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EVERY LIFE COUNTS: IMPROVING THE SAFETY OF OUR NATION'S ROADWAYS

(116–10)

HEARING

BEFORE THE

SUBCOMMITTEE ON
HIGHWAYS AND TRANSIT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

APRIL 9, 2019

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Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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APRIL 4, 2019

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Highways and Transit
FROM: Staff, Subcommittee on Highways and Transit
RE: Subcommittee Hearing on "Every Life Counts: Improving the Safety of our Nation's Roadways"

PURPOSE

The Subcommittee on Highways and Transit will meet on Tuesday, April 9, 2019, at 10:00 a.m. in HVC 210, Capitol Visitor Center, to receive testimony related to "Every Life Counts: Improving the Safety of our Nation's Roadways." The purpose of this hearing is to assess the safety of our Nation's roads and learn what can be done to lower the number of traffic-related fatalities and injuries. The Subcommittee will hear from a National Transportation Safety Board (NTSB) Member, the Vice Mayor of Neptune, Florida, the City of Alexandria's Chief of Police, the League of American Bicyclists, the National Safety Council, and the American Traffic Safety Services Association.

BACKGROUND

According to the National Highway Traffic Safety Administration (NHTSA), 37,133 people lost their lives in accidents on U.S. roadways in 2017[1]. That means an average of 101 people died each day in motor vehicle crashes, equating to roughly one fatality every 15 minutes. There were a total of 5,977 pedestrian fatalities in 2017, and preliminary reports indicate that number increased in 2018, leading to the highest rate of pedestrian fatalities since 1990[2]. There were 783 cyclist deaths in 2017 and 852 cyclist deaths in 2016. And, the 5,172 motorcyclist fatalities in 2017 is more than twice what it was two decades ago. According to the National Safety Council, injuries from motor vehicle incidents totaled more than 4.6 million in 2017.

According to the Centers for Disease Control (CDC), unintentional injury is now the third leading cause of death for Americans. Motor vehicle accidents are the leading cause of unintentional injury deaths, second only to opioid overdoses. Roadway injuries are the eighth leading cause of death globally, according to the World Health Organization (WHO), and are the number one cause of death for children ages 5–14 and youth ages 15–29.

The FAST Act (P.L 114–94), enacted on December 4, 2015, reauthorized Federal surface transportation programs through September 30, 2020. This legislation built on the foundation established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) (P.L. 102-240), the Transportation Equity Act for the 21st Century (TEA–21) (P.L 105–178) enacted in 1998, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU) (P.L. 109–59) enacted in 2005, and the Moving Ahead for Progress in the 21st Century Act (MAP–21) (P.L. 112–141) enacted in 2012.

As part of each of these multi-year authorization bills, Congress has directed guaranteed Federal funding toward programs to ensure safety on our Nation's roads. These include grants to improve physical roadway infrastructure; grant programs to reduce crashes, injuries, and fatalities involving large trucks and buses;

[1] "Fatality Analysis Reporting System (FARS) Encyclopedia." National Highway Traffic Safety Administration, https://wwwfars.nhtsa.dot.gov/Main/index.aspx.

[2] "New Projection: 2018 Pedestrian Fatalities Highest Since 1990." Governors Highway Safety Association, 28 Feb. 2019, https://www.ghsa.org/resources/news-releases/pedestrians19.

grant programs to incentivize States to adopt laws and regulations to improve highway safety; and grants to assist State enforcement of vehicle and driver safety measures. Congress has also mandated that U.S. Department of Transportation (DOT) agencies undertake numerous rulemakings in each of these areas to address outstanding safety concerns, many of which are discussed below.

In 2016, FHWA, FMCSA, and NHTSA announced, in partnership with the National Safety Council, the launch of the "Road to Zero" coalition. The goal of the coalition is to end fatalities on the Nation's roads within the next 30 years. The DOT committed $3 million in grants over three years to organizations working on lifesaving programs. The Road to Zero Coalition focuses on promoting strategies proven to save lives, such as seat belt use, traffic safety enforcement, and education campaigns. The coalition also focuses on developing new evidence-based strategies to addressing changes in driver behavior.

NATIONAL TRANSPORTATION SAFETY BOARD

The NTSB was created by Congress on April 1, 1967, as an independent Federal agency charged with investigating all civil aviation accidents and significant accidents in other modes of transportation. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. Since its inception 50 years ago, the NTSB has investigated thousands of accidents and made more than 14,500 recommendations to improve transportation safety, including over 2,400 highway safety recommendations. Over 80 percent of NTSB safety recommendations have been acted upon favorably, saving lives. Specific information on NTSB recommendations is included below.

FEDERAL-AID HIGHWAYS

The Highway Safety Improvement Program (HSIP) is a Federal-aid program, funded out of the Highway Trust Fund, which provides funding to projects that will achieve a significant reduction in traffic fatalities and serious injuries on public roads, including local roads and roads on tribal land. In order to use HSIP funding, a State must have an approved comprehensive, data-driven strategic highway safety plan (SHSP) that defines State safety goals and describes a program of strategies to improve safety. Funding provided under HSIP is apportioned to States to implement highway safety improvement projects, which are included in a State's SHSP, to correct or improve hazardous road locations and features, or to address highway safety problems.

The FAST Act increased funding for the HSIP program, providing a total of $11.6 billion to States and tribes over five years. The FAST Act also increased funding for the rail-highway grade crossing program, funded out of HSIP. The set-aside increases from $225 million in FY 2016 to $245 million in FY 2020. The FAST Act amended eligible uses of HSIP funds to include only those listed in statute, most of which are related to physical infrastructure improvements to enhance safety, and specifically added the following eligible uses: installation of vehicle-to-infrastructure communication equipment; pedestrian hybrid beacons; and roadway improvements that provide separation between pedestrians and motor vehicles.

The FAST Act also included "complete streets" language, which encourages States to adopt standards to provide for the safe and adequate accommodation of all surface transportation users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Comparable Senate language to require States and Metropolitan Planning Organizations (MPOs) to adopt such policies was not retained in the final Conference Report. The FAST Act also promotes the use of alternate design guides in order to right-size projects and accommodate all users, which contributes to more livable communities and expands safe transportation options.

Policies such as complete streets help reduce accidents and fatalities for all road users by addressing a wide range of elements unique to each community, such as pedestrian accessibility, street crossings, and bus and bike lanes. In November 2018, the NTSB released a special investigative report to address pedestrian safety[3]. Their recommendations included calling on FHWA to expand its support of state and local safety projects in order to develop a broad network of safety improvements, as well as establishing a national metric of pedestrian safety activity to improve local planning.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

NHTSA's mission is to save lives, prevent injuries, and reduce economic costs due to traffic accidents on the Nation's roadways through education, research, and by

[3] "Special Investigation Report: Pedestrian Safety." National Transportation Safety Board, 25 Sept. 2018, https://www.ntsb.gov/safety/safety-studies/Documents/SIR1803.pdf.

promulgating and enforcing safety standards. The FAST Act reauthorized NHTSA's behavioral highway safety programs. Section 402 of title 23, United States Code, requires States to have safety plans approved by the Secretary and designed to reduce fatalities, injuries, and property damage resulting from traffic accidents. Funding is distributed to States with approved plans through a formula based on population and public road mileage. The FAST Act increased funding to carry out state highway safety plans and reduced administrative requirements for States.

The majority of motor vehicle deaths are linked to human behavior. Of the 37,133 traffic related fatalities which occurred in 2017:

- 10,874 (29 percent) were crashes where at least one driver was alcohol-impaired;
- 9,717 (26 percent) were in crashes where at least one driver was speeding, and;
- 3,166 (9 percent) were in crashes involving distracted driving.

Traffic fatality data for each state can be found here: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812581

NHTSA has also analyzed the economic costs of motor vehicle crashes and found that traffic-related accidents cost the U.S. $242 billion in 2010[4]. Of that, $43 billion was attributed to alcohol-impaired crashes, and $52 billion was attributed to speed-related crashes. Seat belt use prevented 12,500 fatalities, 308,000 serious injuries, and $50 billion in injury related costs in 2010. However, the failure of a substantial portion of the driving population to buckle up caused 3,350 unnecessary fatalities, 54,300 serious injuries, and cost society $10 billion in easily preventable injury related expenses. In 2017, motor vehicle injuries are estimated to have cost the U.S. economy $433.8 billion, including medical expenses, lost wages and productivity, property damage, and other similar expenses, according to the National Safety Council.

States can use their Section 402 funding on activities to carry out their States safety plans, including activities to improve enforcement of traffic safety laws. In their campaign Save LIVES, which aims to significantly lower traffic fatalities and injuries by 2050, the WHO included investment in traffic safety enforcement as one of its top six priorities.

The CDC also recommends greater enforcement of seat belt laws to help lower the number of traffic-related fatalities caused by not using a restraint[5]. The majority of Americans recognize the importance of wearing a seat belt, with the national use rate at almost 90 percent. However, of the passengers killed in motor vehicle accidents in 2017, 47 percent were not using a restraint. Despite a continued steady rate of fatalities due to alcohol impairment in recent years, traffic safety enforcement is steadily declining. According to data from the FBI, the number of drunk driving arrests decreased 24 percent from 2005 to 2017[6].

STATE SAFETY GRANTS

In order to assist and incentivize States to improve safety in areas known to contribute to fatalities, Congress authorized the National Priority Safety Program (Section 405 of title 23, U.S.C.). Through this program, NHTSA makes grant funding available to States that adopt or implement programs or laws to: increase the use of occupant protection devices; reduce the number of alcohol impaired driving fatalities; encourage the adoption of laws which prohibit distracted driving; improve motorcyclist safety; improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of state safety data; and encourage the adoption of state graduated driver licensing laws. The FAST Act also added two new grants under Section 405, the 24–7 Sobriety Program and the Non-Motorized Safety program, which makes States with combined pedestrian and bicycle fatalities that exceed 15 percent of total crash fatalities in that State eligible to receive funding to reduce such fatalities. Each State must meet specific criteria in each national priority program to qualify for funding. The FAST Act provided grant funding ($1.4 billion over five years) for this program. In 2019, the Non-Motorized Safety Grants program was fully utilized with each of the 25 states eligible for the grant receiving it.

The FAST Act also made limited changes to the Alcohol-Ignition Interlock Law, Distracted Driving, and Graduated Driver Licensing Incentive grants in order to increase the number of States eligible for those grants. To learn which States met the

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[4] "The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (Revised)." National Highway Traffic Safety Administration, May 2015, https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812013.

[5] "What Works: Strategies to Increase Restraint Use." Centers for Disease Control and Prevention, 21 Jan. 2015, https://www.cdc.gov/motorvehiclesafety/seatbelts/strategies.html.

[6] "2017 Crime in the United States." Federal Bureau of Investigation, https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017/tables/table-69/table-69.xls.

criteria for each grant program see: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/fy19__grantdeterminations__and__deficiencies__in__stateapplications.pdf

Despite the changes made to these safety grants under the FAST Act, states have not adapted their programs to qualify, leaving the program underutilized. The table below shows the number of states who were unsuccessful in meeting the programs' criteria in 2019. Additionally, in each program, fewer States applied for grants in 2019 than in 2018. For example, seventeen states applied for Graduated Driver Licensing Law grants last year, compared to only four states applying in 2019.

Program	Ignition Interlocks (405d)	Comprehensive Distracted Driving (405e)	Graduated Driver Licensing Law (405g)
Applied	13	17	4
Awarded	5	4	0
Not Awarded	8	13	4
Did Not Apply	43	39	52
Not Eligible	0	0	0

The NTSB's FY 2019–2020 Most Wanted List includes recommendations to eliminate distractions, including a nationwide ban on the use of personal electronic devices by all drivers, and increased high-visibility enforcement for speeding and drug and alcohol impaired driving. The full list of recommendations can be found here: https://www.ntsb.gov/safety/mwl/Documents/2019-20/2019-20-MWL-SafetyRecs.pdf

DRUGGED DRIVING

An emerging area of safety concern is drugged driving. NHTSA's most recent Roadside Survey of Alcohol and Drug Use by Drivers found that 20 percent of drivers tested positive for at least one drug that could affect safety [7]. However, this figure does not represent or confirm how many drivers were impaired since a positive marijuana test can detect marijuana use in the past week. A 2016 AAA Foundation for Traffic Safety report found that an estimated 4.9 percent of drivers drove within an hour of using marijuana [8].

In 2016, NHTSA conducted a study in Virginia called the Drug and Alcohol Crash Risk: A Case-Controlled Study, the largest of its kind ever conducted, which assessed whether marijuana use by drivers is associated with greater risk of crashes [9]. The survey found that marijuana users are more likely to be involved in accidents, but that the increased risk may be due in part because marijuana users are more likely to be in groups at higher risk of crashes, particularly young men.

Unlike the current 0.08 percent Blood Alcohol Content impairment standard, there is currently no impairment standard for marijuana. Marijuana has a larger variation in how it affects people than alcohol, making it more difficult to establish a uniform impairment standard. The FAST Act required NHTSA to report to Congress on several outstanding challenges of marijuana-impaired driving, including methods to detect marijuana-impaired driving, impairment standard feasibility, methods to differentiate the cause of a driving impairment between alcohol and marijuana, and the role and extent of marijuana impairment in motor vehicle accidents. That report was issued in July 2017 and provided three recommendations to address marijuana-impaired driving:

- Increase training and resources for law enforcement officers using the most efficient and effective techniques to detect and recognize impairment in drivers;
- Continue research to enable development of an impairment standard for driving under the influence of marijuana, and;

[7] "2013–2014 National Roadside Study of Alcohol and Drug Use by Drivers." National Highway Traffic Safety Administration, May 2017, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13013-nrs__drug__092917__v6__tag.pdf.

[8] "2016 Traffic Safety Culture Index." AAA Foundation, Feb. 2017, https://aaafoundation.org/2016-traffic-safety-culture-index/.

[9] "Drug and Alcohol Crash Risk: A Case-Control Study." National Highway Traffic Safety Administration, Dec. 2016, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812355__drugalcoholcrashrisk.pdf.

- Encourage States to collect data regarding the prevalence of marijuana use by drivers and among those arrested for impaired driving [10].

NTSB recommendations for drugged driving include more research to get better data to understand the scope of the problem and the effectiveness of countermeasures [11]. NTSB also recommends States should increase the collection, documentation, and reporting of driver breath and blood test results for alcohol and drugs following crashes. This is most readily done through NHTSA's National Roadside Survey (NRS).

In recent years, Congress has blocked NHTSA's ability to continue this survey through an appropriations rider. In March 2018, the U.S. Government Accountability Office issued a report to Senate and House Appropriations Committees which found that NHTSA had improved NRS methodology to address previous concerns leading to its prohibition [12]. Their audit found there are key differences in how the NRS is conducted as compared to a traditional law enforcement checkpoint. As a result, participation in the NRS is entirely voluntary and has never resulted in an arrest, unlike law enforcement checkpoints. In response to these findings, the FY 2019 Transportation, Housing, and Urban Development Appropriations Act did not include the prohibition.

AUTONOMOUS VEHICLES

Autonomous vehicles offer many safety improvements over human drivers, but they too have limitations. Within the jurisdiction of the Committee on Transportation and Infrastructure safety issues such as safely navigating road construction zones, pulling aside for emergency vehicles, understanding police controlled intersections are all unique challenges for autonomous vehicles. Roadway infrastructure needs to compliment autonomous vehicles include road striping and smart traffic lights. Finally, educating human drivers to anticipate and react accordingly to the driving style of autonomous vehicles will also need to be part of the process.

WITNESSES

- The Honorable Jennifer Homendy, Member, National Transportation Safety Board
- The Honorable Fred Jones, Vice Mayor, City of Neptune Beach, Florida, on behalf of Transportation for America
- Mr. Michael L. Brown, Chief of Police, City of Alexandria
- Mr. Jay Bruemmer, Vice President, K & G Striping, Inc., on behalf of the American Traffic Safety Services Association
- Mr. Mike Sewell, Active Transportation Service Line Leader, Gresham Smith, on behalf of The League of American Bicyclists
- Mr. Nicholas Smith, Interim President and Chief Executive Officer, The National Safety Council

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[10] "Marijuana-Impaired Driving a Report to Congress." National Highway Traffic Safety Administration, July 2017, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf.

[11] "End Alcohol and Other Drug Impairment—Highway." National Transportation Safety Board, https://www.ntsb.gov/safety/mwl/Pages/mwlfs-19-20/mwl5-fsh.aspx.

[12] "National Roadside Survey: NHTSA Changed Methodology to Address Driver Concerns." U.S. Government Accountability Office, 12 March 2018, https://www.gao.gov/assets/700/690593.pdf.

EVERY LIFE COUNTS: IMPROVING THE SAFETY OF OUR NATION'S ROADWAYS

TUESDAY, APRIL 9, 2019

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room HVC–210, Capitol Visitor Center, Hon. Eleanor Holmes Norton (Chairwoman of the subcommittee) presiding.

Ms. NORTON. The subcommittee will come to order.

I want to welcome us all to today's hearing.

It is a priority for me and I hope for the members of this committee. It is certainly equally important to the other issues we are going to be considering as we move toward reauthorization.

I do not see how we can reauthorize another transportation surface bill without considering not only how to build it, but how to make it safe for those who use it. I am going to ask Members to check on your district the way I did mine, and I wonder if your experience is like mine.

In 2015, the District of Columbia pledged to end roadway fatalities by the year 2024. That must have been a year that was given to us by the Department of Transportation or somebody.

Yet, every year since that pledge there has been an increase in fatalities. In the last 2 years of available data, traffic-related deaths in my own district spiked by 35 percent. That is why I am asking Members to look at their districts because I do not believe, unfortunately, that I am alone.

Nationwide, in 2017, 37,133 people lost their lives in motor vehicle related crashes. Now, I spell that number out. Usually I round off the numbers, but I purposely did not do it for the purposes of this hearing because each number represents a life lost.

Every day we lose more than 100 lives in traffic-related accidents. Some of those may be people walking in the streets or in the roads, and we have had an increase in those fatalities in my own district as well. Some of them may be people riding in automobiles or trucks.

In 2016, the Department of Transportation announced the so-called Road to Zero. It was a coalition with a goal of completely eliminating roadway deaths within 30 years. Well, all I can say is we are off to a poor start.

That is why pedestrian and traffic safety is a priority for me as chair of this subcommittee. I am anxious to learn from today's witnesses, representing an increasingly diverse array of populations

who use our roadways, including pedestrians and bicyclists, and now people riding scooters, and law enforcement on what we can do about this trend.

I would very much like this reauthorization to transform our approach to roadway safety to help us get anywhere close to zero deaths. That is an admirable goal. It is a goal we ought to set.

We need to improve how we design our transportation networks. We need to improve how we educate the users of those networks, and we need to understand how to enforce the proven strategies that we already claim will save lives and apparently have not done so.

Some in Congress may still live in the 20th century of transportation in wanting to eliminate the very small amount of funding that is used for transportation alternatives, but I think the people have already moved ahead of Congress and are already on the roads using alternative modes of transportation.

All of these modes of transportation must be treated equally, not cars over scooters, not bicycles over walking. All must be treated as equally valid choices that people have chosen to move people. The options belong not to Congress but to the State and local communities who must be able to pursue the smartest and most efficient and right-sized projects to meet their own mobility needs of their own citizens.

I am a big proponent of technology as holding promise to save lives, but human error and human choice today are very real problems, and we do not have the technology in place and will not have it in place for some time to save lives.

So we cannot wait to remove humans from the equation before making the real progress we have promised to make.

The three leading causes of motor vehicle deaths remain linked to the same human factors: alcohol impairment, speeding, and distracted driving. I am particularly interested in hearing from our witnesses on why we have not been able to curb this longstanding issue, road safety, and what we can do to stop these fatalities.

I look forward to today's discussion and thank each of our witnesses for sharing their insights, your much needed insights, with us.

I would like to ask the ranking member, Mr. Spano, who is here for our ranking member, for his comments at this time.

Mr. SPANO. Thank you, Chairwoman Norton.

I want to welcome everybody to the hearing today.

The current Federal surface transportation law, the FAST Act, expires on September 30th, 2020. Last month this subcommittee held a hearing to kick off its process to reauthorize Federal surface transportation programs.

Today's hearing builds on that and is focused on how Congress can improve the safety of our Nation's roads. In 2017, as the Chair noted, 37,133 fatalities occurred on our Nation's highways according to the National Highway Traffic Safety Administration.

While this is a 1.8-percent decrease from 2016, more can and should be done to further reduce highway fatalities. The Federal Surface Transportation Safety Programs are administered by different modal administrations within the Department of Transportation. These programs provide non-Federal partners with re-

sources to improve the safety of the Nation's surface transportation system.

Today's hearing focuses on the safety programs administered by the Federal Highway Administration and the National Highway Traffic Safety Administration. These programs require States to have a data-driven, performance-based approach to address their unique highway safety challenges.

As we continue with our reauthorization process, it is important that we gather feedback on how well these programs are working and what other policy and programmatic change this committee should consider.

With that I want to thank our witnesses for being with us this morning, and I look forward to hearing their testimony on this very important topic.

Madam Chair.

[Mr. Spano's prepared statement follows:]

Prepared Statement of Hon. Ross Spano, a Representative in Congress from the State of Florida

Thank you, Chairwoman Norton. I want to welcome everyone to today's hearing.

The current Federal surface transportation law, the FAST Act, expires on September 30, 2020. Last month, this subcommittee held a hearing to kick off its process to reauthorize Federal surface transportation programs. Today's hearing builds on that and is focused on how Congress can improve the safety of the Nation's roads.

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As we continue with our reauthorization process, it is important that we gather feedback on how well these programs are working and what other policy and programmatic changes the committee should consider.

With that, I want to thank our witnesses for being with us this morning, and I look forward to hearing their testimony on this very important topic.

Ms. NORTON. Thank you.

And we will hear now from the chairman of the full committee, Mr. DeFazio.

Mr. DEFAZIO. Thank you, Madam Chair.

Somehow we seem to have become sort of inured to the fact that 100 people a day die in motor vehicle accidents. Yes, there is hortatory like, "Oh, we are going to move to zero," but it is not being followed up with decisive action out of the Department of Transportation or in many State DOTs.

So I am hopeful that as we move toward reauthorization of the FAST Act that we can put new direction and new emphasis on how to deal with this horrible toll.

You know, obviously drunk driving is a big problem. That goes to enforcement issues. Speeding, enforcement issues. Distractions, I think a lot of States have yet to adopt laws regarding distractions, and there are new technologies that are potentially going to

build distractions into the automobiles or after-market distractions like heads-up displays where you can read your email on the windshield while you are driving.

We have to deal with all of these evolving problems and then deal with the more traditional problems we have had.

There has been also an alarming increase in pedestrian deaths, which the Chair mentioned, and cycling and pedestrian, and some of that can be dealt with as we rebuild this crumbling system, and when we look to Complete Streets or other ways to better segregate traffic, pedestrians and bicycles, that can help prevent some of those deaths.

In some cities, they are putting in bike boxes at the front because the right turn is the most common cause of a vehicular collision with a cyclist, and you know, there are other things we can do that are pretty simple, not that expensive, but have not really been exploited to their potential.

So I am looking forward to creative and innovative ideas. I look forward to the witnesses giving us some of those ideas.

And with that I would yield back the balance of my time.

[Mr. DeFazio's prepared statement follows:]

Prepared Statement of Hon. Peter A. DeFazio, a Representative in Congress from the State of Oregon, and Chair, Committee on Transportation and Infrastructure

Thank you, Chair Norton and Ranking Member Davis, for holding this hearing. I am pleased that the subcommittee is prioritizing roadway safety—a topic that has not received the level of attention it deserves.

We can and must do more to save lives and prevent injuries on our roads. Currently, more than 100 people a day die in motor vehicle accidents—that's one life lost every fifteen minutes. Pedestrian deaths have also risen sharply in the last decade—an increase of 45 percent since 2009—and now account for 16 percent of all roadway fatalities. Somehow this has become tolerable.

A total of 37,133 people were killed on our roadways in 2017. Let me put this in context—this is the equivalent of about 218 fully loaded airplanes falling out of the sky each year and yet somehow this has not spurred Americans to demand that enough is enough. If that weren't bad enough, when you consider that the top causes of motor vehicle deaths are drunk driving, speeding, and distractions, you realize these deaths are entirely preventable.

At a time when transportation is changing rapidly thanks to innovation, data sharing, and automation, it's shocking we still aren't making big strides in safety. We should be holding ourselves to a higher standard, because when it comes to roadway safety every single life counts. While we invest billions of dollars in research for cancer and other diseases and allocate new resources to combatting the opioid crisis, we have failed to seriously invest in lowering deaths on our Nation's roadways.

So what can we do? Making substantial progress towards saving lives requires a clear sense of—and strong commitment to—the goal of safety as the highest priority. Two decades ago, Sweden launched an effort called Vision Zero which set forth a road safety approach with a simple aim: "No loss of life is acceptable." This model has been replicated in several countries around the world, and it guides the mission of the U.S. Department of Transportation and the Road to Zero Coalition. And, many U.S. cities have independently adopted policies to work towards zero deaths in roadway accidents. Congress needs to demonstrate its commitment to making Vision Zero a reality as well.

Unfortunately, highway safety has not been a high priority in transportation talks in Congress in recent years. In the development of both the FAST Act and MAP–21, there was a stark shift in the discourse over safety in Congress. Instead of developing solutions to promote safety, we sparred over proposals to ease state requirements on safety funding and exempt industry after industry from safety regulations.

As Congress develops a bill to build 21st-century infrastructure, ensuring safety of the users of that infrastructure must be a top priority of this committee. Given

that two-thirds of fatalities are tied to drunk driving and excessive speed, I want to double down on Federal actions that we know work—education and enforcement.

And we need to look at safety from all angles—not just promoting more responsible behavior by road users, but by ensuring that roadway design takes into account all users through smart policies, such as complete streets. Addressing the unique elements of each community, such as pedestrian accessibility, street crossings, and bus and bike lanes, rather than a cookie-cutter approach can have a profound impact on reducing traffic accidents and fatalities.

I look forward to today's discussion and learning what Congress can do to raise the bar on safety.

Ms. NORTON. Thank you, Mr. Chairman.

Before I introduce today's panel, I want to note that we had many more stakeholder groups who were interested in speaking about safety than we could accommodate at today's hearing, and that is really very encouraging to me that so many wanted to come forward to speak to this issue.

It does speak to the rising consciousness and the pressure, I think, Congress needs to find ways, along with those in the States, to move this issue.

I, therefore, ask unanimous consent to enter into the hearing record written statements from ITS America, Advocates for Highway and Auto Safety, and the American Road and Transportation Builders Association.

Without objection, so ordered.

[The information is on pages 121–129.]

Ms. NORTON. We want to move now to our witnesses:

The Honorable Jennifer Homendy, Member of the National Transportation Safety Board;

The Honorable Fred Jones, vice mayor, city of Neptune Beach, Florida, on behalf of Transportation for America;

Mr. Michael L. Brown, chief of police, city of Alexandria, Virginia;

Mr. Jay Bruemmer, vice president, K&G Striping Inc., on behalf of the American Traffic Safety Services Association;

Mr. Mike Sewell, transportation service line leader, Gresham Smith, on behalf of the League of American Bicyclists;

Mr. Nicholas Smith, interim president and chief executive officer of the National Safety Council.

Thank you for being here. I look forward to your testimony.

Without objection, our witnesses' full statements will be included in the record.

You may proceed, Ms. Homendy.

TESTIMONY OF HON. JENNIFER HOMENDY, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD; HON. FRED JONES, VICE MAYOR, CITY OF NEPTUNE BEACH, FLORIDA, ON BEHALF OF TRANSPORTATION FOR AMERICA; MICHAEL L. BROWN, CHIEF OF POLICE, ALEXANDRIA (VIRGINIA) POLICE DEPARTMENT; JAY BRUEMMER, VICE PRESIDENT, K&G STRIPING, INC., ON BEHALF OF THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION; MIKE SEWELL, ACTIVE TRANSPORTATION SERVICE LINE LEADER, GRESHAM SMITH, ON BEHALF OF THE LEAGUE OF AMERICAN BICYCLISTS; AND NICHOLAS J. SMITH, INTERIM PRESIDENT AND CHIEF EXECUTIVE OFFICER, THE NATIONAL SAFETY COUNCIL

Ms. HOMENDY. Good morning, Chairwoman Norton, Congressman Spano, Chairman DeFazio, and members of the subcommittee. Thank you for inviting the NTSB to testify today.

The NTSB is an independent Federal agency charged by Congress with investigating major transportation disasters. We determine the probable cause of crashes and issue safety recommendations to Federal, State, and local agencies, and organizations to prevent future tragedies and injuries and save lives.

We are not a regulatory agency in the conventional sense. We do not adopt or enforce safety standards. Since 1967, the NTSB has issued nearly 15,000 safety recommendations, about 2,500 of which are aimed at improving highway safety.

Overall, more than 80 percent of those have been adopted, including recommendations that ensure airbags are safer, child restraint fitting stations are available nationwide, and the design and construction of schoolbuses are improved.

Every 2 years, we release a "most wanted list" of transportation safety improvements to highlight issues that we believe are the greatest risk to safety.

Our most recent list identifies 10 priorities, 7 of which affect highway safety. Today I want to focus on speeding, impaired driving, and pedestrian safety.

Speeding is one of the most common factors in motor vehicle crashes. In 2016, more than 10,000 people were killed in speeding related crashes, about the same number of people killed in alcohol impaired driving crashes. Yet our attitude toward speeding is much different. It is seen as more socially acceptable.

Together we need to change that mindset. In July 2017, we issued a study focused on reducing speeding related crashes. We found that, one, we need to change how we set speed limits in this country. Federal guidance to States is leading to ever-increasing speed limits, and as a result, deaths on our Nation's roadways.

From 2012 to 2016, we went from 32 States with maximum speed limits at or above 70 to 41. Seven of those States are at or above 80.

We need to increase enforcement through the use of technologies, like automated speed enforcement and point-to-point enforcement. We need in-vehicle technologies to address speeding like speed limiters, and we need NHTSA to issue performance standards for such technologies.

We need national leadership to address speeding, which should include a campaign like Click It or Ticket, to change driver behavior and incentive grants to States to encourage them to implement programs to combat speeding.

We also need to better address impairment in transportation. Twenty-nine die on our Nation's roads daily due to alcohol-impaired driving crashes. That is one every 48 minutes.

We recommend reducing the BAC limit to .05 or lower, and that NHTSA provide incentive grants to States to do so.

We recommend requiring ignition interlocks for all convicted DWI offenders, and we want NHTSA to accelerate widespread implementation of technology to enable vehicles to detect driver impairment.

Finally, pedestrian safety. Over the last 10 years, pedestrian fatalities have increased by 27 percent, while overall highway fatalities have decreased by 12 percent.

In 2016, the NTSB began investigating a series of highway crashes and issued a study that included 11 recommendations to DOT focused on improving pedestrian safety.

We recommend strengthening Federal standards on vehicle headlights; improving vehicle designs to reduce pedestrian fatalities and injuries; and ensuring collision avoidance technologies like pedestrian detection systems and automatic emergency braking are standard on all vehicles.

We need better street designs. Traditional planning is geared towards motor vehicle traffic. So we recommend that States and MPOs implement a pedestrian safety action plan and that FHWA provide more resources for State and local pedestrian safety projects.

Finally, we need better data to support the decisionmaking process. For example, in 2015, Portland, Oregon, identified 30 high crash streets and intersections that accounted for 57 percent of deadly crashes.

By analyzing injury and crash data, Portland was able to determine where best to invest resources.

In closing, let me emphasize that more than 100 people die on our highways every single day. In our view, one death is too many. We must change a culture that is willing to accept those losses, and we need your help to implement proven solutions.

Thank you again for the opportunity to testify today, and I am happy to answer any questions.

[Ms. Homendy's prepared statement follows:]

Prepared Statement of Hon. Jennifer Homendy, Member, National Transportation Safety Board

Good morning Chairwoman Norton, Ranking Member Davis, Chairman DeFazio, and Ranking Member Graves, and the Members of the Subcommittee. And, let me offer my congratulations to Vice Chair Finkenauer on her selection as Vice Chair of the Subcommittee. Thank you for inviting the National Transportation Safety Board (NTSB) to testify before you today.

In 1967, Congress established the NTSB as an independent agency within the United States Department of Transportation (USDOT) with a clearly defined mission to promote a higher level of safety in the transportation system. In 1974, Congress reestablished the NTSB as a separate entity outside of the USDOT, reasoning that "no federal agency can properly perform such (investigatory) functions unless

it is totally separate and independent from any other ... agency of the United States."[1] Because the USDOT has broad operational and regulatory responsibilities that affect the safety, adequacy, and efficiency of the transportation system, and transportation accidents may suggest deficiencies in that system, the NTSB's independence was deemed necessary for proper oversight.

The NTSB is charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—highway, rail, marine, and pipeline. We determine the probable cause of the accidents we investigate, and we issue recommendations to federal, state, and local agencies, and other entities, aimed at improving safety, preventing future accidents and injuries, and saving lives. The NTSB is not a regulatory agency in the conventional sense—it does not promulgate operating standards and does not certificate organizations and individuals. The goal of our work is to foster safety improvements, through formal and informal safety recommendations, for the traveling public.

On call 24 hours a day, 365 days a year, our investigators travel throughout the country and to every corner of the world in response to transportation disasters. In addition, we conduct special transportation safety studies and coordinate the resources of the federal government and other organizations to assist victims and their family members who have been impacted by major transportation disasters. Since our inception, we have investigated more than 146,000 aviation accidents and thousands of surface transportation accidents. We have issued more than 14,650 safety recommendations to more than 2,400 recipients in all transportation modes, over 82 percent of which have been implemented.

In the case of highway accidents, current law grants the NTSB jurisdiction to investigate those "highway accident[s], including a railroad grade crossing accident, the Board selects in cooperation with a State."[2] The NTSB has a distinguished record of contributing to highway safety for decades. For example, as a result of the NTSB's investigative work and safety recommendations, automobile airbags for all citizens are safer, child restraint fitting stations are available nationwide, and graduated driver licensing programs for teenagers have been implemented by many states. Additional examples of safety improvements inspired by or resulting from investigations or recommendations of the NTSB include improvements in the design and construction of school buses, highway barrier improvements, and center high-mounted rear brake lights on automobiles. Although there is no way to quantify the accidents that did not happen or the lives that were not lost because of the efforts of the NTSB, the tangible safety improvements that can be directly associated with the work of the NTSB have saved countless lives and avoided millions and perhaps billions of dollars in injuries and property damage.

Our goal is zero deaths and injuries on our nation's roadways; to eliminate the more than 37,000 people killed in crashes on US highways in 2017.[3]

On February 4, 2019, we announced our Most Wanted List of Transportation Safety Improvements (MWL) for 2019-2020.[4] First issued in 1990, the MWL serves as the agency's primary advocacy tool to help save lives, prevent injuries, and reduce property damage resulting from transportation accidents. The NTSB created the program to increase industry, Congressional, and public awareness of the transportation safety issues identified in our accident investigations and safety studies. Safety issues highlighted on the MWL receive increased emphasis and become the primary focus of our advocacy activities.

The issues selected for the MWL are chosen from our safety recommendations and emerging areas. Selections are based on the magnitude of risk, potential safety benefits, timeliness, and probability of advocacy efforts to bring about change. Issues selected have been thoroughly validated by our investigations. They are issues we identify as having received insufficient or inadequate action. They are issues that could create a high safety risk if not addressed.

Our 2019-2020 list includes seven areas that affect highway safety:

- Implement a Comprehensive Strategy to Reduce Speeding-Related Crashes
- End Alcohol and Other Drug Impairment
- Eliminate Distractions
- Strengthen Occupant Protection
- Increase Implementation of Collision Avoidance Systems in All New Highway Vehicles

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[1] Independent Safety Board Act of 1974 § 302, Pub. L. 93-633, 88 Stat. 2166-2173 (1975).

[2] 49 U.S.C. § 1131(b)

[3] National Highway Traffic Safety Administration, *2017 Motor Vehicle Crashes: Overview* (Washington, DC: NHTSA, 2018).

[4] National Transportation Safety Board, *2019-2020 Most Wanted List* (Washington, DC: NTSB, 2019).

- Reduce Fatigue-Related Accidents
- Require Medical Fitness—Screen for and Treat Obstructive Sleep Apnea

My testimony today will focus on those areas most closely related to pedestrian and passenger vehicle safety.

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS

Implement a Comprehensive Strategy to Reduce Speeding-Related Crashes

Speeding—either exceeding the speed limit or driving too fast for conditions—is one of the most common factors in motor vehicle crashes in the United States. National Highway Traffic Safety Administration (NHTSA) data show that in 2016, 10,291 people were killed in crashes in which at least one driver was speeding. This represents 27 percent of the traffic fatalities that year, and a 5.6-percent increase from 2015. Speeding increases the likelihood of being involved in a crash, and it increases the severity of injuries sustained by all road users in a crash.

On July 25, 2017, we adopted a safety study, *Reducing Speeding-Related Crashes Involving Passenger Vehicles*, which examined the causes and trends in speeding-related crashes and countermeasures to prevent them.[5] The study focused on five safety issues:

- speed limits
- data-driven approaches for speed enforcement
- automated speed enforcement
- intelligent speed adaptation
- national leadership

Speed limits are a critical component of speed management, but Federal Highway Administration (FHWA) guidance through the Manual of Uniform Traffic Control Devices (MUTCD) emphasizes that states and localities set speed limits within 5 miles per hour (mph) of which 85% of vehicles are traveling. The focus on the 85th percentile has led to increasing speed limits across the United States. For example, in 2012, 35 states had maximum speed limits at or above 70 mph; that increased to 41 states by 2016, with 7 of those states at or above 80 mph. The NTSB recommends de-emphasizing the 85th percentile approach; requiring consideration of factors which are currently only optional, such as crash history, roadway characteristics, and roadway conditions; and incorporating a safe systems approach for urban roads (evaluating pedestrian and bicycle traffic).

Speed limits must also be enforced to be effective. Successful enforcement is achieved through law enforcement commitment to data-driven, high-visibility enforcement. However, law enforcement reporting of speeding-related crashes is inconsistent, which leads to underreporting of speeding-related crashes. This underreporting leads stakeholders and the public to underestimate the overall scope of speeding as a traffic safety issue nationally and hinders the effective implementation of data-driven speed enforcement programs.

Automated speed enforcement (ASE) is also widely acknowledged as an effective countermeasure to reduce speeding-related crashes, fatalities, and injuries. However, only 14 states and the District of Columbia use it. Many states have laws that prohibit or place operational restrictions on ASE, and federal guidelines for ASE are outdated and not well known among ASE program administrators. Point-to-point enforcement, which is based on the average speed of a vehicle between two points, can be used on roadway segments many miles long. This type of ASE has had recent success in other countries, but it is not currently used in the United States. We recommend that state and local agencies use ASE and that the FHWA work with NHTSA to assess the effectiveness of point-to-point enforcement in the United States.

In addition to enforcement efforts to address speeding, there needs to be increased leadership and attention for this at the national level. Current federal-aid programs do not ensure that states fund speed management activities at a level commensurate with the national impact of speeding on fatalities and injuries. Also, unlike other traffic safety issues with a similar impact (such as alcohol-impaired driving) there are no nationwide programs to increase public awareness of the risks of speeding. Although the USDOT has established a multi-agency team to coordinate speeding-related work throughout the department, this team's work plan does not include means to ensure that the planned actions are completed in a timely manner.

National, state, and local traffic safety stakeholders have repeatedly highlighted that—unlike other crash factors such as alcohol impairment or unbelted occupants—speeding has few negative social consequences associated with it. Surveys show

[5] National Transportation Safety Board, *Reducing Speeding-Related Crashes Involving Passenger Vehicles*, (Washington, DC: NTSB, 2018).

drivers generally disapprove of speeding. However, most are complacent about the risks involved and speeding is a common behavior. Safety stakeholders told NTSB that because the dangers of speeding are not well-publicized, drivers underappreciate the risks of speeding in terms of crash causation. Stakeholders also expressed the belief that, to change public perceptions of speeding, a coordinated effort among safety advocacy groups, with strong leadership from the federal government, is needed. The lack of a national traffic safety campaign was cited as a key issue hindering the effective implementation of speeding prevention programs.

NHTSA, through its Traffic Safety Marketing (TSM) group, provides marketing materials and advice for states to use in developing traffic safety campaigns It also coordinates national traffic safety events. Our study found that none of the traffic safety events that NHTSA sponsored in 2016 addressed speeding. TSM does make available marketing materials that state and local agencies can use in their own campaigns. However, in the absence of a national speeding campaign, there is incomplete participation among states and little consistency among the individual state campaigns.

We concluded that traffic safety campaigns that include highly publicized, increased enforcement can be an effective speeding countermeasure. This led us to recommend that NHTSA collaborate with other traffic safety stakeholders to develop and implement an ongoing program to increase public awareness of speeding as a national traffic safety issue. The program should include, but not be limited to, initiating an annual enforcement mobilization directed at speeding drivers.

Another way to increase public awareness of speeding as a traffic safety issue is by providing states with financial incentives to be more engaged in addressing speeding. Highway Safety Program grants are allocated based on the population and road miles in each state, and these funds can be spent on any of 10 different focus areas (which includes speeding) according to a state's Highway Safety Plan. In contrast, National Priority Safety Programs funds are directed toward seven different priority areas, with the funding level for each priority area (rather than the overall total) established by Congress. Each priority area has specific eligibility requirements that incentivize states to conduct particular traffic safety activities. Speeding is not one of the seven priority areas.

The Highway Safety Program allows states significant leeway to spend funds according to their particular traffic safety priorities, including speeding; but it does not provide a means to encourage states to focus on national priorities. In contrast, National Priority Safety Program grants are specifically designed to encourage states to focus additional traffic safety efforts in areas of national importance. However, these funds currently cannot be used for speed management. Thus, we concluded that current federal-aid programs do not require or incentivize states to fund speed management activities at a level commensurate with the national impact of speeding on fatalities and injuries and recommended that NHTSA establish a program to incentivize state and local speed management activities.

In the study, we also recommended completion of all actions in the USDOT 2014 Speed Management Program Plan, FHWA assess of the effectiveness of point-to-point speed enforcement in the U.S., incentivizing passenger vehicle manufacturers and consumers to adopt intelligent speed adaptation systems, including speed limiters, and increasing the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improving consistency in law enforcement reporting of speeding-related crashes.

End Alcohol and Other Drug Impairment in Transportation

The issue area of alcohol and other drug impairment in transportation has been on every Most Wanted List we have published since 1990, and we have made hundreds of recommendations to address this issue. Impairment in transportation continues to be a public health concern, with more than 10,000 highway fatalities each year in the United States involving alcohol-impaired drivers. Impairment by over-the-counter medications, prescription drugs, synthetic drugs, and illicit substances is also a rising concern.

We have recommended a comprehensive approach to address substance-impaired driving to prevent crashes, reduce injuries, and save lives. When it comes to alcohol use, research shows that impairment begins before a person's blood alcohol concentration (BAC) level reaches 0.08 percent, the current illegal per se limit in every state except Utah, which was the first state to enact 0.05 BAC law in 2017. In fact, by the time BAC reaches 0.08, the risk of a fatal crash has more than doubled.[6]

[6] Compton, R.P., R.D. Blomberg, H. Moskowitz, M. Burns, R.C. Peck, and D. Fiorentino. 2002. "Crash Risk of Alcohol-Impaired Driving." *Alcohol, Drugs and Traffic Safety—T2002. Proceedings of the 16th International Conference on Alcohol, Drugs and Traffic Safety (August 4–*

We have recommended that states lower the per se BAC threshold to 0.05 percent or lower. Further, we have recommended that NHTSA seek legislative authority to award incentive grants for states to establish a per se BAC limit of 0.05 or lower for all drivers not already required to adhere to lower BAC limits.[7]

To further deter impaired driving, we have also recommended high-visibility enforcement of impaired driving laws using passive alcohol-sensing technology, as well as encouraged the development of technology that will enable vehicles to detect driver impairment, like the Driver Alcohol Detection System for Safety[8]. We have also made recommendations to reduce recidivism by driving while intoxicated (DWI) offenders. Recommended strategies include requiring ignition interlocks for all convicted DWI offenders and making special efforts to target repeat offenders.[9]

In the United States, ignition interlocks have historically been viewed as a sanction for repeat or high-BAC offenders; however, in recent years, the movement has been toward mandating ignition interlocks for all DWI offenders, including first-time offenders. Currently 32 states plus the District of Columbia have all-offender ignition interlock laws.

Research evaluation of ignition interlock programs over the last two decades has found that ignition interlock devices are effective in reducing recidivism among DWI offenders, sometimes by as much as 62 to 75 percent. One study examined the effectiveness of laws that require alcohol interlock installations for first-time offenders as well as repeat or high-BAC offenders; it found an additional benefit in reducing repeat DWI offenses.[10] Another study estimated 1,100 deaths could have been prevented in 1 year had interlock devices been required for drivers with recent DUI convictions.[11]

Based on the lack of significant progress in reducing alcohol-impaired driving fatalities over the last two decades, it is clear that more can be done to prevent these tragedies. The evidence shows that ignition interlock technology can—and should—be embraced in this battle.

Drugs other than, or in combination with, alcohol also pose an ongoing, increasing threat to highway safety. On March 29, 2017, near Concan, Texas, a pickup truck crossed into the opposite travel lane and collided with a medium-size bus, killing the bus driver and 12 passengers. We determined that the probable cause of the crash was the failure of the pickup truck driver to control his vehicle due to impairment stemming from his use of marijuana in combination with misuse of a prescribed medication.[12] As part of this investigation, we found that law enforcement officers need advanced training to identify the signs and symptoms of impairment as well as additional tools, such as roadside drug screening devices, in order to better detect drivers operating under the influence of drugs. Oral fluid drug screening devices can improve the ability of law enforcement officers to detect drug-impaired drivers. We recommended that NHTSA develop and disseminate best practices, identify model specifications, and create a conforming products list for oral fluid drug screening devices. We also urged NHTSA to evaluate best practices and countermeasures found to be the most effective in reducing fatalities, injuries, and crashes involving drug-impaired drivers and provide additional guidance to the states on drug-impaired driving.[13]

Eliminate Distractions

Drivers and operators in all modes of transportation must keep their hands, eyes, and minds focused on operating their vehicles. According to NHTSA, distraction was

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9, 2002). Montreal, Canada: International Council on Alcohol, Drugs and Traffic Safety. Blomberg, Richard D., Raymond C. Peck, Herbert Moskowitz, Marcelline Burns, and Dary Fiorentino. 2005. *Crash Risk of Alcohol Involved Driving: A Case-Control Study*. Stamford, CT: Dunlap and Associates, Inc.

[7] National Transportation Safety Board, Safety Recommendation H-13-001.

[8] National Transportation Safety Board, Safety Recommendation H-12-048

[9] National Transportation Safety Board, *Reaching Zero: Actions to Eliminate Alcohol-Impaired Driving*, Rpt. No. SR-13/01 (Washington, DC: NTSB, 2013).

[10] A. T. McCartt and others, Washington State's Alcohol Ignition Interlock Law: Effects on Recidivism Among First DUI Offenders, (Arlington, VA: Insurance Institute for Highway Safety, 2012).

[11] A. K. Lund and others, "Contribution of Alcohol-Impaired Driving to Motor Vehicle Crash Deaths in 2005," *8th Ignition Interlock Symposium, Seattle, Washington* (2007).

[12] National Transportation Safety Board, *Pickup Truck Centerline Crossover Collision with Medium-Size Bus on US Highway 83, Concan, Texas, March 29, 2017*, Rpt. No. HAR-18/02 (Washington, DC: NTSB, 2018).

[13] National Transportation Safety Board, Safety Recommendation H-18-056 and H-18-057.

reported to be involved in almost 3,200 highway fatalities, or 8.6 percent of all fatalities in 2017.[14]

On August 5, 2010, in an active work zone in Gray Summit, Missouri, a truck-tractor was struck in the rear by a pickup truck, which was then struck in the rear by a school bus carrying 23 passengers. The school bus was then struck by another school bus carrying 31 passengers. The driver of the pickup and one passenger seated in the rear of the lead school bus were killed. A total of 35 passengers from both buses, the two bus drivers, and the driver of the truck-tractor sustained injuries ranging from minor to serious. We determined that the probable cause of the initial collision was the pickup driver's distraction, likely due to his ongoing text messaging conversation. As a result of this investigation, we recommended that the 50 states and the District of Columbia ban the nonemergency use of portable electronic devices (other than those designed to support the driving task) for all drivers, and to use high-visibility enforcement and targeted communication campaigns.[15] Currently, 16 states ban hand-held use and new laws are being considered in many other states this year. In the seven years since we made these recommendations, we continue to encounter crashes where use of personal electronic devices played a part. Real change will require a three-pronged approach that includes strict laws, proper education, and effective enforcement.

Strengthen Occupant Protection

We have investigated many crashes in which improved occupant protection systems, such as seat belts, child restraints, and other vehicle design features, could have reduced injuries and saved lives. Recent investigations have highlighted the importance of proper use of the safety equipment, effective design, and readily accessible and identifiable evacuation routes on larger passenger vehicles, such as limousines, school buses, motor coaches, and other commercial vehicles.

Seat belts are the best defense against motor vehicle injuries and fatalities because they protect vehicle occupants from the extreme forces experienced during crashes. Unbelted vehicle occupants frequently injure other occupants, and unbelted drivers are less likely than belted drivers to be able to control their vehicles. In addition, seat belts prevent occupant ejections. In 2016, only 1 percent of vehicle occupants using seat belts were ejected, while 29 percent of unbelted vehicle occupants were ejected. Among those occupants completely ejected from their passenger vehicles, 81 percent were killed. NHTSA estimates that seat belts saved the lives of nearly 15,000 motor vehicle occupants age 5 and older in 2016, nationwide. Further, had all passenger vehicle occupants age 5 and older used seat belts in 2016 an additional 2,456 lives could have been saved. From 1975 through 2015, seat belts saved more than 344,000 lives nationwide.

