

EASTERN WHOLESALE FENCE LLC TEST REPORT

SCOPE OF WORK

ASTM F2957 TESTING ON VARIOUS ALUMINUM ORNAMENTAL FENCE PANELS

REPORT NUMBER

Q3220.01-119-19 R0

TEST DATE

09/27/23 - 01/22/24

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TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

REPORT ISSUED TO

EASTERN WHOLESALE FENCE LLC

274 Middle Island Road

Medford, NY 11763

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Eastern Wholesale Fence LLC to perform structural testing in accordance with Section 5 of ASTM F2957 on various styles of their aluminum ornamental fence. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek test facility in York, PA.

Intertek B&C in York, Pennsylvania has demonstrated compliance with ISO/IEC International Standard 17025 and is consequently accredited as a Testing Laboratory (TL-144) by International Accreditation Service, Inc. (IAS). Intertek B&C is accredited to perform all testing reported herein.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. Intertek will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

For INTERTEK B&C:

COMPLETED BY:	Adam J. Schrum
TITLE:	Project Manager
SIGNATURE:	
DATE:	02/12/24

REVIEWED BY:	V. Thomas Mickley, Jr., P.E.
TITLE:	Senior Staff Engineer
SIGNATURE:	
DATE:	02/12/24

AJS:vtm/aas

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SECTION 2

TEST METHOD

The specimens were evaluated in accordance with Section 5 of the following:

ASTM F2957 - 13 (Reapproved May 2019), Standard Specification for Ornamental Aluminum Fence Systems

Limitations:

The test specimens evaluated included the infill, rails, and attachment of the rails to the support posts. Support posts were included only to evaluate the connection of the fence/rail to the post. Evaluation of the support posts and anchorage of support posts to the supporting structure is not included in the scope of this testing and would need to be evaluated separately.

SECTION 3

TEST SUMMARY

TEST SERIES NO.	SIZE	MODEL	NO. OF RAILS	RESULTS
1	60 in by 72 in	Industrial E	2	Pass
2	72 in by 72 in	Industrial B	4	Pass
3	48 in by 72 in	Commercial B	3	Pass
4	48 in by 72 in	Residential B	3	Pass
5	48 in by 72 in	Residential E	2	Pass
6	48 in by 72 in	Industrial B	3	Pass
7	48 in by 72 in	Industrial E	2	Pass
8	48 in by 72 in	Commercial E	2	Pass
9	60 in by 72 in	Residential B	3	Pass
10	60 in by 72 in	Commercial E	2	Pass
11	72 in by 72 in	Commercial B	4	Pass
12	48 in by 96 in	Industrial B	3	Pass
13	48 in by 96 in	Industrial E	2	Pass
14	48 in y 96 in	Commercial E	2	Pass
15	60 in by 96 in	Commercial E	2	Pass
16	60 in by 96 in	Industrial E	2	Pass
17	72 in by 96 in	Industrial B	4	Pass
18	72 in by 96 in	Commercial B	4	Pass
19	48 in by 96 in	Commercial B	3	Pass

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SECTION 4

MATERIAL SOURCE

Test samples were provided by the client.

Representative samples of the test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

SECTION 5

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Adam J. Schrum	Intertek B&C

SECTION 6

TEST PROCEDURE

Fence assembly tests were performed per ASTM F2957, Section 5 in a self-contained structural frame designed to accommodate anchorage of a fence assembly and application of the required test loads. The specimen was loaded using an electric winch mounted to a rigid steel test frame. High strength steel cables, nylon straps, and load distribution beams were used to impose test loads on the specimen. Applied load was measured using an electronic load cell located in-line with the loading system. Deflection was measured to the nearest 0.01 in using an electronic linear displacement transducer.

The fence assembly was installed and tested as a single fence section (one panel; two posts) by directly securing the post mounts to rigid steel stanchions. A transducer mounted to an independent reference frame was located to record movement of a reference point on the fence system component (mid-point) to determine component deflection. See photographs in Section 10 for test setups.

The test specimen was inspected prior to testing to verify size and general condition of the materials, assembly, and installation. No potentially compromising defects were observed. One specimen was used for all load tests which were performed in the order reported. Each design load test was performed using the following procedure:

1. Zeroed transducers and load cell at zero load;
2. Increased load to specified test load in no less than ten seconds;
3. Held test load for no less than two minutes; and
4. Removed load and measured residual deflection

Unless otherwise noted, all loads and displacement measurements were normal to the fence (horizontal).

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SECTION 7

TEST SPECIMEN DESCRIPTION

The aluminum fence systems are comprised of aluminum top, bottom and intermediate rails, pickets spaced between the rail members, and posts. Test specimens consisted of one product color: Black. Drawings are included in Section 11 to verify the overall dimensions and other pertinent information of the tested product, its components, and any constructed assemblies. Photographs are provided in Section 10.

