REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 IBC, 2006 IRC AND STATE OF TEXAS MODIFICATIONS.
2) WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3) 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4) ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
5) FRAME MATERIAL: ALUMINUM 6063–T6.
6) UNITS MUST BE GLAZED PER ASTM E1300–04 SEE SHEET 2 FOR GLAZING OPTIONS.
7) APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8) SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9) FOR ANCHORING INTO MASONRY/CONCRETE USE 1/4" ELCO CRETE–FLEX TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 1/2'' MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
10) FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #14 CUT–THREAD WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 7/16" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
11) FOR ANCHORING INTO METAL STRUCTURE USE #14 SMS OR SELF DRILLING SCREWS MINIMUM GRADE 5 WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
12) ALL FASTENERS TO BE CORROSION RESISTANT.
13) INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
    A. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42
    B. CONCRETE – MINIMUM COMPRESSIVE STRENGTH OF 3,192 PSI.
    C. MASONRY – STRENGTH CONFORMANCE TO ASTM C–90, GRADE N, TYPE 1 (OR GREATER).
    D. METAL STRUCTURE: STEEL 16GA, 33KSI OR ALUMINUM 6063–T5 1/8" THICK MINIMUM

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1	NOTES
2 – 3	ELEVATIONS
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EQUAL LEG AND FLANGE – LMI & SMI
NOTES

DRAWN:	DWG NO.	REV
J.L.	08–02210	–

SCALE	DATE	SHEET
NTS	08/23/13	1 OF 10

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LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
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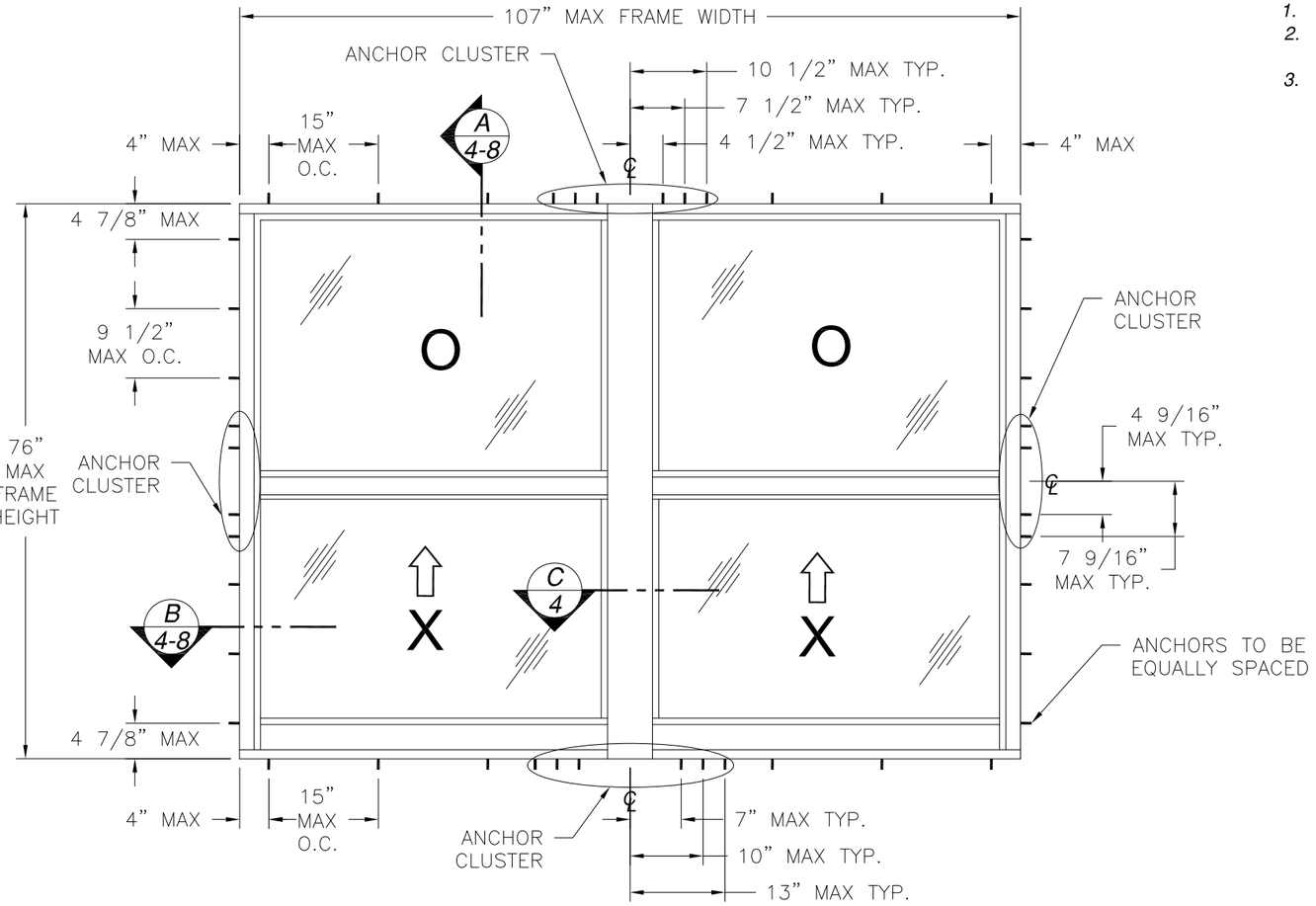


4000 ALUMINUM SINGLE HUNG TWIN WINDOW

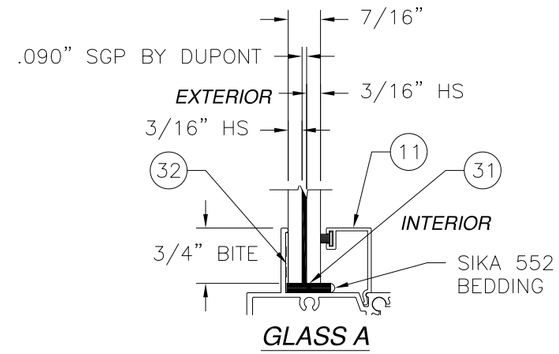
EXTERIOR VIEW

DESIGN PRESSURE RATING	*IMPACT RATING*
+100.0/-150.0PSF	*LARGE AND SMALL MISSILE IMPACT*

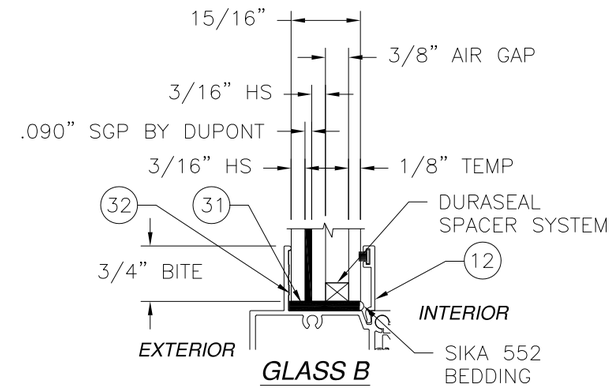
MISSILE LEVEL D, WIND ZONE 4

NOTE:

1. *FLANGE UNIT DIMENSIONS : 108" X 77" TIP TO TIP*
2. *INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.*
3. *SILL RETAINER FULL LENGTH OF SILL*



GLASS A



GLASS B

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TWIN ELEVATION & GLAZING DETAILS

