Bicycle Working Group Report

Ahhh Venice

Hardly any cars...

Ahhh Venice

...but you could do it.

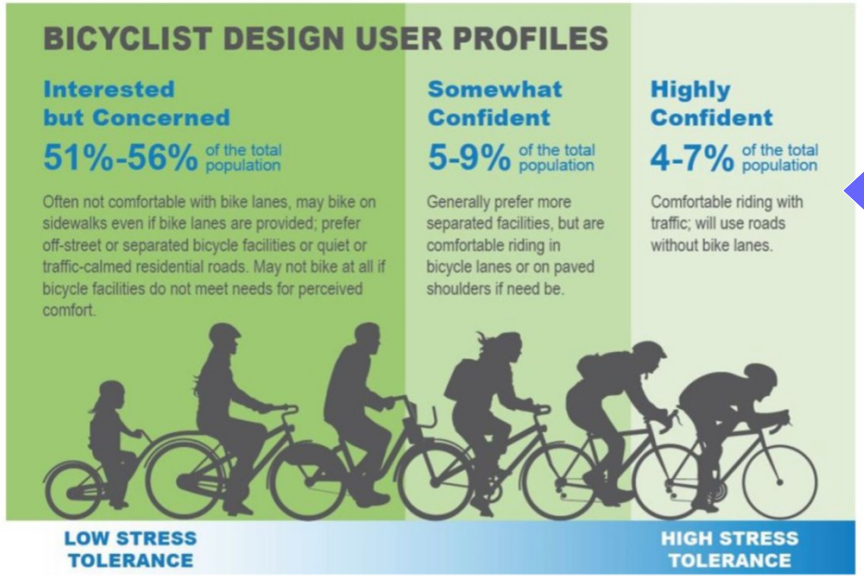
Los Alamos

Hardly any boats on the road.

Los Alamos

Level of Traffic Stress

Level of Traffic Stress (LTS)



Los Alamos is at 2.64% ridership according to the League of American Cyclists.

Most people do not feel safe riding a bike!

Equity: bikes treated like bikes

- Separated bike paths
  Conflicts feel safe
- Safety is a high priority!
- Everyone

Equality: bikes treated like cars

- No cycling infrastructure
- Risk takers
- Young men

Vision Zero a systematic approach to zero traffic fatalities

- A system that is safe only if nobody makes mistakes, is not a safe system.
- People make mistakes. Design the system so the outcome is benign.
- Design intersections so that accidents are unlikely.
- Control vehicle speeds so that accidents that are likely to happen are not likely to be deadly.

Principles

Safe intersection design reduces accidents and ‘close calls’
(most accidents happen at intersections)

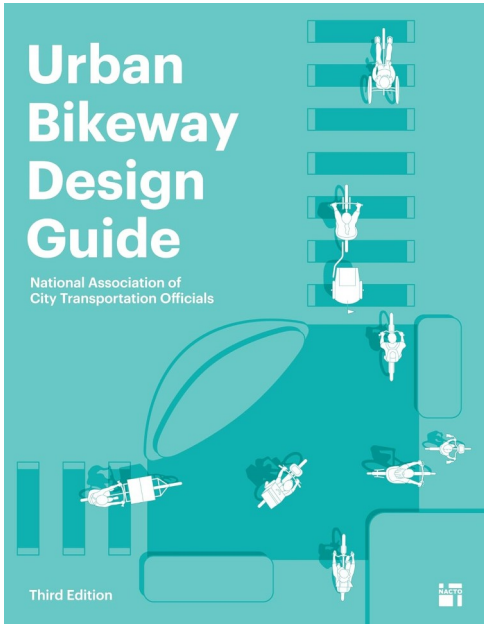
Width and degree of separation should be adjusted to traffic volume and speed

Continuous infrastructure
no gaps, no interruptions (e.g. construction work)

Easy to follow the intended design
color-coding, road signs

Comfortable, convenient, and beautiful!

