

What's possible? Design Facilities



Complete Streets for Bicycling

- Every street should be designed and operated to meet the needs of people riding bikes using the best available designs and best practices.
- To ensure bicycling is available and attractive to people of all ages and abilities, we may advocate for complete, low-stress bicycling networks of roads and other bicycle facilities.

Existing California Standards

SDCBC supports bicycle facilities being built to conform to nationally recognized standards. The documents below provide State standards for Bikeways that SDCBC finds to be generally acceptable, though all bicycle facilities should be built in a manner appropriate to the local context.

HDM - Highway Design Manual, Chapter 1000: Bikeway Planning and Design (California Department of Transportation, 2012 (look for online updates) <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>

CA-MUTCD - California Manual of Uniform Traffic Control Devices for Streets and Highways, Part 9: Traffic Controls for Bicycle Facilities (California Department of Transportation, 2012).
http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd2012.htm

(Following slides are “borrowed” from SANDAG and other sources. Thanks!)

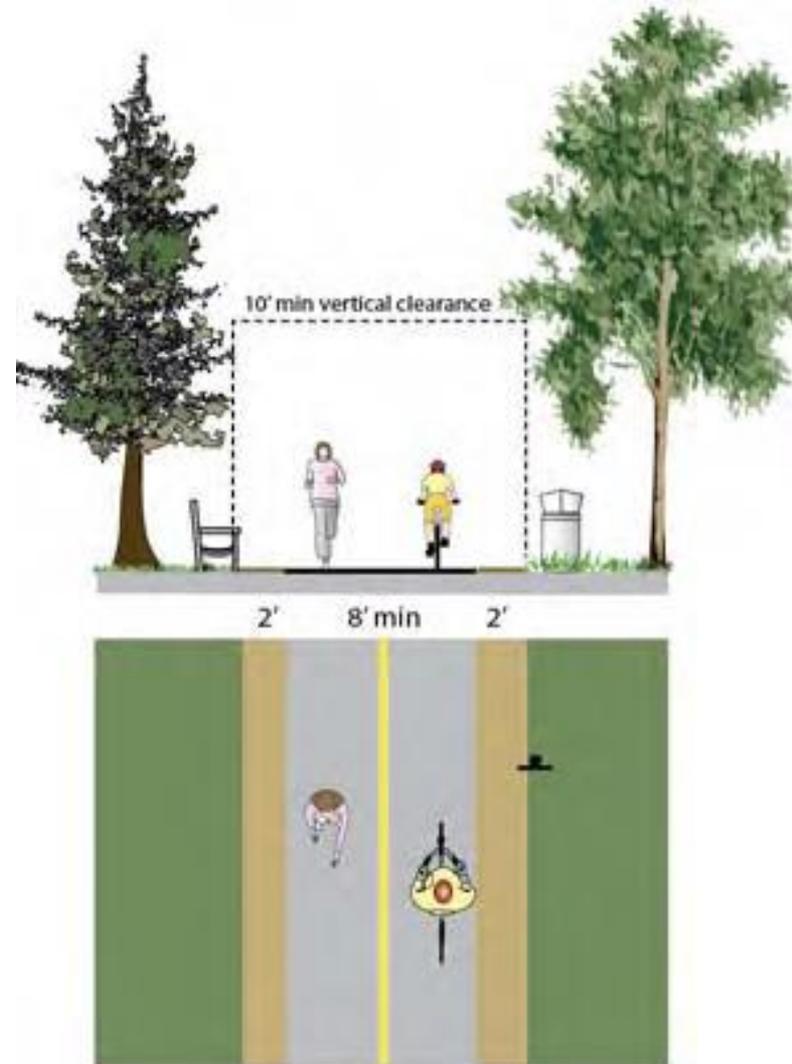
Bike Paths, Class I

Bike paths are bikeways that are physically separated from vehicular traffic. Also termed shared-use paths, bike paths can often safely accommodate bicycle, pedestrian, and other non-motorized travel.

Paths can be constructed in roadway right-of-way or on an independent right-of-way.

