



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

Tecnoglass, LLC
3550 NW 49 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 "PH-4400" Aluminum Single Hung Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **W08-78**, titled "Series PH4400 Alum Single Hung Window (L.M.I.)", sheets 1 through 9 of 9, dated 09/10/08, with revision **F** dated 09/20/23, 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, **Barranquilla, Colombia S.A.**, 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.

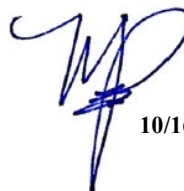
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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 No. **21-0405.19** and consists of this page 1, 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.**




10/16/23

NOA No. 23-0928.08
Expiration Date: October 25, 2024
Approval Date: October 26, 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. 09-0604.21)
2. Drawing No. **W08-78**, titled "Series PH4400 Alum Single Hung Window (L.M.I.)", sheets 1 through 9 of 9, dated 09/10/08, with revision **E** dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 21-0405.19)

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) Kinetic Energy Drop Load Test, (400 Ft. Lb.) per ANSI Z97.1
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5470**, dated 03/20/08, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under NOA No. 09-0604.21)
2. Test reports on: 1) Large Missile Impact Test per FBC, TAS 201-94
2) Cyclic Wind Pressure Loading per FBC, TAS 203-94
3) Kinetic Energy Drop Load Test, (400 Ft. Lb.) per ANSI Z97.1
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5469**, dated 02/19/08, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under NOA No. 09-0604.21)
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
along with marked-up drawings and installation diagram of Series PH4400 Aluminum Single Hung Window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5155**, dated 02/27/07, signed and sealed by Carlos S. Rionda, P.E.
(Submitted under NOA No. 09-0604.21)

C. CALCULATIONS

1. Anchor verification and structural analysis complying with **FBC 6th Edition (2017)** dated 07/03/18, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under NOA No. 16-0510.07)


Manuel Pérez, P.E.
Product Control Examiner
NOA No. 23-0928.08
Expiration Date: October 25, 2024
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS


1. Notice of Acceptance No. **17-0808.02** issued to **Kuraray America, Inc.** for their "SentryGlas® (Clear and White) Glass Interlayers" dated 12/28/17, expiring on 07/04/23.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 7th Edition (2020)**, and of no financial interest, dated January 11, 2021, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
(Submitted under NOA No. 21-0405.19)
2. Asset purchase agreement dated 06/19/14, signed by Mr. Raul Casares, for and on behalf of R.C. Aluminum Industries, Inc. and Mr. José M. Daes, for and on behalf of Tecnoglass, LLC.
(Submitted under NOA No. 16-0510.07)
3. Statement letter dated 07/15/14, issued by R.C. Aluminum Industries, Inc. of sales of asset and relinquishing of all rights of NOA No. **12-0330.11**, signed by Raul Casares, for and on behalf of R.C. Aluminum Industries, Inc.
(Submitted under NOA No. 16-0510.07)
4. Department of State Certification of **TECNOGLASS, LLC** as a limited liability company, active and organized under the laws of the State of Florida, dated 03/03/14 and signed by Ken Detzner, Secretary of State.
(Submitted under NOA No. 16-0510.07)

G. OTHERS

1. Notice of Acceptance No. **16-0510.07**, issued to Tecnoglass, LLC, for their Series "PH4400 Aluminum Single Hung Window - L.M.I.", approved on 10/25/2018 and expiring on 10/25/2023.


Manuel Pérez, P.E.
Product Control Examiner
NOA No. 23-0928.08
Expiration Date: October 25, 2024
Approval Date: October 26, 2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **W08-78**, titled “Series PH4400 Alum Single Hung Window (L.M.I.)”, sheets 1 through 9 of 9, dated 09/10/08, with revision **F** dated 09/20/23, 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. **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.

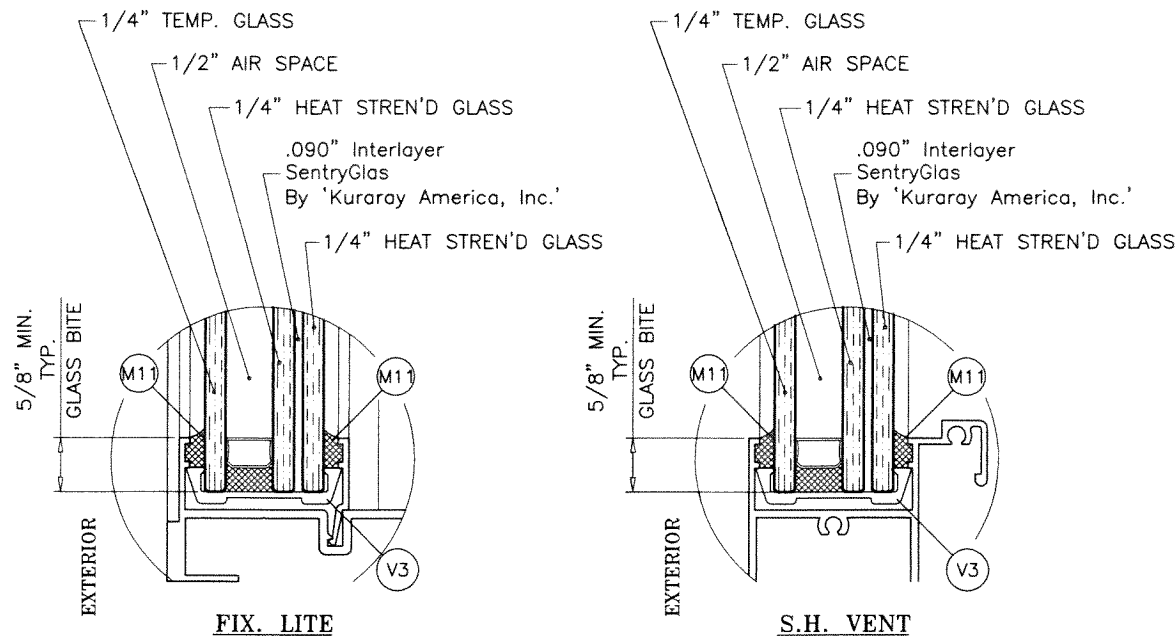
F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 7th Edition (2020)**, with **FBC 8th Edition (2023)** and of no financial interest, dated September 22, 2023, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Letter from Professional Engineer requesting a 1-year extension to allow time to perform verification test, dated September 22, 2023, signed by Jalal Farooq, P.E.
3. Testing agreement letter dated September 27, 2023, between QAI Laboratories, Inc. (QAI) and E.S. Windows, LLC, issued by QAI and signed by Lusinda Delgado, Technical Report Writer.

G. OTHERS

1. Notice of Acceptance No. **21-0405.19**, issued to Tecnoglass, LLC., for their Series “PH4400” Aluminum Single Hung Window – L.M.I.”, approved on 08/12/21 and expiring on 10/25/23.
2. This is a one-year approval, subjected to successful verification test, the final approval will be issued for a total of 5 years.


Manuel Pérez, P.E.
Product Control Examiner
NOA No. 23-0928.08
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GLAZING DETAIL
1-1/4" OVERALL LAM. INSUL. GLASS

1/2" AIR SPACE CONSISTING OF:
SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 982

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

SERIES PH4400
ALUMINUM SINGLE HUNG WINDOW

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS
OF S.H. TO S.H. OR S.H./FIX. TO S.H./FIX. IN MODULES OF TWO OR
MORE WINDOWS USING MIAMI-DADE COUNTY APPROVED MULLIONS IN
BETWEEN.
FOR WINDOWS CAPACITY SEE CHARTS ON SHEETS 1 THRU 3.
FOR MULLION CAPACITY SEE CHART ON SHEET 4.
LOWER DESIGN PRESSURES FROM WINDOW CAPACITY CHART OR
MULLION CAPACITY CHART 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.

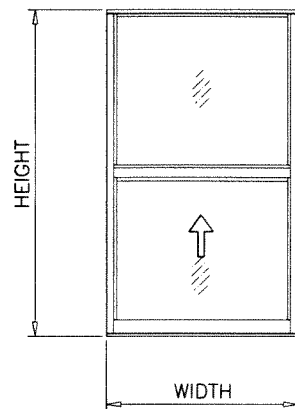
A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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.

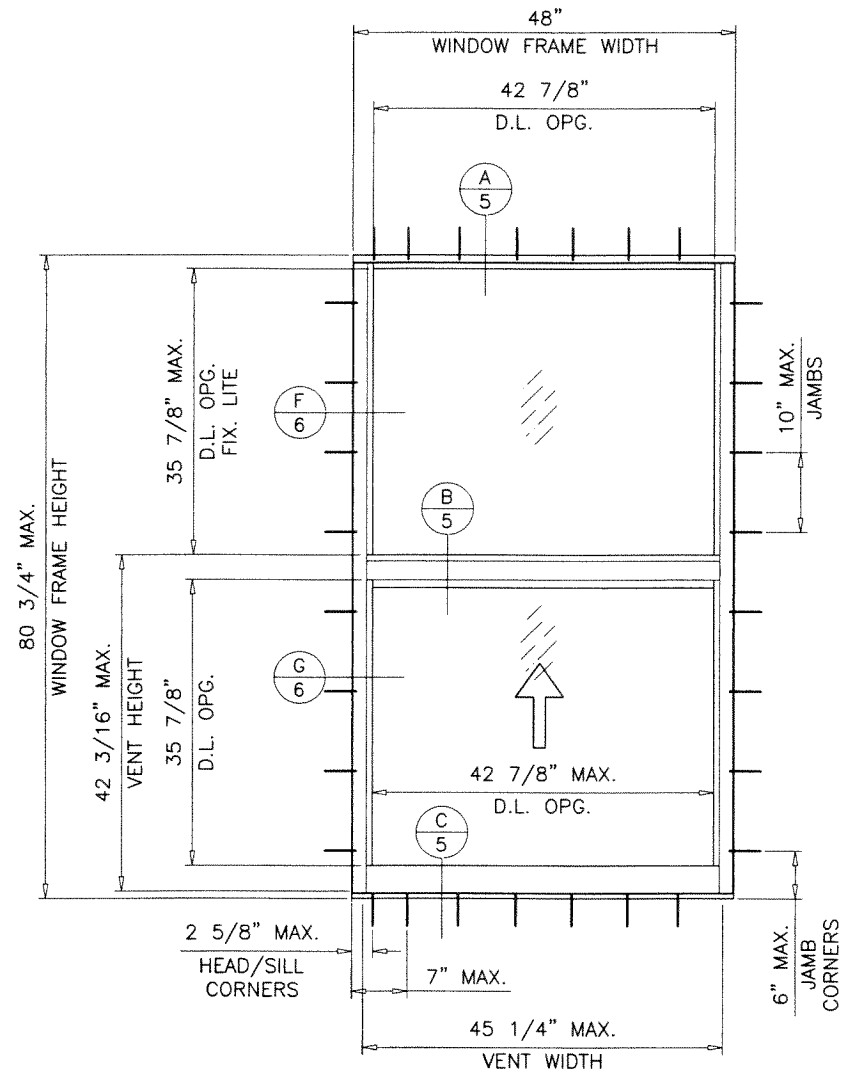
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

Table with 4 columns: WINDOW DIMS. (WIDTH, HEIGHT), INSUL. LAM. GLASS (EXT.(+), INT.(-)). Rows show design load capacity in PSF for various window sizes (36" to 102" wide, 48" to 102" high).



