



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
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

Sunshine Windows Manufacturing, Inc.
1745 W 33rd Place
Hialeah, FL 33012

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: Clipped, Extruded Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No.M2011, titled "Aluminum Tube Mullion L.M.I.," sheets 1 through 21 of 21, dated 02/11/13, with revision #1 dated 05-09-15, prepared by manufacturer, signed and sealed by Francisco Hernandez, 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, city, state, 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# 11-1216.02 and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

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



MP
11/30/15

NOA No. 15-0528.21
Expiration Date: March 28, 2018
Approval Date: December 10, 2015
Page 1

Sunshine Windows Manufacturing, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under previous NOA# 11-1216.02)
2. Drawing No **M2011**, Sheets 1 through 21 of 21, titled "Aluminum Tube Mullion L.M.I.", dated 02/11/13, with revision #1 dated 05-09-15, prepared by manufacturer, signed and sealed by Francisco Hernandez, P.E.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of aluminum fixed windows mullied together using different sizes of rectangular and round aluminum tube mullions, prepared by Fenestration Testing Laboratory, Inc. Test Report No. **FTL-7067**, dated 09/26/12, signed and sealed by Marlin D. Brinson, P.E.
(Submitted under previous NOA# 11-1216.02)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)**, dated 05/09/15, prepared, signed and sealed by Francisco Hernandez, P.E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

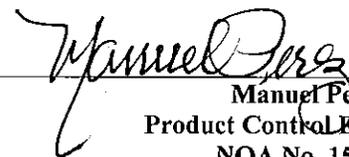
1. None.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 5th Edition (2014)**, dated May 18, 2015, issued, signed and sealed by Francisco Hernandez, P.E.
2. Statement letter of conformance, complying with the FBC-2010, and of no financial interest, dated February 23, 2013, signed and sealed by Francisco Hernandez, P.E.
(Submitted under previous NOA# 11-1216.02)

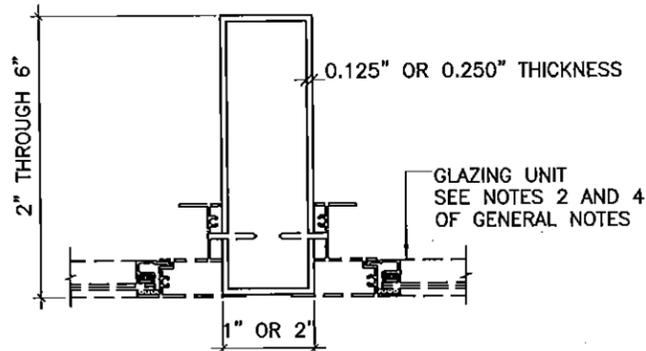
G. OTHERS

1. Notice of Acceptance No. **11-1216.02**, issued to Sunshine Windows Manufacturing, Inc. for their Clipped, Extruded Aluminum Tube Mullion - L.M.I., approved on 03/28/13 and expiring on 03/28/18.



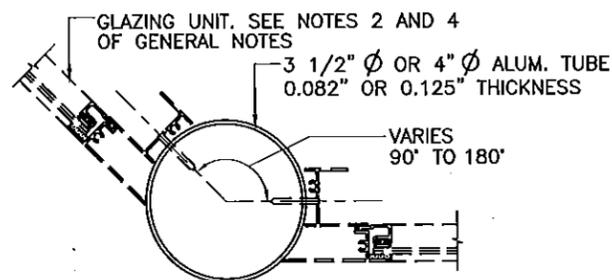
Manuel Perez, P.E.
Product Control Examiner
NOA No. 15-0528.21

Expiration Date: March 28, 2018
Approval Date: December 10, 2015



VERTICAL OR HORIZONTAL RECTANGULAR MULLIONS

SEE MULLION DESIGN LOADS (MULLION CAPACITY) TABLE # 1 ON SHEET 3 OF 21.
SEE ANCHOR DESIGN LOADS (ANCHOR CAPACITY) TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.



VERTICAL ROUND TUBE MULLION

SEE MULLION DESIGN LOADS (MULLION CAPACITY) AND ANCHOR DESIGN LOADS (ANCHOR CAPACITY) TABLE # 4 ON SHEET 6 OF 21.

INDEX OF DRAWINGS

- 1 OF 22 .- MULLION SECTIONS, GENERAL NOTES AND PROCEDURE FOR MULLION SELECTION.
- 2 OF 21 .- MULLION SHAPES, ANCHOR CLIPS AND ANCHOR CLIPS LOCATION DETAILS.
- 3 OF 21 .- TABLE # 1. MULLION DESIGN LOADS (MULLION CAPACITY) FOR RECTANGULAR MULLIONS.
- 4 OF 21 .- TABLE # 2. ANCHOR DESIGN LOADS (ANCHOR CAPACITY) FOR RECTANGULAR MULLIONS.
- 5 OF 21 .- TABLE # 3. ANCHOR DESIGN LOADS (ANCHOR CAPACITY) FOR RECTANGULAR MULLIONS.
- 6 OF 21 .- TABLE # 4. MULLION AND ANCHOR DESIGN LOADS (MULLION AND ANCHOR CAPACITIES) FOR ROUND MULLIONS.
- 7 OF 21 .- ANCHOR CONFIGURATION TYPE A1 ON CONCRETE OR MASONRY WITH 1BY WOOD BUCK.
- 8 OF 21 .- ANCHOR CONFIGURATION TYPE A1 ON WOODEN STRUCTURE OR 2BY WOOD BUCK.
- 9 OF 21 .- ANCHOR CONFIGURATION TYPE A2 ON CONCRETE OR MASONRY WITH 1BY WOOD BUCK AND ON WOODEN STRUCTURE OR 2BY WOOD BUCK.
- 10 OF 21 .- ANCHOR CONFIGURATION TYPE A3 ON CONCRETE OR MASONRY WITH 1BY WOOD BUCK AND ON WOODEN STRUCTURE OR 2BY WOOD BUCK.
- 11 OF 21 .- ANCHOR CONFIGURATION TYPE A3 ON CONCRETE OR MASONRY WITH 1BY WOOD BUCK AND ON WOODEN STRUCTURE OR 2BY WOOD BUCK FOR 2" X 6" MULLION.
- 12 OF 21 .- ANCHOR CONFIGURATION TYPE B1 ON CONCRETE OR MASONRY.
- 13 OF 21 .- ANCHOR CONFIGURATION TYPE B2 AND B3 ON CONCRETE OR MASONRY.
- 14 OF 21 .- ANCHOR CONFIGURATION TYPE B3 ON CONCRETE OR MASONRY.
- 15 OF 21 .- ANCHOR CONFIGURATION TYPE C1 ON METALLIC STRUCTURE.
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- 17 OF 21 .- ANCHOR CONFIGURATION TYPE C3 ON METALLIC STRUCTURE.
- 18 OF 21 .- ANCHOR CONFIGURATIONS TYPE D2, D3 AND D4. MULLION TO MULLION CONNECTIONS.
- 19 OF 21 .- ROUND MULLIONS. TOP VIEWS FOR ANCHOR CONFIGURATIONS TYPE BR2, BR3, CR2 AND CR3.
- 20 OF 21 .- ROUND MULLIONS. TOP VIEWS FOR ANCHOR CONFIGURATION TYPE BR4 AND CR4.
- 21 OF 21 .- ROUND MULLIONS. SIDE VIEWS FOR ANCHOR CONFIGURATIONS TYPE BR2, BR3, BR4, CR2, CR3 AND CR4.

GENERAL NOTES:

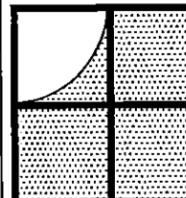
- 1.- THIS PRODUCT MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 5TH EDITION, 2014.
- 2.-MULLIONS SHALL BE USED ALONG WITH SEPARATE APPROVED GLAZING UNITS MEETING THE FLORIDA BUILDING CODE 5TH EDITION (2014) REQUIREMENTS. USE GLAZING UNIT APPROVAL TO SPECIFY FASTENER SIZE AND SPACING.
- 3.- TYPE OF ANCHORS: FOR ATTACHMENT TO CONCRETE OR GROUT FILLED BLOCK WITH 1BY, 2BY OR WOODEN STRUCTURES USE 1/4" DIAM. ELCO ULTRACON CONCRETE AND MASONRY ANCHOR; FOR ATTACHMENT TO METAL STRUCTURES, OR METAL TO METAL CONNECTIONS USE 1/4" DIAM. HILTI KWIK FLEX SELF DRILLING SCREW.
- 4.- THE DESIGN PRESSURES SHOWN ON THE CHARTS ARE BASED ON TUBE STRENGTH ONLY. NO CONTRIBUTION OF ATTACHED GLAZING UNITS ARE CONSIDERED.
- 5.- FOR DETAILS OF ATTACHMENT BETWEEN MULLIONS AND STRUCTURES REFER TO SHEETS 7 THROUGH 21 OF THIS PRODUCT APPROVAL.
- 6.- WOOD BUCKS BY OTHER SHALL BE PROPERLY ATTACHED TO TRANSFER GLAZING SYSTEM LOADS TO THE STRUCTURE AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION.
- 7.- THE THICKNESS OF THE STEEL/ALUMINUM HOST STRUCTURE SHALL BE NOT LESS THAN 1/8". ALUMINUM SHALL BE 6063-T6 AND STEEL SHALL BE Fy= 36 ksi MIN.
- 8.- TUBE MATERIAL SHALL BE ALUMINUM ALLOY 6063-T6.
- 9.- ALL ANCHORS INSTALLED IN THE STEEL/ALUMINUM HOST STRUCTURE SHALL HAVE 1" MINIMUM TO THE EDGE OF THE STRUCTURAL MEMBERS.
- 10.- WOOD HOST STRUCTURE SHALL BE "SOUTHERN YELLOW PINE" G=0.55 OR GREATER DENSITY. ALL ANCHORS INSTALLED IN WOOD SHALL HAVE 1" MINIMUM TO THE EDGE OF THE STRUCTURAL MEMBERS WITH 1 3/8" MIN. EMBEDMENT.
- 11.- CONCRETE STRENGTH: f'c=3,000 psi MIN., CMU PER ASTM C90, GROUT FILLED CMU fm= 2,000 psi MIN. ALL ANCHORS INSTALLED IN CONCRETE SHALL HAVE 2 1/2" MINIMUM EDGE DIST. TO THE STRUCTURAL MEMBERS WITH 1 3/4" MIN. EMBEDMENT. (EXCLUDING STUCCO, FOAM, BRICK AND OTHER WALL FINISHES).
- 12.- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE PROTECTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 5TH EDITION, 2014.

PROCEDURE FOR MULLION SELECTION

- 1. DETERMINE THE WIND LOAD IN PSF ACTING ON THE MULLION PER THE FLORIDA BUILDING CODE 5TH EDITION, 2014. USE ALLOWABLE STRESS DESIGN LOAD FACTOR OF 0.6 FOR WIND LOAD CALCULATED BASED UPON ULTIMATE DESIGN WIND SPEED.
- 2. USE MULLION DESIGN LOAD (MULLION CAPACITY) TABLES # 1 AND # 4 ON SHEETS 3 AND 6 OF 21 TO DETERMINE THE MULLION SECTION REQUIRED TO MEET THE DESIGN PRESSURE.
- 3. USE TABLES # 2, # 3 AND # 4 ON SHEETS 4, 5 AND 6 OF 21 TO DETERMINE THE TYPE OF CONNECTION BETWEEN THE MULLION AND THE STRUCTURE TO MEET THE DESIGN LOAD (MULLION CAPACITY).
- 4. HIGHLIGHT MULLION AND ANCHOR SELECTED OPTIONS AND CORRESPONDING TABLE VALUES OBTAINED IN A SPECIFIC APPLICATION WHEN USING THIS NOA TO APPLY FOR A PERMIT.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528.21
Expiration Date March 28, 2018
By *Francisco Hernandez*
Miami Dade Product Control

Francisco Hernandez
5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393



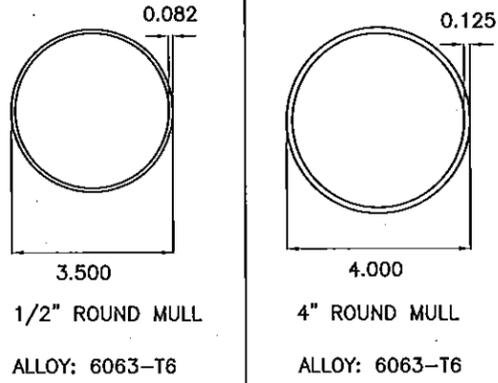
Sunshine Windows
Manufacturing, Inc.
1745 W. 33rd Place
Hialeah, Florida 33012
Ph: (305)364-9952
Fax:(305)828-5118

ALUMINUM TUBE MULLION L.M.I.

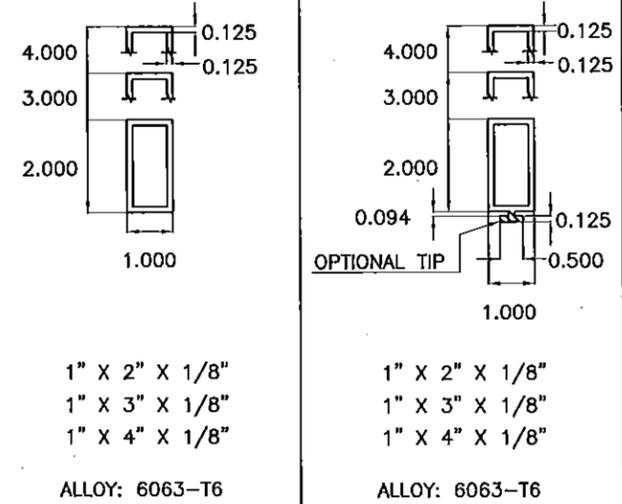
No	DATE	REVISION	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)
1	05-09-15		

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 1 OF 21

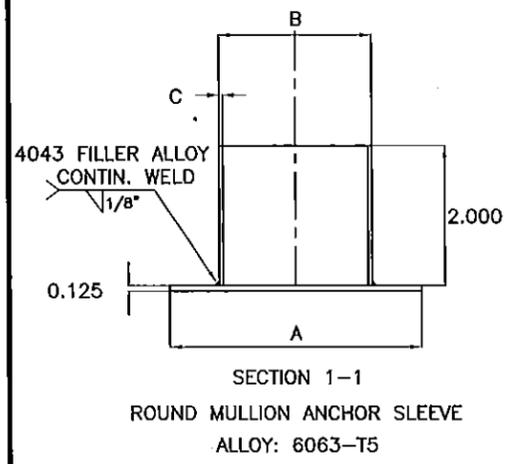
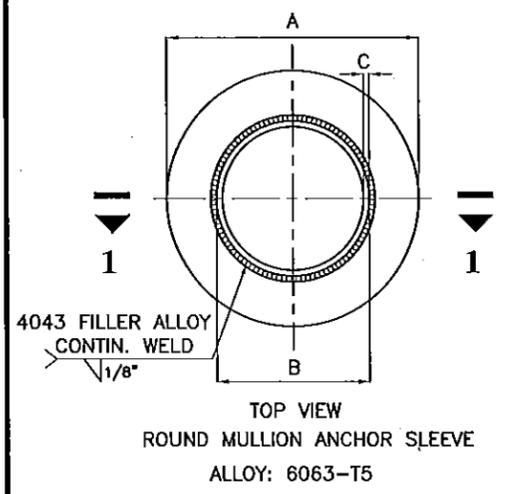
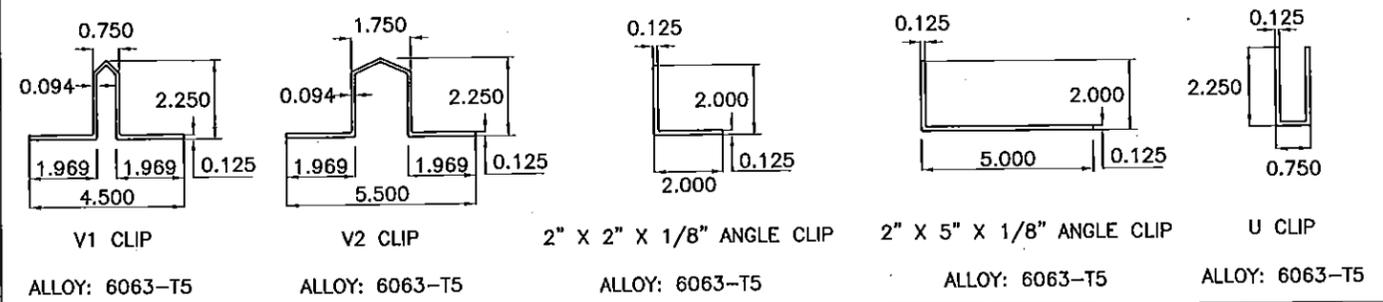
**ROUND MULLIONS
CROSS SECTIONS**



**RECTANGULAR MULLIONS
CROSS SECTIONS**

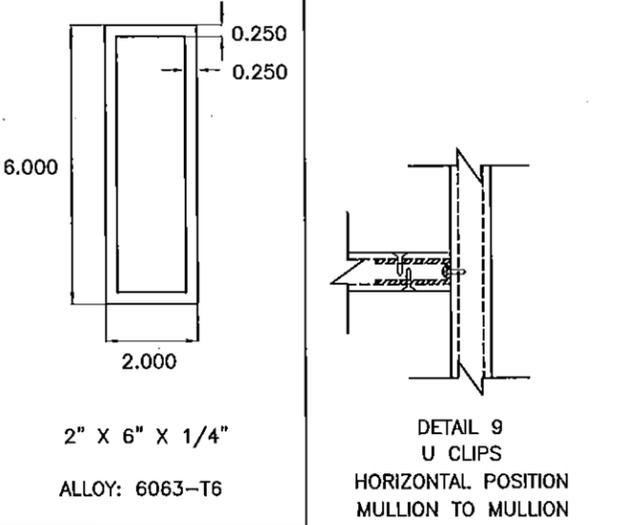
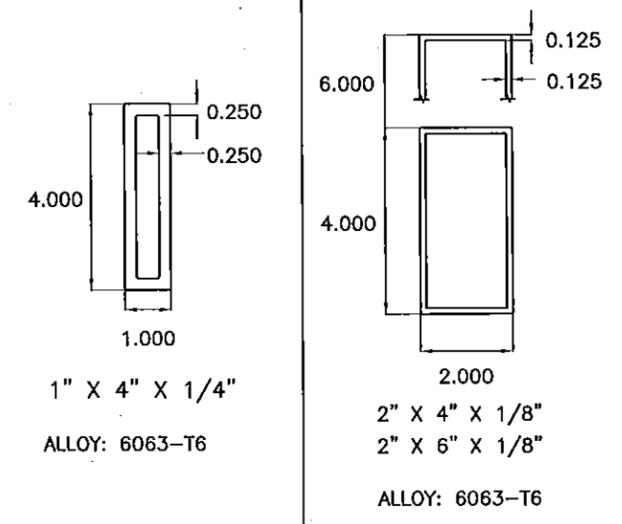


ANCHOR CLIPS CROSS SECTIONS

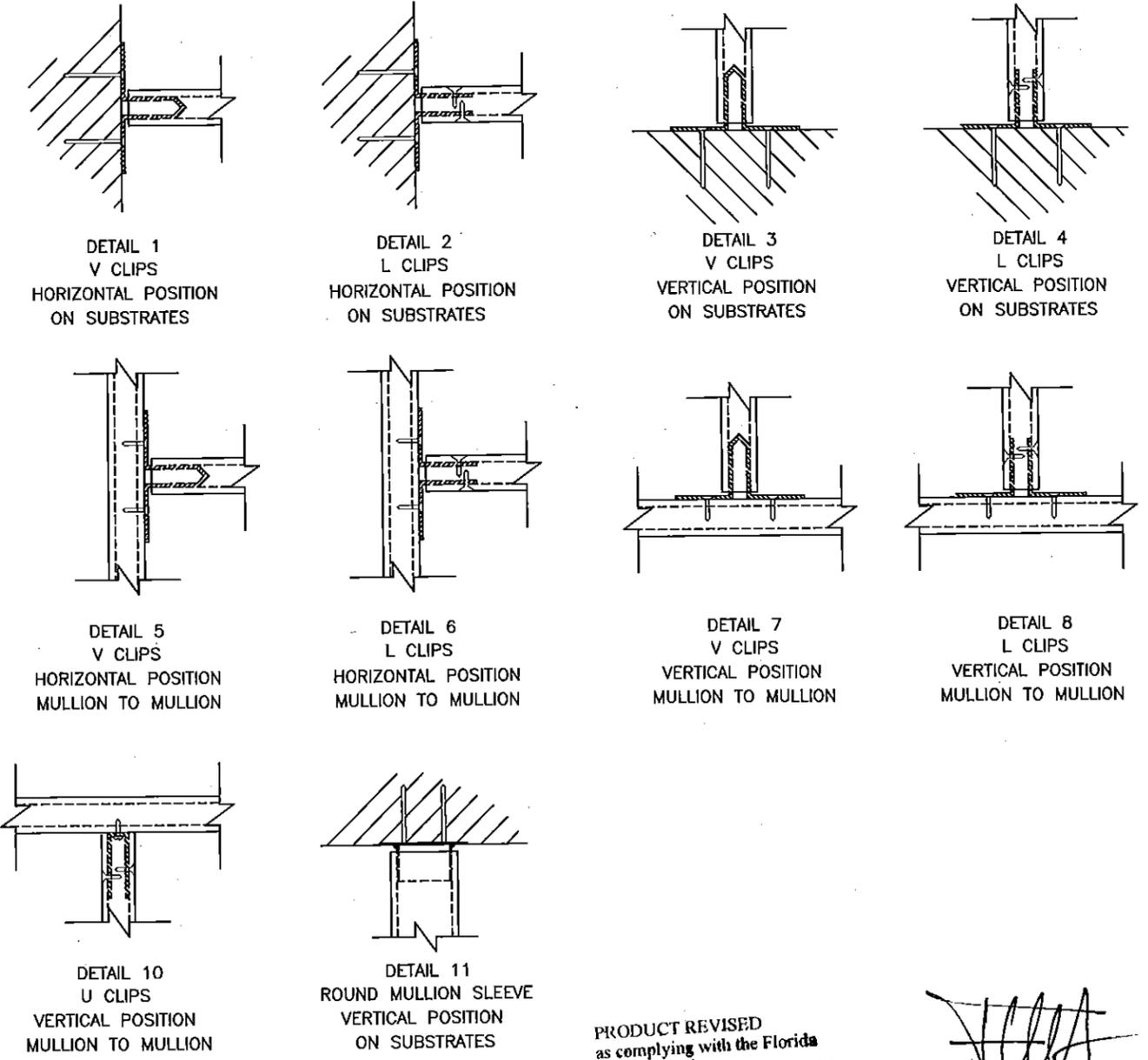


ROUND MULLION SLEEVES			
MULLION TYPE	DIMENSIONS		
	A	B	C
3 1/2" ϕ	5.500"	3.250"	0.125"
4" ϕ	6.000"	3.687"	0.125"

NOTES: - FOR ROUND MULLION AND ANCHOR DESIGN LOADS SEE SHEET 6 OF 21.
- FOR CONFIGURATIONS OF ROUND ANCHORS SEE SHEETS 19, 20 AND 21 OF 21.



ANCHOR CLIPS LOCATION DETAILS



**MULLION SHAPES, ANCHOR CLIPS
AND ANCHOR CLIPS LOCATION DETAILS**

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 15-052821 Expiration Date March 28, 2018
By Manuel Perez Miami Dade Product Control

[Signature]
5-18-15

FRANCISCO HERNANDEZ
FLORIDA PE # 51393

Sunshine Windows Manufacturing, Inc.
1745 W. 33rd Place
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Ph: (305)364-9952
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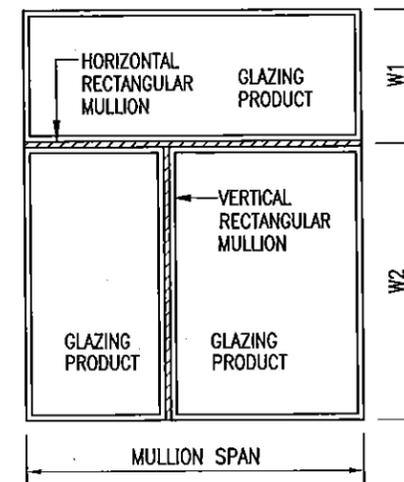
ALUMINUM TUBE MULLION L.M.I.

