

**DIVISION: 05 00 00 - METALS**  
**Section: 05 52 00 – Metal Railings**

**REPORT HOLDER:**  
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[www.easternornamentalfence.com](http://www.easternornamentalfence.com)

**REPORT SUBJECT:**  
Eastern Ornamental Railing System  
Aluminum Guardrail System

### 1.0 SCOPE OF EVALUATION

**1.1** This Research Report addresses compliance with the following Codes:

- 2015 and 2012 *International Building Code*® (IBC)
- 2015 and 2012 *International Residential Code*® (IRC)

**1.2** Eastern Ornamental Railing System has been evaluated for the following property (see Table 1):

- Structural Performance

**1.3** The Eastern Ornamental Railing System has been evaluated for the following uses (see Table 1):

- Under the definitions of the referenced codes the Eastern Ornamental Railing System is intended for use at or near the open sides of elevated walking areas of buildings and walkways as required by the codes.
- Guardrail systems recognized in this report may be used in One and Two- Family Dwellings regulated by the IRC and all construction types regulated by the IBC in accordance with IBC sections 1607.8 and 1015.

### 2.0 STATEMENT OF COMPLIANCE

Eastern Ornamental Railing System complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in

this report, including the Conditions of Use stated in Section 6. See table 2 for allowable use based upon use and occupancy classification.

### 3.0 DESCRIPTION

**3.1** The Eastern Ornamental Railing System is an assemblage of extruded aluminum top and bottom rails, balusters, and structural aluminum posts, with die cast rail to post brackets, post caps and stainless steel fasteners.

**3.2** Level guards are provided with rail lengths of 96 inches measured between the inside of support posts and installed height of up to 42 inches See Table 2.

**3.3** Stair guards are provided with rail lengths up to 96 inches measured along the sloping length between the inside of supports and the installed height of up to 42 inches at the leading edge of the stair tread or landing. See Table 2.

**3.4** Top rail is a T-Shape profile extruded from 6061-T6 alloy aluminum with an overall profile dimensions of 2.10 inches x 2.25 inches. A U-shaped vinyl insert installed into underside of rail secures the balusters to the rail.

**3.5** Bottom rail is a U-Shape profile extruded from 6061-T6 alloy aluminum with an overall profile dimensions of 1.5 inches x 1.25 inches. A U-shaped vinyl insert installed into topside of rail secures the balusters to the rail.

**3.6** Baluster pickets are .75 inch square profile extruded from 6061-T6 aluminum alloy.

**3.7** Support Posts are available in 2.5 inch or 3 in square profiles and are extruded from 6061-T6 aluminum. The post is bolted to a steel base plate utilized to secure the rail assembly to the deck.

### 4.0 PERFORMANCE CHARACTERISTICS

**4.1** The guardrail system described in this report has demonstrated the capacity to resist the design loadings



specified in Chapter 16 of the IBC and section R301 of the IRC when tested in accordance with ICC-ES AC273(2016).

## 5.0 INSTALLATION

### 5.1 General:

Eastern Ornamental Railing System must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

### 5.2 Application:

Guardrails may be installed in configuration identified in table 2. See table 3 for the fastening schedule of all the system components.

## 6.0 CONDITIONS OF USE

**6.1** The Eastern Ornamental Railing System described in this report complies with, or is a suitable alternative to, what is described in the codes listed in Section 1.0 and 2.0 of this report, subject to the following conditions.

**6.2** Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

**6.3** Only those types of fasteners and fastening methods described in this report have been evaluated for use with the Eastern Ornamental Railing System. All other fastening methods are outside the scope of this report.

**6.4** The steel post mounts are anchored to a concrete or steel surface with for 3/8 inch approved anchor bolts. The type and length of the anchor bolts is dependent upon the material and condition of the supporting structure and is not within the scope of this report.

