

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-150 (S.M.I.)
ALUMINUM SINGLE HUNG WINDOW

DESIGN LOAD RATINGS FOR THESE WINDOWS TO BE AS PER
CHART SHOWN ON SHEET 2.

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 2017 (6TH EDITION)/2020 (7TH 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 2017/2020 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

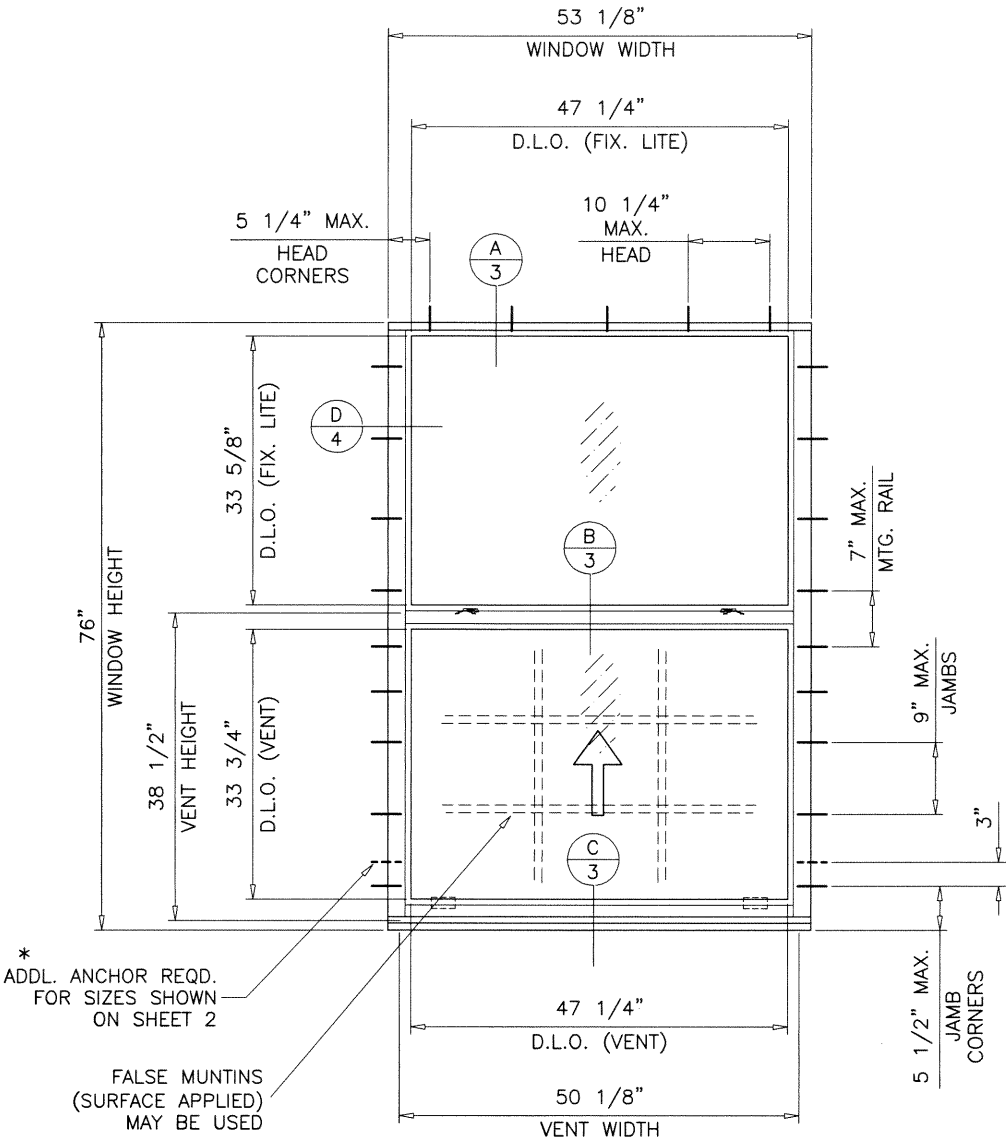
THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION
FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY
OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR
WATER INFILTRATION RESISTANCE ETC.
CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY,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

*
ADDL. ANCHOR REQD.
FOR SIZES SHOWN
ON SHEET 2

FALSE MUNTINS
(SURFACE APPLIED)
MAY BE USED



TYPICAL ELEVATION
(TESTED UNIT)

LAMINATED GLASS
INSUL. LAM. GLASS
SMALL MISSILE IMPACT

Sealed: 10/12/2020 FL #26972

- 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-150 ALUM SINGLE HUNG WDW. (S.M.I.)

ECO WINDOW SYSTEMS, LLC.

8502 N.W. 80th STREET
MEDLEY, FL. 33166

TEL. (305) 885-5299 FAX (305) 885-5902

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\18-44FECD

revisions:

no	date	by	description
A	09.30.20		UPDATED TO 2020 FBC

date: 04-13-18

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

dr. by: TARIQ

chk. by:

drawing no.

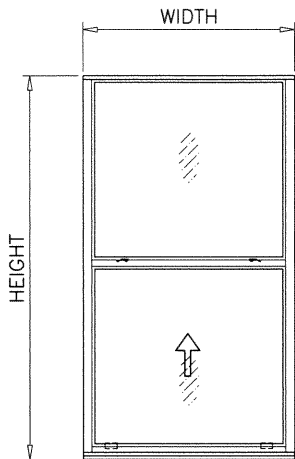
18-44F

sheet 1 of 7

EQUAL LITES WINDOWS			
DESIGN LOAD CAPACITY - PSF			
FLANGE DIMS.		GLASS TYPES 'G1' & 'G2'	
WIDTH	HEIGHT	EXT.(+)	INT.(-)
19-1/8"	38-3/8" (4)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	50-5/8" (6)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	63" (6)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	133.7
19-1/8"	76" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	131.4
19-1/8"	84" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
19-1/8"	96" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0

* NO. IN PARENTHESIS INDICATE NO. OF ANCHORS PER JAMB.

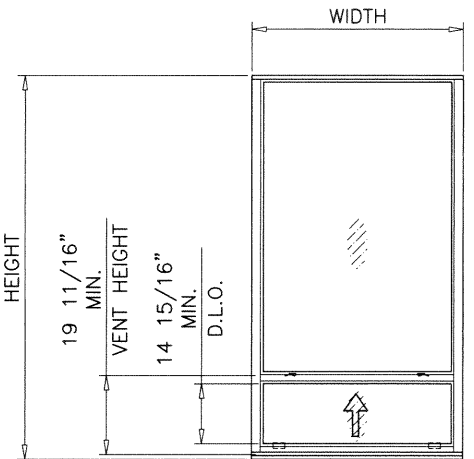
* ADDL. ANCHOR REQD. AT SILL ENDS FOR THESE SIZES.



