



MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

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

General Impact Glass & Windows Corp.
290 West 78 Road
Hialeah, FL 33014

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/ or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "14000 HMMS" Clipped Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No. 17-249, titled "Series 14000 HMMS Impact Resistant Clipped Aluminum Mullions", sheets 1, 2, 3, 4, 5, 6, 6A, 6B, 6C, 7 and 8 through 60 of 60, dated 08/25/17, with revision #1 dated 08/25/17, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E., bearing the Miami-Dade County Product Control Renewal 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 **renews NOA No. 17-1102.14** and consists of this page 1 and evidence pages E-1 and E-2 as well as approval document mentioned above.

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



MP
12/21/18

NOA No. 18-1108.01
Expiration Date: October 24, 2023
Approval Date: December 27, 2018
Page 1

General Impact Glass & Windows Corp.

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. 13-0514.18)
2. Drawing No **17-249**, Sheets 1, 2, 3, 4, 5, 6, 6A, 6B, 6C, 7 and 8 through 60 of 60, titled "Series 14000 HMMS Impact Resistant Clipped Aluminum Mullions", dated 08/25/17, with revision #1 dated 08/25/17, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., 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 a series 14000 aluminum tube mullion system, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-7553**, dated 10/03/13, signed and sealed by Marlin D. Brinson, P.E.
(Submitted under NOA No. 13-0514.18)

C. CALCULATIONS

1. Updated structural analysis, complying with **FBC 6th Edition (2017)**, prepared by Tilteco, Inc., dated 08/25/17, signed and sealed by Walter A. Tillit, Jr., P.E.
(Submitted under NOA No. 17-1102.14)
2. Glazing complies with **ASTM E1300-04**

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 6th Edition (2017)**, dated August 25, 2017, issued by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.
(Submitted under NOA No. 17-1102.14)
2. Statement letter of no financial interest, dated May 13, 2013, signed and sealed by Walter A. Tillit, Jr., P.E. *(Submitted under NOA No. 13-0514.18)*

G. OTHERS

1. Notice of Acceptance No. **15-0622.13**, issued to General Impact Glass & Windows Corp. for their Series "14000 HMMS" Clipped Aluminum Tube Mullion - L.M.I., approved on 09/24/15 and expiring on 10/24/18.


Manuel Perez, P.E.
Product Control Examiner

NOA No. 18-1108.01

Expiration Date: October 24, 2023

Approval Date: December 27, 2018

General Impact Glass & Windows Corp.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. None

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. None

G. OTHERS

1. Notice of Acceptance No. **17-1102.14**, issued to General Impact Glass & Windows Corp. for their Series "14000 HMMS" Clipped Aluminum Tube Mullion - L.M.I., approved on 12/28/17 and expiring on 10/24/18.


Manuel Perez, P.E.
Product Control Examiner

NOA No. 18-1108.01

Expiration Date: October 24, 2023

Approval Date: December 27, 2018

GENERAL NOTES AND SPECIFICATIONS:

1. CLIPPED (INTERIOR OR END) MULLIONS, LARGE MISSILE IMPACT RESISTANT, SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAVE BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF FLORIDA BUILDING CODE. CLIPPED (INTERIOR OR END) MULLIONS MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES.

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE, USING ASCE 7-10, AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 7 THRU 60.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 7 THRU 60.

IN ORDER TO VERIFY THAT ANCHORS ON THIS P.A.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A 1.6 WIND DURATION FACTOR WAS USED FOR WOOD CONNECTIONS.

CLIPPED MULLIONS ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER PROTOCOLS TAS-201, TAS-202, TAS-203, PER FENESTRATION TESTING LABORATORY, LAB REPORT # 7553, AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTION 1616 OF THE FLORIDA BUILDING CODE.

2. THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) APPLIES TO TWO OR MORE FENESTRATIONS MULLED TOGETHER IN ANY COMBINATION WHERE INTERIOR OR END MULLION IS CLIPPED TO EXISTING STRUCTURE. MULLION'S STRUCTURAL ADEQUACY HAS BEEN VERIFIED WITHOUT THE CONTRIBUTION OF FENESTRATION FRAMES ATTACHED TO IT.

3. INSTRUCTIONS TO DETERMINE REQUIRED INTERIOR CLIPPED MULLION:

USE MULLION/ANCHOR LOAD CHARTS ON SHEETS 7 THRU 29 & SHEETS 41 THRU 60 AS FOLLOWS:

STEP 1. DETERMINE A.S.D DESIGN LOAD REQUIRED FOR PARTICULAR OPENING PER SECTION 1620 OF FLORIDA BUILDING CODE.

STEP 2. USE MIAMI-DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE A.S.D. DESIGN LOAD REQUIREMENTS.

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

STEP 4. USING CHARTS ON SHEETS 7 THRU 29 & SHEETS 41 THRU 60, SELECT MULLION WITH CAPACITY EXCEEDING THE A.S.D. DESIGN LOAD SPECIFIED IN STEP 1 ABOVE. SEE CLIP DETAILS ON SHEETS 4 THRU 6.

STEP 5. USING CHARTS ON SHEETS 7 THRU 29 & SHEETS 41 THRU 60, SELECT ANCHOR CLIP, AND CONNECTION TYPE WITH A.S.D. DESIGN PRESSURE RATING LARGER THAN THE A.S.D. DESIGN LOADS DETERMINED IN STEP 1 ABOVE.

4. INSTRUCTIONS TO DETERMINE REQUIRED END CLIPPED MULLION:

USE MULLION/ANCHOR LOAD CHARTS ON SHEETS 30 THRU 40 & SHEETS 41 THRU 60 AS FOLLOWS:

STEP 1. DETERMINE A.S.D DESIGN LOAD REQUIRED FOR PARTICULAR OPENING PER SECTION 1620 OF FLORIDA BUILDING CODE.

STEP 2. USE MIAMI-DADE COUNTY APPROVED GLAZING PRODUCTS MEETING ABOVE A.S.D. DESIGN LOAD REQUIREMENTS.

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

STEP 4. USING CHARTS ON SHEETS 30 THRU 40 & SHEETS 41 THRU 60, SELECT MULLION WITH CAPACITY EXCEEDING THE A.S.D. DESIGN LOAD SPECIFIED IN STEP 1 ABOVE. SEE CLIP DETAILS ON SHEETS 4 THRU 6.

STEP 5. USING CHARTS ON SHEETS 30 THRU 40 & SHEETS 41 THRU 60, SELECT ANCHOR CLIP, AND CONNECTION TYPE WITH A.S.D. DESIGN PRESSURE RATING LARGER THAN THE A.S.D. DESIGN LOADS DETERMINED IN STEP 1 ABOVE.

5. ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE 2017 FLORIDA BUILDING CODE APPROVED REQUIREMENTS I.E. WIND LOAD, AIR AND WATER INFILTRATION, FORCED ENTRY RESISTANT, SAFEGUARDS, ETC.

6. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER (UNLESS OTHERWISE NOTED), WITH $F_y=25.0$ ksi MINIMUM. THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON THIS DRAWING.

7. ALL SCREWS USED FOR MOUNTING CONNECTIONS (METAL TO METAL) TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 WITH 50 ksi YIELD STRENGTH ND 90 ksi TENSILE STRENGTH AND SHALL COMPLY WITH FLORIDA BUILDING CODE, SECTION 2411.3.3.4.

8. NO SHIM SPACE IS ALLOWED FOR ANCHORING OF MULLIONS TO ALL SUBSTRATES.

9. ANCHORS USED FOR CONNECTION OF INTERIOR OR END CLIPPED MULLIONS TO EXISTING STRUCTURE SHALL BE AS FOLLOWS:

(9A) TO EXISTING POURED CONCRETE: (Min. $f'_c=2846$ psi)
- 1/4" ϕ ULTRACONS WITH 1 3/4" MIN. EMBEDMENT, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS
W/ 2 1/2" MIN. EDGE DISTANCE (E.D.) AND 1 1/2" MIN. SPACING.

(9B) TO EXISTING CONCRETE BLOCK: (ASTM C-90)
- 1/4" ϕ ULTRACONS WITH 1 1/4" MIN EMBEDMENT, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS
W/ 2 1/2" MIN. EDGE DISTANCE (E.D.) AND 1 1/2" MIN. SPACING.

(9C) TO EXISTING 2" P.T. WOOD BUCK: (SOUTHERN PINE WITH $G=0.55$)
- 1/4" ϕ ULTRACONS WITH 1 1/2" MIN. EMBEDMENT, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS
W/ 1" MIN. EDGE DISTANCE (E.D.) AND 1" MIN. SPACING.

(9D) TO EXISTING STEEL (MIN. $F_y=33$ ksi, MIN. THICKNESS= 0.062") AND TO EXISTING ALUMINUM (MIN. $F_y=25$ ksi, MIN. THICKNESS= 0.125")
- 1/4" TEK SCREWS W/ 1/2" MIN. EMBEDMENT, AS MANUFACTURED BY ITW/BUILDDEX W/ 1/2" MIN. EDGE DISTANCE (E.D.) AND 1 1/8" MIN. SPACING.

(9E) ANCHOR EMBEDMENT AND EDGE DISTANCE TO BASE MATERIAL SHALL BE BEYOND WALL COVERING (STUCCO, TILE, PLYWOOD, ETC.)

10. (a) THIS P.A.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.A.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS P.A.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL RESPONSIBLE FOR THE PROPER USE OF THE P.A.D.

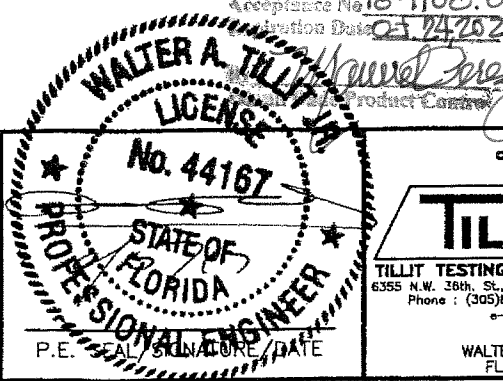
(e) ORIGINAL P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

11. MULLION'S MANUFACTURER STAMP SHALL BE PLACED ON THE EXPOSED SURFACE OF PROFILES. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:

GENERAL IMPACT GLASS & WINDOWS
MIAMI, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

THIS DRAWING SHALL ONLY BE USED TO
OBTAIN PERMITS IN THE STATE OF FLORIDA

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 17-1102.01
Expiration Date 03/24/2018



SHEET #	INDEX
	DESCRIPTION
1	GENERAL NOTES AND INDEX
2	INSTALLATION ELEVATIONS
3	CLIPPED INTERIOR & END MULLIONS
4	CLIP TYPES C1 THRU C4
5	TYPICAL ANCHOR/CLIP DETAILS FOR INTERIOR & END MULLIONS
6	ANCHOR SCHEDULE FOR CLIPS
6A	MULLIONS CHARTS SCHEDULES
6B	MULLIONS CHARTS SCHEDULES
6C	MULLIONS CHARTS SCHEDULES
7 THRU 29	CLIPPED INTERIOR MULLIONS CHARTS, CLIPS C1/C2
30 THRU 40	CLIPPED END MULLIONS CHARTS, CLIP C3
41 THRU 60	CLIPPED INTERIOR & END MULLIONS CHARTS, CLIP C4

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

THE USE OF THIS APPROVAL IS RESTRICTED
TO A WRITTEN AUTHORIZATION FROM GENERAL
IMPACT GLASS AND WINDOWS

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.01
Expiration Date 03/24/2018
By *Walter A. Tillit Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY

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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-8685
www.generalimpact.com

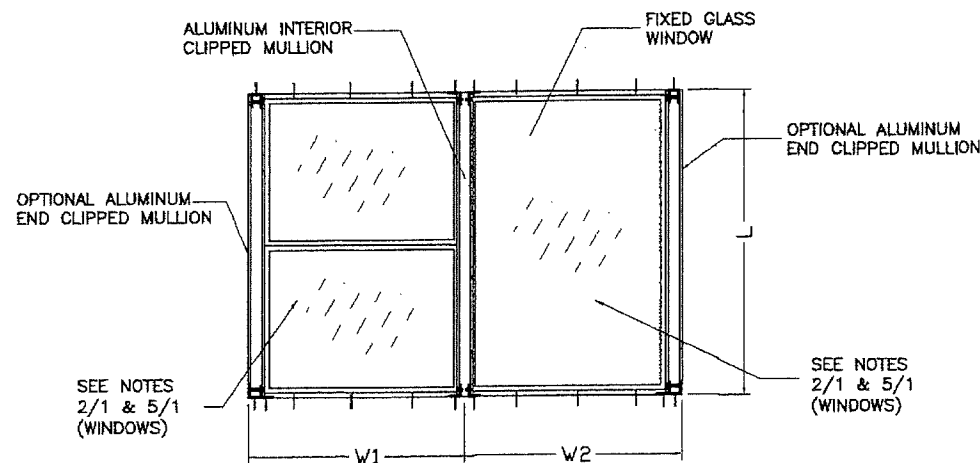
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1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 1 OF 60

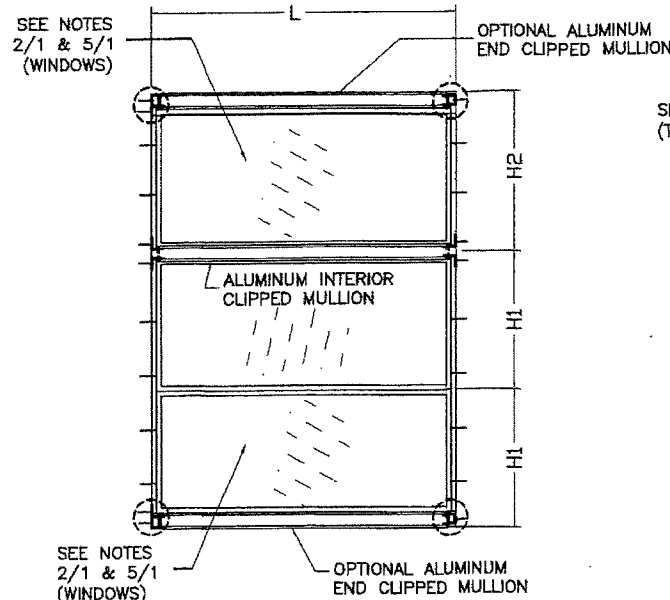


L = MULLION SPAN (SEE SCHEDULE)

TRIBUTARY WIDTH (b) = $\frac{W1 + W2}{2}$
FOR INTERIOR MULLIONS

TRIBUTARY WIDTH (b) = $\frac{W1}{2}$ OR $\frac{W2}{2}$, RESPECTIVELY
FOR END MULLIONS

**INSTALLATION ELEVATION W/ VERTICAL
INTERIOR AND OPTIONAL END
CLIPPED MULLIONS**

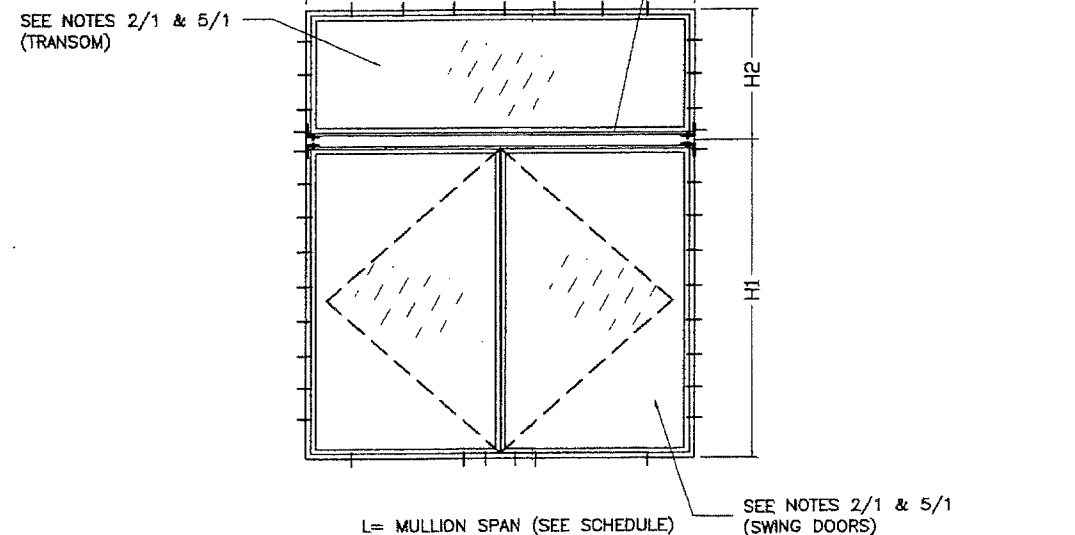


L = MULLION SPAN (SEE SCHEDULE)

TRIBUTARY WIDTH (b) = $\frac{H1 + H2}{2}$
FOR INTERIOR MULLIONS

TRIBUTARY WIDTH (b) = $\frac{H1}{2}$ OR $\frac{H2}{2}$, RESPECTIVELY
FOR END MULLIONS

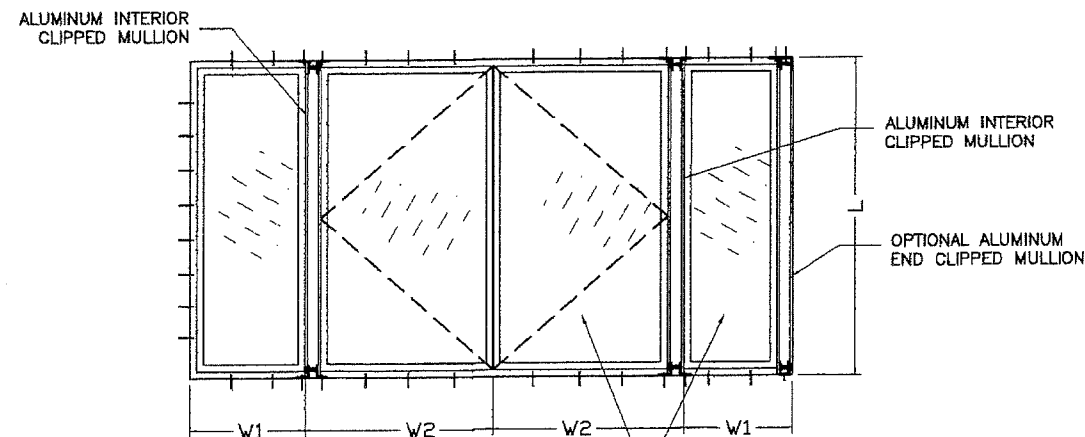
**INSTALLATION ELEVATION W/
HORIZONTAL INTERIOR
AND OPTIONAL END CLIPPED MULLIONS**



L = MULLION SPAN (SEE SCHEDULE)

TRIBUTARY WIDTH (b) = $\frac{H1 + H2}{2}$
FOR INTERIOR MULLIONS

**INSTALLATION ELEVATION W/
HORIZONTAL INTERIOR CLIPPED MULLION**



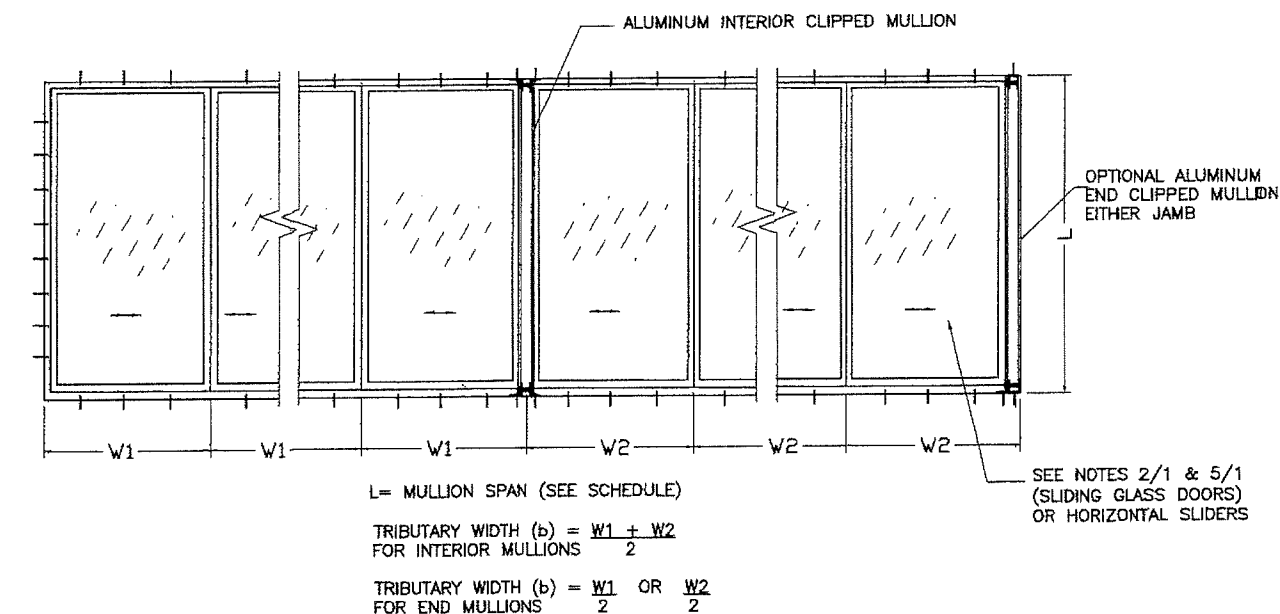
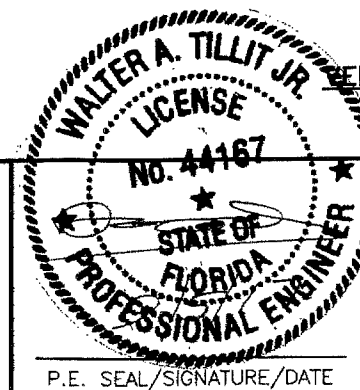
L = MULLION SPAN (SEE SCHEDULE)

TRIBUTARY WIDTH (b) = $\frac{W1 + W2}{2}$
FOR INTERIOR MULLIONS

**INSTALLATION ELEVATION W/ VERTICAL
INTERIOR AND OPTIONAL END CLIPPED
MULLIONS**

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03-24-2023
By *Manuel Lopez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 03-24-2018
By *Manuel Lopez*
Miami Dade Product Control
MIAMI DADE COUNTY



L = MULLION SPAN (SEE SCHEDULE)

TRIBUTARY WIDTH (b) = $\frac{W1 + W2}{2}$
FOR INTERIOR MULLIONS

TRIBUTARY WIDTH (b) = $\frac{W1}{2}$ OR $\frac{W2}{2}$
FOR END MULLIONS

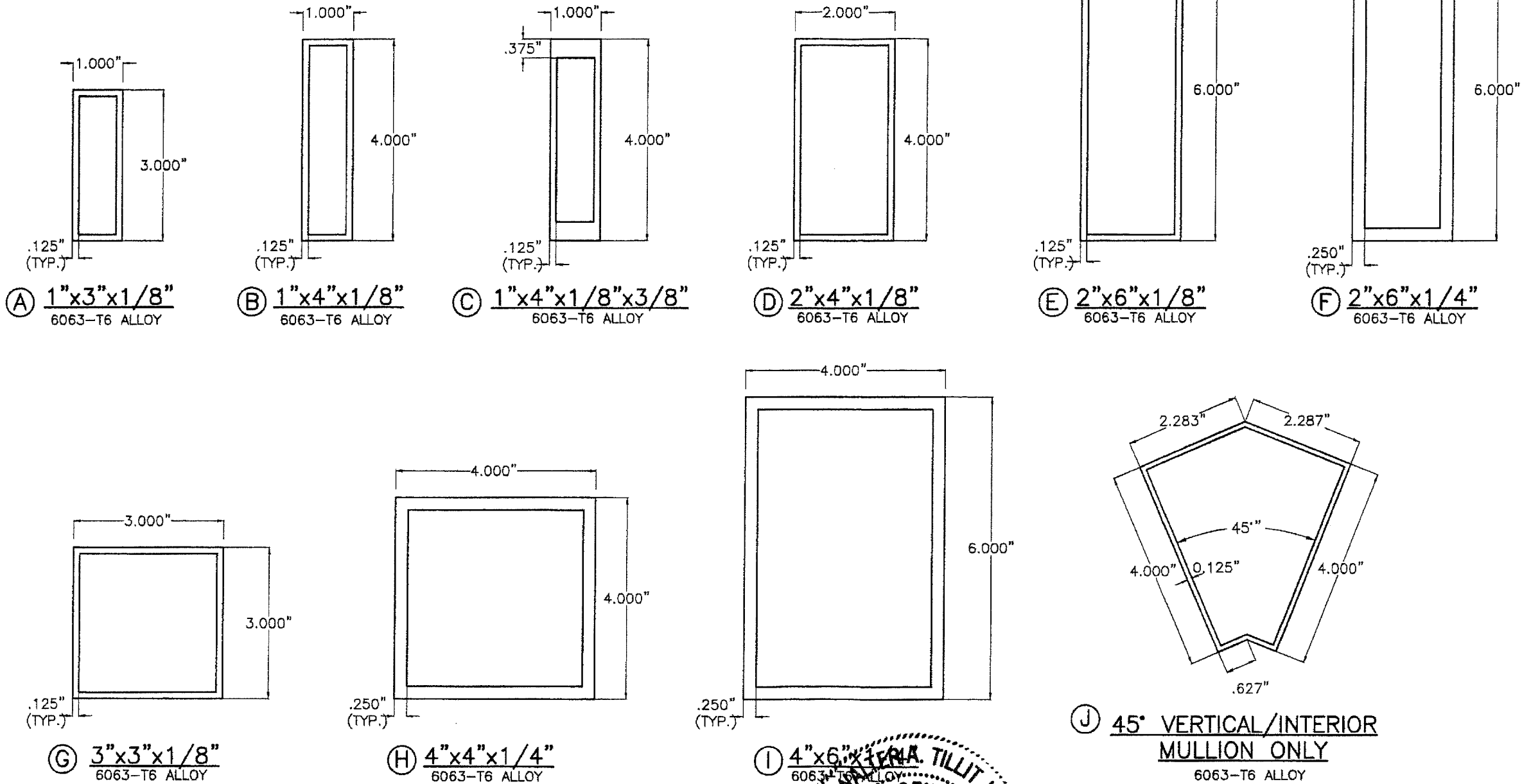
**INSTALLATION ELEVATION W/
VERTICAL INTERIOR AND OPTIONAL END CLIPPED MULLIONS**

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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WALTER A. TILLIT JR., P.E.
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SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com						08/25/17 DATE	
						17-249 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 2 OF 60	
1	OLD 15-158	08/25/17	3				
2			4				

CLIPPED INTERIOR AND END MULLIONS
(EXCEPT AS NOTED)



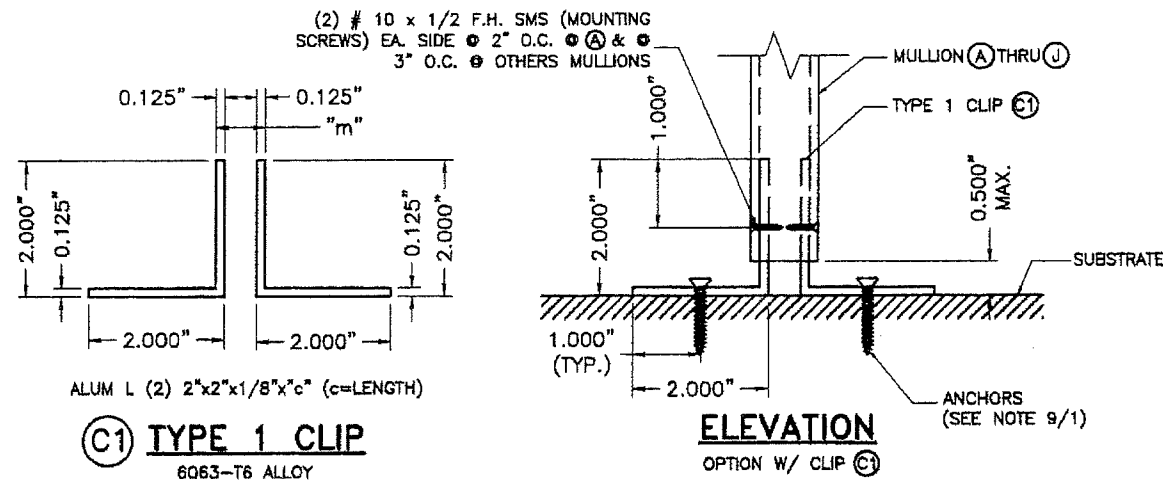
PRODUCT RENEWED
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MIAMI DADE COUNTY

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

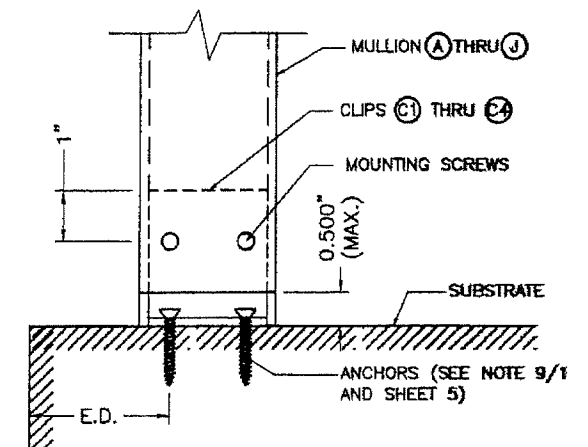
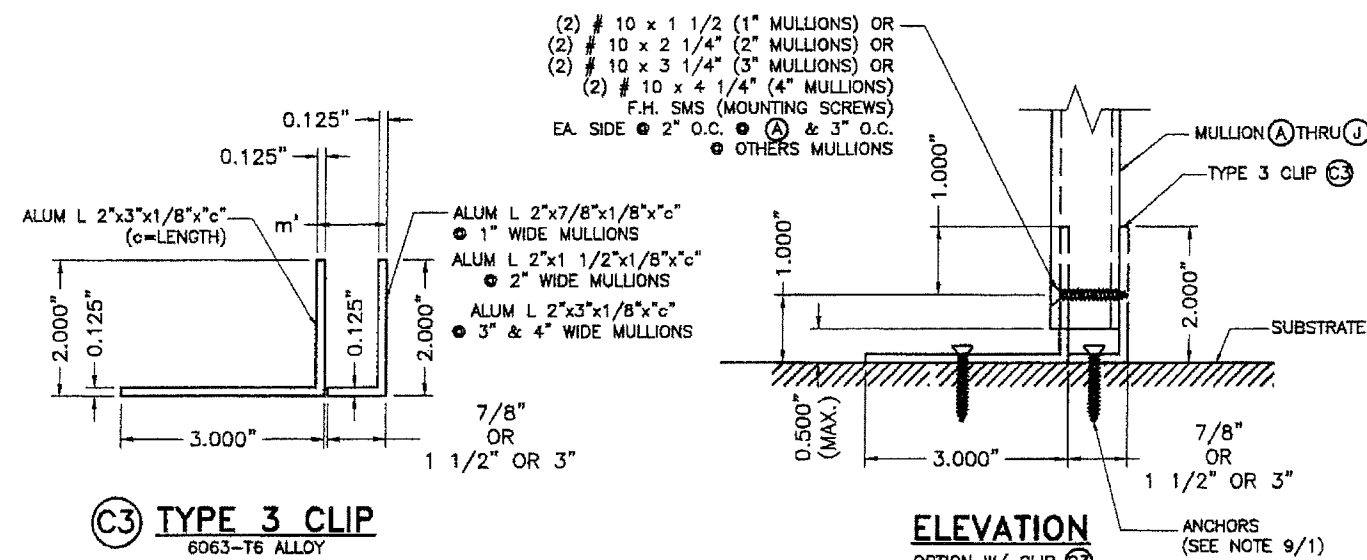
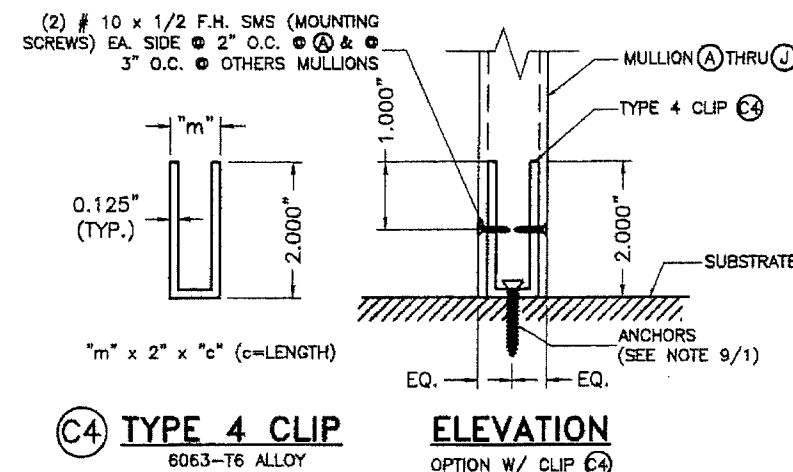
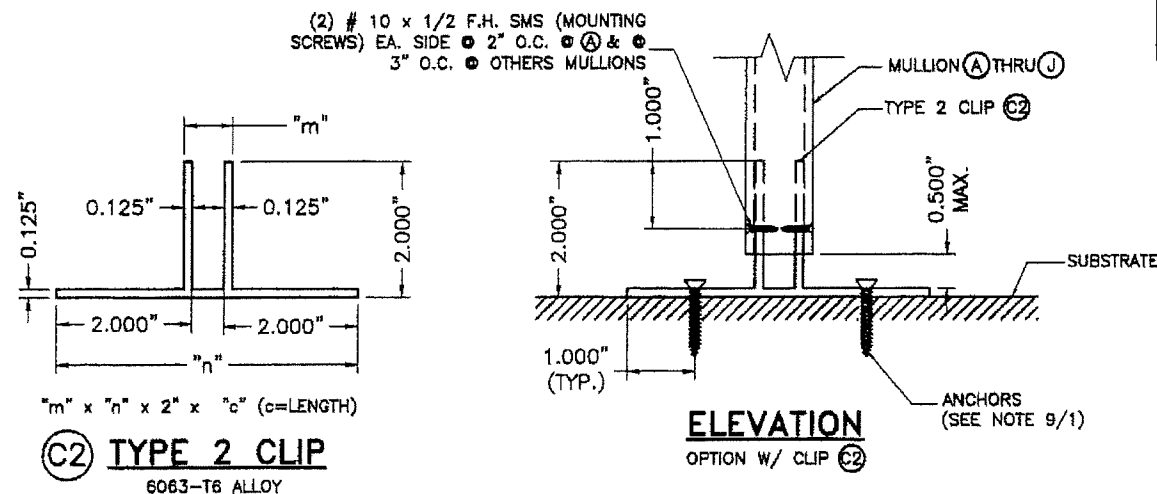
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TILTECO INC.
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)					
SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS				DRAWN BY: L.C.	
 290 WEST 78 ROAD HALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com				08/25/17 DATE	
				17-249 DRAWING No.	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		
SHEET 3 OF 60					



CLIP/SCHEDULE FOR C1, C2, C3 & C4 CLIPS								
MULLION TYPE	m	m'	n	c	REQUIREMENTS FOR CLIP USE			
					C1	C2	C3	C4
(A)	23/32"	1"	4 15/32"	2 23/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(B)	23/32"	1"	4 15/32"	3 23/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(C)	23/32"	1"	4 15/32"	3 7/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(D)	1 23/32"	2"	5 15/32"	3 23/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(E)	1 23/32"	2"	5 15/32"	5 23/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(F)	1 15/32"	1 7/8"	5 15/32"	5 15/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(G)	2 23/32"	3"	6 15/32"	2 23/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(H)	3 15/32"	3 7/8"	7 7/32"	3 15/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(I)	3 15/32"	3 7/8"	7 7/32"	5 15/32"	NOTE 1	NOTE 1	NOTE 2	NOTE 3
(J)	VARIES	N/A	N/A	2 23/32"	NOTE 1	N/A	N/A	N/A

NOTE 1: USE ALWAYS AT INTERIOR MULLIONS (SEE CHARTS SHEETS 7 THRU 29)
NOTE 2: USE ONLY AT END MULLIONS (SEE CHARTS SHEETS 30 THRU 40)
NOTE 3: USE AT END OR INTERIOR MULLIONS (SEE CHARTS SHEETS 41 THRU 60)

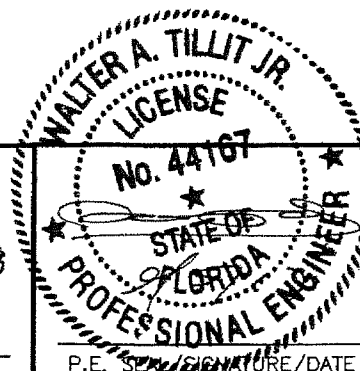


TYPICAL SIDE VIEW & OF CLIPS

CLIP TYPES FOR MULLION CONNECTIONS TO EXISTING STRUCTURE AND TYPICAL ELEVATIONS

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108-01
Expiration Date 08/24/2023
By Manuel J. Perez
Miami Dade Product Control

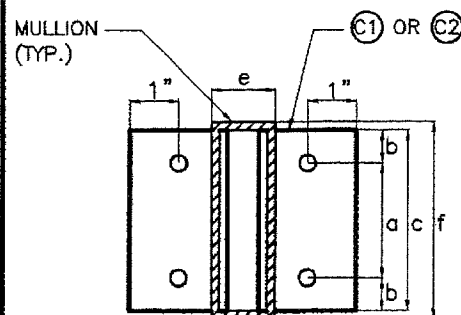
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Expiration Date 08/24/2018
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MIAMI DADE COUNTY



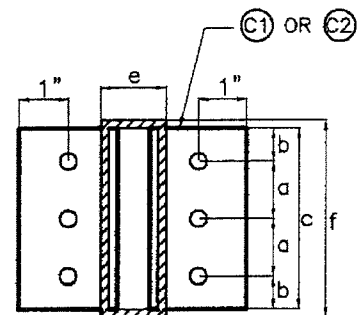
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e-mail: tiltco@aol.com
EB-0006719
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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

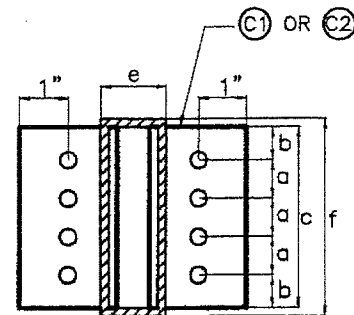
SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
 290 WEST 78 ROAD HIALEAH, FL. 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com						08/25/17 DATE	
						17-249 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 4 OF 60	
1	OLD 15-15R	08/25/17	3				
2			4				



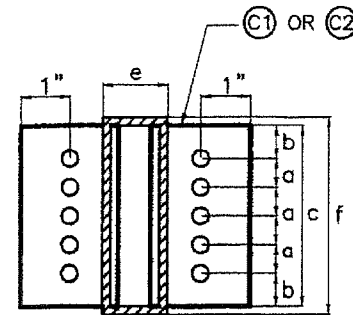
N=4 ANCHORS
@ INTERIOR MULLION



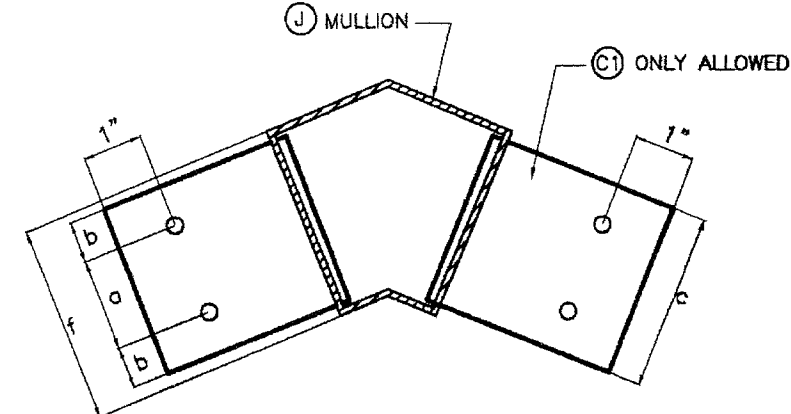
N=6 ANCHORS
@ INTERIOR MULLION



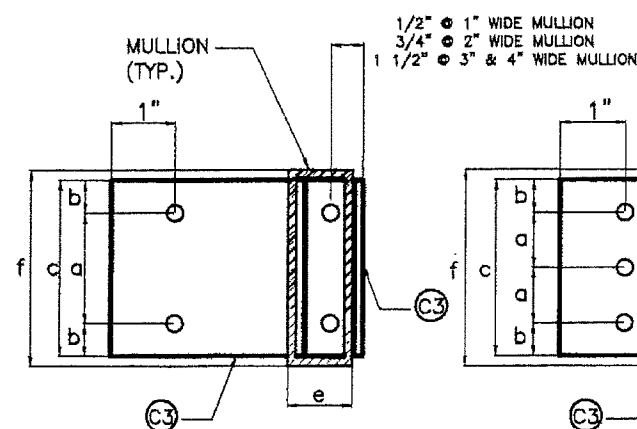
N=8 ANCHORS
@ INTERIOR MULLION



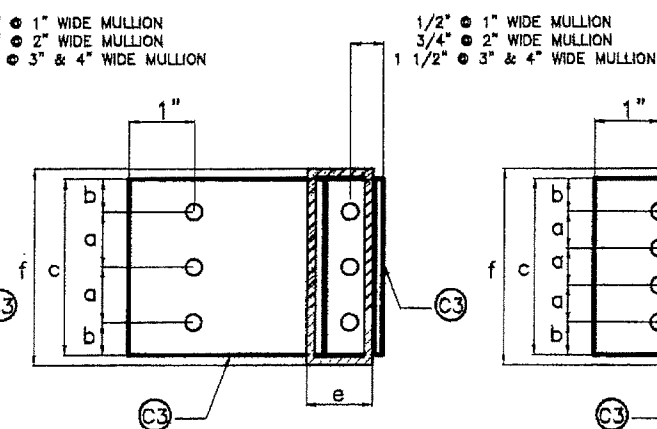
N=10 ANCHORS
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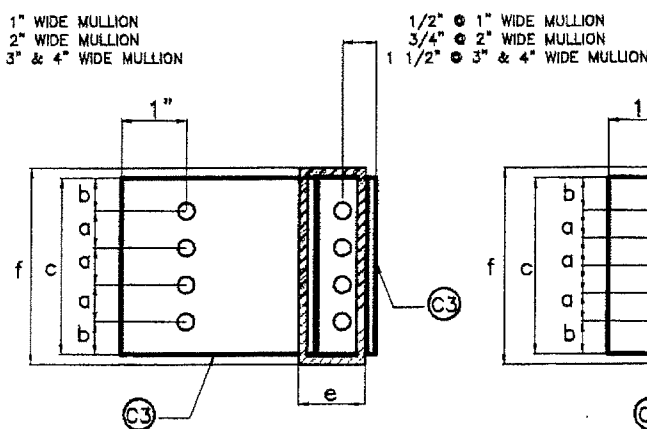
45° VERTICAL/INTERIOR @
MULLION W/ N=4 ANCHORS
& (C1) CLIP



