



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, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/building](http://www.miamidade.gov/building)

**Labrador & Fundora Corp. dba V & V Windows**  
**14150 NW 56<sup>th</sup> Court, Suite 600**  
**Opa-Locka, FL 33054**

### 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 "450" Aluminum Fixed Window – L.M.I.

**APPROVAL DOCUMENT:** Drawing No. **W14-29**, titled "Series-450 Aluminum Fixed Wdw. (L.M.I.)", sheets 1 through 6 of 6, dated 08/20/14, with revision **D** dated 06/07/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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

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

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

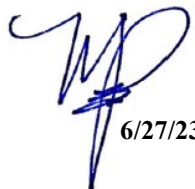
**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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

This NOA **revises NOA No. 20-0929.15** and consists of this page 1 and evidence pages E-1, E-2, E-3, E-4 and E-5, as well as approval document mentioned above.

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



  
6/27/23

NOA No. 23-0620.05  
Expiration Date: December 24, 2024  
Approval Date: July 06, 2023  
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. 14-0909.16)*
2. Drawing No. **19-19D**, titled "Series-350 Aluminum Fixed Wdw. (L.M.I.)", sheets 1 through 6 of 6, dated 08/20/14, with revision **C** dated 07/14/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 20-0929.15)*

**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  
along with marked-up drawings and installation diagram of mulled aluminum fixed and fixed casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5009**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
2. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum fixed and fixed casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5010**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
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 mulled aluminum operable casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5011**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
4. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. Report No. **HETI-14-5012**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*

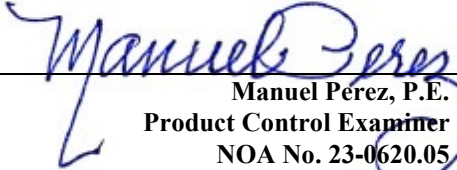
  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 23-0620.05  
Expiration Date: December 24, 2024  
Approval Date: July 06, 2023

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**B. TESTS (CONTINUED)**

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) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement and fixed casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5013**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
6. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement and fixed casement windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5014**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
7. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of an aluminum fixed window, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5015**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
8. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of an aluminum operable casement window, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5016**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
9. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement and fixed windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5017**, dated 04/23/14, signed and sealed by Rafael E. Droz-Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*

  
Manuel Pérez, P.E.  
Product Control Examiner  
NOA No. 23-0620.05  
Expiration Date: December 24, 2024  
Approval Date: July 06, 2023

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**B. TESTS (CONTINUED)**

- 10.** Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement and fixed windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5018**, dated 06/11/14, signed and sealed by Rafael E. Droz– Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
- 11.** 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 an aluminum operable casement window, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5019**, dated 04/23/14, signed and sealed by Rafael E. Droz– Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*
- 12.** Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94  
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with marked-up drawings and installation diagram of mulled aluminum operable casement and fixed windows, prepared by Hurricane Test Laboratory, Inc., Test Report No. **HETI-14-5052**, dated 10/21/14, signed and sealed by Rafael E. Droz– Seda, P.E.  
*(Submitted under NOA No. 14-0909.16)*

**C. CALCULATIONS**

- 1.** Anchor verification calculations and structural analysis, complying with **FBC 6<sup>th</sup> Edition (2017)**, dated 01/16/19 and updated on 09/10/20 to comply with **FBC 7<sup>th</sup> Edition (2020)**, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 20-0929.15)*
- 2.** Glazing complies with **ASTM E1300-09**

**D. QUALITY ASSURANCE**

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

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 23-0620.05  
Expiration Date: December 24, 2024  
Approval Date: July 06, 2023

**Labrador & Fundora Corp. dba V & V Windows**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

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

**E. MATERIAL CERTIFICATIONS**

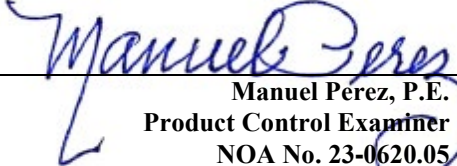
1. Notice of Acceptance No. **20-0622.01** issued to **Eastman Chemical Company (MA)** for their "**Saflex PVB Clear and Color Glass Interlayers**" dated 08/06/20, expiring on 05/21/21.
2. Notice of Acceptance No. **18-0725.11** issued to **Kuraray America, Inc.** for their "**Kuraray SentryGlas® Xtra™ (SGX™) Clear Glass Interlayer**" dated 05/23/19, expiring on 05/23/24.

**F. STATEMENTS**

1. Statement letter of conformance, complying with **FBC 6<sup>th</sup> Edition (2017)**, with **FBC 7<sup>th</sup> Edition (2020)** and of no financial interest, dated September 10, 2020, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.  
*(Submitted under NOA No. 20-0929.15)*
2. Proposal issued by the Product Control Section, dated August 27, 2013, signed by Jaime D. Gascon, P.E., Product Control Supervisor.  
*(Submitted under NOA No. 14-0909.16)*

**G. OTHERS**

1. Notice of Acceptance No. **19-1210.02** issued to Labrador & Fundora Corp. dba V & V Windows for their Series "450" Aluminum Fixed Window - L.M.I., approved on 01/23/20 and expiring on 12/24/24.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 23-0620.05

Expiration Date: December 24, 2024  
Approval Date: July 06, 2023

**Labrador & Fundora Corp. dba V & V Windows**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**2. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **19-19D**, titled “Series-350 Aluminum Fixed Wdw. (L.M.I.)”, sheets 1 through 6 of 6, dated 08/20/14, with revision **D** dated 06/07/23, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. None.

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**

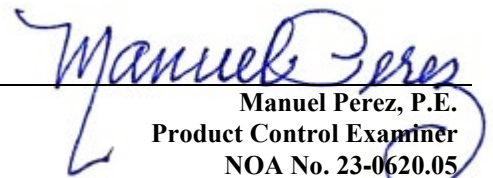
1. Notice of Acceptance No. **21-0216.01** issued to **Eastman Chemical Company (MA)** for their “**Saflex PVB Interlayers - Clear and Colored for Glass**” dated 04/29/21, expiring on 05/21/26.
2. Notice of Acceptance No. **22-1116.01** issued to **Kuraray America, Inc.** for their “**SentryGlas® (Clear and White) Glass Interlayers**” dated 12/15/22, expiring on 07/04/28.