EQUAL LITES

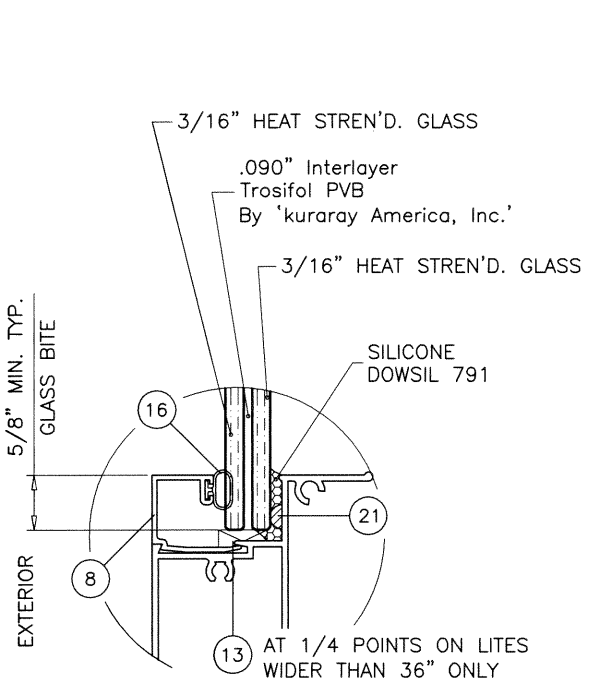
UNEQUAL LITES WINDOWS			
DESIGN LOAD CAPACITY - PSF			
FLANGE DIMS.		GLASS TYPES 'G1' & 'G2'	
WIDTH	HEIGHT	EXT.(+)	INT.(-)
19-1/8"	38-3/8" (4)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	50-5/8" (6)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	63" (6)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	76" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	84" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0
53-1/8"		80.0	135.0
19-1/8"	96" (8)	80.0	135.0
26-1/2"		80.0	135.0
30"		80.0	135.0
42"		80.0	135.0
48"		80.0	135.0

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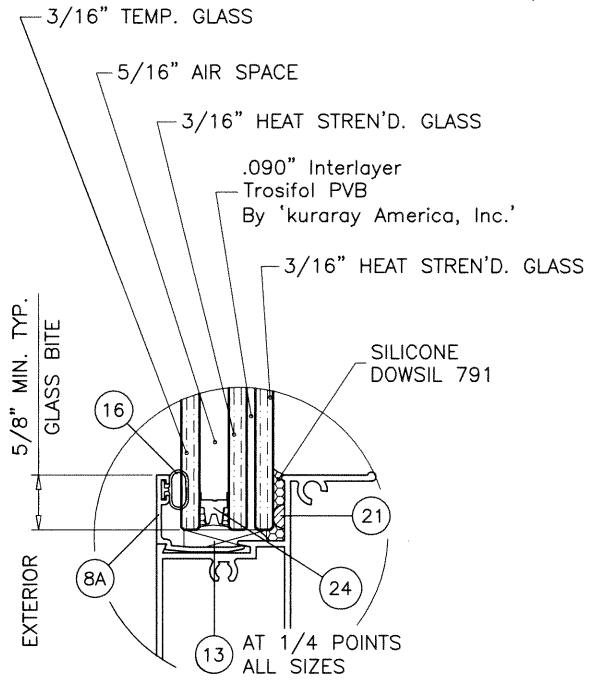


UNEQUAL LITES (ORIEL TYPE)

* ADDL. ANCHOR REQD. AT SILL ENDS FOR THIS SIZE.



GLASS TYPE 'G1'
7/16" OVERALL LAM. GLASS



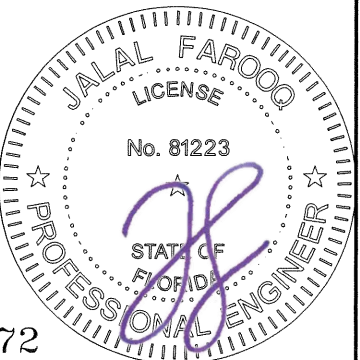
GLASS TYPE 'G2'
15/16" OVERALL INSUL. LAM. GLASS

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

GLAZING OPTIONS

Sealed: 10/12/2020

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SERIES-150 ALUM SINGLE HUNG WDW. (S.M.I.)