Since 1995, we have recommended that states enact legislation providing for the primary enforcement of seat belt laws, which would allow law enforcement officers to stop a vehicle solely because occupants are not wearing seat belts. Currently, 34 states and the District of Columbia authorize primary enforcement of their seat belt laws, but only 29 states apply the law to all passenger seating positions. In 2015, we recommended that states enact legislation for primary enforcement of a mandatory seat belt use law for all vehicle seating positions equipped with a passenger restraint system.[16] This recommendation covers all motor vehicles, including buses. Primary enforcement of mandatory seat belt use laws remains the best way to raise and maintain high seat belt use rates. States that have enacted primary enforcement seat belt laws have historically experienced increases in seat belt use rates between 5 and 18 percentage points. The increased use is based on the realization by drivers that they may be stopped for violating the seat belt law.[17]

We have a long history of investigating school bus crashes. We have found compartmentalization to be effective in frontal collisions, but have also identified the limitations of passenger seats with no belts or lap belt only restraints. Modern school bus seat technology has overcome previous capacity issues, and the installation and proper use of passenger seat belts, particularly lap/shoulder belts, has made school buses safer in severe side impacts and rollovers. On November 21, 2016, six students died, and more than 20 others were injured in Chattanooga, Tennessee, when a Hamilton County Department of Education school bus struck a util-

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[14] National Highway Traffic Safety Administration, *Traffic Safety Facts, 2017 Fatal Motor Vehicle Crashes: Overview* (Washington, DC: US Department of Transportation, NHTSA, 2017). DOT HS 812 603, p. 5.

[15] National Transportation Safety Board, *Multivehicle Collision, Interstate 44 Eastbound, Gray Summit, Missouri, August 5, 2010*, Rpt. No. HAR-11/03 (Washington, DC: NTSB, 2011).

[16] National Transportation Safety Board, Safety Recommendation H-15-042.

[17] Centers for Disease Control and Prevention, *Primary Enforcement of Seat Belt Laws*, https://www.cdc.gov/motorvehiclesafety/calculator/factsheet/seatbelt.html

ity pole, rolled onto its right side, and collided with a tree. Contributing to the severity of the crash was the lack of passenger lap/shoulder belts on the bus.[18] In a special investigation report we developed following this crash, we recommended that jurisdictions which do not yet require passenger belts in large school buses enact legislation to require that all new large school buses be equipped with passenger lap/shoulder belts for all passenger seating positions.[19] The report also focused on the benefits of electronic stability control (ESC) and automatic emergency braking (AEB) in improving driver and vehicle safety.[20]

We have also made recommendations to NHTSA regarding front, side, and rear underride protections for tractor-trailer and single unit trucks to reduce underride and injuries to passenger vehicle occupants. Specifically, as a result of our safety investigations, we have recommended that NHTSA establish performance standards for front, side, and underride protection systems for single-unit trucks with gross vehicle weight ratings over 10,000 pounds, and to require such systems on all such newly manufactured trucks.[21] Each of these recommendations are currently classified "Open-Unacceptable Response." We have also recommended that NHTSA require side and rear underride systems for newly manufactured trailers with gross vehicle weight ratings over 10,000 pounds.[22] Each of these recommendations is currently classified "Open-Acceptable Response."

Increase Implementation of Collision Avoidance Technologies

More than 90 percent of crashes on United States roadways can be attributed to driver error.[23] For more than two decades, we have been advocating implementation of various technologies to help reduce driver error. Vehicle-based collision avoidance technologies, such as forward collision warning (FCW) and autonomous emergency braking (AEB) systems, are important for avoiding or mitigating the impact of rear-end crashes, which represent nearly half of all two-vehicle crashes. Other driver-assist and collision avoidance technologies, such as adaptive cruise control, advance lighting, blind spot detection, and lane departure warning systems can aid drivers and help reduce the occurrence of other types of crashes. These technologies improve visibility, help maintain safe distance between vehicles, alert drivers to impending hazards and potential crashes, or automatically brake to mitigate the consequence of a crash.

In 2015, we issued a special investigation report regarding the use of forward collision avoidance systems to prevent and mitigate rear-end crashes. The report was based on the examination of current research into the effectiveness of collision avoidance systems and investigations of nine crashes—that resulted in 28 fatalities and injuries to 90 vehicle occupants—involving passenger or commercial vehicles striking the rear of another vehicle. As part of this report, we recommended that passenger and commercial vehicle manufacturers install FCW and AEB as standard equipment, and, in order to incentivize manufacturers, that NHTSA expand the New Car Assessment Program (NCAP) to include ratings for various collision avoidance technologies.[24] Most recently, on the night of January 19, 2016, a motorcoach occupied by a driver and 21 passengers collided with an unmarked crash attenuator and concrete barrier on a highway in San Jose, California, during low visibility conditions. Two passengers were ejected and died, and the driver and 13 passengers were injured. Upon later testing, we determined that had the bus been equipped with a collision avoidance system, the system could have detected the crash attenuator and alerted the driver to the hazard to mitigate or prevent the crash.[25]

Reduce Fatigue-Related Accidents

On March 20, 2016, a passenger car, driven by an 18-year-old and carrying three passengers ranging in age from 17 to 19, crossed a median and collided with a truck-tractor in combination with a semitrailer in Robstown, Texas. The three teen-

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[18] National Transportation Safety Board, *Selective Issues in School Bus Transportation Safety: Crashes in Baltimore, Maryland, and Chattanooga, Tennessee*, Rpt. No. SIR-18/02 (Washington, DC: NTSB, 2018).

[19] National Transportation Safety Board, Safety Recommendations H-18-009 and H-18-010.

[20] The report concluded that the technology could have assisted the driver in maintaining vehicle control and mitigated the severity of the crash by reducing the speed of the vehicle.

[21] National Transportation Safety Board, Safety Recommendations H-10-012, H-10-013, H-13-013, H-13-014, H-13-015, and H-13-016.

[22] National Transportation Safety Board, Safety Recommendations H-14-002 and H-14-004.

[23] National Highway Traffic Safety Administration, Critical Reasons for Crashes Investigated in the National Motor Vehicle Crash Causation Survey. February 2015, (DOT HS 812 115).

[24] National Transportation Safety Board, *The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes*, Rpt. No. SIR-15/01 (Washington, DC: NTSB, 2015).

[25] National Transportation Safety Board, *Motorcoach Collision With Crash Attenuator in Gore Area, US Highway 101*, Rpt. No. HAR-17/01 (Washington, DC: NTSB, 2017).

age passengers were killed. We determined the probable cause of this crash was the car driver's loss of control due to fatigue-induced inattention.[26]

NHTSA reported that, in 2015, more than 72,000 police-reported crashes involved drowsy driving, and those crashes resulted in 41,000 injuries and 846 deaths. However, NHTSA has acknowledged that these numbers likely are underestimated.[27] Other research conducted by the AAA Foundation for Traffic Safety estimated that more than 6,000 people are killed in drowsy-driving related crashes each year.[28]

We have issued more than 200 safety recommendations addressing fatigue-related problems across all modes of transportation. Tackling the problem of fatigue in highway transportation requires a comprehensive approach focused on research, education, training, technology, sleep disorder treatment, regulations, and on- and off-duty scheduling policies and practices. Some of our earliest recommendations called for research to better understand the problem of fatigue in transportation, and over the past three decades, several studies have been done. But research only goes so far; we must now implement what we have learned.

OTHER HIGHWAY SAFETY ISSUES

Pedestrian Safety

Until 2010, the number of pedestrians killed in highway crashes decreased for 35 years, but then reversed course. In 2017, the number of pedestrians who died in traffic crashes was 5,977, an increase of more than 45 percent since 2009.[29] Pedestrian deaths in recent years account for 16 percent (or almost one in six) of all highway fatalities.

In May 2016, we hosted a pedestrian safety forum, bringing together federal and state officials and experts to discuss key aspects of the issue.[30] Additionally, between April and November 2016, we worked with local law enforcement partners to initiate 15 investigations into fatal pedestrian crashes. The investigative work on these crashes illustrated a variety of pedestrian safety issues. This work culminated in the adoption last September of our Special Investigation Report: Pedestrian Safety that included the completed investigations, a review of the literature, and information about promising countermeasures.[31]

The report found that vehicle-based countermeasures, such as improved headlights, vehicle designs that reduce injuries to pedestrians, and collision avoidance systems would improve pedestrian safety. We recommended that NHTSA revise Federal Motor Vehicle Safety Standard 108 to improve vehicle lighting, develop performance test criteria for manufacturers to use in evaluating the extent to which automated pedestrian safety systems will mitigate pedestrian injuries, and incorporate those systems into the New Car Assessment Program.

It also found that effective street designs for pedestrian safety are highly context-dependent and best managed by local interests. However, local officials would benefit from having improved resources, tools and funding support to develop and implement those plans. We recommended that FHWA expand its support of state and local safety projects beyond its current focus cities.

Additionally, the study addressed limitations in the data available to decision makers who are working to reduce pedestrian crashes. Planners need localized pedestrian data to support the decision-making process. However, the most complete set of pedestrian crash data is more than two decades old. Thus, we recommended that NHTSA and the Centers for Disease Control work together to develop a detailed pedestrian crash data set combining highway crash data and injury health data with the goal of producing a national database of pedestrian injuries and fatalities. Further, we urged NHTSA to develop a detailed pedestrian crash data set that represents the current, complete range of crash types and that can be used for local and state analysis. Finally, we recommended that FHWA develop definitions and methods for collecting pedestrian exposure data.

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[26] National Transportation Safety Board, *Passenger Vehicle Median Crossover Crash, US Highway 77, Robstown, Texas, March 20, 2016*, Rpt. No. HAB-16/09 (Washington, DC: NTSB, 2016).

[27] National Highway Traffic Safety Administration, Asleep at the Wheel: A National Compendium of Efforts to Eliminate Drowsy Driving. March 2017, DOT HS 812 352.

[28] AAA Foundation for Traffic Safety, *Prevalence of Motor Vehicle Crashes Involving Drowsy Drivers*, United States, 2009-2013, November 2014.

[29] National Highway Traffic Safety Administration, Traffic Safety Facts: Pedestrians. March 2019. (DOT HS 812 681).

[30] National Transportation Safety Board, *Forum: Pedestrian Safety*, (Washington, DC: National Transportation Safety Board, 2016).

[31] National Transportation Safety Board, *Pedestrian Safety*, SIR-18/03 (Washington, DC: 2018).

Motorcycle Safety

We are concerned about the growing number of motorcyclists killed or injured in motorcycle crashes. In 2016, more than 5,000 motorcyclists were killed nationwide, or about 14 motorcyclists per day. The number of motorcycle crash fatalities has more than doubled over the last two decades. According to NHTSA, motorcycles are the most dangerous form of motor vehicle transportation. Motorcycles represent only 3 percent of the vehicles on our roads, but motorcyclists accounted for 14 percent of all traffic fatalities.[32]

These concerns led us to complete a safety report in October 2018, which assessed select risk factors associated with the causes of motorcycle crashes in the United States and made recommendations for improving motorcycle crash prevention.[33] The data analyzed in this report was provided by FHWA, from its 2016 Motorcycle Crash Causation Study (MCCS). The MCCS represents the most recent data available for studying motorcycle crashes in the United States since the USDOT published its comprehensive Motorcycle Accident Cause Factors and Identification of Countermeasures report in 1981.

We concluded many high-risk traffic situations between motorcycles and other motor vehicles could be prevented if vehicle drivers were better able to detect and anticipate the presence of a motorcycle when entering or crossing a road, making a turn or changing lanes. We also determined stability control systems on motorcycles could reduce single-vehicle crashes involving loss of control which would reduce the prevalence of motorcyclists killed or injured by impacts with fixed roadside objects.

There is a need for enhanced braking and stability control systems on motorcycles. More than a third of the crashes analyzed involved a loss of control that contributed to crash causation. More widespread availability of enhanced braking and stability control systems on motorcycles could improve safety by enhancing the effectiveness of braking, collision avoidance performance, and stability control for both novice and experienced riders.

In 2007, following a 2-day public forum on motorcycle safety at which it heard from a group of panelists representative of all important aspects of motorcycle safety, NTSB recommended that states require all motorcycle riders to wear a helmet compliant with U.S. Federal Motor Vehicle Safety Standard (FMVSS) 218.[34] The use of a compliant safety helmet is the single critical factor in the prevention and reduction of head injury. The effectiveness of appropriately designed motorcycle helmets in preventing and mitigating head injury is unequivocal. NHTSA estimates that helmets are 37 percent effective in preventing fatal injuries to motorcycle riders and 41 percent effective for motorcycle passengers.

Universal helmet laws do increase helmet use. Numerous state studies have shown that helmet law repeals led to reduced usage and increased fatalities. Likewise, enactment of a universal helmet law leads to increased usage and reduced motorcycle deaths. Currently, 19 states, plus the District of Columbia, have a universal helmet law. The remarkable effectiveness of universal helmet laws in preventing death and disability among motorcyclists is a powerful argument for the adoption of such laws, especially in light of the more than 5,200 motorcyclists who were killed on our highways in 2016. For more than 70 years, research has shown that helmets protect motorcyclists and passengers from death and serious injury.

Bicycle Safety

In 2017, almost 800 bicyclists were killed in the United States, representing 2 percent of all traffic deaths. As bicycling becomes more popular as a form of active transportation, especially in urban areas, it is timely and important to ensure and improve roadway safety for bicyclists. We have begun a safety study to identify proven countermeasures that can improve bicyclist safety. In this study, we are exploring improved bicycle infrastructure, advanced vehicle-based technologies, and approaches to increase bicycle helmet use. We anticipate that the study will be published late this year.

Automated Vehicles

The use of automated vehicle (AV) controls and systems is accelerating rapidly in all modes of transportation. We have monitored AV development and we have a long

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[32] National Highway Traffic Safety Administration, Traffic Safety Facts: Motorcycles, 2016 Data, February 2018, DOT HS 812 492.

[33] National Transportation Safety Board, *Select Risk Factors Associated with Causes of Motorcycle Crashes*, SR-18/01 (Washington, DC: 2018).

[34] National Transportation Safety Board, Safety Recommendations H-07-37, H-07-38, and H-07-39

history of calling for systems to assist the operator by providing an increased margin of safety, such as automatic emergency braking. AVs that incorporate systems proven to enhance safety hold enormous potential benefits for safety.

In 2018, the USDOT updated a federal AV policy focused on highly automated vehicles. Late last year, in response to a call for comments, we commented that NHTSA's proposed AV policies are notable for the voluntary approach to manufacturers' safety self-assessments, testing and validation of system safety, and AV reporting requirements. We applauded NHTSA's efforts to work with industry. However, its general and voluntary guidance of emerging and evolutionary technological advancements shows a willingness to let manufacturers and operational entities define safety. The most recent AV guidance (AV 3.0) is only focused on SAE Level 3 and above while not providing guidance for Level 2 vehicles.

The USDOT has an important responsibility to ensure the safe development and deployment of AV technologies at all levels of automation, and this safety should not be voluntary. However, the policy thus far has carried an overarching message of promoting AV development, but a clear connection to minimum safety requirements has not yet been crafted. NHTSA can and should provide this required safety leadership. We urge NHTSA to lead with detailed guidance and specific standards and requirements.

CONCLUSION

Thank you for the opportunity to testify before you today. While my testimony has discussed many safety concerns, these are only some of the safety improvements we have identified as needed to prevent crashes, reduce injuries, and save lives. A list of safety recommendations we have made for highway safety that are reflected in our MWL is included with this testimony. I look forward to responding to your questions.

APPENDIX: 2019–2020 MOST WANTED LIST RECOMMENDATIONS FOR HIGHWAY SAFETY

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-05-020	Open—Acceptable Response	TO THE TEXAS DEPARTMENT OF TRANSPORTATION: Install variable speed limit signs or implement alternate countermeasures at locations where wet weather can produce stopping distances that exceed the available sight distance.
H-12-020	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop performance standards for advanced speed-limiting technology, such as variable speed limiters and intelligent speed adaptation devices, for heavy vehicles, including trucks, buses, and motorcoaches.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-12-021	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: After establishing performance standards for advanced speed-limiting technology for heavy commercial vehicles, require that all newly manufactured heavy vehicles be equipped with such devices.
H-17-018	Open—Acceptable Response	TO THE UNITED STATES DEPARTMENT OF TRANSPORTATION: Complete the actions called for in your 2014 Speed Management Program Plan, and periodically publish status reports on the progress you have made.
H-17-019	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Identify speeding-related performance measures to be used by local law enforcement agencies, including, but not limited to, the numbers and locations of speeding-related crashes of different injury severity levels, speeding citations, and warnings, and establish a consistent method for evaluating data-driven, high-visibility enforcement programs to reduce speeding. Disseminate the performance measures and evaluation method to local law enforcement agencies.
H-17-020	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Identify best practices for communicating with law enforcement officers and the public about the effectiveness of data-driven, high-visibility enforcement programs to reduce speeding, and disseminate the best practices to local law enforcement agencies.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-17-021	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Governors Highway Safety Association, the International Association of Chiefs of Police, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.
H-17-022	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Federal Highway Administration to update the Speed Enforcement Camera Systems Operational Guidelines to reflect the latest automated speed enforcement (ASE) technologies and operating practices, and promote the updated guidelines among ASE program administrators.
H-17-023	Open—Acceptable Alternate Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Federal Highway Administration to assess the effectiveness of point-to-point speed enforcement in the United States and, based on the results of that assessment, update the Speed Enforcement Camera Systems Operational Guidelines, as appropriate.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-17-024	Open—Acceptable Alternate Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Incentivize passenger vehicle manufacturers and consumers to adopt intelligent speed adaptation (ISA) systems by, for example, including ISA in the New Car Assessment Program.
H-17-025	Open—Acceptable Alternate Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Collaborate with other traffic safety stakeholders to develop and implement an ongoing program to increase public awareness of speeding as a national traffic safety issue. The program should include, but not be limited to, initiating an annual enforcement mobilization directed at speeding drivers.
H-17-026	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Establish a program to incentivize state and local speed management activities.
H-17-027	Open—Acceptable Response	TO THE FEDERAL HIGHWAY ADMINISTRATION: Revise Section 2B.13 of the Manual on Uniform Traffic Control Devices so that the factors currently listed as optional for all engineering studies are required, require that an expert system such as USLIMITS2 be used as a validation tool, and remove the guidance that speed limits in speed zones should be within 5 mph of the 85th percentile speed.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-17-028	Open—Acceptable Response	TO THE FEDERAL HIGHWAY ADMINISTRATION: Revise Section 2B.13 of the Manual on Uniform Traffic Control Devices to, at a minimum, incorporate the safe system approach for urban roads to strengthen protection for vulnerable road users.
H-17-029	Open—Acceptable Response	TO THE FEDERAL HIGHWAY ADMINISTRATION: Work with the National Highway Traffic Safety Administration to update the Speed Enforcement Camera Systems Operational Guidelines to reflect the latest automated speed enforcement (ASE) technologies and operating practices, and promote the updated guidelines among ASE program administrators.
H-17-030	Open—Acceptable Response	TO THE FEDERAL HIGHWAY ADMINISTRATION: Work with the National Highway Traffic Safety Administration to assess the effectiveness of point-to-point speed enforcement in the United States and, based on the results of that assessment, update the Speed Enforcement Camera Systems Operational Guidelines, as appropriate.
H-17-031	Open—Await Response	TO THE SEVEN STATES PROHIBITING AUTOMATED SPEED ENFORCEMENT (MAINE, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, TEXAS, WEST VIRGINIA, AND WISCONSIN): Amend current laws to authorize state and local agencies to use automated speed enforcement.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-17-032	Open—Await Response	TO THE TWENTY EIGHT STATES WITHOUT AUTOMATED SPEED ENFORCEMENT LAWS (ALABAMA, ALASKA, CALIFORNIA, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, HAWAII, IDAHO, INDIANA, IOWA, KANSAS, KENTUCKY, MASSACHUSETTS, MICHIGAN, MINNESOTA, MISSOURI, MONTANA, NEBRASKA, NEW MEXICO, NORTH CAROLINA, NORTH DAKOTA, OKLAHOMA, PENNSYLVANIA, SOUTH DAKOTA, VERMONT, VIRGINIA, AND WYOMING): Authorize state and local agencies to use automated speed enforcement.
H-17-033	Open—Await Response	TO THE 15 STATES WITH AUTOMATED SPEED ENFORCEMENT RESTRICTIONS (ARIZONA, ARKANSAS, COLORADO, ILLINOIS, LOUISIANA, MARYLAND, NEVADA, NEW YORK, OHIO, OREGON, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, UTAH, AND WASHINGTON): Amend current laws to remove operational and location restrictions on the use of automated speed enforcement, except where such restrictions are necessary to align with best practices.

IMPLEMENT A COMPREHENSIVE STRATEGY TO REDUCE SPEEDING-RELATED CRASHES		
Recommendation #	Overall Status	Subject
H-17-034	Open—Acceptable Response	TO THE GOVERNORS HIGHWAY SAFETY ASSOCIATION: Work with the National Highway Traffic Safety Administration, the International Association of Chiefs of Police, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.
H-17-035	Open—Await Response	TO THE INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE: Work with the National Highway Traffic Safety Administration, the Governors Highway Safety Association, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.
H-17-036	Open—Acceptable Response	TO THE NATIONAL SHERIFFS' ASSOCIATION: Work with the National Highway Traffic Safety Administration, the Governors Highway Safety Association, and the International Association of Chiefs of Police to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-12-034	Open—Await Response	TO THE 45 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA, WHICH HAVE LOW REPORTING RATES FOR BAC TESTING: Increase your collection, documentation, and reporting of blood alcohol concentration (BAC) test results by taking the following actions, as needed, to improve testing and reporting rates: (1) enact legislation, (2)issue regulations, and (3) improve procedures used by law enforcement agencies or testing facilities.
H-12-035	Open—Await Response	TO THE 45 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA, WHICH HAVE LOW REPORTING RATES FOR BAC TESTING: Once the National Highway Traffic Safety Administration has developed the blood alcohol concentration (BAC) testing and reporting guidelines recommended in Safety Recommendation H-12-32, incorporate the guidelines into a statewide action plan to achieve BAC reporting rates of at least 80 percent of fatally injured drivers and at least 60 percent of drivers who survived fatal crashes.
H-12-036	Open—Await Response	TO THE 50 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA: Require law enforcement agencies to collect place of last drink (POLD) data as part of any arrest or accident investigation involving an alcohol-impaired driver.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-12-037	Open—Await Response	TO THE INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE AND THE NATIONAL SHERIFFS' ASSOCIATION: Inform your members of the value of collecting place of last drink (POLD) data as part of any arrest or accident investigation involving an alcohol-impaired driver.
H-12-043	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Automotive Coalition for Traffic Safety, Inc., to accelerate widespread implementation of Driver Alcohol Detection System for Safety (DADSS) technology by (1) defining usability testing that will guide driver interface design and (2) implementing a communication program that will direct driver education and promote public acceptance.
H-12-045	Open—Await Response	TO 33 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA: Enact laws to require the use of alcohol ignition interlock devices for all individuals convicted of driving while intoxicated (DWI) offenses.
H-12-048	Open—Acceptable Response	TO THE AUTOMOTIVE COALITION FOR TRAFFIC SAFETY: Work with the National Highway Traffic Safety Administration to accelerate widespread implementation of Driver Alcohol Detection System for Safety (DADSS) technology by (1) defining usability testing that will guide driver interface design and (2) implementing a communication program that will direct driver education and promote public acceptance.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-13-001	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Seek legislative authority to award incentive grants for states to establish a per se blood alcohol concentration (BAC) limit of 0.05 or lower for all drivers who are not already required to adhere to lower BAC limits.
H-13-005	Open—Await Response	TO THE 50 U.S. STATES AND THE COMMONWEALTH OF PUERTO RICO AND THE DISTRICT OF COLUMBIA: Establish a per se blood alcohol concentration (BAC) limit of 0.05 or lower for all drivers who are not already required to adhere to lower BAC limits.
H-13-006	Open—Await Response	TO THE 50 STATES, THE COMMONWEALTH OF PUERTO RICO AND THE DISTRICT OF COLUMBIA: Include in your impaired driving prevention plan or highway safety plan provisions for conducting high-visibility enforcement of impaired driving laws using passive alcohol-sensing technology during law enforcement contacts, such as routine traffic stops, saturation patrols, sobriety checkpoints, and accident scene responses.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-13-007	Open—Await Response	TO THE 50 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA: Include in your impaired driving prevention plan or highway safety plan elements to target repeat offenders and reduce driving while intoxicated (DWI) recidivism; such elements should include measures to improve compliance with alcohol ignition interlock requirements; the plan should also provide a mechanism for regularly assessing the success of these efforts. (H-13-07) [This recommendation supersedes Safety Recommendation H-00-26.]
H-13-008	Open—Await Response	TO THE 50 STATES, THE COMMONWEALTH OF PUERTO RICO, AND THE DISTRICT OF COLUMBIA: Take the following steps to move toward zero deaths from impaired driving: (1) set specific and measurable targets for reducing impaired driving fatalities and injuries, (2) list these targets in your impaired driving prevention plan or highway safety plan, and (3) provide a mechanism for regularly assessing the success of implemented countermeasures and determining whether the targets have been met. (H-13-08)

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-13-009	Open—Await Response	TO THE 41 STATES THAT HAVE ADMINISTRATIVE LICENSE SUSPENSION OR REVOCATION LAWS AND THE DISTRICT OF COLUMBIA: Incorporate into your administrative license suspension or revocation laws a requirement that drivers arrested for driving while intoxicated (DWI) use an alcohol ignition interlock on their vehicle for a period of time before obtaining full license reinstatement. (H-13-09)
H-13-010	Open—Await Response	TO THE 10 STATES THAT DO NOT HAVE ADMINISTRATIVE LICENSE SUSPENSION OR REVOCATION LAWS AND THE COMMONWEALTH OF PUERTO RICO: Establish administrative license suspension or revocation laws that require drivers arrested for driving while intoxicated (DWI) to use an alcohol ignition interlock on their vehicle for a period of time before obtaining full license reinstatement. (H-13-10)
H-15-038	Open—Acceptable Alternate Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Determine the prevalence of commercial motor vehicle driver use of impairing substances, particularly synthetic cannabinoids, and develop a plan to reduce the use of such substances.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-15-039	Open—Unacceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Work with motor carrier industry stakeholders to develop a plan to aid motor carriers in addressing commercial motor vehicle driver use of impairing substances, particularly those not covered under current drug-testing regulations such as by promoting best practices by carriers, expanding impairment detection training and authority, and developing performance-based methods of evaluation.
H-15-043	Open—Await Response	TO AMERICAN BUS ASSOCIATION, AMERICAN TRUCKING ASSOCIATIONS, COMMERCIAL VEHICLE SAFETY ALLIANCE, OWNER-OPERATOR INDEPENDENT DRIVERS ASSOCIATION, UNITED MOTORCOACH ASSOCIATION: Inform your members about the dangers of driver use of synthetic drugs and encourage them to take steps to prevent drivers from using these substances.
H-16-008	Open—Unacceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Disseminate information to motor carriers about using hair testing as a method of detecting the use of controlled substances, under the appropriate circumstances.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-18-035	Open—Response Received	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Examine the influence of alcohol and other drug use on motorcycle rider crash risk compared to that of passenger vehicle drivers, and develop guidelines to assist states in implementing evidence-based strategies and countermeasures to more effectively address substance-impaired motorcycle rider crashes.
H-18-056	Open—Await Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop and disseminate best practices, identify model specifications, and create a conforming products list for oral fluid drug screening devices.
H-18-057	Open—Await Response	TO THE NATIONAL TRAFFIC SAFETY ADMINISTRATION: Evaluate best practices and countermeasures found to be the most effective in reducing fatalities, injuries, and crashes involving drug-impaired drivers and provide additional guidance to the states on drug-impaired driving in Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices.
H-18-060	Open—Await Response	TO THE STATE OF TEXAS: Conduct an executive-level review of your impaired driving program and implement data-driven strategies that result in a downward trend in the number of fatalities, injuries, and crashes involving alcohol- and other drug-impaired drivers.

END ALCOHOL AND OTHER DRUG IMPAIRMENT		
Recommendation #	Overall Status	Subject
H-18-061	Open—Await Response	TO THE TEXAS DEPARTMENT OF TRANSPORTATION: Promote the importance of attending drug-impaired driving enforcement training and increase training access to meet the demands of local and state law enforcement.

ELIMINATE DISTRACTIONS		
Recommendation #	Overall Status	Subject
H-03-009	Open—Acceptable Response	TO 34 STATES: Add driver distraction codes, including codes for interactive wireless communication device use, to your traffic accident investigation forms.
H-06-029	Open—Await Response	TO 6 MOTORCOACH INDUSTRY, PUBLIC BUS, AND SCHOOL BUS ASSOCIATIONS AND 3 UNIONS: Develop formal policies prohibiting cellular telephone use by commercial driver's license holders with a passenger-carrying or school bus endorsement, while driving under the authority of that endorsement, except in emergencies.
H-11-039	Open—Await Response	TO THE 50 STATES AND THE DISTRICT OF COLUMBIA: (1) Ban the nonemergency use of portable electronic devices (other than those designed to support the driving task) for all drivers; (2) use the National Highway Traffic Safety Administration model of high visibility enforcement to support these bans; and (3) implement targeted communication campaigns to inform motorists of the new law and enforcement, and to warn them of the dangers associated with the nonemergency use of portable electronic devices while driving.

ELIMINATE DISTRACTIONS		
Recommendation #	Overall Status	Subject
H-11-047	Open—Await Response	TO CTIA-THE WIRELESS ASSOCIATION AND THE CONSUMER ELECTRONICS ASSOCIATION: Encourage the development of technology features that disable the functions of portable electronic devices within reach of the driver when a vehicle is in motion; these technology features should include the ability to permit emergency use of the device while the vehicle is in motion and have the capability of identifying occupant seating position so as not to interfere with use of the device by passengers.
H-14-013	Open—Await Response	TO THE FIFTY STATES, THE DISTRICT OF COLUMBIA, AND THE COMMONWEALTH OF PUERTO RICO: Ban the nonemergency use by pilot/escort vehicle drivers of portable electronic devices (other than those designed to support the pilot/escort vehicle driving task), except to communicate hazard-related information to the escorted vehicle.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-11-036	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Modify Federal Motor Vehicle Safety Standard 217 to require that all emergency exits on school buses be easily opened and remain open during an emergency evacuation.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-11-038	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: To cover the interim period until Federal Motor Vehicle Safety Standard 217 is modified as specified in Safety Recommendations H-11-36 and -37, provide the states with guidance on how to minimize potential evacuation delays that could be caused by protruding latch mechanisms on emergency exit windows and by exit windows that require additional manual assistance to remain open during egress.
H-11-045	Open—Response Received	TO THE STATE OF MISSOURI: Revise your bus evacuation regulations to require that pupils traveling to an activity or on a field trip in a school bus or a school-chartered bus be instructed in safe riding practices and on the location and operation of emergency exits prior to starting the trip.
H-12-022	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Evaluate the effects of seat spacing and armrests as factors for potential occupant injury, and if safer spacing or armrest configurations are identified, develop and implement appropriate guidelines.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-13-032	Open—Await Response	TO THE STATES OF CALIFORNIA, FLORIDA, LOUISIANA, NEW JERSEY, NEW YORK, AND TEXAS: Develop: (1) a handout for your school districts to distribute annually to students and parents about the importance of the proper use of all types of passenger seat belts on school buses, including the potential harm of not wearing a seat belt or wearing one but not adjusting it properly; and (2) training procedures for schools to follow during the twice yearly emergency drills to show students how to wear their seat belts properly.
H-13-033	Open—Await Response	TO THE STATES OF CALIFORNIA, FLORIDA, LOUISIANA, NEW JERSEY, NEW YORK, AND TEXAS: Upon publication of the National School Transportation Specifications and Procedures document, revise the handout and training procedures developed in Safety Recommendation H-13-32 to align with the national procedures as appropriate.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-13-035	Open—Acceptable Response	TO THE NATIONAL ASSOCIATION OF STATE DIRECTORS OF PUPIL TRANSPORTATION SERVICES, NATIONAL ASSOCIATION FOR PUPIL TRANSPORTATION, NATIONAL SCHOOL TRANSPORTATION ASSOCIATION, SCHOOL BUS MANUFACTURERS TECHNICAL COUNCIL, AND NATIONAL SAFETY COUNCIL, SCHOOL TRANSPORTATION SECTION: Develop guidelines and include them in the next update of the National School Transportation Specifications and Procedures to assist schools in training bus drivers, students, and parents on the importance and proper use of school bus seat belts, including manual lap belts, adjustable lap and shoulder belts, and flexible seating systems.
H-13-036	Open—Acceptable Alternate Response	TO THE NATIONAL ASSOCIATION OF STATE DIRECTORS OF PUPIL TRANSPORTATION SERVICES, NATIONAL ASSOCIATION FOR PUPIL TRANSPORTATION, AND NATIONAL SCHOOL TRANSPORTATION ASSOCIATION: Provide your members with educational materials on lap and shoulder belts providing the highest level of protection for school bus passengers, and advise states or school districts to consider this added safety benefit when purchasing seat belt-equipped school buses.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-13-037	Open—Acceptable Alternate Response	TO THE SCHOOL BUS MANUFACTURERS TECHNICAL COUNCIL: Develop a recommended practice for establishing and safeguarding the structural integrity of the entire school bus seating and restraint system, including the seat pan attachment to the seat frame, in severe crashes—in particular, those involving lateral impacts with vehicles of large mass.
H-15-010	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop requirements addressing the minimum aisle width for safe evacuation from all buses, including those with moveable seats.
H-15-020	Open—Response Received	TO THE NATIONAL LIMOUSINE ASSOCIATION: Develop and distribute guidelines to your member operators urging them, during pretrip safety briefings, to (1) direct passengers to use seat belts where required by law and strongly encourage passengers to use seat belts where not required by law, and (2) encourage passengers to use properly adjusted head restraints.
H-15-042	Open—Await Response	TO THE FIFTY STATES, DISTRICT OF COLUMBIA, AND PUERTO RICO: Enact legislation that provides for primary enforcement of a mandatory seat belt use law for all vehicle seating positions equipped with a passenger restraint system. (Safety Recommendation H-15-042 supersedes Safety Recommendation H-97-2)

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-17-001	Open—Await Response	TO MOTOR COACH INDUSTRIES INTERNATIONAL, INC.: Evaluate and, if appropriate, modify the driver and passenger floor structure design on new motorcoaches to prevent driver seat separation during crashes.
H-17-008	Open—Await Response	TO THE AMERICAN BUS ASSOCIATION AND THE UNITED MOTORCOACH ASSOCIATION: Encourage member passenger-carrying companies to (1) establish procedures to ensure that the seat belts on all buses are regularly inspected to maintain their functionality and accessibility, and (2) provide pretrip safety briefings emphasizing the benefits of seat belt use.
H-17-012	Open—Acceptable Response	TO GREYHOUND LINES, INC.: Provide pretrip safety briefings at all stops prior to departure when taking on new passengers, which describe the use of the emergency exits and the benefits of wearing seat belts.
H-17-061	Open—Acceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Work with SAE International and the National Highway Traffic Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit post collision fuel spillage, and develop and promulgate an updated standard.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-17-062	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with SAE International and the Federal Motor Carrier Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit post collision fuel spillage, and develop and promulgate an updated standard.
H-17-065	Open—Await Response	TO SAE INTERNATIONAL: Work with the Federal Motor Carrier Safety Administration and the National Highway Traffic Safety Administration to improve truck-tractor side-mounted fuel tank crashworthiness to prevent catastrophic tank ruptures and limit post collision fuel spillage, and develop and promulgate an updated standard.
H-18-009	Open—Await Response	TO THE STATES OF FLORIDA, LOUISIANA, NEW JERSEY, AND NEW YORK: Amend your statutes to upgrade the seat belt requirement from lap belts to lap/shoulder belts for all passenger seating positions in new large school buses in accordance with Federal Motor Vehicle Safety Standard 222.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-18-010	Open—Await Response	TO THE STATES OF ALABAMA, ALASKA, ARIZONA, COLORADO, CONNECTICUT, DELAWARE, GEORGIA, HAWAII, IDAHO, ILLINOIS, INDIANA, IOWA, KANSAS, MAINE, MARYLAND, MICHIGAN, MINNESOTA, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, NEW HAMPSHIRE, NEW MEXICO, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKLAHOMA, OREGON, RHODE ISLAND, SOUTH CAROLINA, SOUTH DAKOTA, TENNESSEE, UTAH, VERMONT, WASHINGTON, WEST VIRGINIA, WISCONSIN, AND WYOMING; THE COMMONWEALTHS OF KENTUCKY, MASSACHUSETTS, PENNSYLVANIA, AND VIRGINIA; THE DISTRICT OF COLUMBIA; AND THE TERRITORY OF PUERTO RICO: Enact legislation to require that all new large school buses be equipped with passenger lap/shoulder belts for all passenger seating positions in accordance with Federal Motor Vehicle Safety Standard 222.
H-18-058	Open—Await Response	TO THE NATIONAL TRAFFICS SAFETY ADMINISTRATION: Amend Federal Motor Vehicle Safety Standard 210 to increase the minimum anchorage spacing for individual seat belt assemblies, taking into account the dynamic testing of seat belt designs, seat belt fit, and vehicle configuration.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-18-059	Open—Await Response	TO THE NATIONAL TRAFFIC SAFETY ADMINISTRATION: Amend Federal Motor Vehicle Safety Standard 208 to require lap/shoulder belts for each passenger seating position on all new buses with a gross vehicle weight rating of more than 10,000 pounds but not greater than 26,000 pounds.
H-18-062	Open—Await Response	TO MEDIUM-SIZE BUS MANUFACTURERS ARBOC SPECIALTY VEHICLES, LLC; COACH & EQUIPMENT MANUFACTURING CORPORATION; REV GROUP, INC.; DIAMOND COACH CORPORATION; FOREST RIVER, INC.; GIRARDIN BLUE BIRD; SVO GROUP, INC.; AND THOMAS BUILT BUSES: Install lap/shoulder belts in all seating positions as standard, rather than optional, equipment in all newly manufactured medium-size buses.
H-18-063	Open—Response Received	TO THE SEAT MANUFACTURERS FREEDMAN SEATING COMPANY AND HSM TRANSPORTATION SOLUTIONS: Supply seating systems equipped with lap/shoulder belts as standard, rather than optional, equipment for medium-size buses.
H-96-014	Open—Acceptable Response	TO THE 50 STATES, THE 5 US TERRITORIES, AND THE DISTRICT OF COLUMBIA: Review existing laws and enact legislation, if needed, that would: ensure that children up to 8 years old are required by the state's mandatory child restraint use law to use child restraint systems and booster seats.

STRENGTHEN OCCUPANT PROTECTION		
Recommendation #	Overall Status	Subject
H-99-009	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Revise the Federal Motor Vehicle Safety Standard 217, "Bus Window Retention and Release," to require that other than floor-level emergency exits can be easily opened and remain open during an emergency evacuation when a motorcoach is upright or at unusual attitudes.
H-99-049	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Expand your research on current advanced glazing to include its applicability to motorcoach occupant ejection prevention, and revise window glazing requirements for newly manufactured motorcoaches based on the results of this research.
H-99-050	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: In 2 years, develop performance standards for motorcoach roof strength that provide maximum survival space for all seating positions and that take into account current typical motorcoach window dimensions.
H-99-051	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Once performance standards have been developed for motorcoach roof strength, require newly manufactured motorcoaches to meet those standards.

INCREASE IMPLEMENTATION OF COLLISION AVOIDANCE SYSTEMS IN ALL NEW HIGHWAY VEHICLES		
Recommendation #	Overall Status	Subject
H-15-004	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop and apply testing protocols to assess the performance of forward collision avoidance systems in passenger vehicles at various velocities, including high speed and high velocity-differential.
H-15-005	Open—Unacceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Complete, as soon as possible, the development and application of performance standards and protocols for the assessment of forward collision avoidance systems in commercial vehicles. (Safety Recommendation H-15-005 supersedes Safety Recommendation H-01-006)
H-15-006	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Expand the New Car Assessment Program 5-star rating system to include a scale that rates the performance of forward collision avoidance systems.
H-15-007	Open—Acceptable Response	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Once the rating scale, described in Safety Recommendation H-15-6, is established, include the ratings of forward collision avoidance systems on the vehicle Monroney labels.
H-15-008	Open—Acceptable Response	TO PASSENGER VEHICLE, TRUCK-TRACTOR, MOTORCOACH, AND SINGLE-UNIT TRUCK MANUFACTURERS: Install forward collision avoidance systems that include, at a minimum, a forward collision warning component, as standard equipment on all new vehicles.

INCREASE IMPLEMENTATION OF COLLISION AVOIDANCE SYSTEMS IN ALL NEW HIGHWAY VEHICLES		
Recommendation #	Overall Status	Subject
H-15-009	Open—Acceptable Response	TO PASSENGER VEHICLE, TRUCK-TRACTOR, MOTOR-COACH, AND SINGLE-UNIT TRUCK MANUFACTURERS: Once the National Highway Traffic Safety Administration publishes performance standards for autonomous emergency braking, install systems meeting those standards on all new vehicles.
H-18-008	Open—Response Received	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Require all new school buses to be equipped with collision avoidance systems and automatic emergency braking technologies.
H-18-019	Open—Response Received	TO BLUE BIRD CORPORATION, COLLINS INDUSTRIES, INC., IC BUS, STARCRAFT BUS, THOMAS BUILT BUSES, INC., TRANS TECH, AND VAN-CON, INC.: Install a collision avoidance system with automatic emergency braking as standard equipment on all newly manufactured school buses.
H-18-029	Open—Response Received	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Incorporate motorcycles in the development of performance standards for passenger vehicle crash warning and prevention systems.
H-18-043	Open—Response Received	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Incorporate pedestrian safety systems, including pedestrian collision avoidance systems and other more-passive safety systems, into the New Car Assessment Program.

INCREASE IMPLEMENTATION OF COLLISION AVOIDANCE SYSTEMS IN ALL NEW HIGHWAY VEHICLES		
Recommendation #	Overall Status	Subject
H-18-044	Open—Response Received	TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop a detailed pedestrian crash data set that represents the current, complete range of crash types and that can be used for local and state analysis and to model and simulate pedestrian collision avoidance systems.

REDUCE FATIGUE-RELATED ACCIDENTS		
Recommendation #	Overall Status	Subject
H-09-009	Open—Await Response	TO THE AMERICAN BUS ASSOCIATION AND THE UNITED MOTORCOACH ASSOCIATION: Inform your members through Web sites, newsletters, and conferences of the circumstances of the Mexican Hat, Utah, accident. The prepared information should encourage charter operators to develop written contingency plans for each charter to ensure that trip planning is in place in the event of driver fatigue, incapacitation, or illness or in the event of trip delays necessitating replacement drivers to avoid hours-of-service violations and inform drivers of their trip's contingency plans. The prepared information should also provide information about the risks of operating in rural areas without wireless telephone coverage and advise members to carry mobile cellular amplifiers or satellite-based devices to communicate emergency events.

REDUCE FATIGUE-RELATED ACCIDENTS		
Recommendation #	Overall Status	Subject
H-09-010	Open—Acceptable Response	TO ARROW STAGE LINES: Develop written contingency plans for each charter to ensure that trip planning is in place in the event of driver fatigue, incapacitation, or illness or in the event of trip delays necessitating replacement drivers to avoid hours-of-service violations and inform drivers of their trip's contingency plans.
H-12-029	Open—Unacceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Establish an ongoing program to monitor, evaluate, report on, and continuously improve fatigue management programs implemented by motor carriers to identify, mitigate, and continuously reduce fatigue-related risks for drivers. (This safety recommendation supersedes Safety Recommendation H-08-14.)
H-12-030	Open—Unacceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Incorporate scientifically based fatigue mitigation strategies into the hours-of-service regulations for passenger-carrying drivers who operate during the nighttime window of circadian low.
H-15-022	Open—Acceptable Response	TO WAL-MART STORES, INC. (ORIGINALLY ISSUED TO WALMART TRANSPORTATION LLC): Develop and implement a fatigue management program based on the North American Fatigue Management Program guidelines.

REDUCE FATIGUE-RELATED ACCIDENTS		
Recommendation #	Overall Status	Subject
H-17-056	Open—Response Received	TO THE UNITED STATES DEPARTMENT OF LABOR: Develop and disseminate guidelines and training material for agricultural employers and farm labor contractors on the dangers of driving while tired and on strategies for managing driver fatigue.

REQUIRE MEDICAL FITNESS—SCREEN FOR AND TREAT OBSTRUCTIVE SLEEP APNEA		
Recommendation #	Overall Status	Subject
H-09-015	Open—Unacceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Implement a program to identify commercial drivers at high risk for obstructive sleep apnea and require that those drivers provide evidence through the medical certification process of having been appropriately evaluated and, if treatment is needed, effectively treated for that disorder before being granted unrestricted medical certification.
H-09-016	Open—Acceptable Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Develop and disseminate guidance for commercial drivers, employers, and physicians regarding the identification and treatment of individuals at high risk of obstructive sleep apnea (OSA), emphasizing that drivers who have OSA that is effectively treated are routinely approved for continued medical certification.

REQUIRE MEDICAL FITNESS—SCREEN FOR AND TREAT OBSTRUCTIVE SLEEP APNEA		
Recommendation #	Overall Status	Subject
H-17-049	Open—Acceptable Alternate Response	TO THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION: Make the 2016 Medical Review Board/Motor Carrier Safety Advisory Committee recommendations on screening for obstructive sleep apnea (OSA) easily accessible to certified medical examiners, and instruct the examiners to use the recommendations as guidance when evaluating commercial drivers for OSA risk.

Ms. NORTON. Thank you for your testimony.

Vice Mayor Jones of Neptune Beach, Florida, on behalf of Transportation for America.

Mr. JONES. Good morning, Chairman DeFazio, Ranking Members, and distinguished members of the committee.

Thank you for the opportunity to testify on behalf of Transportation for America this morning.

My name is Fred Jones, and in addition to representing the citizens of Neptune Beach as their vice mayor, I also work as a professional transportation planner for Michael Baker International and also serve on the advisory board for the National Complete Streets Coalition.

Complete Streets, for those that are unfamiliar with the term, is a street that is designed to be safe and convenient for all users, be they drivers, transit users, pedestrians, and cyclists.

Unfortunately, my community is part of the six most dangerous metropolitan areas in the country in which to walk and bike. In fact, the State of Florida is the most dangerous State in the Union for cyclists and pedestrians, and these safety trends are going in the wrong direction.

If you, in fact, were to visit and join my family on the streets that I walk and bike on a daily basis, I think you would agree that they are not dangerous by accident, but dangerous by fundamental design.

Part of the problem is that for the better part of the half century we have been focused on building bigger, faster roadways with wider lanes and development that is set back from the road to make our drivers more comfortable as they move quickly through our communities, all at the cost of human lives.

In fact, roadways are often designed for travel speeds that are 10 to 15 miles an hour faster than what the posted speed limit is, and we do know that drivers will follow this design cue.

We know that speed leads to more deadly crashes, especially for the children that are walking to school or a bus patron that is

walking to their stop on their way to work, who lacked the protection of thousands of pounds of steel and aluminum.

What is particularly frustrating is our acceptance of this level of danger and the loss of human life. We have a cure, but we just do not want to use it.

I do want to preface that there are many States and communities across the country, and namely, the Florida Department of Transportation, that should be applauded for adopting robust Complete Street policies and initiatives to change these unsafe paradigms.

However, what we are seeing is a major disconnect between what we think are feel-good policy frameworks and the actual implementation of safe roadways.

As an illustration, there was a State road in my area where the district safety office had recommended actually removing a lane to reduce the crossing distance for pedestrians and make it safer.

Well, what ended up happening, there was a little bit of community pushback, and so the agency conceded by growing the forecasted traffic rates and essentially killed what should have been a legacy project, and all in the nature of future traffic congestion.

And even in instances when the traffic volumes are low enough to warrant building a Complete Street, we will often hear excuses that the road is a parallel reliever to an interstate or it is an evacuation route or, in fact, we are too far along in the design process to do anything different.

Yet there are many roadways in our community where you could probably roll a bowling ball down the road on any given day and not hit anything.

Nationally, Congress communicates its Federal priorities through spending, and while we do spend $40 billion in Federal funds annually in the highway program, less than $1 billion of this is often reserved for pedestrian and cyclist infrastructure, and only $2.3 billion is dedicated to safety.

If you visit this committee's website, the issue profiled is the cost of congestion, and I get it. Congestion is very inconvenient and annoying. But the cost of congestion is roughly equivalent to the cost of the 37,000 lives that were lost on our roadways in 2017, a cost of over $356 billion, and that does not include the cost of injuries, which we know number in the millions. Yet safety spending represents a mere fraction of the money that is spent on the congestion.

In 2012, Congress created a less than optimal performance management system that required MPOs and DOTs to set these performance safety targets, including for cyclists and pedestrians.

Yet in 2017, 18 States have set performance targets forecasting more deaths for cyclists and pedestrians on the roadways. Simply put, we do know how to do better.

In Orlando, for example, the Florida Department of Transportation redesigned Edgewater Drive by taking a travel lane and reconfiguring the road to make it more safe for pedestrians and cyclists.

What were the results? Total collisions dropped 40 percent. Injury rates declined 71 percent. Pedestrian counts increased 23 percent. Cycling increased by 30 percent, and traffic actually dropped 12 percent before returning to original levels.

Most significantly, the corridor gained 77 new businesses and 560 jobs, while the value of property along this corridor rose 80 percent.

Unfortunately, these projects more often than not are the exception. Engineers often have to get special approval to implement them in a process that can take more than 1 year. So why would we not want this to be the rule?

As we bring up reauthorization, we are strongly urging Congress to lead a discussion about what it is that we plan to achieve, not just how much we are going to spend. We need to set specific measurable goals, particularly in terms of safety and livability benefits and hold decisionmakers accountable for reaching them.

Above all, this program needs to be oriented to create a safer transportation system for all users.

Thank you again for your leadership and inviting me to testify today, and I look forward to working with you in the next upcoming reauthorization bill.

[Mr. Jones' prepared statement follows:]

Prepared Statement of Hon. Fred Jones, Vice Mayor, City of Neptune Beach, Florida, on behalf of Transportation for America

Good morning Chairman, Ranking Member and distinguished members of the committee. Thank you for the opportunity to testify today on behalf of Transportation for America, a national nonprofit dedicated to creating a transportation system that moves people, safely and affordably, to jobs and services by all means of travel with minimal impact to the community and the environment.

My name is Fred Jones. I represent the citizens of Neptune Beach, Florida as Vice-Mayor on the City Council, and I also work as a transportation planner for Michael Baker International. Additionally, I serve on the advisory board of the National Complete Streets Coalition. Neptune Beach is a small, quiet coastal community nestled on the northeast coast of Florida between Atlantic Beach and Jacksonville Beach. While there are many wonderful things about my community—the beaches, our vibrant town center, the high quality of life, to name a few—we, unfortunately, are also part of the sixth most dangerous metropolitan area in our country in which to walk or bike. The state of Florida, which is the most dangerous state in the Union for bicyclists and pedestrians, is also home to the #1, #2, #3, #4, #5, #6, #8 and #9 most dangerous cities. And these numbers are going in the wrong direction, in Florida and across the nation.