EQUAL LITES
SINGLE HUNG WINDOWS

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



TYPICAL ELEVATION
EQUAL LITES
S.H. WINDOWS

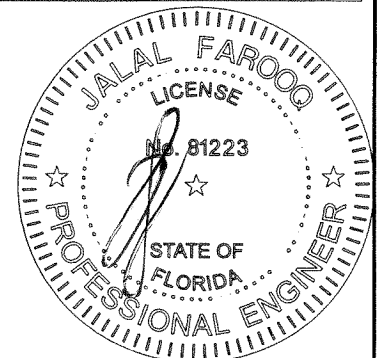
DAYLITE OPENINGS:

DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)
DLO WIDTH = FRAME WIDTH - 5.125 (VENT)
DLO HEIGHT = VENT HEIGHT - 6.313
VENT WIDTH = FRAME WIDTH - 2.75

PRODUCT COMPLIES WITH REQUIREMENTS OF ANSI Z97.1.
SAFEGUARD REQUIREMENTS TO BE VERIFIED.

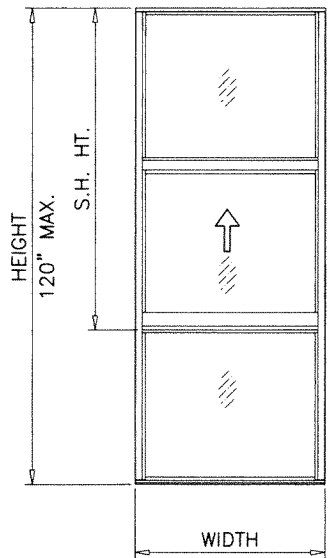
PRODUCT REVISED
As complying with the Florida
Building Code
NOA-No. 23-0928.08
Expiration Date: 10/25/2024
By: Manuel Perez
Miami-Dade Product Control

INSUL. LAM. GLASS
LARGE MISSILE IMPACT



Company information for AL-FAROOQ CORPORATION, including address (9360 SUNSET DRIVE, SUITE 220, MIAMI, FLORIDA 33173), contact details (TEL. (305) 264-8100, FAX. (305) 262-6978), and revision table.

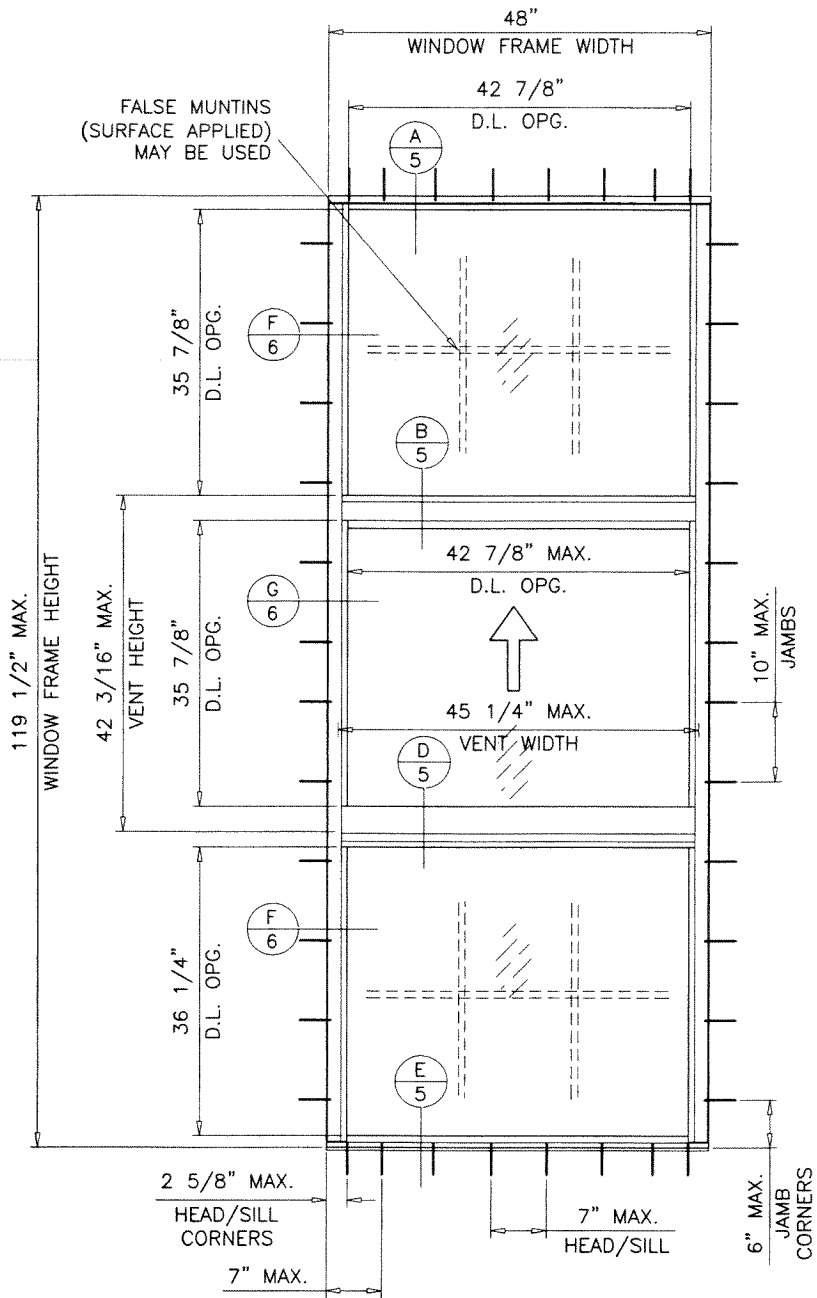
EQUAL LITES SINGLE HUNG/FIXED WINDOWS				
DESIGN LOAD CAPACITY - PSF				
WINDOW DIMS.			INSUL. LAM. GLASS	
WIDTH	S.H. HT.	HEIGHT	EXT.(+)	INT.(-)
36"	48"	72"	120.0	120.0
42"			120.0	120.0
48"			105.0	105.0
54"			88.6	88.6
36"	54"	81"	120.0	120.0
42"			120.0	120.0
48"			97.9	97.9
54"			82.0	82.0
36"	60"	90"	120.0	120.0
42"			116.3	116.3
48"			92.6	92.6
54"			76.9	76.9
36"	66"	99"	120.0	120.0
42"			112.9	112.9
48"			88.7	88.7
54"			73.0	73.0
36"	72"	108"	120.0	120.0
42"			111.1	111.1
48"			85.9	85.9
54"			70.0	70.0
36"	78"	117"	120.0	120.0
42"			110.7	110.7
48"			84.0	84.0
54"			68.0	68.0
36"	80"	120"	120.0	120.0
42"			110.7	110.7
48"			84.0	84.0
54"			68.0	68.0



EQUAL LITES
SINGLE HUNG/FIXED WINDOWS

NOTE:
FOR ANSI Z97.1 COMPLIANCE LIMIT
MAX. WIDTHS TO 48".

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



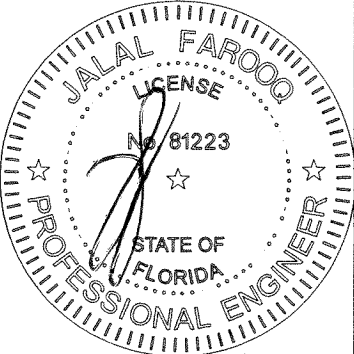
TYPICAL ELEVATION
EQUAL LITES
S.H./FIX. WDW.

DAYLITE OPENINGS:

DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)
DLO WIDTH = FRAME WIDTH - 5.125 (VENT)

DLO HEIGHT = VENT HEIGHT - 6.313
VENT WIDTH = FRAME WIDTH - 2.75

PRODUCT REVISED
As complying with the Florida
Building Code
NOA-No. 23-0928.08
Expiration Date: 10/25/2024
By: Manuel Perez
Miami-Dade Product Control
SEP 22 2023



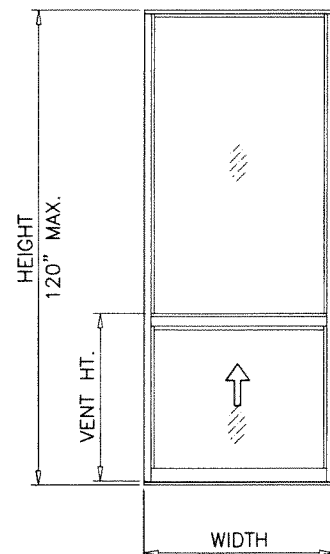
af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W08-78RC

SERIES PH4400 ALUM SINGLE HUNG WINDOW (L.M.I.)
TECNOGLASS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

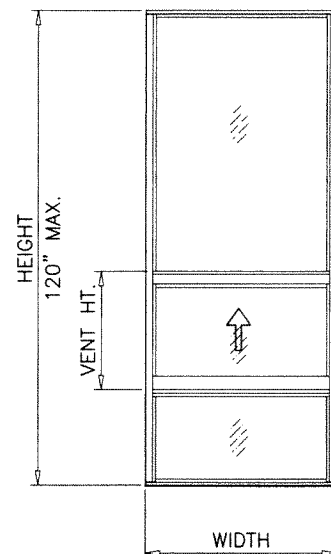
revisions:		description	
no	date	by	description
C	04.14.17	REV. PER RER COMMENTS	
D	09.25.18	NO CHANGE THIS SHEET	
E	11.18.20	UPDATED TO 2020 FBC	
F	09.20.23	NO CHANGE THIS SHEET	
date: 09-10-08		scale: 1/2"=1'-0"	
dr. by: TARIQ		chk. by:	
drawing no.		W08-78	
sheet 2 of 9			

DESIGN LOAD CAPACITY - PSF
INSUL. LAM. GLASS

WINDOW DIMS.		42-3/16" VENT HT.		36-3/16" VENT HT.		30-3/16" VENT HT.		24-3/16" VENT HT.	
WIDTH	HEIGHT	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
36"	84"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		—	—	68.1	68.1	71.7	71.7	76.9	76.9
36"	90"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		—	—	68.1	68.1	71.7	71.7	76.9	76.9
36"	96"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		—	—	68.1	68.1	71.7	71.7	—	—
36"	102"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	120.0	120.0
48"		83.3	83.3	85.4	85.4	89.3	89.3	95.5	95.5
54"		—	—	68.1	68.1	—	—	—	—
36"	108"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	119.6	119.6
48"		83.3	83.3	85.4	85.4	89.3	89.3	—	—
36"	114"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	115.3	115.3	—	—
48"		83.3	83.3	85.4	85.4	—	—	—	—
36"	120"	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
42"		110.7	110.7	111.6	111.6	—	—	—	—
48"		83.3	83.3	—	—	—	—	—	—

