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| Active Transport Investment Program Technical Guidance  **June 2024** |

# Contents

[1. Introduction 1](#_Toc171671923)

[2. Purpose 1](#_Toc171671924)

[3. Eligibility and performance requirements 2](#_Toc171671925)

[3.1 Eligibility 2](#_Toc171671926)

[3.2 Performance requirements 2](#_Toc171671927)

[4. On-road bicycle lanes and cycle tracks 3](#_Toc171671928)

[4.1 Level of traffic stress (LTS) and treatment types 3](#_Toc171671929)

[4.2 Bicycle lanes and on-street parking 6](#_Toc171671930)

[4.3 Intersections 6](#_Toc171671931)

[4.4 Drainage and utilities 7](#_Toc171671932)

[5. Off-road requirements 8](#_Toc171671933)

[5.1 Land use and path provision for walking 8](#_Toc171671934)

[5.2 Path intersections and widths 9](#_Toc171671935)

[5.3 Path sight lines 11](#_Toc171671938)

[5.4 Path joints 11](#_Toc171671939)

[5.5 Path pavement marking and signs 11](#_Toc171671940)

[5.6 Path and driveway conflict/s 12](#_Toc171671941)

[5.7 Objects adjacent to paths 12](#_Toc171671942)

[5.8 Shade provision 14](#_Toc171671943)

[5.9 Access management 14](#_Toc171671944)

[5.10 Shared path longitudinal grade 14](#_Toc171671945)

[5.11 Transitions between on-road and off-road facilities 15](#_Toc171671946)

[6. References 16](#_Toc171671947)

# 1. Introduction

The Department of Transport and Main Roads (TMR) Active Transport Investment Program (ATIP) was established in 2006, and provides funding for bike riding infrastructure, planning and programs, and walking initiatives, to encourage more people to ride bikes and walk more often in line with the visions of the *Queensland Cycling Strategy 2017-2027* and *Queensland Walking Strategy 2019-2029*.

The ATIP funds active transport (AT) infrastructure for transport and utility trips that connect to major attractors, such as schools, universities, shopping complexes, public transport and workplaces.

The ATIP funds projects which provide AT facilities on the state network delivered directly by TMR, and also projects on the local network delivered by Queensland local government areas through funding grants provided by TMR’s Cycle Network Local Government Grants program (CNLGG) and Walking Local Government Grants program (WLGG). The CNLGG and WLGG are sub-programs of the ATIP.

# 2. Purpose

The purpose of this document is to outline the relevant existing technical standards and treatments for AT infrastructure in Queensland and provide guidance on how the ATIP will consider these in prioritisation and development of the AT network through projects funded by the ATIP.

This document seeks to provide further guidance around technical considerations when:

* undertaking planning for projects that might be funded by the ATIP in the future
* developing funding applications for the ATIP
* developing designs for ATIP projects.

For clarity, this document does not present new technical standards or treatments.

This latest version (1.7, June 2024) incorporates learnings and clarifications resulting from previous relevant ATIP funded infrastructure projects.

# 3. Eligibility and performance requirements

## 3.1 Eligibility

Individual program guidelines (CNLGG or WLGG for example) will outline the project eligibility requirements specific to those programs including alignment and, where required, compliance with relative network plans.

## 3.2 Performance requirements

Evidence suggests that high quality AT facilities which are comfortable, low-stress, accessible, convenient, direct, safe and competitive with other modes of travel encourages more people to ride bikes and walk more often.

Further to this, and consistent with the Safe Systems approach adopted in TMR’s Road Safety Policy[[1]](#footnote-2), the ATIP is focused on supporting facilities and treatments that do not expose active transport users to crash forces that could lead to fatal and/or serious injury outcomes. The ATIP also prioritises the separation of modes, where feasible and appropriate for project and location context[[2]](#footnote-3).

Taking these key matters into consideration, the ATIP prioritises the adoption of desirable treatments over minimum treatments to support delivery of infrastructure that:

* meets best practice design and construction standards[[3]](#footnote-4);
* completes missing links and/or removes barriers that present significant obstacles to bike riding or walking;
* improves access to key destinations[[4]](#footnote-5);
* contributes to the delivery of priority network outlined in a Principal Cycle Network Plan (PCNP) and/or Walking Network Plan (WNPs); and
* anticipates and supports future demand and use.

To help projects achieve this, this document:

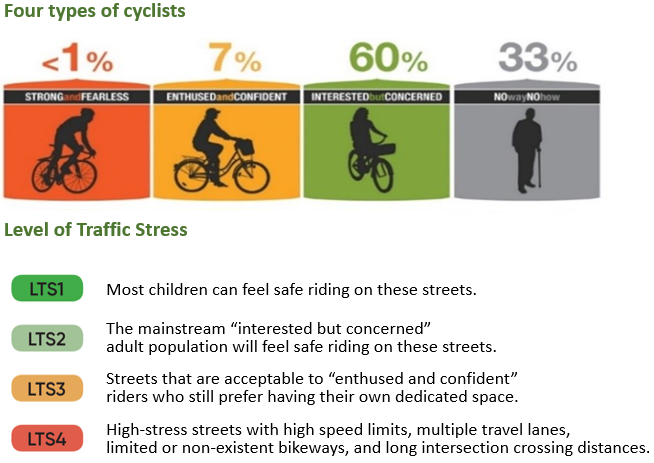
* outlines the desirable treatment/s prioritised by the ATIP;
* references (and is consistent with) the relevant Austroads’ guidelines and the accompanying Queensland-specific documents, and other relevant stand-alone TMR standards, guidelines and associated specifications;
* flags certain treatments and designs that are unlikely to support ATIP objectives.

