

THESE WINDOWS ARE RATED FOR SMALL MISSILE IMPACT.
F.B.C. APPROVED IMPACT RESISTANT SHUTTERS
REQUIRED FOR INSTALLATIONS UP TO 30 FT. OF GRADE.
SHUTTERS NOT REQD. FOR INSTALLATIONS ABOVE 30 FT. OF GRADE.

SERIES-100SH ALUMINUM SINGLE HUNG WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER
CHARTS SHOWN ON SHEET 3.

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
F.B.C. 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.

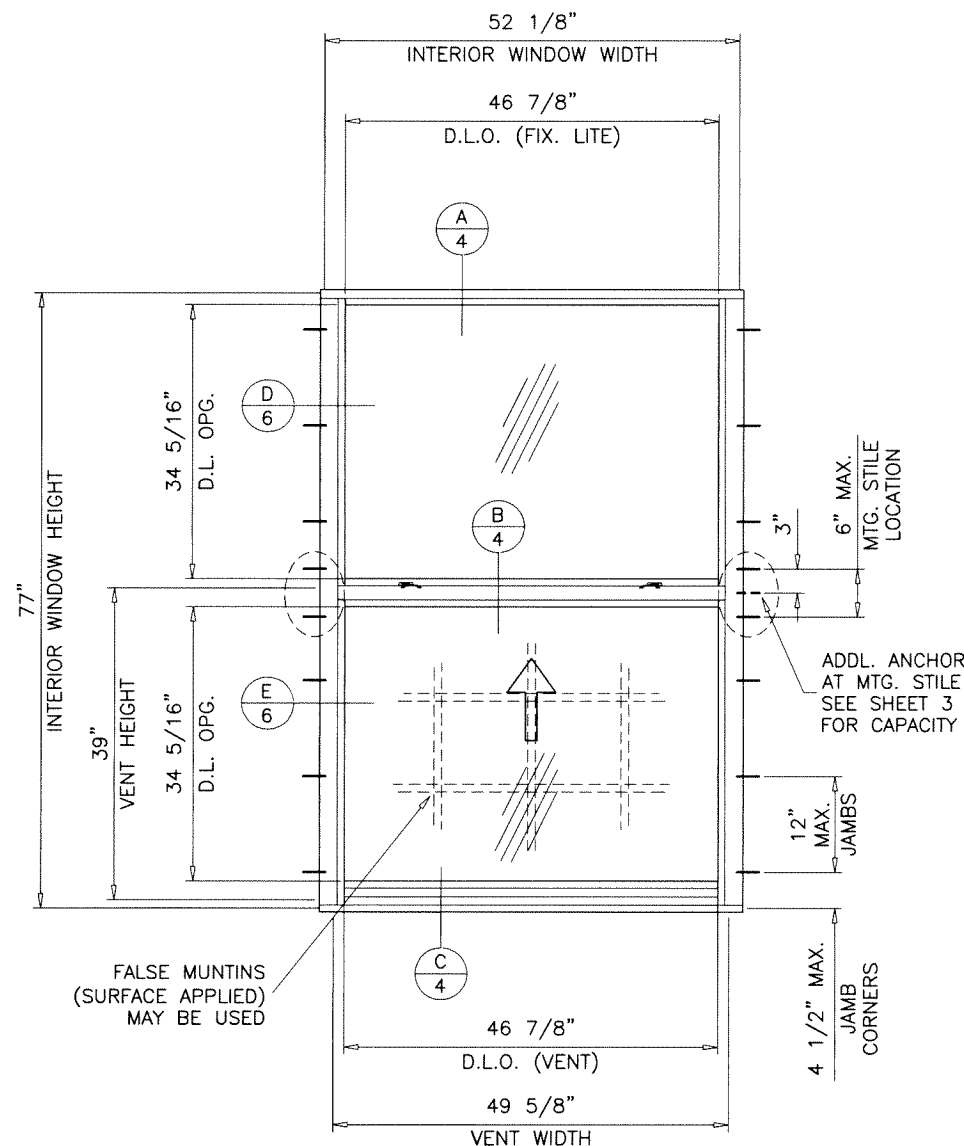
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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.

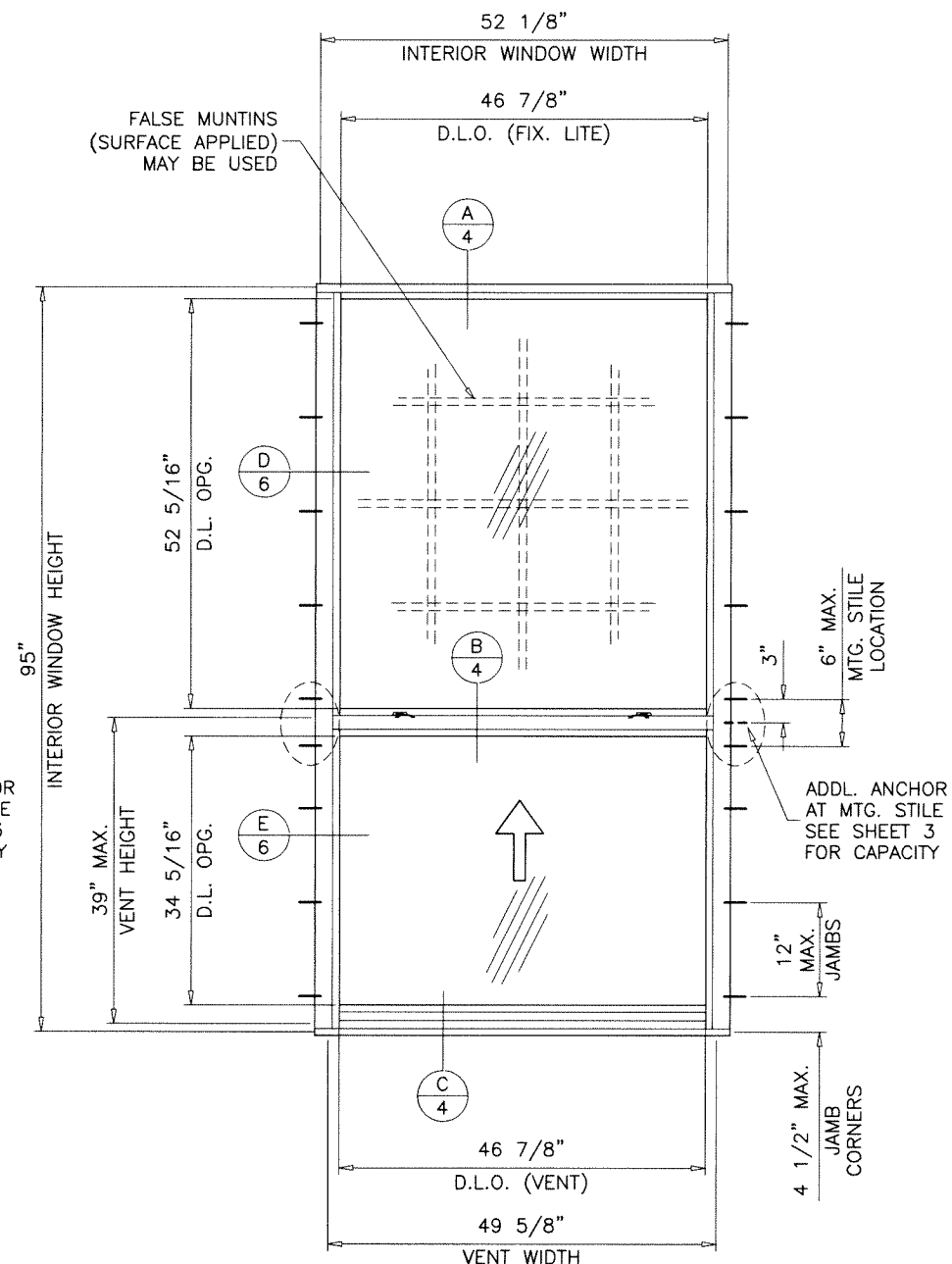
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION
FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY
OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR
WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,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

