



MIAMI-DADE COUNTY, FLORIDA  
 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](http://www.miamidade.gov/economy)

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
 BOARD AND CODE ADMINISTRATION DIVISION  
**NOTICE OF ACCEPTANCE (NOA)**

**Custom Window Systems, Inc.**  
 1900 SW 44<sup>th</sup> Avenue  
 Ocala, FL 34474

**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 w/ and w/o Steel Reinforcement – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **CWS-1259**, titled “Aluminum Tube Mullions” sheets 1 through 10 of 10, dated 11/17/23, with revision **A** dated 11/19/25, prepared by manufacturer, signed and sealed by Thomas J. Sotos, 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, Medley, FL, 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.

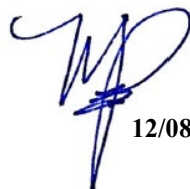
**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**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 and supersedes NOA No. 23-1017.11** and consists of this page 1 and evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.

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



  
 12/08/25

**NOA No. 25-1201.03**  
**Expiration Date: May 30, 2028**  
**Approval Date: December 18, 2025**  
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED


**1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.  
*(Submitted under NOA's No. 02-0501.05 and 95-1212.09)*
2. Drawing No. **LAW-ML-1001**, titled "Aluminum Tube Mullions", sheets 1 through 10 of 10, dated 04/27/10, with revision **G** dated 10/13/23, prepared by manufacturer, signed and sealed by Thomas J. Sotos, P.E.  
*(Submitted under NOA No. 23-1017.11)*

**B. TESTS**

1. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of 108-1/2" span aluminum 2" x 4" tube mullion with no reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-18-6036**, dated 05/04/18, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 18-0529.03)*
2. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94.  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of 108-1/2" span aluminum 2" x 4" tube mullions with no reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-18-6037**, dated 05/04/18, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 18-0529.03)*
3. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of 120" horizontal span and 74" vertical span, 2" x 6" aluminum tube mullions with C4 x 4.5 steel channel reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-18-6038**, dated 05/22/18, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 18-0529.03)*
4. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94.  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of 120" horizontal span and 74" vertical span, 2" x 6" aluminum tube mullions with C4 x 4.5 steel channel reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-18-6040**, dated 05/22/18, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 18-0529.03)*


  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 25-1201.03  
Expiration Date: May 30, 2028  
Approval Date: December 18, 2025

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**B. TESTS (CONTINUED)**

5. Tensile Test report on 0.10" thick wall aluminum tube mullion, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-02-T071**, dated 09/16/02, tested per **ASTM E8**, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 02-0501.05)*
6. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of 120" span aluminum tube mullions with C4 x 4.5 steel channel reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-02-1714**, dated 08/27/02, signed and sealed by Rafael E. Droz-Seda, P.E. *(Submitted under NOA No. 02-0501.05)*
7. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94.  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of 120" span aluminum tube mullion with C4 x 4.5 steel channel reinforcement, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-02-1716**, dated 8/27/02, signed and sealed by Rafael E. Droz-Seda, P.E. *(Submitted under NOA No. 02-0501.05)*
8. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94.  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94 along with marked-up drawings and installation diagram of an aluminum sliding glass door, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-02-1718**, dated 8/27/02, signed and sealed by Rafael E. Droz-Seda, P.E. *(Submitted under NOA No. 02-0501.05)*
9. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of an aluminum sliding glass door, prepared by Hurricane Engineering & Testing, Inc., Test Report No. **HETI-02-1717**, dated 08/27/02, signed and sealed by Rafael E. Droz-Seda, P.E. *(Submitted under NOA No. 02-0501.05)*
10. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of an aluminum sliding glass door, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-1376**, dated 01/31/96, signed and sealed by Gilbert Diamond, P.E. *(Submitted under NOA No. 95-1212.09)*
11. Test report on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94 along with marked-up drawings and installation diagram of two aluminum horizontal sliding windows mullied at top with a 90" span mullion and a 45" high fixed window on top, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-1383**, dated 02/13/96, signed and sealed by Gilbert Diamond, P.E. *(Submitted under NOA No. 95-1212.09)*

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 25-1201.03  
Expiration Date: May 30, 2028  
Approval Date: December 18, 2025

**Custom Window Systems, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**C. CALCULATIONS**

1. Anchor verification calculations and structural analysis, complying with FBC 6<sup>th</sup> Edition (2017), prepared by manufacturer, dated 05/24/18, signed and sealed by Thomas J. Sotos, P.E.  
*(Submitted under NOA No. 18-0529.03)*

**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 8<sup>th</sup> Edition (2023)**, dated October 16, 2023, issued by manufacturer, signed and sealed by Thomas J. Sotos, P.E.  
*(Submitted under NOA No. 23-1017.11)*
2. Statement letter of no financial interest, dated October 16, 2023, issued by the manufacturer, signed and sealed by Thomas J. Sotos, P.E.  
*(Submitted under NOA No. 23-1017.11)*
3. Laboratory compliance letter for Test Reports No.: **FTL-3619, FTL-3620, FTL-3621, FTL-3622, FTL-3623, FTL-3624, FTL-3625, FTL-3626, FTL-3627**, all dated 11/27/02, issued by Fenestration Testing Laboratory, Inc., and signed and sealed by Joseph C. Chan, P.E.  
*(Submitted under NOA No. 03-0128.06)*
4. Laboratory compliance letter for Test Reports No. **HETI-02-1714, HETI-02-1716, HETI-02-1717, HETI-02-1718**, dated 8/27/02 and **HETI-02-T071**, dated 09/16/02, all issued by Hurricane Engineering & Testing, Inc., signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 02-0501.05)*
5. Laboratory compliance letter for Test Reports No. **FTL-1376**, dated 01/31/96, and **FTL-1383**, dated 02/13/96, both issued by Fenestration Testing Laboratory, Inc., signed and sealed by Gilbert Diamond, P.E.  
*(Submitted under NOA No. 02-0501.05)*

**G. OTHERS**

1. Notice of Acceptance No. **23-0404.01** issued to Lawson Industries, Inc. for their Clipped, Extruded Aluminum Tube Mullion w/ and w/o Steel Reinforcement – L.M.I., approved on 05/11/23 and expiring on 05/30/28.

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 25-1201.03  
Expiration Date: May 30, 2028  
Approval Date: December 18, 2025

**Custom Window Systems, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**2. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **CWS-1259**, titled “Aluminum Tube Mullions”, sheets 1 through 10 of 10, dated 11/17/23, with revision **A** dated 11/19/25, prepared by manufacturer, signed and sealed by Thomas J. Sotos, P.E.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. None.

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**


1. None.

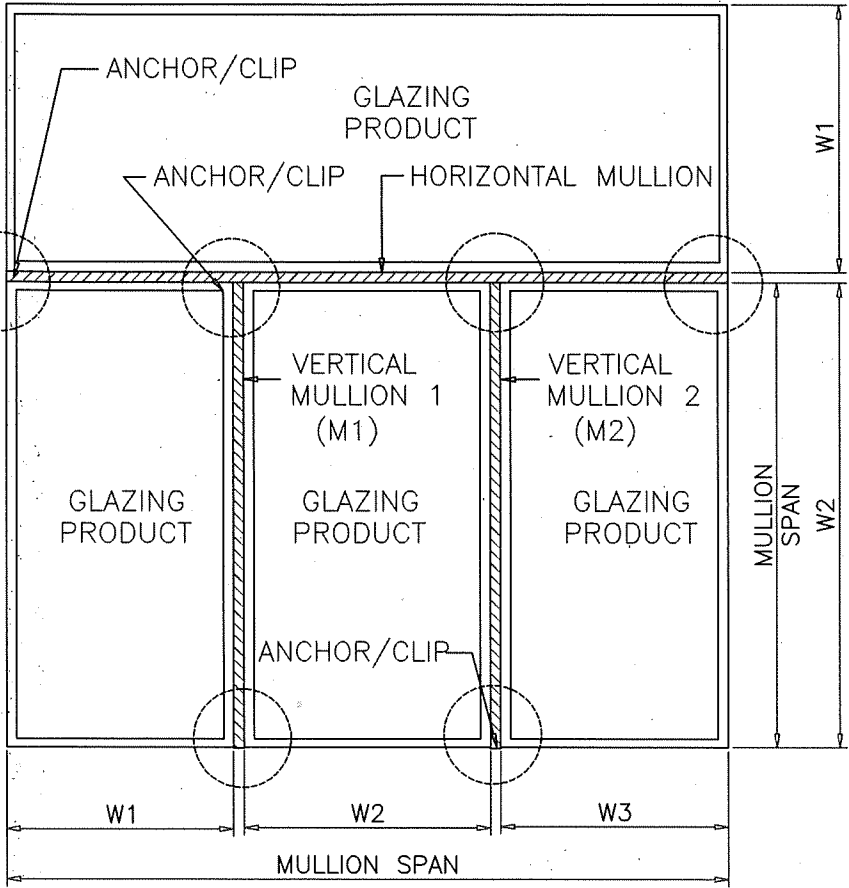
**F. STATEMENTS**

1. Statement letter of conformance, complying with **FBC 8<sup>th</sup> Edition (2023)**, dated November 20, 2025, issued by the manufacturer, signed and sealed by Thomas J. Sotos, P.E.
2. Statement letter of no financial interest, dated November 20, 2025, issued by the manufacturer, signed and sealed by Thomas J. Sotos, P.E.
3. Bill of Sales, Assignment and Assumption Agreement, dated November 28, 2023, signed by Mr. Harold Bailey, President, Lawson Industries, Inc. and Mr. Nicholas Cross, President, CWS-SF, LLC.
4. Letter from manufacturer, dated June 5, 2025, confirming that Custom Window Systems, Inc. is a wholly owned subsidiary of Pella Corporation, signed by Chantel Kramme, Secretary, Custom Window Systems, Inc.
5. Letter from owners of existing NOA No. **23-1017.11**, dated June 10, 2025, stating that they have sold all assets to the applicant, that they no longer manufacture the product and relinquish their rights to the current NOA, signed by Mr. Harold Bailey, President, Lawson Industries, Inc.

