



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

NOTICE OF ACCEPTANCE (NOA)

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

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 "CA-640F Fixed Casement" Aluminum Fixed Window - N.I.

APPROVAL DOCUMENT: Drawing No. **MD-CA640F-NI**, titled "Fixed Casement Window Details - NI", sheets 1 through 10 of 10, dated 08/08/12, with revision **C** dated 05/25/17, prepared by manufacturer, 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.

MISSILE IMPACT RATING: None.

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# 16-0629.20** and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

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



Handwritten signature and date: 10/02/17

NOA No. 17-0614.13
Expiration Date: April 11, 2023
Approval Date: October 12, 2017
Page 1

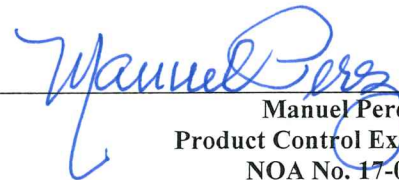
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under NOA No. 12-1218.12)
2. Drawing No. **MD-CA640F-NI**, titled "Fixed Casement Window Details - NI", sheets 1 through 10 of 10, dated 08/08/12, with revision C dated 05/25/17, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of a PVC sliding glass door, a PVC fixed window and an aluminum sliding glass door, using: Kodispace 4SG TPS spacer system, Duraseal® spacer system, Super Spacer® NXT™ spacer system and XL Edge™ spacer system at insulated glass, prepared by Fenestration Testing Laboratory, Inc., Test Reports No. **FTL-8717**, **FTL-8968** and **FTL-8970**, dated 11/16/15, 06/07/16 and 06/02/16 respectively, all signed and sealed by Idalmis Ortega, P.E.
(Submitted under previous NOA No. 16-0629.20)
2. 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
along with marked-up drawings and installation diagram of a series CA640F aluminum fixed window, prepared by Fenestration Testing Laboratory, Inc. Test Report No. **FTL-7060**, dated 09/07/12, signed and sealed by Marlin D. Brinson, P.E.
(Submitted under NOA No. 12-1218.12)
3. 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) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of a series CA-740 outswing aluminum casement window mullied to a fixed window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-3579**, dated 10/03/02, signed and sealed by Joseph Chan, P.E.
(Submitted under NOA No. 12-1218.12)



Manuel Perez, P.E.
Product Control Examiner
NOA No. 17-0614.13

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B. TESTS (CONTINUED)

4. 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 a series CA-740 outswing aluminum casement window mulled to a fixed window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-3580**, dated 10/03/02, signed and sealed by Joseph Chan, P.E.
(Submitted under NOA No. 12-1218.12)
5. 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 a series CA-740 aluminum fixed window mulled to a projected window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-3724**, dated 02/28/02, signed and sealed by Joseph Chan, P.E.
(Submitted under NOA No. 12-1218.12)

C. CALCULATIONS

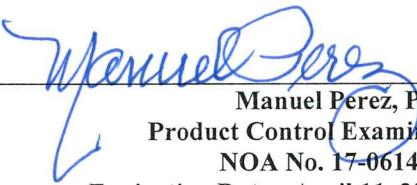
1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)**, and with the **FBC 6th Edition (2017)**, dated 06/09/17, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Glazing complies with **ASTM E1300-04**

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.


Manuel Perez, P.E.
Product Control Examiner
NOA No. 17-0614.13
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F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 5th Edition (2014)** and with **FBC 6th Edition (2017)**, dated August 29, 2017, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
2. Statement letter of no financial interest, dated June 9, 2015, issued by manufacturer, signed and sealed by Anthony Lynn Miller, P.E.
3. Proposal No. **16-0125** issued by the Product Control Section, dated March 09, 2016, signed by Ishaq Chanda, P.E.
(Submitted under previous NOA No. 16-0629.20)

G. OTHERS

1. Notice of Acceptance No. **16-0629.20**, issued to PGT Industries, Inc. for their Series "CA-640F Fixed Casement" Aluminum Fixed Window - N.I." approved on 08/11/16 and expiring on 04/11/18.



Manuel Perez, P.E.
Product Control Examiner
NOA No. 17-0614.13

Expiration Date: April 11, 2023
Approval Date: October 12, 2017

GENERAL NOTES: SERIES 640
NON-IMPACT FIXED CASEMENT WINDOW

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

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

3) FOR MASONRY APPLICATIONS IN MIAMI-DADE COUNTY, USE ONLY MIAMI-DADE COUNTY APPROVED MASONRY ANCHORS. MATERIALS USED FOR ANCHOR EVALUATIONS WERE SOUTHERN PINE, ASTM C90 CONCRETE MASONRY UNITS AND CONCRETE WITH MIN. KSI PER ANCHOR TYPE, SEE TABLE 3, SHEET 4.

4) 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.

5) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT EMBEDMENT AS SPECIFIED ON TABLE 3, SHEET 4. NARROW JOINT SEALANT IS USED ON ALL FOUR CORNERS OF THE FRAME. 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.

6) 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.

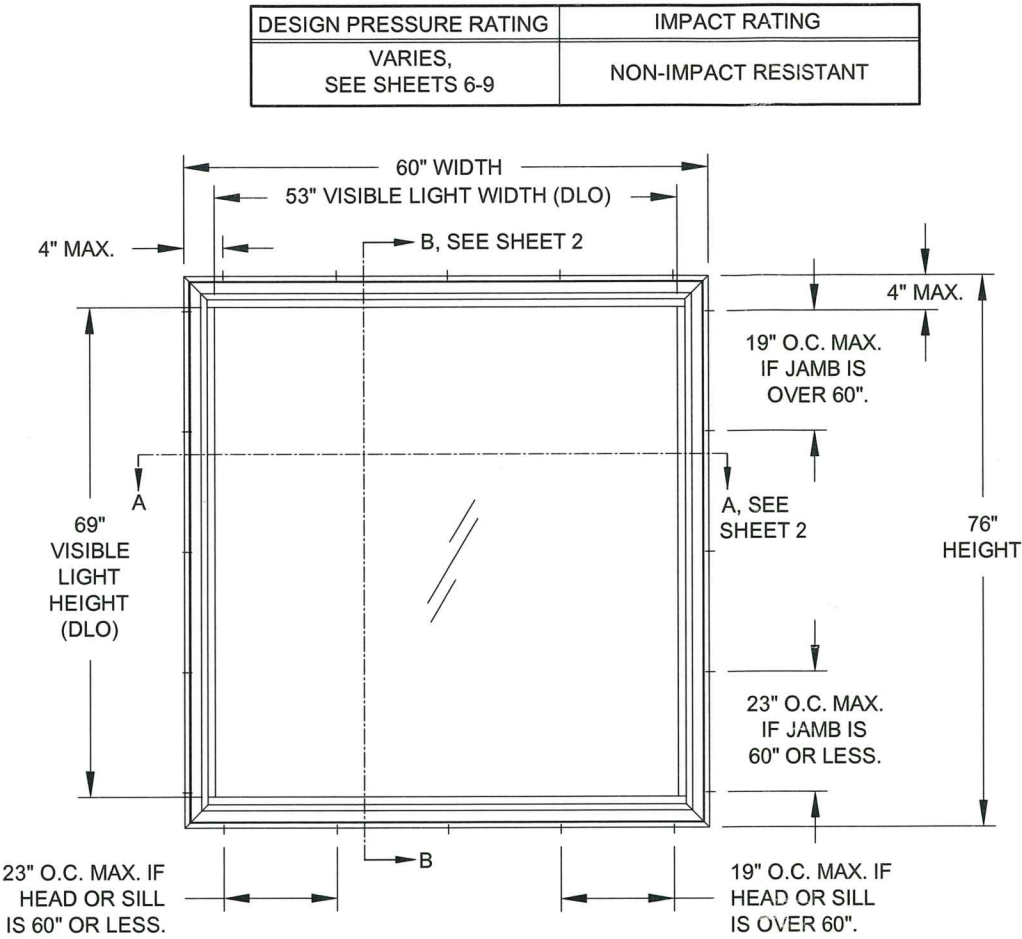
7) DESIGN PRESSURES:
A. NEGATIVE DESIGN LOADS BASED ON STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.
B. POSITIVE DESIGN LOADS BASED ON WATER TEST PRESSURE, STRUCTURAL TEST PRESSURE, FRAME ANALYSIS AND GLASS PER ASTM E1300.
C. DESIGN LOADS ARE BASED ON ALLOWABLE STRESS DESIGN, ASD.

8) 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.

9) REFERENCES: TEST REPORTS FTL-7060, 3579, 3580, 3724; ELCO ULTRACON NOA; ELCO CRETEFLEX NOA; ANSI/AF&PA NDS FOR WOOD CONSTRUCTION AND ADM ALUMINUM DESIGN MANUAL.

CODES / STANDARDS USED:

- 2017 FLORIDA BUILDING CODE (FBC), 6TH EDITION
- 2014 FLORIDA BUILDING CODE (FBC), 5TH EDITION
- ASTM E1300-04
- ANSI/AF&PA NDS-2015 FOR WOOD CONSTRUCTION
- ALUMINUM DESIGN MANUAL, ADM-2015
- AISI S100-12
- AISC 360-10

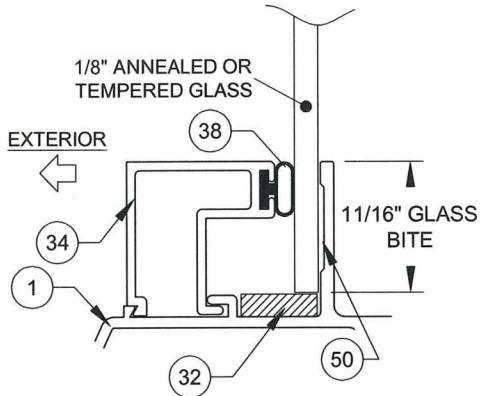


TYP. ELEVATION OF FIXED CASEMENT WINDOW

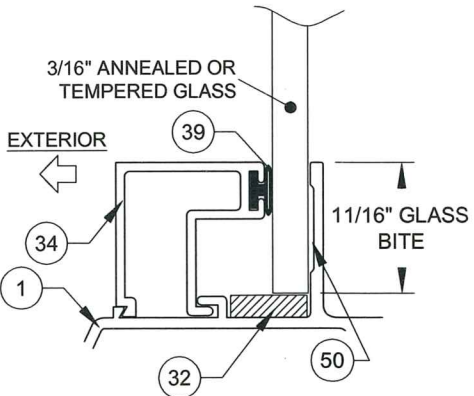
TABLE 1:

Glass Types		Sheet #
1	1/8" Annealed	6
2	1/8" Tempered	6
3	3/16" Annealed	7
4	3/16" Tempered	9
5	1/4" Annealed	7
6	1/4" Tempered	9
7	9/16" IG: (1/8" An - 5/16" Air - 1/8" An)	7
8	9/16" IG: (1/8" T - 5/16" Air - 1/8" T)	7
9	7/8" IG: (3/16" An - 1/2" Air - 3/16" An)	8
10	7/8" IG: (3/16" T - 1/2" Air - 3/16" T)	9

