

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING 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. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS UP TO WIND ZONE 3.
6. DESIGN PRESSURE AND INSTALLATION DETAILS SHOWN IN THIS DOCUMENT APPLY ONLY TO MULLION. WINDOWS MUST BE APPROVED UNDER SEPARATE APPROVAL.
7. SINGLE WINDOWS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. WINDOWS MUST BE MANUFACTURED BY WINDOW MART.
8. DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL WINDOW OR DOOR UNIT.
9. UNITS MAY BE MULLED TOGETHER INDEFINITELY AS LONG AS SINGLE UNIT WIDTH AND HEIGHT ARE NOT EXCEEDED AND MULLION IS ANCHORED AS SHOWN HEREIN.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER NEW REQUIREMENTS	10/04/16	R.L.

ANCHORING NOTES:

1. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS SHEET 3.
2. FOR ANCHORING INTO CONCRETE USE 3/16" TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT WITH 2 1/2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN INSTALLATION DETAILS SHEET 4.
3. FOR ANCHORING INTO METAL STRUCTURE USE #10 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.
4. FOR ATTACHING REINFORCEMENTS TO WINDOW FRAME USE #6 SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A MINIMUM EMBEDMENT OF THREE THREADS PAST THE MULLION WALL. LOCATE SCREWS IN ACCORDANCE WITH WINDOW ANCHORING SCHEDULE AS SHOWN IN WINDOW SEPARATE APPROVAL.
5. FOR WINDOW UNITS ANCHORING SCHEDULE REFER TO APPROVED INSTALLATION INSTRUCTIONS.
6. ALL FASTENERS TO BE CORROSION RESISTANT.
7. 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 3,200 PSI.
 - C. MASONRY – STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
 - D. METAL STRUCTURE: STEEL 18GA, 33KSI OR ALUMINUM 6063-T5 .048" THICK MINIMUM

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2	RATING CHARTS
3 – 6	INSTALLATION DETAILS & ANCHOR CHARTS
7	COMPONENTS

WINDOW MART
5760 ALBERT PIKE
ROYAL, AR 71968

(4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS
NOTES

DRAWN:
V.L.

DWG NO.
08-02229

REV
A

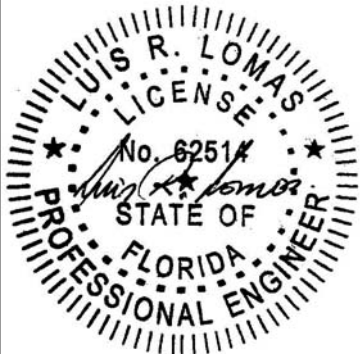
SCALE
NTS

DATE
10/21/13

SHEET
1 OF 7

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
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SIGNED: 10/04/2016



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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER NEW REQUIREMENTS	10/04/16	R.L.

CHART #1
18" TRANSOM
SEE CHARTS 2 & 3 FOR NUMBER OF ANCHORS REQUIRED

Design pressure rating (psf)								
Height (in)		Span and Tributary width (in)						
		48.00	56.00	64.00	72.00	80.00	88.00	96.00
Window	Transom	24.00	28.00	32.00	36.00	40.00	44.00	48.00
36.00	18.00	75.0	75.0	75.0	54.4	39.2	29.2	22.3
42.00	18.00	75.0	75.0	71.8	49.8	35.9	26.6	20.3
48.00	18.00	75.0	75.0	66.1	45.9	33.1	24.6	18.8
54.00	18.00	75.0	75.0	61.3	42.6	30.7	22.9	17.4
60.00	18.00	75.0	75.0	57.1	39.7	28.7	21.3	16.3
66.00	18.00	75.0	75.0	53.4	37.2	26.9	20.0	15.3
72.00	18.00	75.0	75.0	50.2	35.0	25.3	18.8	-

CHART #7
30" TRANSOM
SEE CHARTS 8 & 9 FOR NUMBER OF ANCHORS REQUIRED

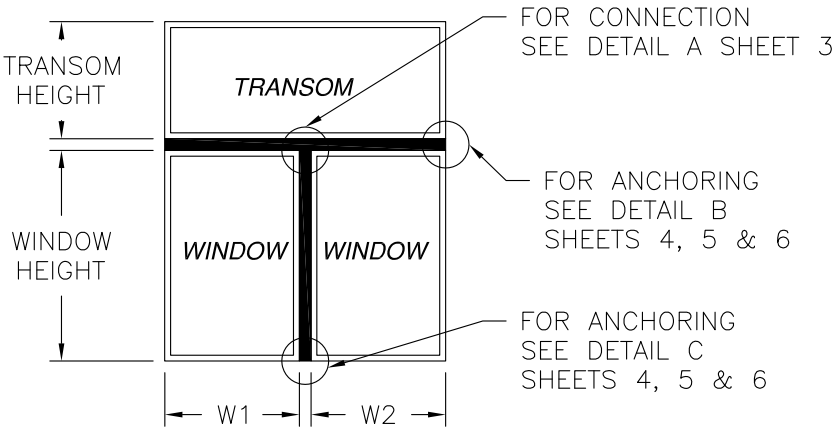
Design pressure rating (psf)								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	30.00	75.0	75.0	75.0	65.7	45.3	32.5	27.9
42.00	30.00	75.0	75.0	75.0	60.9	42.1	30.2	25.9
48.00	30.00	75.0	75.0	75.0	56.8	39.3	28.2	24.2
54.00	30.00	75.0	75.0	75.0	53.2	36.8	26.5	22.7
60.00	30.00	75.0	75.0	75.0	50.0	34.6	24.9	21.4
66.00	30.00	75.0	75.0	71.6	47.2	32.7	23.6	20.2
72.00	30.00	75.0	75.0	67.7	44.6	31.0	22.3	19.2

CHART #4
24" TRANSOM
SEE CHARTS 5 & 6 FOR NUMBER OF ANCHORS REQUIRED

Design pressure rating (psf)								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	24.00	75.0	75.0	75.0	71.3	49.3	35.5	30.5
42.00	24.00	75.0	75.0	75.0	65.7	45.5	32.7	28.1
48.00	24.00	75.0	75.0	75.0	60.9	42.2	30.4	26.1
54.00	24.00	75.0	75.0	75.0	56.7	39.4	28.4	24.4
60.00	24.00	75.0	75.0	75.0	53.1	36.9	26.6	22.9
66.00	24.00	75.0	75.0	75.0	50.0	34.7	25.1	21.5
72.00	24.00	75.0	75.0	71.2	47.1	32.8	23.7	20.4

