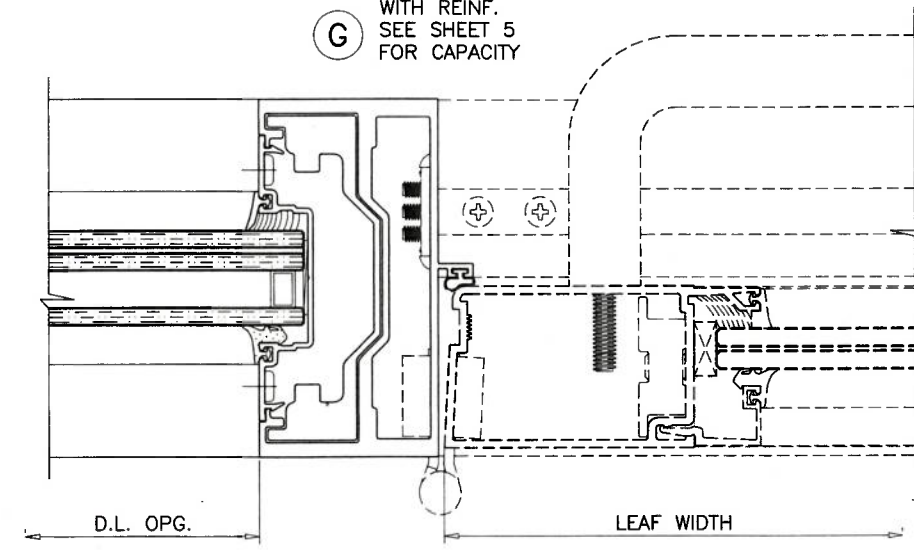
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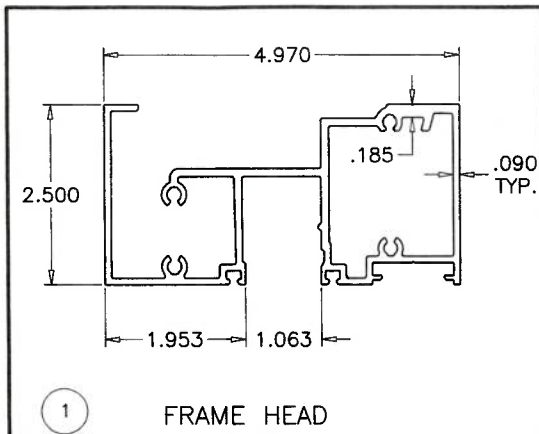


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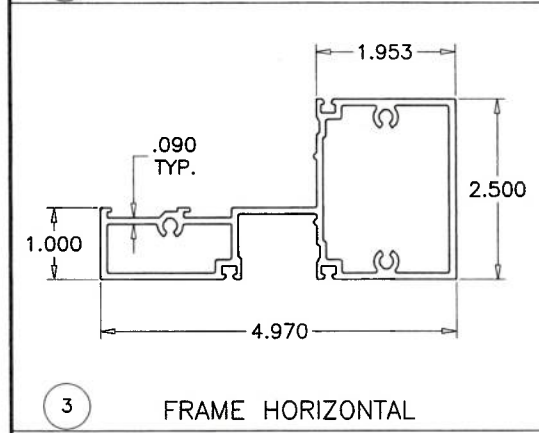
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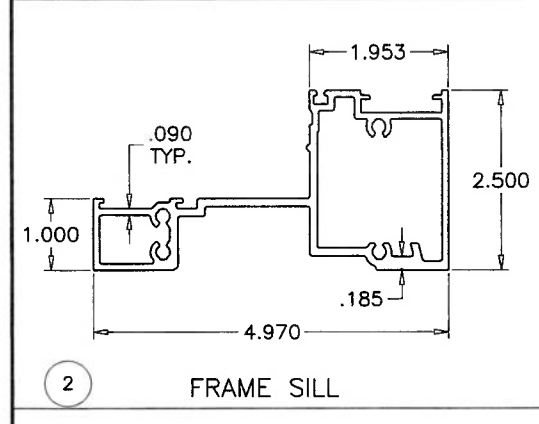
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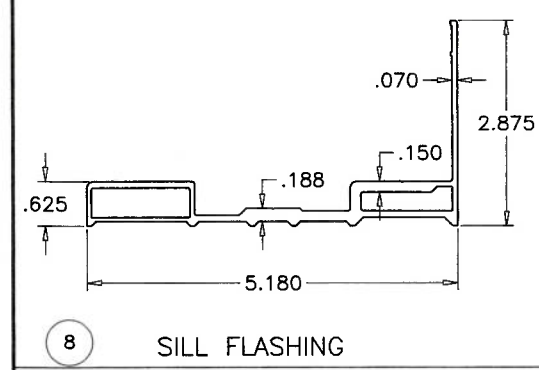
1 FRAME HEAD



