Pedestrian Countdown Timer

Operational Instruction
Pedestrian Countdown Timer - 14.3

AMENDMENT RECORD

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Manager, Traffic and Access Standards Section  
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1. Scope

To provide guidelines for the installation of Pedestrian Countdown Timers (PCTs) in South Australia.

2. Background

‘Standard’ pedestrian signals at traffic signals and pedestrian actuated crossings provide a short green WALK period for pedestrians to commence crossing followed by a clearance flashing red DON’T WALK period of sufficient time to allow pedestrians to complete the crossing before a steady red DON’T WALK period and a commencement of a conflicting vehicle green phase. Under this operation the Australian Road Rules only permit pedestrians to commence crossing during the green WALK period.

While the standard sequence generally serves pedestrians well at most locations, it has been seen to cause some problems at locations with extremely high pedestrian demand such as in the city CBD and at busy suburban shopping and public transport orientated sites. At these sites, due to the high pedestrian volumes, it is common to see pedestrians start to walk and complete the crossing well within the relatively long clearance flashing DON’T WALK period that is required to cater for the less able bodied pedestrians to complete their crossing.

The Adelaide City Council and the Government, through polices and strategies such as ‘Vibrant Adelaide’ and ‘Future Directions’ are constantly examining ways to improve pedestrian accessibility and amenity. One way to achieve this is to reduce some of the waiting time restrictions placed on pedestrians at signalised pedestrian facilities.

Although many cities around the world and in Australia provide PCTs in an attempt to provide a more pedestrian friendly environment, most retain the flashing red DON’T WALK display in conjunction with a countdown timer display to assist pedestrians. However, such an arrangement continues to legally prohibit pedestrians from commencing to walk during the flashing red DON’T WALK/PCT sequence. With this in mind, a decision was made to remove the flashing red DON’T WALK from the sequence and replace it with a pedestrian countdown timer (PCT) alone. Without the flashing red DON’T WALK, pedestrians are not committing an offence if they commence to cross during any part of the countdown sequence. The display relies upon pedestrians being able to judge for themselves, how much time they need to complete the crossing if they commence to cross during the PCT sequence.

Countdown timers can also be used during the steady red DON’T WALK part of the sequence. However, this option is not being considered at this time.

3. Signal Sequence

The sequence of the PCT in use in South Australia is:

1. Steady green WALK (symbol).
2. PCT display clearance time (or time left to cross).

This replaces the red flashing DON’T WALK (symbol). The PCT period is calculated using the same method as the calculation of the flashing red DON’T WALK (pedestrian clearance time) recommended in the Austroads Guide to Traffic Management Part 9, Traffic Operations.
3. Steady red DON’T WALK (symbol)

The steady green WALK (symbol) is still displayed in the same manner as standard pedestrian actuated crossings to indicate to pedestrians that it is safe to start to cross the road. The standard audio tactile signal sequence is used for the vision and hearing impaired.

The sequence is illustrated on the front cover of this document.

4. Installation Criteria

To maximise the benefit for pedestrians while providing an appropriate level of safety, the following criteria for PCT installation shall be applied:

- PCTs should only be installed at crossings where the countdown timer period is greater than or equal to 10 seconds – generally, providing PCTs at locations with short clearance times provides little or no real crossing benefit for pedestrians;
- PCT’s shall not be installed at intersections where any vehicular traffic is permitted to ‘filter’ through pedestrians – this is both a safety issue for pedestrians and an efficiency issue for vehicle movements;
- PCT’s shall not be installed at intersections with two stage pedestrian movements;
- Higher priority should given to the installation of PCT’s where there is high pedestrian demand eg, CBD, shopping precincts, public transport hubs;
- PCTs should not be used at crossings predominantly used by primary school children – it is considered that some school children may not be sufficiently well developed to estimate the distance required for them to cross during the PCT or to understand the risk of crossing too late and continuing to walk during the steady red DON’T WALK.

5. Display Specifications

The following are the minimum requirements for a PCT installation:

- the number and locations of the pedestrian signal displays shall be the same as that used at standard signal treatments;
- the countdown display is to appear in the same aspect as the flashing red and steady red DON’T WALK display;
- in the event of a fault or failure of the countdown timer, the two aspect display shall revert to the standard pedestrian sequence with flashing red DON’T WALK;
- PCTs shall only to be used at sites with TSC-4 signal controllers and where all other signals displays are LED;
- louvres shall not be fitted to PCTs;
- As much as possible, PCTs should be shielded from the view of approaching drivers by positioning or perhaps by the use of extended length visors;
- the PCT countdown display shall;
  - countdown in seconds
  - be yellow in colour;
o comprise a single row of LEDs to display two digit numbers approximately 110mm in height;
o be capable of being ‘dimmed’ at times of low ambient light;
o be capable of displaying two digit numbers to cater for the longest pedestrian clearance time used in SA;
o not flash, i.e. shall change from one number to the next without any appreciable blanking;
o display single digits without a preceding zero below “10”, to, i.e. display 10…9…8…, not 10…09…08 etc;
o not display a count of zero, i.e. the display shall count down to one second, then one second after shall display the steady red DON’T WALK display and no countdown display at all;

- the current operation of PCTs are not compatible with pedestrian crossings fitted with microwave pedestrian detectors i.e. where pedestrian clearance times may vary;
- at controller ‘start up’, the PCT may show a standard sequence flashing red DON’T WALK (symbol) on the initial cycle only (i.e. to learn the applicable clearance time);
- the standard sequence display sign (sticker, TES 8755, illustrated below) shall be attached to the traffic signal post immediately above all pedestrians push buttons (to replace the Cross With Care sign where installed.

Specifications for the PCT are detailed in Electrical Assets Section Specification Knet 7753826.
6. References

1. Future Directions, August 2012 refer Knet 7569746
3. Operational Instruction 14.2 Traffic Signals Faces
4. AS2144 Traffic Signal Lanterns
5. Specification for PCT Lantern Knet 7753826