

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO

TESTIMONY OF

Dr. Shawn D. Wilson

President, American Association of State Highway and Transportation Officials
Secretary, Louisiana Department of Transportation and Development

REGARDING

**Addressing the Roadway Safety Crisis:
Building Safer Roads for All**

BEFORE THE

**Subcommittee on Highways and Transit of the
Committee on Transportation and Infrastructure of the
United States House of Representatives**

ON

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American Association of State Highway and Transportation Officials
555 12th St NW, Suite 1000
Washington, D.C., 20004
202-624-5800
www.transportation.org
info@aahto.org

INTRODUCTION

Chair Norton, Ranking Member Davis, and Members of the Subcommittee, thank you for the opportunity to appear today at this important hearing on the roadway safety crisis facing this country.

My name is Shawn Wilson, and I serve as Secretary of the Louisiana Department of Transportation and Development (LA DOTD) and as President of the American Association of State Highway and Transportation Officials (AASHTO). Today, it is my honor to testify on behalf of the Pelican State and AASHTO, which represents the state departments of transportation (state DOTs) of all 50 states, the District of Columbia, and Puerto Rico.

For far too long, we have seen a tragic loss of life on our nation's roads and streets, and the recent significant increases in traffic fatalities are even more disheartening. Every state DOT in the nation and the AASHTO community stand with this Committee in your unwavering commitment—as Chairs DeFazio and Norton emphasized in their statement of May 17, 2022—to do everything in our power to make our roads safer.

As I conveyed in my testimony to your colleagues on the Ways and Means Committee this past February, the Infrastructure Investment and Jobs Act (IIJA) provides stable and long-term policy and funding opportunities that are critical for state DOTs to meet their safety, quality of life, and economic goals. As we prepare for a future with connected and automated vehicles that are expected to help address many of our roadway safety challenges, state DOTs are keenly aware of the need to aggressively push safety strategies that can have an immediate impact.

The good news is that the IIJA provides an increased level of federal support to state DOTs and our local partners as we combine our efforts to provide a safe, equitable, and sustainable transportation system for the nation. We are grateful that the IIJA aligns well with state DOT and AASHTO priorities by maintaining a strong core Federal-aid Highway Program. This historic infrastructure legislation will continue to provide state DOTs and local governments with policy and funding flexibility that best meets the needs of their individual organizations, transportation networks, and road users.

The IIJA provides an increase in funding and flexibility for the Highway Safety Improvement Program (HSIP) that will allow states to expand their efforts to identify and implement improvements to our surface transportation infrastructure that will counteract the daily tragedies occurring on our roads. In addition, the increases in funding for infrastructure safety activities along with new programs, such as the Safe Streets and Roads for All Grant Program, provide more opportunities for us to work together to address traffic safety throughout the planning, design, operation, and maintenance of all public roads. Thanks to your leadership, the IIJA clearly calls out the principles of the Safe System Approach: that no death or serious injury is acceptable; people make mistakes and are vulnerable; we all share responsibility in preventing serious crashes; we need to be proactive in our efforts, and we need to have redundant safety strategies in place.

The United States Department of Transportation's (USDOT) National Roadway Safety Strategy (NRSS) carries these principles further by providing a framework for our collective work to provide safer people, safer roads, safer vehicles, safer speeds, and post-crash care, and to tie this work into other key priorities, including equity and the climate crisis. With the support of the IIJA and in partnership with the USDOT as

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part of the NRSS, state DOTs are “all-in” on improving the safety of our transportation system for all users.

But even with the good news of the passage of the IIJA, the horrific early estimates from the National Highway Traffic Safety Administration’s (NHTSA) of the increase in the nation’s traffic fatalities in 2021 confirm a grim truth that so many of us are aware of on both a professional and personal level: almost 43,000 people died in traffic crashes last year nationwide or 118 deaths each and every day; in Louisiana, we’re seeing three lives lost each day on average.

As AASHTO President this year, I am leading two emphasis areas that are central to our work on roadway safety: pathways to equity, and partnering to deliver. AASHTO and its member departments are not only identifying ways to strengthen our commitment to diversity, inclusion and equity with respect to our staff and organizations, but we are also working to enhance decision-making and investment processes and practices to positively impact the transportation network. In addition, as we expand our collaboration with both traditional and nontraditional partners, we are continuously identifying new opportunities to work together to improve the transportation system of the nation. Both of my emphasis areas enhance our traffic safety efforts, allow us to work in communities and neighborhoods that have not historically seen the levels of safety investment needed, and elevate work with a range of stakeholders to use innovative countermeasures to improve safety for all road users.

