

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER NEW REQUIREMENTS	08/05/2020	R.L.

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
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.
4. WHERE SHIM OR BUCK THICKNESS IS LESS THAN 1-1/2" WINDOW UNITS MUST BE ANCHORED THROUGH THE FRAME IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE SECURELY FASTENED DIRECTLY INTO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE MATERIAL.
5. WHERE WOOD BUCK THICKNESS IS 1-1/2" OR GREATER, BUCK SHALL BE SECURELY FASTENED TO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WINDOW UNITS MAY BE ANCHORED THROUGH FRAME TO SECURED WOOD BUCK IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
6. 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.
7. BUCKS SHALL EXTEND BEYOND WINDOW INTERIOR FACE SO THAT FULL FRAME SUPPORT IS PROVIDED.
8. FOR FIN INSTALLATION SHIM AS NEEDED. FOR FRAME INSTALLATION SHIM AS REQUIRED AT EACH ANCHOR LOCATION WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. SHIMS SHALL BE LOCATED, APPLIED AND MADE FROM MATERIALS AND THICKNESS CAPABLE OF SUSTAINING APPLICABLE LOADS.
10. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
11. FRAME MATERIAL: EXTRUDED ALUMINUM 6063-T5.
12. UNITS MUST BE GLAZED PER ASTM E1300, WITH SAFETY GLAZING.
13. APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
14. FOR ANCHORING THROUGH FRAME INTO WOOD FRAMING OR 2X BUCK USE #12 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.

15. FOR ANCHORING THROUGH FRAME INTO MASONRY/CONCRETE USE 1/4" TAPCONS 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.
16. FOR ANCHORING THROUGH FRAME INTO METAL STRUCTURE USE #12 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
17. ALL FASTENERS TO BE CORROSION RESISTANT.
18. 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 2,000 PSI.
 - C. MASONRY: HOLLOW/FILLED BLOCK PER ASTM C90 WITH Fm=2,000PSI MINIMUM.
 - D. METAL STRUCTURE: STEEL 18GA (.048") FY=33KSI/FU=52KSI OR ALUMINUM 6063-T5 FU=30KSI .048" THICK MINIMUM

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2	ELEVATION
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4 – 7	INSTALLATION DETAILS
8	COMPONENTS



LANAI DOORS
941 NORTH ELM STREET, SUITE C
ORANGE, CA 92867

THERMALLY BROKEN ALUMINUM BI-FOLD DOOR
NON-IMPACT
NOTES

DRAWN:
A.R.

DWG NO.
08-03150

REV
A

SCALE NTS

DATE 08/02/17

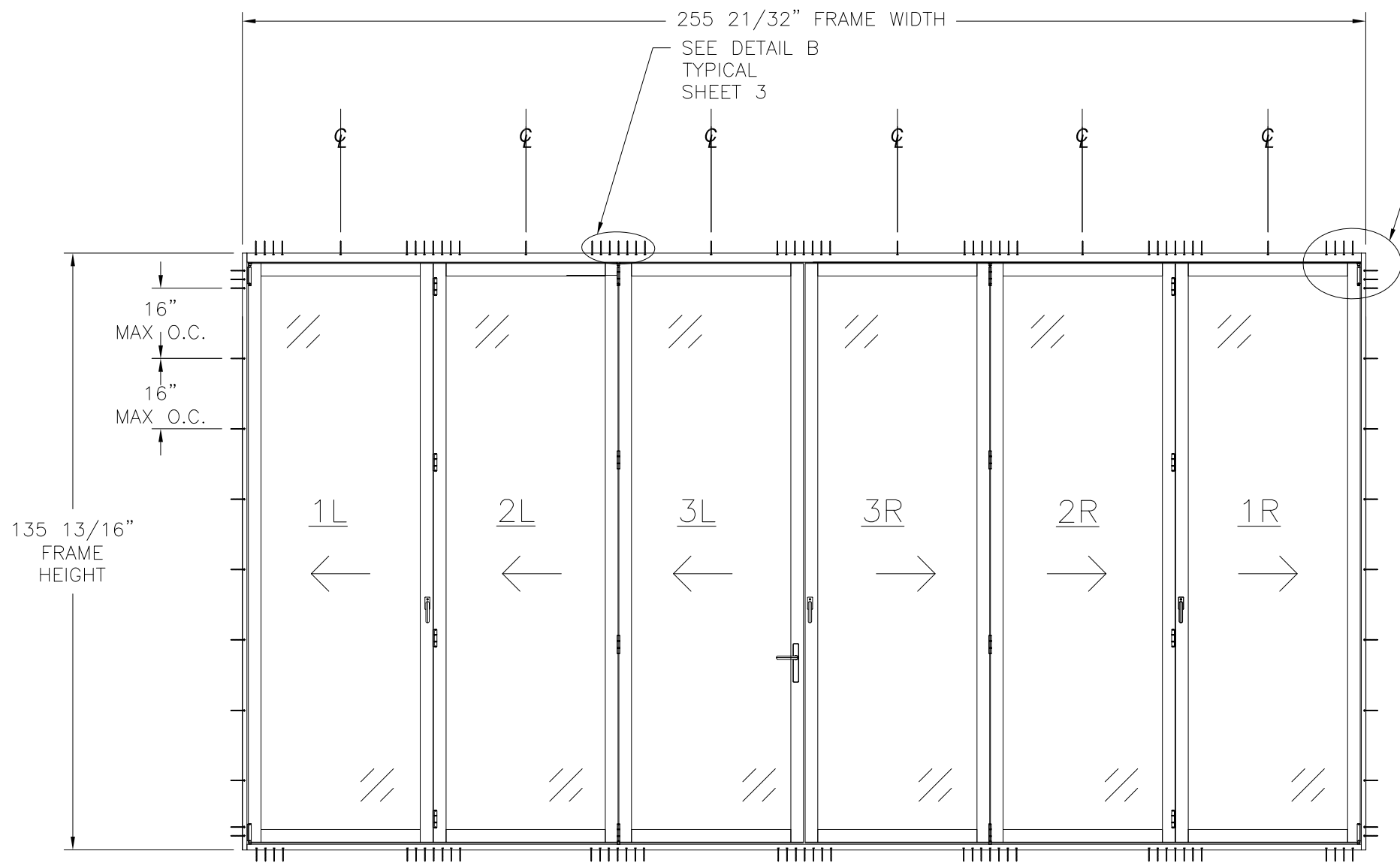
SHEET 1 OF 8

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com

SIGNED: 09/28/2020

Luis R. Lomas P.E.
FL No.: 62514

REVISIONS			
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NOTES:
1. PANEL SIZE: 42" x 132"
2. D.L.O.: 36 3/16" x 126"

LANAI DOORS THERMALLY BROKEN ALUMINUM

EXTERIOR VIEW

UNLIMITED NUMBER OF PANELS IN UNLIMITED CONFIGURATIONS ARE APPROVED AS LONG AS INDIVIDUAL PANEL AREA DOES NOT EXCEED 38.5 FT² AND USES VERTICAL CONDITIONS AS SHOWN IN APPROVAL DRAWING.

