

GLAZING DETAILS

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

1/2" AIR SPACE CONSISTING OF:
SPACER:
ALUMINUM BOX SPACER AROUND
THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
SIKASIL SG-20

**SERIES ENV-350
ALUMINUM OUTSWING CASEMENT WINDOW**

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE
COMBINATIONS OF CASMT./CASMT. OR CASEMENT WITH OTHER
F.B.C. APPR'D 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 2017 (6TH 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 2017 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.

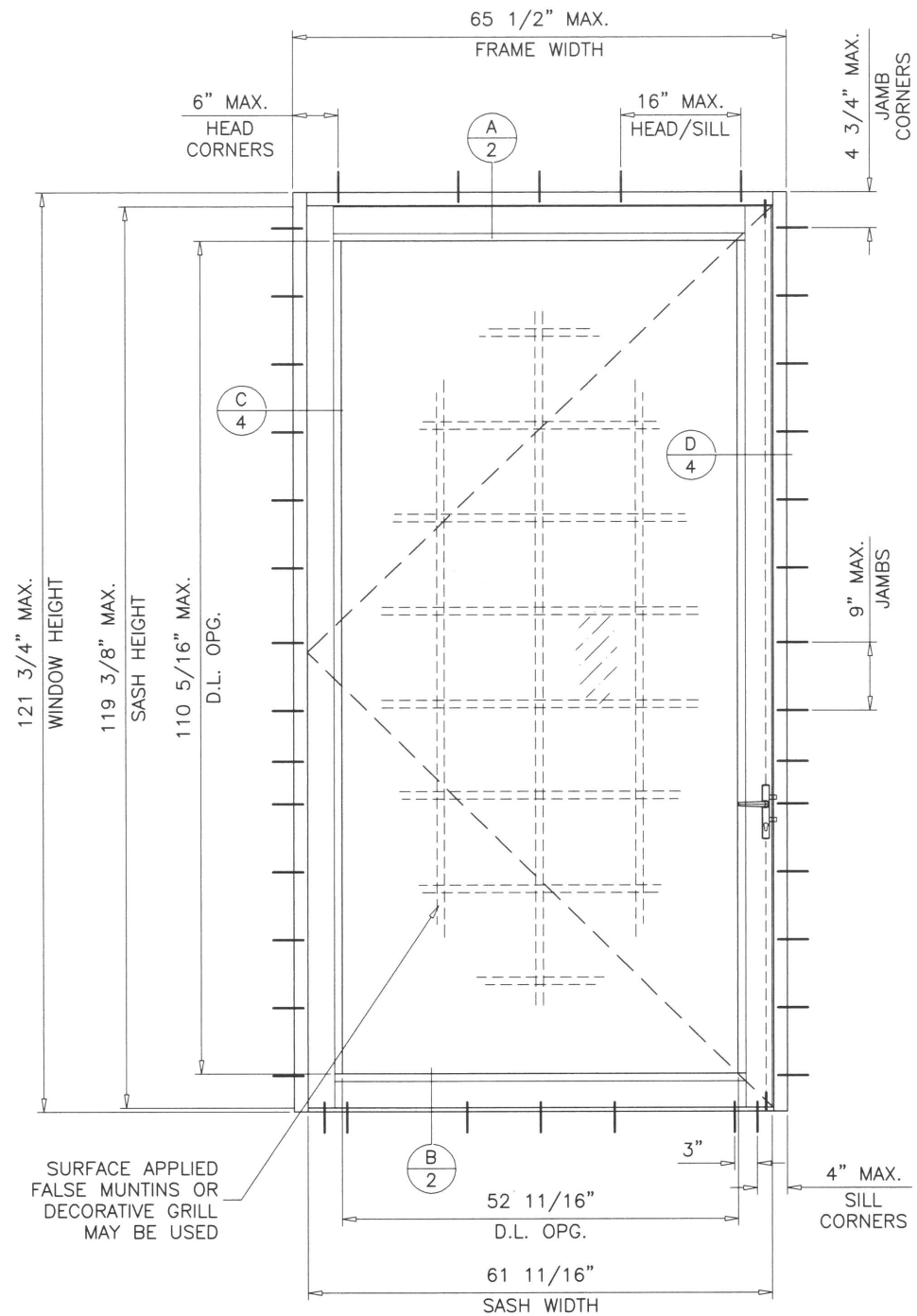
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'
FOR EQUIVALENT LOADS IN 'LOAD AND RESISTANCE FACTOR DESIGN (LRFD)'
MULTIPLY 'ASD' LOADS BY 1.67 (ASD LOAD X 1.67 = LRFD LOAD)

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.

GLASS D.L.O. DIMS.

D.L.O. HEIGHT = FRAME HEIGHT - 11.4375"
D.L.O. WIDTH = FRAME WIDTH - 12.8125"

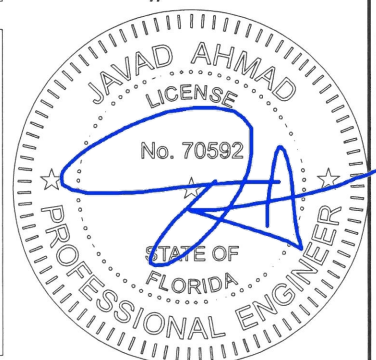
WINDOWS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.



TYPICAL ELEVATION

MAXIMUM DESIGN LOAD RATING = + 120.0 PSF
(FOR MAX. SIZE SHOWN ABOVE OR SMALLER) - 120.0 PSF
WATER RATING = + 18.0 PSF

- 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.