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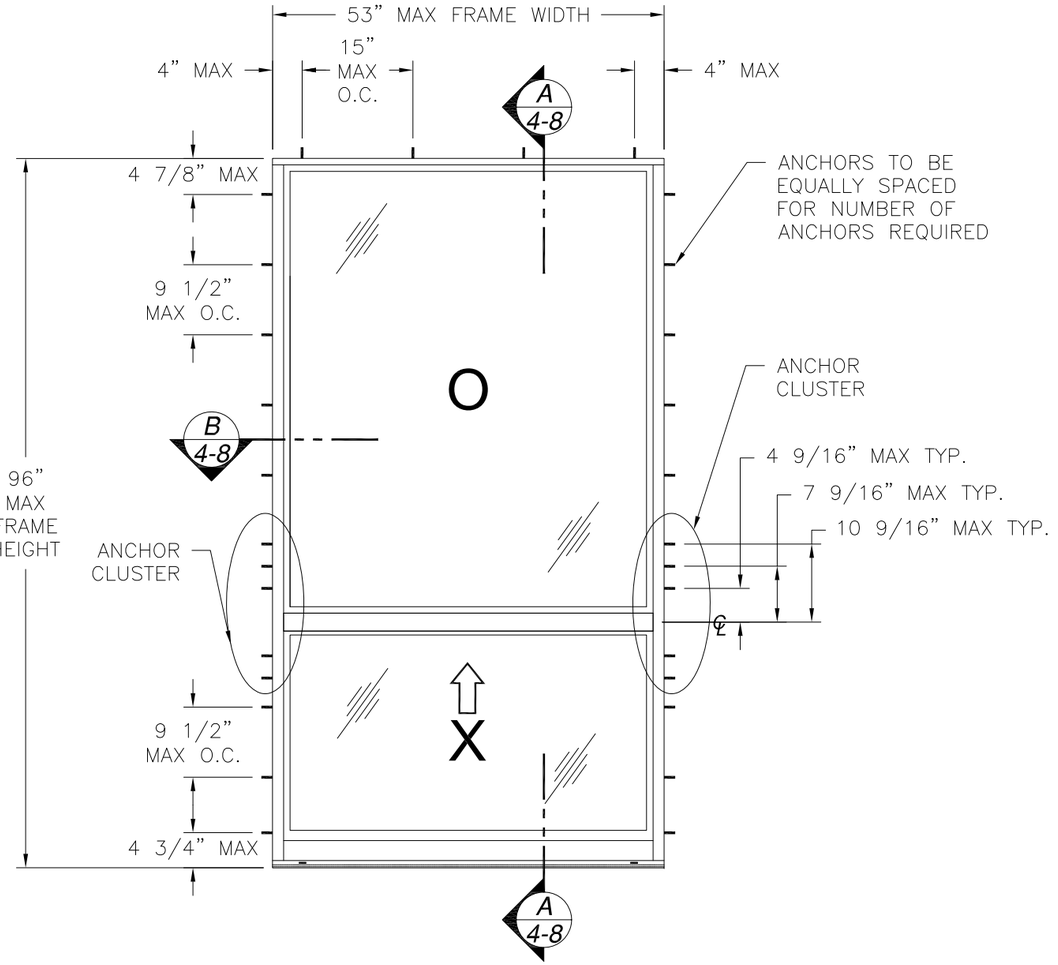
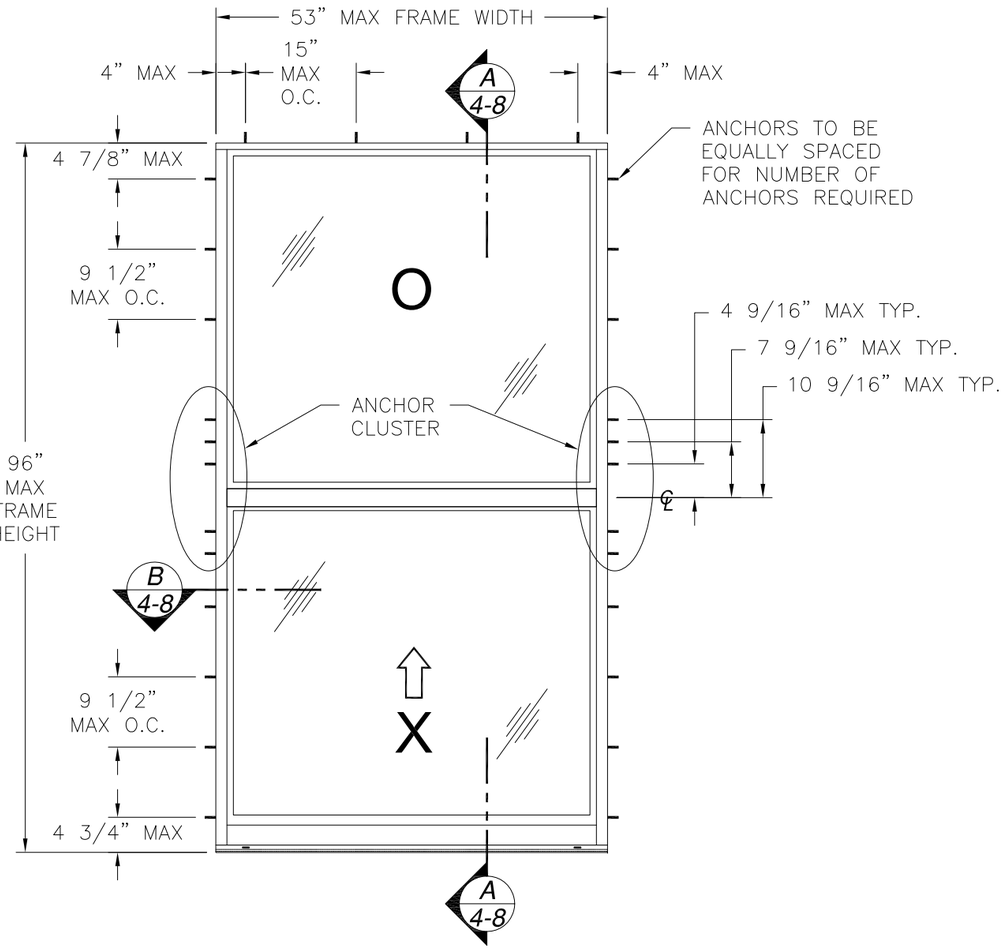


4000 ALUMINUM SINGLE HUNG ORIEL WINDOW

EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
+100.0/-150.0PSF	LARGE AND SMALL MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 4



4000 ALUMINUM SINGLE HUNG WINDOW

EXTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
+100.0/-150.0PSF	LARGE AND SMALL MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 4

NOTE:

1. *FLANGE UNIT DIMENSIONS : 54" X 97" TIP TO TIP*
2. *INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.*
3. *NO FASTENERS IN SILL*

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ORIEL AND EQUAL LEG ELEVATIONS

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STATE OF TEXAS
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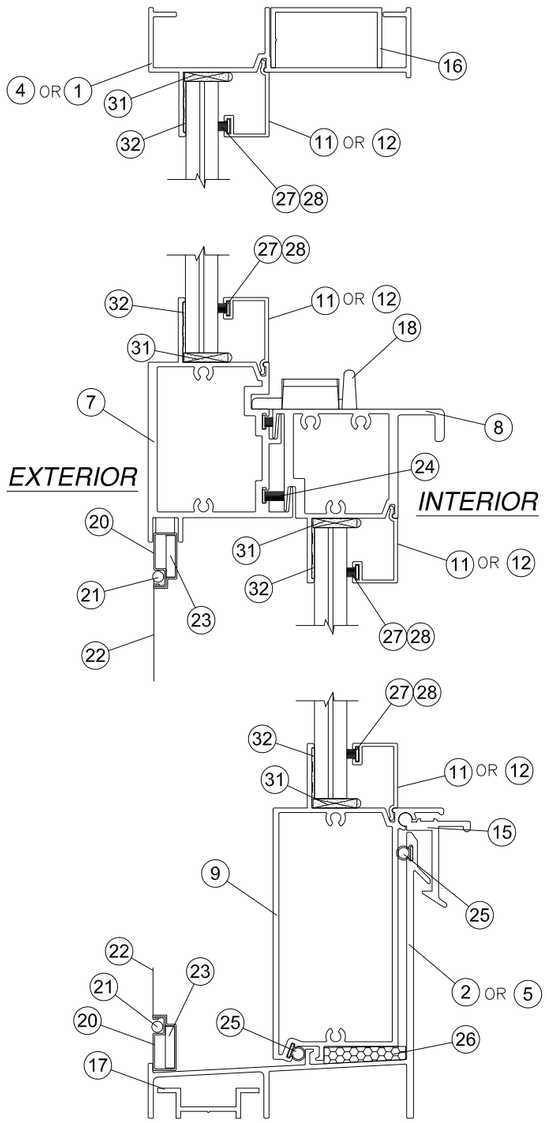
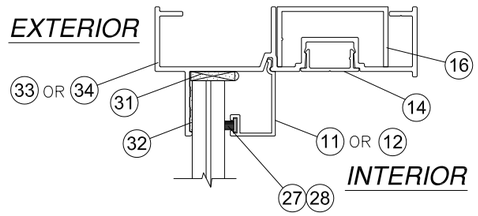
PARTS LIST

