



ENGINEERING DESIGN GUIDELINES
CYCLEWAY AND PATHWAY DESIGN

Planning Scheme Policy No. 15.08

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1 Scope and general

1.1 Scope

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

All relevant design principles contained in the AustRoads Guide referenced below must be integrated in the design of cycleways, pathways and associated infrastructure. This Guideline serves as a companion document to the AustRoads Guide extended to incorporate basic requirements for pathways.

1.2 Objectives

This Guideline aims to set standards and document requirements related to the provision of cycleways and pathways that encourage pedestrian activities and cycling for transportation and recreational purposes.

Cycleways and pathways are to be safe and convenient and shall maintain a satisfactory level of service for all pathway users including users with disabilities and limited mobility.

1.3 Referenced documents

Council Guidelines & Specifications

D1 - Geometric Road Design
 D20 - Drawings and Documentation Guidelines
 Council's Bike Plan
 Council's Road Hierarchy Plan
 Standard Drawings - various

Australian Standards

AS 1742.10 - Manual of uniform traffic control devices – Pedestrian control and protection
 AS 2156.1 - Walking tracks, Classification and signage
 AS 2156.2 - Walking tracks Infrastructure Design
 AS 2890.3 - Parking facilities – Bicycle parking facilities
 AS 1428 - Design for Access and Mobility

Other

The Institute of Municipal Engineering Australia, QLD Division – 1995
 Design Guidelines for Subdivisional Streetworks – “Queensland Streets”
 AustRoads – Guide to Traffic Engineering Practice – PART 13 PART 13 Pedestrians, PART 14 Bicycles
 Planning and Designing for Bicycles – NAASRA (now AustRoads) Technical Report June 1988.
 Disability Standards for Accessible Public Transport Guidelines 2004
 Queensland Cycles Strategy
 Queensland Transport “*Easy Steps*” and “*Cycle Notes*”

1.4 Consultation

The Designer must consult with Council, the Developer's Landscape Architect and any relevant authorities prior to and during the preparation of cycleway and pathway network design.

1.5 Design

A suitable qualified and experienced professional engineer (RPEQ) shall oversee all aspects of the footpath and cycleway design. The design shall comply with all relevant requirements of:

- This Guideline
- All Reference and Source Documents listed in section 1.3
- Any Development Approval conditions relevant to the design, and
- Any specific relevant and reasonable request provided by Council in writing

The RPEQ shall sign all plans associated with the project, certifying that the design complies with this section.

In designing any new paths, the designer shall take into account the existing and proposed network. Prior to presenting to Council the extent and nature of the proposed works, the designer shall take into account relevant requirement contained in Engineering Design Guideline "*D1 – Geometric Road Design*", namely sections:

- D1.01 (3)
- D1.02 (2)
- D1.04 (2)
- D1.05 (2)

Where required in Council's Road Hierarchy Plan or Council's Bicycle Plan the designer shall provide for the inclusion of the appropriate cycleway or pathway. In making decisions about the extent or location of either the cycleway or the pathway network, the designer shall also consider the location of the existing and proposed network.

It is Council's intention to provide long-term connectivity between existing cycleways and pathways and extend the linkage of both paths. This will be included in Council's works and required by developments where required to conform to this aim.

Where access places are to form part of a pedestrian or bicycle network, access links should provide suitable connectivity with adjoining access places or open space systems to ensure such pedestrian and bicycle network are functionally efficient. The minimum width of land that provides pedestrian or bicycle linkage is 15m.

The Designer must be familiar with cycleway geometric design requirements in terms of:

- width
- grade
- stopping sight distance
- change in grade
- horizontal curvature
- crossfall and drainage
- superelevation

- sight distance on horizontal curves
- appropriate treatments at the road / path interface

The Designer shall incorporate all the requirements for disability access as appropriate for pathway design in accordance with any Council Policy on access and mobility.

1.6 Cycleway and Pathway Types

Cycleways can be provided on road and off road. Council's Bike Plan and Road Hierarchy detail descriptions, warrants, widths, pavement marking etc for the majority of these cycleways.

Common alternative cycleway types include:

On Road

- Shared Parking/Bicycle Lanes
- Wide Kerbside Lanes
- Shared Traffic Lanes
- Exclusive Bicycle Lane
- Sealed Shoulder
- Bicycle Awareness Zone

Off Road

- Shared Use Bicycle/Pedestrian Pathway
- Separated Pathway
- Exclusive Cycleway

The AustRoad Guide provides advice on the suitability of pavement conditions, drainage pit grates etc for on road cycleways.

