



# CONVENTIONAL BICYCLE LANES

Conventional bicycle lanes are dedicated on-street bicycle facilities delineated by striping, signage, and bicycle symbol and arrow pavement markings. Typically, conventional bicycle lanes are located on the right-hand side of the street immediately adjacent to a motor vehicle travel lane running in the same direction as motor vehicle traffic, but alternative configurations are possible.

Conventional bicycle lanes alert motorists to the presence of a bike route, allow bicyclists to use the street with less interference from traffic, and increase comfort for bicyclists and predictability for all roadway users. The provision of bicycle lanes may reduce the incidence of bicyclists riding on sidewalks.

## USE

- Conventional bicycle lanes require the least amount of space of any dedicated on-street bicycle facility, but their installation may require a rebalancing of


space and may include modifications to parking or turn lanes, travel lanes, and/or bulb-outs, etc.

- Conventional bicycle lanes may be used on any street type but are typically not utilized on Neighborhood Residential streets.

## DESIGN

- Conventional bicycle lanes adjacent to the curb should be at least six feet wide inclusive of the gutter pan and a minimum of five feet, unless there is no curb (in which case the minimum would lower to four feet). Two feet should be added to the lane width for bicycle lanes adjacent to guardrails, walls, or other vertical barriers or to create a buffer.
- When the bicycle lane is between the travel lane and parking lane, the combined standard width of the bicycle lane and adjacent parking lane is at least 12 feet wide, though this design places people on bicycles at risk of being hit by an open driver side door from a parked car. A combined width of 13 feet wide is recommended (eight foot parking lane plus a five foot bicycle lane), and the desirable combined width is 14 feet wide (eight foot parking lane plus six foot bicycle lane) to minimize “dooring” conflicts.
- A solid white line must be used to differentiate the conventional bicycle lane from the general traffic lane.

- At intersections, bicycle lane markings should be placed outside of the vehicle path to prevent car tires from wearing them down. Avoid placing conventional bicycle lanes to the right of a right-turn lane or the left of a left-turn lane unless a separate bicycle signal is provided. Bicycle lanes require careful design at intersections to minimize conflicts with turning vehicles and to improve legibility, visibility, and predictability for all travelers.
- Use dotted/dashed lines and colored pavement, preferably green, to indicate areas of conventional bicycle lane/vehicle lane conflict, such as bicycle lane markings continuing through intersections, where right turning lanes cross bicycle lanes, and where transit stops are located
- Maintain visibility and sight triangles at driveways, alleys, or intersections.
- Transition bicycle lanes to the outside of turn lanes at intersections.

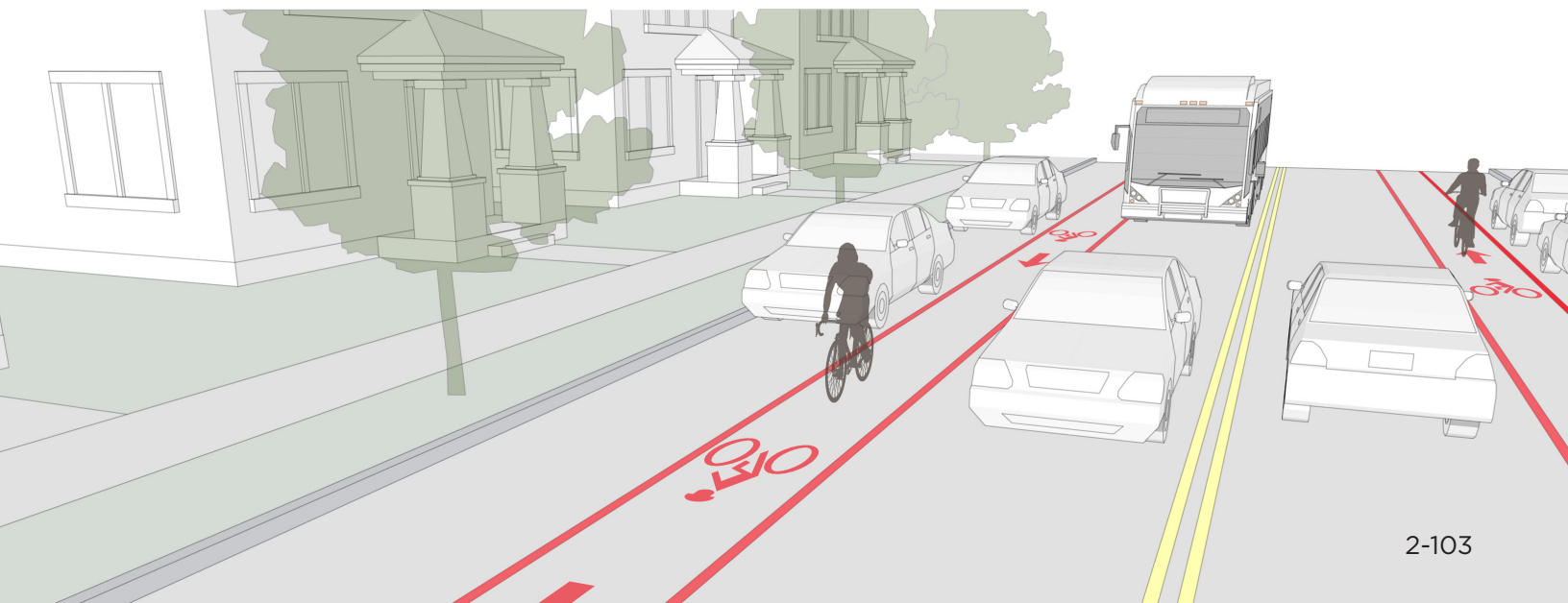
 Bicycle facilities may offer an opportunity for porous concrete or asphalt treatments.

