

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

PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474

T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

**MIAMI-DADE COUNTY** 

## **NOTICE OF ACCEPTANCE (NOA)**

Labrador & Fundora Corp. dba V & V Windows 14150 NW 56<sup>th</sup> Court, Suite 600 Opa-Locka, FL 33054

### 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. **22-13D**, titled "Extruded Aluminum Clipped Mullions", sheets 1 through 10 of 10, dated 04/22/22, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval 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 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.** 

MIAMI-DADE COUNTY
APPROVED

8/22/23

No. 23-0731.04 Expiration Date: August 31, 2028 Approval Date: August 31, 2023

Page 1

## Labrador & Fundora Corp. dba V & V Windows

### NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

### A. DRAWINGS

- 1. Manufacturer's die drawings and sections. (Submitted under NOA No. 23-0731.04)
- 2. Drawing No. 22-13D, titled "Extruded Aluminum Clipped Mullions", sheets 1 through 10 of 10, dated 04/22/22, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, 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 windows mulled together, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-23-8036**, dated 06/28/23, signed and sealed by Ram N. Tewari, P.E.

#### •

### C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC 7<sup>th</sup> Edition (2020) and FBC 8<sup>th</sup> Edition (2023), dated 07/25/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, 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 7<sup>th</sup> Edition (2020), with FBC 8<sup>th</sup> Edition (2023), and of no financial interest, dated July 21, 2023, issued by Al-Faroog Corporation, signed and sealed by Jalal Faroog, P.E.

### G. OTHERS

1. None.

Manuel Perez, P.E. Product Control Examiner NOA No. 23-0731.04

Expiration Date: August 31, 2028 Approval Date: August 31, 2023

## **INSTRUCTIONS:**

USE CHARTS AS FOLLOWS.

STEP 1 DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.

USE MIAMI-DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS.

STEP 3 USE GLAZING PRODUCT CONNECTION TO MULLION AS AS PER PRODUCT APPROVAL.

USING CHARTS ON SHEET 3 SELECT MULLION SIZE STEP 4 WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.

USING ANCHOR TYPES AND ANCHOR CAPACITY CHARTS ON SHEETS 4 THRU 10, SELECT ANCHOR TYPE WITH DESIGN RATING MORE THAN THE DESIGN LOADS SPECIFIED IN STEP 1 ABOVE.

## EXTRUDED ALUMINUM CLIPPED MULLIONS USING MULLION PROPERTIES ONLY

MULLION SYSTEM IS RATED FOR LARGE MISSILE IMPACT. SEE SEPARATE NOA'S FOR WINDOWS/DOORS IMPACT AND LOAD RATINGS. LOWER VALUES FROM MULLION APPROVAL OR WINDOW/DOOR APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH 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.

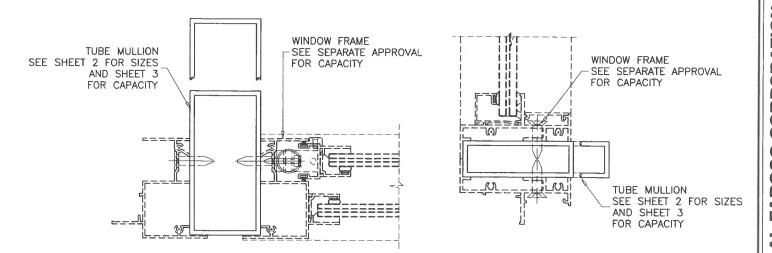
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2020/2023 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

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

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

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



# MULLIONS CONTAINING TYPICAL GLAZING PRODUCTS HORIZONTAL OR VERTICAL

SEE WINDOW OR DOOR NOA'S FOR FASTENERS SIZES AND SPACING

PRODUCT APPROVED As complying with the Florida **Building Code** 23-0731.04 NOA-No.

