

US 287 BIKE LANE ALTERNATIVES FINAL DRAFT (9/20/04)

Option A – 8'-10' Bike Lane

DESCRIPTION

An 8'-10' bike lane is installed to the right of the travel lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. Solid white striping and appropriate signage and stenciling should discourage motorists from using the lane, which is generally designated for bikes only.

APPLICATIONS

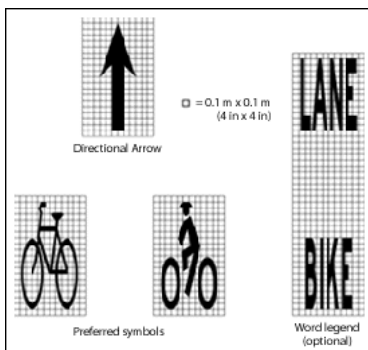
For use on segments with few or minor access conflicts in locations where acceleration and deceleration lanes are not required.

ADVANTAGES

- Wider lane provides greater separation from motorists;
- Greater separation reduces affects of “blow-by” at high speeds;
- Encourages motorists to make turning maneuvers directly at the access point;
- Reduces overtaking conflicts;
- Conflict points are at an expected location for cyclists and motorists; and
- Defines the maximum amount of space and separation for cyclists;

DISADVANTAGES

- Motorists may encroach into the lane as they slow down to make the turn; and
- Not suitable for locations with high turning movement volume intersections



Typical bike lane symbols
Source: Richard Moer for AASHTO



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Option B – 10'-12' Shared Bike Lane

DESCRIPTION

A 10'-12' shared bike lane is installed to the right of the travel lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. A dashed stripe should replace the solid edge line in locations with high right turn volumes and/or bus stops. This treatment defines a transition area for motorists and cyclists. Signage should be installed to instruct motorists and cyclists of the usage of the facility. Shared bike lane stencils should be used.



APPLICATIONS

For use on segments with moderate to high volume access locations where acceleration and deceleration lanes may be required.



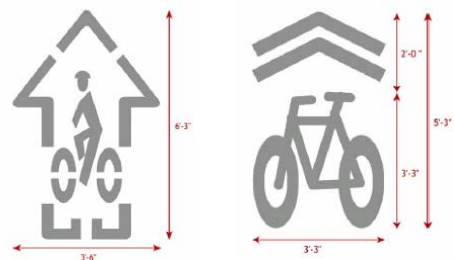
In California, the vehicle code specifically notes that cyclists are allowed use of the full travel lane

ADVANTAGES

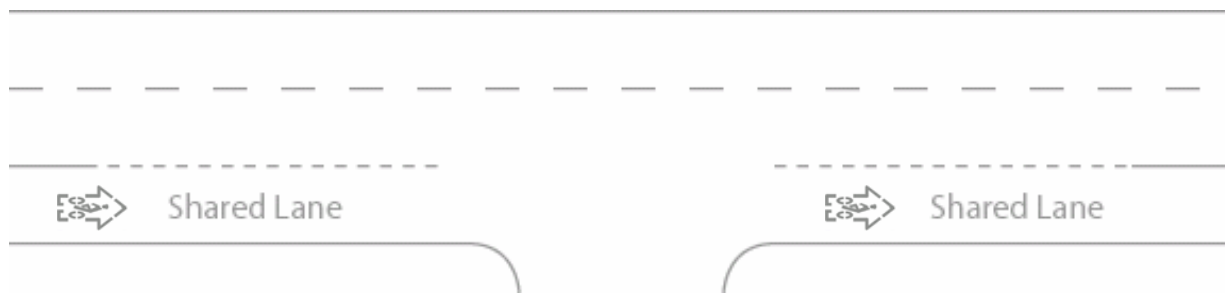
- Wider lane provides greater separation from motorists
- Requires motorists to slow down more to make their turn when cyclists are present, thus bringing their speed closer to that of cyclists;
- Encourages motorists maneuvering into the shared lane to look for and yield to cyclists; and
- Defines the merge or transition point for both cyclists and motorists.

