



## Standard Guide for Above Ground Public Use Skatepark Facilities<sup>1</sup>

This standard is issued under the fixed designation F2334; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This guide covers safety and performance guidelines pertaining to public skatepark facilities and any element included therein. These guidelines pertain to any elements intended to be used in the performance of the sports including skateboarding, inline skating, and BMX biking. Items such as fencing, lighting, and operational structures are not intended to be a part of this guide.

1.2 This guide applies to above-ground (indoor/outdoor) skatepark elements, intended for recreational use.

1.3 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.4 *Tolerances – General Measures, Tolerances, and Conversions*—The general dimensional tolerances for this specification (unless otherwise noted) are as follows:

Dimension	Tolerance
X in. or ft	$\pm 0.5$ in. or ft
X.X in. or ft	$\pm 0.05$ in. or ft
X.XX in. or ft	$\pm 0.005$ in. or ft

NOTE 1—These tolerances still apply to a dimension even when terms like greater than, less than, minimum, or maximum are used.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

NOTE 2—The conversion factor from inch-pound to SI units is 1 in. = 25.4 mm, and 1 lb = 0.45359 kg.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

2.1 *ASTM Standards*:<sup>2</sup>

**F2480 Guide for In-ground Concrete Skatepark**

2.2 *International Building Codes (IBC)*:<sup>3</sup>

**2009 IBC Sections 1013.2 and 1013.3**

### 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *access stairs, n*—stairs used to gain access to elements, and not used as performance elements.

3.1.2 *approaches/thresholds, n*—connection or transition component between base and riding surfaces.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from International Code Council (ICC), 500 New Jersey Ave., NW, 6th Floor, Washington, DC 20001-2070, http://www.iccsafe.org.



3.1.3 *base, n*—concrete, asphalt, or similar rigid, uniform, or stable surface upon which elements are positioned.

3.1.3.1 *Discussion*—

For more information on finish, surface flatness, levelness, expansion and control joints for concrete base surfaces, see Guide F2480.

3.1.4 *coping, n*—circular pipe or other material installed on some elements. Pool coping is excluded from this terminology.

3.1.5 *element, n*—sports and recreational equipment having a level, inclined, or curved solid surface on which the user of skateboards, inline skates, and BMX bicycles can maneuver.

3.1.6 *element riding surface, n*—surface on which it is intended the user be in contact with.

3.1.7 *guardrails, n*—barrier designed to keep users and their riding equipment from falling off the rear or sides of resting/roll-out decks.

3.1.8 *performance decks, n*—flat areas found within the skatepark intended for continuous movement and that do not require the use of guardrails.

3.1.9 *performance edge, n*—durable material placed on the accessible edge or surface of intersecting and terminating planes on elements used for performance purposes.

3.1.10 *performance stairs, n*—stairs within the skatepark intended to be used as performance elements.

3.1.11 *permanent element, n*—any element not intended to be moved or re-positioned.

3.1.12 *portable element, n*—any element that can be moved and is not anchored.

3.1.13 *protective edging/surface, n*—durable material that protects accessible edges or surfaces of intersecting and terminating planes on the riding surfaces for the purposes of reducing wear.

3.1.14 *resting/roll-out decks, n*—horizontal elements where riding is beginning or terminating.

3.1.15 *semi-permanent element, n*—any element that can be moved and is anchored.

3.1.16 *skatepark, n*—element or group of elements within a defined boundary for use by skateboarders, inline skaters, or BMX bikers.

## 4. Materials and Manufacture

### 4.1 *General Requirements:*

4.1.1 Skatepark elements shall be manufactured, assembled, or constructed, or a combination thereof, using durable materials fit for the use intended as specified by the manufacturer.

4.1.2 Materials shall be tested and documented for durability by the supplier or manufacturer.

4.1.3 Ferrous materials for outdoor use shall be inherently corrosion resistant or be provided with a corrosion resistant coating.

4.1.4 Wooden materials for outdoor or indoor use shall meet the Environmental Protection Agency and State requirements.

## 5. Performance Requirements

### 5.1 *Guardrails:*

5.1.1 Guardrails shall be designed to minimize the likelihood of climbing, shall be a minimum of 42 in. (1067 mm) high and prevent passage of a sphere equal to or greater than 4.0 in. (102 mm) outside diameter. (Reference: 2009 IBC Sections 1013.2 and 1013.3). Guardrails shall be constructed in a manner that does not allow a skateboard underneath and through the opening between the bottom of the rail and the resting deck. Resting/Roll-out decks with an elevation of 38 in. (965 mm) and above shall be equipped with guardrails. An elevated surface is exempt from these requirements if a guardrail would interfere with the intended use of the element. See Fig. 1.

5.1.2 Return guardrails shall terminate a maximum of 24 in. (610 mm) from the leading edge of the resting deck. Corners at the leading edge shall be free of sharp edges and contain a maximum radius or miter of 12 in. (305 mm). See Fig. 1.

5.1.3 *Adjoining Resting Deck Guardrails*—Guardrails spanning adjoining resting decks of different elevations shall be constructed in a manner that shall prevent inadvertent falls from one deck over the adjoining guardrail. See Fig. 2.

5.1.4 If an element (like a bench, box, rail, etc.) is within 42 in. (1067 mm) radius from the top of the guardrail, then the guardrail height needs to be adjusted to maintain the 42 in. (1067 mm) minimum height. See Fig. 3.

5.2 If protective edging/surface is used, it shall extend a minimum of 4.0 in. (102 mm) behind the coping and be flush with the finished riding surface within a tolerance of 0.078 in. (2 mm), and shall be strong enough to protect the equipment from damage and excessive wear due to prolonged use.

