



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline: Engineering (Track & Civil)

Category: Standard

Trackside Warning Signs and Markings

ETM-11-01

Applicability

New South Wales	✓	CRIA (NSW CRN)	
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Primary Source

ARTC Standards BDS 19, RDS 03 and ESS 01
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Document Status

Version	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
1.1	18 Jun 10	Standards	Manager Standards	Exec Manager SS&P 21/06/2010	CEO

Amendment Record

Version	Date Reviewed	Clause	Description of Amendment
1.0	01 Dec 09		Implementation draft. Supersedes NSW Standards RDS 03 v1.1 and ESS 01 v1.2
1.1	18 Jun 10		Banner added regarding mandatory requirements in other documents and alternative interpretations.

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Mandatory requirements also exist in other documents.

Where alternative interpretations occur, the Manager Standards shall be informed so the ambiguity can be removed. Pending removal of the ambiguity the interpretation with the safest outcome shall be adopted.

1 General

The only approved boards for indicating Temporary Speed Restrictions and Track Possessions for Engineering Works are detailed in section 2. These boards are known as the 1987 Standard Series.

The use of 'Worksite boundary safety markers' is explained in section 3.

Track centre clearance warning signs for yards are shown in ETM-07-01 "Management of Transit Space".

2 Boards - Temporary Speed Restrictions and Track Possessions

The only approved boards for indicating Temporary Speed Restrictions and Track Possessions for Engineering Works are as follows:

Warning Board	Figure 1
Caution Board	Figure 2
Clearance Board	Figure 3
Hazard Board	Figure 4
Stop Board	Figure 5
Speed Plate - Normal/Self Propelled Trains	Figure 6 & Figure 7
Direction Plate (Arrow)	Figure 8
Standard Ingal Post	Figure 9
Flashing Lamp/Lens	Figure 10
Warning Board (Non Infringing Type)	Figure 11
Caution Board (Non Infringing Type)	
Clearance Board (Non Infringing Type)	
Mounting Bracket for Non Infringing Type Setup	Figure 12

Note: Figures 11 & 12 - Design investigation in progress

3 Purchase

These drawings contain sufficient information to allow their use as a specification of Technical Details when purchase is required.

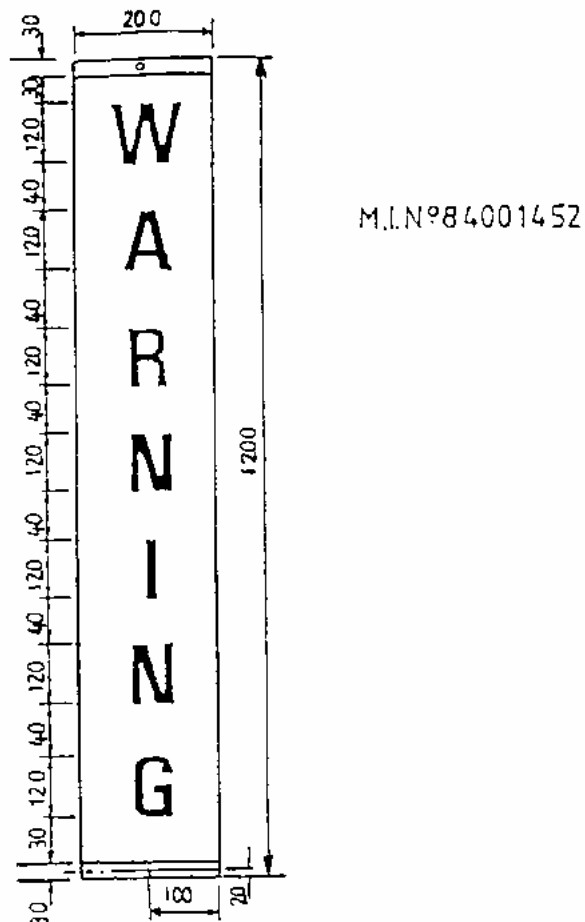


Figure 1 – Warning Board

Notes:

- 1) **LEGEND:** 120mm High in Black to be Screen Printed with appropriate Manufacturers' Ink for Class 1 Sheeting.
- 2) **BACKGROUND:** Yellow Class 1 Retro-reflective Material to conform to A.S. 1906 - 1976, Part 1.
- 3) **BOARD:** Aluminium Type 6061, 2mm thick Extrusion.
- 4) **HOLE:** All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.