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

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION
IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE.
LABELING TO COMPLY WITH SECTION 1709.9.2.



TYPICAL ELEVATION
EQUAL LITES



TYPICAL ELEVATION
UNEQUAL LITES (ORIEL TYPE)
TESTED UNIT

Sealed: 7/31/2023

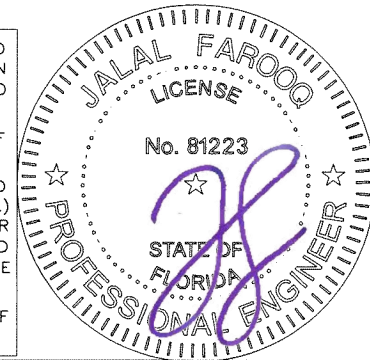
FL #41843

A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND
INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION
PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED
ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF
ALTERED BY ANY MEANS.

C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED
ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.)
FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER
USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED
ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE
SPECIFIC DRAWINGS FOR REVIEW.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF
THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



SERIES-100SH ALUM SINGLE HUNG WDW. (S.M.I.)

Empire Windows Industry, Inc.

6508 NW 77th Court

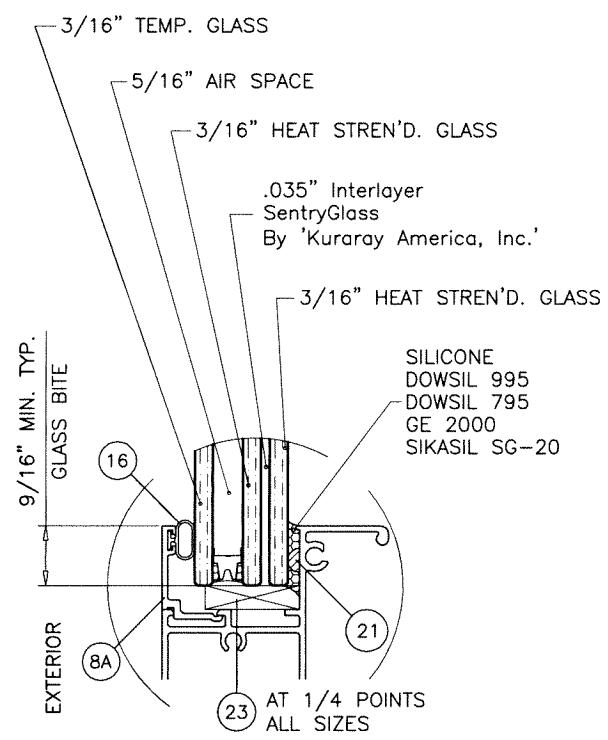
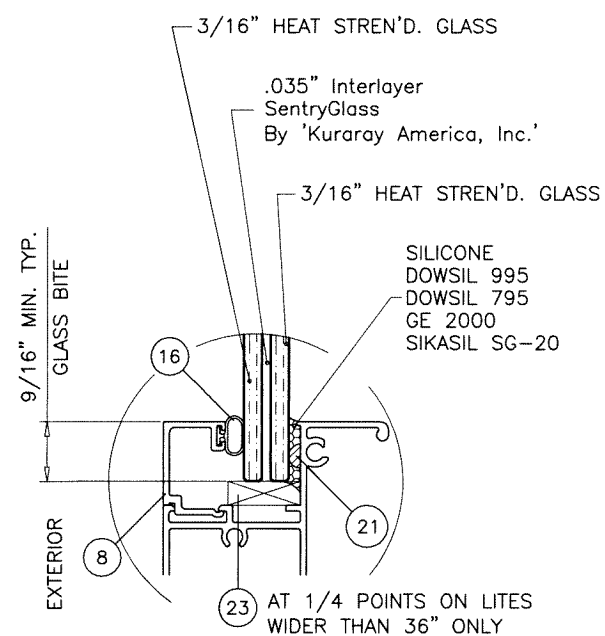
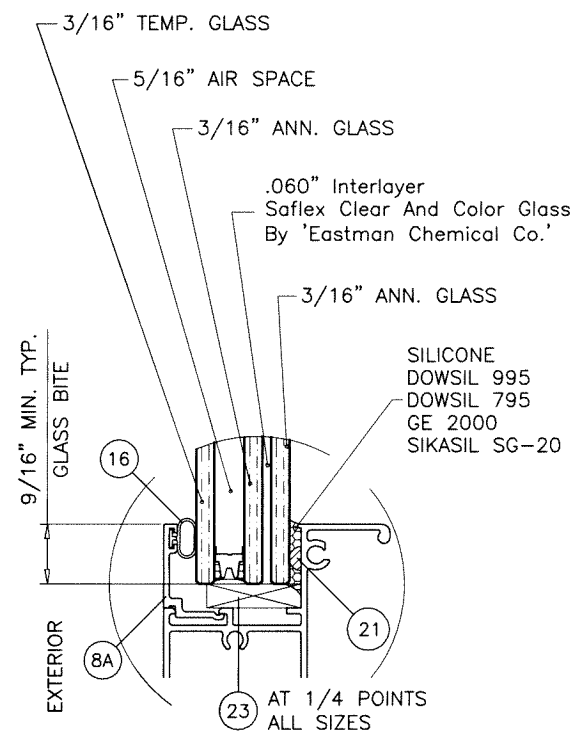
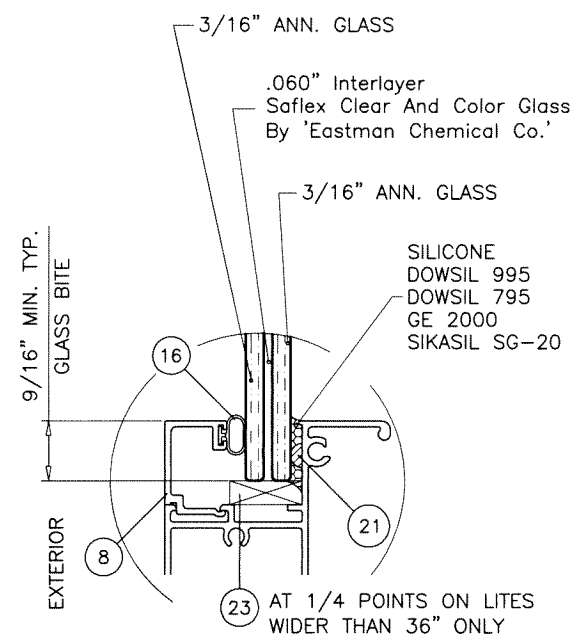
Miami, FL 33166