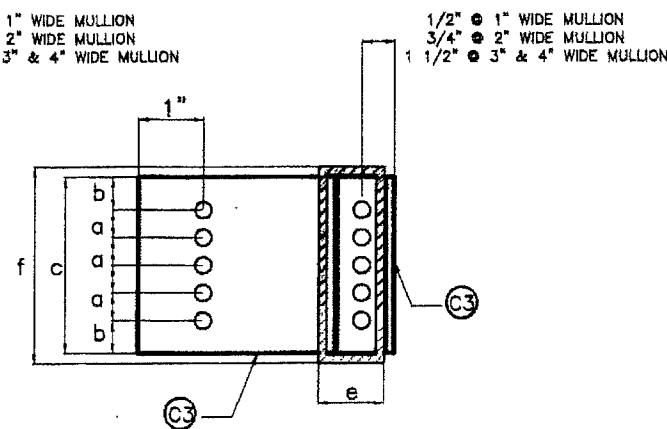
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ONLY END MULLION
(OPTION 1)



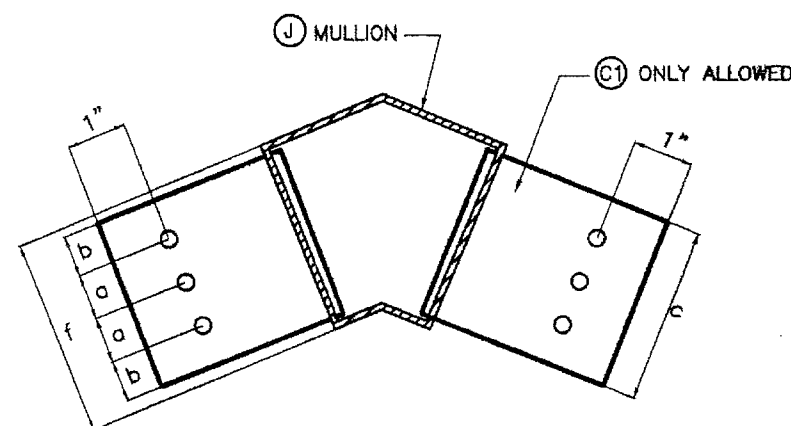
N=6 ANCHORS
ONLY END MULLION
(OPTION 1)



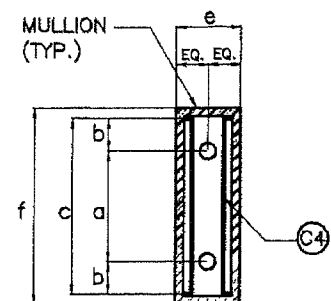
N=8 ANCHORS
ONLY END MULLION
(OPTION 1)



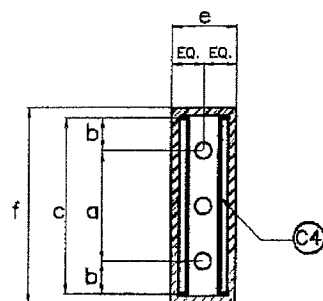
N=10 ANCHORS
ONLY END MULLION
(OPTION 1)



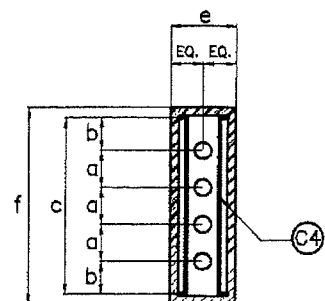
45° VERTICAL/INTERIOR @
MULLION W/ 6 ANCHORS &
(C1) CLIP



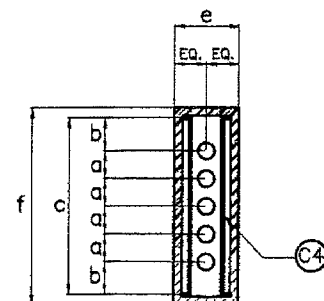
N=2 ANCHORS @
INTERIOR OR END
MULLION
(OPTION 2)



N=3 ANCHORS @
INTERIOR OR END
MULLION
(OPTION 2)



N=4 ANCHORS @
INTERIOR OR END
MULLION
(OPTION 2)



N=5 ANCHORS @
INTERIOR OR END
MULLION
(OPTION 2)

TYPICAL ANCHOR/CLIP DETAILS FOR INTERIOR & END MULLIONS

(SEE SHEET 6 FOR a, b, c, e & f DIMENSIONS)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-11080
Expiration Date 03/24/2023
By *Manuel Cruz*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102-14
Expiration Date 03/24/2018
By *Manuel Cruz*
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL SIGNATURE/DATE

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e-mail: tilteco@aol.com
EB-0006719
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FLORIDA Lic. 44167

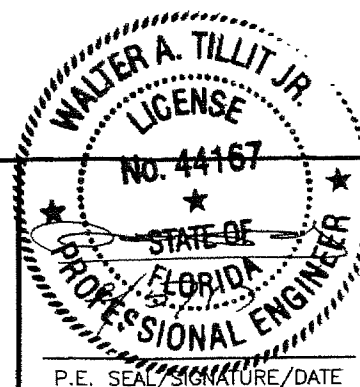
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS				DRAWN BY: L.C.	
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6885 www.generalimpact.com				08/25/17 DATE	
				17-249 DRAWING No.	
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		
					SHEET 5 OF 60

ANCHORS CLIP/SCHEDULE FOR CLIPS C1, C2, C3 & C4 * (SEE SHEETS 4 & 5)														
INTERIOR & END CLIPPED MULLION TYPE	TUBE DIMENSIONS		CLIPS W/ "N" ANCHORS (TOTAL)											
			N=4 CLIPS TYPE C1, C2 & C3 N=2 CLIP TYPE C4			N=6 CLIPS TYPE C1, C2 & C3 N=3 CLIP TYPE C4			N=8 CLIPS TYPE C1, C2 & C3 N=4 CLIP TYPE C4			N=10 CLIPS TYPE C1, C2 & C3 N=5 CLIP TYPE C4		
	e	f	a	b	c	a	b	c	a	b	c	a	b	c
(A)	1"	3"	1 23/32"	1/2"	2 23/32"	-	-	-	-	-	-	-	-	-
(B)	1"	4"	3"	11/32"	3 23/32"	1 11/32"	1/2"	3 23/32"	-	-	-	-	-	-
(C)	1"	4"	2 7/32"	1/2"	3 7/32"	1 3/32"	1/2"	3 7/32"	-	-	-	-	-	-
(D)	2"	4"	3"	11/32"	3 23/32"	1 11/32"	1/2"	3 23/32"	-	-	-	-	-	-
(E)	2"	6"	4 23/32"	1/2"	5 23/32"	2 11/32"	1/2"	5 23/32"	1 9/16"	1/2"	5 23/32"	-	-	-
(F)	2"	6"	-	-	-	2 7/32"	1/2"	5 15/32"	1 15/32"	1/2"	5 15/32"	1 1/8"	1/2"	5 15/32"
(G)	3"	3"	1 23/32"	1/2"	2 23/32"	-	-	-	-	-	-	-	-	-
(H)	4"	4"	2 15/32"	1/2"	3 15/32"	1 7/32"	1/2"	3 15/32"	-	-	-	-	-	-
(I)	4"	6"	4 15/32"	1/2"	5 15/32"	2 7/32"	1/2"	5 15/32"	1 15/32"	1/2"	5 15/32"	1 1/8"	1/2"	5 15/32"
(J)	-	4"	3"	11/32"	3 23/32"	1 11/32"	1/2"	3 23/32"	-	-	-	-	-	-

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct. 24, 2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS
DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 5 OF 60

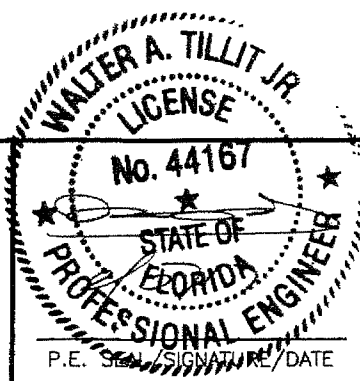
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-156	08/25/17	3		
2			4		

MULLION CHARTS SCHEDULE					
INTERIOR MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
7	A-C1/C2-N=4-WOOD	A	C1/C2	4	WOOD
	B-C1/C2-N=4-WOOD	B	C1/C2	4	WOOD
	C-C1/C2-N=4-WOOD	C	C1/C2	4	WOOD
8	D-C1/C2-N=4-WOOD	D	C1/C2	4	WOOD
	D-C1/C2-N=6-WOOD	D	C1/C2	6	WOOD
9	E-C1/C2-N=6-WOOD	E	C1/C2	6	WOOD
	E-C1/C2-N=8-WOOD	E	C1/C2	8	WOOD
10	F-C1/C2-N=8-WOOD	F	C1/C2	8	WOOD
	F-C1/C2-N=10-WOOD	F	C1/C2	10	WOOD
11	G-C1/C2-N=4-WOOD	G	C1/C2	4	WOOD
	I-C1/C2-N=10-WOOD	I	C1/C2	10	WOOD
12	J-C1-N=6-WOOD	J	C1	6	WOOD
13	A-C1/C2-N=4-BLOCK	A	C1/C2	4	BLOCK
	B-C1/C2-N=4-BLOCK	B	C1/C2	4	BLOCK
	C-C1/C2-N=4-BLOCK	C	C1/C2	4	BLOCK
14	D-C1/C2-N=4-BLOCK	D	C1/C2	4	BLOCK
	F-C1/C2-N=8-BLOCK	F	C1/C2	8	BLOCK
15	E-C1/C2-N=4-BLOCK	E	C1/C2	4	BLOCK
	E-C1/C2-N=8-BLOCK	E	C1/C2	8	BLOCK
16	G-C1/C2-N=4-BLOCK	G	C1/C2	4	BLOCK
	H-C1/C2-N=4-BLOCK	H	C1/C2	4	BLOCK
17	J-C1-N=4-BLOCK	J	C1	4	BLOCK

MULLION CHARTS SCHEDULE					
INTERIOR MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
18	A-C1/C2-N=4-CONC	A	C1/C2	4	CONC
	B-C1/C2-N=4-CONC	B	C1/C2	4	CONC
	C-C1/C2-N=4-CONC	C	C1/C2	4	CONC
19	D-C1/C2-N=4-CONC	D	C1/C2	4	CONC
	G-C1/C2-N=4-CONC	G	C1/C2	4	CONC
	H-C1/C2-N=4-CONC	H	C1/C2	4	CONC
20	E-C1/C2-N=4-CONC	E	C1/C2	4	CONC
	E-C1/C2-N=6-CONC	E	C1/C2	6	CONC
21	F-C1/C2-N=6-CONC	F	C1/C2	6	CONC
	F-C1/C2-N=8-CONC	F	C1/C2	8	CONC
22	I-C1/C2-N=8-CONC	I	C1/C2	8	CONC
	J-C1-N=4-CONC	J	C1	4	CONC
23	A-C1/C2-N=4-STL/AL	A	C1/C2	4	STL/AL
	B-C1/C2-N=4-STL/AL	B	C1/C2	4	STL/AL
24	C-C1/C2-N=4-STL/AL	C	C1/C2	4	STL/AL
	C-C1/C2-N=6-STL/AL	C	C1/C2	6	STL/AL
25	D-C1/C2-N=4-STL/AL	D	C1/C2	4	STL/AL
	D-C1/C2-N=6-STL/AL	D	C1/C2	6	STL/AL
26	E-C1/C2-N=6-STL/AL	E	C1/C2	6	STL/AL
	E-C1/C2-N=8-STL/AL	E	C1/C2	8	STL/AL
27	F-C1/C2-N=8-STL/AL	F	C1/C2	8	STL/AL
	F-C1/C2-N=10-STL/AL	F	C1/C2	10	STL/AL
28	G-C1/C2-N=4-STL/AL	G	C1/C2	4	STL/AL
	I-C1/C2-N=10-STL/AL	I	C1/C2	10	STL/AL
29	J-C1-N=6-STL/AL	J	C1	6	STL/AL

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1102.01
Expiration Date 08.24.2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 08.24.2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS
DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No.
SHEET 6A OF 60

REV. NO.	DESCRIPTION	DATE	REV. No.	DESCRIPTION	DATE
1	OLD 15-156	08/25/17	3		
2			4		

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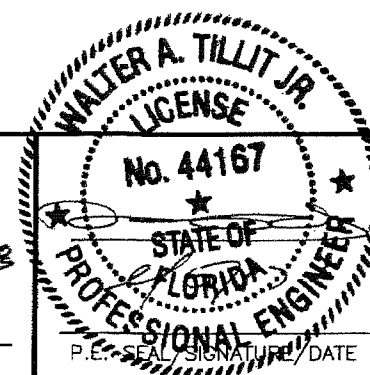
GENERAL
IMPACT GLASS & WINDOWS
The Clear Solution

MULLION CHARTS SCHEDULE					
END MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
30	A-C3-N=4-WOOD	A	C3	4	WOOD
	B-C3-N=4-WOOD	B	C3	4	WOOD
	C-C3-N=4-WOOD	C	C3	4	WOOD
	C-C3-N=6-WOOD	C	C3	6	WOOD
	D-C3-N=4-WOOD	D	C3	4	WOOD
	D-C3-N=6-WOOD	D	C3	6	WOOD
31	E-C3-N=6-WOOD	E	C3	6	WOOD
	E-C3-N=8-WOOD	E	C3	8	WOOD
	F-C3-N=8-WOOD	F	C3	8	WOOD
	F-C3-N=10-WOOD	F	C3	10	WOOD
32	G-C3-N=4-WOOD	G	C3	4	WOOD
	I-C3-N=10-WOOD	I	C3	10	WOOD
33	A-C3-N=4-BLOCK	A	C3	4	BLOCK
	B-C3-N=4-BLOCK	B	C3	4	BLOCK
	C-C3-N=4-BLOCK	C	C3	4	BLOCK
	D-C3-N=4-BLOCK	D	C3	4	BLOCK
	F-C3-N=8-BLOCK	F	C3	8	BLOCK
34	E-C3-N=4-BLOCK	E	C3	4	BLOCK
	E-C3-N=8-BLOCK	E	C3	8	BLOCK
	G-C3-N=4-BLOCK	G	C3	4	BLOCK
	H-C3-N=4-BLOCK	H	C3	4	BLOCK

MULLION CHARTS SCHEDULE					
END MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
35	A-C3-N=4-CONC	A	C3	4	CONC
	B-C3-N=4-CONC	B	C3	4	CONC
	C-C3-N=4-CONC	C	C3	4	CONC
	D-C3-N=4-CONC	D	C3	4	CONC
	G-C3-N=4-CONC	G	C3	4	CONC
	E-C3-N=4-CONC	E	C3	4	CONC
36	E-C3-N=6-CONC	E	C3	6	CONC
	F-C3-N=6-CONC	F	C3	6	CONC
	F-C3-N=8-CONC	F	C3	8	CONC
	H-C3-N=4-CONC	H	C3	4	CONC
37	I-C3-N=8-CONC	I	C3	8	CONC
38	A-C3-N=4-STL/AL	A	C3	4	STL/AL
	B-C3-N=4-STL/AL	B	C3	4	STL/AL
	C-C3-N=4-STL/AL	C	C3	4	STL/AL
	C-C3-N=6-STL/AL	C	C3	6	STL/AL
	G-C3-N=4-STL/AL	G	C3	4	STL/AL
	I-C3-N=10-STL/AL	I	C3	10	STL/AL
39	D-C3-N=4-STL/AL	D	C3	4	STL/AL
	D-C3-N=6-STL/AL	D	C3	6	STL/AL
	E-C3-N=6-STL/AL	E	C3	6	STL/AL
	E-C3-N=8-STL/AL	E	C3	8	STL/AL
40	F-C3-N=8-STL/AL	F	C3	8	STL/AL
	F-C3-N=10-STL/AL	F	C3	10	STL/AL

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1168.01
Expiration Date Oct. 24, 2023
By *Manuel Jara*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 7-1102-14
Expiration Date Oct. 24, 2018
By *Manuel Jara*
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

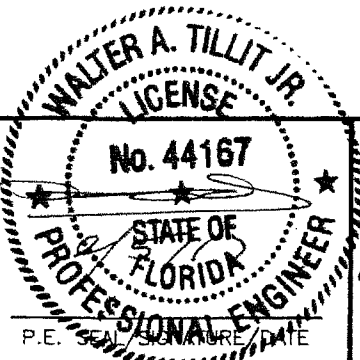
SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
IMPACT GLASS & WINDOWS						08/25/17 DATE	
290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com						17-249	
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE	DRAWING No.	
1	OLD 15-158	08/25/17	3			SHEET 68 OF 60	
2			4				

MULLION CHARTS SCHEDULE					
INTERIOR & END MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
41	A-C4-N=2-WOOD	A	C4	2	WOOD
	B-C4-N=2-WOOD	B	C4	2	WOOD
	C-C4-N=2-WOOD	C	C4	2	WOOD
42	C-C4-N=3-WOOD	C	C4	3	WOOD
	D-C4-N=2-WOOD	D	C4	2	WOOD
	D-C4-N=3-WOOD	D	C4	3	WOOD
43	E-C4-N=3-WOOD	E	C4	3	WOOD
	E-C4-N=4-WOOD	E	C4	4	WOOD
44	F-C4-N=4-WOOD	F	C4	4	WOOD
	F-C4-N=5-WOOD	F	C4	5	WOOD
45	G-C4-N=2-WOOD	G	C4	2	WOOD
	I-C4-N=5-WOOD	I	C4	5	WOOD
46	A-C4-N=2-BLOCK	A	C4	2	BLOCK
	B-C4-N=2-BLOCK	B	C4	2	BLOCK
	C-C4-N=2-BLOCK	C	C4	2	BLOCK
47	D-C4-N=2-BLOCK	D	C4	2	BLOCK
	F-C4-N=4-BLOCK	F	C4	4	BLOCK
	G-C4-N=2-BLOCK	G	C4	2	BLOCK
48	E-C4-N=2-BLOCK	E	C4	2	BLOCK
	E-C4-N=4-BLOCK	E	C4	4	BLOCK
49	H-C4-N=2-BLOCK	H	C4	2	BLOCK

MULLION CHARTS SCHEDULE					
INTERIOR & END MULLIONS CHARTS					
SHEET No.	CHARTS CODIFIED DESIGNATION	MULLIONS (SEE SHEET 3)	CLIPS (SEE SHEET 4)	No. OF ANCHORS N= (SEE SHEET 5)	SUBSTRATE
50	A-C4-N=2-CONC	A	C4	2	CONC
	B-C4-N=2-CONC	B	C4	2	CONC
	C-C4-N=2-CONC	C	C4	2	CONC
51	D-C4-N=2-CONC	D	C4	2	CONC
	G-C4-N=2-CONC	G	C4	2	CONC
52	E-C4-N=2-CONC	E	C4	2	CONC
	E-C4-N=3-CONC	E	C4	3	CONC
53	F-C4-N=3-CONC	F	C4	3	CONC
	F-C4-N=4-CONC	F	C4	4	CONC
54	H-C4-N=2-CONC	H	C4	2	CONC
	I-C4-N=4-CONC	I	C4	4	CONC
55	A-C4-N=2-STL/AL	A	C4	2	STL/AL
	B-C4-N=2-STL/AL	B	C4	2	STL/AL
	G-C4-N=2-STL/AL	G	C4	2	STL/AL
56	C-C4-N=2-STL/AL	C	C4	2	STL/AL
	C-C4-N=3-STL/AL	C	C4	3	STL/AL
57	D-C4-N=2-ST/AL	D	C4	2	STL/AL
	D-C4-N=3-STL/AL	D	C4	3	STL/AL
58	E-C4-N=3-STL/AL	E	C4	3	STL/AL
	E-C4-N=4-STL/AL	E	C4	4	STL/AL
59	F-C4-N=4-STL/AL	F	C4	4	STL/AL
	F-C4-N=5-STL/AL	F	C4	5	STL/AL
60	I-C4-N=5-STL/AL	I	C4	5	STL/AL

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct. 24, 2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530 Fax: (305) 871-1531
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
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REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 60 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE

CONNECTED W/ CLIPS (C1) & (C2)

A-C1/C2-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	183.1	138.8	121.2	111.5	
23	159.2	120.7	105.4	97.0	
26	140.9	106.8	93.2	85.8	
29	126.3	95.7	83.6	76.9	
32	114.4	86.8	75.7	69.7	
35	104.6	79.3	69.2	63.7	
38	96.4	73.1	63.8	58.7	
41	89.3	67.7	59.1	54.4	
44	83.2	63.1	55.1	50.7	
47	77.9	59.1	51.6	47.5	
50	73.2	55.5	48.5	44.6	
53	69.1	52.4	45.7	42.1	
56	65.4	49.6	43.3	39.8	
59	62.1	47.1	41.1	37.8	
62	59.1	44.8	39.1	36.0	
65	56.3	42.7	37.3	34.3	
68	53.9	40.8	35.6	32.8	
71	51.6	39.1	34.1	31.4	
74	49.5	37.5	32.7	30.1	
77	47.6	36.1	31.5	N/A	
80	45.8	34.7	30.3	N/A	
83	44.1	33.4	N/A	N/A	
86	42.6	32.3	N/A	N/A	
89	41.2	31.2	N/A	N/A	
92	39.8	30.2	N/A	N/A	
95	38.6	N/A	N/A	N/A	
98	37.4	N/A	N/A	N/A	
101	36.3	N/A	N/A	N/A	
104	35.2	N/A	N/A	N/A	

B-C1/C2-N=4-WOOD

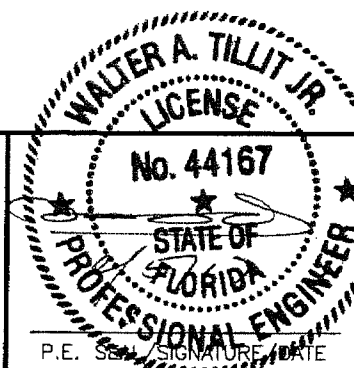
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	183.1	138.8	121.2	111.5	94.6	87.8	
23	159.2	120.7	105.4	97.0	82.3	76.4	
26	140.9	106.8	93.2	85.8	72.8	67.6	
29	126.3	95.7	83.6	76.9	65.3	60.6	
32	114.4	86.8	75.7	69.7	59.2	54.9	
35	104.6	79.3	69.2	63.7	54.1	50.2	
38	96.4	73.1	63.8	58.7	49.8	46.2	
41	89.3	67.7	59.1	54.4	46.2	42.8	
44	83.2	63.1	55.1	50.7	43.0	39.9	
47	77.9	59.1	51.6	47.5	40.3	37.4	
50	73.2	55.5	48.5	44.6	37.9	35.1	
53	69.1	52.4	45.7	42.1	35.7	33.1	
56	65.4	49.6	43.3	39.8	33.8	31.4	
59	62.1	47.1	41.1	37.8	32.1	N/A	
62	59.1	44.8	39.1	36.0	30.5	N/A	
65	56.3	42.7	37.3	34.3	N/A	N/A	
68	53.9	40.8	35.6	32.8	N/A	N/A	
71	51.6	39.1	34.1	31.4	N/A	N/A	
74	49.5	37.5	32.7	30.1	N/A	N/A	
77	47.6	36.1	31.5	N/A	N/A	N/A	
80	45.8	34.7	30.3	N/A	N/A	N/A	
83	44.1	33.4	N/A	N/A	N/A	N/A	
86	42.6	32.3	N/A	N/A	N/A	N/A	
89	41.2	31.2	N/A	N/A	N/A	N/A	
92	39.8	30.2	N/A	N/A	N/A	N/A	
95	38.6	N/A	N/A	N/A	N/A	N/A	
98	37.4	N/A	N/A	N/A	N/A	N/A	
101	36.3	N/A	N/A	N/A	N/A	N/A	
104	35.2	N/A	N/A	N/A	N/A	N/A	

C-C1/C2-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	183.1	138.8	121.2	111.5	94.6	87.8
23	159.2	120.7	105.4	97.0	82.3	76.4
26	140.9	106.8	93.2	85.8	72.8	67.6
29	126.3	95.7	83.6	76.9	65.3	60.6
32	114.4	86.8	75.7	69.7	59.2	54.9
35	104.6	79.3	69.2	63.7	54.1	50.2
38	96.4	73.1	63.8	58.7	49.8	46.2
41	89.3	67.7	59.1	54.4	46.2	42.8
44	83.2	63.1	55.1	50.7	43.0	39.9
47	77.9	59.1	51.6	47.5	40.3	37.4
50	73.2	55.5	48.5	44.6	37.9	35.1
53	69.1	52.4	45.7	42.1	35.7	33.1
56	65.4	49.6	43.3	39.8	33.8	31.4
59	62.1	47.1	41.1	37.8	32.1	N/A
62	59.1	44.8	39.1	36.0	30.5	N/A
65	56.3	42.7	37.3	34.3	N/A	N/A
68	53.9	40.8	35.6	32.8	N/A	N/A
71	51.6	39.1	34.1	31.4	N/A	N/A
74	49.5	37.5	32.7	30.1	N/A	N/A
77	47.6	36.1	31.5	N/A	N/A	N/A
80	45.8	34.7	30.3	N/A	N/A	N/A
83	44.1	33.4	N/A	N/A	N/A	N/A
86	42.6	32.3	N/A	N/A	N/A	N/A
89	41.2	31.2	N/A	N/A	N/A	N/A
92	39.8	30.2	N/A	N/A	N/A	N/A
95	38.6	N/A	N/A	N/A	N/A	N/A
98	37.4	N/A	N/A	N/A	N/A	N/A
101	36.3	N/A	N/A	N/A	N/A	N/A
104	35.2	N/A	N/A	N/A	N/A	N/A

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03/24/2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 03/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-8665 www.generalimpact.com						08/25/17 DATE	
						17-249 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 7 OF 60	
1	OLD 15-158	08/25/17	3				
2			4				

CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

D-C1/C2-N=4-WOOD

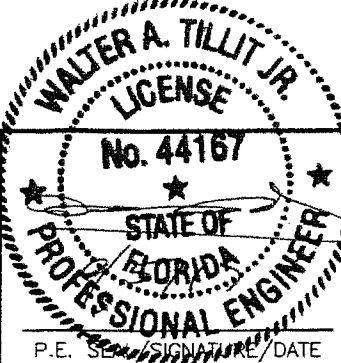
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRA CONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	183.1	138.8	121.2	111.5	94.6	73.2
23	159.2	120.7	105.4	97.0	82.3	63.7
26	140.9	106.8	93.2	85.8	72.8	56.3
29	126.3	95.7	83.6	76.9	65.3	50.5
32	114.4	86.8	75.7	69.7	59.2	45.8
35	104.6	79.3	69.2	63.7	54.1	41.8
38	96.4	73.1	63.8	58.7	49.8	38.5
41	89.3	67.7	59.1	54.4	46.2	35.7
44	83.2	63.1	55.1	50.7	43.0	33.3
47	77.9	59.1	51.6	47.5	40.3	31.1
50	73.2	55.5	48.5	44.6	37.9	N/A
53	69.1	52.4	45.7	42.1	35.7	N/A
56	65.4	49.6	43.3	39.8	33.8	N/A
59	62.1	47.1	41.1	37.8	32.1	N/A
62	59.1	44.8	39.1	36.0	30.5	N/A
65	56.3	42.7	37.3	34.3	N/A	N/A
68	53.9	40.8	35.6	32.8	N/A	N/A
71	51.6	39.1	34.1	31.4	N/A	N/A
74	49.5	37.5	32.7	30.1	N/A	N/A
77	47.6	36.1	31.5	N/A	N/A	N/A
80	45.8	34.7	30.3	N/A	N/A	N/A
83	44.1	33.4	N/A	N/A	N/A	N/A
86	42.6	32.3	N/A	N/A	N/A	N/A
89	41.2	31.2	N/A	N/A	N/A	N/A
92	39.8	30.2	N/A	N/A	N/A	N/A
95	38.6	N/A	N/A	N/A	N/A	N/A
98	37.4	N/A	N/A	N/A	N/A	N/A
101	36.3	N/A	N/A	N/A	N/A	N/A
104	35.2	N/A	N/A	N/A	N/A	N/A

D-C1/C2-N=6-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ULTRA CONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	181.7	167.3	142.0	109.8
23	185.0	181.1	158.0	145.5	123.4	95.5
26	185.0	160.2	139.8	128.7	109.2	84.5
29	185.0	143.6	125.3	115.4	97.9	75.7
32	171.7	130.1	113.6	104.6	88.7	68.6
35	157.0	119.0	103.9	95.6	81.1	62.7
38	144.6	109.6	95.7	88.1	74.7	57.8
41	134.0	101.6	88.7	81.6	69.3	53.6
44	124.9	94.6	82.6	76.1	64.5	49.9
47	116.9	88.6	77.3	71.2	60.4	46.7
50	109.9	83.3	72.7	66.9	56.8	43.9
53	103.7	78.6	68.6	63.1	53.6	41.4
56	98.1	74.4	64.9	59.8	50.7	39.2
59	93.1	70.6	61.6	56.7	48.1	37.2
62	88.6	67.2	58.6	54.0	45.8	35.4
65	84.5	64.1	55.9	51.5	43.7	33.8
68	80.8	61.2	53.5	49.2	41.8	32.3
71	77.4	58.7	51.2	47.1	40.0	30.9
74	74.2	56.3	49.1	45.2	38.4	N/A
77	71.3	54.1	47.2	43.5	36.9	N/A
80	68.7	52.1	45.4	41.8	35.5	N/A
83	66.2	50.2	43.8	40.3	34.2	N/A
86	63.9	48.4	42.3	38.9	33.0	N/A
89	61.7	46.8	40.8	37.6	31.9	N/A
92	59.7	45.3	39.5	36.4	30.9	N/A
95	57.8	43.8	38.3	35.2	N/A	N/A
98	56.1	42.5	37.1	34.1	N/A	N/A
101	54.4	41.2	36.0	33.1	N/A	N/A
104	52.8	40.0	34.9	32.2	N/A	N/A

PRODUCT REVIEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03-24-2023
By *Manuel J. [Signature]*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
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Acceptance No. 17-1102.14
Expiration Date 03-24-2018
By *Manuel J. [Signature]*
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	06/25/17	3		
1			4		

DRAWN BY: L.C.
08/25/17 DATE
17-249 DRAWING No
SHEET 8 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

E-C1/C2-N=6-WOOD

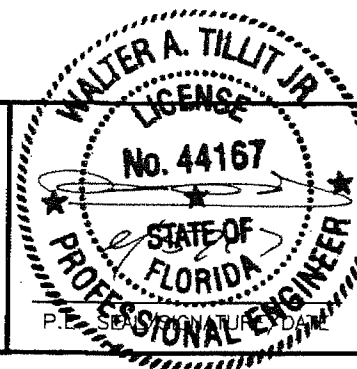
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	181.7	167.3	142.0	109.8	97.6	87.8	73.2
23	185.0	181.1	158.0	145.5	123.4	95.5	84.9	76.4	63.7
26	185.0	160.2	139.8	128.7	109.2	84.5	75.1	67.6	56.3
29	185.0	143.6	125.3	115.4	97.9	75.7	67.3	60.6	50.5
32	171.7	130.1	113.6	104.6	88.7	68.6	61.0	54.9	45.8
35	157.0	119.0	103.9	95.6	81.1	62.7	55.8	50.2	41.8
38	144.6	109.6	95.7	88.1	74.7	57.8	51.4	46.2	38.5
41	134.0	101.6	88.7	81.6	69.3	53.6	47.6	42.8	35.7
44	124.9	94.6	82.6	76.1	64.5	49.9	44.4	39.9	33.3
47	116.9	88.6	77.3	71.2	60.4	46.7	41.5	37.4	31.1
50	109.9	83.3	72.7	66.9	56.8	43.9	39.0	35.1	N/A
53	103.7	78.6	68.6	63.1	53.6	41.4	36.8	33.1	N/A
56	98.1	74.4	64.9	59.8	50.7	39.2	34.9	31.4	N/A
59	93.1	70.6	61.6	56.7	48.1	37.2	33.1	N/A	N/A
62	88.6	67.2	58.6	54.0	45.8	35.4	31.5	N/A	N/A
65	84.5	64.1	55.9	51.5	43.7	33.8	30.0	N/A	N/A
68	80.8	61.2	53.5	49.2	41.8	32.3	N/A	N/A	N/A
71	77.4	58.7	51.2	47.1	40.0	30.9	N/A	N/A	N/A
74	74.2	56.3	49.1	45.2	38.4	N/A	N/A	N/A	N/A
77	71.3	54.1	47.2	43.5	36.9	N/A	N/A	N/A	N/A
80	68.7	52.1	45.4	41.8	35.5	N/A	N/A	N/A	N/A
83	66.2	50.2	43.8	40.3	34.2	N/A	N/A	N/A	N/A
86	63.9	48.4	42.3	38.9	33.0	N/A	N/A	N/A	N/A
89	61.7	46.8	40.8	37.6	31.9	N/A	N/A	N/A	N/A
92	59.7	45.3	39.5	36.4	30.9	N/A	N/A	N/A	N/A
95	57.8	43.8	38.3	35.2	N/A	N/A	N/A	N/A	N/A
98	56.1	42.5	37.1	34.1	N/A	N/A	N/A	N/A	N/A
101	54.4	41.2	36.0	33.1	N/A	N/A	N/A	N/A	N/A
104	52.8	40.0	34.9	32.2	N/A	N/A	N/A	N/A	N/A

E-C1/C2-N=8-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	189.3	146.4	130.1	117.1	97.6
23	185.0	185.0	185.0	185.0	164.6	127.3	113.2	101.8	84.9
26	185.0	185.0	185.0	171.6	145.6	112.6	100.1	90.1	75.1
29	185.0	185.0	167.1	153.9	130.5	101.0	89.7	80.8	67.3
32	185.0	173.5	151.4	139.4	118.3	91.5	81.3	73.2	61.0
35	185.0	158.6	138.5	127.5	108.2	83.7	74.4	66.9	55.8
38	185.0	146.1	127.5	117.4	99.6	77.1	68.5	61.6	51.4
41	178.7	135.4	118.2	108.8	92.3	71.4	63.5	57.1	47.6
44	166.5	126.2	110.1	101.4	86.0	66.5	59.2	53.2	44.4
47	155.8	118.1	103.1	94.9	80.5	62.3	55.4	49.8	41.5
50	146.5	111.0	96.9	89.2	75.7	58.6	52.1	46.8	39.0
53	138.2	104.8	91.4	84.2	71.4	55.2	49.1	44.2	36.8
56	130.8	99.1	86.5	79.7	67.6	52.3	46.5	41.8	34.9
59	124.1	94.1	82.1	75.6	64.2	49.6	44.1	39.7	33.1
62	118.1	89.6	78.2	72.0	61.1	47.2	42.0	37.8	31.5
65	112.7	85.4	74.6	68.6	58.2	45.0	40.0	36.0	30.0
68	107.7	81.7	71.3	65.6	55.7	43.1	38.3	34.4	N/A
71	103.2	78.2	68.3	62.8	53.3	41.2	36.7	33.0	N/A
74	99.0	75.0	65.5	60.3	51.2	39.6	35.2	31.7	N/A
77	95.1	72.1	62.9	57.9	49.2	38.0	33.8	30.4	N/A
80	91.6	69.4	60.6	55.8	47.3	36.6	32.5	N/A	N/A
83	88.3	66.9	58.4	53.8	45.6	35.3	31.4	N/A	N/A
86	85.2	64.6	56.4	51.9	44.0	34.0	30.3	N/A	N/A
89	82.3	62.4	54.5	50.1	42.5	32.9	N/A	N/A	N/A
92	79.6	60.4	52.7	48.5	41.1	31.8	N/A	N/A	N/A
95	77.1	58.4	51.0	47.0	39.8	30.8	N/A	N/A	N/A
98	74.7	56.7	49.5	45.5	38.6	N/A	N/A	N/A	N/A
101	72.5	55.0	48.0	44.2	37.5	N/A	N/A	N/A	N/A
104	70.4	53.4	46.6	42.9	36.4	N/A	N/A	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 04.24.2023
By *Manuel Pro*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 04.24.2018
By *Manuel Pro*
Miami Dade Product Control
MIAMI DADE COUNTY



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Phone : (305) 871-1530 • Fax : (305) 871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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HIALEAH, FL 33014
PHONE: (305) 558-8103
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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 9 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

F-C1/C2-N=8-WOOD

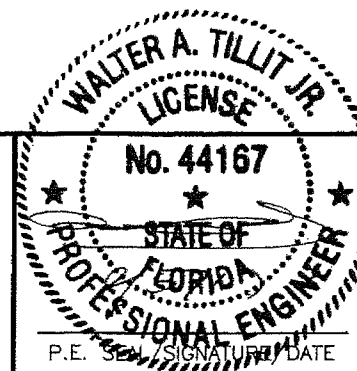
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	146.4	130.1	117.1	97.6
23	185.0	185.0	185.0	185.0	164.6	127.3	113.2	101.8	84.9
26	185.0	185.0	186.4	171.6	145.6	112.6	100.1	90.1	75.1
29	185.0	185.0	167.1	153.9	130.5	101.0	89.7	80.8	67.3
32	185.0	173.5	151.4	139.4	118.3	91.5	81.3	73.2	61.0
35	185.0	158.6	138.5	127.5	108.2	83.7	74.4	66.9	55.8
38	185.0	146.1	127.5	117.4	99.6	77.1	68.5	61.6	51.4
41	178.7	135.4	118.2	108.8	92.3	71.4	63.5	57.1	47.6
44	166.5	126.2	110.1	101.4	86.0	66.5	59.2	53.2	44.4
47	155.8	118.1	103.1	94.9	80.5	62.3	55.4	49.8	41.5
50	146.5	111.0	96.9	89.2	75.7	58.6	52.1	46.8	39.0
53	138.2	104.8	91.4	84.2	71.4	55.2	49.1	44.2	36.8
56	130.8	99.1	86.5	79.7	67.6	52.3	46.5	41.8	34.9
59	124.1	94.1	82.1	75.6	64.2	49.6	44.1	39.7	33.1
62	118.1	89.6	78.2	72.0	61.1	47.2	42.0	37.8	31.5
65	112.7	85.4	74.6	68.6	58.2	45.0	40.0	36.0	30.0
68	107.7	81.7	71.3	65.6	55.7	43.1	38.3	34.4	N/A
71	103.2	78.2	68.3	62.8	53.3	41.2	36.7	33.0	N/A
74	99.0	75.0	65.5	60.3	51.2	39.6	35.2	31.7	N/A
77	95.1	72.1	62.9	57.9	49.2	38.0	33.8	30.4	N/A
80	91.6	69.4	60.6	55.8	47.3	36.6	32.5	N/A	N/A
83	88.3	66.9	58.4	53.8	45.6	35.3	31.4	N/A	N/A
86	85.2	64.6	56.4	51.9	44.0	34.0	30.3	N/A	N/A
89	82.3	62.4	54.5	50.1	42.5	32.9	N/A	N/A	N/A
92	79.6	60.4	52.7	48.5	41.1	31.8	N/A	N/A	N/A
95	77.1	58.4	51.0	47.0	39.8	30.8	N/A	N/A	N/A
98	74.7	56.7	49.5	45.5	38.6	N/A	N/A	N/A	N/A
101	72.5	55.0	48.0	44.2	37.5	N/A	N/A	N/A	N/A
104	70.4	53.4	46.6	42.9	36.4	N/A	N/A	N/A	N/A