5.3 Riding surfaces in the same plane shall be contiguous and shall be uniform in friction characteristics. The elevation difference between adjoining surfaces shall not exceed 0.188 in. (5 mm).

### 5.4 *Copings:*

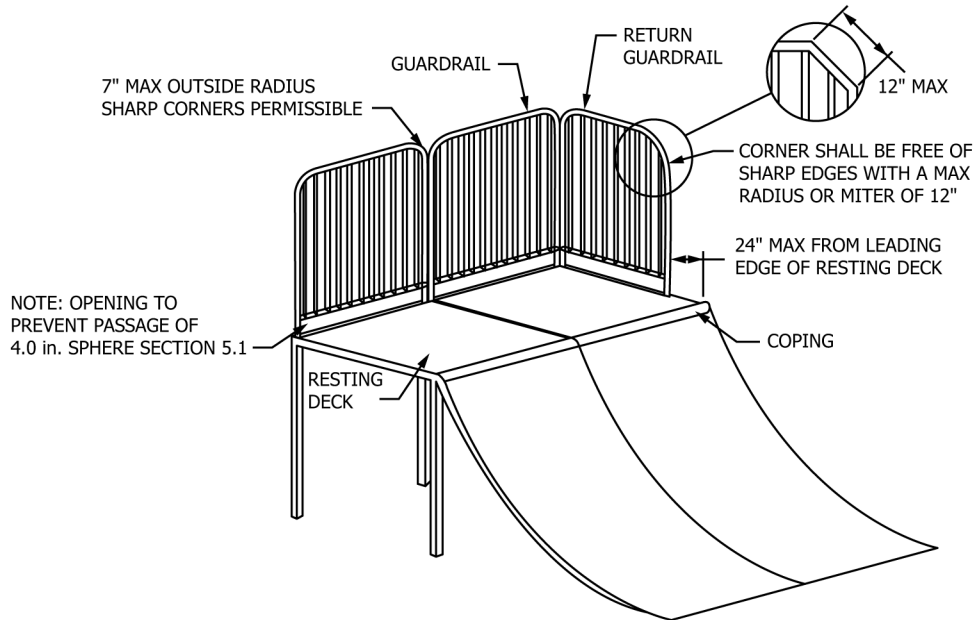


FIG. 1 Guardrail

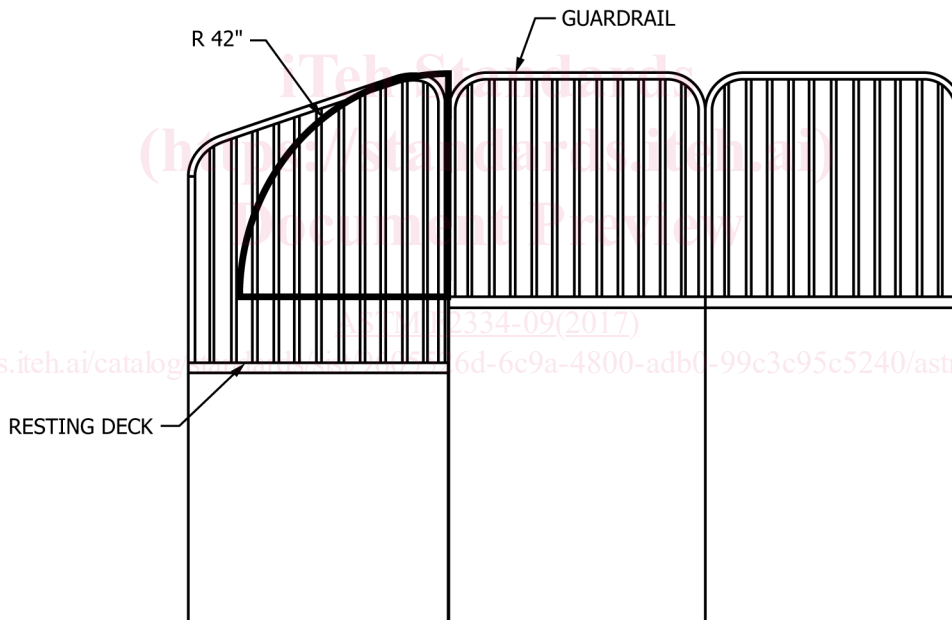


FIG. 2 Adjoining Resting Deck Guardrail

5.4.1 Coping protrusion shall be consistent along resting deck/riding surface and shall protrude  $0.25 \pm 0.125$  in. ( $6 \pm 3$  mm) above the resting deck and  $0.25 + 0.25$  in. ( $6 + 6$  mm) –  $0.125$  in. (3 mm) above the riding surface. See Fig. 4.

5.4.2 The outside radius of coping shall be a minimum of 1.18 in. (30 mm).

5.4.3 Adjoining copings shall be contiguous and flush within 0.031 in. (1 mm).

5.5 Gaps between riding surfaces intended to be in the same plane shall not exceed 0.188 in. (5 mm) in any direction.

5.6 Portable Elements shall not move during use.

5.7 Approaches/Thresholds:

5.7.1 Approaches/thresholds shall provide a smooth transition, and shall be no greater than 0.125 in. (3 mm) difference to the riding surface.

5.7.2 Approach/thresholds shall be between 0.12 in. (3 mm) and 0.19 in. (5 mm) from the top of the base surface at the leading edge to the top of the approach/threshold. It is recommended to remove the sharp edge from the top leading edge of the approach/threshold. See Fig. 5.