

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING, METAL STRUCTURE 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. WHERE SHIM OR BUCK THICKNESS IS LESS THAN 1-1/2" 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.
4. WHERE WOOD BUCK THICKNESS IS 1-1/2" OR GREATER, BUCK SHALL BE SECURELY FASTENED TO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. UNITS MAY BE ANCHORED THROUGH FRAME TO SECURED WOOD BUCK IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
5. 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.
6. BUCKS SHALL EXTEND BEYOND UNIT FRAME INTERIOR FACE SO THAT FULL FRAME SUPPORT IS PROVIDED.
7. SHIM AS NEEDED 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".
8. SHIMS SHALL BE LOCATED, APPLIED AND MADE FROM MATERIALS AND THICKNESS CAPABLE OF SUSTAINING APPLICABLE LOADS.
9. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
10. FRAME MATERIAL: EXTRUDED ALUMINUM 6063-T5.
11. UNITS MUST BE GLAZED PER ASTM E1300, SEE SHEET 2 FOR GLASS DETAILS.
12. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS UP TO WIND ZONE 3.

13. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
14. FOR ANCHORING INTO MASONRY/CONCRETE USE 3/16" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
15. 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.
16. ALL FASTENERS TO BE CORROSION RESISTANT.
17. 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:
 - 17.A. WOOD: MINIMUM SPECIFIC GRAVITY OF G=0.42
 - 17.B. CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
 - 17.C. MASONRY: HOLLOW/FILLED BLOCK PER ASTM C90 WITH Fm=2,000PSI MINIMUM.
 - 17.D. METAL STRUCTURE: STEEL 18GA (.048") FY=33KSI/FU=52KSI OR ALUMINUM 6063-T5 FU=30KSI 1/8" THICK MINIMUM
18. GEOMETRIC SHAPES ARE ALSO APPROVED. APPROVED GEOMETRIC SHAPES DIMENSIONS SHALL NOT EXCEED INSCRIBED DIMENSIONS OF APPROVED RECTANGULAR ASSEMBLY SHOWN IN SHEET 2.

SIGNED: 01/21/2025

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GV FACADES, LLC

2135 STATE HWY 6 SOUTH

HOUSTON, TX 77077

XT90 FIXED WINDOW

IMPACT

NOTES

DRAWN:
R.L.

DWG NO.
08-04075

REV
-

SCALE NTS

DATE 12/16/24

SHEET 1 OF 8

L. ROBERTO LOMAS P.E.

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LUIS R. LOMAS

LICENSE

No. 62514

STATE OF

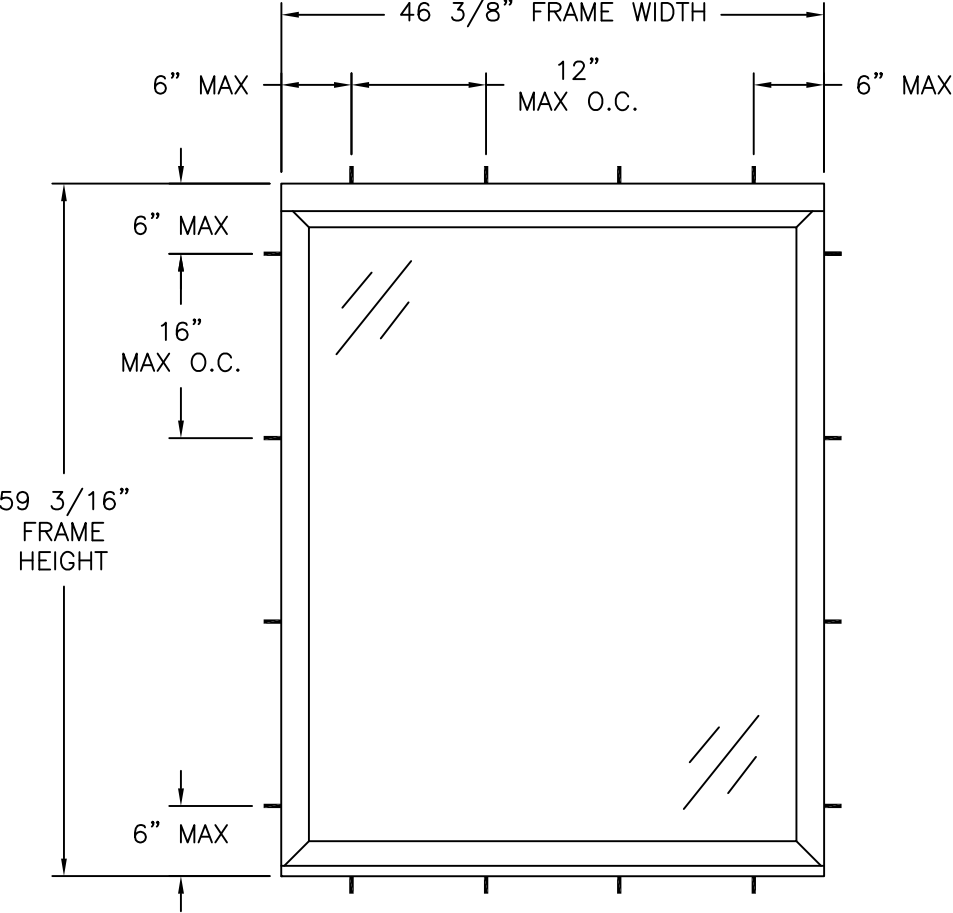
FLORIDA

PROFESSIONAL ENGINEER

Luis R. Lomas P.E.

FL No.: 62514

REVISIONS			
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XT90 FIXED WINDOW

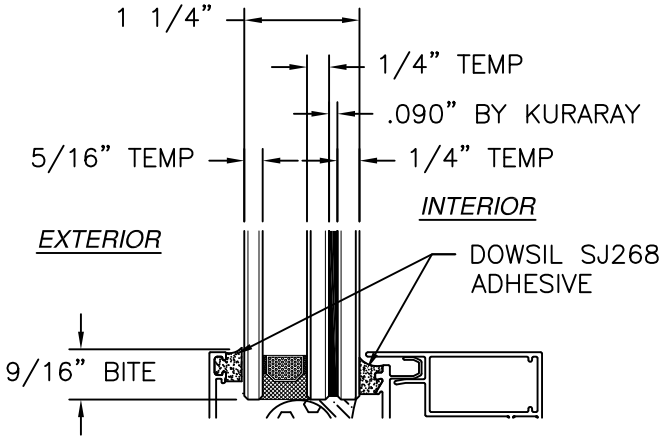
DESIGN PRESSURE RATING	IMPACT RATING
±60.0PSF	LARGE & SMALL MISSILE IMPACT

MISSILE LEVEL D, WIND ZONE 3
FOR ADDITIONAL SIZES SEE CHART THIS SHEET

Chart #1
Single unit rating (psf)

Frame Height (in)	Frame width (in)						
	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
48.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
54.00	60.0	60.0	60.0	60.0	60.0	60.0	55.1
60.00	60.0	60.0	60.0	60.0	60.0	55.1	49.6
66.00	60.0	60.0	60.0	60.0	56.3	50.1	45.1
72.00	60.0	60.0	60.0	59.0	51.6	45.9	41.3
78.00	60.0	60.0	60.0	54.5	47.7	42.4	38.1
84.00	60.0	60.0	59.0	50.6	44.2	39.3	35.4

RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3



GLAZING DETAIL

SIGNED: 01/21/2025

GV FACADES, LLC
2135 STATE HWY 6 SOUTH
HOUSTON, TX 77077

XT90 FIXED WINDOW
IMPACT
ELEVATIONS

DRAWN:
R.L.

