

*L. Roberto Lomas P.E.*

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## Engineering Evaluation Report

**Report No.: 512499**

**Manufacturer:** US Aluminum Inc.  
720 Cel-River Road  
Rock Hill, SC 29730

**Product Line:** Series 450 Center Glazed Store Front

***Compliance:***

The above mentioned product has been evaluated for compliance with the requirements of the Florida Department of Community Affairs for Statewide Acceptance per Rule 9N-3.005 method 1(d). The product listed herein complies with requirements of the Florida Building Code.

***Supporting Technical Documentation:***

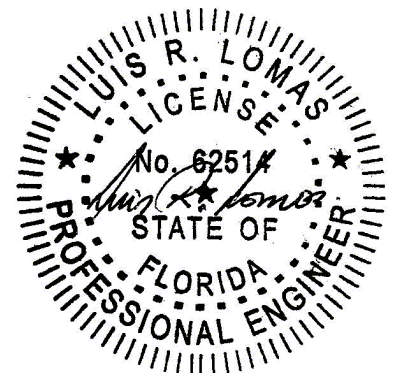
1. Approval document: drawing number 08-01813, titled Series 450 Center Glazed Store Front, prepared, signed and sealed by Luis Roberto Lomas P.E.
2. Test report No.: ATI 79428.03-801-47 signed and sealed by Joseph Reed, P.E.  
Architectural Testing Inc., Southlake, TX  
ASTM E330-02 Design pressure  $\pm 30.0$ psf  
Water penetration: 8.0psf
3. Anchor calculations, report number 512499-1, prepared, signed and sealed by Luis Roberto Lomas P.E.

***Limitations and Conditions of use:***

- Maximum design pressure:  $\pm 30.0$ psf (Refer to Installation Instruction for smaller sizes rating)
- Units must be glazed per ASTM E1300-04, see installation instructions for glass options.
- This product is not rated to be used in the HVHZ.
- This product is not impact resistant and requires impact protection in wind borne debris regions.
- Frame material to be extruded Aluminum 6063-T5.

***Installation:*** Units must be installed in accordance with approval document, 08-01813.

***Certification of Independence:*** Please note that I don't have nor will acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, I don't have nor will acquire a financial interest in any other entity involved in the approval process of the listed product(s).



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 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: EXTRUDED ALUMINUM 6063-T5
  6. UNITS MUST BE GLAZED PER ASTM E1300-04, WITH TEMPERED GLASS.
  7. APPROVED IMPACT PROTECTIVE SYSTEM IS 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 1/2".
  9. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #12 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 5/8" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
  10. FOR ANCHORING 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.
  11. FOR ANCHORING 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.
  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 18GA, 33KSI OR ALUMINUM 6063-T5 1/8" THICK MINIMUM