**6.5** The Eastern Ornamental Railing System is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

## 7.0 SUPPORTING EVIDENCE

**7.1** Data in accordance with the ICC-ES Acceptance Criteria for Handrail and Guards, AC273(2016).

**7.2** Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

## 8.0 IDENTIFICATION

The Eastern Ornamental Railing System is identified with the manufacturer's name (Eastern Wholesale Fence Company), address and telephone number, the product name (Ornamental Railing), the Intertek Mark (example shown below) and the Code Compliance Research Report number (CCRR-0277).



## 9.0 OTHER CODES

This section is not applicable.

## 10.0 CODE COMPLIANCE RESEARCH REPORT USE

**10.1** Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

**10.2** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

**10.3** Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.





TABLE 1 – PROPERTIES EVALUATED

PROPERTY	2015 IBC SECTION <sup>1</sup>	2015 IRC SECTION <sup>1</sup>
Structural Performance	1607.8	R301.5

<sup>1</sup> Section numbers may be different for earlier versions of the International Codes

TABLE 2 – ORNAMENTAL RAILING SYSTEM IBC/IRC RECOGNITION

Railing System Dimensions	Guardrail Type	Baluster	Post	Code Recognition
72in x 42in	Level	3/4 in Square Picket	3in Square	IBC – All Use Group
72in x 42in	Stair			
96in x 42in	Level	3/4 in Square Picket	3in or 2.5in Square	IRC One- and Two-Family Dwellings
96in x 42in	Stair			

TABLE 3 – FASTENER SCHEDULE LEVEL RAIL

CONNECTION	FASTENER
Top Rail to Bracket Post	Three #10 x 1in, self-drill, 304 stainless steel screws
Bottom Rail Bracket to Post	Two #10 x 1in, self-drill, 304 stainless steel screws
Top Rail Bracket to Rail	Two #8 x 3/4in, self-drill, 304 stainless steel screws
Bottom Rail Bracket to Rail	No mechanical fastener

TABLE 4 – FASTENER SCHEDULE STAIR RAIL

CONNECTION	FASTENER
Top Rail to Bracket Post	Four #10 x 1in, self-drill, 304 stainless steel screws
Bottom Rail Bracket to Post	Four #10 x 1in, self-drill, 304 stainless steel screws
Top Rail Bracket to Rail	Two #8 x 3/4in, self-drill, 304 stainless steel screws
Bottom Rail Bracket to Rail	Two #8 x 3/4in, self-drill, 304 stainless steel screws

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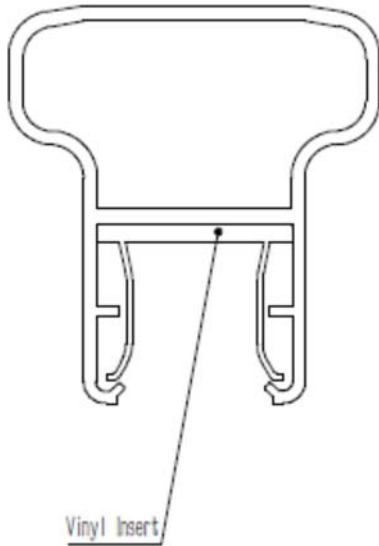


Figure-1 Top Rail

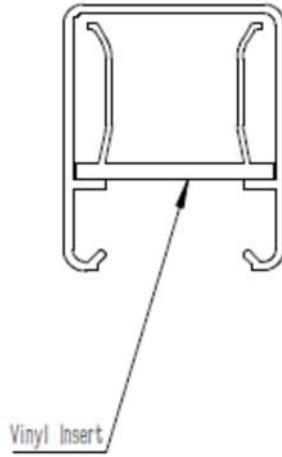


Figure-2 Bottom Rail

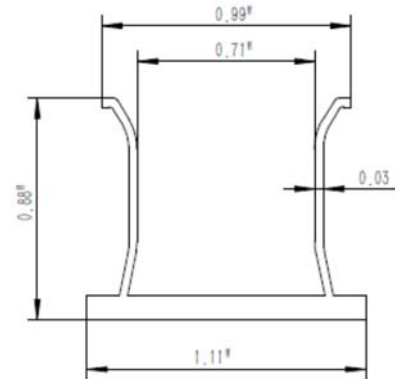


Figure-3 Vinyl Rail Insert

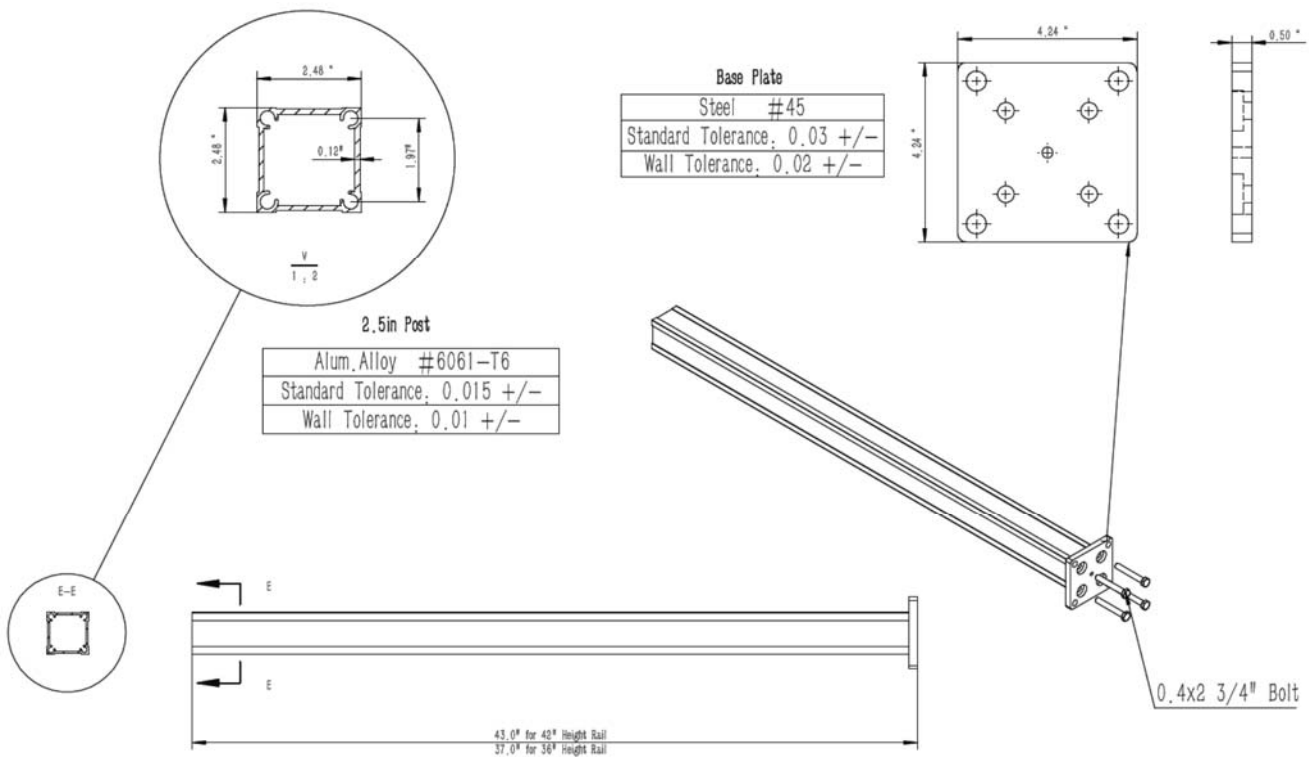


Figure-4 2.5 inch Post



