Protected and Connected Bicycle Lanes

Description

A protected bicycle lane (also known as a cycle track or separated bicycle lane) runs alongside a street, but is physically separated from motor vehicle traffic and is distinct from the sidewalk. Protected bicycle lanes can be one- or two-way. The bicycle lane can be at street level, higher up at the sidewalk level, or at a level in-between the two.

Connected bicycle lanes ensure that the network of lanes is uninterrupted, so that cyclists do not need to leave the lane's protective space in order to reach their final destination.

How it Works

The main feature of a protected bicycle lane is a physical barrier that prevents motor vehicles from entering the dedicated road space set aside for cyclists. The barrier can be a raised curb, jersey barriers, bollards, plantings, or motor vehicle or bicycle parking.

Protected bicycle lanes can be integrated with on-street motor vehicle parking by placing the bicycle lane on the sidewalk side of a parking lane. Drivers moving in or out of parking spaces do not interact with cyclists, and the motor vehicles also act as a barrier that helps protect cyclists.

Injuries caused by "dooring" (when cyclists are injured as a result of car doors opening) are eliminated when the bicycle lane's design fully separates cyclists from parked vehicle spaces.

Studies have shown that:

- The effectiveness of protected bicycle lanes varies but, if implemented well, can reduce vehicle-bicycle crashes resulting in injuries by as much 90%; and
- One-way protected bicycle lanes on both sides of a street are a significantly safer design than a single two-way protected bicycle lane on only one side of the street, especially where they cross intersections and driveways.

Best results occur when:

- Protected bicycle lanes are installed along streets with high motor vehicle volumes and faster speeds (i.e., arterial roads and collector roads);
- They are implemented in conjunction with raised crossings (page 26) to help extend protection to intersections;
- A buffer zone for opening car doors is included in the design if protected bicycle lanes are installed on the sidewalk side of a vehicle parking lane; and
- One-way bike paths on different streets, or on different sides of the same street, are prioritized over two-way bike paths on the same street. Two-way paths lead to highly complex intersections, and introduce greater risks to cyclists when they cross driveways and alleys.