Today, I would like to focus my testimony on three important areas: the traffic fatalities we are seeing on our roadways, the opportunities to address this issue provided by the IIJA, and several state DOT initiatives that demonstrate the potential for reversing the traffic fatality trend.

ZERO FATALITIES AND SERIOUS INJURIES

Traffic fatalities and serious injuries have been a constant threat to our quality of life and the quality of our roadway network over the history of motor vehicle travel. For over a century, we have continuously strived to develop new practices, countermeasures, policies, and technologies to improve the safety of our roads, our road users, and our vehicles. And today, we still face the sobering reality that tens of thousands of our family members, friends, neighbors, and colleagues lose their lives each year during their everyday travel from one destination to another.

Over that same century we have built a world-class transportation network of over 4 million miles of public highways, roads, and streets that take us to work and school, take us on adventures across this nation, and connect us with each other. We have collectively solved enormous engineering challenges, invented vehicles and technologies that allow us to travel more safely and more efficiently, and created a transportation system of such a high standard that most of us that use it do not even have to think about it. And yet despite all that we have accomplished and how we have inspired transportation systems in many nations around the world, we recognize that tens of thousands of people have lost their lives each year on these roadways.

The breakdown of the data in NHTSA’s early estimates for 2021 traffic fatalities show there is no easy answer or single, one-size-fits-all solution to address this problem. Fatalities have increased on both rural and urban roads, and in both daytime and nighttime crashes. Fatalities have increased for pedestrians, bicyclists, and motorcyclists who do not have the protection of a vehicle enclosing them and absorbing

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some of the impact energy. Fatalities have also increased for people aged 65 and older, reversing a previous trend. Those are just a few examples from the NHTSA data.

Beyond fatalities, we cannot forget that over 2.7 million people are injured each year in traffic crashes. Crashes can have lifelong physical, emotional, social, and other impacts that mean the extent of our traffic safety crisis goes tragically far beyond the impacts of the lives lost.

As a nation, we need to aggressively implement existing roadway strategies that are proven to work, while at the same time accelerating the development of new and innovative countermeasures and technologies that hold promise for the future. An evolution of our traffic safety culture, both in our organizations and among road users, will help us prioritize the consideration of safety impacts in our planning and decision-making.

AASHTO has adopted the *Toward Zero Deaths National Strategy on Highway Safety* as its strategic safety plan. All state DOTs strive to achieve zero roadway fatalities. Other public agency partners who work in behavioral traffic safety programs, passenger and commercial vehicle safety, and other disciplines have similar goals. And our partners in the industry, academic, policy, and advocacy fields of transportation are all working toward the same goal of eliminating fatalities and serious injuries. This collaboration is critical to reaching our collective zero goal.

State DOTs, cities, rural transportation agencies, advocacy groups, and others have multiple sources for information, peer exchange of knowledge, and technology transfer activities. Through our Toward Zero Deaths (TZD) initiative, AASHTO is developing resources to support transportation and highway safety organizations' efforts to implement proven safety countermeasures and to improve traffic safety culture. We are developing case studies, templates, webinars, communications materials, and utilizing other methods to share knowledge and expertise among safety organizations. In combination with resources such as the Federal Highway Administration's (FHWA) Proven Safety Countermeasures, technical support and resources, our members and transportation partners have access to a range of means for strengthening their safety activities. Similarly, other safety partners, such as the Road to Zero Coalition and the Vision Zero Network, provide opportunities for sharing of experiences, collaboration and even funding for safety activities. This wealth of knowledge developed by the safety community in its entirety serves as an invaluable resource for state DOTs.

In Louisiana, we have a strong partnership with our Governor's Safety Office, and State Police, to oversee our Strategic Highway Safety Plan (SHSP) where we have committed to Destination Zero Deaths. We use the SHSP as the platform to identify our biggest transportation safety challenges from behavioral and infrastructure perspective and identify meaningful strategies that will make a difference here in Louisiana. LA DOTD has used the Highway Safety Improvement Program (HSIP) funds to establish and manage SHSP Regional Safety Coalitions where SHSP Regional Action Plans are developed by multi-disciplinary groups and implemented for each Emphasis Area within each region. Subject matter experts across the state within various agencies lead to provide technical support for each Emphasis Area: Impaired Driving, Distracted Driving, Young Drivers, Occupant Protection (seat belts and child seats), and Infrastructure and Operations—comprising statewide leaders from the LA DOTD and Local Technical Assistance Program, LA DOTD District Traffic Engineers, and regional leaders—with major focus for HSIP-funded projects involving roadway departures, intersections, and non-motorized users updated with a focus on older pedestrians in 2022. We're also looking to best use data to highlight overlap between the emphasis areas and aligning strategies across multiple emphasis areas, which we believe gets us closer to the Safe System Approach.

