Queensland Manual of Uniform Traffic Control Devices

Part 10: Pedestrian control and protection

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About this document

This document sets out the traffic control devices to be used for the control and protection of pedestrians. Treatments provided include:

- · pedestrian crossings
- pedestrian refuges
- pedestrian malls
- facilities for pedestrians with disabilities.

Pedestrian safety largely depends upon public understanding of accepted methods for traffic control. This principle is particularly important regarding the control of pedestrians and vehicles near schools. Pedestrian safety in these areas can be a highly sensitive subject.

Safe and effective traffic control is best obtained through consistently applying realistic policies, practices and standards which have been developed through traffic engineering studies. It is important that traffic control devices are used in accordance with the conditions prescribed in this Part of the Manual. Uniform treatment for comparable situations promotes uniform behaviour by both motorists and pedestrians.

Where possible, symbolic legends should be used in association with pedestrian facilities. Symbolic legends are used in place of worded legends to increase sign legibility.

How to use this document

This document is designed to be read and applied together with AS 1742.10–2009 *Manual of Uniform Traffic Control Devices Part 10* (AS 1742.10-2009). You must have access to the Australian Standard to understand what applies in Queensland.

This document:

- sets out how AS 1742.10-2009 applies in Queensland
- has precedence over AS 1742.10-2009 when applied in Queensland
- has the same section and clause numbering and headings as AS 1742.10-2009.

The following table summarises the relationship between AS 1742.10-2009 and this document:

Applicability	Meaning	
Accepted	The Australian Standard section or clause is accepted.	
Accepted, with amendments	Part or all of the section or clause has been accepted with additions, deletions or differences.	
New	There is no equivalent section or clause in the Australian Standard.	
Not accepted	The Australian Standard section or clause is not accepted.	

Definitions

The following general amended definitions apply when reading AS 1742.10-2009.

Reference to	Means	
AS 1742.10-2009	AS 1742.10-2009, as amended by this document	
	For example, a reference to AS 1742.10-2009 means you must refer to the Australian Standard Part 10, and Part 10 of the Queensland <i>Manual of Uniform Traffic Control Devices</i> (Queensland MUTCD).	
	Throughout AS 1742.10-2009, references are made to other parts of the Australian Standards (for example, when reading Part 10 you may be referred to Part 1 for further information). In this case, you must refer to the equivalent Part within the Queensland MUTCD first. Check the applicability of the equivalent Part in the Queensland MUTCD before referring to the referenced Australian Standard Part.	
TRUM	Transport and Main Roads' <u>Traffic and Road Use Management manual</u>	

Relationship table

Section	Clause	Description	Applicability
1	Scope		Accepted
2	Referen	ced documents	Accepted, with amendments
3	Definition	ons	
	3.1	Children's crossing	Accepted
	3.2	Children's crossing supervisor	Accepted
	3.3	May	Accepted with amendments
	3.4	Loading island	Accepted
	3.5	Pedestrian	Accepted
	3.6	Pedestrian actuated traffic signals (mid-block)	Accepted
	3.7	Pedestrian aspect	Accepted
	3.8	Pedestrian crossing (zebra)	Accepted
	3.9	Pedestrian interval	Accepted
	3.10	Pedestrian mall	Accepted
	3.11	Pedestrian phase	Accepted
	3.12	Pedestrian push button	Accepted
	3.13	Pedestrian refuge	Accepted
	3.14	Pelican crossing	Not accepted
	3.15	Safety zone	Accepted
	3.16	Shall	Accepted with amendments
	3.17	Should	Accepted, with amendments
	3.18	85 th percentile speed (V85 km/h)	Accepted
	3.19	Registered Professional Engineer of Queensland (RPEQ)	New
	3.20	Innovative treatments	New
4	Classific	cation and type of pedestrian facilities	Accepted, with amendments

