

STANDARD PLAN DEVELOPMENT REPORT (SPDR) Standard Plan No.: M-25.00 Title: Asphalt SafetyEdgeSM Prepared by: Paul Eckman Jr, P.E.; Brandon Irvine, P.E. Date: 3/18/2025

Use: Use this Alaska Standard Plan (ASP) on projects with bound layers such as HMA and/or ATB within the road structural section. Use this ASP for temporary paving where the associated speed limit is 45mph or greater.

Design and Application Considerations:

The purpose of the SafetyEdgeSM is to eliminate vertical drop off from the paved surface and add strength to the pavement edge. When the shouldering material eventually degrades, the SafetyEdgeSM provides a safe slope allowing vehicles tires to safely traverse the pavement edge. As a result, vehicles are less likely to lose control.

Do not install the SafetyEdgeSM across bridges, bridge approach slabs, or locations where the embankment is steeper than the SafetyEdgeSM slope. Do not install SafetyEdgeSM where curb and gutter is present.

SafetyEdgeSM is not required, but is permissible, where guardrail (or any other permanent roadside barrier) is present and/or across driveways. Designer discretion is required in these situations in order to decide where or where not to install SafetyEdgeSM. Consider factors such as the paving method, the cost of the SafetyEdgeSM material, and the sequence of construction activities.

Refer to <u>SafetyEdge[™] | FHWA (dot.gov</u>) for more information on specific design details.

Refer to <u>SafetyEdgeSM Guide Specification | FHWA (dot.gov)</u> for the guide used to create the ASP

History:

New Std. Plan M – 25.00 adopted on January XX, 2025

Tests or Backup Data:

- Field reports from DOTs across the country can be found here: <u>Design and Construction | FHWA</u> (dot.gov)
- Demonstrations of use can be found here: <u>Demonstrations | FHWA (dot.gov)</u>

Construction Considerations:

The addition of SafetyEdgeSM has at times, been a point of contention with contractors, as it requires an approved SafetyEdgeSM system to be added to their paving equipment. However, it has been successfully implemented for over a decade and most contractors are now familiar with the process.

SafetyEdgeSM should be installed as part of the paving process and is separate from the shouldering material. After installation, SafetyEdgeSM should be covered by shouldering material and should not be visible at the time of construction completion.

Refer to the above referenced SafetyEdgeSM Design and Construction Guide for full details on construction methods and considerations.

M&O Considerations:

Vehicles often use the shoulder for parking or driving which causes more stress on the pavement edge. The edge of the pavement is weaker due to the lack of any strong, laterally confining material and can more easily be damaged. The use of the SafetyEdgeSM will increase the strength of the shouldering which will extend the life of the pavement, saving M&O money.