TEST REPORT

AZUMA Design

Balustrades

Client – Genneral Staircase

Product – Ultralox Post 76.2mm Posts Base Mount

Tested By

Azuma Design Pty Ltd

AZT0019.24

Nata Accredited Laboratory No. 15147

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Test results in this report are relevant only to the sample tested.

Signature: Date: 07/02/2024

1 Customer Requirements

To test the sample by the test methods specified in Appendix H of AS1288-2021 and requirements from Section 7.

2 Referenced Standards

- AS1288-2021 Glass in buildings Set - Section 7 Balustrades, Appendix H

3 Test Sample Description

Model No./Name	Ultralox Post to Post Top Rail Picket Infill 76.2 mm End Posts Base Mount 2100 mm Section
Customer	Genneral Staircase
Address	12B-13 Davis Road Wetherill Park NSW 2164
Azuma Testing Number	AZT0019.24
Date of Test	31/01/24
Structural Connection	No
Test Sample Description	3 x 76.2 mm posts fixed into concrete with 4x off 16G x 75mm Button Head Batton Screws With 10x80 Duo Power Masonry Fischer Plugs per post. Between posts, the panels are fixed using a small bracket fixed to the posts and the panel screw fixed to the bracket, A handrail (round profile) is then press fit onto the top of the panel and secured with one screw at each end on each side, middle and underneath. A small support footing as spaced at the mid span of the panel and is fixed with a single screw. 98 mm gap between pickets with 21 pickets in the test sample, pickets are 12.7 x 19.05 mm and 922.8 mm in length.

4 Results

4.1 Barrier Gap Test

Does the probe pass through any gap	No, gaps checked are the picket gap and bottom of the panel gap
Result	Pass

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4.2 Point Load Testing

4.2.1 Outwards (K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	600 N	1314 N
Time Load Held	10 minutes	10 minutes
Deflection under Load	15.73 mm	36.07 mm
Permanent Deflection	0.26 mm	0.69 mm
Damage to Sample	No	No
Result	Pass	Pass

4.2.2 Downwards (K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	600 N	1314 N
Time Load Held	10 minutes	10 minutes
Deflection under Load	0.0 mm	0.0 mm
Permanent Deflection	0 mm	0 mm
Damage to Sample	No	No
Result	Pass	Pass

4.2.3 Post Load (K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	600 N	1314 N
Time Load Held	10 minutes	10 minutes
Deflection under Load	6.33 mm	15.23 mm
Permanent Deflection	0.46 mm	0.38 mm
Damage to Sample	No	No
Result	Pass	Pass

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4.3 Uniform Line Load Testing

4.3.1 Vertical 750 N/m (Span 2100 mm, K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	1800 N	2970 N
Time Load Held	10 minutes	10 seconds
Deflection under Load	0 mm	0 mm
Permanent Deflection	0 mm	0 mm
Damage to Sample	No	No
Result	Pass	Pass

4.3.2 Horizontal 750 N/m (Span 2100 mm, K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	1823 N	3992 N
Time Load Held	10 minutes	10 seconds
Deflection under Load	26 mm	38 mm
Permanent Deflection	0 mm	0 mm
Damage to Sample	No	No
Result	Pass	Pass

4.4 Infill Point Load Testing (Applied over 3 Pickets, K_T =1.46)

Type of Load	Serviceability	Ultimate
Load Applied	500 N	1095 N
Time Load Held	1 minute	10 seconds
Deflection under Load	17.69 mm	28.32 mm
Permanent Deflection	0.05 mm	0.62 mm
Damage to Sample	No	No
Result	Pass	Pass

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4.5 Infill Uniform Load Testing (Applied over 3 Pickets, K_T =1.46)

Type of Load	Serviceability	Ultimate
Pressure Required	1000 Pa	2190 Pa
Load Applied	223 N	489 N
Time Load Held	5 minutes	10 seconds
Deflection under Load	4.35 mm	8.99 mm
Permanent Deflection	0.06 mm	0.35 mm
Damage to Sample	No	No
Result	Pass	Pass

5 Conclusion and Signatories

5.1 Conclusion

The tested sample has passed the requirements of AS1288 Appendix H.

5.2 Signatories

Tested By: Ashley Horne

Position: National Business Manager

Qualifications: B.ENG (Hons), MEM, MIEAust

Signature:

Date: 07/02/2024

END OF REPORT

Azuma Design Pty Ltd
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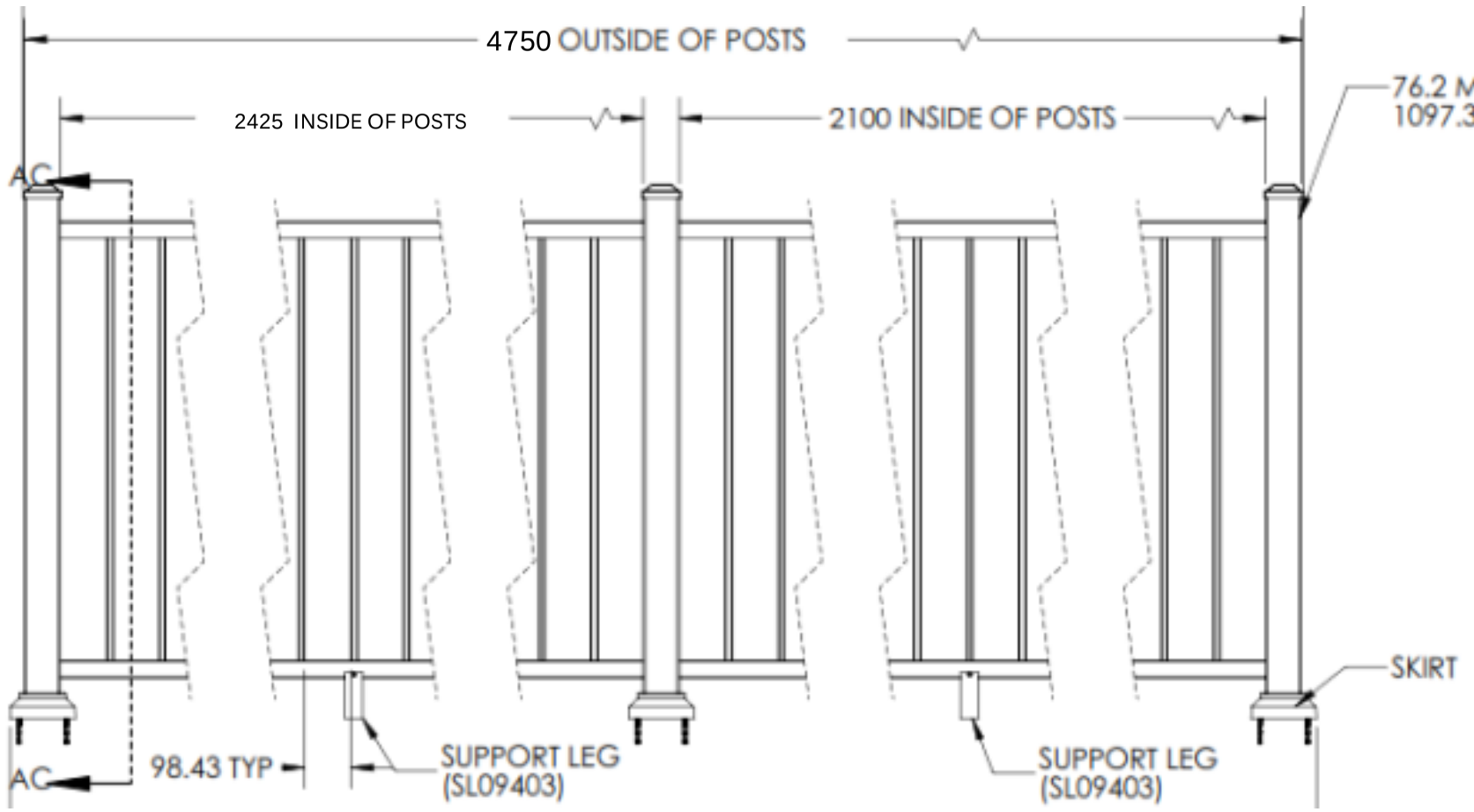
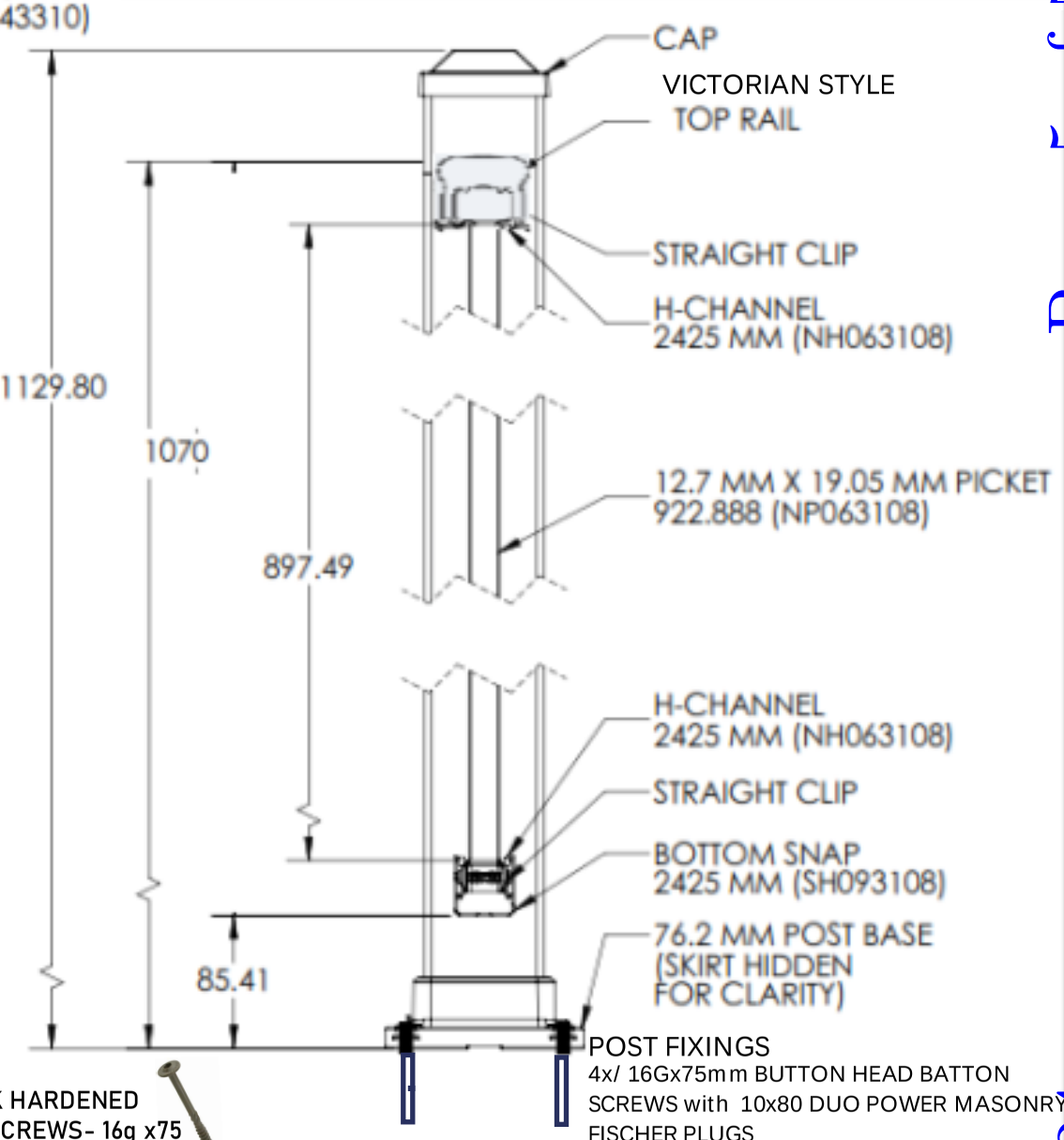
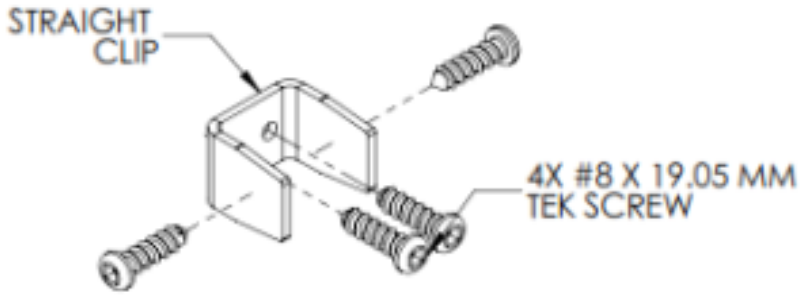
07/02/2024



