	SIDE-MOUNTED SPECIAL CROSSWALK DESIGN		<i>Issued: JUL 2013</i>
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RECOMMENDED PRACTICES	PART	TRAFFIC SIGNALS	
	SECTION		
	SUB-SECTION		

General

Pedestrian safety enhancement is of critical importance, particularly on highways through communities where motorists may not be alert to the presence of pedestrians.

A special crosswalk is a traffic control system installed to aid pedestrians in crossing the road by warning motorists of the presence of pedestrians waiting to cross.

There may be cases where a traditional special crosswalk with overhead signage (as described in Recommended Practices guideline entitled Special Crosswalk Overhead Sign) is not practical or desirable. However, it may still be necessary to warn approaching motorists of the presence of crossing pedestrians. In such cases, the use of an alternative special crosswalk design with side-mounted flashing beacons may be used. This side-mounted design provides a level of pedestrian protection above that of a marked crosswalk.

Standard

The side-mounted special crosswalk design should include a standard pedestal signal pole (refer to standard drawing TCS-F-505) on either side of the crosswalk. The following are to be mounted on the pedestal poles in accordance with Figure 1.

- Standard pedestrian push button;
- ID-21 For Walk Signal Push Button sign;
- RA-4 Pedestrian Crosswalk signs (one on either side of the pedestal

pole to face both vehicle approach directions);

- Controller cabinet (on one of the poles) with pedestrian activated flashing control unit;
- Two 200 mm alternatively flashing LED amber beacons; and
- One 200 mm LED flashing amber beacon for pedestrian indication.

A standard RA-4 Pedestrian Crosswalk sign consists of a black symbol on a white background.

The size of RA-4 Pedestrian Crosswalk Sign to be used for this special crosswalk application is 750 mm x 900 mm.



RA-4	750 mm x 900 mm	
Colour	Symbol and border Background	Black White
Sheeting	ASTM Type III or IV	

A standard ID-21 For Walk Signal Push Button sign, either the left or right version so that the arrow points in the direction of the crossing, is installed directly above the pedestrian pushbutton at either end of the crosswalk.

The standard size of the ID-21-L/R For Walk Signal Push Button (Left/Right) is 130 mm x 200 mm.

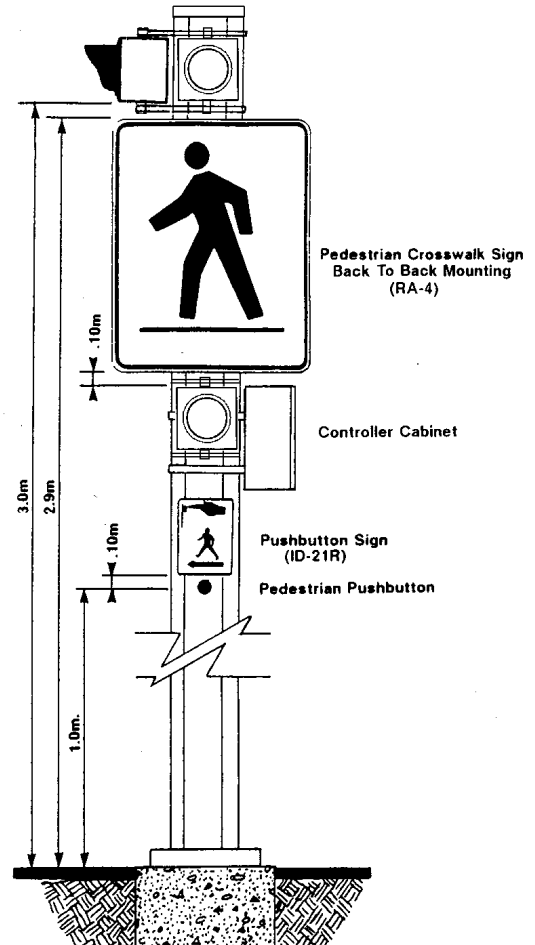


ID-21-L/R	130 mm x 200 mm	
Colour	Symbol and border Background	Black White
Sheeting	ASTM Type III or IV	

In this side-mounted special crosswalk design, the Pedestrian Crosswalk (RA-4) sign is flanked on the top and bottom by two alternatively flashing 200 mm amber beacons, which are activated by a pedestrian push button on either side of the crosswalk. These two beacons shall be orientated to face oncoming traffic in the travel lane adjacent to the pole.

The use of solar power technology for the flashing beacons may be applicable where it is desirable to reduce cost or where conventional power is unavailable.

Figure 1: Typical Placement of Signs and Signal Equipment



NOTE:
All Signs Shall Be Band-It To The Standard With Stainless Steel Band-It Sign Mounting Brackets.

Flash rates for all flashing amber beacons shall be in accordance with Table 1 in the Recommended Practices guideline entitled Beacons.

Once the side-mounted pedestrian indicator lamp starts flashing, both the special crosswalk flashers and the pedestrian indicator lamps shall remain in flash for a duration calculated by dividing the curb to curb (or shoulder line to shoulder line) crosswalk distance by the walking speed,

and then adding 5 seconds for additional buffer. The walking speed can be assumed as:

- 1.2 m/s - typical pedestrian population;
- 1.0 m/s – where children are expected; and
- 0.9 m/s – where seniors or visually impaired are expected.

Wiring of the pedestrian activated flashing control unit should be in accordance with standard drawing TCS-F-110.

A standard WC-2 For Pedestrian Crossing Ahead sign, either the left or right version so that the pedestrian symbol is walking towards the centre of the road, is installed in advance of the crosswalk for both directions of travel.

The standard size of the WC-2-L/R Pedestrian Crossing Ahead (Left Side/Right Side) is 600 mm x 600 mm.



WC-2-L/R	600 mm x 600 mm	
Colour	Symbol and border Background	Black Yellow
Sheeting	ASTM Type IX or IX	

The need for crosswalk/intersection illumination should be determined separately based on warrants in the Transportation Association of Canada (TAC) Guide for the Design of Roadway Lighting, Chapter 10 (Intersections) and Chapter 12 (Mid-Block Crosswalks).

Guidelines for Use

This side-mounted special crosswalk design may be used on 2 lane undivided highways where a traditional special crosswalk design with overhead signage is not practical. It should not be used for crossings wider than 2 lanes as large vehicle traffic could block visibility of the signage and flashing beacons for traffic in the inside lane(s).

Guidelines for Placement

The lateral and vertical placement of signs should be in accordance with the Recommended Practices guideline entitled Placement of Signs.

WC-2 Pedestrian Crossing Ahead signs should be installed in advance of the crosswalk for both directions of vehicle travel. These signs should be installed a distance 'X' in advance of the crosswalk in accordance with Table 1, based on the posted speed limit.

Table 1: WC-2 Placement

Approach Speed (km/h)	Distance 'X' (m)
50	60
60	100
70	120
80	140
90	170

References to Standards

<i>Traffic Control Standards Drawings</i>	TCS-F-110, TCS-F-505
<i>Recommended Practices</i> Section: General	Placement of Signs
<i>Recommended Practices</i> Section: Regulatory Signs	Special Crosswalk Overhead Sign
<i>Recommended Practices</i> Section: Traffic Signals	Beacons
<i>TAC Guide for the Design of Roadway Lighting</i>	Chapter 10 - Intersections Chapter 12 - Mid-Block Crosswalks