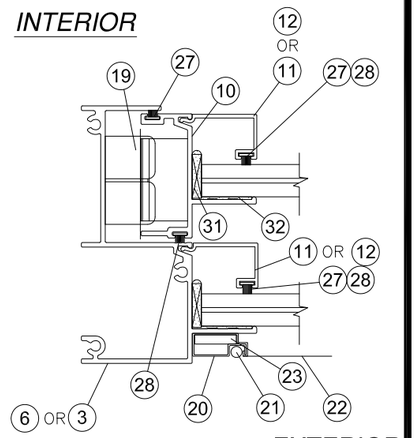
NO.	PART NUMBER	DESCRIPTION	MANUFACTURER	MATERIAL
1	FS-06612	FRAME HEAD EQUAL LEG	KEYMARK	ALUMINUM 6063-T6
2	FS-06613	FRAME SILL EQUAL LEG	KEYMARK	ALUMINUM 6063-T6
3	FS-06614	FRAME JAMB EQUAL LEG	KEYMARK	ALUMINUM 6063-T6
4	FS-06661	FRAME HEAD FLANGE	KEYMARK	ALUMINUM 6063-T6
5	FS-06662	FRAME SILL FLANGE	KEYMARK	ALUMINUM 6063-T6
6	FS-06663	FRAME JAMB FLANGE	KEYMARK	ALUMINUM 6063-T6
7	FH-06615	FIXED MEETING RAIL	KEYMARK	ALUMINUM 6063-T6
8	FH-06616	MEETING RAIL	KEYMARK	ALUMINUM 6063-T6
9	FH-06617	LIFT RAIL	KEYMARK	ALUMINUM 6063-T6
10	FS-06618	SASH JAMB	KEYMARK	ALUMINUM 6063-T6
11	FS-06667	7/16" GLASS STOP	KEYMARK	ALUMINUM 6063-T6
12	FS-06619	1" GLASS STOP	KEYMARK	ALUMINUM 6063-T6
13	FH-06668	VERTICAL IMPOST	KEYMARK	ALUMINUM 6063-T6
14	FS-04501	HEAD RECESS COVER	KEYMARK	ALUMINUM 6063-T6
15	FE-5031	SILL SNAP LOCK	KEYMARK	ALUMINUM 6063-T6
16	FS-06671	HEAD FILLER	KEYMARK	ALUMINUM 6063-T6
17	FS-06664	SILL RETAINER	KEYMARK	ALUMINUM 6063-T6
18	H4000-BL-SL202	SASH LOCK	WINDOOR	ALUMINUM 6063-T6
19		BLOCK AND TACKLE BALANCE	WINDOOR	ALUMINUM 6063-T6
20	S4000-XX-150	SCREEN HEAD, JAMB AND SILL	WINDOOR	ALUMINUM 6063-T6
21	S10010-BL-2200R	SCREEN SPLINE	WINDOOR	ALUMINUM 6063-T6
22	SBV-XX-0600Z	SCREEN CLOTH	WINDOOR	ALUMINUM 6065-T6
23	54080-ML-FB11	SCREEN CORNER KEY	WINDOOR	ALUMINUM 6063-T6
24	122003	.187X.350 FINSEAL	ULTRAFAB	
25	W4000-BL-20218	.187X.300 WEATHERSTRIP	FRANK LOWE	PROLON
26	W4000-BL-SCE42	1.300X1.750X.375 CLOSED CELL PAD	TEAM PLASTICS	FOAM
27	122001	.187X.220 FINSEAL	ULTRAFAB	
28	122002	.187X.240 FINSEAL	ULTRAFAB	
29	131096	#6X3/4" SWEEP ATTACHMENT SCREW		STEEL GRADE 5
30	131014	#8X1" RAIL ATTACHMENT SCREW		STEEL GRADE 5
31	121104	SETTING BLOCK	FRANK LOWE	85 DURO SHORE A
32	C4000-91-351AX	PURFECT GLAZE HOT MELT COMPOUND	HENKEL AMERICAS	
33	FS-07419	FRAME EQUAL LEG W/ CHANNEL	KEYMARK	ALUMINUM 6063-T6
34	FS-07418	FRAME FLANGE W/ CHANNEL	KEYMARK	ALUMINUM 6063-T6



