



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #

FL5012-R22

Application Type

Revision

FL5012.4

Code Version

2020

PW 5500

Application Status

Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments

Archived



Product Manufacturer

PGT Industries

Address/Phone/Email

1070 Technology Drive
North Venice, FL 34275
(941) 486-0100 Ext 21140
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative

Lynn Miller, P.E.

Address/Phone/Email

1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Fixed

Compliance Method

Certification Mark or Listing

Certification Agency

Keystone Certifications, Inc.

Validated By

Steven M. Urlich, PE

☒ Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

<u>Standard</u>	<u>Year</u>
AAMA/WDMA/CSA 101/IS2/A440	2011
AAMA/WDMA/CSA 101/IS2/A440	2005
AAMA/WDMA/CSA 101/IS2/A440	2017
ASTM E 1886	2013
ASTM E1886	2005
ASTM E1996	2012
ASTM E283	2004
ASTM E330	2002

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
[FL5012 R22 Equiv AAMA 101-97 and 05 to AAMA 101-17 Equivalency Letter 2020-09-15.pdf](#)
[FL5012 R22 Equiv ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf](#)

Product Approval Method

Method 1 Option A

Date Submitted

10/27/2020

Date Validated

11/03/2020

Date Pending FBC Approval

Date Approved

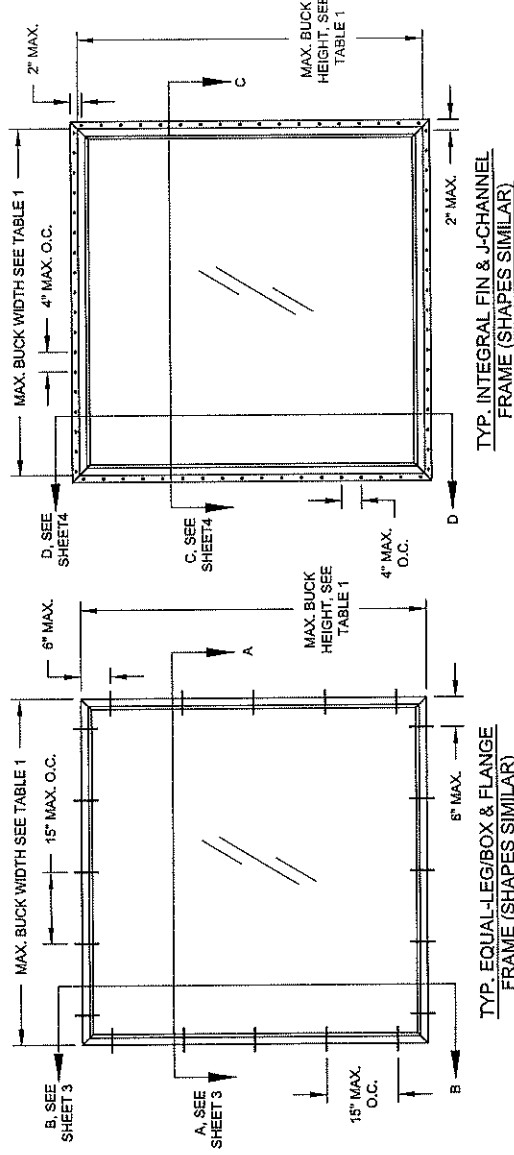
11/13/2020

Summary of Products

FL #	Model, Number or Name	Description
5012.1	PW - 640	Aluminum Fixed Casement
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Cert-FCA640.pdf Quality Assurance Contract Expiration Date 02/25/2022 Installation Instructions FL5012_R22_II_CA640F FPA - Rev A.pdf Verified By: A. Lynn Miller, PE 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_CA640F Evaluation.pdf Created by Independent Third Party: No
5012.2	PW-5420	EnergyVue Vinyl Fixed Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5420-5440.pdf Quality Assurance Contract Expiration Date 07/29/2021 Installation Instructions FL5012_R22_II_PW5420 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5420 Evaluation.pdf Created by Independent Third Party: No
5012.3	PW-5440	EnergyVue Vinyl Fixed Casement Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5420-5440.pdf Quality Assurance Contract Expiration Date 07/29/2021 Installation Instructions FL5012_R22_II_PW5440 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5440 Evaluation.pdf Created by Independent Third Party: No
5012.4	PW-5520	WinGuard Vinyl Fixed Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5520-5540 b.pdf Quality Assurance Contract Expiration Date 06/27/2021 Installation Instructions FL5012_R22_II_PW5520 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012_R22_AE_PW5520 Evaluation.pdf Created by Independent Third Party: No
5012.5	PW-5540	WinGuard Vinyl Fixed Casement Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL5012_R22_C_CAC_Certification - PW5520-5540 b.pdf Quality Assurance Contract Expiration Date 06/27/2021 Installation Instructions FL5012_R22_II_PW5540 FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705

GENERAL NOTES: SERIES 5520
IMPACT RESISTANT, VINYL FIXED WINDOW

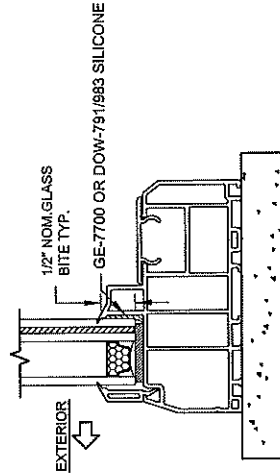
- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- 2) ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER, (EOR) OR ARCHITECT OF RECORD, (AOR).
- 3) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT EMBEDMENT. INSTALLATION ANCHORS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- 4) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, IF OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- 5) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.



SHAPES MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES FOR THAT BLOCK SIZE FROM THE TABLE ON THIS SHEET.

TABLE 1:

Window Buck Size		Design Pressure		Certification (CAR) Number	
Width	Height	(+) psf	(-) psf		
84	54	65.0	65.0	190-281, 1019	
84	54	70.0	70.0	190-284, 1019	
84	72	70.0	70.0	190-279, 1012	
96	63	70.0	70.0	190-283, 1020	
75	48	50.0	50.0	190-280, 1013	
36	72	50.0	50.0	190-282, 1014	



TYP. GLAZING DETAIL

IMPACT RATING	DESIGN PRESSURE RATING
LARGE & SMALL MISSILE	SEE TABLE 1
IMPACT RESISTANT	

COPYRIGHT © 2020
 PGT INDUSTRIES, INC.
 LIMITED LICENSE TO MAKE
 COPIES FOR PERMITTING.
 CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
 N. VENICE, FL 34275 (941) 480-1600

ANTHONY LYNN MILLER
 LICENSE
 No. 58705
 10/26/20
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
 P.E.# 58705

Rev	A	Date	10/21/20
Sheet	2	By	JR
ADDED ANCHORS TO TABLE 2			
Rev		Date	
Sheet	1	By	JR
VINYL PICTURE WINDOW INSTALLATION, LM			
Rev		Date	09/30/11
Sheet	1	By	JR
GENERAL NOTES & ELEVATIONS			
Rev		Date	
Sheet	1	By	JR
PW5520-FPA			

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

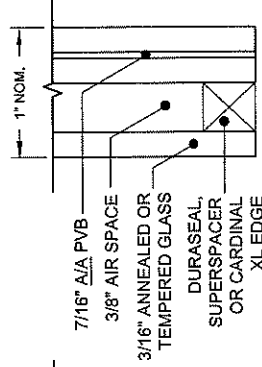
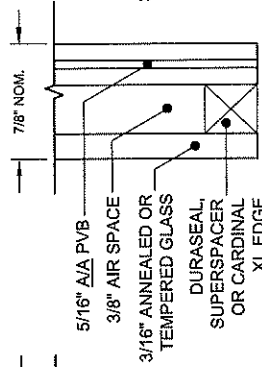
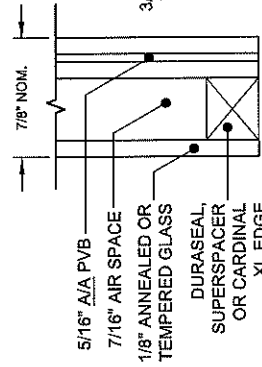
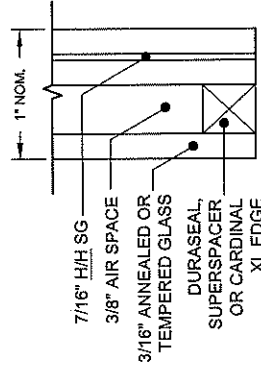
Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0345" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0345" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
3/16" Ultracon Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	Concrete (min. 2.85 ksi)	1"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	Concrete (min. 2.85 ksi)	1"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	Concrete (min. 2.85 ksi)	1"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Crete-Flex (410 S.S.)	Concrete (min. 3.35 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	Concrete (min. 3.275 ksi)	1-1/2"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Aggre-Gator (18-8 S.S.)	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 90.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	3/4"	1-3/8"
2-1/2" x .145" Roofing Nail	Aluminum, 6063-T5	3/8"	0.050"
	Steel Stud, Gr. 33	3/8"	0.0345" (20 Ga.)
	Steel, A36	3/8"	0.050"

ANCHOR NOTES:

- 1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- 2) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.
- 3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



GLAZING TYPES

VISIBLE LIGHT FORMULAS

WIDTH: BUCK WIDTH - 4-5/16"
HEIGHT: BUCK HEIGHT - 4-5/16"

VISIBLE LIGHT WIDTH OR HEIGHT
(ALSO REFERRED TO AS DAYLIGHT
OPENING) IS MEASURED FROM
BEADING TO BEADING.

PVB AND SG INTERLAYERS MANUFACTURED BY: KURARAY AMERICA, INC.

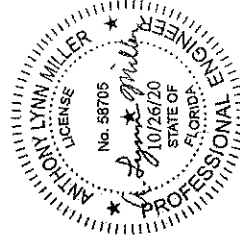
VINYL PICTURE WINDOW INSTALLATION, LM 09/30/11

GLASS/ANCHORS/FRADE OPTIONS J ROSOWSKI

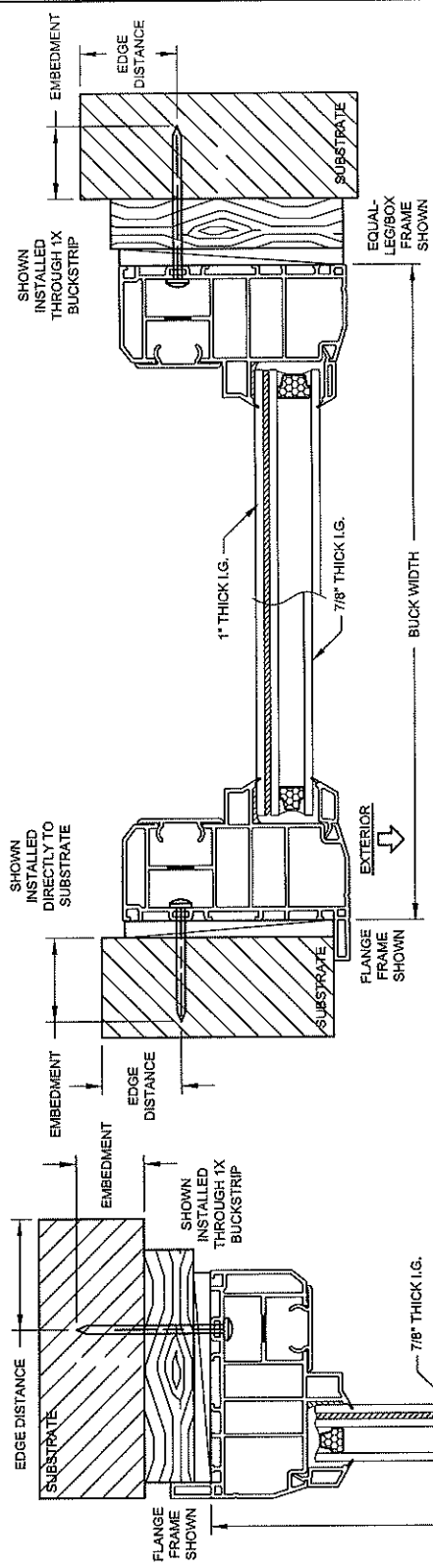
PW5520 2 OF 4 PW5520-FPA A

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296

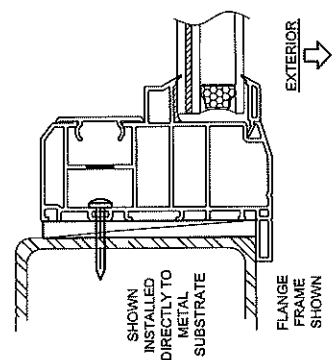
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1600



A. LYNN MILLER, P.E.
P.E.# 58705



HORIZONTAL SECTION A-A



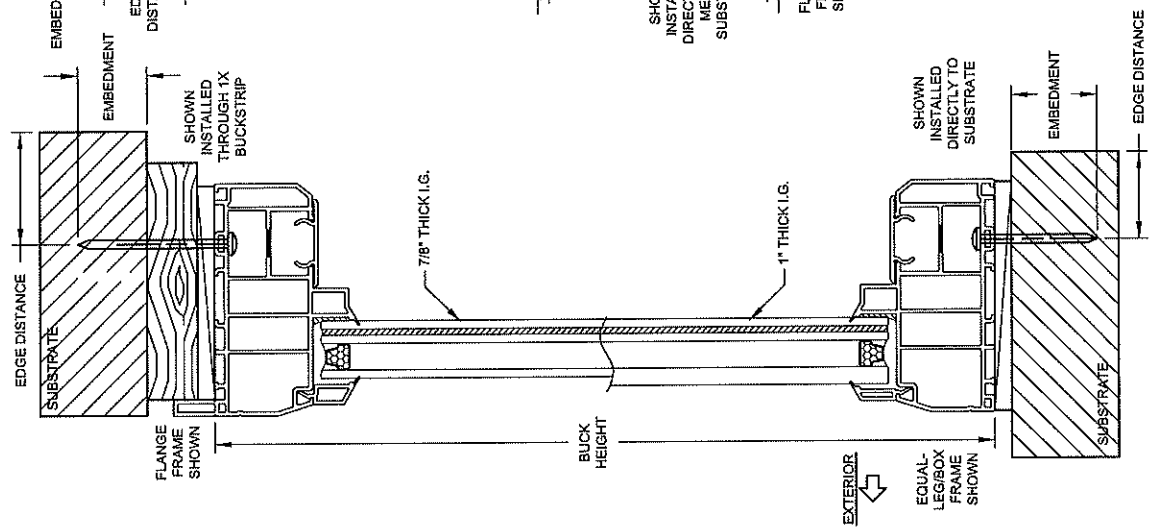
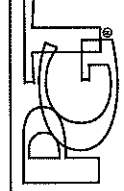
INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

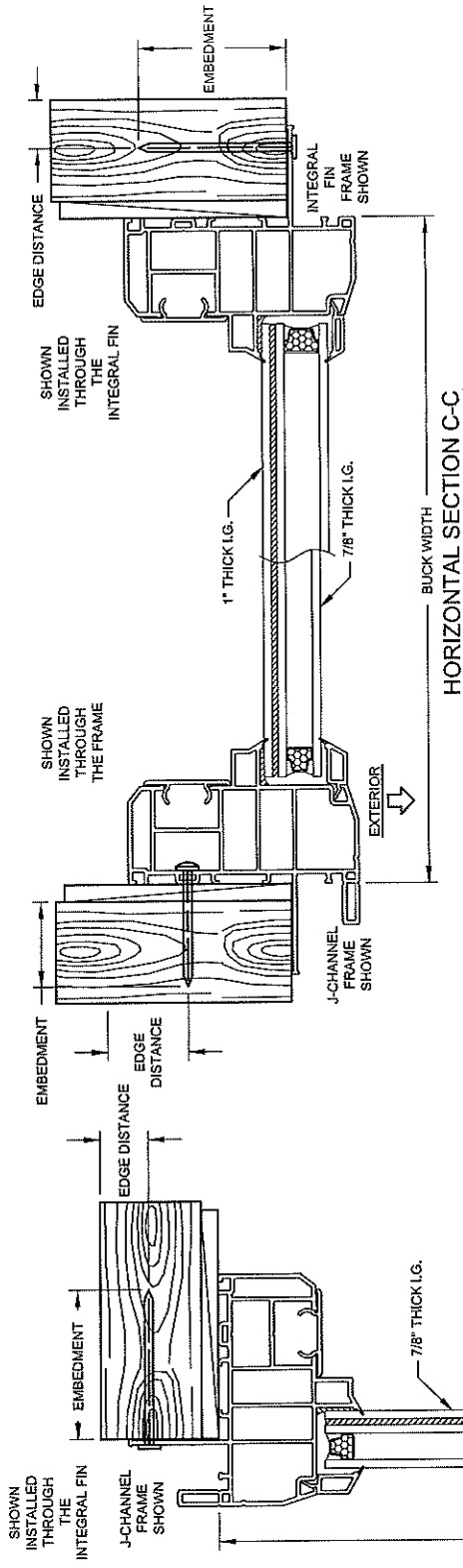
COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING
CERT. OF AUTH. #29298
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1600

ANTHONY LYNN MILLER
LICENSE
No. 58705
10/26/20
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

VINYL PICTURE WINDOW INSTALLATION, LM/		09/30/11
FLANGE/EQUAL-LEG INSTALLATION	J ROSOWSKI	
PW5520	3 OF 4	PW5520-FPA
Sheet	Rev	A

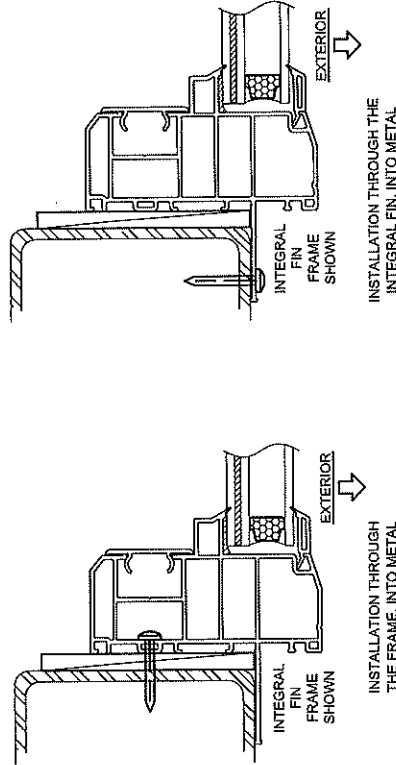


VERTICAL SECTION B-B



INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.



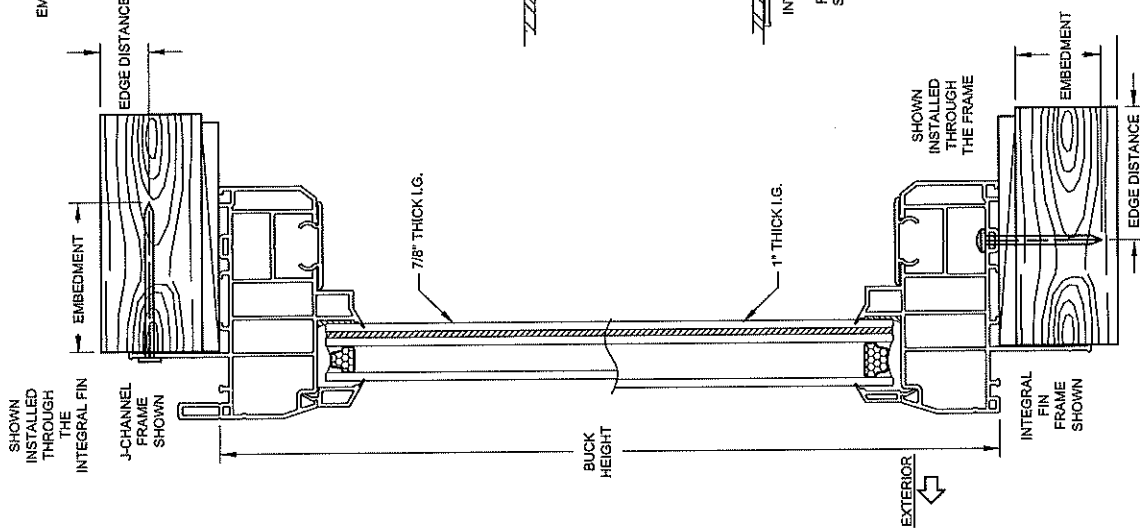
COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34223 (941) 460-1600



A. LYNN MILLER, P.E.
P.E.# 38705

	VINYL PICTURE WINDOW INSTALLATION, LM		09/30/11
	Integral Fin Installation	J ROSOWSKI	
	PW5520	4 OF 4	PW5520-FPA
Series Desc	Sheet	DWG	Rev.



VERTICAL SECTION D-D



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL #	FL261-R13	FL261.1 PGT MULLIONS
Application Type	Affirmation	
Code Version	2020	
Application Status	Approved	

Comments

Archived



Product Manufacturer
Address/Phone/Email

PGT Industries
1070 Technology Drive
North Venice, FL 34275
(941) 486-0100 Ext 21140
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative
Address/Phone/Email

Lynn Miller, P.E.
1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative
Address/Phone/Email

Category
Subcategory

Windows
Mullions

Compliance Method

Certification Mark or Listing

Certification Agency
Validated By

Miami-Dade BCCO - CER
Miami-Dade BCCO - VAL

Referenced Standard and Year (of Standard)

<u>Standard</u>	<u>Year</u>
TAS 201, 202, 203	1994

Equivalence of Product Standards
Certified By

☒ I affirm that there are no changes in the new Florida Building Code which affect my product(s) and my product(s) are in compliance with the new Florida Building Code.

Documentation from approved Evaluation or Validation Entity ☐ Yes ☐ No ☐ N/A

Product Approval Method

Method 1 Option A

Date Submitted	11/05/2020
Date Validated	11/05/2020
Date Pending FBC Approval	
Date Approved	11/11/2020

Summary of Products

FL #	Model, Number or Name	Description
261.1	Mullions for All Doors and Windows	Aluminum Mullions
Limits of Use Approved for use in HVHZ: Yes Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see Miami-Dade County Notice of Acceptance (NOA) for product performance information, and mullion clip anchorage details.		Certification Agency Certificate FL261 R13 C CAC 20-0406.03.pdf Quality Assurance Contract Expiration Date 05/26/2026 Installation Instructions FL261 R13 II 20-0406.03.pdf Verified By: Miami-Dade BCCO - CER Created by Independent Third Party: Evaluation Reports Created by Independent Third Party:

[Back](#) [Next](#)

Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824](#)

The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#). :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:





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

NOTICE OF ACCEPTANCE (NOA)

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

PGT Industries, Inc.
1070 Technology Drive
North Venice, FL 34275

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 "PGT" Clipped Extruded Aluminum Tube Mullion – L.M.I.

APPROVAL DOCUMENT: Drawing No. 6300JR, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, prepared by manufacturer, dated 08/29/11, with revision D dated 06/26/2020, signed and sealed by Anthony Lynn Miller, 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.

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 and renews** NOA# 17-0630.01 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 **Sifang Zhao, P.E.**



S.Z.
08/20/2020

NOA No. 20-0406.03
Expiration Date: May 26, 2026
Approval Date: August 20, 2020
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

1. Manufacturer's die drawings and sections. *(Submitted under NOA No. 10-0819.05)*
2. Drawing No. **6300JR**, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, dated 08/29/11, with revision C dated 06/19/17, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of clipped aluminum mullions, prepared by Fenestration Testing Lab, Inc., Test Report No. **FTL-6443** (samples A-1 thru E-1), dated 02/28/11, and addendum letter dated 05/05/11, signed and sealed by Marlin D. Brinson, P.E. *(Submitted under NOA No. 10-0819.05)*

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)** and with **FBC 6th Edition (2017)**, prepared by manufacturer, dated 08/29/17, signed and sealed by Anthony Lynn Miller, P.E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of conformance to **FBC-5th Edition (2014)** and **FBC-6th Edition (2017)**, dated 06/22/17, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated 06/22/17, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

G. OTHERS

1. Notice of Acceptance No. **16-0218.03**, issued to PGT Industries, Inc. for their Series "**PGT**" **Clipped Extruded Aluminum Tube Mullion – L.M.I.**, approved on 04/14/16 and expiring on 05/26/21.



Sifang Zhao, P.E.

Product Control Examiner

NOA No. 20-0406.03

Expiration Date: May 26, 2026

Approval Date: August 20, 2020

PGT Industries, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **6300JR**, titled "Impact-Resistant Aluminum Tube Mullions", sheets 1 through 25 of 25, dated 08/29/11, with revision **D** dated 06/26/2020, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 6th Edition (2017)** and with **FBC 7th Edition (2020)**, prepared by manufacturer, dated 04/01/2020, signed and sealed by Anthony Lynn Miller, P.E.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

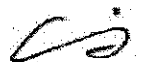
1. None.

F. STATEMENTS

1. Statement letter of conformance to **FBC-6th Edition (2017)** and **FBC-7th Edition (2020)**, dated 03/30/2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated 03/30/2020, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

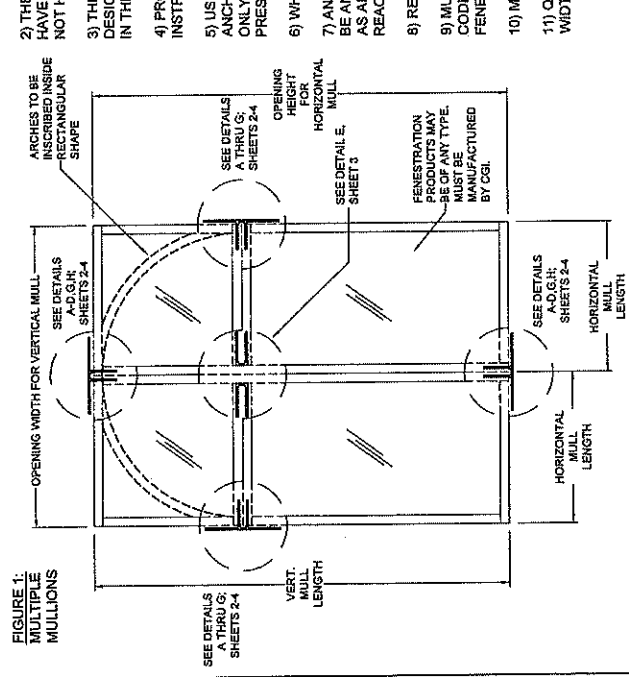
G. OTHERS

1. Notice of Acceptance No. **17-0630.01**, issued to PGT Industries, Inc. for their Series "**PGT**" **Clipped Extruded Aluminum Tube Mullion – L.M.I.**, approved on 11/09/17 and expiring on 05/26/21.

