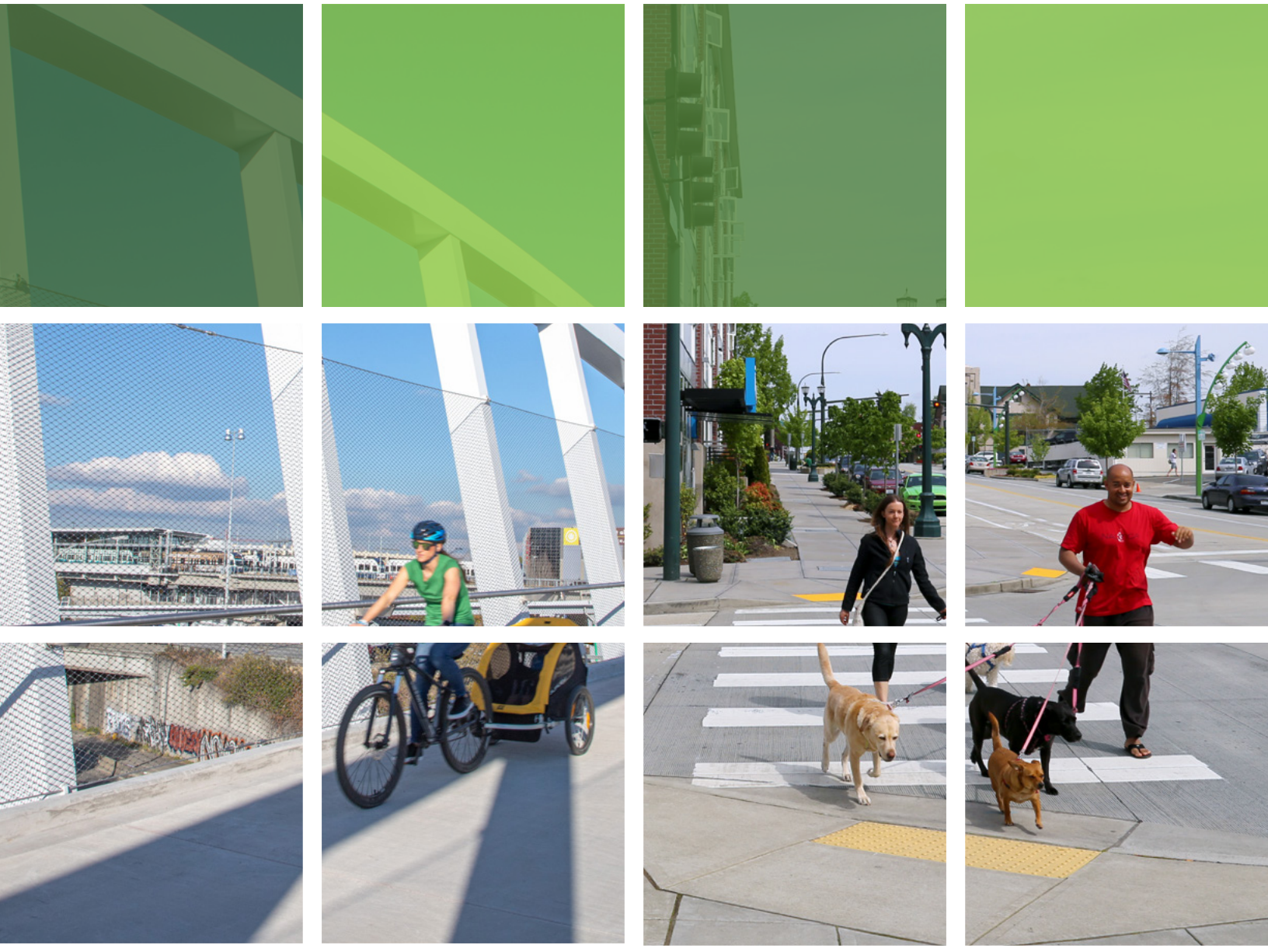
# PSRC Pedestrian and Bicycle Facility Typology

**July 2023**



Puget Sound Regional Council

# Introduction

The Puget Sound Regional Council (PSRC)'s Regional Pedestrian and Bicycle Facility Typology serves to inform PSRC's pedestrian and bicycle facility data collection and analysis work. Additionally, the typology is intended to help guide and inform local pedestrian and bicycle planning and encourage more consistent terminology and data collection across the region.

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## How to use the typology

The typology categorizes and describes a variety of facility and treatment types meant primarily for the use and/or comfort of pedestrians, bicyclists and other active transportation users. Facility categories and definitions are compiled primarily from state and national design guidance resources produced by the National Association of City Transportation Officials (NACTO), American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration (FHWA), and Washington State Department of Transportation (WSDOT).

The typology overviews both pedestrian and bicycle facility and treatment types, including street, crossing and intersection design elements. PSRC's regional pedestrian and bicycle facility data inventory (see pages 16-29 of the PSRC Regional Transportation Plan Appendix A) only includes pedestrian and bicycle facilities on minor and principal arterials and shared use paths on separate rights-of-way that provide for connections between destinations, rather than internal circulation. All other data can be collected at the local level but does not meet thresholds for inclusion in the regional inventory. The purpose of providing this additional information on other facility and treatment types is to help inform and encourage consistency in local pedestrian and bicycle planning and data collection efforts.

There are five subcategories of facility and treatment types, including pedestrian facilities, bicycle facilities, shared use facilities, street design elements, and intersection and crossing design elements. The table includes basic information on the definition and purpose for each facility type and treatment, as well as selected implementation guidance and hyperlinks to the relevant resource(s) used for the descriptions. The tables also feature illustrative images and local examples from the PSRC region for each facility and treatment type. The descriptions and guidance provided in this typology are not intended to give a complete overview of how these facilities and treatments should be implemented in the region. Instead, this information is intended to give a basic understanding of each facility and treatment type. The typology includes minimal criteria for facilities to be identified under each category, but local implementers are encouraged to go above and beyond these most basic requirements. The linked resources provide additional guidance for anyone seeking more thorough information on the design and implementation of each type of infrastructure.

[1] For purposes of this typology, the terms "pedestrian and bicycle" and "active transportation" encompass travel by walking, cycling, mobility device (wheelchair or power scooter) and small personal devices, such as foot scooters. This includes both traditional and electric assist devices.

## Pedestrian Facilities[2]

## Type[3]: Sidewalks

### Definition

The sidewalk is an accessible pathway that runs parallel to the street. The sidewalk should have a minimum cross-section of 5 feet, exclusive of other amenities, to be large enough for two people walking and/or rolling side by side. Sidewalk Zones have four components:

1. Frontage Zone
2. Pedestrian Through Zone
3. Street Furniture/Curb Zone
4. Enhancement/Buffer Zone

### Purpose

The sidewalk ensures that pedestrians (including walkers and people using wheelchairs) have a safe and adequate place to walk and/or roll. As conduits for pedestrian movement and access, they enhance connectivity and promote walking and/or rolling. Safe, accessible, and well-maintained sidewalks are a fundamental and necessary investment for urban areas and have been found to enhance general public health and maximize social capital.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Sidewalks should be 5–7 feet wide in residential settings and 8–12 feet in downtown or commercial areas.
- Sidewalk design should go beyond the bare minimum in width and amenities. Pedestrians and businesses thrive where sidewalks have been designed at an appropriate scale, with sufficient lighting, shade, and street-level activity.
- Sidewalks should be delineated by a vertical and horizontal separation from moving traffic to provide adequate buffer space and a sense of safety for pedestrians.
- On more rural or suburban roads, a walkway or shared-use path adjacent to the main roadway can serve as a substitute for a sidewalk.
- In Washington State, bicyclists are allowed to ride on sidewalks despite these facilities being designed for exclusive pedestrian use. Bicyclists must yield to pedestrians when using a sidewalk or crosswalk. (RCW 46.61.261)

### Local Examples

- Colby Ave north of Pacific Ave in Everett, WA.
- Greenwood Ave N, between NE 117th and NE 125th St, in Seattle.
- 5th Ave in Downtown Seattle.

[2] PSRC's regional inventory only includes information for sidewalks on minor and principal arterials. Data for sidewalk facilities on local and collector roads may be collected at the local level.

[3] All referenced definitions from the "Bicycle Facilities" and "Pedestrian Facilities" sections can be found in NACTO's Urban Bikeway Design Guide or Urban Street Design Guide.

## Bicycle Facilities[4]

**Mapping Category: High Separation**

# Type: Protected Bike Lanes

### Definition

Protected bike lanes are physically separated from motor traffic and distinct from the sidewalk. They provide space that is intended to be exclusively or primarily used for bicycles and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. Protected bike lanes may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level. Protected bike lanes are also known as Cycle Tracks, Separated Bikeways, and On-Street Bike Paths.

### Purpose

By separating bicyclists from motor traffic, protected bike lanes can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public.health and maximize social capital.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Protected bike lanes are most helpful on streets with parking lanes, high levels of bicyclist stress, and/or high volumes of bicycle travel.
- Protection can come in the form of raised medians, on-street parking, flexible delineators, bollards, or grade separation.
- Vertically separated protected bike lanes are called Raised Bike Lanes. These may also allow for both one and two-way travel.
- Conflicts at intersections can be mitigated using parking lane setbacks, bicycle markings through the intersection, and other signalized intersection treatments.

These are considered "**All Ages and Abilities**" facilities.[5]

### Local Examples

- 2nd Ave in Downtown Seattle from Denny Way to South Main St.
- Raised Bike Lane on East 64th Street in Tacoma.
- Green Lake Outer Loop in Seattle.
- Westlake Ave N in Seattle.

[4] PSRC's regional inventory only includes information for bicycle facilities on minor and principal arterials. Data for bicycle facilities on local and collector roads may be collected at the local level.

[5] The Designing for All Ages & Abilities Guide produced by NACTO further explains the design conditions needed for facilities to be identified as "All Ages and Abilities".

# Type: Striped Bike Lanes

## Definition

A striped bike lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. These are also referred to as conventional bike lanes or simply bike lanes.

## Purpose

Striped bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions. They also facilitate predictable behavior and movements between bicyclists and motorists.

## Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Striped bike lanes are most helpful on streets with ≥ 3,000 motor vehicle average daily traffic and with a posted speed ≥ 25 mph and/or streets with high transit vehicle volumes.
- If sufficient space exists, separation should be provided between bike lane striping and parking boundary markings to reduce door zone conflicts.
- Varieties of striped bike lanes include Contra-Flow Bike Lanes and Left-Side Bike Lanes.

Can be considered an "**All Ages and Abilities**" facility when vehicle volumes and speeds are low.

## Local Examples

- Washington Ave in Downtown Bremerton from 5th St to Manette Bridge.
- Washington Blvd between SR 104 and Central Ave in Kingston.
- Hoyt Ave between Pacific Ave and Everett Ave in Everett.

## Bicycle Facilities

**Mapping Category: Moderate Separation**

# Type: Buffered Bike Lanes

### Definition

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.

### Purpose

Buffered bike lanes provide greater distance between motor vehicles and bicyclists than conventional bike lanes and appeal to a wider cross-section of bicycle users. They can also encourage bicyclists to ride outside of the door zone when the buffer is between parked cars and the bike lane.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- These are typically applied anywhere a standard bike lane is being considered or on streets with extra width.
- The buffer shall be marked with 2 solid white lines. If at or wider than 3 feet, these should have interior diagonal cross hatching or chevron markings.

Can be considered an "**All Ages and Abilities**" facility when vehicle volumes and speeds are low.

### Local Examples

- SE Newport Way in Bellevue from Somerset Blvd SE to Factoria Blvd SE.
- Roy St between 1st Ave N and 5th Ave N in Seattle.
- Madison St between the Interurban Trail and Sievers-Duecy Blvd in Everett, WA.

## Type: Shared Lane Markings

### Definition

Shared Lane Markings, or "sharrows," are road markings used to indicate a shared lane environment for bicycles and automobiles.

### Purpose

Among other benefits, shared lane markings reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and may be configured to offer directional and wayfinding guidance.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- The shared lane marking is a pavement marking with a variety of uses; it is not a facility type and should not be considered a substitute for bike lanes, cycle tracks, or other separation treatments where these types of facilities are otherwise warranted or space permits.
- Generally, shared lane marking are not appropriate on streets with a speed limit above 35 mph.

### Local Examples

- SE Newport Way in Bellevue from Somerset Blvd SE to Factoria Blvd SE.
- Roy St between 1st Ave N and 5th Ave N in Seattle.
- Madison St between the Interurban Trail and Sievers-Duecy Blvd in Everett, WA.

## Bicycle Facilities

**Mapping Category: No Separation**


# Type: Neighborhood Greenways

### Definition

Neighborhood Greenways, sometimes called Bicycle Boulevards, are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. These streets can be enhanced using a range of design treatments tailored to existing conditions and desired outcomes. These are commonly known as Neighborhood Greenways in the Pacific Northwest, but terminology varies within the region

### Purpose

Neighborhood Greenways discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Neighborhood greenways should be considered where local streets offer a continuous route along low-traffic streets and should follow a desire line for bicyclists.
- Neighborhood greenways should meet strict targets of fewer than 3,000 motor vehicles per day (1,500 preferred) and a speed of no more than 25 mph.
- Neighborhood Greenways should utilize vertical and horizontal speed control elements for traffic calming.

Can be considered an "**All Ages and Abilities**" facility when vehicle volumes and speeds are low.

### Local Examples

- North Seattle Neighborhood Greenway.
- Rainer Valley Neighborhood Greenway in South Seattle.

## Shared Use Facilities[6]

**Mapping Category: Shared Use**

## Type: Shared Use Paths[7]

### Definition

Shared use paths (SUPs) are linear corridors that are physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Path users are generally active transportation users and may include, but are not limited to, bicyclists; pedestrians (including walkers and people using wheelchairs); skaters and scooter users.

### Purpose

SUPs can serve a variety of purposes, including providing shortcuts that increase route directness; commuting routes between residential areas and job centers or schools; and recreational opportunities. Shared use paths can also provide active transportation access to areas that are otherwise served only by limited-access highways.

### Additional Guidance

- Reference: Guide for the Development of Bicycle Facilities. (page 5-1 of the linked guide.)
- Typically, widths range from 10-14 ft, with 8 feet. acceptable in some defined circumstances.
- Sidepaths (p. 4-7) are a specific type of shared use path that run adjacent to the roadway. Sidepaths should satisfy the same design criteria as shared use paths in independent rights-of-way.
- Hard, all-weather pavement surfaces are generally preferred, but unpaved surfaces may be appropriate in some circumstances. Unpaved pathways should be constructed of materials that are firm and stable.

These are considered "**All Ages and Abilities**" facilities.

### Local Examples

- Interurban Trail in King, Snohomish and Pierce counties.
- Lowell Riverfront Trail in Everett.
- Burke Gilman Trail from Ballard to the City of Bothell.
- Chief Sealth Trail in Seattle.
- Foothills Trail in Pierce County.
- Finn Hill Rd between Olhava Way and Rhododendron Ln in Poulsbo.

[6] PSRC's regional inventory only includes information for shared use paths that provide for connections between destinations, rather than internal circulation. Data for other shared use paths may be collected at the local level.

[7] Definitions for these are sourced from the Guide for the Development of Bicycle Facilities (AASHTO, 2012) and images are sourced from the Small Town and Rural Design Guide (FHWA, 2016).

## Type: Paved Shoulders

### Definition

Paved shoulders are most often used as shared-use facilities on rural roadways. They differ from bike lanes and other shared use facilities in that they are not exclusively travel lanes.

### Purpose

Adding or improving paved shoulders on busier or higher-speed rural roads can improve mobility and comfort for bicyclists and pedestrians and reduce crashes.

### Additional Guidance

- Reference: Guide for the Development of Bicycle Facilities.(page 4-7 of the linked guide.)
- The best use of paved shoulders as bicycle and pedestrian facilities is on rural roadways that connect town centers and other major attractors.
- Paved shoulders should be at least 4 ft wide. Additional shoulder width is desirable on roadways with high motor vehicle speeds (over 50 mph); high numbers of large vehicles; or if static obstructions exist.
- Shoulders are not an exclusive active facilities and may also be used by parked or slow-moving vehicles.
- Rumble strips are not recommended on shoulders used by bicyclists unless there are minimum clear paths for bicycle travel.

### Local Examples

- Lowell Snohomish River Rd in Snohomish County.
- Vashon Island Highway.

## Type: Advisory Shoulders

### Definition

Advisory shoulders create usable shoulders for bicyclists and pedestrians on roadways that are otherwise too narrow to accommodate one. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic. Advisory Shoulders are also known as Edge Lane Roads or Advisory Bike Lanes.

### Purpose

Roads with advisory shoulders accommodate low to moderate volumes of two-way motor vehicle traffic and provide a prioritized space for bicyclists and pedestrians with little or no widening of the paved roadway surface.

### Additional Guidance

- Reference: Small Town and Rural Design Guide.
- These function well within rural and small town traffic and land use contexts.
- Advisory shoulders are a new treatment type in the United States and no performance data has yet been collected to compare to the substantial body of international experience.
- In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the Manual on Uniform Traffic Control Devices (MUTCD).

### Local Examples

- Elk Hill Dr in Everett, Silver Lake Dr in Everett.

[8] Definition and image were sourced from the Small Town and Rural Design Guide (FHWA, 2016).

# Type: Curb Extensions

## Definition

Curb extensions are horizontal speed control elements that visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians while increasing the available space for street furniture, benches, plantings, and street trees. Curb extension is an umbrella term that encompasses several different treatments and applications, including Gateways, Pinchpoints, Bus Bulbs and Chicanes.

## Purpose

Curb extensions serve as a visual cue to drivers that they are entering a neighborhood street or area.

## Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Gateways, or Bulb-outs, are curb extensions installed at the entrance to a residential or low-speed street.
- Pinchpoints, or Chokers, are applied midblock to slow traffic speeds and add public space.
- Bus Bulbs are curb extensions that align the bus stop with the parking lane.
- Chicanes are offset curb extensions that slow traffic speeds considerably.

## Local Examples

- N 41st St and Stone Way N in Seattle.
- Colby Ave at Hewitt Ave in Everett, WA.


# Type: Vertical Speed Control Elements

## Definition

Vertical speed control elements manage traffic speeds and reinforce pedestrian-friendly, safe speeds through grade separation treatments. These include Speed Humps, Speed Tables, Speed Cushions, and Raised Crossings and Intersections.

## Purpose

Vertical speed control has been shown to slow traffic speeds, creating a safer and more attractive environment.

## Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Streets with speed limits of 30 mph and under are good candidates for vertical speed control.
- Vertical speed control elements should be applied where the target speed of the roadway cannot be achieved with conventional traffic calming elements.
- Vertical speed control elements are most effectively implemented at a neighborhood level, rather than by request on a single street.

## Local Examples

- 9th Ave SW between SW Portland St and SW Henderson St in Seattle.

## Type: Bicycle Parking[9]

### Definition

The wide variety of bicycle parking devices available is generally grouped into two classes, long-term and short-term. The needs for each differ in terms of their design and level of protection. In many locations, a combination of short- and long-term options may be appropriate.

### Purpose

Providing bicycle parking facilities is an essential element in a multi-modal transportation system. Unlike motor vehicles, most bicycles are not equipped with locks or anti-theft devices and do not require a key to operate. In addition to helping prevent theft, installing well-designed bicycle parking facilities in appropriate locations can contribute to a more orderly and aesthetic appearance of sidewalks and building sites.

### Additional Guidance

- Reference: Guide for the Development of Bicycle Facilities.(page 6-1 of the linked guide.)
- Bicycle parking should be provided at all public facilities, should be incorporated into roadway and streetscape projects, and should be an integral aspect of land development and redevelopment processes.
- Bicycle parking should, therefore, be conveniently placed in a location that is highly visible and as close to the building entrance as practical.
- Bicycle parking should be easy to locate, simple to use, and able to accommodate different types of bikes.

### Local Examples

- Everett Station.
- University of Washington, Seattle.

[9] Definitions for these are sourced from the Guide for the Development of Bicycle Facilities (AASHTO, 2012) and the image was sourced from the Association of Pedestrian and Bicycle Professionals (APBP) Bicycle Parking Guidelines (APBP, 2010).

# Intersection and Crossing Design Elements[10]

## Type: Crosswalks and Crossings[11]

### Definition

Marked crosswalks should be applied where pedestrian traffic is anticipated and encouraged. Where vehicle speeds and volumes are high and pedestrian access is expected at regular intervals, signalized crossings preserve a safe walking environment. Where anticipated pedestrian traffic is low or intermittent, or where vehicle volumes are lower and pedestrian crossings shorter, designers may consider the use of crossing treatments such as medians, hybrid or rapid flashing beacons, or raised crossings and intersections. Crossings can also be applied midblock where there is significant pedestrian travel.

### Purpose

Safe and frequent crosswalks support a walkable urban environment. While application of crosswalk markings alone is not a viable safety measure in all situations, crosswalks benefit and guide pedestrians.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- On streets with higher volume (>3000 ADT), higher speeds (>20 mph), or more lanes (2+), crosswalks should be the norm at intersections.
- At schools, parks, plazas, senior centers, transit stops, hospitals, campuses, and major public buildings, marked crosswalks may be beneficial regardless of traffic conditions.
- Pedestrian safety islands and median refuge islands can be applied to reduce exposure time.
- Raised crossings can increase visibility, improve yielding behavior, and create a safer crossing environment.
- Active warning beacons can be used to enhance active transportation users visibility.
- Title II of the Americans with Disabilities Act (ADA) requires that newly constructed or altered street level pedestrian walkways contain curb ramps or other sloped areas at intersections to streets, roads, or highways. (28 CFR 35.151(i)). [12]

### Local Examples

- Aurora Ave N and 92nd Street in Seattle.
- Pike Street and 1st Ave in Downtown Seattle.
- 46th Ave S and S Henderson St in Seattle.
- RRFBs at Hewitt Ave/Pine St in Everett.

[10] Some of the facility types and treatments included in the typology currently require Interim Approval by the FHWA. More information is available here.

[11] For purposes of this typology, this definition only refers to marked crosswalks and crossings.

[12] More information on ADA requirements for curb ramps available here: U.S. Department of Justice. (2010). 2010 ADA Standards for Accessible Design.

## Type: Bicycle Intersection Treatments

### Definition

The configuration of a safe intersection for bicyclists may include elements such as color, signage, medians, signal detection, and pavement markings. The level of treatment required for bicyclists at an intersection will depend on the bicycle facility type used, whether bicycle facilities are intersecting, the adjacent street function and land use.

### Purpose

Designs for intersections with bicycle facilities should reduce conflict between bicyclists (and other vulnerable road users) and vehicles by heightening the level of visibility, denoting a clear right-of-way, and facilitating eye contact and awareness with competing modes. Intersection treatments can resolve both queuing and merging maneuvers for bicyclists, and are often coordinated with timed or specialized signals.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Intersection treatments for bicycles can include:
  - Bike boxes
  - Intersection crossing markings
  - Two-stage turn queue boxes
  - Through bike lanes
  - Combined bike lane/turn lane
  - Protected bike lane intersection approach
  - Protected Intersections
  - Leading Bike Intervals

### Local Examples

- South 21st St & Fawcett Ave in Tacoma.
- Pacific Ave and Burwell St in Bremerton.

## Type: Pedestrian Signals

### Definition

There are many types of pedestrian signals. In general, fixed-time signals are the standard in urban areas for reasons of regularity, network organization, predictability, and reducing unnecessary delay. In certain, less-trafficked areas, actuated signals (push buttons, loop detectors) may be appropriate.

### Purpose

Managing traffic signals is important because signals directly impact the quality of the transportation system. While geometric enhancements to a corridor may demarcate space for active transportation users and buses to create a more multi-modal cross-section, signal timing influences delay, compliance, safety, and mode choice.

### Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Pedestrian signals at intersections can include:
  - Fixed and actuated signalizations
  - Leading Pedestrian Intervals (LPI)
  - Hybrid beacons (including HAWK signals)
  - Pedestrian scrambles
  - Accessible Pedestrian Signals (p. 1330-27)

### Local Examples

- Pedestrian signal at 18000 Aurora Ave in Shoreline.
- HAWK signal at 21000 68th Ave S (W Valley Highway) in Kent.


# Type: Bicycle Signals

## Definition

Bicycle signals and beacons facilitate bicyclist crossings of roadways. Bicycle signals are traditional three lens signal heads with green-yellow and red bicycle stenciled lenses that can be employed at standard signalized intersections and Hybrid Signal crossings. Flashing amber warning beacons are utilized at unsignalized intersection crossings. Push buttons, signage, and pavement markings may be used to highlight these facilities for both bicyclists and motorists.

## Purpose

Bicycle signals make crossing intersections safer for bicyclists by clarifying when to enter an intersection and by restricting conflicting vehicle movements.

## Additional Guidance

- Reference: NACTO's Urban Bikeway Design Guide.
- Determining which type of signal or beacon to use for a particular intersection depends on a variety of factors. These include speed limits, average daily traffic (ADT), anticipated crossing traffic, and the configuration bicycle facilities.
- Signal detection and actuation is critical for alerting the signal controller of bicycle crossing demand on a particular approach.
- Bike scrambles are also sometimes used to mitigate intersection conflicts.

## Local Examples

- 2nd Ave in Downtown Seattle.
- 6th St and Washington Ave in Bremerton.
- Bike signal at California St/Broadway in Everett.

## Intersection and Crossing Design Elements[10]

### Type: Pedestrian and Bicycle Bridges and Tunnels[13]

#### Definition

Pedestrian and bicycle bridges and underpasses separate pedestrians and bicyclists from vehicular traffic and allow for safe, uninterrupted pedestrian and bicycle traffic flow. They are most appropriate for crossing a freeway or other high-speed, high-volume arterial street or rail-line.

#### Purpose

Pedestrian and bicycle bridges and tunnels are sometimes appropriate to improve street or route connectivity or provide routes over or under roadways. Overpasses and underpasses are most appropriate when people would otherwise be forced to cross freeways or major multi-lane, high-speed arterial streets to travel. There are also situations where pedestrian signals are not warranted and/or feasible and overpasses and underpasses may be useful during these times.

#### Additional Guidance

- Reference: Safe Routes to School Guide.
- Bridges are best suited in areas where the topography allows for a structure without ramps.
- Underpasses work best when they can be designed to feel open, well-lit, and safe.
- Both bridges and underpasses should be accessible to all pedestrians, including those in wheelchairs.

#### Local Examples

- John Lewis Memorial Bridge in Seattle.
- Union Street Pedestrian Bridge in Seattle.
- Amgen Helix Pedestrian Bridge in Seattle.
- Grand Ave Park Bridge in Everett.

[13] Definition was sourced from the National Center for Safe Routes to School (SRTS) Guide (SRTS, 2015).

## References


- American Association of State Highway and Transportation Officials. (2012). Guide for the Development of Bicycle Facilities, Fourth Edition.
- Federal Highway Administration. (2016). Small Town and Rural Design Guide.
- National Association of City Transportation Officials. (2017). Designing for All Ages & Abilities.
- National Association of City Transportation Officials. (2012). Urban Street Design Guide.
- National Association of City Transportation Officials. (2014). Urban Bikeway Design Guide.
- Safe Routes to School. (2015). Safe Routes to School Guide.
- Washington State Department of Transportation. (2022). Design Manual.


## Additional Guidance


- Association of Pedestrian and Bicycle Professionals. (2010). Bicycle Parking Guidelines, Second Edition.
- Federal Highway Administration. (2019). Bikeway Selection Guide.
- Federal Highway Administration. (2015). Separated Bike Lane Planning and Design Guide.
- National Association of City Transportation Officials. (2019). Don't Stop at the Intersection.
- Washington State Department of Transportation. (2022). Designing for Level of Traffic Stress.

### American with Disabilities Act (ADA) Information

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