REVISION	DATE	DESCRIPTION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. M2011
DATE: 02-11-13
SCALE: NTS
SHEET 2 OF 21

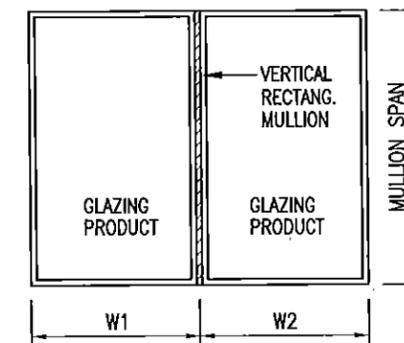
**MULLION DESIGN LOADS (MULLION CAPACITY)
FOR RECTANGULAR MULLIONS
TABLE #1**

MULLION DESIGN LOAD - PSF						MULLION DESIGN LOAD - PSF						MULLION DESIGN LOAD - PSF			
DIMENSIONS		MULLION	MULLION	MULLION	MULLION	DIMENSIONS		MULLION	MULLION	MULLION	MULLION	DIMENSIONS		MULLION	MULLION
WIDTH (W)	SPAN	1" X 2" X 1/8"	1" X 3" X 1/8"	1" X 4" X 1/8"	1" X 4" X 1/4"	WIDTH (W)	SPAN	1" X 4" X 1/4"	2" X 4" X 1/8"	2" X 6" X 1/8"	2" X 6" X 1/4"	WIDTH (W)	SPAN	2" X 6" X 1/8"	2" X 6" X 1/4"
27"	39"	128.5	140.0	140.0	140.0	27"	84"	140.0	115.4	140.0	140.0	27"	120"	122.6	140.0
37"		93.75	140.0	140.0	140.0	37"		112.8	84.20	140.0	140.0	37"		89.45	140.0
48"		72.25	140.0	140.0	140.0	48"		87.00	64.90	140.0	140.0	48"		68.90	126.6
60"		57.80	119.9	140.0	140.0	60"		69.55	51.90	112.5	140.0	60"		55.15	101.3
66"		52.55	109.0	140.0	140.0	66"		63.25	47.20	102.3	140.0	66"		50.15	92.10
74"		46.85	97.25	140.0	140.0	74"		56.40	42.10	91.25	140.0	74"		44.70	82.15
80"		43.35	90.00	140.0	140.0	80"		52.15	38.90	84.40	140.0	80"		41.35	76.00
27"		51"	57.45	140.0	140.0	140.0		27"	90"	125.7	77.30	140.0		140.0	27"
37"	41.90		113.7	140.0	140.0	37"	91.70	56.40		140.0	140.0	37"	81.15	140.0	
48"	32.30		87.65	140.0	140.0	48"	70.70	43.45		122.6	140.0	48"	62.55	114.9	
60"	-		70.10	112.8	140.0	60"	56.55	34.75		98.00	140.0	60"	50.00	91.90	
66"	-		63.75	102.5	140.0	66"	51.40	31.60		89.15	140.0	66"	45.45	83.50	
74"	-		56.85	91.45	140.0	74"	45.85	28.20		79.50	140.0	74"	40.55	74.50	
80"	-		52.60	84.60	140.0	80"	42.40	-		73.55	135.1	80"	37.50	68.90	
27"	58"		-	111.9	140.0	140.0	27"	96"		103.6	64.45	140.0	140.0	27"	132"
37"		-	81.65	140.0	140.0	37"	75.55		47.00	139.7	140.0	37"	73.90	135.8	
48"		-	62.95	109.0	140.0	48"	58.25		36.25	107.7	140.0	48"	57.00	104.7	
60"		-	50.35	87.20	140.0	60"	46.60		29.00	86.20	140.0	60"	45.60	83.75	
66"		-	45.75	79.25	140.0	66"	42.35		-	78.35	140.0	66"	41.50	76.15	
74"		-	40.80	70.70	138.3	74"	37.75		-	69.90	128.4	74"	36.90	67.90	
80"		-	37.75	65.40	128.0	80"	35.00		-	64.65	118.7	80"	34.20	62.80	
27"		63"	-	87.30	140.0	140.0	27"		102"	86.35	54.30	140.0	140.0	27"	
37"	-		63.70	119.8	140.0	37"	63.00	39.60		123.8	140.0	37"	67.65	124.2	
48"	-		49.10	92.40	140.0	48"	48.55	30.50		95.45	140.0	48"	52.15	95.80	
60"	-		39.30	73.90	140.0	60"	38.85	-		76.35	140.0	60"	41.70	76.60	
66"	-		35.70	67.20	131.5	66"	35.30	-		69.40	127.5	66"	37.90	69.65	
74"	-		31.85	59.90	117.3	74"	31.50	-		61.90	113.7	74"	33.80	62.10	
80"	-		29.45	55.40	108.4	80"	29.10	-		57.25	105.2	80"	31.25	57.45	
27"	75"		-	51.75	111.0	140.0	27"	108"		72.70	46.10	140.0	140.0	27"	144"
37"		-	37.75	81.00	140.0	37"	53.00		36.65	110.4	140.0	37"	62.10	114.1	
48"		-	29.10	62.40	122.1	48"	40.90		-	85.10	140.0	48"	47.85	87.90	
60"		-	-	49.90	97.70	60"	32.70		-	68.10	125.1	60"	38.30	70.35	
66"		-	-	45.40	88.85	66"	29.75		-	61.90	113.7	66"	34.80	63.50	
74"		-	-	40.50	79.25	74"	-		-	55.20	101.4	74"	31.00	57.00	
80"		-	-	37.45	73.30	80"	-		-	51.00	93.80	80"	28.70	52.70	



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

HORIZONTAL MULLION



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

VERTICAL MULLION

NOTES:

- 1.- INTERPOLATE FOR INTERMEDIATE VALUES OF SPAN AND/OR TRIBUTARY WIDTH TO DETERMINE THE DESIGN LOAD (MULLION CAPACITY).
- 2.- MULLIONS ON THIS CHART MAY BE ORIENTED VERTICALLY AND/OR HORIZONTALLY.
- 3.- SEE MULLION CROSS SECTIONS ON SHEET 2 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528.21
Expiration Date March 28, 2018
By *Francisco Hernandez*
Miami Dade Product Control

Francisco Hernandez
5-18-15

FRANCISCO HERNANDEZ
FLORIDA PE # 51393

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Manufacturing, Inc.
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Ph: (305)364-9952
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ALUMINUM TUBE MULLION L.M.I.

REVISION	1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)
DATE			

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 3 OF 21

**ANCHOR DESIGN LOADS (ANCHOR CAPACITY)
FOR RECTANGULAR MULLIONS
TABLE # 2**

ANCHOR DESIGN LOAD - PSF													
DIMENSIONS		ANCHOR TYPE A			ANCHOR TYPE B			ANCHOR TYPE C			ANCHOR TYPE D		
WIDTH (W)	SPAN	CONFIGURATIONS			CONFIGURATIONS			CONFIGURATIONS			CONFIGURATIONS		
		A1	A2	A3	B1	B2	B3	C1	C2	C3	D2	D3	D4
27"	39"	72.26	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0
37"		52.73	105.46	140.0	140.0	140.0	140.0	122.15	140.0	140.0	122.15	140.0	140.0
48"		40.65	81.29	121.94	118.1	140.0	140.0	94.15	140.0	140.0	94.15	140.0	140.0
60"		32.52	65.03	97.55	94.50	140.0	140.0	75.32	140.0	140.0	75.32	112.98	140.0
66"		29.56	59.12	88.68	85.90	140.0	140.0	68.48	136.95	140.0	68.48	102.71	136.95
74"		26.37	52.73	79.10	76.60	140.0	140.0	61.07	122.15	140.0	61.07	91.61	122.15
80"		24.39	48.78	73.16	70.85	140.0	140.0	56.49	112.98	140.0	56.49	84.74	112.98
27"	51"	55.26	110.52	140.0	140.0	140.0	140.0	128.00	140.0	140.0	128.00	140.0	140.0
37"		40.32	80.65	120.97	117.2	140.0	140.0	93.41	140.0	140.0	93.41	140.0	140.0
48"		31.08	62.16	93.25	90.35	140.0	140.0	72.00	140.0	140.0	72.00	108.00	140.0
60"		24.87	49.73	74.60	72.25	140.0	140.0	57.60	115.20	140.0	57.60	86.40	115.20
66"		22.61	45.21	67.82	65.70	131.4	140.0	52.36	104.73	140.0	52.36	78.55	104.73
74"		20.16	40.32	60.48	58.60	117.2	140.0	46.70	93.41	140.0	46.70	70.05	93.41
80"		18.65	37.30	55.95	54.20	108.4	140.0	43.20	86.40	129.60	43.20	64.80	86.40
27"	58"	48.59	97.18	140.0	140.0	140.0	140.0	112.55	140.0	140.0	112.55	140.0	140.0
37"		35.46	70.91	106.37	103.0	140.0	140.0	82.13	140.0	140.0	82.13	123.20	140.0
48"		27.33	54.66	81.99	79.45	140.0	140.0	63.31	126.62	140.0	63.31	94.97	126.62
60"		21.86	43.73	65.59	63.55	127.1	140.0	50.65	101.30	140.0	50.65	75.97	101.30
66"		19.88	39.75	59.63	57.75	115.5	140.0	46.04	92.09	138.13	46.04	69.07	92.09
74"		17.73	35.46	53.18	51.50	103.0	139.1	41.07	82.13	123.20	41.07	61.60	82.13
80"		16.40	32.80	49.20	47.65	95.30	128.7	37.99	75.97	113.96	37.99	56.98	75.97
27"	63"	44.73	89.46	134.20	130.0	140.0	140.0	103.62	140.0	140.0	103.62	140.0	140.0
37"		32.64	65.28	97.93	94.85	140.0	140.0	75.61	140.0	140.0	75.61	113.42	140.0
48"		25.16	50.32	75.49	73.10	140.0	140.0	58.29	116.57	140.0	58.29	87.43	116.57
60"		20.13	40.26	60.39	58.50	117.0	140.0	46.63	93.26	139.89	46.63	69.94	93.26
66"		18.30	36.60	54.90	53.10	106.3	140.0	42.39	84.78	127.17	42.39	63.58	84.78
74"		16.32	32.64	48.96	47.40	94.85	128.1	37.81	75.61	113.42	37.81	56.71	75.61
80"		15.10	30.19	45.29	43.85	87.75	118.4	34.97	69.94	104.91	34.97	52.46	69.94
27"	75"	37.58	75.15	112.73	109.2	140.0	140.0	87.04	140.0	140.0	87.04	130.56	140.0
37"		27.42	54.84	82.26	79.70	140.0	140.0	63.52	127.03	140.0	63.52	95.27	127.03
48"		21.14	42.27	63.41	61.40	122.8	140.0	48.96	97.92	140.0	48.96	73.44	97.92
60"		16.91	33.82	50.73	49.10	98.30	132.7	39.17	78.34	117.50	39.17	58.75	78.34
66"		15.37	30.74	46.11	44.65	89.35	120.6	35.61	71.21	106.82	35.61	53.41	71.21
74"		13.71	27.42	41.13	39.85	79.70	107.6	31.76	63.52	95.27	31.76	47.64	63.52
80"		12.68	25.36	38.04	36.85	73.70	99.50	29.38	58.75	88.13	29.38	44.06	58.75

**ANCHOR DETAILS
CROSS REFERENCE TABLE
(RECTANGULAR MULLIONS)**

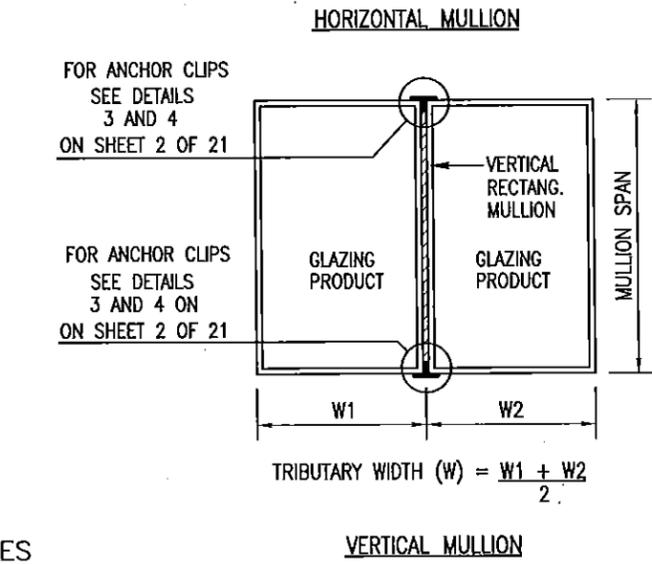
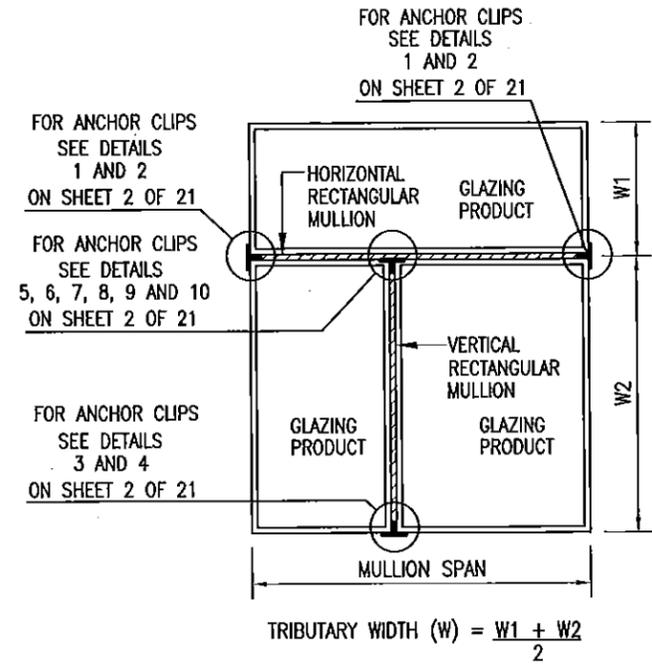
CONFIGURATIONS	LOCATED ON
A1	SHEETS 7 AND 8 OF 21
A2	SHEET 9 OF 21
A3	SHEETS 10 AND 11 OF 21
B1	SHEET 12 OF 21
B2	SHEET 13 OF 21
B3	SHEET 13 AND 14 OF 21
C1	SHEET 15 OF 21
C2	SHEET 16 OF 21
C3	SHEET 17 OF 21
D2	SHEET 18 OF 21
D3	SHEET 18 OF 21
D4	SHEET 18 OF 21

**DESCRIPTION OF
ANCHORS PER TYPE**

ANCHOR TYPE	DESCRIPTION OF ATTACHMENT
A	TROUGH 1" BY WOOD BUCK INTO CONCRETE, MASONRY OR WOOD SUBSTRATE.
B	INTO CONCRETE SUBSTRATE
C	INTO METAL SUBSTRATE
D	INTO METAL SUBSTRATE (MULLION TO MULLION)

NOTES:

- 1.- INTERPOLATE FOR INTERMEDIATE VALUES OF SPAN AND/OR TRIBUTARY WIDTH TO DETERMINE THE DESIGN LOAD (ANCHOR CAPACITY).
- 2.- MULLIONS ON THIS CHART MAY BE ORIENTED VERTICALLY AND/OR HORIZONTALLY.
- 3.- SEE MULLION CROSS SECTIONS ON SHEET 2 OF 21.
- 4.- SEE ANCHOR CLIPS CROSS SECTIONS AND LOCATIONS DETAILS ON SHEET 2 OF 21.

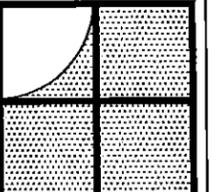


PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 15-0528.21 Expiration Date March 28, 2018

By *Manuel* Miami/Dade Product Control

FHCJ
5-18-15

FRANCISCO HERNANDEZ
FLORIDA PE # 51393



Sunshine Windows Manufacturing, Inc.
1745 W. 33rd Place
Hialeah, Florida 33012
Ph: (305)364-9952
Fax: (305)828-5118

ALUMINUM TUBE MULLION L.M.I.

No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. M2011
DATE: 02-11-13
SCALE: NTS
SHEET 4 OF 21

**ANCHOR DESIGN LOADS (ANCHOR CAPACITY)
FOR RECTANGULAR MULLIONS
TABLE # 3**

ANCHOR DESIGN LOAD - PSF							ANCHOR DESIGN LOAD - PSF								
DIMENSIONS		ANCHOR TYPE A		ANCHOR TYPE B		ANCHOR TYPE C	DIMENSIONS		ANCHOR TYPE A		ANCHOR TYPE B		ANCHOR TYPE C		
WIDTH (W)	SPAN	CONFIGURATIONS		CONFIGURATIONS		CONFIGURATIONS	WIDTH (W)	SPAN	CONFIGURATIONS		CONFIGURATIONS		CONFIGURATIONS		
		A2	A3	B2	B3	C2			C3	A2	A3	B2	B3	C2	C3
27"	84"	67.10	100.65	140.0	140.0	140.0	27"	120"	46.97	70.45	136.5	140.0	108.80	140.0	
37"		48.96	73.45	140.0	140.0	113.42	37"		34.27	51.41	99.60	134.5	79.39	119.09	
48"		37.74	56.61	109.7	140.0	87.43	48"		26.42	39.63	76.80	103.6	61.20	91.80	
60"		30.19	45.29	87.75	118.4	69.94	60"		21.14	31.70	61.40	82.90	48.96	73.44	
66"		27.45	41.17	79.75	107.7	63.58	66"		19.21	28.82	55.85	75.40	44.51	66.76	
74"		24.48	36.72	71.15	96.05	56.71	74"		17.14	25.71	49.80	67.25	39.70	59.55	
74"		22.65	33.97	65.80	88.85	52.46	74"		15.85	23.78	46.00	62.20	36.72	55.08	
27"	90"	62.63	93.94	140.0	140.0	140.0	27"	126"	44.73	67.10	130.0	140.0	103.62	140.0	
37"		45.70	68.55	132.8	140.0	105.86	37"		32.64	48.96	94.85	128.1	75.61	113.42	
48"		35.23	52.84	102.4	138.2	81.60	48"		25.16	37.74	73.10	98.70	58.29	87.43	
60"		28.18	42.27	81.90	110.5	65.28	60"		20.13	30.19	58.50	79.00	46.63	69.94	
66"		25.62	38.43	74.45	100.5	59.35	66"		18.30	27.45	53.15	71.80	42.39	63.58	
74"		22.85	34.27	66.40	89.65	52.93	74"		16.32	24.48	47.40	64.00	37.81	56.71	
74"		21.14	31.70	61.44	82.90	48.96	74"		15.10	22.65	43.85	59.20	34.97	52.46	
27"	96"	58.71	88.07	140.0	140.0	136.00	140.0	27"	132"	42.70	64.05	124.1	140.0	98.91	140.0
37"		42.84	64.26	124.5	140.0	99.24	140.0	37"		31.16	46.74	90.55	122.2	72.18	108.27
48"		33.03	49.54	96.00	129.6	76.50	114.75	48"		24.02	36.03	69.85	94.25	55.64	83.45
60"		26.42	39.63	76.80	103.6	61.20	91.80	60"		19.21	28.82	55.85	75.40	44.51	66.76
66"		24.02	36.03	69.80	94.25	55.64	83.45	66"		17.47	26.20	50.75	68.55	40.46	60.69
74"		21.42	32.13	62.25	84.05	49.62	74.43	74"		15.58	23.37	45.25	61.10	36.09	54.13
74"		19.82	29.72	57.60	77.75	45.90	68.85	74"		14.41	21.62	41.85	56.55	33.38	50.07
27"	102"	55.26	82.89	140.0	140.0	128.00	140.0	27"	138"	40.84	61.26	118.7	140.0	94.61	140.0
37"		40.32	60.48	117.2	140.0	93.41	140.0	37"		29.80	44.71	86.60	116.9	69.04	103.56
48"		31.08	46.62	90.35	121.9	72.00	108.00	48"		22.97	34.46	66.75	90.10	53.22	79.83
60"		24.87	37.30	72.25	97.55	57.60	86.40	60"		18.38	27.57	53.40	72.10	42.57	63.86
66"		22.61	33.91	65.70	88.70	52.36	78.55	66"		16.71	25.06	48.55	66.55	38.70	58.06
74"		20.16	30.24	58.60	79.10	46.70	70.05	74"		14.90	22.35	43.30	58.45	34.52	51.78
74"		18.65	27.97	54.20	73.15	43.20	64.80	74"		13.78	20.68	40.00	54.00	31.93	47.90
27"	108"	52.19	78.28	140.0	140.0	120.89	140.0	27"	144"	39.14	58.71	113.7	140.0	90.67	136.00
37"		38.08	57.12	110.7	140.0	88.22	132.32	37"		28.56	42.84	83.00	112.0	66.16	99.24
48"		29.36	44.03	85.30	115.2	68.00	102.00	48"		22.02	33.03	64.00	86.40	51.00	76.50
60"		23.48	35.23	68.25	92.15	54.40	81.60	60"		17.61	26.42	51.20	69.10	40.80	61.20
66"		21.35	32.02	62.05	83.75	49.45	74.18	66"		16.01	24.02	46.55	62.80	37.09	55.64
74"		19.04	28.56	55.35	74.70	44.11	66.16	74"		14.28	21.42	41.50	56.00	33.08	49.62
74"		17.61	26.42	51.20	69.10	40.80	61.20	74"		13.21	19.82	38.40	51.80	30.60	45.90

**ANCHOR DETAILS
CROSS REFERENCE TABLE
(RECTANGULAR MULLIONS)**

CONFIGURATIONS	LOCATED ON
A1	SHEETS 7 AND 8 OF 21
A2	SHEET 9 OF 21
A3	SHEETS 10 AND 11 OF 21
B1	SHEET 12 OF 21
B2	SHEET 13 OF 21
B3	SHEET 13 AND 14 OF 21
C1	SHEET 15 OF 21
C2	SHEET 16 OF 21
C3	SHEET 17 OF 21
D2	SHEET 18 OF 21
D3	SHEET 18 OF 21
D4	SHEET 18 OF 21

**DESCRIPTION OF
ANCHORS PER TYPE**

ANCHOR TYPE	DESCRIPTION OF ATTACHMENT
A	TROUGH 1" BY WOOD BUCK INTO CONCRETE, MASONRY OR WOOD SUBSTRATE.
B	INTO CONCRETE SUBSTRATE
C	INTO METAL SUBSTRATE
D	INTO METAL SUBSTRATE (MULLION TO MULLION)

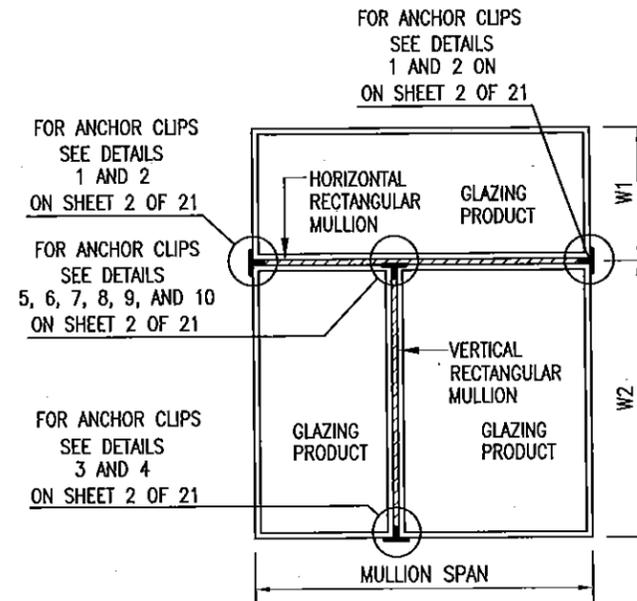
NOTES:

- INTERPOLATE FOR INTERMEDIATE VALUES OF SPAN AND/OR TRIBUTARY WIDTH TO DETERMINE THE DESIGN LOAD (ANCHOR CAPACITY).
- MULLIONS ON THIS CHART MAY BE ORIENTED VERTICALLY AND/OR HORIZONTALLY.
- SEE MULLION CROSS SECTIONS ON SHEET 2 OF 21.
- SEE ANCHOR CLIPS CROSS SECTIONS AND LOCATIONS DETAILS ON SHEET 2 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code 15-0528.21
Acceptance No. March 28, 2018
Expiration Date
By *Francisco Hernandez*
Miami Dade Product Control

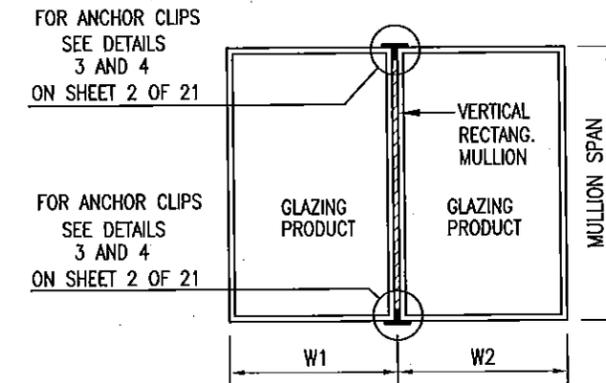
Francisco Hernandez
5-18-15

FRANCISCO HERNANDEZ
FLORIDA PE # 51393



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

HORIZONTAL MULLION



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

VERTICAL MULLION

Sunshine Windows
Manufacturing, Inc.
1745 W. 33rd Place
Hialeah, Florida 33012
Ph: (305)364-9952
Fax: (305)828-5118

ALUMINUM TUBE MULLION L.M.I.