F-C1/C2-N=10-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	183.0	162.7	146.4	122.0
23	185.0	185.0	185.0	185.0	185.0	159.1	141.4	127.3	106.1
26	185.0	185.0	185.0	185.0	182.0	140.8	125.1	112.6	93.8
29	185.0	185.0	185.0	185.0	163.2	126.2	112.2	101.0	84.1
32	185.0	185.0	185.0	174.3	147.9	114.4	101.7	91.5	76.3
35	185.0	185.0	173.1	159.3	135.2	104.6	93.0	83.7	69.7
38	185.0	182.6	159.4	146.8	124.5	96.3	85.6	77.1	64.2
41	185.0	169.3	147.8	136.0	115.4	89.3	79.3	71.4	59.5
44	185.0	157.7	137.7	126.8	107.5	83.2	73.9	66.5	55.5
47	185.0	147.7	128.9	118.7	100.7	77.9	69.2	62.3	51.9
50	183.1	138.8	121.2	111.5	94.6	73.2	65.1	58.6	48.8
53	172.8	131.0	114.3	105.2	89.3	69.1	61.4	55.2	46.0
56	163.5	123.9	108.2	99.6	84.5	65.4	58.1	52.3	43.6
59	155.2	117.6	102.7	94.5	80.2	62.0	55.1	49.6	41.4
62	147.7	111.9	97.7	90.0	76.3	59.0	52.5	47.2	39.4
65	140.9	106.8	93.2	85.8	72.8	56.3	50.1	45.0	37.5
68	134.6	102.1	89.1	82.0	69.6	53.8	47.8	43.1	35.9
71	129.0	97.8	85.3	78.6	66.6	51.5	45.8	41.2	34.4
74	123.7	93.8	81.9	75.4	63.9	49.5	44.0	39.6	33.0
77	118.9	90.1	78.7	72.4	61.5	47.5	42.3	38.0	31.7
80	114.4	86.8	75.7	69.7	59.2	45.8	40.7	36.6	30.5
83	110.3	83.6	73.0	67.2	57.0	44.1	39.2	35.3	N/A
86	106.5	80.7	70.4	64.9	55.0	42.6	37.8	34.0	N/A
89	102.9	78.0	68.1	62.7	53.2	41.1	36.6	32.9	N/A
92	99.5	75.4	65.8	60.6	51.4	39.8	35.4	31.8	N/A
95	96.4	73.1	63.8	58.7	49.8	38.5	34.2	30.8	N/A
98	93.4	70.8	61.8	56.9	48.3	37.3	33.2	N/A	N/A
101	90.7	68.7	60.0	55.2	46.9	36.2	32.2	N/A	N/A
104	88.0	66.7	58.2	53.6	45.5	35.2	31.3	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-110801
Expiration Date OCT 24, 2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date OCT 24, 2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA Lic. 44167

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PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 10 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

G-C1/C2-N=4-WOOD

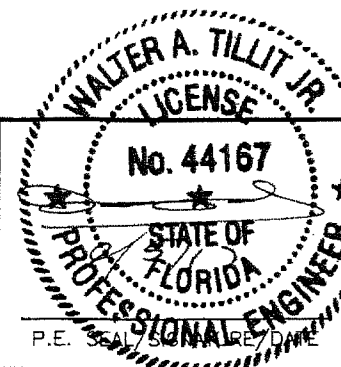
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	183.1	138.8	121.2	111.5	94.6	73.2
23	159.2	120.7	105.4	97.0	82.3	63.7
26	140.9	106.8	93.2	85.8	72.8	56.3
29	126.3	95.7	83.6	76.9	65.3	50.5
32	114.4	86.8	75.7	69.7	59.2	45.8
35	104.6	79.3	69.2	63.7	54.1	41.8
38	96.4	73.1	63.8	58.7	49.8	38.5
41	89.3	67.7	59.1	54.4	46.2	35.7
44	83.2	63.1	55.1	50.7	43.0	33.3
47	77.9	59.1	51.6	47.5	40.3	31.1
50	73.2	55.5	48.5	44.6	37.9	N/A
53	69.1	52.4	45.7	42.1	35.7	N/A
56	65.4	49.6	43.3	39.8	33.8	N/A
59	62.1	47.1	41.1	37.8	32.1	N/A
62	59.1	44.8	39.1	36.0	30.5	N/A
65	56.3	42.7	37.3	34.3	N/A	N/A
68	53.9	40.8	35.6	32.8	N/A	N/A
71	51.6	39.1	34.1	31.4	N/A	N/A
74	49.5	37.5	32.7	30.1	N/A	N/A
77	47.6	36.1	31.5	N/A	N/A	N/A
80	45.8	34.7	30.3	N/A	N/A	N/A
83	44.1	33.4	N/A	N/A	N/A	N/A
86	42.6	32.3	N/A	N/A	N/A	N/A
89	41.2	31.2	N/A	N/A	N/A	N/A
92	39.8	30.2	N/A	N/A	N/A	N/A
95	38.6	N/A	N/A	N/A	N/A	N/A
98	37.4	N/A	N/A	N/A	N/A	N/A
101	36.3	N/A	N/A	N/A	N/A	N/A
104	35.2	N/A	N/A	N/A	N/A	N/A

I-C1/C2-N=10-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	183.0	162.7	146.4	122.0
23	185.0	185.0	185.0	185.0	185.0	159.1	141.4	127.3	106.1
26	185.0	185.0	185.0	185.0	182.0	140.8	125.1	112.6	93.8
29	185.0	185.0	185.0	185.0	163.2	126.2	112.2	101.0	84.1
32	185.0	185.0	185.0	174.3	147.9	114.4	101.7	91.5	76.3
35	185.0	185.0	173.1	159.3	135.2	104.6	93.0	83.7	69.7
38	185.0	182.6	159.4	146.8	124.5	96.3	85.6	77.1	64.2
41	185.0	169.3	147.8	136.0	115.4	89.3	79.3	71.4	59.5
44	185.0	157.7	137.7	126.8	107.5	83.2	73.9	66.5	55.5
47	185.0	147.7	128.9	118.7	100.7	77.9	69.2	62.3	51.9
50	183.1	138.8	121.2	111.5	94.6	73.2	65.1	58.6	48.8
53	172.8	131.0	114.3	105.2	89.3	69.1	61.4	55.2	46.0
56	163.5	123.9	108.2	99.6	84.5	65.4	58.1	52.3	43.6
59	155.2	117.6	102.7	94.5	80.2	62.0	55.1	49.6	41.4
62	147.7	111.9	97.7	90.0	76.3	59.0	52.5	47.2	39.4
65	140.9	106.8	93.2	85.8	72.8	56.3	50.1	45.0	37.5
68	134.6	102.1	89.1	82.0	69.6	53.8	47.8	43.1	35.9
71	129.0	97.8	85.3	78.6	66.6	51.5	45.8	41.2	34.4
74	123.7	93.8	81.9	75.4	63.9	49.5	44.0	39.6	33.0
77	118.9	90.1	78.7	72.4	61.5	47.5	42.3	38.0	31.7
80	114.4	86.8	75.7	69.7	59.2	45.8	40.7	36.6	30.5
83	110.3	83.6	73.0	67.2	57.0	44.1	39.2	35.3	N/A
86	106.5	80.7	70.4	64.9	55.0	42.6	37.8	34.0	N/A
89	102.9	78.0	68.1	62.7	53.2	41.1	36.6	32.9	N/A
92	99.5	75.4	65.8	60.6	51.4	39.8	35.4	31.8	N/A
95	96.4	73.1	63.8	58.7	49.8	38.5	34.2	30.8	N/A
98	93.4	70.8	61.8	56.9	48.3	37.3	33.2	N/A	N/A
101	90.7	68.7	60.0	55.2	46.9	36.2	32.2	N/A	N/A
104	88.0	66.7	58.2	53.6	45.5	35.2	31.3	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02/24/2023
By *Manuel Espinoza*
Miami Dade Product Company

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02/24/2018
By *Manuel Espinoza*
Miami Dade Product Company
MIAMI DADE COUNTY



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DATE

17-249
DRAWING No

SHEET 11 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

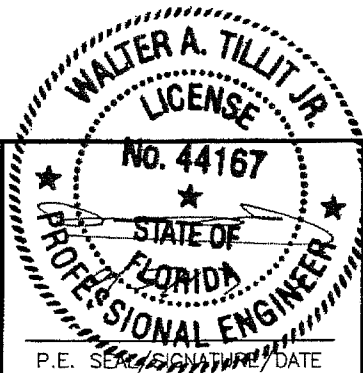
CLIPPED INTERIOR MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP (C1)

J-C1-N=6-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 45° MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	181.7	167.3	142.0	109.8
23	185.0	181.1	158.0	145.5	123.4	95.5
26	185.0	160.2	139.8	128.7	109.2	84.5
29	185.0	143.6	125.3	115.4	97.9	75.7
32	171.7	130.1	113.6	104.6	88.7	68.6
35	157.0	119.0	103.9	95.6	81.1	62.7
38	144.6	109.6	95.7	88.1	74.7	57.8
41	134.0	101.6	88.7	81.6	69.3	53.6
44	124.9	94.6	82.6	76.1	64.5	49.9
47	116.9	88.6	77.3	71.2	60.4	46.7
50	109.9	83.3	72.7	66.9	56.8	43.9
53	103.7	78.6	68.6	63.1	53.6	41.4
56	98.1	74.4	64.9	59.8	50.7	39.2
59	93.1	70.6	61.6	56.7	48.1	37.2
62	88.6	67.2	58.6	54.0	45.8	35.4
65	84.5	64.1	55.9	51.5	43.7	33.8
68	80.8	61.2	53.5	49.2	41.8	32.3
71	77.4	58.7	51.2	47.1	40.0	30.9
74	74.2	56.3	49.1	45.2	38.4	N/A
77	71.3	54.1	47.2	43.5	36.9	N/A
80	68.7	52.1	45.4	41.8	35.5	N/A
83	66.2	50.2	43.8	40.3	34.2	N/A
86	63.9	48.4	42.3	38.9	33.0	N/A
89	61.7	46.8	40.8	37.6	31.9	N/A
92	59.7	45.3	39.5	36.4	30.9	N/A
95	57.8	43.8	38.3	35.2	N/A	N/A
98	56.1	42.5	37.1	34.1	N/A	N/A
101	54.4	41.2	36.0	33.1	N/A	N/A
104	52.8	40.0	34.9	32.2	N/A	N/A

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 08/24/2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 08/24/2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530 Fax: (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 12 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR MULLIONS CHARTS INTO BLOCK SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

A-C1/C2-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	150.1	113.8	99.3	91.4	
23	130.5	98.9	86.4	79.5	
26	115.5	87.5	76.4	70.3	
29	103.5	78.5	68.5	63.1	
32	93.8	71.1	62.1	57.1	
35	85.8	65.0	56.7	52.2	
38	79.0	59.9	52.3	48.1	
41	73.2	55.5	48.4	44.6	
44	68.2	51.7	45.1	41.6	
47	63.9	48.4	42.3	38.9	
50	60.0	45.5	39.7	36.6	
53	56.6	42.9	37.5	34.5	
56	53.6	40.6	35.5	32.7	
59	50.9	38.6	33.7	31.0	
62	48.4	36.7	32.0	N/A	
65	46.2	35.0	30.6	N/A	
68	44.1	33.5	N/A	N/A	
71	42.3	32.1	N/A	N/A	
74	40.6	30.8	N/A	N/A	
77	39.0	N/A	N/A	N/A	
80	37.5	N/A	N/A	N/A	
83	36.2	N/A	N/A	N/A	
86	34.9	N/A	N/A	N/A	
89	33.7	N/A	N/A	N/A	
92	32.6	N/A	N/A	N/A	
95	31.6	N/A	N/A	N/A	
98	30.6	N/A	N/A	N/A	
101	N/A	N/A	N/A	N/A	
104	N/A	N/A	N/A	N/A	

B-C1/C2-N=4-BLOCK

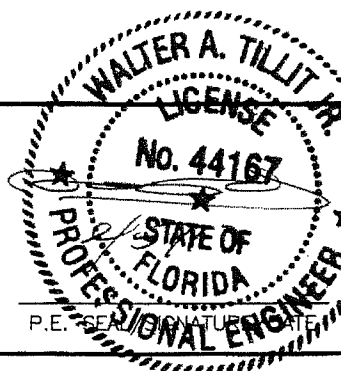
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	185.0	170.7	149.0	137.1	116.4	108.0	
23	185.0	148.4	129.5	119.3	101.2	93.9	
26	173.2	131.3	114.6	105.5	89.5	83.1	
29	155.3	117.7	102.7	94.6	80.3	74.5	
32	140.7	106.7	93.1	85.7	72.7	67.5	
35	128.7	97.5	85.1	78.4	66.5	61.7	
38	118.5	89.8	78.4	72.2	61.2	56.8	
41	109.8	83.3	72.7	66.9	56.8	52.7	
44	102.3	77.6	67.7	62.3	52.9	49.1	
47	95.8	72.6	63.4	58.4	49.5	46.0	
50	90.1	68.3	59.6	54.9	46.5	43.2	
53	85.0	64.4	56.2	51.8	43.9	40.8	
56	80.4	61.0	53.2	49.0	41.6	38.6	
59	76.3	57.9	50.5	46.5	39.4	36.6	
62	72.6	55.1	48.1	44.2	37.5	34.8	
65	69.3	52.5	45.8	42.2	35.8	33.2	
68	66.2	50.2	43.8	40.3	34.2	31.8	
71	63.4	48.1	42.0	38.6	32.8	30.4	
74	60.9	46.1	40.3	37.1	31.4	N/A	
77	58.5	44.3	38.7	35.6	30.2	N/A	
80	56.3	42.7	37.2	34.3	N/A	N/A	
83	54.3	41.1	35.9	33.0	N/A	N/A	
86	52.4	39.7	34.6	31.9	N/A	N/A	
89	50.6	38.4	33.5	30.8	N/A	N/A	
92	48.9	37.1	32.4	N/A	N/A	N/A	
95	47.4	35.9	31.4	N/A	N/A	N/A	
98	45.9	34.8	30.4	N/A	N/A	N/A	
101	44.6	33.8	N/A	N/A	N/A	N/A	
104	43.3	32.8	N/A	N/A	N/A	N/A	

C-C1/C2-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	185.0	170.7	149.0	137.1	116.4	108.0	
23	185.0	148.4	129.5	119.3	101.2	93.9	
26	173.2	131.3	114.6	105.5	89.5	83.1	
29	155.3	117.7	102.7	94.6	80.3	74.5	
32	140.7	106.7	93.1	85.7	72.7	67.5	
35	128.7	97.5	85.1	78.4	66.5	61.7	
38	118.5	89.8	78.4	72.2	61.2	56.8	
41	109.8	83.3	72.7	66.9	56.8	52.7	
44	102.3	77.6	67.7	62.3	52.9	49.1	
47	95.8	72.6	63.4	58.4	49.5	46.0	
50	90.1	68.3	59.6	54.9	46.5	43.2	
53	85.0	64.4	56.2	51.8	43.9	40.8	
56	80.4	61.0	53.2	49.0	41.6	38.6	
59	76.3	57.9	50.5	46.5	39.4	36.6	
62	72.6	55.1	48.1	44.2	37.5	34.8	
65	69.3	52.5	45.8	42.2	35.8	33.2	
68	66.2	50.2	43.8	40.3	34.2	31.8	
71	63.4	48.1	42.0	38.6	32.8	30.4	
74	60.9	46.1	40.3	37.1	31.4	N/A	
77	58.5	44.3	38.7	35.6	30.2	N/A	
80	56.3	42.7	37.2	34.3	N/A	N/A	
83	54.3	41.1	35.9	33.0	N/A	N/A	
86	52.4	39.7	34.6	31.9	N/A	N/A	
89	50.6	38.4	33.5	30.8	N/A	N/A	
92	48.9	37.1	32.4	N/A	N/A	N/A	
95	47.4	35.9	31.4	N/A	N/A	N/A	
98	45.9	34.8	30.4	N/A	N/A	N/A	
101	44.6	33.8	N/A	N/A	N/A	N/A	
104	43.3	32.8	N/A	N/A	N/A	N/A	

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02-24-2023
By *Manuel P. Jr.*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102-14
Expiration Date 02-24-2018
By *Manuel P. Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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www.generallimpact.com

DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 13 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR MULLIONS CHARTS INTO BLOCK SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

D-C1/C2-N=4-BLOCK

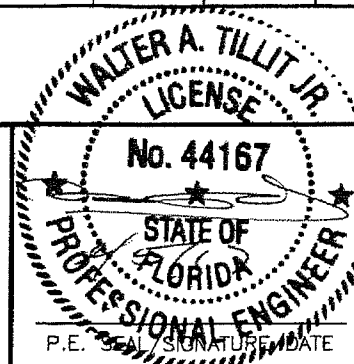
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	170.7	149.0	137.1	116.4	90.0
23	185.0	148.4	129.5	119.3	101.2	78.3
26	173.2	131.3	114.6	105.5	89.5	69.2
29	155.3	117.7	102.7	94.6	80.3	62.1
32	140.7	106.7	93.1	85.7	72.7	56.3
35	128.7	97.5	85.1	78.4	66.5	51.4
38	118.5	89.8	78.4	72.2	61.2	47.4
41	109.8	83.3	72.7	66.9	56.8	43.9
44	102.3	77.6	67.7	62.3	52.9	40.9
47	95.8	72.6	63.4	58.4	49.5	38.3
50	90.1	68.3	59.6	54.9	46.5	36.0
53	85.0	64.4	56.2	51.8	43.9	34.0
56	80.4	61.0	53.2	49.0	41.6	32.1
59	76.3	57.9	50.5	46.5	39.4	30.5
62	72.6	55.1	48.1	44.2	37.5	N/A
65	69.3	52.5	45.8	42.2	35.8	N/A
68	66.2	50.2	43.8	40.3	34.2	N/A
71	63.4	48.1	42.0	38.6	32.8	N/A
74	60.9	46.1	40.3	37.1	31.4	N/A
77	58.5	44.3	38.7	35.6	30.2	N/A
80	56.3	42.7	37.2	34.3	N/A	N/A
83	54.3	41.1	35.9	33.0	N/A	N/A
86	52.4	39.7	34.6	31.9	N/A	N/A
89	50.6	38.4	33.5	30.8	N/A	N/A
92	48.9	37.1	32.4	N/A	N/A	N/A
95	47.4	35.9	31.4	N/A	N/A	N/A
98	45.9	34.8	30.4	N/A	N/A	N/A
101	44.6	33.8	N/A	N/A	N/A	N/A
104	43.3	32.8	N/A	N/A	N/A	N/A

F-C1/C2-N=8-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	182.9	155.2	120.0	106.7	96.0	80.0
23	185.0	185.0	172.7	159.0	134.9	104.3	92.8	83.5	69.6
26	185.0	175.0	152.8	140.7	119.3	92.3	82.1	73.8	61.5
29	185.0	156.9	137.0	126.1	107.0	82.8	73.6	66.2	55.2
32	185.0	142.2	124.1	114.3	97.0	75.0	66.7	60.0	50.0
35	171.5	130.0	113.5	104.5	88.7	68.6	61.0	54.9	45.7
38	158.0	119.8	104.5	96.2	81.7	63.2	56.1	50.5	42.1
41	146.4	111.0	96.9	89.2	75.7	58.5	52.0	46.8	39.0
44	136.5	103.4	90.3	83.1	70.5	54.5	48.5	43.6	36.4
47	127.7	96.8	84.5	77.8	66.0	51.1	45.4	40.9	34.0
50	120.1	91.0	79.4	73.1	62.1	48.0	42.7	38.4	32.0
53	113.3	85.9	75.0	69.0	58.5	45.3	40.3	36.2	30.2
56	107.2	81.3	70.9	65.3	55.4	42.9	38.1	34.3	N/A
59	101.8	77.1	67.3	62.0	52.6	40.7	36.2	32.5	N/A
62	96.8	73.4	64.1	59.0	50.0	38.7	34.4	31.0	N/A
65	92.4	70.0	61.1	56.3	47.7	36.9	32.8	N/A	N/A
68	88.3	66.9	58.4	53.8	45.6	35.3	31.4	N/A	N/A
71	84.6	64.1	55.9	51.5	43.7	33.8	30.0	N/A	N/A
74	81.1	61.5	53.7	49.4	41.9	32.4	N/A	N/A	N/A
77	78.0	59.1	51.6	47.5	40.3	31.2	N/A	N/A	N/A
80	75.0	56.9	49.7	45.7	38.8	30.0	N/A	N/A	N/A
83	72.3	54.8	47.9	44.1	37.4	N/A	N/A	N/A	N/A
86	69.8	52.9	46.2	42.5	36.1	N/A	N/A	N/A	N/A
89	67.5	51.1	44.6	41.1	34.9	N/A	N/A	N/A	N/A
92	65.3	49.5	43.2	39.8	33.7	N/A	N/A	N/A	N/A
95	63.2	47.9	41.8	38.5	32.7	N/A	N/A	N/A	N/A
98	61.3	46.4	40.5	37.3	31.7	N/A	N/A	N/A	N/A
101	59.4	45.1	39.3	36.2	30.7	N/A	N/A	N/A	N/A
104	57.7	43.8	38.2	35.2	N/A	N/A	N/A	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 01/24/2023
By *Walter A. Tillit Jr.*
Miami Trade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 01/24/2018
By *Walter A. Tillit Jr.*
Miami Trade Product Control
MIAMI DADE COUNTY



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e-mail: tilteco@aol.com
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WALTER A. TILLIT Jr., P.E.
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L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 14 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR MULLIONS CHARTS INTO BLOCK SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

E-C1/C2-N=4-BLOCK

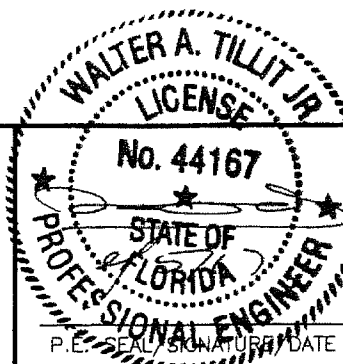
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	170.7	149.0	137.1	116.4	90.0	80.0	72.0	60.0
23	185.0	148.4	129.5	119.3	101.2	78.3	69.6	62.6	52.2
26	173.2	131.3	114.6	105.5	89.5	69.2	61.5	55.4	46.2
29	155.3	117.7	102.7	94.6	80.3	62.1	55.2	49.7	41.4
32	140.7	106.7	93.1	85.7	72.7	56.3	50.0	45.0	37.5
35	128.7	97.5	85.1	78.4	66.5	51.4	45.7	41.1	34.3
38	118.5	89.8	78.4	72.2	61.2	47.4	42.1	37.9	31.6
41	109.8	83.3	72.7	66.9	56.8	43.9	39.0	35.1	N/A
44	102.3	77.6	67.7	62.3	52.9	40.9	36.4	32.7	N/A
47	95.8	72.6	63.4	58.4	49.5	38.3	34.0	30.6	N/A
50	90.1	68.3	59.6	54.9	46.5	36.0	32.0	N/A	N/A
53	85.0	64.4	56.2	51.8	43.9	34.0	30.2	N/A	N/A
56	80.4	61.0	53.2	49.0	41.6	32.1	N/A	N/A	N/A
59	76.3	57.9	50.5	46.5	39.4	30.5	N/A	N/A	N/A
62	72.6	55.1	48.1	44.2	37.5	N/A	N/A	N/A	N/A
65	69.3	52.5	45.8	42.2	35.8	N/A	N/A	N/A	N/A
68	66.2	50.2	43.8	40.3	34.2	N/A	N/A	N/A	N/A
71	63.4	48.1	42.0	38.6	32.8	N/A	N/A	N/A	N/A
74	60.9	46.1	40.3	37.1	31.4	N/A	N/A	N/A	N/A
77	58.5	44.3	38.7	35.6	30.2	N/A	N/A	N/A	N/A
80	56.3	42.7	37.2	34.3	N/A	N/A	N/A	N/A	N/A
83	54.3	41.1	35.9	33.0	N/A	N/A	N/A	N/A	N/A
86	52.4	39.7	34.6	31.9	N/A	N/A	N/A	N/A	N/A
89	50.6	38.4	33.5	30.8	N/A	N/A	N/A	N/A	N/A
92	48.9	37.1	32.4	N/A	N/A	N/A	N/A	N/A	N/A
95	47.4	35.9	31.4	N/A	N/A	N/A	N/A	N/A	N/A
98	45.9	34.8	30.4	N/A	N/A	N/A	N/A	N/A	N/A
101	44.6	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
104	43.3	32.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A

E-C1/C2-N=8-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	182.9	155.2	120.0	106.7	96.0	80.0
23	185.0	185.0	172.7	159.0	134.9	104.3	92.8	83.5	69.6
26	185.0	175.0	152.8	140.7	119.3	92.3	82.1	73.8	61.5
29	185.0	156.9	137.0	126.1	107.0	82.8	73.6	66.2	55.2
32	185.0	142.2	124.1	114.3	97.0	75.0	66.7	60.0	50.0
35	171.5	130.0	113.5	104.5	88.7	68.6	61.0	54.9	45.7
38	158.0	119.8	104.5	96.2	81.7	63.2	56.1	50.5	42.1
41	146.4	111.0	96.9	89.2	75.7	58.5	52.0	46.8	39.0
44	136.5	103.4	90.3	83.1	70.5	54.5	48.5	43.6	36.4
47	127.7	96.8	84.5	77.8	66.0	51.1	45.4	40.9	34.0
50	120.1	91.0	79.4	73.1	62.1	48.0	42.7	38.4	32.0
53	113.3	85.9	75.0	69.0	58.5	45.3	40.3	36.2	30.2
56	107.2	81.3	70.9	65.3	55.4	42.9	38.1	34.3	N/A
59	101.8	77.1	67.3	62.0	52.6	40.7	36.2	32.5	N/A
62	96.8	73.4	64.1	59.0	50.0	38.7	34.4	31.0	N/A
65	92.4	70.0	61.1	56.3	47.7	36.9	32.8	N/A	N/A
68	88.3	66.9	58.4	53.8	45.6	35.3	31.4	N/A	N/A
71	84.6	64.1	55.9	51.5	43.7	33.8	30.0	N/A	N/A
74	81.1	61.5	53.7	49.4	41.9	32.4	N/A	N/A	N/A
77	78.0	59.1	51.6	47.5	40.3	31.2	N/A	N/A	N/A
80	75.0	56.9	49.7	45.7	38.8	30.0	N/A	N/A	N/A
83	72.3	54.8	47.9	44.1	37.4	N/A	N/A	N/A	N/A
86	69.8	52.9	46.2	42.5	36.1	N/A	N/A	N/A	N/A
89	67.5	51.1	44.6	41.1	34.9	N/A	N/A	N/A	N/A
92	65.3	49.5	43.2	39.8	33.7	N/A	N/A	N/A	N/A
95	63.2	47.9	41.8	38.5	32.7	N/A	N/A	N/A	N/A
98	61.3	46.4	40.5	37.3	31.7	N/A	N/A	N/A	N/A
101	59.4	45.1	39.3	36.2	30.7	N/A	N/A	N/A	N/A
104	57.7	43.8	38.2	35.2	N/A	N/A	N/A	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code 18-1108.01
Acceptance No. 17-1102.14
Expiration Date 03.24.2023
By *Manuel Perez*
Miami Dade Product Centre

PRODUCT REVISED
as complying with the Florida
Building Code 17-1102.14
Acceptance No. 17-1102.14
Expiration Date 03.24.2018
By *Manuel Perez*
Miami Dade Product Centre
MIAMI DADE COUNTY



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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.
08/25/17 DATE
17-249 DRAWING No
SHEET 15 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO BLOCK SUBSTRATE CONNECTED W/ CLIPS C1 & C2

G-C1/C2-N=4-BLOCK

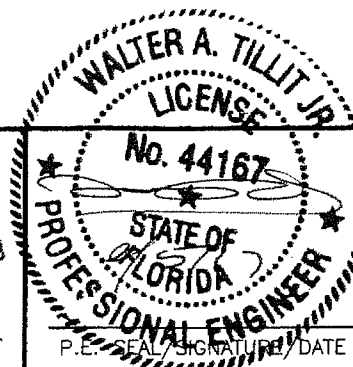
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	150.1	113.8	99.3	91.4	77.6	60.0
23	130.5	98.9	86.4	79.5	67.5	52.2
26	115.5	87.5	76.4	70.3	59.7	46.2
29	103.5	78.5	68.5	63.1	53.5	41.4
32	93.8	71.1	62.1	57.1	48.5	37.5
35	85.8	65.0	56.7	52.2	44.3	34.3
38	79.0	59.9	52.3	48.1	40.8	31.6
41	73.2	55.5	48.4	44.6	37.8	N/A
44	68.2	51.7	45.1	41.6	35.3	N/A
47	63.9	48.4	42.3	38.9	33.0	N/A
50	60.0	45.5	39.7	36.6	31.0	N/A
53	56.6	42.9	37.5	34.5	N/A	N/A
56	53.6	40.6	35.5	32.7	N/A	N/A
59	50.9	38.6	33.7	31.0	N/A	N/A
62	48.4	36.7	32.0	29.5	N/A	N/A
65	46.2	35.0	30.6	N/A	N/A	N/A
68	44.1	33.5	N/A	N/A	N/A	N/A
71	42.3	32.1	N/A	N/A	N/A	N/A
74	40.6	30.8	N/A	N/A	N/A	N/A
77	39.0	N/A	N/A	N/A	N/A	N/A
80	37.5	N/A	N/A	N/A	N/A	N/A
83	36.2	N/A	N/A	N/A	N/A	N/A
86	34.9	N/A	N/A	N/A	N/A	N/A
89	33.7	N/A	N/A	N/A	N/A	N/A
92	32.6	N/A	N/A	N/A	N/A	N/A
95	31.6	N/A	N/A	N/A	N/A	N/A
98	30.6	N/A	N/A	N/A	N/A	N/A
101	N/A	N/A	N/A	N/A	N/A	N/A
104	N/A	N/A	N/A	N/A	N/A	N/A

H-C1/C2-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	170.7	149.0	137.1	116.4	90.0	80.0	72.0	60.0
23	195.8	148.4	129.5	119.3	101.2	78.3	69.6	62.6	52.2
26	173.2	131.3	114.6	105.5	89.5	69.2	61.5	55.4	46.2
29	155.3	117.7	102.7	94.6	80.3	62.1	55.2	49.7	41.4
32	140.7	106.7	93.1	85.7	72.7	56.3	50.0	45.0	37.5
35	128.7	97.5	85.1	78.4	66.5	51.4	45.7	41.1	34.3
38	118.5	89.8	78.4	72.2	61.2	47.4	42.1	37.9	31.6
41	109.8	83.3	72.7	66.9	56.8	43.9	39.0	35.1	N/A
44	102.3	77.6	67.7	62.3	52.9	40.9	36.4	32.7	N/A
47	95.8	72.6	63.4	58.4	49.5	38.3	34.0	30.6	N/A
50	90.1	68.3	59.6	54.9	46.5	36.0	32.0	N/A	N/A
53	85.0	64.4	56.2	51.8	43.9	34.0	30.2	N/A	N/A
56	80.4	61.0	53.2	49.0	41.6	32.1	N/A	N/A	N/A
59	76.3	57.9	50.5	46.5	39.4	30.5	N/A	N/A	N/A
62	72.6	55.1	48.1	44.2	37.5	N/A	N/A	N/A	N/A
65	69.3	52.5	45.8	42.2	35.8	N/A	N/A	N/A	N/A
68	66.2	50.2	43.8	40.3	34.2	N/A	N/A	N/A	N/A
71	63.4	48.1	42.0	38.6	32.8	N/A	N/A	N/A	N/A
74	60.9	46.1	40.3	37.1	31.4	N/A	N/A	N/A	N/A
77	58.5	44.3	38.7	35.6	30.2	N/A	N/A	N/A	N/A
80	56.3	42.7	37.2	34.3	N/A	N/A	N/A	N/A	N/A
83	54.3	41.1	35.9	33.0	N/A	N/A	N/A	N/A	N/A
86	52.4	39.7	34.6	31.9	N/A	N/A	N/A	N/A	N/A
89	50.6	38.4	33.5	30.8	N/A	N/A	N/A	N/A	N/A
92	48.9	37.1	32.4	N/A	N/A	N/A	N/A	N/A	N/A
95	47.4	35.9	31.4	N/A	N/A	N/A	N/A	N/A	N/A
98	45.9	34.8	30.4	N/A	N/A	N/A	N/A	N/A	N/A
101	44.6	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
104	43.3	32.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03.24.2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.1
Expiration Date 08.24.2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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Phone: (305)871-1530 Fax: (305)871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 16 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-156	08/25/17	3		
2			4		

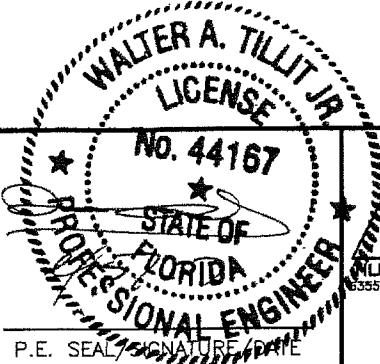
CLIPPED INTERIOR MULLIONS CHARTS INTO BLOCK SUBSTRATE
CONNECTED W/ CLIP (C1)

J-C1-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 45° MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	98
20	185.0	170.7	149.0	137.1	116.4	90.0
23	185.0	148.4	129.5	119.3	101.2	78.3
26	173.2	131.3	114.6	105.5	89.5	69.2
29	155.3	117.7	102.7	94.6	80.3	62.1
32	140.7	106.7	93.1	85.7	72.7	56.3
35	128.7	97.5	85.1	78.4	66.5	51.4
38	118.5	89.8	78.4	72.2	61.2	47.4
41	109.8	83.3	72.7	66.9	56.8	43.9
44	102.3	77.6	67.7	62.3	52.9	40.9
47	95.8	72.6	63.4	58.4	49.5	38.3
50	90.1	68.3	59.6	54.9	46.5	36.0
53	85.0	64.4	56.2	51.8	43.9	34.0
56	80.4	61.0	53.2	49.0	41.6	32.1
59	76.3	57.9	50.5	46.5	39.4	30.5
62	72.6	55.1	48.1	44.2	37.5	N/A
65	69.3	52.5	45.8	42.2	35.8	N/A
68	66.2	50.2	43.8	40.3	34.2	N/A
71	63.4	48.1	42.0	38.6	32.8	N/A
74	60.9	46.1	40.3	37.1	31.4	N/A
77	58.5	44.3	38.7	35.6	30.2	N/A
80	56.3	42.7	37.2	34.3	N/A	N/A
83	54.3	41.1	35.9	33.0	N/A	N/A
86	52.4	39.7	34.6	31.9	N/A	N/A
89	50.6	38.4	33.5	30.8	N/A	N/A
92	48.9	37.1	32.4	N/A	N/A	N/A
95	47.4	35.9	31.4	N/A	N/A	N/A
98	45.9	34.8	30.4	N/A	N/A	N/A
101	44.6	33.8	N/A	N/A	N/A	N/A
104	43.3	32.8	N/A	N/A	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code 18-1108.01
Acceptance No. 02-24-2023
By Manuel Lopez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code 17-1102.14
Acceptance No. 02-24-2018
By Manuel Lopez
Miami Dade Product Control
MIAMI DADE COUNTY



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e-mail: tilteco@aol.com

EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 17 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO CONCRETE SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

A-C1/C2-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x 3"x 1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	185.0	185.0	154.2	130.7	
23	185.0	176.1	134.1	113.7	
26	185.0	155.7	118.7	100.6	
29	185.0	139.6	106.4	90.2	
32	185.0	126.5	96.4	81.7	
35	185.0	115.7	88.1	74.7	
38	185.4	106.6	81.2	68.8	
41	171.9	98.8	75.2	63.8	
44	160.2	92.0	70.1	59.4	
47	149.9	86.2	65.6	55.6	
50	140.9	81.0	61.7	52.3	
53	133.0	76.4	58.2	49.3	
56	125.8	72.3	55.1	46.7	
59	119.4	68.6	52.3	44.3	
62	113.7	65.3	49.8	42.2	
65	108.4	62.3	47.5	40.2	
68	103.6	59.5	45.4	38.5	
71	99.3	57.0	43.4	36.8	
74	95.2	54.7	41.7	35.3	
77	91.5	52.6	40.1	34.0	
80	88.1	50.6	38.6	32.7	
83	84.9	48.8	37.2	31.5	
86	81.9	47.1	35.9	30.4	
89	79.2	45.5	34.7	N/A	
92	76.6	44.0	33.5	N/A	
95	74.2	42.6	32.5	N/A	
98	71.9	41.3	31.5	N/A	
101	69.8	40.1	30.5	N/A	
104	67.8	38.9	N/A	N/A	

B-C1/C2-N=4-CONC

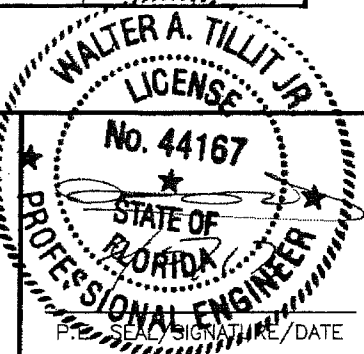
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	185.0	185.0	185.0	185.0	145.5	125.4	
23	185.0	185.0	185.0	175.8	126.6	109.0	
26	185.0	185.0	183.5	155.5	112.0	96.4	
29	185.0	185.0	164.5	139.4	100.4	86.5	
32	185.0	185.0	149.1	126.4	91.0	78.4	
35	185.0	178.9	136.3	115.5	83.2	71.6	
38	185.0	164.8	125.5	106.4	76.6	66.0	
41	185.0	152.7	116.4	98.6	71.0	61.2	
44	185.0	142.3	108.4	91.9	66.2	57.0	
47	185.0	133.2	101.5	86.0	61.9	53.4	
50	185.0	125.2	95.4	80.9	58.2	50.2	
53	185.0	118.1	90.0	76.3	54.9	47.3	
56	185.0	111.8	85.2	72.2	52.0	44.8	
59	184.7	106.1	80.9	68.5	49.3	42.5	
62	175.8	101.0	76.9	65.2	47.0	40.4	
65	167.7	96.3	73.4	62.2	44.8	38.6	
68	160.3	92.1	70.2	59.5	42.8	36.9	
71	153.5	88.2	67.2	56.9	41.0	35.3	
74	147.3	84.6	64.5	54.6	39.3	33.9	
77	141.5	81.3	62.0	52.5	37.8	32.6	
80	136.2	78.3	59.6	50.5	36.4	31.3	
83	131.3	75.4	57.5	48.7	35.1	30.2	
86	126.7	72.8	55.5	47.0	33.8	N/A	
89	122.4	70.4	53.6	45.4	32.7	N/A	
92	118.5	68.1	51.9	43.9	31.6	N/A	
95	114.7	65.9	50.2	42.6	30.6	N/A	
98	111.2	63.9	48.7	41.3	N/A	N/A	
101	107.9	62.0	47.2	40.0	N/A	N/A	
104	104.8	60.2	45.9	38.9	N/A	N/A	

C-C1/C2-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	185.0	185.0	185.0	185.0	185.0	182.2	
23	185.0	185.0	185.0	185.0	183.9	158.4	
26	185.0	185.0	185.0	185.0	162.7	140.2	
29	185.0	185.0	185.0	185.0	145.9	125.7	
32	185.0	185.0	185.0	183.6	132.2	113.9	
35	185.0	185.0	185.0	167.9	120.9	104.1	
38	185.0	185.0	182.4	154.6	111.3	95.9	
41	185.0	185.0	169.1	143.3	103.2	88.9	
44	185.0	185.0	157.6	133.5	96.1	82.8	
47	185.0	185.0	147.5	125.0	90.0	77.5	
50	185.0	177.5	138.7	117.5	84.6	72.9	
53	185.0	167.4	130.8	110.9	79.8	68.8	
56	185.0	158.5	123.8	104.9	75.5	65.1	
59	185.0	150.4	117.5	99.6	71.7	61.8	
62	185.0	143.1	111.8	94.8	68.2	58.8	
65	180.1	136.5	106.7	90.4	65.1	56.1	
68	172.2	130.5	101.9	86.4	62.2	53.6	
71	164.9	125.0	97.6	82.8	59.6	51.3	
74	158.2	119.9	93.7	79.4	57.2	49.2	
77	152.0	115.3	90.0	76.3	54.9	47.3	
80	146.3	110.9	86.7	73.4	52.9	45.5	
83	141.1	106.9	83.5	70.8	51.0	43.9	
86	136.1	103.2	80.6	68.3	49.2	42.4	
89	131.5	99.7	77.9	66.0	47.5	40.9	
92	127.3	96.5	75.4	63.9	46.0	39.6	
95	123.2	93.4	73.0	61.9	44.5	38.4	
98	119.5	90.6	70.7	60.0	43.2	37.2	
101	115.9	87.9	68.6	58.2	41.9	36.1	
104	112.6	85.3	66.7	56.5	40.7	35.0	

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code 17-1102.14
Acceptance No.
Expiration Date Oct 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 18 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO CONCRETE SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

D-C1/C2-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	137.4
23	185.0	185.0	185.0	185.0	185.0	119.5
26	185.0	185.0	185.0	185.0	176.7	105.7
29	185.0	185.0	185.0	185.0	158.4	94.8
32	185.0	185.0	185.0	185.0	143.6	85.9
35	185.0	185.0	185.0	182.3	131.2	78.5
38	185.0	185.0	185.0	167.9	120.9	72.3
41	185.0	185.0	183.6	155.6	112.0	67.0
44	185.0	185.0	171.1	145.0	104.4	62.5
47	185.0	185.0	160.2	135.8	97.7	58.5
50	185.0	177.5	150.6	127.6	91.9	55.0
53	185.0	167.4	142.0	120.4	86.7	51.8
56	185.0	158.5	134.4	113.9	82.0	49.1
59	185.0	150.4	127.6	108.1	77.9	46.6
62	185.0	143.1	121.4	102.9	74.1	44.3
65	180.1	136.5	115.8	98.2	70.7	42.3
68	172.2	130.5	110.7	93.8	67.6	40.4
71	164.9	125.0	106.0	89.9	64.7	38.7
74	158.2	119.9	101.7	86.2	62.1	37.1
77	152.0	115.3	97.8	82.9	59.7	35.7
80	146.3	110.9	94.1	79.8	57.4	34.3
83	141.1	106.9	90.7	76.9	55.3	33.1
86	136.1	103.2	87.5	74.2	53.4	32.0
89	131.5	99.7	84.6	71.7	51.6	30.9
92	127.3	96.5	81.8	69.4	49.9	N/A
95	123.2	93.4	79.2	67.2	48.4	N/A
98	119.5	90.6	76.8	65.1	46.9	N/A
101	115.9	87.9	74.5	63.2	45.5	N/A
104	112.6	85.3	72.4	61.4	44.2	N/A

