



AUSTRALIAN RAIL TRACK CORPORATION LTD

Discipline: Engineering (Track & Civil)

Category: Standard

# 'Light Duty' Maintenance Siding Specification

## ETD-00-06

### Applicability

New South Wales	✓	CRIA (NSW CRN)	
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### Primary Source

ARTC NSW Standard TDS 16
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### Document Status

Version	Date Reviewed	Prepared by	Reviewed by	Endorsed	Approved
1.2	08 Apr 11	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 Standard TDS 16 v1.0
1.1	18 Jun 10		Banner added regarding mandatory requirements in other documents and alternative interpretations.
1.2	08 Apr 11	2.1	Changed siding track Class 3 to Intrastate siding class in accordance with the ARTC T&C CoP Section 0

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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 Introduction

## 1.1 Purpose

"Maintenance sidings" are intended to stable rail mounted track maintenance plant and equipment, (e.g. tampers, regulators, rail grinders, 'hirail' plant etc) during the course of track maintenance activities. Sidings can also be used for the storage of crippled and damaged rolling stock

ARTC's current track design standards do not provide a light-duty alternative standard for such maintenance sidings, rather mainline track construction standards are the default.

This specification is intended to establish the minimum requirements for sidings used solely for these purposes. Sidings constructed to this specification are not suitable for vehicles in revenue service.

## 1.2 Scope

This specification covers both permanent way and the associated civil works requirements for the construction of new or extension of existing maintenance sidings. A typical concept layout is included. Detail design shall be performed on a loop by loop basis and does not form part of this specification.

## 1.3 Reference Documents

The following documents support this standard:

- ARTC T&C CoP Section 5
- ETM-08-01 Earthworks, formation and capping material
- ARTC T&C CoP Section 1

## 2 Design Assumptions

The design parameters to be adopted under this specification include (minimum standards stated):

### 2.1 Permanent Way

- Intrastate siding class as specified in ARTC T&C CoP Section 0

Rail section (kg/m) (Note 1)	Type (Weld) (Note 2)	Ballast Shoulder Width (mm)	Nominal Max Axle Load (Tonnes)	Nominal Ballast Depth (mm)	Sleeper Type	Ballast Grade
40kg/m	Welded	300	19	150	Timber	Standard/Fine
	Loose	250				

*Note 1 40kg/m rail minimum standard stated. Heavier rail may be used if available. Note that reused rail must be checked for acceptable rail wear in accordance with ARTC T&C CoP Section 1.*

*Note 2 Loose rail may be used to save welding costs and ballast shoulder width.*

- Sleeper Spacing – 670mm
- Turnout – Any serviceable unit as permitted and accepted by the Infrastructure Manager.
- Maximum Design Speed – To be determined by turnout design speed with an upper limit of 20km/h.
- Running line derailment protection – Train Derailers (in lieu of Catchpoints)
- Minimum Siding Standing Room – 175 metres (measured from derailer to end of track/buffer stop)
- Maximum vertical grade – 1.5% falling away from the Siding Turnout.
- Maintenance Siding Buffer Stop details – based on current ARTC practice of placing a timber sleeper over the rails, fixed to a sleeper on the underside of the track structure. The sleepers are bolted together using long bolts and fishplates (refer to Figures 2 and 3).
- Minimum Track Centres between the Maintenance Siding and the nearest running line – 5.2m
- Minimum Horizontal clearance to a continuous structure adjacent to Siding – 3.0m
- Maximum Structure Gauge outline for use in the Maintenance Siding – ANZR Rollingstock

### 2.2 Civil Works

- Minimum thickness of capping material – 150mm (the capping material and placement shall be in accordance with ARTC Standard ETM-08-01 Earthworks, Formation and Capping Material).
- Based on the design loading and the proposed intent of the maintenance siding, structural formation material below the Capping layer is not required.

### 2.3 General Design Layout

The general layout for an ARTC Maintenance Siding is detailed in Figure 1 below. The horizontal track alignment shall comply with ARTC T&C CoP Section 5.

