



Building Product Evaluation Report 0142

Oldcastle Guardrail Systems Oldcastle, Inc.

Initial Acceptance: May 11, 2023

Expiration: 31 May 2028

Revision: 15 June 2026

Version: 2.0

TYPE OF ACCEPTANCE

Product Material – Wood and Plastics

CSI Specification Division: 06 50 00 (Structural Plastic) and 06 63 00 (Plastic Railing)

MANUFACTURER IDENTIFICATION:

Oldcastle

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EVALUATION REPORT SUBJECT:

Overlook Guardrail Systems for Exterior Applications.

Installation on construction complying with the International Residential Code® (IRC®) or with the International Building Code® (IBC®), including IBC exceptions in Section 1015.3 of the IBC.

DESCRIPTION OF BUILDING COMPONENTS:

Oldcastle guardrail system is identified by the name – **Overlook (Guardrail) System**. The guardrail system is for use in areas as referenced in the Applicable Codes. The guardrail systems provide a protective barrier for walking areas, balconies, porches, stairs, and ramps. The guardrail systems are manufactured by the co-extrusion process, assembled with molded components, and are produced in white and other colors.

1. Overlook Rail and Stair Systems

A. Overlook Rail

- (a) The guardrail system consists of a top rail, bottom rail, and baluster designs. The top rail, bottom rail, and square baluster are manufactured with PVC material in a co-extrusion process.
- (b) The **Overlook** guardrail system has a T-Rail profile top rail with 0.175-in. wall thickness, hollow in the center, has rounded edges, is pre-routed for balusters and has a PVC cap stock. See Table 4 in this Report for drawings and dimensions.
- (c) The **Overlook** guardrail system has a bottom rail that is rectangular in shape, hollow in the center, has rounded edges and is pre-routed for balusters. The bottom rails connect to the supports utilizing molded PVC brackets. See Table 4 in this Report for drawing and dimensions.
- (d) The **Overlook** guardrail system has a PVC baluster 1-1/2-inch square in shape with 0.065-inch wall nominal wall thickness, has rounded edges and hollow in the center. See Table 4 in this Report for drawings and dimensions.
- (e) The **Overlook** guardrail system connections for the top rail and bottom rail to the supports are brackets. The brackets are secured to the supports with steel screws (stainless, corrosion-resistant, or galvanized) suitable for use in



preservative-treated wood. See Tables 4 and 6 in this Report for drawings of the brackets and number of fasteners required.

- (f) See Table 5 in this Report for the **Overlook** guardrail system height and length. The guardrail system that is 6 feet in length requires intermediate support between the supports under the bottom rail and the guardrail system that is 8 feet in length requires two supports that are located under the bottom rail and are evenly spaced between supports.
- (g) See the manufacturer's published [installation instructions](#) for additional details.

B Overlook Stairs

- (a) The guardrail system can be used as a stair guard. See Table 5 for maximum length between posts, bottom rail supports, top and bottom rail connection brackets and fasteners required.
- (b) When the guardrail is used with stairs, the guardrail must be installed in accordance with the applicable code, manufacturer's installation instructions and Table 6 in this Report. When the manufacturer's installation instructions differ from this Report, this Report governs.
- (c) See Manufacturer's published [installation instructions](#) for additional installation details.

2. Posts

- (a) The **Overlook** guardrail system has post-sleeves and post-sleeve spacers. The post sleeves are manufactured with PVC material, are square in shape, hollow in the center and have rounded edges. The post sleeves are non-structural and can be installed over conventional wood posts. The post sleeve spacer is manufactured with HDPE material, is square in shape, hollow in the center and has rounded edges. Specific details regarding the construction installation for the post sleeves, post sleeve spacer and/or posts have not been evaluated and are outside the scope of this Report. Specific details when required must be furnished to the authority having jurisdiction. See Table 1 of this Report for post sleeve and post sleeve spacer drawings and dimensions.

APPLICABLE CODES:

- 2015, 2018, and 2021 International Building Code (IBC)
- 2015, 2018, and 2021 International Residential Code (IRC)

APPLICABLE CHARACTERISTICS REVIEWED:

1. Structural Performance:

- (a) Oldcastle **Overlook** guardrail systems have been reviewed for maximum spans as indicated in Tables 2 in this Report with the limitations of use evaluated for each design (style).

2. Temperature:

- (a) Oldcastle **Overlook** guardrail systems have been reviewed and evaluated for temperature range of -20 °F (-29 °C) to 125 °F (52 °C).