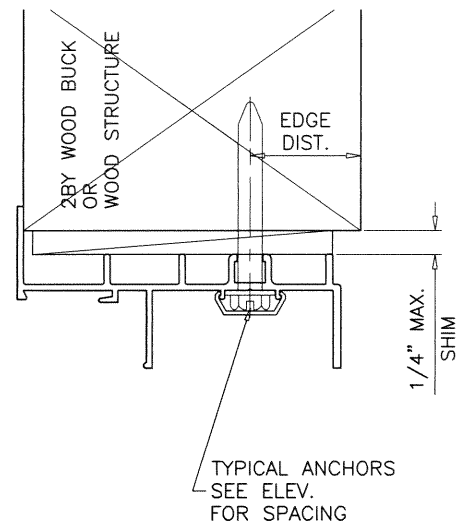
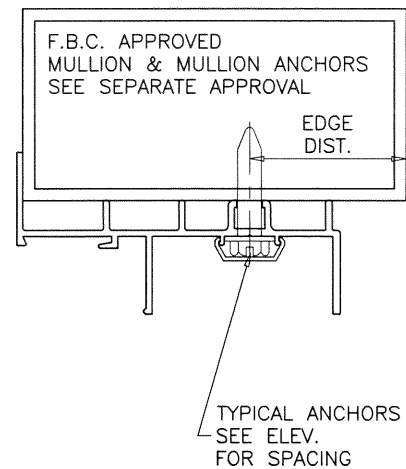
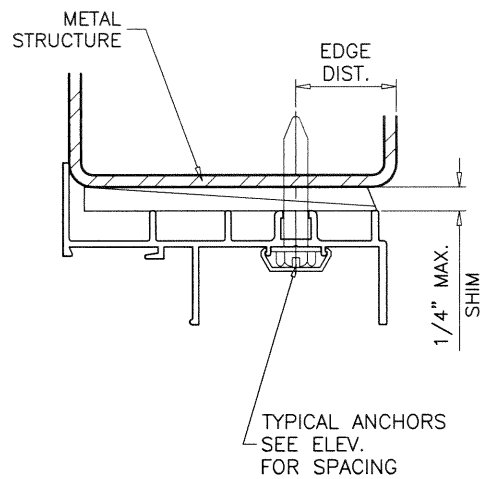
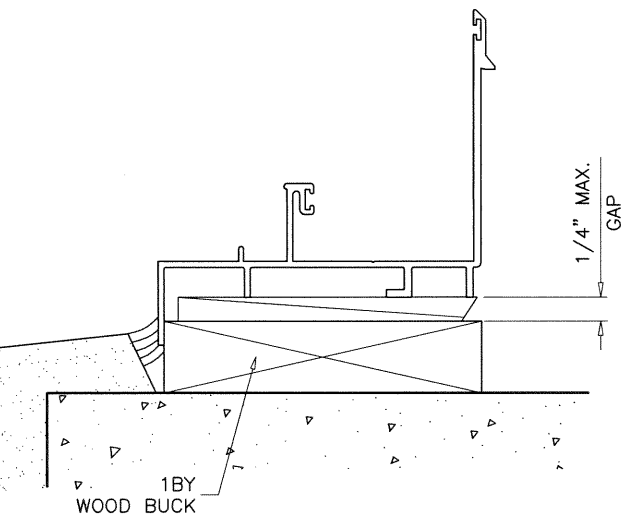
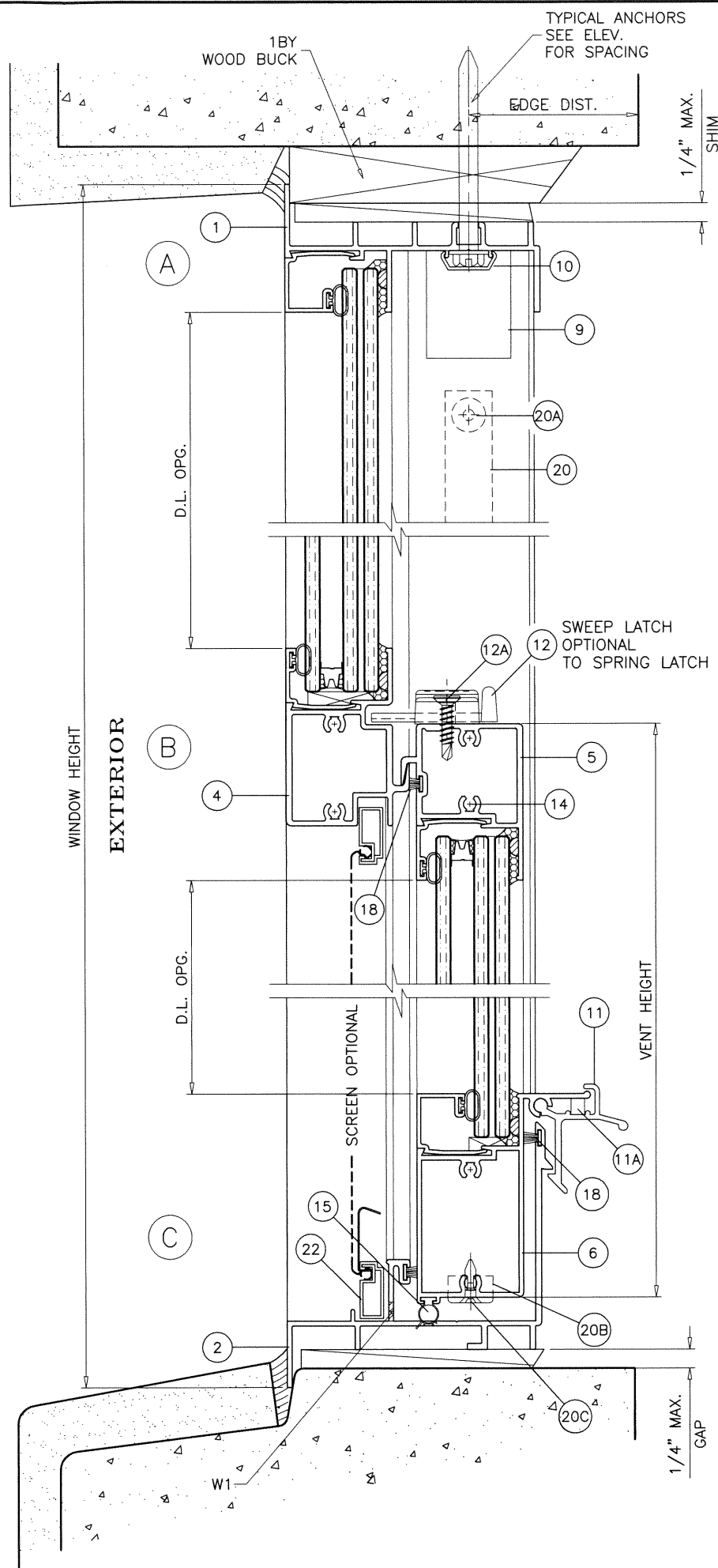
ECO WINDOW SYSTEMS, LLC.
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revisions:
no date by description

date: 04-13-18
scale: -
dr. by: TARIQ
chk. by:

drawing no.
18-44F

sheet 2 of 7



WEEPHOLES:

W1 = 1/4" X 3/4" WEEPHOLES AT 12-1/2" FROM EACH END

WOOD BUCKS AND METAL STRUCTURE NOT BY 'ECO WDW.' 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 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD (HEAD/JAMBS)
 THRU 1BY BUCKS INTO CONC. OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

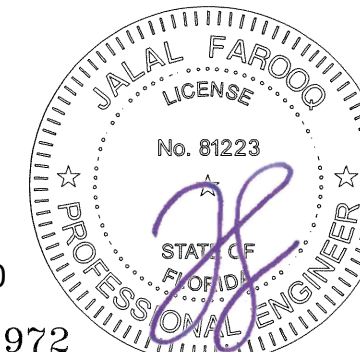
DIRECTLY INTO CONCRETE OR BLOCKS
 1-1/4" MIN. EMBED INTO CONCRETE (HEAD/JAMBS)
 1-1/4" MIN. EMBED INTO BLOCKS (JAMBS)

