Florida Department of Transportation Research

A Summary of Design, Policies, and Operational Characteristics for Shared Bicycle/Bus Lanes
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Traffic lanes set aside for the use of specific categories of vehicles are becoming more common, from dedicated bicycle lanes on urban roadways to managed lanes for carpools and other high occupancy vehicles on Florida's interstate highways. These lanes can offer advantages, such as improved travel time, safety, and travel-time reliability. In an urban setting, it can be helpful to provide special lanes for buses and bicycles, but it is often difficult to justify having both when roadway right of way is limited. One solution is the shared bicycle/bus lane (SBBL). Several cities in the U.S. and abroad have created these lanes, so there is some experience with their planning, management, and enforcement.

The Florida Department of Transportation (FDOT) contracted with researchers from the University of South Florida to examine the use of SBBLs and to determine and prioritize planning considerations related to SBBLs as a foundation for developing best practices for implementing them.

Researchers inventoried SBBLs across three continents, Australia, Europe, and North America. They located numerous examples of SBBLS, including 27 in the U.S. Some have been in place since the late 1980s, but most have been established in the past few years, and some are only in the planning stage. Yet, no generally accepted standards exist on how such lanes should be configured or operated, even among the mostly widely used U.S. design guides. Some communities have implemented SBBLs, relying on the professional expertise and judgment of their transportation engineering staff, while others have established design standards but have no SBBLs in place.

Despite the number of SBBLs in operation, the researchers found that little formal research had been done on the safety or effectiveness of different designs, and most of what has been done is from abroad. Nevertheless, a few studies were found, and these are reviewed in the report.

This shared bicycle/bus lane, on a heavily traveled road in downtown Washington, D.C., was the subject of a detailed case study in this project.

In addition, a number of design guidelines from various cities and states, both inside and outside the U.S., were reviewed that govern separate bicycle and bus lanes.

Among the SBBLs in the U.S., four were selected for in-depth review. For these SBBLs, sufficient information existed to develop case studies, and they represent a variety of facility types, contexts, and operating conditions. Case studies were developed for Hennepin Avenue in Minneapolis, Chestnut Street in Philadelphia, 7th Street NW and 9th Street NW in Washington, D.C., and Coastal Highway in Ocean City, Maryland. Together, the selected examples offer important information for establishing SBBLs in Florida.

Based on their studies, the researchers were able to offer a detailed list of planning considerations, relating them to current Florida design practices and statutory requirements. These planning issues included topics such as design context and facility usage, planning and engineering variables, and operational aspects. They also developed detailed recommendations for future research.

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