



USDOT Pedestrian Safety Action Plan

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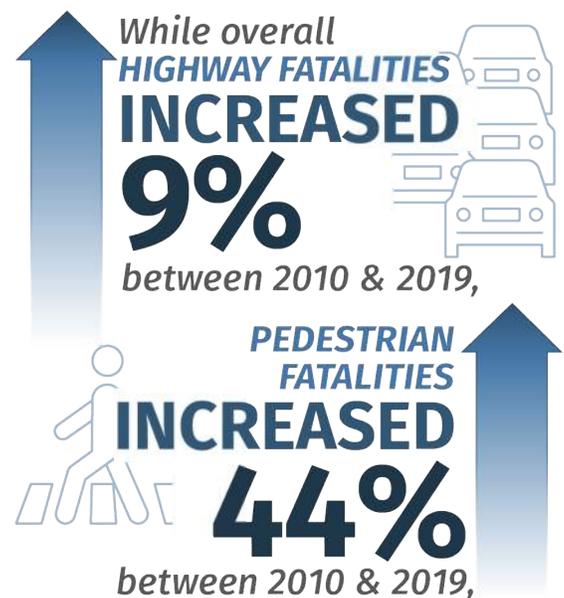
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INTRODUCTION

People may have preferences when it comes to transportation, but at some point, everyone is a pedestrian. Whether it is walking to a neighbor's house, work, or school; accessing transit; shopping; or for exercising – walking is transportation. However, in the last decade, there has been an increase in fatalities for this basic form of transportation.

The number one strategic goal for the U.S. Department of Transportation (USDOT) is safety. The Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA) address pedestrian safety through a multipronged approach of 1) infrastructure to reduce conflicts between vehicles and pedestrians and provide safe places for people to walk; 2) vehicle safety; 3) research; 4) enforcement and judicial solutions; 5) data collection and analysis; and 6) education and outreach through behavioral safety programs.



Source: Fatality Analysis Reporting System (FARS) 2010 Final File, NHTSA's Preview of Motor Vehicle Traffic Fatalities in 2019





To address the issue of pedestrian safety, FHWA Administrator Nicole R. Nason and NHTSA Deputy Administrator James C. Owens joined forces to release this action plan, which includes current and future ways to improve pedestrian safety across all USDOT modes. The goal of the **USDOT Pedestrian Safety Action Plan** is to reduce pedestrian deaths and serious injuries. To accomplish this goal, USDOT is taking a comprehensive approach that encompasses improvements to the roadway and surrounding environment, increased education on the shared responsibility of both pedestrians and motorists along with enforcement and adjudication of pedestrian safety laws.

The plan identifies what the Office of the Secretary of Transportation (OST), FHWA, NHTSA, the Federal Railroad Administration (FRA), the Federal Motor Carrier Safety Administration (FMCSA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA) intend to accomplish in the next two years. The Federal actions focus on the development or update of resources, tools, and plans; new and revised campaigns, programs, and initiatives; the creation or revision of curriculum; and new research to find better ways to improve pedestrian safety.

NHTSA and FHWA are also coordinating the development of the **National Pedestrian Safety Partnership Plan (NPSPP)**. The NPSPP will bring together key stakeholders and U.S. DOT leadership to determine the vision for the future of pedestrian safety and describe the status of pedestrian safety today and how it could be in 2035. This stakeholder engagement



and input is critical to creating a vision and framework for the Nation as a safe place for vulnerable road users.

The safety action plan and the partnership plan put the spotlight on pedestrian safety and boost efforts to reduce pedestrian fatalities and serious injuries nationwide. The input on both of these plans will help identify opportunities and challenges in improving pedestrian safety along with lessons learned. It will also expand the knowledge base on what is working in the area of pedestrian safety.

The goal of the USDOT Pedestrian Safety Action plan is to reduce pedestrian deaths and serious injuries.





Photo courtesy of Scott Windley

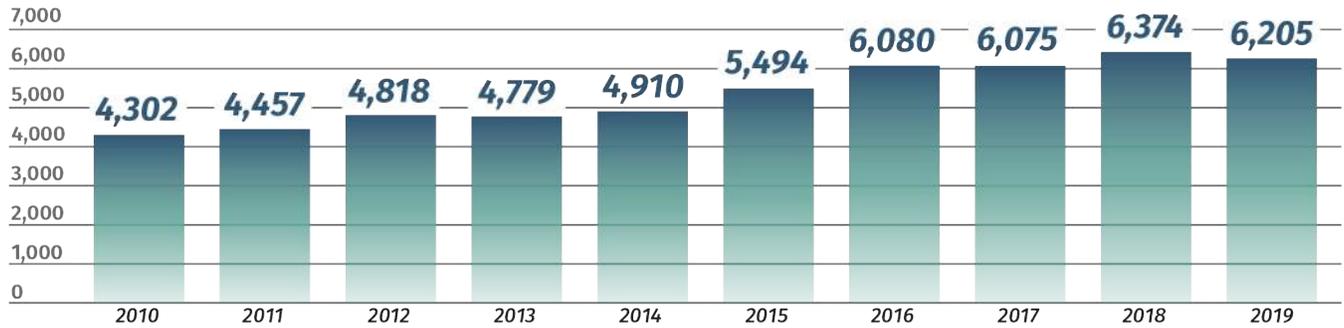
UNDERSTANDING THE CHALLENGE

In keeping with a data-informed approach to problem solving, the following data represent areas where improvements can result in decreases in pedestrian fatalities. Specifically, identification of where pedestrian fatalities occur, who is more involved in these crashes, and the role of additional contributing factors such as alcohol, speed, and vehicle type all help to target successful mitigation treatments. At the time of this report, FARS data from NHTSA included the following: FARS 2010-2018, Final File; the 2018 Annual Report File (ARF) used for specific details; and the Preview of Motor Vehicle Traffic Fatalities in 2019. Specific data such as month, age, etc. are not available for the preview which is why 2019 data does not appear in Figures 2-7 or Table 2. NHTSA's Preview of Motor Vehicle Traffic Fatalities shows a decline in total traffic fatalities including a reduction from 6,374 to 6,205 in pedestrian fatalities from 2018 to 2019 (Source: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813021>). Figure 1 shows the number of annual pedestrian fatalities between 2010 and 2019.





Figure 1. Pedestrian Fatalities, 2010-2019



Source: FARS 2010 to 2018 Final File, NHTSA's Preview of Motor Vehicle Traffic Fatalities in 2019

There are a number of contributing factors for the increase in pedestrian fatalities. While the trend cannot be attributed to a single factor, crashes involving pedestrians may involve reduced visibility caused by time of day or lighting, excessive vehicle speed, and pedestrians crossing against traffic signals, vehicle driver or pedestrian distraction, vehicle type and size, and driver and/or pedestrian impairment. There also may be faulty roadway design or inadequate pedestrian facilities such as a lack of mid-block crossings or extended time at the crosswalk to make it easier to cross a street safely. Unfortunately, when there is an incident involving a vehicle and a pedestrian, the impact is usually more serious for the pedestrian.

To underscore the seriousness of the problem, Table 1 shows the total number of traffic-related fatalities from 2010 to 2019 compared to the total number of pedestrian fatalities during the same time period and what percentage those pedestrian deaths represent.