A/4 VERTICAL CROSS SECTION

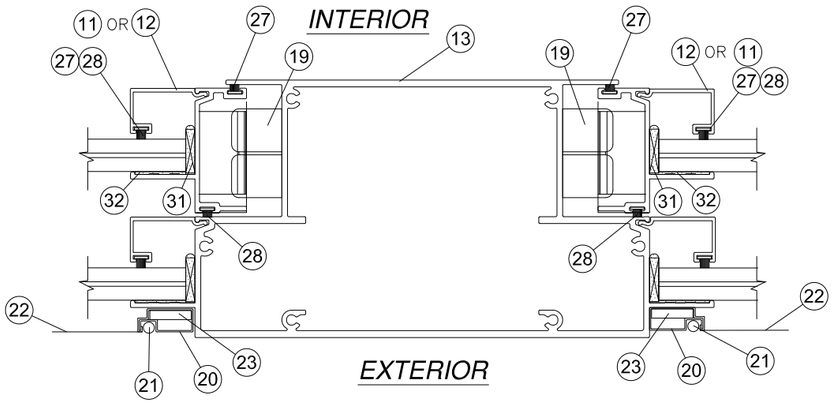


OPTIONAL HEAD FRAME



B/4 JAMB CROSS SECTION

C/4 VERTICAL POST CROSS SECTION



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B.O.M. & CROSS SECTIONS

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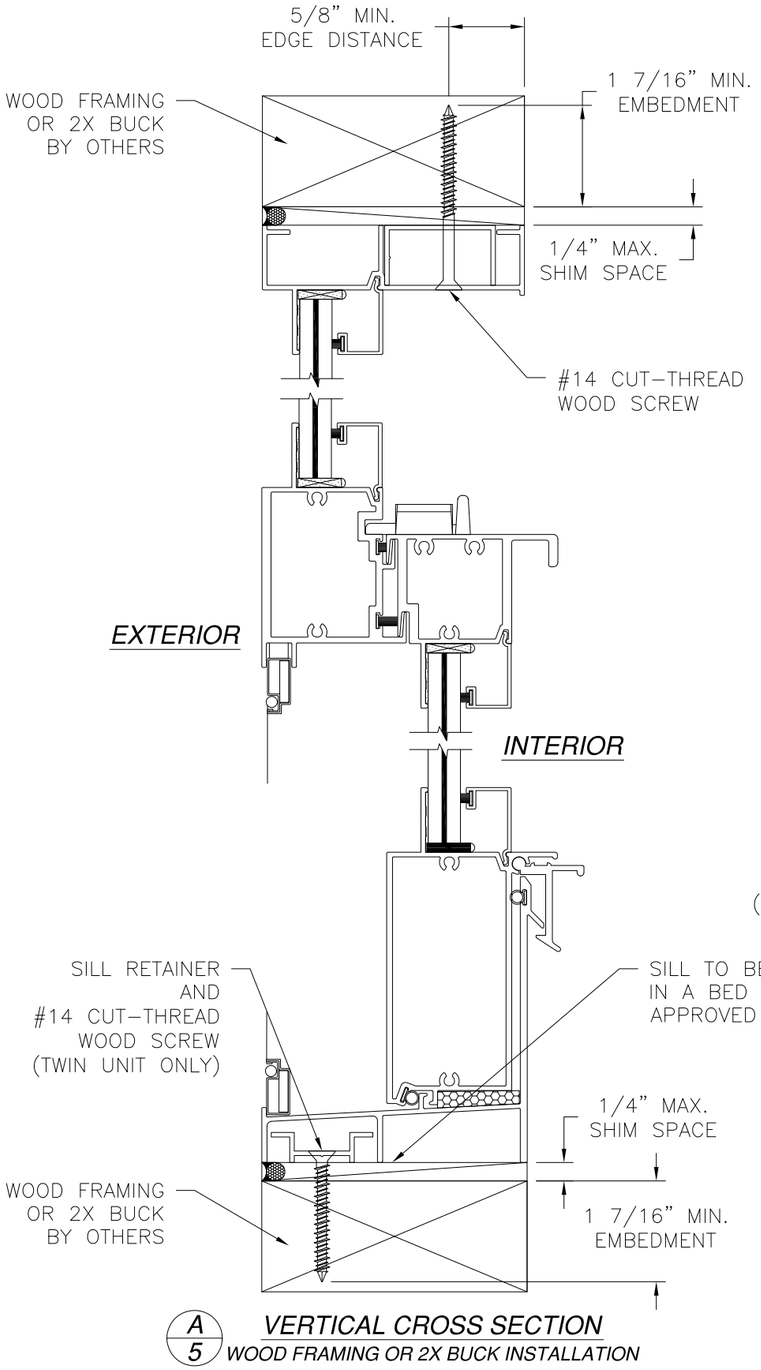
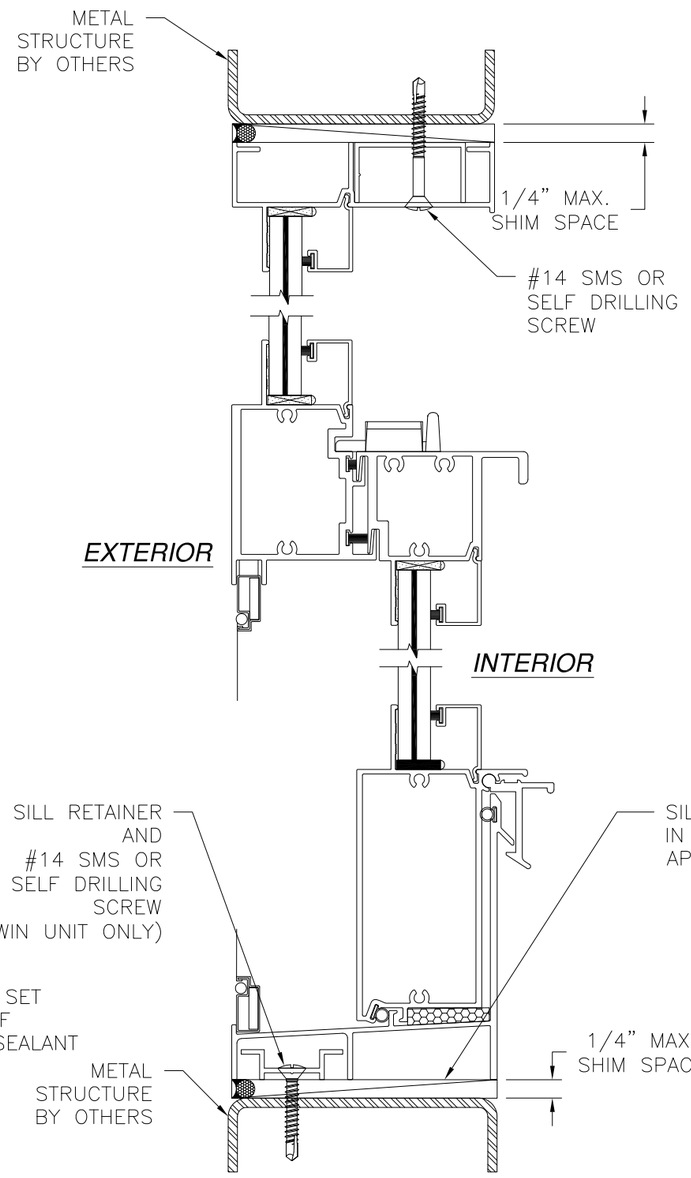
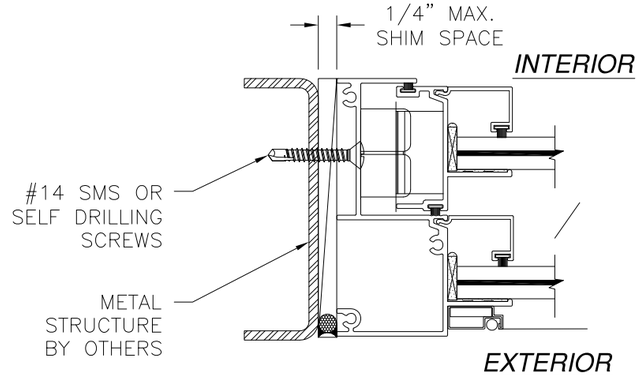


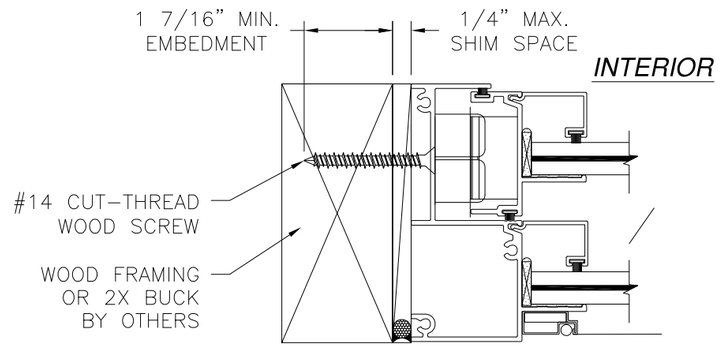
A/5 *VERTICAL CROSS SECTION*
WOOD FRAMING OR 2X BUCK INSTALLATION



A/5 *VERTICAL CROSS SECTION*
METAL STRUCTURE INSTALLATION



B/5 *JAMB INSTALLATION DETAIL*
METAL STRUCTURE INSTALLATION



B/5 *JAMB INSTALLATION DETAIL*
WOOD FRAMING OR 2X BUCK INSTALLATION

NOTE:
1. *INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.*
2. *PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112*

