



VDOT's Highway Safety Program

Commonwealth Transportation Board

July 15, 2015

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Assistant State Traffic Engineer

Highway Safety Program

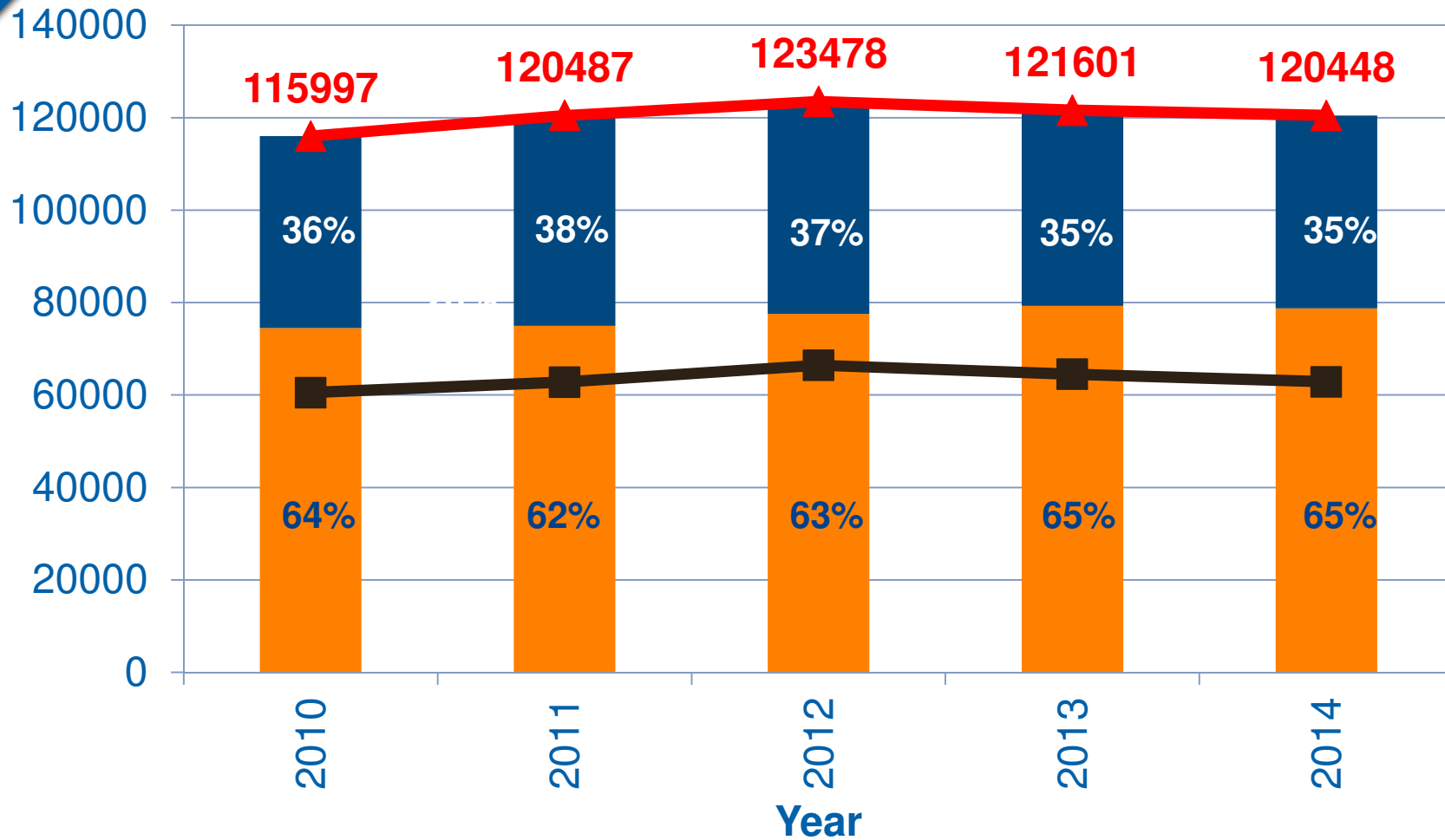


Agenda

- Virginia Highway Crash Trends
- Strategic Highway Safety Plan
- Highway Safety Emphasis/Focus Areas
- Highway Safety Projects

