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

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

NOTICE OF ACCEPTANCE (NOA)

Labrador & Fundora Corp. dba V & V Windows
14150 NW 56th 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. **22-130**, titled "Extruded Aluminum Clipped Mullions", sheets 1 through 9, 9.1 and 10 of 10, dated 04/22/22, with revision **B** dated 06/24/26, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, 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 No. 24-0819.02** and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

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

MIAMI-DADE COUNTY APPROVED

7/22/26

NOA No. 26-0707.06
Expiration Date: August 31, 2028
Approval Date: July 30, 2026

Labrador & Fundora Corp. dba V & V Windows

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under NOA No. 23-0731.04)

2. Drawing No. **22-130**, titled "Extruded Aluminum Clipped Mullions", sheets 1 through 9, 9.1 and 10 of 10, dated 04/22/22, with revision **A** dated 07/24/24, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 24-0819.02)

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-24-8182**, dated 06/26/24 and revised on 10/18/24, signed and sealed by Ram N. Tewari, P.E.
(Submitted under NOA No. 24-0819.02)

2. 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.
(Submitted under NOA No. 23-0731.04)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC 8th Edition (2023), dated 08/25/24, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 24-0819.02)

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.

Manuel Pérez, P.E.
Product Control Examiner
NOA No. 26-0707.06
Expiration Date: August 31, 2028
Approval Date: July 30, 2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 8th Edition (2023)** and of no financial interest, dated August 15, 2024, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 24-0819.02)

2. Proposal No. **24-0224** issued by the Product Control Section, dated March 22, 2024, signed by Manuel Perez, P.E., Product Control Examiner.
(Submitted under NOA No. 24-0819.02)

G. OTHERS

1. Notice of Acceptance No. **23-0731.04**, issued to Labrador & Fundora Corp. dba V & V Windows for their Clipped, Extruded Aluminum Tube Mullion - L.M.I., approved on 08/31/23 and expiring on 08/31/28.

Manuel Pérez, P.E.
Product Control Examiner
NOA No. 26-0707.06
Expiration Date: August 31, 2028
Approval Date: July 30, 2026

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **22-13D**, titled "Extruded Aluminum Clipped Mullions, sheets 1 through 9, 9.1 and 10 of 10, dated 04/22/22, with revision **B** dated 06/24/26, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC 8th Edition (2023) and FBC 9th Edition (2026), dated 07/01/26, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

2. Glazing complies with **ASTM E1300-16**

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 8th Edition (2023), FBC 9th Edition (2026)** and of no financial interest, dated July 01, 2026, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

G. OTHERS

1. Notice of Acceptance No. **24-0819.02**, issued to Labrador & Fundora Corp. dba V & V Windows for their Clipped, Extruded Aluminum Tube (Rectangular or Bay) Mullion - L.M.I., approved on 11/27/24 and expiring on 08/31/28.

Manuel Pérez, P.E.
Product Control Examiner
NOA No. 26-0707.06
Expiration Date: August 31, 2028
Approval Date: July 30, 2026

The following pages in this document were submitted by the manufacturer (third party) to represent the product being approved and establish the limits of use. The pages may include technical drawings, schematics and installation details.

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

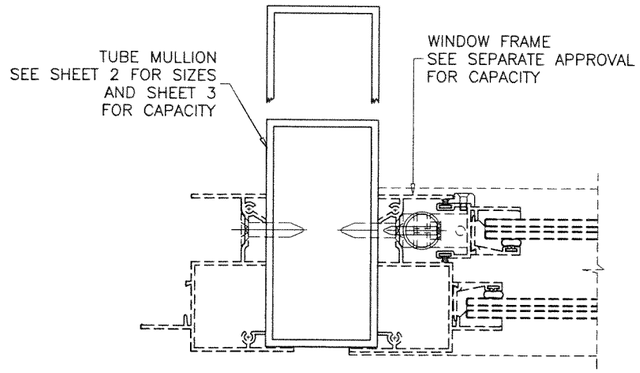
STEP 1 DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.

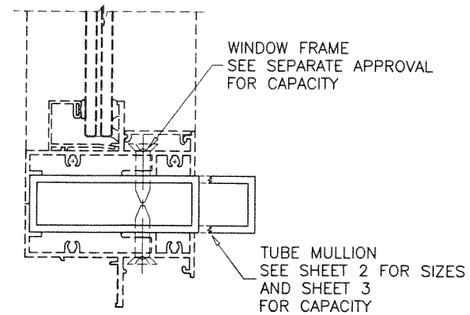
STEP 2 USE MIAMI–DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS.

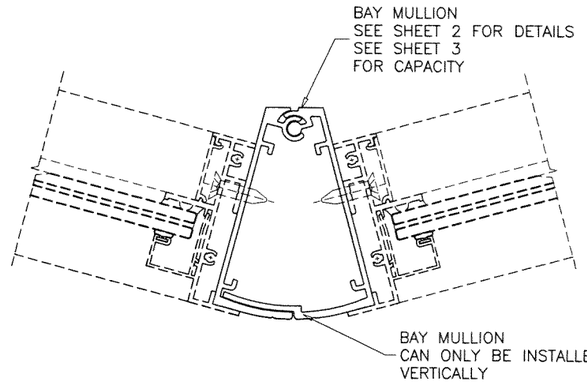
STEP 3 USE GLAZING PRODUCT CONNECTION TO MULLION AS AS PER PRODUCT APPROVAL.

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

STEP 5 USING ANCHOR TYPES 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.







MULLIONS CONTAINING TYPICAL GLAZING PRODUCTS HORIZONTAL OR VERTICAL

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

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 2023 (8TH EDITION)/2026 (9TH 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 2023/2026 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)'.

FASTENERS AND CONNECTORS (AS APPLICABLE) SHOWN IN THIS APPROVAL MAY NOT MEET CORROSION RESISTANCE REQUIREMENTS FOR COASTAL OR SALT WATER EXPOSURE ZONES. COMPLIANCE WITH THESE CONDITIONS TO BE CHECKED PER FBC 1711.

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

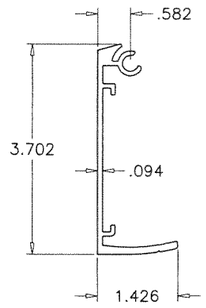
Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

revisions:		
no	date	by description
A	07.24.24	BAY MULLION ADDED
B	06.24.26	UPDATED TO 2026 FBC