DESIGN PRESSURE RATING	IMPACT RATING
+45.0/-40.0PSF	NONE

SEE CHART #1 AND #2, SHEET 3

HARDWARE SCHEDULE

A.	(8) HINGES AT LEFT AND RIGHT INTERMEDIATE PANELS JOINING TO ADJACENT PANELS
B.	(4) PIVOTS AT TOP AND BOTTOM OF LATERAL PANELS AND EXTENDED TO FRAME HEAD AND THRESHOLD
C.	(2) ROLLER CARRIAGE AND HINGE ASSEMBLY AT TOP OF INTERMEDIATE PANELS
D.	(2) GUIDE ROLLER AND HINGE ASSEMBLY AT BOTTOM OF INTERMEDIATE PANELS
E.	(3) TWIN BOLT LOCK AT LEFT AND RIGHT STILE OF RIGHT AND LEFT OUTER PANEL, LEFT STILE OF RIGHT/CENTER PANEL
F.	(1) INTERLOCK LCL LOCK AT RIGHT STILE OF LEFT/CENTER PANEL
G.	(3) SHOOT-BOLT CUPS AT THRESHOLD, 41" FROM ENDS AND CENTER.



LANAI DOORS 941 NORTH ELM STREET, SUITE C ORANGE, CA 92867		
THERMALLY BROKEN ALUMINUM BI-FOLD DOOR NON-IMPACT ELEVATION		
DRAWN: A.R.	DWG NO. 08-03150	REV A
SCALE NTS	DATE 08/02/17	SHEET 2 OF 8
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

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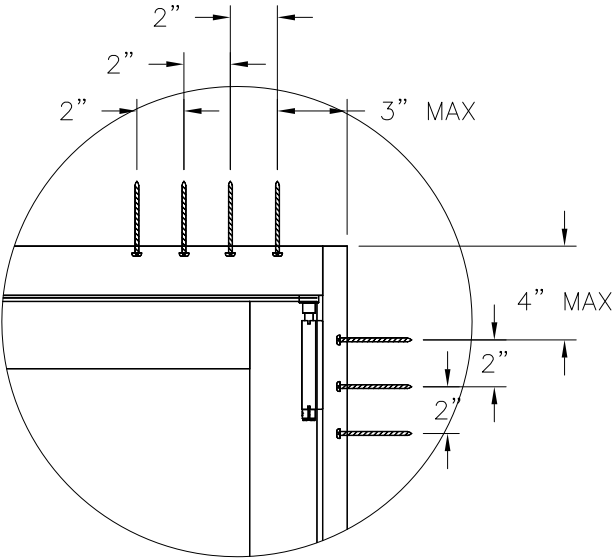
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CHART #1, WHERE WATER RESISTANCE IS REQUIRED

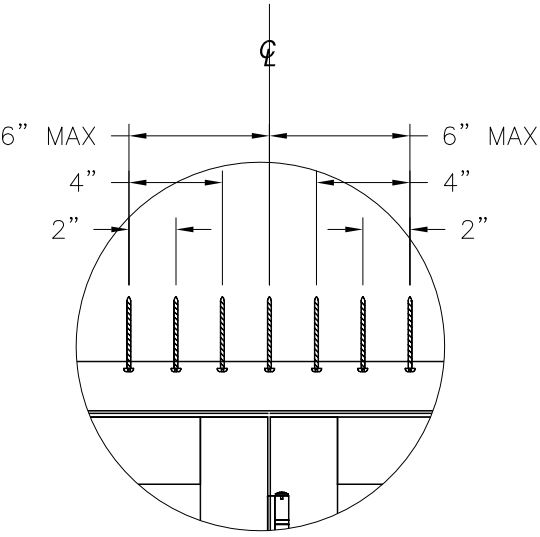
Maximum Design pressure (psf)														
Panel Height (in)	Single Panel Width (in)													
	24.0		30.0		36.0		42.0		48.0		54.0		60.0	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
78.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	59.2	50.0	52.6	50.0	47.4
84.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	55.0	50.0	48.9	49.5	44.0
90.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	58.7	50.0	51.3	50.0	45.6	46.2	41.1
96.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	55.0	50.0	48.1	48.1	42.8	-	-
102.0	50.0	60.0	50.0	60.0	50.0	60.0	50.0	51.8	50.0	45.3	45.3	40.3	-	-
108.0	50.0	60.0	50.0	60.0	50.0	57.0	50.0	48.9	48.1	42.8	-	-	-	-
114.0	50.0	60.0	50.0	60.0	50.0	54.0	50.0	46.3	45.6	40.5	-	-	-	-
120.0	50.0	60.0	50.0	59.2	50.0	50.8	49.5	44.0	-	-	-	-	-	-
126.0	50.0	60.0	50.0	56.0	50.0	48.0	47.1	41.9	-	-	-	-	-	-
132.0	50.0	60.0	50.0	53.1	50.0	45.4	45.0	40.0	-	-	-	-	-	-
138.0	50.0	59.5	50.0	47.9	45.3	40.3	-	-	-	-	-	-	-	-
144.0	50.0	52.3	47.4	42.1	39.8	35.4	-	-	-	-	-	-	-	-

CHART #2, WHERE WATER PENETRARIION IS NOT REQUIRED

Maximum Design pressure (psf)														
Panel Height (in)	Single Panel Width (in)													
	24.0		30.0		36.0		42.0		48.0		54.0		60.0	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
78.0	67.6	60.0	67.6	60.0	67.6	60.0	67.6	60.0	66.6	59.2	59.2	52.6	53.3	47.4
84.0	67.6	60.0	67.6	60.0	67.6	60.0	67.6	60.0	61.9	55.0	55.0	48.9	49.5	44.0
90.0	67.6	60.0	67.6	60.0	67.6	60.0	66.0	58.7	57.8	51.3	51.3	45.6	46.2	41.1
96.0	67.6	60.0	67.6	60.0	67.6	60.0	61.9	55.0	54.1	48.1	48.1	42.8	-	-
102.0	67.6	60.0	67.6	60.0	67.6	60.0	58.2	51.8	51.0	45.3	45.3	40.3	-	-
108.0	67.6	60.0	67.6	60.0	64.2	57.0	55.0	48.9	48.1	42.8	-	-	-	-
114.0	67.6	60.0	67.6	60.0	60.7	54.0	52.1	46.3	45.6	40.5	-	-	-	-
120.0	67.6	60.0	66.6	59.2	57.1	50.8	49.5	44.0	-	-	-	-	-	-
126.0	67.6	60.0	63.0	56.0	54.0	48.0	47.1	41.9	-	-	-	-	-	-
132.0	67.6	60.0	59.8	53.1	51.1	45.4	45.0	40.0	-	-	-	-	-	-
138.0	67.0	59.5	53.9	47.9	45.3	40.3	-	-	-	-	-	-	-	-
144.0	58.9	52.3	47.4	42.1	39.8	35.4	-	-	-	-	-	-	-	-