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IIJA will allow Louisiana to use a portion of our HSIP funds on non-infrastructure projects, which will align well with our efforts to combine education, enforcement, and engineering initiatives identified through the SHSP. Also, we see this a potential opportunity for kick starting a safety corridor program.






The USDOT’s National Roadway Safety Strategy echoes the existing goals and efforts of traffic safety stakeholders and provides a framework for embracing our shared responsibility for safety, including ways to incorporate a safety culture and focus in other priority areas such as equity and climate change.

State DOTs and AASHTO are committed to eliminating fatalities and serious injuries on our roads, and our efforts are part of a broad collection of activities underway across the nation. The National Roadway Safety Strategy will help everyone prioritize and focus these efforts, and the IIJA provides the necessary programs and funding that allow us to move more quickly toward our ultimate goal.

IIJA SUPPORT FOR TRANSPORTATION SAFETY

The state DOT community recognizes the importance of the IIJA in strengthening our transportation infrastructure, and appreciates that the IIJA:

- Includes key policy and funding priorities that AASHTO conveyed to Congress in October 2019 (table below)
- Reflects AASHTO’s core values as outlined in our 2021-2026 Strategic Plan (Safety; Diversity, Equity, and Inclusion; Collaboration; Transparency; and Trust and Integrity) and supports state DOT efforts to strengthen these values as we provide transportation facilities and services to all road users
- Provides us with opportunities to deliver on the commitments I have made as AASHTO President, specifically creating pathways to equity and partnering to deliver

AASHTO CORE POLICY PRINCIPLES	INFRASTRUCTURE INVESTMENT AND JOBS ACT KEY FEATURES
1. Ensure timely reauthorization of a long-term federal surface transportation bill	 Provides five years of federal funding and policy stability from FY 2022 to 2026
2. Enact a long-term, sustainable revenue solution for the Highway Trust Fund	 No revenue solution, though provides a \$118 billion General Fund transfer to HTF; Continues support of state user fee programs and creates a national user fee pilot program
3. Increase and prioritize formula-based federal funding provided to states	 90 percent of total HTF highway funding is provided to states via core formula programs, including two new programs: Carbon Reduction and PROTECT (for resiliency)
4. Increase flexibility, reduce program burdens, and improve project delivery	 Improves the environment review process by touching up on NEPA, Section 4(f), and stewardship and oversight agreement, among others
5. Support and ensure state DOTs’ ability to harness innovation and technology	 Provides substantial funding for EV infrastructure deployment and increased research and development funding

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I would like to highlight a few programs and policies within the IIJA that enable and strengthen state DOT activities related to infrastructure safety improvements - the Safe System Approach, the Highway Safety Improvement Program, Equity and Roadway Safety, and Complete Streets. These specific areas provide many opportunities for improving safety for vulnerable users, working toward equity goals, and collaborating with partners.

Safe System Approach

The principles of the Safe System Approach include acceptance of the shared responsibility for preventing serious crashes and roadway fatalities by proactively providing a transportation system that accounts for human mistakes, reduces impact energy to the human body, and provides redundant protections for all road users to create a "Safe System." While this country will not attain a Safe System overnight, state DOTs have been identifying ways to begin implementing this approach both at the programmatic and individual project level.

While an ideal Safe System will look different from what we have today, it would not be a completely new system. Many of the design concepts and safety countermeasures that have been in use for years will still be instrumental in a Safe System. An example is the "forgiving roadside" concept: an important principle of the Safe System Approach is to minimize impact energy in crashes, and for decades transportation agencies have been using an ever-expanding set of strategies and tools to both reduce the risk of crashes and to minimize the severity of crashes that do occur. Since the 1960s, public, private, and academic organizations have been working to improve roadside design practices and to develop safety hardware, so that if vehicles do leave the traveled way, either the driver can safely steer back onto the road, or the safety devices minimize the severity of impact and injuries. Applying these same concepts to the entire transportation system will take time and investment, and the IIJA enables us to make great strides.

