The purpose of the NACTO Urban Bikeway Design Guide (part of the Cities for Cycling initiative) is to provide cities with state-of-the-practice solutions that can help create complete streets that are safe and enjoyable for bicyclists.

This document includes printable versions of the annotated plans from the complete Urban Bikeway Design Guide document.

View more online:
For more details, information, resources, case studies, and photographs, please visit www.c4cguide.org. The online platform of the NACTO Urban Bikeway Design Guide reflects the most current, up-to-date, available design guidance. It will be frequently revised, updated, and expanded to reflect the state of the practice in bicycle facility design.
Bike Lanes: Conventional Bike Lanes

Bike Lanes: Buffered Bike Lane

The buffer shall be marked with 2 solid white lines with diagonal hatching if 3 feet in width or wider. Double white lines indicate lanes where crossing is discouraged, though not prohibited.

The interior of the buffer area may use different paving materials to separate it from the bike lane. Textured surface materials may cause difficulties for bicyclists as surfaces may be rough. Increased maintenance requirements are likely.

For clarity, consider dashing the inside buffer boundary where cars are expected to cross.

Like a conventional bike lane, a wide (6-8 inch) solid white line may be used to mark the edge adjacent to a motor vehicle travel lane.

Bicycle lane word and/or symbol and arrow markings (MUTCD Figure 9C-3) shall be used to define the bike lane and designate that portion of the street for preferential use by bicyclists.

Buffers should be at least 2 feet wide because it is impractical to mark a zone narrower than that.

For travel lane buffer configurations, separation may also be provided between bike lane striping and the parking boundary to reduce door zone conflicts. This creates a type of parking-side buffer.

Color may be used at the beginning of each block to discourage motorists from entering the buffered lane. For other uses of color in buffered bike lanes see colored bike facilities.

For a parking side buffer, parking T's or a solid line are acceptable to mark between a parking lane and the buffer.

For travel side buffered lanes next to on street parking, a 5 foot minimum width is recommended to encourage bicyclists to ride outside of the door zone.

Where buffers are used, bike lanes can be narrower because the shy distance function is assumed by the buffer. For example, a 3 foot buffer and 4 foot bike lane next to a curb can be considered a 7 foot bike lane.

Where bicyclist volumes are high or where bicyclist speed differentials are significant, the desired bicycle travel area width is 7 feet.

On intersection approaches with no dedicated right turn only lane the buffer markings should transition to a conventional dashed line. Consider the use of a bike box at these locations.

On intersection approaches with right turn only lanes, the bike lane should be transitioned to a through bike lane to the left of the right turn only lane, or a combined bike lane/turn lane should be used if available road space does not permit a dedicated bike lane.

View a high resolution image here: http://nacto.org/wp-content/uploads/2010/08/Buffered-Bike-Lane_Annotation1.jpg
Bike Lanes: Contra-Flow

Consider a No Turn on Red restriction by installing a "No Turn on Red" sign (MUTCD R10-11) on cross streets to minimize potential conflicts with turning vehicles. Cross street traffic may not look for or anticipate contraflow bicycle travel.

A "ONE WAY" sign (MUTCD R6-1, R8-2) with "EXCEPT BIKES" plaque shall be posted along the facility and at intersecting streets, alleys, and driveways informing motorists to expect two-way traffic.

Warning signage, such as a modified "TWO WAY" sign (MUTCD WR-3) may be posted along the facility to inform motorists to expect two-way traffic.

A "DO NOT ENTER" sign (MUTCD R5-1) with "EXCEPT BIKES" plaque should be posted along the facility to only permit use by bicyclists.

Colored pavement may be used along the facility to draw attention to the unique function of the lane, or in areas with cross traffic, such as at driveway exits, for increased visibility of bicyclists.

Small versions of "STOP" signs (18 x 18 inches) and other regulatory signage may be used along the contra-flow lane to emphasize that only bike traffic is permitted to travel in the contra-flow direction.

When configured without parking, a solid double yellow line marking should be used to separate opposing motor vehicle travel lanes from the contraflow bicycle lane.

A curb or a raised median may be used in place of double yellow striping to separate the contra-flow lane from opposing vehicle traffic. Such a facility becomes a contra-flow protected cycle track.

Where there is room, bike lanes should be used on both sides. When there is no room for a with-flow lane, shared lane markings should be used to guide with-flow bicyclists to keep to the right side of the road.

When configured without parking, a solid double yellow line marking should be used to separate opposing motor vehicle travel lanes from the contraflow bicycle lane.