DETAIL A



DETAIL B



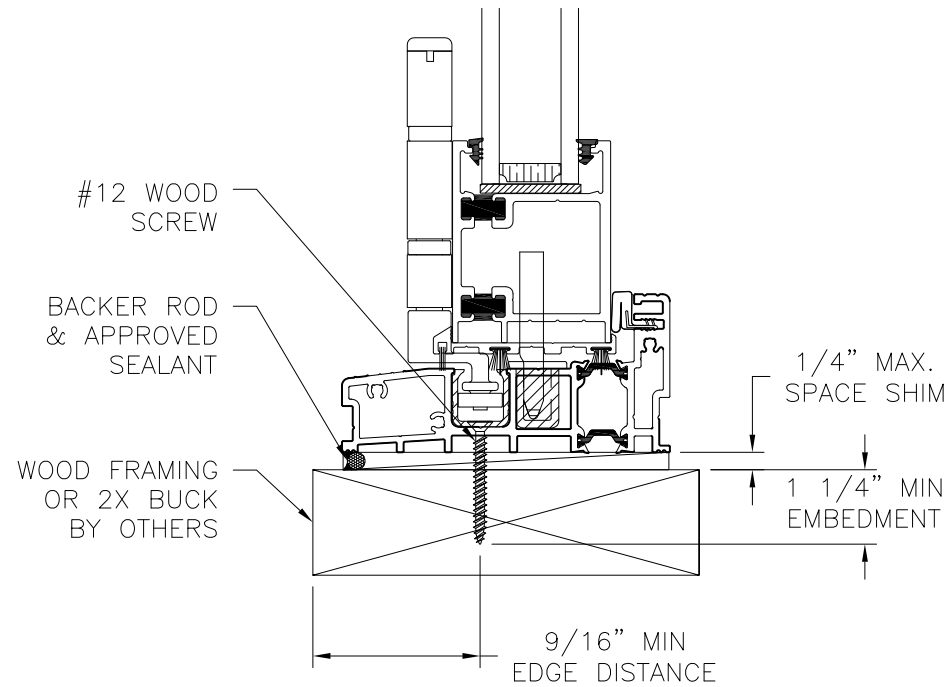
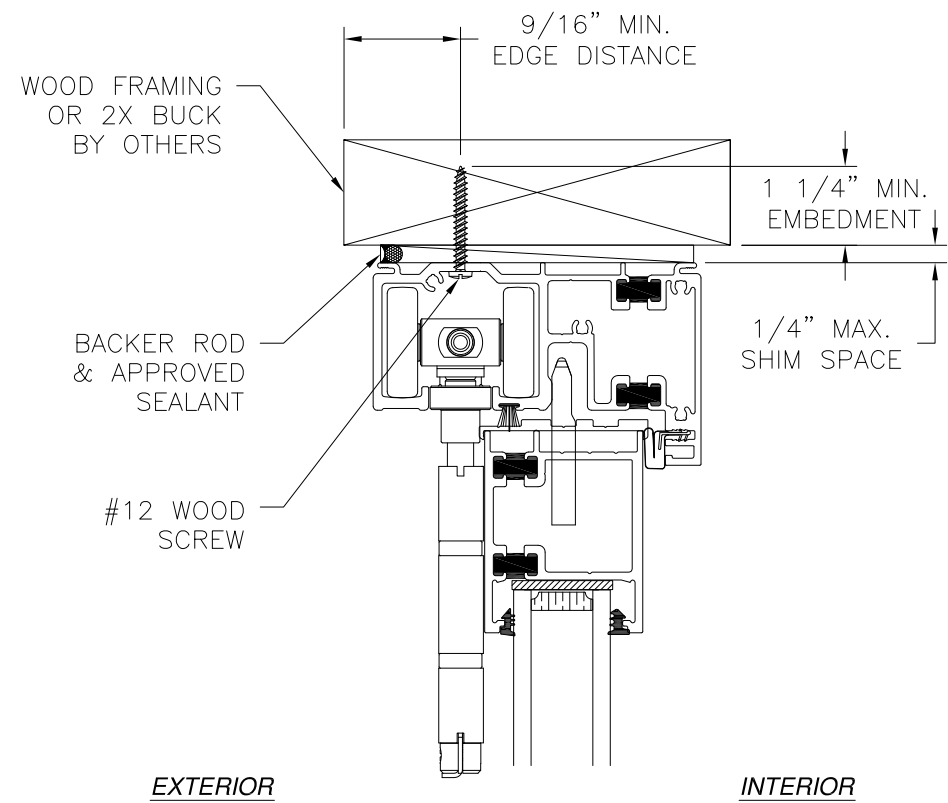
LANAI DOORS 941 NORTH ELM STREET, SUITE C ORANGE, CA 92867		
THERMALLY BROKEN ALUMINUM BI-FOLD DOOR NON-IMPACT DESIGN PRESSURE CHARTS & CLUSTER DETAILS		
DRAWN: A.R.	DWG NO. 08-03150	REV A
SCALE NTS	DATE 08/02/17	SHEET 3 OF 8
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

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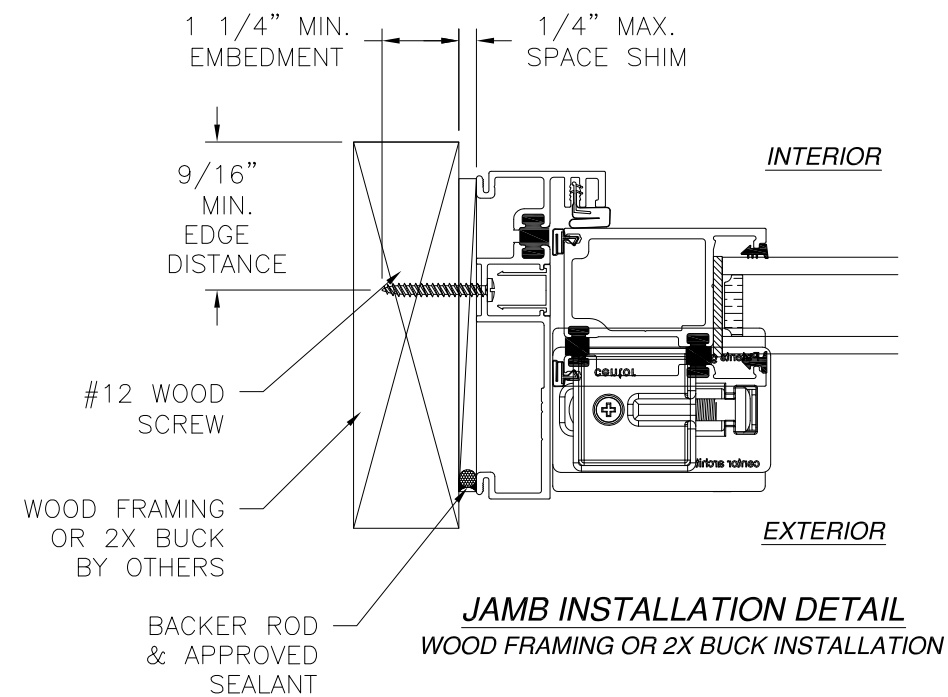


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VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION
STANDARD THRESHOLD SHOWN
SEE SHEET 7 FOR OTHER THRESHOLDS INSTALLATION



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

- NOTES:**
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



LANAI DOORS

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THERMALLY BROKEN ALUMINUM BI-FOLD DOOR
NON-IMPACT
INSTALLATION DETAILS