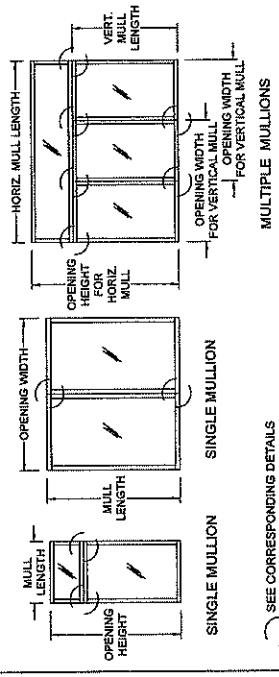


Sifang Zhao, P.E.
Product Control Examiner
NOA No. 20-0406.03
Expiration Date: May 26, 2026
Approval Date: August 20, 2020

SUITABLE FOR ALL LOCATIONS REQUIRING NON-IMPACT OR LARGE AND SMALL MISSILE IMPACT-RESISTANT PRODUCTS



ADDITIONAL EXAMPLES OF MULL CONFIGURATIONS:



SEE CORRESPONDING DETAILS FROM FIGURE 1 ABOVE.

- CODES / STANDARDS USED:**
- 2020 FLORIDA BUILDING CODE (FBC), 7TH EDITION
 - 2017 FLORIDA BUILDING CODE (FBC), 6TH EDITION
 - ANSI/APA NDS-2018 FOR WOOD CONSTRUCTION
 - ALUMINUM DESIGN MANUAL, ADM-2015
 - AISI S100-16
 - AISI 360-16

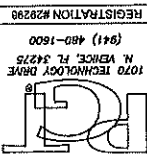
GENERAL NOTES:

- 1) DETAILS SHOWN ARE FOR THE MULLION ONLY. ANCHORS SHOWN ARE IN ADDITION TO ANY ANCHORS REQUIRED FOR THE FENESTRATION PRODUCT INSTALLATION. TYPICAL APPLICATIONS ARE SHOWN. EACH SITUATION IS UNIQUE AND SHOULD BE EVALUATED BY AN EXPERIENCED INSTALLER FOR THE BEST INSTALLATION METHOD. OPTIONAL 1X OR 2X WOOD BUCKS IF USED, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS AND ARE TO BE DESIGNED BY OTHERS.
- 2) THE TYPE AND NUMBER OF ANCHORS IS CRITICAL TO THE STRUCTURAL PERFORMANCE OF THE MULLION UNITS. MULLIONS HAVE BEEN TESTED AS "FREE-FLOATING" AND DO NOT NEED TO BE DIRECTLY ATTACHED TO THE MULLION CLIPS, BUT SHALL NOT HAVE A GAP OF MORE THAN 1/4" FROM THE CLIP.
- 3) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. MULLIONS ARE CALCULATED TO DEFLECT NO MORE THAN L/180. THE 1/3 STRESS INCREASE WAS NOT USED IN THIS ANCHOR EVALUATION. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF WOOD SCREWS.
- 4) PROPER SEALING OF ENTIRE ASSEMBLY IS THE RESPONSIBILITY OF OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- 5) USE THE COMBINED WIDTH OR HEIGHT OF ONLY TWO ADJACENT FENESTRATION PRODUCTS TO DETERMINE PRESSURES AND ANCHORAGE FOR THE COMMON MULLION. SEE EXAMPLES ON THIS SHEET AND SHEET 24. FOR MULTIPLE UNITS, CONSIDER ONLY TWO ADJACENT UNITS AT A TIME WHEN USING THE DESIGN PRESSURE AND ANCHORAGE TABLES. THE LOWEST DESIGN PRESSURE OF MULTIPLE MULLIONS OR FENESTRATION PRODUCTS SHALL APPLY.
- 6) WHEN FINDING YOUR SIZE IN THE MULLION TABLES, ALWAYS ROUND UP TO THE NEXT SIZE SHOWN ON THE TABLE(S).
- 7) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE. ANCHORS SHALL BE COATED OR CORROSION RESISTANT AS APPROPRIATE FOR SUBSTRATE MATERIAL. DISSIMILAR MATERIALS SHALL BE PROTECTED AS REQUIRED TO PREVENT REACTIONS.
- 8) REFERENCE: TEST REPORTS: FTL-6443; ELCO ULTRACON, DEVALTELCO AGGRE-GATOR, DEWALT ULTRACON+ NOANS.
- 9) MULLIONS AND CLIPS HAVE BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, AND ARE APPROVED FOR IMPACT AND NON-IMPACT APPLICATIONS. MULLIONS ARE ONLY TO BE USED WITH PG11 FENESTRATION PRODUCTS.
- 10) MULLIONS ARE IN COMPLIANCE FOR USE IN THE RVHZ.
- 11) QUANTITY OF UNITS WITHIN A MULTIPLE MULLIED ASSEMBLY IS UNLIMITED PROVIDED THAT THE SPAN AND OPENING WIDTH/HEIGHT OF EACH INDIVIDUAL MULLION COMPLIES WITH THE REQUIREMENTS OF THIS NOA.

INSTRUCTIONS:

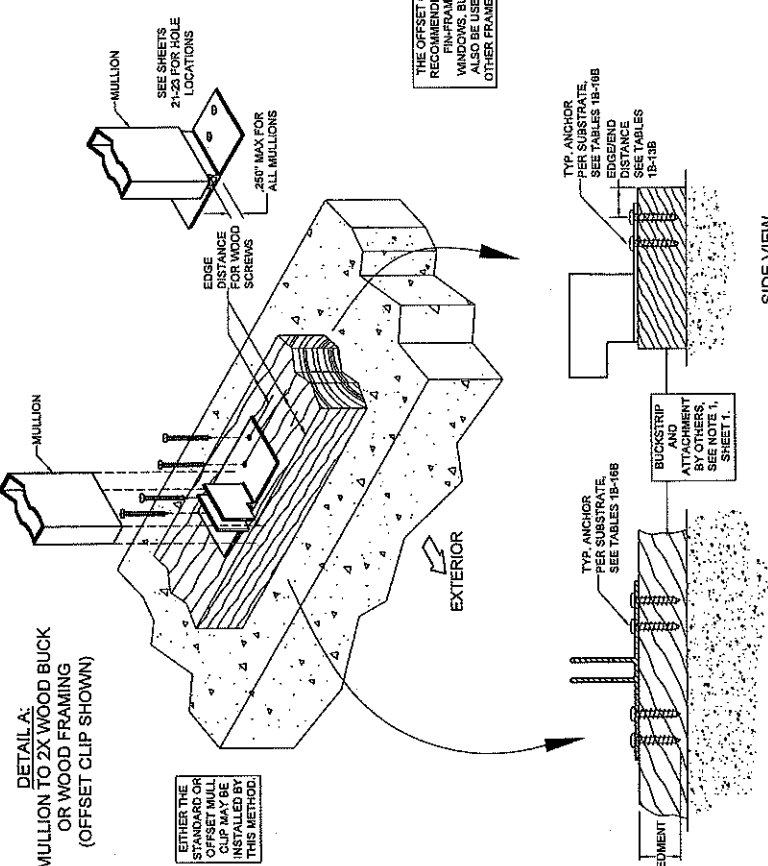
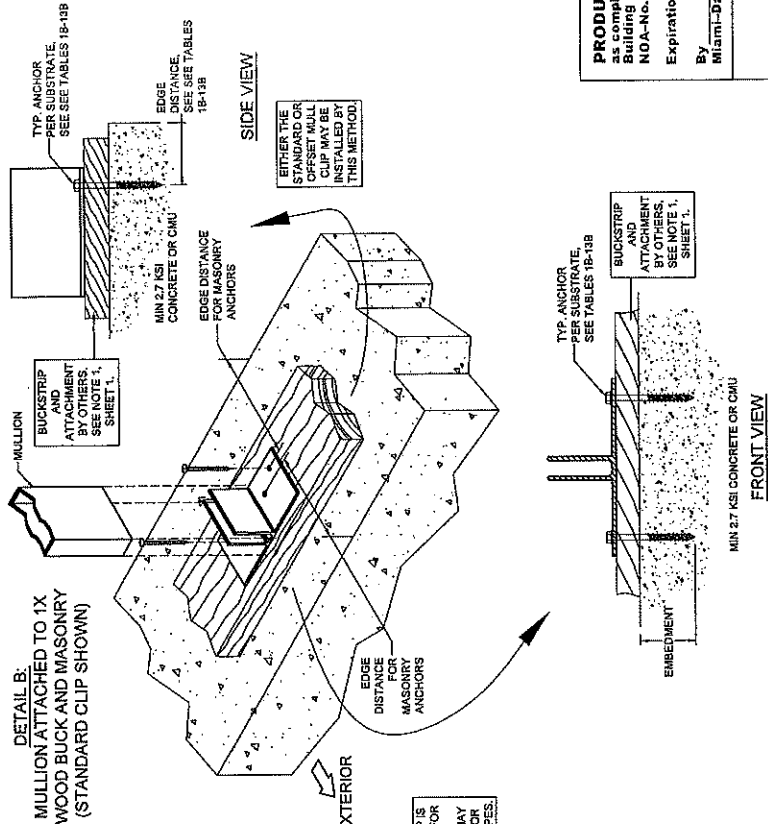
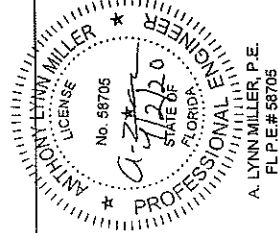
- 1) DETERMINE THE DESIGN PRESSURE REQUIREMENT (LBS/FT²) FOR THE OPENING USING THE ASCE-7 STANDARD.
- 2) CHOOSE A MULLION TYPE THAT WILL FIT THE DEPTH OF THE FENESTRATION PRODUCT'S FRAME DEPTH.
- 3) REFER TO SHEET 25 TO DETERMINE IF THE WIND LOADING IS "RECTANGULAR" OR "TRIANGULAR/TRAPEZOIDAL".
- 4) FIND THE CHOSEN MULLIONS MULLION CAPACITY (LBS/FT²) FROM TABLES 1A THROUGH 16A, ON SHEETS 5 THROUGH 20 RESPECTIVELY, USING THE MULLION TYPE, LENGTH AND OPENING WIDTH OR HEIGHT (DEPENDING IF THE MULLION IS SPANNING VERTICALLY OR HORIZONTALLY). THE MULLION CAPACITY (LBS/FT²) OBTAINED SHALL MEET OR EXCEED THE DESIGN PRESSURE REQUIREMENT (LBS/FT²) FOR THE OPENING OBTAINED IN STEP 1).
- 5) FROM THE SAME TABLE USED IN STEP 4) ABOVE, FIND THE VALUE IN THE NEXT COLUMN ANCHOR CAPACITY REQUIRED (LBS). THIS VALUE REPRESENTS THE WINDLOAD TRANSFERRED TO THE SUBSTRATE BY THE ANCHORS AND MUST BE MET TO ATTAIN THE FULL MULLION CAPACITY.
- 6) FROM THE ANCHOR CAPACITY (LBS) TABLE ON THE SAME SHEET AND USING YOUR ACTUAL SUBSTRATE CONDITION (MULTIPLE ANCHORS/SUBSTRATE/ANCHOR-CLIP PATTERN MAY APPLY) SELECT AN ANCHOR CLIP PATTERN AND VERIFY THAT THE REQUIRED ANCHOR CAPACITY IS MET.
- 7) IF THE MULLION CAPACITY (LBS/FT²) OBTAINED IN THE TABLE IS HIGHER THAN THE DESIGN PRESSURE REQUIREMENT (LBS/FT²) FOR THE OPENING, YOU MAY USE THE "ANCHOR CAPACITY ADJUSTMENT FORMULA" TO OBTAIN THE LOWER ANCHOR CAPACITY REQUIRED. WITH THIS VALUE A LOWER ANCHOR CAPACITY OPTION MAY BE SELECTED FOR THE SAME SUBSTRATE.
- 8) VERIFY THE DESIGN PRESSURE RATING (LBS/FT²) FOR THE FENESTRATION PRODUCT TO BE USED AND COMPARE WITH THE FINAL MULLION CAPACITY (LBS/FT²) OBTAINED FOR THE MULLION SYSTEM. THE LOWER OF THE TWO SHALL APPLY FOR THE ENTIRE MULLIED FENESTRATION PRODUCT ASSEMBLY.
- 9) HIGHLIGHT OPTION USED AND TABLE VALUES USED IN A SPECIFIC APPLICATION WHEN USING THIS NOA TO APPLY FOR A PERMIT.

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS GENERAL NOTES AND ELEVATION 6300JR 1 of 26 1020 TECHNOLOGY DRIVE N. VENICE, FL 33575 (941) 480-1600 REGISTRATION #23290		Date: 06/26/20 Drawn By: J. ROSOWSKI Checked By: J. ROSOWSKI Scale: N/A Project: N/A Revision: UPDATED TO FBC 2020, ADOPTED 1B-16B	PRODUCT REVISED as required with the Florida Building Code NOA-No. 20-0406.03 Expiration Date 05/26/2026 By: Miami-Dade Product Control	PROFESSIONAL ENGINEER STATE OF FLORIDA No. 58705 05/26/20 ANTHONY LYNN MILLER A. LYNN MILLER, P.E. FL P.E.# 58705
---	--	---	--	---



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS	
Revision	06/26/20
Checked By	08/29/11
Scale	N/A
Drawn By	J ROSOWSKI
Project	6300JR
Sheet	2 of 25
Rev	D
INSTALLATION INSTRUCTIONS A	
ADDED MAT. PROP. TABLE	

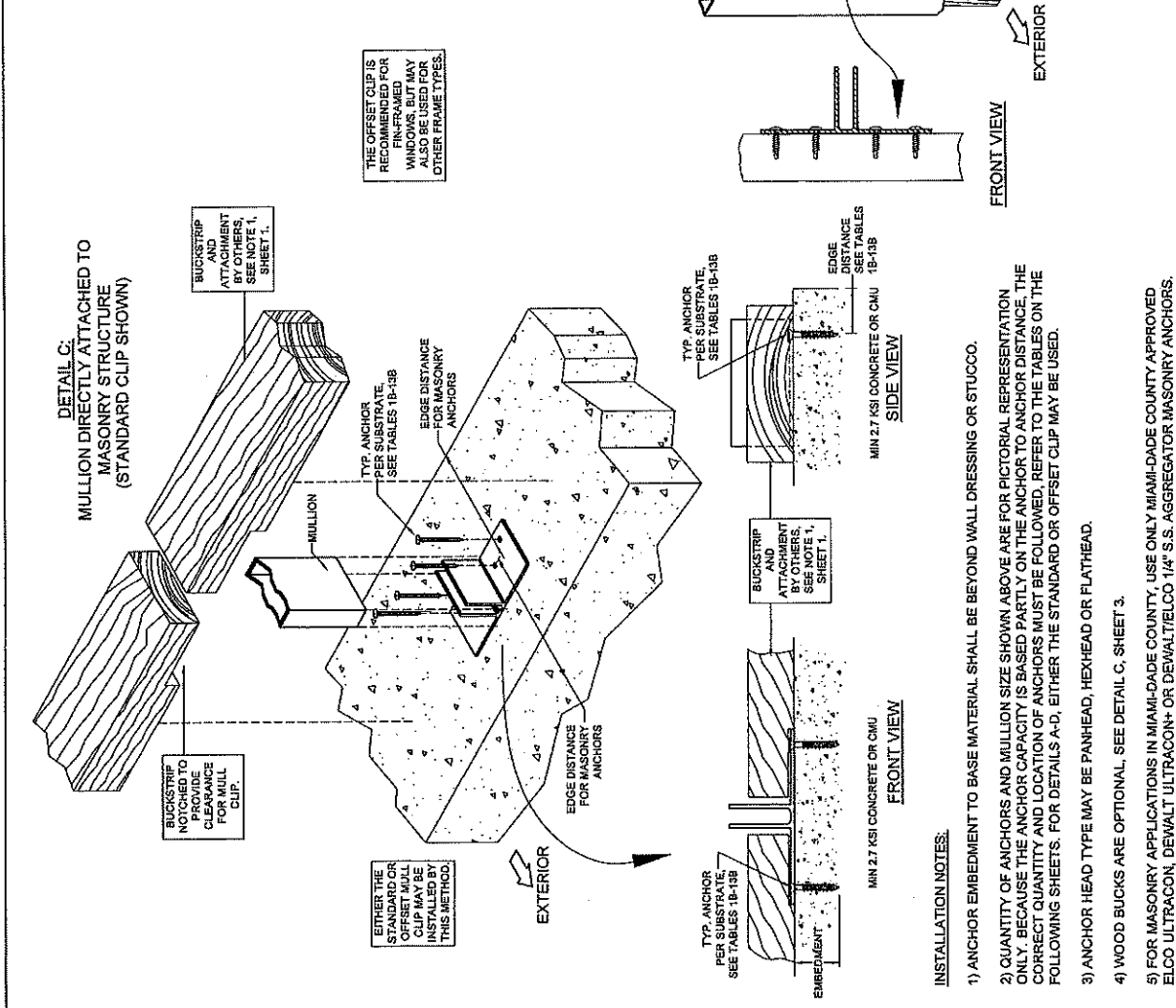
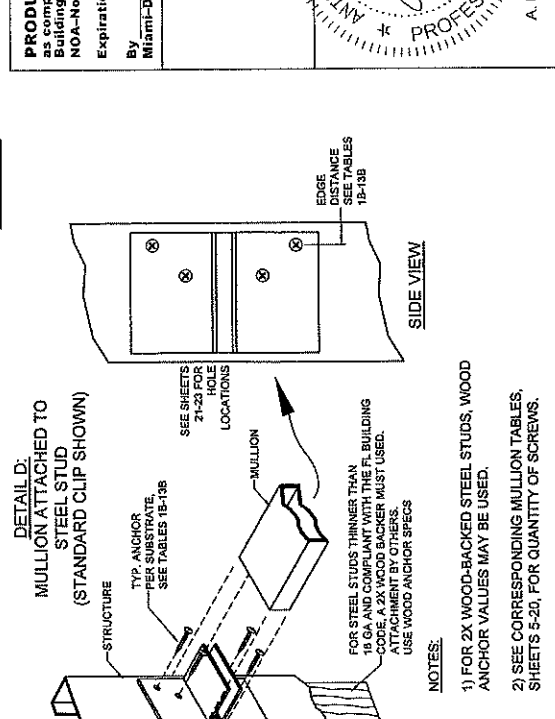
PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By Miami-Dade Product Control



MATERIAL PROPERTIES:

Material	Min. F _y	Min. F _u
Steel Screw	52 ksi	120 ksi
18-8 Screw	50 ksi	95 ksi
410 Screw	90 ksi	110 ksi
DeWalt/Elco Aggre-Gator®	57 ksi	96 ksi
Elco UltraCon®	155 ksi	177 ksi
3/16" DeWalt UltraCon®	117 ksi	164 ksi
1/4" DeWalt UltraCon®	148 ksi	164 ksi
6063-T5 Aluminum	15 ksi	22 ksi
A36 Steel	36 ksi	58 ksi
Gr. 33 Steel Stud	33 ksi	45 ksi

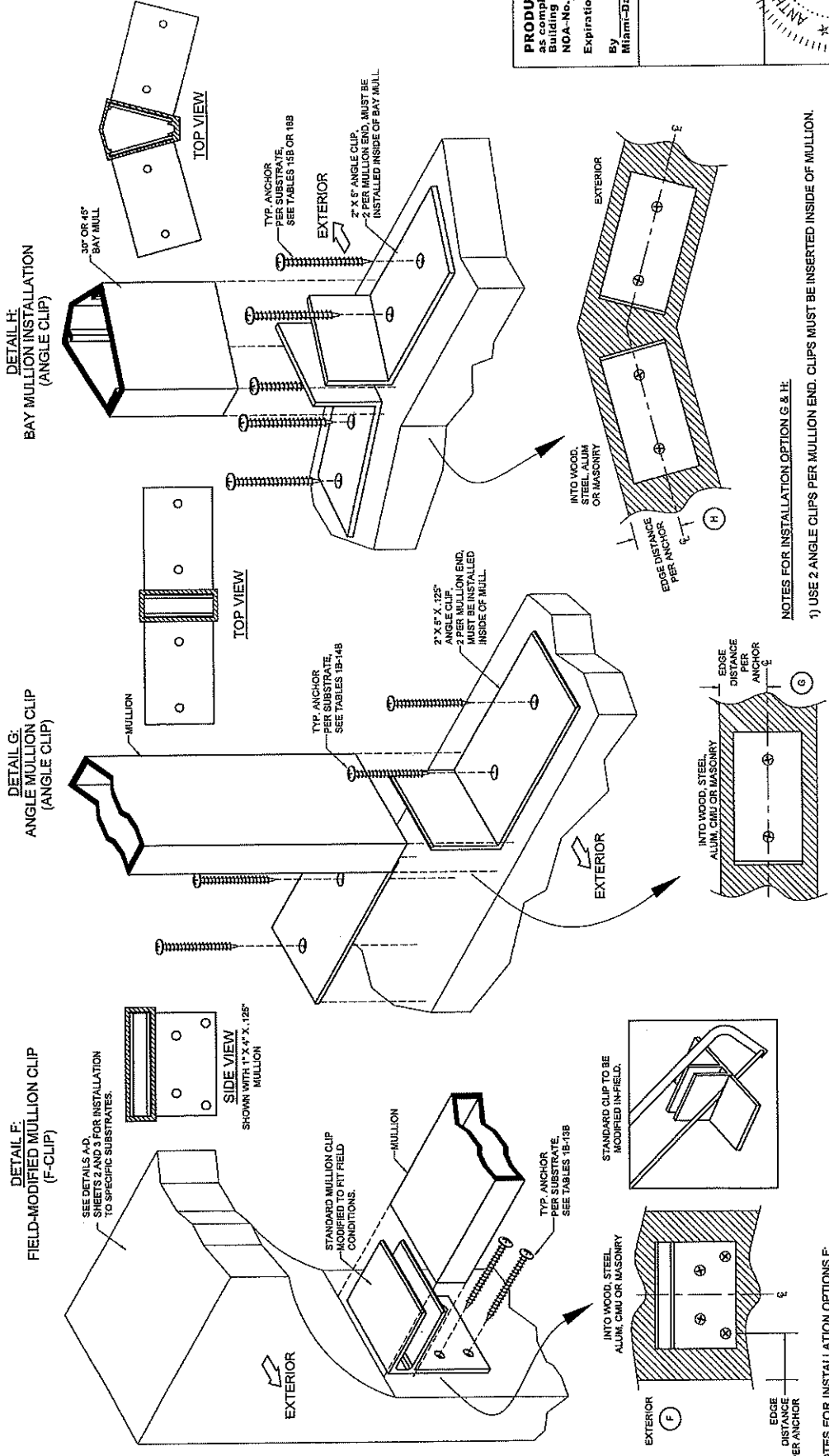
- INSTALLATION NOTES:
- 1) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
 - 2) QUANTITY OF ANCHORS AND MULLION SIZE SHOWN ABOVE ARE FOR PICTORIAL REPRESENTATION ONLY. BECAUSE THE ANCHOR CAPACITY IS BASED PARTLY ON THE ANCHOR TO ANCHOR DISTANCE, THE CORRECT QUANTITY AND LOCATION OF ANCHORS MUST BE FOLLOWED, REFER TO THE TABLES ON THE FOLLOWING SHEETS. FOR DETAILS A-D, EITHER THE STANDARD OR OFFSET CLIP MAY BE USED.
 - 3) ANCHOR HEAD TYPE MAY BE PANHEAD, HEX-HEAD OR FLATHEAD.
 - 4) WOOD BUCKS ARE OPTIONAL, SEE DETAIL C, SHEET 3.
 - 5) FOR MASONRY APPLICATIONS IN MIAMI-DADE COUNTY, USE ONLY MIAMI-DADE COUNTY APPROVED ELCO ULTRACON, DEWALT ULTRACON+ OR DEWALT/ELCO 1/4" S.S. AGGREGATOR MASONRY ANCHORS.



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS INSTALLATION INSTRUCTIONS C		Title: _____ Description: _____ Scale: _____ Date: 08/29/11 Checked By: _____ Drawing No.: 6300JR	Drawn By: J. ROSOWSKI Date: 06/26/20 No. 20-0406.03
Sheet: 4 of 25 Rev: D REGISTRATION #22288 (941) 400-1600 1070 TECHNOLOGY DRIVE N. VENICE, FL 33595	PRODUCT REVISED as complying with the Florida Building Code NOA-No. 20-0406.03 Expiration Date 05/26/2026 By: _____ Miami-Dade Product Control		

ANTHONY LYNN MILLER
LICENSE
No. 58705
05/26/2020
STATE OF FLORIDA
PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.
FL P.E. # 58705



- NOTES FOR INSTALLATION OPTION G & H:
- 1) USE 2 ANGLE CLIPS PER MULLION END. CLIPS MUST BE INSERTED INSIDE OF MULLION.
 - 2) DETAIL G: SEE TABLES 15B-14B FOR ANCHOR QUANTITIES AND SHEETS 21-23 FOR HOLE LOCATIONS.
 - 3) DETAIL H: SEE TABLES 15B OR 18B FOR ANCHOR QUANTITIES AND SHEET 22 FOR HOLE LOCATIONS.

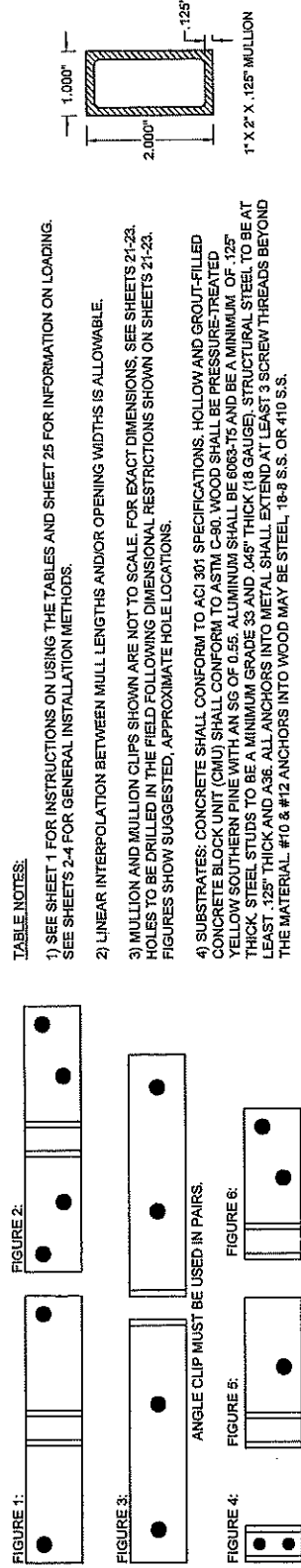
- NOTES FOR INSTALLATION OPTIONS F:
- 1) DETAIL IS NOT APPLICABLE FOR THE BAY OR 1.25" X 2.11" X 125" MULLION.
 - 2) SEE TABLES 15-13B FOR ANCHOR QUANTITIES AND SHEETS 21-23 FOR HOLE LOCATIONS.
 - 3) THE 2X5 CLIP IS NOT SUITABLE FOR THIS APPLICATION.