#14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)
 INTO F.B.C. APPROVED MULLIONS
 OR
 INTO METAL STRUCTURES (HEAD/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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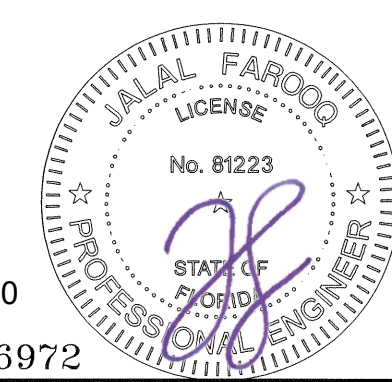
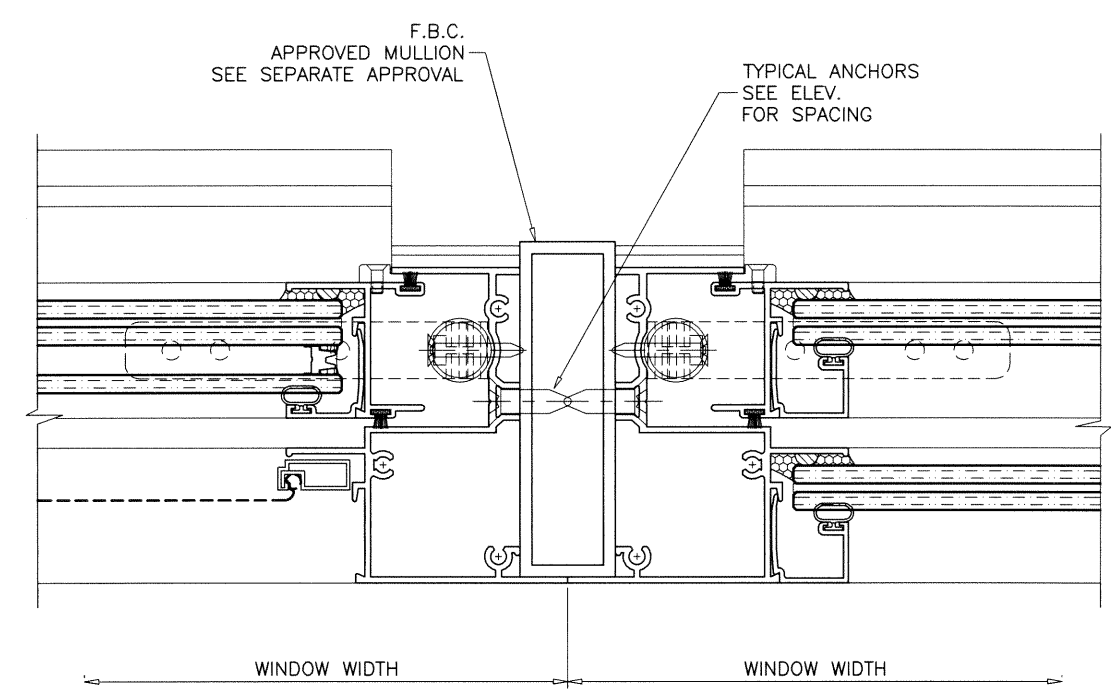
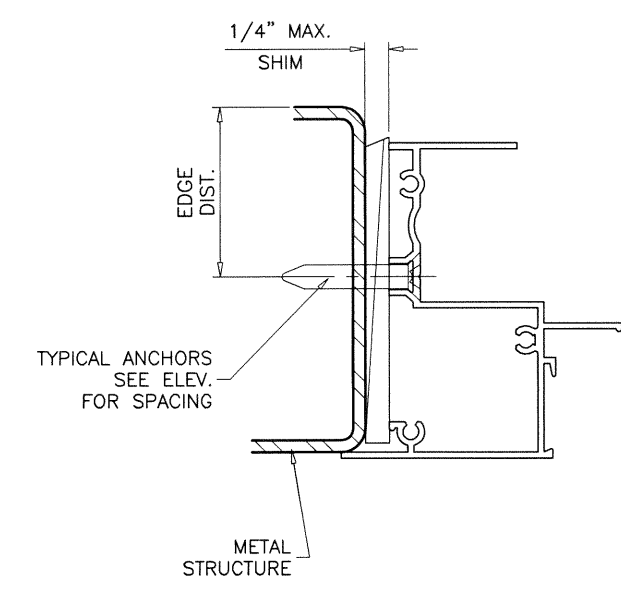
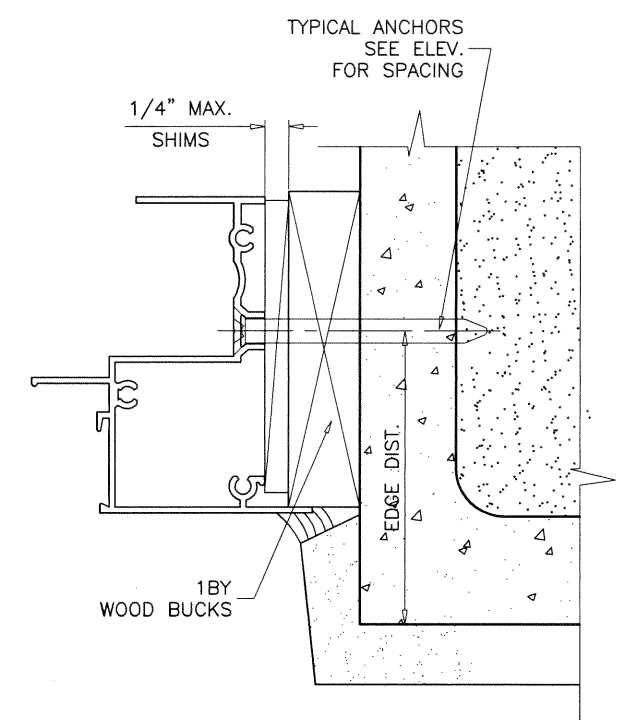
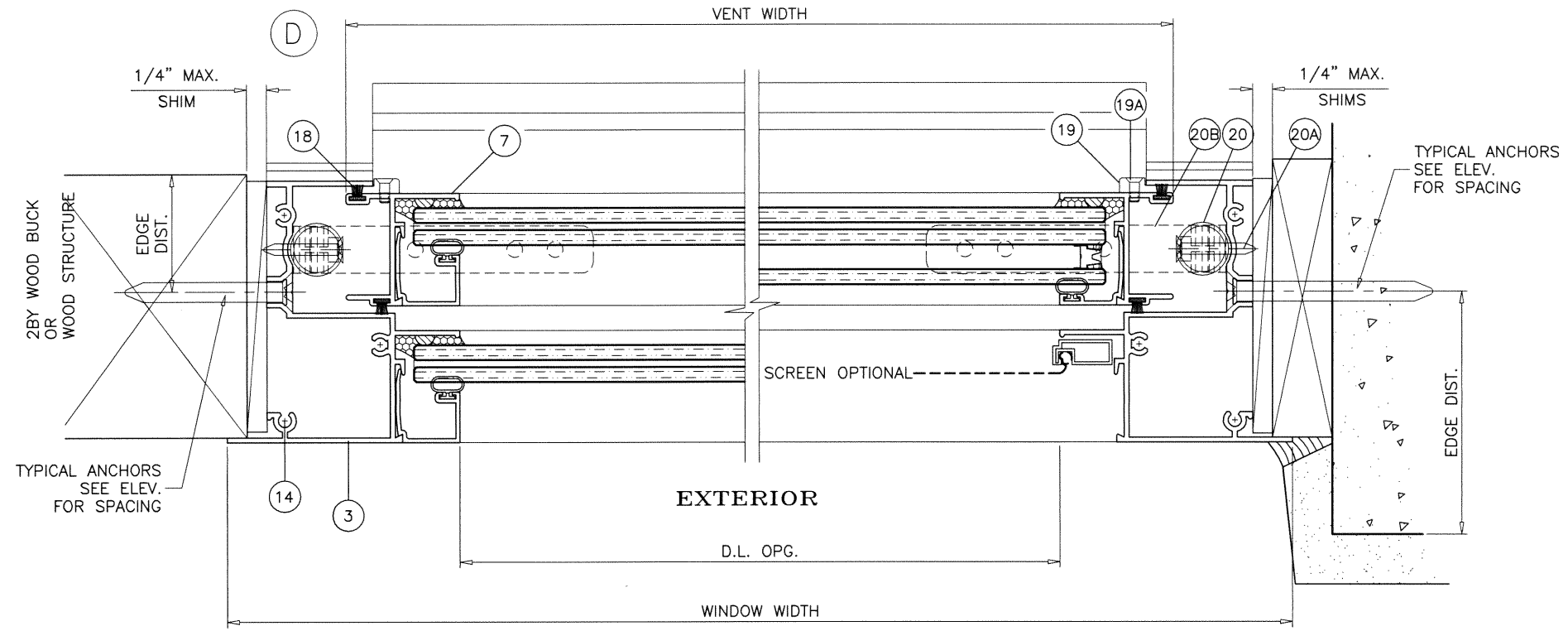
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 sheet 3 of 7