CHART #10
36" TRANSOM
SEE CHARTS 11 & 12 FOR NUMBER OF ANCHORS REQUIRED

Design pressure rating (psf)								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	36.00	75.0	75.0	75.0	61.5	42.2	30.2	25.9
42.00	36.00	75.0	75.0	75.0	57.3	39.4	28.2	24.2
48.00	36.00	75.0	75.0	75.0	53.6	36.9	26.5	22.7
54.00	36.00	75.0	75.0	75.0	50.4	34.7	24.9	21.4
60.00	36.00	75.0	75.0	72.6	47.5	32.8	23.6	20.2
66.00	36.00	75.0	75.0	68.6	45.0	31.1	22.3	19.2
72.00	36.00	75.0	75.0	65.0	42.7	29.5	21.2	18.2



SEE CHARTS 1-12 FOR DESIGN PRESSURE RATINGS AND NUMBER OF ANCHORS REQUIRED

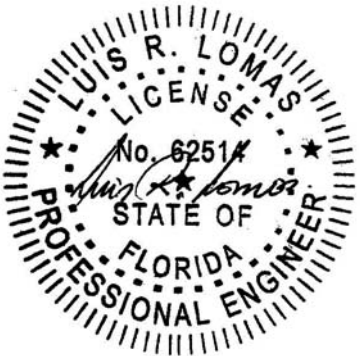
DESIGN PRESSURE TABLE INSTRUCTIONS:

1. DEFINE REQUIRED DESIGN LOAD PER FLORIDA BUILDING CODE CHAPTER 16.
2. DETERMINE MULLION SPAN AND TRIBUTARY WIDTH OF PRODUCT TO BE INSTALLED BASED ON FORMULA FOR TRIBUTARY WIDTH BELOW.
3. TO DETERMINE MULLION RATING LOCATE COLUMN FOR MULLION SPAN AND TRIBUTARY WIDTH THEN LOCATE CORRESPONDING ROW FOR BOTTOM AND TRANSOM HEIGHTS. FIND THE INTERSECTION OF THIS COLUMN AND ROW. MULLION RATING IS LOCATED AT THIS INTERSECTION.
4. MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.
5. IF TRANSOM TO BE INSTALLED IS NOT LISTED IN THESE CHARTS GO TO NEXT HIGHER TRANSOM CHART. FOR EXAMPLE IF TRANSOM TO BE INSTALLED IS 20" HIGH THEN USE CHART FOR 24" TRANSOM.
6. WINDOW/DOOR AND TRANSOMS TO BE ANCHORED ON ALL FOUR SIDES.

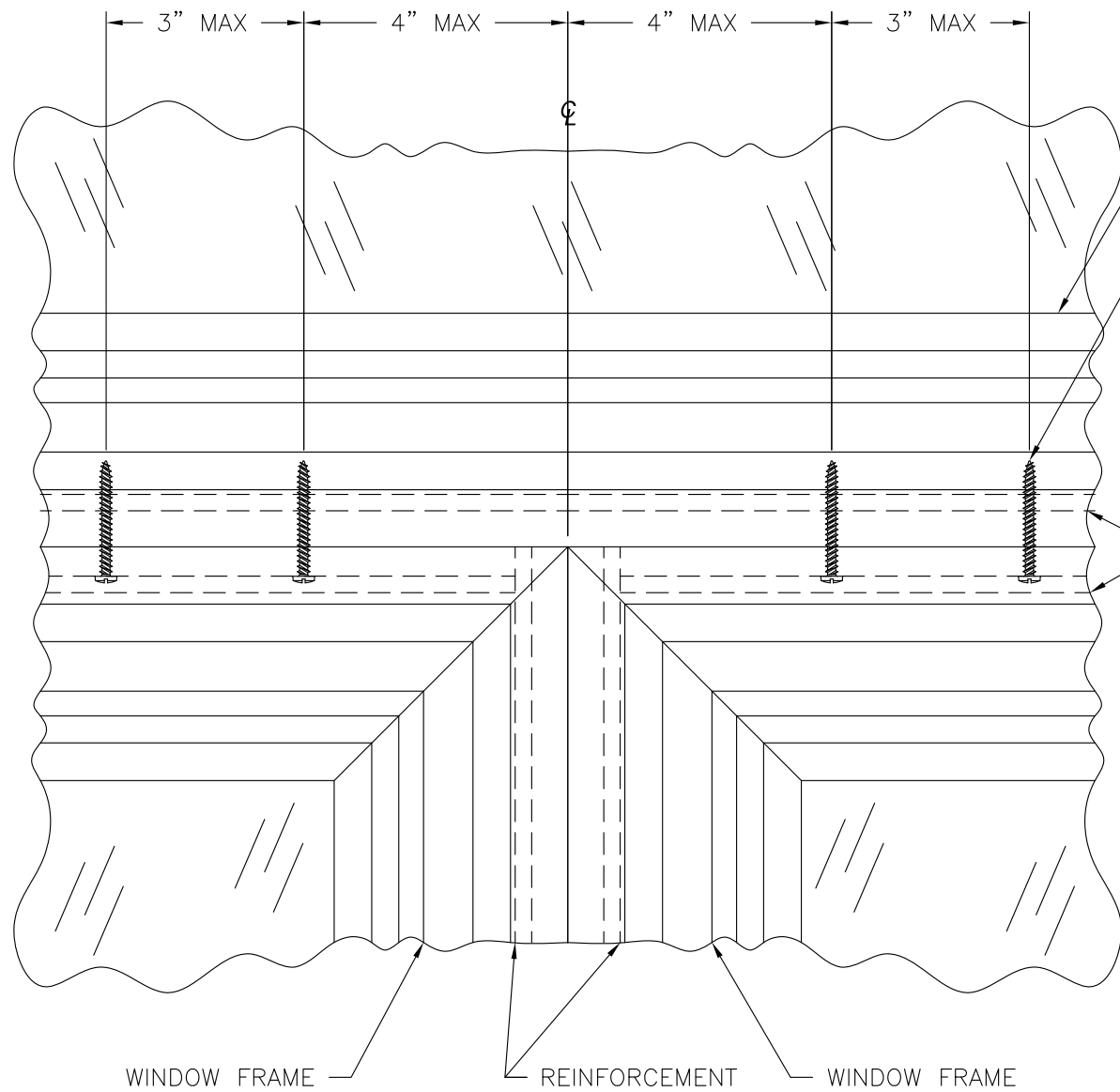
TRIBUTARY WIDTH = $\frac{W1 + W2}{2}$

WINDOW MART 5760 ALBERT PIKE ROYAL, AR 71968		
T MULLION – IMPACT (4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS CONFIGURATIONS AND CHARTS		
DRAWN: V.L.	DWG NO. 08-02229	REV A
SCALE NTS	DATE 10/21/13	SHEET 2 OF 7
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@rlomaspe.com		