G-C1/C2-N=4-CONC

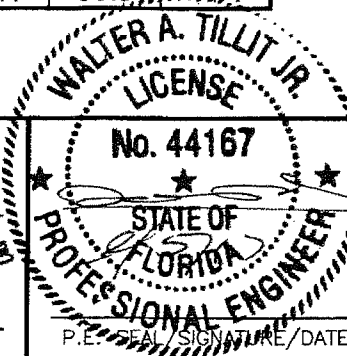
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	99.4
23	185.0	185.0	185.0	185.0	180.3	86.4
26	185.0	185.0	185.0	185.0	159.5	76.4
29	185.0	185.0	185.0	185.0	143.0	68.5
32	185.0	185.0	185.0	180.0	129.6	62.1
35	185.0	185.0	178.8	164.5	118.5	56.8
38	185.0	185.0	164.6	151.5	109.1	52.3
41	185.0	174.8	152.6	140.5	101.1	48.5
44	185.0	162.9	142.2	130.9	94.2	45.2
47	185.0	152.5	133.1	122.5	88.2	42.3
50	185.0	143.4	125.1	115.2	82.9	39.7
53	178.4	135.2	118.0	108.7	78.2	37.5
56	168.9	128.0	111.7	102.8	74.0	35.5
59	160.3	121.5	106.0	97.6	70.3	33.7
62	152.5	115.6	100.9	92.9	66.9	32.1
65	145.5	110.3	96.3	88.6	63.8	30.6
68	139.1	105.4	92.0	84.7	61.0	N/A
71	133.2	101.0	88.1	81.1	58.4	N/A
74	127.8	96.9	84.5	77.8	56.0	N/A
77	122.8	93.1	81.3	74.8	53.8	N/A
80	118.2	89.6	78.2	72.0	51.8	N/A
83	113.9	86.4	75.4	69.4	49.9	N/A
86	110.0	83.3	72.8	67.0	48.2	N/A
89	106.2	80.5	70.3	64.7	46.6	N/A
92	102.8	77.9	68.0	62.6	45.1	N/A
95	99.5	75.5	65.9	60.6	43.6	N/A
98	96.5	73.1	63.8	58.8	42.3	N/A
101	93.6	71.0	61.9	57.0	41.0	N/A
104	90.9	68.9	60.2	55.4	39.9	N/A

H-C1/C2-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	189.0	168.0	151.2	126.0
23	200.0	200.0	200.0	200.0	200.0	164.3	146.1	131.5	109.6
26	200.0	200.0	200.0	200.0	188.0	145.4	129.2	116.3	96.9
29	200.0	200.0	200.0	198.6	168.5	130.3	115.9	104.3	86.9
32	200.0	200.0	195.5	180.0	152.7	118.1	105.0	94.5	78.8
35	200.0	200.0	178.8	164.6	139.6	108.0	96.0	86.4	72.0
38	200.0	188.6	164.6	151.6	128.6	99.5	88.4	79.6	66.3
41	200.0	174.8	152.6	140.5	119.2	92.2	82.0	73.8	61.5
44	200.0	162.9	142.2	130.9	111.1	85.9	76.4	68.7	57.3
47	200.0	152.5	133.1	122.6	104.0	80.4	71.5	64.3	53.6
50	189.1	143.4	125.1	115.2	97.7	75.6	67.2	60.5	50.4
53	178.4	135.2	118.0	108.7	92.2	71.3	63.4	57.1	47.5
56	168.9	128.0	111.7	102.9	87.3	67.5	60.0	54.0	45.0
59	160.3	121.5	106.0	97.6	82.8	64.1	56.9	51.3	42.7
62	152.5	115.6	100.9	92.9	78.8	61.0	54.2	48.8	40.6
65	145.5	110.3	96.3	88.6	75.2	58.2	51.7	46.5	38.8
68	139.1	105.4	92.0	84.7	71.9	55.6	49.4	44.5	37.1
71	133.2	101.0	88.1	81.1	68.8	53.2	47.3	42.6	35.5
74	127.8	96.9	84.5	77.8	66.0	51.1	45.4	40.9	34.1
77	122.8	93.1	81.3	74.8	63.5	49.1	43.6	39.3	32.7
80	118.2	89.6	78.2	72.0	61.1	47.3	42.0	37.8	31.5
83	113.9	86.4	75.4	69.4	58.9	45.5	40.5	36.4	30.4
86	110.0	83.3	72.8	67.0	56.8	44.0	39.1	35.2	29.3
89	106.2	80.5	70.3	64.7	54.9	42.5	37.8	34.0	28.3
92	102.8	77.9	68.0	62.6	53.1	41.1	36.5	32.9	27.4
95	99.5	75.5	65.9	60.6	51.4	39.8	35.4	31.8	26.5
98	96.5	73.1	63.8	58.8	49.9	38.6	34.3	30.9	25.7
101	93.6	71.0	61.9	57.0	48.4	37.4	33.3	29.9	25.0
104	90.9	68.9	60.2	55.4	47.0	36.3	32.3	29.1	24.2

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 01-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 01-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 19 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO CONCRETE SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

E-C1/C2-N=4-CONC

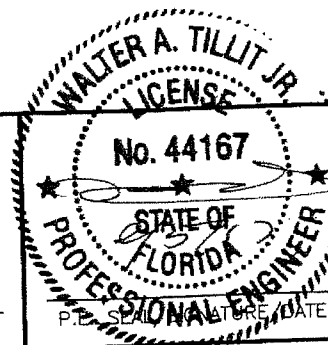
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	156.0	108.3
23	185.0	185.0	185.0	185.0	185.0	185.0	167.4	135.6	94.2
26	185.0	185.0	185.0	185.0	185.0	180.0	148.1	120.0	83.3
29	185.0	185.0	185.0	185.0	185.0	161.4	132.8	107.6	74.7
32	185.0	185.0	185.0	185.0	185.0	146.3	120.3	97.5	67.7
35	185.0	185.0	185.0	185.0	172.9	133.7	110.0	89.1	61.9
38	185.0	185.0	185.0	185.0	159.2	123.2	101.3	82.1	57.0
41	185.0	185.0	185.0	173.9	147.6	114.1	93.9	76.1	52.8
44	185.0	185.0	176.1	162.1	137.5	106.4	87.5	70.9	49.2
47	185.0	185.0	164.8	151.7	128.7	99.6	81.9	66.4	46.1
50	185.0	177.5	154.9	142.6	121.0	93.6	77.0	62.4	43.3
53	185.0	167.4	146.2	134.6	114.2	88.3	72.7	58.9	40.9
56	185.0	158.5	138.3	127.3	108.1	83.6	68.8	55.7	38.7
59	185.0	150.4	131.3	120.9	102.6	79.3	65.3	52.9	36.7
62	185.0	143.1	124.9	115.0	97.6	75.5	62.1	50.3	34.9
65	180.1	136.5	119.2	109.7	93.1	72.0	59.2	48.0	33.3
68	172.2	130.5	113.9	104.9	89.0	68.8	56.6	45.9	31.9
71	164.9	125.0	109.1	100.4	85.2	65.9	54.2	43.9	30.5
74	158.2	119.9	104.7	96.4	81.8	63.2	52.0	42.2	N/A
77	152.0	115.3	100.6	92.6	78.6	60.8	50.0	40.5	N/A
80	146.3	110.9	96.8	89.1	75.6	58.5	48.1	39.0	N/A
83	141.1	106.9	93.3	85.9	72.9	56.4	46.4	37.6	N/A
86	136.1	103.2	90.1	82.9	70.4	54.4	44.8	36.3	N/A
89	131.5	99.7	87.0	80.1	68.0	52.6	43.3	35.0	N/A
92	127.3	96.5	84.2	77.5	65.8	50.9	41.9	33.9	N/A
95	123.2	93.4	81.5	75.1	63.7	49.3	40.5	32.8	N/A
98	119.5	90.6	79.0	72.8	61.7	47.8	39.3	31.8	N/A
101	115.9	87.9	76.7	70.6	59.9	46.3	38.1	30.9	N/A
104	112.6	85.3	74.5	68.6	58.2	45.0	37.0	30.0	N/A

E-C1/C2-N=6-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	156.0	108.3
23	185.0	185.0	185.0	185.0	185.0	185.0	167.4	135.6	94.2
26	185.0	185.0	185.0	185.0	185.0	185.0	148.1	120.0	83.3
29	185.0	185.0	185.0	185.0	185.0	168.1	132.8	107.6	74.7
32	185.0	185.0	185.0	185.0	185.0	152.3	120.3	97.5	67.7
35	185.0	185.0	185.0	185.0	185.0	139.3	110.0	89.1	61.9
38	185.0	185.0	185.0	185.0	185.0	128.3	101.3	82.1	57.0
41	185.0	185.0	185.0	185.0	178.8	118.9	93.9	76.1	52.8
44	185.0	185.0	185.0	185.0	166.6	110.8	87.5	70.9	49.2
47	185.0	185.0	185.0	183.8	156.0	103.7	81.9	66.4	46.1
50	185.0	185.0	185.0	172.8	146.6	97.5	77.0	62.4	43.3
53	185.0	185.0	177.1	163.0	138.3	92.0	72.7	58.9	40.9
56	185.0	185.0	167.6	154.3	130.9	87.0	68.8	55.7	38.7
59	185.0	182.2	159.1	146.4	124.3	82.6	65.3	52.9	36.7
62	185.0	173.4	151.4	139.4	118.2	78.6	62.1	50.3	34.9
65	185.0	165.4	144.4	132.9	112.8	75.0	59.2	48.0	33.3
68	185.0	158.1	138.0	127.1	107.8	71.7	56.6	45.9	31.9
71	185.0	151.4	132.2	121.7	103.3	68.6	54.2	43.9	30.5
74	185.0	145.3	126.8	116.8	99.1	65.9	52.0	42.2	N/A
77	184.2	139.6	121.9	112.2	95.2	63.3	50.0	40.5	N/A
80	177.3	134.4	117.3	108.0	91.6	60.9	48.1	39.0	N/A
83	170.9	129.5	113.1	104.1	88.3	58.7	46.4	37.6	N/A
86	164.9	125.0	109.1	100.5	85.2	56.7	44.8	36.3	N/A
89	159.4	120.8	105.4	97.1	82.4	54.8	43.3	35.0	N/A
92	154.2	116.9	102.0	93.9	79.7	53.0	41.9	33.9	N/A
95	149.3	113.2	98.8	90.9	77.2	51.3	40.5	32.8	N/A
98	144.7	109.7	95.8	88.2	74.8	49.7	39.3	31.8	N/A
101	140.4	106.5	92.9	85.5	72.6	48.3	38.1	30.9	N/A
104	136.4	103.4	90.2	83.1	70.5	46.9	37.0	30.0	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 01-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1162-14
Expiration Date 01-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS
DRAWN BY: L.C.
06/25/17
DATE
17-249
DRAWING No
SHEET 20 OF 6
280 WEST 78 ROAD
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The Clear Solution
REV. NO. DESCRIPTION DATE REV. No. DESCRIPTION DATE
1 OLD 15-158 06/25/17 3
2

CLIPPED INTERIOR MULLIONS CHARTS INTO CONCRETE SUBSTRATE

CONNECTED W/ CLIPS (C1) & (C2)

F-C1/C2-N=6-CONC

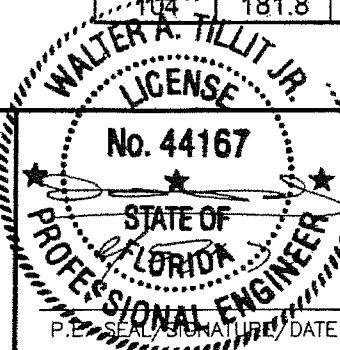
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (6) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	164.3
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	174.5	145.4
29	185.0	185.0	185.0	185.0	185.0	185.0	173.8	156.4	130.3
32	185.0	185.0	185.0	185.0	185.0	177.2	157.5	141.8	118.1
35	185.0	185.0	185.0	185.0	185.0	162.0	144.0	129.6	108.0
38	185.0	185.0	185.0	185.0	185.0	149.2	132.6	119.4	99.5
41	185.0	185.0	185.0	185.0	178.8	138.3	122.9	110.6	92.2
44	185.0	185.0	185.0	185.0	166.6	128.9	114.5	103.1	85.9
47	185.0	185.0	185.0	183.8	156.0	120.6	107.2	96.5	80.4
50	185.0	185.0	185.0	172.8	146.6	113.4	100.8	90.7	75.6
53	185.0	185.0	177.1	163.0	138.3	107.0	95.1	85.6	71.3
56	185.0	185.0	167.6	154.3	130.9	101.3	90.0	81.0	67.5
59	185.0	182.2	159.1	146.4	124.3	96.1	85.4	76.9	64.1
62	185.0	173.4	151.4	139.4	118.2	91.5	81.3	73.2	61.0
65	185.0	165.4	144.4	132.9	112.8	87.2	77.5	69.8	58.2
68	185.0	158.1	138.0	127.1	107.8	83.4	74.1	66.7	55.6
71	185.0	151.4	132.2	121.7	103.3	79.9	71.0	63.9	53.2
74	185.0	145.3	126.8	116.8	99.1	76.6	68.1	61.3	51.1
77	184.2	139.6	121.9	112.2	95.2	73.6	65.5	58.9	49.1
80	177.3	134.4	117.3	108.0	91.6	70.9	63.0	56.7	47.3
83	170.9	129.5	113.1	104.1	88.3	68.3	60.7	54.7	45.5
86	164.9	125.0	109.1	100.5	85.2	65.9	58.6	52.7	44.0
89	159.4	120.8	105.4	97.1	82.4	63.7	56.6	51.0	42.5
92	154.2	116.9	102.0	93.9	79.7	61.6	54.8	49.3	41.1
95	149.3	113.2	98.8	90.9	77.2	59.7	53.1	47.7	39.8
98	144.7	109.7	95.8	88.2	74.8	57.9	51.4	46.3	38.6
101	140.4	106.5	92.9	85.5	72.6	56.1	49.9	44.9	37.4
104	136.4	103.4	90.2	83.1	70.5	54.5	48.5	43.6	36.3

F-C1/C2-N=8-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	172.0
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	152.1
29	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	136.4
32	185.0	185.0	185.0	185.0	185.0	185.0	185.0	178.0	123.6
35	185.0	185.0	185.0	185.0	185.0	185.0	185.0	162.7	113.0
38	185.0	185.0	185.0	185.0	185.0	185.0	176.8	149.9	104.1
41	185.0	185.0	185.0	185.0	185.0	184.4	163.9	138.9	96.5
44	185.0	185.0	185.0	185.0	185.0	171.8	152.7	129.4	89.9
47	185.0	185.0	185.0	185.0	185.0	160.9	143.0	121.2	84.2
50	185.0	185.0	185.0	185.0	185.0	151.2	134.4	113.9	79.1
53	185.0	185.0	185.0	185.0	184.4	142.6	126.8	107.5	74.6
56	185.0	185.0	185.0	185.0	174.5	135.0	120.0	101.7	70.6
59	185.0	185.0	185.0	185.0	165.7	128.1	113.9	96.5	67.0
62	185.0	185.0	185.0	185.0	157.7	121.9	108.4	91.9	63.8
65	185.0	185.0	185.0	177.2	150.4	116.3	103.4	87.6	60.9
68	185.0	185.0	184.0	169.4	143.7	111.2	98.8	83.8	58.2
71	185.0	185.0	176.2	162.3	137.7	106.5	94.6	80.2	55.7
74	185.0	185.0	169.1	155.7	132.1	102.2	90.8	77.0	53.5
77	185.0	185.0	162.5	149.6	126.9	98.2	87.3	74.0	51.4
80	185.0	179.2	156.4	144.0	122.2	94.5	84.0	71.2	49.4
83	185.0	172.7	150.8	138.8	117.8	91.1	81.0	68.6	47.7
86	185.0	166.7	145.5	134.0	113.7	87.9	78.1	66.2	46.0
89	185.0	161.1	140.6	129.4	109.8	84.9	75.5	64.0	44.4
92	185.0	155.8	136.0	125.2	106.2	82.2	73.0	61.9	43.0
95	185.0	150.9	131.7	121.3	102.9	79.6	70.7	60.0	41.6
98	185.0	146.3	127.7	117.6	99.7	77.1	68.6	58.1	40.4
101	185.0	141.9	123.9	114.1	96.8	74.9	66.5	56.4	39.2
104	181.8	137.8	120.3	110.8	94.0	72.7	64.6	54.8	38.0

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02/24/2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 05/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
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DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 21 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR MULLIONS CHARTS
INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

I-C1/C2-N=8-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" Ø ULTRACONS IN POURED CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
29	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	173.8
32	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	157.5
35	185.0	185.0	185.0	185.0	185.0	185.0	185.0	172.8	144.0
38	185.0	185.0	185.0	185.0	185.0	185.0	176.8	159.2	132.6
41	185.0	185.0	185.0	185.0	185.0	184.4	163.9	147.5	122.9
44	185.0	185.0	185.0	185.0	185.0	171.8	152.7	137.5	114.5
47	185.0	185.0	185.0	185.0	185.0	160.9	143.0	128.7	107.2
50	185.0	185.0	185.0	185.0	185.0	151.2	134.4	121.0	100.8
53	185.0	185.0	185.0	185.0	184.4	142.6	126.8	114.1	95.1
56	185.0	185.0	185.0	185.0	174.5	135.0	120.0	108.0	90.0
59	185.0	185.0	185.0	185.0	165.7	128.1	113.9	102.5	85.4
62	185.0	185.0	185.0	185.0	157.7	121.9	108.4	97.5	81.3
65	185.0	185.0	185.0	177.2	150.4	116.3	103.4	93.0	77.5
68	185.0	185.0	184.0	169.4	143.7	111.2	98.8	88.9	74.1
71	185.0	185.0	176.2	162.3	137.7	106.5	94.6	85.2	71.0
74	185.0	185.0	169.1	155.7	132.1	102.2	90.8	81.7	68.1
77	185.0	185.0	162.5	149.6	126.9	98.2	87.3	78.5	65.5
80	185.0	179.2	156.4	144.0	122.2	94.5	84.0	75.6	63.0
83	185.0	172.7	150.8	138.8	117.8	91.1	81.0	72.9	60.7
86	185.0	166.7	145.5	134.0	113.7	87.9	78.1	70.3	58.6
89	185.0	161.1	140.6	129.4	109.8	84.9	75.5	68.0	56.6
92	185.0	155.8	136.0	125.2	106.2	82.2	73.0	65.7	54.8
95	185.0	150.9	131.7	121.3	102.9	79.6	70.7	63.7	53.1
98	185.0	146.3	127.7	117.6	99.7	77.1	68.6	61.7	51.4
101	185.0	141.9	123.9	114.1	96.8	74.9	66.5	59.9	49.9
104	181.8	137.8	120.3	110.8	94.0	72.7	64.6	58.2	48.5

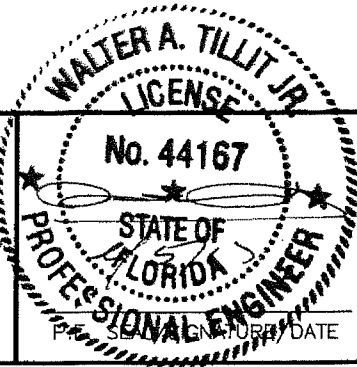
CLIPPED INTERIOR MULLIONS CHARTS
INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP (C1)

J-C1-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 45" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" Ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	200.0	185.9	111.2
23	200.0	200.0	200.0	200.0	161.6	96.7
26	200.0	200.0	200.0	198.6	143.0	85.5
29	200.0	200.0	200.0	178.1	128.2	76.7
32	200.0	200.0	190.4	161.4	116.2	69.5
35	200.0	200.0	174.1	147.5	106.2	63.5
38	200.0	188.6	160.3	135.9	97.8	58.5
41	200.0	174.8	148.6	126.0	90.7	54.2
44	200.0	162.9	138.5	117.4	84.5	50.5
47	200.0	152.5	129.6	109.9	79.1	47.3
50	189.1	143.4	121.9	103.3	74.4	44.5
53	178.4	135.2	115.0	97.4	70.1	42.0
56	168.9	128.0	108.8	92.2	66.4	39.7
59	160.3	121.5	103.3	87.5	63.0	37.7
62	152.5	115.6	98.3	83.3	60.0	35.9
65	145.5	110.3	93.7	79.4	57.2	34.2
68	139.1	105.4	89.6	75.9	54.7	32.7
71	133.2	101.0	85.8	72.7	52.4	31.3
74	127.8	96.9	82.3	69.8	50.2	30.1
77	122.8	93.1	79.1	67.1	48.3	28.9
80	118.2	89.6	76.2	64.5	46.5	27.8
83	113.9	86.4	73.4	62.2	44.8	26.8
86	110.0	83.3	70.8	60.0	43.2	25.9
89	106.2	80.5	68.5	58.0	41.8	25.0
92	102.8	77.9	66.2	56.1	40.4	24.2
95	99.5	75.5	64.1	54.4	39.1	23.4
98	96.5	73.1	62.2	52.7	37.9	22.7
101	93.6	71.0	60.3	51.1	36.8	22.0
104	90.9	68.9	58.6	49.7	35.7	21.4

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date OCT. 24, 2023
By Manuel Perez
Miami Dade Product Center

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date OCT. 24, 2018
By Manuel Perez
Miami Dade Product Center
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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REV. NO.	DESCRIPTION	DATE	REV. No.	DESCRIPTION	DATE
1	OLD 15-156	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 22 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

A-C1/C2-N=4-STEEL/ALUM.

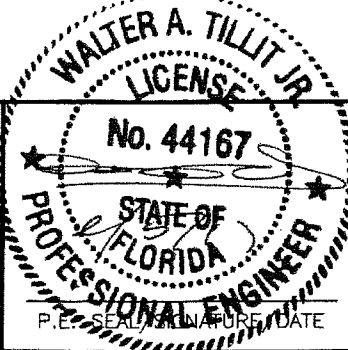
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 TEK SCREWS EACH END OF MULLION				
Tributary Width (b)	Mullion Length (L)			
	38.375	50.625	58	63
20	185.0	185.0	154.2	130.7
23	185.0	176.1	134.1	113.7
26	185.0	155.7	118.7	100.6
29	185.0	139.6	106.4	90.2
32	185.0	126.5	96.4	81.7
35	185.0	115.7	88.1	74.7
38	185.0	106.6	81.2	68.8
41	171.9	98.8	75.2	63.8
44	160.2	92.0	70.1	59.4
47	149.9	86.2	65.6	55.6
50	140.9	81.0	61.7	52.3
53	133.0	76.4	58.2	49.3
56	125.8	72.3	55.1	46.7
59	119.4	68.6	52.3	44.3
62	113.7	65.3	49.8	42.2
65	108.4	62.3	47.5	40.2
68	103.6	59.5	45.4	38.5
71	99.3	57.0	43.4	36.8
74	95.2	54.7	41.7	35.3
77	91.5	52.6	40.1	34.0
80	88.1	50.6	38.6	32.7
83	84.9	48.8	37.2	31.5
86	81.9	47.1	35.9	30.4
89	79.2	45.5	34.7	N/A
92	76.6	44.0	33.5	N/A
95	74.2	42.6	32.5	N/A
98	71.9	41.3	31.5	N/A
101	69.8	40.1	30.5	N/A
104	67.8	38.9	N/A	N/A

B-C1/C2-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	185.0	185.0	185.0	185.0	145.5	125.4
23	185.0	185.0	185.0	175.8	126.6	109.0
26	185.0	185.0	183.5	155.5	112.0	96.4
29	185.0	185.0	164.5	139.4	100.4	86.5
32	185.0	185.0	149.1	126.4	91.0	78.4
35	185.0	178.9	136.3	115.5	83.2	71.6
38	185.0	164.8	125.5	106.4	76.6	66.0
41	185.0	152.7	116.4	98.6	71.0	61.2
44	185.0	142.3	108.4	91.9	66.2	57.0
47	185.0	133.2	101.5	86.0	61.9	53.4
50	185.0	125.2	95.4	80.9	58.2	50.2
53	185.0	118.1	90.0	76.3	54.9	47.3
56	175.3	111.8	85.2	72.2	52.0	44.8
59	166.4	106.1	80.9	68.5	49.3	42.5
62	158.3	101.0	76.9	65.2	47.0	40.4
65	151.0	96.3	73.4	62.2	44.8	38.6
68	144.4	92.1	70.2	59.5	42.8	36.9
71	138.3	88.2	67.2	56.9	41.0	35.3
74	132.7	84.6	64.5	54.6	39.3	33.9
77	127.5	81.3	62.0	52.5	37.8	32.6
80	122.7	78.3	59.6	50.5	36.4	31.3
83	118.3	75.4	57.5	48.7	35.1	30.2
86	114.1	72.8	55.5	47.0	33.8	N/A
89	110.3	70.4	53.6	45.4	32.7	N/A
92	106.7	68.1	51.9	43.9	31.6	N/A
95	103.3	65.9	50.2	42.6	30.6	N/A
98	100.2	63.9	48.7	41.3	N/A	N/A
101	97.2	62.0	47.2	40.0	N/A	N/A
104	94.4	60.2	45.9	38.9	N/A	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 01.24.2023
By Manuel Bera
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102-14
Expiration Date 01.24.2018
By Manuel Bera
Miami Dade Product Control
MIAMI DADE COUNTY



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WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
FAX: (305) 558-6665
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-15M	08/25/17	3		
2			4		

DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 23 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

C-C1/C2-N=4-STEEL/ALUM.

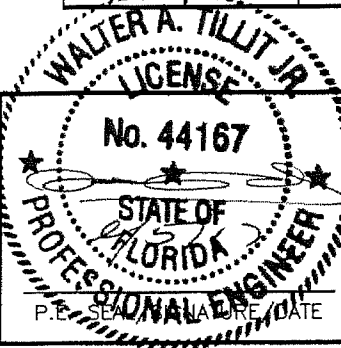
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	185.0	185.0	185.0	185.0	185.0	182.2
23	185.0	185.0	185.0	185.0	183.9	158.4
26	185.0	185.0	185.0	185.0	162.7	140.2
29	185.0	185.0	185.0	185.0	145.9	125.7
32	185.0	185.0	185.0	183.6	132.2	113.9
35	185.0	185.0	185.6	167.9	120.9	104.1
38	185.0	185.0	170.9	154.6	111.3	95.9
41	185.0	181.5	158.4	143.3	103.2	88.9
44	185.0	169.1	147.6	133.5	96.1	82.8
47	185.0	158.3	138.2	125.0	90.0	77.5
50	185.0	148.8	129.9	117.5	84.6	72.9
53	185.0	140.4	122.5	110.9	79.8	68.8
56	175.3	132.9	116.0	104.9	75.5	65.1
59	166.4	126.1	110.1	99.6	71.7	61.8
62	158.3	120.0	104.8	94.8	68.2	58.8
65	151.0	114.5	99.9	90.4	65.1	56.1
68	144.4	109.4	95.5	86.4	62.2	53.6
71	138.3	104.8	91.5	82.8	59.6	51.3
74	132.7	100.6	87.8	79.4	57.2	49.2
77	127.5	96.6	84.3	76.3	54.9	47.3
80	122.7	93.0	81.2	73.4	52.9	45.5
83	118.3	89.7	78.3	70.8	51.0	43.9
86	114.1	86.5	75.5	68.3	49.2	42.4
89	110.3	83.6	73.0	66.0	47.5	40.9
92	106.7	80.9	70.6	63.9	46.0	39.6
95	103.3	78.3	68.4	61.9	44.5	38.4
98	100.2	75.9	66.3	60.0	43.2	37.2
101	97.2	73.7	64.3	58.2	41.9	36.1
104	94.4	71.5	62.5	56.5	40.7	35.0

C-C1/C2-N=6-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	185.0	185.0	185.0	185.0	185.0	182.2
23	185.0	185.0	185.0	185.0	183.9	158.4
26	185.0	185.0	185.0	185.0	162.7	140.2
29	185.0	185.0	185.0	185.0	145.9	125.7
32	185.0	185.0	185.0	183.6	132.2	113.9
35	185.0	185.0	185.0	167.9	120.9	104.1
38	185.0	185.0	182.4	154.6	111.3	95.9
41	185.0	185.0	169.1	143.3	103.2	88.9
44	185.0	185.0	157.6	133.5	96.1	82.8
47	185.0	185.0	147.5	125.0	90.0	77.5
50	185.0	182.0	138.7	117.5	84.6	72.9
53	185.0	171.7	130.8	110.9	79.8	68.8
56	185.0	162.5	123.8	104.9	75.5	65.1
59	185.0	154.2	117.5	99.6	71.7	61.8
62	185.0	146.8	111.8	94.8	68.2	58.8
65	185.0	140.0	106.7	90.4	65.1	56.1
68	185.0	133.8	101.9	86.4	62.2	53.6
71	185.0	128.2	97.6	82.8	59.6	51.3
74	185.0	123.0	93.7	79.4	57.2	49.2
77	185.0	118.2	90.0	76.3	54.9	47.3
80	184.1	113.7	86.7	73.4	52.9	45.5
83	177.4	109.6	83.5	70.8	51.0	43.9
86	171.2	105.8	80.6	68.3	49.2	42.4
89	165.4	102.2	77.9	66.0	47.5	40.9
92	160.0	98.9	75.4	63.9	46.0	39.6
95	155.0	95.8	73.0	61.9	44.5	38.4
98	150.3	92.9	70.7	60.0	43.2	37.2
101	145.8	90.1	68.6	58.2	41.9	36.1
104	141.6	87.5	66.7	56.5	40.7	35.0

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 04.24.2023
By *Manuel Ruiz*
Miami Dade Product Council

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 04.24.2018
By *Manuel Ruiz*
Miami Dade Product Council
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530, Fax: (305) 871-1531
e-mail: tilliteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-8865
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REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 24 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

D-C1/C2-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	137.4
23	185.0	185.0	185.0	185.0	185.0	119.5
26	185.0	185.0	185.0	185.0	176.7	105.7
29	185.0	185.0	185.0	185.0	158.4	94.8
32	185.0	185.0	185.0	185.0	143.6	85.9
35	185.0	185.0	185.0	170.8	131.2	78.5
38	185.0	185.0	170.9	157.4	120.9	72.3
41	185.0	181.5	158.4	145.8	112.0	67.0
44	185.0	169.1	147.6	135.9	104.4	62.5
47	185.0	158.3	138.2	127.2	97.7	58.5
50	196.3	148.8	129.9	119.6	91.9	55.0
53	185.2	140.4	122.5	112.8	86.7	51.8
56	175.3	132.9	116.0	106.8	82.0	49.1
59	166.4	126.1	110.1	101.3	77.9	46.6
62	158.3	120.0	104.8	96.4	74.1	44.3
65	151.0	114.5	99.9	92.0	70.7	42.3
68	144.4	109.4	95.5	87.9	67.6	40.4
71	138.3	104.8	91.5	84.2	64.7	38.7
74	132.7	100.6	87.8	80.8	62.1	37.1
77	127.5	96.6	84.3	77.7	59.7	35.7
80	122.7	93.0	81.2	74.7	57.4	34.3
83	118.3	89.7	78.3	72.0	55.3	33.1
86	114.1	86.5	75.5	69.5	53.4	32.0
89	110.3	83.6	73.0	67.2	51.6	30.9
92	106.7	80.9	70.6	65.0	49.9	N/A
95	103.3	78.3	68.4	62.9	48.4	N/A
98	100.2	75.9	66.3	61.0	46.9	N/A
101	97.2	73.7	64.3	59.2	45.5	N/A
104	94.4	71.5	62.5	57.5	44.2	N/A

D-C1/C2-N=6-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	137.4
23	185.0	185.0	185.0	185.0	185.0	119.5
26	185.0	185.0	185.0	185.0	176.7	105.7
29	185.0	185.0	185.0	185.0	158.4	94.8
32	185.0	185.0	185.0	185.0	143.6	85.9
35	185.0	185.0	185.0	182.3	131.2	78.5
38	185.0	185.0	185.0	167.9	120.9	72.3
41	185.0	185.0	185.0	155.6	112.0	67.0
44	185.0	185.0	171.1	145.0	104.4	62.5
47	185.0	185.0	160.2	135.8	97.7	58.5
50	185.0	185.0	150.6	127.6	91.9	55.0
53	185.0	185.0	142.0	120.4	86.7	51.8
56	185.0	176.5	134.4	113.9	82.0	49.1
59	185.0	167.5	127.6	108.1	77.9	46.6
62	185.0	159.4	121.4	102.9	74.1	44.3
65	185.0	152.0	115.8	98.2	70.7	42.3
68	185.0	145.3	110.7	93.8	67.6	40.4
71	185.0	139.2	106.0	89.9	64.7	38.7
74	185.0	133.5	101.7	86.2	62.1	37.1
77	185.0	128.3	97.8	82.9	59.7	35.7
80	184.1	123.5	94.1	79.8	57.4	34.3
83	177.4	119.1	90.7	76.9	55.3	33.1
86	171.2	114.9	87.5	74.2	53.4	32.0
89	165.4	111.0	84.6	71.7	51.6	30.9
92	160.0	107.4	81.8	69.4	49.9	N/A
95	155.0	104.0	79.2	67.2	48.4	N/A
98	150.3	100.8	76.8	65.1	46.9	N/A
101	145.8	97.8	74.5	63.2	45.5	N/A
104	141.6	95.0	72.4	61.4	44.2	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.DJ
Expiration Date Oct. 24, 2023
by Manuel Diaz
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By Manuel Diaz
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
FAX: (305) 558-6665
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REV. NO.	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 25 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIPS (C1) & (C2)

E-C1/C2-N=6-STEEL/ALUM.

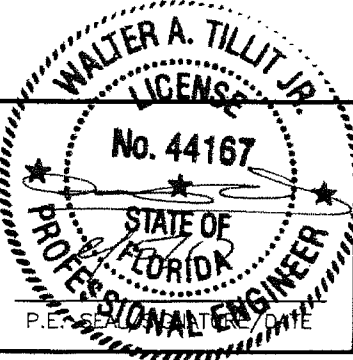
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	156.0	108.3
23	185.0	185.0	185.0	185.0	185.0	185.0	167.4	135.6	94.2
26	185.0	185.0	185.0	185.0	185.0	185.0	148.1	120.0	83.3
29	185.0	185.0	185.0	185.0	185.0	168.1	132.8	107.6	74.7
32	185.0	185.0	185.0	185.0	185.0	152.3	120.3	97.5	67.7
35	185.0	185.0	185.0	185.0	185.0	139.3	110.0	89.1	61.9
38	185.0	185.0	185.0	185.0	185.0	128.3	101.3	82.1	57.0
41	185.0	185.0	185.0	185.0	185.6	118.9	93.9	76.1	52.8
44	185.0	185.0	185.0	185.0	173.0	110.8	87.5	70.9	49.2
47	185.0	185.0	185.0	185.0	161.9	103.7	81.9	66.4	46.1
50	185.0	185.0	185.0	179.4	152.2	97.5	77.0	62.4	43.3
53	185.0	185.0	183.8	169.2	143.6	92.0	72.7	58.9	40.9
56	185.0	185.0	174.0	160.2	135.9	87.0	68.8	55.7	38.7
59	185.0	185.0	165.1	152.0	129.0	82.6	65.3	52.9	36.7
62	185.0	180.0	157.1	144.7	122.7	78.6	62.1	50.3	34.9
65	185.0	171.7	149.9	138.0	117.1	75.0	59.2	48.0	33.3
68	185.0	164.1	143.3	131.9	111.9	71.7	56.6	45.9	31.9
71	185.0	157.2	137.2	126.3	107.2	68.6	54.2	43.9	30.5
74	185.0	150.8	131.7	121.2	102.8	65.9	52.0	42.2	N/A
77	185.0	145.0	126.5	116.5	98.8	63.3	50.0	40.5	N/A
80	184.1	139.5	121.8	112.1	95.1	60.9	48.1	39.0	N/A
83	177.4	134.5	117.4	108.1	91.7	58.7	46.4	37.6	N/A
86	171.2	129.8	113.3	104.3	88.5	56.7	44.8	36.3	N/A
89	165.4	125.4	109.5	100.8	85.5	54.8	43.3	35.0	N/A
92	160.0	121.3	105.9	97.5	82.7	53.0	41.9	33.9	N/A
95	155.0	117.5	102.6	94.4	80.1	51.3	40.5	32.8	N/A
98	150.3	113.9	99.4	91.5	77.7	49.7	39.3	31.8	N/A
101	145.8	110.5	96.5	88.8	75.3	48.3	38.1	30.9	N/A
104	141.6	107.3	93.7	86.2	73.2	46.9	37.0	30.0	N/A

E-C1/C2-N=8-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	156.0	108.3
23	185.0	185.0	185.0	185.0	185.0	185.0	167.4	135.6	94.2
26	185.0	185.0	185.0	185.0	185.0	185.0	148.1	120.0	83.3
29	185.0	185.0	185.0	185.0	185.0	168.1	132.8	107.6	74.7
32	185.0	185.0	185.0	185.0	185.0	152.3	120.3	97.5	67.7
35	185.0	185.0	185.0	185.0	185.0	139.3	110.0	89.1	61.9
38	185.0	185.0	185.0	185.0	185.0	128.3	101.3	82.1	57.0
41	185.0	185.0	185.0	185.0	185.0	118.9	93.9	76.1	52.8
44	185.0	185.0	185.0	185.0	185.0	110.8	87.5	70.9	49.2
47	185.0	185.0	185.0	185.0	173.4	103.7	81.9	66.4	46.1
50	185.0	185.0	185.0	185.0	163.0	97.5	77.0	62.4	43.3
53	185.0	185.0	185.0	185.0	153.7	92.0	72.7	58.9	40.9
56	185.0	185.0	185.0	185.0	145.5	87.0	68.8	55.7	38.7
59	185.0	185.0	185.0	185.0	138.1	82.6	65.3	52.9	36.7
62	185.0	185.0	185.0	182.5	131.4	78.6	62.1	50.3	34.9
65	185.0	185.0	185.0	174.1	125.4	75.0	59.2	48.0	33.3
68	185.0	185.0	185.0	166.4	119.8	71.7	56.6	45.9	31.9
71	185.0	185.0	183.0	159.4	114.8	68.6	54.2	43.9	30.5
74	185.0	185.0	175.5	152.9	110.1	65.9	52.0	42.2	N/A
77	185.0	185.0	168.7	147.0	105.8	63.3	50.0	40.5	N/A
80	185.0	185.0	162.4	141.5	101.8	60.9	48.1	39.0	N/A
83	185.0	179.3	156.5	136.4	98.2	58.7	46.4	37.6	N/A
86	185.0	173.0	151.0	131.6	94.7	56.7	44.8	36.3	N/A
89	185.0	167.2	146.0	127.2	91.5	54.8	43.3	35.0	N/A
92	185.0	161.8	141.2	123.0	88.6	53.0	41.9	33.9	N/A
95	185.0	156.7	136.7	119.1	85.8	51.3	40.5	32.8	N/A
98	185.0	151.9	132.5	115.5	83.1	49.7	39.3	31.8	N/A
101	185.0	147.3	128.6	112.1	80.7	48.3	38.1	30.9	N/A
104	185.0	143.1	124.9	108.8	78.3	46.9	37.0	30.0	N/A

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 08/24/2023
By *Manuel Jerez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 08/24/2018
By *Manuel Jerez*
Miami Dade Product Control
MIAMI DADE COUNTY



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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.	08/25/17 DATE	17-249 DRAWING No
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SHEET 26 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

F-C1/C2-N=8-STEEL/ALUM.