National Association of City Transport Officials guides



NACTO provides different design guides with modern guidelines.
https://nacto.org/

Bike Path Separation

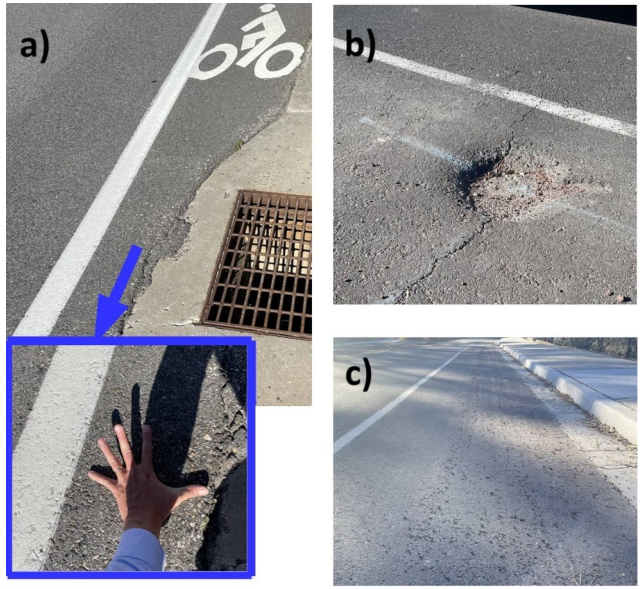
GUIDANCE FOR SELECTING ALL AGES & ABILITIES BIKEWAYS

Bikeway	Target Motor Vehicle Speed	Motor Vehicle Volume per day	Motor Vehicle Volume Peak Hour in Peak Direction
Protected Bike Lane	Any	Any	Any
Shared Spaces	≤10 mph ≤15 km/h	≤ 1,000	≤60
Bicycle Boulevard	≤ 20 mph ≤ 30 km/h	≤ 500 - 2,000	<50-150
Advisory Bike Lane	≤ 20 mph ≤ 30 km/h	≤ 500-2,000	<50-150
Constrained Bike Lanes	≤ 20 mph ≤ 30 km/h	≤ 1,500-3,000	≤ 300
Constrained Bike Lane *with Buffer*	≤ 25 mph ≤ 40 km/h	≤ 6,000	≤ 600

A high degree of separation makes cycling more enjoyable for riders of all abilities.