SIGNED: 10/04/2016



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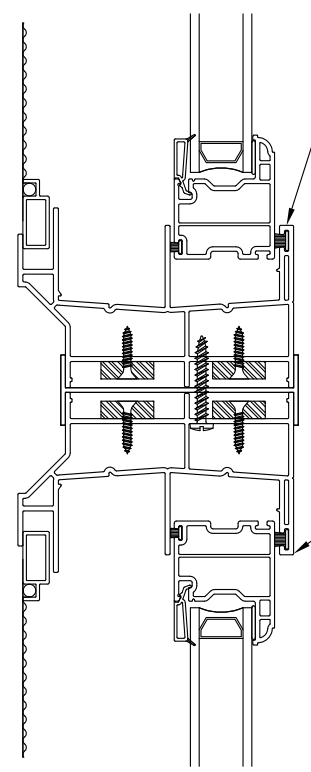


TRANSOM FRAME

#10 SELF DRILLING SCREW
SEE CHARTS
#3, 6, 9 & 12
THIS SHEET
FOR NUMBER
OF ANCHORS
REQUIRED
AT CLUSTER

REINFORCEMENT

EXTERIOR



TRANSOM
FRAME REFERENCE

WINDOW FRAME
REFERENCE ONLY

INTERIOR

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER NEW REQUIREMENTS	10/04/16	R.L.

CHART #9
30" TRANSOM

Number of anchors required at Vertical mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	30.00	2	2	2	2	2	2	2
42.00	30.00	4	4	4	4	2	2	2
48.00	30.00	4	4	4	4	2	2	2
54.00	30.00	4	4	4	4	2	2	2
60.00	30.00	4	4	6	4	4	2	2
66.00	30.00	4	6	6	4	4	2	2
72.00	30.00	4	6	6	4	4	2	2

CHART #12
36" TRANSOM

Number of anchors required for vertical mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	36.00	2	2	2	2	2	2	2
42.00	36.00	4	4	4	2	2	2	2
48.00	36.00	4	4	4	4	2	2	2
54.00	36.00	4	4	4	4	2	2	2
60.00	36.00	4	4	4	4	4	2	2
66.00	36.00	4	6	6	4	4	2	2
72.00	36.00	4	6	6	4	4	2	2

TRANSOM/WINDOW CONNECTION DETAIL A
SEE DETAIL D SHEET 7 FOR FRAME TO REINFORCEMENT INSTALLATION

CHART #3
18" TRANSOM

Number of anchors required at Vertical mullion end cluster								
Height (in)		Span and Tributary width (in)						
		48.00	56.00	64.00	72.00	80.00	88.00	96.00
Window	Transom	24.00	28.00	32.00	36.00	40.00	44.00	48.00
36.00	18.00	2	2	4	2	2	2	2
42.00	18.00	4	4	4	2	2	2	2
48.00	18.00	4	4	4	4	2	2	2
54.00	18.00	4	4	4	4	2	2	2
60.00	18.00	4	6	4	4	2	2	2
66.00	18.00	6	6	4	4	4	2	2
72.00	18.00	6	6	4	4	4	2	-

CHART #6
24" TRANSOM

Number of anchors required at Vertical mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	24.00	2	2	2	2	2	2	2
42.00	24.00	4	4	4	4	2	2	2
48.00	24.00	4	4	4	4	2	2	2
54.00	24.00	4	4	4	4	4	2	2
60.00	24.00	4	4	6	4	4	2	2
66.00	24.00	4	6	6	4	4	2	2
72.00	24.00	4	6	6	4	4	4	2

WINDOW MART
5760 ALBERT PIKE
ROYAL, AR 71968

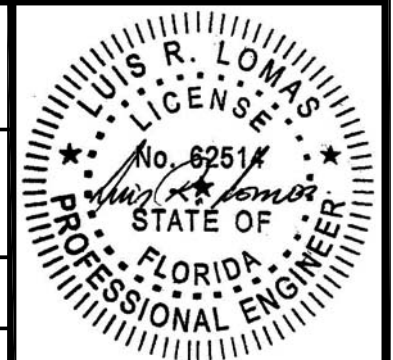
T MULLION – IMPACT
(4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS
INSTALLATION DETAILS