ANTHONY LYNN MILLER
LICENSE
No. 58705
FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION: IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

[illegible]

Anchor Capacity (lbs)	Substrate	2.7K Concrete			3K Concrete			3.5K Conc.			Hollow CMU			Filled CMU			Mat'l
		Anchor Type	1/4" E/ho U/ltcon	3/16" E/ho U/ltcon	1/4" D/Wall U/ltcon*	3/16" D/Wall U/ltcon*	1/4" D/Wall U/ltcon*	3/16" E/ho U/ltcon	1/4" E/ho U/ltcon	3/16" D/Wall U/ltcon*	1/4" D/Wall U/ltcon*	3/16" E/ho U/ltcon	1/4" SS E/ho App/Selr	#10 Steel Srew (S5)	#12 Steel Srew (S5)		
																Edge Distance (in)	
2 Anchors @ 7/8" Min. O.C. / Standard or Offset Clp. (Fig. 1)	3/32"	1-3/4"	350 lbs	450 lbs	310 lbs	430 lbs	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	
2 Anchors @ 7/8" Min. O.C. / Standard or Offset Clp. (Fig. 2)	480 lbs	700 lbs	N/A	N/A	320 lbs	1250 lbs	370 lbs	N/A	N/A	350 lbs	740 lbs	N/A	N/A	682 lbs	835 lbs	1120 lbs	
4 Anchors @ 1.15" Min. O.C. / Standard or Offset Clp. (Fig. 3)	780 lbs	780 lbs	680 lbs	1550 lbs	620 lbs	1250 lbs	440 lbs	1740 lbs	N/A	500 lbs	740 lbs	860 lbs	1192 lbs	692 lbs	855 lbs	1120 lbs	
4 Anchors @ 3" Min. O.C. / (2) 2x3 Angle Clp. (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	715 lbs	
2 Anchors @ 0.45" Min. O.C. / U/ltcon (Fig. 5)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	280 lbs	
2 Anchors @ 1.15" Min. O.C. / F-C/Clp. (Fig. 6)	195 lbs	195 lbs	235 lbs	445 lbs	165 lbs	315 lbs	110 lbs	435 lbs	110 lbs	135 lbs	190 lbs	187 lbs	232 lbs	170 lbs	221 lbs	280 lbs	
2 Anchors @ 1.15" Min. O.C. / F-C/Clp. (Fig. 6)	240 lbs	350 lbs	N/A	N/A	160 lbs	630 lbs	165 lbs	N/A	140 lbs	177 lbs	370 lbs	185 lbs	290 lbs	473 lbs	341 lbs	550 lbs	



NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

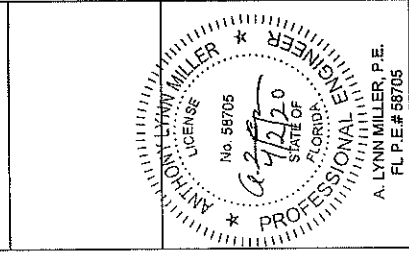


REGISTRATION #28286
(941) 400-1600
1070 TECHNOLOGY DRIVE
M. WENDE, P.E. 34278

DATE: 08/26/20
DRAWING NO.: 6300JR
SHEET: 6 of 25
REVISION: 1
ANCHOR TYPE: D

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS
1 X 2 X .375 MULL SPECS

PRODUCT REVISION
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control



ANCHOR CAPACITY
ADJUSTMENT FORMULA:

$$(DP_{max}) \times \left(\frac{ANCHOR CAP}{ANCHOR CAP} \right) = ANCHOR CAP$$

USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY"
REQUIRED CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT FOR THE
OPENING, WHEN IT IS LOWER
THAN THE MULLION CAPACITY
(FROM THE TABLE) OF THE
SELECTED MULLION. IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR OPTIONS FROM THE
ANCHOR CAPACITY TABLE.

TABLE 2A
Mullion Capacity Table (lbs/ft)

Mullion Length	Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)											
	50 in	60 in	70 in	80 in	90 in	100 in	120 in	140 in	160 in	180 in	200 in	220 in
42 in	170.0	620	170.0	480	161.3	662	170.0	505	163.5	518	160.9	517
48 in	121.6	507	138.0	419	101.4	507	138.7	403	78.0	507	102.8	389
54 in	85.4	400	93.3	336	71.2	400	93.3	336	51.0	400	93.3	336
60 in	62.3	324	66.9	270	51.9	324	51.9	270	44.5	324	51.9	270
66 in	50.8	294	57.4	242	44.8	294	57.4	242	38.4	294	57.4	242
72 in	46.6	268	49.6	230	39.0	268	49.6	230	33.4	268	49.6	230
78 in	43.0	242	46.6	210	35.0	242	46.6	210	30.0	242	46.6	210
84 in	40.0	225	43.0	196	32.0	225	43.0	196	27.0	225	43.0	196
90 in	37.0	202	40.0	177	29.5	202	40.0	177	24.5	202	40.0	177
96 in	34.0	182	37.0	168	27.0	182	37.0	168	22.0	182	37.0	168
102 in	31.0	165	34.0	151	24.5	165	34.0	151	19.5	165	34.0	151
108 in	28.0	144	31.0	138	22.0	144	31.0	138	17.0	144	31.0	138
114 in	25.0	127	28.0	126	19.5	127	28.0	126	14.5	127	28.0	126
120 in	22.0	113	25.0	113	17.0	113	25.0	113	12.0	113	25.0	113

TABLE 2B
Anchor Capacity Table (lbs)

Anchor Capacity (lbs)	Substrate											
	2 in Concrete	3 in Concrete	4 in Concrete	5 in Concrete	6 in Concrete	7 in Concrete	8 in Concrete	9 in Concrete	10 in Concrete	11 in Concrete	12 in Concrete	13 in Concrete
2 Anchors @ 4.75" Min. O.C. / Standard (or Offset) Clip (Fig. 1)	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
4 Anchors @ 1.15" Min. O.C. / Standard (or Offset) Clip (Fig. 2)	350	350	350	350	350	350	350	350	350	350	350	350
4 Anchors @ 3" Min. O.C. / 2025 Angle Clip (Fig. 3)	700	700	700	700	700	700	700	700	700	700	700	700
2 Anchors @ 0.45" Min. O.C. / 1/4" Dia. 102" Alum. (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 Anchors @ 1.15" Min. O.C. / 1/4" Dia. 102" Alum. (Fig. 5)	165	165	165	165	165	165	165	165	165	165	165	165
2 Anchors @ 1.15" Min. O.C. / 1/4" Dia. 102" Alum. (Fig. 6)	240	240	240	240	240	240	240	240	240	240	240	240

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

TABLE NOTES:
1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING.
2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.

FIGURE 1:
ANCHOR CLIP MUST BE USED IN PAIRS.

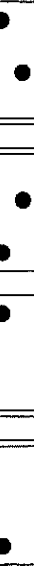


FIGURE 2:
ANCHOR CLIP MUST BE USED IN PAIRS.

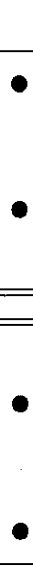


FIGURE 3:
ANCHOR CLIP MUST BE USED IN PAIRS.

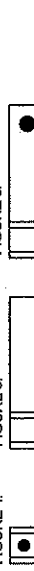
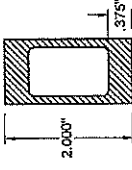


FIGURE 4:
ANCHOR CLIP MUST BE USED IN PAIRS.

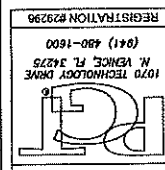


1' x 2' x .375' MULLION

TABLE 4A

Mullion Capacity Table (lb/ft ²)	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
	50 in			60 in			70 in			80 in		
	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading
1 x 2.75 x .650 Alum. Tube Mullion	Mullion Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Mullion Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Mullion Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Mullion Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)	Anchor Capacity (lb/ft ²)
	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)	Required (lb/ft ²)
42 in	170.0	820	170.0	435	170.0	744	170.0	688	170.0	595	170.0	519
48 in	170.0	768	170.0	524	170.0	850	170.0	892	170.0	684	170.0	661
50.825 in	170.0	747	170.0	892	170.0	931	170.0	1046	170.0	723	170.0	723
54 in	170.0	747	170.0	892	170.0	931	170.0	1046	170.0	723	170.0	723
60 in	170.0	895	170.0	912	170.0	958	170.0	1118	170.0	883	170.0	883
63 in	151.8	820	167.9	710	128.5	830	138.9	894	108.3	830	144.5	815
66 in	132.1	757	140.0	650	110.0	757	118.3	830	84.3	757	105.9	824
72 in	101.7	638	108.8	552	84.8	636	91.0	540	72.7	636	80.1	530
76 in	86.5	571	90.4	474	68.7	542	76.8	485	57.1	542	67.9	457
80 in	52.1	407	53.7	351	43.4	407	45.4	355	37.2	407	36.8	349
84 in	42.9	358	44.1	320	36.8	358	37.2	314	30.7	358	32.4	309
108 in	30.1	263	30.9	255	25.1	263	25.9	251	21.5	263	22.5	247
111 in	27.8	267	28.3	242	23.1	267	23.8	238	18.8	267	20.8	235
120 in	22.0	229	22.3	209	18.3	229	18.8	205	15.7	229	18.2	202

ANCHOR CAPACITY ADJUSTMENT FORMULA:
 $(OP_{req}) \times (\text{ANCHOR CAP}_{req}) = \text{ANCHOR CAP}_{req}$
USE THIS FORMULA TO OBTAIN THE "ANCHOR CAP" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING. WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION, IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS
1 x 2.75 x .650 MULL SPECS
Sheet 8 of 25
Drawing No. 6300JR
Checked By: [Signature]
Date: 08/29/11
Scale: N/A
J. ROSOWSKI
06/26/20 ADDED NEW ANCHOR TYPE.

TABLE 4B

Anchor Capacity (lbs)	Substrate											
	2/3 Concrete			3/4 Concrete			3/8" DeWalt Ultracore			3/8" DeWalt Ultracore		
Anchor Type	3/8" Elco Ultracore			3/8" Elco Ultracore			3/8" Elco Ultracore			3/8" Elco Ultracore		
	Embedment (in)	Edge Distance (in)	Spacing (in)	Embedment (in)	Edge Distance (in)	Spacing (in)	Embedment (in)	Edge Distance (in)	Spacing (in)	Embedment (in)	Edge Distance (in)	Spacing (in)
3 Anchors @ 4.75 Min. O.C. / Standard for Offset Clip (Fig. 3)	3.00	1.34	1.34	3.00	1.34	1.34	3.00	1.34	1.34	3.00	1.34	1.34
4 Anchors @ 1.15 Min. O.C. / Standard for Offset Clip (Fig. 3)	3.00	1.34	1.34	3.00	1.34	1.34	3.00	1.34	1.34	3.00	1.34	1.34
2 Anchors @ 0.45 Min. O.C. / UCCP (Fig. 5)	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34
2 Anchors @ 0.45 Min. O.C. / UCCP (Fig. 5)	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34
2 Anchors @ 1.15 Min. O.C. / UCCP (Fig. 5)	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34
2 Anchors @ 1.15 Min. O.C. / UCCP (Fig. 5)	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34	1.95	1.34	1.34

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1:



FIGURE 2:

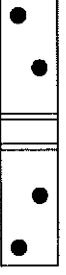


TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-3 S.S. OR 410 S.S.

FIGURE 3:



FIGURE 4:

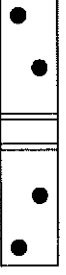


FIGURE 5:

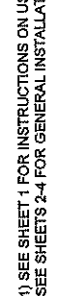


FIGURE 6:



FIGURE 7:

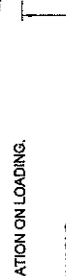


FIGURE 8:



FIGURE 9:



FIGURE 10:



FIGURE 11:



FIGURE 12:



FIGURE 13:

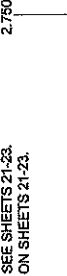


FIGURE 14:



FIGURE 15:

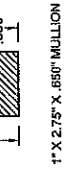
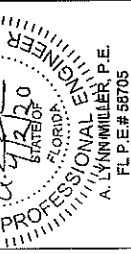


TABLE 5A

Mullion Length 1" x 3.125" x .500" Alum Tube Mull	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)									
	50 in		60 in		70 in		80 in		90 in	
	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
42 in	170.0	600	170.0	435	170.0	435	170.0	435	170.0	435
48 in	170.0	700	170.0	520	170.0	520	170.0	520	170.0	520
50.625 in	170.0	747	170.0	554	170.0	554	170.0	554	170.0	554
54 in	170.0	797	170.0	598	170.0	598	170.0	598	170.0	598
60 in	170.0	895	170.0	701	170.0	701	170.0	701	170.0	701
63 in	170.0	930	170.0	745	170.0	745	170.0	745	170.0	745
72 in	126.5	803	134.9	697	107.0	789	139.6	655	151.3	804
76 in	109.2	721	114.1	629	91.0	721	103.3	603	110.0	721
80 in	95.8	614	97.9	546	80.4	576	93.1	514	104.6	614
86 in	85.8	514	87.9	456	72.1	485	84.4	440	94.1	514
96 in	54.2	452	55.7	404	43.2	452	47.0	396	50.9	452
108 in	36.1	357	36.9	322	31.7	357	35.7	284	37.2	357
111 in	35.1	338	35.8	305	29.2	338	30.1	250	33.8	338
120 in	27.7	289	28.2	263	23.1	289	23.7	239	25.6	289

Mullion Capacity Table (lb/ft²)

Mullion Capacity (lb/ft²)	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)									
	50 in		60 in		70 in		80 in		90 in	
	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
42 in	170.0	600	170.0	435	170.0	435	170.0	435	170.0	435
48 in	170.0	700	170.0	520	170.0	520	170.0	520	170.0	520
50.625 in	170.0	747	170.0	554	170.0	554	170.0	554	170.0	554
54 in	170.0	797	170.0	598	170.0	598	170.0	598	170.0	598
60 in	170.0	895	170.0	701	170.0	701	170.0	701	170.0	701
63 in	170.0	930	170.0	745	170.0	745	170.0	745	170.0	745
72 in	126.5	803	134.9	697	107.0	789	139.6	655	151.3	804
76 in	109.2	721	114.1	629	91.0	721	103.3	603	110.0	721
80 in	95.8	614	97.9	546	80.4	576	93.1	514	104.6	614
86 in	85.8	514	87.9	456	72.1	485	84.4	440	94.1	514
96 in	54.2	452	55.7	404	43.2	452	47.0	396	50.9	452
108 in	36.1	357	36.9	322	31.7	357	35.7	284	37.2	357
111 in	35.1	338	35.8	305	29.2	338	30.1	250	33.8	338
120 in	27.7	289	28.2	263	23.1	289	23.7	239	25.6	289

ANCHOR CAPACITY
ADJUSTMENT FORMULA:

$$(DP_{max}) \times \left(\frac{\text{ANCHOR CAP (required)}}{\text{ANCHOR CAP (available)}} \right)^{1.5}$$

USE THIS FORMULA TO OBTAIN THE ANCHOR CAPACITY REQUIRED CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING, WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

TABLE 5B

Anchor Capacity (lbs)	Substrate									
	2 1/2" Concrete		3" Concrete		3 1/2" Concrete		4" Concrete		Heavy CMU	
	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 1)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
4 Anchors @ 3" Min. O.C. / Standard or Offset Clip (Fig. 2)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
4 Anchors @ 3" Min. O.C. / 1/2" x 5/8" Angle Clips (Fig. 3)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
3 Anchors @ 4.05" Min. O.C. / L-Clip (Fig. 4)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 6)	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1:

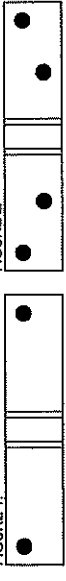


FIGURE 2:

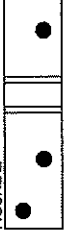
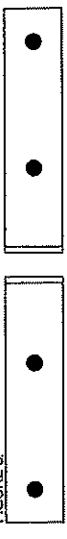


FIGURE 3:



ANGLE CLIP MUST BE USED IN PAIRS.

FIGURE 4:



FIGURE 5:

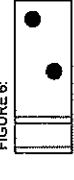
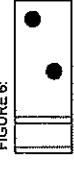


FIGURE 6:



PRODUCT REVISED

as complying with the Florida Building Code

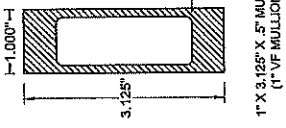
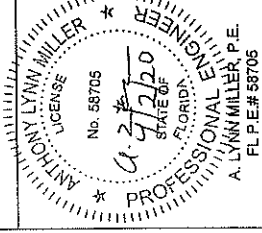
NOA-N6

20-0406.03

Expiration Date 05/26/2026

By

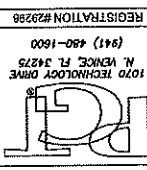
Miami-Dade Product Control



1" x 3.125" x .5" MULLION
(1" VP MULLION)

TABLE NOTES:

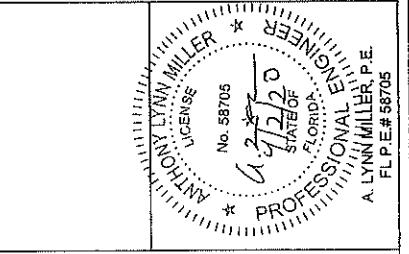
- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOWN SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.85. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF 125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-3 S.S. OR 410 S.S.



REVISION #20200
(941) 480-1600
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33579

Sheet 10 of 25
6300JLR
D
Checked By: N/A
Date: 08/29/11
Added New Anchor Type: J ROSOWSKI
Date: 06/26/20
Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control



ANCHOR CAPACITY ADJUSTMENT FORMULA:
 $(DP_{min}) \times (\text{ANCHOR CAP}_{(2000LBS)})$
 $= \text{ANCHOR CAP}_{(4000LBS)}$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY" REQUIRED "CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION. IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

Mullion Length	Opening Width (for vertically-spacing mullions) or Opening Height (for horizontally-spacing mullions)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	50 in			60 in			70 in			80 in			100 in			120 in			140 in			160 in																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)	Rectangular Loading	Triangular Loading	Anchor Capacity (lbs)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
42 in	1700	620	1700	435	1700	744	1700	478	1700	888	1700	508	1700	592	1700	1135	1700	681	1700	1275	1700	677	155.3	1303	1700	690	130.3	1303	1700	680	111.7	1303	1700	680	145.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	1700	521	122.8	1489	170



IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

Drawn By: J. ROSOWSKI
Checked By: J. ROSOWSKI
Scale: N/A
Date: 08/29/11

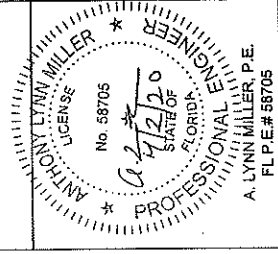
Project: 1 X 4 X .375 MULL SPEC

Sheet: 11 of 25

Revision: 06/26/20 ADDED NEW ANCHOR TYPE

PRODUCT REVISED
Building Code
N/A
N/A
20-0406.03
Expiration Date 05/26/2026

By: Miami-Dade Product Control



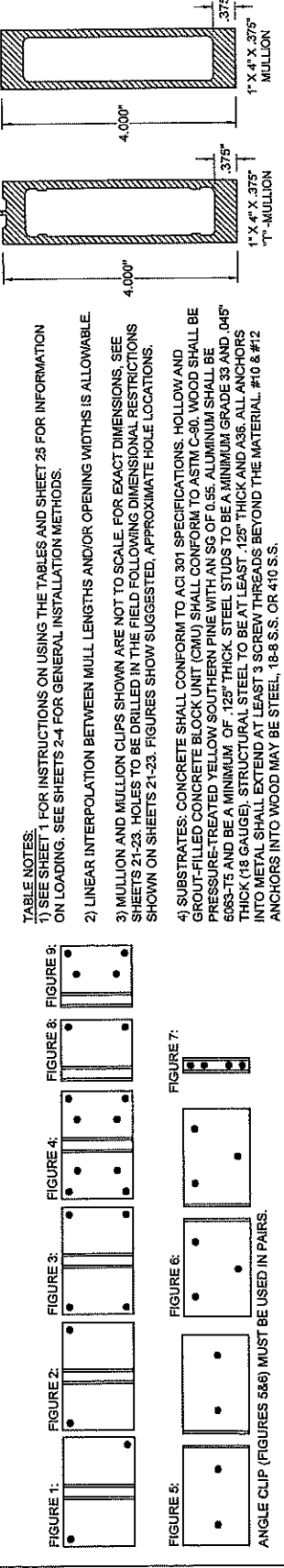
ANCHOR CAPACITY
ADJUSTMENT FORMULA:

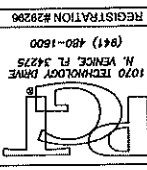
$(DP_{min}) \times (ANCHOR CAP_{min})$
 $(DP_{min}) \times (ANCHOR CAP_{min})$
= ANCHOR CAP

USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY"
REQUIRED CORRESPONDING
TO AN ACTUAL PRESSURE
OPENING, WHEN IT IS LOWER
FROM THE TABLE CAPACITY
SELECTED MULLION. IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR CAPACITY TABLE

Mullion Capacity Table (lbs/ft)	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
	50 in		60 in		70 in		80 in		90 in		100 in	
	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading
1 x 4 x .375 Alum. Tube & "M" Mullion												
42 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
48 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
50.625 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
54 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
60 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
63 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
66 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
72 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
76 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
80 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
84 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
88 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
92 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
96 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
100 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
104 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
108 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
112 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
116 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
120 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
144 in	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0

Anchor Capacity (lbs)	Substrate											
	2.7K Concrete		3K Concrete		3.5K Concrete		Hollow CMU		Flare CMU		PT Wood	
	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)	Anchor Type	Embedment (in)
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 12)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 2.25" Min. O.C. / Standard or Offset Clip (Fig. 3)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 1.5" Min. O.C. / Standard or Offset Clip (Fig. 4)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 3" Min. O.C. / 25° Angle Clip (Fig. 5)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
6 Anchors @ 3" Min. O.C. / 25° Angle Clip (Fig. 6)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 0.45" Min. O.C. / L-Clip, Into 125° Alum. (Fig. 7)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 2.25" Min. O.C. / F-Clip (Fig. 8)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"
4 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 9)	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"	3/16" E/16" U	1.34"



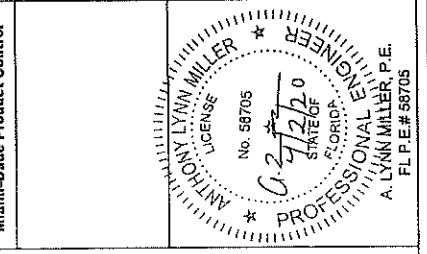


1070 TECHNOLOGY DRIVE
N. VENICE, FL 33575
(813) 480-1600

REGISTRATION #229296
D
13 of 25
6300JR
Checked By: N/A
Date: 08/29/11
Added New Anchor Type

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS
1.25 X 3.25 X .100 MULL SPECS
N/A
08/29/11
06/26/20

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control



ANCHOR CAPACITY
ADJUSTMENT FORMULA:

$$(DP_{\text{req}}) \times (\text{ANCHOR CAP.}) = \text{ANCHOR CAP.} \times (\text{ANCHOR CAP.})$$

USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY"
REQUIRED CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT FOR THE
OPENING, WHEN IT IS LOWER
THAN THE MULLION CAPACITY
(FROM THE TABLE OF THE
SELECTED MULLION). IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR OPTIONS FROM THE
ANCHOR CAPACITY TABLE.