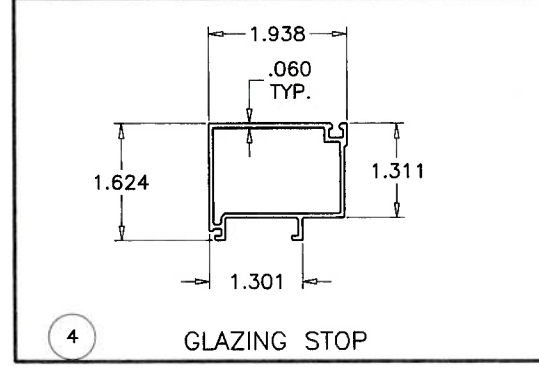
3 FRAME HORIZONTAL



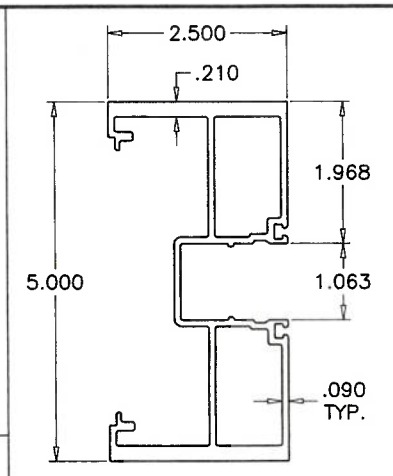
2 FRAME SILL



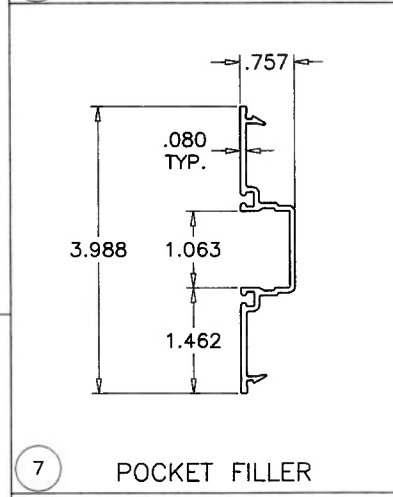
8 SILL FLASHING



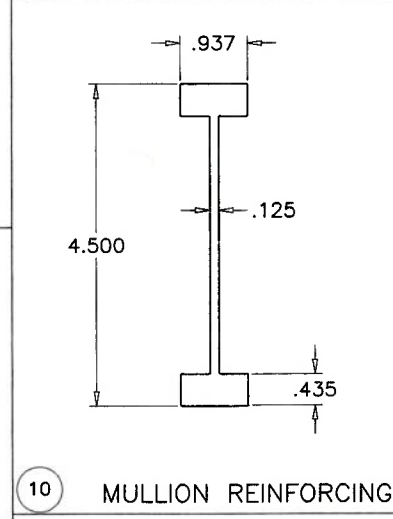
4 GLAZING STOP



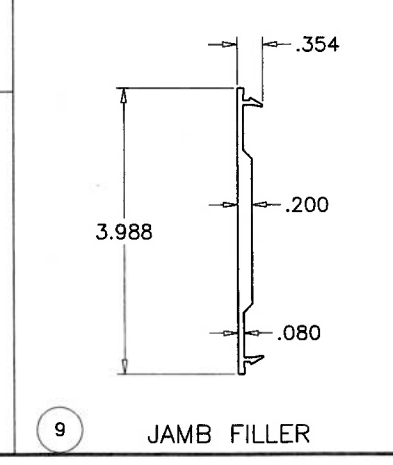
5 FRAME JAMB/MULLION



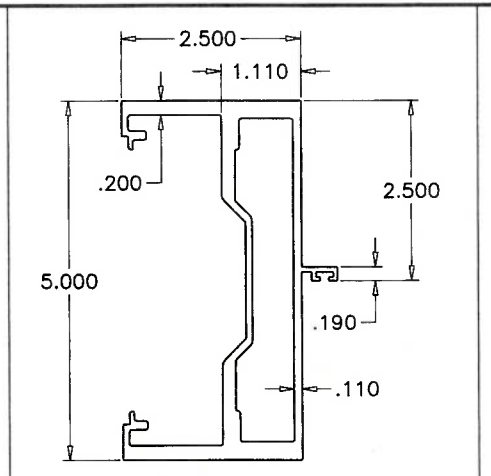
7 POCKET FILLER



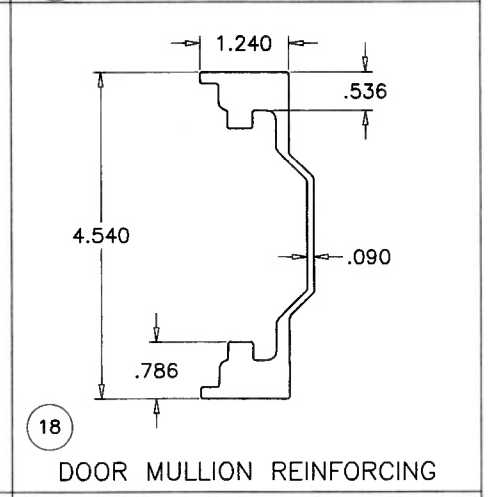
10 MULLION REINFORCING



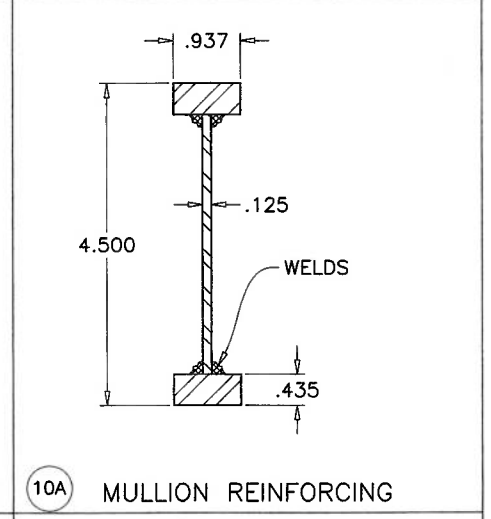
9 JAMB FILLER



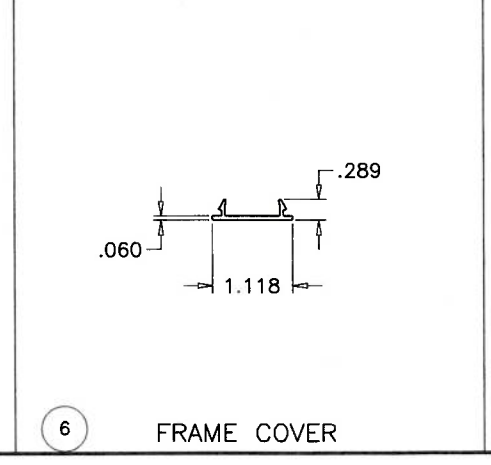
5A DOOR MULLION



18 DOOR MULLION REINFORCING



10A MULLION REINFORCING



6 FRAME COVER

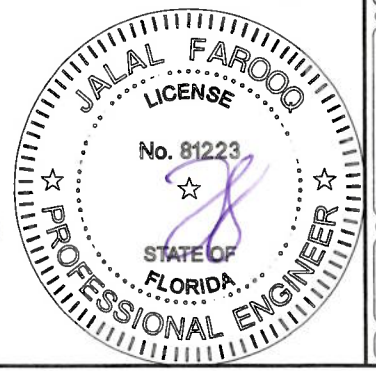
ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ES9506	AS REQD.	FRAME HEAD (LAM. GLASS)	6063-T6	-
2	ES9503	AS REQD.	FRAME SILL (LAM. GLASS)	6063-T6	-
3	ES9505	AS REQD.	FRAME HORIZONTAL (LAM. GLASS)	6063-T5	-