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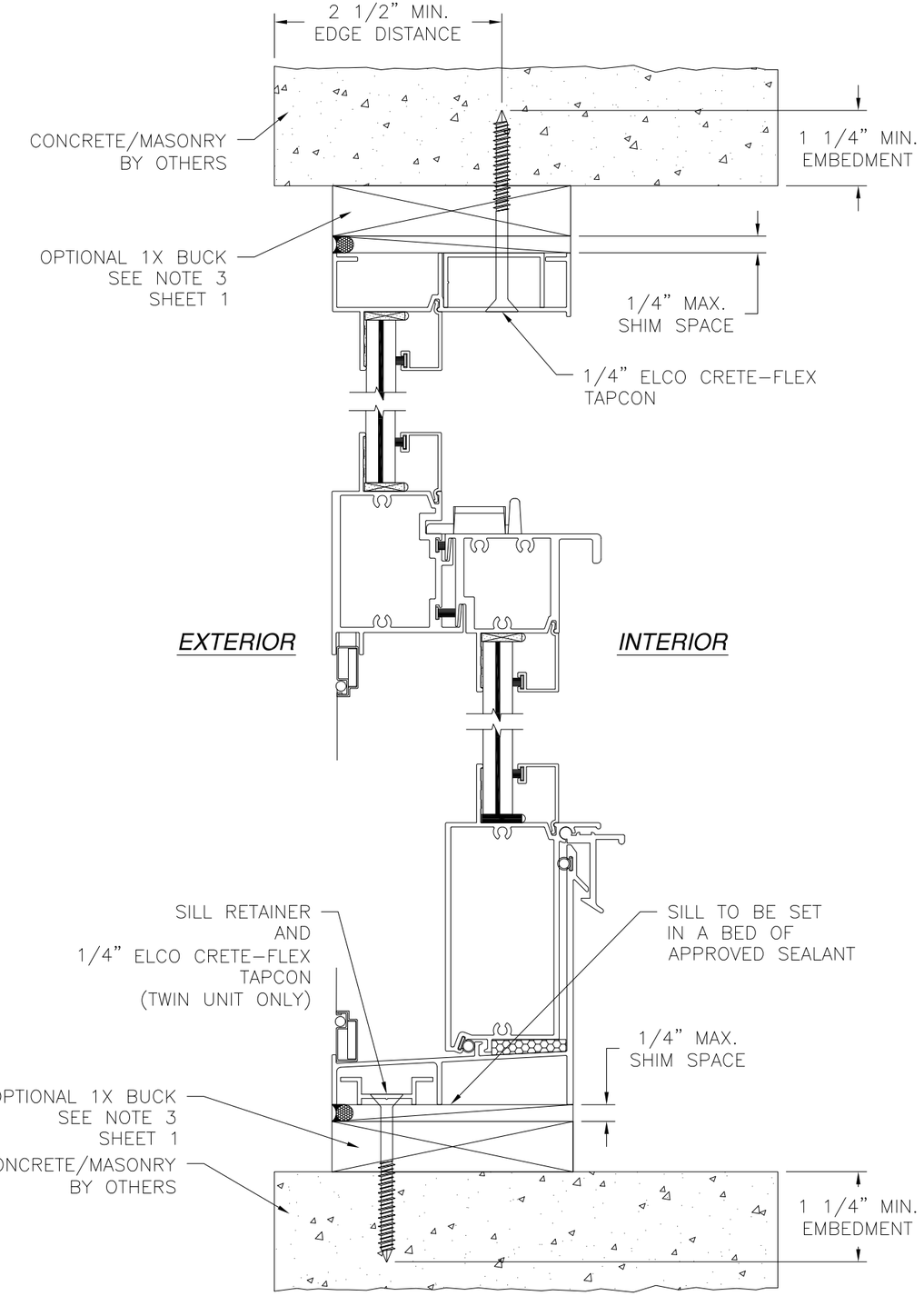
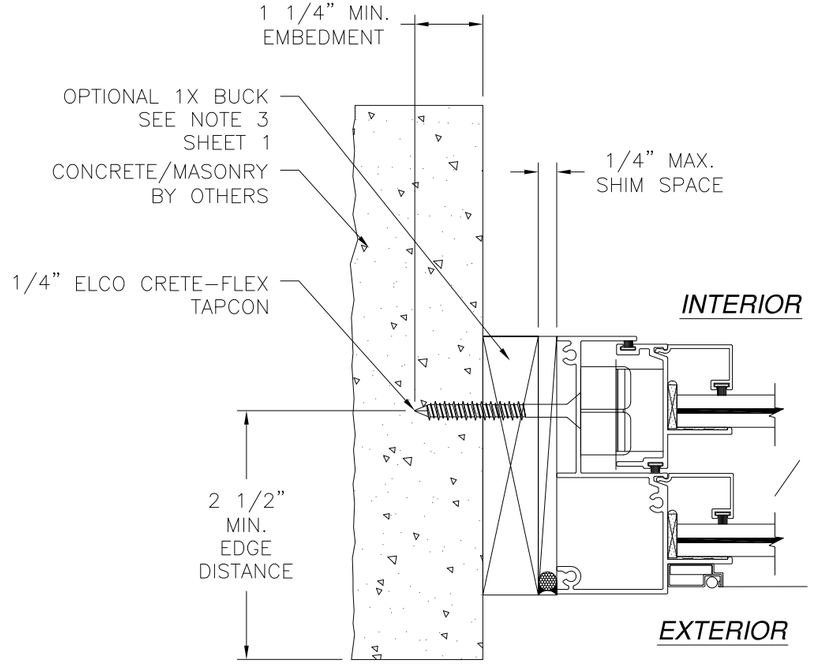


A/6 *VERTICAL CROSS SECTION*
CONCRETE/MASONRY INSTALLATION



B/6 *JAMB INSTALLATION DETAIL*
CONCRETE/MASONRY INSTALLATION

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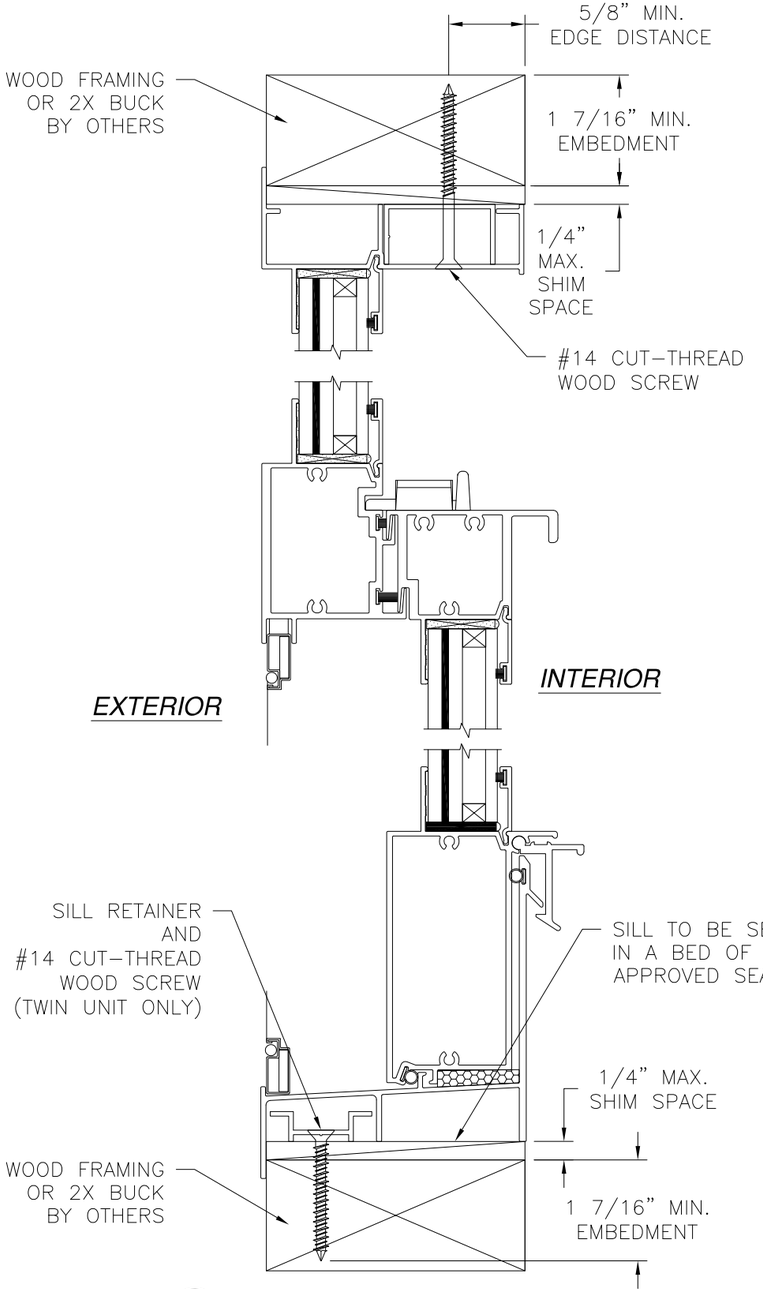
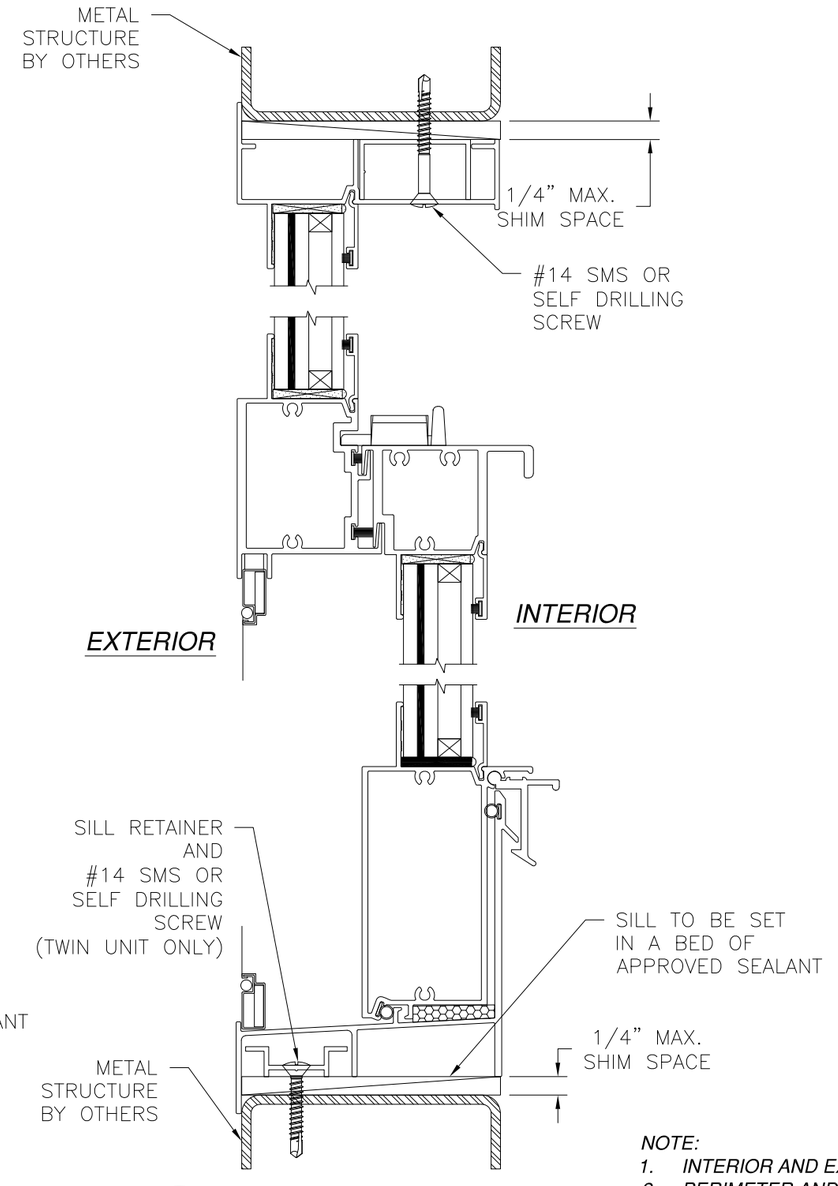
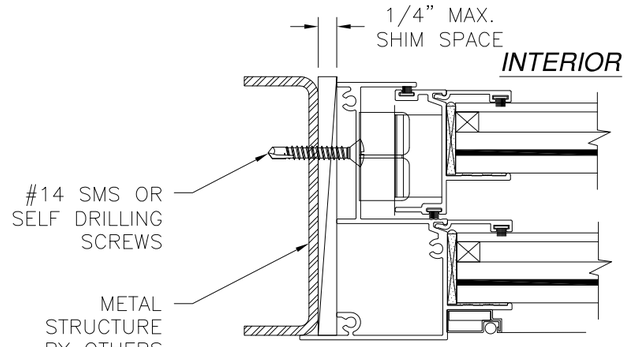