COLOR	Black
MATERIAL	Extruded aluminum (unspecified alloy and temper)
RAIL	Residential: 1 in by 1 in by 0.050 in wall with 3/16 in returns inverted U-shaped aluminum extrusion
	Commercial: 1-1/4 in by 1-1/4 in by 0.085/0.060 in wall with 1/4 in returns inverted U-shaped aluminum extrusion
	Industrial: 1-1/2 in by 1-1/2 in by 0.085/0.060 in wall with 1/4 in returns inverted U-shaped aluminum extrusion
PICKET	Residential: 5/8 in square by 0.045 in wall with 3-13/16 in clear space between pickets
	Commercial: 3/4 in square by 0.055 in wall with 3-11/16 in clear space between the pickets
	Industrial: 1 in square by 0.060 in wall with 3-7/16 in clear space between the pickets
POST	Residential and Commercial: 2 in square by 0.055 in wall aluminum extrusion with routed holes for rails
	Industrial: 2-1/2 in square by 0.075 in wall aluminum extrusion with routed holes for rails

Fastening Schedule

CONNECTION	FASTENER
Rail to Post	Slip fit into routings and then secured to the post with one #10-16 by 1-1/2" (0.135 in minor diameter) hex-washer head, self-drilling, coated steel screw
Picket to Rail	One #8-18 by 3/4" (0.118 in minor diameter) pan-head, self-drilling, Philips drive, coated steel screw

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SECTION 8

TEST RESULTS

Key to Test Results Tables:

Load Level: Target test load

Test Load: Actual applied load at the designated load level (target). Where more than one value is reported, the test load was the range (min. - max.) that was held during the time indicated in the test.

Elapsed Time (E.T.): The amount of time into the test with zero established at the beginning of the loading procedure. Where more than one value is reported, the time was the range (start-end) that the designated load level was reached and sustained.

Test Series No. 1

60 in by 72 in *Industrial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 09/27/23

Method A: 300 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
300 lb	301 - 315	00:26 - 02:30	1.09	0.07

Result: Withstood load equal to or greater than 300 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.07" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/27/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	125 - 131	00:20 - 02:24	1.63	0.06

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.06" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

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Test Series No. 2

72 in by 72 in *Industrial B* Aluminum Ornamental 4-Rail Fence

Test No. 1 - Test Date: 09/27/23

Method A: 500 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
500 lb	500 - 529	00:31 - 02:40	1.35	0.09

Result: Withstood load equal to or greater than 500 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.09" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/27/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	125 - 133	00:36 - 02:42	1.04	0.03

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.03" ∴ *ok*

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Report No.: Q3220.01-119-19 R0

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Test Series No. 3

48 in by 72 in *Commercial B* Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 09/28/23

Method A: 325 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
325 lb	325 - 343	00:37 - 02:43	1.82	0.16

Result: Withstood load equal to or greater than 325 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.16" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	83 - 88	00:24 - 02:28	0.87	0.04

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.04" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

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Test Series No. 4

48 in by 72 in *Residential B* Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 10/20/23

Method A: 225 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
225 lb	225 - 234	00:28 - 02:33	2.14	0.20

Result: Withstood load equal to or greater than 225 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.20" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 50 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
50 lb	52 - 57	00:10 - 02:28	1.22	0.07

Result: Withstood load equal to or greater than 50 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.07" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 5

48 in by 72 in *Residential E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 10/20/23

Method A: 150 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
150 lb	151 - 157	00:30 - 02:36	1.81	0.21

Result: Withstood load equal to or greater than 150 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.21" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 50 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
50 lb	50 - 55	00:12 - 02:22	2.23	0.12

Result: Withstood load equal to or greater than 50 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.12" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

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Test Series No. 6

48 in by 72 in *Industrial B* Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 09/28/23

Method A: 500 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
500 lb	501 - 524	00:56 - 03:00	1.70	0.13

Result: Withstood load equal to or greater than 500 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.13" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	140 - 159	00:10 - 02:14	0.79	0.03

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.03" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

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Test Series No. 7

48 in by 72 in *Industrial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 09/28/23

Method A: 300 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
300 lb	301 - 316	00:25 - 02:29	1.54	0.00

Result: Withstood load equal to or greater than 300 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.00" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	126 - 134	00:20 - 02:24	1.06	0.05

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.05" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

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Test Series No. 8

48 in by 72 in *Commercial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 09/28/23

Method A: 220 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
220 lb	223 - 236	00:31 - 02:42	1.68	0.14

Result: Withstood load equal to or greater than 220 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.14" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	83 - 87	00:13 - 02:25	1.36	0.06

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.06" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

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Test Series No. 9

60 in by 72 in Residential B Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 10/20/23

Method A: 225 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
225 lb	225 - 234	00:32 - 02:35	2.10	0.12

Result: Withstood load equal to or greater than 225 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.12" ∴ ok

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/28/23

Method B: 50 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
50 lb	50 - 55	00:10 - 02:14	1.83	0.21

Result: Withstood load equal to or greater than 50 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.21" ∴ ok

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 10

60 in by 72 in *Commercial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 09/29/23

Method A: 220 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
220 lb	221 - 234	00:28 - 02:32	1.77	0.13

Result: Withstood load equal to or greater than 220 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.13" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 10/20/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	81 - 86	00:23 - 02:26	1.59	0.05

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.05" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 11