Mullion Length	Opening Width (for vertically-spawning mullions) or Opening Height (for horizontally-spawning mullions)											
	50 in			70 in			80 in			90 in		
	Rectangular Loading	Trap/Trip Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Trap/Trip Loading	Rectangular Loading	Trap/Trip Loading	Trap/Trip Loading
42 in	170.0	620	170.0	435	170.0	475	170.0	508	170.0	519	170.0	521
48 in	170.0	708	170.0	524	170.0	584	167.8	578	170.0	581	170.0	581
50 in	170.0	747	170.0	563	170.0	623	167.8	617	170.0	620	170.0	620
54 in	170.0	797	170.0	612	164.3	672	164.3	666	153.9	666	143.8	666
60 in	143.2	748	153.8	634	119.4	748	123.3	620	105.3	748	117.8	620
63 in	123.7	677	132.0	579	103.1	677	113.2	556	88.4	677	109.4	556
66 in	107.8	617	114.1	520	98.7	617	103.3	518	76.9	617	98.3	518
72 in	62.8	518	67.1	450	69.1	518	74.2	440	59.2	518	65.2	440
78 in	70.5	485	72.7	409	58.7	465	62.8	395	50.3	465	54.9	395
78 in	65.2	441	68.0	387	54.3	441	57.7	378	46.8	441	50.6	378
80 in	42.1	332	43.8	295	33.2	332	32.3	284	26.5	332	28.8	284
86 in	35.0	291	35.9	260	28.1	291	26.4	252	21.9	291	24.5	252
108 in	24.6	230	25.1	208	20.5	230	21.1	205	17.5	230	18.3	205
111 in	22.6	218	23.1	197	18.3	218	19.4	194	16.2	218	16.8	194
120 in	17.0	187	18.2	170	14.8	187	15.3	167				

Anchor Capacity (lbs)	Substrate											
	2.7k Concrete			3k Concrete			5.5k Conc.			Hollow CMU		
	Anchor Type	Edge Distance (in)	Embedment (in)	3/16" Elico Ultracon	1/4" Elico Ultracon	3/16" DeWall Ultracon	1/4" DeWall Ultracon	5/16" Elico Ultracon	3/16" Elico Ultracon	3/16" DeWall Ultracon	1/4" DeWall Ultracon	1/4" Elico Ultracon
2 Anchors @ 4.75 Min. O.C. / Standard or Elico Clip (Fig. 2)	1.3/4"	1.3/4"	3.00	300 lbs	400 lbs	300 lbs	400 lbs	300 lbs	400 lbs	300 lbs	400 lbs	300 lbs
4 Anchors @ 1.15 Min. O.C. / Standard or Elico Clip (Fig. 2)	1.3/4"	1.3/4"	4.00	400 lbs	500 lbs	400 lbs	500 lbs	400 lbs	500 lbs	400 lbs	500 lbs	400 lbs
4 Anchors @ 3 Min. O.C. / 2x25 Angle Clip (Fig. 3)	1.3/4"	1.3/4"	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs	700 lbs
3 Anchors @ 0.54 Min. O.C. / U-Clip, Int. 100" Alum. (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1 Anchor / 7 F-Clip (Fig. 5)	1.15"	1.15"	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs	155 lbs
2 Anchors @ 1.15 Min. O.C. / F-Clip (Fig. 5)	1.15"	1.15"	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs	200 lbs

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

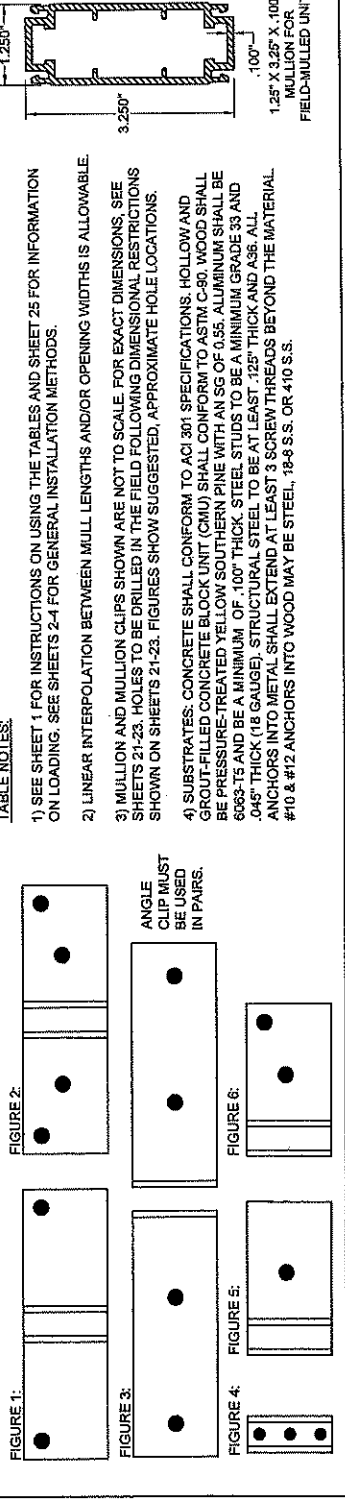


TABLE NOTES:
1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .100" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.

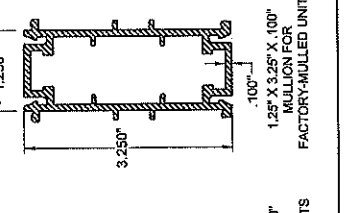


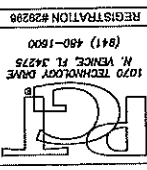
TABLE 10A

1.25 x 3.25 x .624 Alum. Tube Mullion		Mullion Capacity Table (lb/in ²)												150 in				
		Opening Width (for vertically-spanning mullions) or Opening Height (for horizontally-spanning mullions)																
		50 in		60 in		70 in		80 in		90 in		100 in				120 in		140 in
Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	Rectangular Loading	Triparting Loading	
Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	Mullion Capacity (lb/in ²)	Anchor Capacity (lb/in ²)	
42 in	170.0	520	170.0	435	170.0	744	170.0	595	170.0	595	170.0	515	170.0	521	170.0	1488	170.0	521
48 in	170.0	708	170.0	526	170.0	850	170.0	630	170.0	1139	170.0	561	170.0	1275	170.0	677	170.0	680
50.625 in	170.0	747	170.0	563	170.0	885	170.0	631	170.0	1046	170.0	584	170.0	1345	170.0	747	170.0	756
54 in	170.0	797	170.0	612	170.0	955	170.0	691	170.0	1116	170.0	754	170.0	1424	170.0	837	170.0	861
60 in	170.0	935	170.0	731	170.0	1100	170.0	754	170.0	1275	170.0	904	170.0	1624	170.0	985	170.0	1003
63 in	170.0	985	170.0	785	170.0	1165	170.0	797	170.0	1345	170.0	944	170.0	1694	170.0	1035	170.0	1063
66 in	170.0	1035	170.0	839	170.0	1230	170.0	847	170.0	1415	170.0	993	170.0	1764	170.0	1085	170.0	1113
72 in	170.0	1149	170.0	953	170.0	1345	170.0	955	170.0	1530	170.0	1095	170.0	1879	170.0	1209	170.0	1239
76 in	170.0	1273	170.0	1077	170.0	1469	170.0	1079	170.0	1654	170.0	1219	170.0	2003	170.0	1323	170.0	1353
78 in	170.0	1320	170.0	1121	170.0	1518	170.0	1123	170.0	1703	170.0	1263	170.0	2052	170.0	1372	170.0	1402
80 in	170.0	1367	170.0	1165	170.0	1567	170.0	1167	170.0	1752	170.0	1307	170.0	2101	170.0	1421	170.0	1451
90 in	170.0	1581	170.0	1379	170.0	1781	170.0	1383	170.0	1971	170.0	1519	170.0	2315	170.0	1635	170.0	1665
96 in	170.0	1705	170.0	1503	170.0	1905	170.0	1505	170.0	2095	170.0	1643	170.0	2439	170.0	1759	170.0	1789
98 in	170.0	1752	170.0	1547	170.0	1949	170.0	1549	170.0	2139	170.0	1687	170.0	2483	170.0	1803	170.0	1833
108 in	170.0	1965	170.0	1761	170.0	2163	170.0	1763	170.0	2363	170.0	1863	170.0	2693	170.0	2013	170.0	2043
110 in	170.0	2012	170.0	1805	170.0	2207	170.0	1807	170.0	2407	170.0	1907	170.0	2737	170.0	2057	170.0	2087
115 in	170.0	2116	170.0	1909	170.0	2311	170.0	1911	170.0	2511	170.0	2011	170.0	2841	170.0	2161	170.0	2191
120 in	170.0	2220	170.0	2013	170.0	2415	170.0	2015	170.0	2615	170.0	2115	170.0	2945	170.0	2265	170.0	2295
124 in	170.0	2324	170.0	2117	170.0	2519	170.0	2119	170.0	2719	170.0	2219	170.0	3049	170.0	2369	170.0	2399
144 in	170.0	2712	170.0	2506	170.0	2908	170.0	2508	170.0	3108	170.0	2608	170.0	3442	170.0	2762	170.0	2792

ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(DP_{max}) \times (ANCHOR CAP_{min}) = ANCHOR CAP_{max}$$

USE THIS FORMULA TO OBTAIN THE ANCHOR CAPACITY REQUIRED CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING. WHEN IT IS LOWER THAN THE MULLION CAPACITY (FROM THE TABLE) OF THE SELECTED MULLION, IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR CAPACITY TABLE.



Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS
 Description: 1.25 X 3.25 X .624 MULL. SPECS
 Scale: N/A
 Date: 08/29/11
 Drawn By: J. ROSOWSKI
 Checked By: J. ROSOWSKI
 Date: 06/26/20
 Added New Anchor Type: 6300JR
 Sheet: 14 of 25
 Rev: D

TABLE 10B

TABLE 10B																	
Anchor Capacity (lbs)	Substrate	2.7K Concrete				3K Concrete				Hollow CMU				Filled CMU		P* Wood	Metal
		3/16" Eico Ultrason	1/4" Eico Ultrason	3/16" DeWalt Ultrason	1/4" DeWalt Ultrason	3/16" Eico Ultrason	1/4" Eico Ultrason	3/16" DeWalt Ultrason	1/4" DeWalt Ultrason	3/16" Eico Ultrason	1/4" Eico Ultrason	3/16" DeWalt Ultrason	1/4" DeWalt Ultrason	1/4" SS Eico Aggrigator	#10 Steel Screw (65)		
2 Anchors @ 4.75" Min. O.C. / Standard or Offset Clip (Fig. 1)	Embedment (in)	1"	2-1/2"	1-3/4"	2-1/2"	1-3/4"	2-1/2"	1"	2-1/2"	1-3/4"	2-1/2"	1"	2-1/2"	1-3/4"	1-3/8"	1-3/8"	1-3/8"
		1-3/4"	3-1/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1-3/4"	1"	1-1/4"	1-1/4"	1-1/4"	1"	1-1/4"	1-1/4"	1-3/8"	1-3/8"
4 Anchors @ 1.15" Min. O.C. / Standard or Offset Clip (Fig. 2)	Edge Distance (in)	350 lbs	450 lbs	370 lbs	530 lbs	220 lbs	370 lbs	270 lbs	354 lbs	240 lbs	370 lbs	320 lbs	500 lbs	374 lbs	341 lbs	442 lbs	350 lbs
4 Anchors @ 3" Min. O.C. / (2) 24" Angle Clips / (Fig. 3)	1" into 1" F.C.H. (Fig. 4)	700 lbs	N/A	320 lbs	1250 lbs	370 lbs	N/A	N/A	340 lbs	N/A	N/A	N/A	740 lbs	N/A	N/A	895 lbs	1120 lbs
		700 lbs	600 lbs	1950 lbs	1250 lbs	400 lbs	N/A	760 lbs	480 lbs	N/A	N/A	N/A	540 lbs	748 lbs	602 lbs	895 lbs	1120 lbs
3 Anchors @ 0.54" Min. O.C. / 100 Alum. Ings. / (Fig. 4)	1" into 1" F.C.H. (Fig. 4)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	550 lbs
		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	550 lbs
2 Anchors @ 1.15" Min. O.C. / F-Clip (Fig. 5)	1" into 1" F-Clip (Fig. 5)	165 lbs	225 lbs	445 lbs	315 lbs	110 lbs	435 lbs	110 lbs	177 lbs	370 lbs	115 lbs	163 lbs	250 lbs	437 lbs	170 lbs	221 lbs	260 lbs
		N/A	N/A	N/A	180 lbs	630 lbs	195 lbs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	341 lbs	442 lbs	350 lbs
NOTE: For OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.																	

NOTE: FOR THE OFFSET CLIP, USE THE SAME ANCHOR PATTERN AND ANCHOR VALUES AS THE STANDARD CLIP.

FIGURE 1:

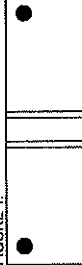


FIGURE 2:

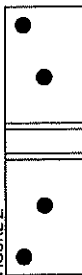


FIGURE 3:



FIGURE 4:

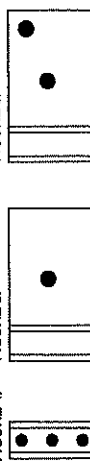


FIGURE 5:

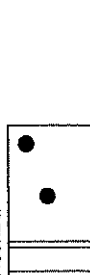


FIGURE 6:

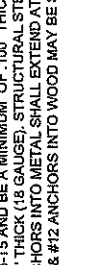
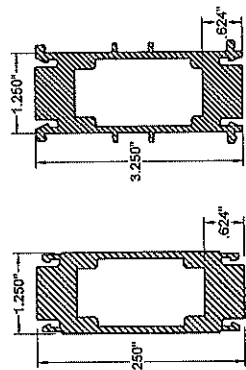


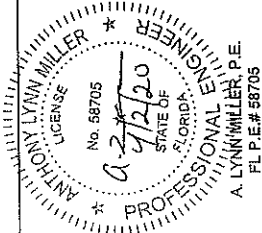
TABLE NOTES:

- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .100" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (.18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.



1.25" X 3.25" X .624" MULLION FOR FACTORY-MULLED UNITS

1.25" X 3.25" X .624" MULLION FOR FIELD-MULLED UNITS

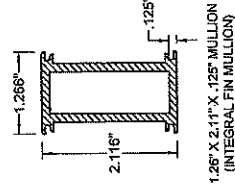


PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. 20-0406.03
 Expiration Date 05/26/2026
 By: Miami-Dade Product Control

[illegible][illegible]

1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING.
SEE SHEETS 2,4 FOR GENERAL INSTALLATION METHODS.

FOOTING: _____



ANGLE CLIP MUST BE USED IN PAIRS.

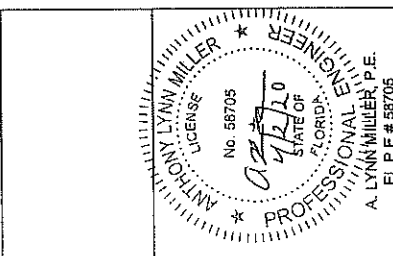
4) SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL 18-8 S.S. OR 410 S.S.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By SP
Miami-Dade Product Control

LUMINUM TUBE MULTIONS		FULL SPECS		Drawing No.		6300JR		Sheet		19 of 25		Rev.		D		Checked By:		Date:		Rev.		D		Added New Anchor Type.	
-----------------------	--	------------	--	-------------	--	--------	--	-------	--	----------	--	------	--	---	--	-------------	--	-------	--	------	--	---	--	------------------------	--

IMPACT-RESISTANT A	30 DEGREE BAY M
Date: 08/29/11 Scale: N/A	Date: 06/26/20 Scale: N/A

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By LS
Miami-Dade Product Control



ANCHOR CAPACITY ADJUSTMENT FORMULA:

$$(DP_{\text{cap}}) \times \left(\frac{\text{ANCHOR CAP. (max load)}}{\text{MULLION CAP. (max load)}} \right) = \text{ANCHOR CAP.}_{\text{adj}}$$

USE THIS FORMULA TO OBTAIN THE "ANCHOR CAPACITY REQUIRED" CORRESPONDING TO AN ACTUAL PRESSURE REQUIREMENT FOR THE OPENING. WHEN IT IS LOWER (FROM THE TABLE) OF THE SELECTED MULLION, IT WILL YIELD A MINIMUM ANCHOR CAPACITY WHICH MAY BE USED TO QUALIFY ADDITIONAL ANCHOR OPTIONS FROM THE ANCHOR CAPACITY TABLE.

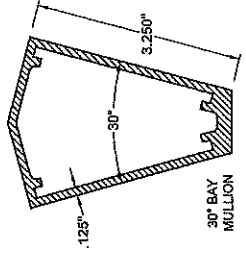
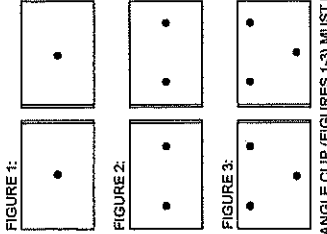
[illegible][illegible]

TABLE NOTES:

- 1) SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 23 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
- 2) LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
- 3) MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
- 4) SUBSTRATE: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T3 AND BE A MINIMUM OF 125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST 125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 18-8 S.S. OR 410 S.S.

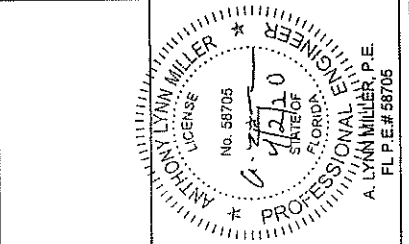




REGISTRATION #29296
(941) 480-1800
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33479

Rev. By: J ROSOWSKI
Date: 06/26/20
Checked By: 6300JR
Drawing No.: 20-0406-03
Scale: N/A
Description: 45 DEGREE BAY MULL SPECS
Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406-03
Expiration Date 05/26/2026
By: Miami-Dade Product Control

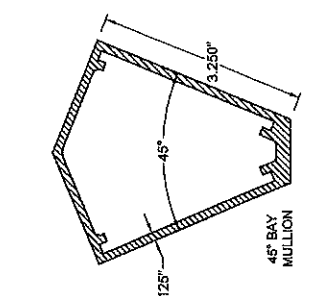


**ANCHOR CAPACITY
ADJUSTMENT FORMULA:**
 $(DF_{min}) \times (ANCHOR CAP_{min})$
= ANCHOR CAP_{adj}

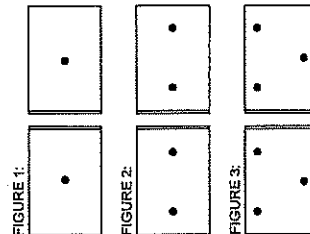
USE THIS FORMULA TO OBTAIN
THE "ANCHOR CAPACITY
REQUIRED" CORRESPONDING
TO AN ACTUAL PRESSURE
REQUIREMENT FOR THE
OPENING WHEN IT IS LOWER
FROM THE TABLE OF THE
SELECTED MULLION. IT WILL
YIELD A MINIMUM ANCHOR
CAPACITY WHICH MAY BE
USED TO QUALIFY ADDITIONAL
ANCHOR OPTIONS FROM THE
ANCHOR CAPACITY TABLE.

Mull Length	Opening Width (for vertically-sparring mullions) or Opening Height (for horizontally-sparring mullions)											
	50 in			60 in			70 in			80 in		
	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading	Rectangular Loading	Triangular Loading	Triangular Loading
42 in	170.0	690	435	170.0	478	170.0	688	170.0	506	170.0	519	170.0
48 in	170.0	708	524	170.0	594	170.0	692	170.0	630	170.0	681	170.0
50 in	170.0	747	570	170.0	631	170.0	723	170.0	664	170.0	723	170.0
54 in	170.0	797	612	170.0	681	170.0	784	170.0	716	170.0	784	170.0
60 in	170.0	885	685	170.0	754	170.0	854	170.0	784	170.0	854	170.0
66 in	170.0	974	759	170.0	829	170.0	929	170.0	854	170.0	929	170.0
72 in	170.0	1062	832	170.0	904	170.0	1004	170.0	929	170.0	1004	170.0
78 in	170.0	1150	906	170.0	979	170.0	1079	170.0	1004	170.0	1079	170.0
84 in	170.0	1238	980	170.0	1054	170.0	1154	170.0	1079	170.0	1154	170.0
90 in	170.0	1326	1054	170.0	1129	170.0	1229	170.0	1154	170.0	1229	170.0
96 in	170.0	1414	1129	170.0	1204	170.0	1304	170.0	1229	170.0	1304	170.0
102 in	170.0	1502	1204	170.0	1279	170.0	1379	170.0	1304	170.0	1379	170.0
108 in	170.0	1590	1279	170.0	1354	170.0	1454	170.0	1379	170.0	1454	170.0
114 in	170.0	1678	1354	170.0	1429	170.0	1529	170.0	1454	170.0	1529	170.0
120 in	170.0	1766	1429	170.0	1504	170.0	1604	170.0	1529	170.0	1604	170.0
126 in	170.0	1854	1504	170.0	1579	170.0	1679	170.0	1604	170.0	1679	170.0
132 in	170.0	1942	1579	170.0	1654	170.0	1754	170.0	1679	170.0	1754	170.0
138 in	170.0	2030	1654	170.0	1729	170.0	1829	170.0	1754	170.0	1829	170.0
144 in	170.0	2118	1729	170.0	1804	170.0	1904	170.0	1829	170.0	1904	170.0

Anchor Capacity (lbs)	Substrate											
	2.7k Concrete			3k Concrete			3.5k Concrete			Fiberglass CMU		
	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	3/16" Elco Ultrason	1/4" SS Elco Ultrason	1/4" SS Elco Ultrason	1/2" Steel Screw (SS)
2 Anchors @ 5" Min. O.C. / (2) 2x5 Angle Clips / (Fig. 1)	380 lbs	380 lbs	380 lbs	450 lbs	450 lbs	450 lbs	520 lbs	520 lbs	520 lbs	520 lbs	520 lbs	520 lbs
4 Anchors @ 3.5" Min. O.C. / (2) 2x5 Angle Clips / (Fig. 2)	760 lbs	760 lbs	760 lbs	900 lbs	900 lbs	900 lbs	1040 lbs	1040 lbs	1040 lbs	1040 lbs	1040 lbs	1040 lbs
6 Anchors @ 2.7" Min. O.C. / (2) 2x5 Angle Clips / (Fig. 3)	1140 lbs	1140 lbs	1140 lbs	1360 lbs	1360 lbs	1360 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs	1580 lbs



- TABLE NOTES:**
- SEE SHEET 1 FOR INSTRUCTIONS ON USING THE TABLES AND SHEET 25 FOR INFORMATION ON LOADING. SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.
 - LINEAR INTERPOLATION BETWEEN MULL LENGTHS AND/OR OPENING WIDTHS IS ALLOWABLE.
 - MULLION AND MULLION CLIPS SHOWN ARE NOT TO SCALE. FOR EXACT DIMENSIONS, SEE SHEETS 21-23. HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS SHOWN ON SHEETS 21-23. FIGURES SHOW SUGGESTED, APPROXIMATE HOLE LOCATIONS.
 - SUBSTRATES: CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. HOLLOW AND GROUT-FILLED CONCRETE BLOCK UNIT (CMU) SHALL CONFORM TO ASTM C-90. WOOD SHALL BE PRESSURE-TREATED YELLOW SOUTHERN PINE WITH AN SG OF 0.55. ALUMINUM SHALL BE 6063-T5 AND BE A MINIMUM OF .125" THICK. STEEL STUDS TO BE A MINIMUM GRADE 33 AND .045" THICK (18 GAUGE). STRUCTURAL STEEL TO BE AT LEAST .125" THICK AND A36. ALL ANCHORS INTO METAL SHALL EXTEND AT LEAST 3 SCREW THREADS BEYOND THE MATERIAL. #10 & #12 ANCHORS INTO WOOD MAY BE STEEL, 19-8 S.S. OR 410 S.S.



ANGLE CLIP (FIGURES 1-3) MUST BE USED IN PAIRS.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration date 05/26/2026
By: Miami-Dade Product Control

ANTHONY LYNN MILLER
No. 58705
03/25/20
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

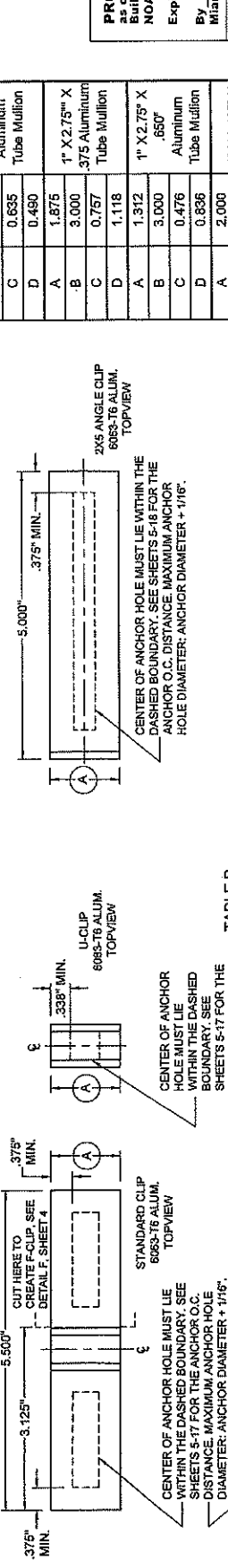
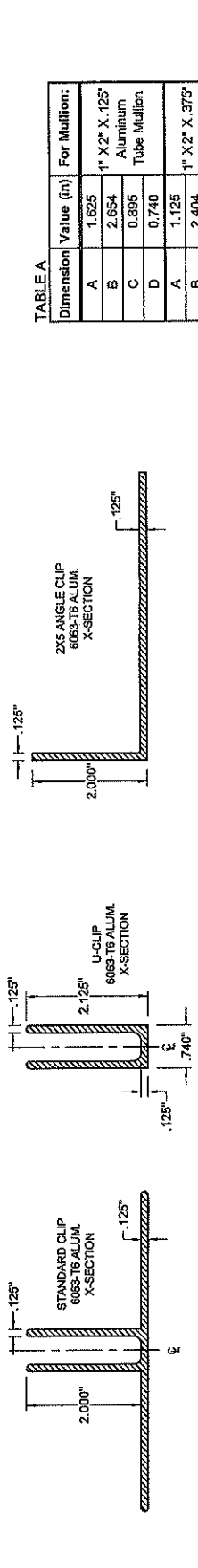
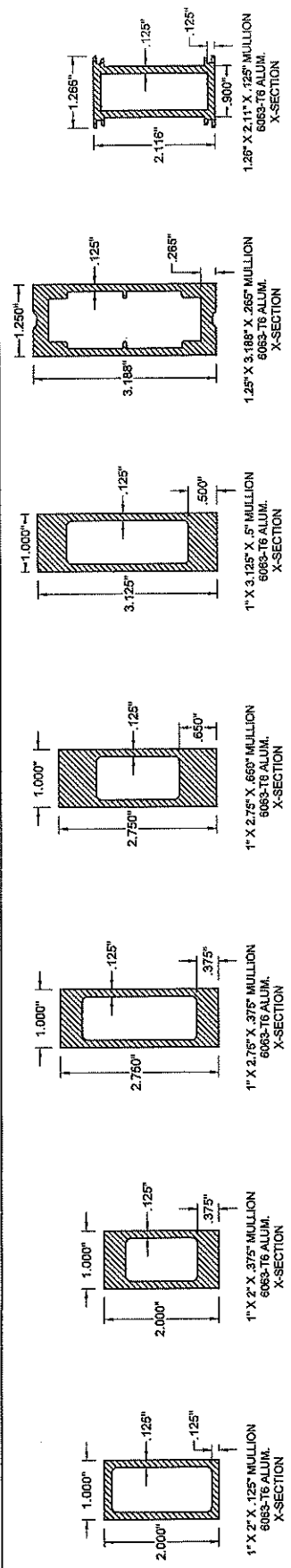


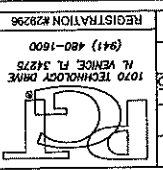
TABLE A

Dimension	Value (in)	For Mullion:
A	1.625	1" X 2" X .125" Aluminum Tube Mullion
B	2.654	1" X 2" X .125" Aluminum Tube Mullion
C	0.895	1" X 2" X .125" Aluminum Tube Mullion
D	0.740	1" X 2" X .125" Aluminum Tube Mullion
A	1.125	1" X 2.75" X .375" Aluminum Tube Mullion
B	2.404	1" X 2.75" X .375" Aluminum Tube Mullion
C	0.635	1" X 2.75" X .375" Aluminum Tube Mullion
D	0.490	1" X 2.75" X .375" Aluminum Tube Mullion
A	1.875	1" X 3.125" X .5" Aluminum Tube Mullion
B	3.000	1" X 3.125" X .5" Aluminum Tube Mullion
C	0.757	1" X 3.125" X .5" Aluminum Tube Mullion
D	1.118	1" X 3.125" X .5" Aluminum Tube Mullion
A	1.312	1.25" X 2.11" X .125" Aluminum Tube Mull
B	3.000	1.25" X 2.11" X .125" Aluminum Tube Mull
C	0.476	1.25" X 2.11" X .125" Aluminum Tube Mull
D	0.836	1.25" X 2.11" X .125" Aluminum Tube Mull
A	2.000	1.25" X 2.11" X .125" Aluminum Tube Mull
B	2.637	1.25" X 2.11" X .125" Aluminum Tube Mull
C	0.863	1.25" X 2.11" X .125" Aluminum Tube Mull
D	1.137	1.25" X 2.11" X .125" Aluminum Tube Mull
A	2.625	1.25" X 3.188" X .265" Aluminum Tube Mull
B	3.262	1.25" X 3.188" X .265" Aluminum Tube Mull
C	0.882	1.25" X 3.188" X .265" Aluminum Tube Mull
D	1.782	1.25" X 3.188" X .265" Aluminum Tube Mull
A	1.813	1.25" X 2.11" X .125" Aluminum Tube Mull

TABLE B

Mull Dimension (Sheet #)	Mullion	Std. Clip	Offset Clip	U-Clip	Angle Clip
1" X 2" X .125" (5)	66605	66613M	666118M	666243M	66651M
1" X 2" X .375" (6)	66606	66614M	666119M	666244M	66652M
1" X 2.75" X .375" (7)	66607	66615M	666120M	666245M	66653M
1" X 2.75" X .650" (8)	66608	66616M	666121M	666246M	66654M
1" X 3.125" X .500" (9)	66609	66617M	666122M	666247M	66655M
1.25" X 3.188" X .265" (12)	66641	666117M	666113M	666241M	666516M
1.25" X 2.11" X .125" (18)	66670	N/A	N/A	N/A	666517M

- NOTES:**
- HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS GIVEN ON THIS SHEET.
 - SEE SHEETS 5-9, 12 & 18 FOR SUGGESTED, APPROXIMATE HOLE LOCATIONS & ANCHOR O.C. DISTANCE.
 - SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.