Approval Date: 08/31/2023

Miami-Dade Product Control

JUL 2 6 2023

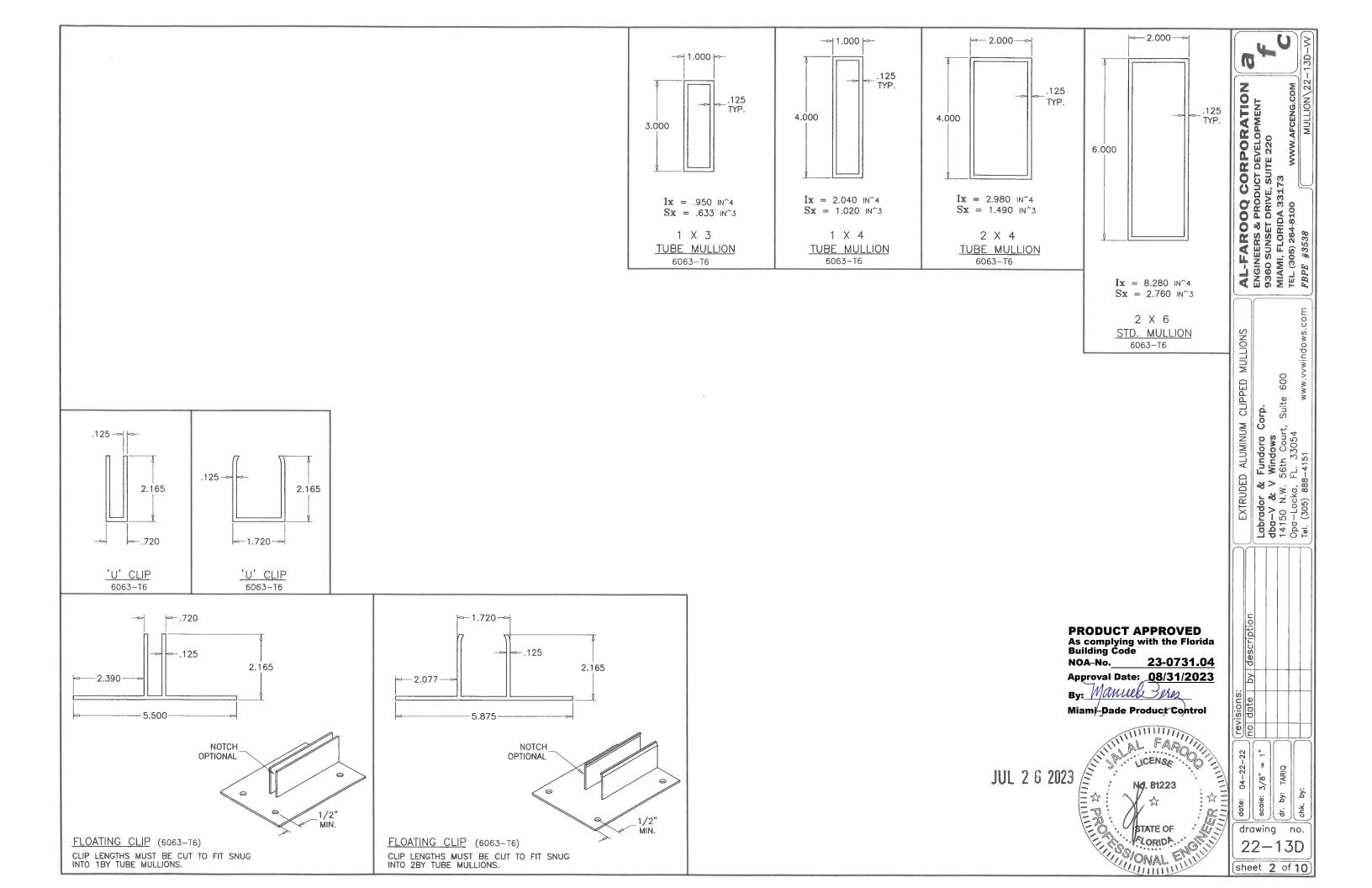


MULLIONS EXTRUDED ALUMINUM CLIPPED Suite 04-22-

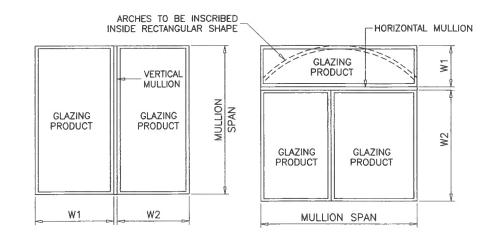
drawing

22 - 13D

sheet 1 of 10



DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)						DESIGN LOAD CAPACITY - PSF (TUBE MULLIONS)					
	♥ DIMS. MULL SPAN	1 X 3 TUBE	1 X 4 TUBE	2 X 4 TUBE	2 X 6 STD.		W DIMS.	1 X 3 TUBE	1 X 4 TUBE	2 X 4 TUBE	2 X 6 STD.
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		52.0	110.6	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	26-1/2"		37.5	79.8	117.7	120.0
30"		120.0	120.0	120.0	120.0	30"		33.2	70.5	104.0	120.0
37"		120.0	120.0	120.0	120.0	37"		26.9	57.2	84.3	120.0
42"	70 7/0"	120.0	120.0	120.0	120.0	42"	0.47	23.7	50.4	74.3	120.0
48"	38-3/8"	120.0	120.0	120.0	120.0	48"	84"	20.7	44.1	65.0	120.0
54"		120.0	120.0	120.0	120.0	54"		-	39.2	57.8	113.5
60"		112.5	120.0	120.0	120.0	60"		-	35.3	52.0	102.2
66"		102.2	120.0	120.0	120.0	66"		-	32.1	47.3	92.9
72"		93.7	120.0	120.0	120.0	72"			29.4	43.3	85.2
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		34.8	74.8	109.3	120.0
26-1/2"		120.0	120.0	120.0	120.0	26-1/2"		25.1	54.0	78.9	120.0
30"		120.0	120.0	120.0	120.0	30"		22.2	47.7	69.7	120.0
37"		103.0	120.0	120.0	120.0	37"		_	38.7	56.5	120.0
42"	50 5 /0"	90.8	120.0	120.0	120.0	42"	0.07	_	34.1	49.8	110.9
48"	50-5/8"	79.4	120.0	120.0	120.0	48"	96"	-	29.8	43.5	97.0
54"		70.6	112.5	120.0	120.0	54"		-	26.5	38.7	86.2
60"		63.5	101.3	120.0	120.0	60"		-	23.8	34.8	77.6
66"		57.8	92.1	120.0	120.0	66"		_	21.7	31.7	70.6
72"		53.0	84.4	120.0	120.0	72"		-	-	29.0	64.7
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		24.5	52.5	76.8	120.0
26-1/2"		89.0	120.0	120.0	120.0	26-1/2"		_	37.9	55.4	120.0
30"		78.6	120.0	120.0	120.0	30"		-	33.5	48.9	120.0
37"		63.7	104.3	120.0	120.0	37"		-	27.2	39.7	98.7
42"	0.78	56.1	91.9	120.0	120.0	42"	108"	-	23.9	35.0	87.0
48"	63"	49.1	80.4	120.0	120.0	48"		-	20.9	30.6	76.1
54"		43.7	71.5	111.5	120.0	54"		-	-	27.2	67.6
60"		39.3	64.3	100.3	120.0	60"		-	-	24.5	60.9
66"		35.7	58.5	91.2	120.0	19-1/8"			38.3	56.0	120.0
72"		32.7	53.6	83.6	120.0	26-1/2"		-	27.6	40.4	110.9
19-1/8"		75.3	120.0	120.0	120.0	30"		-	24.4	35.7	97.9
26-1/2"		54.4	103.4	120.0	120.0	37"	120"	-	-	28.9	79.4
30"		48.0	91.3	120.0	120.0	42"		-	-	25.5	69.9
37"		38.9	74.0	116.3	120.0	48"		-	-	22.3	61.2
42"	74-1/4"	34.3	65.2	102.4	120.0	54"			-	_	54.4
48"	/4-1/4	30.0	57.1	89.6	120.0	57"		_	-	_	51.5
54"		26.7	50.7	79.7	120.0	19-1/8"		_	28.8	42.0	116.8
60"		24.0	45.7	71.7	120.0	26-1/2"		_	20.8	30.3	84.3
66"		21.8	41.5	65.2	119.7	30"		-	-	26.8	74.5
72"		20.0	38.0	59.7	109.7	37"	132"	_	-	21.7	60.4
19-1/8"		70.2	120.0	120.0	120.0	42"		-	_	_	53.2
26-1/2"		50.7	98.5	120.0	120.0	48"		_	-	_	46.5
30"		44.8	87.0	120.0	120.0	52"		_	_	_	43.0
37"		36.3	70.5	110.8	120.0	19-1/8"		-	22.2	32.4	90.0
42"	76"	32.0	62.1	97.6	120.0	26-1/2"		-	-	23.4	64.9
48"	/6	28.0	54.4	85.4	120.0	30"	144"	_	-	20.6	57.4
54"		24.9	48.3	75.9	120.0	37"	1 ***	_	-	-	46.5
60"		22.4	43.5	68.4	120.0	42"		_	-	_	41.0
66"		20.3	39.5	62.1	114.1	48"		_	_	_	35.8
72"		-	36.2	57.0	104.6						



