

Attachment

Elizabeth Street Options and Bike Infrastructure Design Guidelines Assessment

The following bicycle infrastructure design guidelines are relevant to this project:

- Draft Department of Transport Cycling Guide 2020
- VicRoads Design Guidance for Strategically Important Cycling Corridors 2016
- VicRoads Guidance on Treating on Bicycle Car Doorings Collisions 2016
- Austroads Guide to Road Design - Part 6A: Paths for Walking and Cycling 2017
- Cycling Aspects of Austroads Guides 2017

All these guides contain guidelines which were established by Austroads as the national peak body for transport agencies and were largely adopted by the Victorian State Government. Most of the VicRoads guidelines are therefore primarily based on the Austroads guidelines with incorporation of some international elements and examples. Council should follow the direction of the relevant state government transport authority since it is this entity that develops the road rules which govern the state of Victoria, and not the Federal Government. Notwithstanding this, Council is not necessarily legally obliged to comply with any of the aforementioned guidelines however it would be sensible to have a clear documented justification for deviating from them in the event of a serious injury or fatality.

The draft DoT Cycling Guide 2020 provide the most recent and relevant best practice guidelines for Council in its decision making on the design and delivery of high-quality cycling infrastructure for the community. From a technical perspective and user experience, it is generally better to provide wider protected bike lanes than narrower ones since they are safer, more attractive and comfortable for people of all ages and abilities to ride a bicycle on.

Relevant Guidance Document	VicRoads Design Guidance for Strategically Important Cycling Corridors 2016	Draft Department of Transport Cycling Guide 2020
Status	Adopted by a road authority that no longer exists	Due for adoption in September 2020 by the new road authority
Traffic lane width	3.0m minimum*	3.0m minimum*
Parking space width	2.1m minimum*	2.1m minimum*
Protected bike lane width - next to traffic	1.2m minimum	2.0m minimum***
Protected bike lane width - next to parking	1.8m minimum**	2.0m minimum***
Protected lane buffer width - next to traffic	Not specified	Not specified
Protected lane buffer width - next to parking	0.6m minimum****	0.8m minimum (painted buffer); 1.0m minimum (raised separator)
Unprotected bike lane width - next to path	Not recommended^	Not recommended^
Unprotected bike lane width - next to parking	Not recommended^	Not recommended^
Unprotected lane buffer width - next to path	Not required	Not required

* Specified in Austroads standards

** 1.5m is acceptable only when a 1m buffer is provided

*** 2.0m is the absolute minimum, 2.5m is the preferred width

**** A 1.8m bike lane requires a 0.6m buffer as an absolute minimum (VicRoads Guidance on Treating on Bicycle Car Dooring Collisions)

^^ Elizabeth Street is an identified Victorian State Government Strategic Cycling Corridor (SCC). As stated in the Victorian Cycling Strategy 2018-2028, a SCC is a designated cycling route that joins up important destinations: the central city, national employment clusters, major activity centres, and other destinations of metropolitan or state significance. The guidance does not recommend unprotected bike lanes on any of these defined routes. For busy inner-city corridors like Elizabeth Street it states protected bike lanes should be provided. Shared bike/traffic environments can be provided on quiet local residential streets (eg. Napier Street) that are designed as SCC's but only where traffic volumes are very low (far lower than those found on Elizabeth Street).

The draft DoT Cycling Guide states that 1.8m is the absolute minimum width for painted (unprotected) bike lanes to allow for people to pass and support movements in low traffic volume environments, although this width does not really provide a high level of comfort for less confident and experienced bike riders. It is also not recommended for moderate or

high volume on-road routes such as SCCs. The VicRoads guidelines indicate that a 1.5m wide is the desirable minimum width for a painted bike lane but 1.2m-2.5m is an acceptable range as per the Austroads guidelines. It should be noted that these ranges encompass a very broad range of cycling environments which are specified in the documentation. For example 1.2m is for a bike lane on an off road path not on a busy road next to parked cars such as is found on Elizabeth Street.

Option					VicRoads Design Guidance for Strategically Important Cycling Corridors 2016 ¹²				DoT Cycling Guide 2020 ³				
	Location	West of Lennox St		East of Lennox St		West of Lennox St		East of Lennox St		West of Lennox St		East of Lennox St	
	Traffic direction	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound
	Typical kerb-to-kerb width (m)	14.1		14.8		14.1		14.8		14.1		14.8	
	Bike lane and car dooring buffer (next to parking)					2.4 minimum				2.8 minimum			
1	As per Council Resolution												
	Bike lane width	2.1	2.1	2.3	2.3	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Buffer width	0.6	1.2	0.6	1.2	Compliant*	Compliant	Compliant*	Compliant	Not compliant	Compliant	Not compliant	Compliant
	Separated	Yes	Yes	Yes	Yes	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Traffic Lane	3	3	3	3	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Parking Lane	2.1	N/A	2.1	N/A	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
2	Narrowed Protected Bike Lanes												
	Bike lane width	1.4	1.3	1.7	1.7	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant
	Buffer width	0.6	0.6	0.6	0.6	Compliant	Compliant	Compliant	Compliant	Not compliant	Not compliant	Not compliant	Not compliant
	Separated	Yes	Yes	Yes	Yes	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Traffic Lane	3	3	3	3	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Parking Lane	2.1	2.1	2.1	2.1	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
2b	Narrowed Protected Bike Lanes (wider parking bays)												
	Bike lane width	1.1	1.1	1.1	1.1	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant	Not compliant
	Buffer width	0.6	0.6	0.6	0.6	Compliant	Compliant	Compliant	Compliant	Not compliant	Not compliant	Not compliant	Not compliant
	Separated	Yes	Yes	Yes	Yes	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Traffic Lane	3	3	3	3	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Parking Lane	2.4	2.3	2.7	2.8	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
3	Southern Side Only Protected Bike Lanes												
	Bike lane width	1.5	1.8	2.0	1.8	Not compliant	Not Advised	Compliant	Not Advised	Not compliant	Not Advised	Compliant*	Not Advised
	Buffer width	0.6	N/A	0.8	N/A	Compliant	Not Advised	Compliant	Not Advised	Not compliant	Not Advised	Compliant*	Not Advised
	Separated	Yes	No	Yes	No	Compliant	Not Advised	Compliant	Not Advised	Compliant	Not Advised	Compliant	Not Advised
	Traffic Lane	3	3	3	3	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
	Parking Lane	2.1	2.1	2.1	2.1	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant
4	Remove Pilot Trial												
	Bike lane width	1.8	1.8	1.8	1.8	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised
	Buffer width	N/A	N/A	N/A	N/A	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised
	Separated	No	No	No	No	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised
	Traffic Lane	3	3	3.3	3.3	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised
	Parking Lane	2.2	2.2	2.2	2.2	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised	Not Advised

Compliant – Complies with MINIMUM standards or guidelines (Note: This does not mean that the design aligns with underlying objectives of Council policy regarding increasing ridership and safety for all users)

¹ VicRoads Design Guidance for Strategically Important Cycling Corridors 2016; p. 15.

² VicRoads Guidance on Treating Bicycle Car Dooring Collisions 2016; p. 16, 33.

³ Department of Transport Cycling Guide 2020; p.86-87, 108.

Compliant* – Allowed as the ABSOLUTE MINIMUM but it is not recommended

Not Advised – A design outcome on Elizabeth Street that is not advised in the guides

Not Compliant – In the event of an accident Council may be liable for providing infrastructure that does not comply with the guidelines