Architectural Testing

AAMA 1503-09 THERMAL PERFORMANCE TEST REPORT

Rendered to:

US ALUMINUM INC., DIVISION OF CR LAURENCE CO., INC.

SERIES/MODEL: FT 451 Storefront

TYPE: Glazed Wall Systems (Site-built)

Summary of Results	
Thermal Transmittance (U-Factor)	0.49
Condensation Resistance Factor - Frame (CRF_f)	60
Condensation Resistance Factor - Glass (CRF_g)	64
Unit Size	79" x 79" (2007 mm x 2007 mm)
Layer 1	1/4" AGC Comfort TiAC36 LowE (e=0.034*, #2)
Gap 1	0.50" Gap, Super Spacer Standard (OF-S), 100% Air-Filled*
Layer 2	1/4" Clear

Reference must be made to Report No. B8199.02-201-46, dated 11/29/12 for complete test specimen description and data.

849 Western Avenue North
St. Paul, MN 55117
phone: 651-636-3835
fax: 651-636-3843
www.archtest.com

Architectural Testing

AAMA 1503-09 THERMAL PERFORMANCE TEST REPORT

Rendered to:

US ALUMINUM INC., DIVISION OF CR LAURENCE CO., INC.
200 Singleton Drive
Waxahachie, Texas 75165

Report Number:	B8199.02-201-46
Test Date:	09/11/12
Report Date:	11/29/12
Test Record Retention Date:	09/11/16

Test Sample Identification:

Series/Model: FT 451 Storefront

Type: Glazed Wall Systems (Site-built)

Test Sample Submitted by: Client

Test Procedure: The condensation resistance factor (CRF) and thermal transmittance (U) were determined in accordance with AAMA 1503-09, *Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections*

1. Average warm side ambient temperature 69.80 F
2. Average cold side ambient temperature -0.40 F
3. 15 mph dynamic wind applied to test specimen exterior.
4. 0.0" $\pm$0.04" static pressure drop across specimen.

Test Results Summary:

1. Condensation resistance factor - Frame (CRF_f) 60
   Condensation resistance factor - Glass (CRF_g) 64
2. Thermal transmittance due to conduction (U) 0.49
   (U-factors expressed in Btu/hr·ft^2·F)

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Test Sample Description:

CONSTRUCTION	**Frame**
Size (in.)	79 x 79
Daylight Opening (in.)	36-1/2 x 75 (x2)
CORNERS	Square Cut
Fasteners	Screws
Sealant	No
MATERIAL	AT (0.21")
Color Exterior	Gray
Finish Exterior	Anodized
Color Interior	Gray
Finish Interior	Anodized
GLAZING METHOD	Interior

Glazing Information:

Layer 1	1/4" AGC Comfort TiAC36 LowE (e=0.034*, #2)
Gap 1	0.50" Gap, Super Spacer Standard (OF-S), 100% Air-Filled*
Layer 2	1/4" Clear
Gas Fill Method	N/A
Desiccant	Yes

**Stated per Client/Manufacturer*
NA Non-Applicable
See Description Table Abbreviations

Test Sample Description: (Continued)

COMPONENTS			
	Type	**Quantity**	**Location**
WEATHERSTRIP			
	No weatherstrip		
HARDWARE			
	No hardware		
DRAINAGE			
	No drainage		

Test Duration:

1. The environmental systems were started at 14:10 hours, 09/10/12.

2. The thermal performance test results were derived from 03:59 hours, 09/11/12 to 07:59 hours, 09/11/12.

Condensation Resistance Factor (CRF):

The following information, condensed from the test data, was used to determine the condensation resistance factor:

T_h	=	Warm side ambient air temperature	69.80 F
T_c	=	Cold side ambient air temperature	-0.40 F
FT_p	=	Average of pre-specified frame temperatures (14)	42.02 F
FT_r	=	Average of roving thermocouples (4)	36.67 F
W	=	$[(FT_p - FT_r) / (FT_p - (T_c + 10))] \times 0.40$	0.066
FT	=	$FT_p(1-W) + W (FT_r)$ = Frame Temperature	41.66 F
GT	=	Glass Temperature	44.67 F
CRF_g	=	Condensation resistance factor – Glass	64
		$CRF_g = (GT - T_c) / (T_h - T_c) \times 100$	
CRF_f	=	Condensation resistance factor – Frame	60
		$CRF_f = (FT - T_c) / (T_h - T_c) \times 100$	

The CRF number was determined to be 60 (on the size as reported). When reviewing this test data, it should be noted that the frame temperature (FT) was colder than the glass temperature (GT) therefore controlling the CRF number. Refer to the 'CRF Report' page and the 'Thermocouple Location Diagram' page of this report.

Thermal Transmittance (U_c):

T_h	=	Average warm side ambient temperature	69.80	F
T_c	=	Average cold side ambient temperature	-0.40	F
P	=	Static pressure difference across test specimen 15 mph dynamic perpendicular wind at exterior	0.00	psf
Nominal sample area			43.34	ft^2
Total measured input to calorimeter			1629.79	Btu/hr
Calorimeter correction			125.05	Btu/hr
Net specimen heat loss			1504.74	Btu/hr
U	=	Thermal Transmittance	0.49	$Btu/hr \cdot ft^2 \cdot F$

Glazing Deflection (in.):

	Left Glazing	Right Glazing
Edge Gap Width	0.50	0.50
Estimated center gap width upon receipt of specimen in laboratory (after stabilization)	0.34	0.32
Center gap width at laboratory ambient conditions on day of testing	0.34	0.32
Center gap width at test conditions	0.27	0.27

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

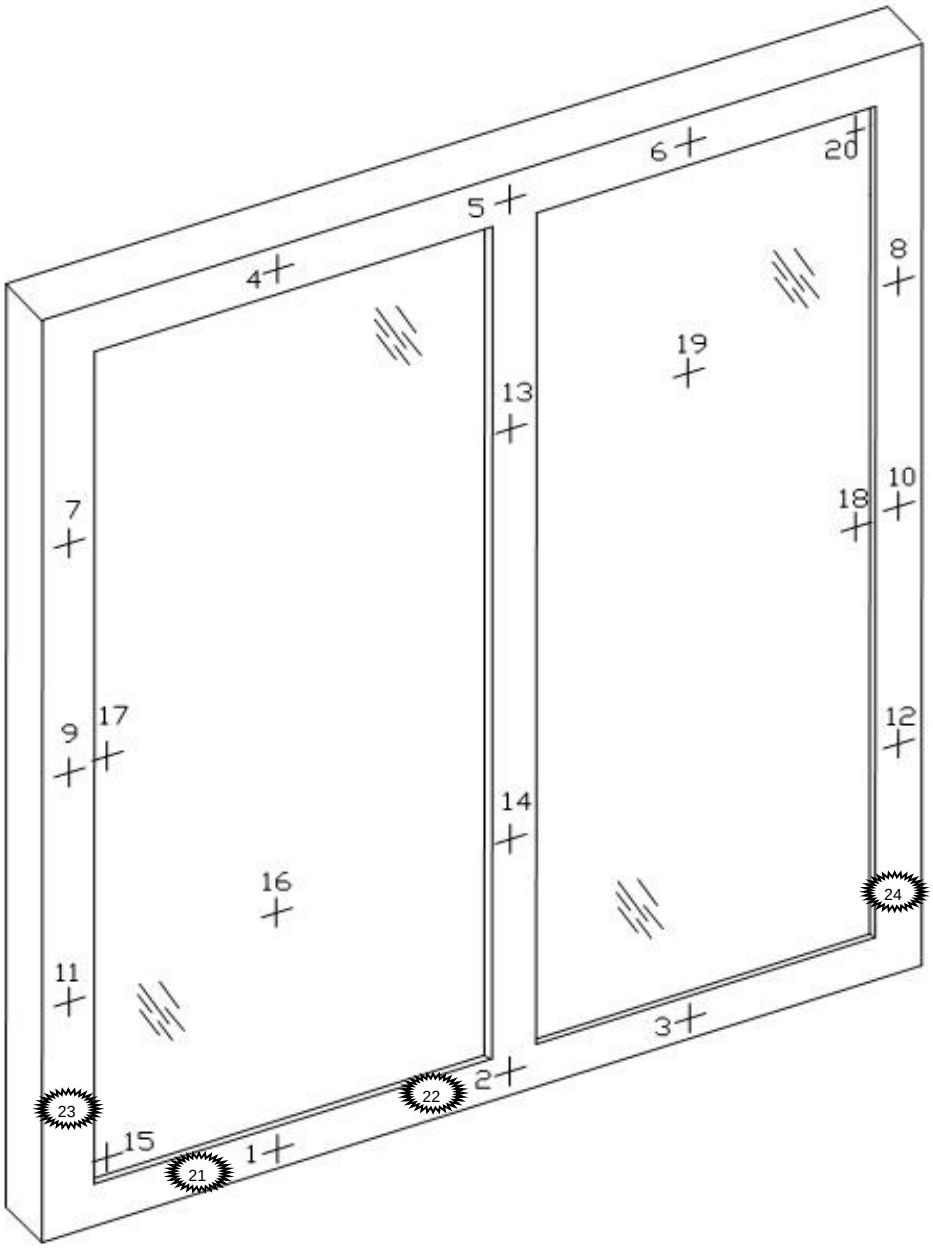
A calibration of the Architectural Testing Inc. 'thermal test chamber' (ICN N000235) in St. Paul, Minnesota was conducted in October 2011 in accordance with Architectural Testing Inc. calibration procedure.

