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Standard Guide for Fences for Above-Ground and In-ground Skate Park Facilities[1]

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1. Scope

1.1 This guide provides recommended minimum requirements for denoting the various types of fences/barriers for skate parks and for inline skating or roller hockey rinks and extreme performance areas.

1.2 This guide provides the minimum requirements for the protection of the participants from intrusion of other activity users; from unauthorized and unsupervised use by users that could be harmed by unanticipated entry into the area and from falls into in-ground skate park area.

1.3 This guide provides for the safety of spectators from errant skateboard use.

1.4 The values stated in inch-pound units are to be regarded as the standard. The SI values in parentheses are provided for information purposes only.

1.5 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric

A491 Specification for Aluminum-Coated Steel Chain-Link Fence Fabric

F537 Specification for Design, Fabrication, and Installation of Fences Constructed of Wood and Related Materials

F552 Terminology Relating to Chain Link Fencing

F668 Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric

F900 Specification for Industrial and Commercial Steel Swing Gates

F964 Specification for Rigid Poly (Vinyl Chloride) (PVC) Exterior Profiles Used for Fencing and Railing

F1043 Specification for Strength and Protective Coatings on Steel Industrial Fence Framework

F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

F1345 Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric

F2408 Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets

F2453/F2453M Specification for Welded Wire Mesh Fence Fabric (Metallic-Coated or Polymer Coated) for Meshes of 6 in.^{2} [3871 mm^2] or Less, in Panels or Rolls, with Uniform Meshes

F2589 Specification for Ornamental Fences Employing Steel Tubular Pickets

3. Terminology

3.1 See Terminology F552 for definitions of terms relating to chain-link fencing.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *fence, n*—a type of barrier that surrounds and obstructs access to the skate park. Examples: chain link, wood, ornamental, PVC extrusions.

3.2.2 *grade, n*—the finished elevation at any specified point of the ground or pavement outside the skate park.

4. Summary of Guide

4.1 This guide is based in part upon findings of the United States Consumer Product Safety Commission (CPSC), the American Association of Pediatrics, the National Center for Injury Prevention, the National Recreation and Park Association and the American Medical Association. It also incorporates certain provisions of the ASTM Committee F08 Task Groups on Skate Park Standards.

5. Significance and Use

5.1 This guide sets forth minimum standard requirements for use in local codes and ordinances relating to fences/barriers separating pedestrian circulation and traffic areas from skate

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[2] 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.

park and related venue enclosures to prevent collision, contain the skateboards and prevent falls into such in-ground venue areas.

5.2 This guide sets forth minimum standard requirements for use in local codes and ordinances relating to enclosing skate parks and preventing unfamiliar use of the facilities creating falls from hazards.

5.3 This guide does not have the effect of law, nor is it intended to supersede local codes and ordinances of a more restrictive nature.

5.4 Studies have been the basis for certain recommendations in this guide and will assist those who intend to provide protection against unfamiliar access by restricting access to children under the age of five years who have no training and others unfamiliar with the equipment and features in skateboards. This would include, but is not limited to, state and local governments, model code organizations, building code groups, and consumers. It is understood that the format will vary depending upon the specific use and local conditions.

6. Requirements

6.1 *Height*—The top of the fence shall be a minimum of 72 in. (1829 mm) above grade measured on the side of the fence, which faces away from the facility.

6.2 *Visibility and Accessibility for Emergencies* —The fence shall be so designed and constructed that it allows for 50 % visibility and accessibility from a designated supervising area outside the area to inside the area.

6.3 *Ground Clearance*—The maximum vertical clearance between grade and the bottom of the fence shall be 2 in. (50 mm) measured on the side of the fence, which faces away from the skate park.

6.4 *Chain-link Mesh*—2 in (50 mm) mesh 9-gauge wire in compliance with Specifications A392, A491, F668, or F1345 having knuckle/knuckle selvage. Mesh sizes greater than the standard 2 in. (50 mm) are not permitted.

6.5 *Welded Wire Mesh*—Maximum opening 2 in. by 2 in. (50 mm by 50 mm), minimum 9 gauge wire in compliance with Specification F2453/F2453M.

6.6 *Decorative Fences*—Where the fence is composed of diagonal members, (such as in a lattice fence), any opening created by the diagonal members shall be a maximum of 2.9 in. (74 mm) measured in its largest direction, rigid PVC profile fences shall comply with Specification F964 and wood fencing shall comply with Specification F537.

6.7 *Ornamental and Picket Fences*—Where fence is composed of vertical pickets the spacing between pickets shall not be greater than 4 in. (101 mm). Ornamental steel fence shall comply with Specification F2408 or Specification F2589, rigid PVC profile fences shall comply with Specification F964 and wood fencing shall comply with Specification F537.

6.8 *Diagonal bracing members* extending from one corner to the opposite comer creating a ladder effect on all styles offences and gates are not permitted where spacing of vertical members in any area between posts exceeds 1 ¾ in. (44 mm) to prevent climbing.

6.9 *Framework and Fittings*—The strength of the fence and its framework shall be structurally designed to provide the desired security, safety and strength to withstand area wind load forces. Chain link framework shall comply with Specification F1043 or Specification F1083.

6.10 *Access Gates:*

6.10.1 Double leaf access gates shall comply with the requirements of 6.1 through 6.5 and shall be equipped with a padlock or other key-operated locking device that is always locked when the gate is not in use. Chain link swing gates shall meet the requirements of Specification F900.

6.10.2 Single leaf access gates shall comply with applicable ASTM specifications; open outward away from the skate park; shall be self-closing; and shall have a self-latching device. Chain link single swing gates shall meet the requirements of Specification F900.

6.11 *Grounding*—When required, fence shall be grounded in compliance with the requirements of local utilities and electrical codes.

7. Prohibited Locations

7.1 *Fence/Barriers*—Shall be located so as to prohibit the use of permanent or replaceable structures, equipment, landscaping or similar objects to aid in climbing the fence/barrier.

8. Safety Signs

8.1 Safety signs shall be mounted on skate park barriers to communicate important information to users regarding the existence of hazards and ways to avoid personal injury. The communication of safety critical information is a non-delegable responsibility of skate park venue owners and operators. These signs shall tell people about a threat to their well being posted by dangerous conditions or products and as a safety measure to change behavior so that people act safely rather than unsafely.

8.2 Warning signs shall be located in proximity to the actual hazard. They shall clearly and concisely tell people how to avoid being hurt in a way, which is readily understood and followed by those being warned. The signs shall provide motivation to act safely by explicitly stating the consequences of failure to act appropriately and by the use of the signal words: “**DANGER**”, “**WARNING**”, and “**CAUTION**” to refer to the severity of the threat to the well being of the person being warned. In the latter regard, the signal “**DANGER**” is used to denote the possibility of serious permanent injury or death, the signal word “**WARNING**” is used to mark the threat of serious recoverable injury and the signal word “**CAUTION**” is used to mark the possibility of moderate or minor injury. The signs should also convey the unsafe conditions.

8.3 Warning signs must be durable, legible, illuminated, in large type, unambiguous, serious, and in simple language so that all of the objectives are met for the duration of the existence of the hazard.

9. Maintenance and Inspection

9.1 It is the responsibility of the owner to maintain the integrity of the fence and to regularly inspect the gates, doors, etc. for proper closing and latching operation.

9.2 Keep the area outside the fence free of toys, furniture, or other objects, which could be moved by a child and used to climb the fence.

10. Keywords

10.1 barrier; fence; fences; skate park