



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

**DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION
 NOTICE OF ACCEPTANCE (NOA)**

**E.S. Windows, LLC
 3550 NW 49th Street
 Miami, FL 33142**

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 “EL-100” Aluminum Single Hung Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **W16-57**, titled “ES-EL100 Alum Single Hung Wdw. (L.M.I)”, sheets 1, 1.1 1.2 and 2 through 10 of 10, dated 07/13/16, with revision **E** dated 09/06/2023, 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, **Barranquilla, Colombia**, 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. **23-0714.15** and consists of this page 1 and evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.

The submitted documentation was reviewed by **Sifang Zhao, P.E.**



S.Z.
 12/26/2024

NOA No. 23-0913.06
Expiration Date: May 04, 2027
Approval Date: December 19, 2024
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

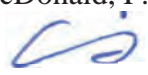
1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

1. Manufacturer's die drawings and sections.
(Submitted under NOA No. 16-0510.22)
2. Drawing No. **W16-57**, titled "ES-EL100 Alum Single Hung Wdw. (L.M.I)", sheets 1 through 10 of 10, dated 07/13/16, with revision **C** dated 06/22/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 21-0526.02)

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
along with marked-up drawings and installation diagram of a Series ES-EL 100 aluminum single hung window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-12413**, dated 12/16/20, signed and sealed by Idalmis Ortega, P.E. *(Submitted under NOA No. 21-0526.02)*
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
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 aluminum single hung window, prepared by Blackwater Testing, Inc., Test Report No. **BT-ESW-17-018**, dated 03/31/17, signed and sealed by Constantin Bortes, P.E.
(Submitted under NOA No. 16-0510.22)
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) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, Test per FBC 2411 3.2.1, TAS 202-94
along with marked-up drawings and installation diagram of an aluminum single hung window, prepared by Architectural Testing, Inc., Test Reports No. **F9504.01-450-18**, dated 04/06/17 and revised on 04/25/17, signed and sealed by Justin P. McDonald, P.E.
(Submitted under NOA No. 16-0510.22)



Sifang Zhao, P.E.
Product Control Examiner
NOA No. 23-0913.06
Expiration Date: May 04, 2027
Approval Date: December 19, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC 5th Edition (2014)** dated 04/12/17, revised on 04/21/17 and updated on 04/26/21 to comply with **FBC 7th Edition (2020)**, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 21-0526.02)
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **20-0915.22** issued to **Kuraray America, Inc.** for their "**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**" dated 11/19/20, expiring on 07/08/24.
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.
3. Notice of Acceptance No. **20-0622.03** issued to **Eastman Chemical Company (MA)** for their "**Saflex Storm - Saflex and Saflex HP Composite Glass Interlayers with PET Core**" dated 08/06/20, expiring on 12/11/23.
4. 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.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 7th Edition (2020)**, and of no financial interest, dated April 27, 2021, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 21-0526.02)

G. OTHERS

1. Notice of Acceptance No. **17-1114.07**, issued to ES Windows, LLC, for their Series "EL-100" Aluminum Single Hung Window - L.M.I., approved on 01/18/18 and expiring on 05/04/22.



Sifang Zhao, P.E.
Product Control Examiner
NOA No. 23-0913.06
Expiration Date: May 04, 2027
Approval Date: December 19, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **W16-57**, titled “ES-EL100 Alum Single Hung Wdw. (L.M.I)”, sheets 1, 1.1 1.2 and 2 through 10 of 10, dated 07/13/16, with revision **E** dated 09/06/2023, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, 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 a Series ES-EL 100 aluminum single hung window, prepared by AQI Testing Laboratory, Inc., Test Report No. **13078**, dated 06/26/2023 signed and sealed by Idalmis Ortega, P.E.
(Submitted under NOA No. 23-0913.06)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis dated 09/06/2023, complying with **FBC 7th Edition (2020) and FBC 8th Edition (2023)**, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Glazing complies with **ASTM E1300-09**

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. NOA #**24-0205.08** issued to **Kuraray America, Inc.** for their “**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**” dated 03/21/24, expiring on 07/08/29.
2. NOA# **23-0717.30** issued to **Kuraray America, Inc.** for their “**SentryGlas® (Clear and White) Glass Interlayers**” dated 08/31/23, expiring on 07/04/28.
3. NOA# **24-0312.10** issued to **Eastman Chemical Company (MA)** for their “**Saflex Storm - Saflex and Saflex HP Composite Glass Interlayers with PET Core**” dated 04/11/24, expiring on 12/11/28.
4. NOA# **23-0713.18** issued to **Eastman Chemical Company (MA)** for their “**Saflex PVB Interlayers - Clear and Colored for Glass**” dated 08/17/23, expiring on 05/21/26.



Sifang Zhao, P.E.
Product Control Examiner
NOA No. 23-0913.06
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED (CONTINUED)

F. STATEMENTS

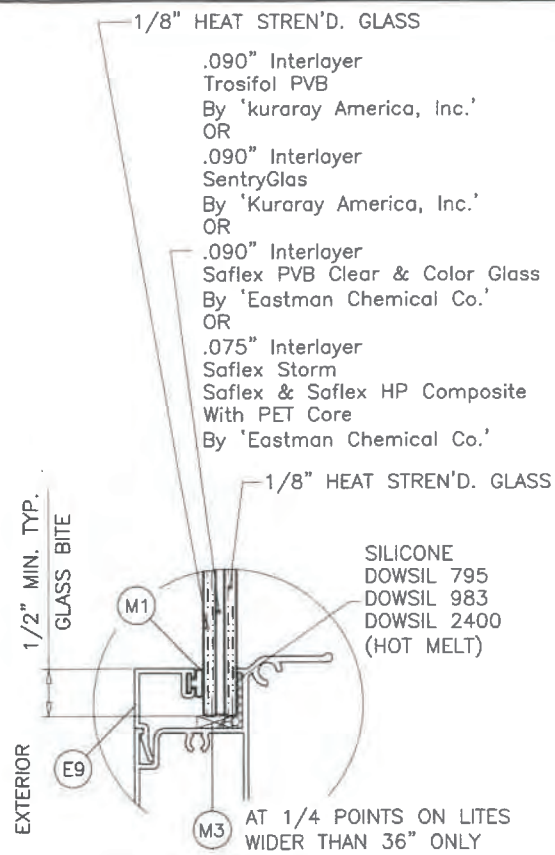
1. Statement letter of conformance, complying with **FBC 7th Edition (2020)**, with **FBC 8th Edition (2023)**, and of no financial interest, dated September 06, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Test Proposal #22-0056, approved by RER on 02/10/2022

G. OTHERS

1. Notice of Acceptance No. **23-0714.15**, issued to E.S. Windows, LLC, for their Series “EL-100” Aluminum Single Hung Window - L.M.I., approved on 08/24/2023 and expiring on 05/04/27.

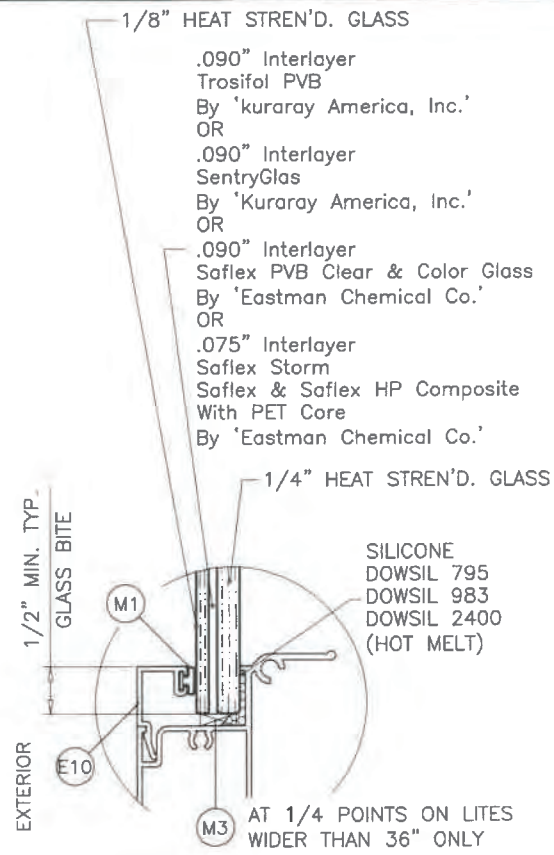


Sifang Zhao, P.E.
Product Control Examiner
NOA No. 23-0913.06
Expiration Date: May 04, 2027
Approval Date: December 19, 2024



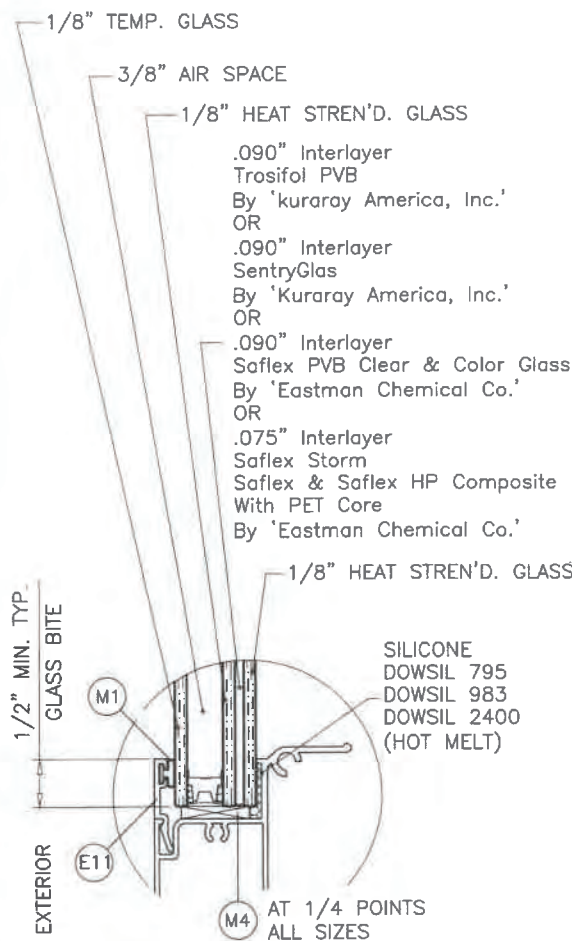
GLASS TYPE '1'

5/16" OVERALL LAM. GLASS



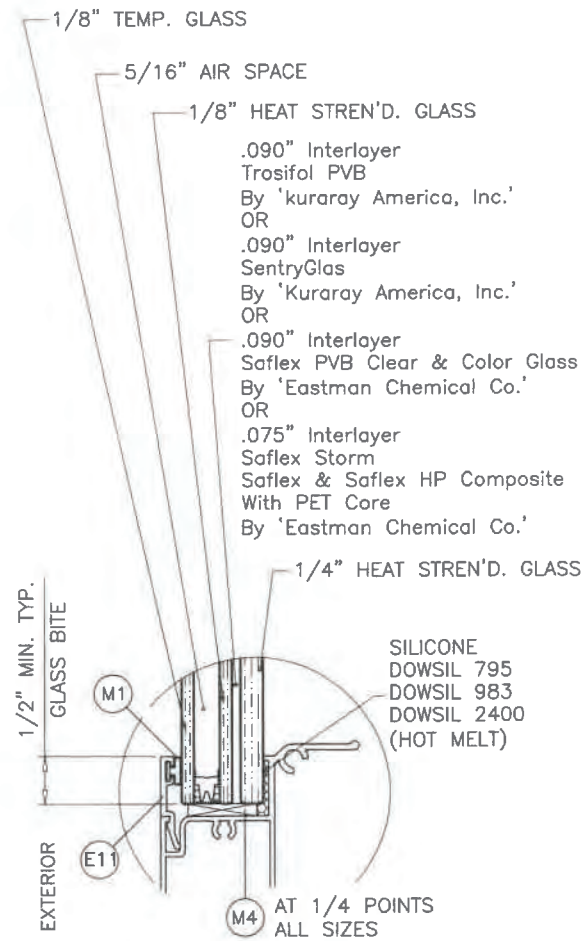
GLASS TYPE '2'

7/16" OVERALL LAM. GLASS



GLASS TYPE '1i'

7/8" OVERALL INSUL. LAM. GLASS



GLASS TYPE '2i'

7/8" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

ES-EL100

ALUMINUM SINGLE HUNG WINDOW

SEE SHEETS 2 AND 3 FOR DESIGN LOAD CAPACITY.

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF S.H./S.H. OR SINGLE HUNG 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)'.

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

5/16" & 3/8" AIR SPACE CONSISTING OF:

SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.

