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**Statement for the Record of**  
**The American Society of Civil Engineers**  
**on**  
**"America Builds: A Review of Programs to Address Roadway Safety"**  
**Subcommittee on Highways and Transit**  
**Committee on Transportation and Infrastructure**  
**U.S. House of Representatives**  
**February 12, 2025**

## **Introduction**

The American Society of Civil Engineers (ASCE) appreciates the opportunity to submit a statement to the House Committee on Transportation and Infrastructure's Subcommittee on Highways and Transit regarding the hearing "America Builds: A Review of Programs to Address Roadway Safety."

ASCE recognizes the Committee on Transportation and Infrastructure's prompt and thorough attention to the needs of the transportation system this year. This hearing is the committee's seventh of the 119th Congress and follows sessions focused on highways, rail, and maritime infrastructure. We appreciate this committee's early focus on infrastructure issues and the upcoming surface transportation reauthorization bill. Passing comprehensive surface transportation legislation before the Infrastructure Investment and Jobs Act (IIJA) expires next September is a top priority for ASCE.

Founded in 1852, ASCE is the nation's oldest civil engineering society. ASCE represents more than 160,000 members of the civil engineering profession in 177 countries. As the professionals who design, construct, and maintain critical aspects of the transportation system, including roadways, ASCE welcomes the opportunity to offer perspective on the important subject of roadway safety.

## **ASCE's Report Card for America's Infrastructure**

Every four years, ASCE publishes its *Report Card for America's Infrastructure*, which grades the nation's major infrastructure categories using an "A" to "F" school report card format. The most recent Report Card<sup>1</sup>, released in March 2021, evaluated 17 categories of infrastructure and reflected an overall "C-" grade. Roads received a "D" on the Report Card, while bridges received a "C", transit a "D-", and rail a "B". The next Report Card will assess 18 categories and will be released on March 25, 2025.

## **Safety on America's roads**

Safety is the guiding principle of the civil engineering profession and ASCE understands that transportation safety needs to extend to all modes of travel, including roads. Transportation safety is critical, and safer roadway systems can reduce loss of life, personal injuries, and loss of economic resources. ASCE supports a sustained effort to reduce crashes, fatalities, injuries, and property damage through improvements to highway system planning and operation as well as the implementation of safety improvement programs and technology.

Safety remains a significant issue on our nation's roadways. The National Highway Traffic Safety Administration (NHTSA) estimates 40,990 people died in motor vehicle traffic crashes in 2023. Pedestrian injuries and fatalities are also high. Preliminary data indicates 7,318 people were struck and killed while walking in 2023<sup>2</sup>. This figure marks

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<sup>1</sup> <https://infrastructurereportcard.org/>

<sup>2</sup> <https://www.ghsa.org/resources/Pedestrians24>

a decrease from the 7,737 pedestrians that were killed in 2022, but it is still 14.1% higher than the number of pedestrian deaths reported in 2019.

### **Support for federal transportation safety programs**

In any surface transportation reauthorization bill, ASCE asks Congress to support federal programs designed to improve the safety of the traveling public. As roadway use continues to grow, industry, federal, state, and local cooperation and funding are needed to preserve mobility while reducing the frequency and severity of traffic crashes. Moreover, ASCE believes safety efforts should include increased flexibility in federal-aid funding programs for high-priority highway safety improvement programs.

The Department of Transportation (DOT) oversees many programs focused on safety, and ASCE requests dependable, robust funding for those programs in the years to come. A few of those programs include:

1. The Rural Surface Transportation Grant Program, which supports projects that improve surface transportation infrastructure in rural areas by increasing connectivity, improving safety, and generating regional economic growth. Traffic safety is a particular concern in rural areas. Challenges with rural roads include a lack of safety features, such as rumble strips, ample shoulders, recoverable slopes, and lighting, and a lack of quick access to emergency medical care.
2. The Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program, which funds projects with local or regional impacts across various modes, including roads, rail, transit, and ports. Since 2009, Congress has provided DOT with 15 rounds of competitive grants totaling nearly \$14.4 billion<sup>3</sup>. These grants have helped 1,096 projects in all 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
3. The Safe Streets and Roads for All (SS4A) program, which funds regional, local, and Tribal initiatives to prevent roadway deaths and serious injuries. Since Fiscal Year (FY) 2022, the SS4A program has provided \$2.9 billion in funding to over 1,600 communities in all 50 states and Puerto Rico. These awards are expected to improve roadway safety planning for about 75% of the nation's population, including communities in rural areas.
4. The Railroad Crossing Elimination Grant Program, which funds highway-rail grade crossing improvement projects. Just as people use various modes of travel to reach their destinations, roadway safety involves other sectors of transportation infrastructure. Highway-rail grade crossings – the intersections where roads cross railroad tracks at grade – can be particularly hazardous. The Federal Railroad Administration reports that, nationally, more than 2,000 incidents and 200 fatalities occur at grade crossings each year. This program funds life-saving efforts to separate grades and relocate tracks.