date: 04–22–22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

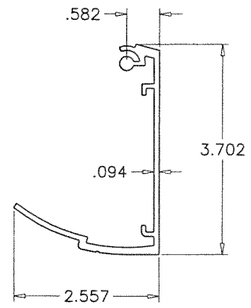
drawing no. 22–13D

sheet 1 of 10



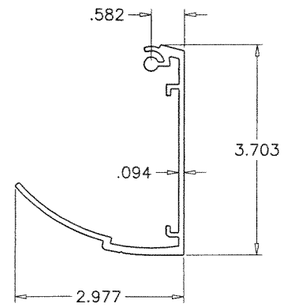
Ix = 1.341 IN^4
Sx = .674 IN^3

BAY MULLION PART 'A'
6063-T6



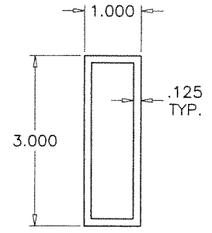
Ix = 1.575 IN^4
Sx = .732 IN^3

BAY MULLION PART 'B'
6063-T6



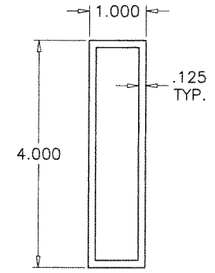
Ix = 1.589 IN^4
Sx = .728 IN^3

BAY MULLION PART 'C'
6063-T6



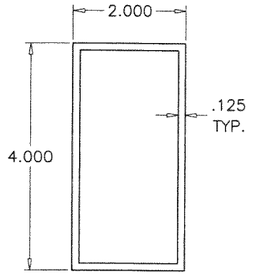
Ix = .950 IN^4
Sx = .633 IN^3

1 X 3
TUBE MULLION
6063-T6



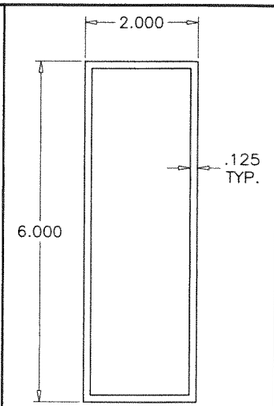
Ix = 2.040 IN^4
Sx = 1.020 IN^3

1 X 4
TUBE MULLION
6063-T6



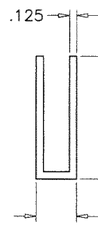
Ix = 2.980 IN^4
Sx = 1.490 IN^3

2 X 4
TUBE MULLION
6063-T6

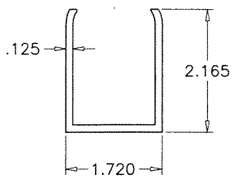


Ix = 8.280 IN^4
Sx = 2.760 IN^3

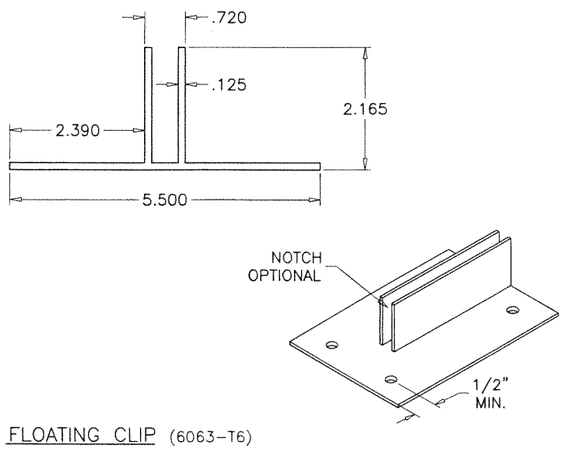
2 X 6
STD. MULLION
6063-T6



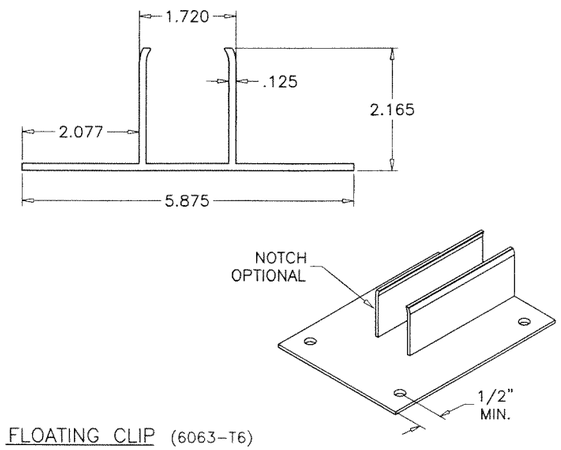
'U' CLIP
6063-T6



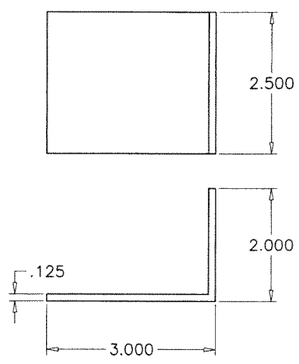
'U' CLIP
6063-T6



FLOATING CLIP (6063-T6)
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 1BY TUBE MULLIONS.



FLOATING CLIP (6063-T6)
CLIP LENGTHS MUST BE CUT TO FIT SNUG INTO 2BY TUBE MULLIONS.



BAY MULLION CLIP (6063-T5)

PRODUCT REVISED
As complying with the Florida Building Code
NOA-No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami-Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22-13D-VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba-V & V Windows
14150 N.W. 56th Court, Suite 600
Opa-Locka, FL. 33054
Tel. (305) 888-4151
www.vvwindows.com

revisions:

no	date	by	description
A	07.24.24		BAY MULLION ADDED
B	06.24.26		NO CHANGE THIS SHEET

date: 04-22-22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

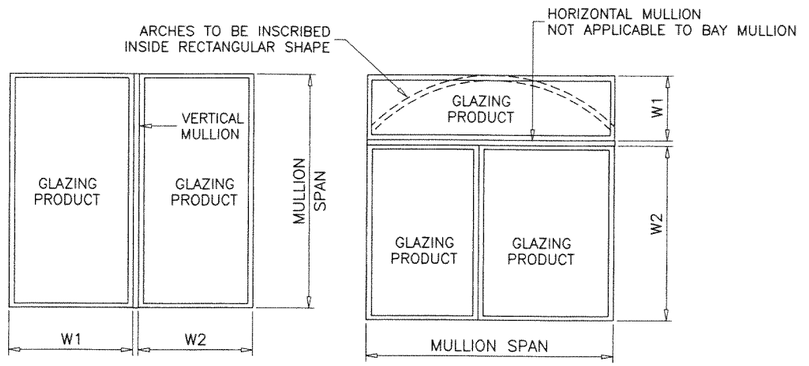
drawing no. 22-13D

sheet 2 of 10

DESIGN LOAD CAPACITY – PSF						
WINDOW DIMS.		1 X 3	1 X 4	2 X 4	2 X 6	BAY
WIDTH (W)	MULL SPAN	TUBE	TUBE	TUBE	STD.	MULLION
19–1/8"	38–3/8"	120.0	120.0	120.0	120.0	70.0
26–1/2"		120.0	120.0	120.0	120.0	70.0
30"		120.0	120.0	120.0	120.0	70.0
37"		120.0	120.0	120.0	120.0	70.0
42"		120.0	120.0	120.0	120.0	70.0
48"		120.0	120.0	120.0	120.0	70.0
54"		120.0	120.0	120.0	120.0	70.0
60"		112.5	120.0	120.0	120.0	70.0
66"		102.2	120.0	120.0	120.0	70.0
72"		93.7	120.0	120.0	120.0	70.0
19–1/8"	50–5/8"	120.0	120.0	120.0	120.0	70.0
26–1/2"		120.0	120.0	120.0	120.0	70.0
30"		120.0	120.0	120.0	120.0	70.0
37"		103.0	120.0	120.0	120.0	70.0
42"		90.8	120.0	120.0	120.0	70.0
48"		79.4	120.0	120.0	120.0	70.0
54"		70.6	112.5	120.0	120.0	70.0
60"		63.5	101.3	120.0	120.0	70.0
66"		57.8	92.1	120.0	120.0	70.0
72"		53.0	84.4	120.0	120.0	70.0
19–1/8"	63"	120.0	120.0	120.0	120.0	70.0
26–1/2"		89.0	120.0	120.0	120.0	70.0
30"		78.6	120.0	120.0	120.0	70.0
37"		63.7	104.3	120.0	120.0	70.0
42"		56.1	91.9	120.0	120.0	70.0
48"		49.1	80.4	120.0	120.0	70.0
54"		43.7	71.5	111.5	120.0	70.0
60"		39.3	64.3	100.3	120.0	70.0
66"		35.7	58.5	91.2	120.0	–
72"		32.7	53.6	83.6	120.0	–
19–1/8"	74–1/4"	75.3	120.0	120.0	120.0	70.0
26–1/2"		54.4	103.4	120.0	120.0	70.0
30"		48.0	91.3	120.0	120.0	70.0
37"		38.9	74.0	116.3	120.0	70.0
42"		34.3	65.2	102.4	120.0	70.0
48"		30.0	57.1	89.6	120.0	70.0
54"		26.7	50.7	79.7	120.0	70.0
60"		24.0	45.7	71.7	120.0	–
66"		21.8	41.5	65.2	119.7	–
72"		20.0	38.0	59.7	109.7	–
19–1/8"	76"	70.2	120.0	120.0	120.0	70.0
26–1/2"		50.7	98.5	120.0	120.0	70.0
30"		44.8	87.0	120.0	120.0	70.0
37"		36.3	70.5	110.8	120.0	70.0
42"		32.0	62.1	97.6	120.0	70.0
48"		28.0	54.4	85.4	120.0	70.0
54"		24.9	48.3	75.9	120.0	–
60"		22.4	43.5	68.4	120.0	–
66"		20.3	39.5	62.1	114.1	–
72"		–	36.2	57.0	104.6	–