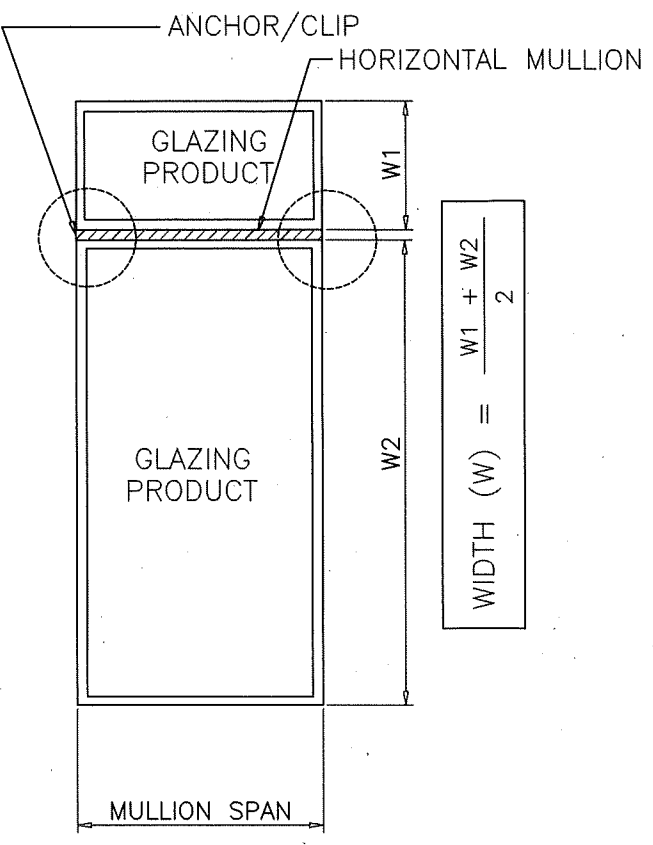
**G. OTHERS**

1. Notice of Acceptance No. **23-1017.11** issued to Lawson Industries, Inc. for their Clipped, Extruded Aluminum Tube Mullion w/ and w/o Steel Reinforcement – L.M.I., approved on 11/16/23 and expiring on 05/30/28.

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 25-1201.03  
Expiration Date: May 30, 2028  
Approval Date: December 18, 2025

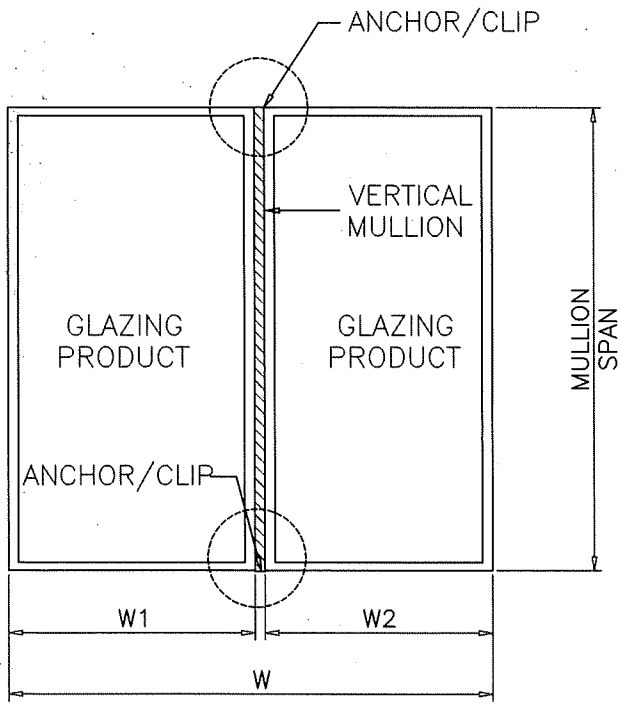


$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

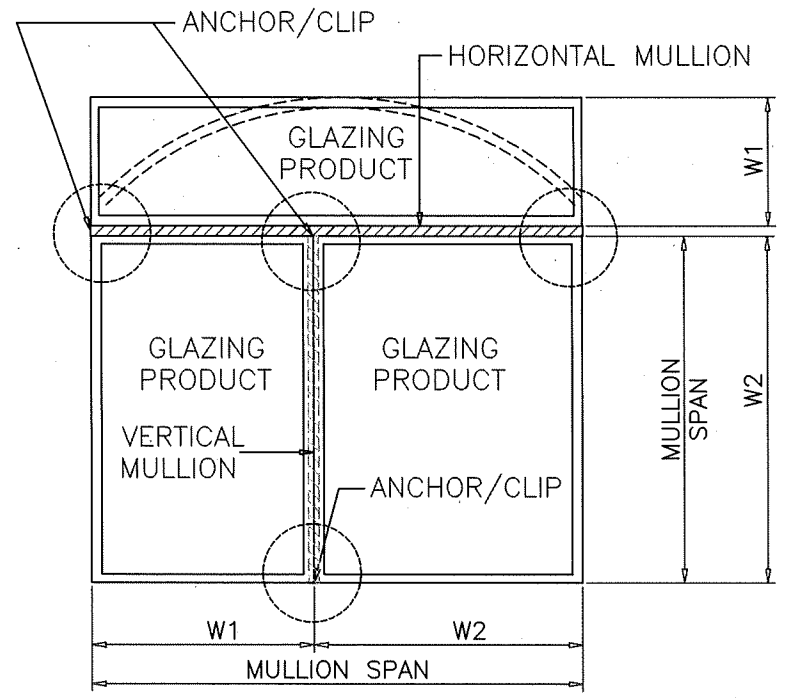


$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

$$\text{WIDTH (W)} = (M1) \frac{W1 + W2}{2} + (M2) \frac{W2 + W3}{2}$$



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



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

TYPICAL MULLION ARRANGEMENTS

THESE MULLIONS ARE RATED FOR LARGE MISSILE IMPACT AND CAN BE USED WITH ALL CWS'S MIAMI-DADE COUNTY APPROVED IMPACT AND NON-IMPACT PRODUCTS.

RECTANGULAR ALUMINUM TUBE MULLIONS USING MULLION PROPERTIES ONLY

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (2023-8th Edition) INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
2. ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE FLORIDA BLDG. CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.
3. MULLIONS ARE APPROVED FOR IMPACT AND NON-IMPACT APPLICATIONS, INCLUDING WINDOWS, DOORS OR COMBINATIONS MAY BE MULLED.
4. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
5. ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
6. ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
7. A LOAD DURATION INCREASE IN ALLOWABLE STRESS IS USED IN DESIGN OF WOOD ANCHORS ONLY.
8. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL OR METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BLDG. CODE - SECTION 2003.8.4.

MULLION & CLIP NOTES:

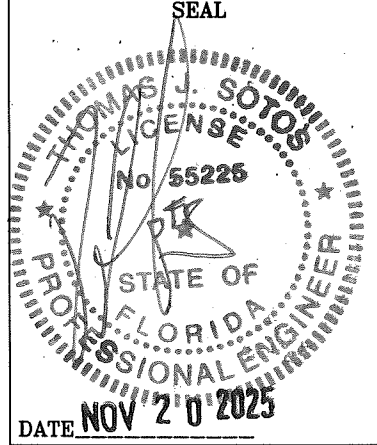
1. FOR MULLIONS WITHOUT REINFORCEMENT REFER TO SHEET 2 OF 10 FOR DETAILS AND NOTES.  
\* REFER TO SHEET 3 OF 10 FOR MAX. MULL DESIGN PRESSURE CHARTS
2. FOR MULLIONS WITH STEEL REINFORCEMENT REFER TO SHEET 4 OF 10 FOR DETAILS AND NOTES.  
\* REFER TO SHEET 5 OF 10 FOR MAX. MULL DESIGN PRESSURE CHARTS
3. FOR CLIP TYPES AND ANCHOR CONDITIONS REFER TO SHEETS 6, 7, 8, & 9 OF 10 FOR DETAILS AND NOTES.  
\* REFER TO SHEET 10 OF 10 FOR MAX. ANCHOR DESIGN PRESSURE CHARTS