3. Flame Spread Index:

- (a) Oldcastle **Overlook** guardrail system flame spread rating was less than 200 for Solidcore and VPC material when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

4. Decay Resistance:

- (a) The materials used in the Oldcastle **Overlook** guardrail systems in this Report do not contain any wood and have been deemed comparable to naturally resistant wood or to preservative-treated wood for resistance to fungal decay.

5. Termite Resistance:

- (a) The materials used in the Oldcastle **Overlook** guardrail systems in this Report do not contain any wood and have been deemed equivalent to naturally resistant wood or to preservative-treated wood for resistance to termite attack.

6. UV Testing:

- (a) The UV testing was conducted, and an appropriate adjustment factor was applied in accordance with ASTM D7032, *Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)*.



7. Fastening:

- (a) Oldcastle **Overlook** guardrail system top and bottom rails must be fastened to posts with PVC molded brackets using steel (stainless, corrosion-resistant, or galvanized) screws. See Table 1 of this Report for drawing of the bracket. See Table 3 of this Report and manufacturer's installation instructions for fastening details.
- (b) The fasteners and brackets are supplied by the manufacturer and must be used in the installation of the Oldcastle **Overlook** guardrail system. Use of other brackets and fasteners is not covered under this Report.

8. Posts:

- (a) Wood posts or other wood support framing members are not covered under this Report. However, wood posts and other wood support framing members must be designed to meet load and other requirements in the applicable building code(s), have a minimum specific gravity of 0.51 (Southern Pine or better), and of sufficient thickness to allow full penetration of bracket mounting screws.

APPLICABLE USES:

The materials used in the Oldcastle **Overlook** guardrail system evaluated in this Report are for installations on construction complying with IRC or IBC. See Table 2 for guardrail system limitations.

LIMITATIONS OF ACCEPTANCE:

The Oldcastle **Overlook** guardrail systems as described in this Report complies with those codes listed in the Applicable Codes section above and is subject to the following conditions.

- 1. The guardrail systems are limited to exterior construction complying with the IRC and the IBC. The guardrail systems provide a protective barrier for walking areas, balconies, porches, stairs and ramps.
- 2. Installation of the guardrail systems must comply with this Report; the manufacturer's published installation instructions, and the applicable code. When the guardrail installation instructions differ from this Report, this Report governs.
- 3. The fasteners described in this Report have been evaluated for the installation of the Oldcastle **Overlook** guardrails and stairs only. Material necessary for anchorage of the guardrail and stair system(s) and compatibility of the fasteners to the treated wood supporting construction have not been evaluated.
- 4. The guardrail systems indicated in the Report must be fastened to the supporting construction as indicated in the manufacturer's published installation instructions and as outlined in this Report. When guardrail fastening instructions differ from this Report, this Report governs.
- 5. The top rail component for the guardrail systems do not meet the graspability requirements when used as a handrail for stairs. In order to comply with the IBC or IRC graspability requirements, a separate handrail complying with IBC Section 1014.3 or IRC Section R311.7.8.3 must be provided. Specific details regarding the construction installation and attachment to the stair guardrail and/or posts have not been evaluated and are outside the scope of this Report. Specific details when required must be furnished to the authority having jurisdiction.
- 6. When required, the guardrail system, including a stair in this Report must be designed by a professional and submitted to the authority having jurisdiction for final acceptance.
- 7. The Oldcastle **Overlook** guardrail systems have not been evaluated as a member of a fire-resistance-rated assembly.
- 8. Oldcastle has a third-party inspection program provided by PFS TECO.

DOCUMENTATION SUBMITTED:

Submitted data was provided in accordance with PFS TECO Certification and Inspection Policy: Deck Boards and Guardrails (Quality Control Manual, Specifications, Manufacturer's published installation instructions, Test data and Descriptive information). The products have been evaluated in accordance with ICC-ES AC174, *Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)*.