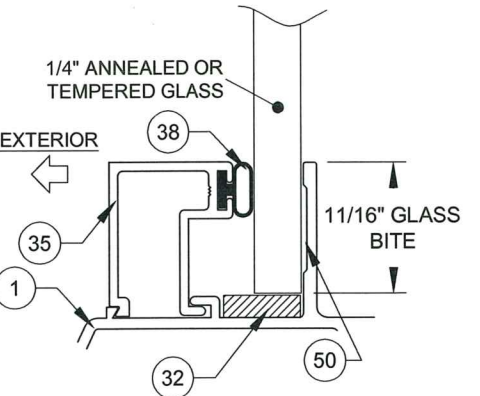
GENERAL NOTES.....	1
ELEVATION.....	1
GLAZING DETAILS.....	1
INSTALLATION.....	2
ASSEMBLY TUBE DETAILS.....	3
ANCHOR SPECIFICATIONS.....	4
ANCHOR QUANTITIES.....	4-5
DESIGN PRESSURES.....	6-9
ASSEMBLY DETAILS/BOM.....	10



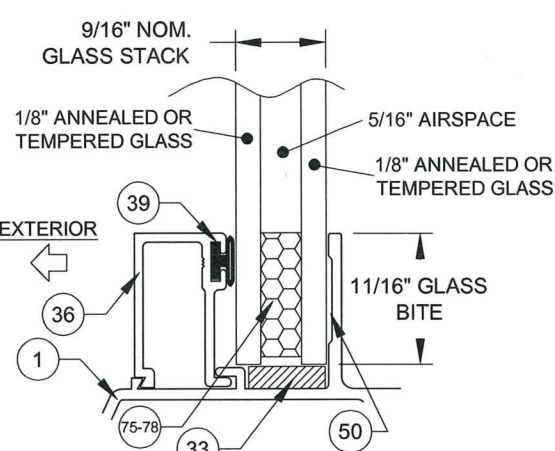
GLASS TYPES 1 & 2



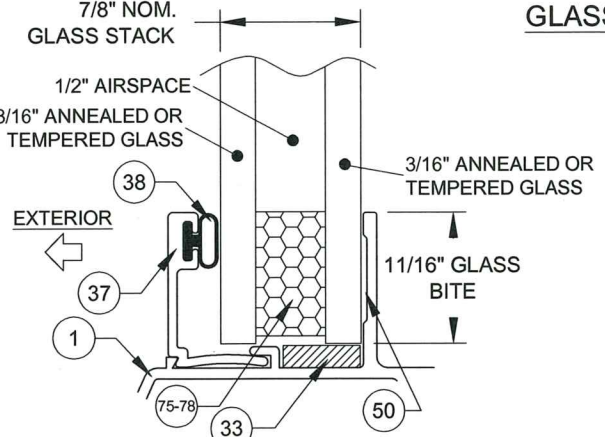
GLASS TYPES 3 & 4



GLASS TYPES 5 & 6

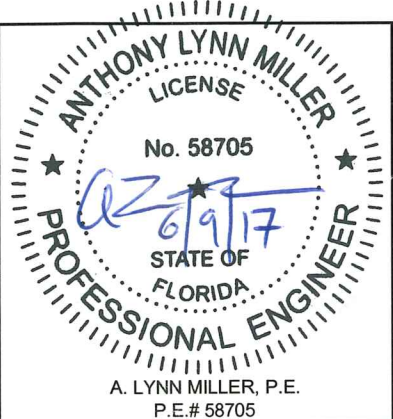


GLASS TYPES 7 & 8



GLASS TYPES 9 & 10

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-0614-13
Expiration Date April 11, 2023
By Manuel Perez
Miami Dade Product Control



PGT
1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
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Revised By:	Date:	Revision B:
JR	05/25/17	UPDATED ANCHORAGE PER FBC 2017.
Revised By:	Date:	Revision A:

Description:
GENERAL NOTES & ELEVATION

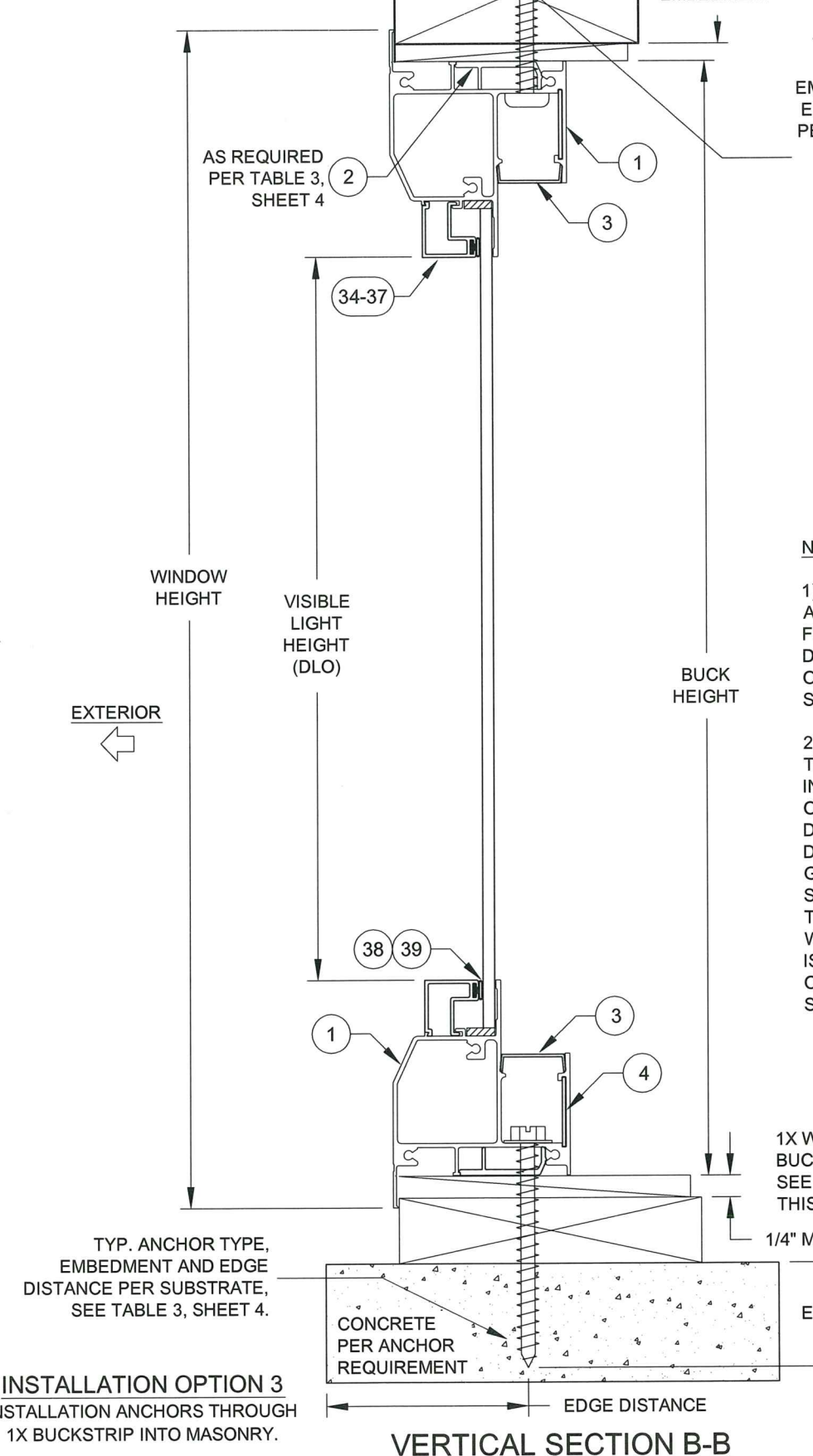
Drawn By:
J ROSOWSKI

Title:	FIXED CASEMENT WINDOW DETAILS - NI		Date:	08/08/12
Series/Model:	CA-640	Scale:	NTS	Sheet:
				1 OF 10
Drawing No.	MD-CA640F-NI	Rev:	C	

**INSTALLATION
OPTION 1**
INSTALLATION ANCHORS
INTO 2X WOOD.

**INSTALLATION
OPTION 2**
INSTALLATION
ANCHORS DIRECTLY
INTO MASONRY.

**INSTALLATION
OPTION 4**
INSTALLATION
ANCHORS DIRECTLY
INTO METAL.



TYP. ANCHOR
TYPE,
EMBEDMENT AND
EDGE DISTANCE
PER SUBSTRATE,
SEE TABLE 3,
SHEET 4.

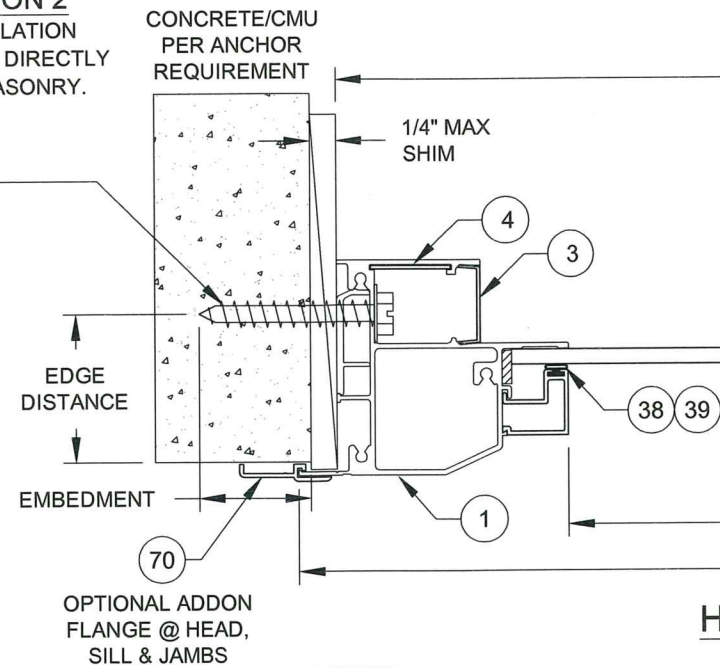
NOTES:

- 1) USE ONLY SUBSTRATE-APPROPRIATE ANCHORS LISTED ON TABLE 3, SHEET 4. FOLLOW EMBEDMENT AND EDGE DISTANCE LIMITS. ANY INSTALLATION OPTION SHOWN MAY BE USED ON ANY SIDE OF THE WINDOW.
- 2) ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL. UNIT MAY BE 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. MAXIMUM SHIM THICKNESS TO BE 1/4".

1X WOOD
BUCKSTRIP,
SEE NOTE 2,
THIS SHEET.

