

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

WINDOWS NOT RATED FOR IMPACT.
INSTALLATION OF THIS SYSTEM OUTSIDE THE HVHZ AREA SHALL MEET
THE APPLICABLE REQUIREMENTS FOR WIND BORNE DEBRIS PROTECTION.

SERIES ES-P251 (N.I.)
ALUMINUM THERMALLY BROKEN
IN-SWING CASEMENT WINDOW

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE
COMBINATIONS OF CASMT./CASMT. OR CASEMENT 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 FOR NON HIGH VELOCITY HURRICANE ZONE.

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.

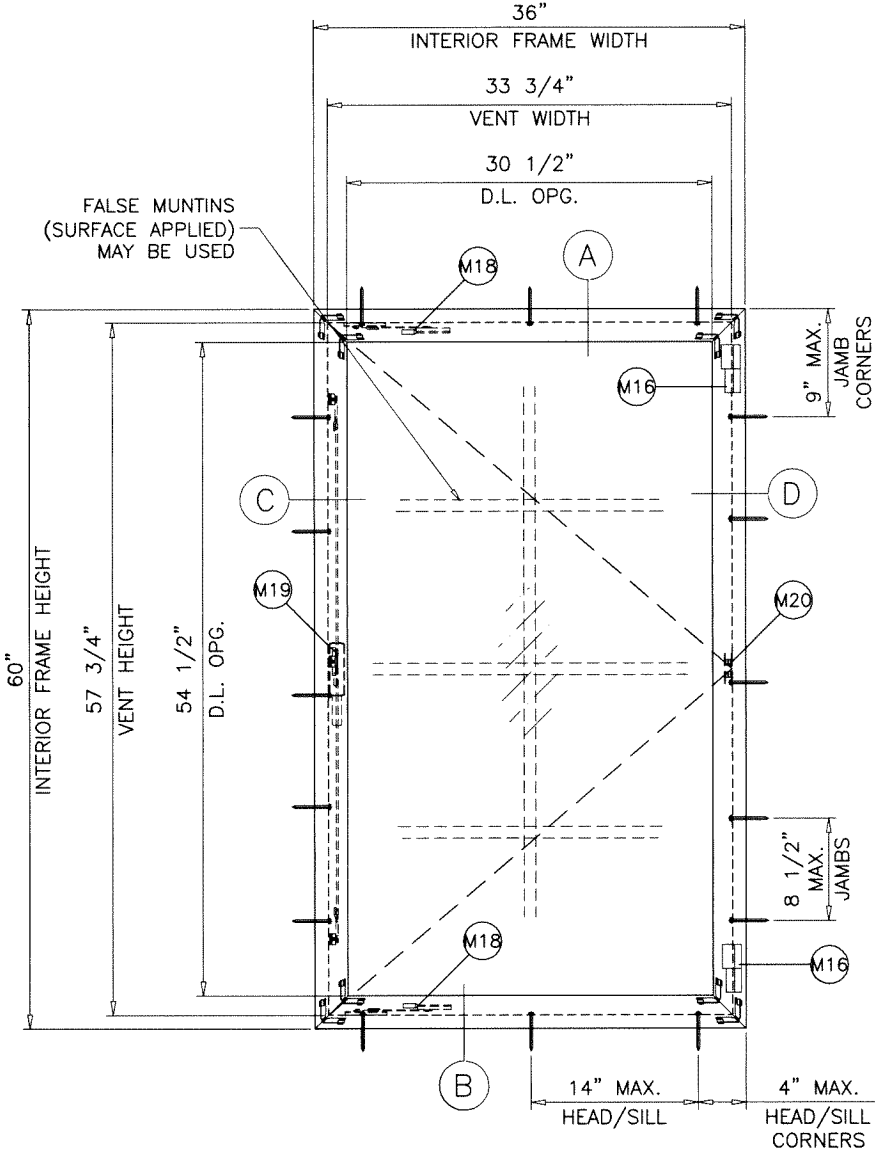
A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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.