# 4. On-road bicycle lanes and cycle tracks

## 4.1 Level of traffic stress (LTS) and treatment types

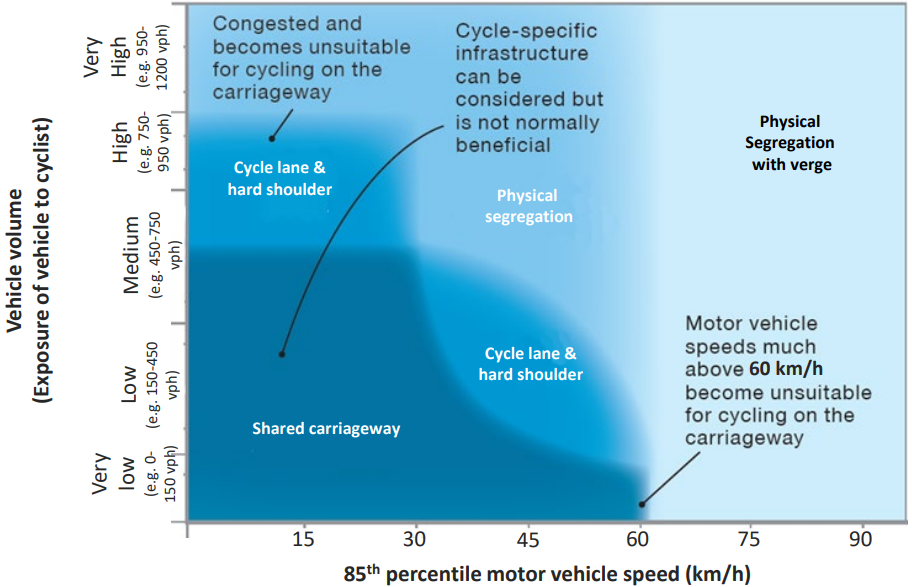
With respect to comfortable and low-stress travel by bicycle, ATIP funding is prioritised towards projects that incorporate physical separation from motorised traffic. This means supporting treatments which aim to achieve at least LTS2 and preferably LTS1 – refer Figure 1.

***Figure 1 – Level of Traffic Stress (LTS) categories***1



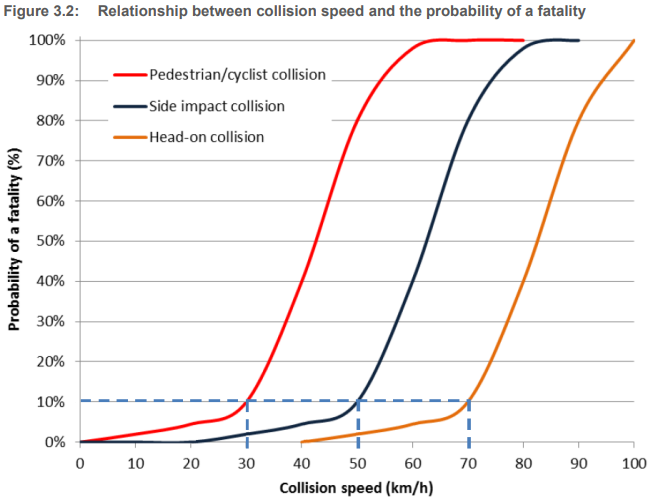
Facilities that are consistent with a Safe Systems approach are more attractive and address perceived safety concerns and therefore typically encourage new riders. This does not generally include on-road bicycle lanes (e.g. line marking only), as separation of vulnerable road users (such as bike riders and pedestrians) from motor vehicles is preferred in most cases and is required for roads that carry higher traffic volumes – refer Figure 2.

***Figure 2 – Separation of bike riders and motor vehicles along preferred bicycle routes[[5]](#footnote-6)***



If separation isn’t practicable (e.g. at road crossings and/or property accesses) then the target operating speed within the conflict area should not be greater than 30km/h – refer Figure 3.

***Figure 3 – Relationship between collision speed and the probability of a fatality[[6]](#footnote-7)***



Achieving comfortable, low-stress and safe travel by bicycle is typically achieved through adoption of the following facilities:

* Stand-alone bikeway/cycleway – physically separated by wide verge, grade separation and/or independent of adjacent infrastructure;
* Separated path (cycle track)/s – physically separated by verge and/or kerb (bicycle path alongside footpath);
* On-road bike lane/s – separated/delineated by separation devices and provision of conflict protection through turning movement speed management/restrictions at intersections/accesses;
* Cycle street – low volume local access roads with speed management devices;
* Raised priority crossing/s; and/or
* Shared path/s – preferably at least 3.0m wide (2.5m minimum).