72 in by 72 in *Commercial B* Aluminum Ornamental 4-Rail Fence

Test No. 1 - Test Date: 09/29/23

Method A: 325 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
325 lb	326 - 337	00:19 - 02:26	1.33	0.09

Result: Withstood load equal to or greater than 325 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.09" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	81 - 85	00:20 - 02:35	1.38	0.03

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.03" ∴ *ok*

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Report No.: Q3220.01-119-19 R0

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Test Series No. 12

48 in by 96 in *Industrial B* Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 10/18/23

Method A: 500 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
500 lb	501 - 516	00:36 - 02:40	3.22	0.17

Result: Withstood load equal to or greater than 500 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.17" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	135 - 140	00:10 - 02:27	1.21	0.04

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.04" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 13

48 in by 96 in *Industrial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 10/18/23

Method A: 300 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
300 lb	300 - 314	00:30 - 02:32	2.63	0.15

Result: Withstood load equal to or greater than 300 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.15" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	126 - 132	00:18 - 02:27	1.63	0.05

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.05" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 14

48 in by 96 in *Commercial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 10/20/23

Method A: 220 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
220 lb	220 - 228	00:24 - 02:27	2.88	0.22

Result: Withstood load equal to or greater than 220 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.22" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	81 - 85	00:23 - 02:36	2.17	0.05

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.05" ∴ *ok*

TEST REPORT FOR EASTERN WHOLESALE FENCE LLC

Report No.: Q3220.01-119-19 R0

Date: 02/12/24

Test Series No. 15

60 in by 96 in *Commercial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 10/18/23

Method A: 220 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
220 lb	221 - 229	00:23 - 02:27	2.77	0.20

Result: Withstood load equal to or greater than 220 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.20" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	80 - 85	00:25 - 02:35	2.89	0.11

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.11" ∴ *ok*

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Test Series No. 16

60 in by 96 in *Industrial E* Aluminum Ornamental 2-Rail Fence

Test No. 1 - Test Date: 09/29/23

Method A: 300 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
300 lb	302 - 321	00:25 - 02:31	3.10	0.18

Result: Withstood load equal to or greater than 300 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.18" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	125 - 130	00:12 - 02:21	2.17	0.06

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.06" ∴ *ok*

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Test Series No. 17

72 in by 96 in *Industrial B* Aluminum Ornamental 4-Rail Fence

Test No. 1 - Test Date: 10/18/23

Method A: 500 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
500 lb	501 - 515	00:34 - 02:36	2.31	0.16

Result: Withstood load equal to or greater than 500 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.16" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

Test No. 2 - Test Date: 09/29/23

Method B: 125 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
125 lb	131 - 134	00:10 - 02:18	1.27	0.02

Result: Withstood load equal to or greater than 125 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.02" ∴ *ok*

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Test Series No. 18

72 in by 96 in *Commercial B* Aluminum Ornamental 4-Rail Fence

Test No. 1 - Test Date: 10/20/23

Method A: 325 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD ² (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
325 lb	324 - 334	00:34 - 02:38	2.31	0.22

Result: Withstood load equal to or greater than 325 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.22" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

² Test load dropped below the load level for one second during the hold period.

Test No. 2 - Test Date: 09/29/23

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	81 - 85	00:14 - 02:23	1.57	0.02

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.02" ∴ *ok*

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Test Series No. 19

48 in by 96 in *Commercial B* Aluminum Ornamental 3-Rail Fence

Test No. 1 - Test Date: 01/22/24

Method A: 325 lb Vertical Load Applied to the Top Rail ¹

LOAD LEVEL	TEST LOAD ² (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
325 lb	324 - 340	00:28 - 02:28	3.44	0.12

Result: Withstood load equal to or greater than 325 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.12" ∴ *ok*

¹ Load was equally distributed to two straps. Each strap was located 12 in on either side of the center point of the panel.

² Test load dropped below the load level for one second during the hold period.

Test No. 2 - Test Date: 01/22/24

Method B: 80 lb / 1 Square ft of Infill at Center of Infill

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)	
			MAX	RESIDUAL
80 lb	80 - 88	00:21 - 02:25	1.27	0.02

Result: Withstood load equal to or greater than 80 lb for two full minutes without failure

Residual Deflection Evaluation:

Limits per ASTM F2957:

0.25" > 0.02" ∴ *ok*

SECTION 9 CONCLUSION

The fence assemblies reported herein meet the structural performance requirements of Section 5 of ASTM F2957 for the applications specified.

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SECTION 10 PHOTOGRAPHS



Photo No. 1
Method A Test on the 2-Rail System



Photo No. 2
Method A Test on 3-Rail System

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Photo No. 3
Method A Test on a 4-Rail System



Photo No. 4
Method B Test on the 2-Rail System

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Photo No. 5
Method B Test on a 3-Rail System



Photo No. 6
Method B Test on a 4-Rail System

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SECTION 11 DRAWINGS

The "As-Built" drawings for the aluminum fence systems which follow have been reviewed by Intertek B&C and are representative of the project reported herein. Project construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

The drawings will be inserted into the final test report.

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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	02/12/24	N/A	Original Report Issue

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