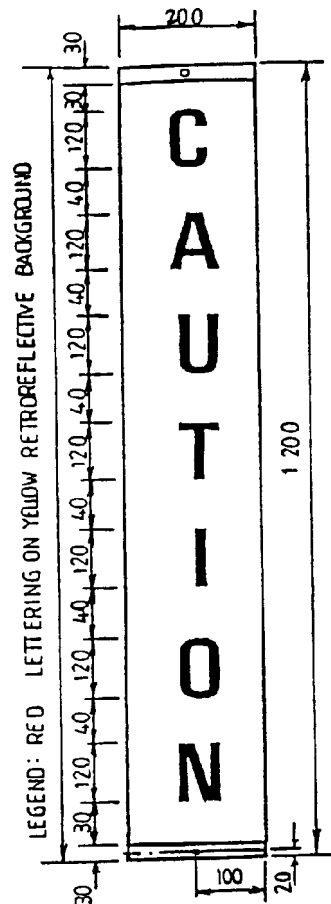


Figure 2 - Caution Board

Notes:

- 1) *LEGEND: 120mm High in Red to be Screen Printed with appropriate Manufacturers' Ink for Class 1 Sheeting.*
- 2) *BACKGROUND: Yellow Class1 Retro-reflective Material to conform to A.S. 1906-1976, Part 1.*
- 3) *BOARD: Aluminium Type 6061, 2mm thick Extrusion.*
- 4) *HOLE: All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.*

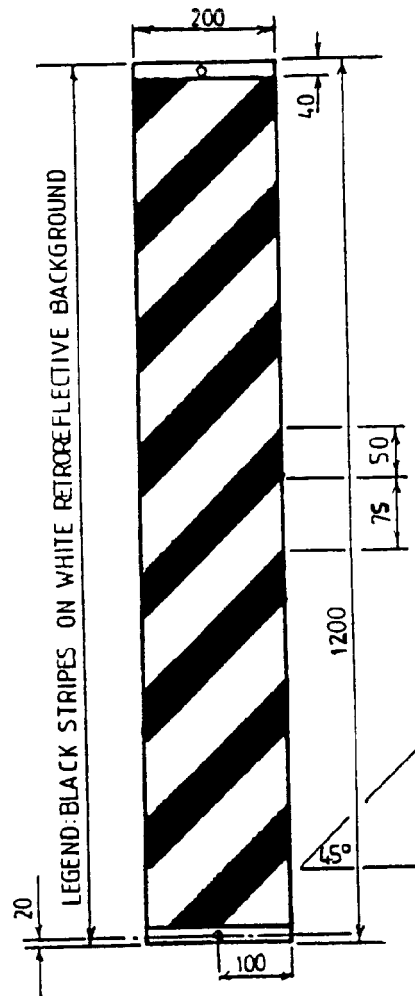


Figure 4 - Hazard Board

Notes:

- 1) LEGEND: 50mm Stripes in Black to be Screen Printed with appropriate Manufacturers' Ink for Class 1 Sheeting.
- 2) BACKGROUND: White Class1 Retro-reflective Material to conform to A.S. 1906-1976, Part 1.
- 3) BOARD: Aluminium Type 6061, 2mm thick Extrusion.
- 4) HOLES: All holes to be 12mm diameter. All Retro-reflective Material to be cut of bolt holes.

