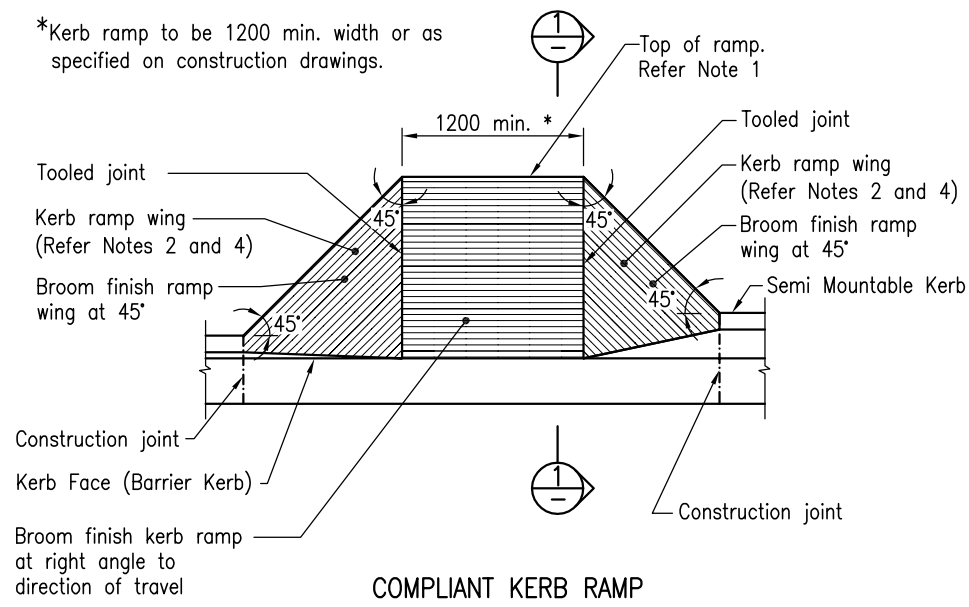


*Kerb ramp to be 1200 min. width or as specified on construction drawings.

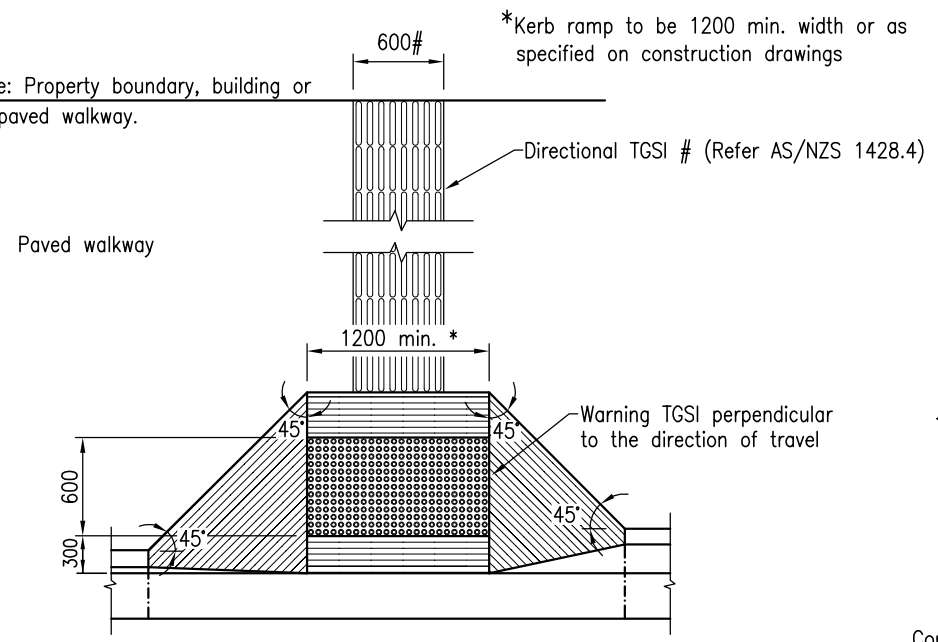


COMPLIANT KERB RAMP
PLAN VIEW

ELEVATION - RAMP

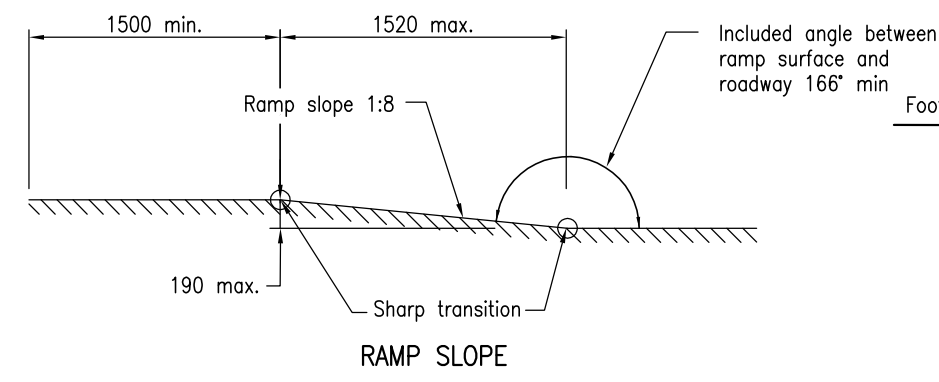
Directional TGSIs are 600 wide where pedestrians approach at an angle to the path of travel (i.e. at a mid-block crossing point). If there is a choice of directions for pedestrians (i.e. on intersection corner), install a 600 square warning TGSIs pad 300 from the shore line/s and 300 directional TGSIs between the top of the kerb ramp and the 600 square warning TGSIs pad.