NO	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 5 OF 21

**MULLION AND ANCHOR DESIGN LOADS (MULLION AND ANCHOR CAPACITIES)
FOR ROUND MULLIONS
TABLE # 4**

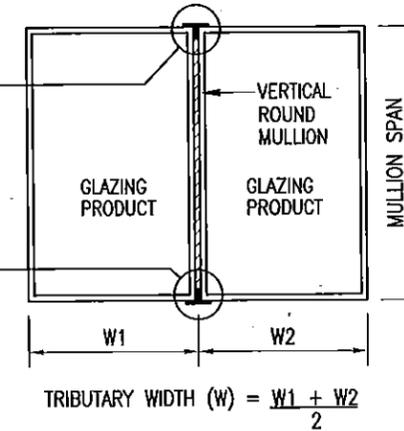
MULLION DESIGN LOAD - PSF				ANCHOR DESIGN LOAD - PSF					
DIMENSIONS		MULLION	MULLION	ANCHOR TYPE B			ANCHOR TYPE C		
WIDTH (W)	SPAN	3 1/2" Ø X 0.082"	4" Ø X 0.125"	CONFIGURATIONS			CONFIGURATIONS		
				BR2	BR3	BR4	CR2	CR3	CR4
27"	39"	140.0	140.0	140.0	140.0	140.0	140.00	140.00	140.00
37"		116.9	140.0	140.0	140.0	140.0	122.15	140.00	140.00
48"		90.10	140.0	118.1	140.0	113.2	94.15	140.00	140.00
60"		72.10	140.0	94.50	127.6	90.55	75.32	112.98	140.00
66"		65.55	129.0	85.90	116.0	82.35	68.48	102.71	136.95
74"		58.45	115.0	76.60	103.4	73.45	61.07	91.61	122.15
80"		54.00	106.4	70.85	95.70	67.90	56.49	84.74	112.98
27"	51"	93.70	140.0	140.0	140.0	140.0	128.00	140.00	140.00
37"		68.35	134.5	117.2	140.0	112.3	93.41	140.00	140.00
48"		52.70	103.7	90.35	121.9	86.55	72.00	108.00	140.00
60"		42.15	82.90	72.25	97.55	69.25	57.60	86.40	115.20
66"		38.30	75.40	65.70	88.70	62.95	52.36	78.55	104.73
74"		-	67.25	58.60	79.10	56.15	46.70	70.05	93.41
80"		-	62.20	54.20	73.15	51.95	43.20	64.80	86.40
27"	58"	72.40	140.0	140.0	140.0	135.3	112.55	140.00	140.00
37"		52.85	104.0	103.0	139.1	98.75	82.13	123.20	140.00
48"		40.75	80.15	79.45	107.2	76.10	63.31	94.97	126.62
60"		32.60	64.15	63.55	85.80	60.90	50.65	75.97	101.30
66"		-	58.30	57.75	78.00	55.35	46.04	69.07	92.09
74"		-	52.00	51.50	69.55	49.35	41.07	61.60	82.13
80"		-	48.10	47.65	64.35	45.65	37.99	56.98	75.97
27"	63"	61.25	120.8	130.0	140.0	124.6	103.62	140.00	140.00
37"		44.70	88.15	94.85	128.1	90.90	75.61	113.42	140.00
48"		34.45	67.90	73.10	98.70	70.10	58.29	87.43	116.57
60"		-	54.35	58.50	78.95	56.05	46.63	69.94	93.26
66"		-	49.40	53.15	71.80	50.95	42.39	63.58	84.78
74"		-	44.00	47.40	64.00	45.45	37.81	56.71	75.61
80"		-	40.75	43.85	59.25	42.05	34.97	52.46	69.94
27"	75"	36.31	81.65	109.2	140.0	104.6	87.04	130.56	140.00
37"		-	59.55	79.70	107.6	76.35	63.52	95.27	127.03
48"		-	45.90	61.40	82.90	58.85	48.96	73.44	97.92
60"		-	36.70	49.15	66.35	47.10	39.17	58.75	78.34
66"		-	33.40	44.65	60.30	42.80	35.61	53.41	71.21
74"		-	-	39.85	53.80	38.15	31.76	47.64	63.52
80"		-	-	36.85	49.75	35.30	29.38	44.06	58.75

**ANCHOR DETAILS
CROSS REFERENCE TABLE
(ROUND MULLIONS)**

CONFIGURATIONS	TOP VIEW LOCATED ON	SECTION LOCATED ON
BR2	SHEET 19 OF 21	SHEET 21 OF 21
BR3	SHEET 19 OF 21	SHEET 21 OF 21
BR4	SHEET 20 OF 21	SHEET 21 OF 21
CR2	SHEET 19 OF 21	SHEET 21 OF 21
CR3	SHEET 19 OF 21	SHEET 21 OF 21
CR4	SHEET 20 OF 21	SHEET 21 OF 21

FOR ANCHOR CLIPS
SEE DETAIL 11
ON SHEET 2 OF 21

FOR ANCHOR CLIPS
SEE DETAIL 11
ON SHEET 2 OF 21



VERTICAL MULLION

**DESCRIPTION OF
ANCHORS PER TYPE
(ROUND MULLIONS)**

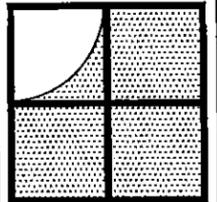
ANCHOR TYPE	DESCRIPTION OF ATTACHMENT
B	INTO CONCRETE SUBSTRATE
C	INTO METAL SUBSTRATE

NOTES:

- 1.- INTERPOLATE FOR INTERMEDIATE VALUES OF SPAN AND/OR TRIBUTARY WIDTH TO DETERMINE DESIGN LOAD (MULLION AND ANCHOR CAPACITIES).
- 2.- SEE DETAILS OF ROUND MULLIONS ON SHEETS 19, 20 AND 21 OF 21.
- 3.- ROUND MULLIONS SHALL BE ORIENTED VERTICALLY ONLY.
- 4.- SEE MULLION CROSS SECTIONS ON SHEET 2 OF 21.
- 5.- SEE ANCHOR SLEEVE DETAILS, SECTIONS AND LOCATIONS ON SHEET 2 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528-21
Expiration Date March 28, 2018
By *Francisco Hernandez*
Miami Dade Product Control

Francisco Hernandez
5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393



Sunshine Windows
Manufacturing, Inc.
1745 W. 33rd Place
Hialeah, Florida 33012
Ph: (305)364-9952
Fax: (305)828-5118

ALUMINUM TUBE MULLION L.M.I.

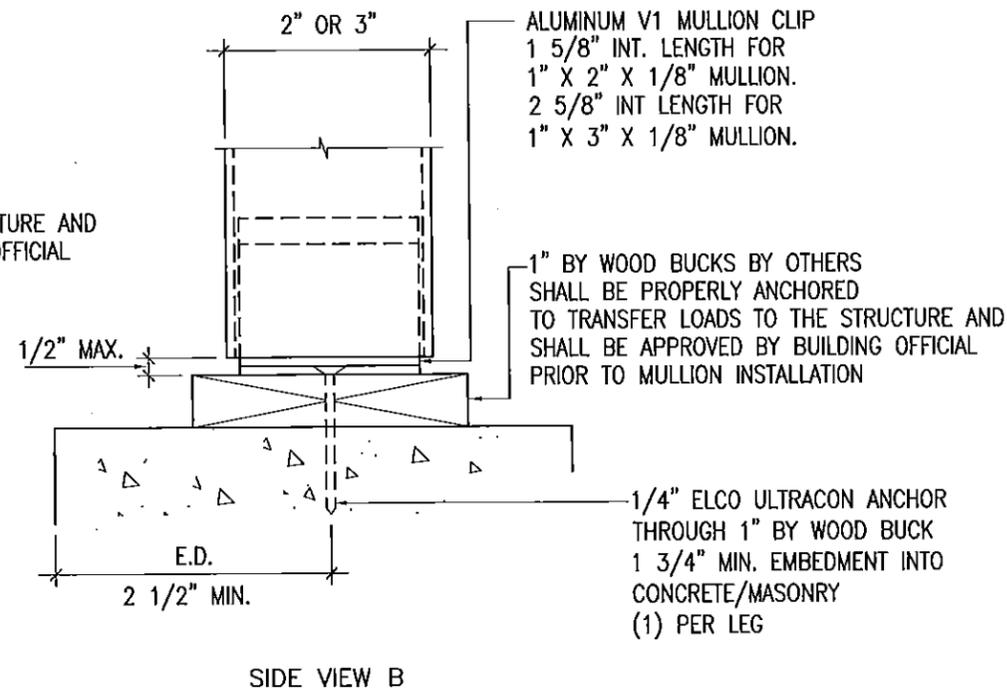
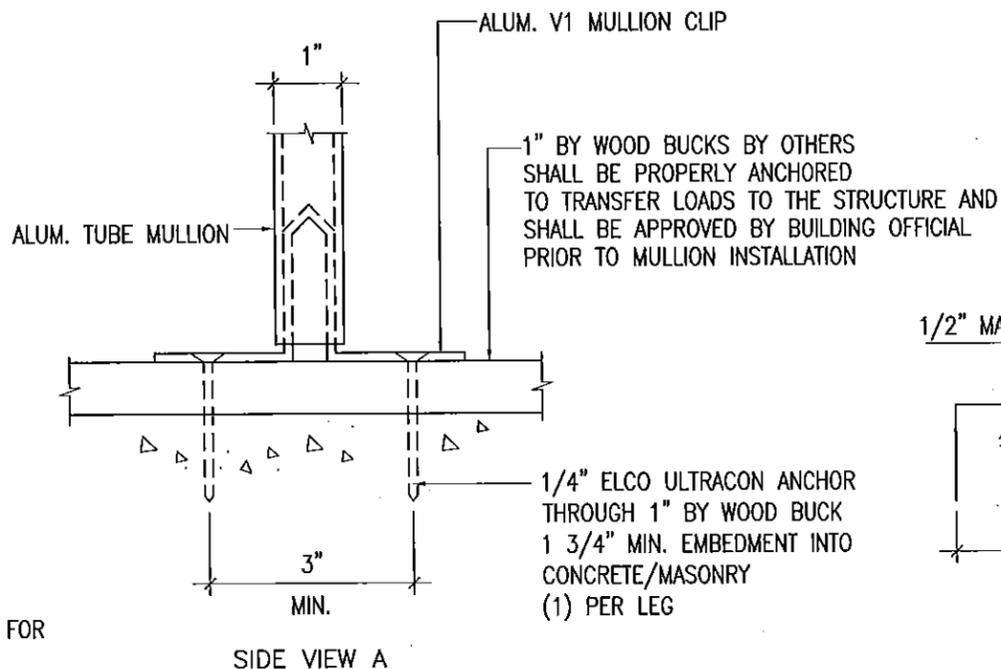
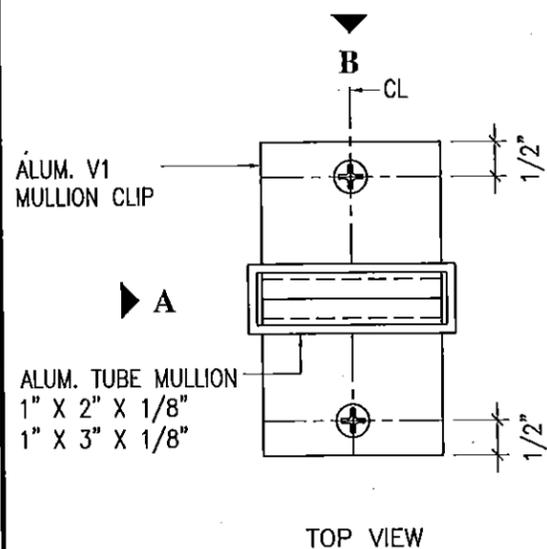
No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 6 OF 21

ANCHOR CONFIGURATION TYPE A1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH V1 MULLION CLIP

NUMBER OF ANCHORS PER LEG = (1) ULTRACON ANCHORS
SUBSTRATE: 1" BY WOOD BUCK FASTENED TO GROUT FILLED BLOCK

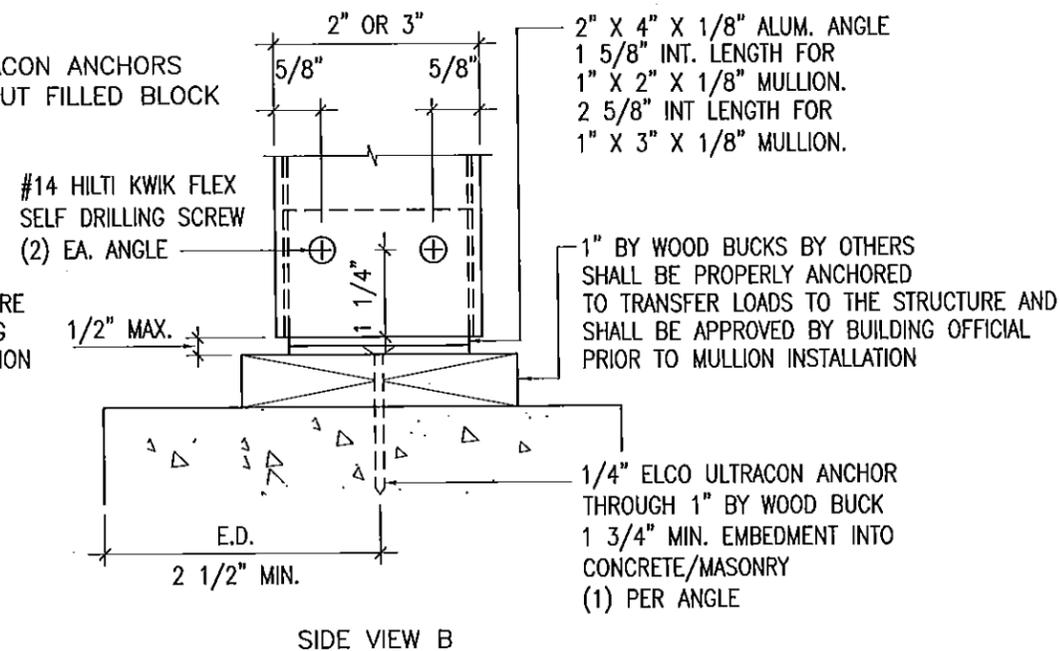
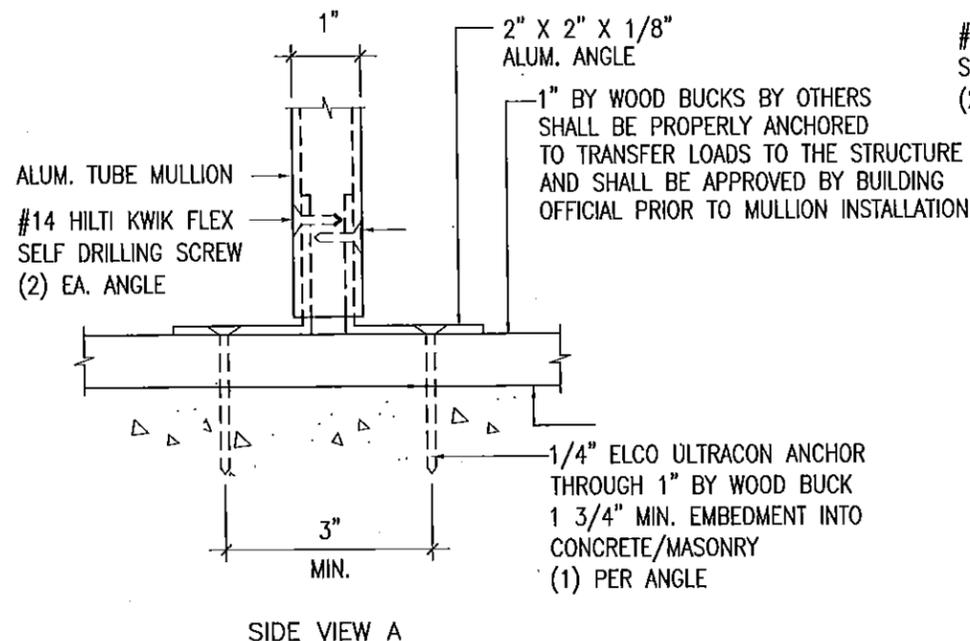
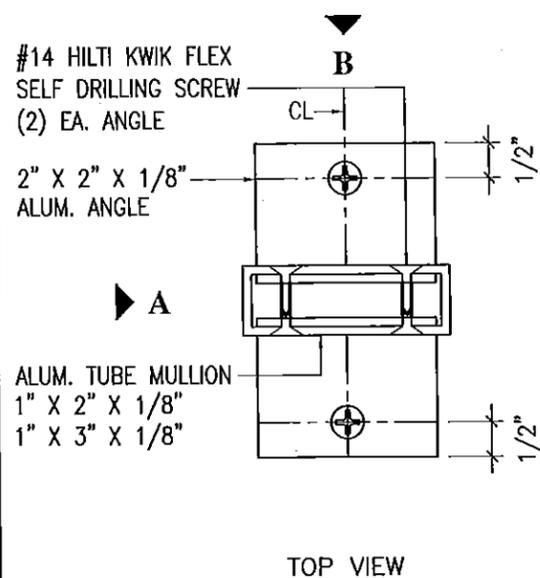


NOTE: ANCHOR CONFIGURATION TYPE A1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

ANCHOR CONFIGURATION TYPE A1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH 2" X 2" X 1/8" ANGLES

NUMBER OF ANCHORS PER ANGLE = (1) ULTRACON ANCHORS
SUBSTRATE: 1" BY WOOD BUCK FASTENED TO GROUT FILLED BLOCK



NOTE: ANCHOR CONFIGURATION TYPE A1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528.21
Expiration Date March 28, 2018

By *Manuel Perez*
Miami Dade Product Control

FRANCISCO HERNANDEZ
FLORIDA PE # 51393

Sunshine Windows
Manufacturing, Inc.
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Fax: (305)828-5118

ALUMINUM TUBE MULLION L.M.I.

No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011

DATE: 02-11-13

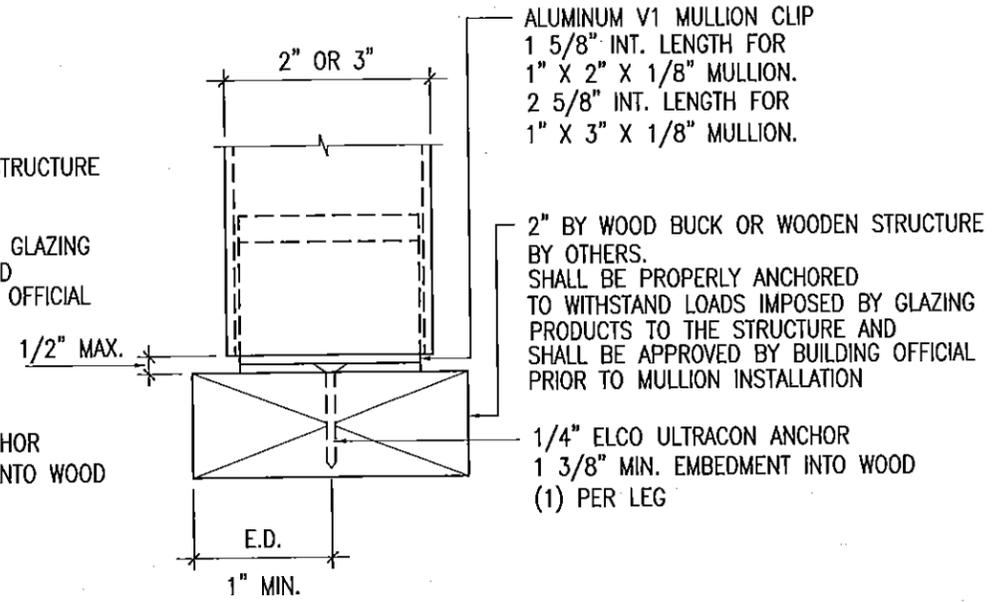
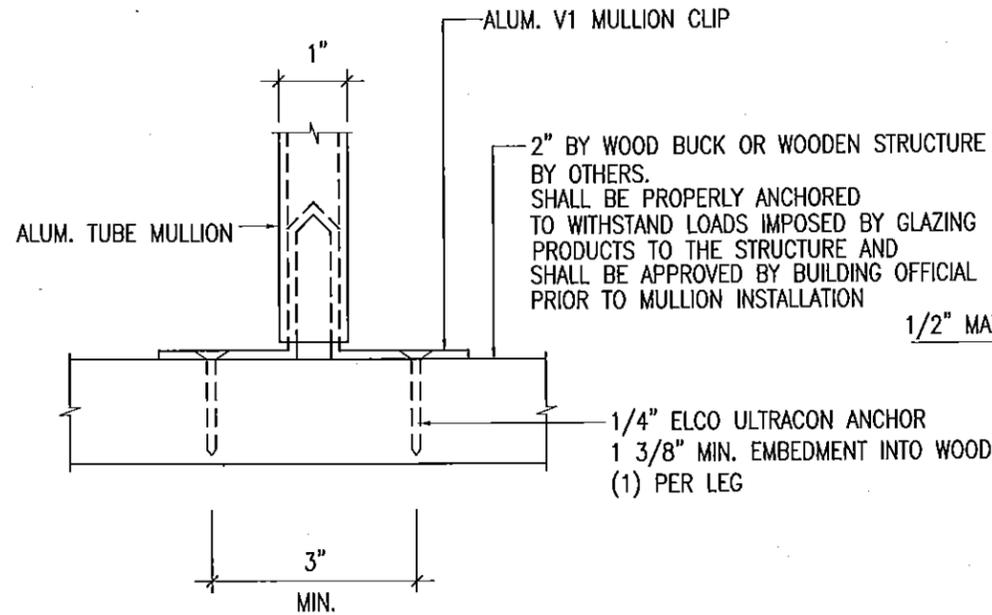
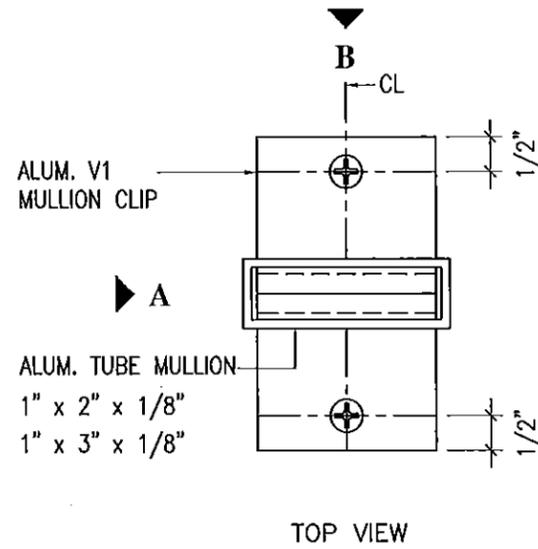
SCALE: NTS