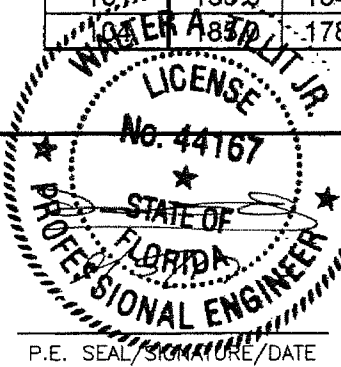
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	172.0
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	152.1
29	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	136.4
32	185.0	185.0	185.0	185.0	185.0	185.0	185.0	178.0	123.6
35	185.0	185.0	185.0	185.0	185.0	185.0	185.0	162.7	113.0
38	185.0	185.0	185.0	185.0	185.0	185.0	183.6	149.9	104.1
41	185.0	185.0	185.0	185.0	185.0	185.0	170.1	138.9	96.5
44	185.0	185.0	185.0	185.0	185.0	178.4	158.5	129.4	89.9
47	185.0	185.0	185.0	185.0	185.0	167.0	148.4	121.2	84.2
50	185.0	185.0	185.0	185.0	185.0	157.0	139.5	113.9	79.1
53	185.0	185.0	185.0	185.0	185.0	148.1	131.6	107.5	74.6
56	185.0	185.0	185.0	185.0	181.2	140.1	124.6	101.7	70.6
59	185.0	185.0	185.0	185.0	172.0	133.0	118.2	96.5	67.0
62	185.0	185.0	185.0	185.0	163.7	126.6	112.5	91.9	63.8
65	185.0	185.0	185.0	184.0	156.1	120.7	107.3	87.6	60.9
68	185.0	185.0	185.0	175.9	149.2	115.4	102.6	83.8	58.2
71	185.0	185.0	183.0	168.4	142.9	110.5	98.3	80.2	55.7
74	185.0	185.0	175.5	161.6	137.1	106.1	94.3	77.0	53.5
77	185.0	185.0	168.7	155.3	131.8	101.9	90.6	74.0	51.4
80	185.0	185.0	162.4	149.5	126.8	98.1	87.2	71.2	49.4
83	185.0	179.3	156.5	144.1	122.3	94.6	84.0	68.6	47.7
86	185.0	173.0	151.0	139.1	118.0	91.3	81.1	66.2	46.0
89	185.0	167.2	146.0	134.4	114.0	88.2	78.4	64.0	44.4
92	185.0	161.8	141.2	130.0	110.3	85.3	75.8	61.9	43.0
95	185.0	156.7	136.7	125.9	106.8	82.6	73.4	60.0	41.6
98	185.0	151.9	132.5	122.0	103.5	80.1	71.2	58.1	40.4
101	185.0	147.3	128.6	118.4	100.5	77.7	69.1	56.4	39.2
104	185.0	143.1	124.9	115.0	97.6	75.5	67.1	54.8	38.0

F-C1/C2-N=10-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	172.0
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	152.1
29	185.0	185.0	185.0	185.0	185.0	185.0	185.0	196.4	136.4
32	185.0	185.0	185.0	185.0	185.0	185.0	185.0	178.0	123.6
35	185.0	185.0	185.0	185.0	185.0	185.0	185.0	162.7	113.0
38	185.0	185.0	185.0	185.0	185.0	185.0	185.0	149.9	104.1
41	185.0	185.0	185.0	185.0	185.0	185.0	171.5	138.9	96.5
44	185.0	185.0	185.0	185.0	185.0	185.0	159.8	129.4	89.9
47	185.0	185.0	185.0	185.0	185.0	185.0	149.6	121.2	84.2
50	185.0	185.0	185.0	185.0	185.0	178.0	140.6	113.9	79.1
53	185.0	185.0	185.0	185.0	185.0	167.9	132.7	107.5	74.6
56	185.0	185.0	185.0	185.0	185.0	158.9	125.6	101.7	70.6
59	185.0	185.0	185.0	185.0	185.0	150.8	119.2	96.5	67.0
62	185.0	185.0	185.0	185.0	185.0	143.5	113.4	91.9	63.8
65	185.0	185.0	185.0	185.0	185.0	136.9	108.2	87.6	60.9
68	185.0	185.0	185.0	185.0	185.0	130.9	103.4	83.8	58.2
71	185.0	185.0	185.0	185.0	178.6	125.3	99.0	80.2	55.7
74	185.0	185.0	185.0	185.0	171.4	120.3	95.0	77.0	53.5
77	185.0	185.0	185.0	185.0	164.7	115.6	91.3	74.0	51.4
80	185.0	185.0	185.0	185.0	158.5	111.2	87.9	71.2	49.4
83	185.0	185.0	185.0	180.1	152.8	107.2	84.7	68.6	47.7
86	185.0	185.0	185.0	173.8	147.5	103.5	81.8	66.2	46.0
89	185.0	185.0	182.4	168.0	142.5	100.0	79.0	64.0	44.4
92	185.0	185.0	176.5	162.5	137.9	96.7	76.4	61.9	43.0
95	185.0	185.0	170.9	157.4	133.5	93.7	74.0	60.0	41.6
98	185.0	185.0	165.7	152.5	129.4	90.8	71.8	58.1	40.4
101	185.0	184.2	160.8	148.0	125.6	88.1	69.6	56.4	39.2
104	185.0	178.9	156.1	143.7	122.0	85.6	67.6	54.8	38.0

PRODUCT REVIEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.0
Expiration Date Oct. 24, 2023
By *Manuel P. Ponce*
Miami Dade Product Control

PRODUCT REVIEWED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel P. Ponce*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 27 OF 60

CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIPS (C1) & (C2)

G-C1/C2-N=4-STEEL/ALUM.

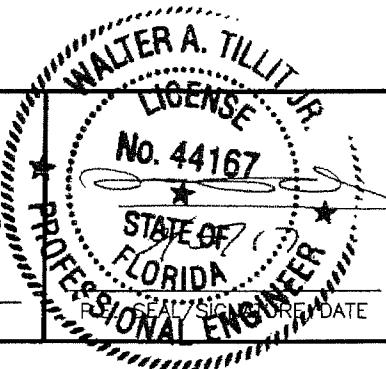
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	99.4
23	185.0	185.0	185.0	185.0	180.3	86.4
26	185.0	185.0	185.0	185.0	159.5	76.4
29	185.0	185.0	185.0	198.6	143.0	68.5
32	185.0	185.0	185.0	180.0	129.6	62.1
35	185.0	185.0	185.6	164.5	118.5	56.8
38	185.0	185.0	170.9	151.5	109.1	52.3
41	185.0	185.0	158.4	140.5	101.1	48.5
44	185.0	169.1	147.6	130.9	94.2	45.2
47	185.0	158.3	138.2	122.5	88.2	42.3
50	185.0	148.8	129.9	115.2	82.9	39.7
53	185.0	140.4	122.5	108.7	78.2	37.5
56	175.3	132.9	116.0	102.8	74.0	35.5
59	166.4	126.1	110.1	97.6	70.3	33.7
62	158.3	120.0	104.8	92.9	66.9	32.1
65	151.0	114.5	99.9	88.6	63.8	30.6
68	144.4	109.4	95.5	84.7	61.0	N/A
71	138.3	104.8	91.5	81.1	58.4	N/A
74	132.7	100.6	87.8	77.8	56.0	N/A
77	127.5	96.6	84.3	74.8	53.8	N/A
80	122.7	93.0	81.2	72.0	51.8	N/A
83	118.3	89.7	78.3	69.4	49.9	N/A
86	114.1	86.5	75.5	67.0	48.2	N/A
89	110.3	83.6	73.0	64.7	46.6	N/A
92	106.7	80.9	70.6	62.6	45.1	N/A
95	103.3	78.3	68.4	60.6	43.6	N/A
98	100.2	75.9	66.3	58.8	42.3	N/A
101	97.2	73.7	64.3	57.0	41.0	N/A
104	94.4	71.5	62.5	55.4	39.9	N/A

I-C1/C2-N=10-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
23	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
26	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
29	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
32	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
35	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0
38	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	171.6
41	185.0	185.0	185.0	185.0	185.0	185.0	185.0	185.0	159.0
44	185.0	185.0	185.0	185.0	185.0	185.0	185.0	178.4	148.2
47	185.0	185.0	185.0	185.0	185.0	185.0	185.0	167.0	138.7
50	185.0	185.0	185.0	185.0	185.0	185.0	174.4	157.0	130.4
53	185.0	185.0	185.0	185.0	185.0	185.0	164.5	148.1	123.0
56	185.0	185.0	185.0	185.0	185.0	175.2	155.7	140.1	116.4
59	185.0	185.0	185.0	185.0	185.0	166.3	147.8	133.0	110.5
62	185.0	185.0	185.0	185.0	185.0	158.2	140.6	126.6	105.2
65	185.0	185.0	185.0	185.0	185.0	150.9	134.2	120.7	100.3
68	185.0	185.0	185.0	185.0	185.0	144.3	128.2	115.4	95.9
71	185.0	185.0	185.0	185.0	178.6	138.2	122.8	110.5	91.8
74	185.0	185.0	185.0	185.0	171.4	132.6	117.8	106.1	88.1
77	185.0	185.0	185.0	185.0	164.7	127.4	113.2	101.9	84.7
80	185.0	185.0	185.0	185.0	158.5	122.6	109.0	98.1	81.5
83	185.0	185.0	185.0	180.1	152.8	118.2	105.1	94.6	78.6
86	185.0	185.0	185.0	173.8	147.5	114.1	101.4	91.3	75.8
89	185.0	185.0	182.4	168.0	142.5	110.2	98.0	88.2	73.3
92	185.0	185.0	176.5	162.5	137.9	106.6	94.8	85.3	70.9
95	185.0	185.0	170.9	157.4	133.5	103.3	91.8	82.6	68.6
98	185.0	185.0	165.7	152.5	129.4	100.1	89.0	80.1	66.5
101	185.0	184.2	160.8	148.0	125.6	97.1	86.3	77.7	64.6
104	185.0	178.9	156.1	143.7	122.0	94.3	83.8	75.5	62.7

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 28 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

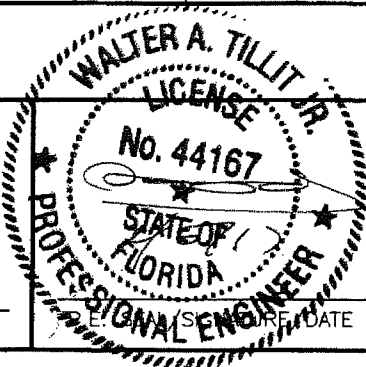
CLIPPED INTERIOR MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIP (C1)

J-C1-N=6-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 45° MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	185.0	185.0	185.0	185.0	185.0	111.2
23	185.0	185.0	185.0	185.0	161.6	96.7
26	185.0	185.0	185.0	185.0	143.0	85.5
29	185.0	185.0	185.0	178.1	128.2	76.7
32	185.0	185.0	185.0	161.4	116.2	69.5
35	185.0	185.0	174.1	147.5	106.2	63.5
38	185.0	185.0	160.3	135.9	97.8	58.5
41	185.0	185.0	148.6	126.0	90.7	54.2
44	185.0	181.8	138.5	117.4	84.5	50.5
47	185.0	170.2	129.6	109.9	79.1	47.3
50	185.0	159.9	121.9	103.3	74.4	44.5
53	185.0	150.9	115.0	97.4	70.1	42.0
56	185.0	142.8	108.8	92.2	66.4	39.7
59	185.0	135.5	103.3	87.5	63.0	37.7
62	185.0	129.0	98.3	83.3	60.0	35.9
65	185.0	123.0	93.7	79.4	57.2	34.2
68	185.0	117.6	89.6	75.9	54.7	32.7
71	185.0	112.6	85.8	72.7	52.4	31.3
74	185.0	108.1	82.3	69.8	50.2	30.1
77	180.7	103.9	79.1	67.1	48.3	N/A
80	174.0	100.0	76.2	64.5	46.5	N/A
83	167.7	96.4	73.4	62.2	44.8	N/A
86	161.8	93.0	70.8	60.0	43.2	N/A
89	156.4	89.9	68.5	58.0	41.8	N/A
92	151.3	86.9	66.2	56.1	40.4	N/A
95	146.5	84.2	64.1	54.4	39.1	N/A
98	142.0	81.6	62.2	52.7	37.9	N/A
101	137.8	79.2	60.3	51.1	36.8	N/A
104	133.8	76.9	58.6	49.7	35.7	N/A

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
 290 WEST 78 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-8685 www.generalimpact.com						08/25/17 DATE	
						17-249 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE	SHEET 29 OF 60	
1	OLD 15-158	08/25/17	3				
2			4				

CLIPPED END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C3

A-C3-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	135.5	102.7	89.7	82.5	
23	117.8	89.3	78.0	71.8	
26	104.2	79.0	69.0	63.5	
29	93.5	70.8	61.8	56.9	
32	84.7	64.2	56.0	51.6	
35	77.4	58.7	51.2	47.2	
38	71.3	54.1	47.2	43.4	
41	66.1	50.1	43.7	40.3	
44	61.6	46.7	40.8	37.5	
47	57.7	43.7	38.2	35.1	
50	54.2	41.1	35.9	33.0	
53	51.1	38.8	33.8	31.1	

B-C3-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	158.4	120.1	104.8	96.5	81.9	76.0
23	137.7	104.4	91.1	83.9	71.2	66.1
26	121.8	92.4	80.6	74.2	63.0	58.4
29	109.2	82.8	72.3	66.5	56.5	52.4
32	99.0	75.0	65.5	60.3	51.2	47.5
35	90.5	68.6	59.9	55.1	46.8	43.4
38	83.4	63.2	55.2	50.8	43.1	40.0
41	77.3	58.6	51.1	47.1	39.9	37.1
44	72.0	54.6	47.6	43.9	37.2	34.5
47	67.4	51.1	44.6	41.1	34.8	32.3
50	63.4	48.0	41.9	38.6	32.7	30.4
53	59.8	45.3	39.5	36.4	30.9	28.7

C-C3-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	149.7	113.5	99.0	91.2	77.4	71.8
23	130.2	98.7	86.1	79.3	67.3	62.4
26	115.2	87.3	76.2	70.1	59.5	55.2
29	103.2	78.3	68.3	62.9	53.4	49.5
32	93.6	70.9	61.9	57.0	48.4	44.9
35	85.5	64.8	56.6	52.1	44.2	41.0
38	78.8	59.7	52.1	48.0	40.7	37.8
41	73.0	55.4	48.3	44.5	37.7	35.0
44	68.0	51.6	45.0	41.4	35.2	32.6
47	63.7	48.3	42.1	38.8	32.9	30.6
50	59.9	45.4	39.6	36.5	30.9	28.7
53	56.5	42.8	37.4	34.4	29.2	27.1

C-C3-N=6-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	187.2	141.9	123.9	114.1	96.8	89.8
23	162.8	123.4	107.7	99.2	84.1	78.1
26	144.0	109.2	95.3	87.7	74.4	69.1
29	129.1	97.9	85.4	78.7	66.7	61.9
32	117.0	88.7	77.4	71.3	60.5	56.1
35	107.0	81.1	70.8	65.2	55.3	51.3
38	98.5	74.7	65.2	60.0	50.9	47.3
41	91.3	69.2	60.4	55.6	47.2	43.8
44	85.1	64.5	56.3	51.8	44.0	40.8
47	79.7	60.4	52.7	48.5	41.2	38.2
50	74.9	56.8	49.6	45.6	38.7	35.9
53	70.7	53.6	46.7	43.0	36.5	33.9

D-C3-N=4-WOOD

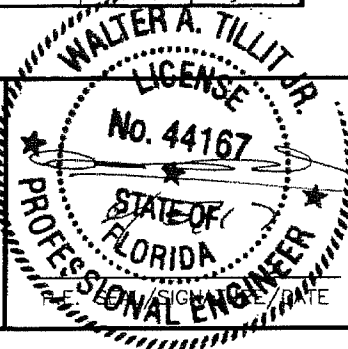
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	152.4	115.6	100.9	92.9	78.8	60.9
23	132.6	100.5	87.7	80.7	68.5	53.0
26	117.3	88.9	77.6	71.4	60.6	46.9
29	105.1	79.7	69.6	64.0	54.3	42.0
32	95.3	72.2	63.0	58.0	49.2	38.1
35	87.1	66.0	57.6	53.1	45.0	34.8
38	80.2	60.8	53.1	48.9	41.5	32.1
41	74.4	56.4	49.2	45.3	38.4	29.7
44	69.3	52.5	45.8	42.2	35.8	27.7
47	64.9	49.2	42.9	39.5	33.5	25.9
50	61.0	46.2	40.3	37.1	31.5	24.4
53	57.5	43.6	38.1	35.0	29.7	23.0

D-C3-N=6-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ULTRACONS EACH END OF						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	154.4	134.8	124.1	105.3	81.4
23	177.1	134.3	117.2	107.9	91.6	70.8
26	156.7	118.8	103.7	95.5	81.0	62.6
29	140.5	106.5	93.0	85.6	72.6	56.2
32	127.3	96.5	84.2	77.6	65.8	50.9
35	116.4	88.2	77.0	70.9	60.2	46.5
38	107.2	81.3	70.9	65.3	55.4	42.9
41	99.4	75.3	65.8	60.5	51.4	39.7
44	92.6	70.2	61.3	56.4	47.9	37.0
47	86.7	65.7	57.4	52.8	44.8	34.7
50	81.5	61.8	53.9	49.6	42.1	32.6
53	76.9	58.3	50.9	46.8	39.7	30.7

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1102.01
Expiration Date Oct 24, 2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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Phone: (305) 871-1530 Fax: (305) 871-1531
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EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6685
www.generalimpact.com

REV. NO.	DESCRIPTION	DATE	REV. No.	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 30 OF 60

CLIPPED END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C3

E-C3-N=6-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	180.8	157.8	145.3	123.3	95.3	84.7	76.3	63.6
23	200.0	157.2	137.2	126.3	107.2	82.9	73.7	66.3	55.3
26	183.5	139.1	121.4	111.8	94.8	73.3	65.2	58.7	48.9
29	164.5	124.7	108.8	100.2	85.0	65.8	58.4	52.6	43.8
32	149.1	113.0	98.6	90.8	77.0	59.6	53.0	47.7	39.7
35	136.3	103.3	90.2	83.0	70.4	54.5	48.4	43.6	36.3
38	125.5	95.2	83.1	76.5	64.9	50.2	44.6	40.1	33.5
41	116.3	88.2	77.0	70.9	60.1	46.5	41.3	37.2	31.0
44	108.4	82.2	71.7	66.0	56.0	43.3	38.5	34.7	28.9
47	101.5	76.9	67.2	61.8	52.5	40.6	36.1	32.5	27.0
50	95.4	72.3	63.1	58.1	49.3	38.1	33.9	30.5	25.4
53	90.0	68.2	59.6	54.8	46.5	36.0	32.0	28.8	24.0

E-C3-N=8-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	198.7	182.9	155.2	120.0	106.7	96.0	80.0
23	200.0	198.0	172.8	159.1	135.0	104.4	92.8	83.5	69.6
26	200.0	175.1	152.8	140.7	119.4	92.3	82.1	73.9	61.6
29	200.0	157.0	137.0	126.2	107.0	82.8	73.6	66.2	55.2
32	187.7	142.3	124.2	114.3	97.0	75.0	66.7	60.0	50.0
35	171.6	130.1	113.5	104.5	88.7	68.6	61.0	54.9	45.7
38	158.1	119.8	104.6	96.3	81.7	63.2	56.2	50.5	42.1
41	146.5	111.0	96.9	89.2	75.7	58.6	52.1	46.8	39.0
44	136.5	103.5	90.3	83.2	70.6	54.6	48.5	43.7	36.4
47	127.8	96.9	84.6	77.8	66.0	51.1	45.4	40.9	34.1
50	120.1	91.1	79.5	73.2	62.1	48.0	42.7	38.4	32.0
53	113.3	85.9	75.0	69.0	58.6	45.3	40.3	36.2	30.2

F-C3-N=8-WOOD

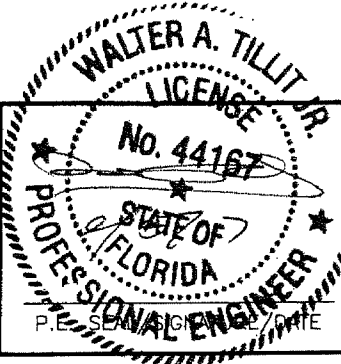
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	185.7	157.6	121.9	108.3	97.5	81.3
23	200.0	200.0	175.4	161.5	137.0	106.0	94.2	84.8	70.7
26	200.0	177.8	155.2	142.9	121.2	93.8	83.3	75.0	62.5
29	200.0	159.4	139.1	128.1	108.7	84.1	74.7	67.2	56.0
32	190.6	144.4	126.1	116.1	98.5	76.2	67.7	60.9	50.8
35	174.2	132.1	115.3	106.1	90.0	69.6	61.9	55.7	46.4
38	160.5	121.6	106.2	97.7	82.9	64.1	57.0	51.3	42.8
41	148.7	112.7	98.4	90.6	76.9	59.5	52.8	47.6	39.6
44	138.6	105.1	91.7	84.4	71.6	55.4	49.2	44.3	36.9
47	129.7	98.3	85.8	79.0	67.1	51.9	46.1	41.5	34.6
50	122.0	92.4	80.7	74.3	63.0	48.8	43.3	39.0	32.5
53	115.1	87.2	76.1	70.1	59.5	46.0	40.9	36.8	30.7

F-C3-N=10-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	191.9	148.4	131.9	118.7	98.9
23	200.0	200.0	200.0	196.7	166.9	129.1	114.7	103.2	86.0
26	200.0	200.0	189.0	174.0	147.6	114.2	101.5	91.3	76.1
29	200.0	194.1	169.4	156.0	132.3	102.4	91.0	81.9	68.2
32	200.0	175.9	153.5	141.3	119.9	92.8	82.5	74.2	61.8
35	200.0	160.8	140.4	129.2	109.7	84.8	75.4	67.8	56.5
38	195.4	148.1	129.3	119.0	101.0	78.1	69.4	62.5	52.1
41	181.1	137.3	119.8	110.3	93.6	72.4	64.4	57.9	48.3
44	168.8	127.9	111.7	102.8	87.2	67.5	60.0	54.0	45.0
47	158.0	119.8	104.5	96.2	81.7	63.2	56.1	50.5	42.1
50	148.5	112.6	98.3	90.5	76.8	59.4	52.8	47.5	39.6
53	140.1	106.2	92.7	85.3	72.4	56.0	49.8	44.8	37.3

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.0/
Expiration Date 02/24/2023
By *Manuel Jara*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02/24/2018
By *Manuel Jara*
Miami Dade Product Control
MIAMI DADE COUNTY



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WALTER A. TILLIT JR., P.E.
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 31 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C3

G-C3-N=4-WOOD

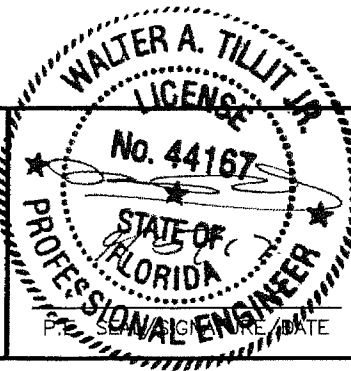
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	117.2	88.8	77.5	71.4	60.6	46.8
23	101.9	77.3	67.4	62.1	52.7	40.7
26	90.2	68.3	59.6	54.9	46.6	36.0
29	80.8	61.3	53.5	49.2	41.8	32.3
32	73.2	55.5	48.5	44.6	37.9	29.3
35	67.0	50.8	44.3	40.8	34.6	26.8
38	61.7	46.8	40.8	37.6	31.9	24.7
41	57.2	43.3	37.8	34.8	29.5	22.9
44	53.3	40.4	35.2	32.4	27.5	21.3
47	49.9	37.8	33.0	30.4	25.8	19.9
50	46.9	35.5	31.0	28.6	24.2	18.7
53	44.2	33.5	29.3	26.9	22.9	17.7

I-C3-N=10-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	177.5	137.3	122.0	109.8	91.5
23	200.0	200.0	197.5	181.9	154.3	119.3	106.1	95.5	79.6
26	200.0	200.0	174.7	160.9	136.5	105.6	93.8	84.5	70.4
29	200.0	179.5	156.7	144.2	122.4	94.7	84.1	75.7	63.1
32	200.0	162.7	142.0	130.7	110.9	85.8	76.3	68.6	57.2
35	196.2	148.7	129.8	119.5	101.4	78.4	69.7	62.7	52.3
38	180.7	137.0	119.6	110.1	93.4	72.2	64.2	57.8	48.2
41	167.5	127.0	110.8	102.0	86.6	67.0	59.5	53.6	44.6
44	156.1	118.3	103.3	95.1	80.7	62.4	55.5	49.9	41.6
47	146.1	110.8	96.7	89.0	75.5	58.4	51.9	46.7	38.9
50	137.3	104.1	90.9	83.7	71.0	54.9	48.8	43.9	36.6
53	129.6	98.2	85.7	78.9	67.0	51.8	46.0	41.4	34.5

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.0
Expiration Date Oct. 24, 2023
By *Manuel Diaz*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Diaz*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS						DRAWN BY: L.C.	
 290 WEST 78 ROAD HALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com						08/25/17 DATE	
						17-249 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	SHEET 32 OF 60	
1	OLD 15-158	08/25/17	3				
2			4				

CLIPPED END MULLIONS CHARTS INTO BLOCK SUBSTRATE
CONNECTED W/ CLIP C3

A-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	111.1	84.2	73.5	67.7	
23	96.6	73.2	63.9	58.8	
26	85.4	64.8	56.5	52.0	
29	76.6	58.1	50.7	46.7	
32	69.4	52.6	45.9	42.3	
35	63.5	48.1	42.0	38.7	
38	58.5	44.3	38.7	35.6	
41	54.2	41.1	35.8	33.0	
44	50.5	38.3	33.4	30.8	
47	47.3	35.8	31.3	28.8	
50	44.4	33.7	29.4	27.1	
53	41.9	31.8	27.7	25.5	

B-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	195.3	148.0	129.2	118.9	100.9	93.7
23	169.8	128.7	112.3	103.4	87.8	81.4
26	150.2	113.9	99.4	91.5	77.6	72.0
29	134.7	102.1	89.1	82.0	69.6	64.6
32	122.0	92.5	80.7	74.3	63.1	58.5
35	111.6	84.6	73.8	68.0	57.7	53.5
38	102.8	77.9	68.0	62.6	53.1	49.3
41	95.2	72.2	63.0	58.0	49.2	45.7
44	88.8	67.3	58.7	54.1	45.9	42.6
47	83.1	63.0	55.0	50.6	42.9	39.9
50	78.1	59.2	51.7	47.6	40.4	37.5
53	73.7	55.9	48.8	44.9	38.1	35.3

C-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	184.1	139.5	121.8	112.1	95.1	88.3
23	160.0	121.3	105.9	97.5	82.7	76.8
26	141.6	107.3	93.7	86.2	73.2	67.9
29	126.9	96.2	84.0	77.3	65.6	60.9
32	115.0	87.2	76.1	70.1	59.5	55.2
35	105.2	79.7	69.6	64.1	54.4	50.5
38	96.9	73.4	64.1	59.0	50.1	46.5
41	89.8	68.1	59.4	54.7	46.4	43.1
44	83.7	63.4	55.4	51.0	43.2	40.1
47	78.3	59.4	51.8	47.7	40.5	37.6
50	73.6	55.8	48.7	44.8	38.1	35.3
53	69.5	52.6	46.0	42.3	35.9	33.3

D-C3-N=4-BLOCK

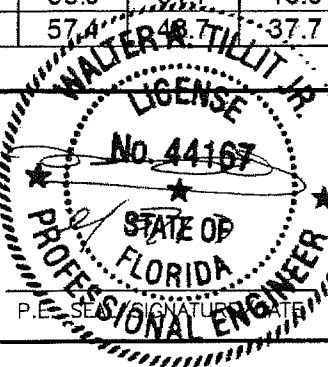
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	187.4	142.1	124.0	114.2	96.9	74.9
23	163.0	123.5	107.8	99.3	84.2	65.2
26	144.2	109.3	95.4	87.8	74.5	57.6
29	129.3	98.0	85.5	78.7	66.8	51.7
32	117.1	88.8	77.5	71.4	60.5	46.8
35	107.1	81.2	70.9	65.2	55.4	42.8
38	98.6	74.8	65.3	60.1	51.0	39.4
41	91.4	69.3	60.5	55.7	47.3	36.5
44	85.2	64.6	56.4	51.9	44.0	34.1
47	79.8	60.5	52.8	48.6	41.2	31.9
50	75.0	56.8	49.6	45.7	38.7	30.0
53	70.7	53.6	46.8	43.1	36.6	28.3

F-C3-N=8-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	189.4	165.4	152.2	129.2	99.9	88.8	79.9	66.6
23	200.0	164.7	143.8	132.4	112.3	86.9	77.2	69.5	57.9
26	192.2	145.7	127.2	117.1	99.4	76.8	68.3	61.5	51.2
29	172.4	130.6	114.0	105.0	89.1	68.9	61.2	55.1	45.9
32	156.2	118.4	103.3	95.1	80.7	62.4	55.5	50.0	41.6
35	142.8	108.3	94.5	87.0	73.8	57.1	50.7	45.7	38.1
38	131.5	99.7	87.0	80.1	68.0	52.6	46.7	42.1	35.1
41	121.9	92.4	80.7	74.3	63.0	48.7	43.3	39.0	32.5
44	113.6	86.1	75.2	69.2	58.7	45.4	40.4	36.3	30.3
47	106.3	80.6	70.4	64.8	55.0	42.5	37.8	34.0	28.3
50	100.0	75.8	66.1	60.9	51.7	40.0	35.5	32.0	26.6
53	94.3	71.5	62.4	57.4	48.7	37.7	33.5	30.2	25.1

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-198	08/26/17	3		
2			4		

DRAWN BY: L.C.
DATE: 08/25/17
DRAWING No: 17-249
SHEET 33 OF 60

CLIPPED END MULLIONS CHARTS INTO BLOCK SUBSTRATE
CONNECTED W/ CLIP C3

E-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	159.3	139.1	128.0	108.6	84.0	74.7	67.2	56.0
23	182.8	138.5	120.9	111.3	94.5	73.1	64.9	58.4	48.7
26	161.7	122.6	107.0	98.5	83.6	64.6	57.4	51.7	43.1
29	144.9	109.9	95.9	88.3	74.9	57.9	51.5	46.4	38.6
32	131.4	99.6	86.9	80.0	67.9	52.5	46.7	42.0	35.0
35	120.1	91.0	79.5	73.2	62.1	48.0	42.7	38.4	32.0
38	110.6	83.9	73.2	67.4	57.2	44.2	39.3	35.4	29.5
41	102.5	77.7	67.8	62.5	53.0	41.0	36.4	32.8	27.3
44	95.5	72.4	63.2	58.2	49.4	38.2	33.9	30.6	25.5
47	89.4	67.8	59.2	54.5	46.2	35.8	31.8	28.6	23.8
50	84.1	63.7	55.6	51.2	43.5	33.6	29.9	26.9	22.4
53	79.3	60.1	52.5	48.3	41.0	31.7	28.2	25.4	21.1

E-C3-N=8-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	186.6	162.9	149.9	127.2	98.4	87.5	78.7	65.6
23	200.0	162.3	141.6	130.4	110.6	85.6	76.1	68.5	57.0
26	189.4	143.5	125.3	115.3	97.9	75.7	67.3	60.6	50.5
29	169.8	128.7	112.3	103.4	87.7	67.9	60.3	54.3	45.2
32	153.9	116.6	101.8	93.7	79.5	61.5	54.7	49.2	41.0
35	140.7	106.6	93.1	85.7	72.7	56.2	50.0	45.0	37.5
38	129.6	98.2	85.7	78.9	67.0	51.8	46.0	41.4	34.5
41	120.1	91.0	79.4	73.1	62.1	48.0	42.7	38.4	32.0
44	111.9	84.8	74.0	68.2	57.8	44.7	39.8	35.8	29.8
47	104.7	79.4	69.3	63.8	54.1	41.9	37.2	33.5	27.9
50	98.5	74.6	65.1	60.0	50.9	39.4	35.0	31.5	26.2
53	92.9	70.4	61.5	56.6	48.0	37.1	33.0	29.7	24.8

G-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	96.1	72.8	63.6	58.5	49.6	38.4
23	83.5	63.3	55.3	50.9	43.2	33.4
26	73.9	56.0	48.9	45.0	38.2	29.5
29	66.3	50.2	43.8	40.4	34.2	26.5
32	60.0	45.5	39.7	36.6	31.0	24.0
35	54.9	41.6	36.3	33.4	28.4	21.9
38	50.6	38.3	33.5	30.8	26.1	20.2
41	46.9	35.5	31.0	28.5	24.2	18.7
44	43.7	33.1	28.9	26.6	22.6	17.5
47	40.9	31.0	27.0	24.9	21.1	16.3
50	38.4	29.1	25.4	23.4	19.9	15.4
53	36.3	27.5	24.0	22.1	18.7	14.5

H-C3-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	116.7	88.5	77.2	71.1	60.3	46.7	41.5	37.3	31.1
23	101.5	76.9	67.1	61.8	52.4	40.6	36.1	32.5	27.0
26	89.8	68.0	59.4	54.7	46.4	35.9	31.9	28.7	23.9
29	80.5	61.0	53.3	49.0	41.6	32.2	28.6	25.7	21.4
32	72.9	55.3	48.3	44.4	37.7	29.2	25.9	23.3	19.4
35	66.7	50.5	44.1	40.6	34.5	26.7	23.7	21.3	17.8
38	61.4	46.6	40.6	37.4	31.7	24.6	21.8	19.6	16.4
41	56.9	43.2	37.7	34.7	29.4	22.8	20.2	18.2	15.2
44	53.0	40.2	35.1	32.3	27.4	21.2	18.8	17.0	14.1
47	49.7	37.6	32.9	30.2	25.7	19.9	17.6	15.9	13.2
50	46.7	35.4	30.9	28.4	24.1	18.7	16.6	14.9	12.4
53	44.0	33.4	29.1	26.8	22.8	17.6	15.6	14.1	11.7

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02-24-2023
By *Manuel Suarez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.1A
Expiration Date 02-24-2018
By *Manuel Suarez*
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SIGNATURE/DATE

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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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Phone : (305) 871-1530 • Fax : (305) 871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS
DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 34 OF 60

290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6865
www.generalimpact.com

GENERAL
IMPACT GLASS & WINDOWS
The Clear Solution

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 18-158	08/25/17	3		
2			4		

CLIPPED END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP C3

A-C3-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x 3"x 1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	200.0	200.0	154.2	130.7	
23	200.0	176.1	134.1	113.7	
26	200.0	155.7	118.7	100.6	
29	200.0	139.6	106.4	90.2	
32	200.0	126.5	96.4	81.7	
35	199.9	115.7	88.1	74.7	
38	184.1	106.6	81.2	68.8	
41	170.7	98.8	75.2	63.8	
44	159.0	92.0	70.1	59.4	
47	148.9	86.2	65.6	55.6	
50	140.0	81.0	61.7	52.3	
53	132.0	76.4	58.2	49.3	

B-C3-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	200.0	200.0	200.0	145.5	125.4
23	200.0	200.0	200.0	175.8	126.6	109.0
26	200.0	200.0	183.5	155.5	112.0	96.4
29	200.0	200.0	164.5	139.4	100.4	86.5
32	200.0	195.7	149.1	126.4	91.0	78.4
35	200.0	178.9	136.3	115.5	83.2	71.6
38	200.0	164.8	125.5	106.4	76.6	66.0
41	200.0	152.7	116.4	98.6	71.0	61.2
44	200.0	142.3	108.4	91.9	66.2	57.0
47	200.0	133.2	101.5	86.0	61.9	53.4
50	200.0	125.2	95.4	80.9	58.2	50.2
53	191.6	118.1	90.0	76.3	54.9	47.3

C-C3-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	200.0	200.0	200.0	199.8	182.2
23	200.0	200.0	200.0	200.0	173.7	158.4
26	200.0	200.0	196.7	181.1	153.7	140.2
29	200.0	200.0	176.4	162.4	137.8	125.7
32	200.0	183.1	159.8	147.2	124.9	113.9
35	200.0	167.4	146.1	134.5	114.2	104.1
38	200.0	154.2	134.6	123.9	105.1	95.9
41	188.5	142.9	124.7	114.8	97.4	88.9
44	175.7	133.2	116.2	107.0	90.8	82.8
47	164.5	124.7	108.8	100.2	85.0	77.5
50	154.6	117.2	102.3	94.2	79.9	72.9
53	145.9	110.6	96.5	88.8	75.4	68.8

D-C3-N=4-CONC

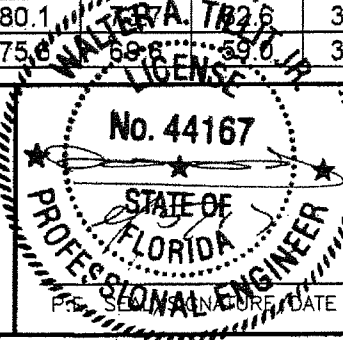
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	200.0	200.0	137.4
23	200.0	200.0	200.0	200.0	199.7	119.5
26	200.0	200.0	200.0	200.0	176.7	105.7
29	200.0	200.0	200.0	200.0	158.4	94.8
32	200.0	200.0	200.0	185.5	143.6	85.9
35	200.0	200.0	184.2	169.6	131.2	78.5
38	200.0	194.4	169.7	156.2	120.9	72.3
41	200.0	180.2	157.3	144.8	112.0	67.0
44	200.0	167.9	146.6	134.9	104.4	62.5
47	200.0	157.2	137.2	126.3	97.7	58.5
50	194.9	147.8	129.0	118.7	91.9	55.0
53	183.9	139.4	121.7	112.0	86.7	51.8

G-C3-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS IN CONCRETE						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	184.3	156.4	99.4
23	200.0	199.5	174.1	160.3	136.0	86.4
26	200.0	176.4	154.0	141.8	120.3	76.4
29	200.0	158.2	138.1	127.1	107.9	68.5
32	189.1	143.4	125.1	115.2	97.7	62.1
35	172.9	131.1	114.4	105.3	89.4	56.8
38	159.3	120.7	105.4	97.0	82.3	52.3
41	147.6	111.9	97.7	89.9	76.3	48.5
44	137.5	104.3	91.0	83.8	71.1	45.2
47	128.8	97.6	85.2	78.4	66.6	42.3
50	121.0	91.8	80.1	74.8	59.0	39.7
53	114.2	86.6	75.6	69.8	59.0	37.5

PRODUCT RENEWED
as complying with the Florida
Building Code 18-1108.01
Acceptance No. 18-1108.01
Expiration Date 01/24/2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code 17-1102.14
Acceptance No. 17-1102.14
Expiration Date 01/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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HALEAH, FL 33014
PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 35 OF 60

CLIPPED END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP (C3)

E-C3-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	192.6	156.0	108.3
23	200.0	200.0	200.0	200.0	200.0	189.9	167.4	135.6	94.2
26	200.0	200.0	200.0	200.0	200.0	168.0	148.1	120.0	83.3
29	200.0	200.0	200.0	200.0	194.8	150.6	132.8	107.6	74.7
32	200.0	200.0	200.0	200.0	176.5	136.5	120.3	97.5	67.7
35	200.0	200.0	200.0	190.2	161.4	124.8	110.0	89.1	61.9
38	200.0	200.0	190.3	175.2	148.6	115.0	101.3	82.1	57.0
41	200.0	200.0	176.4	162.4	137.8	106.6	93.9	76.1	52.8
44	200.0	188.3	164.3	151.3	128.4	99.3	87.5	70.9	49.2
47	200.0	176.3	153.9	141.6	120.2	93.0	81.9	66.4	46.1
50	200.0	165.7	144.6	133.1	113.0	87.4	77.0	62.4	43.3
53	200.0	156.3	136.4	125.6	106.6	82.4	72.7	58.9	40.9

E-C3-N=6-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4"Ø IN ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	192.6	156.0	108.3
23	200.0	200.0	200.0	200.0	200.0	200.0	167.4	135.6	94.2
26	200.0	200.0	200.0	200.0	200.0	187.5	148.1	120.0	83.3
29	200.0	200.0	200.0	200.0	200.0	168.1	132.8	107.6	74.7
32	200.0	200.0	200.0	200.0	198.9	152.3	120.3	97.5	67.7
35	200.0	200.0	200.0	200.0	181.9	139.3	110.0	89.1	61.9
38	200.0	200.0	200.0	197.4	167.5	128.3	101.3	82.1	57.0
41	200.0	200.0	198.8	183.0	155.3	118.9	93.9	76.1	52.8
44	200.0	200.0	185.2	170.5	144.7	110.8	87.5	70.9	49.2
47	200.0	198.6	173.4	159.6	135.4	103.7	81.9	66.4	46.1
50	200.0	186.7	163.0	150.0	127.3	97.5	77.0	62.4	43.3
53	200.0	176.2	153.8	141.6	120.1	92.0	72.7	58.9	40.9

F-C3-N=6-CONC

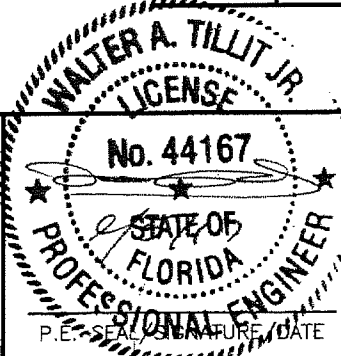
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (6) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	198.8	165.7
23	200.0	200.0	200.0	200.0	200.0	200.0	192.1	172.9	144.1
26	200.0	200.0	200.0	200.0	200.0	191.2	169.9	152.9	127.5
29	200.0	200.0	200.0	200.0	200.0	171.4	152.4	137.1	114.3
32	200.0	200.0	200.0	200.0	200.0	155.3	138.1	124.3	103.6
35	200.0	200.0	200.0	200.0	183.6	142.0	126.2	113.6	94.7
38	200.0	200.0	200.0	199.3	169.1	130.8	116.3	104.6	87.2
41	200.0	200.0	200.0	184.7	156.8	121.2	107.8	97.0	80.8
44	200.0	200.0	187.0	172.1	146.1	113.0	100.4	90.4	75.3
47	200.0	200.0	175.1	161.2	136.7	105.8	94.0	84.6	70.5
50	200.0	188.5	164.5	151.5	128.5	99.4	88.4	79.5	66.3
53	200.0	177.8	155.2	142.9	121.3	93.8	83.4	75.0	62.5

F-C3-N=8-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	197.8
23	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	172.0
26	200.0	200.0	200.0	200.0	200.0	200.0	200.0	193.7	152.1
29	200.0	200.0	200.0	200.0	200.0	200.0	192.9	173.6	136.4
32	200.0	200.0	200.0	200.0	200.0	196.7	174.8	157.3	123.6
35	200.0	200.0	200.0	200.0	200.0	179.8	159.8	143.9	113.0
38	200.0	200.0	200.0	200.0	200.0	165.6	147.2	132.5	104.1
41	200.0	200.0	200.0	200.0	198.5	153.5	136.4	122.8	96.5
44	200.0	200.0	200.0	200.0	184.9	143.0	127.1	114.4	89.9
47	200.0	200.0	200.0	200.0	173.1	133.9	119.0	107.1	84.2
50	200.0	200.0	200.0	191.8	162.7	125.9	111.9	100.7	79.1
53	200.0	200.0	196.6	181.0	153.5	118.7	105.6	95.0	74.6

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03/24/2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 03/24/2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530, Fax: (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 36 OF 60

CLIPPED END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP C3

H-C3-N=4-CONC

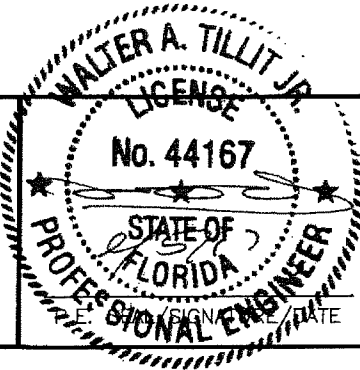
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	190.0	146.9	130.6	117.6	98.0
23	200.0	200.0	200.0	194.7	165.2	127.8	113.6	102.2	85.2
26	200.0	200.0	187.1	172.2	146.1	113.0	100.5	90.4	75.4
29	200.0	192.2	167.7	154.4	131.0	101.3	90.1	81.1	67.6
32	200.0	174.2	152.0	140.0	118.7	91.8	81.6	73.5	61.2
35	200.0	159.2	139.0	128.0	108.6	84.0	74.6	67.2	56.0
38	193.5	146.7	128.0	117.9	100.0	77.3	68.7	61.9	51.6
41	179.3	135.9	118.6	109.2	92.7	71.7	63.7	57.3	47.8
44	167.1	126.7	110.6	101.8	86.4	66.8	59.4	53.4	44.5
47	156.4	118.6	103.5	95.3	80.8	62.5	55.6	50.0	41.7
50	147.0	111.5	97.3	89.6	76.0	58.8	52.2	47.0	39.2
53	138.7	105.2	91.8	84.5	71.7	55.5	49.3	44.4	37.0

I-C3-N=8-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" Ø ULTRACONS IN POURED CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	195.1
23	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	169.7
26	200.0	200.0	200.0	200.0	200.0	200.0	200.0	180.1	150.1
29	200.0	200.0	200.0	200.0	200.0	200.0	179.4	161.5	134.6
32	200.0	200.0	200.0	200.0	200.0	182.9	162.6	146.4	122.0
35	200.0	200.0	200.0	200.0	200.0	167.3	148.7	133.8	111.5
38	200.0	200.0	200.0	200.0	199.2	154.1	136.9	123.2	102.7
41	200.0	200.0	200.0	200.0	184.6	142.8	126.9	114.2	95.2
44	200.0	200.0	200.0	200.0	172.0	133.1	118.3	106.4	88.7
47	200.0	200.0	200.0	189.8	161.0	124.6	110.7	99.6	83.0
50	200.0	200.0	193.8	178.4	151.4	117.1	104.1	93.7	78.1
53	200.0	200.0	182.8	168.3	142.8	110.5	98.2	88.4	73.6

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By Manuel Perez
Miami Dade Product Centre

PRODUCT REVISED
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Building Code
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1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 37 OF 60

CLIPPED END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP C3

A-C3-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 TEK SCREWS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	200.0	200.0	154.2	130.7	
23	200.0	176.1	134.1	113.7	
26	200.0	155.7	118.7	100.6	
29	200.0	139.6	106.4	90.2	
32	200.0	126.5	96.4	81.7	
35	200.0	115.7	88.1	74.7	
38	185.4	106.6	81.2	68.8	
41	171.9	98.8	75.2	63.8	
44	160.2	92.0	70.1	59.4	
47	149.9	86.2	65.6	55.6	
50	140.9	81.0	61.7	52.3	
53	133.0	76.4	58.2	49.3	

B-C3-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4 TEK SCREWS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	200.0	200.0	200.0	200.0	145.5	125.4	
23	200.0	200.0	200.0	175.8	126.6	109.0	
26	200.0	200.0	183.5	155.5	112.0	96.4	
29	200.0	200.0	164.5	139.4	100.4	86.5	
32	200.0	195.7	149.1	126.4	91.0	78.4	
35	200.0	178.9	136.3	115.5	83.2	71.6	
38	200.0	164.8	125.5	106.4	76.6	66.0	
41	200.0	152.7	116.4	98.6	71.0	61.2	
44	193.5	142.3	108.4	91.9	66.2	57.0	
47	181.1	133.2	101.5	86.0	61.9	53.4	
50	170.3	125.2	95.4	80.9	58.2	50.2	
53	160.6	118.1	90.0	76.3	54.9	47.3	

C-C3-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	200.0	200.0	200.0	200.0	200.0	182.2	
23	200.0	200.0	200.0	200.0	180.3	158.4	
26	200.0	200.0	200.0	188.0	159.5	140.2	
29	200.0	200.0	183.1	168.6	143.0	125.7	
32	200.0	190.1	165.9	152.8	129.6	113.9	
35	200.0	173.8	151.7	139.7	118.5	104.1	
38	200.0	160.1	139.7	128.6	109.1	95.9	
41	195.7	148.4	129.5	119.2	101.2	88.9	
44	182.4	138.3	120.7	111.1	94.3	82.8	
47	170.7	129.4	113.0	104.0	88.2	77.5	
50	160.5	121.7	106.2	97.8	83.0	72.9	
53	151.4	114.8	100.2	92.2	78.3	68.8	

C-C3-N=6-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	200.0	200.0	200.0	200.0	200.0	182.2	
23	200.0	200.0	200.0	200.0	183.9	158.4	
26	200.0	200.0	200.0	200.0	162.7	140.2	
29	200.0	200.0	200.0	200.0	145.9	125.7	
32	200.0	200.0	200.0	183.6	132.2	113.9	
35	200.0	200.0	189.7	167.9	120.9	104.1	
38	200.0	200.0	174.8	154.6	111.3	95.9	
41	200.0	185.6	162.0	143.3	103.2	88.9	
44	200.0	172.9	150.9	133.5	96.1	82.8	
47	200.0	161.9	141.3	125.0	90.0	77.5	
50	200.0	152.2	132.8	117.5	84.6	72.9	
53	189.4	143.6	125.3	110.9	79.8	68.8	

G-C3-N=4-STEEL/ALUM.