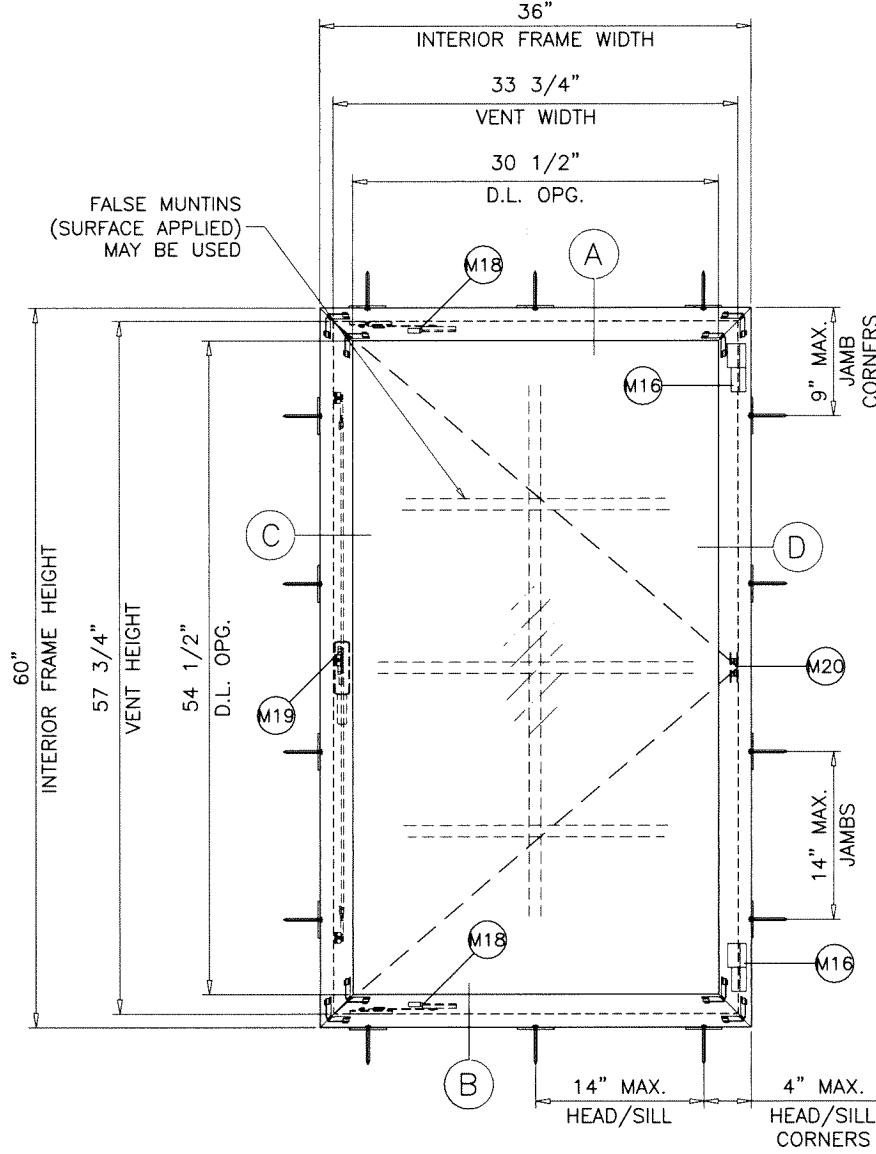
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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

