



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

NOTICE OF ACCEPTANCE (NOA)

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

www.miamidade.gov/economy

Eco Window Systems, LLC
8502 NW 80th Street
Medley, Fl. 33166

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 "ECO-Guard Clipped" Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No. M14-01 Rev. A, Series titled "Aluminum Tube Mullion", sheets 1 through 9 of 9, dated 05/19/14 with the latest revision dated 11/15/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P. E., bearing the Miami-Dade County Product Control Section 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, city, state, 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. 14-0529.16 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 Jorge M. Plasencia, P. E.



[Signature]
02/16/18

NOA No. 17-1218.14
Expiration Date: October 23, 2019
Approval Date: February 22, 2018
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 14-0529.16

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **M14-01**, Series titled "**Aluminum Tube Mullion**", sheets 01 through 09 of 09, dated 05/19/14 with the latest revision dated 05/23/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P. E.

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
along with marked-up drawings and installation diagram of a clipped aluminum mullion at fixed windows, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-08-2192A**, dated 01/15/09, signed and sealed by Candido F. Font, P. E.
2. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of a clipped aluminum mullion at a fixed window/ a single hung window, prepared by Hurricane Engineering & Testing, Inc., Test Reports No.'s **HETI-08-2192B** and **HETI-08-2166C**, both dated 01/15/09, signed and sealed by Candido F. Font, P. E.
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) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of a clipped aluminum mullion single hung window, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-08-2166A**, dated 01/15/09, signed and sealed by Candido F. Font, P. E.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC-2010** and **FBC 5th Edition (2014)**, prepared by Al-Farooq Corporation, dated 05/05/14, signed and sealed by Javad Ahmad, P. E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.


Jorge M. Plasencia, P. E.
Product Control Unit Supervisor
NOA No. 17-1218.14
Expiration Date: October 23, 2019
Approval Date: February 22, 2018

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of no financial interest, conformance to and complying with **FBC-2010** and **FBC 5th Edition (2014)**, issued by Al-Farooq Corporation, dated 05/23/14, signed and sealed by Javad Ahmad, P. E.
2. Department of State Certification of **Eco Window Systems, LLC** as a limited liability company, active and organized under the laws of the State of Florida, dated 03/21/13 and signed by Kurt S. Browning, Secretary of State.
3. Laboratory compliance letter for Test Reports No.'s **HETI-08-2192A**, **HETI-08-2192B**, **HETI-08-2166A** and **HETI-08-2166C**, all issued by Hurricane Engineering & Testing, Inc., dated 01/15/09, signed and sealed by Candido F. Font, P. E.
4. Proposal No. **08-0236** issued by the Product Control, dated 06/04/08, signed by Manuel Perez, P. E.

G. OTHERS

1. None.

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **M14-01 Rev. A**, Series titled "**Aluminum Tube Mullion**", sheets 1 through 9 of 9, dated 05/19/14 with the latest revision dated 11/15/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P. E.

B. TESTS

1. None.

C. CALCULATIONS

1. Structural analysis, complying with **FBC 6th Edition (2017)**, prepared by Al-Farooq Corporation, dated 11/30/17, signed and sealed by Javad Ahmad, P. E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.



Jorge M. Plasencia, P. E.
Product Control Unit Supervisor
NOA No. 17-1218.14
Expiration Date: October 23, 2019
Approval Date: February 22, 2018

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance to **FBC 6th Edition (2017)** and of no financial interest, issued by Al-Farooq Corporation, dated 11/14/17, signed and sealed by Javad Ahmad, P. E.

G. OTHERS

1. This NOA revises NOA #14-0529.16, expiring on 10/23/19.



Jorge M. Plasencia, P. E.
Product Control Unit Supervisor
NOA No. 17-1218.14
Expiration Date: October 23, 2019
Approval Date: February 22, 2018

MULLION SYSTEM IS RATED FOR LARGE MISSILE IMPACT.
AND CAN BE USED WITH ALL MIAMI-DADE COUNTY APPROVED
IMPACT AND NON-IMPACT RESISTANT PRODUCTS.

RECTANGULAR ALUMINUM TUBE MULLIONS USING MULLION PROPERTIES ONLY

NOTES:

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

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE
APPLICABLE BUILDING CODE REQUIREMENTS I.E: WIND LOAD, WATER
INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

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 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

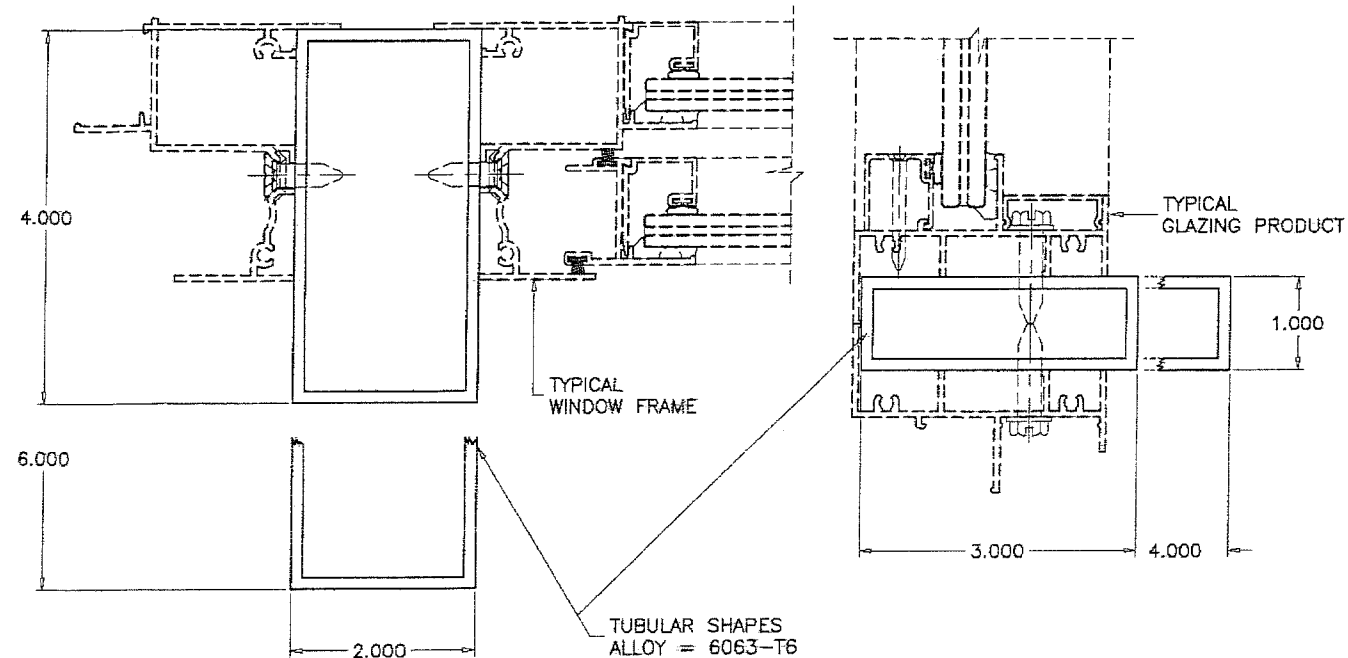
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION
FOR A SITE SPECIFIC PROJECT, I.E. LIFE SAFETY OF THIS PRODUCT, ADEQUACY
OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR
WATER INFILTRATION RESISTANCE ETC.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,
AND TO BE REVIEWED BY BUILDING OFFICIAL.