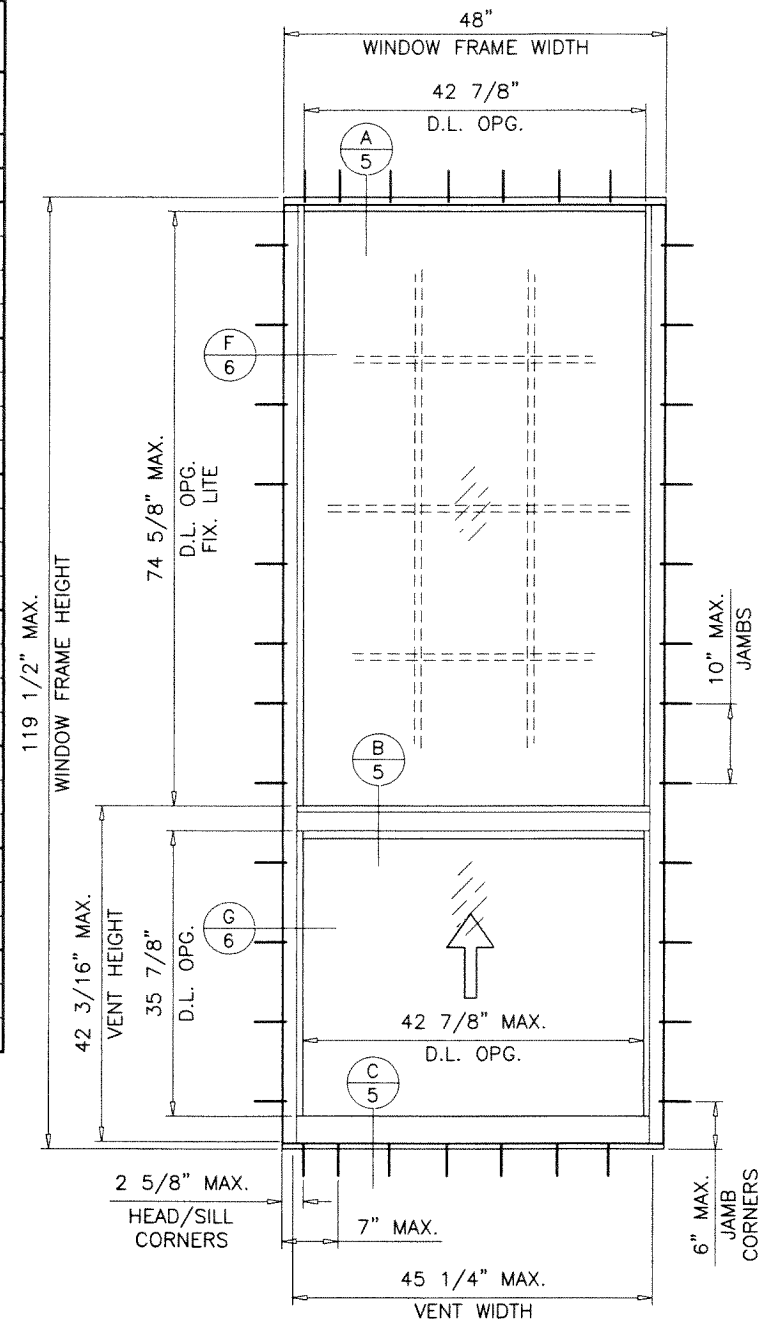


UNEQUAL LITES (ORIEL)
SINGLE HUNG WINDOWS



UNEQUAL LITES (ORIEL)
SINGLE HUNG/FIXED WINDOWS

NOTE:
FOR ANSI Z97.1 COMPLIANCE LIMIT
MAX. WIDTHS TO 48".



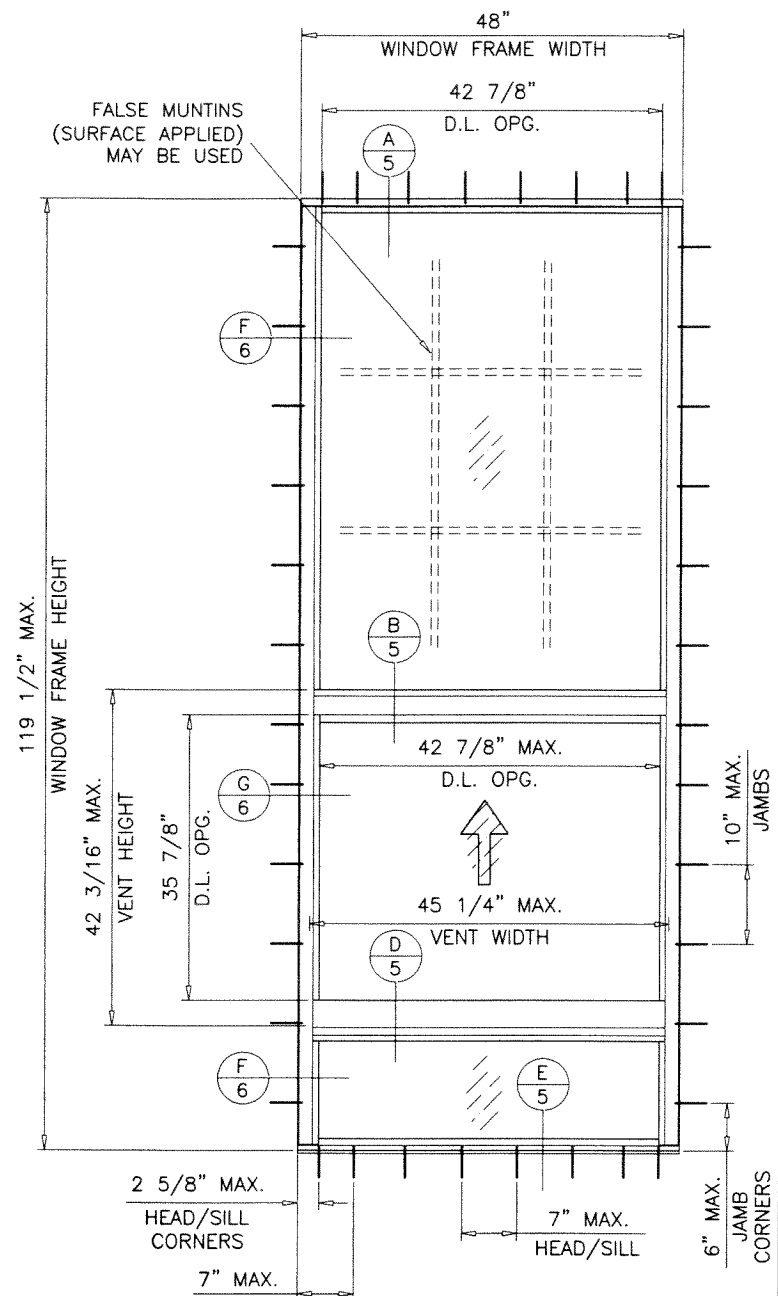
TYPICAL ELEVATION
UNEQUAL LITES (ORIEL TYPE)
S.H. WINDOWS

DAYLITE OPENINGS:

DLO WIDTH = FRAME WIDTH - 5.125 (FIX. LITE)
DLO WIDTH = FRAME WIDTH - 5.125 (VENT)

$$\text{DLO HEIGHT} = \text{VENT HEIGHT} - 6.313$$
$$\text{VENT WIDTH} = \text{FRAME WIDTH} - 2.75$$

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

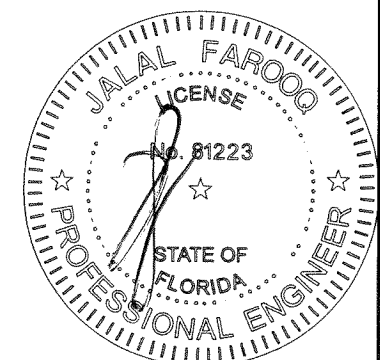


TYPICAL ELEVATION
UNEQUAL LITES
S.H./FIX. WDW.

PRODUCT REVISED
As complying with the Florida
Building Code
NOA-No. 23-0928.08
Expiration Date: 10/25/2024

By: Manuel Perez
Miami-Dade Product Control

SEP 22 2023



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

SERIES PH4400 ALUM SINGLE HUNG WINDOW (L.M.I.)

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

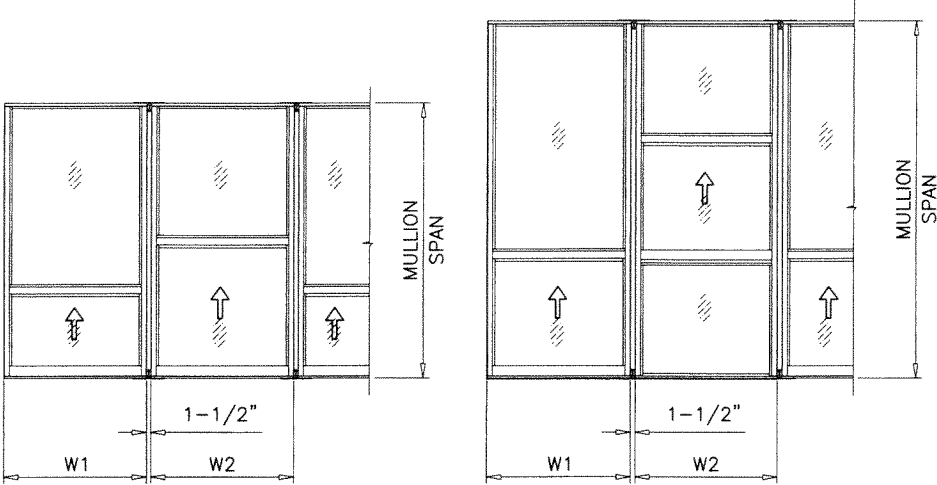
revisions:		no	date	by	description
	C	04.14.17			REV. PER PER COMMENTS
	D	09.25.18			NO CHANGE THIS SHEET
	E	11.18.20			UPDATED TO 2020 FBC
	F	09.20.23			NO CHANGE THIS SHEET

date: 09-10-08
scale: 1/2"=1'-0"
dr. by: TARIQ
chk. by:

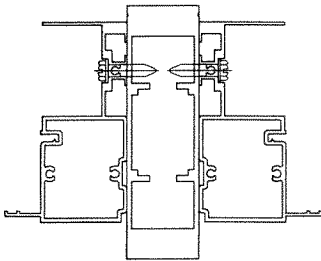
drawing no.
W08-78

sheet 3 of 9

MULLION CAPACITY CHART - PSF			
WINDOW DIMS.		STD. MULLION	
WIDTH (W)	MULL SPAN	EXT.(+)	INT.(-)
37-1/2"	78"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	84"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	90"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	96"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	102"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	108"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		118.4	118.4
37-1/2"	114"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0
37-1/2"	120"	120.0	120.0
43-1/2"		120.0	120.0
49-1/2"		120.0	120.0
54"		120.0	120.0



$$\text{WIDTH (W)} = \frac{W1 + W2}{2} + 1-1/2"$$



STD. MULLION

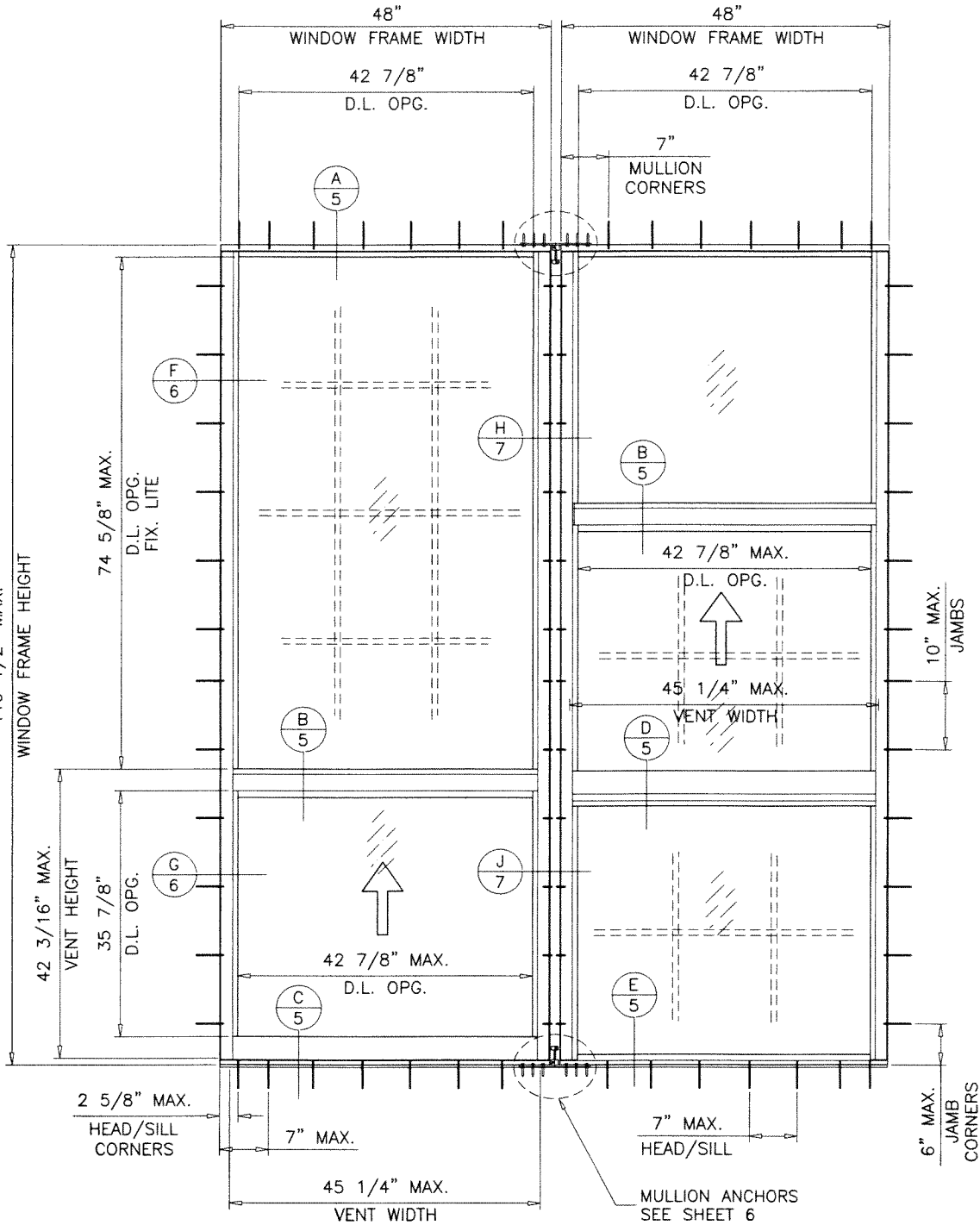
Ix IN^4	Sx IN^3
16.8106	6.3410

REFER TO SHEET 1 THRU 3 TO OBTAIN CAPACITY OF
EQUAL LITE AND UNEQUAL LITES SINGLE HUNG WINDOWS
AND SINGLE HUNG/FIXED WINDOWS

REFER TO CHARTS ABOVE TO OBTAIN MULLION CAPACITY.

USE LOWEST VALUES OF WINDOW CAPACITY CHARTS OR
MULLION CAPACITY CHART.

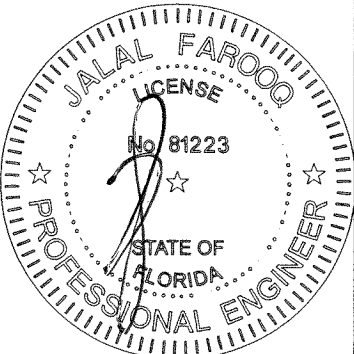
NOTE:
FOR ANSI Z97.1 COMPLIANCE LIMIT
MAX. WIDTHS TO 48".



TYPICAL ELEVATION
TESTED UNIT

PRODUCT REVISED
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Miami-Dade Product Control

SEP 22 2023



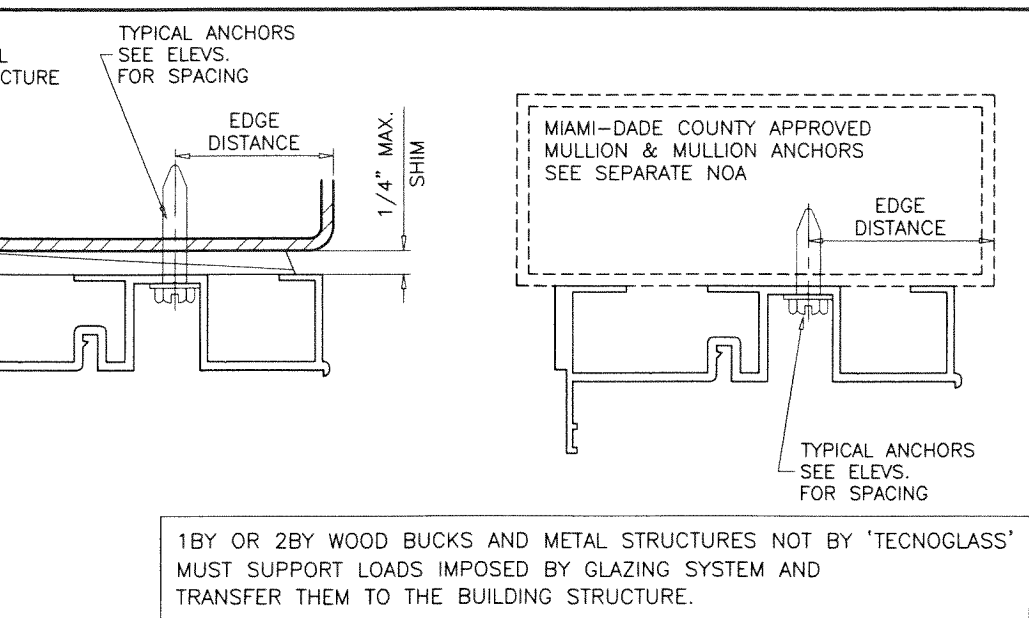
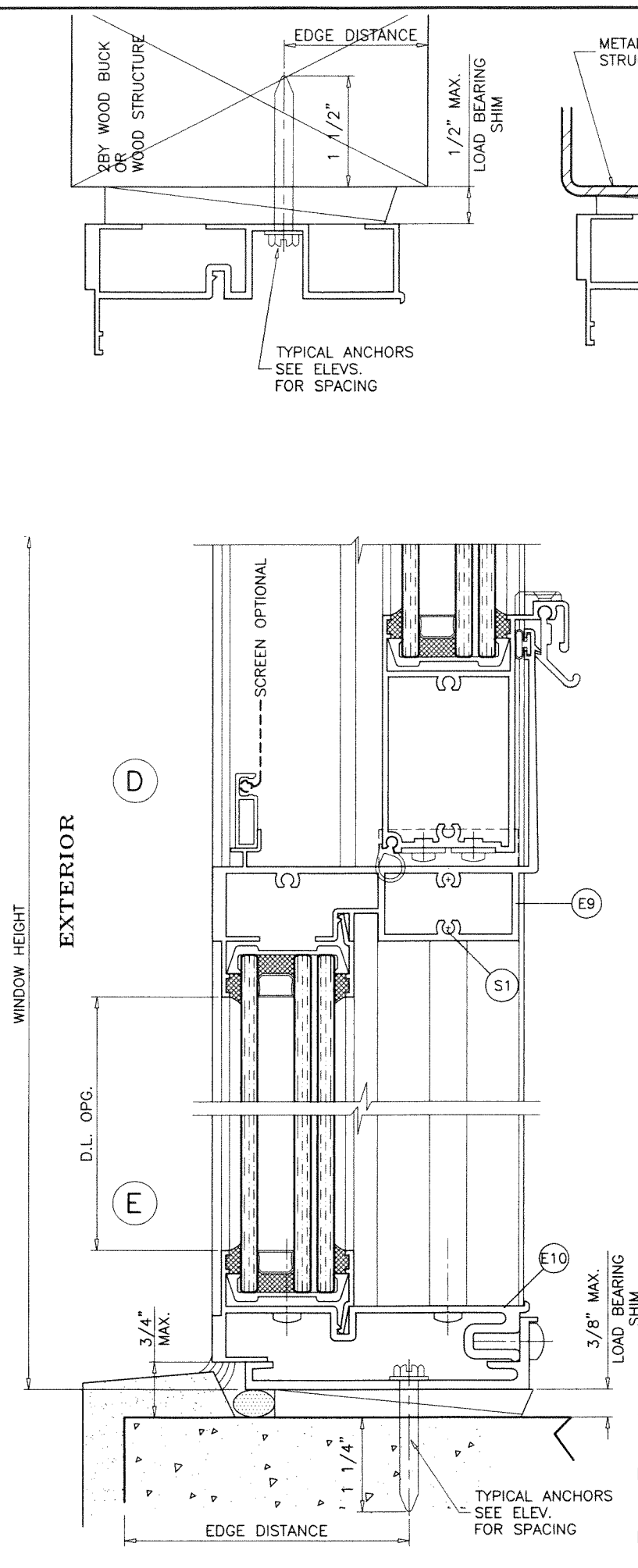
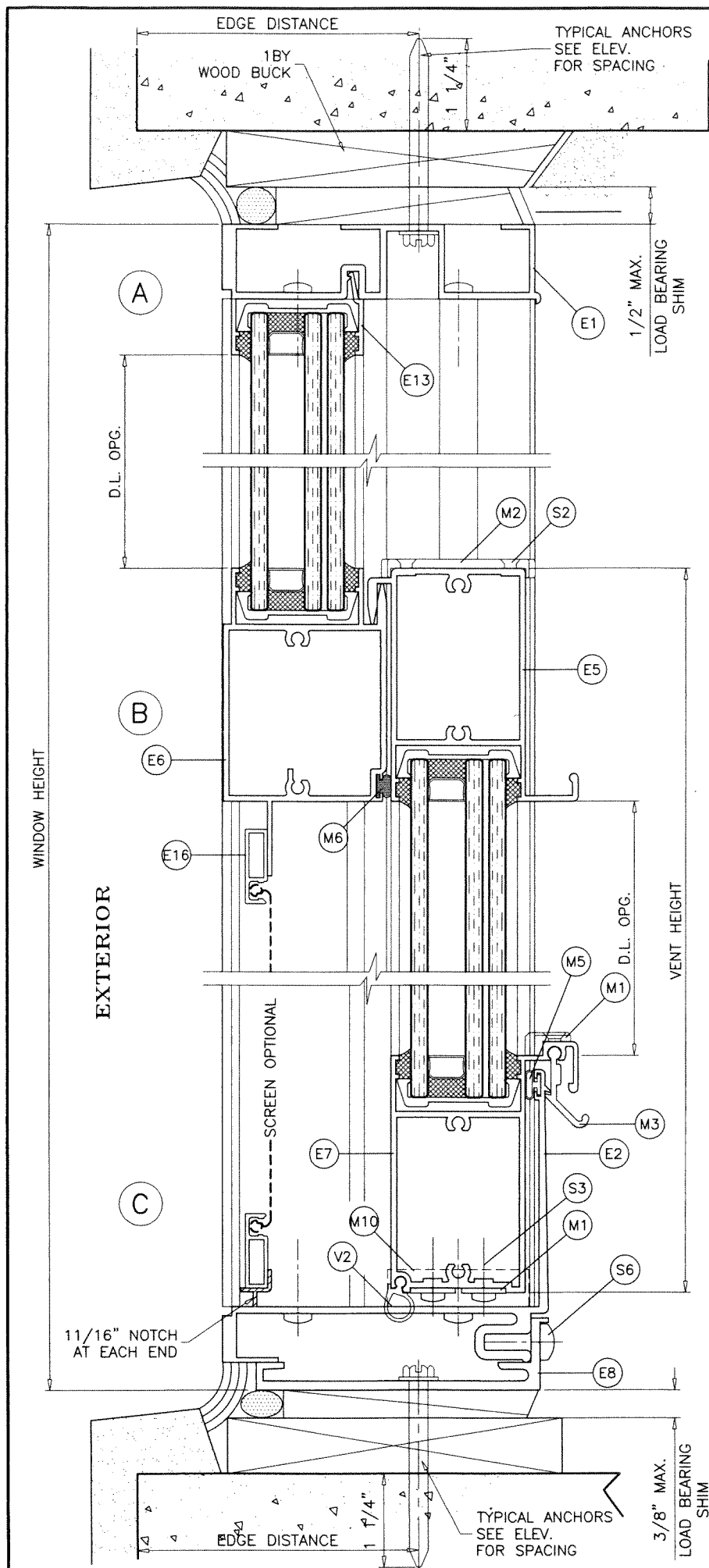
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL\W08-78RC

