

SERIES '540-H'

ALUMINUM HOPPER (PROJECT-IN) WINDOW WITH LOUVERS

APPROVAL APPLIES TO SINGLE UNITS OR SIDE BY SIDE COMBINATIONS OF HOPPER/HOPPER OR HOPPER WINDOW 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.

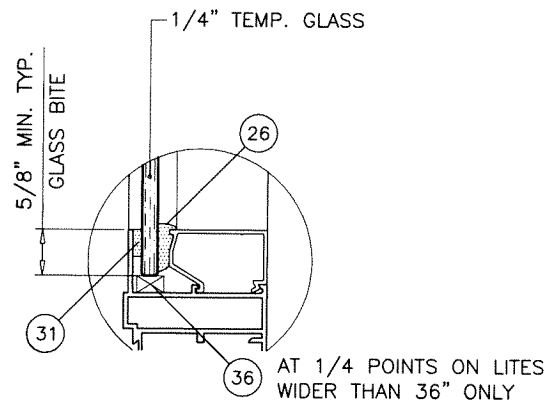
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

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.

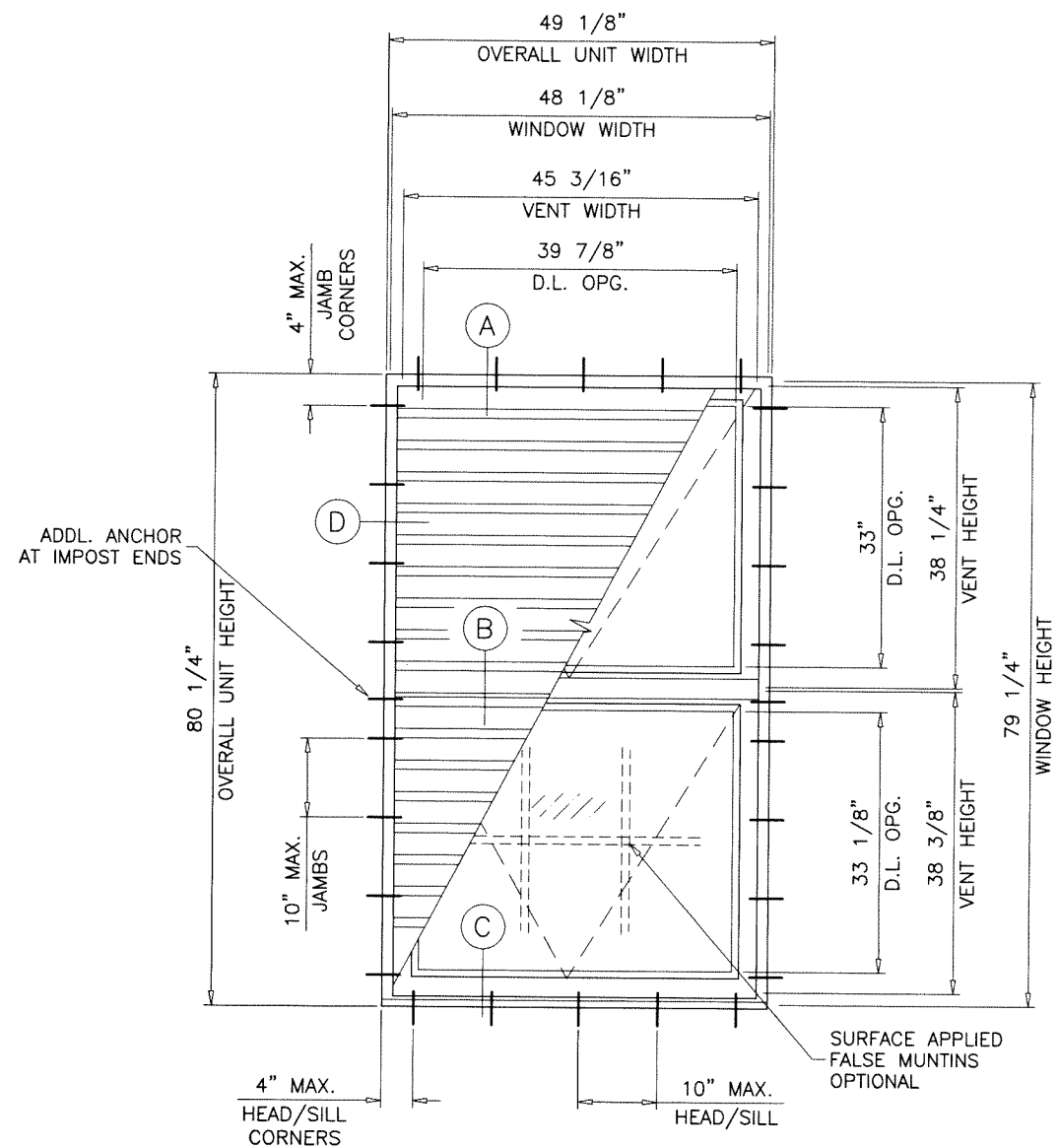
DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

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.