DESIGN LOAD CAPACITY – PSF						
WINDOW DIMS.		1 X 3	1 X 4	2 X 4	2 X 6	BAY
WIDTH (W)	MULL SPAN	TUBE	TUBE	TUBE	STD.	MULLION
19–1/8"	84"	52.0	110.6	120.0	120.0	70.0
26–1/2"		37.5	79.8	117.7	120.0	70.0
30"		33.2	70.5	104.0	120.0	70.0
37"		26.9	57.2	84.3	120.0	70.0
42"		23.7	50.4	74.3	120.0	69.4
48"		20.7	44.1	65.0	120.0	61.3
54"		–	39.2	57.8	113.5	–
60"		–	35.3	52.0	102.2	–
66"		–	32.1	47.3	92.9	–
72"		–	29.4	43.3	85.2	–
19–1/8"	96"	34.8	74.8	109.3	120.0	–
26–1/2"		25.1	54.0	78.9	120.0	–
30"		22.2	47.7	69.7	120.0	–
37"		–	38.7	56.5	120.0	–
42"		–	34.1	49.8	110.9	–
48"		–	29.8	43.5	97.0	–
54"		–	26.5	38.7	86.2	–
60"		–	23.8	34.8	77.6	–
66"		–	21.7	31.7	70.6	–
72"		–	–	29.0	64.7	–
19–1/8"	108"	24.5	52.5	76.8	120.0	–
26–1/2"		–	37.9	55.4	120.0	–
30"		–	33.5	48.9	120.0	–
37"		–	27.2	39.7	98.7	–
42"		–	23.9	35.0	87.0	–
48"		–	20.9	30.6	76.1	–
54"		–	–	27.2	67.6	–
60"		–	–	24.5	60.9	–
19–1/8"	120"	–	38.3	56.0	120.0	–
26–1/2"		–	27.6	40.4	110.9	–
30"		–	24.4	35.7	97.9	–
37"		–	–	28.9	79.4	–
42"		–	–	25.5	69.9	–
48"		–	–	22.3	61.2	–
54"		–	–	–	54.4	–
57"		–	–	–	51.5	–
19–1/8"	132"	–	28.8	42.0	116.8	–
26–1/2"		–	20.8	30.3	84.3	–
30"		–	–	26.8	74.5	–
37"		–	–	21.7	60.4	–
42"		–	–	–	53.2	–
48"		–	–	–	46.5	–
52"		–	–	–	43.0	–
19–1/8"	144"	–	22.2	32.4	90.0	–
26–1/2"		–	–	23.4	64.9	–
30"		–	–	20.6	57.4	–
37"		–	–	–	46.5	–
42"		–	–	–	41.0	–
48"		–	–	–	35.8	–

ALL LOADS ARE EXT.(+)/INT.(–).



TYPICAL MULLION ARRANGEMENTS

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

NOTE:
RECTANGULAR TUBE MULLIONS RATED IN THESE CHARTS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY.
(INTERPOLATION BETWEEN WIDTHS ALLOWED)
BAY MULLION ONLY VERTICAL INSTALLATIONS

BAY MULLIONS MAY BE ORIENTED VERTICALLY ONLY.

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 06 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

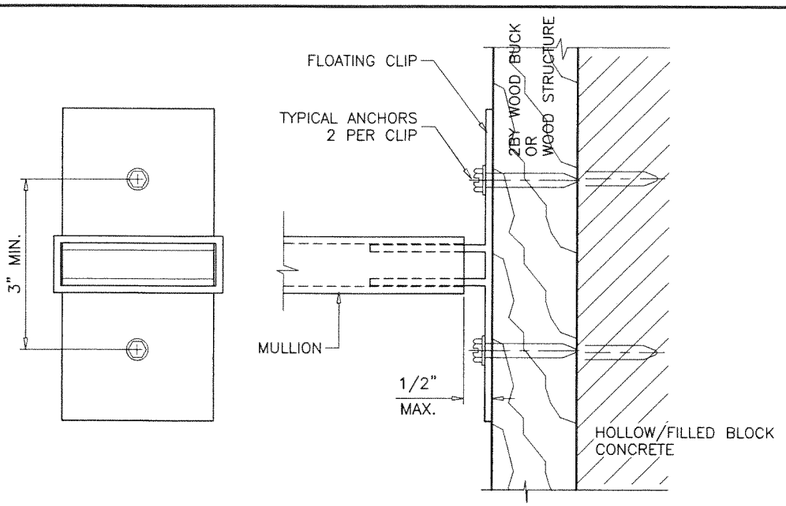
revisions:

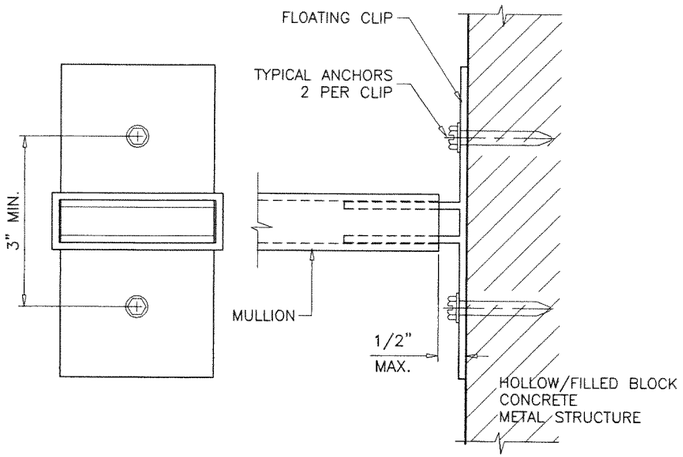
no	date	by	description
A	07.24.24		BAY MULLION ADDED
B	06.24.26		NO CHANGE THIS SHEET

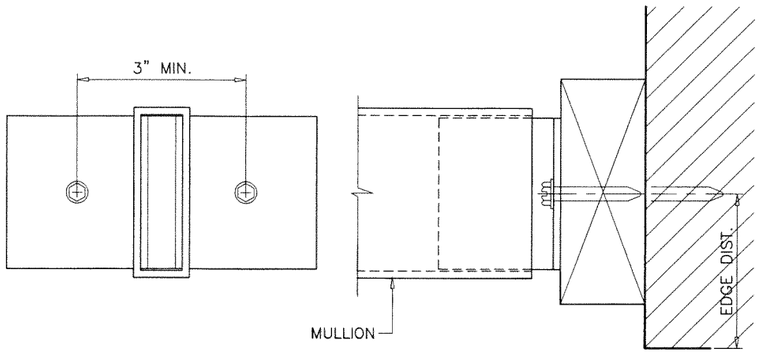
date: 04–22–22
scale: –
dr. by: TARIQ
chk. by:

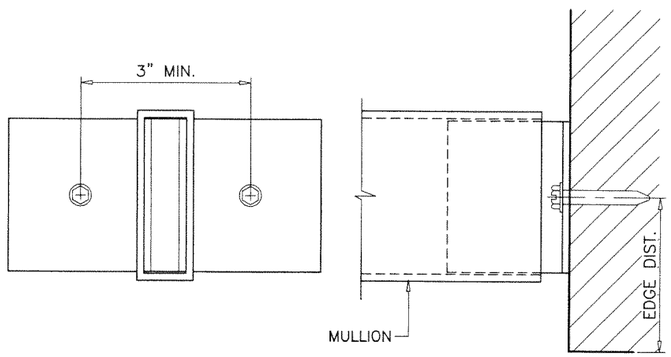
drawing no. 22–13D

sheet 3 of 10

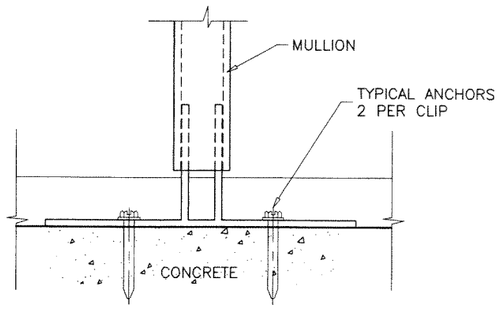








NOTE:
FOR BAY MULLION ANCHORS,
SEE SHEET 10



RECTANGULAR TUBE MULLIONS
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

RECTANGULAR TUBE MULLIONS
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 REVISED
As complying with the Florida Building Code
NOA-No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami-Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION 22-13D-VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba-V & V Windows
14150 N.W. 56th Court, Suite 600
Opa-Locka, FL. 33054
Tel. (305) 888-4151
www.vvwindows.com