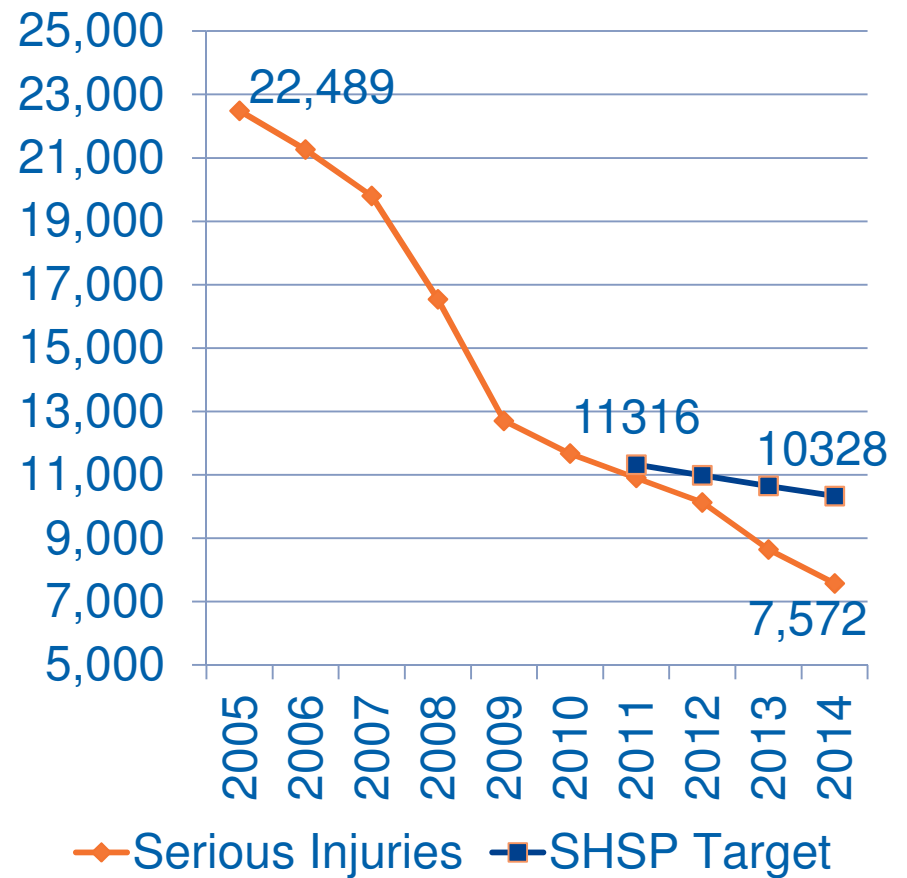
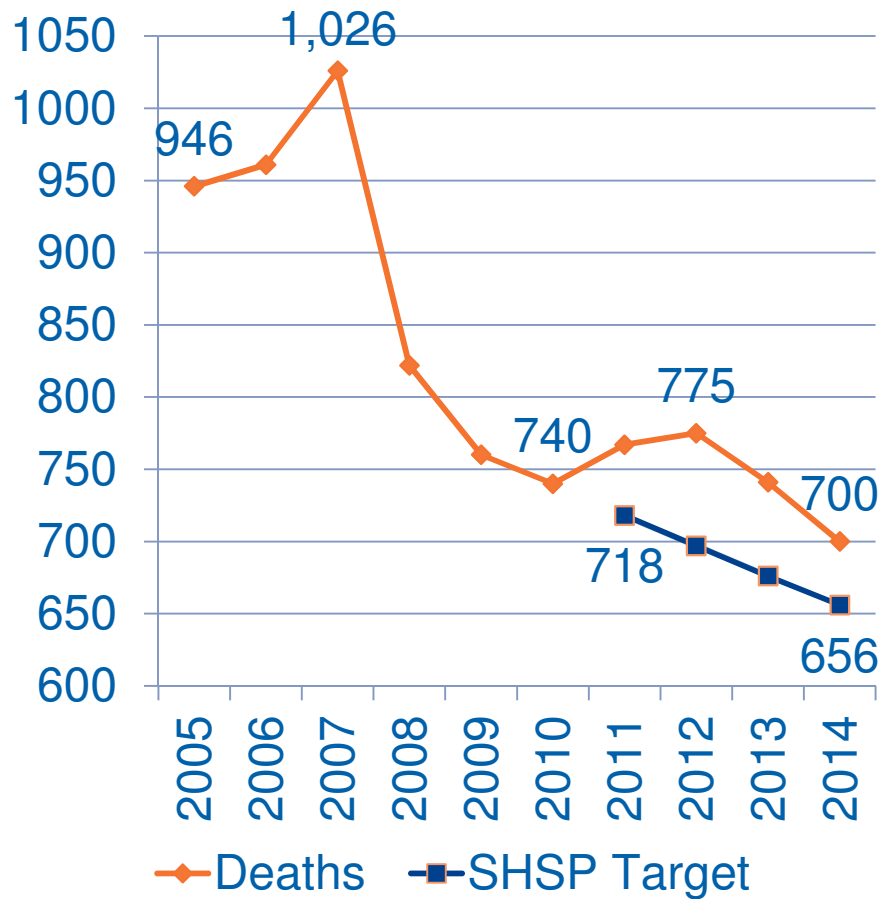


Virginia Highway Crashes (2010 – 2014)



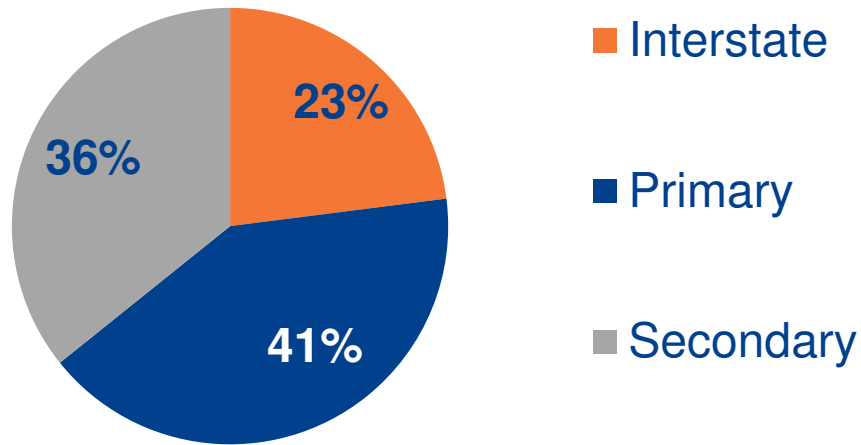
■ VDOT
 ■ Local
 ▲ Total Crashes
 ■ Injuries

