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

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

NOTICE OF ACCEPTANCE (NOA)

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. **15-158**, 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 06/04/15, with revision #1 dated 06/04/15, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/ series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/ or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

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

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA No. 13-0514.18** 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.**

MIAMI-DADE COUNTY APPROVED

9/15/15

NOA No. 15-0622.13
Expiration Date: October 24, 2018
Approval Date: September 24 2015

General Impact Glass & Windows Corp.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
   (Submitted under previous NOA No. 13-0514.18)
2. Drawing No **15-158**, 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 06/04/15, with revision #1 dated 06/04/15, 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 previous NOA No. 13-0514.18)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC-2010**, prepared by Tilteco, Inc., dated 05/12/13, signed and sealed by Walter A. Tillit, Jr., P.E.
   (Submitted under previous NOA No. 13-0514.18)
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.

Manuel Perez, P.E.
Product Control Examiner
NOA No. 15-0622.13
Expiration Date: October 24, 2018
Approval Date: September 24 2015

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 5th Edition (2014)**, dated June 11, 2015, issued by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.
2. Statement letter of no financial interest, dated May 13, 2013, signed and sealed by Walter A. Tillit, Jr., P.E.
   (Submitted under previous NOA No. 13-0514.18)

G. OTHERS

1. Notice of Acceptance No. **13-0514.18**, issued to R.C. General Impact Glass & Windows Corp. for their Series "14000 HMMS" Clipped Aluminum Tube Mullion - L.M.I., approved on 10/24/13 and expiring on 10/24/18.

Manuel Perez, P.E.
Product Control Examiner
NOA No. 15-0622.13
Expiration Date: October 24, 2018
Approval Date: September 24 2015

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 **2014** (5th 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 2010 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 Fy= 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" ø 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"ø 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" ø 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. Fy=33 ksi, MIN. THICKNESS= 0.062") AND TO EXISTING ALUMINUM (MIN. Fy=25 ksi, MIN. THICKNESS= 0.125")
- 1/4" TEK SCREWS W/ 1/2" MIN. EMBEDMENT, AS MANUFACTURED BY ITW/BUILDEX 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

INDEX

SHEET #	DESCRIPTION
1	GENERAL NOTES AND INDEX
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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

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 15-0622.13
Expiration Date Oct 04, 2018
By Manuel Perez
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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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

GENERAL IMPACT GLASS & WINDOWS The Clear Solution
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
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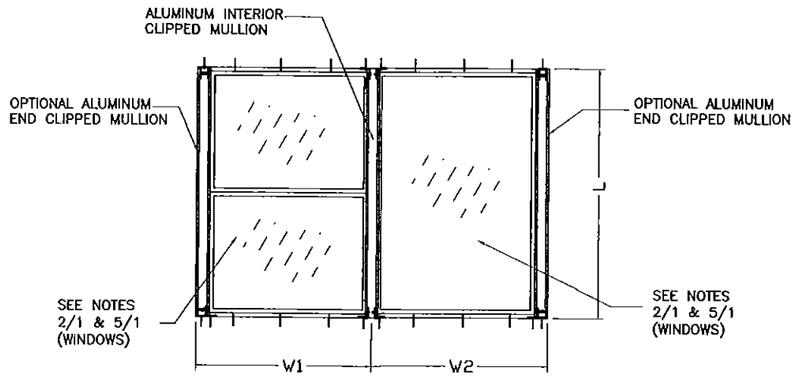
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 1 OF 60

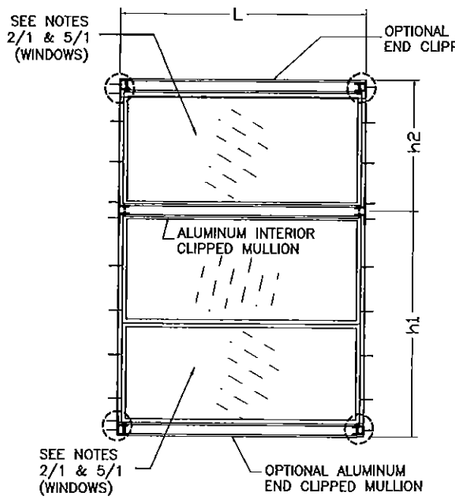


L= MULLION SPAN (SEE SCHEDULE)