revisions:

no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

date: 04-22-22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. 22-13D

DESIGN LOAD CAPACITY – PSF					
WINDOW DIMS.		ANCHORS TYPE			
WIDTH (W)	MULL SPAN	W2	B2	C2	M2
19–1/8"	38–3/8"	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
37"		107.1	117.6	120.0	120.0
42"		94.3	103.6	109.0	120.0
48"		82.6	90.7	95.4	120.0
54"		73.4	80.6	84.8	108.7
60"		66.0	72.5	76.3	97.8
66"		60.0	66.0	69.4	88.9
72"		55.0	60.5	63.6	81.5
19–1/8"	50–5/8"	120.0	120.0	120.0	120.0
26–1/2"		113.3	120.0	120.0	120.0
30"		100.1	110.0	115.7	120.0
37"		81.2	89.2	93.8	120.0
42"		71.5	78.6	82.6	105.9
48"		62.6	68.7	72.3	92.7
54"		55.6	61.1	64.3	82.4
60"		50.1	55.0	57.8	74.1
66"		45.5	50.0	52.6	67.4
72"		41.7	45.8	48.2	61.8
19–1/8"	63"	120.0	120.0	120.0	120.0
26–1/2"		91.1	100.1	105.2	120.0
30"		80.5	88.4	93.0	119.2
37"		65.2	71.7	75.4	96.6
42"		57.5	63.1	66.4	85.1
48"		50.3	55.2	58.1	74.5
54"		44.7	49.1	51.6	66.2
60"		40.2	44.2	46.5	59.6
66"		36.6	40.2	42.3	54.2
72"		33.5	36.8	38.7	49.7
19–1/8"	74–1/4"	107.1	117.6	120.0	120.0
26–1/2"		77.3	84.9	89.3	114.5
30"		68.3	75.0	78.9	101.1
37"		55.4	60.8	63.9	82.0
42"		48.8	53.6	56.3	72.2
48"		42.7	46.9	49.3	63.2
54"		37.9	41.7	43.8	56.2
60"		34.1	37.5	39.4	50.6
66"		31.0	34.1	35.8	46.0
72"		28.4	31.2	32.9	42.1
19–1/8"	76"	104.6	114.9	120.0	120.0
26–1/2"		75.5	82.9	87.2	111.8
30"		66.7	73.3	77.1	98.8
37"		54.1	59.4	62.5	80.1
42"		47.6	52.3	55.0	70.6
48"		41.7	45.8	48.2	61.7
54"		37.1	40.7	42.8	54.9
60"		33.3	36.6	38.5	49.4
66"		30.3	33.3	35.0	44.9
72"		27.8	30.5	32.1	41.2

DESIGN LOAD CAPACITY – PSF					
WINDOW DIMS.		ANCHORS TYPE			
WIDTH (W)	MULL SPAN	W2	B2	C2	M2
19–1/8"	84"	94.7	104.0	109.4	120.0
26–1/2"		68.3	75.0	78.9	101.2
30"		60.3	66.3	69.7	89.4
37"		48.9	53.7	56.5	72.5
42"		43.1	47.3	49.8	63.8
48"		37.7	41.4	43.6	55.9
54"		33.5	36.8	38.7	49.7
60"		30.2	33.1	34.9	44.7
66"		27.4	30.1	31.7	40.6
72"		25.1	27.6	29.0	37.2
19–1/8"	96"	82.8	91.0	95.7	120.0
26–1/2"		59.8	65.7	69.1	88.5
30"		52.8	58.0	61.0	78.2
37"		42.8	47.0	49.5	63.4
42"		37.7	41.4	43.6	55.9
48"		33.0	36.3	38.1	48.9
54"		29.3	32.2	33.9	43.4
60"		26.4	29.0	30.5	39.1
66"		24.0	26.4	27.7	35.5
72"		22.0	24.2	25.4	32.6
19–1/8"	108"	73.6	80.9	85.1	109.0
26–1/2"		53.1	58.4	61.4	78.7
30"		46.9	51.6	54.2	69.5
37"		38.1	41.8	44.0	56.4
42"		33.5	36.8	38.7	49.7
48"		29.3	32.2	33.9	43.4
54"		26.1	28.6	30.1	38.6
60"		23.5	25.8	27.1	34.8
19–1/8"	120"	66.3	72.8	76.5	98.1
26–1/2"		47.8	52.5	55.2	70.8
30"		42.2	46.4	48.8	62.6
37"		34.2	37.6	39.6	50.7
42"		30.2	33.1	34.9	44.7
48"		26.4	29.0	30.5	39.1
54"		23.5	25.8	27.1	34.8
57"		22.2	24.4	25.7	32.9
19–1/8"	132"	60.2	66.2	69.6	89.2
26–1/2"		43.5	47.8	50.2	64.4
30"		38.4	42.2	44.4	56.9
37"		31.1	34.2	36.0	46.1
42"		27.4	30.1	31.7	40.6
48"		24.0	26.4	27.7	35.5
52"		22.2	24.3	25.6	32.8
19–1/8"	144"	55.2	60.7	63.8	81.8
26–1/2"		39.8	43.8	46.0	59.0
30"		35.2	38.7	40.7	52.1
37"		28.5	31.4	33.0	42.3
42"		25.1	27.6	29.0	37.2
48"		22.0	24.2	25.4	32.6

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

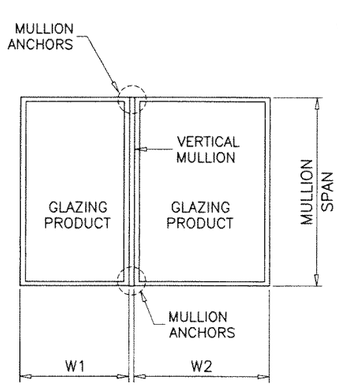
INTO CONCRETE AND BLOCKS = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

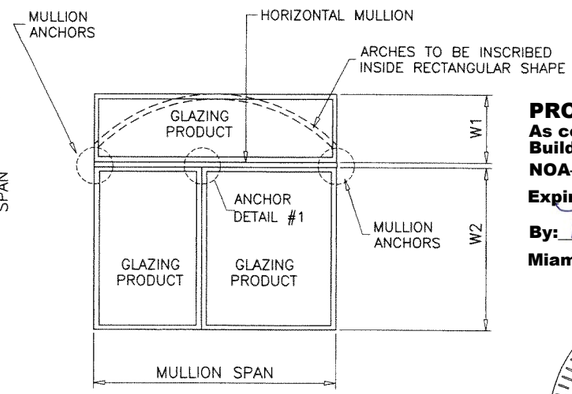
WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C–90 HOLLOW/FILLED NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
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)