**CWS**  
1900 SW 44TH AVE.  
OCALA, FLORIDA 34474  
WWW.CWS.CC

ALUMINUM TUBE MULLIONS

NO.	DESCRIPTION	BY	DATE
A	Revises NDA # 23-101711	N.E.	11/19/25

THOMAS J. SOTOS  
PROFESSIONAL ENGINEER  
FL LIC. # 55225



SHEET DESCRIPTION:  
TYPICAL MULL ARRANGEMENTS, AND GENERAL NOTES

DRAWN BY: NELSON ERAZO DATE: 11/17/2023

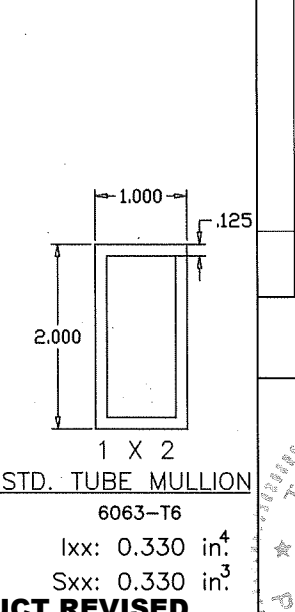
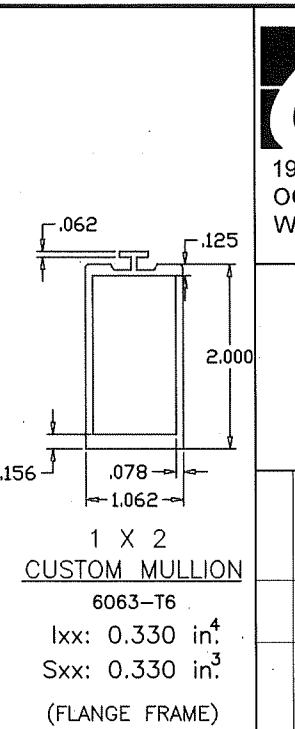
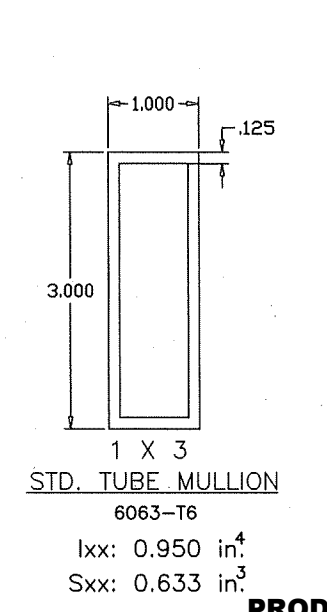
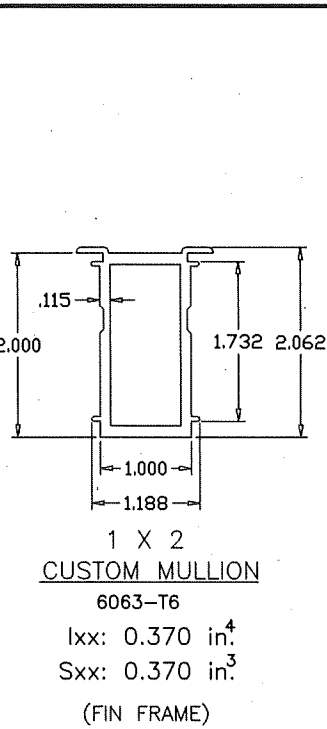
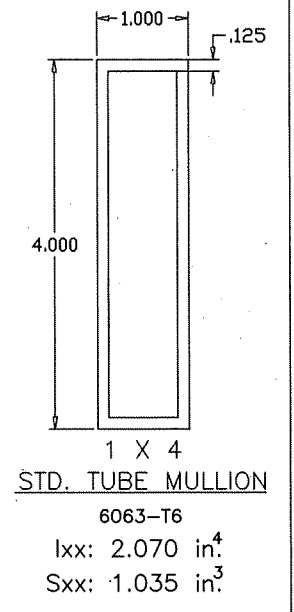
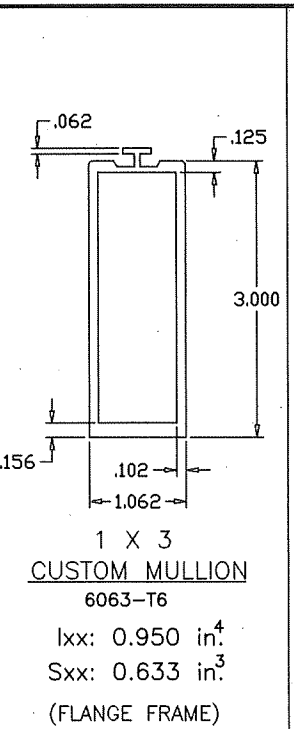
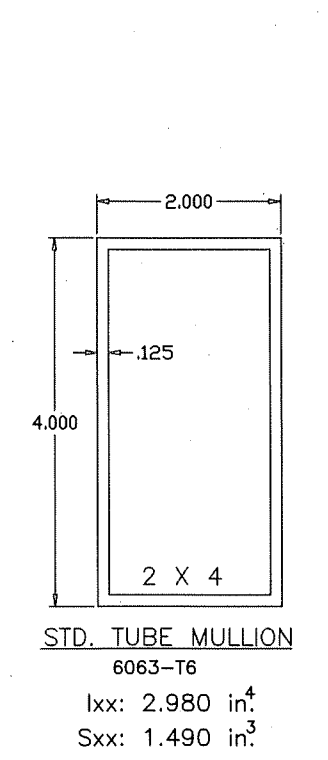
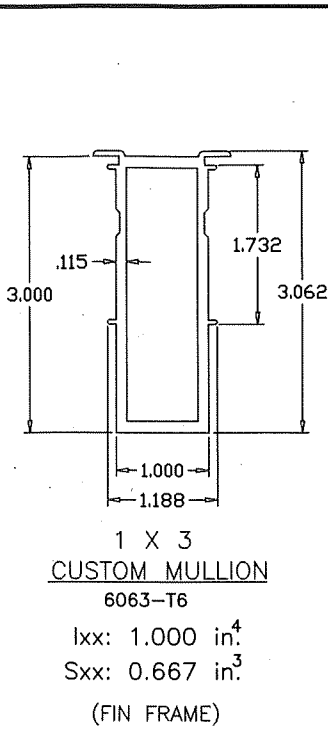
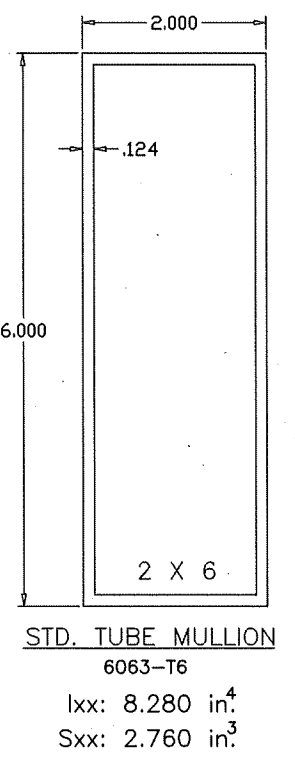
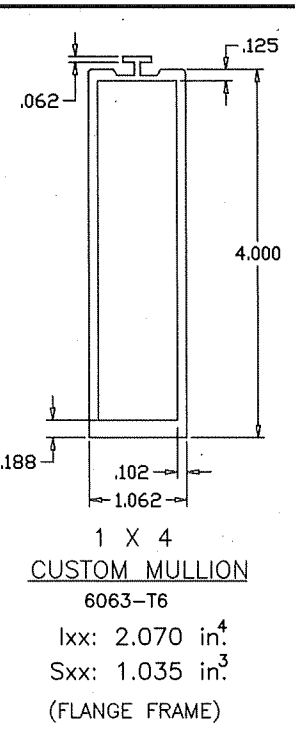
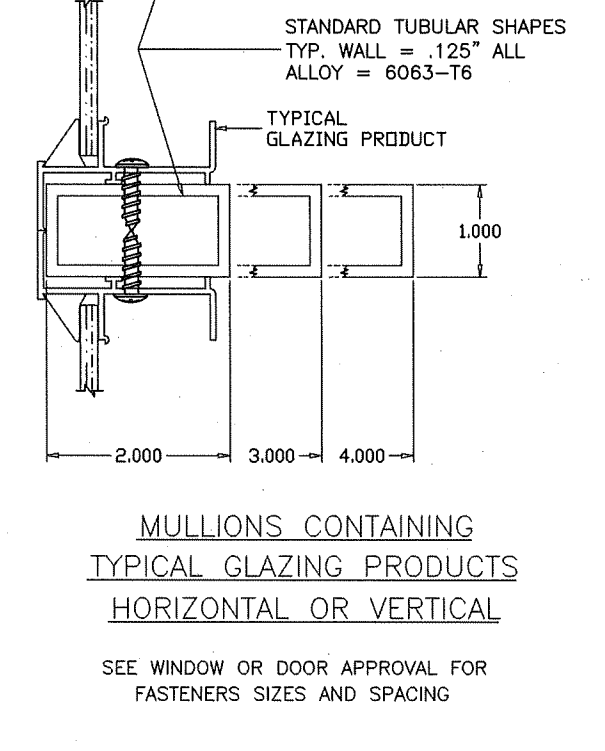
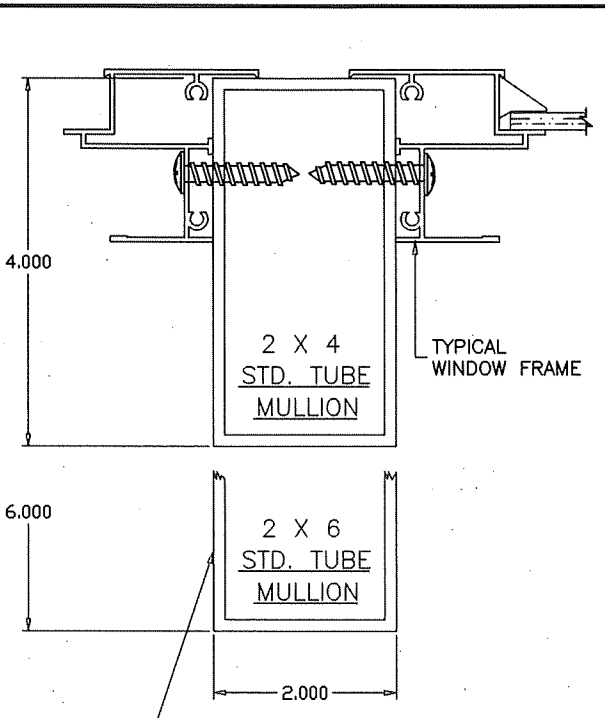
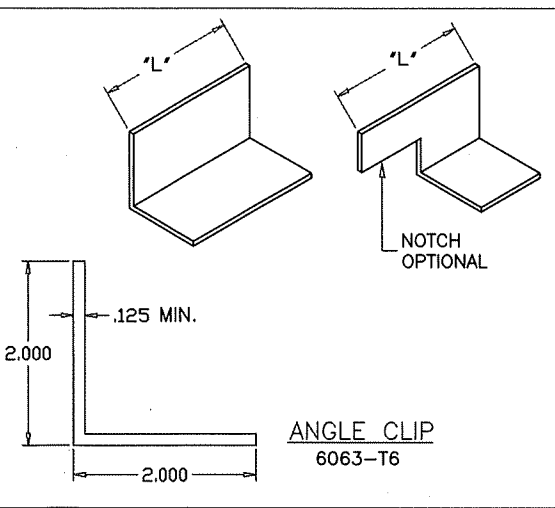
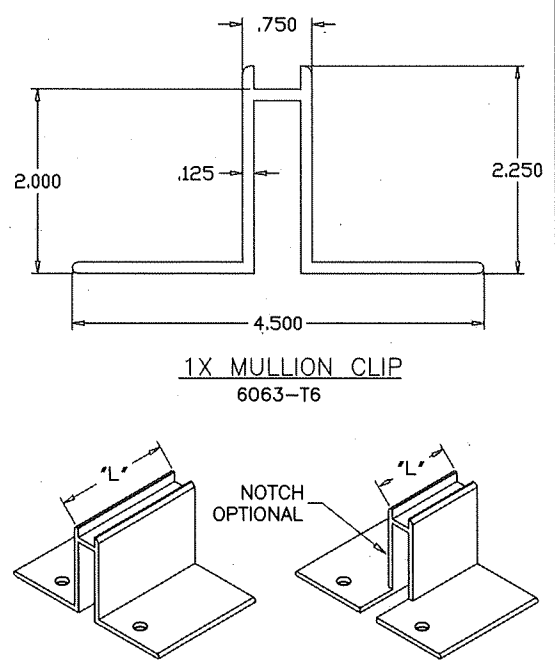
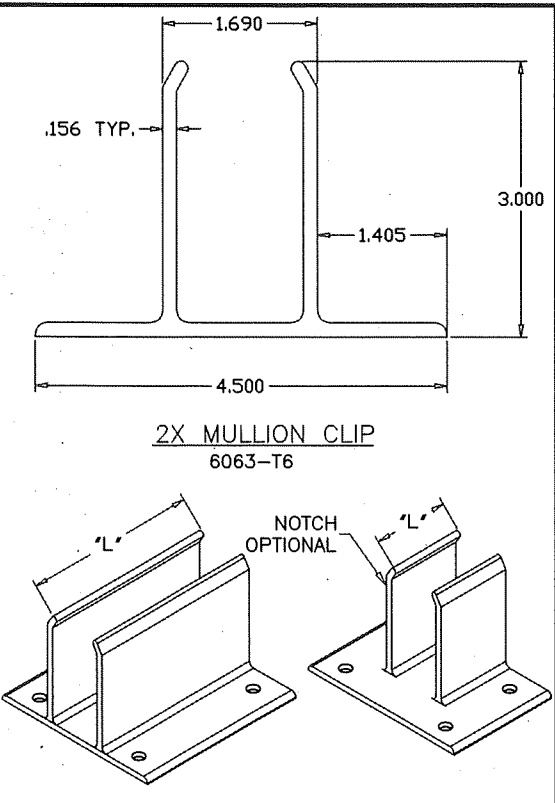
REV. BY: N.E. DATE: 11/19/2025