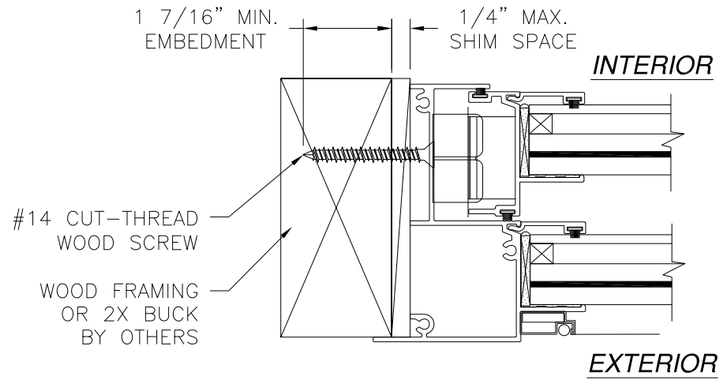
A/7 *VERTICAL CROSS SECTION*
WOOD FRAMING OR 2X BUCK INSTALLATION



A/7 *VERTICAL CROSS SECTION*
METAL STRUCTURE INSTALLATION



B/7 *JAMB INSTALLATION DETAIL*
METAL STRUCTURE INSTALLATION



B/7 *JAMB INSTALLATION DETAIL*
WOOD FRAMING OR 2X BUCK INSTALLATION

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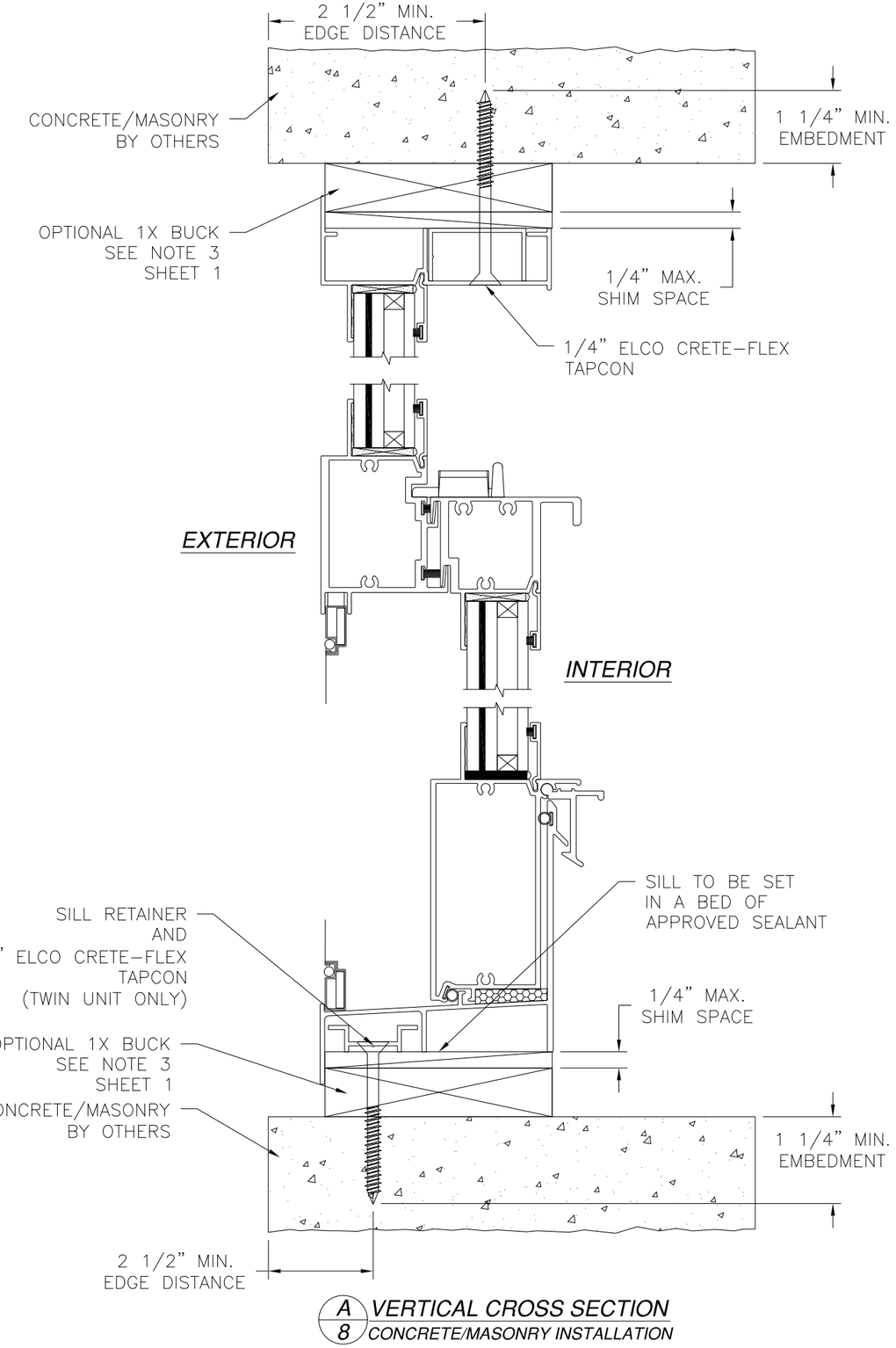
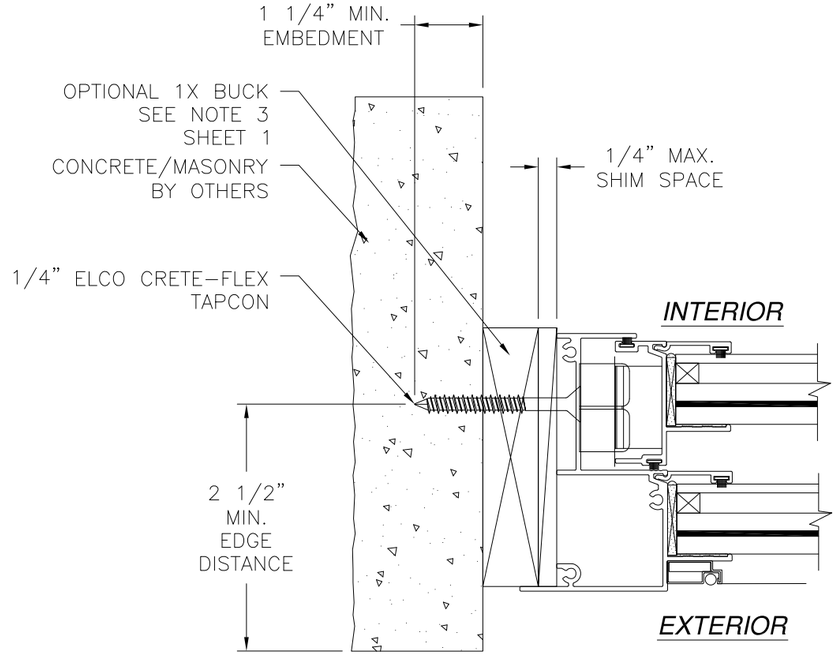


