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TRAFFIC SIGNAL POSTS AND ATTACHMENTS

STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Automobile Association

Australian Road Research Board

Confederation of Australian Industry

Department of Transport

Latrobe University, Department of Communication Engineering

National Association of Australian State Road Authorities

National Capital Development Commission

Railways of Australia Committee

State Police Departments

State Traffic Authorities

University of Melbourne, Department of Optometry

University of New South Wales, School of Transport and Highways

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AUSTRALIAN STANDARD

TRAFFIC SIGNAL POSTS AND ATTACHMENTS

AS 2339—1980

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PREFACE

This standard was prepared by the Association's Committee on Road Traffic Signals as part of a program of work on the development of standards for the equipment associated with traffic signal installations.

It incorporates requirements for the design, construction and finish of tubular steel posts used for the support of traffic signal lanterns, and for the various components utilized in attaching the lanterns to the posts. Mast-arms, which may in certain applications also be used for supporting traffic signal lanterns, are not covered in the standard, but the development of appropriate requirements is under consideration.

In the application of this standard reference may be necessary to the following publications:

AS 1074	Steel Tubes and Tubulars Threaded or Suitable for Threading with Pipe Threads of Whitworth Form
AS 1275	Metric Screw Threads for Fasteners
AS 1554	SAA Code for Welding in Building Part 1—Manual Welding
AS 1650	Galvanized Coatings on Ferrous Articles
AS 1721	General Purpose Metric Screw Threads
AS 1798	Preferred Dimensions for Lighting Columns and Bracket Arms
AS 1939	Classification of Degrees of Protection Provided by Enclosures for Electrical Equipment
AS 2052	Metallic Conduits and Fittings
AS 2144	Traffic Signal Lanterns
AS 2276	Cables for Traffic Signal Installations: Part 1, Multicore Power Cables
AS K185	Colours for Specific Purposes
AS	Pedestrian Push-button Assemblies*
BS 1322	Aminoplastic Moulding Materials

British Electricity Supply Industry Standard 12-1 (1970), Terminal Blocks

*In course of preparation—issued for public review as DR 78038.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
TRAFFIC SIGNAL POSTS AND ATTACHMENTS

1 SCOPE. This standard specifies requirements for tubular steel posts and associated attachments which are designed for use in traffic signal installations for the support of traffic signal lanterns and pedestrian push-button assemblies. It does not apply to special overhead structures such as mast-arms* and gantries which may be used for this purpose.

NOTE: Appendix B lists the information which should be supplied with an enquiry or order for traffic signal posts and attachments to this standard.

2 DEFINITIONS. For the purpose of this standard the following definitions apply, in addition to the relevant definitions in AS 2144. The terms defined herein are illustrated in Appendix A.

2.1 Traffic signal post—a tubular structure which is designed to support a traffic signal lantern or group of lanterns. It may also be used to support ancillary equipment such as pedestrian push-button assemblies.

NOTE: The term 'post' is hereafter used to refer to a traffic signal post.

2.2 Push-button post—a post designed solely for the support of one or more push-button assemblies.

2.3 Baseplate-mounted post—a post which is designed to be bolted down onto a foundation by means of a baseplate affixed to the bottom of the post.

2.4 Buried post—a post which is intended to be supported by the direct burial of a portion of it.

2.5 Planting depth—the length of that section of a buried post which is intended to be buried below ground level.

2.6 Ground line—the position on a buried post at a distance from the butt end equal to the manufacturer's stated planting depth.

2.7 Post length.

(a) *For baseplate-mounted posts*—the distance from the bottom of the baseplate to the highest point on the post.

(b) *For buried posts*—the distance from the ground line to the highest point on the post.

NOTE: The overall length of a buried post is the sum of the post length and the planting depth (see Fig. A1 of Appendix A).

2.8 Lantern mounting bracket—an assembly designed for clamping onto a post, for the purpose of supporting one or more traffic signal lanterns by means of mounting straps attached to the top and bottom of each lantern.

2.9 Lantern mounting strap—a supporting strap used for the purpose of connecting the lantern to a mounting bracket attached to the post.

2.10 Finial cap—a cover provided at the top of the post to prevent inadvertent contact with live terminals and to protect the terminal assembly and associated wiring from the weather.

3 POSTS.

3.1 Material, Dimensions and Construction. Posts shall be manufactured from medium steel tube of 100 mm nominal size complying with AS 1074.

NOTE: The 100 mm nominal size refers to the inside diameter of the steel tube. The outside diameter is required by AS 1074 to lie between 113.3 mm and 114.9 mm.

Post lengths shall be in accordance with the following:

(a) *For traffic signal posts*—3.2 m (see Note 2), 4.1 m or 4.6 m.

(b) *For pedestrian push-button posts*—1.6 m.

For buried posts the planting depth shall be not less than 700 mm.

A steel cap shall be attached to the top of pedestrian push-button posts to prevent access to wiring or ingress of water.

The deviation from straightness, after galvanizing as required by Clause 3.4, shall not exceed 3 mm/m of post length.

NOTES:

1. The post lengths specified above are intended to cater for normal requirements. However, unusual site conditions may necessitate the selection of special post lengths.
2. The post length of 3.2 m is not intended for the mounting of three-aspect lanterns having a nominal signal diameter of 300 mm.
3. Special posts may be required for joint use applications, e.g. traffic signal/railway level crossing signal, traffic signal/street lighting.

3.2 Baseplate. Each baseplate-mounted post shall be provided with a steel baseplate of 16 mm in thickness, having four fixing holes equally spaced on a pitch circle diameter of 350 mm or 500 mm in accordance with the requirements of AS 1798.

NOTE: Baseplates with a pitch circle diameter of 500 mm are intended for use where a cable pit is provided directly beneath the baseplate for the purpose of storing excess cable.

The baseplate shall be welded onto the post in such a manner that the strength of the joint is at least equivalent to that of the steel tube prescribed in Clause 3.1. Welding practice shall comply with the requirements of AS 1554, Part 1.

3.3 Cable Entry. Buried posts shall incorporate a cable entry aperture in accordance with the requirements of Fig. 1. Baseplate-mounted posts shall provide for entry of the cable into the interior of the post through a hole in the baseplate, having a diameter of not less than the inside diameter of the post.

*Requirements for mast-arms are under consideration.