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Transport Roads & Traffic Authority

File 30.5395 10/1; C11/945; WST10/00055

The General Manager
Bathurst Regional Council
Private Mail Bag 17
BATHURST NSW 2795

Dear Sir

DA 2010/0770 Cycle Park, Lot 20 DP 1119593, Vale Road (MR 54) Bathurst

Thank you for your letter dated 16 August 2011 referring development application DA 2011/0770 to the Roads and Traffic Authority of New South Wales (RTA) for consideration. It is noted that Pre DA advice from the RTA dated 9 August 2010 indicated the traffic report should consider interaction between vehicles approaching the site and interaction with the railway level crossing in particular queuing from the level crossing onto MR54 while waiting for a train. This has not been addressed in the documentation.

Given the proposed connection to Vale Road, RTA concurrence is required pursuant to Section 138 of the *Roads Act 1993*. The RTA will not object to the proposed development and will provide concurrence subject to the following requirements being addressed in the Conditions of Consent:

- A right turn treatment of the 'Type CHR' (Channelised Right Turn) is to be constructed adjacent to the southbound lane on Vale Road as per Fig 7.7 in the *Austroads Guide to Road Design: Part 4A*. A copy is provided for your information.
- Intersection design on Vale Road will need to cater for any additional queuing as a result of level crossing operation. The level crossing will require the installation of a queuing treatment as detailed in Australian Standard AS1742.7 (2007) in conjunction with the Vale Road intersection works.
- The pavement and seal of widened sections is to be consistent with the existing pavement and seal on the highway. In this regard a pavement design is to be forwarded to the RTA for approval. The approved layout and pavement design will form part of the Works Authorisation Deed (WAD).
- A copy of construction plans for the proposed road works associated with the access are to be submitted to the RTA for approval.
- As the intersection is located on a state road, the developer will be required to undertake private financing and construction of works on a road in which the RTA has a statutory interest. A formal agreement in the form of a Works Authorisation Deed (WAD) is required between the developer and the RTA.
- Any environmental impacts associated with widening for the above intersection works is to be considered in the Part 4 development assessment. Otherwise as part of the WAD a Review of Environmental Factors will be required under Part 5 of the *Environmental Planning and Assessment Act 1979*.
- More details are required for the proposed cyclist lane on Vale Road between Bathurst and the development site. Information is to be provided regarding the lane width along the route given that there is an existing narrow bridge, as well as trees located close to the road.

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- Landscaping and vegetation of the site is not to interfere with driver or pedestrian sight lines.
- Road Safety Audits are to be conducted as per Section 4.4 of the traffic feasibility report.
- Lighting is to be in accordance with Australian Standards and not be a distraction or a nuisance to road users through light spillage onto the road corridor.
- Detail of any proposed outdoor advertising signage was not provided. Dependant upon size, the sign could be the subject of a separate Development Application or further information pertaining to overall size, location and structure detail to be provided for assessment. The RTA interest is in the frangibility and location of the structure, and the potential for distraction of road users on Vale Road by sign content and lighting.
- A Road Occupancy Licence is required prior to any works commencing within three metres of the travel lanes of Vale Road. This can be obtained by contacting Mr Paul Maloney on (02) 6861 1686. Submission of a Traffic Management Plan incorporating a Traffic Control Plan is required as part of this licence.
- The intersection treatments are to be completed prior to any other works being undertaken at the site.
- All consulting, planning, designing, investigating, reviewing, and works are to be at no cost to the RTA.

Should you have any further enquiries, please contact Fiona Francis on (02) 6861 1453.

Yours faithfully

Tony Hendry
Road Safety and Traffic Manager
Western

9 SEP 2011

7.5.3 Rural Channelised T-junction – Full Length (CHR)

For this layout, all traffic is required to deviate and therefore the road alignment for the through movement must be designed to suit the operating speed. This deviation requires the pavement to be widened to provide a full-length right-turn lane as shown in Figure 7.7.

The minimum lengths of deceleration (D) for different design speeds are shown in Table 5.2 and should be based on the comfortable deceleration rate of 2.5 m/s^2. The storage length (S) is usually determined through the use of computer programs such as aaSIDRA.

Details of the departure end of the right-turn lane should be determined using turning path templates (minimum radius 15.0 m). This will depend on the width and the angle of intersection of the road that the turning vehicle is entering.

There are no numerical warrants for the provision of raised medians in lieu of the painted medians, and some jurisdictions may require road lighting where raised medians are provided.

Pavement marking should be provided as shown in Figure 7.7. If the painted separation between opposing traffic flows is wider than a double white line, then the median should be delineated with diagonal markings and raised retroreflective pavement markers (Figure 6.5).