Table 1. Total Fatalities and Pedestrian Fatalities, 2010-2019

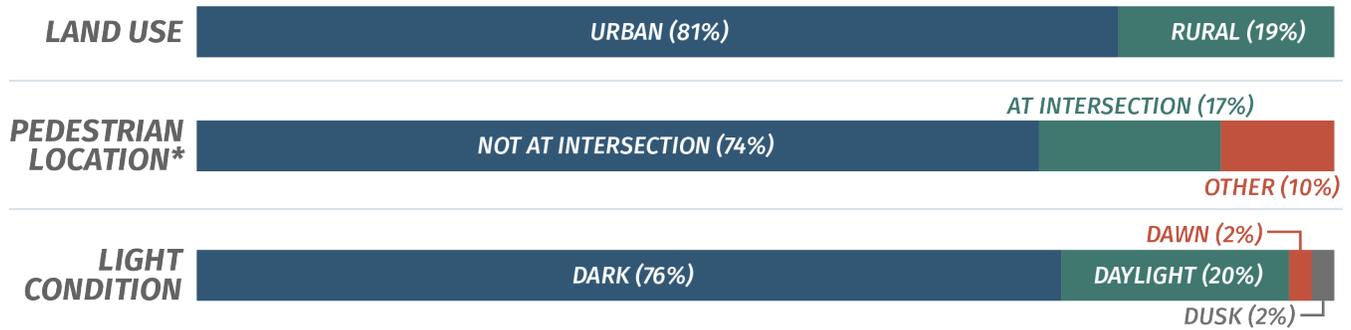
Year	Total Fatalities	Pedestrian Fatalities	
		Number	Percentage of Total Fatalities
2010	32,999	4,302	13%
2011	32,479	4,457	14%
2012	33,782	4,818	14%
2013	32,893	4,779	15%
2014	32,744	4,910	15%
2015	35,484	5,494	15%
2016	37,806	6,080	16%
2017	37,473	6,075	16%
2018	36,835	6,374	17%
2019	36,096	6,205	17%

Source: FARS 2010 to 2018 Final File, NHTSA's Preview of Motor Vehicle Traffic Fatalities in 2019



In their publication *Pedestrian Traffic Safety Facts, 2018 Data*, NHTSA identifies when and where the majority of pedestrian fatalities occur. Figure 2 shows that in 2018, the majority of pedestrian fatalities happened in urban areas (81 percent), not at an intersection (74 percent), and when it is dark (76 percent).

Figure 2. Percentage of Pedestrian Fatalities in Relation to Land Use, Pedestrian Location, and Light Condition, 2018

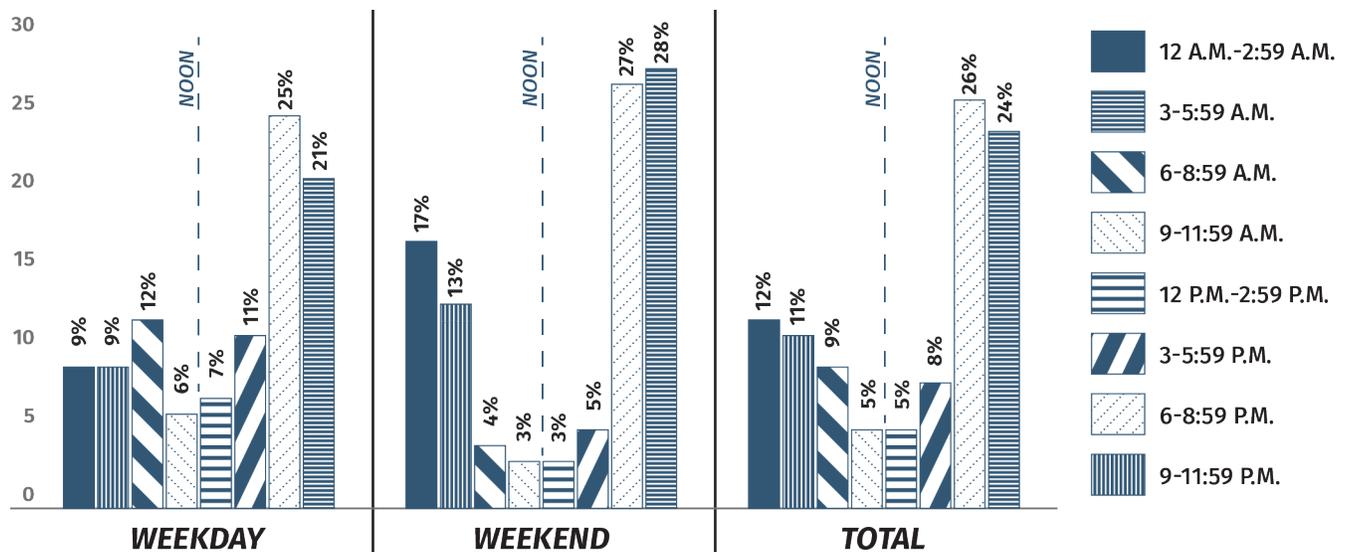


Source: FARS 2018 ARF

*Based on location of pedestrian struck at the time of the crash. "Other" includes sidewalk, bicycle lane, median/crossing island, parking lane/zone, shoulder/roadside, driveway access, shared-use path, and non-traffic area, which may or may not have been at intersection, but were not distinguished by collected data. Thus, "At Intersection" and "Not at Intersection" do not include those in the "Other" category that were at intersection or not at intersection.

Note: Percentages may not add up to 100 percent due to independent rounding. Unknowns were removed before calculating percentages.

Figure 3. Percentage of Pedestrian Fatalities, by Time of Day and Day of Week, 2018



Source: FARS 2018 ARF

*Weekday is Monday 6 a.m. to Friday 5:59 p.m.; weekend is Friday 6 p.m. to Monday 5:59 a.m.