Over the past 10 years, 5433 people in the state of Florida, including 419 people in the Jacksonville, were struck and killed trying to walk or bike to work, school, running errands or going to a friend's house. These are the streets that I walk, bike and drive on. It is important that we recognize that these roadways are not dangerous by accident: they are dangerous by design.[1]

Some of the problem is that many people do not understand how small changes in roadway design and development patterns affect safety. Wider lanes and broader streets with buildings set back from the road signal to the driver that speed is allowed and encouraged—no matter what your posted speed limit is. In fact, often roadways are designed for traffic speeds 10-15 miles per hour faster than the posted speed. When we talk about roadway design, it's important to emphasize context. We are not talking about limited access freeways but, rather, the misapplication of limited access freeway engineering and design solutions and parameters to local roadways.

While transportation agencies claim that this is done for "safety reasons," the underlying message is that they expect drivers to speed and want to clear space for those speeding drivers to make mistakes and correct them without crashing. This accommodation to drivers, in the name of "safety", creates more danger to those outside of the car because the driver naturally interprets these roadway design cues to go at the higher design speed, inducing the speeding behavior that the design engineers are trying to head off. And we know that speed leads to mistakes and

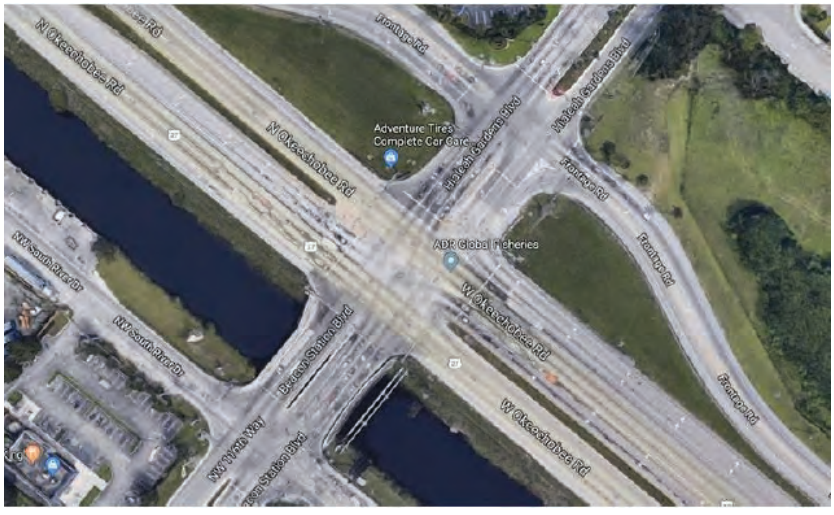
[1] https://smartgrowthamerica.org/dangerous-by-design/

more deadly crashes, especially for those that don't have thousands of pounds of steel and aluminum surrounding them.



N. Flamingo and Pines Boulevard in the Miami area, a typical example of a major intersection in Florida.

These issues—along with un-signaled crossings, long blocks and multiple driveways—create inherently dangerous conditions for people who walk or bike. All of these designs are put in place for the convenience of drivers and to move vehicles at a high rate of speed, which is the real underlying priority of our national transportation program, whether that was our intention or not. But most of all they all put people outside of a car in jeopardy.



Arterial roadways (not limited access highways) in Miami areas. N. Okeechobee Road and Hialeah Gardens Boulevard is one of the most dangerous intersections in Florida today.

What is particularly frustrating to me is the acceptance of this level of danger and loss of human life. It is not a problem that we don't know how to solve. This isn't a problem that we are powerless to address. We have a cure. But for whatever reasons, just don't want to use it.

Two cities that have adopted one major cure, known as Vision Zero, have seen traffic fatalities fall significantly. Vision Zero emphasizes matching speeds of roadways based on the surrounding context. In other words, in populated areas, drivers should have an expectation that they will move slower than in the wide-open countryside or on limited access highways. The results speak for themselves: in New York City fatalities are down 28 percent since 2014. San Francisco is down 41 percent. If you just look at pedestrians, the decrease is 46 percent in New York City and 34 percent in San Francisco. Fortunately, several local cities in my home state have also begun to join this movement, including Tampa, Orlando, West Palm Beach and Miami.

Despite knowing how to fix the problems, many of our transportation agencies are often concerned about the ramifications—often political—of making safety their top priority. To make space for people outside of a car, we sometimes have to take space from the cars. Even where doing so would create very minor delays—as in seconds—for drivers, it is enough to throw the option out. This resistance to change can be found at all levels—from local public works agencies to Congress and from broad policy to bureaucratic procedure and culture.

I want to preface that there are many states and communities, and particularly the Florida DOT, that should be applauded for adopting robust complete street policies and initiatives to change this paradigm. However, there is a major disconnect or cultural barrier that exists between the policy framework around safety and complete streets and the actual implementation of innovative design solutions and projects that would provide better outcomes. Our success requires moving beyond a feel-good policy discussion to meaningful culture change, political will and leadership, and shifting priorities away from speed and capacity at all costs.

I'm going to next provide a few examples and illustrations of the difficulties in building safer roads for all. In terms of procedure, every road project is designed around a standard that most people have never heard of, called Level of Service. This is a measure of how quickly cars can move and how easily they can maneuver through a roadway with little congestion or delay. A wide-open street with free flowing traffic on is considered LOS-A. Congested, stop and go traffic is LOS-F. As a result, your most economically productive corridors are considered failures in the transportation world, while those that are underutilized get an A. What is the equivalent safety standard that we use to design roads, you may ask? We don't have one. We respond to clusters of crashes, we don't design to avoid them.

In terms of culture, you can find the focus on traffic speeds over safety everywhere. Highway engineers have historically been trained to build highways to maximize capacity, speed and vehicle throughput. This ideal has in turn been misapplied to all roadways, from highways to arterial roads to local, neighborhood streets. DOTs sometimes don't believe that the federal government will permit them to implement a design that would slow traffic. Or they will claim that they aren't allowed to use funding that way. Whether that is true or not (and in spite of several directives from (FHWA) Administration saying it isn't true), they regularly blame the federal government for tying their hands. The excuse for failing to design a roadway for all users varies based on the type of road.

On a state road in my metro area, the local DOT district safety office previously recommended a road diet or lane elimination to reduce the crossing distance for pedestrians and improve overall safety. There was some pushback, so the DOT immediately conceded and raised the forecasted traffic volumes and misapplied other traffic analyses to make a great project that would have provided a sense of arrival on a college campus look infeasible. Two things to take from this story. One, traffic projections and analyses are often over-estimated and DOTs have a lot of discretion on how they are established. Computer models used to generate such analyses are only as good as their inputs, and there's nothing easier than tweaking such inputs to get desired outputs. Two, if there is traffic that might be impacted by accommodating pedestrians or cyclists, even if it is minor, it is often considered too much.

If traffic volumes are not high enough to justify refusing to build a complete street, DOTs often will often provide other reasons for not changing the roadway such as claiming that the road is a parallel reliever to an Interstate or highway and that giving up space to pedestrians would impact drivers if a problem on the highway requires traffic to move to that roadway. On one street near downtown Jacksonville, traffic is not the problem. You could roll a bowling ball down the road at nearly any time of day and not hit anything. In this case, the local agency said they couldn't give up a lane because even though the road is well below capacity, it is an evacuation route. There was also a recent instance, when planning for an innovative, autonomous transit service was only supported with the condition that no state roads could be considered for lane elimination. So instead of repurposing a portion

of the roadway to support enhanced cycling and walking and transit, things that the local community desire, they insisted that it be left alone—and empty.

It isn't just happening in Florida. It is happening in all of our states. For example, Beach Park, Illinois, has been trying to get better pedestrian protection along a state route that has seen four pedestrian fatalities over the last 15 months. In the most recent crash, the driver said he could not see the victim, but Illinois DOT has been slow to respond to the community's call for visibility improvements. The response has been so slow and lackluster that the city is considering making the improvements on their own and paying penalties for failing to get the required permits.[2]

In terms of broad policy, Congress communicates federal priorities to the state departments of transportation (DOTs) and for metropolitan planning organizations (MPOs) through spending. While we spend over $40 billion in federal funds per year in the highway program, less than $1 billion of that is reserved for the Transportation Alternatives program, which is targeted to bicycle and pedestrian infrastructure, and only $2.3 billion is dedicated to safety improvements.

Even in the messaging from Washington, DC, the convenience for drivers is primary. If you go to this committee's website, the issue profiled is the cost of congestion. And I get it: congestion is annoying and inconvenient. I don't like to sit in it either. But the cost cited on your website for congestion is roughly equivalent to the cost of the $37,133 lives lost on our roadways in 2017, a cost of $356,476,800,000.[3] That doesn't include the cost associated with those injured on our roads, which number in the millions of people each year. Yet safety spending is a small fraction compared to all the money we spend to address congestion.



Bill Deatherage, of the Kentucky Council of the Blind, walking along Louisville, KY's Brownsboro Road before and after sidewalk construction. Photo by Anne M. McMahon.

In 2012, Congress required DOTs and MPOs to set performance targets in federal priority areas. Several of those targets are safety related, including overall fatalities and serious injuries as well as non-motorized fatalities and serious injuries (i.e., bicyclists and pedestrians).

While this approach is referred to as "performance management" in the law, it is really simply performance tracking. Instead of setting targets and orienting spending around those targets, the program allows states to set priorities and report the safety results. If those targets are ambitious, wonderful. But Congress allows them to be negative too. As a result, in 2017, eighteen states set performance targets to kill more bicyclists and pedestrians on their roadways.

You can find this information if you know where to go deep on the FHWA's webpage to find them. There you must dig through 55 reports that are 60-70 pages

[2] https://www.chicagotribune.com/suburbs/lake-county-news-sun/news/ct-lns-beach-park-pedestrian-fatals-st-0111-20170110-story.html

[3] Based on the 2016 Revised Value of a Statistical Life Guidance set by the US Department of Transportation of $9.6 million per life.

each to find this information to compare across states. That's better than the repair and other targets, which aren't available on FHWA's site at all. This is seven years after Congress required performance tracking. That is what passes for accountability in the federal transportation program.

I have heard many people claim that the focus on congestion mitigation is important for the economy. As a local elected official, I can promise you that an empty roadway, while uncongested, is hardly an example of a healthy economy. Corridors that are full of cars and people are usually our highest performing economic centers.

The National Complete Street Coalition analyzed 37 Complete Streets projects in across the nation and found that employment levels rose after Complete Streets projects—in some cases, significantly. Communities reported increased net new businesses after Complete Streets improvements, suggesting that Complete Streets projects made the street more desirable for businesses. In eight of the ten communities with available data, property values increased after the Complete Streets improvements.[4]

In fact, Redfin found, based on more than 1 million homes sold between January 2014 and April 2016, that one walk-score point can increase the price of a home by an average of $3,250, or 0.9 percent. While the majority of home buyers were looking for homes in walkable neighborhoods, Redfin found that they make up just 2% of active listings.[5] As we all know, when something is in high demand and low supply, it can push the price of that item substantially upward. As a result, walkable neighborhoods can become very expensive and are often out of reach for those that are most reliant on walking and transit for their daily activities. And the cost premium created by this low supply is created by restrictions in development and housing policy, but also by transportation programs. Much like the cost of diamonds is elevated by restricting supply, government is increasing the cost of walkable neighborhoods by blocking the market response to the ever-increasing demand for them. A design that would save thousands of lives every year.

Some fear that making space for people walking and biking requires something to be taken from drivers. But when we build roads to move everyone, everyone does better. In Grandview, Missouri, a project was implemented to reinvigorate Main Street by improving the pedestrian accommodations along several blocks. The result was an increase in all modes: pedestrians by 900 percent, bicyclists by 40 percent and automobiles by 20 percent, although it remained uncongested. There were also 90 percent fewer crashes after the changes. The city's investment of $5 million has led to a return of $375 million. This amounts to approximately 1.5 times of the cities entire assessed property evaluation.[6]





In Charlotte, North Carolina, the state DOT redesigned East Boulevard from five lanes to three, adding new sidewalks and bike lanes back in 2006. As a result, they saw a dramatic reduction in crashes, more efficient traffic operations, a drop in speeding, and a 47 percent increase in non-residential property values that raised annual tax revenues by $530,000.[7]

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[4] https://smartgrowthamerica.org/resources/evaluating-complete-streets-projects-a-guide-for-practitioners/

[5] https://www.marketwatch.com/story/how-walk-score-boosts-your-homes-value-2016-08-11

[6] http://www.marc.org/Government/GTI/Academy-for-Sustainable-Communities/Sustainable-Success-Stories-Honorees/2016/Grandview-Gateway

[7] https://www.completestreetsnc.org/project-examples/ex-eastblvdroaddiet/





In my home state of Florida, we know how to do this right when we want to. In Orlando, Florida DOT redesigned Edgewater Drive by taking a travel lane and reconfiguring the road to make space for pedestrians and bicyclists. Total collisions dropped by 40 percent, injury rates decline 71 percent, pedestrian counts increased by 23 percent and bicycling increased by 30 percent traffic dropped 12 percent before returning to original levels. Additionally, the corridor has gained 77 new businesses and 560 jobs, while the value of property along the corridor rose 80 percent.[8]





Yet these projects are the exception. Engineers actually have to get special approval to implement them, a process that can take more than a year. Why wouldn't we want this to be the rule?

As we consider the next six years of our national surface transportation spending, Congress should update the program to better protect all users. Congress should strengthen existing Complete Streets language to require states and metropolitan regions to plan, design, fund, and maintain safer streets. Congress should fund more Complete Streets projects. And Congress should create real accountability for roadway safety. States should not be allowed negative safety targets. If they are expecting more deaths then investments or changes need to be made to their programs.

For years, we have heard about the need for more money. But it's really not about the amount, but rather how it's being prioritized and spent. Shouldn't we ensure that federal funding goes to projects that improve safety, improve traffic operations and create the communities that people want? Every single dollar spent to resurface roadways could include a redesign that saves lives. But when a resurfacing project is developed, stakeholders and the community that might want Complete Streets are told that DOT will have to "study the matter" and then by the time the design concept is reviewed by the traffic division, the project is at 60 percent development and the DOT says they are too far into the process to consider the change. We are choosing bureaucratic, status quo procedure over human life.

Florida DOT, particularly in resurfacing projects, claim they have little flexibility in federal funding rules to support enhancements outside of their right of way jurisdiction. And often this may be a sidewalk or transit stop outside of their right of way jurisdiction. This results in safety and complete street gaps whereby a sidewalk or resurfacing project avoids needed improvements on private or other agency prop-

[8] Edgwater Drive Fact Sheet: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=2ahUKEwjgq__2w2rnhAhVDnOAKHZ1cDGUQFjABegQIAhAC&url=http%3A%2F%2Famericas.uli.org%2Fwp-content%2Fuploads%2Fsites%2F2%2FULI-Documents%2FEdgewater-Drive-Orlando-FL.pdf&usg=AOvVaw0iqKJs__cXyNniFKC6__V8gN

erty that would result in a safe, seamless project. We are choosing to leave this part of the transportation system out and it is killing people.

After a road is built or resurfaced, we are told there is no money for retrofits. Even when there is, it is a fraction of the funding they are using to create the problem. It is like building an addition on your house while ignoring a gas leak.

Moreover, as we enter this reauthorization, I look to you all on this committee to set clear goals about what we, the American people, will get for the investment. There is a lot of talk on Capital Hill about raising taxes and putting more funding into the surface transportation program to stabilize it over the long run.

As we bring up reauthorization, Congress should lead a discussion about what we plan to achieve, not just about what you are going to spend. We need to set specific, measurable goals and hold decision-makers accountable for reaching them. There should be rewards for doing well and penalties for failure. And above all, this program should be oriented to create a safer transportation system for all users. Doing so will save lives while creating the economically vibrant, livable communities that Americans want.

Thank you very much for inviting me to testify today. I look forward to working with you to do more for safety in the coming reauthorization bill.

Ms. NORTON. Thank you very much, Vice Mayor Jones.

I am going to next ask the chief of police for the city of Alexandria, Michael L. Brown, to offer his testimony. Five minutes, please.

Mr. BROWN. Thank you, Madam Chairwoman and also members of the committee.

I am going to try and cover the high points in the written testimony I submitted, and principally what I was looking at and trying to offer or was asked to offer was the lens of law enforcement in trying to deal with the traffic safety implications across this country.

In my testimony, we recognize in the profession that clearly the major issues were outlined by the chair regarding impaired driving, speeding, distraction, and the pedestrian conflicts occurring across the country.

I would also add the issue of occupant protection as well because occupant protection speaks directly to the survivability should you get involved in a crash.

But from the law enforcement perspective and the lens we look at the world, frankly, in terms of the competing interests that are placed upon law enforcement, and a lot of those interests come from the local level. The local demand of our neighborhoods in our communities tell us what we need to prioritize on.

And, quite frankly, in some communities like the one in which I work, traffic and even parking is a significant issue.

But that is not across the Nation, and so we need to be flexible in the way we look at creating an authorization that accounts for the local law enforcement and the local expectations that the law enforcement leaders and the officers who do the work are confronted with on a daily basis.

I have included in my testimony a number of general recommendations, especially regarding incentivizing involvement of law enforcement. The current incentives for the national campaigns and those kinds of things that you find in the FAST Act and in previous editions of reauthorization provide an opportunity for law enforcement to engage in campaigns. It is a capacity-driven thing so that it could be coordinated on a national level.

But that does not happen on a day-to-day basis, and as you have heard testimony by law enforcement officials across this country,

there are times where that capacity is drawn upon by other commitments and other challenges that law enforcement faces, aside from the fact that we are in an issue in some parts of the country where it is very difficult to recruit people and to fill the ranks of law enforcement.

So this competition takes place within these incentives. General overtime programs we suggest should be continued for a variety of reasons, especially if they drive for capacity at the local level.

The other thing that would be interesting in terms of trying to do this is to raise the awareness through these incentivization programs of traffic safety within the local political establishment.

One of the things that I have suggested is develop a national narrative. The current national narrative in many cases, NHTSA does a good job, but it focuses on a lot of the specific things that we are looking at in our major campaign.

The fact of the matter is most of the crashes that are occurring are directly related to bad behavior on the part of the participants, whether it be a bicyclist, a pedestrian, or some motorists. Very few of them are related to mechanical issues.

People make bad choices, and people get hurt, and in some cases, they die. So what we were trying to do at least in the city that we have and in other parts and communities across the country is to elevate that discussion to something more than just the numbers, something more than just a campaign, trying to get out there and engage in the activity, making a traffic stop, not necessarily making a citation, but looking for the teachable moment that is going to change behavior and get people to voluntarily comply with the laws.

That is taking place across the country at varying levels for the same kind of conditions that we talked about at the local level.

I would suggest that we continue to focus on these key areas, but I would also suggest that in the new authorization we build in as much flexibility for a local government to establish the priorities that they are facing in their local issues. What happens in Alexandria is not the same it is going to be in L.A. It is not going to be the same as Salina, Kansas.

And so we need to be able to provide them the opportunity to address their traffic safety issues, and I would also argue that the traffic safety issues are not accidents. They are crashes, and it is not just deaths. People who survive crashes, and we see them every day, in many cases have lifelong, lasting issues that change their life forever.

So, Madam Chair, thank you very much for the opportunity. I look forward to any questions the committee may have.

[Mr. Brown's prepared statement follows:]

Prepared Statement of Michael L. Brown, Chief of Police, Alexandria (Virginia) Police Department

Mr. Chairman and members of the committee, I am honored to come before you and represent the law enforcement perspective on traffic safety and law enforcement's role in addressing this important issue. My testimony is offered to underscore the importance of traffic safety in our country and some of the challenges we face in addressing it.

Traffic safety is often defined by the number of crashes that have occurred and by the number the fatalities that have resulted from these crashes. While these are important measures, law enforcement deals with it on a much more personal level. Law enforcement officers respond to crash calls, investigate and deal with individual needs of those involved. This occurs thousands of times a day in our country. The level of law enforcement engagement is shaped by local capacity, community interest and political will. The role of the officers and the service they provide is often lost in national level discussions of traffic safety. My testimony will address major policy level issues it and it is also offered to you through this lens.

TRAFFIC SAFETY IS A CRITICAL ISSUE FOR AMERICA

The sheer number of crashes in this country illustrates traffic safety is a critical issue that affects millions of people, however, it is frequently under prioritized in the context of other national priorities. Clearly, crashes that involve a fatality or a life changing issue have an impact on individuals and their families. I would also argue that involvement in crashes resulting in minor injuries or mere property damage also complicate the lives of people on a daily basis. Law enforcement officers know this and deal with this every day. Unfortunately, the latter situations are frequently "overlooked" in traffic safety discussions.

Law enforcement is often called upon to deal with traffic safety issues. Each day, we receive many calls or complaints about specific traffic safety which we have to prioritize with our other calls for service. The public call us because they expect law enforcement to enforce traffic laws and mitigate their issue. This is based upon the premise that the real or perception of officers actively or potentially enforcing traffic safety laws will lead to some level of voluntary compliance by individuals in a specific area. Law enforcement acknowledges this expectation and perspective. Law enforcement agencies and their officers respond by prioritizing traffic safety along with the other expectations a community may place upon them, e.g.; crime responses, mental health calls, etc.).

Law enforcement agencies understand the importance of traffic safety in the context of a community's "quality of life". Many agencies have understood this for a long time. Others came to understand that perspective even better during the 1990's. The 1994 Crime Bill required participating law enforcement agencies to conduct 'town hall' meetings with their communities across the country. One of the quality of life issues repeatedly raised in these meetings was traffic safety and traffic management. It became so prevalent that the U.S. Department of Justice's COPS Office developed publications to help law enforcement agencies in responding to traffic safety issues. Today, law enforcement's conversations with the public still include the traffic safety issue. The challenge remains—law enforcement is constantly balancing traffic safety as a community priority alongside more traditional policing issues. Community expectations for policing and traffic safety issues are local community based and the law enforcement response to these expectations vary by community across the nation. That said, there are some specific challenges for law enforcement that surface so often they deserve national discussion and attention. My following comments will cover some of the specific challenges that are high priority.

IMPAIRED DRIVING

Driving under the influence is a major issue for the nation and its communities. While there has been a significant reduction in fatalities and a reported change in public acceptance of driving impaired, about 1/3 of all traffic fatalities are directly related to problem. Much of this success on this issue can be attributed to the efforts of MADD, law enforcement, and other community groups. The National Highway Traffic Safety Administration (NHTSA) and others have also developed a robust toolkit to deal with this issue including impairment presumption levels, national enforcement campaigns, ignition interlock programs, DUI courts and others. However, local participation in these efforts varies across the nation. This variation can be attributed to local capacity and local political will. We need to remember that law enforcement's response to impaired driving will be governed by these local conditions.

The national approach to this issue should continue and incentivize the use of the current toolkit as these tools have been proven effective in dealing with impaired driving. However, there should be a renewed interest in engaging groups other than law enforcement more effectively in addressing impaired driving. Substance abuse is a major underlying cause of impaired driving and repeat offenders are a prime example of the substance abuse issues that law enforcement confronts in dealing with impaired driving. Law enforcement is not in the substance abuse treatment

business and increased access to substance abuse (public health) programs to deal with this issue should be promoted as an intervention measure.

Law enforcement recognizes the importance of enforcing impaired driving laws and accepts its role as evidenced by the number of people they arrest for driving impaired. The evolution of impaired driving law over the years has led to officers completing incredibly long, detailed reports and other protocols which result in a major commitment of the officer's time. I will not say this discourages officers from making DUI arrests nor am I suggesting the development of shortcuts which affect the rights of the arrested individual. The reality for the officer is that, in some cases, a misdemeanor DUI report can be as complicated as a criminal felony homicide case. *There must be a way to develop a standardized national methodology which simplifies these reports which appropriately balances the needs of prosecutors and the rights of the arrestee*.

Finally, I must address the specific concerns of law enforcement over the impact of driving under the influence of drugs. The country has acknowledged that drug abuse is a public health issue and has many programs to deal with it in this framework. Law enforcement and prosecutors have successfully enforced impaired driving statues for many years and will continue to do so. That said, there is considerable concern within law enforcement over the potential public safety implications for impaired driving and the interests to increase public access to marijuana. Law enforcement is closely monitoring the experience of states and communities that have increased this legal access but the current debate can be confusing and alarming. For the officer, they recognize the absence of credible technology and informative research to assist them in assessing driver impairment during an impaired driving enforcement contact involving drugs. It is critical that these issues are addressed immediately to help guide officers in their impaired driving enforcement efforts.

OCCUPANT PROTECTION

This issue remains a major issue for our nation. About half of the nation's fatal crash reports indicate that one or more vehicle occupants are not wearing their safety belts. This proportion has also been relatively consistent for decades. The same observation can be found in national injury crashes. Again, NHTSA has developed a toolkit to get people to wear their seatbelts but the engagement of law enforcement varies across the nation due to local conditions and political will.

The discussions of seatbelt enforcement often include concerns over the police overstepping their authority and/or over prioritizing the importance of seatbelt enforcement. Officers frequently still hear the response "don't you have more important things to do" when they enforce seatbelt laws. Officers and their leaders are very aware of these conversations and positions and it can also have a 'chilling' effect on actual seatbelt enforcement. *The nation needs to change the perspective on the importance of seatbelt laws to improve public compliance. Seatbelt enforcement needs to be viewed as a lifesaving effort not as a tactic used by officers to 'pick on' people*.

This is a problem which could also be fixed at some level over time through engineering and design. *The use of seat belt interlocks for example could improve this behavior without the need for law enforcement*.

SPEEDING

Nobody likes getting a speeding ticket and yet speed continues to be an issue in most crashes in America. In many cases, it is the principle reason behind the crash. It is also a major factor in the severity of the crash and occupant survivability which relates to the principles of physics. Speed enforcement is a traditional enforcement activity in many police agencies and officers do it every day. Unfortunately, there are many more speeders than there are officers and voluntary compliance by motorists is often dependent upon the motorist's perception that they will be caught speeding. Many motorists like the odds of not being caught and choose to speed. *Speed limit compliance could be enhanced by incentivizing law enforcement efforts to speed enforcement at a national level. The increased use of automated speed enforcement technology could also prove useful providing such programs are implemented for traffic safety reasons and not revenue generation. Such programs must be implemented to avoid any challenges to police legitimacy*.

DISTRACTION

Distraction is a very real threat to the safe use of our transportation system. Law enforcement acknowledges that and where possible enforces the laws that are available to them. All transportation system users need to pay attention when using these systems. The emerging data is illustrating that this issue is growing especially

with our reliance on some technology. Many of the current laws focus on drivers and not other users like pedestrians and bicyclists while in the roadway. When this topic is discussed the issues surrounding police harassment and the ability of officers to detect distraction frequently surface. Some of the existing laws also make the law difficult for officers to enforce e.g.; manipulating a device or texting language. Officers will tell you of many instances where they see drivers, pedestrians, bicyclists and other transportation system users not paying attention and jeopardizing their own personal safety and the safety of others. This will continue unless the nation acknowledges this to be a problem. *There should be a national effort to develop hands free laws which are applicable to all system users. There should also be a national priority assigned to this traffic safety threat and a more uniformed enforcement/compliance approach that is acceptable to the states and local authorities*.

PEDESTRIAN AND BICYCLE SAFETY

There is a growing concern in many communities over the safety of bicyclists and pedestrians. Law enforcement understands these concerns and responds to local traffic safety complaints on these issues on a daily basis. This is particularly important in urban centers and those communities that encourage these travel options. In many discussions on this issue there are references to pedestrians and bicyclists as 'vulnerable' populations which are understandable especially when they share the road with cars. From the law enforcement perspective, there is plenty of blame to share as to what creates this conflict. At times it is the motor vehicle operator that does not recognize or ignores the laws and protections provided to pedestrians and cyclists. Yet, there are also many occasions where these same pedestrians/cyclists involved in these potential conflicts will position the argument so that they are the victim instead of acknowledging that each contributes to the traffic safety issue. This makes it difficult for officers when they take enforcement action involving pedestrian and cyclists. *Like some of the other traffic safety issues I have discussed, the narrative needs to change on this issue so that traffic safety is a personal responsibility and all the players must follow the rules.*

OTHER IMPORTANT LAW ENFORCEMENT CONSIDERATIONS

There are other issues which I must bring up which can impact the role of law enforcement in performing its traffic safety responsibilities. These issues are real for law enforcement and the communities they serve and provide context for traffic safety enforcement. They include:

Calls for Service and Officer Initiated Activity

At one time in my career I was told by a federal official that "law enforcement will do what we tell them to do". Sadly, other federal officials that were present found that comment humorous at the time. Unfortunately, that perspective is a counterproductive to encouraging law enforcement participation and clearly ignores the daily realities of our officers.

Traffic enforcement occurs when officers are on routine patrol and when they are responding to a specific traffic safety complaint from the community. The latter is treated like a call for service (e.g.; a 911 call) and the officer's discretion to engage in enforcement may be affected. The officers still have discretion to give a warning or a citation but there is an expectation that they respond to the problem area and at least look for violations. Officers on routine patrol have greater discretion to engage in traffic enforcement. Patrolling officers may be more interested in other local policing priorities or their own specific policing interests rather than traffic safety.

This has been and will continue to be a challenge for law enforcement leadership. Officers who acknowledge a public safety priority tend to respond to that priority. *As such, it is important to develop a national narrative which elevates traffic enforcement as a community* ***public safety*** *threat which deserves the attention of the individual officer. The national narrative needs to be supported with messaging and incentives designed to promote officer engagement in this enforcement effort*.

Law Enforcement as an Intervention

Enforcement is often portrayed as the key intervention for improving traffic safety. That is most likely the basis for the number of traffic enforcement call/requests law enforcement agencies receive each day. Research has demonstrated that good enforcement can have an impact on changing some behavior in traffic safety. In some cases, there are more profound foundational issues which dictate the need for other interventions. My coverage of impaired driving included some discussion of other intervention needs when substance abuse behavior is present. There are other disciplines which can be applied. Vehicle design, engineering, and other technologies can be useful in developing interventions which might stop problematic behavior.

Interlock systems for impaired driving and seatbelts are examples of design interventions.

While law enforcement plays a critical role in changing traffic safety behavior many issues require a more complex intervention to effectively deal with any poor behavior. *I do believe the role of law enforcement is significant in this effort but we should avoid defaulting to law enforcement as the entity that has sole responsibility for changing behavior that causes crashes*.

Officer Discretion and Legitimacy

It is the individual officer that makes the decision to engage in traffic enforcement. Therefore, we must also acknowledge that officers are very aware of the climate in which they work and the public acceptance of their enforcement efforts. Officer decisions to engage involve the professional discretion they have during the performance of their duties. There is considerable research on officer discretion and it has shaped agencies policies. Law enforcement agencies have many policies to control the use of discretion but the myriad of fact patterns an officer confronts while performing their duties make it difficult to develop policy for every situation. That is one reason why law enforcement agencies commit so much time, energy, and money into selecting and training individuals that can exercise good judgment in the use of officer discretion. I would argue that, in practically every case, the competence and motivation of today's officers is at a much higher level than ever before.

Legitimacy is a foundational factor in policing and the police will not be effective without it. There have been past concerns and debates about law enforcement actions and legitimacy. There have also been some comments that these concerns and debates have resulted in fewer officers engaging in traffic enforcement as a result. While this may be the case in some communities, I have not seen research that conclusively proves that this is occurring on a national level. *That said, it is important for law enforcement and political leadership to create an environment which suggests that officers should engage in traffic law enforcement to respond to community quality of life and public safety issues in a manner which promote police legitimacy within the community the officer serves. This may not be occurring in some communities and should be addressed in a manner which supports officers doing traffic enforcement for the right reasons—protecting the public. A development of a national position which encourages this environment would be useful for improved traffic law enforcement*.

Incentives for Law Enforcement

I have referenced incentives in my testimony on several occasions. The incentives that are traditionally offered through the federal government relate to providing enforcement capacity. Providing funding is important for law enforcement agencies that lack the capacity to participate in national traffic safety enforcement efforts. Some approaches result in individual officers performing this enforcement on an overtime basis which, for some officers, may be incentive. Recently, there have been repeated reports within the law enforcement community that overtime details do not often sufficiently encourage officers to perform specific activities including traffic safety enforcement. This may be attributed to the many uses of overtime details to address non-traffic related issues. These other details may compete with traffic enforcement details for available officers to participate. Some law enforcement agencies also argue overtime is not a sufficient high priority or driving factor with some officers. Agencies often advise that filling these overtime details can be difficult as a result. Another reason for the difficulty in getting officers to participate in these details may also be the degree of importance officers assign to traffic safety. Many officers may not recognize their role in traffic safety and enforcement of traffic laws as being that important to their community.

NATIONAL NARRATIVE

My testimony also makes several references to developing a national narrative outlining the importance of traffic safety and committing the resources to change the belief structures in the country relating to safety on and around our roadways. There are examples where this has worked in this area like the changed attitudes on impaired driving which was initiated by MADD. Other individual groups within the traffic safety community have made similar efforts to change attitudes and culture in specific areas with varying degrees of success. To me, this seems to be 'chipping away' at the essential need for all of us in this country to change our behavior and improve our quality of life as it relates to all aspects of traffic safety.

A national traffic safety improvement narrative would also be useful in getting law enforcement behind the traffic safety issue. Officers and their agencies have a history of responding to recognized threats to public safety. The drug and gang activity in

the 1980's, the homeland security effort following 9/11 and, more recently, the issues related to mental health and opioid overdoses are prime examples of a motivated law enforcement response. What is missing today for law enforcement is the commitment to making traffic safety a high priority for our nation.

CONCLUSIONS

I have offered a number of perspectives and suggestions in my testimony to assist the committee in its legislative deliberations. The issues surrounding traffic safety are complex and will require leadership to effectively change the behaviors that cause crashes in this country. We currently have individuals that provide that leadership in certain areas of traffic safety but a nationwide comprehensive commitment designed to make this issue a high priority for our country has been missing for some time.

Within our communities are individuals who have personnel stories of how they were affected by a crash. Law enforcement officers make personal death or serious injury notifications to families and friends following a traffic crash on a daily basis. Officers who have done this, including me, will tell you the impact these notifications have on these family and friends as well as the officer are significant. The personal loss, the shock, and the feelings encountered by the officers are the same for traffic crashes as they are those notifications made following a major felony not related to traffic. I have said many times—it doesn't matter if the injury or death is caused by a car fender or a bullet to loved ones.

Our communities want a sustainable and safe quality of life. They want to feel safe in their communities and reduce all threats to safety. Law enforcement's experience has shown this includes their expectations on traffic safety. The committee can play a key leadership role in raising the profile of traffic safety as a public safety issue across our nation. I am confident elevating the issue to a serious, high priority public safety issue will also lead to increased support from law enforcement. This effort may move our nation to a better and safer place than we currently find ourselves.

Thank you for giving me the opportunity to offer my thoughts on this very important policy issue.

Ms. NORTON. Thank you, Chief Brown.

Mr. Jay Bruemmer.

Mr. BRUEMMER. Chairwoman Norton and members of the subcommittee, thank you for the opportunity to testify to you today on behalf of the American Traffic Safety Services Association.

ATSSA represents the manufacturers and installers of roadway safety infrastructure devices, such as guard rail and cable barriers, traffic signs, pavement markings, and work zone safety devices, among others.

Our mission is to advance roadway safety and reduce fatalities and serious injuries to zero.

Professionally, I have worked for K&G Striping for 34 years, a Missouri contractor who installs pavement markings, traffic signs, and traffic control.

It is appropriate to be here discussing roadway safety during National Work Zone Awareness Week, as we honor those who lost their lives in work zones around the country, including nearly 800 the previous year.

My first project on an interstate quickly taught me the importance of roadway safety. While striping in a work zone on I–70 nearly Lawrence, Kansas, I looked up to see a semi truck knocking over cones and headed right at me. I only had enough time to take one step back before I was blown off my feet by the wind.

I was fortunate to go home that day to my family, but tragically many others are not so lucky. Please slow down in work zones.

Mitigating driver behavior is a perennial challenge for transportation leaders, and knowing this, the roadway safety infrastructure

industry has innovated and deployed cost-effective countermeasures to combat negative driver behavior. Here are a few examples.

Wrong-way driving crashes are often catastrophic when they occur, especially on highways and high-speed roads. Intelligent transportation systems in conjunction with signage combat wrong-way driving. These systems detect a wrong-way driver and inform both the driver and law enforcement about the incident so law enforcement may intercede within minutes.

Systematic devices like barriers are critically important to the safety ecosystem of a roadway network. This is particularly true in rural areas where 30 percent of total vehicle miles traveled occur, yet 50 percent of roadway fatalities occur.

The Minnesota Department of Transportation installed cable median barrier along 150 miles of road. In the 3 years prior there were 19 fatal cross-median crashes. In the 3 years following, there were zero.

We know that wider pavement markings have positive safety benefits, especially for older drivers. They also prove beneficial for machine-driven vehicles. Under adverse conditions, wider markings consistently improve machine vision detection.

In 2017, nearly 6,000 pedestrians were killed in roadway crashes, and the previous year saw 840 cyclists killed. There are roadway safety infrastructure solutions that help protect both vulnerable users and motorists, including dedicated bike lanes with green pavement markings and delineators, as well as innovative retroreflective crosswalks for pedestrians.

Thirty-seven thousand one hundred and thirty men, women, and children being killed on U.S. roads annually, we cannot allow safety to ever become an afterthought.

None of these safety priorities can be achieved without a solvent, robustly funded Highway Trust Fund.

ATSSA strongly supports increasing user fees to address the long-term viability of the trust fund. This includes indexing gas and diesel taxes and eventually moving towards the vehicle miles traveled user fee system.

The Highway Safety Improvement Program, or HSIP, is the sole Federal highway program focused on roadway safety. States—which are responsible for the safety on all public roads—are able to use these funds for eligible activities.

However, States are allowed to transfer up to 50 percent of their HSIP allocations. Given the importance of safety, ATSSA calls on Congress to eliminate or at the very least reduce the percentage of funds that can be transferred out of HSIP.

Congress has previously ensured that funds from HSIP can only be used for roadway safety infrastructure projects. We urge the committee to continue this language as part of the FAST Act reauthorization and infrastructure packages.

ATSSA calls on Congress to double the size of the Highway Safety Improvement Program to at least 10 percent of the overall core Federal-aid Highway Program so it can aggressively combat fatalities and serious injuries on U.S. roads and expand the use of cost-effective, lifesaving roadway infrastructure countermeasures.

In conclusion, we must not let safety slip as our top priority. Roadway safety infrastructure and the Highway Safety Improvement Program are key pieces of the safety puzzle.

And ATSSA looks forward to working with the subcommittee to reduce fatalities and serious injuries on our Nation's roads to zero.

Thank you for the opportunity, and I look forward to any questions.

[Mr. Bruemmer's prepared statement follows:]

Prepared Statement of Jay Bruemmer, Vice President, K&G Striping, Inc., on behalf of the American Traffic Safety Services Association

Chairman Holmes Norton, Ranking Member Davis, and members of the Subcommittee, thank you for the opportunity to testify today on behalf of the American Traffic Safety Services Association (ATSSA) on how investing in and improving the safety of America's roadway system impacts each and every one of us. I currently serve as Chairman of ATSSA's Government Relations Committee. I am also a past member of the ATSSA Board of Directors, past President of the ATSSA Chapter Presidents' Council and past President of the Heart of America Chapter of ATSSA (comprised of Kansas and Missouri). ATSSA is a 1,500+ member international trade association which represents the manufacturers, installers and distributors of roadway safety infrastructure devices and services such as guardrail and cable barrier, traffic signs, pavement markings, rumble strips, high friction surface treatments, and work zone safety devices, among others. Our mission is to *Advance Roadway Safety* and reduce fatalities and serious injuries on U.S. roads toward zero.

Professionally, I am the Vice President of K&G Striping Inc., a Riverside, MO-based contractor focused on pavement marking, traffic sign installation, and traffic control. K&G Striping has been a contractor in the Midwest since 1982, incorporated in 1989, and now serves Johnson County, Jackson County and the greater Kansas City metro area. If you're driving through western Missouri and find yourself in a roadway work zone, chances are you will see our trucks doing the work. In fact, Ranking Member Sam Graves represents our office here in Congress.

Congratulations to Chairman DeFazio, Ranking Member Graves, Chairman Holmes Norton, and Ranking Member Davis on your new leadership positions on the Committee and Subcommittee, and thank you for holding this critically-important hearing. The timing of this hearing coincides with National Work Zone Awareness Week, honoring those who have lost their lives in roadway work zones and spreading awareness for the need to enhance safety in work zones around the country. In 2017, 799 people were killed in work zones, which includes both motorists and workers.

We hear it almost every single day—that transportation safety is the number one priority. Members of Congress, the Executive Branch, businesses, states, local governments and users of the transportation system all talk about the importance of safety programs. But sometimes, the need to invest in safety infrastructure is easy to overlook or take for granted. But with more than 37,000 men, women and children being killed on U.S. roads annually, and from personal experience of working in roadway work zones, we cannot allow safety to ever become an afterthought or second priority. Period.

According to the National Highway Traffic Safety Administration (NHTSA), 37,133 individuals were killed in motor vehicle crashes in 2017. This is truly a horrifying statistic; however, the glimmer of hope is that this was a reduction from 2016 by approximately 2%.[1] Additionally, preliminary 2018 data indicates that this decline in fatalities is potentially continuing.[2] For me and the men and women employed by K&G Striping, this number hits very close to home, especially when you consider that in 2017, 799 of those fatalities occurred in work zones. Imagine yourself working on a road construction project, and passenger vehicles and motor carriers are traveling at 50, 60, 70+ miles per hour only feet from where you are working. You might be protected by a steel or concrete barrier, but you might just have

[1] NHTSA 2017 Fatality Data—https://www.nhtsa.gov/press-releases/us-dot-announces-2017-roadway-fatalities-down

[2] NHTSA Preliminary 2018 Fatality Data—https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812629

some plastic cones and barrels separating you from thousands of pounds of speeding steel. I know from personal experience how terrifying this can be.

When I was 18 years old, one of my first projects working on the interstate was on I-70 between Lawrence and Topeka. We were installing temporary pavement markings behind a lane closure to prepare to switch traffic to head to head on the eastbound lanes. While putting down reflective markers, I looked up to see a semi-truck, which had not seen the lane closure in time, knocking over channelizers in the taper and headed directly toward me. I had just enough time to stand up, and take one step back before the wind blew me off my feet. When I stood back up, I saw the tire tracks through the tar I had put down for the next marker I was going to install. Had I not been lucky enough to look up when I did, the outcome would have been catastrophic. At the age of 18, I learned firsthand two incredibly important lessons: that I was not invincible and the importance of safety while working on the road. Years later when I became the owner of our business, I repeatedly used this experience to remind myself that the safety of my employees must be my primary concern.

In 2005 as part of the SAFETEA–LU legislation, Congress authorized the Highway Safety Improvement Program or HSIP, and subsequently reauthorized that program in 2012 in MAP–21 and again in 2015 under the FAST Act. The HSIP program is the sole federal highway program focused on roadway safety infrastructure. Over the lifetime of the FAST Act, HSIP is authorized at approximately $12.5 billion, including set asides for the Work Zone Safety Grant and the Railway-Highway Crossings Program. States—which are responsible for the safety on all public roads, not only state-owned roads—are able to utilize these funds for eligible activities under HSIP. However, states are also allowed to transfer up to 50% of their HSIP allocations to other core federal-aid highway programs—such as the National Highway Performance Program, Surface Transportation Block Grant Program, Transportation Alternatives, National Highway Freight Program, and the Congestion Mitigation and Air Quality Improvement Program and vice versa.

And states have opted to utilize these transfer provisions. Under MAP–21 and the FAST Act—as of September 30, 2018—24 states transferred HSIP funds to other programs, totaling approximately $1.2 billion. Given the importance of safety and the need for safety to remain a priority area of investment, ATSSA calls on Congress to eliminate, or at the very least, reduce the percentage of funds that can be transferred out of HSIP to ensure that roadway safety infrastructure funds are being utilized on roadway safety infrastructure projects.

Additionally, in MAP–21, Congress ensured that funds from the Highway Safety Improvement Program (HSIP) could only be used for eligible roadway safety infrastructure projects under HSIP. We urge the committee to continue this language as part of the FAST Act reauthorization.

Mitigating driver behavior is a perennial challenge for transportation leaders; however, the roadway safety infrastructure industry has innovated and deployed cost-effective countermeasures to combat negative driver behavior. Here are a few examples.

WRONG-WAY DRIVING

Although not incredibly frequent, wrong-way driving crashes are often catastrophic when they do occur, especially on highways and high-speed roads. There are several countermeasures that work to address this issue, namely signage, markings and LED lights on signs. However, road owners can also opt to utilize intelligent transportation systems, in conjunction with signs, to combat wrong-way driving. These systems detect a wrong-way driver and inform both the driver and law enforcement about the incident.[3]

HIGH FRICTION SURFACE TREATMENT

High friction surface treatments (HFST) are an example of an infrastructure safety countermeasure that does not require the driver to make behavioral changes in order to have a positive safety impact. These treatments are applied to high risk crash locations such as intersections or curves. Durable aggregate (usually bauxite) is applied to the road surface and bonded using a polymer binder. In 75 locations

[3] "Improving Driver Behavior with Infrastructure Safety Countermeasures" ATSSA case study publication, 2015

in Kentucky where HFST were applied, roadway departure crashes decreased by 91% in wet conditions and 78% in dry conditions.[4]

PEDESTRIAN AND BICYCLE SAFETY

In 2017, 5,977 pedestrians were killed in roadway crashes across the United States. In 2016, there were 840 bicyclists killed in roadway crashes. There are roadway safety infrastructure solutions that help protect both vulnerable users and motorists, including dedicate bicycle lanes with green pavement markings and flexible delineators as well as retroreflective crosswalks for pedestrians. One countermeasure focused on pedestrian safety is the Leading Pedestrian Interval Plus (LPI+), which allows the pedestrian to begin crossing the street before traffic is allowed to move. Studies have shown that LPIs can reduce vehicle-pedestrian crashes by as much as 60%.[5]

SMARTER WORK ZONES

As I mentioned, this week being National Work Zone Awareness Week, it is a crucial moment to talk about safety in work zones. Work zones are inherently dangerous areas, and the safety of the men and women working on the road is paramount. Making work zones smarter, safer, and more efficient will decrease fatalities and serious injuries for both drivers and workers. Smarter work zones can mean intelligent transportation systems, data collection and usage, project coordination, and stakeholder engagement, among many other activities. In Washington, DC, the District Department of Transportation (DDOT) realized that multiple road construction projects in the city were having interrelated impacts on road users. So in response, DDOT created a comprehensive, software-based work zone project management system which brought together roadway, utility, and developer construction activities which identified and lessened public right-of-way conflicts. The top goals of this approach were to minimize work zone location conflicts and impacts and improve safety and mobility within the work zones. A web-based work zone tracking application was used to gather all the data and then send that data to project coordinators to alert them of possible conflicts.[6]

BARRIER

Barrier is used either in a median or on the roadside to protect vehicles from leaving the road and impacting other fixed objects or on-coming traffic. Systemic devices such as barrier are critically important to the safety ecosystem of a road network. This is especially true in rural areas where, according to 2016 Federal Highway Administration (FHWA) data, 30% of total vehicle miles traveled occurred, yet 50% of roadway fatalities also occurred. Fatalities on rural roads are disproportionately high. Over a four-year period, the Minnesota Department of Transportation installed cable barrier in 31 segments along 150 miles of roadway. In the three years prior to installation of the cable barrier, there were 19 fatal cross-median crashes. In the three years following installation, there were zero.[7]

We know that these countermeasures work. Through the use of dashboard cameras, we can see how effective roadway safety infrastructure can be. For example, this website shows footage from a camera affixed to a tractor-trailer truck on a highway. The video captured the image of another tractor-trailer truck nearly colliding head-on but the crash being mitigated by cable barrier. https://drive.google.com/file/d/1L-5egeInhrJgB9pZO14PtObM7tYQkI1D/view

WIDER, HIGH VISIBILITY PAVEMENT MARKINGS AND CAVS

Some countermeasures are seemingly commonsense, but they have lasting positive impacts not only for today's human drivers, but also for connected and automated vehicles into the future. A Texas A&M Transportation Institute (TTI) study found that wider pavement markings in Michigan reduced fatal and injury crashes by nearly 25%, nighttime crashes by nearly 40% and nighttime crashes in wet conditions by more than 33%.[8] A 2011 study of Missouri roads found that wider pave-

[4] "Improving Driver Behavior with Infrastructure Safety Countermeasures" ATSSA case study publication, 2015

[5] "Traffic Control Device Innovations to Improve Pedestrian and Bicycle Safety at Signalized Intersections" ATSSA case study publication, 2019

[6] Smarter Work Zones: Project Coordination and Technology Applications, ATSSA case study publication, 2016

[7] "Preventing Vehicle Departures from Roadways" ATSSA case study publication 2015

[8] "Improving Driver Behavior with Infrastructure Safety Countermeasures" ATSSA case study publication, 2015

ment markings had a positive safety impact in reducing fatal and serious injury crashes, including: a 46% reduction on rural, multilane undivided highways; a 38% reduction on urban, two-lane highways; and a 34% reduction on rural, multilane divided highways.[9]

We know that wider pavement markings have positive safety benefits, especially for older drivers. But the question arises of whether or not wider markings assist vehicles equipped with machine vision/connected and automated vehicles (CAVs). A separate TTI study finds that the answer is yes. In February 2017, BMW's President and CEO-North America testified that clear lane markings were a critical component to a transportation network that was ready to deploy CAVs.[10] Additionally, TTI undertook a separate study in 2018 which looked at wider pavement markings and CAVs. This study found that wider markings, under adverse conditions, consistently improved machine vision detection. Adverse conditions include: crack seal, pavement seams, scarring, "ghost" lines from previous markings, and glare.[11]

With that said, we believe that full deployment of CAVs is still some time away. The average age of a vehicle in the U.S. is 11.5 years old, and according to 2017 data, the median household income in the United States is $61,372.[12] In each congressional district, there are families who make below this average income line. And even for families who have a household income above the median, we need to recognize the fact that most families will not want to purchase a new car until they feel it is time for them to do so. It is hard to believe that, even once CAVs are readily available, families will be able to or necessarily want to immediately rush to their car dealer to purchase one of these new CAVs. It is important that we understand these realities when planning for the expanded deployment of these technologies.