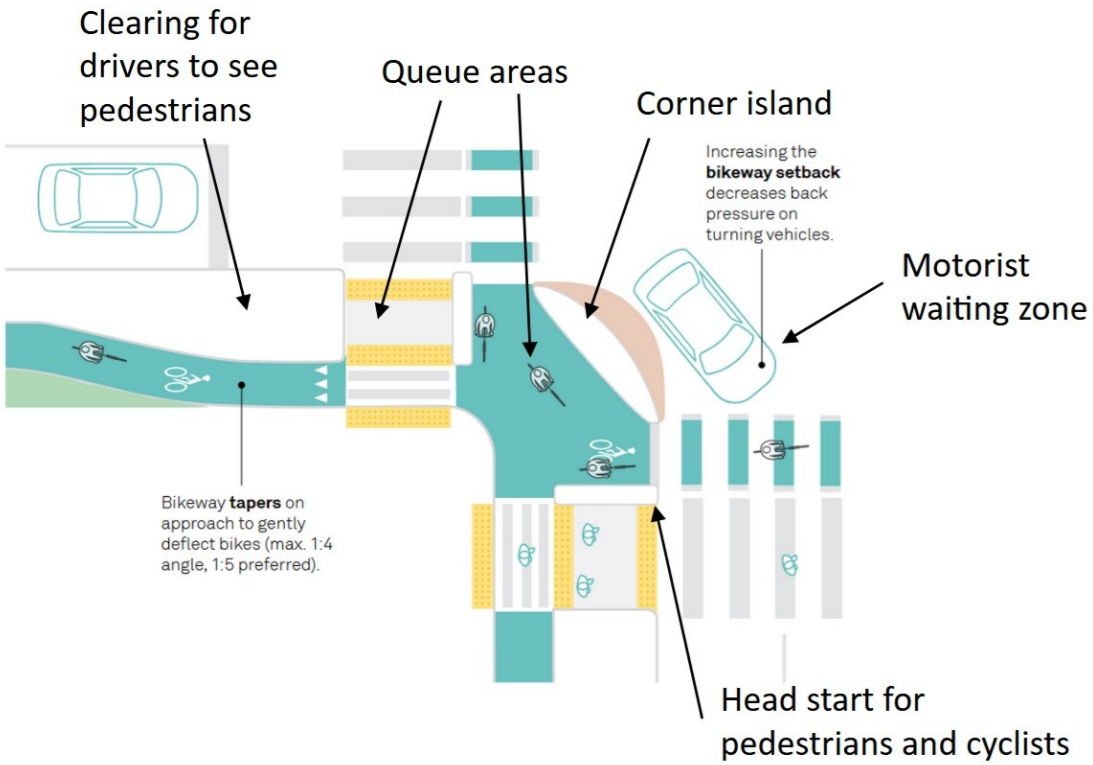
Bike Path Width

MINIMUM AND PREFERRED RIDEABLE WIDTHS								
Control Device	One-Way Bike Lane				Two-Way Bike Lane			
	Minimum Recommended*		Preferred		Minimum Recommended*		Preferred	
Mini Device Widths cannot be less than a typical bike	6 ft	1.8 m	7-8 ft	2.1-2.4 m	8-10 ft	2.4-3 m	11-13 ft	3.3-3.9 m
Typical Bike Device width up to 2.5 ft (0.8 m)	6 ft	1.8 m	7-8 ft	2.1-2.4 m	8-10 ft	2.4-3 m	11-13 ft	3.3-3.9 m
Cargo Bike Device width up to 3 ft (0.9 m)	6.5 ft	2 m	8-9 ft	2.5-2.8 m	9-11 ft	2.7-3.3 m	12-14 ft	3.7-4.3 m
Extra-Large Bike Device width up to 4.5 ft (1.4 m)	7 ft	2.1 m	11.5-12.5 ft	3.5-3.8 m	12-14 ft	3.6-4.2 m	15-17 ft	4.7-5.3 m



Bike paths need to be wide enough.
Grates and drainage cannot be counted to the width of a bike path.
Poles, curbs, and other obstacles require an added shy distance.