## TYPICAL MULLION ARRANGEMENTS

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

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

PRODUCT APPROVED
As complying with the Florida
Building Code
NOA-No. 23-0731.04

Approval Date: 08/31/2023

By: Manual Peres

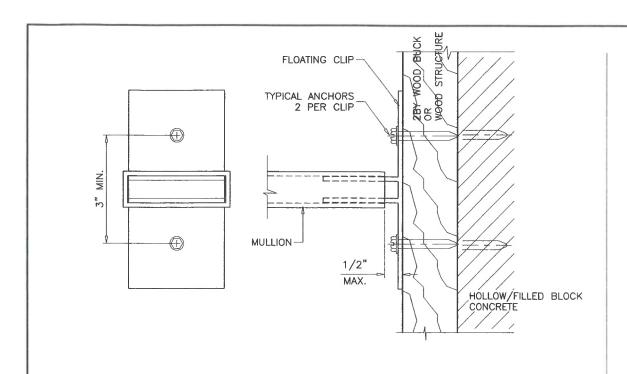
Miami-Dade Product Control

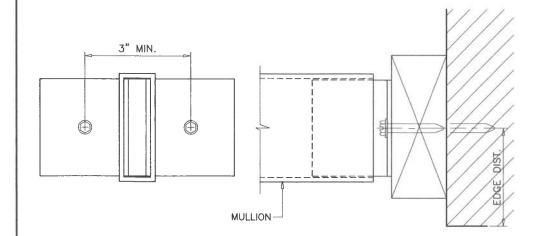
JUL 2 6 2023



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538 EXTRUDED ALUMINUM CLIPPED MULLIONS urt, Suite Labrador & Fundora C dba-V & V Windows 14150 N.W. 56th Court, Opa-Locka, FL. 33054 Tel. (305) 888-4151 revisions: no date by description الق drawing 22-13D

sheet 3 of 10

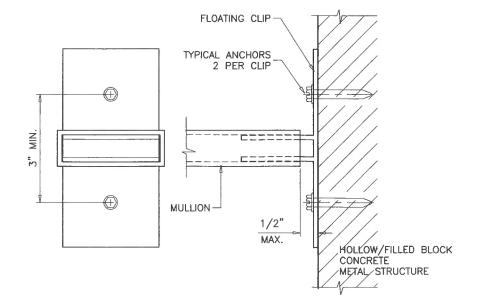


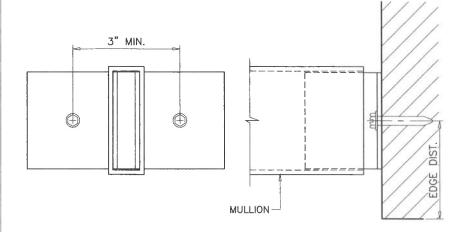


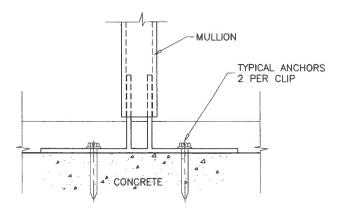
# TYPICAL ANCHORS TYPE 'W2'

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES (W2) THRU 1BY BUCKS INTO CONC. OR MASONRY (W2)

SEE SHEET 5 FOR ANCHOR CAPACITIES







# TYPICAL ANCHORS TYPE 'B2', 'C2', 'M2'

DIRECTLY INTO HOLLOW/FILLED BLOCK (B2)
DIRECTLY INTO CONCRETE (C2)
INTO METAL STRUCTURES (M2)

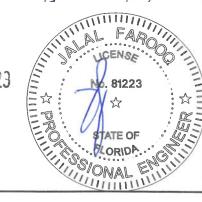
SEE SHEET 5 FOR ANCHOR CAPACITIES

PRODUCT APPROVED
As complying with the Florida
Building Code
NOA-No. 23-0731.04

Approval Date: <u>08/31/2023</u>

By: Manuel Person Miami-Dade Product Control

JUL 2 6 2023



AL-FAROOQ CORPORATION	ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220	3173	TEL. (305) 264-8100 WWW.AFCENG.COM	FBPE #3538 MULLION\22-
EXTRUDED ALUMINUM CLIPPED MULLIONS	Labrador & Fundora Corp.	14150 N.W. 56th Court, Suite 600	Opa-Locka, FL. 33054	Tel. (305) 888-4151 www.vvwindows.com
04–22–22 revisions:	3/8" = 1"	TARIQ		

