

Appendix D – Generic Treatments

Generic Treatments

Drop Kerbs / Pram Ramps

A drop kerb or pram ramp provides a smooth change in level between the footpath and the road pavement.

Drop kerbs are particularly important for pedestrians with mobility disabilities, especially wheelchair users and parents with prams.

Some regular design flaws at drop kerbs include:

- The formation of a lip between the ramp and the road;
- Kerb not aligned with the crossing which guides users into the intersection;
- Formation of a steep gully between the ramp and the roadway which wheels can get stuck in; and
- Steep gradients on the ramp.

Drop kerbs should be designed as per per Austroads Part 13 - Pedestrians as shown below.

Tactile Paving

Tactile paving as shown in the kerb ramp design should be provided at all controlled crossings. Tactile paving is an important indicator for people with impaired vision of the presence of a crossing point. AS 1428.4 should be referred to for further information on the provision of tactile paving.

Incorrectly/poorly located tactile paving can be a hazard particularly for wheelchair users.



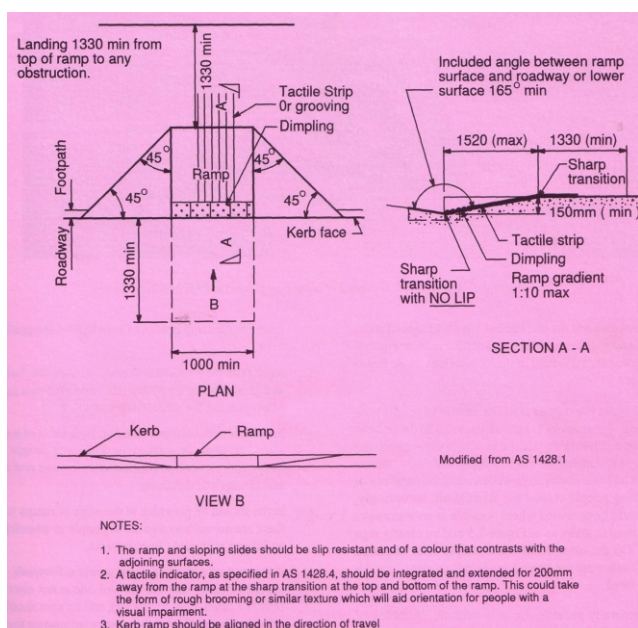
Steep and narrow drop kerb which does not line up with drop kerb on opposite side of road.



Drop kerb angled towards middle of road and not to the disabled parking space. No tactile paving used.



Dropped kerbs and tactile paving provided at signals but not at kebra crossing. Indirect route for mobility impaired and parents with prams.



Kerb ramp design (source: Austroads Part 13 Figure 2.6 pg 21).

Generic Treatments

Pedestrian Refuges

The large number of arterial roads in the Ryde area can cause problems for pedestrians wishing to cross them.

These problems can be seen in the number of pedestrian accidents on arterial roads in the area at both intersections and at mid block sections.

At both signalised intersections and mid block sections pedestrian refuges can provide a safe haven for pedestrians trying to cross the road.

At signalised intersections of roads of about 10m or more in width pedestrian refuges should be provided. Additional traffic signal controls should be installed on the refuge island so that anyone who becomes stranded on the island can press the button to call up the pedestrian phase.

Pedestrian refuges mid block are particularly effective on roads where pedestrian movements are spread over a length of heavily traffic road such as a shopping area on an arterial road.