SHEET 7 OF 21

ANCHOR CONFIGURATION TYPE A1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH V1 MULLION CLIP

NUMBER OF ANCHORS PER LEG = (1) ULTRACON ANCHORS IN WOOD
SUBSTRATE: 2" BY WOOD BUCK OR WOODEN STRUCTURE

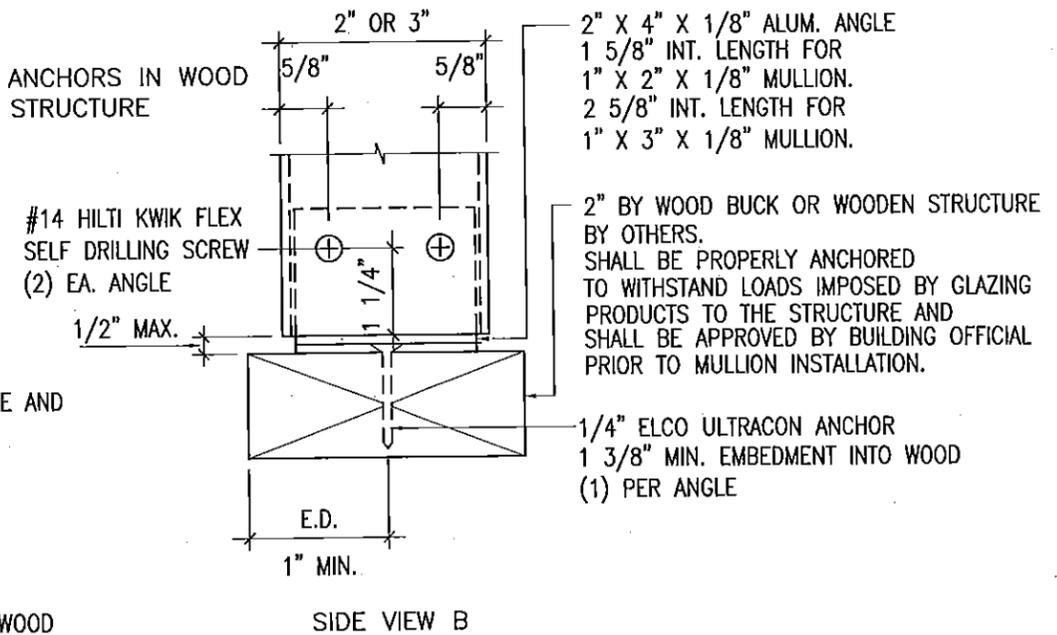
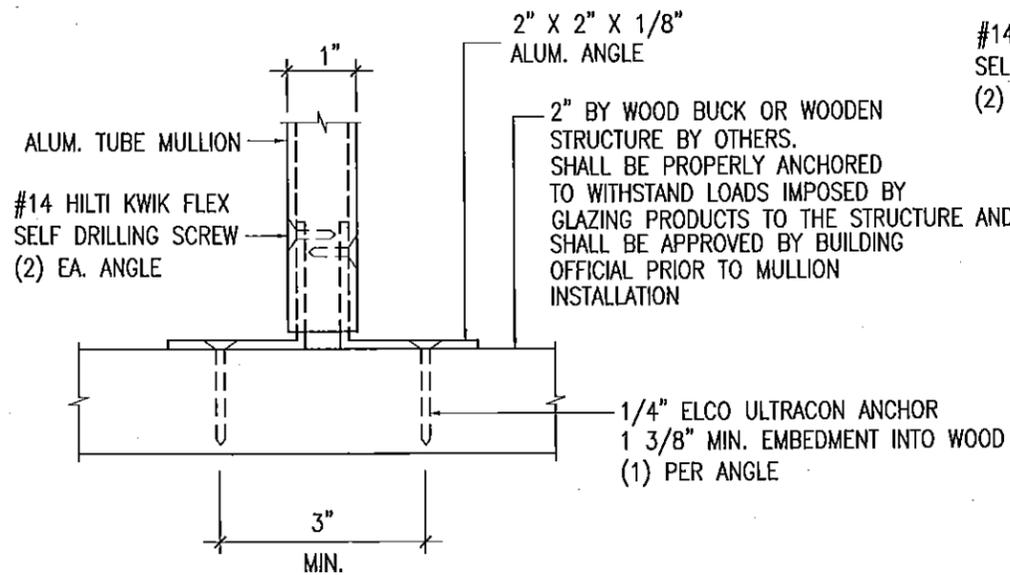
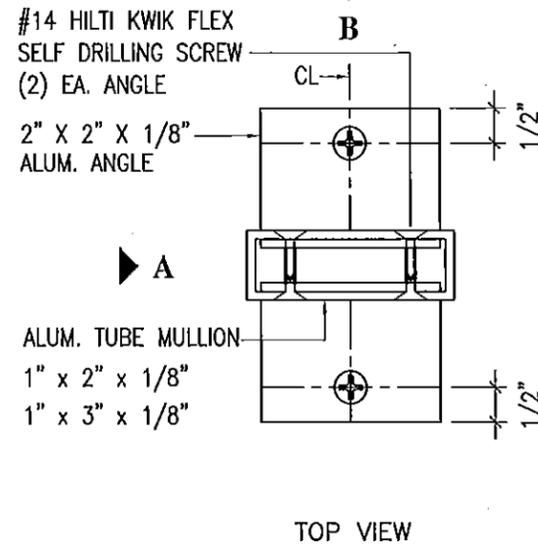


NOTE: ANCHOR CONFIGURATION TYPE A1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

ANCHOR CONFIGURATION TYPE A1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH 2" X 2" 1/8" ANGLES

NUMBER OF ANCHORS PER ANGLE = (1) ULTRACON ANCHORS IN WOOD
SUBSTRATE: 2" BY WOOD BUCK OR WOODEN STRUCTURE

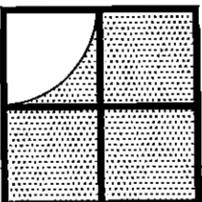


NOTE: ANCHOR CONFIGURATION TYPE A1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528-21
Expiration Date March 28, 2018
By *Francisco Hernandez*
Miami/Dade Product Control

Francisco Hernandez
5-18-15

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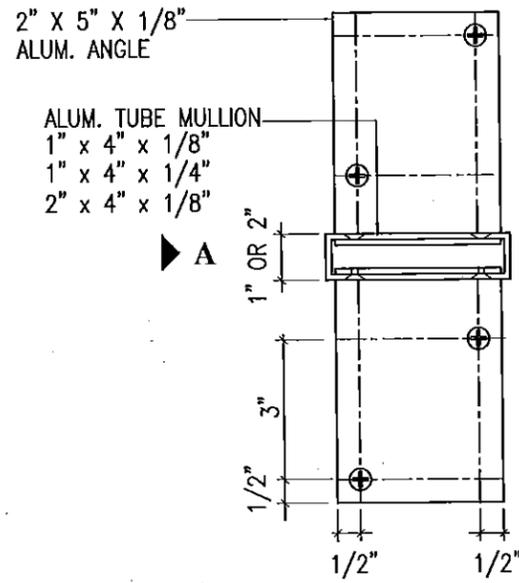
ALUMINUM TUBE MULLION L.M.I.

REVISION	DATE	DESCRIPTION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

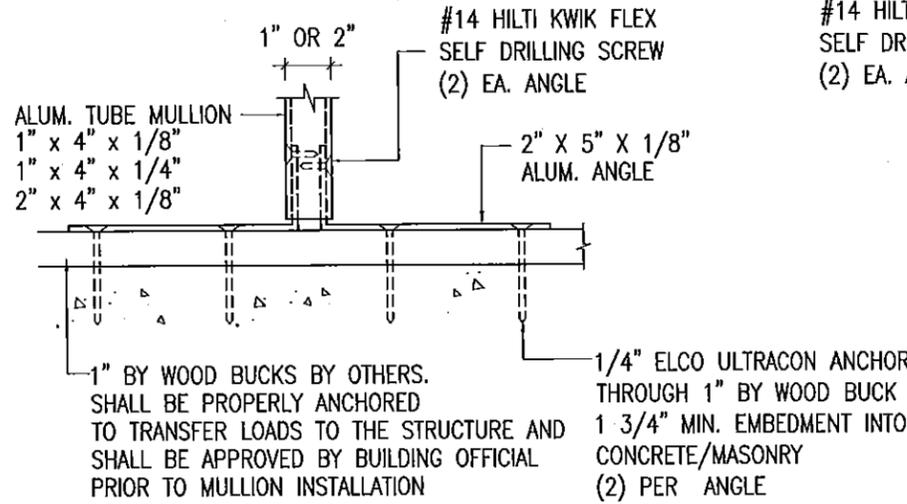
DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 8 OF 21

ANCHOR CONFIGURATION TYPE A2

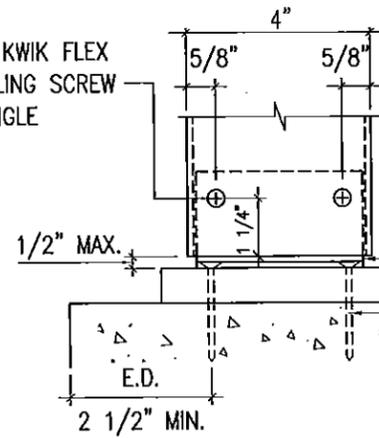
FOR 1" X 4" OR 2" X 4" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (2) ULTRACON ANCHORS
SUBSTRATE: 1" BY WOOD BUCK FASTENED TO GROUT FILLED BLOCK



TOP VIEW



SIDE VIEW A



SIDE VIEW B

2" X 5" X 1/8" ALUM. ANGLE
3 5/8" INT. LENGTH FOR
4" X 1" X 1/8" MULLION
3 3/8" INT. LENGTH FOR
4" X 1" X 1/4" MULLION
3 5/8" INT. LENGTH FOR
4" X 2" X 1/8" MULLION

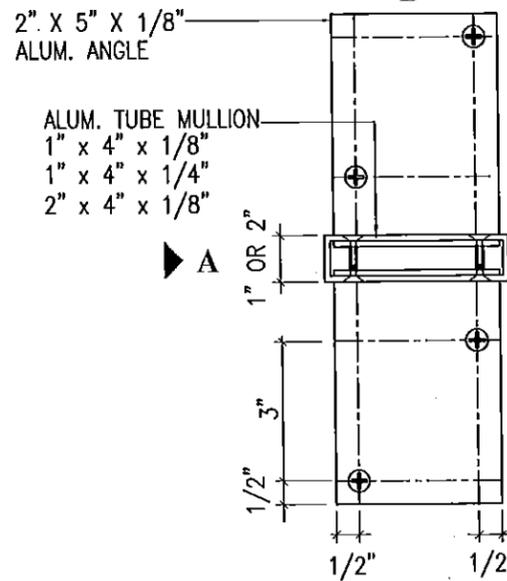
1" BY WOOD BUCKS BY OTHERS MUST BE PROPERLY ANCHORED TO TRANSFER LOADS TO THE STRUCTURE SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

1/4" ELCO ULTRACON ANCHOR THROUGH 1" BY WOOD BUCK 1 3/4" MIN. EMBEDMENT INTO CONCRETE/MASONRY (2) PER ANGLE

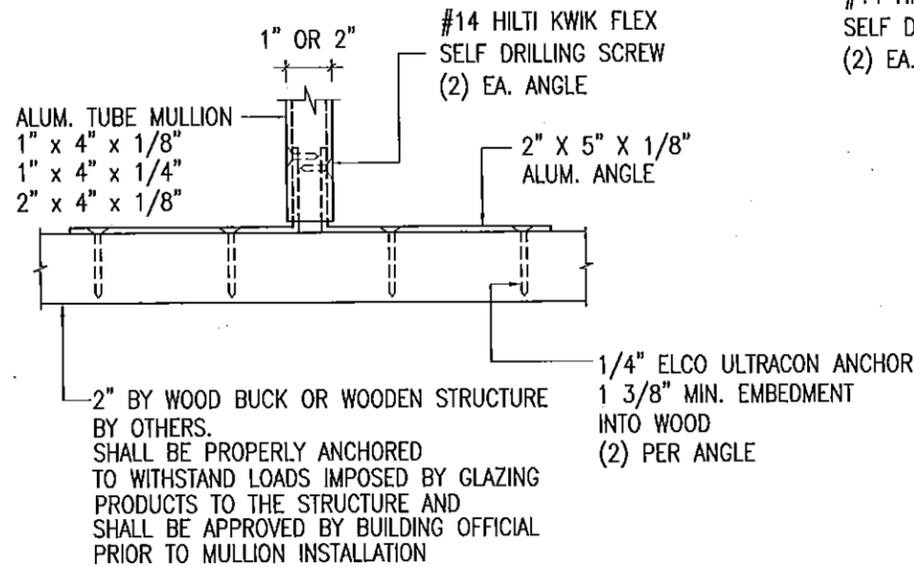
NOTE: ANCHOR CONFIGURATION TYPE A2 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8". FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

ANCHOR CONFIGURATION TYPE A2

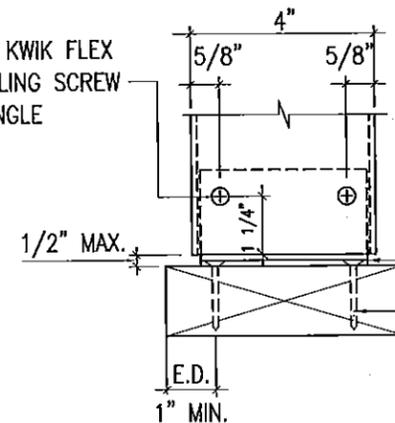
FOR 1" X 4" OR 2" X 4" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (2) ULTRACON ANCHORS IN WOOD
SUBSTRATE: 2" BY WOOD BUCK OR WOODEN STRUCTURE



TOP VIEW



SIDE VIEW A



SIDE VIEW B

2" X 5" X 1/8" ALUM. ANGLE
3 5/8" INT. LENGTH FOR
4" X 1" X 1/8" MULLION
3 3/8" INT. LENGTH FOR
4" X 1" X 1/4" MULLION
3 5/8" INT. LENGTH FOR
4" X 2" X 1/8" MULLION

2" BY WOOD BUCK OR WOODEN STRUCTURE BY OTHERS. MUST BE PROPERLY ANCHORED TO WITHSTAND LOADS IMPOSED BY GLAZING PRODUCTS TO THE STRUCTURE SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

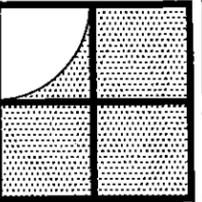
1/4" ELCO ULTRACON ANCHOR THROUGH 2" BY WOOD BUCK OR WOODEN STRUCTURE BY OTHERS. SHALL BE PROPERLY ANCHORED TO WITHSTAND LOADS IMPOSED BY GLAZING PRODUCTS TO THE STRUCTURE AND SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION (2) PER ANGLE

NOTE: ANCHOR CONFIGURATION TYPE A2 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8". FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528. 21
Expiration Date March 28, 2018
By Manuel Perez
Miami Dade Product Control

Handwritten signature and date: 5-18-15

FRANCISCO HERNANDEZ
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ALUMINUM TUBE MULLION L.M.I.

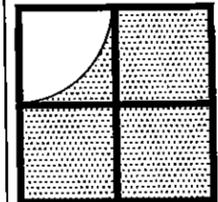
No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011

DATE: 02-11-13

SCALE: NTS

SHEET 9 OF 21

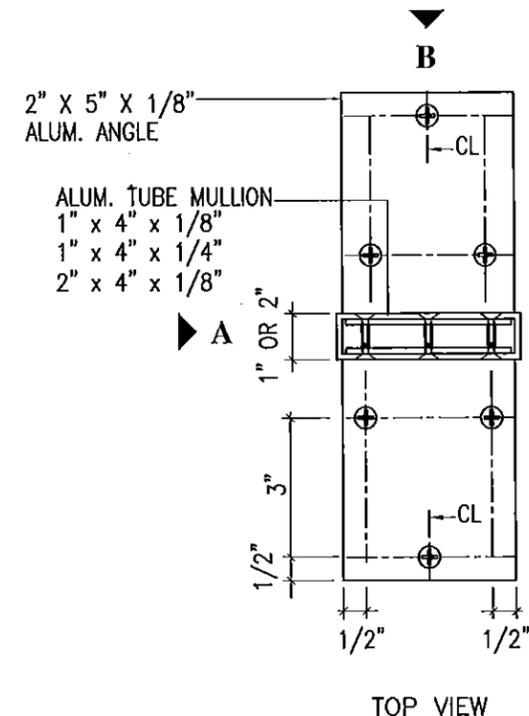


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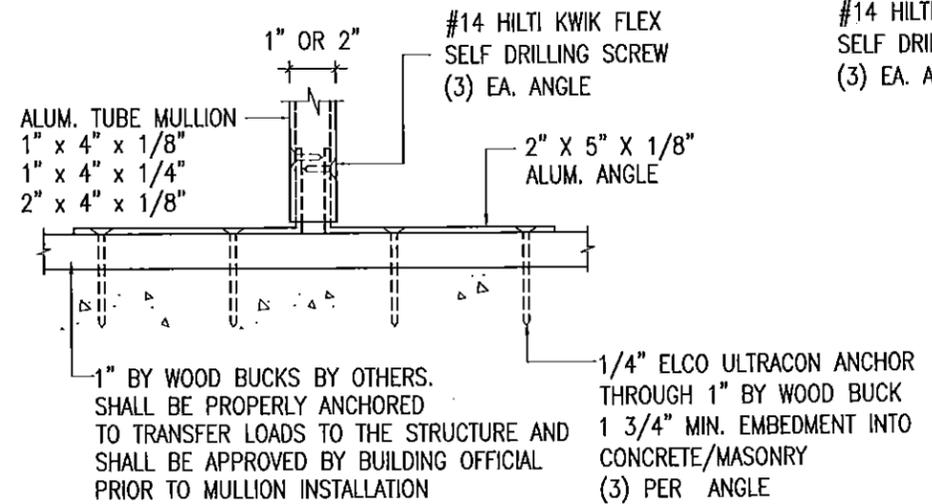
ALUMINUM TUBE MULLION L.M.I.

ANCHOR CONFIGURATION TYPE A3

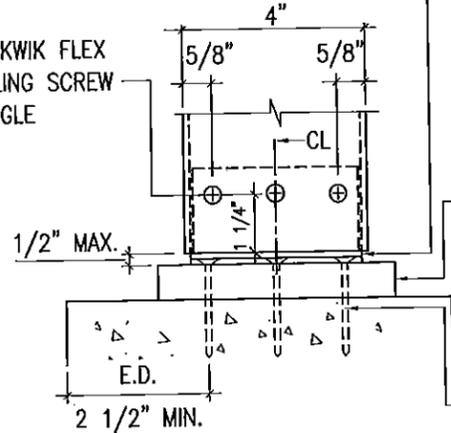
FOR 1" X 4" OR 2" X 4" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS SUBSTRATE: 1" BY WOOD BUCK FASTENED TO GROUT FILLED BLOCK



TOP VIEW



SIDE VIEW A



SIDE VIEW B

2" X 5" X 1/8" ALUM. ANGLE
3 5/8" INT. LENGTH FOR
4" X 1" X 1/8" MULLION
3 3/8" INT. LENGTH FOR
4" X 1" X 1/4" MULLION
3 5/8" INT. LENGTH FOR
4" X 2" X 1/8" MULLION

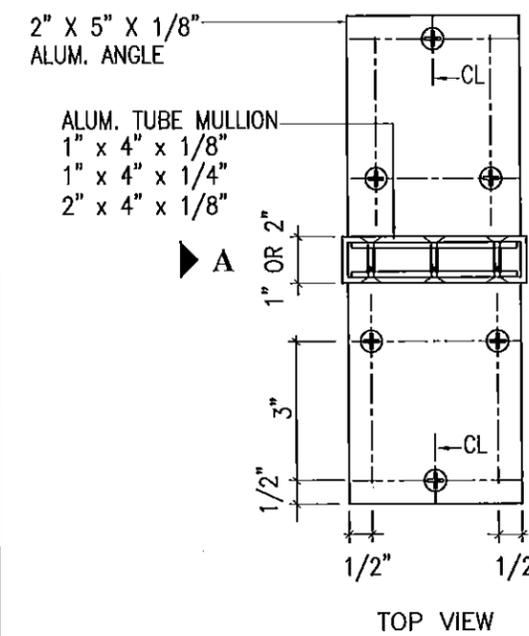
1" BY WOOD BUCKS BY OTHERS.
SHALL BE PROPERLY ANCHORED
TO TRANSFER LOADS TO THE STRUCTURE AND
SHALL BE APPROVED BY BUILDING OFFICIAL
PRIOR TO MULLION INSTALLATION

1/4" ELCO ULTRACON ANCHOR
THROUGH 1" BY WOOD BUCK
1 3/4" MIN. EMBEDMENT INTO
CONCRETE/MASONRY
(3) PER ANGLE

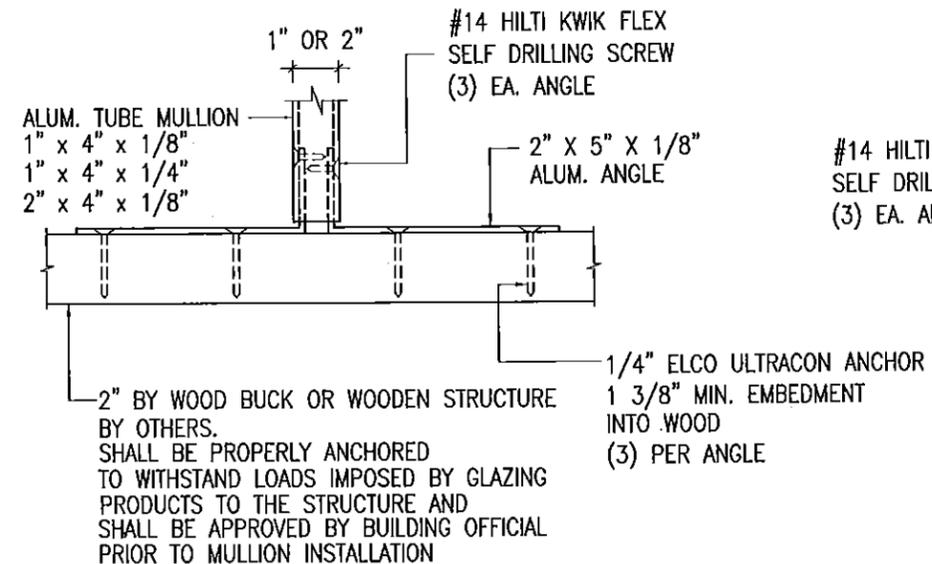
NOTE: ANCHOR CONFIGURATION TYPE A3 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8". FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

ANCHOR CONFIGURATION TYPE A3

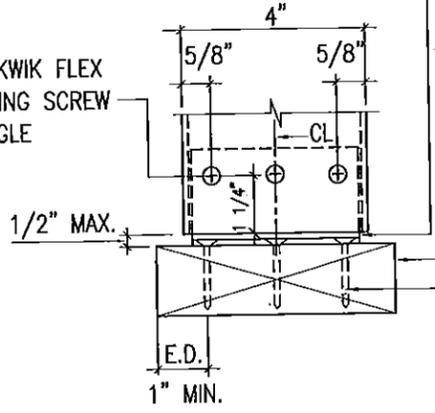
FOR 1" X 4" OR 2" X 4" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS IN WOOD SUBSTRATE: 2" BY WOOD BUCK OR WOODEN STRUCTURE



TOP VIEW



SIDE VIEW A



SIDE VIEW B

2" X 5" X 1/8" ALUM. ANGLE
3 5/8" INT. LENGTH FOR
4" X 1" X 1/8" MULLION
3 3/8" INT. LENGTH FOR
4" X 1" X 1/4" MULLION
3 5/8" INT. LENGTH FOR
4" X 2" X 1/8" MULLION