A curb or a raised median may be used in place of double yellow striping to separate the contra-flow lane from opposing vehicle traffic. Such a facility becomes a contra-flow protected cycle track.

Intersection traffic controls along the street (e.g., stop signs and traffic signals) shall also be installed and oriented toward bicyclists in the contra-flow lane.

Bike Lanes: Left-Side Bike Lane

Bicycle through lanes should be provided to the right of vehicle left turn pockets to reduce conflicts at intersections. This is important for through bicyclists as well as left turning bicyclists as left turning vehicles will cross paths with a left turning bicyclist. (Not shown).

Intersection treatments such as bike boxes and bike signals should be considered to assist in the transition from left-side bike lanes to right-side bike lanes.

Where bicyclist demand is high and street space permits, a buffered bike lane configuration or wider than minimum dimensions should be used to allow bicyclists to pass one another without encroaching upon the adjacent travel lane.

A "Yield to Bikes" sign should be post-mounted in advance of and in conjunction with a left turn lane to reinforce that bicyclists have the right-of-way going through the intersection.

Colored pavement may be used along the facility to draw attention to the unique function of the lane, or within conflict areas for increased visibility of bicyclists.

Signage should accompany left-side bicycle lanes to clarify proper use by bicyclists and may be effective in reducing wrong-way riding. Modified MUTCD R3 series sign shown.

Cycle Tracks: One-Way Protected

A cycle track, like a bike lane, is a type of preferential lane as defined by the MUTCD.

See MUTCD advice on diagonal stripping Section 36.24.05

Bicycle lane word, symbol, and/or arrow markings (MUTCD Figure 9C-3) shall be placed at the beginning of a cycle track and at periodic intervals along the facility based on engineering judgment.

When using a pavement marking buffer, desired parking lane and buffer combined width is 11 feet to discourage motor vehicle encroachment into the cycle zone.

Travel lanes

Three feet is the desired width for a parking buffer to allow for passenger loading and to prevent door collisions.

Paving markings are used to separate motor vehicle parking lanes from the preferential bicycle lane, solid white lane line markings shall be used. Diagonal crosshatch markings may be placed in the neutral area for special emphasis. See MUTCD Section 36.24. Raised medians or other barriers can also provide physical separation to the cycle track.

A BIKE ONLY legend (MUTCD 3D.01) may be used to supplement the preferential lane word or symbol marking.

A BIKE LANE sign (MUTCD R3-17) may be used to designate the portion of the street for preferential use by bicyclists. A supplemental "No Cars" selective exclusion sign may be added for further clarification.

Sidewalk curbs and furnishings should be used to prevent pedestrian use of the cycle zone.

Gutter seams, drainage inlets, and utility covers should be configured so as not to impede bicycle travel and to facilitate run-off.

Cycle tracks may be shifted more closely to the travel lanes on minor intersection approaches to cut cyclists clearly in the field of view of motorists. (Not shown)

The desired width for a cycle track should be 5 feet. In areas with high bicyclist volumes or uphill sections, the desired width should be 7 feet to allow for bicyclists passing each other.

Colored pavement may be used to further define the bicycle space.

Cycle Tracks: Raised

Desirable one-way raised cycle track travel surface width is 6.5 feet to allow side-by-side riding or passing. Desired minimum width is 5 feet at intersections and pinch points.

Additional width may be needed for protection from traffic or parking and/or distance to sidewalks or furnishings.

The cycle track shall be vertically separated from the street at an intermediate or sidewalk level. If configured at a height flush with the sidewalk, color, pavement markings, textured surfaces, landscaping, or other furnishings should be used to discourage pedestrian use of the cycle zone.

At driveways and minor intersections the crossing should be raised, in which the sidewalk and cycle track maintain their elevation through the crossing. Sharp inclines on either side from road to sidewalk level serve as a speed hump for motor vehicles.

Motor vehicle traffic crossing the cycle track should be constrained or channelized to make turns at sharp angles to reduce travel speed prior to the crossing.

For motor vehicles attempting to cross the cycle track from the side street or driveway, street and sidewalk furnishings and/or other features should accommodate a sight triangle of 20 feet to the cycle track from minor street crossings, and 10 feet from driveway crossing.

Drainage should slope to the street. Drainage grates should be in adjacent travel or parking lane.

Cycle Tracks: Two-Way Protected

Cycle tracks may be shifted more closely to the travel lanes on minor intersection approaches to put bicyclists clearly in the field of view of motorists.

The desirable two-way cycle track width is 12 feet. Minimum width in constrained locations is 8 feet.

A dashed yellow line should be used to separate two-way bicycle traffic and to help distinguish the cycle track from any adjacent pedestrian area.

If configured on a one-way street, a “ONE WAY” sign (MUTCD R6-1, R6-2) with “EXCEPT BIKES” plaque shall be posted along the facility and at intersecting streets, alleys, and driveways informing motorists to expect two-way traffic.

A “DO NOT ENTER” sign (MUTCD R5-1) with “EXCEPT BIKES” plaque shall be posted along the facility to only permit use by bicycles.

Bicycle lane word, symbol, and/or arrow markings (MUTCD Figure 9C-3) shall be placed at the beginning of a cycle track and at periodic intervals along the facility to define the bike lane direction and designate that portion of the street for preferential use by bicyclists.

Two-stage turn boxes should be provided to assist in making turns from the cycle track facility.

When protected by a parking lane, 3 feet is the desired width for a parking buffer to allow for passenger loading and to prevent dooring collisions.

Intersection traffic controls along the street (e.g., stop signs and traffic signals) shall also be installed and oriented toward bicyclists traveling in the contra-flow direction.

Cycle Tracks: Two-Way Raised

If configured on a one-way street, a "ONE WAY" sign (MUTCD R5-1, R6-2) with "EXCEPT BIKES" plaque shall be posted along the facility and at intersecting streets, alleys, and driveways informing motorists to expect two-way traffic.

A "DO NOT ENTER" sign (MUTCD R5-1) with "EXCEPT BIKES" plaque shall be posted along the facility to only permit use by bicycles.

At driveways and minor intersections, color, yield lines, and "Yield to Bikes" signage should be used to identify the conflict area and make it clear that the cycle track has priority over entering and exiting traffic.

If configured as a raised cycle track, the crossing should be raised, in which the sidewalk and cycle track maintain their elevation through the crossing. Sharp inclines on either side from road to sidewalk level serve as a speed hump for motor vehicles.

For motor vehicles attempting to cross the cycle track from the side street or driveway, street and sidewalk furnishings and/or other features should accommodate a sight triangle of 20 feet to the cycle track from minor street crossings, and 10 feet from driveway crossing.

The desirable two-way cycle track width is 12 feet. Minimum width in constrained locations is 8 feet.

A dashed yellow line should be used to separate two-way bicycle traffic and to help distinguish the cycle track from any adjacent pedestrian area.

Motor vehicle traffic crossing the cycle track should be constrained or channeled to make turns at sharp angles to reduce travel speed prior to the crossing.

Intersection traffic controls along the street (e.g., stop signs and traffic signals) shall also be installed and oriented toward cyclists traveling in the contra-flow direction.

If the cycle track is parking protected, parking should be prohibited near driveways and minor intersections to improve visibility. The desirable no-parking area is 30 feet from each side of the crossing.

Bicycle lane word, symbol, and/or arrow markings (MUTCD Figure SC-3) shall be placed at the beginning of a cycle track and at periodic intervals along the facility to define the bike lane direction and designate that portion of the street for preferential use by bicyclists.

When protected by a parking lane, 3 feet is the desired width for a parking buffer to allow for passenger loading and to prevent door zone collisions.

Two-stage turn boxes should be provided to assist in making turns from the cycle track facility.

Cycle tracks may be shifted more closely to the travel lanes on minor intersection approaches to put bicyclists clearly in the field of view of motorists.

Intersections: Bike Box

In cities that permit right turns on red signal indications, a "No Turn on Red" sign shall be installed overhead to prevent vehicles from entering the Bike Box.

A "Yield to Bikes" sign should be post-mounted in advance of and in conjunction with an egress lane to reinforce that bicyclists have the right-of-way going through the intersection.

A "Stop Here on Red" sign should be post-mounted at the stop line to reinforce observance of the stop line.

Additional signs may be used to clarify signal control. Among the legends that may be used for this purpose are "Bikes Stop Here on Red" or a supplemental "Except Bicycles" plaque in conjunction with R10-6.

An ingress lane should be used to define the bicycle space. Colored pavement may be used. When color is used, length shall be 25 to 50 feet to guarantee bicycle access to the box.

A "WAIT HERE" legend marking may be used to supplement the stop line and "Stop Here on Red" sign at a bike box.

Stop lines shall be used to indicate the point behind which motor vehicles are required to stop in compliance with a traffic control signal. See MUTCD 38.16.

Stop lines may be placed up to 7 feet in advance of the bike box space to limit encroachment by motor vehicles.

A box formed by transverse lines shall be used to hold queueing bicyclists, typically 10-16 feet deep. Deeper boxes show less encroachment by motor vehicles.

Intersections

View a high resolution image here: http://nacto.org/wp-content/uploads/2010/08/BikeBox_Plan_Annotated.jpg
Intersections: Intersection Crossing Markings

Crossing striping width shall be a minimum of 6 inches adjacent to motor vehicle travel lanes and match the width and positioning of leading bike lane striping.

Dotted lines shall bind the bicycle crossing space. See MUTCD Section 3B.08 for dotted line extensions through intersections.

Dotted lines should be 2 foot lines with 2 to 6 foot spacing. Markings should be white, skid resistant and retro-reflective.

Crossing lane width should match width and positioning of the leading bike lane.

Yield Lines, also known as “Sharks Teeth” (not shown) may be used when crossing driveways and alleyways to mark edge of the bike lane.

Intersections: Intersection Crossing Markings

- Crossing striping width shall be a minimum of 6 inches adjacent to motor vehicle travel lanes and match the width and positioning of leading bike lane striping.

- Chevrons may be used for increased visibility within conflict areas or across entire intersections.

- Dotted lines shall form the bicycle crossing space. See MUTCD Section 38.06 for dotted line extensions through intersections.

- Dotted lines should be 2 foot lines with 2 to 6 foot spacing. Markings should be white, skid resistant and retro-reflective.

- Placement shall be in the middle of the moving lanes, and close to crosswalks.

- Crossing lane width should match width and positioning of the leading bike lane.

- Yield Lines, also known as “Sharks Teeth” (not shown) may be used when crossing driveways and alleyways to mark edge of the bike lane.

Intersections: Intersection Crossing Markings

Crossing striping width shall be a minimum of 6 inches adjacent to motor vehicle travel lanes and match the width and positioning of leading bike lane striping.

Shared lane marking (MUTCD Figure SC-9) may be used for increased visibility within conflict areas or across entire intersections.

Dotted lines shall bind the bicycle crossing space. See MUTCD Section 38.08 for dotted line extensions through intersections.

Dotted lines should be 2 foot lines with 2 to 6 foot spacing. Markings should be white, skid resistant and retro-reflective.

Placement shall be in the middle of the moving lanes, and close to crosswalks.

Crossing lane width should match width and positioning of the leading bike lane.

Yield Lines, also known as "Sharks Teeth" (not shown) may be used when crossing driveways and alleys to mark edge of the bike lane.

Intersections: Intersection Crossing Markings

Crossing striping width shall be a minimum of 6 inches adjacent to motor vehicle travel lanes and match the width and positioning of leading bike lane striping.

Colored pavement may be used for increased visibility within conflict areas or across entire intersections.

Dotted lines shall bind the bicycle crossing space. See MUTCD Section 38.08 for dotted line extensions through intersections.

Dotted lines should be 2 foot lines with 2 to 6 foot spacing. Markings should be white, skid resistant and retro-reflective.

Crossing lane width should match width and positioning of the leading bike lane.

Yield Lines, also known as “Sharks Teeth” (not shown) may be used when crossing driveways and alleyways to mark edge of the bike lane.

Intersections: Intersection Crossing Markings

**Intersections: Two-Stage Turn Queue Box**

In cities that permit right turns on red signal indications, a "No Turn on Red" sign shall be installed overhead to prevent vehicles from entering the queuing area. (MUTCD Section 2B.54)

An area shall be designated to hold queuing bicyclists and formalize two-stage turn maneuvers.

Pavement markings shall include a bicycle stencil and a turn arrow to clearly indicate proper bicycle direction and positioning.

The queue box shall be placed in a protected area. Typically this is within an on-street parking lane or between the bicycle lane and the pedestrian crossing.

Markings across intersections should be used to define bicyclist positioning through the intersection.

The queue box may be positioned laterally in the cross street parking lane rather than in front of the travel lane.

The queue box should be positioned laterally in the cross-street, to promote visibility of bicyclists.

Colored paving inside of the queuing area should be used to further define the bicycle space.

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- Colored paving inside of the queuing area should be used to further define the bicycle space.

- Markings across intersections should be used to define bicyclist positioning through the intersection.

- The queue box may be positioned laterally in the cross street parking lane rather than in front of the travel lane.

- The queue box should be positioned laterally in the cross-street, to promote visibility of bicyclists.

Intersections: Two-Stage Turn Queue Box

In cities that permit right turns on red signal indications, a “No Turn on Red” sign shall be installed overhead to prevent vehicles from entering the queuing area (MUTCD Section 2B.54).

An area shall be designated to hold queuing bicyclists and formalize two-stage turn maneuvers.

Pavement markings shall include a bicycle stencil and a turn arrow to clearly indicate proper bicycle direction and positioning.

The queue box shall be placed in a protected area. Typically this is within an on-street parking lane or between the bicycle lane and the pedestrian crossing.

Wide corner radius and setback pedestrian crossings provide opportunity for bicyclist queuing area.

The queue box may be positioned laterally in the cross street parking lane rather than in front of the travel lane.

The queue box should be positioned laterally in the cross-street, to promote visibility of bicyclists.

Colored paving inside of the queuing area should be used to further define the bicycle space.

Markings across intersections should be used to define bicyclist positioning through the intersection.

View a high resolution image here: http://nacto.org/wp-content/uploads/2010/08/TwoStageTurn_BikeLaneParking_Reference_Annotated.jpg
Intersections: Median Refuge Island

The height of the island should be curb level, 6 inches high. When used as an exclusive bicycle facility it may be desirable to keep the refuge area at street level.

The median refuge can be carried across the entire cross street approach to act as a diverter to prevent cut-through traffic on a bicycle route.

Reflective markers should be used on the approach to the nose of the island’s curb.

The length of the refuge island should be greater than 6 feet.

The approach edge of the raised median shall be outlined in retroreflective white or yellow material.

Pavement markings on the approach to the refuge island shall follow the guidance provided in Section 31.02 of the MUTCD.

View a high resolution image here: http://nacto.org/wp-content/uploads/2010/08/MedianRefugeIsland_Diverter_Annotated.jpg
Intersections: Through Bike Lanes

Right turn only lanes should be as short as possible in order to limit the speed of cars in the right turn lane. Fast moving traffic on both sides can be uncomfortable for bicyclists.

Accompanying signage should include R3-7R Right Lane Must Turn Right and R4-4 Begin Right Turn Yield to Bikes.

Dashed lines signifying the merge area should begin a minimum of 50' before the intersection (MUTCD); 100' if along a high speed/volume roadway.

Vehicle turn lane width should not be reduced to less than 9'.

Desired width of dashed bike transition lane is 6 feet with a minimum of 4 feet.

Bike lane pocket shall be placed to the left of the right turn only lane.

Bicycle detection should be provided within the bike lane pocket.

Bicycle lane word and/or symbol and arrow markings (MUTCD Figure 9C-3) shall be used to define the bike lane and designate that portion of the street for preferential use by bicyclists.

Dashed white lines should be 6” wide and 2’ long with a 6” gap between dashes (MUTCD). It is desirable for bicyclists to travel straight through the merging area to reinforce right-of-way. If the merging area occurs at an angle across a vehicle lane additional treatments beyond dashed white lines such as coloring and increased signing should be provided.

Intersections: Combined Bike Lane/Turn Lane

Within the combined lane, the bicycle area width should be 4 feet minimum.

A shared lane marking (MUTCD Figure 9C-9) may be used as an alternative to dotted striping to clarify bicyclist position within the combined lane.

A dotted 4 inch line and bicycle lane marking should be used to clarify bicyclist positioning within the combined lane without excluding cars from the suggested bicycle area.

If the right lane is signed for “Right Turn Only,” or if a sign is otherwise needed to make it legal for through bicyclists to use a right turn lane, signage should be installed in advance alerting the start of the combined turn lane.

View a high resolution image here: http://nacto.org/wp-content/uploads/2010/08/CombinedRightTurnLane_Plan_Annotated.jpg
Intersections: Cycle Track Intersection Approach

A bicycle exclusive signal phase may be used to segregate conflicting movements between bicyclists and motorists.

A truncated cycle track requires that intersections provide some type of bicycle facility to receive cycle track users. This may be a conventional bike lane, bike box, or combined bike lane/turn lane.

The desirable distance to drop a cycle track prior to an intersection varies by the specific treatment and lane configuration. More space is required when bicyclists and motorists will be mixing or merging.

Tactile warnings or pavement markings should be used on slopes from raised cycle tracks to slow bicyclist speed prior to the transition out of the cycle track, and to warn users of potential conflicts with motor vehicles.

Two-stage turn queue boxes should be provided to assist in making turns from the cycle track facility.

Cycle tracks should be shifted more closely to the travel lanes on intersection approaches to put bicyclists clearly in the field of view of motorists.

For a transition to a bike lane, minimum desirable width is 6 feet, with an absolute minimum of 4 feet.

Color may be used to mark conflict areas at intersections with turn lanes, or to extend color applied to the cycle track facility.

If color is used along the length of a cycle track facility it should be dropped in the merging area to let bicyclists know they are entering a vehicular area.

Parking should be prohibited 30 to 50 feet in advance of the cycle track buffer termination to promote visibility between bicyclists and motorists.

Maximum slope 1:8

When transitioning from a raised cycle track to street level, the grade should be smooth and comfortable, without significant longitudinal pavement joints or sharp changes in direction.

At intersections with heavy right turn movements, the facility may be combined with a bike box or an advanced stop bar to position bicyclists in ahead of motorists.

Intersection crossing markings should be used with truncated cycle tracks to indicate the intended path of bicyclists through the intersection.

Signing and Marking: Bike Route Wayfinding Signage System

Signing and Marking: Colored Bike Lanes

Color shall be applied to the road surface to delineate space, increase visibility and emphasize proper vehicle priority.

The color green shall be used to minimize confusion with other standard traffic control markings.

Colored surface should be skid resistant and retro-reflective.

Normal white bike lane lines shall be provided along the edges of the colored lane to provide consistency with other facilities and to enhance nighttime visibility.

Color may be applied within conflict areas for increased visibility of bicyclists.

"Yield to Bikes" sign should be used at intersections or driveway crossings to reinforce that bicyclists have the right-of-way at colored bike lane areas.

Signing and Marking: Colored Bike Lanes

Color shall be applied to the road surface to delineate space, increase visibility and emphasize proper vehicle priority.

The color green shall be used to minimize confusion with other standard traffic control markings.

Colored surface should be skid resistant and retro-reflective.

Color may be applied along a dashed pattern within a dashed bicycle lane to indicate merging areas. Dashed application of colored pavement mimics typical traffic striping layouts, where dashed markings indicate areas where merging maneuvers are permitted.

Normal white bike lane lines shall be provided along the edges of the colored lane to provide consistency with other facilities and to enhance nighttime visibility.

“Yield to Bikes” sign should be used at intersections or driveway crossings to reinforce that bicyclists have the right-of-way at colored bike lane areas.

Signing and Marking: Colored Bike Lanes

Color shall be applied to the road surface to delineate space, increase visibility and emphasize proper vehicle priority.

The color green shall be used to minimize confusion with other standard traffic control markings.

Colored surface should be skid resistant and retro-reflective.

"Yield to Bikes" sign should be used at intersections or driveway crossings to reinforce that bicyclists have the right-of-way at colored bike lane areas.

Normal white bike lane lines shall be provided along the edges of the colored lane to provide consistency with other facilities and to enhance nighttime visibility.

Color may be applied along a corridor, with gaps in coloring to denote crossing areas. When used in this fashion, color can distinguish the bicycle facility along its entire length. This is particularly useful in high traffic situations or areas where traffic may encroach into the bike facility.

Signing and Marking: Shared Lane Markings

- 7-8 Feet Parking Zone
- Parking Zone + 2.5 feet for door zone
- Minimum placement is 1 foot from the outside of the door zone. MUTCD minimum is 11 feet.
- Preferred placement is in center of travel lane, to minimize wear and promote single file travel.
- Frequent, visible placement of markings is essential. Number of markings along a street should correspond to difficulty of bicyclists trying to take proper travel path or position.

Lateral placement of the shared lane marking is critical to encourage riders to avoid the door zone.

If on-street vehicle parking is not present, SLMs should be placed far enough from curb to direct bicyclists away from gutters, seams, and other obstacles, or near center of lane if lane is less than 14’ wide.

Preferred placement is in center of travel lane, to minimize wear and promote single file travel.

For wayfinding purposes the orientation of the chevron marking may be adjusted to direct bicyclists along discontinuous routes.

Sample Plan Drawings

BIKE LANES

- Conventional Bike Lane

- Buffered Bike Lanes

- Contra-Flow Bike Lane

- Left Side Bike Lane

CYCLE TRACKS

- One-way protected cycle track

- Raised Cycle Track

- Two-way cycle track

INTERSECTIONS

- Bike Box

- Bike Box, Left Side-Bike Lane

- Median Refuge Island

SIGNALS

- Bicycle Signal

- Detection and Actuation

SIGNING AND MARKING

- Intersection Markings

- Colored Bike Facilities