TYPICAL MULLION ARRANGEMENTS

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

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–W

EXTRUDED ALUMINUM CLIPPED MULLIONS

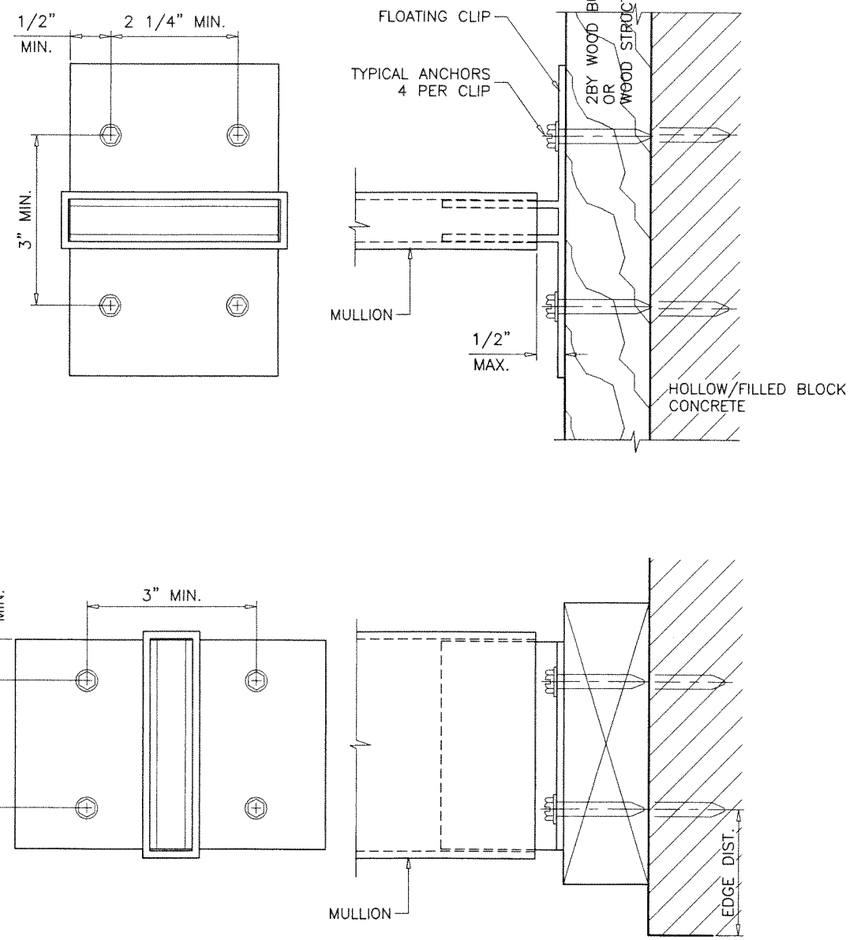
Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

revisions:			
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

date: 04–22–22
scale: –
dr. by: TARIQ
chk. by:

drawing no. 22–13D

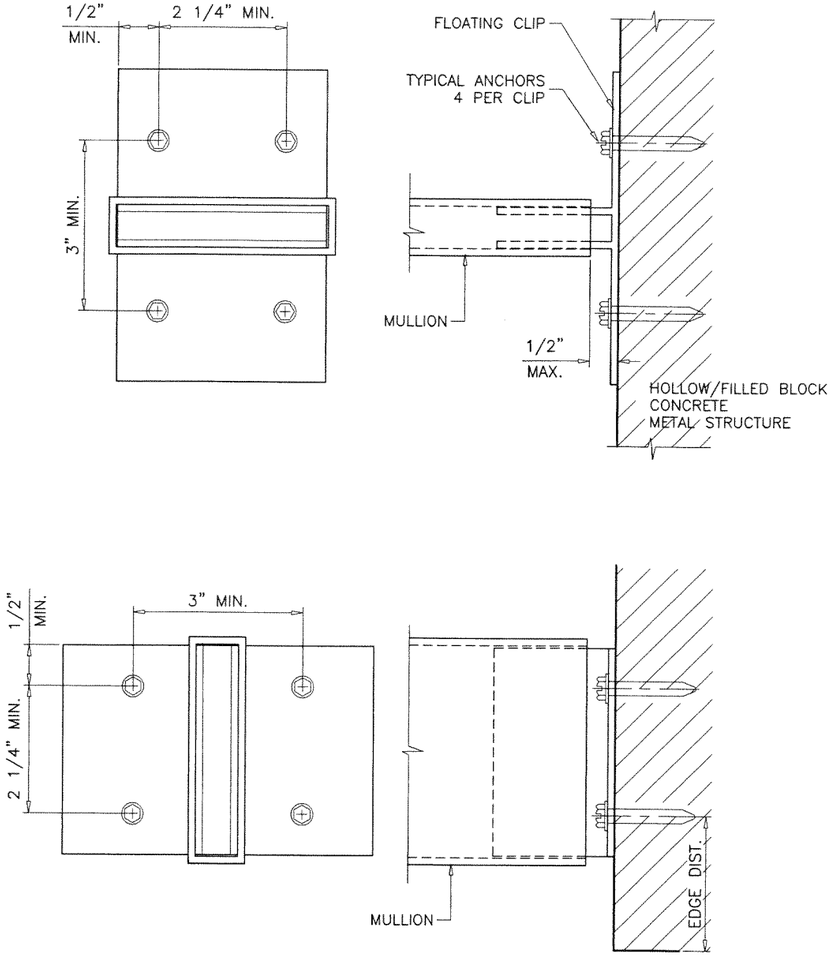
sheet 5 of 10



RECTANGULAR TUBE MULLIONS
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



RECTANGULAR TUBE MULLIONS
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

NOTE:
FOR BAY MULLION ANCHORS,
SEE SHEET 10

PRODUCT REVISED
As complying with the Florida Building Code
NOA-No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami-Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION 22-13D-VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba-V & V Windows
14150 N.W. 56th Court, Suite 600
Opa-Locka, FL. 33054
Tel. (305) 888-4151
www.vvwindows.com

revisions:			
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

date: 04-22-22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. 22-13D

sheet 6 of 10

DESIGN LOAD CAPACITY – PSF					
WINDOW DIMS.		ANCHORS TYPE			
WIDTH (W)	MULL SPAN	W4	B4	C4	M4
19–1/8"	38–3/8"	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
37"		120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0
54"		120.0	120.0	120.0	120.0
60"		120.0	120.0	120.0	120.0
66"		120.0	120.0	120.0	120.0
72"		110.1	110.5	120.0	120.0
19–1/8"	50–5/8"	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
37"		120.0	120.0	120.0	120.0
42"		120.0	120.0	120.0	120.0
48"		120.0	120.0	120.0	120.0
54"		111.2	111.7	120.0	120.0
60"		100.1	100.5	114.5	120.0
66"		91.0	91.4	104.1	120.0
72"		83.4	83.8	95.4	120.0
19–1/8"	63"	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
37"		120.0	120.0	120.0	120.0
42"		114.9	115.4	120.0	120.0
48"		100.6	101.0	115.0	120.0
54"		89.4	89.7	102.3	120.0
60"		80.5	80.8	92.0	119.2
66"		73.1	73.4	83.7	108.3
72"		67.0	67.3	76.7	99.3
19–1/8"	74–1/4"	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
37"		110.7	111.1	120.0	120.0
42"		97.5	97.9	111.6	120.0
48"		85.3	85.7	97.6	120.0
54"		75.9	76.1	86.8	112.3
60"		68.3	68.5	78.1	101.1
66"		62.1	62.3	71.0	91.9
72"		56.9	57.1	65.1	84.3
19–1/8"	76"	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
37"		108.2	108.6	120.0	120.0
42"		95.3	95.6	109.0	120.0
48"		83.4	83.7	95.4	120.0
54"		74.1	74.4	84.8	109.8
60"		66.7	66.9	76.3	98.8
66"		60.6	60.9	69.4	89.8
72"		55.6	55.8	63.6	82.3