DWG NO.
08-04075

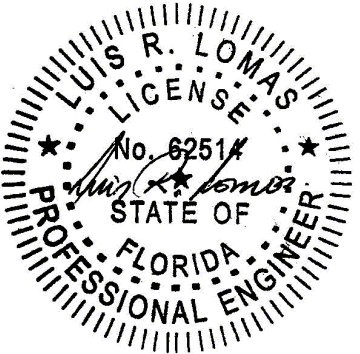
REV
-

SCALE
NTS

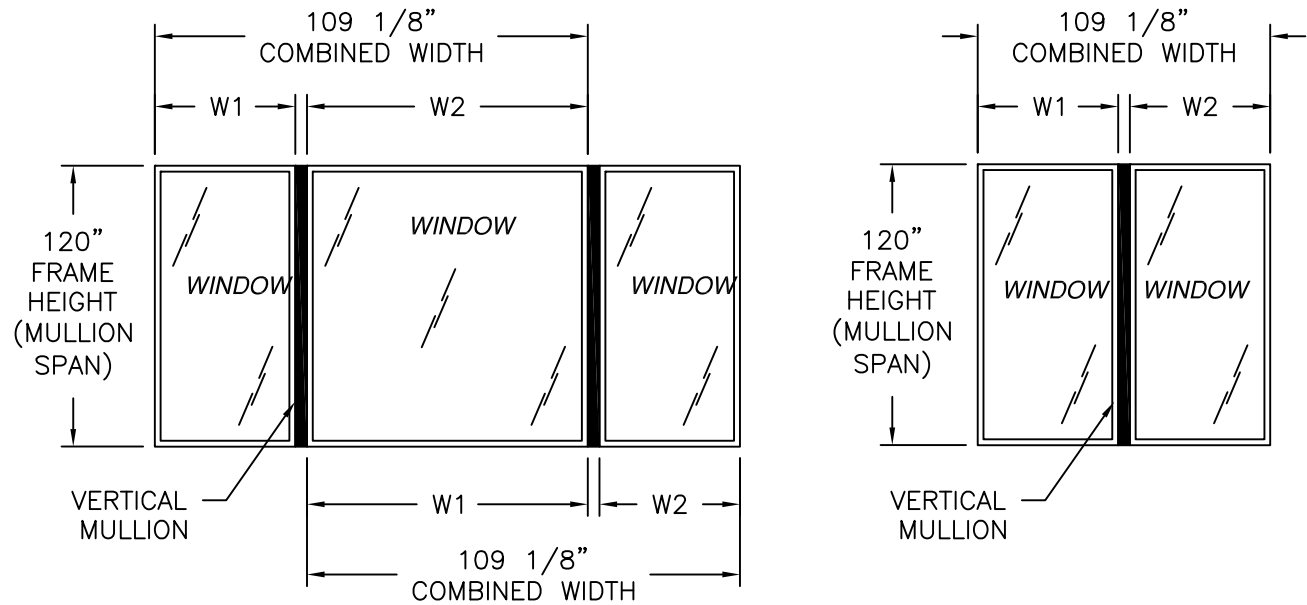
DATE
12/16/24

SHEET
2 OF 8

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Luis R. Lomas P.E.
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APPROVED CONFIGURATIONS
UNITS MAY BE MULLED INDEFINITELY

Chart #2
Mulled unit rating (psf)

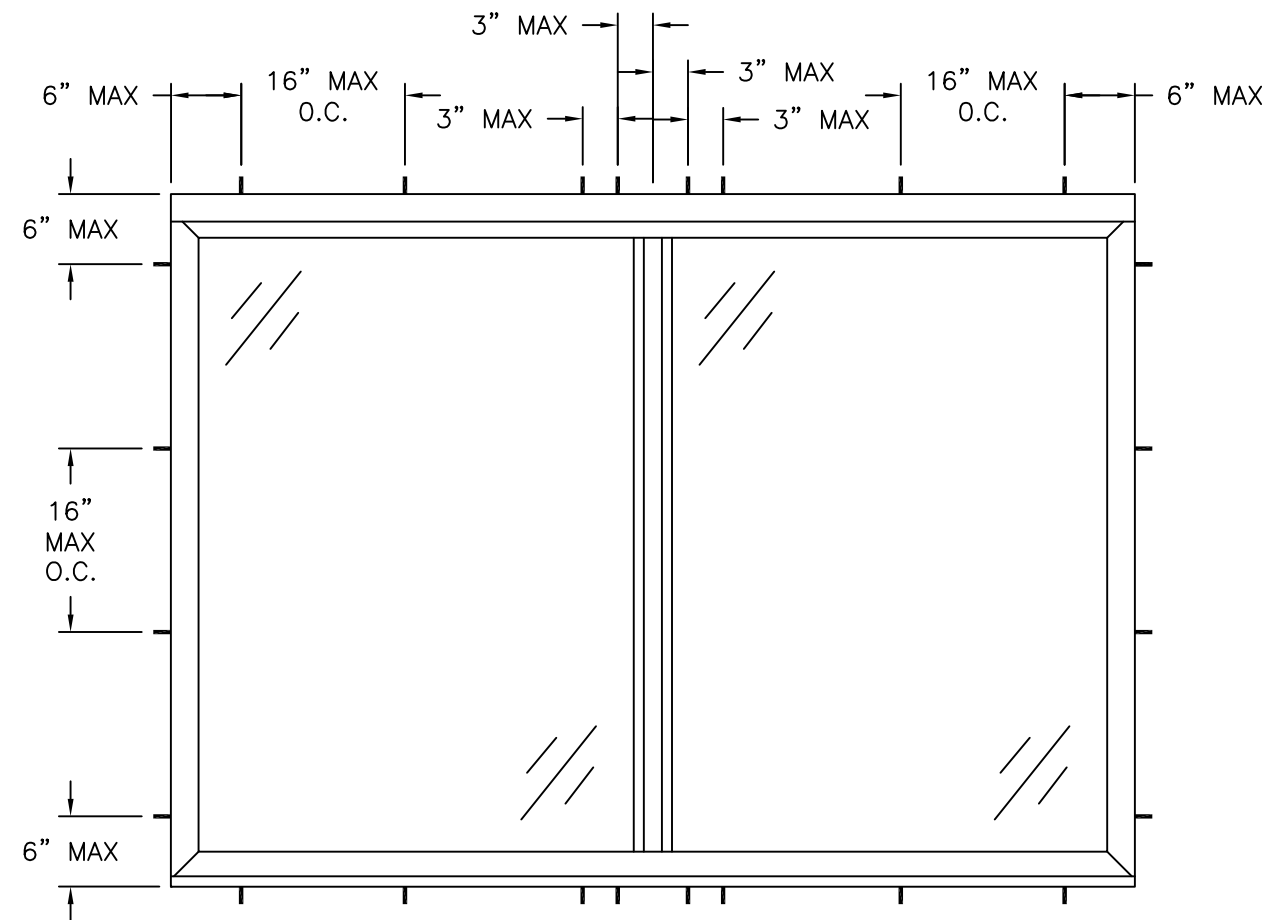
Mullion span (in)	Tributary width (in)						
	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
48.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
54.00	60.0	60.0	60.0	60.0	60.0	60.0	55.1
60.00	60.0	60.0	60.0	60.0	60.0	55.1	49.6
66.00	60.0	60.0	60.0	60.0	56.3	50.1	45.1
72.00	60.0	60.0	60.0	59.0	51.6	45.9	41.3
78.00	60.0	60.0	60.0	54.5	47.7	42.4	38.1
84.00	60.0	60.0	59.0	50.6	44.2	39.3	35.4

RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3

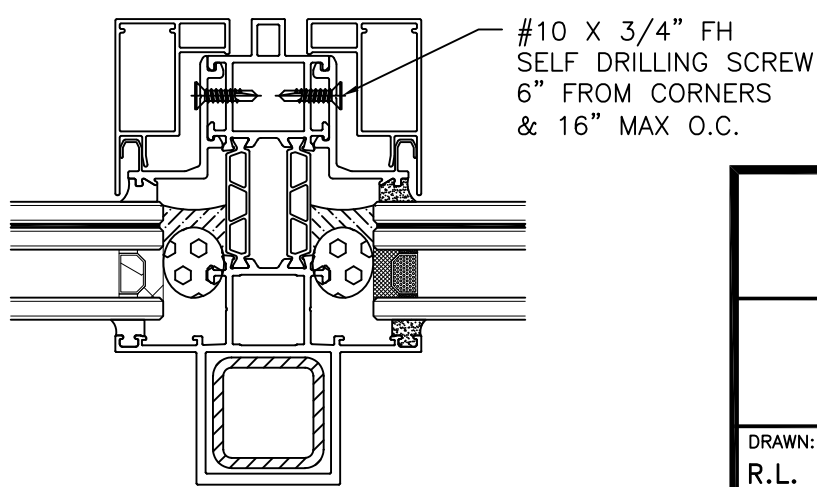
DESIGN PRESSURE TABLE INSTRUCTIONS:

1. DEFINE REQUIRED DESIGN LOAD PER FLORIDA BUILDING CODE CHAPTER 16.
2. DETERMINE TRIBUTARY WIDTH AND MULLION SPAN BASED ON PRODUCT TO BE INSTALLED. SEE FORMULA FOR TRIBUTARY WIDTH.
3. LOCATE MULLION SPAN (UNIT HEIGHT) AND TRIBUTARY WIDTH. AT THE INTERSECTION OF ROW AND COLUMN CONTAINING THE MULLION SPAN AND TRIBUTARY WIDTH RESPECTIVELY IS THE MULLION RATING FOR PRODUCT IN STEP 2. MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.

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



ANCHORING SCHEME FOR MULLED UNITS



VERTICAL MULLION CROSS SECTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

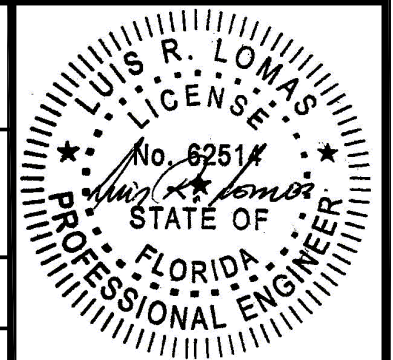
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GV FACADES, LLC
2135 STATE HWY 6 SOUTH
HOUSTON, TX 77077

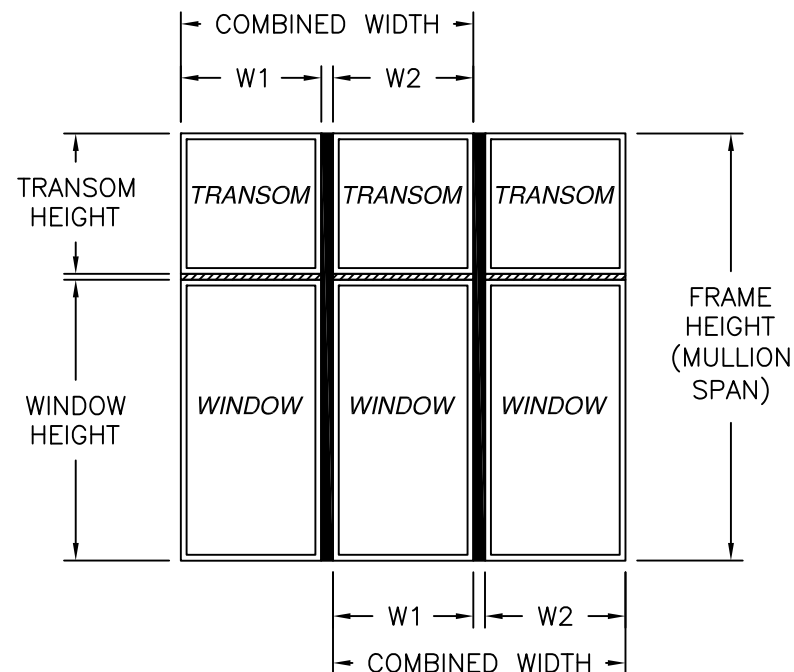
XT90 FIXED WINDOW
IMPACT
ELEVATIONS

DRAWN: R.L.	DWG NO. 08-04075	REV -
SCALE NTS	DATE 12/16/24	SHEET 3 OF 8

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APPROVED CONFIGURATION
UNITS MAY BE MULLED INDEFINITELY

Chart #3

X muller unit rating (psf)
With 18" transom

Height (in)		Tributary width (in)						
Window	Transom	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	18.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	18.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
48.00	18.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
54.00	18.00	60.0	60.0	60.0	60.0	60.0	60.0	55.1
60.00	18.00	60.0	60.0	60.0	60.0	59.4	54.8	49.6
66.00	18.00	60.0	60.0	60.0	55.1	49.9	45.9	42.8
72.00	18.00	60.0	60.0	53.1	46.9	42.4	39.0	36.3
78.00	18.00	60.0	53.4	45.8	40.5	36.5	33.5	31.1
84.00	18.00	56.7	46.6	39.9	35.2	31.7	29.0	26.9

RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3

DESIGN PRESSURE TABLE INSTRUCTIONS:

1. DEFINE REQUIRED DESIGN LOAD PER FLORIDA BUILDING CODE CHAPTER 16.
2. DETERMINE TRIBUTARY WIDTH AND MULLION SPAN BASED ON PRODUCT TO BE INSTALLED. SEE FORMULA FOR TRIBUTARY WIDTH.
3. LOCATE MULLION SPAN (UNIT HEIGHT) AND TRIBUTARY WIDTH. AT THE INTERSECTION OF ROW AND COLUMN CONTAINING THE MULLION SPAN AND TRIBUTARY WIDTH RESPECTIVELY IS THE MULLION RATING FOR PRODUCT IN STEP 2. MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.

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

Chart #4

X muller unit rating (psf)
With 24" transom

Height (in)		Tributary width (in)						
Window	Transom	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	24.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	24.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
48.00	24.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
54.00	24.00	60.0	60.0	60.0	60.0	60.0	55.6	51.5
60.00	24.00	60.0	60.0	60.0	56.6	51.0	46.7	43.4
66.00	24.00	60.0	60.0	54.8	48.3	43.5	39.8	36.9
72.00	24.00	60.0	55.3	47.3	41.6	37.4	34.2	31.7
78.00	24.00	58.8	48.2	41.2	36.2	32.5	29.7	27.5
84.00	24.00	51.8	42.4	36.2	31.8	28.5	26.0	24.0

RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3

Chart #5

X muller unit rating (psf)
With 30" transom

Height (in)		Tributary width (in)						
Window	Transom	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	30.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	30.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
48.00	30.00	60.0	60.0	60.0	60.0	60.0	56.1	51.6
54.00	30.00	60.0	60.0	60.0	57.8	52.0	47.4	43.7
60.00	30.00	60.0	60.0	56.2	49.4	44.4	40.5	37.4
66.00	30.00	60.0	56.8	48.5	42.6	38.2	34.9	32.2
72.00	30.00	60.0	49.6	42.3	37.1	33.3	30.3	27.9
78.00	30.00	53.3	43.6	37.2	32.6	29.2	26.6	24.5
84.00	30.00	47.2	38.6	32.9	28.8	25.8	23.4	21.6

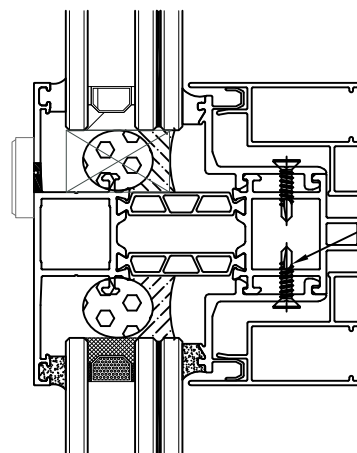
RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3