2" BY WOOD BUCK OR WOODEN STRUCTURE
BY OTHERS.
SHALL BE PROPERLY ANCHORED
TO WITHSTAND LOADS IMPOSED BY GLAZING
PRODUCTS TO THE STRUCTURE AND
SHALL BE APPROVED BY BUILDING OFFICIAL
PRIOR TO MULLION INSTALLATION

1/4" ELCO ULTRACON ANCHOR
1 3/8" MIN. EMBEDMENT INTO WOOD
(3) PER ANGLE

NOTE: ANCHOR CONFIGURATION TYPE A3 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8". FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

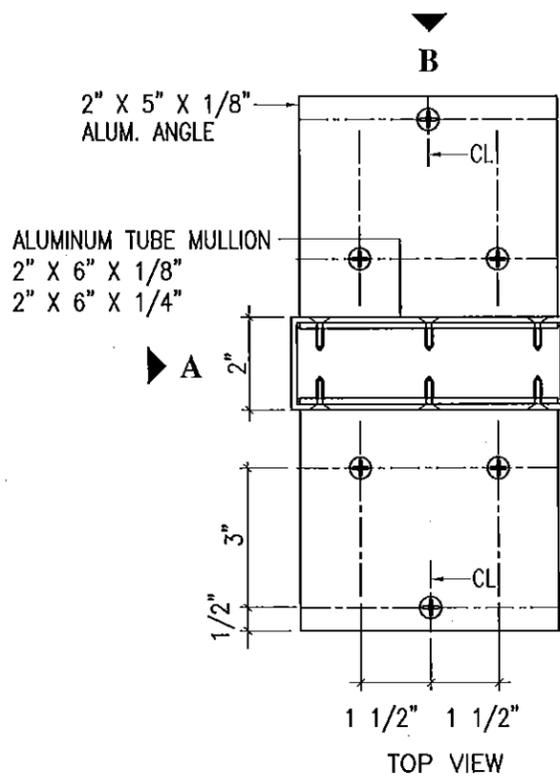
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0528.21
Expiration Date March 28, 2018
By *Manuel Perez*
Miami/Dade Product Control

Francisco Hernandez
5-18-13

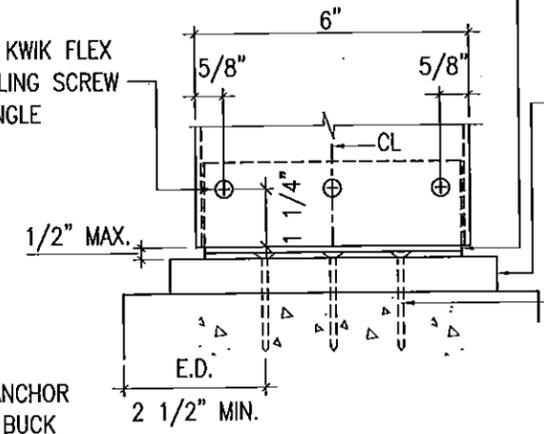
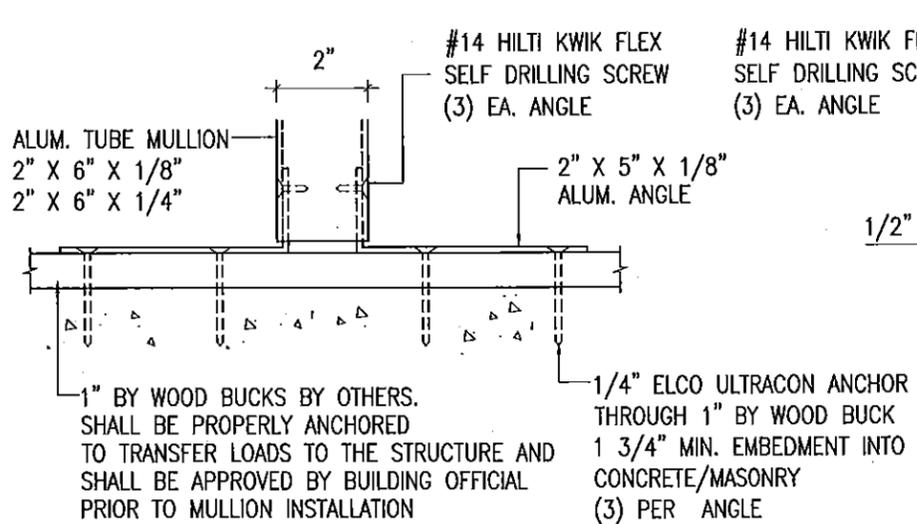
FRANCISCO HERNANDEZ
FLORIDA PE # 51393

REVISION	DATE	DESCRIPTION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 10 OF 21



ANCHOR CONFIGURATION TYPE A3
 FOR 2" X 6" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS
 SUBSTRATE: 1" BY WOOD BUCK FASTENED TO GROUT FILLED BLOCK

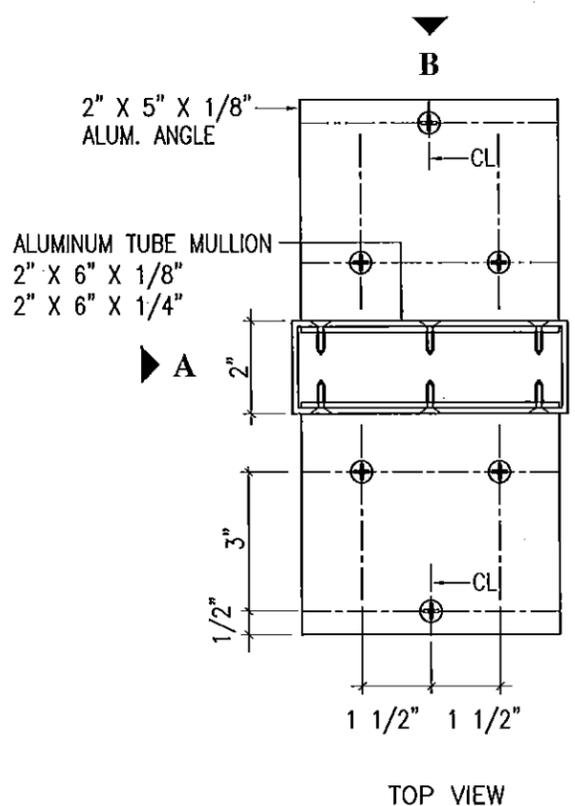


2" X 5" X 1/8" ALUM. ANGLE
 5 5/8" INT. LENGTH FOR
 2" X 6" X 1/8" MULLION
 5 3/8" INT. LENGTH FOR
 2" X 6" X 1/4" MULLION

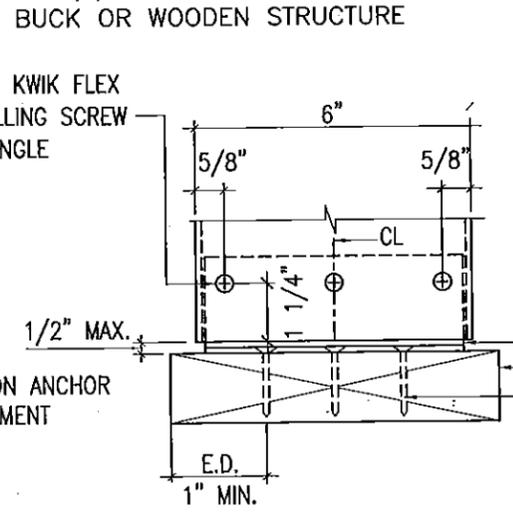
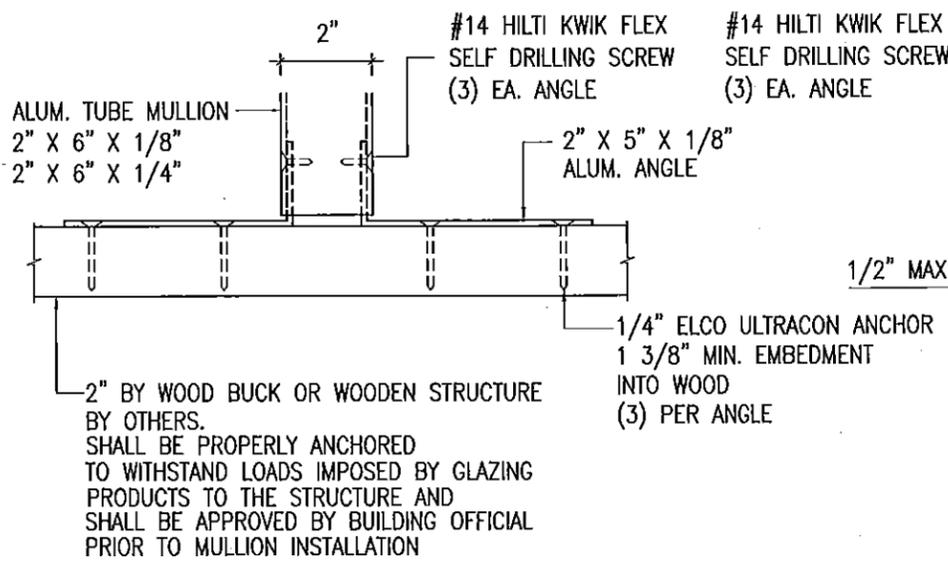
1" BY WOOD BUCKS BY OTHERS. SHALL BE PROPERLY SEALED AND ANCHORED TO TRANSFER LOADS TO THE STRUCTURE SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

1/4" ELCO ULTRACON ANCHOR THROUGH 1" BY WOOD BUCK 1 3/4" MIN. EMBEDMENT INTO CONCRETE/MASONRY (3) PER ANGLE

NOTE: ANCHOR CONFIGURATION TYPE A3 AS SHOWN IS VALID FOR MULLIONS 2" X 6" X 1/8" AND 2" X 6" X 1/4".
 FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.



ANCHOR CONFIGURATION TYPE A3
 FOR 2" X 6" MULLIONS WITH 2" X 5" X 1/8" ALUM. ANGLES NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS IN WOOD
 SUBSTRATE: 2" BY WOOD BUCK OR WOODEN STRUCTURE



2" X 5" X 1/8" ALUM. ANGLE
 5 5/8" INT. LENGTH FOR
 2" X 6" X 1/8" MULLION
 5 3/8" INT. LENGTH FOR
 2" X 6" X 1/4" MULLION

2" BY WOOD BUCK OR WOODEN STRUCTURE BY OTHERS. SHALL BE PROPERLY ANCHORED TO WITHSTAND LOADS IMPOSED BY GLAZING PRODUCTS TO THE STRUCTURE AND SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

1/4" ELCO ULTRACON ANCHOR 1 3/8" MIN. EMBEDMENT INTO WOOD (3) PER ANGLE

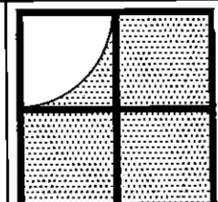
NOTE: ANCHOR CONFIGURATION TYPE A3 AS SHOWN IS VALID FOR MULLIONS 2" X 6" X 1/8" AND 2" X 6" X 1/4".
 FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 15-0528.21 Expiration Date March 28, 2018

By *Francisco Hernandez*
 Miami/Dade Product Control

Francisco Hernandez
 5-18-15

FRANCISCO HERNANDEZ
 FLORIDA PE # 51393



Sunshine Windows Manufacturing, Inc.
 1745 W. 33rd Place
 Hialeah, Florida 33012
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ALUMINUM TUBE MULLION L.M.I.

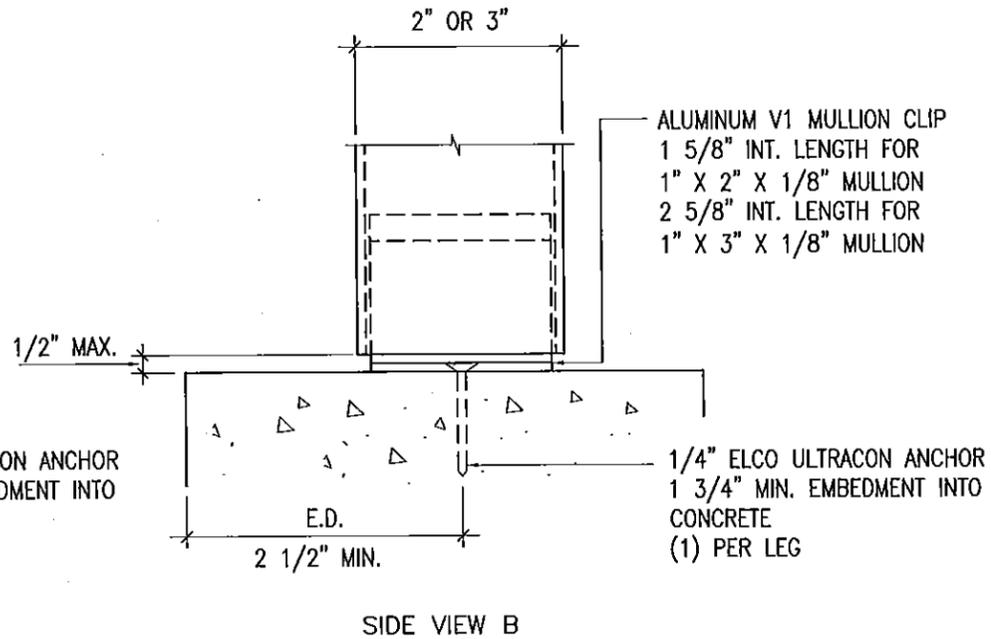
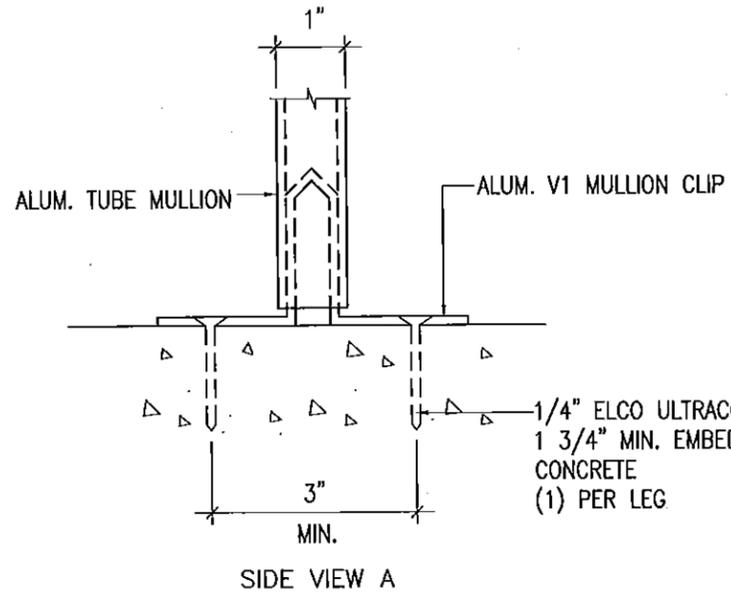
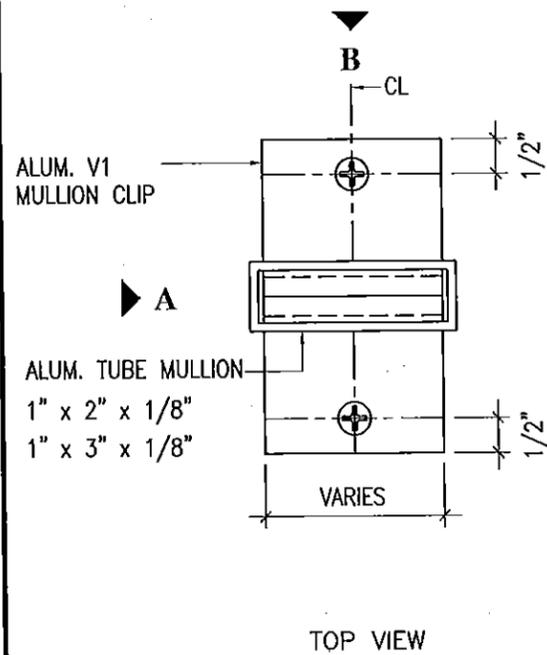
NO.	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. M2011
 DATE: 02-11-13
 SCALE: NTS
 SHEET 11 OF 21

ANCHOR CONFIGURATION TYPE B1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH V1 MULLION CLIP

NUMBER OF ANCHORS PER LEG = (1) ULTRACON ANCHORS IN CONCRETE
SUBSTRATE: 3.000 PSI CONCRETE

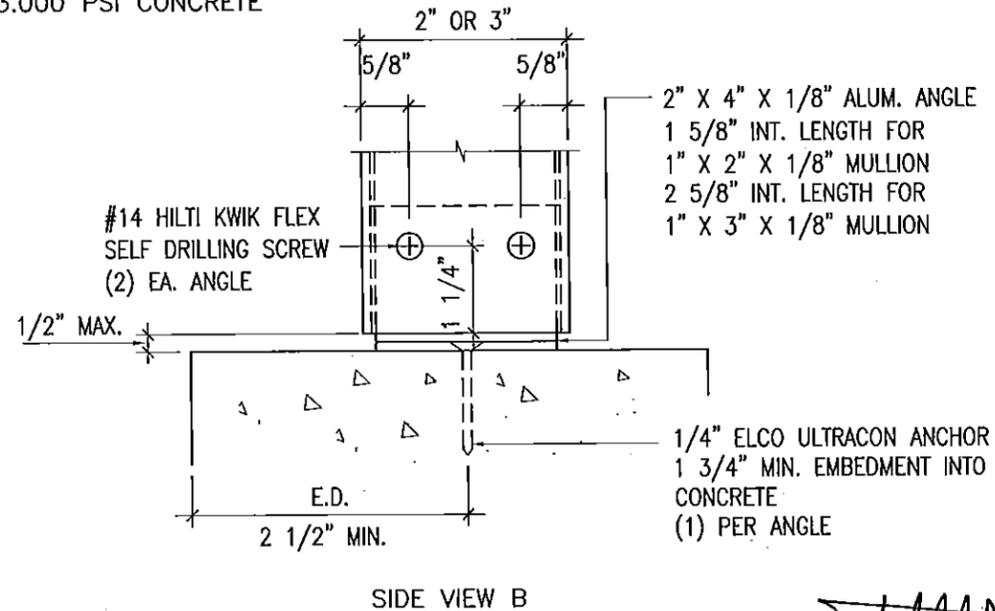
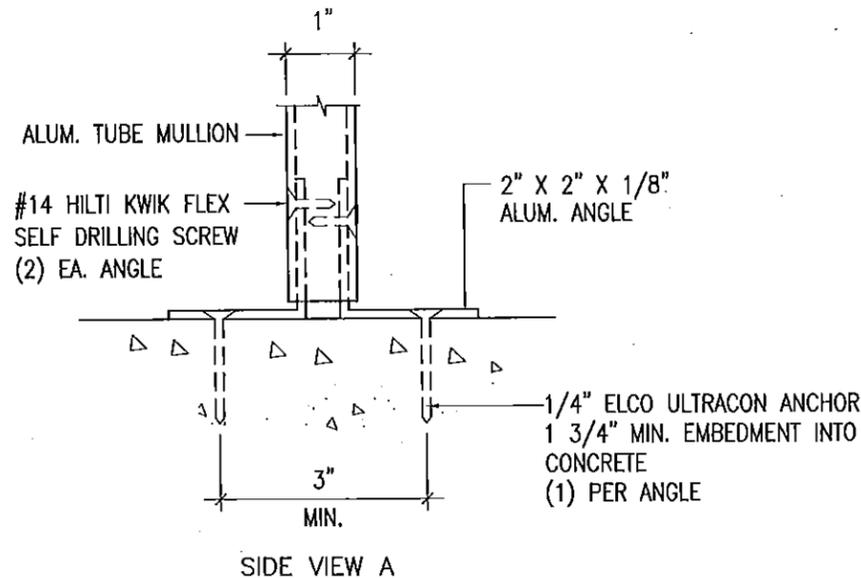
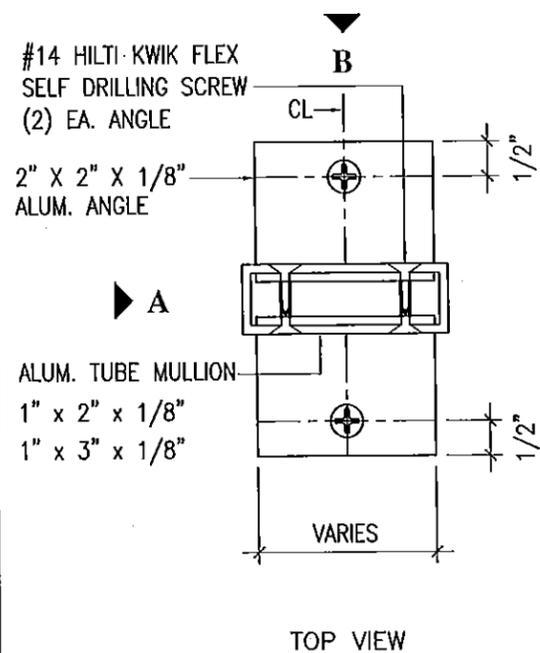


NOTE: ANCHOR CONFIGURATION TYPE B1 AS SHOWN ON THIS SHEET IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

ANCHOR CONFIGURATION TYPE B1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH 2" X 2" X 1/8" ANGLE

NUMBER OF ANCHORS PER ANGLE = (1) ULTRACON ANCHORS IN CONCRETE
SUBSTRATE: 3.000 PSI CONCRETE

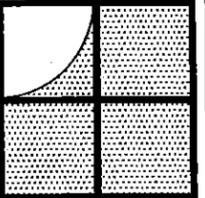


NOTE: ANCHOR CONFIGURATION TYPE B1 AS SHOWN ON THIS SHEET IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

PRODUCT REVISED
as complying with the Florida
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By *Manuel Perez*
Miami Dade Product Control

FRANCISCO HERNANDEZ
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ALUMINUM TUBE MULLION L.M.I.

REVISION	DATE	DESCRIPTION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011

DATE: 02-11-13

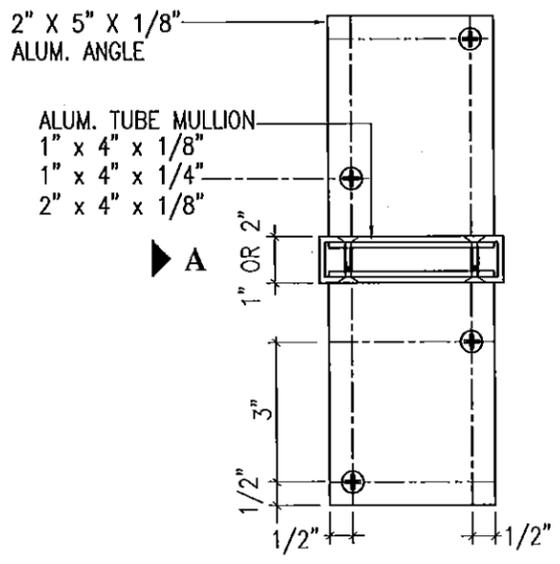
SCALE: NTS

SHEET 12 OF 21

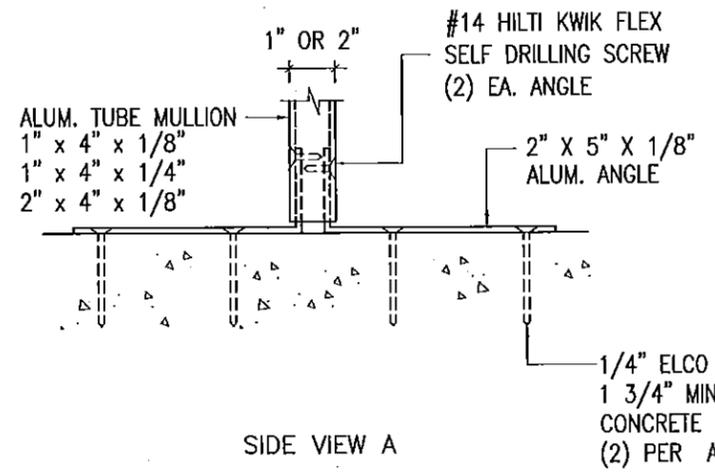
ANCHOR CONFIGURATION TYPE B2

FOR 1" X 4" OR 2" X 4" MULLIONS
WITH 2" X 5" X 1/8" ALUM. ANGLES

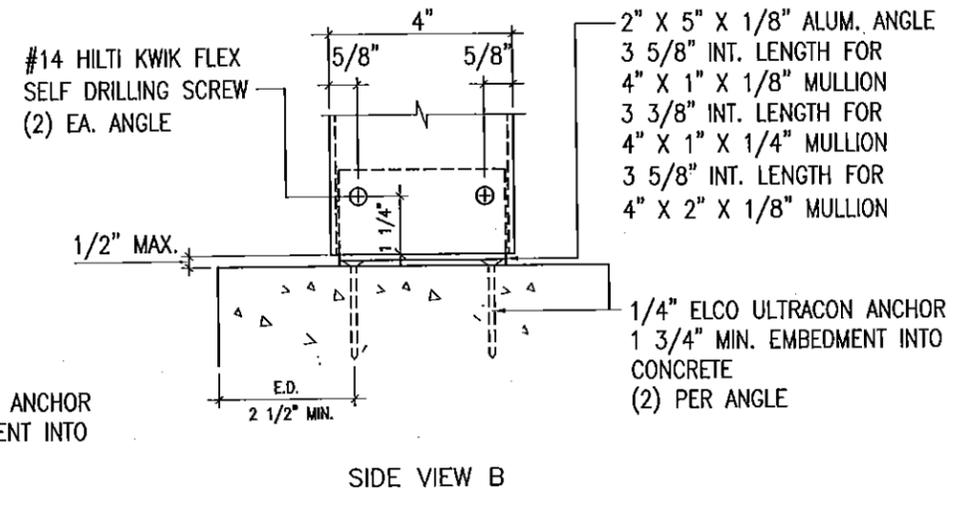
NUMBER OF ANCHORS PER ANGLE = (2) ULTRACON ANCHORS IN CONCRETE
SUBSTRATE: 3.000 PSI CONCRETE



TOP VIEW

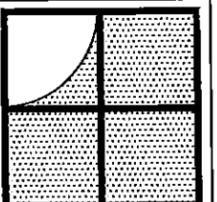


SIDE VIEW A



SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE B2 AS SHOWN IS VALID FOR
MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 5 AND 6 OF 22.