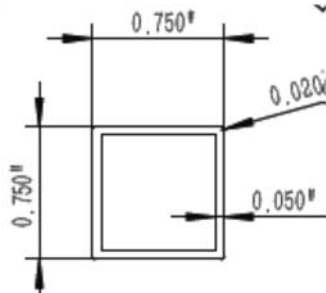


Figure-5 2.5 inch Picket

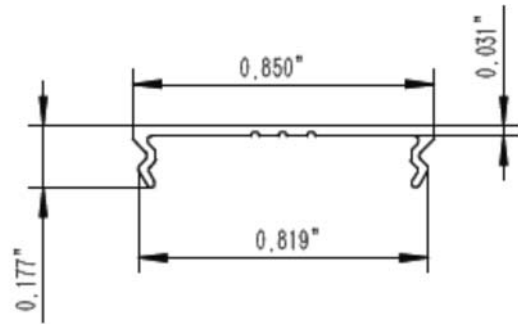


Figure-6 Spacer

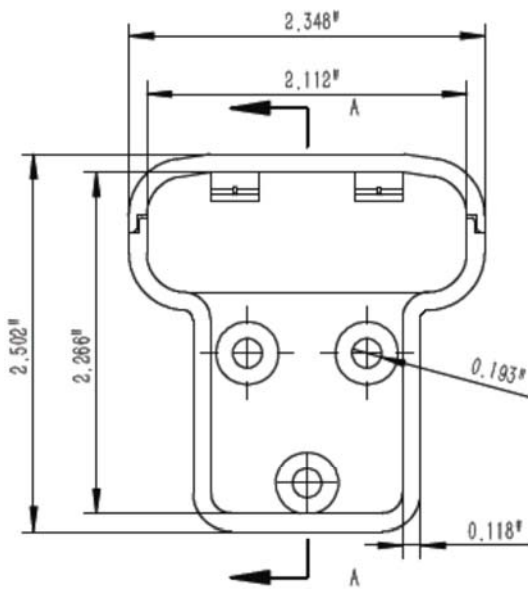
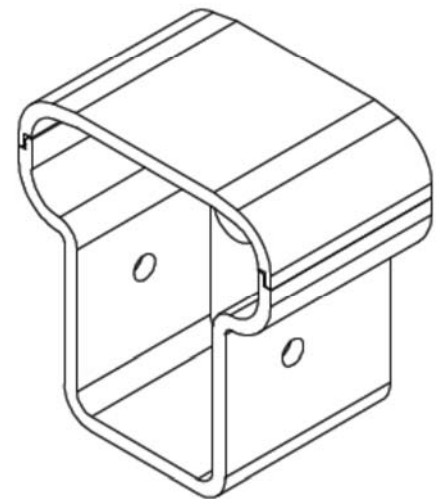