DRAWN: V.L. DWG NO. 08-02229 REV A

SCALE NTS DATE 10/21/13 SHEET 3 OF 7

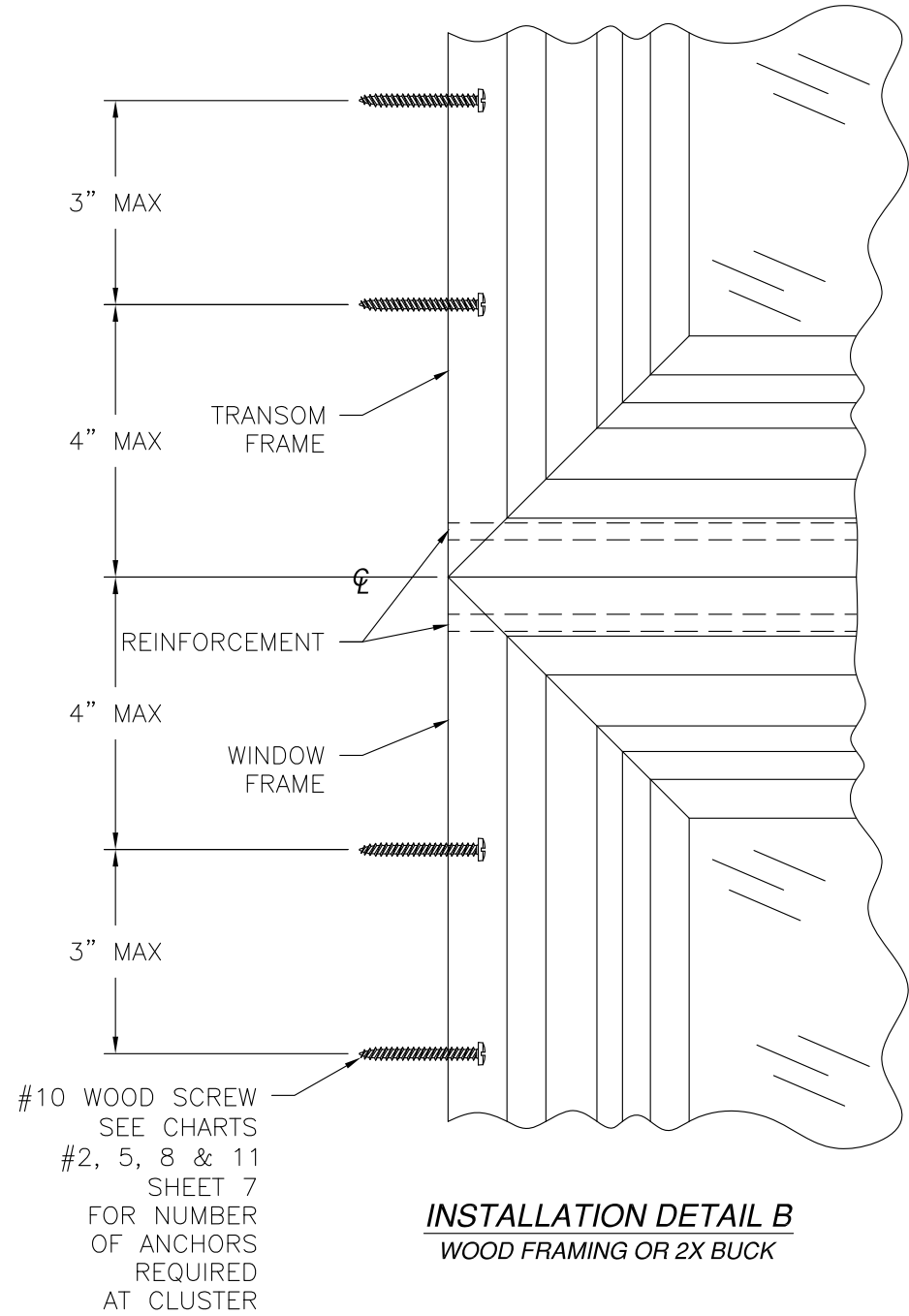
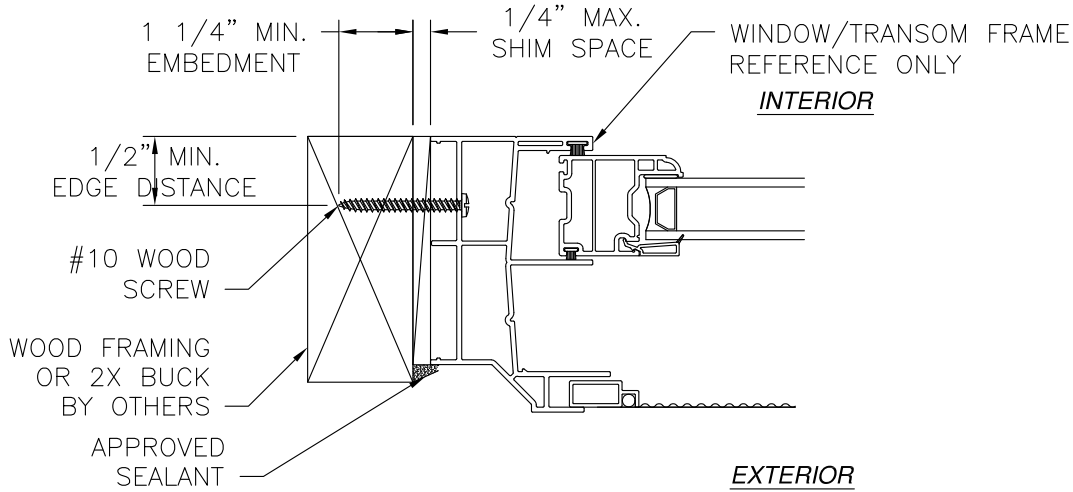
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434-688-0609 rllomas@rlomaspe.com

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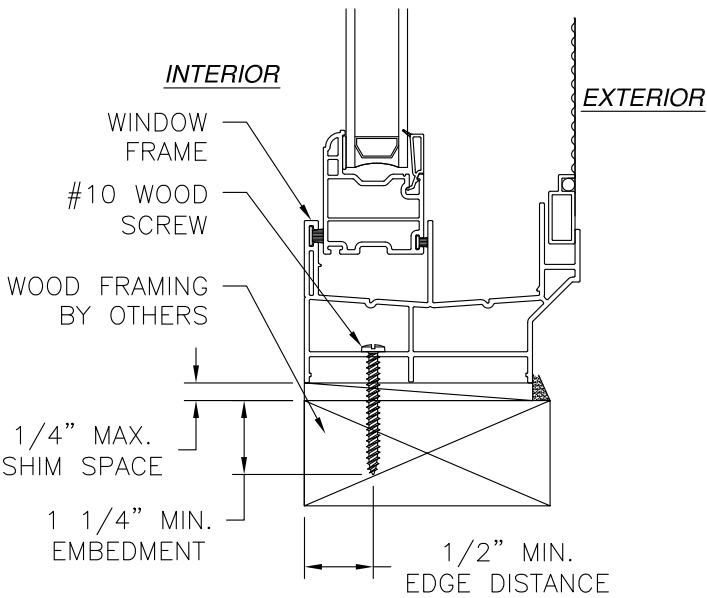


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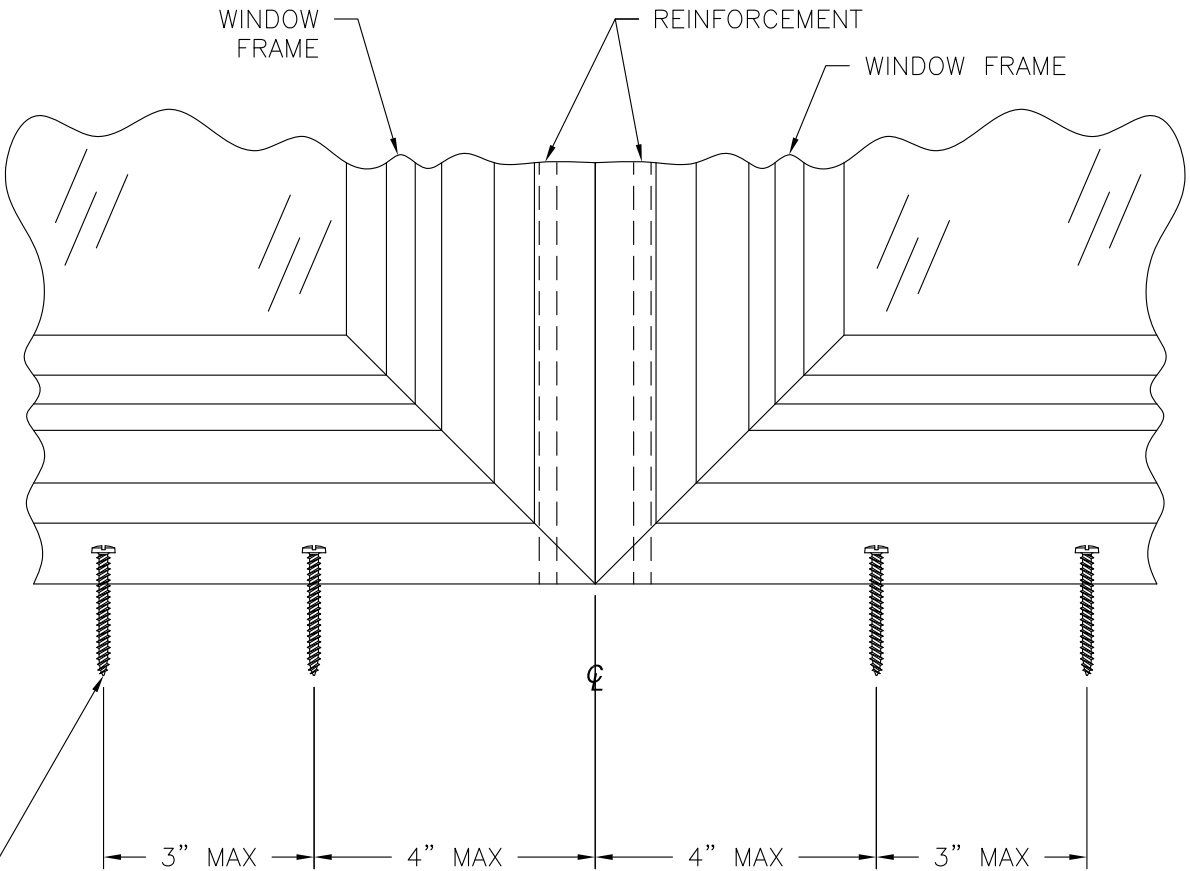