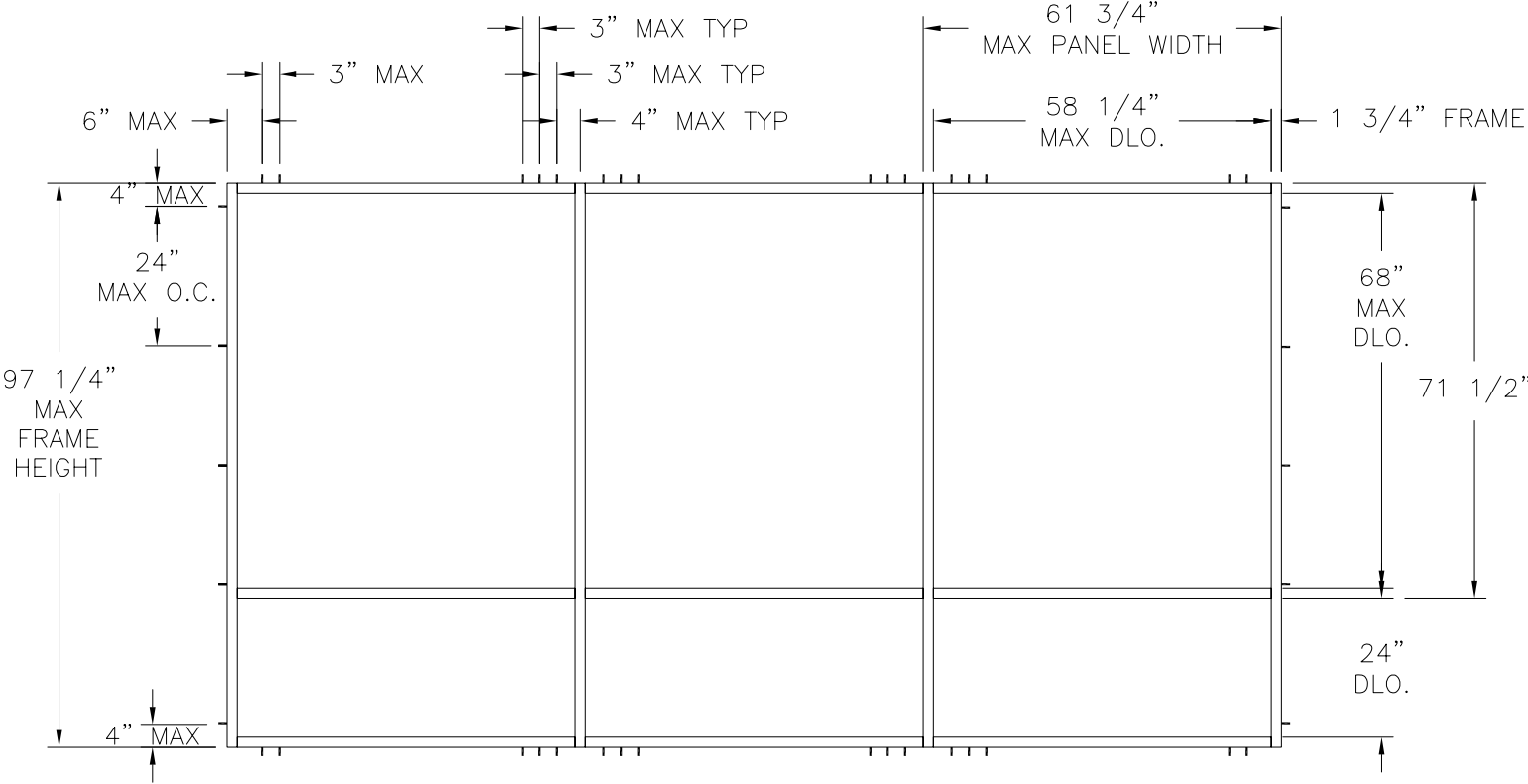
SIGNED: 10/09/2012

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US ALUMINUM INC. 720 CEL-RIVER ROAD ROCK HILL, SC 29730		
SERIES 450 CENTER GLAZE STORE FRONT NOTES		
DRAWN: AP	DWG NO. 08-01813	REV —
SCALE NTS	DATE 10/08/12	SHEET 1 OF 5



REVISIONS			
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**SERIES 450 CENTER GLAZE STORE FRONT**  
EXTERIOR VIEW  
UNLIMITED NUMBER OF PANELS IN UNLIMITED CONFIGURATION ARE APPROVED  
AS LONG AS INDIVIDUAL PANEL SIZE DOES NOT EXCEED MAXIMUM PANEL SIZE AND USES VERTICAL  
CONDITIONS AS SHOWN.

DESIGN PRESSURE RATING	IMPACT RATING
±30.0PSF	NONE

Maximum design pressure capacity chart (psf)																
Frame Height (in)	Single Panel Width (in)															
	24.00		30.00		36.00		42.00		48.00		54.00		60.00		61.75	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
24.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
30.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
36.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
42.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
48.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
54.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
60.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0
66.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	60.0	53.3	58.4	53.3	56.9	53.3	56.7
72.00	53.3	60.0	53.3	60.0	53.3	60.0	53.3	57.4	53.3	53.4	50.6	50.6	48.8	48.8	48.4	48.4
78.00	53.3	60.0	53.3	60.0	53.3	56.9	51.4	51.4	47.4	47.4	44.6	44.6	42.7	42.7	42.3	42.3
84.00	53.3	60.0	53.3	59.4	51.8	51.8	46.5	46.5	42.7	42.7	39.9	39.9	38.0	38.0	37.5	37.5
90.00	53.3	60.0	53.3	54.6	47.4	47.4	42.4	42.4	38.8	38.8	36.1	36.1	34.2	34.2	33.7	33.7
96.00	53.3	60.0	50.6	50.6	43.8	43.8	39.0	39.0	35.6	35.6	33.0	33.0	31.1	31.1	30.6	30.6
97.25	53.3	60.0	49.8	49.8	43.1	43.1	38.4	38.4	35.0	35.0	32.4	32.4	30.5	30.5	30.0	30.0

