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Administrator  
Federal Highway Administration  
U.S. Department of Transportation  
1200 New Jersey Ave, SE  
Washington, D.C. 20590

ATTN: Docket No. FHWA-2022-0017

Re: Work Zone Safety and Mobility and Temporary Traffic Control Devices

The American Society of Civil Engineers (ASCE) appreciates the opportunity to submit comments to the Federal Highway Administration (FHWA) on work zone safety and mobility and temporary traffic control devices. Safety is the core principle of civil engineers' work. ASCE believes roadway safety programs should provide a safe environment for all users of the system, from the travelers operating vehicles to the crews doing construction and utility work. The input presented in this document is in response to a request for comment based on a Notice of Proposed Rulemaking (NPRM) published by FHWA in the Federal Register on September 20th.

Founded in 1852, ASCE is the nation's oldest engineering society. ASCE represents more than 150,000 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 this subject.

FHWA's NPRM pertains to its regulations that govern traffic safety and mobility in highway and street work zones. These regulations, which introduced requirements for state departments of transportation to develop work zone safety policies, conduct work zone impact analyses during project development, and develop transportation management plans (TMPs) for projects as determined by the results of the impact analyses, were last modified in 2004. FHWA's NPRM would revise certain provisions to clarify aspects of the regulations and provide additional emphasis on certain elements. Proposed changes include incorporating a requirement in a state's Work Zone Safety and Mobility Policy to define the safety and mobility performance measures the state will monitor and report, reducing the frequency of work zone programmatic reviews from once every two years to once every five years, revising the definition of what constitutes a significant project, and simplifying the language describing the components of a TMP.

As FHWA's NPRM notes, safety on roadways—and particularly in work zones—remains a pressing issue. According to National Highway Traffic Safety Administration (NHTSA) data, there were 956 work zone

traffic fatalities in 2021, an increase from 863 such fatalities in 2020<sup>1</sup>. Regularly maintaining and upgrading the nation's infrastructure necessitates the presence of work zones. With continued implementation of the Infrastructure Investment and Jobs Act (IIJA), which ASCE strongly supported, work zones will likely increase along roadways. ASCE has long advocated for repairing and upgrading our infrastructure, and we recognize the safety of construction crews is one key aspect to the development of a safe and modern transportation system for all.

ASCE would like to thank FHWA for the opportunity to submit comments on work zone safety and mobility and temporary traffic control devices. We stand ready to answer any questions or lend additional feedback as the agency conducts this information collection process. For these comments, ASCE and its members would like to focus on **guidance for work zone safety and reviews, considerations for active transportation, and industry-led standards.**

### **ASCE's 2021 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>2</sup>, released in March 2021, evaluated 17 categories of infrastructure and reflected an overall "C-" grade.

Roads received a "D" on the Report Card, which found the country faces a \$786 billion backlog of road and bridge capital needs. To raise the grade for roads, ASCE recommends increased funding from all levels of government and the private sector to address the condition and operations of the roadway system to maintain a state of good repair and ensure safety for all users.

### **Construction site safety and work zone reviews**

Construction sites are vital parts of an infrastructure system that routinely needs to undergo repair, maintenance, and modernization. However, these sites have the potential to expose workers and the public to safety hazards.

ASCE believes site safety is paramount and requires commitment from all parties involved in a project. Safe construction sites can be effectively achieved through a committed, cooperative relationship between the owners, architects, engineers, contractors, suppliers, construction managers, safety professionals, construction workers, labor unions, regulatory agencies, industry associations and institutes, academics, legal counsels, and insurance professionals<sup>3</sup>.

Section § 630.1106 in FHWA's NPRM refers to policy and procedures for work zone safety and management. FHWA proposes to modify § 630.1106(b) to clarify that agency processes, procedures, or guidance regarding strategies and devices to be used for the management of work zone impacts, including the use of positive protection devices and other strategies, are to be based on an engineering study. Agency processes, procedures, or guidance should be based on consideration of standards or guidance contained in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) and the American Association of State Highway and Transportation Officials' (AASHTO) Roadside Design Guide, as well as project characteristics and factors. Additionally, ASCE recommends this section to refer

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<sup>1</sup> [FHWA Work Zone Facts and Statistics - FHWA Office of Operations \(dot.gov\)](#)

<sup>2</sup> <https://infrastructurereportcard.org/>

<sup>3</sup> [Policy Statement 350 - Construction site safety | ASCE](#)

to a minimum requirement of safety for the workers in the zone. The establishment of requirements for the workers in the zone to protect themselves would also be beneficial.

The NPRM defines a “work zone programmatic review” as a data-driven, systematic, and holistic analysis that uses quantitative and qualitative data from different sources to assess the safety and mobility performance of work zones under a state’s jurisdiction in order to identify improvements to that agency’s work zone processes and procedures. ASCE recommends state agencies upgrade their project management system to record necessary data for these reviews, such as work zone starting/ending locations, effective dates, and project letting/completion dates. If possible, state agencies should update their crash database coding manual to include work zone-related crashes.

Though congestion is an issue for a work zone area, speeding might be another problem for its adjacent road segments. Therefore, observing speed changes from adjacent road segments (i.e. without construction work) to the target road segment (with construction work) would be valuable for safety concerns.

### **Active transportation safety and mobility**

Work zone safety for pedestrians is mostly associated with workers who are navigating the site. However, work zone crashes can also involve pedestrians and bicyclists, especially on high-activity corridors and at intersections. In addition to safety, pedestrians and bicyclists are also affected by work zones in terms of mobility due to reduced right of way and detours. These disruptions are more impactful to pedestrians with reduced mobility (including seniors, children, and people with disabilities, such as those using wheelchairs or crutches). Safety and equity for all road users should be considered and promoted when measures regarding work zones are put in place. ASCE supports Complete Streets policies that integrate the safety and accessibility of all users in the planning, design, construction, operation, and maintenance of transportation networks<sup>4</sup>.

### **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 government 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>5</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.

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<sup>4</sup> [Policy statement 537 - Complete streets | ASCE](#)

<sup>5</sup> <https://ascelibrary.org/doi/book/10.1061/9780784414507>

ASCE's discipline-specific institutes and technical groups, which bring together volunteers from around the world to advance the profession's expertise, may be useful sources of guidance for the Department of Transportation (DOT). In particular, the Transportation & Development Institute represents professionals who could be appropriate points of contact for the agency.

Another area in which ASCE may lend expertise and perspective is the MUTCD. The IJIA, which ASCE strongly supported, 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 DOT 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 would like to thank FHWA for the opportunity to offer perspective on work zone safety and temporary traffic control devices as this NPRM progresses. ASCE represents the professionals who construct and maintain the transportation network, and we appreciate the chance to submit input. We look forward to continuing to work with FHWA and we are prepared to answer any questions.