

Safer People, Safer Streets:

Summary of U.S. Department of Transportation Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities

September 2014



A Message about Pedestrian and Bicyclist Safety

Americans are increasingly walking and riding bicycles to commute, run errands, get exercise, access public transportation, and save money. At the U.S. Department of Transportation, we believe that everyone should have the choice to safely take advantage of these healthy and economical transportation options.

Walking and biking are not just lifestyle choices. They complete our transport system and are the first and last leg of almost every trip. Expanded access to these options can improve the economic and social well-being of a community and its residents. Safer and more convenient access to affordable transportation means that we are all better connected to our communities, to essential services, and to new job and education opportunities.

Despite our success in reducing passenger vehicle occupant deaths by 33 percent in the past decade, in the past few years we have seen rising numbers of pedestrian and bicyclist injuries and fatalities related to collisions with motor vehicles. We must better protect people on foot and bicycle by fostering environments and multimodal transition points that are safe, so that even more Americans will feel comfortable enough to take advantage of walking and biking.

That is why we have launched a comprehensive and coordinated approach that builds off our existing work to improve pedestrian and bicycle safety. This initiative will include new research and tools to improve safety, generate better data on pedestrian and bicycle activity, crashes, and infrastructure, and build stronger partnerships between DOT headquarters and field offices, local officials, safety organizations, State, regional, and local planners and engineers, and advocacy groups.

The U.S. Department of Transportation is committed to making safe walking and biking a reality for all Americans, regardless of age, income, or ability. I strongly encourage you to get involved in your own communities and at all levels of government to make the case for improved pedestrian and bicyclist safety. When these options are safe and available to all Americans, we will have a transportation system that connects people to endless possibilities.



Anthony R. Foxx

A handwritten signature in blue ink that reads "Anthony R. Foxx". The signature is stylized and cursive.

Secretary of Transportation

Introduction

Around the country, States and cities are documenting increasing numbers of people walking and bicycling for their commutes, errands, recreation, and other travel. For some people, walking and bicycling are the only transportation options. This boom in non-motorized travel has been supported by infrastructure and design improvements that encourage safe walking and bicycling, increased use of public transportation, as well as the development of urban bike-sharing programs. Americans have demonstrated that when we have greater access to safe infrastructure for walking or bicycling, we are eager to enjoy the health benefits, cost savings, and pleasure of walking or riding through our communities.

Secretary Foxx and the U.S. Department of Transportation strongly support this increase in use of these environmentally-friendly transportation options which help reduce congestion and general wear and tear on roadways. Non-motorized infrastructure and bike-share systems are critical to increasing access and connectivity to existing and planned bus and passenger rail systems, linking our transportation systems together into a multimodal network.

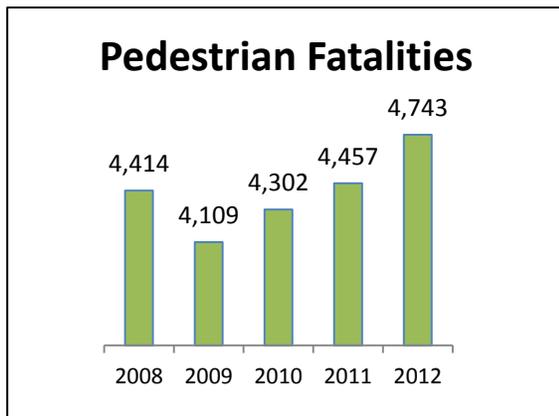
With the increase in biking and walking, the potential for conflict between motorized and non-motorized travelers has also increased. Since 2009, fatalities have been increasing for bicyclists and pedestrians. In 2012, bicyclist and pedestrian fatalities were over 16% of all traffic-related fatalities.

Secretary Foxx has declared pedestrian and bicyclist safety as a top priority for the DOT. The Department's pedestrian and bicyclist safety initiative focuses many departmental resources on the problem and helping to improve the safety of the growing number of Americans traveling by bike or by foot to reach transit or other important destinations including work, job training, school, healthcare and community services.