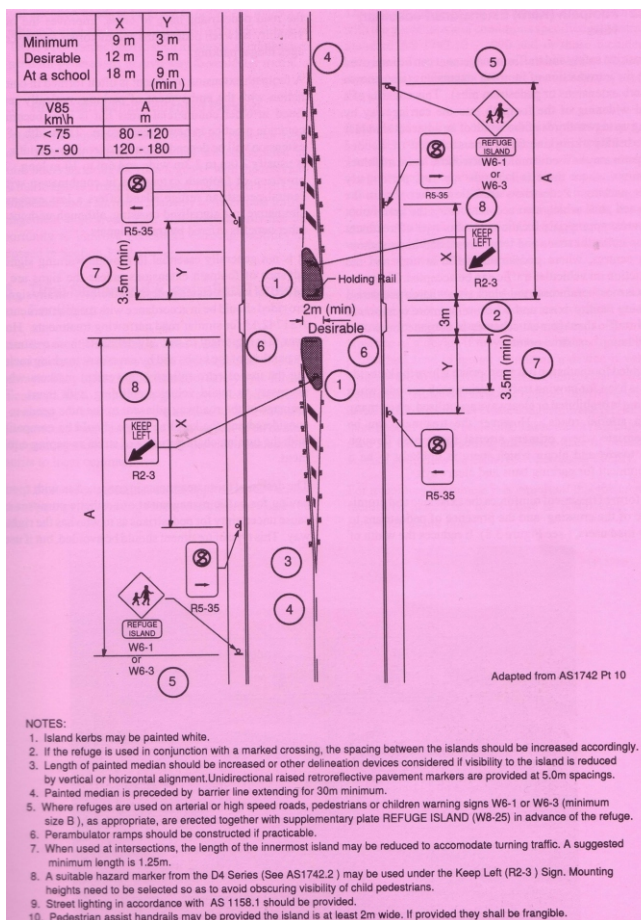


Image above: Pedestrian refuge (source: Austroads Part 13 Figure 3.6, pg 37).

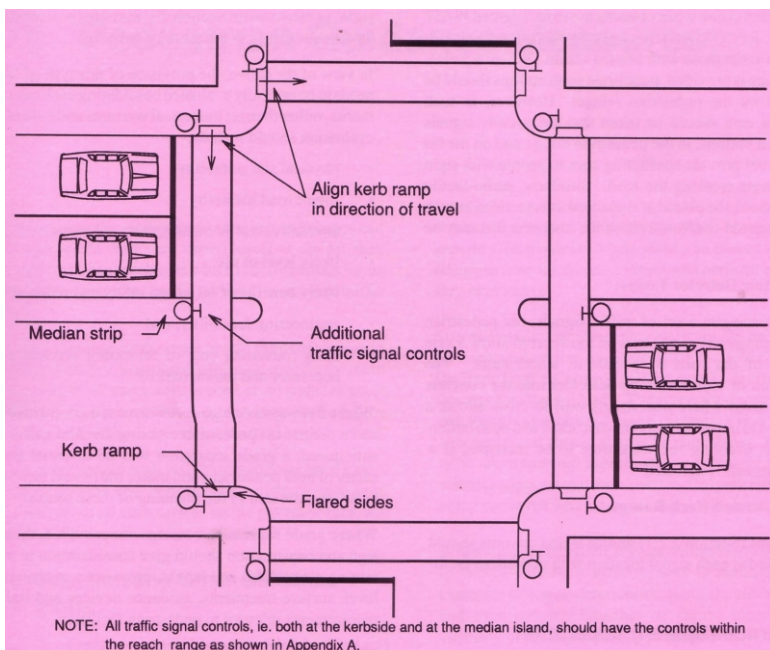


Image left: Stop and cross walk lines at signalised intersections (Source: Austroads Part 13 Figure 3.16, pg 47).

Generic Treatments

Kerb Extensions

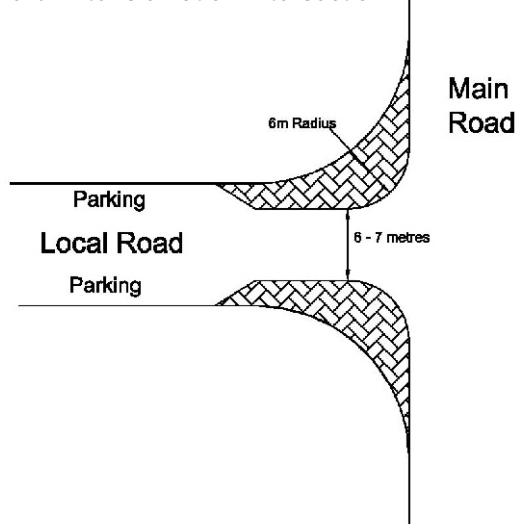
Where practical the distance to be travelled by pedestrians when crossing a road should be minimised. Reducing the crossing width increases pedestrian safety and amenity and can reduce vehicle delay at crossing as less time is needed for pedestrians to cross.

Austrroads Part 13, Table 3.2 identifies the most suitable crossing treatments for different types of roads. Kerb extensions are appropriate for collector and local streets.

It is recommended that extended kerbs at midblock points are used in areas where there is high pedestrian demand for crossing such as at local shops or schools.

Kerb extensions at intersections should be used on collector and local streets where they intersect with each other and with arterial roads. Reduced intersection mouth widths reduce pedestrian crossing times and discourage inappropriate vehicle turning speeds.

Kerb Extension at an Intersection



Extended kerb (footpath) (Source: Austrroads Part 13 Figure 3.7, pg 38).

