

Separated Bike Lanes

Creating safer streets for all

Separated bike lanes (also known as protected bike lanes or cycletracks) are bike lanes that are physically separated from vehicle and pedestrian traffic.

Separated bike lanes are known to be safer for people walking, biking, and driving.^{1,2} They are more attractive and comfortable to a wider range of people than traditional painted bike lanes because they provide physical separation from motor vehicles. Separated bike lanes are typically implemented as one-way facilities on either side of the roadway. In some cases, a two-way separated bikeway may be used.

Fifty-one percent of Minnesotans surveyed during the Minnesota Statewide Bicycle System Plan process indicated a preference for separated bicycle facilities.

- 1 STREET BUFFER**
 A vertical barrier, such as a raised median or flexible post that separates people biking from people driving, has several benefits:
 - Maximizes bicyclist comfort and safety.
 - Moderates driving speeds by visually narrowing the roadway.
 - Shortens pedestrian crossings.
- 2 SIDEWALK BUFFER**
 • Separates people walking from people biking.
 • Maximizes pedestrian comfort and safety.
 • Provides a detectable barrier between the sidewalk and bike lane.
- 3 ON-STREET PARKING (OPTIONAL)**
 • Augments the street buffer, providing even more separation for people biking.
- 4 BIKE LANE**
 • Provides a smooth and continuous path for people biking.

Separated bike lanes have been shown to:

Reduce serious injury and fatality collisions for people biking by **90%**¹

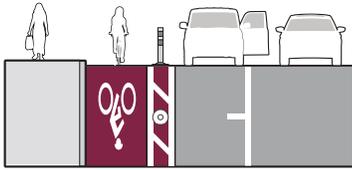
Reduce fatalities for all road users **44%**²

¹ Marshall, W.E. and Ferenchak, N.N. 2019. Why Cities with High Bicycling Rates are Safer for All Road Users. *Journal of Transport & Health*, 13. DOI: 10.1016/j.jth.2019.03.004

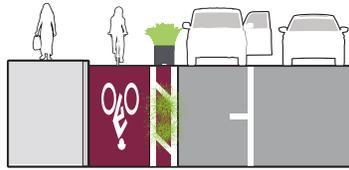
² Teschke, K., Harris, M.A., et al. 2012. Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. *American Journal of Public Health*, 102(12): 2336-2343. DOI: 10.2105/AJPH.2012.300762

Types of Separation

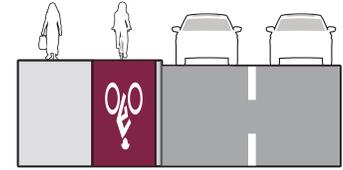
There are a variety of different approaches that can be used to provide separation:



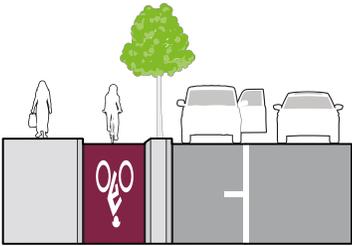
Flexible Posts or Bollards
Provide cost-effective vertical separation for retrofits.



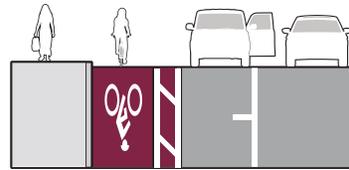
Planter Boxes
Provide vertical separation that is more aesthetically pleasing than posts or bollards.



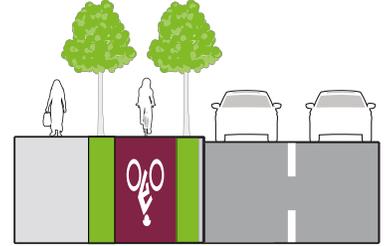
Raised Bike Lanes
Vertically separate bike lanes along a roadway where space is constrained.



Raised Medians
Provide hard separation, which can also contain trees or plantings if 6' or more in width.



Parking Lanes
May act as a barrier in place of, or in conjunction with posts, bollards, or planter boxes.



Landscaped Buffers
Can improve street aesthetics, provide shade, and create opportunity for bike share stations, bike parking, bus stops, and other amenities.

Where To Use Them



Intersections

Separated bike lanes shouldn't end at intersections. When providing separated infrastructure, intersections should be designed with care, ideally with protection continuing throughout.



Multimodal Considerations

In areas with high volumes of people walking, consider using Separated Bike Lanes to provide separation between people walking and people bicycling.

DESIGN RESOURCES

FHWA-SA-18-077: Bikeway Selection Guide

FHWA-HEP-15-025: Separated Bike Lane Planning and Design Guide

FHWA-HEP-16-005: Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts

MnDOT Bicycle Facility Design Manual

RELATED INFOSHEETS

Sidepaths