Phone: (786) 203-1574

www.empirewindowindustry.com

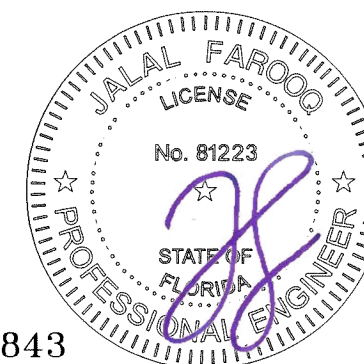
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
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COMP-ANL\22-51F-EW

revisions:		no	date	by	description
		A	07.18.23		UPDATED TO 2023 FBC
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drawing no.		22-51F			
sheet		1 of 8			



Sealed: 7/31/2023

FL #41843



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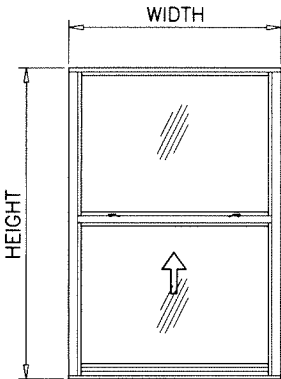
W.AFCENG.COM

EQUAL LITES WINDOWS DESIGN LOAD CAPACITY - PSF					
INTERIOR FRAME DIMS.		GLASS TYPES 'A', 'Ai', 'B', 'Bi'			
WIDTH	HEIGHT	EXT.(+)	1NT.(-)		
18-1/8"	25"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	95.0		
18-1/8"	37-3/8"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	95.0		
18-1/8"	49-5/8"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	95.0		
18-1/8"	55"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	95.0		
18-1/8"	62"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	95.0		
18-1/8"	71"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	93.1	80.0	95.0 *
18-1/8"	77"	80.0	95.0		
25-1/2"		80.0	95.0		
36"		80.0	95.0		
52-1/8"		80.0	90.2	80.0	95.0 *

EQUAL LITES WINDOWS DESIGN LOAD CAPACITY - PSF					
INTERIOR FRAME DIMS.		GLASS TYPES 'A', 'Ai', 'B', 'Bi'			
WIDTH	HEIGHT	EXT.(+)	1NT.(-)		
23"	47"	80.0	95.0		
29"		80.0	95.0		
31"		80.0	95.0		
35"		80.0	95.0		
41"		80.0	95.0		
47"		80.0	95.0		
23"	59"	80.0	95.0		
29"		80.0	95.0		
31"		80.0	95.0		
35"		80.0	95.0		
41"		80.0	95.0		
47"		80.0	95.0		
23"	71"	80.0	95.0		
29"		80.0	95.0		
31"		80.0	95.0		
35"		80.0	95.0		
41"		80.0	95.0		
47"		80.0	95.0		
23"	83"	80.0	95.0		
29"		80.0	95.0		
31"		80.0	95.0		
35"		80.0	95.0		
41"		80.0	95.0		
47"		80.0	95.0		
23"	93"	80.0	95.0		
29"		80.0	95.0		
31"		80.0	95.0		
35"		80.0	95.0		
41"		80.0	95.0		
47"		80.0	95.0		

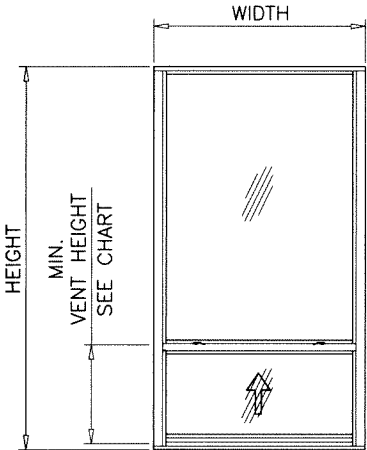
UNEQUAL LITES WINDOWS DESIGN LOAD CAPACITY - PSF						
INTERIOR FRAME DIMS.		MIN. VENT HEIGHT	GLASS TYPES 'A', 'Ai', 'B', 'Bi'			
WIDTH	HEIGHT		EXT.(+)	1NT.(-)		
18-1/8"	37-3/8"	16"	80.0	95.0		
25-1/2"			80.0	95.0		
36"			80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"	49-5/8"	16"	80.0	95.0		
36"			80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"			80.0	95.0		
36"	55"	16"	80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"			80.0	95.0		
36"			80.0	95.0		
52-1/8"	62"	16"	80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"			80.0	95.0		
36"			80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"	71"	16"	80.0	95.0		
25-1/2"			80.0	95.0		
36"			80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"	75"	20"	80.0	95.0		
36"			80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"			80.0	95.0		
36"	95"	39"	80.0	95.0		
52-1/8"			80.0	95.0		
18-1/8"			80.0	95.0		
25-1/2"			80.0	95.0		
36"			80.0	88.1	80.0	95.0 *

UNEQUAL LITES WINDOWS DESIGN LOAD CAPACITY – PSF				
INTERIOR FRAME DIMS.		MIN. VENT HEIGHT	GLASS TYPES 'A', 'Ai', 'B', 'Bi'	
WIDTH	HEIGHT		EXT.(+)	1NT.(–)
23"	47"	16"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0
23"	59"	16"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0
23"	71"	16"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0
23"	83"	22"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0
23"	93"	32"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0
23"	95"	39"	80.0	95.0
29"			80.0	95.0
31"			80.0	95.0
35"			80.0	95.0
41"			80.0	95.0
47"			80.0	95.0