DESIGN LOAD CAPACITY – PSF					
WINDOW DIMS.		ANCHORS TYPE			
WIDTH (W)	MULL SPAN	W4	B4	C4	M4
19–1/8"	84"	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
37"		97.9	98.2	111.9	120.0
42"		86.2	86.5	98.6	120.0
48"		75.4	75.7	86.3	111.7
54"		67.0	67.3	76.7	99.3
60"		60.3	60.6	69.0	89.4
66"		54.9	55.1	62.8	81.2
72"		50.3	50.5	57.5	74.5
19–1/8"	96"	120.0	120.0	120.0	120.0
26–1/2"		119.5	120.0	120.0	120.0
30"		105.6	106.0	120.0	120.0
37"		85.6	85.9	97.9	120.0
42"		75.4	75.7	86.3	111.7
48"		66.0	66.3	75.5	97.8
54"		58.7	58.9	67.1	86.9
60"		52.8	53.0	60.4	78.2
66"		48.0	48.2	54.9	71.1
72"		44.0	44.2	50.3	65.2
19–1/8"	108"	120.0	120.0	120.0	120.0
26–1/2"		106.3	106.7	120.0	120.0
30"		93.9	94.2	107.4	120.0
37"		76.1	76.4	87.1	112.7
42"		67.0	67.3	76.7	99.3
48"		58.7	58.9	67.1	86.9
54"		52.1	52.3	59.7	77.2
60"		46.9	47.1	53.7	69.5
19–1/8"	120"	120.0	120.0	120.0	120.0
26–1/2"		95.6	96.0	109.4	120.0
30"		84.5	84.8	96.6	120.0
37"		68.5	68.8	78.4	101.4
42"		60.3	60.6	69.0	89.4
48"		52.8	53.0	60.4	78.2
54"		46.9	47.1	53.7	69.5
57"		44.5	44.6	50.9	65.9
19–1/8"	132"	120.0	120.0	120.0	120.0
26–1/2"		86.9	87.3	99.5	120.0
30"		76.8	77.1	87.9	113.7
37"		62.3	62.5	71.2	92.2
42"		54.9	55.1	62.8	81.2
48"		48.0	48.2	54.9	71.1
52"		44.3	44.5	50.7	65.6
19–1/8"	144"	110.4	110.8	120.0	120.0
26–1/2"		79.7	80.0	91.2	118.0
30"		70.4	70.7	80.5	104.3
37"		57.1	57.3	65.3	84.5
42"		50.3	50.5	57.5	74.5
48"		44.0	44.2	50.3	65.2

ALL LOADS ARE EXT.(+)/INT.(–).

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

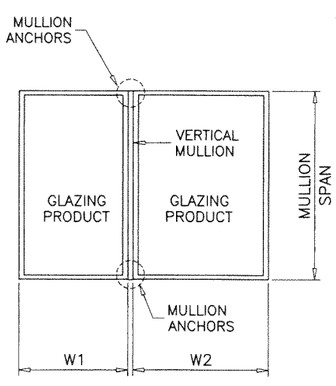
INTO CONCRETE AND BLOCKS = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

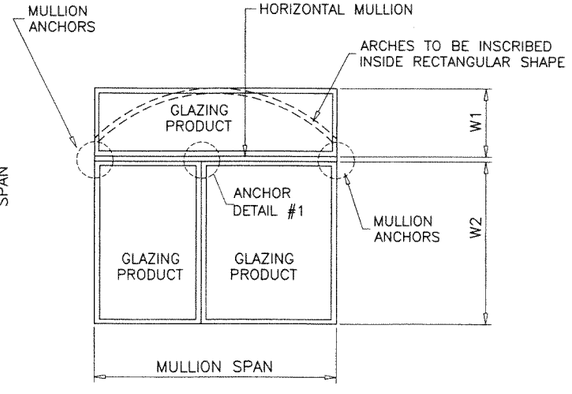
WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C–90 HOLLOW/FILLED NORMAL WEIGHT BLOCK AT JAMBS f'm = 2000 PSI MIN.

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)





TYPICAL MULLION ARRANGEMENTS

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

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 06 2026

JALAL FAROOQ LICENSE No. 61223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

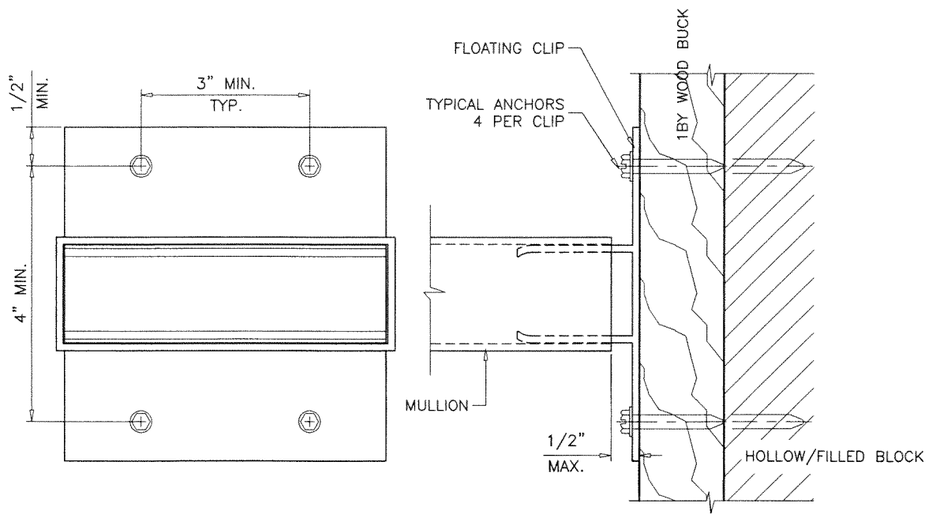
Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

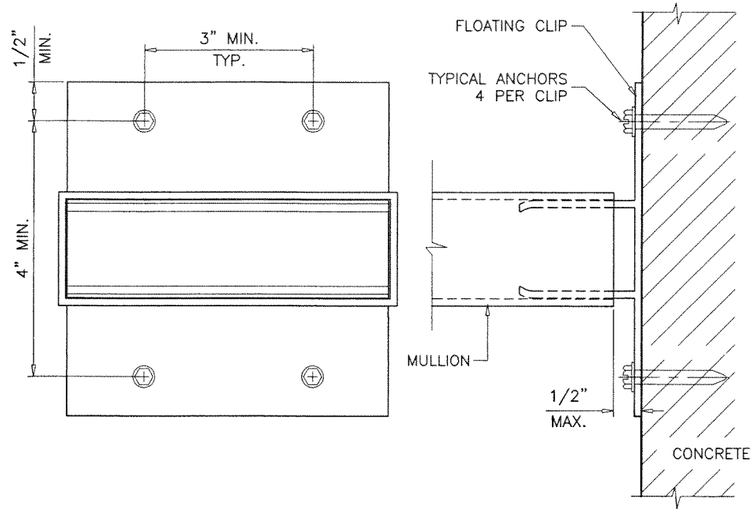
revisions:			
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

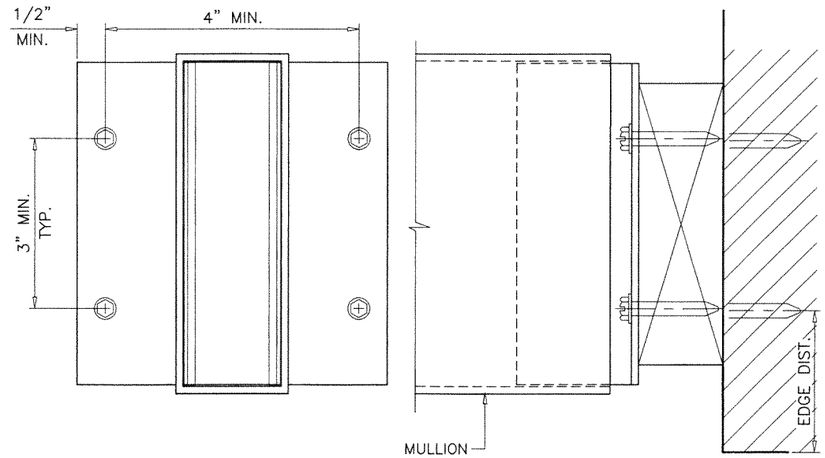
date: 04–22–22
scale: –
dr. by: TARIQ
chk. by:

drawing no. 22–13D

sheet 7 of 10



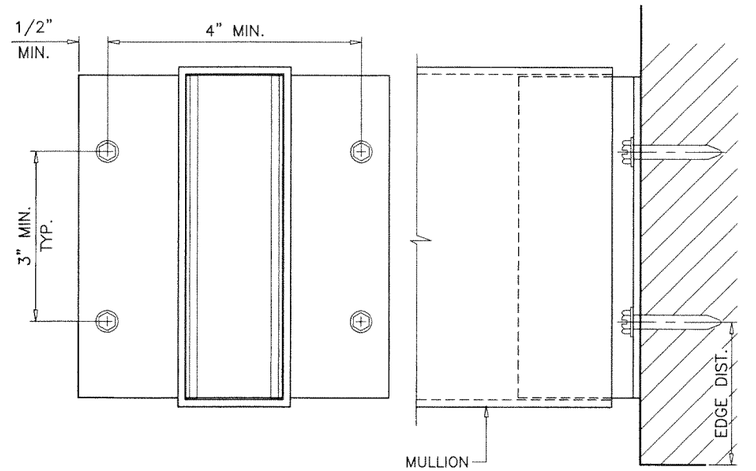




RECTANGULAR TUBE MULLIONS
TYPICAL ANCHORS TYPE 'B4A'