Virginia Highway Deaths & Serious Injuries 2005 - 2014

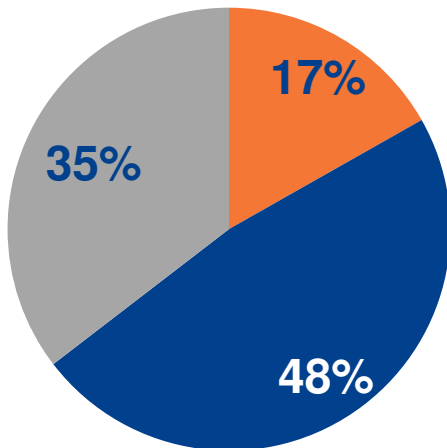


VDOT Maintained Road Crashes 2010-2014

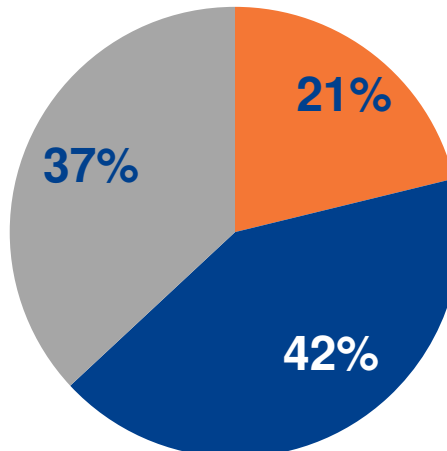
Total Crashes



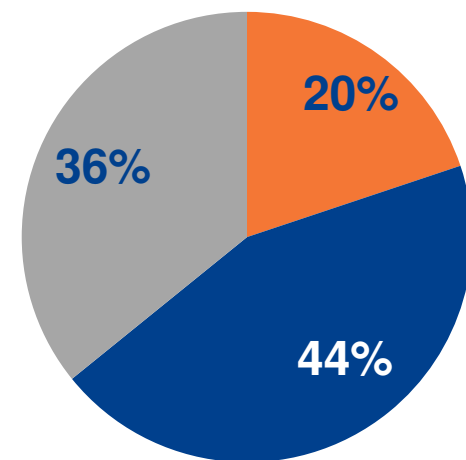
Deaths



Severe Injuries

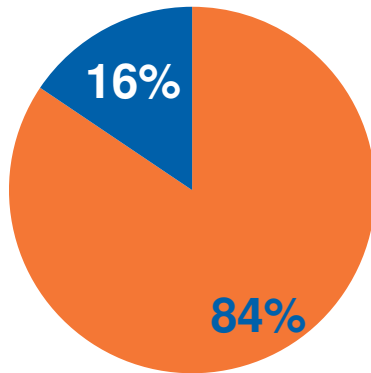


ALL Injuries

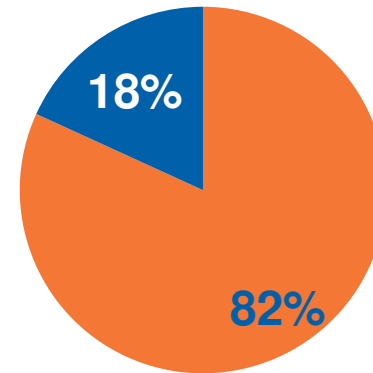


2010 - 2014 Network Comparison

Lane Mileage

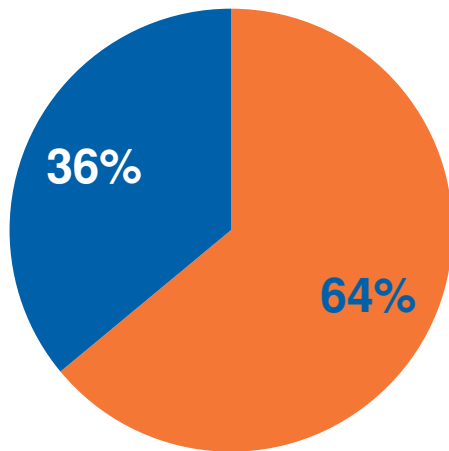