Whilst not an exhaustive list, applicable reference documents related to the above bicycle facilities are summarised in the references at the end of this document. Alternative standards, guidelines and innovative treatments not covered by the reference documents will be assessed by ATIP on a case-by-case basis in consultation with TMR’s Engineering and Technology Branch.

The following treatments for bicycle infrastructure are not typically supported by the ATIP:

* Bicycle Awareness Zone/s;
* Part-time bicycle lanes;
* On-road bike lanes without separation devices (unless the exclusion of separation devices is supported by relevant guideline/s and justifiable on engineering grounds); and
* Shared path/s less than 3.0m wide (without justification).

Physical separation from motorised traffic assists in reducing perceived and actual safety issues in road environments with higher traffic speeds and volumes. Physical separation can be achieved by:

* “hardening” a bike lane with a physical device, refer *Queensland Guide to Traffic Management (QGTM) Part 10 – Bicycle lane separation devices guideline* (Nov 2021);
* establishing a Cycle Track, refer *TMR’s Selection and design of cycle tracks* (Oct 2019) guideline; or
* establishing a bike path (incorporating priority crossing/s to maintain safety and directness).

Recommended bicycle lane widths for the ATIP are outlined in Table 1. Minimum width bicycle lanes should only be considered at localised constrictions such as drainage grates or where significant constraints restrict relocation of the kerb line.

Bicycle lane set out shall be based on the alignment of the adjacent traffic lane, not the kerb alignment.

Urban traffic lanes may need to be marked less than 3.5m wide in order to establish a bicycle lane. There is limited evidence to support wide traffic lanes in urban areas. Refer to TMR’s RPDM Edition 2 Volume 3 *Supplements to Austroads Guide to Road Design Parts 1, 3* and *4A* (formerly *RPDM* and *Guidelines for road design on brownfield sites*) for further detail.

*Table 1: Recommended Bicycle lane widths for ATIP projects (Based on AGRD Part 3, Table 4.18, Feb 2021)*

|  |  |  |
| --- | --- | --- |
| **Posted speed limit** | **Recommended Width for ATIP projects*Note1*** | **Reference** |
| 30km/h or less | Consider active street priority, such as a Cycle Street | TRUM Volume 1 Part 8 |
| 50km/h | 2.0m (physical separation*Note 2* possible) | QGTM Part 10 – Bicycle lane separation devices guideline |
| 60km/h or 70km/h | 2.0m with physical separation | QGTM Part 10 – Bicycle lane separation devices guideline |
| 80km/h or higher | 2.0m with physical separation, or bike path (separated bikeway) | QGTM Part 10 – Bicycle lane separation devices guideline |

Note 1: At localised constrictions/constraints, or where justified in constrained areas, narrower facility width/s are to be determined in accordance with TMR’s *Selection and design of cycle tracks* guideline.

Note 2: Along very low volume and constrained streets without on-street parking, physical separation may not be required.

## 4.2 Bicycle lanes and on-street parking

When on-street car parking is reduced, arterial roads have improved safety and reduced motor vehicle congestion, and generally allow room for the separation of moving vehicular traffic from people riding.

Locating a separated bicycle lane kerbside with vehicle parking adjacent is an efficient method to protect people riding from moving vehicular traffic.

This lane configuration provides a safe full-time facility for people riding bikes, as well as enabling clearway operation and off-peak parking to provide for motor vehicle capacity when needed. For more detail refer TMR's *Selection and design of cycle tracks* (Oct 2019) guideline.

## 4.3 Intersections

ATIP priorities for providing for bike riders at intersections are directness, safety and comfort. This is often addressed by providing priority for bicycle riders and pedestrians at intersections.

Designing to ensure appropriate vehicle speeds so that people are not exposed to crash forces that would lead to fatal and serious injury outcomes is also important and is consistent with the Safe System approach.

The following TMR guidelines should be referred to for further information:

* *Selection and design of cycle tracks* (Oct 2019), Section 4 provides comprehensive guidance on a variety of intersection treatments.
* *Raised priority crossings for pedestrians and cycle paths* (Jan 2019) provides guidance for shared path crossings at side roads, roundabouts, and slip lanes. Furthermore, in locations of high demand, near key destinations or with a high-proportion of vulnerable users (such as children), raised priority crossings should be considered to maintain priority for those walking and riding.
* *Supplement to Austroads Guide to Road Design Part 4B: Roundabouts* (Jul 2021), *Section 5* provides further guidance for treatment/s at roundabouts (as does the *Providing for People Walking and Riding at Roundabouts guideline*, Aug 2020).
* <https://www.tmr.qld.gov.au/Safety/Road-safety/Road-Safety-Policy>. Where slip lanes must be retained (removal preferred), wombat (raised zebra) crossings are expected to be installed, refer Section 2.6.3 in Raised priority crossings for pedestrians and cycle paths (Jan 2019) and TMR's *Supplement to AGRD Part 4* (Nov 2021). Treatments other than a wombat crossing which are proposed for ATIP funded projects will only be considered in exceptional circumstances with appropriate engineering justification.