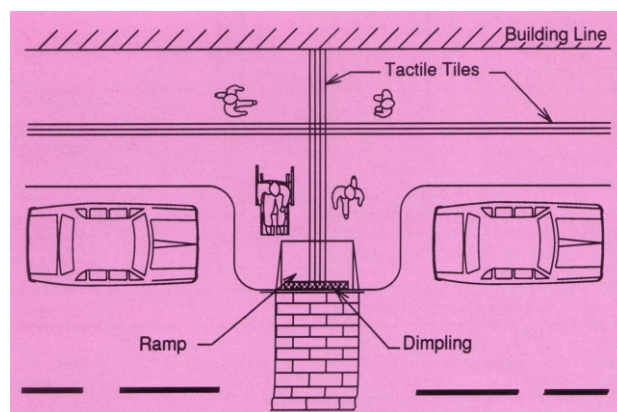


Table: Suitability of road types for general crossing treatment (Source: Austrroads Part 13 Table 3.2, pg 28).

Facility	Primary Arterial*	Secondary Arterial	Collector Road	Local Street
Pedestrian refuges	B	B	A	A
Footpath (kerb) extension	C**	B	A	A
Road narrowings indented parking, kerb extension, line marking	C	C	A	A

* Non-freeway

** Footpath Extension may be appropriate on primary arterial in Rural Town

A Most likely to be appropriate

B May be an inappropriate treatment

C Inappropriate treatment

Reference should also be made to the installation guidelines provided in Australian Standard AS 1742.10 and the detailed design provisions in AS 1742.2.

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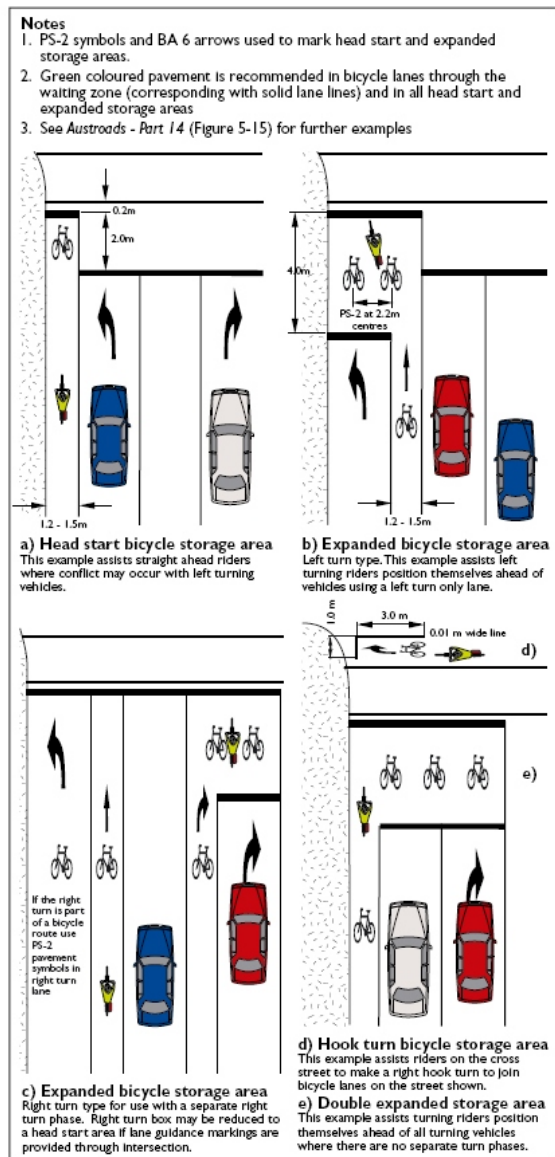
Storage Boxes

Accident analysis in Ryde shows a number of accidents involving cyclists at intersections. Storage boxes can make negotiating signalised intersections safer for cyclists.

Storage boxes allow cyclists to position themselves ahead of the traffic queue at signalised intersections. It is common practice for cyclists to wait in front of queuing traffic and storage boxes formalise this practice. The position of the cyclist in front of the traffic queue makes the cyclist more conspicuous to motorists and allows the cyclist to proceed through the intersection more quickly.

RTA have adopted green as the contrasting colour recommended to be used on specific treatments in NSW. It is recommended that green coloured surfacing be used to highlight storage boxes at busy intersections.

Other intersection treatments for priority and roundabout controlled intersections which could be adopted in Ryde are outlined in NSW Bicycle Guidelines.