INSTRUCTIONS:

USE CHARTS AND GRAPHS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN LOAD REQUIRED PER ASCE 7
FOR PARTICULAR OPENING.
- STEP 2** USE MIAMI-DADE COUNTY APPROVED GLAZING PRODUCTS
MEETING ABOVE LOAD REQUIREMENTS.
- STEP 3** USE CONNECTION TO MULLION AS PER PRODUCT
APPROVAL.
- STEP 4** USING CHARTS ON SHEET 3 SELECT MULLION SIZE WITH
DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED
IN STEP 1 ABOVE.
- STEP 5** USING ANCHOR TYPES ON SHEETS 5 THRU 9 AND ANCHOR CHARTS
ON SHEET 4, SELECT ANCHOR TYPE WITH DESIGN RATING
MORE THAN THE DESIGN LOADS SPECIFIED IN STEP 1 ABOVE.

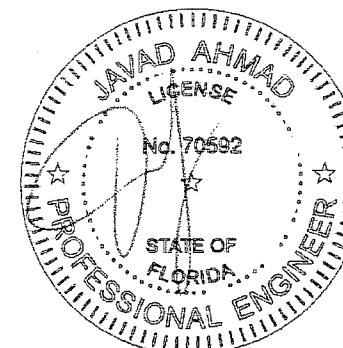


MULLIONS CONTAINING TYPICAL GLAZING PRODUCTS HORIZONTAL OR VERTICAL

SEE WINDOW OR DOOR APPROVAL FOR FASTENERS SIZES AND SPACING

NOV 30 2017

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **17-1218.14**
Expiration Date **10/23/2019**
By *[Signature]*
Miami-Dade Product Control



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)

MULLION M14-01ESW

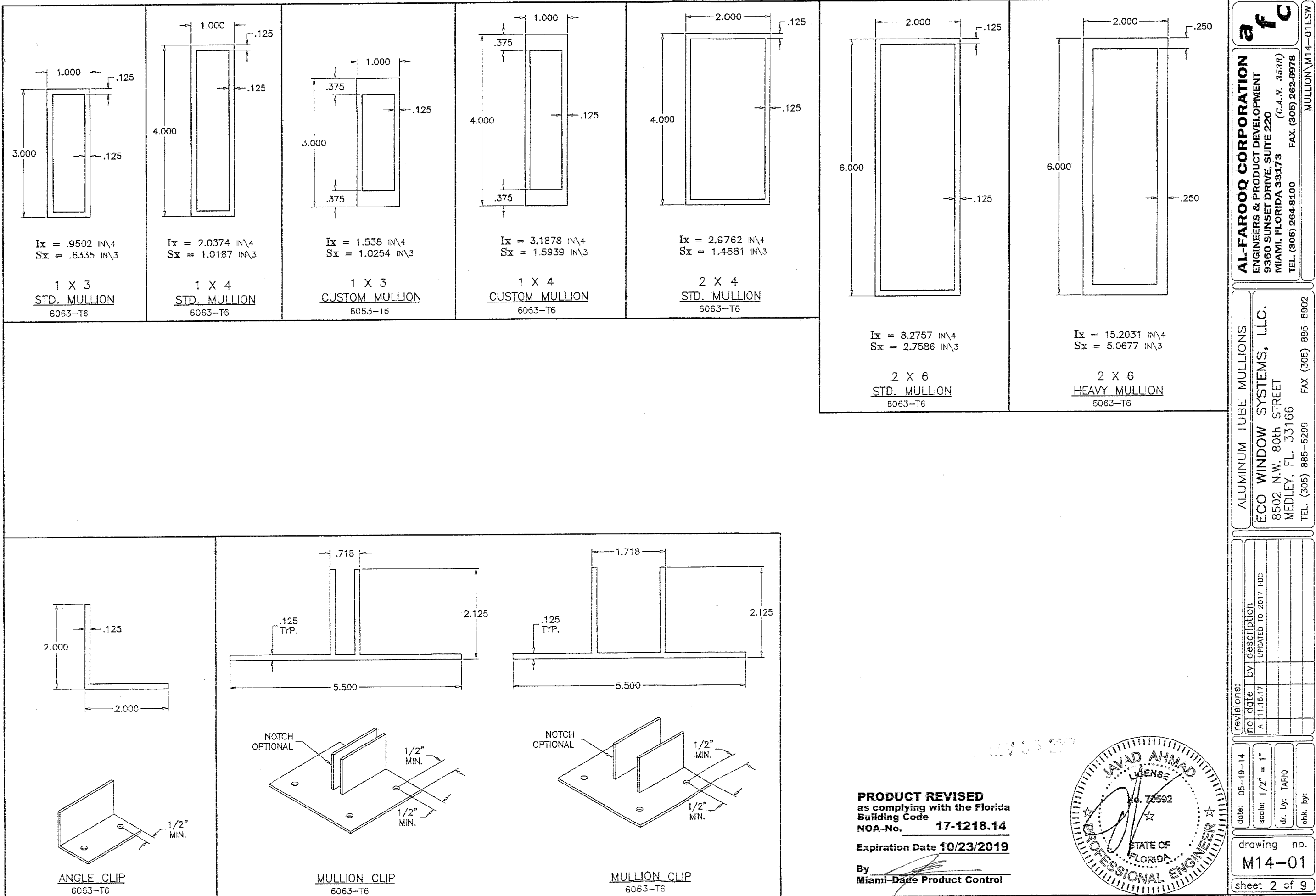
ALUMINUM TUBE MULLIONS
ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th STREET
MEDLEY, FL. 33166
TEL. (305) 885-5299 FAX (305) 885-5902

ALUMINUM TUBE MULLIONS

revisions:		no	date	by	description
1	A	11.15.17			UPDATED TO 2017 FBC

date: 05-19-14	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:	
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drawing no.	M14-01
sheet 1 of 9	



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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ALUMINUM TUBE MULLIONS

ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th STREET
MEDLEY, FL. 33166
TEL. (305) 885-5299 FAX (305) 885-5902

MULLION\M14-01ESW

revisions:		by description	
no.	date	no.	date
A	11.15.17		UPDATED TO 2017 FBC

date: 05-19-14

scale: 1/2" = 1"

dr. by: TARIQ

chk. by:

drawing no.