SAFETY FUNDING

None of these safety priorities can be achieved without a solvent, robustly-funded Highway Trust Fund. Continuing to spend more from the Highway Trust Fund than is collected through taxes and fees is not a long-term solution. We need to address these deficiencies. In that regard, we strongly support an increase to user fees to address the long-term viability of the Highway Trust Fund, which include increasing and indexing the motor fuels user fees, an eventual move towards a vehicle miles traveled user fee system, and where it makes sense, the use of public private partnerships (P3s).

We view P3s as a separate issue from the Highway Trust Fund solvency. Increasing the use of P3s does not address the underlying fiscal cliff of the Highway Trust Fund. As we consider an infrastructure package and a FAST Act reauthorization, the Administration and Congress must grapple with the fact that increased direct federal investments are crucial to the rebuilding and safety of America's roadway network.

With any increase in revenue for the Highway Trust Fund, ATSSA calls on Congress to double the size of the Highway Safety Improvement Program to at least 10% of the overall core federal-aid highway programs so that we can aggressively combat fatalities and serious injuries on U.S. roads and expand the use of cost-effective, life-saving roadway safety infrastructure countermeasures.

In conclusion, as a nation, we have made great strides in all aspects of roadway safety: behavioral, vehicle, emergency response, and infrastructure. As we move into the third decade of the 21st century, we must continue to press forward with safety and not let it slip from our top priority. Roadway safety infrastructure and the Highway Safety Improvement Program are a key piece of the safety puzzle, and this Subcommittee has the opportunity and responsibility to lead the charge in reducing fatalities and serious injuries on our nation's roads.

Thank you again for the opportunity to testify today. I look forward to answering any of your questions.

Ms. NORTON. And thank you for your testimony.

We want to hear next from Mr. Mike Sewell here on behalf of the League of American Bicyclists.

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[9] "Innovative Safety Solutions with Pavement Markings and Delineation" ATSSA case study publication, 2016

[10] https://www.enotrans.org/article/two-decades-congress-still-pushing-21st-century-infrastructure/

[11] "Evaluation of the Effects of Pavement Marking Width on Detectability by Machine Vision: 4-Inch versus 6-Inch Markings" October 2018 Texas A&M Transportation Institute

[12] U.S. Census Bureau Data—https://www.census.gov/library/stories/2018/09/highest-median-household-income-on-record.html

Mr. SEWELL. Thank you, Chairwoman Norton as well as distinguished members of this subcommittee.

I am very happy to be here to answer your questions about pedestrian/bicycle safety.

My name is Mike Sewell. I am from Louisville, Kentucky, where I work as a professional engineer. I also serve as the Active Transportation Service Line Leader and one of the owners of Gresham Smith. It is an architecture and engineering consulting firm.

I am representing not only the engineering profession today, but also the League of American Bicyclists, where I serve on their board of directors.

But most importantly today, I come to you as a daily bicycle commuter. As little as a decade ago, I would be a very highly unlikely candidate to be talking to you about bicycle and pedestrian safety. However, as fate would have it, I found myself stuck in a car in construction traffic watching pedestrians and bicyclists move across a Second Street bridge passing me, and so in a fit of frustration I decided I would abandon my car on the side of the road and attempt to join them.

Something serendipitous happened about halfway across that Second Street bridge though. I heard a bicycle bell, and as I looked over my shoulder, a bicyclist said, "It is a beautiful day, is it not?"

And in my current state of mind, I had a hard time matching his enthusiasm, and at that point I had an epiphany. My choice of transportation that morning was negatively influencing my ability to enjoy myself.

So I decided right then and there I was going to bike to work the next day. That was almost 8 years ago, and I am pleased to say I have biked to work about every day since, and I now have a far better understanding of what it means to be joyful in a commute.

But me as an engineer, that decision made me challenge myself in the decisions I was making and our public right-of-way that might impede or allow other folks to have a similar epiphany and enjoy themselves in their commute.

And as most engineers will do, we dug into data, and what I found was quite alarming. Between 2008 and 2017, we saw pedestrian deaths increase by 35 percent while pedestrians as a mode share only increased by 1 percent.

What that tells me is that pedestrian deaths make up a vastly disproportionate amount of fatalities on our roadway.

Bike fatalities are at their highest level since the early 1990s, with a 3-year average increase of 14.7 percent.

There are also direct ties to equity issues in our transportation network that relate also to fatalities. What we found is older adults, people of color, or people attempting to walk and bike in lower income communities are far disproportionately represented in fatalities as well.

Part of this fix is education, and thankfully, the League of American Bicyclists has formal training programs that educate about 60,000 bicycle riders about how better to engage in transportation in our corridors, stay visible, and ride with confidence.

They have also formalized a bicycle-friendly driver program to better educate drivers on what to expect from bicyclists.

However, education alone is not enough. Congress has a critical role in addressing policy and funding that allows people like me, engineers, to proactively design safer transportation systems.

Nationwide bicycling and walking make up approximately 12 percent of trips. They roughly make up 18 percent of fatalities. Yet less than 1 percent of HSIP dollars are spent focusing on better bicycling and pedestrian infrastructure type projects to address these fatalities.

Part of the reason is the way HSIP is set up. States were required to prioritize hot spots, basically pinpoints on a map that categorize how fatal accidents are happening in a location.

But what we found, too, is that it is a straightforward approach, but it does not tell the entire story. There are other factors that determine if a pedestrian is going to be safe or a bicyclist is going to be safe, such as roadway classification, speed differential, geometry, as well as land use. All of these can be used for a data-driven approach to determine where safety issues are likely to occur or where future users will likely encounter them.

This is also not just an urban problem. We found that our rural areas also have a lot of difficulty implementing meaningful and safe multimodal connections.

Today I would like to suggest adding a special rule to HSIP that requires States to address vulnerable user safety where there is a high rate of fatalities related to vulnerable users.

Despite increases in bicyclist and pedestrian fatalities nationwide, there are some good stories that come out of this. In some locations, States and cities are seeing decreases. Oregon, for instance, is a great example, having nearly a 31-percent decrease in the number of fatalities for bicyclists over the course of 2007 to 2016, despite a 46-percent increase in bike commuter trips.

These results can be replicated through proactive policy, appropriate funding, education, and better engineered streets for all users.

I appreciate your time, and thank you for this opportunity. I look forward to answering any questions you may have.

[Mr. Sewell's prepared statement follows:]

Prepared Statement of Mike Sewell, Active Transportation Service Line Leader, Gresham Smith, on behalf of the League of American Bicyclists

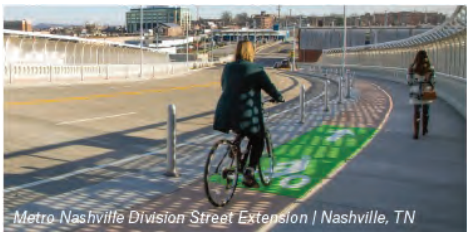
Thank you, Chairman DeFazio, Ranking Member Graves, and distinguished members of this committee for the invitation to present my perspectives on bicycle and pedestrian safety. My name is Mike Sewell. I am from Louisville, Kentucky where I work as a professional engineer. I also serve as the Active Transportation Service Line leader and one of the owners of Gresham Smith, an Architecture, Engineering and design practice. Gresham Smith is an active member of the American Council of Engineering Companies (ACEC), the business association of the engineering industry representing more than 5,600 engineering firms and 600,000+ engineers, surveyors, architects, and other specialists nationwide.

I am representing not only the engineering profession today, but also the League of American Bicyclists where I serve on their board of directors. Most importantly, today I come to you as a daily bicycle commuter. Since beginning to bike to work, I have ridden more than 7,000 miles and explored dozens of U.S. cities by bike and experienced both the fear and the joy of being a bicyclist on American roads.

BACKGROUND

The League of American Bicyclists has been a presence on Capitol Hill since 1880, when the first bicycle advocates rode to Washington, D.C. They presented a petition on a bicycle wheel demanding paved roads, which would be safer and more enjoyable for the rising number of bicyclists in America. Then, just as now, we wanted the voices of bicyclists to be heard in the design and future of our transportation system. As most people who bicycle will tell you, though, today's roads certainly do not feel like they have been designed to make it easier to get to work by bike or get to work safely by bike.

It has only been since 1991 that Congress has made funding for bicycling and walking projects part of federal transportation programs. In the intervening 28 years, we have seen a significant increase in bicycling for both transportation and recreation. More recently, state and local governments have begun promoting bicycling as a transportation option to reduce congestion and improve public health with the proliferation of bike share systems, separated bike lanes, and state and local initiatives with significant investments in bicycling networks. In places like Minneapolis, New York and Virginia, rates of bicycling have increased significantly and these gains have often been accompanied by better safety outcomes for all road users.



Metro Nashville Division Street Extension—Nashville, TN

GEOGRAPHY/LOCAL BACKGROUND

Slightly more than 20% of all bike commuters can be found in just 10 cities, including New York City where nearly 50,000 people choose to travel to work by bike. When those in Washington think about someone bicycling for transportation, the image that might come to mind is a young person on Pennsylvania Avenue coming to work from Columbia Heights, benefiting from urban density and local bike amenities.

But bicycling is by no means confined to first tier cities. Louisville, Kentucky, my hometown, is a strong example of how a mid-size city has also benefited from prioritizing bicycle facilities:

- Over the last decade, Louisville has made a concerted effort to improve our bicycling options, and is now certified as a Silver-level Bicycle Friendly Community by the League of American Bicyclists.
- Louisville is a member of the Road to Zero Coalition and Kentucky supports the national movement Toward Zero Deaths, focusing on how engineering roads can prevent deaths of people walking or biking.
  - These efforts have paid off: while nationwide the number of people killed while biking reached a 25-year high in 2016, Louisville saw a decrease in bicyclist fatalities in recent years even while biking to work increased significantly.
- Bicycling in Louisville is not just an urban solution, but is a way to help people experience the city, countryside and places in between.
  - I personally am involved in projects dedicated to creating safe bikeways within the urban core, as well as a project linking the city to the countryside. That 22-mile project will increase safe, healthy transportation options to nearby residents.
- As a Gold Level Bike Friendly Business, Gresham Smith, actively pursued building space adjacent to better bicycle and pedestrian infrastructure as well as adjacent land uses that allow our employees access to more restaurants and shop that are also bike friendly.



Town Branch Commons—Lexington, KY

Bicycling is also an important part of transportation in many rural states. In Montana, people bike to work at a rate more than twice the national average. In North Dakota, more people bike to work than use public transit. And in Northwest Arkansas, the construction of 163 miles of trails and paths over the last 10 years has led to a 24% average annual increase in bicycling.



Town Branch Commons—Lexington, KY

EQUITY

There is no denying that bicycling is an affordable and economical means of transportation and isused by a wide range of people to make a living. The money people save on transportation allows them to spend more in the local economy, as well as afford housing, education, and other necessary expenses. In fact, bicycling is integral to getting employees to and from work. According to data from the 2017 National Household Travel Survey, people from households with incomes of less than $25k per year took nearly 25% of all the nation's bike trips. Similarly, the same survey said that 20% of bike trips were to earn a living, which is 4% higher than the percentage of trips to earn a living for all modes of transportation [https://nhts.ornl.gov/vehicle-trips].

SAFETY

When I work with communities interested in increasing active transportation, one of their major concerns is safety. No community wants to lose a mother, father, son, daughter, or neighbor in a fatal crash. While multiple surveys show Americans want to bike more, it is often their concern about safety that stops them.

The concern for safety is one of both perception and reality.

- Improvements in traffic safety over the last quarter century have not been evenly distributed; people in cars have been the main beneficiaries, while people biking and walking represent an increasing percentage of traffic fatalities.
- But the data also shows increasing fatalities of people biking and walking, with more people being killed while biking in 2016 than in any year since 1991.
- On a per trip basis, bicycling is just slightly more dangerous than walking and it is safer than walking on a per mile basis.

You might be thinking we are seeing higher fatalities among bicyclists as a result of more people bicycling. However, the inverse is true. For example, despite their overall disparity in population size, more people bike to work in Oregon than in Texas, but in 2016 Oregon had 55 fewer bicyclists die on its roads than Texas. This difference in safety can be explained by at least two reasons:

- Oregon has a long history of investing in safe bicycling infrastructure, meaning that more people are likely riding on safe infrastructure. Oregon has had a Complete Streets law since 1971 and makes bicyclist safety an emphasis area in its Strategic Highway Safety Plan.
  - In comparison, Texas adopted a Complete Streets policy in 2011 and does not make bicyclist safety an emphasis area in its Strategic Highway Safety Plan.
- The number of people biking in Oregon leads to an effect known as "safety in numbers." This effect has been found in numerous studies. The more people who bike leads to more driver awareness of bicyclists, more predictable behavior by bicyclists and drivers, and improved safety through better behavior.



A re-imagined Broadway in Louisville, KY with a complete street approach.

THE LEAGUE'S THEORY OF SAFETY

While there is limited data to pinpoint the reasons for increasing bicyclist fatalities, we know that bicyclists' perceptions of safety and safety outcomes are shaped by drivers and the built environment. According to a 2012 NHTSA survey [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811841b.pdf], the most common reason that a bicyclist felt their safety was threatened was due to a motorist's action—usually driving too close. In keeping with that data, improving bicyclist safety should also be about improving driver behavior, like limiting distractions, and implementing infrastructure that reduces or mitigates opportunities for drivers to threaten bicyclists.

To improve bicyclist safety the League has pursued three strategies:

1. Increasing bike infrastructure and networks, especially protected bike infrastructure. According to AARP [https://www.aarp.org/livable-communities/getting-around/info-2016/why-bicycling-infrastructure-is-good-for-people-who-dont-ride-bikes.html], in New York City, injuries for motorists, pedestrians and bicyclists declined [http://www.streetsblog.org/2014/09/05/new-dot-report-shows-protected-bike-lanes-improve-safety-for-everybody/] by 20% on streets with protected bike lanes.
   - Bicycle infrastructure can include a variety of solutions based on different community needs. My written testimony includes pictures of some examples.

2. Promoting Complete Streets policies and practices. Earlier, I noted how Oregon's early adoption of Complete Streets has led to decades of road design that have resulted in better safety outcomes for cyclists. That is because Complete Streets policies consider all users in the planning, design and construction phases of roads. By adopting policies and practices that assume consideration for all users, the costs of bicycle lanes can be reduced by up to 40% according to data from the FHWA [https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/resurfacing/resurfacing_workbook.pdf].
   - Complete Streets can encompass a variety of street designs, safety improvements, and planning and operational practices. My written testimony includes picture of some examples.
3. Adopting and enforcing safe passing laws, which require drivers to give cyclists at least three feet of clearance when they are passing. According to the National Conference of State Legislatures [http://www.ncsl.org/research/transportation/safely-passing-bicyclists.aspx], 32 states, including Kentucky have this type of law.
   - According to data from NHTSA, a person is most likely to be killed while biking when hit from behind despite this being a relatively rare collision type.

The League believes that improving bicyclist safety will take dedicated pursuit of those three strategies and more. Congress should consider whether more proactive safety legislation—which might improve vehicle designs, provide incentives for advanced and automated vehicle safety systems, and create performance standards for in-vehicle and device-based distraction—are appropriate to supplement the strategies discussed here.

Federally-backed initiatives that embrace the goal of zero traffic deaths, such as the Road to Zero Coalition and Towards Zero Deaths national safety strategy have attracted wide support, but some safety efforts require congressional leadership.

"...the most common reason that a person bicycling felt their safety was threatened was due to a motorist's action..."

Taking off my bike helmet and speaking as an engineer, the trend we are seeing in the engineering industry is toward a "safe systems" approach. The basic idea is that humans will continue to make mistakes and/or choose risky behaviors (e.g. distracted driving, speeding, driving while impaired, not wearing a seatbelt, etc.) so the transportation infrastructure should be designed to reduce fatalities when accidents do occur.

Using a data-driven, analytical approach, engineers are deploying a variety of proven countermeasures and design strategies—such as corridor access management, adding turn lanes, medians and pedestrian crossing slands, and road diets/reconfigurations, among many others—to control vehicle speeds, calm traffic, and thereby manage the kinetic energy transfer among road users in accidents. These factors, in addition to traditional design criteria such as sight distance, intersection design to reduce conflicts, and roadside improvements on horizontal curves, can enhance safety of all roadway users and adapt the structure and function of the system to accommodate the complexities of human behavior.

HSIP ASK

One area where Congress can make a difference in the lives of people who bike and walk is the Highway Safety Improvement Program (HSIP). HSIP [https://www.fhwa.dot.gov/fastact/factsheets/hsipfs.cfm] is a congressionally authorized road safety program that distributes more than $2 billion each year based on where data shows funding could improve road safety.



Louisville Metro Urban Bike Network—Louisville, KY

First, I would encourage the committee to increase funding for HSIP commensurate with an overall increase in the federal-aid highway program. Safety elements are included in other apportionments, but HSIP is a primary tool for the kinds of enhancements we are discussing and cannot be neglected.

Despite the data and safety outcome focus of the program, because the algorithms are written with blind spots, funding does not flow to places where bicyclists and pedestrians are dying. Currently, Congress requires HSIP funding to go to "hot spots" and leaves it up to state Departments of Transportation to write the formulas for where those hot spots occur.

- For instance, the New Jersey DOT has a stated policy that its HSIP funding should be spent on pedestrian improvements in the same proportion of fatalities that are pedestrians.
- However, despite over 30% of roadway fatalities in New Jersey being pedestrians, the state reports spending NONE of its HSIP on pedestrians. The "data-driven" formula cannot identify a hot spot for these pedestrian fatalities and so 1 in every 3 roadway fatalities in New Jersey goes unaddressed by HSIP.

Bicycling and walking make up 12% of transportation trips, 18% of roadway fatalities, and receive less than 1% of HSIP investments. In 10 states where bicyclist and pedestrian fatalities averaged more than 15% of all traffic fatalities in the last 5 years, the state reported spending $0 of HSIP funding on bicyclist and pedestrian safety projects during that time.

To effectively improve pedestrian and bicyclist safety through HSIP, Congress needs to provide leadership to state DOTs.

- Pedestrian and bicyclist fatalities do not usually occur in "hot spots" but do predictably occur along corridors that can be identified using alternative analyses. Often these corridors are arterial roadways with commercial and residential development and high observed speeds.
- Speed is incredibly important for the safety of people biking and walking.
  - If you are driving 45 mph and hit a bicyclist or a pedestrian, there is a 90% chance you will kill them. At 35 mph the chances of death drop to 50%, at 25 mph there is 85% chance of survival.

The growing number of Vision Zero communities has found a vast majority of fatalities happen on a small percentage of roads with similar contexts.



Louisville Metro Urban Bike Network—Louisville, KY



Metro Nashville 28th-31st Avenue Connector—Nashville, TN

- For instance in San Francisco, 75% of severe and fatal traffic injuries occur on just 13% of its streets [1].
- In Denver, 50% of traffic fatalities occur on 5% of the roads [2].

Congress plays a critical role in leading the nation towards sustained improvements for people bikingand walking through the Highway Safety Improvement Pro-

[1] Vision Zero SF 2019 Action Strategy.
[2] Denver Vision Zero Action Plan. https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/visionzero/Denver-Vision-Zero-Action-Plan-draft-July2017.pdf. Pg.5

gram. In past transportation bills, such as MAP–21 and the FAST Act, Congress has taken steps to improve the safety of people biking and walking, including:

- Removing the requirement to focus only on hot spots.
- Requiring more attention to bicycling and pedestrian crashes.
- Allowing states to use HSIP on roads that have dangerous features, before fatalities occur. Allowing proactive systematic approaches to safety.

Those changes were necessary and we applaud them. However, many states have not yet significantly addressed the crisis of safety for people who bike and walk.

At this time, we are not asking states to change their HSIP formulas, but rather are proposing supplementing those formulas. We don't want to throw out the good work done to address hot spots, but want to stop the perpetuation of blind spots and encourage states to slow down and take a harder look at what they might not be seeing.

- In areas where vulnerable user fatalities are above a certain threshold, such as MPOs, regional planning areas, tribal lands, and other jurisdictions that receive federal funding, HSIP funds should be directed to vulnerable user safety projects and protections in those areas.
  - Such a change dovetails with changes in the FAST Act which requires states to consider all users when constructing and reconstructing on non-interstate Federal Highway System roads. These roads are often the arterials and connectors where bicyclist and pedestrian fatalities happen.
  - Vulnerable user safety projects could include separated bicycle infrastructure, improved at-grade crossings including medians, grade-separated connections across high speed and high volume roads, and wider shoulders on rural roads. Many of these projects are already recommended by the FHWA.

RECOGNIZE PAST CHANGES

The changes we want for HSIP also dovetail with non-infrastructure changes made by Congress, which recognized the need for education and enforcement to complement safe infrastructure for people biking and walking.

The League believes that traffic safety goes beyond infrastructure and vehicle standards. While my professional career is about building complete streets and better infrastructure for all road users, I am also a strong believer in the role of education in improving the safety of bicycling.

- As a certified League Cycling Instructor, I have been trained to teach adults and children safe bicycling practices, including obeying traffic laws, practicing defensive bicycling techniques, and ensuring your bike is safe to ride.
- Since the 1970s the League has trained more than 6,000 cycling instructors, and these instructors train an average of 60,000 bicyclists each year. Our materials have been translated into seven languages.
- The League is also rolling out a Bicycle Friendly Driver curriculum. It is a program developed in Fort Collins, Colo., to teach drivers why bicyclists ride like we do and create a shared understanding of how we use the road.
- As a lifelong learner in the transportation industry, programs like these help people better respond to the changes we are seeing on our roads and can better support people who choose or depend on biking and walking.

On enforcement, the League celebrated Congress's decision in the FAST Act to create the 405(h) program that funds education and enforcement around state laws pertaining to bicyclists and pedestrians in those states where bicyclist and pedestrian fatalities are more than 15% of all traffic fatalities.

Since its creation in the FAST Act, every eligible state has applied for the available funding and that funding has been used for a variety of education and enforcement campaigns.

- In Georgia [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ga_fy2018_ar.pdf], 405(h) funds were used to publish bicycle safety messages, reaching over 14 million contacts by leveraging existing bicycling-related groups, and to distribute more than 17,000 bicycle safety guides to agencies and others.
- In Oregon [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/or_fy2018_ar.pdf], 405(h) funds were used to fund mini-grants to localities to implement an "Oregon Friendly Driver" program.
- In Florida [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/fl_fy18_ar.pdf], 405(h) funds were used to develop a four-hour classroom based training course to improve the effectiveness of officers taking part in High Visibility Enforcement to support pedestrian and bicycle safety in Florida.

The 405(h) program shows how directing funding to change the culture around how we view the safety of people biking and walking can be successful. Through

these programs, Congress has demonstrated attention to the safety of people biking and walking as well as encouraged continued actions to promote the safety of all people who use our nation's roadways.

In closing, I would like to again emphasize the need for updates to the Highway Safety Improvement Program so that it directs funding to the needs of all roadway users. As currently implemented, HSIP all too often has blind spots for the safety of people walking and biking. Just as we ask drivers to do, the program needs to check your blind spots for people you may not have seen.

We appreciate the steps Congress has taken in the last two transportation bills on improving education regarding bicycle and pedestrian laws, and believe Congress should build on those steps by improving HSIP so that the transportation system's most vulnerable users are not overlooked in its data-driven process.

Ms. NORTON. Thank you, Mr. Sewell.

Next, Nicholas Smith for the National Safety Council.

Mr. SMITH. Good morning, Chairwoman Norton, Ranking Member Spano, and Chairman DeFazio, as well as the members of the subcommittee. Thank you for inviting me to testify today on improving the safety on our Nation's roadways.

My name is Nick Smith, and I am the interim president and CEO of the National Safety Council, and I am also the chair of the Road to Zero Coalition, which is focused on reaching zero fatalities by 2050.

Last year, the coalition, which is over 900 strong, representing transportation organizations, government, businesses, academia, safety advocates, including those organizations represented here today on this panel, issued this report [indicating a document], a framework to help us get to zero deaths on our roadways by the year 2050.

Together we call out three steps to reach the goal of zero deaths on our roadways. One, we believe doubling down on what works through proven evidence-based strategies.

Two, accelerate advanced lifesaving technology in vehicles and in infrastructure.

And three, prioritize safety by adopting a safe systems approach and creating a positive safety culture.

My full testimony mentions specific steps for each of these. Today I will focus on prioritizing safety, which is the third step we call out.

Today over 100 people will die in crashes on our roadway. Yesterday over 100 people died in crashes, and tomorrow over 100 people will die again in motor vehicle crashes. But there is no outrage. In every other mode of transportation this committee oversees, there is a different expectation of safety.

For example, after two airplane crashes, countries across the world grounded all Boeing 737 Max 800 and 900 airplanes. In less than a week, a coordinated global action was taken to address a potential risk to millions of people.

This committee rightly held hearings to determine causation and next steps. We can all agree that this was the right decision, but every 72 hours, we lose 328 people, nearly the equivalent of these 2 airplane crashes on U.S. roadways.

Where is our outrage over these deaths? And where is our urgency to prevent them? We must demand safety for all no matter how they are mobile.

Now for the good news. We know how to prevent these fatalities from happening. We just have not had the will to prioritize these actions.

The culture around traveling on the roadways is very different from the airways. We require safety management systems and safety training for people who work in our airway system, and we even have a safety briefing for passengers before every flight.

When things go wrong, this committee demands answers. Several Federal agencies send people to investigate, and a plane can be grounded. Simply put, we have a strong safety culture when it comes to aviation.

So how do we raise the bar on safety on our road? The reauthorization of the FAST Act provides you an opportunity to do so today.

While prioritizing safety, the reauthorization bill should encourage States to pass strong laws to implement proven countermeasures to save lives, like automated enforcement and lowering the blood alcohol concentration.

Also, the bill should support safer roadway designs that provide for the safe movement of all roadway users and incorporates safety no matter if in a rural, suburban, or urban area. We know that drivers are human and we make mistakes and errors, and safer designs can help make sure those errors do not become fatalities.

These are only a few examples of how to prioritize safety and move toward our goal to zero deaths on our roadway system.

I have with me a letter from the Road to Zero Coalition asking Congress to prioritize safety. This bill should not be about more miles of pavement only. It must include safety in every aspect of the bill.

I urge you to use this report as a framework to prioritize safety in our transportation system.

I hope you will join me in saying enough is enough. The value of life should not depend on whether you are sitting on an airplane or behind the wheel of a car. It is time to bring the culture of safety on our roadways to levels we have achieved in the air. We know how to get there. We just need the will to do so.

I look forward to discussing more with you today. Thank you.

[Mr. Smith's prepared statement follows:]

Prepared Statement of Nicholas J. Smith, Interim President and Chief Executive Officer, the National Safety Council

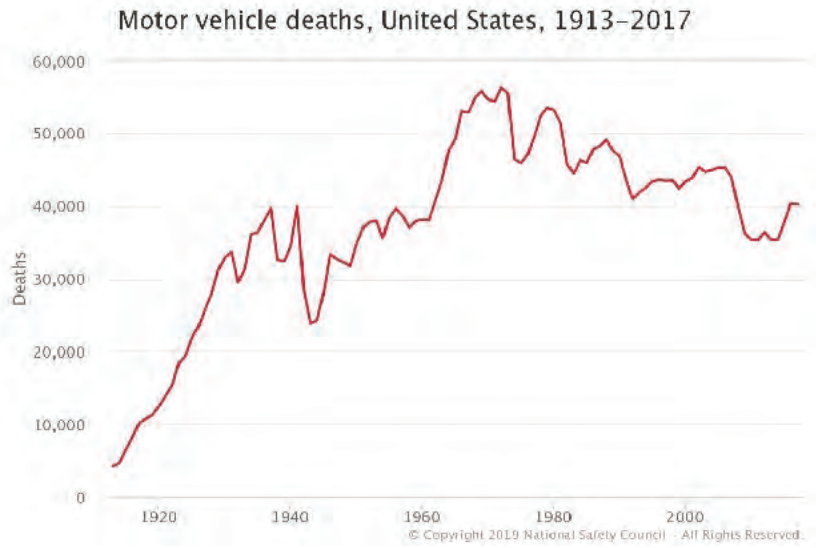
Chairwoman Norton, Ranking Member Davis and members of the Subcommittee, thank you for inviting me to testify today on improving the safety of our nation's roadways.

It is an honor to be with you today. My name is Nicholas Smith, and I am the Interim President and CEO of the National Safety Council (NSC) and the Chair of the Road to Zero Coalition. It is nice to be back in Washington, as I previously lived and worked here at the Department of Homeland Security and for Majority Leader Bill Frist.

The National Safety Council is a 100-year-old nonprofit committed to eliminating preventable deaths in our lifetime by focusing on reducing fatalities and injuries in workplaces, on the road and in homes and communities. Our more than 15,000 member companies represent employees at more than 50,000 U.S. worksites. Not only do we work with companies but also with organized labor, who share our dedication to keeping workers safe on and off the job. These members are across the United States and are likely in each district represented on this Committee.

The National Safety Council estimates that over 40,000 people were killed in motor vehicle crashes in 2018.[1] Included here are the number of people killed in motor vehicle crashes in 2018 from the Chairs' and Ranking Members' states, and a complete overview of all states is included with my testimony.

District of Columbia	34
Illinois	1,048
Missouri	917
Oregon	468



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These are the lives of your constituents. These mothers, fathers, sisters, brothers, aunts and uncles contributed to the communities in which they lived. Yet, our national outrage at these losses is conspicuously absent, particularly when you compare to deaths in other forms of transportation, such as aviation. These crashes and deaths on our roadways not only have a human toll, but there is an annual cost to the American economy of over $433 billion.[2]

The United States has consistently avoided the hard choices needed to save lives on the roadways. The reauthorization of the Fixing America's Surface Transportation (FAST) Act is an opportunity for us to start making the right choices, and I appreciate the opportunity to talk with you today about how to do more to save lives, because we know that all of these deaths are preventable.

What disappoints many of us in the safety community is that the main causes of motor vehicle fatalities—lack of seat belt use, alcohol-impaired driving, and speed—have remained the same for decades.

50% of people who die in motor vehicle crashes are unbelted[3]
30% of people who die in crashes are involved in alcohol-impaired wrecks[4]
27% of the fatalities are speed-related[5]

The solutions to these problems are simple and clearly known, but we need the political and societal will to widely implement them.

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[1] https://www.nsc.org/in-the-newsroom/2018-marks-third-straight-year-that-motor-vehicle-deaths-are-estimated-to-have-reached-40-000
[2] https://injuryfacts.nsc.org/motor-vehicle/overview/introduction/
[3] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812662
[4] https://www.responsibility.org/alcohol-statistics/drunk-driving-statistics/drunk-driving-fatality-statistics/
[5] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812451

Recently, "zero" language has been incorporated into the goals on our roadways. This has been commonplace in other settings like workplaces, where NSC has been involved since its beginning, and it has had meaningful results. NSC is so committed to a zero goal on the roadways that we lead the Road to Zero Coalition, a diverse group of over 900 members committed to eliminating roadway fatalities by 2050. Over the past two and a half years, the coalition has grown to include members from across the country representing transportation organizations, businesses, academia, safety advocates and others, the first time so many organizations have collaborated to put forth a plan to address fatalities on our roads.

The centerpiece of our work together has been the creation of the Road to Zero report, a comprehensive roadmap of the strategies necessary to achieve our goal by 2050. One year ago this month, the coalition issued our report with three primary recommendations.

1. Double down on what works through proven, evidence-based strategies
2. Accelerate advanced life-saving technology in vehicles and infrastructure
3. Prioritize safety by adopting a safe systems approach and creating a positive safety culture

DOUBLE DOWN

We know what works. Enacting evidence-based laws related to seatbelts, alcohol impairment and speed shows we are ready for change, and education about the laws combined with strong enforcement delivers on the change. We urge legislators to look at these and the many other laws that, if enacted, enforced and promoted would drive down fatalities. While many of these laws require state action, the federal government should consider incentives in the reauthorization bill to accelerate state adoption and enforcement.

The data and research tell us that primary seat belt laws, lowered blood alcohol content laws, and better speed management efforts would have meaningful impact.

Seatbelts

Regardless of other causal factors, the lack of proper occupant restraint continues to increase the severity and lethality of motor vehicle crashes. While 89.6% of American drivers and vehicle occupants used seat belts in 2018, more than 1 in 10 continued to put their lives at unnecessary risk, with tragic consequences. Almost half (47%) of people killed in motor vehicle crashes in 2017 were unbelted.[6] Yet despite these data, only 34 states and the District of Columbia have primary enforcement of their seatbelt laws—meaning law enforcement may stop vehicles solely for belt law violations. Of the other 16 states, 15 have secondary laws—requiring police to have another reason for a traffic stop—and one, New Hampshire, has no belt law.

Primary seatbelt laws are proven to increase the rate of belt use and save lives. In 2018, 90.6% of passenger vehicle occupants were belted in states with primary laws, while only 86.4% of occupants were belted in states with secondary or no seatbelt laws.[7] There should only be one acceptable level of safety. Public education and high-visibility enforcement campaigns such as Click It or Ticket have increased public awareness of the dangers of driving unrestrained, but will only be most effective when accompanied by strong laws.

In 2016, the National Highway Traffic Safety Administration (NHTSA) estimates that the use of seat belts in passenger vehicles saved 14,668 lives and if all drivers and passengers had worn their seatbelts, an additional 2,456 lives would have been saved.[8] In Oregon and Illinois, 16 and 52 lives respectively could have been saved with 100% seat belt use.[9] Similarly, the Center for Disease Control and Prevention provides the Motor Vehicle Prioritizing Interventions and Cost Calculator for States (MV PICCS) to help policymakers determine the lives saved and costs of implementation of 14 different evidence-based motor vehicle laws. When comparing Oregon and Illinois again, seat belt enforcement campaigns could save 16 and 35 lives respectively.[10]

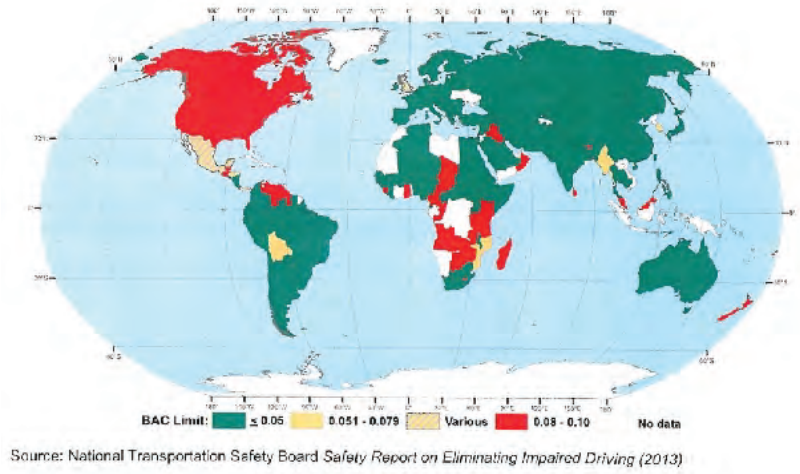
Impairment

Another leading cause of roadway deaths is alcohol impairment. Every day, almost 30 people die in alcohol-impaired crashes in the United States—one every 48 minutes.[11] Despite these data, our culture does not prioritize safety, with more than

[6] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812662
[7] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812662
[8] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812454
[9] Ibid.
[10] https://www.cdc.gov/motorvehiclesafety/calculator/index.html
[11] https://www.nhtsa.gov/risky-driving/drunk-driving

1 in 10 drivers admitting to driving in the prior year when they thought they were close to or over the legal blood alcohol content(BAC) limit.[12]

The data are clear: drivers are four times more likely to crash at .05 than if they had nothing to drink.[13] Most other industrialized countries have implemented a BAC of .05 or lower, changes which have been followed by decreasing numbers of fatalities from alcohol-impaired crashes. Lowering the BAC limit from .08 to .05 is proven to save lives on the roadways, and in the U.S. could save as many as 1,500 lives if implemented nationally.[14] Utah is the first state in the U.S. to pass a law lowering the BAC to .05. NSC supports other states attempting to implement such legislation, and hopes to see federal legislation introduced to this end.



Source: National Transportation Safety Board ''Safety Report on Eliminating Impaired Driving (2013)''

Speed

The United States has a fatal problem with driving too fast. Just last week, the Insurance Institute for Highway Safety (IIHS) estimated that increasing speed limits over the past 25 years have led to 37,000 deaths.[15] Nearly 27% of roadway fatalities include speed as a causal factor, a factor that is even more deadly for our growing population of vulnerable road users such as pedestrians and bicyclists.

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[12] http://tirf.us/wp-content/uploads/2018/12/RSM-TIRF-USA-2018-Alcohol-Impaired-Driving-in-the-United-States-3.pdf

[13] Blomberg RD, Peck RC, Moskowitz H, Burns M, Fiorentino D: The Long Beach/Fort Lauderdale relative risk study; J Safety Res 40:285; 2009.

[14] Fell, J.C., and M. Scherer. 2017. Estimation of the potential effectiveness of lowering the blood alcohol concentration (BAC) limit for driving from 0.08 to 0.05 grams per deciliter in the United States. *Alcoholism, Clinical and Experimental Research*. doi: 10.1111/acer.13501.

[15] https://gallery.mailchimp.com/6bedee967fbeb62935e59055b/files/63d3f7b0-3f00-446b-9613-031039a61d02/iihs__news__040419__emb.pdf?mc__cid=5154c704bc&mc__eid=ab62186d28



Image: Seattle Department of Transportation

As illustrated, at 20 miles per hour, 9 out of 10 pedestrians would survive being struck by a vehicle, but if you double that speed, 9 out of 10 pedestrians would be killed.

It is not only pedestrians and other vulnerable road users impacted by excess speed, but also 9,242 motor vehicle drivers and occupants who died in 2017 in speed-related crashes.[16] One evidence-based proven countermeasure for speed is automated enforcement. Automated enforcement is proven to reduce speed and save lives, but implementation must be done properly, with safety—not revenue—as the primary objective. NSC, AAA, the Advocates for Highway and Auto Safety and IIHS created the attached checklist to provide guidance to communities as they deploy automated enforcement. As you can see, the guidance encourages transparency and grace among enforcement actions given and dedication of the funds to safety, trauma care or similar purpose.

There are other deadly problems on our roadways, like distraction, that we can do more to solve as well, and these issues should not be overlooked by this Committee.

ADVANCE TECHNOLOGY

Technology is an important disrupter that will continue to transform roadway safety well into the foreseeable future. To reach zero deaths, we need to encourage the development of innovations that address human failures and road design failures and, once proven, establish mandates for adoption of technologies that work. Further, this regulatory certainty and defined standards should drive interoperability and ensure meaningful outcomes. Additionally, data collection on serious and fatal crashes should be required in order to share consistent and verified information, and testing on public roads should be reported to the jurisdictions in which the tests occur. This level of transparency will help consumers better understand the technology and how to operate in it, with it and around it.

Establishing performance standards and common nomenclature for the automated vehicle (AV) technology will also help encourage better understanding. Earlier this year, AAA released a report about the lack of consistency. In it, they found adaptive cruise control has 20 different names and lane keeping assistance has 19 unique names.[17] The trend continued with other technologies. These different names do not aid consumer understanding and acceptance. In fact, AAA also found that over 70% of consumers are afraid of fully automated vehicles.[18] This reauthorization bill should help establish more standards for technology by building the necessary frameworks to support our desired outcomes to reduce deaths on the roadways, and it should include commercial motor vehicles too.

As we sit here today, automakers, technology firms and others are developing partially and fully automated vehicles. The potential safety benefits of automated vehicles could be incredible. When ready, these vehicles will not glance down at their phone, speed through a red light or have an alcoholic beverage before getting behind the wheel—all mistakes that we as human drivers continue to make over and over again, with deadly consequences. To be clear, it will be decades before we have meaningful fleet penetration on U.S. roadways of AVs. In the meantime, there are significant technologies available in vehicles today, Advanced Driver Assistance Sys-

[16] NSC analysis of NHTSA FARS data
[17] https://www.aaa.com/AAA/common/AAR/files/ADAS-Technology-Names-Research-Report.pdf
[18] https://newsroom.aaa.com/2019/03/americans-fear-self-driving-cars-survey/

tems (ADAS) that can prevent or mitigate crashes. Consumer education about these technologies is key.

While standards are essential, public education is also important. The National Safety Council is working to expand consumer education around these new technologies. NSC and the University of Iowa created a website, MyCarDoesWhat.org, to help. When a person visits MyCarDoesWhat.org, he or she learns about dozens of existing safety features such as lane departure warning, blind spot monitoring, backup cameras, automatic emergency braking and more. The MyCarDoesWhat team has developed videos, infographics and other informational pieces to help drivers understand how these technologies work and what they are capable of doing. The purpose of MyCarDoesWhat is to educate the public about these assistive safety features in order to maximize their potential lifesaving benefits.

Additionally, the National Safety Council was a founding member of PAVE (Partners for Automated Vehicle Education), which launched in January. PAVE is a broad-based coalition that includes automotive and technology companies, safety and mobility advocates and community partners. PAVE members believe that in order to fully realize the benefits of self-driving technology, policymakers and the public need factual information about the present and future state of such technology. PAVE enhances public understanding through a variety of strategies including an educational website at PaveCampaign.org; "hands-on" demonstrations allowing the public to see and experience driverless technology; and workshops to help policymakers understand the technology. In the future, PAVE will produce educational toolkits for car dealers to help them communicate more effectively with customers about their vehicles' capabilities and limitations.

When it comes to technology, the U.S. prioritized safety years ago by dedicating spectrum for safety purposes to prevent crashes. Today, other groups would like to take the spectrum for streaming services. I urge this committee to direct the U.S. DOT, the Federal Communications Commission, the Department of Commerce and others to maintain the spectrum for roadway safety purposes allowing vehicles to communicate with each other, infrastructure, pedestrians and others to prevent crashes. This spectrum provides a safety margin that we should not give away.

PRIORITIZE SAFETY

By prioritizing safety, we commit to changing our nation's safety culture. This means we have to accept that any life lost is one too many. Once we accept that one death is too many, we will begin thinking about how to take a "safe systems" approach to our roadways. Fully adopted by the aviation industry, this means building fail-safe features that anticipate human error and developing infrastructure with safety margins.

With the understanding that people will make mistakes, the built environment or infrastructure can be more forgiving to eliminate fatalities. Some of these changes may include engineering greater safety into a design. For example, in the pictures below, a multi-lane intersection with a red light in Scottsdale, Arizona was replaced with a roundabout. With the intersection, there are 32 potential points of failure, but with a roundabout, that is engineered down to only 8.[19] Speeds are decreased, and if crashes do occur, they occur at angles that are not as violent.



Successful infrastructure redesign can also look like the picture below from New York City. The picture on the left shows two roads merging together without an area for pedestrians, and the lane lines are non-existent. However, the reworked

[19] https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/presentations/safety__aspects/long.cfm

merge incorporates clearly marked lanes of travel, large sidewalks and areas of less exposure to vehicles for pedestrians.



These infrastructure changes are just as important in rural areas. Rumble strips on the center line or edge of roadways can prevent the roadway departure crashes that account for 52% of fatalities in the U.S.[20] Cable median barriers can also provide a margin of safety to redirect people in to their lane of travel, and high friction surface treatments can decrease vehicle stopping distance on roadways. These are all tools we have available today.

Infrastructure changes can be expensive, but they do not have to be. Through the Road to Zero Coalition, NSC has awarded grants to groups across the country working in communities of all sizes. In the first year of grants, the National Complete Streets Coalition, which is testifying today too, worked with three communities: Lexington, KY, Orlando, FL, and South Bend, IN. Each city was provided only $8,000 dollars from the grant for temporary infrastructure changes that you can see below to measure results. Each city had measurable improvements to safety even with a small dollar investment.

[20] https://safety.fhwa.dot.gov/roadway__dept/



South Bend, IN

The biggest and hardest change is the shift to truly prioritize safety by changing safety culture on the roads. We cannot be complacent when it comes to losing so many people each and every day on our roads. We need leaders in this area, and I can think of none better than the members of this Committee and Subcommittee. The reauthorization is the vehicle to accomplish this change. We have changed safety culture in workplaces, around child passenger safety and in other areas. We can do it here too with your help.

OTHER PROVISIONS

There are specific provisions in the FAST Act that can be improved to prioritize safety. These include:

- Altering the "Section 405" programmatic funds that largely go unused by reworking the program to give states different options
- Expanding the use of Highway Safety Improvement Program

Additionally, the National Safety Council believes we can use data to better target roadway areas for safety improvements. Identifying and prioritizing dangerous areas of roadways for safety improvements can save lives.

Several states have provided estimates to the U.S. Department of Transportation that the fatalities in their states will increase. Focusing the spending in those states on safety to prevent this projection from coming true should be a priority for Congress.

There are evidence-based safety solutions that federal dollars are prohibited to purchase or federal safety programs that have been cut, but there are several comm unities that would like to employ a range of options that will improve safety. Allowing flexibility in federal spending for evidence-based safety improvements can save lives, and I urge this committee to re-evaluate some of those restrictions on technology like automated enforcement and other programs.

NSC looks forward to working with this Committee to fully develop these provisions.

CONCLUSION

You have an opportunity in front of you to prioritize safety, and the National Safety Council is committed to working with you to reach zero fatalities on our roadways. I hope you will join me in saying enough is enough and start down the Road to Zero. It is not impossible. It just hasn't been done yet.

Preliminary motor vehicle annual fatality estimates

State motor-vehicle deaths and percent changes

State	Number of Months Reported	Deaths Identical Periods			Percent Changes	
		2018	2017	2016	2017 to 2018	2016 to 2018
TOTAL U.S.	12	40,000	40,231	40,327	-1%	-1%
Alabama	12	948	914	1,044	4%	-9%
Alaska	12	80	77	84	4%	-5%
Arizona	12	1,013	970	950	4%	7%
Arkansas	12	489	491	545	< 0.5%	-10%
California	12	3,651	3,564	3,680	2%	-1%
Colorado	12	624	630	605	-1%	3%
Connecticut	12	297	284	307	5%	-3%
Delaware	12	111	119	119	-7%	-7%
Dist. of Columbia	12	34	30	28	13%	21%
Florida	12	3,325	3,087	3,037	8%	9%
Georgia	12	1,497	1,528	1,540	-2%	-3%
Hawaii	12	117	107	119	9%	-2%
Idaho	12	233	242	253	-4%	-8%
Illinois	12	1,048	1,080	1,078	-3%	-3%
Indiana	12	859	910	820	-6%	5%
Iowa	12	319	331	403	-4%	-21%
Kansas	12	404	462	431	-13%	-6%
Kentucky	12	721	775	830	-7%	-13%
Louisiana	12	777	792	756	-2%	3%
Maine	12	127	171	159	-26%	-20%
Maryland	12	487	525	490	-7%	-1%
Massachusetts	12	357	360	399	-1%	-11%
Michigan	12	962	1,041	1,064	-8%	-10%
Minnesota	12	382	358	398	7%	-4%
Mississippi	12	633	685	670	-8%	-6%
Missouri	12	917	932	939	-2%	-2%
Montana	12	182	186	190	-2%	-4%
Nebraska	12	230	226	217	2%	6%
Nevada	12	331	305	327	9%	1%
New Hampshire	12	146	102	137	43%	7%
New Jersey	12	565	638	607	-11%	-7%
New Mexico	12	387	375	398	3%	-3%
New York	12	873	928	953	-6%	-8%
North Carolina	12	1,457	1,404	1,435	4%	2%
North Dakota	12	104	113	113	-8%	-8%
Ohio	12	1,071	1,179	1,129	-9%	-5%
Oklahoma	12	627	646	668	-3%	-6%
Oregon	12	468	436	495	7%	-5%
Pennsylvania	12	1,244	1,141	1,189	9%	5%
Rhode Island	12	59	84	53	-30%	11%
South Carolina	12	1,034	983	1,015	5%	2%
South Dakota	12	129	132	116	-2%	11%
Tennessee	12	1,047	1,040	1,042	1%	< 0.5%
Texas	12	3,597	3,721	3,751	-3%	-4%
Utah	12	264	272	280	-3%	-6%
Vermont	12	68	68	64	0%	6%
Virginia	12	817	839	750	-3%	9%
Washington	12	541	554	536	-2%	1%
West Virginia	12	295	303	269	-3%	10%
Wisconsin	12	577	603	592	-4%	-3%
Wyoming	12	111	123	112	-10%	-1%

NOTE: Deaths are reported by state traffic authorities. ALL FIGURES ARE PRELIMINARY. To ensure proper comparisons, 2016 and 2017 figures are preliminary figures covering the same reporting period as those for 2018. The totals for 2016 and 2017 are from the National Center for Health Statistics.

States in bold: States with a decrease in deaths from 2017 to 2018.



RED LIGHT CAMERA PROGRAM CHECKLIST

Photo enforcement is a proven, effective tool to make roads safer. Well-controlled before-and-after studies have found that red light cameras reduce violations and injury crashes, especially the violent front-into-side crashes most associated with red light running.

Successful programs have a strong public information component, are transparent, and emphasize safety over revenue. In fact, communities should expect that revenue will decline over time as fewer drivers run red lights. Some, though not all, studies indicate that rear-end crashes increase initially, but rear-enders are typically low-severity crashes compared with the high-speed right-angle collisions targeted by red light camera programs.

This checklist assumes your community is already legally authorized to set up a program. It is intended to help you operate a program to reduce crashes, prevent injuries, save lives, and maintain strong public support.

FIRST STEPS

- ☐ Identify problem intersections:
  - Assess violation and crash data.
  - Conduct field observations.
  - Collect resident input.
- ☐ Make changes necessary to ease compliance with the law:
  - Ensure the road geometry conforms with guidelines from the American Association of State Highway and Transportation Officials or state road design manuals.
  - Ensure that signal timing at a minimum conforms with the Manual on Uniform Traffic Control Devices and Institute of Transportation Engineers guidelines.
  - Remove sightline obstructions of signals and signage.
- ☐ If photo enforcement is appropriate for the problem intersections, establish an advisory committee comprised of stakeholders, e.g., law enforcement, transportation department, victim advocates, school officials, community residents, first responders, health officials, and the courts. Outline the committee's role to advise on the development and implementation of the program.
- ☐ Meet with the media and newspaper editorial boards to build support and educate the public.

SECOND STEPS

- ☐ Select appropriate sites based on data from first steps.
- ☐ Publicize the extent of the safety problem and need for innovative solutions.
- ☐ Secure a vendor and establish payment based on the vendor's actual costs, not the number of citations.
- ☐ Establish a grace period before a vehicle is photographed of up to 1/2 second and no less than 1/8 of a second after the light turns red.
- ☐ Establish that law enforcement officers or other appropriately trained personnel employed by the locality will review evidence, identify violations, and issue citations.
- ☐ Create a website and social media plan with program details, such as how to pay and dispute tickets.
- ☐ Establish a method for answering questions accurately and in a timely manner.
- ☐ Develop an emergency action plan for handling problems, such as system malfunctions.