Minimising changes in grade from verge/island level to road level and vice versa benefits all active transport users, including people with disabilities. Crossing solutions that remove the need for people to navigate kerb ramps (whilst providing an appropriate tactile cue, e.g. TGSI) are desirable for ATIP funded projects.

## 4.4 Drainage and utilities

Drainage is an essential design component to ensure road and path longevity and safety. Guidance relating to bicycle aspects of drainage design is covered in TMR’s *Supplement to AGRD Part 5* (Jan 2024), *Part 5A* (Jan 2024), *Part 5B* (Jan 2024) and *Part 6A* (Nov 2023).

Field inlets, cross drainage and/or seepage management may need to be considered to prevent paths being submerged during rainfall and reduce collection of debris on the path, slip resistance issues and ongoing maintenance.

Where transverse drainage may impact path user safety, flow depth and velocity checks should be undertaken at transverse drainage locations.

Where facilities are proposed adjacent to or within a drainage channel, special considerations for both the minor and major storm event are required – these will be considered by ATIP on a case-by-case basis as required.

Steel in the travelled way can be a slip resistance safety issue for people riding bikes. The ATIP suggests that covers located in the travelled way provide equivalent slip resistance to surrounding surfaces in all weather conditions and suggests the same be considered for covers within 1.0m of the travelled way. Concrete infill covers are a good way to ensure durable slip resistance.

Drain grates and utility covers should comply with *Australian Standard 3996 Access Covers and Grates* and non-compliant gully grates should be replaced.

Where possible, new gullies in urban areas should be recessed into the kerb to allow the grate to line up with the lip of channel (i.e. lip in line rather than kerb in line).

Where bicycle lanes are retrofitted on streets with encroaching grates, adoption of minimum bike lane width as per Table 1 immediately adjacent the grate/s may be acceptable (bike/heel safe grate requirements remain, as applicable). Existing stormwater gullies could also be reconstructed to reduce grate interaction with the bicycle lane.

# 5. Off-road requirements

## 5.1 Land use and path provision for walking

If your project is providing a path/s to fulfill a WNP only, refer to Table 2.

***Table 2: Land use and recommended footpath provision for walking*** Note 3

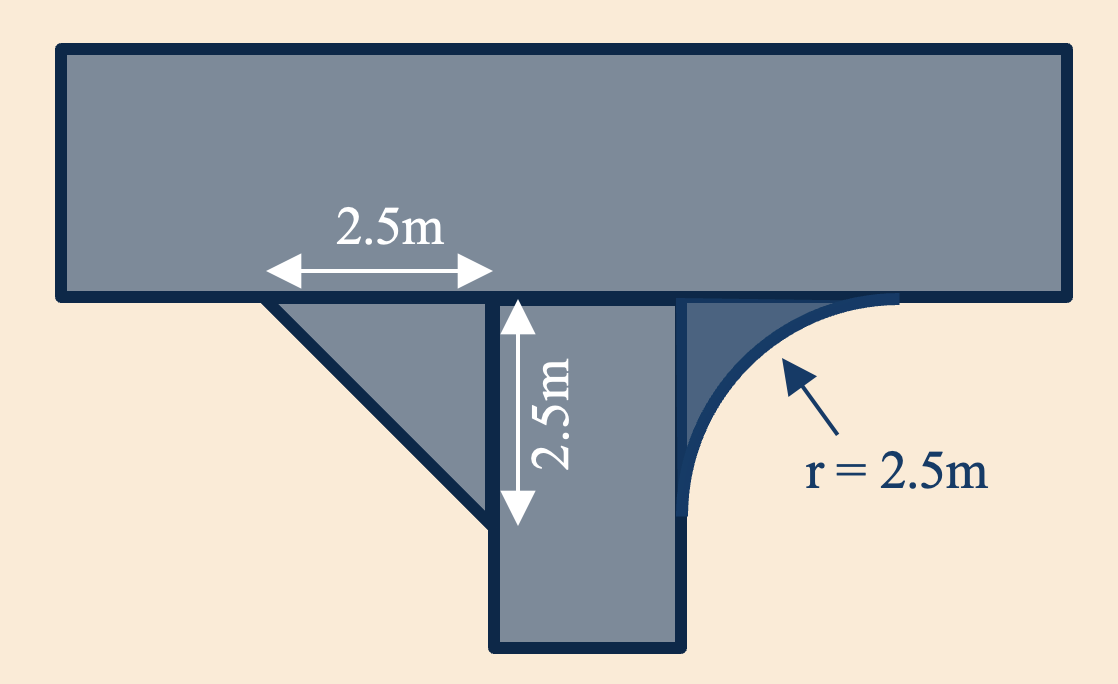
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Land use** | **New roads – Preferred** | **New roads – Minimum** | **Existing roads – Preferred** | **Existing roads – Minimum** |
| Commercial and industrial | Both sides | Both sides | Both sides | Both sides |
| Residential (on arterial roads) | Both sides | Both sides | Both sides | Both sides |
| Residential (on collector roads) | Both sides | Both sides | Both sides | Both sides |
| Residential (on local streets) | Both sides | Both sides | Both sides | One side |
| Three to ten dwellings per hectare | Both sides | One side | One side | Shoulders on both sides |
| Fewer than three dwellings per hectare | One side | Shoulders on both sides | One side | Shoulders on both sides |

Note 3: Based on Austroads *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Feb 2021)

## 5.2 Path intersections and widths

Intersections of paths are to include 2.5 metre corner radii or a chamfer of equivalent size – refer Figure 4.