drawing no. 22-13D sheet 4 of 10

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF					
WINDO	WINDOW DIMS. ANCHORS TYPE				WINDOW DIMS. ANCHORS TYPE					E	
WIDTH (W)	MULL SPAN	W2	B2	C2	M2	WIDTH (W)	MULL SPAN	W2	B2	C2	M2
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		94.7	104.0	109.4	120.0
26-1/2"		120.0   120.0   120.0     26-1/2"	68.3	75.0	78.9	101.2					
30"		120.0	120.0	120.0	120.0	30"		60.3	66.3	69.7	89.4
37"		107.1	117.6	120.0	120.0	37"		48.9	53.7	56.5	72.5
42"	38-3/8"	94.3	103.6	109.0	120.0	42"	84"	43.1	47.3	49.8	63.8
48"	30-3/0	82.6	90.7	95.4	120.0	48"	04	37.7	41.4	43.6	55.9
54"		73.4	80.6	84.8	108.7	54"		33.5	36.8	38.7	49.7
60"		66.0	72.5	76.3	97.8	60"		30.2	33.1	34.9	44.7
66"		60.0	66.0	69.4	88.9	66"		27.4	30.1	31.7	40.6
72"		55.0	60.5	63.6	81.5	72"		25.1	27.6	29.0	37.2
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		82.8	91.0	95.7	120.0
26-1/2"		113.3	120.0	120.0	120.0	26-1/2"		59.8	65.7	69.1	88.5
30"		100.1	110.0	115.7	120.0	30"		52.8	58.0	61.0	78.2
37"		81.2	89.2	93.8	120.0	37"		42.8	47.0	49.5	63.4
42"	50-5/8"	71.5	78.6	82.6	105.9	42"	96"	37.7	41.4	43.6	55.9
48"	30 0/0	62.6	68.7	72.3	92.7	48"	30	33.0	36.3	38.1	48.9
54"		55.6	61.1	64.3	82.4	54"		29.3	32.2	33.9	43.4
60"		50.1	55.0	57.8	74.1	60"		26.4	29.0	30.5	39.1
66"		45.5	50.0	52.6	67.4	66"		24.0	26.4	27.7	35.5
72"		41.7	45.8	48.2	61.8	72"		22.0	24.2	25.4	32.€
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		73.6	80.9	85.1	109.0
26-1/2"		91.1	100.1	105.2	120.0	26-1/2"		53.1	58.4	61.4	78.7
30"		80.5	88.4	93.0	119.2	30"		46.9	51.6	54.2	69.5
37"		65.2	71.7	75.4	96.6	37"	108"	38.1	41.8	44.0	56.4
42"	63"	57.5	63.1	66.4	85.1	42"	100	33.5	36.8	38.7	49.7
48"	00	50.3	55.2	58.1	74.5	48"		29.3	32.2	33.9	43.4
54"		44.7	49.1	51.6	66.2	54"		26.1	28.6	30.1	38.6
60"		40.2	44.2	46.5	59.6	60"		23.5	25.8	27.1	34.8
66"		36.6	40.2	42.3	54.2	19-1/8"		66.3	72.8	76.5	98.1
72"		33.5	36.8	38.7	49.7	26-1/2"		47.8	52.5	55.2	70.8
19-1/8"		107.1	117.6	120.0	120.0	30"		42.2	46.4	48.8	62.6
26-1/2"		77.3	84.9	89.3	114.5	37"	120"	34.2	37.6	39.6	50.7
30"		68.3	75.0	78.9	101.1	42"	120	30.2	33.1	34.9	44.7
37"		55.4	60.8	63.9	82.0	48"		26.4	29.0	30.5	39.1
42"	74-1/4"	48.8	53.6	56.3	72.2	54"		23.5	25.8	27.1	34.8
48"	' ' ' '	42.7	46.9	49.3	63.2	57"		22.2	24.4	25.7	32.9
54"		37.9	41.7	43.8	56.2	19-1/8"		60.2	66.2	69.6	89.2
60"		34.1	37.5	39.4	50.6	26-1/2"		43.5	47.8	50.2	64.4
66"		31.0	34.1	35.8	46.0	30"		38.4	42.2	44.4	56.9
72"		28.4	31.2	32.9	42.1	37"	132"	31.1	34.2	36.0	46.
19-1/8"		104.6	114.9	120.0	120.0	42"		27.4	30.1	31.7	40.6
26-1/2"		75.5	82.9	87.2	111.8	48"		24.0	26.4	27.7	35.5
30"		66.7	73.3	77.1	98.8	52"		22.2	24.3	25.6	32.8
37"		54.1	59.4	62.5	80.1	19-1/8"		55.2	60.7	63.8	81.8
42"	76"	47.6	52.3	55.0	70.6	26-1/2"		39.8	43.8	46.0	59.0
48"	'	41.7	45.8	48.2	61.7	30"	144"	35.2	38.7	40.7	52.
54"		37.1	40.7	42.8	54.9	37"	177	28.5	31.4	33.0	42.3
60"		33.3	36.6	38.5	49.4	42"		25.1	27.6	29.0	37.2
66"		30.3	33.3	35.0	44.9	48"		22.0	24.2	25.4	32.6
72"		27.8	30.5	32.1	41.2						

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

## TYPICAL ANCHORS:

1/4" DIA, ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

- W2: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD
- W2: THRU 1BY BUCKS INTO CONCRETE 1-1/4" MIN. EMBED INTO CONCRETE
- B2: THRU 1BY BUCKS INTO BLOCKS OR DIRECTLY INTO BLOCKS 1-1/4" MIN. EMBED INTO BLOCKS
- C2: DIRECTLY INTO CONCRETE 1-1/4" MIN. EMBED INTO CONCRETE

### #14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M2: INTO METAL STRUCTURES (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.) STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.) (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

### TYPICAL EDGE DISTANCE

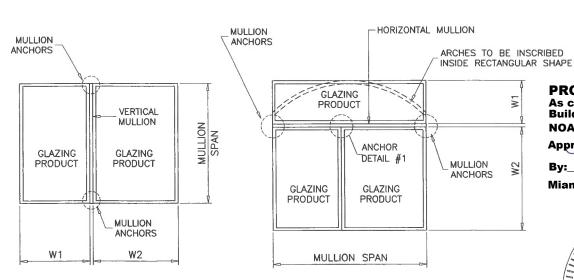
INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN. INTO METAL STRUCTURE = 3/4" MIN.

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

ANCHORS MAY BE HEX OR FLAT HEAD

ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEETS 4 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



NOA-No.

