STATEMENT OF CATHERINE CHASE
PRESIDENT
ADVOCATES FOR HIGHWAY AND AUTO SAFETY

ON

"AMERICA BUILDS: A REVIEW OF PROGRAMS TO ADDRESS ROADWAY SAFETY"

SUBMITTED TO THE

UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT

FEBRUARY 12, 2025

Introduction

Advocates for Highway and Auto Safety (Advocates) is a coalition of public health, safety, law enforcement and consumer organizations, insurers and insurance agents that promotes highway and auto safety through the adoption of federal and state laws, policies and regulations. Advocates is unique both in its board composition and its mission of advancing safe vehicles, safe motorists and road users, and safe roadway infrastructure.

Motor Vehicle Crashes are a Devastating and Costly Public Health Crisis, and the Public is Keenly Aware of the Dangers

America's roads move an ever-increasing number of people and goods.[1] We all rely on our infrastructure system for household supplies to be delivered, for family vacations to be enjoyed, and for our Nation's economy to thrive. However, Americans suffer a significant death and injury toll caused by preventable crashes. On average, 116 people were killed every day on roads in the U.S., totaling just over 42,500 fatalities in 2022.[2] This is a 26 percent increase in deaths in just a decade.[3] An additional 2.38 million people were injured.[4] Early projections for 2023 traffic fatalities remain at a similar historic high level; nearly 41,000 people are estimated to have died that year.[5]

The American Society of Civil Engineers (ASCE) reports "these vital lifelines are frequently underfunded, and over 40% of the system is now in poor or mediocre condition."[6] In their 2021 Report Card, roads received a grade of "D," with 43 percent in poor or mediocre condition.[7] Bridges received a "C," with 42 percent being at least 50 years old and more than 46,000 considered structurally deficient.[8] Moreover, our deteriorating roads are forcing the Nation's motorists to spend nearly $130 billion each year in extra vehicle repairs and operating costs.[9]

In addition to the physical and emotional repercussions of motor vehicle crashes, the annual economic cost is approximately $340 billion (2019 dollars).[10] This figure equates to every person living in the U.S. essentially paying an annual "crash tax" of over $1,000. Moreover, the total value of societal harm from motor vehicle crashes in 2019, which includes loss of life, pain and decreased quality of life, was nearly $1.4 trillion.[11] When adjusted solely for inflation, this figure amounts to over $1.72 trillion.[12] Research from the Network of Employers for Traffic Safety (NETS), finds motor vehicle crashes cost employers $72.2 billion in direct crash-related expenses in 2019.[13]

These devastating crashes impact millions of Americans each year including the family of U.S. Department of Transportation (DOT) Secretary Duffy and Members of Congress. These tragedies result in long-lasting impacts which often are not accounted for in statistics alone. For every single death and serious injury, there is a horrific ripple effect forever changing the lives of children, parents, friends and communities.

To take the temperature of the public on the impact of motor vehicle crashes, Advocates commissioned a public opinion survey conducted in December 2024. It showed that while Americans are not aware of the total magnitude of the motor vehicle crash fatality and injury toll, they are highly concerned about roadway safety dangers.[14] The poll results clearly illustrate that

people have significant trepidations about a multitude of roadway safety hazards including speeding, distracted driving, impaired driving, lack of seat belt use, child passenger safety seat use, being a vulnerable road user (VRU), sharing the roads with large trucks, and driverless cars and trucks, among others.

Improving Truck Safety

Since 2009, the number of fatalities in large truck crashes has increased by 76 percent.[15] In that same timespan, the number of people injured in crashes involving large trucks rose by 117 percent.[16] In fatal two-vehicle crashes between a large truck and a passenger motor vehicle, 96 percent of the fatalities were occupants of the passenger vehicle.[17] In 2022, 5,936 people were killed and over 160,000 people were injured in crashes involving large trucks.[18]

According to the Federal Highway Administration (FHWA), traffic incidents, which include crashes, are one of the seven main causes of traffic congestion which erodes the reliability of travel time.[19] The report notes that for truck operators, "[t]he cost of unexpected delay can add another 20 percent to 250 percent" to their hourly costs.[20] The cost to society from crashes involving large trucks and buses was estimated to be $128 billion in 2021, the latest year for which data is available.[21] When adjusted solely for inflation, this figure amounts to over $151 billion.[22]

This safety epidemic should be a clear indicator that essential protections, including federal truck size and weight limits (TSW), should not be weakened or repealed. Retaining current TSW also impacts roadway infrastructure as larger, heavier trucks could result in an increased prevalence and severity of crashes and cause increased wear and damage to our roadway infrastructure and bridges.