Injury and Fatality Trends and Risk Factors: We Need to Improve Safety Outcomes

A quick review of roadway death and injury data makes clear why we need to do better when it comes to pedestrian and bicycle safety. Despite declines in motor vehicle crash fatalities, pedestrian and bicycle injuries and fatalities have steadily increased since 2009. In 2012, more than 5,000 pedestrians and bicyclists across the U.S. were killed in crashes with motor vehicles.



NHTSA's National Center for Statistics and Analysis

Walking or biking fatalities and serious injuries can happen anywhere, but understanding when and where crashes are most likely to occur can help transportation professionals target road safety improvement projects and thereby increase safety for all road users. Rural roads can pose safety challenges where traffic is moving fast and drivers may not be expecting a bicyclist or pedestrian. But the majority of fatalities—73% of pedestrian deaths and 69% of bicyclists deaths in 2012—occur in urban areas where interactions between vehicles and non-motorized users are most

“Cities and towns across the country are taking steps to make biking an option for their residents, but we have a responsibility to make sure that it's a safe option, too...this isn't just an issue of recreation; it's an issue of equality, bringing people together, expanding the middle class, and helping people who are trying to get into the middle class. It's an issue of making sure, when someone's only or best option to get to work is a bike, that they have an option to ride it, and ride it in safety.”

Secretary Anthony Foxx

frequent, and where many people walk or bike to reach destinations or transit stops and stations. A majority of fatalities take place on urban arterials.

“Our roads should be safe; they should be easy places to travel no matter how we’re traveling on them”
Secretary Anthony Foxx

Whether in rural or urban areas, the most dangerous area is mid-block, where drivers may be less alert to the presence of pedestrians and bicyclists. In 2012, 60% of bicyclist deaths and 70% of pedestrian deaths occurred outside of the intersection.

Recent data indicates that residents of low-income and minority neighborhoods are disproportionately represented in bike and pedestrian injuries and fatalities, and low-income neighborhoods often have fewer sidewalks and other safe infrastructure. Safe

non-motorized travel, and safe access to transit stops, is essential for disadvantaged Americans seeking to reach jobs, schools, and other opportunities, so DOT sees pedestrian and bicycle safety as an essential part of our Ladders of Opportunity initiative.

Time of day and lighting conditions also contribute to risks for bicyclists and pedestrians. The majority of pedestrian fatalities occur in the evening to nighttime hours during low-light conditions, particularly between 8 pm and midnight. For bicyclists, the highest percent of fatalities occur between the hours of 4pm and 8pm.

Alcohol impairment is also a serious risk for all road users, and particularly critical for pedestrians and bicyclists. In 2012, 14% of drivers involved in fatal pedestrian or bicyclist crashes were at or above blood alcohol concentrations of .08 g/dL—the legal limit for driving in the U.S. Further, nearly one-fourth (24%) of bicyclists and one-third (36%) of pedestrians killed in traffic crashes had blood alcohol concentrations of .08 BAC or higher.

The DOT Pedestrian and Bicycle Safety Initiative

The DOT is committed to continuing to improve the safety of our roadways to protect all users, and to working with the public, state, regional, and local officials, community leaders, and organizations to improve safety by focusing on changes that can have a lasting impact. Over the course of the next year and a half, the Department will be doing more to address non-motorized safety issues and help communities create safer, better connected bicycling and walking networks. We will be rolling out a variety of new resources, issuing new research, and highlighting existing tools for a range

“Americans are increasingly embracing a new approach to work and school commutes that includes less time behind the wheel and more time walking or cycling... We need to bring new resources and tried and true strategies to bear to better protect Americans when they choose to walk or ride their bikes.”
-Acting NHTSA Administrator David Friedman

of transportation professionals. We will engage safety experts, existing and new stakeholders, local officials, and the public on a range of targeted strategies to help us get these materials into use and encourage safety in and around our streets, including transit stations and other multi-modal connections.

Infrastructure Safety

The DOT will promote infrastructure and design improvements to ensure safe and efficient routes and facilities are available wherever people walk and bike.