Prior to testing the specimen was sealed with silicone on the interior side and checked for air infiltration per Section 9.3.4.

CRF Report

Time:	05:59	06:29	06:59	07:29	07:59	AVERAGE
Pre-specified Thermocouples - Frame						
1	37.64	37.65	37.70	37.69	37.66	37.67
2	37.14	37.12	37.12	37.14	37.16	37.14
3	41.78	41.78	41.78	41.75	41.79	41.78
4	51.07	51.02	50.93	50.92	50.92	50.97
5	50.19	50.19	50.17	50.22	50.25	50.20
6	52.07	52.06	52.10	52.09	52.12	52.09
7	39.97	39.99	39.98	40.00	40.02	39.99
8	39.77	39.76	39.76	39.78	39.84	39.78
9	37.32	37.28	37.28	37.32	37.37	37.31
10	37.95	37.96	37.89	37.88	38.00	37.94
11	36.30	36.28	36.28	36.33	36.31	36.30
12	38.69	38.69	38.66	38.67	38.75	38.69
13	45.68	45.69	45.69	45.74	45.71	45.70
14	42.66	42.69	42.64	42.65	42.66	42.66
FT_P	42.02	42.01	42.00	42.01	42.04	42.02
Pre-specified Thermocouples - Glass						
15	34.30	34.31	34.32	34.27	34.27	34.30
16	50.13	50.15	50.10	50.10	50.16	50.13
17	41.78	41.80	41.78	41.77	41.82	41.79
18	44.76	44.78	44.72	44.77	44.78	44.76
19	51.81	51.81	51.83	51.81	51.84	51.82
20	45.22	45.25	45.18	45.20	45.28	45.23
GT	44.67	44.69	44.66	44.66	44.69	44.67
Cold Point (Roving) Thermocouples						
21	37.04	37.01	37.01	37.03	37.05	37.03
22	37.14	37.12	37.12	37.14	37.16	37.14
23	36.30	36.28	36.28	36.33	36.31	36.30
24	36.20	36.17	36.21	36.21	36.23	36.20
FT_R	36.67	36.65	36.65	36.68	36.69	36.67
W	0.07	0.07	0.07	0.07	0.07	0.07
FT	41.66	41.66	41.65	41.66	41.69	41.66
Warm Side - Room Ambient Air Temperature						
	69.78	69.79	69.79	69.80	69.81	69.79
Cold Side - Room Ambient Air Temperature						
	-0.36	-0.36	-0.47	-0.36	-0.41	-0.39
CRF_f	60	60	60	60	60	60
CRF_g	64	64	64	64	64	64

Thermocouple Location Diagram



Cold Point Locations

21. 37.03
22. 37.14
23. 36.30
24. 36.20

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Michael Resech

Michael P. Resech
Senior Project Manager
Individual-In-Responsible-Charge

Digitally Signed by: Daniel A. Johnson

Daniel A. Johnson
Director – Regional Operations
Individual-In-Responsible-Charge

MDT:mdt
B8199.02-201-46

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Description Table Abbreviations (1)
Appendix-B: Submittal Form and Drawings (11)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
02-R0	11/29/12	All	Original Report Issue. Work requested by Don Willard of US Aluminum Inc., Division of CR Laurence Co., Inc.

Appendix A: Description Table Abbreviations

CODE	Frame / Sash Types
AI	Aluminum w/ Vinyl Inserts (Caps)
AL	Aluminum
AP	Aluminum w/ Thermal Breaks - Partial
AS	Aluminum w/ Steel Reinforcement
AT	Aluminum w/ Thermal Breaks - All Members (≥ 0.21")
AU	Aluminum Thermally Improved - All Members (0.062" - 0.209")
AV	Aluminum / Vinyl Composite
AW	Aluminum-clad Wood
FG	Fiberglass
PA	ABS Plastic w/ All Members Reinforced
PC	ABS Plastic-clad Aluminum
PF	ABS Plastic w/ Foam-filled Insulation
PH	ABS Plastic w/ Horizontal Members Reinforced
PI	ABS Plastic w/ Reinforcement - Interlock
PL	ABS Plastic
PP	ABS Plastic w/ Reinforcement - Partial
PV	ABS Plastic w/ Vertical Members Reinforced
PW	ABS Plastic-clad Wood
ST	Steel
VA	Vinyl w/ All Members Reinforced
VC	Vinyl-clad Aluminum
VF	Vinyl w/ Foam-filled Insulation
VH	Vinyl w/ Horizontal Members Reinforced
VI	Vinyl w/ Reinforcement - Interlock
VP	Vinyl w/ Reinforcement - Partial
VV	Vinyl w/ Vertical Members Reinforced
VW	Vinyl-clad Wood
VY	Vinyl
WA	Aluminum / Wood composite
WD	Wood
WV	Vinyl / Wood composite
WF	Fiberglass/Wood Combination
WC	Composite/Wood Composite (Shaped vinyl/wood composite members)
CW	Copper Clad Wood
CO	Vinyl/Wood Composite Material

CODE	Spacer Types (See sealant)
A1	Aluminum
A2	Aluminum (Thermally-broken)
A3	Aluminum-reinforced Polymer
A4	Aluminum / Wood
A5	Aluminum-reinforced Butyl (Swiggle)
A6	Aluminum / Foam / Aluminum
A7	Aluminum U-shaped
A8	Aluminum-Butyl (Corrugated) (Duraseal)
ER	EPDM Reinforced Butyl
FG	Fiberglass
GL	Glass
OF	Organic Foam
P1	Duralite
PU	Polyurethane Foam
SU	Stainless Steel, U-shaped
CU	Coated Steel, U-shaped (Intercept)
S2	Steel (Thermally-broken)
S3	Steel / Foam / Steel
S5	Steel-reinforced Butyl
S6	Steel U-channel w/ Thermal Cap
SS	Stainless Steel
CS	Coated Steel
TP	Thermo-plastic
WD	Wood
ZE	Elastomeric Silicone Foam
ZF	Silicone Foam
ZS	Silicone / Steel
N	Not Applicable
TS	Thermo-plastic w/ stainless steel substrate

CODE	Tint Codes
AZ	Azurlite
BL	Blue
BZ	Bronze
CL	Clear
EV	Evergreen
GD	Gold
GR	Green
GY	Gray
LE	Low 'e' Coating
OT	Other (use comment field)
RC	Solar or Reflective Coating
RG	Roller Shades between glazing
RS	Silver (reflective coating)
SF	Suspended Polyester Film
SR	Silver
BG	Blinds between the Glazing
DV	Dynamic Glazing-Variable
DY	Dynamic Glazing-NonVariable

CODE	Gap Fill Codes
AIR	Air
AR2	Argon/Krypton Mixture
AR3	Argon / Krypton / Air
ARG	Argon/Air
CO2	Carbon Dioxide
KRY	Krypton/Air
SF6	Sulfur Hexaflouride
XE2	Xenon/Krypton/Air
XE3	Xenon/Argon/Air
XEN	Xenon/Air
N	Not Applicable

