AS 1742.7—2007
(Incorporating Amendment No. 1)

AS 1742.7—2007

Australian Standard®

Manual of uniform traffic control devices

Part 7: Railway crossings

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The following are represented on Committee MS-012:

- AUSTROADS
- Association of Consultants in Access Australia
- Australasian Railway Association
- Australian Automobile Association
- Australian Chamber of Commerce and Industry
- Department of Infrastructure (Victoria)
- Department of Infrastructure, Energy and Resources (Tasmania)
- Independent Transport Safety & Reliability Regulator (NSW)
- Main Roads Department, Queensland
- Main Roads Western Australia
- Roads and Traffic Authority of NSW
- Transport SA

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PREFACE

This Standard was prepared by the Standards Australia Sub-Committee MS-012-02, Railway Crossings for Committee MS-012, Road Signs and Traffic Signals to supersede AS 1742.7—1993. It is one in a series of fourteen Standards which together form the *Manual of uniform traffic control devices*. The series comprises the following Standards:

AS		
1742	Manual of uniform traffic control devices	
1742.1	Part 1:	General introduction and index of signs
1742.2	Part 2:	Traffic control devices for general use
1742.3	Part 3:	Traffic control devices for works on roads
1742.4	Part 4:	Speed controls
1742.5	Part 5:	Street name and community facility name signs
1742.6	Part 6:	Tourist and services signs
1742.7	Part 7:	Railway crossings (this Standard)
1742.8	Part 8:	Freeways
1742.9	Part 9:	Bicycle facilities
1742.10	Part 10:	Pedestrian control and protection
1742.11	Part 11:	Parking controls
1742.12	Part 12:	Bus, transit, tram and truck lanes
1742.13	Part 13:	Local area traffic management
1742.14	Part 14:	Traffic signals

This Standard incorporates Amendment No. 1 (October 2007). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This revised Standard results from a recent major review by both road and railway authorities of the safety requirements at railway crossings in terms of signs, markings and delineation.

The principal changes and additions to the previous edition are summarized as follows:

(a) The Standard now promotes use of the red background position sign, R6-25, for new or replacement signs in preference to the open ‘crossbuck’ sign, R6-24.

(b) Provision is made for active advance warning of the activation of railway crossing signals under certain conditions.

(c) More detail is given for sight distance requirements at passive control crossings for stop and give-way sign control.

(d) The need to avoid unsafe queuing of traffic on railway crossings upstream of traffic signals is recognized and the use of corrective measures including signs and box markings are specified.

(e) Standards for pedestrian crossing treatments at railway crossings have been substantially upgraded and now include provision for people with disabilities.

Statements expressed in mandatory terms in notes to figures are deemed to be requirements of this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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FOREWORD

Uniform standards and practices in the use of signs, markings and other devices at railway crossings is essential in the interests of safety for both rail traffic and road users.

Essential to this compliance is an understanding of the risks inherent at railway crossings. Long, heavy freight trains and high-speed passenger trains constitute a massive energy source that can be highly destructive. Trains, even those moving relatively slowly, cannot be stopped anywhere near as readily as road traffic and this factor may not be apparent to some road users. It is imperative that vehicle occupants do not come into contact with such large energy sources and that road users recognize the need and are given every opportunity to give way to trains.

Problems associated with long and heavy road vehicles can influence both the location and safe operation of crossings. Long and heavy vehicles with slow acceleration from the stopped position can, when sight distance along the railway is poor, have difficulty starting up and clearing a crossing before the arrival of a previously unseen train unless there is some form of active control to warn that a train is coming. Likewise, long vehicles can present problems if there is an intersection or other vehicular check point close to the crossing on the departure side and the rear of such a vehicle inadvertently fails to clear the conflict area. Appropriate solutions need to be considered for all of these conditions.

Before any works, features or devices (e.g. pedestrian crossing, bus stop, intersection control, temporary works site) are introduced in the vicinity of a railway crossing, which could cause road traffic to queue across the crossing, the relevant rail and road authorities should confer to determine the most suitable method of handling the situation.

Other problems such as ill-defined crossings which may occur within freight loading areas, and crossings which are only used seasonally or indeed very rarely at any time of the year may present operational and management challenges that can only be partially met (if at all in some cases) by application of this Standard.

Railway crossings should be located to avoid sub-standard geometric features of the road, such as sub-standard curves, reduced pavement widths and vertical obstructions. If this cannot be avoided, special attention should be given to the signing and marking of these features as well as the railway crossing itself. Sub-standard geometric features can lead to increased numbers of crashes not involving trains as well as having an effect on the incidence of vehicle/train collisions.

The Standard does not provide guidance on when a crossing should progress from one hierarchical step in the type of control to the next, i.e. passive control to active control and active control to elimination. Such guidance can be found in risk assessment models such as ALCAM*.

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* Australian Level Crossing Assessment Model

STANDARDS AUSTRALIA

Australian Standard
Manual of uniform traffic control devices

Part 7: Railway crossings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies traffic control devices to be used to control and warn traffic at and in advance of railway crossings at grade. It specifies the way in which these devices are used to achieve the level of traffic control required for the safety of rail traffic and road users, including pedestrians. Requirements and guidance are also given in appendices on the illumination and reflectorization of signs, on their installation and location, and on selection of the appropriate sign size.

1.2 APPLICATION

The requirements of this Standard are not applicable to railway crossings provided for the exclusive use of the occupier of private land or by other people with the knowledge and agreement of the occupier (sometimes known as ‘occupation’ crossings).

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1428 Design for access and mobility
1428.1 Part 1: General requirements for access—New building work

1742 Manual of uniform traffic control devices
1742.2 Part 2: Traffic control devices for general use
1742.3 Part 3: Traffic control devices for works on roads
1742.4 Part 4: Speed controls
1742.14 Part 14: Traffic signals

1743 Road signs—Specification

AS/NZS
1158 Lighting for roads and public spaces
1158.3.1 Part 3.1: Pedestrian area (Category P) lighting—Performance and design requirements

1428 Design for access and mobility
1428.4 Part 4: Tactile indicators

1906 Retroreflective materials and devices for road traffic control purposes
1906.1 Part 1: Retroreflective materials

2144 Traffic signal lanterns

HB 197 An introductory guide to the slip resistance of pedestrian surface material