***Figure 4 – Corner radii for path intersections***[[7]](#footnote-8)



5.2.1 Bike infrastructure path widths

To achieve the program intent for bike riding infrastructure, key path design criteria are set out in Table 3.

*Table 3: Key shared path design criteria for ATIP projects*

|  |  |  |  |
| --- | --- | --- | --- |
| **Path design criteria** | **Desirable value** | **Minimum value** | **Rationale** |
| Width (m) | 3.0*Note 4* | 2.5*Note 5* | 3.0m wide paths have 50% greater capacity than 2.5m wide paths and generate fewer path user complaints and interaction issues. |
| Design speed on midblock level grade (km/h) | 30 | 25*Note 6* | Appropriate for commuter use. Design speed variance should consider gradient/s and intersection priority. |

Note 4: Minimum value for stand-alone treatments along major roads.

Note 5: Justification required for adoption of 2.5m rather than desirable 3.0m.

Note 6: Where justified in constrained areas, a lower minimum design speed may be considered.

A reduction in these design criteria values may be considered at localised constraints such as significant poles or structures but this must be explicitly documented as to why a better facility standard cannot be achieved.

Provision of paths both sides of urban arterial and collector roads may provide a case for reduced path widths when co-located with cycle tracks or bicycle lanes.

Where a significant number of people walking and bike riding are expected, a segregated path may be required to maintain an appropriate level of service[[8]](#footnote-9). TMR's *Selection and design of cycle tracks* (Oct 2019) guideline provides additional guidance on segregated paths and path treatments at intersections with side streets.

5.2.2 Walking infrastructure path widths

If your project is providing infrastructure to fulfill a WNP only, refer to Table 4

***Table 4: Minimum footpath widths by predicted use*** Note 7

|  |  |  |
| --- | --- | --- |
| **Predicted pedestrian use** | **Minimum clear through route width for pedestrians** | **Scenario and context** |
| **Medium use** | 2.0m-3.0m | * In walk-up catchment of public transport station * Near medium density residential areas * Near small to medium sized schools * Small to medium local shopping areas * Passing of wider wheeled devices can occur within footpath width but walking in a group is uncomfortable.   Example of medium use footpath image |
| **Medium-High use** | Min. 3.0m+ | * Near to public transport stations * Medium to large commercial and shopping areas * Large metropolitan central city streets * Near to large schools * Passing of wider wheeled devices can occur within footpath width and group walking is anticipated. If walking in groups is expected, 4.0m is desirable.   Example of medium-high use footpath image |

Note 7: Adapted from IPWEA *Street Design Manual, Part 2 Detailed Design Guidelines* and *TfNSW Walking Space Guide Summary Version 2, 2020.TMR images.*

## 5.3 Path sight lines

Path corridors must be designed to provide appropriate unobstructed sight lines. Intersection visibility splays[[9]](#footnote-10) and visibility requirements for two-way paths[[10]](#footnote-11) must be considered in addition to other general visibility checks.

## 5.4 Path joints

Where an existing path is to be widened, longitudinal joints in paths are only to be considered where a physical divider, such as a kerb, can be used to cover this joint.

Transverse joints shall be designed to be smooth; this is usually achieved through sawcut joints[[11]](#footnote-12) or using a proprietary jointing system.

Where possible, pathways should be positioned so they are clear of the roots of established trees. In constrained locations where paths will be within the root zone of trees, pathway joint systems between slabs should be used to minimise any displacement of slabs that could form a hazard. Refer TMR’s *TN197 Provision of shade along paths* (July 2021) for root zone considerations.

## 5.5 Path pavement marking and signs

Wayfinding signage is desirable to encourage and orient new users. Refer TMR’s guideline *Wayfinding and signage for people walking* (Dec 2020).

Pavement marking should be easily identifiable. Where a warning colour is used at an intersection with another path, crossings or driveway, green surfacing shall only be used on a path designated “Bicycle Only”. Green surfacing is not to be used on shared paths. Coloured surface treatments should be used sparingly. Other treatments such as exposed aggregate surfacing may offer enough visual and tactile differentiation at a lower whole-of-life cost.

Pavement marking of some signs may be used in lieu of vertical signs[[12]](#footnote-13), which can reduce sign clutter and may improve sign visibility for path users.

Shared path signage is not necessary as Queensland Road Rule 250 permits people to ride on footpaths.

## 5.6 Path and driveway conflict/s

Paths intersecting driveways are to be constructed to provide a smooth joint between the two facilities using measures to control joint displacement such as dowels or other proprietary devices.