GLAZING DETAIL

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



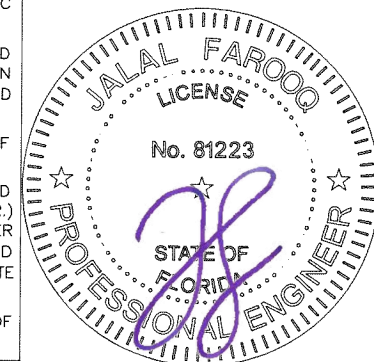
MAXIMUM DESIGN LOAD RATING = + 75.0 PSF
(FOR SIZES SHOWN ABOVE OR SMALLER) - 75.0 PSF

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

LOUVER BLADES MAX. LENGTH = 47 INCHES

Sealed: 11/1/2023

FL #17527



S-540-H ALUM HOPPER WDW. W/ LOUVERS (L.M.I.)

SOL-A-TROL ALUMINUM PRODUCTS

4101 N.W. 132ND STREET

MIAMI, FL. 33054

TEL. (305) 681-2020

FAX. (305) 681-2035

revisions:

date: 02-17-15

scale: 1/2"=1'-0"

dr. by: TARIQ

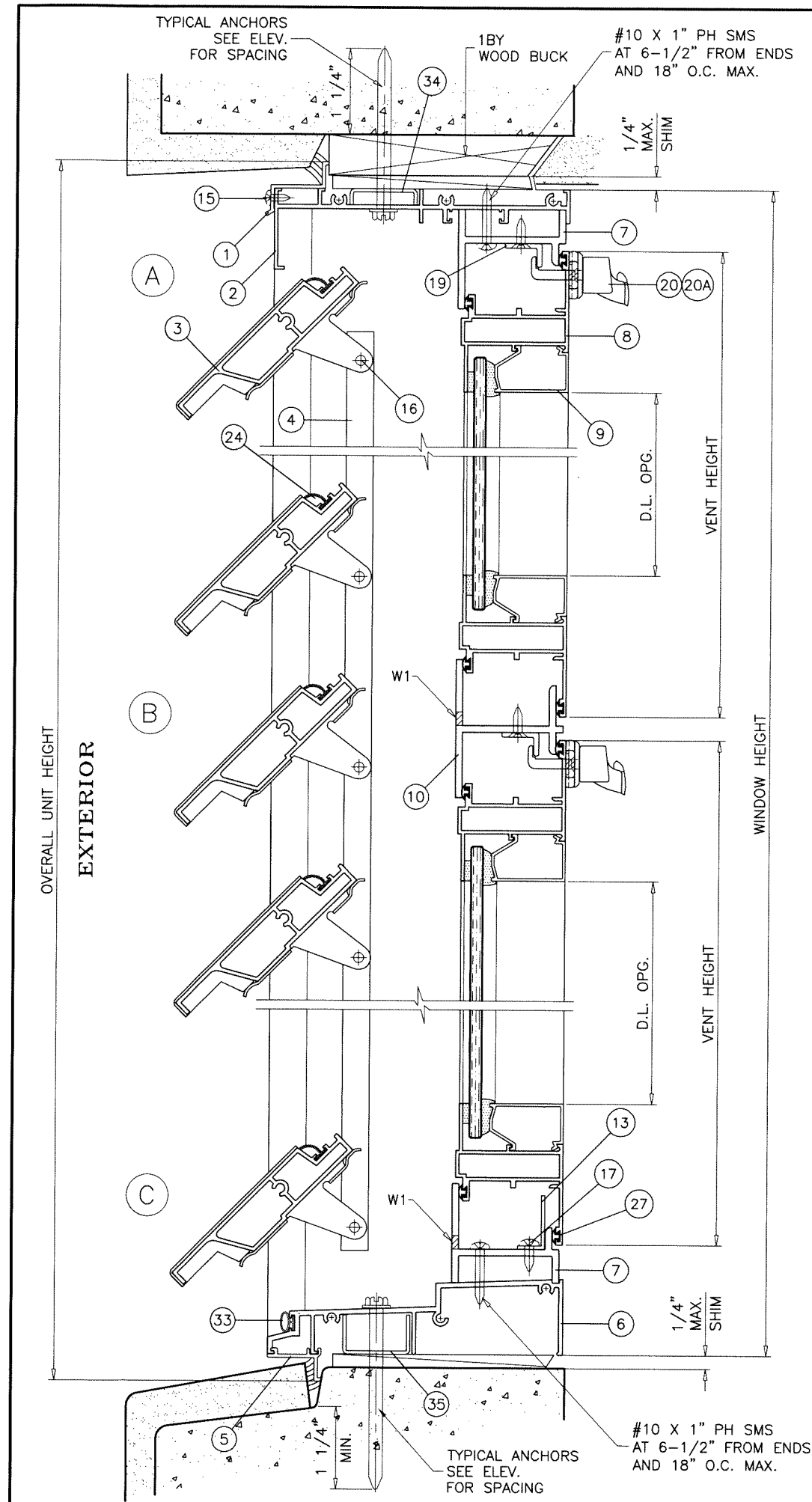
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drawing no.

W15-04

sheet 1 of 6

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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100
FAX. (305) 264-8100
WWW.AFCENG.COM
COMP-ANL\W15-04SAT
FBPE #3538



SEALANTS:

FRAME AND VENT CORNERS AND INSTALLATION SCREWS AT SILL SEALED WITH WHITE/ALUMINUM COLORED SEALANT.