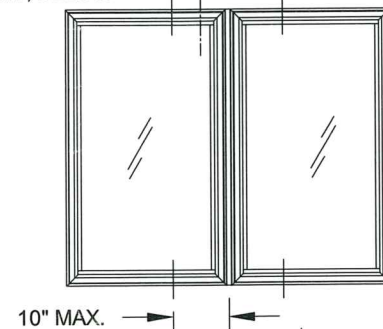
1/4" MAX SHIM

VERTICAL SECTION B-B

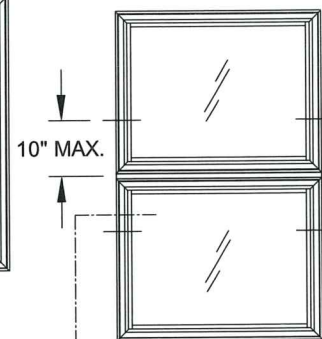


HORIZONTAL SECTION A-A

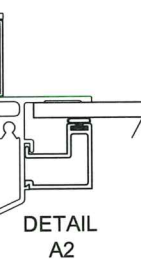
SEE DETAIL
A1, BELOW



**DETAIL
A1**



SEE DETAIL A2, BELOW



**DETAIL
A2**

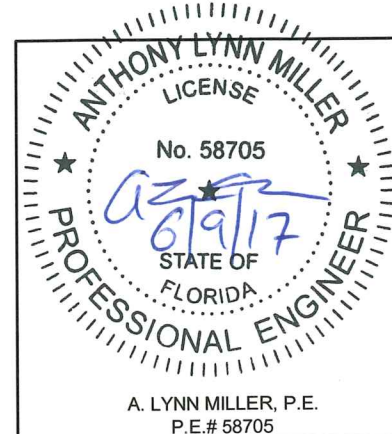
NOTES:

1) WHEN INSTALLING COMBINATION UNITS, ADDITIONAL INSTALLATION ANCHORS MAY NEED TO BE INSTALLED THROUGH THE WINDOW FRAMES AT 10" MAX. FROM EACH SIDE OF THE FRAME ASSEMBLY TUBE CENTERLINE. SEE TABLE BELOW:

Additional Anchors Required on each Side of the Frame Assembly Tube (FAT)			
Vert. FAT	Window Width	Anchor Type	
		A	B, C & D
	17" - 25.9"	1	0
Horiz. FAT	Window Height	Anchor Type	
		A	B, C & D
	17" - 25.9"	1	0
	26"+	1	1

VISIBLE LIGHT FORMULAS
WIDTH: WINDOW WIDTH - 7
HEIGHT: WINDOW HEIGHT - 7

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-0614.13
Expiration Date: APRIL 2023
By *Manuel Ruiz*
Miami Dade Product Control



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1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
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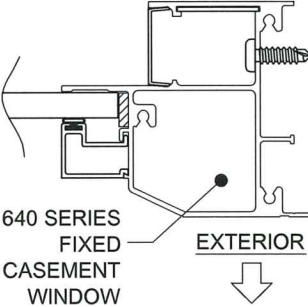
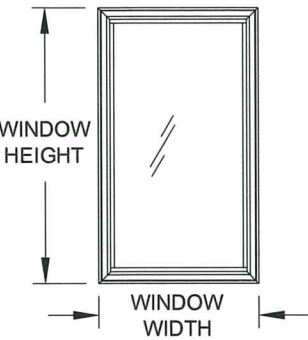
Revised By: JR	Date: 05/25/17	Revision B: NO CHANGES THIS SHEET.
Revised By:	Date:	Revision A:

Description:
GENERAL NOTES & ELEVATION

Title: FIXED CASEMENT WINDOW DETAILS - NI		Date: 08/08/12	
Series/Model: CA-640	Scale: NTS	Sheet: 2 OF 10	Drawing No. MD-CA640F-NI
			Rev: C

Drawn By:
J ROSOWSKI

FIXED CASEMENT (O)

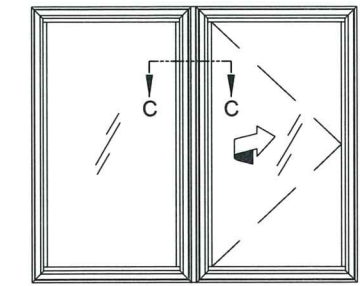


FOR SINGLE UNITS:

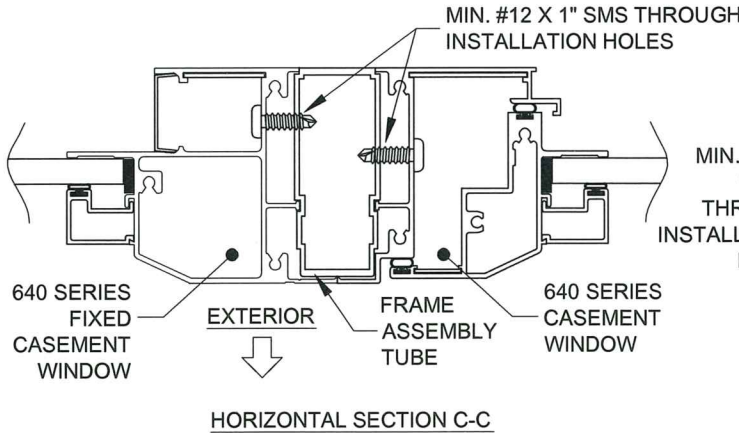
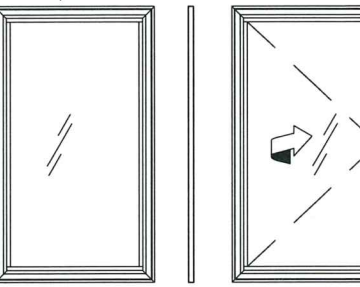
- 1) DETERMINE YOUR WINDOW SIZE AND GLASS.
- 2) KNOWING YOUR ANCHOR TYPE AND SUBSTRATE, DETERMINE YOUR ANCHOR GROUP FROM TABLE 3, SHEET 4.
- 3) FROM SHEETS 6-9, FIND THE SHEET FOR YOUR GLASS TYPE. FIND THE PRODUCT'S DESIGN PRESSURE FROM THE TABLE LABELED "DESIGN PRESSURE (PSF) FOR SINGLE WINDOWS, ALL ANCHOR GROUPS".
- 4) DIMENSIONS SHOWN ARE TIP-TO-TIP. FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION SHOWN ON THE TABLES.
- 5) USING THE TABLES LABELED "WINDOW ANCHORS REQUIRED" (TABLES 2A & 2B, SHEETS 4 & 5), DETERMINE THE NUMBER OF ANCHORS NEEDED IN THE HEAD, SILL AND JAMBS OF YOUR WINDOW.
- 6) INSTALL AS PER THE INSTRUCTIONS ON SHEET 2.

FIXED CASEMENT / CASEMENT (OX)

FIGURE 1:



640 SERIES FIXED CASEMENT WINDOW
FRAME ASSEMBLY TUBE
640 SERIES CASEMENT WINDOW*

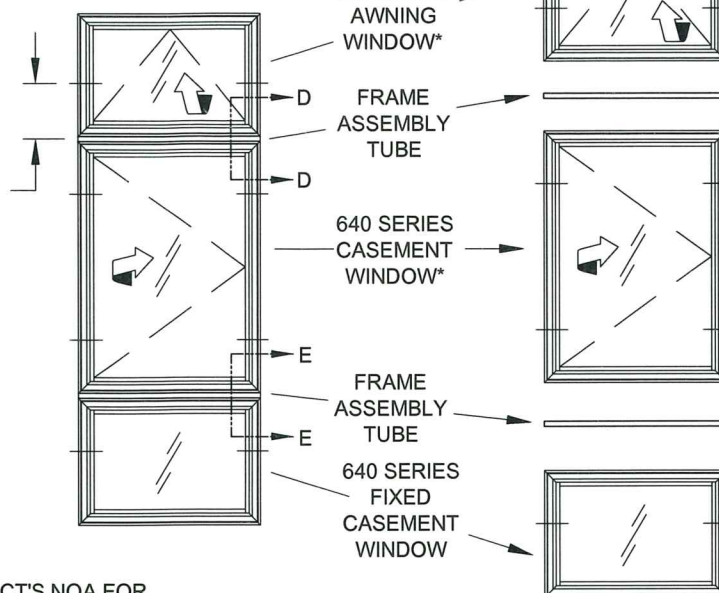


FOR EACH WINDOW IN A COMBINED ASSEMBLY:

- 1) DETERMINE EACH INDIVIDUAL WINDOW TYPE, SIZE AND GLASS MAKEUP, SEE FIGURES 1 & 2, THIS SHEET. DETERMINE YOUR ANCHOR GROUP FROM TABLE 3, SHEET 4.
- 2) FROM SHEETS 6-9, FIND THE SHEET FOR YOUR GLASS TYPE.
- 3) FIND THE DESIGN PRESSURE FROM THE TABLES LABELED "DESIGN PRESSURE (PSF) FOR WINDOWS ATTACHED TO A FRAME ASSEMBLY TUBE". THIS MUST BE DONE FOR EACH WINDOW IN THE ASSEMBLY, AND THE LOWEST DESIGN PRESSURE APPLIES TO THE ENTIRE ASSEMBLY. DIMENSIONS SHOWN ARE TIP-TO-TIP. FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION SHOWN ON THE TABLES.
- 4) USING THE TABLE LABELED "WINDOW ANCHORS REQUIRED" (TABLES 2A & 2B, SHEETS 4 & 5), DETERMINE THE NUMBER OF ANCHORS NEEDED IN THE HEAD, SILL AND JAMBS OF YOUR WINDOW.
- 5) INSTALL AS PER THE INSTRUCTIONS ON SHEETS 2-3. NOTE THAT ADDITIONAL ANCHORS THROUGH THE WINDOW FRAME INTO THE SUBSTRATE MAY BE REQUIRED (SEE SHEET 2), AND THAT MIN. # 12 X 1" ANCHORS ARE TO BE USED THROUGH THE FRAME INTO THE FRAME ASSEMBLY TUBE (SEE DETAILS ON THIS SHEET).