DVMT

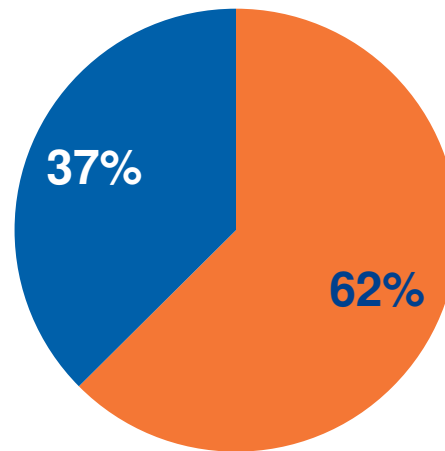


■ VDOT
■ Local

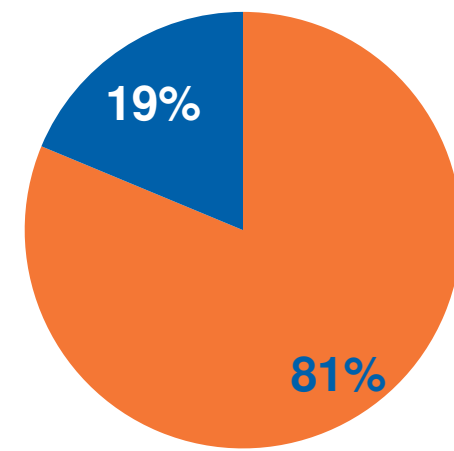
Crashes



Injuries

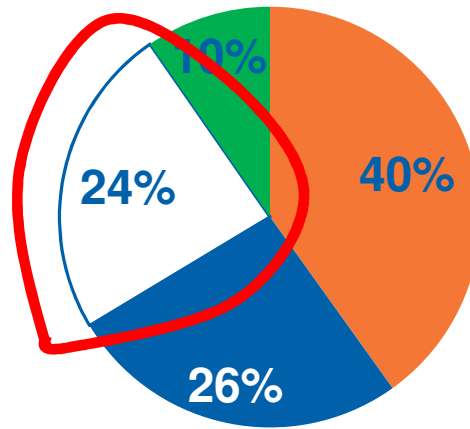


Deaths

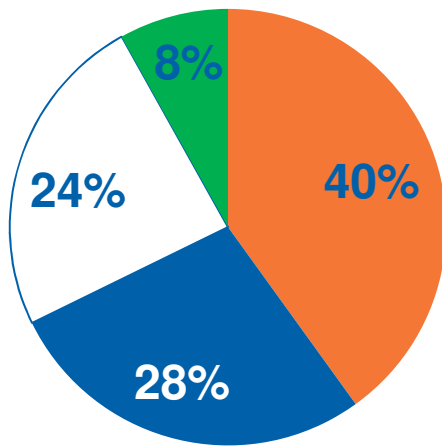


2010 - 2014 Network Comparison Statewide - Posted Speed Limit

Total Crashes

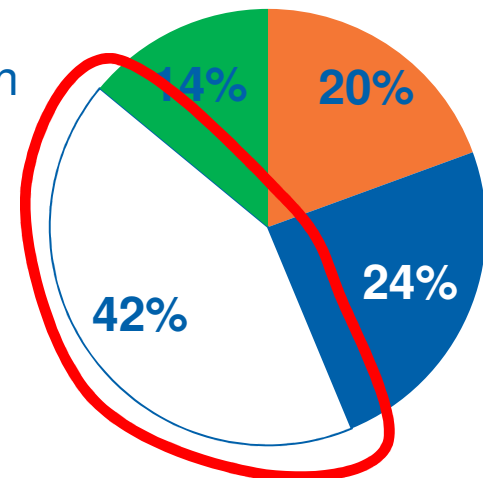


Injury Crashes



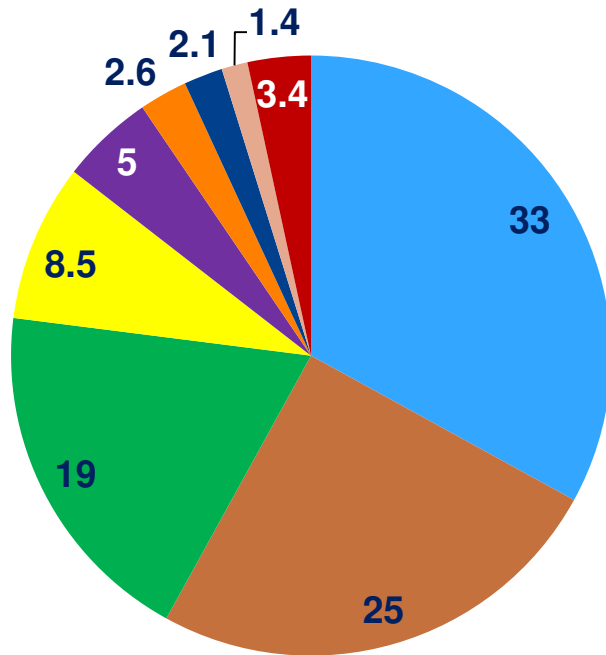
- 35 or Less
- 40 or 45
- 50 or 55
- Over 55 mph