Section	Clause	Description	Applicability
5	General requirements		
	5.1	Demand	Accepted, with amendments
	5.2	Provision for people with disabilities	Accepted, with amendments
	5.3	Subways and bridges	Accepted
	5.4	Signs	Accepted
6	Pedestr	ian crossing (zebra)	
	6.1	Purpose and safe operation	Accepted
	6.2	Description	Accepted, with amendments
	6.3	Requirements for installation	Accepted, with amendments
	6.4	Signs	Accepted
	6.5	Pavement markings	Accepted, with amendments
7	Children	n's crossing	
	7.1	Purpose and safe operation	Not accepted
	7.2	Description	Not accepted
	7.3	Requirements for installation	Accepted
	7.4	Signs	Accepted
8	Pedestrian actuated traffic signals (mid-block)		
	8.1	Description	Accepted
	8.2	Guidelines for installation	Accepted
	8.3	Limitations on installation	Accepted
	8.4	Signs and pavement markings	Accepted
	8.5	Pelican crossings	Not accepted
	8.5.1	Description	Not accepted
	8.5.2	Guidelines for installation	Not accepted
	8.6	Provision for pedestrians at signalized intersections and railway crossings	Accepted
9	Physica	l pedestrian facilities	
	9.1	General	Accepted
	9.2	Pedestrian refuge islands, traffic islands and medians	
	9.2.1	General	Accepted
	9.2.2	Installation	Accepted
	9.2.3	Guidelines for installation	Accepted
	9.2.4	Barrier lines	New
	9.3	Kerb extensions	Accepted
	9.4	Loading islands and safety zones	Accepted, with amendments
	9.5	Signs	Accepted, with amendments
	9.6	Pedestrian fencing	Accepted

Section	Clause	Description	Applicability
10	Pedestrian malls		Accepted
11	Warning signs		
	11.1	General	Accepted
	11.2	Warning signs for pedestrian crossings	Accepted, with amendments
	11.3	Warning signs for pedestrians not at crossings	Accepted
12	Pedestri	an direction signs (G5-7, G5-8)	Accepted
13	Lighting		Accepted
14		n to treatments and Registered Professional r of Queensland certification	New
Appendi	ces		
Α	Illumina	tion and reflectorization of signs (normative)	
	A1	Scope	Accepted
	A2	General	Accepted
	А3	Means of illumination	Accepted
	A4	Means of reflectorization	Accepted
В	Installation and location of signs (normative)		
	B1	Scope	Accepted
	B2	Uniformity of location	
	B2.1	General	Accepted
	B2.2	Longitudinal placement	Accepted
	B2.3	Lateral placement and height	
	B2.3.1	General	Accepted
	B2.3.2	Lateral placement – rural	Accepted
	B2.3.3	Lateral placement – urban	Accepted
	B2.3.4	Height – rural	Accepted
	B2.3.5	Height – urban	Accepted
	B2.3.6	Overhead mounting	Accepted
	B2.4	Overhead signs	Accepted
	В3	Installation / orientation	Accepted

Section	Clause	Description	Applicability
С	Model ir (informa	nstructions for adult supervisors at crossings ative)	
	C1	Scope	Not accepted
	C2	Equipment	Not accepted
	C3	Uniform	Not accepted
	C4	Preliminary instructions to children	Not accepted
	C5	Procedure at children's crossings on two way roads	Not accepted
	C6	Procedure at children's crossings on divided roads	Not accepted
	C7	Procedure at pedestrian actuated traffic signals (mid-block)	Not accepted
	C8	Accidents	Not accepted
D	Model in	nstructions for child monitors at crossings	
	D1	Scope	Not accepted
	D2	Equipment	Not accepted
	D3	Uniform	Not accepted
	D4	Procedure at a zebra or children's crossing	Not accepted
	D5 Procedure at pedestrian actuated traffic signals (mid-block) D6 Reporting of drivers disobeying monitor's stop banners		Not accepted
			Not accepted
	D7	Reporting of drivers disobeying red signal at signalized crossings	Not accepted
E		ming at pedestrian actuated traffic signals ck) (informative)	
	E1	General	Accepted
	E2	Minimum vehicle green time	Accepted
	E3	Minimum pedestrian green (walk) time	Accepted
	E4 Flashing pedestrian clearance time		Accepted
	E5	Intergreen time	Accepted
	E6	Flashing yellow signal holding time at pelican crossings	Not accepted

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2 Referenced documents

Difference

The following are additional reference documents:

- AS 1428.1 General requirements for access New building work
- AS 1428.4.1 Means to assist the orientation of people with vision impairment Tactile ground surface indicators.

3 Definitions

Addition

3.3 May

Indicates the existence of an option. Where the word 'may' is used, it indicates that use of the device is conditional, or optional. Usually, no specific requirement for design or application is intended.

3.14 Pelican crossing

Not accepted

This type of crossing is **not approved for use in Queensland**.

Addition

3.16 Shall

Indicates that a statement is mandatory. Where certain requirements in the design or application of the device are described with the 'shall' stipulation, it is mandatory that, when an installation is made, these requirements be met.

3.17 Should

Addition

Indicates a recommendation. Where the word 'should' is used, it is considered to be recommended usage, but not mandatory. Any recommendation that is not applied must be based on sound traffic engineering judgement and documented.