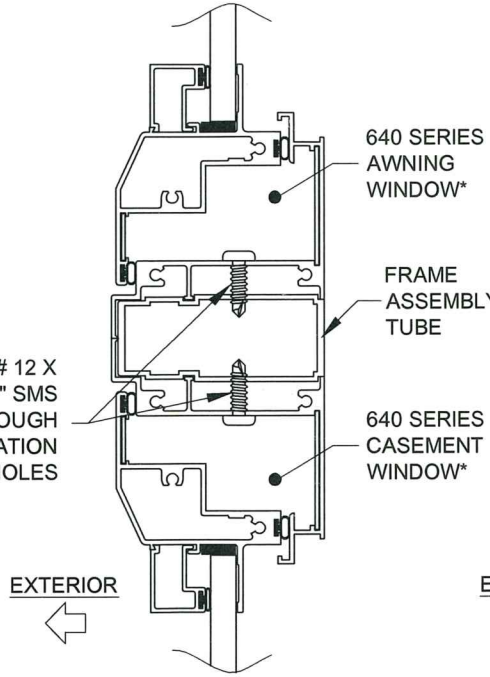
AWNING / CASEMENT / FIXED CASEMENT (XXO)

FIGURE 2:

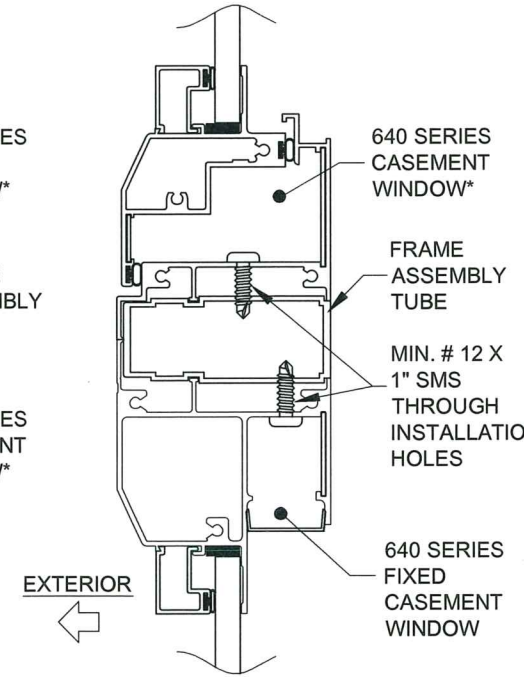


10", SEE NOTE 7, THIS SHEET

*SEE PRODUCT'S NOA FOR INSTALLATION SPECS



VERTICAL SECTION D-D



VERTICAL SECTION E-E

FRAME ASSEMBLY TUBE NOTES:

- 1) DIMENSIONS SHOWN ARE TIP-TO-TIP DIMENSIONS FOR EACH INDIVIDUAL WINDOW. FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE WIDTH OR HEIGHT DIMENSION SHOWN ON THE TABLES.
- 2) ANY 640-SERIES PRODUCT (CASEMENT, AWNING OR FIXED CASEMENT) MAY BE ATTACHED TO THE FRAME ASSEMBLY TUBE. FOR ALL WINDOWS, USE THE WINDOW'S NOA FOR ANCHORAGE, SIZE AND DESIGN PRESSURE LIMITATIONS.
- 3) ALL WINDOWS IN THE COMBINATION UNIT MUST BE ABLE TO INDIVIDUALLY COMPLY WITH THE REQUIREMENTS OF THEIR RESPECTIVE NOA.
- 4) FRAME ASSEMBLY TUBE TO BE FASTENED TO WINDOW, AS SHOW IN DETAILS, WITH MIN. #12 X 1" SHEET METAL SCREWS. USE THE SAME SPACING AND QUANTITY AS THE OPPOSITE FRAME MEMBER.
- 5) THE FRAME ASSEMBLY TUBE MAY NOT EXCEED 62" IN LENGTH (AS USED IN A 63" FLANGED WINDOW) OR BE USED IN TEE OR CROSS CONFIGURATIONS.
- 6) THE FRAME ASSEMBLY TUBE IS NOT REQUIRED TO BE CLIPPED TO THE SUBSTRATE. ALL EXTERIOR JOINTS TO BE SEALED BY INSTALLER.
- 7) FOR ALL COMBINATION UNITS, ADDITIONAL INSTALLATION ANCHORS MAY NEED TO BE INSTALLED THROUGH THE WINDOW FRAMES AT 10" MAX. FROM EACH SIDE OF THE FRAME ASSEMBLY TUBE CENTERLINE. SEE TABLE BELOW:

Additional Anchors Required on each Side of the Frame Assembly Tube (FAT)			
Vert. FAT	Window Width	Anchor Type	
		A	B, C & D
	17" - 25.9"	1	0
Horiz. FAT	Window Height	Anchor Type	
		A	B, C & D
	17" - 25.9"	1	0
Horiz. FAT	26"+	1	1

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-0614-13
Expiration Date April 11, 2023
By Manuel Perez
Miami Dade Product Control

Revision A:	Date:	Date:	08/08/12
Revised By:	Drawn By:	J ROSOWSKI	
Description: FRAME ASSEMBLY TUBE DETAILS			
Title: FIXED CASEMENT WINDOW DETAILS - NI			
Series/Model:	CA-640	Scale:	NTS
Sheet:	3 OF 10	Drawing No.	MD-CA640F-NI
Rev:	C		

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
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ANTHONY LYNN MILLER
LICENSE
No. 58705
a27917
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

TABLE 2A:

TABLE 2A:

Window Anchors Required (37" and Less on Short Side Dimension)																																		
Anchor Type			Short Side																															
			under 23"				25-15/16"				27-3/4"				29"				31-1/2"				33-1/2"				34"				37"			
			A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D				
Long Side	under 23"	Long Side	2	2	2	2																												
		Short Side	2	2	2	2																												
	25-15/16"	Long Side	3	2	2	2	3	2	2	2																								
		Short Side	2	2	2	2	3	2	2	2																								
	35"	Long Side	4	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3				
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	4	3	3	5	4	3	3				
	37"	Long Side	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	5	3	3	3	5	4	3	3
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	44"	Long Side	6	4	3	3	6	4	3	3	6	4	4	3	7	4	4	3	7	4	4	3	7	5	4	3	7	5	4	3	7	5	4	3
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	44-1/4"	Long Side	6	4	3	3	6	4	4	3	7	4	4	3	7	4	4	3	7	4	4	3	7	5	4	3	7	5	4	3	7	5	4	3
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	53-1/8"	Long Side	7	5	4	3	8	5	4	3	8	5	5	3	8	5	5	3	9	6	5	3	9	6	5	3	9	6	5	3	10	6	5	3
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	58"	Long Side	8	5	4	4	9	6	5	4	9	6	5	4	10	6	5	4	10	6	5	4	10	7	6	4	10	7	6	4	11	7	6	4
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	63"	Long Side	9	6	5	4	10	6	5	4	10	7	6	4	11	7	6	4	11	7	6	4	12	7	6	4	12	7	6	4	12	8	7	4
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
	66-13/16"	Long Side	10	6	5	5	10	7	6	5	11	7	6	5	11	7	6	5	12	8	6	5	12	8	7	5	13	8	7	5	13	8	7	5
		Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3
67-1/2"	Long Side	10	6	5	5	11	7	6	5	11	7	6	5	11	7	6	5	12	8	7	5	13	8	7	5	13	8	7	5	13	9	7	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
68"	Long Side	10	6	5	5	11	7	6	5	11	7	6	5	12	7	6	5	12	8	7	5	13	8	7	5	13	8	7	5	14	9	7	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
70"	Long Side	10	6	6	5	11	7	6	5	12	7	6	5	12	8	6	5	13	8	7	5	13	8	7	5	13	8	7	5	14	9	8	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
72"	Long Side	10	7	6	5	11	7	6	5	12	8	7	5	12	8	7	5	13	8	7	5	14	9	7	5	14	9	7	5	15	9	8	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
74"	Long Side	11	7	6	5	12	8	6	5	12	8	7	5	13	8	7	5	14	9	7	5	14	9	8	5	14	9	8	5	15	10	8	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
76"	Long Side	11	7	6	5	12	8	7	5	13	8	7	5	13	8	7	5	14	9	8	5	15	9	8	5	15	9	8	5	16	10	8	5	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
84"	Long Side	12	8	7	5	14	9	7	5	14	9	8	5	15	9	8	5	16	10	8	6	17	11	9	6	17	11	9	6	18	11	10	6	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
114"	Long Side	17	11	9	7	19	12	10	7	20	13	11	7	21	13	11	7	23	14	12	8	24	15	13	8	24	15	13	8	26	16	14	9	
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3	5	4	3	3	
134"	Long Side	21	13	11	8	23	14	12	8	24	15	13	8	25	16	13	9	27	17	14	9	29	18	15	10	29	18	15	10					
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3	5	3	3	3	5	3	3	3					
145"	Long Side	22	14	12	9	25	16	13	9	26	17	14	9	28	17	15	9	29	19	16	10													
	Short Side	2	2	2	2	3	2	2	2	3	2	2	2	4	2	2	2	4	3	3	3													

TABLE 3:

Group	Anchor	Substrate	Min. Edge Distance	Min. O.C. Distance	Min. Embedment	Anchor Plate Required?
A	#12, steel SMS (G5)	S. Pine	5/8"	1"	1-3/8"	No
		6063-T5 Alum.	3/8"	5/8"	.063"	No
		A36 Steel	3/8"	5/8"	.050"	No
		A653 Stud, Gr. 33	3/8"	5/8"	.045", 20 Ga.	No
	#14, steel SMS (G5) or #14, 410 SS SMS	S. Pine	5/8"	1"	1-3/8"	No
		6063-T5 Alum.	3/8"	5/8"	.063"	No
		A36 Steel	3/8"	5/8"	.050"	No
		A653 Stud, Gr. 33	3/8"	5/8"	.045", 20 Ga.	No
B	1/4" steel Ultracon	2.85k Concrete	2-1/2"	4"	1-3/8"	No
		Hollow Block	1"	6"	1-1/4"	No
		Hollow Block	2-1/2"	5"	1-1/4"	No
C	1/4" steel Ultracon	Hollow Block	1"	6"	1-1/4"	Yes
		3.35k Concrete	1"	5"	1-3/4"	No
		Hollow Block	2-1/2"	5"	1-1/4"	No

TABLE 3: (cont.)

Group	Anchor	Substrate	Min. Edge Distance	Min. O.C. Distance	Min. Embedment	Anchor Plate Required?
D	#12, steel SMS (G5) or #12, 410 SS SMS	S. Pine	5/8"	1"	1-3/8"	Yes
		6063-T5 Alum.	3/8"	5/8"	.0713"	Yes
		A36 Steel	3/8"	5/8"	.050"	Yes
		A653 Stud, Gr. 33	3/8"	5/8"	.045", 18 Ga.	Yes
	#14, steel SMS (G5) or #14, 410 SS SMS	S. Pine	5/8"	1"	1-3/8"	Yes
		6063-T5 Alum.	3/8"	5/8"	.0713"	Yes
		A36 Steel	3/8"	5/8"	.050"	Yes
		A653 Stud, Gr. 33	3/8"	5/8"	.045", 18 Ga.	Yes
	1/4" steel Ultracon	2.85k Concrete	1"	4"	1-3/4"	Yes
		2.85k Concrete	2-1/2"	4"	1-3/8"	Yes
		Hollow Block	2-1/2"	5"	1-1/4"	Yes
		Filled Block	2-1/2"	4"	1-3/4"	Yes
	1/4" 410 SS CreteFlex	3.35k Concrete	1"	6"	1-3/4"	Yes
		3.35k Concrete	2-1/2"	6"	1"	Yes
		Hollow Block	2-1/2"	6"	1-1/4"	Yes
		3.5k Concrete	1-1/4"	5"	1-3/4"	No
	5/16" steel Ultracon	Hollow Block	3-1/8"	5"	1-1/4"	No
		Filled Block	2-1/2"	5"	1-3/4"	No

1) WHERE SUBSTRATE CONDITIONS REQUIRE ANCHORAGE FROM MORE THAN ONE OF THE ANCHOR GROUPS ABOVE, CHOOSE THE ANCHOR GROUP OF THE LOWEST LETTER FOR ALL SUBSEQUENT TABLES IN THIS APPROVAL.

2) ANCHOR MUST EXTEND A MINIMUM OF 3 THREADS BEYOND ANY METAL SUBSTRATE.

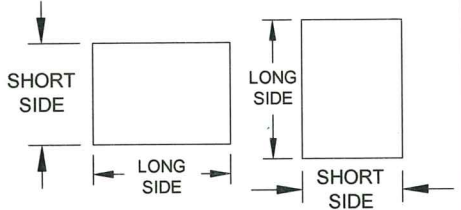
3) ANCHORS MAY BE HEXHEAD, PANHEAD OR FLATHEAD.