REGISTRATION #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 33575
(941) 480-1600

Rev. By: J. ROSOWSKI
Date: 06/26/20
Revision: 08/29/11
Checked By: N/A
Scale: N/A
Drawing No. 6300.R
Sheet: 22 of 26
Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By: Miami-Dade Product Control

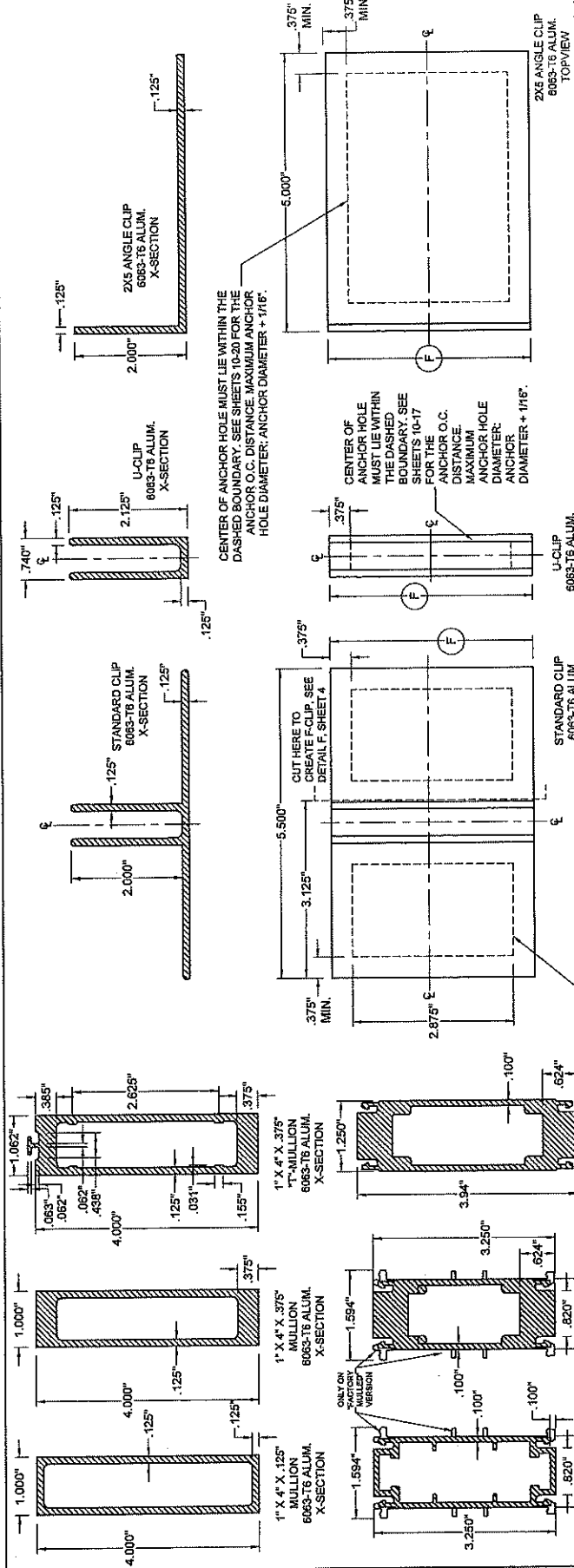
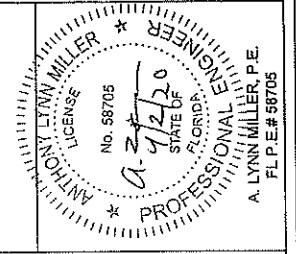


TABLE C

Dimension	Value (in)	For Mullion:
F	3.687	1" X 4" X .125" Aluminum
G	1.000	1" X 4" X .375" Tube Mullion
H	2.680	1" X 4" X .375" Tube Mullion
I	3.000	1" X 4" X .375" Tube Mullion
J	3.187	1" X 4" X .375" Tube Mullion
K	0.757	1" X 4" X .375" Tube Mullion
L	2.430	1" X 4" X .375" Tube Mullion
M	2.250	1" X 4" X .375" Tube Mullion
N	0.750	1" X 4" X .375" Tube Mullion
O	1.500	1" X 4" X .375" Tube Mullion
P	3.250	1" X 4" X .375" Tube Mullion

TABLE C, CONT.

Dimension	Value (in)	For Mullion:
F	1.938	1.25" X 3.25" X .063" Tube Mullion
G	0.500	1.25" X 3.25" X .063" Tube Mullion
H	1.438	1.25" X 3.25" X .063" Tube Mullion
I	3.250	1.25" X 3.25" X .063" Tube Mullion
J	2.625	1.25" X 3.25" X .063" Tube Mullion
K	1.125	1.25" X 3.25" X .063" Tube Mullion
L	1.500	1.25" X 3.25" X .063" Tube Mullion
M	3.250	1.25" X 3.25" X .063" Tube Mullion
N	2.813	1.25" X 3.25" X .063" Tube Mullion
O	2.875	1.25" X 3.25" X .063" Tube Mullion

TABLE D

Mull Dimension (Sheet #)	Mullion	Std. Clip	Offset Clip	U-Clip	Angle Clip
1" X 4" X .125" (10)	6354	66511M	665122M	66521M	665518M
1" X 4" X .375" (11)	66510	665112M	665123M	66522M	665519M
1" X 4" X .375" (11)	66553	665112M	665123M	66522M	665519M
1.25" X 3.25" X .100" (13)	2016020312	6651127M	665124M	665241M	6655110M
1.25" X 3.25" X .100" (13)	2016120315	6651129M	665125M	665241M	6655110M
1.25" X 3.25" X .063" (14)	20162	665117M	665126M	665241M	665517M
1.25" X 3.94" X .063" (15)	20162	665117M	665126M	665241M	665517M
30 Degree (19)	66549	N/A	N/A	N/A	665510M
45 Degree (20)	66550	N/A	N/A	N/A	665511M

NOTES:
1) HOLES TO BE DRILLED IN THE FIELD FOLLOWING DIMENSIONAL RESTRICTIONS GIVEN ON THIS SHEET.
2) SEE SHEETS 10, 11, 13-15, 19 & 20 FOR SUGGESTED, APPROXIMATE HOLE LOCATIONS.
3) SEE SHEETS 2-4 FOR GENERAL INSTALLATION METHODS.

PGT

1020 TECHNOLOGY DRIVE
N. WENDE, FL 34225
(813) 460-1800

REGISTRATION #28288

IMPACT-RESISTANT ALUMINUM TUBE MULLIONS

DESCRIPTION: MULLION AND CLIP DIMENSIONS C

Sheet: 23 of 25

Rev: D

Checked By: 6300JR

Date: 08/29/11

Rev: 06/26/20

NO CHANGES THIS SHEET.

PRODUCT REVISED

as complying with the Florida Building Code

NOA-No. 20-0406.03

Expiration Date 05/26/2026

By Miami-Dade Product Control

PROFESSIONAL ENGINEER

ANTHONY LYNN MILLER

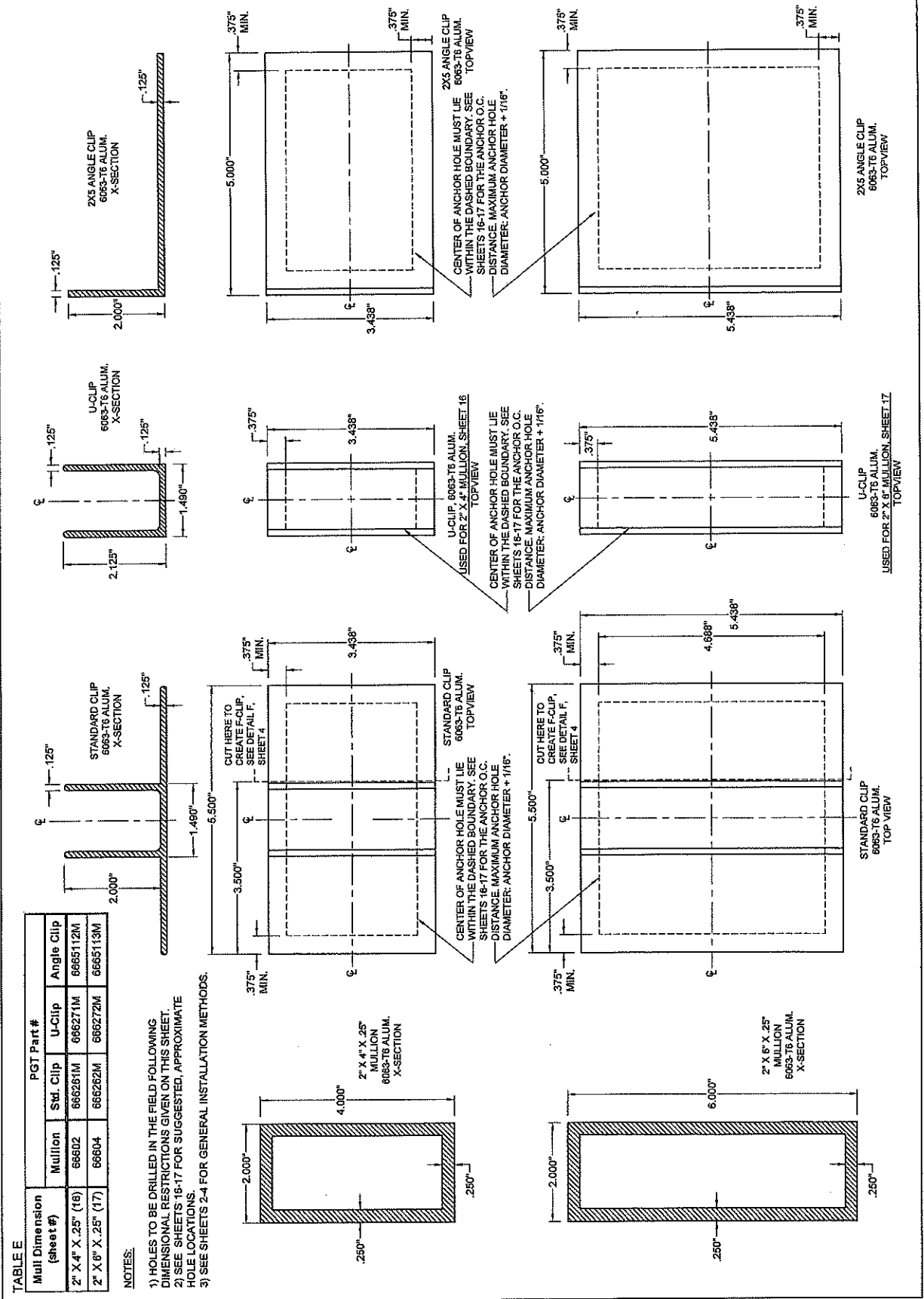
No. 58705

FLORIDA STATE OF

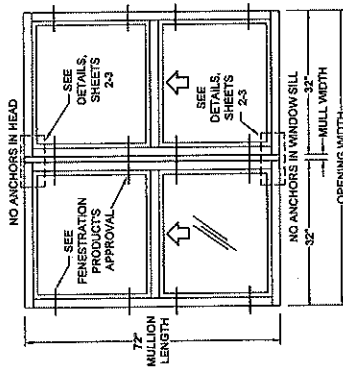
01/27/20

A. LYNN MILLER, P.E.

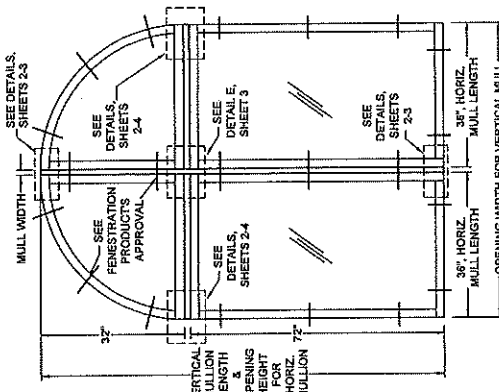
FL P.E. # 58705



EXAMPLE 1: SINGLE VERTICAL MULLION



EXAMPLE 2: MULTIPLE MULLIONS



THE BUILDING SUBSTRATE IS KNOWN TO BE WOOD ON ALL FOUR SIDES. THE WINDOW FRAME DEPTH IS 2-1/4". THE OPENING REQUIRES A DESIGN PRESSURE OF +60.0/60.0 PSF.

1) INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE, THE MULLION LENGTH IS 72" AND THE OPENING WIDTH IS 32" X 72" = 2304". REFERENCE SHEET 25, THE COLUMN USING RECTANGULAR LOADING MUST BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-1/4" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +60.0/-60.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 3A, SHEET 7, THE 1" X 2.75" X 375" MULLION (LENGTH = 72", OPENING WIDTH = 70") MEETS THE DEPTH REQUIRED, HOWEVER THE DESIGN PRESSURE IS +58.3 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

FROM TABLE 4A, SHEET 8, THE 1" X 2.75" X 680" MULLION (LENGTH = 72", OPENING WIDTH = 70") HAS A DESIGN PRESSURE OF +72.7 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 636 LBS.

2) USE TABLE 4B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE WOOD SUBSTRATE. BOTH THE STANDARD CLIP WITH (4) #12 ANCHORS AND THE 2X5 ANGLE CLIPS WITH (4) #12 ANCHORS HAVE A CAPACITY OF 685 LBS. THOUGH EITHER ONE COULD BE USED, THE STANDARD CLIP IS EASIER TO INSTALL.

3) VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY. FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.

IN THIS EXAMPLE, THE DESIGN PRESSURE REQUIRED WAS +60.0 PSF. THE OVERALL MULLION SYSTEM WAS DETERMINED TO BE 72.7 PSF WITH AN ANCHOR CAPACITY OF 636 LBS. ALTERNATIVELY, THE ANCHOR CAPACITY ADJUSTMENT FORMULA COULD HAVE BEEN USED TO CALCULATE THE ANCHOR CAPACITY REQUIRED FOR THE EXACT DESIGN PRESSURE OF 60 PSF:

$$(60 \text{ PSF}) \times \left(\frac{636 \text{ LBS}}{72.7 \text{ PSF}} \right) = 524.9 \text{ LBS} \quad (\text{MAY BE USED TO QUALIFY # 10 STEEL SCREWS FROM TABLE 4B})$$

THE BUILDING SUBSTRATE IS KNOWN TO BE CMU ON THE JAMBS AND USES A CONCRETE HEADER AND SILL. THE WINDOW FRAME DEPTH IS 2-3/8". THE OPENING REQUIRES A DESIGN PRESSURE OF +60.0/-55.0 PSF.

FOR THE VERTICAL MULLION:

1) INITIALLY ASSUMING THAT A 1" WIDE MULLION IS SUITABLE, THE MULLION LENGTH IS 32" X 72" = 2304" AND THE OPENING WIDTH IS 38" X 36" = 1368". REFERENCE SHEET 25, THE COLUMN USING RECTANGULAR LOADING SHALL BE USED. SCAN THE MULLION TABLES FOR A MULLION THAT IS AT LEAST THE WINDOW FRAME DEPTH OF 2-3/8" AND WILL MEET OR EXCEED THE REQUIRED DESIGN PRESSURE OF +60.0/-55.0 PSF. IF THE TABLE DOES NOT SHOW THE EXACT SIZE, USE THE NEXT LARGER SIZE AVAILABLE.

FROM TABLE 3A, SHEET 7, THE 1" X 2.75" X 375" MULLION (LENGTH = 108", OPENING WIDTH = 80") MEETS THE DEPTH REQUIRED, HOWEVER THE DESIGN PRESSURE IS +41.6 PSF AND WOULD NOT BE SUITABLE FOR THIS APPLICATION.

FROM TABLE 12A, SHEET 16, THE 2" X 4" X 250" MULLION (LENGTH = 108", OPENING WIDTH = 80") HAS A DESIGN PRESSURE OF +64.7 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 971 LBS.

BECAUSE IT IS NOW KNOWN THAT THE MULLION WILL ADD 2" TO THE WIDTH OF THE MULLION UNIT, THE ADJUSTED OPENING WIDTH IS 38" X 36" = 1368". NOT 73" AS PREVIOUSLY ASSUMED. VERIFY THAT THE DESIGN PRESSURE IS STILL APPLICABLE FOR THE ADJUSTED OPENING. ALTERNATIVELY, THE WINDOW WIDTHS MAY BE REDUCED TO MAINTAIN THE 73" DIMENSION (35-1/2" X 35-1/2" = 1250").

2) USE TABLE 12B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CONCRETE SUBSTRATE. IN THIS EXAMPLE, ASSUME THE POURED CONCRETE HEADER AND SILL ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8", CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE STANDARD CLIP WITH (6) 3/16" ULTRACON ANCHORS AT AN EDGE DISTANCE OF 2-1/2" GIVES AN ANCHOR CAPACITY OF 1050 LBS WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 971 LBS.

FOR THE HORIZONTAL MULLIONS:

BECAUSE THE VERTICAL MULL WILL BE A 2" X 4" X 250" MULLION, IN THIS EXAMPLE WE WILL MATCH THE HORIZONTAL AND VERTICAL MULLIONS. ALTERNATIVELY, ANOTHER MULLION TYPE COULD BE CHOSEN.

1) THE MULLION LENGTH IS 36" AND THE OPENING HEIGHT IS 32" X 72" = 2304" = 108". REFERENCE SHEET 25, THE COLUMN USING TRAPEZOIDAL/TRIANGULAR LOADING MAY BE USED. FROM TABLE 12A, SHEET 16, THE 2" X 4" X 250" MULLION (LENGTH = 42", OPENING HEIGHT = 120") HAS A DESIGN PRESSURE OF +470.0 PSF WHICH EXCEEDS THE REQUIREMENTS FOR THE OPENING AND MAY BE USED IN THIS APPLICATION. NOTE THE ANCHOR CAPACITY REQUIRED OF 521 LBS.

2) USE TABLE 12B TO FIND THE ANCHOR TYPE, ANCHOR QUANTITY AND CLIP TYPE REQUIRED FOR THE CMU SUBSTRATE. IN THIS EXAMPLE, ASSUME THE CMU JAMBS ARE 8" WIDE. IF THE MULLION CLIP WERE TO BE CENTERED WITHIN THE 8", CARE MUST BE TAKEN TO MAINTAIN THE FASTENER'S EDGE DISTANCE. USING THE 2X5 ANGLE CLIPS WITH (4) 3/16" ULTRACON ANCHORS AT AN EDGE DISTANCE OF 1" GIVES AN ANCHOR CAPACITY OF 940 LBS WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY OF 521 LBS.

4) FOR THE U-CLIP IN THE HORIZONTAL MULLION TO VERTICAL MULLION, USE THE SAME ANCHOR CAPACITY OF 521 LBS. TABLE 12B FOR THE U-CLIP SHOWS THE ANCHOR CAPACITY IS 1074 LBS WHEN USING 3 ANCHORS, WHICH IS GREATER, AND THEREFORE SUITABLE, FOR THE REQUIRED ANCHOR CAPACITY REQUIREMENT OF 521 LBS. THE ANCHOR TYPE IS A #12 STEEL SCREW.

FROM THE ABOVE STEPS, OUR MULLION DESIGN PRESSURE IS:

+64.7 PSF FROM THE VERTICAL MULLION;

+470.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO CMU;

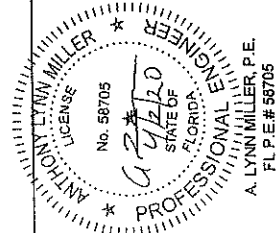
+470.0 PSF FROM THE 36" HORIZONTAL MULLION ATTACHING TO THE VERTICAL MULLION (INTERSECTION);

THE LOWEST DESIGN PRESSURE IS +64.7 PSF AND WOULD APPLY TO ALL OF THE MULLIONS.

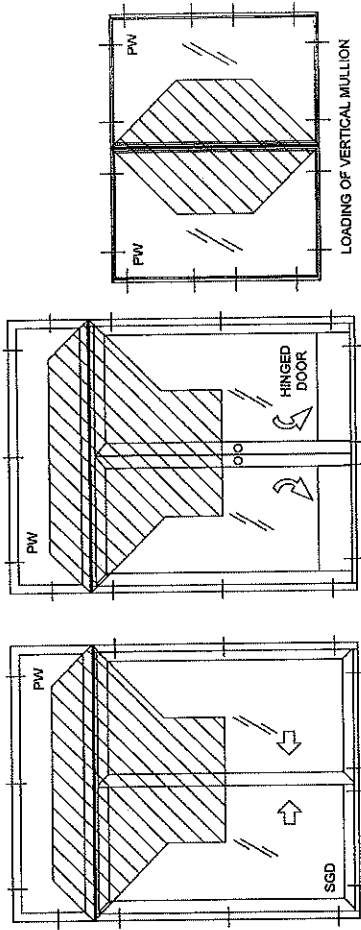
VERIFY THE DESIGN PRESSURE OF THE FENESTRATION PRODUCTS USED WITH THIS MULLION SYSTEM. THE LOWER DESIGN PRESSURE, OF MULLIONS OR FENESTRATION PRODUCTS, WILL APPLY TO THE OVERALL ASSEMBLY. FINAL DESIGN PRESSURE REQUIRES THAT THE BOTH THE MULLION AND THE FENESTRATION PRODUCT BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION SPECIFICATIONS INTO RESPECTIVE SUBSTRATES AND FENESTRATION PRODUCTS TO MULLION.

		REGISTRATION #20295 (941) 480-1600	
IMPACT-RESISTANT ALUMINUM TUBE MULLIONS		NO CHANGES THIS SHEET.	
Title: IMPACT-RESISTANT ALUMINUM TUBE MULLIONS Description: EXAMPLES Scale: N/A Date: 08/29/11 Checked By: J. ROSOWSKI Date: 06/26/20 Drawn By: J. ROSOWSKI	Drawing No: 6300JR Sheet: 24 of 25	PRODUCT REVISED as complying with the Florida Building Code NOA - No. 20-0406.03 Expiration Date 05/26/2026 By: Miami-Dade Product Control	

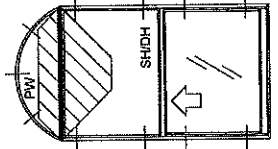
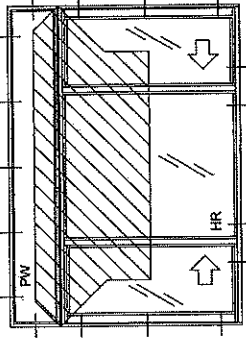
PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-0406.03
Expiration Date 05/26/2026
By SP
Miami-Dade Product Control



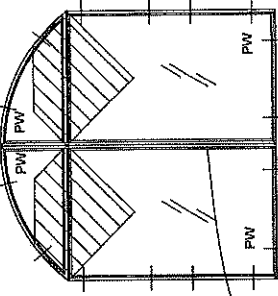
EXAMPLES OF TRAPEZOIDAL/TRIANGULAR LOADING:



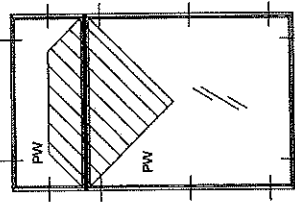
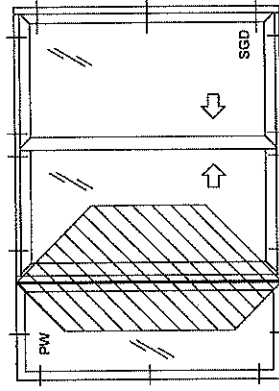
LOADING OF VERTICAL MULLION

LOADING OF HORIZONTAL
MILLION

LOADING OF HORIZONTAL MULLION

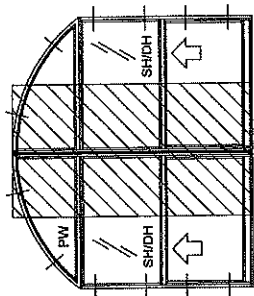
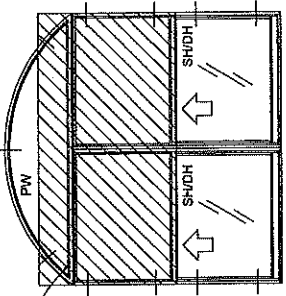


LOADING OF (2) HORIZONTAL MILLIONS

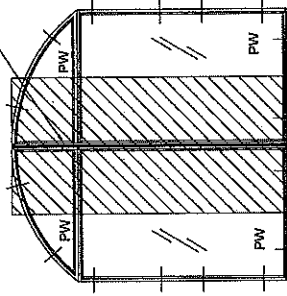
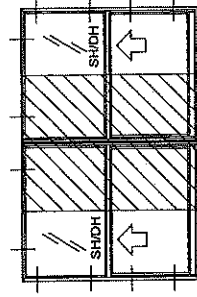
LOADING OF HORIZONTAL
MULCHION

LOADING OF VERTICAL MULLION

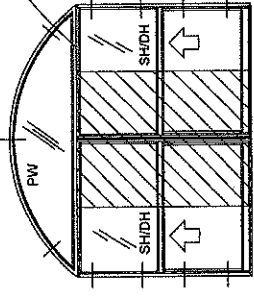
EXAMPLES OF RECTANGULAR LOADING:

LOADING OF VERTICAL MULLION
WITH INTERSECTING HORIZONTAL MULLIONS

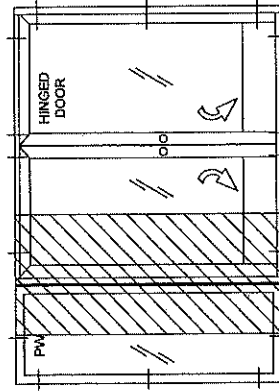
LOADING OF HORIZONTAL MULLION WITH INTERSECTING VERTICAL MULLION

LOADING OF VERTICAL MULLION
WITH INTERSECTING HORIZONTAL MULLIONS

LOADING OF VERTICAL MULLION SILL OF WINDOWS NOT ANCHORED



LOADING OF VERTICAL MULLION
SILL OF WINDOWS NOT ANCHORED



LOADING OF VERTICAL MULLION
PANEL OF HINGED DOOR IS NOT CAPTURED OR ANCHORED

NOTES:

- 1) DRAWINGS ARE REPRESENTATIONS OF TYPICAL CONFIGURATIONS. CONFIGURATIONS NOT SHOWN MAY BE EXTRAPOLATED FROM THOSE SHOWN.
- 2) IF THE LOADING TYPE CANNOT BE DETERMINED, USE RECTANGULAR LOADING.
- 3) SEE PRODUCTS' APPROVAL FOR ACTUAL ANCHOR LOCATIONS.



