Architectural Testing

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

UNITED STATES ALUMINUM

SERIES/MODEL: TT601 Top Notch Ribbon Wall SSG
TYPE: Glazed Wall System

Report No: **B6092.04-116-45**
Report Date: **02/14/12**

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

Architectural Testing

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

UNITED STATES ALUMINUM
200 Singleton Road
Waxahachie, Texas 75165

Report No:	B6092.04-116-45
Report Date:	02/14/12
Simulation Date:	02/07/12

Project Summary:

Architectural Testing, Inc. was contracted by United States Aluminum to provide U-Factor and Solar Heat Gain Coefficient thermal performance ratings on the TT601 Top Notch Ribbon Wall SSG Glazed Wall System. The thermal performance ratings were determined in accordance with AAMA 507-07, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Building.

Reference Documents:

AAMA 507-07, *Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings*

NFRC 100-2010, *Procedure for Determining Fenestration Product U-Factors*

NFRC 200-2010, *Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence*

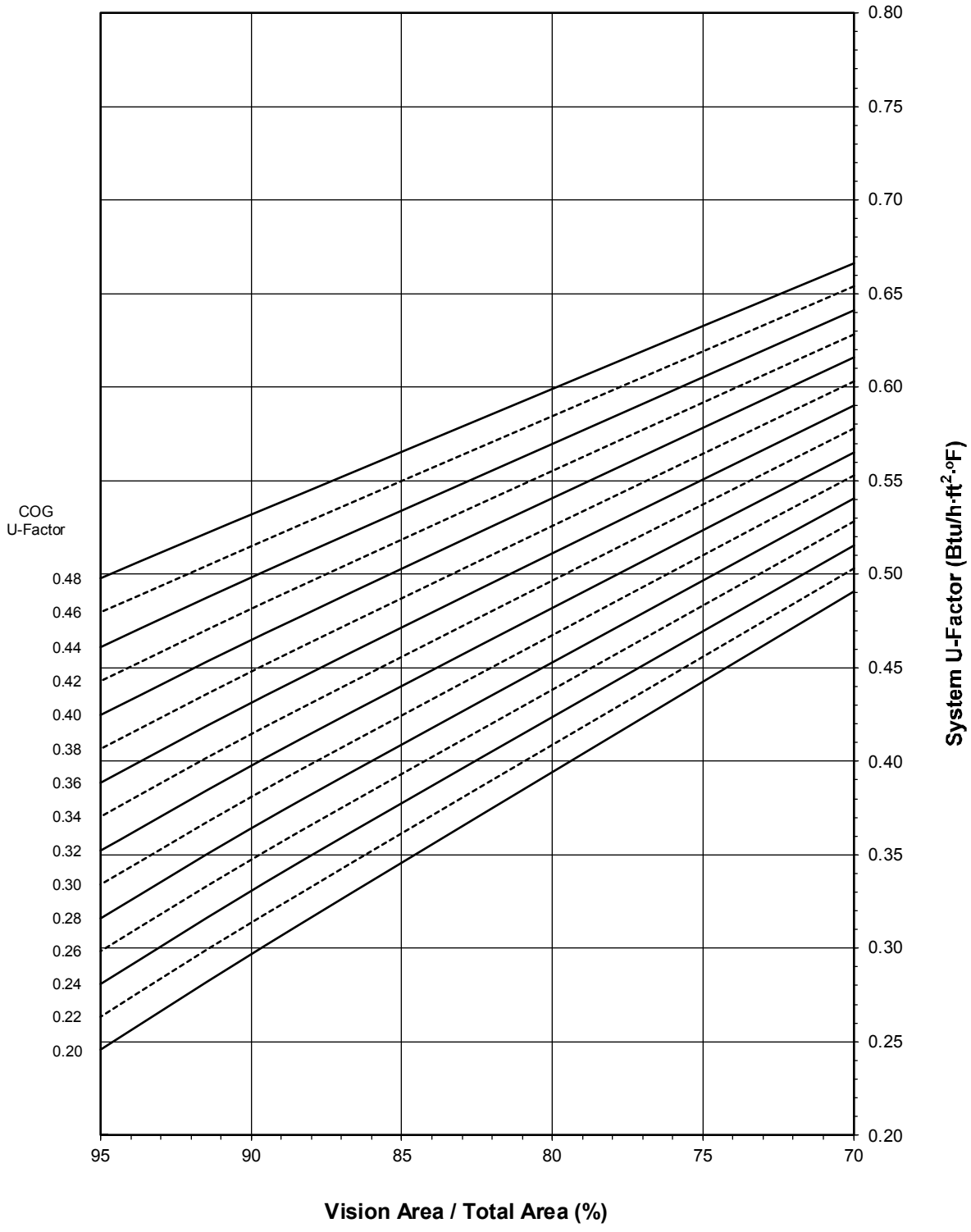
Simulation Specimen Description:

Series/Model:	TT601 Top Notch Ribbon Wall SSG
Product Groupings:	Material finish grouped per NFRC 100, Section 4.2.1 L
Type:	Glazed Wall System
Frame Material:	Aluminum Thermally Broken Framing System
Material Finish:	Painted Aluminum
Specimen Size:	2000mm wide by 2000mm high (78-3/4" by 78-3/4")
Configuration:	Single vision lIte
Drawing Reference:	US Aluminum Drawings: TT601_SSG Horiz, & TT601_SSG Vert

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

United States Aluminum
TT601 Top Notch Ribbon Wall SSG - Glazed Wall System

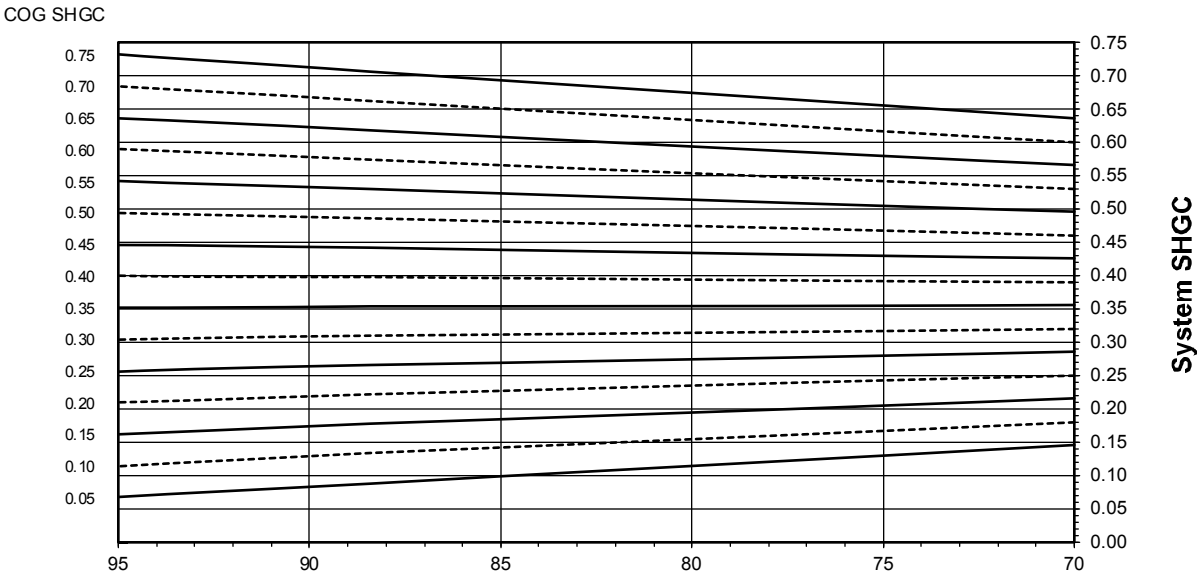
System U-Factor vs. Percentage of Vision Area



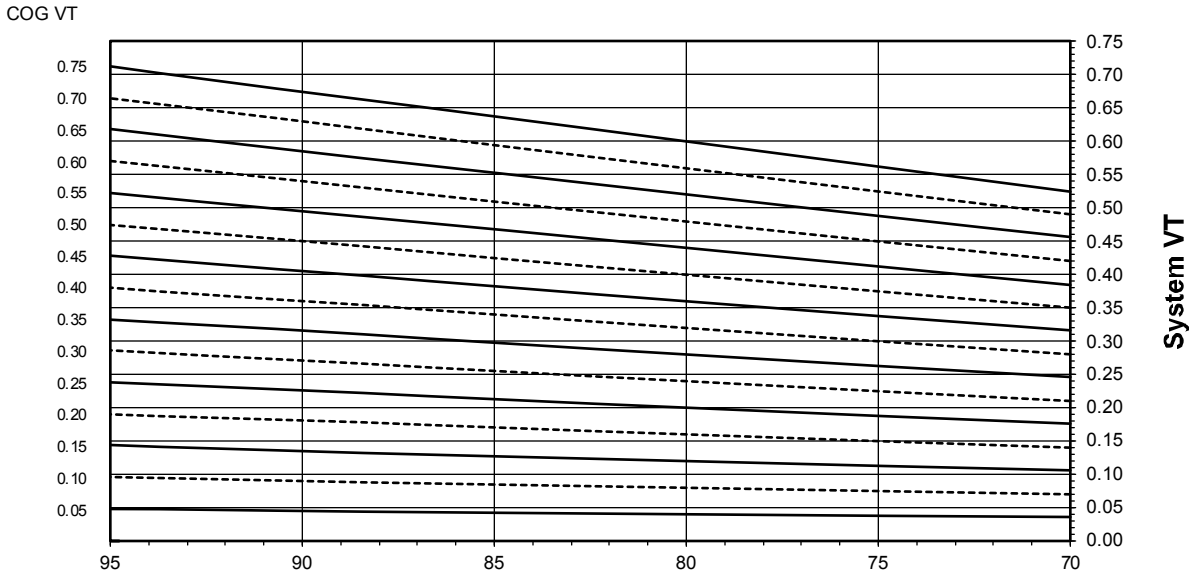
Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

United States Aluminum
TT601 Top Notch Ribbon Wall SSG - Glazed Wall System

System SHGC vs. Percentage of Vision Area



System VT vs. Percentage of Vision Area



United States Aluminum
TT601 Top Notch Ribbon Wall SSG - Glazed Wall System

Size Specific U-Factor Matrix*

Glazing Option	Center of Glass U-Factor	Overall U-Factor
1	0.48	0.54
2	0.46	0.53
3	0.44	0.51
4	0.42	0.49
5	0.40	0.48
6	0.38	0.46
7	0.36	0.44
8	0.34	0.43
9	0.32	0.41
10	0.30	0.40
11	0.28	0.38
12	0.26	0.36
13	0.24	0.35
14	0.22	0.33
15	0.20	0.31

Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

Size Specific SHGC Matrix*

Center of Glass SHGC	Overall SHGC
0.75	0.71
0.70	0.66
0.65	0.62
0.60	0.57
0.55	0.53
0.50	0.49
0.45	0.44
0.40	0.40
0.35	0.35
0.30	0.31
0.25	0.26
0.20	0.22
0.15	0.18
0.10	0.13
0.05	0.09

Size Specific VT Matrix*

Center of Glass VT	Overall VT
0.75	0.66
0.70	0.62
0.65	0.57
0.60	0.53
0.55	0.49
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

*Size Specific U-Factor, SHGC, and VT Matrices are based on the standard Glazed Wall System specimen size of 2000mm wide by 2000mm high (78-3/4" by 78-3/4"). This represents 88.4% Vision Area / Total Area.

Vision Area Data

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70% Vision Area	*NFRC 100-2010*	*95% Vision Area*
							28.93" by 28.93"	*78.74" by 78.74"*	*186.49" by 186.49"*
1	0.48	43.7	Head	2.3481	1.1783	0.4909	0.6666	0.5429	0.4979
			L. Jamb	2.3481	1.1783	0.4909			
			R. Jamb	2.3840	1.0905	0.4637			
			Mullion	1.1928	1.0898	0.4638			
			Sill	2.3376	1.0586	0.4873			
2	0.46	44.8	Head	2.3481	1.1785	0.4788	0.6538	0.5265	0.4795
			L. Jamb	2.3481	1.1785	0.4788			
			R. Jamb	2.3840	1.0833	0.4494			
			Mullion	1.1928	1.0826	0.4495			
			Sill	2.3376	1.0584	0.4750			
3	0.44	45.8	Head	2.3481	1.1787	0.4666	0.6410	0.5102	0.4612
			L. Jamb	2.3481	1.1787	0.4666			
			R. Jamb	2.3840	1.0763	0.4350			
			Mullion	1.1928	1.0756	0.4351			
			Sill	2.3376	1.0583	0.4627			
4	0.42	46.8	Head	2.3481	1.1789	0.4545	0.6283	0.4939	0.4430
			L. Jamb	2.3481	1.1789	0.4545			
			R. Jamb	2.3840	1.0695	0.4207			
			Mullion	1.1928	1.0688	0.4209			
			Sill	2.3376	1.0582	0.4505			
5	0.40	47.9	Head	2.3481	1.1791	0.4423	0.6156	0.4775	0.4248
			L. Jamb	2.3481	1.1791	0.4423			
			R. Jamb	2.3840	1.0628	0.4064			
			Mullion	1.1928	1.0621	0.4066			
			Sill	2.3376	1.0581	0.4383			
6	0.38	48.9	Head	2.3481	1.1793	0.4304	0.6030	0.4612	0.4067
			L. Jamb	2.3481	1.1793	0.4304			
			R. Jamb	2.3840	1.0565	0.3921			
			Mullion	1.1928	1.0558	0.3923			
			Sill	2.3376	1.0581	0.4262			
7	0.36	50.0	Head	2.3481	1.1796	0.4183	0.5904	0.4448	0.3885
			L. Jamb	2.3481	1.1796	0.4183			
			R. Jamb	2.3840	1.0501	0.3778			
			Mullion	1.1928	1.0494	0.3779			
			Sill	2.3376	1.0580	0.4140			
8	0.34	51.0	Head	2.3481	1.1798	0.4065	0.5779	0.4284	0.3704
			L. Jamb	2.3481	1.1798	0.4065			
			R. Jamb	2.3840	1.0439	0.3637			
			Mullion	1.1928	1.0432	0.3639			
			Sill	2.3376	1.0581	0.4021			
9	0.32	52.0	Head	2.3481	1.1801	0.3944	0.5654	0.4120	0.3523
			L. Jamb	2.3481	1.1801	0.3944			
			R. Jamb	2.3840	1.0377	0.3494			
			Mullion	1.1928	1.0370	0.3495			
			Sill	2.3376	1.0581	0.3899			

Vision Area Data

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70% Vision Area	*NFRC 100-2010*	*95% Vision Area*
							28.93" by 28.93"	*78.74" by 78.74"*	*186.49" by 186.49"*
10	0.30	53.1	Head	2.3481	1.1805	0.3826	0.5529	0.3955	0.3343
			L. Jamb	2.3481	1.1805	0.3826			
			R. Jamb	2.3840	1.0317	0.3353			
			Mullion	1.1928	1.0311	0.3354			
			Sill	2.3376	1.0582	0.3780			
11	0.28	54.2	Head	2.3481	1.1808	0.3707	0.5405	0.3791	0.3162
			L. Jamb	2.3481	1.1808	0.3707			
			R. Jamb	2.3840	1.0258	0.3211			
			Mullion	1.1928	1.0251	0.3212			
			Sill	2.3376	1.0583	0.3660			
12	0.26	55.2	Head	2.3481	1.1812	0.3589	0.5281	0.3626	0.2985
			L. Jamb	2.3481	1.1812	0.3589			
			R. Jamb	2.3840	1.0199	0.3070			
			Mullion	1.1928	1.0193	0.3071			
			Sill	2.3376	1.0583	0.3541			
13	0.24	56.3	Head	2.3481	1.1816	0.3471	0.5157	0.3462	0.2810
			L. Jamb	2.3481	1.1816	0.3471			
			R. Jamb	2.3840	1.0144	0.2927			
			Mullion	1.1928	1.0137	0.2929			
			Sill	2.3376	1.0584	0.3422			
14	0.22	57.3	Head	2.3481	1.1819	0.3355	0.5034	0.3298	0.2635
			L. Jamb	2.3481	1.1819	0.3355			
			R. Jamb	2.3840	1.0087	0.2787			
			Mullion	1.1928	1.0080	0.2789			
			Sill	2.3376	1.0585	0.3304			
15	0.20	58.4	Head	2.3481	1.1823	0.3238	0.4911	0.3133	0.2457
			L. Jamb	2.3481	1.1823	0.3238			
			R. Jamb	2.3840	1.0032	0.2646			
			Mullion	1.1928	1.0025	0.2648			
			Sill	2.3376	1.0587	0.3186			

Detailed drawings, datasheets, 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 simulated 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 named herein and relates only to the specimen(s) simulated. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

Eric Barilar
Simulation Technician

REVIEWED BY:

Kevin S. Louder
Project Engineer

EAB:EAB
B6092.04-116-45

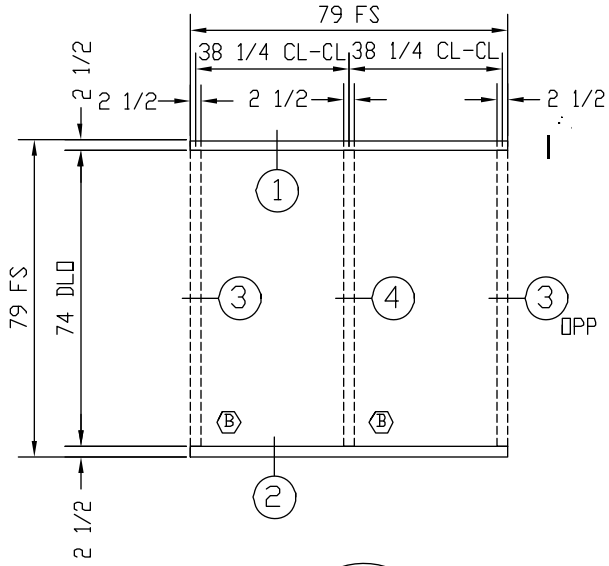
Attachments (pages): This report is complete only when all attachments listed are included.
Appendix A: Drawings and Bills of Material (8)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
.04R0	2/14/2012	All	Original Report Issue

All drawings and Bills of Material used in simulating this product are enclosed in this Appendix.

Appendix A



SYMBOL KEY			
SYMBOL	DESCRIPTION	QTY	COMMENTS
(B)	37.875 X 74.875	2	1 INS = INSULATED GLASS

REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

2109 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 589-1281 FAX: (323) 232-2323

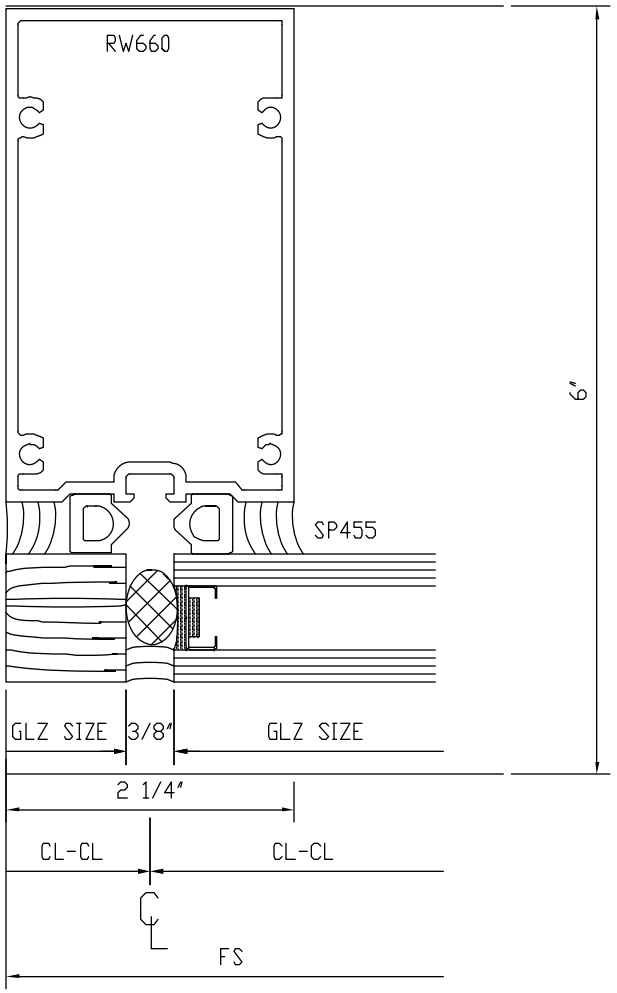
DIVISION: UNITED STATES ALUMINUM

DRAWN BY: DCW
DATE: 12/20/2011
SCALE: 3/8"=1"

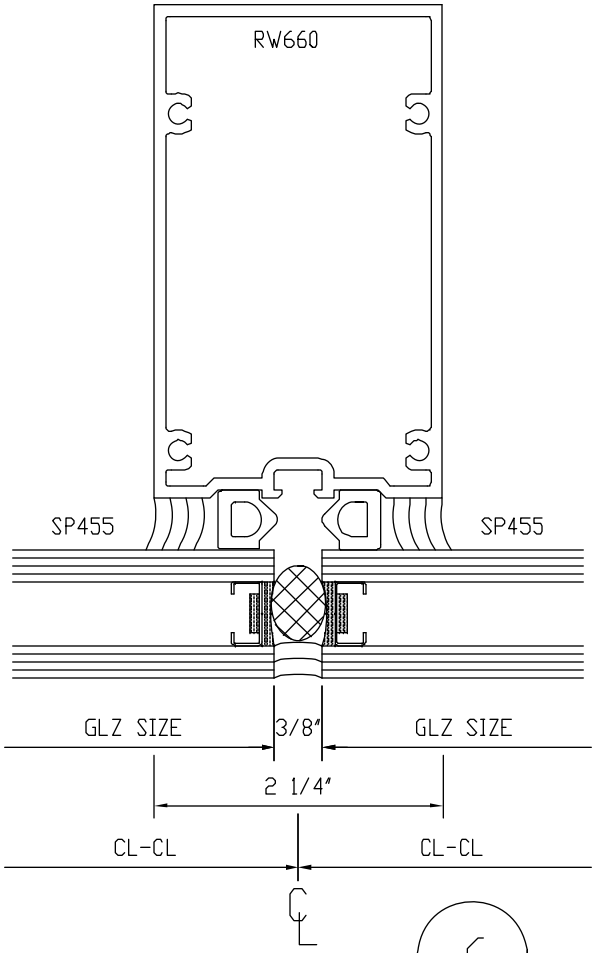
THERMAL_TEST_NFRC_AAMA_1503
SERIES_TT601_SSG

DWG NO.
MU2011-002-01

MU2011-002-03



5



6

REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

2100 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 589-1281 FAX: (323) 232-2323

DIVISION UNITED STATES ALUMINUM

DRAWN BY: DCW

DWG'D 12/20/2011

SCALE: FULL

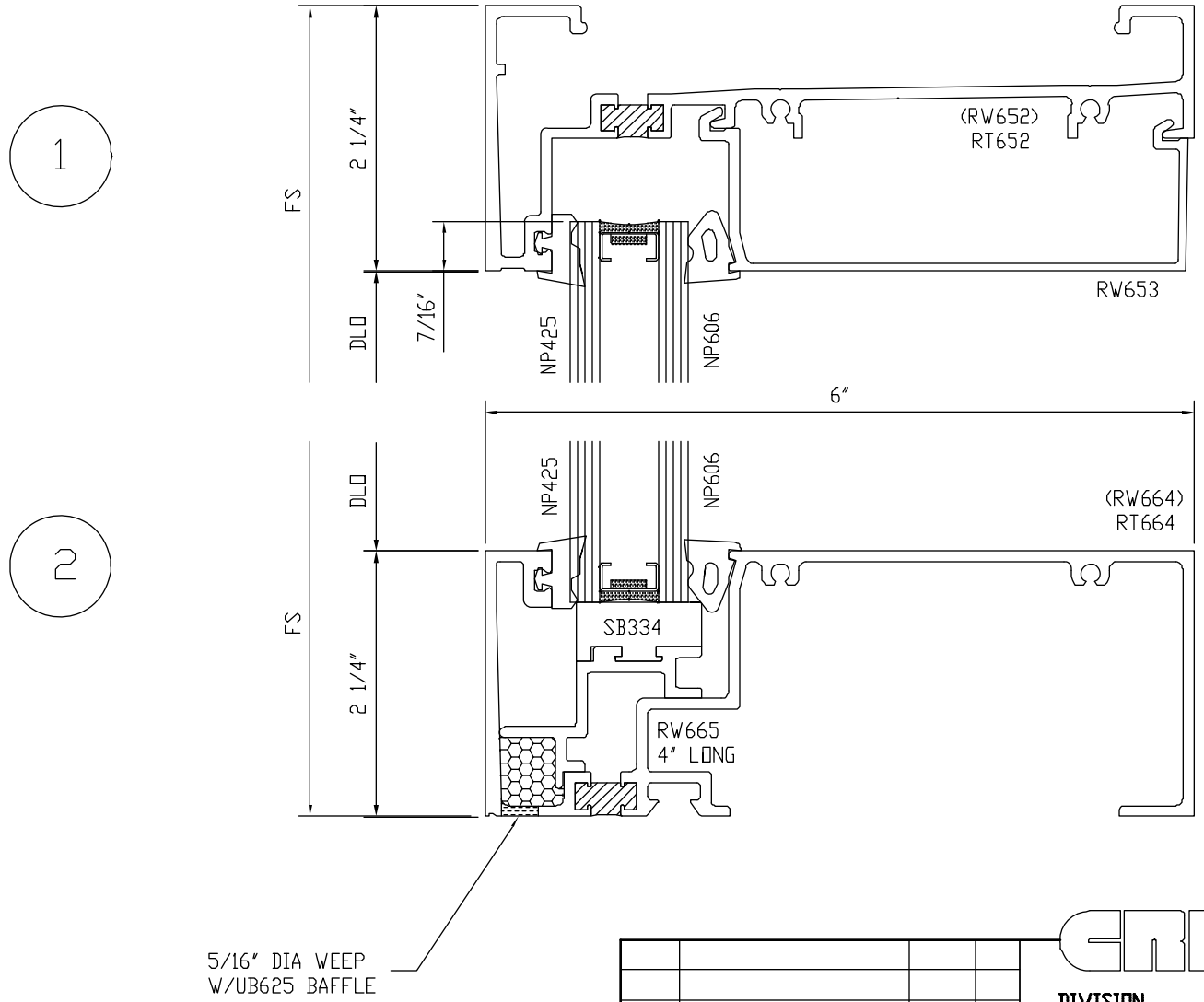
THERMAL_TEST_NFRC_AAMA_1503

SERIES_TT601_SSG

DWG NO.

MU2011-002-03

MU2011-002-02



REV	REV_DESCRIPTION	DATE	XXX
SYM	REVISION	DATE	BY

2100 E. 38TH STREET VERNON, CA 90058
PHONE: (323) 589-1281 FAX: (323) 232-2523

DIVISION: UNITED STATES ALUMINUM

DRAWN BY: DCW

DWG'D: 12/20/2011

SCALE: FULL

THERMAL_TEST_NFRC_AAMA_1503

SERIES_TT601_SSG

DWG NO. MU2011-002-02