US ALUMINUM INC.  
720 CEL-RIVER ROAD  
ROCK HILL, SC 29730

SERIES 450 CENTER GLAZE  
STORE FRONT  
ELEVATION, AND CHART

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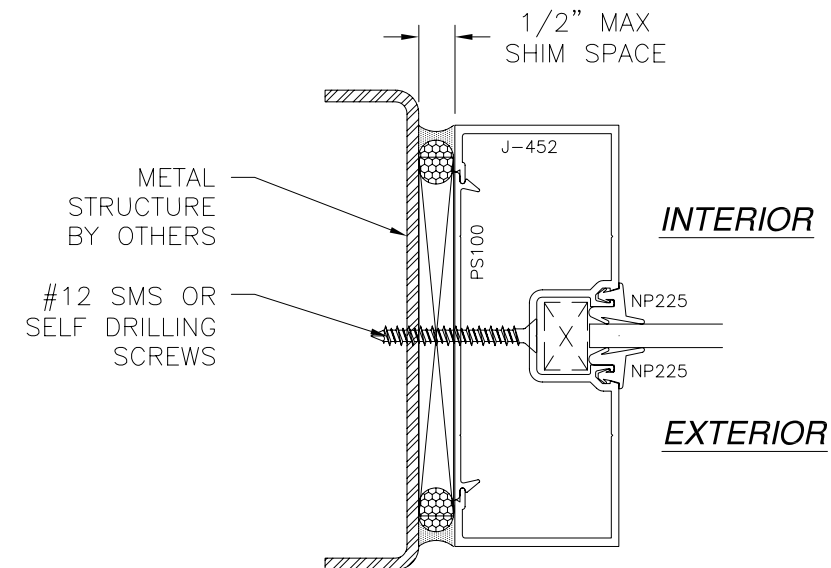
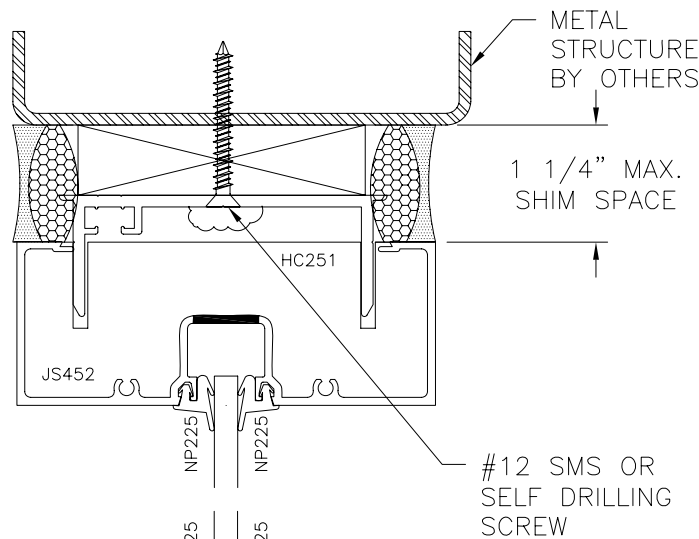
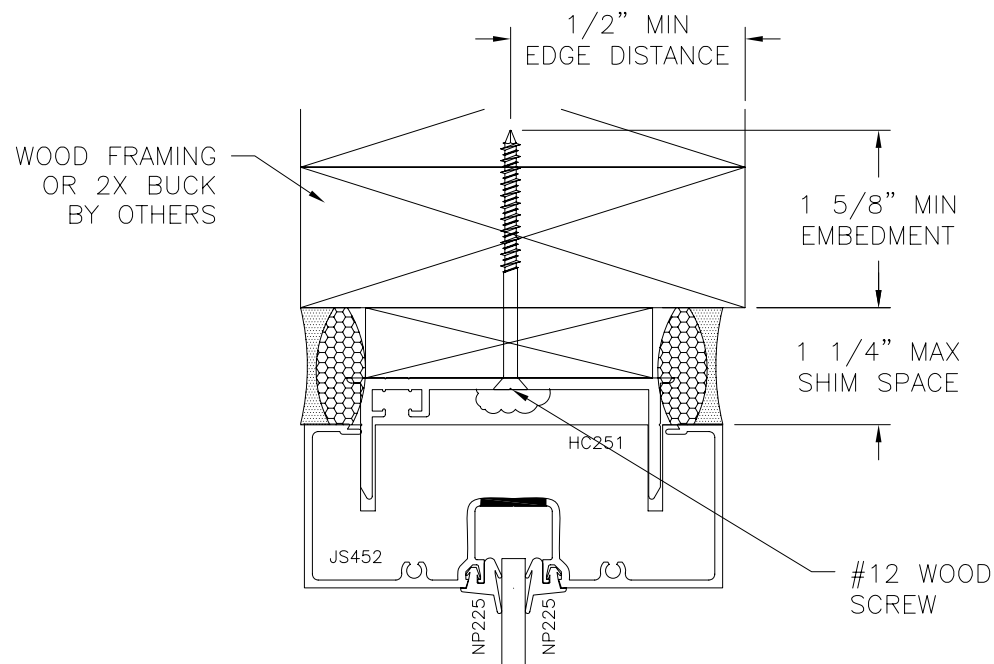
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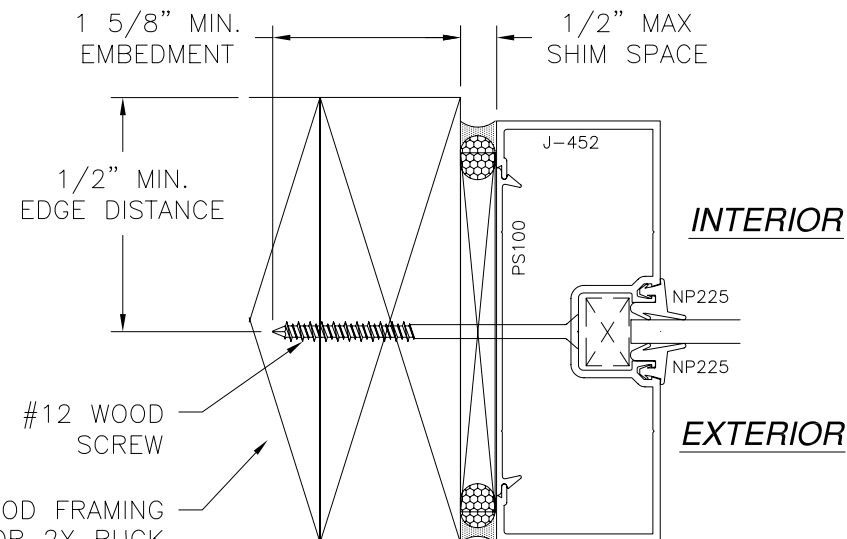