DOOR DETAILS	
N	Not Applicable
CODE	Door Type
EM	Embossed
FL	Flush
LF	Full Lite
LH	1/2 - Lite
LQ	1/4 - Lite
LT	3/4 - Lite
RP	Raised Panel
CODE	Skin
AL	Aluminum
FG	Fiberglass
GS	Galvanized Steel
ST	Steel
WD	Wood
VY	Vinyl
CODE	Panel
FG	Fiberglass
PL	Plastic
WP	Wood - Plywood
WS	Wood - Solid
CODE	Sub-Structure
GS	Galvanized Steel
ST	Steel
WD	Wood
VY	Vinyl
CODE	Core Fill
CH	Cellular - Honeycomb
EP	Expanded Polystyrene
PI	Polyisocyanurate
PU	Polyurethane
WP	Wood - Plywood
WS	Wood - Solid
XP	Extruded Polystyrene

CODE	Spacer Sealant
D	Dual Seal Spacer System
S	Single Seal Spacer System

CODE	Grid Description
N	No Muntins
G	Grids between glass
S	Simulated Divided Lites
T	True Muntins

CODE	Grid Size Codes
	Blank for no grids
0.75	Grids < 1"
1.5	Grids >= 1"

CODE	Thermal Breaks
F	Foam
U	Urethane
V	Vinyl
FB	Fiberglass
O	Other
AB	ABS
NE	Neoprene
AI	Air
N	Not Applicable
P	Polyamide

Appendix B: Drawings

NFRC PRODUCT CERTIFICATION PROGRAM

Submittal Form for Test Samples

For use by manufacturers, lineal suppliers and fabricators

National Fenestration Rating Council®

1. Information on Production of the Test Sample (complete **ALL** fields):

Manufacturer: US Aluminum Date of sample manufacture: 08-2012

Plant Address where manufactured: Waxahachie

City: Waxahachie State: Texas Zip Code: 75165

Name of IA: ALI Phone: 214.565.0593 Fax: 214.565.1094

2. Product Information (complete **ALL** fields):

Product Line ID (CPD) No.: New Product/Operator Type (Table 4-3 of NFRC 100): NA

Series/Model: FT451

3. Test sample is being submitted for (select **ONE**):

a. ☐ Validation for Initial Certification (prototype only) no plant qualification

b. ☒ Validation for Initial Certification (production line unit) & plant qualification

c. ☐ Validation for Recertification (production line unit) & plant qualification

d. ☐ Plant Qualification Only (production line unit)

I, Don Willard, as the designated agent for US Aluminum do hereby attest that the foregoing information is true to the best of my information, knowledge, and belief. Further, if the unit is identified in Section 3 as a production line unit, I hereby authorize the NFRC-accredited testing laboratory to send a copy of the test report to the IA identified above for plant qualification purposes pursuant to the NFRC Product Certification Program..

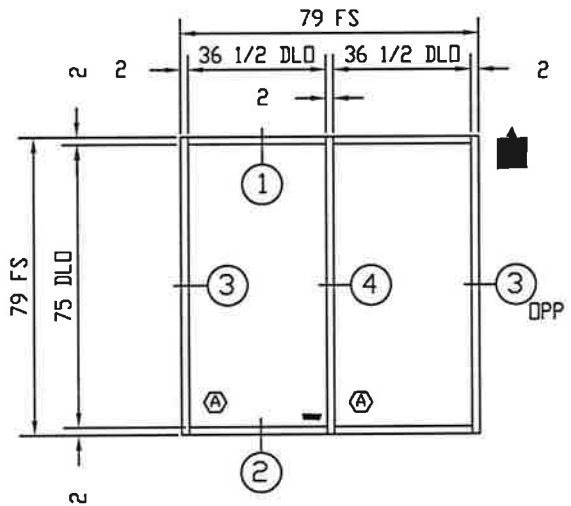
Signature: Don Willard Date: 12.04.12

FOR LABORATORY USE ONLY

1. Laboratory: ARCHITECTURAL TESTING, INC
2. Date Sample Received: 9/30/12 File number ID: BEM9
3. Date Sample Tested: 9/11/12 By:
4. Modifications made: —
5. Reason for non-testing of sample unit:

[***Note***: If the sample submitted can not be tested due to damage prior to testing, a new sample and new form shall be submitted to the testing laboratory. Both forms shall be submitted to the IA when the testing is completed.]

MU2012-001-01



A

QTY = 1

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B8199

Date 11/8/12 Tech MB

SYMBOL KEY			
SYMBOL	DESCRIPTION	QTY	COMMENTS
(A)	37.375 X 75.875	2	1 INS = INSULATED GLASS

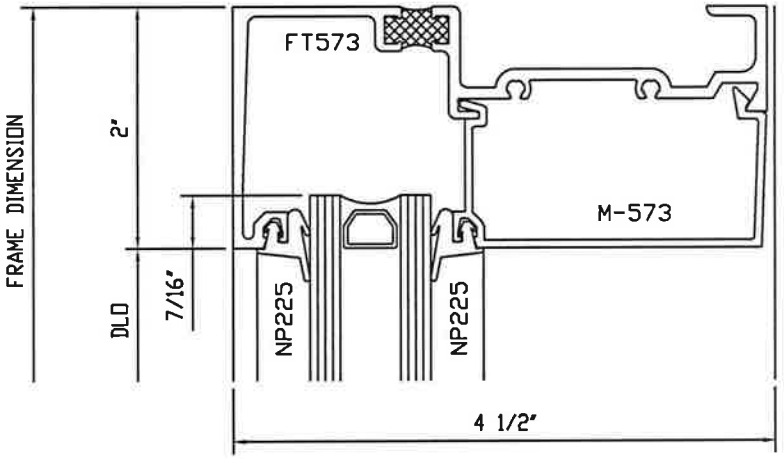
REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

CRL
2100 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 588-1281 FAX: (323) 232-2523
DIVISION UNITED STATES ALUMINUM

DRWN BY: DCW	THERMAL_TEST_NFRC_AAMA_1503 SERIES_FT451	DWG NO. MU2012-001-01
DATE: 03.19.12		
SCALE: 3/8"=1"		

MU2012-001-02

1



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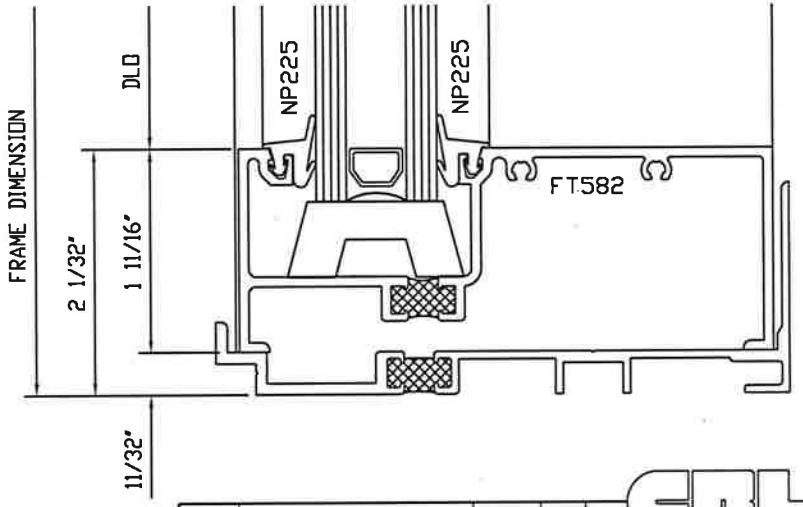


Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# B8199

Date 11/8/12 Tech MB

CRL

2100 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 588-1281 FAX: (323) 232-2523

DIVISION UNITED STATES ALUMINUM

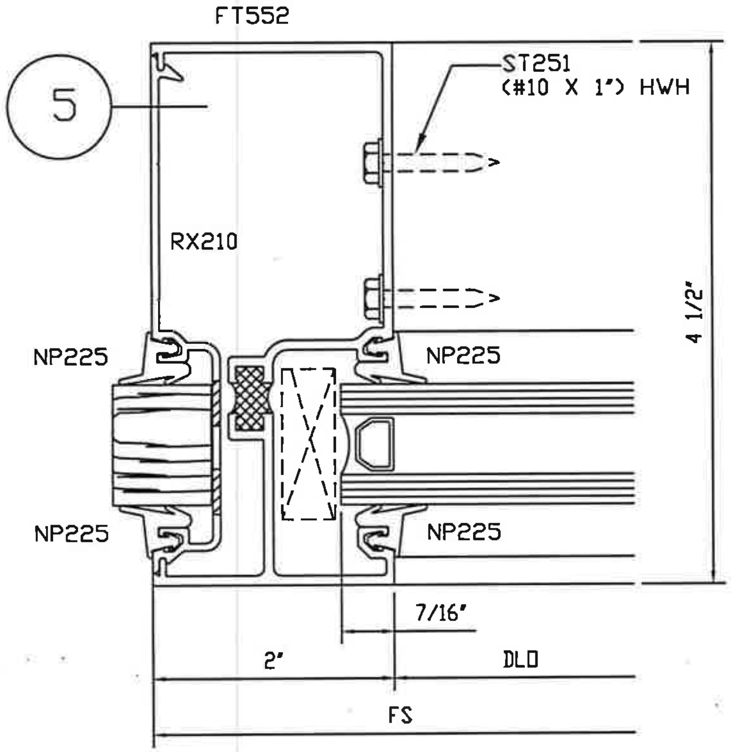
REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