## SPECIAL CONSIDERATIONS

- Use a continuous solid line or place “T” marks between the conventional bicycle lane and the parking lane to mark the inside of the bicycle lane and discourage motorists from encroachment.
- Make gutter seams, drainage inlets, and utility covers flush with the ground to prevent conflicts with bike tires. Ensure the proper use of bicycle-safe drainage grates to avoid trapping bicycle tires.
- Green colored pavement or markings can be used to further distinguish bicycle lanes in areas where there is a particular need. Use alternating sections of green colored pavement or markings to highlight areas of bicycle/vehicle conflicts and solid green to emphasize bike-only lanes.
- Avoid locating manholes in bicycle lanes. Ensure any utility or vault covers are flush with the road surface and properly set and maintained.

## OPERATIONS AND MAINTENANCE

- Bicycle facilities should be kept free of debris, which has a tendency to collect at the edge of the lanes, representing a hazard to bicyclists.
- If trenching is done in the bicycle lane, repair the entire width of the bicycle lane and install pavement markings so there is not an uneven surface as this can be particularly dangerous for bicyclists.
- Avoid locating manholes in bicycle lanes. Ensure any utility or vault covers are flush with the road surface and properly set and maintained.



- Bicycle lanes and associated signs and symbols are additional markings that will require maintenance and replacement. Advisory bicycle lane markings may require frequent repainting because of the increased motor vehicle travel on the dashed white pavement markings.
- If colored pavement is used, routine maintenance plans should be in place to keep the pavement markings clear.
- Bicycle facilities may require additional enforcement to ensure they remain free of parked and stopped vehicles, delivery trucks and other obstacles.
- Recess marking to minimize maintenance requirements and maintain reflectivity.
- Snow should be cleared from the bicycle lanes the same as any other roadway facility. Bicycle lanes of any type should not be used for snow storage.
- When utility or other construction work requires occupying part or all of a bicycle lane, include provisions in the temporary traffic control plans to prevent a significant disruption of the bicycle network. Consider adding temporary wayfinding signage around detours.

## REFERENCES

- NACTO: Urban Bikeway Design Guide, Second Edition, 2014
  - <http://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/conventional-bike-lanes/>
- AASHTO: Guide for the Development of Bicycle Facilities, 2012
  - Section 4.5: Paved Shoulders
  - Section 4.6: Bicycle Lanes
  - Section 4.7: Bicycle Lane Markings and Signs
  - Section 4.8: Bicycle Lanes at Intersections
  - Section 4.9: Retrofitting Bicycle Facilities on Existing Streets and Highways
- ITE Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, 2010
  - Chapter 9. Traveled Way Design Guidelines: Bicycle Lanes
  - <http://library.ite.org/pub/e1cff43c-2354-d714-51d9-d82b39d4dbad>
  - Part 9 Traffic Control for Bicycle Facilities [http://mdotcf.state.mi.us/public/tands/Details\\_Web/mmutcdpart9\\_2011.pdf](http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart9_2011.pdf)