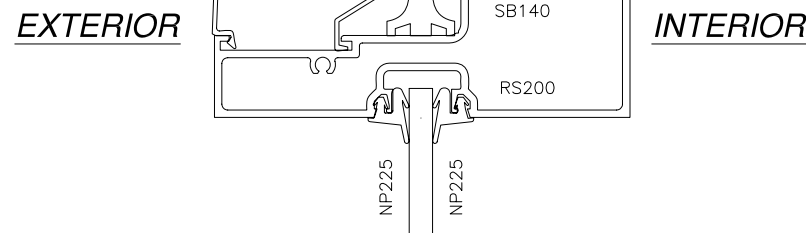
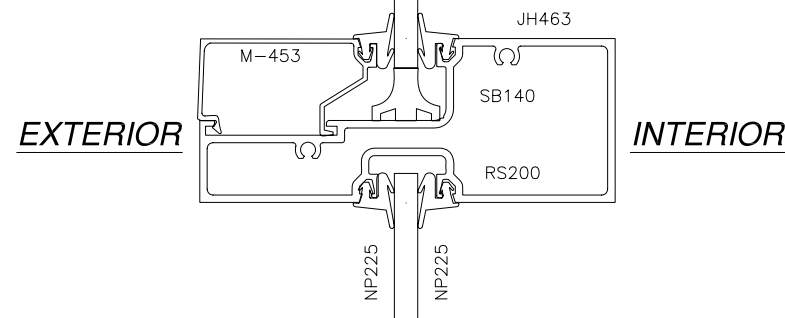
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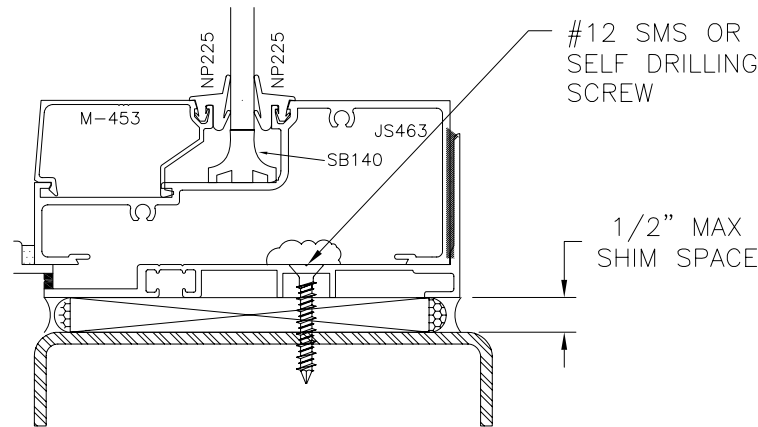
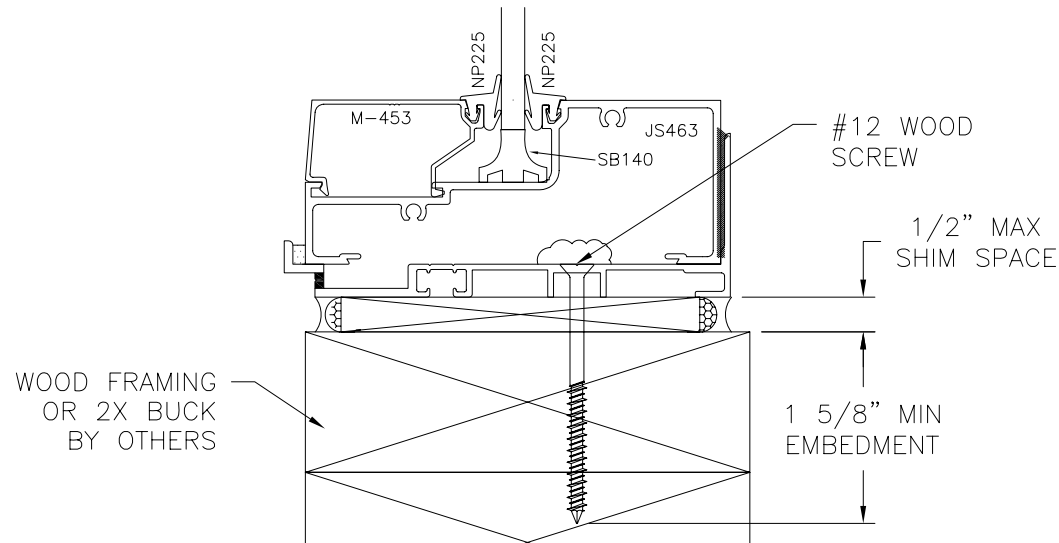
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**JAMB INSTALLATION DETAIL**  
METAL STRUCTURE INSTALLATION