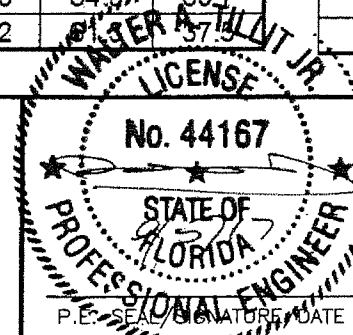
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	96	
20	200.0	200.0	200.0	191.3	162.4	99.4	
23	200.0	200.0	180.7	166.4	141.2	86.4	
26	200.0	183.2	159.9	147.2	124.9	76.4	
29	200.0	164.2	143.3	132.0	112.0	68.5	
32	196.3	148.8	129.9	119.6	101.5	62.1	
35	179.5	136.1	118.8	109.3	92.8	56.8	
38	165.3	125.3	109.4	100.7	85.4	52.3	
41	153.2	116.2	101.4	93.3	79.2	48.5	
44	142.8	108.2	94.5	87.0	73.8	45.2	
47	133.7	101.3	88.4	81.4	69.1	42.3	
50	125.6	95.2	83.1	76.5	64.9	39.7	
53	118.5	89.9	78.4	72.2	61.5	37.1	

I-C3-N=10-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" TEK SCREWS EACH END OF MULLION										
Tributary Width (b)	Mullion Length (L)									
	38.375	50.625	58	63	74.25	96	108	120	144	
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
23	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	
26	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	188.7
29	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	169.1
32	200.0	200.0	200.0	200.0	200.0	200.0	200.0	183.9	153.3	
35	200.0	200.0	200.0	200.0	200.0	200.0	186.9	168.2	140.1	
38	200.0	200.0	200.0	200.0	200.0	193.6	172.1	154.9	129.1	
41	200.0	200.0	200.0	200.0	200.0	179.5	159.5	143.6	119.6	
44	200.0	200.0	200.0	200.0	200.0	167.2	148.6	133.8	111.5	
47	200.0	200.0	200.0	200.0	200.0	156.5	139.1	125.2	104.4	
50	200.0	200.0	200.0	200.0	190.3	147.2	130.8	117.7	98.1	
53	200.0	200.0	200.0	200.0	179.5	138.8	123.4	111.1	92.5	

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 03/24/2023
By *Manuel Jara*
Miami Dade Product Center

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Building Code
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Expiration Date 03/24/2018
By *Manuel Jara*
Miami Dade Product Center
MIAMI DADE COUNTY



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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 38 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP C3

D-C3-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	200.0	200.0	137.4
23	200.0	200.0	200.0	200.0	183.6	119.5
26	200.0	200.0	200.0	191.5	162.4	105.7
29	200.0	200.0	186.4	171.7	145.6	94.8
32	200.0	193.6	169.0	155.6	132.0	85.9
35	200.0	177.0	154.5	142.2	120.7	78.5
38	200.0	163.0	142.3	131.0	111.1	72.3
41	199.3	151.1	131.9	121.4	103.0	67.0
44	185.7	140.8	122.9	113.1	96.0	62.5
47	173.9	131.8	115.0	105.9	89.9	58.5
50	163.4	123.9	108.1	99.6	84.5	55.0
53	154.2	116.9	102.0	93.9	79.7	51.8

D-C3-N=6-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	200.0	200.0	137.4
23	200.0	200.0	200.0	200.0	199.7	119.5
26	200.0	200.0	200.0	200.0	176.7	105.7
29	200.0	200.0	200.0	200.0	158.4	94.8
32	200.0	200.0	200.0	199.4	143.6	85.9
35	200.0	200.0	200.0	182.3	131.2	78.5
38	200.0	200.0	190.1	167.9	120.9	72.3
41	200.0	200.0	176.2	155.6	112.0	67.0
44	200.0	188.1	164.2	145.0	104.4	62.5
47	200.0	176.1	153.7	135.8	97.7	58.5
50	200.0	165.6	144.5	127.6	91.9	55.0
53	200.0	156.2	136.3	120.4	86.7	51.8

E-C3-N=6-STEEL/ALUM.

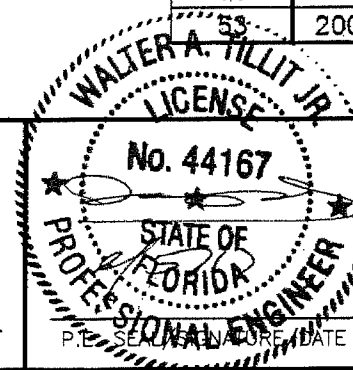
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (6) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	192.6	156.0	108.3
23	200.0	200.0	200.0	200.0	200.0	200.0	167.4	135.6	94.2
26	200.0	200.0	200.0	200.0	200.0	187.5	148.1	120.0	83.3
29	200.0	200.0	200.0	200.0	200.0	168.1	132.8	107.6	74.7
32	200.0	200.0	200.0	200.0	200.0	152.3	120.3	97.5	67.7
35	200.0	200.0	200.0	200.0	188.8	139.3	110.0	89.1	61.9
38	200.0	200.0	200.0	200.0	173.9	128.3	101.3	82.1	57.0
41	200.0	200.0	200.0	190.0	161.2	118.9	93.9	76.1	52.8
44	200.0	200.0	192.3	177.0	150.2	110.8	87.5	70.9	49.2
47	200.0	200.0	180.0	165.7	140.6	103.7	81.9	66.4	46.1
50	200.0	193.8	169.2	155.8	132.2	97.5	77.0	62.4	43.3
53	200.0	182.9	159.6	146.9	124.7	92.0	72.7	58.9	40.9

E-C3-N=8-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	192.6	156.0	108.3
23	200.0	200.0	200.0	200.0	200.0	200.0	167.4	135.6	94.2
26	200.0	200.0	200.0	200.0	200.0	187.5	148.1	120.0	83.3
29	200.0	200.0	200.0	200.0	200.0	168.1	132.8	107.6	74.7
32	200.0	200.0	200.0	200.0	200.0	152.3	120.3	97.5	67.7
35	200.0	200.0	200.0	200.0	200.0	139.3	110.0	89.1	61.9
38	200.0	200.0	200.0	200.0	200.0	128.3	101.3	82.1	57.0
41	200.0	200.0	200.0	200.0	198.7	118.9	93.9	76.1	52.8
44	200.0	200.0	200.0	200.0	185.2	110.8	87.5	70.9	49.2
47	200.0	200.0	200.0	200.0	173.4	103.7	81.9	66.4	46.1
50	200.0	200.0	200.0	196.1	163.0	97.5	77.0	62.4	43.3
53	200.0	200.0	200.0	185.0	153.7	92.0	72.7	58.9	40.9

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as complying with the Florida
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Expiration Date 01.24.2023
By *Manuel Perez*
Miami Dade Product Control

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as complying with the Florida
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Expiration Date 01.24.2018
By *Manuel Perez*
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MIAMI DADE COUNTY



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L.C.

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DATE

17-249

DRAWING No

SHEET 39 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE
CONNECTED W/ CLIP C3

F-C3-N=8-STEEL/ALUM.

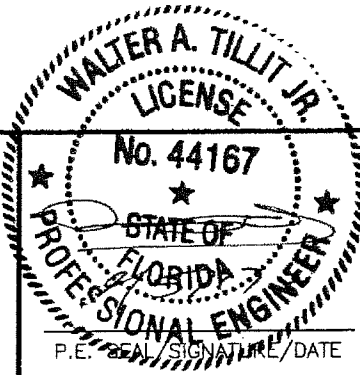
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (8) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	197.8
23	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	172.0
26	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	152.1
29	200.0	200.0	200.0	200.0	200.0	200.0	200.0	180.2	136.4
32	200.0	200.0	200.0	200.0	200.0	200.0	181.5	163.3	123.6
35	200.0	200.0	200.0	200.0	200.0	186.7	165.9	149.3	113.0
38	200.0	200.0	200.0	200.0	200.0	171.9	152.8	137.5	104.1
41	200.0	200.0	200.0	200.0	200.0	159.4	141.6	127.5	96.5
44	200.0	200.0	200.0	200.0	192.0	148.5	132.0	118.8	89.9
47	200.0	200.0	200.0	200.0	179.7	139.0	123.6	111.2	84.2
50	200.0	200.0	200.0	199.1	168.9	130.7	116.2	104.5	79.1
53	200.0	200.0	200.0	187.8	159.4	123.3	109.6	98.6	74.6

F-C3-N=10-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (10) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	197.8
23	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	172.0
26	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	152.1
29	200.0	200.0	200.0	200.0	200.0	200.0	200.0	196.4	136.4
32	200.0	200.0	200.0	200.0	200.0	200.0	200.0	178.0	123.6
35	200.0	200.0	200.0	200.0	200.0	200.0	200.0	162.7	113.0
38	200.0	200.0	200.0	200.0	200.0	200.0	185.0	149.9	104.1
41	200.0	200.0	200.0	200.0	200.0	194.0	171.5	138.9	96.5
44	200.0	200.0	200.0	200.0	200.0	180.8	159.8	129.4	89.9
47	200.0	200.0	200.0	200.0	200.0	169.3	149.6	121.2	84.2
50	200.0	200.0	200.0	200.0	200.0	159.1	140.6	113.9	79.1
53	200.0	200.0	200.0	200.0	194.1	150.1	132.7	107.5	74.6

PRODUCT REVIEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 05.24.2023
By Manuel Perez
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02.24.2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530 Fax: (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS

290 WEST 78 ROAD
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PHONE: (305) 558-8103
FAX: (305) 558-6665
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 40 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C4

A-C4-N=2-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4 ULTRACONS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	91.6	69.4	60.6	55.8	
23	79.6	60.4	52.7	48.5	
26	70.4	53.4	46.6	42.9	
29	63.1	47.9	41.8	38.5	
32	57.2	43.4	37.9	34.9	
35	52.3	39.7	34.6	31.9	
38	48.2	36.5	31.9	29.4	
41	44.7	33.9	29.6	27.2	
44	41.6	31.5	27.5	25.4	
47	39.0	29.5	25.8	23.7	
50	36.6	27.8	24.2	22.3	
53	34.6	26.2	22.9	21.0	
56	32.7	24.8	21.6	19.9	
59	31.0	23.5	20.5	18.9	
62	29.5	22.4	19.5	18.0	
65	28.2	21.4	18.6	17.2	
68	26.9	20.4	17.8	16.4	
71	25.8	19.6	17.1	15.7	
74	24.7	18.8	16.4	15.1	
77	23.8	18.0	15.7	14.5	
80	22.9	17.4	15.1	13.9	
83	22.1	16.7	14.6	13.4	
86	21.3	16.1	14.1	13.0	
89	20.6	15.6	13.6	12.5	
92	19.9	15.1	13.2	12.1	
95	19.3	14.6	12.8	11.7	
98	18.7	14.2	12.4	11.4	
101	18.1	13.7	12.0	11.0	
104	17.6	13.3	11.6	10.7	

B-C4-N=2-WOOD

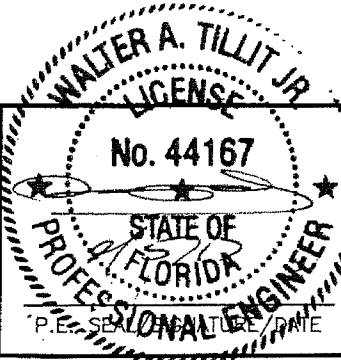
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4 ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	91.6	69.4	60.6	55.8	47.3	43.9	
23	79.6	60.4	52.7	48.5	41.1	38.2	
26	70.4	53.4	46.6	42.9	36.4	33.8	
29	63.1	47.9	41.8	38.5	32.6	30.3	
32	57.2	43.4	37.9	34.9	29.6	27.5	
35	52.3	39.7	34.6	31.9	27.0	25.1	
38	48.2	36.5	31.9	29.4	24.9	23.1	
41	44.7	33.9	29.6	27.2	23.1	21.4	
44	41.6	31.5	27.5	25.4	21.5	20.0	
47	39.0	29.5	25.8	23.7	20.1	18.7	
50	36.6	27.8	24.2	22.3	18.9	17.6	
53	34.6	26.2	22.9	21.0	17.9	16.6	
56	32.7	24.8	21.6	19.9	16.9	15.7	
59	31.0	23.5	20.5	18.9	16.0	14.9	
62	29.5	22.4	19.5	18.0	15.3	14.2	
65	28.2	21.4	18.6	17.2	14.6	13.5	
68	26.9	20.4	17.8	16.4	13.9	12.9	
71	25.8	19.6	17.1	15.7	13.3	12.4	
74	24.7	18.8	16.4	15.1	12.8	11.9	
77	23.8	18.0	15.7	14.5	12.3	11.4	
80	22.9	17.4	15.1	13.9	11.8	11.0	
83	22.1	16.7	14.6	13.4	11.4	10.6	
86	21.3	16.1	14.1	13.0	11.0	10.2	
89	20.6	15.6	13.6	12.5	10.6	9.9	
92	19.9	15.1	13.2	12.1	10.3	9.5	
95	19.3	14.6	12.8	11.7	10.0	9.2	
98	18.7	14.2	12.4	11.4	9.7	9.0	
101	18.1	13.7	12.0	11.0	9.4	8.7	
104	17.6	13.3	11.6	10.7	9.1	8.4	

C-C4-N=2-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	91.6	69.4	60.6	55.8	47.3	43.9	
23	79.6	60.4	52.7	48.5	41.1	38.2	
26	70.4	53.4	46.6	42.9	36.4	33.8	
29	63.1	47.9	41.8	38.5	32.6	30.3	
32	57.2	43.4	37.9	34.9	29.6	27.5	
35	52.3	39.7	34.6	31.9	27.0	25.1	
38	48.2	36.5	31.9	29.4	24.9	23.1	
41	44.7	33.9	29.6	27.2	23.1	21.4	
44	41.6	31.5	27.5	25.4	21.5	20.0	
47	39.0	29.5	25.8	23.7	20.1	18.7	
50	36.6	27.8	24.2	22.3	18.9	17.6	
53	34.6	26.2	22.9	21.0	17.9	16.6	
56	32.7	24.8	21.6	19.9	16.9	15.7	
59	31.0	23.5	20.5	18.9	16.0	14.9	
62	29.5	22.4	19.5	18.0	15.3	14.2	
65	28.2	21.4	18.6	17.2	14.6	13.5	
68	26.9	20.4	17.8	16.4	13.9	12.9	
71	25.8	19.6	17.1	15.7	13.3	12.4	
74	24.7	18.8	16.4	15.1	12.8	11.9	
77	23.8	18.0	15.7	14.5	12.3	11.4	
80	22.9	17.4	15.1	13.9	11.8	11.0	
83	22.1	16.7	14.6	13.4	11.4	10.6	
86	21.3	16.1	14.1	13.0	11.0	10.2	
89	20.6	15.6	13.6	12.5	10.6	9.9	
92	19.9	15.1	13.2	12.1	10.3	9.5	
95	19.3	14.6	12.8	11.7	10.0	9.2	
98	18.7	14.2	12.4	11.4	9.7	9.0	
101	18.1	13.7	12.0	11.0	9.4	8.7	
104	17.6	13.3	11.6	10.7	9.1	8.4	

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1168.01
Expiration Date 05-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 01-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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HALEAH, FL 33014
PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 41 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO WOOD SUBSTRATE CONNECTED W/ CLIP (C4)

C-C4-N=3-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" x 3/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	137.3	104.1	90.9	83.7	71.0	65.9
23	119.4	90.5	79.0	72.7	61.7	57.3
26	105.6	80.1	69.9	64.4	54.6	50.7
29	94.7	71.8	62.7	57.7	49.0	45.4
32	85.8	65.1	56.8	52.3	44.4	41.2
35	78.5	59.5	51.9	47.8	40.6	37.6
38	72.3	54.8	47.8	44.0	37.4	34.7
41	67.0	50.8	44.3	40.8	34.6	32.1
44	62.4	47.3	41.3	38.0	32.3	29.9
47	58.4	44.3	38.7	35.6	30.2	28.0
50	54.9	41.6	36.3	33.5	28.4	26.4
53	51.8	39.3	34.3	31.6	26.8	24.9
56	49.0	37.2	32.5	29.9	25.4	23.5
59	46.6	35.3	30.8	28.4	24.1	22.3
62	44.3	33.6	29.3	27.0	22.9	21.3
65	42.3	32.0	28.0	25.7	21.8	20.3
68	40.4	30.6	26.7	24.6	20.9	19.4
71	38.7	29.3	25.6	23.6	20.0	18.6
74	37.1	28.1	24.6	22.6	19.2	17.8
77	35.7	27.0	23.6	21.7	18.4	17.1
80	34.3	26.0	22.7	20.9	17.7	16.5
83	33.1	25.1	21.9	20.2	17.1	15.9
86	31.9	24.2	21.1	19.5	16.5	15.3
89	30.9	23.4	20.4	18.8	16.0	14.8
92	29.9	22.6	19.8	18.2	15.4	14.3
95	28.9	21.9	19.1	17.6	14.9	13.9
98	28.0	21.2	18.5	17.1	14.5	13.4
101	27.2	20.6	18.0	16.6	14.1	13.0
104	26.4	20.0	17.5	16.1	13.7	12.7

D-C4-N=2-WOOD

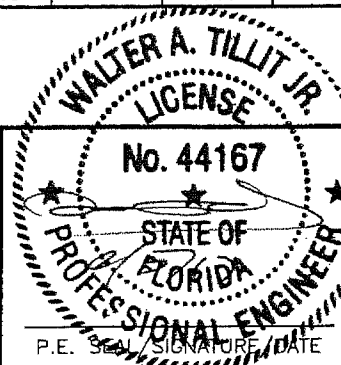
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	91.6	69.4	60.6	55.8	47.3	36.6
23	79.6	60.4	52.7	48.5	41.1	31.8
26	70.4	53.4	46.6	42.9	36.4	28.2
29	63.1	47.9	41.8	38.5	32.6	25.2
32	57.2	43.4	37.9	34.9	29.6	22.9
35	52.3	39.7	34.6	31.9	27.0	20.9
38	48.2	36.5	31.9	29.4	24.9	19.3
41	44.7	33.9	29.6	27.2	23.1	17.9
44	41.6	31.5	27.5	25.4	21.5	16.6
47	39.0	29.5	25.8	23.7	20.1	15.6
50	36.6	27.8	24.2	22.3	18.9	14.6
53	34.6	26.2	22.9	21.0	17.9	13.8
56	32.7	24.8	21.6	19.9	16.9	13.1
59	31.0	23.5	20.5	18.9	16.0	12.4
62	29.5	22.4	19.5	18.0	15.3	11.8
65	28.2	21.4	18.6	17.2	14.6	11.3
68	26.9	20.4	17.8	16.4	13.9	10.8
71	25.8	19.6	17.1	15.7	13.3	10.3
74	24.7	18.8	16.4	15.1	12.8	9.9
77	23.8	18.0	15.7	14.5	12.3	9.5
80	22.9	17.4	15.1	13.9	11.8	9.2
83	22.1	16.7	14.6	13.4	11.4	8.8
86	21.3	16.1	14.1	13.0	11.0	8.5
89	20.6	15.6	13.6	12.5	10.6	8.2
92	19.9	15.1	13.2	12.1	10.3	8.0
95	19.3	14.6	12.8	11.7	10.0	7.7
98	18.7	14.2	12.4	11.4	9.7	7.5
101	18.1	13.7	12.0	11.0	9.4	7.2
104	17.6	13.3	11.6	10.7	9.1	7.0

D-C4-N=3-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	137.3	104.1	90.9	83.7	71.0	54.9
23	119.4	90.5	79.0	72.7	61.7	47.7
26	105.6	80.1	69.9	64.4	54.6	42.2
29	94.7	71.8	62.7	57.7	49.0	37.9
32	85.8	65.1	56.8	52.3	44.4	34.3
35	78.5	59.5	51.9	47.8	40.6	31.4
38	72.3	54.8	47.8	44.0	37.4	28.9
41	67.0	50.8	44.3	40.8	34.6	26.8
44	62.4	47.3	41.3	38.0	32.3	25.0
47	58.4	44.3	38.7	35.6	30.2	23.4
50	54.9	41.6	36.3	33.5	28.4	22.0
53	51.8	39.3	34.3	31.6	26.8	20.7
56	49.0	37.2	32.5	29.9	25.4	19.6
59	46.6	35.3	30.8	28.4	24.1	18.6
62	44.3	33.6	29.3	27.0	22.9	17.7
65	42.3	32.0	28.0	25.7	21.8	16.9
68	40.4	30.6	26.7	24.6	20.9	16.1
71	38.7	29.3	25.6	23.6	20.0	15.5
74	37.1	28.1	24.6	22.6	19.2	14.8
77	35.7	27.0	23.6	21.7	18.4	14.3
80	34.3	26.0	22.7	20.9	17.7	13.7
83	33.1	25.1	21.9	20.2	17.1	13.2
86	31.9	24.2	21.1	19.5	16.5	12.8
89	30.9	23.4	20.4	18.8	16.0	12.3
92	29.9	22.6	19.8	18.2	15.4	11.9
95	28.9	21.9	19.1	17.6	14.9	11.6
98	28.0	21.2	18.5	17.1	14.5	11.2
101	27.2	20.6	18.0	16.6	14.1	10.9
104	26.4	20.0	17.5	16.1	13.7	10.6

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By *Walter A. Tillit Jr.*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct 24, 2018
By *Walter A. Tillit Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305) 871-1530 Fax : (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 42 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO WOOD SUBSTRATE

CONNECTED W/ CLIP (C4)

E-C4-N=3-WOOD

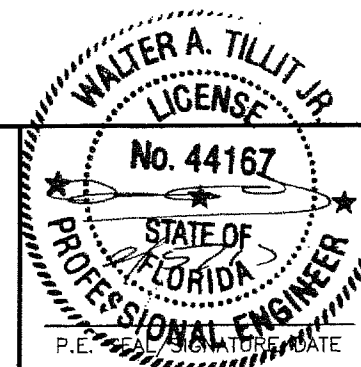
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	137.3	104.1	90.9	83.7	71.0	54.9	48.8	43.9	36.6
23	119.4	90.5	79.0	72.7	61.7	47.7	42.4	38.2	31.8
26	105.6	80.1	69.9	64.4	54.6	42.2	37.5	33.8	28.2
29	94.7	71.8	62.7	57.7	49.0	37.9	33.7	30.3	25.2
32	85.8	65.1	56.8	52.3	44.4	34.3	30.5	27.5	22.9
35	78.5	59.5	51.9	47.8	40.6	31.4	27.9	25.1	20.9
38	72.3	54.8	47.8	44.0	37.4	28.9	25.7	23.1	19.3
41	67.0	50.8	44.3	40.8	34.6	26.8	23.8	21.4	17.9
44	62.4	47.3	41.3	38.0	32.3	25.0	22.2	20.0	16.6
47	58.4	44.3	38.7	35.6	30.2	23.4	20.8	18.7	15.6
50	54.9	41.6	36.3	33.5	28.4	22.0	19.5	17.6	14.6
53	51.8	39.3	34.3	31.6	26.8	20.7	18.4	16.6	13.8
56	49.0	37.2	32.5	29.9	25.4	19.6	17.4	15.7	13.1
59	46.6	35.3	30.8	28.4	24.1	18.6	16.5	14.9	12.4
62	44.3	33.6	29.3	27.0	22.9	17.7	15.7	14.2	11.8
65	42.3	32.0	28.0	25.7	21.8	16.9	15.0	13.5	11.3
68	40.4	30.6	26.7	24.6	20.9	16.1	14.4	12.9	10.8
71	38.7	29.3	25.6	23.6	20.0	15.5	13.7	12.4	10.3
74	37.1	28.1	24.6	22.6	19.2	14.8	13.2	11.9	9.9
77	35.7	27.0	23.6	21.7	18.4	14.3	12.7	11.4	9.5
80	34.3	26.0	22.7	20.9	17.7	13.7	12.2	11.0	9.2
83	33.1	25.1	21.9	20.2	17.1	13.2	11.8	10.6	8.8
86	31.9	24.2	21.1	19.5	16.5	12.8	11.3	10.2	8.5
89	30.9	23.4	20.4	18.8	16.0	12.3	11.0	9.9	8.2
92	29.9	22.6	19.8	18.2	15.4	11.9	10.6	9.5	8.0
95	28.9	21.9	19.1	17.6	14.9	11.6	10.3	9.2	7.7
98	28.0	21.2	18.5	17.1	14.5	11.2	10.0	9.0	7.5
101	27.2	20.6	18.0	16.6	14.1	10.9	9.7	8.7	7.2
104	26.4	20.0	17.5	16.1	13.7	10.6	9.4	8.4	7.0

E-C4-N=4-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	183.1	138.8	121.2	111.5	94.6	73.2	65.1	58.6	48.8
23	159.2	120.7	105.4	97.0	82.3	63.7	56.6	50.9	42.4
26	140.9	106.8	93.2	85.8	72.8	56.3	50.1	45.0	37.5
29	126.3	95.7	83.6	76.9	65.3	50.5	44.9	40.4	33.7
32	114.4	86.8	75.7	69.7	59.2	45.8	40.7	36.6	30.5
35	104.6	79.3	69.2	63.7	54.1	41.8	37.2	33.5	27.9
38	96.4	73.1	63.8	58.7	49.8	38.5	34.2	30.8	25.7
41	89.3	67.7	59.1	54.4	46.2	35.7	31.7	28.6	23.8
44	83.2	63.1	55.1	50.7	43.0	33.3	29.6	26.6	22.2
47	77.9	59.1	51.6	47.5	40.3	31.1	27.7	24.9	20.8
50	73.2	55.5	48.5	44.6	37.9	29.3	26.0	23.4	19.5
53	69.1	52.4	45.7	42.1	35.7	27.6	24.6	22.1	18.4
56	65.4	49.6	43.3	39.8	33.8	26.1	23.2	20.9	17.4
59	62.1	47.1	41.1	37.8	32.1	24.8	22.1	19.9	16.5
62	59.1	44.8	39.1	36.0	30.5	23.6	21.0	18.9	15.7
65	56.3	42.7	37.3	34.3	29.1	22.5	20.0	18.0	15.0
68	53.9	40.8	35.6	32.8	27.8	21.5	19.1	17.2	14.4
71	51.6	39.1	34.1	31.4	26.7	20.6	18.3	16.5	13.7
74	49.5	37.5	32.7	30.1	25.6	19.8	17.6	15.8	13.2
77	47.6	36.1	31.5	29.0	24.6	19.0	16.9	15.2	12.7
80	45.8	34.7	30.3	27.9	23.7	18.3	16.3	14.6	12.2
83	44.1	33.4	29.2	26.9	22.8	17.6	15.7	14.1	11.8
86	42.6	32.3	28.2	25.9	22.0	17.0	15.1	13.6	11.3
89	41.2	31.2	27.2	25.1	21.3	16.4	14.6	13.2	11.0
92	39.8	30.2	26.3	24.2	20.6	15.9	14.1	12.7	10.6
95	38.6	29.2	25.5	23.5	19.9	15.4	13.7	12.3	10.3
98	37.4	28.3	24.7	22.8	19.3	14.9	13.3	12.0	10.0
101	36.3	27.5	24.0	22.1	18.7	14.5	12.9	11.6	9.7
104	35.2	26.7	23.3	21.5	18.2	14.1	12.5	11.3	9.4

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct. 24, 2023
By *Manuel Jara*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Jara*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

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REV. NO.	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY: L.C.
08/25/17 DATE
17-249 DRAWING No
SHEET 43 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C4

F-C4-N=4-WOOD

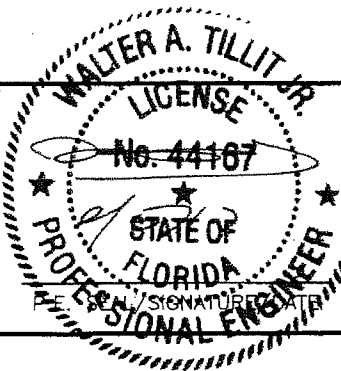
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	183.1	138.8	121.2	111.5	94.6	73.2	65.1	58.6	48.8
23	159.2	120.7	105.4	97.0	82.3	63.7	56.6	50.9	42.4
26	140.9	106.8	93.2	85.8	72.8	56.3	50.1	45.0	37.5
29	126.3	95.7	83.6	76.9	65.3	50.5	44.9	40.4	33.7
32	114.4	86.8	75.7	69.7	59.2	45.8	40.7	36.6	30.5
35	104.6	79.3	69.2	63.7	54.1	41.8	37.2	33.5	27.9
38	96.4	73.1	63.8	58.7	49.8	38.5	34.2	30.8	25.7
41	89.3	67.7	59.1	54.4	46.2	35.7	31.7	28.6	23.8
44	83.2	63.1	55.1	50.7	43.0	33.3	29.6	26.6	22.2
47	77.9	59.1	51.6	47.5	40.3	31.1	27.7	24.9	20.8
50	73.2	55.5	48.5	44.6	37.9	29.3	26.0	23.4	19.5
53	69.1	52.4	45.7	42.1	35.7	27.6	24.6	22.1	18.4
56	65.4	49.6	43.3	39.8	33.8	26.1	23.2	20.9	17.4
59	62.1	47.1	41.1	37.8	32.1	24.8	22.1	19.9	16.5
62	59.1	44.8	39.1	36.0	30.5	23.6	21.0	18.9	15.7
65	56.3	42.7	37.3	34.3	29.1	22.5	20.0	18.0	15.0
68	53.9	40.8	35.6	32.8	27.8	21.5	19.1	17.2	14.4
71	51.6	39.1	34.1	31.4	26.7	20.6	18.3	16.5	13.7
74	49.5	37.5	32.7	30.1	25.6	19.8	17.6	15.8	13.2
77	47.6	36.1	31.5	29.0	24.6	19.0	16.9	15.2	12.7
80	45.8	34.7	30.3	27.9	23.7	18.3	16.3	14.6	12.2
83	44.1	33.4	29.2	26.9	22.8	17.6	15.7	14.1	11.8
86	42.6	32.3	28.2	25.9	22.0	17.0	15.1	13.6	11.3
89	41.2	31.2	27.2	25.1	21.3	16.4	14.6	13.2	11.0
92	39.8	30.2	26.3	24.2	20.6	15.9	14.1	12.7	10.6
95	38.6	29.2	25.5	23.5	19.9	15.4	13.7	12.3	10.3
98	37.4	28.3	24.7	22.8	19.3	14.9	13.3	12.0	10.0
101	36.3	27.5	24.0	22.1	18.7	14.5	12.9	11.6	9.7
104	35.2	26.7	23.3	21.5	18.2	14.1	12.5	11.3	9.4

F-C4-N=5-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (5) 1/4" ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	173.5	151.4	139.4	118.3	91.5	81.3	73.2	61.0
23	199.0	150.9	131.7	121.2	102.9	79.6	70.7	63.7	53.0
26	176.1	133.5	116.5	107.3	91.0	70.4	62.6	56.3	46.9
29	157.9	119.7	104.4	96.2	81.6	63.1	56.1	50.5	42.1
32	143.1	108.4	94.7	87.1	73.9	57.2	50.8	45.8	38.1
35	130.8	99.1	86.5	79.7	67.6	52.3	46.5	41.8	34.9
38	120.5	91.3	79.7	73.4	62.3	48.2	42.8	38.5	32.1
41	111.7	84.6	73.9	68.0	57.7	44.6	39.7	35.7	29.8
44	104.0	78.9	68.8	63.4	53.8	41.6	37.0	33.3	27.7
47	97.4	73.8	64.4	59.3	50.3	38.9	34.6	31.1	26.0
50	91.6	69.4	60.6	55.8	47.3	36.6	32.5	29.3	24.4
53	86.4	65.5	57.2	52.6	44.6	34.5	30.7	27.6	23.0
56	81.7	62.0	54.1	49.8	42.3	32.7	29.0	26.1	21.8
59	77.6	58.8	51.3	47.3	40.1	31.0	27.6	24.8	20.7
62	73.8	56.0	48.9	45.0	38.2	29.5	26.2	23.6	19.7
65	70.4	53.4	46.6	42.9	36.4	28.2	25.0	22.5	18.8
68	67.3	51.0	44.5	41.0	34.8	26.9	23.9	21.5	17.9
71	64.5	48.9	42.7	39.3	33.3	25.8	22.9	20.6	17.2
74	61.9	46.9	40.9	37.7	32.0	24.7	22.0	19.8	16.5
77	59.5	45.1	39.3	36.2	30.7	23.8	21.1	19.0	15.8
80	57.2	43.4	37.9	34.9	29.6	22.9	20.3	18.3	15.3
83	55.2	41.8	36.5	33.6	28.5	22.0	19.6	17.6	14.7
86	53.2	40.4	35.2	32.4	27.5	21.3	18.9	17.0	14.2
89	51.4	39.0	34.0	31.3	26.6	20.6	18.3	16.4	13.7
92	49.8	37.7	32.9	30.3	25.7	19.9	17.7	15.9	13.3
95	48.2	36.5	31.9	29.4	24.9	19.3	17.1	15.4	12.8
98	46.7	35.4	30.9	28.5	24.1	18.7	16.6	14.9	12.4
101	45.3	34.4	30.0	27.6	23.4	18.1	16.1	14.5	12.1
104	44.0	33.4	29.1	26.8	22.8	17.6	15.6	14.1	11.7

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct. 24, 2023
By *Manuel Perez*
Miami Trade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Perez*
Miami Trade Product Control
MIAMI DADE COUNTY



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EB-0006719
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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 44 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO WOOD SUBSTRATE
CONNECTED W/ CLIP C4

G-C4-N=2-WOOD

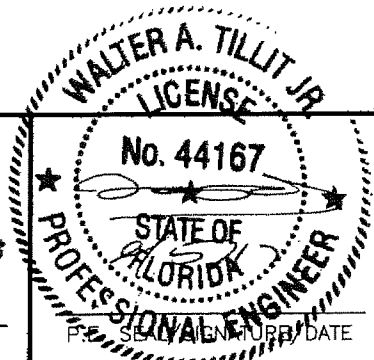
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" ULTRACONS EACH END OF						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	91.6	69.4	60.6	55.8	47.3	36.6
23	79.6	60.4	52.7	48.5	41.1	31.8
26	70.4	53.4	46.6	42.9	36.4	28.2
29	63.1	47.9	41.8	38.5	32.6	25.2
32	57.2	43.4	37.9	34.9	29.6	22.9
35	52.3	39.7	34.6	31.9	27.0	20.9
38	48.2	36.5	31.9	29.4	24.9	19.3
41	44.7	33.9	29.6	27.2	23.1	17.9
44	41.6	31.5	27.5	25.4	21.5	16.6
47	39.0	29.5	25.8	23.7	20.1	15.6
50	36.6	27.8	24.2	22.3	18.9	14.6
53	34.6	26.2	22.9	21.0	17.9	13.8
56	32.7	24.8	21.6	19.9	16.9	13.1
59	31.0	23.5	20.5	18.9	16.0	12.4
62	29.5	22.4	19.5	18.0	15.3	11.8
65	28.2	21.4	18.6	17.2	14.6	11.3
68	26.9	20.4	17.8	16.4	13.9	10.8
71	25.8	19.6	17.1	15.7	13.3	10.3
74	24.7	18.8	16.4	15.1	12.8	9.9
77	23.8	18.0	15.7	14.5	12.3	9.5
80	22.9	17.4	15.1	13.9	11.8	9.2
83	22.1	16.7	14.6	13.4	11.4	8.8
86	21.3	16.1	14.1	13.0	11.0	8.5
89	20.6	15.6	13.6	12.5	10.6	8.2
92	19.9	15.1	13.2	12.1	10.3	8.0
95	19.3	14.6	12.8	11.7	10.0	7.7
98	18.7	14.2	12.4	11.4	9.7	7.5
101	18.1	13.7	12.0	11.0	9.4	7.2
104	17.6	13.3	11.6	10.7	9.1	7.0

