

GAMCO CORPORATION COMPUTER SIMULATION REPORT

SCOPE OF WORK

FG451IS STOREFRONT - 1" IG - AAMA 507

REPORT NUMBER

R9112.01-116-45 R0

TEST DATE

10/17/24

ISSUE DATE

10/17/24

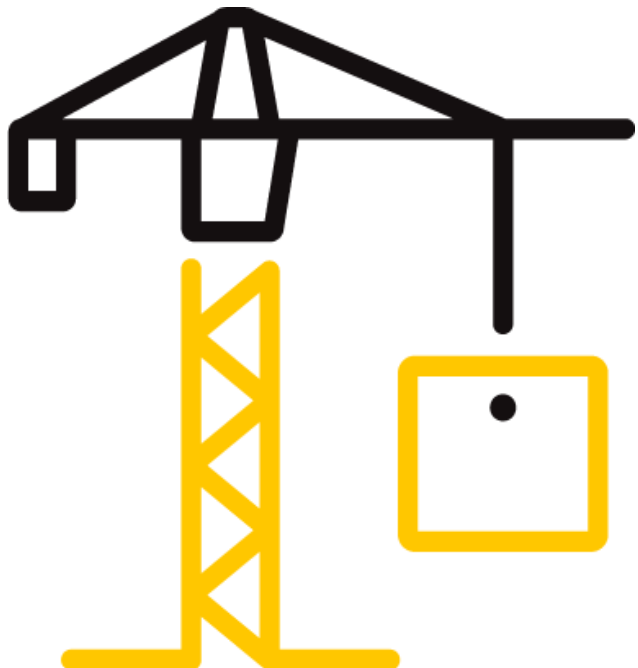
PAGES

24

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-8192 (05/10/24)

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TEST REPORT FOR GAMCO CORPORATION

Report No.: R9112.01-116-45 R0

Date: 10/17/24

REPORT ISSUED TO

GAMCO CORPORATION

131-10 Maple Avenue

Flushing, New York 11355

SECTION 1

SUMMARY

SERIES/MODEL: FG451IS Storefront - 1" IG

Architectural Testing, Inc. (an Intertek company), dba Intertek Building & Construction (Intertek B&C) was contracted to perform AAMA 507 computer simulations utilizing thermal thermal modeling computer software developed by Lawrence Berkeley National Laboratory Laboratory (LBNL). Results obtained are simulated values and were secured using the designated test methods.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. The record retention end date of this report is 10/17/29.

For INTERTEK B&C:

COMPLETED BY: Eric S. Leitner
Manager - Thermal
TITLE: Testing & Simulations
SIGNATURE:
DATE: 10/17/24

REVIEWED BY: Allison M. Ford
Technician Team Leader,
TITLE: SIRC
SIGNATURE:
DATE: 10/17/24

ESL:esl

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SECTION 2

TEST METHODS

The products were evaluated in accordance with the following:

AAMA 507-15, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings

ANSI/NFRC 100-2023, Procedure for Determining Fenestration Product U-Factors

ANSI/NFRC 200-2023, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

SECTION 3

TEST PROCEDURE

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

FRAME AND EDGE MODELING	THERM 7.8.71
CENTER-OF-GLASS MODELING	WINDOW 7.8.71
TOTAL PRODUCT CALCULATIONS	WINDOW 7.8.71
SPECTRAL DATA LIBRARY	IGDB 101.0

Modeling Assumptions / Technical Interpretations

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) This product is available in either a painted or anodized finish. These two finish types may be grouped in accordance with ANSI/NFRC 100-2023, Section 4.2.1.L. The painted finish was simulated since it is the worst case (highest emissivity).
- 3) The center-line modeling approach was conducted using the horizontal intermediate for the head and sill members and the vertical intermediate for the jambs. This procedure is outlined in the NFRC Simulation Manual, Section 8.9.
- 4) Non-continuous hardware was not modeled.

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SECTION 4

SIMULATION SPECIMEN DESCRIPTION

SERIES/MODEL	FG451IS Storefront - 1" IG
PRODUCT TYPE	Window Wall
FRAME MATERIAL	AT - Aluminum w/ Thermal Breaks
SASH MATERIAL	NA - Not Applicable

GLAZING OPTIONS					
	<i>OUTER PANE</i>	<i>MIDDLE PANE</i>	<i>INNER PANE</i>	<i>GAP SIZES</i>	<i>IG OVERALL</i>
GL1	1/4"	N/A	1/4"	0.500"	1"
GL2	1/4"	Heat Mirror	1/4"	0.250"	1"

GL1: Dual glazed IG unit (COG=0.48 - COG=0.20)

GL2: Dual glazed IG unit w/ heat mirror (COG=0.18 - COG=0.10)

SPACER OPTIONS			
<i>TYPE</i>	<i>PRIMARY SEAL</i>	<i>SECONDARY SEAL</i>	<i>CODE</i>
Aluminum Dual Seal Spacer	Butyl Rubber	Butyl Rubber	A1-D

SECTION 5

MEASURED SIMULATION DATA

U-FACTOR CALCULATIONS	
Exterior Air Temperature	-0.4°F
Exterior Wind Velocity	12.3 mph (Perpendicular Flow)
Interior Air Temperature	69.8°F

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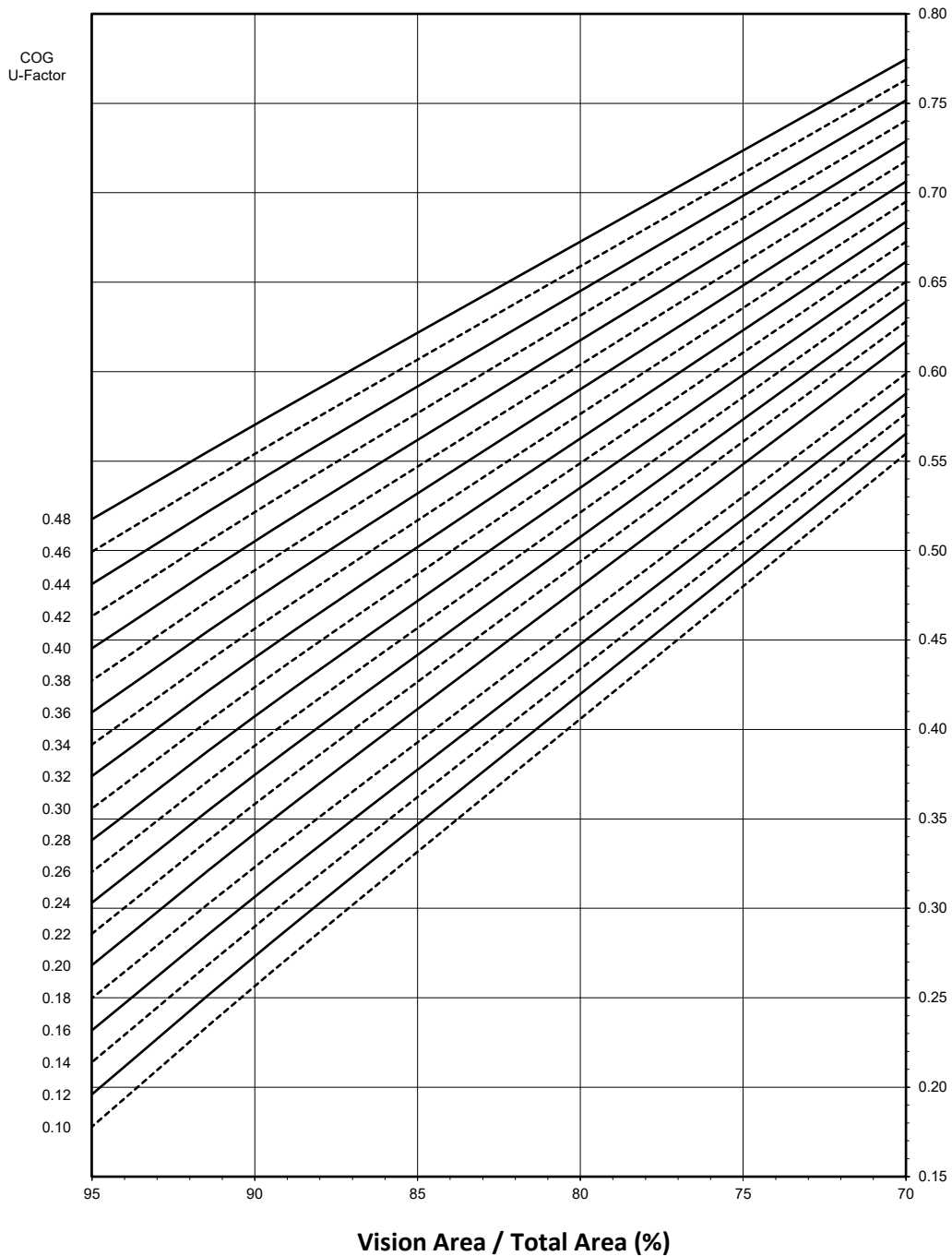
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SECTION 6

SIMULATION RESULTS

U-FACTOR CALCULATIONS: System U-Factor vs. Percentage of Vision Area



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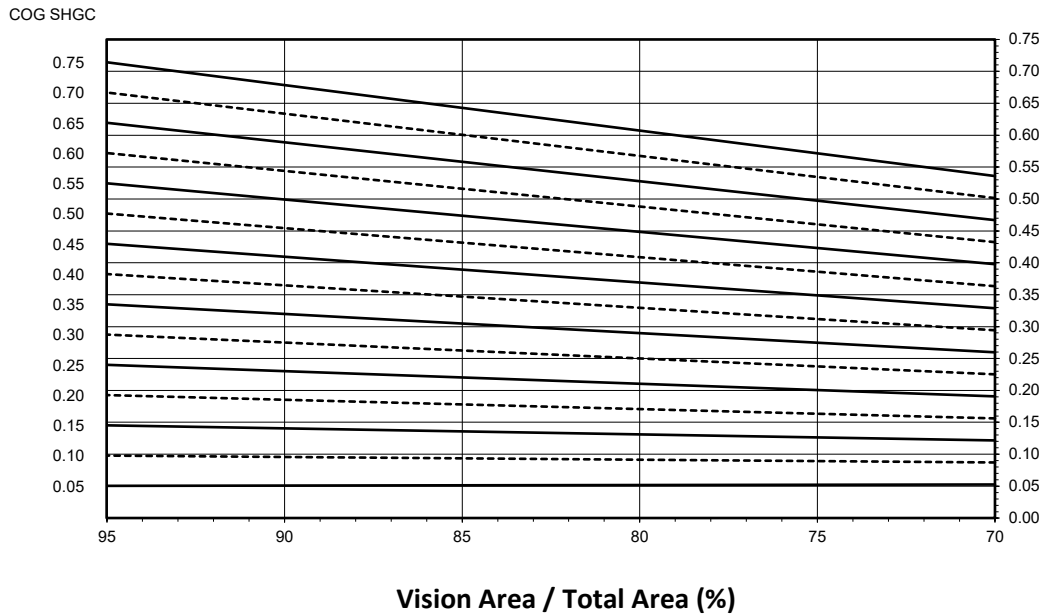
Report No.: R9112.01-116-45 R0

Date: 10/17/24

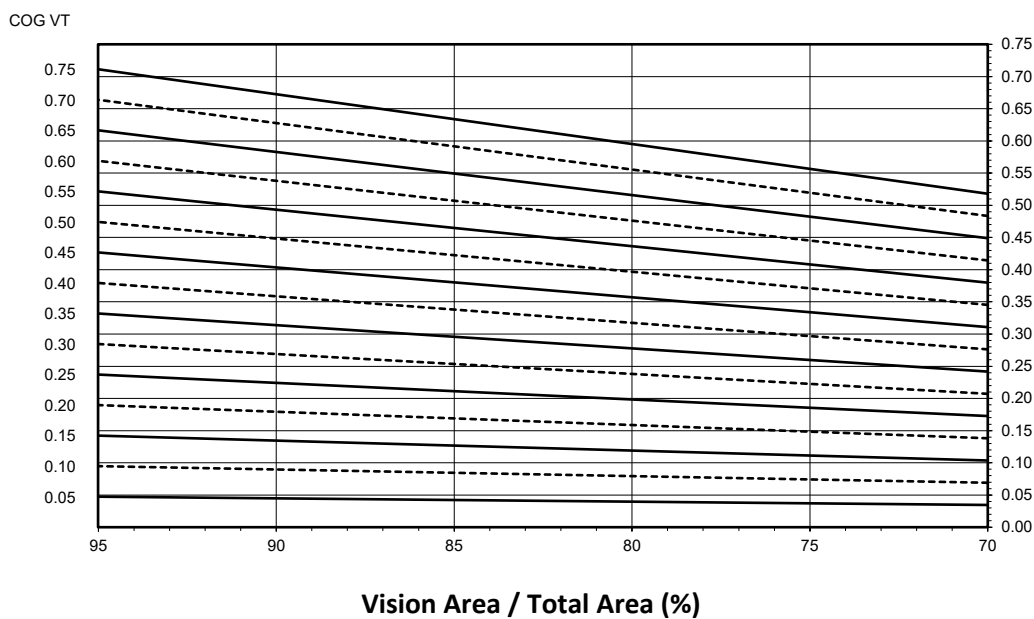
SECTION 6

SIMULATION RESULTS

SHGC CALCULATIONS: System SHGC vs. Percentage of Vision Area



VT CALCULATIONS: System VT vs. Percentage of Vision Area



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SECTION 6

SIMULATION RESULTS

U-FACTOR CALCULATIONS (FG451IS Storefront - 1" IG)		
Size Specific U-Factor Matrix*		
Glazing Option	Center-of-Glass U-Factor	Overall U-Factor
1	0.48	0.59
2	0.46	0.57
3	0.44	0.56
4	0.42	0.54
5	0.40	0.52
6	0.38	0.51
7	0.36	0.49
8	0.34	0.48
9	0.32	0.46
10	0.30	0.45
11	0.28	0.43
12	0.26	0.41
13	0.24	0.40
14	0.22	0.38
15	0.20	0.37
16	0.18	0.35
17	0.16	0.33
18	0.14	0.31
19	0.12	0.30
20	0.10	0.28

*The size specific U-Factor matrix is based on the Window Wall NFRC specimen size of 2000mm x 2000mm (78.75 in x 78.75 in). This represents 88.3% Vision Area / Total Area.