PERIMETER SEALANT:

SILICONE
DOWSIL 791
GE 2000

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0913.06

Expiration Date 05/04/2027

By
Miami-Dade Product Control



af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W16-57ES

ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

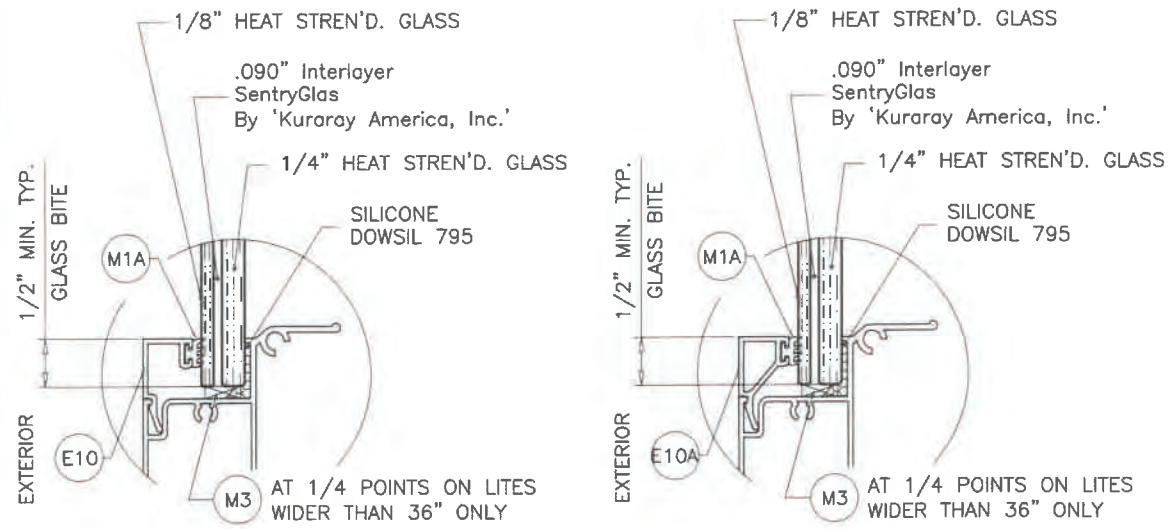
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C	06.22.20	GENERAL REVISION
D	06.22.23	UPDATED TO 2023 FBC
E	09.06.23	ALT. JAMB ADDED

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dr. by: TARIQ
chk. by:

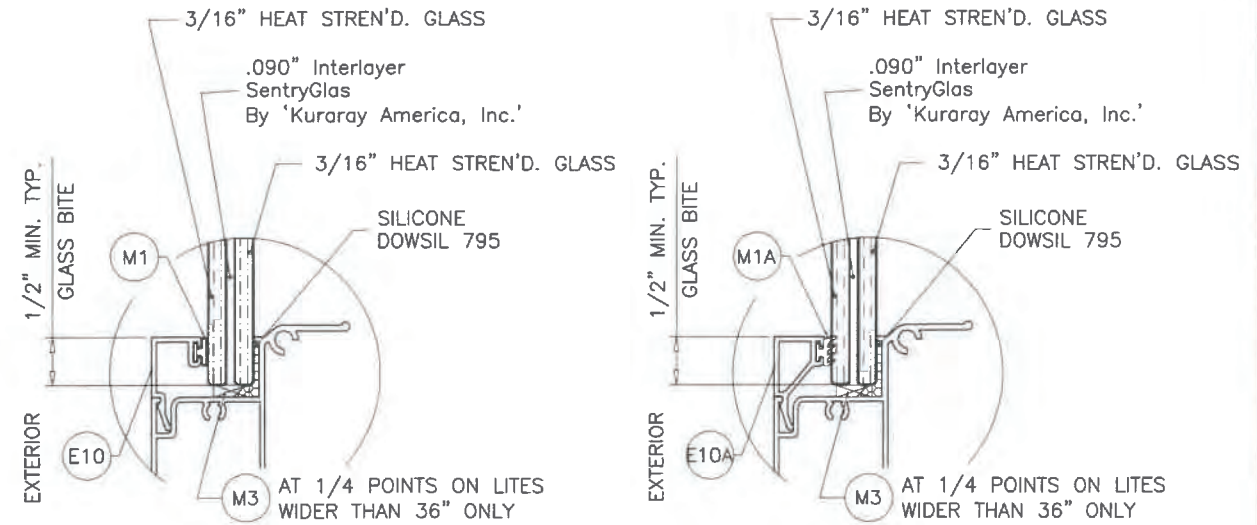
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W16-57

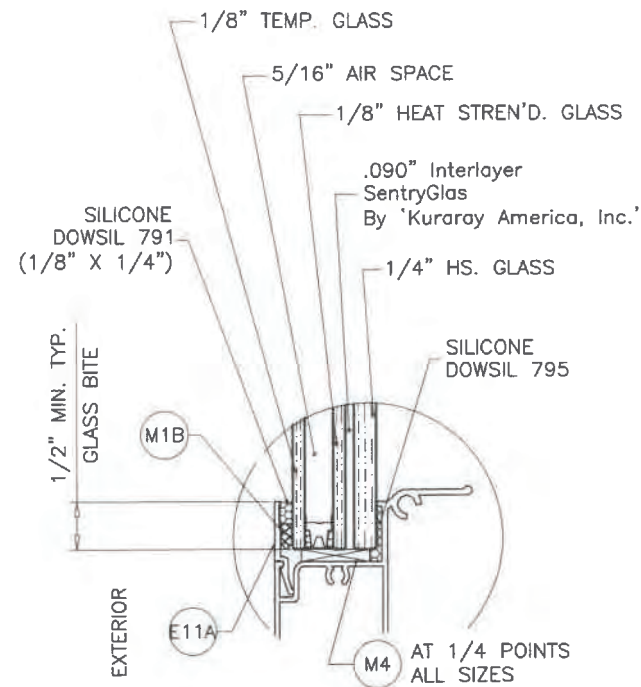
sheet 1 of 10



GLASS TYPE '2A'
7/16" OVERALL LAM. GLASS



GLASS TYPE '3'
7/16" OVERALL LAM. GLASS

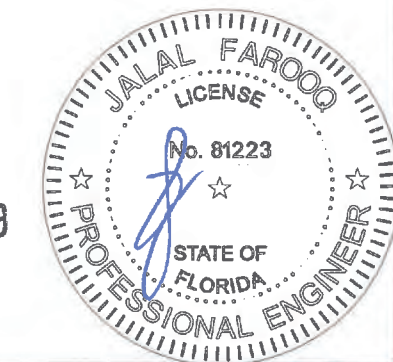


GLASS TYPE '2Ai'
7/8" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

5/16" AIR SPACE CONSISTING OF:
SPACER:
 'HELIMA' LOW PROFILE ALUMINUM SPACER
 BY 'LINGERMANN GMBH'
 AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
 SILICONE
 DOWSIL 791
 GE 2000

SEP 08 2023



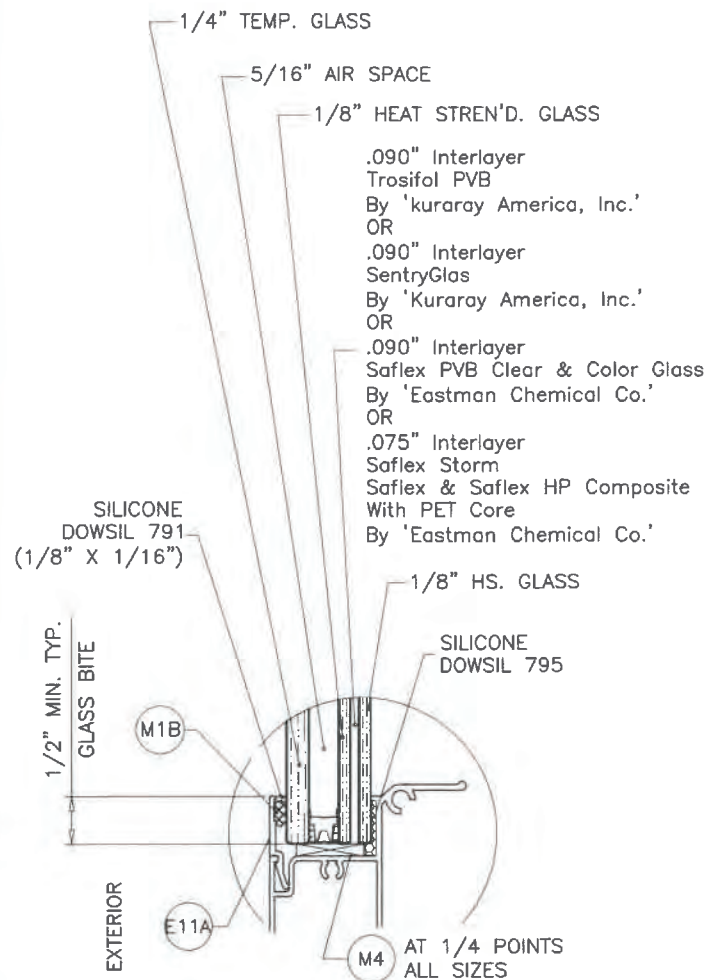
PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. 23-0913.06
 Expiration Date 05/04/2027
 By *[Signature]*
 Miami-Dade Product Control

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\W16-57ES

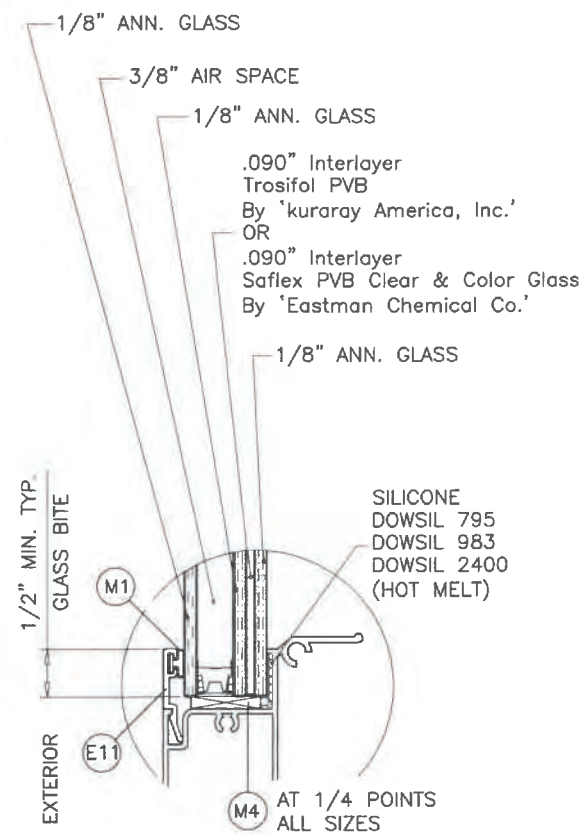
ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)
E.S. WINDOWS, LLC
 3550 N.W. 49 STREET
 MIAMI, FL. 33142
 TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description
	C	06.22.20	TARIQ	GENERAL REVISION
	D	06.22.23		NO CHANGE THIS SHEET
	E	09.06.23		NO CHANGE THIS SHEET

date: 07-13-16
 scale: 1/2" = 1"
 dr. by: TARIQ
 chk. by:
 drawing no.
W16-57
 sheet 1.1 of 10



GLASS TYPE '4i'
7/8" OVERALL INSUL. LAM. GLASS



GLASS TYPE '5i'
7/8" OVERALL INSUL. LAM. GLASS

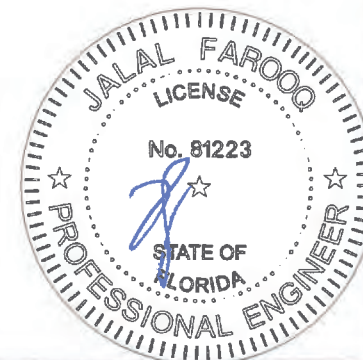
GLAZING OPTIONS

NOTE:
EXTERIOR PLY OF GLASS TYPE '5i' TO BE TEMPERD
TO QUALIFY FOR SMALL MISSILE IMPACT.

5/16" & 3/8" AIR SPACE CONSISTING OF:
SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000

SEP 08 2023

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0913.06
Expiration Date 05/04/2027
By *[Signature]*
Miami-Dade Product Control



af c

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ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)