I-C4-N=5-WOOD

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (5) 1/4" ELCO ULTRACONS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	173.5	151.4	139.4	118.3	91.5	81.3	73.2	61.0
23	199.0	150.9	131.7	121.2	102.9	79.6	70.7	63.7	53.0
26	176.1	133.5	116.5	107.3	91.0	70.4	62.6	56.3	46.9
29	157.9	119.7	104.4	96.2	81.6	63.1	56.1	50.5	42.1
32	143.1	108.4	94.7	87.1	73.9	57.2	50.8	45.8	38.1
35	130.8	99.1	86.5	79.7	67.6	52.3	46.5	41.8	34.9
38	120.5	91.3	79.7	73.4	62.3	48.2	42.8	38.5	32.1
41	111.7	84.6	73.9	68.0	57.7	44.6	39.7	35.7	29.8
44	104.0	78.9	68.8	63.4	53.8	41.6	37.0	33.3	27.7
47	97.4	73.8	64.4	59.3	50.3	38.9	34.6	31.1	26.0
50	91.6	69.4	60.6	55.8	47.3	36.6	32.5	29.3	24.4
53	86.4	65.5	57.2	52.6	44.6	34.5	30.7	27.6	23.0
56	81.7	62.0	54.1	49.8	42.3	32.7	29.0	26.1	21.8
59	77.6	58.8	51.3	47.3	40.1	31.0	27.6	24.8	20.7
62	73.8	56.0	48.9	45.0	38.2	29.5	26.2	23.6	19.7
65	70.4	53.4	46.6	42.9	36.4	28.2	25.0	22.5	18.8
68	67.3	51.0	44.5	41.0	34.8	26.9	23.9	21.5	17.9
71	64.5	48.9	42.7	39.3	33.3	25.8	22.9	20.6	17.2
74	61.9	46.9	40.9	37.7	32.0	24.7	22.0	19.8	16.5
77	59.5	45.1	39.3	36.2	30.7	23.8	21.1	19.0	15.8
80	57.2	43.4	37.9	34.9	29.6	22.9	20.3	18.3	15.3
83	55.2	41.8	36.5	33.6	28.5	22.0	19.6	17.6	14.7
86	53.2	40.4	35.2	32.4	27.5	21.3	18.9	17.0	14.2
89	51.4	39.0	34.0	31.3	26.6	20.6	18.3	16.4	13.7
92	49.8	37.7	32.9	30.3	25.7	19.9	17.7	15.9	13.3
95	48.2	36.5	31.9	29.4	24.9	19.3	17.1	15.4	12.8
98	46.7	35.4	30.9	28.5	24.1	18.7	16.6	14.9	12.4
101	45.3	34.4	30.0	27.6	23.4	18.1	16.1	14.5	12.1
104	44.0	33.4	29.1	26.8	22.8	17.6	15.6	14.1	11.7

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 18-1108.01
Expiration Date 02/24/2023
By *Manuel Jara*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 17-1102.14
Expiration Date 02/24/2018
By *Manuel Jara*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 • Fax : (305)871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS				DRAWN BY: L.C.	
 280 WEST 76 ROAD HIALEAH, FL 33014 PHONE: (305) 558-8103 FAX: (305) 558-6665 www.generalimpact.com				08/25/17 DATE	
				17-249 DRAWING No	
				SHEET 45 OF 60	

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO BLOCK SUBSTRATE

CONNECTED W/ CLIP C4

A-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8"
MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø
ULTRACONS IN CONCRETE BLOCK EACH END OF
MULLION

Tributary Width (b)	Mullion Length (L)			
	38.375	50.625	58	63
20	75.0	56.9	49.7	45.7
23	65.3	49.5	43.2	39.8
26	57.7	43.8	38.2	35.2
29	51.8	39.2	34.2	31.5
32	46.9	35.6	31.0	28.6
35	42.9	32.5	28.4	26.1
38	39.5	29.9	26.1	24.1
41	36.6	27.8	24.2	22.3
44	34.1	25.9	22.6	20.8
47	31.9	24.2	21.1	19.5
50	30.0	22.8	19.9	18.3
53	28.3	21.5	18.7	17.3
56	26.8	20.3	17.7	16.3
59	25.4	19.3	16.8	15.5
62	24.2	18.4	16.0	14.7
65	23.1	17.5	15.3	14.1
68	22.1	16.7	14.6	13.4
71	21.1	16.0	14.0	12.9
74	20.3	15.4	13.4	12.4
77	19.5	14.8	12.9	11.9
80	18.8	14.2	12.4	11.4
83	18.1	13.7	12.0	11.0
86	17.5	13.2	11.5	10.6
89	16.9	12.8	11.2	10.3
92	16.3	12.4	10.8	9.9
95	15.8	12.0	10.5	9.6
98	15.3	11.6	10.1	9.3
101	14.9	11.3	9.8	9.1
104	14.4	10.9	9.5	8.8

B-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS
CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF
MULLION

Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	112.6	85.3	74.5	68.6	58.2	54.0
23	97.9	74.2	64.8	59.6	50.6	47.0
26	86.6	65.6	57.3	52.7	44.8	41.5
29	77.6	58.9	51.4	47.3	40.1	37.2
32	70.4	53.3	46.6	42.9	36.4	33.8
35	64.3	48.8	42.6	39.2	33.2	30.9
38	59.2	44.9	39.2	36.1	30.6	28.4
41	54.9	41.6	36.3	33.4	28.4	26.3
44	51.2	38.8	33.9	31.2	26.4	24.5
47	47.9	36.3	31.7	29.2	24.8	23.0
50	45.0	34.1	29.8	27.4	23.3	21.6
53	42.5	32.2	28.1	25.9	22.0	20.4
56	40.2	30.5	26.6	24.5	20.8	19.3
59	38.2	28.9	25.2	23.2	19.7	18.3
62	36.3	27.5	24.0	22.1	18.8	17.4
65	34.6	26.3	22.9	21.1	17.9	16.6
68	33.1	25.1	21.9	20.2	17.1	15.9
71	31.7	24.0	21.0	19.3	16.4	15.2
74	30.4	23.1	20.1	18.5	15.7	14.6
77	29.2	22.2	19.3	17.8	15.1	14.0
80	28.1	21.3	18.6	17.1	14.5	13.5
83	27.1	20.6	17.9	16.5	14.0	13.0
86	26.2	19.8	17.3	15.9	13.5	12.6
89	25.3	19.2	16.7	15.4	13.1	12.1
92	24.5	18.6	16.2	14.9	12.6	11.7
95	23.7	18.0	15.7	14.4	12.2	11.4
98	23.0	17.4	15.2	14.0	11.9	11.0
101	22.3	16.9	14.7	13.6	11.5	10.7
104	21.6	16.4	14.3	13.2	11.2	10.4

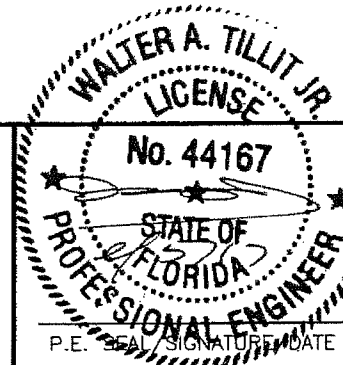
C-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH
CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END
OF MULLION

Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	112.6	85.3	74.5	68.6	58.2	54.0
23	97.9	74.2	64.8	59.6	50.6	47.0
26	86.6	65.6	57.3	52.7	44.8	41.5
29	77.6	58.9	51.4	47.3	40.1	37.2
32	70.4	53.3	46.6	42.9	36.4	33.8
35	64.3	48.8	42.6	39.2	33.2	30.9
38	59.2	44.9	39.2	36.1	30.6	28.4
41	54.9	41.6	36.3	33.4	28.4	26.3
44	51.2	38.8	33.9	31.2	26.4	24.5
47	47.9	36.3	31.7	29.2	24.8	23.0
50	45.0	34.1	29.8	27.4	23.3	21.6
53	42.5	32.2	28.1	25.9	22.0	20.4
56	40.2	30.5	26.6	24.5	20.8	19.3
59	38.2	28.9	25.2	23.2	19.7	18.3
62	36.3	27.5	24.0	22.1	18.8	17.4
65	34.6	26.3	22.9	21.1	17.9	16.6
68	33.1	25.1	21.9	20.2	17.1	15.9
71	31.7	24.0	21.0	19.3	16.4	15.2
74	30.4	23.1	20.1	18.5	15.7	14.6
77	29.2	22.2	19.3	17.8	15.1	14.0
80	28.1	21.3	18.6	17.1	14.5	13.5
83	27.1	20.6	17.9	16.5	14.0	13.0
86	26.2	19.8	17.3	15.9	13.5	12.6
89	25.3	19.2	16.7	15.4	13.1	12.1
92	24.5	18.6	16.2	14.9	12.6	11.7
95	23.7	18.0	15.7	14.4	12.2	11.4
98	23.0	17.4	15.2	14.0	11.9	11.0
101	22.3	16.9	14.7	13.6	11.5	10.7
104	21.6	16.4	14.3	13.2	11.2	10.4

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02.24.2018
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02.24.2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 46 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO BLOCK SUBSTRATE CONNECTED W/ CLIP (C4)

D-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	112.6	85.3	74.5	68.6	58.2	45.0
23	97.9	74.2	64.8	59.6	50.6	39.1
26	86.6	65.6	57.3	52.7	44.8	34.6
29	77.6	58.9	51.4	47.3	40.1	31.0
32	70.4	53.3	46.6	42.9	36.4	28.1
35	64.3	48.8	42.6	39.2	33.2	25.7
38	59.2	44.9	39.2	36.1	30.6	23.7
41	54.9	41.6	36.3	33.4	28.4	22.0
44	51.2	38.8	33.9	31.2	26.4	20.5
47	47.9	36.3	31.7	29.2	24.8	19.1
50	45.0	34.1	29.8	27.4	23.3	18.0
53	42.5	32.2	28.1	25.9	22.0	17.0
56	40.2	30.5	26.6	24.5	20.8	16.1
59	38.2	28.9	25.2	23.2	19.7	15.3
62	36.3	27.5	24.0	22.1	18.8	14.5
65	34.6	26.3	22.9	21.1	17.9	13.8
68	33.1	25.1	21.9	20.2	17.1	13.2
71	31.7	24.0	21.0	19.3	16.4	12.7
74	30.4	23.1	20.1	18.5	15.7	12.2
77	29.2	22.2	19.3	17.8	15.1	11.7
80	28.1	21.3	18.6	17.1	14.5	11.3
83	27.1	20.6	17.9	16.5	14.0	10.8
86	26.2	19.8	17.3	15.9	13.5	10.5
89	25.3	19.2	16.7	15.4	13.1	10.1
92	24.5	18.6	16.2	14.9	12.6	9.8
95	23.7	18.0	15.7	14.4	12.2	9.5
98	23.0	17.4	15.2	14.0	11.9	9.2
101	22.3	16.9	14.7	13.6	11.5	8.9
104	21.6	16.4	14.3	13.2	11.2	8.7

F-C4-N=4-BLOCK

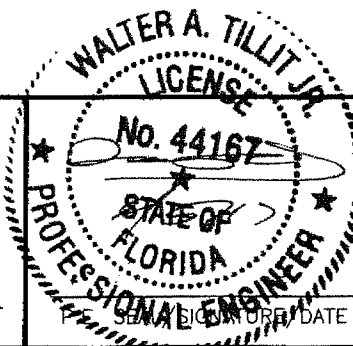
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	150.1	113.8	99.3	91.4	77.6	60.0	53.3	48.0	40.0
23	130.5	98.9	86.4	79.5	67.5	52.2	46.4	41.7	34.8
26	115.5	87.5	76.4	70.3	59.7	46.2	41.0	36.9	30.8
29	103.5	78.5	68.5	63.1	53.5	41.4	36.8	33.1	27.6
32	93.8	71.1	62.1	57.1	48.5	37.5	33.3	30.0	25.0
35	85.8	65.0	56.7	52.2	44.3	34.3	30.5	27.4	22.9
38	79.0	59.9	52.3	48.1	40.8	31.6	28.1	25.3	21.1
41	73.2	55.5	48.4	44.6	37.8	29.3	26.0	23.4	19.5
44	68.2	51.7	45.1	41.6	35.3	27.3	24.2	21.8	18.2
47	63.9	48.4	42.3	38.9	33.0	25.5	22.7	20.4	17.0
50	60.0	45.5	39.7	36.6	31.0	24.0	21.3	19.2	16.0
53	56.6	42.9	37.5	34.5	29.3	22.6	20.1	18.1	15.1
56	53.6	40.6	35.5	32.7	27.7	21.4	19.0	17.1	14.3
59	50.9	38.6	33.7	31.0	26.3	20.3	18.1	16.3	13.6
62	48.4	36.7	32.0	29.5	25.0	19.4	17.2	15.5	12.9
65	46.2	35.0	30.6	28.1	23.9	18.5	16.4	14.8	12.3
68	44.1	33.5	29.2	26.9	22.8	17.6	15.7	14.1	11.8
71	42.3	32.1	28.0	25.8	21.9	16.9	15.0	13.5	11.3
74	40.6	30.8	26.8	24.7	21.0	16.2	14.4	13.0	10.8
77	39.0	29.6	25.8	23.7	20.1	15.6	13.9	12.5	10.4
80	37.5	28.4	24.8	22.9	19.4	15.0	13.3	12.0	10.0
83	36.2	27.4	23.9	22.0	18.7	14.5	12.9	11.6	9.6
86	34.9	26.5	23.1	21.3	18.0	14.0	12.4	11.2	9.3
89	33.7	25.6	22.3	20.5	17.4	13.5	12.0	10.8	9.0
92	32.6	24.7	21.6	19.9	16.9	13.0	11.6	10.4	8.7
95	31.6	24.0	20.9	19.2	16.3	12.6	11.2	10.1	8.4
98	30.6	23.2	20.3	18.7	15.8	12.2	10.9	9.8	8.2
101	29.7	22.5	19.7	18.1	15.4	11.9	10.6	9.5	7.9
104	28.9	21.9	19.1	17.6	14.9	11.5	10.3	9.2	7.7

G-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	75.0	56.9	49.7	45.7	38.8	30.0
23	65.3	49.5	43.2	39.8	33.7	26.1
26	57.7	43.8	38.2	35.2	29.8	23.1
29	51.8	39.2	34.2	31.5	26.8	20.7
32	46.9	35.6	31.0	28.6	24.2	18.8
35	42.9	32.5	28.4	26.1	22.2	17.1
38	39.5	29.9	26.1	24.1	20.4	15.8
41	36.6	27.8	24.2	22.3	18.9	14.6
44	34.1	25.9	22.6	20.8	17.6	13.6
47	31.9	24.2	21.1	19.5	16.5	12.8
50	30.0	22.8	19.9	18.3	15.5	12.0
53	28.3	21.5	18.7	17.3	14.6	11.3
56	26.8	20.3	17.7	16.3	13.9	10.7
59	25.4	19.3	16.8	15.5	13.1	10.2
62	24.2	18.4	16.0	14.7	12.5	9.7
65	23.1	17.5	15.3	14.1	11.9	9.2
68	22.1	16.7	14.6	13.4	11.4	8.8
71	21.1	16.0	14.0	12.9	10.9	8.5
74	20.3	15.4	13.4	12.4	10.5	8.1
77	19.5	14.8	12.9	11.9	10.1	7.8
80	18.8	14.2	12.4	11.4	9.7	7.5
83	18.1	13.7	12.0	11.0	9.3	7.2
86	17.5	13.2	11.5	10.6	9.0	7.0
89	16.9	12.8	11.2	10.3	8.7	6.7
92	16.3	12.4	10.8	9.9	8.4	6.5
95	15.8	12.0	10.5	9.6	8.2	6.3
98	15.3	11.6	10.1	9.3	7.9	6.1
101	14.9	11.3	9.8	9.1	7.7	5.9
104	14.4	10.9	9.5	8.8	7.5	5.8

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date OCT. 24, 2023
By *Walter A. Tillit Jr.*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date OCT. 24, 2018
By *Walter A. Tillit Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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HALEAH, FL. 33014
PHONE: (305) 558-8103
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www.generalimpact.com

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 47 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO BLOCK SUBSTRATE
CONNECTED W/ CLIP (C4)

E-C4-N=2-BLOCK

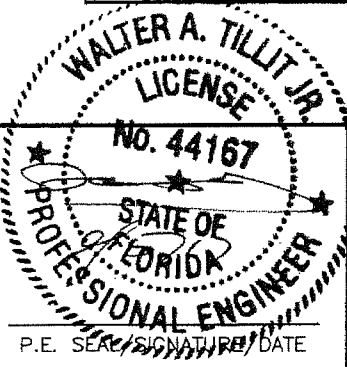
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	
20	112.6	85.3	74.5	68.6	58.2	45.0	40.0	36.0	30.0
23	97.9	74.2	64.8	59.6	50.6	39.1	34.8	31.3	26.1
26	86.6	65.6	57.3	52.7	44.8	34.6	30.8	27.7	23.1
29	77.6	58.9	51.4	47.3	40.1	31.0	27.6	24.8	20.7
32	70.4	53.3	46.6	42.9	36.4	28.1	25.0	22.5	18.8
35	64.3	48.8	42.6	39.2	33.2	25.7	22.9	20.6	17.1
38	59.2	44.9	39.2	36.1	30.6	23.7	21.1	18.9	15.8
41	54.9	41.6	36.3	33.4	28.4	22.0	19.5	17.6	14.6
44	51.2	38.8	33.9	31.2	26.4	20.5	18.2	16.4	13.6
47	47.9	36.3	31.7	29.2	24.8	19.1	17.0	15.3	12.8
50	45.0	34.1	29.8	27.4	23.3	18.0	16.0	14.4	12.0
53	42.5	32.2	28.1	25.9	22.0	17.0	15.1	13.6	11.3
56	40.2	30.5	26.6	24.5	20.8	16.1	14.3	12.9	10.7
59	38.2	28.9	25.2	23.2	19.7	15.3	13.6	12.2	10.2
62	36.3	27.5	24.0	22.1	18.8	14.5	12.9	11.6	9.7
65	34.6	26.3	22.9	21.1	17.9	13.8	12.3	11.1	9.2
68	33.1	25.1	21.9	20.2	17.1	13.2	11.8	10.6	8.8
71	31.7	24.0	21.0	19.3	16.4	12.7	11.3	10.1	8.5
74	30.4	23.1	20.1	18.5	15.7	12.2	10.8	9.7	8.1
77	29.2	22.2	19.3	17.8	15.1	11.7	10.4	9.4	7.8
80	28.1	21.3	18.6	17.1	14.5	11.3	10.0	9.0	7.5
83	27.1	20.6	17.9	16.5	14.0	10.8	9.6	8.7	7.2
86	26.2	19.8	17.3	15.9	13.5	10.5	9.3	8.4	7.0
89	25.3	19.2	16.7	15.4	13.1	10.1	9.0	8.1	6.7
92	24.5	18.6	16.2	14.9	12.6	9.8	8.7	7.8	6.5
95	23.7	18.0	15.7	14.4	12.2	9.5	8.4	7.6	6.3
98	23.0	17.4	15.2	14.0	11.9	9.2	8.2	7.3	6.1
101	22.3	16.9	14.7	13.6	11.5	8.9	7.9	7.1	5.9
104	21.6	16.4	14.3	13.2	11.2	8.7	7.7	6.9	5.8

E-C4-N=4-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	
20	150.1	113.8	99.3	91.4	77.6	60.0	53.3	48.0	40.0
23	130.5	98.9	86.4	79.5	67.5	52.2	46.4	41.7	34.8
26	115.5	87.5	76.4	70.3	59.7	46.2	41.0	36.9	30.8
29	103.5	78.5	68.5	63.1	53.5	41.4	36.8	33.1	27.6
32	93.8	71.1	62.1	57.1	48.5	37.5	33.3	30.0	25.0
35	85.8	65.0	56.7	52.2	44.3	34.3	30.5	27.4	22.9
38	79.0	59.9	52.3	48.1	40.8	31.6	28.1	25.3	21.1
41	73.2	55.5	48.4	44.6	37.8	29.3	26.0	23.4	19.5
44	68.2	51.7	45.1	41.6	35.3	27.3	24.2	21.8	18.2
47	63.9	48.4	42.3	38.9	33.0	25.5	22.7	20.4	17.0
50	60.0	45.5	39.7	36.6	31.0	24.0	21.3	19.2	16.0
53	56.6	42.9	37.5	34.5	29.3	22.6	20.1	18.1	15.1
56	53.6	40.6	35.5	32.7	27.7	21.4	19.0	17.1	14.3
59	50.9	38.6	33.7	31.0	26.3	20.3	18.1	16.3	13.6
62	48.4	36.7	32.0	29.5	25.0	19.4	17.2	15.5	12.9
65	46.2	35.0	30.6	28.1	23.9	18.5	16.4	14.8	12.3
68	44.1	33.5	29.2	26.9	22.8	17.6	15.7	14.1	11.8
71	42.3	32.1	28.0	25.8	21.9	16.9	15.0	13.5	11.3
74	40.6	30.8	26.8	24.7	21.0	16.2	14.4	13.0	10.8
77	39.0	29.6	25.8	23.7	20.1	15.6	13.9	12.5	10.4
80	37.5	28.4	24.8	22.9	19.4	15.0	13.3	12.0	10.0
83	36.2	27.4	23.9	22.0	18.7	14.5	12.9	11.6	9.6
86	34.9	26.5	23.1	21.3	18.0	14.0	12.4	11.2	9.3
89	33.7	25.6	22.3	20.5	17.4	13.5	12.0	10.8	9.0
92	32.6	24.7	21.6	19.9	16.9	13.0	11.6	10.4	8.7
95	31.6	24.0	20.9	19.2	16.3	12.6	11.2	10.1	8.4
98	30.6	23.2	20.3	18.7	15.8	12.2	10.9	9.8	8.2
101	29.7	22.5	19.7	18.1	15.4	11.9	10.6	9.5	7.9
104	28.9	21.9	19.1	17.6	14.9	11.5	10.3	9.2	7.7

PRODUCT REVISOR
as complying with the Florida
Building Code
Acceptance No. 18-1108.61
Expiration Date 01-24-2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 01-24-2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 48 OF 60

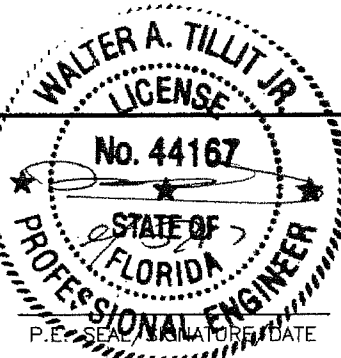
CLIPPED INTERIOR & END MULLIONS CHARTS INTO BLOCK SUBSTRATE
CONNECTED W/ CLIP C4

H-C4-N=2-BLOCK

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	
20	75.0	56.9	49.7	45.7	38.8	30.0	26.7	24.0	20.0
23	65.3	49.5	43.2	39.8	33.7	26.1	23.2	20.9	17.4
26	57.7	43.8	38.2	35.2	29.8	23.1	20.5	18.5	15.4
29	51.8	39.2	34.2	31.5	26.8	20.7	18.4	16.6	13.8
32	46.9	35.6	31.0	28.6	24.2	18.8	16.7	15.0	12.5
35	42.9	32.5	28.4	26.1	22.2	17.1	15.2	13.7	11.4
38	39.5	29.9	26.1	24.1	20.4	15.8	14.0	12.6	10.5
41	36.6	27.8	24.2	22.3	18.9	14.6	13.0	11.7	9.8
44	34.1	25.9	22.6	20.8	17.6	13.6	12.1	10.9	9.1
47	31.9	24.2	21.1	19.5	16.5	12.8	11.3	10.2	8.5
50	30.0	22.8	19.9	18.3	15.5	12.0	10.7	9.6	8.0
53	28.3	21.5	18.7	17.3	14.6	11.3	10.1	9.1	7.5
56	26.8	20.3	17.7	16.3	13.9	10.7	9.5	8.6	7.1
59	25.4	19.3	16.8	15.5	13.1	10.2	9.0	8.1	6.8
62	24.2	18.4	16.0	14.7	12.5	9.7	8.6	7.7	6.5
65	23.1	17.5	15.3	14.1	11.9	9.2	8.2	7.4	6.2
68	22.1	16.7	14.6	13.4	11.4	8.8	7.8	7.1	5.9
71	21.1	16.0	14.0	12.9	10.9	8.5	7.5	6.8	5.6
74	20.3	15.4	13.4	12.4	10.5	8.1	7.2	6.5	5.4
77	19.5	14.8	12.9	11.9	10.1	7.8	6.9	6.2	5.2
80	18.8	14.2	12.4	11.4	9.7	7.5	6.7	6.0	5.0
83	18.1	13.7	12.0	11.0	9.3	7.2	6.4	5.8	4.8
86	17.5	13.2	11.5	10.6	9.0	7.0	6.2	5.6	4.7
89	16.9	12.8	11.2	10.3	8.7	6.7	6.0	5.4	4.5
92	16.3	12.4	10.8	9.9	8.4	6.5	5.8	5.2	4.3
95	15.8	12.0	10.5	9.6	8.2	6.3	5.6	5.1	4.2
98	15.3	11.6	10.1	9.3	7.9	6.1	5.4	4.9	4.1
101	14.9	11.3	9.8	9.1	7.7	5.9	5.3	4.8	4.0
104	14.4	10.9	9.5	8.8	7.5	5.8	5.1	4.6	3.8

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 05/24/2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 04/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tiltco@aol.com
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WALTER A. TILLIT Jr., P.E.
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
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DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 49 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP (C4)

A-C4-N=2-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x 3"x 1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4 ULTRACONS EACH END OF MULLION				
Tributary Width (b)	Mullion Length (L)			
	38.375	50.625	58	63
20	200.0	179.2	154.2	130.7
23	200.0	155.8	134.1	113.7
26	181.8	137.8	118.7	100.6
29	163.0	123.6	106.4	90.2
32	147.8	112.0	96.4	81.7
35	135.1	102.4	88.1	74.7
38	124.4	94.3	81.2	68.8
41	115.3	87.4	75.2	63.8
44	107.5	81.5	70.1	59.4
47	100.6	76.3	65.6	55.6
50	94.6	71.7	61.7	52.3
53	89.2	67.6	58.2	49.3
56	84.4	64.0	55.1	46.7
59	80.1	60.7	52.3	44.3
62	76.3	57.8	49.8	42.2
65	72.7	55.1	47.5	40.2
68	69.5	52.7	45.4	38.5
71	66.6	50.5	43.4	36.8
74	63.9	48.4	41.7	35.3
77	61.4	46.5	40.1	34.0
80	59.1	44.8	38.6	32.7
83	57.0	43.2	37.2	31.5
86	55.0	41.7	35.9	30.4
89	53.1	40.3	34.7	29.4
92	51.4	39.0	33.5	28.4
95	49.8	37.7	32.5	27.5
98	48.2	36.6	31.5	26.7
101	46.8	35.5	30.5	25.9
104	45.5	34.5	29.7	25.1

B-C4-N=2-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4 ULTRACONS EACH END OF MULLION							
Tributary Width (b)	Mullion Length (L)						
	38.375	50.625	58	63	74.25	80	
20	200.0	200.0	193.7	178.3	145.5	125.4	
23	200.0	192.9	168.4	155.0	126.6	109.0	
26	200.0	170.7	149.0	137.1	112.0	96.4	
29	200.0	153.0	133.6	123.0	100.4	86.5	
32	182.9	138.7	121.0	111.4	91.0	78.4	
35	167.3	126.8	110.7	101.9	83.2	71.6	
38	154.0	116.8	101.9	93.8	76.6	66.0	
41	142.8	108.2	94.5	87.0	71.0	61.2	
44	133.0	100.8	88.0	81.0	66.2	57.0	
47	124.5	94.4	82.4	75.9	61.9	53.4	
50	117.1	88.7	77.5	71.3	58.2	50.2	
53	110.4	83.7	73.1	67.3	54.9	47.3	
56	104.5	79.2	69.2	63.7	52.0	44.8	
59	99.2	75.2	65.6	60.4	49.3	42.5	
62	94.4	71.6	62.5	57.5	47.0	40.4	
65	90.1	68.3	59.6	54.9	44.8	38.6	
68	86.1	65.3	57.0	52.4	42.8	36.9	
71	82.4	62.5	54.6	50.2	41.0	35.3	
74	79.1	60.0	52.3	48.2	39.3	33.9	
77	76.0	57.6	50.3	46.3	37.8	32.6	
80	73.2	55.5	48.4	44.6	36.4	31.3	
83	70.5	53.5	46.7	43.0	35.1	30.2	
86	68.1	51.6	45.0	41.5	33.8	29.2	
89	65.8	49.9	43.5	40.1	32.7	28.2	
92	63.6	48.2	42.1	38.8	31.6	27.3	
95	61.6	46.7	40.8	37.5	30.6	26.4	
98	59.7	45.3	39.5	36.4	29.7	25.6	
101	58.0	43.9	38.3	35.3	28.8	24.8	
104	56.3	42.7	37.2	34.3	28.0	24.1	

C-C4-N=2-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8"x3/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4 ULTRACONS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	179.2	156.4	144.0	122.2	113.4
23	200.0	155.8	136.0	125.2	106.2	98.6
26	181.8	137.8	120.3	110.8	94.0	87.2
29	163.0	123.6	107.9	99.3	84.3	78.2
32	147.8	112.0	97.8	90.0	76.4	70.9
35	135.1	102.4	89.4	82.3	69.8	64.8
38	124.4	94.3	82.3	75.8	64.3	59.7
41	115.3	87.4	76.3	70.2	59.6	55.3
44	107.5	81.5	71.1	65.5	55.5	51.5
47	100.6	76.3	66.6	61.3	52.0	48.3
50	94.6	71.7	62.6	57.6	48.9	45.4
53	89.2	67.6	59.0	54.3	46.1	42.8
56	84.4	64.0	55.9	51.4	43.6	40.5
59	80.1	60.7	53.0	48.8	41.4	38.4
62	76.3	57.8	50.5	46.5	39.4	36.6
65	72.7	55.1	48.1	44.3	37.6	34.9
68	69.5	52.7	46.0	42.4	35.9	33.4
71	66.6	50.5	44.1	40.6	34.4	31.9
74	63.9	48.4	42.3	38.9	33.0	30.6
77	61.4	46.5	40.6	37.4	31.7	29.5
80	59.1	44.8	39.1	36.0	30.5	28.4
83	57.0	43.2	37.7	34.7	29.4	27.3
86	55.0	41.7	36.4	33.5	28.4	26.4
89	53.1	40.3	35.1	32.4	27.5	25.5
92	51.4	39.0	34.0	31.3	26.6	24.7
95	49.8	37.7	32.9	30.3	25.7	23.9
98	48.2	36.6	31.9	29.4	24.9	23.1
101	46.8	35.5	31.0	28.5	24.2	22.5
104	45.5	34.5	30.1	27.7	23.5	21.8

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By *Manuel Pera*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct 24, 2018
By *Manuel Pera*
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL
RENEWAL DATE

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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS
DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 50 OF 60
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REV. NO. DESCRIPTION DATE REV. No. DESCRIPTION DATE
1 OLD 15-158 08/25/17 3
2 4

CLIPPED INTERIOR & END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP (C4)

D-C4-N=2-CONC

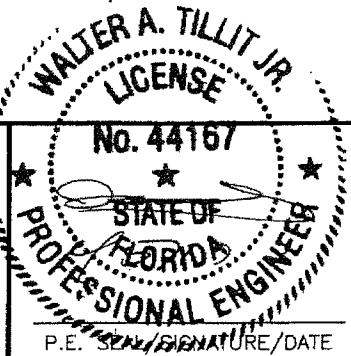
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	193.7	178.3	151.3	117.0
23	200.0	192.9	168.4	155.0	131.5	101.7
26	200.0	170.7	149.0	137.1	116.4	90.0
29	200.0	153.0	133.6	123.0	104.3	80.7
32	182.9	138.7	121.0	111.4	94.5	73.1
35	167.3	126.8	110.7	101.9	86.4	66.9
38	154.0	116.8	101.9	93.8	79.6	61.6
41	142.8	108.2	94.5	87.0	73.8	57.1
44	133.0	100.8	88.0	81.0	68.8	53.2
47	124.5	94.4	82.4	75.9	64.4	49.8
50	117.1	88.7	77.5	71.3	60.5	46.8
53	110.4	83.7	73.1	67.3	57.1	44.2
56	104.5	79.2	69.2	63.7	54.0	41.8
59	99.2	75.2	65.6	60.4	51.3	39.7
62	94.4	71.6	62.5	57.5	48.8	37.7
65	90.1	68.3	59.6	54.9	46.5	36.0
68	86.1	65.3	57.0	52.4	44.5	34.4
71	82.4	62.5	54.6	50.2	42.6	33.0
74	79.1	60.0	52.3	48.2	40.9	31.6
77	76.0	57.6	50.3	46.3	39.3	30.4
80	73.2	55.5	48.4	44.6	37.8	29.3
83	70.5	53.5	46.7	43.0	36.5	28.2
86	68.1	51.6	45.0	41.5	35.2	27.2
89	65.8	49.9	43.5	40.1	34.0	26.3
92	63.6	48.2	42.1	38.8	32.9	25.4
95	61.6	46.7	40.8	37.5	31.8	24.6
98	59.7	45.3	39.5	36.4	30.9	23.9
101	58.0	43.9	38.3	35.3	30.0	23.2
104	56.3	42.7	37.2	34.3	29.1	22.5

G-C4-N=2-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	179.2	156.4	144.0	122.2	94.5
23	200.0	155.8	136.0	125.2	106.2	82.2
26	181.8	137.8	120.3	110.8	94.0	72.7
29	163.0	123.6	107.9	99.3	84.3	65.2
32	147.8	112.0	97.8	90.0	76.4	59.1
35	135.1	102.4	89.4	82.3	69.8	54.0
38	124.4	94.3	82.3	75.8	64.3	49.7
41	115.3	87.4	76.3	70.2	59.6	46.1
44	107.5	81.5	71.1	65.5	55.5	43.0
47	100.6	76.3	66.6	61.3	52.0	40.2
50	94.6	71.7	62.6	57.6	48.9	37.8
53	89.2	67.6	59.0	54.3	46.1	35.7
56	84.4	64.0	55.9	51.4	43.6	33.8
59	80.1	60.7	53.0	48.8	41.4	32.0
62	76.3	57.8	50.5	46.5	39.4	30.5
65	72.7	55.1	48.1	44.3	37.6	29.1
68	69.5	52.7	46.0	42.4	35.9	27.8
71	66.6	50.5	44.1	40.6	34.4	26.6
74	63.9	48.4	42.3	38.9	33.0	25.5
77	61.4	46.5	40.6	37.4	31.7	24.5
80	59.1	44.8	39.1	36.0	30.5	23.6
83	57.0	43.2	37.7	34.7	29.4	22.8
86	55.0	41.7	36.4	33.5	28.4	22.0
89	53.1	40.3	35.1	32.4	27.5	21.2
92	51.4	39.0	34.0	31.3	26.6	20.5
95	49.8	37.7	32.9	30.3	25.7	19.9
98	48.2	36.6	31.9	29.4	24.9	19.3
101	46.8	35.5	31.0	28.5	24.2	18.7
104	45.5	34.5	30.1	27.7	23.5	18.2

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1103-01
Expiration Date Oct 24, 2018
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102-14
Expiration Date Oct 24, 2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305) 871-1530 • Fax: (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
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REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 51 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP (C4)

E-C4-N=2-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	193.7	178.3	151.3	117.0	104.0	93.6	78.0
23	200.0	192.9	168.4	155.0	131.5	101.7	90.4	81.4	67.8
26	200.0	170.7	149.0	137.1	116.4	90.0	80.0	72.0	60.0
29	200.0	153.0	133.6	123.0	104.3	80.7	71.7	64.6	53.8
32	182.9	138.7	121.0	111.4	94.5	73.1	65.0	58.5	48.8
35	167.3	126.8	110.7	101.9	86.4	66.9	59.4	53.5	44.6
38	154.0	116.8	101.9	93.8	79.6	61.6	54.7	49.3	41.1
41	142.8	108.2	94.5	87.0	73.8	57.1	50.7	45.7	38.0
44	133.0	100.8	88.0	81.0	68.8	53.2	47.3	42.5	35.5
47	124.5	94.4	82.4	75.9	64.4	49.8	44.3	39.8	33.2
50	117.1	88.7	77.5	71.3	60.5	46.8	41.6	37.4	31.2
53	110.4	83.7	73.1	67.3	57.1	44.2	39.2	35.3	29.4
56	104.5	79.2	69.2	63.7	54.0	41.8	37.1	33.4	27.9
59	99.2	75.2	65.6	60.4	51.3	39.7	35.3	31.7	26.4
62	94.4	71.6	62.5	57.5	48.8	37.7	33.5	30.2	25.2
65	90.1	68.3	59.6	54.9	46.5	36.0	32.0	28.8	24.0
68	86.1	65.3	57.0	52.4	44.5	34.4	30.6	27.5	22.9
71	82.4	62.5	54.6	50.2	42.6	33.0	29.3	26.4	22.0
74	79.1	60.0	52.3	48.2	40.9	31.6	28.1	25.3	21.1
77	76.0	57.6	50.3	46.3	39.3	30.4	27.0	24.3	20.3
80	73.2	55.5	48.4	44.6	37.8	29.3	26.0	23.4	19.5
83	70.5	53.5	46.7	43.0	36.5	28.2	25.1	22.6	18.8
86	68.1	51.6	45.0	41.5	35.2	27.2	24.2	21.8	18.1
89	65.8	49.9	43.5	40.1	34.0	26.3	23.4	21.0	17.5
92	63.6	48.2	42.1	38.8	32.9	25.4	22.6	20.3	17.0
95	61.6	46.7	40.8	37.5	31.8	24.6	21.9	19.7	16.4
98	59.7	45.3	39.5	36.4	30.9	23.9	21.2	19.1	15.9
101	58.0	43.9	38.3	35.3	30.0	23.2	20.6	18.5	15.4
104	56.3	42.7	37.2	34.3	29.1	22.5	20.0	18.0	15.0

E-C4-N=3-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	183.3	141.8	126.0	113.4	94.5
23	200.0	200.0	200.0	187.8	159.4	123.3	109.6	98.6	82.2
26	200.0	200.0	180.5	166.2	141.0	109.0	96.9	87.2	72.7
29	200.0	185.4	161.8	149.0	126.4	97.8	86.9	78.2	65.2
32	200.0	168.0	146.6	135.0	114.5	88.6	78.8	70.9	59.1
35	200.0	153.6	134.1	123.4	104.7	81.0	72.0	64.8	54.0
38	186.6	141.5	123.5	113.7	96.5	74.6	66.3	59.7	49.7
41	173.0	131.1	114.4	105.4	89.4	69.1	61.5	55.3	46.1
44	161.2	122.2	106.6	98.2	83.3	64.4	57.3	51.5	43.0
47	150.9	114.4	99.8	91.9	78.0	60.3	53.6	48.3	40.2
50	141.8	107.5	93.8	86.4	73.3	56.7	50.4	45.4	37.8
53	133.8	101.4	88.5	81.5	69.2	53.5	47.5	42.8	35.7
56	126.6	96.0	83.8	77.1	65.5	50.6	45.0	40.5	33.8
59	120.2	91.1	79.5	73.2	62.1	48.1	42.7	38.4	32.0
62	114.4	86.7	75.7	69.7	59.1	45.7	40.6	36.6	30.5
65	109.1	82.7	72.2	66.5	56.4	43.6	38.8	34.9	29.1
68	104.3	79.1	69.0	63.5	53.9	41.7	37.1	33.4	27.8
71	99.9	75.7	66.1	60.8	51.6	39.9	35.5	31.9	26.6
74	95.8	72.6	63.4	58.4	49.5	38.3	34.1	30.6	25.5
77	92.1	69.8	60.9	56.1	47.6	36.8	32.7	29.5	24.5
80	88.7	67.2	58.7	54.0	45.8	35.4	31.5	28.4	23.6
83	85.4	64.8	56.5	52.0	44.2	34.2	30.4	27.3	22.8
86	82.5	62.5	54.6	50.2	42.6	33.0	29.3	26.4	22.0
89	79.7	60.4	52.7	48.5	41.2	31.9	28.3	25.5	21.2
92	77.1	58.4	51.0	47.0	39.8	30.8	27.4	24.7	20.5
95	74.7	56.6	49.4	45.5	38.6	29.8	26.5	23.9	19.9
98	72.4	54.9	47.9	44.1	37.4	28.9	25.7	23.1	19.3
101	70.2	53.2	46.5	42.8	36.3	28.1	25.0	22.5	18.7
104	68.2	51.7	45.1	41.5	35.2	27.3	24.2	21.8	18.2

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1105.01
Expiration Date 02.24.2023
By *Manuel Ruiz*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02.24.2018
By *Manuel Ruiz*
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
P.E. SIGNATURE/DATE

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TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 • Fax : (305)871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS

280 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com
DRAWN BY: L.C.
08/25/17
DATE
17-249
DRAWING No
SHEET 52 OF 60

REV. NO.	DESCRIPTION	DATE	REV. No.	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO CONCRETE SUBSTRATE CONNECTED W/ CLIP C4

