**GUIDELINES FOR THE INSTALLATION OF TACTILE GROUND SURFACE INDICATORS (TGSIs) FOR PEDESTRIANS WITH A VISION IMPAIRMENT AT RAMPED KERB CROSSINGS (KERB RAMPS)**

**A.** Warning and directional TGSIs shall conform with AS/NZS 1428.4:1999 Design for Access and Mobility – Part 4: Tactile Indicators.

**B.** Tactile indicators shall have 30% min. luminance contrast to the surrounding surfaces, and be of contrasting colour, preferably yellow (Coloured Yellow Y14 or Sunflower Y10 – AS2700). Luminance contract shall be achieved in all conditions (i.e. wet/dry, day/night).

**C.** Warning TGSIs shall be included (dimensions in brackets are warning TGSI dimensions):

(a) to warn pedestrians with a vision impairment of hazards;
(b) 300 mm on any hazard e.g. roadway (600 deep x 400 mm width of kerb ramp, path of travel or cut through median/planeline);
(c) perpendicular to the direction of travel;
(d) at the intersection of 2 (or more) directional indicator strips to indicate a change of direction (600 x 600 mm).

**D.** Directional TGSIs shall be included (dimensions in brackets are directional TGSI dimensions):

(a) to give guidance to pedestrians with a vision impairment in the absence of normally available cues;
(b) along the centreline of the direction of travel;
(c) at mid-block kerb ramps or street crossings to direct pedestrians with a vision impairment to the crossing point (600 x property boundary to top of kerb ramp);
(d) between a warning TGSI indicating a change/choice of direction and the top of kerb ramps where 2 pedestrian crossings exist on a corner of an intersection.

**E.** The installation of TGSIs should be prioritised as follows:

(a) No TGSIs required when all criteria specified by note G are satisfied;
(b) Multiple entry kerb ramp treatment installed (Dual entry or Dual separate). Multiple entry kerb ramps must only be installed where there is sufficient space on both sides of the crossing (Dual separate treatment shown on Std Draw 1446, refer AS/NZS 1428.4 for details of multiple entry treatments);
(c) Warning TGSIs on the face of a compliant kerb ramp.

**F.** If a warning TGSI treatment is installed, a warning TGSI treatment must be installed on the other side of the crossing.

**G.** TGSIs are not required at a crossing point if:

(a) a compliant kerb ramp is installed (refer Std Draw 1446 for details of a compliant kerb ramp);
(b) the top of the ramp is within 3 metres of the end of the shore line (property boundary, building line or edge of paved walkway); and
(c) the ramp is an unobstructed accessible path of travel from the shore line (property line, building line or paved walkway) oriented in terms of normally available cues.

If TGSIs are not required, a culture treatment of the full width and length of the face of the ramp may assist pedestrians with a vision impairment.

**H.** Examples of normally available cues that aid people with a vision impairment are:

(a) sharp transitions at change of grade on top and bottom of a 1 or 2 kerb ramp;
(b) audio tactile push buttons, refer MPRD Parts 10 and 14 for location and orientation of pedestrian push buttons, none, an audio tactile push button device is an insufficient cue for a pedestrian with a vision impairment to find the crossing point;
(c) a detectable edge of a paved walkway or cut through island.

1. Refer Standard Drawings 1446 and 1447 for details of compliant ramps and TGSIs placement.
2. For advice on TGSIs placement, contact the Safer Roads Unit in Transport and Main Roads.