IMPLEMENTATION

- ☐ Hold a kickoff event with advisory committee members. Introduce a sustained public education campaign focused on improving safety by changing driver attitudes and behavior.
- ☐ Connect the program to safety initiatives such as Vision Zero, Toward Zero Deaths, and Road to Zero.
- ☐ Install prominent warning signs at camera locations and major roadways entering the jurisdiction.
- ☐ Establish a probationary period during which only warnings are issued.
- ☐ Target violations with the greatest safety consequences. Discard right-turn-on-red violations when pedestrians, bicyclists, and oncoming vehicles are not present.
- ☐ Allow for due process. Minimize the number of days between the violation and citation issuance. Establish and publicize the available procedures for contesting an alleged violation.
- ☐ To the extent feasible, allocate fines in excess of program costs to traffic safety programs.

LONG TERM

- ☐ Publicize changes, including new camera locations. Reinstate the probationary period before ticketing begins at new locations.
- ☐ Monitor program operation and publicize results.
- ☐ Require regular field reviews. Verify monthly camera calibration and synchronization with signals.
- ☐ Require regular program evaluation by collecting crash and infraction data. Avoid simple before-and-after comparisons by using proper control intersections. Include control intersections that are not subject to spillover effects.
- ☐ Regularly meet with the advisory committee and media to review program status and sustain public support.

For more information on red light cameras, go to
IIHS.ORG/RED-LIGHT-RUNNING

Partner organizations: AAA, ADVOCATES FOR HIGHWAY & AUTO SAFETY, IIHS HLDI, NATIONAL SAFETY COUNCIL

July 2018

Ms. NORTON. Thank you very much, Mr. Smith.

And I want to thank all of you for your testimony today.

We will now move on to Members' questions. Each Member will be recognized for 5 minutes of questions.

I now recognize myself.

And this is a question for all of the witnesses. This is frustrating to hear this testimony. Congress has spent some considerable funds to reduce highway deaths, and yet we hear that it has not, in fact, gone much below 35,000 a year since the 1950s.

I mean, this is a country used to making some progress. Now, I recognize that much of this lies with local and State authorities, but I would like to ask all of you, and I will begin with Ms. Homendy, but it is a question for all of you.

What in your view, and I recognize that there are many things that each of you think should be done, but I am trying to focus on major things now; what is the single most important thing that you think Congress can do to reduce the number of roadway fatalities, bearing in mind the State and localities are where the action is?

So could I start with Ms. Homendy and just go on down the line?

Ms. HOMENDY. Thank you very much for the question.

And it is hard for the NTSB to pick one thing over another. So something I will say is it is a comprehensive approach.

From our standpoint, it is effective guidance to the States. It is enforcement, high-visibility enforcement, education for drivers and others, and engineering, and that includes vehicle technologies, other technologies like collision avoidance systems, speed limiters, and better data.

Ms. NORTON. Yes, sir, Mr. Jones, Vice Mayor Jones?

Mr. JONES. Thank you.

Again, I think it has a lot to do with priorities and accountability. I think there are a lot of great tools in the toolbox to do good design. We have great examples of where we have retrofitted our streets to make them accessible and safe for all users.

But again, I mentioned there is this disconnect between these large policy frameworks and the actual implementation. Sometimes I think it has a lot to do with just the culture. You know, engineers are often trained and their priorities are about moving cars as quickly and efficiently through communities as possible.

And I think there needs to be a greater focus in on sort of changing the paradigm a little bit and prioritizing funding to do things like Complete Streets.

I mean, Florida DOT, for example, the State has a wonderful Complete Streets policy, but what ends up happening is by the time it gets down to the local or the district level, a lot of times it falls by the wayside.

And I think what we need is some more accountability to say, "Look. We can do these projects. Let's put a pot of funding that is dedicated solely to this effort and start to do more demonstration projects so people can see the benefits of these types of improvements in retrofit."

Ms. NORTON. Chief Brown?

Mr. BROWN. Very briefly, I would say that, frankly, we should really change the narrative from the standpoint, and I put this in my written comments, to drive home the importance of what we are talking about.

A lot of times the threat to the public and the individual road users, whether they be pedestrians, bikes or motorists, is lost in the discussion of the authorization regarding roadway use and construction and everything else.

I put in my testimony a comment that I truly believe and I have said many times over. When you knock on a door and you wake somebody up and you tell them they have lost a loved one or a

friend, it does not matter if it is bullet or a fender. The same shock is there.

Our officers across this country deal with that on a daily basis, as do professionals in the medical field and do it at a hospital, and yet we ignore this as a national issue.

What we compete with in the law enforcement arena are other public health and public safety issues. The opioid task issue is a huge issue across this country. We are dealing with it, but no one says it with the same loud depth and a voice as it applies across this country, and yet it affects so many people and so many families.

That is the national narrative, I think, that frankly Congress could tee up and charge all of us to do better at.

Ms. NORTON. Mr. Bruemmer?

Mr. BRUEMMER. The Highway Safety Improvement Program requires data-driven results from State DOTs. DOTs have data on where accidents happen. They lack the funding a lot of times to combat the problem. I think that is probably one of the most useful systems that Congress has at its disposal, is the ability to identify where crashes happen, where fatalities happen, and the ability to take action and provide results.

Ms. NORTON. Mr. Sewell?

Mr. SEWELL. I would like to echo a lot of what Mr. Jones has said. We have great tools currently as engineers and planners of our transportation network. The biggest issues are the data sets that we are using to identify where those issues could occur, and then the funding is always an issue.

So I think for Congress to show leadership on both how we are attacking these to be more proactive and keep people safe as well as the pot of money that can be allocated towards safety projects are the two biggest things for me.

Ms. NORTON. I'm going to allow Mr. Smith to answer briefly.

Mr. SMITH. Of course. I certainly agree with everything that has been said here on the panel, and it really comes back down to the culture and addressing the culture. We would not accept this in the aviation industry, and we cannot accept it on the roadways.

Ms. NORTON. Thank you very much.

I am going to now recognize the ranking member, Mr. Spano.

Mr. SPANO. Thank you, Madam Chair.

I represent a district, as I think maybe many of the Members on the dais do, that has urban areas and rural areas, and so you know, the differences in terms of the needs and the guidelines vary so greatly.

So how does the next surface transportation reauthorization bill address the differing needs between rural and urban areas? That is the first question.

And then how do you create or fashion a comprehensive bill that maybe is necessary to obtain compliance while still giving local folks some authority and wiggle room to best use those directions or directives to suit the needs of their local area?

I know that is a big question, but maybe you could each address that.

Ms. HOMENDY. Thank you.

And from our perspective, we have a number of safety recommendations we have issued. For NHTSA we have 108 safety recommendations that are open that we would urge Congress to address in the upcoming reauthorization.

And from our standpoint, those issues regarding safety, it does not discriminate whether you are on a highway, whether you are on a rural road. They are critical safety issues that need to be addressed like impairment, adopting .05 instead of having .08; addressing speeding.

There are a number of pedestrian safety issues that could also be addressed that we can get into in this hearing, but I think addressing those big safety issues would be critical because, like I said, it does not matter if you are on a highway or on a smaller road. These are still critical safety issues.

Mr. SPANO. And if I might interject, Chief Brown, I think you more so than any of the other members on the panel stressed the need for some local input, control in terms of the decisionmaking process.

So how do you square some of the broader requirements with the need to have that flexibility?

Mr. BROWN. That is an excellent question, and quite frankly, there is a framework in the FAST Act that allows you to do some of that, but it gets down to the implementation of it. Nobody should be just given a block grant for traffic safety activity, but I think you can certainly use the FAST Act ideas and concepts to justify the need for it and tailor it to the local issue.

And then the other key is to fund it. Unfortunately, oftentimes there is influence in that process as far as the allocations go where some projects do not get funded and some do.

And in some cases, it is discouraging for some local law enforcement, and frankly, some local communities may not have the capacity to drive even the grant application process, to be real frank, even today.

I would say that the more we provide an opportunity and a framework that is more detailed, but provides the flexibility to address the local issues, I think you can incorporate the same things that we are talking about here on this panel.

The major issues are mostly across the country to one degree or another.

Mr. SPANO. Vice Mayor?

Mr. JONES. Thank you.

And that is a great question, and it really points to the issue of context. And when we talk about Complete Streets, they certainly do look much different in a rural context than, say, in very urban areas, but yet they are still complete.

And, again, I want to emphasize here that we are not talking about freeway design but rather what often happens is that sort of mentality ends up going to the local issue. So there is this mismatch where we think about how we design a freeway, and then we might apply it to what should be a local street with maybe two lanes and an opportunity for cyclists and pedestrians.

And I think when it comes to addressing the issue of incentives, I think the more that we can offer to local jurisdictions, you know, in terms of additional funding when they actually meet the per-

formance standards, that is an issue. It is really about accountability.

So if local jurisdictions can show that they are doing these projects, improving safety, reducing the loss of life, then perhaps they should be getting more money.

Mr. SPANO. Mr. Bruemmer?

Mr. BRUEMMER. Engineers have said that we are on the cusp of the largest revolution in surface transportation since the switch from horse and buggy. I think technology moves us forward and changes a lot of the dynamics that differentiate local versus rural.

I think there needs to be a coalition of manufacturers from auto industry to surface transportation industry that create a cohesiveness between what we do moving forward. Things that most people do not think about that I think about every day are pavement markings. The auto industry has said what we need to drive our cars machine-wise is good pavement markings.

I think the discussion needs to be brought from industry to make it all work so that we make the right steps moving forward.

Mr. SPANO. I apologize, Mr. Sewell and Mr. Smith. I do not have any time remaining.

Madam Chair.

Ms. NORTON. Thank you, Mr. Spano.

Mr. Carbajal.

Mr. CARBAJAL. Mr. Chairman, Madam Chair.

And thank you to all of the witnesses for being here today.

Mr. Bruemmer, according to the National Safety Council, injuries from motor vehicle incidents totaled more than 4.6 million in 2017. The National Highway Traffic Safety Administration estimates that over 37,000 people lost their lives in accidents on U.S. roadways in that same year.

In my district, Highway 46 is sadly known as Blood Alley due to the countless fatal crashes over the years. As we begin our work on a surface transportation reauthorization, what are some concrete actions Congress can take to make our roads safer?

And, two, as we make greater strides in artificial intelligence and self-driving vehicle technologies, how can we start integrating this technology into our road planning?

Mr. BRUEMMER. Thank you.

As I mentioned before, I think technology is moving at a rapid pace from the auto industry. Unfortunately, they have kept their cards close to their vest from our side of the industry, but as we move forward, the discussion is now becoming more open that how does technology act with infrastructure. How does V2I move the conversation forward?

I think that in the very near term, I think that progress can be seen. At the national level from Congress, I think it is focused on you are already aware of the major problem that you have on Highway 46. That is the start.

Now the problem is talk to the engineers. Talk to the DOT. How do we fix this problem? And how do we bring a package from Congress that can help the State best rectify this problem?

Mr. CARBAJAL. Thank you.

Ms. Homendy, in your testimony you reference the "most wanted list" of recommendations for highway safety. One of NTSB's rec-

ommendations is for the Department of Labor to develop and disseminate guidelines on the dangers of driving while tired.

While it seems obvious, I want to ask you. Why are these guidelines necessary?

Ms. HOMENDY. Thank you for the question.

And if you do not mind me adding one thing to what the gentleman said on technology, there are safety technologies available today which are the building blocks to automated vehicles that you could use to save lives today. So we do not have to wait until those are on the road.

So I just want to put that out there.

On fatigue, a lot of the work that has been done by the NTSB has focused on commercial motor vehicles and not on autos, and a lot of that is focused on needing science-based hours-of-service standards, no exemptions to those standards, having fatigue management plans in place, implementing and using electronic logging devices, and screening diagnosis and treating of sleep apnea for FMCSA to do rulemaking in that area, and installation of collision avoidance systems which could help combat fatigue.

Mr. CARBAJAL. Thank you very much.

Madam Chair, I yield back.

Ms. NORTON. Thank you.

And I want to call next Mr. Gallagher.

Mr. GALLAGHER. Thank you very much.

I thought it would take me 30 years to get up here at the top, but——

[Laughter.]

Mr. GALLAGHER [continuing]. You know it is only going to last a couple of minutes. So I just want to savor it for a second.

[Laughter.]

Mr. GALLAGHER. Ms. Homendy, forgive me if I am mispronouncing that. In your opening statement, you noted that pedestrian deaths on our roadways have been increasing since 2010. In 2016, nearly 6,000 pedestrians died in collisions with highway vehicles in the U.S. That is an average of 16 per day.

And according to NTSB's 2018 special investigation report, roughly 28 percent of those deaths occur on rural roads.

My district in northeast Wisconsin has a lot of rural roads, and I know this was talked about a little bit before, but could you expand on whether there is a difference in NTSB safety recommendations for urban versus rural roads?

Ms. HOMENDY. For the pedestrian safety study, we did find that there were more fatalities in urban environments and that 18 percent of the fatalities occurred at intersections, 72 percent at nonintersections, and 10 percent at other locations.

Mr. GALLAGHER. I appreciate that.

And for anyone on the panel, can you comment perhaps on the impact that commercial trucking has on pedestrian and nonpedestrian fatalities, if at all?

I do not know who wants to volunteer. Who is brave? Sir, you look eager. If not eager, reluctantly willing to step up.

Mr. BROWN. If I could, sir, I am not so sure that that is a high-priority issue in terms of the representation in fatalities and injuries. Unfortunately, when those incidents occur, because you are

dealing with the principle of physics, a bigger vehicle against a human being is not going to come out well for the human being.

But generally speaking, I am not aware of a significant change in that kind of an environment under the scenario that you suggested.

Mr. GALLAGHER. Well, let me perhaps ask it a different way and sort of reveal what I am getting at here.

So commercial trucks following local laws in 29 States are barred from using the Federal interstate which then forces them in many cases to stay on winding secondary roads where there are a lot of pedestrian crossings, bicycles, school crossings, traffic lights, and other obstacles, right?

So in 2009, we in Congress authorized a pilot program in Maine that found that allowing these commercial trucks on the interstate even for short distances actually decreased fatalities by 37 percent, which makes sense, right?

If you have these trucks sort of off the rural winding roads where there are a lot more pedestrians, perhaps they would avoid that unfortunate encounter that you referenced.

So I just would ask particularly those who are representatives at the State and local level: would you in theory support States having the option of allowing some of these commercial trucks to use the Federal interstate for short distances in order to reduce highway fatalities?

Mr. BROWN. It would depend upon what type of commercial vehicle we are talking about. Commercial vehicles are very broad. You can have those that involve the transportation, for example, of certain hazardous commodities, whether they are interstate or intrastate. There is a difference in that as far as title 49.

Mr. GALLAGHER. Yes.

Mr. BROWN. In addition to that, there is also the concerns about what our local communities want in their backyard.

We do have bypass traffic because of congestion and congestion mitigation efforts made by commercial drivers at times. But I think you will find that most local folks would love to have the local control over what is migrating through their cities.

But whether or not those vehicles should be allowed on an interstate vis-a-vis through sort of thing, it would depend upon what they are trying to move, quite frankly.

Mr. GALLAGHER. Yes. And for us in northeast Wisconsin, logging is a big issue. You can imagine logging trucks, giving them the ability to for a short distance, 150 miles, use the Federal interstates.

I do not know if anyone has dealt with any of these issues and wants to chime in.

Mr. SEWELL. If I may real quickly, what you are speaking about is very closely tied to land use.

Mr. GALLAGHER. Yes.

Mr. SEWELL. And when you are trying to provide access not only to commercial vehicles or you name it type of vehicle to get to a place they have to do business and you couple that with where we are focused on multimodal pedestrian and bicycle safety, establishing clear context for corridors and then assigning certain vehicles to allow access to places that eliminate conflicts and minimize,

as was mentioned, that speed differential between higher moving vehicles and pedestrians or slower moving vehicles is a great idea.

Mr. GALLAGHER. Yes. Well, thank you all for being here today. And I yield the balance of my time.

Ms. NORTON. Thank you, Mr. Gallagher.

And I do want to note that the subcommittee will be having a hearing on trucking and truck safety will be included in that. It is an important issue.

Mrs. Craig.

Mrs. CRAIG. Thank you so much, Chairwoman Norton.

Ms. Homendy, your testimony particularly spoke to me. My stepsister lost her life in one of those intersections in Portland, Oregon. So she left a kindergartner to be raised by his dad and a family that was changed forever.

So you know, I appreciate that the title of this hearing is "Every Life Counts." I grew up in a family where that life was lost. So thank you all for being here.

What I want to follow up on is just this comment about the rural areas. I come from Minnesota's Second Congressional District, and according to the 2016 Federal Highway Administration data, rural areas account for 30 percent of total vehicle miles traveled. Yet 50 percent of roadway fatalities take place in rural areas.

As Mr. Bruemmer noted, over a 4-year period, the Minnesota DOT installed cable barriers in 31 segments along 150 miles of roadway. In the 3 years prior to installation, there were 19 fatal cross-median crashes, and in the 3 years following, there were zero.

I would love to hear from you about those types of policy recommendations. Obviously, that is infrastructure investment.

You also talked about speed and alcohol use. Is there any difference in these rural areas?

And what recommendations would you make? Perhaps maybe start with Mr. Brown.

Mr. BROWN. Yes, ma'am. The solution or the proper way to address many of the things that you are talking about in the rural areas does require a little bit of a combined approach actually.

I have seen over and over again where infrastructure like center divider medians, Jersey walls, things to prevent crossovers will increase survivability in the case of a crash.

But a lot of it has to do with behavior. So a lot of the things that you see in an urban environment involving impaired driving and the like we will see in a rural area.

I have had the privilege in my career of working in rural areas, and I know exactly what you are talking about in terms of, you know, the tragedies sometimes are even worse because of the speed that is involved in those kinds of situations.

It is kind of hard to go downtown in Alexandria at 85 miles an hour. It is much easier in a rural area, and that will complicate survivability in many cases.

Mrs. CRAIG. Does anyone else have a thought on any of those factors in rural areas? Anything to add?

Yes, sir.

Mr. SEWELL. Thank you for the question.

I will tack on, too. It is very difficult to engineer bad decisions out of drivers, but one of the things that we can do is better influence user behavior.

There is an infamous NHTSA quote. I believe it is 95 percent of errors everywhere in our transportation system are human error. I think there is a role in engineering and planning that you can eliminate user error or cut it down by positively influencing user behavior, by designing predictable, safer transportation connections.

Mrs. CRAIG. Thank you.

Madam Chair, I yield the remainder of my time.

Ms. NORTON. Thank you very much.

I would like to call next on Mr. Palmer.

Mr. PALMER. Thank you, Madam Chairwoman.

I grew up in a rural area of northwest Alabama and unfortunately saw several fatal highway accidents, and the thing that gets me about a lot of drivers is how many people do not wear seatbelts.

There was a report that came out in 2002 that indicated there were 43,005 traffic fatalities, and of that, 19,103 were not wearing seatbelts. I think a later report said we would average saving over 4,200 lives a year if just 90 percent of occupants wore seatbelts.

I do not know what we can do. I know in Alabama we have seatbelt laws. If you do not have a seatbelt on, you get a ticket, but that just seems to be one of the most commonsense, easiest things you can do to increase your survivability of an automobile accident.

Do you have anything to add to that, Ms. Homendy?

Ms. HOMENDY. Yes. The single greatest defense against death and injury is the use of effective safety equipment. So whether that is seatbelts or age appropriate restraints for younger children, those are things that the NTSB has recommended, but also for all seating positions in a vehicle, not just in the front seats.

And we have encouraged States to adopt primary enforcement laws so that when law enforcement officers pull a motor vehicle over that they can issue a ticket for not wearing seatbelts, not that you have to have another reason.

Alabama does have a primary enforcement law, but some of the other States do not. You have to have another reason to issue a ticket for not wearing a seatbelt in some of the States.

Mr. PALMER. Yes. Chief Brown, first of all, I want to commend your department on its response to the shooting at the baseball field. I was there. I was 20 steps from the guy. So I really am grateful for the courage of the officers who responded that day.

Also, I would say the issues with impaired driving and the texting, and there is a big push for that, too. Is your department writing many tickets dealing with that?

Mr. BROWN. First of all, sir, thank you very much for the compliments of our officers. We were very proud to serve that day. It was a very difficult day for us as well.

If I may also add, in terms of the seatbelt issue, it ties in with these others as well. There are a lot of assumptions made, I think, by motorists and others that it is not going to be them.

And in the case of occupant protection, your survivability in a crash is entirely dependent upon, especially with airbags, on the use of that seatbelt. It is an integral part of the engineering that

goes in there. And people do not wear their seatbelt and they get severely injured.

In impaired driving and also in speeding and all the topical issues that have been mentioned on this panel and by the chair are addressed daily across this country with law enforcement.

The real question is: what are they having to compete with at the same time they are addressing those issues? And the demands upon law enforcement in this Nation right now are incredible.

The mental health requirements that we are having to deal with, the issues related to that, the drugs, opioids are high-priority issues for our communities. Traffic in some communities is high priority. It is in our city, but it is not that way across the country, and somehow that needs to change.

Mr. PALMER. There is just one other issue I want to address, and that is the corporate auto fuel economy standards that impose the miles per gallon standards, which necessarily resulted in a lot of smaller, lighter vehicles being made.

I think there is the safer, affordable fuel-efficient vehicles rule that is going to retain the 2020 model year standards, and they are estimating that that could save $500 billion in societal costs and save almost 13,000 lives.

I am concerned as the father of two girls and one son. My first daughter, I bought her what I called a rolling airbag because of concerns for vehicle safety.

But as we go to more electric vehicles, you are going to have a disproportionate problem there with weight if that vehicle is involved with a lighter vehicle.

I just want your thoughts on retaining the 2020 model year standards.

And what are we doing to compensate in vehicle manufacturing? Because even my pickup truck now gets almost 21 miles per gallon on the road. It is lighter than the truck I had before.

Any thoughts on that, Ms. Homendy?

Ms. HOMENDY. We have not looked at—that is not something we have looked at in CAFE standards. So——

Mr. PALMER. In terms of overall——

Ms. HOMENDY. In terms of mass, I mean, there—when it comes to crashes, we have looked at crashes, obviously, involving different motor vehicles, trucks with motor vehicles. So the mass of the vehicle definitely impacts what occurs in the tragedy, but it is not something that we have really focused on, the difference in the light vehicles versus heavy vehicles, to my——

Mr. PALMER. Mr. Jones, did you want to respond to that?

Mr. JONES. Yes. I just wanted to say, you know, being from northeast Florida, there is definitely a culture in terms of where we drive larger trucks. And, I mean, just traveling around I can see the difference. Every day when I am driving, probably 80 percent of the vehicles that are on the road are F–150s and larger SUVs, and that is part of the problem that we are seeing. And pedestrians and cyclists and other folks are really at a severe disadvantage when it comes to that. So that is——

Mr. PALMER. As are the smaller——

Mr. JONES. That is a tradeoff, yes.

Mr. PALMER [continuing]. Smaller vehicles.

I have gone over my time, Madam Chairwoman, I thank you for your patience with me, and I yield back.

Ms. NORTON. Thank you very much.

Mr. García?

Mr. GARCÍA. Thank you, Madam Chair, as well as Ranking Member Davis, for holding this hearing.

The statistics are very sobering and stark with respect to people who were killed on U.S. roadways in 2017: 37,000 and 4.6 million people were injured in 2017. I also marked a high in Chicago roadway fatalities. We went from 119 traffic-related deaths in 2016 to 132 in 2017. Many of the areas that I represent in the city of Chicago are considered high crash corridors, according to Chicago's Vision Zero plan. And many of them are in areas that have commercial strips, retail commercial strips in them.

I would like to ask a question of Ms. Homendy. In Illinois we have had a dozen vehicle crashes where vehicles that were stopped—involving law enforcement stops, where—this happened in January, an Illinois State trooper, Christopher Lambert, stopped to assist with a crash and was struck and killed by a passing motorist. He is now 1 of 16 Illinois State troopers that have been killed in accidents starting the beginning of this year.

I understand that the automatic emergency braking, or AEB, could help to prevent these crashes, and the NTSB has recommended the installation of this technology on all new passenger motor vehicles. Despite this recommendation, the AEB is not standard equipment in all new passenger vehicles. Why has the NTSB made such a recommendation, and what are the benefits of the recommendation, and why should AEB be standard equipment for all new vehicles?

Ms. HOMENDY. The NTSB has issued several recommendations regarding collision avoidance, including AEB and forward collision warning, to prevent deaths such as the one that you mentioned in your statement just a minute ago.

The National Highway Traffic Safety Administration has not implemented those recommendations, and they are crucial for preventing fatalities and injuries. And so we are hopeful that they will move forward on those.

Mr. GARCÍA. Thank you.

For Mr. Smith, according to Forbes, 10 automakers will be equipping half of their vehicles in 2018. In fact, NHTSA Administrator Heidi King recently said, "Technologies like automatic emergency braking can help make cars safer on roads, which means Americans are safer when traveling."

Are AEBs a sensible step in the right direction? And why should they be considered for large and heavy trucks, as well?

Mr. SMITH. The work that we have done indicates that, in fact—that important technology. And we would suggest looking at all the technologies that are out there being developed. But this is a particularly important one to help reduce the rate of fatalities. And we would also encourage it being looked at in our commercial vehicles, as well, as an important way to reduce those fatalities. So we certainly think this is one of—as you think about those big impacts, one of those areas where you can have big impact, in terms of reducing fatalities.

Mr. GARCÍA. Is it your sense that we are on the cusp of a significant breakthrough in safety, if recommendations like those you have made are actually implemented?

Mr. SMITH. I think that those are going to help us on the path. The reality is as we convert the fleet of total vehicles on cars, it is going to be a slow process, just because of the turnover and the average age of cars, and things like that. But it is important we start implementing those things as the technology is proven today, recognizing there is that lag with respect to the integration into the broader fleets.

Mr. GARCÍA. Thank you, Madam Chair. I yield back my time.

Ms. HOMENDY. Can I add one thing to that, Congressman?

Mr. GARCÍA. Sure.

Ms. HOMENDY. Those technologies are available today, and we know from research that they are proven to save lives. And so what the NTSB has said is that they should be standard on all vehicles. Unfortunately, in many vehicles you have to pay for safety upgrades. In our view, safety is not a luxury. Those should be standard on all new vehicles, whether it is a heavy truck, a passenger vehicle, a motorcoach, or a schoolbus. They can and should be implemented today.

Mr. GARCÍA. Thank you for interjecting.

I yield back, Madam Chair.

Ms. NORTON. And thank you, Mr. García.

Mr. Webster?

Mr. WEBSTER. Thank you, Madam Chair.

Ms. Homendy, I listened to your testimony and you talked about ending alcohol and other drug impairments in transportation. You said in 1990 you first started printing statistics in that area about different modifications that could be done. I listened to that.

I was in the State legislature then. I passed a law raising the drinking age to 21, lowering the blood alcohol to .08 and, for those under 21, .02. There was an open container law that we banned, and boots for repeat offenders on their vehicles, and some other things that we did. And I know those had an effect. I know those helped. And now you have got .05.

To me the statistics seemed to prove that many of the problems come from substance abuse, or alcohol. And yet, when you get into really changing the system, you can do those, those are certainly laws that can be passed, and I was in full favor of those. But when it gets down to really limiting what you can consume, there is a strong lobby against that. And so if you try to do dram shop legislation, which keeps a bartender from serving somebody visibly intoxicated, it is going to be killed every single time, and other things.

I just think if you picked out one thing, I would say impairment, especially from external sources, has got to be a major, major issue that, even though we have scraped the edges and done some things, not really hitting the core. Have you got any ideas about that?

Ms. HOMENDY. Yes. Impairment is a significant issue. Ten thousand people lose their lives annually due to alcohol-impaired-related crashes—or more than 10,000.

The NTSB has recommended reducing the BAC limit from .08 to .05 or lower. What we say, though, is it is not about stopping con-

sumption. You can consume alcohol, you just can't drive in addition to it. And impairment, from all the research we have looked at, begins at the very first drink. There are significant challenges, a decline in visual functions, at .02; reduced coordination at .05. And so, when you talk about .08, then that makes the situation even worse.

And so, from our standpoint, it is reducing the BAC limit to .05, requiring ignition interlocks for all offenders, not just repeat offenders.

One thing that we found in the research is that by the time a first-time offender is convicted, they have driven impaired more than 80 times. And so we believe ignition interlocks for all offenders. And then, of course, in-vehicle technologies, which exist today, to prevent drivers from operating motor vehicles while impaired.

Mr. WEBSTER. So there is other substances. You mentioned marijuana, and yet we just marched down this road of saying it is fine, nothing wrong with it. And yet have you seen any statistics related to that?

Ms. HOMENDY. The data on marijuana is just not there. Unfortunately, we know how alcohol affects the human body, we just don't know how marijuana does. For one—and we—and because of that we don't have an impairment standard.

And so, to determine impairment is so difficult because you have to look at how it is ingested, whether it is ingested, whether it is smoked, how frequently it is used. It changes, based on body factors. So we have recommended that NHTSA issue guidance to States to inform law enforcement officers when they should require testing, how they should do testing, what methods the laboratories should use, and cut-off levels. Because right now States are handling it all very differently.

Mr. WEBSTER. OK, thank you. My time is out. Thank all of you for appearing. I yield back.

Ms. NORTON. Thank you very much.

Mr. Espaillat?

Mr. ESPAILLAT. Thank you, Madam Chair. I want to thank the witnesses for your testimony. The safety of roads is incredibly important for New York City, so much so that it was one of the first issues our mayor, Bill de Blasio, took on when he announced Vision Zero, a very ambitious program.

Just this week I reintroduced legislation, the Stopping Threats on Pedestrians Act, or STOP Act, that will help localities install bollards in highly trafficked areas with many vulnerable users. Bollards in Time Square, New York City, were specifically cited as having prevented further deaths when a driver tried to use his vehicle to attack nearby pedestrians.

The lack of bollards, some may argue, unfortunately, didn't prevent the terrorist attack that occurred on October 31st, 2017, when a pickup truck went on the Hudson River bike path and killed many tourists that were in the area. I think that, in many ways, including this bill can help local governments address safety issues head on.

Mr. Sewell, your testimony recommends changes to the Highway Safety Improvement Program to ensure that States spend funding on infrastructure improvement in proportion to the specific types of

safety problems the State encounters. Could you elaborate a little bit more on that?

And particularly with regards to the use of bollards and the prevention of potential terrorist attacks, how do you see that playing out? Do we need to fund these very specific programs that can save lives?

Mr. SEWELL. Well, I appreciate your question. And in the example that you gave, the use of bollards in certain settings is a proven countermeasure for restricting the flow of larger vehicles on certain designated routes. So on the greenway that you just mentioned, the installation of bollards in restricting the flow of those could be an absolute, you know, lifesaver.

In terms of the HSIP and redirecting, you know, to fund proactively the fixes that you just mentioned, I believe it is a good idea. I think that if you look at the percentage of accidents that happen—or not accidents, but crashes that happen, and the loss of lives that happened, I think it should be an equity-based—we should have a proportionate amount of money dedicated to saving those lives.

So yes, I agree with you completely.

Mr. ESPAILLAT. And do you support providing local governments more control over how the program should be funded, and where to implement these new strategies to prevent death? I mean I think there seems to be—local governments really know where these hot spots are at, right? And do you feel there should be more leverage, more flexibility in terms of how the funding is used?

Mr. SEWELL. Yes, and I could not agree more. I think giving local municipalities where—if they are rural or urban settings, they are going to know best their constituents, what their local people are engaging and how they are engaging on their transportation network. And I absolutely think they would be the best to direct the funds in an appropriate manner, yes.

Mr. ESPAILLAT. Madam Chair, let me just stress again the importance of these initiatives and the ability for municipalities to be able to determine where to spend the funding, and they get a fair share of funding to install bollards and other strategies that could prevent terrorist attacks.

We have seen how, in New York City, that was tragic, and we also saw in Times Square how the bollards helped prevent deaths there, as a driver, a reckless driver, tragically went on the sidewalk and basically ran down people.

But we must consider local opinions about where to place these. I think local law enforcement is also well equipped to let us know here in Washington where the hot spots—how we can spend the money and how we can save lives.

Any additional comment?

Mr. SEWELL. One quick one. On Times Square, in particular, that is a great example of a proactive fix. It was identified that it is a heavily used pedestrian area, and so it was decided to invest in place-making for that locale. And you see the result, in terms of not only adjacent businesses reaping the benefit of having a nice, fun place to interact, but, as you mentioned, the restriction of motor vehicular traffic reduces that conflict to basically zero. So I think that is a great example. I wanted to tack that on. Thank you.

Mr. ESPAILLAT. Thank you, Madam Chair.

Ms. NORTON. Thank you very much.

Mr. LaMalfa?

Mr. LAMALFA. Thank you, Madam Chair. A lot of ideas here today. What I don't hear often enough is, to me, happy drivers are drivers that are moving and getting to where they want to go. When you have happy drivers, less frustration, all that, things go better.

Just coming in from the airport yesterday we saw a road rage thing break out because the two guys tried to occupy one spot on the on-ramp. And you know, so the infrastructure emphasis, I think, is really important, that we can actually have systems that move traffic better. Most of the time I hear the solutions are ways to corral people and make them where they can't go where they want to go, and that is just highly frustrating.

Some of the emphasis I have heard in the committee today is the impairment. I think that is extremely important that we get after people that are driving incompetently, whether it is under influence of alcohol. And this marijuana thing, you know, we have State after State just rushing to legalize this for normal use.

When I was in the California State Legislature it was interesting. There was a bill early on for, basically, where you couldn't discriminate against people that were on medical marijuana—where it was only medical at the time was supposedly legal—and the list of exemptions to where you couldn't discriminate against an employee were all the important things, like operating equipment and being trusted with large amounts of money, and things like that. And so the areas where you didn't want people acting that—being under that influence were actually the important ones.

And so we have next to zero data on marijuana, yet there is research out there that I think we can point to that would start to get a baseline for what you could do with marijuana-influenced people, because everybody, I think, intuitively knows that marijuana influence does slow down your thinking ability and your ability to process more than one thing at a time. And people are amazing at how they can drive and think about 10 other things—you know, not necessarily good, but we see the distractions that are out there. We got to do a lot more on the marijuana situation.

But coming back to traffic that is flowing is happier traffic, and, I mean, just around this town, one more example is that every single stoplight here seems like it is timed. You are sitting there for 60 seconds at 10 o'clock, or 11 o'clock, or midnight, waiting for nothing, instead of the ones that have a sensor to allow you to go. And the amount of time you spend at stop lights and waiting for elevators in your life is really frustrating.

But that said, in my own district in northern California, an area that I share with Mr. Garamendi, we have Highway 70 that travels between, basically—well, the key area we are talking about is Oroville and Marysville, you know, the Chico area. And we have had 40 deaths in that area, just since 2010—what we have here. And that is a traffic flow issue. So many times you are pent up behind vehicles going 45 miles an hour, people get frustrated, they pass where they shouldn't. We have issues with the Oroville Dam spillway crisis and the evacuation there, the fires we have had in

the area. We have a lot of frustration and a lot of pent-up traffic there.

I just throw it to you, Ms. Homendy, with Chief Brown, Mayor Jones. Wouldn't one of the greatest ways to improve is take away the frustration, and allow traffic to flow, and get these projects done, rather than limiting people and frustrating more? Please.

Ms. HOMENDY. I think I might need a little bit more clarification on the question.

Mr. LAMALFA. OK. I think most people want to see traffic flow. But we hear a lot about how to impede what they are doing. How could we greater emphasize traffic flow in our conversations?

Ms. HOMENDY. Well, part of it is road design, and we have to have road—right now, with road designers and engineers, the focus is on motor vehicle traffic, but not on the complete traffic, which is everything from pedestrians to bicyclists to everything on our Nation's roads. So we have to have a comprehensive view on how we do road design from our traffic engineers.

Mr. LAMALFA. All right. So roads designed in the 1940s or 1950s that are now accommodating triple the traffic, you know, that is the frustration.

So Chief Brown, what would you touch on with an urban area like you have?

Mr. BROWN. Well, I would add—actually, I am very familiar with the area you are from. I, frankly, grew up in Sacramento, so I know that area very well.

My issue is that I think you need to have proper road design, and you need to keep it current. That is balanced against whatever the competing issues are that you are looking at at the local level, in terms of design.

It doesn't matter if it is an urban area or an external area; there are frustrations that take place within the driver's world, based upon design. And sometimes they will—it will cause them to do things they would not ordinarily do, like blocking the box, following too close in an urban area, maybe crossing and passing when it is inappropriate. I have seen that from my own professional experience.

Mr. LAMALFA. Yes, a left turn light that sits there red when there is nobody coming for a mile, and you are waiting there for what, right?

Mr. BROWN. But it doesn't take away from that decisionmaking that that individual has, whether or not to go into that direction, make that call, place themselves and others in jeopardy. And I think we also have to keep that in mind. It is a behavioral thing in most cases with the crashes that we see.

Mr. LAMALFA. Yes, thank you.

I will yield back.

Mr. JONES. I——

Mr. LAMALFA. Thank you, Madam Chairwoman.

Mr. JONES. I was going to——

Mr. LAMALFA. Oh, you wish to—OK.

Mr. JONES. I did want to add on. I think that, again, this issue here is this happy drivers versus happy pedestrians and cyclists is something that we will continue to deal with. And again, it does boil it down to context. I think for so long that we have been de-

signing the roadways to minimize the delay on drivers, actually—I mean I would say more often than not signals are optimized to reduce and minimize the delay of drivers. And sometimes that does come at the expense of pedestrians and cyclists.

I would say, you know, we will talk about the frustration of, well, we have to add 3 seconds to that signal. But say there is a lady or a person that is trying to walk across the street to get to their destination. We may add 10 minutes to their delay, because they have to walk down to the closest signalized intersection.

So it is always going to be a balance there, and I think there is some context where, certainly, minimizing—or allowing or maximizing vehicular throughput is going to be the most important thing we can do. But there are a lot of contexts, particularly in cities and urban areas, where we have to allow for a greater accommodation of——

Mr. LAMALFA. Thank you.

Mr. JONES [continuing]. Pedestrians.

Mr. LAMALFA. I would yield—need to yield back, thank you.

Ms. NORTON. Thank you very much, Mr. LaMalfa.

Mr. Garamendi?

Mr. GARAMENDI. Thank you, Madam Chair.

Mr. Smith, in your testimony you emphasize the need for us to build a true culture of safety. Are there any areas in the traffic safety where you have seen success in doing this? If so, how could we translate those lessons to a broader cultural shift towards roadway safety habits?

Mr. SMITH. Through our chairmanship of the Road to Zero Coalition we have been able to provide grants to local communities and through different organizations that have innovation, and bringing it to the forefront.

We have seen some of the local communities integrate some of these grant dollars in a way that has addressed some of their key pain points. But what they have done is brought the community together as part of solving the solution. And so it is really about doing the design element of it, and bringing the community together, so that we aren't just doing it in a vacuum, and understanding why the particular changes are being made.

And I think there is just more we need to do, from an education perspective, quite frankly, across the country, why do we do some of what we need to do, and why do we need to fund what we are looking to do, particularly when it comes to some of the new augmentation technologies in our vehicles to make it safe, and to understand that it may have some limiting challenges for us, as we traditionally operate our vehicle, but also when it comes to some of the infrastructure, as well. Helping people understand, I think, is what is going to be critically important, and that is where we have seen some case examples where—with some of the grant dollars.

Mr. GARAMENDI. I remember an example of that in California, Mothers Against Drunk Driving. The effort they made some 30 years ago. I think you were in Stockton at the time, Chief, maybe as a young child. But nonetheless, it was very, very successful in developing the laws.

Along that same line, it appears that nearly 30 percent of all fatalities are associated with impaired driving, mostly alcohol, but now, as the discussion has gone here, with marijuana and other drugs. Yet, at the same time, over the last 25 years or so, arrests for impaired driving are down, significantly down, according to the FBI statistics.

So do we have an enforcement issue here? And if so, what do we do about it? And I will leave that open. I start with you, Chief, and then run down the line until I am out of time.

Mr. BROWN. I will be happy to respond to that, and I did kind of address that in my comments. There are a number of reasons we think that that may be taking place. Frankly, if you are from the officer's lens, if you will, the complexities that we currently have in terms of arrests and prosecuting for driving under the influence have grown significantly over that period of time.

When I was a young officer in the 1970s I was in California. We could get done on a four-page piece of paper. Now that document is 27 pages long. There are homicide reports that are prepared that are shorter than some DUI cases, and we are talking about a misdemeanor. There are opportunities to streamline that and still provide and protect the rights of the individual. If we could come up with a way—and this is where—I think, positioned to do that.

The other piece is the competing interests and demands on law enforcement. Right now law enforcement is challenged in ways that it was not challenged 25 years ago. If you go out in a patrol car today you will see officers responding to calls that they did not respond to 25 years ago, so they don't have that discretion because they don't have that ability and that time, if you will, the opportunity to engage in it.

Mr. GARAMENDI. If you will excuse me for a second—because I am going to be out of time in a moment—but then the issue is really a lack of enforcement. Many reasons for that, but is it really an enforcement issue, that we need the police to be enforcing these laws?

Mr. BROWN. I think it gets down to capacity more than anything else.

Mr. GARAMENDI. OK. So that is, again, capacity.

Ms. Homendy?

Ms. HOMENDY. It is also a training issue. In a recent accident investigation that we looked at in Concan, Texas, we saw some issues with the training of law enforcement.

Basic training for law enforcement is standardized field sobriety testing. But NHTSA has a couple of great programs called the Advanced Roadside Impaired Driving Enforcement program, or ARIDE, which provides 16 hours of training for law enforcement officials, and the Drug Recognition Expert Training, which is substantially more, 72 hours of classroom training and 60 hours of field training. And those law enforcement officers become highly skilled at detection and identification of impairment.

So we urge—very few of them are trained at those levels, and we are urging more training.

Mr. GARAMENDI. Good. We are—I am almost out of time, and I just want to wrap up. If you look at the statistics here, 29 percent alcohol impaired and 26 percent speeding, it seems to me that both

of these are both information, as in Mothers Against Drunk Driving, but also enforcement. And that probably means money.

I yield back my time.

Ms. NORTON. Thank you.

Mr. Balderson?

Mr. BALDERSON. Thank you. This is something—two subjects that I am very passionate about: bicycles and motorcycles. In fact, my friends say, "What are you going to ride today, Troy, a bike or a motorcycle?" So thank you all, and I appreciate some of your testimony that I have heard.

Mr. Sewell, my first question for you is—and taking the time for being here today, and I appreciate the need for adequate safety and protections for our fellow bikers. The State of Ohio has a safe passing law in place, which requires drivers to give cyclists at least 3 feet. I cosponsored that and really tried to raise awareness of that.

In your experience—and that law has passed in the last general assembly—in your experience, how has the implementation of such laws impacted bike safety is the first question.

If you would follow up with that, do you believe the common driver might be aware of such laws? I have an answer for that, and I think you know that response. And, if not, how can we improve the awareness?

Mr. SEWELL. Absolutely. Well—and, first and foremost, I appreciate your support for the 3-foot passing law. I think it is an important law, but it is also coupled directly with education.

I think you are correct, if I am assuming—your response to that second part of your question. It is important when drivers are educated about what it means. And I think there is some great demonstrations that you can help to educate drivers about what it means if you are a cyclist and you get buzzed, how terrifying that can be. I am a biker, too, of course, and so I have been in Columbus, and I have biked around, and I remember hearing when that came through. It is a great idea to have that, but it has to be coupled with education.

Mr. BALDERSON. I totally agree with that. I appreciate your response, and I would love to work with you in trying to figure out how we can address that issue, and make sure that drivers are aware of it. And they love to see how close they can get those mirrors to us on the road.

So my next question is for Ms. Homendy, and thank you very much for being here, and your testimony. My other passion, with the motorcycles—in your testimony you mentioned your safety report from 2018 regarding motorcycle crashes and recommendations for improving, preventions such as the need for enhanced braking and stability control systems on motorcycles.

I myself have a model 2007 that already had that anti-lock brake system on it, but also the controlled—I mean it is similar to what you are talking about with the stability control. Have you seen an increase of where in the motorcycle community—of such needs that this report has—when it was released?

Ms. HOMENDY. Sorry about that. Yes. We agree that we need anti-lock braking and stability control systems, and we recommend that they be standard on all motorcycles and that, again, safety is not a luxury, and we don't feel that motorcyclists or auto drivers

should have to pay more for vehicles for safe technology. And so we recommend that they be included as standard on all motorcycles.

Mr. BALDERSON. Most manufacturers today, just so you know, are making it standard. In the 2017 BMW that I have, it was standard equipment——

Ms. HOMENDY. Great.

Mr. BALDERSON [continuing]. With anti-lock brakes. Now, to touch on that, though, the—and I have done all the motorcycle training, all the way through. At one time I was even going to be an instructor, and that is kind of what is going to lead me to that—but the one place I got to try that anti-lock brakes—I mean it is one thing to do it in a car, but anti-lock brakes on a motorcycle are completely different than they are a car. So I don't think we have the pleasure of allowing motorcyclists to enact that anti-lock brake system to actually see what it is going to do. So I am going to try to encourage more and more manufacturers to offer their own input training.

But I get an email every week on motorcycle training and the lack of instructors. How can we encourage to get more members of the motorcycle community—and anybody can answer this—to come out and help us with—I mean whether it is a free oil change, from—I mean I don't know what that—but do you all have any ideas how we can encourage more motorcycle instructors to participate and help us train fellow motorcyclists?

Ms. HOMENDY. Yes, I mean, you know, from our standpoint, you know, when it comes to safety—and I was just in Connecticut, testifying on the importance of motorcycle safety, and talked to some of the motorcyclists, and I think it is crucial to encourage them to get more training, and to have more instructors.

And I think, from NTSB's standpoint, it is just getting out there and encouraging people to improve safety and motorcycle safety, and trying to encourage them to get adequate training.

Mr. BALDERSON. My time is up. I would love to continue this conversation. I yield back, or can—go ahead, sir.

Ms. NORTON. Thank you very much.

Mr. JONES. I just wanted to add more Harley-Davidson dealerships offering incentives for the instructors to come out.

If you don't mind, I did want to talk about the 3-foot rule, if that is possible.

Ms. NORTON. Time is expired.

Mr. JONES. OK.

Ms. NORTON. Mr. Lowenthal?

Mr. LOWENTHAL. Thank you, Madam Chair. You know, I am struck by reports that individuals with obstructive sleep apnea are twice as likely to be involved in motor vehicle accidents than are the general public. And we know that interventions like CPAPs can dramatically reduce the incidents of these accidents.

I raise this because within the last 6 months one morning my wife says to me, "You know what, Alan? You are not breathing at night."

I said, "I don't know, what are you talking about? I am breathing at night."

She said, "No, I timed it. I woke up. You go sometimes 7, 8 seconds without breathing."

So I went to George Washington University Hospital and had a screening and found out I have serious sleep apnea, which I was not even aware of. And I will tell you, by using a CPAP, I am much more alert. I do—that is why I can ask you questions now. I would have been——

[Laughter.]

Mr. LOWENTHAL. I never would have been able to ask any of these questions.

So the reason I raise this is for years that the NTSB and other stakeholders have been concerned that Federal agencies haven't implemented clear guidelines to ensure drivers and other transportation workers are screened for sleep apnea, yet in 2017 the Federal Motor Carrier Safety Administration and the Federal Railroad Administration withdrew efforts to update sleep apnea screening standards.

So, Ms. Homendy, can you tell us more about the NTSB recommendations, and how great a safety risk is posed by sleep apnea?

Ms. HOMENDY. It is a significant issue. And as you—so my husband has sleep apnea, didn't even know it.

Mr. LOWENTHAL. Me too, didn't know.

Ms. HOMENDY. Until I told him I was tired of him snoring and he had to go get help.

Mr. LOWENTHAL. I just stopped breathing. At least he was snoring, you know.

[Laughter.]

Ms. HOMENDY. Hopefully—so, you know, we have issued—we have investigated a number of accidents involving fatigued drivers, whether it is in motor vehicles or large trucks or also in the rail industry, with operators of trains. And we have issued a number of recommendations on the screening, diagnosis, and treatment for sleep disorders like sleep apnea.

I do know that some of the carriers and the railroads are doing some of that. But without a rulemaking it won't occur, industry-wide. So we are pushing that FMCSA and FRA adequately address this and issue a rulemaking to require screening, diagnosis, and treatment.

Mr. LOWENTHAL. Well, thank you. I am going to ask Mr. Smith. What is your perspective at the National Safety Council?

Mr. SMITH. Sure. Well, you know, we know that according to the AAA, over 328,000 drowsy driving crashes happen every year; 109,000 of those resulted in injury, and 64,000 resulted in fatalities. So this clearly is a big issue, and it is a concern for us, and we definitely recognize that fatigue has been a challenge.

We represent over 15,000 work employers who are dealing with fatigue, as well, in the workplace, and some of those instances it connects to some of the workplace safety.

Where we see a big issue also comes from those shift workers, as well, that are six times more likely to be in an incident based on this drowsy driving. So certainly we think, in the commercial space, obviously we want to see the support for continuing to——

Mr. LOWENTHAL. And so I don't have a lot of time, so I want to ask you.

Mr. SMITH. Sure.

Mr. LOWENTHAL. So you do not support the withdrawing of efforts by the FMCSA or FRA? They just withdrew this.

Mr. SMITH. Yes, we do not support that, correct.

Mr. LOWENTHAL. Thank you. And, well, I yield back.

Thank you, Madam Chairwoman.

Ms. NORTON. Thank you very much, Mr. Lowenthal.

Mr. Woodall?

Mr. WOODALL. Thank you, Madam Chair.

Ms. Homendy, let me begin with you. You were talking about hours of service earlier, and I thought you said you support hours of service with no exemptions or exceptions. I am thinking about a recent rulemaking for ready-mix concrete trucks, for example, that I would argue brings greater safety and more common sense to the industry. Could you tell me what you mean about no exceptions and no exemptions?

Ms. HOMENDY. We do support science-based hours-of-service standards, and we don't support exemptions to those standards. But we also support fatigue management plans as an adjunct to Federal standards.