DISADVANTAGES

- With a wide lane, motorists may attempt to overtake cyclists riding in the far right portion of the lane; and
- On high speed facilities a long transition area is needed, increasing the length of the potential conflict area.



The "Bike-In-House" and "Sharrow" symbols are examples of shared lane stencils used in Denver and in San Francisco



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Option C –10'-12' Shared Bike Lane with Combined Right Turn Lane

DESCRIPTION

The bike lane transitions from a 10'-12' shared lane to a 4-6' lane marked within the dedicated right turn lane. A dashed stripe divides the bike portion and right turn portion of the lane. Signage should be installed to instruct motorists and bicyclist of the usage of the facility.

APPLICATIONS

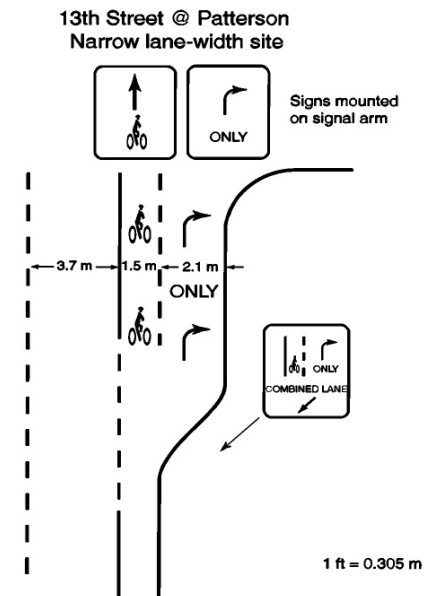
For use on roadways where there is not enough space to implement a standard width bike lane and a standard width dedicated right turn lane at the intersection, preferably on roadways with slow vehicle speeds and a low level of heavy vehicle traffic.

ADVANTAGES

- Guides through cyclists to the correct position at the intersections with a dedicated right turn lane;
- Encourages motorists to yield to cyclists when crossing into the narrow right turn lane;
- Requires motorists to slow down more to make their turn, thus bringing their speed closer to that of cyclists; and
- Enhances bicycle safety in the FHWA evaluation; most cyclists either felt safer or as safe as in standard width bicycle and dedicated right turn lanes.

DISADVANTAGES

- On high speed facilities, long right turn lanes may delay motorists or encourage late lane changing to overtake cyclists;
- Cyclists may be forced into the adjacent through lane when large vehicles are turning right, however, usually they fit next to each other comfortably or the motorist waits behind; and
- A combined lane may not be effective where a right turn island is required.



This treatment is used in Eugene, OR, where intersection widening was not possible.



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Option D – 10'-12' Shared Bike Lane with Separate Right Turn Lane

DESCRIPTION

The bike lane transitions from an 10'-12' lane to a 6' lane installed between the through travel lane and the dedicated right turn lane. A dashed stripe should be installed to define the transition area. Signage should be installed to instruct motorists and bicyclist of the usage of the facility. Shared bike lane stencils should be used.

APPLICATIONS

For use on roadways where there is enough space to implement both a standard width bike lane and a standard width dedicated right turn lane at the intersection.