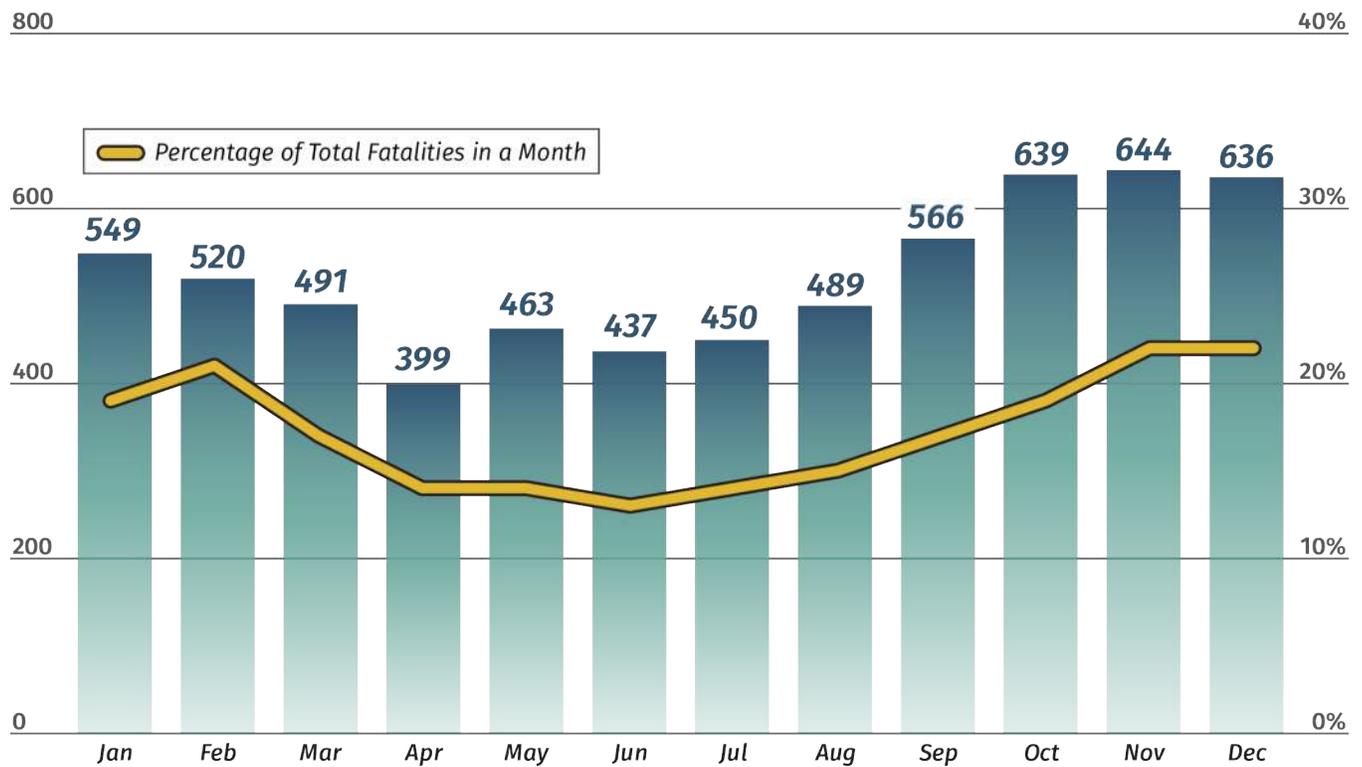


Figure 3, also from the NHTSA Pedestrian Traffic Safety Facts, 2018 Data, shows that in 2018, of those fatalities where the time of day and day of week is known, most pedestrian fatalities occurred between the hours of 6 p.m. to 11:59 p.m.

As Figure 4 shows, the majority of pedestrian fatalities occur in the fall and winter months starting in October when these fatalities increase possibly due to the time change and fewer daylight hours.



Figure 4. Pedestrian Fatalities by Month, 2018



Source: FARS 2018 ARF

One third of pedestrian fatalities are individuals ages 50 to 69 (2,104), as shown in Table 2. However, of the total number of fatalities involving children age 14 and under, 17 percent were pedestrians.



Table 2. Total Killed and Pedestrians Killed in Traffic Crashes, by Age Group, 2018

Age Group	Total Killed	Pedestrians Killed	
		Number	Percentage of Total Killed
<5	344	63	18%
5-9	331	58	18%
10-14	363	60	17%
Children (≤14)	1,038	181	17%
15-19	2,318	227	10%
20-24	3,927	431	11%
25-29	3,688	482	13%
30-34	3,045	485	16%
35-39	2,690	501	19%
40-44	2,299	423	18%
45-49	2,548	485	19%
50-54	2,588	553	21%
55-59	2,889	608	21%
60-64	2,491	558	22%
65-69	1,934	385	20%
70-74	1,579	291	18%
75-79	1,304	238	18%
80+	2,090	361	17%
Ages 65+	6,907	1,275	18%
Total*	36,560	6,283	17%

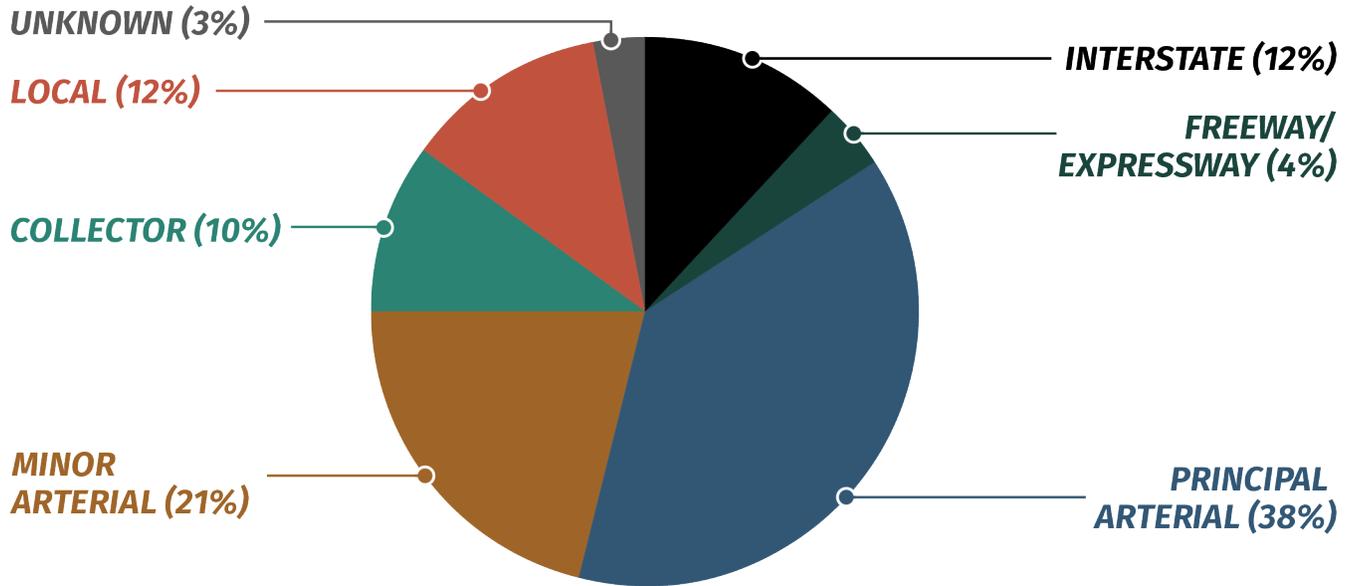
Source: FARS 2018 ARF

*Includes fatalities of unknown age.