A/8 VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



B/8 JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

NOTE:
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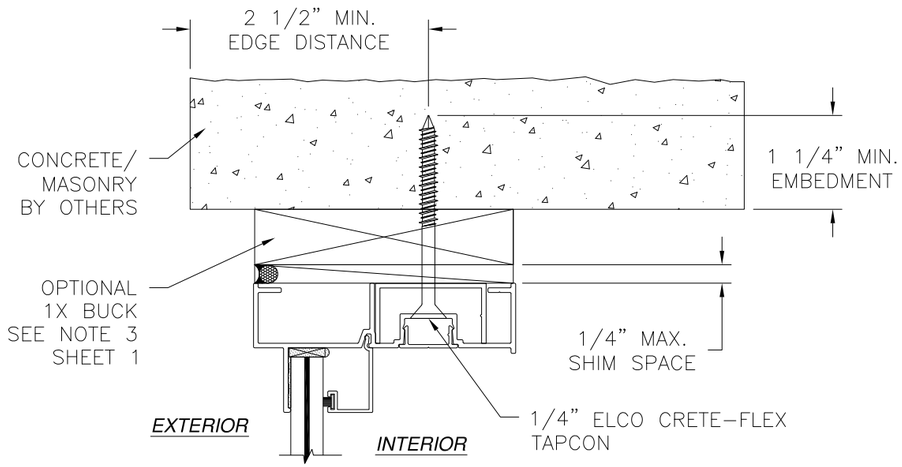
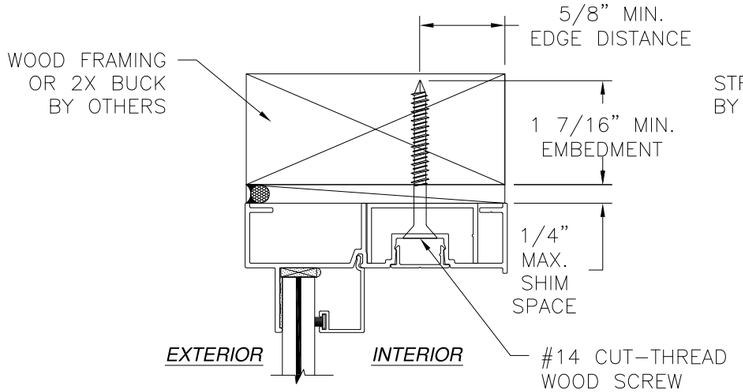
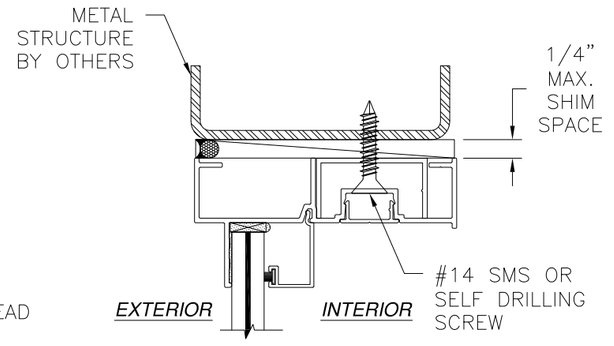


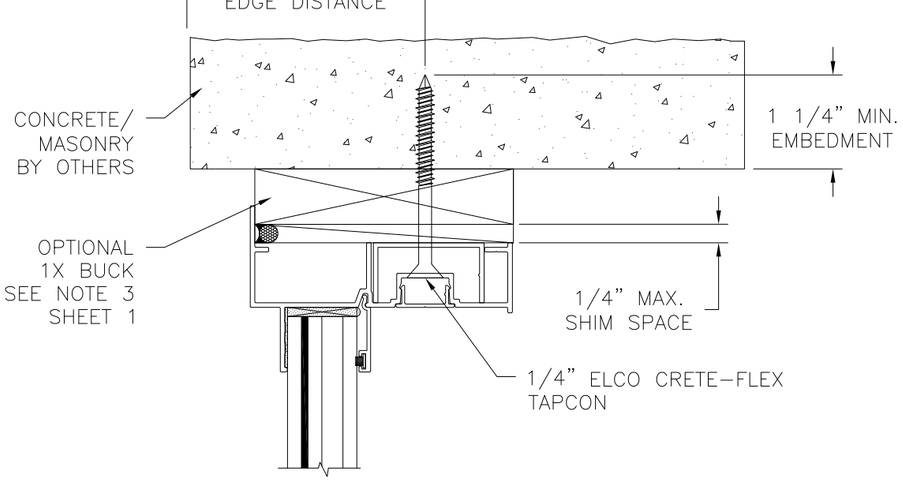
OPTIONAL HEAD ANCHORING
CONCRETE/MASONRY INSTALLATION



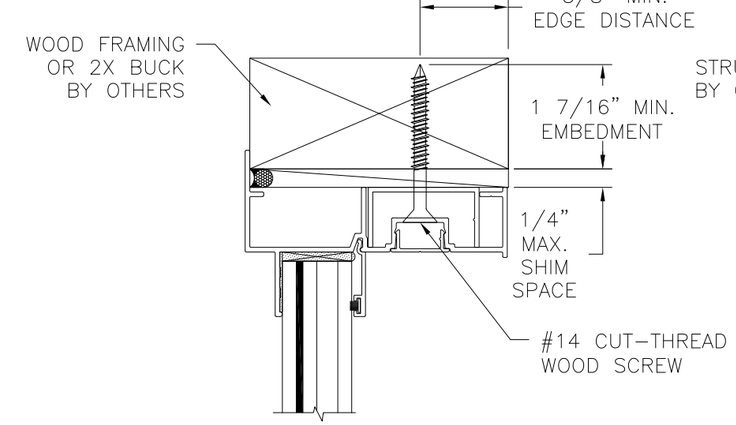
OPTIONAL HEAD ANCHORING
WOOD FRAMING OR 2X BUCK INSTALLATION