Chart #6

X muller unit rating (psf)
With 36" transom

Height (in)		Tributary width (in)						
Window	Transom	24.00	30.00	36.00	42.00	48.00	54.00	60.00
36.00	36.00	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42.00	36.00	60.0	60.0	60.0	60.0	60.0	56.3	51.5
48.00	36.00	60.0	60.0	60.0	58.7	52.7	47.9	43.9
54.00	36.00	60.0	60.0	57.1	50.2	45.1	41.0	37.7
60.00	36.00	60.0	57.9	49.5	43.4	38.9	35.4	32.6
66.00	36.00	60.0	50.6	43.2	37.9	33.9	30.8	28.3
72.00	36.00	54.5	44.6	38.0	33.3	29.8	27.0	24.9
78.00	36.00	48.4	39.5	33.6	29.5	26.3	23.9	21.9
84.00	36.00	43.2	35.3	30.0	26.2	23.4	21.2	19.5

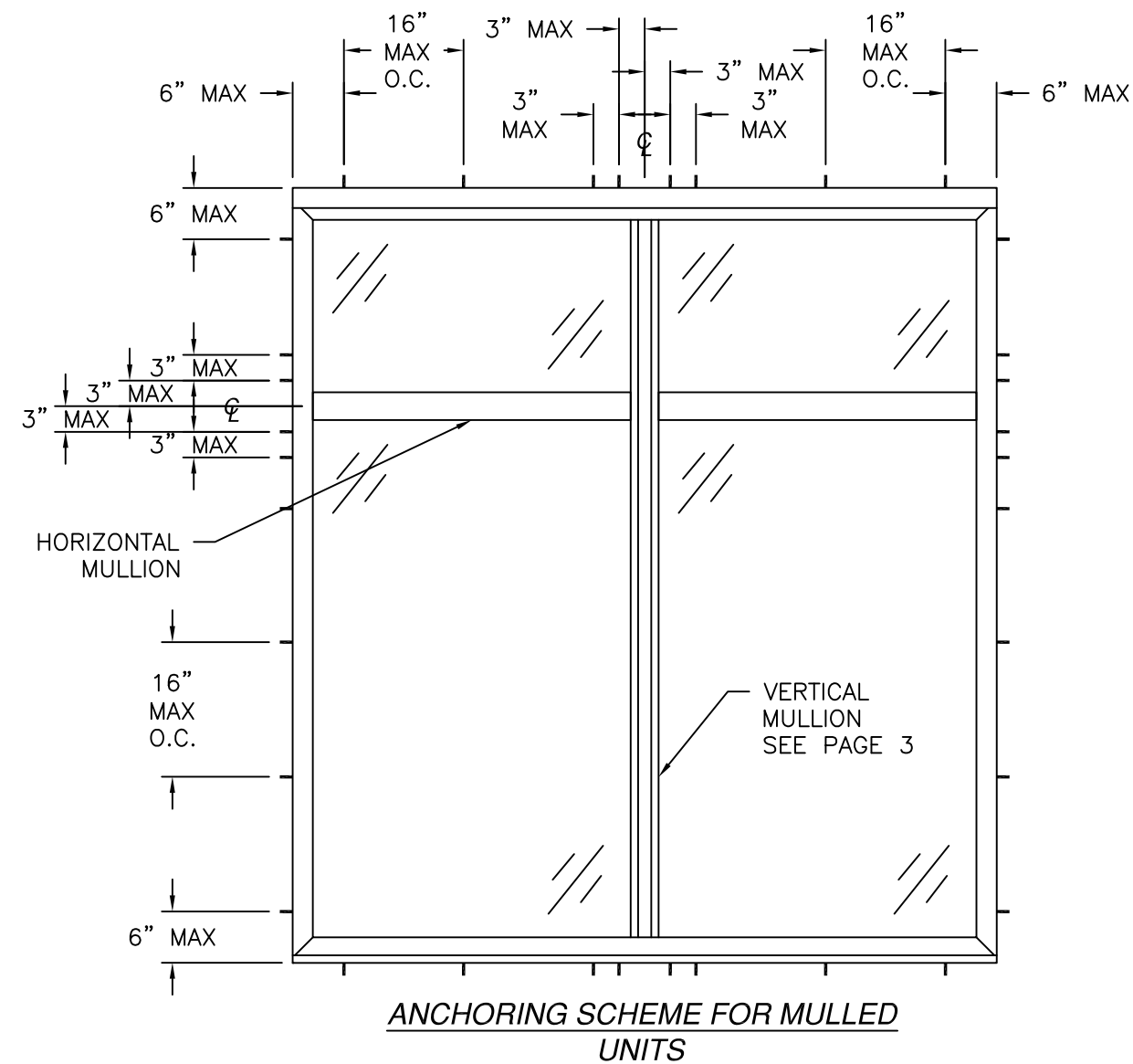
RATINGS ARE POSITIVE AND NEGATIVE
IMPACT RATED UP TO WIND ZONE 3



#10 X 3/4" FH
SELF DRILLING SCREW
6" FROM CORNERS
& 16" MAX O.C.

HORIZONTAL MULLION CROSS SECTION

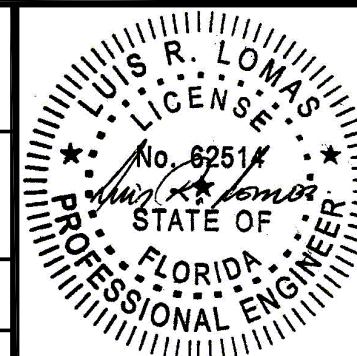
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**ANCHORING SCHEME FOR MULLED
UNITS**

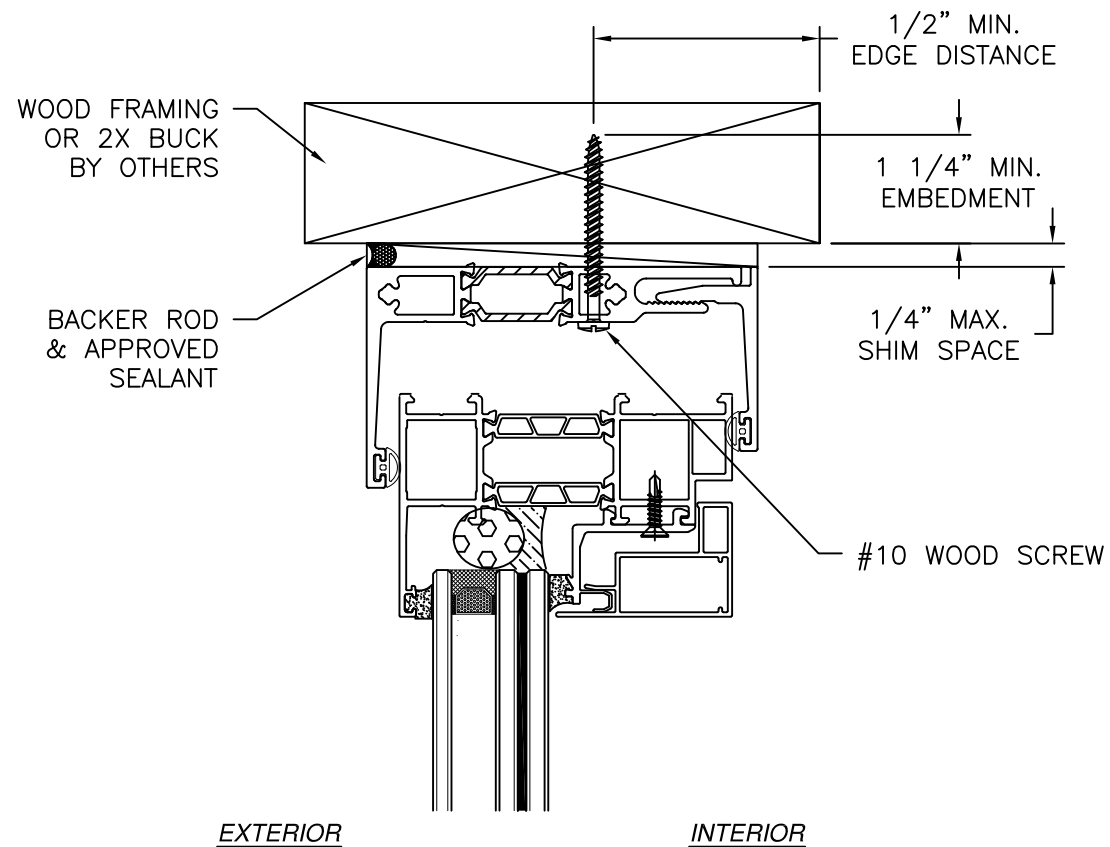
SIGNED: 01/21/2025

GV FACADES, LLC 2135 STATE HWY 6 SOUTH HOUSTON, TX 77077		
XT90 FIXED WINDOW IMPACT ELEVATIONS		
DRAWN: R.L.	DWG NO. 08-04075	REV -
SCALE NTS	DATE 12/16/24	SHEET 4 OF 8
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@rlomaspe.com		

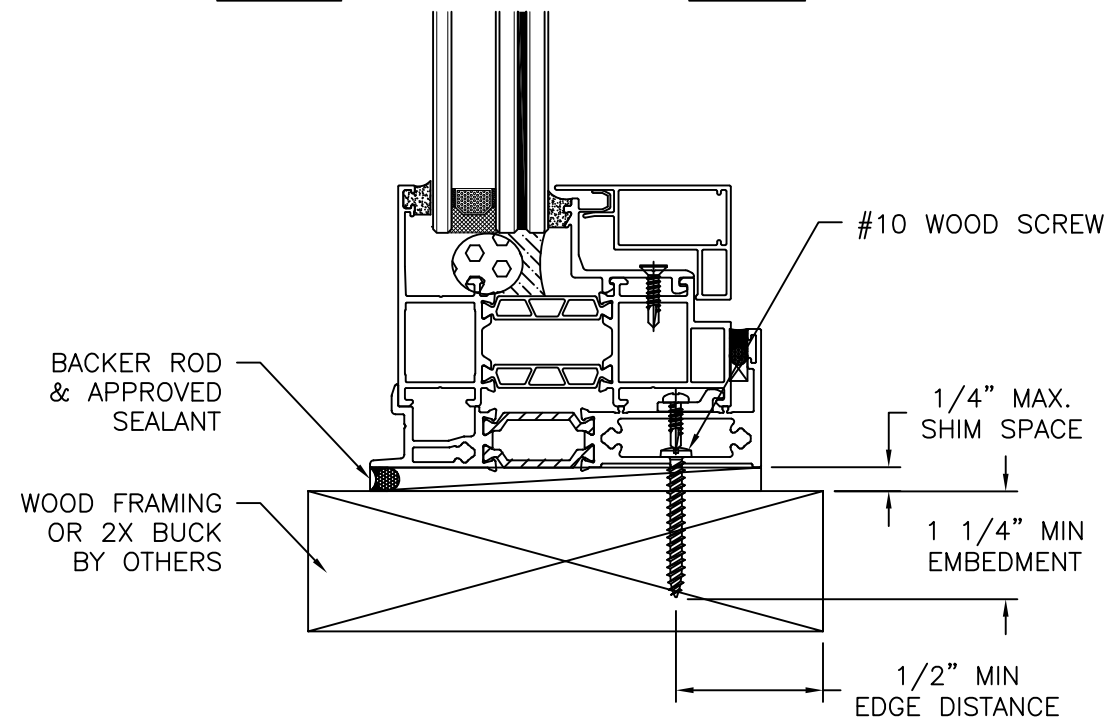


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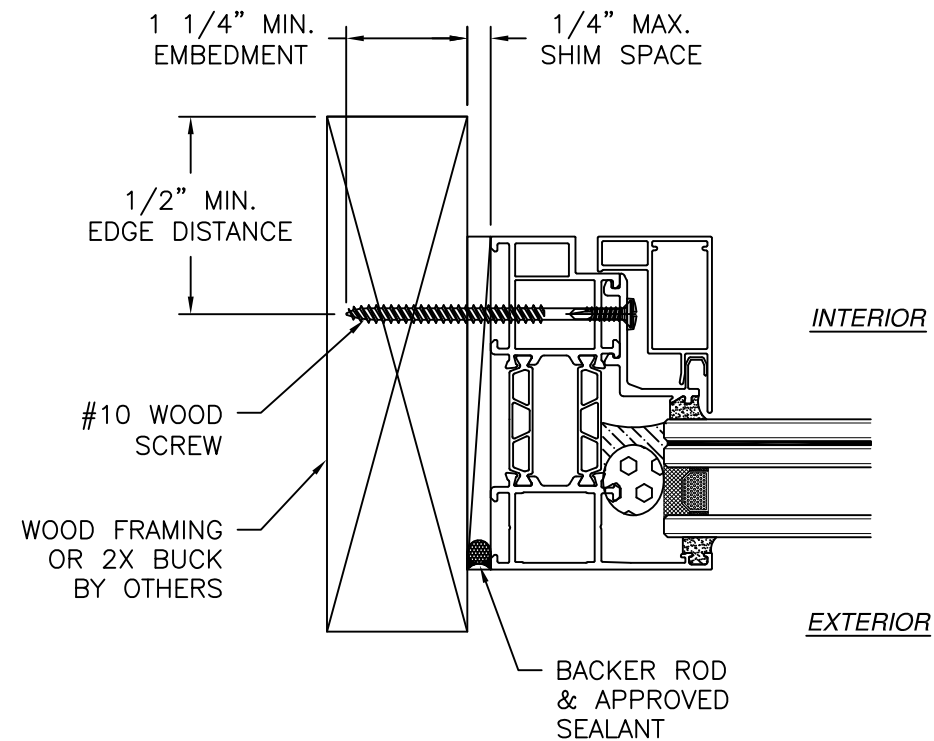
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EXTERIOR INTERIOR