3.19 Registered Professional Engineer of Queensland (RPEQ)

<u>New</u>

A person who is registered as a Registered Professional Engineer of Queensland (RPEQ), under the *Professional Engineers Act 2002* (Qld) with the <u>Board of Professional Engineers of Queensland</u>.

3.20 Innovative treatments

New

Innovative treatments that provide improved safety, efficiency, and/or value-for-money outcomes are encouraged. Such treatments may include:

- a) innovative use of current devices
- b) alternative device layouts using existing and/or improved devices, and/or
- c) new devices or practices.

New or improved devices, treatments, or practices require approval by the Department of Transport and Main Roads (see Section 14 for guidance about variations to optimal treatments) prior to their use or adoption.

For trials of new or innovative traffic control devices, treatments, or practices, a submission in accordance with the requirements of the Queensland *Manual of Uniform Traffic Control Devices* (MUTCD) Part 1 Clause 1.13 shall be submitted to TrafficEngineering.Support@tmr.qld.gov.au.

4 Classification and type of pedestrian facilities

Difference

Pelican Crossings in Table 1 is not approved for use in Queensland.

5 General requirements

5.1 Demand

Addition

The *Queensland Guide to Traffic Management* Part 6 provides crossing selection guidance for Queensland.

5.2 Provision for people with disabilities

Difference

(c) Tactile ground surface indicators in accordance with AS/NZS 1428.4.1 Design for access and mobility, Part 4.1: Means to assist the orientation of people with vision impairment.

6 Pedestrian crossing (zebra)

6.2 Description

Difference

Information contained in the fifth paragraph in this clause about the use of twin alternating flashing lights is not approved for use in Queensland.

Addition

Foreshortening of the no-stopping zone may be implemented as shown in Figure 6.2.

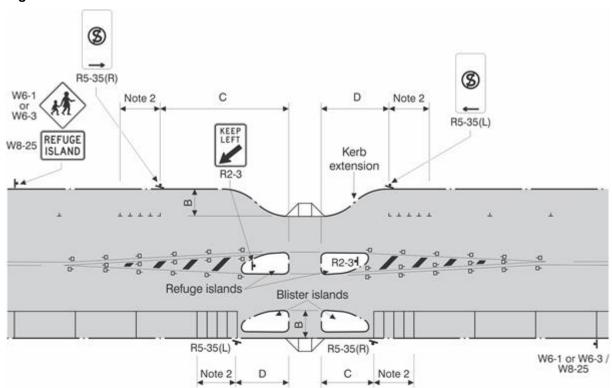


Figure 6.2 - Kerb extension blister

Notes:

- Parking restrictions may also be reduced at rear-in 'angled parking' situations. Kerb extensions must project at least 200 mm further from the kerb than the length of the angled parking bay.
- When parking restrictions have been reduced, the first parking spaces should be allocated to motorcycles or bicycles so as to ensure extra visibility to and from the facility.

Placement of "No Stopping Any Time" (R5-35) signs at parallel parking situations

B (m)	C (m)	D (m)
0	20	10
1.5	15	10
2.0	10	10
≥2.5	5	5

6.3 Requirements for installation

Difference

(a)(i) No more than one lane of moving traffic in any one direction shall be encountered by a pedestrian using a crossing. Refer the *Queensland Guide to Traffic Management* Part 6 for further guidance.

<u>Addition</u>

(b) Crossings on slip lanes and roundabouts

The conditions specified for crossings in Item (a) shall also apply to pedestrian crossing (zebra) installations on slip lanes and roundabouts, except that there is no restriction on speed limit but that the upper 15 km/h pace on the slip lane or roundabout measured at the point where the crossing is to be placed shall not exceed 60 km/h. If any of these requirements are not met, a signalised crossing of the slip lane or roundabout may be appropriate.

In addition, the slip lane may be on an arterial road and signposted parking restrictions may be omitted, unless it is considered that parking or stopping on the slip lane (which has the potential to

restrict sight distance to the crossing or result in undesirable vehicle movements over the crossing) may occur.

6.5 Pavement markings

Addition

For the profile of raised pedestrian crossings (zebra) on bus routes, refer to Part 13 of this Manual.

7 Children's crossing

7.1 Purpose and safe operation

Not accepted

The following replaces that in the Standard:

The children's crossing is a part-time facility catering primarily for school children. It is only in operation when the CHILDREN'S CROSSING (R3-3) flags are displayed.

CHILDREN'S CROSSING (R3-3) flags shall only be displayed during school zone times of operation.