Additional improvements, such as ensuring adequate truck parking to help mitigate the well-known and documented safety issue of truck driver fatigue, should be undertaken as well. Advocates recognizes that the lack of safe and convenient truck parking is an issue that merits federal action. However, simply dedicating more federal funding to build parking facilitates will likely not solve the issue alone. Studies have demonstrated that the parking shortage is often most acute in areas of the country, such as along the Interstate 95 corridor in the Northeast, where building facilities for parking may not be realistic due to costs and scarcity of open land.[23] As such, along with providing funding to address this issue, Advocates urges policymakers to examine additional remedies to address this problem such as use of existing dormant facilities.

Protecting Vulnerable Road Users

Vulnerable road users (VRUs) who do not have the protections afforded to people in vehicles are particularly imperiled in a crash, and they have been experiencing rises in fatalities. In 2022, 7,522 pedestrians and 1,105 bicyclists were killed, representing a 56 percent and 50 percent increase respectively in the past decade.[24] Additionally, motorcycle riders experienced the highest fatality total in a single year in 2022 since data collection began in 1975; 6,218 motorcycle riders were killed.[25]

Commonsense solutions are available to improve the safety of VRUs. According to the Insurance Institute for Highway Safety (IIHS), automatic emergency braking (AEB) systems with pedestrian detection (PAEB) have the capability to reduce pedestrian crashes by 27 percent and pedestrian injury crashes by 30 percent.[26] The National Highway Traffic Safety Administration (NHTSA) estimates that requiring PAEB on light vehicles will save at least 362 lives and mitigate 24,321 non-fatal injuries annually.[27] It also is estimated to result in a yearly net benefit of between $5.8-$7.2 billion.[28] The agency issued a Final Rule requiring PAEB on light vehicles in May 2024 (a separate rulemaking to require AEB on heavy trucks remains outstanding).[29] While the new rule takes effect for most new cars in September 2029, automakers do not need to wait to install this lifesaving technology, nor do commercial motor vehicle (CMV) manufacturers.

In September 2024, NHTSA issued a Notice of Proposed Rulemaking (NPRM) to establish a new Federal Motor Vehicle Safety Standard (FMVSS) to ensure passenger vehicles are designed to mitigate the risks of serious injuries and fatalities in crashes involving pedestrians.[30] The standard proposed in the NPRM would save 67 lives annually with the benefits far outpacing the costs by establishing test procedures simulating a head-to-hood impact and performance requirements to minimize the risk of head injury.[31]

The Infrastructure Investment and Jobs Act (IIJA) enacted in 2021 with bipartisan support included a provision directing NHTSA to issue a Notice for Public Comment on updating hood and bumper standards for passenger vehicles to "to reduce the number of injuries and fatalities suffered by pedestrians, bicyclists, or other vulnerable road users."[32] The measure also required the agency to provide a report to Congress. NHTSA has yet to complete these actions even though doing so could help to protect VRUs.

The IIJA also required NHTSA issue a standard for adaptive driving beam (ADB) technology. With 78 percent of pedestrian fatalities occurring in the dark,[33] improvements to vehicle lighting would afford drivers additional time to identify and respond accordingly to VRUs and animals in the roadway. In 2022, the NHTSA published a Final Rule allowing but not requiring ADB systems on passenger vehicles.[34] Similarly, these systems can be installed now in vehicles without the issuance of a mandate.

The Safe System Approach and Federal Grant Programs Are Essential to Improving Public Safety

Roadway infrastructure and design play a critical role in improving the safety of the public. Roadway design, maintenance and building throughout the country can and should prioritize getting from Point A to Point B safely for all users as well as quickly and efficiently to avoid hazardous scenarios. The Safe System Approach (SSA) is "an effective way to address and mitigate the risks inherent in our enormous and complex transportation system. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur."[35] SSA assumes that humans will make mistakes and that we must anticipate this and make accommodations to account for limited human injury tolerances through five elements: Safe Vehicles, Safe Road Users, Safe Roads, Safe Speed and Post-Crash Care.

Roadway infrastructure improvements consistent with the SSA to limit conflicts include: reducing speed limits; employing automated enforcement to augment traditional enforcement; adding speed curbing features like speed humps; performing road diets; and, installing roundabouts as well as educating on driver behavior such as using real-time speed feedback signs.

Other examples of infrastructure to promote safety include adding lighting and improving sight lines; installing leading intervals and pedestrian hybrid beacons; ensuring curb extensions, accessible sidewalks, protected intersections and separated bike lanes; and, prioritizing road separations and rumble strips. Localities can advance these and other infrastructure improvements systemically by requiring their adoption as appropriate in road projects.