Fatal Crashes

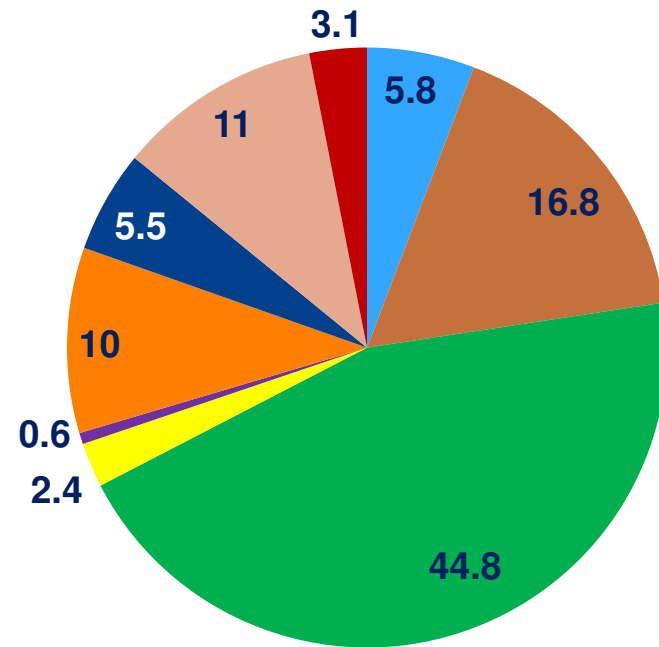


Virginia Highway Crash Types

Total Crashes (%)



Fatal Crashes (%)



- Rear End
- Sideswipe
- Overtaken

- Angle
- Animal
- Ped/Bike

- Fixed Object Off Road
- Head On
- Others

Strategic Highway Safety Plan

Vision

Toward Zero Deaths

Mission

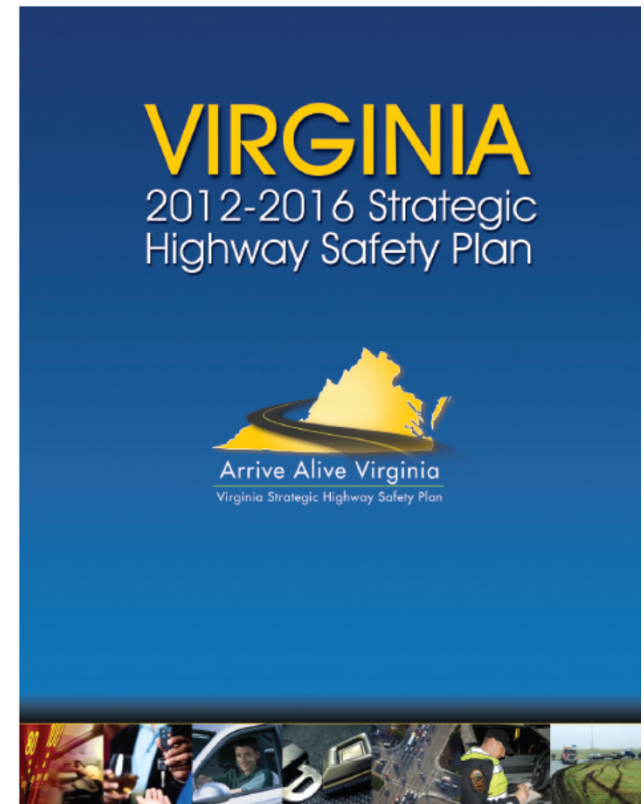
- *save lives and reduce crashes and injuries*
- *data driven strategic approach*
- *enforcement, education, engineering, and emergency response strategies*

Goal

reduce deaths & severe injuries by half by 2030

Target –

3 percent per year until 2016



Emphasis/Focus Areas

- Roadway Departure Crashes
- Intersection Crashes
- Bicycle and Pedestrian Safety