EQUAL LITES

*
DESIGN LOADS WITH ADDL. ANCHOR AT
MTG. STILE LOCATION



UNEQUAL LITES (ORIEL TYPE)

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

Sealed: 7/31/2023

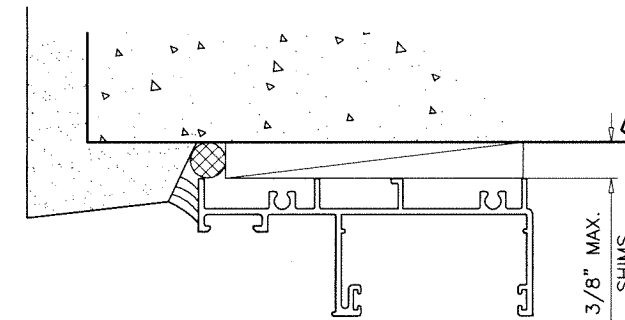
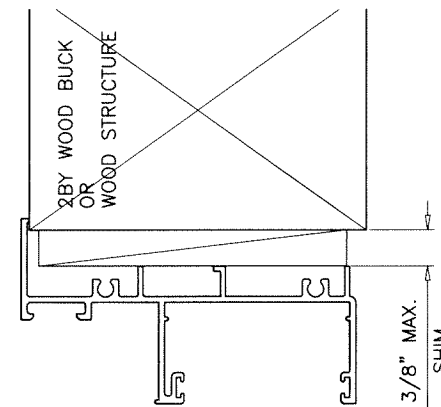
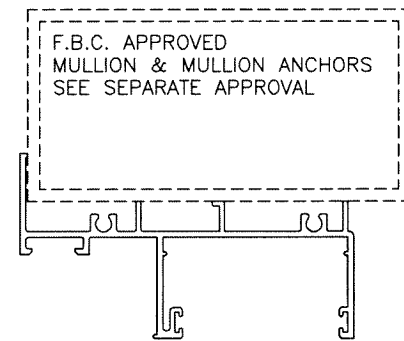
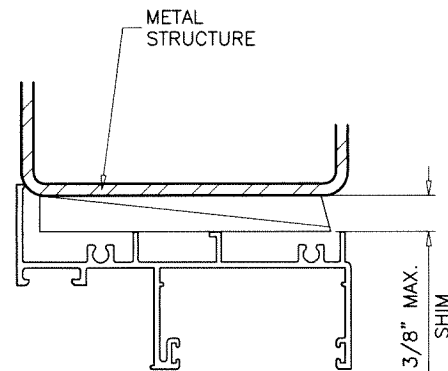
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22-51F
sheet 3 of 8



FLUSH FRAME WITH
TRIMMED EXTERIOR FLANGE
APPLICABLE TO HEAD AND SILL FOR
ANY SUBSTRATE SHOWN FOR FLANGE FRAMES

WOOD BUCKS AND METAL STRUCTURE NOT BY 'EMPIRE WINDOWS'
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 WOOD STRUCTURES

2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)

THRU 1BY OR 2BY WOOD 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

2" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)

2" MIN. EMBED INTO GROUT FILLED BLOCKS (JAMBS)

1/4" DIA. TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS)

INTO F.B.C. 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)

TYPICAL EDGE DISTANCE

INTO CONCRETE AND BLOCKS = 2-1/2" MIN.

INTO WOOD STRUCTURE = 1" MIN.

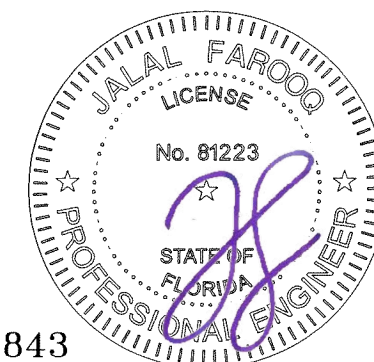
INTO METAL STRUCTURE = 3/4" MIN.

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.