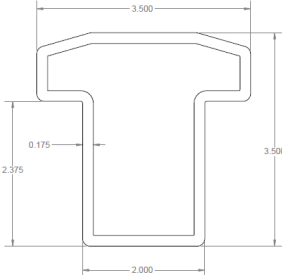
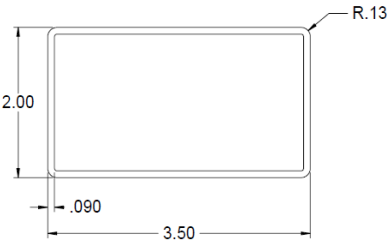
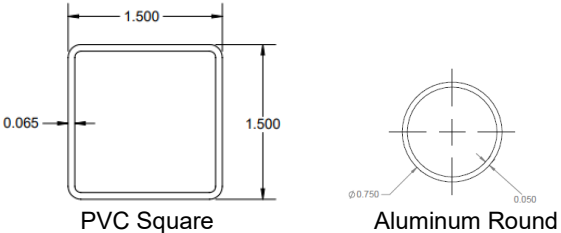
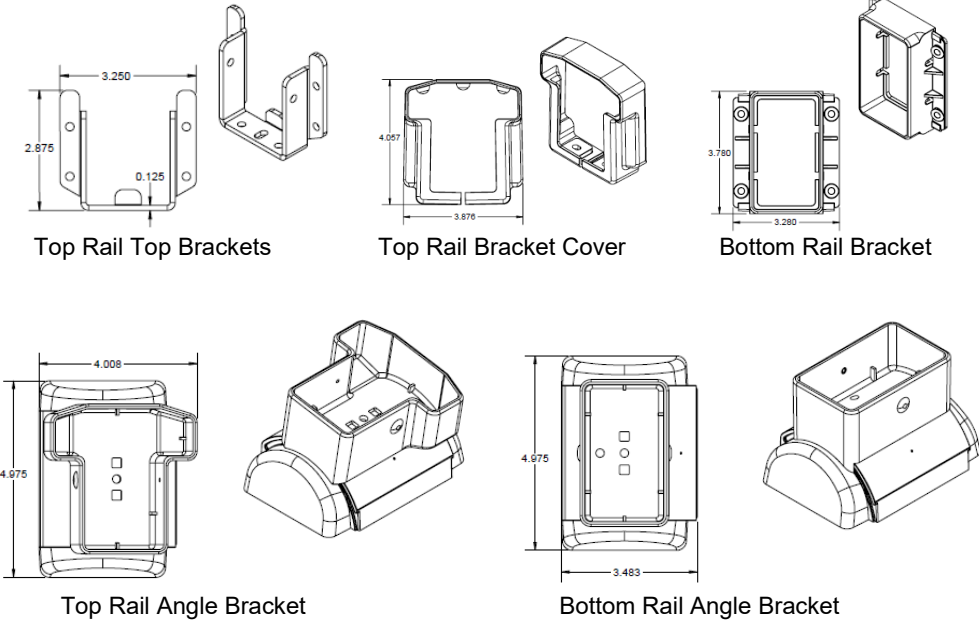


PRODUCT IDENTIFICATION:

The Oldcastle guardrail assembly system must be identified with a label on each component or the packaging. The information required is as follows: Oldcastle, product identification (***Overlook***), compliance with ASTM D7032 including the maximum guardrail span and loading, the PFS TECO Building Product Evaluation number (BPER 0142), and the PFS Certification Mark (see image below). Guardrails that are 36" high require a label indicating, "Guardrail installation in residential (1 & 2 Family) units only." Guardrails without this information are not covered under this Report.



Table 1: Schematics of Overlook Guardrail System Components

Description	Profile
Top Rail	
Bottom Rail	
Balusters	 PVC Square Aluminum Round
T-Rail Level Rail Brackets	 Top Rail Top Brackets Top Rail Bracket Cover Bottom Rail Bracket Top Rail Angle Bracket Bottom Rail Angle Bracket