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #	FL1435-R23
Application Type	Revision
Code Version	2020
Application Status	Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments
Archived ☐

Product Manufacturer	PGT Industries
Address/Phone/Email	1070 Technology Drive North Venice, FL 34275 (941) 486-0100 Ext 21140 jrosowski@pgtindustries.com

Authorized Signature	Jens Rosowski jrosowski@pgtindustries.com
----------------------	--

Technical Representative	Lynn Miller, P.E.
Address/Phone/Email	1070 Technology Dr N Venice, FL 34275 (941) 486-0100 Ext 21142 lmiller@pgtindustries.com

Quality Assurance Representative
Address/Phone/Email

Category	Windows
Subcategory	Single Hung

Compliance Method	Certification Mark or Listing
-------------------	-------------------------------

Certification Agency	Keystone Certifications, Inc.
Validated By	Steven M. Ulrich, PE
	☒ Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)	<u>Standard</u>	<u>Year</u>
	AAMA/WDMA/CSA 101/IS2/A440	2011
	ASTM E1886	2005
	ASTM E1886	2013
	ASTM E1996	2012
	ASTM E283	2004
	ASTM E330	2002

Equivalence of Product Standards Certified By	Florida Licensed Professional Engineer or Architect <u>FL1435_R23_Equiv_ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf</u>
--	---

Product Approval Method

Method 1 Option A

Date Submitted

10/27/2020

Date Validated

11/04/2020

Date Pending FBC Approval

Date Approved

11/08/2020

Summary of Products

FL #	Model, Number or Name	Description
1435.1	SH-5400	EnergyVue Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5400.pdf Quality Assurance Contract Expiration Date 08/13/2021 Installation Instructions FL1435_R23_II_SH5400_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5400_Evaluation.pdf Created by Independent Third Party: No
1435.2	SH-5500	WinGuard Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5500.pdf Quality Assurance Contract Expiration Date 10/01/2021 Installation Instructions FL1435_R23_II_SH5500_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5500_Evaluation.pdf Created by Independent Third Party: No

[Back](#)[Next](#)

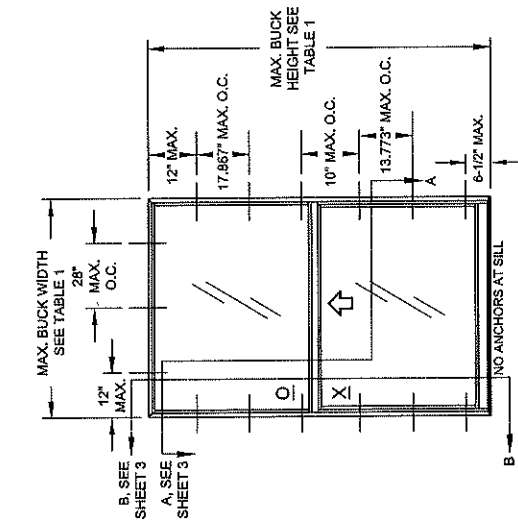
Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. Copyright 2007-2013 State of Florida. :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:

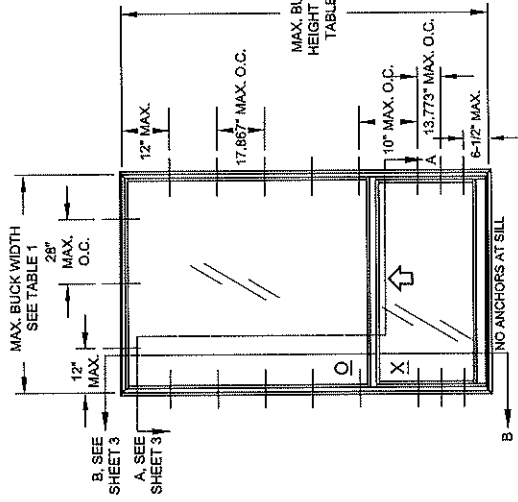
IMPACT RATING	DESIGN PRESSURE RATING
NON-IMPACT RESISTANT	SEE TABLE 1



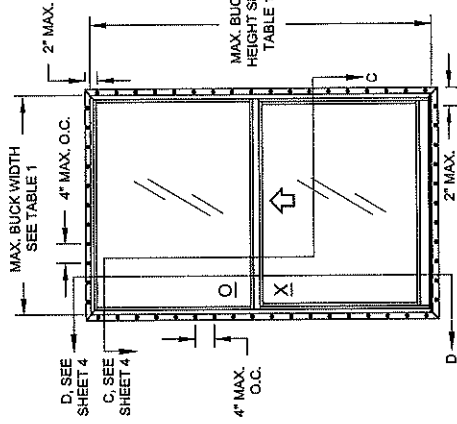
ELEVATION FOR TYP. EQUAL LEG FRAME,
EQUAL-LITE CONFIGURATION

GENERAL NOTES: SERIES 5400 NON-IMPACT RESISTANT,
VINYL SINGLE HUNG WINDOW

- 1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- 2) ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER (EOR) OR ARCHITECT OF RECORD (AOR).
- 3) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT EMBEDMENT. INSTALLATION ANCHORS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- 4) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- 5) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.



ELEVATION FOR TYP. FLANGE FRAME,
PROVIEW/ORIEL CONFIGURATION
(COTTAGE SIMILAR)



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME,
EQUAL-LITE CONFIGURATION
(SIMILAR ANCHOR DIMENSIONS FOR OTHER CONFIGURATIONS)

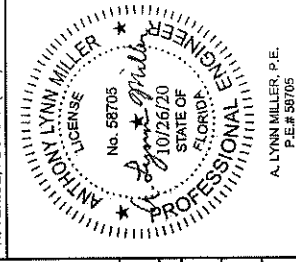
TABLE 1:

Window Buck Size		Reinf. Level	Design Pressure		Certification (CAR) Number
Width	Height		(+) psf	(-) psf	
40"	63"	Equal-lite	50.0	70.0	190-1022
36"	62"	Std. ProView	50.0	50.0	190-1027
36"	67-9/16"	Custom Sash			
52-1/8"	84"	Equal-lite	50.0	50.0	190-1021
52-1/8"	91-13/16"	Std. ProView			
52-1/8"	84"	Custom Sash			
52-1/8"	84"	Equal-lite	65.0	70.0	190-1026
52-1/8"	91-13/16"	Std. ProView			
52-1/8"	91-13/16"	Custom Sash			

MIN. SASH HEIGHT = WINDOW BUCK HEIGHT - 50.136 (APPLIES TO ANY HEIGHT 91.78" OR LESS).

SHAPES MAY BE USED BY
INSCRIBING THE SHAPE IN
A BLOCK AND OBTAINING
DESIGN PRESSURES FOR
THAT BLOCK SIZE FROM
THE TABLE ON THIS SHEET.

COPYRIGHT © 2020
PGI INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (841) 480-1600



ADDED ANCHORS TO TABLE 2				Date	
Rev.	Desc.	Sheet	By	Date	
1	0/2/R20			09/30/11	
VINYL SINGLE HUNG INSTALLATION, NI				J ROSOWSKI	
GENERAL NOTES & ELEVATIONS				SH 5400-FPA	
SH 5400				1 OF 4	
				A	

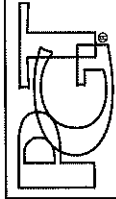


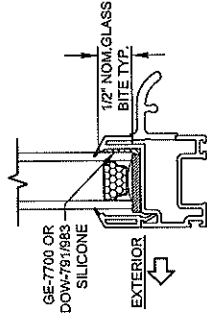
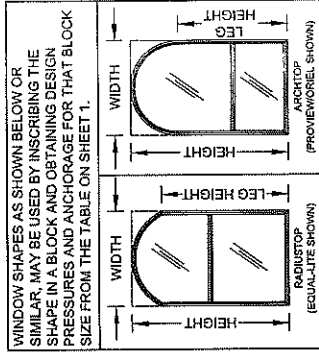
TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
3/16" Ultracon Max. DP of 50.0 psf	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3,000 psi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
1/4" Ultracon Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 2,850 psi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3,350 psi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+ Max. DP of 50.0 psf	Concrete (min. 3,275 psi)	1-1/2"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-3/8"
	P.T. Southern Pine (SG=0.55)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG=0.55)	9/16"	2-7/16"
	P.T. Southern Pine (SG=0.55)	9/16"	2-7/16"
	P.T. Southern Pine (SG=0.55)	9/16"	2-7/16"
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG=0.55)	3/4"	1-3/8"
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	Steel Stud, Gr. 33	3/8"	0.0346" (20 Ga.)
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	Steel, A36	3/8"	0.050"

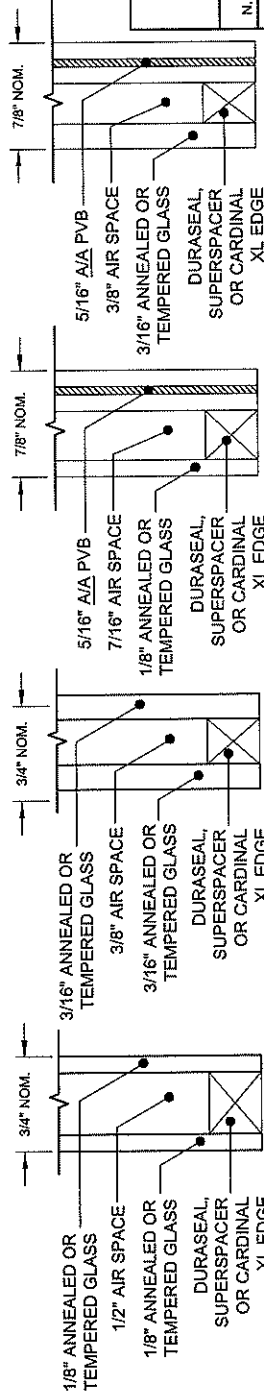
WINDOW SHAPES AS SHOWN BELOW OR SIMILAR, MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES AND ANCHORAGE FOR THAT BLOCK SIZE FROM THE TABLE ON SHEET 1.



TYP. GLAZING DETAIL

ANCHOR NOTES:

- 1) "UNGRADED CMU" VALUES MAY BE USED FOR GRADED CMU APPLICATIONS.
- 2) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.
- 3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



GLAZING TYPES

Reinforcement			
Level	Upper Lite Bottom Rail	Lower Lite Top Rail	Side Rails
R1	B	A	A
R2	C	A	A
R4	B	A	N/A

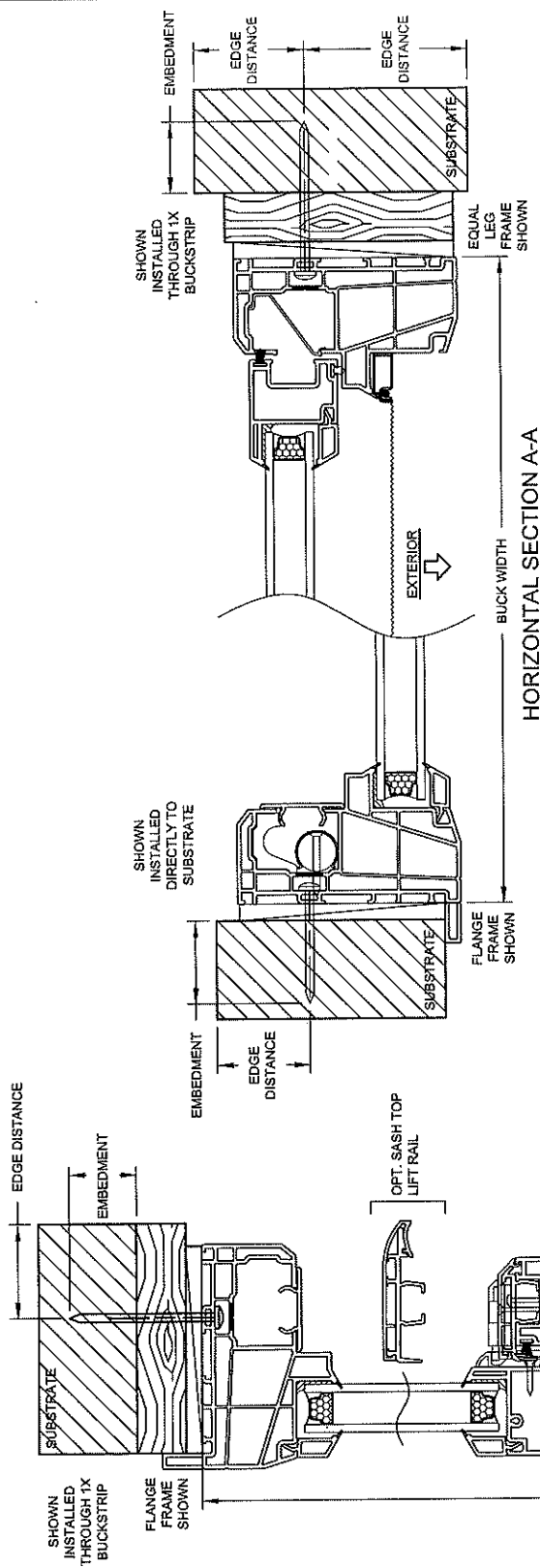
REINFORCEMENT TYPE A REINFORCEMENT TYPE B REINFORCEMENT TYPE C

Series	Desc	Title	Date
1	VINYL SINGLE HUNG INSTALLATION, NI	J ROSOWSKI	09/30/11
2	GLASS/ANCHORS/FRADE OPTIONS	J ROSOWSKI	10/26/20
3	SH 5400	2 OF 4	SH5400-FPA
4			

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29298
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1800



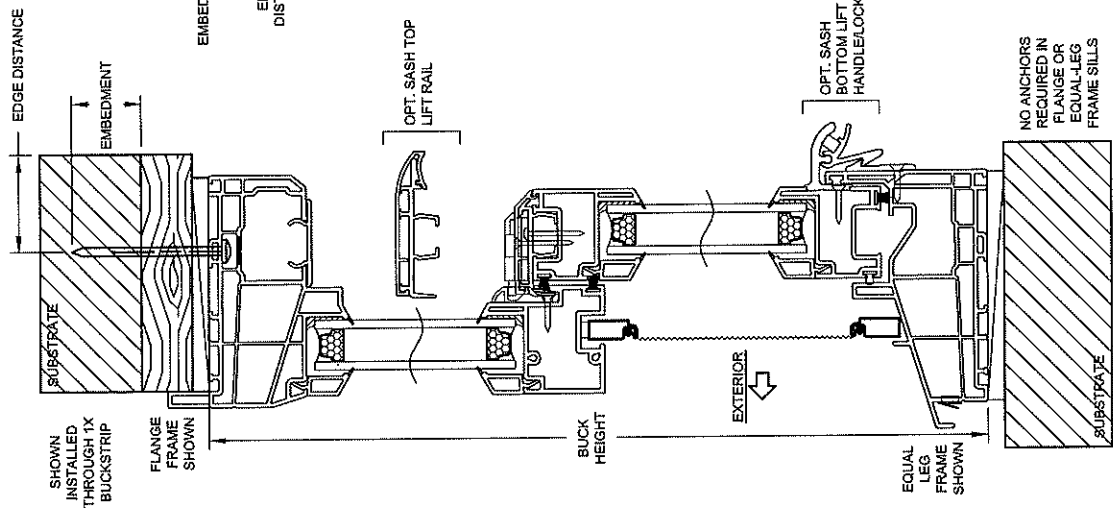
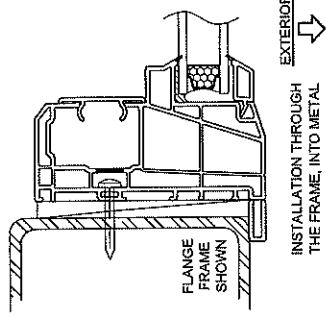
A. LYNN MILLER, P.E.
P.E.# 58705



HORIZONTAL SECTION A-A

INSTALLATION NOTES:

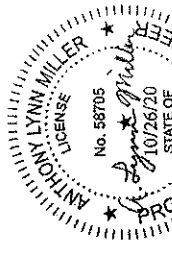
- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.



VERTICAL SECTION B-B

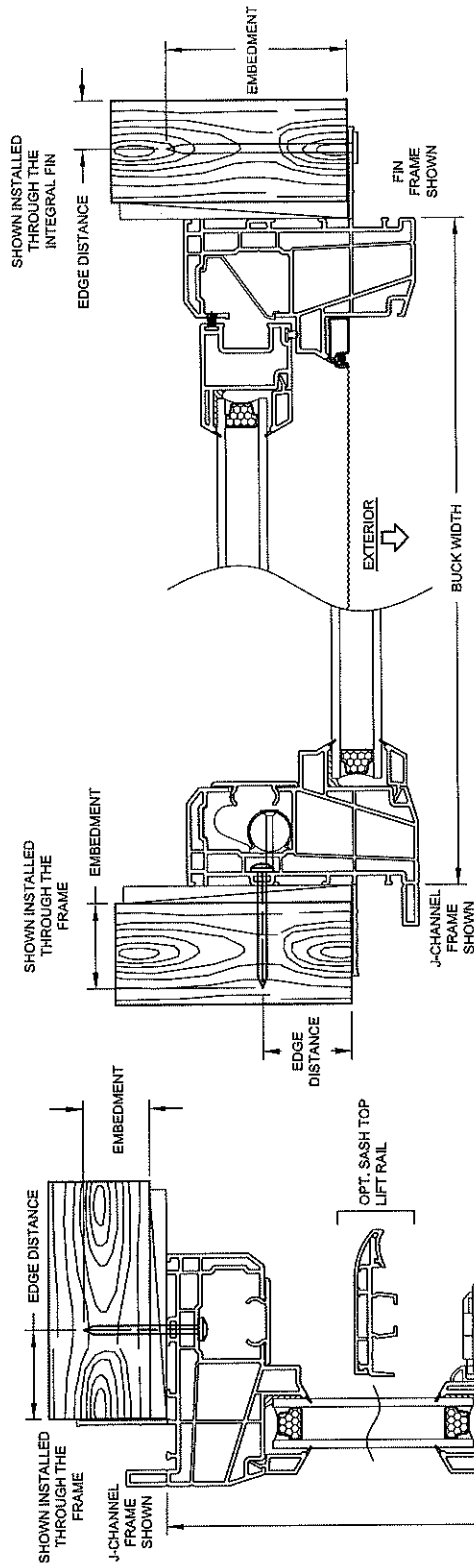
COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 460-1800



A. LYNN MILLER, P.E.
P.E.# 58705

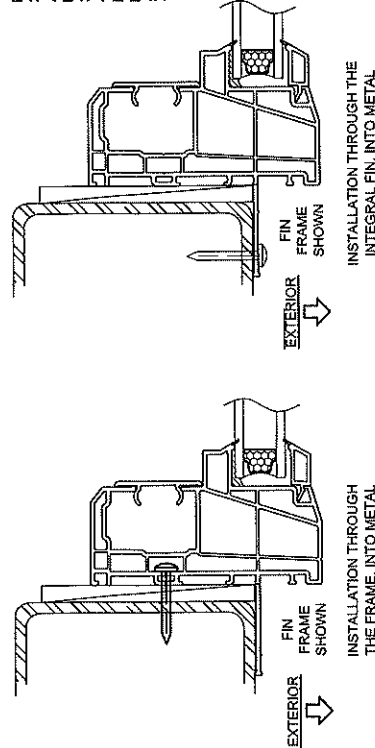
	VINYL SINGLE HUNG INSTALLATION, NI	Date 09/30/11
	FLANGE/EQUAL-LEG INSTALLATION	Rev. J ROSOWSKI
SH 5400	3 OF 4	SH5400-FPA



HORIZONTAL SECTION C-C

INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.



VERTICAL SECTION D-D

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING,
CERT. OF AUTH. #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1600



A. LYNN MILLER, P.E.
P.E.# 58705

	Series	Disc	Title	Sheet	Rev
	SH 5400	4 OF 4	SH5400-FPA	A	
	VINYL SINGLE HUNG INSTALLATION, NI				
INTEGRAL FIN INSTALLATION			DATE	DATE	DATE
			J ROSOWSKI	09/30/11	



Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
SECRETARY

FL #

FL1435-R23

Application Type

Revision

Code Version

2020

Application Status

Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments

Archived



Product Manufacturer

PGT Industries

Address/Phone/Email

1070 Technology Drive
North Venice, FL 34275
(941) 486-0100 Ext 21140
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative

Lynn Miller, P.E.

Address/Phone/Email

1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Single Hung

Compliance Method

Certification Mark or Listing

Certification Agency

Keystone Certifications, Inc.

Validated By

Steven M. Urich, PE



Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

<u>Standard</u>	<u>Year</u>
AAMA/WDMA/CSA 101/IS2/A440	2011
ASTM E1886	2005
ASTM E1886	2013
ASTM E1996	2012
ASTM E283	2004
ASTM E330	2002

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
FL1435 R23 Equiv ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf

Product Approval Method

Method 1 Option A

Date Submitted

10/27/2020

Date Validated

11/04/2020

Date Pending FBC Approval

Date Approved

11/08/2020

Summary of Products

FL #	Model, Number or Name	Description
1435.1	SH-5400	EnergyVue Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5400.pdf Quality Assurance Contract Expiration Date 08/13/2021 Installation Instructions FL1435_R23_II_SH5400_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5400_Evaluation.pdf Created by Independent Third Party: No
1435.2	SH-5500	WinGuard Vinyl Single Hung Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1435_R23_C_CAC_Certification - SH5500.pdf Quality Assurance Contract Expiration Date 10/01/2021 Installation Instructions FL1435_R23_II_SH5500_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1435_R23_AE_SH5500_Evaluation.pdf Created by Independent Third Party: No

Back

Next

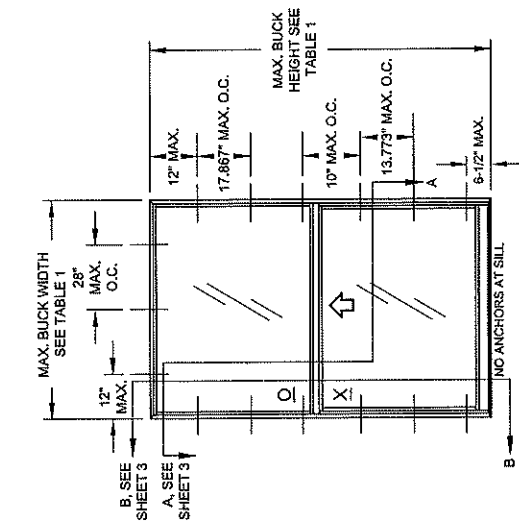
Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

The State of Florida is an AA/EEO employer. Copyright 2007-2013 State of Florida. :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:

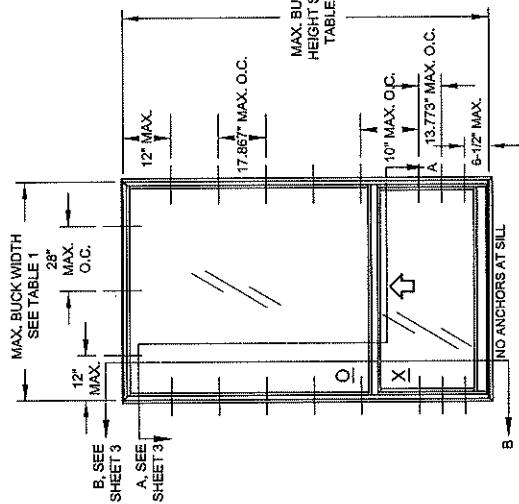
IMPACT RATING	DESIGN PRESSURE RATING
LARGE & SMALL MISSILE IMPACT RESISTANT	SEE TABLE 1



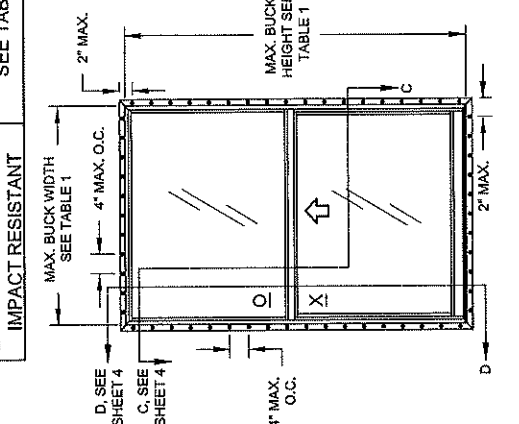
ELEVATION FOR TYP. EQUAL LEG FRAME,
EQUAL-LITE CONFIGURATION

GENERAL NOTES: SERIES 5500 IMPACT RESISTANT, VINYL
SINGLE HUNG WINDOW

- THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER, (EOR) OR ARCHITECT OF RECORD, (AOR).
- ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT EMBEDMENT. INSTALLATION ANCHORS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.
- MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.
- THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WINDLOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.8 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.



