

CAPRICORN MUNICIPAL DEVELOPMENT MANUAL

CYCLEWAY AND PATHWAY DESIGN

D9

DESIGN GUIDELINE

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Keeping the Capricorn Municipal Development Guidelines up-to-date

The Capricorn Municipal Development Guidelines are living documents which reflect progress of municipal works in the Capricorn Region. To maintain a high level of currency that reflects the current municipal environment, all guidelines are periodically reviewed with new editions published and the possibility of some editions to be removed. Between the publishing of these editions, amendments may be issued. It is important that readers assure themselves they are using the current guideline, which should include any amendments which may have been published since the guideline was printed. A guideline will be deemed current at the date of development approval for construction works.

GENERAL

D09.01. SCOPE

D09.01.01. This Guideline sets out requirements to be used in the design of various types of cycleways and pathways.

D09.01.02. All relevant design principles contained in the AUSTROADS Suite referenced below must be integrated in the design of cycleways and pathways and associated infrastructure. This specification serves as a companion document to the AUSTROADS Suite extended to incorporate basic requirements for pathways and specific Local Authority requirements.

AUSTROADS

D09.01.03. The following order of priority for interpretation of documents will apply: (Please note that reference to a Guideline or Standard, is reference to the latest version of the relevant document, unless a version number is specifically stated)

**Order of
Priority**

1. CMDG D9 Cycleway and Pathway Design Guideline
2. Manual of Uniform Traffic Control Devices (MUTCD)
3. Traffic and Road Use Management Manual (TRUM)
4. AUSTROADS
5. Australian Standards

D09.02. OBJECTIVES

D09.02.01. This Guideline aims to set the minimum design requirements relating to the provision of cycleways and pathways. Cycleways and pathways are to be safe and convenient and shall maintain a satisfactory level of service for all pathway users.

**Safety Level of
Service**

D09.03. REFERENCE AND SOURCE DOCUMENTS

(a) CMDG Specifications

D1 - Geometric Road Design

(b) Australian Standards

AS/NZS 1158.3.1 - Lighting for roads and public spaces Pedestrian area (Category P) lighting - Performance and design requirements

AS/NZS 1158.5 - Lighting for roads and public spaces Tunnels and underpasses

AS/NZS 1428.1 - Design for access and mobility – General requirements for access – New Building Work

AS/NZS 1428.4.1 - Design for access and mobility – Tactile Ground Surface Indicators

AS 1798 - Lighting poles and bracket arms - Recommended dimensions

AS 2156.1 - Walking Tracks Classification and signage

- AS 2156.2 - Walking Tracks Infrastructure design
AS 2890.3 - Bicycle parking facilities

(c) Other

- Department of Transport and Main Roads, Queensland Government
- Manual of Uniform Traffic Control Devices (MUTCD)
 - Traffic and Road Use Management Manual (TRUM)
- AUSTROADS
- Guide to Road Design – Part 6A: Pedestrian and Cyclist Paths (AGR06A)
 - Guide to Traffic Management – Part 10: Traffic Control and Communication Devices (AGTM10)
 - Cycling Aspects of Austroads Guides (AP-G88)

D09.04. DEFINITIONS

1. **Cycleway** – A pavement intended only for bicycle traffic, separated from the road carriageway, either within or outside a road reserve.
2. **Cyclelane** – Provision for cyclists within the road carriageway adjacent to existing vehicular traffic.
3. **Shared Path** – A pavement intended for the shared use of pedestrians and bicycle traffic, separated from the road or street carriageway, either within or outside a road reserve.
4. **Separated Path** – A pavement divided into separate sections, one of which is designated for the exclusive use of cyclists and the remainder for other path users, separated from the road or street carriageway, either within or outside a road reserve.
5. **Path/Pathway** – A generic term that refers to either a (i) Pathway, (ii) Cycleway, (iii) Shared Path, or (iv) Separated Path, as described above. A path is the infrastructure/pavement.
6. **Verge** – A strip of land or corridor to accommodate the construction of a Path, typically the area between the invert of kerb and channel and the property boundary.

D09.05. CONSULTATION

- D09.05.01. The Designer is encouraged to consult with Local Government, and relevant authorities prior to and during the preparation of cycleway and pathway design. Designers should in addition to the requirements of this guideline ascertain specific requirements of these authorities as they relate to the designs in hand.

***Landscape
Designers
Public
Authorities***

D09.06. MINIMUM DESIGN STANDARDS

D09.06.01. The minimum design standards for Cycleways and Pathways shall be as **Design Grades** nominated in Table D09.08.1 Minimum Pathway / Cycleway Features Table.