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

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

INSTALLATION ELEVATION W/ VERTICAL INTERIOR AND OPTIONAL END CLIPPED MULLIONS



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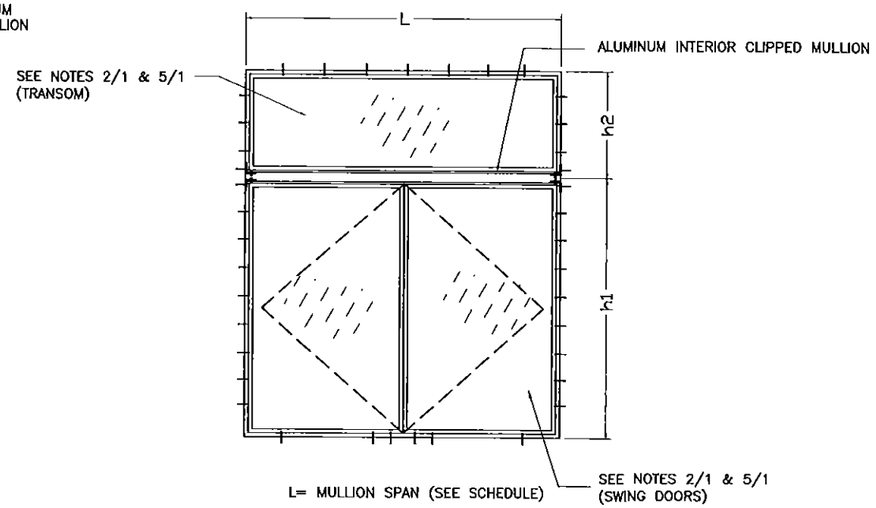
INSTALLATION ELEVATION W/ HORIZONTAL INTERIOR AND OPTIONAL END CLIPPED MULLIONS



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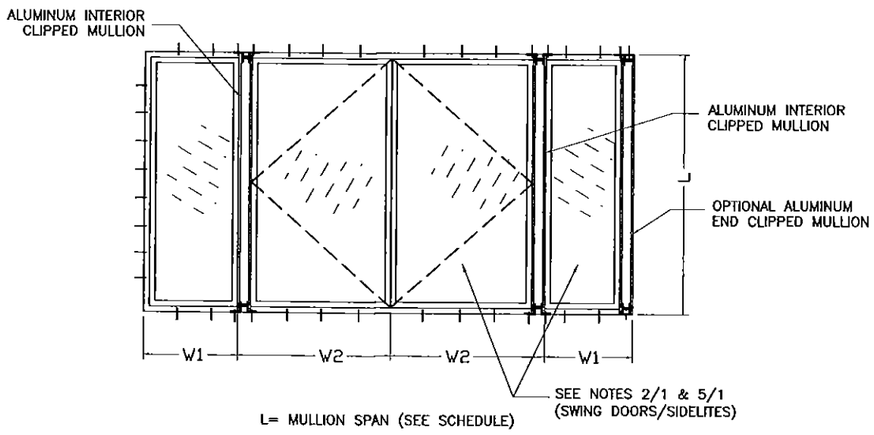

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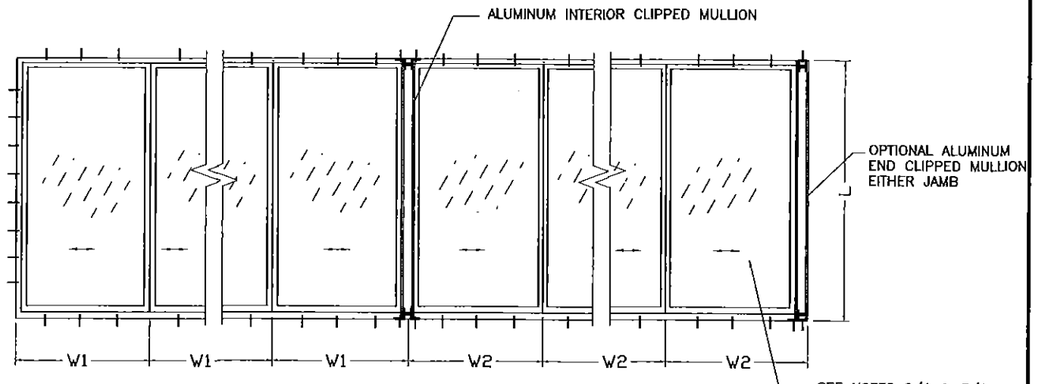

