

# PRT Safety Features

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Safety has been an important consideration in the design and development of the PRT system from initial concept. The following list highlights some of the most important safety features that make PRT an inherently safe form of transport:

## *Infrastructure Safety Features*

- One-way guideways: eliminates the risk of head on vehicle collisions
- Guideway kerbs designed to contain vehicle: minimizes risk of vehicle leaving guideway
- Segregated or elevated guideways: minimizes risk of collisions between vehicles and other traffic or pedestrians
- Elevated guideway safety railing: maintains safety for passengers in an emergency evacuation event and employees during construction and maintenance activities

## *Vehicle Safety Features*

- Bumper structure designed to progressively absorb impact energy and limit passenger deceleration: prevents injuries to passengers in low speed impacts
- Fail Safe Electromagnetic hold off brakes: will bring the vehicle safely to a halt in the event of a vehicle control system or power failure
- Door back off function: stops doors closing if an obstruction is detected in the door to prevent injuries to passengers
- Smoke and Fire alarms: informs Network Controllers of smoke or fire in the vehicle so that an appropriate emergency services response can be arranged if required.

## *Control Systems Safety Features*

- Synchronous vehicle scheduling: eliminates possibility of vehicles scheduled on conflicting paths

- Continuous fault monitoring and automatic response: detection of faults allows vehicles to be slowed, stopped or rerouted to prevent any potential collisions
- Independent Automatic Vehicle Protection System: prevents vehicle collisions in the event of other control system or vehicle failures

#### *Other Safety Features*

- Berth doors in stations which only open when a vehicle is in the berth: prevents passengers inadvertently entering the guideway
- CCTV coverage of all the guideway and stations: allows Controllers to monitor all parts of the system and respond to any emergency event
- Uninterruptable power supplies to all critical system components: allowing the system to be brought to a safe state in the event of a power failure.

Safety is integral to many system elements, and how these elements perform these various safety functions is described in more detail in the relevant sections elsewhere in this document.