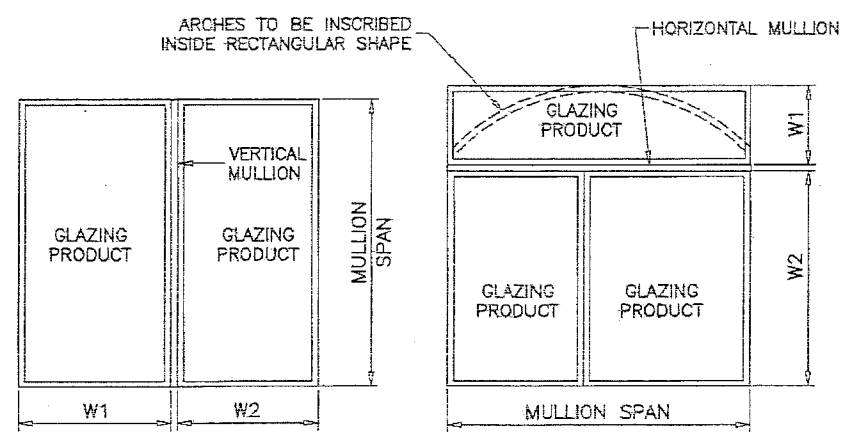
M14-01

sheet 2 of 9

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS.		1 X 3	1 X 4	1 X 3	1 X 4	2 X 4	2 X 6	2 X 6
WIDTH (W)	MULL SPAN	STD.	STD.	CUSTOM	CUSTOM	STD.	STD.	HEAVY
19-1/8"	38-3/8"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
37"		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"		112.5	120.0	120.0	120.0	120.0	120.0	120.0
66"		102.3	120.0	120.0	120.0	120.0	120.0	120.0
72"		93.8	120.0	120.0	120.0	120.0	120.0	120.0
19-1/8"	42"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
37"		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"		116.8	120.0	120.0	120.0	120.0	120.0	120.0
54"		103.8	120.0	120.0	120.0	120.0	120.0	120.0
60"		93.4	120.0	120.0	120.0	120.0	120.0	120.0
66"		84.9	120.0	120.0	120.0	120.0	120.0	120.0
72"		77.9	120.0	120.0	120.0	120.0	120.0	120.0
19-1/8"	50-5/8"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	120.0	120.0	120.0
37"		103.1	120.0	120.0	120.0	120.0	120.0	120.0
42"		90.8	120.0	120.0	120.0	120.0	120.0	120.0
48"		79.5	120.0	120.0	120.0	120.0	120.0	120.0
54"		70.6	112.5	111.6	120.0	120.0	120.0	120.0
60"		63.6	101.3	100.4	120.0	120.0	120.0	120.0
66"		57.8	92.1	91.3	120.0	120.0	120.0	120.0
72"		53.0	84.4	83.7	120.0	120.0	120.0	120.0
19-1/8"	63"	120.0	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		89.0	120.0	120.0	120.0	120.0	120.0	120.0
30"		78.6	120.0	120.0	120.0	120.0	120.0	120.0
37"		63.7	104.3	103.2	120.0	120.0	120.0	120.0
42"		56.1	91.9	90.9	120.0	120.0	120.0	120.0
48"		49.1	80.4	79.5	120.0	120.0	120.0	120.0
54"		43.7	71.5	70.7	108.3	111.5	120.0	120.0
60"		39.3	64.3	63.6	97.5	100.3	120.0	120.0
66"		35.7	58.5	57.8	88.6	91.2	120.0	120.0
72"		32.7	53.6	53.0	81.3	83.6	120.0	120.0

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS.		1 X 3	1 X 4	1 X 3	1 X 4	2 X 4	2 X 6	2 X 6
WIDTH (W)	MULL SPAN	STD.	STD.	CUSTOM	CUSTOM	STD.	STD.	HEAVY
19-1/8"	74-1/4"	75.3	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		54.3	103.4	88.0	120.0	120.0	120.0	120.0
30"		48.0	91.3	77.7	120.0	120.0	120.0	120.0
37"		38.9	74.0	63.0	111.9	116.3	120.0	120.0
42"		34.3	65.2	55.5	98.6	102.4	120.0	120.0
48"		30.0	57.1	48.6	86.3	89.6	120.0	120.0
54"		26.7	50.7	43.2	76.7	79.7	120.0	120.0
60"		24.0	45.7	38.9	69.0	71.7	120.0	120.0
66"		21.8	41.5	35.3	62.7	65.2	119.7	120.0
72"		-	38.0	32.4	57.5	59.7	109.7	120.0
19-1/8"	84"	52.0	110.6	84.2	120.0	120.0	120.0	120.0
26-1/2"		37.5	79.8	60.8	120.0	117.7	120.0	120.0
30"		33.2	70.5	53.7	106.3	104.0	120.0	120.0
37"		26.9	57.2	43.5	86.2	84.3	120.0	120.0
42"		23.7	50.4	38.3	76.0	74.3	120.0	120.0
48"		20.7	44.1	33.5	66.5	65.0	120.0	120.0
54"		-	39.2	29.8	59.1	57.8	113.5	120.0
60"		-	35.3	26.8	53.2	52.0	102.2	120.0
66"		-	32.1	24.4	48.3	47.3	92.9	120.0
72"		-	29.4	22.4	44.3	43.3	85.2	120.0
19-1/8"	96"	34.8	74.8	56.4	116.9	109.3	120.0	120.0
26-1/2"		25.1	54.0	40.7	84.4	78.9	120.0	120.0
30"		22.2	47.7	36.0	74.5	69.7	120.0	120.0
37"		-	38.7	29.2	60.4	56.5	120.0	120.0
42"		-	34.1	25.7	53.2	49.8	110.9	120.0
48"		-	29.8	22.5	46.6	43.5	97.0	120.0
54"		-	26.5	-	41.4	38.7	86.2	120.0
60"		-	23.8	-	37.3	34.8	77.6	120.0
66"		-	21.7	-	33.9	31.7	70.6	120.0
72"		-	-	-	31.1	29.0	64.7	118.3
19-1/8"	108"	-	-	-	82.1	76.8	120.0	120.0
26-1/2"		-	-	-	59.3	55.4	120.0	120.0
30"		-	-	-	52.3	48.9	120.0	120.0
37"		-	-	-	42.4	39.7	98.7	120.0
42"		-	-	-	37.4	35.0	87.0	120.0
48"		-	-	-	32.7	30.6	76.1	120.0
54"		-	-	-	29.1	27.2	67.6	120.0
60"		-	-	-	26.2	24.5	60.9	111.3
66"		-	-	-	23.8	22.2	55.3	101.2
72"		-	-	-	21.8	20.4	50.7	92.7

DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)								
WINDOW DIMS.		1 X 3	1 X 4	1 X 3	1 X 4	2 X 4	2 X 6	2 X 6
WIDTH (W)	MULL SPAN	STD.	STD.	CUSTOM	CUSTOM	STD.	STD.	HEAVY
19-1/8"	120"	-	-	-	59.9	56.0	120.0	120.0
26-1/2"		-	-	-	43.2	40.4	110.9	120.0
30"		-	-	-	38.2	35.7	97.9	120.0
37"		-	-	-	30.9	28.9	79.4	120.0
42"		-	-	-	27.3	25.5	69.9	120.0
48"		-	-	-	23.8	22.3	61.2	111.8
54"		-	-	-	21.2	-	54.4	99.4
60"		-	-	-	-	-	49.0	89.5
66"		-	-	-	-	-	44.5	81.3
72"		-	-	-	-	-	40.8	74.6
19-1/8"	132"	-	-	-	45.0	42.0	116.8	120.0
26-1/2"		-	-	-	32.5	30.3	84.3	120.0
30"		-	-	-	28.7	26.8	74.5	120.0
37"		-	-	-	23.2	21.7	60.4	110.8
42"		-	-	-	20.5	-	53.2	97.6
48"		-	-	-	-	-	46.5	85.4
54"		-	-	-	-	-	41.4	75.9
60"		-	-	-	-	-	37.2	68.4
66"		-	-	-	-	-	33.8	62.1
72"		-	-	-	-	-	31.0	57.0
19-1/8"	144"	-	-	-	34.6	32.4	90.0	120.0
26-1/2"		-	-	-	25.0	23.4	64.9	119.2
30"		-	-	-	22.1	20.6	57.4	105.3
37"		-	-	-	-	-	46.5	85.4
42"		-	-	-	-	-	41.0	75.2
48"		-	-	-	-	-	35.8	65.8
54"		-	-	-	-	-	31.9	58.5
60"		-	-	-	-	-	28.7	52.6
66"		-	-	-	-	-	26.1	47.9
72"		-	-	-	-	-	23.9	43.9



ALL LOADS ARE EXT.(+)/INT.(-).