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SECTION 6

SIMULATION RESULTS

SHGC/VT CALCULATIONS (FG451IS Storefront - 1" IG)			
Size Specific SHGC Matrix*		Size Specific VT Matrix*	
Center-of-Glass SHGC	Overall SHGC	Center-of-Glass VT	Overall VT
0.75	0.67	0.75	0.66
0.70	0.62	0.70	0.62
0.65	0.58	0.65	0.57
0.60	0.53	0.60	0.53
0.55	0.49	0.55	0.48
0.50	0.45	0.50	0.44
0.45	0.40	0.45	0.40
0.40	0.36	0.40	0.35
0.35	0.31	0.35	0.31
0.30	0.27	0.30	0.26
0.25	0.23	0.25	0.22
0.20	0.18	0.20	0.18
0.15	0.14	0.15	0.13
0.10	0.09	0.10	0.09
0.05	0.05	0.05	0.04

*The size specific SHGC and VT matrices are based on the Window Wall NFRC specimen size of 2000mm x 2000mm (78.75 in x 78.75 in). This represents 88.3% Vision Area / Total Area.

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SECTION 6

SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (FG451IS Storefront - 1" IG)									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70.00% Vision Area	ANSI/NFRC 100-2023	95.00% Vision Area
1	0.48	43.7°F	Head	2.3050	1.2537	0.5000	0.7746	0.5879	0.5176
			L. Jamb	1.1800	1.7044	0.4999			
			R. Jamb	1.1800	1.6605	0.5352			
			Mullion	2.3600	1.6824	0.5176			
			Sill	2.8050	1.0488	0.5063			
2	0.46	44.8°F	Head	2.3050	1.2538	0.4863	0.7631	0.5721	0.4994
			L. Jamb	1.1800	1.7049	0.4862			
			R. Jamb	1.1800	1.6608	0.5222			
			Mullion	2.3600	1.6829	0.5042			
			Sill	2.8050	1.0487	0.4926			
3	0.44	45.8°F	Head	2.3050	1.2539	0.4727	0.7517	0.5563	0.4813
			L. Jamb	1.1800	1.7054	0.4726			
			R. Jamb	1.1800	1.6612	0.5092			
			Mullion	2.3600	1.6833	0.4909			
			Sill	2.8050	1.0487	0.4789			
4	0.42	46.8°F	Head	2.3050	1.2540	0.4594	0.7403	0.5406	0.4633
			L. Jamb	1.1800	1.7059	0.4593			
			R. Jamb	1.1800	1.6616	0.4965			
			Mullion	2.3600	1.6838	0.4779			
			Sill	2.8050	1.0486	0.4655			
5	0.40	47.9°F	Head	2.3050	1.2541	0.4458	0.7289	0.5247	0.4453
			L. Jamb	1.1800	1.7065	0.4456			
			R. Jamb	1.1800	1.6620	0.4835			
			Mullion	2.3600	1.6843	0.4645			
			Sill	2.8050	1.0486	0.4518			
6	0.38	48.9°F	Head	2.3050	1.2543	0.4326	0.7176	0.5090	0.4274
			L. Jamb	1.1800	1.7073	0.4323			
			R. Jamb	1.1800	1.6627	0.4709			
			Mullion	2.3600	1.6850	0.4516			
			Sill	2.8050	1.0485	0.4386			

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SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (FG451IS Storefront - 1" IG)									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70.00% Vision Area	ANSI/NFRC 100-2023	95.00% Vision Area
7	0.36	50.0°F	Head	2.3050	1.2544	0.4193	0.7063	0.4932	0.4096
			L. Jamb	1.1800	1.7080	0.4190			
			R. Jamb	1.1800	1.6632	0.4582			
			Mullion	2.3600	1.6856	0.4386			
			Sill	2.8050	1.0485	0.4252			
8	0.34	51.0°F	Head	2.3050	1.2546	0.4060	0.6950	0.4773	0.3916
			L. Jamb	1.1800	1.7087	0.4057			
			R. Jamb	1.1800	1.6637	0.4454			
			Mullion	2.3600	1.6862	0.4255			
			Sill	2.8050	1.0485	0.4118			
9	0.32	52.0°F	Head	2.3050	1.2548	0.3928	0.6838	0.4615	0.3739
			L. Jamb	1.1800	1.7094	0.3925			
			R. Jamb	1.1800	1.6642	0.4328			
			Mullion	2.3600	1.6868	0.4127			
			Sill	2.8050	1.0486	0.3986			
10	0.30	53.1°F	Head	2.3050	1.2551	0.3797	0.6726	0.4455	0.3559
			L. Jamb	1.1800	1.7101	0.3794			
			R. Jamb	1.1800	1.6647	0.4203			
			Mullion	2.3600	1.6874	0.3998			
			Sill	2.8050	1.0486	0.3855			
11	0.28	54.2°F	Head	2.3050	1.2553	0.3667	0.6614	0.4297	0.3382
			L. Jamb	1.1800	1.7108	0.3663			
			R. Jamb	1.1800	1.6653	0.4078			
			Mullion	2.3600	1.6881	0.3870			
			Sill	2.8050	1.0487	0.3723			
12	0.26	55.2°F	Head	2.3050	1.2555	0.3536	0.6503	0.4137	0.3205
			L. Jamb	1.1800	1.7116	0.3532			
			R. Jamb	1.1800	1.6659	0.3952			
			Mullion	2.3600	1.6888	0.3742			
			Sill	2.8050	1.0487	0.3592			

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TOTAL PRODUCT CALCULATIONS (FG451IS Storefront - 1" IG)									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70.00% Vision Area	ANSI/NFRC 100-2023	95.00% Vision Area
13	0.24	56.3°F	Head	2.3050	1.2558	0.3406	0.6392	0.3978	0.3032
			L. Jamb	1.1800	1.7125	0.3402			
			R. Jamb	1.1800	1.6665	0.3828			
			Mullion	2.3600	1.6895	0.3615			
			Sill	2.8050	1.0488	0.3462			
14	0.22	57.3°F	Head	2.3050	1.2562	0.3276	0.6280	0.3819	0.2858
			L. Jamb	1.1800	1.7135	0.3271			
			R. Jamb	1.1800	1.6674	0.3701			
			Mullion	2.3600	1.6904	0.3486			
			Sill	2.8050	1.0490	0.3330			
15	0.20	58.4°F	Head	2.3050	1.2565	0.3146	0.6167	0.3658	0.2683
			L. Jamb	1.1800	1.7144	0.3141			
			R. Jamb	1.1800	1.6681	0.3577			
			Mullion	2.3600	1.6912	0.3359			
			Sill	2.8050	1.0467	0.3200			
16	0.18	59.5°F	Head	2.3050	1.2477	0.2935	0.5989	0.3471	0.2498
			L. Jamb	1.1800	1.6998	0.2930			
			R. Jamb	1.1800	1.6534	0.3379			
			Mullion	2.3600	1.6766	0.3154			
			Sill	2.8050	1.0367	0.2981			
17	0.16	60.6°F	Head	2.3050	1.2480	0.2802	0.5877	0.3309	0.2318
			L. Jamb	1.1800	1.7009	0.2797			
			R. Jamb	1.1800	1.6543	0.3250			
			Mullion	2.3600	1.6776	0.3024			
			Sill	2.8050	1.0369	0.2848			
18	0.14	61.6°F	Head	2.3050	1.2490	0.2662	0.5764	0.3148	0.2140
			L. Jamb	1.1800	1.7029	0.2657			
			R. Jamb	1.1800	1.6561	0.3111			
			Mullion	2.3600	1.6795	0.2884			
			Sill	2.8050	1.0374	0.2706			

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TOTAL PRODUCT CALCULATIONS (FG451IS Storefront - 1" IG)									
Option Number	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							70.00% Vision Area	ANSI/NFRC 100-2023	95.00% Vision Area
19	0.12	62.7°F	Head	2.3050	1.2493	0.2530	0.5653	0.2986	0.1961
			L. Jamb	1.1800	1.7043	0.2523			
			R. Jamb	1.1800	1.6570	0.2983			
			Mullion	2.3600	1.6806	0.2753			
			Sill	2.8050	1.0375	0.2574			
20	0.10	63.9°F	Head	2.3050	1.2497	0.2397	0.5542	0.2824	0.1780
			L. Jamb	1.1800	1.7053	0.2390			
			R. Jamb	1.1800	1.6578	0.2853			
			Mullion	2.3600	1.6816	0.2621			
			Sill	2.8050	1.0377	0.2440			



Total Quality. Assured.

130 Derry Court
York, PA, 17406

Telephone: 717-764-7700
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www.intertek.com/building

TEST REPORT FOR GAMCO CORPORATION

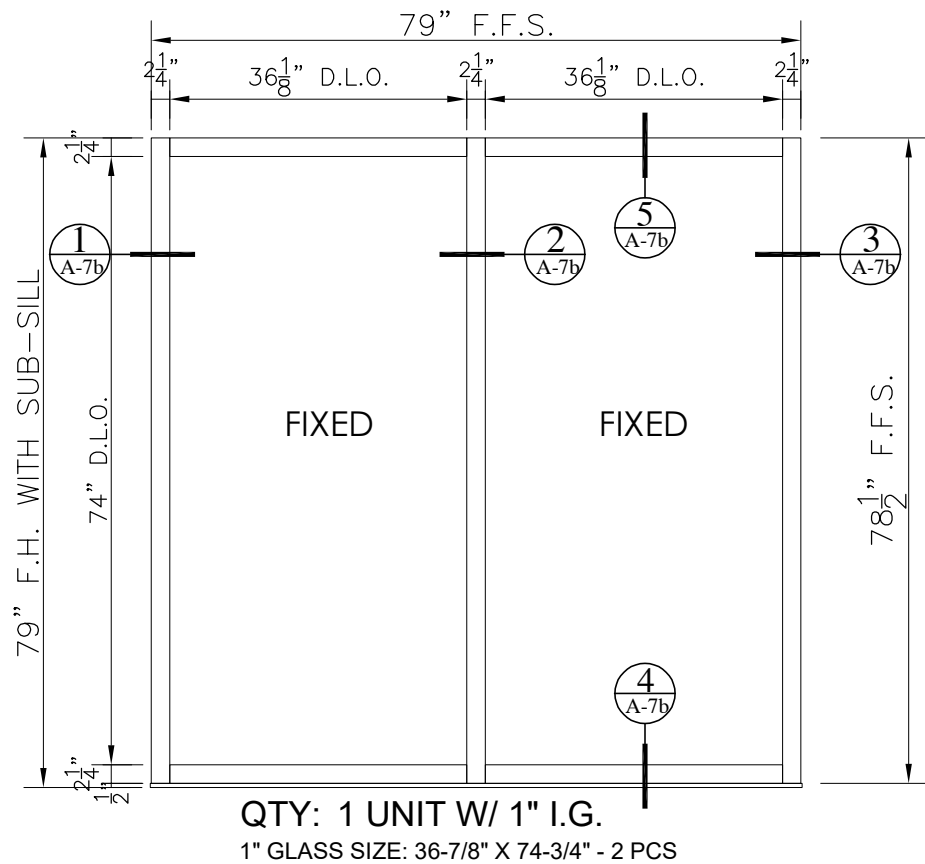
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SECTION 7

DRAWINGS / BILL OF MATERIALS

The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation result(s) reported herein. Any deviations are documented herein or on the drawings.