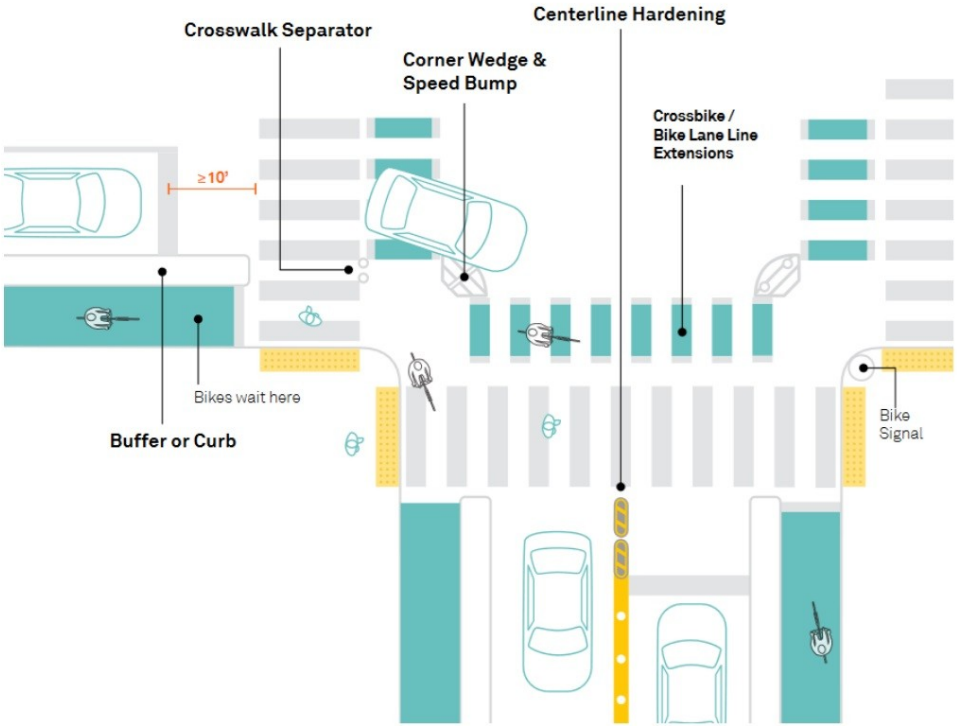
Major Protected Intersections



A safe and comfortable intersection design with queue areas for pedestrians and cyclists.

Recommended for:
Diamond Dr/Canyon Rd
Diamond Dr/Trinity Dr
Diamond Dr/West Rd
Diamond Dr/Orange St
Diamond Dr/Arkansas Avenue

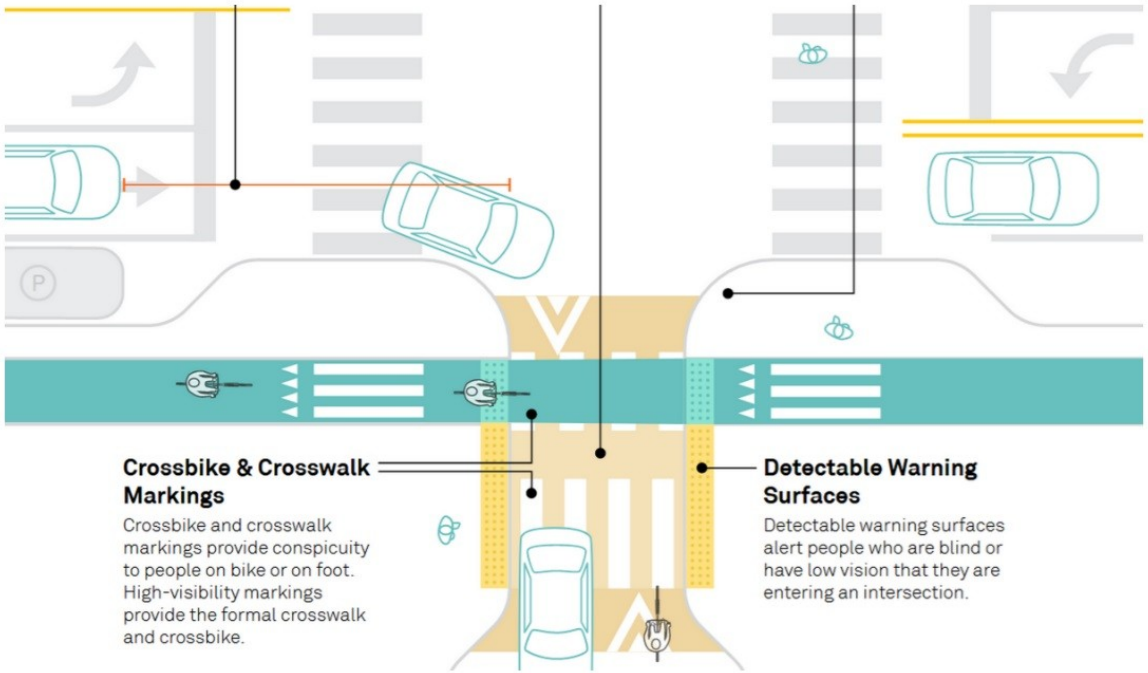
Protected Intersection



Similar to the major protected intersection with a smaller foot print.

