



Light rail and road interfaces Part 1: Management of light rail vehicle movement

RiSSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Light rail Standard



This Australian Standard® AS 7601.1 Light rail and road interfaces Part 1: Management of light rail vehicle movement was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Altrac Light Rail

Canberra Metro

Tehnika

Rail Safety Consulting Australia

Transport for NSW

Yarra Trams

Dept. Infrastructure and Transport

Keolis Downer

Main Roads WA

The Standard was approved by the Development Group and the Light Rail Standing Committee in October, 2021. On November 29, 2021 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comment on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.

**Deb Spring**

Chief Executive Officer

Rail Industry Safety and Standards Board

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This Standard was prepared by the Rail Industry Safety and Standards Board (RISSB) Development Group AS 7601.1 Light rail and road interfaces Part 1: Management of light rail vehicle movement.

Membership of this Development Group consisted of representatives from the organisations listed on the inside cover of this document

Objective

This Standard provides a consistent approach to the management of light rail vehicle movements within a light rail network. This Standard covers line of sight operation, signalling and indications used on light rail networks. This Standard does not provide guidance or instruction on road signals used for road traffic purposes.

This Standard applies to new networks and may be applied against existing light rail and modified light rail networks.

This Standard is part of the AS 7601 (Light rail and road interfaces) series. This series is currently under development.

Compliance

There are four types of provisions contained within Australian Standards developed by RISSB:

1. Requirements.
2. Recommendations.
3. Permissions.
4. Constraints.

Requirements – it is mandatory to follow all requirements to claim full compliance with the Standard. Requirements are identified within the text by the term 'shall'.

Recommendations – do not mention or exclude other possibilities but do offer the one that is preferred. Recommendations are identified within the text by the term 'should'.

Recommendations recognize that there could be limitations to the universal application of the control, i.e. the identified control is not able to be applied or other controls are more appropriate or better.

Permissions – conveys consent by providing an allowable option. Permissions are identified within the text by the term 'may'.

Constraints - provided by an external source such as legislation. Constraints are identified within the text by the term 'must'.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities, or interfacing organisations where the risk may be shared.

Controls in RISSB standards address known light rail risks and top-level events which are tabled in Appendix A.

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1 Scope and general

1.1 Scope

This Standard specifies the minimum requirements for design, interpretation and use of visual driver cues and signalling systems that permit the safe movement of light rail vehicles in light rail networks. This includes:

- (a) line of sight operation;
- (b) pavement markings or stud markings;
- (c) traffic signals;
- (d) light rail signals;
- (e) other indicators.

In addition to specifying technical requirements this Standard also recognizes the importance of a structured approach to human factors integration, through the application of appropriate knowledge, processes, and techniques, in order to enhance both safety and overall system performance.

This Standard applies to all light rail networks. Heritage and tourist tramways may adopt all or part of this Standard if they deem it appropriate to do so.

1.2 Exclusions

This Standard does not address:

- (a) signals such as indicators and brake lights mounted on light rail vehicles;
- (b) control of vehicle movements, other than light rail vehicle movements, by road traffic control systems;
- (c) traffic signal controller logic and control functions that are designed, installed and maintained by road managers;
- (d) level crossings systems used on light rail networks¹;
- (e) cane and other non-passenger railways.

1.3 Traffic signals and light rail signals

This Standard refers to both traffic signals and light rail signals. To provide a delineation between these two the following explanation is provided:

- (a) Traffic signals refer to all signals controlled by a traffic signal controller, including T-lights, turn arrows and other signals commonly found at road intersections (section 6).
- (b) Light rail signals refer to signals for light-rail operations that are controlled from a central control centre. For example, signals controlled from an operations control centre for the purpose of maintaining safe separation between light rail vehicle movements (section 7).

¹ Level crossings are covered in AS 7658 Level Crossings – Rail industry requirements