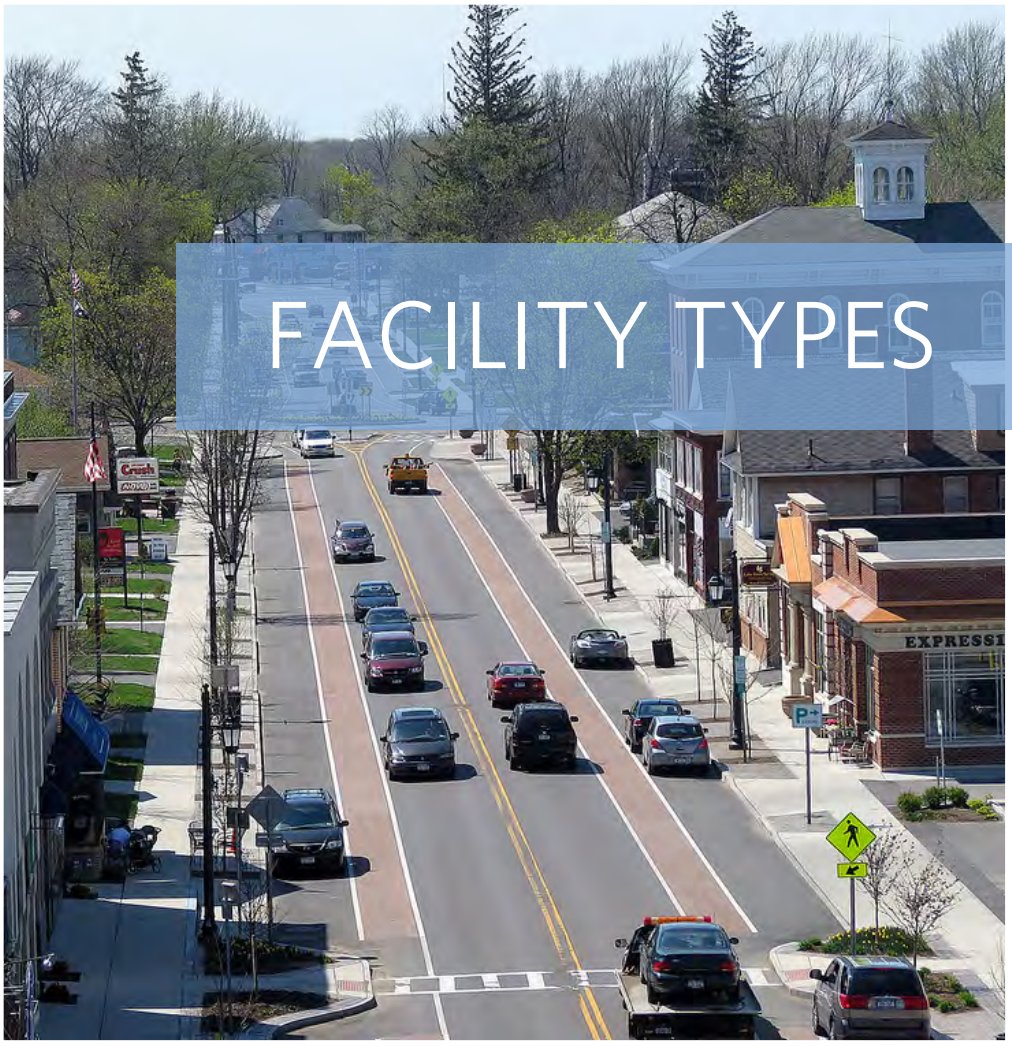
Complete Streets
Facility Types

March 2015



FACILITY TYPES

Implementing a network of Complete Streets begins with an understanding of the variety of facility types and functions associated with users beyond automobile drivers. Choosing the appropriate facility type is important to ensure safety, balance the needs of all roadway users, assure the comfort and convenience of bicyclists and pedestrians of the widest possible range of abilities, to increase the number of people choosing these modes, and to maximize the impact of the investments made by communities from increasingly limited resources and to ensure the cost-effectiveness of infrastructure.

Bicycle facilities

There are many types of bicycle facilities. The land use context, motor vehicle speed, and traffic volumes should be considered when selecting appropriate treatments. As a general rule, separation between vehicles and bicycles should increase as vehicle speed and volume increase, though on-street bicycle facilities can themselves function as a traffic calming measure. ROW constraints may limit bicycle facility selection, especially in retrofit projects, and may require trade-offs in more constricted areas. An excellent source for more information on bicycle facility types is NACTO's Urban Bikeway Design Guide, which is available to download for free at http://nacto.org/cities-for-cycling/design-guide/. In addition, AASHTO's detailed Guide for the Development of Bicycle Facilities, 4th Edition (2012) can be purchased online at https://bookstore.transportation.org/item_details.aspx?ID=1943.

Images (clockwise from main image):

Small town main street.
Source: Complete Streets, Flickr.

Additional examples:
Source: Complete Streets, Flickr; Dan Burden, pedbikeimages.org.

Signed routes

Bike route signs can offer important, affordable motorist education and traffic calming benefits and are appropriate for any roadway that provides an essential link in a bicycle system. Wayfinding signs provide directions and distances to specific destinations and route cyclists to streets with bicycle infrastructure or to neighborhood routes with low traffic volumes and speeds.

Images (clockwise from main image):

Wayfinding signage in Oak Park, IL.
Source: Paul Lippens.

Additional examples:
Source: MoBikeFed, Flickr; sfbike, Flickr; District of Columbia Department of Transportation (DDOTDC), Flickr..

Shared lanes

Streets with typically low traffic volumes and speeds, like most local residential streets, are appropriate for shared lanes. Shared lanes do not require any on-street bicycle markings or signs but can be reinforced with a bicycle-and-chevron stencil marking (called a "sharrow," see below) and/or bike route signage to better communicate a community's acceptance and encouragement of bicycling.

Images (clockwise from main image):

Example of a shared lane.
Source: Laura Sandt.

Additional examples:
Sources: National Association of City Transportation Officials (NACTO) Bikeway Design Guide; Dan Burden; NACTO Bikeway Design Guide; Complete Streets, Flickr.