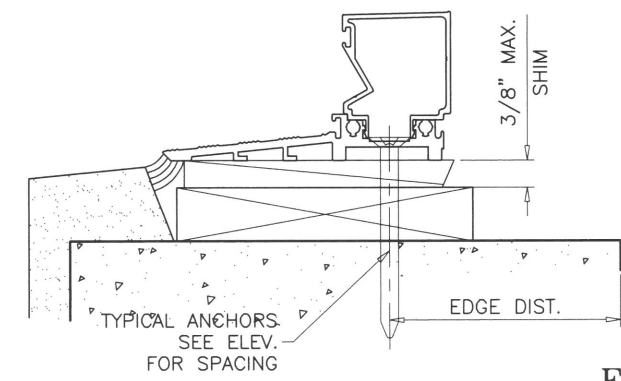
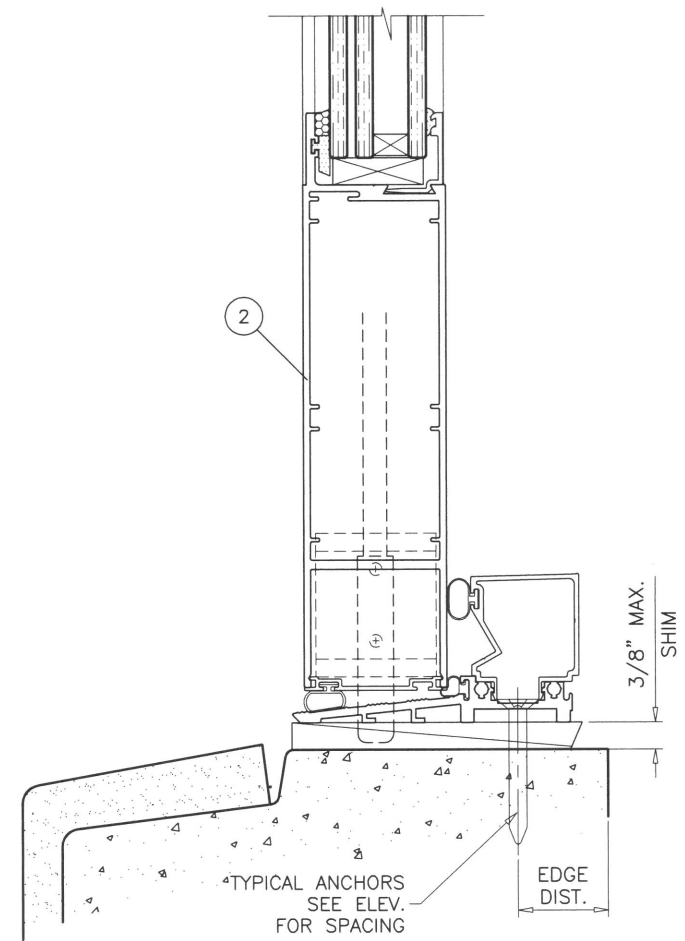
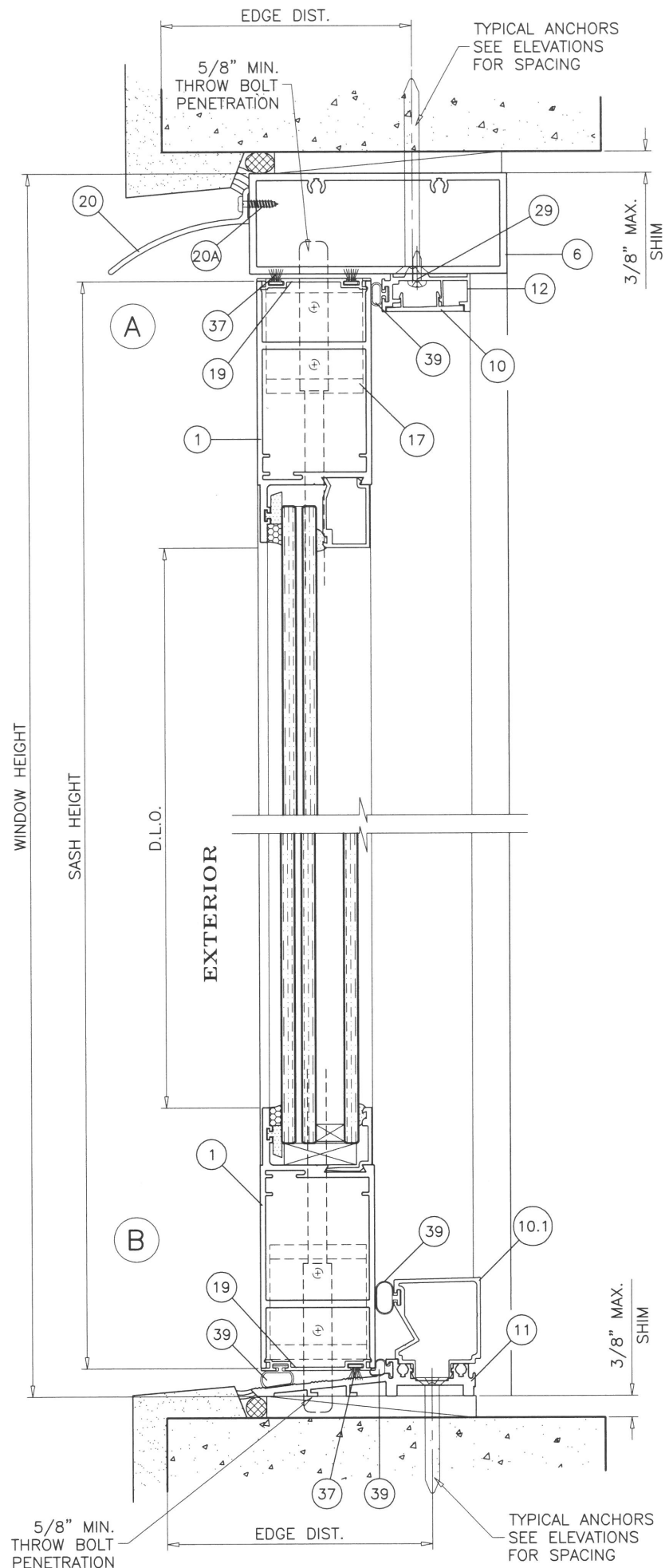
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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL 19-70FENV

SERIES ENV-350 OUTSWING CASEMENT WDW. (L.M.I.)
ENVIRALUM INDUSTRIES INC.
5100 N.W. 72 AVENUE BLDG. C
MIAMI, FL. 33166
TEL. (305) 752-4411 FAX. (305) 406-3877