**F. STATEMENTS**

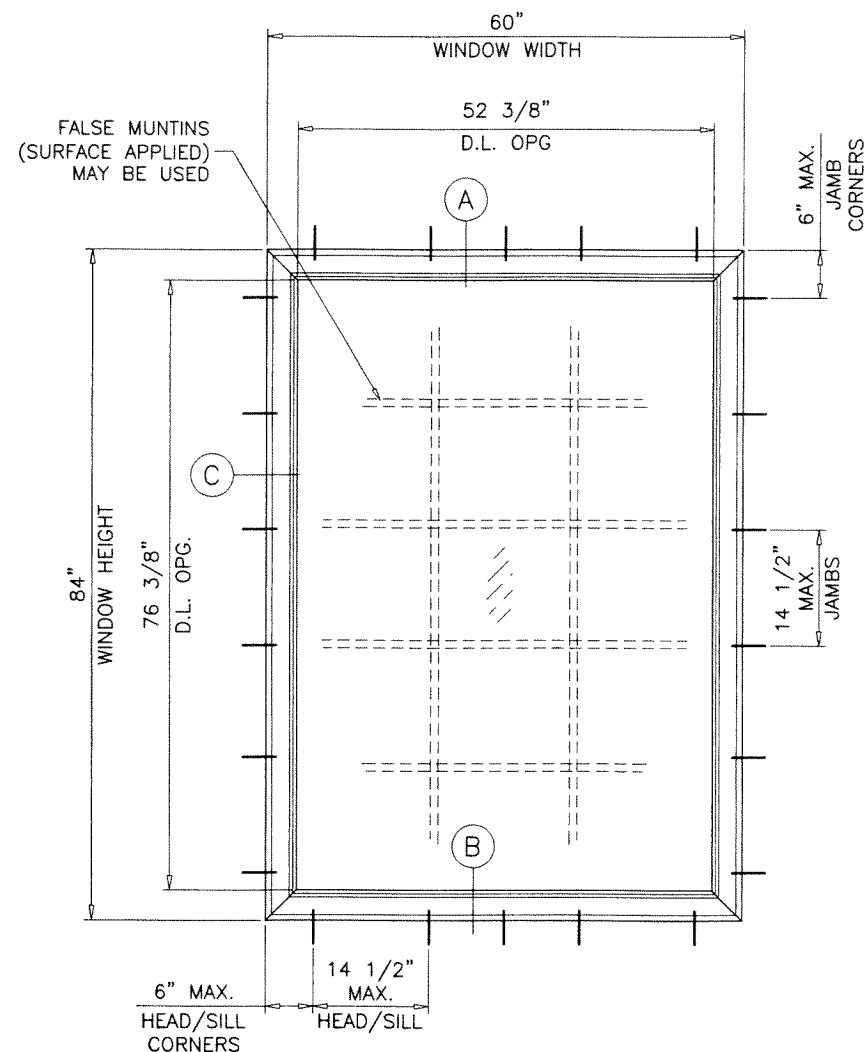
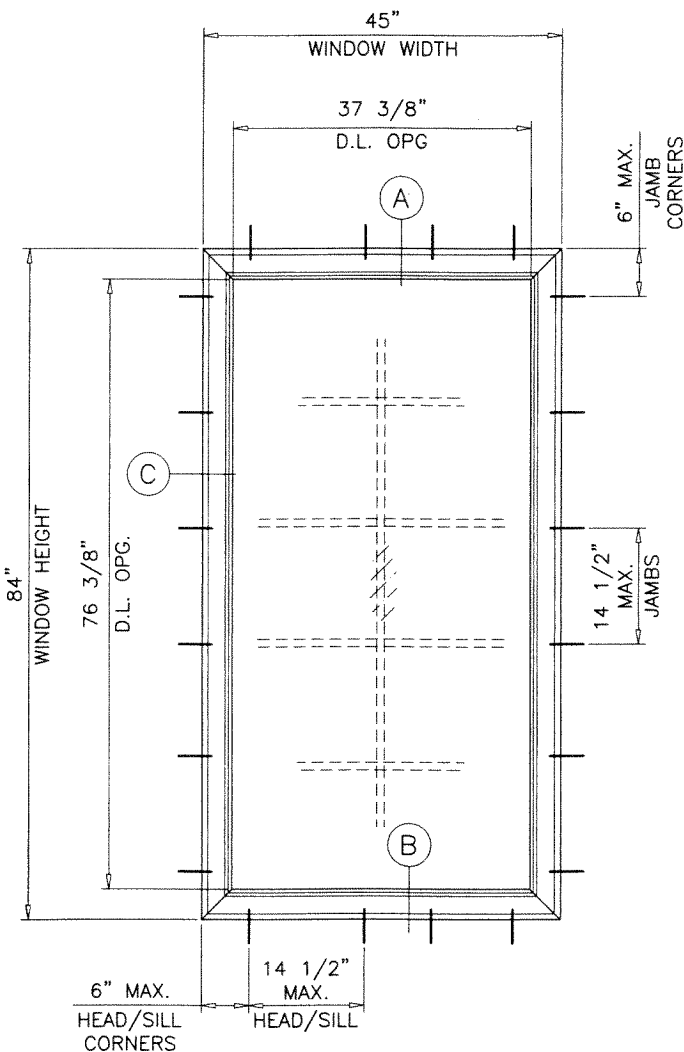
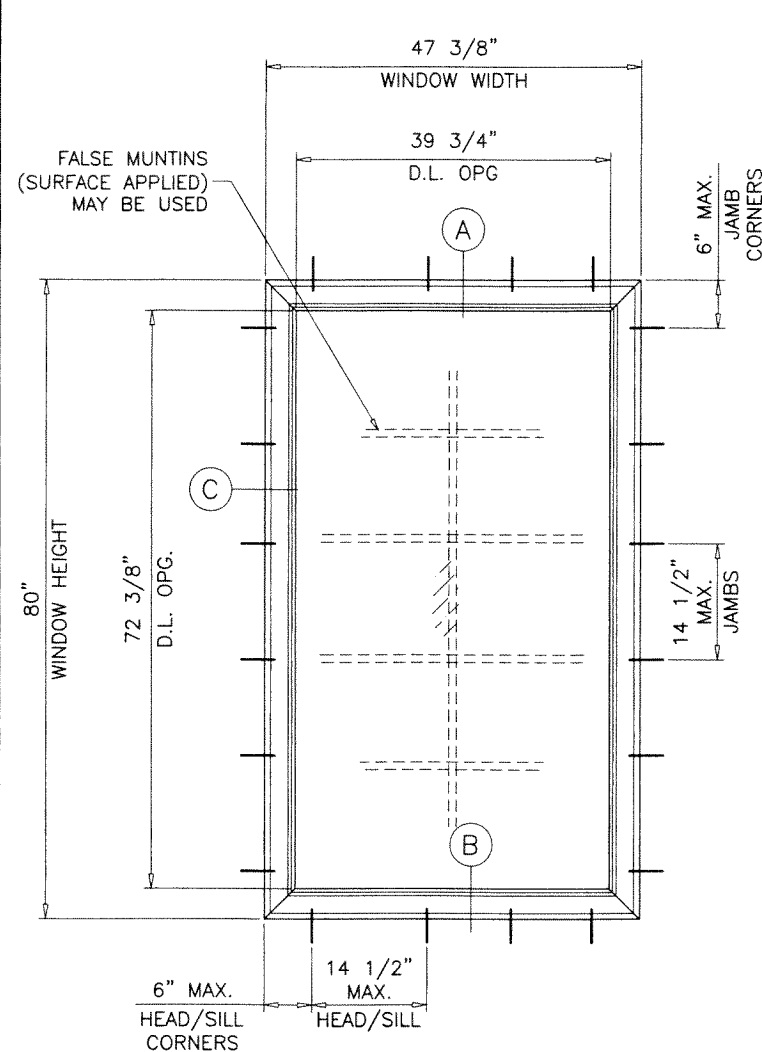
1. Statement letter of conformance, complying with **FBC 7<sup>th</sup> Edition (2020)**, with **FBC 8<sup>th</sup> Edition (2023)** and of no financial interest, dated July 07, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

**G. OTHERS**

1. Notice of Acceptance No. **20-0929.15** issued to Labrador & Fundora Corp. dba V & V Windows for their Series “450” Aluminum Fixed Window - L.M.I., approved on 12/17/20 and expiring on 12/24/24.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No. 23-0620.05  
Expiration Date: December 24, 2024  
Approval Date: July 06, 2023





### TYPICAL ELEVATIONS

GLASS TYPES 'G2L' & 'G2i'

MAXIMUM DESIGN LOAD RATING = + 70.0 PSF  
(FOR SIZES SHOWN ABOVE OR SMALLER) - 75.0 PSF

THESE WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.  
SHUTTERS ARE NOT REQUIRED.

### SERIES-450

### ALUMINUM FIXED WINDOW

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF FIX./FIX. OR FIXED WITH OTHER WINDOW TYPES IN MODULES OF TWO OR MORE WINDOWS USING MIAMI-DADE COUNTY APPROVED MULLIONS IN BETWEEN. LOWER DESIGN PRESSURE FROM WINDOWS OR MULLION APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION)/2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2020/2023 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

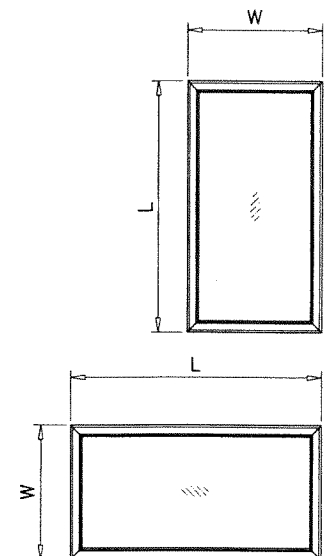
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

### TYPICAL ELEVATION

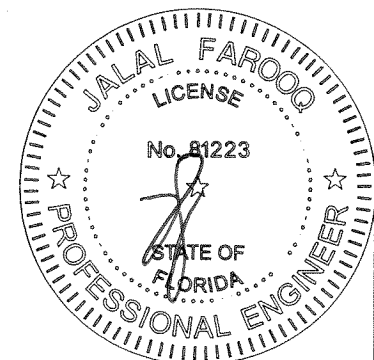
GLASS TYPES 'G1L' & 'G1i'

MAXIMUM DESIGN LOAD RATING = + 85.0 PSF  
(FOR SIZE SHOWN ABOVE OR SMALLER) - 85.0 PSF



NOTE:  
WIDTH AND LENGTH DIMENSIONS CAN BE ORIENTED VERTICALLY OR HORIZONTALLY AS SHOWN ABOVE.