Material	Min. F _y	Min. F _u
Steel Screw	92 ksi	120 ksi
410 Screw	90 ksi	110 ksi
Elco UltraCon®	155 ksi	177 ksi
410 SS Elco CreteFlex®	127.4 ksi	189.7 ksi
6063-T5 Aluminum	16 ksi	22 ksi
A36 Steel	36 ksi	58 ksi
Gr. 33 Steel Stud	33 ksi	45 ksi

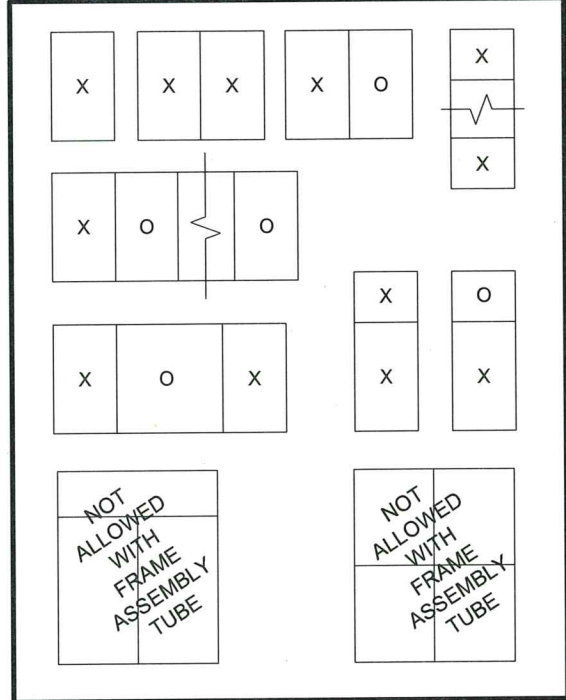
1) USE THIS TABLE FOR ALL WINDOWS PER THE ELEVATIONS ON SHEET 1. DIMENSIONS SHOWN ARE TIP-TO-TIP.

2) FOR SIZES NOT SHOWN, ROUND UP TO THE NEXT AVAILABLE SHORT OR LONG SIDE DIMENSION SHOWN ON THE TABLE.

3) TABLE DIMENSIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN:



SAMPLE CONFIGURATIONS:



1) OPERABLE (X) WINDOWS MAY BE CASEMENT WINDOWS OR AWNING WINDOWS OF THE SAME SERIES.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-0614-13
Expiration Date April 11, 2023
By *Manuel Perez*
Miami Dade Product Control

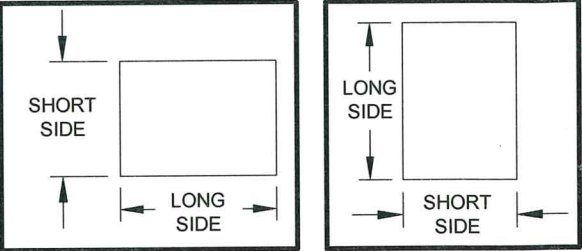
TABLE 2B:

Window Anchors Required (Over 37" on Short Side Dimension)

Anchor Type			Short Side																																				
			40"				44"				48-1/4"				53-1/8"				54"				58"				60"				63"				67-1/2"				
			A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D					
Long Side	under 23"	Long Side																																					
		Short Side																																					
	25-15/16"	Long Side																																					
		Short Side																																					
	35"	Long Side																																					
		Short Side																																					
	37"	Long Side																																					
		Short Side																																					
	44"	Long Side	7	5	4	3	7	5	4	3																													
		Short Side	6	4	3	3	7	5	4	3																													
	44-1/4"	Long Side	7	5	4	3	7	5	4	3																													
		Short Side	6	4	3	3	7	5	4	3																													
	53-1/8"	Long Side	10	6	5	4	10	7	6	4	10	7	6	4	11	7	6	4																					
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	11	7	6	4																					
	58"	Long Side	11	7	6	4	12	8	6	4	12	8	7	4	12	8	7	4	12	8	7	4	13	8	7	4													
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	11	7	6	4	11	7	6	4	13	8	7	4													
	63"	Long Side	13	8	7	5	13	9	7	5	14	9	7	5	14	9	8	5	14	9	8	5	15	9	8	5	15	9	8	5	15	9	8	5					
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	11	7	6	4	11	7	6	4	13	8	7	4	13	9	7	5	15	9	8	5					
	66-13/16"	Long Side	14	9	7	5	15	9	8	5	15	10	8	5	16	10	8	5	16	10	8	5	16	10	8	5	16	10	8	5	16	10	8	5	15	10	8	5	6
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	10	7	6	4	11	7	6	4	12	8	7	4	13	8	7	5	14	9	8	5	16	10	8	6	
	67-1/2"	Long Side	14	9	8	5	15	9	8	5	15	10	8	5	16	10	8	6	16	10	8	6	16	10	8	6	16	10	8	6	16	10	8	6	16	10	8	6	
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	10	7	6	4	11	7	6	4	12	8	7	4	13	8	7	5	14	9	7	5	16	10	8	6	
	68"	Long Side	14	9	8	5	15	10	8	5	16	10	8	5	16	10	9	6	16	10	9	6	16	10	9	6	16	10	9	6	16	10	9	6					
		Short Side	6	4	3	3	7	5	4	3	9	6	5	3	10	7	6	4	11	7	6	4	12	8	6	4	13	8	7	4	14	9	7	5					
	70"	Long Side	15	9	8	5	16	10	8	5	16	10	9	6	16	10	9	6	16	10	9	6	16	10	9	6	16	10	9	6	16	10	9	6					
Short Side		6	4	3	3	7	5	4	3	9	6	5	3	10	7	6	4	10	7	6	4	12	7	6	4	12	8	7	4	13	9	7	5						
72"	Long Side	15	10	8	5	16	10	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6						
	Short Side	6	4	3	3	7	5	4	3	9	6	5	3	10	6	5	4	10	7	6	4	12	7	6	4	12	8	7	4	13	8	7	5						
74"	Long Side	16	10	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6	17	11	9	6						
	Short Side	6	4	3	3	7	5	4	3	9	6	5	3	10	6	5	4	10	7	6	4	11	7	6	4	12	8	6	4	12	8	6	4						
76"	Long Side	16	10	9	6	17	11	9	6	18	11	9	6	18	11	9	6	18	11	9	6	18	11	9	6	18	11	9	6	18	11	9	6						
	Short Side	6	4	3	3	7	5	4	3	9	5	5	3	10	6	5	4	10	6	5	4	11	7	6	4	12	8	6	4	12	8	6	4						
84"	Long Side	19	12	10	6	20	12	10	7	20	12	10	7	20	12	10	7	20	12	10	7																		
	Short Side	6	4	3	3	7	5	4	3	8	5	4	3	9	6	5	3	10	6	5	3																		
114"	Long Side	26	17	14	9																																		
	Short Side	6	4	3	3																																		

TABLE 4:

		Design Pressure (psf) for Single Windows, All Anchor Groups						
Long Side		Short Side						
		under 23"	25-15/16"	27-3/4"	33-1/2"	37"	44"	48-1/4"
	under 23"	+/- 79.6						
	25-15/16"	+/- 71.5	+/- 70.5					
	37"	+/- 57.7	+/- 54.3	+/- 52.7	+/- 49.9	+/- 49.4		
	44"	+/- 53.9	+/- 50	+/- 48.1	+/- 44.1	+/- 42.7	+/- 41.6	
	48-1/4"	+/- 52.2	+/- 48.2	+/- 46.3	+/- 41.8	+/- 40.1	+/- 38.2	+/- 35.2
	53-1/8"	+/- 49.9	+/- 43.8	+/- 42.9	+/- 39.9	+/- 38		
	58"	+/- 46.9	+/- 39.4	+/- 38.1	+/- 37.9	+/- 36.3		
	63"	+/- 44.5	+/- 36.2	+/- 33.8	+/- 33.6	+/- 33.2		
	76"	+/- 40.7	+/- 30.8	+/- 27.4				
	84"	+/- 39.4	+/- 29.3	+/- 25.5				

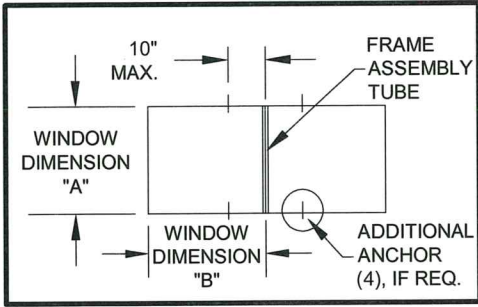


1) SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES.
2) TABLE DIMENSIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.

TABLE 5:

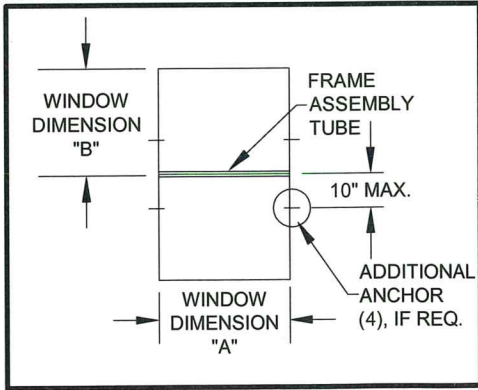
		Design Pressure (psf) for Windows Attached to a Frame Assembly Tube									
Window Dimension "B"		Window Dimension "A"									
		under 23"	25-15/16"	27-3/4"	33-1/2"	37"	44"	48-1/4"	53-1/8"	58"	63"
		Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group
		All	All	All	All	All	All	All	All	All	All
	under 23"	+70/-79.6	+70/-71.5	+/-67.9	+/-60.6	+/-57.7	+/-53.9	+/-52.2	+/-49.9	+/-46.9	+/-44.5
	25-15/16"	+70/-71.5	+70/-70.5	+/-66.2	+/-57.6	+/-54.3	+/-50	+/-48.2	+/-43.8	+/-39.4	+/-36.2
	37"	+/-57.7	+/-54.3	+/-52.7	+/-49.9	+/-49.4	+/-42.7	+/-40.1	+/-38	+/-36.3	+/-33.2
	44"	+/-53.9	+/-50	+/-48.1	+/-44.1	+/-42.7	+/-41.6	+/-38.2			
	48-1/4"	+/-52.2	+/-48.2	+/-46.3	+/-41.8	+/-40.1	+/-38.2	+/-35.2			
	53-1/8"	+/-49.9	+/-43.8	+/-42.9	+/-39.9	+/-38					
	58"	+/-46.9	+/-39.4	+/-38.1	+/-37.9	+/-36.3					
	63"	+/-44.5	+/-36.2	+/-33.8	+/-33.6	+/-33.2					
	76"	+/-40.7	+/-30.8	+/-27.4							
	84"	+/-39.4	+/-29.3	+/-25.5							

FIGURE FOR VERTICAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

FIGURE FOR HORIZONTAL FRAME ASSEMBLY TUBE



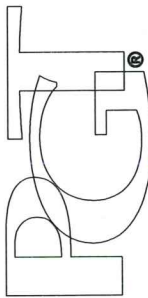
SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

