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High-risk Intersection Guide consultation
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High Risk Intersection Guide – feedback on draft

Introduction

The New Zealand Automobile Association (AA) welcomes the opportunity to provide comment on the New Zealand Transport Agency's (NZTA's) draft *High Risk Intersection Guide*.

As the largest member-based organisation in New Zealand, representing 1.3 million vehicle owners and drivers, the NZAA has a strong interest in transport issues in New Zealand.

Thank you for the opportunity to submit on the draft Guide.

A. General Comments

According to the *Safer Journeys 2020* strategy, 21% of fatal crashes occur at intersections. Whilst the majority of intersection fatal crashes occur in a rural environment, the majority of serious injury crashes happen in an urban environment.

The Strategy talked about the Government developing a guide on urban intersections; however the 2011-2012 Action Plan formed the action to develop and use a Guide to identify high-risk intersections, without limiting it to urban environments. The draft *High-risk Intersection Guide* has been developed to include both urban and rural intersections. The AA is very supportive of this approach – while there are obvious differences required in addressing safety concerns in each environment (e.g. speed differences), safe intersection design principles will be similar for both.

The Guide provides a significant road safety resource in regard to intersection safety in New Zealand. The Guide goes from identifying high-risk intersections to advising on appropriate treatment to reduce crash risk all the way through to monitoring and evaluating the effectiveness of the safety interventions. As we also mentioned in our submission on the High-risk Rural Road Guide, the High-risk Intersection Guide provides a strong basis to assist with consistency around the country regarding intersection design and also for sharing engineering expertise and best practice with those local authorities that are less able to have it in-house. Whilst we acknowledge it will take more than just the Guide's existence to achieve this, we see the Guide as a significant step in the right direction.



How do you think it could generally be improved?

Relationship to other Guides

Some fantastic work has gone in to preparing the other Guides in the suite, namely the High-risk Rural Roads Guide and the Safer Journeys for Motorcycling in New Zealand Guide. Wherever possible and relevant, the High-risk Intersection Guide should reference and make use of the information contained in them. It doesn't appear that *Safer Journeys for Motorcycling on New Zealand's Roads* is mentioned in the Guide. Some of the countermeasures in Appendix 6 could create additional hazards for motorcyclists (road surfacing and roadside hazards), so some reference back to the *Safer Journeys for Motorcycling on New Zealand's Roads* would be useful here to ensure the greatest use is made of all of the resources.

Access Control

Intersections by their very existence causes traffic conflict that can result in a crash – therefore access points onto strategic roads should be reduced or minimised where possible. The AA has long been a supporter of rationalising access (such as clustering access or reducing direct access) on higher hierarchy roads to improve road safety, particularly on strategic routes, and having lower speeds *and more access points* on low hierarchy routes that have predominantly an access and pedestrian function.

The Intersection Guide does not go into great detail about access other than to say when a high risk intersection is identified, it's important to consider overall strategic factors such as identifying whether this is the most appropriate access point and whether there may be a more suitable alternative which could be promoted. The AA considers this a significant omission.

In terms of hierarchy the Guide suggests identifying where the intersection fits within the local and national route hierarchy and whether the intersection form and control (e.g. Give Way, traffic signals) is appropriate to the hierarchy and traffic volumes. The AA considers that the option of limiting or otherwise managing direct accesses in the vicinity of the intersection should be explicitly added.

Testing changes with road users

The AA requests that changes to intersection standards are tested on focus groups of road users to see whether they have the desired effect which engineers are looking for and that they are understandable to road users. One example that comes to mind is the decision to remove the double limit lines from give way intersections and the removal of the words 'Give Way' from the road surface. The reduction of two limit lines down makes the intersection difficult for road users to differentiate from any other white line on the road. There should be a process by which proposed changes like this are tested for how they communicate themselves to road users to ensure they achieve the desired results.

Is it self-explanatory or do you think there is a need for training workshops?

The AA is of the view that introductory workshops will be necessary to ensure dissemination of the principles in the guide to local authorities and ensuring at staff level they are understood, to minimise the risk of regionalisation of solutions that will occur. There was also a suggestion from one of our Districts that follow-up workshops would also be necessary. Perhaps these could be held in conjunction with presentations on the *High-risk Rural Roads Guide* and the *Safer Journeys for Motorcycling in New Zealand* guide. The sessions would also provide the opportunity for local engineers to provide feedback on the content of the guides and suggest any updates/amendments.

Do you have any other general comments about the format and presentation or suggestions?