Figure 1 - General Maintenance Siding layout

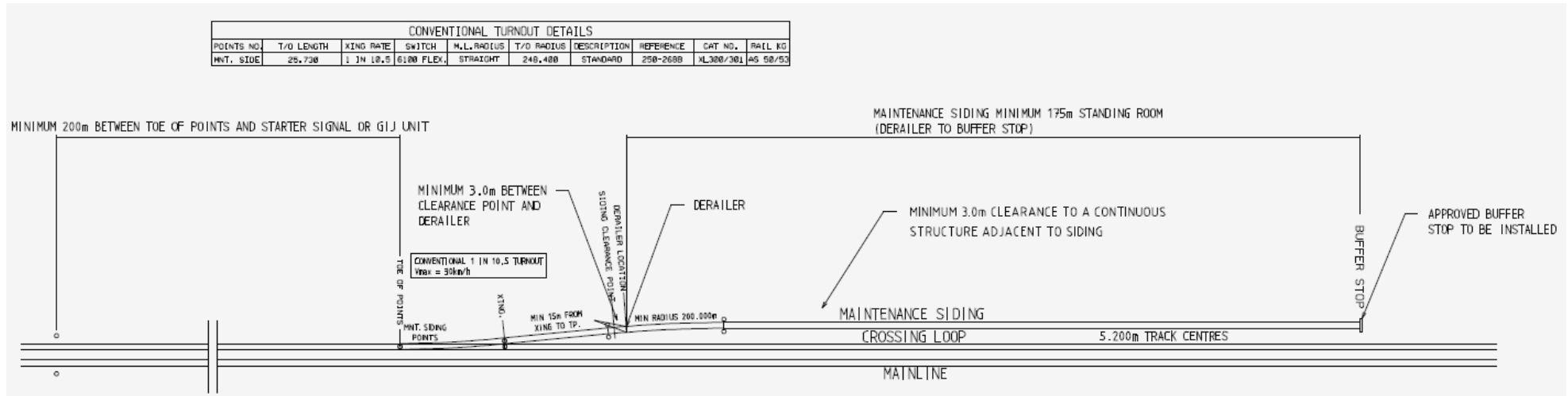


Figure 2 – Typical ARTC Maintenance Siding Buffer Stop

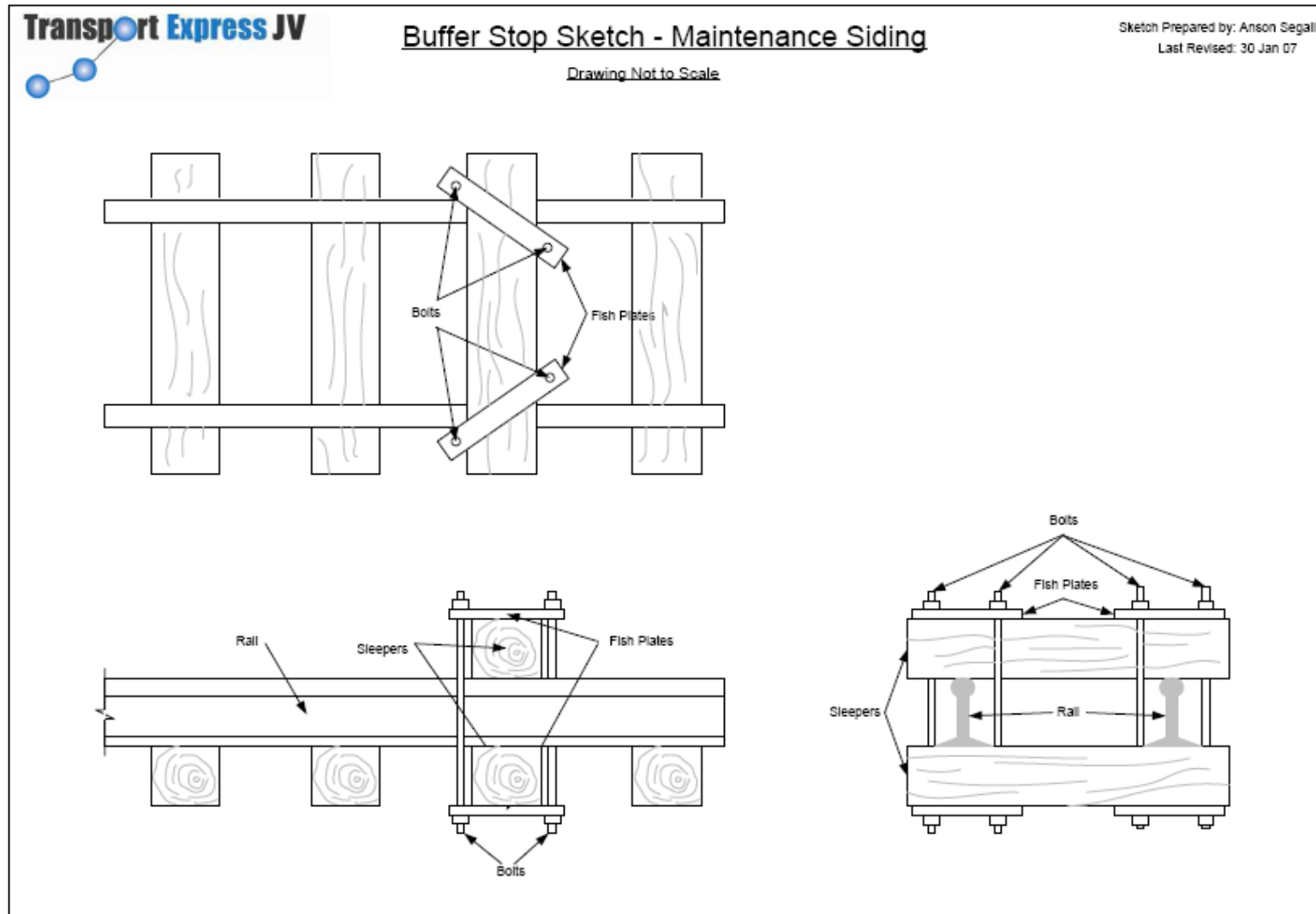




Figure 3 – Photo of ARTC Maintenance Siding Buffer Stop