Head start and expanded storage areas
(Source: NSW Bicycle Guidelines Figure 7.18 pg 57).



Use of a storage box with green coloured surfacing at a signalised intersection.

Generic Treatments

Accessible Bus Stops

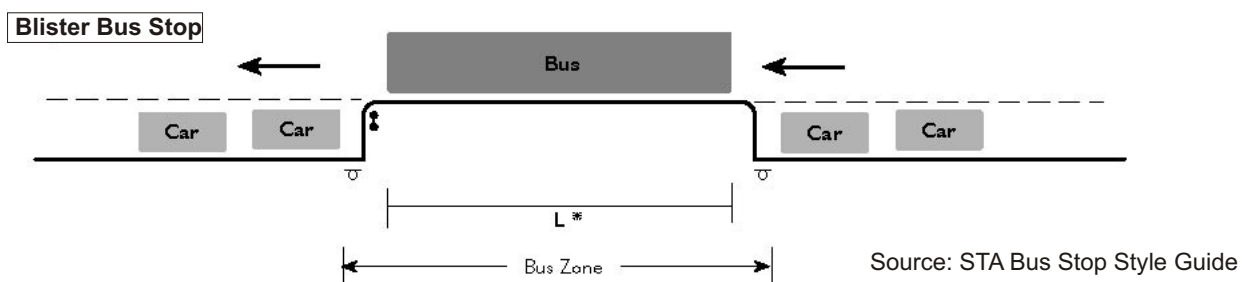
All bus stops should be designed to accommodate low floor accessible buses. For ease of access buses should be able to manoeuvre the vehicle entry/exit platform right up to the kerbside. Gaps of 100mm or more can cause problems for some users such as the elderly, wheelchair users, people with prams and people with sight impairments or walking difficulties. Minimum kerb heights of 150mm are required to ensure that entry/exit platforms are at the right angle.

The provision of accessible bus stops is particularly important with regard to the requirements of the Disability Standards for Accessible Public Transport 2002. A number of agencies have produced generic bus stop designs to comply with these standards. An example is shown below.

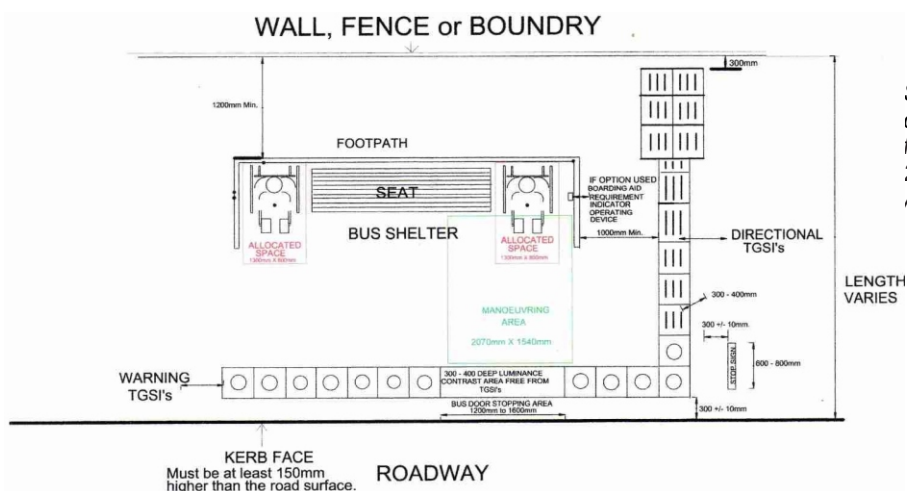
A number of design solutions need to be considered to ensure that bus stops are accessible for both the bus driver and passengers. Different solutions will be applicable to different locations. The following are an example of some of the factors that should be considered when designing a bus stop:

- What type of buses will be used? E.g. articulated;
- Will parking around the bus stop cause access problems?
- If a bus bay is provided will there be difficulties pulling back into the stream of traffic?
- Is there a connecting pedestrian network etc?

Bus stops should be designed in consultation with bus operators and with reference to the State Transit Bus Stop Style Guide.



Blister bus stops help ensure that bus stops are not blocked by parked vehicles and buses can easily pull back out into the stream of traffic. The blister length should be designed for the longest bus that may use the route. Articulated buses are being introduced on Victoria Road routes and this should be reflected in bus stop designs.



Sample accessible bus stop to comply with Disability Standards for Accessible Public Transport 2002 designed by Access For All Alliance (Hervey Bay) Inc.

Source: www.accessforall.org.au