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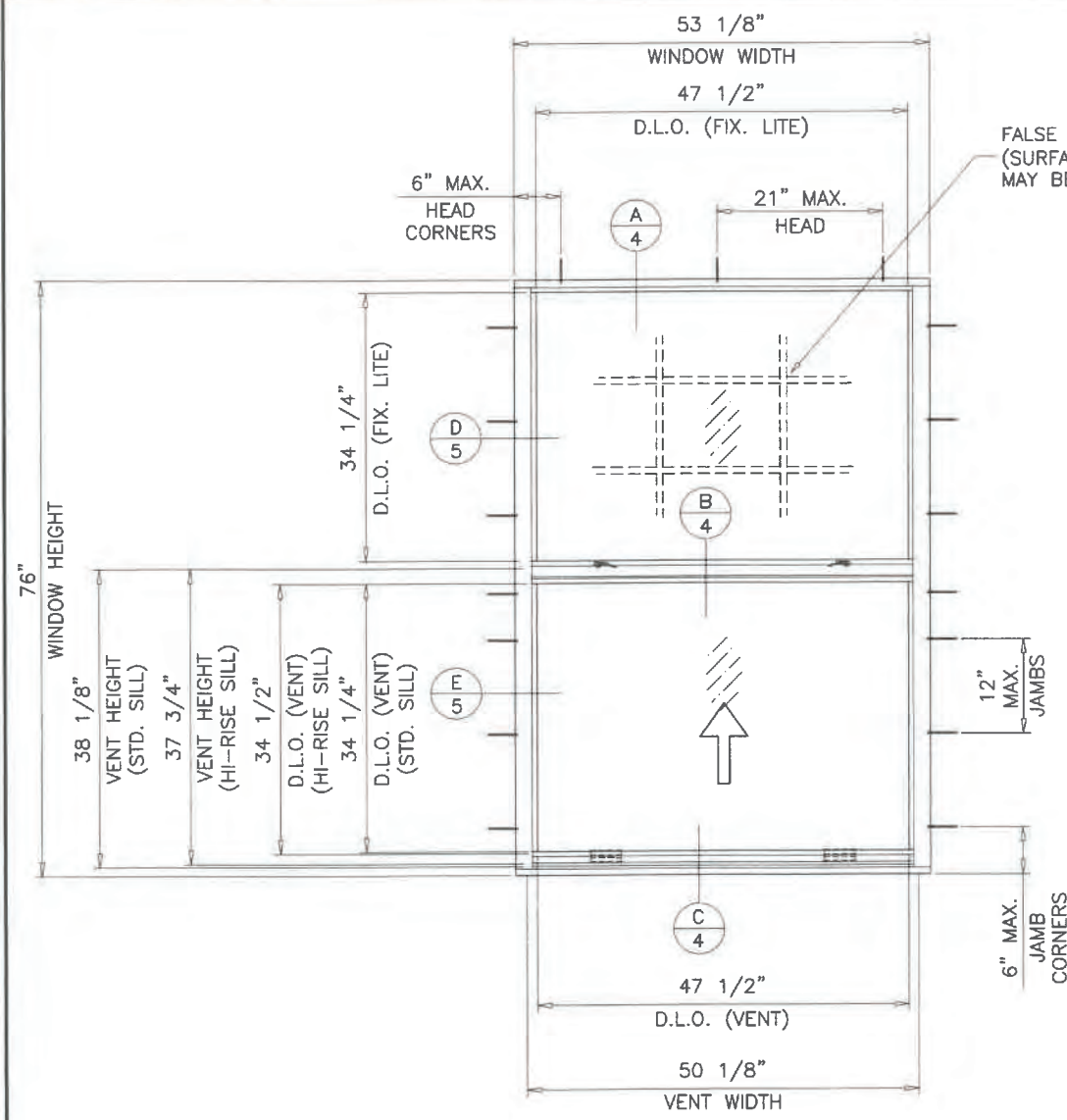
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	D	06.22.23		UPDATED TO 2023 FBC
	E	09.06.23		NO CHANGE THIS SHEET

date: 07-13-16
scale: 1/2" = 1"
dr. by: TARIQ
chk. by:

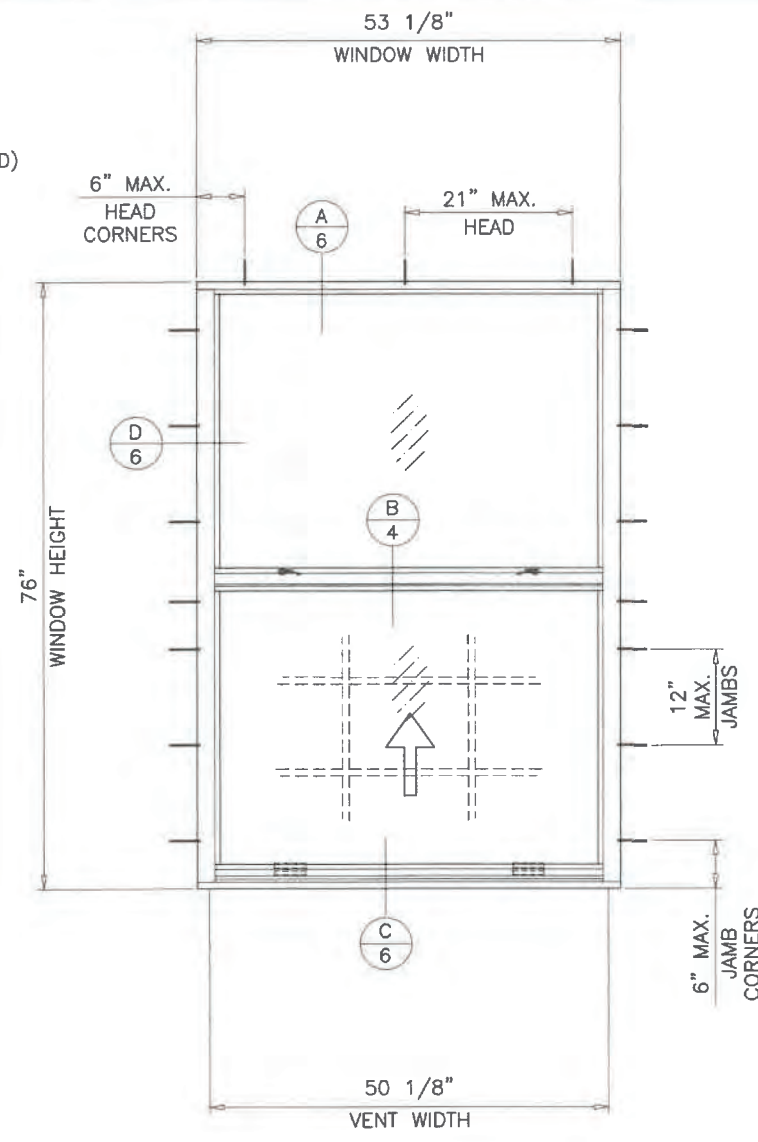
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W16-57

sheet 1.2 of 10

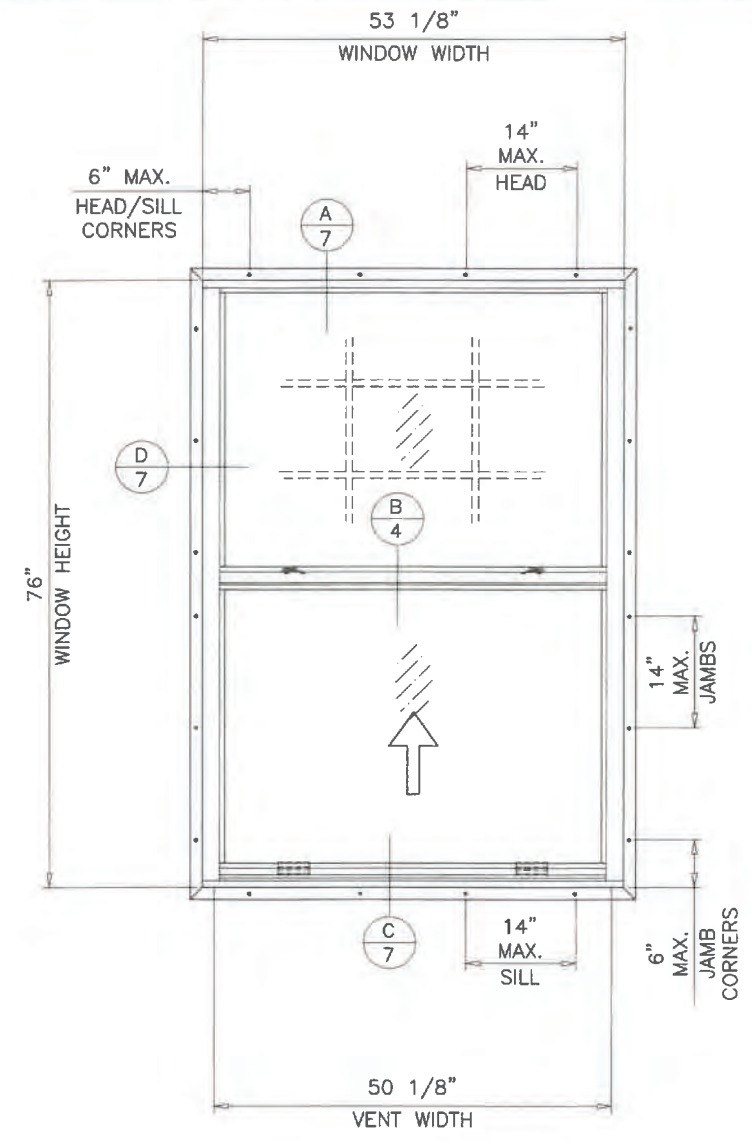
COMP -ANL\W16-57ES



TYPICAL ELEVATION
EQUAL LITES
FLANGE FRAMES



TYPICAL ELEVATION
EQUAL LITES
FLANGE FRAMES WITH FLUSH ADAPTER



TYPICAL ELEVATION
EQUAL LITES
FLANGE FRAMES WITH FIN ADAPTER

GLASS TYPES:
'1', '2', '1i', '2i', '2A', '2Ai', '3', '4i'
MAXIMUM DESIGN LOAD RATING = + 60.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 80.0 PSF
STD. FRAME SILL

GLASS TYPE '5i'
MAXIMUM DESIGN LOAD RATING = + 60.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 70.0 PSF
STD. FRAME SILL

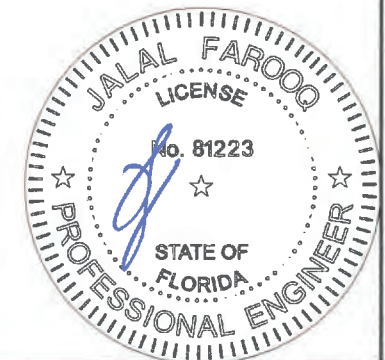
GLASS TYPES:
'1', '2', '1i', '2i', '2A', '2Ai', '3', '4i'
MAXIMUM DESIGN LOAD RATING = + 80.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 80.0 PSF
HI-RISE FRAME SILL

GLASS TYPE '5i'
MAXIMUM DESIGN LOAD RATING = + 70.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 70.0 PSF
HI-RISE FRAME SILL

FOR ALTERNATE SIZE UNITS MAX. FRAME AREA OF WINDOW
NOT TO EXCEED TESTED FRAME AREA OF 28.04 SQ. FT. OR 53-1/8" WIDTH.

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

SEP 08 2023



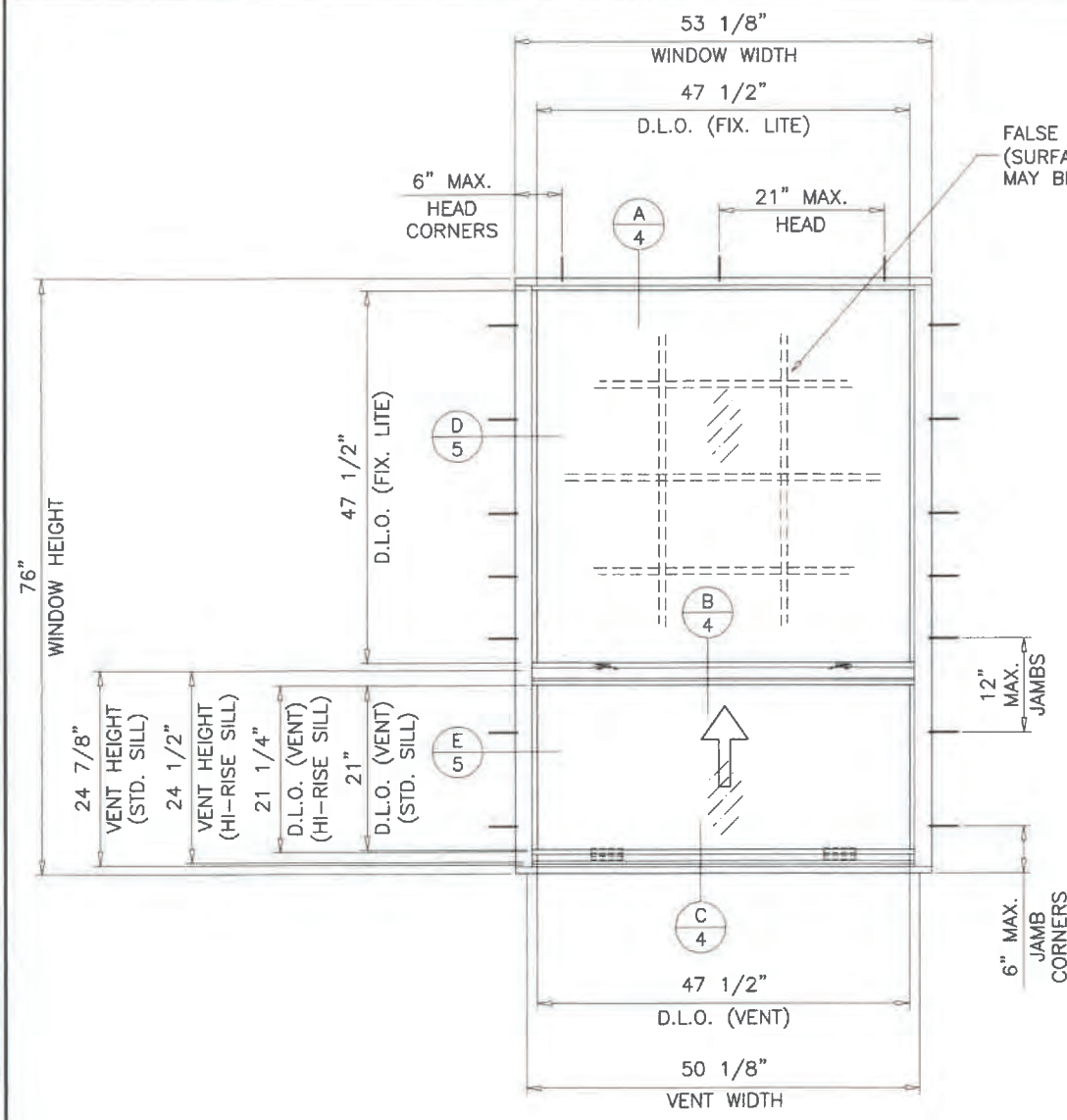
af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
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ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)
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TEL. (305) 638-5151 FAX. (305) 638-5158