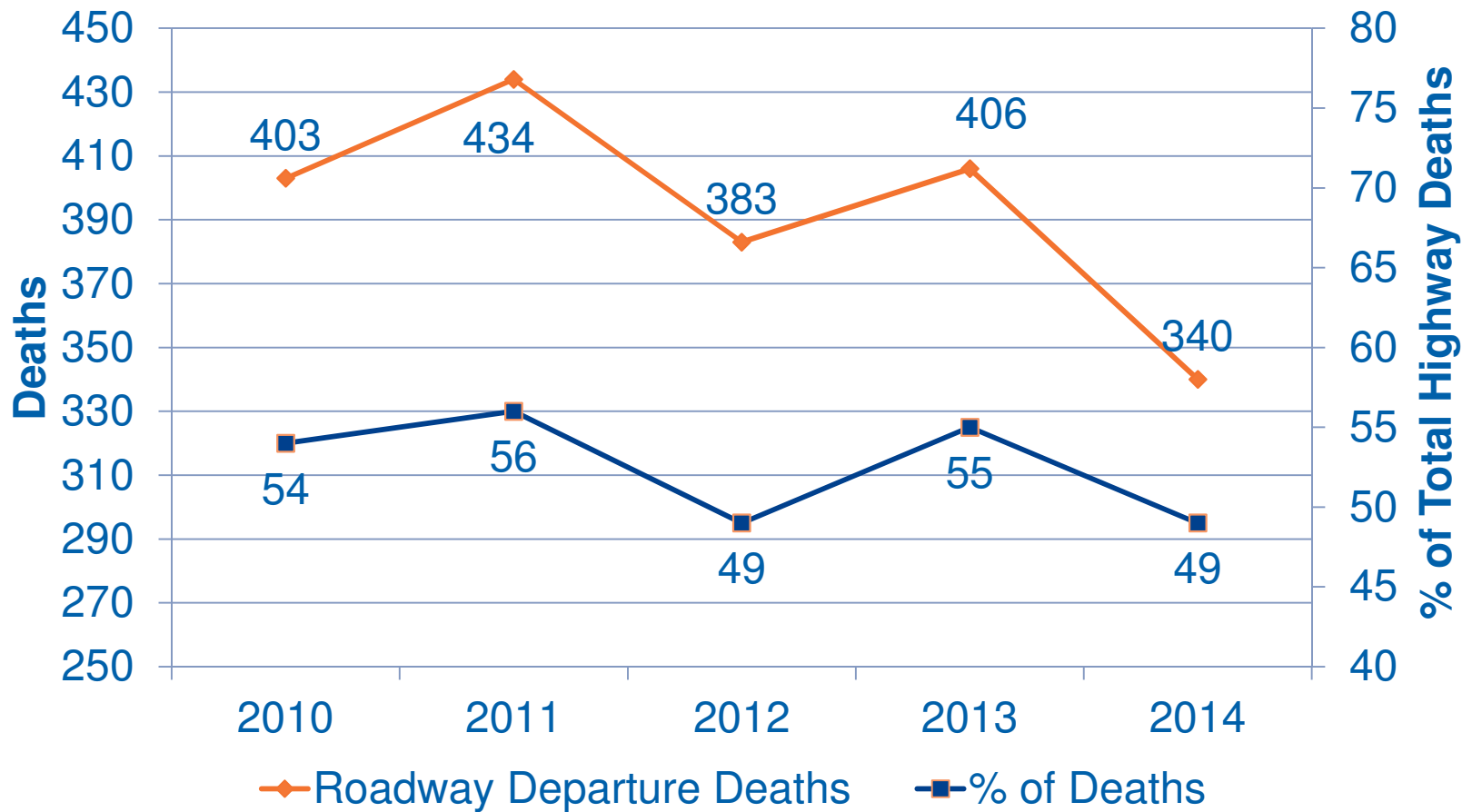


Roadway Departure Crash Definition

“A non-intersection crash which occurs when a vehicle crosses an edge line or a center line, or otherwise leaves the traveled way.” (Source: FHWA)

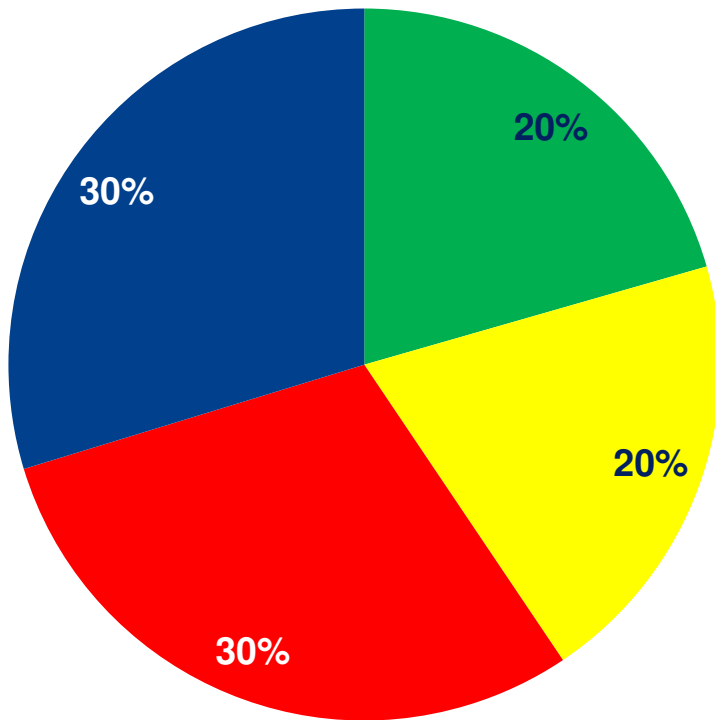


Virginia Roadway Departure Deaths 2010 - 2014

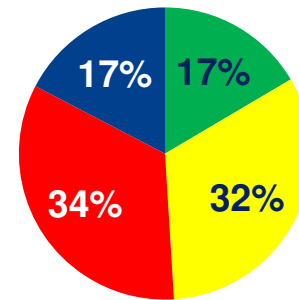


Virginia Roadway Departure Crashes 2010-2014

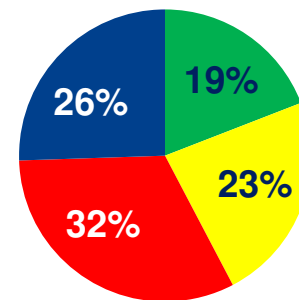
Total Crashes (%)



Fatalities (%)



Injuries (%)