SERIES PH4400 ALUM SINGLE HUNG WINDOW (L.M.I.)
TECNOGLASS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

no	date	by	description
C	04.14.17		REV. PER PER COMMENTS
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date:	09-10-08
scale:	1/2" = 1'-0"
dr. by:	TARIQ
chk. by:	

drawing no.
W08-78
sheet 4 of 9



1BY OR 2BY WOOD BUCKS AND METAL STRUCTURES NOT BY 'TECNOGLASS' MUST SUPPORT LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

1/4" DIA. KWIK-CON II+ BY 'HILTI' (Fu=138 KSI, Fy=137 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 1-3/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS) 1-1/4" MIN. EMBED INTO GROUT-FILLED BLOCKS (JAMBS)

1/4" DIA. TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS) INTO MIAMI-DADE COUNTY APPROVED MULLIONS OR INTO METAL STRUCTURES (HEAD/SILL/JAMBS) (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS 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)

EDGE DISTANCE

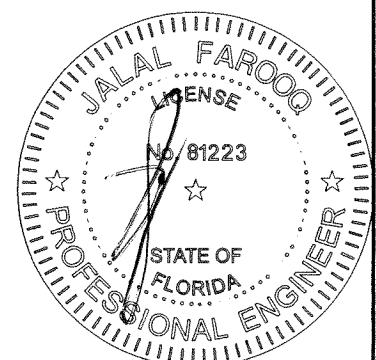
INTO CONCRETE AND BLOCKS = 2-1/2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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.

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH DOW CORNING 795 SEALANT.

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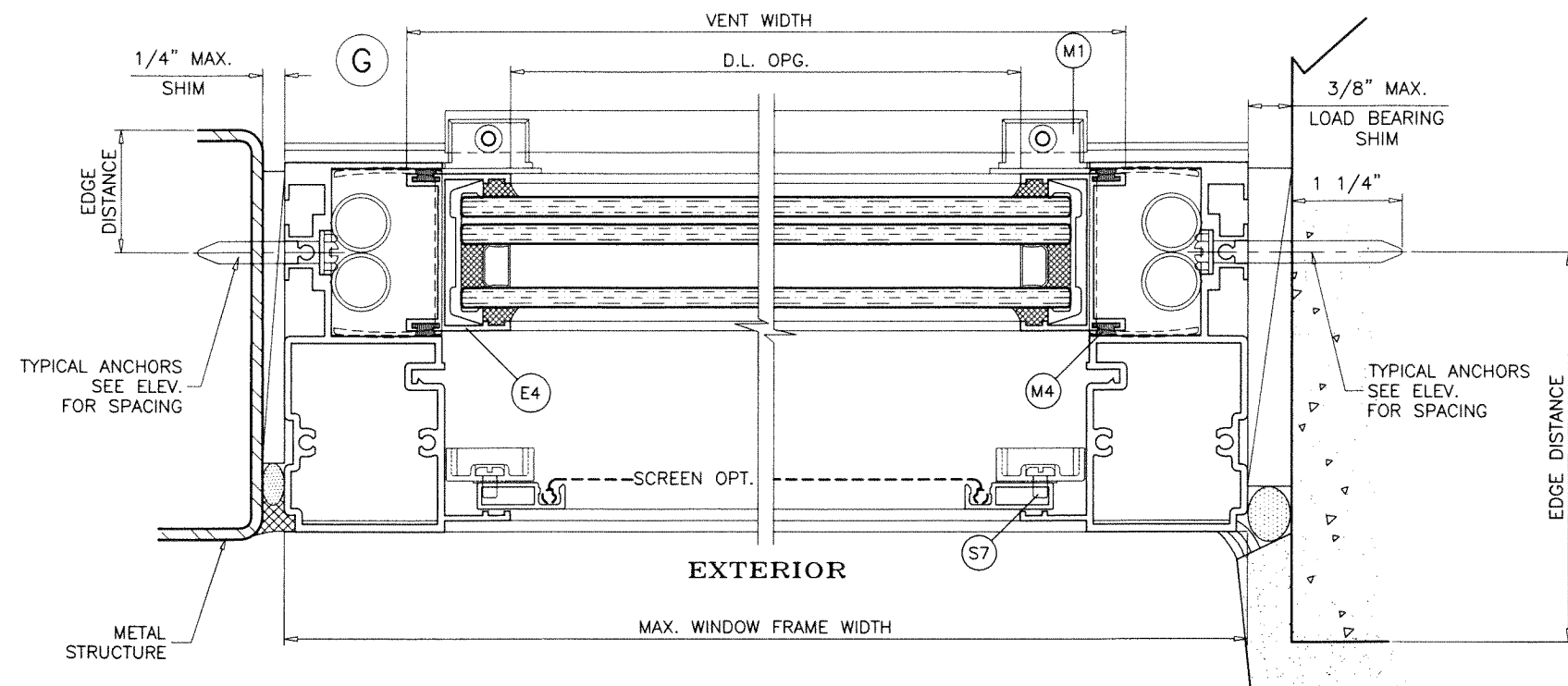
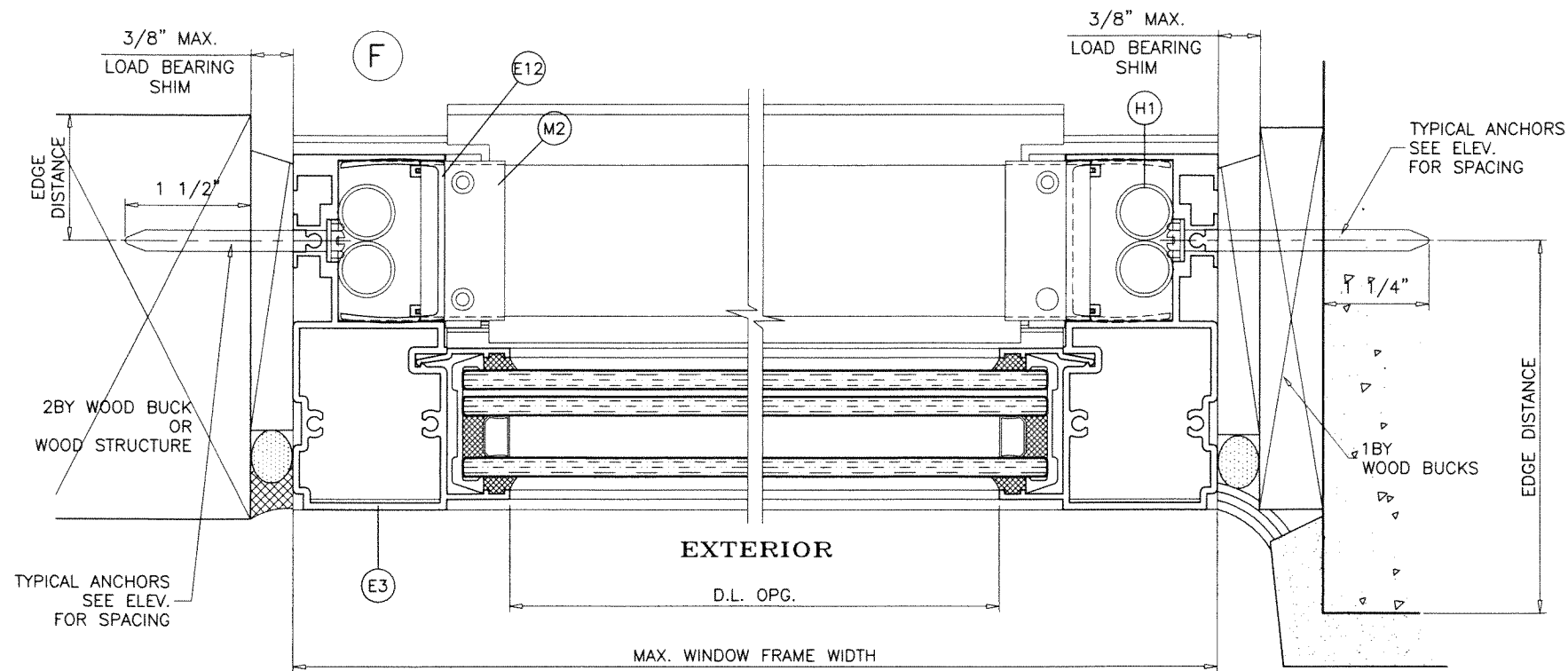
SERIES PH4400 ALUM SINGLE HUNG WINDOW (L.M.I.)