Common pathway types include:

- Exclusive Pedestrian Pathways ("No Bicycle" Zones)
- Shared Use Bicycle/Pedestrian Pathways

By definition, pedestrian pathways are "off road" in that pedestrian facilities routinely designed adjacent to roadways are termed footpaths and are designed to meet criteria outlined in Council's Road Hierarchy Plan and typically related to road cross section detailing.

Pathways by comparison diverge from road alignment either within the road reserve or across land reserves. Pathways can be provided in conjunction with overland floodways or retention basins.

1.7 Provisions for Cycleways and Pathways at Structures

Designers shall consider the best way to provide for the uninterrupted movement of cyclists and pedestrians at proposed and existing structures wherever possible. Structures include bridges and underpasses over rivers, roads or railways. The reference and source documents provide information on:

- acceptable widths and clearances
- types of cycleways and pathways
- handrails and barrier fences

- bicycle bridges
- approach ramps

1.8 Signage and Pavement Marking

The Designer shall provide appropriate signposting design for cycleways and pathways.

Signs and pavement marking will provide for safe and convenient use of the facility. The signs and pavement marking will comply with the Queensland MUTCD.

1.9 End of Journey Facilities

Consideration must be given to the design of adequate facilities at common destinations of cyclists and pedestrians so as to encourage cycleway and pathway usage.

Such facilities could include:

- seats
- standby areas
- secure bicycle parking
- picnic facilities
- drinking fountains

Bicycle parking installation design should meet appropriate criteria discussed in the AustRoads Guide and be fabricated to meet AS 2890.3.

1.10 Minimum Design Standards

Notwithstanding the Reference and Source Documents referred to this Guideline the following minimum standards as shown in Table D9.1 are to be complied with for off-road paths.

Table 10.1 Minimum Design Standards

	Cycleway	Pathway	Shared Use Pathway
Path Width	2.5m	1.5m ¹ 1.2m ²	2.0m (absolute) 2.5m (preferred) ³ 2.5m ⁴
Formation Width	3.5m	2.0m	3.0m 4.0m ⁴
Cross-fall min. (preferred) max.	1:50 1:40	1:50 1:40	1:50 1:40

Notation:

1. Full width concrete path to be provided in defined areas within the City Centre (Refer to Council's standard drawing)

2. With prior approval only and required to match existing paths widths
3. For off-road shared paths within road reserves. Where the 2.5m wide shared pathway is to be located within a “new” road reserve and the Designer cannot satisfy adequate clearances for all users of the proposed pathway (as well as cater for the location and clearances from street trees, light poles and other similar obstructions to pathway users), the Designer shall increase the road reserve/verge width to satisfy all road user and design requirements. The absolute minimum width of 2m is only to be considered for construction in existing road reserves where it is not possible to widen the road verge.
4. For shared paths within park and drainage reserves

The maximum longitudinal grade of any off-road cycleway shall comply with the relevant Australian Standard.

The designer shall ensure that design details for all cycleways and pathways comply with the requirements detailed in Council’s relevant standard drawing.

The wearing surface of all cycleways and pathways shall be concrete. Where the designer wants to propose an alternative treatment, they shall seek and obtain separate prior approval.

1.11 Documentation

The following listing outlines Council’s minimum requirements for presentation of cycleway and/or pathway designs.

- Plans for all cycleways/pathways
- The cycleway plan sheet may be incorporated into the road plan where clarity permits
- Longitudinal Sections will be required for all off-road cycleways where grades exceed 4%
- Cross Sections are to be provided and transition tables will be required where cross falls vary or superelevation is provided
- A typical cross section will be detailed to indicate pavement materials and layer depths

All drawings and documentation to be submitted to Council for approval shall conform to the requirements of Council’s Engineering Design Guideline “D20 – Drawings and Documentation Guidelines”. A copy of these Guidelines will be made available upon request.

Failure to comply with Council’s *Drawings and Documentation Guidelines* may result in the drawings and/or documentation being returned to the designer without consideration by Council.

1.12 Special Requirements

1.12.1 Accessibility

All pedestrian and shared paths shall include tactile indicators in accordance with AS 1428.4 design for Access and Mobility – Tactile Indicators.

All cycleways and pathways that lead to, or join, an existing or proposed public transport facility (such as a bus stop or taxi rank) shall comply with the Federal legislative

requirements detailed in Disability Standards for Accessible Public Transport Guidelines 2004.

1.12.2 Lighting

All cycleways and pathways shall be lit to the lighting category determined from AS/NZS1158.3 "Pedestrian area (Category P) lighting". Minimum requirements shall be Category P4 with the desirable level being Category P2.

Light fittings to be used shall be as specified in Council's Landscape Style Manual.