DRWN BY: DCW
DATE: 03.19.12
SCALE: FULL

THERMAL_TEST_NFRC_AAMA_1503
SERIES_FT451

DWG NO.
MU2012-001-02

MU2012-001-03



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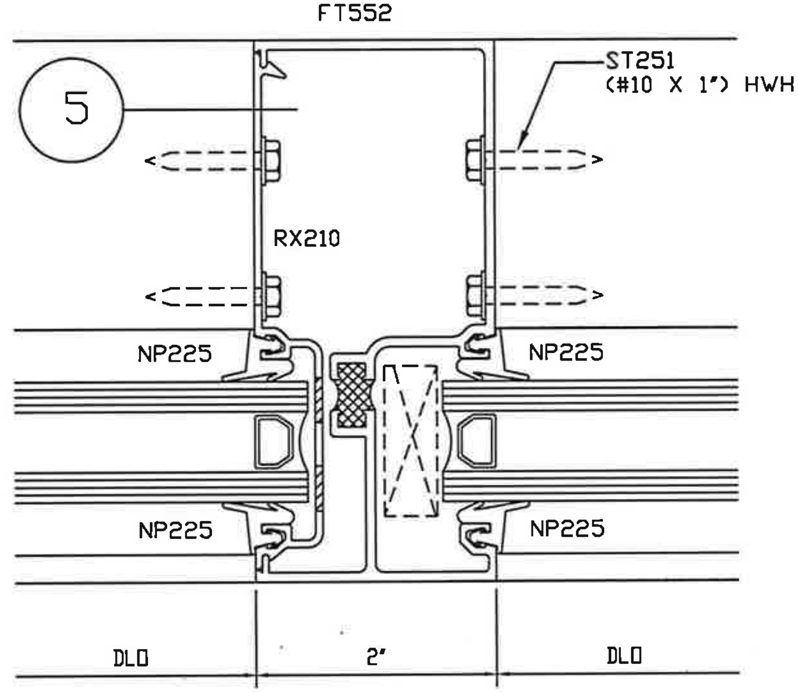


4

Architectural Testing
This sample complies with these details.
Deviations are noted.
Report: B8199
Date: 11/8/12 Tech: MB

CRL
2100 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 588-1281 FAX: (323) 232-2523
DIVISION UNITED STATES ALUMINUM

REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

DRWN BY: DCW
DATE: 03.19.12
SCALE: FULL

THERMAL_TEST_NFRC_AAMA_1503
SERIES_FT451

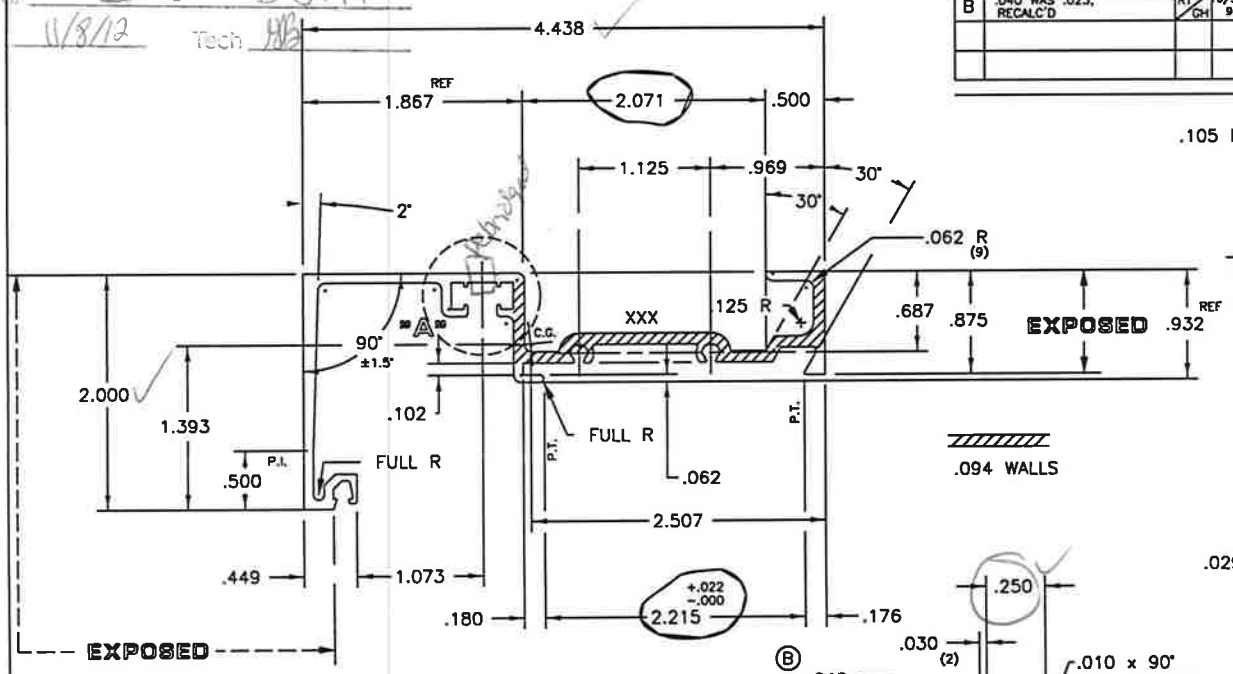
DWG NO. MU2012-001-03

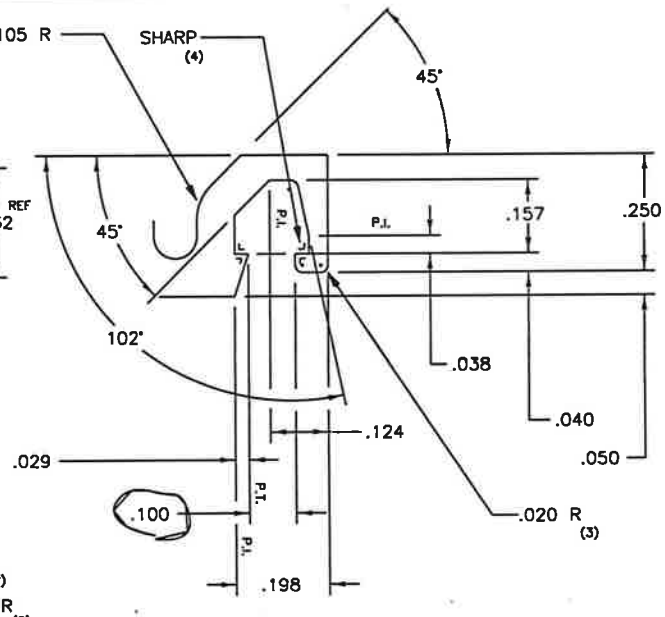
Architectural Testing

Test sample complies with these details.
Deviations are noted.