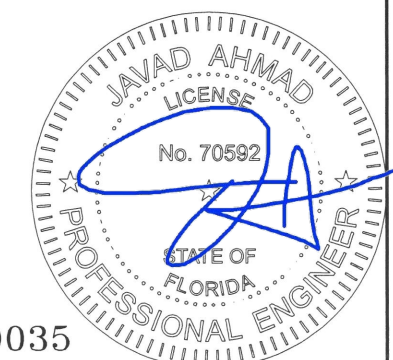
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chk. by:

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FL #30035



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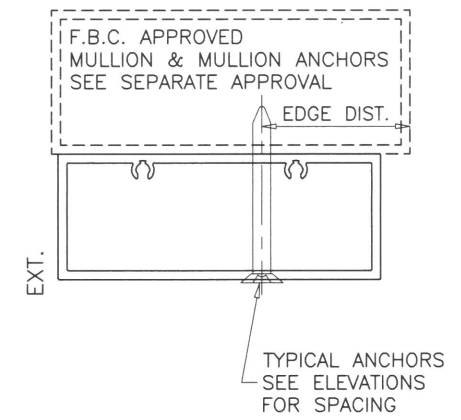
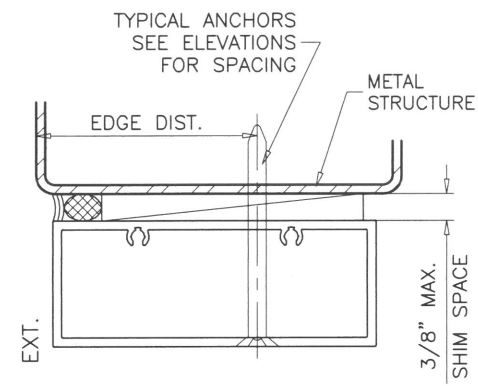
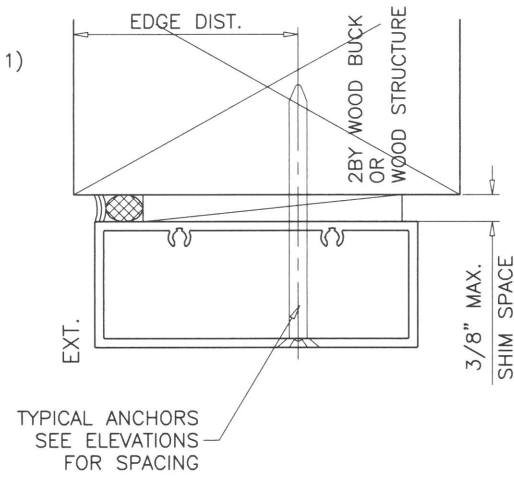
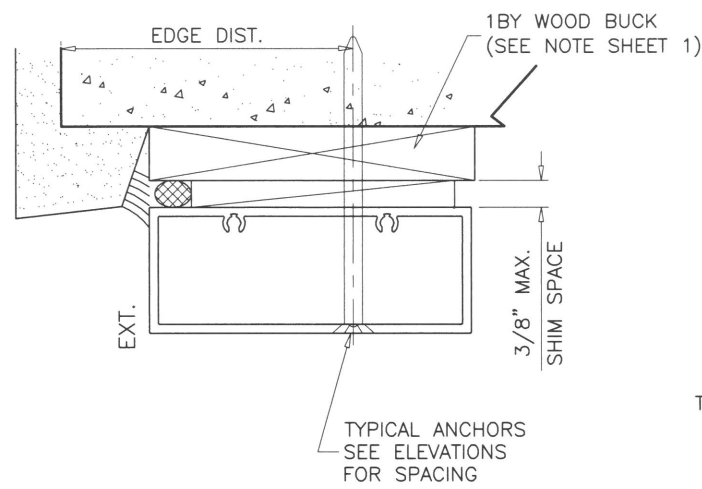
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WOOD BUCKS AND METAL STRUCTURE NOT BY ENVIRALUM MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

TYPICAL ANCHORS: SEE ELEV. FOR SPACING

5/16" DIA. ULTRACON BY 'ELCO' ($F_u=177$ KSI, $F_y=155$ KSI)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/SILL/JAMBS)
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/SILL/JAMBS)
 1-3/4" MIN. EMBED INTO GROUT-FILLED BLOCKS (JAMBS)

5/16" DIA. TEKS OR SELF-DRILLING SCREWS (GRADE 5 CRS)
 INTO F.B.C. APPROVED MULLIONS
 AND
 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. ($F_y = 36$ KSI MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

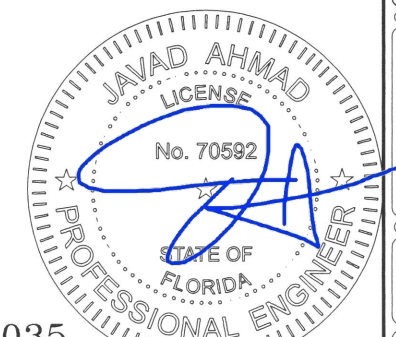
CRITICAL EDGE DISTANCE

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.

CRITICAL CENTERLINE-TO-CENTERLINE DISTANCE

INTO CONCRETE AND BLOCKS = 3" MIN.
 INTO WOOD STRUCTURE = 1" MIN.
 INTO METAL STRUCTURE = 1" MIN.