Table D09.06.1 Minimum Off-Road Pathway / Cycleway Features Table

Feature	Pathway	Shared Path	Cycleway
Minimum width	As per the Local Government Road Hierarchy Tables in D1 Geometric Road Design.	2.5m	2.5m
Design Speed	N/A	30km/h	30km/h
Maximum Crossfall	2.5%*	2.5%*	Refer to Austroads for superelevation limits

*Lower crossfall of 1.0% preferred, providing that drainage is adequate

D09.06.02. Separated path and cyclepath widths should be determined based on the predicted numbers of pedestrians and cyclists while meeting the minimum requirements specified in the Local Government Road Hierarchy Tables in D1 Geometric Road Design and Table D09.08.1 Minimum Pathway / Cycleway Features.

D09.06.03. Refer to Austroads Guide to Road Design Part 6A for other key parameters including (but not limited to) embankment slopes, overhead and horizontal clearances, longitudinal gradients, horizontal and vertical curve radii, sight distance

D09.06.04. Pathway and Shared Path grading is to be in accordance with AS 1428.1 and Table D09.06.2. In instances where this is not practical, landings may be omitted and/ or steeper grades used with approval of the LGA.

Table D09.06.2 Ramp and Pathway Landings Table

Type of path	Longitudinal gradient	Landing requirement ^{2, 3}
Ramp and pathway with gradients >1:20	1:14	Every 9m
	1:20	Every 15m
Pathway ¹	1:20	Every 15m
	1:33	Every 25m
	Flatter than 1:33	No landing required

¹ Ground level adjacent to pathways: ≤ 25 mm of the pathway level.

² A 1.2m long landing shall be provided on all pathways where the grade exceeds 3%.

³ The maximum ramp length between landings shall be in accordance with AS 1428.1.

D09.06.05. All cycleways and pathways shall be constructed in accordance with CMDG Standard Drawings.

D09.07. OTHER PATHWAY / CYCLEWAY FEATURES

D09.07.01. Disabled access should comply to AS1428.1, the Disability Discrimination Act 1992 and Council's policy on access and mobility if relevant. **Disabled access**

D09.07.02. Provide signposting to indicate destinations and potential hazards. For more information on signposts and path markings refer to Austroads AGTM10. **Signposting**

D09.07.03. Where a path is located adjacent to a carriageway, the road lighting should also cater for the path. If required, lighting infrastructure should be provided in accordance with the LGA's lighting policy (if applicable), AS/NZS 1158.3.1 and AS 1798. For underpasses refer to AS/NZS 1158.5. **Lighting**

D09.08. PATHWAY FACILITIES

D09.08.01. Include in the development scheme, design proposals for the following facilities, including at common cyclist and pedestrian destinations: **Pathway Facilities**

- i. Street furniture including seats, bins, drinking fountains and telephones.
- ii. Waiting areas.
- iii. Secure bicycle parking facilities and devices to Austroads AP-G88 and AS 2890.3.
- iv. Picnic facilities and viewing platform facilities.
- v. Information stands/direction signs.
- vi. Bicycle wheeling ramps.
- vii. Bus stop shelters.

D09.09. PATHWAY CONSTRUCTION

D09.09.01. Cycleways and pathways constructed in accordance with CMDG Standard Drawings as shown in Table D09.09.1.

Table D09.09.1 Path Drawings

	Path Type	
	Reinforced Concrete	Asphalt
Applicable Drawings	CMDG-R-050 CMDG-R-051 CMDG-R-058	CMDG-R-052

D09.10. SURFACE FINISH REQUIREMENTS

D09.10.01. All pathways shall have a non-slip surface, generally this can be achieved by applying a stiff broom to the wet surface of concrete. **Surface Treatment**

D09.10.02. A construction tolerance of up to 5mm is acceptable using rounded or bevelled edges as per AS 1428.1

D09.11. MAINTENANCE AND INSPECTION

- D09.11.01. The Contractor or RPEQ with a sign-off shall inspect all cycleway and pathways to determine if defects (cracking from machinery, gap tolerance > 5mm, lifting due to tree roots etc.) or adjacent path surface level exceeds 5mm are present. Any defects revealed by such inspections shall be rectified immediately and these works shall be completed as required, to ensure no defects are present when off maintenance period ends.
- D09.11.02. In the case of removal of defects in concrete paths, the Contractor shall replace the entire affected section from between joints.
- D09.11.03. In the case of removal of defects in asphalt paths, the Contractor shall replace the affect section a metre each side of the affected section (3m minimum) for the full width of the path.

***Contractor's
Responsibility***