PRODUCT APPROVED

As complying with the Florida Building Code

Approval Date: 08/31/2023

Miami-Dade Product Control

By: Manuel Peres

23-0731.04

JUL 2 6 2023

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

MULLIONS Suite

EXTRUDED ALUMINUM CLIPPED

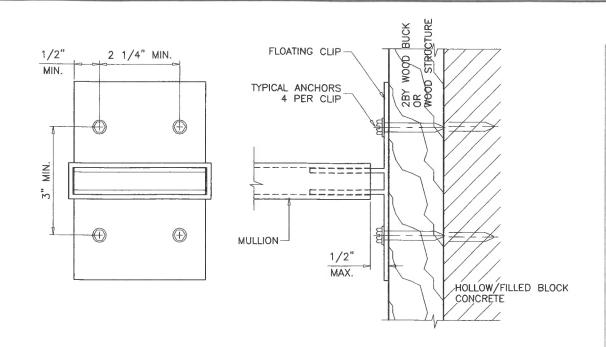
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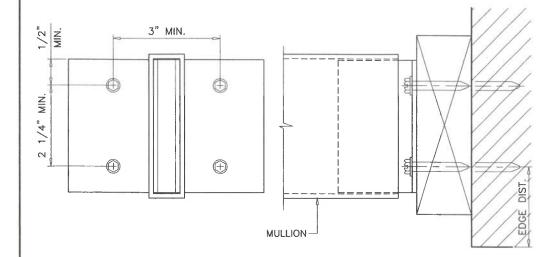
drawing

sheet 5 of 10

TYPICAL MULLION ARRANGEMENTS

W1 + W2WIDTH (W) =

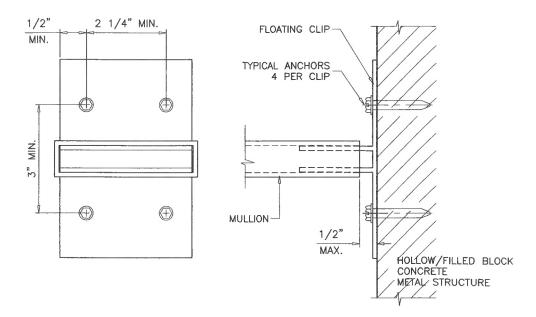


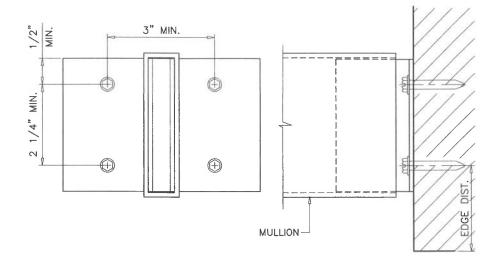


# TYPICAL ANCHORS TYPE 'W4'

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES (W4) THRU 1BY BUCKS INTO CONC. OR MASONRY (W4)

SEE SHEET 7 FOR ANCHOR CAPACITIES





# TYPICAL ANCHORS TYPE 'B4', 'C4', 'M4'

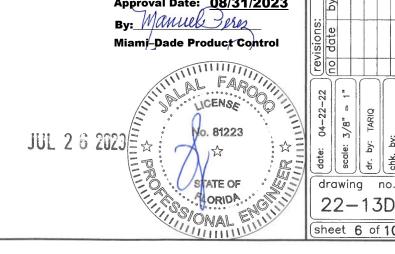
DIRECTLY INTO HOLLOW/FILLED BLOCK (B4) DIRECTLY INTO CONCRETE (C4) INTO METAL STRUCTURES (M4)

SEE SHEET 7 FOR ANCHOR CAPACITIES

PRODUCT APPROVED
As complying with the Florida
Building Code 23-0731.04 NOA-No.

Approval Date: 08/31/2023

By: Manuel Peres



EXTRUDED ALUMINUM CLIPPED MULLIONS by description revisions: no date t no. 22-13D

sheet 6 of 10

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

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009

Suite

DESIGN LOAD CAPACITY - PSF						DESIGN LOAD CAPACITY - PSF					
WINDOW DIMS. ANCHORS TYPE				WINDO	WINDOW DIMS. ANCHORS TYPE						
WIDTH (W)	MULL SPAN	W4	B4	C4	M4	WIDTH (W)	MULL SPAN	W4	B4	C4	M4
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	26-1/2"		120.0	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	30"		120.0	120.0	120.0	120.0
37"		120.0	120.0	120.0	120.0	37"		97.9	98.2	111.9	120.0
42"	38-3/8"	120.0	120.0	120.0	120.0	42"	84"	86.2	86.5	98.6	120.0
48"	30-3/6	120.0	120.0	120.0	120.0	48"	04	75.4	75.7	86.3	111.7
54"		120.0	120.0	120.0	120.0	54"		67.0	67.3	76.7	99.3
60"		120.0	120.0	120.0	120.0	60"		60.3	60.6	69.0	89.4
66"		120.0	120.0	120.0	120.0	66"		54.9	55.1	62.8	81.2
72"		110.1	110.5	120.0	120.0	72"		50.3	50.5	57.5	74.5
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	26-1/2"		119.5	120.0	120.0	120.0
30"		120.0	120.0	120.0	120.0	30"		105.6	106.0	120.0	120.0
37"		120.0	120.0	120.0	120.0	37"		85.6	85.9	97.9	120.0
42"	50-5/8"	120.0	120.0	120.0	120.0	42"	96"	75.4	75.7	86.3	111.7
48"	30 3/0	120.0	120.0	120.0	120.0	48"	90	66.0	66.3	75.5	97.8
54"		111.2	111.7	120.0	120.0	54"		58.7	58.9	67.1	86.9
60"		100.1	100.5	114.5	120.0	60"		52.8	53.0	60.4	78.2
66"		91.0	91.4	104.1	120.0	66"		48.0	48.2	54.9	71.1
72"		83.4	83.8	95.4	120.0	72"		44.0	44.2	50.3	65.2
19-1/8"		120.0	120.0	120.0	120.0	19-1/8"		120.0	120.0	120.0	120.0
26-1/2"		120.0	120.0	120.0	120.0	26-1/2"		106.3	106.7	120.0	120.0
30"		120.0	120.0	120.0	120.0	30"		93.9	94.2	107.4	120.0
37"		120.0	120.0	120.0	120.0	37"	108"	76.1	76.4	87.1	112.7
42"	63"	114.9	115.4	120.0	120.0	42"	100	67.0	67.3	76.7	99.3
48"	05	100.6	101.0	115.0	120.0	48"		58.7	58.9	67.1	86.9
54"		89.4	89.7	102.3	120.0	54"		52.1	52.3	59.7	77.2
60"		80.5	80.8	92.0	119.2	60"		46.9	47.1	53.7	69.5
66"		73.1	73.4	83.7	108.3	19-1/8"		120.0	120.0	120.0	120.0
72"		67.0	67.3	76.7	99.3	26-1/2"		95.6	96.0	109.4	120.0
19-1/8"		120.0	120.0	120.0	120.0	30"		84.5	84.8	96.6	120.0
26-1/2"		120.0	120.0	120.0	120.0	37"	120"	68.5	68.8	78.4	101.4
30"		120.0	120.0	120.0	120.0	42"	120	60.3	60.6	69.0	89.4
37"		110.7	111.1	120.0	120.0	48"		52.8	53.0	60.4	78.2
42"	74-1/4"	97.5	97.9	111.6	120.0	54"		46.9	47.1	53.7	69.5
48"	' ' '	85.3	85.7	97.6	120.0	57"		44.5	44.6	50.9	65.9
54"		75.9	76.1	86.8	112.3	19-1/8"		120.0	120.0	120.0	120.0
60"		68.3	68.5	78.1	101.1	26-1/2"		86.9	87.3	99.5	120.0
66"		62.1	62.3	71.0	91.9	30"		76.8	77.1	87.9	113.7
72"		56.9	57.1	65.1	84.3	37"	132"	62.3	62.5	71.2	92.2
19-1/8"		120.0	120.0	120.0	120.0	42"		54.9	55.1	62.8	81.2
26-1/2"		120.0	120.0	120.0	120.0	48"		48.0	48.2	54.9	71.1
30"		120.0	120.0	120.0	120.0	52"		44.3	44.5	50.7	65.6
37"		108.2	108.6	120.0	120.0	19-1/8"		110.4	110.8	120.0	120.0
42"	76"	95.3	95.6	109.0	120.0	26-1/2"		79.7	80.0	91.2	118.0
48"	"	83.4	83.7	95.4	120.0	30"	144"	70.4	70.7	80.5	104.3
54"		74.1	74.4	84.8	109.8	37"	'''	57.1	57.3	65.3	84.5
60"		66.7	66.9	76.3	98.8	42"		50.3	50.5	57.5	74.5
66"		60.6	60.9	69.4	89.8	48"		44.0	44.2	50.3	65.2
72"		55.6	55.8	63.6	82.3						