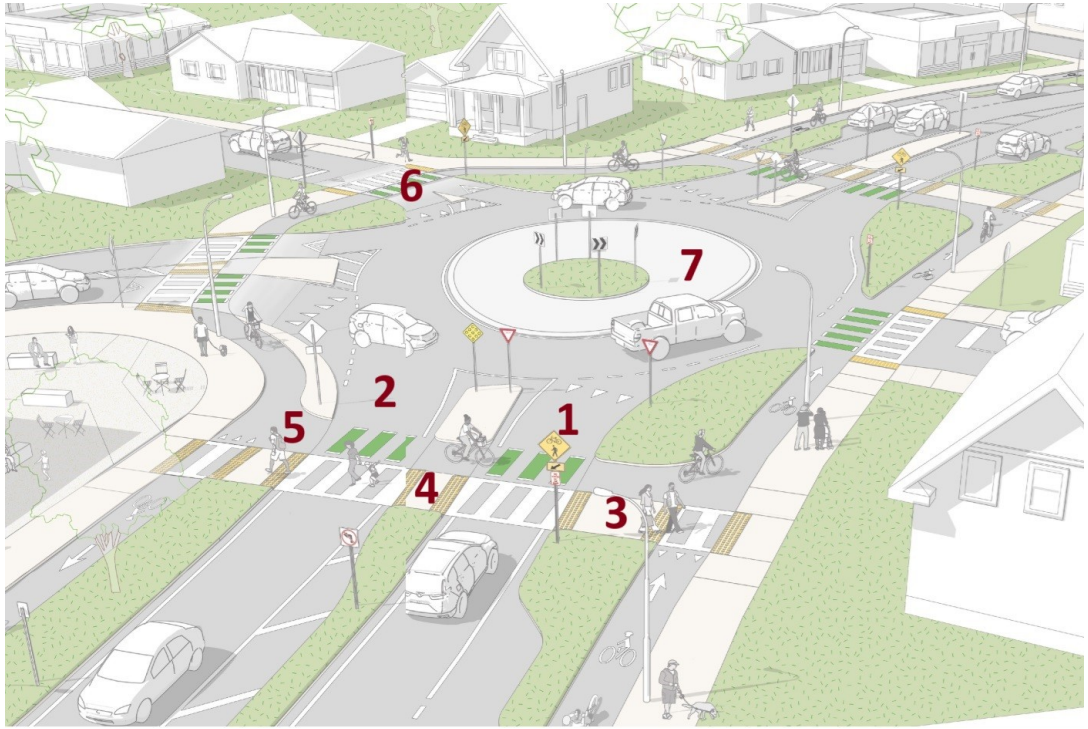
Should be used on smaller intersections.

Side Street Intersection



When a side street meets a main road. Traffic going straight on the main road is given priority.
Example: Diamond/Urban