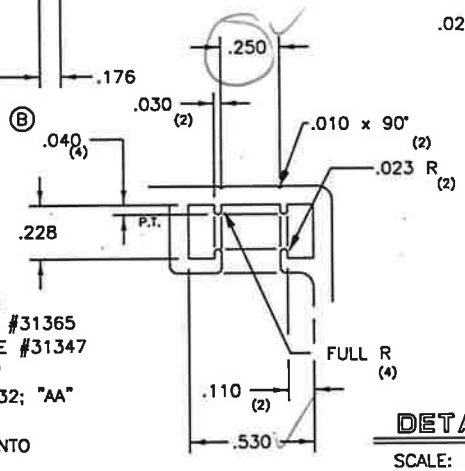
Report# C2485 B8199
Date 11/8/12 Tech MB

B	.040 WAS .023, RECALC'D	RT/CH	10/30 97	U.S. ALUMINUM CORP.	T-31788 |B
				HEAD – 1" MAMO	8/3/93
				FF573 FULL SIZE	

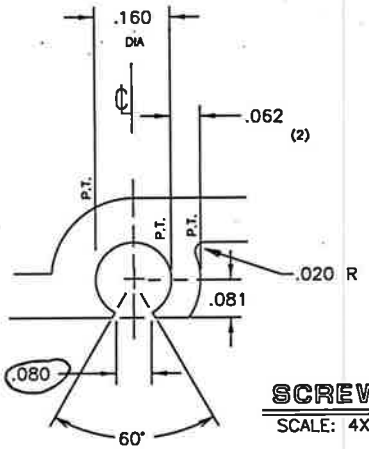




GASKET POCKET DETAIL
SCALE: 4X SIZE



DETAIL "A"
SCALE: 2X SIZE



SCREW RACE DETAIL
SCALE: 4X SIZE (2 PLACES)

NOTES:

1. SNAP-FITS W/M-573; DIE #31365
   ASSEMBLES W/HC201; DIE #31347
2. PAINT PERIMETER: 3.188"
3. (B) THERMO DETAIL AREA: .132; "AA"
4. DEBRIDGE WITH A .218 x .015 MAX PENETRATION INTO THERMO MATERIAL.
5. XXX INDICATES I.D. MARK FOR IEC-TX
6. F & D PART NO. IS FT573

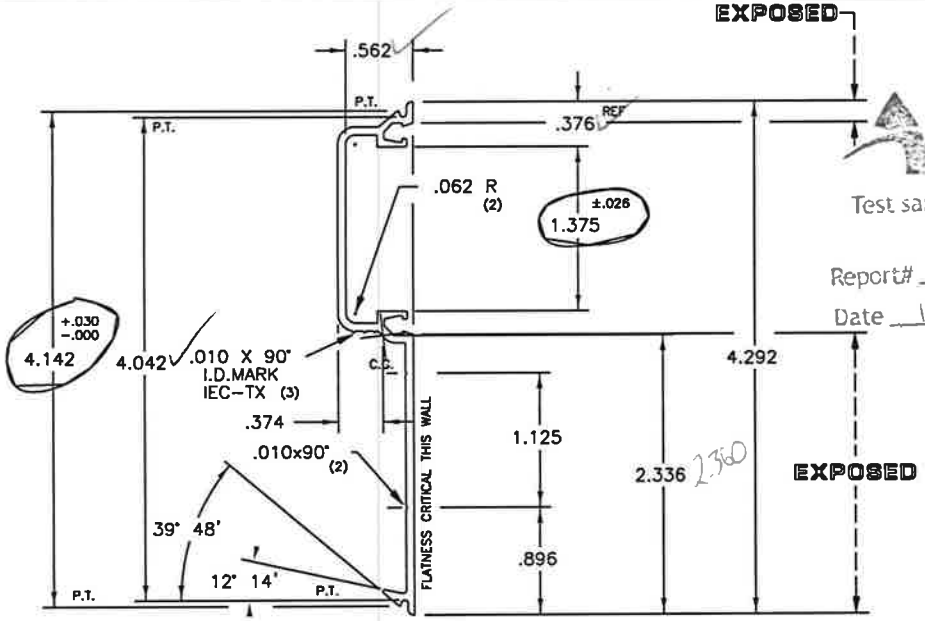
SECTION PROPERTIES:

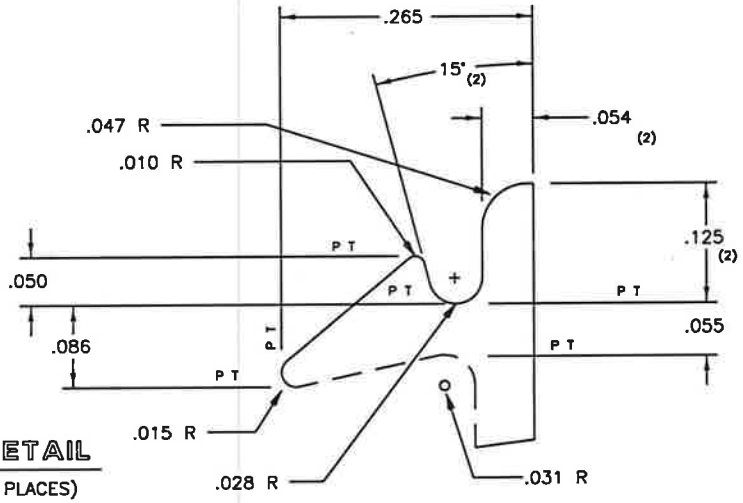
Ixx = 2.259 in^4
Sxx = 0.901 in^3
Iyy = 0.242 in^4
Syy = 0.174 in^3

10x1 1/2 W/P 10x1 1/4 DIE NO STEP

.080

.930 (B)			1 / W/P 31788
1.116 (B)	5.000		10x31359
21.321 (B)	SOLID		12x7 1/2 31359
19	8" = 61		T-31788 | B





SNAP DETAIL

SCALE: 8X (2 PLACES)

PRODUCT:

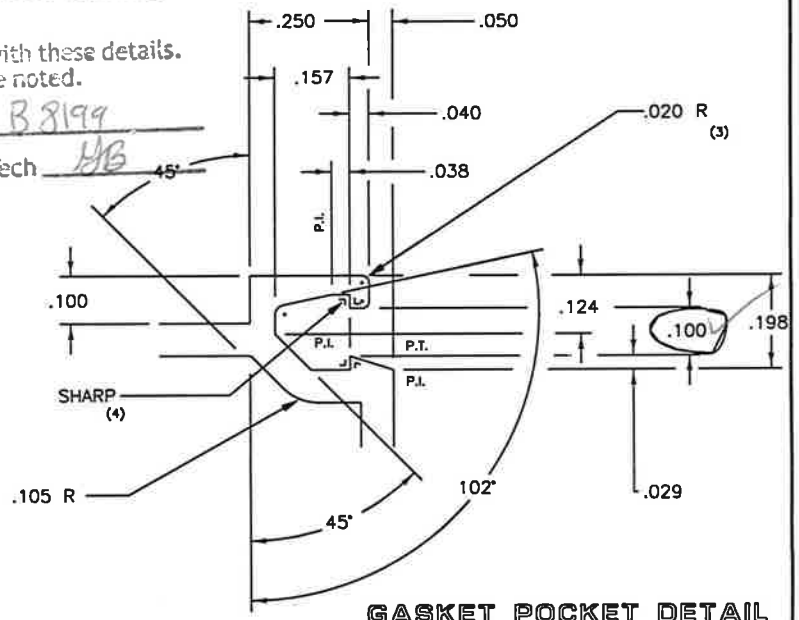
PROJECT:

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# C2485 B8199

Date 11/8/12 Tech YG



GASKET POCKET DETAIL

SCALE: 4X SIZE (2 PLACES)

NOTES:

1. SNAP–FITS W/FF552; DIE # 31507
   W/FF551; DIE # 31512

2. PAINT PERIMETER: 2.522"

SECTION PROPERTIES:

Ixx = 0.643 in^4
Sxx = 0.275 in^3
Iyy = 0.023 in^4
Syy = 0.061 in^3

SYM	REVISION	BY	DATE

CUSTOMER U.S. ALUMINUM CORP. DIE NO. T–31508

PART NAME INSERT DRAWN MAMO DATE 11/18/94

PART NO. RF210 SCALE FULL SIZE CHKD. APP.