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<sup>3</sup> <https://ops.fhwa.dot.gov/freight/infrastructure/tiger/>

## **Additional recommendations for a surface transportation reauthorization bill**

### **1. Funding for infrastructure investment**

Besides support for key safety programs, such as the initiatives highlighted above, ASCE urges Congress to provide adequate funding for infrastructure investment in the next surface transportation reauthorization bill. Recent federal legislation, such as the Infrastructure Investment and Jobs Act, set a new standard for investment in surface transportation. However, a funding gap to fully address our nation's transportation needs remains, and ASCE requests that Congress at least maintain investment levels set by the IIJA.

The IIJA has resulted in many tangible benefits to the transportation system. Since the law's enactment in November 2021, the IIJA has directed \$591 billion to over 72,000 projects<sup>4</sup>. These are projects to improve safety on roads and at railroad crossings, accelerate the movement of goods at ports, and increase connectivity in rural and under-resourced communities. In short, the IIJA has funded projects that not only protect human lives, but also spur economic activity.

Transportation funding should involve a continuation of traditional user fees, such as federal and state motor fuel taxes, while transitioning to more sustainable innovative user fees, such as alternative energy vehicle fees and road usage charges. Funding for roads and bridges relies on the Highway Trust Fund (HTF), which is supported by motor fuel tax revenue. The federal motor fuel tax rate of 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel has not been raised since 1993. Due to the growth in construction costs and the increasing fuel efficiency of vehicles, the purchasing power of the HTF has declined precipitously over the years.

Vehicles, navigation systems, safety mechanisms, and roadway design techniques have all made their way into the 21st century. Funding for infrastructure should transition to reflect the current transportation system. ASCE recommends innovative user fees that align with the "user pay" principle, which is based on the idea that people who use roadways should bear the costs associated with them. Innovative financing techniques can benefit infrastructure development by better leveraging available resources to deliver more capital. They can also play a major role in delivering projects and public benefits sooner than conventional methods. However, financing by any technique does not supplant the need for adequate user fees or other sources of revenue to pay for projects.

### **2. Operations and maintenance**

Congress should support state- and local-level transportation asset management plans that link asset management efforts to long-term transportation planning and incorporate the use of life-cycle cost analysis. Life-cycle cost analysis, which helps raise awareness

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<sup>4</sup> <https://www.transportation.gov/briefing-room/big-deal-biden-harris-administration-nears-close-history-making-progress-continues>

of the full cost of infrastructure, can help transportation professionals make well-informed operations and maintenance decisions. Using life-cycle cost analysis to evaluate operations, maintenance, repair, and energy costs can help with the overall cost-effectiveness of the project.

One key component of judicious infrastructure decisions is accurate, updated data. Thoroughly collected and promptly reported data guides infrastructure owners on when and how to distribute valuable resources to maintain their roads and bridges. ASCE would like to suggest the incorporation of a provision included in the Rail Bridge Safety and Transparency Act (H.R. 9998/S. 4954) that proposes a bridge inspection report database. This bill, which was introduced last year, calls on the Department of Transportation to develop a database of bridge inspection reports received from railroad carriers. ASCE believes this provision would promote transparency and increase the safety of these critical structures.

ASCE also recommends Congress consider the Bureau of Transportation Statistics' (BTS) work to provide local government agencies with data tools to support infrastructure decisions. The IIJA directed BTS to conduct outreach and identify the data needs of local government officials to make informed decisions about infrastructure investments. It also called on BTS to create a work plan to develop relevant data analysis tools for infrastructure investments in rural and urban communities. In the upcoming surface transportation reauthorization bill, ASCE suggests requiring an update from BTS on the progress of the work plan. Additionally, ASCE would recommend preserving an IIJA provision authorizing \$10 million per fiscal year for BTS besides the amounts provided through the HTF.

### **3. Building for the future**

Across the U.S., disasters of greater intensity, duration, and frequency have wreaked havoc on communities of every size and location. In 2023, a total of 28 extreme weather events caused nearly 500 deaths and over \$95 billion in damages; since 1980, the U.S. has experienced 400 events amounting to at least \$1 billion with a total cost of \$2.7 trillion.

Therefore, in any reauthorization bill, ASCE urges Congress to include requirements to design and construct infrastructure that can withstand increasingly extreme weather events, such as incentivizing the use of the latest codes and standards for projects receiving federal dollars. Designing and maintaining with resilience in mind can result in longer-term project viability, cost savings over time for infrastructure owners, reduced negative impacts on communities and the environment, and increased public involvement in decision-making. The widespread adoption of frameworks and standards can help deliver resilient, fiscally responsible projects and make the nation's infrastructure fit for the future. The past year alone, during which tornadoes caused damage across the central and southeastern U.S. and hurricanes devastated communities, has demonstrated the need for resilient infrastructure. One recent

standard ASCE recommends would be ASCE/COS 73-23: Standard Practice for Sustainable Infrastructure, which provides guidance for infrastructure owners to develop and implement solutions throughout a project's entire life cycle.