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SHEET 4 OF 8

L. ROBERTO LOMAS P.E.

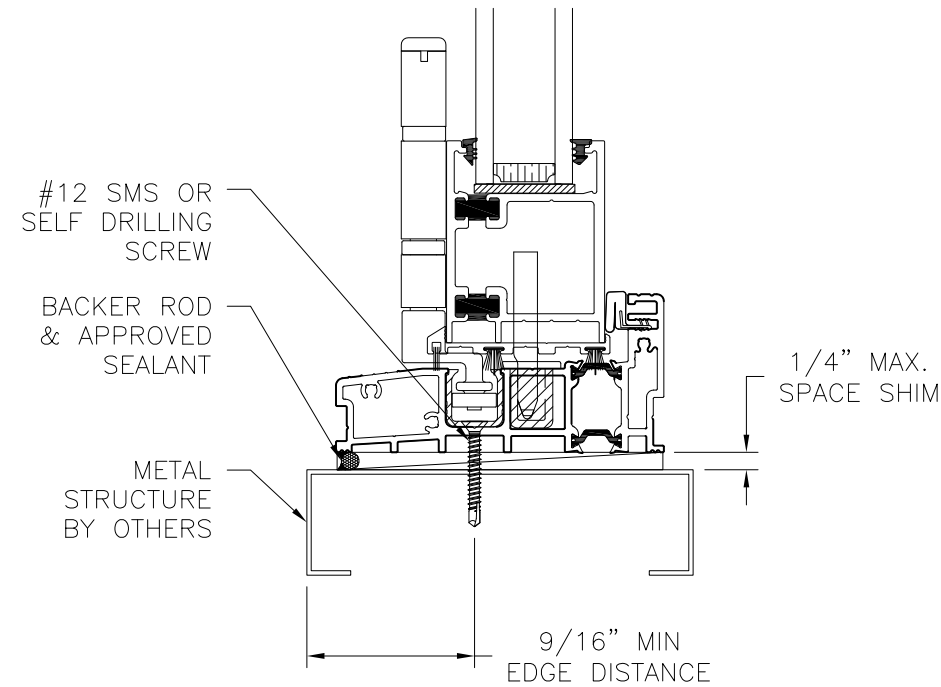
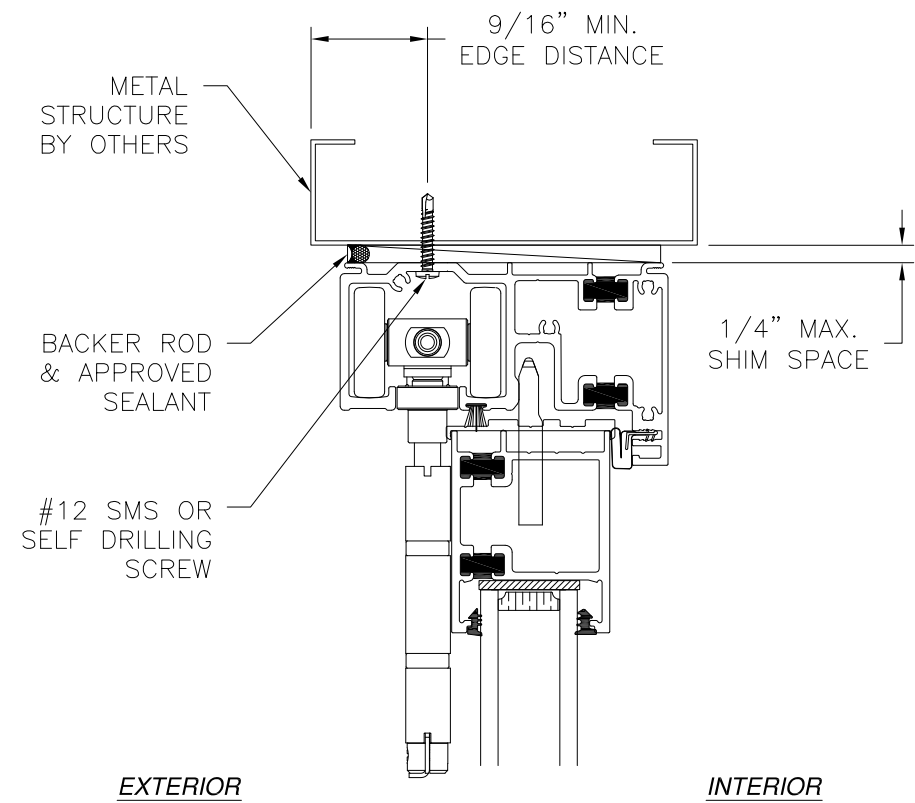
1432 WOODFORD RD LEWISVILLE, NC 27023

434-688-0609 rllomas@lrlomaspe.com

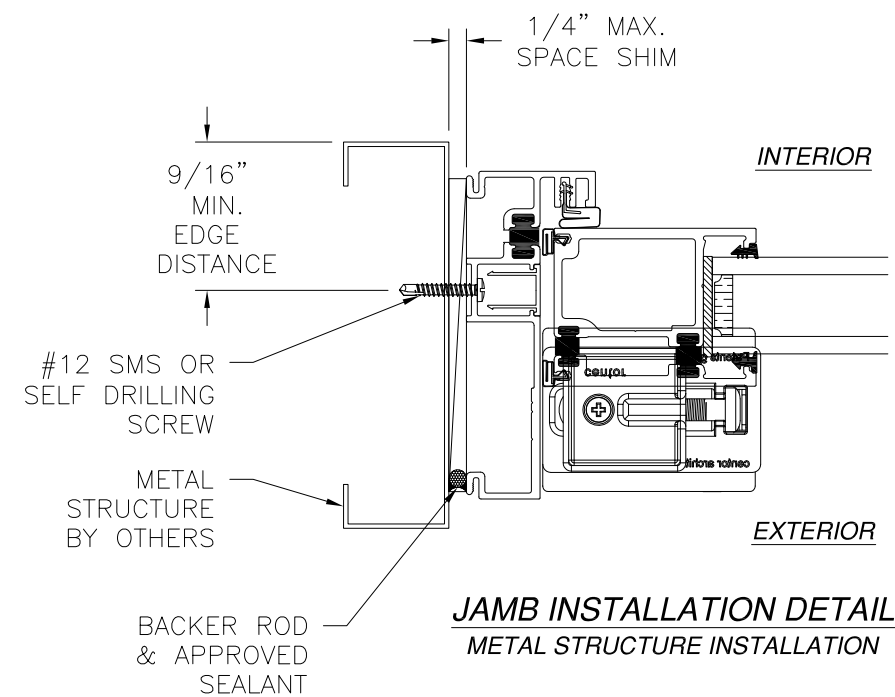
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VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION
STANDARD THRESHOLD SHOWN
SEE SHEET 7 FOR OTHER THRESHOLDS INSTALLATION



