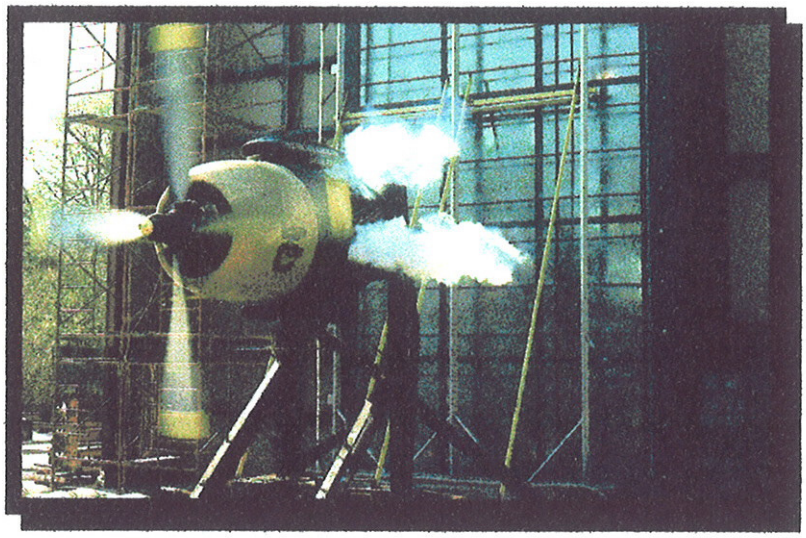
CONSTRUCTION CONSULTING LABORATORY, *INTERNATIONAL*



TEST REPORT:

AAMA 501-05 PERFORMANCE REPORT
UNITED STATES ALUMINUM
SERIES FLUSH FRONT UNIT WALL MOCK UP
REPORT CCLI #11-216

December 7, 2011

Prepared for:

UNITED STATES ALUMINUM
200 Singleton Drive
Waxahachie, TX 75165

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Carrollton, Texas 75006

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A Quality Control Company

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APPENDIX:

Refer to mock-up drawing in **Appendix A**. This report is not complete unless these drawings Are stamped and initialed by **CCLI** as illustrated below.

Detail	Detail	Date	Stamped as Illustrated
U.S. Aluminum	Bill of Materials	11/15/11	CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL 1601 Luna Road Carrollton, Texas 75006 Phone (972) 242-0556 Report# 11-216 Date 12-7-11 Reviewed BY GW
U.S. Aluminum	Page 1 of 2	11/15/11	
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AAMA 501-05 PERFORMANCE REPORT
UNITED STATES ALUMINUM
SERIES FLUSH FRONT UNIT WALL MOCK UP
REPORT CCLI #11-216

1. PROJECT DATA

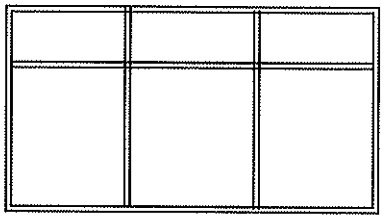
Project:	AAMA 501-05 Performance Testing United States Aluminum Series Flush Front Unit Wall Mock Up
Date of Testing:	November 30, 2011
Test Performed At:	US Aluminum testing facility in Waxahachie, TX.
Tested For:	United States Aluminum 200 Singleton Drive Waxahachie, TX 75165
Witnessed By:	(All or Partial Viewing)
Terry Hopgood	United States Aluminum
Jeffrey Crump	Construction Consulting Laboratory, *International*

2. SUMMARY

The United States Aluminum Series Flush Front Unit Wall Mock Up was tested in accordance with AAMA 501-05 and passed the requirements noted in laboratory test specifications section for Air Infiltration @ 6.24 psf, Water Penetration @ 12.00 psf, Uniform Load Deflection @ 25 psf with a positive measured deflection of .590" and a negative measured deflection of .635", with an allowable of .697". Uniform Load Structural Test was performed @ 37.5 psf positive and negative with no glass breakage or unallowable permanent deformation.

3. TEST SPECIMEN

Product Type: Aluminum Storefront, **Product Drawings, Appendix A**
Series Model: Flush Front Unit Wall Mock Up
Publication No.: AAMA 501-05
Frame Size: 15'-2" x 10'-2"
Configuration:



Weather-Stripping: None.

Hardware: None.