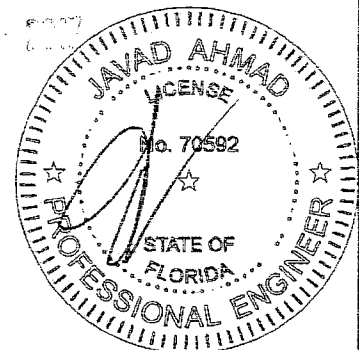
NOTE:
MULLIONS RATED IN THESE CHARTS MAY BE ORIENTED
VERTICALLY OR HORIZONTALLY.
(INTERPOLATION BETWEEN WIDTHS ALLOWED)

TYPICAL MULLION ARRANGEMENTS

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

MULLIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **17-1218.14**
Expiration Date **10/23/2019**
By **Miami-Dade Product Control**



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

ALUMINUM TUBE MULLIONS

ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th STREET
MEDLEY, FL. 33166
TEL. (305) 885-5299 FAX (305) 885-5902

revisions:
no. date by description
A 11.15.17 UPDATED TO 2017 FBC

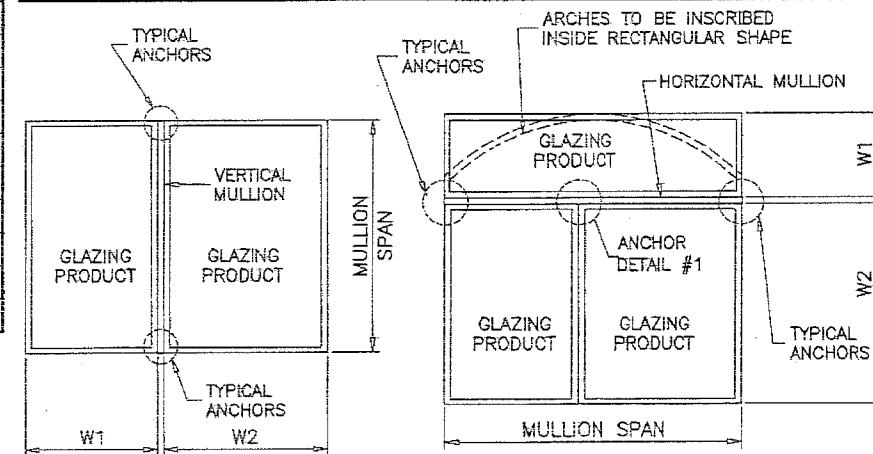
date: 05-19-14
scale:
dr. by: TARIQ
chk. by:

drawing no.
M14-01
sheet 3 of 9

DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		ANCHORS TYPE					
WIDTH (W)	MULL SPAN	A2	A4	A6	B2	B4a	B4b
19-1/8"	38-3/8"	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	120.0	120.0
37"		120.0	120.0	120.0	101.4	120.0	120.0
42"		120.0	120.0	120.0	89.3	120.0	120.0
48"		120.0	120.0	120.0	78.2	112.6	120.0
54"		108.4	120.0	120.0	69.5	100.1	120.0
60"		97.6	120.0	120.0	62.5	90.1	120.0
66"		88.7	120.0	120.0	56.9	81.9	113.7
72"		81.3	120.0	120.0	52.1	75.0	104.2
19-1/8"	42"	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	114.3	120.0	120.0
37"		120.0	120.0	120.0	92.7	120.0	120.0
42"		120.0	120.0	120.0	81.6	117.6	120.0
48"		111.4	120.0	120.0	71.4	102.9	120.0
54"		99.0	120.0	120.0	63.5	91.4	120.0
60"		89.1	120.0	120.0	57.1	82.3	114.3
66"		81.0	120.0	120.0	51.9	74.8	103.9
72"		74.3	120.0	120.0	47.6	68.6	95.2
19-1/8"	50-5/8"	120.0	120.0	120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	107.3	120.0	120.0
30"		120.0	120.0	120.0	94.8	120.0	120.0
37"		119.9	120.0	120.0	78.9	110.7	120.0
42"		105.7	120.0	120.0	67.7	97.5	120.0
48"		92.4	120.0	120.0	59.3	85.3	118.5
54"		82.2	120.0	120.0	52.7	75.9	105.3
60"		74.0	120.0	120.0	47.4	68.3	94.8
66"		67.2	117.2	120.0	43.1	62.1	86.2
72"		61.6	107.5	120.0	39.5	56.9	79.0
19-1/8"	63"	120.0	120.0	120.0	119.5	120.0	120.0
26-1/2"		120.0	120.0	120.0	86.3	120.0	120.0
30"		118.9	120.0	120.0	76.2	109.7	120.0
37"		96.4	120.0	120.0	61.8	89.0	120.0
42"		84.9	120.0	120.0	54.4	78.4	108.8
48"		74.3	120.0	120.0	47.6	68.6	95.2
54"		66.0	115.1	120.0	42.3	61.0	84.7
60"		59.4	103.6	120.0	38.1	54.9	76.2
66"		54.0	94.2	120.0	34.6	49.9	69.3
72"		49.5	86.3	120.0	31.7	45.7	63.5

DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		ANCHORS TYPE					
WIDTH (W)	MULL SPAN	A2	A4	A6	B2	B4a	B4b
19-1/8"	74-1/4"	120.0	120.0	120.0	101.4	120.0	120.0
26-1/2"		114.2	120.0	120.0	73.2	105.4	120.0
30"		100.8	120.0	120.0	64.6	93.1	120.0
37"		81.8	120.0	120.0	52.4	75.5	104.8
42"		72.0	120.0	120.0	46.2	66.5	92.4
48"		63.0	109.9	120.0	40.4	58.2	80.8
54"		56.0	97.7	120.0	35.9	51.7	71.8
60"		50.4	87.9	120.0	32.3	46.5	64.6
66"		45.8	79.9	119.9	29.4	42.3	58.8
72"		42.0	73.3	109.9	26.9	38.8	53.9
19-1/8"	84"	120.0	120.0	120.0	89.6	120.0	120.0
26-1/2"		100.9	120.0	120.0	64.7	93.2	120.0
30"		89.1	120.0	120.0	57.1	82.3	114.3
37"		72.3	120.0	120.0	46.3	66.7	92.7
42"		63.7	111.0	120.0	40.8	58.8	81.6
48"		55.7	97.1	120.0	35.7	51.4	71.4
54"		49.5	86.3	120.0	31.7	45.7	63.5
60"		44.6	77.7	116.6	28.6	41.1	57.1
66"		40.5	70.6	106.0	26.0	37.4	51.9
72"		37.1	64.8	97.1	23.8	34.3	47.6
19-1/8"	96"	120.0	120.0	120.0	78.4	112.9	120.0
26-1/2"		88.3	120.0	120.0	56.6	81.5	113.2
30"		78.0	120.0	120.0	50.0	72.0	100.0
37"		63.2	110.3	120.0	40.5	58.4	81.1
42"		55.7	97.1	120.0	35.7	51.4	71.4
48"		48.8	85.0	120.0	31.3	45.0	62.5
54"		43.3	75.6	113.3	27.8	40.0	55.6
60"		39.0	68.0	102.0	25.0	36.0	50.0
66"		35.5	61.8	92.7	22.7	32.7	45.5
72"		32.5	56.7	85.0	20.8	30.0	41.7
19-1/8"	108"	108.8	120.0	120.0	69.7	100.4	120.0
26-1/2"		78.5	120.0	120.0	50.3	72.5	100.6
30"		69.3	120.0	120.0	44.4	64.0	88.9
37"		56.2	98.0	120.0	36.0	51.9	72.1
42"		49.5	86.3	120.0	31.7	45.7	63.5
48"		43.3	75.6	113.3	27.8	40.0	55.6
54"		38.5	67.2	100.7	24.7	35.6	49.4
60"		34.7	60.4	90.7	22.2	32.0	44.4
66"		31.5	54.9	82.4	20.2	29.1	40.4
72"		28.9	50.4	75.6	-	26.7	37.0