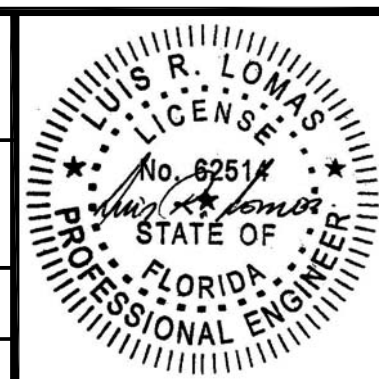
**JAMB INSTALLATION DETAIL**  
WOOD FRAMING OR 2X BUCK INSTALLATION



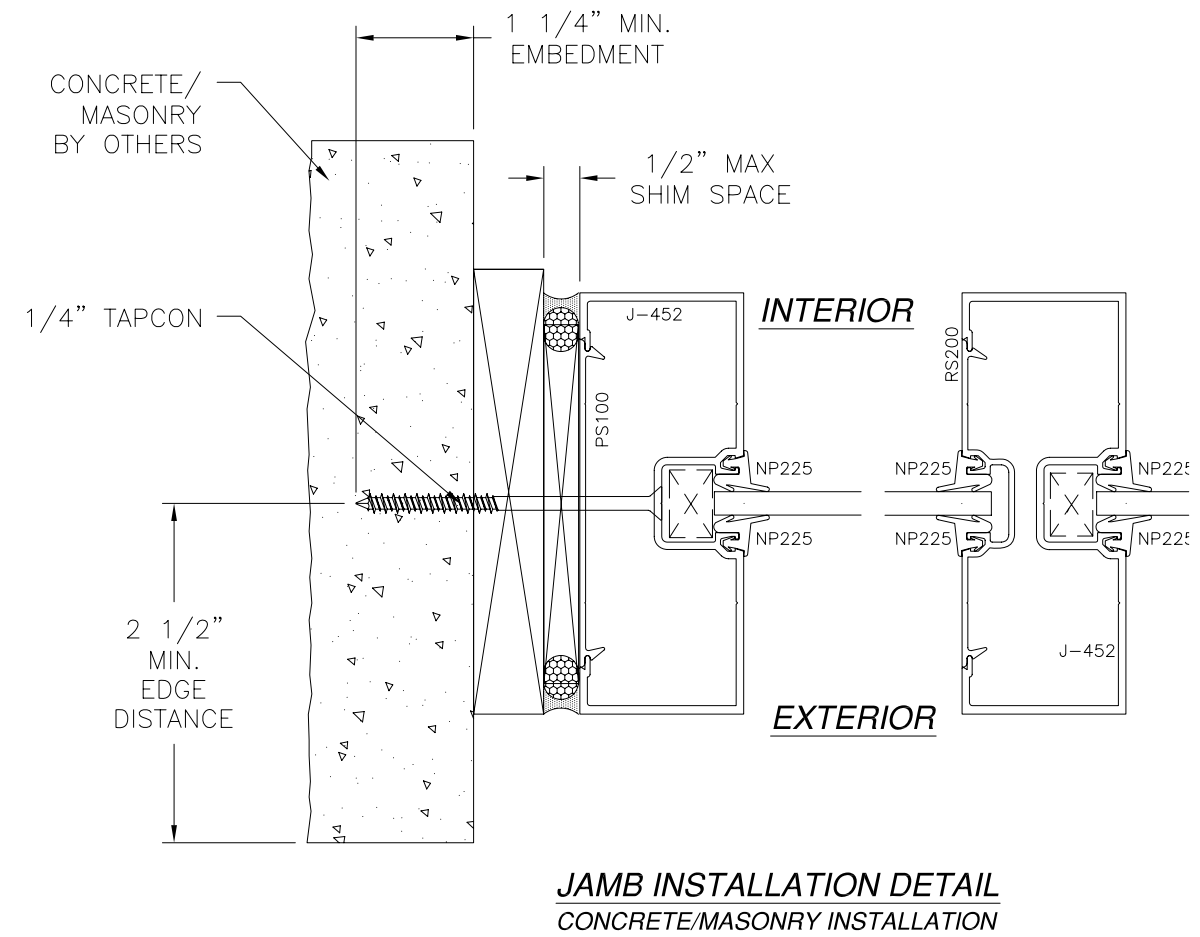