Figure 5. Pedestrian Fatalities by Roadway Function Class, 2018



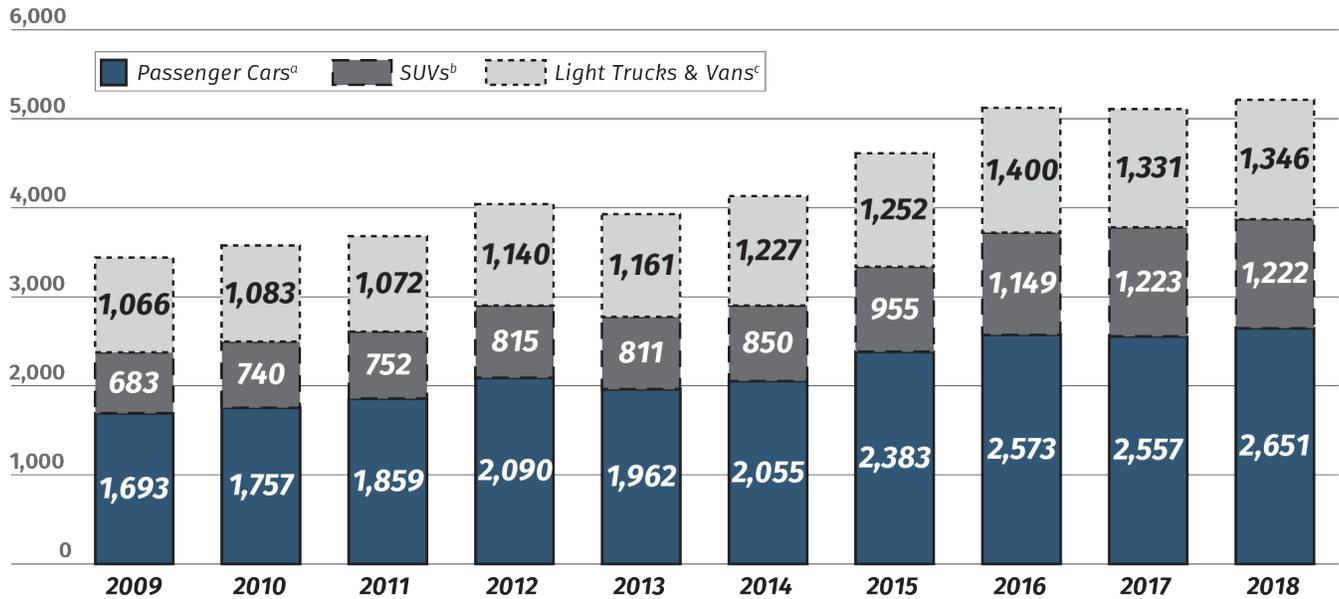
Source: FARS 2018 ARF

Figure 5 shows that in 2018, the majority of pedestrian deaths occurred on arterial roadways (38 percent on a principal arterial and 21 percent on a minor arterial).

Vehicle type also plays a role in pedestrian safety. The increase in the popularity of sport utility vehicles (SUVs) and light trucks may play a role in the increasing number of pedestrian fatalities as shown in Figure 6. The number of pedestrian fatalities where passenger cars, SUVs, or other light trucks were reported as the striking vehicle increased from 2009 to 2018.



Figure 6. Vehicle Types in Pedestrian Deaths, 2009-2018



Source: GAO Analysis of NHTSA Fatality Analysis Reporting System Data using NHTSA classifications for vehicle body types, GAO-20-419

^a NHTSA defines passenger cars as light vehicles such as sedans, hatchbacks, coupes, and convertibles that are designed primarily to transport eight or fewer persons.

^b NHTSA defines SUVs or utility vehicles as multipurpose vehicles with increased ground clearance and strong frames, which are generally designed for carrying persons and off-road capabilities.

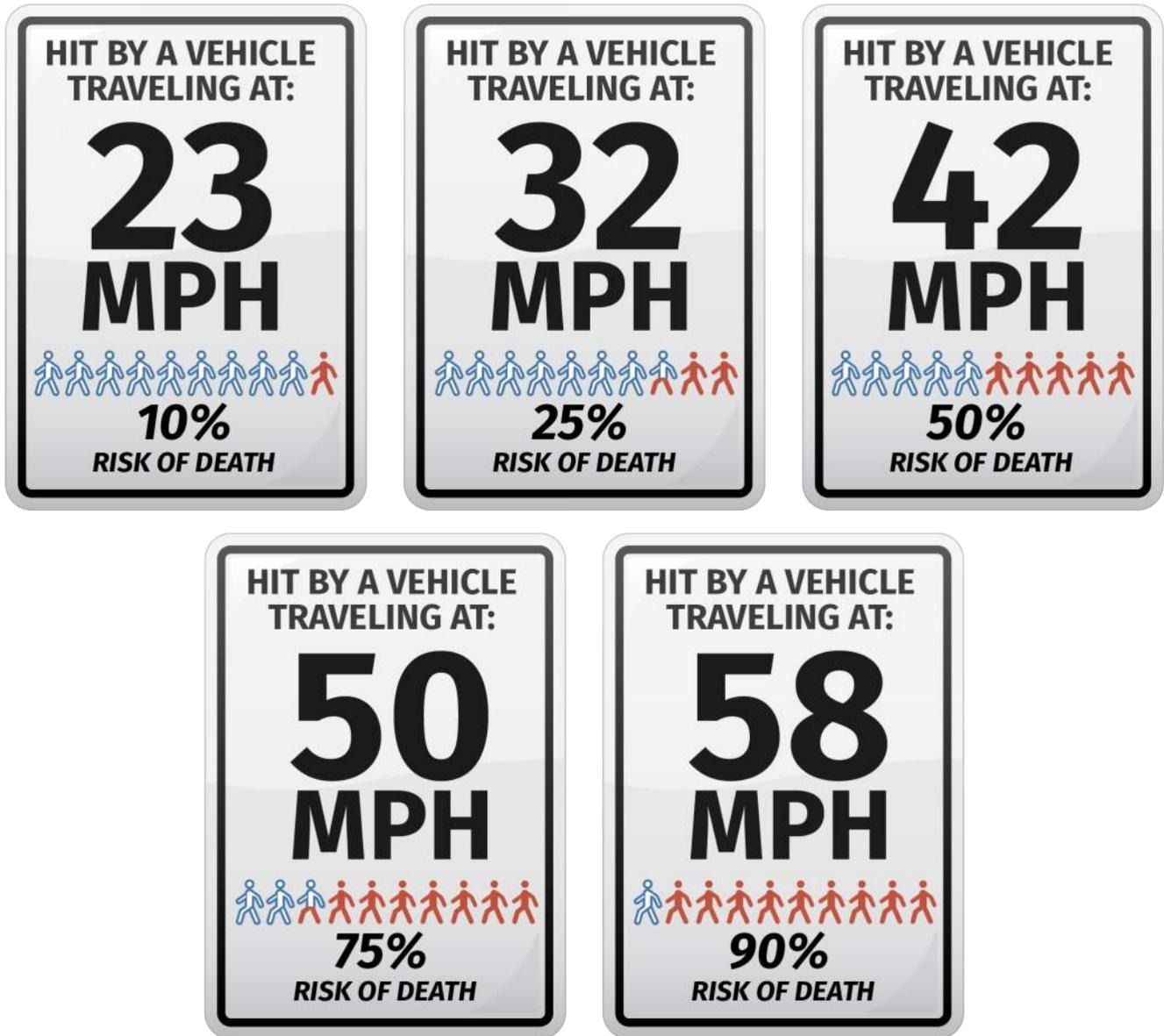
^c NHTSA's light trucks and vans definition includes light conventional trucks, such as pickup trucks and other vehicles designed with small passenger cabs, large hoods, and an open cargo area, van-based light trucks, such as minivans and other vehicles designed to maximize enclosed cargo and passenger areas, and other light trucks, which are based on conventional light pickup frames, but may include commercial or recreational vehicle body features.

Speeding is a key factor in the survivability of pedestrian crashes as shown in Figure 7. According to the AAA Foundation for Traffic Safety, the average risk of death for a pedestrian reaches 10 percent at an impact speed of 23 mph, 25 percent at 32 mph, 50 percent at 42 mph, 75 percent at 50 mph, and 90 percent at 58 mph. Risks vary significantly by age.