WEEPHOLES:

W1 = 3/8"W X 1/4"H WEEPHOLES AT 7-1/4" FROM EACH END

TYPICAL ANCHORS:

SEE ELEV. FOR SPACING
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 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)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

#14 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)
 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)

#12 SMS OR SELF-DRILLING SCREWS (GRADE 2 CRS)
 INTO F.B.C. APPROVED MULLIONS
 (3) THREADS MIN. TO EXTEND BEYOND METAL THICKNESS
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)

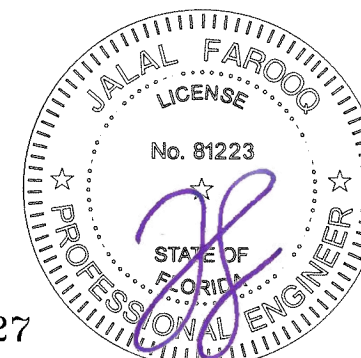
CRITICAL EDGE DISTANCE

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.

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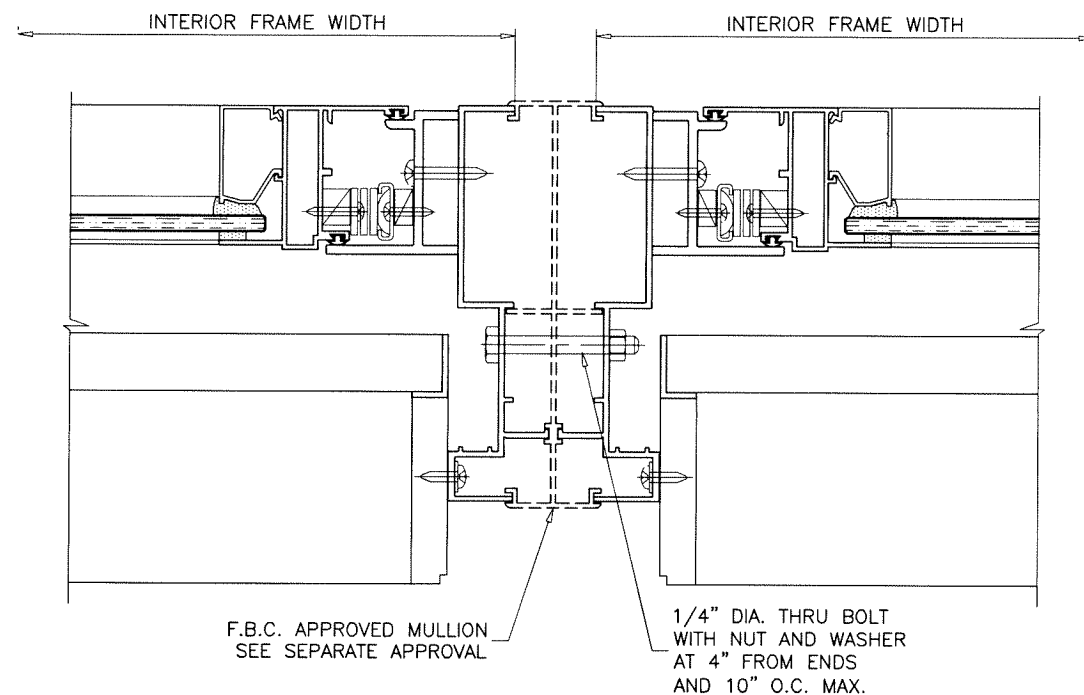
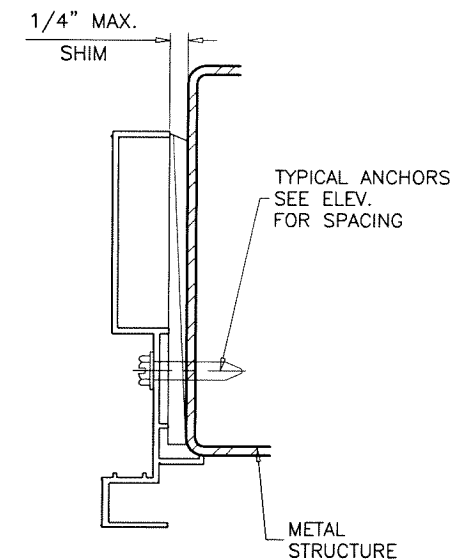
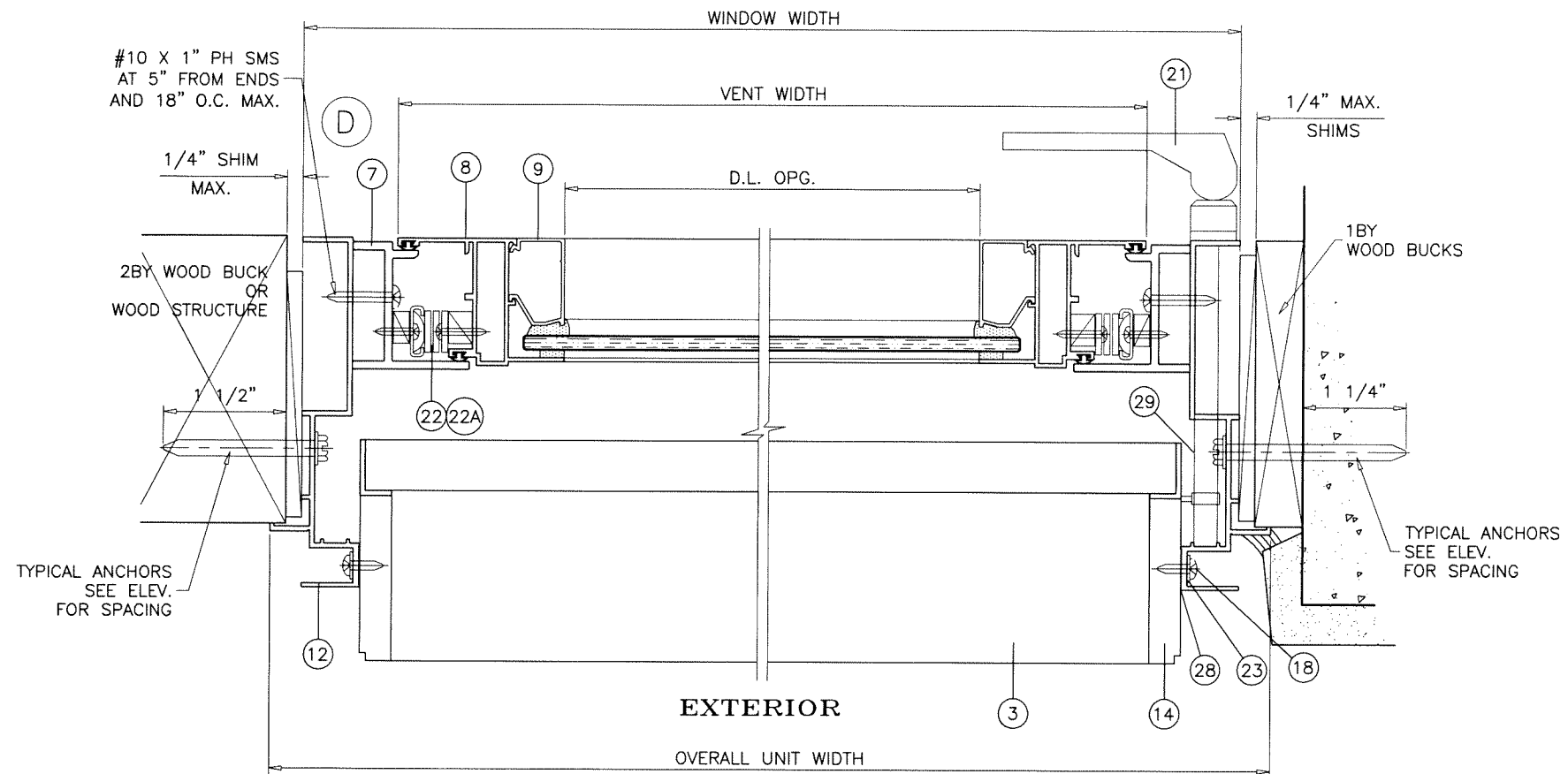
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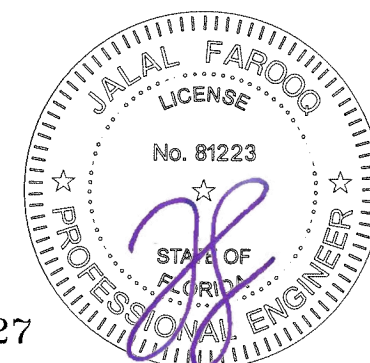
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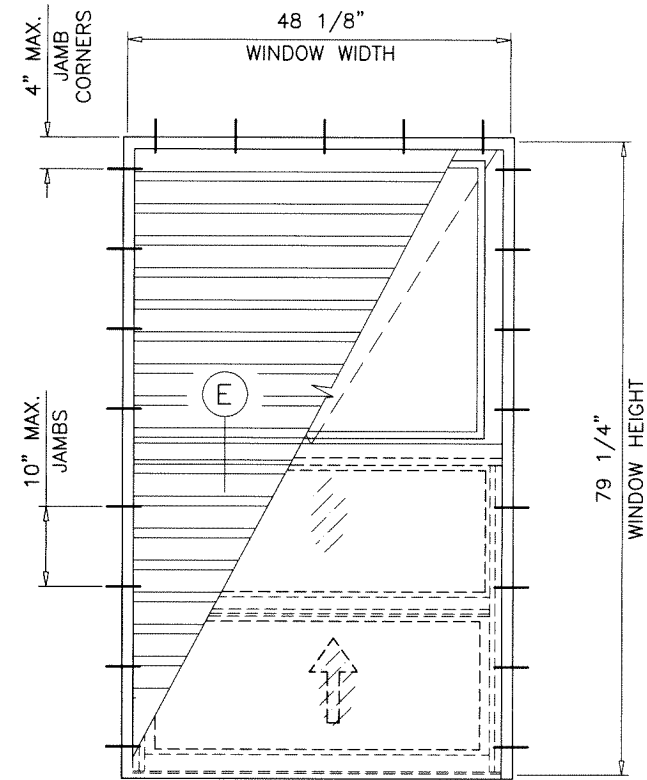
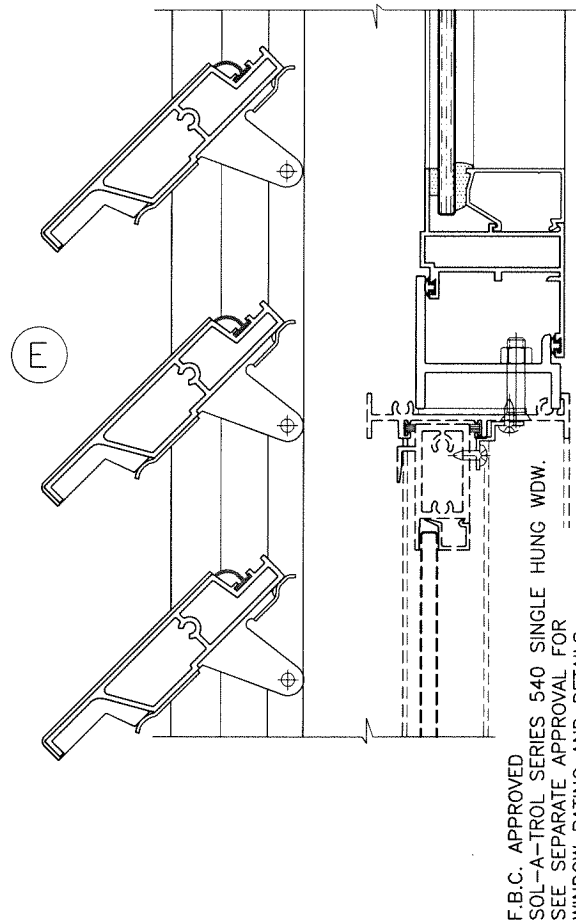
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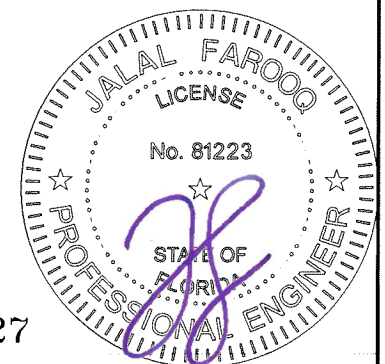


