

Technical Direction

For traffic, transport & safety practitioners

OPERATIONAL POLICY – GUIDELINES – ADVICE



Transport
Roads & Maritime
Services

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Provision of Variable Message Signs on motorways for on-road presentation of real time travel time information.

Scope

This *Technical Direction* provides guidance in the provision of variable message signs on motorways to support a real time travel time information service on a motorway in New South Wales (NSW).

This *Technical Direction* should be used by planners in the design of on-road presentation requirements using variable message signs (VMS) in a real time travel time service management plan on an existing and new motorway in NSW.

This *Technical Direction* does not cover:

- Development, implementation, operation and maintenance phases of a VMS.

Background

Roads and Maritime Services (RMS) objective is to provide credible, accurate and real time travel time information to travellers to facilitate the safe, timely and efficient movement of traffic along a motorway.

Permanent VMS are provided on a motorway to support effective and efficient road network operations services including incident management and traveller information.

The provision of real time travel time information will improve a road user's experience as it can help to minimise travel delay and frustration, exposure to congestion and improve travel reliability when using the State Road network. When real time travel time information is provided on the road network via road side infrastructure it provides information to assist road users to make decisions concerning their travel route during their journey.

Distribution List:

Director, Infrastructure Development; Director, Asset Maintenance; Traffic Management and Road Safety staff.

For further enquiries

www.rms.nsw.gov.au | E technical.directions.publication@rms.nsw.gov.au

Glossary

Term	Definition
Real Time Travel Time Service Management Plan for a motorway	<p>A formal plan that provides the service delivery requirements for a real time travel time service on a State Road. It would cover the lifecycle requirements for all components in the service delivery system including design, delivery, operation, customer feedback and reporting.</p> <p>The plan is typically developed in the initiation phase in RMS Project Pack and MinorProject project management systems.</p>
Motorway	<p>The highest standard State Road in NSW. Typically designed with a divided carriageway of two or more traffic lanes in each direction, where opposing traffic is separated by a median strip with controlled entries and exits.</p> <p>Can often be also referred to as a freeway, expressway, distributor such as Warringah Freeway or major rural highway such Hume Highway.</p> <p>Applies to public and private motorways in NSW.</p>
Variable message sign	<p>A Variable Message Sign (VMS) is an intelligent transport system device used to display electronically generated messages. It has the ability to display predefined or free text messages for the purpose of informing, directing, warning or guiding road users.</p> <p>Permanent and temporary VMS are widely used in New South Wales to provide road users with information about road and traffic conditions and other road use information.</p>
Permanent VMS	<p>VMS that are fixed in one location and attached to the ground via a footing. It is has a permanent power supply and communications backbone.</p>

Context

The technical direction should be read in conjunction with the following RMS operational policies and guidelines:

- *Reference Guidelines for Managed Motorways.*
- *Location and placement of Variable Message Signs (PN028)*
- *Interim RTA Policy and Advisory Travel Time on Variable Signs on Motorways*
- *Real time travel time service on State Road network in NSW (DRAFT)*
- *The Lifecycle Management of Permanent Variable Message Signs (DRAFT)*

Permanent VMS is the only ITS device to be used for on-road presentation of RTTTI on motorways in NSW.

Permanent VMS for a RTTTI service is a subset of the provision of VMS for road network operations on a motorway. The primary reference document for the provision of VMS on motorways in NSW is *Reference Guidelines for Managed Motorways*.

The assessment criteria provide guidance in the design of on-road presentation requirements to support a desired minimum level of RTTTI service on a motorway. Additional VMS can be used and provided as part of a RTTTI service where available and appropriate.

Assessment criteria

Design of on-road presentation requirements should be based on the following principles:

- VMS provision will support an “end to end” RTTTI service along the full length of a motorway.
- Existing VMS must be considered for use prior to considering the implementation of new VMS.
- VMS provision should consider the number and spacing of interchanges and the strategic importance of a road at an interchange. Not all interchanges will require a VMS for RTTTI service.
- A similar number of VMS should be provided along both directions on a motorway.