NOTE

- 1. Pedestrians on (or entering) a crossing place a legal obligation on vehicles to stop and not enter the crossing. Vehicles may not proceed until all pedestrians are clear of the crossing. This is a higher obligation on traffic than at a pedestrian crossing (refer Clause 6).
- 2. For information regarding traffic management and road safety at schools in Queensland, refer TRUM Volume 2 Part 3 Section 3.2-1.

7.2 Description

Not accepted

The following replaces that in the Standard:

A children's crossing as shown in Figure 7.2(a) shall comprise the following items:

- i. STOP lines 300 to 600 mm wide
- ii. Two posts painted in red and white alternate bands on each side of the road at the crossing and one post in red and white alternate bands in advance of the crossing at the STOP line
- iii. the CHILDREN'S CROSSING flags (R3-3) displayed to indicate that the crossing is in operation
- iv. provision for mounting the CHILDREN'S CROSSING flags on the advance posts specified in Item ii
- v. NO STOPPING signs (R5-36-1) for control of parking near the crossing during the times the crossing is in operation
- vi. the hand STOP banner (R6-7) which is used by a crossing supervisor when in attendance
- vii. the advance warning sign assembly, Children (symbolic), CROSSING
 AHEAD (W6-3 / W8-22) used where sight distance to the crossing is substandard.
- viii. Dashed crosswalk lines.

ix. Yellow pedestrian holding lines each side of the crossing.

At some schools, a pedestrian crossing may be required for use by pedestrians outside of school zone hours. This facility would normally be installed in accordance with Clause 6. Figure 7.2(b) provides details for signing and marking a combined children's crossing and pedestrian crossings (zebra) at schools.

W8-22 (3) R5-36-1 80 m to ヤ-こ **'6-L** 120 7-9. 2-4... 20 m R5-36-1 1 Stop line 10 m (1) POST AND FLAG (R3-3) 6 1 2.4 min. (2) (2)POST POST R3-3 HILDREN 63 POST AND FLAG 18 m ROSSING (R3-3) 10 m 1 POST ALTERNATE RED AND WHITE BANDS 300 mm WIDE (50 mm NB POST) Stop line E 20 m 300 1 R5-36-1 "ヤ-フ m to 120 m POST AND FLAG ~6-L 2-4. 8 R5-36-1 ALTERNATE RED AND WHITE BANDS 300 mm WIDE (50 mm NB POST) 1.2 m 3 W6-3 W8-22 POST

Figure 7.2(a) - Children's crossing

Notes:

- 1. Variations to no-stopping distances may be required where visibility to the crossing is sub-standard.
- 2. A yellow line (approximately 100 mm wide) shall be painted on the footpath at least 0.5 m behind the face of the kerb to indicate the position where pedestrians should wait until directed to cross the roadway. Where used, this line extends the width of the sealed apron connecting the footpath and kerb or a distance of 2.4 metres, that is, between the crossing posts (without flags).
- 3. The W6-3 / W8-22 assembly is required if the sight distance to the crossing is sub-standard.

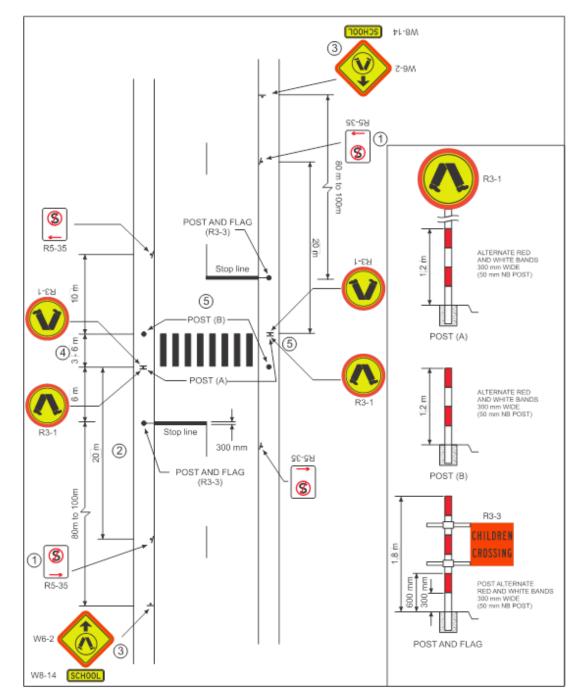


Figure 7.2(b) – Combined children's crossing and pedestrian crossing at schools

Notes:

- 1. Times of operation may be specified by use of R5-36-1 sign.
- 2. Where stationary vehicles near a crossing seriously limit visibility between drivers and pedestrians, an increase in these distances may be required.
- Warning signs may be supplemented with advance pavement messages (see Section 6 of Part 4 MUTCD).
- 4. A yellow line (approximately 100 mm wide) shall be painted on the footpath at least 0.5 m behind the face of the kerb to indicate the position where pedestrians should wait until directed to cross the roadway. Where used, this line extends the width of the sealed apron connecting the footpath and kerb or a distance of 3–6 metres, that is, between the crossing posts (without flags).
- 5. Pram / bicycle ramps should be installed.

