

# Vision for Guardrail End Terminal and Crash Cushion In-Service Performance Evaluation

March 12, 2016

1. On September 11, 2015, the Federal Highway Administration (FHWA) released the findings of the FHWA-AASHTO Joint Task Force in a report titled, "Report from Joint AASHTO-FHWA Task Force on Guardrail Terminal Crash Analysis." This report documents a joint effort between the FHWA and the American Association of State Highway and Transportation Officials (AASHTO) to assess the safety performance of extruding w-beam guardrail terminals (also called guardrail end terminals and guardrail end treatments). The press release and the report can be found using the following links.

<http://www.fhwa.dot.gov/guardrailsafety/safetyanalysis/>

<http://www.fhwa.dot.gov/pressroom/fhwa1561.cfm>

One of the recommendations in the findings was to conduct in-service performance evaluations of guardrail end terminals that have been installed on roads. Based on this recommendation, the Department will move forward with conducting in-service performance evaluations thru the joint efforts of the Safety, Design, Program Management, and Maintenance Offices.

2. In-Service Performance Evaluation consists of three phases.
  - a. Phase 1 is collecting inventory data and is scheduled to start July 1, 2016. The end terminal inventory data will be collected by maintenance using in-house or contract forces as part of the guardrail inspection performed every two years. The crash cushion inventory will be collected by the Department using in-house or contract forces as part of the crash cushion inspection performed every year.
  - b. Phase 2 is collecting incident data and is scheduled to start July 1, 2016. This data will be collected by maintenance using in-house or contract forces. If an incident occurs within the limits of a Traffic Monitoring Center (TMC), the TMC will determine if a guardrail end terminal or crash cushion is impacted and if so, notify the appropriate maintenance office contacts. If an incident occurs outside the limits of a Traffic Monitoring Center (TMC), law enforcement will notify the appropriate maintenance office contacts and the maintenance office will determine if a guardrail end terminal or crash cushion is impacted. The maintenance office will collect the data, ideally, before the vehicles involved in the incident are removed from the site, but at least prior to repair or replacement of the end terminal or crash cushion.
  - c. Phase 3 is evaluating the data collected from Phase 1 and Phase 2. This evaluation will be performed by a third party such as a university or research facility and is not anticipated to start for several years.
3. A Guardrail End Terminal and Crash Cushion In-Service Performance Evaluation Statewide Maintenance Task Team has been formed to discuss and finalize the implementation details. These individuals will participate in training hosted by the

Roadway Design and Product Evaluation Offices and take that information and knowledge back to each district.