Table 6-3 (pages 41-44) is difficult to interpret, and requires going backwards and forwards between it and the appendix at the back. Is it possible to list the actual measures in the last column to save that, and the extra details would remain in the appendix?

B. Specific Comment

1. Introduction and objective

Section 1.4: Risk Management mentions risk identification through public feedback with the AA and other stakeholders and the feedback determining whether the level of perceived risk matches actual or potential risk through the use of road and crash data. The AA is very supportive of this and thinks AA Members and AA District Councils could provide the NZTA and District/City Councils with valuable feedback on intersections from a road user perspective that they are unlikely to see for themselves due to their over-familiarity with the topic – for example the AA could highlight confusing signage/road markings and other similar issues that could be contributing to crashes.

2. Strategic context

We like the interpretation of the safe system approach to intersection safety, in particular that the physical intersection layout is simple, self-explaining and forgiving of user error. We also believe there should also be a requirement around consistency (where appropriate) between intersection approaches also.

3. Crash priorities: strategic context

Whilst a figure 3-6 is mentioned in the wording, the figure doesn't appear to be included in the document.

4. Identifying high-risk intersections

The AA supports using a KiwiRAP approach using both collective and personal risk to assess actual crash risk; but the Guide also recognises the need for coming up with a proactive measurement of engineering risk similar to that used for KiwiRAP star ratings. To develop such a predictive measure the Guide highlights the need for RCA's to start collecting information on the features at each intersection that will assist in developing star ratings in the future. The AA supports this recommendation, however our AA Southland District notes that some local authorities are already stretched and it will be a challenge to gain the information, so it will be necessary for the NZTA to provide tools, training and monitoring to help with this.

One of our Districts has raised the issue of minor injury crashes – obviously they are not used in KiwiRAP which presently is mainly focused on higher speed environments – however there could a place for including these crashes in the urban intersection environment. In addition, often engineers receive public feedback/complaints regarding near misses they have had at intersections. Whilst not formal in nature, it is all useful information for helping to determine how risky an intersection is.

5. Understanding the issues

The AA supports the focus on consistency of expectation and of the provision of intersection and roadside infrastructure.

This section highlights the lack of movement code in CAS for cyclist crashes and the result that we don't have good statistics on how cyclist crashes occur at intersections. The AA is supportive of work to ensure that all movements that are unique to cyclists (and motorcyclists) are included in the movement codes. This doesn't necessarily mean that it has to be a whole new category (as cyclists and motorcyclists will still have movements that are similar to cars), but additional codes should be included where necessary to ensure full data is collected.

6. Safer intersections countermeasures

As part of the network evaluation, the Guide suggests identifying where the intersection fits within the local and national route hierarchy and whether the intersection form and control (e.g. Give Way, traffic signals) is appropriate to the hierarchy and traffic volumes. The AA considers that the option of limiting or otherwise managing direct accesses in the vicinity of the intersection should be explicitly added, and should be one of the first options considered.

All of the countermeasures contained in the Guide need to be based on sound research and results. They need to take account of overseas practice and on valid national and international research. Countermeasures in the Guide do not all have to be brand new and innovative, those approaches that have served us well and contributed to progress in reducing the road toll over the last few years remain valid.

Speed management is mentioned in a number of places in the document as a method of improving intersection safety. The AA is heavily involved in discussions with the NZTA regarding the safe system approach to speed and the principles which should underpin this approach.

Our preferences in relation to how to manage speeds are:

- For road controlling authorities to be tougher in terms of investigating closing of current access points on the network where they are contributing to a safety risk on the road. Carefully managing and designing for safe access is an important feature of managing safety consistent with the road hierarchy and its appropriate speed environments.
- Engineering treatments should be seen as the priority, with reducing speed limits as the last resort. We do not want to see speed limits as the easy solution to a road safety problem. While they may be relatively 'cheap' to install, there is a cost to the road user and economic cost to the country.
- In regard to the use of speed cameras, the AA has called for an increase in the visibility of speed cameras and camera areas. In our view fixed speed cameras should be placed in areas where excessive speed is a safety problem. Colouring them with high visibility paint and clearly notifying motorists of their presence will better achieve their purpose of slowing traffic down.
- The AA is supportive of red light cameras. The introduction of these cameras in Auckland decreased crashes from red light running by an average of 69% at carefully selected qualifying camera sites.

10. Countermeasures details

The treatment life for rumble strips is listed as 1-3 years depending on traffic volumes, whereas the treatment life for transverse markings is listed as 25years. This does not appear to be accurate?

Thank you for the opportunity to submit on the content of the draft. If you have any questions on our submission, please don't hesitate to contact me.

Yours sincerely



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