

# Technical Direction

## Traffic management and road safety practice

TTD 2017/002

### Special purpose lanes for trams – signage and line marking

Summary:	Audience:
<p>Special purpose lanes are used to facilitate the safe and efficient movement of designated vehicles.</p> <p>This technical direction summarises the signs and line marking required to delineate the special purpose lanes applicable to trams in NSW.</p>	<ul style="list-style-type: none"> <li>• Roads and Maritime traffic practitioners.</li> <li>• Transport for NSW planners.</li> <li>• Light rail design consultants.</li> </ul>

### Introduction

Light rail networks are being implemented in NSW with the intention of providing safe and easily accessible public transport coupled with a high quality urban environment. Wherever possible, movement along light rail corridors will be restricted to trams and public buses to help deliver reliable travel times for commuters and passengers. This means, when on-road, the light rail network will run predominantly in special purpose lanes. This technical direction describes the signs and line marking required for the three special purpose lanes applicable to light rail networks in NSW.

### A note on terminology

There has been a preference in NSW to use the term 'light rail' to describe the vehicle, network and services. However, the term 'tram' is used almost exclusively in both the Australian Road Rules and the *NSW Road Rules 2014*. Members of the public are more likely to interact with the Road Rules than other legislation. Therefore, to avoid confusion, there is agreement among Transport for NSW and Roads and

### Approvals:

<b>Owner:</b>	Roads and Maritime Services	<b>Review Date:</b>	30-06-2020
<b>Authorised by:</b>	General Manager Network Sydney	<b>Effective Date:</b>	30-06-2017

Maritime Services (RMS) planners and practitioners that the light rail vehicle is referred to as a 'tram'. 'Tram' should also be used for traffic and safety messaging, eg on variable message signs.

## Background

The three special purpose lanes applicable to the light rail network in NSW are summarised in Table 1.

Table 1. Summary of the NSW Road Rules applying to tram lanes, tramways and T-Ways

Rule		Description
155	Tram lane	<p>A tram lane is part of a road with tram tracks that is between a tram lane sign and end tram lane sign and is marked along the left side of the tracks (facing the direction of tram travel) by a continuous yellow line parallel to the tracks.</p> <p>In this rule, trams include tram recovery vehicles and public buses.</p> <p>Trucks are permitted in tram lanes if they need to reach a place to pick up or drop off passengers or goods.</p>
158	Exceptions to driving in a tram lane	<p>Bicycles, special purpose vehicles and authorised road and traffic survey vehicles are permitted to drive in tram lanes.</p> <p>General traffic is permitted in tram lanes for up to 50 metres to enter or leave the road (eg to/from side streets, driveways or parking), to overtake a vehicle that is turning right from the centre of the road, to avoid an obstruction, or if a sign applying to the lane permits it to do so.</p>
155A	Tramway	<p>A tramway is part of a road with tram tracks that is between a tramway sign and an end tramway sign and is marked along the left side of the tracks (in the direction of tram travel) by either two continuous yellow lines parallel to the tracks or a structure (eg dividing strip, refuge, etc).</p> <p>In this rule, trams include tram recovery vehicles and public buses.</p> <p>A driver may drive in a tramway if it is necessary to avoid an obstruction and the driver does not move into the path of a tram or public bus travelling in the tramway.</p> <p>A tramway line is considered continuous despite any break in the line marking designed to permit vehicles to cross the tramway.</p>
157-1	T-Way lane	<p>A T-Way lane is a marked lane, or part of a marked lane, beginning with a T-Way lane sign and ending at the next intersection or an end T-Way lane sign, whichever comes first.</p> <p>Only authorised T-Way vehicles displaying the T-Way vehicle label or plate are permitted to drive or stop in T-Way lanes.</p>

## Application

Note: Trams may travel in a mixed traffic lane with no lane use restrictions. Yellow lane markings (TL 1) are used to delineate mixed traffic lanes with tram tracks. Refer to AS1742.12 for more information.

## Tram lanes

The tram lane sign (R7-1-5) must be installed at the beginning of a tram lane. Tram lanes do not automatically end at each intersection, however, the tram lane sign must be installed at the beginning of each block to advise drivers who may be entering the road from a side street.

The tram lane sign (R7-1-5) and end supplementary plate (R7-4) combination is used to indicate the end of a tram lane (see Figure 1).

A tram lane must also be marked with a yellow continuous line (TL 2) on the left side of the tram tracks in the direction of tram travel (see Table 2).