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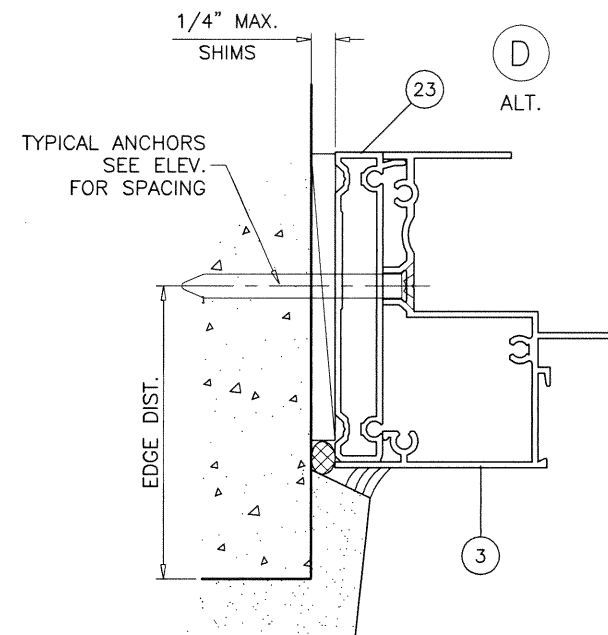
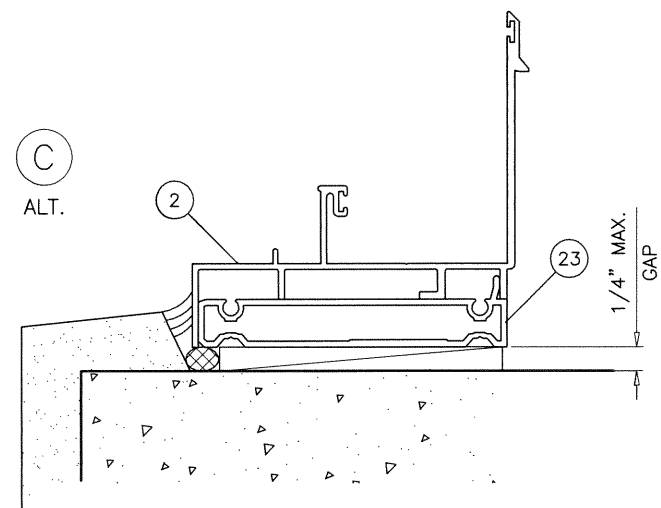
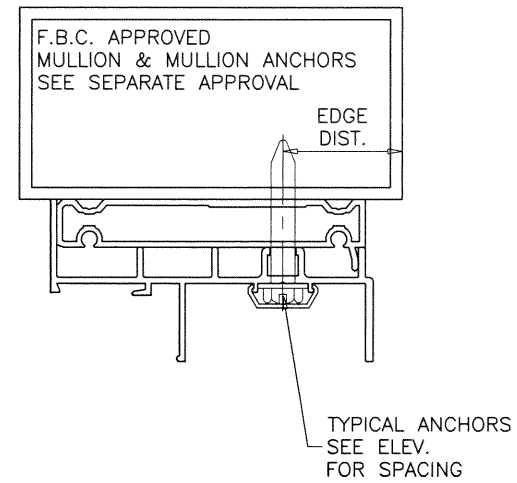
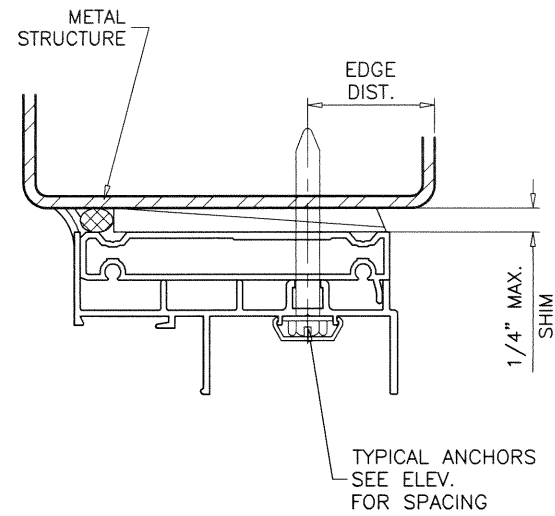
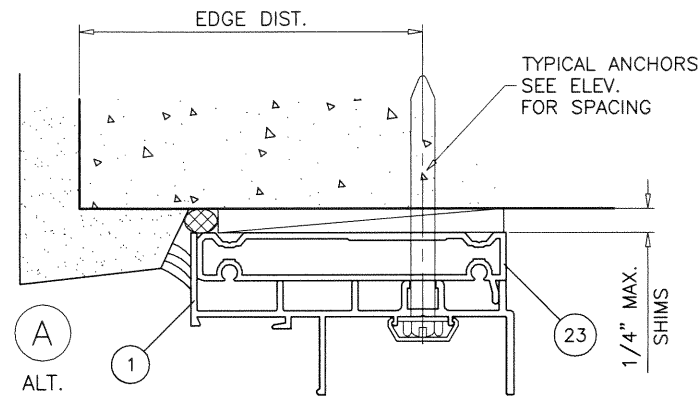
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date: 04-13-18	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:
drawing no.		18-44F	
sheet 4 of 7			