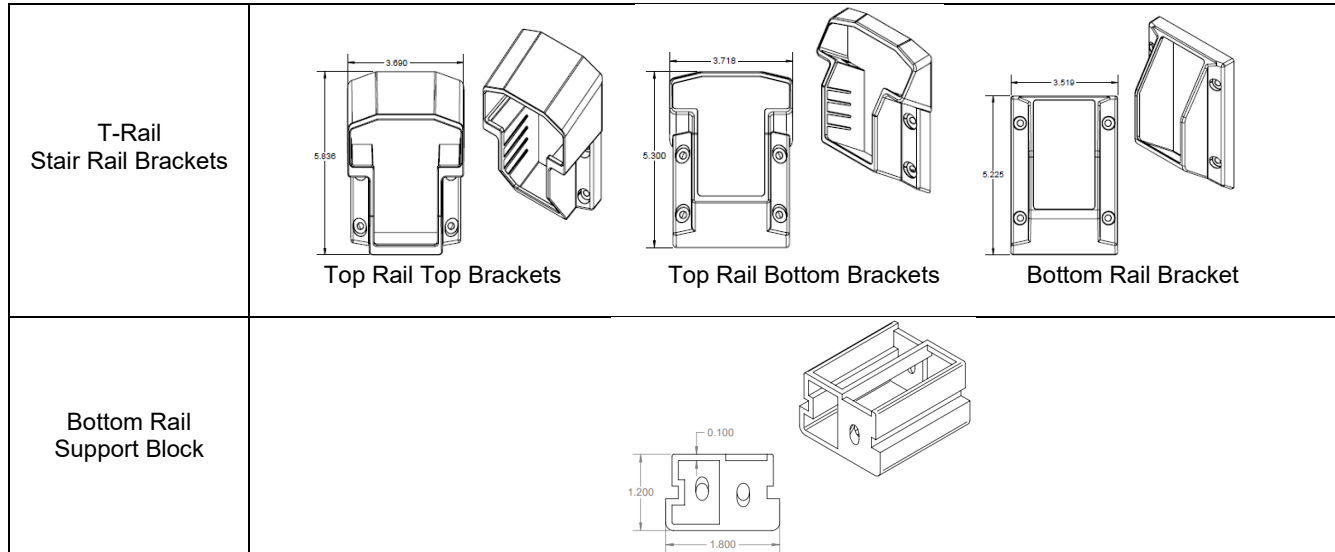


Table 2: Maximum Span Table for Overlook Guardrail Assembly

Guardrail Type	Top Rail	Top Rail Insert	Bottom Rail Insert	Baluster	Approved Standard Guardrail Lengths
Railing Assembly for Compliance with IRC, Residential Dwellings (Type V-B) only Maximum Rail Height 36 inches					
Level	T-Rail	None	None	1.5" x 1.5" Square PVC or 0.75" Aluminum Round	96-in. ¹ 72-in
Stair					90-in. ¹ 69.5-in
Railing Assembly for Compliance with IRC, Residential Dwellings (Type V-B) only Maximum Rail Height 36 inches					
Level	T-Rail	Aluminum Big T Stiffener	None	1.5" x 1.5" Square PVC or 0.75" Aluminum Round	120-in. ¹ 96-in. 72-in.
Railing Assembly for Compliance with IBC, Residential Dwellings (Type V-B) only Maximum Rail Height 42 inches					
Level	T-Rail	Aluminum Big T Stiffener	None	1.5" x 1.5" Square PVC or 0.75" Aluminum Round	96-in. ¹ 72-in.
Railing Assembly for Compliance with IBC Maximum Rail Height 42 inches					
Stair	T-Rail	Aluminum Big T Stiffener	None	1.5" x 1.5" Square PVC or 0.75" Aluminum Round	90-in. ¹ 69.5-in.

for SI conversion: 1 in = 25.4 mm, 1 psf = 47.9 Pa, 1 lbf = 0.0044 kN

Refer to Table 6 for fastening schedule

Maximum span is clear length between posts measured parallel to top/bottom rail

¹ Maximum approved length.



Table 3: Fastening Schedule for Overlook Guardrail Assembly

Location	Connection	Fasteners
Level Rail Assembly		
T-Rail Level Top Rail with PVC Bracket	Rail Bracket to Post	Four #10 x 2" Pan #2 Square Drive SDS 410 SS screw
	Rail Bracket to Rail	Three #10 x 1" Pan #2 Square Drive SDS 410 SS screw
T-Rail Level Top Rail with Adjustable Bracket	Rail Bracket Base to Post	Four #10 x 1-1/2" Pan Phillips Drive SDS 410 SS screw
	Rail Bracket to Rail	Two #10 x 1" Flat Head #2 Square Drive SDS 410 SS screw ¹
	Rail Bracket to Bracket Base	Two #10 x 1" Pan Head Phillips Drive SDS 410 SS screw
Bottom Rail Level with PVC Bracket	Rail Bracket to Post	Four #10 x 1-1/4" Pan #2 Square Drive SDS 302 SS screw ¹
	Rail Bracket to Rail	Slip fit – No mechanical connection
Bottom Rail Level with Optional PVC Bracket	Rail Bracket to Post	Two #10 x 1-1/4" Pan #2 Square Drive SDS 302 SS screw ¹
	Rail Bracket to Rail	Slip fit – No mechanical connection
Stair Rail Assembly		
T-Rail Top Rail Stair with Molded PVC Bracket	Rail Bracket to Post	Four #10 x 1-1/2" Pan #2 Square Drive SDS 410 SS screw
	Rail Bracket to Rail (Optional)	One #10 x 1" Pan #2 Square Drive SDS 410 SS screw
Bottom Rail Stair Molded PVC Bracket	Rail Bracket to Post	Four #10 x 1-1/4" Pan #2 Square Drive SDS 410 SS screw ¹
	Rail Bracket to Rail	Slip fit – No mechanical connection
Support Block ³ to Bottom Rail		One #10 x 3/4" Pan #2 Square Drive Tapping 302 SS screw

¹ Pre drill with 5/32" drill bit

² Pre drill with 1/8" drill bit

³ Use one Support Block for 6-ft span and two Support Blocks for longer span

⁴ See Applicable Characteristics Reviewed – 8 for additional post information