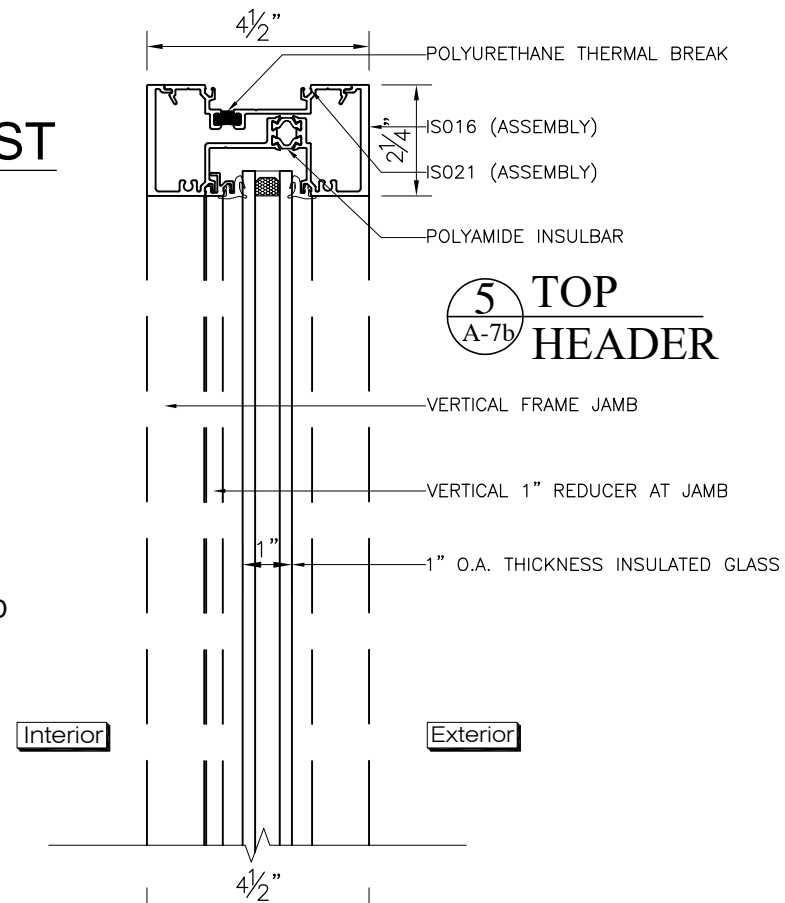


FG451IS AAMA 507 - THERMAL TEST

MODEL TESTED: FG451IS
GLAZING SET-UP FOR 1" O.A.

GLASS TYPE:
 EXT: 1/4" THICKNESS
 1/2" SPACER (ARGON)
 INT: 1/4" THICKNESS
 GLASS SIZE D.L.O. + 0.750

 ALL POLYAMIDE INSULBAR'S PROPRIETARY
 THERMAL CONDUCTIVITY MATERIAL IS LISTED
 IN THE NFRC 101 DATABASE IN APPENDIX C,
 PROVIDED COMPANY "ENSINGER"

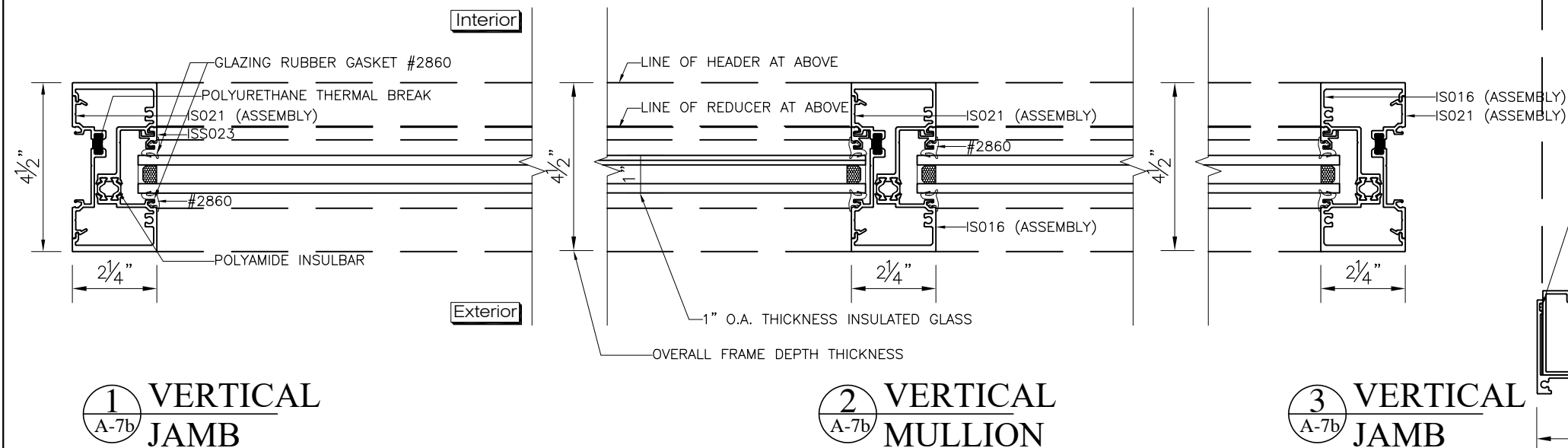


GENERAL NOTES
 * ALL DIMENSIONS TO BE VERIFIED IN FIELD BY CONTRACTOR.
 * D.L.O. = DAYLIGHT OPENING
 * R.O. = ROUGH OPENING
 * F.F.S. = FINISH FRAME SIZE
 * F.W.S. = FINISH WINDOW SIZE
 * F.D.S. = FINISH DOOR SIZE

ALUMINUM STOREFRONT ELEVATIONS

* NOTE: ALL ELEVATIONS SHOWN TO BE VIEW FROM EXTERIOR. SCALE: 1/2" = 1'-0"

Report #: R9112-116-45
 Date: 10/17/2024
 Verified by: *[Signature]*



HORIZONTAL SECTIONAL DETAILS

SCALE: 3" = 1'-0"

VERTICAL SECTIONAL DETAILS

SCALE: 3" = 1'-0"

ARCHITECT:

CLIENT:

TEL: FAX:

No: Date: Description: Approver:

REVISION

JOB NO.: DRAWN BY: D. CHEN
 CHECKED BY:
 DRAWING NO.: DATE: 09/19/2024
 A-7b SCALE: AS SHOWN

GAMCO CORPORATION
 MANUFACTURERS OF FENESTRATION PRODUCTS
 131-10 MAPLE AVE. FLUSHING, N.Y. 11355
 TEL: (718)359-8833 FAX: (718)359-8661
 info@gamcocorp.com www.gamcocorp.com

PROJECT:
 TEST PRODUCTS - STOREFRON

TITLE:
 COMMERCIAL FG451IS FRAME
 ELEVATION & DETAILS (THERM.)

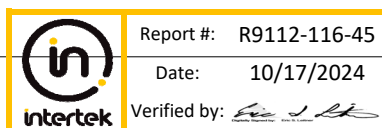


FG451IS FRAME - BOM LIST

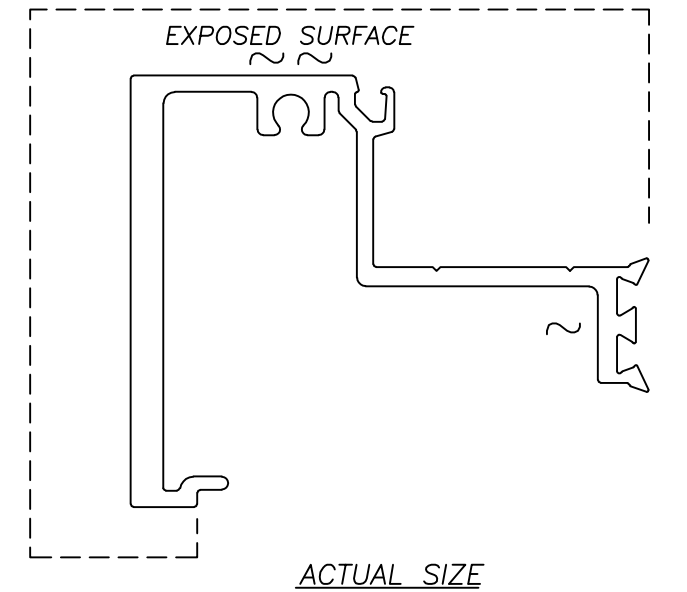
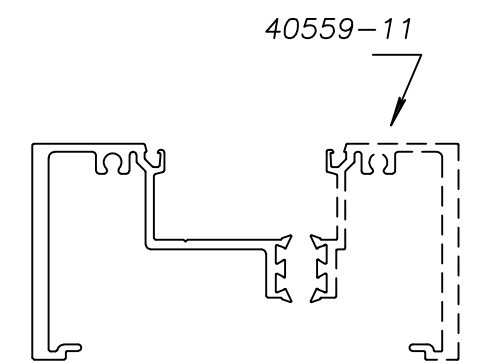
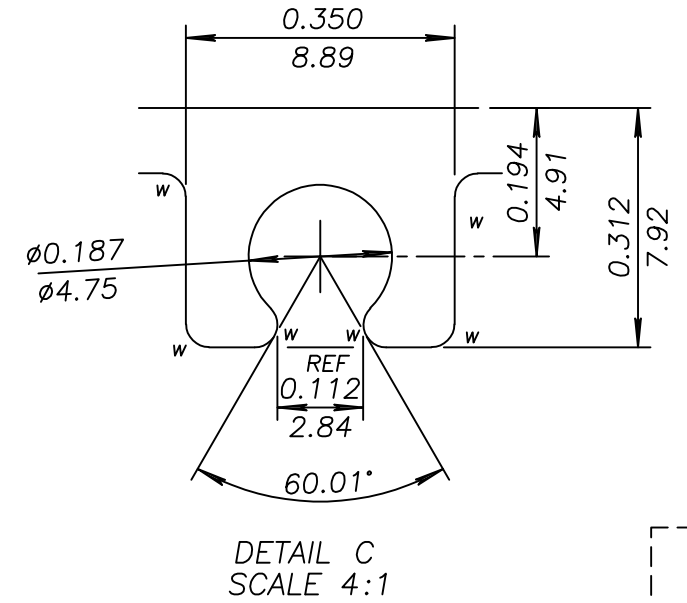
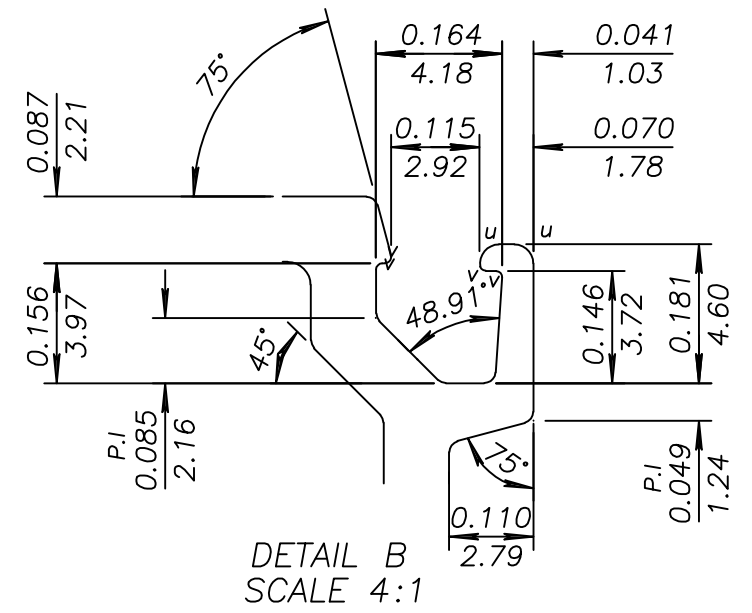
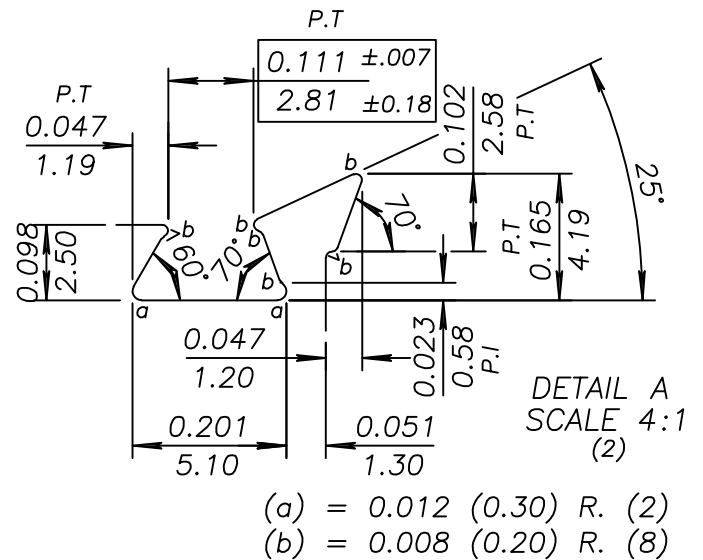
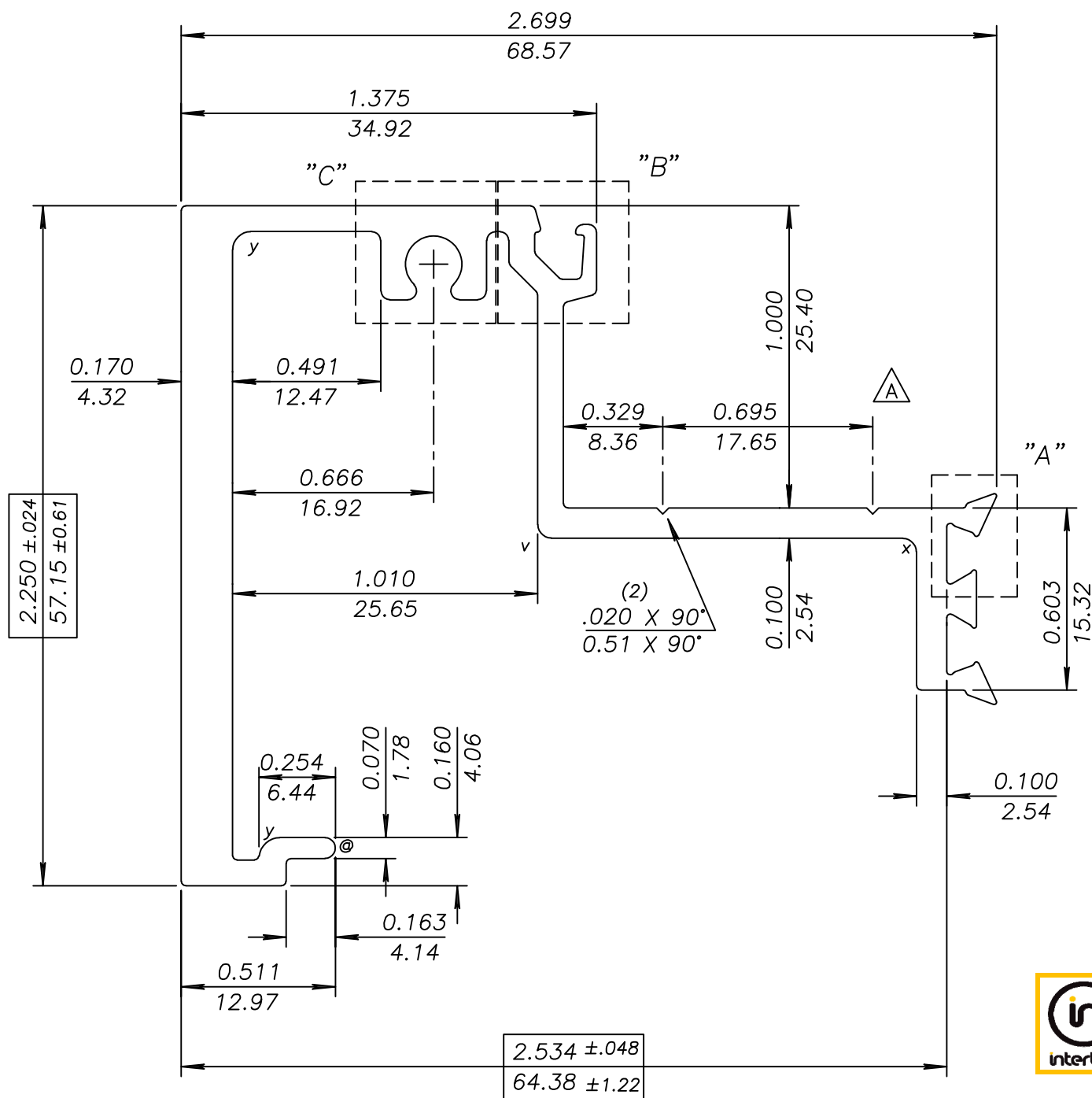
THERMAL TESTING MOCK-UP