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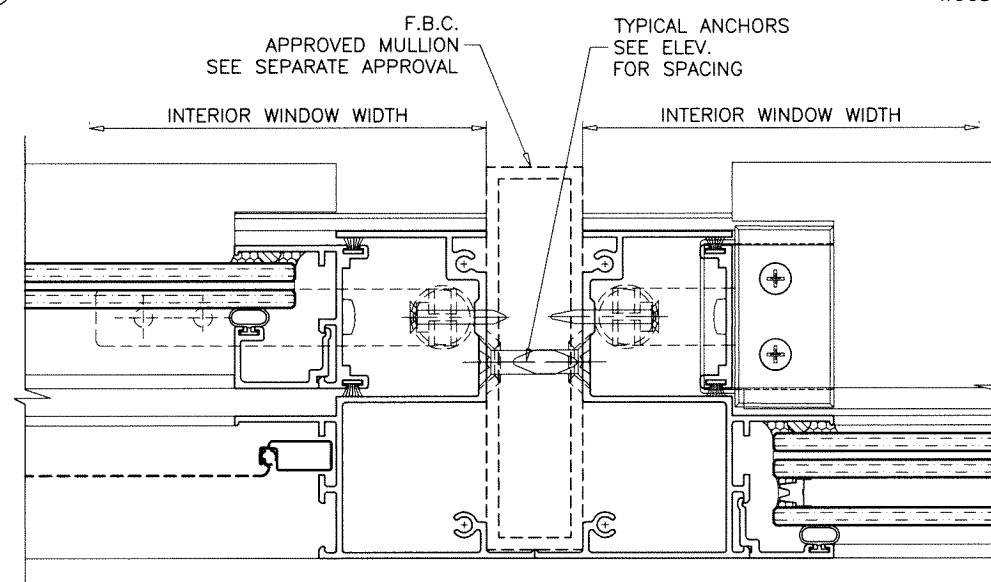
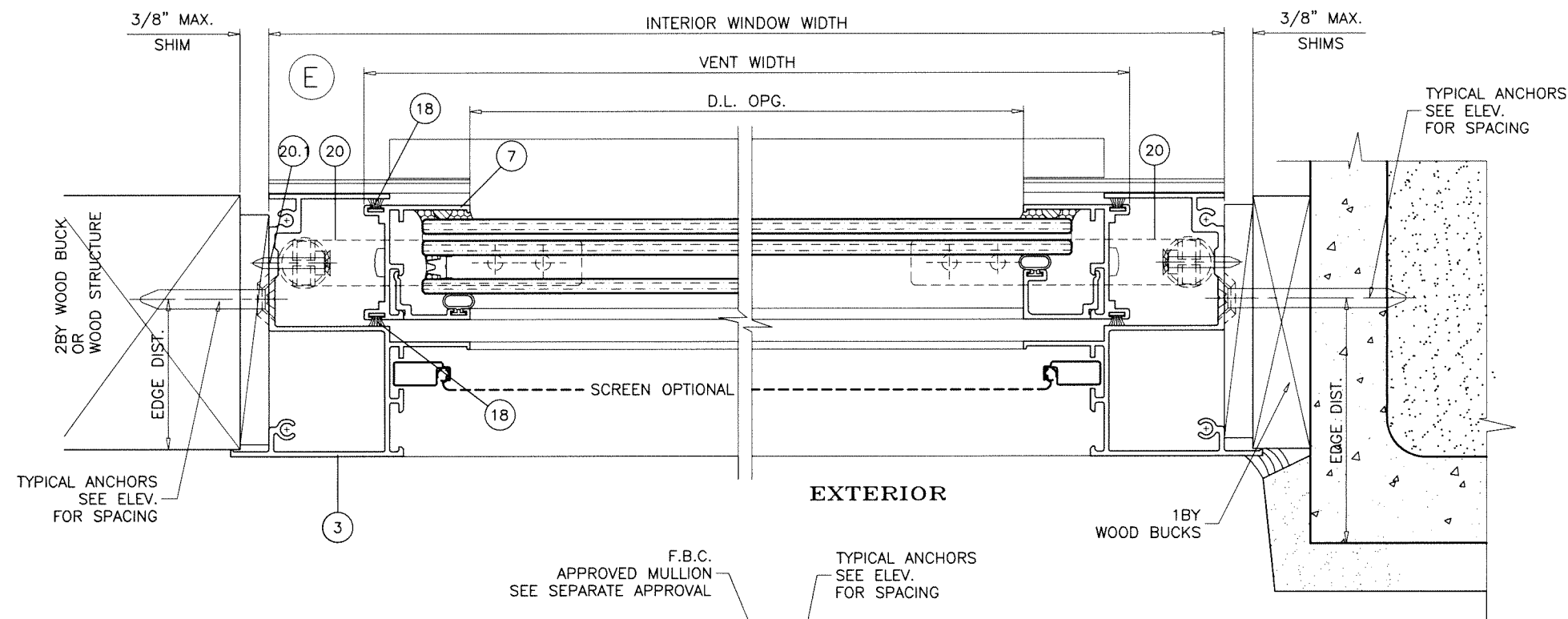
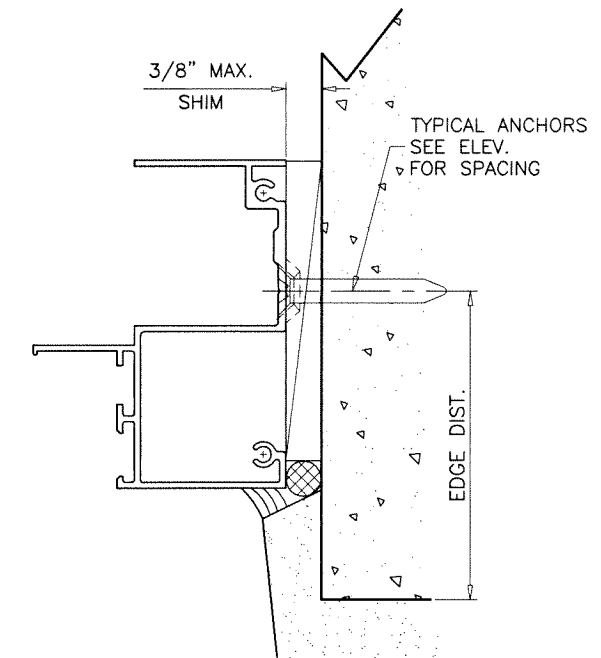
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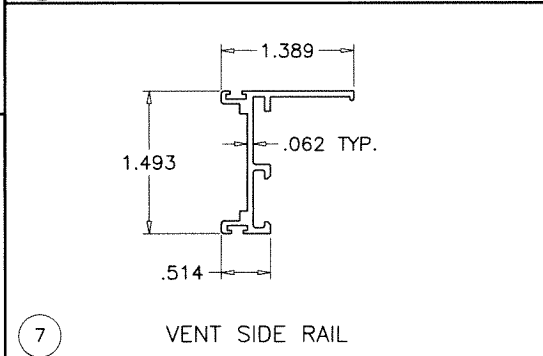
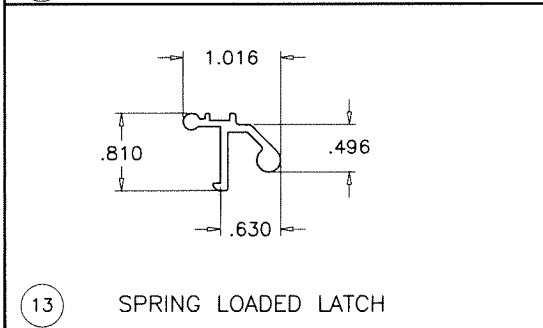
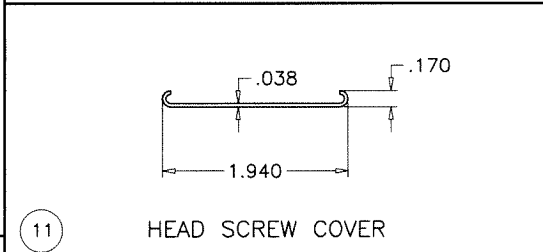
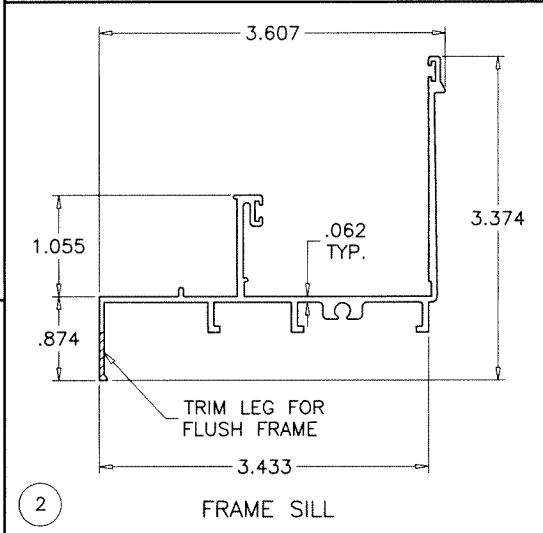