DWG #: CWS-1259 REV #: A

SCALE: AS NOTED SHEET 1 OF 10

**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **25-1201.03**  
Expiration Date: **05/30/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control

**ALUMINUM TUBE MULLIONS**



CLIP LENGTH	
MULL	"L"
1 X 2	1.688"
1 X 3	2.688"
1 X 4	3.688"
2 X 4	3.688"
2 X 6	5.688"

1. ALL CLIPS AND ANGLES ARE TO FIT SNUG INTO TUBE MULLIONS.
2. WHERE ANGLES ARE NOT FIT SNUG INTO TUBE MULLIONS, SEE OPTIONAL ANCHOR DETAIL AT SHEET 9 OF 10.

- INSTRUCTIONS:**  
USE CHARTS AND GRAPHS AS FOLLOWS.
- STEP 1** DETERMINE DESIGN LOAD REQUIRED FOR PARTICULAR OPENING.
  - STEP 2** USE APPROVED GLAZING PRODUCTS MEETING ABOVE LOAD REQUIREMENTS.
  - STEP 3** USE CONNECTION TO MULLION AS PER PRODUCT APPROVAL.
  - STEP 4** SPECIFY MAXIMUM SHIM SPACING.
  - STEP 5** USING CHARTS ON SHEET 3 OF 10 SELECT MULLION SIZE WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
  - STEP 6** USING ANCHOR TYPES ON SHEET 6 THRU 9 AND ANCHOR CHARTS ON SHEET 9, SELECT ANCHOR TYPE WITH DESIGN RATING MORE THAN THE DESIGN LOADS SPECIFIED IN STEP 1 ABOVE.

**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **25-1201.03**  
Expiration Date: **05/30/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control

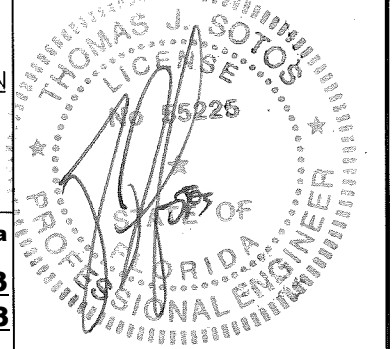
**RECTANGULAR ALUMINUM TUBE MULLIONS  
USING MULLION PROPERTIES ONLY**

THESE MULLIONS ARE RATED FOR LARGE MISSILE IMPACT AND CAN BE USED WITH ALL CWS'S MIAMI-DADE COUNTY APPROVED IMPACT AND NON-IMPACT PRODUCTS.

- NOTES:**
1. REFER TO THE GENERAL NOTES ON SHEET 1 OF 10 FOR BUILDING CODE COMPLIANCE.
  2. MULLIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY.
  3. REFER TO SHEET 1 OF 10 FOR TYPICAL MULLION ARRANGEMENTS OR STACK CONFIGURATIONS.

NO.	DESCRIPTION	BY	DATE
A	Revises NDA # 23-1017.11	N.E.	11/19/25

**THOMAS J. SOTOS**  
PROFESSIONAL ENGINEER  
FL LIC. # 55225



DATE **NOV 20 2025**

SHEET DESCRIPTION:  
**MULL AND CLIPS CROSS SECTIONS, AND GENERAL NOTES**

DRAWN BY: NELSON ERAZO  
DATE: 11/17/2023

REV. BY: N.E.  
DATE: 11/19/2025

DWG #: CWS-1259  
REV #: A

SCALE: AS NOTED  
SHEET 2 OF 10







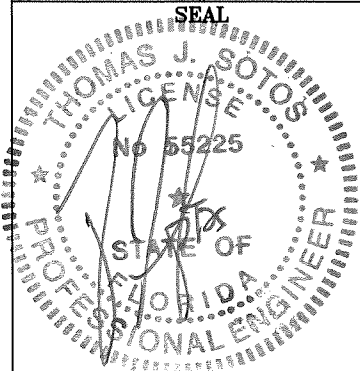
1900 SW 44TH AVE.  
OCALA, FLORIDA 34474  
WWW.CWS.CC