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3550 N.W. 49 STREET
MIAMI, FL. 33142
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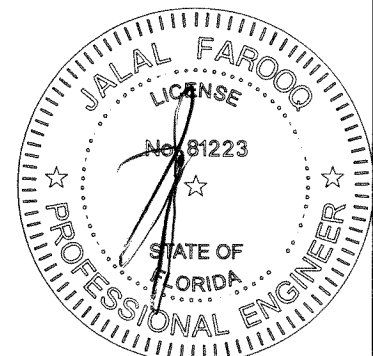
REV. PER RER COMMENTS
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F 09.20.23

date: 09-10-08
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dr. by: TARIQ
chk. by:

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W08-78
sheet 5 of 9



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 (C.A.N. 3538)

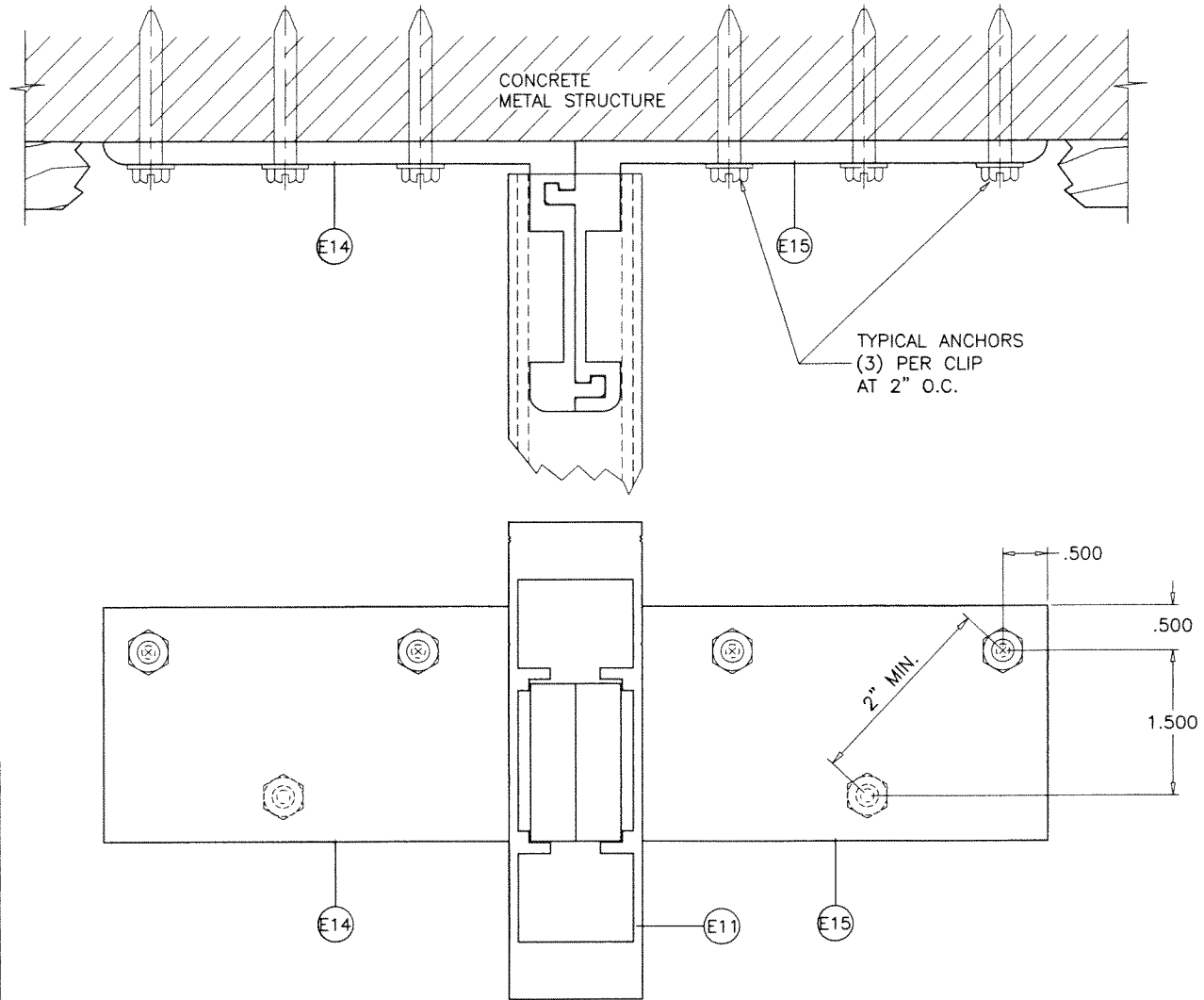
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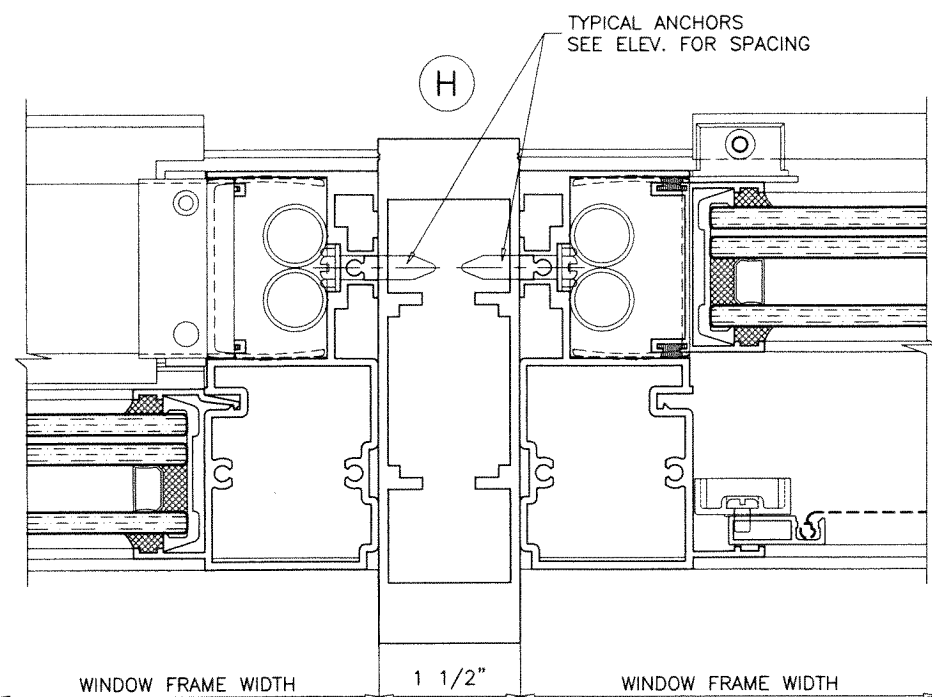
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dr. by:	TARIQ
chk. by:	