In Louisiana, we have taken a proactive approach in reducing the potential for crossover median crashes on our high speed divided highways. We realize motorists can and will make mistakes which lead to roadway departure crashes while traveling at a high rate of speed. Although rare, when crossing the center median these crashes can have devastating impacts when colliding with another high speed vehicle. In 2009, the first pilot areas along I-10 were completed in late 2008 and along I-12 in 2009. These segments were selected based on cross over crash rates. Due to the success of these pilot projects, LA DOTD developed a cable median barrier program to systematically install cable median barriers on rural and high speed, fully controlled-access facilities where feasible, or at site-specific locations where warranted based on crash data. Based on data from 2009 to 2013 following the first round of cable median barrier installations, there has been a 33 percent reduction in cross-median crashes for these segments. In terms of severity, cable median barriers have reduced fatal and serious-injury crashes by almost 30 percent and 20 percent, respectively. Overall, we have installed 623 miles of cable median barriers statewide with another 100 miles let to construction.

The Missouri Department of Transportation has utilized the Safe System Approach for individual projects and has expanded that experience to the rest of their transportation program. For many years, Missouri has used a data-driven approach to identify and address highway safety issues throughout the state. However, these projects have typically been limited in number and scope due to fiscal constraints and the need to ensure safety improvements offer the greatest return on investment. A recent project in the St. Louis area received a national roadway safety award for integrating an innovative, and potentially first-of-its-kind, combination of data-driven and evidence-based safety analysis with a design-build project

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model. With the passage of the IIJA and additional transportation funding at the state level, Missouri is better positioned to include this proven method and additional safety improvements throughout the entirety of the Statewide Transportation Improvement Program (STIP). Using principles of the Safe System Approach, MoDOT is now evaluating the opportunity for safety improvements on all projects, from rural, low-volume roads to urban interstate corridors. In support of the state's SHSP, Show-Me Zero, the safety assessment for projects will be far-reaching and take into consideration the needs of the transportation system's most vulnerable road users, including pedestrians, bicyclists, and senior road users. The inclusion of safety improvements on all projects is a vital component of addressing the overwhelming loss of life on Missouri roadways that occurs on all types of roads in all types of areas.

Another example of applying the Safe System Approach to the project level comes from Massachusetts Department of Transportation (MassDOT), which has taken advantage of tools that support the Safe System Approach to help guide design alternative selections. Using the Safe System Intersection analysis tool from the FHWA, they were able to select design alternatives for intersections that minimize or modify conflict points, reduce vehicle speeds, improve visibility at intersections and provide space and protection for pedestrians and bicyclists. The IIJA will enable the agency to advance these projects to implementation to reduce fatalities and serious injuries.

Incorporating the Safe System Approach at the organizational and safety program levels will promote the application of this approach more broadly. It also allows for more data-driven consideration of equity in our program decisions, which also supports implementation of the USDOT's National Roadway Safety Strategy. State DOT strategic highway safety plans guide the use of HSIP funds, and we are seeing more and more states incorporating the Safe System Approach and equity considerations into their SHSPs.

Two examples of this come from my colleagues in California and Massachusetts:

- The California Department of Transportation (Caltrans) created a new Division of Safety Programs that rebuilt California's Strategic Highway Safety Plan based on safety-focused principles of doubling down on what works; accelerating advanced technology; implementing the Safe System Approach; and integrating equity. Their systemic pedestrian safety program is a proactive data-driven approach to identifying areas across the state roadway system that have specific risk factors known to be related to pedestrian crashes and then prioritizing those areas for improvement based on crash data, roadway features, crash types, and equity metrics. Caltrans works with other state agencies, local agencies, other external partners, and advocacy groups to apply an equity tool to identify and score locations for potential future improvements by Caltrans.
- The Massachusetts Department of Transportation has developed risk models that incorporate roadway features, community features including environmental justice, and other aspects in order to identify the locations with the greatest risk for each of the SHSP's emphasis areas (including speeding, pedestrians, bicyclists, older drivers, motorcyclists, impaired drivers, unbelted drivers, etc.). Using these tools allows the agency to be proactive and develop systemic projects to reduce fatalities and serious injuries on all roadways with investments enabled by IIJA.