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TRIBUTARY WIDTH (b) = $\frac{W1}{2}$ OR $\frac{W2}{2}$ FOR END MULLIONS

INSTALLATION ELEVATION W/ VERTICAL INTERIOR AND OPTIONAL END CLIPPED MULLIONS

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date ~~OCT. 24, 2018~~
By Manuel Perez
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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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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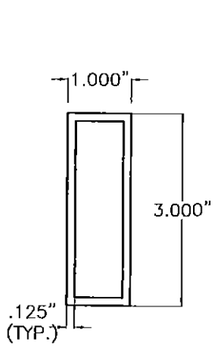
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

CLIPPED INTERIOR AND END MULLIONS (EXCEPT AS NOTED)



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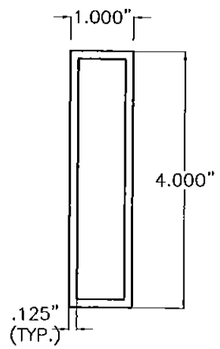
6063-T6 ALLOY



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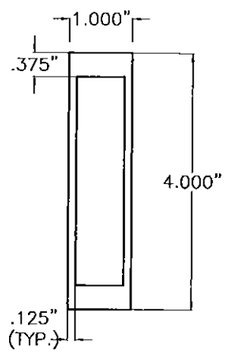

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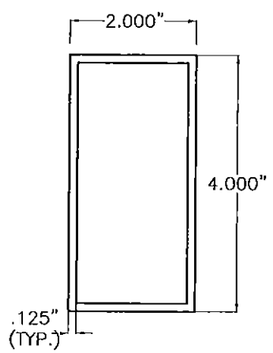

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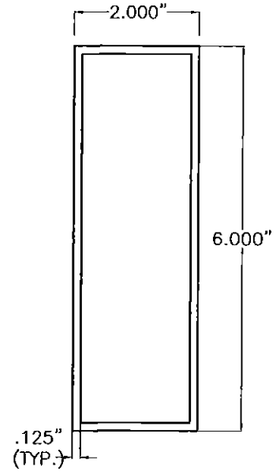

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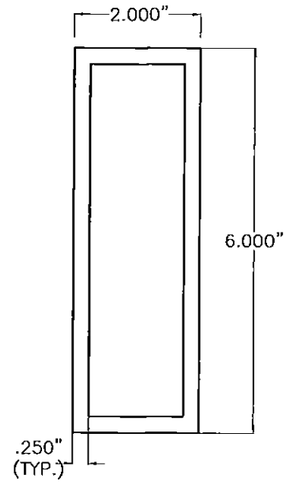
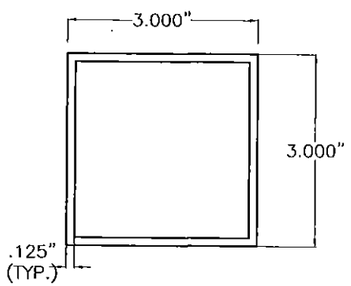


Ⓕ 2"x6"x1/4"
6063-T6 ALLOY



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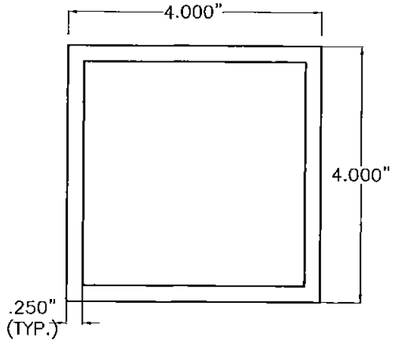
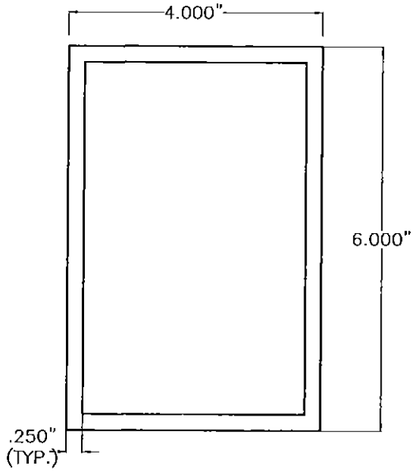
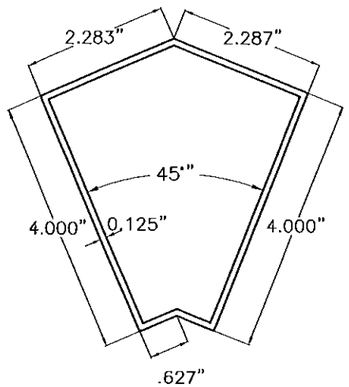
6063-T6 ALLOY