		STEEL REINFORCED TUBE MULLIONS						STEEL REINFORCED TUBE MULLIONS						STEEL REINFORCED TUBE MULLIONS			
Width (w)	MULL SPAN	1 X 3	1 X 4	2 X 4	2 X 6	Width (w)	MULL SPAN	1 X 3	1 X 4	2 X 4	2 X 6	Width (w)	MULL SPAN	1 X 3	1 X 4	2 X 4	2 X 6
18	38- 3/8"	125.0	125.0	125.0	125.0	18	74-1/4"	125.0	125.0	125.0	125.0	18	120"	44.0	95.7	125.0	125.0
24		125.0	125.0	125.0	125.0	24		139.5	125.0	125.0	125.0	24		33.0	71.8	116.6	125.0
30		125.0	125.0	125.0	125.0	30		111.6	125.0	125.0	125.0	30		26.4	57.4	93.2	125.0
36		125.0	125.0	125.0	125.0	36		93.0	125.0	125.0	125.0	36		22.0	47.8	77.7	125.0
42		125.0	125.0	125.0	125.0	42		79.7	125.0	125.0	125.0	42		18.9	41.0	66.6	125.0
48		125.0	125.0	125.0	125.0	48		69.7	125.0	125.0	125.0	48		16.5	35.9	58.3	149.7
54		125.0	125.0	125.0	125.0	54		62.0	134.6	125.0	125.0	54		-	31.9	51.8	133.1
60		125.0	125.0	125.0	125.0	60		55.8	121.2	125.0	125.0	60		-	28.7	46.6	119.8
66		125.0	125.0	125.0	125.0	66		50.7	110.1	125.0	125.0	66		-	26.1	42.4	108.9
72		125.0	125.0	125.0	125.0	72		46.5	101.0	125.0	125.0	72		-	23.9	38.9	99.8
78	125.0	125.0	125.0	125.0	78	42.9	93.2	125.0	125.0	78	-	22.1	35.9	92.1			
18	50-5/8"	125.0	125.0	125.0	125.0	18	84"	128.4	125.0	125.0	125.0	18	132"	33.1	71.9	116.8	125.0
24		125.0	125.0	125.0	125.0	24		96.3	125.0	125.0	125.0	24		24.8	53.9	87.6	125.0
30		125.0	125.0	125.0	125.0	30		77.1	125.0	125.0	125.0	30		19.9	43.1	70.1	125.0
36		125.0	125.0	125.0	125.0	36		64.2	139.5	125.0	125.0	36		16.5	35.9	58.4	125.0
42		125.0	125.0	125.0	125.0	42		55.0	119.5	125.0	125.0	42		-	30.8	50.0	128.5
48		125.0	125.0	125.0	125.0	48		48.2	104.6	125.0	125.0	48		-	27.0	43.8	112.5
54		125.0	125.0	125.0	125.0	54		42.8	93.0	125.0	125.0	54		-	24.0	38.9	100.0
60		125.0	125.0	125.0	125.0	60		38.5	83.7	135.9	125.0	60		-	21.6	35.0	90.0
66		147.7	125.0	125.0	125.0	66		35.0	76.1	123.6	125.0	66		-	19.6	31.8	81.8
72		135.3	125.0	125.0	125.0	72		32.1	69.7	113.3	125.0	72		-	18.0	29.2	75.0
78	124.9	125.0	125.0	125.0	78	29.6	64.4	104.6	125.0	78	-	16.6	26.9	69.2			
18	57"	125.0	125.0	125.0	125.0	18	96"	86.0	125.0	125.0	125.0	18	144"	25.5	55.4	89.9	125.0
24		125.0	125.0	125.0	125.0	24		64.5	140.1	125.0	125.0	24		19.1	41.5	67.5	125.0
30		125.0	125.0	125.0	125.0	30		51.6	112.1	125.0	125.0	30		15.3	33.2	54.0	138.6
36		125.0	125.0	125.0	125.0	36		43.0	93.4	125.0	125.0	36		-	27.7	45.0	115.5
42		125.0	125.0	125.0	125.0	42		36.9	80.1	130.1	125.0	42		-	23.7	38.5	99.0
48		125.0	125.0	125.0	125.0	48		32.3	70.1	113.8	125.0	48		-	20.8	33.7	86.6
54		137.0	125.0	125.0	125.0	54		28.7	62.3	101.2	125.0	54		-	18.5	30.0	77.0
60		123.3	125.0	125.0	125.0	60		25.8	56.1	91.1	125.0	60		-	16.6	27.0	69.3
66		112.1	125.0	125.0	125.0	66		23.5	51.0	82.8	125.0	66		-	15.1	24.5	63.0
72		102.8	125.0	125.0	125.0	72		21.5	46.7	75.9	125.0	72		-	-	22.5	57.8
78	94.8	125.0	125.0	125.0	78	19.9	43.1	70.0	125.0	78	-	-	20.8	53.3			
18	63"	125.0	125.0	125.0	125.0	18	108"	60.4	131.2	125.0	125.0	18	150"	22.6	49.0	79.6	125.0
24		125.0	125.0	125.0	125.0	24		45.3	98.4	125.0	125.0	24		16.9	36.7	59.7	125.0
30		125.0	125.0	125.0	125.0	30		36.3	78.7	127.9	125.0	30		-	29.4	47.7	122.6
36		125.0	125.0	125.0	125.0	36		30.2	65.6	106.6	125.0	36		-	24.5	39.8	102.2
42		130.5	125.0	125.0	125.0	42		25.9	56.2	91.4	125.0	42		-	21.0	34.1	87.6
48		114.2	125.0	125.0	125.0	48		22.7	49.2	79.9	125.0	48		-	18.4	29.8	76.6
54		101.5	125.0	125.0	125.0	54		20.1	43.7	71.1	125.0	54		-	16.3	26.5	68.1
60		91.3	125.0	125.0	125.0	60		18.1	39.4	64.0	125.0	60		-	-	23.9	61.3
66		83.0	125.0	125.0	125.0	66		16.5	35.8	58.1	147.0	66		-	-	21.7	55.7
72		76.1	142.4	125.0	125.0	72		15.1	32.8	53.3	134.8	72		-	-	19.9	51.1
78	70.2	131.4	125.0	125.0	78	-	30.3	49.2	124.4	78	-	-	18.4	47.2			

ALUMINUM TUBE MULLIONS

NO.	DESCRIPTION	BY	DATE
A	Revises NDA # 23-1017.11	N.E.	11/19/25

THOMAS J. SOTOS  
PROFESSIONAL ENGINEER  
FL LIC. # 55225



DATE **NOV 20 2025**

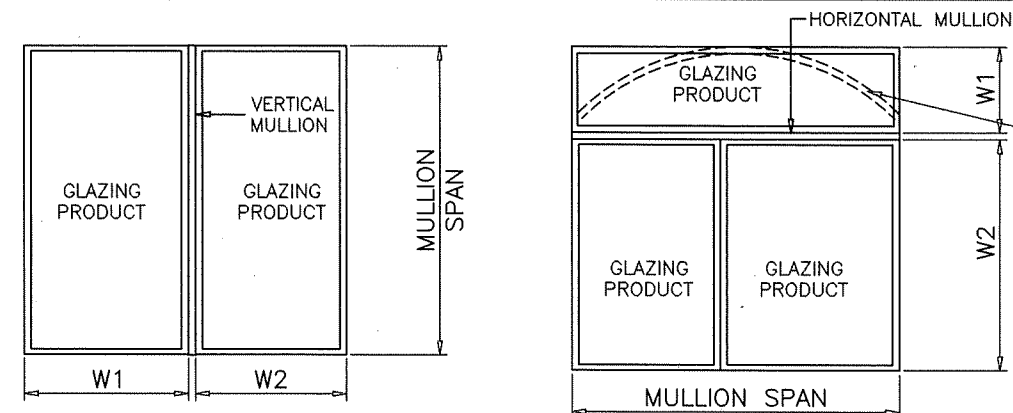
SHEET DESCRIPTION:  
REINFORCED TUBE MULLIONS  
DESIGN PRESSURE CHARTS  
AND GENERAL NOTES

DRAWN BY: NELSON ERAZO DATE: 11/17/2023

REV. BY: N.E. DATE: 11/19/2025

DWG #: CWS-1259 REV #: A

SCALE: AS NOTED SHEET 5 OF 10



TYPICAL MULLION ARRANGEMENTS

ARCHES TO BE INSCRIBED INSIDE RECTANGULAR SHAPE  
NOTE: MULLIONS RATED IN THESE CHARTS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY. (INTERPOLATION BETWEEN WIDTHS ALLOWED)

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

**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **25-1201.03**  
Expiration Date: **05/30/2028**  
By: *Manuel Erazo*  
Miami-Dade Product Control

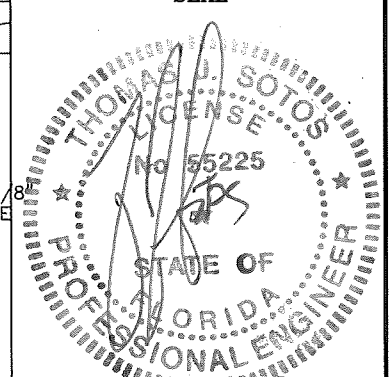
ALUMINUM TUBE MULLIONS

NO.	DESCRIPTION	BY	DATE
A	Revises NDA # 23-1017.11	N.E.	11/19/25

REVISIONS

THOMAS J. SOTOS  
PROFESSIONAL ENGINEER  
FL LIC. # 55225

SEAL



DATE **NOV 20 2025**

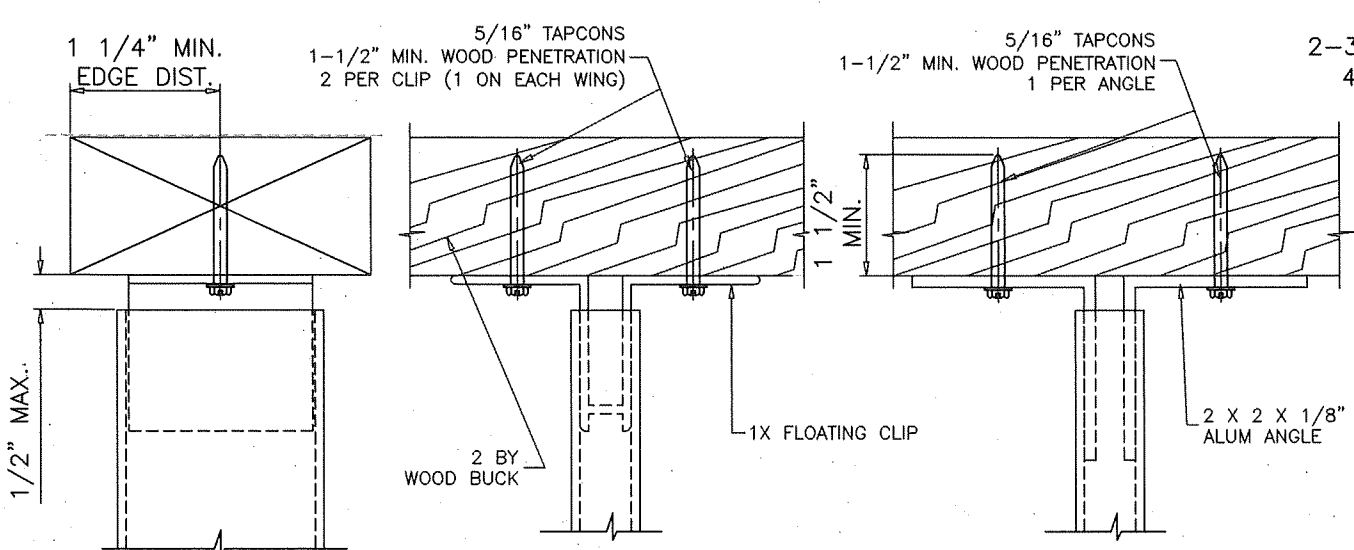
SHEET DESCRIPTION:  
ANCHOR/CLIP TYPES,  
INSTALLATION DETAILS,  
AND GENERAL NOTES