The most vulnerable road users are those not traveling in enclosed vehicles designed with structural and technological protections that reduce crash severity. We have been experiencing an increasing trend in vulnerable road user fatalities and serious injuries for some time now, and states are committed to combating this trend. The IIJA includes a provision for states to include vulnerable road user safety

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assessments in their SHSPs and requires states to consider the Safe System Approach when conducting these assessments. While states typically analyze their crash data to understand vulnerable road user safety issues, the IIJA provisions for considering demographic data of crash locations will help ensure a more comprehensive look at equity-related factors in identifying locations and potential projects.

AASHTO and the state DOTs appreciate FHWA's efforts to obtain input from all stakeholders as they develop guidance on the vulnerable road user safety assessments. We have found that a flexible and interactive community involvement process tends to best reflect our existing strategic highway safety planning stakeholder involvement objectives, while allowing each state to address its own specific needs.

Regarding implementation of the IIJA, flexibility in the use of federal funds remains critical to states, and it is important to provide this flexibility in federal guidance. The Vulnerable Road User Special Rule requires that states triggering the rule must obligate 15 percent or more of their HSIP funds to vulnerable road user safety projects in the next fiscal year. For any given fiscal year, HSIP projects were programmed several years earlier, so states may not have infrastructure-based projects programmed that would meet the requirements of the Special Rule. This might lead to significant effort to program projects in a short time frame, which increases the likelihood that projects have to be selected based on their ability to be implemented quickly rather than based on their safety impacts. States should be allowed flexibility in identifying the most effective way to obligate the funds to vulnerable road user safety.

The Safe System Approach is often discussed in the context of urban environments and vulnerable road user safety, but I would like to emphasize the potential for the Safe System Approach to help us address our fatalities and serious injuries on rural roadways as well. The rural roadway fatality rate—fatalities per million vehicle miles travelled—is roughly twice the urban fatality rate. As with crashes in urban areas, there are a variety of factors that contribute to the occurrence and severity of rural crashes, but application of the Safe System Approach principles will help us address our rural safety challenges.

AASHTO and state DOTs need to play a leading role in defining the Safe System Approach to ensure that application of these principles is done in a manner that recognizes the most urgent safety needs and priorities of individual states and local governments without having a one-size-fits-all approach. With each state having urban and rural areas, FHWA's guidance and technical support for the Safe System Approach needs to address both and should be coordinated with any guidance or resources from NHTSA or other USDOT modal administrations that address the Safe System Approach.

Highway Safety Improvement Program (HSIP)

Since the creation of the HSIP in the SAFETEA-LU legislation of 2005, state DOTs have received dedicated formula funding for important safety programs and improvements. The IIJA provides significantly increased funding for HSIP, which will expand opportunities for state DOTs to apply the Safe System Approach concepts to their infrastructure-based safety improvements. In addition, the reinstatement of states' ability to use a portion of their HSIP funds for non-infrastructure safety activities supports the shared-responsibility aspect of the Safe System Approach.

State DOTs rely on data analysis and research to fully understand how their transportation systems are performing, how to identify options for improvements, and how to prioritize improvements most

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effectively. These methods help us ensure that we are making the most appropriate decisions possible. HSIP provides the framework and funding for prioritizing projects in the safety context. States use data and other considerations to prioritize their safety emphasis areas in their SHSPs, with input from many stakeholders inside and outside the state DOT. Countermeasures are identified that will target these emphasis areas. The HSIP funds are used to apply these countermeasures to high-crash locations, and to types of locations identified as having characteristics that present an increased risk for crash types. This systemic application of countermeasures is a proactive method of preventing crashes before they occur that is critical in the Safe System Approach. The IIJA adds more safety countermeasures to the list of options eligible for HSIP funds and this expansion of this eligibility helps states implement their SHSPs to improve safety for all road users. These additional countermeasures support vulnerable road user safety and can also improve safety for motorists as well.

An example of a risk-based or systemic safety program comes from Massachusetts. MassDOT uses risk-based models to identify rural roadways, many of them municipally-owned, where low-cost and short-term countermeasures would be effective at reducing fatal and serious injury lane departure crashes. The IIJA will enable MassDOT to bundle numerous high-risk, rural, municipally-owned locations and install enhanced signage in a proactive manner.

Virginia has also shifted its focus when it comes to investing limited highway safety infrastructure dollars. In 2019, the Virginia DOT (VDOT) approved its first systemic safety implementation plan that directs highway safety improvement dollars to complete eight proven safety countermeasures to be systemically deployed across state-maintained roads over the next several years. The eight countermeasures include traffic signal high-visibility backplates, flashing yellow arrows at traffic signals, pedestrian crossings at traffic signals, curve signage, centerline and edgeline rumble strips on primary roadways, and safety edge (a wedge of pavement for better recovery) when roads are repaved. The high-visibility backplate and flashing yellow arrow initiatives were completed in 2021 and the state's transportation board recently approved a phase 2 systemic investment plan that continues funding for proven countermeasures on state roads while also providing funds for systemic safety improvements on locally-owned and maintained roads in Virginia.