Traffic circles or "roundabouts" have been found by IIHS to be a safer alternative to traffic signals and stop signs by reducing speed and conflict points.[36] In fact, intersections converted from traffic signals or stop signs to roundabouts have reduced injury crashes up to 80 percent and cut all crashes by nearly half (47 percent).[37] Moreover, along with improving safety the FHWA has noted traffic circles are efficient in keeping travelers moving and "can be implemented in both urban and rural areas under a wide range of traffic conditions."[38] Federal funding for states and localities to build roundabouts and other proven infrastructure upgrades is available through the Safe Streets and Roads for All (SS4A) program and should be preserved.

The IIJA authorizes safety upgrades to the Highway Safety Improvement Program (HSIP) that will help to protect VRUs and provides robust funding for the SS4A program to provide direct access to localities to make roadway improvements consistent with SSA and Complete Streets policy. These changes promote infrastructure features that consider multimodal use, calm traffic, separate different types of road users, reduce vehicle speeds, and prevent or mitigate harmful interactions among road users. Advocates supports enhancing HSIP to allow for funding of projects that can strengthen protections for VRUs, perpetuating and expanding access to SS4A funding opportunities, advancing Complete Streets measures and ensuring that all communities across the Nation can take advantage of federal dollars to implement these innovative approaches to improving public safety on their roadways.

Initially authorized by the Highway Safety Act of 1966, the Highway Safety Program, known as Section 402, which is jointly administered by NHTSA and FHWA, provides federal funding to states to reduce motor vehicle crashes and address dangerous driving behaviors.[39] To receive funding, states are required to have a highway safety program that is approved by the U.S. DOT. Advocates supports this program as it is critical in assisting states in addressing roadway safety. In addition, Advocates has supported expanding eligible uses of the dollars under the program to combat emerging issues of concern such as drugged driving and distracted driving.

In 2012, as part of the Moving Ahead for Progress in the 21st Century Act (MAP-21), Congress established the National Priority Safety Program, known as Section 405.[40] The program was subsequently amended and currently includes grant programs to address some of the major contributors to crashes including impaired and distracted driving. In addition, it includes grant programs to improve the safety of motorcycle riders and non-motorized road users. Funds also

can be spent to assist states in improving transportation information systems by collecting critical data.

As with all federal safety grants, it is critical that these programs include clear and transparent measures for success to ensure funds are spent as intended and result in actual safety benefits and improvements. Advocates supports the continuation and funding for these safety grant programs to help reduce the death, injury and financial toll on American roads.

Major Contributors of Crashes Must be Addressed with Effective Solutions

Between 1968 and 2019, FMVSS saved 865,706 lives and reduced the number of individuals injured by 49,206,849.[41] During that same period, net comprehensive benefits totaled $16.3 trillion and net economic benefits alone were $2.7 trillion.[42] Yet, several driver behavioral issues continue to be leading factors in traffic fatalities including alcohol impairment, distraction, speeding and lack of restraint use.[43] We can and must continue to increase these numbers with effective solutions.

Impaired Driving

According to NHTSA, between 2011-2020, an average of almost 10,500 people were killed each year due to alcohol impaired driving crashes.[44] Since our inception in 1989, Advocates has been a leading safety voice in the fight against alcohol-impaired driving. Our organization supported the development of breathalyzer technology which is essential to enforcement of impaired driving laws and keeping drunk drivers off the road. Additionally, together with Mothers Against Drunk Driving (MADD) and others, Advocates was a leading supporter in federal and state efforts to reduce blood alcohol concentration (BAC) laws from .10 to .08 percent and achieve a national law.[45] Advocates has long supported a .05 percent BAC threshold for drunk driving and the enactment of all-offender ignition interlock device (IID), child endangerment and open container laws, and measures to curb marijuana impaired driving such as extending zero tolerance for under age 21 and open container laws to include marijuana use and its products. To curb impaired driving, Advocates supports the END DWI Act, (H.R. 8213, 118th Congress) and opposes H.R. 1137 (119th Congress).

The development of passive touch-based and/or breath sensor technology that detects if a driver is alcohol intoxicated has tremendous potential to reduce impaired driving crashes. In fact, IIHS research shows that impairment detection systems could save upwards of 10,000 lives each year once widely deployed.[46] Regrettably, even with strong and consistent advocacy, these technologies are not required as standard equipment, while new systems which may prevent impaired driving and ensure driver capability are increasingly available on passenger vehicles.[47]

The IIJA directed NHTSA to issue a FMVSS requiring passenger motor vehicles to be equipped with impaired driving prevention technology by 2024.[48] The agency issued an Advanced Notice of Proposed Rulemaking (ANPRM) in January 2024 but has taken no further regulatory action.[49] Until NHTSA completes this overdue rulemaking, lives will continue to be needlessly lost, injuries suffered and associated costs expended.

