



U.S. Department of Transportation
Federal Highway Administration

Transportation and Safety

Over the past 50 years, most roadways have been designed primarily for safer automobile and truck travel, which can make them less safe for pedestrians, older adults, children, people with disabilities, or bicyclists. More than 7,000 pedestrians and bicyclists died on U.S. roads in 2018 and more than 120,000 were injured.¹ People who do not drive or have access to private vehicles, such as children and older adults, are disproportionately represented.² Making roads safer for all users can have the added benefits of improving access to jobs and services, reducing congestion, and sparking business and neighborhood investment.³

Complete Streets balance safety and efficiency. Complete Streets are designed and operated to enable safe and efficient access for pedestrians, bicyclists, motorists and transit riders of all ages and abilities. A Road Diet is a successful and popular method of reconfiguring roadways to promote multimodal safety. The most common Road Diet is the reconfiguring of a four-lane undivided highway to a three-lane segment consisting of two through lanes and a center, two-way left-turn lane. FHWA has deemed Road Diets a proven safety countermeasure and promotes them as a safety-focused design alternative. These projects can help to reduce speeds and allow reclaimed space to be allocated for other uses, such as bus lanes, sidewalks, bike lanes, and parking helping to improve mobility, access, and quality of life for all road users.⁴

Complete Street networks improve safety. Street networks are the building blocks of a community. Compact, interconnected street networks are safer and more convenient than the “cul-de-sac and collector roads” approach; a traditional grid street network improves safety by encouraging motorists to drive at appropriate speeds.⁵ Slower vehicle speeds improve crash survivability. For example, a pedestrian hit at 20 mph has just a 5 percent chance of being killed compared to an 85 percent chance if hit at 40 mph.⁶ Creating communities with an interconnected roadway network of smaller streets offers multiple options for efficient local travel at moderate speeds, with safer, more direct routes for walking and bicycling.



Complete Streets improve access and mobility for all road users (Photo used with permission of Charlotte Department of Transportation)

The money saved by preventing bicycle and pedestrian injuries and fatalities more than offsets the costs of improving our streets and roads. The Federal Highway Administration estimates the national comprehensive cost for each traffic death at \$9.6 million and \$125,100 for moderate injuries. For 2018 bicycle and pedestrian data, this equates to a cost of roughly \$82.2 billion in a single year.

Source: Crash Costs for Highway Safety Analysis. FHWA. (2018).

¹ National Highway Traffic Safety Administration. “Traffic Safety Facts: 2018.” 2018.

² National Highway Traffic Safety Administration. “Quick Facts – 2017.” July 2019.

³ See related Factsheets on public health and economic development.

⁴ Federal Highway Administration Office of Safety. “Road Diets (Roadway Reconfigurations).”

⁵ Centers for Disease Control. “Designing Activity Friendly Communities.” 2019.

⁶ Safe Routes to School. “Safe Routes to School Guide.”

Creating more livable communities through transportation choices



Success Stories

Combining safety and redevelopment in San Diego, CA.

The reconstruction of La Jolla Boulevard in Bird Rock combined community revitalization and traffic calming to yield significant safety benefits and increased economic development. The plan included use of a road configuration to reduce the number of through travel lanes from five to two, and the addition of five modern roundabouts, improved sidewalks, medians, landscaping, increased angle parking in space gained from lane reductions, and traffic calming on side streets to avoid potential traffic diversion. Traffic incidents were reduced by 90 percent. The project has revitalized La Jolla Boulevard, acting as a catalyst for several new mixed-use developments, a 139-unit condominium development, and a major drugstore.⁷

Repurposing Space Improves Safety for All in Gallup, NM.

Boardman Drive is classified as a principal arterial roadway and main thoroughfare for two schools and an aquatic center in Gallup, NM, a small city in the western half of the State. The area attracts many students and a younger population; however, the roadway's high traffic volume and lack of safe crossings created an unsafe environment for vulnerable road users. The New Mexico DOT engaged with the community and funded the installation of a road diet with pedestrian improvements. The project reduced the number of travel lanes from four to three and used the additional space to install bicycle lanes and sidewalks to promote comfort and safety and to encourage a healthier commute for area students.⁸

Bike-friendly cities are safer for everyone. Davis, CA, is recognized as one of the top bicycle friendly cities in the U.S. There are bike lanes on 100 percent of arterial roadways, and nearly 22 percent of residents commute by bike.⁹ What is less well known is that the traffic fatality rate (including drivers) in Davis is also unusually low, at about 10 percent of the CA Statewide rate. The experience of cities such as Cambridge, MA; Portland, OR; and New York, NY, which have been recognized for successfully increasing bike usage in recent years, has reinforced the finding that most bike friendly cities are safer than average for all roadway users. In all three cities, the increase in bike ridership has corresponded with an equally dramatic decrease in traffic fatality rates.¹⁰



La Jolla Boulevard before (above) and after (below) road diet (Photos used with permission of Paul Zykovsky)

Available Resources

FHWA Bicycle and Pedestrian Program

FHWA Safety Program

U.S. DOT Safe Routes to School Programs

Steps to a Walkable Community – A Guide for Citizens, Planners and Engineers

National Complete Streets Coalition Website

Pedestrian and Bicycle Information Center

⁷ Federal Highway Administration, "The Role of FHWA Programs In Livability: State of the Practice Summary." March 2011.

⁸ Federal Highway Administration. "FHWA's Fostering Multimodal Connectivity Newsletter: Resource Highlight – Right-Sizing Transportation Infrastructure to Foster Economic Development." April 2019.

⁹ League of American Bicyclists. "Report Card: Davis, CA." 2016.

¹⁰ Garrick, Norman and Marshall, Wesley, "Beyond Evidence on Why Bike-Friendly Cities Are Safer for All Road Users." *Environmental Practice*, March 2011.