THRU 1BY BUCKS INTO BLOCKS OR DIRECTLY INTO BLOCKS

SEE SHEET 9 FOR ANCHOR CAPACITIES



RECTANGULAR TUBE MULLIONS
TYPICAL ANCHORS TYPE 'C4A'

DIRECTLY INTO CONCRETE

SEE SHEET 9 FOR ANCHOR CAPACITIES

NOTE:
FOR BAY MULLION ANCHORS,
SEE SHEET 10

PRODUCT REVISED
As complying with the Florida Building Code
NOA-No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami-Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 61223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
FBPE #3538
WWW.AFCENG.COM

MULLION\22-13D-VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba-V & V Windows
14150 N.W. 56th Court, Suite 600
Opa-Locka, FL. 33054
Tel. (305) 888-4151
www.vvwindows.com

revisions:			
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.26.26		NO CHANGE THIS SHEET

date: 04-22-22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. 22-13D

sheet 8 of 10

DESIGN LOAD CAPACITY – PSF			
WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	B4A	C4A
19–1/8"	38–3/8"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		120.0	120.0
48"		120.0	120.0
54"		120.0	120.0
60"		120.0	120.0
66"		120.0	120.0
72"		120.0	120.0
19–1/8"	50–5/8"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		120.0	120.0
48"		120.0	120.0
54"		120.0	120.0
60"		110.0	115.7
66"		100.0	105.2
72"		91.7	96.4
19–1/8"	63"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		120.0	120.0
48"		110.5	116.2
54"		98.2	103.3
60"		88.4	93.0
66"		80.3	84.5
72"		73.7	77.5
19–1/8"	74–1/4"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		107.1	112.7
48"		93.7	98.6
54"		83.3	87.6
60"		75.0	78.9
66"		68.2	71.7
72"		62.5	65.7
19–1/8"	76"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		118.8	120.0
42"		104.7	110.1
48"		91.6	96.3
54"		81.4	85.6
60"		73.3	77.1
66"		66.6	70.0
72"		61.1	64.2

DESIGN LOAD CAPACITY – PSF			
WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	B4A	C4A
19–1/8"	84"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		107.5	113.1
42"		94.7	99.6
48"		82.9	87.1
54"		73.7	77.5
60"		66.3	69.7
66"		60.3	63.4
72"		55.2	58.1
19–1/8"	96"	120.0	120.0
26–1/2"		120.0	120.0
30"		116.0	120.0
37"		94.1	98.9
42"		82.9	87.1
48"		72.5	76.3
54"		64.4	67.8
60"		58.0	61.0
66"		52.7	55.5
72"		48.3	50.8
19–1/8"	108"	120.0	120.0
26–1/2"		116.7	120.0
30"		103.1	108.4
37"		83.6	87.9
42"		73.7	77.5
48"		64.4	67.8
54"		57.3	60.2
60"		51.6	54.2
19–1/8"	120"	120.0	120.0
26–1/2"		105.1	110.5
30"		92.8	97.6
37"		75.2	79.1
42"		66.3	69.7
48"		58.0	61.0
54"		51.6	54.2
57"		48.8	51.4
19–1/8"	132"	120.0	120.0
26–1/2"		95.5	100.4
30"		84.4	88.7
37"		68.4	71.9
42"		60.3	63.4
48"		52.7	55.5
52"		48.7	51.2
19–1/8"	144"	120.0	120.0
26–1/2"		87.5	92.1
30"		77.3	81.3
37"		62.7	65.9
42"		55.2	58.1
48"		48.3	50.8

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

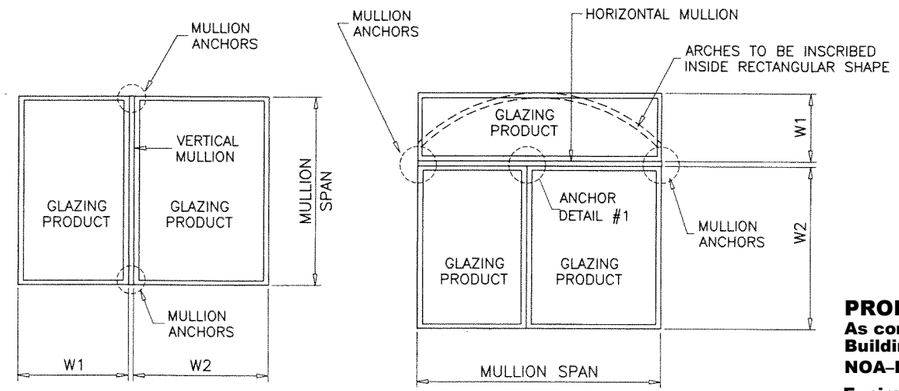
INTO CONCRETE AND BLOCKS = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.

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 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 8 FOR ANCHOR DETAILS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)



TYPICAL MULLION ARRANGEMENTS

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

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE NO. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

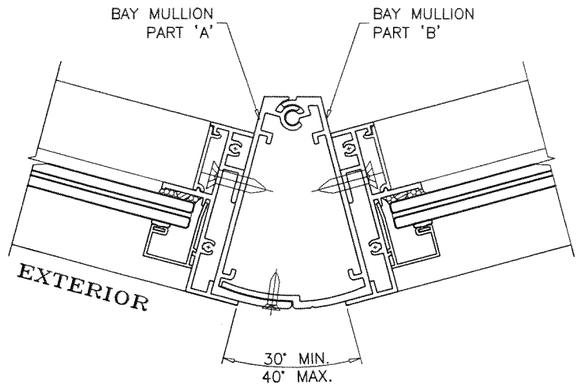
revisions:

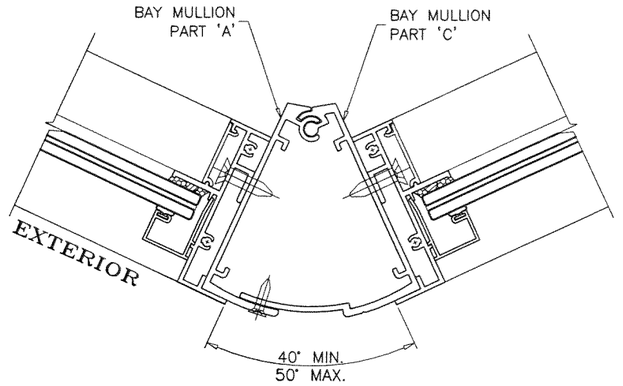
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

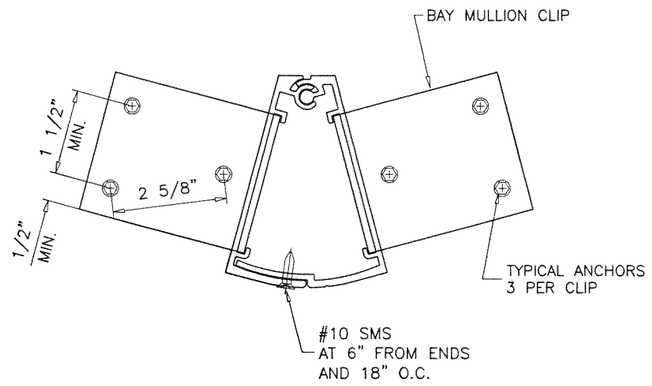
date: 04–22–22
scale: –
dr. by: TARIQ
chk. by:

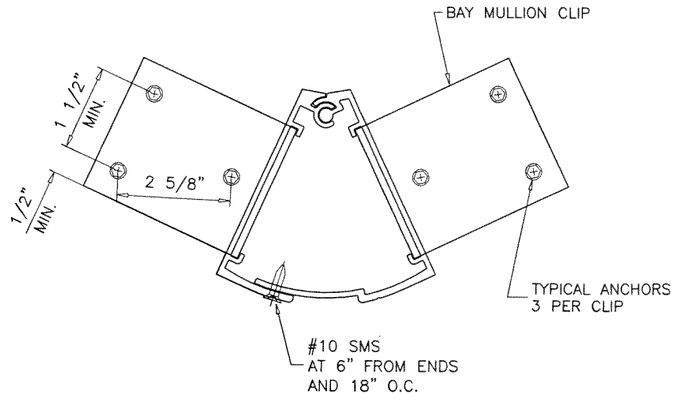
drawing no. 22–13D

sheet 9 of 10









TYPICAL ANCHORS:

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

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1–1/2" MIN. PENETRATION INTO WOOD

THRU 1BY BUCKS INTO CONCRETE
1–1/4" MIN. EMBED INTO CONCRETE

DIRECTLY INTO CONCRETE
1–1/4" MIN. EMBED INTO CONCRETE

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

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

TYPICAL EDGE DISTANCE

INTO CONCRETE = 2–1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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

ANCHORS MAY BE HEX OR FLAT HEAD

NOTE:
ANY ANCHOR CONDITION SHOWN HEREIN MAY COVER LOCATIONS AT HEAD OR SILL ENDS.

(INTERPOLATION BETWEEN WIDTHS OR SPANS ALLOWED)

TOTAL PRPERTIES
Ix = 2.923 IN^4
Sx = 1.461 IN^3

ANCHOR LOAD CAPACITY = ±70.0 PSF
FOR ALL BAY MULLION SIZES LISTED ON SHEET 3.

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 06 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

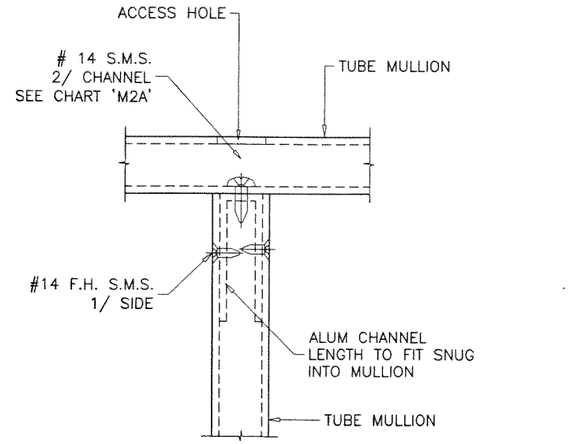
revisions:			
no	date	by	description
A	07.24.24		BAY MULLION ADDED
B	06.24.26		NO CHANGE THIS SHEET

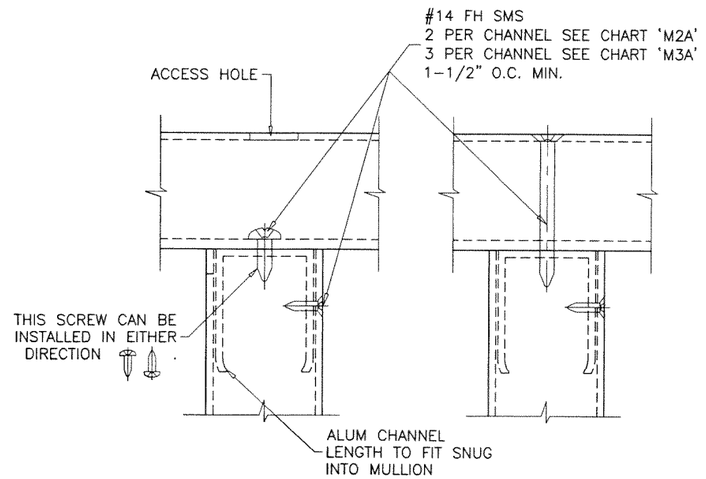
date: 04–22–22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no. 22–13D

DESIGN LOAD CAPACITY – PSF			
WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	M2A	M3A
19–1/8"	38–3/8"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		120.0	120.0
48"		120.0	120.0
54"		120.0	120.0
60"		112.1	120.0
66"		101.9	120.0
72"		93.4	120.0
19–1/8"	50–5/8"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		120.0	120.0
42"		120.0	120.0
48"		106.2	120.0
54"		94.4	120.0
60"		85.0	120.0
66"		77.2	115.8
72"		70.8	106.2
19–1/8"	63"	120.0	120.0
26–1/2"		120.0	120.0
30"		120.0	120.0
37"		110.7	120.0
42"		97.5	120.0
48"		85.3	120.0
54"		75.9	113.8
60"		68.3	102.4
66"		62.1	93.1
72"		56.9	85.3
19–1/8"	74–1/4"	120.0	120.0
26–1/2"		120.0	120.0
30"		115.8	120.0
37"		93.9	120.0
42"		82.7	120.0
48"		72.4	108.6
54"		64.4	96.5
60"		57.9	86.9
66"		52.7	79.0
72"		48.3	72.4
19–1/8"	76"	120.0	120.0
26–1/2"		120.0	120.0
30"		113.2	120.0
37"		91.8	120.0
42"		80.8	120.0
48"		70.7	106.1
54"		62.9	94.3
60"		56.6	84.9
66"		51.4	77.2
72"		47.2	70.7

DESIGN LOAD CAPACITY – PSF			
WINDOW DIMS.		ANCHORS TYPE	
WIDTH (W)	MULL SPAN	M2A	M3A
19–1/8"	84"	120.0	120.0
26–1/2"		115.9	120.0
30"		102.4	120.0
37"		83.0	120.0
42"		73.1	109.7
48"		64.0	96.0
54"		56.9	85.3
60"		51.2	76.8
66"		46.5	69.8
72"		42.7	64.0
19–1/8"	96"	120.0	120.0
26–1/2"		101.4	120.0
30"		89.6	120.0
37"		72.6	109.0
42"		64.0	96.0
48"		56.0	84.0
54"		49.8	74.7
60"		44.8	67.2
66"		40.7	61.1
72"		37.3	56.0
19–1/8"	108"	120.0	120.0
26–1/2"		90.2	120.0
30"		79.6	119.5
37"		64.6	96.9
42"		56.9	85.3
48"		49.8	74.7
54"		44.2	66.4
60"		39.8	59.7
19–1/8"	120"	112.4	120.0
26–1/2"		81.1	120.0
30"		71.7	107.5
37"		58.1	87.2
42"		51.2	76.8
48"		44.8	67.2
54"		39.8	59.7
57"		37.7	56.6
19–1/8"	132"	102.2	120.0
26–1/2"		73.8	110.7
30"		65.2	97.7
37"		52.8	79.3
42"		46.5	69.8
48"		40.7	61.1
52"		37.6	56.4
19–1/8"	144"	93.7	120.0
26–1/2"		67.6	101.4
30"		59.7	89.6
37"		48.4	72.6
42"		42.7	64.0
48"		37.3	56.0





ANCHOR DETAIL #1

METAL TO METAL CONNECTION

PRODUCT REVISED
As complying with the Florida Building Code
NOA–No. 26-0707.06
Expiration Date: 08/31/2028
By: Manuel Perez
Miami–Dade Product Control

JUL 0 6 2026

JALAL FAROOQ LICENSE No. 81223 STATE OF FLORIDA PROFESSIONAL ENGINEER

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
WWW.AFCENG.COM
FBPE #3538

MULLION\22–13D–VV

EXTRUDED ALUMINUM CLIPPED MULLIONS

Labrador & Fundora Corp.
dba–V & V Windows
14150 N.W. 56th Court, Suite 600
Opa–Locka, FL. 33054
Tel. (305) 888–4151
www.vvwindows.com

revisions:			
no	date	by	description
A	07.24.24		NO CHANGE THIS SHEET
B	06.24.26		NO CHANGE THIS SHEET

date: 04–22–22
scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

drawing no.
22–13D

sheet 10 of 10