Where existing driveways do not meet the cross-fall requirements of proposed shared paths, they should be reconstructed to join smoothly to the pathway grade and cross-fall.

Where driveways are being installed or reconstructed, the kerb crossing should not include a vertical lip at the invert.

Sight lines between drivers entering or exiting driveways, and path users should also be provided[[13]](#footnote-14). On commercial driveways, further treatments such as road humps are usually required to reinforce low vehicle speeds and path priority.

Driveways should be visually delineated to maintain the appearance of the path being continuous through the driveway[[14]](#footnote-15).

## 5.7 Objects adjacent to paths

A 1.0 metre clearance should be provided from the edge of the rideable surface of any bike facility or shared path to any potentially hazardous object adjacent to the path/facility.

Fencing, balustrades and vegetation should be placed to ensure unobstructed sight lines are available.

Selection of vegetation adjacent to paths should consider the effects of leaf, seed and other plant debris on path slip resistance and maintenance. Planting of vegetation adjacent to paths must ensure clearances and sight lines are easily maintained as the planting matures.

Designing to minimise the extent of fencing is recommended. Landscaping or low shrubbery (up to 0.5m high) is a desirable alternative to fencing in many situations.

Fencing is intended to protect path users from hazards however it does not necessarily need to follow the edge of path. For example, fencing the headwall and wings of a culvert protects path users from the hazard while maximising clearance to the path. Fencing constructed directly adjacent to the path shall incorporate flared terminals, refer TMR *Fencing and edging treatments for cycling infrastructure* (Feb 2019) guideline for details and Figure 5.

***Figure 5 – Fence alignment at drainage/creek crossing***



Fencing incorporating vertical bars is not considered smooth as rubrails are only partially effective at preventing adult or children riding bikes from engaging with the vertical elements of the fence. Fence types with openings of 20mm or less are considered to have smooth features. Smaller apertures are more desirable and may be required if anti-climb features are required. The smoothest side of fence products should face towards the path such as in Figure 6.

*Figure 6 – Closely spaced mesh fencing*



Fencing with continuous smooth profiles eliminates the need to consider an offset top rail on bicycle paths as pedals will not be caught on the tightly spaced horizontal wire. This should also have the benefit of reducing the cost of the fencing. This modified weldmesh can also be formed with the edges rolled at the top and bottom to further increase strength and remove the need for top or bottom rails. Figure *6A-1* in TMR's RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) notes the projecting deflection rail is not required when snag-free infill panels are provided. This is the preferred full barrier fencing style on ATIP projects.

There is often a need for fencing of pathways across bridges, particularly where pathways pass close to the back of guardrail. If guardrail is located within 1.0 metre of the path edge it is to be treated to minimise path user collision severity. If adopted, fencing needs to be designed to ensure it does not interfere with guardrail effectiveness in the event of a motor vehicle collision, and/or guardrail type selected/modified to minimise risk of impact with fencing. The path should diverge away from the guardrail as soon as practicable to minimise the amount of path with clearance constraints and the need for fencing.

## 5.8 Shade provision

For comfort and attractiveness and to increase the shade and cooling effect for walking and riding environments, planting of mature trees should be considered, with canopies above/outside sightlines and 2.5m vertical clearance for riders. Refer to TMR’s *TN197 Provision of shade along paths* (July 2021) for delivery of one tree per 15 metres along paths.

## 5.9 Access management

Access management devices such as bollards and fencing deflection rails shall not be used as slow points or force riders to dismount to safely navigate through the treatment.

Access management treatments at path terminals should not be considered unless there is infrastructure along the pathway, such as lightweight bridges, that could be damaged by unauthorised access by a motor vehicle and no alternative solution is available. Where access management devices are required, they shall be placed in the safest location possible (for example, in a visible location clear of curves and steep grades) and be implemented to maintain path capacity and minimise conflict between path users. The clear opening width shall be not less than 1.6m and approach delineation shall be marked from 5-10m on approach to any potentially hazardous feature.

Protection of structures from authorised motor vehicle access can potentially be managed by load limit signage, subject to local authority management.

Appendix C in TMR's *QGTM Part 6: Intersections, Interchanges and Crossings Management* (2020) (March 2023) provides further guidance on safe vehicle restriction treatments for bicycle paths and shared paths.

## 5.10 Shared path longitudinal grade

TMR’s RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) and *Austroads Guide to Road Design* (AGRD) *Part 6A: Paths for Walking and Cycling* (Feb 2021) (*AGRD Part 6A*) provide guidance on bike path and shared path longitudinal grade.

With specific reference to shared path/s, *Section 5.4*, *Section 5.4.1* and *Table 5.8* in *AGRD Part 6A* refer to *AS 1428.1* (June 2021). Therefore, *AS 1428.1* is a relevant reference document for ATIP projects, including shared path/s. This design approach is consistent with:

1. the requirements of the *Disability Discrimination Act* (DD Act)[[15]](#footnote-16);
2. guidance from the Australian Human Rights Commission (AHRC) that advises “premises” should be read to include “streetscapes”, which includes “public footpath” – refer Section 3 and Section 8.7 in the AHRC *Advisory Note on streetscape, public outdoor areas, fixtures, fittings and furniture, 8 February 2013*[[16]](#footnote-17); and
3. TMR’s vision to create a single integrated network accessible to everyone – refer TMR’s *Accessibility and Inclusion Strategy*[[17]](#footnote-18).