DESIGN LOAD CAPACITY - PSF							
WINDOW DIMS.		ANCHORS TYPE					
WIDTH (W)	MULL SPAN	A2	A4	A6	B2	B4a	B4b
19-1/8"	120"	97.9	120.0	120.0	62.7	90.4	120.0
26-1/2"		70.6	120.0	120.0	45.3	65.2	90.6
30"		62.4	108.8	120.0	40.0	57.6	80.0
37"		50.6	88.2	120.0	32.4	46.7	64.9
42"		44.6	77.7	116.6	28.6	41.1	57.1
48"		39.0	68.0	102.0	25.0	36.0	50.0
54"		34.7	60.4	90.7	22.2	32.0	44.4
60"		31.2	54.4	81.6	20.0	28.8	40.0
66"		28.4	49.5	74.2	-	26.2	36.4
72"		26.0	45.3	68.0	-	24.0	33.3
19-1/8"	132"	89.0	120.0	120.0	57.0	82.1	114.1
26-1/2"		64.2	112.0	120.0	41.2	59.3	82.3
30"		56.7	98.9	120.0	36.4	52.4	72.7
37"		46.0	80.2	120.0	29.5	42.5	59.0
42"		40.5	70.6	106.0	26.0	37.4	51.9
48"		35.5	61.8	92.7	22.7	32.7	45.5
54"		31.5	54.9	82.4	20.2	29.1	40.4
60"		28.4	49.5	74.2	-	26.2	36.4
66"		25.8	45.0	67.4	-	23.8	33.1
72"		23.6	41.2	61.8	-	21.8	30.3
19-1/8"	144"	81.6	120.0	120.0	52.3	75.3	104.6
26-1/2"		58.9	102.6	120.0	37.7	54.3	75.5
30"		52.0	90.7	120.0	33.3	48.0	66.7
37"		42.2	73.5	110.3	27.0	38.9	54.1
42"		37.1	64.8	97.1	23.8	34.3	47.6
48"		32.5	56.7	85.0	20.8	30.0	41.7
54"		28.9	50.4	75.6	-	26.7	37.0
60"		26.0	45.3	68.0	-	24.0	33.3
66"		23.6	41.2	61.8	-	21.8	30.3
72"		21.7	37.8	56.7	-	20.0	27.8



TYPICAL MULLION ARRANGEMENTS

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

ALL LOADS ARE EXT.(+)/INT.(-).

NOTE:

ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS.

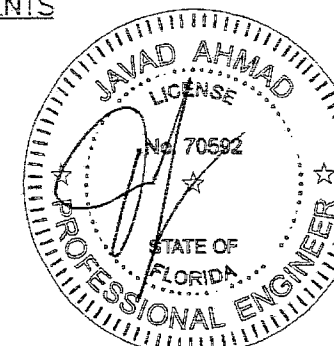
FOR ANCHORS DESCRIPTION SEE SHEETS 5 THRU 9. (INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

ANCHORS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **17-1218.14**

Expiration Date **10/23/2019**

By **JAVAD AHMAD**
Miami-Dade Product Control



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 262-8100 FAX. (305) 262-8978

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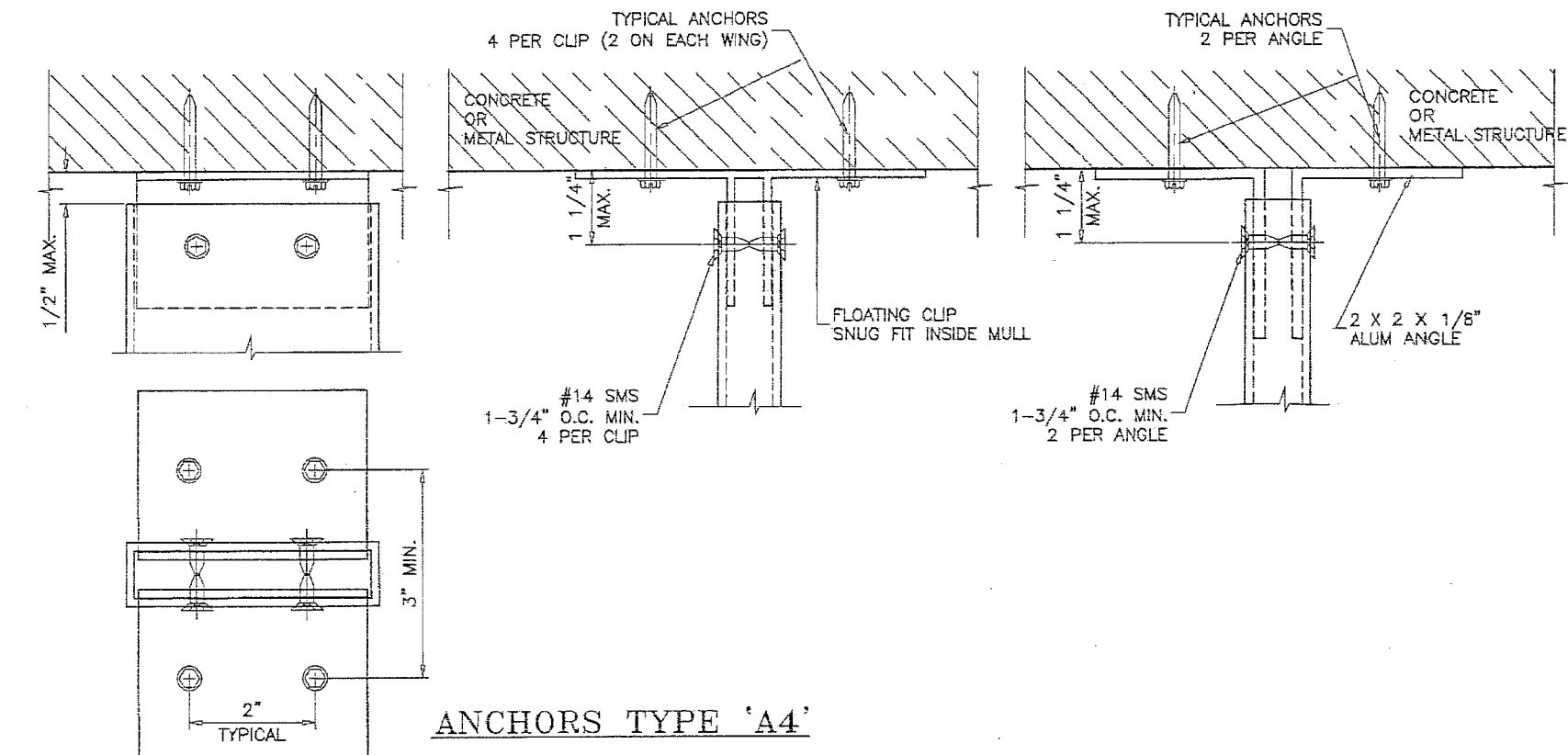
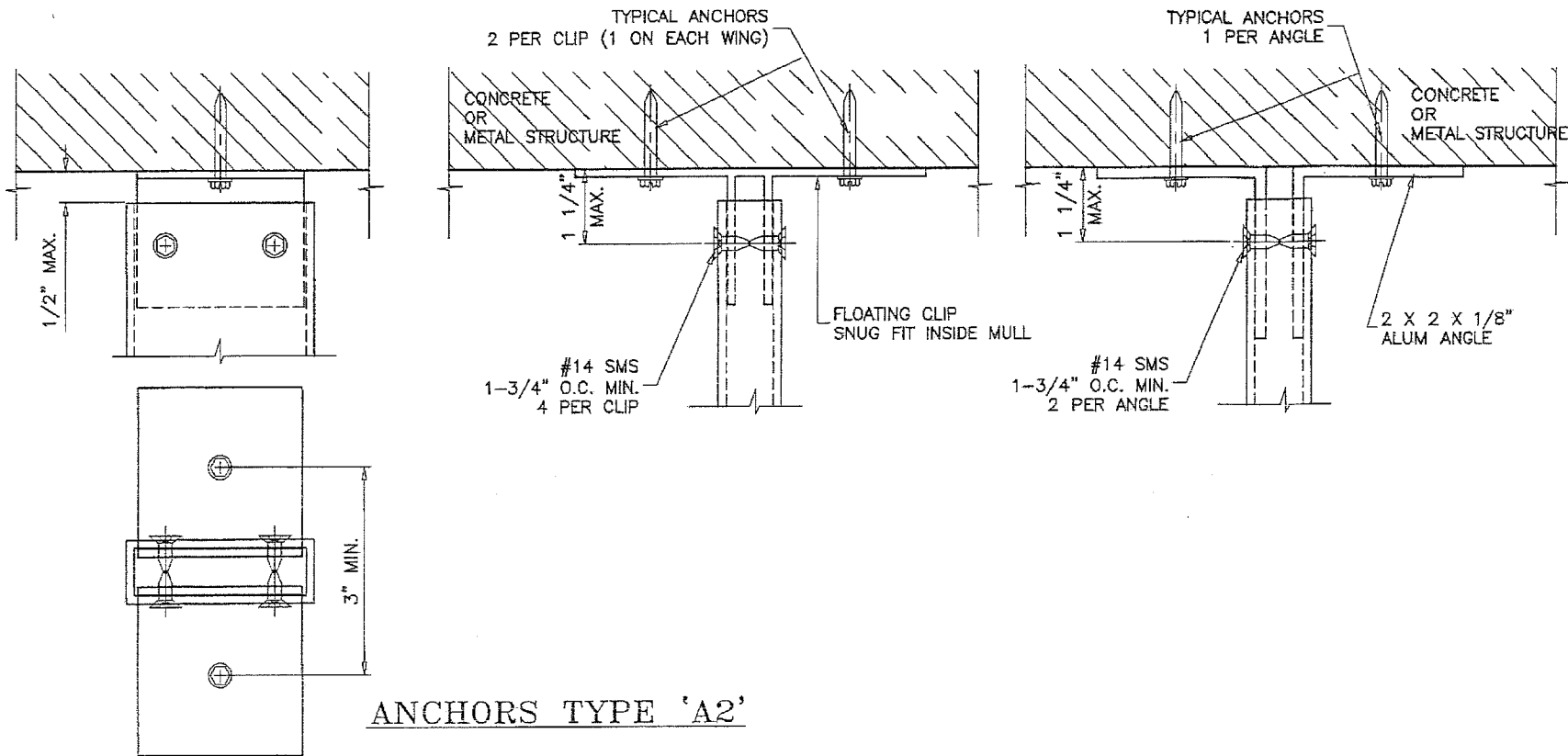
date: 05-19-14
scale:
dr. by: TARIQ
chk. by:

drawing no.

M14-01

sheet 4 of 9

MULLION M14-01ESW



TYPICAL ANCHORS:

ANCHOR TYPES	SUBSTRATE	MIN. EMBED.	MIN. EDGE DIST.
1/4" DIA. ULTRACONS BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)	CONCRETE	1-3/4"	2-1/2"
1/4" DIA. SELF DRILLING SCREWS (GRADE 5 CRS)	METAL	1/8"	3/4"

CONCRETE = f'_c = 3000 PSI MIN.

METAL = 1/8" MIN. THK. STEEL F_y = 36 KSI MIN.

1/8" MIN. THK. ALUMINUM (6063-T5 MIN.)

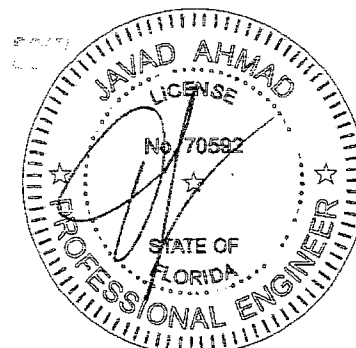
ANCHORS MAY BE HEX OR FLAT HEAD.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
WATER-WHITE METHACRYLATE LACQUER.

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af c
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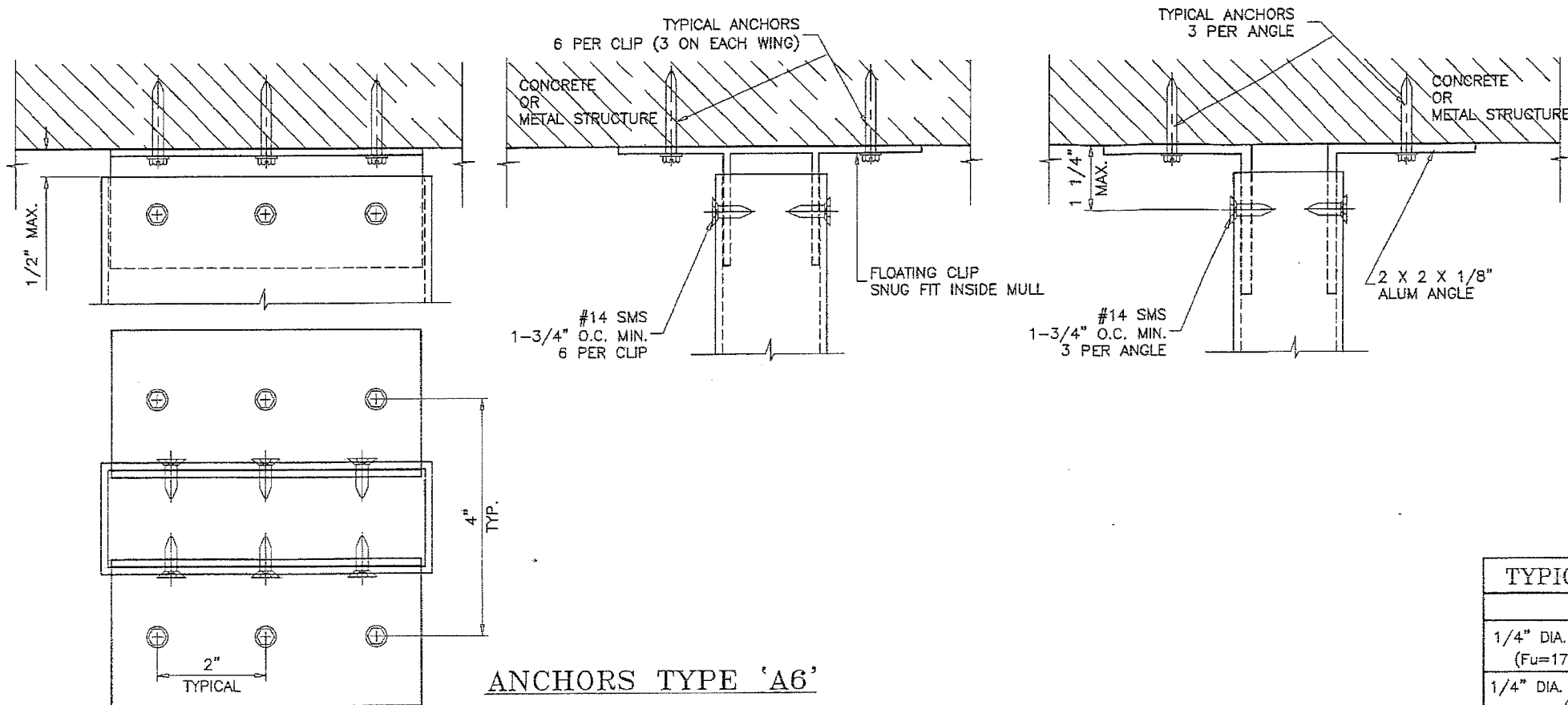
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drawing no.

M14-01

sheet 5 of 9

MULLION\M14-01ESW



ANCHORS TYPE 'A6'

TYPICAL ANCHORS:

ANCHOR TYPES	SUBSTRATE	MIN. EMBED.	MIN. EDGE DIST.
1/4" DIA. ULTRACONS BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)	CONCRETE	1-3/4"	2-1/2"
1/4" DIA. SELF DRILLING SCREWS (GRADE 5 CRS)	METAL	1/8"	3/4"

CONCRETE = f'_c = 3000 PSI MIN.