TYPICAL ANCHORS:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

W4: INTO 2BY WOOD BUCKS OR WOOD STRUCTURES 1-1/2" MIN. PENETRATION INTO WOOD

W4: THRU 1BY BUCKS INTO CONCRETE 1-1/4" MIN. EMBED INTO CONCRETE

B4: THRU 1BY BUCKS INTO BLOCKS OR DIRECTLY INTO BLOCKS 1-1/4" MIN. EMBED INTO BLOCK

C4: DIRECTLY INTO CONCRETE

1-1/4" MIN. EMBED INTO CONCRETE

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)

M4: INTO METAL STRUCTURES

(3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)

STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)

(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

#### TYPICAL EDGE DISTANCE

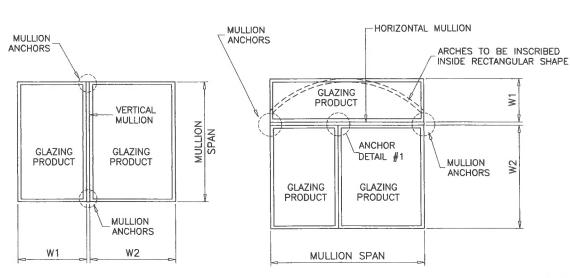
INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN. INTO METAL STRUCTURE = 3/4" MIN.

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

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS
AT HEAD, SILL OR JAMB ENDS.
SEE SHEETS 6 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



PRODUCT APPROVED
As complying with the Florida
Building Code
NOA-No. 23-0731.04

Approval Date: 08/31/2023

Miami-Dade Product Contro

JUL 2 6 2023

STATE OF CONAL ENGINEERS

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by description

date

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

WWW.AFGENG.C

MULLIONS

CLIPPED

ALUMINUM

Suite

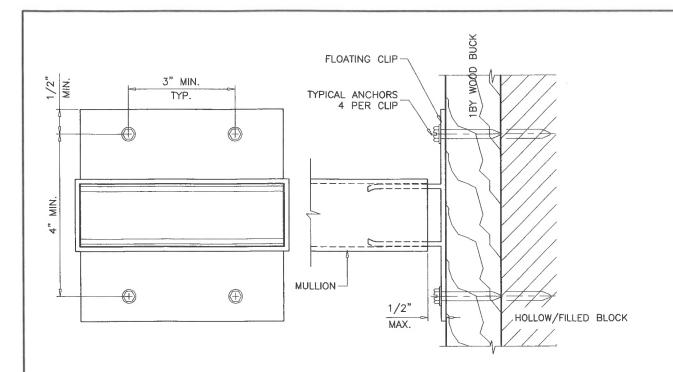
sheet 7 of 10

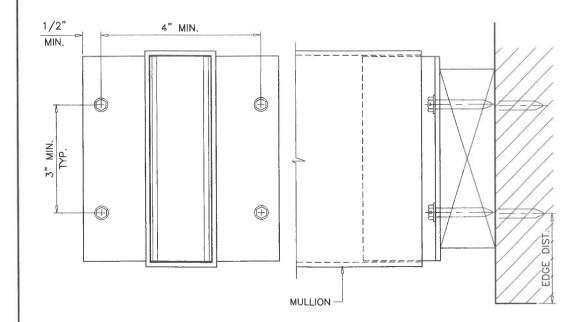
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TYPICAL MULLION ARRANGEMENTS

