

1 July 2008

## Network Operations Technical Memorandum No. TM 3004

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**Subject:** Revisions to TNZ P/24 and the RSMA Compliance Standard

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**Circulation:** Capital Projects Managers  
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### Purpose

This memo provides details of revisions to Transit New Zealand specification TNZ P/24 *Performance Based Specification for Traffic Signs* and the Transit Endorsed *RSMA Compliance Standard for Traffic Signs* that will be implemented on 1 July 2008.

### References

TNZ P/24: 2008	<i>Performance Based Specification for Traffic Signs</i>
TNZ P/24 Notes: 2008	<i>Performance Based Specification for Traffic Signs</i>
TNZ P/24 Supplement	Transit Endorsed <i>RSMA Compliance Standard for Traffic Signs 2008</i>

### Background

1995 – Joint Transit New Zealand-RSMA Standard for the Manufacture and Maintenance of Traffic Signs, Posts and Fittings.

Prior to 1995, NZS5414: 1977 *Specification for the construction of traffic signs* set the standards for the manufacture of traffic signs. Changing demands of the industry brought about by new technology and the need to set new technical criteria in line with updated Quality Assurance procedures and standards resulted in Transit and the Road Safety Manufacturers Association (RSMA) defining, publishing and adopting a joint standard in 1995.

2003 – Transit New Zealand TNZ P/24 Performance Based Specification for Traffic Signs

Transit had chosen to adopt performance based specifications in preference to standards, which in combination with a need to update the joint document, resulted in a review of the 1995 standard commencing in 2001.

Transit worked closely with the RSMA to ensure that a Transit endorsed means of compliance would be published and implemented at the same time.

### 2003 – RSMA Compliance Standard for Traffic Signs

This document, superseding the 1995 joint standard, was released/implemented in March 2003 following over 2 years of significant input from both the RSMA and Transit.

Transit made it a requirement of the standard that all multi-post signs with sign supports at spacing greater than 1.0m use an approved hinge immediately below the sign panel and an approved breakaway device. As this was a significant change to previous practice, implementation of this requirement was delayed until 1 July 2005.

### **The Primary Changes Made**

The primary changes introduced in the revised specification TNZ P/24 *Performance Based Specification for Traffic Signs* and the Transit Endorsed *RSMA Compliance Standard for Traffic Signs* are:

- the introduction of the concept of small and large traffic signs (as per AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals);
- the removal of the requirement for hinges to the newly defined small signs;
- providing a link with the requirements of TNZ P/24 for impact performance of sign supports requiring testing to NCHRP350 TL3 by adopting relevant sections of the AASHTO standard;
- updating relevant specification and design data for revised codes for timber grading, loading (wind in particular) and retroreflectivity, which in part results in changes to design life requirements;
- removal from the design charts of posts that are not breakaway and therefore suitable for use with small signs.

### **Reasons for Changes**

Transit has always held the view that new standards are reviewed for their appropriateness including safety outcomes/benefits, additional costs and compliance with the new standard.

In reviewing TNZ P/24 it is apparent that as a result of the changes made in 2003 there has been a significant increase in installation costs. There has also been some confusion and uncertainty regarding when a sign requires the appropriate treatment. As a consequence a number of new signs are still being installed to the old standard.

Increased costs on Transit projects have been the focus of the Ministerial Advisory Group (MAG) as well as Transit's in-house Value for Money exercise. The outcomes of both of these studies place further pressure on Transit to review ways of ensuring that we are getting value for money.

Through referencing of the AASHTO standard and the adoption of relevant technical definitions and approved solutions, the RSMA standard will provide clear guidance for specific sign types/sizes and locations i.e. Overhead Signs, Small Signs and Large Signs. It is under these provisions that large signs will require approved breakaway devices and hinge systems, as is the practice in the USA and other countries.

The introduction of the hinge requirement, particularly for small signs (now to be defined as less than 4.7m<sup>2</sup> panel area), has been unpopular with the traffic signs industry and the Transit regions as:

- there has been no supporting evidence from accident data;
- TNZ P/24 called for testing to NCHRP350 and yet there is no requirement for hinge devices in the USA for small signs;
- there has been a significant increase in the costs of small signs;
- initially there were no compliant products available in NZ and the small size of the market makes it difficult to justify the design and testing of compliant hinge devices.

For what will now be defined as large signs the industry has largely ignored the requirements of both TNZ P/24 and the RSMA standard that sign supports and foundations for these signs require specific design. This has resulted in sign and foundation failures resulting in unnecessary high replacement and maintenance costs and exposure to health and safety liability.

### **Implementation**

The 1 July 2008 requirements may be used immediately. For existing and imminent State Highway contracts, however, at the discretion of Capital Projects Managers and Operations Managers stock of previously acceptable signs may be used. Also damaged signs may be reinstated to the standard existing before the damage occurred when the cost warrants repair rather than replacement to the new standard.

### **Future Developments**

Transit, the RSMA and others are represented on the LTNZ Traffic Control Devices Steering Group and the Traffic Control Devices Signs Working Group.

This work involves providing guidance and oversight relating to the signs component of the TCD Specifications and will involve detail currently included in TNZ P/24, MOTSAM, the RSMA Compliance Standard and other related documents.

LTNZ are working towards the Traffic Control Device Rules and Specifications forming the basis for an all encompassing, single source for all matters involved with signs for all roads –national, regional and local.

In the mean time P/24 and the RSMA Compliance Standard will be reassessed in the future as and when required as new technological advancements are introduced.

### **Acknowledgements**

It is acknowledged that the RSMA has played a major role in putting in place both the current standard and specifications and the revised documents.

### **For Your Action**

Apply the advice given above to current and new State Highway contracts.

Any questions/comments can be directed to:

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