



NZ TRANSPORT AGENCY
WAKA KOTAHI

Traffic signs beyond MOTSAM

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Traffic control devices manual

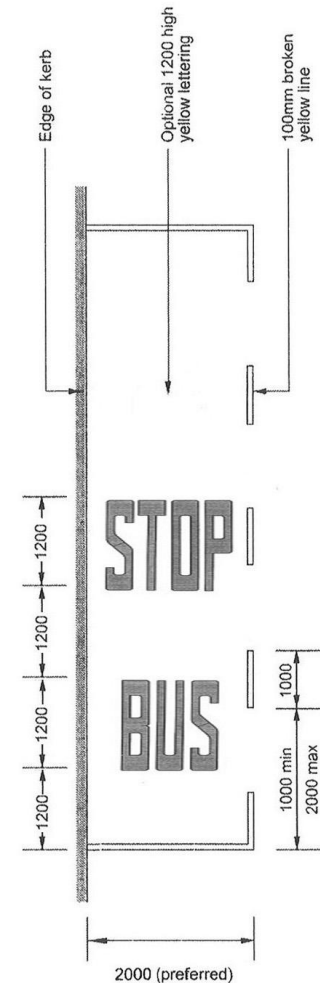
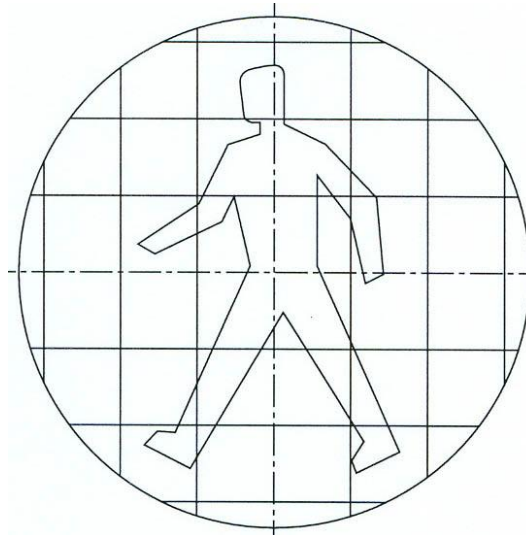
Series of documents to replace MOTSAM.

Desire to ensure the replacement document reflected requirements of all RCAs.

- *Parking control* (Dec 2007) and *Level crossings* (Dec 2008)
- *Motorways and Expressways* (Dec 2009)
- *CoPTTM* to be Part 8 when republished (Jun 2010)
- *Vol 1, 2 and 3 Signs* to be published by Jun 2010
- *Vol 4 & 5 General use of TCDs* and *Vol 6 Speed management* to be progressed 2010/11

TCD Specifications

Signs, signals and markings



TCD Steering Group

Responsible for:

- guidance/strategic direction TCD Manual and TCD Specifications
- oversee programme of research and trials of new TCDs and recommend adoption to NZTA
- provide input to Austroads Guides
- ensure consultative approach is taken

TCD Steering Group

Experienced practitioners representing industry:

- NZTA – Regional Partnerships and Highways (2)
- Local Government NZ/Ingenium/IPENZ (3)
- NZ Roadmarkers Federation (1)
- Road Safety Manufacturers' Association (1)
- NZ Automobile Association (1)
- Roothing NZ (1)



Working Groups

Volume 1, 2 and 3 Signs

NZTA (3), local authorities (2), RSMA (2)

Volume 7 Parking

NZTA (1), MoT (1), NZPA (3), LGNZ (3), NZAA (1)

Volume 9 Level crossings

Kiwirail (2), NZTA (road 2, rail 1), FRONZ (1), MoT (1)

Vol 4 & 5 General use of TCDs and Vol 6 Speed management – ANY VOLUNTEERS?

Consultation

- Essential industry involved in process in addition to role in Steering Group and Working Groups
- All drafts of TCD Manual to be presented for public consultation
- NZTA list over 700 who receive notification.

ARE YOU ON IT?

- Comments received considered by authors and working group and final draft approved by Steering Group
- Document only published electronically



Transitional management of MOTSAM

- MOTSAM contains state highway operational policy so needs to be maintained while TCD Manual developed.
- Transition to TCD Manual being managed to have clear and non-contradictory guidance.
- MOTSAM is now published as image files on NZTA website.

Comprehension of traffic signs

- No previous New Zealand attempt to routinely assess drivers' understanding of traffic signs.
- Some efforts to assess individual signs
- Assessment for variable message signs
- *NZS 8603 outdoor recreational symbols*
- *ISO 9186 Graphical symbols: test methods for judged comprehensibility and for comprehension*
- *AS 2342: 1992*

2007 survey

- 28 signs tested – existing, new or proposed.
- Images presented in a web-based survey.
- Responses evaluated with ISO 9186 methodology.
- ‘Comprehension score’ calculated:

Perfect comprehension	=	1.000
Non-comprehension	=	0.000
Exact opposite of meaning	=	-1.000
- Some results are tabled in the paper.



2007 survey – web example page

EXAMPLE



On a road sign

What do you think this symbol means?

Warning - railway level crossing ahead -
watch for trains and be prepared to stop



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2009 survey

- Changes in presentation, suggested from 2007 survey were incorporated where:
 - sign was shown in a ‘real-life’ context; and
 - respondents asked to describe action.
- 27 signs used in survey
- Some repeated from 2007 survey for comparison
- Existing, new or proposed

2009 survey – web example page

EXAMPLE



On a road sign



What do you think this sign means?

Warning - railway level crossing ahead

What action would you take in response to this sign?

Watch for trains and be prepared to stop



Example results - 1



0.685



0.691



0.714



Example results - 2



2009 **0.730**



2007 **0.781**

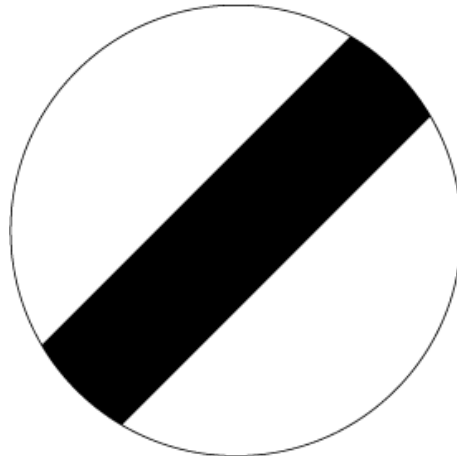
2009 **0.743**



Example results - 3



2009 **0.878**



2007 **0.406**

2009 **0.497**



2009 **0.703**

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