



Elevating and Amusement Devices Safety Program	Ref. No.: 542 / 21
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Subject: Amusement Ride and Device Classifications

Distribution: TSSA website - Amusement Devices Advisory Council

1. Introduction

- 1.1. Amusement Device Authorizations (licence and permits) effective from May 1, 2021, will be subject to the new fee structure. All fee changes can be found on our website <https://www.tssa.org/en/Fees.aspx>
- 1.2. The new fee structure is based on amusement ride and device classifications as listed in part 2.

2. Amusement Ride and Device Classifications

2.1. The following ride/device classifications are currently in use:

- a. Inflatables
- b. Waterslides
- c. Ziplines
- d. Go-Karts
- e. Amusement Rides and Devices (AR) (including Mechanically Assisted Bounce, Bungee Jump and Free Fall Devices) are now classified as i) Simple, ii) Medium, or iii) Complex

2.2. The classification criteria for Simple, Medium and Complex for Amusement Rides and Devices (AR) are as follows:

2.2.1. Simple (AR)

- a. Restraint class 1 or 2 (no restraints or restraints optional) (based on ASTM F2291)
- b. Low RPM and Forces applied
- c. Low elevation
- d. Mechanical and structural failure present the most likely risk for low impact events
Examples: Hampton rides, Berry-go-round, Carousels, 4D motion seats, Dry Slides, Raiders, Teacups, Euro Bungy, Train (single train)

2.2.2. Medium (AR)

- a. Multiple axis of rotation on ground or on one level
- b. Up and down movement only, no rotation
- c. Restraint class 3 (based on ASTM F2291)
- d. Elevation <30m
- e. Mechanical and structural failure present the most likely risk for medium impact events.
Examples: Century Wheel, Frog Hopper, Dragon Wagon, Himalaya, Gravitron, Scrambler, Tilt-a-Whirl, Zipper, Trains (multi train, one track)

2.2.3. Complex (AR)

- a. Multiple axis of rotation
- b. Has elevation (goes up/down)
- c. Track length over >100m

- d. Elevation >30m
- e. Restraint class 4 or 5 (based on ASTM F2291)
- f. Mechanical and structural failure present the most likely risk for high impact events.
Examples: Roller Coasters, Large swing rides, Sky master, Remix

Note 1: Classifications may be applied to rides/devices meeting some (not all) of the listed criterion.

Note 2: Hybrid devices with multiple classifications will be assessed on a case-by-case basis.

3. Existing Rides and Devices

Devices that have been active for the past five (5) years have been classified as noted above.

All future renewal packages will include a device validation list that will display the amusement ride and device classifications shown in part 2.

4. New Rides and Devices

For new submissions where the classification is not easily determined, please contact TSSA at addesignsubmittal@tssa.org.