Sunshine Windows
Manufacturing, Inc.
1745 W. 33rd Place
Hialeah, Florida 33012
Ph: (305)364-9952
Fax: (305)828-5118

ALUMINUM TUBE MULLION L.M.I.

No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528.21
Expiration Date March 28, 2018
By *Manuel Perez*
Miami Dade Product Control

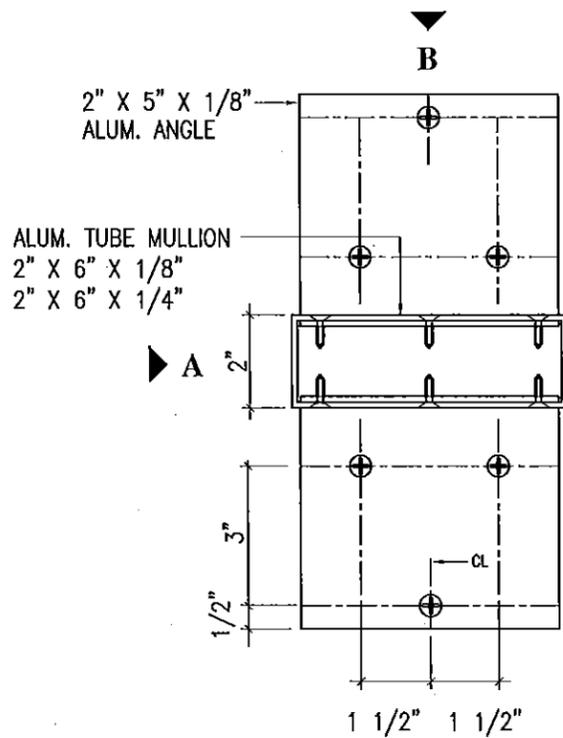
Francisco Hernandez
5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 13 OF 21

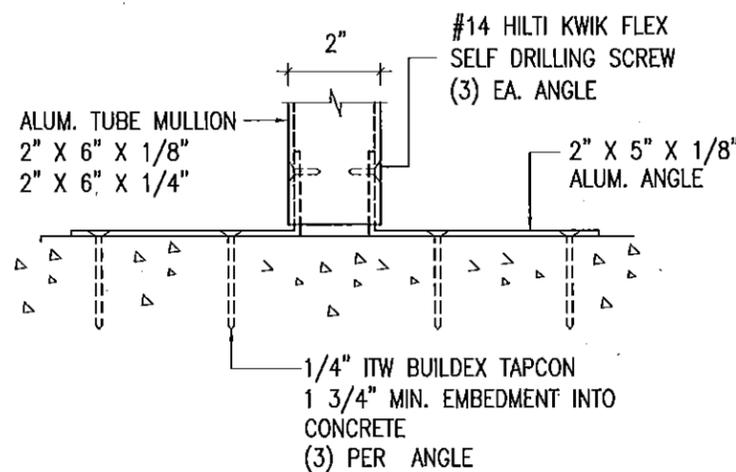
ANCHOR CONFIGURATION TYPE B3

FOR 2" X 6" MULLIONS
WITH 2" X 5" X 1/8" ALUM. ANGLES

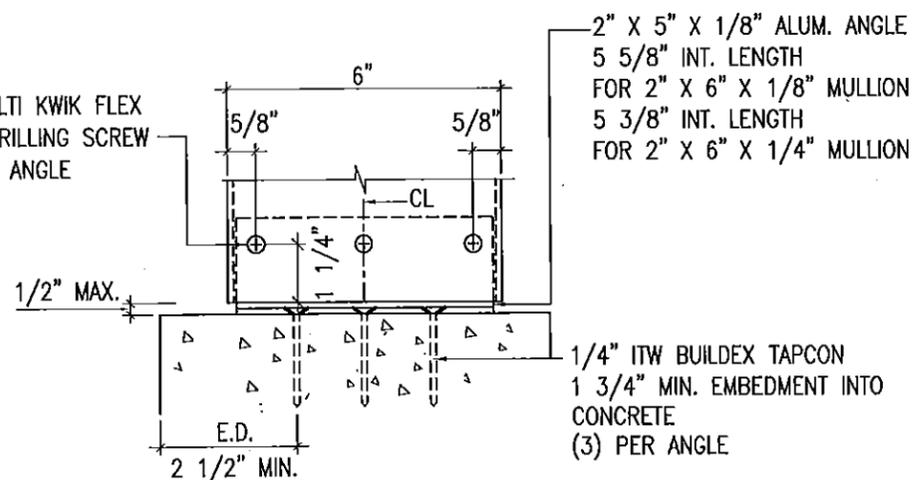
NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS IN CONCRETE
SUBSTRATE: 3.000 PSI CONCRETE



TOP VIEW



SIDE VIEW A



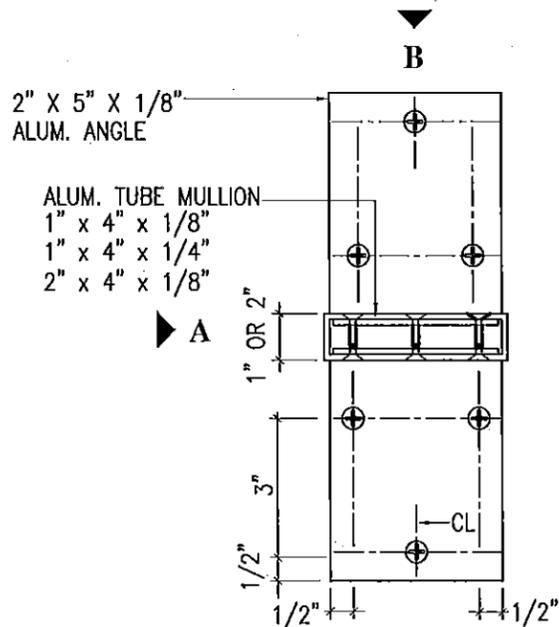
SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE B3 AS SHOWN IS VALID FOR MULLIONS 2" X 6" X 1/8" AND 2" X 6" X 1/4".
FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

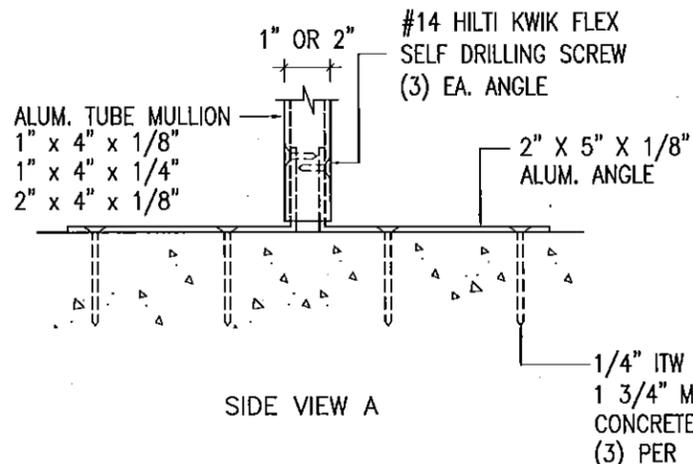
ANCHOR CONFIGURATION TYPE B3

FOR 1" X 4" OR 2" X 4" MULLIONS
WITH 2" X 5" X 1/8" ALUM. ANGLES

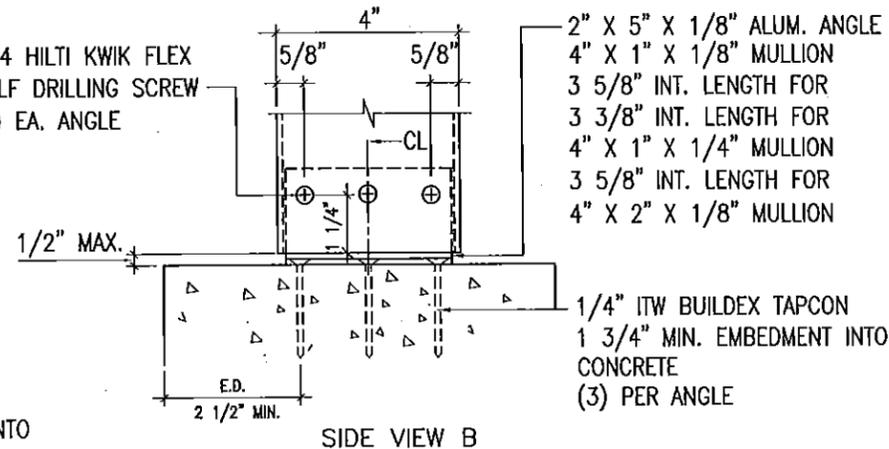
NUMBER OF ANCHORS PER ANGLE = (3) ULTRACON ANCHORS IN CONCRETE
SUBSTRATE: 3.000 PSI CONCRETE



TOP VIEW



SIDE VIEW A

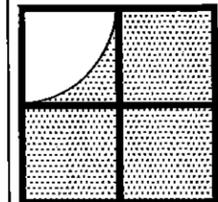


SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE B3 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

PRODUCT REVISED
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Miami Dade Product Control

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5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393



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ALUMINUM TUBE MULLION L.M.I.

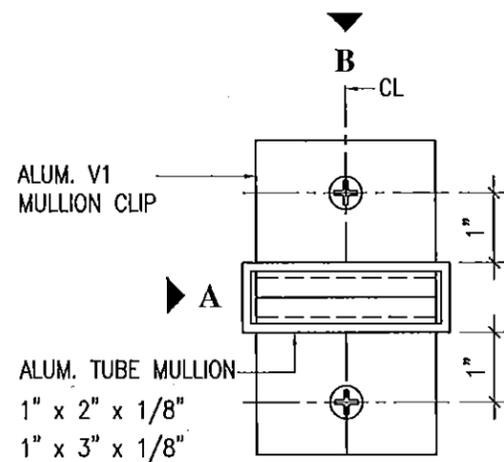
No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 14 OF 21

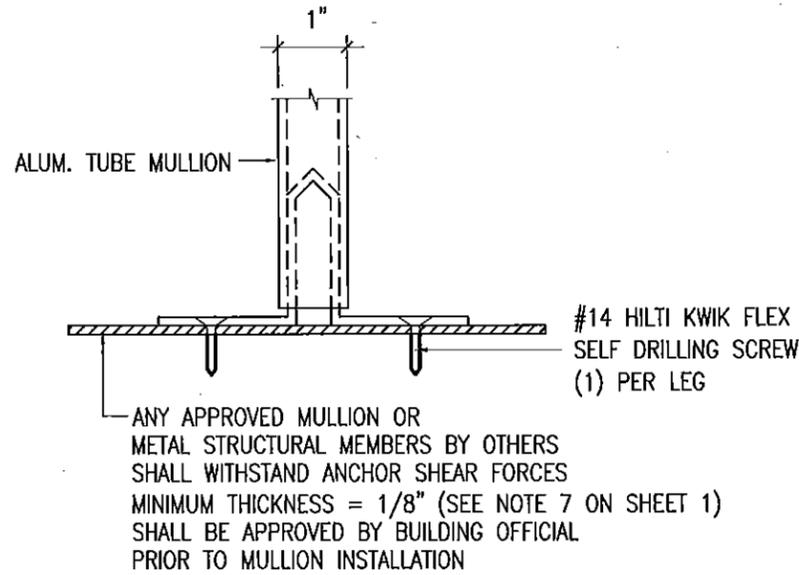
ANCHOR CONFIGURATION TYPE C1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH V1 MULLION CLIP

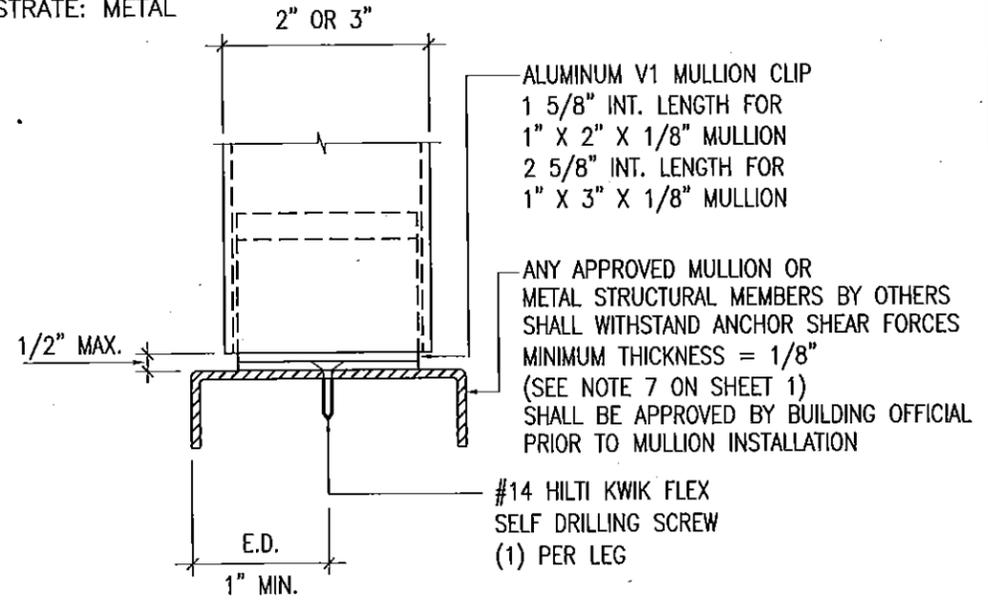
NUMBER OF ANCHORS PER LEG = (1) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL
SUBSTRATE: METAL



TOP VIEW



SIDE VIEW A



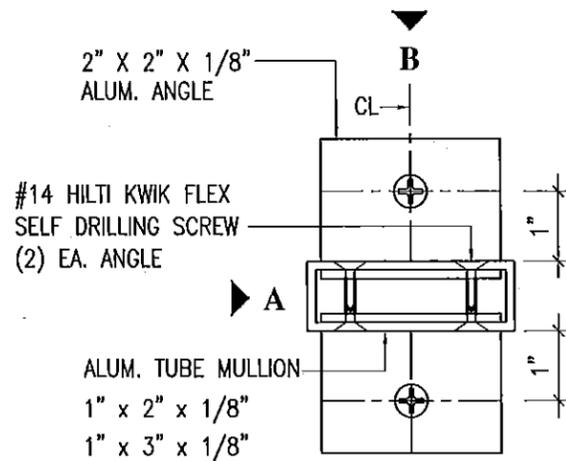
SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

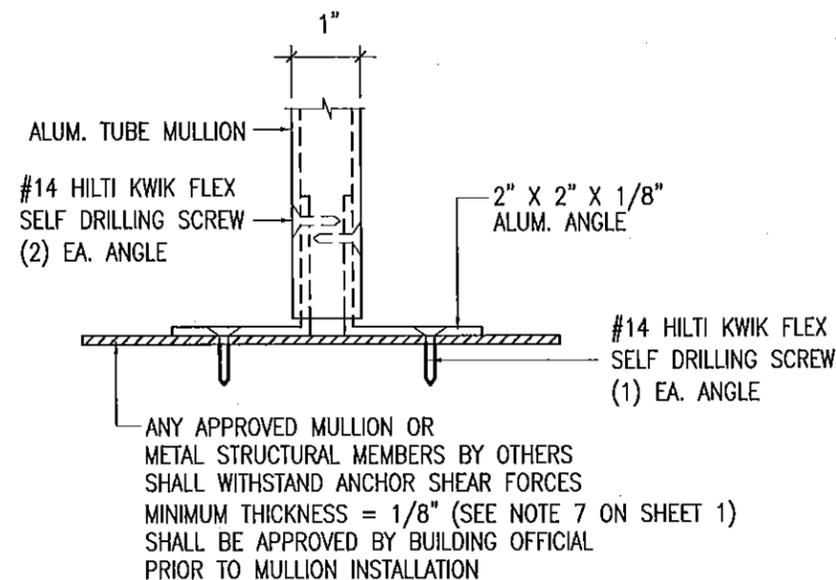
ANCHOR CONFIGURATION TYPE C1

FOR 1" X 2" OR 1" X 3" MULLIONS
WITH 2" X 2" X 1/8" ALUM. ANGLES

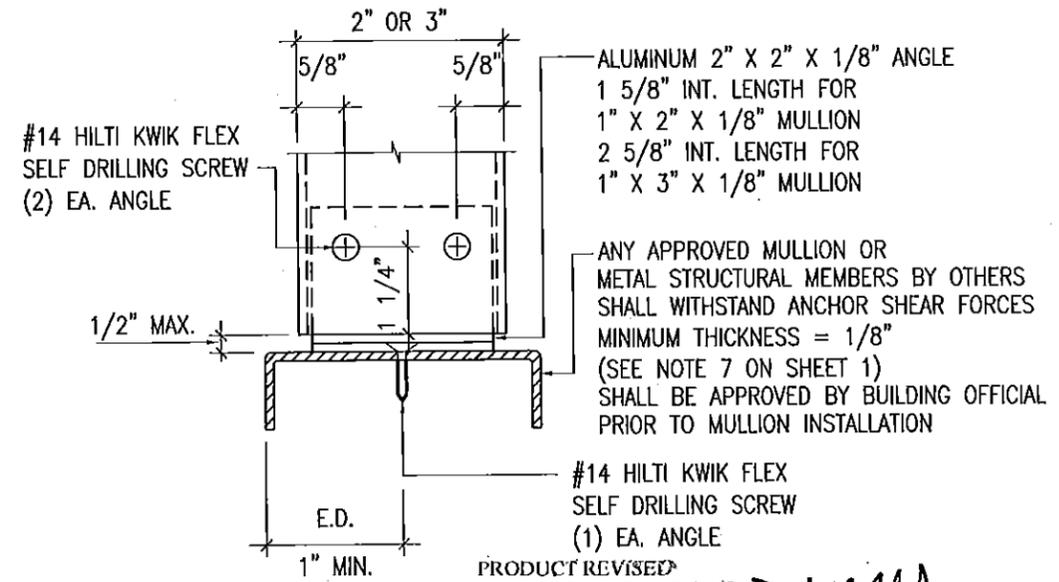
NUMBER OF ANCHORS PER ANGLE = (1) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL
SUBSTRATE: METAL



TOP VIEW

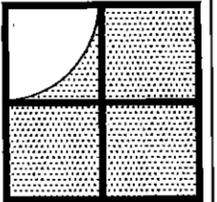


SIDE VIEW A



SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C1 AS SHOWN IS VALID FOR
MULLIONS 1" X 2" X 1/8" AND 1" X 3" X 1/8".
FOR ANCHOR DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.



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ALUMINUM TUBE MULLION L.M.I.