JAMB INSTALLATION DETAIL
METAL STRUCTURE INSTALLATION

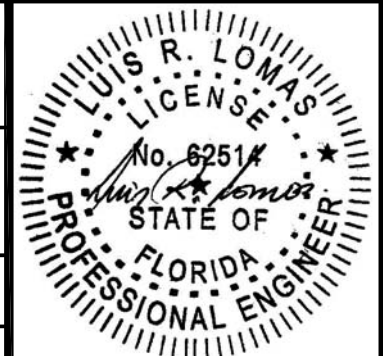
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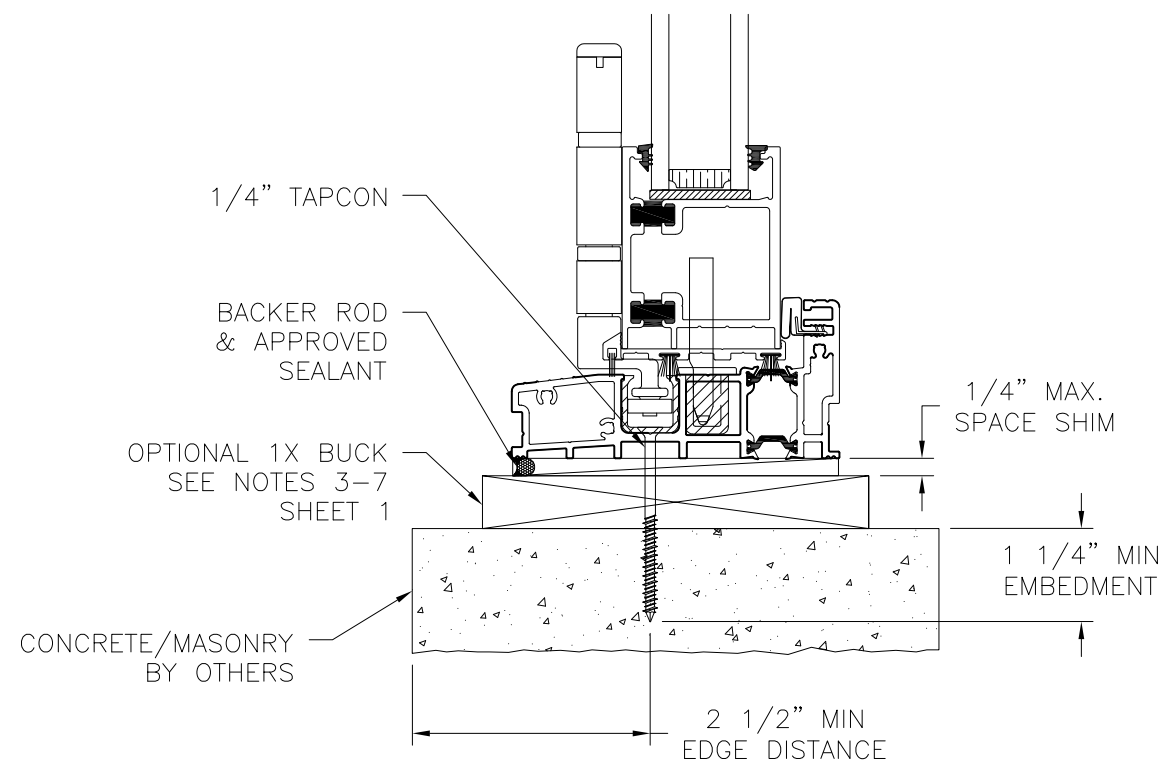
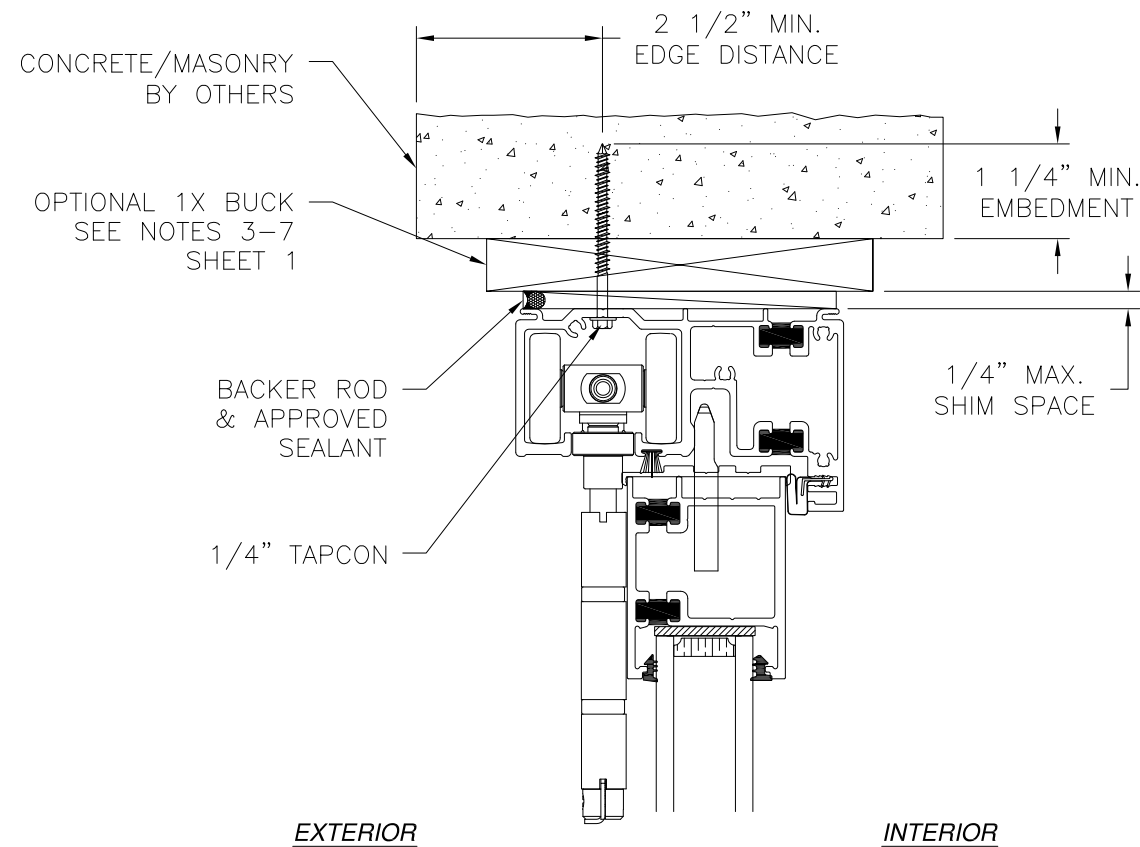


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THERMALLY BROKEN ALUMINUM BI-FOLD DOOR NON-IMPACT INSTALLATION DETAILS		
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SCALE NTS	DATE 08/02/17	SHEET 5 OF 8
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