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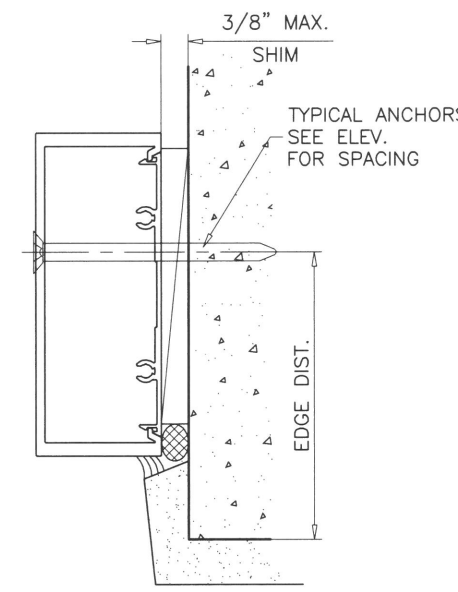
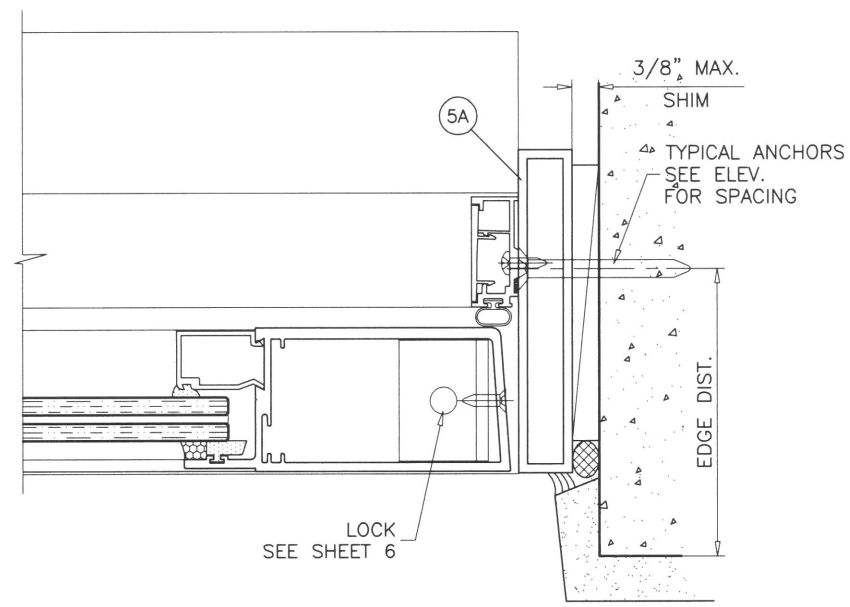
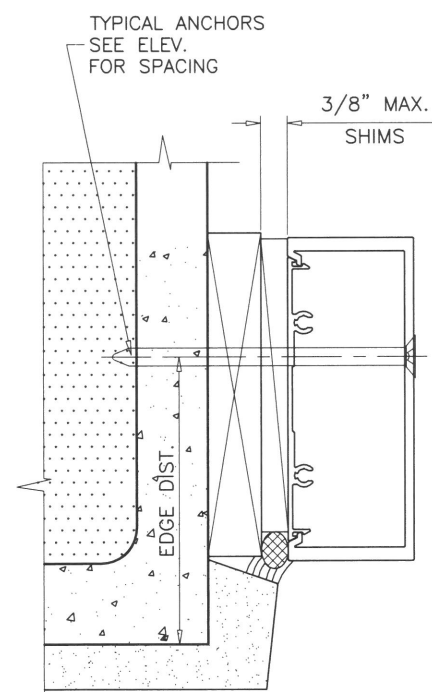
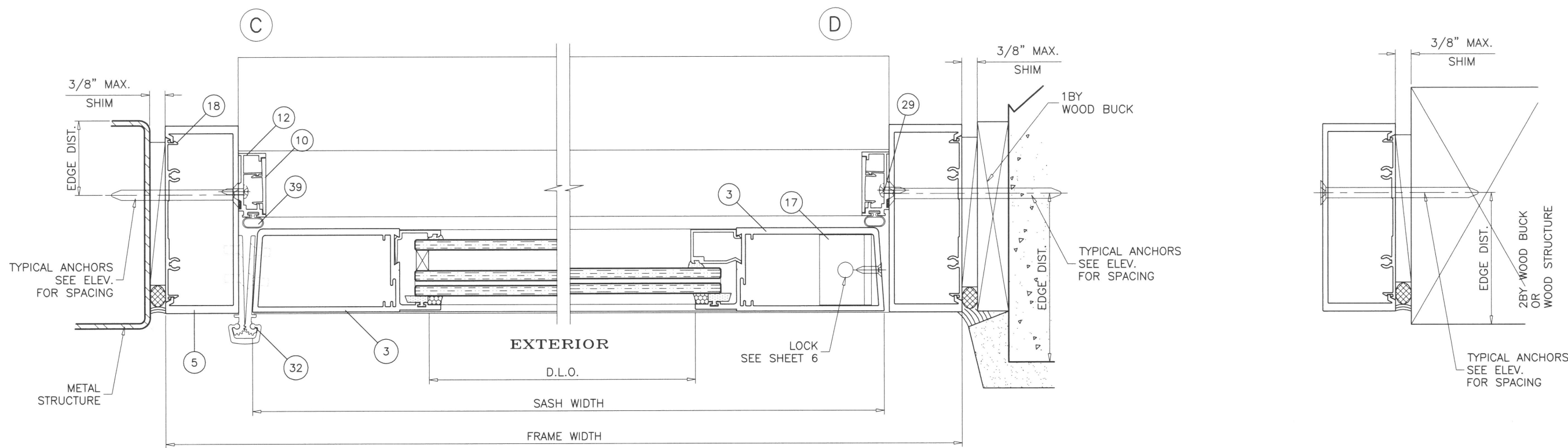
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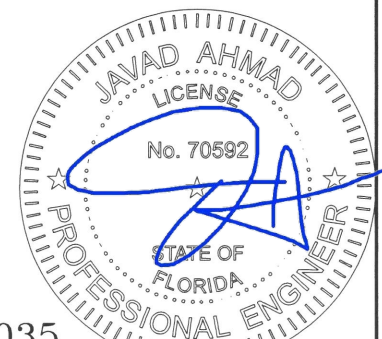
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ALT. FRAME JAMB