NO	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS

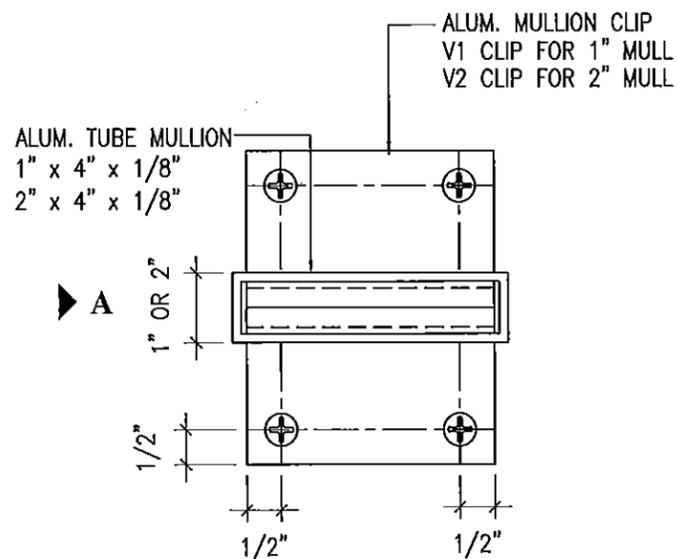
SHEET 15 OF 21

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 15-0528.21
Expiration Date March 15, 2018
By Manuel Perez 5-18-15
Miami/Dade Product Control
FRANCISCO HERNANDEZ
FLORIDA PE # 51393

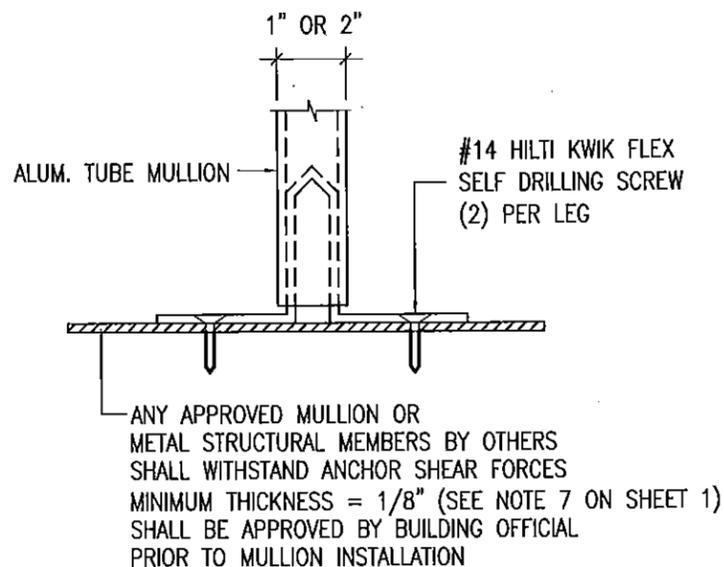
ANCHOR CONFIGURATION TYPE C2

FOR 1" X 4" OR 2" X 4" MULLIONS WITH V1 AND V2 CLIPS

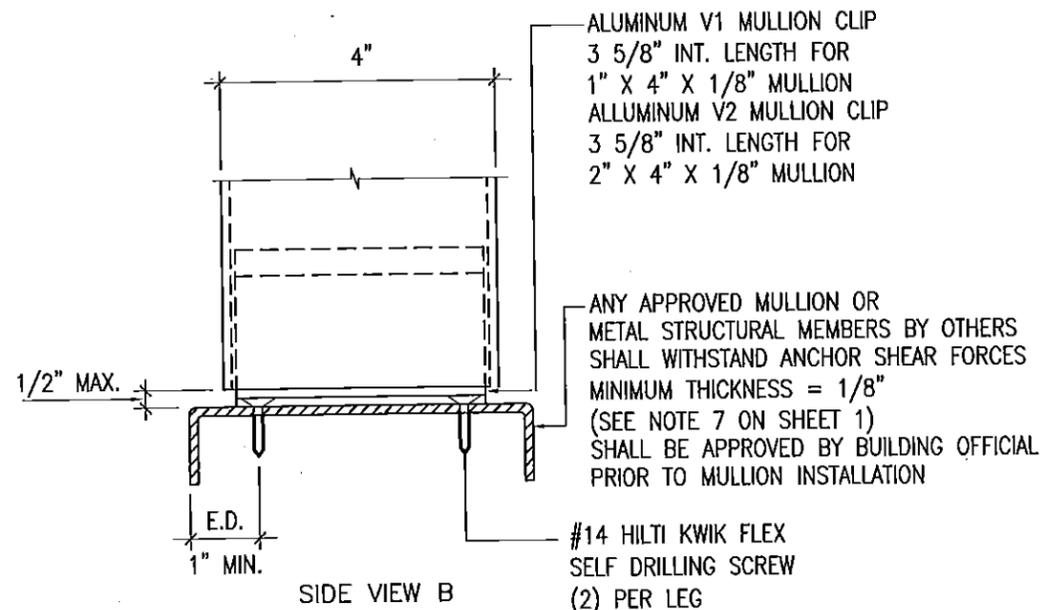
NUMBER OF ANCHORS PER LEG = (2) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL SUBSTRATE: METAL



TOP VIEW



SIDE VIEW A



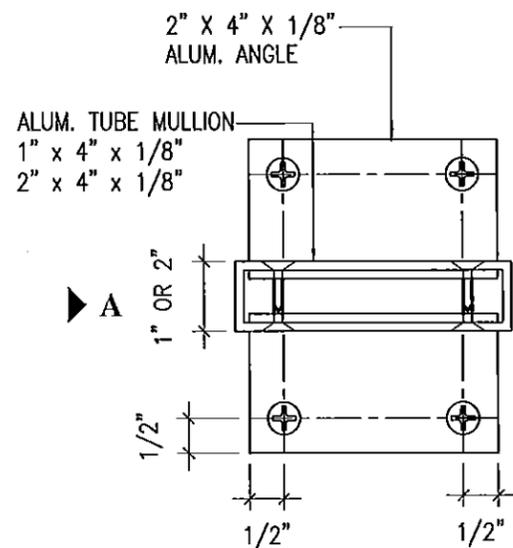
SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C2 AS SHOWN IS VALID FOR 1" X 4" X 1/8" AND 2" X 4" X 1/8" MULLIONS. FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

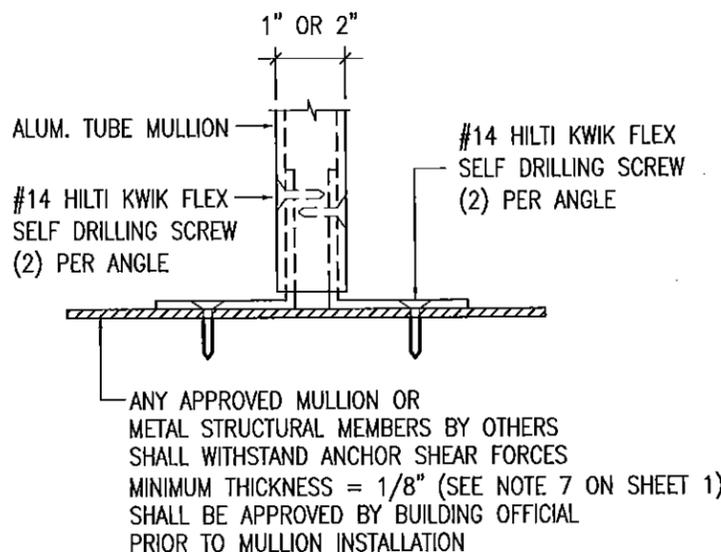
ANCHOR CONFIGURATION TYPE C2

FOR 1" X 4" OR 2" X 4" MULLIONS WITH 2" X 2" X 1/8" ALUM. ANGLES

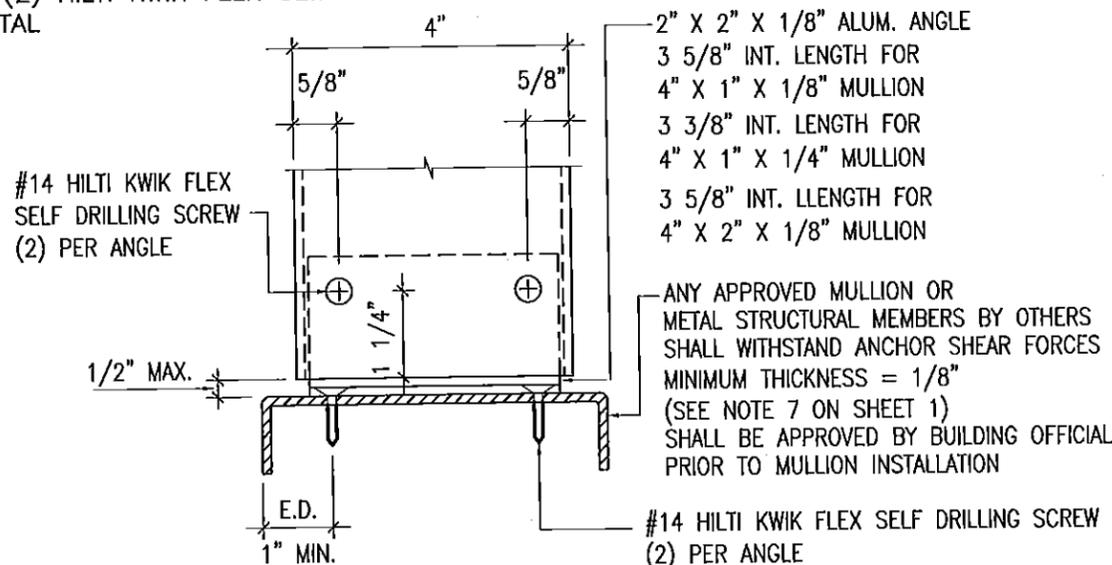
NUMBER OF ANCHORS PER ANGLE = (2) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL SUBSTRATE: METAL



TOP VIEW



SIDE VIEW A



SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C2 AS SHOWN ON THIS SHEET IS VALID FOR 1" X 4" X 1/8", 1" X 4" X 1/4" AND 2" X 4" X 1/8" MULLIONS. FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

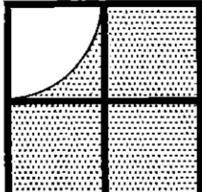
PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 15-0528-21 Expiration Date March 28, 2018
 By: *Francisco Hernandez*
 Miami Dade Product Control FRANCISCO HERNANDEZ FLORIDA PE # 51393

Sunshine Windows Manufacturing, Inc.
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ALUMINUM TUBE MULLION L.M.I.

REVISION	DATE	DESCRIPTION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. M2011
 DATE: 02-11-13
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 SHEET 16 OF 21



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ALUMINUM TUBE MULLION L.M.I.

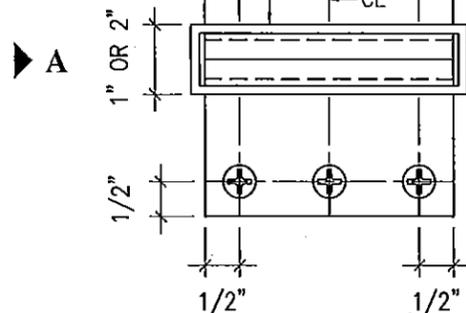
ANCHOR CONFIGURATION TYPE C3

FOR 1" X 4", 2" X 4" OR 2" X 6" MULLIONS WITH V1 AND V2 CLIPS

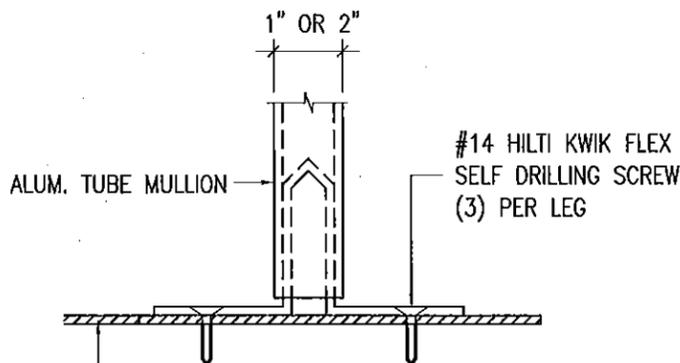
NUMBER OF ANCHORS PER LEG = (3) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL SUBSTRATE: METAL

ALUM. TUBE MULLION
 1" x 4" x 1/8"
 2" x 4" x 1/8"
 2" x 6" x 1/8"

ALUM. MULLION CLIP
 V1 CLIP FOR 1" MULL
 V2 CLIP FOR 2" MULL

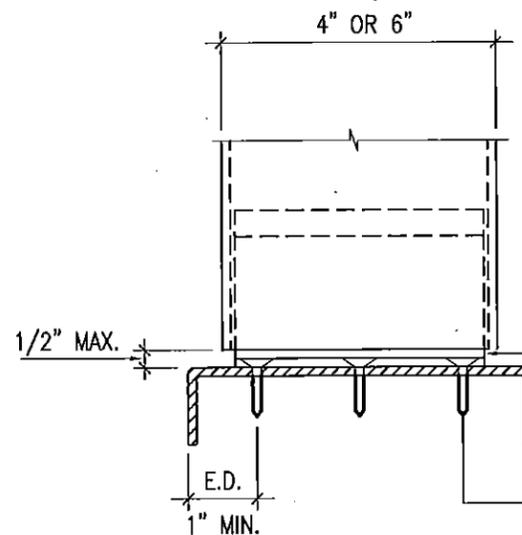


TOP VIEW



ANY APPROVED MULLION OR METAL STRUCTURAL MEMBERS BY OTHERS SHALL WITHSTAND ANCHOR SHEAR FORCES MINIMUM THICKNESS = 1/8" (SEE NOTE 7 ON SHEET 1) SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

SIDE VIEW A



ALUMINUM V1 MULLION CLIP
 3 5/8" INT. LENGTH FOR 1" X 4" X 1/8" MULLION
 ALUMINUM V2 MULLION CLIP
 3 5/8" INT. LENGTH FOR 2" X 4" X 1/8" MULLION

ANY APPROVED MULLION OR METAL STRUCTURAL MEMBERS BY OTHERS SHALL WITHSTAND ANCHOR SHEAR FORCES MINIMUM THICKNESS = 1/8" (SEE NOTE 7 ON SHEET 1) SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

#14 HILTI KWIK FLEX SELF DRILLING SCREW (3) PER LEG

SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C3 AS SHOWN IS VALID FOR 1" X 4" X 1/8", 2" X 4" X 1/8" AND 2" X 6" X 1/8" FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

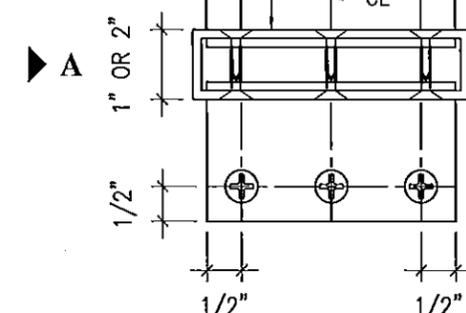
ANCHOR CONFIGURATION TYPE C3

FOR 1" X 4", 2" X 4" OR 2" X 6" MULLIONS WITH 2" X 2" X 1/8" ALUM. ANGLES

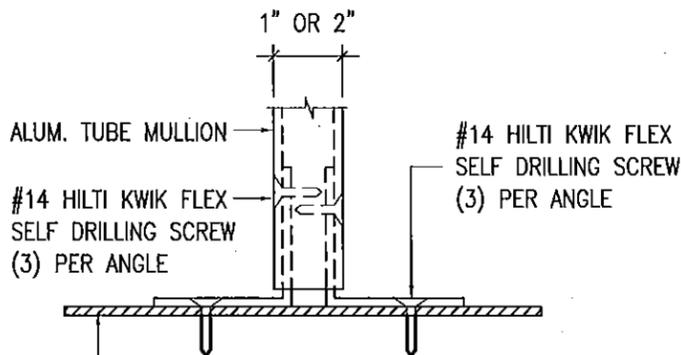
NUMBER OF ANCHORS PER ANGLE = (3) HILTI KWIK FLEX SELF DRILLING SCREW IN METAL SUBSTRATE: METAL

ALUM. TUBE MULLION
 1" x 4" x 1/8"
 1" x 4" x 1/4"
 2" x 4" x 1/8"
 2" x 6" x 1/8"
 2" x 6" x 1/4"

2" X 4" X 1/8" ALUM. ANGLE

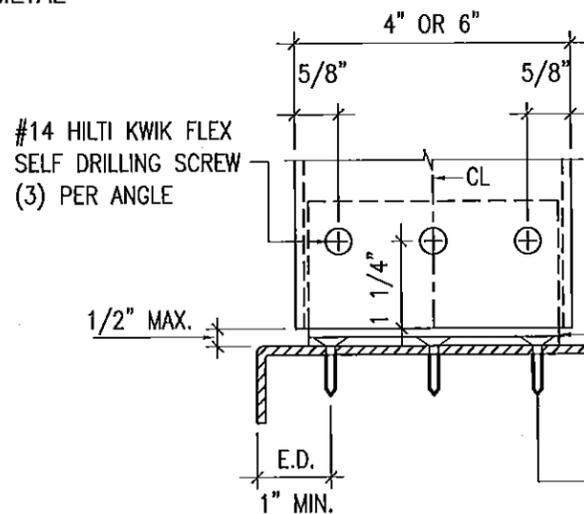


TOP VIEW



ANY APPROVED MULLION OR METAL STRUCTURAL MEMBERS BY OTHERS SHALL WITHSTAND ANCHOR SHEAR FORCES MINIMUM THICKNESS = 1/8" (SEE NOTE 7 ON SHEET 1) SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

SIDE VIEW A



2" X 2" X 1/8" ALUM. ANGLE
 3 5/8" INT. LENGTH FOR 1" X 4" X 1/8" MULLION
 3 3/8" INT. LENGTH FOR 1" X 4" X 1/4" MULLION
 3 5/8" INT. LENGTH FOR 2" X 4" X 1/8" MULLION
 5 5/8" INT. LENGTH FOR 2" X 6" X 1/4" MULLION

ANY APPROVED MULLION OR METAL STRUCTURAL MEMBERS BY OTHERS SHALL WITHSTAND ANCHOR SHEAR FORCES MINIMUM THICKNESS = 1/8" (SEE NOTE 7 ON SHEET 1) SHALL BE APPROVED BY BUILDING OFFICIAL PRIOR TO MULLION INSTALLATION

#14 HILTI KWIK FLEX SELF DRILLING SCREW (3) PER ANGLE

SIDE VIEW B

NOTE: ANCHOR CONFIGURATION TYPE C3 AS SHOWN IS VALID FOR MULLIONS 1" X 4" X 1/8", 1" X 4" X 1/4", 2" X 4" X 1/8", 2" X 6" X 1/8" AND 2" X 6" X 1/4". FOR ANCHOR DESIGN LOADS SEE TABLES # 2 AND # 3 ON SHEETS 4 AND 5 OF 21.

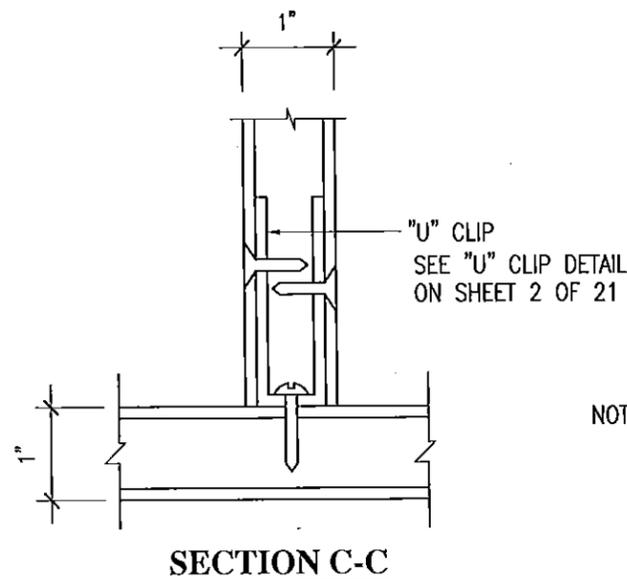
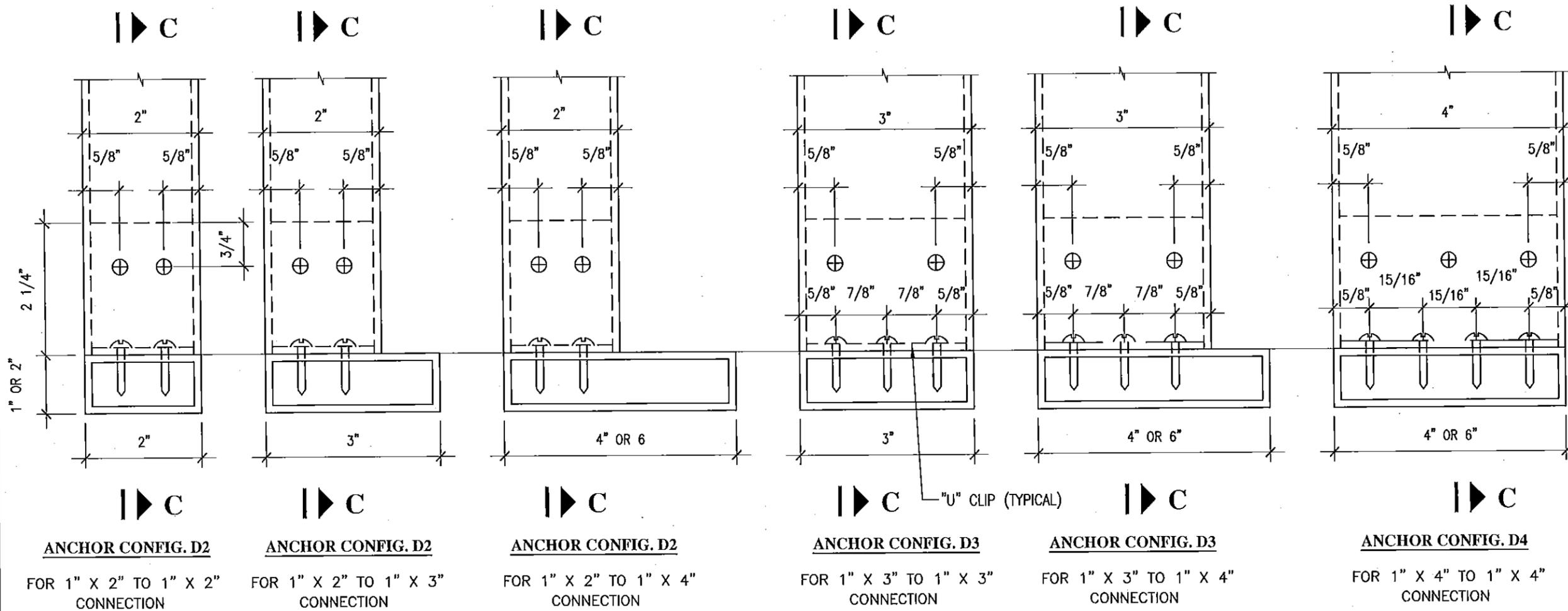
PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 15-0928-21
 Expiration Date March 28, 2018 5-18-15

By *Francisco Hernandez* FRANCISCO HERNANDEZ
 Miami Dade Product Control FLORIDA PE # 51393

No	DATE	REVISION
1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. M2011
 DATE: 02-11-13
 SCALE: NTS
 SHEET 17 OF 21

**ANCHOR CONFIGURATIONS D2, D3 AND D4
MULLION TO MULLION CONNECTION**
FOR 1" X 2", 1" X 3" AND 1" X 4" MULLIONS
WITH U CLIPS SUBSTRATE: METAL



NOTE: ALL SCREWS USED FOR MULLION TO MULLION CONNECTIONS SHOWN ON THIS SHEET SHALL BE #14 HILTI KWIK FLEX SELF DRILLING SCREW FOR ANCHORS DESIGN LOADS SEE TABLE # 2 ON SHEET 4 OF 21.

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. **15-0528-21**
 Expiration Date **March 28, 2018**
 By *Manuel Ruiz*
 Miami Dade Product Control

FRANCISCO HERNANDEZ
 FLORIDA PE # 51393

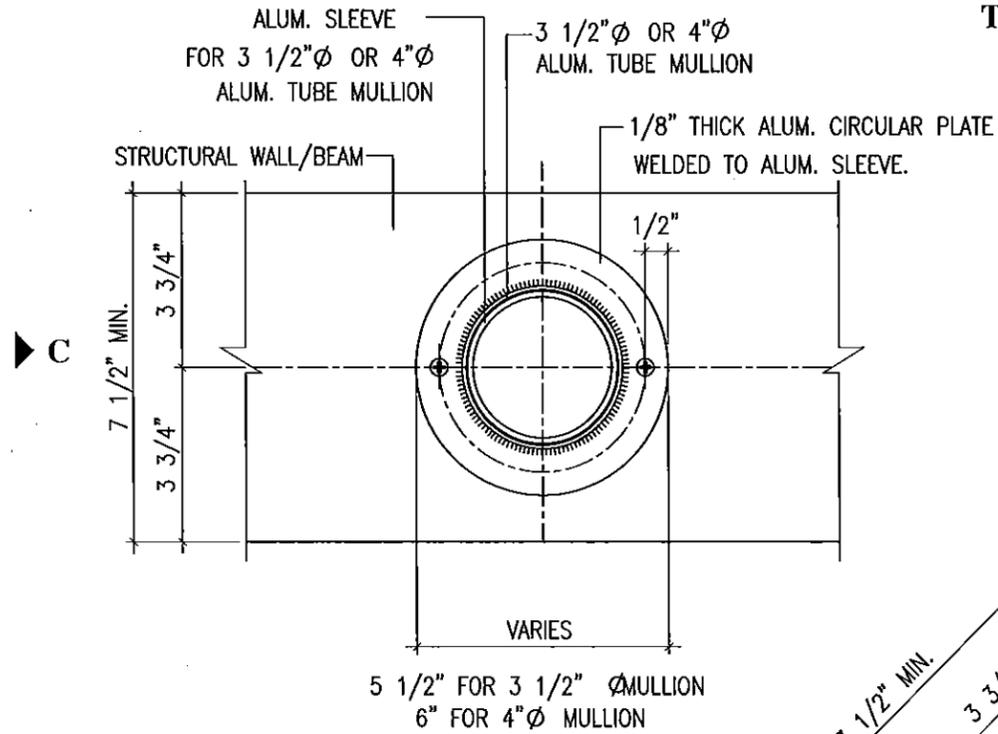
Sunshine Windows Manufacturing, Inc.
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ALUMINUM TUBE MULLION L.M.I.