1" I.G. SETUP

<u>LINE #</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>MATERIAL</u>
1	IS016	HEADER / JAMB	6060-T5
2	IS021	SHALLOW POCKET FILLER	6060-T5
3	ISS019	SILL CAP	6060-T5
4	IS017	MID / BASE SILL	6060-T5
5	ISS023	1" POCKET REDUCER	6060-T5
6	IS006	SUB-SILL	6060-T5
7	PLATE	SUB-SILL END PLATES	6060-T5
8	2860	GLAZING GASKET	EPDM
9	SETTING(2)	SETTING BLOCK	EPDM
10	DEF	WATER DEFLECTOR	PVC
11			
12			
13			
14			
15			
16			



CLIENT GAMCO CORPORATION	CLIENT No. ISS024	No. De PROFILE/DIE No. MS-81075	DASH
DESCRIPTION: HEADER / VERTICAL	TARRIF# 7604.29.10.00	PROPOSAL# 40559-10B	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE 24/01/15	SYM Add "v" groove	REVISION BY GL



intertek Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

~ = SHADOW LINES MAY APPEAR

NOTE
UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.015 (0.38) R.
(z) = 0.070 (1.78) R. (1)
(y) = 0.060 (1.52) R. (1)
(x) = 0.045 (1.14) R. (2)
(w) = 0.030 (0.76) R. (7)
(v) = 0.008 (0.20) R. (4)
(u) = 0.025 (0.63) R. (2)
(@) = FULL R. (1)

		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
0.085(2.16) ±0.006(0.15)			
SURF. ETABLIE EST. AREA	0.870 IN ²	561 MM ²	PER. EXT. OUT PER.
POIDS ETABLIE EST. WEIGHT	1.044 LBS _{PI} -FT.	1.554 KG/M	FACTEUR FACTOR
PER. ETABLIE EST. PER.	15.636 PO IN	397 MM	c.c.d.
DESSINE PAR DRAWN BY	Clint	ALLIAGE ALLOY	6063-T5
		ECHELLE SCALE	2:1
		DATE	18,09,2023
ARRONDIR TOUS LES COINS AVEC UN RAYON DE 0.25mm (0.010") SAUF AUTREMENT INDIQUE BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.			

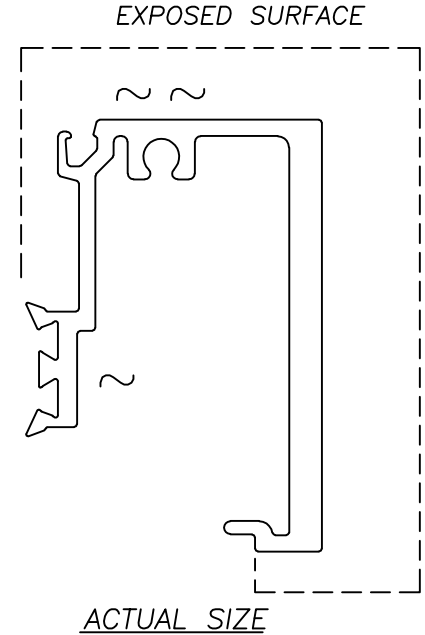
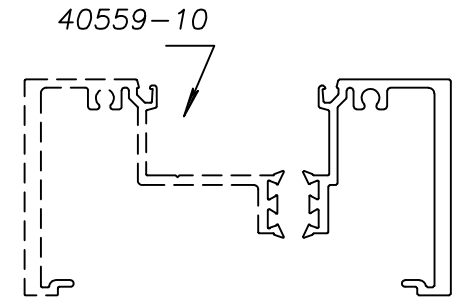
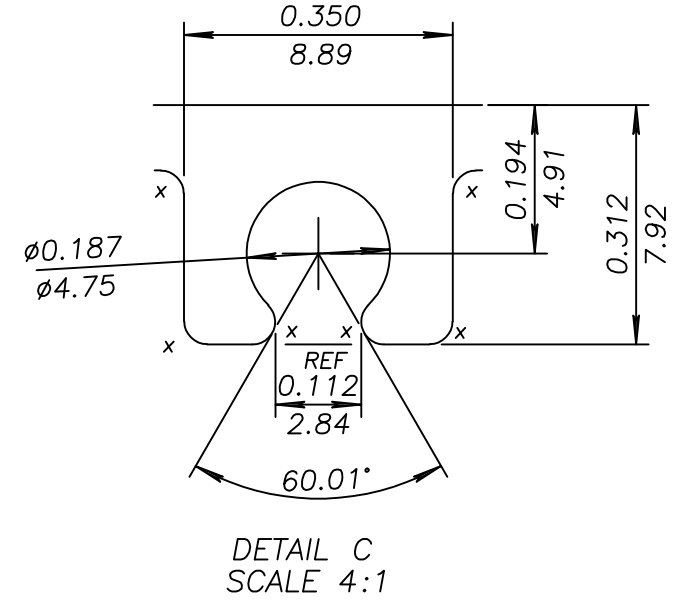
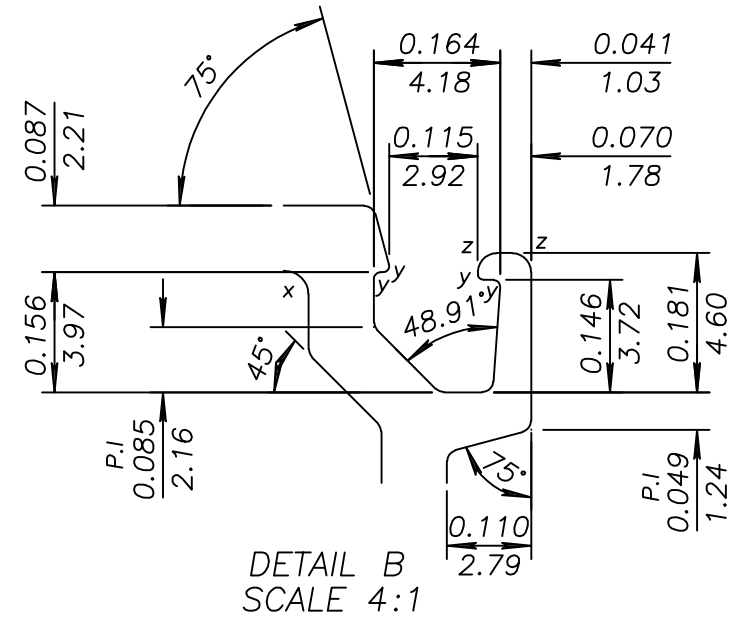
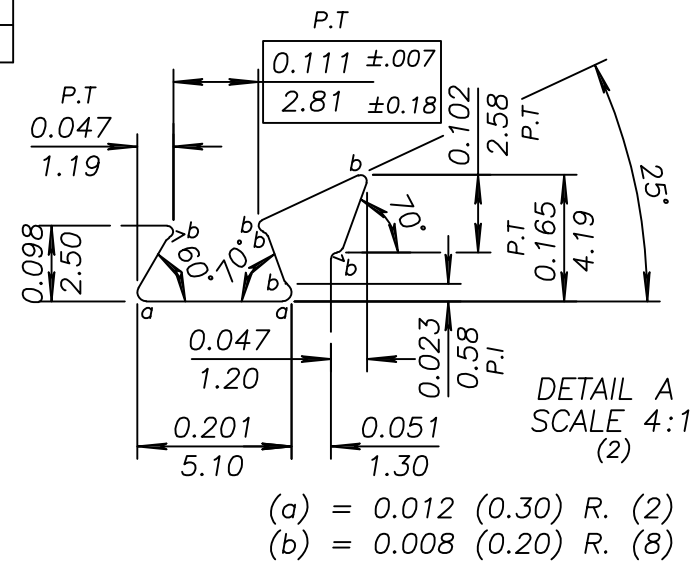
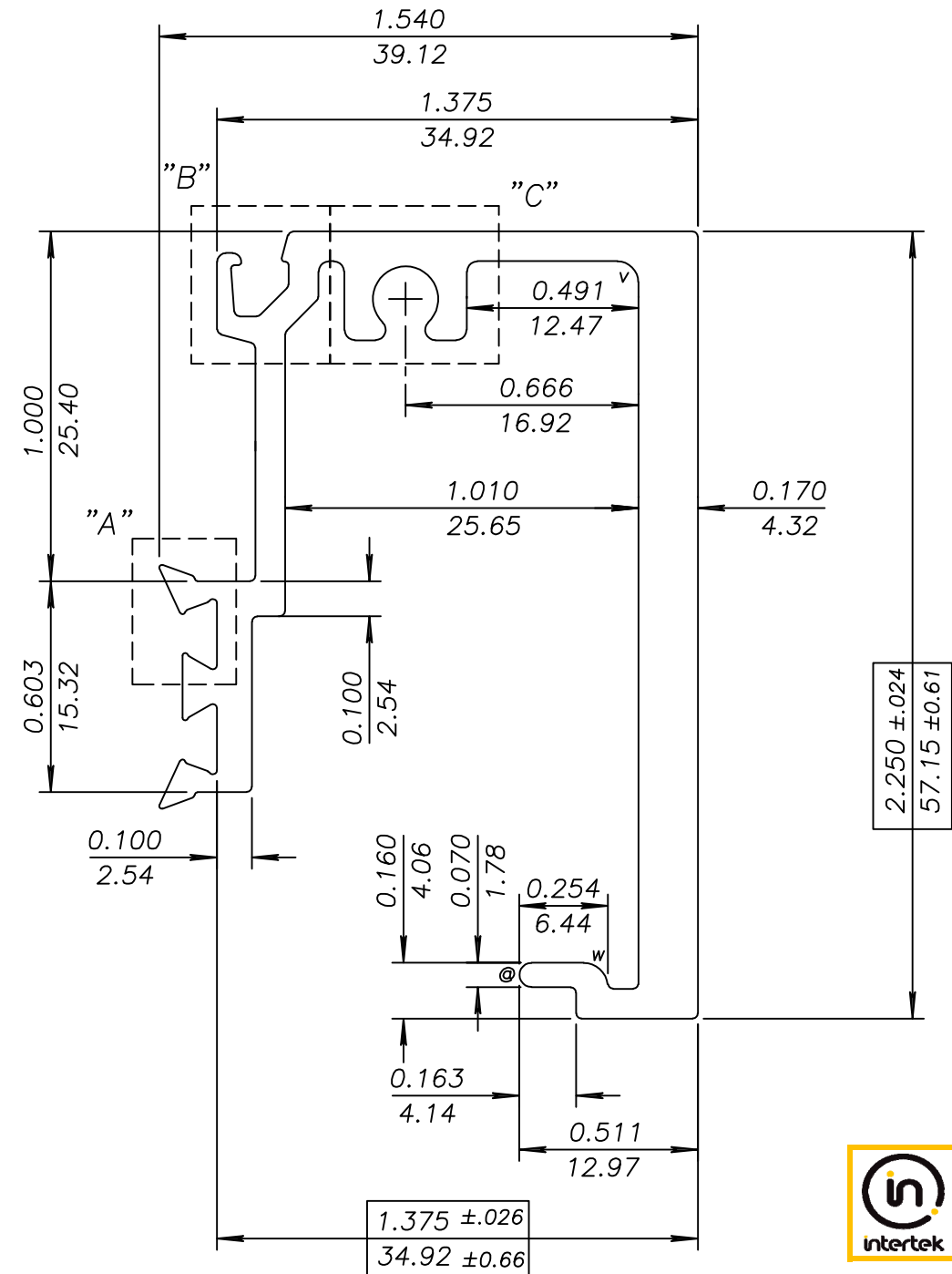
NOTE
CHECK OR INDICATE EXPOSED SURFACES, CIRCLE CRITICAL DIMENSIONS
INDICATE LOCATION FOR HYDRO IDENTIFICATION MARK

SHAPE DRAWING APPROVAL
PLEASE SIGNIFY BELOW THAT THE SHAPE AND DIMENSIONS CONFORM TO YOUR
REQUIREMENTS AND THAT YOU AGREE TO ACCEPT ALL LEGAL RESPONSIBILITIES FOR
PATENTS, TRADE MARK, COPYRIGHT, INDUSTRIAL DESIGN OR ANY OTHER INFRINGEMENT
RELATING TO THIS SHAPE AND TO INDEMNIFY AND SAVE HARMLESS Hydro
FROM ANY CLAIMS, SUITS, ACTIONS OR DEMANDS ARISING THEREFROM.

