

Submission to
Land Transport New Zealand
on
Manual for Traffic Control Devices
Volume 9: Level Crossings (draft)



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1. INTRODUCTION

1.1 General

This submission relates to the Land Transport New Zealand draft guideline for rail level crossings (*Manual for Traffic Control Devices, Volume 9 Level Crossings*).

While the submission focuses primarily on the guideline, some of the comments have implications for the Traffic Control Devices Rule (“TCD Rule”) and the Road User Rule (“RU Rule”). Issues raised may need to be considered the next time these rules are reviewed.



2. SPECIFIC COMMENTS

2.1 Terminology

(Refer Section 2.2.1): The term “pedestrian crossing” has a very specific meaning in the RU and TCD rules, which in no way refers to rail crossing facilities. An alternative term should be used, such as “pedestrian rail crossing”.

References to signs in the guide are a mixture of codes from *Manual of Traffic Signs and Markings* (“MoTSaM”) and the new nomenclature set out in the TCD Rule. There should be consistent use of TCD Rule codes throughout.

2.2 Jurisdiction issues

The TCD Rule establishes some complex demarcations between rail access providers (“RAPs”) and road controlling authorities (“RCAs”). For example the RAP is responsible for painting limit lines at a crossing, but the RCA is responsible for the “RAIL X” markings in advance of the lines.

The Guideline needs to draw attention to the respective responsibilities. All RAPs and RCAs need to have protocols in place which ensure maintenance is carried out in an efficient and coordinated manner, and that in the event of a prosecution all traffic control devices are properly authorised.

2.3 “Give Way” and “Stop” signs

(Refer Section 4.4.3): Under TCD Rule Section 9.4, RAPs are entitled to erect a “Give Way” or “Stop” sign. There are however no warrants or other guidance provided on when they should be used.

Nor is the current guideline of much assistance. For “Stop” signs, Clause 4.4.3.1 advises that signs “*should*” be erected where the driver of a vehicle “*has insufficient visibility of an approaching train*”. This is vague, and needs to be clarified through reference to Table 3.1.

There is thus the potential for inconsistent and undisciplined use of the signs, with adverse implications not only for crossing safety, but also for the credibility of “Stop” control at intersections.

For “Give Way” signs, 4.4.3.2 indicates that the signs “*should*” be erected at all crossings not otherwise controlled. The intention apparently is for fairly general use of the signs.

In the writer’s view, the rationale for erecting “Stop” or “Give Way” priority signs is questionable:



- There can be very few motorists under any illusion that they might have priority at a rail crossing. There should be no need to reinforce the legal priority with a redundant additional sign.
- Use of “Give Way” signs at some crossings carries the implication that there are other situations where motorists are not required to give way. This is never the case.
- It is doubtful whether compliance with “Stop” signs could be enforced. The obligation to obey “Stop” and “Give Way” signs is contained in the RU Rule Part 4, which clearly anticipates that the signs will be only used at intersections: “*A driver approaching or entering an intersection where the vehicles ...are controlled by a stop sign...must ... stop his or her vehicle before entering the path of any possible vehicle flow...*” (from RU Rule 4.1(1), emphasis added). A rail crossing does not fit the definition of an intersection, nor is a train defined as a vehicle for the purposes of this rule. Accordingly, there is no obligation for drivers to obey a “Stop” sign at a rail level crossing. (The same comment applies to “Give Way” control, although in that case a violation could be prosecuted under RU Rule Part 9.)
- There will occasionally be perverse outcomes, for example where there is a walkway parallel to a railway, it could be argued that bicycles, skateboards and mobility scooters could have priority over road traffic regardless of whether or not a train were present.

The practical difficulties of implementing the proposed regime need to be clearly understood. The photograph in Figure 1 shows a typical rural rail crossing, with a rural road crossing the rail line and intersecting with a state highway immediately beyond. (The location is in Taranaki but the situation is repeated at a large number of crossings throughout the country.)





FIGURE 1 Typical crossing near intersection

Some problems with the crossing could be remedied, such as repairing the swivelling “Give Way” sign and removing the pre-2005 markings.

Other problems are not so easily resolved. The RAP has erected a “Give Way” sign at the crossing, and as required by TCD Rule 9.4(5) a triangular give way symbol has been marked on the roadway.

Unfortunately, TCD Rule 9.3(1) obliges the RCA to also mark “RAIL X” on the roadway, as the road is sealed and has a speed limit of 70 km/h or more. This cannot be done without taking up a considerable length of roadway, and creating a cluttered and confusing road surface. (For the crossing illustrated in Figure 1, “RAIL X” markings have been omitted, in contravention of the rule.)