Speeding

In 2022, nearly a third (29 percent) of traffic fatalities totaling 12,151 deaths were speeding related.[50] In addition, over 300,000 people were injured in crashes due to speeding.[51] Excess speed can contribute to both the frequency and severity of motor vehicle crashes. At higher speeds, additional time is required to stop a vehicle, and more distance is traveled before corrective maneuvers can be implemented. Speeding reduces a driver's ability to react to emergencies created by driver inattention, unsafe maneuvers of other vehicles, roadway hazards, vehicle issues (such as tire blowouts) or perilous weather conditions. Increases in speed also can mean life or death for VRUs who lack the protective structure of a vehicle. While many drivers have a proclivity to exceed posted speed limits or may approve of higher speed limits, AAA has found that raising speed limits leads to a very minimal reduction in time on the road noting, "Raising speed limits is often thought of as a way to improve traffic flow and to allow drivers to get to their destinations more quickly. However, our AAA research shows that driving at higher speeds increases risk which can outweigh the potential benefits of saving a few minutes of time."[52]

Speed assistance systems, such as intelligent speed assistance (ISA), can provide information to drivers about present speed limits, warn drivers when a vehicle speed is above the limit, prevent a vehicle from exceeding the speed limit, or maintain a set speed.[53] Rating this technology in new vehicles should be part of an improved U.S. New Car Assessment Program (NCAP), as is already done in Europe, and could incentivize automakers to equip more U.S. models with speed assistance systems. ISA is required on all new vehicles sold in Europe as of July 2024.[54] Advocates supports the further installation of these systems into passenger vehicles in the U.S. as well as grant funding opportunities for localities to equip their fleet vehicles with ISA systems. In October 2024, the U.S. DOT Volpe Center released research, "New York City Intelligent Speed Assistance Pilot Evaluation," which showed "ISA produced a 64 percent reduction in overall speeding and an 82 percent decrease on high-speed roads."[55]

Automated enforcement (AE), such as speed and red-light running safety cameras, is a verified deterrent against frequent crash contributors and has been identified by NHTSA, FHWA, the National Transportation Safety Board (NTSB), Centers for Disease Control and Prevention (CDC), IIHS and others as an effective means to curb dangerous driving behavior.[56] Moreover, the Congressional Research Service (CRS) has found that speed camera programs are effective in reducing speeding and/or crashes near cameras.[57] Additionally, for VRUs, such as pedestrians and bicyclists, small changes in speed can have a large impact on survivability. New crash tests performed by IIHS and the AAA Foundation for Traffic Safety and Humanetics show that modest five to ten miles per hour (mph) increases in speed can have a severe impact on a driver's risk of injury or even death.[58] Provisions in the IIJA correctly permit use of certain federal funds for AE programs in school and work zones. This allowance should be expanded, especially to high injury networks, to curb deadly driving on other roadways.

Additional improvements to roadway infrastructure, often referred to as roadway calming, can help to curb speeding as well as improve safety for VRUs. These previously identified roadway safety upgrades include speed humps which require a vehicle to slow, curb extensions which reduce crossing distances for pedestrians and bollards, and other measures consistent with road diets to narrow lanes and curb speed. Research performed by IIHS indicates that implementing

such improvements along with public outreach and enforcement resulted in substantial reductions in speeding.[59]

Lastly, the 85th percentile speed is the speed at or below which 85 percent of the vehicles on a road tend to travel. This speed is measured and then the limit is set or modified. This method ignores evidence from IIHS and others that people often drive faster than the speed limit, and average speeds tend to increase whenever speed limits are raised, creating a feedback loop of repeated speed limit increases.[60] The NTSB has recommended removing the guidance from the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) that speed limits in speed zones be within five mph of the 85th percentile speed among other countermeasures to curb excessive speed.[61] Advocates concurs with the NTSB on this issue.