DRAWN BY: NELSON ERAZO DATE: 11/17/2023

REV. BY: N.E. DATE: 11/19/2025

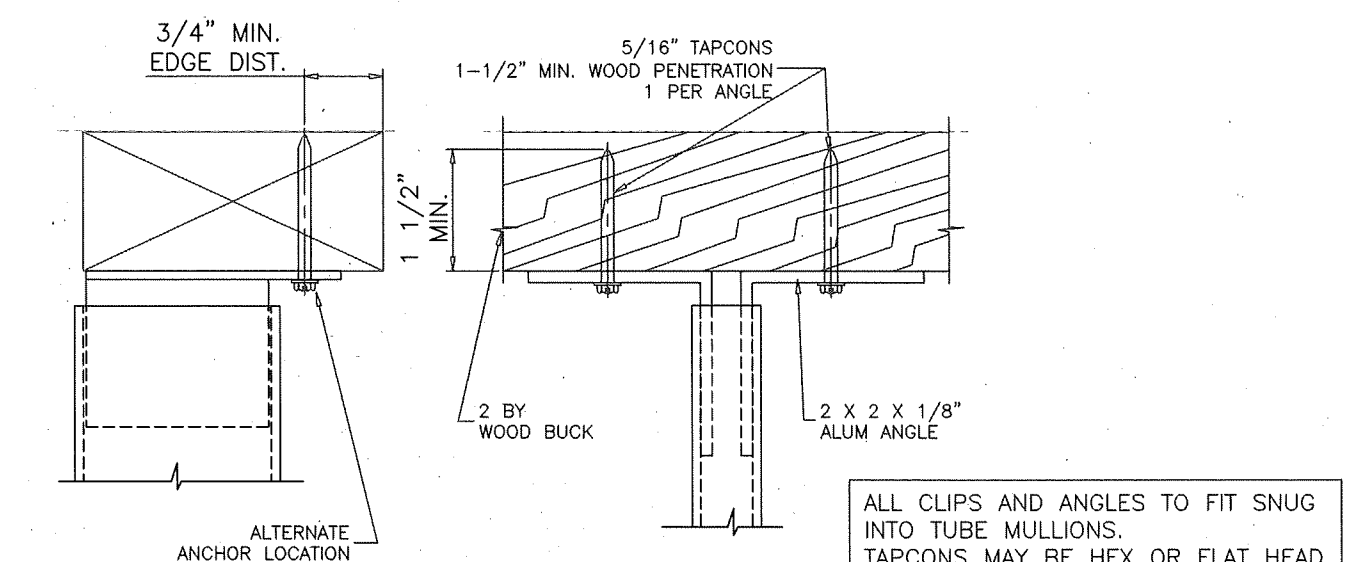
DWG #: CWS-1259 REV #: A

SCALE: AS NOTED SHEET 6 OF 10

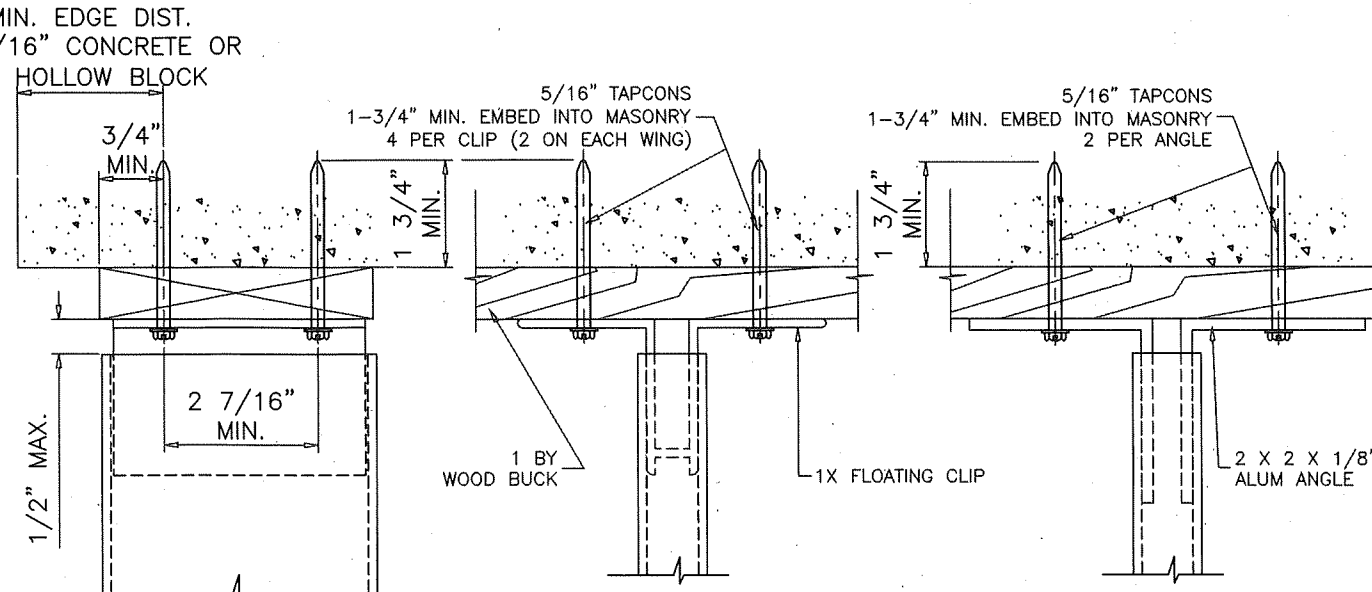


ANCHORS TYPE 'A'  
2 ANCHORS INTO WOOD

ANCHORS TYPE 'B'  
4 ANCHORS INTO WOOD



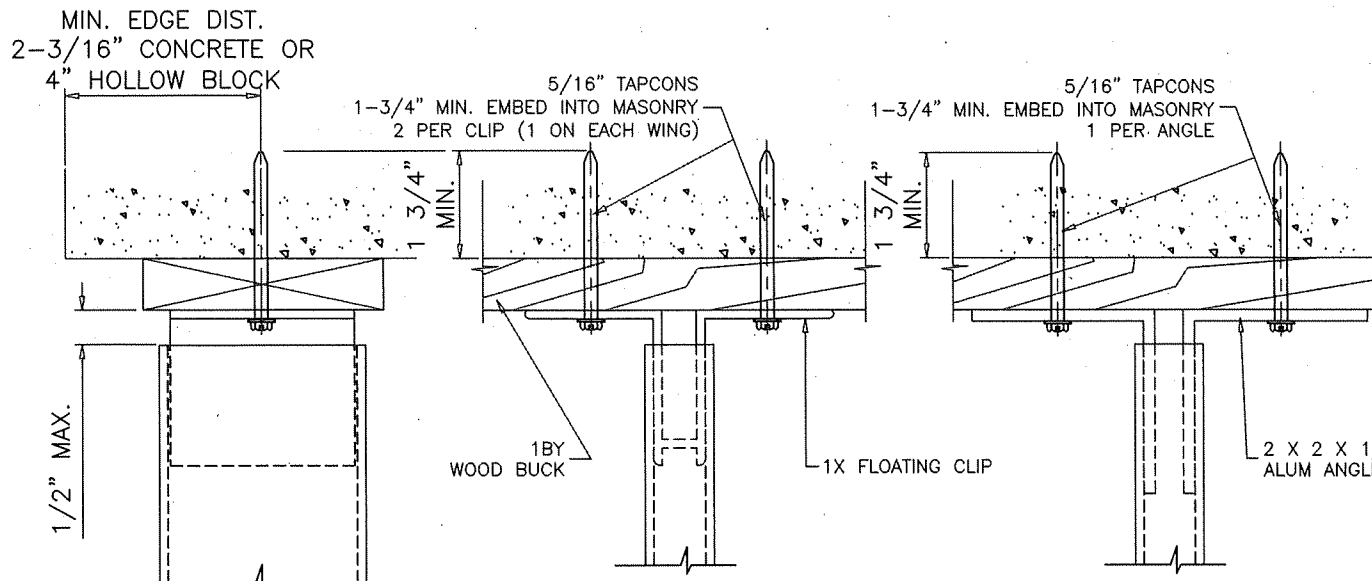
ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS. TAPCONS MAY BE HEX OR FLAT HEAD.



ANCHORS TYPE 'D' (INTO BLOCK)  
ANCHORS TYPE 'G' (INTO CONCRETE)

4 ANCHORS THRU 1X BUCK INTO CONCRETE OR BLOCK  
1"x4" & 2"x4" MULL

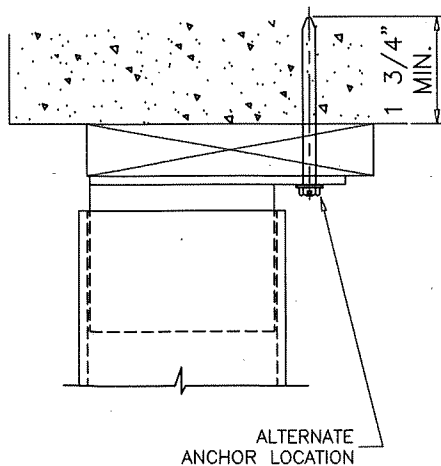
ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS. TAPCONS MAY BE HEX OR FLAT HEAD.