Mr. WOODALL. And when I am talking to dispatchers, they will say, "Rob, I am going to do what I have to do to fit within Federal hours of service, but I know the guy I am sending out is worn out. But I can't—I don't have the flexibility to let him do something different that works with his schedule and his needs. If he feels tired, he still has to stay on the road because if he doesn't he is not going to get his hours in today."

Would you support some sort of flexibility for dispatcher and drivers? Or do you believe where we have those rules today, they need to sit right there?

Ms. HOMENDY. And let me clarify exemptions, meaning we believe people should have adequate rest. We don't support allowing them to continue driving if they are not fit for duty.

Mr. WOODALL. Though that would be moving hours of service in a more restrictive direction. I am talking about providing more flexibility, but it is—your position is let——

Ms. HOMENDY. Correct.

Mr. WOODALL. We have as much flexibility as you would like to see us have at the——

Ms. HOMENDY. Well——

Mr. WOODALL. At current——

Ms. HOMENDY. We would not support less off-duty time and more work time, that is correct.

Mr. WOODALL. Thinking about some of the opportunities to partner with industry and safety, there has been some conversation about speed limiters today, there has been some conversation about moving trucks onto interstates. I don't believe we have to have a winner and a loser in a safety conversation, it is just all win, win, win, right? We are all moving in the right direction.

When you are thinking about the safety from—particularly from a bicyclist's perspective, sir, to focus on the folks you represent, do you have the flexibility from your members to say, yes, we are going to make this gain on behalf of bicyclists? And what we will do, then, is we will also put more trucks on the Interstate Highway System, which may make your interstate drive different, but we

are going to improve your bicycle drive. Or is it a single-sided conversation when you are speaking on behalf of your members?

Mr. SEWELL. No, I think you nailed it. I think you have to think of all users when you are designing any roadway. So you don't want to do anything that would—and the other question that came earlier was one of frustration, from a motorist's standpoint.

We have to design systems that work for all users. That is part of the engineer's creed. You are doing it for public betterment. And that includes drivers. And so, you have to think through, if you do move a mode of transportation to a different mechanism for transport, is that going to negatively impact safety for other users on that roadway, too?

So yes, I think you said it very eloquently. It is a balancing act between all of these modes of transportation.

Mr. WOODALL. Chief, let me ask you. I see your members more often than I would like to see them, but thank you for keeping my roads safe in that way. I am thinking about cameras on the roads. Do we utilize those cameras to also enforce our distracted driving and our seatbelt regulations?

Mr. BROWN. Not so much with the seatbelt because, quite frankly, you need to be able to observe it, and it is difficult to get the placement. We do use them for red lights. In some communities they use them for speed enforcement.

The key with the cameras, from my personal standpoint, is you need to make sure that it is for problems, not necessarily for the generation of revenue. That is a debate that becomes problematic for law enforcement, when they administer those programs. But if you identify problem areas and you deploy that type of technology, it will have an impact, to some extent, on some of the behavior, and you will get better compliance.

It also increases capacity. But I will also tell you it also results in a number of complaints, because people don't like to see those tickets coming in the mail.

Mr. WOODALL. I share that distaste for those tickets coming in the mail.

[Laughter.]

Mr. WOODALL. But at some point, either the law is the law and we have to enforce it—you don't have enough cops on the beat to cover every cell phone user. You don't have enough cops on the beat to make sure that everybody is wearing their seat belt. And if the law is not evenly and aggressively enforced, my behavior is going to reflect that.

Mr. BROWN. And not all the States allow it. And so that is a national thing. I am not sure exactly where some of the other Federal agencies may be. But frankly, there is—in the Commonwealth, for example, there are a number of communities that would be interested in having the flexibility of applying it for problem areas. Alexandria is one of them. I know that is true across the country, but not all the States allow for that, or they have limited applications that are appropriate.

Mr. WOODALL. All right. I thank you all for being here.

Madam Chair, I yield back.

Ms. NORTON. Thank you, Mr. Woodall.

Mrs. Napolitano?

Mrs. NAPOLITANO. Thank you, Madam Chair. I have questions for all of you, and this is another—it is public safety. Thank you for being here today.

But of particular concern is the growing number of assaults on bus drivers. Not only are they heinous acts perpetrated on public servants, they also pose a great danger to passengers, pedestrians, and other vehicles, as some of these assaults happen while the driver is operating his vehicle.

My bill, H.R. 1139, Transit Worker and Pedestrian Protection Act, has 100 bipartisan cosponsors, would provide FTA funds for transit agencies to install barriers to protect the driver and keep the bus operating safely.

It also addresses the issue of blind spots in modern buses with large bus frames and sight mirrors that prevent them from—it blocks their view of pedestrians crossing the street. This has led to multiple severe accidents around the country. Some buses in the U.S. and many buses in Europe do not have this impediment, those large visual obstructions for the driver. It requires a transit agency to address and remove significant blind spots from the bus driver work station. And I have personally recommended that before they buy any buses, they talk to the manufacturer for those changes on the buses.

Do you have any concerns about the assaults on bus drivers, and the blind spots and the transportation safety hazard? And should we address this issue in Congress?

Ms. HOMENDY. Thank you, Chairwoman. I appreciate the question. The NTSB has not looked at assaults on rail or transit operators. But any injury or fatality is a concern to us, of course.

We have issued recommendations on collision avoidance systems like automatic emergency braking or forward collision avoidance, which could help with other issues. But we haven't specifically looked at the particular issue you are talking about.

Mrs. NAPOLITANO. Would you mind looking at it? We had——

Ms. HOMENDY. Absolutely.

Mrs. NAPOLITANO [continuing]. People coming, bus drivers actually tell us all the heinous acts committed on them.

Ms. HOMENDY. Yes. And, in fact, we are meeting with a few folks in a few days on that.

Mr. BROWN. Mrs. Napolitano, from the standpoint of just being a cop, that is a felony, it is a criminal act, and that always causes us concern. The implications for that, should the bus—should the driver be operating a bus, are huge, because there are implications for all the passengers that are maybe on that bus, let alone the size difference on the vehicles.

There are some communities that have had problems in that area. Not everyone has that same kind of a problem, that I could see from the stats. We have actually looked at that a little bit as it applies to the national capital region to see if it had implications for us and our city.

But the potential jeopardy for the community is huge that is on that bus.

Mrs. NAPOLITANO. Thank you.

Mr. BRUEMMER. I think the transportation of the future certainly relies on multimodal integrating, how does transit operate with

other sources: pedestrian, bikes, and regular vehicles. I think infrastructure, as we move forward, needs to change to accommodate those areas so that we do have separation between that. And certainly, you know, it is a major concern when you get pedestrian traffic moving across in front of a large vehicle.

Mrs. NAPOLITANO. They can't see them.

Mr. BRUEMMER. There needs to be a—there is a concern there that they need to be able to integrate with each other.

Mrs. NAPOLITANO. Anybody else?

Well, it is a problem. I have met with the Los Angeles Transportation Department, and they tell me—I met with the drivers and they tell me that it has happened more often than not, especially on routes that are in neighborhoods that are questionable, and especially if they have new drivers assigned to those areas that are less knowledgeable about the area.

There is another question I would like to have. Mr. Sewell, your testimony talks about the importance of designing a built environment through policies such as Complete Streets to consider all road users. You note that engineering is moving to safe system approach to designing for structure.

Is the Federal highway policy currently set up to advance a systems approach and related policies, or do we need to make adjustments to ensure that States and cities design projects that prioritize safety?

Mr. SEWELL. I appreciate your question. And I was recently in L.A., and there is—I think it is a great example of rapid evolution happening in the transportation network, and us poorly responding to it.

And I think it goes back to—to answer your question more specifically—giving local control over how those transportation systems can respond to changes in how people want to move is the way to go. I think that that would have been a great help to a city like Los Angeles in responding to the emergence of scooters, and things like that.

Mrs. NAPOLITANO. Well, thank you for the answer. One of the things I would recommend, especially in California, you have the public access system, and you talk about information, training for the public, like in motorcycle training, you should develop or encourage the industry to do that. And go—free for public safety would be a tremendous help to the public. Thank you.

Ms. NORTON. Thank you very much, Mrs. Napolitano.

Mr. Babin?

Dr. BABIN. Yes, ma'am. Thank you, Madam Chair, I appreciate that, and appreciate every one of you experts being here today.

The first question that I have is for Ms. Homendy. Thank you very much for being here. I was just briefed by your Chairman, Robert Sumwalt, and he said to tell you hello. He knows you are going to do a great job.

Ms. HOMENDY. No pressure.

[Laughter.]

Dr. BABIN. Thank you. For a good part of my life, born and raised in southeast Texas—I represent the 36th District, from Houston to Louisiana—I have slowly watched Highway 59, U.S. 59, transition and change to become a part of the new Interstate 69.

Now I am leading efforts to try to expand the newly authorized Interstate 14 that will be running east and west through my district.

And with the support of a number of my colleagues, I have, in fact, the bill language right here, Madam Chair, if I could enter this into the record. Would that be possible?

Ms. NORTON. So ordered.

[The information follows:]

H.R. 2220

To amend the Intermodal Surface Transportation Efficiency Act of 1991 with respect to high priority corridors on the National Highwav System, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. BABIN (for himself, Mr. Johnson of Louisiana, Mr. ABRAHAM, Mr. GUEST, Mr. PALAZZO, Mr. BRADY, Mr. CONAWAY, Mr. FLORES, Mr. WILLIAMS, Mr. CARTER of Texas, and Mr. WEBER of Texas): introduced the following bill; which was referred to the Committee on Transportation and Infrastructure.

A BILL

To amend the Intermodal Surface Transportation Efficiency Act of 1991 with respect to high priority corridors on the National Highway System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "I-14 Expansion and Improvement Act of 2019".

SEC. 2. HIGH PRIORITY CORRIDORS ON NATIONAL HIGHWAY SYSTEM.

(a) IDENTIFICATION.—

(1) CENTRAL TEXAS CORRIDOR.—Section 1105(c)(84) of the Intermodal Surface Transportation Efficiency Act of 1991 is amended to read as follows:

"(84) The Central Texas Corridor, including the route—

"(A) commencing in the vicinity of Texas Highway 338 in Odessa, Texas, running eastward generally following Interstate Route 20, connecting to Texas Highway 158 in the vicinity of Midland, Texas, then following Texas Highway 158 eastward to United States Route 87 and then following United States Route 87 southeastward, passing in the vicinity of San Angelo, Texas, and connecting to United States Route 190 in the vicinity of Brady, Texas;

"(B) commencing at the intersection of Interstate Route 10 and United States Route 190 in Pecos County, Texas, and following United States Route 190 to Brady, Texas;

"(C) following portions of United States Route 190 eastward, passing in the vicinity of Fort Hood, Killeen, Belton, Temple, Bryan, College Station, Huntsville, Livingston, Woodville, and Jasper, to the logical terminus of Texas Highway 63 at the Sabine River Bridge at Burrs Crossing;

"(D) following United States Route 83 southward from the vicinity of Eden, Texas, to a logical connection to Interstate Route 10 at Junction, Texas;

"(E) following United States Route 69 from Interstate Route 10 in Beaumont, Texas, north to United States Route 190 in the vicinity of Woodville, Texas; and

"(F) following United States Route 96 from Interstate Route 10 in Beaumont, Texas, north to United States Route 190 in the vicinity of Jasper, Texas.".

(2) CENTRAL LOUISIANA CORRIDOR.—Section 1105(c) of the Intermodal Surface Transportation Efficiency Act of 1991 is amended by adding at the end the following:

"(91) The Central Louisiana Corridor commencing at the logical terminus of Louisiana Highway 8 at the Sabine River Bridge at Burrs Crossing and generallv following portions of Louisiana Highway 8 to Leesville, Louisiana, and then eastward on Louisiana Highway 28, passing in the vicinity of Alexandria, Pineville, Walters, and Archie, to the logical terminus of United States Route 84 at the Mississippi River Bridge at Vidalia, Louisiana.".

(3) CENTRAL MISSISSIPPI CORRIDOR.—Section 1105(c) of the Intermodal Surface Transportation Efficiency Act of 1991, as amended by this Act, is further amended by adding at the end the following:

"(92) The Central Mississippi Corridor commencing at the logical terminus of United States Route 84 at the Mississippi River and then generally following portions of United States Route 84 passing in the vicinity of Natchez, Brookhaven, Monticello, Prentiss, and Collins, to the logical terminus with Interstate Route 59 in the vicinity of Laurel, Mississippi and continuing on Interstate Route 59 south to United States Route 98 in the vicinity of Hattiesburg connecting to United States Route 49 south following to Interstate Route 10 in the vicinity of Gulfport following Mississippi Route 601 southerly terminating near the Mississippi State Port at Gulfport.".

(b) INCLUSION OF CERTAIN SEGMENTS ON INTERSTATE SYSTEM.—Section 1105(e)(5)(A) of the Intermodal Surface Transportation Efficiency Act of 1991 is amended in the first sentence—

(1) by inserting "subsection (c)(84)," after "subsection (c)(83),"; and

(2) by striking "and subsection (c)(90)" and inserting "subsection (c)(90), subsection (c)(91), and subsection (c)(92)".

(c) DESIGNATION.—Section 1105(e)(5)(C) of the Intermodal Surface Transportation Efficiency Act of 1991 is amended by striking "The route referred to in subsection (c)(84) is designated as Interstate Route I-14." and inserting "The route referred to in subsection (c)(84)(A) is designated as Interstate Route I-14 North and the State of Texas shall erect signs, as appropriate and as approved by the Secretary, identifying such route as future Interstate Route I-14 North. The route referred to in subsection (c)(84)(B) is designated as Interstate Route I-14 South and the State of Texas shall erect signs, as appropriate and as approved by the Secretary, identifying such route as future Interstate Route I-14 South. The routes referred to in subparagraphs (C), (D), (E), and (F) of subsection (c)(84) and in subsections (c)(91) and (c)(92) are designated as Interstate Route I-14 and the States of Texas, Louisiana, and Mississippi shall erect signs, as appropriate and as approved by the Secretary, identifyiug such routes as segments of future Interstate Route I-14. ".

Dr. BABIN. OK. And I want to—with this in mind, I want to ask about safety in regards to converting a highway or State road to an interstate highway.

In your experience with the NTSB, have you seen a correlation between improving roadway safety and updating existing roads, whether U.S. highways or State highways, in order to meet the interstate standards and grades? If you could, maybe elaborate your thoughts on that.

Ms. HOMENDY. I apologize. On that question I will have to get back to you for the record and talk with some of our experts back——

Dr. BABIN. OK.

Ms. HOMENDY [continuing]. In the office.

Dr. BABIN. All right.

Ms. HOMENDY. But I will respond, and also contact your office on that.

Dr. BABIN. OK, that would be fine. Does anybody else want to take a stab at that?

I will just wait and get back—if you will get back with me, Ms. Homendy.

All right, this is for—the next question is for Mr. Bruemmer, if you don't mind. Thank you for being here today, as well. You said it best in your testimony, that we cannot allow safety to ever become an afterthought or a second priority, period. I couldn't agree with you more on that.

And you know it better than most, that so much of the work this committee did on the FAST Act was to help stimulate innovation, improve safety through data-driven performance-based approaches,

and allow our States the flexibility they need to create programs unique to their needs for both motor and nonmotorized users. The data has clearly shown a reduction of motor vehicle fatalities, highlighting that safety programs all over the country are indeed working successfully.

Could you share with the committee where you see the next generation of roadway safety moving, and where do you see innovative and creative ideas, and where they are taking us through the next decade in terms of safety and smart investment? Yes, sir.

Mr. BRUEMMER. Thank you, Congressman. I think, as you look forward, you know, technology is really kind of the front-runner of this. Vehicles are becoming smarter. How does infrastructure react to the vehicles?

From my experience what you look at is pavement markings that are now becoming more recognizable by machine-driven vehicles. You have signs which machines can read. They have got, basically, a QR code inset in them, so that the vehicle comes up and can tell what the sign reads.

Dr. BABIN. Right.

Mr. BRUEMMER. So I think as we look 5, 10 years down the road, how do we make that step from purely a human-driven world to integrating that technology, and we go forward. So that transition period is going to be difficult. I think we need to have a strong map forward of where do we want to be 20 to 25 years from now.

Dr. BABIN. Right. OK. Thank you very much.

And you know what? I don't—unless anybody else has something they would like to add to that, thank you, Madam Chair, I will yield back.

Ms. NORTON. Thank you, Mr. Babin.

Dr. BABIN. Yes, ma'am.

Ms. NORTON. Mr. Stanton?

Mr. STANTON. Thank you very much, Madam Chair. An excellent presentation today on an incredibly important topic: safety on our roadways and our highway systems.

And as we plan a significant infrastructure bill through this committee, we need to make sure that safety is at the forefront, and it is equally as important, if not the most important investment we can make in this country is on roadway safety, particularly supporting cities and municipalities across the country, things like Complete Streets and Vision Zero and other programs that are successful models.

The Federal Government can better support those cities, and hope that State legislatures don't preempt cities who have a lot of innovative ideas. I say that as a former mayor of a city.

And the specific issue I want to talk today about has to do with wrong-way drivers. Sadly, that is an issue that my community, the Greater Phoenix, Arizona, community, is confronting in a significant and sad way right now.

In January of 2015 a dispatcher with the Phoenix Fire Department was on her way home from a late shift when she was killed on the I–17 in central Phoenix by a wrong-way driver. Megan Lange was 26 years old, a wife, a mother of two young boys. When the firefighters arrived at the scene of the accident, they knew that she was one of their own, because she was still in her uniform.

Megan's death shook our community, and especially her fellow city employees. I was mayor at the time, and I will never forget taking that call. Her tragedy, unfortunately, was one of a series, part of a pattern of wrong-way drivers that our cities, counties, and State have to work hard to correct.

Two out of three wrong-way crashes are caused by impaired drivers, often drivers with blood alcohol levels more than twice the legal limit. One-quarter of all wrong-way crashes are fatal, compared to just about 1 percent for other highway crashes. And though, nationally, the number of and rate of fatal crashes have been falling for decades, the number of fatal wrong-way crashes continues to creep upward. And that is something that we have to confront.

So I will open up to all the panel, but particularly Mr. Bruemmer. Can you talk a little bit about what we can be doing, as Congress, to better support you and other safety-related organizations to decrease and even stop the epidemic of wrong-way crashes across our country?

Mr. BRUEMMER. Thank you, Congressman. There are innovations coming out, as far as infrastructure, which improve the possibility that someone can't go the wrong way: sensors, which activate lights to notify the driver; also relaying messages to law enforcement, so that they can respond quickly, knowing that there is someone going the wrong direction; pavement markings which are visible as you enter a ramp that, from one direction, say "Do Not Enter," the other way they look normal. So I think that it is an infrastructure question.

People get confused and lost, unfortunately, make a wrong turn up the wrong ramp, and it is catastrophic. How do you avoid that? And I think, really, infrastructure has to combat that at a one-on-one level.

Mr. STANTON. Excellent. Infrastructure and, of course, continuing with our efforts in terms of drunken driving and other types of driving under the influence.

I will leave it—I will open up to other witnesses. What can we do, as Congress, Members of Congress, to better support efforts to reduce and end wrong-way driving?

Mr. BROWN. Mr. Stanton, if I could, the National Transportation Safety Board—I am going to steal your thunder a little bit—did a report.

Ms. HOMENDY. That was my answer.

Mr. BROWN. There you go.

[Laughter.]

Mr. BROWN. Don Carroll was the one that authored it. He used to be with the California Highway Patrol, did a work on wrong-way drivers. And most cops know that you have a disorientation issue, and largely it comes from impairment of some level. And also, it comes with, to some extent, with people who have developed some kind of limiting capability with their mind.

There are ways to deal with that as intervention. So MADD has the interlock, they have been promoting the ignition interlock as an example. There are other ways to deal with the impairment issues, so that those people don't get in a car and drive.

As far as the issues involving capacity, mental capacity, that is where the DMVs can come in and try to deal with those issues. And certainly that would be within the purview of an authorization act, should that be an issue.

Mr. STANTON. Thank you very much.

Ms. Homendy, did the chief accurately represent NTSB perspective?

[Laughter.]

Ms. HOMENDY. He did. And the person he references, actually, is a former law enforcement official who is on staff at the NTSB. So we did a wrong-way special investigative report in 2012, and looked at six crashes. We had recommendations on improving road designs, having better signage, and then addressing impairment.

And the NTSB's views on impairment is reducing the legal BAC limits from .08 to .05 or lower; requiring ignition interlocks for all offenders, not just repeat offenders, including first-time offenders; stronger enforcement; and then also in-vehicle technology to prevent impaired drivers from getting in the vehicle and driving.

Mr. STANTON. Thank you. I yield back.

Ms. NORTON. The gentleman yields back.

Mrs. Miller?

Mrs. MILLER. Thank you, Chairwoman Norton. West Virginia has been successful throughout the implementation of the Governor's highway safety program. We have received millions of dollars through the National Highway Traffic Safety Administration to help implement several different programs in all 55 counties of my State.

In my region of southern West Virginia, one of the largest challenges we face is impaired driving. Over 50 percent of impaired driving arrests in southern West Virginia counties have been identified as drug-related. Southern West Virginia has been ravaged by the opioid epidemic, especially as the economy in the region collapsed, due to the war on coal. The economic hopelessness faced by so many in my community has been hard to fathom.

I have learned very quickly, since being in Congress, that we are very fluid in our movement, and in and out of committees, and in and out of chairs. So Ms. Homendy, I hope this question has not been asked to you before.

Programs committed to stop drunk driving have been successful across the country. What programs are in development to stem the tide on drug-impaired driving?

Ms. HOMENDY. Well, I know NHTSA has focused on drug-impaired driving.

From the NTSB's perspective, we have investigated a number of crashes involving impaired drivers. The difficulty with drugs is there is no impairment standard. And so we have recommended that DOT work with HHS to develop a standard. In the meantime, we have recommended that NHTSA issue guidance to States that tells law enforcement officers when to test, what drugs to test for, how to test, and cut-off levels to help determine impairment.

In addition, we need advanced training for law enforcement officials, so that they can recognize when a driver is impaired.

Mrs. MILLER. Thank you. West Virginia is a hub for transportation, and our highways are a crossroads of trade and shipping.

Commercial trucking is essential for our economy, but has not seen the same decrease in accidents that passenger automobiles have.

Mr. Jones, are there any programs in development aimed to protect our Nation's commercial truckers, in particular?

Mr. JONES. I am going to defer that answer, if maybe Ms. Homendy has some more perspective on that. I can't speak about the commercial trucking industry directly.

Mrs. MILLER. OK.

Ms. HOMENDY. I mean for commercial driving, I would say fatigue. I mean, from our perspective, it is strong hours-of-service standards, no exemptions to those standards, strong fatigue mitigation, management plans, implementation of electronic logging devices, and then screening, diagnosis, and treatment for sleep apnea. So fatigue, we would say, is the major issue.

Mrs. MILLER. OK. Does anyone else have any comments on that?

Mr. BROWN. Yes, at one point the Federal Motor Carrier Safety Administration also brought up the issue of distraction as a major issue with regards to—within the cockpit of the vehicle. And I would think that that would probably still ring true today.

Mrs. MILLER. What type of distraction?

Mr. BROWN. Basic distraction, in terms of the operating of the commercial vehicle, people manipulating cell phones, working on automated electronic logs, things of that nature, not paying attention to their driving.

Mrs. MILLER. OK, thank you. I yield back my time.

Ms. NORTON. Thank you very much, Mrs. Miller. Finally, our Ranking Member Davis.

Mr. DAVIS. Finally bringing up the rear, huh? Pretty long hearing. You guys thought you were done, and then we keep walking back in, right?

[Laughter.]

Mr. DAVIS. Ms. Homendy, great to speak with you yesterday. I hear, because I am late, that some of my other colleagues asked about technology. I was going to channel Don Young [referring to nameplate swap]. Come on, what are you guys doing? The dean of the delegation, the dean of the House.

[Laughter.]

Mr. DAVIS. In all seriousness, Ms. Homendy, you mentioned that the technology is not there yet. For States like Illinois that will be on a path to legalize marijuana, you know, my concern is how do we get technology up to the forefront to be able to do tests, a roadside test, just like we do with impaired drivers due to alcohol consumption.

And you mentioned in your response that the technology is not here yet, but others are working on it. Right? Do you have anything else to add?

Ms. HOMENDY. Right. We have recommended that DOT and HHS work together to provide additional testing mechanisms like oral fluid testing and hair testing.

And in addition to just the testing, in the meantime, NHTSA can issue guidance to States, as I mentioned, for law enforcement officers to clarify when people should be tested, what types of drugs they should be tested for, and cut-off levels for testing. That guidance has not gone out yet.

But in addition, training for law enforcement officers. I mentioned a couple of programs to you yesterday that NHTSA has for advanced training for law enforcement officers. Basic training is the standard field sobriety testing for law enforcement officers, but NHTSA has two programs, one called the ARIDE program and one called DRE—it is an Advanced Roadside Impaired Driving Enforcement program and the Drug Recognition Expert training—which provide 72 hours of classroom training and 40 to 60 hours of field training, which makes them highly skilled at detection and identification of impairment. And very few officers are trained at those levels, so we encourage additional training.

Mr. DAVIS. Right, thank you. And I apologize, my team forgot the WWE belt I promised you yesterday.

Ms. HOMENDY. I was hoping to wear it for my opening statement.

Mr. DAVIS. My apologies to you and your entire team.

Chief, first off, I want to say thank you. And if you could please relay my thanks and the thanks of many of my teammates for the courageous actions of your three officers who saved us all one fateful morning in Alexandria a few years ago. So thank you for that. And please, again, relay our thanks to them. I don't think they get enough credit for that.

Mr. BROWN. Thank you, sir. I will.

Mr. DAVIS. Thank you. In my home State of Illinois, Chief, we have had 15 officers struck this year already while outside of their vehicles. We have a law called Scott's Law in Illinois that protects our law enforcement officials, our Good Samaritans, and even our tow truck drivers who are on the side of our roadways, trying to help motorists who are stranded. We are looking to expand Scott's Law in Illinois, and I noticed this isn't a law in every State.

What type of activities would you recommend we do at the national level to stop the carnage that we have seen of our law enforcement officers and our Good Samaritans and tow truck drivers that we are seeing in Illinois?

Mr. BROWN. Well, actually, NHTSA has actually taken a position of supporting the move over, at least in concept.

But you are right, there are a lot of differences between the States. My former agency, the California Highway Patrol, just lost a sergeant just a couple of days ago over this very same thing.

That is actually a disincentive in some cases for law enforcement to engage in traffic safety, because oftentimes they are exposed when they go out there. And so any way we can protect the highway worker—and that is not just the cop and the tow truck officers, and it is, in many cases, the person from DOT who is working on the road to repair a roadway. It is a paramount issue.

Move-over laws work. They are difficult to enforce sometimes because, you know, usually there is congestion or other issues around it. But if you can get some level of compliance, it provides a buffer. And I think that would be appropriate to put into some authorization to encourage that at some point.

Mr. DAVIS. Well, thank you. This is something that we have not experienced at this level in my home State before. It has happened for many years, and it is something that, obviously, we need to address, especially with distracted driving and other issues that have

caused these terrible, tragic accidents, especially in the wake of technology and technological advances in our automobiles.

I rented a car this weekend, and was driving around, and it notified me every time it thought I went outside the lane. I mean at some point we have got to recognize technological advances to assist in saving the lives of the brave men and women who wear that same uniform you do.

Thank you for your time to each and every one of you, and I yield back no time that I have.

Ms. NORTON. I want to thank the ranking member, and I particularly want to thank all of you who have come. You have given us new information, you have given us very helpful information on a very serious subject, where our country is badly in need of the contributions you have made today.

I ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to any questions that may have been submitted in writing.

And I ask unanimous consent that the record remain open for 15 days for any additional comments and information submitted by Members or witnesses to be included in the record of today's hearing.

Without objection, so ordered.

This hearing is adjourned. Thank you very much.

[Whereupon, at 12:25 p.m., the subcommittee was adjourned.]

SUBMISSIONS FOR THE RECORD

Prepared Statement of Hon. Steve Cohen, a Representative in Congress from the State of Tennessee

Thank you, Chairwoman Norton for putting together this important hearing, and thanks to all the witnesses for being here today.

According to the National Highway Traffic Safety Administration (NHTSA), 37,133 people lost their lives in accidents on U.S. roadways in 2017, or 100 people died each day in motor vehicle crashes.

We must do better.

Fortunately, I believe there are several commonsense, bipartisan steps that Congress can take to improve highway safety. They include, the DUI Reporting Act, the School Bus Safety Act, the Stop Underrides Act, and the Horse Transportation Safety Act.

DUI REPORTING ACT

The DUI Reporting Act (H.R. 1914) would stop the dangerous practice of charging repeat drunk drivers as first-time offenders.

Just a few years ago, two teenagers from Memphis were killed when the car they were driving was struck by a drunk driver who had accrued seven DUI charges since 2008 and had been allowed to plead guilty five times to a first-offense DUI.

Congressman Steve Chabot and I introduced legislation to stop this by creating an incentive for local law enforcement to report DUI arrests to the National Crime Information System, so prosecutors will know if a defendant is a repeat offender.

This bipartisan bill has been endorsed by Mothers Against Drunk Driving, and I hope this committee will consider it soon.

SCHOOL BUS SAFETY ACT

I hope this committee will also consider the School Bus Safety Act, a bill I am planning to reintroduce with Senator Tammy Duckworth, to implement several of the National Transportation Safety Board's recommendations to improve school bus safety.

Specifically, the bill will ensure that there are seat belts at every seat and buses are equipped with safety measures like stability control and automatic braking systems.

In November 2016, there were two high-profile school bus accidents in Chattanooga, Tennessee, and another in Baltimore, Maryland, that left 6 school-aged children robbed of their futures.

These are chilling reminders that Congress needs to act.

STOP UNDERRIDES ACT

I hope this committee will also take action on the Stop Underrides Act (H.R. 1511/S. 665).

In 2014, my constituents Randy and Laurie Higginbotham lost their 33-year-old son Michael, like thousands of others have, when his car crashed into a semi-truck trailer and ended up under it. Unfortunately, truck underride is not a new issue. It has been on the highway safety radar for decades, yet action has not been taken.

That is why I introduced the Stop Underrides Act with our Transportation Committee colleague Mark DeSaulnier, and Senators Kirsten Gillibrand and Marco Rubio, to require all large truck trailers to have front, side, and rear underride guards.

This bill will save lives and I encourage my colleagues to support it.

I hope this committee will also take action to protect the lives of both horses and humans as horses are transported on our nation's highways.

In 2007, fifteen horses died when a double deck trailer carrying 59 Belgian draft horses overturned on Route 41 in Illinois. Unfortunately, accidents like this are not uncommon.

Drivers can currently exploit a loophole in current regulation banning the transport of horses in double deck trailers, thus giving drivers an incentive to inhumanely transport horses to assembly points then reload them into single level trailers just outside their final destination.

This practice is not only dangerous and inhumane to the horses, but to the traveling public, as well.

That is why I introduced the bipartisan Horse Transportation Safety Act (H.R. 1400) along with Representatives Peter King, and Transportation Committee members Dina Titus and Brian Fitzpatrick, to ensure the humane and safe transportation of horses.

If enacted, it would prohibit interstate transportation of horses in a motor vehicle containing two or more levels stacked on top of one another. It would also create civil penalties of at least $100 for each horse involved.

These bills will help save lives, and I hope this committee will take action on them. I once again thank the chair for holding today's hearing and yield back.

Prepared Statement of Hon. Frederica S. Wilson, a Representative in Congress from the State of Florida

Thank you, Chairwoman Norton.

Improving safety on our roadways is a top priority for my constituents and me.

Seemingly every day, I see a fresh news story about a traffic collision that either claimed lives or caused injuries in my community.

On November 8, 2018, my longtime friend and neighbor, Alvin Watson, was fatally struck by a vehicle while jogging near his home. He was a beloved husband, father, colleague, and friend.

In January, seven people, five of whom were children, lost their lives on their way to Disney World after their church van collided with three other vehicles.

Just last month, a father and his six-year-old son were struck as they walked to school. While they weren't seriously injured, this was still an extremely traumatic event for them.

In 2017 alone, more than 3,100 people, including 654 pedestrians, died on Florida roadways.

As pedestrians, Floridians face a risk of fatality that's incomparable to any other state.

Shockingly, of the 20 most dangerous metropolitan areas for pedestrians in the nation, 9 are in Florida.

In fact, the stretch of I-95 that runs through Miami-Dade County, which I represent, had more fatal accidents than any other part of the nearly 2000-mile interstate highway in 2015.

Suffice it to say, traffic safety reforms are desperately needed in my state and district.

We can and must do better.

As we consider legislation to reauthorize the FAST Act and invest in our infrastructure, I will advocate for robust investments and policies to reduce traffic fatalities and strongly prioritize pedestrian safety.

I have a few questions.

Letter from Shailen P. Bhatt, President and CEO, Intelligent Transportation Society of America, Submitted for the Record by Hon. Norton

APRIL 8, 2019.

Hon. ELEANOR HOLMES NORTON
Chair
Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure, U.S. House of Representatives, Washington, DC 20515

Hon. RODNEY DAVIS
Ranking Member
Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure, U.S. House of Representatives, Washington, DC 20515

DEAR CHAIR NORTON AND RANKING MEMBER DAVIS:

In anticipation of the Subcommittee on Highways and Transit upcoming hearing entitled "Every Life Counts: Improving the Safety of our Nation's Roadways," the Intelligent Transportation Society of America (ITS America) writes to underscore how new and developing Vehicle-to-Everything (V2X) technology that depends on the 5.9 GHz band is allowing us to finally address the lives lost and ruined on our nation's roads. Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I), and Vehicle-to-Pedestrian (V2P)—collectively referred to as Vehicle-to-Everything (V2X)—have incredible potential to dramatically improve the safety, accessibility, and operational performance of our road infrastructure and vehicle safety.

Safety is the top priority of the nation's transportation system. According to the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA), 37,133 people lost their lives in motor vehicle crashes in 2017, which roughly breaks down to just over 100 fatalities per day. Examples of V2V deployments available today include systems that provide emergency braking and the ability to be the "eyes and ears" of other vehicles. Non-Line-of-Sight awareness, as it's known, means that drivers and vehicles can see around corners and receive information about hazards in the roadway, even if they cannot see the hazard. V2V communications help move traffic more efficiently with demand responsive traffic signaling and allow emergency response vehicles to preempt signals.

V2I provides vehicles and drivers information about infrastructure operations—weather and pavement condition, how signals are directing traffic, and even the location of potential hazards at intersections and other critical road safety hotspots. V2I applications include red light violation warnings, reduced speed zone warnings, curve speed warnings, and spot weather impact warnings. V2I soon will support other applications that will disseminate the condition of the infrastructure, such as bridge integrity and collect data from cars that describe pavement condition. V2I technology helps drivers safely negotiate intersections and prevent intersection crashes. Another connected vehicle safety application that helps drivers with left turns at intersections could help prevent left-turn crashes. NHTSA estimates that safety applications enabled by V2V and V2I could eliminate or mitigate the severity of up to 80 percent of non- impaired crashes, including crashes at intersections or while changing lanes.

V2X will enable us to deploy safety solutions to protect vulnerable users of the system, which will be transformational. By allowing vehicles to communicate with these users through sensors or vehicle to device communication (V2P), we can significantly reduce the number of pedestrians killed on our roadways.

Public sector agencies can also reap the benefits of V2X. Increasingly, vehicles will rely on digital formatting of roadway information to process roadway rules. ITS America member Regional Transportation Commission of Southern Nevada recently became first in the world to put roadway information into a digital format. As connected vehicles drive over the roadway, they can pick up differences between the "digital" road and the actual road. This could eliminate the need for agencies to manually examine roadways for striping or automatically report potholes instead of waiting for enough drivers to incur tire damage before fixing them. These vehicles will also give an up-to-the-minute snapshot of the system—how it is performing, are there any incidents, live weather conditions, etc. Millions of dollars have already been invested in this effort, including incorporating connected vehicle technologies into infrastructure by states and cities. Eighty-four communities in the United States are deploying or planning to deploy connected vehicle technology. Of that number, 54 sites are operational, and 30 are in development. Nearly every state has at least one connected vehicle deployment. V2I deployments include expansions of the Safety Pilot Model Deployment in Ann Arbor (MI), large pilot deployments in New York City, Tampa, and Wyoming, and the Smart City Challenge in Columbus (OH).

These technologies can also enhance automated driving systems, which can provide numerous economic, environmental, and societal benefits, such as decreased congestion and fuel consumption, and increased access for older adults and people with disabilities.

However, V2X communications are by no means guaranteed. The 5.9 GHz band for V2X is being targeted by cable companies and their supporters who are seeking additional spectrum for enhanced WiFi experience and are aggressively pressuring the Federal Communications Commission (FCC) to force V2X to share this spectrum with unlicensed consumer broadband devices. Speed matters when safety information is involved. Sharing the band could compromise the speed and put lives at risk. What if a driver knew, in fractions of a second, that an airbag deployed in a car in front of him/her? Alternatively, that the car in front, around the next curve, was sliding on black ice? Or a pedestrian is around the next corner? Thanks to V2X technology, that driver would react—and avoid a crash. Deploying life-saving technologies that allow cars, buses, trucks, bicycles, pedestrians, motorcycles, street lights, and other infrastructure to talk to each other will ensure more people arrive home safely.

ITS America supports preserving the entire 5.9 GHz band for existing, new, and developing V2X technologies. We want to make sure all three phases of testing for the 5.9 GHz band are complete before the FCC rules on whether the spectrum can be shared between V2X operations and unlicensed devices like WiFi. Any unlicensed use in the band should be done without harmful interference to the incumbent technology or other intelligent transportation systems technologies. Finally, ITS America requests a report from the U.S. Department of Transportation (USDOT) on the outcomes of the FCC studies. USDOT must ensure Congress and transportation stakeholder that transportation safety will not be compromised in the 5.9 GHz band.

Sincerely,

SHAILEN P. BHATT
President and CEO, Intelligent Transportation Society of America

cc: House of Representatives Subcommittee on Highways and Transit Committee on Transportation and Infrastructure
Ron Thaniel, ITS America Vice President of Legislative Affairs

Statement of Catherine Chase, President, Advocates for Highway and Auto Safety, Submitted for the Record by Hon. Norton

INTRODUCTION

Advocates for Highway and Auto Safety (Advocates) is a coalition of public health, safety, 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 safer vehicles, safer motorists and road users, and safer roads. We respectfully request that this statement be included in the hearing record.

DEATHS AND INJURIES ON OUR NATION'S ROADS REMAIN UNACCEPTABLY HIGH

In 2017, more than 37,000 people were killed and 2.7 million were injured in motor vehicle crashes.[1] Crashes impose a financial toll of over $800 billion in total costs to society and $242 billion in direct economic costs, equivalent to a "crash tax" of $784 on every American. This incredibly high level of carnage and expense would not be tolerated in any other mode of transportation.

Moreover, fatal truck crashes continue to occur at an alarmingly high rate. In 2017, crashes involving large trucks killed 4,761 people. This is an increase of 9 percent from the previous year and an increase of 41 percent since 2009. The number of 2017 fatalities in crashes involving large trucks is also the highest since 2007. Additionally, 149,000 people were injured in crashes involving large trucks in 2017. In fatal two-vehicle crashes between a large truck and a passenger motor vehicle, 97 percent of the fatalities were occupants of the passenger vehicle. The cost to society from crashes involving commercial motor vehicles (CMVs) was estimated to be $134 billion in 2016.

[1] Statistics are from the U.S. Department of Transportation unless otherwise noted.

AVAILABLE COMMONSENSE AND COST-EFFECTIVE SOLUTIONS

While far too many lives are lost and people are injured on our Nation's roads each year, proven solutions are currently available that can help to prevent or mitigate these senseless tragedies. The National Highway Traffic Safety Administration (NHTSA) currently values each life lost ina crash at $9.6 million. Each one of these senseless tragedies not only irreparably harms families and communities, but they also impose significant costs on society that can be avoided.

Proven, Advanced Vehicle Technologies Should be Standard in All Vehicles

Every day on average, over 100 people are killed and 7,500 people are injured in motor vehicle crashes. Nearly a third of all crashes continue to be caused by an impaired driver and speed is a contributing factor in over 25 percent of crashes. Additionally, distracted driving resulted in over 3,000 deaths in 2017 alone. Advanced vehicle technologies can prevent and lessen the severity of crashes and should be required as standard equipment on all vehicles. These include automatic emergency braking (AEB), lane departure warning (LDW) and blind spot detection (BSD) for cars, trucks and buses. These systems can help stop crashes from occurring, as well as reduce the impact of crashes that do occur. The Insurance Institute for Highway Safety (IIHS) has found that AEB can decrease front-to-rear crashes with injuries by 56 percent, LDW can reduce single-vehicle, sideswipe and head-on injury crashes by over 20 percent, and BSD can diminish injury crashes from lane change by nearly 25 percent. However, these safety systems are often sold as part of an additional, expensive trim package along with other non-safety features, or included only in high end models or vehicles. Moreover, there are currently no minimum performance standards to ensure they perform as expected.

Recommendation: Advanced vehicle technologies that have proven to be effective at preventing and mitigating crashes, including AEB, LDW and BSD, should be standard equipment on all cars, trucks and buses.

Commonsense Regulation of Experimental Driverless Car Technology is Essential

Autonomous vehicles (AVs), also known as driverless cars, are being developed and tested on public roads without sufficient safeguards to protect both those within the AVs and everyone sharing the roadways with them without consent. Numerous public opinion polls show a high skepticism and fear about the technology, and for good reason. At least six crashes resulting in four fatalities have occurred in the U.S. involving cars equipped with autonomous technology that are being investigated by the National Transportation Safety Board (NTSB).

While AVs have tremendous promise to meaningfully reduce traffic crashes, fatalities and injuries as well as increase mobility, once they are proven to be safe, they must be subject to minimum performance standards set by the U.S. Department of Transportation (U.S. DOT). These standards should include, but not be limited to, cybersecurity, vehicle electronics, driver engagement for AVs that require a human driver to take over at any point, and a "vision test" for driverless cars to ensure they can properly detect and respond to their surroundings. Additionally, minimum performance requirements and protections will be especially critical as autonomous systems are deployed in commercial motor vehicles (CMVs). Large trucks and buses should always have an appropriately-trained and licensed driver behind the wheel, and introduction of automated systems should never be used as a rationale for weakening operational rules such as hours of service, driver training and other important requirements.

The recent crashes involving the Boeing 737 MAX airplane tragically highlight the catastrophic results that can occur when automated technology potentially malfunctions and is not subject to thorough oversight. Reports have indicated that many aspects of the plane's certification were delegated to Boeing. In addition, safety systems that could have assisted the pilots were not required as standard equipment. Lastly, both planes were being operated by experienced pilots that had extensive training. Yet, there are no such federal training requirements for individuals testing or operating automated vehicle technology or for the consumers who purchase these vehicles and are using them on public roads.

Recommendation: AVs must be subject to minimum performance standards set by the U.S. DOT including for cybersecurity, vehicle electronics, driver engagement for AVs that require a human driver to take over at any point, and a "vision test" for driverless cars to ensure they can properly detect and respond to their surroundings.

Crash Data Must be Collected and Available

At a minimum, crash data should be collected, recorded, accessible, and shared with appropriate federal agencies and researchers so that safety-critical problems

can be identified. Consumers must also be given essential information about the limitations and capabilities of AVs in the owner's manual and at the point of sale, as well as via a public website searchable by VIN that includes, at a minimum, vehicle information such as any exemptions from federal safety standards and the AV's operational design domain (ODD).

Recommendation: Crash data generated by vehicles should be collected, recorded, accessible, and shared with appropriate federal agencies and researchers so that safety- critical problems can be identified. In addition, consumers must also be given essential information about the limitations and capabilities of AVs in the owner's manual and at the point of sale, as well as via a public website searchable by VIN.

Vulnerable Road Users Must be Protected

Deaths and injuries of pedestrians and bicyclists remain unacceptably high. In fact, in 2016, pedestrian and bicyclist fatalities hit their highest levels in nearly 30 years. Vehicles can be designed, specifically in the front end, to reduce the severity of impacts with pedestrians and/or bicyclists. Additionally, collision avoidance systems for pedestrians, like advanced AEB, have promise to further reduce deaths and injuries. Advocates continues to monitor research on the effectiveness of these systems and will support data-driven solutions to these fatalities. Moreover, the New Car Assessment Program (NCAP) must be updated to include pedestrian crashworthiness and pedestrian crash avoidance. Upgrades to infrastructure could also offer pedestrians and bicyclists better protection to reduce the occurrence and severity of crashes.

Recommendation: NHTSA should be directed to issue a standard for improved vehicle designs to reduce the severity of impacts with road users. In addition, NCAP must be updated to include pedestrian crashworthiness and pedestrian crash avoidance.

Improving Safety for Older Americans

In 2017, over 6,500 people age 65 and older were killed in traffic crashes—representing 18 percent of all traffic fatalities. Advocates has developed federal legislative proposals addressing both human factors and vehicle design issues to advance the safety of older adults. These recommended improvements include development of a crash test dummy representing older occupants, endorsing revisions to NCAP to include a "Silver Car Rating", and promoting a modification of the injury criteria used in crash tests to address the specific injury patterns suffered by older occupants. Additionally, Advocates supported the need to mandate that hybrid and electric vehicles be manufactured to make sounds when operating at speeds below 18 miles per hour in order to enable child and adult pedestrians and bicyclists, especially those with visual-impairments and older adults, to identify the presence and movement of these very quiet vehicles. This final rule was issued in December 2016 and compliance is required by September 2020.

Recommendation: NHTSA should be required to develop a crash test dummy representing older occupants, revise NCAP to include a "Silver Car Rating", and modify injury criteria used in crash tests to address the specific injury patterns suffered by older occupants.

The Epidemic of Distracted Driving Must be Addressed

In 2017, crashes involving a distracted driver claimed 3,166 lives. Moreover, crashes in which at least one driver was identified as being distracted imposes an annual economic cost of $40 billion dollars, based on 2010 data. Issues with underreporting crashes involving cell phones remain because of differences in police crash report coding, database limitations, and other challenges. It is clear from an increasing body of safety research, studies and data that the use of electronic devices for telecommunications (such as mobile phones and text messaging), telematics and entertainment can readily distract drivers from the driving task.

Numerous devices and applications, which pose a substantial danger for distracted driving, are being built into motor vehicles. Yet, NHTSA has issued nonbinding guidelines which recommend, but do not require, that clearly unsafe electronic devices should not be installed in vehicles. This does not prohibit manufacturers from installing electronic communications devices that have highly distracting features and will not prevent manufacturers from disregarding the agency guidelines.

Recommendation: NHTSA should issue regulations to strictly limit the use of electronic communication and information features that can be operated while driving, and to prohibit the use of those features that cannot be conducted safely while driving.

NHTSA Must be Sufficiently Funded and Given Additional Authorities

Ensuring NHTSA has adequate resources, funds and staff is a crucial priority. However, the Administration has proposed reducing NHTSA's vehicle safety program by $49 million (26 percent) from the agency's 2019 budget. The Fixing America's Surface Transportation (FAST) Act (Pub. L. 114-94) authorized $214,073,440 for NHTSA's vehicle safety program for fiscal year 2020. The Administration's request is $63 million less than the Congressional authorization. In addition, under the Administration's proposal the enforcement budget, which supports the agency's efforts to identify safety recalls and ensure new vehicles meet federal safety standards, will be cut by $13.5 million (40.9 percent) and the rulemaking budget will be cut by $2.4 million (9.6 percent).

In recent years, millions of motor vehicles have been recalled for serious and sometimes fatal safety defects. NHTSA must have the ability to take immediate action when the agency determines that a defect involves a condition that substantially increases the likelihood of serious injury or death if not remedied immediately. This "imminent hazard" power is needed to protect the public, by allowing the agency to direct manufacturers to immediately notify consumers and remedy the defect as soon as possible. Further, NHTSA must also be given the authority to pursue criminal penalties in appropriate cases where corporate officers who acquire actual knowledge of a serious product danger that could lead to serious injury or death and knowingly and willfully fail to inform NHTSA and warn the public. Under current federal law, many agencies already have authority to pursue criminal penalties including the Consumer Product Safety Commission, the Food and Drug Administration, and the Securities and Exchange Commission. The lack of criminal penalty authority has hampered the agency's ability to deter automakers from safety defect recidivism.

Recommendation: Considering the unacceptably high number of fatalities and injuries on our Nation's roads, the prevalence of recalls, and the new responsibilities incumbent upon the U.S. DOT as AVs are developed and deployed, NHTSA must have additional resources and authorities to effectively oversee vehicle safety.

Commercial Motor Vehicle Safety Must be Improved

Large truck crash fatalities continue to skyrocket. Each day on average, 13 people are killed and more than 400 more are injured in large truck crashes. This preventable fatality toll amounts to a major airplane crash every other week of the year. However, technology currently exists that can help to reverse these grim statistics. They include crash avoidance systems like AEB and speed limiting devices. This equipment should be made standard on all large trucks. Advocates has also recommended mandating comprehensive underride guards for large trucks in order to prevent serious injuries and deaths that occur in crashes in which a passenger vehicle goes underneath the rear, side or front of a truck—known as "underride."

Additionally, the lack of uniform adequate training for candidates wishing to obtain their commercial driver's license (CDL) has been a known safety problem for decades. Yet, a rule requiring training for all new CDL applicants issued in 2016 failed to include a requirement that they receive a minimum number of hours of the behind-the-wheel (BTW) training. This type of real-world experience is needed to enhance the ability of CDL applicants to operate a CMV safely. In addition to these measures, federal truck safety laws including truck size and weight limits, truck driver hours of service rules, and the age requirement for transporting interstate commerce should not be weakened.

Further, the safety deficiencies of motorcoaches identified in countless recommendations and crash investigations by the NTSB had not been addressed for years, even decades, until deadlines for agency action were enacted in the Moving Ahead for Progress in the 21st Century (MAP-21) Act (Pub. L. 112-141). Even still, NHTSA has yet to complete several of these rulemakings despite a long overdue Congressional deadline of October 2014.

Recommendation: Lifesaving technology including AEB, speed limiting devices and underride guards should be standard equipment on CMVs and trailers. Federal truck safety laws including truck size and weight limits, truck driver hours of service rules, and the age requirement for transporting interstate commerce should not be weakened, and truck driver training requirements should be enhanced. Overdue rulemakings enhancing the safety of motorcoaches must be completed without further delay.