ELEVATION FOR TYP. FLANGE FRAME,
PROVIEW/ORIEL CONFIGURATION
(COTTAGE SIMILAR)



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME,
EQUAL-LITE CONFIGURATION
(SIMILAR ANCHOR DIMENSIONS FOR OTHER CONFIGURATIONS)

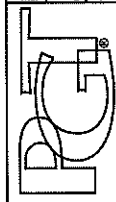
TABLE 1:

Window Buck Size		Reinf. Level	Design Pressure		Certification (CAR) Number
Width	Height		(+) psf	(-) psf	
52-1/8"	84"	R1	50.0	50.0	190-285, 1028
52-1/8"	84"				
52-1/8"	91-13/16"				
52-1/8"	84"	R2	65.0	70.0	190-286, 1029
52-1/8"	84"				
52-1/8"	91-13/16"				

MIN. SASH HEIGHT = WINDOW BUCK HEIGHT - 50.136" (APPLIES TO ANY HEIGHT 91.78" OR LESS).

Rev.	Desc.	Date
2	ADDED ANCHORS TO TABLE 2	10/21/20

VINYL SINGLE HUNG INSTALLATION, LM		Date	09/30/11
GENERAL NOTES & ELEVATIONS		By	J ROSOWSKI
SH5500	1 OF 4	Sheet	SH5500-FPA
		Rev.	A



SHAPES MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES FOR THAT BLOCK SIZE FROM THE TABLE ON THIS SHEET.

COPYRIGHT © 2020
PGI INDUSTRIES, INC.
LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.
CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (841) 480-1600



A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

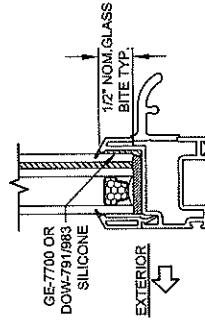
Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55) Steel, A36	7/16"	1-3/8"
	Steel Stud, A653 Gr. 33	3/8"	0.050"
	Aluminum, 6063-T5	3/8"	0.0346" (20 Ga.)
	P.T. Southern Pine (SG=0.55)	3/8"	0.0713" (14 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	Steel, A36	3/8"	1-3/8"
	Steel Stud, A653 Gr. 33	3/8"	0.050"
	Aluminum, 6063-T5	3/8"	0.0346" (20 Ga.)
	P.T. Southern Pine (SG=0.55)	7/16"	0.0713" (14 Ga.)
3/16" Ultracon Max. DP of 50.0 psf	Concrete (min. 3,000 psi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
3/16" Ultracon+ Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
1/4" Ultracon	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 2.85 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
1/4" Ultracon+	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
1/4" Crete-Flex (410 S.S.)	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3.35 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
1/4" Aggre-Gator (18-8 S.S.)	Concrete (min. 3,275 psi)	1-1/2"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
2-1/2" x .131" Ring-shank Nail	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG=55)	9/16"	2-7/16"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	Aluminum, 6063-T5	3/4"	1-3/8"
	Steel Stud, Gr. 33	3/8"	0.0713" (14 Ga.)
	Steel, A36	3/8"	0.0346" (20 Ga.)
	Steel, A36	3/8"	0.050"

ANCHOR NOTES:

- 1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- 2) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.
- 3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



REINFORCEMENT TYPE A

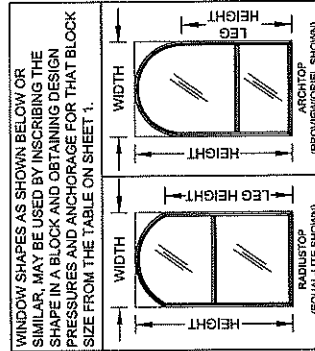


TYP. GLAZING DETAIL

REINFORCEMENT TYPE B

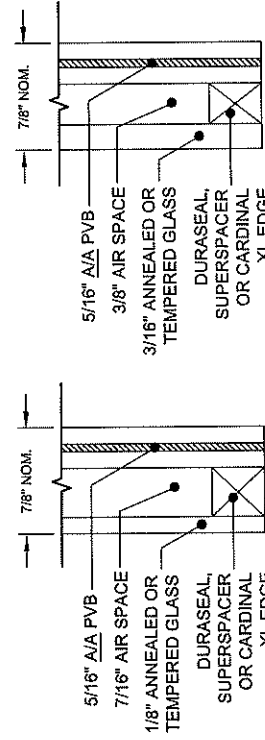


REINFORCEMENT TYPE C



WINDOW SHAPES AS SHOWN BELOW OR SIMILAR, MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES AND ANCHORAGE FOR THAT BLOCK SIZE FROM THE TABLE ON SHEET 1.

GLAZING TYPES



PVB INTERLAYER MANUFACTURED BY KURARAY AMERICA, INC.

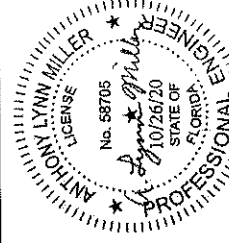
PGI	Series	Desc	Title	Date	Rev
			VINYL SINGLE HUNG INSTALLATION, LM	09/30/11	
			GLASS/ANCHORS/FRADE OPTIONS	J ROSOWSKI	
			SH5500	2 OF 4	SH5500-FPA
					A

TABLE 4: REINFORCEMENT TYPES

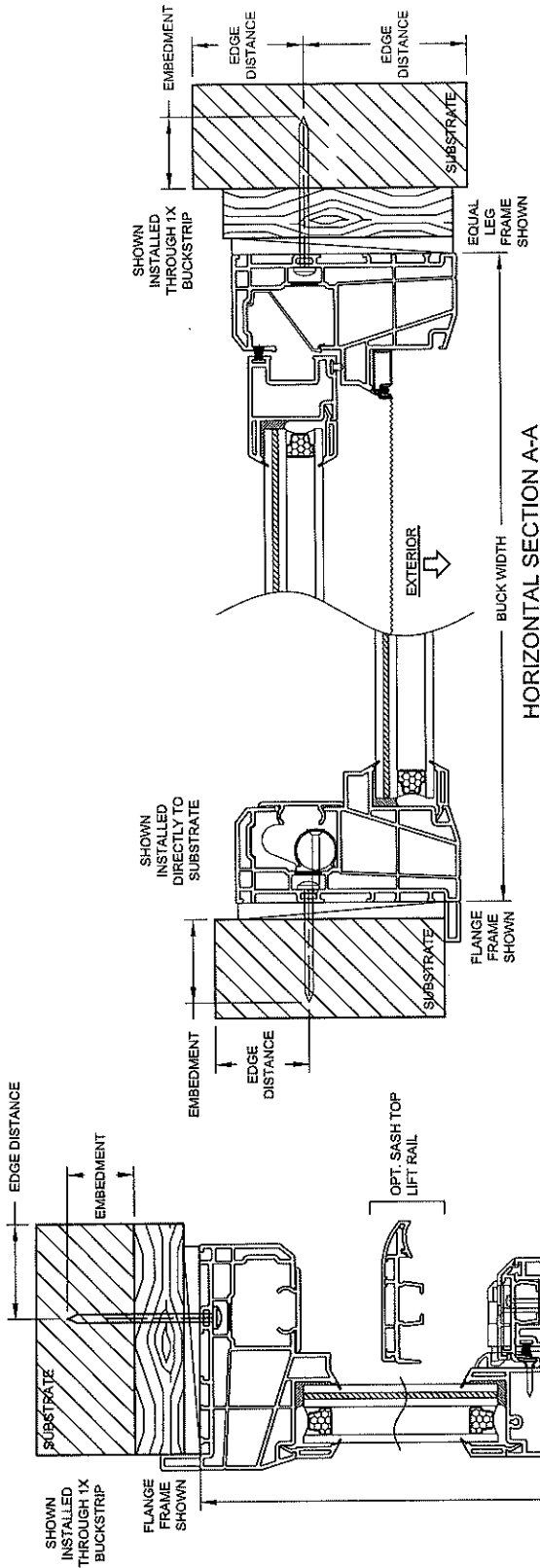
Reinforcement				
Level	Upper Lite Bottom Rail	Lower Lite Bottom Rail	Side Rail	Side Rails
R1	B	A	A	A
R2	C	A	A	A

COPYRIGHT © 2020
PGI INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (841) 480-1600



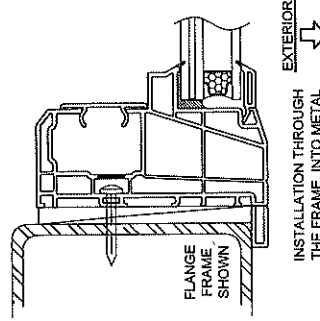
A. LYNN MILLER, P.E.
P.E.# 58705



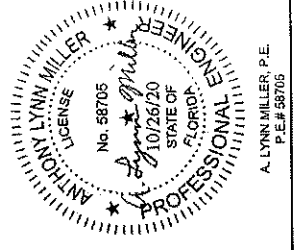
HORIZONTAL SECTION A-A

INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

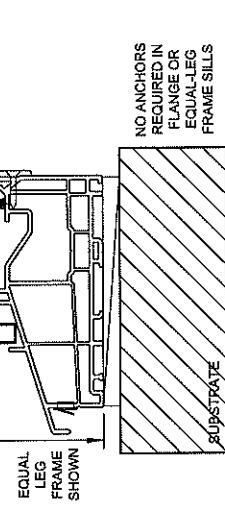


COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 460-1600

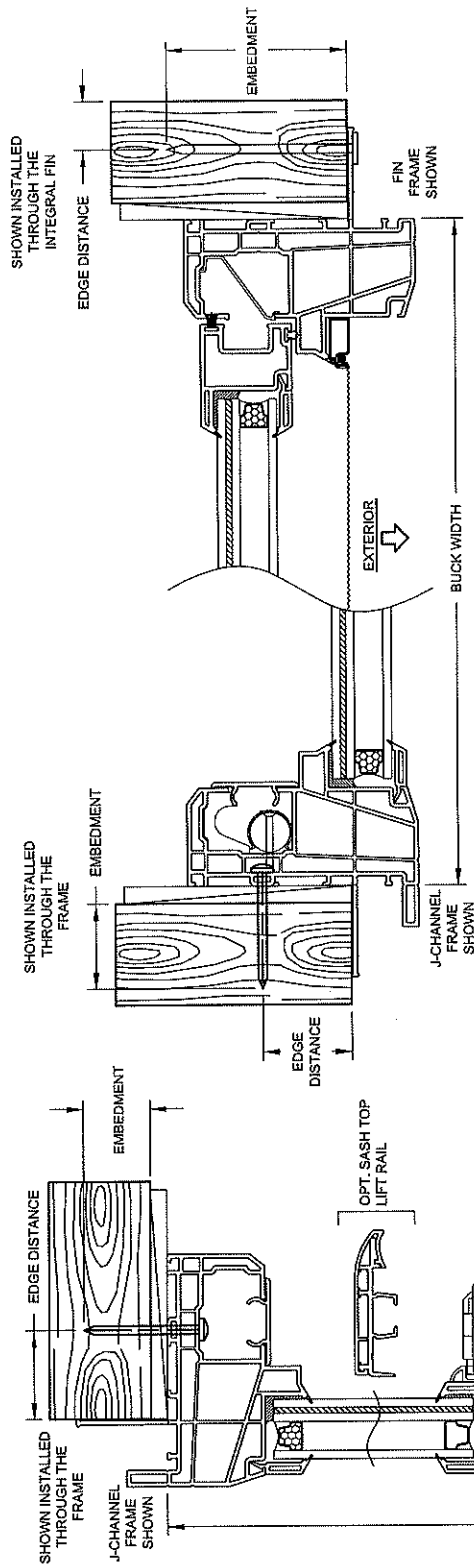


PGT		Series	Disc	Title	Rev	Date
VINYL SINGLE HUNG INSTALLATION, LM						09/30/11
FLANGE/EQUAL-LEG INSTALLATION						J ROSOWSKI
SH5500		3 OF 4	Sheet	SH5500-FPA		A

VERTICAL SECTION B-B

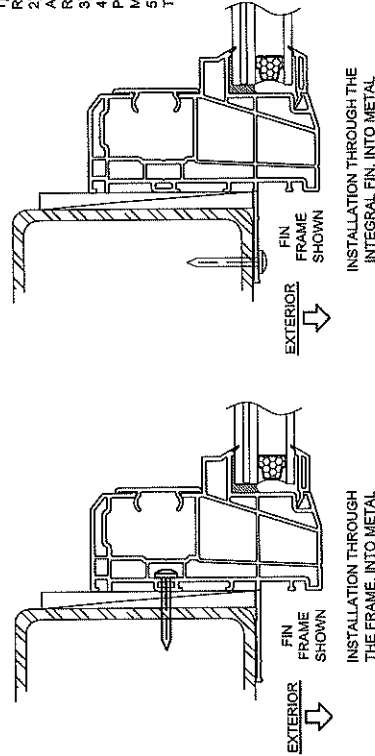


NO ANCHORS
REQUIRED IN
FLANGE OR
EQUAL-LEG
FRAME SILLS

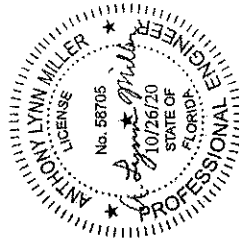


HORIZONTAL SECTION C-C

- INSTALLATION NOTES:
- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
 - 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
 - 3) MAX. SHIM THICKNESS TO BE 1/4".
 - 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
 - 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.



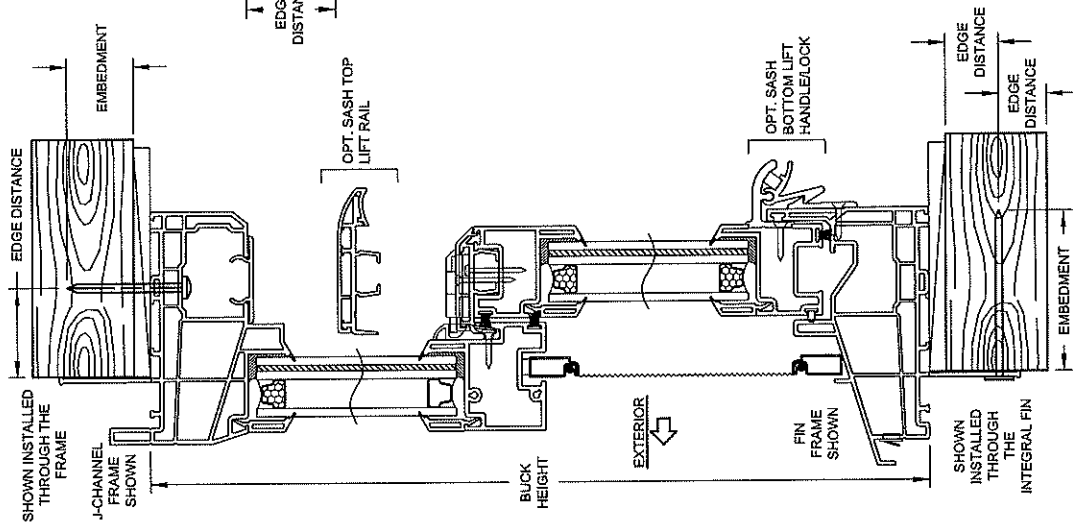
COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29298
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 400-1800



A. LYNN MILLER, P.E.
P.E.# 58705

	Series	Disc	Title	Date	Rev
	SH5500	4 OF 4	SH5500-FPA	09/30/11	A
	VINYL SINGLE HUNG INSTALLATION, LM INTEGRAL FIN INSTALLATION J ROSOWSKI				

VERTICAL SECTION D-D





Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**



FL #

FL1844-R25

FL1844.2

Application Type

Revision

1pnl/3pnl 5500

Code Version

2020

Application Status

Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Comments

Archived



Product Manufacturer

PGT Industries

Address/Phone/Email

1070 Technology Drive
North Venice, FL 34275
(941) 486-0100 Ext 21140
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
jrosowski@pgtindustries.com

Technical Representative

Lynn Miller, P.E.

Address/Phone/Email

1070 Technology Dr
N Venice, FL 34275
(941) 486-0100 Ext 21142
lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Horizontal Slider

Compliance Method

Certification Mark or Listing

Certification Agency

Keystone Certifications, Inc.

Validated By

Steven M. Ulrich, PE

☒ Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

Standard	Year
AAMA/WDMA/CSA 101/I.S.2/A440	2011
ASTM E1886	2005
ASTM E1886	2013
ASTM E1996	2012

Equivalence of Product Standards
Certified By

Florida Licensed Professional Engineer or Architect
[FL1844_R25_Equiv_ASTM E1886-04-05 to E1886-13a and E1996-05-06-09 to E1996-17 Equivalency Letter 2020-09-09.pdf](#)

Product Approval Method

Method 1 Option A

Date Submitted 10/27/2020
 Date Validated 11/04/2020
 Date Pending FBC Approval
 Date Approved 11/08/2020

Summary of Products

FL #	Model, Number or Name	Description
1844.1	HR-5410	EnergyVue Vinyl Horizontal Roller
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1844_R25_C_CAC_Cert-HR5410.pdf Quality Assurance Contract Expiration Date 12/11/2021 Installation Instructions FL1844_R25_II_HR5410_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844_R25_AE_HR5410_Evaluation.pdf Created by Independent Third Party: No
1844.2	HR-5510	WinGuard Vinyl Horizontal Roller
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Certification Agency Certificate FL1844_R25_C_CAC_Cert-HR5510.pdf Quality Assurance Contract Expiration Date 12/11/2021 Installation Instructions FL1844_R25_II_HR5510_FPA - Rev A.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL1844_R25_AE_HR5510_Evaluation.pdf Created by Independent Third Party: No

Back

Next

Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

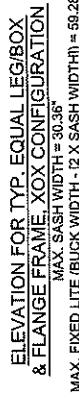
The State of Florida is an AA/EEO employer. Copyright 2007-2013 State of Florida. :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Product Approval Accepts:



SEE TABLE 1



ELEVATION FOR TYP. FIN OR J-CHANNEL FRAME,
XO CONFIGURATION, OX & XOX SIMILAR

TABLE 1:

Window Buck Size		Configuration	Reinf. Level	Design Pressure		Glass Types	Certification (CAR) Number
Width	Height			(+) psf	(-) psf		
75"	63"	XO/OX	R3	50.0	50.0	5-8	190-292, 1048
75"	63"	XO/OX	R4	60.0	60.0	5	190-290, 1074
75"	63"	XO/OX	R4	65.0	70.0	5-8	190-291, 1047
75"	72"	XO/OX	R4	50.0	50.0	5-8	190-289, 1046
120"	63"	XOX (1/4-1/2-1/4)	R3	45.0	45.0	5	190-297, 1053
92"	63"	XOX (1/3-1/3-1/3)					
120"	63"	XOX (1/4-1/2-1/4)	R3	50.0	50.0	5-8	190-298, 1054
92"	63"	XOX (1/3-1/3-1/3)					
120"	63"	XOX (1/4-1/2-1/4)	R4	65.0	65.0	7	190-295, 1051
92"	63"	XOX (1/3-1/3-1/3)					
120"	63"	XOX (1/4-1/2-1/4)	R4	65.0	70.0	7 & 8	190-296, 1052
92"	63"	XOX (1/3-1/3-1/3)					

SEE SHEET 2 FOR GLASS TYPES

**GENERAL NOTES: SERIES 5510 IMPACT RESISTANT,
VINYL HORIZONTAL ROLLER**

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.

2) ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED AS 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X SHALL BE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER, FLOOR OR ARCHITECT OF RECORD. (A09)

3) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT EMBEDMENT. INSTALLATION ANCHORS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

4) MAX. 1/4" SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.

5) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST A STRESS CORROSION CRACK PROPAGATION RATE THAT IS PROPORTIONAL TO THE REQUIRED DESIGN PRESSURE. THE 3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296
1070 TECHNOLOGY DRIVE

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 480-1600



A. LYNN MILLER, P.E.
P.E.# 58705

Rev. Desc.	ADDED ANCHORS TO TABLE 2	Sheet	2	By	JR	Date	10/21/20
------------	--------------------------	-------	---	----	----	------	----------

09/30/11	Date	VINYL HORIZ ROLLER INSTALLATION, LM	
J ROSOWSKI	Drawn By	GENERAL NOTES & ELEVATIONS	
Rev	Sheet	1 OF 4	HR5510-FPA

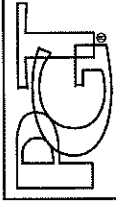


TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55) Steel, A36	7/16"	1-3/8"
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	Steel Stud, A653 Gr. 33 Aluminum, 6063-T5	3/8"	0.050"
	P.T. Southern Pine (SG=0.55) Steel, A36	3/8"	0.0713" (14 Ga.)
	Steel Stud, A653 Gr. 33 Aluminum, 6063-T5	3/8"	0.050"
	P.T. Southern Pine (SG=0.55) Steel, A36	3/8"	0.0713" (14 Ga.)
3/16" Ultracon Max. DP of 50.0 psf	Concrete (min. 2.85 ksi) Ungrouted CMU, (ASTM C-90)	1"	1-3/8"
3/16" Ultracon+ Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55) Concrete (min. 3 ksi)	1"	1-1/4"
1/4" Ultracon	Ungrouted CMU, (ASTM C-90) Concrete (min. 2.85 ksi)	1"	1-3/8"
1/4" Ultracon+	P.T. Southern Pine (SG=0.55) Ungrouted CMU, (ASTM C-90)	1"	1-3/8"
1/4" Crete-Flex (410 S.S.)	Concrete (min. 3 ksi) Ungrouted CMU, (ASTM C-90)	1-3/16"	1-3/4"
1/4" Aggre-Gator (18-8 S.S.)	P.T. Southern Pine (SG=0.55) Concrete (min. 3.35 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90) Concrete (min. 3.275 ksi)	1-1/2"	1-3/8"
	P.T. Southern Pine (SG=0.55) Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
2-1/2" x .131" Ring-shank Nail	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	Aluminum, 6063-T5 Steel Stud, Gr. 33	3/8"	1-3/8"
	Steel, A36	3/8"	0.0713" (14 Ga.) 0.0346" (20 Ga.)
	Steel, A36	3/8"	0.050"

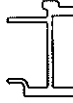
REINFORCEMENT TYPE B



REINFORCEMENT TYPE C



REINFORCEMENT TYPE E



REINFORCEMENT TYPE F

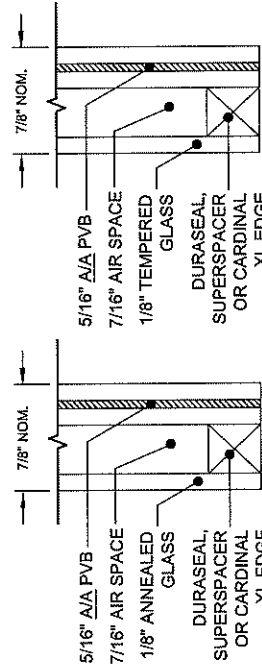


TABLE 4: REINFORCEMENT TYPES

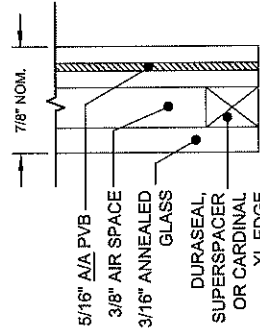
Level	Vent (4 sides)	Meeting Rail
R3	B	E
R4	C	F

ANCHOR NOTES:

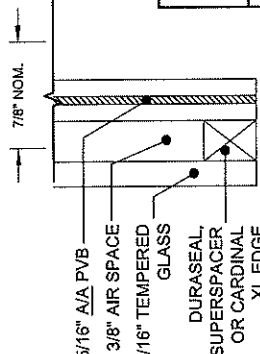
- 1) "UNROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- 2) PANHEAD, FLATHEAD OR HEXHEAD ARE ACCEPTABLE.
- 3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.



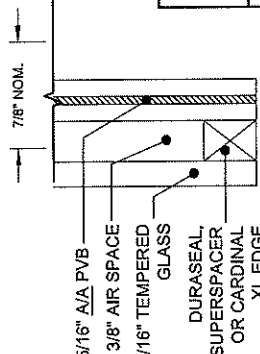
GLASS TYPE 5



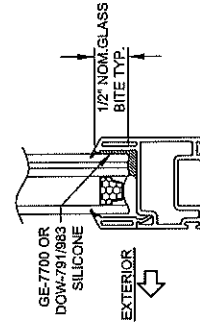
GLASS TYPE 6



GLASS TYPE 7



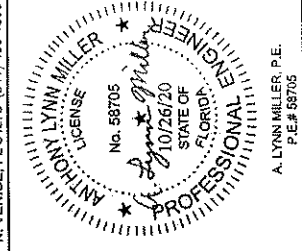
GLASS TYPE 8



TYP. GLAZING DETAIL

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29286

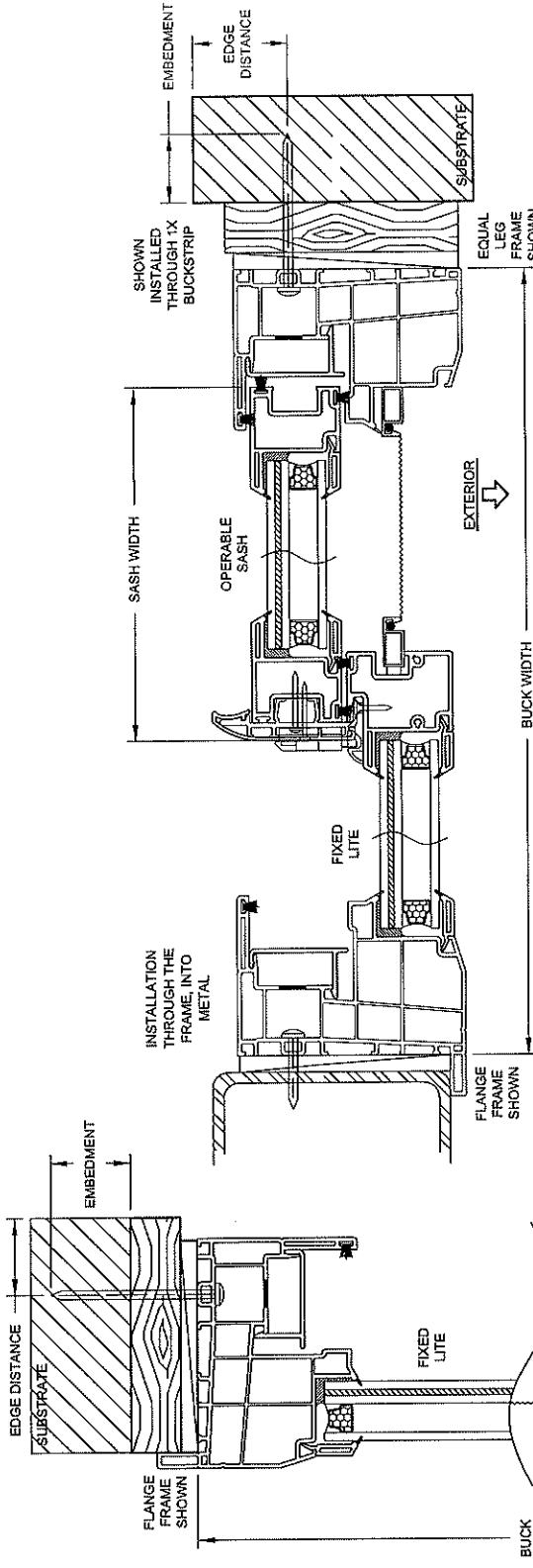
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 460-1800



A. LYNN MILLER, P.E.
P.E.# 58705

PVB INTERLAYER MANUFACTURED BY KURARAY AMERICA, INC.