STANDARD TOLERANCES FOR EXTRUDED SHAPES APPLY UNLESS SPECIFICALLY SHOWN OTHERWISE

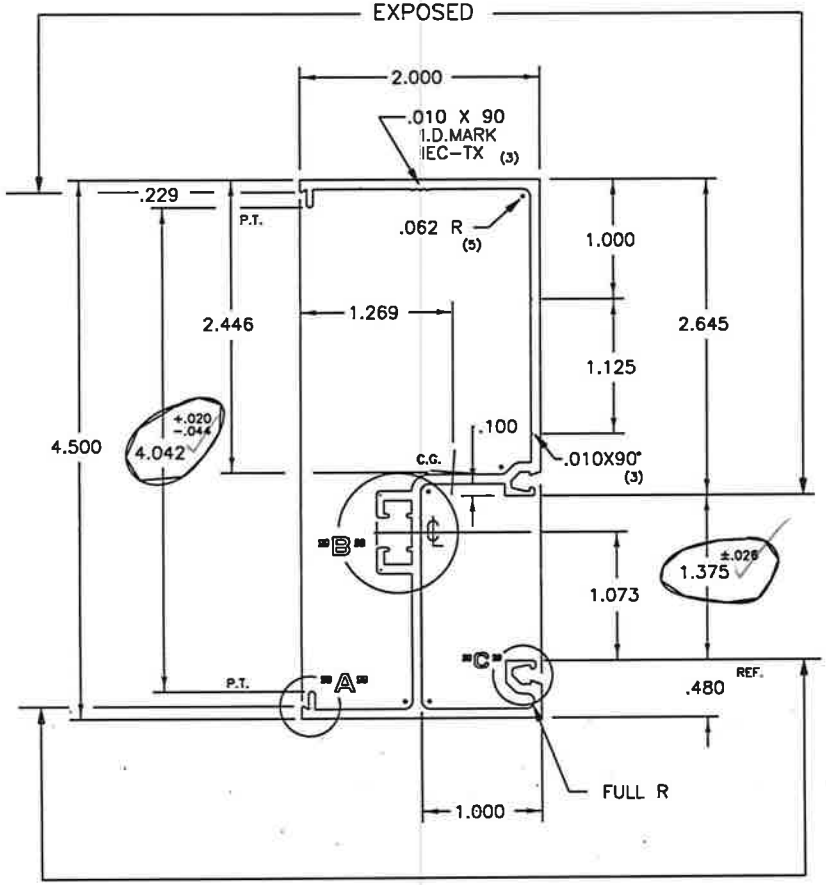
UNLESS OTHERWISE NOTED, ALL CORNERS ARE .015 R, AND TYPICAL WALL THICKNESS IS .068

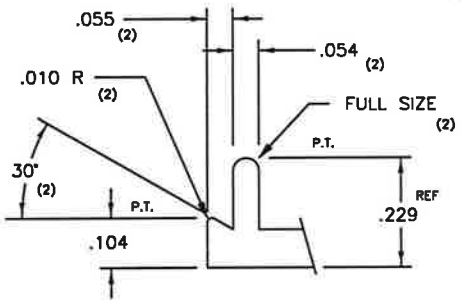
☐ CA
☐ TX

International Extrusion Corporation
202 SINGLETON DRIVE (972) 937–7032 WAXAHACHIE TEXAS 75165

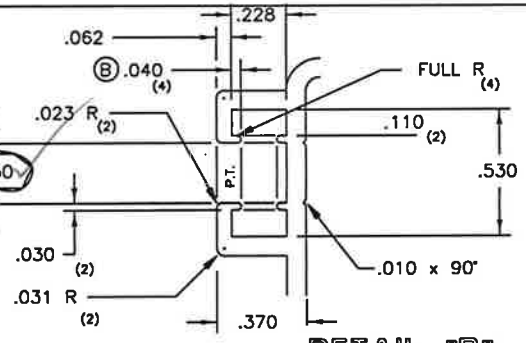
EST. AREA:	.397	US–NO.	P–24052	PORTS	
EST. WT/FT:	.476	CIRCLE SIZE	4.292 IN.	BACKER	
EST. PER:	12.268	CLASS.	SOLID	BOLSTER	
FACTOR :	26	ER–		DIE NO.	T–31508

B	.040 WAS .023, RECALC'D	RT/GH	10/30 97	U.S. ALUMINUM CORP.		T-31507 | B
				VERT MULL	MAMO	11/18/94
				FF552	FULL SIZE	

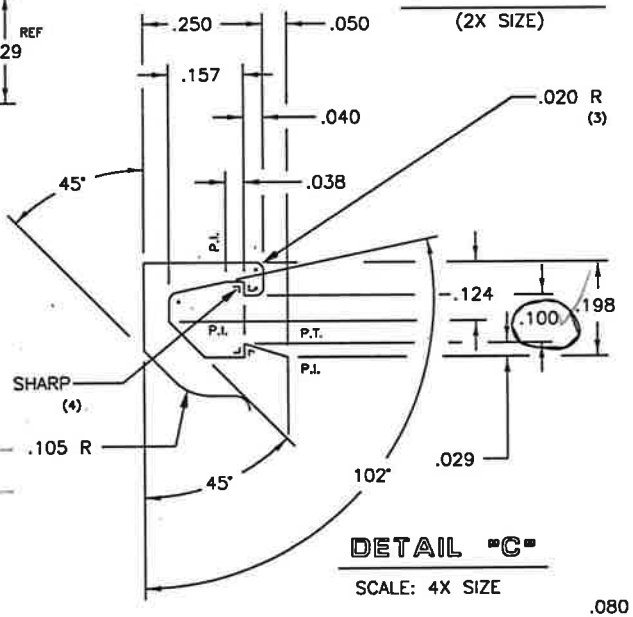




DETAIL "A"
(4x SIZE)



DETAIL "B"
(2X SIZE)



DETAIL "C"
SCALE: 4X SIZE

Architectural Testing
Test sample complies with these details. Deviations are noted.
Report# C2485 B8199
Date 11/8/12 Tech HB

NOTES:

1. SNAP-FITS W/RF210; DIE #31508
   W/RF110; DIE #31509
   W/PF100; DIE #31510
2. PAINT PERIMETER: 6.758"
3. (B) THERMO POCKET AREA: .132; "AA"
4. F & D PART NO. IS FT552

SECTION PROPERTIES:

I_{xx} = 2.408 in^4
S_{xx} = 0.984 in^3
I_{yy} = 0.311 in^4
S_{yy} = 0.245 in^3

.897 (B)		P-24046	1 | WP31507
1.076 (B)		4.915	10 X 31507
23.378 (B)		SOLID	31355
22	8	60	T-31507 | B

.080

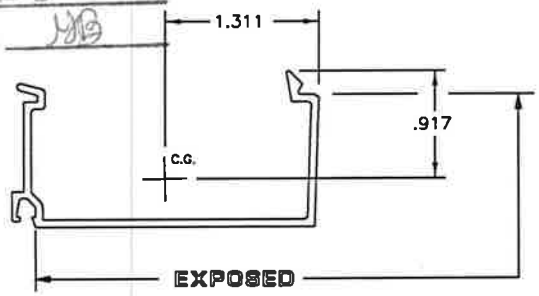
FF451

Architectural Testing

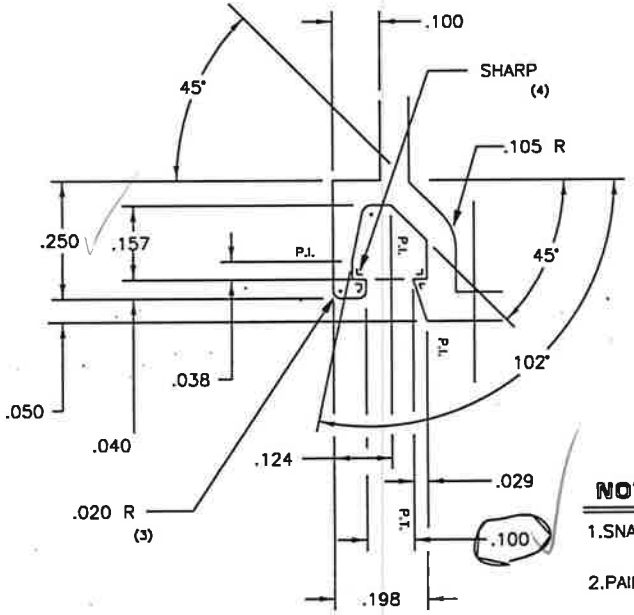
Test sample complies with these details.
Deviations are noted.