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION

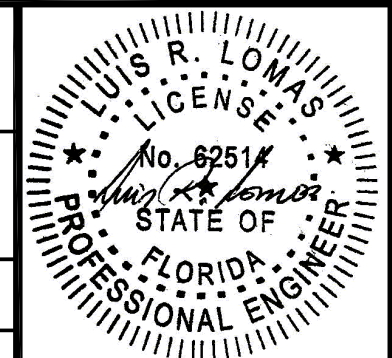


JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

- 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

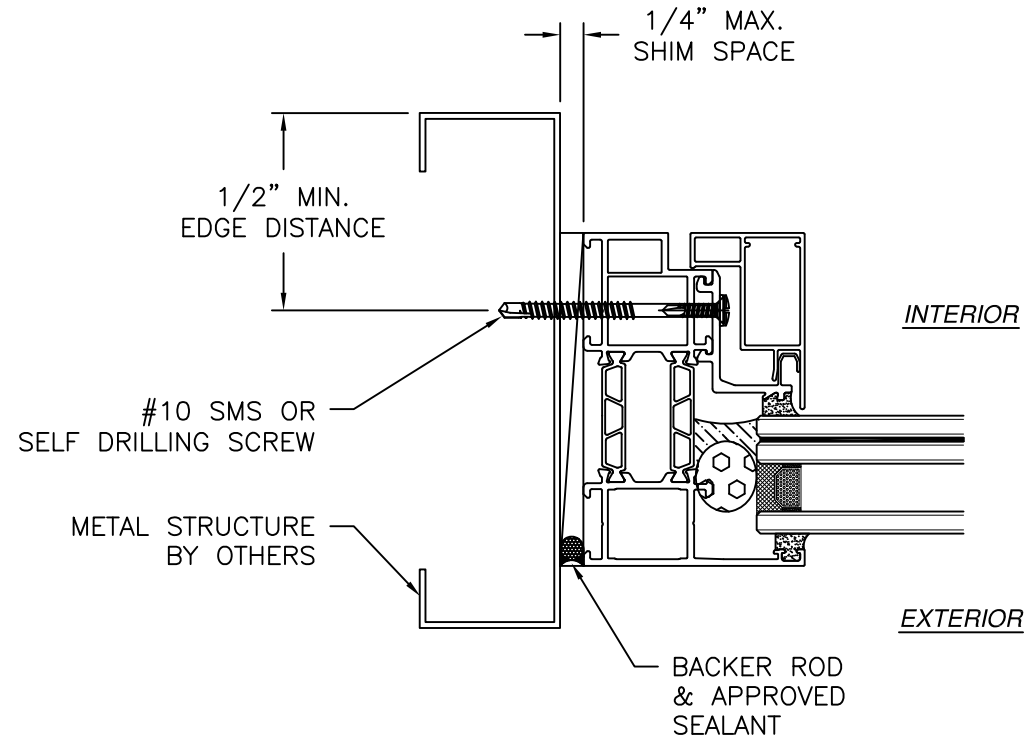
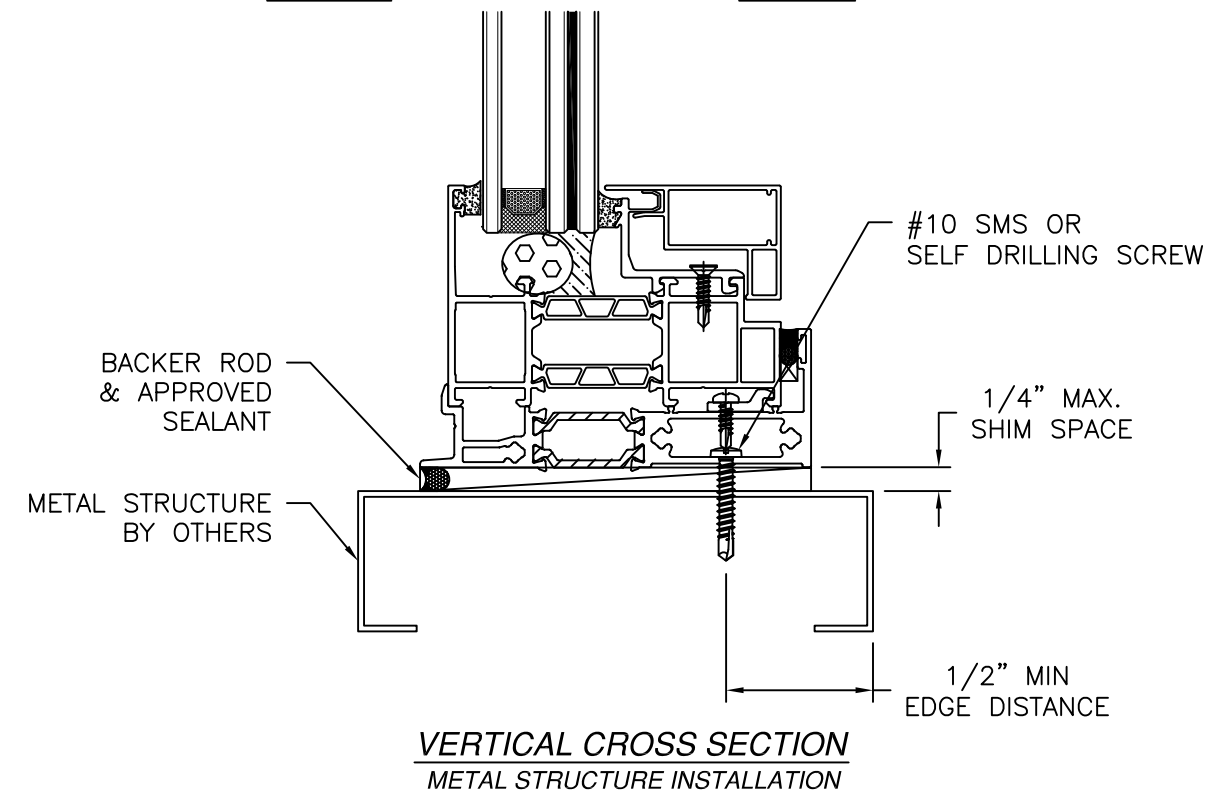
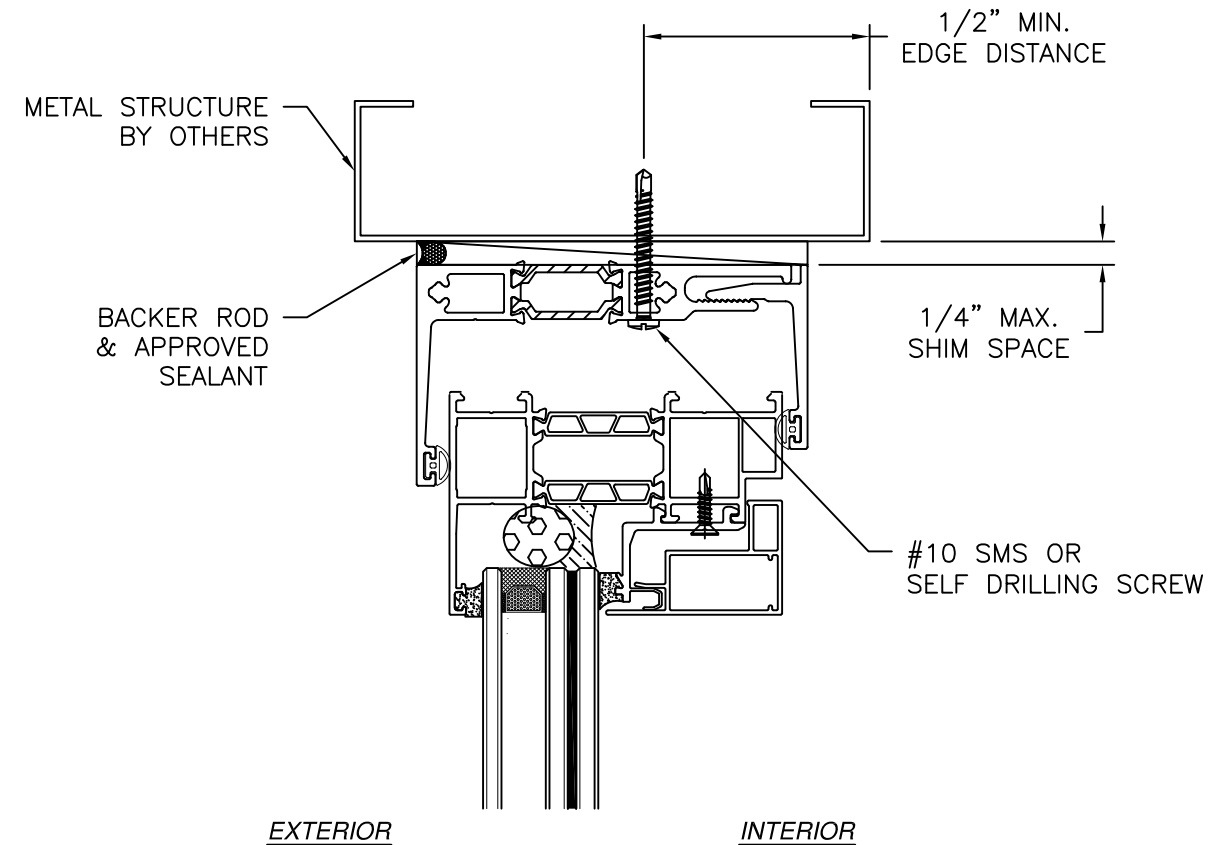
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GV FACADES, LLC 2135 STATE HWY 6 SOUTH HOUSTON, TX 77077		
XT90 FIXED WINDOW IMPACT INSTALLATION DETAILS		
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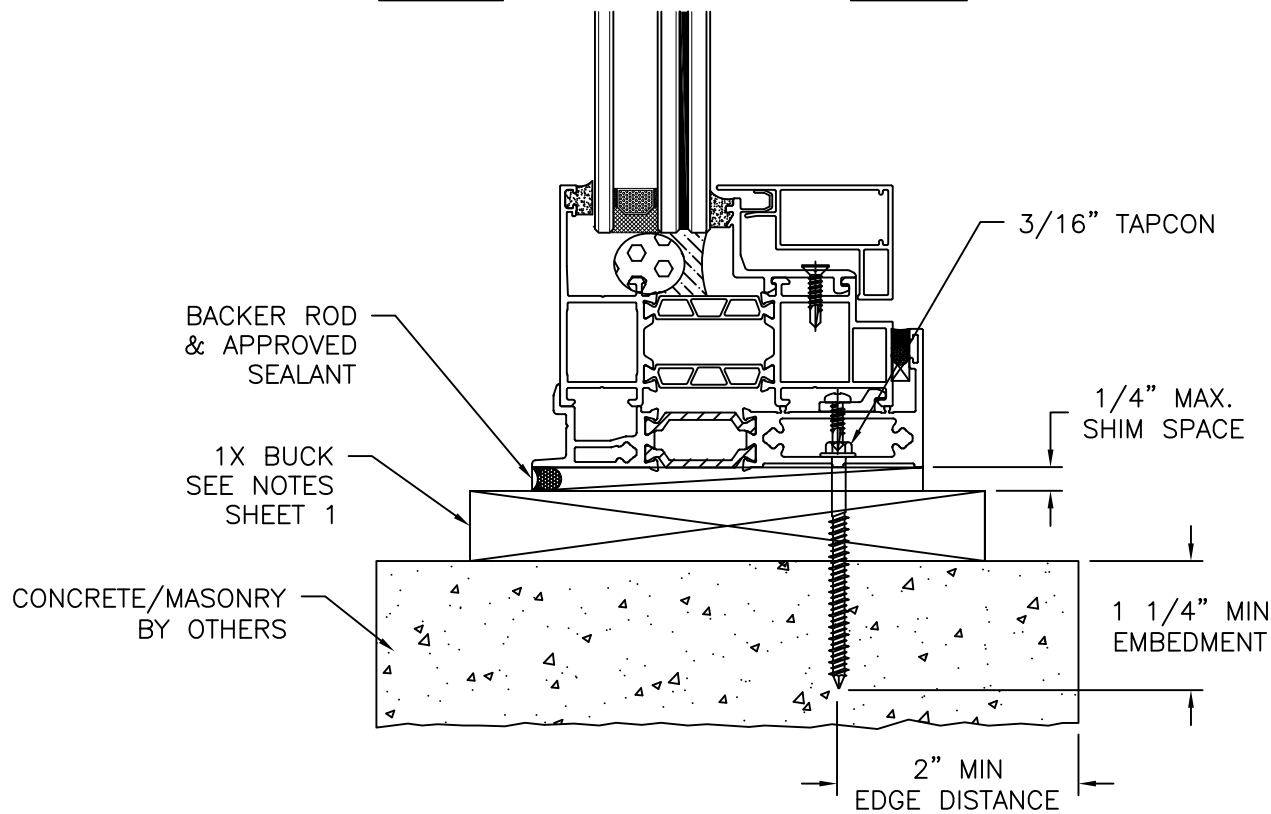
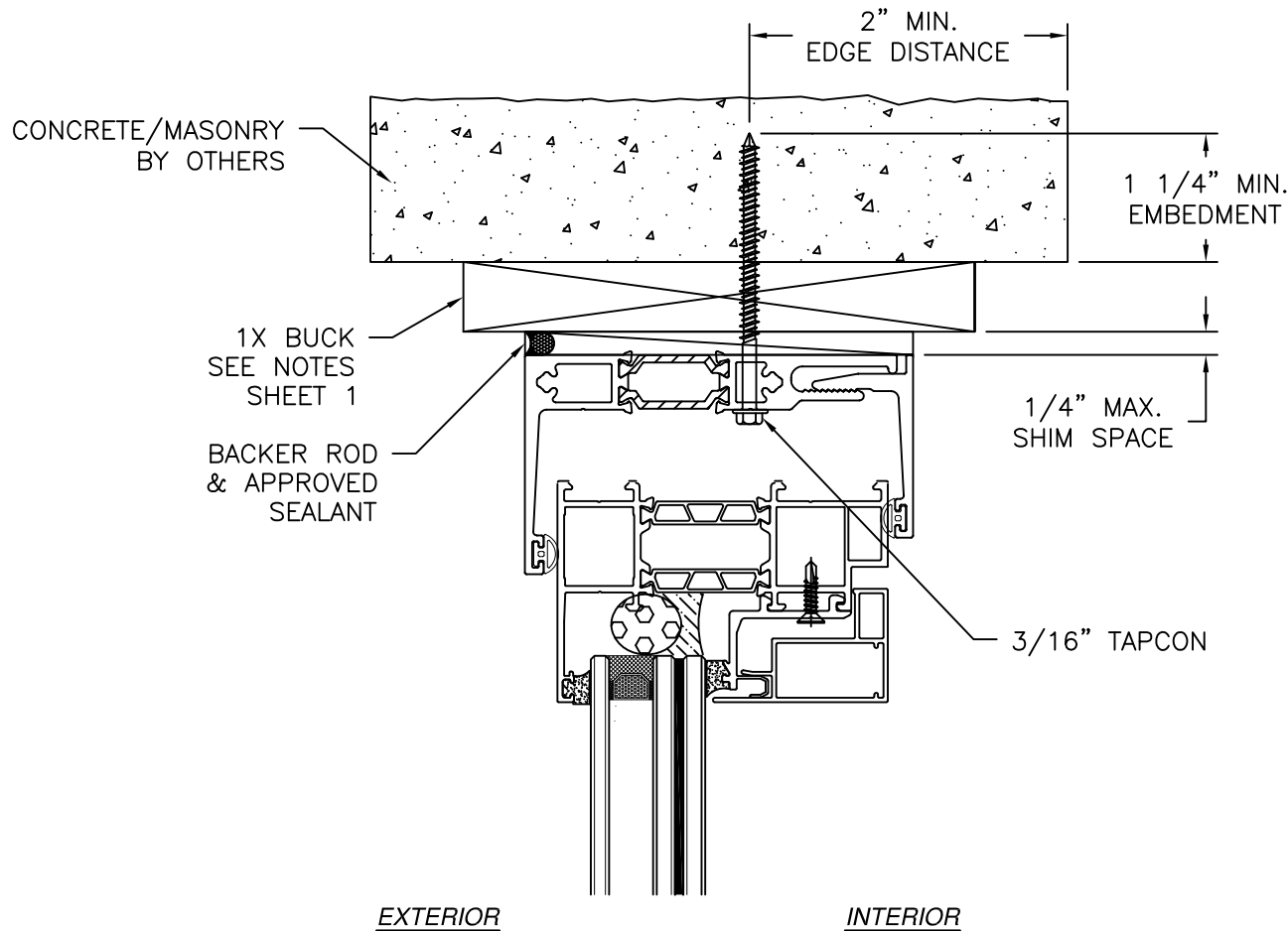
- NOTES:
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GV FACADES, LLC 2135 STATE HWY 6 SOUTH HOUSTON, TX 77077		
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L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		