Bike paths provide critical connections in the region where roadways are absent or are not conducive to bicycle travel.

Bike Paths are sometimes called Trails.



Where are San Diego Paths?

Bike Paths & Multi-Use Paths

- **The Bayshore Bikeway** (Around San Diego Bay)
- **Sweetwater Bikeway** (Along Sweetwater River)
- **San Diego Harbor Bike Path** (North San Diego Bay)
- **Mission Bay Bike Path** (Around Mission Bay)
- **The Boardwalk** (Mission & Pacific Beaches)
- **Ocean Beach Bike Path** (Along San Diego River)
- **Lake Murray Bike Path** (Lake Murray)
- **Miramar Reservoir Bike Path** (Miramar Reservoir)
- **State Route 56 Bike Path** (Along SR-56)
- **Inland Rail-Trail** (San Marcos)
- **San Luis Rey Trail Bike Bath** (Oceanside)
- **Coastal Rail-Trail** (Oceanside to San Diego)



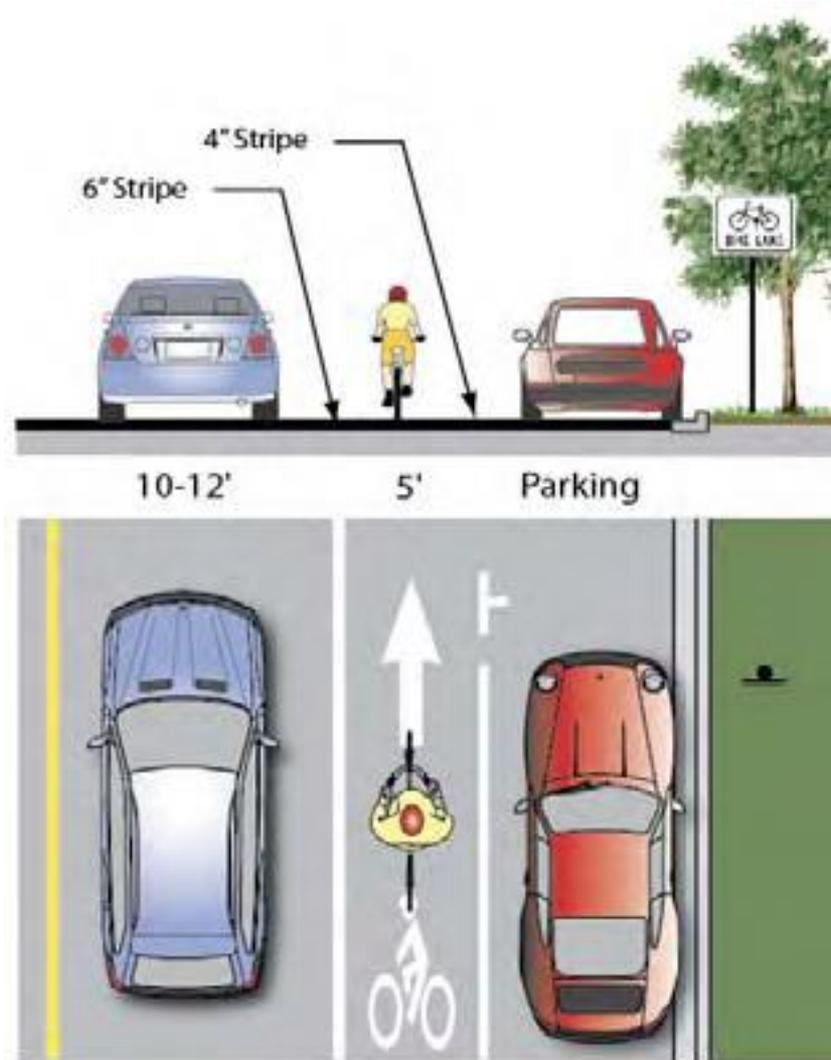
Bike Lanes, Class II

Bike Lanes are defined by pavement markings and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel.

Within the regional corridor system, Bike Lanes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues. Such treatments include innovative signage, intersection treatments, and bicycle loop detectors.