INSTALLATION DETAIL B
WOOD FRAMING OR 2X BUCK



#10 WOOD SCREW
SEE CHARTS
#3, 6, 9 & 12
FOR NUMBER OF
ANCHORS REQUIRED
AT CLUSTER

INSTALLATION DETAIL C
WOOD FRAMING OR 2X BUCK



WINDOW MART

5760 ALBERT PIKE
ROYAL, AR 71968

T MULLION – IMPACT

(4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS

INSTALLATION DETAILS

DRAWN: V.L.

DWG NO. 08-02229

REV A

SCALE NTS

DATE 10/21/13

SHEET 4 OF 7

L. ROBERTO LOMAS P.E.

1432 WOODFORD RD LEWISVILLE, NC 27023

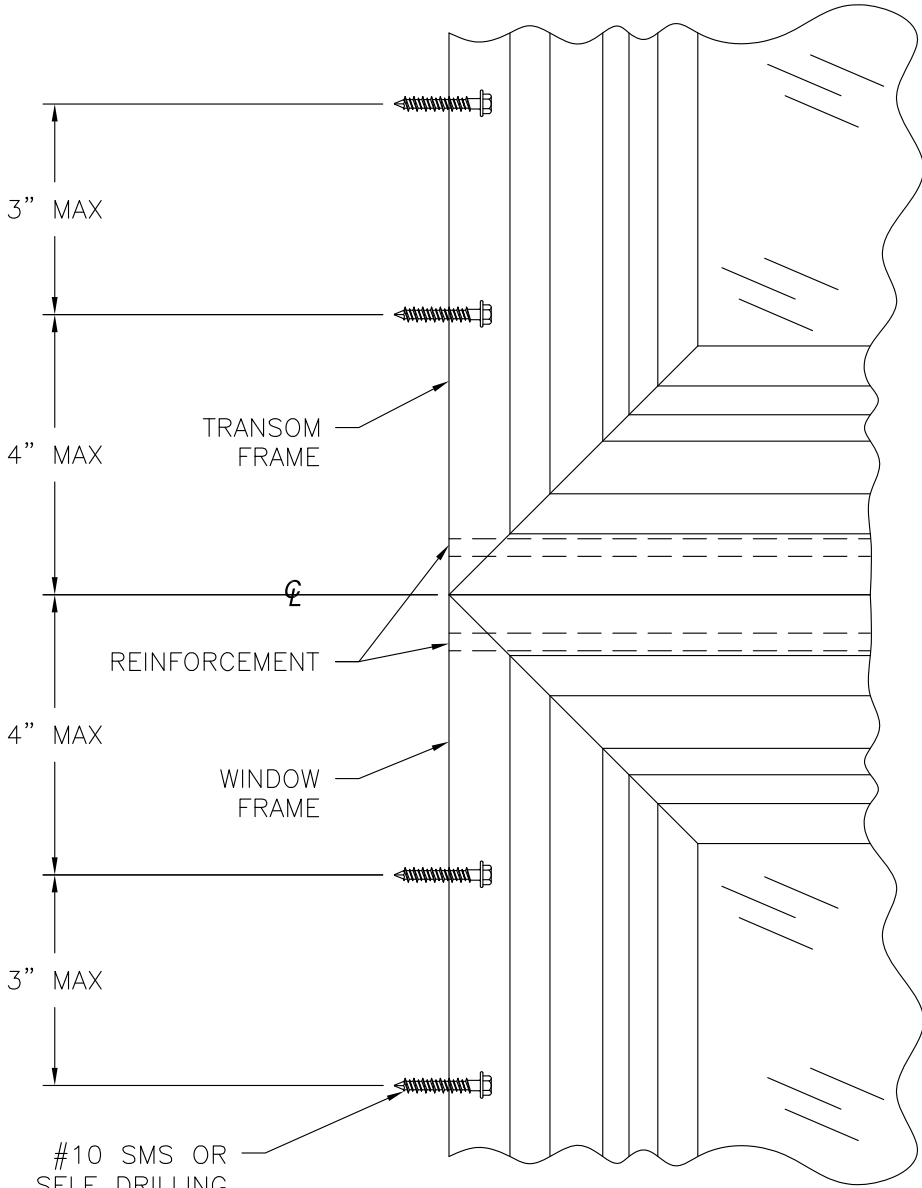
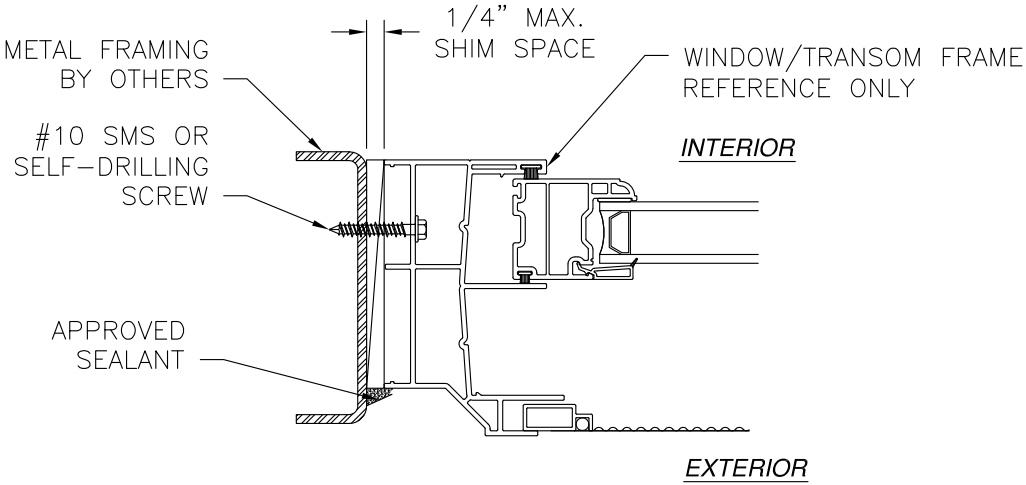
434-688-0609 rllomas@lrlomaspe.com