■ Interstate
 ■ Primary
 ■ Secondary
 ■ Local/Urban

Roadway Departure Prevention



Curve Delineation

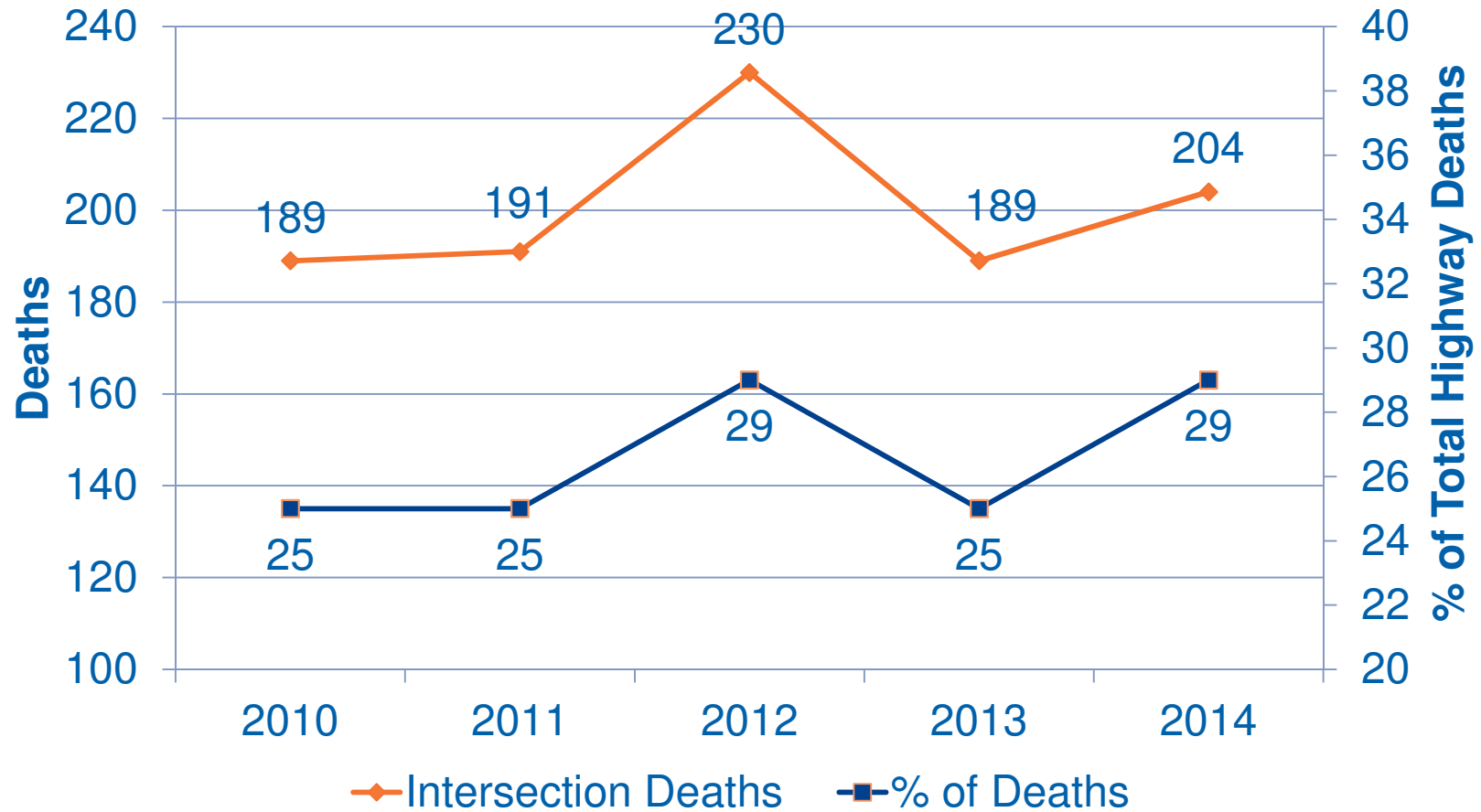
- \$13M investment
- 2600 curves
- 30-50% crash reduction
- Save 18 lives/year
- Save 150 serious injuries/year