METAL = 1/8" MIN. THK. STEEL F_y = 36 KSI MIN.
1/8" MIN. THK. ALUMINUM (6063-T5 MIN.)

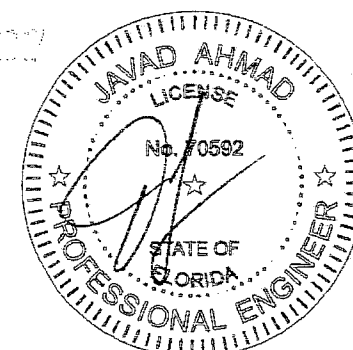
ANCHORS MAY BE HEX OR FLAT HEAD.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS.
CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED
WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR
WATER-WHITE METHACRYLATE LACQUER.

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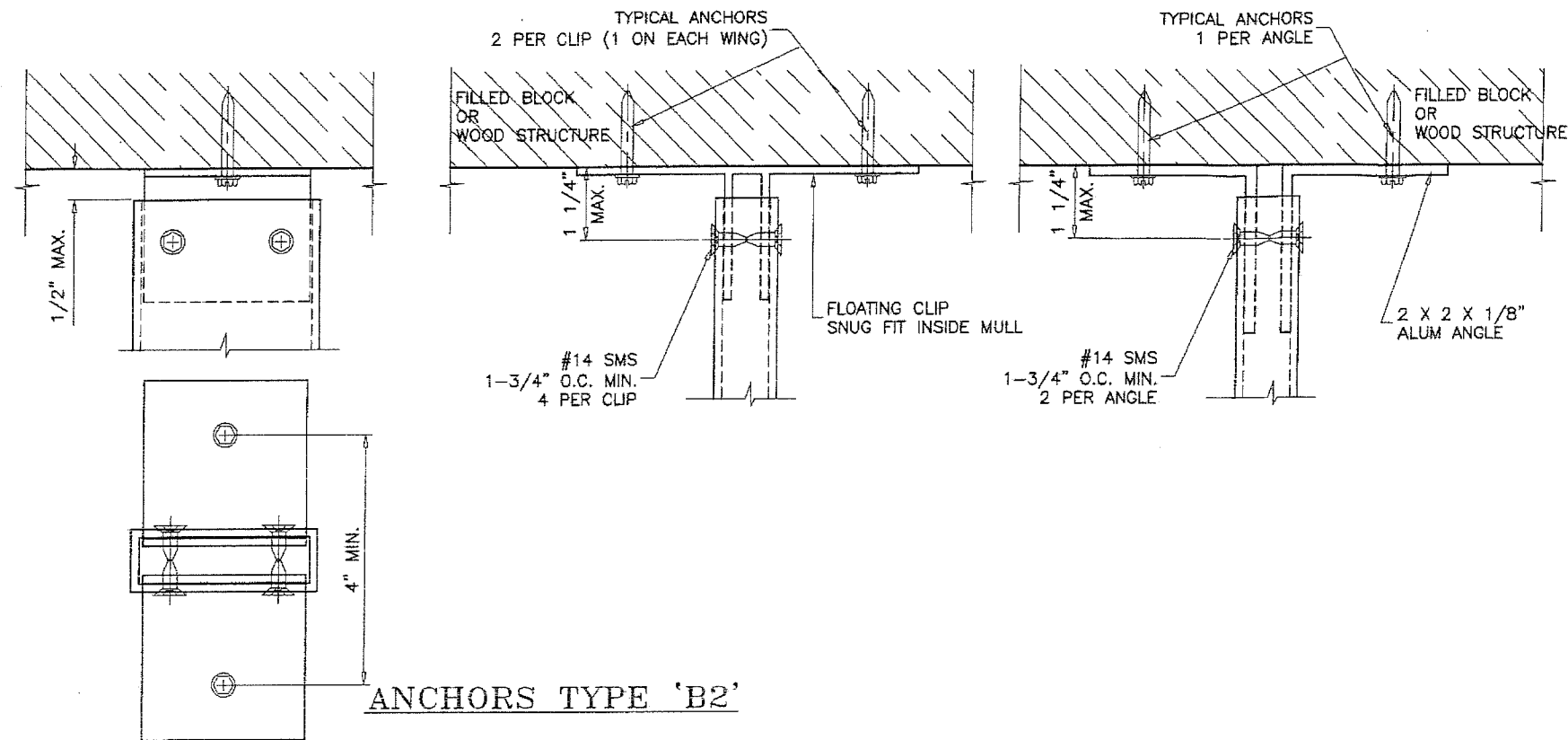
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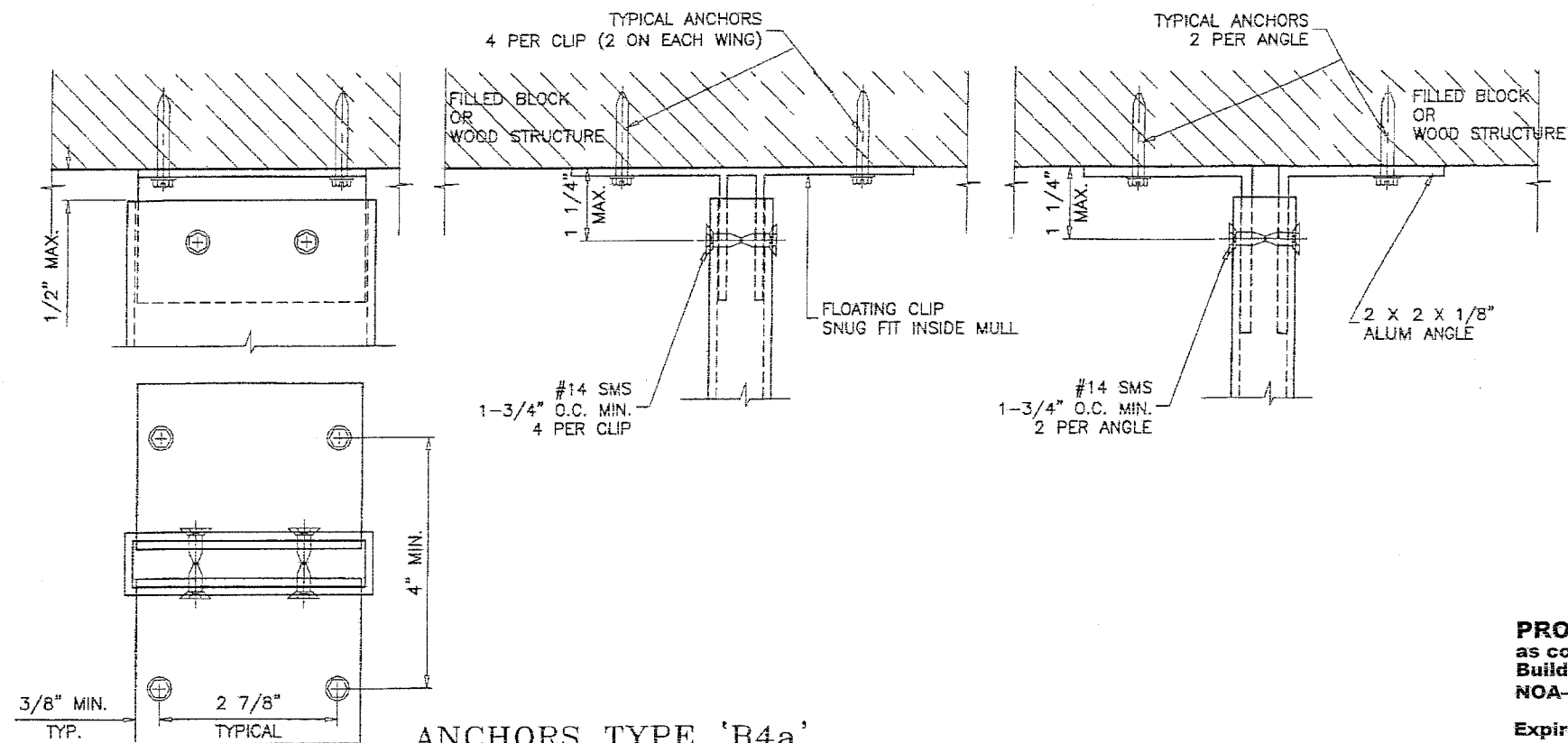
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M14-01
sheet 6 of 9