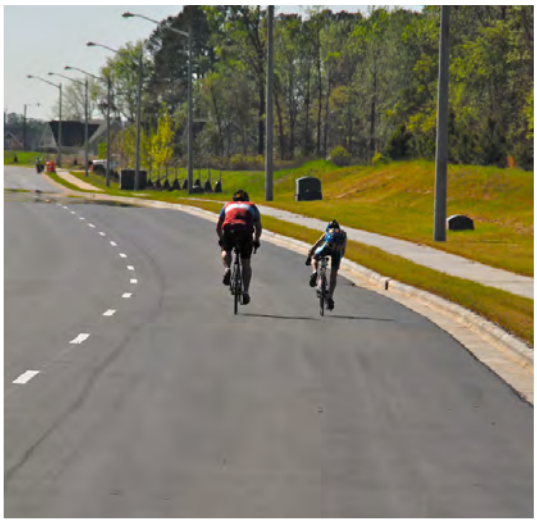
Marked shared lanes

Marked shared lanes use a sharrow marking in a general-use lane to alert drivers to the presence of bicyclists and to encourage safe bicycle use. Chevron symbols direct bicyclists to ride in the safest location within the lane. Generally, marked shared lanes are a low-cost treatment suitable for lightly traveled collectors and arterials when speeds are lower than 30-35 mph. They are also appropriate, when there is not room for bike lanes, for high-volume, low-speed corridors, typically with on-street parking, when there is not room for a designated bike lane.

Images (clockwise from main image):

Marked shared lane in Oak Park, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: W.D Vanlue, Flickr; Heather Bowden, pedbikeimages.org; Steven Vance, Flickr.



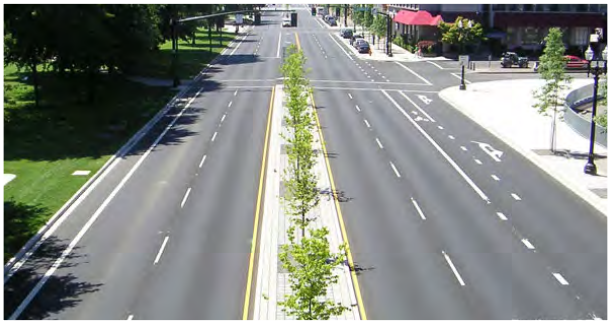
Wide curb lanes

Wide curb lanes are 13- to 15-foot wide vehicle lanes that provide space for a vehicle to pass a bike within the lane. But when bicyclists are not present, they also encourage vehicles to travel at faster speeds, especially over long distances. For this reason, wide curb lanes should be discouraged or used in combination with shared lane markings, traffic calming, and bicycle wayfinding signs.

Images (clockwise from main image):

Wide curb lanes in Chicago, IL
Source: Active Transportation Alliance.

Additional examples:
Sources: Austin Brown; Libby Thomas; City of Greenville, NC.



Bike lanes

Bike lanes are appropriate on streets with heavy traffic and along major bikeway corridors. At minimum, bike lanes should be 5-feet wide. Where possible, and especially when adjacent to parked cars, 6-foot wide lanes are preferred as they allow cyclists to ride further away from cars and avoid the "door zone" of parked cars. When no on-street parking is allowed, on-curb bike lanes can be four feet wide (excluding the gutter pan). Bike lanes are marked by a solid line separating the bike lane from the motor vehicle travel lane. Various designs and treatments exist for bike lanes as they approach an intersection. Generally, bike lanes reinforce proper roadway etiquette, raise the visibility of bicyclists, and help both bicyclists and drivers behave predictably when sharing road space. They can also serve to narrow wide roadways ,which helps to reduce vehicle speeds and increase the sense of safety for wary cyclists.

Images (clockwise from main image):

Bike lane in Kenilworth, IL.
Source: Active Transportation Alliance.

Additional examples:
Sources: Greg Griffin; Dan Burden; National Association of City Transportation Officials (NACTO) Bike Design Guide; Dan Burden.

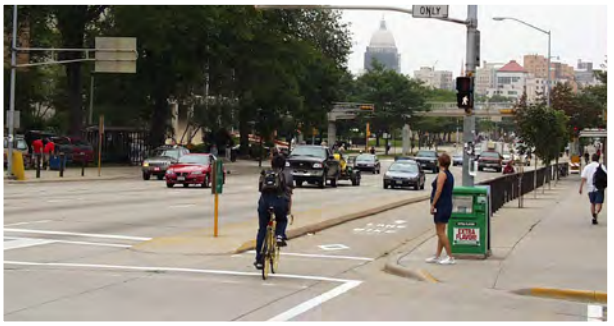
Buffered bike lanes

Buffered bike lanes use a painted (striped) buffer area to separate the vehicle travel or parking lane from the bike lane. This buffer, usually 2 to 3 feet wide, can provide sufficient separation to improve cyclists' comfort and safety on heavily traveled arterial corridors. Where there is sufficient space within the curb-to-curb area, buffered bike lanes provide a more affordable solution than a shared-use path or a cycle track. They also have the advantage of not presenting any barrier to emergency, delivery, or other irregular traffic. Bike lane buffer areas can be painted between the bike lane and the on-street parallel parking, instead of – or in addition to –the area between the bike lane and the vehicular travel lane, to separate the bike lane from the door zone.

Images (clockwise from main image):

Buffered Bike Lane in Chicago, IL.
Source: Active Transportation Alliance.

Additional examples:
Sources: National Association of City Transportation Officials (NACTO) Bike Design Guide; Paul Krueger; Dan Moser.