Report# C2485 B8199
Date 11/8/12 Tech YB

U.S. ALUMINUM CORP.		T-31365
INT GLS STOP	MAMO	6/21/93
M-573	2x SIZE	

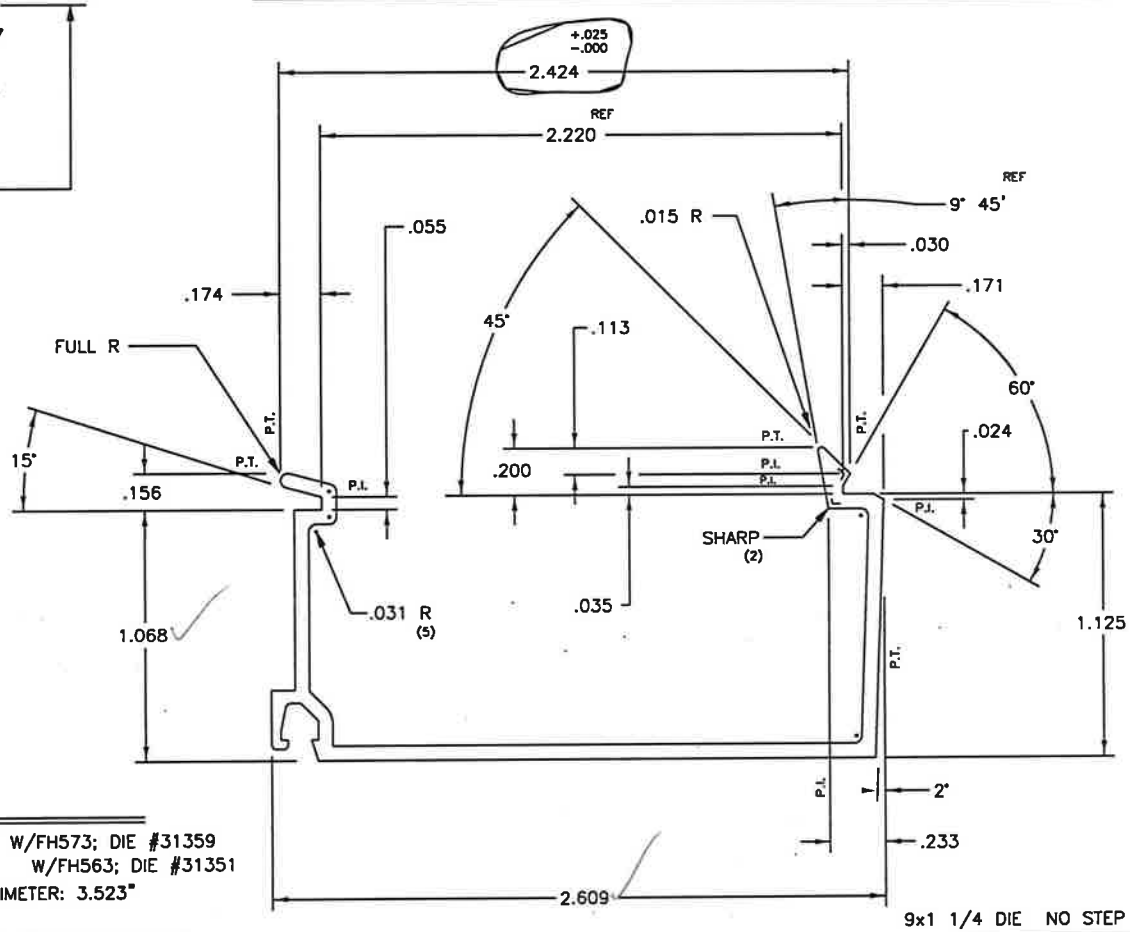


ACTUAL SIZE



GASKET POCKET DETAIL

SCALE: 4X SIZE



9x1 1/4 DIE NO STEP

NOTES:

1. SNAP-FITS W/FH573; DIE #31359
   W/FH563; DIE #31351
2. PAINT PERIMETER: 3.523"

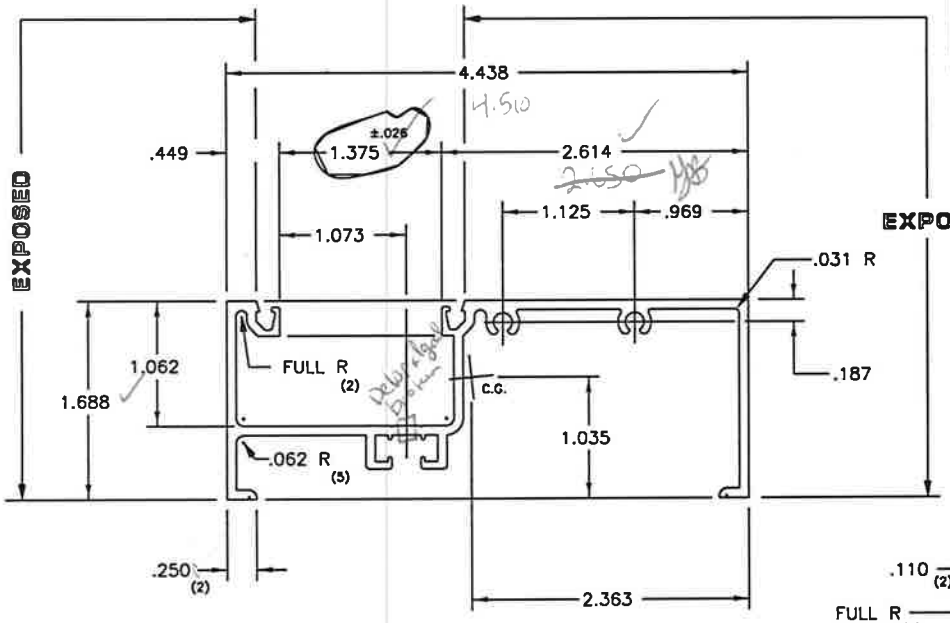
SECTION PROPERTIES:

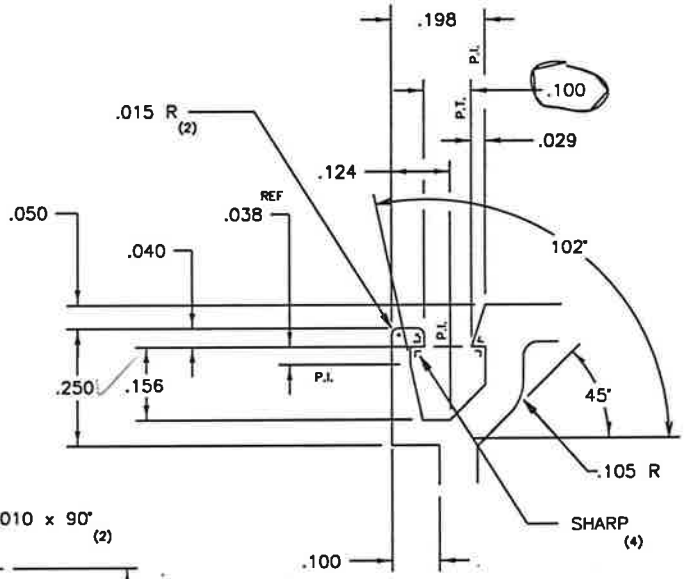
Ixx = 0.355 in^4
Sxx = 0.271 in^3
Iyy = 0.066 in^4
Syy = 0.072 in^3

.062

.346	P-21780	
.415	3.500	
11.203	SOLID	
27		T-31365

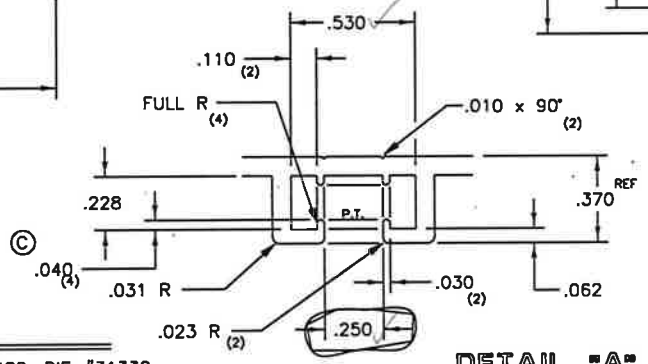
B	SCREWRACE DETAIL REVISED	MM	10/27 93	U.S. ALUMINUM CORP.		T-31362 | C
C	.040 WAS .023, RECALC'D	RT / CH	10/28 97	SILL - INSIDE GLAZE	MAMO	6/21/93
				FF582	FULL SIZE	





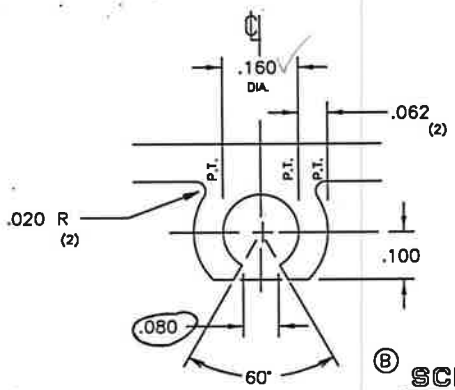
GASKET POCKET DETAIL

SCALE: 4X SIZE (2 PLACES)



DETAIL "A"

SCALE: 2X SIZE



Ⓑ SCREWRACE DETAIL

SCALE: 4X SIZE (2 PLACES)

NOTES:

