EDC Overview

It is a commonly held perception that it takes an average of 13 years to deliver a major highway project (from planning through completion). However, several opportunities exist in the current project delivery process where innovative approaches will improve project delivery times. Consequently, in the summer of 2010, Federal Highway Administrator Victor Mendez launched the Every Day Counts (EDC) initiative. Specifically, this initiative is designed to identify and deploy innovation aimed at enhancing the safety of roadways and protecting the environment, while ultimately shortening the transportation project development process.

What is the Safety EdgeSM?

The Safety EdgeSM is a simple but highly effective way to reduce highway crashes, by shaping the edge of the roadway pavement to 30 degrees, minimizing the problem of drop-off. This angle provides a safer roadway edge, reducing the potential for rollovers and other severe crashes. For asphalt pavement, the Safety EdgeSM also improves pavement edge durability. When drop-offs recur at various locations along the road, instead of a vertical drop-off between the paved and unpaved surface which can result in loss of control on re-entry to the lane after a Roadway Departure, the Safety EdgeSM provides a smooth, controlled re-entry. As with conventional paving, the paved edge should be covered with shoulder backing material.

Why is the Safety EdgeSM needed?

Roadway departures account for 53 percent of fatal crashes. When a driver drifts off the roadway and tries to steer back onto the pavement, a vertical pavement edge can create a “tire scrubbing” condition that may result in over-steering. If drivers over-steer to return to the roadway without reducing speed, they are prone to lose control of the vehicle. The resulting crashes tend to be more severe than other crash types. The vehicle may veer into the adjacent lane, where it may collide with oncoming cars, over-turn, or run off the opposite side of the roadway and strike a fixed object or overturn on a slope.

What benefits have been achieved?

The Safety EdgeSM is particularly useful on rural two-lane highways, but its utility goes well beyond that. On well-maintained highways, vigilant maintenance may prevent drop-offs from becoming a problem. In the real world, however, drop-offs can occur even on reasonably maintained roads as a result of settlement, erosion, and wear. The Safety EdgeSM should be considered for use whenever roads are built or resurfaced. A 3-year crash analysis of the Safety EdgeSM in a number of States that used the technology indicates a 5.7 percent reduction in total crashes.

Safety Edge

Contact Information

For training or more information on this Every Day Counts Initiative, please contact your local FHWA Divisions Office.

To learn more about EDC, visit: http://www.fhwa.dot.gov/everydaycounts

About Every Day Counts

Every Day Counts is designed to identify and deploy innovation aimed at shortening project delivery, enhancing the safety of our roadway, and protecting the environment.

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SM Team has formed a
for this one either
Long-Term savings can be considerable.
outweighed the costs by as much as 63 to 1 in
project and depends on such issues as pavement
Improved pavement edge durability reduces
currently working with States to develop
The EDC Safety Edge
partnership with the National Center for Asphalt
Technology to install the Safety EdgeSM in a
in 2012. The main goal will be to quantify
number of pavement sections on their test track
What are FHWA’s next steps in
implementing this technology?
Safety EdgeSM technology. The agency is
changes to construction that would improve the
insights into mix design issues that could predict
size that is now available, the research will develop
EdgeSM.
Typical Safety Edge
SM was not damaged when his
SM. When constructing
SM design. When constructing
Existing personnel may need additional
monitoring or to make some minor adjustments, but no additional personnel are needed to install
applications. Including an Open House with the
construction, and quality aspects of the
overcome misunderstandings about the design,
working through on-site issues and to
innovative technology. Most of the successful
encourages wider implementation of the
opportunity to gain hands-on knowledge and
potential agencies and industry partners the
champion emerging from the stakeholders.

fairly common occurrence with conventional
No additional labor or training is needed.
Minimal additional material is needed for
may be required.
Safety EdgeSM, and design and construction
management of additional material is needed for
Management and design decisions are integral
addressed?
Quality control practices are similar to
cost and time savings, what
conventional paving.

Placing the shoulder-backing material may be
required to install the Safety EdgeSM, and in
contractor. Some contractors have seen an
using the Safety EdgeSM meant that temporary

In terms of cost and time savings, what
improvement of pavement edge, quality Montage practices are adequate
The surface
SM.

1. The slope on a Michigan project

2. Monitoring while paving.
   to avoid steep angles, the rolling pattern may
   be adjusted. Currently, two devices are
   available that have adjustable angles.
   Typically the Safety EdgeSM is good enough or better may be a barrier. The
   belief that the existing process
   is good enough or better may be a barrier. The
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