Bike Lane use requirements are described in CVC 21208.

Beware the Door Zone Bike Lanes!



Bike Routes, Class III

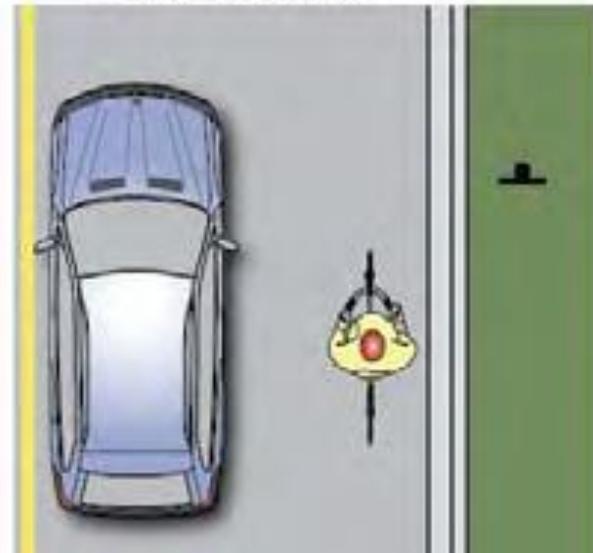
Bike Routes are located on shared roadways that accommodate vehicles and bicycles in the same travel lane.

Established by signs, Bike Routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand.

Within the regional corridor system, Bike Routes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues.



14' preferred min



Regular Streets, Shared Use

Regular Streets

Most streets do not have any specific bike designation, but can still work perfectly well for bicyclists.



Sidewalks???

In the City of San Diego,
Coronado and many other cities it
is illegal to ride on the sidewalks
in business districts.

If you must; ride slowly, yield to
pedestrians, and watch all
driveways!



Photo courtesy www.pedbikeimages.org Dan Burden



Shared Lane Markings

Sharrows on the road



Shared lane markings, commonly called Sharrows, are pavement markings used to remind motorists that bicyclists are allowed to lawfully use this portion of a lane.
(See page 35 of the 2011 DMV California Driver Handbook)



Buffering of Bike Lanes on the right or left-hand sides.



Bike Lanes may have diagonal crosshatch buffers to the right or to the left. Buffers are meant to discourage (not prohibit) vehicle or bicycle travel on these paved areas.



These conform to the CALIF-MUTCD though the HDM offers little guidance ... yet...

**DAVE SNYDER, CBC EXEC. DIRECTOR:
'CALIFORNIA JURISDICTIONS ONLY DO ANYTHING IF
IT'S IN THE BOOK. AND WE'RE GOING TO MAKE
SURE THAT THAT BOOK IS RIGHTEOUS! '**