Figure 7. Vehicle Speed and Pedestrian Fatalities



Source: AAA Foundation for Traffic Safety, *Impact of Speed and a Pedestrian's Risk of Severe Injury or Death*, <https://aaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/>





ADDRESSING THE CHALLENGE

Some factors that are unique to pedestrian safety present challenges when it comes to solutions. Unlike vehicles, there is currently not a consistent way to measure exposure to risk as it relates to pedestrians. Exposure describes the frequency in which pedestrians are exposed to the risk of a crash with a vehicle. The number of person trips is generally not collected. There are some States and localities that are beginning to collect this information, but it is not widespread. In addition to not having a way to measure risk, there are other problems associated with pedestrian safety including urban sprawl which can make it difficult for pedestrians to get around; poor links to transit; problems caused by weather conditions; and a general lack of safe, complete networks for pedestrians to use when they go about their daily travels.

FHWA, NHTSA, and other USDOT agencies are addressing these and other challenges while moving forward with efforts to improve pedestrian safety. The USDOT Pedestrian Safety Action Plan includes actions that will be completed in the near term (December 2020) and those that will be completed by December 2021 and beyond. The plan also identifies those actions that fall under the safe system approach. The safe system approach promotes a more forgiving transportation system that takes human vulnerability into account. It caters to all the modes of transportation, including pedestrians and bicyclists.





To ensure the action plan comprehensively addresses a wide range of pedestrian concerns and issues, USDOT solicited input from stakeholders across the nation including State, local, regional, and Tribal agencies; national traffic safety and pedestrian safety organizations; universities; non-profit organizations; engineering and planning firms; activist groups; etc. Their input was garnered through a variety of methods including the following:

- Input received via the USDOT Summit on Pedestrian Safety web site.
- Presentations, poll questions and comments from the “Taking Action on Pedestrian Safety” Summit webinars in July 2020.
- Comments sent to USDOT via email.



STAKEHOLDER THEMES

Over 180 comments were received. Each was reviewed and compared to the existing activities FHWA, NHTSA and other USDOT agencies included in the plan. A review of these comments revealed several important themes:

- **Speed:** Do a better job of setting speed limits; design roadways to encourage slower speeds; approve laws and regulations including the use of speed cameras; and conduct more education on the dangers of speeding to change the cultural mindset that does not view speeding as a serious problem.
- **Roadway Design:** Support pedestrian safety through traffic calming; establish “no car” or slow zones; conduct pedestrian safety audits; and implement Complete Streets policies.
- **Technology:** Support technology and new vehicle design, including connected and Automated Driving Systems (ADS), that allow drivers to see pedestrians sooner and engage emergency braking systems when necessary.
- **Funding:** Address the lack of funding that prevents State and local governments from making needed pedestrian safety improvements.

Many of the themes are currently considered in the plan and a number of recommended programs and projects are either already ongoing or are planned. Some of the feedback received, however, falls outside the purview of the Federal government and must be handled at the State or local level.



INPUT RECEIVED

FHWA, NHTSA, and other USDOT agencies received input across the components of the safe system. Inputs were considered on the following:

- The mobility needs of persons with disabilities.
- Pedestrian safety on Tribal lands.
- Pedestrian safety in rural areas where there is a lack of paved shoulders and limited horizontal and vertical sight distance.
- Innovative intersection designs that can turn vehicle-centric designs into an intersection that balances the crossing needs and safety of vehicular and non-vehicular traffic.
- A human factors approach that strengthens the understanding of all roadway user needs.
- Increased collaboration among Federal, State, and local agencies.
- The unique needs and concerns in work zones for both pedestrians who travel near these areas and the workers in and around the work zone.

The intent of gathering and responding to input is to ensure the USDOT Pedestrian Safety Action Plan is as comprehensive as possible. FHWA, NHTSA, and the other USDOT agency partners will monitor plan progress to ensure pedestrian safety remains at the forefront of public attention.

FHWA, NHTSA, and the other USDOT agency partners will monitor implementation progress to ensure pedestrian safety remains at the forefront of public attention.





USDOT ACTIONS TO PREVENT HARMFUL CRASHES INVOLVING PEDESTRIANS



Complete by December 31, 2020

#	Agency	Activity	Safe System Approach							
			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
1	FHWA	Update Pedestrian and Bicycle Road Safety Audit Guide to reflect the latest in safety information and innovative technology.	Y	N	N	Y	N	Y	Y	N
2	FHWA	Develop a pedestrian and bicycle Scalable Risk Assessment Methodology (ScRAM) to walk users through systemic safety planning process.	N	N	N	Y	N	N	N	Y
3	FHWA	Develop a Safe Transportation for Every Pedestrian (STEP) toolbox to lead stakeholders through the steps necessary to improve pedestrian crossing locations and to learn about all relevant available STEP and pedestrian safety materials.	Y	N	N	Y	N	N	Y	N
4	FHWA	Develop and deliver two Safe Transportation for Every Pedestrian (STEP) campaigns to increase the understanding of pedestrian crossing safety and what STEP countermeasures can be used to improve pedestrian safety by FHWA stakeholders, primarily engineering and design staffs at State and local DOTs.	Y	N	N	Y	N	N	Y	N
5	FHWA	Conduct a U.S. DOT Summit on Pedestrian Safety and produce a summary report by inviting key stakeholders from across the U.S. to discuss ways to improve pedestrian safety and produce a report that summarizes the findings.	Y	Y	Y	Y	Y	Y	Y	Y
6	FHWA	Produce a final short-term U.S. DOT Action Plan on Pedestrian Safety that targets actions over the next two years and beyond.	Y	Y	Y	Y	Y	Y	Y	Y
7	FHWA	Create Safe Transportation for Every Pedestrian (STEP) STEM (Science, Technology, and Math) Lessons for K-8 grade students to advance pedestrian safety using engineering concepts and countermeasures.	N	N	N	Y	N	N	Y	N
8	FHWA	Develop State and MPO non-motorized safety targets by providing resources and tools to help States and MPOs set these annual targets.	Y	N	N	N	N	N	N	Y
9	FHWA	Produce a lighting design guide and implementation policy to promote pedestrian safety in an urban street environment (including lighting at walkways adjoining schools) that are applicable throughout the country.	Y	N	N	Y	N	N	N	N
10	NHTSA	Produce the Role of Law Enforcement in Pedestrian and Bicyclist Safety: An Idea Book to describe ways in which law enforcement plays a role in addressing pedestrian safety including non-traditional examples and pro-active efforts for law enforcement to conduct at the community level.	N	Y	N	N	N	N	Y	N
11	NHTSA	Provide a community-based bicyclist and pedestrian behavioral safety assessment to include a tool, manual and data analyzer for communities to assess their pedestrian and bicycle safety issues and identify local recommendations; conduct the initial pilot in ten high-risk pedestrian injury communities in the NHTSA regions.	N	Y	N	Y	Y	Y	Y	Y
12	NHTSA	Conduct Pedestrian Automatic Emergency Braking (P-AEB) test procedures to evaluate daytime and nighttime P-AEB performance. (NHTSA released a Request for Comment (RFC) to solicit input on these draft test procedures; stakeholder input is under solicitation and will be considered and the procedures.	N	N	Y	N	N	N	N	N