- Walk and Bike Assessments: In every state, FHWA, FTA, and NHTSA field offices will facilitate or participate in on-the-ground safety assessments of selected corridors to understand the extent of the safety need. This will also be an opportunity to build relationships with local practitioners and stakeholders around the topics of connected pedestrian and bicycle networks and the safety of non-motorized users. Pilot assessments have already been conducted in three metropolitan areas – Boston, MA; Dallas/Ft. Worth, TX; and Lansing, MI.
- The Road Diet Guide: Road Diets will be one of FHWA’s 2015 Every Day Counts (EDC) Initiatives, in which FHWA works with state, local, and industry partners to deploy new innovations. Road diets help balance street space between vehicles, pedestrians, bicyclists and transit, and they can improve mobility and access for all road users, reduce crashes and injuries, and improve quality of life.



- How to Design Safe Bicycling Facilities: FHWA will update the popular resource Bikesafe: Bicycle Countermeasure Selection System to provide practitioners with the latest information available for improving the safety and mobility of those who bicycle. **Bikesafe** is an expert system that allows the user to select treatments (mainly engineering with some enforcement and education activities) that help mitigate a known crash problem or help achieve a specific performance objective. An update to the companion tool for pedestrian safety, **Pedsafe**, was recently completed.

- Separated Bike Lane Planning and Design: FHWA's document, to be released in fall 2014, will document planning and design considerations for separated bike lanes, which are exclusive bike facilities physically separated from motor traffic and distinct from the sidewalk. The project includes a detailed safety analysis of existing separated bike lanes throughout the U.S. and will cover issues such as design flexibility, accessibility, intersection design, and maintenance.



- FHWA's Research Agenda: In fall 2014, FHWA will be initiating an aggressive research agenda on a range of topics including pedestrian and bicycle safety, performance measures, design flexibility, and network development. Planned research projects include:
 - Flexibility in Pedestrian and Bicycle Facility Design
 - Global Benchmarking Program Desktop Review on Delivering Safe and Connected Pedestrian and Bicycle Networks
 - Multimodal Conflict Points
 - Guidebook for Evaluating, Establishing, and Tracking Pedestrian and Bicycle Performance Measures
 - Workbook for Building On-Road Bike Networks through Routine Resurfacing Programs

The capstone of these projects will be a Strategic Agenda for Pedestrian and Bicycle Transportation (to identify critical gaps, prioritize near term investments, and establish a national framework for issues such as data collection and management, network implementation and documentation, research, training, and national design guidance).

- Assist Residents Making their Communities Safe for All Road Users: The Resident's Guide for Creating Safe and Walkable Communities is being updated with new information and will also include bicycle safety issues. The guide includes information, ideas, and resources to help residents learn about issues that affect walking and bicycling conditions; find ways to address or prevent these problems; and promote pedestrian and bicyclist safety. The Guide provides examples from communities working to improve pedestrian and bicyclist safety, and also contains fact sheets, worksheets, and sample materials that can be distributed or adapted to meet the needs of a community.

- Infrastructure Design Innovations: Many new design innovations are showing promise in improving bicycle and pedestrian safety. The Department will research and promote evidence-based design concepts that help drivers, bicyclists, and pedestrians share the road together safely, including roadway reconfigurations that better serve all users.



- Focus Resources Where They're Most Needed: The *Pedestrian Safety Focus States and Focus Cities* effort concentrates technical assistance on evaluating, planning, and solving safety issues in states and cities with the highest pedestrian fatalities and fatality rates. This focus will carry over to specific high-incidence locations in these jurisdictions.

- Evaluation of Pedestrians Safety Engineering Countermeasures at Urban and Suburban Midblock Crossing Locations: About 70 percent of pedestrian fatalities occur at non-intersection locations. The goals of this research effort are to improve pedestrian safety at urban and suburban midblock crossing locations by identifying and evaluating low- to medium-cost pedestrian countermeasures to reduce

pedestrian fatalities and injuries at these locations.

