

Darwin Shared Path & Bicycle Lane Technical Notes

8. Kerb Ramp Design and Positioning

Objective

The objective of the *Darwin Shared Path & Bicycle Lane Technical Notes* is to provide direction and guidance for the planning and delivery of cycling facilities within the City of Darwin area. These technical notes are also intended to provide information for other stakeholders including the NT Government, cycling groups and the community.

References

Throughout this document, references have been made to the following technical standards and guidelines:

- AS 1428.1-2009 *Design for Access and Mobility Part 1: General Requirements for New Access – New Building Work*
- AS 1428.4.1-2009 *Design for Access and Mobility Part 4.1: Means to Assist the Orientation of People with Vision Impairment – Tactile Ground Surface Indicators*
- Austroads *Guide to Road Design Part 4: Intersections and Crossings – General* (2009)
- Capricorn *Municipal Development Guidelines*
- City of Darwin *Footpaths and Pram Crossings* (Drawing No. DCC-104)
- Main Roads WA *Ramp and Grab Rail Details* (Drawing No. 9831-5649-1)
- Northern Territory Government *Pram Ramps, with and without TGSI* (Drawing No. CS0300)

The technical note should be read in conjunction with these documents.

Introduction

This technical note provides direction and guidance on kerb ramp design and positioning. The information is compiled from multiple sources detailing good design practices adopted throughout Australia.

Kerb ramps allow for pedestrians, cyclists, disabled and other users to seamlessly transition at crossings from the footpath to the road and vice versa. The design and location of kerb ramps has to adequately accommodate the needs of all users.

Kerb ramp design

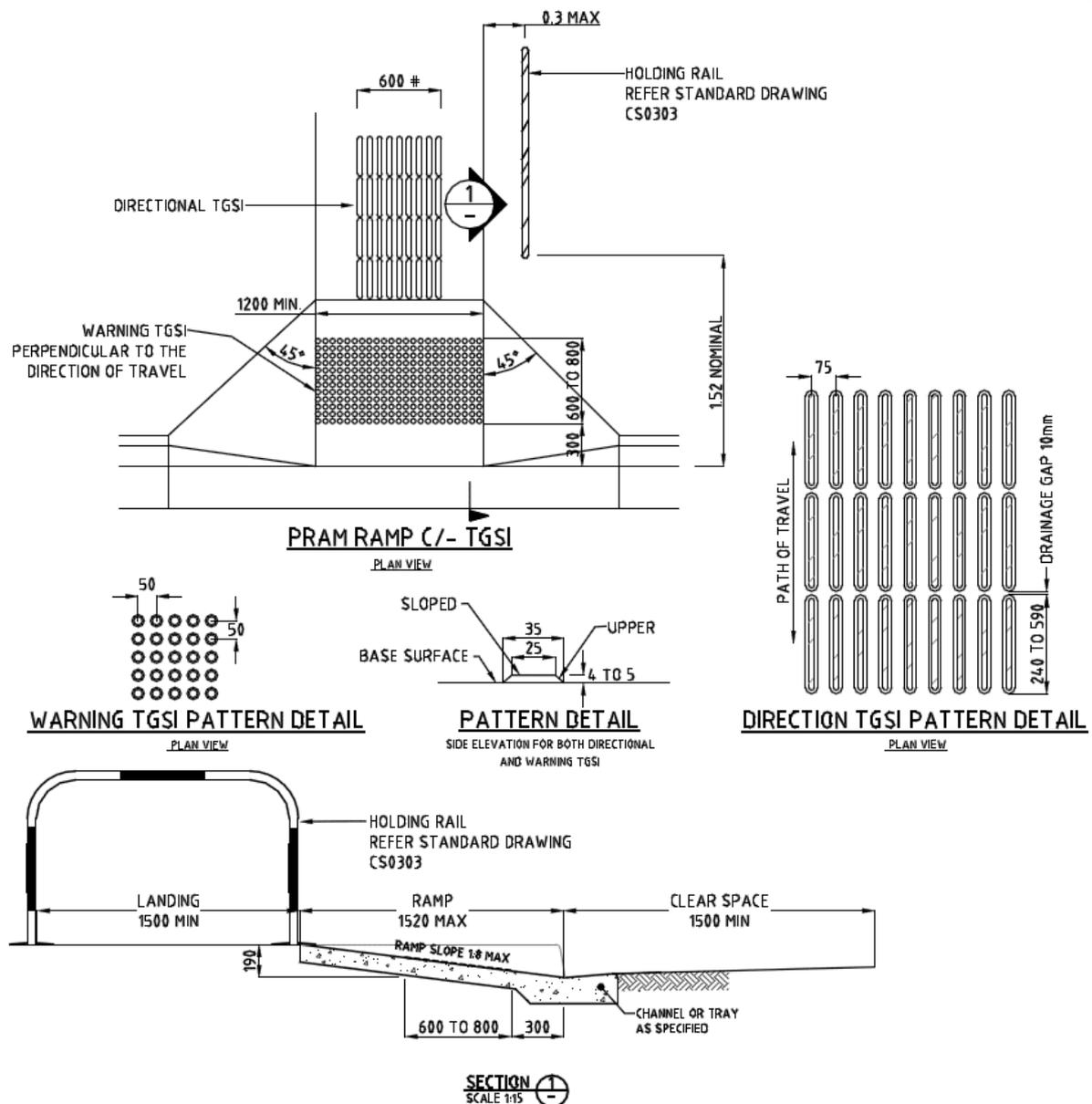
The specifications of kerb ramps are available in NTG's standard drawing for Pram Ramps and CoD's standard drawing for Footpaths and Pram Crossings. An example of the cross section and plan of a kerb ramp has been provided in the figure below from NTG's standard drawing for Pram Ramps with TGSI.

Kerb ramps on shared paths should be a minimum of 2.5m in width and desirably extend for the full width of the path where a wider path is provided.

Additional key factors to consider when designing kerb ramps include:

- The maximum allowable gradient for the kerb ramp is 1 in 8
- Kerb ramps should have a maximum rise of 190mm and a length not greater than 1520 mm
- Provision of tactile paving in accordance to AS 1428.4.1 (if required)
- Provision of hand rails in accordance to AS 1428.1 (if required)
- Appropriate construction material used (e.g. slip resistant surface)

Kerb ramp dimensions and specifications



SOURCE: NTG PRAM RAMPS, WITH AND WITHOUT TGS (DRAWING No. CS3302)

Kerb ramp location

- 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.
- Kerb ramps should preferably be directed at 90 degrees to the direction of the road to enable vision impaired pedestrians to walk directly across the road by the shortest route, however at crossings of minor roads (< 5,000 vehicles per day) a straight crossing alignment across the throat of the intersection should be used. For more details on the positioning of crossings refer to '*Crossing Treatments and Alignments for Shared Paths at Roadway and Driveway Intersections*' Technical Note.
- Kerb ramps which are perpendicular to the path shall be located clear of the path.
- In constrained verge environments where insufficient width is available, the kerb ramp may be located within the path with a minimum of 1.5m (and desirable 2.5m) of clear, flat area behind the kerb ramp. In these situations, the kerb ramp shall be treated with appropriate delineation (e.g. differential surface treatment) to ensure that approaching cyclists and users of mobility aids such as gophers can identify the hazard.
- The direction of kerb ramps should be positioned so as not to allow diagonal pedestrian and cyclist movements through an intersection or crossing except at designated scramble crossings
- Refer to "Kerb Ramp Design and Positioning" document.

Holding Rails

For the use and position of Holding Rails, refer to the '*Location and Requirements for Holding Rail*' Technical Note.