It is acknowledged that a significant portion of the projects delivered through the ATIP are within brownfield sites and therefore delivering shared path/s accessible to all can in some locations be a considerable challenge. In these instances, it is required that thorough consideration of plausible design solutions be investigated and appropriately documented[[18]](#footnote-19). It is also recommended these considerations be undertaken in consultation with:

1. TMR’s internal Accessible Transport Network team (for TMR projects) and/or relevant local representative group/s; or
2. Council’s internal accessibility team and/or relevant local representative group/s (for Council projects).

## 5.11 Transitions between on-road and off-road facilities

For bicycle route connections, transition ramps should be considered between roadway corridor and off-road corridors. The additional off-road option allows people riding bikes to choose which facility they use based on their confidence and the traffic conditions at the time. Existing single dwelling residential driveways constructed without a vertical lip may function as a transition ramp. For detail on bicycle specific transition ramps refer Austroads *Guide to Road Design Part 3: Geometric Design* *Figure 4.45* (Feb 2021).

# 

# 6. References

| Reference and location | Guidance on… |
| --- | --- |
| **TMR Road Planning and Design Manual (RPDM)**  Available at  [www.tmr.qld.gov.au](http://www.tmr.qld.gov.au) | **Reduced urban traffic lane widths** -Refer to TMR RPDM Edition 2 Volume 3 *Supplements to Austroads Guide to Road Design Parts 1, 3 and 4A* (formally *RPDM* and *Guidelines for road design on brownfield sites*)  **Minimum corner radii for path intersections** -*Section 6.4*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023)  **Intersection sight-lines (visibility splays)** - *Figure 6A-2*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023)  **Visibility requirements for two-way paths** - *Section 5.7*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023)  **Projecting deflection rail not required** - *Figure 6A-1* in TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023)  **Longitudinal grade** - *Section 5.4 and Section 5.4.*1, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023)  **Roundabout treatments** - *Section* 5, TMR's Supplement *to Austroads Guide to Road Design Part 4B: Roundabouts* (Jul 2021)  **Road and bikeway lighting** - *Volume 6: Lighting* (Mar 2021) |
| **Traffic and Road Use Management Manual (TRUM)**  Available at  www.tmr.qld.gov.au | **Cycle Streets** - TRUM Volume 1 Part 8 |
| **TMR Standard Drawings**  Available at  www.tmr.qld.gov.au | **Kerb ramps** – TMR Std Drg No. 1446  **TGSI installation** – TMR Std Drg No. KRG1 and KRG2 |
| **Road Safety Policy**  Available at  www.tmr.qld.gov.au | Safety Intervention and Improvement Guidelines for TMR projects. |
| **Queensland Guide to Traffic Management (QGTM)**  Available at  www.tmr.qld.gov.au | **Bicycle lane separation devices** - *QGTM Part 10 – Bicycle lane separation devices guideline* (Nov 2021)  **Vehicle restriction treatments -** *Appendix C*, *QGTM Part 6: Intersections, Interchanges and Crossings Management (2020)* (Mar 2023) |
| **TMR Options for Designers of Pedestrian and Cyclist Bridges to achieve value-for-money Guideline**  Available at  www.tmr.qld.gov.au | TMR supplement to *Design Criteria for Bridges and Other Structures Manual* |
| **Queensland Manual of Uniform Traffic Control Devices (QMUTCD)**  Available at  www.tmr.qld.gov.au | **Bicycle Facilities** – Part 9 |
| **TMR MUTCD Q-series and Traffic Control (TC) signs**  Available at  www.tmr.qld.gov.au |  |
| **TMR Technical Notes and Cyclist and Pedestrian Guidelines** Available at  www.tmr.qld.gov.au | **Cycle tracks -** *Selection and design of cycle tracks* (Oct 2019)  **Segregated paths -** *Selection and design of cycle tracks* (Oct 2019)  **Level of Traffic Stress -** *Figure 2.2*, *Selection and design of cycle tracks guideline* (Oct 2019)  **Intersection treatments** - *Section 4*, *Selection and design of cycle tracks* (Oct 2019)  **Crossings at side roads, roundabouts, and slip lanes** – *Raised priority crossings for pedestrians and cycle paths* (Jan 2019)  **Delineated driveways** - *Treatment options to improve safety of pedestrians, bicycle riders and other path users at driveways* guideline (Feb 2021)  **Fencing and edge treatments** - *Fencing and edging treatments for cycling infrastructure* guideline (Feb 2019)  **Pedestrian demand forecasting** – *Pedestrian Demand Forecasting* Guideline and Tool (Feb 2021)  **Shade near paths** – *Technical Note 197 Provision of shade along paths* (July 2021)  **Wayfinding** *– Wayfinding and signage for people walking* guideline (Dec 2020)  **Roundabout treatments** – *Providing for people walking and riding bikes at roundabouts* (Aug 2020) |
| **Queensland Road Rules [Transport Operations (Road Use Management—Road Rules) Regulation 2009]**  Available at  [www.legislation.qld.gov.au](http://www.legislation.qld.gov.au) | **Shared paths** - *Rule 250* |
| ***Street Design Manual***  Available at  [www.ipwea-qnt.com](http://www.ipwea-qnt.com) | **Recommended footpath provision for new developments** - *IPWEA Street Design Manual, Part 2 Detailed Design Guidelines.* |
| ***TfNSW Walking Space Guide***  Available at  www.standards.transport.nsw.gov.au | 1. **Walking path widths** 2. *Walking Space Guide summary, Table 1, version 2* |
| ***Disability Discrimination Act***  Available at  www.legislation.gov.au | 1. **Accessibility requirements** of the *Disability Discrimination Act* |
| **Australian Human Rights Commission (*AHRC) Guidance***  Available at  www.humanrights.gov.au | 1. **Accessible streetscapes** – *Section 3* and *Section 8.7*, AHRC *Advisory Note on streetscape, public outdoor areas, fixtures, fittings and furniture* (8 February 2013) |
| **Austroads Guides to Road Design, Traffic Management and Road Safety**  Available at  www.austroads.com.au | **Relationship between speed and injury** - *Figure 3.2*, Austroads *Integrating Safe System with Movement and Place for Vulnerable Road Users* (Feb 2020)  **Path joints -** *Figure C 4*, Austroads *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Feb 2021)  **Longitudinal grade** – *Section 5.4, Section 5.4.1 and Table 5.8*, Austroads *Guide to Road Design* (AGRD) *Part 6A: Paths for Walking and Cycling* (Feb 2021)  **Physical separation** - *Figure C9 1*,Austroads *Guide to Traffic Management Part 4: Network Management Strategies* (Apr 2020)  **Bicycle transition ramps** - *Figure 4.45*, Austroads *Guide to Road Design Part 3: Geometric Design* (Feb 2021) |
| **Australian Standards**  Available at  www.saiglobal.com | **Access Covers and Grates** - AS 3996  **Design for Access and Mobility** – AS 1428.1  **Lighting for roads and public spaces** - AS 1158 (including AS 1158.0, AS 1158.1.1, AS 1158.1.2, AS 1158.2, AS 1158.3.1, AS 1158.4 and AS 1158.5) |