Ⓗ 4"x4"x1/4"
6063-T6 ALLOY



Ⓘ 4"x6"x1/4"
6063-T6 ALLOY



Ⓙ 45° VERTICAL/INTERIOR MULLION ONLY
6063-T6 ALLOY

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
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Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
PRINT NAME SIGNATURE DATE

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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

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS

GENERAL IMPACT GLASS & WINDOWS The Clear Solution
290 WEST 78 ROAD
HIALEAH, FL. 33014
PHONE: (305) 558-8103
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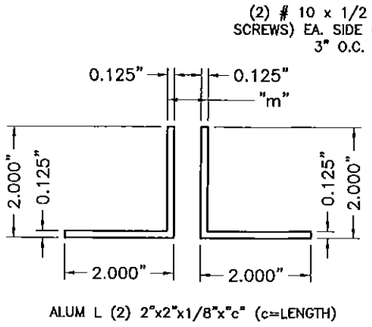
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

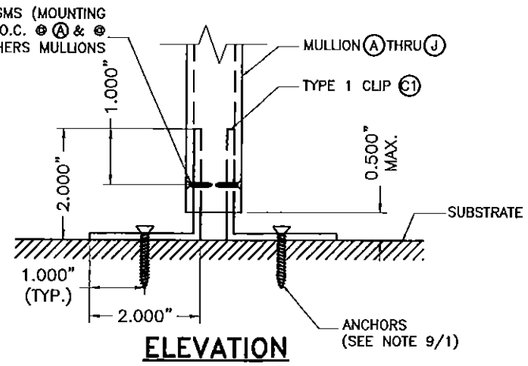
DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No



ALUM L (2) 2"x2"x1/8"x"c" (c=LENGTH)

(C1) TYPE 1 CLIP

6063-T6 ALLOY

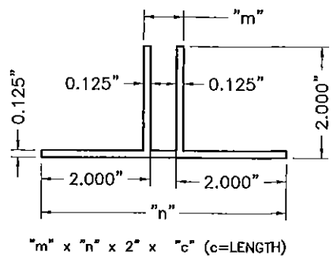


ELEVATION

OPTION W/ CLIP (C1)

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

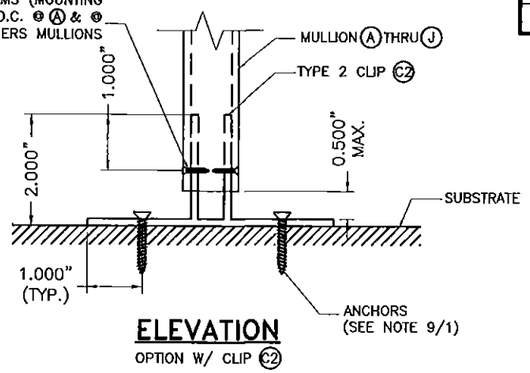
NOTE 1: USE ALWAYS AT INTERIOR MULLIONS (SEE CHARTS SHEETS 7 THRU 29)
NOTE 2: USE ONLY AT END MULLIONS (SEE CHARTS SHEETS 30 THRU 40)
NOTE 3: USE AT END OR INTERIOR MULLIONS (SEE CHARTS SHEETS 41 THRU 60)



"m" x "n" x 2" x "c" (c=LENGTH)