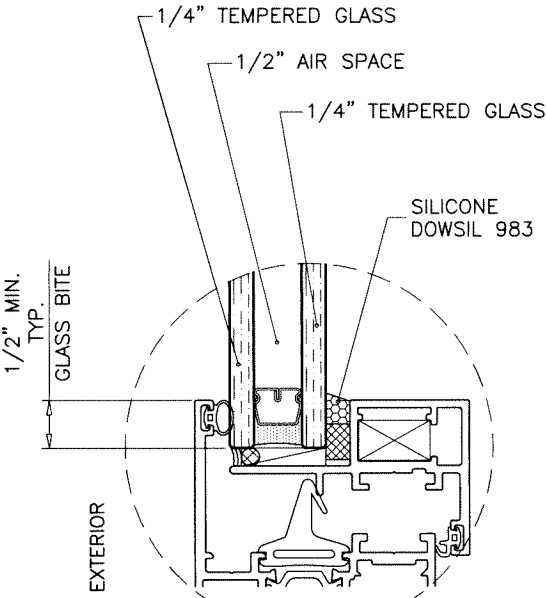
ANCHORS THRU WDW. FRAMES



TYPICAL ELEVATION

ANCHORS THRU STRAP CLIPS

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



GLAZING DETAIL

1" OVERALL INSUL. GLASS

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.