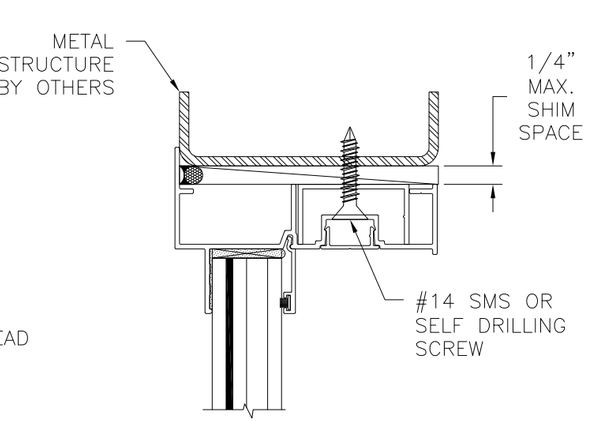
OPTIONAL HEAD ANCHORING
METAL STRUCTURE INSTALLATION



OPTIONAL HEAD ANCHORING
CONCRETE/MASONRY INSTALLATION



OPTIONAL HEAD ANCHORING
WOOD FRAMING OR 2X BUCK INSTALLATION



OPTIONAL HEAD ANCHORING
METAL STRUCTURE INSTALLATION

SIGNED: 08/23/2013

NOTE:
1. *INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.*
2. *PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112*

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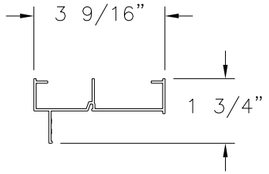
INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
J.L.	08-02210	–
SCALE NTS	DATE 08/23/13	SHEET 9 OF 10

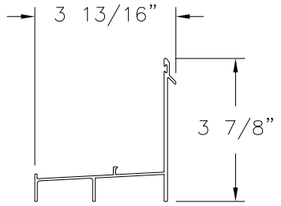
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



1 **FRAME**
ALUMINUM 6063-T6 .063 THICK



2 **FRAME SILL**
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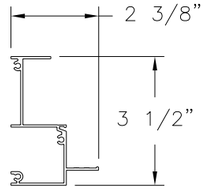
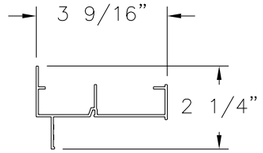


3 **FRAME JAMB**
ALUMINUM 6063-T6 .063 THICK



4 **FRAME FLANGE**
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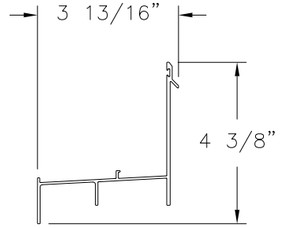

5 **FRAME SILL FLANGE**
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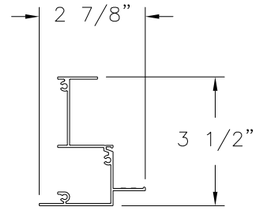
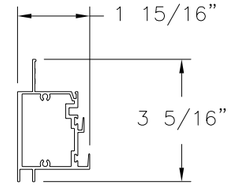
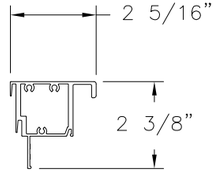


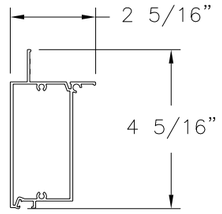
6 **FRAME JAMB FLANGE**
ALUMINUM 6063-T6 .063 THICK



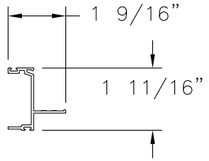
7 **FIXED MEETING RAIL**
ALUMINUM 6063-T6 .077 THICK



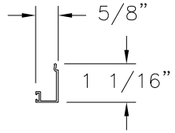
8 **MEETING RAIL**
ALUMINUM 6063-T6 .063 THICK



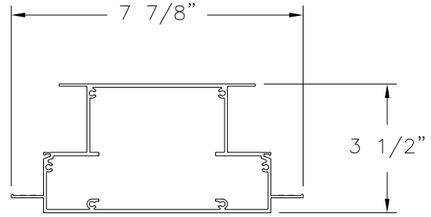
9 **LIFT RAIL**
ALUMINUM 6063-T6 .063 THICK



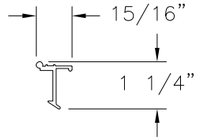
10 **SASH JAMB**
ALUMINUM 6063-T6 .063 THICK



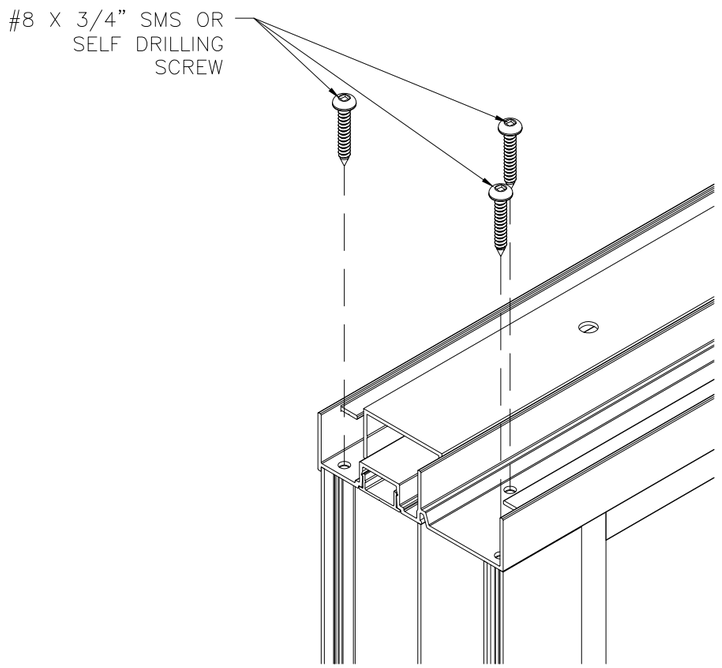
11 12 **GLAZING STOP**
ALUMINUM 6063-T6 .040 THICK



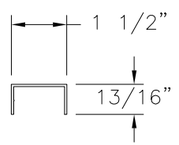
13 **VERTICAL IMPOST**
ALUMINUM 6063-T6 .093 THICK



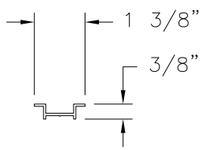
15 **SILL SNAP LOCK**
ALUMINUM 6063-T6 .090 THICK



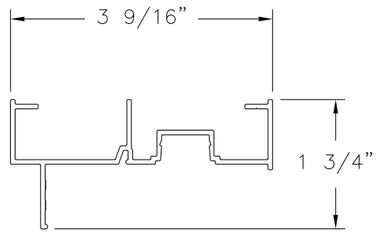
CORNER DETAIL



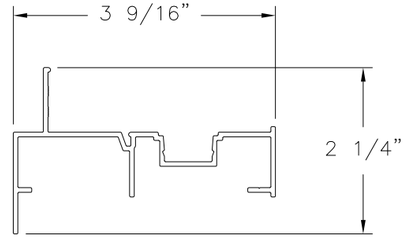
16 **HEAD FILLER**
ALUMINUM 6063-T6 .063 THICK



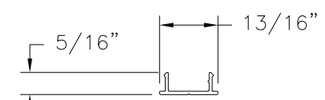
17 **SILL RETAINER**
ALUMINUM 6063-T6 .063 THICK



33 **FRAME W/ CHANNEL**
ALUMINUM 6063-T6 .063 THICK



34 **FRAME W/ CHANNEL**
ALUMINUM 6063-T6 .063 THICK



14 **HEAD RECESS COVER**
ALUMINUM 6063-T6 .044 THICK

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