# Guide for the Development of Bicycle Facilities, 4th Edition (2012)







### **Bike Lanes**

#### **Best Use**

Major roads that provide direct, convenient, quick access to major land uses. Also can be used on collector roads and busy urban streets with slower speeds.

#### **Motor Vehicle Design Speed**

Generally, any road where the design speed is more than 25 mph.

#### **Traffic Volume**

Variable. Speed differential is generally a more important factor in the decision to provide bike lanes than traffic volumes.

#### Classification or Intended Use

Arterials and collectors intended for major motor vehicle traffic movements.

#### **Other Considerations**

Where motor vehicles are allowed to park adjacent to bike lane, provide a bike lane of sufficient width to reduce probability of conflicts due to opening vehicle doors and objects in the road. Analyze intersections to reduce bicyclist/motor vehicle conflicts.



#### **Marked Shared Lanes**

#### **Best Use**

Space-constrained roads with narrow travel lanes, or road segments upon which bike lanes are not selected due to space constraints or other limitations.

### **Motor Vehicle Design Speed**

Variable. Use where the speed limit is 35 mph or less.

#### **Traffic Volume**

Variable. Useful where there is high turnover in on-street parking to prevent crashes with open car doors.

#### Classification or Intended Use

Collectors or minor arterials.

### **Other Considerations**

May be used in conjunction with wide outside lanes. Explore opportunities to provide parallel facilities for less confident bicyclists. Where motor vehicles are allowed to park along shared lanes, place markings farther out to reduce potential conflicts with opening car doors.



Off Street Shared Use Path (Trail) independent right-of-way

#### **Best Use**

Linear corridors in greenways, or along waterways, freeways, active or abandoned rail lines, utility rights-of-way, unused rights-of-way. May be a short connection, such as a connector between two cul-de-sacs, or a longer connection between cities

# Motor Vehicle Design Speed

<u>Traffic Volume</u>

#### N/A

N/A

#### Classification or Intended Use

Provides a separated path for non-motorized users. Intended to supplement a network of on-road bike lanes, shared lanes, bicycle boulevards, and paved shoulders.

#### **Other Considerations**

Analyze intersections to anticipate and mitigate conflicts between path and roadways users. Design path with all users in mind, wide enough to accommodate expected usage. On-road alternatives may be desired for advanced rides who desire a more direct facility that accommodates higher speeds and minimizes conflicts with intersection and driveway traffic, pedestrians, and young bicyclists.



# Shared Lanes (wide outside lanes)

# **Best Use**

Major roads where bike lanes are not selected due to space constraints or other limitations

#### **Motor Vehicle Design Speed**

Variable. Use as the speed differential between bicyclist and motorists increases. Generally any road where the design speed is more than 25 mph.

#### **Traffic Volume**

Generally more than 3,000 vehicles per day.

# **Classification or Intended Use**

Arterials and collectors intended for major motor vehicle traffic movements.

# **Other Considerations**

Explore opportunities to provide marked shared lanes, paved shoulder, or bike lanes for less confident bicyclists.



# **Paved Shoulders**

#### **Best Use**

Rural highways that connect town center and other major attractors.

# **Motor Vehicle Design Speed**

Variable. Typical posted rural highway speeds (generally 40-55 mph).

#### **Traffic Volume**

Variable.

#### Classification or Intended Use

Rural roadways; inter-city highways.

# **Other Considerations**

Provides more shoulder width for roadway stability. Shoulder width should be dependent on characteristics of the adjacent motor vehicle traffic, i.e. wider shoulders on higher speed and/or higher-volume roads.



# Off Street Shared Use Path (Sidepath) adjacent to roadways

#### **Best Use**

Adjacent to roadways with no or very few intersections or driveways. The path is used for a short distance to provide continuity between sections of path on independent right-of-way.

#### **Motor Vehicle Design Speed**

The adjacent roadway has high-speed motor vehicle traffic such that bicyclists might be discouraged from riding on the roadway.

# **Traffic Volume**

The adjacent roadway has very high motor vehicle traffic volumes such that bicyclists might be discouraged from riding on the roadway.

# Classification or Intended Use

Provides a separated path for non-motorized users. Intended to supplement a network of on-road bike lanes, shared lanes, bicycle boulevards, and paved shoulders. Not intended to substitute or replace on-road accommodations for bicyclists, unless bicycle use is prohibited

# Other Considerations

Several serious operational issues are associated with this facility type.

# **NACTO**

Urban Bikeway Desian Guide



### Cycle Track

#### **Best Use**

Space that is intended to be exclusively or primarily used for bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks.

# **Motor Vehicle Design Speed**

Streets with high motor vehicle speeds.

#### **Traffic Volume**

There are no US standards for the bicyclist and motor vehicle volumes that warrant cycle tracks, however several international documents provide basic guidance.

#### Classification or Intended Use

Dedicates and protects space for bicyclists in order to improve perceived comfort and safety.

#### **Other Considerations**

Cycle tracks may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the cycle track from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or bollards.

# OTHER LOCAL FACILITIES

(Not included in AASHTO or Mobility 2035, The Metropolitan Transportation Plan



# Signed Bike Route

### **Best Use**

A roadway or bikeway designated by the jurisdiction having authority, either with a unique route designation or with Bike Route signs, along which bicycle guide signs may provide directional and distance information.

#### Other Considerations

Decision signs should include destinations, directional arrows, and distance. Travel time required to reach the destination provides bicyclists with additional information and may also be included. It is recommended that a 10 mph bicycle speed be used for travel time calculations.<sup>1</sup>



Nature Trails, Equestrian Trails

#### **Best Use**

Natural areas where constraints prevent building of paved surface trails or a more natural experience is desired.

#### <u>Classification or Intended Use</u> Hiking, horseback riding

### **Other Considerations**

Primarily natural surface trails such as crushed aggregate, mulch, or dirt.



# **Bicycle Boulevards**

#### **Best Use**

Streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority.

# **Motor Vehicle Design Speed**

Bicycle boulevards should have a maximum posted speed of 25 mph.

#### **Traffic Volume**

Bicycle boulevards should be designed for motor vehicle volumes under 1,500 vehicles per day (vpd), with up to 3,000 vpd allowed in limited sections of a bicycle boulevard corridor.

# Classification or Intended Use

Residential roadways.

#### **Other Considerations**

Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.



1. NACTO Urban Bikeway Design Guide

## **Private**

# <u>Definition</u>

Privately maintained shared use paths and sidewalks. Typically located on private property or within a subdivision and maintained by a Property Owners Association. Facilities may vary in width, length, and surface material. Occasionally these facilities connect to a larger public path (trail) system.



# Wide Sidewalks

#### **Definition**

Wide sidewalks may have a greater width than standard sidewalks to accommodate higher volumes of users. However, the facility width does not comply with AASHTO guidelines for a shared use path that safely accommodates a range of non-motorized users.