



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline: Engineering (Track & Civil)

Category: Code of Practice

Level Crossings

Section 16

Applicability

ARTC Network wide	✓	CRIA (NSW CRN)	
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Primary Source

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Document Status

Version	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
2.2	08 Nov 11	Standards	Standards & Procedures Administrator	Track Standards Engineer	Manager Standards

Amendment Record

Version	Date Reviewed	Clause	Description of Amendment
2.0	31 Jul 09		Implementation draft of network wide document which is an amalgamation of the CoP for SA/WA & Vic and NSW requirements.
2.1	18 Jun 10		Banner added regarding mandatory requirements in other documents and alternative interpretations.
2.2	08 Nov 11		Banner added regarding elements of RISSB National CoP being incorporated

This ARTC CoP has drawn on the Rail Industry Safety and Standards Board (RISSB) National Code of Practice Volume 4, Track and Civil Infrastructure, but is not identical. The ARTC CoP has been subject to Risk Assessment as required by the various State Rail Safety Regulators. The results of these risk assessments have made it necessary to deviate from the RISSB CoP in some areas. ARTC maintains traceability of the differences.

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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.

16 Section 16: Level Crossings

16.1 Design and Rating

16.1.1 General

Level crossing signage should comply with the requirements of AS 1742-7.

16.2 * * * This Clause Reserved * * *

16.3 * * * This Clause Reserved * * *

16.4 Inspection and Assessment

16.4.1 Scheduled Grade Crossing Inspection

a) Patrol inspections

The interval between patrols of grade crossings shall not exceed 7 days or as otherwise specified by ARTC e.g. in an approved Technical Maintenance Plan. Track patrols should keep a lookout for defects and conditions (i.e. indicators of a defect) that may affect, or indicate problems with, the integrity of the crossing including the following:

- Flangeway obstructions
- Track geometry including approaches
- Road surface condition
- Condition of walkways
- Condition of fencing – pedestrian mazes.
- Signage

The inspection should be carried out at a speed consistent with the local conditions and the full scope of the inspection being carried out (eg. the type and number of other infrastructure elements being inspected).

b) General inspections

Scheduled general inspections shall be carried out in a manner appropriate to the at grade crossing type, condition, rate of deterioration, and other local and seasonal factors. General Inspections shall be at intervals not greater than 12 months or as otherwise specified by ARTC e.g. in an approved Technical Maintenance Plan.

A general inspection shall be carried out when suspected defects are identified from conditions determined during patrols inspections.

General inspections shall include the tasks of the patrol inspection and in addition look for conditions or changes in the conditions which may affect the function of the crossing including the following:

- Road / walkway surface cracking or breaking up – deterioration of the road surface can allow moisture and contaminants to enter the ballast and penetrate the subgrade.

- Track geometry / alignment – laterally and vertically - (observe under load), excessive movement under traffic can indicate any of the following;
 - Deterioration of sleepers and fastenings - ballast
 - Subgrade deterioration – track pumping
 - Requirement for tamping
 - Condition of fastenings and sleepers
 - Condition of rail
 - Flangeways – clearance / obstructions
 - Under Vehicle Clearance
 - Track geometry, including vertical alignment under traffic and approaches to crossings
 - Condition of road / walkway surfacing materials
 - Condition of signs, including visibility and line of sight
 - Condition of fencing including guide fencing and pedestrian mazes
 - Concrete stools – installation, adequate clearance
 - Other defects that could affect the safety of train operations or public access.

16.4.2 Un-Scheduled Inspection

An inspection of Grade crossings shall be carried out following the identification of suspected defects, and the occurrence of an event that may have affected the infrastructure.

16.4.3 Examination

The gang length number, date of inspection and location of each level crossing and take-off are to be recorded on the appropriate form

At each location, the measurements of gauge, flange clearance and track alignment, together with the condition of ties and fastenings, rail top, drainage, rail corrosion, roadway or take-off surface and signs, fences, gates etc., are to be recorded.

Where signs and markings owned by others are found to be unsatisfactory, the Infrastructure Manager or nominated representative is to forward this information to the owner (road authority or private owner) for appropriate corrective action.