As the science of safety continues to develop, we are expanding the types of data and range of contributing factors we use to identify locations and facility types for improvement, and to select the most appropriate countermeasures.

Another example from Virginia demonstrates their expanding data analysis to improve pedestrian safety. The VDOT released its first Pedestrian Safety Action Plan (PSAP) in 2018, which seeks to improve pedestrian safety in Virginia by providing policy change recommendations, a toolbox of pedestrian safety countermeasures that can be used, and an online map (updated every two years) that identifies roadway segments in the Commonwealth that are higher risk locations for pedestrians. The higher risk locations, or pedestrian priority corridors, were determined by using data sources that provide an indication of pedestrian risk such as traffic volume, number of vehicle travel lanes, and proximity to transit and schools to score and predict locations with greater risk. The top 5% of roadway segments are included on the PSAP map that is published every two years. One of the data sets used in the evaluation is the Virginia Health Opportunity Index (HOI), developed by the Virginia Department of Health, that grades every census tract in the state, providing a score that indicates the opportunity of a person in that census tract to live a long and healthy life. VDOT determined through analysis that there is a strong connection between road locations with low HOI scores and roads that have more pedestrian crashes. Virginia is

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using the information to help predict roads with highest pedestrian risk and then focusing infrastructure dollars to make pedestrian infrastructure improvements at those locations.

AASHTO's Highway Safety Manual is a technical resource that provides tools for data analysis to estimate the effectiveness of decisions made for the roadway network. With these models, we can identify safety needs and prioritize improvements, estimate the expected change in crashes on proposed roadway designs, and predict future safety effects of individual countermeasures. For over ten years, researchers and practitioners involved in the development and use of the Highway Safety Manual, and similar analysis methods, have made great strides in how to quantitatively consider potential safety impacts in decision-making processes. In addition to developing additional content to address more facility and crash types, AASHTO, FHWA, the Transportation Research Board of the National Academies, and others provide training and technology transfer opportunities to practitioners using these methods.

An emerging implementation issue under the IJIA is a conflict between the performance targets required for the HSIP and the targets required for the Highway Safety Plans administered by NHTSA, specifically related to coordinating the two programs' identical targets and to using evidence-based targets. AASHTO has requested USDOT to take the necessary steps to resolve these conflicts. Collaboration between USDOT and state DOTs will be crucial as this issue can significantly impact our ability to continue to work collaboratively with our local partners to deliver projects in an effective and timely manner.

States fund a significant amount of research on vulnerable road user safety through the Transportation Research Board's National Cooperative Highway Research Program (NCHRP). Historically, a significant challenge with research related to pedestrian and bicyclist safety was the availability of data, specifically volume data, since many analysis methods require the volume of pedestrians and bicyclists on the facilities. To improve modeling capabilities, states have funded research conducted by NCHRP to identify and apply new technologies to efficiently collect this type of data. States have been investing in research to develop models that predict the expected safety performance of pedestrian and bicyclist facilities, guidance on systemic safety analysis of vulnerable road user safety, development of new countermeasures for vulnerable road users, and other means for analyzing and addressing safety concerns. The IJIA funding and expanded HSIP eligibility provide opportunities for expanded application of these countermeasures. States are well-positioned to continue to expand their programs through the Vulnerable Road User Assessments.

Equity in Roadway Safety

States are identifying ways to incorporate equity factors into their safety analyses to better meet their states' roadway safety goals. This includes processes for prioritizing safety projects. Two examples come from my own state and Ohio.

In Louisiana, we completed a Statewide Pedestrian Crash Assessment in 2021 prior to release of the IJIA. The crash assessment focused on pedestrians since pedestrian crashes represent the majority of vulnerable road users in Louisiana (about 18 percent of all fatalities). We focused on state routes since we had more data on the state network; that being said, the risk factors identified could also be used for locally owned roadways. The assessment was data-focused and used statistical models to determine risk factors for pedestrian crashes including roadway facility characteristics and socioeconomic factors tied to equity. The risk factors identified included: average daily traffic, section length, population density,

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percent of households with no vehicle, percent of households below poverty line, percent unemployed, median household income, distance to school, distance to park, and shoulder type.