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			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
13	FHWA	Continue Safe Transportation for Every Pedestrian (EDC4/5) to help transportation agencies address pedestrian crashes by promoting cost-effective countermeasures that have known safety benefits including Pedestrian Hybrid Beacons (PHB), pedestrian refuge islands, leading pedestrian intervals and road diets, raised crosswalks, crosswalk visibility enhancements, rectangular rapid flashing beacon, etc.	Y	N	Y	Y	N	Y	N	N
14	FHWA	Create a comprehensive, five-year Pedestrian and Bicycle Safety Program Strategic Plan for FHWA's pedestrian and bicycle safety program.	Y	N	Y	Y	N	Y	Y	N
15	FHWA	Develop three Safe Transportation for Every Pedestrian (STEP) short videos (3-5 minutes) to market the benefits of STEP Countermeasures with the first focusing on the rectangular rapid flashing beacon, the second video a white board presentation, and the last on the STEP Campaign—Design Like It.	Y	N	N	Y	N	N	Y	N
16	FHWA	Identify, develop and promote speed management noteworthy practices that are carried out by States and localities to reduce speed-related fatalities and cover topics such as setting appropriate speed limits for all roadway users and countermeasures that slow traffic down.	Y	N	N	Y	N	Y	N	N
17	NHTSA	Develop and conduct a Pedestrian and Bicyclist Bystander Care Initiative to include informational and marketing materials that educate stakeholders and consumers on bystander care safety tips.	N	N	N	N	N	Y	N	N
18	NHTSA	Conduct a pedestrian and bicyclist safety literature review to improve the state of knowledge and understand pedestrian/bicycle safety's relationship to traffic safety.	N	N	N	N	N	Y	Y	Y
19	NHTSA	Investigate the effect of electronic device use on pedestrian safety by determining pedestrian and driver use and the magnitude of the involvement of electronic device use in pedestrian-involved motor vehicle conflicts.	N	N	N	N	N	Y	Y	Y
20	NHTSA	Evaluate New Child Pedestrian Curriculum to determine effectiveness and impact.	N	N	N	N	N	N	Y	Y
21	NHTSA	Launch a Pedestrian Safety Month with media and marketing materials promoting pedestrian safety and how State and local efforts support the effort.	N	Y	N	N	N	Y	Y	N
22	FHWA	Test Vehicle-to-Pedestrian (V2P) communications that can sense the environment around them and communicate that information to other vehicles, infrastructure, and to personal mobile devices.	N	N	Y	Y	N	N	N	Y
23	FHWA/ NHTSA	Update Speed Management Program Plan (SMPP)/Automated Speed Enforcement to reflect current and promising new strategies that address speed related motor vehicle crashes and injuries.	N	N	N	N	N	Y	N	N
24	OST	Determine the potential to estimate pedestrian and bicyclist crash rates through a case study that integrates data from the City of Philadelphia with private sector Streetlight data that includes pedestrian and bicycle volumes.	N	N	N	N	N	N	N	Y
25	FHWA	Develop a pedestrian count model that can predict pedestrian volumes at locations without this information through the Exploration of Pedestrian Safety Through the Integration of HSIS and Emerging Data Sources: Case Study in Charlotte, NC.	N	N	Y	Y	N	Y	N	Y



#	Agency	Activity	Safe System Approach							
			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
26	FHWA	Support and distribute Implementing A Local Road Safety Plan (LRSP) , which provides strategies local agencies and States have used to overcome barriers and challenges to successfully implement their plans, including pedestrian safety. LRSP is an FHWA proven safety countermeasure that provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads.	Y	Y	N	Y	N	Y	Y	Y
27	FHWA	Distribute and support A Handbook of Human and Roadway Interaction for Local and Tribal Roads , which provides information on how road user actions affect road safety and how to apply this information. This document defines and describes some useful human factors principles, and supplies information about using the principles to improve safety. An entire section dedicated to Pedestrian Safety.	Y	Y	N	Y	N	Y	Y	Y
28	FHWA	Provide technical assistance for pedestrian and bicycle safety programs through “on-call” services, training, and peer exchanges in support of the pedestrian and bicycle safety programs.	Y	N	N	Y	Y	Y	N	Y
29	FHWA	Foster innovation in Pedestrian and Bicycle Transportation Pooled Fund Study , which focuses on bicycle and pedestrian network planning, safety, and design issues, by addressing short term research needs of interest to the practitioner community. Participants will decide on a new round of projects to be funded by the pooled fund by December 2020.	Y	N	N	Y	N	Y	N	N
30	FHWA	Continue the National Highway Institute’s pedestrian safety courses in the classroom and virtual offerings that address topics such as Developing a Pedestrian Safety Action Plan, Designing for Pedestrian Safety, and Modern Roundabouts: Intersections Designed for Safety.	N	N	N	Y	N	N	Y	N





2021 and beyond

#	Agency	Activity	Safe System Approach							
			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
31	FHWA NHTSA	In collaboration with NHTSA, update Pedestrian and Bike Crash Analysis Tool (PBCAT) , a crash typing software that improves walking and bicycling safety through the development and analysis of a database containing details on motor vehicle and pedestrian/bicycle crashes.	N	N	N	N	N	N	N	Y
32	FHWA	Update systemic safety analysis training to include a pedestrian module along with a discussion and case study that focuses on risk factors identified in NCHRP 893, Systemic Pedestrian Safety Analysis.	N	N	N	Y	N	N	Y	N
33	FHWA	Conduct a global benchmarking study on pedestrian safety to learn from other countries how they successfully address pedestrian safety on urban signalized arterials.	Y	N	N	Y	N	N	Y	N
34	NHTSA	Update Countermeasures That Work: A Highway Safety Countermeasures Guide for State Highway Safety Offices particularly the countermeasures for pedestrians in Chapter 8 and bicyclists in Chapter 9. (Updated biennially, 10th edition Winter 2020)	N	Y	N	N	N	Y	Y	N
35	FHWA	Plan for multimodal networks in a connected and automated vehicle future by conducting research and describing scenarios on how pedestrian and bicycle network planning may change as deployment of this technology becomes more widespread.	Y	Y	Y	Y	Y	Y	N	N
36	FHWA	Produce a guide on effective selection of crosswalk patterns to help practitioners prioritize where the placement of high-visibility crosswalks would be most effective.	N	N	N	Y	N	N	Y	N
37	FHWA	Update Pedestrian Safety Guide for Transit Agencies using customer feedback to provide the most recent information and include bicycle accommodation.	N	N	N	Y	N	N	N	N
38	NHTSA, FHWA	Develop a National Pedestrian Safety Partnership Plan with stakeholder involvement that is targeted at reducing pedestrian fatalities in the next 10 years.	Y	Y	Y	Y	Y	Y	Y	Y
39	NHTSA	Develop a new Statewide Pedestrian and Bicyclist Safety Program Assessment process that reviews elements of a State's program and provides recommendations for improvement; include an online and in-person review process utilizing national subject matter experts.	N	Y	Y	Y	Y	Y	Y	Y
40	NHTSA	Develop law enforcement trainings on bicycle and pedestrian safety with input from law enforcement reflecting current issues and cultural changes.	N	Y	N	N	N	N	N	N
41	NHTSA	Examine the impact safety in numbers , i.e., more pedestrians and bicyclists on the roads, has on crash rates from a literature and programmatic perspective.	N	N	N	N	N	Y	Y	Y
42	NHTSA	Identify discrepancies in how new pedestrian and bicycle facilities are designed to be used versus how they are actually used by pedestrians, bicyclists, and motorists by examining knowledge of proper facility use, enforcement efforts, and documentation of available educational resources and initiatives.	N	N	N	N	N	Y	Y	N