8 Pedestrian actuated traffic signals (mid-block)

8.5 Pelican crossings

Not accepted

This type of crossing is not approved for use in Queensland.

9 Physical pedestrian facilities

9.2 Pedestrian refuge islands, traffic islands and medians

9.2.4 Barrier lines

<u>New</u>

A double barrier line, augmented with RRPMs, should form the outline on the approach sides of the painted splays. A barrier line should also precede each splay for the distance given in Table 9.2.4.

Table 9.2.4 - Required distances

V ₈₅ (km/h)	A (m)	C (m)
<75	80–120	30
75–90	120–180	60
>90	180–250	100

9.4 Loading islands and safety zones

Difference

The fifth paragraph in the Standard is replaced with the following:

The safety zone is a particular form of loading island at which special traffic regulations apply. Loading islands may be designated as safety zones by the installation of the SAFETY ZONE sign (R3-2) (see Clause 9.5(b)) on the island facing approaching traffic.

9.5 Signs

Difference

(b) Safety Zone (R3-2)

The paragraph in the Standard is replaced with the following:

The SAFETY ZONE sign shall be used to designate loading islands as safety zones where large numbers of passengers board or leave public transport vehicles other than the footway (see Clause 9.4).

11 Warning signs

11.2 Warning signs for pedestrian crossings

Difference

(c) Children / CROSSING AHEAD (W6 3 / W8 22)

The paragraph in the Standard is replaced with the following:

The assembly shall be used in advance of the crossing where visibility of the CHILDREN'S CROSSING flags (R3-3) is obstructed due to road curvature or other local conditions.

The CROSSING AHEAD (W8-22) sign shall not be used without the Children (W6-3) sign, or the Signals Ahead (W3-3) sign (see Item (a)).

These signs shall be manufactured using retroreflective fluorescent yellow / green sheeting as specified in AS/NZS 1906.1 Retroreflective materials and devices for road traffic control purposes, Part 1: Retroreflective sheeting.

14 Variation to treatments & Registered Professional Engineer of Queensland certification

New

This Part of the *Manual* contains mandatory requirements (*shall*), recommendations (*should*) and options (*may*). The application of these mandatory requirements and recommendations is intended to provide the optimal level of safety and traffic efficiency. It is acknowledged that, in some instances, variations to these requirements and recommendations may be necessary and, as such, variations to these requirements and recommendations may be undertaken as follows:

- a) Where recommendations (*should*) are not adopted, a risk assessment shall be undertaken and certified by a Registered Professional Engineer of Queensland (RPEQ).
- b) Where mandatory requirements (*shall*) are not adopted, a risk assessment shall be undertaken and certified by an RPEQ.
 - Notifications of variations to mandatory requirements (including all relevant information) shall be emailed to TrafficEngineering.Support@tmr.qld.gov.au for information purposes and for the benefit of identifying potential future practice changes not for approval or endorsement. These variations may include learnings that may be attributed to the variation of a *shall* requirement, such as operational, cost or safety impacts.
- c) Where innovative treatments (see Clause 3.20) that are outside the scope of the Queensland MUTCD are proposed to be adopted, a risk assessment shall be undertaken and certified by an RPEQ.
- d) All proposed innovative treatments require approval by Transport and Main Roads prior to their use or adoption. Requests for approval of innovative treatments (including all relevant information) shall be emailed to TrafficEngineering.Support@tmr.qld.gov.au. As part of an approval to use or trial an innovative treatment, Transport and Main Roads may require that the applicant provides a detailed evaluation report on the performance and effectiveness of the treatment. Transport and Main Roads may use the results of the evaluation to identify potential future practice changes to this Part of the Manual.

e) The use of options (*may*) is not a variation to the optimal treatment and does not require certification by an RPEQ.

Appendices

Appendix C – Model instructions for adult supervisors at crossings (informative)

Not accepted

Refer to Regional Road Safety Advisor as published on the Transport and Main Roads website.

Appendix D – Model instructions for child monitors at crossings (informative)

Not accepted

This is not accepted in Queensland.

Appendix E – Signal timing at pedestrian actuated traffic signals (mid-block) (informative)

E6 Flashing yellow signal holding time at pelican crossings

Not accepted.

This type of crossing is **not approved for use in Queensland**.