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

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

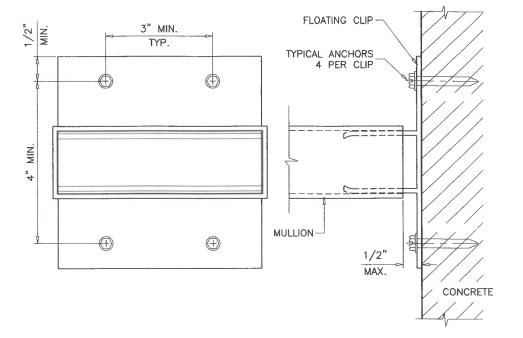


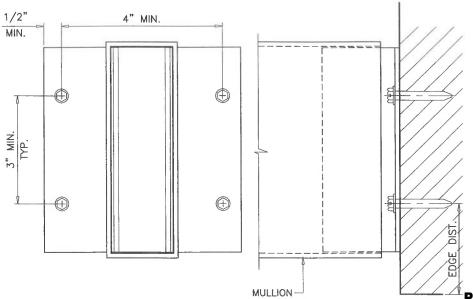


# TYPICAL ANCHORS TYPE 'B4A'

THRU 1BY BUCKS INTO BLOCKS OR DIRECTLY INTO BLOCKS

SEE SHEET 9 FOR ANCHOR CAPACITIES





# TYPICAL ANCHORS TYPE 'C4A'

DIRECTLY INTO CONCRETE

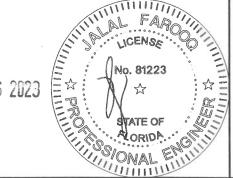
SEE SHEET 9 FOR ANCHOR CAPACITIES

PRODUCT APPROVED
As complying with the Florida
Building Code 23-0731.04 NOA-No.

Approval Date: <u>08/31/2023</u>

By: Manuel Peres

Miami-Dade Product Control



	revisions:	no date by de		7			
	te: 04-22-22		scale: 3/8" = 1"		dr. by: TARIQ		- Paris
-/	date:	ال	ွင္တ	Jl	Ą.	l	40

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22-13D sheet 8 of 10

no.

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33.173
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FBPE #3538

MULLIONS

ALUMINUM CLIPPED

Fundora Corp.
/ Windows
56th Court, Suite f
FL. 33054 ww

JUL 2 6 2023

DESIGN	LOAD CAPA	CITY -	PSF		DESIGN	LOAD CAPA	CITY -	PSF
WINDOW DIMS. ANCHORS TY					WINDO	V DIMS.	ANCHOR	S TYPE
WIDTH (W)	MULL SPAN	B4A	C4A		WIDTH (W)	MULL SPAN	B4A	C4A
19-1/8"		120.0	120.0		19-1/8"		120.0	120.0
26-1/2"		120.0	120.0		26-1/2"		120.0	120.0
30"		120.0	120.0	П	30"		120.0	120.0
37"		120.0	120.0	П	37"		107.5	113.1
42"	70 7 /0"	120.0	120.0	П	42"	0.4"	94.7	99.6
48"	38-3/8"	120.0	120.0	П	48"	84"	82.9	87.1
54"		120.0	120.0	П	54"		73.7	77.5
60"		120.0	120.0		60"		66.3	69.7
66"		120.0	120.0		66"		60.3	63.4
72"		120.0	120.0		72"		55.2	58.1
19-1/8"		120.0	120.0		19-1/8"		120.0	120.0
26-1/2"		120.0	120.0		26-1/2"		120.0	120.0
30"		120.0	120.0		30"		116.0	120.0
37"		120.0	120.0		37"		94.1	98.9
42"	50 5 (0"	120.0	120.0		42"	0.6"	82.9	87.1
48"	50~5/8"	120.0	120.0		48"	96"	72.5	76.3
54"		120.0	120.0		54"		64.4	67.8
60"		110.0	115.7		60"		58.0	61.0
66"		100.0	105.2		66"		52.7	55.5
72"		91.7	96.4		72"		48.3	50.8
19-1/8"		120.0	120.0		19-1/8"		120.0	120.0
26-1/2"		120.0	120.0		26-1/2"	108"	116.7	120.0
30"		120.0	120.0		30"		103.1	108.4
37"		120.0	120.0		37"		83.6	87.9
42"	C 7 "	120.0	120.0		42"		73.7	77.5
48"	63"	110.5	116.2		48"		64.4	67.8
54"		98.2	103.3		54"		57.3	60.2
60"		88.4	93.0		60"		51.6	54.2
66"		80.3	84.5		19-1/8"		120.0	120.0
72"		73.7	77.5		26-1/2"		105.1	110.5
19-1/8"		120.0	120.0		30"		92.8	97.6
26-1/2"		120.0	120.0		37"	120"	75.2	79.1
30"		120.0	120.0		42"	120	66.3	69.7
37"		120.0	120.0		48"		58.0	61.0
42"	741/4"	107.1	112.7		54"		51.6	54.2
48"	/ -	93.7	98.6		57"		48.8	51.4
54"		83.3	87.6		19-1/8"		120.0	120.0
60"		75.0	78.9		26-1/2"		95.5	100.4
66"		68.2	71.7		30"		84.4	88.7
72"		62.5	65.7		37"	132"	68.4	71.9
19-1/8"		120.0	120.0		42"		60.3	63.4
26-1/2"		120.0	120.0		48"		52.7	55.5
30"		120.0	120.0	1	52"		48.7	51.2
37"		118.8	120.0	1	19-1/8"		120.0	120.0
42"	76"	104.7	110.1	1	26-1/2"		87.5	92.1
48"		91.6	96.3		30"	144"	77.3	81.3
54"		81.4	85.6	1	37"	1	62.7	65.9
60"		73.3	77.1	1	42"		55.2	58.1
66"		66.6	70.0	1	48"		48.3	50.8
72"		61.1	64.2					

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

## TYPICAL ANCHORS:

1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)

B4A: THRU 1BY BUCKS INTO BLOCKS OR DIRECTLY INTO BLOCKS

1-1/4" MIN. EMBED INTO BLOCK

C4A: DIRECTLY INTO CONCRETE

1-1/4" MIN. EMBED INTO CONCRETE

#### TYPICAL EDGE DISTANCE

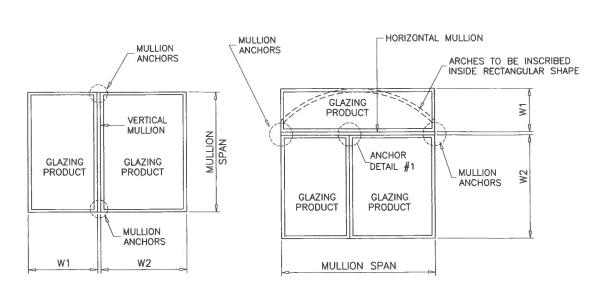
INTO CONCRETE AND BLOCKS = 2-1/2" MIN. INTO WOOD STRUCTURE = 1" MIN.