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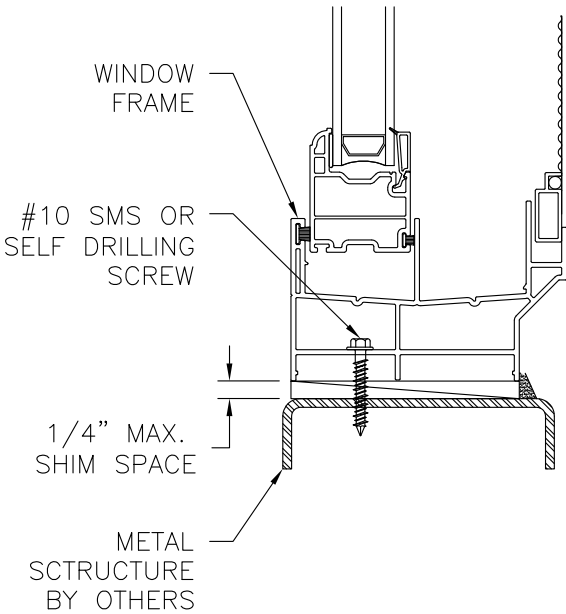
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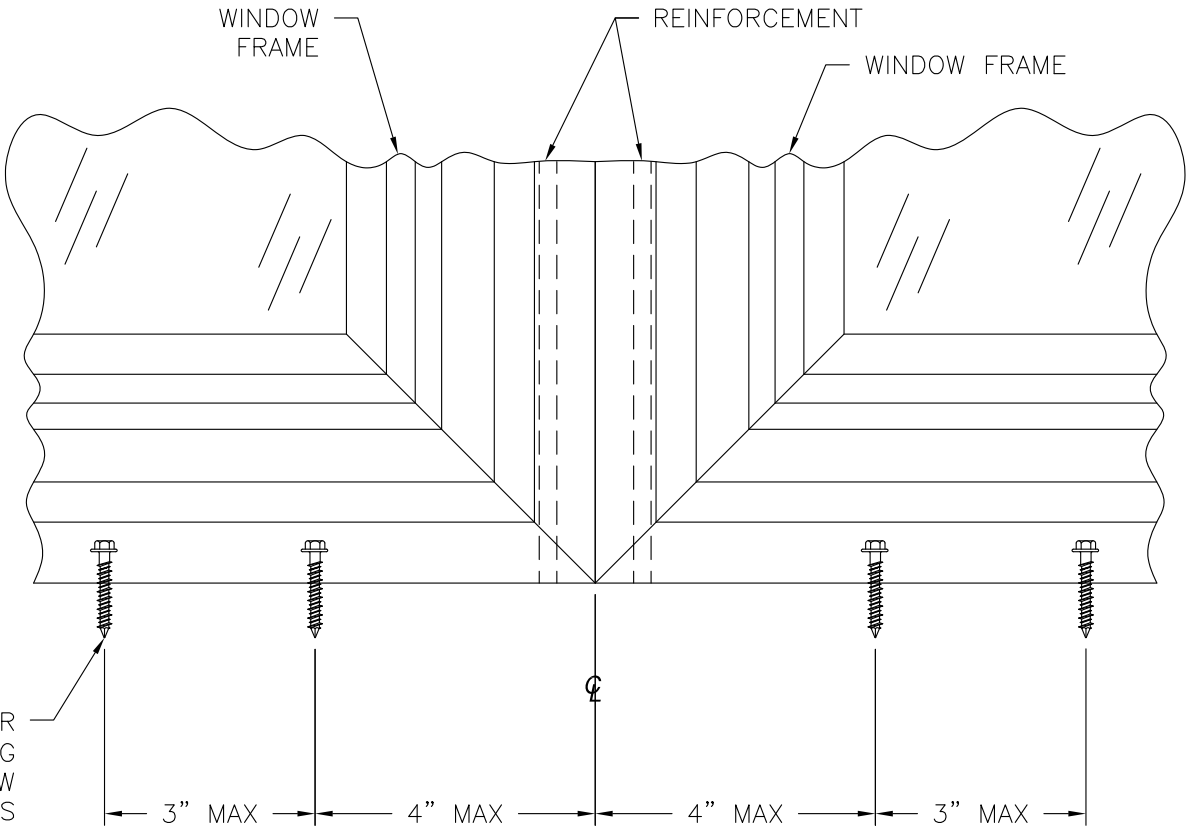
#10 SMS OR
SELF DRILLING
SCREW
SEE CHARTS
#2, 5, 8 & 11
SHEET 7
FOR NUMBER
OF ANCHORS
REQUIRED AT CLUSTER

INSTALLATION DETAIL B
METAL STRUCTURE



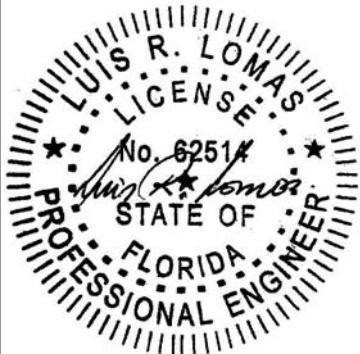
#10 SMS OR
SELF DRILLING
SCREW
SEE CHARTS
#3, 6, 9 & 12
SHEET 3
FOR NUMBER OF
ANCHORS REQUIRED
AT CLUSTER