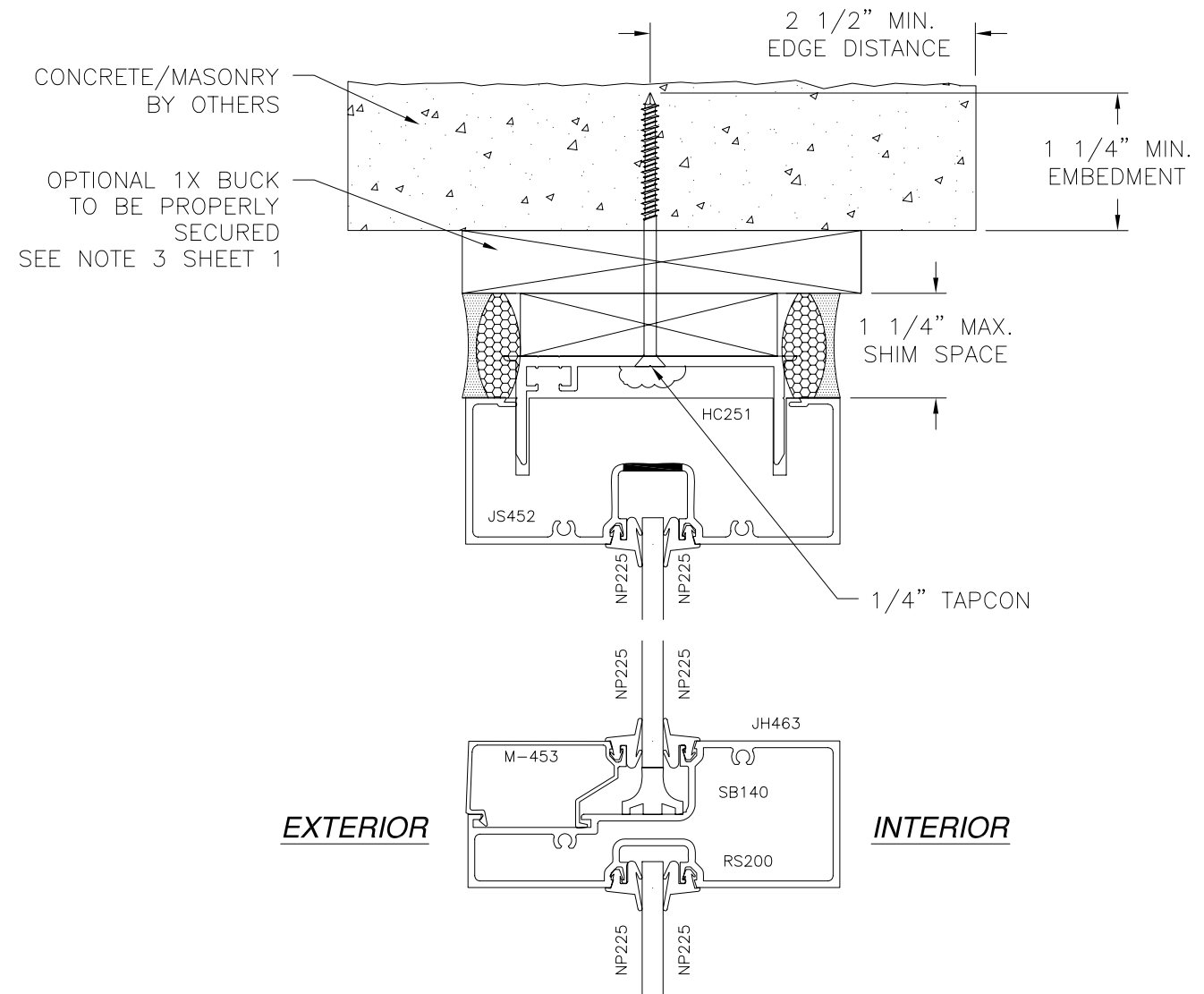
**VERTICAL CROSS SECTION**  
METAL STRUCTURE INSTALLATION

NOTE:  
INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT  
SHOWN FOR CLARITY.