Relatedly, ASCE recommends Congress continue to fund research into the use of innovative technologies, materials, and construction techniques, which can help ensure our infrastructure systems withstand extreme weather events. Innovation in the transportation sector can result not only in longer-lasting infrastructure, but also safer systems for the traveling public.

ASCE also recognizes that reducing delays in the permitting process for infrastructure projects can help our nation achieve a transportation system appropriate for the 21st century. ASCE supports a balanced approach to the National Environmental Policy Act (NEPA) process characterized by quality science, objective determinations of potential project impacts on the environment, and streamlining the permitting and approval process for infrastructure projects. Project delays associated with the current NEPA process often result in significant additional expenses to taxpayers stemming from issues such as increases in labor and materials costs. Time is another challenge, as environmental impact statements (EIS) can take years to complete. These delays in projects across every infrastructure sector are impacting public safety and our economy, and ASCE encourages Congress to look at ways for the permitting process to be streamlined in a safe and responsible way.

### **The economic value of infrastructure investment**

In 2024, ASCE released *Bridging the Gap*, a report that analyzes the impacts of recent infrastructure investments on American households and businesses. As Congress considers reauthorizing surface transportation programs over the upcoming year, it will be critical to have a strong understanding of the country's needs. The report found that, to bring the nation's surface transportation infrastructure into a state of good repair, \$3.5 trillion would need to be invested from 2024-2033<sup>5</sup>. If Congress continues to invest in surface transportation programs at the same funding levels represented by the IIJA, the overall funding gap for surface transportation programs will decrease slightly to \$1.2 trillion. However, if funding reverts to 2019 levels, the gap will grow to \$1.8 trillion. While recent federal legislation has halted the infrastructure investment gap's rapid growth, continued robust investment is needed to keep up with increasing demands and ensure our system is fit for the future.

Furthermore, continuing to invest in infrastructure at IIJA levels will have significant economic benefits for American families and businesses over the next two decades. *Bridging the Gap* finds that, if IIJA spending becomes the new baseline for infrastructure investment, American families will save \$700 more per year from 2024-2043. These savings will allow Americans to have more disposable income to invest in the goods and

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<sup>5</sup> <https://bridgingthegap.infrastructurereportcard.org/wp-content/uploads/2024/05/2024-Bridging-the-Gap-Economic-Study.pdf>

services they want, rather than the expenses related to failing infrastructure, such as car repair, bottled water, or losses from spoiled food when the power goes out. Continued investment in our transportation system will also result in safer and more dependable trips for individuals heading to work, children on their way to school, and truck drivers delivering goods to businesses.

### **Promotion of industry-driven standards**

ASCE engages in setting standards on a large scale and can serve as a useful source of technical information for Congress and agency partners. ASCE Standards provide technical guidelines for promoting safety, reliability, productivity, and efficiency in the civil engineering profession. Accredited by the American National Standards Institute (ANSI), ASCE has a rigorous and formal process overseen by the Codes and Standards Committee (CSC). Standards are created or updated by a balanced volunteer standards committee, followed by a public review period. These standards are adopted by state and local jurisdictions and used in the designing of projects around the world. One particular standard that can offer sound guidance for transportation engineering and roadway safety is ASCE 58, Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways (ASCE/T&DI/ICPI 58-16)<sup>6</sup>, which establishes guidelines for developing appropriate pavement structures for various traffic and subgrade conditions. This standard provides preparatory information for design, key design elements, design tables for pavement equivalent structural design, construction considerations, applicable standards, definitions, and best practices.

Another area in which ASCE may lend expertise and perspective is the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). The IIJA requires the DOT to update the MUTCD every four years. The required update is meant to provide for the protection of vulnerable road users, support the safe testing of automated vehicle technology and any preparation necessary for the safe integration of automated vehicles onto public streets, and guide appropriate use of variable message signs. It also incorporates recommendations issued by the National Committee on Uniform Traffic Control Devices (NCUTCD) that have not yet been incorporated. As a sponsoring organization of the NCUTCD, ASCE is in a position to provide comments and information to Congress on this manual. ASCE believes a regular cycle of updates can be effective in keeping the manual current. Traffic control device standards and practices included in the MUTCD should be based on sound engineering practices and judgment supported through adequate peer-reviewed research and experimentation.

### **Conclusion**

ASCE thanks the Subcommittee on Highways and Transit for holding a hearing on the important subject of roadway safety. Safety is fundamental to the work of civil engineers and ASCE would like to see safety-focused programs supported in the upcoming

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<sup>6</sup> <https://ascelibrary.org/doi/book/10.1061/9780784414507>

surface transportation reauthorization bill. We appreciate the opportunity to offer perspective and we stand ready to answer any questions.