1. Purpose

A runaway truck ramp, runaway truck lane, escape lane, emergency escape ramp or truck arrester bed is a traffic device that enables vehicles that are having braking problems to safely stop. It is typically a long, sand or gravel-filled lane adjacent to a road with a steep down-hill grade, and is designed to accommodate large trucks. The deep filling allows the truck’s momentum to be dissipated in a controlled and relatively harmless way, allowing the operator to stop it safely.

Emergency escape ramps are typically located in mountainous areas which cause high construction costs and present difficult site selection. Designs include:

- **Arrester bed**: a gravel-filled ramp adjacent to the road that uses rolling resistance to stop the vehicle. The required length of the bed depends on the mass and speed of the vehicle, the grade of the arrester bed, and the rolling resistance provided by the gravel. The required length of the bed depends on the mass and speed of the vehicle, the grade of the arrester bed, and the rolling resistance provided by the gravel.

- **Gravity escape ramp**: a long upwardly-inclined path parallel to the road. A large length is required. Control can be difficult for the driver: problems include rollback after the vehicle stops.

- **Sand pile escape ramp**: a short length of loosely piled sand. Problems include large deceleration; sand being affected by weather conditions (moisture and freezing), and; vehicles vaulting and/or overturning after contacting the sand pile.

- **Mechanical-arrestor escape ramp**: a proprietary system of stainless-steel nets transversely spanning a paved ramp that engage and retard a runaway vehicle. Ramps of this type are typically shorter than gravity ramps and can have a downhill grade. **Alternatives**: such as a vehicle arresting barrier.

- http://infrastructure.sa.gov.au/content/adelaide_to_melbourne_road_corridor/south_eastern_freeway

![Adelaide Arrester Bed](image1)

![Adelaide Arrester Bed](image2)

![Arrester Bed Signs Qld](image3)

![Arrester Bed W.A.](image4)