Shore line: Property boundary, building or edge of paved walkway.

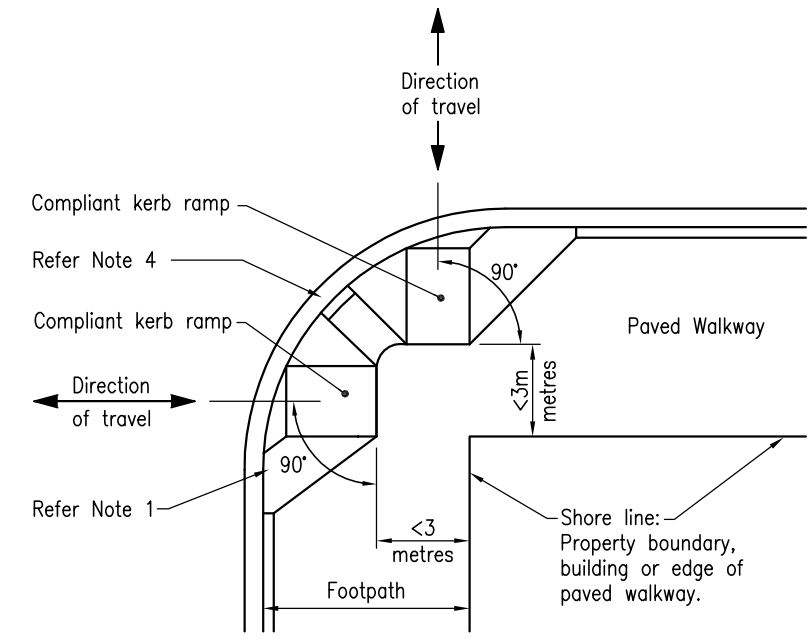


COMPLIANT KERB RAMP
INCLUDING TACTILE GROUND SURFACE INDICATORS (TGSIs) LAYOUT
PLAN VIEW

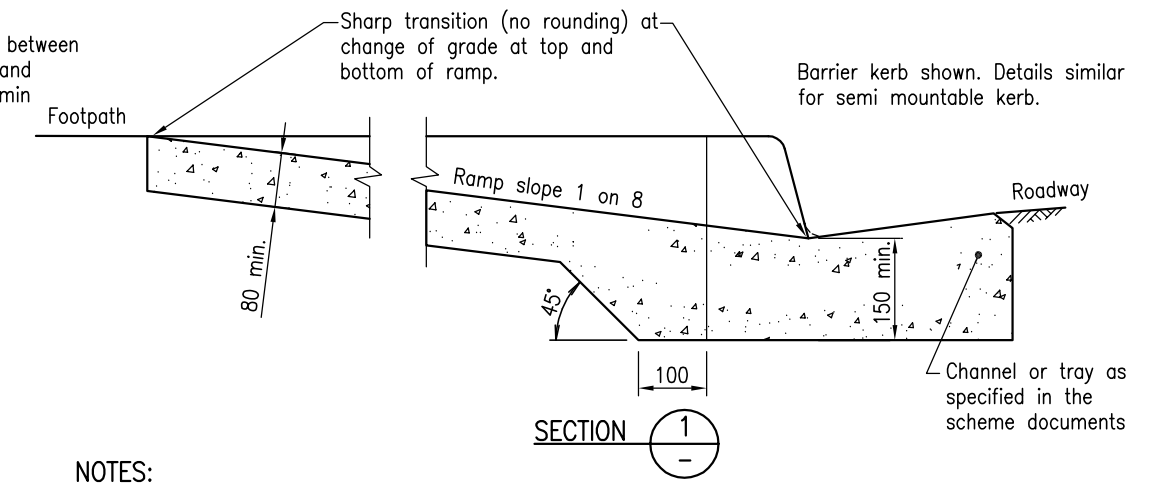
Refer drawings KRG1 and KRG2 for TGSIs application examples and guidelines on their use and placement.



RAMP SLOPE



KERB RAMP LAYOUT - TGSIs not required
(refer KRG1 drawing for criteria where TGSIs are not required.)