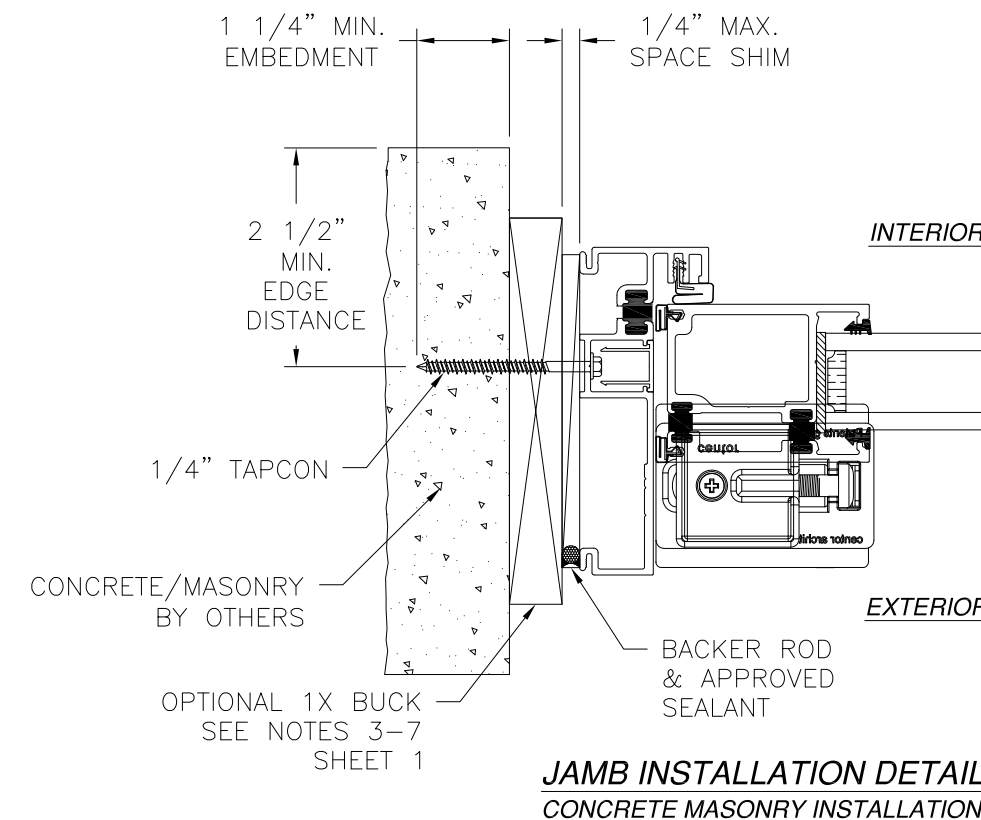
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VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION
STANDARD THRESHOLD SHOWN
SEE SHEET 7 FOR OTHER THRESHOLDS INSTALLATION



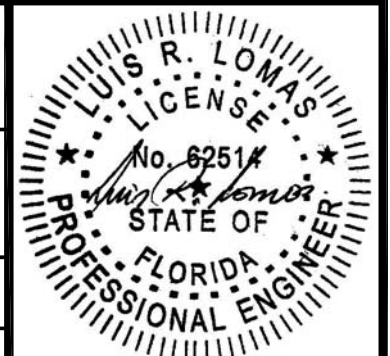
NOTES:

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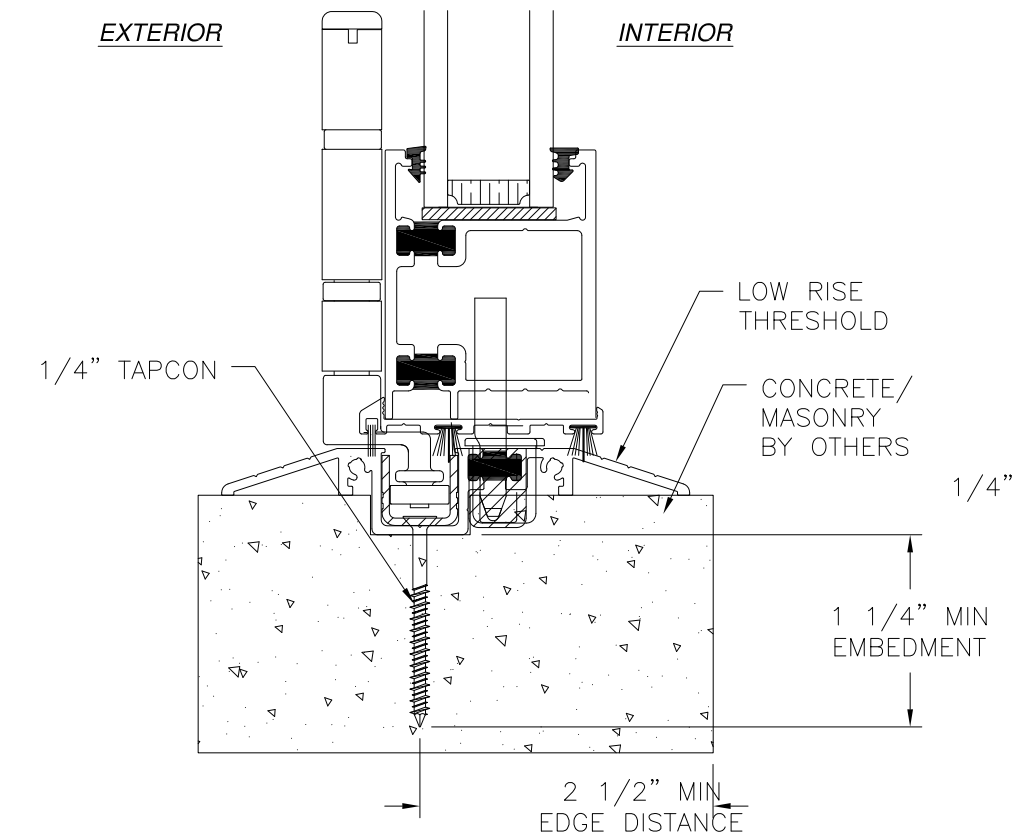
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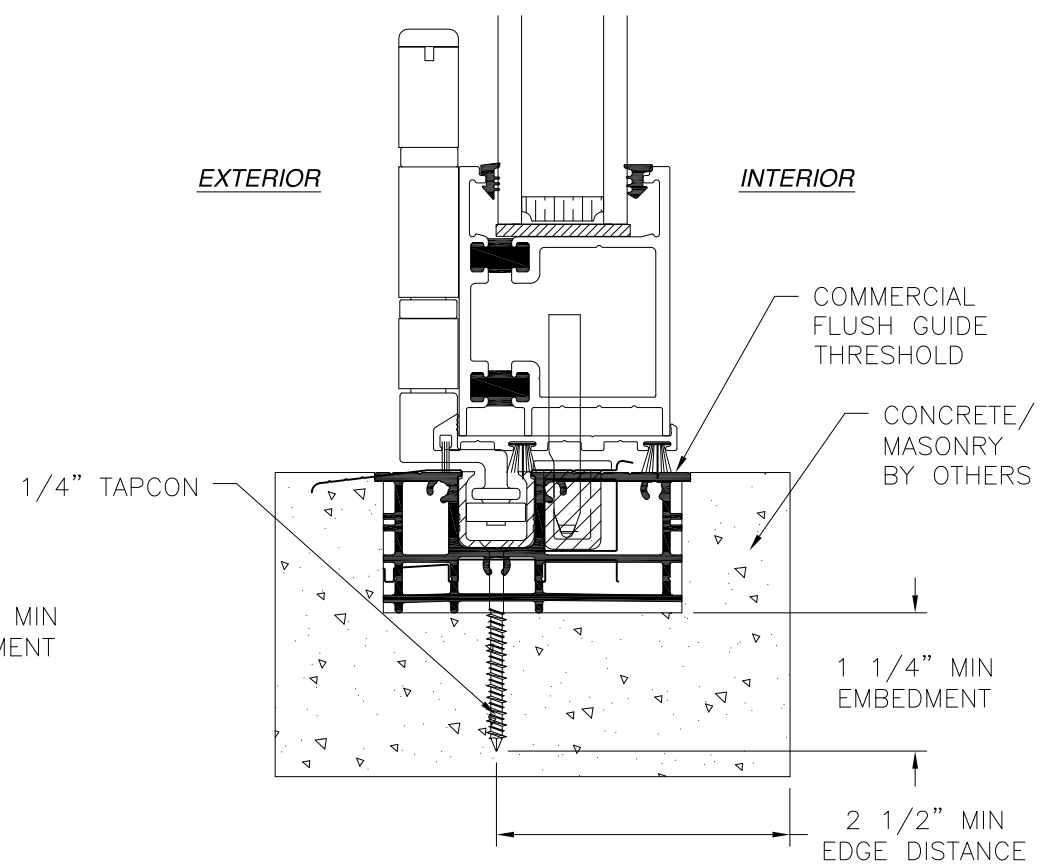