The assessment of interchanges along a motorway is based on a 4 step process shown below:

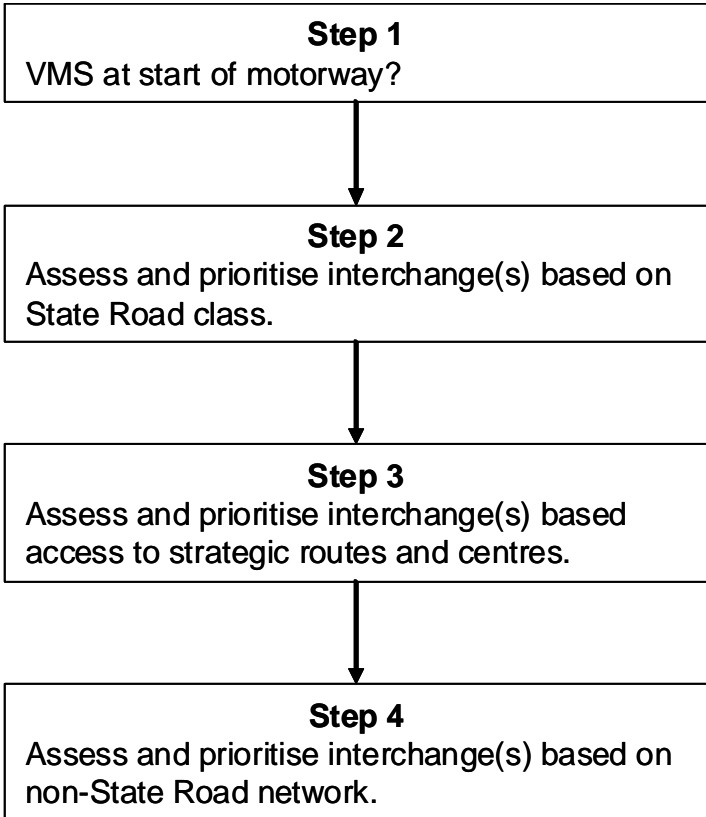


Table 1 provides practice notes to assist planners in determining the interchanges to be considered in a RTTTI service on a motorway. In some instances the interchange can fulfil a number of the roles specified.

Approval

The General Manager Traffic and Safety Management will be responsible for the implementation of this technical direction.

The project manager is responsible for implementing this technical direction

Action

This *Technical Direction* must be followed when RMS and private motorway operators are designing the on-road presentation requirements as part of a real time travel time information service management plan on a motorway in NSW.

Updates

To ensure that this *Technical Direction* and any related guidelines remain current and relevant, minor updates may be made from time to time. Any updates may be obtained from the RMS website using the Traffic & Transport Policies & Guidelines Register which can be found at:

www.rta.nsw.gov.au/doingbusinesswithus/guidelines/documentregister/index.html

Printed copies of this *Technical Direction* are uncontrolled, therefore the Register should always be checked prior to using this *Technical Direction* or any related guidelines.

Approved by:

Authorised by:

SIGNED

SIGNED

Craig Moran
General Manager
Traffic & Safety Management

Ken Kanofski
Director
Journey Management

Table 1: Practice notes to support interchange assessment for VMS for on-road presentation to support a RTTTI service on a motorway.

Consideration for VMS placement
<p><u>Step 1: Start of the service</u></p> <p>A VMS should be provided at the start of a motorway.</p>
<p><u>Step 2: Prioritisation of State Road network</u></p> <p>Priority is provided to (in order of priority):</p> <ul style="list-style-type: none"> • Motorway to Motorway interchanges. A VMS should be provided at every Motorway to Motorway interchange. • Motorway to State (arterial) road network with exit ramps in both directions. <p><u>Notes</u></p> <p>New VMS may be provided at interchanges with an exit in one direction only in exception circumstances.</p>
<p><u>Step 3: Identify key State (arterial) Road interchange - Strategic routes and activity centres</u></p> <p>Priority is provided to an interchange where the State (arterial) road is (in order of priority):</p> <ul style="list-style-type: none"> • Part of the National Network. A VMS should be provided at every Motorway to National Network interchange. • Designated as a NSW Primary and Secondary Freight route. • An access to a key centre/ destination within the broader road network. <p><u>Notes</u></p> <p>1: In some instances the same road can fulfil a number of these roles.</p> <p>2: For State (arterial) Road interchanges providing access to a freight route and key centre/ destination, assessment of interchanges should consider existing incident management plans. Where multiple interchanges exist an analysis of incidents along the motorway may need to be undertaken with a view of identifying the frequency of incidents, incident severity (duration) and interchanges providing the highest benefit for incident management.</p> <p>3: When considering VMS provision on rural motorways additional VMS may be necessary due to the long distances between interchanges. This position is based on the risk of providing inaccurate information to road users should an incident occur along a route between two adjacent VMS providing real time travel time information.</p>
<p><u>Step 4: Prioritisation of Regional and Local road network</u></p> <p>New VMS at interchanges with Regional and Local Road network will generally only be provided in exception circumstances.</p> <p>Should a VMS be considered, priority is provided to (in order of priority):</p> <ul style="list-style-type: none"> • Motorway to Regional road network interchanges • Interchanges to Local road network.