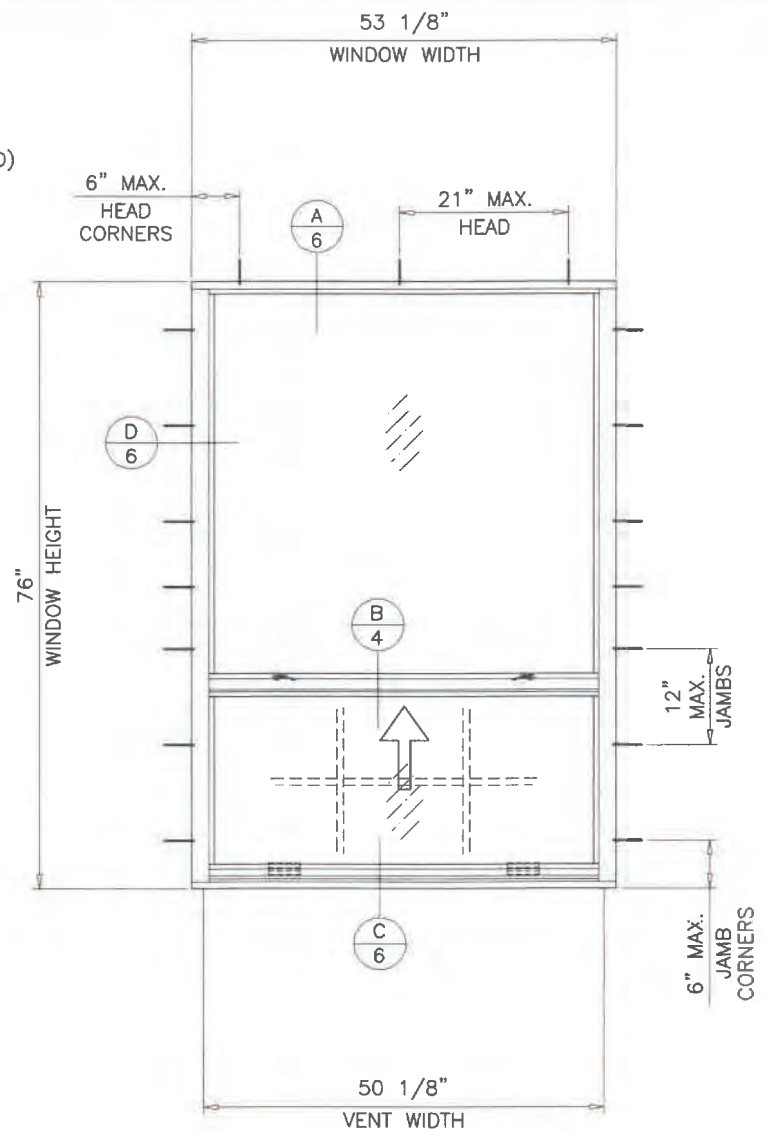
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B	09.26.17		NO CHANGE THIS SHEET
C	06.22.20		GENERAL REVISION
D	06.22.23		NO CHANGE THIS SHEET
E	09.06.23		NO CHANGE THIS SHEET

date: 07-13-16
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:
drawing no.
W16-57
sheet 2 of 10

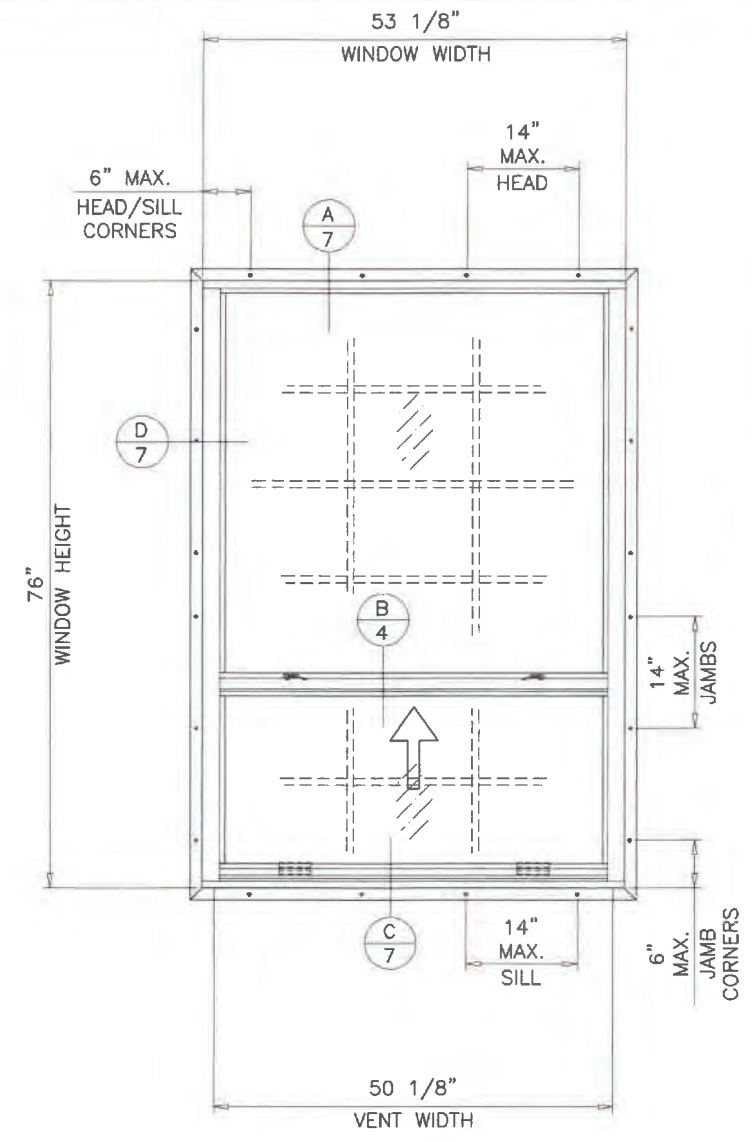
PRODUCT REVISED
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Building Code
NOA-No. 23-0913.06
Expiration Date 05/04/2027
By *[Signature]*
Miami-Dade Product Control



TYPICAL ELEVATION
UNEQUAL LITES (ORIEL TYPE)
FLANGE FRAMES



TYPICAL ELEVATION
UNEQUAL LITES (ORIEL TYPE)
FLANGE FRAMES WITH FLUSH ADAPTER



TYPICAL ELEVATION
UNEQUAL LITES (ORIEL TYPE)
FLANGE FRAMES WITH FIN ADAPTER

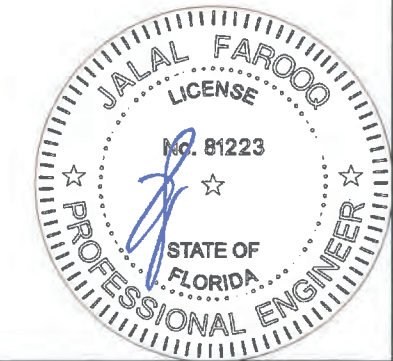
GLASS TYPES:
'1', '2', '1i', '2i', '2A', '2Ai', '3', '4i'
MAXIMUM DESIGN LOAD RATING = + 60.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 80.0 PSF
STD. FRAME SILL

GLASS TYPES:
'1', '2', '1i', '2i', '2A', '2Ai', '3', '4i'
MAXIMUM DESIGN LOAD RATING = + 80.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 80.0 PSF
HI-RISE FRAME SILL

FOR ALTERNATE SIZE UNITS MAX. FRAME AREA OF WINDOW
NOT TO EXCEED TESTED FRAME AREA OF 28.04 SQ. FT. OR 53-1/8" WIDTH.

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

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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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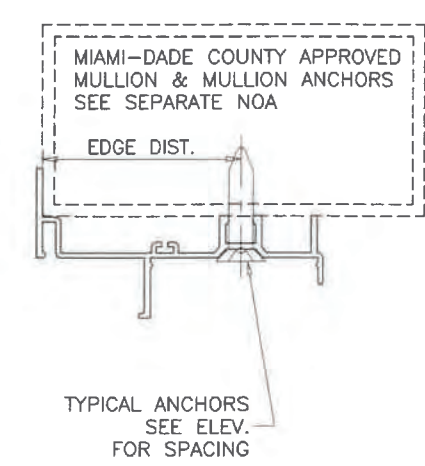
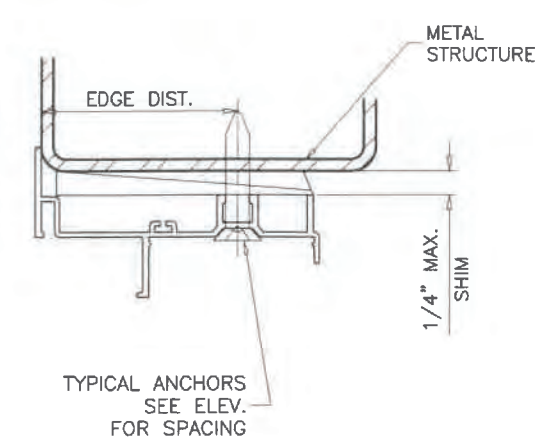
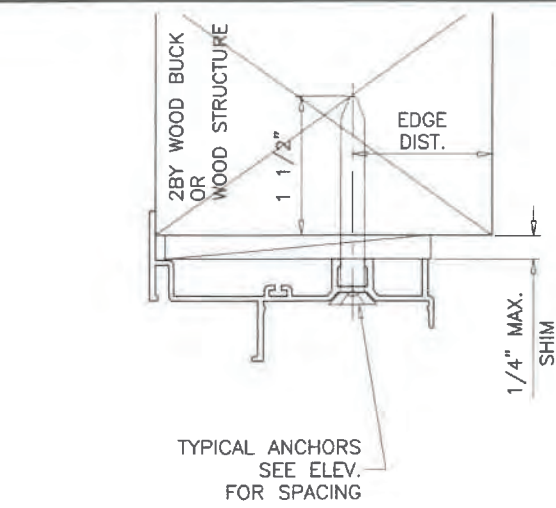
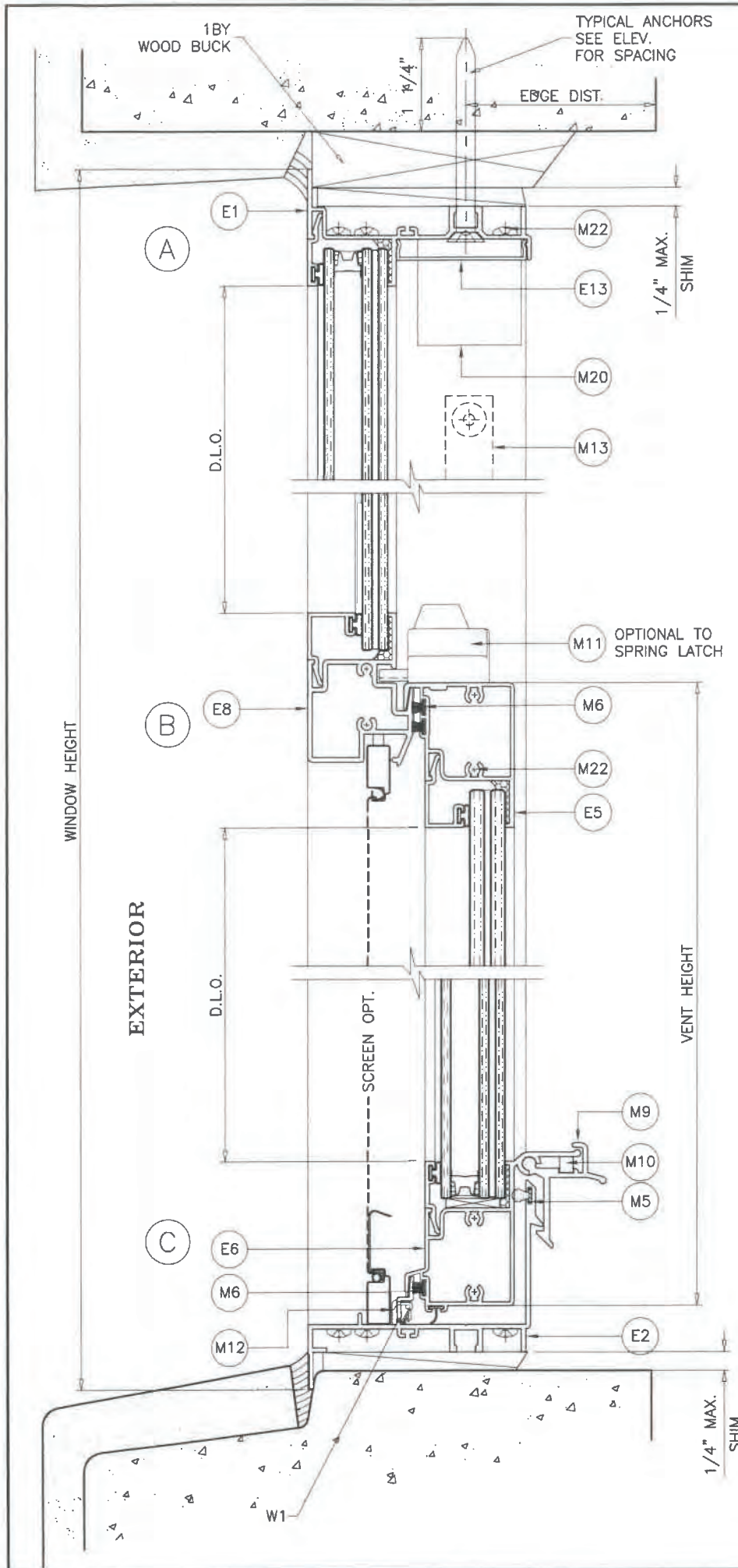
ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:	no	date	by	description
	A	04.21.17		NO CHANGE THIS SHEET
	B	09.26.17		NO CHANGE THIS SHEET
	C	06.22.20		GENERAL REVISION
	D	06.22.23		NO CHANGE THIS SHEET
	E	09.06.23		NO CHANGE THIS SHEET

date: 07-13-16
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

drawing no.
W16-57

sheet **3** of 10



WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WINDOWS' MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