Glass: Sealed Insulated Glass: 2 pcs ¼" tempered glass, ½" air spacer, and 1" overall thickness.

Glazing: Interior glazed using glazing gasket (part #NP225) at interior and exterior of glass with horizontal glazing stops (part #M-573) at interior of frame horizontal members.

Weep Arrangement: 1¼" x $^{3}/_{16}$" weep slot located at frame sill flashing (FT-400), 20" from each vertical member, 24" O.C., two (2) under each lite (total of 6).

Sealant: Frame is interior and exterior perimeter sealed with backer rod and Tremco silicone. Glazing gasket ends (part #NP225) buttered with silicone. Continuous seal located at interior and exterior of frame sill (part #FT582) at sill flashing (part #FT400). Water deflectors completely sealed (at head only) and sealed at interior on horizontal mullion. End dams embedded in silicone at frame sub-sill.

Reinforcement: None.

Installation Features: Test specimen was installed in a #2 (2" x 8") yellow pine wood test buck with #12 x 3" flat head wood screws , two (2), screws spaced 3" apart were located approximately 7" from each vertical mull. Frame sub-sill attached with ¼" dia. wood screws 6" from each end and 12" on center.

Other Features: Frame members are thermally broken using polyurethane. Horizontal and vertical members attached using two (2) #10 x 1" HWH per connection at frame head and sill and four (4) per connection at frame horizontal members. Male vertical intermediate (part #FT540) and female intermediate (part #FT549) snap together to form mullion.

4. PERFORMANCE RESULTS

Title of Test	Test Method	Measured	Allowed
Air Infiltration @ 6.24 psf	ASTM E 283-04	0.01 CFM/Ft²	0.06 CFM/Ft²
Water Resistance @ 15.00 psf	ASTM E 331-00	No Leakage	No Leakage
Uniform Load Deflection @ Vertical Mullion	ASTM E 330-02		
-Positive @ 25 psf		0.590"	0.697"
-Negative @ 25 psf		0.635"	0.697"
Uniform Load Structural	ASTM E 330-02		
-Positive @ 37.5 psf		No Damage	No Damage
-Negative @ 37.5 psf		No Damage	No Damage
-Permanent Set		0.0625"	0.244"

Detailed extrusion and assembly drawings indicating measured wall thickness and corner construction are on file and were compared to the test sample submitted. These records will be retained at **CCLI** for a period of four years.

5. DISCLAIMER

The test specimen was tested in accordance with the requirements of AAMA 501-05. The results were obtained by using the designated test methods.