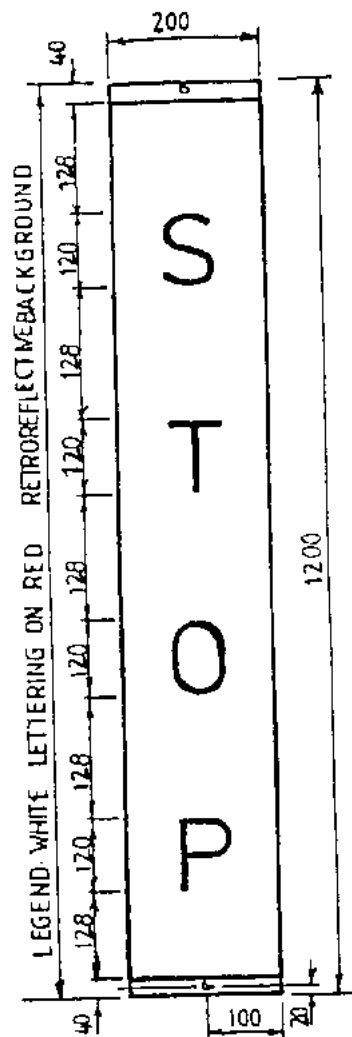


Figure 5 - Stop Board

Notes:

- 1) LEGEND: 120mm High in White to be Screen Printed with appropriate Manufacturers' Ink for Class 1 Sheeting.
- 2) BACKGROUND: Red Class 1 Retro-reflective Material to conform A.S. 1906-1976, Part 1.
- 3) BOARD: Aluminium Type 6061, 2mm thick Extrusion.
- 4) HOLES: All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.

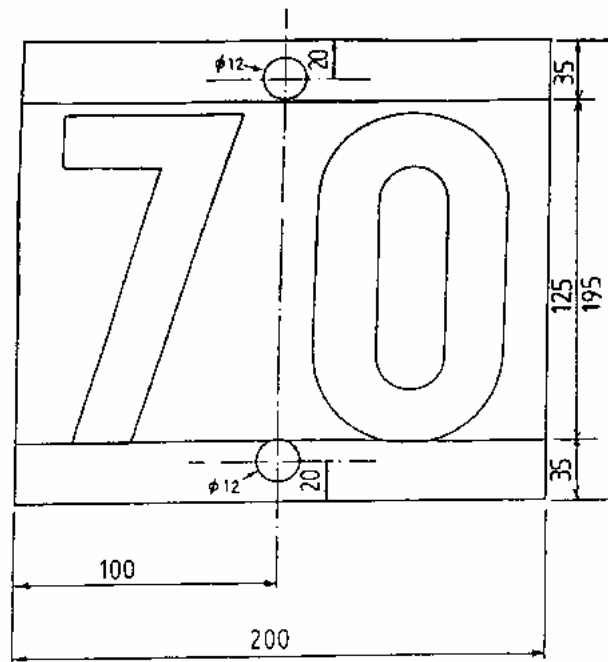


Figure 6 – Speed Board

Notes:

- 1) *LEGEND: 120mm High in Black to be Screen Printed with appropriate Manufacturers Ink for Class 1 Sheeting.*
- 2) *BACKGROUND: NORMAL TRAINS: Yellow Class 1 Retro-reflective Material to conform to AS 1906-1976, Part 1*
- 3) *BACKGROUND: SELF PROPELLED TRAINS: White Class 1 Retro-reflective Material to conform to AS 1906-1976, Part 1.*
- 4) *HOLES: All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.*
- 5) *PLATE: Aluminium Type 6061, 2mm thick.*

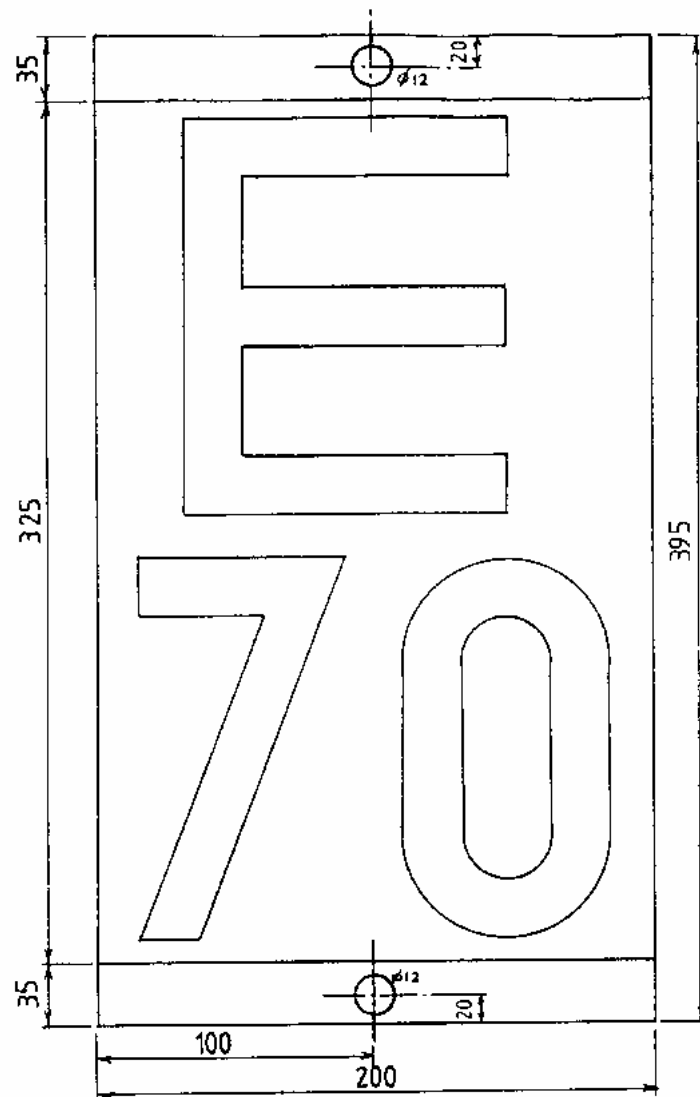


Figure 7 – Overhead Wiring Speed Plates

Notes:

- 1) *LEGEND: 120mm High in Blue to be Screen Printed with appropriate Manufacturers Ink for Class 1 Sheeting.*
- 2) *BACKGROUND: White Class 1 Retro-reflective Material to conform to AS 1906-1976, Part 1*
- 3) *HOLES: All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.*
- 4) *PLATE: Aluminium Type 6061, 2mm thick.*