WEEPHOLES:

W1 = 1-3/8" X 1/4" WEEPHOLES AT 4" FROM EACH END

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/JAMBS)
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

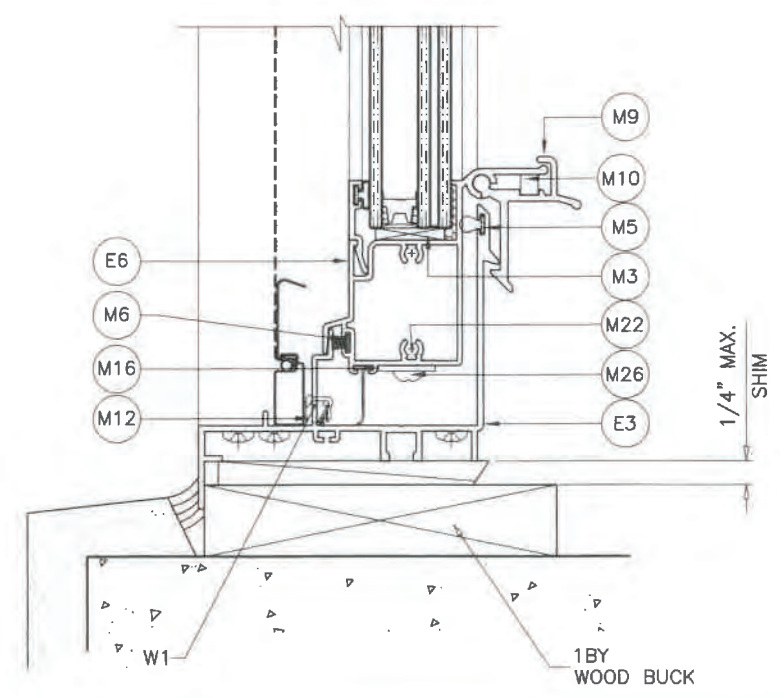
DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
 INTO MIAMI-DADE COUNTY APPROVED MULLIONS
 OR
 INTO METAL STRUCTURES (HEAD/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)

TYPICAL EDGE DISTANCE

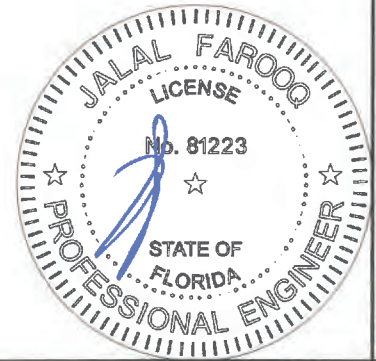
INTO CONCRETE AND MASONRY = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD, SILL OR JAMBS SG = 0.55 MIN.
 CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
 C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.



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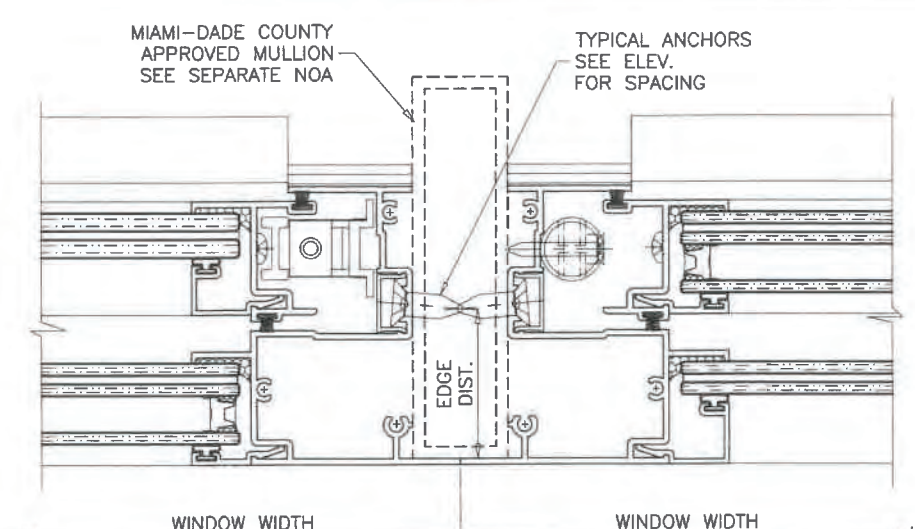
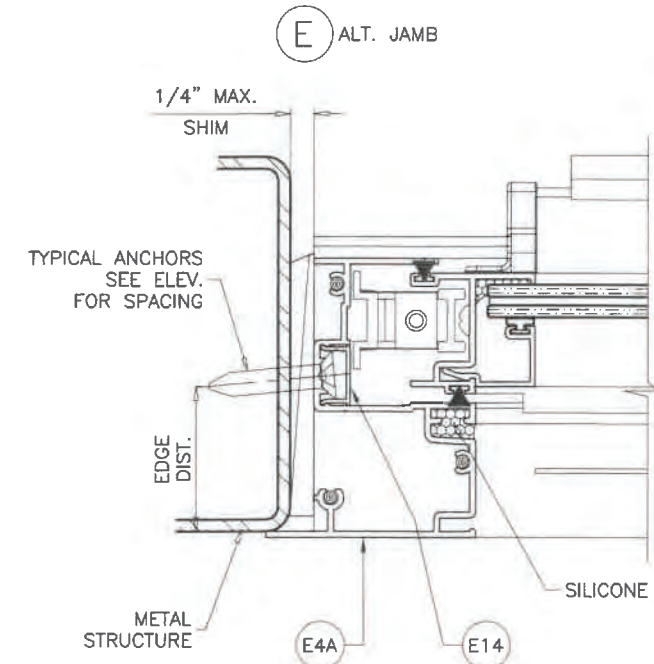
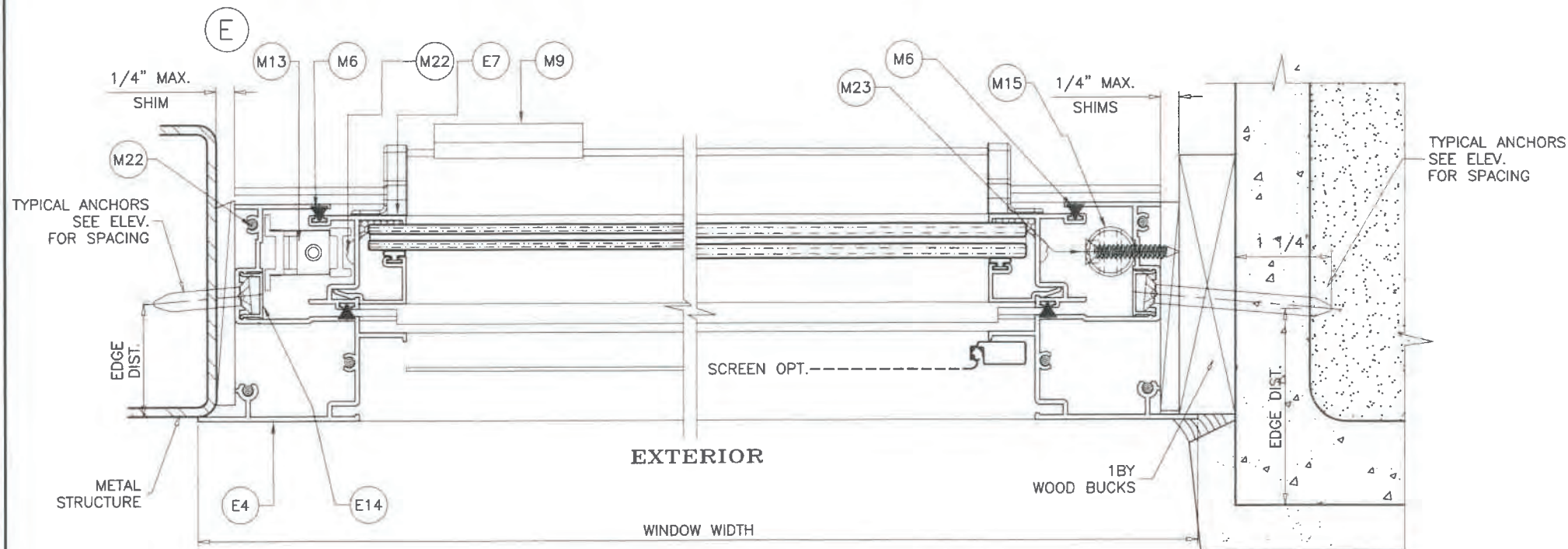
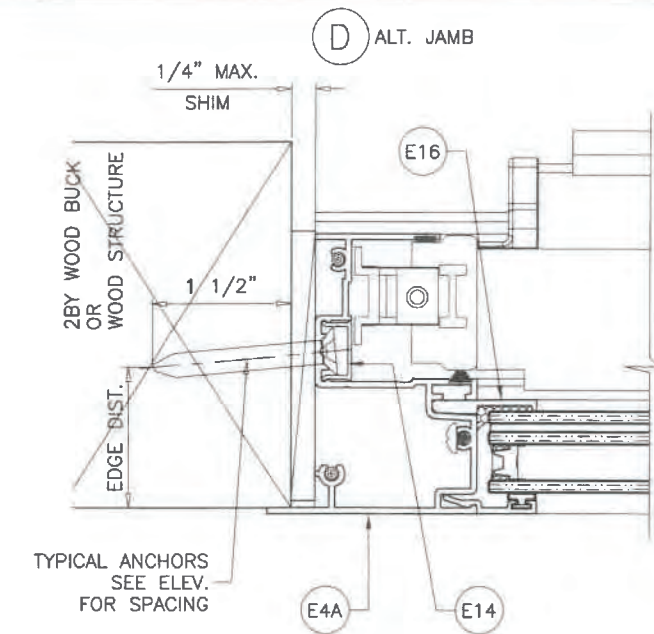
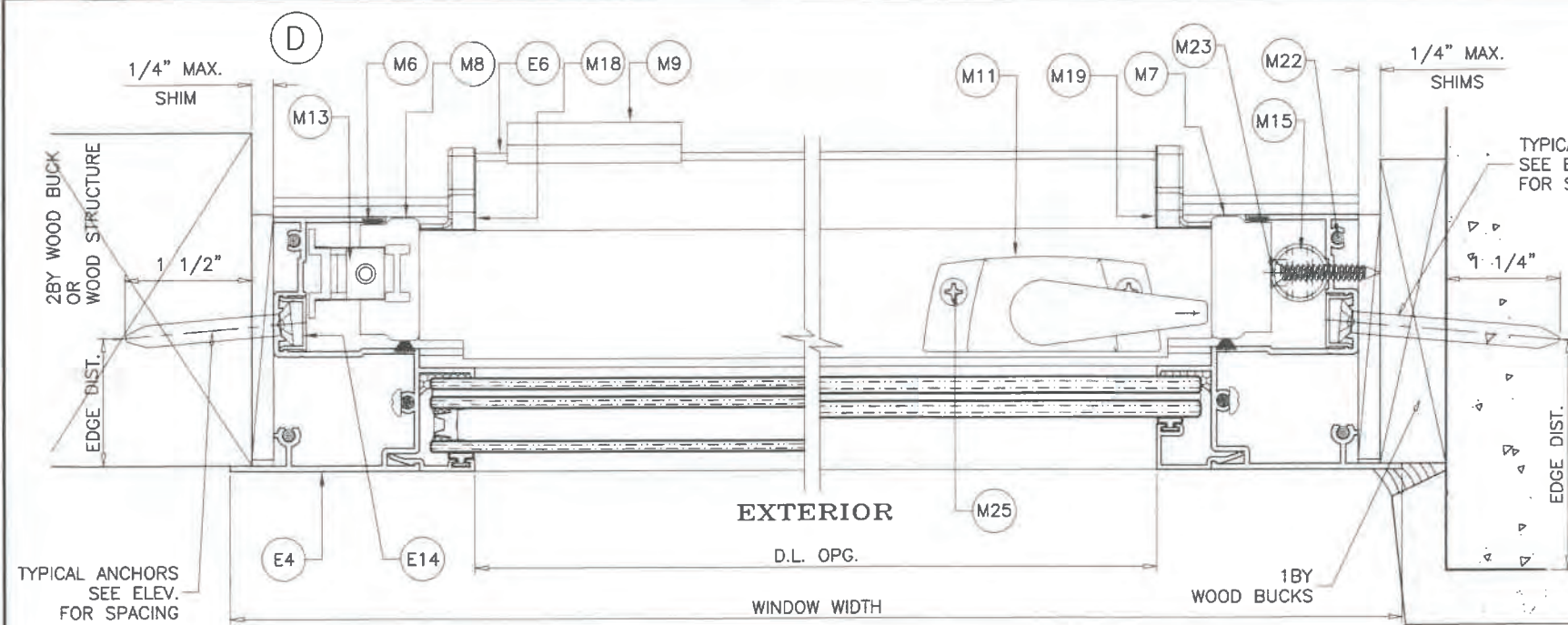