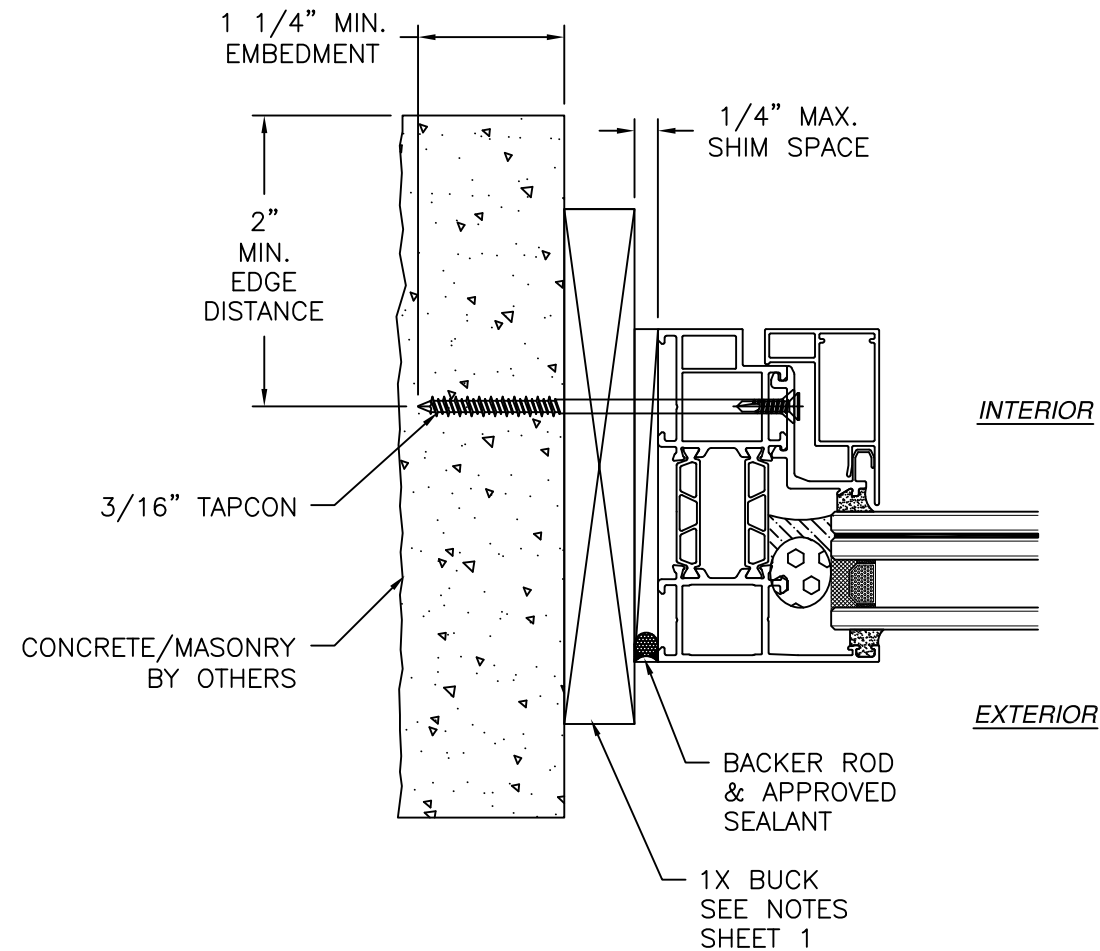
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VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION

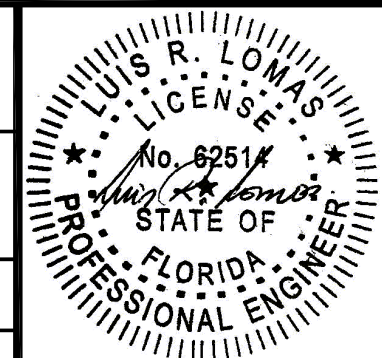


JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

- NOTES:
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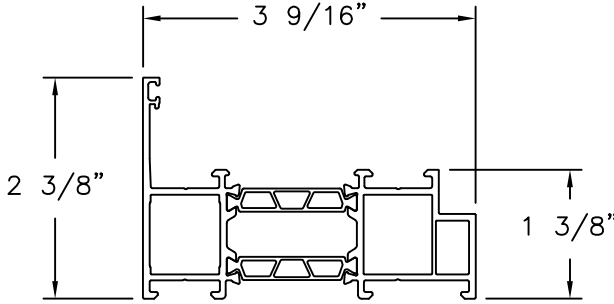
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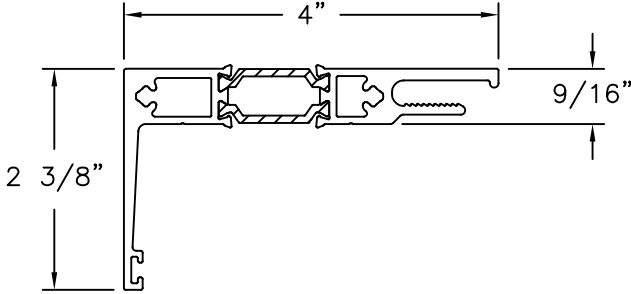


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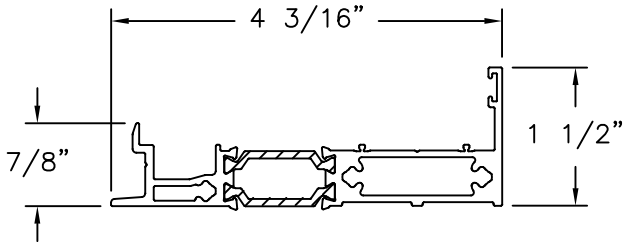
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



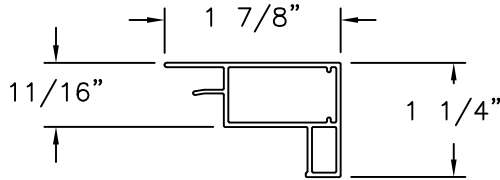
MAIN FRAME (JDS09010-11)
ALUMINUM 6063-T5



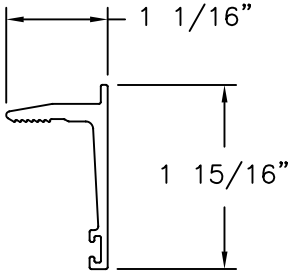
SUB HEAD (JD09013-14)
ALUMINUM 6063-T5



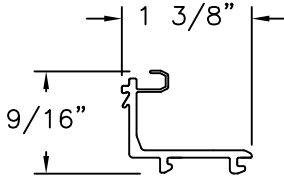
SUB SILL (JDS09001-02)
ALUMINUM 6063-T5



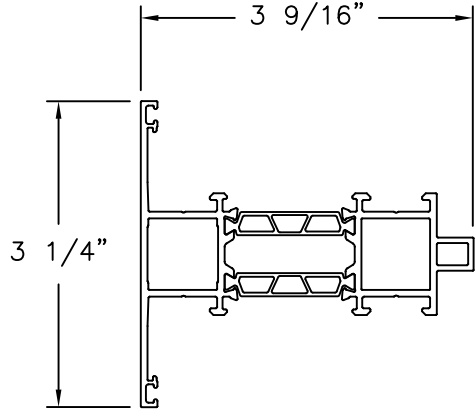
BEAD COVER (JDS09008)
ALUMINUM 6063-T5



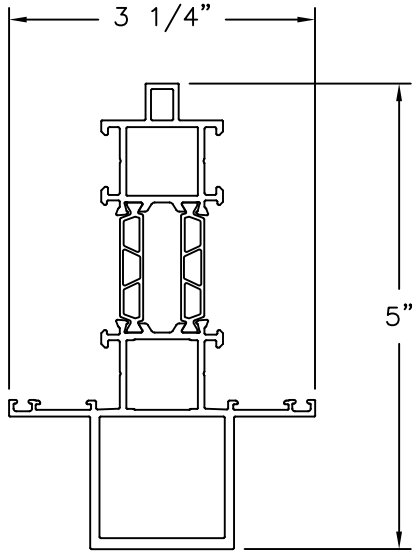
SUB HEAD COVER (JDS09012)
ALUMINUM 6063-T5



GLASS BEAD (JDS09009)
ALUMINUM 6063-T5



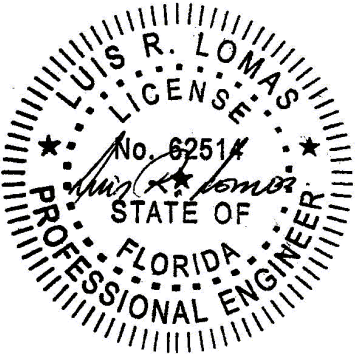
HORIZONTAL MULLION
ALUMINUM 6063-T5



VERTICAL MULLION
ALUMINUM 6063-T5

SIGNED: 01/21/2025

GV FACADES, LLC 2135 STATE HWY 6 SOUTH HOUSTON, TX 77077		
XT90 FIXED WINDOW IMPACT COMPONENTS		
DRAWN: R.L.	DWG NO. 08-04075	REV -
SCALE NTS	DATE 12/16/24	SHEET 8 OF 8
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		



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