If compliance with the TCD Rule in the direction shown is problematic, then for traffic approaching from the highway it is quite impossible. There simply is not enough room between the intersection and the crossing for the required markings to be placed.

The problem is illustrated by the layouts in Figures A9 and A10 of the Guideline. In both diagrams, the “RAIL X” marking is omitted, in contravention of Rule 9.3(1) (except where the speed limit is less than 70 km/h). The only way of making the layouts comply would be to remove the “Stop” or “Give Way” sign.

A further difficulty is created for traffic management at the state highway intersection. The “Give Way” sign has been erected at the crossing, but many drivers will interpret it as applying to the intersection. If a further sign were erected at the intersection, the spacing would be less than that recommended in MoTSaM (60 metres for an 85th percentile speed of 100 km/h). Drivers would encounter two signs in quick succession and could easily overlook the second.

As things stand, priorities at the intersection are ambiguous, with no clear priority between the conflicting right turns. If the intersection had a cross-road layout, then the “Give Way” sign at the crossing would seriously detract from the sign at the intersection, increasing the risk of intersection crossing collisions. (These are a major concern at cross-road intersections.)

These problems illustrate the difficulties inherent in taking intersection controls and applying them in situations for which they were not intended. If drivers are believed to be having difficulty recognising crossings, then rather than present them with multiple controls, it would be preferable to reinforce and emphasise a single control, such as the crossbuck sign and “RAIL X” marking.

If “Give Way” signs are to be erected, then consideration should be given to developing a distinctive sign in the “Give Way” format but with a rail symbol, in the same way that a specialised sign has been developed for roundabout approaches. (“Stop” signs may not be so easily adapted.)

Any such usage would need to be accompanied by corresponding amendments to the TCD and RU Rules.

2.4 Visibility at skewed crossings

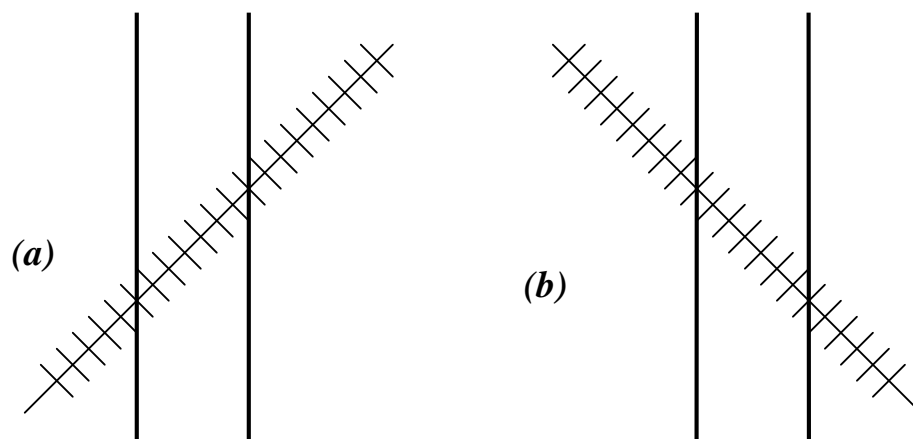


FIGURE 2 Skewed crossing types

As with intersections, drivers need adequate sight lines at rail crossings. For a clear view in both directions, the road should intersect with the rail line at an angle of between 70 and 110 degrees.

Where this cannot be achieved, the arrangement (b) in Figure 2 is to be preferred, with the acute angle on the right. This will allow drivers to check over their shoulder for trains approaching from the right.

Where the acute angle is on the left as in (a), drivers will not have a clear view of trains approaching from the left, especially in trucks or vans where the load obscures vision toward the left and rear.

The difference between the two situations needs to be recognised when determining how a crossing should be controlled. There could be a case for requiring all Type (a) crossings to be controlled by active devices such as bells and lights.

2.5 Commercial interests

At Appendix C, criteria for considering applications for private road level crossings (commercial) include “*Any commercial disadvantage to Ontrack should be considered*”.

Such a criterion has no place in a public policy document produced by a Government agency. Ontrack (and other rail access providers) should support or oppose applications solely on public interest grounds, with no consideration of the effect on its commercial position.

Quite apart from the principle involved, inclusion of such a provision could compromise Ontrack’s position in the event of a legal challenge from an unsuccessful applicant.

W J Barclay

2 November 2007

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