



Standard Practice for Operations of Amusement Railway Rides, Devices, and Facilities¹

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1. Scope

1.1 This practice applies to operations of amusement railway ride(s) that have a track gauge greater than or equal to 12 in. (305 mm) measured between the heads of the rails. This excludes patron powered ride vehicles specifically designed for children.

1.2 This standard does not apply to the operation of rides, such as roller coasters, that may resemble railways, but may fall within the scope of Practice **F2291** or Practice **F1159** and does not apply to funiculars as defined in ANSI B77.2 or BS EN 1907.

1.3 This standard does not apply to Amusement Railway Rides operation that are intended for use as a portable amusement ride or attraction.

1.4 This standard does not apply to permanently installed amusement railway rides and tourist railways, and their associated track, devices and facilities that are under the jurisdiction of the Federal Railroad Administration (FRA) in whole or part or National equivalent.

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.

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.*

2. Referenced Documents

2.1 ASTM Standards:²

¹ This practice is under the jurisdiction of ASTM Committee **F24** on Amusement Rides and Devices and is the direct responsibility of Subcommittee **F24.60** on Special Rides/Attractions.

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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.

F770 Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices

F1159 Practice for Design of Amusement Rides and Devices that are Outside the Purview of Other F24 Design Standards

F2291 Practice for Design of Amusement Rides and Devices

2.2 Other Standards:

ANSI B77.2 Funiculars - Safety Requirements³

BS EN 1907 Safety requirements for cableway installations designed to carry persons. Terminology⁴

3. Terminology

3.1 *amusement railway ride, n*—an amusement ride that may have multiple vehicles (for example, locomotive(s), coach(es), etc.) linked together, at least one of which has on board mechanical propulsion that has an on board operator(s), utilizing flanged wheels on railroad type rails with a gauge of 12 in. or greater, that is insular to national regulations, which is designated by the Designer/Engineer as an amusement railway ride.

4. Significance and Use

4.1 4.1 The purpose of this practice is to delineate information and to establish procedures for the operation of an Amusement Railway Ride.

4.2 The user of this standard shall be required to review and comply with the referenced “core” ASTM Committee F24 standards in Section 2.1 of this standard. Modified or alternate requirements to those standards may be required in this standard.

5. Operations

5.1 Ownership, operation, maintenance and inspection requirements shall be in accordance with Practice **F770**.

5.1.1 The owner/operator of an Amusement Railway Ride shall include, specifically, the following procedures in the

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Available from British Standards Institution (BSI), 389 Chiswick High Rd., London W4 4AL, U.K., <http://www.bsigroup.com>.

owner/operators fact sheet in addition to those required by Practice **F770**, subsection 4.1:

5.1.1.1 *Speed*—Establish a procedure so each operator of an amusement railway ride shall operate within a prescribed speed range which covers each area, section, or block of track, or a combination thereof. This procedure shall incorporate a method to communicate changes in the prescribed speed range for each area, section, or block of track based on changes in track condition, weather, visibility restrictions, or other factors that may influence the prescribed speed range. The speed range may be automatically or manually controlled.

5.1.1.2 *Multiple Train Operations*—Establish a procedure so each operator of an amusement railway ride maintains adequate spacing between other amusement railway vehicles/trains operating on the same track.

5.1.1.3 *Collision avoidance between trains and other on or off track equipment, objects, or persons on or near the track*—Establish a procedure so each operator of an amusement railway vehicle/train is aware of other equipment, objects, or persons that may be adjacent to the patron clearance envelope during the operation of an amusement railway ride.

APPENDIX

(Nonmandatory Information)

X1. OPERATIONS

X1.1 *Subsection 5.1.1.1*—This procedure may use a time and distance method, speed measuring devices, or other means to determine approximate speeds.

X1.2 *Subsection 5.1.1.2*—This procedure may use any, or a combination of, manual or automated signaling devices, a method of communication between operators, timetables/train warrants/train orders, or other means to avoid unintended

collisions between trains.

X1.3 *Subsection 5.1.1.3*—This procedure may prohibit operations, restrict operations, require the use of additional personnel, or require the use of additional warning devices, or a combination thereof, during operations for the area, section, or block of track, or combination thereof, that is affected.

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