NOTE:  
GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-09 (3 SEC. GUSTS) AND FLORIDA BUILDING COMMISSION DECLARATORY STATEMENT DCA05-DEC-219



**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **23-0620.05**  
Expiration Date: **12/24/2024**  
By: *Manuel Perez*  
Miami-Dade Product Control

JUN 13 2023

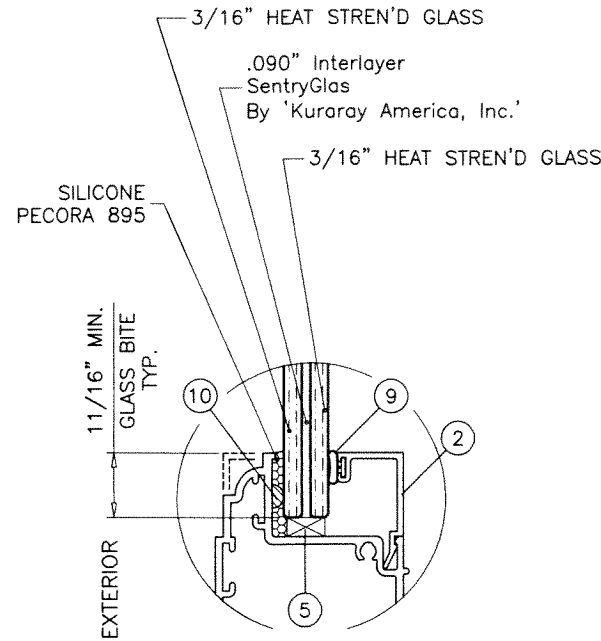
**af c**  
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173 (C.A.N. 3538)  
TEL. (305) 264-8100 FAX. (305) 262-6978  
COMP-ANL W14-29W

SERIES-450 ALUMINUM FIXED WDW. (L.M.I.)  
**Labrador & Fundora Corp.**  
dba-V & V Windows  
14150 N.W. 56th Court, Suite 600  
Opa-Locka, FL 33054  
Tel. (305) 888-4151  
www.vvwindows.com

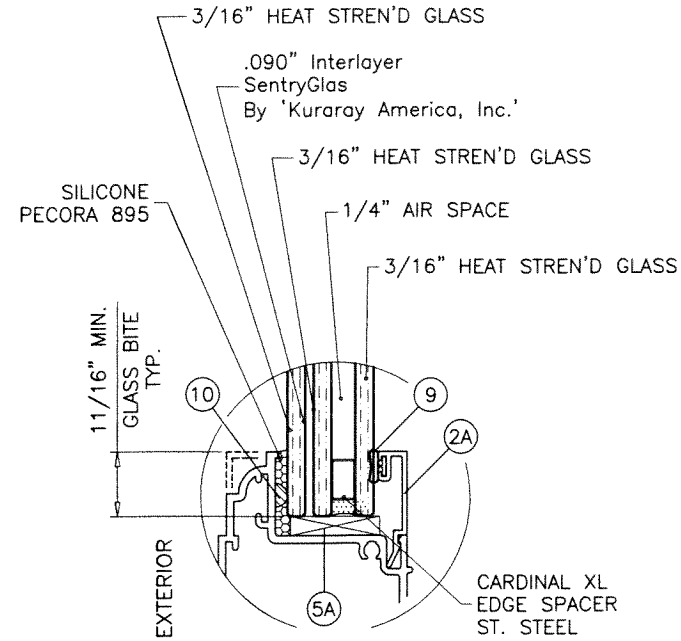
| revisions: | no | date     | by | description            |
|------------|----|----------|----|------------------------|
|            | A  | 07.10.17 |    | UPDATED TO 2017 FBC    |
|            | B  | 12.02.19 |    | EDITORIAL CHANGES ONLY |
|            | C  | 07.14.20 |    | UPDATED TO 2020 FBC    |
|            | D  | 06.07.23 |    | UPDATED TO 2023 FBC    |

date: 08-20-14  
scale: 1/2"=1'-0"  
dr. by: TARIQ  
chk. by:

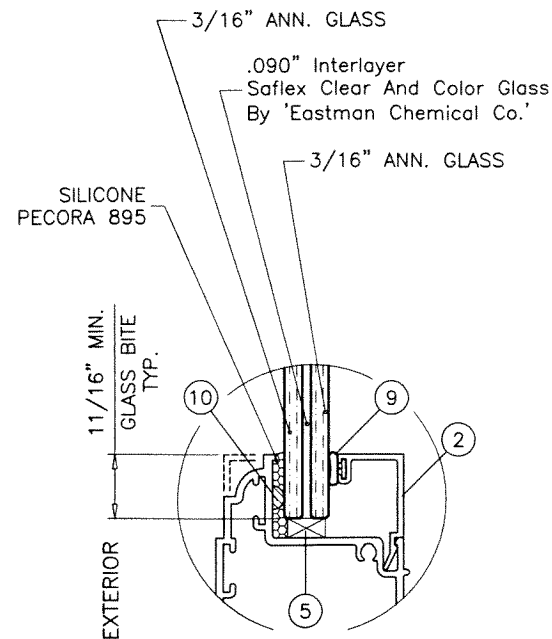
drawing no.  
**W14-29**  
sheet 1 of 6



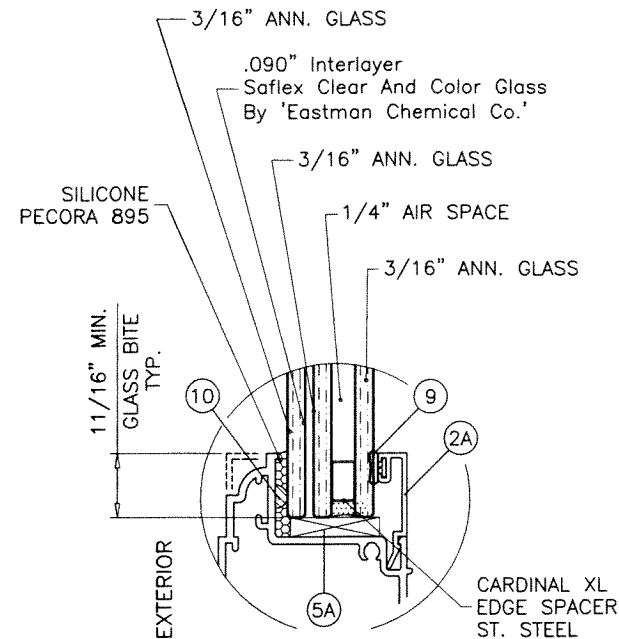
**GLASS TYPE 'G1L'**  
7/16" OVERALL NOM.