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			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
43	NHTSA	Develop a CIREC (Crash Injury Research) trauma center-based crash data collection program by modernizing pedestrian crash data collection protocols, and collecting data on a small number of pedestrian crashes in a pilot study to determine feasibility of different approaches in obtaining detailed and relevant pedestrian crash data to support research needs.	N	N	Y	N	N	Y	Y	Y
44	NHTSA	Finalize rulemaking for Adaptive Driving Beam Headlamps (ADB) and encourage improved lower beam headlighting performance to increase seeing distance for drivers in certain conditions without increasing glare levels, including the ability to see other road users.	N	N	Y	N	N	N	N	N
45	NHTSA	Publish a Federal Register notice in 2020 that will seek comment on planned upgrades to the New Car Assessment Program (NCAP) , including new technologies expected to contribute to the safety of pedestrians.	N	N	Y	N	N	N	N	N
46	PHMSA, FHWA, FRA, NHTSA	Produce a streamlined test protocol and testbed for public and private institutions to evaluate public safety awareness technologies that mitigate risks in the transportation system; use pedestrian trespass on railroads as a case example for the test protocol. <i>This collaborative effort is in response to the National Petroleum Council's recommendation that the DOT should create an agile pathway for evaluation and regulatory acceptance of new technologies that can improve transportation safety and shorten the research, deployment, and adoption cycle time.</i>	N	N	N	N	N	N	Y	N
47	FHWA	Build upon efforts to advance data-informed decision-making using continuous friction measurement (CFM) as the state of the practice in the U.S. in combination with a friction management framework to address safety performance at locations where there is a higher demand for friction such as intersections and approaches to crosswalks.	N	N	N	Y	N	N	N	N
48	FHWA	Assess, with NCHRP, the current state of practice of pedestrian and bicycle planning, design, and operational issues at alternative intersections , synthesize design guidance, and compile them into a comprehensive reference on how to effectively and safely accommodate pedestrians and bicycles at innovative intersections.	N	N	N	Y	N	N	Y	N
49	FHWA	Develop Pedestrian-Intersection Crash Modification Factors by determining the safety effectiveness of medium to low-cost pedestrian engineering countermeasures in reducing non-motorist fatalities and injuries at controlled intersections specifically the study of the corner radius utilizing crashes and right-turning speeds in the evaluation.	N	N	N	Y	N	N	N	Y
50	NHTSA	Depict the highest risk behaviors by motorists, pedestrians, and cyclists utilizing crash animation videos in drivers' education courses.	N	N	N	N	N	N	Y	N
51	FHWA	Conduct a safety study on the pedestrian crossing warning MUTCD W11-2 sign or the school crossing warning sign with embedded light emitting diodes (LEDs) that can be applied at uncontrolled pedestrian crossing locations (mid-block and unsignalized intersections).	N	N	N	Y	N	N	N	Y





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			Improved Mobility Options	Enforcement, Laws and Regulations	Vehicle Design and Technology	Street Design and Engineering	Land Use Planning	Speed Management	Education and Capacity Building	Data and Evaluation
52	OST	Develop and implement a data analytics and visualization dashboard using mobile device location data to better understand pedestrian travel volumes and their exposure to risk through a partnership with the Maryland Department of Transportation State Highway Administration.	Y	N	N	N	N	N	N	Y
53	OST	Refine and expand USDOT's existing Pedestrian Fatality Risk Map through a partnership with the City of New Orleans, Louisiana to help the City make defined, targeted decisions around small-area and corridor-level investments with the greatest potential to prevent serious injuries and fatalities for vulnerable road users.	Y	Y	N	Y	N	N	N	Y
54	FHWA	Develop Supplement to the Intersection Informational Guide Series: Designing Intersections for Walking and Bicycling to the various intersection informational reports and guides developed and published by FHWA	Y	N	N	Y	N	Y	N	N
55	FHWA	Provide technical support to counties, cities, and Tribal nations that are experiencing fatal and serious injury crashes on their roads, including pedestrian-related crashes through the Local and Rural Safety Technical Assistance Program .	Y	N	N	Y	N	Y	Y	Y
56	FHWA	Conduct research on responder and other roadside worker safety and observational studies on Move-Over Law compliance and by studying various technologies, including movable barriers, to assess their effectiveness in protecting first responders and improving safety for roadside workers.	Y	N	N	Y	N	Y	N	Y
57	FHWA	Conduct safety evaluations of innovative intersection designs for pedestrians and bicyclists for three retrofitting designs that can turn a large at grade intersection (vehicle centric design) into a bicyclist/pedestrian friendly combo intersection that balances the crossing needs and safety of both vehicular and non-motorized traffic demands. This project is in the evaluation site selection phase, and is expected to be completed in September 2022.	Y	N	N	Y	N	Y	N	Y
58	FHWA	Establish a Human Factors Laboratory to improve transportation safety by strengthening the understanding of user needs and making recommendations for roadway design, signing, and advanced transportation technology. It includes a variety of state-of-the-art tools, including a Virtual Reality Laboratory, used to conduct behavioral research on drivers, pedestrians and bicyclists, and other road users.	Y	N	N	Y	N	N	Y	N
59	FHWA	Conduct a Traffic Control Device (TCD) Consortium Pooled Fund Study (PFS) by assembling a consortium composed of regional, state, and local entities; appropriate organizations; and the FHWA to facilitate collaboration and information sharing among members; identify human factors and operational issues related to TCDs, including pedestrians; select and evaluate new and existing TCDs; initiate and monitor research projects; and disseminate results.	Y	N	N	Y	N	N	N	N
60	FHWA	Conduct an evaluation of aesthetically treated crosswalks to determine the impact they have on motorists' and pedestrians' recognition and behavior at crosswalks, including pedestrians with low vision.	Y	N	N	Y	Y	N	N	N