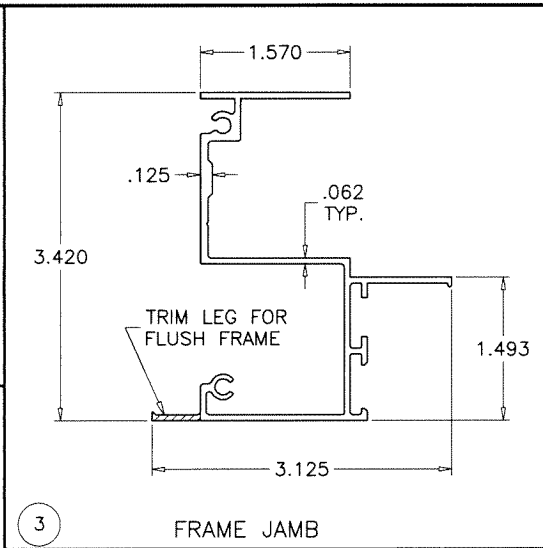
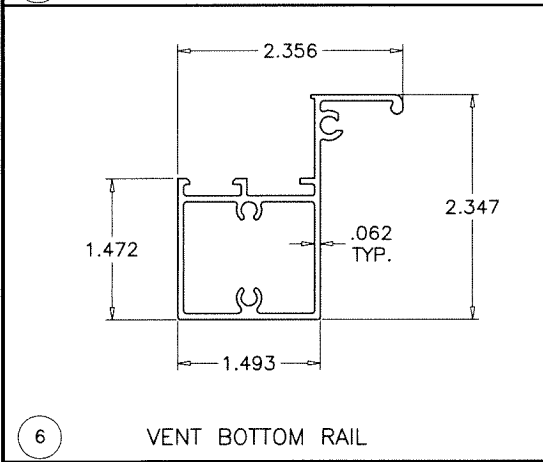
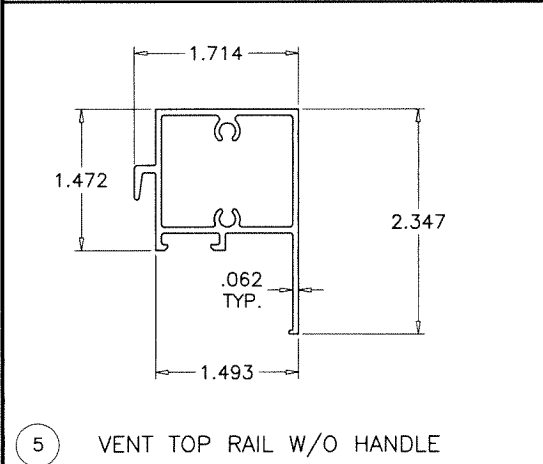
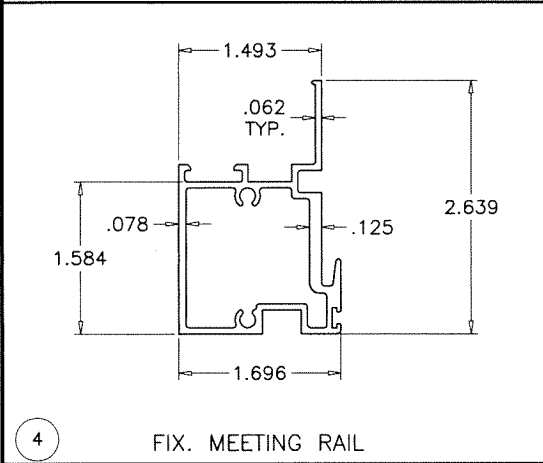
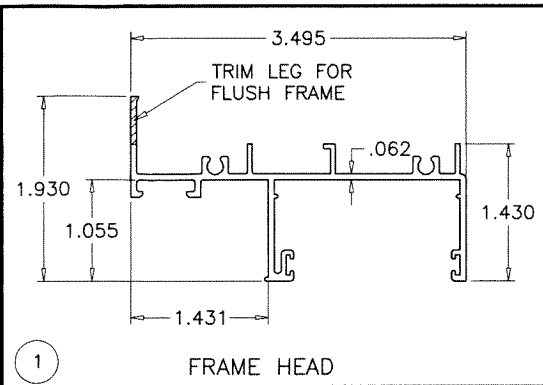
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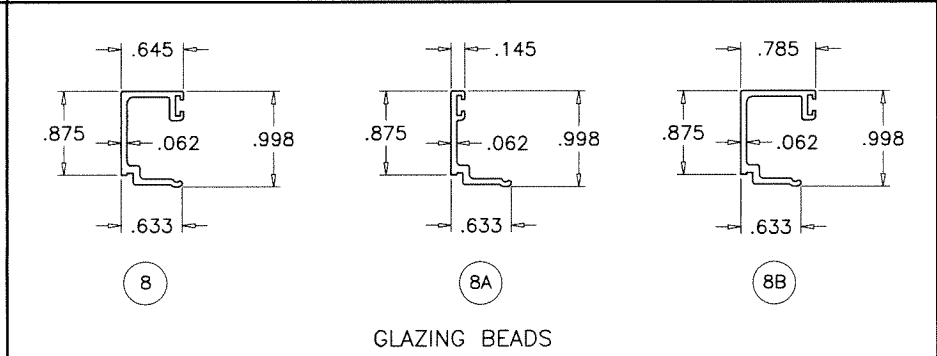
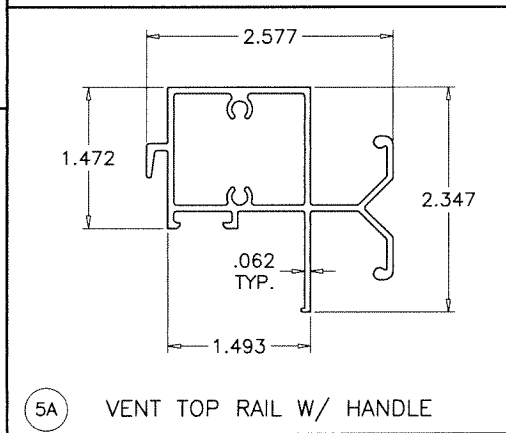
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drawing no.	22-51F	sheet	5 of 8