**GLASS TYPE 'G1i'**  
1" OVERALL NOM.



**GLASS TYPE 'G2L'**  
7/16" OVERALL NOM.

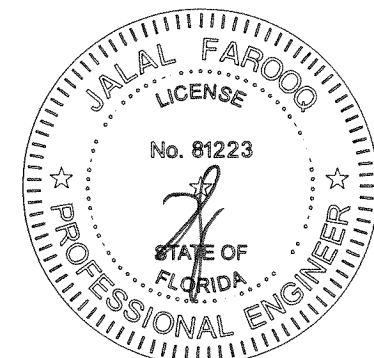


**GLASS TYPE 'G2i'**  
1" OVERALL NOM.

**GLAZING OPTIONS**

**PRODUCT REVISED**  
As complying with the Florida Building Code  
NOA-No. **23-0620.05**  
Expiration Date: **12/24/2024**  
By: *Manuel Perez*  
Miami-Dade Product Control

JUN 13 2023



SERIES-450 ALUMINUM FIXED WDW. (L.M.I.)  
**Labrador & Fundora Corp.**  
**dba-V & V Windows**  
14150 N.W. 56th Court, Suite 600  
Opa-Locka, FL 33054  
Tel. (305) 888-4151  
www.vvwindows.com

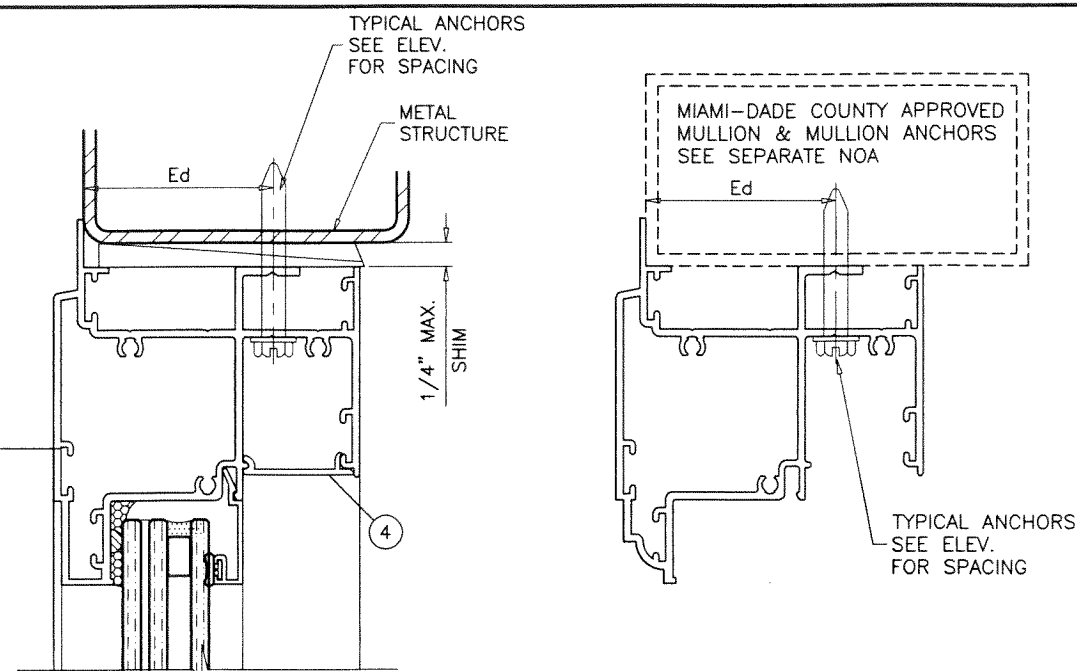
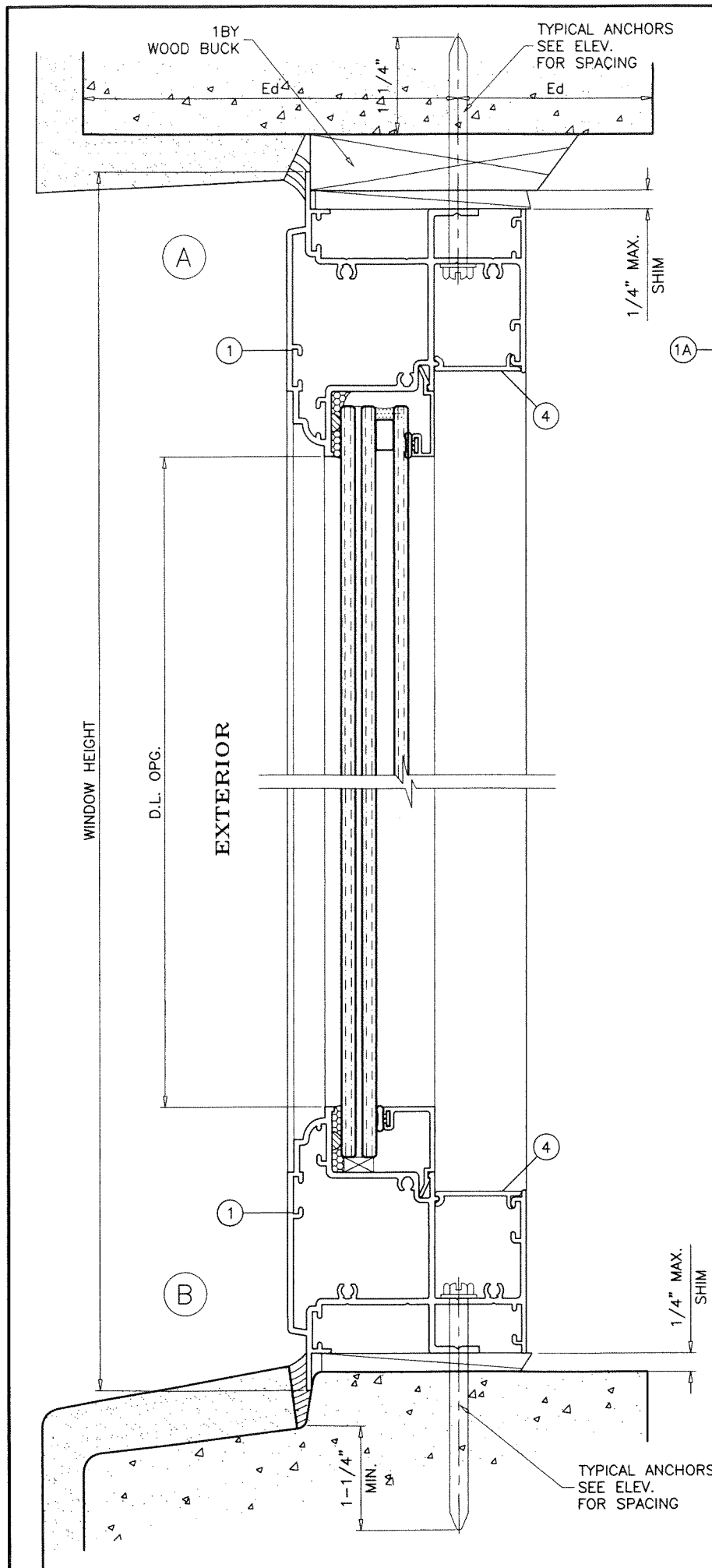
**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173  
TEL. (305) 264-8100 FAX. (305) 262-6978  
C.A.N. 3538  
COMP-ANL\W14-29W

| revisions: | no. | date     | by | description          |
|------------|-----|----------|----|----------------------|
|            | A   | 07.10.17 |    | UPDATED TO 2017 FBC  |
|            | B   | 12.02.19 |    | NO CHANGE THIS SHEET |
|            | C   | 07.14.20 |    | EDITORIAL CHANGES    |
|            | D   | 06.07.23 |    | UPDATED TO 2023 FBC  |

