Approved Manufacturing Location*
VEKA Inc.
100 Veka Drive
Fombell, PA 16123

Evaluation Report Information
RAFAB Contact: Scott Clark - (734) 789-8590
www.rafabinc.com

General Details

The VEKA Vinyl Guardrail Systems are used for exterior guards on balconies, porches, and decks of structures in accordance with the code compliance section of this PER. The top and bottom railings are fabricated with openings spaced under 4" to accommodate the vertical balusters.

The VEKA Vinyl Guardrail Systems have been tested by ATI Architectural Testing and evaluated by ATI Evaluation Service, for structural strength to meet design loads and requirements of the codes listed under Code Compliance of this PER.

Product Descriptions

The VEKA Vinyl Guardrail Systems are fabricated from PVC with colored stabilizers, that are manufactured by VEKA Inc. The VEKA Vinyl Guardrail Systems are available in three (3) different colors: Almond, Khaki and White. Guardrail Systems have a span rating ranging from 72" to 120" depending on the specific system and are intended for exterior use only. The VEKA Vinyl Guardrail Systems are strengthened with a 6063-T5 or 6005A-T5 aluminum rail reinforcement depending on the guardrail system being used. This PER program covers six (6) Vinyl Guardrail Systems that VEKA manufactures. These systems are identified as Conrad, Majestic, Regal, Stanfield, Trustin, and Whitman.

The Conrad and Trustin Railing assemblies utilize the T-Rail. The T-Rail is a "T" shaped component with a width of 3.5" and a depth of 3.5". The T-rail is designed to be installed with a P-channel insert manufactured from either at 6063-T5 or 6005A-T5 aluminum alloy. Conrad and Trustin Railing assembly options are shown in Figure 6 and Figure 1, respectively.

The Regal system utilizes an Ornamental shape top rail and a rectangular bottom rail. The Regal system may be constructed in any configuration up to a maximum height of 42" and the various assembly options are shown in Figure 4.

The Majestic system also utilizes the Ornamental shaped top rail and Rectangular bottom rail along with die-cast brackets. The Majestic system may be constructed in any configuration up to a maximum height of 42" and the various assembly options are shown in Figure 2.

The balusters are fabricated in seven (7) different sizes. These sizes are 1" square PVC, 7/8" X 1-1/2 rectangular picket, 1-1/4" square picket, 1-1/2" X 1-1/2" molded PVC spindle and 3/4" galvanized powder coated iron balusters.

Code Compliance for VEKA Vinyl Guardrail Systems

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<thead>
<tr>
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<tbody>
<tr>
<td>Section R301.1.3</td>
<td>Section R312.1</td>
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<tr>
<td>Section R301.5</td>
<td>Section R317.4</td>
</tr>
<tr>
<td>Section R312.1</td>
<td>Section R317.4</td>
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<tbody>
<tr>
<td>Section R301.1.3</td>
<td>Section R301.5</td>
</tr>
<tr>
<td>Section R312.2</td>
<td>Section R317.5</td>
</tr>
</tbody>
</table>

Notes:
1. Limited to use in all construction types where untreated wood is permitted in accordance with Section 1406.3 of the IBC.
2. All products may be recognized as code compliant in accordance with the 2012 IBC/IRC and 2015 IBC/IRC. System specific limitations are provided in Table 1.
### General Product Usage

1. The VEKA Vinyl Guardrail Systems shall be installed in accordance with the VEKA Rail Installation Guide and are subject to the conditions of this PER. A copy of the VEKA Rail Installation Guide shall be made easily available to the installer.

2. All framing, wood posts, beams, joists, stringers and associated connections needed to support the VEKA Vinyl Guardrail systems are outside the scope of this PER. All framing shall follow applicable codes or be designed by a licensed Engineer. Stairways shall be designed and constructed in accordance with the applicable codes.

3. The VEKA Vinyl Guardrail Systems are installed and fastened per the fastening tables found in Figure 1 through Figure 6.

4. When installing the railing on posts other than 4x4 Southern Yellow Pine, (i.e. proprietary posts such as the LMT Mercer Group, Inc. Blu-Mount™ Post Mount), the installer must consult local code officials for compliance to building code requirements and follow all manufacturer's post mount installation requirements. Connection verification and post installation is outside the scope of this PER.

5. Whitman and 120” Conrad Guardrail Systems are limited to exterior use in one- and two-family dwellings only.

6. All pickets shall be installed with a clear space between pickets as indicated in Figure 1 through Figure 6. (Exception: 1-1/2” square pickets may be installed with a maximum clear space of 3.84”)

### Tested to

- **ICC-ES AC174** - Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)
- **ASTM D1761-00** - Standard Test Methods of Mechanical Fasteners in Wood

### Product Labeling

Guardrail Systems fabricated by RAFAB Incorporated must be labeled with at least the following information:

1. Fabricator Name and address
2. Quantity
3. Color
4. Product Code
5. Date Code
6. Rail Style
7. Third Party Certification

### Acceptable Evaluation Marks

![Acceptable Evaluation Marks Image]

### Product Documentation

- A Product Evaluation Service Agreement between Pei Evaluation Service® and RAFAB Incorporated
- A Follow-up Inspection Service Agreement between Progressive Engineering Inc. and RAFAB Incorporated
- A Pei Evaluation Service® Agreement between PER Owner and Approved Manufacturer