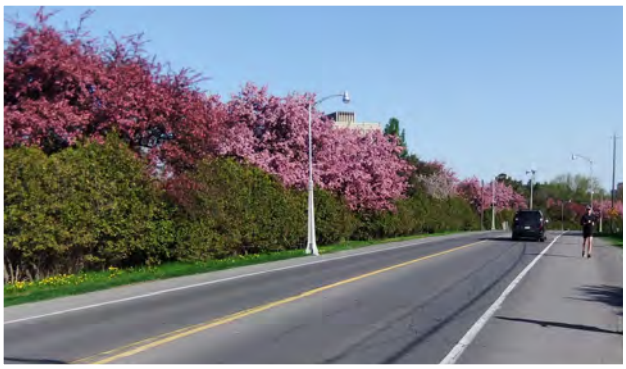
Cycle tracks

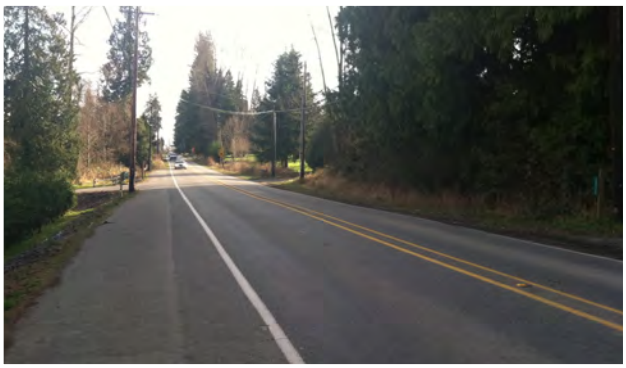
Cycle tracks, or barrier-protected bike lanes, are bike lanes that are physically separated from vehicle traffic by a curb, rail, bollards, or other element. Colored pavement, mixing zones or exclusive bike signal phasing can be used to increase safety at intersection points. Cycle tracks are typically wider than bike lanes, allowing cyclists to ride side-by-side or to pass other cyclists. On corridors with on-street parking, cycle tracks are usually placed between the parking lane and the sidewalk, using the parked cars as a physical barrier. Two-way cycle tracks – whether on one side or in the center of a roadway – require additional considerations to achieve safe crossings at driveways and intersections. Cycle tracks are most appropriate on wider high-volume roadways in urban and mixed-use settings, where bicycles are a prioritized mode and a regular feature of the transportation environment.

Images (clockwise from main image):

Cycle track in Chicago, IL.
Source: Active Transportation Alliance.

Additional examples:
Sources: National Association of City Transportation Officials (NACTO) Bike Design Guide; NACTO Bike Design Guide; Richard Masoner, Flickr; Dan Burden.





Paved shoulders

Paved shoulders are the paved areas adjacent to motor vehicle travel lanes. They can be considered for corridors that cannot accommodate 5-foot bike lanes or as an interim step for corridors where funding has not yet been secured to add bike lane markings and signs. Paved shoulders can also be considered on roads where demand for bike lanes is limited or on rural roads where shoulders are shared with pedestrians. Guidance for the installation of rumble-strips on roadway shoulders that are intended as bikeways is available from AASHTO, FHWA, and other sources.[1]

1 See the League of American Bicyclists and the Alliance for Biking and Walking report, "Bicycling and Rumble Strips" at http://www.advocacyadvance.org/docs/rumble_strips.pdf.

Images (clockwise from main image):

Paved shoulder in Palos Heights, IL.
Source: Peter Speer.

Additional examples.
Sources: Bob Boyce; SnoCo Public Works; ianhun2009, Flickr; Let Ideas Compete, Flickr.

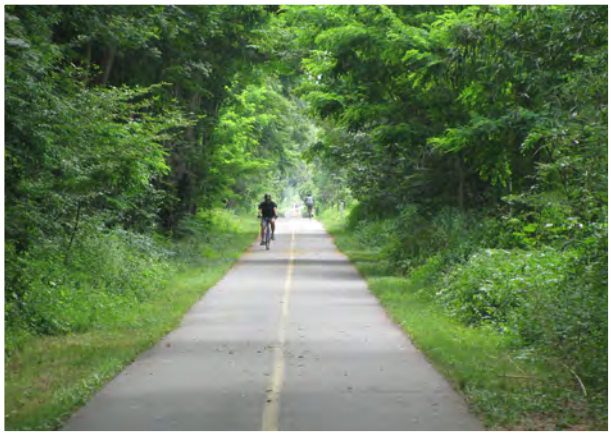
Shared use paths

Shared-use paths are off-street facilities shared with pedestrians and recreational users. When closely connected with a roadway corridor, they are often called “sidepaths,” which look and function like a sidewalk but are wide enough to accommodate bicyclists and other users simultaneously. These paths are a good option for high-speed, high-volume corridors with wider block spacing, and they provide access for users who are not comfortable bicycling in heavy traffic. Shared-use paths should be at least 8-feet wide; widths of 12 to 14 feet are preferred. Special care should be taken to design driveway and intersection crossings to reduce potential conflicts.

Images (clockwise from main image):

Shared-use bike path.
Source: Aaron Renn, Urbanophile.

Additional examples:
Sources: Carl Sundstrom; Complete Streets, Flickr; Richard Durdl.



Trails

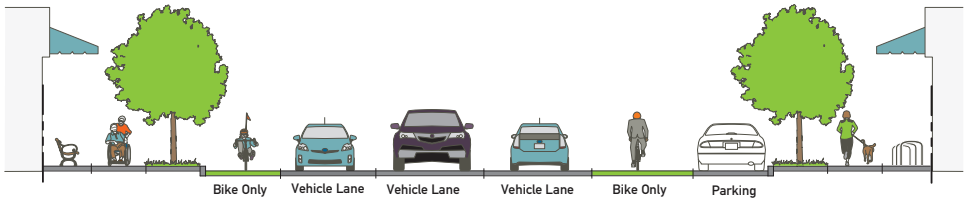
Trails are off-street facilities that can enhance network connectivity, filling in gaps where the street network is not complete or cannot accommodate bike facilities. Trails are often associated with preserved open space and recreational use, though they can and do serve transportation purposes. Typically, trails have fewer at-grade roadway crossings than shared-use paths. Trails should meet the same design criteria as shared-use paths. They function best on exclusive rights-of-way, over significant distances, such as along waterways, utility corridors, or railroad corridors. Although trails are more expensive to build than on-street facilities, they provide important connections to regional trail systems.