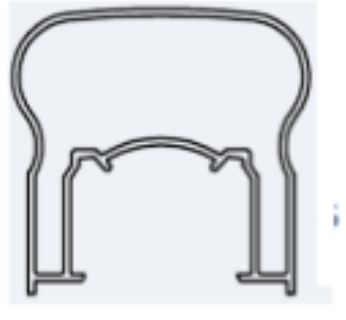
REVISIONS - BALLOONS DENOTE CHANGES			
REV.	DESCRIPTION	DATE	APPROVED
A	ORIGINAL	10/01/2024	SM
B	CHANGE TO 1X 2425 PANEL + POST FIXINGS	07.02.2024	SM



SECTION AC-AC



8X CLIP DETAIL



MODERN TOP RAIL

NOTES:
1. ALL RAIL MUST BE ASSEMBLED AND FASTENED IN ACCORDANCE WITH ULTRALOX'S INSTALLATION INSTRUCTIONS.
2. AVAILABLE COLORS ARE BLACK - WHITE - BRONZE.

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN metric TOLERANCES: SURFACE FINISH: 125 RMS ANGULAR: ± .5 DEG LINEAR: .X ±.02 .XX ±.010 .XXX ±.005	DRAWN	SM	7.2.24
	CHECKED		
	ENG APPR.		
	MFG APPR.		
THIRD ANGLE PROJECTION	INTERPRET GEOMETRIC TOLERANCING PER: ASME Y14.5-2009		
MATERIAL	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ULTRALOX. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ULTRALOX.		
FINISH			
DO NOT SCALE DRAWING			

ULTRALOX
INTERLOCKING TECHNOLOGY

TITLE:
ULTRALOX BALUSTRADE SYSTEM
TEST ; 76mm POST -PICKET -
2100 -2425 SPAN

SIZE	DWG. NO.	REV
		B

SCALE: 1:10 WEIGHT: SHEET

Information Supplied by Customer
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