- Pedestrian Countermeasure Crash Modification Factor Study: This new research will develop statistically rigorous CMFs for high-priority pedestrian crash countermeasures using current state-of-the-art analytical methods. The study will focus on the sites and 18 countermeasures installed in three cities from a previous study (San Francisco, Las Vegas, and Miami). Based on data availability and FHWA priorities, a select group of countermeasures will be evaluated for CMF development.

- Road Safety for Transit Patrons: Safer bike and pedestrian infrastructure depends on effective relationships and communication between road agencies and transit agencies. Transit agencies and their customers can often identify gaps in the transportation network, but they do not typically have the authority to fill those gaps. The Road Safety for Transit Patrons Initiative will work at the intersection of road and transit agency responsibilities. This effort will bring staff from FTA, FHWA and NHTSA – both headquarters and field offices – to provide technical assistance to local and regional planners, engineers, public safety officers and public works professionals who work for transit operators, State DOTs, MPOs, counties and cities.



- Transit Agency Safety Plans: As part of MAP-21 implementation, FTA is developing its National Safety Plan, which will guide transit agencies in areas of all sizes to: establish policies for encouraging safe access to transit; consider

safety risks; and develop mitigations for those safety risks in partnership with the communities they serve through the implementation of a Safety Management Systems (SMS) approach to safety. Transit agencies will further speak to these safety activities in their Transit Agency Safety Plans. Because all transit riders are bicyclists or pedestrians for some part of their journey, communication and awareness of safety actions are large components of any strategy for improving safe access to transit.

Improving Connected Pedestrian and Bicycle Networks: The Department will promote the development of multimodal networks which include interconnected pedestrian/and or bicycle transportation facilities that allow people of all ages and abilities to safely and conveniently get where they want to go. This will be accomplished, in part, by promoting pedestrian and bicycle facility design flexibility, and by highlighting best practices at the local, regional, and state level.

- In December 2013, FHWA issued an interim approval for bike signals through the Manual on Uniform Traffic Control Devices (MUTCD). A range of new devices and applications for pedestrian and bicycle facilities are being considered for inclusion in the next edition of the MUTCD, which is expected to be published in 2016.

Engaging the Public

The Pedestrian and Bicycle Information Center and the National Center for Safe Routes to School provide research, tools, training opportunities, and other resources that the public can use to get informed and actively engaged in the process of improving pedestrian and bicycle safety in their community. We encourage you to visit these sites!

- FHWA supports the [Pedestrian and Bicycle Information Center](http://www.pedbikeinfo.org), which develops, synthesizes, promotes, and distributes current bicycling and walking information, provides expert technical assistance to various audiences to ensure that citizens and professionals have access to the best available information, and generates a network of informed individuals and organizations who can increase the exposure of ped/bike issues to the general public. www.pedbikeinfo.org
- FHWA supports the [National Center for Safe Routes to School](http://www.saferoutesinfo.org), which assists States and communities in enabling and encouraging children to safely walk and bicycle to school. The National Center serves as the information clearinghouse for the Federal Safe Routes to School program. The organization provides technical support and resources and coordinates online registration efforts for U.S. Walk to School Day and facilitates worldwide promotion and participation. <http://www.saferoutesinfo.org>

Behavioral Safety and Education

To enable individuals to make the choices that best protect their safety and the safety of their families and communities, the Department will provide tools to help people understand how their behavior affects their own safety and the safety of others.

- **New Behavioral Countermeasures:** New research into risks and solutions will include a detailed examination of behavioral choices and the role of electronic distractions – of drivers, bicyclists, and pedestrians – in crash risk.
- **Pedestrian Enforcement Demonstration Program:** The Department is evaluating law enforcement and education techniques applied in three pilot locations, New York

City, Philadelphia, PA, and Louisville, KY. Results of these programs will be incorporated into law enforcement training and community program guides to promote safer behavior.