SECTION 1

NOTES:

- A compliant kerb ramp exists where all the following are satisfied:
1. TOP OF RAMP: There shall be a minimum obstruction free wheelchair turnaround distance of 1500 beyond the top of the ramp. The sharp transition at the top and bottom of the ramp shall be perpendicular to the direction of travel.
 2. RAMP: Maximum ramp slope for wheelchair access shall be 1:8. A sharp transition (no rounding) is to be maintained at the intersection of graded plane surfaces (top and bottom of ramp and intersection of ramp and wings). The intersection of the ramp and wings should be a tooled joint.
 3. RAMP ALIGNMENT: Ramps shall be aligned parallel to the pedestrian direction of travel. Ramps on both sides of a carriageway shall be aligned with one another and the direction of travel.
 4. KERB RAMP WINGS: The required wing angle is 45°. Subject to the approval of the Superintendent, wings may be angled at less than 45° if the wing is required to be clear of traffic signals hardware, other wings or utility pits/manholes. Wing angle may also be reduced at obtuse angled intersections. Wing widths shall be 1500 max. A slope no steeper than 1 on 4 is to be maintained on the wings. At least a 1 metre kerb upstand is desirable between adjacent kerb ramps wings on an intersection corner.
 5. SURFACE OF RAMP and sloping sides shall be slip resistant as specified in AS 1428.1

Tactile Ground Surface Indicators (TGSIs):

6. Warning TGSIs shall be installed on or adjacent to designated crossing points to warn pedestrians with a vision impairment of the impending hazard (traffic) and directional TGSIs shall be installed to provide directional guidance in the absence of detectable cues. Refer Drawing KRG1 for full details of TGSIs requirements.
7. TGSIs shall be provided at designated crossing points when new designs or modifications are being carried out.
8. TGSIs shall have 30% minimum luminance contrast to the surrounding surfaces and be of contrasting colour, preferably Safety Yellow (Golden Yellow Y14 or Sunflower Y15 - AS 2700). Refer AS/NZS 1428.4 for full details of luminance contrast requirements.
9. Refer AS/NZS 1428.4 for all requirements of TGSIs.

GENERAL:

10. CONCRETE to be Class N32/10. All concrete to be broom finished. Ramp to be cast monolithically with the channel or tray.
11. DIMENSIONS are in millimetres unless shown otherwise.

ASSOCIATED DOCUMENTS:

- Main Roads Manual Specifications and Technical Standards Manual
- Main Roads Standard Drawings Roads manual

REFERENCED DOCUMENTS:

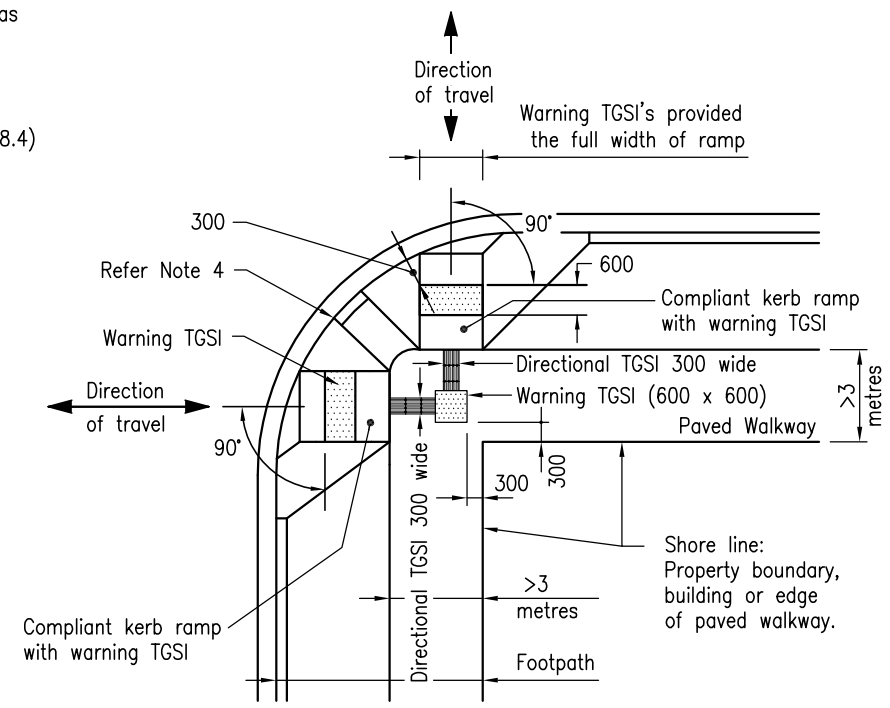
- Standard Drawings:
- 1033 Kerb and Channel - Kerbs, Channels and Ramped Vehicular Crossing
 - 1447 Median and Island Crossings - Ramped and Cut-Through Treatment for Pedestrian Facilities

Standard Specifications:

- MRTS03 Drainage, Retaining Structures and Protective Treatments

Australian Standards:

- AS 2876 Concrete kerbs and channels (gutters) - Manually or Machine Placed
- AS 1428.1 Design for access and mobility - Part 1 General requirements for access - New building work
- AS/NZS 1428.4 Design for access and mobility - Part 4 Tactile indicators



KERB RAMP LAYOUT - including TGSIs

KERB RAMP		Queensland Government Department of Transport and Main Roads	
RAMPED KERB CROSSING	A3	Standard Drawing No	
	Not to Scale	1446	
		Date 10/09	
	A	B	