Our Most Precious Passengers Need Enhanced Protections

Every year, nearly 500,000 school buses transport more than 25 million children to and from school and school-related activities according to the NTSB. School bus crashes are similar in many respects to aviation crashes—crashes are infrequent but

when they do occur, the results can be catastrophic. Leading safety experts have determined that all school buses should be equipped with safety belts to improve passenger safety. Since 2013, the NTSB has recommended that new school buses be equipped with safety belts. Moreover, the American Academy of Pediatrics has a long standing position that new school buses should be equipped with safety belts. NHTSA also supports requiring safety belts on school buses, and has stated that its goal is to make sure there are no fatalities in school buses. Additional technologies can also make school buses safer. NTSB has recommended that school buses be equipped with both electronic stability control (ESC) and AEB. In addition, motion-activated detection systems that can detect pedestrians located near the outside of the school bus and alert the driver of their presence can improve safety for students boarding and departing a school bus.

Recommendation: Congress should require that important safety advancements be made to ensure the safety of children both inside and outside of school buses.

CONCLUSION

America's roads are needlessly dangerous. Far too many lives are lost and serious injuries sustained in crashes each year. However, commonsense solutions are at hand that can help to improve the safety of all road users. With bold action from this Committee, these measures can be implemented and lives can be saved.

Statement of the American Road and Transportation Builders Association, Submitted for the Record by Hon. Norton

Chairman Norton, Ranking Member Davis and members of the subcommittee, the American Road & Transportation Builders Association (ARTBA) appreciates the opportunity to submit these comments on a subject that is of primary importance to our organization, the entire transportation construction industry and the American public—*Every Life Counts: Improving the Safety of our Nation's Roadways*.

Established in 1902, ARTBA represents over 8,000 member companies and individuals who design, build and manage the nation's highways, public transit, airports and intermodal transportation systems. The primary goal of the association is to grow and protect transportation infrastructure investment to meet the public and business demand for safe and efficient travel. Accordingly, the jobsite safety of the men and women who build and maintain America's transportation infrastructure—as well as that of those who travel through our work zones and drive on our completed roadways—has been a top priority for ARTBA's membership.

As an example of ARTBA's commitment to roadway safety, in 2016 we launched the Safety Certification for Transportation Project Professionals(tm) (SCTPP). This industry driven program aspires to ensure the safety and well-being of construction workers, motorists, truck drivers, pedestrians and their families by making transportation project sites worldwide zero-incident zones.

The SCTPP credential aims to show employers and peers that credentialed transportation professionals can identify common hazards found on transportation project sites and correct them to prevent safety incidents that could result in deaths or injuries. Earning the professional certification also demonstrates command of internationally-recognized core competencies for safety awareness and risk management on transportation projects.

The program was accredited by the American National Standards Institute (ANSI) in May 2018; well over 300 people have earned the credential. And we are just beginning.

SAFER ROADS AND WORK ZONES

ARTBA understands highway safety is an intricate balance between the roadway infrastructure, the vehicle and the motorist. That equilibrium is particularly challenged during construction operations where workers labor barely inches away from motorists who are often travelling at high rates of speed. We commend the committee for happening to schedule this hearing during National Work Zone Awareness Week, which for 20 years has promoted safety for all roadway users and construction workers who navigate these potentially hazardous roadway construction zones. ARTBA is particularly concerned with the trend of increasing deaths and injuries on these sites.

Over the past eight years, work zone fatalities have increased significantly, from 586 in 2010 to 799 in2017 (the latest year for which data is available). That is a jump of over 30 percent. The table below represents the number work zone-related

fatalities, as tracked by the National Traffic Highway Safety Administration's "Fatality Analysis Reporting System" or FARS:



This trend is obviously moving in the wrong direction, and we agree with the committee that a more serious investigation into the cause of work zone fatalities—and all roadway fatalities—is urgently needed.

A FOCUS ON INFRASTRUCTURE

ARTBA's experience over the past 117 years has led to an understanding that roadway users will make errors. Design, construction and operation of the transportation network should emanate from this premise, allowing for the development of a more "forgiving" roadway system.

In the United States, this principle requires a new paradigm. Today, much of America's basic road safety strategy today is aimed at reducing human error. Most federal efforts focus on reducing the number of crashes by improving motorists' behavior, including the interaction of drivers with pedestrians, cyclists, large trucks and other motorists. ARTBA believes we must turn that premise around by accepting the fact that some motorists will inevitably make mistakes. Too often they pay for their mistakes with their lives—or the lives of innocent bystanders.

On all major routes—and others to the extent practicable—our roadway system must anticipate user error and be designed, constructed, equipped and operated to forgive the errant user and protect the innocent worker, pedestrian, cyclist or other driver.

SEVERITY VS. FREQUENCY

In conjunction with reducing fatalities, ARTBA believes our transportation system must be improved to reduce the severity of incidents. In some situations, such as the use of roundabouts, a possible increased rate in the frequency of accidents may be a viable trade-off for a decrease in the severity of injuries. The U.S. should prioritize the quality of human life and health above the rate of traffic incidents.

ARTBA's premise does not remove responsibility from the driver to operate his or her vehicle in a safe and courteous manner. All transportation users have an obligation to follow laws, standards and customs that promote safe and efficient use of the system. At the same time, funds must be provided to give transportation system owners greater opportunities to properly operate their systems.

To date, U.S. policy accepts the fact this is an imperfect system, with a goal to reduce the unsafe consequences of that system. ARTBA believes America's safety goal should be developing a transportation system that features zero predictable crashes with severe consequences—beginning with the major networks through to all other roadways to the extent practicable.

PARADIGM SHIFT

This vision requires a paradigm shift on two parallel tracks:

1. The focus of reducing incidents on America's transportation system must be viewed asreducing severity of injuries as opposed to reducing the number of crashes.

2. The policy anticipates user errors and emphasizes design, construction and maintenance of asystem that will be "forgiving" of errant behavior.

This change in philosophy is necessary because system users do not have all the relevant information needed to make critical decisions related to their safety and the safety of other users. For example, drivers are repeatedly reminded: "speed kills," but the problem is not just speed but kinetic energy. Kinetic energy causes the damage in a collision or a crash, yet users are blind to it. They feel safe when they shouldn't. If the transportation system looked dangerous—and hazards were visible in a manner which users could perceive and appreciate—reliance on improved user behavior would be sufficient. The design and operation of America's transportation system must compensate for this information gap and systematically seek to eliminate such invisible hazards.

On April 14, 2010, Dr. Ted Miller of the Pacific Institute for Research & Evaluation (PIRE) offered testimony on this approach before the Senate Committee on Environment and Public Works.He made a remarkable statement to Congress: "The cost of crashes involving deficient roadway conditions dwarf the costs of crashes involving alcohol, speeding, or failure to wear a safety belt . . . Focusing as much on improving road safety conditions as on reducing impaired driving would save thousands of lives and billions of dollars each year." He further estimated "motor vehicle crashes in which roadway conditions is a contributing factor cost the U.S. economy more than $217 billion each year."

Dr. Miller's comments were based on a significant research study commissioned by the Transportation Construction Coalition—a partnership of 31 national construction associations and construction trade unions that is co-chaired by ARTBA and the Associated General Contractors of America. Completed in 2009, the study is entitled, "On a Crash Course: The Dangers and Health Costs of Deficient Roadways." In the report Dr. Miller described several immediate solutions for problem spots including using brighter and more durable pavement markings, adding rumble strips to shoulders, mounting more guardrails or safety barriers, and installing traffic signals and better signs with easier-to-read legends. Dr. Miller emphasized: "More significant road improvements include replacing non-forgiving poles with breakaway poles, adding or widening shoulders, improving roadway alignment, replacing or widening narrow bridges, reducing pavement edges and abrupt drop offs, and clearing more space on the roadside."

Ten years later, the report's findings remain valid, and the state of America's infrastructure may well be in worse condition now than it was a decade ago. ARTBA's April 1 report on the state of U.S. bridges found the pace of bridge repair in the U.S. is slowing. At the current pace, it would take more than 80 years to replace or repair the nation's structurally deficient bridges. That's longer than the average life expectancy of a person living in the U.S. The report, based on an analysis of the recently-released U.S. Department of Transportation 2018 National Bridge Inventory (NBI) database, revealed 47,052 bridges are classified as structurally deficient and in poor condition. The length of America's structurally deficient bridges if placed end-to-end would span nearly 1,100 miles, the distance between Chicago and Houston.

A HISTORY OF CONGRESSIONAL SUPPORT

ARTBA commends Congress for its long-standing support of roadway infrastructure safety. In the MAP-21 and FAST Act surface transportation laws, Congress ensured that funds set aside for the Highway Safety Improvement Program (HSIP) would be dedicated to highway infrastructure safety improvements. The legislation also continued to provide support for the National Work Zone Safety Information Clearinghouse, a public-private partnership dedicated to providing research, information, conferences and many other resources aimed at improving roadway work zone safety. We hope Congress will continue to support these important programs.

A FIRST STEP

While there are many needs for roadway improvements—and demands on resources to make those improvements are challenging—some efforts simply require doing that which Congress has already identified as an immediate need. For example, through federal rulemaking after the SAFETEA-LU surface transportation law and further provisions in both the MAP-21 and FAST Act laws, Congress and previous administrations have expressed in a bipartisan manner the intent to use increased positive separation between workers and motorists on construction projects that present significant hazards to both workers and roadway users. However, the law has not been fully implemented and positive separation is still not used as regu-

larly as Congress intended. New products and technologies are available that make the practice more practical and cost-effective.

Congress should continue to mandate the Federal Highway Administration to strengthen areas of its Subpart K regulation in accordance with the MAP-21 law that requires additional considerations for use of positive separation. It should also institute provisions in the next surface transportation law that allow for greater enforcement and/or consequences for those who violate the law. Congress should also urge FHWA to include similar positive separation considerations in the agency's Manual on Uniform Traffic Control Devices (MUTCD). The law is clear and prescriptive as to when positive protective systems are to be used by the owner/agency and should be followed accordingly.

CONCLUSION

Improved safety on America's roadways is a critically important goal. With limited resources it is imperative that Congress review all the means available for saving lives and use those resources in a manner that is most effective—both now and in the long term. Investment in improved roadway infrastructure is a proven means to achieve this goal, and will be effective independent of an individual's behavior, whether he or she decides to act responsibly, or chooses to drive impaired, distracted or fatigued.

We have the technology and "know how" to build our roadway system to anticipate user error. It can be designed, constructed, equipped, and operated to forgive the errant user and protect the innocent victim. Sound investment in safe transportation infrastructure is a bi-partisan priority. ARTBA encourages T&I Committee members to act in urgency with their colleagues in other House committees and the Senate to complete an infrastructure investment bill that will not only improve transportation operations, but also dramatically reduce the nearly 40,000 lives lost each year on America's roads.

Statement of the American Association of State Highway and Transportation Officials, Submitted for the Record by Hon. Norton

INTRODUCTION

The American Association of State Highway and Transportation Officials (AASHTO) welcomes the opportunity to submit this testimony related to safety on this nation's highways. AASHTO represents the state departments of transportation (state DOTs) of all 50 States, Washington, DC, and Puerto Rico.

The State DOTs appreciate the leadership of the House Transportation and Infrastructure Committee, along with your Senate and House peers in partner committees, in shepherding the Fixing America's Surface Transportation (FAST) Act in December 2015. This legislation has ensured stability in the federally-supported passenger rail, freight, safety, highway, and transit programs through 2020.

The safety of all users of the transportation system is a top priority for every state DOT and safety is one of AASHTO's key reauthorization policy areas included as part of our Transportation Policy Form (TPF). Under the direction of the TPF, the state DOTs last year initiated an extensive 18-month effort to develop and adopt reauthorization policy recommendations by October of this year. It is a bottom-up process, where we are currently in the process of gathering expert input from our wide range of technical committees comprising leaders from all state DOTs. We're also seeking our industry partners' input during this process prior to our formal adoption later next year, in order to maximize the inclusivity of perspectives in our policy recommendations to come.

In order to improve the safety of the transportation system for all users, infrastructure owners and operators, such as state DOTs, must take a multidisciplinary and data-driven approach to transportation safety. Transportation safety performance is linked to a variety of elements, including roadway design, traffic law enforcement, road user behavior, and emergency crash response. Therefore, effective transportation safety necessitates a multidisciplinary effort and requires that the infrastructure owners and operators partner with a range of stakeholders and exercise flexibility in how best to use limited funding in order to eliminate traffic fatalities and serious injuries.

As the owners and operators of a significant portion of this nation's roadways, AASHTO members have been at the forefront in ensuring a safe transportation system through safety innovation. In 2012, the Moving Ahead for Progress in the 21st Century (MAP-21) was passed which requires states to use a performance-based management approach to establish targets and then allocate funding to projects and

programs that will help a state achieve those targets. The law required the U.S. Department of Transportation (USDOT), to establish a number of national performance measures, of which safety is one of four major groups. The law and subsequent regulations set certain requirements for state DOTs to establish targets and to make progress towards achieving those targets prior to imposing certain consequences. For safety, all state DOTs must establish targets for five safety performance measures:

1. Number of fatalities on all public roads
2. Fatality rate on all public roads
3. Number of serious injuries on all public roads
4. Serious injury rate on all public roads
5. Number of non-motorist fatalities and serious injuries on all public roads

State DOTs are able to establish their own targets for each safety performance measure and must report their targets through their annual Highway Safety Improvement Program (HSIP) report and the Highway Safety Plan (HSP) report. The Federal Highway Administration (FHWA) determines whether a state DOT has made significant progress towards achieving their targets if they meet or exceed four out of five targets or if their final number is better than a baseline value calculated by FHWA. If a state DOT is determined to have not made significant progress towards their safety performance measures, FHWA will impose a number of consequences.

Safety is considered one of the more mature performance management areas since state DOTs have been establishing and reporting on many different safety performance measures through their HSIP, Highway Safety Plans, and Strategic Highway Safety Plans (SHSP) for nearly ten years. The target-setting process a state DOT uses to establish their targets is very comprehensive and data-driven. It is comprehensive in that it includes many different stakeholders and addresses all public roads and all users of the transportation system. It is data-driven in that numerous sources of data are included in the analysis including the Fatal Accident Reporting System (FARS), law enforcement data, serious injury databases, and roadway design elements. All of this data and information is then used to better understand why crashes occurred where and when they did. Finally, predictive tools and models are used to better understand how best to program funding for specific projects to prevent the crashes from occurring, be it countermeasures, design elements, enforcement efforts, and/or public information campaigns.

Thus, an important aspect to programming funding is *flexibility* both in how funds can be used among engineering, education, enforcement and emergency services efforts as well as within the engineering domain where state DOTs have the most control to identify which engineering solution may be most appropriate to improve safety. In order to make the best engineering decision, state DOTs have pooled their resources to research and develop a number of different design guides that transportation professionals can use to plan and design better and safer transportation systems. The following are examples of the design guides that the state DOTs have developed through AASHTO:

- *Highway Safety Manual* [1]—provides a complete collection of quantitative safety analysis methods to estimate crash frequency or severity at a variety of locations in order to better plan and design safer roadways.
- *Policy on Geometric Design of Highways and Streets* [2] *(also known as the AASHTO Green Book)*—presents a framework for the geometric design of roadways that is flexible, multimodal, and performance-based providing guidance to engineers and designers who strive to make unique design solutions that meet the needs of all highway and street users on a project-by-project basis. The newest edition introduces a set of "contextual" classifications—such as rural, rural town, suburban, urban, and urban core—that will help better guide geometric design efforts to create more "flexible and performance-based" designs for new projects as well as for existing roads. Work has begun on the next edition, which is expected to fully implement a multimodal, performance-based approach for road designers to use to improve safety by meeting the needs of all roadway users.
- *Guide for the Planning, Design, and Operation of Pedestrian Facilities* [3]—provides guidelines for the planning, design, operation, and maintenance of pedestrian facilities, including signals and signing. The guide recommends methods for accommodating pedestrians, which vary among roadway and facility types, and addresses the effects of land use planning and site design on pedestrian

[1] http://www.highwaysafetymanual.org/Pages/default.aspx
[2] https://store.transportation.org/item/collectiondetail/180
[3] https://store.transportation.org/Item/CollectionDetail?ID=131

mobility. A new, updated edition of this guide is scheduled to be published this year.

- *Guide for the Development of Bicycle Facilities* [4]—provides detailed planning and design guidelines on how to accommodate bicycle travel and operation in most riding environments. It covers the planning, design, operation, maintenance, and safety of on-road facilities, shared use paths, and parking facilities. Flexibility is provided through ranges in design values to encourage facilities that are sensitive to local context and incorporate the needs of bicyclists, pedestrians, and motorists. Work on a new edition is currently underway.
- *Guide for Geometric Design of Transit Facilities on Highways and Streets* [5]—provides a comprehensive reference of current practice in the geometric design of transit facilities on streets and highways, including local buses, express buses, and bus rapid transit operating in mixed traffic, bus lanes, and high-occupancy vehicle lanes, as well as bus-only roads within street and freeway environments. It also covers streetcars and LRT running in mixed traffic and transit lanes, and within medians along arterial roadways.

All of these guides provide planners, engineers, and designers with significant flexibility in how they ultimately design a transportation project while taking into account the overall safety and operations of the facility. These guides do not establish mandatory requirements for how a project should be designed, rather they emphasize flexibility and encourage planners, engineers, and designers to take into account the unique aspects of each individual project. In fact, state DOTs are adding even more flexibility to these guides while continuing to ensure they remain research-based and peer-reviewed. For example, the next edition of the Policy of Geometric Design of Highways and Streets will include updates to educate engineers and designers on the flexibility inherent in the guide and further emphasize the multimodal nature of our transportation system which includes all users.

Given the comprehensive nature of improving the safety of our transportation system, the remainder of this testimony focuses on three points that have been identified to date through the TPF process that should be addressed in future federal surface transportation authorization laws:

1. Continue to focus on implementation of the performance management regulations;
2. The need to add flexibility for the use of HSIP funding; and
3. The need to add eligibility and increased federal share for railway-highway grade crossing projects.

IMPLEMENTATION OF PERFORMANCE MANAGEMENT REGULATIONS

All state DOTs are now in the process of implementing the performance management requirements that were established in law as part of MAP-21 and the FAST Act. The new and updated performance management regulations were developed and published over a six year time period beginning in 2013 and ending in 2018 with the publication of the final rule regarding 23 CFR § 490, National Performance Management Measures, Subpart H and the FTA Safety final rule in July 2018. State DOTs are currently working to implement the first required aspect of these provisions, which is to establish targets for the federal performance measures, incorporate those targets into the planning process, and report on progress towards achieving the targets. Under the current rules, the first comprehensive report documenting and analyzing the results of the first reporting cycle will not be available until CY2022, at the earliest, since the first reporting cycle goes from January 1, 2018 to December 31, 2021 [6].

AASHTO members believe the current regulations are working. A case in point is the Missouri DOT (MoDOT) and their current efforts to reduce fatalities and serious injuries on the public roadways. As with all state DOTs, 2017 was the first year for which Missouri had to establish safety targets for the five national-level safety performance measures identified above for CY2018. From the beginning, MoDOT established five-year targets by first establishing a goal for an annual *reduction* in fatalities and serious injuries. MoDOT used their strategic highway safety plan (called the Blueprint) goal of 700 fatalities by 2020, which had the support of many stakeholders statewide, to drive these targets. Their initial 2017 targets for fatalities was a seven percent *reduction*, with a four percent reduction for serious injuries and for non-motorized users. These were considered very aggressive targets since the number of fatalities had increased in 2015 and 2016.

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[4] https://store.transportation.org/Item/CollectionDetail?ID=116
[5] https://store.transportation.org/Item/CollectionDetail?ID=133
[6] https://www.fhwa.dot.gov/tpm/faq.cfm#perf

MoDOT, unfortunately, did not achieve their aggressive targets set in 2017 but was encouraged to see a reduction in the number of fatalities nonetheless. For 2018, they continued to pursue their Blueprint target of 700 fatalities by 2020 and set targets even more aggressively at nine percent reduction for fatalities and five percent reduction for serious injuries and four percent reduction for non-motorized users. For 2019, they are proposing even more aggressive targets of 13 percent reduction for fatalities, eight percent reduction for serious injuries and a five percent reduction for non-motorized to continue the course to reach the Blueprint target. Since the beginning of federal safety targets, MoDOT has always set targets based on an anticipated reduction each year. Fatality and serious injury numbers started decreasing consistently in 2017 and continue as of this date.

Because of the data-driven process MoDOT used and setting aggressive targets to improve safety, the Missouri Highways and Transportation Commission allocated an additional $10 million in 2017 for safety projects. MoDOT supported the grass roots *Buckle Up Phone Down* campaign which took aim at reducing distracted driving. And, in 2017, MoDOT targeted Natural Bridge Road in St. Louis that had three times the number of pedestrian crashes compared to other similar roadways (20 fatalities from 2012-2016). Since the multi-disciplinary efforts of this innovative project started, there has only been one pedestrian fatality, a decrease of 95% While MoDOT is seeing success in their efforts to establish aggressive targets that aim to drive down the number of fatalities and serious injuries we must remember that MoDOT alone cannot be held responsible for a state's ultimate results. MoDOT sets safety targets based on efforts to improve highway safety using the comprehensive approach which includes engineering, education, enforcement, emergency services, and public policy as well as significant engagement with statewide partners, local agencies, and elected officials as part of the solution for reducing fatalities.

The MoDOT story is but one of 52 examples occurring throughout the United States. We believe it is an example of a true success story in the way a data-driven process like performance management can be used to identify areas of concern, agencies can set targets, and then strategies identified to achieve those targets. To this end, AASHTO recommends that no consideration be given to changing existing regulations that would alter the current performance management requirements until after at least two full reporting cycles in order to give the state DOTs time and experience in addressing the regulations which is 2026.

HIGHWAY SAFETY IMPROVEMENT PROGRAM FLEXIBILITY

Under current law, HSIP funds are restricted to use on specific activities and cannot be used for education, enforcement, safety research, or emergency medical service safety programs. The legislative change in the FAST Act effectively restricts HSIP eligibility to only 28 strategies, activities or projects listed in the legislation, eliminating the ability to use HSIP funds for public awareness and education efforts, infrastructure and infrastructure-related equipment to support emergency services, and enforcement of traffic safety laws that are identified in the states' Strategic Highway Safety Plans.

Prior to the enactment of the FAST Act, state DOTs had the flexibility to choose safety projects and programs that would lead to the best safety outcome—whether the solutions were roadway safety infrastructure projects or were implemented in combination with non-infrastructure programs. SAFETEA-LU and MAP-21 had provided this flexibility in order to identify: 1) the right solution to fit the unique needs of specific areas or stretches of roadway and to help reverse a trend of increasing fatalities; 2) a systemic approach to address a type of crash state wide; and/or 3) a behavioral issue in a certain area or part of the population. Unfortunately, the FAST Act changed the ability of state DOTs to truly implement a comprehensive and data-driven process since states are limited in how they can use their limited HSIP funding.

Ultimately, the FAST Act changes are inconsistent with the intent of a state's Strategic Highway Safety Plan, which calls for a multidisciplinary approach to reducing highway fatalities and serious injuries on all public roads. The lack of flexibility in safety project selection in the HSIP program, particularly non-infrastructure related activities, stifles innovative safety improvements and partnerships that lead to crash reductions and reduced highway fatalities. AASHTO recommends that Congress restore flexibility for states to use a portion of HSIP funds for non-infrastructure safety programs and for safety research.

RAILWAY-HIGHWAY CROSSINGS

Crashes at highway-rail grade crossings are a perennial issue for many state and local DOTs from a safety perspective. According to the U.S. Government Account-

ability Office, railway-highway crossings are one of the leading causes of railroad-related deaths [7]. According to the Federal Railroad Administration (FRA) data, in 2017, there were more than 2,100 crashes resulting in 273 fatalities. Since 2009 crashes have occurred at a fairly constant rate. And, research sponsored by the FRA identified vehicle driver behavior as the main cause of highway-rail grade crossing crashes and that factors such as train and traffic volume can contribute to the risk of a crash. In addition, over 70 percent of fatal crashes in 2017 occurred at grade crossings with gates. Railway-highway crossings are an important contributor to a state DOT's fatality and serious injury rates and through the 23 USC § 130 program, the federal government provides states funding to improve grade-crossing safety. Within the 23 USC § 130 Program, there are four concerns that the state DOTs have: conflict related to the federal share between 23 USC § 120 and § 130 programs, the need for additional flexibility in the use of railway-highway funds, the need to increase incentive payments for communities, and the eligibility of projects for funding.

Federal Share—For the at-grade rail-highway crossing program, there is a conflict in current law. 23 USC § 120 allows for a 100 percent federal share for certain safety projects or projects within Indian reservations, national parks, and national monuments while 23 USC § 130, Railway-Highway Crossing, set the federal share at 90 percent. This difference in what is allowed for the total federal share has resulted in a lot of confusion at both state DOTs and the FHWA. For example, the FHWA allowed thirty-five states plus the District of Columbia to incorrectly authorize 863 projects at 100 percent federal share (per 23 USC § 120) rather than at 90 percent as currently provided in 23 USC § 130. The FHWA is now requiring states to reimburse the federal-aid program for the difference on railway-highway crossing projects authorized above the 90 percent share on or after April 14, 2016, which totals over $26 million.

Unfortunately, decreasing the federal share to 90 percent and requiring state DOTs to reimburse the federal-aid highway program for the difference already approved and spent will be counterproductive to the intent of the law and burdensome to many of the localities where the projects were constructed for two reasons.

First, many of the railway-highway crossing projects that were originally allowed at the 100 percent federal share are located in rural areas that are off the state highway system. And, most of these locations are in small cities and counties that do not have the financial resources to provide the needed ten percent match for the cost of the projects.

Second, if the intent of the law is to improve safety and state DOTs now have to reimburse FHWA for the $26 million, they likely have to take money away from other projects that are also designed to improve safety. Additional flexibility is needed in order to assist rural counties and small cities address their railway- highway crossing safety challenges.

Given the confusion and uncertainty that has been created by the differences in these two sections of Title 23, AASHTO recommends that the two sections be aligned to allow 100 percent participation of 23 USC § 130 funds, resulting in the funding being less restrictive to use at the local level where the need is often greatest. AASHTO believes these changes will provide significant safety benefits for rural areas where rail-highway crossings can result in significant safety concerns. In addition, AASHTO believes that the current requirement that states reimburse the federal-aid highway program for the $26 million be rescinded so that states can continue to focus on safety.

Incentive payments—States and railroads may make incentive payments of up to $7,500 for the permanent closure of at-grade railway-highway crossings. Although there are set-aside funds to help incentivize communities to close grade crossings, the $7,500 limit is often not enough to convince local officials to support closing these grade crossings, as the cost of such projects are substantially more expensive than this amount. AASHTO recommends that the $7,500 incentive payment amount be increased to $100,000 in order to encourage the closure of at-grade railway-highway crossings.

[7] https://www.gao.gov/assets/700/695317.pdf

Eligibility—The current 23 USC § 130 railway-highway crossing program does not include replacement of functionally obsolete warning devices as an eligible activity. While research shows that a large percentage of crashes occur at railway-highway crossing with gates, the research also shows that modern and updated devices can reduce crashes occurring at railway-highway crossings as well. Thus, AASHTO recommends adding the replacement of functionally obsolete warning devices with modern and innovative devices and techniques to the list of eligible uses of 23 USC § 130 funds.

CONCLUSION

Every state DOT views a high priority of their work being to provide a safe transportation system to the public. State DOTs have the expertise, data, and analytics to understand where crashes are occurring, how to mitigate the effect of those crashes, and program limited funding to achieve critical safety targets. Ultimately, while the state DOTs are held accountable for the federal performance management safety target achievement, we must remember that state DOTs alone are not solely responsible for achieving the safety targets. Determining how best to mitigate crashes from occurring that result in serious injuries and fatalities must include the ability for all partners to:

- design better infrastructure and vehicles;
- educate the public about safe use of roadways regardless of mode;
- enforce existing laws and/or establish new laws; and
- ensure emergency services are quick to arrive and well equipped if a crash does occur.

Clearly, a state DOT has direct influence over some of these efforts, but certainly not all. Other state agencies, local agencies, elected officials and numerous other stakeholders are all part of the solution for reducing fatalities and serious injuries and the federal laws and regulations must be designed to enable a state DOT to have as much flexibility as possible to focus limited funding on programs and projects that have the potential to reduce the number of crashes as much as possible.

AASHTO members encourage the Committee to continue to provide the necessary funding and program flexibility in order to best meet the safety challenges of today and best prepare for the safety challenges of the future.

Letter from the Road to Zero Coalition, Submitted for the Record by Hon. Norton

APRIL 9, 2019.

Hon. JOHN BARRASSO
307 Dirksen Senate Office Building, Washington, DC 20510
Hon. PETER DEFAZIO
2134 Rayburn House Office Building, Washington, DC 20510
Hon. TOM CARPER
513 Hart Senate Office Building, Washington, DC 20510
Hon. SAM GRAVES
1135 Longworth House Office Building, Washington, DC 20515

DEAR CHAIRMEN BARRASSO AND DEFAZIO AND RANKING MEMBERS CARPER AND GRAVES:

The Road to Zero coalition [https://www.nsc.org/road-safety/get-involved/road-to-zero] believes reaching zero deaths on the nation's roads is not impossible; it just has not been done yet. We are a broad-based diverse group of organizations committed to eliminating roadway fatalities by 2050. Over the past two years we have grown to more than 900 members from across the country representing every facet of the transportation and safety communities. It is the first time so many organizations have collaborated to put forth a plan to address fatalities on our roads, which recently increased after years of decline.

In 2018, the National Safety Council (NSC) estimates more than 40,000 people lost their lives in roadway crashes.[1] Additionally, pedestrian fatalities are at a higher level than any time in the last 25 years. This is unacceptable.

Everyone can do something to reduce fatalities on the roadway—including government leaders, industry, safety experts, transportation planners, engineers, tech-

[1] https://injuryfacts.nsc.org/motor-vehicle/overview/preliminary-estimates/

nology providers, health professionals, and advocates. Together, we have awarded eighteen Safe System Innovation Grants for leading safety projects and issued a seminal report, The Road to Zero: A Vision for Achieving Zero Roadway Deaths by 2050, on how to reach this bold objective.

- Double down on what works through proven, evidence-based strategies
- Advance life-saving technology in vehicles and infrastructure
- Prioritize safety by adopting a safe systems approach and creating a positive safety culture

We hope this report and the goals in it can help you in your roles, and the Road to Zero Coalition stands ready to assist and show how we are implementing this vision each and every day across the United States.

Sincerely,

19th Judicial District Court Baton Rouge • 2eyes.justdrive • 3 little Halos Safety Town • 92nd District Court of Michigan Case Management • A Sobering Choice Coalition • AAA • AAA Foundation for Traffic Safety • AARP • AARP Driver Safety • Acadian Ambulance Service • ACRT Inc. • Active Transportation Alliance • Advanced Drivers of North America • Advocates for Highway & Auto Safety • Agero • Air Safety Engineering • Alaska Child Passenger Safety Coalition • Alert Today Florida • AlertDriving • Alexandria Bicycle and Pedestrian Advisory Committee • Alliance for a Healthy Orange County • Alliance for Safe Kids • Alta Planning + Design • ALTARUM, Center for Behavioral Health • Alvin Lester • Amazon • America Walks • American Ambulance Association • American Association for Justice (AAJ} • American Association of Motor Vehicle Administrators (AAMVA) • American Association of State Highway and Transportation Officials • American Automotive Leasing Association (AALA) • American Bar Association/NHTSA Judicial Outreach Liaison Chaney Taylor • American Bar Association/NHTSA Judicial Outreach Liaison Judge Jack Kennedy • American Bar Association/NHTSA Judicial Outreach Liaison Judge Mary Jane Knisely • American College of Emergency Physicians • American Driver and Traffic Safety Education Assn. (ADTSEA) • American Family Children's Hospital • American Highway Users Alliance/Roadway Safety Foundation • American Industrial Hygiene Association (AIHA) • American Insurance Association (AIA) • American Motorcyclist Association • American Public Works Association (APWA) • American Road and Transportation Builders Association • American Society of Civil Engineers (ASCE) • American Society of Safety Engineers (ASSE) • American Traffic Safety Services Association (ATSSA} • American Transportation Research Institute (ATRI) • American Trucking Associations (ATA} • Amy Stewart CSP • AnnaLeah & Mary for Truck Safety • Anne Lusk, Ph.D. - Harvard T.H. Chan School of Public Health • Arcadis • ARI • Arizona Department of Transportation • Arkansas Highway and Transportation Department • Arrow Expedite, Inc. • Association *Friends Of Road* for Sikasso Mali (Africa) • Association for Safe International Road Travel (ASIRT} • Association for the Advancement of Automotive Medicine (AAAM) • Association of Equipment Manufacturers (AEM) • Association of Ignition Interlock Program Administrators • Association of Metropolitan Planning Organizations • Association of National Stakeholders in Traffic Safety Education • Association of Pedestrian and Bicycle Professionals (APSE) • Association of Transportation Safety Information Professionals • Athens-Clarke County • Atlanta Bike • Austin Transportation Department • Autonontraffic • B.R.A.K.E.S. • Baltimore City Department of Transportation • Baltimore Metropolitan Council • Baton Rouge-Courts • Baton Rouge Planning Commission • BCR Consulting LLC • Beach Cities Cycling Club • Beaverhead Development Corporation • Behind The Wheel With ADHD • Below 100 • BenPohlSpeaks • Benton County Arkansas • Berkeley Media Studies Group • Berlin (VT) Police Deparatment • Better Eugene-Springfield Transit (BEST) • Bicycle Coalition of Maine • Bicycle Colorado • Big Picture Huntsville • Bike Cleveland • Bike Pittsburgh • Bike Routes 4 Fitness Inc. • Bike San Diego • BikeWalkKC • Blue Hills Neighborhood Assoc. • Boardman Township, Mahoning County, Ohio • Boone County Highway Department, IL • Boone County Public Works, KY • Borough of Kennett Square • Borough of Matamoras • Borough of Nesquehoning, PA • Borris Automotive & Safety Solutions • Brahma Kumaris World Spiritual University (BKWSU) • Brain Injury Association of America • Brandmotion • Breakthru Beverage • Bristol-Myers-Squibb • Broadspectrum • Buchanan County Secondary Roads-IA • Buckle Up for Life • Buckle Up Your Pet • Butte Cares Inc. • C.S. Mott Children's Hospital, Injury Prevention Program • California University of PA • California Walks • Cape Canaveral City Council • Cape Coral Police Department • Capital District Transportation Committee-New York • Capitol Region Council

of Governments Traffic Planner • car2go North America • Carol Stream Police Department • Cary Medical Center • Casanova Powell Consulting • Cascade Bicycle Club • Casey Feldman Foundation • CDC-National Center for Injury Prevention and Control • CDC-(NIOSH) • CDC Center for Disease Control and Prevention • CEC Electrical • CellSlip • Transport Hartford Academy at the Center for Latino Progress • Center for Safe Alaskans • Center for Seabees Facilities Engineering • Center for Transportation Safety • Center for Transportation Research at the USF • Center for Vehicle Safety • Centerstone Kentucky • Chesapeake Region Safety Council Maryland Chapter • Chicago Department of Transportation • Child Injury Prevention Alliance • Children and Parent Resource Group, Inc. • Children's Mercy Hospital • Citizen Response Corps • City of Akron (OH) Police Department • City of Atlanta Office of Mobility Planning • City of Bethlehem • City of Birmingham (AL) Traffic Engineering Department • City of Boulder • City of Bowling Green • City of Broken Arrow, OK • City of Charlotte • City of Charlotte Vision Zero • City of Chicago • City of Cincinnati • City of Columbia, MO • City of Coweta, OK • City of Cupertino Safe Routes to School • City of Dallas • City of Decatur, AL • City of Dillon, MT • City of Durango • City of Durant, OK • City of Durham Department of Transportation • City of East Point, Georgia • City of Edgewater • City of Elganger • City of Eugene • City of Fort Lauderdale • City of Fremont • City of Hardy, Arkansas • City of Hernando • City of Irvine • City of Kalamazoo-Public Services Department • City of Kissimmee • City of Lakeland • City of Lansing, Michigan • City of Longwood, FL • City of Louisville • City of Marshall, IL • City of Memphis • City of Monterey • City of Morgantown, WV • City of Mountain Brook • City of Naples • City of North Miami Beach, FL • City of Norwalk, CT • City of Omaha • City of Orlando Transportation Department • City of Philadelphia • 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County Engineer's Office • Cowboy Barriers LLC • Cranberry Township, PA • Crane 1 Services • Creative Visions • Cross County Connection TMA • CTIA-Everything Wireless • Cycling Advocates of Southern Arizona (CASAz) • Daimler Trucks North America • Dakota County Attorney's Office • DC Government • Decide2drive • Dee Davila-Estelle • Delaware General Health District • Delfasco, LLC • Delhaize America, LLC • Delphi Automotive • DENSO • Department of Homeland Security • Department of the Navy • Distribution Inc. • District Department of Transportation • District Department of Transportation-Highway Safety Office • Doodnauth Thompson • Dothan-Houston County Substance Abuse Partnership • Douglaston Local Development Corporation • Draper • Drive Smart • Drive Smart Virginia • Drivers Education of Southern Maryland, Inc. • Driving Dynamics • Duke Trauma Center • Dulles Greenway • Eagle Ridge Institute • East New York 4 Gardens Inc • Econometrica, Inc. • Ecostratas Services • eDriving • 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ward Pinellas • Foundation for Advancing Alcohol Responsibility (FAAR) • Foundation for Safe Driving • Franklin Regional Council of Governments • Fullerton Collaborative • GAF • Gas Station TV • The General Sessions Music City Community Court, VIII • George L. Reagle and Associates • George Washington University Hospital • Global Automakers • Global Brake Safety Council • Global Health Advocacy Incubator • GO Bike Buffalo • Goodhue County Health and Human Services • Governors Highway Safety Association (GHSA) • Governors State University-Campus Police Department • Grand River Navigation Company • Graves County Road Department • Guam Office of Highway Safety • Gulf Breeze Police Department, FL • Guts of Grief • H.E.A.R.T. Coalition, Inc. • Haas Alert • Handytube • Hang Up and Drive • Harford County Sheriff's Office • Hawaii Bicycling League • Hays Companies • Health by Design • Healthy Communities of Brownsville, Inc. • HED Academy • Hennepin County Public Works • Here • Hernando County Community Anti-Drug Coalition • Higher Education Center for Alcohol and Drug Prevention • Hill County Road Dept • Hillsborough County Sheriff's Office • Hitch42 LLC • Holly Springs Police Department (GA) • Hollywood Crawford Door Company • Honda Motors • Howard County Fire and Rescue • Howard University Hospital-Injury Prevention • Human Factors and Machine Lab at Texas A&M • Humboldt General Hospital EMS Rescue • Hydrokinetics • Illinois Department of Transportation • Illinois Safety Consultants • llluminite360 • IMMI • Impact Teen Drivers • Improve Hybrid Safety • In Control Family Foundation • In Memory of Tristan Beckett Schultz • Independence County Road Department • Indian Health Service • Injury Prevention Center at the Dartmouth-Hitchcock • Injury Prevention Center of Greater Dallas • lnova Injury Prevention and Outreach • Institute for Car Crash Justice • Institute for Transportation at Iowa State University • Institute of Scrap Recycling Industries, Inc. • Institute of Transportation Engineers (ITE) • Institute of Transportation Engineers Public Fellow • Insurance Institute for Highway Safety (IIHS) • Intelligent Car Coalition • Interactive Education Concepts • International Association of Chiefs of Police (IACP) • International Association of EMS Chiefs • International Center for Automotive Medicine • lnviro Solutions Group • Ion Science • Iowa Methodist Medical Center • Iowa-Illinois Safety Council • iRap • ITE Public Fellow Member • J.D. Power • J&M Tank Lines • Jefferson County Iowa • Jessica and Kelli Uhl Memorial Foundation • JodenesVoice • John Burns Construction Company • Johns Hopkins Center for Injury Research and Policy • Johns Hopkins International Injury Research Unit • Johnson County Trails • JPACC Foundation • Just Drive, Inc. • Justice Speakers Institute • Justicia Vial • Kahn Media Inc. • Katasi, Inc. • Katherine Wilson Art • Kelly, Remmel, and Zimmerman Bike Law • Ken's Beverage Inc. • Keolis Transit America • KidsAndCars.org • Kimley-Horn • Kinetic Metrics LLC • Kittelson & Associates • Knight-Swift Transportation Holdings, Inc. • Knoxville Regional Transportation Planning Organization • KSPAN-KY Safety & Prevention Alignment Network • Kwik Trip • Laborers' Health & Safety Fund of North America • Lake Forest Park Citizens' Commission • Lance Wheeler Memorial Roadway Safety Initiative • Landstar Transportation Logistics, Inc. • Lane Council of Governments • Lansing Area Safety Council • LaSalle County Highway Department • LeasePlan USA • Lexington-Fayette Urban County Government • Liberty Mutual • LifeFlight Eagle • LifeSaverApp LLC • Lime • Lindsey Research Services LLC • LINK Houston • LivableStreets Alliance • LOOK! Save A Life • Lorain County Public Health, OH • Los Angeles DOT • Los Angeles Police Department • Los Angeles Walks • Louisiana Bureau of EMS • Louisiana Center for Transportation Safety • Louisiana Destination Zero Deaths • Louisville Metro Department of Public Works and Assets • Loyola University New Orleans • Lyft • Lytx, Inc. • M-C North America Inc. • MADD • MADD-Maine Chapter • MADD Washington State Chapter • Madison County Safety Coalition • Mahube-OTWA Community Action Partnership • Main Line Health Center for Population Research • Malcolm Omari Hill Scholarship Fund Inc. • Manatee County Public Works • Marc and Tamara Schwartz • Marconi Pacific, LLC • Massachusetts Department of Transportation • Massachusetts State Police • McLean County Planning Commission (Illinois) • Mechanical Systems Company, LLC • Mecklenburg Safe Communities • MedStar Washington Hospital Center • Message Loud • MGA Research • Michigan State University • Mid-Region Council of Governments (NM) • Milt Olin Foundation • Minnesota Office of Traffic Safety • Minnesota Toward Zero Deaths • Mississippi Safety Services • Missouri Bicycle & Pedestrian Federation • Mobileye Vision Technologies Inc. • Mobility 4 All, GBC • Montana State University-Western Transportation • Monterey County Health Department • Montgomery County District Attorney's Office-Texas • Montgomery County, Maryland Government-Vision •

Morgan State University • Motor Carriers of Montana • Motor Equipment and Manufacturers Association • Motorcycle Riders Foundation • Mount Joy Borough • Mourning Parents Act, Inc. • Muller Welding Company • Munich Reinsurance America Inc. • NAFA Fleet Management Association • Nassau Alcohol Crime Drug Abatement Coalition • Nassau County, FL • National/Local Technical Assistance Program Association • National Academies of Sciences, Engineering, and Medicine (TRB) • National Advanced Driving Simulator University of Iowa • National Association of Attorneys General • National Association of City Transportation Officials (NACTO) • National Association of Counties (NACo) • National Association of County Engineers (NACE) • National Association of Development Organizations (NADO) • National Association of Emergency Medical Technicians (NAEMT) • National Association of State EMS Officers • National Association of State Head Injury Administrators • National Association of State Motorcycle Safety Administrators • National Association of Trailer Manufacturers (NATM) • National Association of Women Highway Safety Leaders • National Center for DWI Courts • National Center for Rural Road Safety at Montana State University • National Center for Safe Routes to School-UNC Highway Center • National Child Passenger Safety Board • National Coalition for Safer Roads • National Coalition for the Homeless • National Complete Streets Coalition/Smart Growth America • National District Attorneys Association (NOAA) • National District Attorneys Association/National Traffic Law • National EMS Management Association • National Fire Protection Association • National Foundation for Teen Safe Driving • National Governors Association (NGA) • National Governors Association Center for Best Practices • National Highway Traffic Safety Administration (NHTSA) • National Highway Traffic Safety Administration Judicial • National Highway Traffic Safety Administration Public Health • National Highway Traffic Safety Administration Tribal Judicial Fellow • National Institute of Health-National Institute on Aging • National League of Cities (NLC) • National Oceanic and Atmospheric Administration (NOAA) • National Opinion Research Center at the University of Chicago • National Organizations for Youth Safety (NOYS) • National Safety Council-Chesapeake Region Safety Council • National Safety Council-Nebraska Safety Council • National Safety Council-North Dakota Safety Council • National Safety Council-Ohio Chapter • National Safety Council-Oklahoma Safety Council • National Safety Council-Safety Council of SW Ohio • National Safety Council (NSC) • National Safety Council of Northern New England • National Safety Council of South Carolina • National Safety Council/National Child Passenger Safety Board • National Sheriffs Association • National Transportation Safety Board (NTSB) • National Waste and Recycling Association • Nationwide Insurance • Naumann Hobbs Material Handling • Nauto, Inc. • NAVAIR/Military/NAS Patuxent River • Naval Safety Center • NavFac Bethesda • NC DWI Services • NDOT Highway Safety Office • Nebraska Bicycling Alliance • Nebraska Department of Transportation Highway Safety • Network of Employers for Traffic Safety (NETS) • Nevada Highway Patrol • Nevada Office of Traffic Safety • New Mexico Department of Transportation • New Mexico DOT Traffic Safety Division • New Mexico DOT • New Mexico LTAP Center • New Middletown Police • New York City • New York City-Department of Transportation • New York City Police Department • Nexar • Nikhil Badlani Foundation • NJM Insurance Company • NLTAPA • NNID Foundation Inc. • NoCell Technology • Nonprofits Insurance Alliance Group • North Carolina DOT Rail Division • North Carolina Division of Public Health • North Central Texas Council of Governments • North Dakota Department of Transportation • North Jersey Transportation Planning Authority • Northeast Transportation Connections • Northeastern New York Safety & Health Council • Northeastern University • Northwest Missouri Regional Council of Governments • Northwestern Medicine • Office of the Assistant Secretary of the Navy, Energy, Installations and Environment • Office of the Attorney General, DC • Office of the Chief Judge-Circuit Court of Cook County • Office of Emergency Medical Services, Commonwealth of Massachusetts • Oklahoma Insurance Department • Oklahoma State University • Open Data Nation • Operation Lifesaver, Inc. • Orbcomm • Oregon Walks • Our Driving Concern Oklahoma • Our Driving Concern Texas • PA Trauma Systems Foundation • PACE Coalition • Pace Suburban Bus • Palm Beach Metropolitan Planning Organization • Palmetto Cycling Coalition • Palouse Injury Research Laboratory-University of Idaho • Parachute Vision Zero Network • Paramedic Foundation • Partnership for Change • Patricia E. Adams, DTM • Patriot Rail Company LLC • Paul Shindman • Pedal Pushers, LLC • Pedestrians Educating Drivers on Safety, Inc. • PedNet Coalition • Pendleton County Fiscal Court/Road Dept. • Pennsyl-

vania DUI Association • People That Care, Inc. • Perry Township • Pete Stoppani Consulting LLC • Philip B Demosthenes LLC • Police Executive Research Forum (PERF) • Police Foundation • Port Vue Borough • Preco Electronics • Prevention Institute • Prince Georges County • Professor Gregory Shill • ProFrac Services, LLC • Progistics Distribution, Inc. • Promedica Hospital • Property Casualty Insurers Association of America • Protective Insurance Company • Psychemedics Corporation • Public Health Institute • Puerto Rico Safety Group, Inc. • Pulse by Safety F1rst • Quanta Services • R+L Carriers Inc. • RADO • Redflex Traffic Systems, Inc. • Regional Transportation Commission, Washoe County • Remember Me • Rhode Island Department of Transportation • Rhode Island Traffic Safety Coalition • Richland County Regional Planning • Ridar Systems • Ridge Policy Group • Rimkus Consulting Group • RMT Calgary • Road Runner Media • Road Safe America • Road-iQ • Roadside Guardian • Roadway Safety Foundation • Roane County Anti-Drug Coalition • Robert Bosch LLC • Roberta Carlson-Total ControlTraining • Robinson Engineering Ltd. • Rockdale County DOT (GA) • Rockland County Department of Health (NY) • Rocky Mountain Tribal Epidemiology Center • Rowan University • Roy Jorgensen Associates • Russell Hurd • Rutgers University-CAIT • Safe Bus For Us • Safe Communities MDC • Safe Kids • Safe Kids Austin • Safe Kids Grand Forks • Safe Kids Pima County • Safe Kids Thurston County • Safe Kids Worldwide • Safe Roads Alliance • Safe States Alliance • SAFE.voyage • Safety Center Incorporated • Safety Compliance Associates • SafetyBeltSafe U.S.A. • SafetySock • SafeWise • San Francisco Municipal Transportation Agency • Sara's Wish Foundation • The Sawaya Foundation • Schneider National, Inc. • Seattle & King County Department of Public Health • Seattle Neighborhood Greenways • Secure Your Load • Sentinel Transportation, LLC • SFARA • Shasta County Chemical People • Shenandoah Valley Bicycle Coalition • Shreya R. Dixit Memorial Foundation • Silicon Valley Bicycle Coalition • Skilled Motorcyclist Association-Inc. • Slow Roll Chicago • Smart Growth America/National Complete Streets Coalition • SmartDrive Systems, Inc. • Snohomish County District Court • Society of Automotive Engineers (SAE) International • Southern Alleghenies Planning & Development Commission • Southern Chester County Regional Police Department • Southwest Renewal Foundation of High Point, Inc. • Specific Range Solutions • Square One Education Network • St. John Trauma Center • St. Joseph Mercy Hospital-Oakland • St. Joseph, Missouri Planning Organization • St. Joseph's University, Beirut • Stapleton Foundation • Stone County • StopDistractions.org • StopUnderrides.com • Stratacomm • StreetSafeUS • Students AgainstDestructive Decisions (SADD) • Subaru • Substance Abuse Free Environment, Inc. • Survive the Ride • SurvivetheDrive.org • Suwannee Lumber Company • Swedish Transport Administration • Syngenta • Taking Texas to Zero • Tampa Police Department • Tangipahoa Reshaping Attitudes for Community • TCW, Inc. • Techstring • Teen Safe Driving Coalition of NJ • Tenneco • Tennessee Child Passenger Safety Center • Tennessee Department of Health • Tennessee Department of Transportation • Tennessee Tech University, iCube • Texans Standing Tall • Texas A&M-Applied Cognitive Ergonomics Lab • Texas A&M NeuroErgonomics Laboratory • Texas A&M Transportation Institute-Transportation • Texas A&M University • Texas Department of Transportation • Texas Municipal Courts Education Center • Texas Transportation Commissioner • Thackery Group • The Chemours Company • The Connor Johnson Memorial Foundation • The Crim Fitness Foundation • The Dutch Reach Project • The Gillen Group • The John R. Elliott HERO Campaign for Designated Drivers • The KDR Challenge • The Lance Wheeler Memorial Roadway Safety Initiative • The Lane Construction Corp. • The League of American Bicyclists • The LA County Metropolitan Transportation Authority • The Mitre Corporation • The Paramedic Foundation • The Ray • The Sandy Johnson Foundation: Making Our Roads Safer • The SmartDrive Foundation • The Trucking Alliance • The University of Tennessee Center for Transportation Research • The Wonderful Corporation • ThinkFirst National Injury Prevention Foundation • Thompson Driving • TOCSS FOUNDATION INTERNATIONAL USA INC • Together for Safer Roads • Tom Wood Group • Toole Design Group • ToughLove Corporation • Town of Danville Department of Public Works • Town of Lauderdale-By-The-Sea • Toyota Collaborative Safety Research Center • Traffic PD • Traffic Safety Education Foundation • TransOptions • Transportation Alternatives • Transportation4 America • Transystems • Trauma Agency-Health Care District Palm Beach County • Travelers • Travelers Institute • Tri-County Regional Planning Commission • Truck Safety Coalition • Truckload Carriers Association • TrueMotion • Trumbull Walks • Tulare County Association of Governments • U.S. DOT-OST • U.S.