Sealed: 10/9/2023

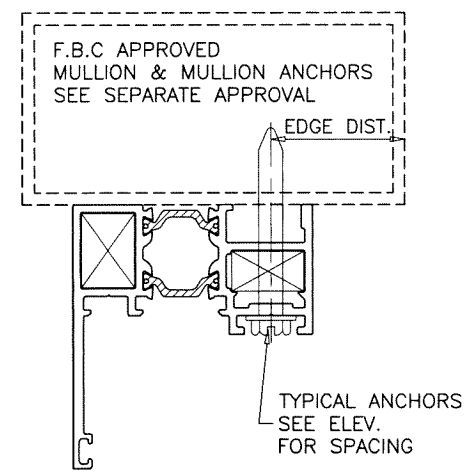
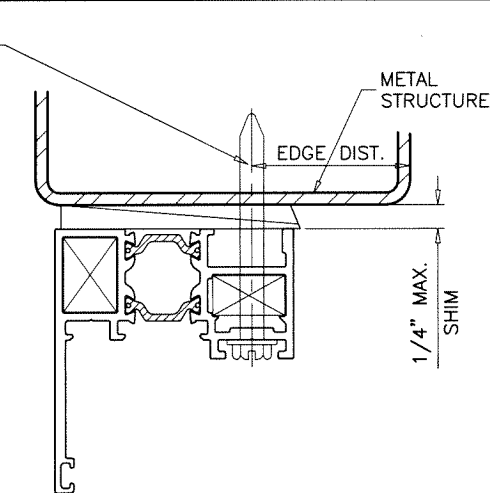
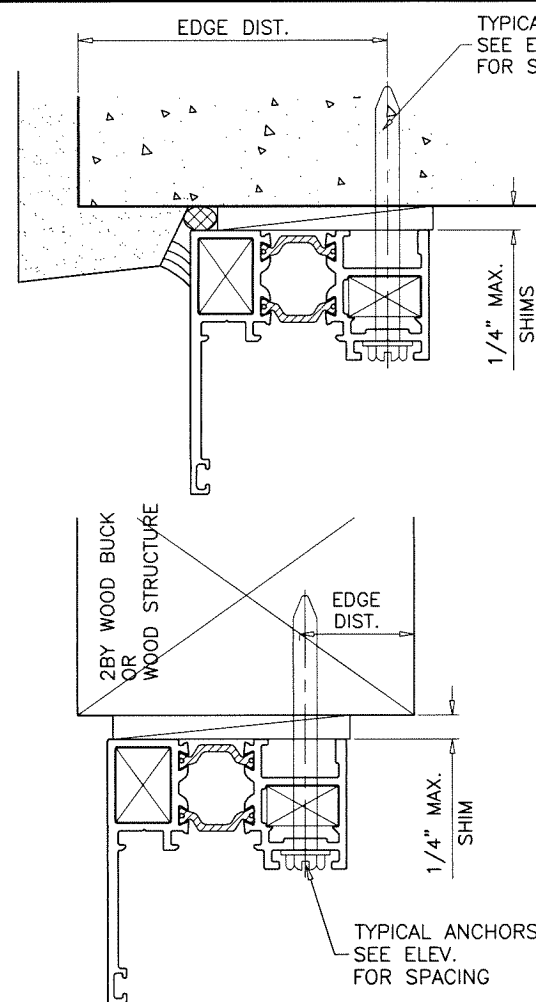
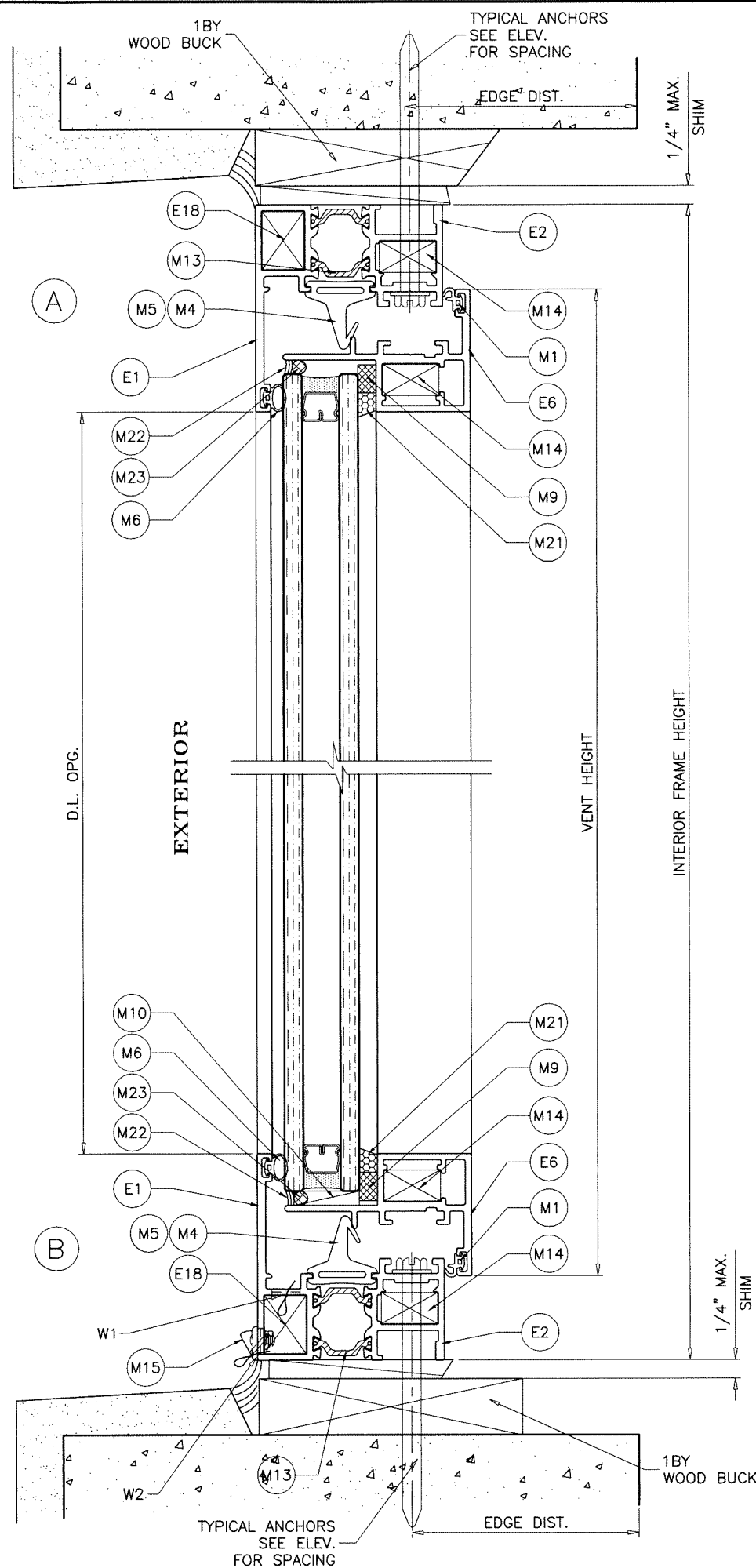
FL #19655