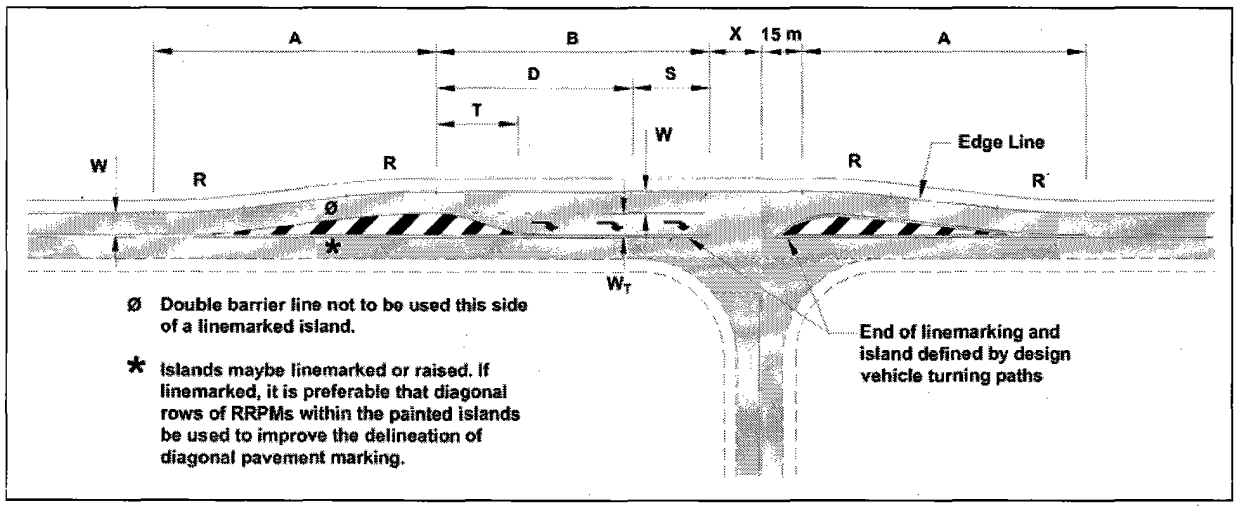
Table 7.2 provides the dimensions of the CHR treatment for various design speeds.

Table 7.2: Dimensions of CHR treatment for various design speeds

Design speed of major road approach (km/h)	Lateral movement length A (m) [1]		Desirable radius R (m)
	W_T=3.5 m	W_T=3.0 m	
50	50 [2]	40 [2]	110
60	60	50 [2]	175
70	70	60	240
80	80	65	280
90	90	75	350
100	100	85	425
110	110	95	500
120	120	100	600

Notes:

1. Based on a diverge rate of 1 m/sec. If the through road is on a tight horizontal curve (e.g. one with a side friction demand greater than the maximum desirable) increase the lateral movement length so that a minimal decrease in speed is required for the through movement.
2. Where Type 2 road trains are required minimum A = 60.0 m.



Notes:

1. An alternative to the double white line on the offside edge of the right-turn slot is a 1.0 m painted median. The 1.0 m median is particularly useful when the major road is on a tight horizontal curve and oncoming vehicles track across the centreline. Provision of this median will require the dimension 'A' to be increased.
2. A raised concrete median on the minor road may be used with this treatment to minimise 'corner cutting', particularly for higher turning volumes.
3. The dimensions of the treatment are defined below and values of A, D, R and T are shown in Table 7.2:

W = Nominal through lane width (m) (including widening for curves). For a new intersection on an existing road, the width is to be in accordance with the current link strategy.

W_T = Nominal width of turn lane (m), including widening for curves based on the design turning vehicle. Desirable minimum = W, absolute minimum = 3.0 m.

B = Total length of auxiliary lane including taper, diverge/deceleration and storage (m).

D = Diverge/deceleration length including taper. Adjust for grade using the 'correction to grade' factor (Section 5)

T = Physical taper length (m) and is given by:

$$T = \frac{0.33VW_T}{3.6}$$

S = Storage length (m) should be the greater of:

1. the length of one design turning vehicle or
2. (calculated car spaces –1) x 8 m (*Guide to Traffic Management – Part 3: Traffic Studies and Analysis* (Austroads 2009h), or use computer program e.g. aaSIDRA).

V = Design speed of major road approach (km/h)

X = Distance based on design vehicle turning path, typically 10–15 m

Source: Based on QDMR (2006).

Figure 7.7: Channelised right turn (CHR) on a two-lane rural road

7.5.4 *Rural Right-Left Staggered T*

Basic two-lane two-way road

This layout should be designed to ensure that:

- the stagger distance between the minor legs is large enough to discourage drivers from 'taking a short-cut on the wrong side of the traffic islands (e.g. at least 15 m to 25 m depending on the site characteristics)
- the island treatments in the minor roads are long enough to also discourage wrong way movements
- sufficient width is provided on the major road within the intersection to enable through vehicles to pass slowly to the left of vehicles waiting to turn right (e.g. 12 m), a similar principle to the BAR treatment.