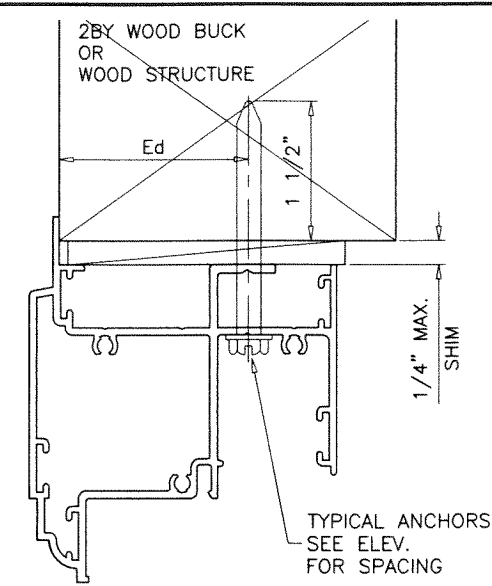
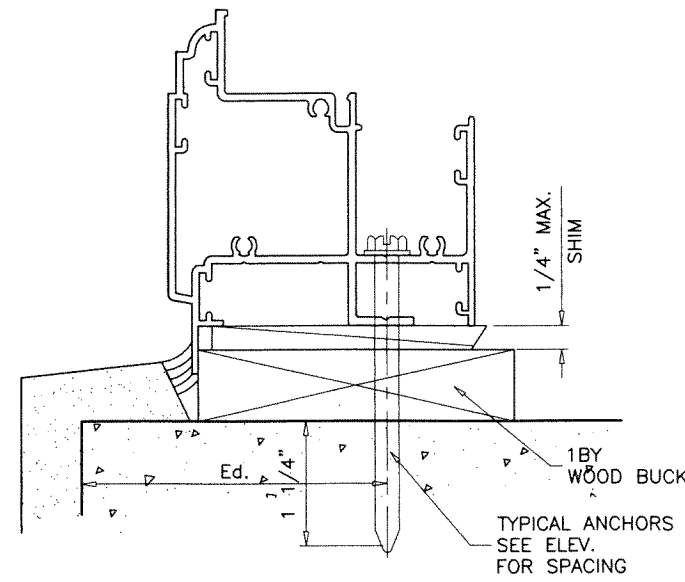
  

|                           |                  |               |          |
|---------------------------|------------------|---------------|----------|
| date: 08-20-14            | scale: 1/2" = 1" | dr. by: TARIQ | chk. by: |
| drawing no. <b>W14-29</b> |                  |               |          |
| sheet 2 of 6              |                  |               |          |





WOOD BUCKS AND METAL STRUCTURE NOT BY 'V & V WDW.'  
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM  
AND TRANSFER THEM TO THE BUILDING STRUCTURE.



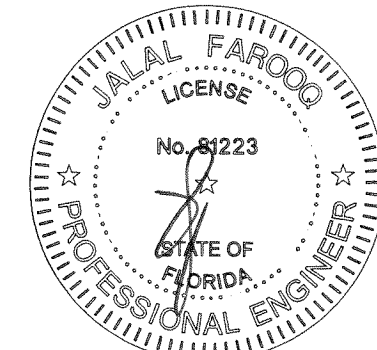
**TYPICAL ANCHORS:** SEE ELEV. FOR SPACING  
**1/4" DIA. ULTRACON+ BY 'DEWALT'** (Fu=164 KSI, Fy=148 KSI)  
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES  
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)  
 THRU 1BY BUCKS INTO CONC. OR BLOCKS  
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)  
 DIRECTLY INTO CONCRETE OR BLOCKS  
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)  
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

**#14 SMS OR SELF DRILLING SCREWS** (GRADE 2 CRS)  
 INTO METAL STRUCTURES (HEAD/SILL/JAMBS)  
 (3) THREADS MIN. PENETRATION BEYOND SUBSTRATE  
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)  
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)  
**#12 SMS OR SELF DRILLING SCREWS** (GRADE 2 CRS)  
 INTO MIAMI-DADE COUNTY APPROVED MULLIONS  
 (3) THREADS MIN. PENETRATION BEYOND SUBSTRATE  
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.) (NO SHIM SPACE)  
 STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.) (NO SHIM SPACE)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

**Ed = TYPICAL EDGE DISTANCE**  
 INTO CONCRETE AND MASONRY = 2-1/2" MIN.  
 INTO WOOD STRUCTURE = 1" MIN.  
 INTO METAL STRUCTURE = 3/4" MIN.  
 WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.  
 CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.  
 C-90 GROUT FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.

**PRODUCT REVISED**  
 As complying with the Florida  
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**NOA-No. 23-0620.05**  
**Expiration Date: 12/24/2024**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

JUN 13 2023



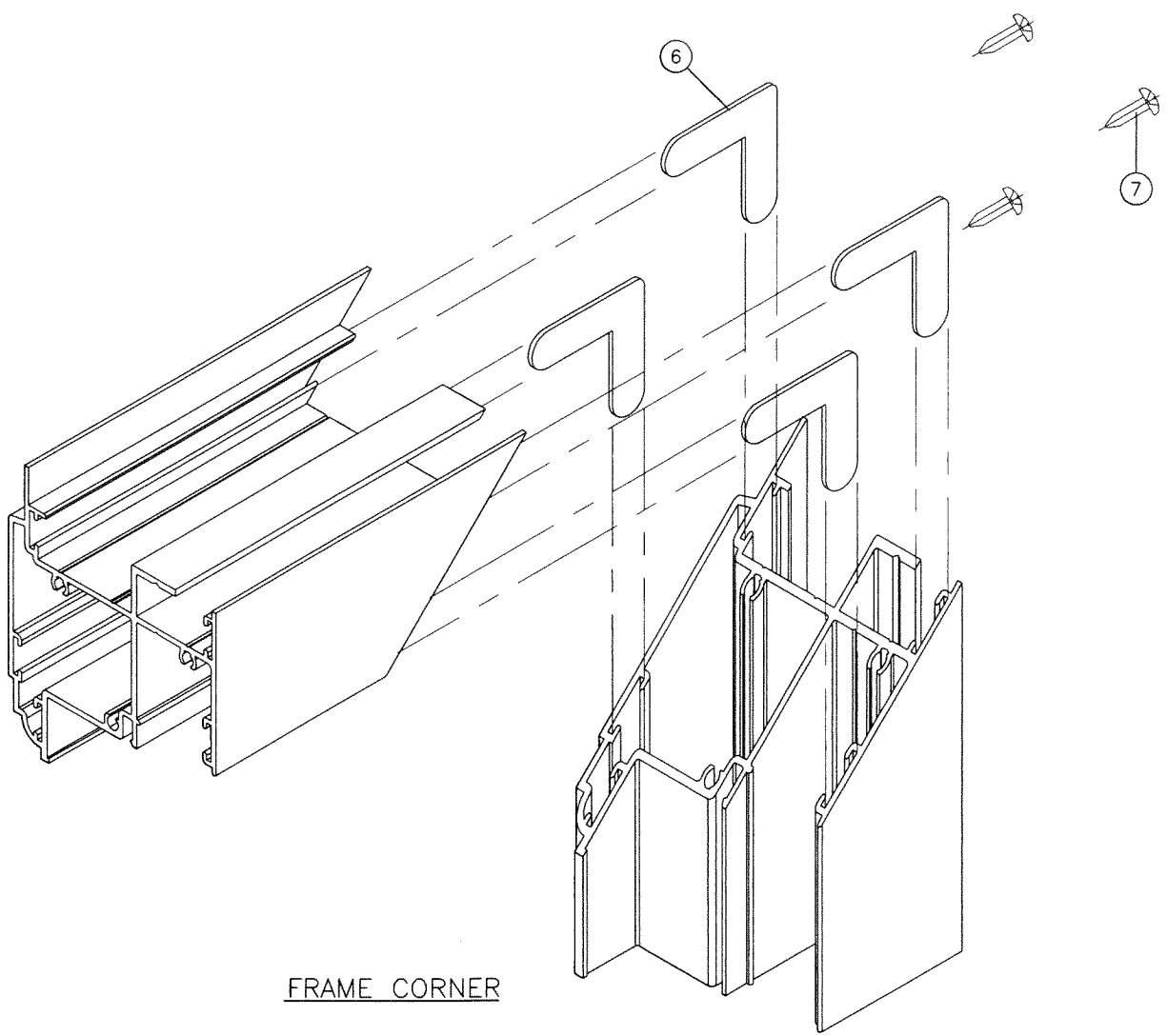
**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173  
 TEL. (305) 264-8100 FAX. (305) 262-6978  
 (C.A.N. 3538)