Cycle Tracks

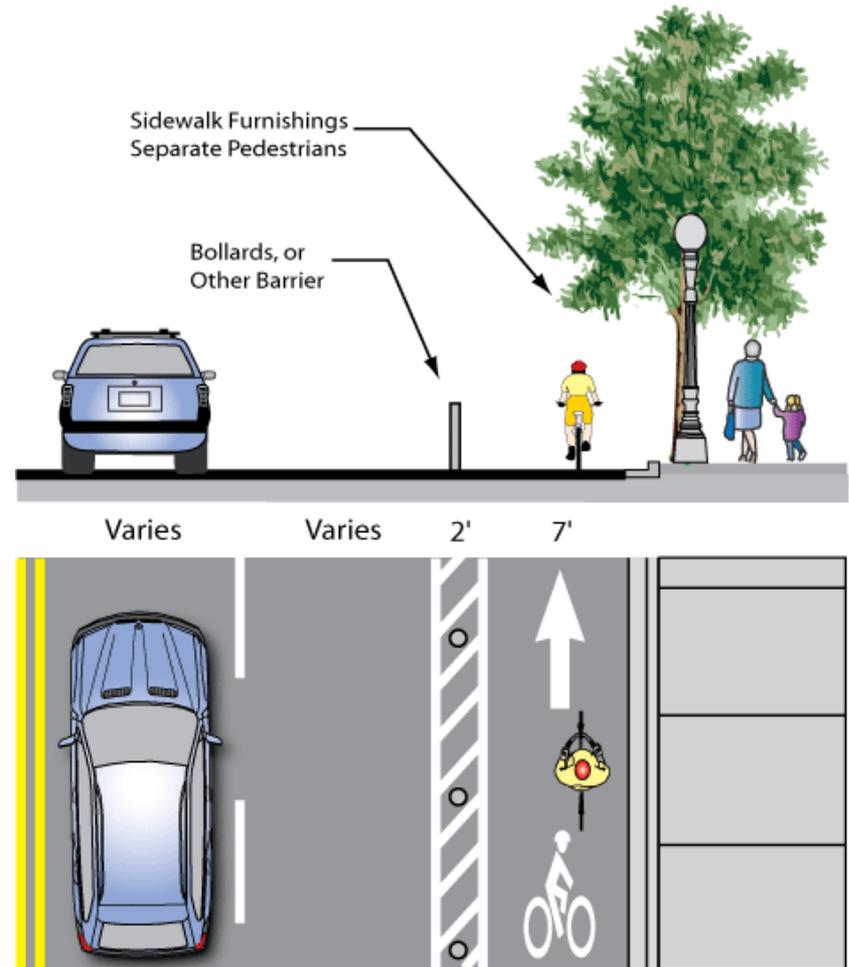
A Cycle Track is a hybrid type bicycle facility that combines the experience of a separated path with the on-street infrastructure of a conventional Bike Lane.

Cycle Tracks are Bikeways located in roadway right-of-way but separated from vehicle (Shared?) lanes by physical barriers or buffers.

Cycle Tracks usually provide for one-way bicycle travel in each direction adjacent to vehicular (Shared?) travel lanes and are exclusively for bicycle use.

Cycle Tracks are not recognized yet by Caltrans Highway Design Manual or the CA-MUTCD as Bikeway facilities.

Development of Cycle Tracks on segments of the regional corridor system is proposed through experimental, pilot projects.



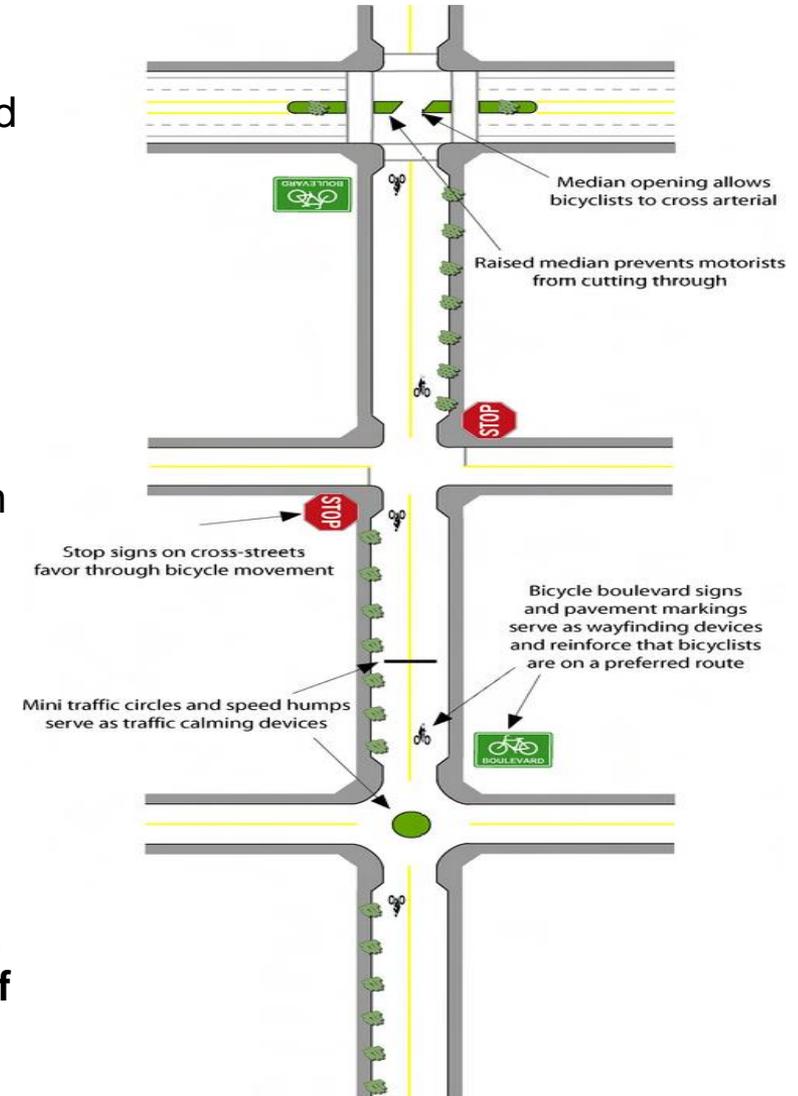
Bicycle Boulevards, also called Greenways