US ALUMINUM INC. 720 CEL-RIVER ROAD ROCK HILL, SC 29730		
SERIES 450 CENTER GLAZE STORE FRONT INSTALLATION DETAILS		
DRAWN: AP	DWG NO. 08-01813	REV -
SCALE NTS	DATE 10/08/12	SHEET 3 OF 5



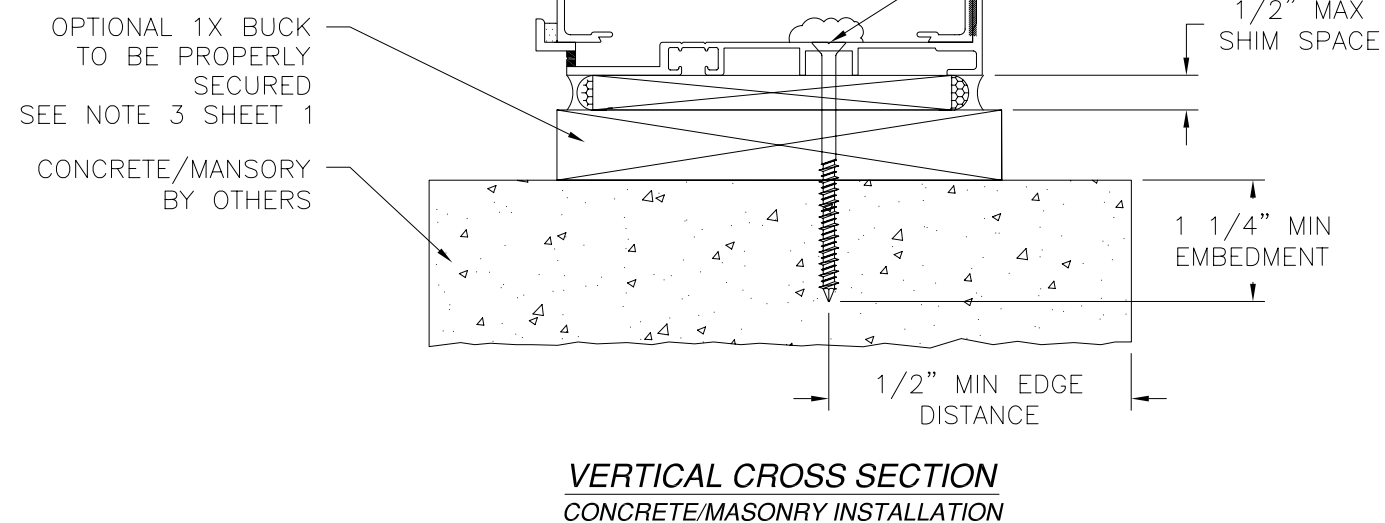
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### JAMB INSTALLATION DETAIL