DOT-Transportation Safety • U.S. Department of Transportation-Volpe Center • U.S. Department of Transportation (US DOT) • U.S. Department of Transportation OCIO • Uber • UFG Insurance • University Children Hospital Injury Prevention Center • University of Alabama-Birmingham Youth Safety Lab • University of Alabama Translational Research for Injury • University of British Columbia Sustainable Transport • UC Berkeley SafeTREC • University of California, San Diego • University of Idaho • University of Iowa Injury Prevention Research Center • University of Michigan Transportation Research • University of Minnesota-Roadway Safety Institute • University of Mississippi Medical Center (UMMC) • University of NM, Dept of Civil, Construction • University of North Florida • University of South Alabama-Transportation Safety Lab • University of Texas at San Antonio • University of Utah • Upper Dublin Township, OH • Upper Merion Area Community Alliance for a Safer Tomorrow • Urban Health Partnerships • USAA • USAF Auxiliary, CAP, Oregon Wing • USDOT-Office of the Secretary of Transportation • Utah Safety Council • Varsity Sports Unlimited • VB Safety Services, LLC • Velodyne LiDAR • Velvac • Vermont Center For Independent Living • Vermont Highway Safety Alliance • Village of Blanchester-Ohio • Virginia Department of Motor Vehicles/Highway Safety • Virginia Tech Transportation Institute • Virginia Tech, Center for Injury Biomechanics • Virginia Trucking Association • Vision Impact Institute • Vision Zero-NYC DOT • Vision Zero Amarillo • Vision Zero Greensboro • Vision Zero Network • Vision Zero Network-City of Boston • Vision Zero North Carolina • Vision Zero North Carolina/North Carolina State University • VOLPE Center-U.S. Department of Transportation • Volvo Trucks • VR Motion Corp. • Walk Boston • Walk Denver • Walk It! Bike It! Lewisburg • Walk Long Beach • Walk San Francisco • Washington College GIS Program • Washington Traffic Safety Commission • Waste Management • Waycare Technologies • Wayne State University Transportation Research Group • Waze • WCA Waste of Texas • We Save Lives • West Side Youth Development Coalition • WV Connecting Communities • Westat • Western Carolina University • Western Kentucky University • Western OK TSET Healthy Living Program • Whitehall Township • Wichita State University Visual Perception and Cognition Lab • Wiessinger Consulting LLC • Winthrop Harbor Police Department • Wiomax • Wireless Research Center of NC • Worth Township, PA • Wyoming Department of Transportation • Wyoming Montana Safety Council • Yakama Nation DNR Engineering • Youth Safety Council of Vermont • Youth Towers • Zendrive • Zero Fatalities Iowa • Zurich Insurance

Statement of J. Scott Marion, President-Infrastructure, Lindsay Corporation, Submitted for the Record by Hon. Lipinski

Mr. Chairman, Members of the Subcommittee, I read the Committee's press release announcing today's hearing, "Every Life Counts: Improving the Safety of our Nation's Roadways," with great interest and respectfully would like to submit the following comments for the record.

For more than six decades, Lindsay Transportation Solutions has been dedicated to developing products and services that help make roads safer. Construction work zones are growing in number around the country. The natural aging of existing roadway infrastructure ensures that more and more maintenance and rehabilitation will be required. Our goal is to reduce traffic congestion and to improve safety forboth motorists and work crews through the use of innovative tools and state-of-the-art technology.

Work zones, by their very definition, create two major issues that must be addressed in some way:safety and mobility. In the United States, highway work zones are responsible for almost 25% of all non- recurring congestion and 10% of overall congestion. According to the National Workzone Safety Information Clearinghouse, there were 799 work zone-related fatalities in the U.S. in 2017—up 4.5% from the previous three-year average of 764.

Vehicle accidents are more common in work zones, and traffic congestion through work zones on urban arterials and freeways is often considered to be "unavoidable." Fortunately, technology is providing new solutions to these problems at an accelerated rate. By combining the best of these new technologies, agencies can effectively reduce injury accidents and mitigate traffic congestion through construction work zones.

The U.S. Department of Transportation (DOT) Strategic Plan for FY 2018-2022 establishes DOT's strategic goals and objectives for Fiscal Year (FY) 2018 through

FY 2022. It reflects the Secretary's priorities for achieving DOT's mission through four strategic goals:

- *Safety*: Reduce Transportation-Related Fatalities and Serious Injuries Across the TransportationSystem.
- *Infrastructure*: Invest in Infrastructure to Ensure Mobility and Accessibility and to StimulateEconomic Growth, Productivity and Competitiveness for American Workers and Businesses.
- *Innovation*: Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the Nation's Transportation System.
- *Accountability*: Serve the Nation with Reduced Regulatory Burden and Greater Efficiency,Effectiveness and Accountability.

As you and your colleagues work to repair America's infrastructure during a time where our roads, bridges and other infrastructure are desperately in need of investment, we must be creative and innovative in addressing these needs in ways that allow every tax dollar to be spent more efficiently andeffectively and still meet the Secretary's priorities for achieving DOT's mission through the fourstrategic goals outlined in the DOT's Strategic Plan.

The utilization of innovative technologies that help manage lanes and construction applications tocreate "Safe, Dynamic Highways" offering real-time roadway reconfiguration while maintaining positive barrier protection between lanes can assist in meeting the strategic goals outlined in the DOT's Strategic Plan. For instance, to reduce worker exposure, moveable barrier installations can becombined with automated traffic control technology. At the push of a button, traffic advisory signs and lane closure gates can be activated to channel road users into the current lane configuration.

These automated control systems can be operated onsite or remotely, or they can be combined with real-time intelligent traffic data that can analyze traffic patterns to determine the best times to reconfigure the roadway. Data from the cloud is sent to automated traffic control as well as the moveable barrier system operators to keep traffic congestion and road closure confusion to a minimum through the work zone. *Together, these new technologies will create safer, less congested work zone environments for motorists and provide greater safety for workers by decreasing exposure to vehicles and removing confusion from lane configuration changes.*

We welcome the opportunity to work with you and your staff as you begin to consider the scope and reach of an infrastructure bill and we strongly urge the committee to consider the role that innovative technologies, like moveable barriers, can play in assisting Congress in addressing roadway improvements and congestion while improving the safety of our nation's roadways.

Letters from the Coalition for Future Mobility, Submitted for the Record by Hon. Graves of Missouri

APRIL 10, 2019.

Hon. PETER A. DEFAZIO
Chairman, Transportation and Infrastructure, 2165 Rayburn House Office Building, Washington, DC 20515

Hon. SAM GRAVES
Ranking Member, Transportation and Infrastructure, 2164 Rayburn House Office Building, Washington, DC 20515

Hon. ELEANOR HOLMES NORTON
Chair, Highways and Transit, 2136 Rayburn House Office Building, Washington, DC 20515

Hon. RODNEY DAVIS
Ranking Member, Highways and Transit, 1740 Longworth House Office Building, Washington, DC 20515

CHAIRMAN DEFAZIO, RANKING MEMBER GRAVES, CHAIR NORTON, AND RANKING MEMBER DAVIS:

In 2017, more than 37,000 lives were lost on U.S. roadways, including approximately 6,000 pedestrians. According to the National Highway Traffic Safety Administration, 94% of all vehicle crashes—including the crashes that take the lives of roadway users—are due to human choice or error.

The Coalition for Future Mobility (CFM), a diverse, multi-stakeholder group representing auto manufacturers, suppliers, repairers, technology and communications companies, mobility providers, state and city governments, safety and national secu-

rity groups, consumers, seniors, persons with disabilities, and others, writes to underscore the critical role automated vehicles (AVs) could play in helping to reduce the number of crashes and lives lost due human choice or error.

Current federal safety programs focus primarily on behavior—such as incentives to states to increase seat belt use, as well as educating the public about drunk driving or resources to increases enforcement programs, which were established before AV safety technologies were created. We hope that the details uncovered at this hearing serve as a reminder that the status quo of primarily working to support driver behavioral programs alone cannot be expected to eliminate or substantially reduce roadway crashes and fatalities. We encourage you to support legislation and regulatory updates that help to promote safety technologies—including automated vehicle technologies as a way to lessen the more than 37,000 fatalities on our nation's roadways.

Further information on the potential benefits of AV technology and bipartisan AV legislation can be found on the attached letter that our coalition sent to all Members of Congress on February 26, 2019. We at CFM look forward to working with you to help improve safety by lessening the loss of life on U.S. roadways.

THE COALITION FOR FUTURE MOBILITY

Enclosure

ENCLOSURE—LETTER FROM THE COALITION FOR FUTURE MOBILITY SENT TO CONGRESS ON FEBRUARY 26, 2019

FEBRUARY 26, 2019.

Hon. NANCY PELOSI
Speaker of the House, U.S. House of Representatives, H-232, The Capitol, Washington, DC 20515

Hon. KEVIN MCCARTHY
Minority Leader, U.S. House of Representatives, H-204, The Capitol, Washington, DC 20515

Hon. MITCH MCCONNELL
Majority Leader, United States Senate, S-230, The Capitol, Washington, DC 20510

Hon. CHARLES SCHUMER
Minority Leader, United States Senate, S-221, The Capitol, Washington, DC 20510

SPEAKER PELOSI, MINORITY LEADER MCCARTHY, SENATE MAJORITY LEADER MCCONNELL, AND MINORITY LEADER SCHUMER:

Roughly two years ago, the Coalition for Future Mobility—a group of key stakeholders that represents a wide cross section of auto manufacturers, suppliers, repairers, technology companies, mobility providers, state and local governments, safety and national security groups, consumers, seniors, and persons with disabilities—was created to highlight the critical need for a federal framework that allows for the safe development, testing, and deployment of automated vehicles (AVs) here in the United States. We write to thank those Members of Congress who were involved in working to pass AV legislation in the 115th Congress and urge you to continue those efforts this year. Without question, Congress is uniquely suited to help provide greater clarity regarding both state and federal authorities that can help when it comes to the safe testing, development, and deployment of AV technologies.

The National Highway Traffic Safety Administration (NHTSA) has found that human choice or error is a factor in approximately 94% of all motor vehicle crashes on U.S. roads—crashes that took the lives of over 37,000 men, women, and children in 2017. By facilitating technology that can potentially eliminate these bad choices and unintentional errors, we can help prevent many crashes from happening and dramatically reduce injuries and fatalities on our roadways.

While safety is a critical component in the drive for the development of AVs, these vehicles can also provide life-changing opportunities for those who are not adequately served by current mobility options, such as seniors, persons with disabilities, and those who require more affordable transportation. Further, the benefits of these vehicles extend to other roadway users. Large-scale AV implementation could also mean less congestion and greater efficiency on our roads.

Last Congress, both the House of Representatives and the Senate recognized the importance of providing a federal framework for AVs. The House of Representatives passed the bipartisan SELF DRIVE Act (H.R. 3388) without a vote in opposition. Shortly after the House acted, the Senate Committee on Commerce, Science, and Transportation unanimously passed similar legislation. In spite of strong, bipartisan support, legislation was unable to receive floor consideration in the Senate. Our coalition encourages you and your colleagues to redouble your efforts to move forward with legislation that will help improve safety, provide a tech-neutral path forward

for private industry to innovate, and ensure clarity for regulators at all levels of government.

The status quo should not be acceptable. Recognizing the potential of this technology to positively impact millions of Americans, we urge you to support a federal AV framework this Congress. Our Coalition members stand ready to work with you.

3M • 60 Plus • Alliance for Transportation Innovation • Alliance of Automobile Manufacturers • American Council of the Blind • American Highway Users Alliance • American Network of Community Options and Resources • Americans for Tax Reform • Aptiv • Argo AI, LLC • Aurora • Automotive Service Association • Association for Unmanned Vehicle Systems International • Association of Global Automakers • Competitive Enterprise Institute • CTIA • Digital Liberty • Harman • Mobileye • Motor & Equipment Manufacturers Association • Narcolepsy Network • National Association of Manufacturers • National Cued Speech Association • National Federation of the Blind • National Taxpayers Union • R Street Institute • Securing America's Future Energy • Segs4Vets • Telecommunications Industry Association • Third Way • U.S. Pan Asian American Chamber of Commerce • U.S. Tire Manufacturers • Via • What3Words • Wine & Spirits Wholesalers of America

cc: All Members of the U.S. House of Representatives and U.S. Senators

Statement of Benjamin Harvey, President, E.L. Harvey & Sons Inc., on behalf of the National Waste and Recycling Association, Submitted for the Record by Hon. Graves of Missouri

Good morning, Chairman Holmes Norton, Ranking Member Davis, and Members of the Committee. My name is Benjamin Harvey and I am the President of E. L. Harvey & Sons Inc. located in Westborough, Mass. E. L. Harvey & Sons is a full-service waste and recycling firm that provides services for commercial and industrial corporations and municipalities throughout eastern Massachusetts, New Hampshire, Rhode Island, and Maine. My company is a member of the National Waste & Recycling Association, also known as NWRA, which I am representing before the committee today in my capacity as the association's chairman.

NWRA is the voice in the nation's capital for the private-sector waste and recycling industry that is essential to maintaining the quality of American life. The delivery of waste and recycling services impacts all residential, commercial, and industrial properties on a daily basis. Apart from the U.S. Postal Service, the waste and recycling industry is one of the few, if not the only other, that travels on every roadway in the country at least once each week.

Association members operate in all 50 states and the District of Columbia and can be found in most, if not all, U.S. congressional districts. Waste and recycling facilities number nearly 18,000 scattered throughout the U.S., mirroring population centers. Our nearly 700 members are a mix of publicly-traded and privately-owned local, regional, and Fortune 500 national and international companies.

The industry directly employs about 420,000 people as of early 2018 with a total payroll of more than $21 billion. It is estimated that the private sector waste and recycling industry accounts for over one million jobs and generates nearly a quarter of a trillion dollars in U.S. GDP.

Tens of thousands of these hard-working men and women in the waste and recycling industry become vulnerable road users everyday as part of their job. The Bureau of Labor Statistics (BLS) has named the waste and recycling collector as the fifth most dangerous occupation (2018).[1] In 2017, "Waste and Recycling" had 33 fatalities, of which 23 were transportation related.[2]

Safety is the number one value for the waste and recycling industry. The goal each day is for every worker and driver to go home safely at the end of their shifts, without a crash, injury or fatality. Our work is focused on making collection, processing, and disposal operations less dangerous by encouraging safety training as well as providing assistance in complying with regulations and company safety rules and policies.

Despite these industry efforts, distracted driving by motorists with whom we share the road puts waste and recycling drivers and workers at risk every day. Many of the transportation related fatalities were caused by inattentive or distracted drivers who failed to yield to waste and recycling collection vehicles. Most

[1] https://www.bls.gov/iif/oshwc/cfoi/cfch0016.pdf
[2] Ibid

of the time, the danger is the same as that experienced by police officers, fire fighters, and tow truck drivers who are stopped along the side of the road.

The private sector of the waste and recycling industry has a commercial motor vehicle (CMV) fleet of more than 100,000 collection trucks and an even greater number of CMV Drivers. These trucks are primarily Heavy-Duty Vehicles as defined by the Federal Highway Administration (FHWA) with a GVWR of more than 26,000 pounds. The industry's fleet includes, but is not limited to, waste and recycling collection trucks, roll-off trucks, post collection tractor trailers, container delivery, and grapple trucks.

The waste (garbage, trash, solid waste) and recycling (paper, plastic, aluminum, metal, compost) collection trucks that service nearly every American household and business are the most recognized part of the industry's fleet. Although waste and recycling collection trucks are virtually identical in most respects, they are significantly different in the means by which the material is emptied into the cargo area (e.g. rear-, front-, automated side-load, etc.).

According to FHWA's 2016 Freight Quick Facts Report, "Waste/Scrap" is the tenth largest commodity by tonnage shipped in the U.S. The industry's truck operations moved 92 percent of the 652.9 million tons transported by all modes in 2015.

Assuming that two-thirds of the industry's trucks are in use on any given workday, that means approximately 70,000 workers are exposed to dangerous driving situations, such as distracted driving, each workday.

According to the National Highway Traffic Safety Administration (NHTSA), distracted driving is "any activity that diverts attention from driving, including talking or texting on your phone, eating and drinking, talking to people in your vehicle, fiddling with the stereo, entertainment or navigation system-anything that takes your attention away from the task of safe driving." It is estimated that during daylight hours approximately 481,000 drivers are using handheld cell phones while driving, creating significant potential for injury or death.

NHTSA reports that 3,450 people were killed by distracted drivers in 2016 and 562 of these fatalities were not occupants of a vehicle but rather pedestrians, bicyclists, and others including waste and recycling industry employees. In 2015, distracted drivers were responsible for 391,000 injuries in motor vehicle crashes. Teens were the largest age group reported as distracted at the time of fatal crashes.

Driving requires the full attention of motorists. Texting in particular poses a danger since sending or reading a text takes one's eyes off the road for an average of 4.6 seconds. Traveling at 55 MPH while texting is the equivalent of driving the length of a football field with your eyes closed.

NHTSA is engaged in several efforts to educate Americans about the dangers of distracted driving including public service announcements, social media campaigns, "Distracted Driving Awareness Month" every April, and partnerships with state and local police departments to enforce laws against distracted driving.

These law enforcement officials are also undertaking the difficult task of enhanced enforcement of distracted driving laws. This is complicated by the need to observe the offense before making a traffic stop since, unlike with impaired driving, the prohibited behavior has typically ended once a driver is pulled over.

So far, 23 states have enacted "Move Over" laws that cover waste and recycling workers. The statutes vary from state to state, but the laws generally require drivers to slow down and yield to collection vehicles, especially when the operator is emptying a cart or walking back to the truck. "Move Over" laws are saving lives by requiring drivers to exercise caution and avoid distractions when they are approaching a collection truck.

NWRA has been at the forefront of efforts to expand state "Move Over" laws to include "amber lighted vehicles" such as waste and recycling, tow trucks, and other similar industries. However, these laws are only effective if the motoring public knows about and law enforcement enforces them.

A 2014 incident in central Florida involving an NWRA-member company is a perfect example. One of their collection workers was injured by a car and the law enforcement officer did not issue a citation to the driver of the vehicle, despite Florida's recently expanded "Move Over" law. When the company's safety director asked for the "Move Over" law to be invoked, the officer stated he did not know about the statute, nor did the command staff of that department. This shows the need to educate both law enforcement and the public about the necessity to move over as well as the consequences of not moving over. NWRA is confident that this situation is not an isolated event.

NWRA urges Congress to use federal infrastructure legislation or surface transportation appropriations as a vehicle to enact incentives for states to adopt "Move Over" laws that include waste and recycling collection workers similar to the incentives it uses to encourage states to set and keep their legal drinking age at 21 years

old. This is an opportunity for Congress to make a real difference in improving safety with minimal effort and no additional cost.

Thank you for your consideration of our position. We look forward to working with the committee to improve the safety of our nation's highways. I will be happy to respond to any questions that you may have.

APPENDIX

QUESTIONS FROM HON. PETER A. DEFAZIO FOR HON. JENNIFER HOMENDY, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Each of your testimonies highlight the dangers of speeding, which increases the likelihood of a crash and the severity of injuries sustained, and nearly guarantees pedestrian death at 40 miles per hour. Mr. Bruemmer, you share your own harrowing story of nearly being struck by a truck in a work zone.

Member Homendy, you cite Federal Highway Administration guidance which emphasizes that States and localities "set speed limits within 5 miles per hour of which 85 percent of vehicle are traveling", known as the 85th percentile rule. This has led to a situation where in 2016, 41 States had maximum speed limits at or above 70 miles per hour, and 7 of those States were at or above 80 miles per hour.

Question 1. Can you comment further on NTSB's recommendation to move away from this 85th percentile approach?

ANSWER. The NTSB recommends that the Federal Highway Administration (FHWA) "revise Section 2B.13 of the Manual on Uniform Traffic Control Devices so that the factors currently listed as optional for all engineering studies are required, require that an expert system such as USLIMITS2 be used as a validation tool, and remove the guidance that speed limits in speed zones should be within 5 mph of the 85th percentile speed" (H-17-27).

The intent of this recommendation is to de-emphasize the use of the 85th percentile speed. The 85th percentile speed is obtained by conducting an engineering study of ideal traffic flows unaffected by inclement weather or traffic congestion. The use of the 85th percentile speed assumes that the majority of drivers are capable of selecting appropriate speeds according to weather conditions, traffic, road geometry, and roadside development, and that they operate at reasonable and prudent speeds. Because the research that provided the strongest empirical support of the use of the 85th percentile speed is dated (having been conducted in the late 1950s) and was conducted only on 2- and 4-lane rural highways, it is unclear whether the 85th percentile speed equates to the speed with the lowest crash involvement rate on all road types, such as those in cities. Heavily populated urban areas typically have higher numbers of vulnerable road users, such as pedestrians and bicyclists. Research has clearly shown that these road users have little chance of surviving a collision with a motor vehicle traveling at high speed.

Additionally, the use of the 85th percentile speed has resulted in increasing speed limits among states. For example, the Texas Transportation Code states that the speed limit for certain roads is 70 miles per hour (mph). To increase speed limits, Texas requires an engineering study that follows the Texas Department of Transportation's "Procedures for Establishing Speed Zones," which emphasize the 85th percentile speed. Over time, speed limits in Texas have increased from 70 mph to 85 mph, the highest posted speed limit in the United States. In 2012, 35 states had a maximum speed limit of 70 mph, with Texas and Utah at or above 80 mph. Just 4 years later, in 2016, 41 states had a maximum speed limit of 70 mph, with 7 states at or above 80 mph.

Therefore, although assessing roadway operating speed remains important, a more balanced approach to setting speed limits that also considers the vulnerability of pedestrians and bicyclists and crash experience should replace the one that primarily favors vehicular traffic.

Question 2. What policies should Congress look at to reduce speeding? Do you think this can be achieved through education and enforcement alone, or do we also need to look at road design has to slow people down in many contexts?

ANSWER. One of the items on the NTSB's 2019-2020 Most Wanted List addresses speeding by calling for lawmakers, industry, and every American to work together to "implement a comprehensive strategy to reduce speeding-related crashes."

Through research and accident investigations, the NTSB has identified proven countermeasures that must be used broadly to reduce speeding-related crashes. These countermeasures include automated enforcement technology, education campaigns, vehicle technology, and infrastructure design. The NTSB urges Congress to consider actions that (1) encourage data-driven speed enforcement that may include both traditional and automated enforcement technology; (2) urge NHTSA and the FHWA to update and promote best practices for implementing automated speed enforcement; (3) push for social change that makes speeding culturally unacceptable; (4) accelerate the development of performance standards for and industry adoption of advanced speed-limiting technology for heavy vehicles such as trucks, buses, and motorcoaches; (5) create incentive mechanisms to increase adoption of speed-limiting technology for passenger vehicles; (6) emphasize a complete street policy that encourages roadway designs that slow drivers down to the safe speed, such as using road diets, lane narrowing, and curve reconfiguration. Reducing speeding-related fatalities and injuries must include all countermeasures, including road design, education, and enforcement.

Attached is a list of NTSB recommendations that, if implemented, would reduce speeding-related crashes and save lives. These recommendations supplement our Most Wanted List issue item regarding speeding. The NTSB urges Congress to consider them when developing legislation.

QUESTIONS FROM HON. FREDERICA S. WILSON FOR HON. JENNIFER HOMENDY, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Member Homendy, congratulations on your appointment to the NTSB. I look forward to working with you.

As you know, in 2017, 26 percent of crashes involved at least one speeding driver. Speeding is a major contributor to fatal accidents in Florida and throughout the nation. In your testimony, you called for "increased leadership and attention" to speeding on the national level.

Question 3. What are some actions this Congress can take to ensure that speeding is being prioritized at a level that reflects its role in fatal accidents?

ANSWER. In interviews the NTSB has conducted, national, state, and local traffic safety stakeholders repeatedly mentioned that—unlike other crash factors such as alcohol impairment or unbelted occupants—speeding is associated with few negative social consequences, and it does not have a leader campaigning to increase public awareness about the issue at the national level. Stakeholders further stated that they thought the dangers of speeding are not well-publicized, and that society therefore underappreciates the risks of speeding. The resulting complacency among drivers has led to speeding becoming a common behavior, even though surveys indicate that drivers generally disapprove of other drivers speeding. Stakeholders also expressed the belief that, to gradually change public perceptions of speeding, safety advocacy groups must launch a coordinated effort, with strong leadership from the federal government.

We have recommended several actions that can be taken at the national level, including implementing an ongoing program to increase public awareness of speeding as a national traffic safety issue, including an annual enforcement mobilization; establishing programs to incentivize state and local speed management activities, for example via federal-aid programs such as the National Priority Safety Program; and prioritizing and promoting federal transportation agency efforts to address speeding, such as the work coordinated by the DOT's multiagency Speed Management Team.

Attached is a list of our recommendations to reduce speeding-related crashes. These recommendations supplement this issue area on our 2019-2020 Most Wanted List. We urge Congress to consider them when developing future legislation.

Speeding

Member Homendy, in your testimony, you highlight the glaring fact that neither the Highway Safety Program nor the National Priority Safety Program truly incentivize states to address the issue of speeding. You also mentioned that stakeholders cited the lack of a national traffic safety campaign as a key hindrance to increasing public awareness.

Question 4. Can you describe what an effective campaign should include?

ANSWER. An effective campaign to address speeding should be informed by the successes of other highway safety campaigns, such as the long-running "Click It or Ticket" national campaign to increase seat belt usage. "Click It or Ticket" includes an annual high-visibility enforcement mobilization, a robust communications strategy at the national and state levels, legislated incentives to encourage high participation among the states, and dedicated funding. Research has shown that the com-

munications component of a traffic safety campaign increases safety benefits; by using consistent messaging over many years, 85% of the public recognizes the "Click It or Ticket" slogan, according to NHTSA surveys.

Pedestrian fatalities

Member Homendy, I was pleased to learn that NTSB investigated the recent increase of pedestrians killed in highway crashes. Your investigation found that pedestrian deaths now account for almost one in six highway fatalities.

Question 5. Why are pedestrian deaths so much higher now than they were a decade ago?

ANSWER. In 2008, 4,414 pedestrians died in traffic crashes, representing 12% of all traffic fatalities. In 2017, almost 6,000 pedestrians were killed, comprising 16% of all traffic deaths (based on NHTSA Traffic Safety Facts). There can be a multitude of reasons, and no single factor is causing the substantial increase over the last 10 years. One key ingredient is the rapid increase in urban population. In 2008, 72% of pedestrian deaths occurred in urban areas. In 2017, the percentage reached 80%. Pedestrians and motor vehicles are interacting more in our cities. Because most roadways were designed in an era where vehicular traffic took precedence, moving vehicles from one place to another quickly was favored over the needs of other users, such as pedestrians. Many multilane arterial roadways with high speed limits still snake through our highly populated cities, which is why managing speed is key to tackling pedestrian safety. This requires an integrated approach that includes lowering speed limits, enforcement, education, and road design. Many cities lack adequate pedestrian facilities, such as sidewalks and crosswalks. Pedestrian crashes also appear to be getting deadlier, with deaths per 100 crashes increasing by 29 percent in the last decade (IIHS, 2018). This increase may be the result of changes to the vehicle fleet (for example, more SUVs). In addition, factors like distraction and impairment continue to affect pedestrians and drivers. Accordingly, we have issued recommendations to address vehicle design, roadway design, vehicle speed, impairment, and distraction.

QUESTION FROM HON. BRIAN BABIN FOR HON. JENNIFER HOMENDY, MEMBER, NATIONAL TRANSPORTATION SAFETY BOARD

Question 6. During the hearing, Member Homendy committed to providing a response to Representative Babin's question asked at the hearing: In your experience with the NTSB, have you seen a correlation between improving roadway safety and updating existing roads (US/state highways) in order to meet the Interstate standards and grades?

ANSWER. NTSB believes that both new and redesigned highways should be built to the current American Association of State Highway and Transportation Officials and Federal Highway Administration standards in order to incorporate the best available safety technology. Whenever a jurisdiction brings a roadway up to current design standards the result should be an improvement to the safety of the facility because it is using the latest in barriers, signage and a current evaluation of geometric design (in regard to the speed limit). In its investigation of a 2003 highway crash in Hewitt, Texas, we found that the highway (I-35) has been expanded from a US/state highway to an Interstate, but the roadway was not upgraded to meet Interstate standards. In that case, the correlation between improving roadway safety and updating existing roads (US/state highways) in order to meet the Interstate standards and grades was not done. Our investigation cited the poor roadway conditions and inadequate stopping sight distances on I-35 in its determination of the probable cause for that crash.



Implement a Comprehensive Strategy to Reduce Speeding-Related Crashes

Speeding increases the likelihood of being involved in a crash and intensifies the severity of injuries sustained in a crash. Speeding-related crashes kill more than 10,000 people and cost society more than $52 billion annually. **Proven countermeasures—including automated enforcement technology, vehicle technology, infrastructure design, and education campaigns—must be used more broadly to reduce speeding-related crashes.**

RECOMMENDATION NO. STATUS

Highway

H-05-020 **Open–Acceptable Response**
TO THE TEXAS DEPARTMENT OF TRANSPORTATION: Install variable speed limit signs or implement alternate countermeasures at locations where wet weather can produce stopping distances that exceed the available sight distance.

H-12-020 **Open–Unacceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Develop performance standards for advanced speed-limiting technology, such as variable speed limiters and intelligent speed adaptation devices, for heavy vehicles, including trucks, buses, and motorcoaches.

H-12-021 **Open–Unacceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: After establishing performance standards for advanced speed-limiting technology for heavy commercial vehicles, require that all newly manufactured heavy vehicles be equipped with such devices.

H-17-018 **Open–Acceptable Response**
TO THE UNITED STATES DEPARTMENT OF TRANSPORTATION: Complete the actions called for in your 2014 Speed Management Program Plan, and periodically publish status reports on the progress you have made.

H-17-019 **Open–Acceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Identify speeding-related performance measures to be used by local law enforcement agencies, including, but not limited to, the numbers and locations of speeding-related crashes of different injury severity levels, speeding citations, and warnings, and establish a consistent method for evaluating data-driven, high-visibility enforcement programs to reduce speeding. Disseminate the performance measures and evaluation method to local law enforcement agencies.

H-17-020 **Open–Acceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Identify best practices for communicating with law enforcement officers and the public about the effectiveness of data-driven, high-visibility enforcement programs to reduce speeding, and disseminate the best practices to local law enforcement agencies.

H-17-021 **Open–Acceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Governors Highway Safety Association, the International Association of Chiefs of Police, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.

H-17-022 **Open–Acceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Federal Highway Administration to update the *Speed Enforcement Camera Systems Operational Guidelines* to reflect the latest automated speed enforcement (ASE) technologies and operating practices, and promote the updated guidelines among ASE program administrators.

H-17-023 **Open–Acceptable Alternate Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Work with the Federal Highway Administration to assess the effectiveness of point-to-point speed enforcement in the United States and, based on the results of that assessment, update the *Speed Enforcement Camera Systems Operational Guidelines*, as appropriate.

H-17-024 **Open–Acceptable Alternate Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Incentivize passenger vehicle manufacturers and consumers to adopt intelligent speed adaptation (ISA) systems by, for example, including ISA in the New Car Assessment Program.

H-17-025 **Open–Acceptable Alternate Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Collaborate with other traffic safety stakeholders to develop and implement an ongoing program to increase public awareness of speeding as a national traffic safety issue. The program should include, but not be limited to, initiating an annual enforcement mobilization directed at speeding drivers.

H-17-026 **Open–Acceptable Response**
TO THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION: Establish a program to incentivize state and local speed management activities.

H-17-027 **Open–Acceptable Response**
TO THE FEDERAL HIGHWAY ADMINISTRATION: Revise Section 2B.13 of the *Manual on Uniform Traffic Control Devices* so that the factors currently listed as optional for all engineering studies are required, require that an expert system such as USLIMITS2 be used as a validation tool, and remove the guidance that speed limits in speed zones should be within 5 mph of the 85th percentile speed.

H-17-029 **Open–Acceptable Response**
TO THE FEDERAL HIGHWAY ADMINISTRATION: Work with the National Highway Traffic Safety Administration to update the *Speed Enforcement Camera Systems Operational Guidelines* to reflect the latest automated speed enforcement (ASE) technologies and operating practices, and promote the updated guidelines among ASE program administrators.

H-17-030 **Open–Acceptable Response**
TO THE FEDERAL HIGHWAY ADMINISTRATION: Work with the National Highway Traffic Safety Administration to assess the effectiveness of point-to-point speed enforcement in the United States and, based on the results of that assessment, update the *Speed Enforcement Camera Systems Operational Guidelines*, as appropriate.

H-17-031 **Open–Initial Response Received**
TO THE SEVEN STATES PROHIBITING AUTOMATED SPEED ENFORCEMENT (MAINE, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, TEXAS, WEST VIRGINIA, AND WISCONSIN): Amend current laws to authorize state and local agencies to use automated speed enforcement.

H-17-032 **Open–Initial Response Received**
TO THE TWENTY EIGHT STATES WITHOUT AUTOMATED SPEED ENFORCEMENT LAWS (ALABAMA, ALASKA, CALIFORNIA, CONNECTICUT, DELAWARE, FLORIDA, GEORGIA, HAWAII, IDAHO, INDIANA, IOWA, KANSAS, KENTUCKY, MASSACHUSETTS, MICHIGAN, MINNESOTA, MISSOURI, MONTANA, NEBRASKA, NEW MEXICO, NORTH CAROLINA, NORTH DAKOTA, OKLAHOMA, PENNSYLVANIA, SOUTH DAKOTA, VERMONT, VIRGINIA, AND WYOMING): Authorize state and local agencies to use automated speed enforcement.

H-17-033 **Open–Initial Response Received**
TO THE 15 STATES WITH AUTOMATED SPEED ENFORCEMENT RESTRICTIONS (ARIZONA, ARKANSAS, COLORADO, ILLINOIS, LOUISIANA, MARYLAND, NEVADA, NEW YORK, OHIO, OREGON, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, UTAH, AND WASHINGTON): Amend current laws to remove operational and location restrictions on the use of automated speed enforcement, except where such restrictions are necessary to align with best practices.

H-17-034 **Open–Acceptable Response**
TO THE GOVERNORS HIGHWAY SAFETY ASSOCIATION: Work with the National Highway Traffic Safety Administration, the International Association of Chiefs of Police, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.

H-17-035 **Open–Initial Response Received**
TO THE INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE: Work with the National Highway Traffic Safety Administration, the Governors Highway Safety Association, and the National Sheriffs' Association to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.

H-17-036 **Open–Acceptable Response**
TO THE NATIONAL SHERIFFS' ASSOCIATION: Work with the National Highway Traffic Safety Administration, the Governors Highway Safety Association, and the International Association of Chiefs of Police to develop and implement a program to increase the adoption of speeding-related Model Minimum Uniform Crash Criteria Guideline data elements and improve consistency in law enforcement reporting of speeding-related crashes.

QUESTIONS FROM HON. PETER A. DEFAZIO FOR HON. FRED JONES, VICE MAYOR, CITY OF NEPTUNE BEACH, FLORIDA, ON BEHALF OF TRANSPORTATION FOR AMERICA

Mr. Jones, your testimony notes that the performance metrics established by Congress in MAP-21 allows States to set their own priorities and targets. States are considered in compliance with performance management requirements as long as they are tracking a particular metric—States do not have to make progress or improve their performance over time. Your testimony reports that in 2017, 18 States set safety performance targets that were worse in terms of fatalities than the previous year.

Question 1. Do you support stronger accountability under the performance management system, to actually require States to demonstrate improvement in a par-

ticular metric? Would you support a requirement to shift more funds to build infrastructure projects that reduce fatalities for any State that does not set, or does not meet, a target that is an actual safety improvement?

ANSWER. Yes. While States were granted the flexibility and discretion to set priorities and report their results under the current FHWA performance management system, enabling negative safety targets should be prohibited. In 2017, eighteen states established targets resulting in more bicyclist and pedestrian deaths on their facilities. If the States are to be held to a higher standard of accountability with respect to safety measures, particularly for pedestrians and bicyclists, any State that does not set, or does not meet, such targets beyond reasonable control, may receive less funding for traditional, capacity-based projects or have their allocated funds redirected to safety and complete street projects.

Additionally, we would like to see greater emphasis and reliance on other non-traditional roadway performance metrics such as community and economic development, job creation, health impacts, and resiliency over the conventional use of roadway capacity, level-of-service and delay as the primary metrics for funding and prioritization. This is particularly for States and communities planning and constructing more complete streets and multimodal infrastructure.

QUESTIONS FROM HON. FREDERICA S. WILSON FOR HON. FRED JONES, VICE MAYOR, CITY OF NEPTUNE BEACH, FLORIDA, ON BEHALF OF TRANSPORTATION FOR AMERICA

Mr. Jones, your testimony notes that the performance metrics established by Congress in MAP-21 allows states to set their own priorities and targets. States are considered in compliance with performance management requirements as long as they are tracking a particular metric; they do not have to make progress or improve their performance over time. Your testimony reports that in 2017, 18 states set safety performance targets that were worse in terms of fatalities than the previous year.

Question 2. Do you support greater accountability under the performance management system to actually require states to demonstrate improvement in a particular metric?

ANSWER. Yes. Our transportation agencies' top priority should be safety. We cannot claim that safety is a priority if we are willing to tolerate safety targets—actual goals—for our roads to get less safe. And our current program tolerates just that. Why is that? Because we understand that there are many priorities that need to be addressed, and as a matter of policy Congress has been comfortable if transportation agencies place other priorities above safety. But this should not be the case. In the aviation industry, planes are grounded in order to protect safety. Safety is a goal placed above economics and convenience. Likewise, safety should be the top priority in surface transportation, and that priority should be clear in our program spending so long as there are preventable crashes occurring on our roadways.

There is no world in which we will ever have enough money to address everything that needs to be addressed on our transportation system. That means we have to set priorities. And safety should always be the top one.

Local Choice

Mr. Jones, your testimony provides some good examples of complete streets projects, but also describes what happens when a state DOT does not want to or feels it does not have flexibility with federal funds to pursue a complete streets approach or other design enhancement. The committee has heard from local government stakeholders in past hearings that greater control over project choice at the local government level would help bring about projects in communities that are perhaps not the priority of the state DOT.

Question 3. If Congress expanded the role of local governments in programming federal transportation funding, and you had greater direct control over how federal funds are spent in your community, do you believe this would result in a different range of projects than when the decision making is controlled by Florida DOT?

ANSWER. Yes and that is because state governments have typically overlooked the local trip in spite of the fact that most trips are local. State departments of transportation were formed to build highways that connect cities and towns while the locals have had the responsibility of moving people around that city or town. Also while state departments of transportation have responsibility for roads, the cities are not just trying to move people around but are also trying to create great places and create high quality of life. In the case of Florida, if local governments had more control and decision-making on FDOT facilities, they would likely support different ranges of projects that promote placemaking and quality of life over vehicular throughput, such as reducing speeds, lane widths, or reallocating travel lanes for other travel modes or community spaces.

Bringing more voices into the program can only generate more diversity in terms of the challenges we are trying to address and how we address them.

Mr. Jones, you state in your testimony that "We have a cure" for reducing traffic-related fatalities, "But for whatever reasons, we just don't want to use it."

Question 4. What are some of the "cures" New York and San Francisco implemented that decreased traffic fatalities by 28 and 41 percent, respectively? What are some of the solutions that were specific to pedestrians?

ANSWER. Both cities slowed down traffic speeds. Mistakes are inevitable with humans. But mistakes turn more deadly for people in and outside a car the faster cars are going. True "Vision Zero" cities are lowering speed limits, slimming down lanes, and taking other steps to slow down traffic. There should be an expectation that when a driver arrives in a town or city that they slow down in order to create a safe environment and to create a great place to spend time in. Other strategies that help are shorter and more visible crossings for pedestrians and bringing front doors for houses and businesses along the road to the sidewalk, creating a canopy that makes the area more comfortable for pedestrians and encourages drivers to slow down.

QUESTIONS FROM HON. ELEANOR HOLMES NORTON FOR MICHAEL L. BROWN, CHIEF OF POLICE, ALEXANDRIA (VIRGINIA) POLICE DEPARTMENT

Chief Brown, your testimony calls for a "national narrative" on the importance of traffic safety and committing the resources to carry it out. You note that this would help law enforcement across the nation unite behind traffic safety, much like the response to homeland security efforts following 9/11 and more recently the opioid crisis. You state "what is missing today for law enforcement is the commitment to making traffic safety a high priority for our nation."

Question 1. What can Congress do to promote this national narrative and to demonstrate the Federal commitment improving safety on our roads?

ANSWER. The first step to changing the national narrative on traffic safety would be to raise the level of awareness and driving home the negative consequences of ***both traffic deaths and injuries***. The message should be sufficiently powerful to demonstrate the costs to, not only to those involved in crashes, but also to their families, friends, employers, and the nation as a whole. These costs are more than just dollars. There can also be quality of life implications that can last a lifetime, e.g.; permanent disability.

Practically all of the crashes are preventable and predictable. They are caused by poor choices made by individuals that are sharing our roadways. The message should be broad enough to capture the attention of everyone as a quality of life issue in our communities. The current traffic safety messages are good but they focus on individual problems. The ultimate message should transmit a message that this is indeed a public health crisis.

Aside from the message, Congress can make a more dramatic impact through the reauthorization. The reauthorization should provide more flexibility in for law enforcement to address traffic safety issues in their local communities. As I mentioned during the hearing, the issues raised in prior reauthorizations are important but they may not be the highest priority in every community. The new reauthorization could continue to highlight the prior focus areas but it should also provide more flexibility and support for enforcement on the issues that might be facing the communities law enforcement serves. This can be accomplished by setting up an adjusted program providing less restrictive guidance to the states to deliver the assets or funding to law enforcement. Issues like speeding, right of way violations, jaywalking, and similar, often overlooked but important community issues can be addressed.

The design of a traffic safety enforcement program must also recognize that officers will make stops for issues based upon what they see as a legitimate and important violation. When making a traffic stop officers often find other issues relevant to traffic safety. For example, an officer stopping a speeding vehicle may ultimately detect an impaired driver, a driver on a cell phone, or someone not wearing a seatbelt.

Additionally, the practice of "counting tickets" should be avoided in grant activity reports. Citations are but one means of measuring activity and finding teachable moments for those on the road. Sometimes, a verbal warning can be just as effective. Counting tickets can also have a chilling effect on officer engagement and may even depress the level of engagement that is being sought.

The guidance to the state highway safety offices needs to be more specific otherwise it creates the opportunity for differing interpretations in developing projects. These interpretations may also be too restrictive and may result in fewer grant ap-

plications or lower levels of officer engagement. Past authorizations have frequently resulted in different interpretations by federal and state officials which can discourage law enforcement participation especially when law enforcement is interested in enforcing local traffic safety issues. Another approach to consider might be a direct appropriation to law enforcement agencies that are interested in working on traffic safety in their community. This would reduce the influence of interpretation issues.

Finally, if this is to be serious effort to improve traffic safety it must be accompanied by a substantial increase in funding designed to address local traffic issues. The past reauthorizations have focused on a select group of important issues. More funding for local traffic issues needs to be included to encourage participation in a comprehensive national traffic safety effort. As I mentioned in my testimony, the capacity of law enforcement is already taxed in most communities with non-traffic related issues. The use of overtime grants has been the traditional approaches applied to increase this capacity and this should be continued. However, not every agency can use this approach. It might useful to consider adding traffic safety officer positions to those agencies that can justify an extreme lack of capacity.

Chief Brown, you mention in your testimony that you support expansion of automated speed enforcement, granted that it is used for public safety purposes and not revenue generation. I believe many constituents oppose automated speed enforcement technologies because they assume that revenue would be the real motive behind it.

Question 2. How can we implement automated enforcement in a way which eases these concerns?

ANSWER. The National Highway Traffic Safety Administration (NHTSA) has developed a considerations document which outlines many of the steps law enforcement should consider when looking at automated enforcement. The NHTSA document focuses on problem identification needs to promote the legitimacy of the enforcement efforts and the proper use of the technology that is used.

Another issue of some concern in the public's perspective is whether or not the fines that result from this enforcement are a revenue source. NHTSA addresses this issue in its document but it does not specifically address what a non-law enforcement agency may feel about these fines. Too often, the fine revenue becomes a fiscal revenue stream for communities which feeds the narrative that citations are issued to ease fiscal concerns. Whatever is being considered at the local level the local government and law enforcement agencies should consider all of these issues and the NHTSA guidance is helpful.

The use of automated enforcement on a national level will not be possible without encouraging or incentivizing state efforts to adopt legislation that enables this type of enforcement. Automated enforcement is not available in every state or community and its implementation is often inconsistent. This inconsistency does not help with public acceptance. The new authorization could and should address this issue so more agencies can employ automated enforcement technology at the local level across the nation in a consistent manner.

Finally, there should funding to further develop technology to address other traffic safety issues. Currently, there is a focus on running red lights and speeding issues. There should also be challenge to develop technology to identify other traffic safety violations, (e.g.; jaywalking, cell phone use, failure to yield conditions), especially with the emerging technological systems being placed on our roadways and in our vehicles.

Overall, automated enforcement could prove to further enhance compliance with traffic safety laws by increasing the public's perception that violations may be discovered through the use of this technology.

QUESTIONS FROM HON. ELEANOR HOLMES NORTON FOR JAY BRUEMMER, VICE PRESIDENT, K&G STRIPING, INC., ON BEHALF OF THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION

Mr. Bruemmer, one of the solutions to addressing the dangerousness of work zones is work zone project management software, and you note that it has been employed by the District of Columbia.

Question 1. Can you provide more detail on how this system worked and tell us whether there are any other places you're aware of that are using similar methods? If not, how can we help promote its adoption in other cities?

ANSWER. In responding to your written question regarding the smarter work zone application in Washington, DC, I wanted to point you and the Subcommittee staff to ATSSA's innovation website which is focused on educating departments of trans-

portation and public works agencies on the opportunities that exist for smarter work zones and innovative roadway safety countermeasures generally.[1]

Additionally, I have attached the case study publication entitled, *Smarter Work Zones: Project Coordination and Technology Applications*. This publication is focused on various applications of smarter work zones across the nation, including the application in Washington, DC.[2] Project coordination is a focus for departments of transportation (DOTs) around the country. The Federal Highway Administration (FHWA) created a *Guide to Project Coordination for Minimizing Work Zone Mobility Impacts*, which helps DOTs utilize project coordination in their planning and execution.[3]

Finally, there is additional information on project coordination efforts around the country, including case studies.[4] Local transportation agencies rely on state DOTs and ultimately FHWA to incorporate new technology into projects and provide best practices. FHWA is in the process of developing systems to update their specifications to keep pace with emerging innovation through an update to the Manual on Uniform Traffic Control Devices (MUTCD). We encourage Congress to provide FHWA the resources to promote adoption of this and other new life-saving roadway safety infrastructure countermeasures. As for the Washington, DC-specific example, upon further conversations with the District Department of Transportation (DDOT), DDOT indicated difficulties in moving the project forward due to continuous software maintenance upgrades. That said, project coordination, in general, is important part of work zone safety, and it underscores the need to have guidelines and systems in place to keep up with ever-evolving technology.

ATTACHMENT—CASE STUDY PUBLICATION ENTITLED "SMARTER WORK ZONES: PROJECT COORDINATION AND TECHNOLOGY APPLICATIONS"

[The case study publication is retained in committee files.]

QUESTION FROM HON. PETER A. DEFAZIO FOR NICHOLAS J. SMITH, INTERIM PRESIDENT AND CHIEF EXECUTIVE OFFICER, THE NATIONAL SAFETY COUNCIL

Mr. Smith, your testimony raises the specter of the FCC reneging on its initial decision to preserve a small piece of bandwidth for connected vehicles to communicate critical safety information with high speed and accuracy. Today, big telecomm wants to share the spectrum despite the lack of studies that guarantee their transmission will not interfere with vehicle to vehicle communication that will save lives.

Question 1. Should this committee allow the FCC to undercut the opportunity to prevent 37,000 deaths a year so people can download a movie a few minutes faster?

ANSWER. Mr. Chairman, the United States prioritized safety in 1999 by preserving the 5.9 GHz spectrum band for roadway safety communication. Communication between vehicles and other objects over this spectrum has the opportunity to mitigate and prevent crashes that could result in the loss of life. Infrastructure owners and vehicle manufacturers have begun installing 5.9 compatible technology, and the National Safety Council (NSC) would like to see implementation progress and proliferate.

The FCC and the Department of Transportation should exercise vigorous oversight of any testing of unlicensed devices to ensure no interference in the band that compromises safety. NSC urges Congress to monitor this testing as well.

Life-saving technology can operate over this band, including in areas that are often overlooked by other technology buildouts. NSC encourages Congress to preserve this spectrum for safety to help eliminate these preventable deaths.

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[1] ATSSA Innovation Website—http://innovate.atssa.com/innovative-technology-by-state.html

[2] Washington, DC case study on project coordination—https://www.workzonesafety.org/files/documents/SWZ/DC__PC__case__study.pdf

[3] *Guide to Project Coordination for Minimizing Work Zone Mobility Impacts*—https://ops.fhwa.dot.gov/publications/fhwahop16013/index.htm

[4] Project coordination repository—https://www.workzonesafety.org/swz/swzproject-coordination/outreach/