- Research on Impaired Pedestrians and Bicyclists: New research to determine safety risk related to alcohol impaired pedestrians and bicyclists will be used to identify and share strategies to prevent impaired walking and biking and encourage less risky choices.
- New Safety Campaign Materials: The Department will develop new safety campaign materials focused on helping pedestrians and bicyclists make good choices and provide tools and resources for broad dissemination.

Vehicle Safety

Advanced technology holds great potential for making roads and vehicles safer, adding features that could warn road users about hazards, and even intervene to avoid crashes.

- Vehicle-to-Pedestrian Communications: The Department is examining the potential for vehicle-to-pedestrian (V2P) communications technology to help drivers see pedestrians, as well as warn pedestrians that they are crossing or entering a roadway.
- Crash Avoidance Technologies: The Department is researching advanced crash avoidance technologies such as sensor-based warning systems and automated braking systems that can help drivers detect pedestrians to avoid or reduce the severity of a crash.
- Promote and Regulate Vehicle-based Solutions: The Department will advance the adoption of vehicle-based solutions through its consumer information and regulatory programs. The New Car Assessment Program will continue to inform consumers of currently available safety systems, such as rear-visibility cameras, that can significantly improve pedestrian and bicyclist safety. The Department will also continue its efforts to require audible alerts for electric and hybrid vehicles operating in quiet mode and vehicle designs to reduce the harm to a pedestrian struck by a vehicle.



Improvements in Data Collection and Analysis

Fundamental to this initiative is the need to improve the quality and availability of data to enable more informed transportation decisions. This includes data on walking and bicycling activity (i.e. volume), existing and proposed pedestrian and bicycle infrastructure, and the basic circumstances of all pedestrian and bicycle crashes. As part of our commitment to performance-based design and decision making, DOT will support improvements to bicycle and pedestrian data and research.

- Data Initiatives: DOT will host three sessions to focus on data needs and how better data can be used to develop policies. These include (1) a gathering of the University Transportation Centers and modal practitioners who research relevant bicycle and pedestrian safety topics; (2) a “datajam” with technology and data experts to identify data sources and innovative analysis methods; and (3) a Transportation Research Board workshop to promote development and use of resources and best practices.
- Pedestrian and Bicycle Updates to the Traffic Monitoring Guide (TMG) and the Traffic Monitoring Analysis System (TMAS): TMAS receives raw data in the TMG-recommended data forms from automatic collection programs, vehicle classification counts, and weigh-in-motion counters, and produces basic traffic volume reports from those data sets. An extension of this system scheduled to be released in 2015 will receive bicycle and pedestrian counts.
- Non-Motorized Toolkit (NMTK): A toolkit framework implemented as a GIS-enabled, open-source, Web-based system has been developed to allow researchers and planners to readily share analytic tools for bicycle and pedestrian data analysis and modeling.



Conclusion

This new Initiative recognizes the need to work in a coordinated, multimodal fashion, not just across the U.S. Department of Transportation, but throughout America's states, regions, towns and cities. The growing interest in bicycling and walking needs to be encouraged and supported through continued investment in safer infrastructure, and through new resources and tools to ensure that we choose the safest designs and promote safer behaviors.

We look forward to engaging the public and practitioners in a conversation about pedestrian and bicycle safety. Your input and contribution is essential to making progress on bicycle and pedestrian safety, because everyone has a role to play in improving the safety of our communities. At the State and regional level, we're asking officials and practitioners to commit to enhancing walking and biking networks, promote laws to reduce risks to bicyclists and pedestrians, and ensure that resources are allocated to solving this problem. At the community level, we're asking individuals to start a safety dialogue, get involved in local, regional, and state transportation planning efforts, and identify critical gaps in multimodal transportation networks. Throughout the Fall of 2014 we will be engaging local officials, safety organizations, State, regional, and local planners and engineers, and advocacy groups in helping us plan innovative ways to spread the word about these resources and develop a comprehensive approach to pedestrian and bicycle safety.

When safe and convenient transportation opportunities are available to every American, regardless of age, ability, or income, we all benefit from safer communities, a stronger economy, and a cleaner environment.