Figure-7 Top Rail Bracket



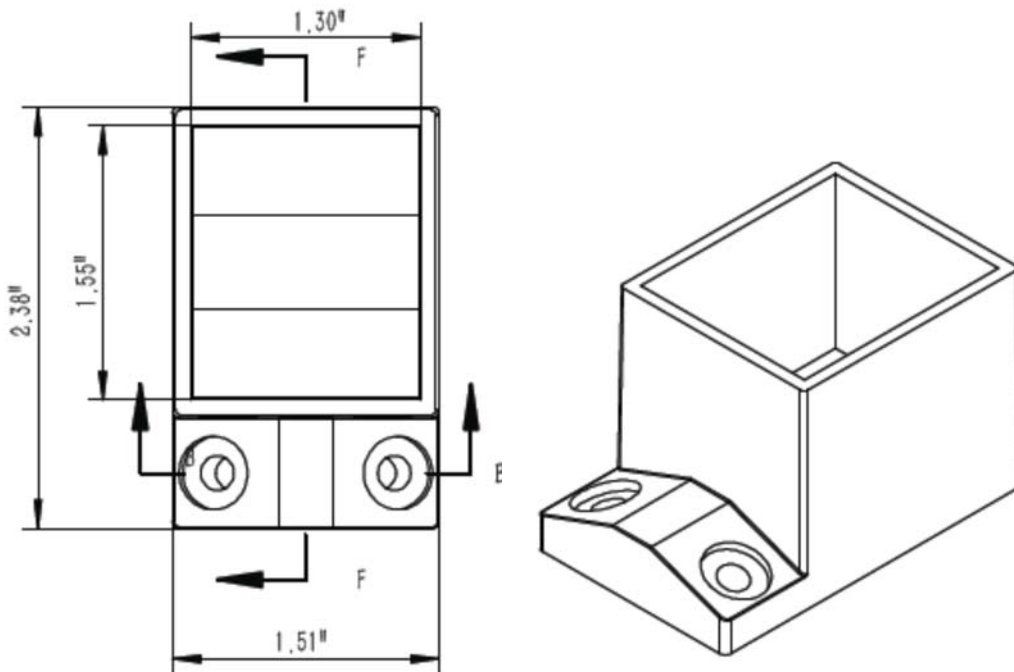


Figure-8 Bottom Rail Bracket

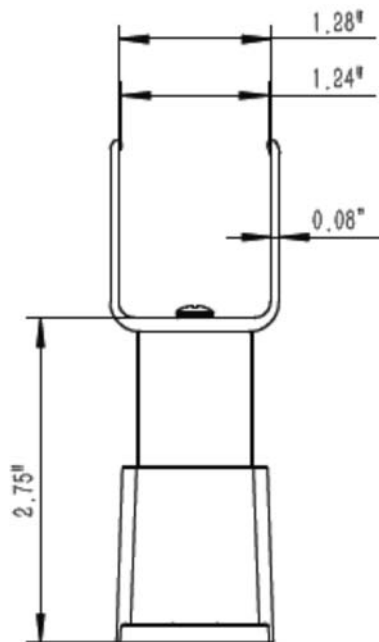


Figure-9 Bottom Rail Support

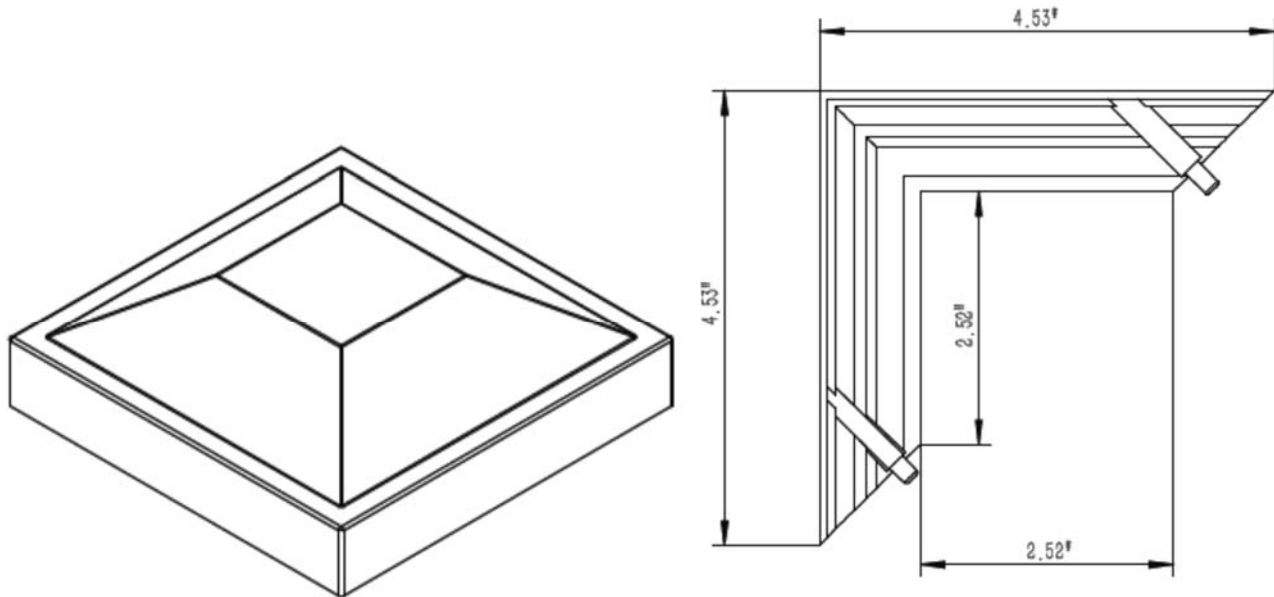


Figure-10 Post Cap and Trim