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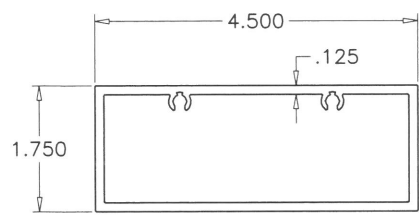
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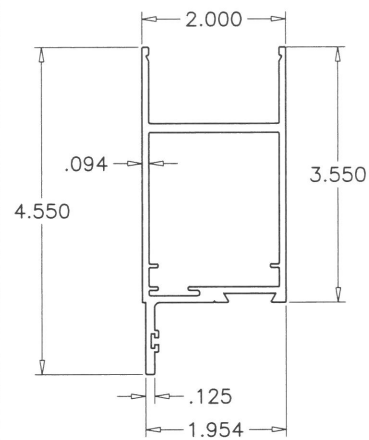
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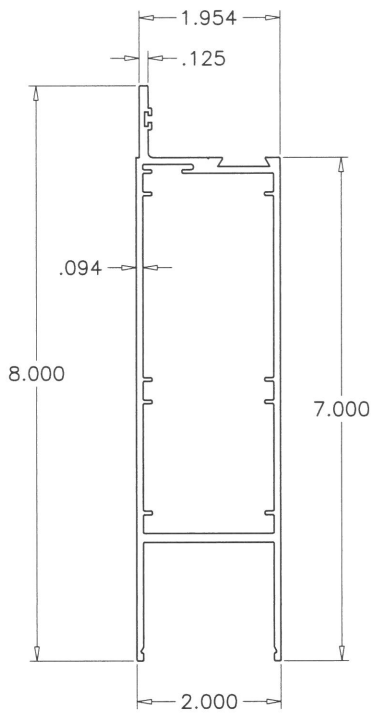
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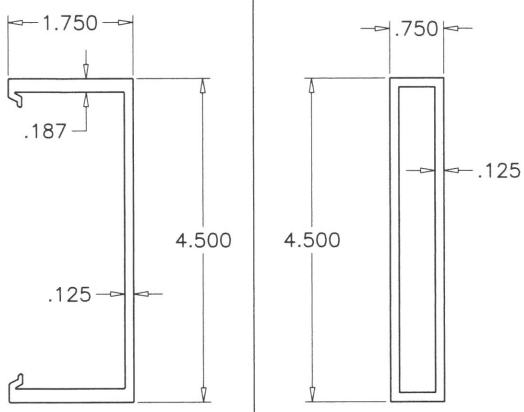
6 FRAME HEAD



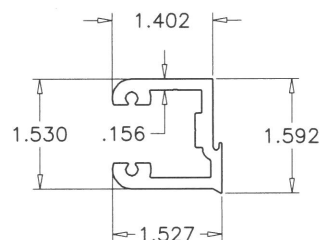
1 TOP/BOTTOM RAIL



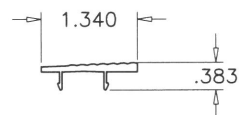
2 ALT. BOTTOM RAIL



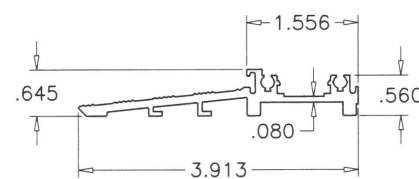
5 STD. JAMB 5A NARROW JAMB



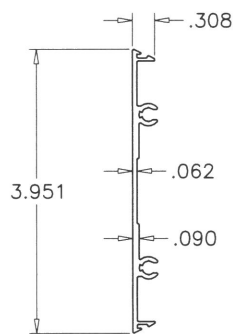
16 SHEAR BLOCK



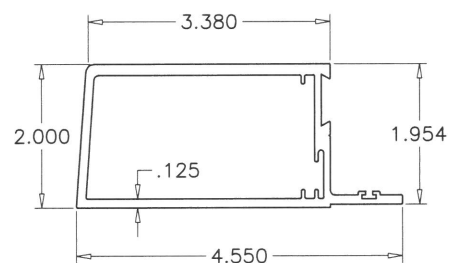
10 SILL/SASH STOP COVER



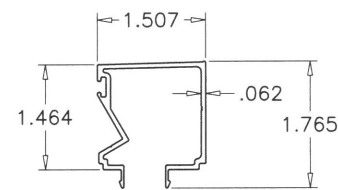
11 FRAME SILL



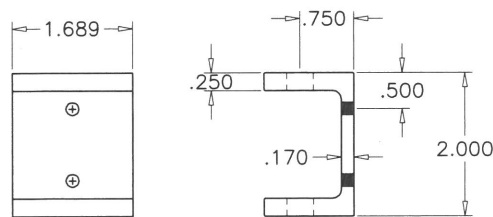
16 FLAT FILLER



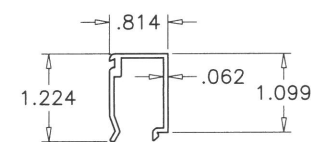
3 HINGE/LOCK STILE



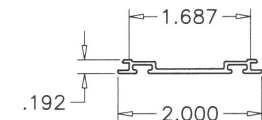
10.1 SILL COVER



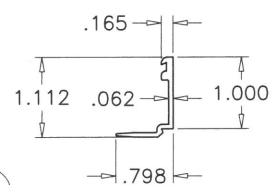
17 GUIDE CHANNEL FOR TOP & BOTTOM PIN



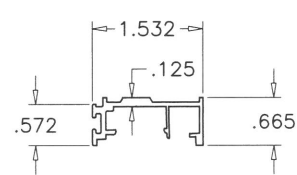
8 GLASS STOP (LAM. GLASS)



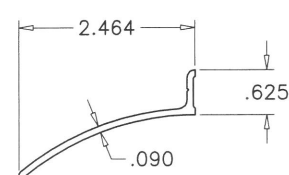
19 EDGE SWEEP



7 GLASS STOP (INSUL. LAM. GLASS)



12 SASH STOP



20 DRIP CAP

afc

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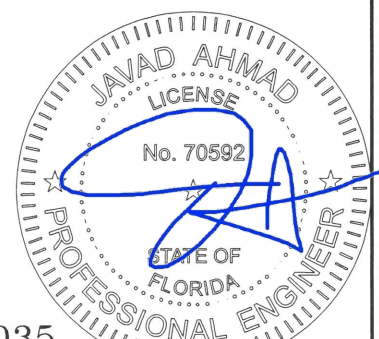
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chk. by:

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FL #30035

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ITEM NO.	PART NUMBER	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ENV-351	2/ SASH	TOP/BOTTOM RAIL	6063-T6	ENVIRALUM
2	ENV-352	1/ LEAF	ALT. BOTTOM RAIL (8" HIGH)	6063-T6	ENVIRALUM
3	ENV-353	1/ SASH	HINGE/LOCK STILE	6063-T6	ENVIRALUM
5	ENV-355	2/ SASH	STANDARD JAMB	6063-T6	ENVIRALUM
5A	ENV-3517	2/ SASH	NARROW JAMB	6063-T6	ENVIRALUM
6	ENV-356	1/ SASH	FRAME HEAD	6063-T6	ENVIRALUM
7	ENV-357	4/ LITE	GLASS STOP (INSULATED GLASS)	6063-T6	ENVIRALUM
8	ENV-358	4/ LITE	GLASS STOP (LAMINATED GLASS)	6063-T6	ENVIRALUM
10	ENV-3510	AS REQD.	SILL/SASH STOP COVER	6063-T6	ENVIRALUM
10.1	ENV-3518	AS REQD.	SILL COVER (HI-RISE)	6063-T6	ENVIRALUM
11	ENV-3511	1/ SASH	FRAME SILL	6063-T6	ENVIRALUM
12	ENV-3512	3/ SASH	SASH STOP	6063-T6	ENVIRALUM
16	ENV-3516	1/ SASH CORNER	SHEAR BLOCK	6063-T6	ENVIRALUM
17	ENV-GC01	2/ SASH	GUIDE CHANNEL FOR TOP & BOTTOM PIN	6063-T6	ENVIRALUM
18	ENV-454	AS REQD.	FLAT SNAP, 3" LONG	6063-T6	ENVIRALUM
19	ENV-3522	AS REQD.	EDGE SWEEP	6063-T5	ENVIRALUM
20	ENV-3524	AS REQD.	DRIP CAP	6063-T5	ENVIRALUM
20A	#8 X 5/8"	AS REQD.	DRIP CAP FASTENERS, AT 3" FROM ENDS & 6" O.C.	ST. STEEL	HWH SELF DRILLING SCREWS
21	ENV-A02	AS REQD.	INTERIOR GASKET	EPDM	GLAZING RUBBER PRODUCTS
22	ENV-A01	AS REQD.	SPACER GASKET	EPDM	GLAZING RUBBER PRODUCTS
23	ENV-SB01	1/ QUARTER POINT	3/8" X 1/2" X 2" SETTING BLOCKS, DUROMETER 80±5	EPDM	GLAZING RUBBER PRODUCTS
24	ENV-SB02	1/ QUARTER POINT	3/8" X 1-1/4" X 2" SETTING BLOCKS, DUROMETER 80±5	EPDM	GLAZING RUBBER PRODUCTS
27	#12 X 1-1/2	4/ CORNER	FRAME ASSEMBLY SCREWS	ST. STEEL	HWH SMS, AT 16" O.C.
29	#8 X 5/8"	AS REQD.	SASH STOP ASSEMBLY SCREWS, @ 3" FROM ENDS & 20" O.C.	ST. STEEL	HWH SMS
32	SL-21	1/ SASH	CONT. GEAR HINGE	ALUMINUM	SELECT PRODUCTS LTD.
32A	PEMKO-FS	1/ SASH	CONT. GEAR HINGE	ALUMINUM	PEMKO
33	1/4-20 X 1"	10/ SASH	CORNER BLOCK ASSEMBLY	ST. STEEL	HEX HEAD BOLT W/ WASHER
37	ENV-WP1	AS REQD.	WOOL PILE W'STRIPPING	TRILOBAL YARN	ULTRAFAB
39	ENV-BG1	AS REQD.	BULB W'STRIPPING, (.475 BULB W/ FLAP X .270 BK.)	EPDM	ULTRAFAB

LOCK:

3 POINT LOCK SYSTEM BY 'INTERLOCK' AT 40" FROM BOTTOM
HANDLE ACTIVATES DEAD BOLT AND SHOOT BOLTS ENGAGING AT HEAD AND SILL
KEY OPERATED ON EXTERIOR AND THUMB TURN ON INTERIOR
FASTENED TO ACTIVE LEAF LOCK STILE WITH (2) #8-32 X 2" OH MS

HINGE:

CONTINUOUS ALUMINUM HINGE 'PEMKO-FM' OR 'SELECT SL 27'
FASTENED TO FRAME JAMB AND TO JAMB STILE WITH (2) #12-24 X 1/2" FH MS SCREWS

SEALANTS:

ALL FRAME CORNERS, JOINTS, MULLION SEAMS AND PERIMETER OF GLAZING BEAD TO FRAME SEALED WITH SILICONE SEALANT.