INSTALLATION DETAILS WITH FLUSH FRAME ADAPTER
SEE SHEETS 4 & 5 FOR WINDOW DETAILS



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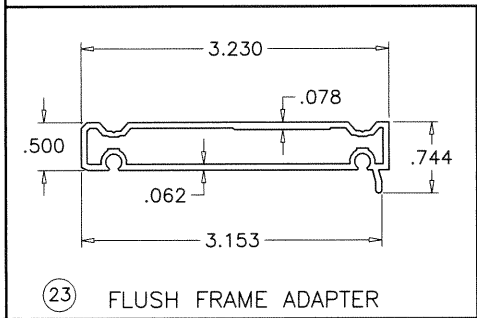
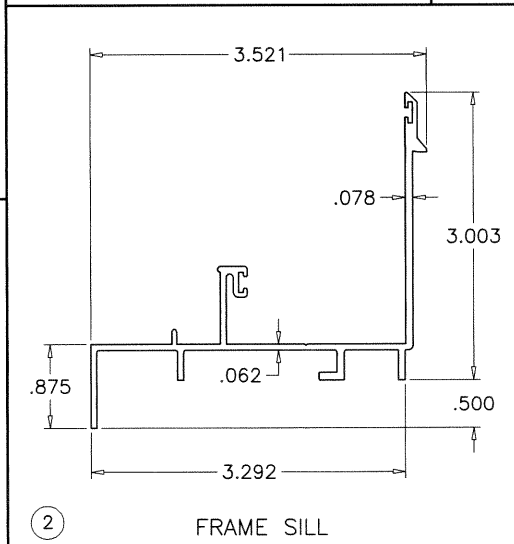
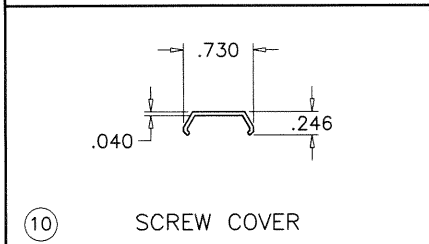
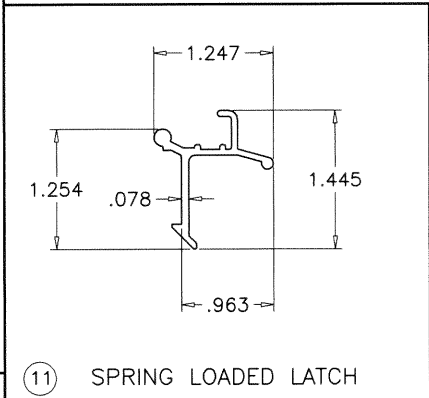
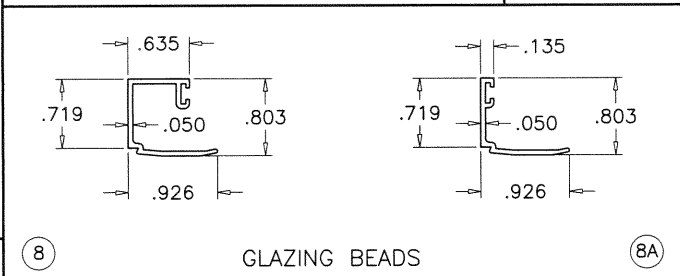
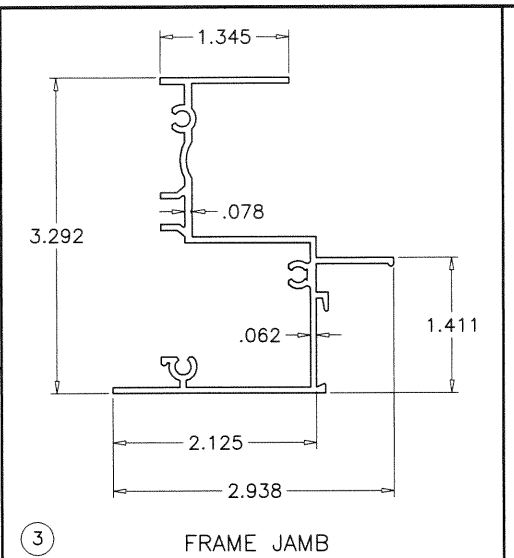
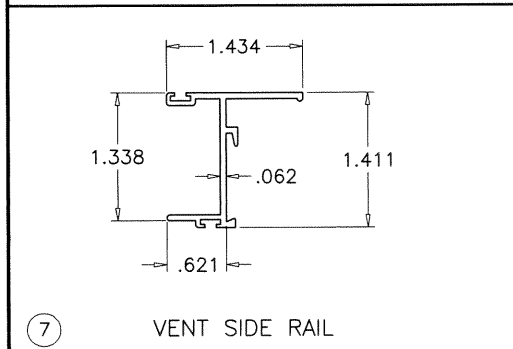
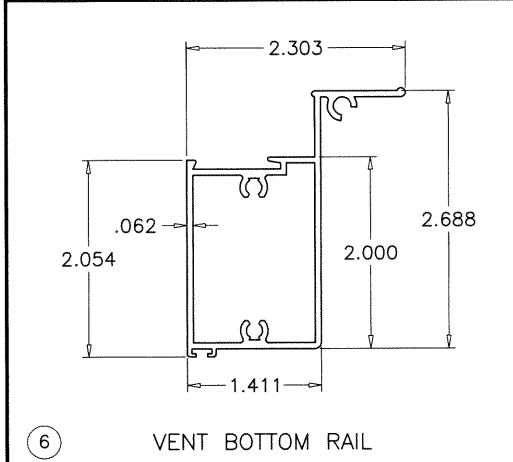
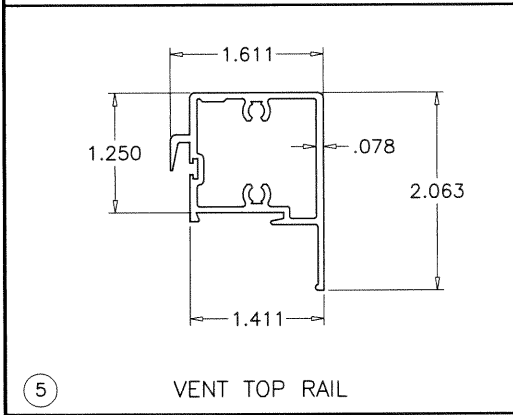
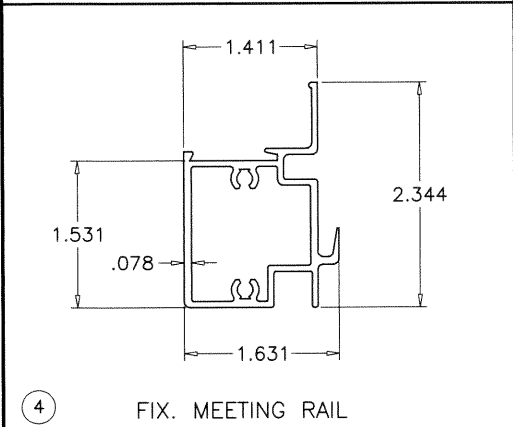
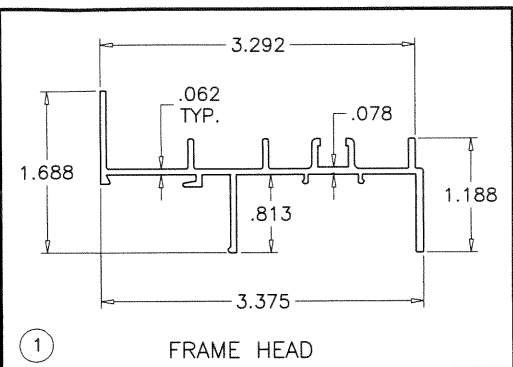
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18-44F
sheet 5 of 7



ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	E151	1	FRAME HEAD	6063-T6	-
2	E152	1	FRAME SILL	6063-T6	-
3	E153	2	FRAME JAMB	6063-T6	-
4	E154	1	FIXED MTG. RAIL	6063-T6	-
5	E155	1	VENT TOP RAIL	6063-T6	-
6	E156	1	VENT BOTTOM RAIL	6063-T6	-
7	E157	2	VENT SIDE RAIL	6063-T6	-
8	E159	AS REQD.	GLAZING BEAD (LAM. GLASS)	6063-T6	-
8A	E158	AS REQD.	GLAZING BEAD (INSUL. LAM. GLASS)	6063-T6	-
9	FY116	2/VENT	SASH STOP	6063-T5	-
10	E162	AS REQD.	SCREW COVER	6063-T6	-
11	FY113	2/VENT	SPRING LOADED LATCH, AT 6" FROM ENDS	6063-T6	-
11A	-	1/ LATCH	LATCH SPRING	ST. STEEL	-
12	SL203P	2/VENT	SWEEP LATCH, AT 12" FROM ENDS	ZAMAK	SULLIVAN & ASSOC.
12A	#8 X 5/8"	2/ LATCH	LATCH INST. SCREWS	ST. STEEL	FH SMS
13	-	AS REQD.	SETTING BLOCK	EPDM	DUROMETER 80±5 SHORE A
14	#10 X 1"	AS REQD.	FRAME & VENT ASSEMBLY SCREWS	CRS	PH SMS
14A	#10 X 1-1/4"	2/ CORNER	FLUSH FRAME ADAPTER FASTENERS	CRS	FH SMS
15	E207	AS REQD.	BOTTOM RAIL SEAL - SERIES 101	NEOPRENE	ULTRAFAB
16	TR.3020	AS REQD.	GLAZING BEAD BULB	SANTOPRENE	TECHNO RUBBER
17	E163	2/ VENT	SASH TOP GUIDE	DERLIN	M&M PLASTICS
18	W23181	AS REQD.	FIN SEAL W'STRIPPING	-	ULTRAFAB
19	E164	4/ VENT	SASH SIDE GUIDE	DERLIN	M&M PLASTICS
19A	#6 X 3/8"	1/ GUIDE	SASH GUIDE INST. SCREW	CRS	OH SMS TYPE B
20	F210	2/VENT	SASH BALANCE	-	SUPERBOOST BY BSI
20A	#8 X 1"	1/ BALANCE	BALANCE INST. SCREW	ST STEEL	FH SMS
20B	21B02 UEK	1/ BALANCE	BALANCE BRACKET	STEEL	CALDWELL
20C	#8 X 1/2"	2/ BRACKET	BRACKET FASTENER	ST. STEEL	PH SMS
21	-	AS REQD.	GLASS SPACER	SILICONE	FRANK LOWE
22	-	1	5/16" BOX SCREEN	-	OPTIONAL
23	E161	-	FLUSH FRAME ADAPTER	6063-T6	OPTIONAL
24	-	-	INSUL. GLASS EDGE SPACER	ST. STEEL	CARDINAL XL

Sealed: 10/12/2020

FL #26972



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

COMP-ANL\18-44FECO

SERIES-150 ALUM SINGLE HUNG WDW. (S.M.I.)

ECO WINDOW SYSTEMS, LLC.
8502 N.W. 80th STREET
MEDLEY, FL. 33166
TEL. (305) 885-5299 FAX (305) 885-5902

revisions:

no	date	by	description

date: 04-13-18

scale: 1/2" = 1"

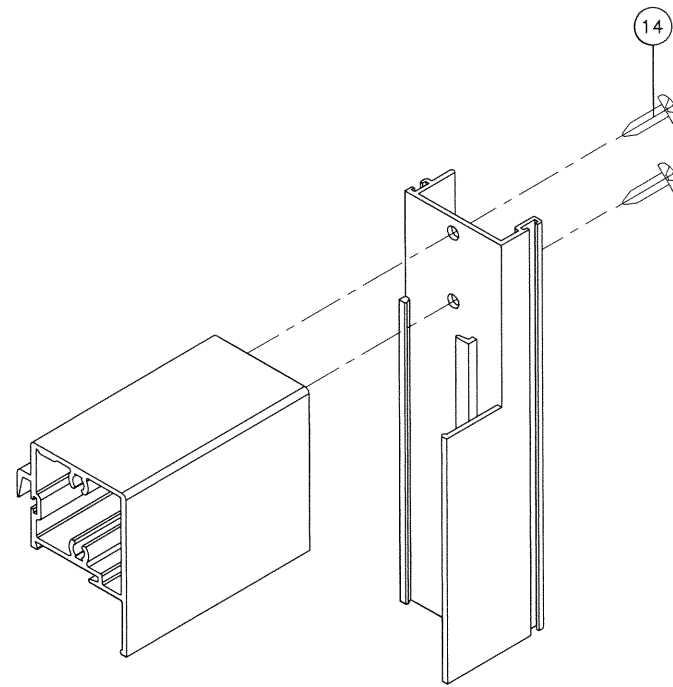
dr. by: TARIQ

chk. by:

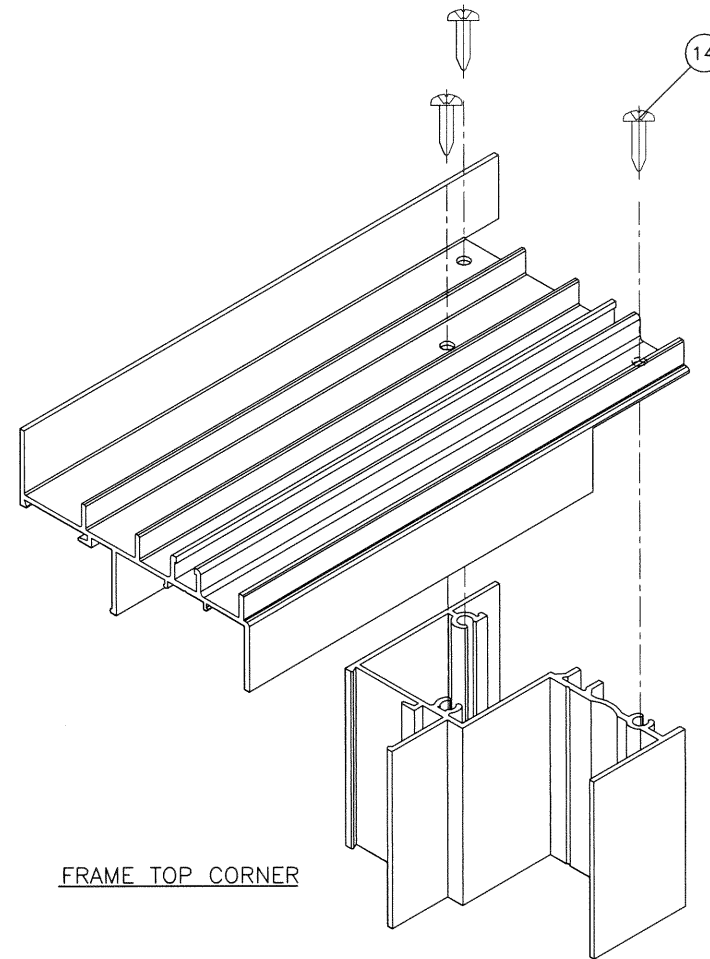
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18-44F