SERIES-450 ALUMINUM FIXED WDW. (L.M.I.)  
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 14150 N.W. 56th Court, Suite 600  
 Opa-Locka, FL 33054  
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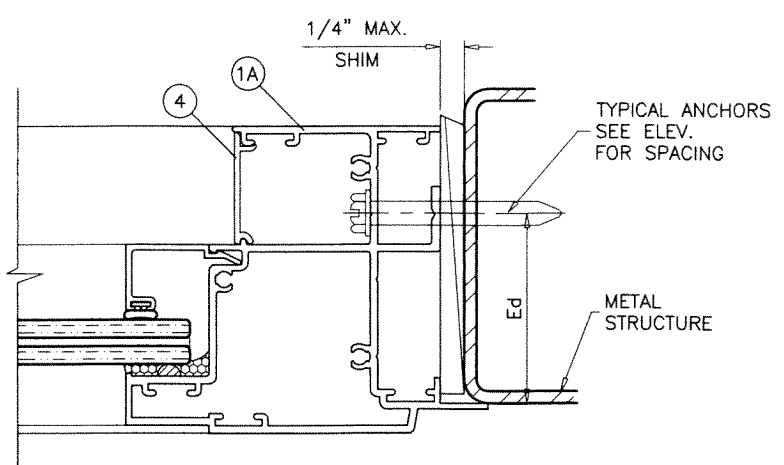
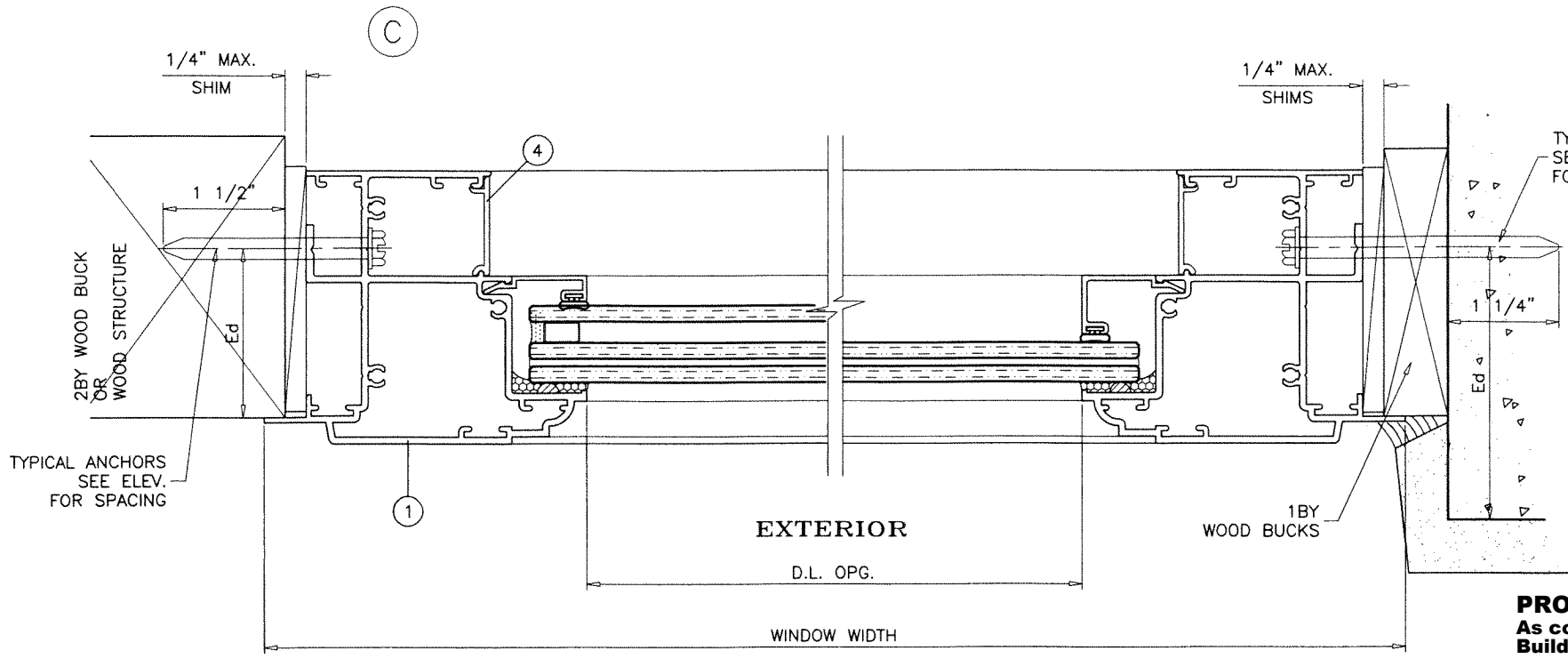
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|            | A  | 07.10.17 |    | UPDATED TO 2017 FBC    |
|            | B  | 12.02.19 |    | EDITORIAL CHANGES ONLY |
|            | C  | 07.14.20 |    | UPDATED TO 2020 FBC    |
|            | D  | 06.07.23 |    | UPDATED TO 2023 FBC    |

date: 08-20-14  
 scale: 1/2" = 1"  
 dr. by: TARIQ  
 chk. by:

drawing no.  
**W14-29**  
 sheet 3 of 6

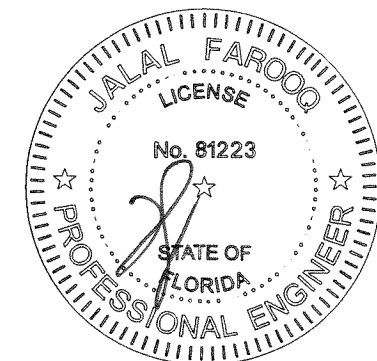


FRAME CORNER



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 Expiration Date: **12/24/2024**  
 By: *Manuel Perez*  
 Miami-Dade Product Control