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dr. by: TARIQ			
chk. by:			
drawing no.		description	
22-51F			
sheet 6 of 8			



ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	105	1	FRAME HEAD	6063-T6	-
2	104	1	FRAME SILL	6063-T6	-
3	113	2	FRAME JAMB	6063-T6	-
4	108	1	FIXED MTG. RAIL	6063-T6	-
5	107	1	VENT TOP RAIL W/O HANDLE	6063-T6	-
5A	107	1	VENT TOP RAIL W/ HANDLE	6063-T6	-
6	106	1	VENT BOTTOM RAIL	6063-T6	-
7	102	2	VENT SIDE RAIL	6063-T6	-
8	115	AS RQD.	GLAZING BEAD (7/16" LAM. GLASS)	6063-T6	-
8A	103	AS RQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
8B	119	AS RQD.	GLAZING BEAD (5/16" LAM. GLASS)	6063-T6	-
9	-	2/VENT	SASH STOP	6063-T6	-
11	-	-	HEAD SCREW COVER	-	-
12	SL203P	2/ VENT	SWEEP LATCH	ZAMAK	SULLIVAN & ASSOC.
12.1	#8 X 1/2"	2/ LATCH	LATCH INST. SCREWS	ST. STEEL	OH SMS
13	-	2/ VENT	SPRING LOADED LATCH	6063-T6	ALTERNATE TO SWEEP LATCH
13.1	-	2/ LATCH	LATCH SPRING	ST. STEEL	SULLIVAN & ASSOC.
14	#10 X 1-3/4"	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	CRS	PH SMS
16	E202	AS REQD.	GLAZING BEAD BULB	NEOPRENE	ULTRAFAB
18	W71221NK	AS REQD.	FIN SEAL W'STRIPPING	-	ULTRAFAB
18A	W71321NK	AS REQD.	FIN SEAL W'STRIPPING	-	ULTRAFAB
19A	-	4/ VENT	VENT GUIDE	CELCON	M&M PLASTICS
19B	-	2/ VENT	VENT TOP CAP	CELCON	M&M PLASTICS
19.1	#6 X 3/8"	1/ GUIDE	SASH GUIDE INST. SCREW	CRS	OH SMS TYPE B
20	-	2/VENT	SPIRAL BALANCE	-	-
20.1	#10 X 1-1/4"	1/ BALANCE	BALANCE INST. SCREW	-	OH SMS TYPE B
21	-	AS REQD.	GLASS SPACER	SILICONE	FRANK LOWE
22	-	1	5/16" BOX SCREEN	-	OPTIONAL
23	-	2/ LITE	SETTING BLOCK AT 1/4 POINTS	EPDM	DUROMETER 80±5 SHORE A
24	-	2	RETICULATED FOAM BAFFLE 30 PPI	-	-
25	WL02	AS REQD.	AUTOMATIC LOCK	-	ROTO HARDWARE



SEALANT:
ALL JOINTS AND FRAME CONNECTIONS SEALED WITH WHITE/ALUMINUM COLORED GENERAL PURPOSE SILICONE.

Sealed: 7/31/2023



AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
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SERIES-100SH ALUM SINGLE HUNG WDW. (S.M.I.)

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6508 NW 77th Court
Miami, FL 33166
Phone: (786) 203-1574 www.empirewindows.com

revisions:	no	date	by	description

date: 12-16-22

scale: 1/2" = 1"

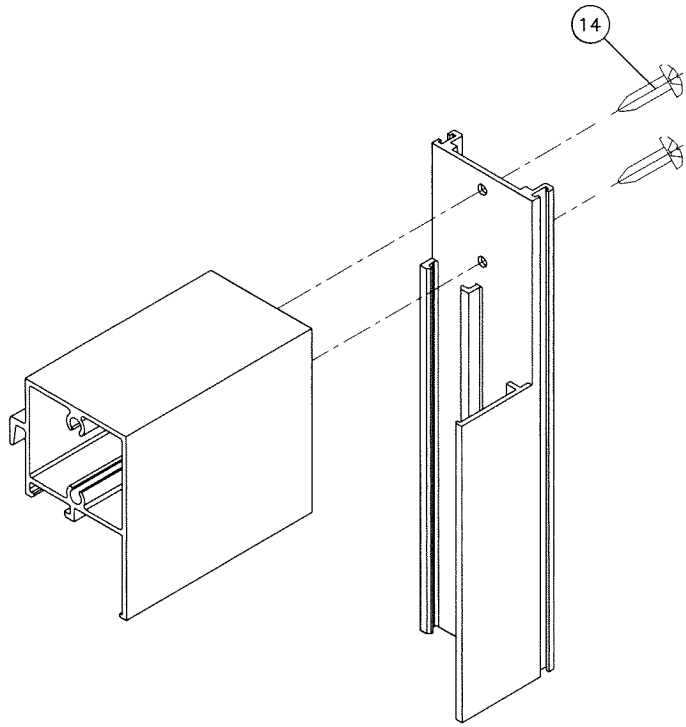
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chk. by:

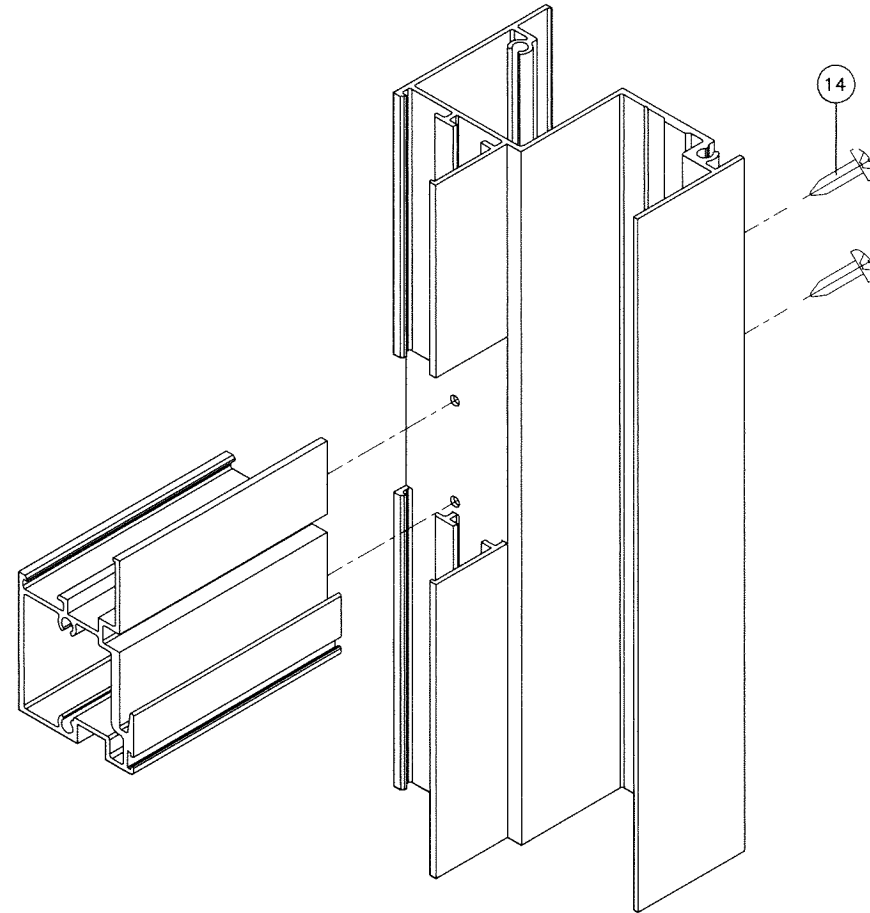
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22-51F