RAFAB Incorporated Quality Assurance Manual - Dated: 2/28/2017

VEKA Rail Guard Rail System Rail Installation Guide


### Table 1 - Individual Railing System Additional Code Limitations

<table>
<thead>
<tr>
<th>Railing System</th>
<th>Maximum Nominal Length</th>
<th>Maximum Height</th>
<th>Additional Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trustin</td>
<td>8-ft</td>
<td>42-in</td>
<td>None</td>
</tr>
<tr>
<td>Majestic</td>
<td>8-ft</td>
<td>42-in</td>
<td>None</td>
</tr>
<tr>
<td>Stanfield</td>
<td>8-ft</td>
<td>42-in</td>
<td>None</td>
</tr>
<tr>
<td>Regal</td>
<td>8-ft</td>
<td>42-in</td>
<td>None</td>
</tr>
<tr>
<td>Whitman</td>
<td>8-ft</td>
<td>42-in</td>
<td>One- and Two-Family Dwellings Only</td>
</tr>
<tr>
<td>Conrad</td>
<td>10-ft</td>
<td>42-in</td>
<td>One- and Two-Family Dwellings Only</td>
</tr>
</tbody>
</table>

**Notes:**

1. All railing systems are limited to exterior use in One- and Two-Family Dwellings and a maximum height of 36-inches when 3/4” galvanized powder coated iron balusters (straight, single basket, and double basket) are used. See Figure 1 through Figure 6 for iron baluster details.
3.5" x 3.5" PVC T-Rail Profile
Aluminum reinforced

2" x 3.5" Rectangular Profile PVC Bottom Rail
Aluminum reinforced

3.5" x 3.5" PVC T-Rail Profile
Aluminum reinforced

1.5" x 1.5" Molded PVC Spindle

1.5" x 1.5" PVC Picket

Bracket

<table>
<thead>
<tr>
<th>Bracket</th>
<th>Fastening Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMT Eclipse Aluminum T-Rail Bracket</td>
<td>(6) #10 X 2&quot; SS Flat-Head Wood Screws</td>
</tr>
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<td>LMT Eclipse Aluminum Rail Bracket</td>
<td>(6) #10 X 2&quot; SS Flat-Head Wood Screws</td>
</tr>
<tr>
<td>Support Block Bracket to Bottom Rail</td>
<td>(2) #10 X 3/4&quot; SS Self-Starting Pan-Head Screws</td>
</tr>
</tbody>
</table>

3/4" Straight Iron Picket

3/4" Single-Basket Iron Spindles

3/4" Double-Basket Iron Spindles

4" PVC Post Sleeve

Figure 1 - Trustin Guardrail System
Figure 2 - Majestic Guardrail System

Bracket Fastening Schedule

<table>
<thead>
<tr>
<th>Bracket</th>
<th>Bracket to Post</th>
<th>Bracket to Rail</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMT Eclipse Aluminum Majestic T-Rail Bracket</td>
<td>(6) #10 X 2&quot; SS Flat-Head Wood Screws</td>
<td>(4) #10 X 1-1/4&quot; SS Pan-Head Screws</td>
</tr>
<tr>
<td>LMT Eclipse Aluminum Rail Bracket</td>
<td>(6) #10 X 2&quot; SS Flat-Head Wood Screws</td>
<td>(4) #10 X 1-1/4&quot; SS Pan-Head Screws</td>
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<tr>
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<td>(2) #10 X 3/4&quot; SS Self-Starting Pan-Head Screws</td>
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</table>
2" x 3.5" Rectangular Profile PVC Top Rail
Aluminum reinforced

2" x 3.5" Rectangular Profile PVC Bottom Rail
Aluminum reinforced

Extruded 6063-T5 Aluminum "H" Insert

1.5" x 1.5" Molded Spindle PVC Infill

1.5" x 1.5" PVC Picket

3/4" Single-Basket Iron Spindles

3/4" Double-Basket Iron Spindles

3/4" Straight Iron Picket

4" PVC Post Sleeve

**Figure 3 - Stanfield Guardrail System**
Figure 4 - Regal Guardrail System
**Figure 5 - Whitman Guardrail System**

### Bracket Fastening Schedule

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<tr>
<td>LMT PVC Rail Bracket</td>
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<tr>
<td>LMT PVC Rail Bracket</td>
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Figure 6 - Conrad Guardrail System

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<tr>
<td>LMT PVC T-Rail Bracket</td>
<td>(4) #10 x 2-1/4&quot; SS Flat-Head Wood Screws</td>
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Blu-Mount Post Mount
36" and 42"

Hardware Wood Heavy Duty

Hardware Concrete

*Blu-Mount post mount system is shown as an example of potential alternative post options only. Installer must consult local code officials for compliance to building code requirements and follow all manufacturer's post mount installation requirements. Connection verification and post installation is outside the scope of this PER.

**Figure 7 - Blu-Mount Post Mount Systems (For Reference Only)**
*Blu-Mount post mount system is shown as an example of potential alternative post options only. Installer must consult local code officials for compliance to building code requirements and follow all manufacturer’s post mount installation requirements. Connection verification and post installation is outside the scope of this PER.

Figure 8 - Blu-Mount Post Mount Molded Guides (For Reference Only)