Images (clockwise from main image):

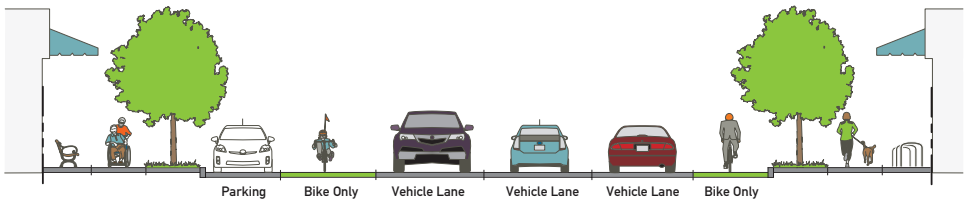
Trail in Wheeling, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Laura Sandt; Lyubov Zuyeva; Charles Hamlett.

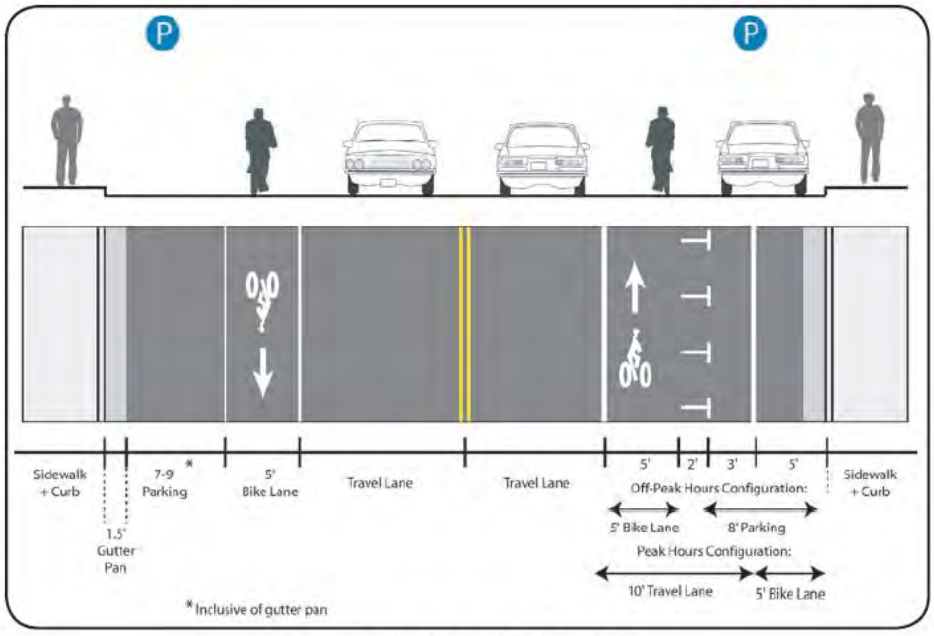
Cross Section Scale: 1 Inch = 10 Feet



AM Peak Floating Bike Lane



PM Peak Floating Bike Lane



Recommended floating bike lane design.

Floating bike lanes

Floating bike lanes can be used on roadways with higher-volume traffic during peak hours and where on-street parking is allowed only during certain periods of the day. They are a special, dynamic form of combination bicycle-parking lanes. These lanes are generally adjacent to the curb. During peak traffic hours, on-street parking is not allowed; the lanes are used only by bicyclists. At off-peak hours, the lanes are used for parking and bicyclists move to the traffic lane or to another bicycle facility on the roadway. For additional information on floating bike lanes, see http://www.lexingtonky.gov/index.aspx?page=2579. Also, see Section 1.6 of the City of Albuquerque's report on innovative bicycle design treatments at http://www.cabq.gov/planning/documents/InnovativeDesignTreatments.pdf.

Images (clockwise from main image):

Floating bike lane.
Source: Active Transportation Alliance.

Additional examples:
Sources: Steven Vance, Flickr; allisondan, Flickr; BikeCalgary, Flickr; Albuquerque Innovative Design Treatments, Gannett Fleming West, Inc, and Alta Planning and Design.

Advisory bike lanes

Advisory bike lanes are typically installed on narrow roadways with two-way vehicle traffic, low volume, and very low speeds. The lanes are marked by dashed white lines on both sides of the roadway, creating a single center lane for motor vehicles. When oncoming cars approach, the motorists move carefully into bike lanes to pass each other. For more information, see the City of Bloomington, IN handout on Advisory Bike Lanes, https://bloomington.in.gov/media/media/application/pdf/16373.pdf.

Images (clockwise from main image):

Advisory bike lane in Minneapolis, MN.
Source: Steve Clark.

Additional images:
Sources: Greg Raisman, Flickr; Dylan Passmore, Flickr; Streets MN.

Contrafolow bike lanes

Contraflow bike lanes can help to increase network connectivity in areas with many one-way streets by allowing bikes to travel against the flow of vehicular traffic. A double yellow line — along with bicycle lane and directional arrow markings, signage, and other treatments — provides separation and indicates that bicyclists will be moving against traffic. These facilities can make short but necessary connections between important bike corridors, bicycle parking facilities, and other destinations.

Images (clockwise from main image):

Contra-flow bike lane.
Source: Dylan Passmore.

Additional images:
Sources: National Association of City Transportation Officials (NACTO); NACTO (Delaware Department of Transportation); NACTO; Richard Masoner, Cyclelicious, Flickr.

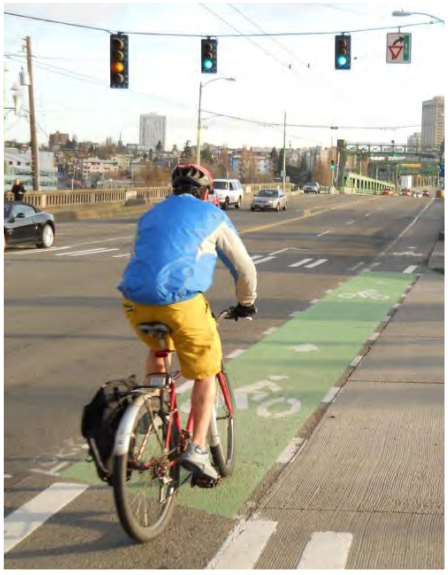
Left-side bike lanes

Left-side bike lanes can be used on one-way streets that have many conflicts on the right side, such as frequent stopping or parking,, or on boulevards where a median separates the lane from oncoming traffic. Under these circumstances, a left-side bike lane allows for fewer potential conflicts and disruptions in the flow of bicycle traffic.

Images (clockwise from main image):

Left-side bike lane in Chicago, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Dan Burden; Laura Sandt; Laura Sandt; bostonbiker.org.



Colored pavement bike lanes

Colored pavement bike lanes improve visibility and identity, indicate areas of conflict, and help reduce vehicle speeds by making the vehicular travel way appear narrower. Paint can be used to mark the lanes if the roadway surface is pretreated to avoid slipperiness; colored asphalt or a thermoplastic coating provide a higher level of traction and durability. These lanes are often used to bridge short segments where there is higher potential for vehicular or pedestrian conflicts.

Images (clockwise from main image):

Colored pavement bike lane in Boston, MA.
Source: National Association of City Transportation Officials (NACTO) Bike Design Guide.

Additional images:
Sources: NACTO Bike Design Guide; Toole Design Group; NACTO Bike Design Guide.

Double bike lanes

Double bike lanes provide two separate, side-by-side lanes in the same direction for bicycle travel. Like a buffered lane, a double bike lane can provide separation from vehicle and parking lanes; it also allows faster cyclists to pass slower ones. Double bike lanes allow for more bicyclist through-put and can be considered on corridors with high-volume bicycle use and over short segments along commuter routes.

Images (clockwise from main image):

Double bike lanes on Milwaukee Avenue in Chicago.
Source: Active Transportation Alliance.

Additional images:
Sources: Active Transportation Alliance; Jason McHuff.

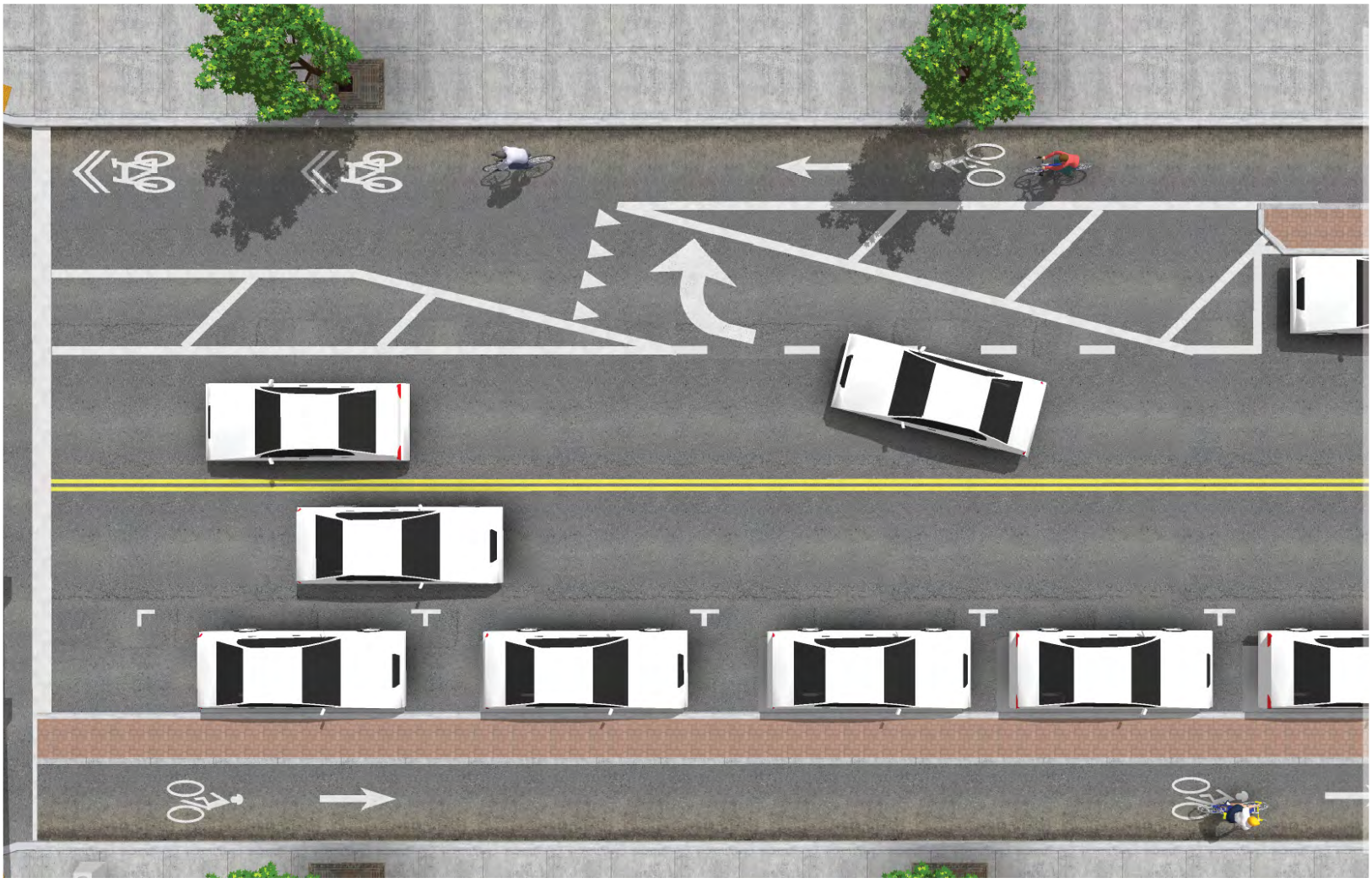
Bike-bus lanes

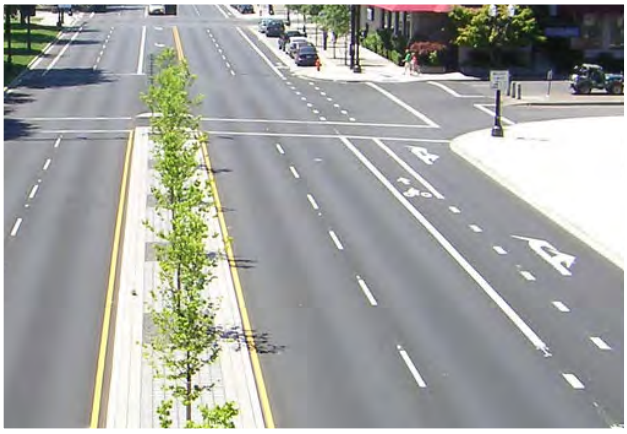
Bike-bus lanes are shared lanes limited to bus and bicycle traffic. The low traffic volume in these lanes makes them safer for bicyclists, while the dedicated lane reduces congestion delays for buses, benefiting transit users. The recommended width for these lanes is 16-feet, but can be as narrow as 14-feet in areas with lower speeds. Various treatments (markings and signage) exist to more clearly and forcefully communicate the use and function of these lanes.

Images (clockwise from main image):

Shared bus-bike lane.
Source: cycling is good for you, Flickr.

Additional images:
Sources: Cheryl & Rich; Toole Design Group, Flickr; mindfrieze, Flickr.





Mixing zones

Mixing zones are those areas where dedicated bike facilities approach an intersection with vehicular turn lanes. Designs for mixing zones aim to ensure visibility and clarity at the point where cyclists and cars must cross paths or share the roadway and to position the cyclist so as to avoid conflicts with turning vehicles. The mixing zone merges motor vehicle traffic and bicyclists in a shared space in advance of the intersection. Various designs and treatments have been developed to define and communicate the nature and function of the shared roadway space. The dedicated bikeway resumes on the far side of the crossing..

Images (clockwise from main image):

Rendering of mixed zoning.
Source: National Association of City Transportation Officials (NACTO) Bike Design Guide.

Additional images:
Sources: NACTO Bike Design Guide, SFstreetsblog; NACTO Bike Design Guide; NACTO Bike Design Guide.

Through-intersection bike lane markings

At intersections with conflicting travel movements, dashing, sharrows markings, and/or green paint can be used to indicate conflict zones and to guide bicyclists (and drivers) along the proper path. For instance, a dashed line can indicate where a right-turn-only lane requires motor vehicles to cross a bike lane. In areas where there are many conflicts, high crash rates, and/or high vehicle/bike usage, dashed lines can be supplemented with colored pavement or shared lane marking to improve visibility.

Images (clockwise from main image):

Through-intersection with bike lane markings.
Source: Shawn Turner, pedbikeimages.org.

Additional images:
Sources: National Association of City Transportation Officials (NACTO) Bike Design Guide.

Combined bike lane/turn lanes

A combined bike lane/turn lane represents one design solution to the problem of mixing zones. This design solution calls for the bike lane to simply continue within the motor vehicle right-turn lane, along the left side of the lane. Shared lane markings, bicycle stencil/arrow, and/or a dashed line are used to indicate the presence of and intended path for bicyclists who are continuing straight through the intersection. The treatment should include signage to communicate the proper positioning of bicyclists and cars within the lane.

Images (clockwise from main image):

Combined bike lane/turn lane, Vancouver.
Source: Richard Drdle.

Additional images:
Sources: NACTO Bike Design Guide.

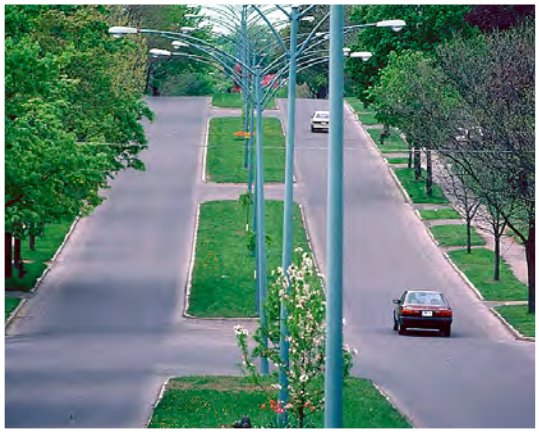
Bike boxes

Bike boxes are wide, marked/colored areas of pavement at signalized intersections, in front of automobiles queuing during the red signal phase. The vehicle stop bar is placed behind the back edge of the bike box. These facilities give bicyclists priority in crossing the intersection, allowing them to clear the intersection first. Bike boxes also increase the visibility of cyclists at intersections and reduce conflicts caused by the difference in startup speeds of bicycles and automobiles. Typically highlighted with green paint.

Images (clockwise from main image):

Bike box in Chicago, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Stephen Faust, AICP, pedbikeimages.org; Laura Sandt, pedbikeimages.org; National Association of City Transportation Officials (NACTO) Bike Design Guide.



Refuge islands

Refuge islands are covered in more detail below, under the "Select Treatments" section. It is important to note that such islands provide protection at busy crossings and can work especially well where cycle tracks and bike boulevards cross large or busy roads. The width and queuing area should be sized appropriately to accommodate both bicyclists and pedestrians.

Images (clockwise from main image):

Refuge Island in Chicago, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Dan Burden, pedbikeimages.org.

Bike boulevards and neighborhood greenways

Bike Boulevards, also known as neighborhood greenways or bicycle priority streets, are created by modifying a local street to give priority to bicyclists while maintaining local access for automobiles. Some bike boulevards replace stop signs with traffic-circles or mini-roundabouts to reduce stoppings for cyclists and automobiles. Bicycle boulevards and neighborhood greenways should include provisions for safely crossing arterial corridors that intersect the bicycle boulevard.

Images (clockwise from main image):

Example of a bike boulevard.
Source: National Association of City Transportation Officials (NACTO) Bike Design Guide.

Additional images:
Sources: John Pope, pedbikeimages.org; Adam Fukushima, pedbikeimages.org; Payton Chung, Flickr.

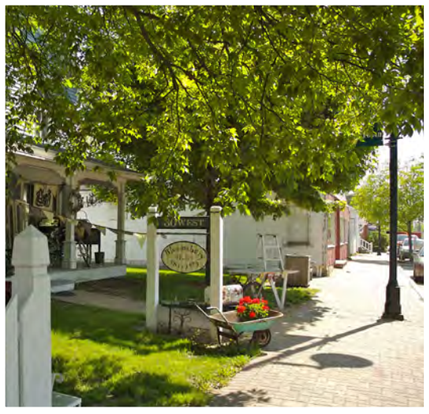
Urban greenways

An urban greenway is a linear park that extends a regional shared-use path or trail into urban/suburban bicycle networks and core districts. They can serve as a transportation link and also can be a destination for recreational bicycling, shopping, entertainment, and tourism.

Images (clockwise from main image):

Urban greenway in Chicago, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Laura Sandt, pedbikeimages.org; National Association of City Transportation Officials (NACTO) Bike Design Guide; The City Project, Flickr.



Pedestrian facilities

Sidewalks and crosswalks are the most basic of pedestrian facilities. Selection of pedestrian facilities should be based on the surrounding land use context and traffic conditions. Please see the "Select Treatments" section of this toolkit for more detailed discussion of crossing treatments.

Sidewalk zone system

The Sidewalk Zone System is a tool that planners use to ensure that pedestrian ways provide safety, comfort, and convenience and meet basic ADA requirements for a continuous, smooth, and level sidewalk, free of obstructions. The Sidewalk Zone System consists of four distinct zones:

- **Curb zone**: Curbed area between the sidewalk and the vehicle ways; usually includes drain inlets.
- **Furniture zone**: Area of the sidewalk where refuse receptacles, benches, utilities, and other objects are best placed. Also can include a narrow parkway providing access to/from cars parked along the curb.
- **Pedestrian zone**: Area of the sidewalk that should be clear for walking. The minimum continuous and unobstructed clear width of a pedestrian access route is 4 feet, exclusive of the width of the curb,[2] though additional width may be needed in specific contexts.
- **Frontage zone**: Area of the sidewalk that transitions to adjacent buildings and land uses; commonly used for quasi-public activities, such as outdoor cafes and sidewalk sales. The frontage zone also provides room for building access (opening doors) and window shopping, etc.

Dimensions and geometrics for each zone will look different in residential areas versus commercial districts. Like Complete Streets in general, pedestrian zones are designed in conjunction with and in response to surrounding land use and in order to meet the needs of all anticipated users and activities. Guidance on space allocations can be found in Chapter 3 of the Active Transportation Alliance's *Complete Streets Complete Networks* design manual: http://atpolicy.org/Design.

The *Public Rights-of Way Accessibility Guidelines* (PROWAG), proposed by the U.S. Access Board for adoption by the Department of Justice, and recommended by U.S. DOT and FHWA, offers guidance on selecting the practices for accessibility.[3]

2 See PROWAG, Chapter R3 at http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/background/revised-draft-guidelines/chapter-3.

3 See http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way.

Images (clockwise from main image):

Residential sidewalks in Berwyn, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: Laura Sandt, Pedsafe; Los Angeles County Model Design Manual for Living Streets; Eric Lowry, pedbikeimages.org; Dan Burden, pedbikeimages.org; Kaizer Rangwala, PedSafe,Flickr. .

Basic transit facilities

Transit systems make use of streets and public rights-of-way both to operate vehicles (buses, trolleys, streetcars, trains, etc.) and to provide access for transit users to and from these vehicles. While this toolkit cannot cover all aspects and elements of transit design, operations, and accessibility, we will offer some basic information on several important facilities or service types that can enhance the function and experience of transit on different types of corridors.

More information on the connection between roadway planning and design and transit can be found in Pace Suburban Bus *Transit Supportive Guidelines*.[4]

4 http://pacebus.com/guidelines/index.asp.

Images (clockwise from main image):

Integrated pedestrian and transit facility.
Source: Dan Burden, pedbikeimages.org.

Additional images:
Sources: Adam Piggott, Flickr;
Dan Burden, pedbikeimages.org.

Transit shelters

Transit shelters should be provided in any area prioritized for transit, especially in districts that are major regional destinations. Transit shelters should be designed to fully shield waiting passengers from inclement weather. While custom designs can be developed, all should meet the specifications of servicing transit agencies and should be compliant with the ADA and with the proposed standards found in the PROWAG. Shelters should be at least 5 feet deep and long enough to provide space for a minimum of three seats, plus wheelchair accessibility. Transit shelter placement should never limit the pedestrian way to less than 5 feet.

Images (clockwise from top left image):

Example of a bus shelter.
Source: Spacing Magazine, Flickr.

Additional images:
Sources: Dan Burden, pedbikeimages.org; Active Transportation Alliance; Austin Brown, pedbikeimages.org; Oran Viriyincy, Flickr.

Dedicated bus lanes

Dedicated bus lanes are travel ways reserved for bus transit; no other vehicles (except in some cases, bicycles) may use the lanes. Signal prioritization can be used to improve travel times. Enforcement of non-authorized lane use can be done with cameras mounted on the bus.

Top image: **Dedicated bus lane.**
Source: Complete Streets, Flickr.

Bottom image: **Dedicated bus lane, Seattle.**
Source: Seattle Department of Transportation, Flickr.

Protected bus lanes

Protected bus lanes use curbed buffers or bollards to separate the bus network from the other travel lanes. These lanes are often placed in the center of the street. Separated lanes encourage prioritization of transit at signals and can be shared with bicyclists. Center-located bus lanes typically have faster speeds, as they are not slowed by right-turning traffic, but they usually require limiting left turns.

Images (clockwise from main image):

Protected bus lane shared with cyclists.
Source: Active Transportation Alliance.

Additional images:
Sources: Rob Wrenn, Flickr; Sustainable Urban Transport Project (SUTP), Flickr; Dylan Passmore, Flickr; Live Streets, Flickr.

Bus rapid transit (BRT)

BRT systems typically combine separated or dedicated lane configurations with signal prioritization and improved vehicles and stations, often with a "branded" identity that distinguishes it from regular bus service. BRT vehicles have increased capacity, modernized seating configurations, and high capacity doors for loading and unloading. BRT service stops or stations resemble rail-transit stations, with level boarding platforms and the provision for the prepayment of fares in order to speed loading times.[5]

5 More information on BRT systems, including "The BRT Planning Guide" and "The BRT Standard" can be found on the Institute for Transportation and Development Policy website http://www.itdp.org/library/standards-and-guides/.