FOR GLASS TYPES:

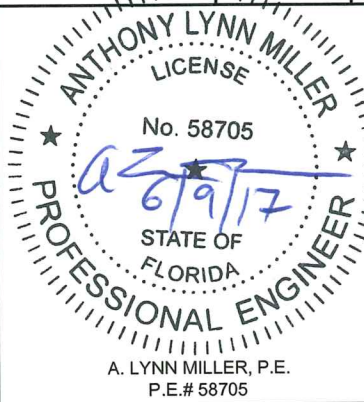
- 1) 1/8" Annealed
- 2) 1/8" Tempered

PRODUCT REVISED
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Acceptance No. 17-0614.13
Expiration Date April 11, 2023
By Manuel Perez
Miami Dade Product Control

Revised By:	Date:	Revision A:
J ROSOWSKI	05/25/17	UPDATED TABLES.
Drawn By:	Date:	
J ROSOWSKI	08/08/12	
Description:		
DESIGN PRESSURES PER GLAZING TYPE		
Title:		
FIXED CASEMENT WINDOW DETAILS - NI		
Series/Model:		
CA-640		
Scale:		
NTS		
Sheet:		
6 OF 10		
Drawing No.		
MD-CA640F-NI		
Rev:		
C		



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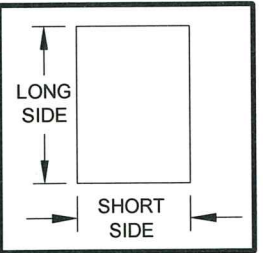
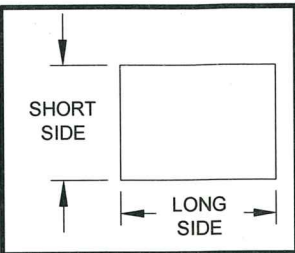
FOR GLASS TYPES:

- 3) 3/16" Annealed
- 5) 1/4" Annealed
- 7) 9/16" IG: (1/8" An - 5/16" Air - 1/8" An)
- 8) 9/16" IG: (1/8" T - 5/16" Air - 1/8" T)

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Expiration Date April 11, 2023
By Manuel Perez
Miami Trade Product Control

TABLE 6:

	Design Pressure (psf) for Single Windows, All Anchor Groups									
	Short Side									
	under 23"	25-15/16"	27-3/4"	33-1/2"	37"	44"	48-1/4"	53-1/8"	58"	63"
Long Side	under 23"	+90/-112.1								
	25-15/16"	+90/-100.7	+90/-99.4							
	37"	+/- 81.3	+/- 76.5	+/- 74.3	+/- 70.3	+/- 69.7	+/- 60.1	+/- 56.5	+/- 53.5	+/- 51.1
	44"	+/- 75.9	+/- 70.4	+/- 67.8	+/- 62.1	+/- 60.1	+/- 58.6	+/- 53.8	+/- 44.5	+/- 41.9
	48-1/4"	+/- 73.6	+/- 67.9	+/- 65.2	+/- 58.9	+/- 56.5	+/- 53.8	+/- 53.4	+/- 43.5	+/- 40.6
	53-1/8"	+/- 71.6	+/- 65.8	+/- 62.9	+/- 56.2	+/- 53.5	+/- 44.5	+/- 43.5	+/- 43.2	
	58"	+/- 69.9	+/- 64	+/- 61	+/- 54.1	+/- 51.1	+/- 41.9	+/- 40.6		
	63"	+/- 68.6	+/- 62.6	+/- 59.6	+/- 52.4	+/- 49.3	+/- 40			
	76"	+/- 66	+/- 55.4	+/- 49.3	+/- 43.1	+/- 39.4				
	84"	+/- 64.9	+/- 52.7	+/- 45.8	+/- 37.8					

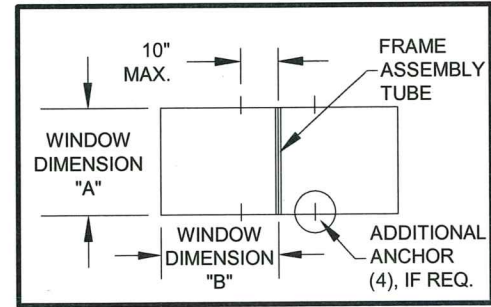


1) SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES.
2) TABLE DIMENSIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.

TABLE 7:

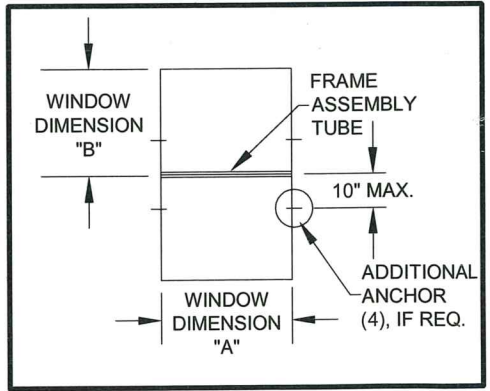
		Design Pressure (psf) for Windows Attached to a Frame Assembly Tube																									
		Window Dimension "A"																									
		under 23"	25-15/16"	27-3/4"	33-1/2"	37"			44"			48-1/4"				53-1/8"				58"				63"			
		Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group			Anchor Group			Anchor Group				Anchor Group				Anchor Group				Anchor Group			
		All	All	All	All	A	B	C & D	A	B	C & D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Window Dimension "B"	under 23"	+70/-90	+70/-90	+70/-90	+70/-85.4	+70/-81.3	+70/-79.2	+70/-81.3	+70/-75.9	+/-66.6	+70/-75.9	+70/-73.6	+/-60.7	+70/-72.7	+70/-73.6	+/-69	+/-55.3	+/-66.1	+70/-71.6	+/-63.1	+/-50.5	+/-60.5	+/-69.9	+/-58.1	+/-46.5	+/-55.7	+/-68.6
	25-15/16"	+70/-90	+70/-90	+70/-90	+70/-81.1	+70/-76.5	+70/-76.5	+70/-76.5	+70/-70.4	+70/-70.4	+70/-70.4	+/-67.1	+/-67.9	+/-67.9	+/-67.9	+/-61.1	+/-65.8	+/-65.8	+/-65.8	+/-55.9	+/-64	+/-64	+/-64	+/-51.5	+/-62.6	+/-62.6	+/-62.6
	37"	+70/-81.3	+70/-76.5	+70/-74.3	+70/-70.3	+/-69.7	+/-69.7	+/-69.7	+/-60.1	+/-60.1	+/-60.1	+/-56.5	+/-56.5	+/-56.5	+/-56.5	+/-53.5	+/-53.5	+/-53.5	+/-53.5	+/-49	+/-51.1	+/-51.1	+/-51.1	+/-45.1	+/-49.3	+/-49.3	+/-49.3
	44"	+70/-75.9	+70/-70.4	+/-67.8	+/-62.1	+/-60.1	+/-60.1	+/-60.1	+/-54.3	+/-58.6	+/-58.6	+/-49.5	+/-53.8	+/-53.8	+/-53.8	+/-45.1	+/-50	+/-50	+/-50	+/-41.2	+/-47.2	+/-47.2	+/-47.2	+/-37.9	+/-45	+/-45	+/-45
	48-1/4"	+70/-73.6	+/-67.9	+/-65.2	+/-58.9	+/-56.5	+/-56.5	+/-56.5	+/-49.5	+/-53.8	+/-53.8	+/-45.1	+/-53.4	+/-53.4	+/-53.4	+/-41.1	+/-49	+/-49	+/-49	+/-37.5	+/-45.7	+/-45.7	+/-45.7				
	53-1/8"	+70/-71.6	+/-65.8	+/-62.9	+/-56.2	+/-53.5	+/-53.5	+/-53.5	+/-50	+/-50	+/-50	+/-49	+/-49	+/-49	+/-49	+/-44.9	+/-48.6	+/-48.6	+/-48.6								
	58"	+/-69.9	+/-64	+/-61	+/-54.1	+/-51.1	+/-51.1	+/-51.1	+/-47.2	+/-47.2	+/-47.2	+/-45	+/-45.7	+/-45.7	+/-45.7												
	63"	+/-68.6	+/-62.6	+/-59.6	+/-52.4	+/-49.3	+/-49.3	+/-49.3	+/-45	+/-45	+/-45																
	76"	+/-66	+/-55.4	+/-49.3	+/-43.1	+/-39.4	+/-39.4	+/-39.4																			
84"	+/-64.9	+/-52.7	+/-45.8	+/-37.8																							

FIGURE FOR VERTICAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

FIGURE FOR HORIZONTAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

Revised By: J ROSOWSKI
Date: 05/25/17

Drawn By: J ROSOWSKI
Date: 08/08/12

Description: DESIGN PRESSURES PER GLAZING TYPE

Revised: C

Scale: NTS

Sheet: 7 OF 10

Drawing No: MD-CA640F-NI

Series/Model: CA-640

Title: FIXED CASEMENT WINDOW DETAILS - NI

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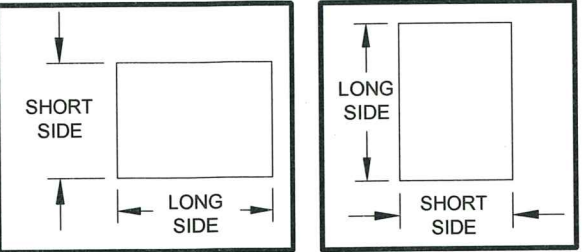
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6/9/17
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705

FOR GLASS TYPES:
9) 7/8" IG: (3/16" An - 1/2" Air - 3/16" An)

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Acceptance No. **17-0614.13**
Expiration Date **April 11, 2023**
By **Manuel Perez**
Miami Dade Product Control

TABLE 8:

	Design Pressure (psf) for Single Windows, All Anchor Groups									
	Short Side									
	under 23"	25-15/16"	36"	48"	53-1/8"	58"	60"	63"	65"	66-13/16"
Long Side	under 23"	+90/-150								
	25-15/16"	+90/-150	+90/-150							
	35"	+90/-141.2	+90/-133.5							
	63"	+90/-116	+90/-105.8	+/- 84.8	+/- 73.4	+/- 70.9	+/- 69.6	+/- 69.4	+/- 69	
	66-13/16"	+90/-114.5	+90/-104.3	+/- 82.9	+/- 70.9	+/- 68.1	+/- 66.4	+/- 65.9	+/- 65.2	+/- 63.5
	68"	+90/-114.1	+90/-103.8	+/- 82.4	+/- 70.2	+/- 67.3	+/- 65.5	+/- 65	+/- 64.2	+/- 62.4
	70"	+90/-113.4	+90/-103.2	+/- 79.9	+/- 69.1	+/- 66.1	+/- 64.2	+/- 63.6	+/- 62.4	
	74"	+90/-112.3	+90/-101.9	+/- 73.9	+/- 67.2	+/- 64	+/- 61.8	+/- 61.1		
	76"	+90/-111.7	+90/-101.3	+/- 72.1	+/- 66.4	+/- 63.1	+/- 60.8			
	84"	+90/-109.9	+90/-99.4	+/- 65.5	+/- 58.9	+/- 57.7				

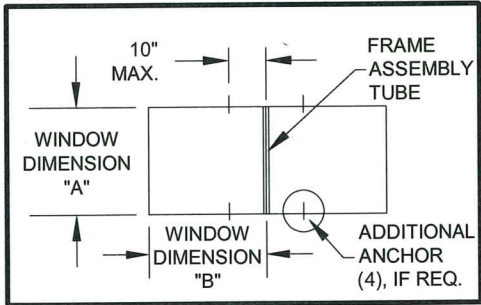


1) SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES.
2) TABLE DIMENSIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.