ANCHORS TYPE 'B2'



ANCHORS TYPE 'B4a'

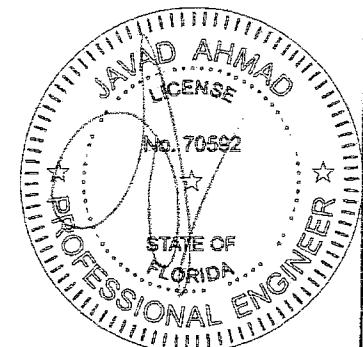
TYPICAL ANCHORS:			
ANCHOR TYPES	SUBSTRATE	MIN. EMBED.	MIN. EDGE DIST.
1/4" DIA. ULTRACONS BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)	MASONRY	1-3/4"	2-1/2"
	WOOD	1-1/2"	1"

WOOD = 2BY WOOD BUCKS OR WOOD STRUCTURE S.G. = 0.55 MIN.
MASONRY = C-90 HOLLOW/FILLED BLOCK f'm = 2000 PSI MIN.

1BY OR 2BY WOOD BUCKS NOT BY ECO WINDOW
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO BUILDING STRUCTURE.

ANCHORS MAY BE HEX OR FLAT HEAD.

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By *[Signature]*
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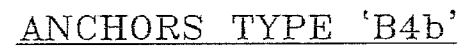
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sheet 7 of 9

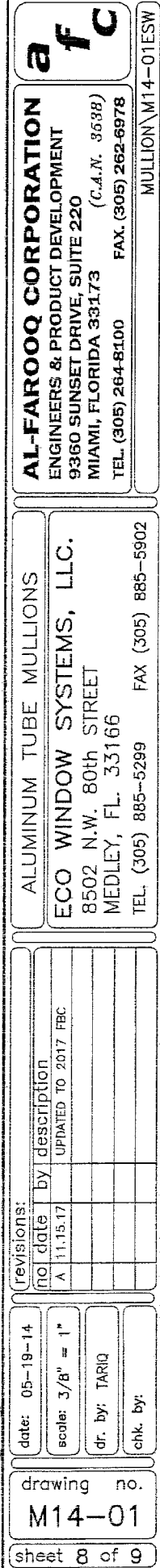


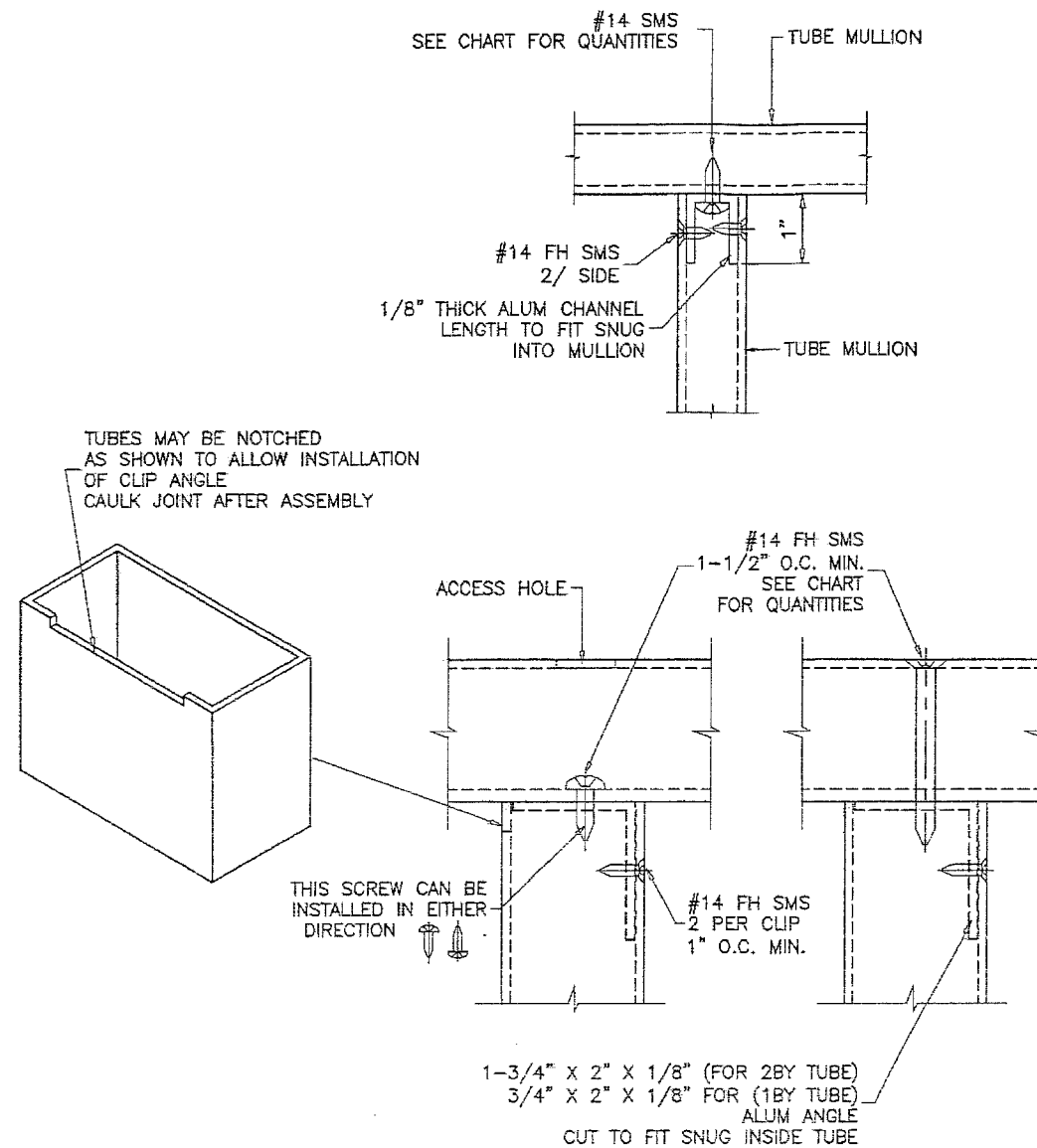
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MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER
THEM TO BUILDING STRUCTURE.

ANCHORS MAY BE HEX OR FLAT HEAD.

By [Signature]
Miami-Dade Product Control



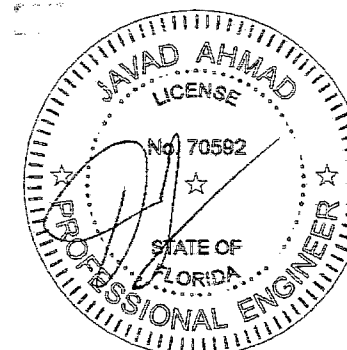


ANCHOR CHART	NO. OF SCREWS
TYPE A2	2
TYPE A4	3
TYPE A6	4

ANCHORS DETAIL #1
METAL TO METAL CONNECTION

#14 SMS		
SUBSTRATE	Ed. = MIN. EDGE DIST.	MIN. CL TO CL SPACING
ALUMINUM	5/8"	1/2"

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