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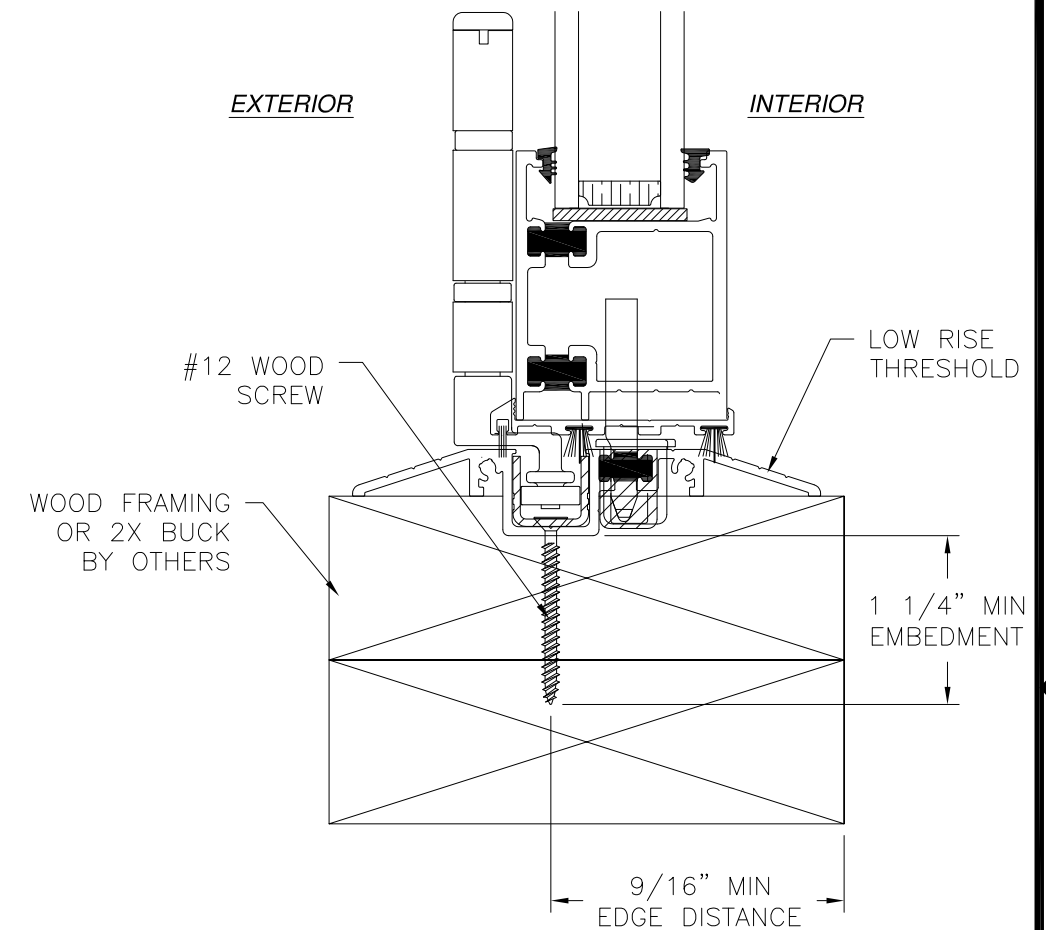
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VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION
LOW RISE THRESHOLD

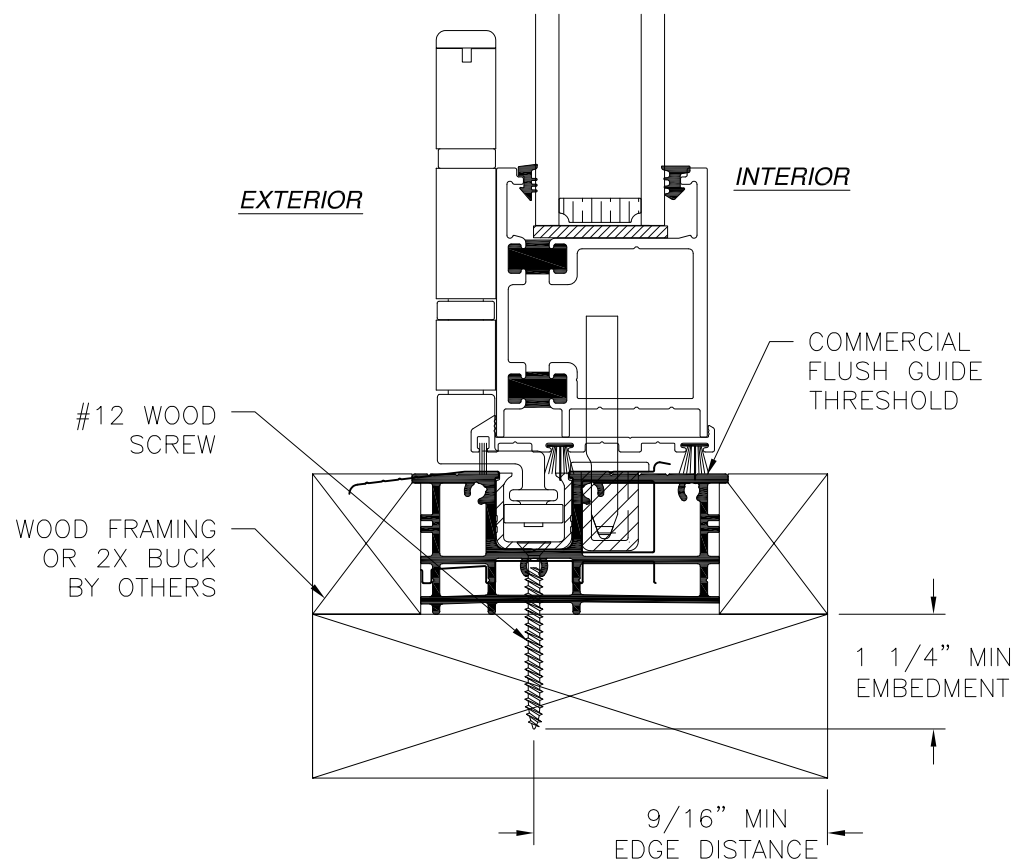


VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION
COMMERCIAL FLUSH GUIDE THRESHOLD



VERTICAL CROSS SECTION
WOOD FRAMING INSTALLATION
LOW RISE THRESHOLD

- NOTES:**
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VERTICAL CROSS SECTION
WOOD FRAMING INSTALLATION
COMMERCIAL FLUSH GUIDE THRESHOLD



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941 NORTH ELM STREET, SUITE C
ORANGE, CA 92867

THERMALLY BROKEN ALUMINUM BI-FOLD DOOR
NON-IMPACT
INSTALLATION DETAILS

DRAWN: A.R.

