Safety Edge

The first eleven (11) slides (National Implementations - slides 1-11) are from site implementations in Georgia. Safety Edge has been placed nationally in Georgia, Indiana, Iowa, New York, New Hampshire, Maine, and North Carolina. There are more states that will be implementing Safety Edge throughout the 2011 paving cycle.

National Implementations

- Safety Edge potentially reduces crashes where the Shoulder Drop Off was a contributing factor within the crash

These photos are from sites in Georgia that DID NOT have Safety Edge. The photos demonstrate the edge drop offs that occur over time once vehicles have left the edge of pavement and rut out the dirt and grass shoulder material. The exposed pavement edge is nearly vertical, and in these photos is 2” to 6” in depth. The vertical edge, along with the depth of the drop off, causes increased tire friction on the side wall of a drivers tire when they run off the road and try to come back on. The driver tends to pull the wheel hard in a steering maneuver to get back on the road. Once the tire releases from the vertical edge from increased side wall tire friction, the vehicles tends to shoot back up onto the pavement causing the driver to lose control of his vehicle.

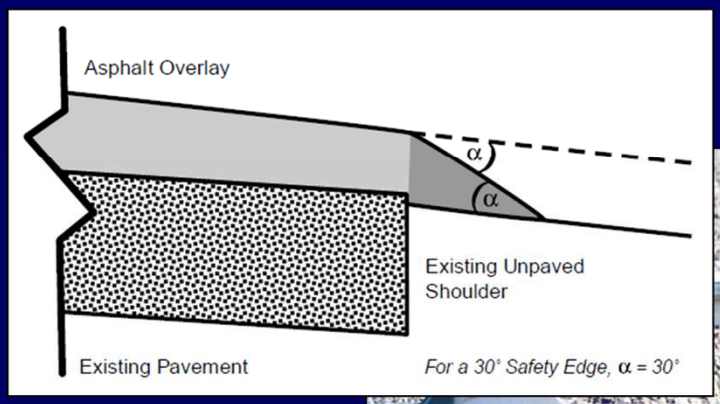
National Implementations

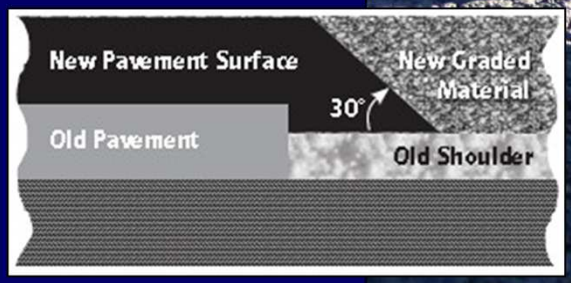
- Locations from Installations in Georgia

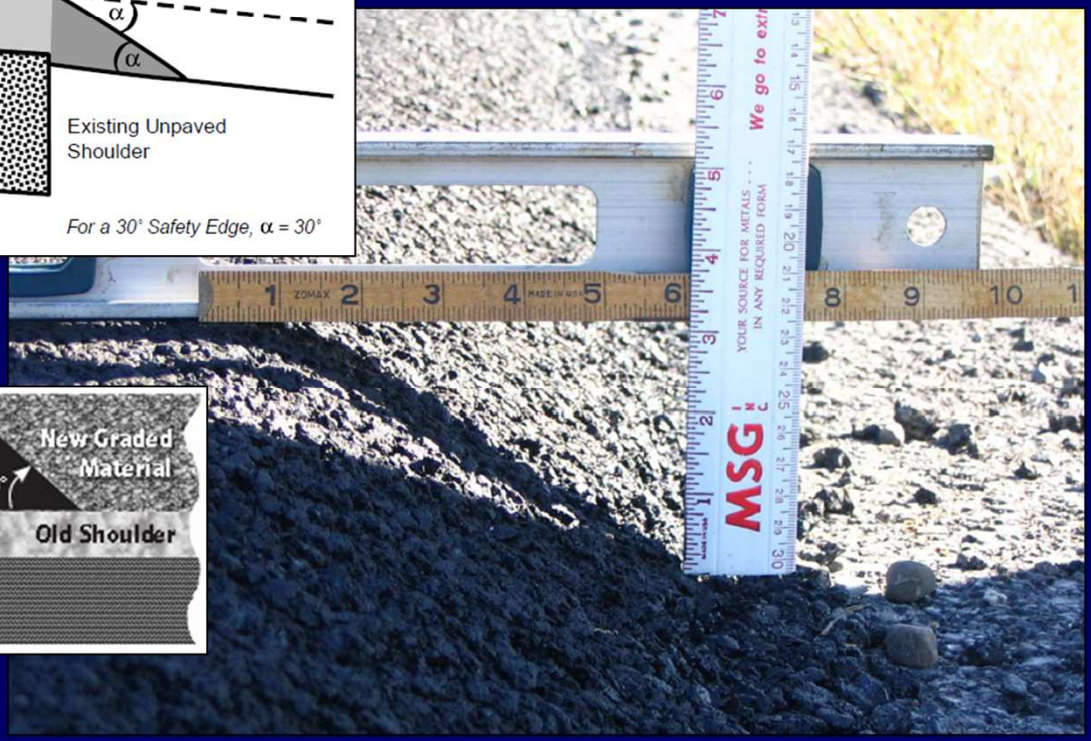
Safety Edge devices are installed on the paving machine, the road is then paved as normal, and shoulders are then pulled flush with new pavement lift. The safety edge process is not complete until the new shoulder material is pulled flush with the new pavement lift. The potential crash reduction/mitigation results overtime once vehicles have had the opportunity to re-rut out pavement edges, therefore exposing the 30 degree pavement edge drop-off instead of the current 60 to 90 degree pavement edge drop-off. Photos above are from a Georgia Safety Edge Implementation.