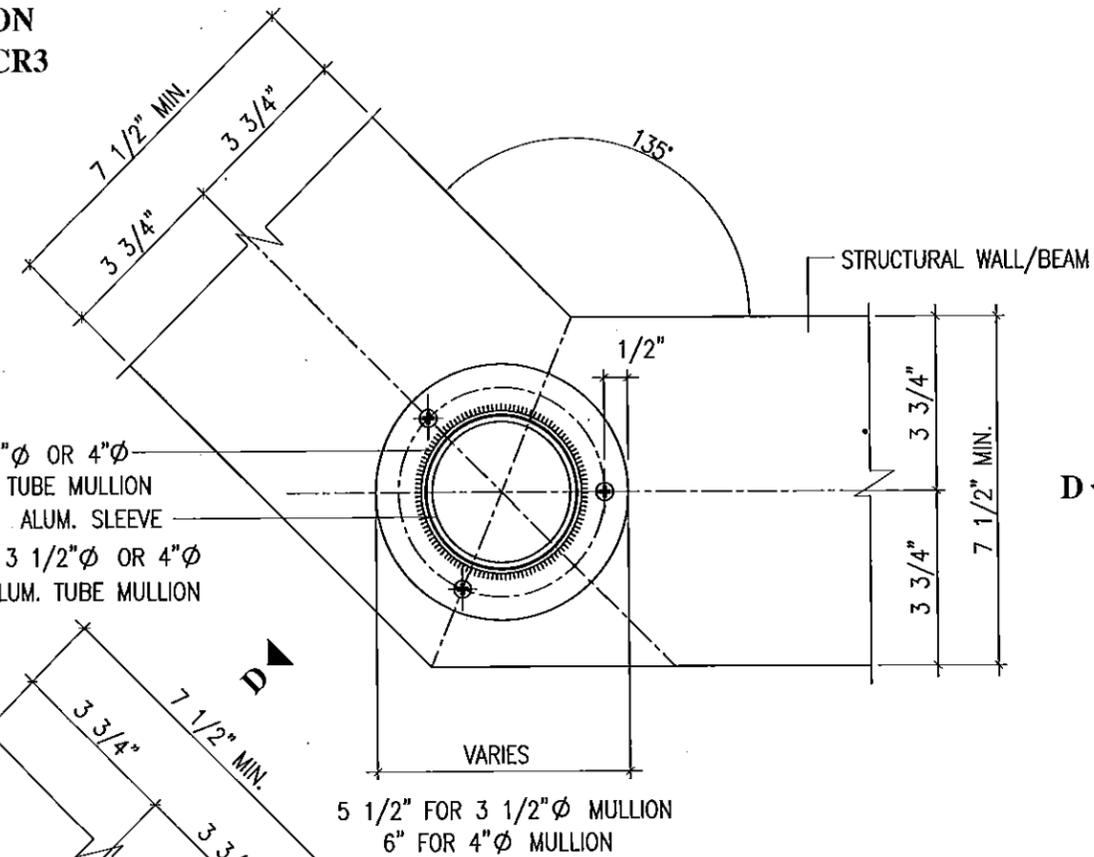
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1	05-09-15	REVISION IN COMPLIANCE WITH FBC 5TH EDITION (2014)

DRAWING No. **M2011**
 DATE: **02-11-13**
 SCALE: **NTS**
 SHEET 18 OF 21

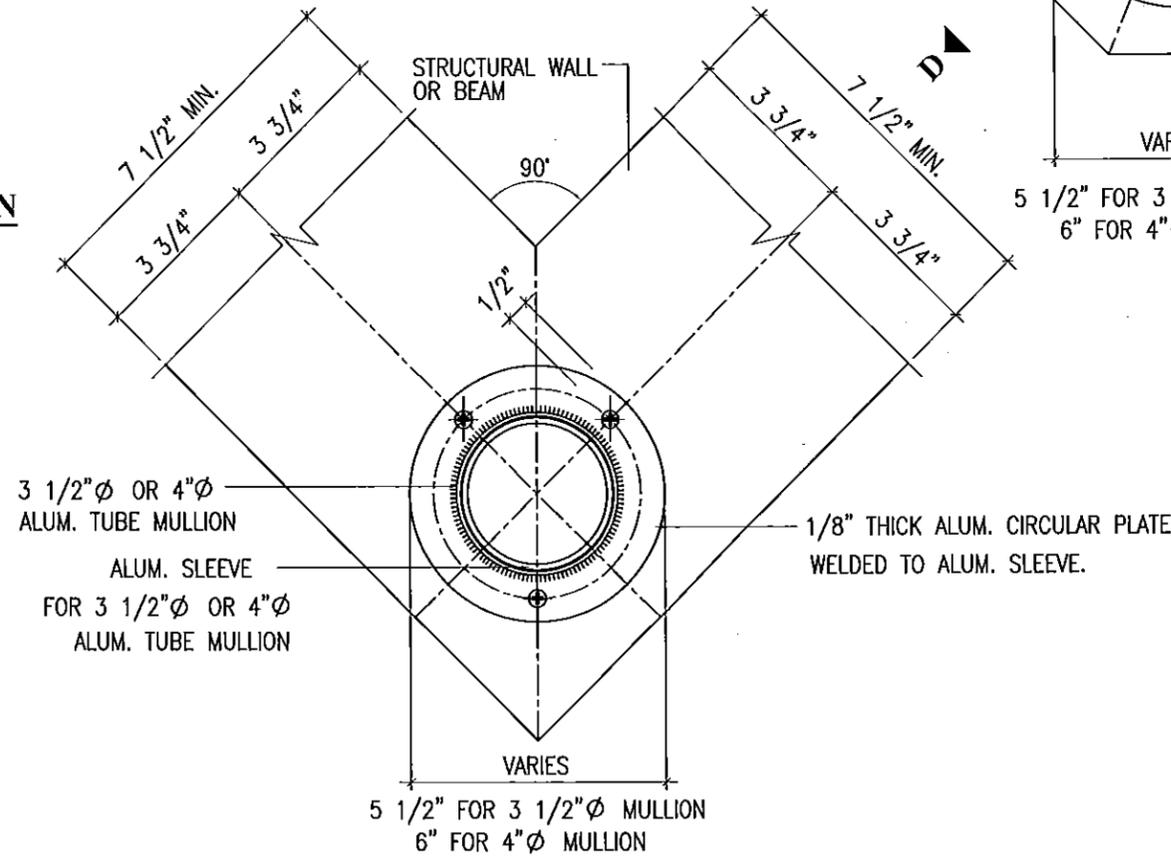
**TOP VIEWS FOR
ANCHOR CONFIGURATION
TYPE BR2, BR3, CR2 AND CR3
ROUND MULLIONS
3 1/2"Ø AND 4"Ø**



**ANCHOR CONFIGURATION
BR2 AND CR2
FOR 180° ANGLE**



**ANCHOR CONFIGURATION
BR3 AND CR3
FOR 135° ANGLE**



**ANCHOR CONFIGURATION
BR3 AND CR3
FOR 90° ANGLE**

NOTE: FOR MULLION AND ANCHOR DESIGN LOADS SEE TABLE # 4 ON SHEET 6 OF 21.

PRODUCT REVISED
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Expiration Date March 28, 2018
By *Manuel Perez*
Miami Dade Product Control

[Signature]
5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393

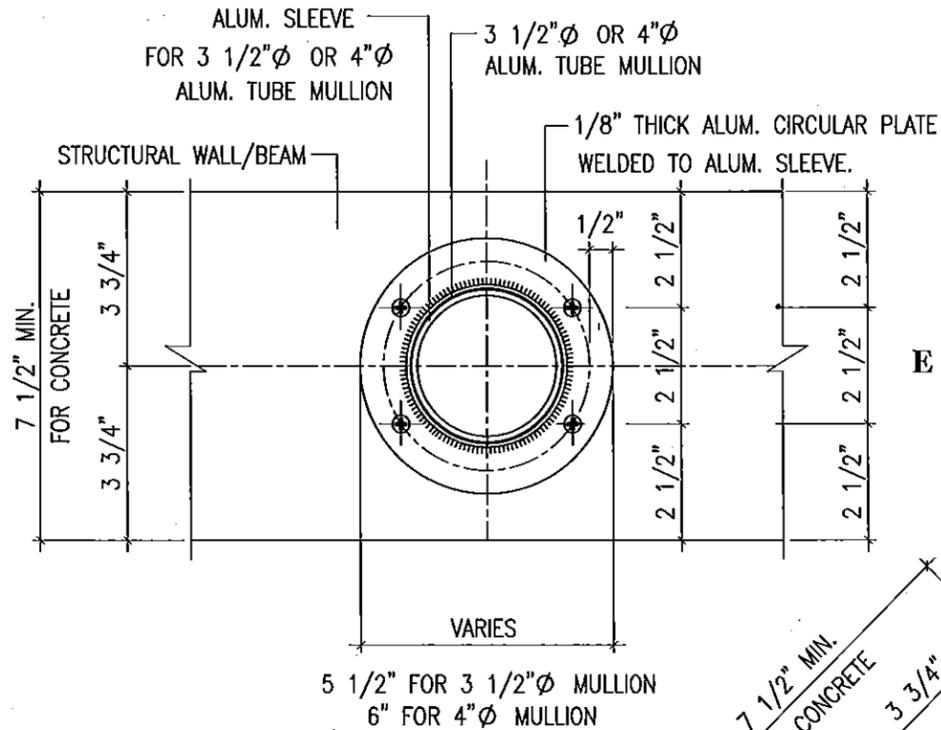
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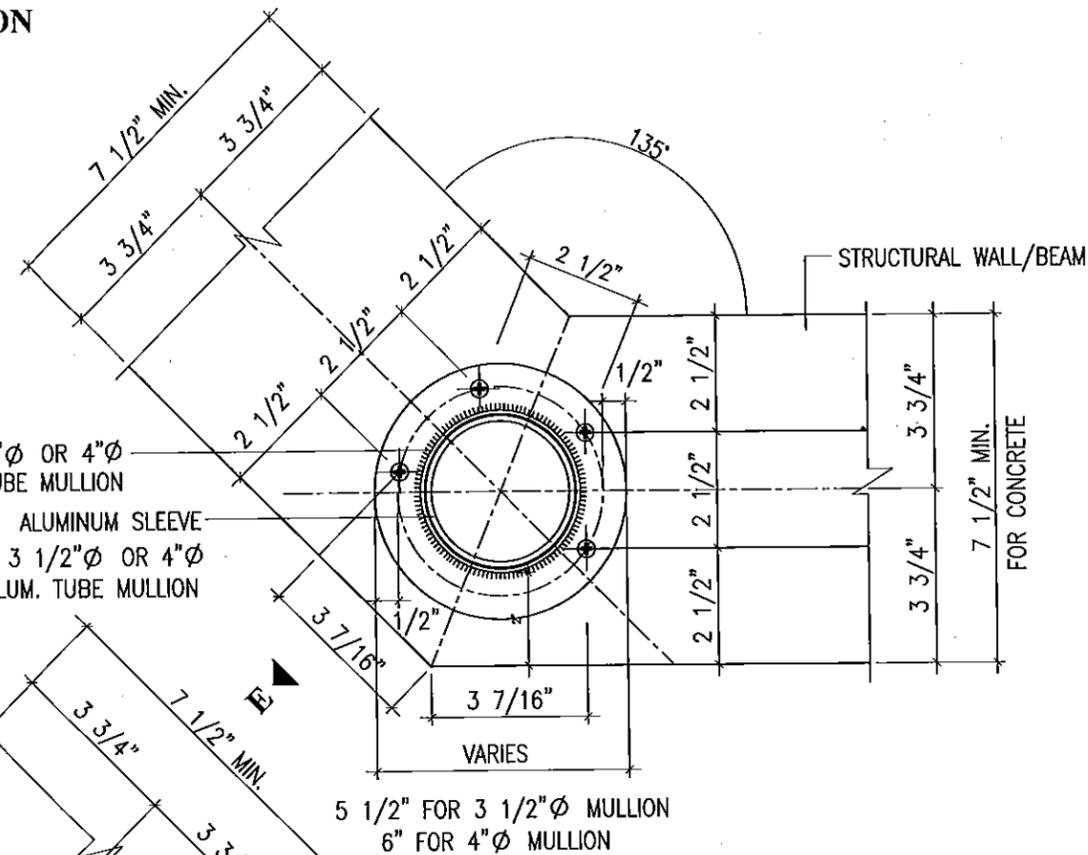
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DRAWING No.
M2011
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SCALE: NTS
SHEET 19 OF 21

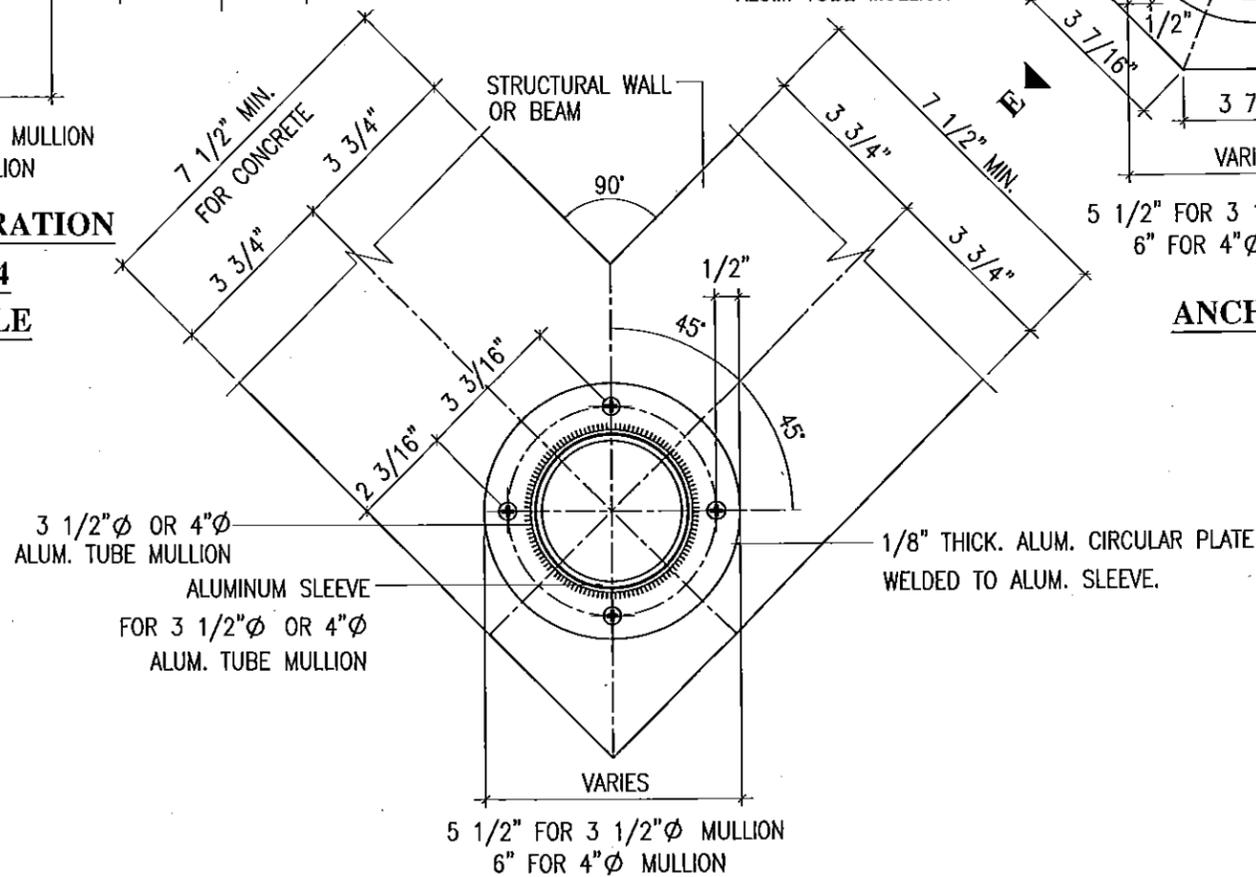
**TOP VIEWS FOR
ANCHOR CONFIGURATION
TYPE BR4 AND CR4
ROUND MULLIONS
3 1/2"Ø AND 4"Ø**



**ANCHOR CONFIGURATION
BR4 AND CR4
FOR 180° ANGLE**



**ANCHOR CONFIGURATION
BR4 AND CR4
FOR 135° ANGLE**



**ANCHOR CONFIGURATION
BR4 AND CR4
FOR 90° ANGLE**

NOTE: FOR MULLION AND ANCHOR DESIGN LOADS SEE TABLE # 4 ON SHEET 6 OF 21.

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By *Manuel Hernandez*
Miami Dade Product Control

Manuel Hernandez
5-18-15
FRANCISCO HERNANDEZ
FLORIDA PE # 51393

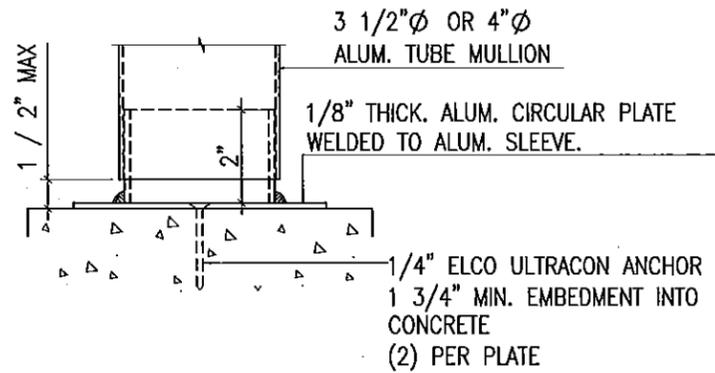
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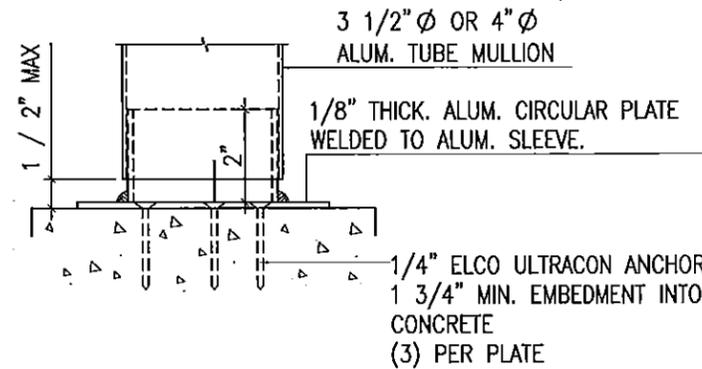
DRAWING No.
M2011
DATE: 02-11-13
SCALE: NTS
SHEET 20 OF 21

**SIDE VIEWS FOR
ANCHOR CONFIGURATION TYPE BR2, BR3 AND BR4
ROUND MULLIONS
3 1/2"Ø AND 4"Ø
SUBSTRATE: CONCRETE**



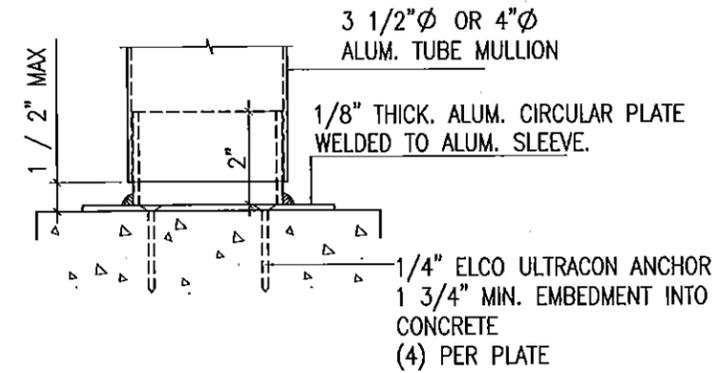
SIDE VIEW C
ANCHOR CONFIG. BR2

NUMBER OF ANCHORS PER LEG = 2



SIDE VIEW D
ANCHOR CONFIG. BR3

NUMBER OF ANCHORS PER LEG = 3

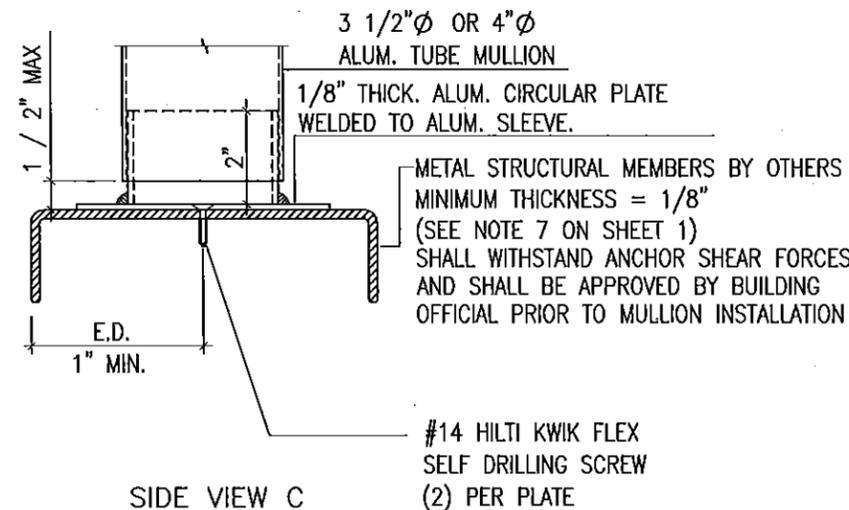


SIDE VIEW E
ANCHOR CONFIG. BR4

NUMBER OF ANCHORS PER LEG = 4

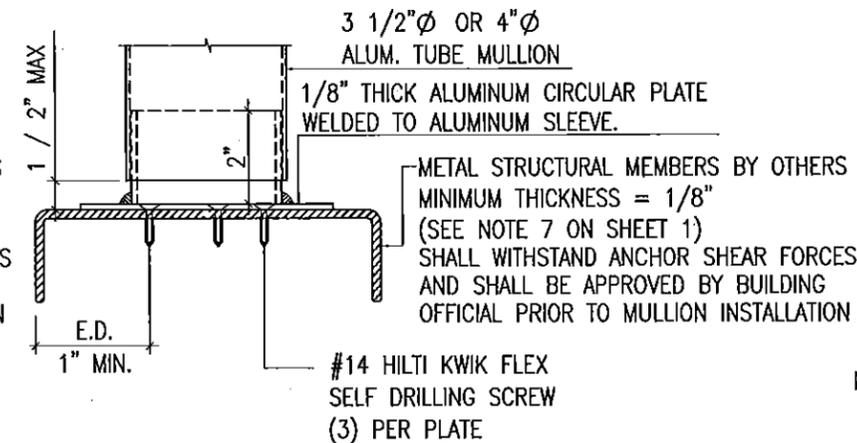
NOTE: FOR MULLION AND ANCHOR DESIGN LOADS SEE TABLE # 4 ON SHEET 6 OF 21.

**SIDE VIEWS FOR
ANCHOR CONFIGURATION TYPE CR2, CR3 AND CR4
ROUND MULLIONS
3 1/2"Ø AND 4"Ø
SUBSTRATE: METAL**



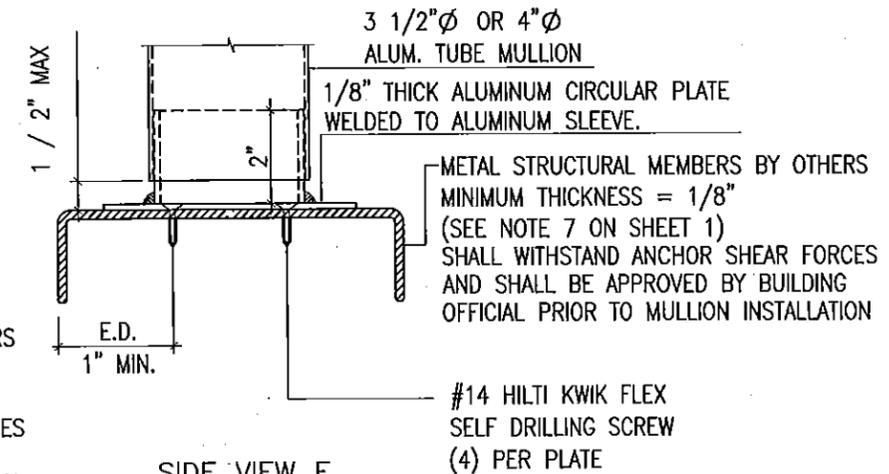
SIDE VIEW C
ANCHOR CONFIG. CR2

NUMBER OF ANCHORS PER LEG = 2



SIDE VIEW D
ANCHOR CONFIG. CR3

NUMBER OF ANCHORS PER LEG = 3



SIDE VIEW E
ANCHOR CONFIG. CR4

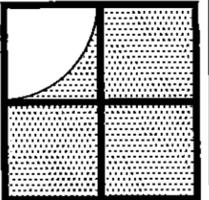
NUMBER OF ANCHORS PER LEG = 4

NOTE: FOR MULLION AND ANCHOR DESIGN LOADS SEE TABLE # 4 ON SHEET 6 OF 21.

PRODUCT REVISED
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Building Code
Acceptance No. 15-0528.21
Expiration Date March 28, 2018
By *Francisco Hernandez*
Miami Dade Product Control

Francisco Hernandez
5-18-15

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