SIGNED BY: *[Signature]* DATE: 02/08/2024

TOLERANCE STANDARD SAUF SI INDIQUE
STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

CLIENT GAMCO CORPORATION	CLIENT No. ISS025	No. De PROFILE/DIE No. MS-81076	DASH
DESCRIPTION: HEADER / VERTICAL	TARRIF# 7604.29.10.00	PROPOSAL# 40559-11B	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE	SYM	REVISION



intertek Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

~ = SHADOW LINES MAY APPEAR

		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
0.085(2.16) ±0.006(0.15)			
SURF. ETABLIE EST. AREA	0.754 IN ²	487 MM ²	PER. EXT. OUT PER.
POIDS ETABL EST. WEIGHT	0.905 LBS	1.347 KG	FACTEUR FACTOR
PER. ETABL EST. PER.	13.327 PO IN	339 MM	c.c.d.
DESSINE PAR DRAWN BY	Clint	ALLIAGE ALLOY	6063-T5
ARRONDIR TOUS LES COINS AVEC UN RAYON DE 0.25mm (0.010") SAUF AUTREMENT INDIQUE BREAK ALL CORNERS .010" R (0.25R) UNLESS OTHERWISE NOTED.		ECHELLE SCALE	2:1
		DATE	18,09,2023

SAMPLE APPROVAL
THIS SAMPLE IS APPROVED
AND Hydro
MAY PROCEED WITH PRODUCTION

SIGNED: *[Signature]*
DATE: 03/15/2024

TOLERANCE STANDARD SAUF SI INDIQUE
STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

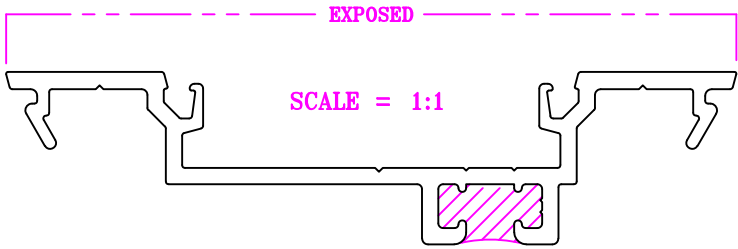
CUSTOMER'S SUPPLIED CAD FILE

UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.015 (0.38) R.

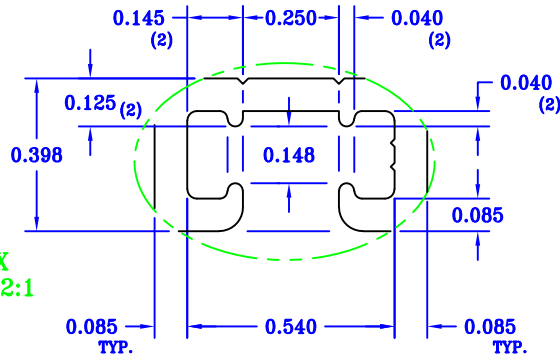
(z) = 0.025 (0.63) R. (2)
(y) = 0.008 (0.20) R. (4)
(x) = 0.030 (0.76) R. (7)
(w) = 0.070 (1.78) R. (1)
(v) = 0.060 (1.52) R. (1)
(@) = FULL R. (1)

REV	DIE REVISION DESCRIPTION	BY	DATE
-----	--------------------------	----	------

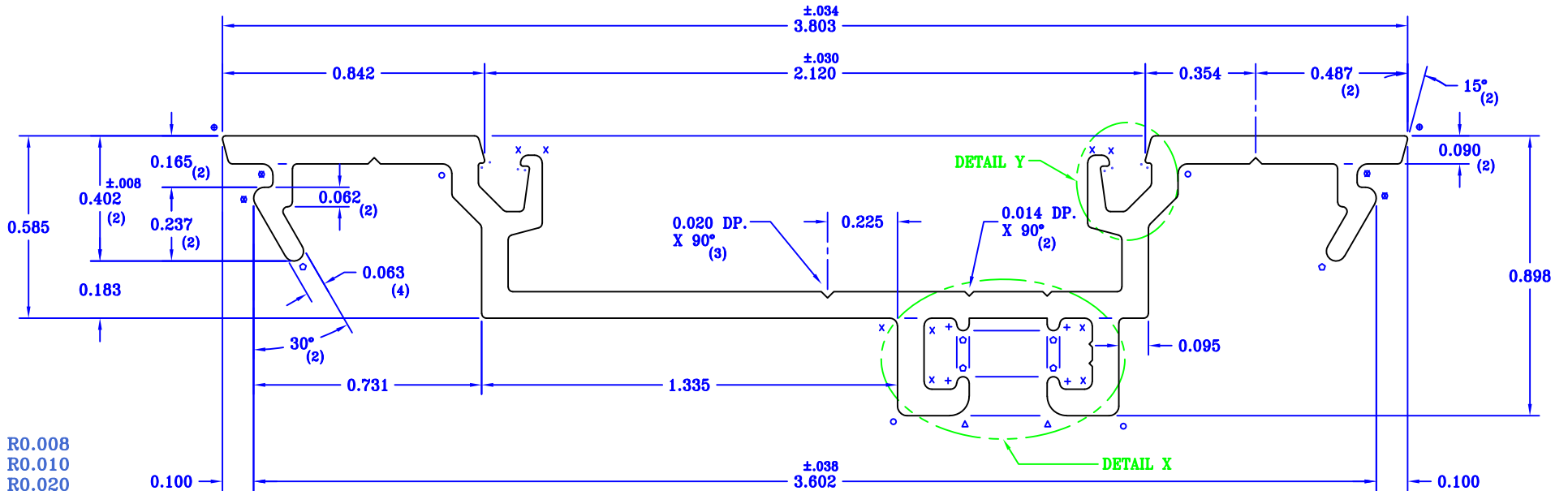
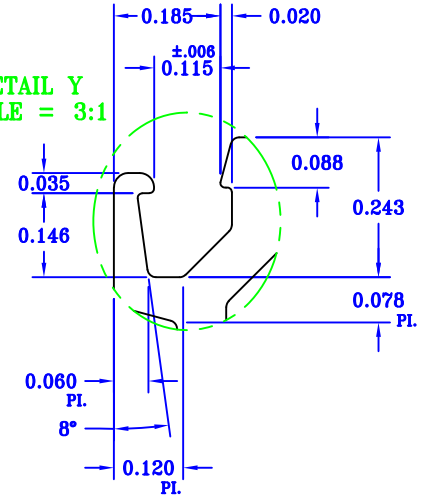
This is NOT a Gateway Extrusions design. This drawing is Gateway's interpretation of the section designed and requested by the customer, whom should check and test the design before using. Gateway accepts no responsibility or liability for the products produced therefrom. Gateway makes NO warranty of any particular purpose with regards to extrusions produced pursuant to this drawing. Gateway's only warranty shall be as stated in the Terms and Conditions of Sale.



DETAIL X
SCALE = 2:1



DETAIL Y
SCALE = 3:1



- R0.008
- ⊕ R0.010
- + R0.020
- × R0.025
- R0.030
- ⊗ R0.035
- △ R0.062
- FULL R


 Report #: R9112-116-45
 Date: 10/17/2024
 Verified by: *[Signature]*


Accepted By: *[Signature]*
Date: 07/10/2024

Thermal Pocket Size "A" (0.139 sq.in.)