#### CONCRETE/MASONRY INSTALLATION

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SERIES 450 CENTER GLAZE  
STORE FRONT  
INSTALLATION DETAILS

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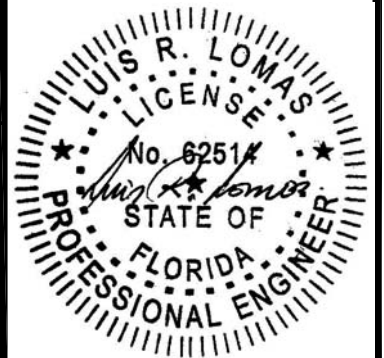
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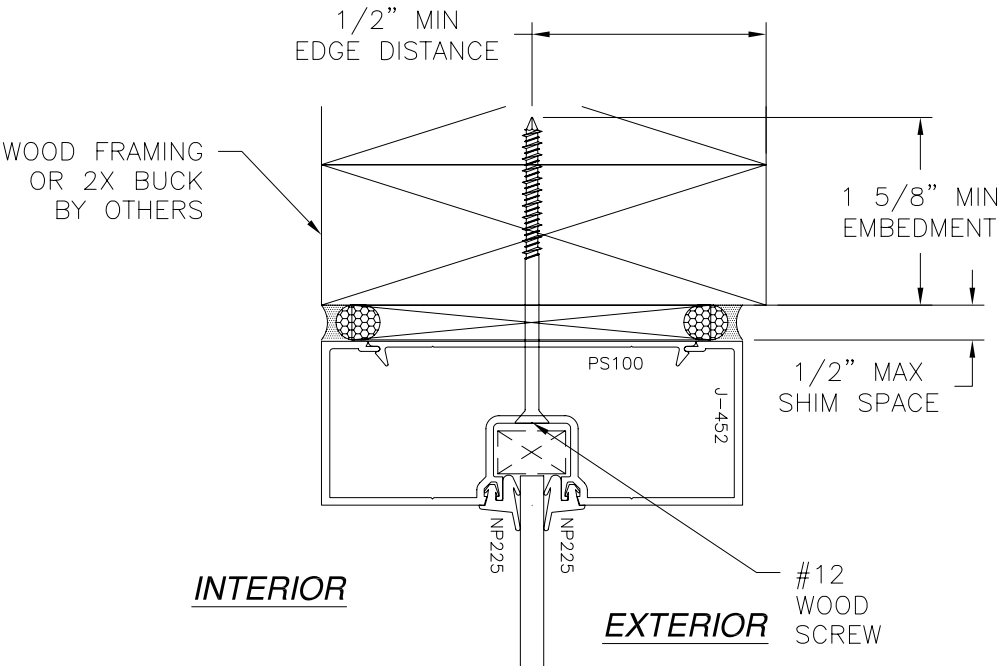
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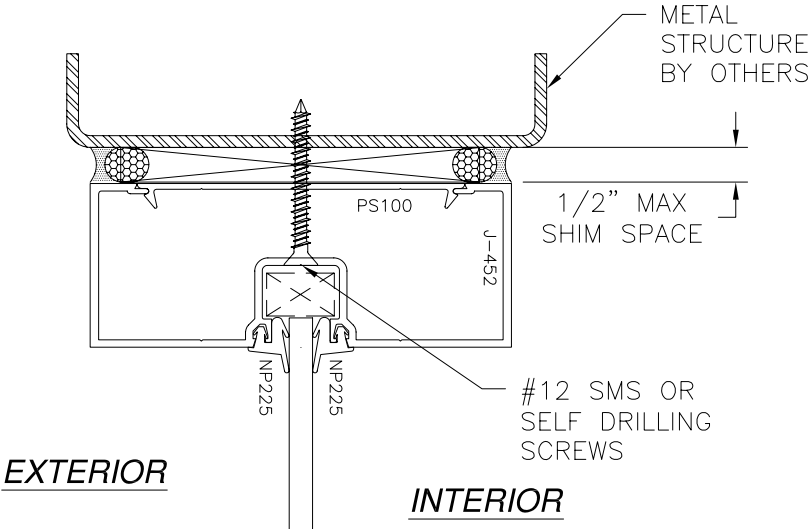
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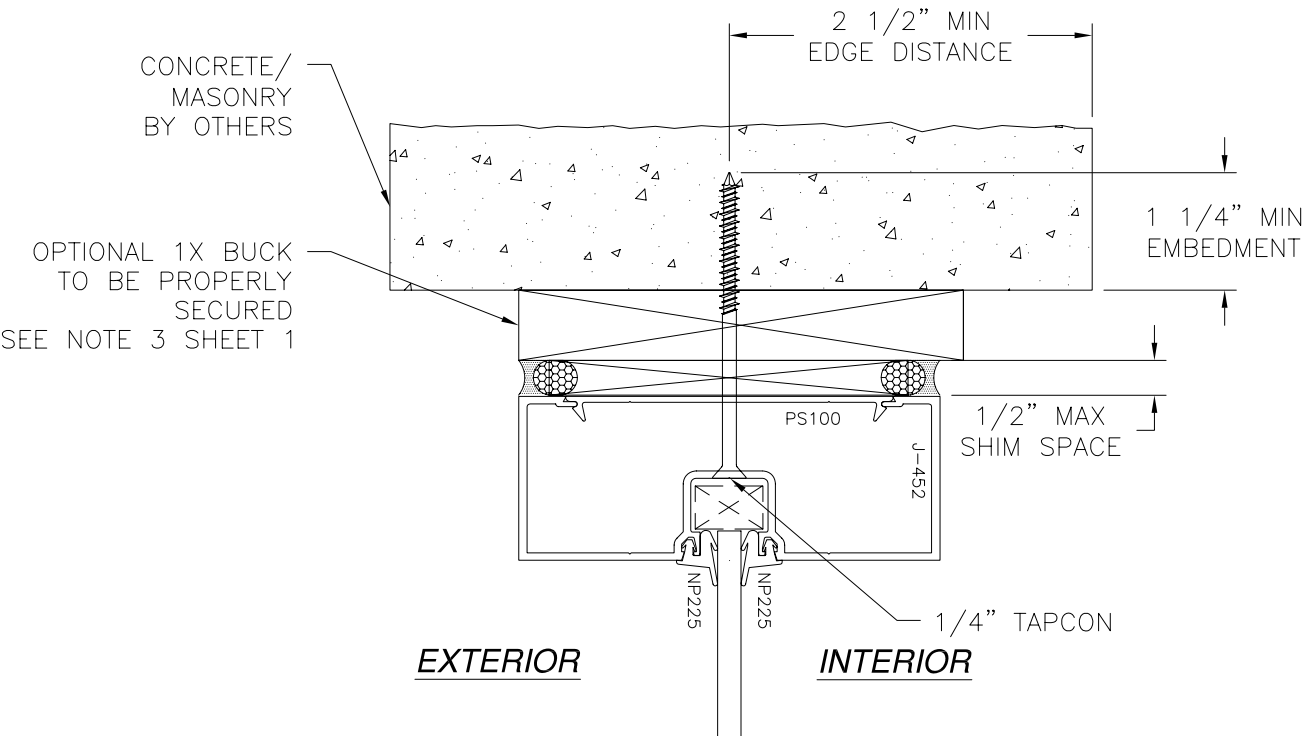
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**VERTICAL CROSS SECTION**  
WOOD FRAMING OR 2X BUCK INSTALLATION  
OPTIONAL HEAD CONFIGURATION



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