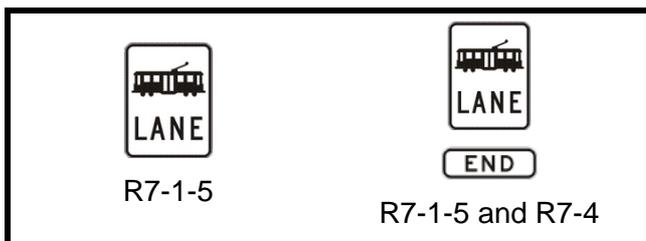


Figure 1. Regulatory tram lane signs

## Tramways

The tramway sign (R7-8-1) must be installed at the beginning of a tramway. Tramways do not automatically end at each intersection, however, the tramway sign must be installed at the beginning of each block to advise drivers who may be entering the road from a side street.

The tramway sign (R7-8-1) and end supplementary plate (R7-4) combination is used to indicate the end of a tramway (see Figure 2).

A tramway must also be marked with two parallel yellow continuous lines (TL 4) on the left side of the tram tracks in the direction of tram travel (see Table 2) or with a structure of some description.

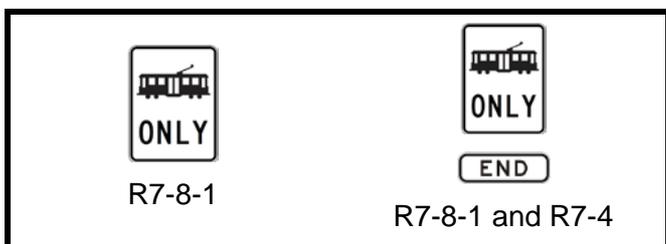
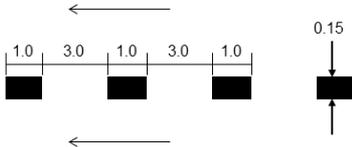
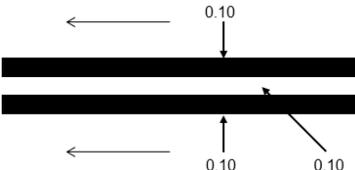


Figure 2. Regulatory tramway signs

Table 2. Line markings for lanes with tram tracks

Line	Type	Pattern and dimensions	Colour
Mixed traffic lane with tram tracks	TL 1		Yellow

Line	Type	Pattern and dimensions	Colour
Tram lane line	TL 2		Yellow
Tram lane continuity line	TL 3		Yellow
Tramway line	TL 4		Yellow

Lane lines do not extend into signalised intersections. Dividing lines must be white. For more information about the purpose and application of line markings, refer to AS1742.2, AS1742.12 and the Delineation guide.

### Practical considerations when installing tram lanes, tramways and T-Ways

1. The *NSW Road Rules 2014* assumes tram lanes and tramways are installed in the middle of the road or bi-directionally on one side of the road. If this is not the case and the tracks are uni-directional on each side of the road, the appropriate line markings must be implemented on both sides of the tram tracks in the direction of tram travel.
2. Because of the requirement for both lane end and lane beginning signs, lanes should transition between tram lanes and tramways at an intersection wherever possible.
3. In NSW, vehicles are permitted to cross any dividing line, including continuous double lines, to enter or leave the road by the shortest practicable route. Vehicles are also permitted to drive on a painted dividing strip to enter or leave the road. (For all practical purposes, a painted dividing strip is wider than our widest barrier line, ie >1.0m wide including line markings.) However, vehicles are not permitted to cross a T-Way lane to enter or leave the road. Vehicles are only permitted to cross tramways where a break in the tramway line permits. Access to driveways needs to be carefully considered when installing tramways and T-Way lanes. A median or other physical barrier may be required to restrict undesirable movements.
4. Notwithstanding the recommended placement of signs found in AS1742 and other guidelines, signs may be placed in medians where practicable and appropriate clearances can be met.

### T-Way lanes

A T-Way lane sign (R6-237 or R6-238 series; see Figure 3) must be installed at the beginning of a T-Way lane. T-Way lanes end at each intersection, if not before. Therefore, a T-Way lane sign must be installed at the beginning of each block in which a T-Way lane is installed.

A T-Way lane end sign (R6-237-3 or R6-238-3) must be installed at the end of a T-Way lane if it ends before the next intersection.

The T-Way only sign (R9-304) is a non-regulatory sign which may be used to designate a T-Way access lane or to advise drivers who enter the road mid-block and may inadvertently enter the T-Way.