ANCHORS TYPE 'C' (INTO BLOCK)  
ANCHORS TYPE 'F' (INTO CONCRETE)

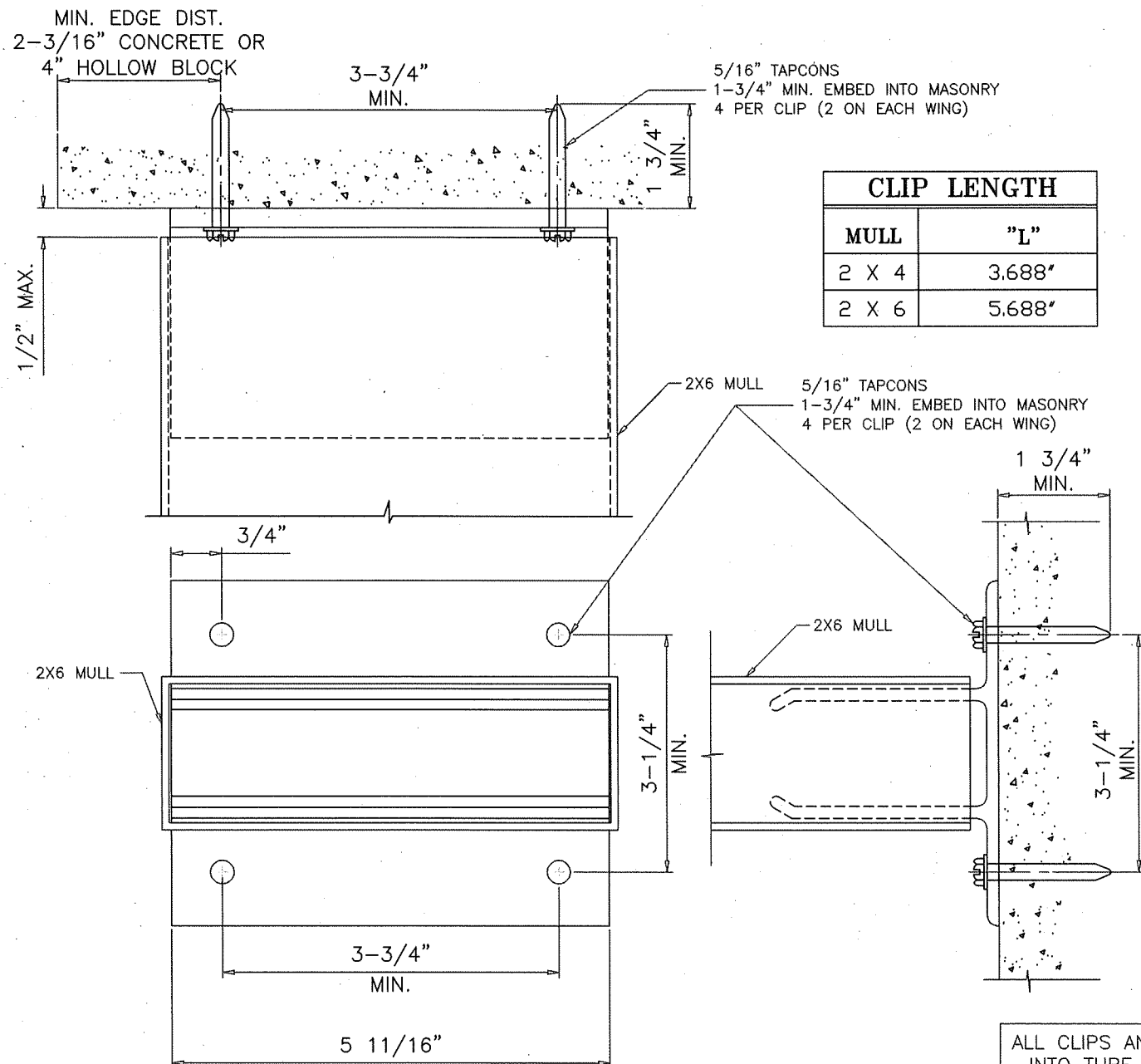
2 ANCHORS THRU 1X BUCK INTO CONCRETE OR BLOCK

**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **25-1201.03**  
Expiration Date: **05/30/2028**  
By: *Manuel Perez*  
Miami-Dade Product Control



ALTERNATE ANCHOR LOCATION



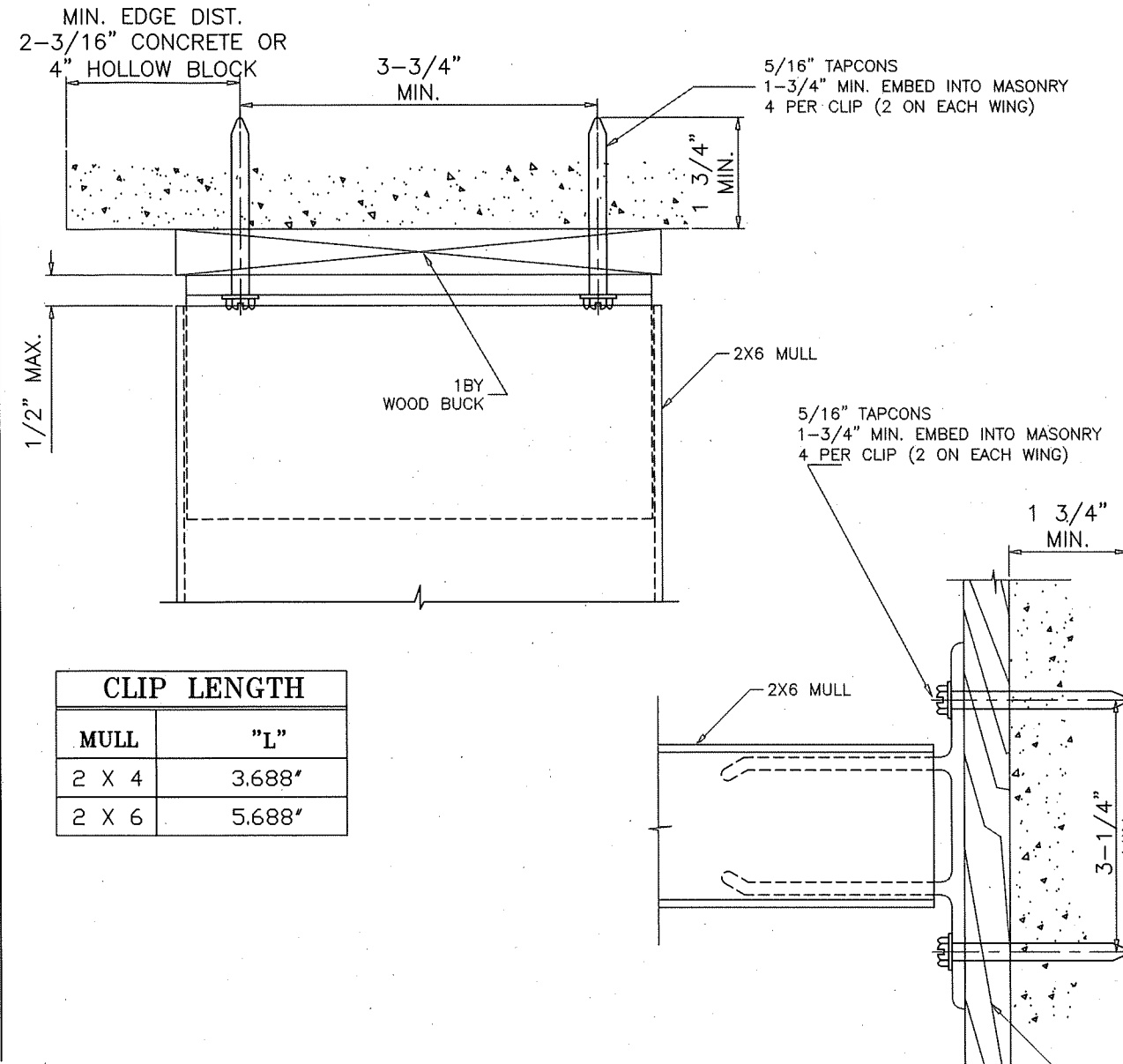


ANCHORS TYPE 'E' (INTO BLOCK)  
 ANCHORS TYPE 'H' (INTO CONCRETE)  
 ANCHORS INTO CONCRETE OR BLOCK  
 2"X6" MULL SHOWN

CLIP LENGTH	
MULL	"L"
2 X 4	3.688'
2 X 6	5.688'

CLIPS OR ANGLES CONNECTED DIRECTLY TO MASONRY TO BE PROTECTED WITH ALKALI-RESISTANT COATINGS, SUCH AS BITUMINOUS PAINT OR WATER-WHITE METHACRYLATE LACQUER.

ALL CLIPS AND ANGLES TO FIT SNUG INTO TUBE MULLIONS. TAPCONS MAY BE HEX OR FLAT HEAD.



CLIP LENGTH	
MULL	"L"
2 X 4	3.688'
2 X 6	5.688'

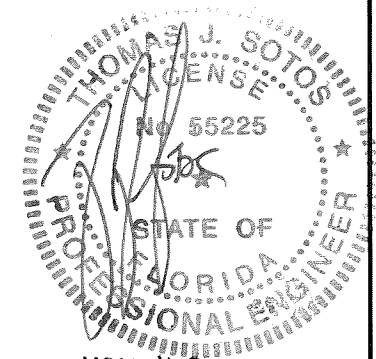
ANCHORS TYPE 'E' (INTO BLOCK)  
 ANCHORS TYPE 'H' (INTO CONCRETE)  
 4 ANCHORS THRU 1X BUCK INTO CONCRETE OR BLOCK  
 2"X6" MULL SHOWN

**CWS**  
 1900 SW 44TH AVE.  
 OCALA, FLORIDA 34474  
 WWW.CWS.CC

ALUMINUM TUBE MULLIONS

NO.	DESCRIPTION	BY	DATE
A	Revises NOA # 23-1017.11	N.E.	11/19/25

THOMAS J. SOTOS  
 PROFESSIONAL ENGINEER  
 FL LIC. # 55225  
 SEAL



DATE NOV 20 2023

SHEET DESCRIPTION:  
 ANCHOR/CLIP TYPES, INSTALLATION DETAILS, AND GENERAL NOTES

DRAWN BY: NELSON ERAZO DATE: 11/17/2023

REV. BY: N.E. DATE: 11/19/2025

DWG #: CWS-1259 REV #: A

SCALE: AS NOTED SHEET 8 OF 10

**PRODUCT REVISED**  
 As complying with the Florida Building Code  
 NOA-No. **25-1201.03**  
 Expiration Date: **05/30/2028**  
 By: *Manuel Erazo*  
 Miami-Dade Product Control