Seat Belts

Seat belt use is a proven lifesaver. From 1975 to 2019, seat belts prevented over 403,000 fatalities and saved society approximately $2.5 trillion in economic costs.[62] Seat belts serve as the first line of defense against injury or death for vehicle occupants when crashes occur. According to NHTSA, the combination of an airbag plus a lap and shoulder belt reduces the risk of death in frontal crashes by 61 percent.[63] Sadly, for passenger vehicle occupant fatalities in 2022, it is estimated that half were unrestrained.[64]

Seat belt reminder systems have been proven to improve seat belt use and save lives.[65] Congress as part of MAP-21 directed NHTSA to amend federal safety standards to require these systems in the rear seats of passenger vehicles (previously these systems were only required for the front driver's seat although most automakers also equipped the front passenger seat).[66] NHTSA recently issued a Final Rule,[67] and it must be implemented without delay to improve vehicle occupant safety.

Distracted Driving

Driver distraction is known to be a principal cause of motor vehicle crashes.[68] In 2022, 3,308 people were killed in crashes involving a distracted driver accounting for 8 percent of all crash fatalities. Nonoccupants (pedestrians, bicyclists, and others) accounted for 19 percent (621) of distraction-affected fatalities in 2022. An estimated 289,310 people were injured in distraction-affected crashes in 2022.[69] However, the true impact of distracted driving remains unclear due to issues with the underreporting of crashes involving distraction, including differences in police crash report coding and database limitations.[70]

In 2023, over two trillion text and multimedia messages were sent or received in the U.S. Mobile wireless data traffic has risen dramatically over the last decade, from 3 trillion megabytes in 2010 to 100.1 trillion in 2023.[71] Research has shown that because of the degree of cognitive distraction these devices cause, the behavior of drivers using mobile phones (whether handheld or hands-free) is equivalent to the behavior of drivers at the threshold of the legal limit for alcohol in most states (0.08 percent blood alcohol concentration).[72] Crash risk increases dramatically–as much as four times higher–when a driver is using a mobile phone, with no significant safety difference between handheld and hands-free phones observed in many studies.[73] A study by the Virginia Tech Transportation Institute found that text messaging increased the risk of a safety-critical driving event (i.e., crashes, near-crashes, crash-relevant

conflicts and unintentional lane deviations) by 23.2 times.[74] Sending or receiving a text message causes the driver's eyes to be off the road for an average of 4.6 seconds. When driving 55 miles per hour (mph), this is the equivalent of driving the entire length of a football field with one's eyes closed.[75]

A comprehensive approach including strong laws, appropriate enforcement, vehicle safety systems and effective education can deter distracted driving. The IIJA directed NHTSA to conduct research regarding the installation and use of driver support systems also known as driver monitoring systems to minimize or eliminate driver distraction.[76] The Euro NCAP is already evaluating these systems including for non-fatigue impairment detection.[77] In addition, several major automakers include some type of driver monitoring technologies in their vehicles sold in the U.S. These systems can help to address the scourge of distracted driving and should continue to be introduced into the U.S. market.

Ensuring Safe Integration of Automated Driving System (ADS) Technology

Autonomous driving technology has made advances yet remains unable to consistently operate safely with all road users, conditions and scenarios, as evidenced by fatal and serious crashes involving passenger motor vehicles equipped with ADS of varying levels.[78] Further, the interest in expanding the use of this technology must not be used as a pretext to eviscerate essential safety regulations administered by NHTSA and the Federal Motor Carrier Safety Administration (FMCSA), and particularly in the absence of new standards to ensure the technology performs safely and as needed. The public safety protections provided by safety standards and the Federal Motor Carrier Safety Regulations (FMCSRs) have become no less important or applicable simply because a passenger vehicle or a CMV has been equipped with an ADS. In fact, additional substantial public safety concerns are presented by automated CMVs. In addition, vehicles equipped with ADS may result in new impacts on roadway and bridge infrastructure due to considerations such as increased weight and mileage, and use of lane centering technology.

Advocates and numerous stakeholders developed the "AV Tenets," policy positions which should be foundational to any AV legislation.[79] The AV Tenets have four main, commonsense categories including: 1) prioritizing safety of all road users; 2) guaranteeing accessibility and equity; 3) preserving consumer and worker rights; and, 4) ensuring local control and sustainable transportation. While the AV Tenets were developed for application to vehicles under 10,000 pounds, many of the principles also could apply to larger commercial vehicles. At a minimum, autonomous CMVs must meet safety standards for the ADS and related systems, including for cybersecurity, and operations must be subject to adequate oversight as a starting point for their potential deployment.

Conclusion

Everyone in the U.S. moves on our roadways, whether as a car or truck driver, passenger, pedestrian, bicyclist, motorcycle rider, first responder, law enforcement officer, roadway construction worker, or other road user, and everyone deserves a safe trip. Advancing data-driven solutions including improving the safety of our roadways through infrastructure improvements is a proven path to prevent fatalities and injuries and ensure efficient roads.

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