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61	FHWA	Provide support to the National Center for Excellence for Rural Road Safety whose role is to facilitate training and educational exchange, as well as provide technology transfer and deployment to rural practitioners to improve the overall understanding of roadway safety data and analysis, safety effectiveness evaluations, and investment decision making in the areas of rural safety and surface transportation safety including pedestrians.	Y	N	N	Y	N	Y	Y	Y
62	OST	Establish the U.S. DOT Pedestrian and Bicyclist Coordinating Committee to monitor progress in bicycle and pedestrian safety and use; identify new cross-modal opportunities and partnerships with outside entities to advance pedestrian and bicycle transportation; and communicate, coordinate, and share information across Operating Administrations within U.S. DOT on pedestrian and bicycle transportation activities.	N	N	N	N	N	N	Y	N
63	FHWA	Finalize updates to the Manual on Uniform Traffic Control Devices (MUTCD) to address advances in traffic control device design and placement.	Y	N	N	Y	Y	Y	N	N
64	FHWA	Work with the Tribal Transportation Program Safety Fund (TTPSF) which shares an eligibility list with the highway safety improvement program, the TTPSF provides competitive grant funding to tribal governments to address transportation safety needs, including pedestrians. The fund was created under MAP-21 and carried forward to the FAST act.	N	N	N	N	N	N	Y	N
65	FHWA	Support the Tribal Transportation Strategic Safety Plan , which was originally developed in response to a report to Congress required by the FAST Act. The FHWA Office of Tribal Transportation Safety Engineer chairs a committee of multiple Federal program offices that continuously update this plan, which covers pedestrian safety.	N	N	N	N	N	N	Y	N
66	FHWA	Collaborate with the American Traffic Safety Services Association (ATSSA) to provide an updated Pedestrians Checklist and Considerations for Temporary Traffic Control to consider during planning, design, and construction phases for a project. The checklist and considerations are designed to enhance pedestrian safety and accessibility, maintain Americans with Disabilities Act of 1990 (ADA) compliance, and provide positive guidance to avoid pedestrian confusion throughout each phase.	Y	N	N	Y	N	Y	N	N
67	FHWA	Collaborate with the American Road and Transportation Builders Association (ARTBA) on a Pedestrian Safety in Work Zone Learning Module . In this module, participants will learn how pedestrians, including the disabled, should be considered and provided for during the development and implementation of the traffic control plan.	N	N	N	Y	N	N	Y	N
68	FHWA	Collaborate with the American Road and Transportation Builders Association (ARTBA) on a Pedestrian Fatalities in Work Zones project. ARTBA is currently working with the National Institute for Occupational Safety and Health (NIOSH) on a work zone data analysis project to get a better understanding of worker vs. pedestrian fatalities and related causation. This initiative will compare the two national fatality databases to better understand how highway worker-on-foot fatalities due to collisions by traffic and by vehicles associated with the work zone are (or are not) captured in each database.	Y	N	N	Y	N	N	Y	N





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69	FHWA	Conduct an Ensuring Access for All Around New and Innovative Multimodal Facilities project with a literature review of past and in-process research projects to identify issues and design solutions that ensure full accessibility of new and innovative multimodal facilities.	Y	N	N	Y	N	N	N	N
70	FHWA	Update the safety chapter in the Federal Lands Highway Project Development and Design Manual (PDDM) to include current pedestrian and bicycle safety considerations.	N	N	N	Y	N	N	N	N
71	FHWA	Conduct research on Ensuring Safe Interactions Between Pedestrians and Connected and Autonomous Vehicles (CAV) in Complex Urban Settings to determine the state of CAV readiness to make decisions in complex and hazardous urban environments that maximize the safety of pedestrians and other VRUs. The research will also identify and recommend CAV practices that anticipate, recognize and safely adapt to the presence of and simultaneous actions taken by pedestrians and other VRUs in complex urban settings.	N	N	Y	Y	N	N	N	N
72	FHWA	Update the Guide for Maintaining Pedestrian Facilities for Enhanced Safety , which addresses the needs for pedestrian facility maintenance; common maintenance issues; inspection, accessibility, and compliance; maintenance measurers; funding; and construction techniques to reduce future maintenance.	N	N	N	Y	N	N	N	N
73	FHWA	Support Reaching Zero Deaths Together by helping State, regional, local, and Tribal agencies work toward zero traffic deaths for all road users, by providing technical assistance and facilitating the application of the Safe System and safety culture approaches.	N	Y	N	N	N	N	Y	N
74	NHTSA	Continue to conduct Data Collection and Analysis using annual FARS data on vulnerable road users.	N	N	N	N	N	N	N	Y
75	NHTSA	Annually update Traffic Safety Facts for Pedestrians, Bicyclists, and Motorcyclists.	N	N	N	N	N	N	N	Y
76	NHTSA	Produce a Research Note on the Geographic Summary of Traffic Fatalities when annual FARS data are released.	N	N	N	N	N	N	N	Y
77	NHTSA	Promote data-driven programs to address vulnerable road user safety by providing technical assistance on awareness campaigns, training and education, and enforcement efforts.	N	Y	N	N	N	N	Y	Y
78	NHTSA	Participate in the Strategic Highway Safety Plan (SHSP) processes (with modal partners) to ensure vulnerable road users needs are considered and addressed with data-driven, proven or innovative countermeasures.	N	N	N	N	N	N	Y	Y
79	NHTSA	Support states that have adopted Vision Zero/Road to Zero policies .	N	Y	N	N	N	N	Y	N
80	NHTSA	Investigate whether vehicle countermeasures designed to address head and leg injuries, which are the most common type of injuries, are also effective in mitigating pedestrian thorax injuries .	N	N	Y	N	N	N	N	N



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81	NHTSA	Conduct a study to determine the usability of automated technologies and products inside and outside the vehicle for individuals with disabilities and vulnerable road users utilizing user needs analysis, participatory design, empirical research and interface approaches.	Y	N	Y	N	N	N	N	N
82	NHTSA	Continue research on pedestrian crash safety to improve test tools used in testing and evaluating crash avoidance (pre-crash-avoiding/reducing the speed) and crash-worthiness (post-crash-passive for injury mitigation, e.g., more pedestrian-friendly frontal structures) safety countermeasures and to harmonize these test tools and associated procedures with international counterparts.	N	N	Y	N	N	Y	N	N
83	FHWA	Continue support for the Highway Safety Improvement Program , which includes non-motorized transportation performance measures; state Strategic Highway Safety Plans; implementation and evaluation of projects, including ones that address pedestrian safety strategies and activities, using a data-driven roadway safety management process.	N	Y	N	Y	N	N	N	N
84	FHWA	Produce a quarterly Pedestrian and Bike Forum newsletter that highlights recent pedestrian and bicycle safety activities undertaken by the U.S. DOT.	Y	Y	Y	Y	Y	Y	Y	Y
85	FHWA	Provide technical assistance to pedestrian and bicyclist focus states and cities through funding for a peer-to-peer Exchange, quarterly webinars, more technical assistance and training to focus States and cities.	Y	N	N	Y	N	N	Y	N
86	FHWA	Produce a Multimodal Connectivity Newsletter that provides transportation professionals with real-world examples of ways that multimodal transportation investments promote economic revitalization, provide access to jobs, and achieve safer communities through support of accelerated project delivery, technology and design innovation, and public/private partnerships.	N	N	N	N	N	N	Y	N
87	FHWA	Produce a Human Environment Newsletter to share the latest information from Federal and non-Federal sources on transportation and its relationship to the human environment including accelerated project delivery, access to jobs, and community revitalization; technology and design innovation; and accountability through the use of data-driven decisions and performance-based planning.	N	N	N	N	N	N	Y	N
88	FHWA/ NHTSA	Co-sponsor the Pedestrian and Bicycle Information Center , which develops, synthesizes, promotes and distributes accurate and 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 pedestrian/bicycle issues to the general public.	N	N	N	N	N	N	Y	Y
89	FHWA	Update Pedestrian Safety Guide and Countermeasure Selection (Pedsafe) to make it current with the latest technology, research and data on countermeasures; update case studies and add new ones as appropriate.	Y	N	Y	N	N	Y	N	N
90	FMCSA	Support the Our Roads, Our Safety campaign that educates all drivers, cyclists and pedestrians about operational challenges large trucks and buses face, and simple actions everyone can take to help improve safety on America's roadways.	N	N	N	N	N	Y	N	N