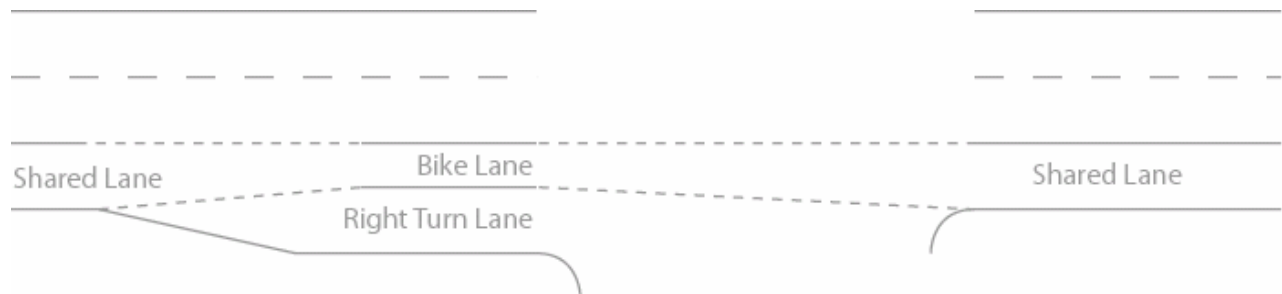
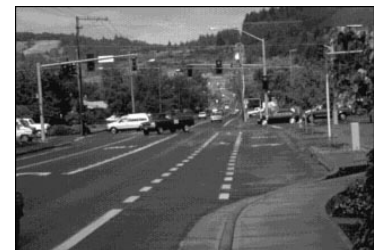
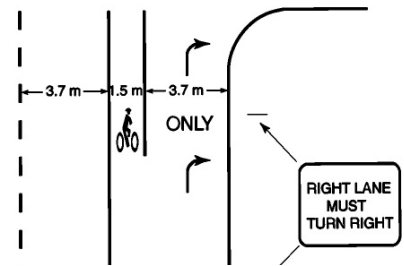
ADVANTAGES

- Guides through cyclists to the correct position at the intersections with a dedicated right turn lane;
- Encourages motorists maneuvering into the dedicated right turn lane to look for and yield to cyclists; and
- Defines the merge or transition point for both cyclists and motorists.

DISADVANTAGES

- For long right turn lanes, cyclists may be overtaken on both sides by motorists;
- On high speed facilities a long transition area is needed, increasing the length of the potential conflict area.

13th Street@ Willamette
Standard lane-width site



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Option E – 6'-8' Bike Lane plus 12' Auxiliary Lane

DESCRIPTION

A 6'-8' bike lane is installed to the right of a 12' auxiliary lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. A dashed stripe should be installed to define a transition area for high right turn volumes and/or bus stops. Appropriate signage and stenciling should define the bike lane.



APPLICATIONS

For use on segments with moderate to high volume access locations where acceleration and deceleration lanes may be required.

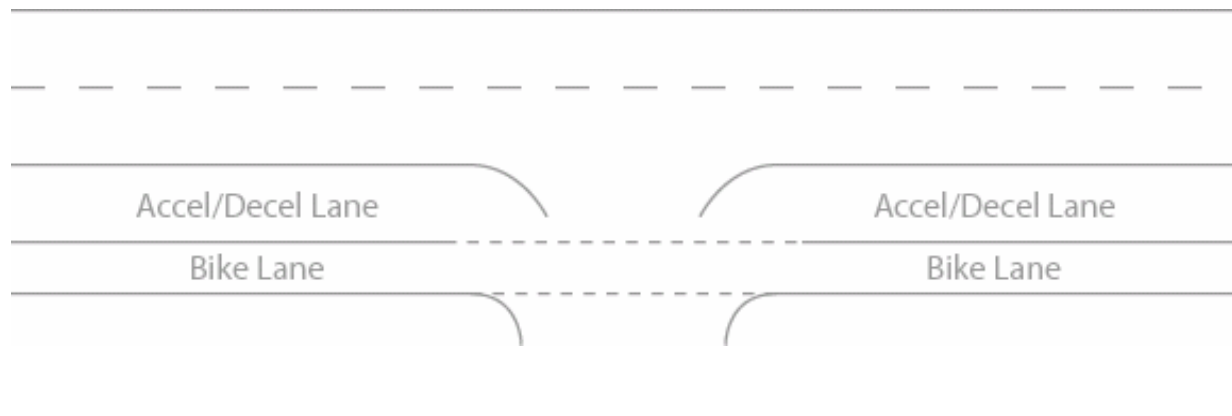
ADVANTAGES

- Long transition areas and conflicts are avoided;
- Conflict points are at an expected location for cyclists and motorists; and
- Provides additional separation between cyclists and motorists when auxiliary lane is not heavily used.