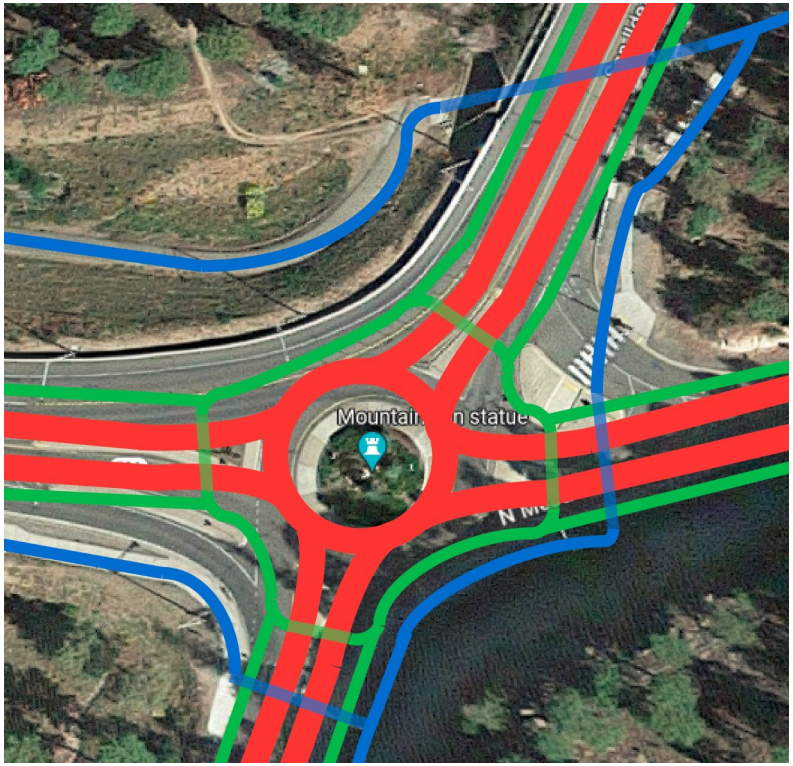
Roundabout



Safe roundabout design:

1&2: motorist waiting zones
3: pedestrian and cyclist queuing area
4: center refuge zone
5: cyclist speed control
6: raised crossing
7: car speed control via center island

Roundabout



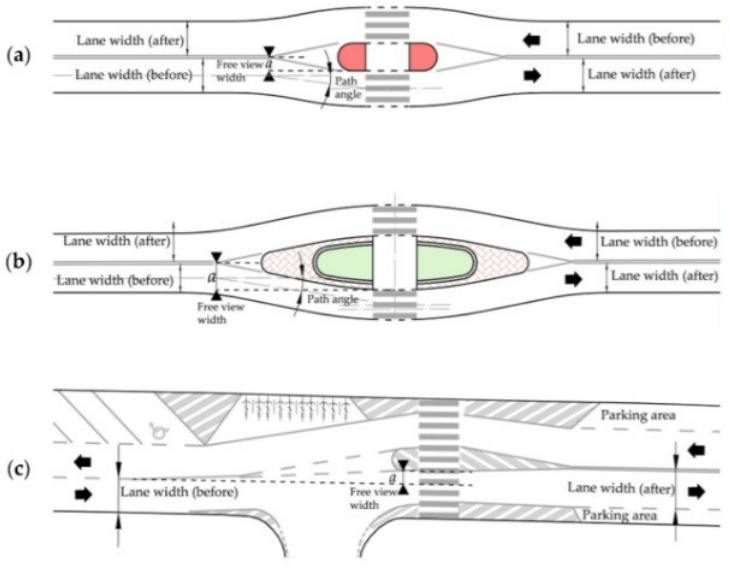
Diamond/San Ildefonso

NM504/Central Avenue/Diamond

Speed Control

Speed table:

Traffic diversion:

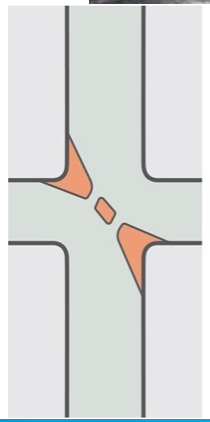


Speed Control

We recommend to rely on physical speed control measures instead on speed limit signs.

We recommend enforcing lower speeds in residential areas.

Central Avenue



We recommend a reduction of though traffic with following options:

- Reduce traffic speed with speed tables and raised crossings
- Turing Central into a one-way
- Model filtering to block through-traffic
- Pedestrianizing

Summery

Design cycling infrastructure that is safe and accessible to all ages and abilities of riders. Infrastructure should be intuitive and inherently safe. The more intuitive infrastructure is, the less one needs to rely on education for people to follow the intended design.

Follow recommendations from the National Association of City Transportation Officials (NATCO) for degree of separation between bikes and motor vehicles.

Follow designs laid out in NATCO guidelines for ‘Urban Bikeway Design Guide’, ’Don’t Give Up at the Intersection’, and ’Design for all ages and abilities‘.

At traffic lights for pedestrian crossings, install separate bicycle lights or put up signs allowing cyclists to use the ‘Leading Pedestrian Intervals’.

Control vehicle speed using physical measures that encourage drivers to drive at the design speed.

Conduct education campaigns for all those who use the road network, including bicyclists, pedestrians, and vehicular drivers. Educational materials should be easily understandable and designed for all ages.