Bicycle Boulevards are local roads or residential streets that have been enhanced with traffic calming and other treatments to facilitate safe and convenient bicycle travel.

Bicycle Boulevards accommodate bicyclists and motorists in the same travel lanes, typically without specific vehicle or Bike Lane delineation. These roadway designations prioritize bicycle travel above vehicular travel. The treatments applied to create a Bicycle Boulevard heighten motorists' awareness of bicyclists, and slow down vehicle traffic making the Boulevard more conducive to safe bicycle and pedestrian activity.

Bicycle Boulevard treatments include signage, pavement markings, intersection treatments, traffic calming measures, and can include traffic diversions.

Bicycle Boulevards are not defined as Bikeways in the Caltrans Highway Design Manual or the MUTCD; however, the basic design features of Bicycle Boulevards comply with Caltrans existing standards and guidance.



An example of an on-street Bike Corral



This one is a car-shaped bike rack using two car spaces to provide park for more than people.

2 for 10!



Augmented Sharrows



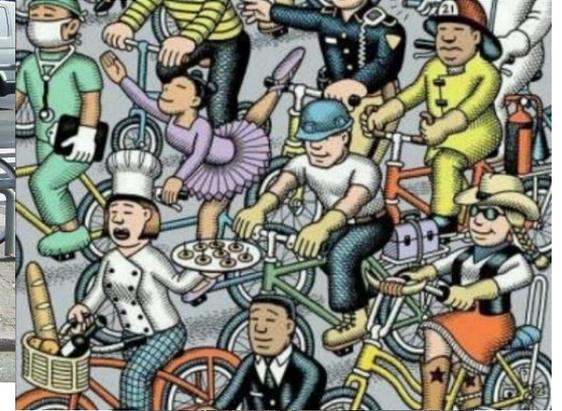
Sharrows do more than make bicycling more comfortable.

They calm/slow down motor vehicle traffic passing by roadside businesses.

More visibility can bring more people to businesses.



What's possible? What's Next? You Can Help!



Other Design Resources

The Model Design Manual for Living Streets (Los Angeles County 2011) <http://www.modelstreetdesignmanual.com/>

NACTO - Urban Bikeway Design Guide.(National Association of City Transportation Officials, 2011) <http://nacto.org/cities-for-cycling/design-guide/>

AASHTO Guide for Development of Bicycle Facilities. (American Association of State Highway Officials, 1999)
http://safety.fhwa.dot.gov/ped_bike/docs/b_aashtobik.pdf

Rails to Trails provided Draft AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities (AASHTO 2010)
<http://www.railstotrails.org/resources/documents/ourWork/trailBuilding/DraftBikeGuideFeb2010.pdf>

Some More Resources

Bicycle Boulevard Design Tools (City of Berkeley)
<http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=6650>

SANDAG Regional Bike Plan....

APBP - Bicycle Parking Design Guidelines
(Association of Pedestrian and Bicycle Professionals, 2002).
http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf