



# NORTH CAROLINA TERMINOLOGY FOR ACTIVE TRAVEL

A Guide to Bicycle and Pedestrian Infrastructure and Networks



OCTOBER 2015

## NC TERMINOLOGY FOR ACTIVE TRAVEL

This glossary was created for NCDOT's Division of Bicycle and Pedestrian Transportation by the Institute for Transportation Research and Education. The Bicycle and Pedestrian Program at ITRE focuses on improving the walk- and bike-ability of communities through research, technical assistance, dissemination of current best practices in facility design, and training. ITRE would like to acknowledge John Vine-Hodge and Bryan Poole at NCDOT for their oversight and direction on the project.

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## NC TERMINOLOGY FOR ACTIVE TRAVEL

**N**on-motorized terms are similar and can often be confused and/or misused. This glossary is intended as a resource for transportation engineers, planners, advocates, and citizens. Its primary purpose complements the work completed through North Carolina's Pedestrian and Bicycle Infrastructure Network (PBIN), a geodatabase of non-motorized facilities in North Carolina, and can be used as a reference when documenting and planning for non-motorized assets. This glossary also gives clarity to conversations regarding bicycle and pedestrian infrastructure.

Primary resources for the terminology and definitions in this document are taken from official guidance documents, which should be consulted for more detailed descriptions and direction regarding implementation. These documents include: the NC Pedestrian and Bicycle Infrastructure Network Data Catalog (June 2015), NC Complete Streets Planning and Design Guidelines (July 2012), PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System (2013), BIKESAFE: Bicycle Countermeasure Selection System (September 2014), American Association of State and Highway Transportation Officials Guide for the Development of Bicycle Facilities (2012), Michigan Department of Transportation Bicycle and Pedestrian Terminology (March 2014), and the National Association of City Transportation Officials Urban Bikeway Design Guide (March 2014) and Urban Street Design Guide (October 2013).

**The terms in this document are not an endorsement of the designs, facilities or treatments.**

# TABLE OF CONTENTS

Access Point.....	6	Buffered Bike Lane.....	13
Accessible Pedestrian Signal (APS).....	6	Contra-Flow Bike Lane.....	13
Advance Yield/Stop Lines.....	6	Crossing Island.....	14
Automated Pedestrian Detection.....	7	Crossing Improvement – Unspecified.....	14
Bench.....	7	Crosswalk.....	14
Bicycle.....	7	Curb Extension.....	14
Automated Pedestrian Detection.....	7	Curb Radius (reduction).....	15
Bicycle Detection.....	8	Curb Ramp (upgrade).....	15
Bicycle Boulevard.....	8	Cycle Track.....	15
Bicycle Corral.....	8	Detectable Warning.....	15
Bicycle Facilities.....	9	Footpath.....	16
Bicycle Lane.....	9	Grade-Separated Crossing.....	16
Bicycle Lockers.....	9	Green Zone.....	16
Bicycle Parking.....	10	Hazard Identification.....	17
Bicycle Route.....	10	High-Visibility Crosswalk.....	17
Bicycle Signal.....	10	Implementation Method.....	17
Bicycle Zone.....	11	Leading Pedestrian Interval.....	17
Bike-Activated Signal Detection.....	11	Lighting.....	18
Bike Box.....	11	Median Island.....	18
Bollards.....	12	Marking.....	18
Bike Maintenance Facility.....	12	Mid-Block Crossing.....	19
Bike Share.....	12	New Construction.....	19
Buffer.....	13	Overpass.....	19

# TABLE OF CONTENTS

Parking/Transit Stop Zone .....	20	Trailhead.....	27
Paved Shoulder.....	20	Signage.....	27
Paving Treatments.....	20	Sidewalk.....	27
Pedestrian.....	21	Unimproved Trail.....	28
Pedestrian Signal Head.....	21	Underpass.....	28
Pedestrian Hybrid Beacon (PHB).....	21	Widening.....	29
Rail Trail .....	22	Wayfinding.....	29
Protected Bike Lane.....	22		
Rail-with-Trail .....	22		
Raised Crosswalk .....	22		
Reallocation .....	23		
Rectangular Rapid Flashing Beacon (RRFB).....	23		
Repave .....	23		
Restripe.....	24		
Resurface .....	24		
Rumble Strips .....	24		
Road Diet .....	24		
Shared Lane Marking (SLM).....	25		
Separated Bike Lane .....	25		
Shared Lane .....	25		
Shared Use Path .....	26		
Shared Use Path Signal.....	26		
Sidepath.....	26		

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Access Point

Locations other than at-grade street intersections where a bicyclist or pedestrian can enter or exit a **Shared Use Path**.

## Accessible Pedestrian Signal (APS)

Devices that communicate information about the "walk" and "don't walk" intervals at signalized intersections in non-visual formats to pedestrians who are blind or have low vision.



## Advance Yield/Stop Lines

A pavement marking placed 20 to 50 feet prior to the **Crosswalk** intended to improve visibility of pedestrians to motorists. It can help reduce the likelihood of a multiple-threat crash at an unsignalized **Mid-Block Crossing**, as the line encourages drivers to stop back far enough so a pedestrian can see if a second motor vehicle is approaching in the far lane and be able to take evasive action. It should be supplemented with appropriate signage per the MUTCD.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Automated Pedestrian Detection

Devices that can determine when a pedestrian enters a detection zone, such as the approach to a **Crosswalk**, and automatically send a signal to a **Pedestrian Signal Head** to initiate a WALK phase. Some devices also determine when a pedestrian needs additional crossing time.

## Bench

A structure for sitting often found near pedestrian or bicycle facilities.



## Bicycle

A pedal-powered vehicle upon which the human operator sits. The term "bicycle" can include two- or three-wheeled human powered vehicles. For planning and design purposes, this term is more broadly defined than the legal definition.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Bicycle Boulevard

A segment of street, or series of contiguous street segments, that has been modified to accommodate through-bicycle traffic and minimize through- motor traffic. Another term for a bicycle boulevard is a "neighborhood greenway." There are a variety of facilities that can be used to designate a boulevard including: **Signage**, **Shared Lane Markings**, partial- or full-street closures, mini-circles, and other streetscape improvements.

## Bicycle Corral

A large rack designed for parking multiple bicycles. Usually placed in high- demand areas, it typically occupies the equivalent space of one or more motor vehicle parking spaces. See also: **Bicycle Parking**



## Bicycle Detection

A device at a traffic signal that detects bicyclists and alerts the signal control box of a bicyclist's presence and need to cross.



# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Bicycle Facilities

A general term denoting infrastructure on which a bicyclist may travel, such as **Bicycle Lanes** or **Protected Bike Lanes**.

## Bicycle Lane

A marked travel lane along a portion of the roadway that has been designated for preferential or exclusive use for bicyclists via pavement markings in compliance with the MUTCD. It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless it is marked and designated as a **Contra-Flow Bike Lane**.



## Bicycle Lockers

A secure bicycle storage container with a capacity to store one to two bicycles each. Typically a series of lockers are clustered in a designated area to provide longer-term bicycle parking.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Bicycle Parking

A rack or object provided specifically for the purpose of supporting and enabling a bicycle to be secured when not in use.

## Bicycle Route

A segment of road identified as a path of travel for bicyclists between destinations which may have directional and informational **Signage** and **Markings**. While these routes are identified for use by bicyclists, they are not necessarily exclusive to bicycle transportation. Routes may exist at the national, state, county and local level.



## Bicycle Signal

A traffic control device that assigns right-of-way to bicyclists and controls bicycle movements in mixed traffic to reduce conflict with motor vehicles and/or pedestrians.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Bicycle Zone

An area in the public right of way reserved for bicycling facilities.

## Bike-Activated Signal Detection

Detection at intersections designed to accommodate bicyclists either actively or passively. Active detection requires the bicyclist to activate the signal phase through a pushbutton. See [Bicycle Detection](#)



## Bike Box

A designated area of a traffic lane at the approach to a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Bike Maintenance Facility

A stand, kiosk or repair station provided to the public for self-service bicycle maintenance.



## Bike Share

A service in which a fleet of bicycles are made available for shared use by the public.



## Bollards

Short, vertical posts used to prevent motor vehicle traffic from entering a shared use path facility and limit motor vehicle access along bicycle boulevards or used for physical demarcation. Bollards used for entry control should meet path users safety and mobility needs.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Buffer

A strip of land that separates the sidewalk, or other facilities, from the street to improve the active traveler's level of comfort. A buffer can be comprised of one or multiple zones including the **Green Zone**, **Bicycle Zone**, **Parking/Transit Stop Zone** or a combination thereof. Typical elements that contribute to creating a buffer include landscaping strips, parked cars and/or bicycle lanes.



## Buffered Bike Lane

A conventional **Bicycle Lane** with a designated buffer space, typically delineated by markings, that separates the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.



## Contra-Flow Bike Lane

Bicycle lanes designed to allow bicyclists to ride in the opposite direction of motor vehicle traffic.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Crossing Island

A raised island at intersection or **Mid-Block Crossing** location that helps protect crossing pedestrians from motor vehicles and provides a place of refuge. Also known as a pedestrian refuge island. See also **Median Island**

## Crossing Improvement – Unspecified

A location identified for a crossing improvement for which the specific treatment(s) has yet to be determined (typically from plan level data).

## Crosswalk

The portion of the roadway intended for pedestrians to use in crossing the street. It may be distinctly indicated for pedestrian crossing by lines or other markings on the surface. At intersections with sidewalk present, the crosswalk is the marked or unmarked part of the roadway where the lateral boundary lines of the sidewalk would extend across. See **High Visibility Crosswalk**



## Curb Extension

An extension of sidewalk, landscaped area, or curb line into the roadway that reduces the crossing distance and enhances visibility for pedestrians and may reduce traffic speed.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Curb Radius (reduction)

Reconstructing or tightening the curb radius to reduce turning speeds, shorten pedestrian crossing distances, and improve visibility between motorists and pedestrians. The radius of a curb impacts vehicle turning speeds and pedestrian crossing distances at intersections, and extending the curb tightens the curb radius and helps reduce turning speeds.



## Curb Ramp (upgrade)

A combined ramp and landing to accomplish a change in level at a curb between the sidewalk and the street. This element provides a transitional access between elevations for pedestrians using wheelchairs, strollers or other devices with wheels, and must comply with ADA Standards. Upgrading a curb ramp by relocating it, adding detectable warnings, adjusting the slope, or other changes to bring it into compliance with ADA Standards.



## Cycle Track

See [Separated Bike Lane](#)

## Detectable Warning

Standardized surface feature built in, or applied to, walking surfaces to warn pedestrians with vision impairments of their approach to street crossings by delineating the boundary between pedestrian and vehicular routes, and to hazardous drop-offs such as the edge of boarding platforms at transit stations. Detectable warnings must meet ADA Standards. Truncated domes are a type of detectable warning.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



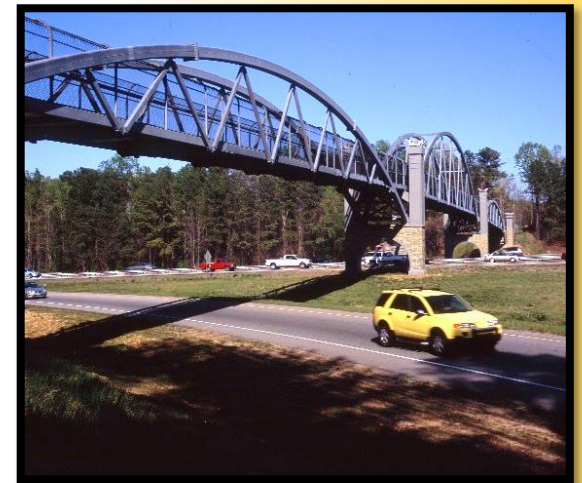
## Footpath

An unpaved travel way formed naturally by pedestrian use, often due to the lack of pedestrian facilities. Also known as “goat trails” or “desire lines.”



## Green Zone

Generally a landscaped area between the street pavement and the accessible pedestrian route. In a high-density urban area, a green zone may be hardscaped with trees in planters. This zone may include features such as landscaping, signs, benches, fire hydrants, and utility poles. Also known as a planting strip or curb strip.



## Grade-Separated Crossing

A facility, such as an **Overpass**, Underpass, skywalk, or tunnel that allows pedestrians, bicyclists, and motor vehicles to cross each other at different levels to avoid conflicts and improve free flow of each mode.



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## Hazard Identification

Identifying and mitigating potential dangers on bicycling and walking facilities to increase safety and reduce barriers to mobility. Potential hazards typically identified include drainage grates, unswept surfaces, poorly drained surfaces, snow/ice, uneven pavement, utility covers, and railroad crossings. Mitigation of hazards occurs through developing methods of identification and institutionalizing practices to address them.



## High-Visibility Crosswalk

A **Crosswalk** marked with diagonal or longitudinal lines parallel to traffic flow, such as the ladder, continental or bar pair marking pattern.

## Implementation Method

A broad category for roadway improvement methods, such as **Restripe**, **Repave**, **Widen**, **Reallocate**, and **Mark**.

## Leading Pedestrian Interval

Programming traffic signals to give pedestrians the WALK signal before motorists are allowed to proceed through the intersection. This gives pedestrians a “head start” in order to minimize conflicts between pedestrians crossing a roadway and left or right turning vehicles.



# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Lighting

Illumination provided to enhance the safety and comfort of pedestrians and bicyclists. High quality and well-placed lighting, including supplementing pedestrian-scale lighting at night-time crossing areas, increases safety and security for non-motorized users.



## Marking

Provide information, guidance, regulation, or warnings to road users. As a proposed implementation method, marking means striping or painting facilities such as shared lane markings or bicycle lanes without any need for additional improvements or adjustments to the roadway.



## Median Island

A specific type of crossing island in the center of a road that physically separates the directional flow of traffic and that may provide pedestrians with a place of refuge, reducing the crossing distance between safety points. Also known as a center island.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Mid-Block Crossing

A marked **Crosswalk** that occurs in a location other than an intersection.



## New Construction

Addition of a bicycle or pedestrian facility along an existing roadway, as an independent project, where the existing travel lanes are not changed for the improvement to occur. This is a type of **Implementation Method**.



## Overpass

A structure or bridge that crosses over a roadway, barrier, or natural feature. See **Grade-Separated Crossing**.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Parking/Transit Stop Zone

A section of the public right of way that allows for parking motor vehicles. The parking zone is typically an 8 to 10-foot wide paved section allowing for parallel parking adjacent to traffic flow. It may also contain areas that are used for a bus pullout, where appropriate. May be a type of **Buffer**.



## Paved Shoulder

The portion of the roadway contiguous with the travel lanes that accommodates stopped vehicles, emergency vehicles, and reduces the frequency of pavement maintenance. Shoulders, where paved and of sufficient width, may be used by bicyclists. Bicycle lane pavement **Markings** may be used to designate the shoulder as a **Bicycle Lane**. In rural areas, paved shoulders are also used by pedestrians where sidewalk is not present.



## Paving Treatments

Paving treatments can send a visual cue to motorists about the function of a street. They can also create an aesthetic enhancement of a street and be used to delineate separate space for pedestrians or bicyclists. Some examples include colored concrete, brick, and cobblestone.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Pedestrian

A person on foot or using a wheelchair or other personal assistive mobility device.

## Pedestrian Hybrid Beacon (PHB)

A pedestrian-activated device used to warn and control traffic at an unsignalized location to assist pedestrians in crossing at a marked **Crosswalk**. This was previously referred to as "High-intensity Activated crossWALK," or "HAWK" signal.



## Pedestrian Signal Head

A signal head providing special types of traffic signal indications exclusively intended for controlling pedestrian traffic. These signal indications consist of the illuminated symbols of a 'walking person' (symbolizing WALK) and an 'upraised hand' (symbolizing DON'T WALK).

# NC TERMINOLOGY FOR ACTIVE TRAVEL

## Protected Bike Lane

See **Separated Bike Lane**

## Rail Trail

A **Shared Use Path**, either paved or unpaved, built within the right of way of a former railroad.



## Rail-with-Trail

A **Shared Use Path**, either paved or unpaved, built within the right of way of and adjacent to an active rail line.

## Raised Crosswalk

A crosswalk, raised higher than the roadway and covering the width of a **Marked Crosswalk**, intended to reduce vehicle speeds and enhance pedestrian crossing safety.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Reallocation

A technique to modify the number or width of travel lanes to achieve systemic improvements. Variants of reallocation include 4-to-3 lane conversion, lane reduction, road diet, or reconfiguration. This is a type of **Implementation Method**.



## Rectangular Rapid Flashing Beacon (RRFB)

A warning beacon activated by a pedestrian at an uncontrolled crossing location which uses an irregular flash pattern to signal drivers of a pedestrian's presence and desire to cross.



## Repave

Proposed implementation method to improve a facility for bicyclists by capitalizing on the routine paving or **Resurfacing** maintenance schedule. This is type of **Implementation Method**.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Restripe

Adjustment in the lateral placement of existing travel lanes to reallocate roadway space for bicyclists or create a greater buffer width between motor vehicle lanes and existing or proposed pedestrian facilities. This adjustment does not remove or add any travel lanes for motor vehicles. This is type of **Implementation Method**.



## Resurface

A proposed implementation method to improve a facility for pedestrians to occur the next time the roadway segment is scheduled to be resurfaced. Resurfacing beyond routine maintenance (i.e. **Repaving**) is considered an alteration and therefore requires upgrading **Curb Ramps** and **Crosswalks** for ADA compliance. This is type of **Implementation Method**.

## Road Diet

See **Reallocation**.

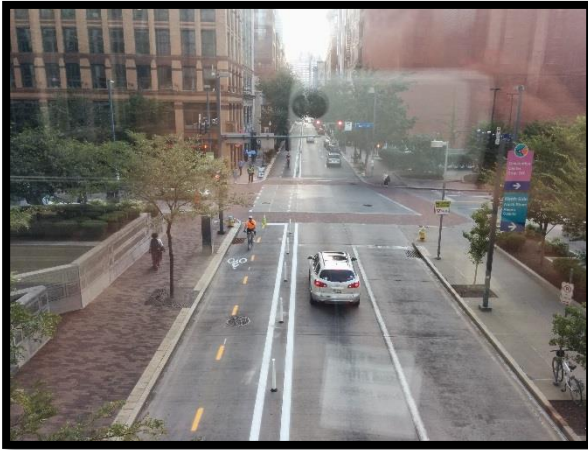


## Rumble Strips

A textured or grooved pavement treatment designed to create noise and vibration to alert motorists of a need to change their path or speed. Longitudinal rumble strips are used on or along shoulders or center lines of highways to alert motorists who stray from the appropriate travel path. Transverse rumble strips are placed on the roadway surface in the travel lane perpendicular to the direction of travel to warn drivers in advance of a potential hazard or conflict location. Poorly placed or designed rumble strips may be a hazard to bicyclists.



# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Separated Bike Lane

A bicycle lane that is physically separated from motor vehicle lanes, exclusively for bicycle traffic, and is on or adjacent to the roadway. Also known as a Cycle Track or Protected Bike Lane.

## Shared Lane

A lane that is open to both bicycle and motor vehicle travel. Shared lanes can be marked with shared lane markings or designated as bicycle boulevards in compliance with the MUTCD. A shared lane that is at least 14 feet wide allows space so that bicyclists and motorists may travel side-by-side within the same traffic lane.



## Shared Lane Marking (SLM)

A pavement marking symbol used to indicate a **Shared Lane** environment for bicycles and motor vehicles. The markings help assist with bicyclists' positioning and direction of travel on the roadway, can indicate a preferred bicycling route, and alert motorists of a bicyclist's likely location on the roadway. These **Markings** are also called a "sharrows."

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Shared Use Path

A facility, which should be designed to meet ADA Standards, which may be used by bicyclists, pedestrians, and other non-motorized users. They are separated from the roadway by an open space or a physical barrier or within an independent-right-of-way. Also known as a “multi-use trail” or “greenway.”



## Shared Use Path Signal

A signal head providing special types of traffic signal indications exclusively intended for controlling **Shared Use Path** traffic.



## Sidepath

A specific type of shared use path facility that is physically separated from the road but located within the roadway right of way.

# NC TERMINOLOGY FOR ACTIVE TRAVEL



## Sidewalk

The portion of a street or highway right of way, beyond the curb or edge of roadway pavement, which is intended for use by pedestrians.



## Signage

Sign categories include warning (e.g. turn signs), regulatory (e.g. stop signs), guide (e.g. bicycle route signs), school (e.g. school speed limit signs), and emergency signs (e.g. area closed signs).



## Trailhead

A trailhead is the primary access point to a **Shared Use Path**. It may have parking and other amenities at the terminus.

## NC TERMINOLOGY FOR ACTIVE TRAVEL



### Underpass

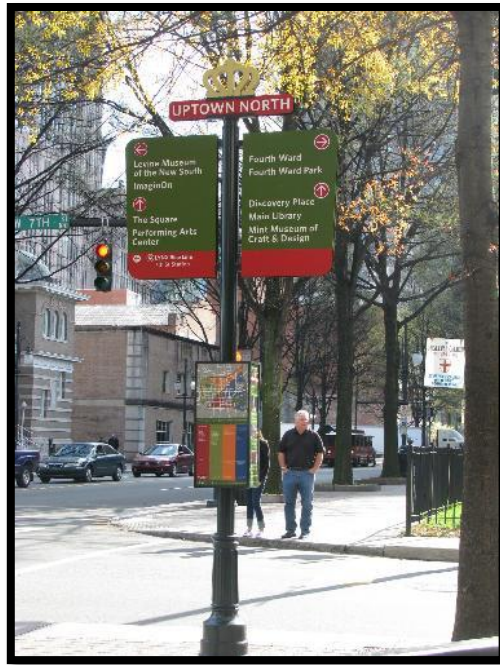
A structure or bridge that crosses under a roadway, barrier, or natural feature. See [Grade-Separated Crossing](#)



### Unimproved Trail

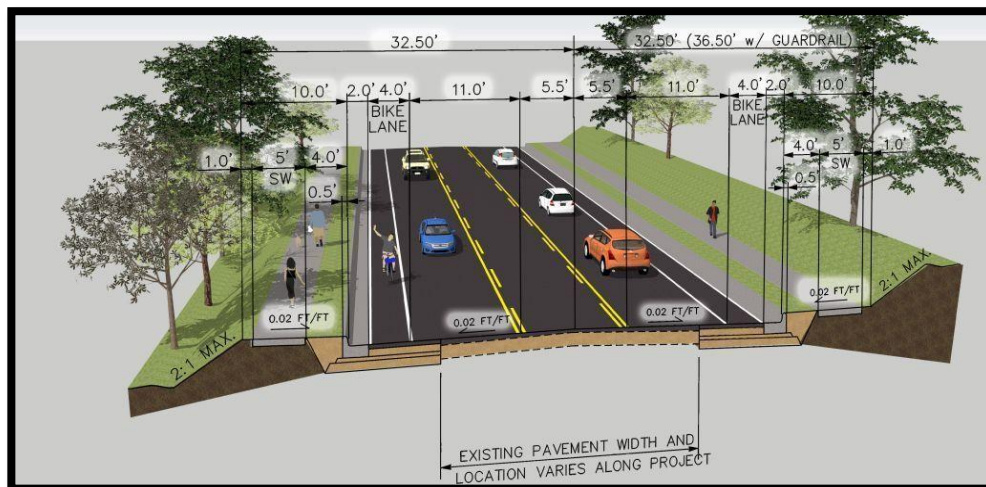
An unpaved/unimproved off-road facility, open for bicyclist and/or pedestrian use, which is not required to meet ADA Standards.

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## Wayfinding

Comprehensive **Signage** and/or **Markings** to guide travelers to their destinations along preferred routes by providing information such as distances or times to reach key destinations or areas.



## Widening

Increasing the width of the paved portion of the roadway to specifically improve the roadway segment for a bicycling or pedestrian facility. This is a type of **Implementation Method**.

FOR MORE INFORMATION

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