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 COMP--ANL\W16-57ES

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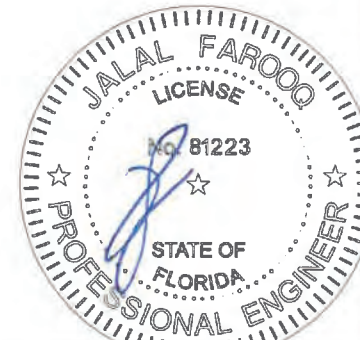
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D	06.22.23	NO CHANGE THIS SHEET	
E	09.06.23	NO CHANGE THIS SHEET	

date: 07-13-16
 scale: 1/2" = 1"
 dr. by: TARIQ
 chk. by:
 drawing no.
W16-57
 sheet 4 of 10



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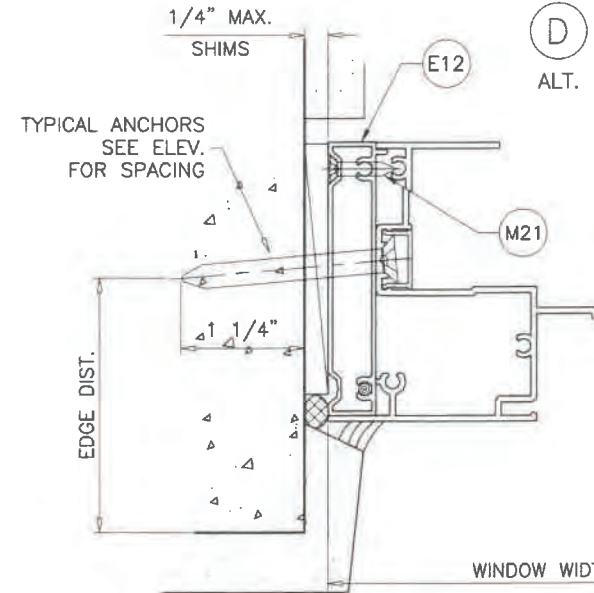
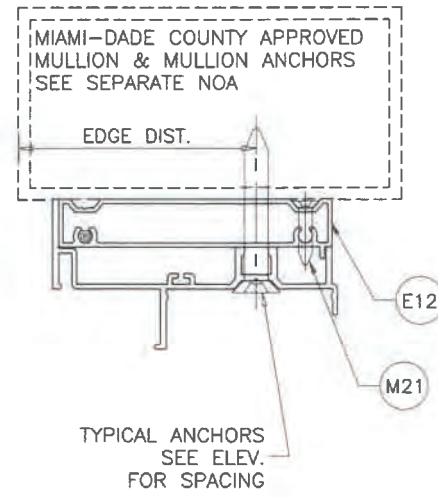
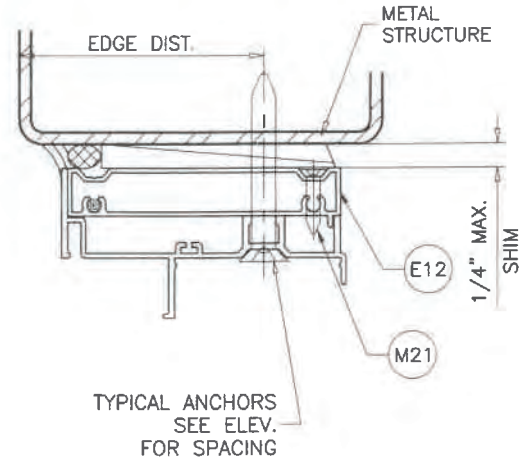
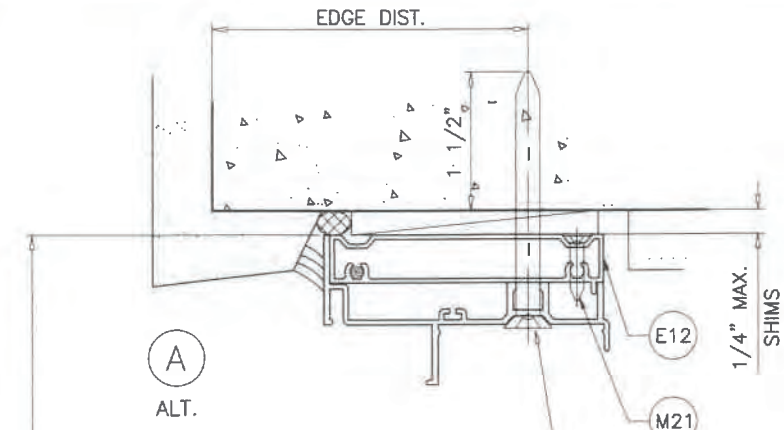


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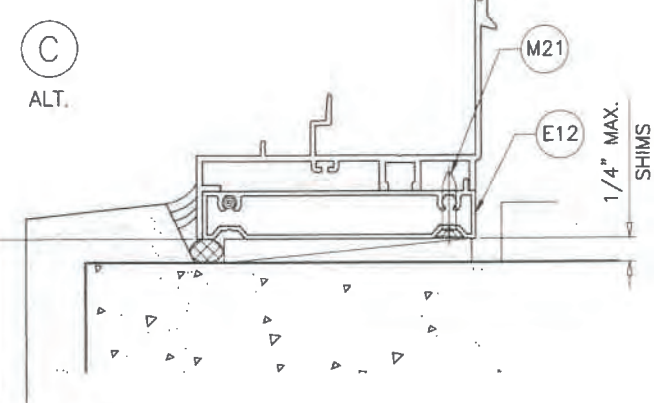
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B	09.26.17	NO CHANGE THIS SHEET	
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D	06.22.23	NO CHANGE THIS SHEET	
E	09.06.23	ALT. JAMB ADDED	

date: 07-13-16
 scale: 1/2" = 1"
 dr. by: TARIO
 chk. by:
 drawing no. W16-57
 sheet 5 of 10



WINDOW HEIGHT

EXTERIOR



INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER
SEE SHEETS 4 & 5 FOR WINDOW DETAILS

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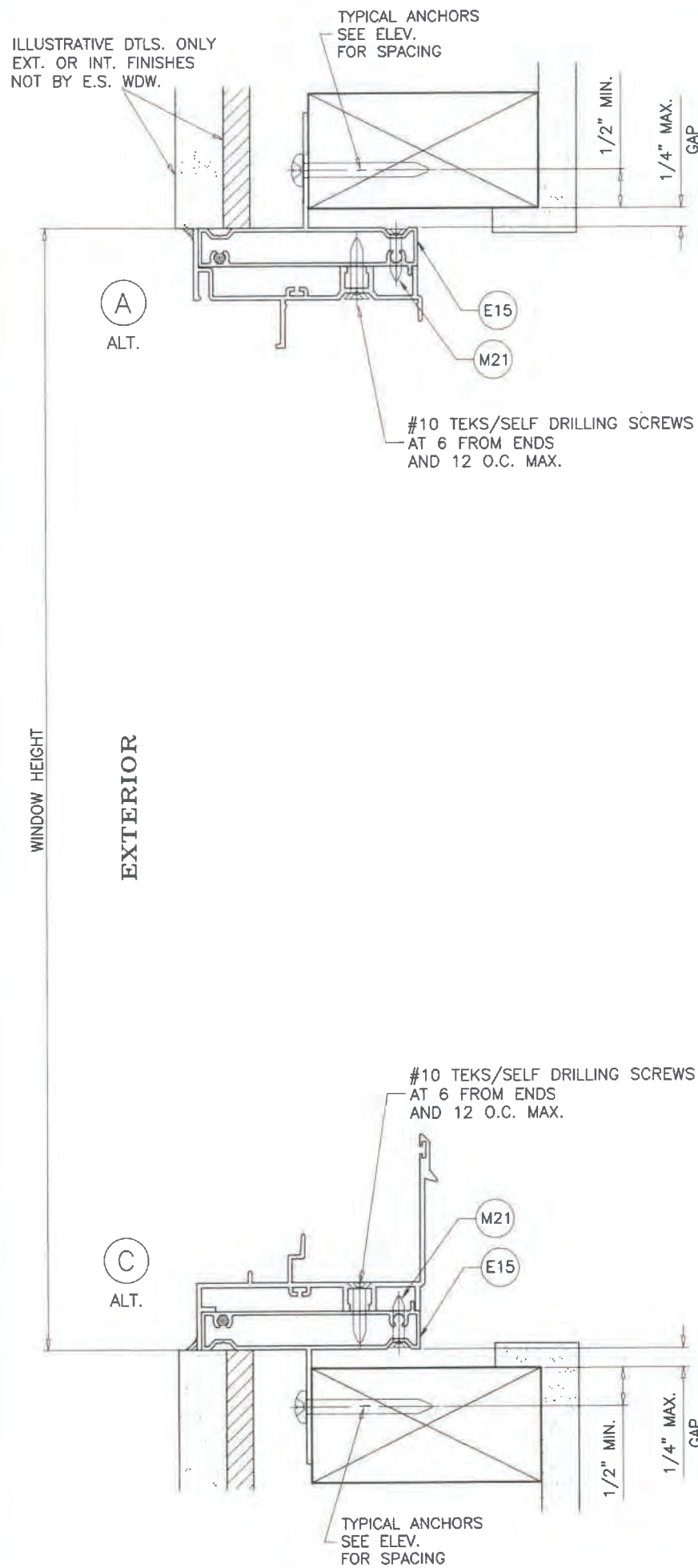
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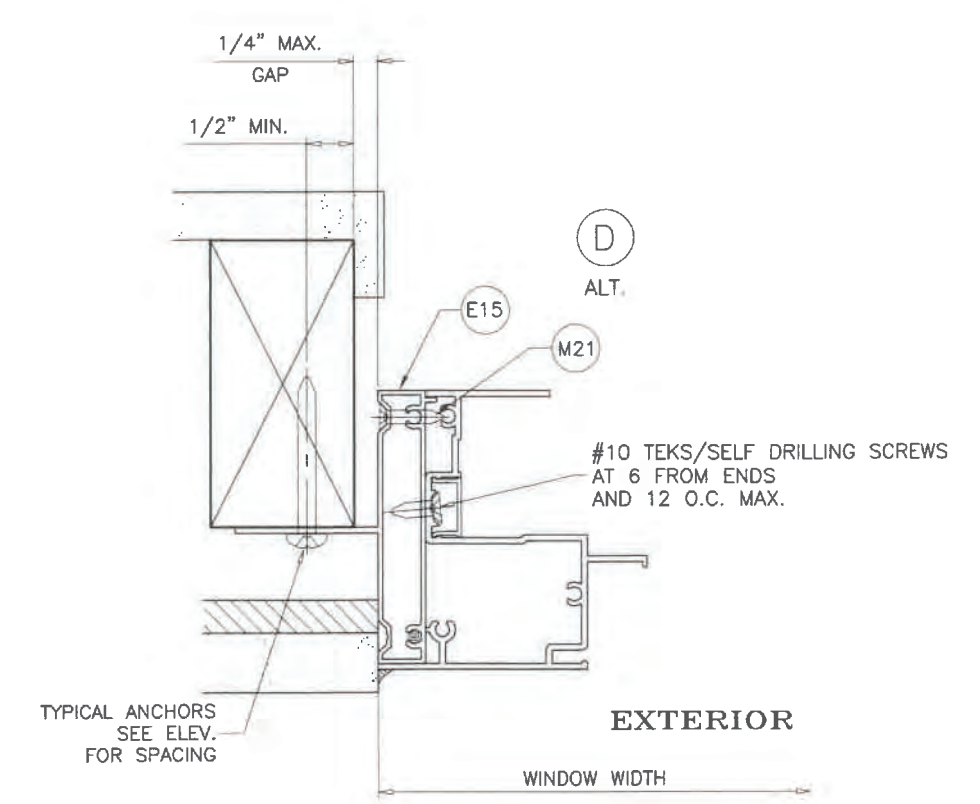
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W16-57
sheet 6 of 10



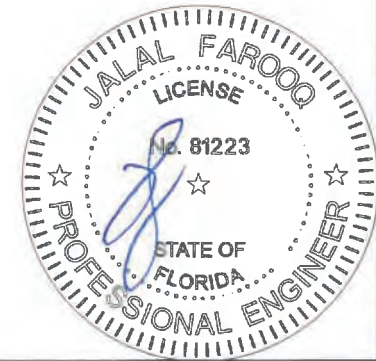
TYPICAL ANCHORS: SEE ELEV. FOR SPACING
#14 WOOD SCREWS (GRADE 2 CRS)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD



INSTALLATION DETAILS WITH FIN FRAME ADAPTER
 SEE SHEETS 4 & 5 FOR WINDOW DETAILS

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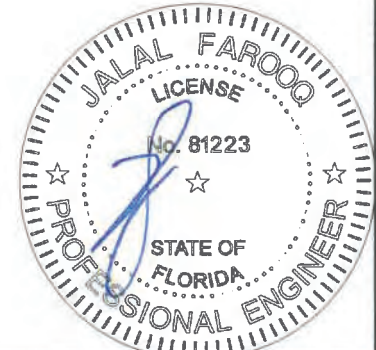
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 chk. by:
 drawing no. W16-57
 sheet 7 of 10

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-EL101A	1	FRAME HEAD	6063-T6	-
E2	ES-EL102	1	FRAME SILL (STANDARD)	6063-T6	-
E3	ES-EL103	1	FRAME SILL (HI-RISE)	6063-T6	-
E4	ES-EL104	2	FRAME JAMB	6063-T6	-
E4A	ES-EL128	2	ALT. FRAME JAMB	6063-T6	-
E5	ES-EL105	1	VENT TOP RAIL	6063-T6	-
E6	ES-EL106	1	VENT BOTTOM RAIL	6063-T6	-
E7	ES-EL107	2	VENT SIDE RAIL	6063-T6	-
E8	ES-EL108A	1	FIXED MTG. RAIL	6063-T6	-
E9	ES-EL109	AS RQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063-T6	-
E10	ES-EL110	AS RQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E10A	ES-EL123	AS RQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
E11	ES-EL111	AS RQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
E11A	ES-EL116	AS RQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
E12	ES-EL112	AS REQD.	FLUSH FRAME ADAPTER	6063-T6	-
E13	ES-EL113A	AS REQD.	HEAD SCREW COVER	6063-T6	-
E14	ES-EL114	AS REQD.	JAMB SCREW COVER	6063-T6	-
E15	ES-EL115	AS REQD.	FLUSH FRAME ADAPTER WITH FIN	6063-T6	-
E16	ES-EL129	AS REQD.	GLAZING ADAPTER AT ALT. FRAME JAMB	6063-T6	-
M1	ES-5008A	AS REQD.	GLAZING BEAD BULB	SILICONE	DUROMETER 65±5 SHORE A
M1A	EL100-G02	AS REQD.	EXTERIOR LEAF GASKET	SILICONE	DUROMETER 60±5 SHORE A
M1B	ES-H-340-G05	AS REQD.	EXTERIOR WEDGE GASKET	SILICONE	DUROMETER 65±5 SHORE A
M2	EL100-G01	AS REQD.	VENT BOTTOM GASKET	EPDM	DUROMETER 65±3 SHORE A
M3	80-372A	2/ LITE	SETTING BLOCK AT 1/4 POINTS (LAM. GLASS)	SILICONE	DUROMETER 80±5 SHORE A
M4	EL100-B01	2/ LITE	SETTING BLOCK AT 1/4 POINTS (INSUL. LAM. GLASS)	SILICONE	DUROMETER 80±5 SHORE A
M5	Q300T190	AS REQD.	Q-LON2 WEATHER SEAL AT SILL	URETHANE FOAM	-
M6	23211NG	AS REQD.	PILE W'STRIPPING WITH PLASTIC FIN	POLYPROPYLENE	-
M7	ES-EL115	4/ VENT	VENT TOP GUIDE (SPIRAL BALANCE)	CELCON	-
M8	ES-EL116	2/ VENT	VENT TOP GUIDE (BLOCK & TACKLE BALANCE)	CELCON	-
M9	SK08-4010	2/ VENT	SPRING LOADED LATCH	6063-T6	ALTERNATE TO SWEEP LATCH
M10	ES-1012	2/ LATCH	LATCH SPRING	ST. STEEL	-
M11	SL302-XX	2/ VENT	SWEEP LATCH	DIE CAST ALUM	-
M12	FAS255129	2	WEEP HOLE COVER	NYLON	-
M13	SERIES 86	2/VENT	BLOCK & TACKLE BALANCE	CRS	-
M14	15P19	2/VENT	BALANCE TAKE OUT CLIP	ST. STEEL	-
M15	-	2/VENT	SPIRAL BALANCE CLASS 5	CRS	-
M16	21803	-	NON TILT	ST. STEEL	-
M17	ES-004	2	VENT GUIDE	NYLON	-
M18	ES-1000-P1L	-	LEFT NOTCH CAP	NYLON	-
M19	ES-1000-P1R	-	RIGHT NOTCH CAP	NYLON	-
M20	PENDIENTE	-	SASH STOP	-	-
M21	#8 X 1"	-	FLUSH FRAME ADAPTER ASSEMBLY FASTENERS	ST. STEEL	FH SMS
M22	#8 X 1"	-	FRAME AND VENT ASSEMBLY FASTENERS	ST. STEEL	PH SMS
M23	#10 X 1-1/4"	-	SPIRAL BALANCE ASSEMBLY FASTENERS	ST. STEEL	FH SMS
M24	#6 X 1/2"	-	VENT GUIDE ASSEMBLY FASTENERS	ST. STEEL	FH SMS
M25	#8 X 3/4"	-	SWEEP LATCH FASTENERS	ST. STEEL	FH SMS
M26	#8 X 1/2"	-	NON TILT FASTENERS	ST. STEEL	PH SMS

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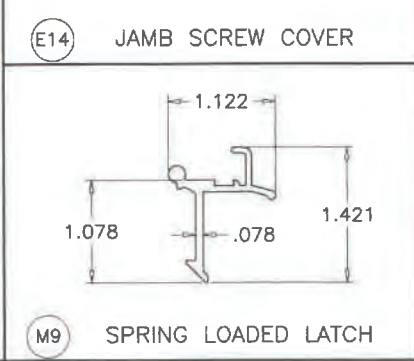
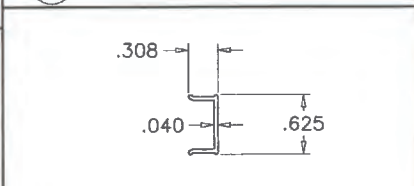
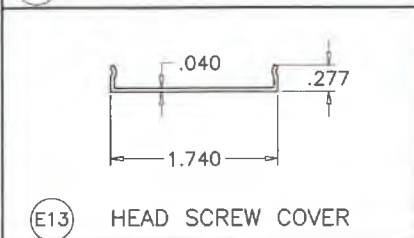
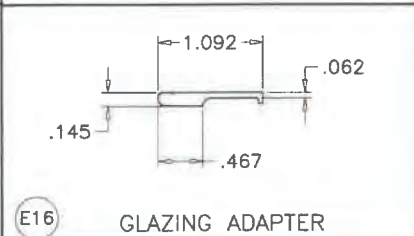
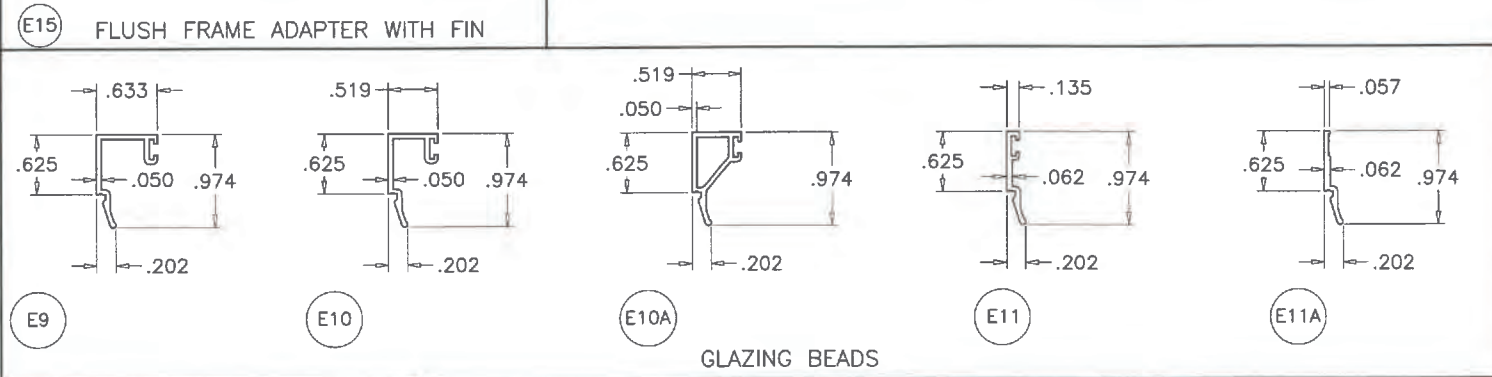
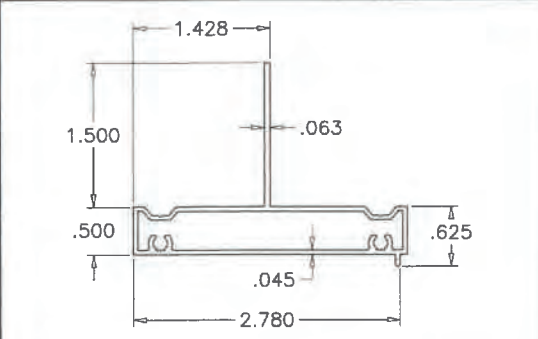
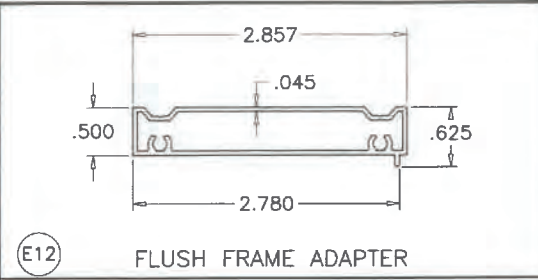
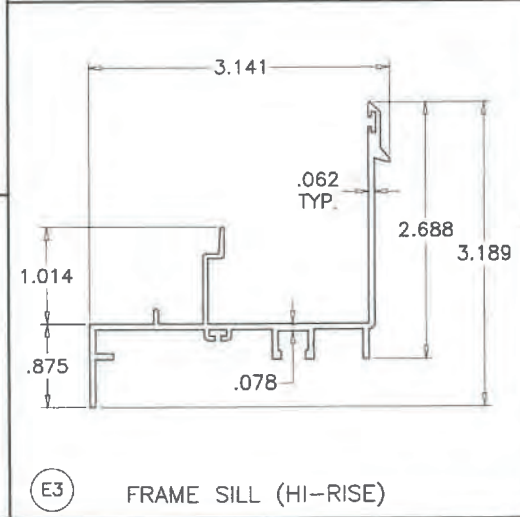
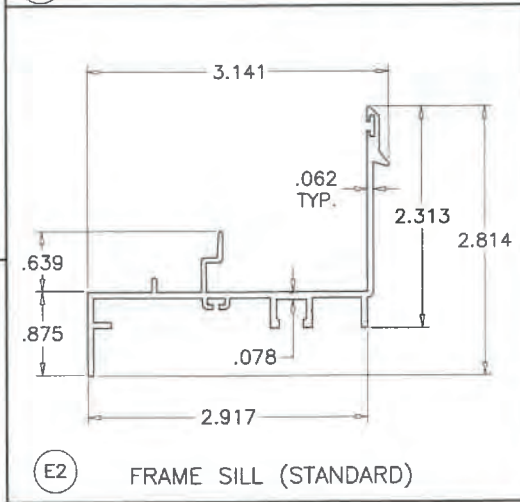
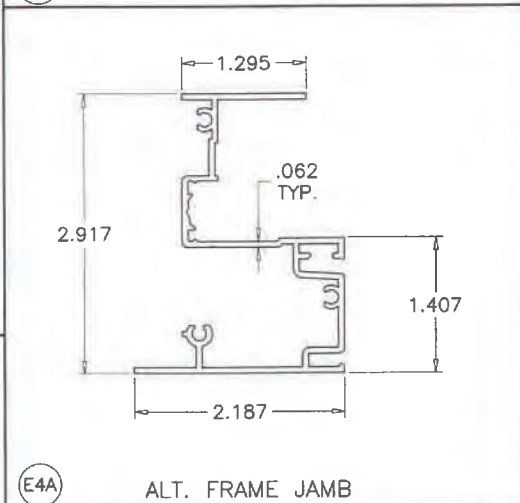
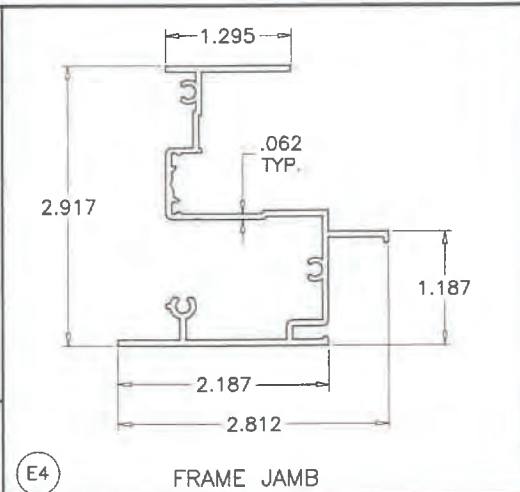
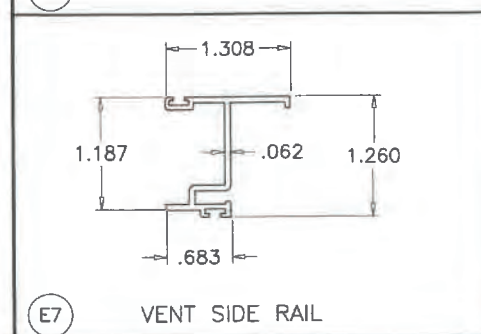
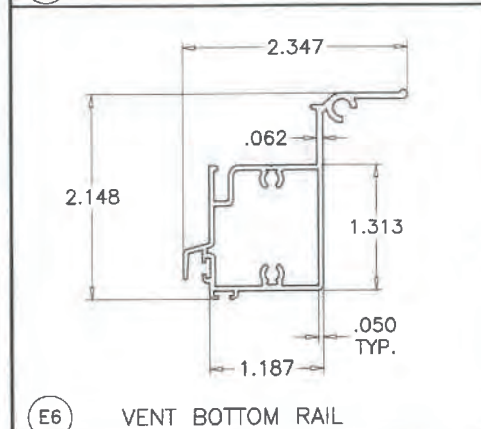
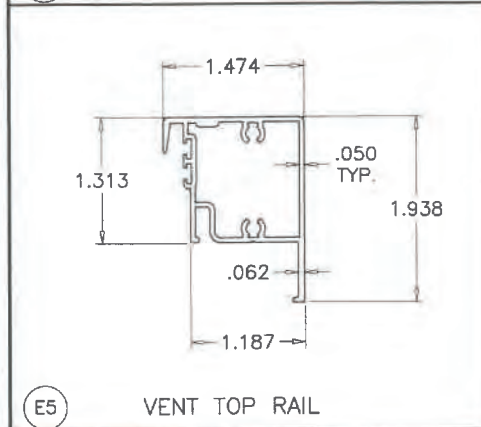
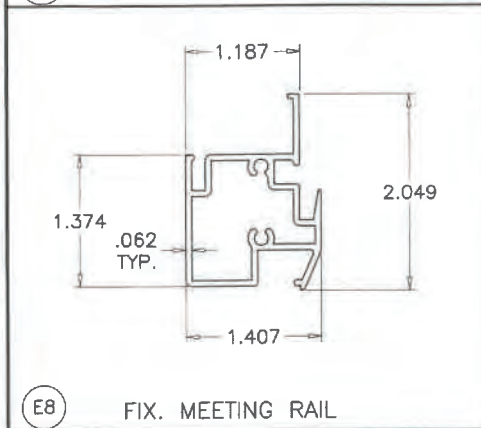
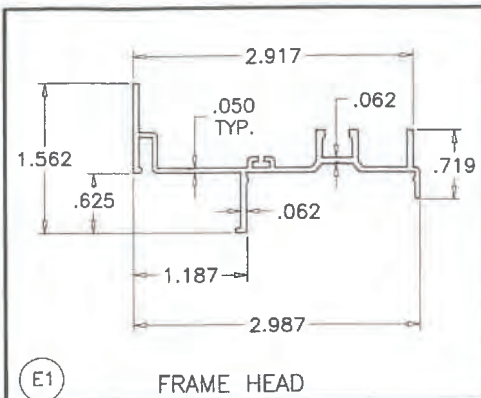
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SEP 08 2023