National Implementations

- Details from FHWA, Installation in Indiana







The safety edge forms a 30 degree slope during the paving process instead of a 45 to 90 degree slope that standard paving practices currently construct. Photos above are from a Georgia Safety Edge Implementation.

Safety Edge devices that are currently on the market for purchase are from TransTech, Advant Edge, Troxler, and Carlson (items highlighted in Orange). The TransTech, Advant Edge, and Troxler devices fit on the inside corner of the paving machine; the Carlson device places the edge device on the outside of the paving machine (replace standard end gate with end gate shoe). The other devices shown are what DOT's have experimented with or what contractors have built for their use.

National Implementations

- Locations below from Installations in Georgia

With Safety Edge

Without Safety Edge

This slide demonstrates the 30 degree shaped and formed pavement edge created by using a safety edge device VERSUS the standard pavement edge that is approximately 45-60 degrees with a non-shaped and non-formed pavement edge that crumbles and breaks off leaving a potential 90 degree pavement edge. Photos above are from a Georgia Safety Edge Implementation.

National Implementations

- Location below from Installation in Georgia

This slide demonstrates the durability of the Safety Edge shortly after being laid, with a fully loaded truck running over the edge. This typically happens when the road is now being paved an the other direction of travel and the asphalt trucks need to drive around the paving machine. Installation in Georgia.

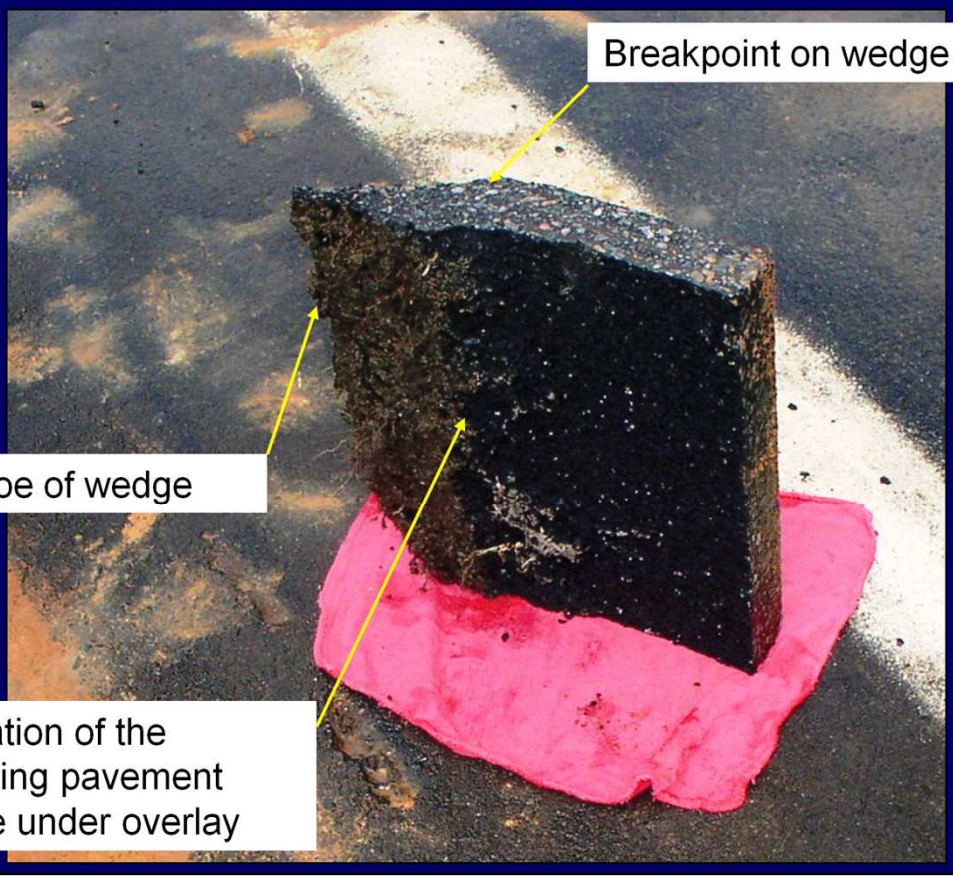
National Implementations

- Location below from Installation in Georgia

This photo is from an installation in Georgia where the edge of pavement was cut out for demonstration purposes. The breakpoint of the wedge was placed at the old edge of pavement, and the wedge was formed over the clipped soil shoulder.

National Implementations

- Location below from Installation in Georgia



This photo is from an installation in Georgia where the edge of pavement was cut out for demonstration purposes. This is underside of the piece of pavement that was removed from the roadway. The breakpoint of the wedge was placed at the old edge of pavement, and the wedge was formed over the clipped soil shoulder.

National Implementations

- Locations below from Installation in Georgia - 1 year After Photos

With Safety Edge

Without Safety Edge

This slide demonstrates two roads that were paved in Georgia at the one (1) year period after resurfacing. The one on the left was paved with Safety Edge, the one on the right was paved WITHOUT safety edge.

National Implementations

- Locations below from Installation in Georgia - 6 year After Photos

With Safety Edge

Without Safety Edge

This slide demonstrates two roads that were paved in Georgia at the six (6) year period after resurfacing. The one on the left was paved with Safety Edge, the one on the right was paved WITHOUT safety edge.