F-C4-N=3-CONC

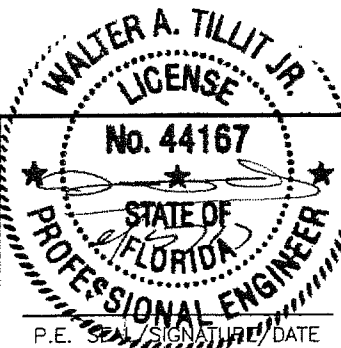
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (3) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	183.3	141.8	126.0	113.4	94.5
23	200.0	200.0	200.0	187.8	159.4	123.3	109.6	98.6	82.2
26	200.0	200.0	180.5	166.2	141.0	109.0	96.9	87.2	72.7
29	200.0	185.4	161.8	149.0	126.4	97.8	86.9	78.2	65.2
32	200.0	168.0	146.6	135.0	114.5	88.6	78.8	70.9	59.1
35	200.0	153.6	134.1	123.4	104.7	81.0	72.0	64.8	54.0
38	186.6	141.5	123.5	113.7	96.5	74.6	66.3	59.7	49.7
41	173.0	131.1	114.4	105.4	89.4	69.1	61.5	55.3	46.1
44	161.2	122.2	106.6	98.2	83.3	64.4	57.3	51.5	43.0
47	150.9	114.4	99.8	91.9	78.0	60.3	53.6	48.3	40.2
50	141.8	107.5	93.8	86.4	73.3	56.7	50.4	45.4	37.8
53	133.8	101.4	88.5	81.5	69.2	53.5	47.5	42.8	35.7
56	126.6	96.0	83.8	77.1	65.5	50.6	45.0	40.5	33.8
59	120.2	91.1	79.5	73.2	62.1	48.1	42.7	38.4	32.0
62	114.4	86.7	75.7	69.7	59.1	45.7	40.6	36.6	30.5
65	109.1	82.7	72.2	66.5	56.4	43.6	38.8	34.9	29.1
68	104.3	79.1	69.0	63.5	53.9	41.7	37.1	33.4	27.8
71	99.9	75.7	66.1	60.8	51.6	39.9	35.5	31.9	26.6
74	95.8	72.6	63.4	58.4	49.5	38.3	34.1	30.6	25.5
77	92.1	69.8	60.9	56.1	47.6	36.8	32.7	29.5	24.5
80	88.7	67.2	58.7	54.0	45.8	35.4	31.5	28.4	23.6
83	85.4	64.8	56.5	52.0	44.2	34.2	30.4	27.3	22.8
86	82.5	62.5	54.6	50.2	42.6	33.0	29.3	26.4	22.0
89	79.7	60.4	52.7	48.5	41.2	31.9	28.3	25.5	21.2
92	77.1	58.4	51.0	47.0	39.8	30.8	27.4	24.7	20.5
95	74.7	56.6	49.4	45.5	38.6	29.8	26.5	23.9	19.9
98	72.4	54.9	47.9	44.1	37.4	28.9	25.7	23.1	19.3
101	70.2	53.2	46.5	42.8	36.3	28.1	25.0	22.5	18.7
104	68.2	51.7	45.1	41.5	35.2	27.3	24.2	21.8	18.2

F-C4-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	189.0	168.0	151.2	126.0
23	200.0	200.0	200.0	200.0	200.0	164.3	146.1	131.5	109.6
26	200.0	200.0	200.0	200.0	188.0	145.4	129.2	116.3	96.9
29	200.0	200.0	200.0	198.6	168.5	130.3	115.9	104.3	86.9
32	200.0	200.0	195.5	180.0	152.7	118.1	105.0	94.5	78.8
35	200.0	200.0	178.8	164.6	139.6	108.0	96.0	86.4	72.0
38	200.0	188.6	164.6	151.6	128.6	99.5	88.4	79.6	66.3
41	200.0	174.8	152.6	140.5	119.2	92.2	82.0	73.8	61.5
44	200.0	162.9	142.2	130.9	111.1	85.9	76.4	68.7	57.3
47	200.0	152.5	133.1	122.6	104.0	80.4	71.5	64.3	53.6
50	189.1	143.4	125.1	115.2	97.7	75.6	67.2	60.5	50.4
53	178.4	135.2	118.0	108.7	92.2	71.3	63.4	57.1	47.5
56	168.9	128.0	111.7	102.9	87.3	67.5	60.0	54.0	45.0
59	160.3	121.5	106.0	97.6	82.8	64.1	56.9	51.3	42.7
62	152.5	115.6	100.9	92.9	78.8	61.0	54.2	48.8	40.6
65	145.5	110.3	96.3	88.6	75.2	58.2	51.7	46.5	38.8
68	139.1	105.4	92.0	84.7	71.9	55.6	49.4	44.5	37.1
71	133.2	101.0	88.1	81.1	68.8	53.2	47.3	42.6	35.5
74	127.8	96.9	84.5	77.8	66.0	51.1	45.4	40.9	34.1
77	122.8	93.1	81.3	74.8	63.5	49.1	43.6	39.3	32.7
80	118.2	89.6	78.2	72.0	61.1	47.3	42.0	37.8	31.5
83	113.9	86.4	75.4	69.4	58.9	45.5	40.5	36.4	30.4
86	110.0	83.3	72.8	67.0	56.8	44.0	39.1	35.2	29.3
89	106.2	80.5	70.3	64.7	54.9	42.5	37.8	34.0	28.3
92	102.8	77.9	68.0	62.6	53.1	41.1	36.5	32.9	27.4
95	99.5	75.5	65.9	60.6	51.4	39.8	35.4	31.8	26.5
98	96.5	73.1	63.8	58.8	49.9	38.6	34.3	30.9	25.7
101	93.6	71.0	61.9	57.0	48.4	37.4	33.3	29.9	25.0
104	90.9	68.9	60.2	55.4	47.0	36.3	32.3	29.1	24.2

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02/24/2023
By: *Walter A. Tillit Jr.*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02/24/2018
By: *Walter A. Tillit Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 53 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO CONCRETE SUBSTRATE
CONNECTED W/ CLIP C4

H-C4-N=2-CONC

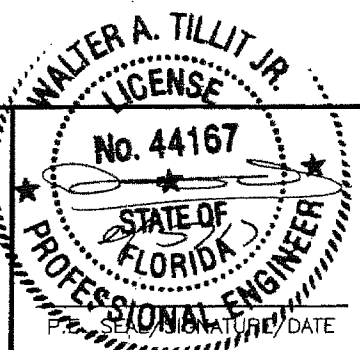
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x4"x1/4" MULLION WITH CLIPS CONNECTED WITH (2) 1/4"Ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	179.2	156.4	144.0	122.2	94.5	84.0	75.6	63.0
23	200.0	155.8	136.0	125.2	106.2	82.2	73.0	65.7	54.8
26	181.8	137.8	120.3	110.8	94.0	72.7	64.6	58.2	48.5
29	163.0	123.6	107.9	99.3	84.3	65.2	57.9	52.1	43.4
32	147.8	112.0	97.8	90.0	76.4	59.1	52.5	47.3	39.4
35	135.1	102.4	89.4	82.3	69.8	54.0	48.0	43.2	36.0
38	124.4	94.3	82.3	75.8	64.3	49.7	44.2	39.8	33.2
41	115.3	87.4	76.3	70.2	59.6	46.1	41.0	36.9	30.7
44	107.5	81.5	71.1	65.5	55.5	43.0	38.2	34.4	28.6
47	100.6	76.3	66.6	61.3	52.0	40.2	35.7	32.2	26.8
50	94.6	71.7	62.6	57.6	48.9	37.8	33.6	30.2	25.2
53	89.2	67.6	59.0	54.3	46.1	35.7	31.7	28.5	23.8
56	84.4	64.0	55.9	51.4	43.6	33.8	30.0	27.0	22.5
59	80.1	60.7	53.0	48.8	41.4	32.0	28.5	25.6	21.4
62	76.3	57.8	50.5	46.5	39.4	30.5	27.1	24.4	20.3
65	72.7	55.1	48.1	44.3	37.6	29.1	25.8	23.3	19.4
68	69.5	52.7	46.0	42.4	35.9	27.8	24.7	22.2	18.5
71	66.6	50.5	44.1	40.6	34.4	26.6	23.7	21.3	17.7
74	63.9	48.4	42.3	38.9	33.0	25.5	22.7	20.4	17.0
77	61.4	46.5	40.6	37.4	31.7	24.5	21.8	19.6	16.4
80	59.1	44.8	39.1	36.0	30.5	23.6	21.0	18.9	15.8
83	57.0	43.2	37.7	34.7	29.4	22.8	20.2	18.2	15.2
86	55.0	41.7	36.4	33.5	28.4	22.0	19.5	17.6	14.7
89	53.1	40.3	35.1	32.4	27.5	21.2	18.9	17.0	14.2
92	51.4	39.0	34.0	31.3	26.6	20.5	18.3	16.4	13.7
95	49.8	37.7	32.9	30.3	25.7	19.9	17.7	15.9	13.3
98	48.2	36.6	31.9	29.4	24.9	19.3	17.1	15.4	12.9
101	46.8	35.5	31.0	28.5	24.2	18.7	16.6	15.0	12.5
104	45.5	34.5	30.1	27.7	23.5	18.2	16.2	14.5	12.1

I-C4-N=4-CONC

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4"Ø ULTRACONS IN POURED CONCRETE EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	189.0	168.0	151.2	126.0
23	200.0	200.0	200.0	200.0	200.0	164.3	146.1	131.5	109.6
26	200.0	200.0	200.0	200.0	188.0	145.4	129.2	116.3	96.9
29	200.0	200.0	200.0	198.6	168.5	130.3	115.9	104.3	86.9
32	200.0	200.0	195.5	180.0	152.7	118.1	105.0	94.5	78.8
35	200.0	200.0	178.8	164.8	139.6	108.0	96.0	86.4	72.0
38	200.0	188.6	164.6	151.6	128.6	99.5	88.4	79.6	66.3
41	200.0	174.8	152.6	140.5	119.2	92.2	82.0	73.8	61.5
44	200.0	162.9	142.2	130.9	111.1	85.9	76.4	68.7	57.3
47	200.0	152.5	133.1	122.6	104.0	80.4	71.5	64.3	53.6
50	189.1	143.4	125.1	115.2	97.7	75.6	67.2	60.5	50.4
53	178.4	135.2	118.0	108.7	92.2	71.3	63.4	57.1	47.5
56	168.9	128.0	111.7	102.9	87.3	67.5	60.0	54.0	45.0
59	160.3	121.5	106.0	97.6	82.8	64.1	56.9	51.3	42.7
62	152.5	115.6	100.9	92.9	78.8	61.0	54.2	48.8	40.6
65	145.5	110.3	96.3	88.6	75.2	58.2	51.7	46.5	38.8
68	139.1	105.4	92.0	84.7	71.9	55.6	49.4	44.5	37.1
71	133.2	101.0	88.1	81.1	68.8	53.2	47.3	42.6	35.5
74	127.8	96.9	84.5	77.8	66.0	51.1	45.4	40.9	34.1
77	122.8	93.1	81.3	74.8	63.5	49.1	43.6	39.3	32.7
80	118.2	89.6	78.2	72.0	61.1	47.3	42.0	37.8	31.5
83	113.9	86.4	75.4	69.4	58.9	45.5	40.5	36.4	30.4
86	110.0	83.3	72.8	67.0	56.8	44.0	39.1	35.2	29.3
89	106.2	80.5	70.3	64.7	54.9	42.5	37.8	34.0	28.3
92	102.8	77.9	68.0	62.6	53.1	41.1	36.5	32.9	27.4
95	99.5	75.5	65.9	60.6	51.4	39.8	35.4	31.8	26.5
98	96.5	73.1	63.8	58.8	49.9	38.6	34.3	30.9	25.7
101	93.6	71.0	61.9	57.0	48.4	37.4	33.3	29.9	25.0
104	90.9	68.9	60.2	55.4	47.0	36.3	32.3	29.1	24.2

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-110861
Expiration Date 01-24-2023
By *Manuel Torres*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-110214
Expiration Date 01-24-2018
By *Manuel Torres*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: titeco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	05/25/17	3		
2			4		

DRAWN BY:
L.C.
06/25/17
DATE
17-249
DRAWING No
SHEET 54 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP (C4)

A-C4-N=2-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" TEK SCREWS EACH END OF MULLION					
Tributary Width (b)	Mullion Length (L)				
	38.375	50.625	58	63	
20	200.0	186.0	154.2	130.7	
23	200.0	161.8	134.1	113.7	
26	188.8	143.1	118.7	100.6	
29	169.2	128.3	106.4	90.2	
32	153.4	116.3	96.4	81.7	
35	140.2	106.3	88.1	74.7	
38	129.2	97.9	81.2	68.8	
41	119.7	90.7	75.2	63.8	
44	111.5	84.6	70.1	59.4	
47	104.4	79.2	65.6	55.6	
50	98.2	74.4	61.7	52.3	
53	92.6	70.2	58.2	49.3	
56	87.6	66.4	55.1	46.7	
59	83.2	63.1	52.3	44.3	
62	79.2	60.0	49.8	42.2	
65	75.5	57.2	47.5	40.2	
68	72.2	54.7	45.4	38.5	
71	69.1	52.4	43.4	36.8	
74	66.3	50.3	41.7	35.3	
77	63.7	48.3	40.1	34.0	
80	61.4	46.5	38.6	32.7	
83	59.1	44.8	37.2	31.5	
86	57.1	43.3	35.9	30.4	
89	55.1	41.8	34.7	29.4	
92	53.3	40.4	33.5	28.4	
95	51.7	39.2	32.5	27.5	
98	50.1	38.0	31.5	26.7	
101	48.6	36.8	30.5	25.9	
104	47.2	35.8	29.7	25.1	

B-C4-N=2-STEEL/ALUM.

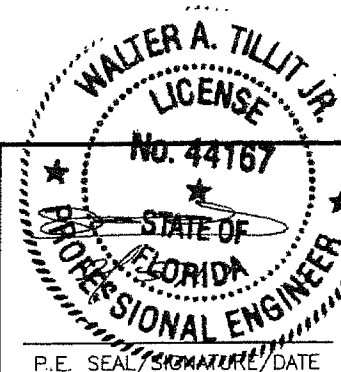
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	186.0	162.4	149.5	126.8	117.7
23	200.0	161.8	141.2	130.0	110.3	102.4
26	188.8	143.1	124.9	115.0	97.6	90.6
29	169.2	128.3	112.0	103.1	87.5	81.2
32	153.4	116.3	101.5	93.4	79.3	73.6
35	140.2	106.3	92.8	85.4	72.5	67.3
38	129.2	97.9	85.5	78.7	66.8	62.0
41	119.7	90.7	79.2	72.9	61.9	57.4
44	111.5	84.6	73.8	67.9	57.7	53.5
47	104.4	79.2	69.1	63.6	54.0	50.1
50	98.2	74.4	64.9	59.8	50.7	47.1
53	92.6	70.2	61.3	56.4	47.9	44.4
56	87.6	66.4	58.0	53.4	45.3	42.0
59	83.2	63.1	55.0	50.7	43.0	39.9
62	79.2	60.0	52.4	48.2	40.9	38.0
65	75.5	57.2	50.0	46.0	39.0	36.2
68	72.2	54.7	47.8	44.0	37.3	34.6
71	69.1	52.4	45.7	42.1	35.7	33.2
74	66.3	50.3	43.9	40.4	34.3	31.8
77	63.7	48.3	42.2	38.8	32.9	30.6
80	61.4	46.5	40.6	37.4	31.7	29.4
83	59.1	44.8	39.1	36.0	30.6	28.4
86	57.1	43.3	37.8	34.8	29.5	27.4
89	55.1	41.8	36.5	33.6	28.5	26.5
92	53.3	40.4	35.3	32.5	27.6	25.6
95	51.7	39.2	34.2	31.5	26.7	24.8
98	50.1	38.0	33.1	30.5	25.9	24.0
101	48.6	36.8	32.2	29.6	25.1	23.3
104	47.2	35.8	31.2	28.7	24.4	22.6

G-C4-N=2-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 3"x3"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" TEK SCREWS EACH END OF						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	186.0	162.4	149.5	126.8	98.1
23	200.0	161.8	141.2	130.0	110.3	85.3
26	188.8	143.1	124.9	115.0	97.6	75.5
29	169.2	128.3	112.0	103.1	87.5	67.7
32	153.4	116.3	101.5	93.4	79.3	61.3
35	140.2	106.3	92.8	85.4	72.5	56.1
38	129.2	97.9	85.5	78.7	66.8	51.6
41	119.7	90.7	79.2	72.9	61.9	47.9
44	111.5	84.6	73.8	67.9	57.7	44.6
47	104.4	79.2	69.1	63.6	54.0	41.7
50	98.2	74.4	64.9	59.8	50.7	39.2
53	92.6	70.2	61.3	56.4	47.9	37.0
56	87.6	66.4	58.0	53.4	45.3	35.0
59	83.2	63.1	55.0	50.7	43.0	33.3
62	79.2	60.0	52.4	48.2	40.9	31.6
65	75.5	57.2	50.0	46.0	39.0	30.2
68	72.2	54.7	47.8	44.0	37.3	28.9
71	69.1	52.4	45.7	42.1	35.7	27.6
74	66.3	50.3	43.9	40.4	34.3	26.5
77	63.7	48.3	42.2	38.8	32.9	25.5
80	61.4	46.5	40.6	37.4	31.7	24.5
83	59.1	44.8	39.1	36.0	30.6	23.6
86	57.1	43.3	37.8	34.8	29.5	22.8
89	55.1	41.8	36.5	33.6	28.5	22.0
92	53.3	40.4	35.3	32.5	27.6	21.3
95	51.7	39.2	34.2	31.5	26.7	20.7
98	50.1	38.0	33.1	30.5	25.9	20.0
101	48.6	36.8	32.2	29.6	25.1	19.4
104	47.2	35.8	31.2	28.7	24.4	18.9

PRODUCT REVIEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 07-24-2023
By *Manuel J. Jara*
Miami Dade Product Council

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 07-24-2018
By *Manuel J. Jara*
Miami Dade Product Council
MIAMI DADE COUNTY



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e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 55 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP (C4)

C-C4-N=2-STEEL/ALUM.

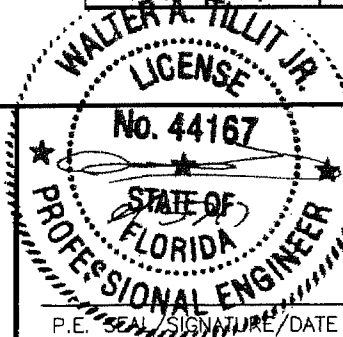
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	186.0	162.4	149.5	126.8	117.7
23	200.0	161.8	141.2	130.0	110.3	102.4
26	188.8	143.1	124.9	115.0	97.6	90.6
29	169.2	128.3	112.0	103.1	87.5	81.2
32	153.4	116.3	101.5	93.4	79.3	73.6
35	140.2	106.3	92.8	85.4	72.5	67.3
38	129.2	97.9	85.5	78.7	66.8	62.0
41	119.7	90.7	79.2	72.9	61.9	57.4
44	111.5	84.6	73.8	67.9	57.7	53.5
47	104.4	79.2	69.1	63.6	54.0	50.1
50	98.2	74.4	64.9	59.8	50.7	47.1
53	92.6	70.2	61.3	56.4	47.9	44.4
56	87.6	66.4	58.0	53.4	45.3	42.0
59	83.2	63.1	55.0	50.7	43.0	39.9
62	79.2	60.0	52.4	48.2	40.9	38.0
65	75.5	57.2	50.0	46.0	39.0	36.2
68	72.2	54.7	47.8	44.0	37.3	34.6
71	69.1	52.4	45.7	42.1	35.7	33.2
74	66.3	50.3	43.9	40.4	34.3	31.8
77	63.7	48.3	42.2	38.8	32.9	30.6
80	61.4	46.5	40.6	37.4	31.7	29.4
83	59.1	44.8	39.1	36.0	30.6	28.4
86	57.1	43.3	37.8	34.8	29.5	27.4
89	55.1	41.8	36.5	33.6	28.5	26.5
92	53.3	40.4	35.3	32.5	27.6	25.6
95	51.7	39.2	34.2	31.5	26.7	24.8
98	50.1	38.0	33.1	30.5	25.9	24.0
101	48.6	36.8	32.2	29.6	25.1	23.3
104	47.2	35.8	31.2	28.7	24.4	22.6

C-C4-N=3-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 1"x4"x1/8 x 3/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	80
20	200.0	200.0	200.0	200.0	190.3	176.6
23	200.0	200.0	200.0	195.0	165.4	153.5
26	200.0	200.0	187.4	172.5	146.3	135.8
29	200.0	192.4	168.0	154.6	131.2	121.8
32	200.0	174.4	152.2	140.1	118.9	110.4
35	200.0	159.5	139.2	128.1	108.7	100.9
38	193.7	146.9	128.2	118.0	100.1	92.9
41	179.6	136.1	118.8	109.4	92.8	86.1
44	167.3	126.8	110.7	101.9	86.5	80.3
47	156.6	118.7	103.6	95.4	81.0	75.1
50	147.2	111.6	97.4	89.7	76.1	70.6
53	138.9	105.3	91.9	84.6	71.8	66.6
56	131.5	99.7	87.0	80.1	67.9	63.1
59	124.8	94.6	82.6	76.0	64.5	59.9
62	118.7	90.0	78.6	72.3	61.4	57.0
65	113.3	85.9	74.9	69.0	58.5	54.3
68	108.3	82.1	71.6	65.9	56.0	51.9
71	103.7	78.6	68.6	63.2	53.6	49.7
74	99.5	75.4	65.8	60.6	51.4	47.7
77	95.6	72.5	63.3	58.2	49.4	45.9
80	92.0	69.8	60.9	56.1	47.6	44.1
83	88.7	67.2	58.7	54.0	45.8	42.5
86	85.6	64.9	56.6	52.1	44.2	41.1
89	82.7	62.7	54.7	50.4	42.8	39.7
92	80.0	60.7	52.9	48.7	41.4	38.4
95	77.5	58.7	51.3	47.2	40.1	37.2
98	75.1	56.9	49.7	45.8	38.8	36.0
101	72.9	55.3	48.2	44.4	37.7	35.0
104	70.8	53.7	46.8	43.1	36.6	34.0

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 02/24/2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 02/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILLIT TESTING & ENGINEERING COMPANY
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Phone : (305)871-1530 • Fax : (305)871-1531
e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



290 WEST 78 ROAD
HIALEAH, FL 33014
PHONE: (305) 558-8103
FAX: (305) 558-8885
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 56 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP **C4**

D-C4-N=2-STEEL/ALUM.

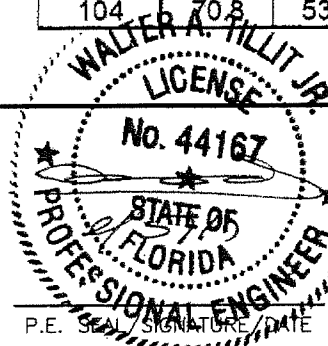
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (2) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	186.0	162.4	149.5	126.8	98.1
23	200.0	161.8	141.2	130.0	110.3	85.3
26	188.8	143.1	124.9	115.0	97.6	75.5
29	169.2	128.3	112.0	103.1	87.5	67.7
32	153.4	116.3	101.5	93.4	79.3	61.3
35	140.2	106.3	92.8	85.4	72.5	56.1
38	129.2	97.9	85.5	78.7	66.8	51.6
41	119.7	90.7	79.2	72.9	61.9	47.9
44	111.5	84.6	73.8	67.9	57.7	44.6
47	104.4	79.2	69.1	63.6	54.0	41.7
50	98.2	74.4	64.9	59.8	50.7	39.2
53	92.6	70.2	61.3	56.4	47.9	37.0
56	87.6	66.4	58.0	53.4	45.3	35.0
59	83.2	63.1	55.0	50.7	43.0	33.3
62	79.2	60.0	52.4	48.2	40.9	31.6
65	75.5	57.2	50.0	46.0	39.0	30.2
68	72.2	54.7	47.8	44.0	37.3	28.9
71	69.1	52.4	45.7	42.1	35.7	27.6
74	66.3	50.3	43.9	40.4	34.3	26.5
77	63.7	48.3	42.2	38.8	32.9	25.5
80	61.4	46.5	40.6	37.4	31.7	24.5
83	59.1	44.8	39.1	36.0	30.6	23.6
86	57.1	43.3	37.8	34.8	29.5	22.8
89	55.1	41.8	36.5	33.6	28.5	22.0
92	53.3	40.4	35.3	32.5	27.6	21.3
95	51.7	39.2	34.2	31.5	26.7	20.7
98	50.1	38.0	33.1	30.5	25.9	20.0
101	48.6	36.8	32.2	29.6	25.1	19.4
104	47.2	35.8	31.2	28.7	24.4	18.9

D-C4-N=3-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x4"x1/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" TEK SCREWS EACH END OF MULLION						
Tributary Width (b)	Mullion Length (L)					
	38.375	50.625	58	63	74.25	96
20	200.0	200.0	200.0	200.0	190.3	137.4
23	200.0	200.0	200.0	195.0	165.4	119.5
26	200.0	200.0	187.4	172.5	146.3	105.7
29	200.0	192.4	168.0	154.6	131.2	94.8
32	200.0	174.4	152.2	140.1	118.9	85.9
35	200.0	159.5	139.2	128.1	108.7	78.5
38	193.7	146.9	128.2	118.0	100.1	72.3
41	179.6	136.1	118.8	109.4	92.8	67.0
44	167.3	126.8	110.7	101.9	86.5	62.5
47	156.6	118.7	103.6	95.4	81.0	58.5
50	147.2	111.6	97.4	89.7	76.1	55.0
53	138.9	105.3	91.9	84.6	71.8	51.8
56	131.5	99.7	87.0	80.1	67.9	49.1
59	124.8	94.6	82.6	76.0	64.5	46.6
62	118.7	90.0	78.6	72.3	61.4	44.3
65	113.3	85.9	74.9	69.0	58.5	42.3
68	108.3	82.1	71.6	65.9	56.0	40.4
71	103.7	78.6	68.6	63.2	53.6	38.7
74	99.5	75.4	65.8	60.6	51.4	37.1
77	95.6	72.5	63.3	58.2	49.4	35.7
80	92.0	69.8	60.9	56.1	47.6	34.3
83	88.7	67.2	58.7	54.0	45.8	33.1
86	85.6	64.9	56.6	52.1	44.2	32.0
89	82.7	62.7	54.7	50.4	42.8	30.9
92	80.0	60.7	52.9	48.7	41.4	29.9
95	77.5	58.7	51.3	47.2	40.1	28.9
98	75.1	56.9	49.7	45.8	38.8	28.0
101	72.9	55.3	48.2	44.4	37.7	27.2
104	70.8	53.7	46.8	43.1	36.6	26.4

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct 24, 2023
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct 24, 2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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Phone: (305) 871-1530 • Fax: (305) 871-1531
e-mail: tiltco@aol.com
EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



REV. NO.	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	05/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249
DRAWING No

SHEET 57 OF 60

CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP (C4)

E-C4-N=3-STEEL/ALUM.

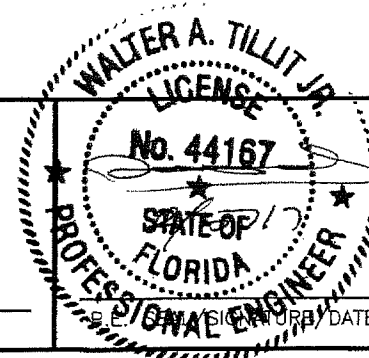
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (3) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	190.3	147.2	130.8	117.7	98.1
23	200.0	200.0	200.0	195.0	165.4	128.0	113.7	102.4	85.3
26	200.0	200.0	187.4	172.5	146.3	113.2	100.6	90.6	75.5
29	200.0	192.4	168.0	154.6	131.2	101.5	90.2	81.2	67.7
32	200.0	174.4	152.2	140.1	118.9	92.0	81.8	73.6	61.3
35	200.0	159.5	139.2	128.1	108.7	84.1	74.7	67.3	56.1
38	193.7	146.9	128.2	118.0	100.1	77.4	68.8	62.0	51.6
41	179.6	136.1	118.8	109.4	92.8	71.8	63.8	57.4	47.9
44	167.3	126.8	110.7	101.9	86.5	66.9	59.5	53.5	44.6
47	156.6	118.7	103.6	95.4	81.0	62.6	55.7	50.1	41.7
50	147.2	111.6	97.4	89.7	76.1	58.9	52.3	47.1	39.2
53	138.9	105.3	91.9	84.6	71.8	55.5	49.4	44.4	37.0
56	131.5	99.7	87.0	80.1	67.9	52.6	46.7	42.0	35.0
59	124.8	94.6	82.6	76.0	64.5	49.9	44.3	39.9	33.3
62	118.7	90.0	78.6	72.3	61.4	47.5	42.2	38.0	31.6
65	113.3	85.9	74.9	69.0	58.5	45.3	40.2	36.2	30.2
68	108.3	82.1	71.6	65.9	56.0	43.3	38.5	34.6	28.9
71	103.7	78.6	68.6	63.2	53.6	41.5	36.8	33.2	27.6
74	99.5	75.4	65.8	60.6	51.4	39.8	35.4	31.8	26.5
77	95.6	72.5	63.3	58.2	49.4	38.2	34.0	30.6	25.5
80	92.0	69.8	60.9	56.1	47.6	36.8	32.7	29.4	24.5
83	88.7	67.2	58.7	54.0	45.8	35.5	31.5	28.4	23.6
86	85.6	64.9	56.6	52.1	44.2	34.2	30.4	27.4	22.8
89	82.7	62.7	54.7	50.4	42.8	33.1	29.4	26.5	22.0
92	80.0	60.7	52.9	48.7	41.4	32.0	28.4	25.6	21.3
95	77.5	58.7	51.3	47.2	40.1	31.0	27.5	24.8	20.7
98	75.1	56.9	49.7	45.8	38.8	30.0	26.7	24.0	20.0
101	72.9	55.3	48.2	44.4	37.7	29.1	25.9	23.3	19.4
104	70.8	53.7	46.8	43.1	36.6	28.3	25.2	22.6	18.9

E-C4-N=4-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/8" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	196.2	174.4	156.0	108.3
23	200.0	200.0	200.0	200.0	200.0	170.6	151.7	135.6	94.2
26	200.0	200.0	200.0	200.0	195.1	150.9	134.2	120.0	83.3
29	200.0	200.0	200.0	200.0	174.9	135.3	120.3	107.6	74.7
32	200.0	200.0	200.0	186.9	158.5	122.6	109.0	97.5	67.7
35	200.0	200.0	185.6	170.8	145.0	112.1	99.7	89.1	61.9
38	200.0	195.8	170.9	157.4	133.5	103.3	91.8	82.1	57.0
41	200.0	181.5	158.4	145.8	123.7	95.7	85.1	76.1	52.8
44	200.0	169.1	147.6	135.9	115.3	89.2	79.3	70.9	49.2
47	200.0	158.3	138.2	127.2	107.9	83.5	74.2	66.4	46.1
50	196.3	148.8	129.9	119.6	101.5	78.5	69.8	62.4	43.3
53	185.2	140.4	122.5	112.8	95.7	74.0	65.8	58.9	40.9
56	175.3	132.9	116.0	106.8	90.6	70.1	62.3	55.7	38.7
59	166.4	126.1	110.1	101.3	86.0	66.5	59.1	52.9	36.7
62	158.3	120.0	104.8	96.4	81.8	63.3	56.3	50.3	34.9
65	151.0	114.5	99.9	92.0	78.1	60.4	53.7	48.0	33.3
68	144.4	109.4	95.5	87.9	74.6	57.7	51.3	45.9	31.9
71	138.3	104.8	91.5	84.2	71.5	55.3	49.1	43.9	30.5
74	132.7	100.6	87.8	80.8	68.6	53.0	47.1	42.2	29.3
77	127.5	96.6	84.3	77.7	65.9	51.0	45.3	40.5	28.1
80	122.7	93.0	81.2	74.7	63.4	49.1	43.6	39.0	27.1
83	118.3	89.7	78.3	72.0	61.1	47.3	42.0	37.6	26.1
86	114.1	86.5	75.5	69.5	59.0	45.6	40.6	36.3	25.2
89	110.3	83.6	73.0	67.2	57.0	44.1	39.2	35.0	24.3
92	106.7	80.9	70.6	65.0	55.1	42.7	37.9	33.9	23.5
95	103.3	78.3	68.4	62.9	53.4	41.3	36.7	32.8	22.8
98	100.2	75.9	66.3	61.0	51.8	40.0	35.6	31.8	22.1
101	97.2	73.7	64.3	59.2	50.2	38.9	34.5	30.9	21.4
104	94.4	71.5	62.5	57.5	48.8	37.7	33.5	30.0	20.8

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1102.01
Expiration Date 01/24/2018
By *Manuel Perez*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date 01/24/2018
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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FAX: (305) 558-6865
www.generalimpact.com

DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 58 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP C4

F-C4-N=4-STEEL/ALUM.

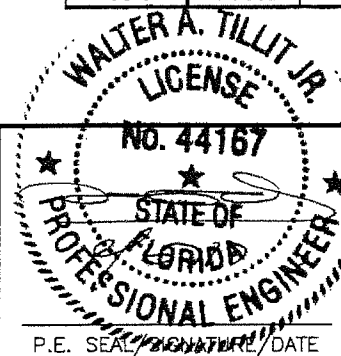
A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (4) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	196.2	174.4	157.0	130.8
23	200.0	200.0	200.0	200.0	200.0	170.6	151.7	136.5	113.7
26	200.0	200.0	200.0	200.0	195.1	150.9	134.2	120.7	100.6
29	200.0	200.0	200.0	200.0	174.9	135.3	120.3	108.2	90.2
32	200.0	200.0	200.0	186.9	158.5	122.6	109.0	98.1	81.8
35	200.0	200.0	185.6	170.8	145.0	112.1	99.7	89.7	74.7
38	200.0	195.8	170.9	157.4	133.5	103.3	91.8	82.6	68.8
41	200.0	181.5	158.4	145.8	123.7	95.7	85.1	76.6	63.8
44	200.0	169.1	147.6	135.9	115.3	89.2	79.3	71.3	59.5
47	200.0	158.3	138.2	127.2	107.9	83.5	74.2	66.8	55.7
50	196.3	148.8	129.9	119.6	101.5	78.5	69.8	62.8	52.3
53	185.2	140.4	122.5	112.8	95.7	74.0	65.8	59.2	49.4
56	175.3	132.9	116.0	106.8	90.6	70.1	62.3	56.1	46.7
59	166.4	126.1	110.1	101.3	86.0	66.5	59.1	53.2	44.3
62	158.3	120.0	104.8	96.4	81.8	63.3	56.3	50.6	42.2
65	151.0	114.5	99.9	92.0	78.1	60.4	53.7	48.3	40.2
68	144.4	109.4	95.5	87.9	74.6	57.7	51.3	46.2	38.5
71	138.3	104.8	91.5	84.2	71.5	55.3	49.1	44.2	36.8
74	132.7	100.6	87.8	80.8	68.6	53.0	47.1	42.4	35.4
77	127.5	96.6	84.3	77.7	65.9	51.0	45.3	40.8	34.0
80	122.7	93.0	81.2	74.7	63.4	49.1	43.6	39.2	32.7
83	118.3	89.7	78.3	72.0	61.1	47.3	42.0	37.8	31.5
86	114.1	86.5	75.5	69.5	59.0	45.6	40.6	36.5	30.4
89	110.3	83.6	73.0	67.2	57.0	44.1	39.2	35.3	29.4
92	106.7	80.9	70.6	65.0	55.1	42.7	37.9	34.1	28.4
95	103.3	78.3	68.4	62.9	53.4	41.3	36.7	33.0	27.5
98	100.2	75.9	66.3	61.0	51.8	40.0	35.6	32.0	26.7
101	97.2	73.7	64.3	59.2	50.2	38.9	34.5	31.1	25.9
104	94.4	71.5	62.5	57.5	48.8	37.7	33.5	30.2	25.2

F-C4-N=5-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 2"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (5) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	196.2	163.5
23	200.0	200.0	200.0	200.0	200.0	200.0	189.6	170.6	142.2
26	200.0	200.0	200.0	200.0	200.0	188.7	167.7	150.9	125.8
29	200.0	200.0	200.0	200.0	200.0	169.1	150.3	135.3	112.8
32	200.0	200.0	200.0	200.0	198.2	153.3	136.3	122.6	102.2
35	200.0	200.0	200.0	200.0	181.2	140.1	124.6	112.1	93.4
38	200.0	200.0	200.0	196.7	166.9	129.1	114.7	103.3	86.1
41	200.0	200.0	198.0	182.3	154.7	119.6	106.3	95.7	79.8
44	200.0	200.0	184.5	169.9	144.1	111.5	99.1	89.2	74.3
47	200.0	197.9	172.7	159.0	134.9	104.4	92.8	83.5	69.6
50	200.0	186.0	162.4	149.5	126.8	98.1	87.2	78.5	65.4
53	200.0	175.5	153.2	141.0	119.7	92.5	82.3	74.0	61.7
56	200.0	166.1	145.0	133.5	113.2	87.6	77.9	70.1	58.4
59	200.0	157.6	137.6	126.7	107.5	83.1	73.9	66.5	55.4
62	197.9	150.0	130.9	120.6	102.3	79.1	70.3	63.3	52.7
65	188.8	143.1	124.9	115.0	97.6	75.5	67.1	60.4	50.3
68	180.4	136.8	119.4	109.9	93.3	72.1	64.1	57.7	48.1
71	172.8	131.0	114.3	105.3	89.3	69.1	61.4	55.3	46.1
74	165.8	125.7	109.7	101.0	85.7	66.3	58.9	53.0	44.2
77	159.4	120.8	105.4	97.1	82.4	63.7	56.6	51.0	42.5
80	153.4	116.3	101.5	93.4	79.3	61.3	54.5	49.1	40.9
83	147.8	112.1	97.8	90.1	76.4	59.1	52.5	47.3	39.4
86	142.7	108.2	94.4	86.9	73.7	57.0	50.7	45.6	38.0
89	137.9	104.5	91.2	84.0	71.3	55.1	49.0	44.1	36.7
92	133.4	101.1	88.2	81.2	68.9	53.3	47.4	42.7	35.5
95	129.2	97.9	85.5	78.7	66.8	51.6	45.9	41.3	34.4
98	125.2	94.9	82.8	76.3	64.7	50.1	44.5	40.0	33.4
101	121.5	92.1	80.4	74.0	62.8	48.6	43.2	38.9	32.4
104	118.0	89.4	78.1	71.9	61.0	47.2	41.9	37.7	31.4

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date Oct. 24, 2023
By *Manuel Diaz*
Miami Dade Product Council

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-1102.14
Expiration Date Oct. 24, 2018
By *Manuel Diaz*
Miami Dade Product Council
MIAMI DADE COUNTY



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EB-0006719
WALTER A. TILLIT Jr., P.E.
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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PHONE: (305) 558-8103
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www.generalimpact.com

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		

DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 59 OF 60

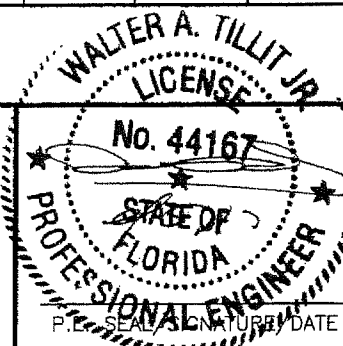
CLIPPED INTERIOR & END MULLIONS CHARTS INTO STEEL/ALUMINUM SUBSTRATE CONNECTED W/ CLIP C4

I-C4-N=5-STEEL/ALUM.

A.S.D. DESIGN PRESSURE RATING (p.s.f.) FOR 4"x6"x1/4" MULLION WITH CLIPS CONNECTED WITH (5) 1/4" TEK SCREWS EACH END OF MULLION									
Tributary Width (b)	Mullion Length (L)								
	38.375	50.625	58	63	74.25	96	108	120	144
20	200.0	200.0	200.0	200.0	200.0	200.0	200.0	196.2	163.5
23	200.0	200.0	200.0	200.0	200.0	200.0	189.6	170.6	142.2
26	200.0	200.0	200.0	200.0	200.0	188.7	167.7	150.9	125.8
29	200.0	200.0	200.0	200.0	200.0	169.1	150.3	135.3	112.8
32	200.0	200.0	200.0	200.0	198.2	153.3	136.3	122.6	102.2
35	200.0	200.0	200.0	200.0	181.2	140.1	124.6	112.1	93.4
38	200.0	200.0	200.0	196.7	166.9	129.1	114.7	103.3	86.1
41	200.0	200.0	198.0	182.3	154.7	119.6	106.3	95.7	79.8
44	200.0	200.0	184.5	169.9	144.1	111.5	99.1	89.2	74.3
47	200.0	197.9	172.7	159.0	134.9	104.4	92.8	83.5	69.6
50	200.0	186.0	162.4	149.5	126.8	98.1	87.2	78.5	65.4
53	200.0	175.5	153.2	141.0	119.7	92.5	82.3	74.0	61.7
56	200.0	166.1	145.0	133.5	113.2	87.6	77.9	70.1	58.4
59	200.0	157.6	137.6	126.7	107.5	83.1	73.9	66.5	55.4
62	197.9	150.0	130.9	120.6	102.3	79.1	70.3	63.3	52.7
65	188.8	143.1	124.9	115.0	97.6	75.5	67.1	60.4	50.3
68	180.4	136.8	119.4	109.9	93.3	72.1	64.1	57.7	48.1
71	172.8	131.0	114.3	105.3	89.3	69.1	61.4	55.3	46.1
74	165.8	125.7	109.7	101.0	85.7	66.3	58.9	53.0	44.2
77	159.4	120.8	105.4	97.1	82.4	63.7	56.6	51.0	42.5
80	153.4	116.3	101.5	93.4	79.3	61.3	54.5	49.1	40.9
83	147.8	112.1	97.8	90.1	76.4	59.1	52.5	47.3	39.4
86	142.7	108.2	94.4	86.9	73.7	57.0	50.7	45.6	38.0
89	137.9	104.5	91.2	84.0	71.3	55.1	49.0	44.1	36.7
92	133.4	101.1	88.2	81.2	68.9	53.3	47.4	42.7	35.5
95	129.2	97.9	85.5	78.7	66.8	51.6	45.9	41.3	34.4
98	125.2	94.9	82.8	76.3	64.7	50.1	44.5	40.0	33.4
101	121.5	92.1	80.4	74.0	62.8	48.6	43.2	38.9	32.4
104	118.0	89.4	78.1	71.9	61.0	47.2	41.9	37.7	31.4

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 18-1108.01
Expiration Date 09.24.2013
By *Walter A. Tillit Jr.*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code 17-1102.14
Acceptance No. 09.24.2018
By *Walter A. Tillit Jr.*
Miami Dade Product Control
MIAMI DADE COUNTY



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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS



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DRAWN BY:
L.C.

08/25/17
DATE

17-249

DRAWING No

SHEET 60 OF 60

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-158	08/25/17	3		
2			4		