INSTALLATION DETAIL C
METAL STRUCTURE

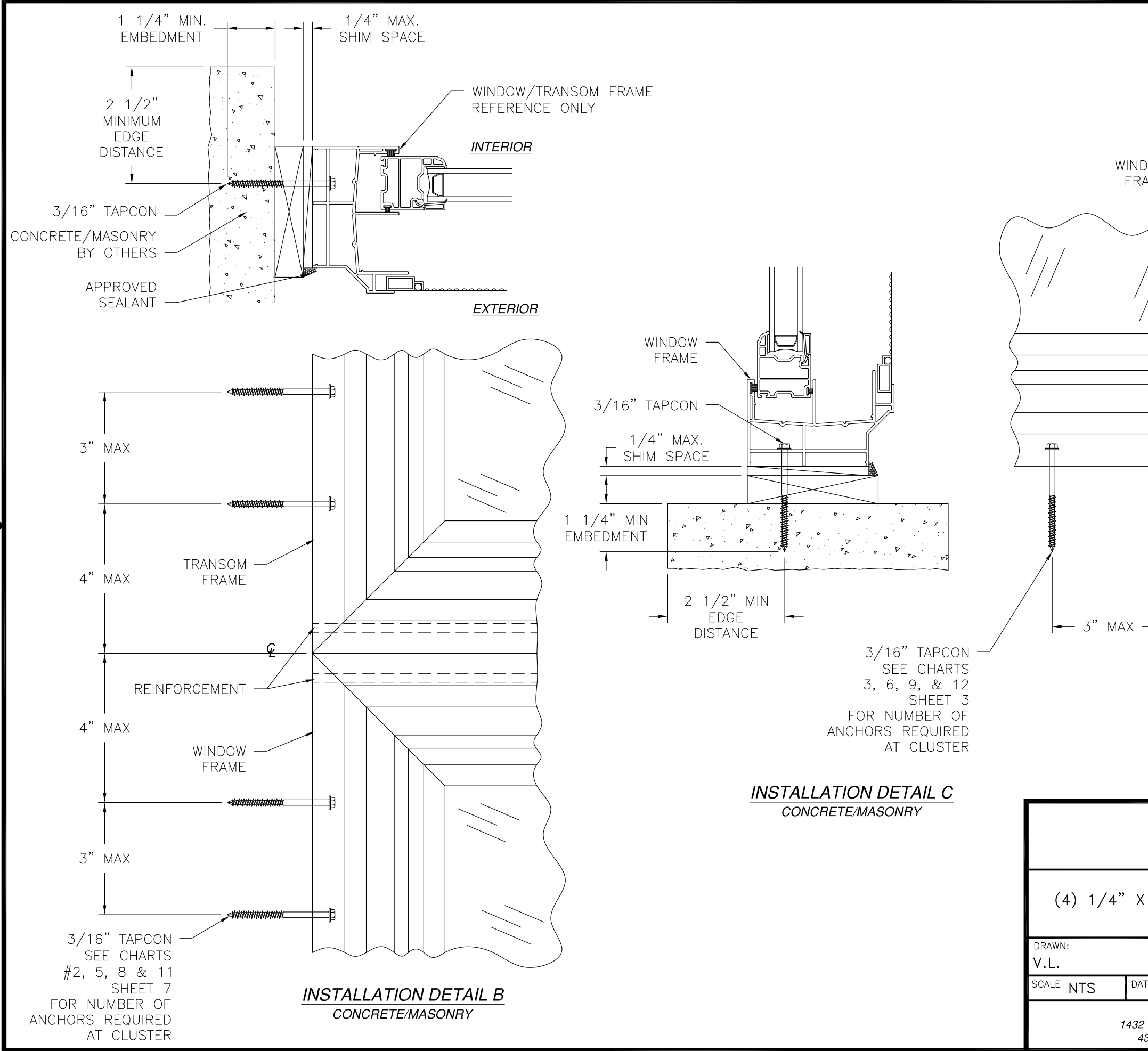


WINDOW MART 5760 ALBERT PIKE ROYAL, AR 71968		
T MULLION – IMPACT (4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS INSTALLATION DETAILS		
DRAWN: V.L.	DWG NO. 08-02229	REV A
SCALE NTS	DATE 10/21/13	SHEET 5 OF 7
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

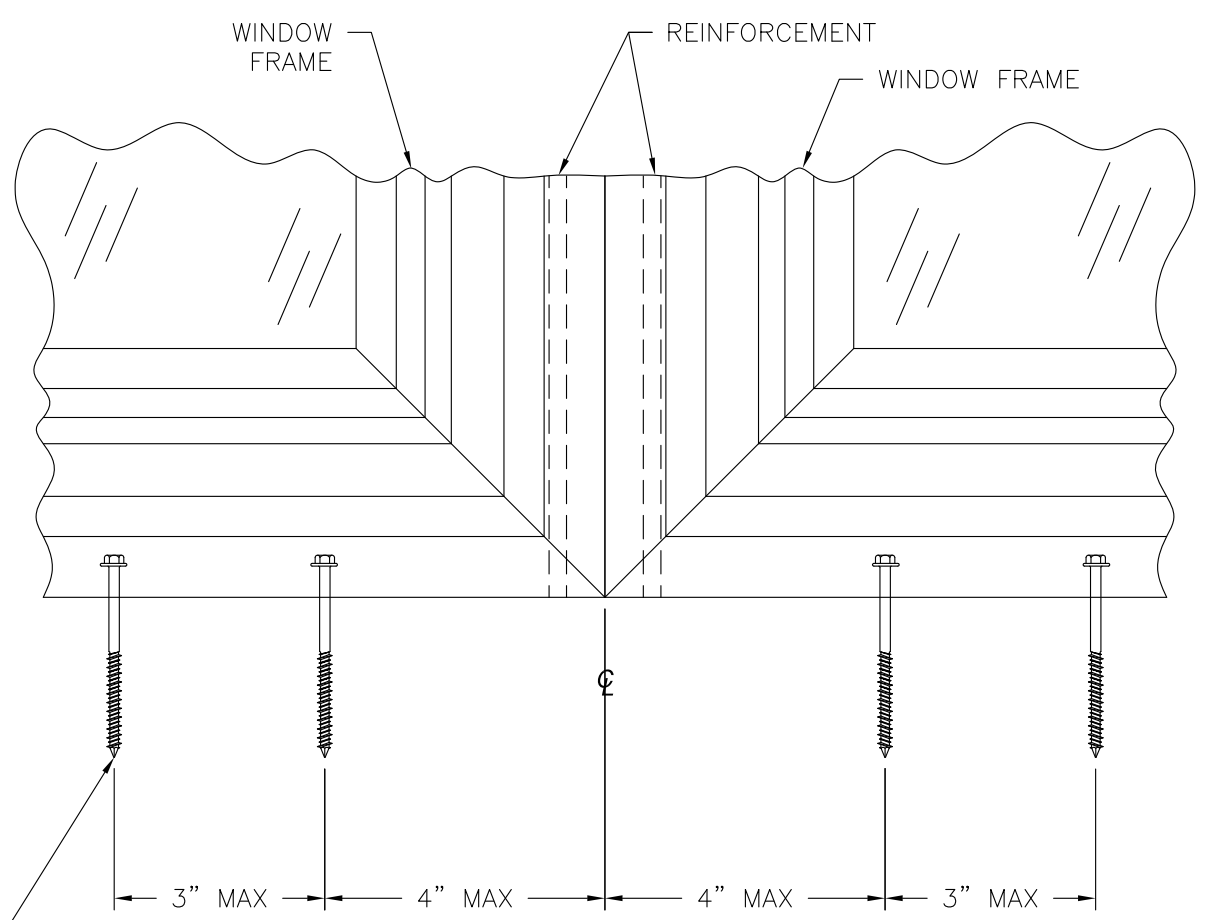
SIGNED: 10/04/2016



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



REVISIONS			
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WINDOW MART
5760 ALBERT PIKE
ROYAL, AR 71968

(4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS
INSTALLATION DETAILS

DRAWN:
V.L.