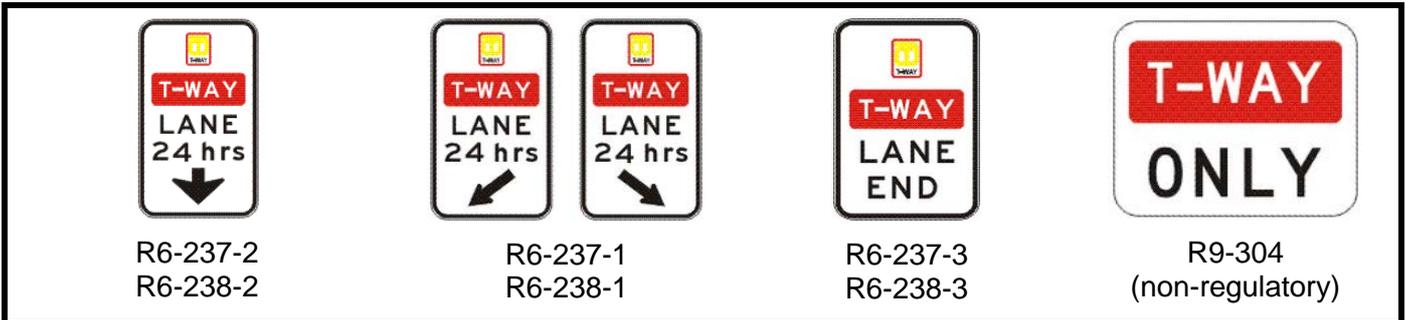


Figure 3. Regulatory and advisory T-Way lane signs

### Warning signs and pavement markings

Warning or advisory signs may be required on the approach to some intersections to alert drivers to the possibility of tram traffic.

A tram warning sign (W5-41) may be used alone or in conjunction with supplementary plates (eg Figure 4) to alert other road users to the presence of trams where there is a high risk of conflict or unexpected appearance of a tram. Pavement markings (Figure 5) may also be used within the tram lane, tramway or T-Way lane to raise awareness of tram traffic. A straight arrow (AR1) should be used in conjunction with the pavement marking to indicate the direction of tram travel.

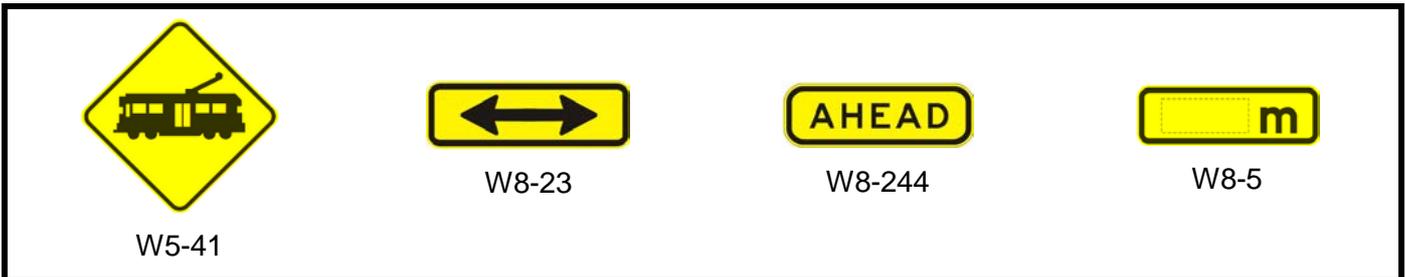


Figure 4. Tram warning sign with possible supplementary plates

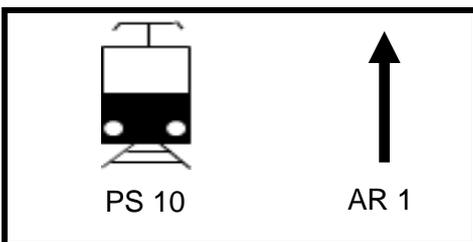


Figure 5. Tram pavement marking

Yellow raised retroreflective pavement markers (RRPM) can be used to augment tram lane and tramway lines. However, because RRPM increase the risk of pedestrians and bicycle riders tripping or falling, they should be used sparingly around tram tracks and only when deemed critical. If used, AS1742.2 recommends a spacing of around 24m.

## Action

This technical direction is effective immediately and must be followed whenever tram lanes, tramways or T-Way lanes are installed.

Practitioners must also refer to the references listed below for a comprehensive list of signs and detailed information on the design, dimensions and placement of signs, lines and pavement markings.

## Updates

To ensure this technical direction remains current and relevant, minor updates may be made from time to time. The Roads & Maritime Services' website and sign database should always be checked prior to using this technical direction.

<http://www.rms.nsw.gov.au/business-industry/partners-suppliers/index.html#gsc.tab=0>

## References

AS 1742 Manual of Uniform Traffic Control Devices Part 2: Traffic control devices for general use (2009)

AS 1742 Manual of Uniform Traffic Control Devices Part 12: Bus, transit, tram and truck lanes (2017)

Austrroads Guide to Traffic Management Part 10 Traffic control and communication devices (2016)

*NSW Road Rules 2014*

QA Specification R145 Pavement Marking (Performance Based)

The RMS traffic sign database