Respectfully submitted,

CONSTRUCTION CONSULTING LABORATORY, ***INTERNATIONAL***

WESLEY WILSON
LABORATORY MANAGER

JEFFREY CRUMP
TESTING MANAGER

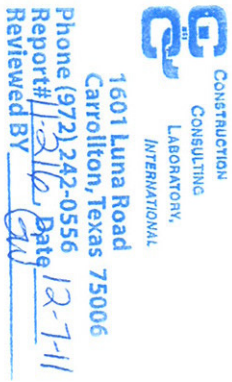
APPENDIX

APPENDIX A

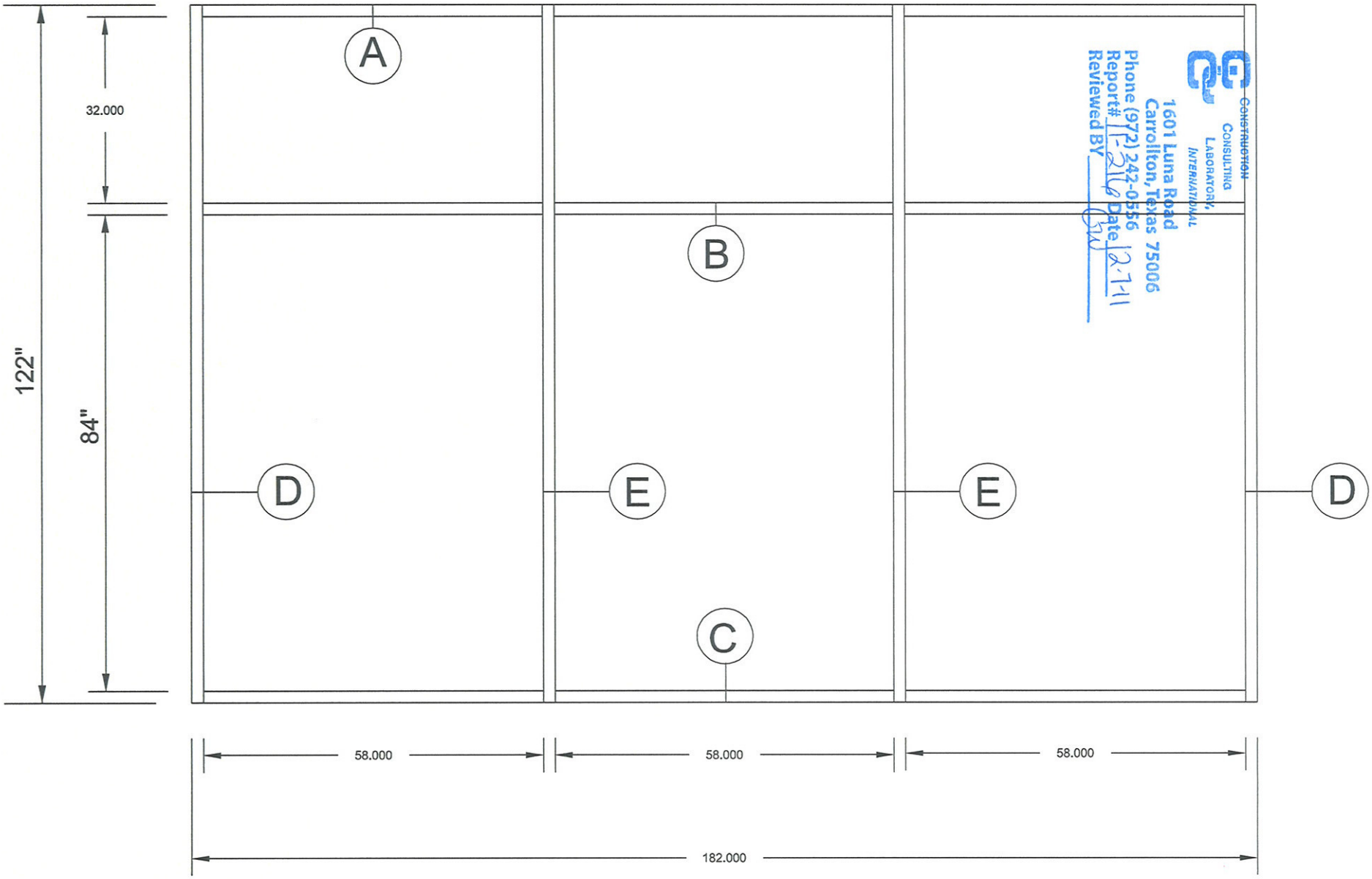
PROJECT DRAWINGS

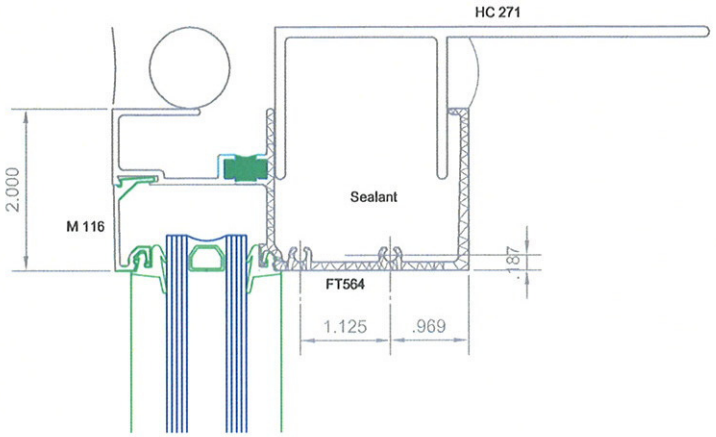
Detail	Detail	Date
U.S. Aluminum	Bill of Materials	11/15/11
U.S. Aluminum	Page 1 of 2	11/15/11
U.S. Aluminum	Page 2 of 2	11/15/11