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 262-6978
FAX. (305) 262-6978
COMP-ANL\W15-108ESW

ES-P251 ALUM THERMALLY BROKEN INSWING CASMT. W. (N.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	10.13.17		description
	B	12.17.20		UPDATED TO 2020 FBC
	C	09.27.23		UPDATED TO 2023 FBC
date:	12-14-15			
scale:	3/4"=1'-0"			
dr. by:	TARIQ			
chk. by:				
drawing no.	W15-108			
sheet	1 of 5			



TYPICAL ANCHORS: SEE ELEV. FOR SPACING

#14 DIA. CRETE-FLEX SS4 BY 'DEWALT' ($F_u=190$ KSI, $F_y=127$ KSI)

1/4" DIA. ULTRACON+ BY 'DEWALT' ($F_u=164$ KSI, $F_y=148$ KSI)

INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)

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

DIRECTLY INTO CONC. OR MASONRY
2" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
2" MIN. EMBED INTO FILLED BLOCKS (JAMBS)

1/4" DIA. BI-FLEX 300 SELF DRILLING SCREWS BY 'DEWALT'

1/4" DIA. DRIL-FLEX SELF DRILLING SCREWS BY 'DEWALT' (GRADE 5 CRS)

INTO F.B.C. APPROVED MULLIONS (MIN. THK. = 1/8")

INTO METAL STRUCTURES

STEEL : 1/8" THK. MIN. ($F_y = 36$ KSI MIN.)

ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)

(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES

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.

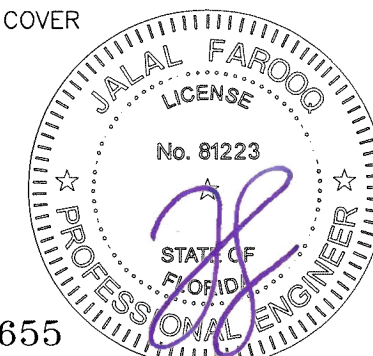
WEEPHOLES:

W1 = 1/4" X 1-1/4" WEEPHOLES AT 5-1/2" FROM EACH END

W2 = 1/4" X 1-1/4" WEEPHOLES WITH PLASTIC COVER
AT 5-1/2" FROM EACH END

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

Sealed: 10/9/2023



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COMP-ANL W15-108SW

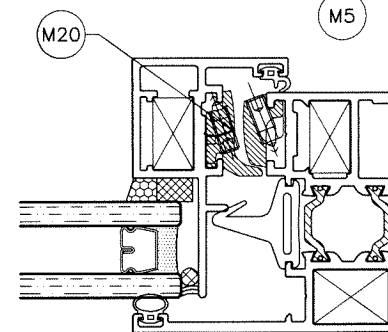
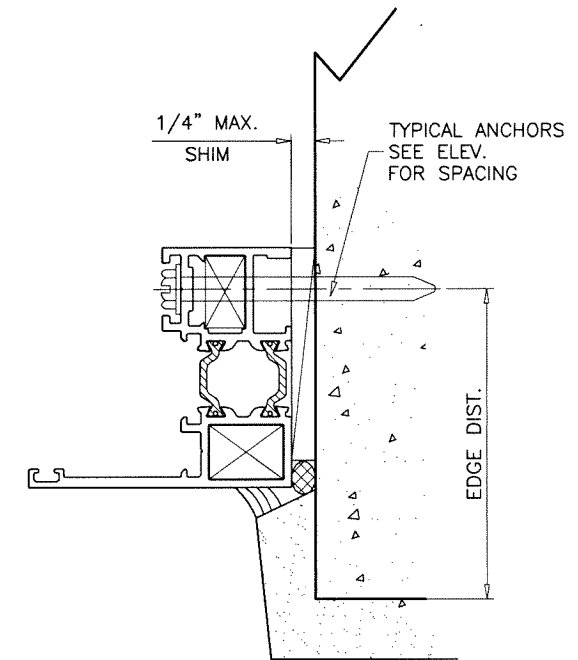
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ES-P251 ALUM THERMALLY BROKEN INSULVING CASMT. W. (N.I.)