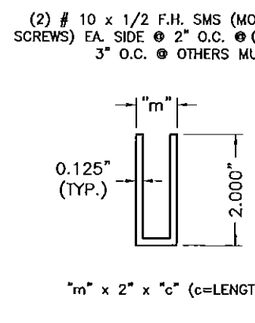
(C2) TYPE 2 CLIP

6063-T6 ALLOY



ELEVATION

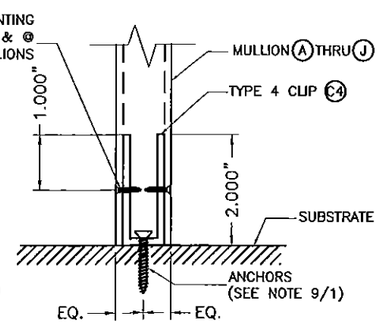
OPTION W/ CLIP (C2)



"m" x 2" x "c" (c=LENGTH)

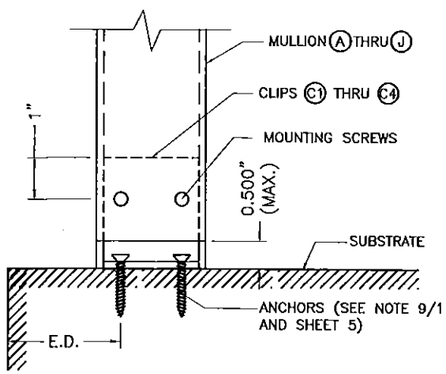
(C4) TYPE 4 CLIP

6063-T6 ALLOY

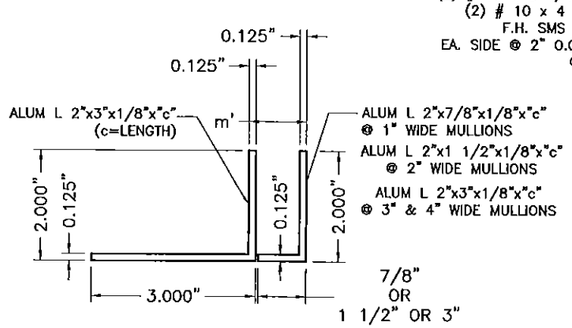


ELEVATION

OPTION W/ CLIP (C4)

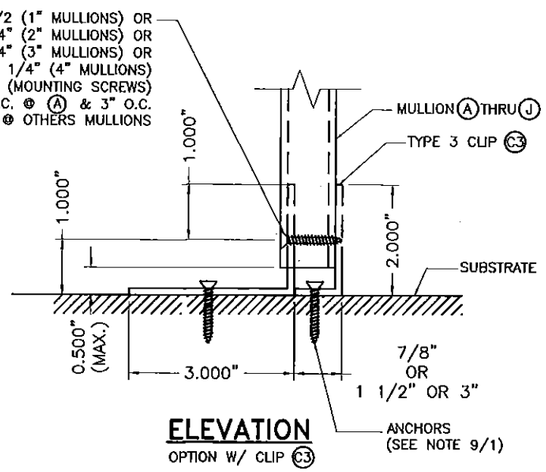


TYPICAL SIDE VIEW & OF CLIPS



(C3) TYPE 3 CLIP

6063-T6 ALLOY



ELEVATION

OPTION W/ CLIP (C3)

CLIP TYPES FOR MULLION CONNECTIONS TO EXISTING STRUCTURE AND TYPICAL ELEVATIONS

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 15-0622.13 Expiration Date Oct. 24, 2018
By Manuel Perez Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
6/1/15 DATE

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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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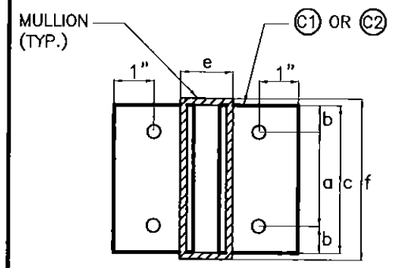
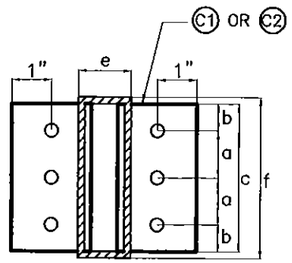
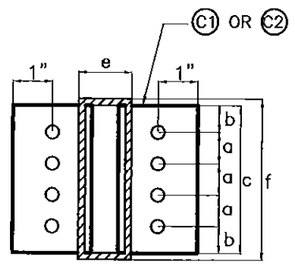
06/04/15 DATE
15-158 DRAWING No