1. MATES W/FF400, DIE #31332
2. PAINT PERIMETER: 6.043"
3. Ⓒ THERMO DETAIL AREA: .132; "AA"
4. DEBRIDGE WITH A .218 x .015 MAX PENETRATION INTO THERMO MATERIAL.
5. F & D PART NO. IS FT582

SECTION PROPERTIES:

Ixx = 2.195 in^4
Sxx = 0.929 in^3
Iyy = 0.270 in^4
Syy = 0.261 in^3

10x1 1/2 W/P 10x1 1/4 DIE NO STEP

☒ CA
☒ TX

.080

.918 Ⓒ	P-21774	1 / W/P 31362
1.102 Ⓒ	4.800	10x31362
23.515 Ⓒ	SOLID	12x7 1/2 31362
21	8" = 59	T-31362 | C

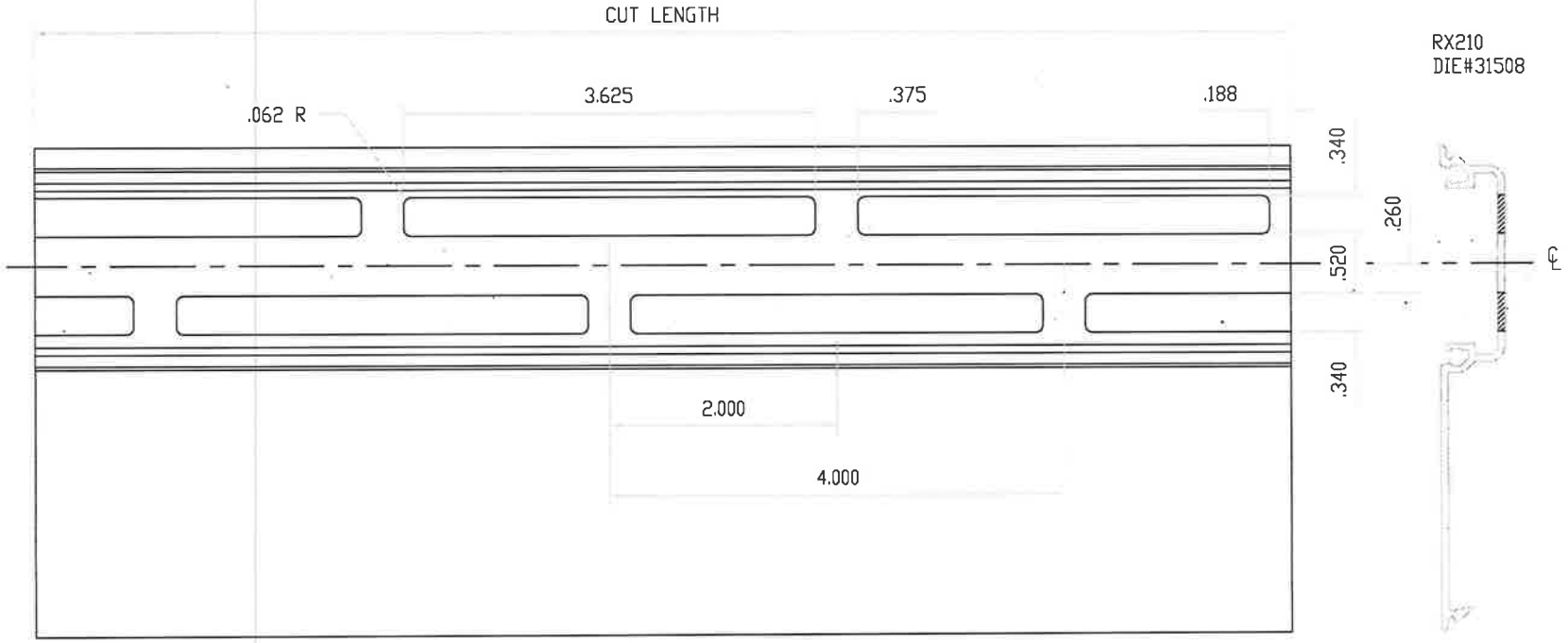
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# C2485 B3199

Date 11/8/12 Tech MB

MU2012-013-04



5 TYPICAL FILLER THERMAL SLOTS

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# C2485 B8199

Date 11/8/12 Tech MB

REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

CNL DIVISION

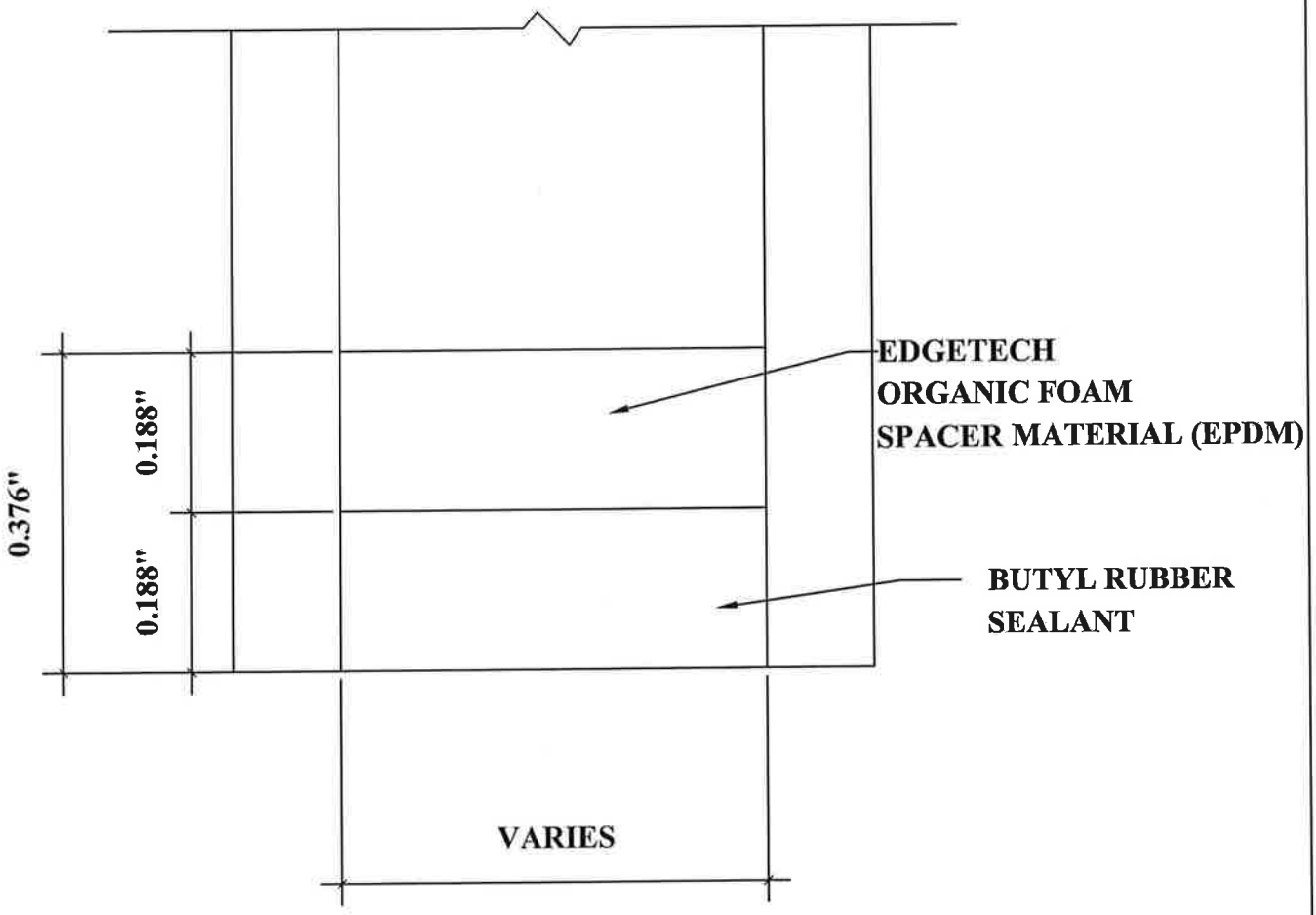
DCW	THERMAL_TEST_NFRC_AAMA_1503	DWG NO
08.17.12	SERIES_FT451-INSIDE_SET	MU2012-013-04
FULL		

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# B8199 C2485

Date 11/8/12 Tech HB



DETAIL FOR THERMAL MODELING OF
EDGETECH SUPER SPACER STANDARD (OF-S)