Part #	LENGTH	Qty	Description	Vendor
FT400	183"	1	SUB SILL	U.M.E.X
FT582	58"	2	SILL	U.M.E.X
FT563	58"	2	INT. HORIZONTIAL	U.M.E.X
M-573	58"	2	GLASS STOP	U.M.E.X
M 116	58"	2	GLASS STOP	U.M.E.X
FT552	122"	2	JAMB	U.M.E.X
PT100	122"	2	JAMB FILLER	U.M.E.X
FT540	122"	2	MALE VERTICAL	U.M.E.X
FT549	122"	2	FEMALE VERTICAL	U.M.E.X
FT564	58"	2	HEAD	U.M.E.X
HC 271	6"	6	F / CLIP	U.M.E.X
WD200		12	DEEP WATER DEFLECTOR	ASHLAND HARDWARE
WD210		9	SHALLOW WATER DEFLECTOR	ASHLAND HARDWARE
EC450		2	END DAM	ASHLAND HARDWARE
SB200		12	SETTING BLOCK	TREMCO
CP 550		4	CLOSER PLATE	ASHLAND HARDWARE
NP 225		150'	GASKET	TREMCO
ST 251		48		AMERICAN BOLT AND SCREW

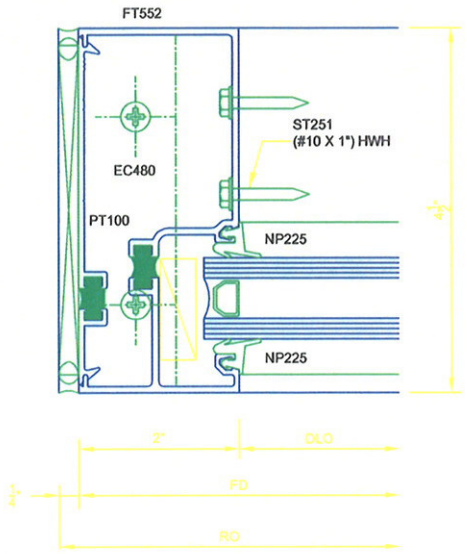


Flush Front unit wall Mock up

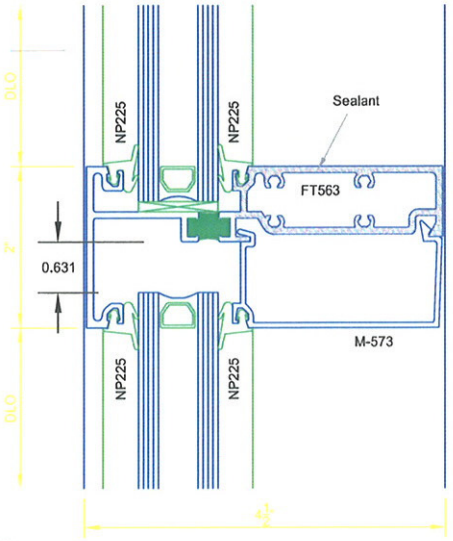




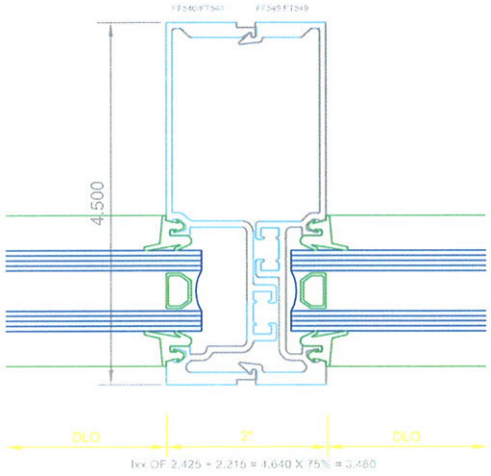
A Head



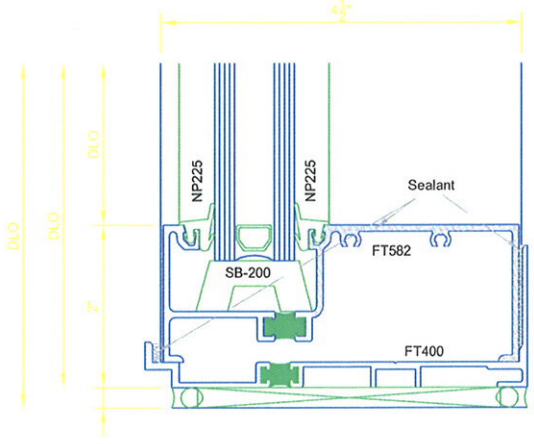
D Jamb



B Horizontal



E Mullion



C Sill

- END OF REPORT -