PROJECT-IN/SINGLE HUNG
WINDOWS WITH LOUVERS

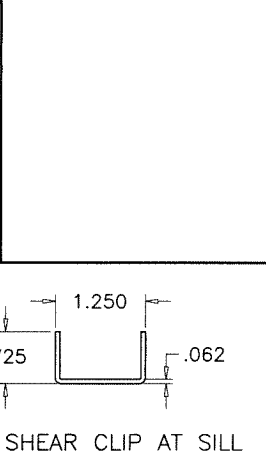
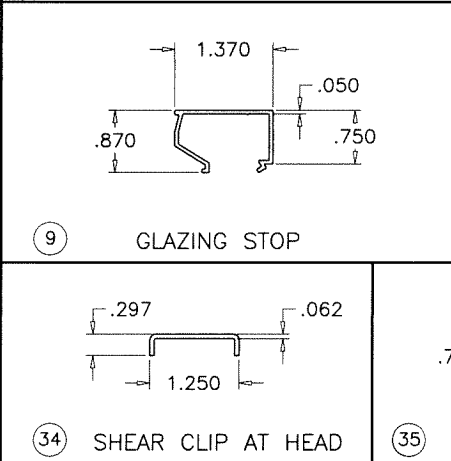
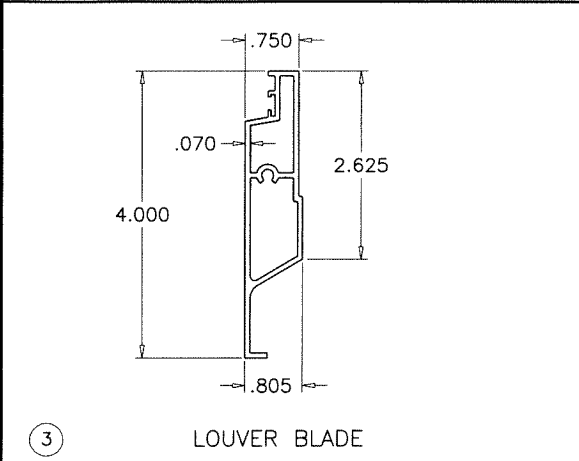
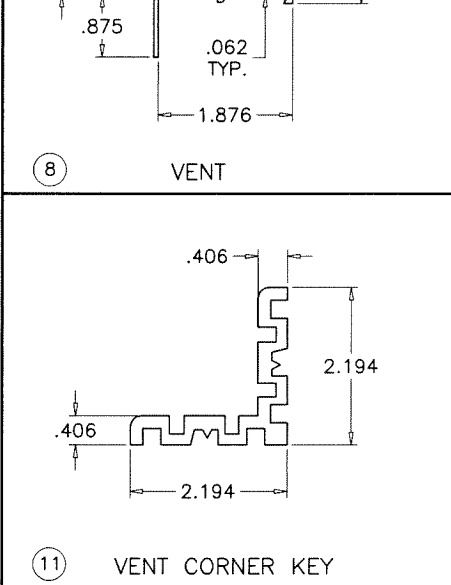
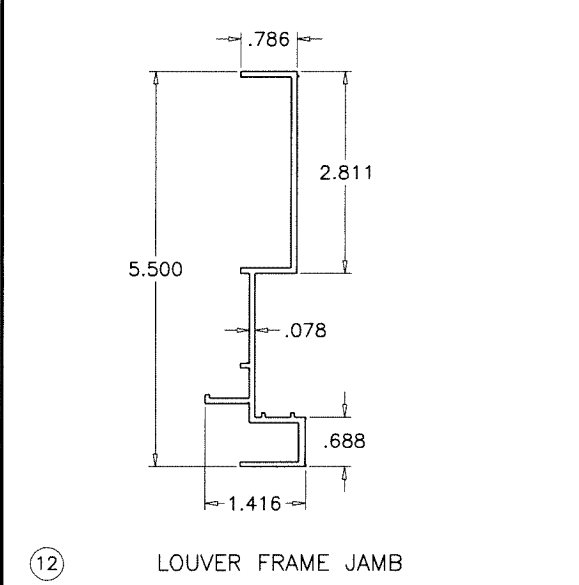
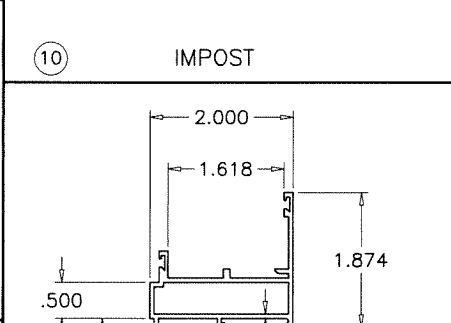
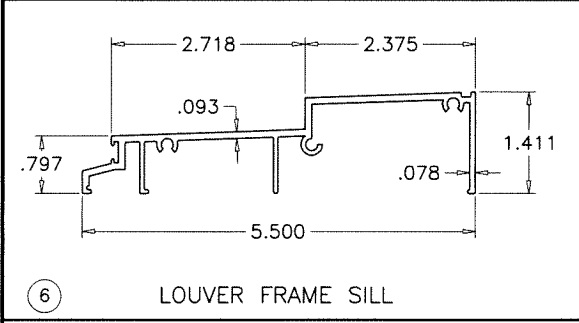