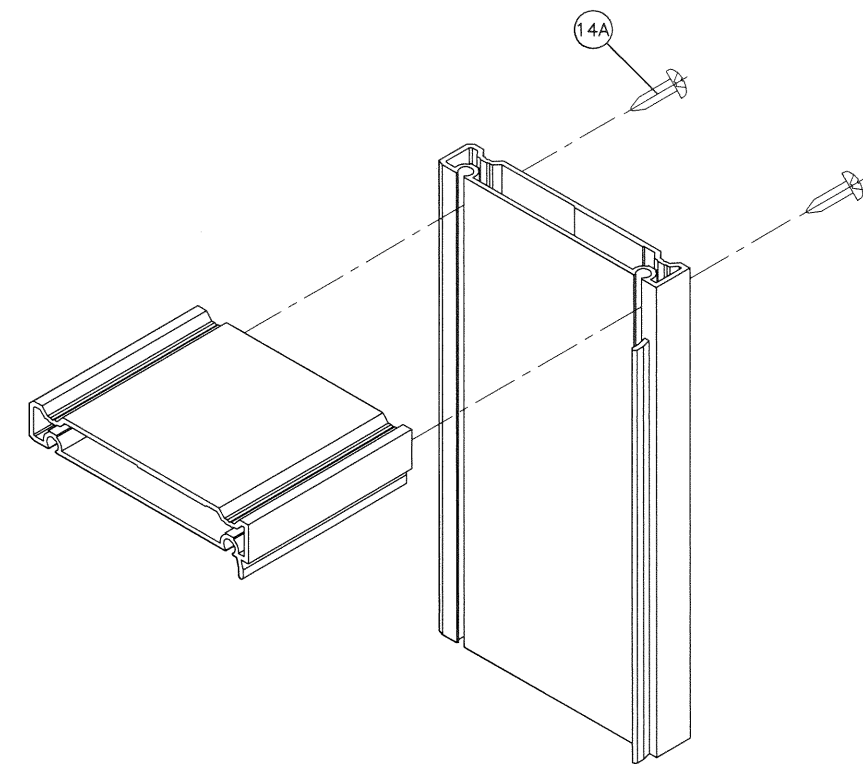
sheet 6 of 7



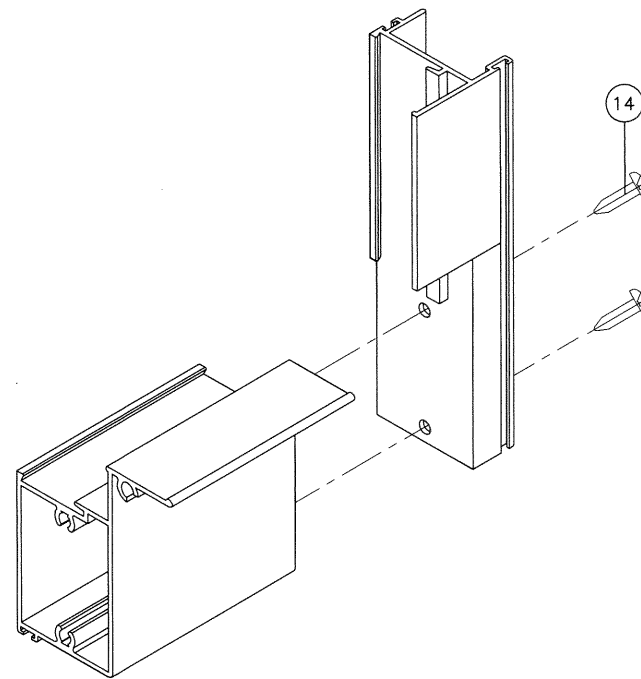
VENT TOP CORNER



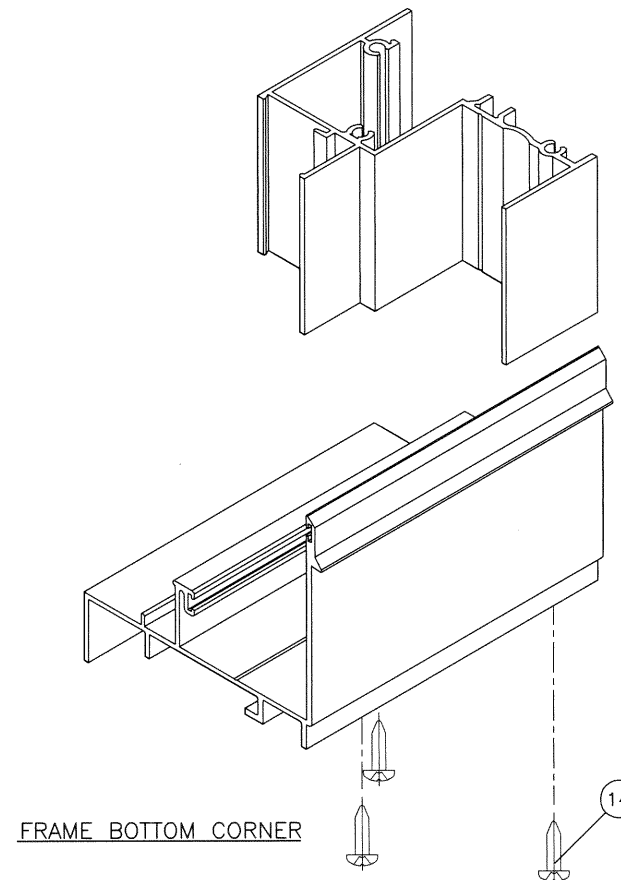
FRAME TOP CORNER



FLUSH FRAME ADAPTER CORNER



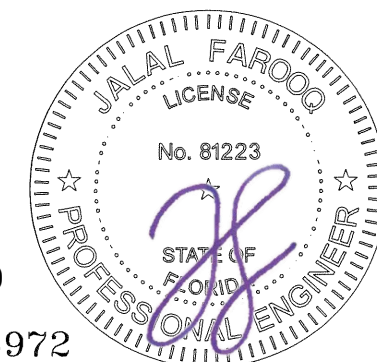
VENT BOTTOM CORNER



FRAME BOTTOM CORNER

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sheet 7 of 7