afc

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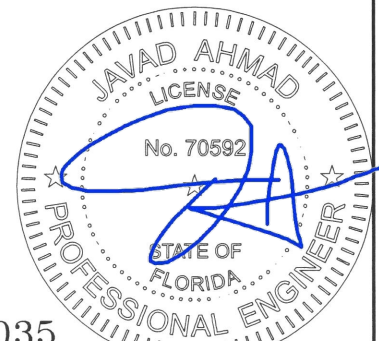
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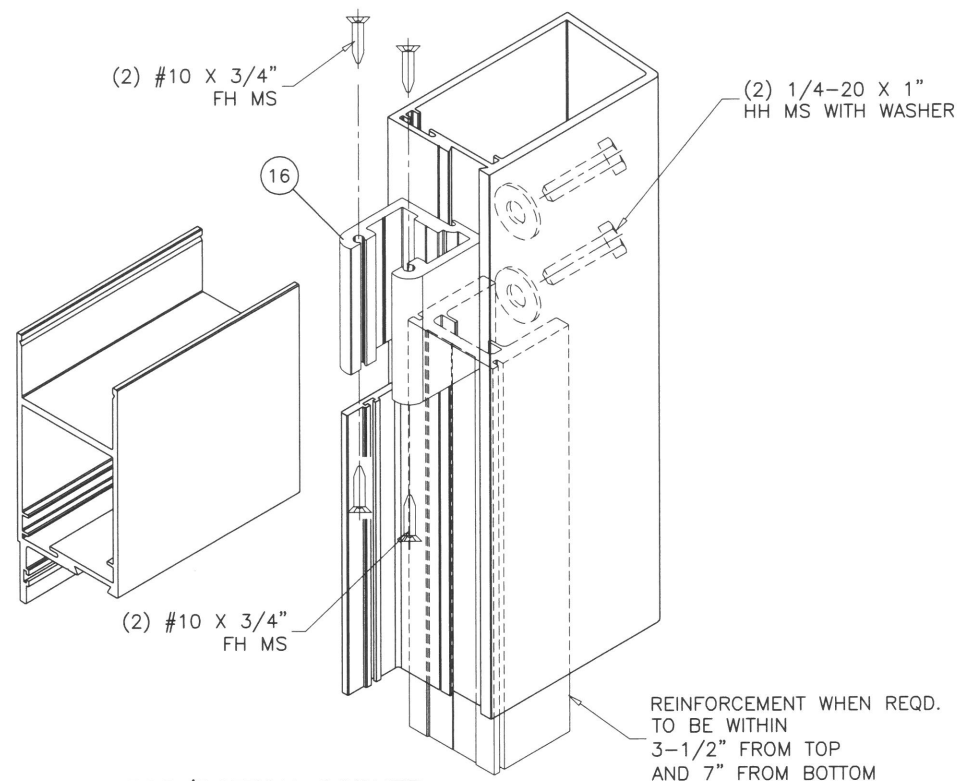


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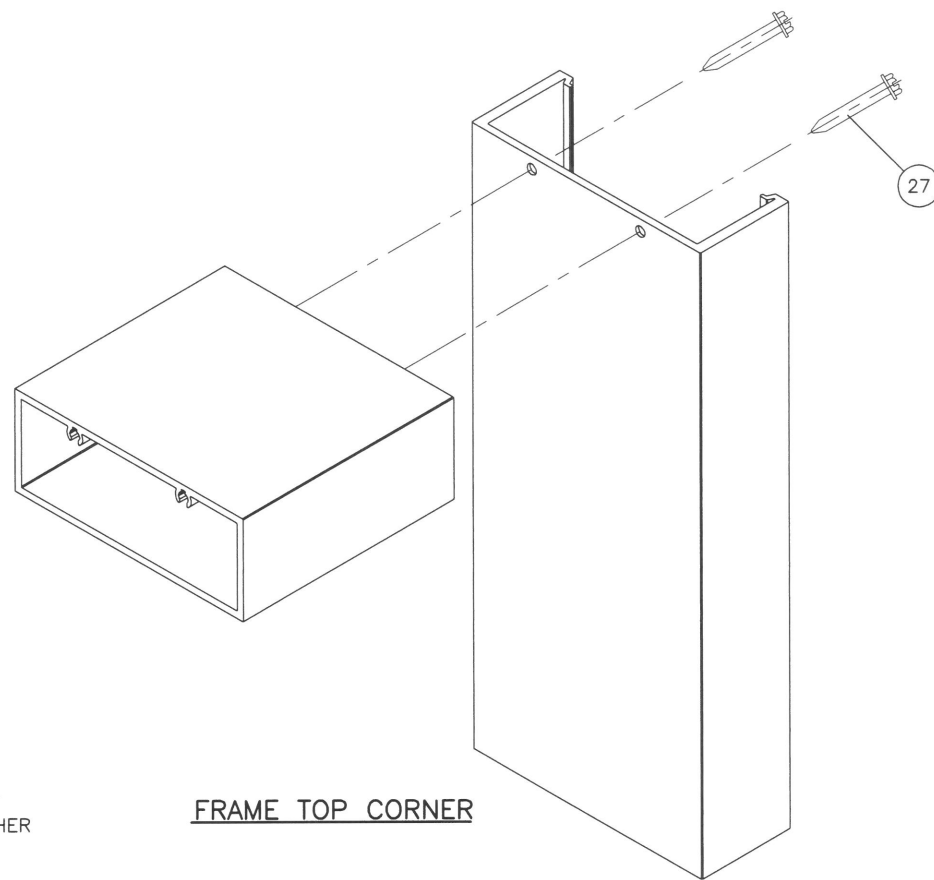
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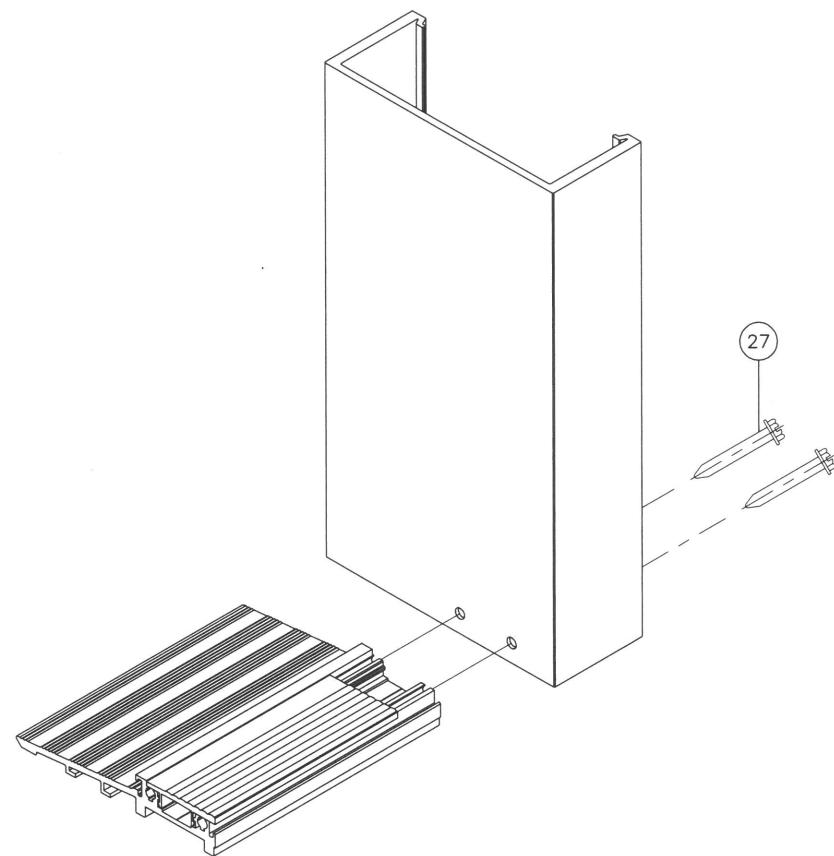
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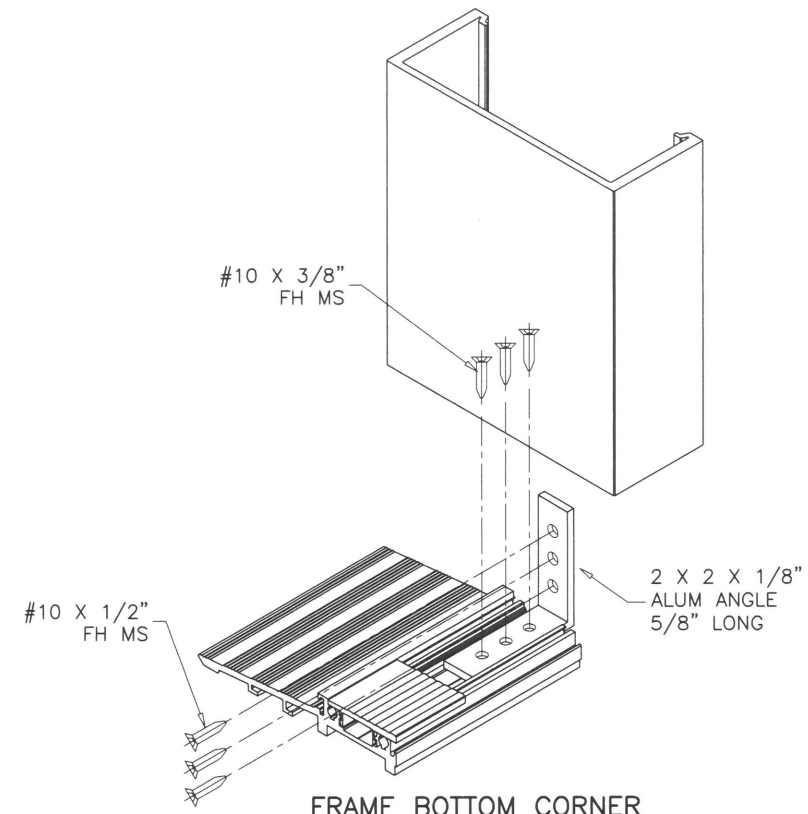
SASH TOP/BOTTOM CORNER