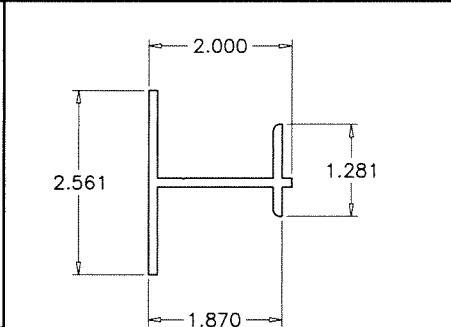
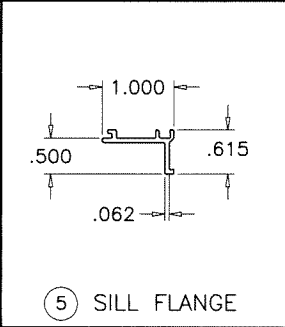
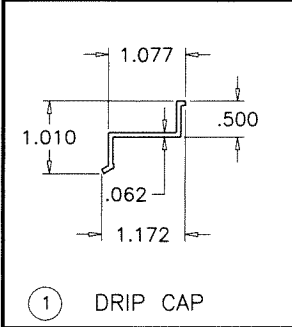
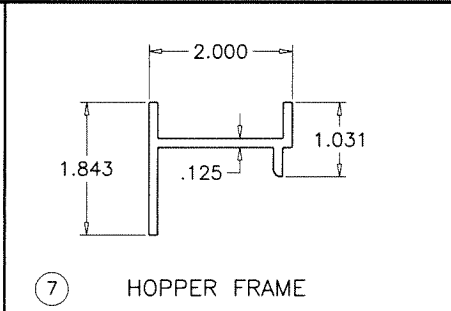
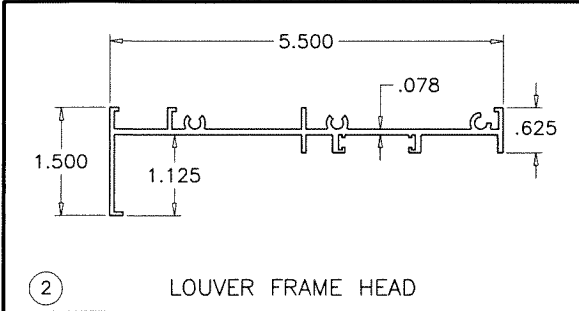
LIMIT MAXIMUM DESIGN LOADS TO ± 70.0 PSF FOR PROJECT-IN/SINGLE HUNG COMBINATIONS
LOUVER BLADES MAX. LENGTH = 47 INCHES