The purpose of the crash assessment was to assist LA DOTD traffic and design engineers as well as local jurisdictions in implementing pedestrian safety features on high priority segments and corridors statewide. A major focus for 2022 is to identify at least one location in each region which with to move forward. Our goal is to meet 20 percent of HSIP construction funding on projects that improve safety for non-motorized users, or about \$10 to \$12 million annually. While we are currently averaging about 10 to 15 percent, pedestrian crash assessments will help us jump start projects. LA DOTD is providing additional assistance on implementation via feasibility/traffic studies, design, and construction for highlighted priority locations. Based on the IJIA, Louisiana is expected to develop a Vulnerable User Crash Assessment based on the Vulnerable Road User Special Rule. We are eager to receive detailed federal guidance on requirements and to build on equity risk factors previously identified for pedestrians.

We in Louisiana also developed the Safe Routes to Public Places Program in 2017 to address vulnerable road user safety using our HSIP funds. After a couple of years, we had not received many applications from economically-disadvantaged local jurisdictions who lacked the resources to collect the data needed for the applications. We added an equity component to the application process to expand the pool of eligible projects. Crash data has the most weight of the scoring criteria, and projects are also scored using a comparison of the area's median household income compared to the poverty level. This is not a perfect measure, so we are further exploring how to relate crash data to income level to identify a better metric.

The Ohio DOT's HSIP process integrates crash data with US Census data to better ensure their system accommodates users of all ages, abilities, and incomes. After identifying an increased level of traffic fatalities and serious injuries in low-income areas, and working with district safety staff and external stakeholders, ODOT revised their project scoring process for local safety projects. Crash hot spots are eligible for HSIP funds, and poverty rate is included in the scoring process. ODOT is also providing assistance for safety studies in economically-disadvantaged communities, and in some cases are able to reduce the local jurisdictions' financial match for the project funding.

Complete Streets

The federal support of the Complete Streets design model in the IJIA and the National Roadway Safety Strategy highlight the use of Safe System Approach principles to provide a roadway environment that is safe for all road users and supports opportunities to incorporate equity principles into projects. Beyond the safety-focused HSIP program, state DOTs and others are expanding the use of approaches that incorporate safety for all road users throughout the transportation system. Many state DOTs are incorporating flexible and context-sensitive design practices into their programs to connect road users to their destinations via safe and comfortable facilities—in fact, according to the National Complete Streets Coalition (NCSC), 35 states plus Puerto Rico have adopted Complete Street policies and additional states are carrying out programs producing similar outcomes even if they may not necessarily refer to them by this moniker. AASHTO Vice President Roger Millar is the former Director of the NCSC and has been a member of the organization's steering committee since 2015. As states' experiences with this type of approach expand, we are able to share knowledge and best practices with each other to further strengthen our programs.

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The LA DOTD has a comprehensive Complete Streets policy that was in place prior to the IJA passing. With increased state investment coupled with IJA funding, we can now begin to effectively employ this policy on projects as opposed to the limited implementation that was previously used in a preservation-only approach. LA DOTD has recently established a new engineering design position designated as a subject matter expert for designing pedestrian and bike facilities. We are also investigating the need for retaining national experts to provide additional assistance with design reviews and training. LA DOTD is also using a Complete Streets approach to make improvements to non-motorized facilities on all roadway projects where practicable. As part of this effort, LA DOTD works closely with the Complete Streets Advisory Council to prepare an annual report with performance measures each year to the state legislature.

Massachusetts has been actively involved in Complete Streets and investing in their infrastructure for vulnerable road users. Their efforts are paying off: Massachusetts was ranked number one in the 2022 Bicycle Friendly State Report Card by the League of American Bicyclists who gave Massachusetts a grade of “A” for Infrastructure & Funding, Education & Encouragement, and Policies & Programs. The Vulnerable Road User Rule will further support this work and enable Massachusetts to expand on projects targeting bicycle and pedestrian safety in an equitable manner using their crash-based and risk-based network screening.