Images (clockwise from main image):

Bus rapid transit at facility.
Source: tracktwentynine, Flickr.

Additional images:
Sources: EcoMobility, Flickr; DearEdward, Flickr; Ron Burke, Active Transportation Alliance.

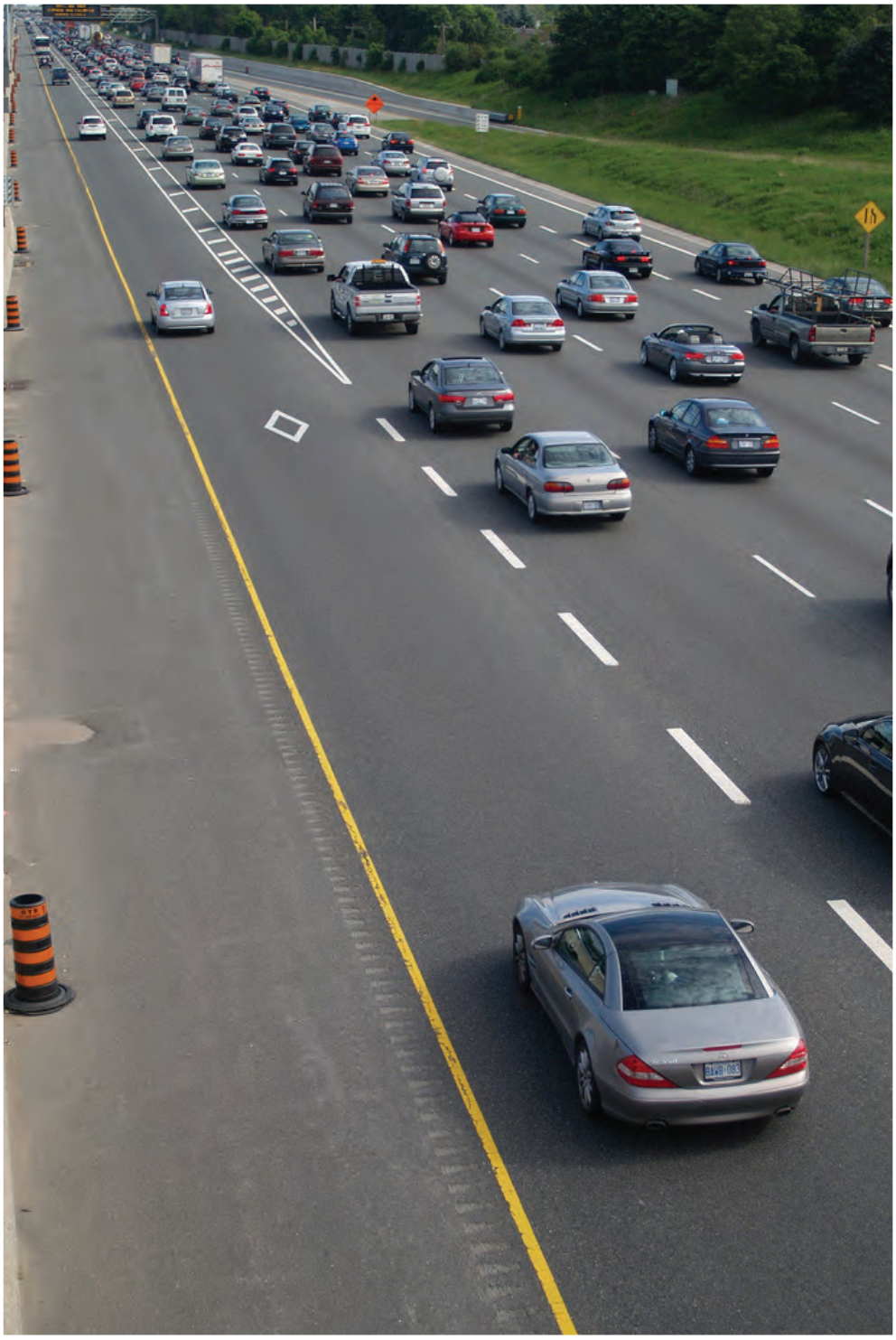
Street cars

Streetcars allow for shared use of travel with other vehicles. Streetcars typically feature improved station amenities and vehicle design, like BRT, along with the flexibility to stop more frequently and integrate with the vehicle network, like traditional bus transit. As a fixed-route service, streetcars also have a more profound impact on community land use.

Images (clockwise from main image):

Example of a light-rail street car.
Source: paulkimo9, Flickr.

Additional images:
Sources: Diego3336, Flickr; Active Transportation Alliance; cbcastro, Flickr.



HOV lanes

High-occupancy vehicle (HOV) lanes are limited to use by multi-passenger vehicles, including public buses and carpools. In some cases, these lanes also allow motorcycle use or single-occupant vehicles who pay a fee or "toll" to use the lane (HOT lanes).

Images (clockwise from main image):

High occupancy vehicle lane in Toronto, Canada.
Source: Jesse Fizscy.

Additional images:
Sources: bankbryan, Flickr.

Green lanes

A green lane is a variation of an HOV lane that allows use by an energy-efficient vehicle, including flex-fuel, hybrid, and electric cars and other non-petroleum powered vehicles. These lanes can be shared with motorcycles and, when not a limited access highway, bicycles.

Green lane sticker.
Source: California Environmental Protection Agency.

Rail transit

Rail transit typically runs outside of the roadway network, interconnecting and interacting at stations and other locations. Coordinating bicycle network access and pedestrian facilities with rail transit stations is a priority for a Complete Streets network. In addition to access at stations, consideration and provision for safe access over rail lines should be planned.

Images (clockwise from main image):

Metra train in Elgin, IL.
Source: Active Transportation Alliance.

Additional images:
Sources: vxla, Flickr; Sound Transit, pedbikeimages.org; Steven Vance, Flickr.

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