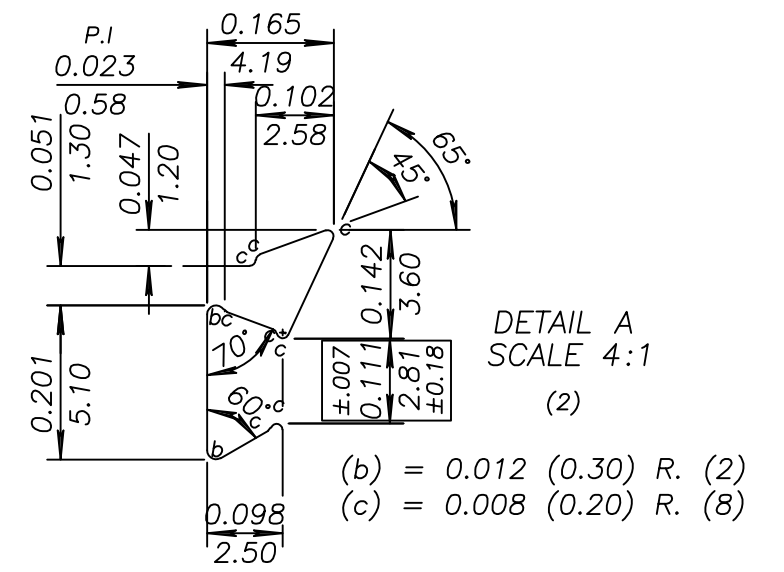
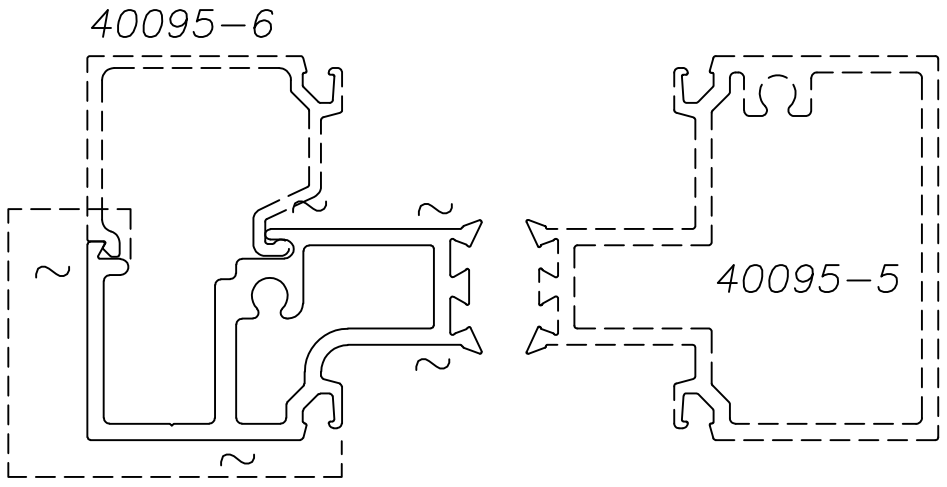
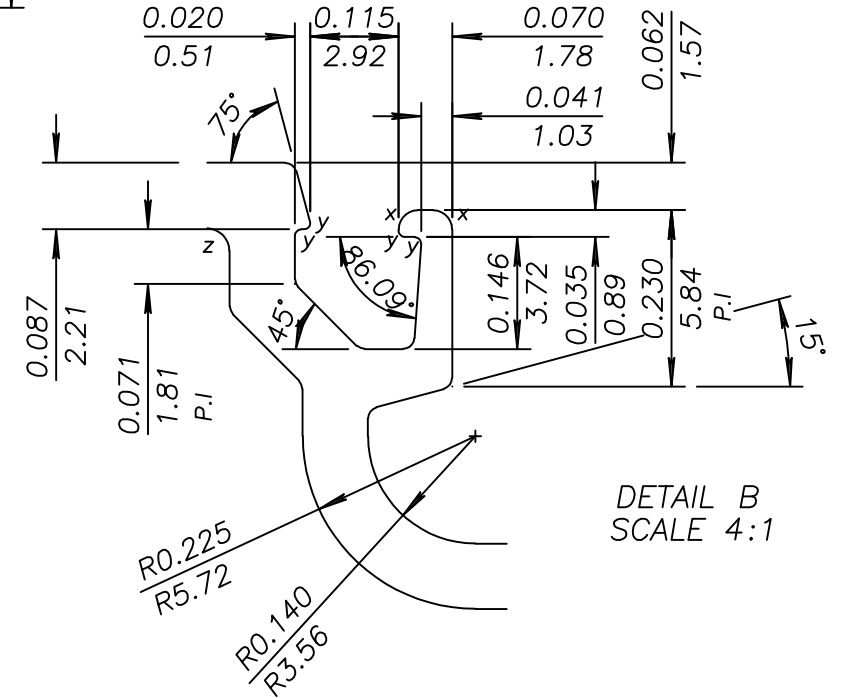
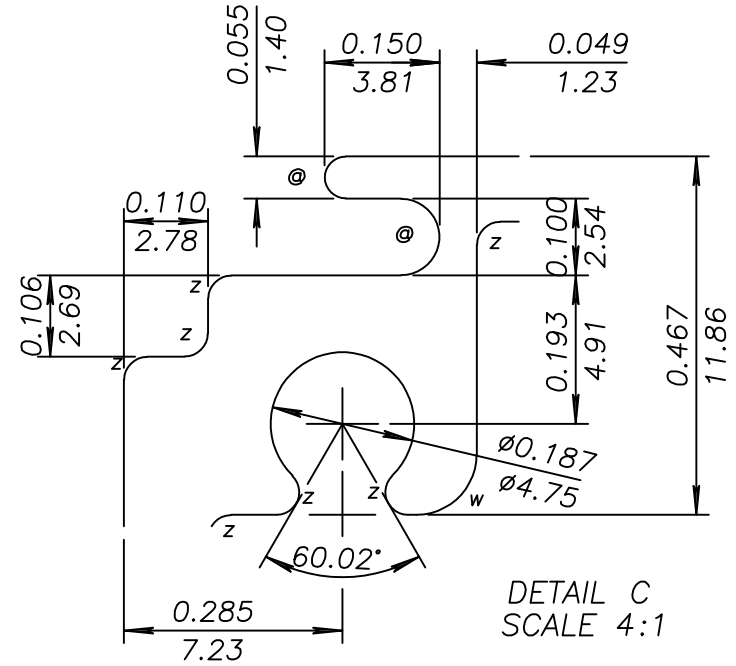
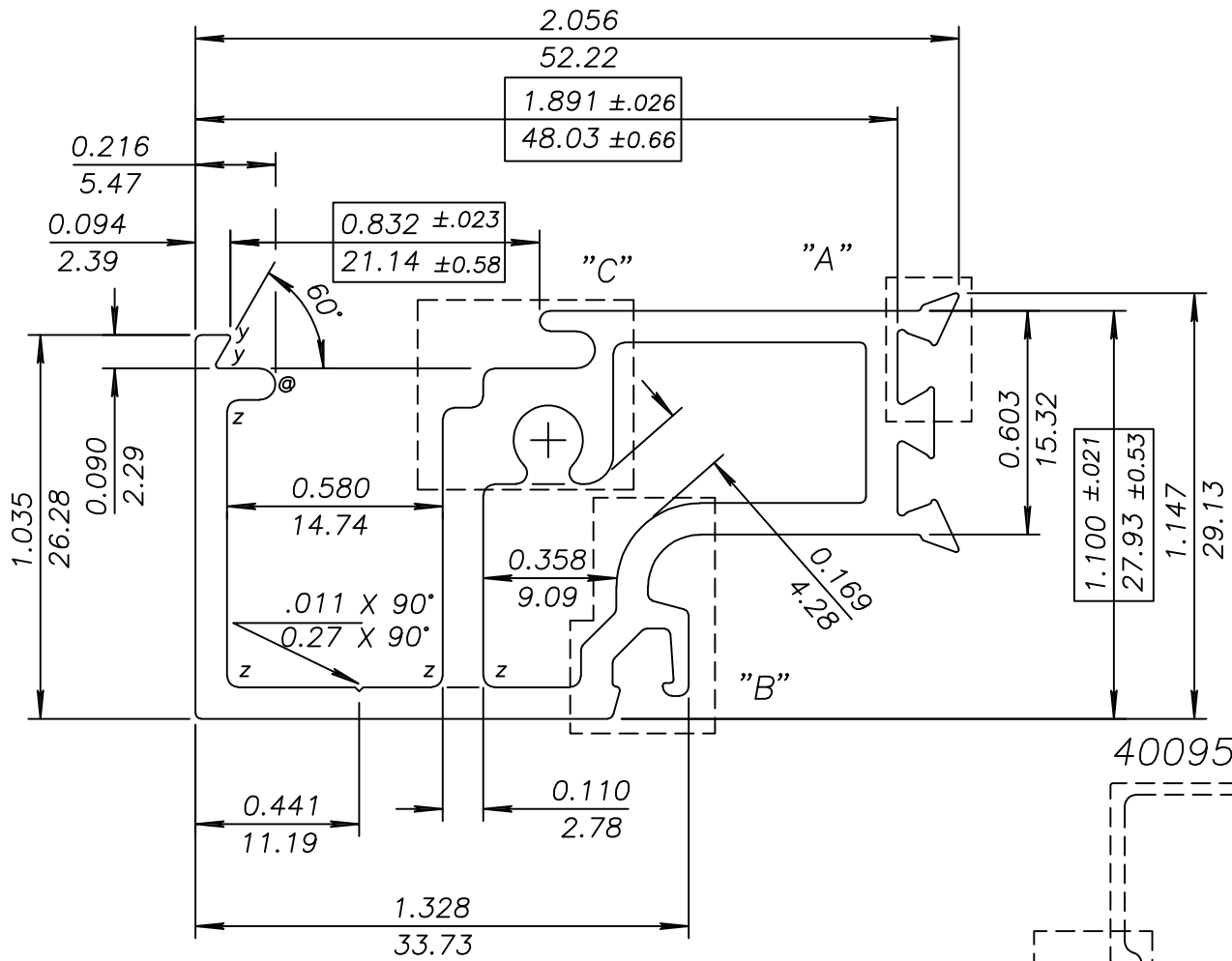
GATEWAY EXTRUSIONS
 704 West Park Road
 Union, MO 63084
STANDARD TOLERANCES FOR EXTRUDED PRODUCTS APPLY UNLESS SPECIFICALLY SHOWN OTHERWISE

Area: 0.569 sq.in.
 Full Perimeter: 13.929 in.
 Weight: 0.683 lb./ft.
 Fin. Perimeter: 5.877 in.
 Unspecified Wall Thickness: 0.085
 All N/S Corner Radius: 0.015

Customer: GAMCO CORP.		GWE DIE #:	
Part Name: IS021		Series Title:	
Part #: IS021		Drawing #: IS021.dwg	
Factor: 20	Type: SOLID	Material: 6063-T5	Date: 07/09/24
		Scale: 2 : 1	


 Designer:
 Drawn By: J HALTERMAN

CLIENT GAMCO CORPORATION	CLIENT No. ISH004	No. De PROFILE/DIE No. MH-80462	DASH
DESCRIPTION: MID / BASE SILL; 2 PARTS	TARRIF# 7604.21.00.00	PROPOSAL# 40095-4A	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE	SYM	REVISION



Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
±0.006(0.15) S		0.085(2.16)	
±0.010(0.25) H			
SURF. ETABLIE EST. AREA	0.615 PO ² IN ²	397 MM ²	PER. EXT. OUT PER.
POIDS ETABLIE EST. WEIGHT	0.738 LBS _{PI-FT.}	1.098 KG _M	FACTEUR FACTOR
PER. ETABLIE EST. PER.	13.935 PO IN	354 MM	C.C.D.
DESSINE PAR DRAWN BY	Danica	ALLIAGE ALLOY	6063-T5
		ECHELLE SCALE	2:1
		DATE	20,02,2023
ARRONDIR TOUS LES COINS AVEC UN RAYON DE 0.25mm (0.010") SAUF AUTREMENT INDIQUE BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.			

~ = SHADOW LINES MAY APPEAR

SAMPLE APPROVAL

THIS SAMPLE IS APPROVED
AND Hydro
MAY PROCEED WITH PRODUCTION

SIGNED: _____
DATE: _____

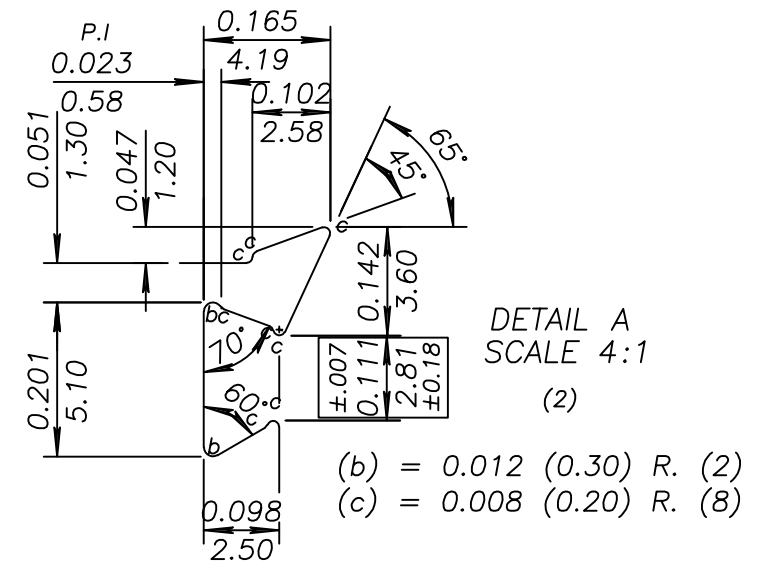
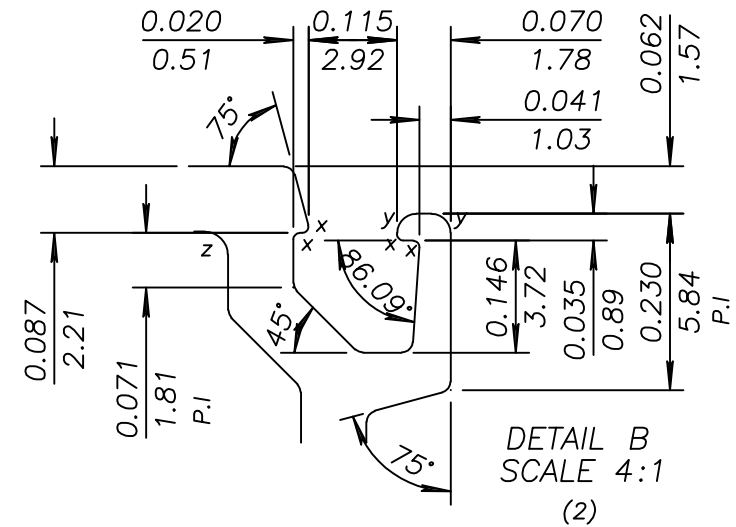
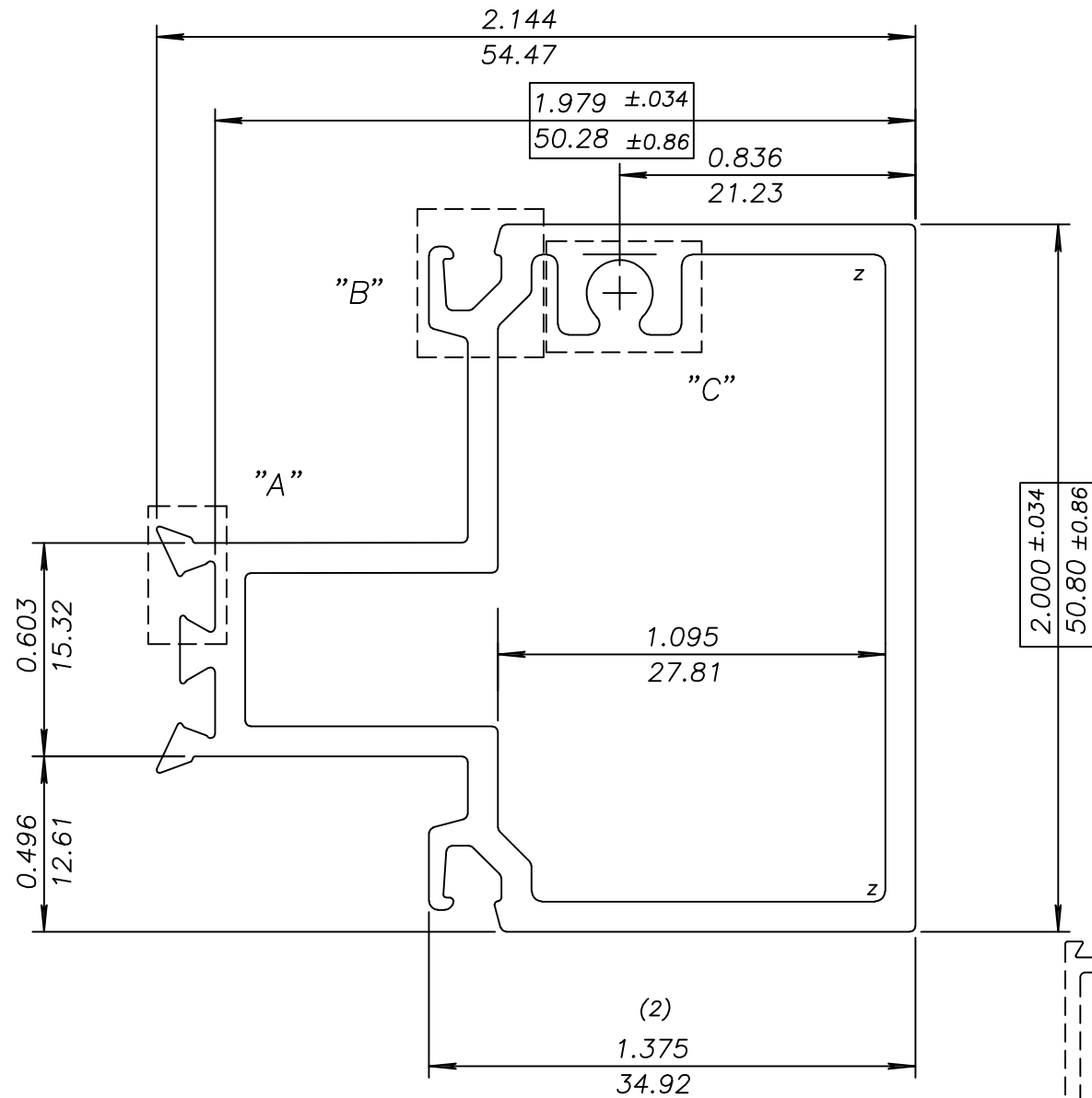
CUSTOMER'S SUPPLIED CAD FILE

UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.015 (0.38) R.

(z) = 0.030 (0.76) R. (12)
(y) = 0.008 (0.20) R. (6)
(x) = 0.025 (0.63) R. (2)
(w) = 0.079 (2.00) R. (1)
(@) = FULL R. (3)

TOLERANCE STANDARD SAUF SI INDIQUE
STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

CLIENT GAMCO CORPORATION	CLIENT No. ISH005	No. De PROFILE/DIE No. MH-80463	DASH
DESCRIPTION: MID / BASE SILL; 2 PARTS	TARRIF# 7604.21.00.00	PROPOSAL# 40095-5	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE	SYM	REVISION

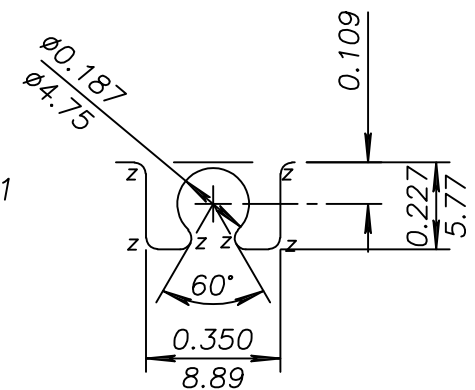


40095-4

EXPOSED SURFACE

ACTUAL SIZE

DETAIL C
SCALE 2:1



Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

~ = SHADOW LINES MAY APPEAR

		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
0.085(2.16) ±0.010(0.25) H			
SURF. ETABLIE EST. AREA	0.759 PO ² IN ²	490 MM ²	PER. EXT. OUT PER.
POIDS ETABLIE EST. WEIGHT	0.911 LBS PI-F.T.	1.355 KG/M	FACTEUR FACTOR
PER. ETABLIE EST. PER.	17.975 PO IN	457 MM	C.C.D.
DESSINE PAR DRAWN BY	Sandra	ALLIAGE ALLOY	6063-T5
		ECHELLE SCALE	2:1
		DATE	30,01,2023
ARRONDIR TOUS LES COINS AVEC UN RAYON DE 0.25mm (0.010") SAUF AUTREMENT INDIQUE BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.			

SAMPLE APPROVAL

THIS SAMPLE IS APPROVED
AND Hydro
MAY PROCEED WITH PRODUCTION

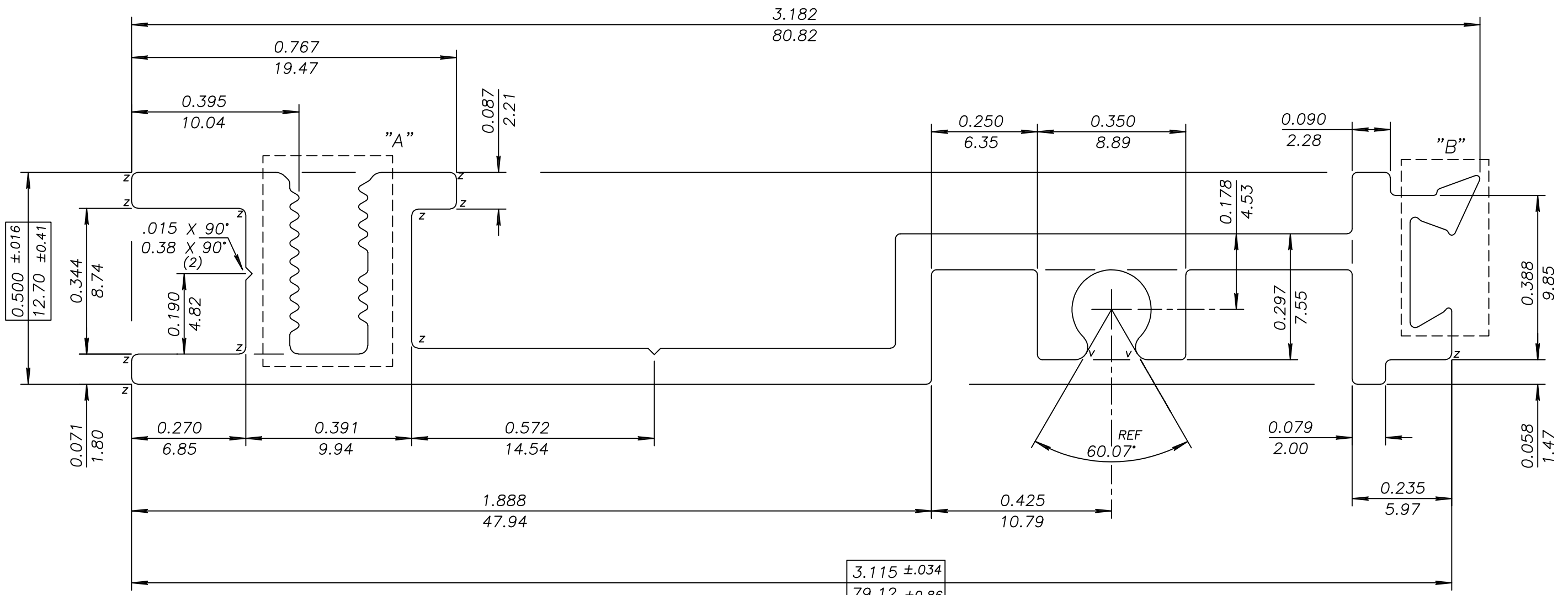
SIGNED: _____
DATE: _____

TOLERANCE STANDARD SAUF SI INDIQUE
STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

CUSTOMER'S SUPPLIED CAD FILE

UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.015 (0.38) R.
(z) = 0.030 (0.76) R. (10)
(y) = 0.025 (0.63) R. (4)
(x) = 0.008 (0.20) R. (8)

CLIENT GAMCO CORPORATION	CLIENT No. ISS007	No. De PROFILE/DIE No. MS-80465	DASH
DESCRIPTION: SUB-SILL; 2 PARTS	TARRIF# 7604.29.10.00	PROPOSAL# 40095-7	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE	SYM	REVISION

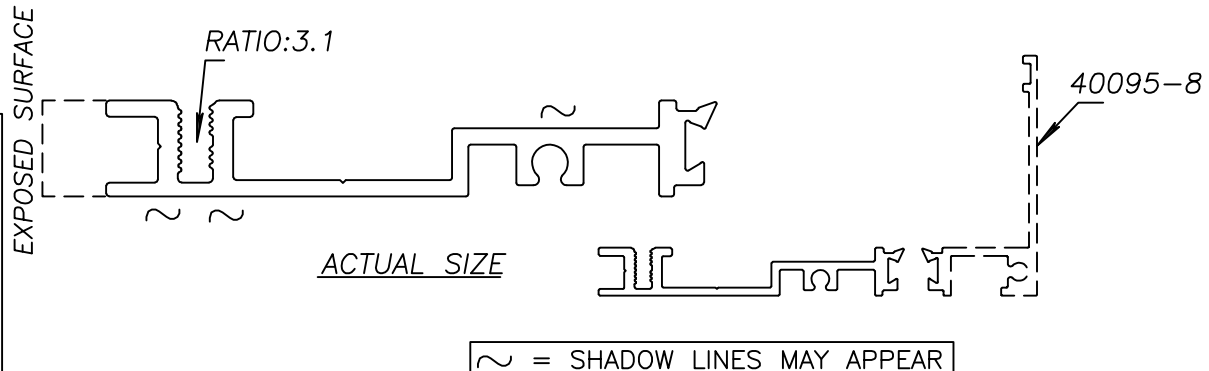


Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

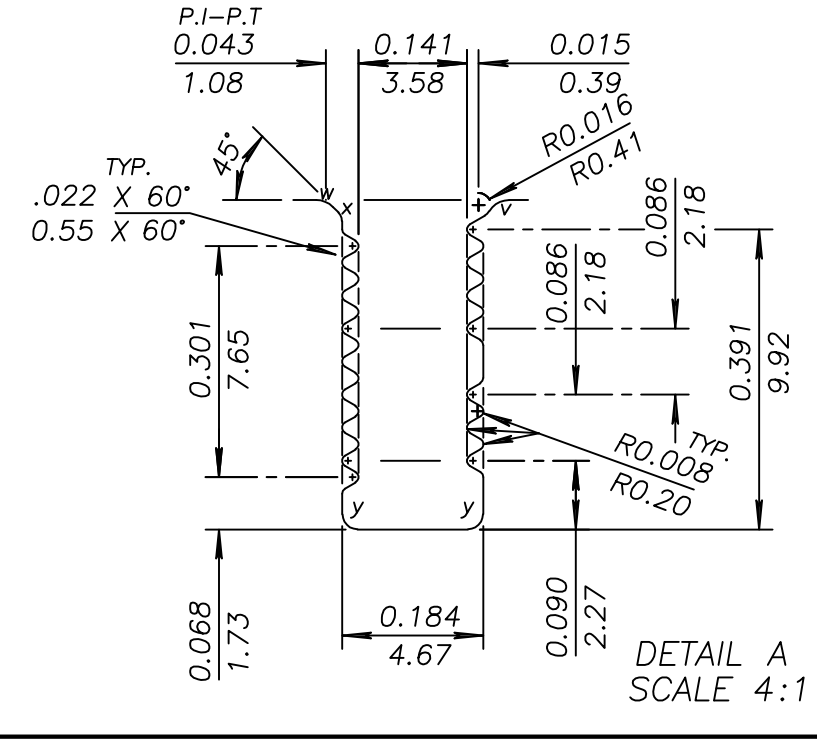
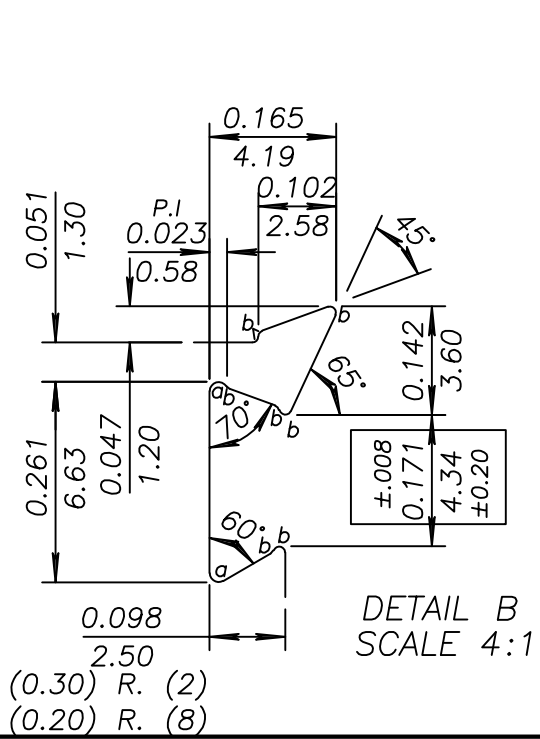
CUSTOMER'S SUPPLIED CAD FILE

UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.012 (0.30) R.