1. https://www.tmr.qld.gov.au/Safety/Road-safety/Road-Safety-Policy [↑](#footnote-ref-2)
2. In many instances paths are also used by people riding wheeled recreational devices (WRDs), motorised mobility devices (MMDs) and/or personal mobility devices (PMDs). People using these devices are valid path users, their utility, size, speed and interaction with other path users should be considered during infrastructure design. [↑](#footnote-ref-3)
3. Projects that provide only minimum provisions for bike riders rather than good practice are unlikely to be competitive for funding. [↑](#footnote-ref-4)
4. Walking Local Government Grant infrastructure projects are required to focus on public transport stations (including long distance bus, coach and train stops). [↑](#footnote-ref-5)
5. Refer *Figure C9 1* in Austroads’ *Guide to Traffic Management Part 4: Network Management Strategies* (Apr 2020) [↑](#footnote-ref-6)
6. Refer *Figure 3.2* in Austroads’ *Integrating Safe System with Movement and Place for Vulnerable Road Users* (Feb 2020) [↑](#footnote-ref-7)
7. Refer *Section 6.4*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) [↑](#footnote-ref-8)
8. Refer *Section 5.1*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) [↑](#footnote-ref-9)
9. Refer *Figure 6A-2*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) [↑](#footnote-ref-10)
10. Refer *Section 5.7*, TMR RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023) [↑](#footnote-ref-11)
11. Refer *Figure C 4*, Austroads *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Feb 2021) [↑](#footnote-ref-12)
12. Refer *Part 9*, *Queensland Manual of Uniform Traffic Control Devices* (Nov 2022) [↑](#footnote-ref-13)
13. Refer TMR *Treatment options to improve safety of pedestrians, bicycle riders and other path users at driveways* guideline (Feb 2021) [↑](#footnote-ref-14)
14. Refer TMR *Treatment options to improve safety of pedestrians, bicycle riders and other path users at driveways* guideline (Feb 2021) [↑](#footnote-ref-15)
15. https://www.legislation.gov.au/C2004A04426/latest/text [↑](#footnote-ref-16)
16. https://humanrights.gov.au/our-work/disability-rights/publications/advisory-note-streetscape-public-outdoor-areas-fixtures [↑](#footnote-ref-17)
17. https://www.tmr.qld.gov.au/About-us/Our-organisation/Accessibility-and-inclusion [↑](#footnote-ref-18)
18. Refer *Section 5.4*, TMR’s RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling* (Nov 2023); TMR's RPDM Edition 2 Volume 3 *Supplement to Austroads Guide to Road Design Part 1* (formally *RPDM* and *Guidelines for road design on brownfield sites*); and the DD Act; for further detail. [↑](#footnote-ref-19)