AASHTO has been supporting state efforts to use flexible design practices, such as Complete Streets, context-sensitive design, practical design, and other related approaches. In 2004, AASHTO published *A Guide for Achieving Flexibility in Highway Design* and since then has continued to discuss these concepts and best practices within our committees and with partner organizations to expand our knowledge base. AASHTO has embarked on a process to revise our main design guidelines, *A Policy on Geometric Design of Highways and Streets*, to provide guidance on design flexibility that follows our model of being research-based and peer-reviewed. The state DOTs have funded research through NCHRP to examine roadway contexts and related appropriate designs and to develop a framework for a performance-based design process. The next edition of this publication will support state efforts to use Complete Streets approaches as they expand their safe and accessible transportation options for all road users. AASHTO is engaging other design and advocacy stakeholders in this work, some of whom are already involved in AASHTO committees and in the NCHRP panels overseeing related research.

As you know, vehicle speeds and traffic signs, signals, and pavement markings also contribute to the safety and comfort of the roadway environment. Design guidelines are complemented by the Manual on Uniform Traffic Control Devices (MUTCD), a federal document, which is currently being updated. This document allows transportation agencies to provide information to road users in a consistent and standardized way to contribute to safe operations for all road users. AASHTO and the State DOTs are dedicated to working with partners to ensure all road users are considered in our selection and use of traffic control devices. We have provided significant comments during this update process to ensure that the most recent research into traffic control devices would be quickly incorporated into an updated version of the manual, which hasn't been formally updated since 2009. In addition, in those comments as well as in a joint letter in March of last year to FHWA Acting Administrator Stephanie Pollack from AASHTO and several partners, the state DOTs committed to work jointly FHWA and other stakeholders on a full reexamination of the structure, process, and content of the MUTCD, to ensure that the manual is meeting the needs of all users of the transportation system – including pedestrians and bicyclists – in an equitable and consistent manner.

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Beyond the HSIP, the states invest much more on safety through inclusion of safety countermeasures in many road and bridge projects funded under other Federal-aid Highway Program categories and through state funds. State DOTs work closely with metropolitan planning organizations (MPOs) and other local agencies on many issues, and these existing relationships represent an opportunity to further leverage IIJA's policy and funding provisions in the National Highway Performance Program, Surface Transportation Block Grant Program, Increasing Safe and Accessible Transportation Options, and Safe Streets and Roads for All Grant Program, among others.

Similarly, AASHTO's support for flexible design practices, Complete Streets, and local road safety is exemplified through our expert-led councils and committees' collaboration with other associations that support local agencies. As state DOTs build on their partnerships with local agencies and MPOs, our councils and committees are working to identify additional ways to share best practices and identify new ways to exchange information and provide assistance. Within the AASHTO Committee on Safety in particular, our Local Road Safety Subcommittee is starting to identify ways to collaborate with partner associations on the Safe Streets and Roads for All Grant Program opportunities. Many states have processes in place for assisting local agencies with HSIP projects, and plan to build on this experience to support new safety opportunities.

AASHTO recommends that implementation of expanded and new IIJA programs remain flexible to allow states to continue to integrate Complete Streets concepts into their transportation programs in ways that best suit individual states. FHWA's technical and policy support is valuable to the states, as state DOTs work with individual locations and jurisdictions to provide facilities that meet the needs of their specific contexts. We continue to recommend that our federal partners steer away from potentially prescriptive requirements that would prevent use of the most appropriate approaches and designs that will mitigate safety challenges and improve transportation equity for all users.

CONCLUSION

AASHTO is fully dedicated to combating traffic fatalities and serious injuries. We know that as infrastructure owners and operators, state DOTs have a leading role in many of the activities that will get us to zero deaths. Each state recognizes that their road networks are not perfect, and there are thousands of dedicated public and private professionals working every day to provide the best transportation system possible. We know that supporting the critical work of our partners—public, private, and non-profit—will advance our collective efforts. We all have different capabilities, jurisdictions, and responsibilities so we need to rely on partners to work in areas where we cannot. I look forward to hearing the ideas from my fellow panelists. Working together, we can comprehensively combat traffic fatalities and serious injuries on our nation's roadways.

AASHTO and its members will continue to promote known infrastructure-based opportunities—and to identify new ones - to address the variety of factors contributing to crashes and roadway safety needs of all road users. AASHTO's councils and committees continuously identify best practices to share among the states so that we can continue to spread good ideas around the country. Our recent compilation, "State DOTs Delivering on the Public Benefits of the Infrastructure Investment and Jobs Act" contains numerous examples of how the IIJA is allowing states to expand their programs, and currently there are 16 examples related to safety activities using HSIP and other funds.

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AASHTO and its state DOT members are fully devoted to support Congress in implementing the IIJA in order to ensure full economic recovery and growth, and enhance quality of life through robust investments in transportation programs and projects.

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

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