

# KENT COUNTY ROAD COMMISSION Safety Edge Projects

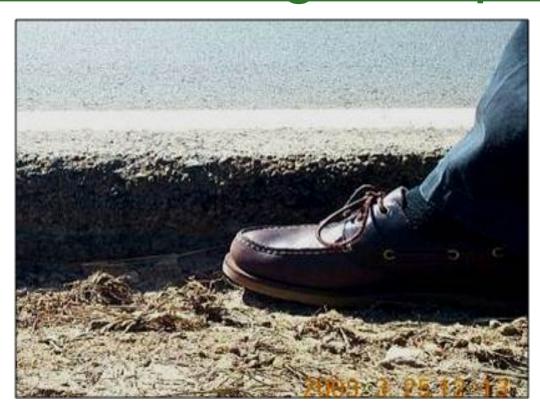


#### What is a Safety Edge?

- A simple & effective solution that can help save lives by allowing drivers who drift off pavements to return to the road safely.
- The Safety Edge shapes the edge of the pavement to approximately 30 degrees.



#### Pavement Edge Drop-Offs



#### Pavement Edge Drop-Offs

- A vertical pavement edge can create a "tire scrubbing" condition that may result in oversteering.
- Driver may lose control of the vehicle.
- The resulting crashes tend to be more severe than other crash types.
- A vertical or near vertical drop-off of 2.5 inches or greater has been shown to pose a significant risk.



#### 3 KCRC Projects

- Bailey Drive —between Vergennes
   St and Boynton Avenue (2.65 Miles)
- Ada Drive between Fox Hollow Dr and Thornapple River Dr (1.31 Miles)
- 18 Mile Road Casnovia to Peach Ridge Ave (1.5 Miles)

#### Selection Consideration

- Bailey Drive Narrow shoulder and horizontal curves, Local Funds
- Ada Drive Narrow shoulder with higher volume, Federal Funds
- 18 Mile Road Narrow shoulder and HMA overlay candidate



# BAILEY DRIVE (Local w/ 2000 ADT)

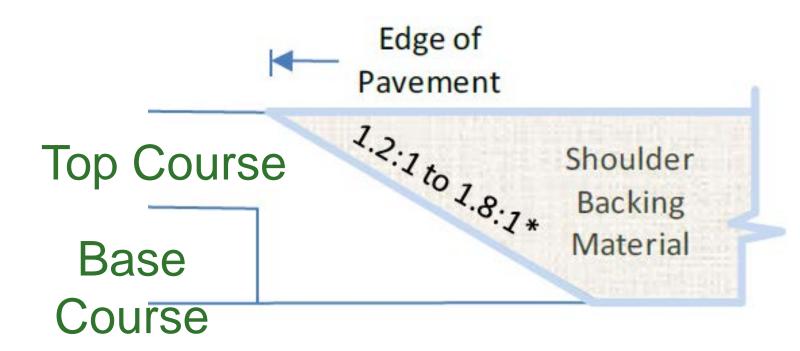
- Crush & Shape and 2
   Course Resurface
- Placed Safety Edge during Top Course

#### fety Edge Shoe





### Safety Edge in Top Paving Course



#### How Does It Impact Paving Process

- Using the Safety Edge should not affect the rate of production.
- 1 percent additional asphalt material cost.
- Roller needs to stay off outside edge.



## **Bailey Drive**



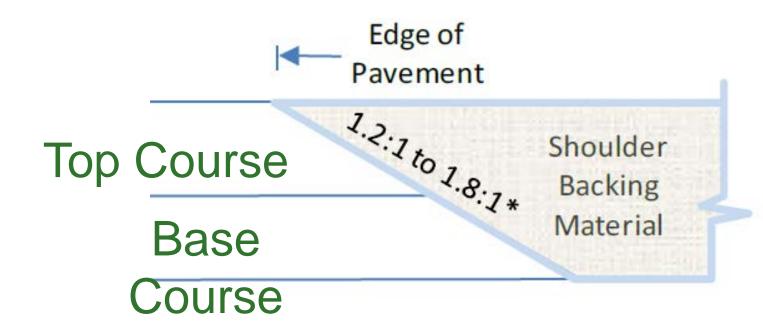


#### ADA DRIVE (Primary w/8000 ADT)

- Crush and shape ex. HMA and 2 Course HMA Resurface
- Safety Edge placed in both courses.



# Safety Edge in Both Base & Top Courses





#### Ada Drive







#### 18 MILE ROAD (Primary w/ 1100 ADT)

- Single Course overlay
- Trenched existing shoulders to place safety edge



## Safety Edge in Top Paving Course on Overlay Project

Overlay

Edge of Pavement

Overlay

Existing

Pavement

Shoulder

Backing

Material

Trench existing

shoulder



#### COST (2012)

**Additional HMA** 

30 Tons per Mile/Side (3.5 inch Depth)

1 Mile Both Sides @ \$60/ton = \$3,600

Shoulder Trenching (if required)

Estimated Cost = \$2,000/mile

Accident Reduction

Less concern of Edge Drop

May reduce edge cracking