DISADVANTAGES

- Allows higher speed deceleration movements to occur alongside cyclists; and
- Does not require motorists to look for or yield to cyclists until reaching the access point;
- May require additional pavement width, increasing maintenance costs



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Option F – Colored Bike Lanes in High-Risk Conflict Locations

DESCRIPTION

A short section of the bike lane is colored (typically light blue) at high-risk conflict locations, where motorists are permitted or required to merge into or cross the bike lane. Some cities are using this treatment to enhance bike lane locations previously marked with dashed lines.

APPLICATIONS

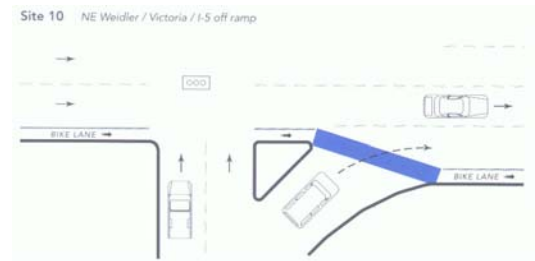
For use at hazardous intersections and high speed conflict zones, especially where motorists may fail to yield to cyclists. North American cities that have used this treatment include Portland, OR, Cambridge, MA, Petaluma, CA, and Montreal, QC, Canada.

ADVANTAGES

- Improves bicycle safety at high conflict areas, with statistically significant results;
- Improves the visibility of the bike lane at key locations;
- Encourages motorists to yield to cyclists more often when crossing the lane;
- Results in motorists encroaching less on bike lanes; and
- Warns cyclists and motorists of especially hazardous areas.

DISADVANTAGES

- May create a false sense of security for cyclists;
- Disabled users may be confused by the light blue color;
- Local policies and/or traffic laws may prohibit the use of this treatment;
- Costs of on-going maintenance is a concern; and
- Unfamiliar drivers may be confused or uncertain about the purpose of the markings.



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Option G – Off-Street Shared Use Path

DESCRIPTION

An exclusive shared bike and pedestrian facility with minimal cross flow by vehicles, best used as an extension of or supplement to an on street bike lane system. Under most conditions, the path should be at least 10' wide to allow for two-directional travel.

APPLICATIONS

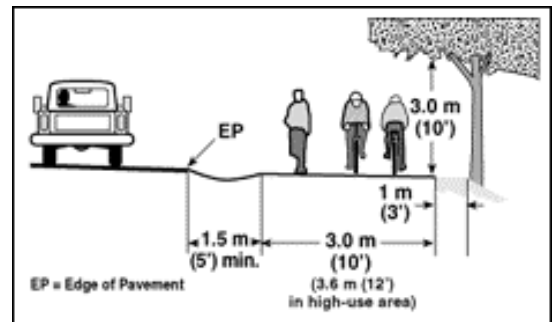
Shared use paths adjacent to roadways are generally not recommended for a number of reasons outlined in the disadvantages below. However, they can serve as connections to other off-street paths or as an alternative to on street facilities in uniquely constrained locations.

ADVANTAGES

- Physically separates cyclists from motorists;
- Provides a learning ground for inexperienced cyclists who may fear high speed traffic conditions associated with on street lanes; and
- Can attract experienced cyclists who prefer an aesthetic ride.

DISADVANTAGES

- Requires one direction of cyclist traffic to ride against motor vehicle traffic, leading to wrong way riding at the end of the path;
- Motorists crossing the path at intersections do not expect cyclist traffic approaching both directions;
- Many cyclists will still choose to use the roadway because it may be more convenient, better maintained, or safer. This may lead to harassment by motorists who expect cyclists to use only the adjacent path;
- Motorists falsely expect cyclists to stop or yield at all cross-streets and driveways, but efforts to require or encourage cyclists to yield or stop at these locations are inappropriate and frequently ignored; and
- Stopped cross-street motorists may block the path crossing.



Multi-use path standards
Source: Oregon Department of Transportation