4	ES9504	AS REQD.	GLAZING STOP (LAM. GLASS)	6063-T5	-
5	ES9507	AS REQD.	FRAME JAMB/MULLION (LAM. GLASS)	6063-T6	-
5A	ES9013	AS REQD.	DOOR MULLION	6063-T6	-
6	ES9502	AS REQD.	FRAME COVER	6063-T5	-
7	ES9508	AS REQD.	POCKET FILLER (LAM. GLASS)	6063-T6	-
8	ES9501	AS REQD.	SILL FLASHING	6063-T6	-
9	ES9016	AS REQD.	JAMB FILLER	6063-T6	-
10	ES9510	AS REQD.	MULLION REINFORCING	6063-T6	-
10A	-	AS REQD.	MULLION REINFORCING	STEEL	-
11	#12 X 1"	AS REQD.	FRAME ASSEMBLY SCREWS	ST/ST	P.H. SMS
12	-	AS REQD.	WEDGE GASKET	EPDM	-
13	-	AS REQD.	GLAZING COMPOUND	SILICONE	DOWSIL 795/983
14	-	AS REQD.	TRIM GASKET	EPDM	-
15	-	AS REQD.	INTERIOR SPACER 1/4" X 1/4"	EPDM	-
16	-	AS REQD.	SETTING BLOCK (LAM. GLASS)	EPDM	DUROMETER 75±5 SHORE A
17	-	AS REQD.	SIDE BLOCK	EPDM	DUROMETER 75±5 SHORE A
18	ES9017	AS REQD.	DOOR MULLION REINFORCING	6063-T6	-

SEALANTS:

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

PRODUCT REVISED
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Miami-Dade Product Control

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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

afC

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

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

STORE W09-25ES

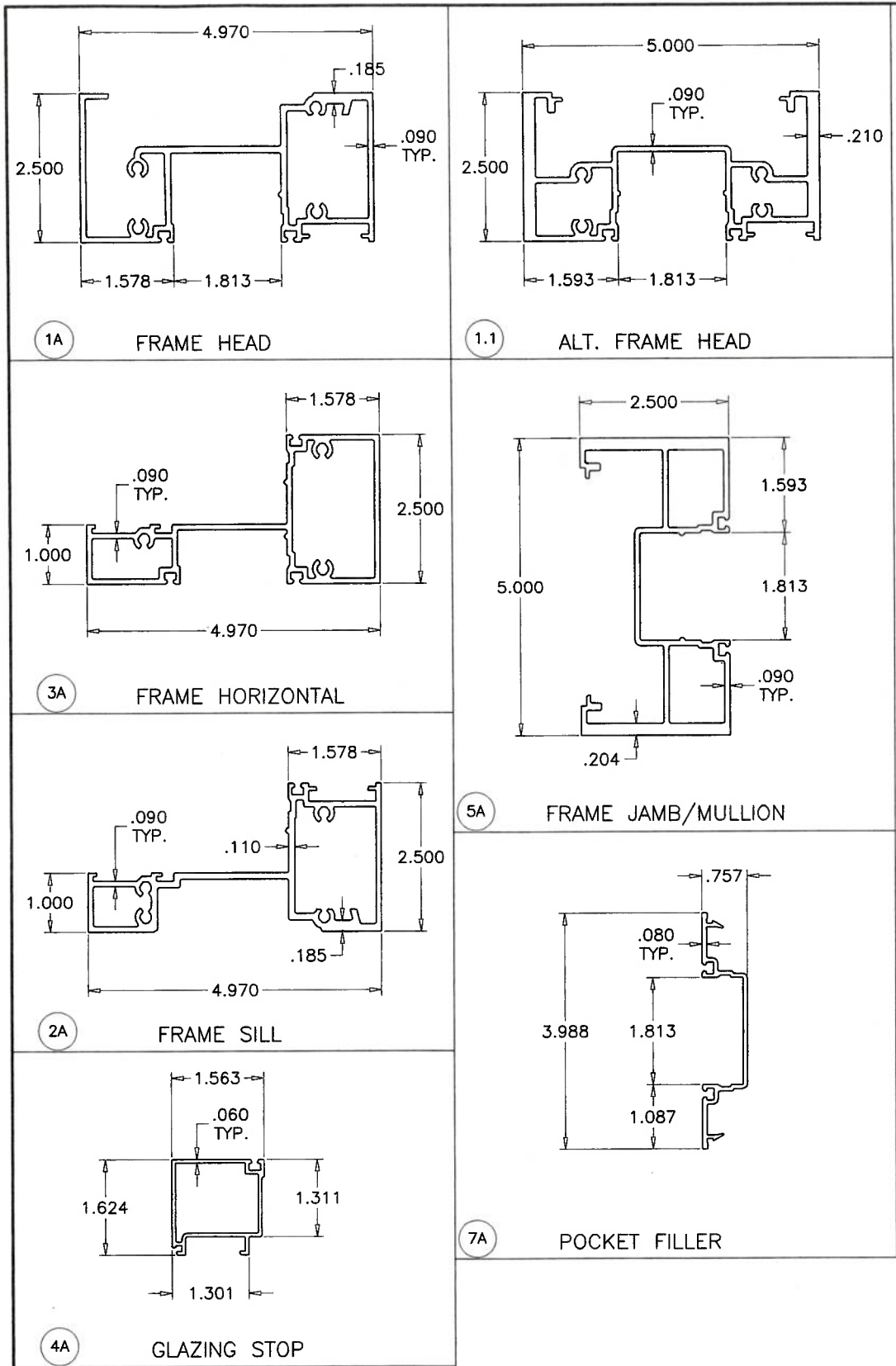
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scale: 3/8" = 1"
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chk. by:

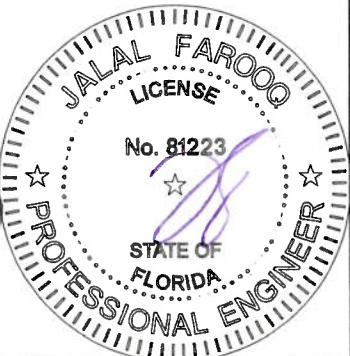
drawing no.
W09-25

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ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1A	ES-9554	AS REQD.	FRAME HEAD (INSUL. LAM. GLASS)	6063-T6	-
1.1	ES-9558	AS REQD.	ALT. FRAME HEAD (INSUL. LAM. GLASS)	6063-T6	-
2A	ES-9551	AS REQD.	FRAME SILL (INSUL. LAM. GLASS)	6063-T6	-
3A	ES-9553	AS REQD.	FRAME HORIZONTAL (INSUL. LAM. GLASS)	6063-T5	-
4A	ES-9552	AS REQD.	GLAZING STOP (INSUL. LAM. GLASS)	6063-T5	-
5A	ES-9555	AS REQD.	FRAME JAMB/MULLION (INSUL. LAM. GLASS)	6063-T6	-
7A	ES-9556	AS REQD.	POCKET FILLER (INSUL. LAM. GLASS)	6063-T6	-
16A	-	AS REQD.	SETTING BLOCK (INSUL. LAM. GLASS)	EPDM	DUROMETER 75±5 SHORE A

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 Miami-Dade Product Control



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AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
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STORE W09-25ES

SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

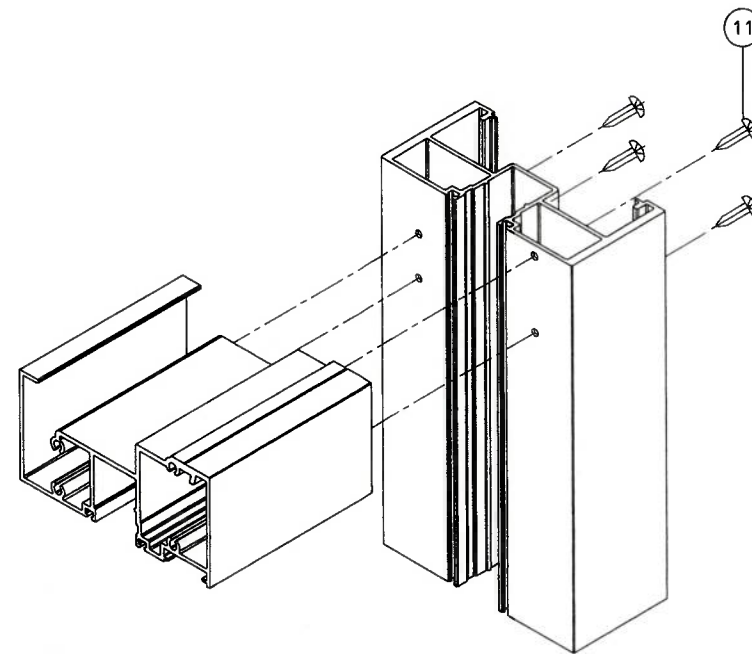
E.S. WINDOWS, LLC
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 MIAMI, FL. 33142
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revisions:

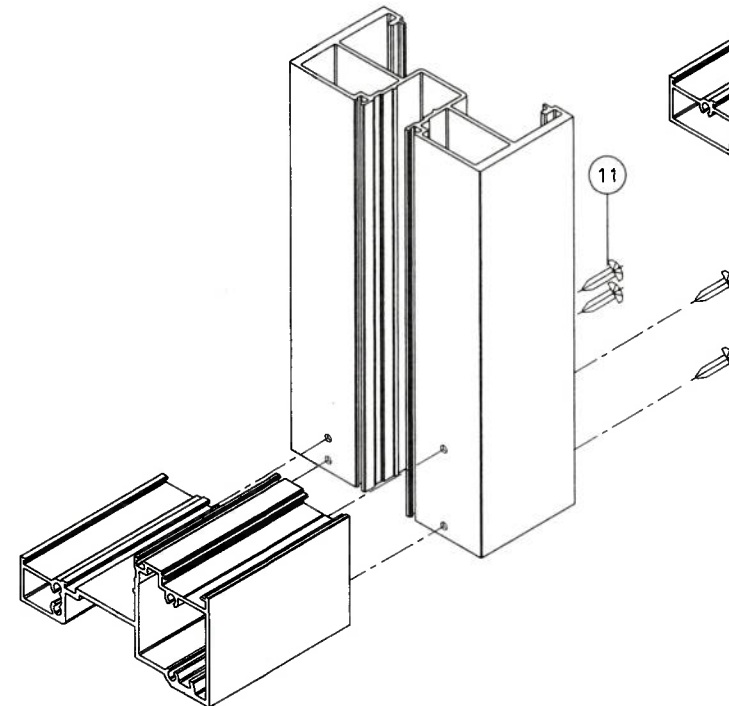
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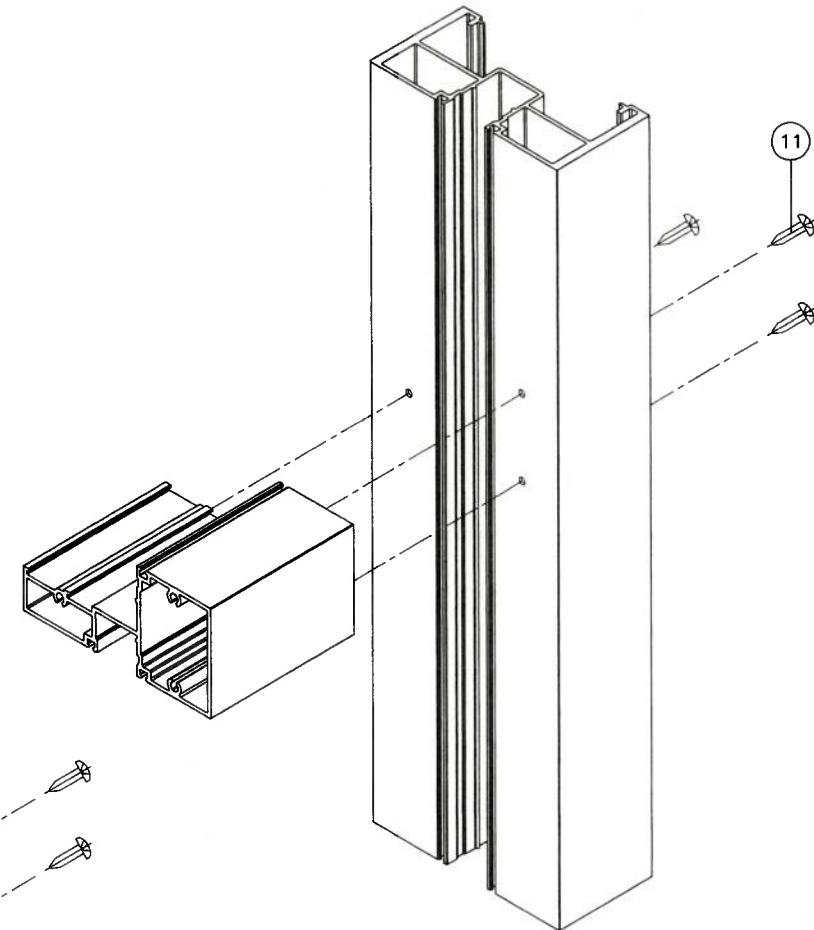
drawing no.
W09-25
 sheet 15 of 17



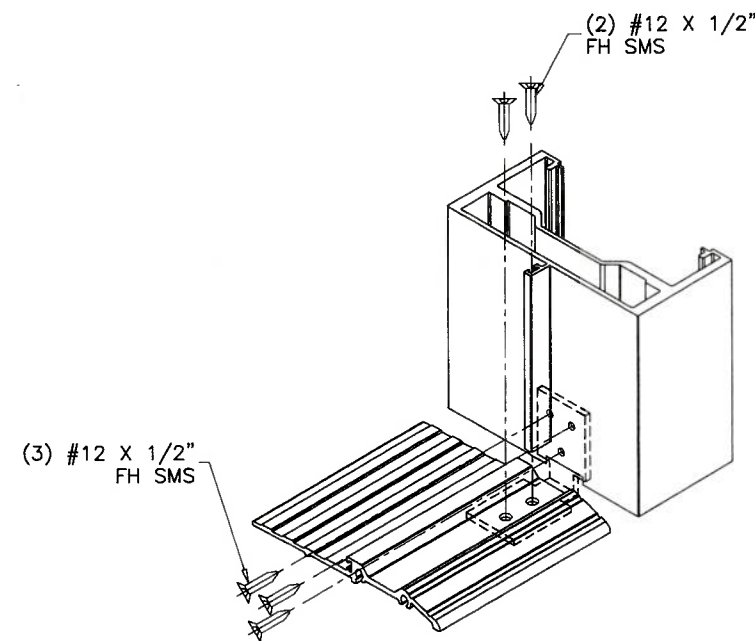
FRAME TOP CORNER



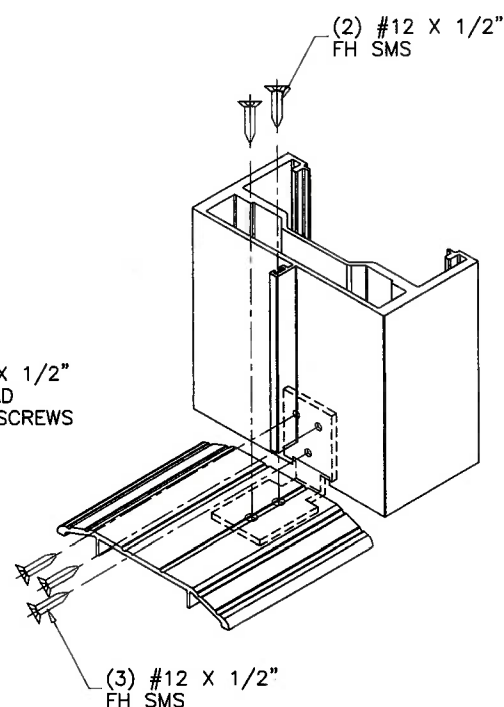
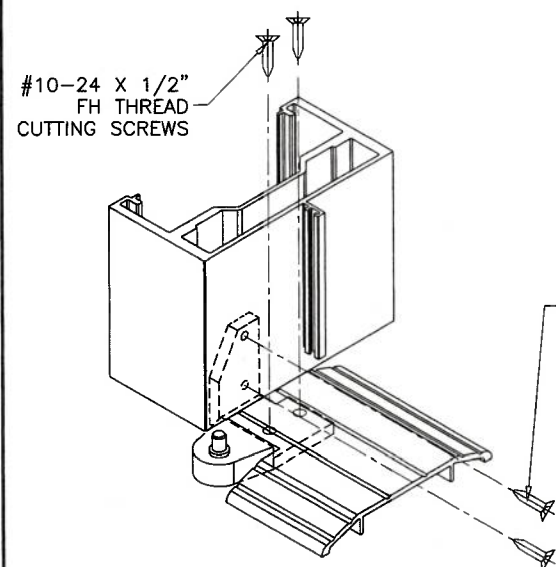
FRAME BOTTOM CORNER



HORIZONTAL CORNER

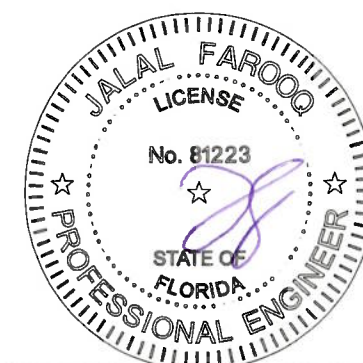


DOOR MULLION CORNER



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SERIES 9500 ALUM WINDOW WALL SYSTEM (L.M.I.)

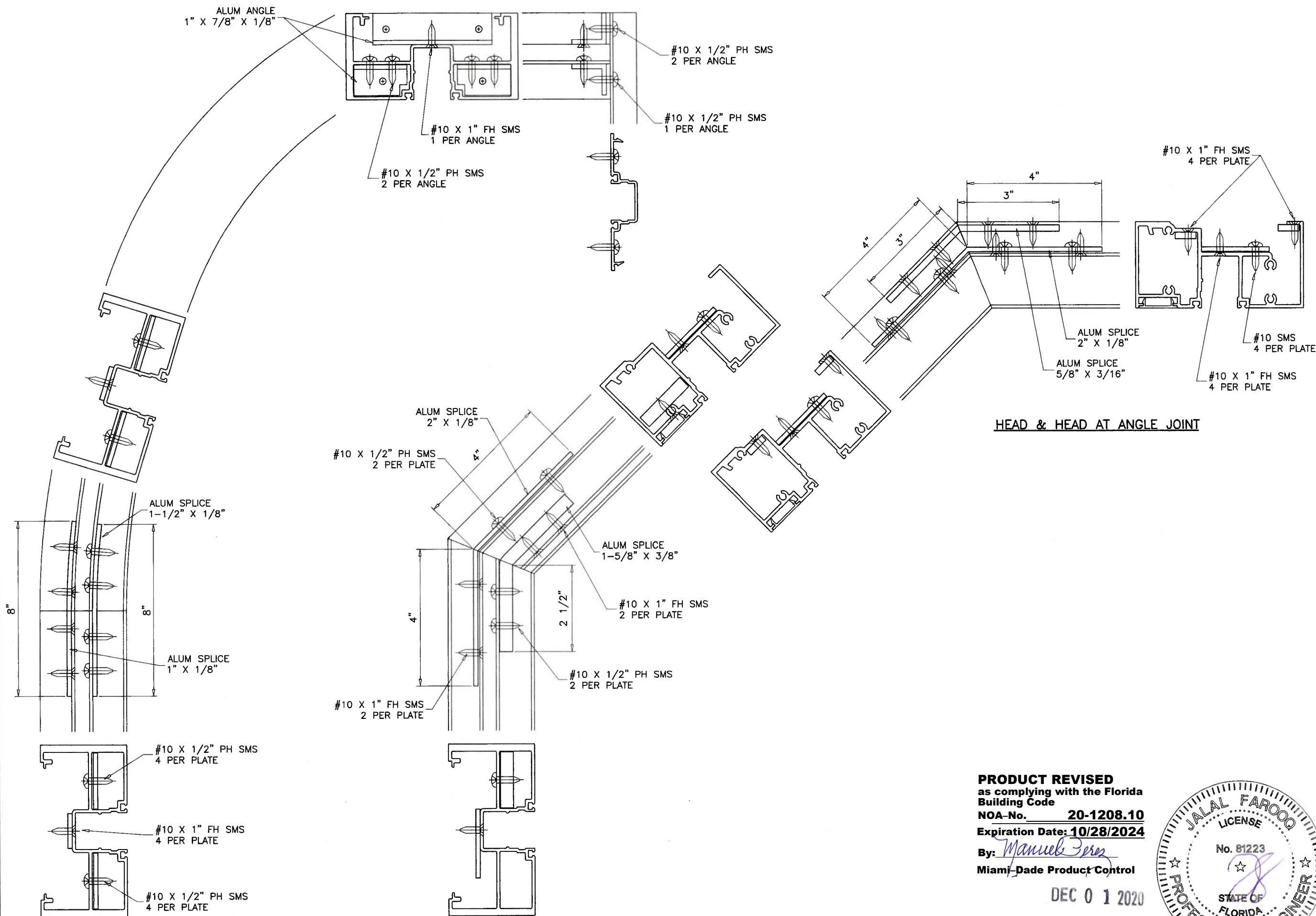
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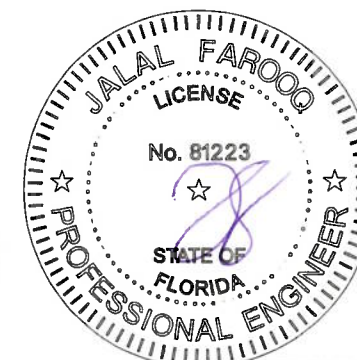


JAMB AT CIRCULAR JOINT

JAMB & HEAD AT ANGLE JOINT

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