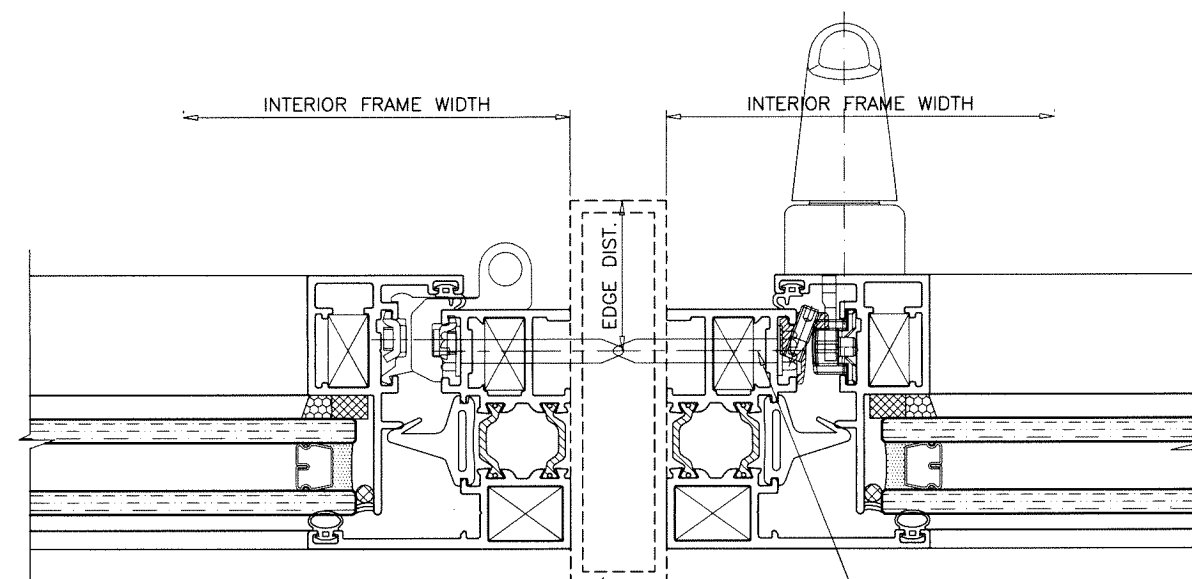
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dr. by: TARIQ
chk. by:

drawing no.
W15-108
sheet 2 of 5



HINGED JAMB @ MIDSPAN



TYPICAL ANCHORS
— SEE ELEV.
FOR SPACING

Sealed: 10/9/2023



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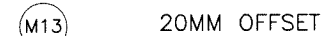
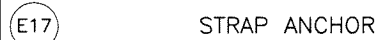
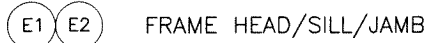
ES-P251 ALUM THERMALLY BROKEN INSWING CASMT. W. (N.I.)

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COMP-ANI\W15

COMP-ANL\W15-108ESW

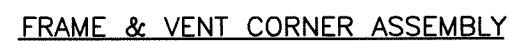
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W15-108	sheet 3 of 5	scale: 1/2" = 1"	no	date	by description
		dr. by: TARIQ			
		chk. by:			



MATERIAL = POLYAMIDE
TENSILE STRENGTH = 13031 PSI
RATE OF BURN = .752 IN./MIN.
SELF IGNITION TEMP. = 793° F
FLASH IGNITION TEMP. - 781°C
SMOKE DENSITY = 1.63

NOTE: HARDWARE AS SHOWN OR EQUIVALENT.

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH
WHITE/ALUMINUM COLORED SILICONE.



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drawing no. W15-108			
sheet 5 of 5			