

Highway Safety Improvement Program

Overview

The Moving Ahead for Progress in 21st Century Act (MAP-21) continues the Highway Safety Improvement Program (HSIP) to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Notice of Proposed Rulemaking

The Federal Highway Administration (FHWA) issued a Notice of Proposed Rulemaking (NPRM) for the HSIP on March 28, 2014.¹ The comment period on the NPRM was extended to June 30, 2014, at which point Caltrans was able to send in their response to the rulemaking. As of July 2015, the final rule is expected to be published in October 2015.

Summary of HSIP Changes

The most significant change in the NPRM is the requirement to establish a Model Inventory of Roadway Elements (MIRE) fundamental data elements (FDE) for all public roads (required by section 1112 of MAP-21 that amends 23 U.S.C. § 148(f)).

The NPRM discusses the 5-year Strategic Highway Safety Plan (SHSP) update cycle, as well as the requirement to submit HSIP reports on an annual basis via online reporting tool, which will facilitate review and evaluation of the reports.

The NPRM also proposes to amend U.S. Department of Transportation (U.S. DOT's) regulations to conform to MAP-21 statutory provisions that removed the requirement for states to prepare a Transparency Report, the High Risk Rural Roads set-aside, and the 10 percent flexibility provision for states to use safety funding in accordance with federal law.

The comment period for this NPRM is closed and the proposed rule may change prior the final rule being published in the Code of Federal Regulations.

Model Inventory of Roadway Elements

The NPRM requires that states establish a MIRE FDE by September 30, 2020. The MIRE FDE is a comprehensive data set, including roadway geometrics, roadway features, and traffic information, which can be used to do advanced safety analysis. A linear referencing system (LRS) is used to locate MIRE FDE inventory on the state highway system, and is an optional, but suggested, extension to be applied to all public roads in the state. For roads with less than 400 average annual daily traffic, a reduced set of MIRE FDEs will need to be collected.

While the FHWA is not proposing requirements for how states must collect and process the proposed MIRE FDE, FHWA envisions that states would do so using a variety of means, tools and technology, including, but not limited to: Data mining existing resources (e.g., existing state-maintained roadway inventories, as-built plans, and construction records), ground-based imaging (e.g., driving along roads and using mobile mapping and LiDAR), and aerial imaging (both with and without LiDAR). In addition, FHWA's NPRM notes that state Departments of Transportation may need to work with local transportation authorities to collect the MIRE FDE.² A description of various methodologies for collecting MIRE FDE is provided in the MIRE Data Collection Guidebook.³

¹ Highway Safety Improvement Program, 79 Fed. Reg. 17,464 (Mar. 28, 2014). <http://www.gpo.gov/fdsys/pkg/FR-2014-03-28/pdf/2014-06681.pdf>

² *Id.* at 17,471.

³ <http://safety.fhwa.dot.gov/rsdp/downloads/datacollectionguidebook.pdf>

The MIRE FDE elements will need to be continually updated, once the initial data collection has been completed. Route realignments, roadway modifications, degradation of facilities, and changes in driver behavior are examples of factors that can change over time, requiring an update of the MIRE FDE.

Highway Safety Improvement Program Report

Minimal changes were suggested to the HSIP report content in the NPRM. States are still required to develop, implement, and evaluate an annual HSIP that has the objective to significantly reduce fatalities and serious injuries resulting from crashes.

Timelines

The FHWA NPRM requires Caltrans to incorporate an implementation plan for the collection of MIRE FDE by July 1, 2015, and complete collection of all MIRE FDE on all public roads is to be completed by September 30, 2020.

Annual HSIP reports are to be submitted no later than August 31 for the previous reporting year.

States are to update their SHSP no later than every five years from the date of the previously approved version.

Caltrans comments on this NPRM

Caltrans submitted several comments on the NPRM.⁴ The requirement to have an implementation plan for collecting the MIRE FDE by July 2015 is overly ambitious. More time is necessary to coordinate statewide with all other parties that will be involved because of the size of the state and the scope of the data collection.

The collection of the MIRE FDE on all public roads in five years is an aggressive schedule, especially for the collection of data on the local road system. The local road system in California contains over 140,000 miles of roadway. Caltrans believes that ten years would be a more appropriate schedule for this effort, given the magnitude.

The collection of accident data statewide will be a difficult undertaking. Approximately 60 percent of California's highway fatalities occur on the local roadway system, where it is difficult to gather information. Compiling High Collision Concentration Locations will be difficult without access to a statewide LRS, and it is unknown what other data gaps might exist, or what collaboration challenges might arise. Funding, flexibility, and time will be needed to adequately accomplish the goals of the NPRM.

The NPRM estimates that it would cost an average state \$1,362,000 to complete LRS and initial MIRE FDE collection, including \$66,000 for management and administrative costs and \$225,000 annually for maintenance costs. The costs will likely be significantly higher for California because of the vast local roadway network and the significant data gaps on the local roadway system. However, even for an average state Caltrans believes the costs have been vastly understated.

Additional Resources

Caltrans MAP-21 Implementation Website:

http://www.dot.ca.gov/hq/transprog/map21_Implementation.htm

⁴<http://www.dot.ca.gov/hq/transprog/map21/NPRM/Comment%20Letters/Caltrans%20Comments%20on%20the%20Highway%20Safety%20Improvement%20Program%20Rulemaking.pdf>