TABLE 9:

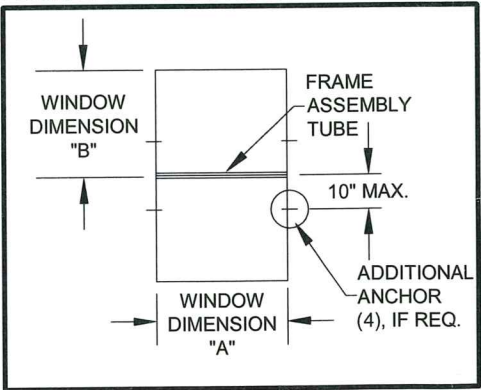
		Design Pressure (psf) for Windows Attached to a Frame Assembly Tube																								
		Window Dimension "A"																								
		under 23"	25-15/16"	36"			48"				53-1/8"				58"				60"				63"			
		Anchor Group	Anchor Group	Anchor Group			Anchor Group				Anchor Group				Anchor Group				Anchor Group							
		All	All	A	B	C & D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Window Dimension "B"	under 23"	+70/-90	+70/-90	+70/-90	+70/-81.4	+70/-90	+70/-76.2	+/-61.1	+70/-73.1	+70/-90	+/-68.8	+/-55.2	+/-66	+70/-90	+/-63.1	+/-50.5	+/-60.5	+70/-90	+/-61	+/-48.9	+/-58.5	+70/-90	+/-58.1	+/-46.5	+/-55.7	+70/-88.7
	25-15/16"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+/-67.5	+70/-90	+70/-90	+70/-90	+/-61	+70/-90	+70/-90	+70/-90	+/-55.9	+70/-89.6	+70/-90	+70/-90	+/-54	+70/-86.6	+70/-90	+70/-90	+/-51.5	+70/-82.5	+70/-90	+70/-90
	35"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+/-62.6	+70/-90	+70/-90	+70/-90	+/-56.5	+70/-90	+70/-90	+70/-90	+/-51.8	+70/-83	+70/-89.2	+70/-89.2	+/-50.1	+70/-80.2	+70/-87.9	+70/-87.9	+/-47.7	+70/-76.4	+70/-86.2	+70/-86.2
	63"	+70/-90	+70/-90	+70/-83.4	+70/-84.8	+70/-84.8	+/-62.6	+70/-73.4	+70/-73.4	+70/-73.4	+/-56.5	+70/-70.5	+70/-70.9	+70/-70.9	+/-51.8	+/-64.6	+/-66.2	+/-69.6	+/-50.1	+/-62.4	+/-64	+/-69.4	+/-47.7	+/-59.4	+/-61	+/-69
	66-13/16"	+70/-90	+70/-90	+70/-78.7	+70/-82.9	+70/-82.9	+/-59	+70/-70.9	+70/-70.9	+70/-70.9	+/-53.3	+/-66.4	+/-68.1	+/-68.1	+/-48.8	+/-60.9	+/-66.4	+/-66.4	+/-47.2	+/-58.8	+/-65.9	+/-65.9	+/-45	+/-56	+/-65.2	+/-65.2
	68"	+70/-90	+70/-90	+70/-82.4	+70/-82.4	+70/-82.4	+/-64.4	+70/-70.2	+70/-70.2	+70/-70.2	+/-58.2	+/-65.3	+/-67.3	+/-67.3	+/-53.3	+/-59.8	+/-65.5	+/-65.5	+/-51.5	+/-57.8	+/-65	+/-65	+/-49.1	+/-55.1	+/-64.2	+/-64.2
	70"	+70/-90	+70/-90	+70/-79.9	+70/-79.9	+70/-79.9	+/-62.6	+/-69.1	+/-69.1	+/-69.1	+/-56.5	+/-63.4	+/-66.1	+/-66.1	+/-51.8	+/-58.1	+/-64.2	+/-64.2	+/-50.1	+/-56.2	+/-63.6	+/-63.6	+/-47.7	+/-53.5	+/-62.4	+/-62.4
	74"	+70/-90	+70/-90	+70/-73.9	+70/-73.9	+70/-73.9	+/-59.2	+/-66.4	+/-67.2	+/-67.2	+/-53.5	+/-60	+/-64	+/-64	+/-49	+/-55	+/-61.8	+/-61.8	+/-47.4	+/-53.1	+/-61.1	+/-61.1				
	76"	+70/-90	+70/-90	+70/-72.1	+70/-72.1	+70/-72.1	+/-57.6	+/-64.7	+/-66.4	+/-66.4	+/-52.1	+/-58.4	+/-63.1	+/-63.1	+/-47.7	+/-53.5	+/-60.8	+/-60.8								
84"	+70/-90	+70/-90	+/-65.5	+/-65.5	+/-65.5	+/-57.4	+/-58.9	+/-58.9	+/-58.9	+/-51.8	+/-57.7	+/-57.7	+/-57.7													

FIGURE FOR VERTICAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

FIGURE FOR HORIZONTAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

Revised By:	J ROSOWSKI	Date:	05/25/17	Revision A:	UPDATED TABLES.
Drawn By:	J ROSOWSKI	Date:	08/08/12		
Description:	DESIGN PRESSURES PER GLAZING TYPE				
Title:	FIXED CASEMENT WINDOW DETAILS - NI				
Series/Model:	CA-640	Scale:	NTS	Sheet:	8 OF 10
				Drawing No.:	MD-CA640F-NI
				Rev:	C

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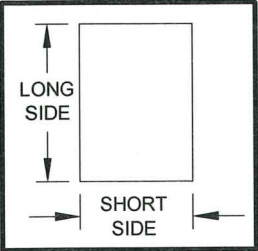
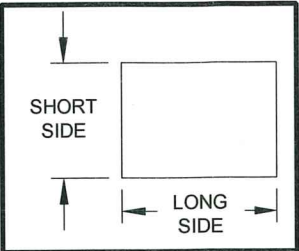
FOR GLASS TYPES:

- 4) 3/16" T
- 6) 1/4" T
- 10) 7/8" IG: (3/16" T - 1/2" Air - 3/16" T)

PRODUCT REVISED
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Building Code
Acceptance No. 17-0614-13
Expiration Date April 11, 2023
By *Manuel Ruiz*
Miami Dade Product Control

TABLE 10:

Design Pressure (psf) for Single Windows, All Anchor Groups										
Long Side	Short Side									
	under 23"	25-15/16"	29"	31-1/2"	34"	40"	54"	60"	63"	67-1/2"
	+90/-150	+90/-150								
	+90/-150	+90/-150								
	63"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	
	67-1/2"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-147	+90/-142.9	+90/-141.7	+90/-134.5
	72"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-141.1	+90/-136.1	+90/-134.4	
	76"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-136.8	+90/-131.2		
	84"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-150	+90/-133.4	+90/-127.2		
	114"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-131.9	+90/-96.6			
	134"	+90/-150	+90/-150	+90/-150	+90/-150	+90/-124.1				
	145"	+90/-150	+90/-150	+90/-150	+90/-149					

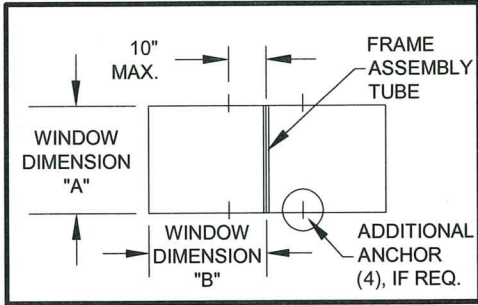


- 1) SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES.
- 2) TABLE DIMENSIONS MAY BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN.

TABLE 11:

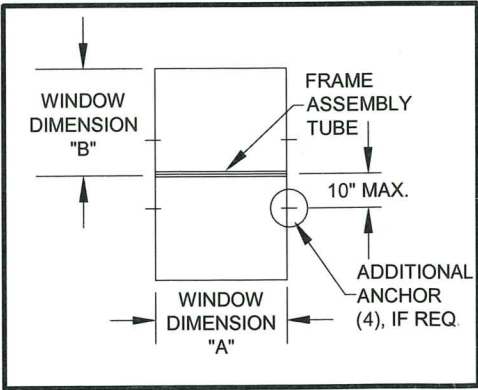
		Design Pressure (psf) for Windows Attached to a Frame Assembly Tube																						
		Window Dimension "A"																						
		under 23"	25-15/16"	29"	31-1/2"	34"			40"				54"				60"				63"			
		Anchor Group	Anchor Group	Anchor Group	Anchor Group	Anchor Group			Anchor Group				Anchor Group				Anchor Group				Anchor Group			
		All	All	All	All	A	B	C & D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Window Dimension "B"	under 23"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-86.2	+70/-90	+70/-90	+70/-73.3	+70/-87.7	+70/-90	+/-67.7	+/-54.3	+/-65	+70/-90	+/-61	+/-48.9	+/-58.5	+70/-90	+/-58.1	+/-46.5	+/-55.7	+70/-88.7
	25-15/16"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-75.1	+70/-90	+70/-90	+70/-90	+/-67.5	+70/-86.6	+70/-90	+70/-90	+/-64.3	+70/-82.5	+70/-90	+70/-90
	63"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90
	67-1/2"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-89	+70/-90	+70/-90	+70/-90
	72"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-88.1	+70/-90	+70/-90	+70/-90
	76"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90				
	84"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90					
	114"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90											
	134"	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90	+70/-90																
145"	+70/-90	+70/-90	+70/-90	+70/-90																				

FIGURE FOR VERTICAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

FIGURE FOR HORIZONTAL FRAME ASSEMBLY TUBE



SEE SHEETS 1, 4 & 5 FOR WINDOW ANCHOR LOCATIONS AND QUANTITIES. SEE SHEET 3 FOR ANY ADDITIONAL ANCHORS REQUIRED FOR THE FRAME ASSEMBLY TUBE.