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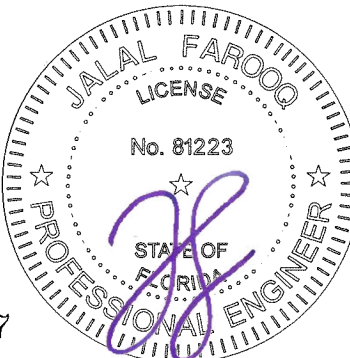
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ITEM	PART #	QUANTITY	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	ARSO-8	1	DRIP CAP	6063-T5	-
2	ARSO-3	1	LOUVER FRAME HEAD	6063-T5	-
3	ARSO-69	AS REQD.	LOUVER BLADE	6063-T6	-
4	ARSO-51	2/ WDW.	TRAVEL BAR	6063-T5	-
5	ARSO-7	1	SILL FLANGE	6063-T5	-
6	ARSO-66	1	LOUVER SILL	6063-T5	-
7	ARSO-112	4/ WDW.	HOPPER FRAME	6063-T5	-
8	ARSO-176	4/ VENT	VENT FRAME	6063-T5	-
9	ARSO-187	4/ VENT	GLAZING BEAD	6063-T5	-
10	ARSO-129R	1	IMPOST	6063-T5	-
11	ARSO-173	1/ CORNER	VENT CORNER KEY	6063-T5	-
12	ARSO-52	2/ WDW.	LOUVER JAMB	6063-T5	-
13	-	1	ALUMINUM ANGLE	6063-T5	1/2 X 1 X 1/16"
14	393	2/ BLADE	LOUVER BLADE CLIP	ALUM 5005	-
15	#6 X 3/8"	AS REQD.	DRIP CAP SCREWS, AT 6-1/2" FROM ENDS	ST. STEEL	PH SMS
16	3/16" DIA.	-	TUBULAR RIVET	ALUMINUM	-
17	#10 X 3/8"	AS REQD.	SILL ANGLE SCREWS, AT 5" FROM ENDS & 10" O.C. MAX.	ST. STEEL	PH MS
18	#10 X 1-1/2"	AS REQD.	LOUVER INSTALLATION FASTENERS	ST. STEEL	SMS
19	#847	1/ VENT	KEEPER	WHITE BRONZE	FASTENED W/ (2) #10 X 3/8" SMS
20	#4907/4908	1/ VENT	CAM LOCKS, AT 5-1/2" FROM ENDS	WHITE BRONZE	-
20A	#10 X 3/8"	2/ LOCK	LOCK INSTALLATION SCREWS	ST. STEEL	FH SMS
21	#149-003	2	LOUVER HANDLE	WHITE BRONZE	-
22	SS-300	2/ VENT	4-BAR HINGE	ST. STEEL	-
22A	#10 X 3/4"	4/ HINGE	HINGE INSTALLATION SCREWS	ST. STEEL	PH SMS
23	001-292-A-1	AS REQD.	BUSHING	VINYL	-
24	326-FP-61-SB	-	BLADE WEATHERSTRIPPING	VINYL	-
25	-	AS REQD.	GLAZING TAPE	POLYFOAM	1/8" X 3/8"
26	FP-40	AS REQD.	GLAZING WEDGE	VINYL	-
27	FP-216-S	AS REQD.	WEATHERSTRIPPING	VINYL	-
28	301-COIL	-	WEATHERSTRIPPING	ST. STEEL	-
29	#313	-	5/16" HEX ROD	2024-T4	-
30	#1580	-	SPOOL ARM	-	-
31	-	AS REQD.	1/8" X 3/8 GLAZING TAPE	FOAM	POLY FOAM
32	#10 X 1"	-	FRAME ASSEMBLY SCREWS	ST. STEEL	PH SMS
33	FP-86S	AS REQD.	LOUVER SILL WEATHERSTRIPPING	-	PROTOTYPE
34	-	AS REQD.	SHEAR CLIP AT HEAD, 3" LONG	3003-H14	AT ANCHOR LOCATIONS
35	-	AS REQD.	SHEAR CLIP AT SILL, 3" LONG	3003-H14	AT ANCHOR LOCATIONS
36	-	AS REQD.	SETTING BLOCKS	EPDM	DUROMETER 80±5 SHORE A