revisions:	no	date	by	description
	A	04.21.17	REV. PER RER COMMENTS	
	B	09.26.17	NO CHANGE THIS SHEET	
	C	06.22.20	GENERAL REVISION	
	D	06.22.23	NO CHANGE THIS SHEET	
	E	09.06.23	ALT. JAMB ADDED	

date: 07-13-16
 scale: 1/2" = 1"
 dr. by: TARIQ
 chk. by:
 drawing no. W16-57
 sheet 8 of 10



SEP 08 2023



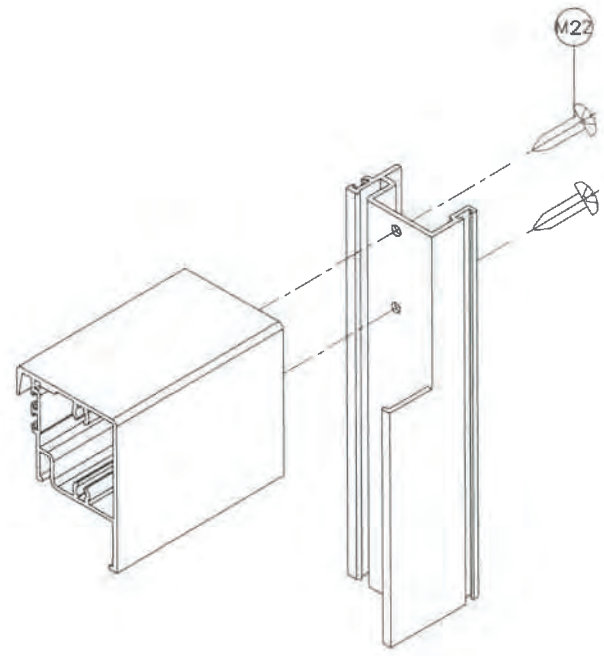
PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 23-0913.06
Expiration Date 05/04/2027
By *[Signature]*
Miami-Dade Product Control

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W16-57ES

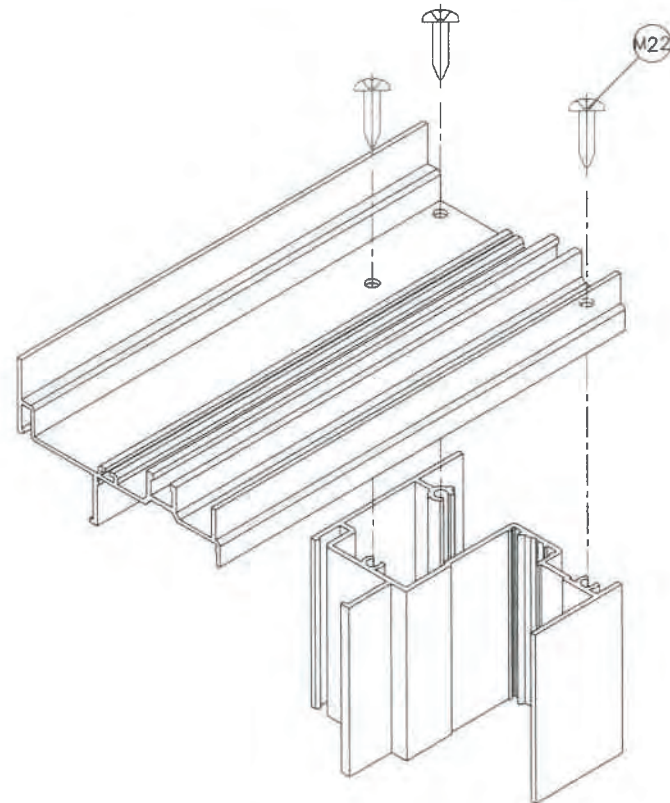
ES-EL100 ALUM SINGLE HUNG WDW. (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

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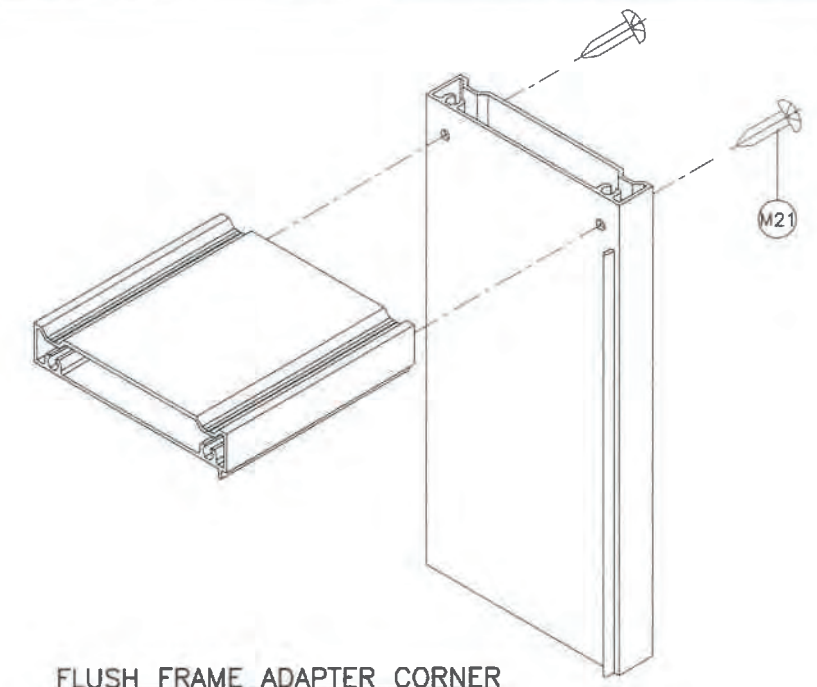
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scale: 1/2" = 1"
dr. by: TARIQ
chk. by:
drawing no. **W16-57**
sheet 9 of 10



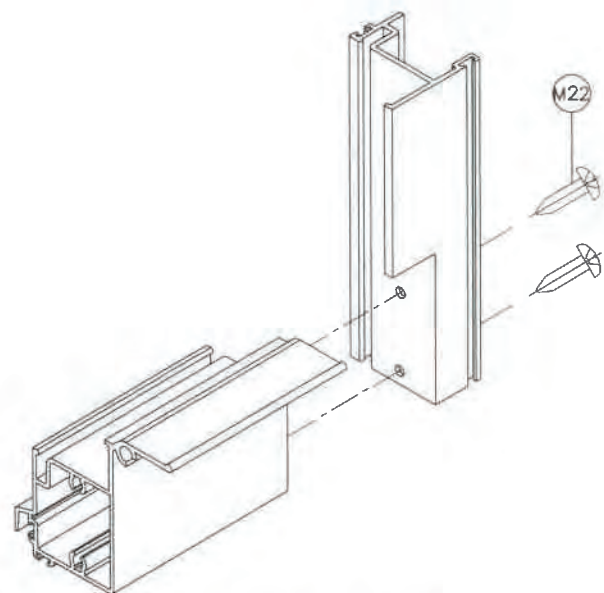
VENT TOP CORNER



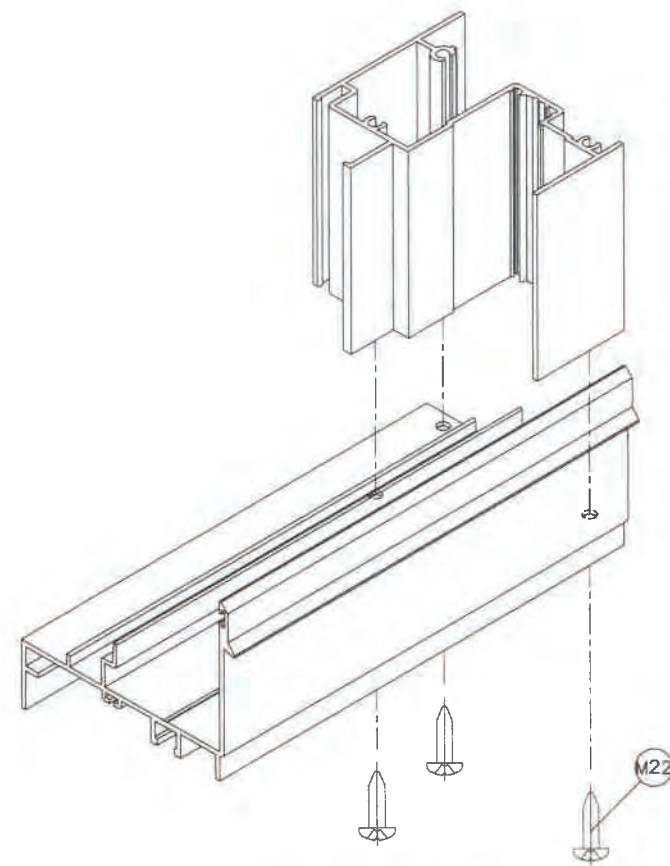
FRAME TOP CORNER



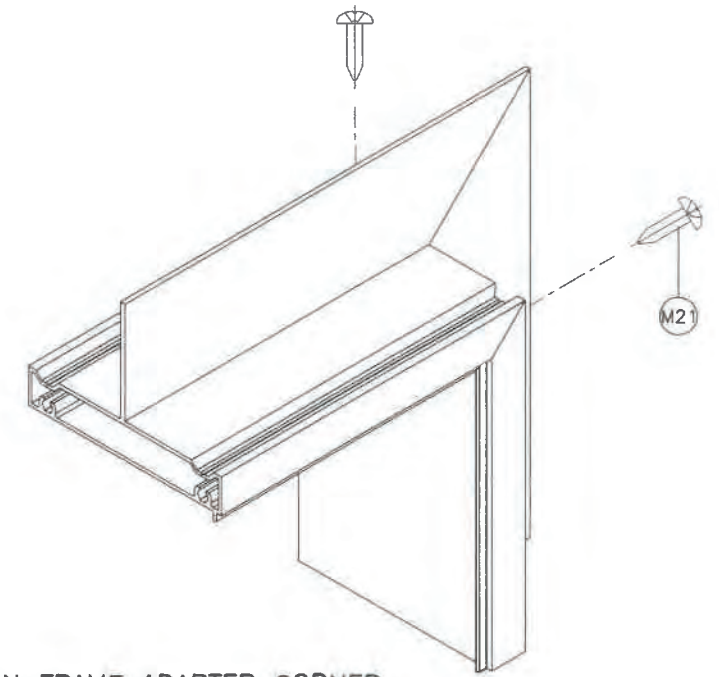
FLUSH FRAME ADAPTER CORNER



VENT BOTTOM CORNER



FRAME BOTTOM CORNER



FIN FRAME ADAPTER CORNER

PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. 23-0913.06

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By 
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SEP 03 2023



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