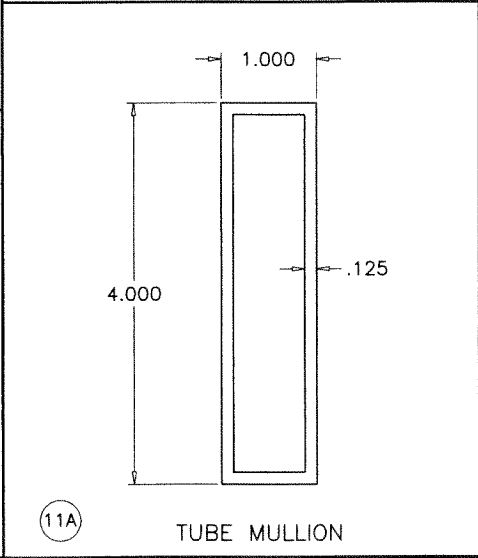
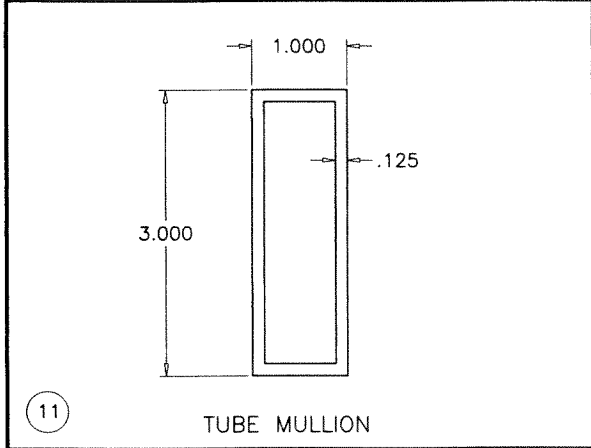
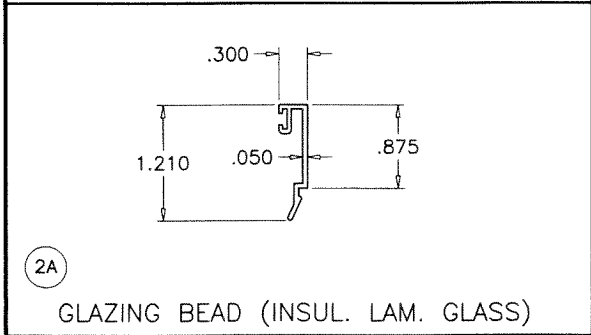
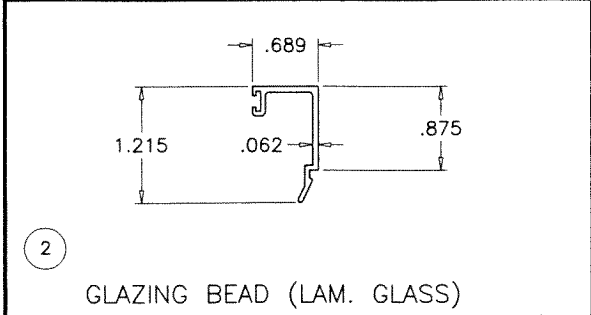
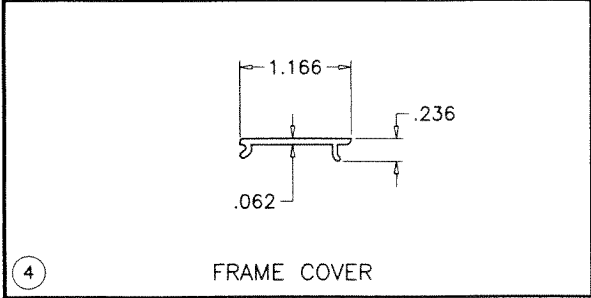
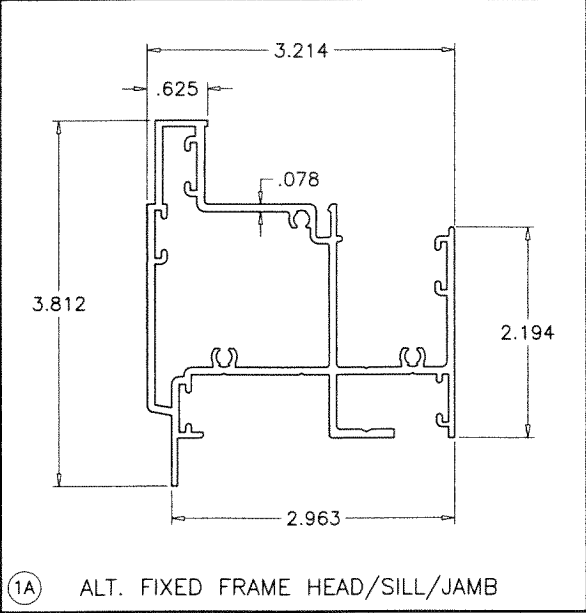
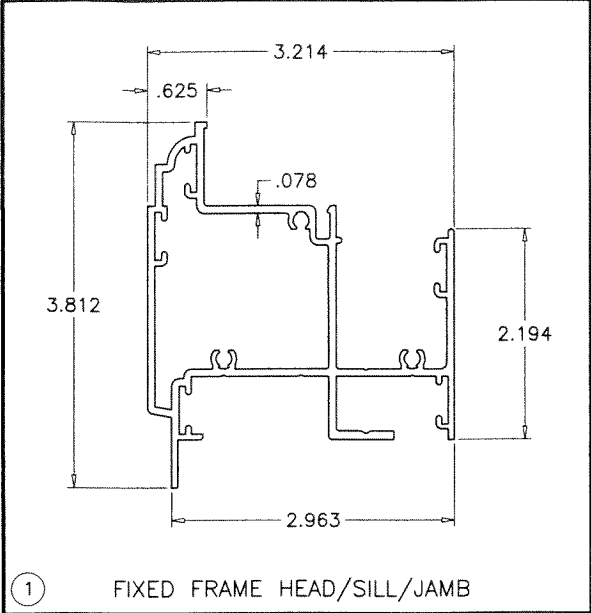
JUN 13 2023



**al-farooq**  
**AL-FAROOQ CORPORATION**  
 ENGINEERS & PRODUCT DEVELOPMENT  
 9360 SUNSET DRIVE, SUITE 220  
 MIAMI, FLORIDA 33173 (C.A.N. 3538)  
 TEL. (305) 264-8100 FAX. (305) 262-6978  
 COMP-ANL\W14-29W

SERIES-450 ALUMINUM FIXED WDW. (L.M.I.)  
**Labrador & Fundora Corp.**  
 dba-V & V Windows  
 14150 N.W. 56th Court, Suite 600  
 Opa-Locka, FL. 33054  
 Tel. (305) 888-4151 www.vvwindows.com

|                  |          |    |                      |  |  |
|------------------|----------|----|----------------------|--|--|
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| dr. by: TARIQ    |          |    |                      |  |  |
| chk. by:         |          |    |                      |  |  |
|                  |          |    |                      |  |  |
| drawing no.      |          |    |                      |  |  |
| W14-29           |          |    |                      |  |  |
| sheet 4 of 6     |          |    |                      |  |  |



| ITEM | PART #       | QUANTITY | DESCRIPTION                      | MATERIAL  | MANF./SUPPLIER/REMARKS                   |
|------|--------------|----------|----------------------------------|-----------|--|
| 1    | V403         | 4/ WDW.  | FRAME HEAD/SILL/JAMB             | 6063-T6   | -  |
| 1A   | V412         | 4/ WDW.  | ALT. FRAME HEAD/SILL/JAMB        | 6063-T6   | -  |
| 2    | V405         | 4/ WDW.  | GLAZING BEAD (LAM. GLASS)        | 6063-T5   | -  |
| 2A   | V406         | 4/ WDW.  | GLAZING BEAD (INSUL. LAM. GLASS) | 6063-T5   | -  |
| 4    | V404         | AS REQD. | FRAME COVER                      | 6063-T6   | -  |
| 5    | -            | AS REQD. | SETTING BLOCK                    | EPDM      | ULTRAFAB, DUROMETER 80±5 SHORE A         |
| 5A   | -            | AS REQD. | SETTING BLOCK                    | EPDM      | ULTRAFAB, DUROMETER 80±5 SHORE A         |
| 6    | PJ540-SS     | AS REQD. | CORNER KEY                       | ST. STEEL | SULLIVAN & ASSOC.                        |
| 7    | #10 X 1-1/4" | AS REQD. | FRAME ASSEMBLY SCREWS            | CRS       | PH SMS                                   |
| 9    | 9146         | AS REQD. | GLAZING GASKET                   | VINYL     | CENTRAL PLASTICS, DUROMETER 65±5 SHORE A |
| 10   | -            | AS REQD. | GLASS SPACER                     | SILICONE  | FRANK LOWE, DUROMETER 65±5 SHORE A       |
| 11   | -            | AS REQD. | 1X3 TUBE MULLION                 | 6063-T6   | -  |
| 11A  | -            | AS REQD. | 1X4 TUBE MULLION                 | 6063-T6   | -  |

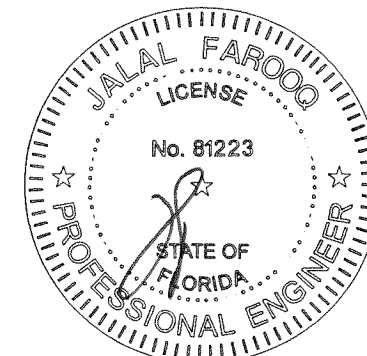
**SEALANT:**

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH  
'PECORA 1215' SEAM SEALER.

PARIMETER CAULKING 'DYMONIC FC POLYURETHANE' ON EXTERIOR ONLY.