PGI	Series Desc	Sheet	2 OF 4	HR5510-FPA	Rev	A
	VINYL HORIZ ROLLER INSTALLATION, LM	Date	09/30/11			
	GLASS/ANCHORS/FRADE OPTIONS	By	J ROSOWSKI			



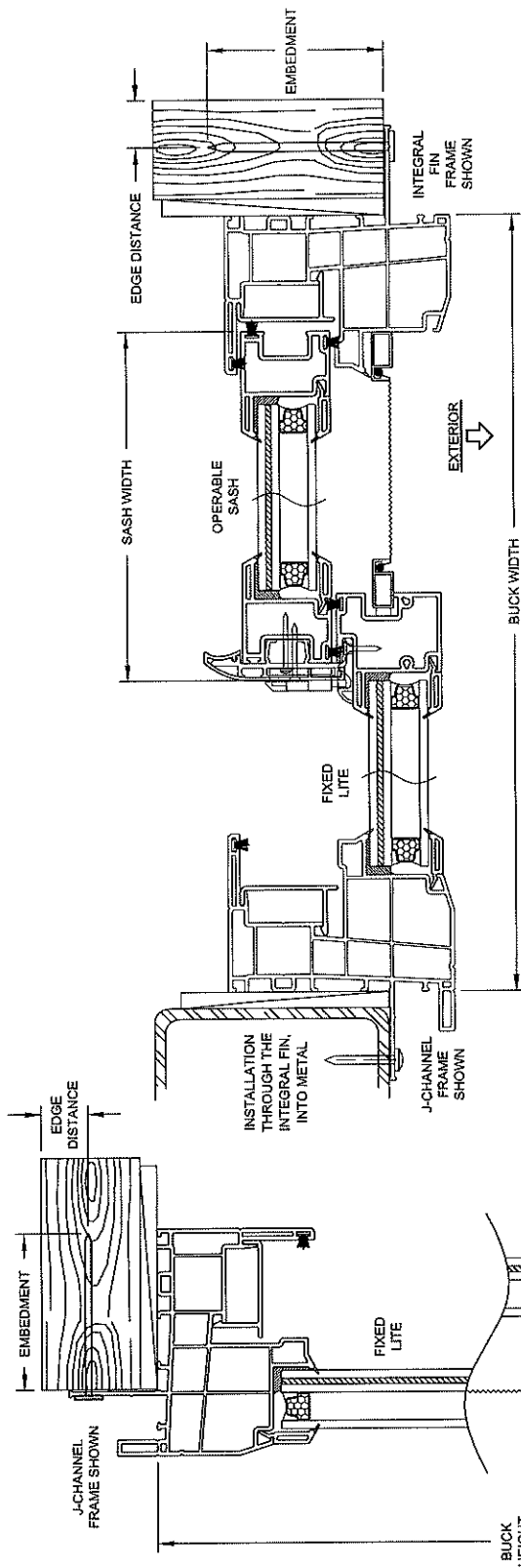
INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4"
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

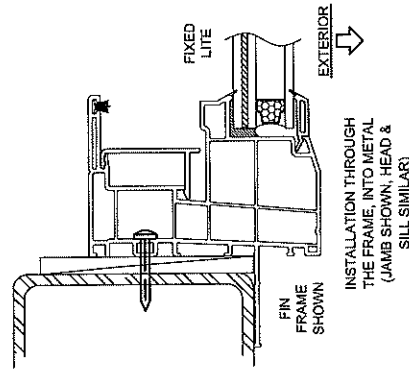
COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING.
CERT. OF AUTH. #29296
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941)-460-1600



	VINYL HORIZ ROLLER INSTALLATION, LM		Date	09/30/11
	FLANGE/EQUAL-LEG INSTALLATION		By	J ROSOWSKI
	HR5510	3 OF 4	Rev	HR5510-FPA A



HORIZONTAL SECTION C-C (XO)
(OX & XOX SIMILAR)

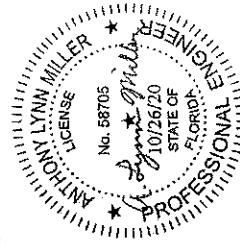


INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

COPYRIGHT © 2020
PGT INDUSTRIES, INC.
LIMITED LICENSE TO MAKE
COPIES FOR PERMITTING,
CERT. OF AUTH. #29296

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275 (941) 400-1800



A. LYNN MILLER, P.E.
P.E.# 58705

VERTICAL SECTION D-D

	Title		Date	
	VINYL HORIZ ROLLER INSTALLATION, LM		09/30/11	
	J ROSOWSKI		Rev.	
	Integral Fin Installation		A	
Series	Desc	Sheet	DWG No	
		HR5510	4 OF 4	HR5510-FPA



Product Approval
USER: Public User

[Product Approval Menu](#) >
 [Product or Application Search](#) >
 [Application List](#) >
 Application Detail



FL #

FL5012-R25

Application Type

Revision

Code Version

2020

Application Status

Approved

FL5012.2
5400 PW

Comments

Archived



Product Manufacturer

PGT Industries

Address/Phone/Email

1070 Technology Drive
 North Venice, FL 34275
 (941) 486-0100 Ext 21140
 jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski
 jrosowski@pgtindustries.com

Technical Representative

Lynn Miller, P.E.

Address/Phone/Email

1070 Technology Dr
 N Venice, FL 34275
 (941) 486-0100 Ext 21142
 lmiller@pgtindustries.com

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Fixed

Compliance Method

Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer

☐ Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Evaluation Report

A. Lynn Miller, P.E.

Florida License

PE-58705

Quality Assurance Entity

Keystone Certifications, Inc.

Quality Assurance Contract Expiration Date

12/31/2023

Validated By

Steven M. Urlich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL5012_R25_COI_Cert of Independence.pdf](#)

Referenced Standard and Year (of Standard)

Standard

Year

AAMA/WDMA/CSA 101/IS2/A440

2017

ASTM E 1886

2013

ASTM E1996

2012

ASTM E283

2004

ASTM E330

2002

Equivalence of Product Standards

Certified By

Florida Licensed Professional Engineer or Architect
[FL5012_R25_Equiv_AAMA 101-97 and 05 to AAMA 101-17 Equivalency](#)

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

08/10/2022

Date Validated

08/14/2022

Date Pending FBC Approval

08/19/2022

Date Approved

10/11/2022

Summary of Products

FL #	Model, Number or Name	Description
5012.1	PW - 640	Aluminum Casement Picture Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL5012 R25 II FCA640FPA-NI.pdf Verified By: A. Lynn Miller, PE 58705 Created by Independent Third Party: No Evaluation Reports FL5012 R25 AE Eng Eval - PW640.pdf Created by Independent Third Party: No
5012.2	PW-5420	EnergyVue Vinyl Picture Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL5012 R25 II PW5420FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012 R25 AE Eng Eval - PW5420.pdf Created by Independent Third Party: No
5012.3	PW-5440	EnergyVue Vinyl Casement Picture Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL5012 R25 II PW5440FPA-NI.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012 R25 AE Eng Eval - PW5440.pdf Created by Independent Third Party: No
5012.4	PW-5520	WinGuard Vinyl Picture Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL5012 R25 II PW5520FPA-LM.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012 R25 AE Eng Eval - PW5520.pdf Created by Independent Third Party: No
5012.5	PW-5540	WinGuard Vinyl Casement Picture Window
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: N/A Other: Please see the Installation Instructions for design pressure, size and anchorage information.		Installation Instructions FL5012 R25 II PW5540FPA-LM.pdf Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No Evaluation Reports FL5012 R25 AE Eng Eval - PW5540.pdf Created by Independent Third Party: No

[Back](#)[Next](#)[Contact Us :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824](#)The State of Florida is an AA/EEO employer. [Copyright 2007-2013 State of Florida](#), :: [Privacy Statement](#) :: [Accessibility Statement](#) :: [Refund Statement](#)

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public-records request, do not send electronic

SERIES PW5420V NON-IMPACT RESISTANT, VINYL PICTURE WINDOW

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE.

2) SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.

3) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLES 2 & 3. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.

4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH. ANCHORS AND FRAME CORNERS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

5) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.

6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

FLORIDA PRODUCT APPROVAL #5012

DESIGN PRESSURE RATING SEE TABLE 1
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE

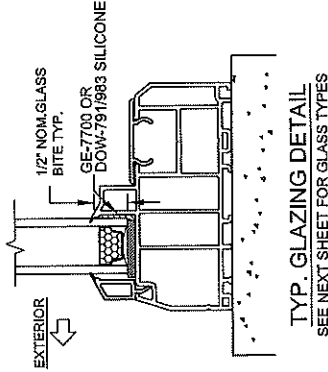
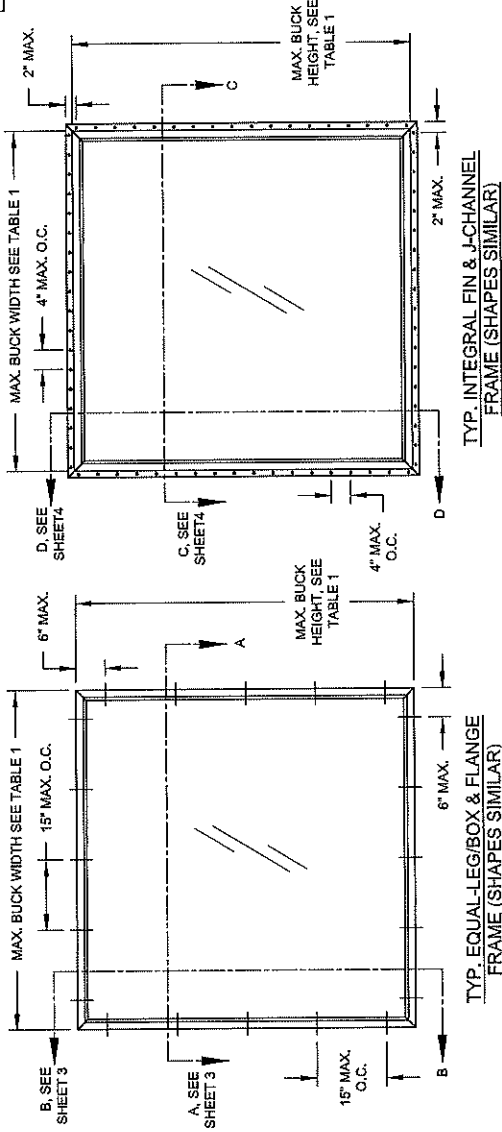


TABLE 1:

Window Buck Size		Design Pressure		Product Rating	
Width	Height	(+) psf	(-) psf		
120"	60"	70.0	70.0	CW-PG70	
96"	63"	50.0	50.0	CW-PG50	

SHAPES MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES FOR THAT BLOCK SIZE FROM THE TABLE ON THIS SHEET.

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 N. VENICE, FL 34275 (941) 480-1600	REGISTERED PROFESSIONAL ENGINEER STATE OF FLORIDA No. 58705 License
1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600			
REGISTERED PROFESSIONAL ENGINEER STATE OF FLORIDA No. 58705 License			
ANTHONY LYNN MILLER P.E. # 58705			

DATE 08/12/11	PROJECT VINYL PICTURE WINDOW (NI)
BY JENS ROSOWSKI	DATE 08/12/11
REVISIONS 1 OF 4	
PROJECT PW5420VPA-NI	

DESIGN PRESSURE RATING SEE TABLE 1
IMPACT RATING NOT RATED FOR IMPACT RESISTANCE

TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psi	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
3/16" Ultracon Max. DP of 50.0 psi	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
3/16" Ultracon+	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
Max. DP of 50.0 psi	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon	Concrete (min. 2.85 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Ultracon+	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
1/4" Crete-Flex (410 S.S.)	Concrete (min. 3.35 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
	P.T. Southern Pine (SG=0.55)	1-1/2"	1-3/8"
1/4" Aggre-Gator (18-8 S.S.)	Concrete (min. 3.275 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

1) "UNGRADED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.

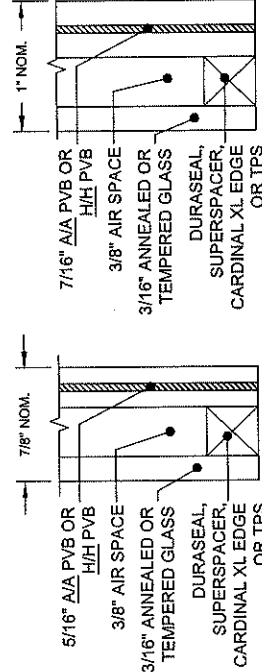
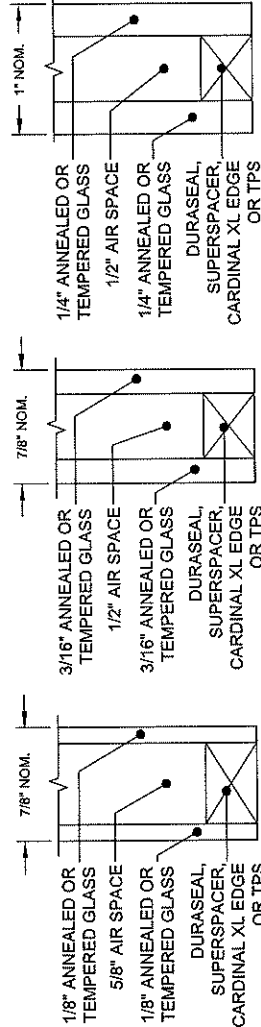
2) PAN-HEAD, FLAT-HEAD OR HEX-HEAD ARE ACCEPTABLE.

3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
	P.T. Southern Pine (SG= .55)	9/16"	2-7/16"
2-1/2" x .131" Ring-shank Nail	P.T. Southern Pine (SG= .55)	3/4"	1-3/8"
	Aluminum, 6063-T5	3/8"	0.050"
	Steel Stud, Gr. 33	3/8"	0.0346" (20 Ga.)
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG= .55)	3/8"	0.050"
	Aluminum, 6063-T5	3/8"	0.0346" (20 Ga.)
	Steel Stud, Gr. 33	3/8"	0.050"

1) PAN-HEAD, FLAT-HEAD OR HEX-HEAD ARE ACCEPTABLE.



GLASS TYPES

PVB = KURARAY TROSIFOL PVB INTERLAYER BY KURARAY AMERICA, INC.
A = ANNEALED
H = HEAT STRENGTHENED

VISIBLE LIGHT FORMULAS
WIDTH: BUCK WIDTH - 4-5/16"
HEIGHT: BUCK HEIGHT - 4-5/16"

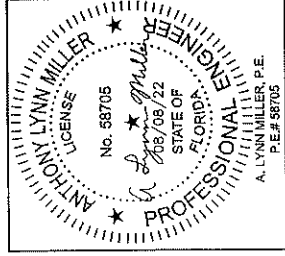
VISIBLE LIGHT WIDTH OR HEIGHT
(ALSO REFERRED TO AS DAYLIGHT
OPENING) IS MEASURED FROM
BEADING TO BEADING.

PREPARED BY A. LYNN MILLER
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600

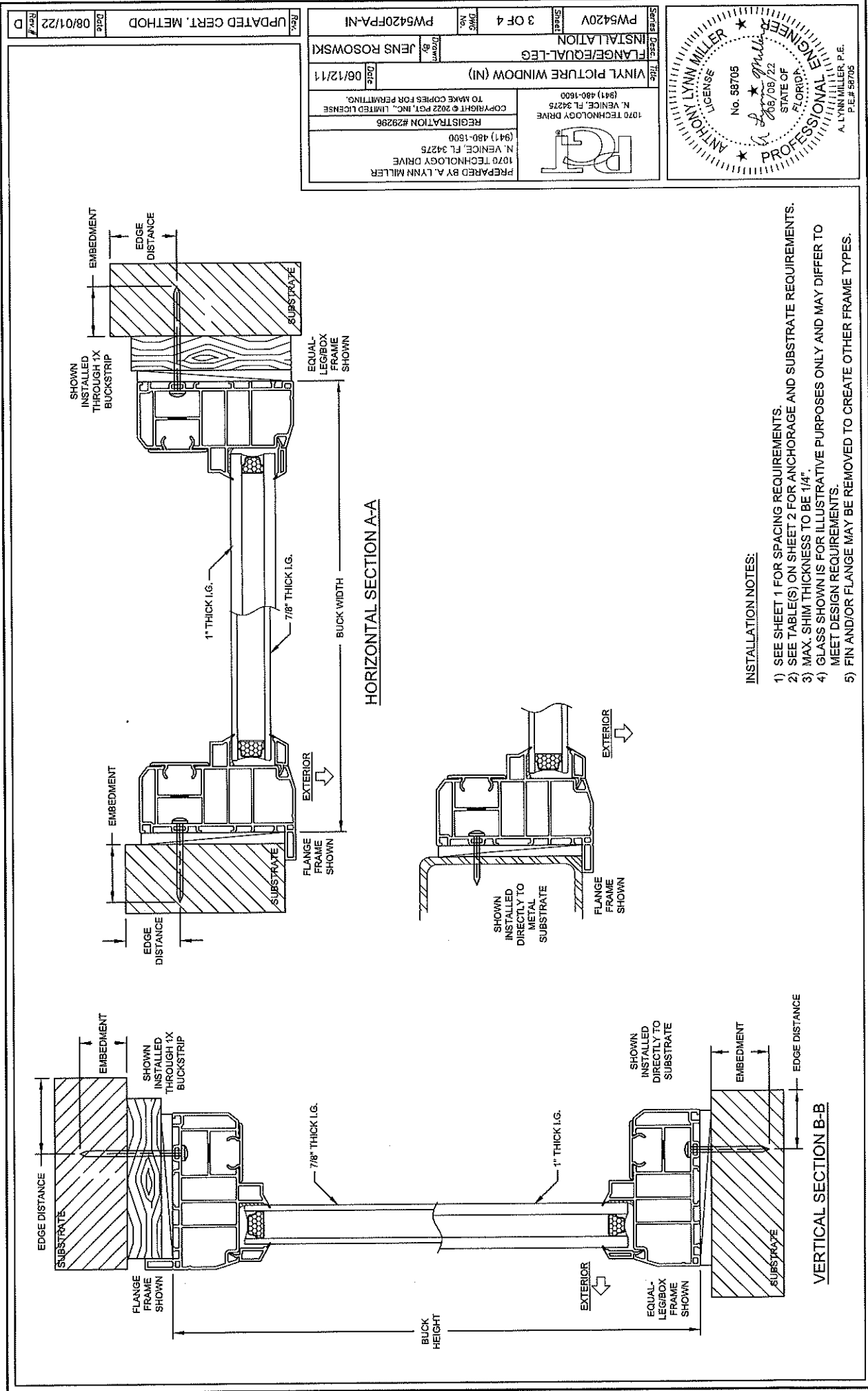
REGISTRATION #28296
COPYRIGHT © 2002 PGT, INC., LIMITED LICENSE
TO MAKE COPIES FOR PERMITTING.

VINYL PICTURE WINDOW (NI)
ANCHORS AND GLAZING
DETAILS
JENS ROSOWSKI
Date 06/12/11

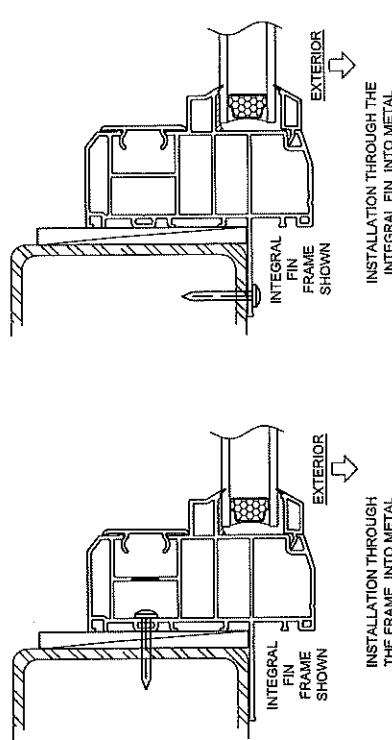
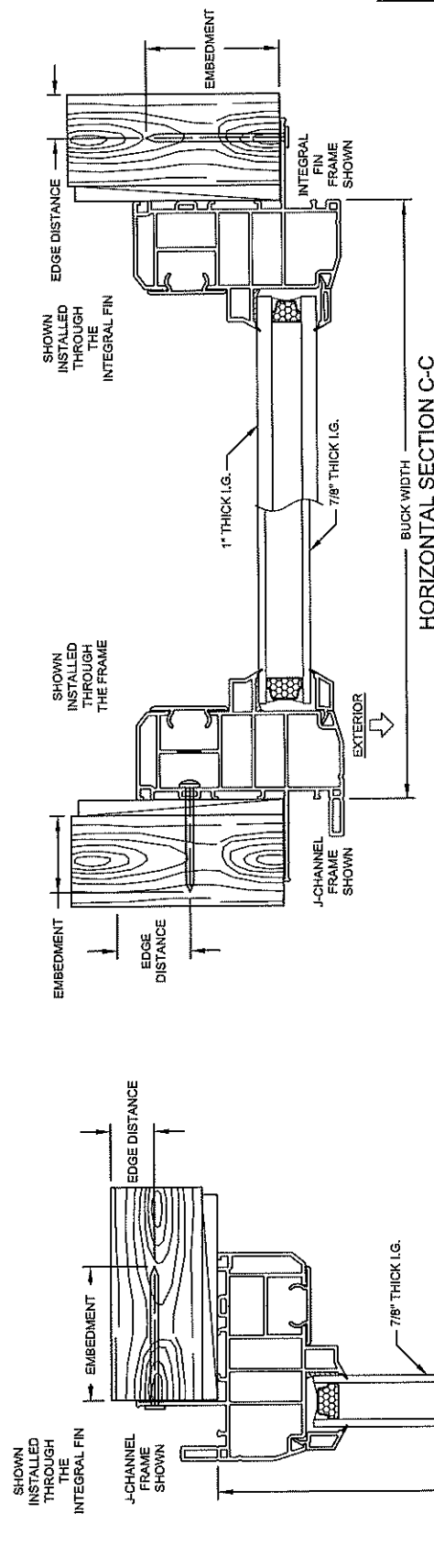
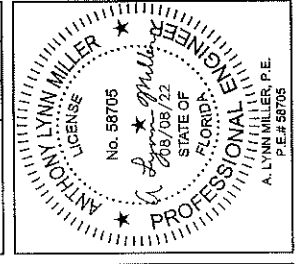
Sheet 2 OF 4
PW5420V
PW5420FPA-NI



Rev. # 08/01/22
D
UPDATED CERT. METHOD

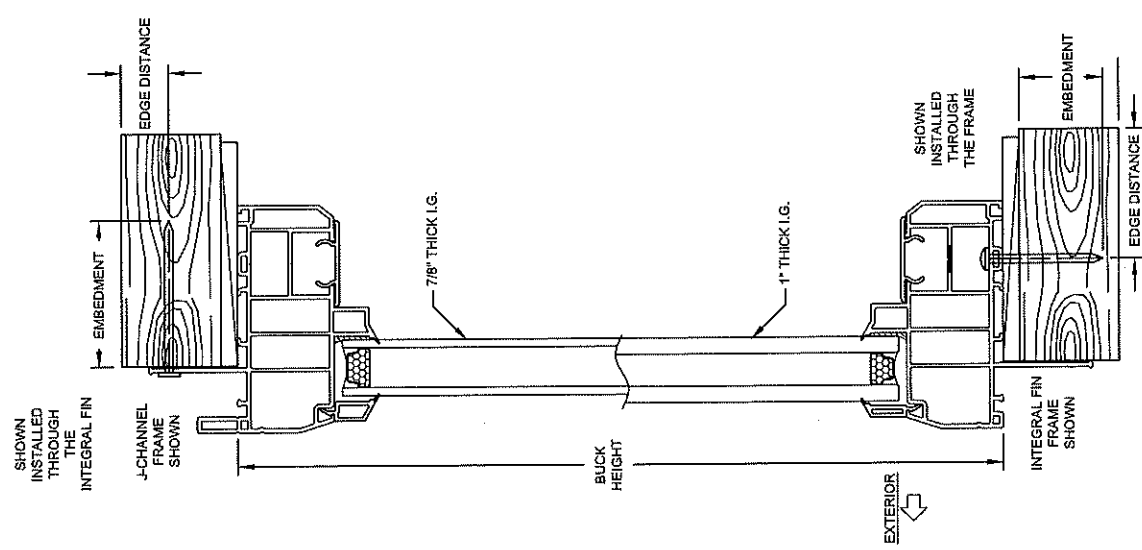


PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600 REGISTRATION #28296 COPYRIGHT © 2022 PGT, INC., LIMITED LICENSE TO MAKE COPIES FOR PERMITTING.	VINYL PICTURE WINDOW (NI) Date: 06/12/11 Drawn by: JENS ROSOWSKI DWG No: PW5420FPA-NI Sheet: 4 OF 4
--	---



INSTALLATION NOTES:

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.



VERTICAL SECTION D-D