(z) = 0.015 (0.38) R. (11)
(y) = 0.020 (0.51) R. (2)
(x) = 0.016 (0.41) R. (1)
(w) = 0.031 (0.79) R. (1)
(v) = 0.030 (0.77) R. (3)

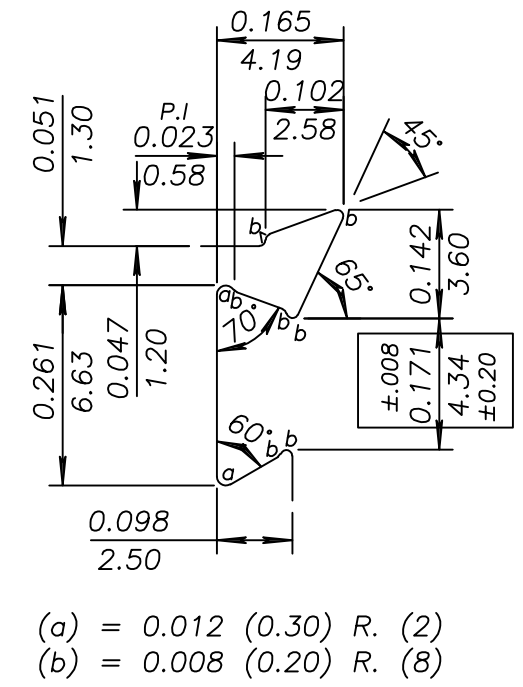
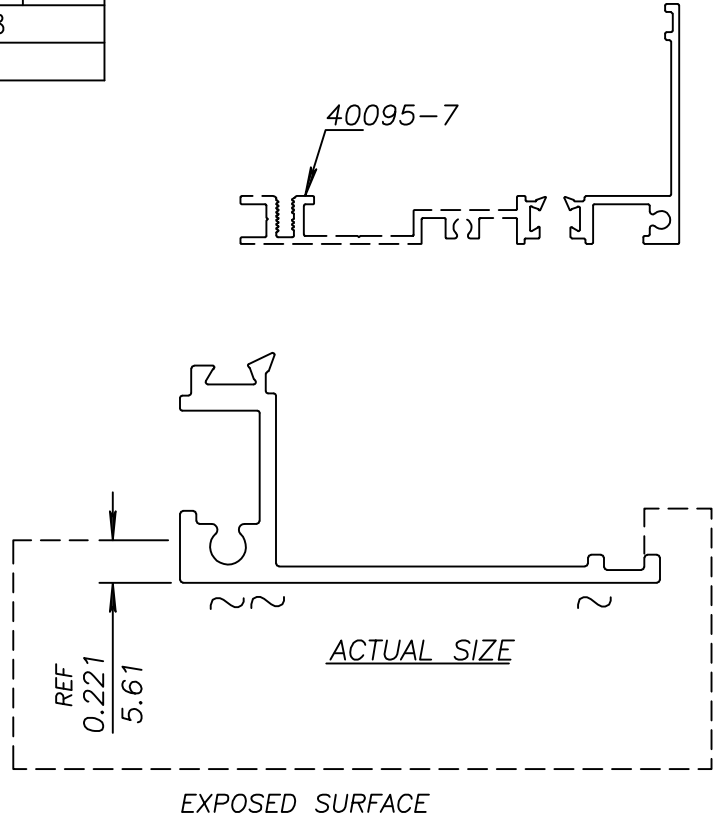
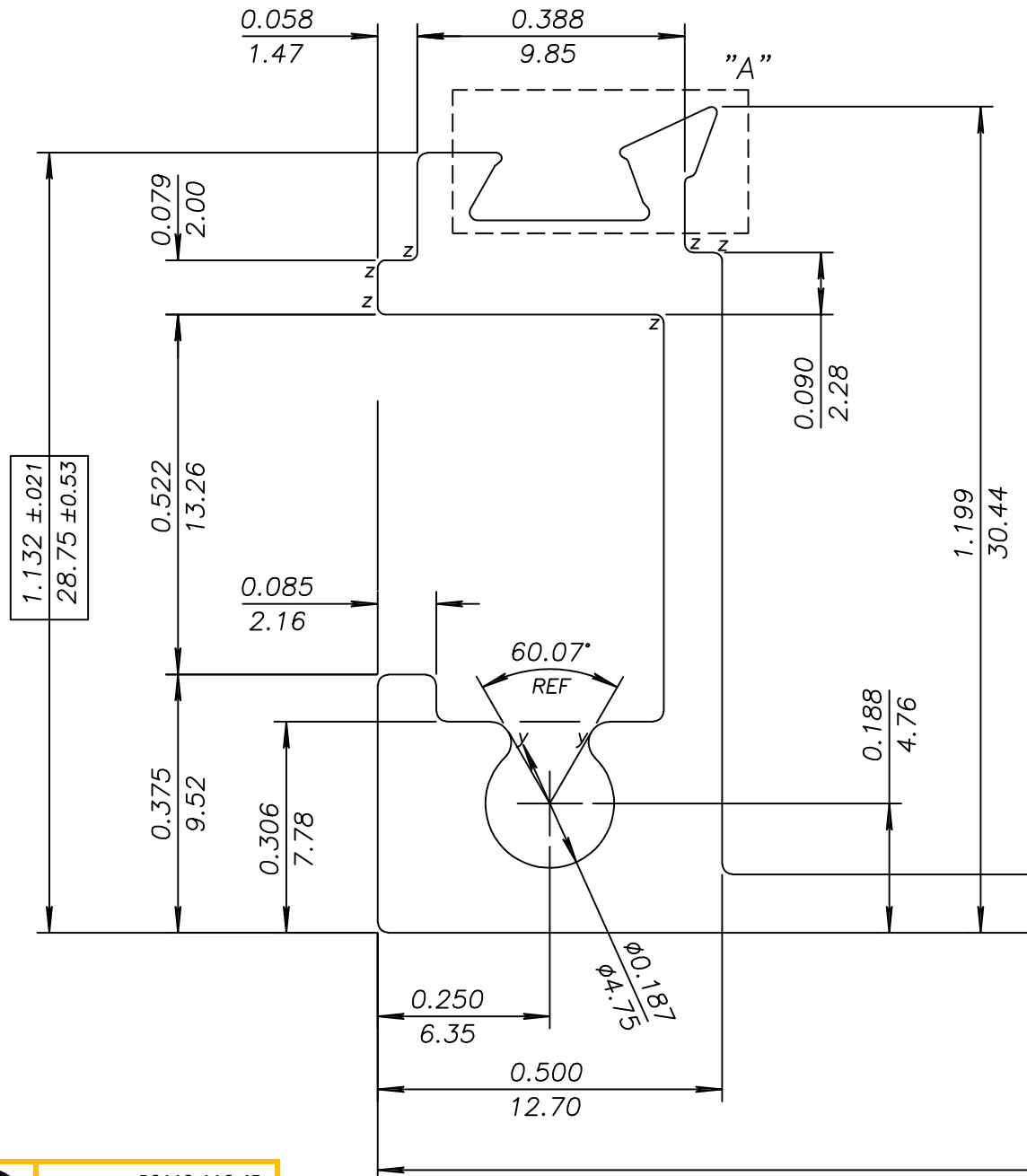


Hydro		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
0.085(2.16) ±0.006(0.15)		SAMPLE APPROVAL	
THIS SAMPLE IS APPROVED AND Hydro MAY PROCEED WITH PRODUCTION		SIGNED: <i>[Signature]</i>	
DATE: 09/21/2023		TOLERANCE STANDARD SAUF SI INDIQUE STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED	
SURF. ETABLIE EST. AREA	0.513 PO ² IN ²	331 MM ²	PER. EXT. OUT PER.
POIDS ETABLIE EST. WEIGHT	0.616 LBS PI-F.T.	0.916 KG/M	FACTEUR FACTOR
PER. ETABLIE EST. PER.	11.642 PO IN	296 MM	C.C.D. 3.216 PO IN 82 MM
DESSINE PAR DRAWN BY	Danica	ALLIAGE ALLOY	6063-T5
ECHELLE SCALE	4:1	DATE	30,01,2023



(a) = 0.012 (0.30) R. (2)
(b) = 0.008 (0.20) R. (8)

CLIENT GAMCO CORPORATION	CLIENT No. ISS008	No. De PROFILE/DIE No. MS-80466	DASH
DESCRIPTION: SUB-SILL; 2 PARTS	TARRIF# 7604.29.10.00	PROPOSAL# 40095-8	
HYDRO EXTRUSIONS 325 Avro, Pointe-Claire, Quebec H9R 5W3 (514) 697-5120	DATE	SYM	REVISION



DETAIL A
SCALE 4:1

intertek Report #: R9112-116-45
Date: 10/17/2024
Verified by: *[Signature]*

~ = SHADOW LINES MAY APPEAR

Hydro		EPAISSEUR DE PAROIS NON INDIQUE UNSPECIFIED WALL THICKNESS	
0.085(2.16) ±0.006(0.15)		SAMPLE APPROVAL	
THIS SAMPLE IS APPROVED AND Hydro MAY PROCEED WITH PRODUCTION		CUSTOMER'S SUPPLIED CAD FILE	
SURF. ETABLIE EST. AREA	0.438 PO ² IN ²	283 MM ²	PER. EXT. OUT PER.
POIDS ETABLIE EST. WEIGHT	0.526 LBS PI-F.T.	0.782 KG/M	FACTEUR FACTOR
PER. ETABLIE EST. PER.	9.246 PO IN	235 MM	c.c.d. 2.686 PO IN 68 MM
DESSINE PAR DRAWN BY	Danica	ALLIAGE ALLOY	6063-T5
ARRONDIR TOUS LES COINS AVEC UN RAYON DE 0.25mm (0.010") SAUF AUTREMENT INDIQUE BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.		ECHELLE SCALE	4:1
		DATE	30,01,2023

SIGNED: *[Signature]*
DATE: 09/21/2023

TOLERANCE STANDARD SAUF SI INDIQUE
STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

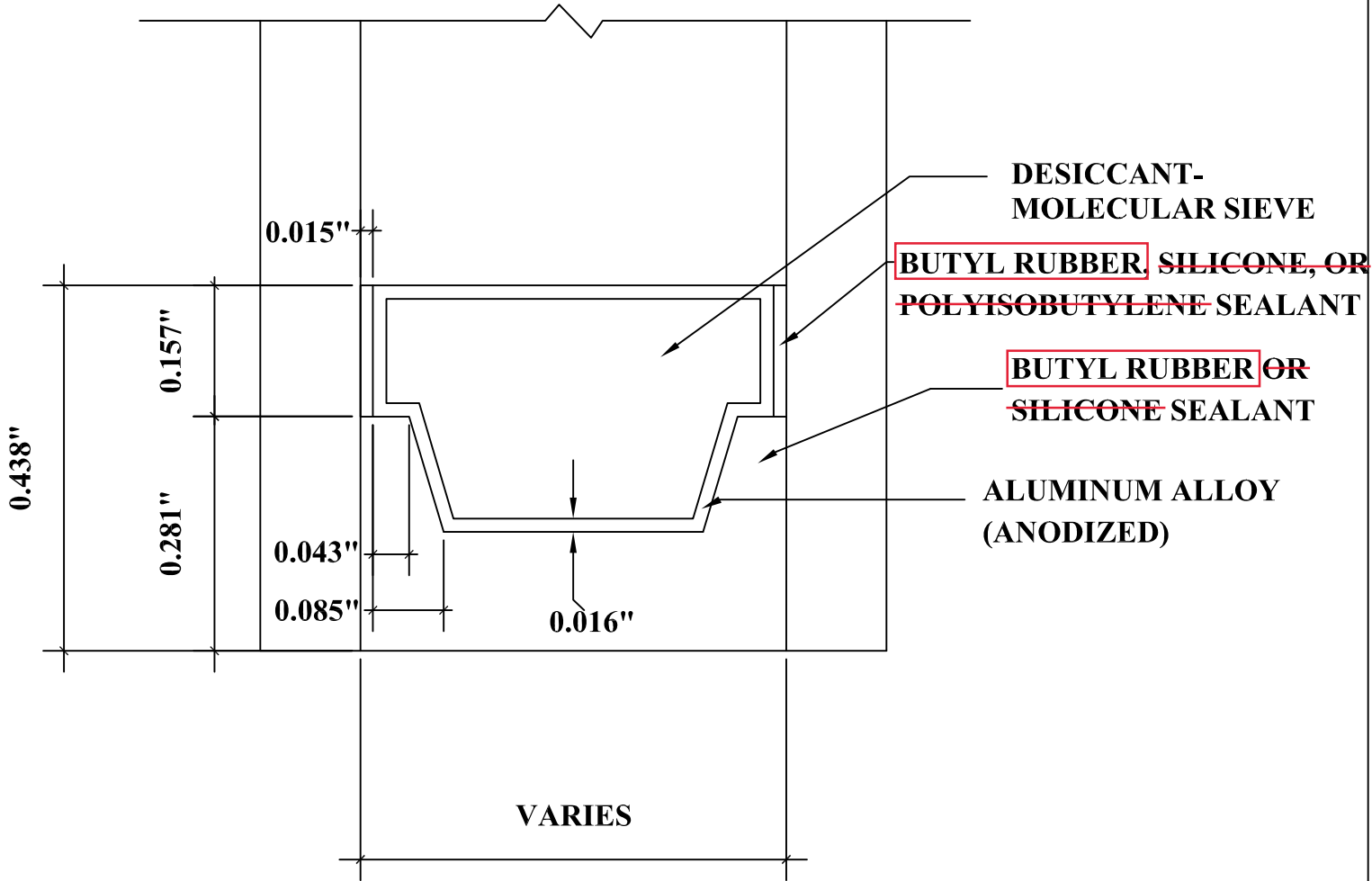
UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.015 (0.38) R.
(z) = 0.012 (0.30) R. (6)
(y) = 0.030 (0.77) R. (2)



Report #: R9112-116-45

Date: 10/17/2024

Verified by: *[Signature]*



DETAIL FOR THERMAL MODELING OF ALUMINUM SPACER (A1-D)



Total Quality. Assured.

130 Derry Court
York, PA, 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR GAMCO CORPORATION

Report No.: R9112.01-116-45 R0

Date: 10/17/24

SECTION 8

REVISION LOG

REVISION #	DATE	PAGES	REVISION
.01R0	10/17/24	N/A	Original Report Issued to Gamco Corporation.