FRAME TOP CORNER

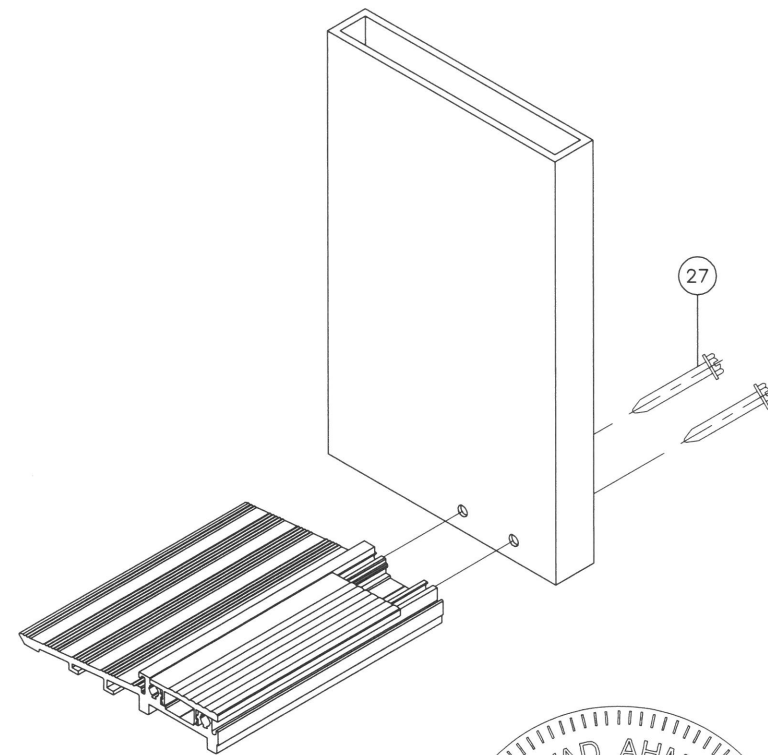


FRAME BOTTOM CORNER

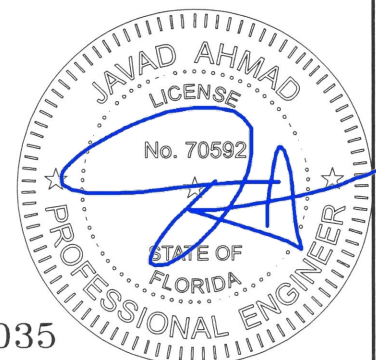


FRAME BOTTOM CORNER

APPLICABLE AT STD. AND NARROW JAMBS



FRAME BOTTOM CORNER



FL #30035

Sealed 8/14/2019

afc
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 \ 19-70FENV

SERIES ENV-350 OUTSWING CASEMENT WDW. (L.M.I.)
ENVIRALUM INDUSTRIES INC.
 5100 N.W. 72 AVENUE BLDG. C
 MIAMI, FL. 33166
 TEL. (305) 752-4411 FAX. (305) 406-3877

no	date	description

date: 07-26-19
 scale: 3/8" = 1"
 dr. by: TARIQ
 chk. by:

drawing no.
19-70F
 sheet 7 of 7