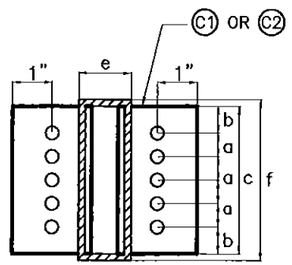
N=4 ANCHORS @ INTERIOR MULLION



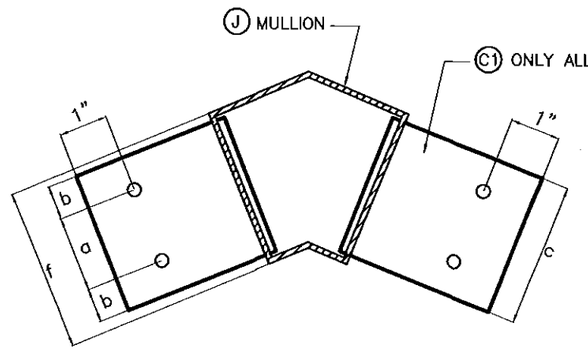
N=6 ANCHORS @ INTERIOR MULLION



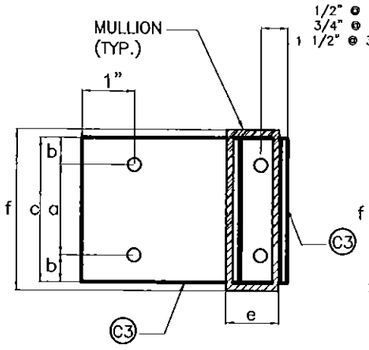
N=8 ANCHORS @ INTERIOR MULLION



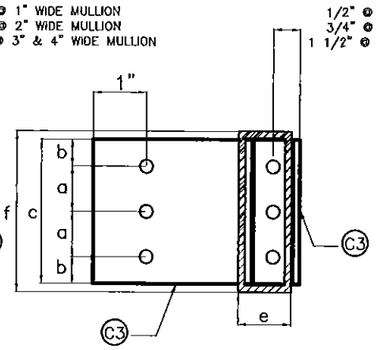
N=10 ANCHORS @ INTERIOR MULLION



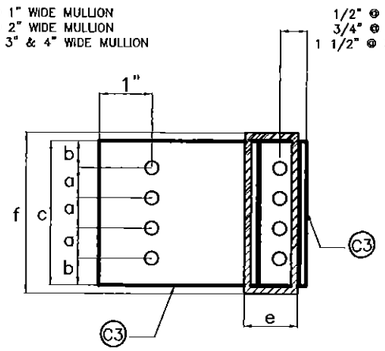
45° VERTICAL/INTERIOR (J) MULLION W/ N=4 ANCHORS & (C1) CLIP



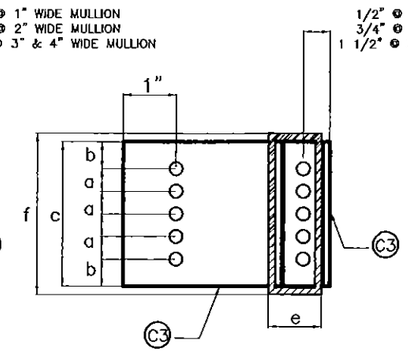
N=4 ANCHORS ONLY END MULLION (OPTION 1)



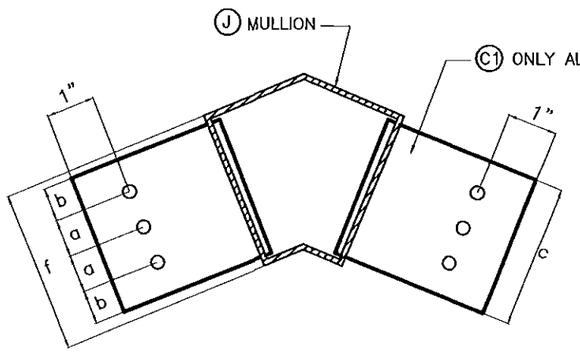
N=6 ANCHORS ONLY END MULLION (OPTION 1)