Revised By: J ROSOWSKI
Date: 05/25/17
Description: DESIGN PRESSURES PER GLAZING TYPE

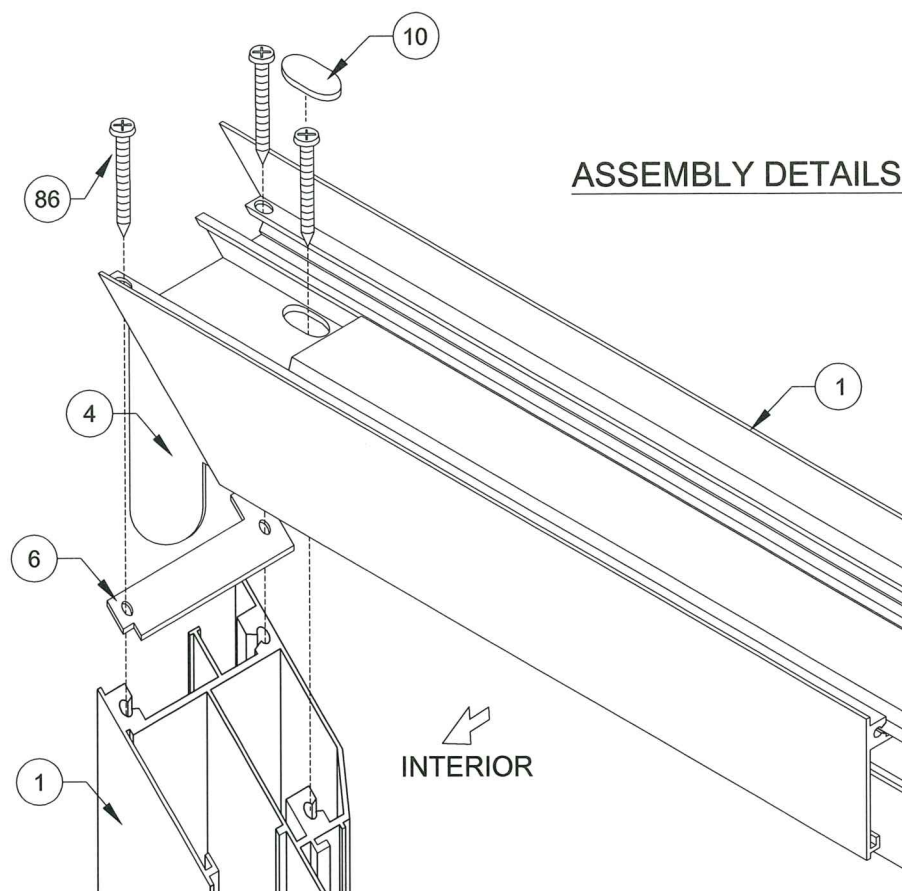
Drawn By: J ROSOWSKI
Date: 08/08/12
Title: FIXED CASEMENT WINDOW DETAILS - NI

Scale: NTS
Sheet: 9 OF 10
Drawing No. MD-CA640F-NI

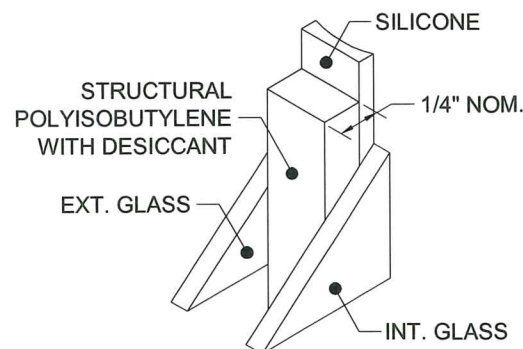
Rev: C

1070 TECHNOLOGY DRIVE
N. VENICE, FL 34275
(941) 480-1600
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CERT. OF AUTH. #29296

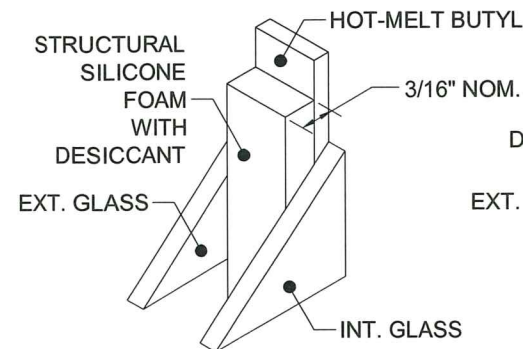
ANTHONY LYNN MILLER
LICENSE
No. 58705
STATE OF FLORIDA
PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
P.E.# 58705



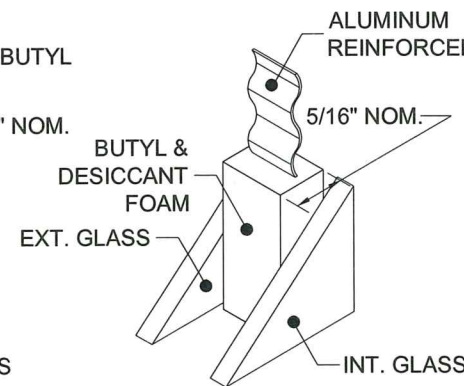
ASSEMBLY DETAILS



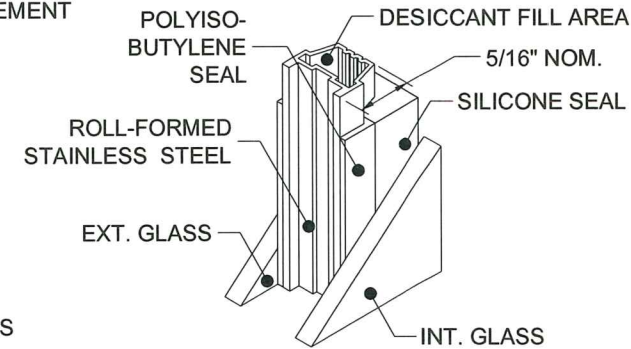
75 **KODISPACE
4SG TPS**



76 **SUPER
SPACER[®] NXT[™]**



77 **DURASEAL[®]
SPACER**



78 **XL EDGE[™]
SPACER**

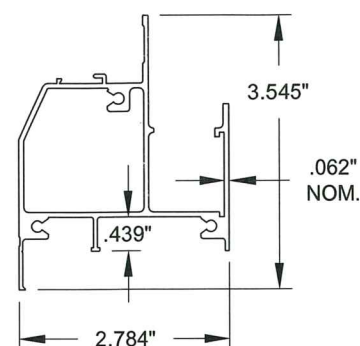
INTERIOR

TABLE 12:

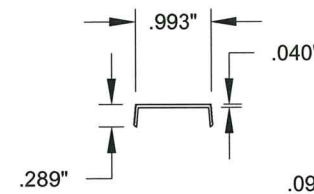
Item	Dwg. #	Description	Mat.
1	7005	Main Frame Head, Sill & Jambs	6063-T6 Alum.
2	7071	Anchor Plate	6063-T6 Alum.
3	7007	Installation Hole Cover	6063-T6 Alum.
4	7010	Frame Corner Key	Steel
6	7078	Frame Gasket	Vinyl Foam
10	7055	Fixed Frame Hole Plug	PVC
32	1713	Setting Block 5/32" x 3/16" x 1-1/4"	EPDM
33	1714	Setting Block 5/32" x 1-7/16" x 1-1/4"	EPDM
34	7037	Bead A	6063-T6 Alum.
35	7036	Bead B	6063-T6 Alum.
36	7042	Bead C	6063-T6 Alum.
37	7059	Bead D	6063-T6 Alum.
38	1224	Vinyl Bulb Wstp (Thick)	Flex PVC 70
39	1225	Vinyl Bulb Wstp (Thin)	Flex PVC 70
50		Dow 899 Silicon Backbedding	
70	134	Add-on Flange	6063-T6 Alum.
71	7004	Casement Frame Assy Tube	6063-T6 Alum.
86		#8 X 1-1/2" Quad Pn SMS Stainless Steel	Stainless Steel
90		#12 x 1" Ph. Pn. TEK	Stainless Steel

Part #	Description	Material
75	Kommerling 4SG TPS Spacer System	See this Sheet for Materials
76	Quanex Super Spacer NXT with Hot Melt Butyl	
77	Quanex Duraseal Spacer	
78	Cardinal XL Edge Spacer	

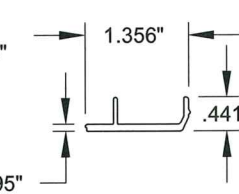
REFERENCE TEST REPORTS: FTL-8717, 8968 & 8970



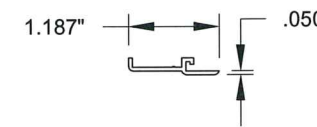
1 **FRAME HEAD,
SILL & JAMB**
#7005, 6063-T6



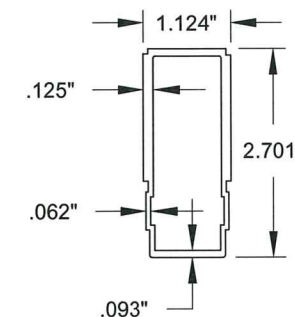
3 **INST. HOLE COVER**
#7007, 6063-T6



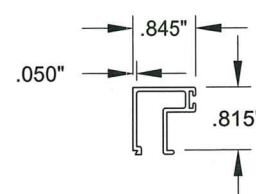
2 **ANCHOR PLATE**
#7071, 6063-T6



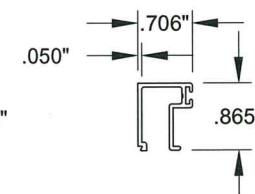
70 **ADDON FLANGE**
#134, 6063-T6



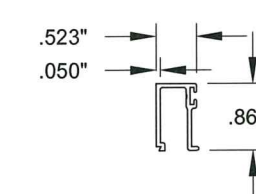
71 **FRAME
ASSEMBLY TUBE**
#7004, 6063-T6



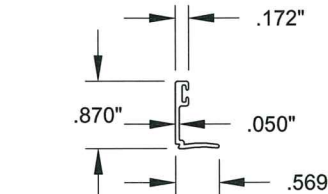
34 **BEAD A**
#7037, 6063-T6



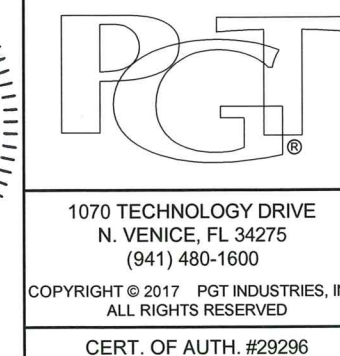
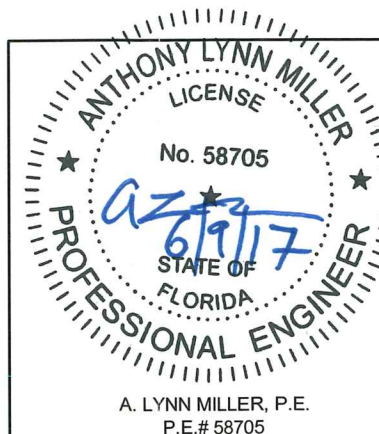
35 **BEAD B**
#7036, 6063-T6



36 **BEAD C**
#7042, 6063-T6



37 **BEAD D**
#7059, 6063-T6



Revised By:	Date:	Revision B:
JR	05/25/17	NO CHANGES THIS SHEET.
Revised By:	Date:	Revision A:

Description:	BOM AND EXTRUSIONS		Drawn By:	J ROSOWSKI
Title:	FIXED CASEMENT WINDOW DETAILS - NI		Date:	08/08/12
Series/Model:	CA-640	Scale:	NTS	Sheet:
				10 OF 10
Drawing No.	MD-CA640F-NI	Rev:	C	

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 17-0614.13
Expiration Date April 11, 2023
By: Manuel Perez
Miami Dade Product Control