

Introduction

Incorporating safety into daily road maintenance activities has the potential to reduce fatalities and serious injuries on the local and rural roadways. It is often second nature to roadway practitioners and maintenance professionals to visually scan their road network whether driving during or outside work hours. Each time a staff member “reads the road” to identify roadway deficiencies, there is an opportunity to improve safety. This briefing sheet lists a set of no or low-cost activities that can be incorporated into roadway maintenance or identified during maintenance activities to improve safety on rural and local roads.

Low-Cost, Daily Maintenance Observations that Affect Safety

Well-maintained roads are more likely to be safer roads. Low-cost, routine maintenance practices can have positive effects on roadway safety. Safety practices can be incorporated into daily maintenance work. The following can serve as a checklist for issues requiring attention that are easily identifiable on the roadways and have the potential to result in fatalities or serious injuries.

- Signing and Pavement Marking
 - ✓ Damaged signs from crashes or incidents
 - ✓ Vandalized signing or other roadway infrastructure
 - ✓ Downed or leaning signs
 - ✓ Poor sign retroreflectivity and conspicuity
 - ✓ Lack of advance warning signs
 - ✓ Poor pavement marking retroreflectivity
- Road Surface
 - ✓ Skid marks on the pavement or tire tracks beyond the pavement edge
 - ✓ “Washboard” or rutted locations on gravel roads
 - ✓ Instances where water has crossed the road and washed the road surface
 - ✓ Pavement in poor condition
- Road Surface (contd)
 - ✓ Roads with loose surface material after chip seals and patching
 - ✓ Slick pavement locations, particularly on curves and at intersections
- Roadside
 - ✓ Areas with pavement edge-drop
 - ✓ Deteriorated roadside slopes from moisture, high water, or lack of vegetation
 - ✓ Intersection and horizontal curve sight distance obscured
 - ✓ Overhanging trees restricting snowy/icy roads from sunlight
 - ✓ Drainage blocked by debris, leaves, limbs, sediment, and trash

Prioritizing Safety Maintenance Practices

Some of the activities listed above may be more relevant than others depending on the context. For example, drivers along roads with rolling topography and horizontal curves may especially benefit from the removal or delineation of fixed objects (e.g., trees, utility poles, rock outcroppings, etc.) and the delineation and advance signing of hidden intersections due to the increased chance of crashes. While these issues may be identified in the field during routine scanning, it is not always



practical or possible to address immediately. A particularly helpful means to prioritize efforts related to roadway departure crashes is to place importance on activities in the following order:

1. Keep vehicles on the roadway, in their appropriate directional lane,
2. Reduce the potential for crashes when vehicles do leave the roadway or cross into opposing traffic lanes, and
3. Minimize the severity of crashes that do occur.

One example of prioritizing safety-related maintenance activities according to the list above is 1) improve pavement markings, 2) improve or remedy pavement edge-drops, and 3) remove fixed objects beyond the pavement edge. Some strategies to address intersection safety issues include improving sight distance for all approaches of the intersection, making the intersection visible (lighting, delineation) and providing advance warning signs for upcoming intersections.

How You Can Improve Roadway Safety

Local and rural road owners can also improve safety through collaboration. Local law enforcement or emergency medical service responders are typically able to help locate roads or segments with frequent crashes, which can assist with identification of safety issues. Additionally, coordinating maintenance activities among local departments or agencies, or neighboring transportation agencies, can help identify road segments, intersections, or corridors with safety issues that can be address cooperatively.

Resources

The Federal Highway Administration's (FHWA) **Road Safety 365 - A Workshop for Local Governments** – This one day course is offered by State Local Technical Assistance Program (LTAP) and Regional Tribal Transportation Assistance Program (TTAP) Centers. Contact your local LTAP or TTAP for a schedule of workshops.

The following resources provide more details related to maintenance activities that improve safety:



Federal Highway Administration, Local and Rural Road Safety Program: Training, Tools, Guidance and Countermeasures for Locals. Available at: http://safety.fhwa.dot.gov/local_rural/training/



Federal Highway Administration, *Maintenance of Signs and Sign Supports: A Guide for Local Highway and Street Maintenance Personnel*. FHWA-SA-09-025 (Washington, DC: 2009). Available at: http://safety.fhwa.dot.gov/local_rural/training/fhwasa09025/



Federal Highway Administration, *Maintenance of Drainage Features for Safety: A Guide for Local Highway and Street Maintenance Personnel*, FHWA-SA-09-024 (Washington, DC: 2009). Available at: http://safety.fhwa.dot.gov/local_rural/training/fhwasa09024/



Federal Highway Administration, *Maintenance of Signs and Sign Supports for Local Roads and Streets: A Guide for Street and Highway Maintenance Personnel*. Available at: http://safety.fhwa.dot.gov/local_rural/training/fhwart0000/