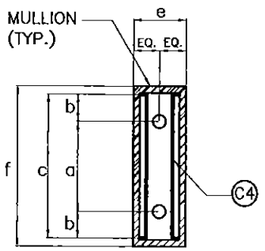
N=8 ANCHORS ONLY END MULLION (OPTION 1)



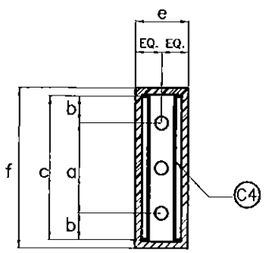
N=10 ANCHORS ONLY END MULLION (OPTION 1)



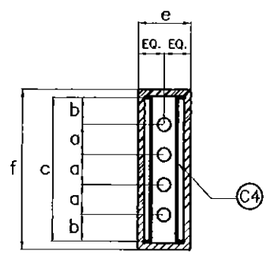
45° VERTICAL/INTERIOR (J) MULLION W/ 6 ANCHORS & (C1) CLIP



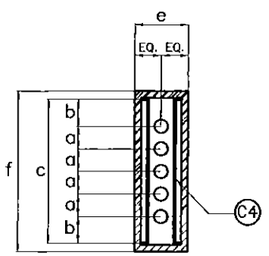
N=2 ANCHORS @ INTERIOR OR END MULLION (OPTION 2)



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)

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date 01.24.2018
By Manuel Perez
Miami-Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 6/1/15 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL / SIGNATURE / DATE

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TILLIT TESTING & ENGINEERING COMPANY
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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 APPROVED as complying with the Florida Building Code Acceptance No 15-0622.13 Expiration Date 02.04.2018 By Manuel Perez Miami Dade Product Control MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROFESSIONAL SEAL SIGNATURE/DATE

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DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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

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CLIPPED ALUMINUM MULLIONS

GENERAL IMPACT GLASS & WINDOWS
The Clear Solution
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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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
36	E-C3-N=4-CONC	E	C3	4	CONC
	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
37	H-C3-N=4-CONC	H	C3	4	CONC
	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 15.0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 6C 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

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Expiration Date Oct. 14, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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" ULTRACONS EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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" ULTRACONS EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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
ns complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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
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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SERIES 14000 HMMS IMPACT RESISTANT
CLIPPED ALUMINUM MULLIONS

GENERAL IMPACT GLASS & WINDOWS The Clear Solution
290 WEST 78 ROAD
HIALEAH, FL. 33014
PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 9 OF 60

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date 03.24.2018
By
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
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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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

GENERAL IMPACT CLASS & WINDOWS The Clear Solution
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 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 (6) 1/4" ULTRACONS EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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 15-0622.13
Expiration Date Oct. 24, 2018
By 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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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 15-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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"ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION

Tributary	Mullion Length (L)			
Width (b)	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"ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION

Tributary	Mullion Length (L)					
Width (b)	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"ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION

Tributary	Mullion Length (L)					
Width (b)	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 15-0622.13
Expiration Date 02.24.2018
By
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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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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 13 OF 60

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 14 OF 60

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"ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary	Mullion Length (L)								
Width (b)	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"ø ULTRACONS IN CONCRETE BLOCK EACH END OF MULLION									
Tributary	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By
Miami Dade Product Control
MIAMI DADE COUNTY

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

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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

GENERAL IMPACT GLASS & WINDOWS
The Clear Solution
290 WEST 78 ROAD
HIALEAH, FL. 33014
PHONE: (305) 558-8103
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	08/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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"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	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"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	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By
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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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
8355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, Fl 33166
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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: F.R.L.

GENERAL IMPACT GLASS & WINDOWS The Clear Solution
290 WEST 78 ROAD
HIALEAH, FL. 33014
PHONE: (305) 558-8103
FAX: (305) 558-6665
www.generalimpact.com

06/04/15 DATE

15-158 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	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	Mullion Length (L)					
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami-Dade Product Control

MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROFESSIONAL SIGNATURE & DATE