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

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE: ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD, SILL OR JAMB ENDS. SEE SHEETS 8 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

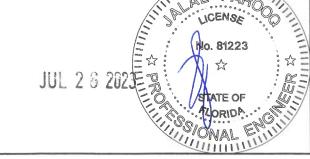


# TYPICAL MULLION ARRANGEMENTS

W1 + W2 WIDTH (W) =

PRODUCT APPROVED As complying with the Florida Building Code 23-0731.04 NOA-No.

Approval Date: \_08/31/2023



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-81.00
WWW.AFCENG.COM

EXTRUDED ALUMINUM CLIPPED MULLIONS Suite

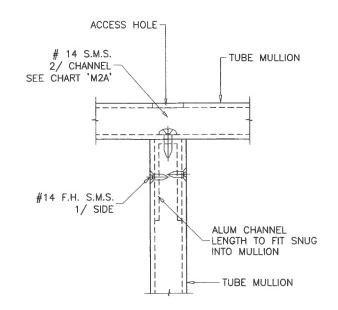
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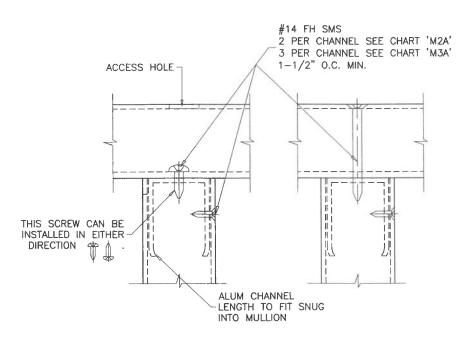
drawing

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sheet 9 of 10

DESIGN	LOAD CAPA	CITY -	PSF	DESIGN	LOAD CAPA	CITY -	PSF		
WINDOY	V DIMS.	ANCHOR	S TYPE	WINDOW DIMS. ANCHORS TYPE					
WIDTH (W)	MULL SPAN	M2A	МЗА	WIDTH (W)	MULL SPAN	M2A	МЗА		
19-1/8"		120.0	120.0	19-1/8"		120.0	120.0		
26-1/2"		120.0 120.0 26-1/2"		115.9	120.0				
30"		120.0	120.0	30"		102.4	120.0		
37"			120.0	120.0	37"		83.0	120.0	
42"		120.0	120.0	42"	_	73.1	109.7		
48"	38-3/8"	120.0	120.0	48"	84"	64.0	96.0		
54"		120.0	120.0	54"		56.9	85.3		
60"		112.1	120.0	60"		51.2	76.8		
66"		101.9	120.0	66"		46.5	69.8		
72"		93.4	120.0	72"		42.7	64.0		
19-1/8"		120.0	120.0	19-1/8"		120.0	120.0		
26-1/2"		120.0	120.0	26-1/2"		101.4	120.0		
30"		120.0	120.0	30"		89.6	120.0		
37"		120.0	120.0	37"		72.6	109.0		
42"		120.0	120.0	42"		64.0	96.0		
48"	50-5/8"	106.2	120.0	48"	96"	56.0	84.0		
54"		94.4	120.0	54"		49.8	74.7		
60"		85.0	120.0	60"		44.8	67.2		
66"		77.2	115.8	66"		40.7	61.1		
72"		70.8	106.2	72"		37.3	56.0		
19-1/8"		120.0	120.0	19-1/8"		120.0	120.0		
26-1/2"		120.0	120.0	26-1/2"	108"	90.2	120.0		
30"		120.0	120.0	30"		79.6	119.5		
37"		110.7	120.0	37"		64.6	96.9		
42"		97.5	120.0	42"		56.9	85.3		
48"	63"	85.3	120.0	48"		49.8	74.7		
54"		75.9	113.8	54"		44.2	66.4		
60"		68.3	102.4	60"		39.8	59.7		
66"		62.1	93.1	19-1/8"		112.4	120.0		
72"		56.9	85.3	26-1/2"		81.1	120.0		
19-1/8"		120.0	120.0	30"		71.7	107.5		
26-1/2"		120.0	120.0	37"	100"	58.1	87.2		
30"		115.8	120.0	42"	120"	51.2	76.8		
37"		93.9	120.0	48"		44.8	67.2		
42"	74-1/4"	82.7	120.0	54"		39.8	59.7		
48"	/ 1/4	72.4	108.6	57"		37.7	56.6		
54"		64.4	96.5	19-1/8"		102.2	120.0		
60"		57.9	86.9	26-1/2"		73.8	110.7		
66"		52.7	79.0	30"		65.2	97.7		
72"		48.3	72.4	37"	132"	52.8	79.3		
19-1/8"		120.0	120.0	42"		46.5	69.8		
26-1/2"		120.0	120.0	48"		40.7	61.1		
30"		113.2	120.0	52"		37.6	56.4		
37"		91.8	120.0	19-1/8"		93.7	120.0		
42"	76"	80.8	120.0	26-1/2"		67.6	101.4		
48"	,0	70.7	106.1	30"	144"	59.7	89.6		
54"		62.9	94.3	37"	177	48.4	72.6		
60"		56.6	84.9	42"		42.7	64.0		
66"		51.4	77.2	48"		37.3	56.0		
72"		47.2	70.7						





ANCHOR DETAIL #1 METAL TO METAL CONNECTION

PRODUCT APPROVED
As complying with the Florida
Building Code 23-0731.04 NOA-No.

Approval Date: <u>08/31/2023</u>

Miami-Dade Product Control

JUL 2 8 2023



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no.

drawing

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