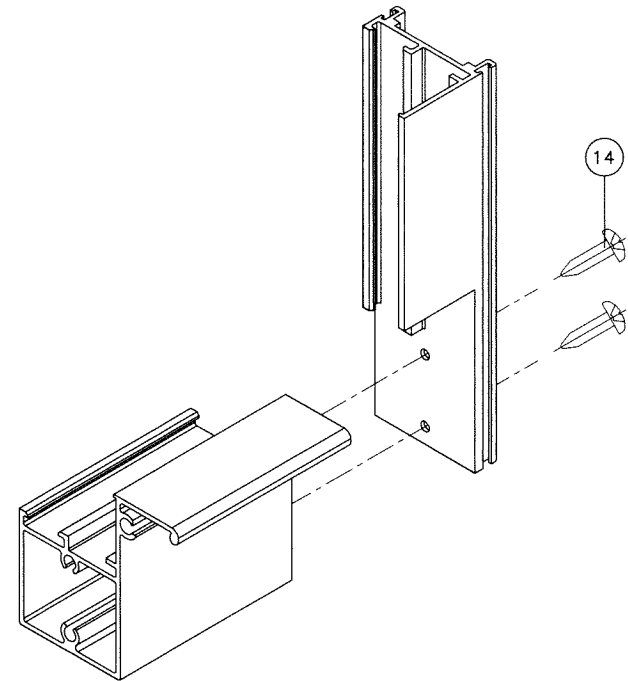
sheet 7 of 8



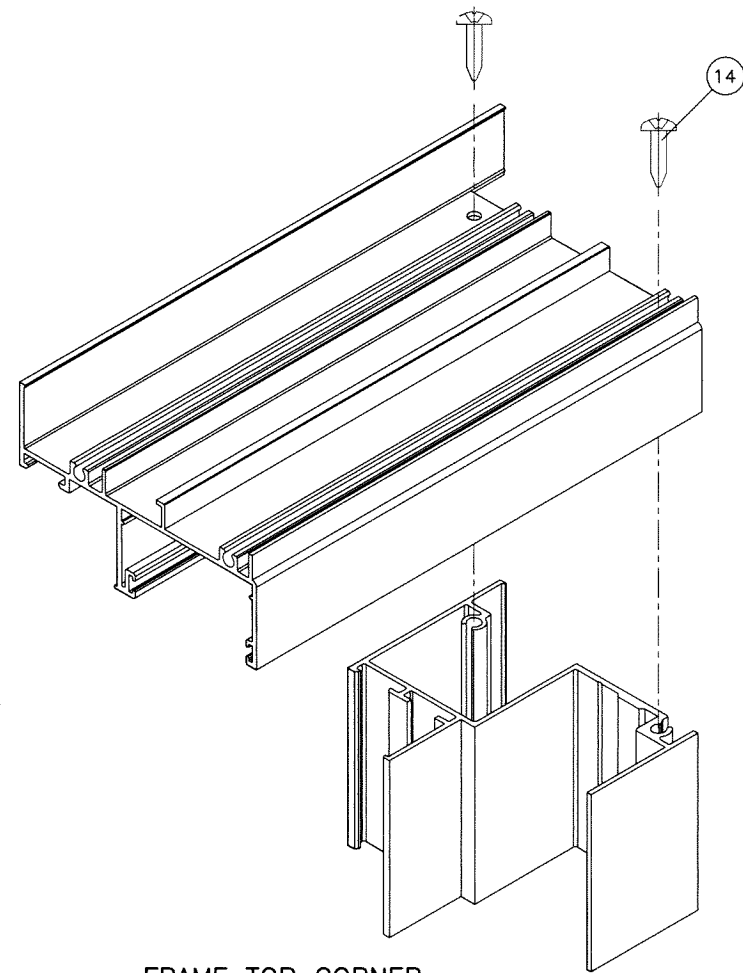
VENT TOP CORNER



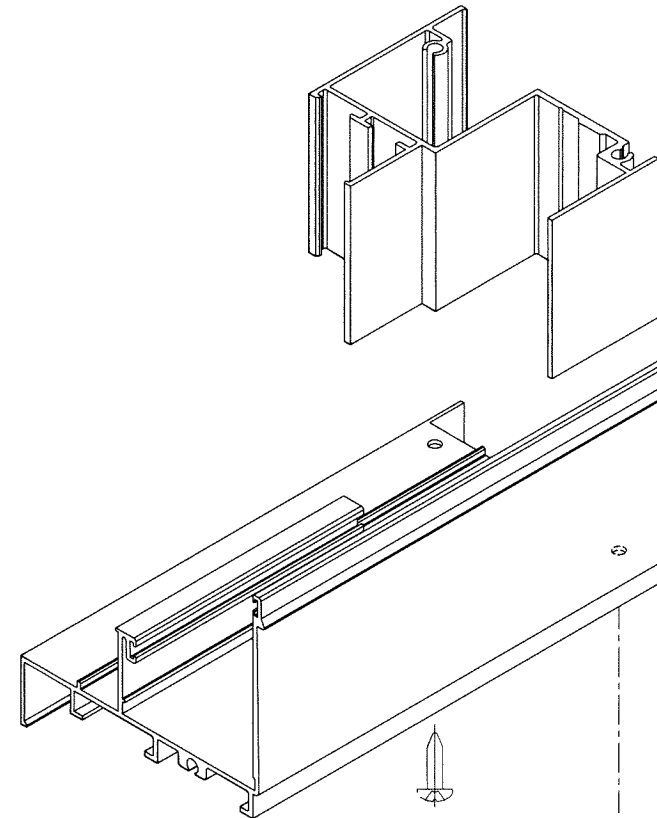
FIXED RAIL CORNER



VENT BOTTOM CORNER

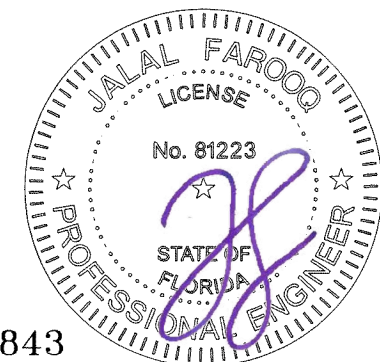


FRAME TOP CORNER



FRAME BOTTOM CORNER

Sealed: 7/31/2023



FL #41843

af c
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 sheet 8 of 8