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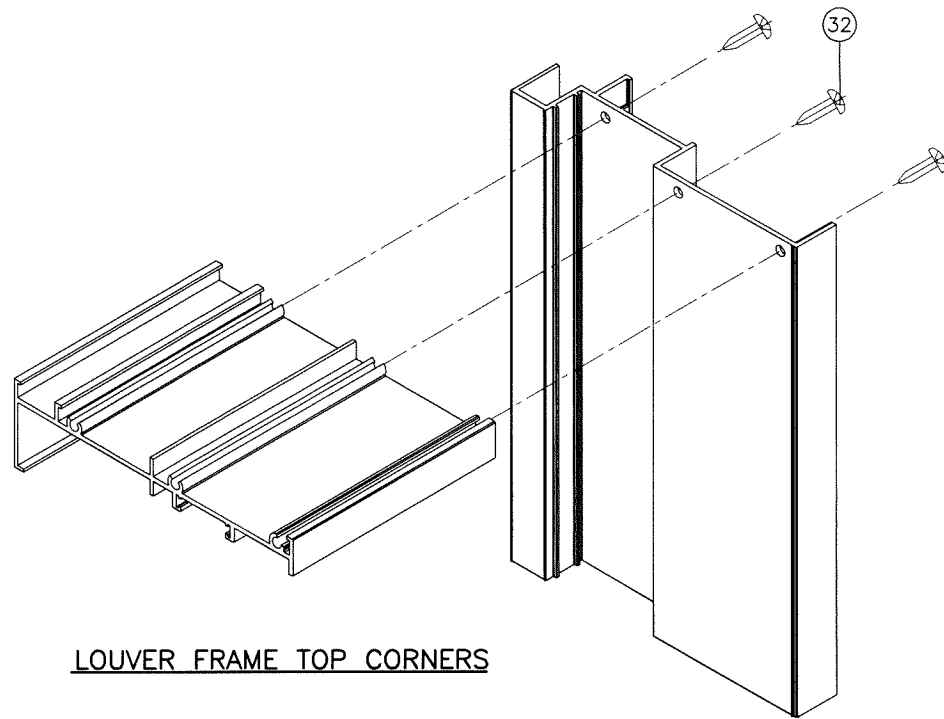
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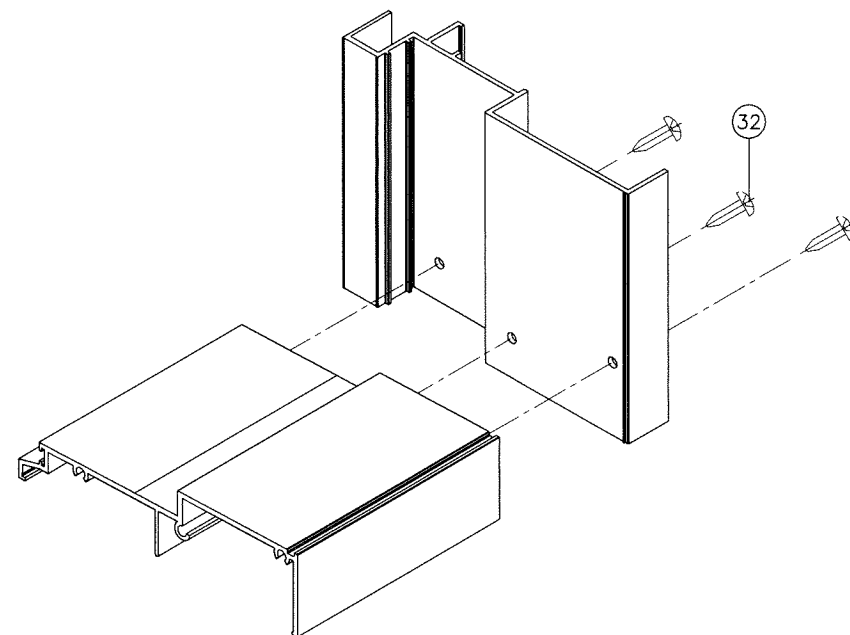
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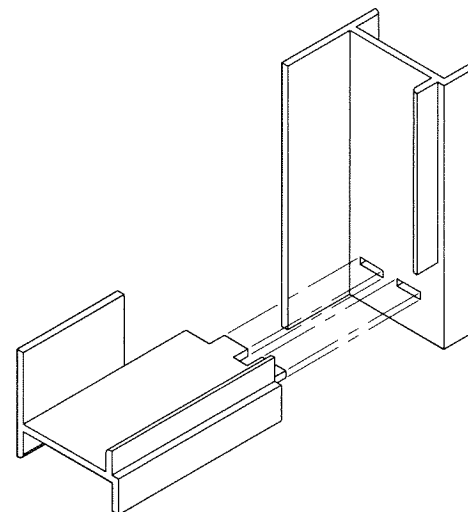
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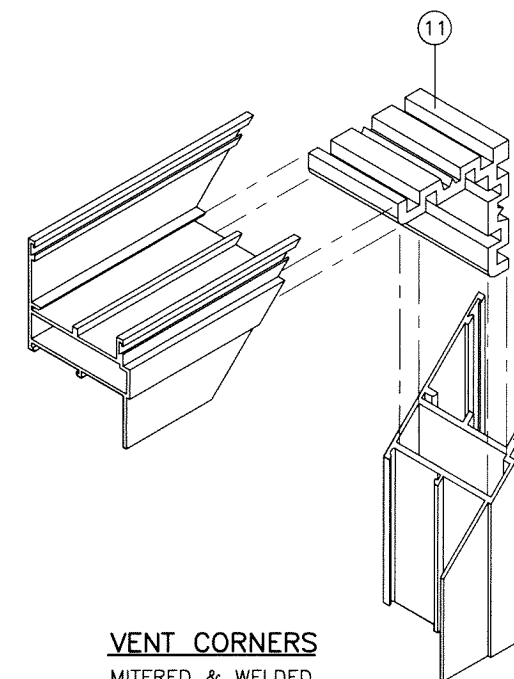
LOUVER FRAME TOP CORNERS



LOUVER FRAME BOTTOM CORNERS



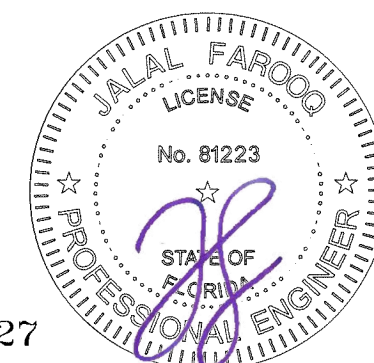
HOPPER FRAME CORNERS
STAKED MORTISE AND TENON FABRICATION



VENT CORNERS
MITERED & WELDED

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