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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EB-0006719
WALTER A. TILLIT Jr., P.E.
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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 15-0622.13
Expiration Date 03.24.2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
6/4/2015
P.E. SIGNATURE & DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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"ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary	Mullion Length (L)								
Width (b)	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"ø ULTRACONS IN CONCRETE EACH END OF MULLION									
Tributary	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SIGNATURE AND DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date 6.1.04.2018
By Manuel Perez
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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EB-0006719
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By
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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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date OCT. 24, 2018
By Manuel Perez
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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15.0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
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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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)								
Width (b)	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 15-0622.13
Expiration Date Oct. 14, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 6/1/15 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL / SIGNATURE / DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 15-0622.13 Expiration Date Oct. 04, 2018 By Manuel Perez Miami-Dade Product Control

MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

REAL SIGNATURE AND SEAL

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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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	DLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
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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EB-0006719
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FLORIDA Lic. 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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

SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS

GENERAL IMPACT GLASS & WINDOWS
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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15.0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
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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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
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Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15.0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control

MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

SIGNATURE & DATE

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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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"ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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"ø ULTRACONS IN CONCRETE						
Tributary	Mullion Length (L)					
Width (b)	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	73.7	62.6	39.7
53	114.2	86.6	75.6	[illegible]	[illegible]	37.5

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 6/1/15 STATE OF FLORIDA PROFESSIONAL ENGINEER
P.E. SEAL, SIGNATURE AND DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	QLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct 24 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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"x8"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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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Phone : (305)871-1530 . Fax : (305)871-1531
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	61.3	37.5

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	Mullion Length (L)								
Width (b)	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	188.7
29	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE NO. 44167 6/17/15 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNATURE / DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)								
Width (b)	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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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

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By
Miami Dade Product Control
MIAMI DADE COUNTY

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 6/1/15 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL/SIGNATURE & DATE

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TILLIT TESTING & ENGINEERING COMPANY
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date 03.27.2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date OCT. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)								
Width (b)	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	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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EB-0006719
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)								
Width (b)	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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0602.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami-Dade Product Control

MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER SIGNATURE AND DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
SIGNATURE DATE 6/1/15

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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 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

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

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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 47 OF 60

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	Mullion Length (L)								
Width (b)	38.375	50.625	58	63	74.25	96	108	120	144
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	Mullion Length (L)								
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami-Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
12/12/15
P.E. SIGNATURE & DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)								
Width (b)	38.375	50.625	58	63	74.25	96	108	120	144
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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 15-0622.13
Expiration Date Oct. 24, 2018
By 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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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: F.R.L.

06/04/15 DATE

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15-158 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

SHEET 50 OF 60

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"ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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"ø ULTRACONS IN CONCRETE EACH END OF MULLION						
Tributary	Mullion Length (L)					
Width (b)	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 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
PROFESSIONAL SIGNATURE AND SEAL

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 REVISED
as complying with the Florida Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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.
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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

GENERAL IMPACT GLASS & WINDOWS The Clear Solution
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 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 15-0622.13
Expiration Date Oct. 04, 2018
By Manuel Perez
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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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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	164.6	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 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE NO. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
P.E. REGISTRATION NUMBER DATE

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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	Mullion Length (L)			
Width (b)	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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 14, 2018
By Manuel Perez
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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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 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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 REVISED
as complying with the Floride
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER

P.E. SIGNATURE & SEAL

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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
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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	Mullion Length (L)					
Width (b)	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	Mullion Length (L)					
Width (b)	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

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
Miami Dade Product Control
MIAMI DADE COUNTY

WALTER A. TILLIT JR. LICENSE No. 44167 STATE OF FLORIDA PROFESSIONAL ENGINEER
6/4/15
SEAL, SIGNATURE & DATE

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TILLIT TESTING & ENGINEERING COMPANY
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EB-0006719
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SERIES 14000 HMMS IMPACT RESISTANT CLIPPED ALUMINUM MULLIONS

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The Clear Solution
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 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 15-0622.13
Expiration Date Oct. 24, 2018
By Manuel Perez
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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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 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No

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 15-0622.13
Expiration Date Oct. 24, 2018
By
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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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 13-016	06/04/15	3		
2			4		

DRAWN BY: F.R.L.

06/04/15 DATE

15-158 DRAWING No

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 REVISED
as complying with the Florida
Building Code
Acceptance No 15-0622.13
Expiration Date OCT. 24, 2018
By Manuel Perez
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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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 13-018	06/04/15	3		
2			4		

DRAWN BY: F.R.L.
06/04/15 DATE
15-158 DRAWING No
SHEET 60 OF 60