DWG NO.
08-02229

REV
A

SCALE
NTS

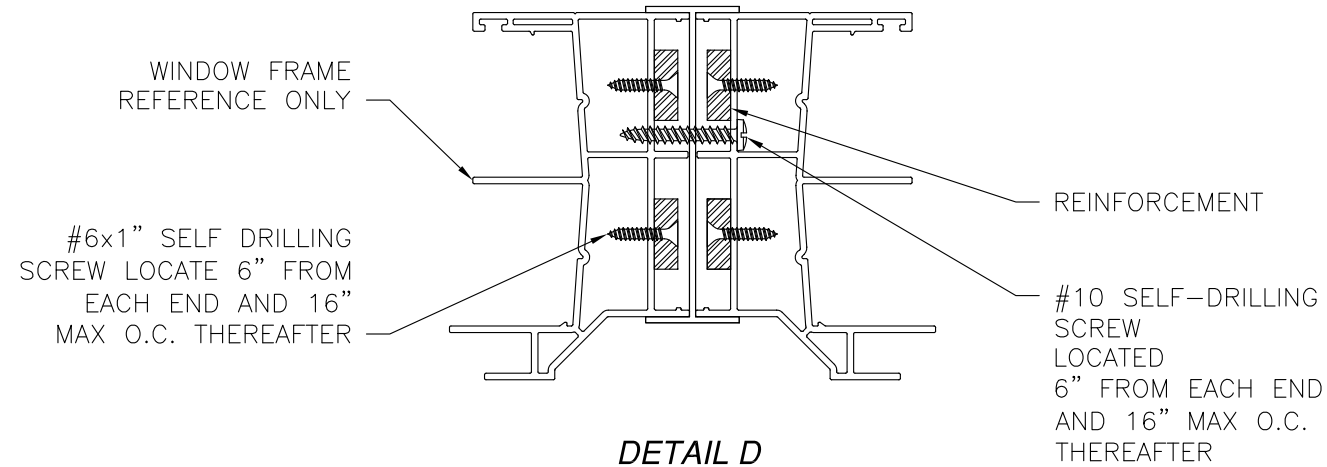
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10/21/13

SHEET
6 OF 7

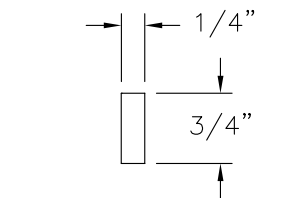
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SIGNED: 10/04/2016

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



DETAIL D
WINDOW FRAME TO REINFORCEMENT
INSTALLATION



REINFORCEMENT
ALUMINUM 6105-T5

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER NEW REQUIREMENTS	10/04/16	R.L.

CHART #2
18" TRANSOM

Number of anchors required at Horizontal mullion end cluster								
Height (in)		Span and Tributary width (in)						
		48.00	56.00	64.00	72.00	80.00	88.00	96.00
Window	Transom	24.00	28.00	32.00	36.00	40.00	44.00	48.00
36.00	18.00	4	4	6	4	4	4	4
42.00	18.00	4	4	6	4	4	4	4
48.00	18.00	4	6	6	4	4	4	2
54.00	18.00	4	6	6	4	4	4	2
60.00	18.00	4	6	6	4	4	4	2
66.00	18.00	6	6	6	4	4	4	2
72.00	18.00	6	6	4	4	4	4	-

CHART #5
24" TRANSOM

Number of anchors required at Horizontal mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	24.00	4	4	4	6	4	4	4
42.00	24.00	4	4	6	6	4	4	4
48.00	24.00	4	4	6	6	4	4	4
54.00	24.00	4	4	6	6	4	4	4
60.00	24.00	4	6	6	6	4	4	4
66.00	24.00	4	6	6	6	4	4	4
72.00	24.00	4	6	6	6	4	4	4

CHART #8
30" TRANSOM

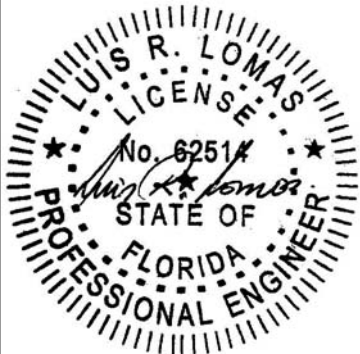
Number of anchors required at Horizontal mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	30.00	4	4	6	6	4	4	4
42.00	30.00	4	4	6	6	4	4	4
48.00	30.00	4	4	6	6	4	4	4
54.00	30.00	4	6	6	6	4	4	4
60.00	30.00	4	6	6	6	4	4	4
66.00	30.00	4	6	6	6	4	4	4
72.00	30.00	4	6	6	6	4	4	4

CHART #11
36" TRANSOM

Number of anchors required at Horizontal mullion end cluster								
Height (in)		Span and Tributary width (in)						
		40.00	48.00	56.00	64.00	72.00	80.00	84.00
Window	Transom	20.00	24.00	28.00	32.00	36.00	40.00	42.00
36.00	36.00	4	4	6	6	4	4	4
42.00	36.00	4	4	6	6	4	4	4
48.00	36.00	4	4	6	6	4	4	4
54.00	36.00	4	6	6	6	4	4	4
60.00	36.00	4	6	6	6	4	4	4
66.00	36.00	4	6	6	6	4	4	4
72.00	36.00	4	6	6	4	4	4	4

WINDOW MART 5760 ALBERT PIKE ROYAL, AR 71968		
(4) 1/4" X 3/4" ALUMINUM REINFORCEMENTS COMPONENTS		
DRAWN: V.L.	DWG NO. 08-02229	REV A
SCALE NTS	DATE 10/21/13	SHEET 7 OF 7
L. ROBERTO LOMAS P.E. 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@lrlomaspe.com		

SIGNED: 10/04/2016



Luis R. Lomas P.E.
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