1900 SW 44TH AVE.  
OCALA, FLORIDA 34474  
WWW.CWS.CC

**ALUMINUM TUBE MULLIONS**

		ANCHOR TYPES												ANCHOR TYPES												ANCHOR TYPES									
Width (w)	MULL SPAN	A	B	C	D	E	F	G	H	I	Width (w)	MULL SPAN	A	B	C	D	E	F	G	H	I	Width (w)	MULL SPAN	A	B	C	D	E	F	G	H	I			
18	38 3/8	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	74 1/4	90.72	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	120	56.13	112.27	129.07	125.00	125.00	144.27	125.00	125.00	125.00		
24		131.65	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		24	68.04	136.08	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		24	42.10	84.20	96.80	145.60	125.00	108.20	125.00	125.00	115.70	
30		105.32	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		30	54.43	108.86	125.16	125.00	125.00	139.89	125.00	125.00	149.59	30		33.68	67.36	77.44	116.48	125.00	86.56	130.24	125.00	92.56		
36		87.77	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		36	45.36	90.72	104.30	125.00	125.00	116.58	125.00	125.00	124.66	36		28.07	56.13	64.53	97.07	129.00	72.13	108.53	144.20	77.13		
42		75.23	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		42	38.88	77.76	89.40	134.46	125.00	99.92	125.00	125.00	106.85	42		24.06	48.11	55.31	83.20	110.57	61.83	93.03	123.60	66.11		
48		65.82	131.65	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00		48	34.02	68.04	78.22	117.66	125.00	87.43	131.56	125.00	93.49	48		21.05	42.10	48.40	72.80	96.75	54.10	81.40	108.15	57.85		
54		58.51	117.02	134.53	125.00	125.00	125.00	125.00	125.00	125.00	125.00		54	30.24	60.48	69.53	104.58	138.99	77.72	116.94	125.00	83.11	54		18.71	37.42	43.02	64.71	86.00	48.09	72.36	96.13	51.42		
60		52.66	105.32	121.08	125.00	125.00	125.00	125.00	125.00	125.00	144.72		60	27.22	54.43	62.58	94.13	125.09	69.95	105.24	139.83	74.80	60		16.84	33.68	38.72	58.24	77.40	43.28	65.12	86.52	46.28		
66		47.87	95.74	110.07	125.00	125.00	125.00	125.00	125.00	125.00	131.56		66	24.74	49.48	56.89	85.57	113.72	63.59	95.68	127.12	68.00	66		15.31	30.62	35.20	52.95	70.36	39.35	59.20	78.65	42.07		
72		43.88	87.77	100.90	125.00	125.00	125.00	125.00	125.00	125.00	120.60		72	22.68	45.36	52.15	78.44	104.24	58.29	87.70	116.53	62.33	72		14.03	28.07	32.27	48.53	64.50	36.07	54.27	72.10	38.57		
78	40.51	81.01	93.14	140.09	125.00	104.11	125.00	125.00	111.32	78	20.94	41.87	48.14	72.40	96.22	53.81	80.96	107.56	57.54	78	12.95	25.91	29.78	44.80	59.54	33.29	50.09	66.55	35.60						
18	50 5/8	133.06	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	84	80.19	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	132	51.03	102.06	117.33	125.00	125.00	131.15	125.00	125.00	140.24			
24		99.79	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	24		60.14	120.29	138.29	125.00	125.00	125.00	125.00	125.00	125.00	24		38.27	76.55	88.00	132.36	125.00	98.36	148.00	125.00	105.18			
30		79.83	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	30		48.11	96.23	110.63	125.00	125.00	123.66	125.00	125.00	132.23	30		30.62	61.24	70.40	105.89	140.73	78.69	118.40	125.00	84.15			
36		66.53	133.06	125.00	125.00	125.00	125.00	125.00	125.00	125.00	36		40.10	80.19	92.19	138.67	125.00	103.05	125.00	125.00	110.19	36		25.52	51.03	58.67	88.24	117.27	65.58	98.67	131.09	70.12			
42		57.02	114.05	131.12	125.00	125.00	146.56	125.00	125.00	125.00	42		34.37	68.73	79.02	118.86	125.00	88.33	132.90	125.00	94.45	42		21.87	43.74	50.29	75.64	100.52	56.21	84.57	112.36	60.10			
48		49.90	99.79	114.73	125.00	125.00	128.24	125.00	125.00	137.13	48		30.07	60.14	69.14	104.00	138.21	77.29	116.29	125.00	82.64	48		19.14	38.27	44.00	66.18	87.95	49.18	74.00	98.32	52.59			
54		44.35	88.70	101.98	125.00	125.00	113.99	125.00	125.00	121.89	54		26.73	53.46	61.46	92.44	122.86	68.70	103.37	137.33	73.46	54		17.01	34.02	39.11	58.83	78.18	43.72	65.78	87.39	46.75			
60		39.92	79.83	91.78	138.05	125.00	102.59	125.00	125.00	109.70	60		24.06	48.11	55.31	83.20	110.57	61.83	93.03	123.60	66.11	60		15.31	30.62	35.20	52.95	70.36	39.35	59.20	78.65	42.07			
66		36.29	72.58	83.44	125.50	125.00	93.26	140.33	125.00	99.73	66		21.87	43.74	50.29	75.64	100.52	56.21	84.57	112.36	60.10	66		13.92	27.83	32.00	48.13	63.97	35.77	53.82	71.50	38.25			
72		33.26	66.53	76.48	115.04	125.00	85.49	128.63	125.00	91.42	72		20.05	40.10	46.10	69.33	92.14	51.52	77.52	103.00	55.10	72		12.76	25.52	29.33	44.12	58.64	32.79	49.33	65.55	35.06			
78	30.71	61.41	70.60	106.19	141.13	78.92	118.74	125.00	84.39	78	18.51	37.01	42.55	64.00	85.05	47.56	71.56	95.08	50.86	78	11.78	23.55	27.08	40.73	54.13	30.27	45.54	60.50	32.36						
18	57	118.18	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	96	70.17	140.33	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	144	46.78	93.56	107.56	125.00	125.00	120.22	125.00	125.00	128.56			
24		88.63	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	24		52.63	105.25	121.00	125.00	125.00	135.25	125.00	125.00	144.63	24		35.08	70.17	80.67	121.33	125.00	90.17	135.67	125.00	96.42			
30		70.91	141.81	125.00	125.00	125.00	125.00	125.00	125.00	125.00	30		42.10	84.20	96.80	145.60	125.00	108.20	125.00	125.00	115.70	30		28.07	56.13	64.53	97.07	129.00	72.13	108.53	144.20	77.13			
36		59.09	118.18	135.86	125.00	125.00	125.00	125.00	125.00	125.00	36		35.08	70.17	80.67	121.33	125.00	90.17	135.67	125.00	96.42	36		23.39	46.78	53.78	80.89	107.50	60.11	90.44	120.17	64.28			
42		50.65	101.29	116.45	125.00	125.00	130.17	125.00	125.00	139.19	42		30.07	60.14	69.14	104.00	138.21	77.29	116.29	125.00	82.64	42		20.05	40.10	46.10	69.33	92.14	51.52	77.52	103.00	55.10			
48		44.32	88.63	101.89	125.00	125.00	113.89	125.00	125.00	121.79	48		26.31	52.63	60.50	91.00	120.94	67.63	101.75	135.19	72.31	48		17.54	35.08	40.33	60.67	80.63	45.08	67.83	90.13	48.21			
54		39.39	78.78	90.57	136.23	125.00	101.24	125.00	125.00	108.26	54		23.39	46.78	53.78	80.89	107.50	60.11	90.44	120.17	64.28	54		15.59	31.19	35.85	53.93	71.67	40.07	60.30	80.11	42.85			
60		35.45	70.91	81.52	122.61	125.00	91.12	137.09	125.00	97.43	60		21.05	42.10	48.40	72.80	96.75	54.10	81.40	108.15	57.85	60		14.03	28.07	32.27	48.53	64.50	36.07	54.27	72.10	38.57			
66		32.23	64.46	74.11	111.46	148.13	82.83	124.63	125.00	88.57	66		19.14	38.27	44.00	66.18	87.95	49.18	74.00	98.32	52.59	66		12.76	25.52	29.33	44.12	58.64	32.79	49.33	65.55	35.06			
72		29.54	59.09	67.93	102.18	135.79	75.93	114.25	125.00	81.19	72		17.54	35.08	40.33	60.67	80.63	45.08	67.83	90.13	48.21	72		11.69	23.39	26.89	40.44	53.75	30.06	45.22	60.08	32.14			
78	27.27	54.54	62.70	94.32	125.34	70.09	105.46	140.11	74.95	78	16.19	32.38	37.23	56.00	74.42	41.62	62.62	83.19	44.50	78	10.79	21.59	24.82	37.33	49.62	27.74	41.74	55.46	29.67						
18	63	106.92	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	18	108	62.37	124.74	143.41	125.00	125.00	125.00	125.00	125.00	125.00	18	150	44.91	89.81	103.25	125.00	125.00	115.41	173.65	125.00	123.41			
24		80.19	125.00	125.00	125.00	125.00	125.00	125.00	125.00	125.00	24		46.78	93.56	107.56	125.00	125.00	120.22	125.00	125.00	128.56	24		33.68	67.36	77.44	116.48	125.00	86.56	130.24	125.00	92.56			
30		64.15	128.30	147.50	125.00	125.00	125.00	125.00	125.00	125.00	30		37.42	74.84	86.04	129.42	125.00	96.18	144.71	125.00	102.84	30		26.94	53.89	61.95	93.18	123.84	69.25	104.19	138.43	74.05			
36		53.46	106.92	122.92	125.00	125.00	137.40	125.00	125.00	146.92	36		31.19	62.37	71.70	107.85	143.33	80.15	120.59	125.00	85.70	36		22.45	44.91	51.63	77.65	103.20	57.71	86.83	115.36	61.71			
4																																			