drawing no.	W08-78
sheet	6 of 9

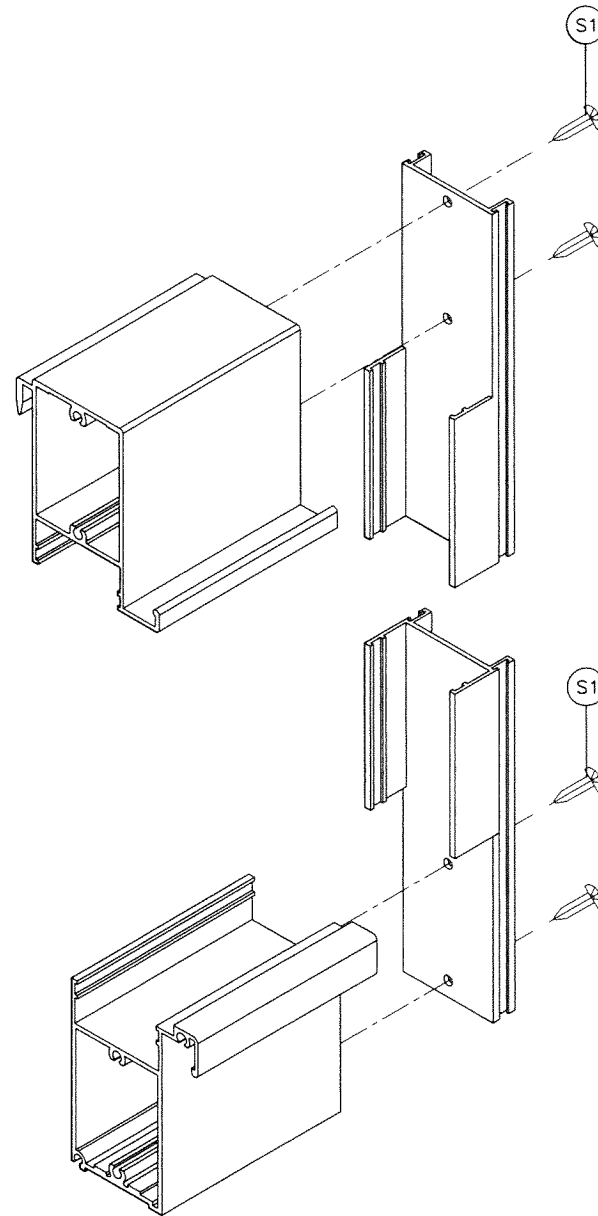
COMP-ANL\W08-78RC



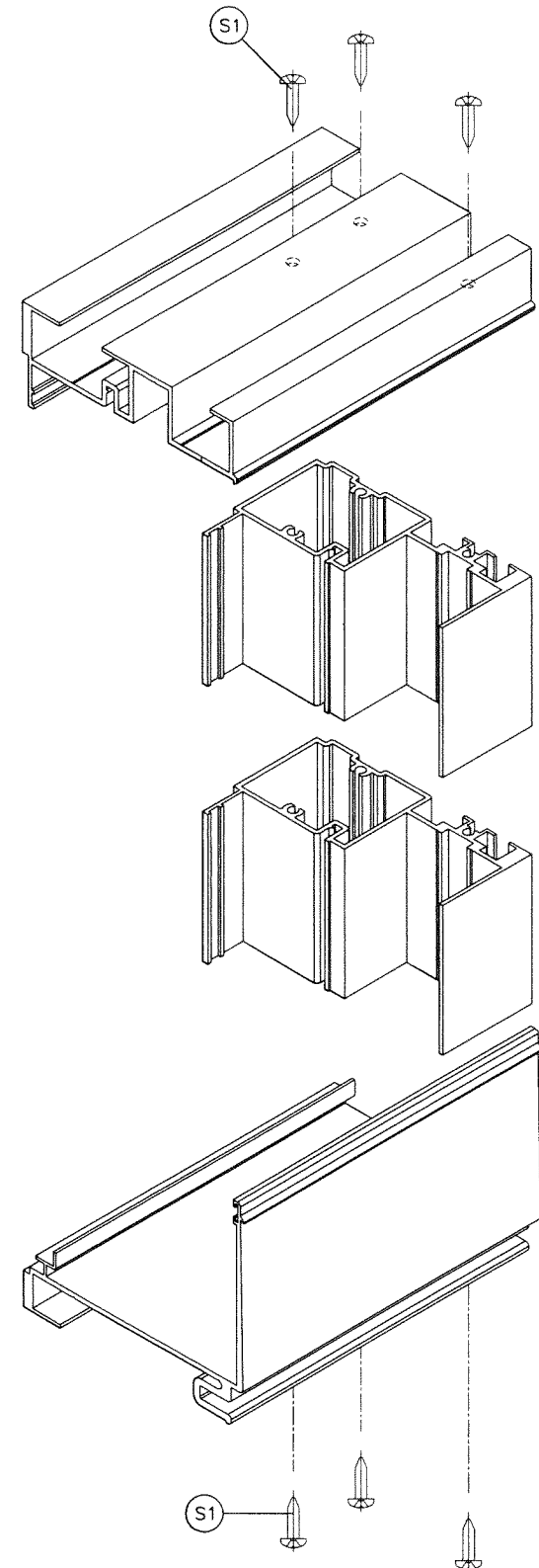
MULLION CLIP CONNECTION AT HEAD & SILL



SEE CHARTS ON SHEET 4 FOR MULLION LOAD CAPACITY



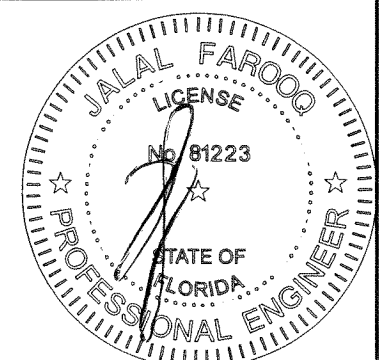
VENT CORNER DETAIL



FRAME CORNERS DETAIL

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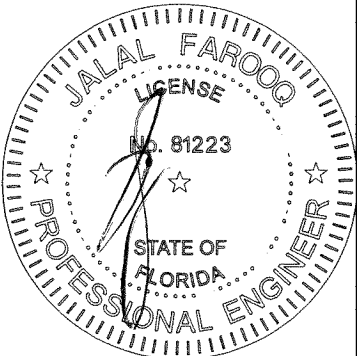
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dr. by: TARIQ
chk. by:
drawing no. **W08-78**
sheet 7 of 9

ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	PH4400-001	1	FRAME HEAD	6063-T6	-
E2	PH4400-002	1	FRAME SILL	6063-T6	-
E3	PH4400-003	2	FRAME JAMB	6005-T5	-
E4	PH4400-004	2	VENT JAMB	6063-T6	-
E5	PH4400-005	1	VENT TOP	6005-T5	-
E6	PH4400-006	1	MEETING RAIL	6005-T5	-
E7	PH4400-007	1	VENT BOTTOM	6063-T6	-
E8	PH4400-008	1	SILL ANCHOR CLIP	6063-T6	-
E9	PH4400-009	1	MEETING SILL	6063-T6	-
E10	PH4400-010	1	FRAME SILL 3P	6063-T6	-
E11	PH4400-011A	AS REQD.	MULLIOM	6063-T6	-
E12	PH4400-012	1	VENT STOP	6063-T6	AT TOP OF FRAME
E13	500Y-007	AS REQD.	GLAZING BEAD	6063-T6	-
E14	500Y-024	AS REQD.	FEMALE ANCHOR CLIP	6063-T6	TOP & BOTTOM OF MULLION
E15	500Y-025	AS REQD.	MALE ANCHOR CLIP	6063-T6	TOP & BOTTOM OF MULLION
E16	500Y-026	AS REQD.	EXTRUDED FRAME (OPTIONAL)	-	-
V2	V-071	AS REQD.	VENT BOTTOM WEATHERSEAL	VINYL	DUROMETER 65±5 SHORE A
V3	V-073	AS REQD.	MARINE GLAZING GASKET	EPDM	DUROMETER 75±5 SHORE A
S1		AS REQD.	#10 X 1" LG. PH. SMS POINT"B" ST/ST (ASSEMBLY SCREW)	-	-
S2		2/ GUIDE	#8 X 3/8" LG. FH. SMS TYPE "B" ST/ST (@ P-037 & P-013)	-	-
S3		-	#8 X 1/2" LG. P.H. SMS. ST/ST (@ BALANCE BRACKET)	-	AT BALANCE CLIP
S5		-	#8 X 1" LG. FH. SMS ST/ST (@ BALANCE)	-	AT TOP OF BALANCE
S6		AS REQD.	#14 X 3/4" LG. PH. SMS TYPE "B" ST/ST AT SILL	-	AT 4" FROM ENDS & 20" O.C. MAX.
S7		-	#8-32 X 1/4" LG. PHL. MACHINE SCREW ST/ST	-	-
H1		2/ WDW.	ULTRALIFT BALANCE	-	-
H2		2/ WDW.	ULTRALIFT NOT TILT BRACKET	-	-
M1	P-040	2/ VENT	VENT BOTTOM GUIDE	NYLON	BOTTOM OF SASH VENT
M2	P-037	2/ VENT	VENT TOP GUIDE	NYLON	TOP OF SASH VENT
M3	P-035	2/ WDW.	FINGER LOCK	ALUMINUM	AT 6" FROM EACH END
M4	U56	-	Q225T270 BLACK @ VENT JAMBS	FOAM	-
M5	V-086	-	OPERABLE VENT GASKET	VINYL	-
M6	U52	-	Q250T270 WHITE @ MEETING RAIL	-	-
M7	P-028	-	SCREEN RETAINER CLIP-90° ROTATION	-	-
M10		-	1 1/4" X 1 7/8" X 1/2" HIGH BAFFLE 30 PPI RETIC. W/ADHES AT BOTTOM	-	-
M11	DC-995	AS REQD.	GLAZING COMPOUND	SILICONE	DOW CORNING

