

Highway Safety Improvement Program (HSIP)

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law on July 6, 2012. MAP-21 includes specific provisions related to the Highway Safety Improvement Program (HSIP) under section 1112. The HSIP is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. (23 U.S.C. 148(b))

The HSIP emphasizes a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The foundation for this approach is a safety data system, which each State is required to have to identify key safety problems, establish their relative severity, and then adopt strategic and performance-based goals to maximize safety. Every State is required to develop a Strategic Highway Safety Plan (SHSP) that lays out strategies to address these key safety problems. MAP-21 ensures ongoing progress toward achieving safety targets by requiring regular plan updates and defining a clear linkage between behavioral (NHTSA funded) State safety programs and the SHSP. The SHSP remains a statewide coordinated plan developed in cooperation with a broad range of multidisciplinary stakeholders.

MAP-21 redefined and created a Special Rule for High Risk Rural Roads (HRRR). Prior to MAP-21, the Safe, Accountable, Flexible, Efficient, and Transportation Equity Act: A Legacy For Users (SAFETEA-LU) provided an annual set-aside from the HSIP for HRRR. MAP-21 legislation does not set aside funds for a high risk rural roads program. However, the Special Rule requires States with an increase in fatality rates on rural roads to obligate a specified amount of HSIP funds on HRRRs. The Special Rule applies to Connecticut and the Department will be required to obligate funds on those specific roadways.

In order to satisfy the requirements of MAP-21, the Department regularly updates its SHSP, continues to administrator both State Highway and local road accident reduction program as well as the Rail-Highway Grade Crossing Program, and produces an Annual Safety Report which tracks HSIP implementation and effectiveness. The Annual Safety Report is submitted to the FHWA Division Office no later than August 31 of each calendar year and covers the 12 month period from October 1 to September 30.

For details regarding the elements of the HSIP, please refer to the following descriptions:

Project Selection – State Highways

The HSIP provides federal funding for safety improvement projects, addressing hazardous elements identified at specific locations and along roadway sections. The Department actively collects and compiles crash data with the intent of addressing problematic conditions that are identified. Identification and surveillance of locations displaying higher than expected accident rates on the state highway system are accomplished primarily through a computerized surveillance system utilizing traffic record files maintained by the Bureau of Policy and Planning's Office of

Coordination, Modeling and Crash Data. Those files consist of (1) a crash record file, (2) an average daily traffic file, (3) an inventory of certain roadway characteristics. The inventory file identifies locations as being either rural or urban, as either a section of highway, section of expressway, intersection with another state highway, intersection with a town road (or signalized drive) or expressway interchange and further by number of lanes and control of access. Some groups having few locations are merged with similar groups.

The Office of Coordination, Modeling and Crash Data annually runs a computer program utilizing the three files described above. The results are lists of locations that appear to have an unusually high crash history. These lists are referred to as SLOSSS lists (Suggested List of Study Surveillance Sites). In that computer program, average crash rates and number of crashes are computed for the various groups of locations described in the preceding paragraph. Based upon those average values, a threshold of abnormally high numbers and rates is developed for each location. Locations equaling or exceeding the threshold are reviewed. The thresholds are changed occasionally based upon prior experience with these lists.

The process described above is not intended to be the sole determinant in identifying locations having problematic characteristics. Many locations with crash rates not abnormally high will demonstrate crash type or severity patterns symptomatic of the problematic characteristic for a particular location. An example would be a pattern of run-off-the-road crashes at a curve. Some other locations may have design characteristics similar to a design characteristic determined to be problematic (e.g., rigid sign posts, poor sight line). These may also be considered for safety improvement.

The Department's "Suggested List of Surveillance Study Sites" (SLOSSS) is utilized to determine which locations are targeted for study. Improvements designed to address crash patterns are recommended, where appropriate.

Project Selection – Local Roadways

The Local Road Accident Reduction Program (LRARP) provides funding for safety-related improvements not on the state-numbered highway system, to address hazardous elements identified at specific locations and along roadway sections. The same level of data collection for local roads as compared to state roads is not available and therefore an analytical analysis of crashes on non-state maintained roadways to determine project selection is not possible. Upon solicitation by the Department, Regional Planning Organizations (RPO) recommends improvements on behalf of their member towns, to address identified hazardous elements. These improvements may include signal enhancements, minor geometric improvements, roadside obstacles, sight line conditions, hazards to pedestrians and poor or unmarked roadways. As a result of CT's participation as a lead State in AASHTO's Lane Departure Accident Reduction initiative, the Department has expanded the LRARP to consider system-wide improvement projects designed to address run-off-road fixed-object collisions on local roads

For additional information, refer to a separate document entitled "Local Road Accident Reduction Program."

Railroad/Highway Grade Crossing Program

The Connecticut Department of Transportation's Division of Traffic Engineering is responsible for the implementation of the Railroad/Highway Grade Crossing Program within the HSIP. Historically, the program's emphasis has been to provide active warning devices, as a minimum. In prioritizing the review of candidate locations, the Division of Traffic Engineering utilizes a highway grade-crossing priority list, which accounts for vehicular traffic volumes, train counts and vehicle/train collisions. Recommended project memoranda are then forwarded to initiate crossing improvements in future design years. When projects are initiated under the crossing program, they are for a total improvement of the crossing. The improvements include signs, markings, installation/modernization of railroad warning devices, track circuitry upgrade, surface improvement and alignment and sightline improvements.