

Traffic Note 5

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Road Safety Surveys - Information

The Land Transport Safety Authority (LTSA) carries out surveys on the application of safety standards by Road Controlling Authorities (RCA). The surveys help fulfil LTSA's statutory function to 'monitor adherence to safety standards within the land transport system'.

The purpose of the surveys is to:

- assist and advise RCAs on standards and guidelines affecting traffic safety;
- measure the application of standards and guidelines by RCAs;
- provide a national summary and report the findings to RCAs and other parties; and
- identify changes to improve standards, guidelines or traffic rules.

Results of five surveys carried out during 1995/96 and 1996/97 have been previously notified to the RCAs and interested practitioners. They are now available for more widespread distribution. The topics and results reached are briefly described below. Copies of the full reports are available through the LTSA regional engineers at Auckland, Wellington and Christchurch.

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Traffic Signal Light Output (1995/96)

- Most RCAs had a quarterly cycle for cleaning lamps and replacing incandescent lamps and a cycle of two years or more for replacing quartz halogen lamps.
- No RCA had a programme for routine monitoring of lamp performance.
- Only five RCAs did not have a programme for upgrading traffic signals lamps to quartz halogen lamps.
- 30% of the sites surveyed had quartz halogen lamps and the rest were incandescent.
- Approximately 20% of incandescent and 80% of quartz halogen lamps in service met the lamp output standard (Australian Standard AS2144).
- 31% of signal lanterns surveyed were at Austroads' recommended mounting heights.

Upgrading the light output and mounting heights of all remaining traffic signals in New Zealand to Austroads guidelines would cost an estimated \$13.0 million while crash cost savings were estimated at \$17.5 million.

Street Lighting (1995/96)

- Over 40% of RCAs used road hierarchies and priority lists for improving lighting.
- Only 32% of RCAs had a full pole by pole maintenance database and only 23% had a regular cycle of bulk lamp replacement.
- In urban areas it was estimated 35% of arterials, 45% of collectors and 60% of local roads had street lighting below the standard the RCAs consider appropriate.

Upgrading all street lighting on traffic routes in New Zealand to the joint Australia/New Zealand standard would cost an estimated \$65 million.

Treatment of Slip Lanes at Traffic Signals

- 59% of RCAs used the appropriate standard and a further 9% partially used it.
- 37% of 'free flow slip lanes' and 19% of 'high entry angle slip lanes' complied fully.
- At a small number of sites signs and markings had been incorrectly installed in a way that would confuse drivers.

Upgrading all remaining slip lanes to guideline standards would cost an estimated \$141,000. The prevention of one injury crash from this upgrading would cover the cost.

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Advisory Speed Signs (1996/97)

- The consistency of the speed values on advisory speed signs is not satisfactory - only 53% were 'correct' and 82% accurate to within 10km/h of the measured speed.
- Over 80% of signs were located closer to the curve than recommended in the *Manual of Traffic Signs and Markings*.
- Approximately 20% of the signs were erected where they could not be warranted.

It was recommended:

- regular audits of sign consistency be carried out by RCAs;
- any advisory speed sign not resurveyed since 1992 should be surveyed now; and
- because of divergence between practice and policy in regard to sign size and location the guidelines should be reviewed.

STOP and GIVE WAY Controls at Intersections

This was an interview survey of RCAs only. No field surveys were completed.

The findings included:

- some RCA staff were unaware of legal processes required for intersection controls;
 - all RCAs had criteria for assessing types of control, with most using LTSA guidelines and the *Manual of Traffic Signs and Markings*;
 - visibility was the dominant criteria for most RCAs;
 - RCAs were using STOP signs alone as a crash countermeasure without taking other corrective actions;
 - most RCAs had a programme to install controls on all crossroads and some had completed this;
 - some RCAs also had a programme to control all 'T' intersections;
- many RCAs were using a sign inventory programme.

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