

Road Planning and Design Manual

2nd Edition

Queensland Practice

September 2025

Volume 3 – Guide to Road Design



Queensland
Government

Copyright

© The State of Queensland (Department of Transport and Main Roads) 2025.

Licence



This work is licensed by the State of Queensland (Department of Transport and Main Roads) under a Creative Commons Attribution (CC BY) 4.0 International licence.

CC BY licence summary statement

In essence, you are free to copy, communicate and adapt this work, as long as you attribute the work to the State of Queensland (Department of Transport and Main Roads). To view a copy of this licence, visit: <https://creativecommons.org/licenses/by/4.0/>

Translating and interpreting assistance



The Queensland Government is committed to providing accessible services to Queenslanders from all cultural and linguistic backgrounds. If you have difficulty understanding this publication and need a translator, please call the Translating and Interpreting Service (TIS National) on 13 14 50 and ask them to telephone the Queensland Department of Transport and Main Roads on 13 74 68.

Disclaimer

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within. To the best of our knowledge, the content was correct at the time of publishing.

Feedback

Please send your feedback regarding this document to: tmr.techdocs@tmr.qld.gov.au

Amendment Register

Issue / Rev no.	Reference section	Description of revision	Authorised by	Date
1	All	Initial release of manual (2nd edition)	Steering committee	July 2013
2	4, 4A, 4B & 6	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	August 2014
3	4C	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	November 2014
4	7	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	April 2015
5	6A	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	June 2015
6	6B & 8	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	December 2015
7	3	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	March 2016
8	4B	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	November 2017
9	3	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	August 2018
10	1, 2 & 8	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	November 2019
11	6A	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	May 2020
12	6B	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	July 2020
13	3, 4 & 4A	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	September 2020
14	4C & 6B	Updated content. Link inserted to access Supplement to	Steering committee	November 2020

Issue / Rev no.	Reference section	Description of revision	Authorised by	Date
		<i>Austrroads Guide to Road Design</i>		
15	1, 3, 4, 4A, 6A, 6B & 7	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i> Part 2 and 8 withdrawn	Steering committee	November 2021
16	3 & 7	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i>	Steering committee	June 2022
17	6	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i> . New risk evaluation process.	Steering committee	October 2022
18	3, 6, 6a	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i> .	Steering committee	November 2023
19	5, 5a, 5b	NEW content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i> .	Steering committee	January 2024
20	6	Updated content. Link inserted to access Supplement to <i>Austrroads Guide to Road Design</i> .	Steering committee	July 2024
21	4, 4A, 4B, 4C	Updated content. Harmonisation with <i>Austrroads Guide to Road Design</i> Part 4, 4A, 4B and 4C.	Steering committee	October 2024
22	3, 4, 4B, 4C, 6A, 6B	Updated content. Harmonisation with <i>Austrroads</i> (and Queensland supplements), <i>Selection and Design of Cycle Tracks</i> guideline and QGTM Part 10.	Steering committee	July 2025
23	5B	Updated content. Inconsistency identified in Sections 3.16.2 & 3.16.4. Updated to align with the other manuals and drawings.	Steering committee	August 2025

Issue / Rev no.	Reference section	Description of revision	Authorised by	Date
24	4, 4B	Updated content. Include reference to Table 5.1.1(b) of RPDM Volume 3 Part 4B in relation to recommended ramp gradients. Address ambiguity about road types and operating speeds where raised crossings can be used	Steering committee	September 2025

Contents

Part 1: Objectives of Road Design..... 1

Part 2: Network Wide Design (under development) 2

Part 3: Geometric Design..... 3

Part 4: Intersections and Crossings – General 4

Part 4A: Unsignalised and Signalised Intersections..... 5

Part 4B: Roundabouts 6

Part 4C: Interchanges 7

Part 5: Drainage – General and Hydrology Considerations 8

Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface 9

Part 5B: Drainage – Open Channels, Culverts and Floodway Crossings..... 10

Part 6: Roadside Design, Safety and Barriers 11

Part 6A: Paths for Walking and Cycling 12

Part 6B: Roadside Environment 13

Part 7: New and Emerging Treatments..... 14

Part 1: Objectives of Road Design

See [Supplement to Austroads Guide to Road Design - Part 1: Objectives of Road Design](#)

Part 2: Network Wide Design (under development)

The content of Part 2 *Design Considerations*, Part 7 *Geotechnical Investigation and Design* and Part 8 *Process and Documentation* were incorporated into Part 1 *Objectives of Road Design* in November 2021.

Part 3: Geometric Design

See [Supplement to Austroads Guide to Road Design - Part 3: Geometric Design](#)

Part 4: Intersections and Crossings - General

See [Supplement to Austroads Guide to Road Design – Part 4: Intersections and Crossings - General](#)

Part 4A: Unsignalised and Signalised Intersections

See [Supplement to Austroads Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections](#)

Part 4B: Roundabouts

See [Supplement to Austroads Guide to Road Design – Part 4B: Roundabouts](#)

Part 4C: Interchanges

See [Supplement to Austroads Guide to Road Design – Part 4C: Interchanges](#)

Part 5: Drainage – General and Hydrology Considerations

See [Supplement to Austroads Guide to Road Design – Part 5: General and Hydrology Considerations](#).

Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface

See [Supplement to Austroads Guide to Road Design – Part 5A: Drainage – Road Surface, Networks, Basins and Subsurface](#).

Part 5B: Drainage – Open Channels, Culverts and Floodway Crossings

See [Supplement to Austroads Guide to Road Design – Part 5: Drainage – Open Channels, Culverts and Floodway Crossings](#).

Part 6: Roadside Design, Safety and Barriers

See [Supplement to Austroads Guide to Road Design – Part 6: Roadside Design, Safety and Barriers](#)

Part 6A: Paths for Walking and Cycling

See [Supplement to Austroads Guide to Road Design – Part 6A: Paths for Walking and Cycling](#)

Part 6B: Roadside Environment

See [Supplement to Austroads Guide to Road Design – Part 6B: Roadside Environment](#)

Part 7: New and Emerging Treatments

See [Supplement to Austroads Guide to Road Design – Part 7: New and Emerging Treatments](#)