DWG NO. 08-03150

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SHEET 7 OF 8

L. ROBERTO LOMAS P.E.

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SIGNED: 09/28/2020

LUIS R. LOMAS

LICENSE No. 62514

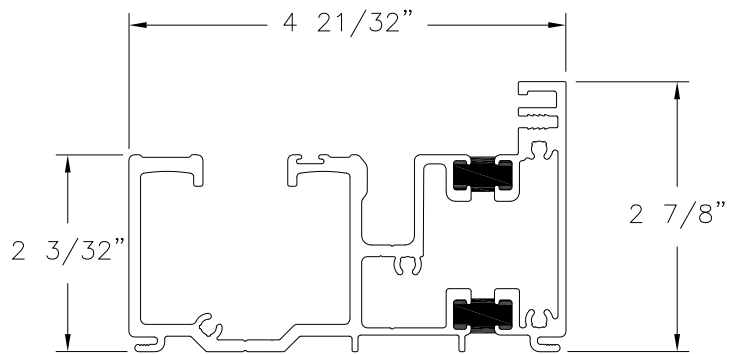
STATE OF FLORIDA

PROFESSIONAL ENGINEER

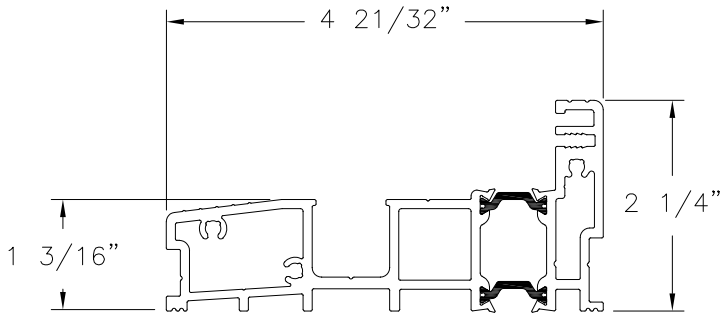
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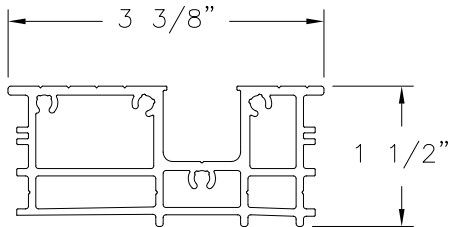
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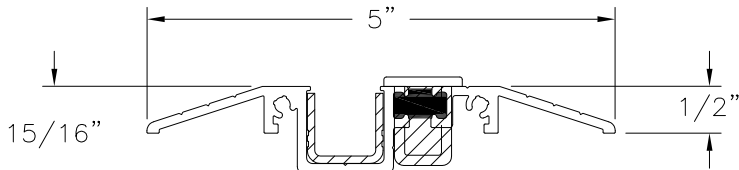
HEAD FRAME
ALUMINUM 6063-T5



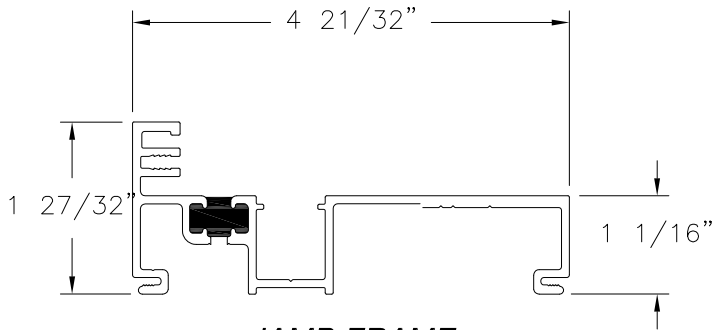
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ALUMINUM 6063-T5



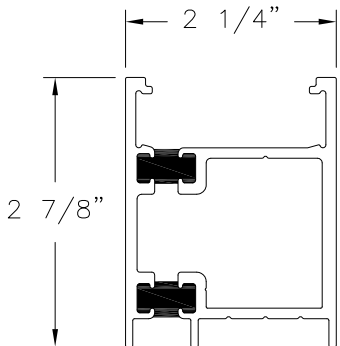
COMMERCIAL FLUSH GUIDE THRESHOLD
ALUMINUM 6063-T5



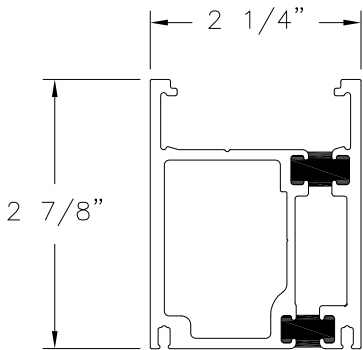
LOW RISE THRESHOLD
ALUMINUM 6063-T5



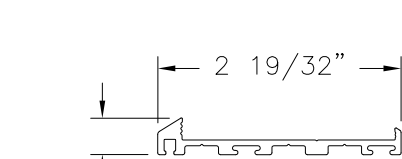
JAMB FRAME
ALUMINUM 6063-T5



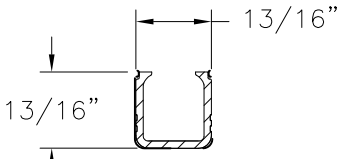
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ALUMINUM 6063-T5



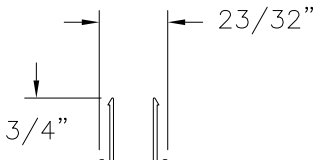
TOP/BOTTOM RAIL
ALUMINUM 6063-T5



DOOR BOOT
ALUMINUM 6063-T5



THRESHOLD INSERT
RIGID PVC



JAMB COVER
ALUMINUM 6063-T5



LANAI DOORS
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THERMALLY BROKEN ALUMINUM BI-FOLD DOOR
NON-IMPACT
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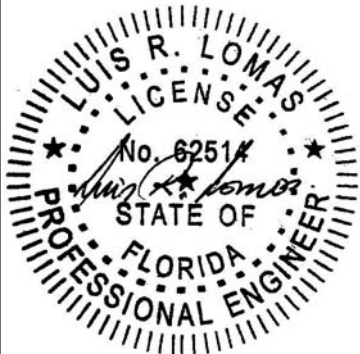
SCALE
NTS

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SHEET
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