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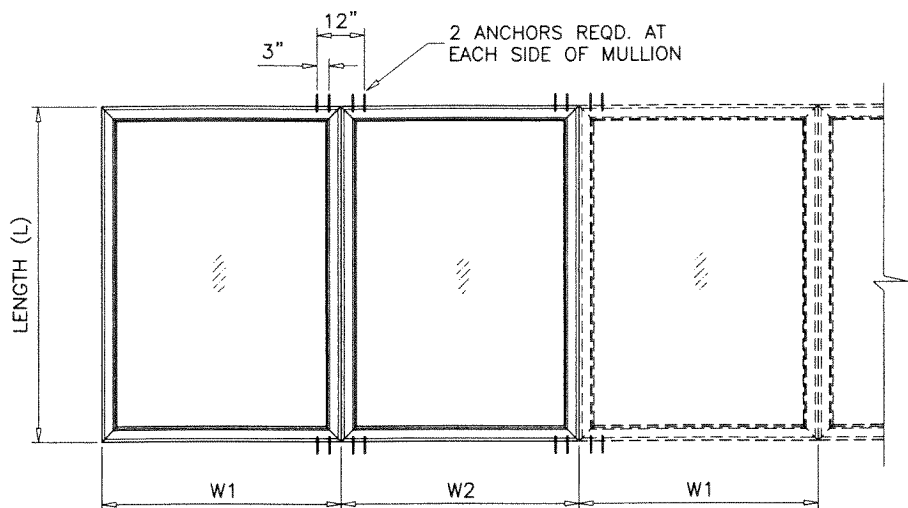
drawing no.  
**W14-29**  
sheet 5 of 6



| MULLION LOAD CAPACITY - PSF |            |                  |         |                  |         |
|-----------------------------|------------|------------------|---------|------------------|---------|
| WINDOW DIMS.                |            | MULLION TYPE '1' |         | MULLION TYPE '2' |         |
| WIDTH (W)                   | LENGTH (L) | EXT.(+)          | INT.(-) | EXT.(+)          | INT.(-) |
| 19-1/8"                     | 74-1/4"    | 85.0             | 85.0    | 85.0             | 85.0    |
| 26-1/2"                     |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 37"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 53-1/8"                     |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 60"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 19-1/8"                     | 80"        | 85.0             | 85.0    | 85.0             | 85.0    |
| 26-1/2"                     |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 37"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 53-1/8"                     |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 60"                         |            | 82.7             | 82.7    | 85.0             | 85.0    |
| 19-1/8"                     | 84"        | 85.0             | 85.0    | 85.0             | 85.0    |
| 26-1/2"                     |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 37"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 53-1/8"                     |            | 74.9             | 74.9    | 85.0             | 85.0    |
| 60"                         |            | 69.7             | 69.7    | 85.0             | 85.0    |
| 18"                         | 78"        | 85.0             | 85.0    | 85.0             | 85.0    |
| 24"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 30"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 36"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 42"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 48"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 54"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 60"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 18"                         | 84"        | 85.0             | 85.0    | 85.0             | 85.0    |
| 24"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 30"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 36"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 42"                         |            | 85.0             | 85.0    | 85.0             | 85.0    |
| 48"                         |            | 80.3             | 80.3    | 85.0             | 85.0    |
| 54"                         |            | 74.2             | 74.2    | 85.0             | 85.0    |
| 60"                         |            | 69.7             | 69.7    | 85.0             | 85.0    |

# NOTES:

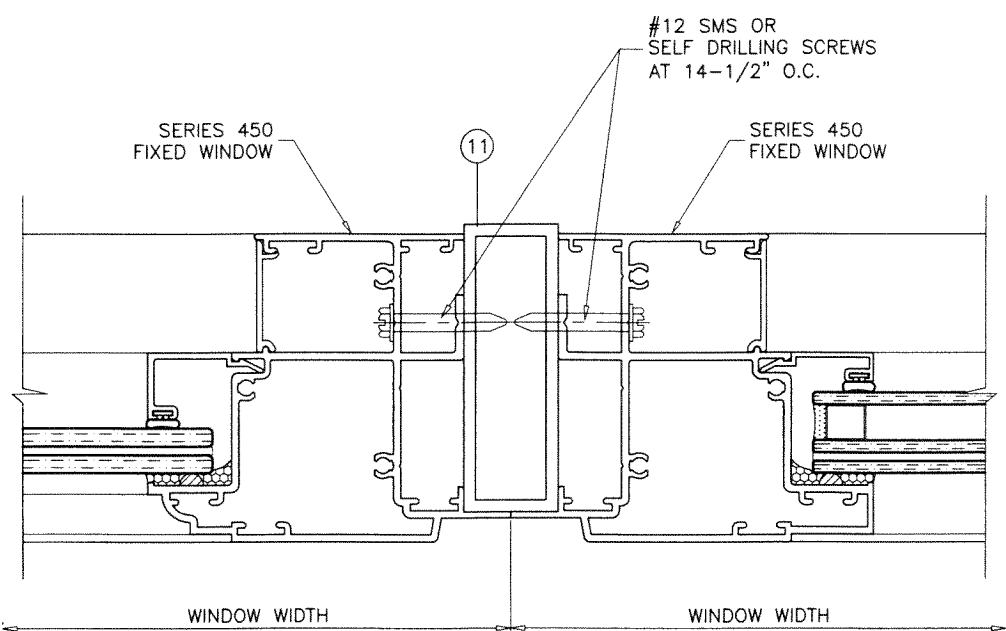
- USE CHART ON THIS SHEET FOR SIDE BY SIDE CONNECTION CAPACITY OF WINDOW MULLION.
- FOR FIXED WINDOW CAPACITY SEE SHEET 1.
- LOWER VALUES FROM STEPS 1 OR 2 WILL APPLY TO ENTIRE SYSTEM.



TYPICAL ELEVATIONS  
SIDE BY SIDE WINDOWS  
SIDE BY SIDE APPLIES TO TWO OR MORE WINDOWS

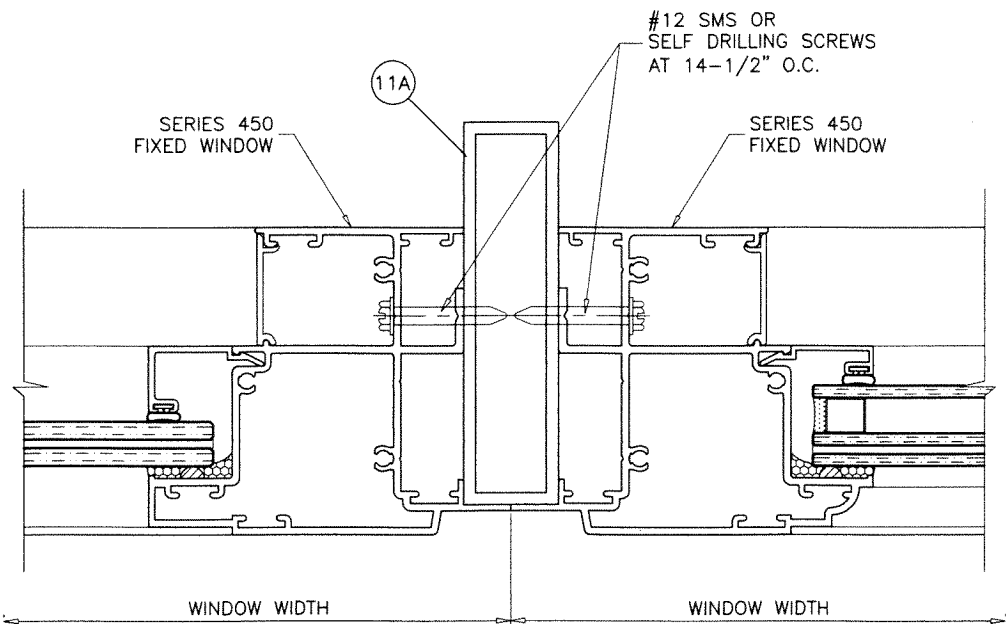
$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$

# UN-CLIPPED MULLIONS



# MULLION TYPE '1'

TOTAL PRPERTIES  
Ix = 4.188 IN<sup>4</sup>  
Sx = 2.319 IN<sup>3</sup>

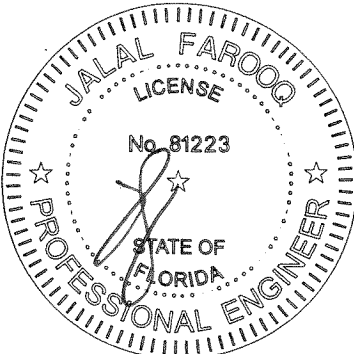


# MULLION TYPE '2'

TOTAL PRPERTIES  
Ix = 5.275 IN<sup>4</sup>  
Sx = 2.638 IN<sup>3</sup>

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**af c**  
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