

Safety Strategies in Transportation Infrastructure

Vehicular Infrastructure and Programs

Texas Strategic Highway Safety Performance Plan – FY 2012

In 2006, the Texas Department of Transportation (TxDOT) produced the first Strategic Highway Safety Plan (SHSP). It established statewide goals, objectives, and key emphasis areas in consultation with Federal, State, local, and private sector safety stakeholders. In satisfying federal requirements, it also served as an initial attempt to identify key safety needs and guide investment decisions intended to lead to significant reductions in highway fatalities and severe injuries on all public roads.

The 2006 SHSP provides a detailed description of the analysis of crash data, stakeholder survey, and workshop of safety professionals used to guide TxDOT in identifying special highway safety emphasis areas. Further, it describes crash reduction goals and objectives related to those issues and countermeasures that might be used to achieve them. This document led the effort in the update for FY 2012.

Target goals set for 2010 were set at 1.40 fatalities and 41.2 severe injures per 100 million vehicular miles traveled (VMT). These were met and exceeded and objectives for 2015 were identified and set for each safety issue defined in the progress report. Safety issues are grouped into four Emphasis Areas: Crash Type and Location, System Users, User Behavior, and System Administration. Although the Statewide Goal is given as a fatality and severe injury rate per 100 MVMT, the objective for most Emphasis Areas is stated in terms of reductions in fatal (K), incapacitating (A), and non-incapacitating (B), or KAB crashes. Since countermeasures are geared toward reducing crashes and crash severity, it is assumed that their success, correspondingly, reduced the numbers of fatalities and injuries. Thus, reductions in crashes and crash severity in an Emphasis Area are reflected in achievement of the Statewide Goal.

Reflecting the safety concerns within the EPMPO region, the TxDOT SHSP delivers potential goals towards the planning process regarded during the EPMPO project selection process. What makes for compatibility is the mandatory criteria in TxDOT transportation projects to clearly evaluate any safety details in any project (i.e. guard rails, pedestrian crosswalks, lighting, etc) that uses federal or state funding. With the exception of special funding category projects like Safe Routes to School and Category 8 projects, most highway projects already have built-in safety criteria that may directly become safety solutions to a project. Other projects like preventing Drinking and Driving campaigns and other public awareness and user behavior campaigns use special funding and are not campaigns that are directly funded through EPMPO funds, except through special request. However, these campaigns may directly influence in lowering the number of accidents in connection with those specific causes.

Most safety projects funded through the EPMPO are smaller projects that are generally classified in the transportation improvement program (TIP) as general maintenance projects and are pooled into one funded project that covers the entire region through an entire year. This process is further explained in the TIP and financial section of the Horizon MTP. Most of these projects involve items like railroad crossing improvements, intersection lighting improvements, and do not constitute a large scale safety project but are instead considered safety enhancements. Special projects like the addition or improvements for ITS Architecture or dynamic message signs may also be considered safety projects and would constitute a large scale project.

New Mexico Highway Safety and Performance Plan

The Traffic Safety Division of the New Mexico Department of Transportation (NMDOT) has primary responsibility for managing programs designed to reduce traffic-related deaths and injuries. The Traffic Safety Division (TSD) partners with the National Highway Traffic Safety Administration (NHTSA) to develop and fund statewide and community-level projects that will have the greatest impact on saving lives and reducing injuries due to traffic crashes.

New Mexico's FY12 HSPP goal is to reduce the number of traffic-related accidents, fatalities, and serious injuries in New Mexico. A major focus of New Mexico's Highway Safety and Performance Plan is to reduce impaired driving crashes, fatalities, and injuries. The Traffic Safety Division has adopted the theory of general deterrence as applied to enforcement programs designed to influence drinking and driving behavior.

Almost twice as many New Mexicans died in traffic accidents in rural areas than in urban areas (65% - rural; 35% - urban). In rural areas, drivers are slightly less likely to use safety belts, and they drive at higher speeds than in urban settings. Crashes involving overturned vehicles and fatal collisions with pedestrians are more common in rural areas.

Through the review of New Mexico's traffic safety issues and the setting of the FY12 HSPP Performance

Measures, TSD is proposing to continue funding projects in the following program areas:

- Planning and Administration
- Alcohol/ Impaired Driving
- Occupant Protection
- Pedestrian and Bicycle Safety
- Police Traffic Services
- Traffic Records
- Motorcycle Safety
- Marketing and Media
- Driver Education and Safety

Strategies involved with the HSPP indirectly relate to highway projects or programs in regards to safety elements. Some strategies involve traffic management planning strategies for traffic incidents and the safety of all modes of traffic surrounding and incident and identifying, evaluating, prioritizing, and mitigating problem intersections and some of these could be generalized into various projects that are pooled together into maintenance projects for the entire region and per fiscal year. Other modes like bicycle, pedestrian, and equestrian modes are being incorporated by identifying, prioritizing, funding, and constructing these modal facilities or elements to enhance community character and safety, as well as providing routine maintenance. In rural areas their emphasis will be in planning to provide safe multimodal transportation options. Additionally, another strategy that is also listed as a theme in MAP-21 guidance provides for funding to be used for the collection of data to help plan and prioritize projects that will enhance safety in transportation infrastructure and transportation programs. Moreover, these plans are covering the federal guidance on studying high-risk rural roads and developing best practices for these roadways.

Providing the basis for an improved traffic safety planning process for the future, the TX Strategic Highway Safety Plan and NM Highway Safety and Performance Plan serve as guides for EPMPO regional and local stakeholders interested in traffic safety to continue to participate in the planning process and that future plans consider and incorporate regional and local safety interests. It is through the data and information collected in the documents that such groups will use to develop detailed plans that will identify safety issues, countermeasures, and implementation plans for their respective areas. Moreover, it is hoped that future state DOT efforts will be able to draw heavily upon these plans.