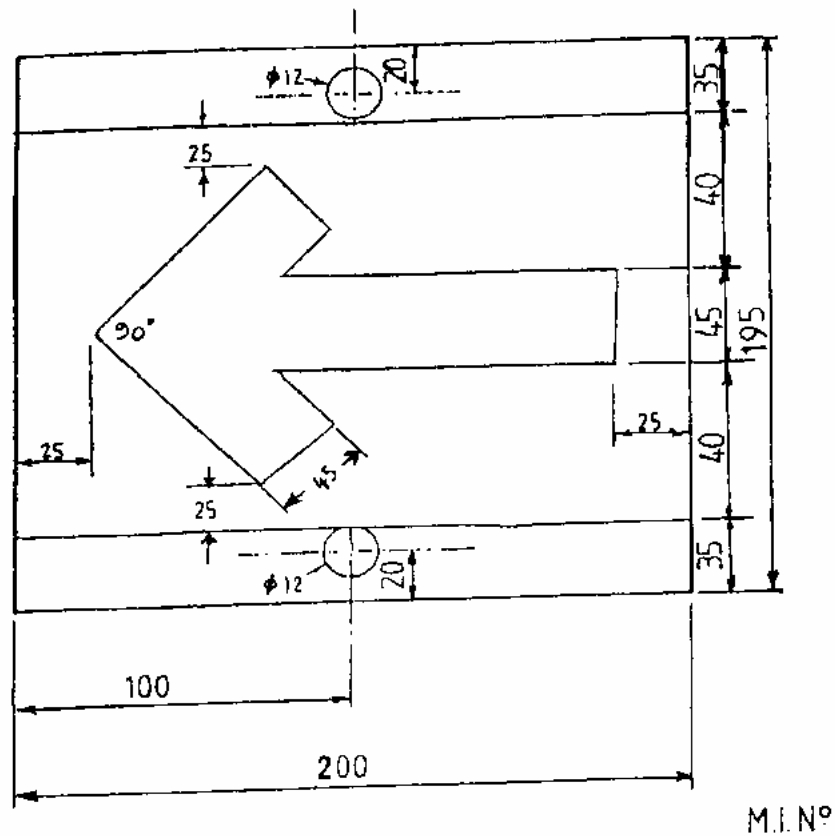


Figure 8 - Directional Plate

Notes:

- 1) LEGEND: ARROW in White Class 1 Retro-reflective. A.S. 1906-1976, Part 1.
- 2) BACKGROUND: DIRECTIONAL PLATE: Blue Class 1 Retro-reflective Material A. S. 1906-1976, Part 1.
- 3) HOLES: All holes to be 12mm diameter. All Retro-reflective Material to be cut clear of bolt holes.
- 4) PLATE: Aluminium Type 6061, 2mm thick.

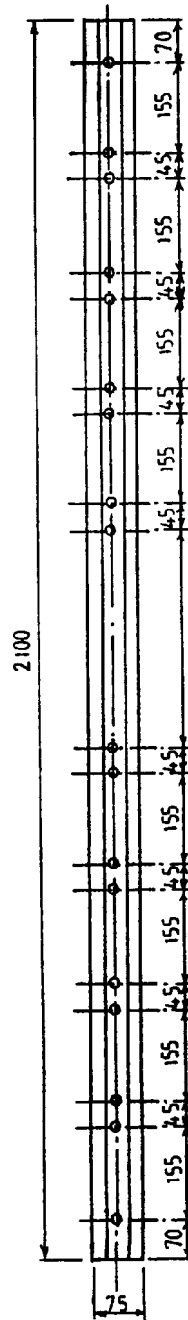


Figure 9 - Standard Ingal Post

Notes:

- 1) *HOLEs: All holes to be 12mm diameter.*
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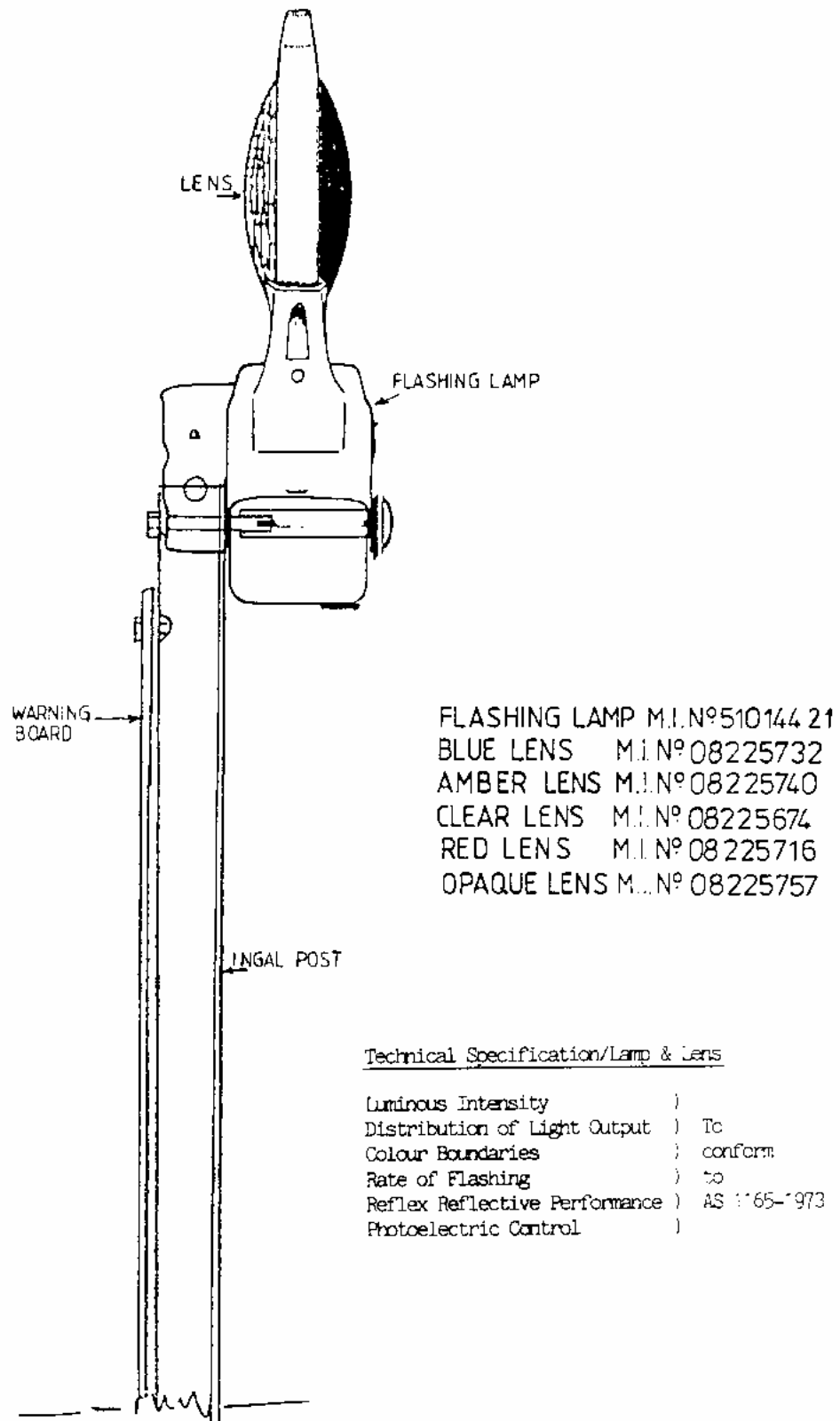


Figure 10 - Flashing Lamp Mounting Procedure

4 Worksite Safety Boundary Markers

Worksite Safety Boundary Markers are provided as visible reminders of the boundary of work areas. They are provided to assist staff and in no way replace requirements for protection in accordance with Safeworking Procedures.

Worksite Safety Boundary Markers are not to be considered as physical safety barriers. Where physical safety barriers are required they should be constructed in accordance with safety fencing standards and safeworking procedures.

a) Application

Worksite Safety Boundary Markers are recommended for use in the following situations:

- To identify the edge of 'off track worksites' when off track work has potential for encroaching within the 'on track' zone.

When used in this situation, a clear agreement must be reached with those performing the work that no encroachment of the markers is permitted at any time. If any equipment has the capacity to encroach, it must be controlled, or protected as determined by the authorised ARTC representative.

- To delineate the barrier between dead and live roads in multiple track situations. This is most applicable in multiple worksite situations.

In complex worksites the authorised ARTC representative should make a determination of the practicality of the markers and length of marker sites.

b) Type

The barriers will, as a minimum be constructed of:

- Star pickets at approximately 10m centres. Where considered necessary post caps should be used. For locations defined in 2 (ii) above post caps must be used.
- A minimum of 2, preferably 3 strands of coloured plastic tape spaced evenly on posts.
- The colour of the tape is to be preferably orange, but checked blue and white is acceptable (safeworking colours of red, yellow and green must not be used).

The durability of the tape should be considered when used for long periods. Repeated failure of the tape will reduce the effectiveness of the protection.

c) Maintenance responsibility

In general, where Worksite Safety Markers are used the authorised ARTC representative will be responsible for ensuring their continued adequacy.