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SEP 22 2023

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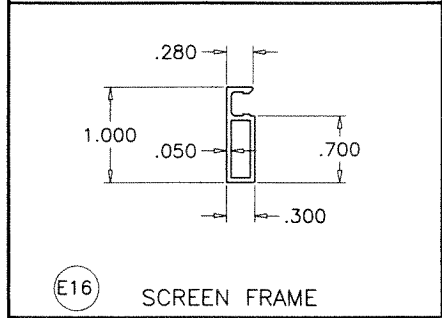
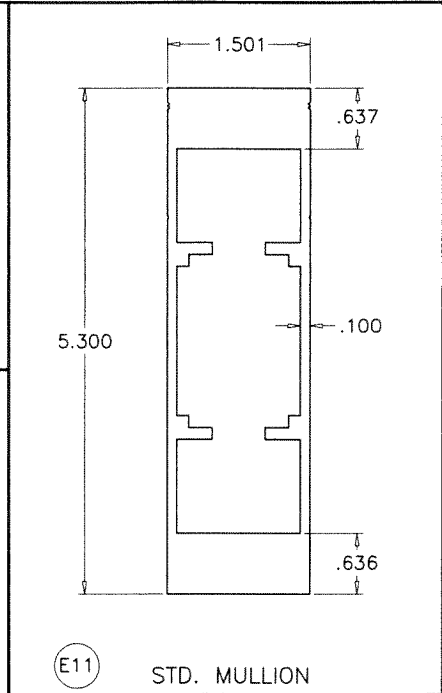
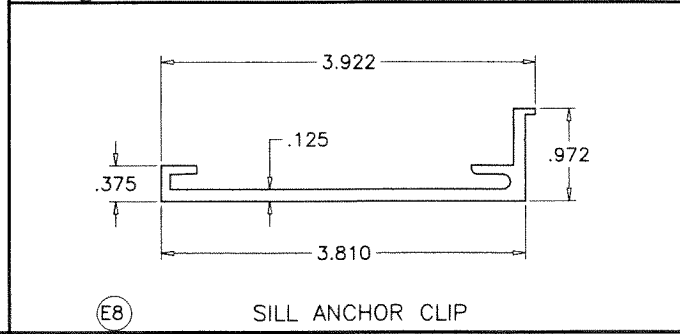
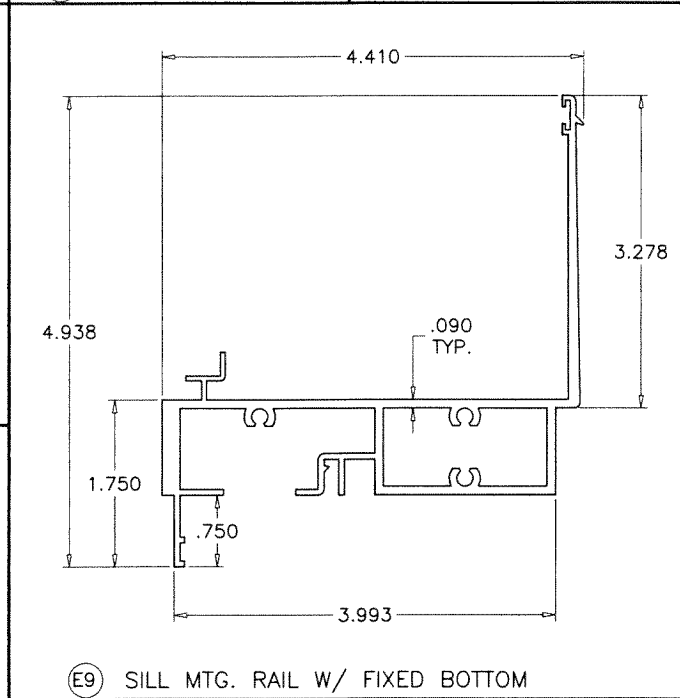
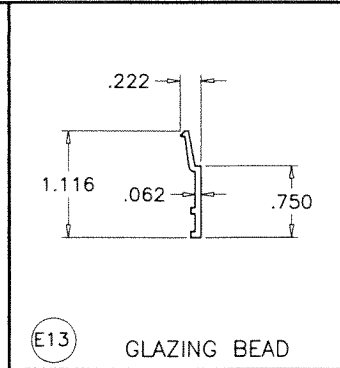
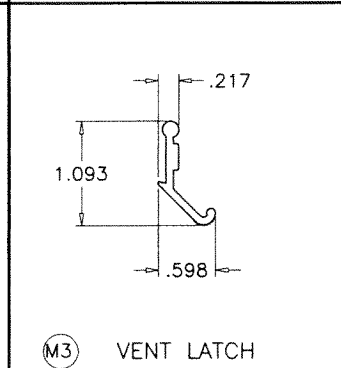
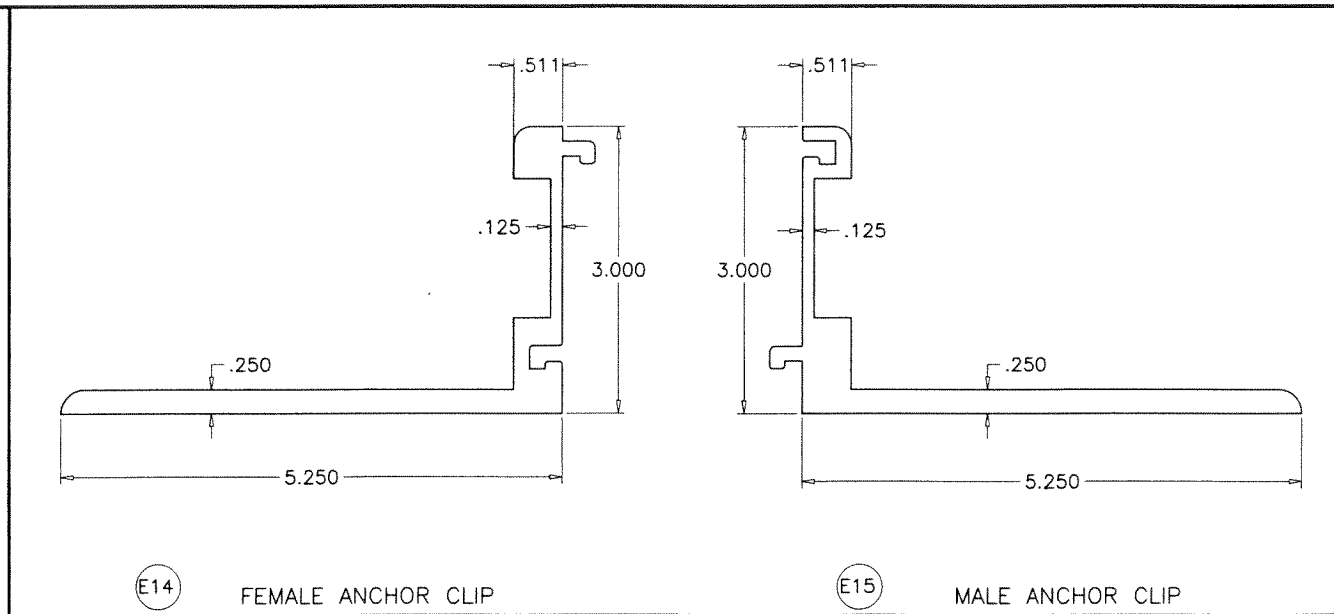
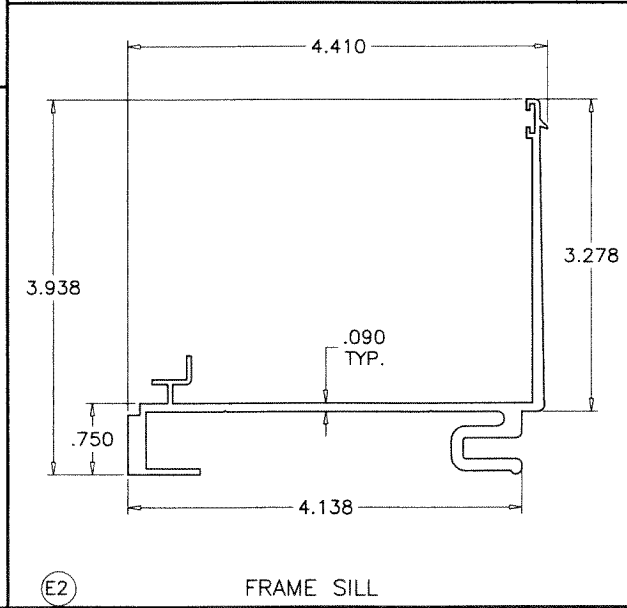
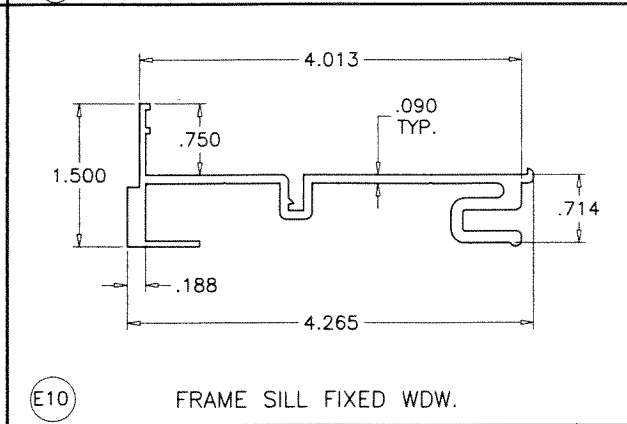
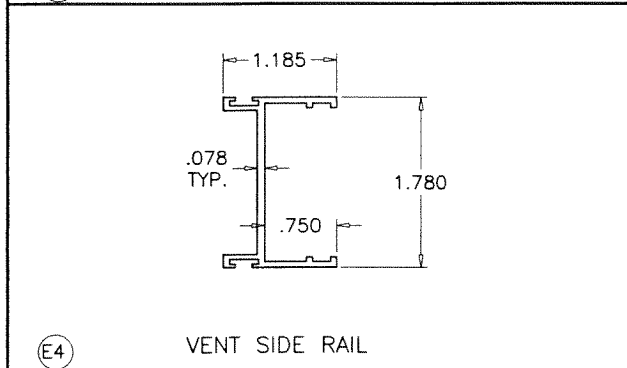
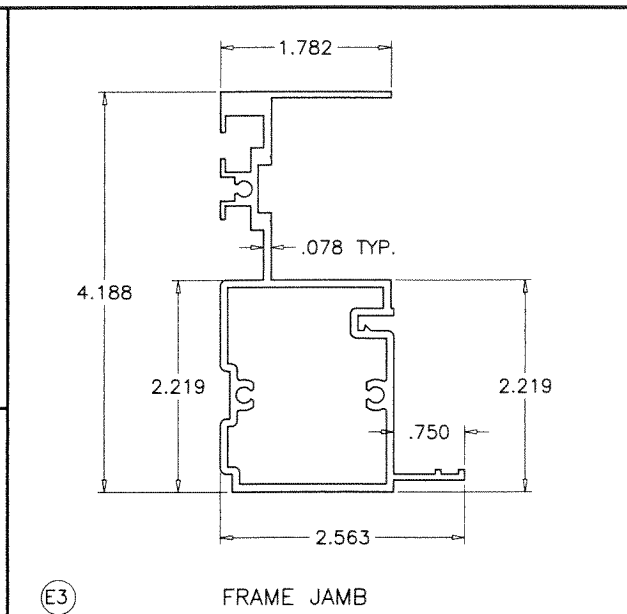
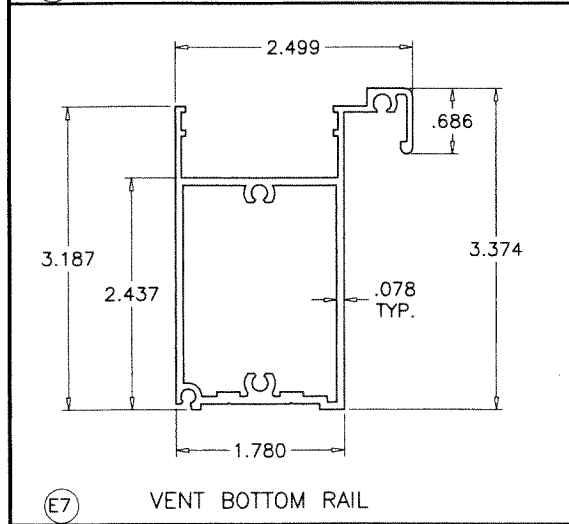
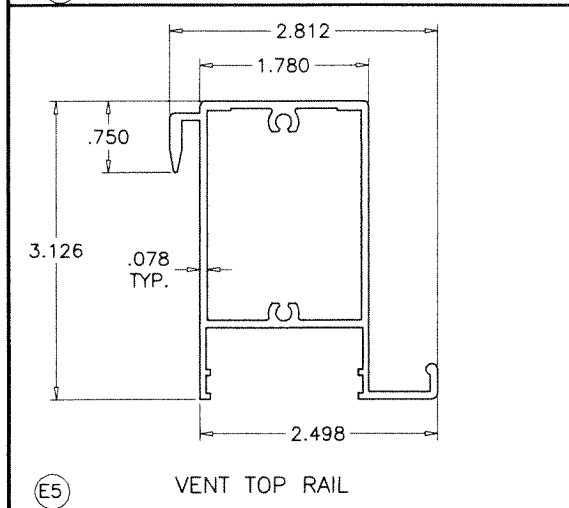
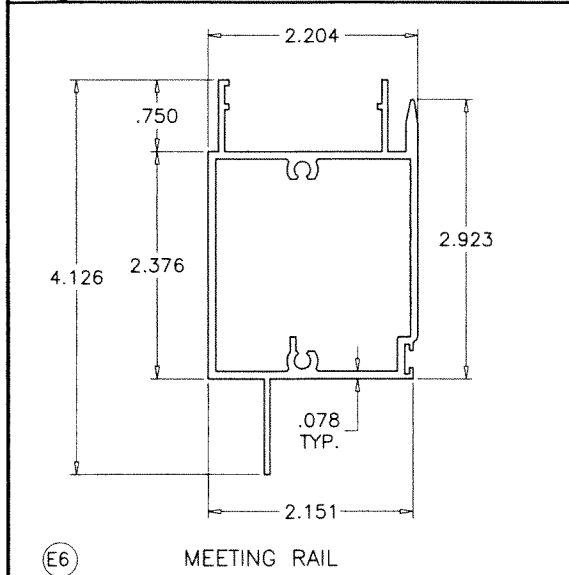
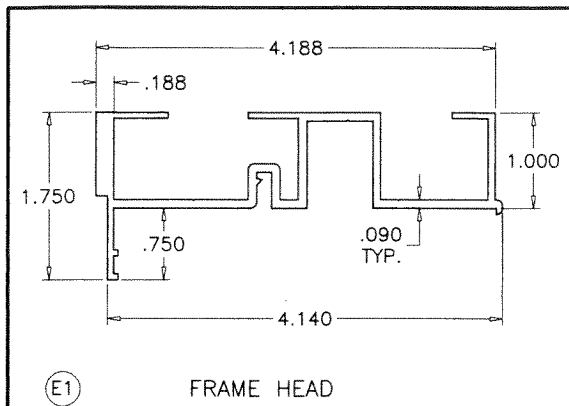
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chk. by:

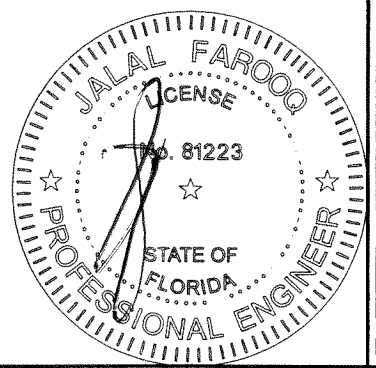
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W08-78

sheet 8 of 9



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