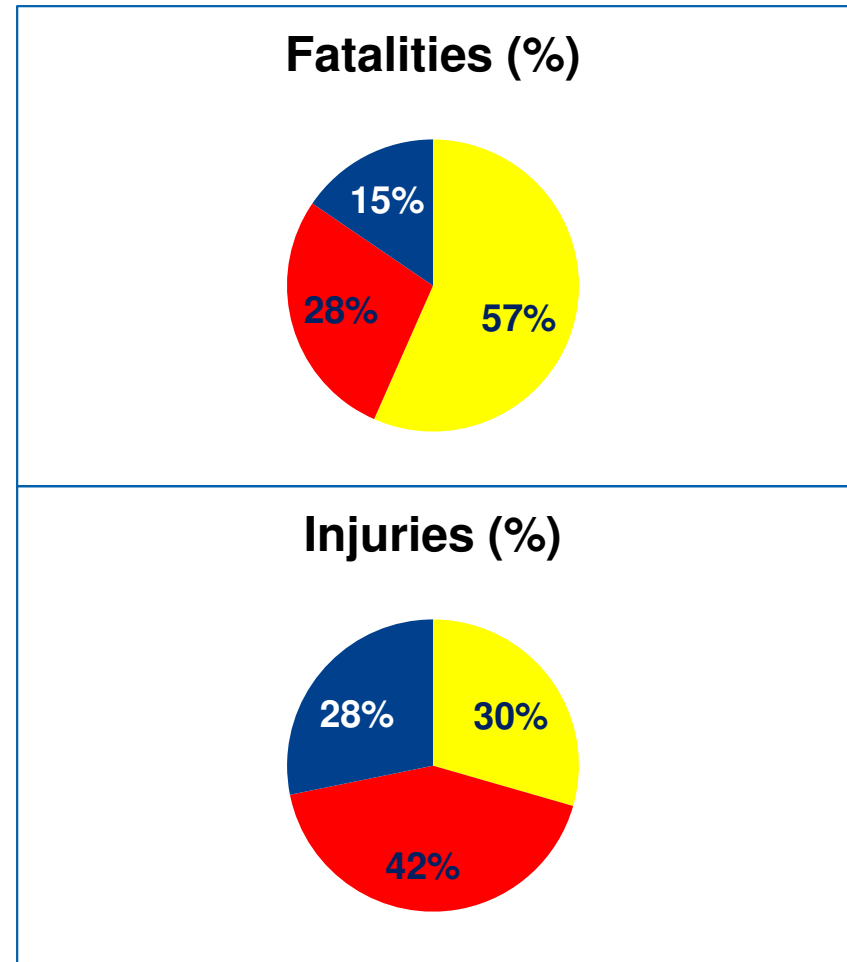
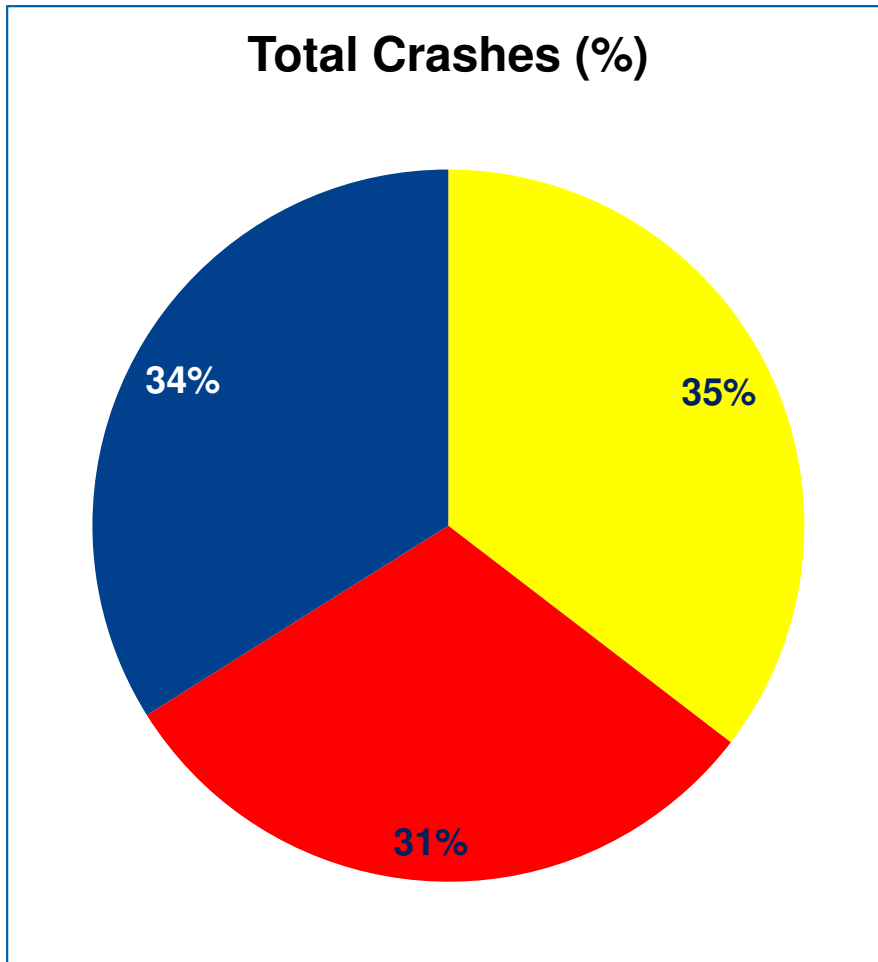
Rumble Strips

- \$18M investment
- 1900 miles treated
- 40-60% crash reduction
- Save 12 lives/year
- Save 400 serious injuries/year

Virginia Intersection Deaths 2010 – 2014







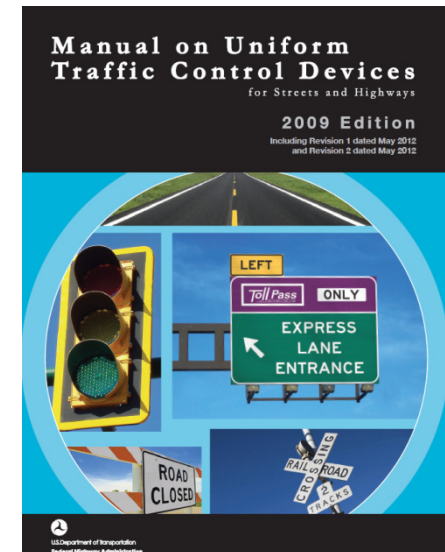
Virginia Intersection Crashes 2010-2014



■ Interstate
 ■ Primary
 ■ Secondary
 ■ Local/Urban

Effective Intersection Projects

	<p>Steady Red Arrow Drivers turning left must stop and wait (except where permitted by law).</p>
	<p>Steady Yellow Arrow Stop, if you can do so safely.</p>
	<p>Flashing Yellow Arrow Proceed with left turn after yielding to oncoming traffic and pedestrians.</p>
	<p>Steady Green Arrow Proceed with left turn.</p>



Flashing Yellow Arrow

- \$20K/intersection
- 36% crash reduction

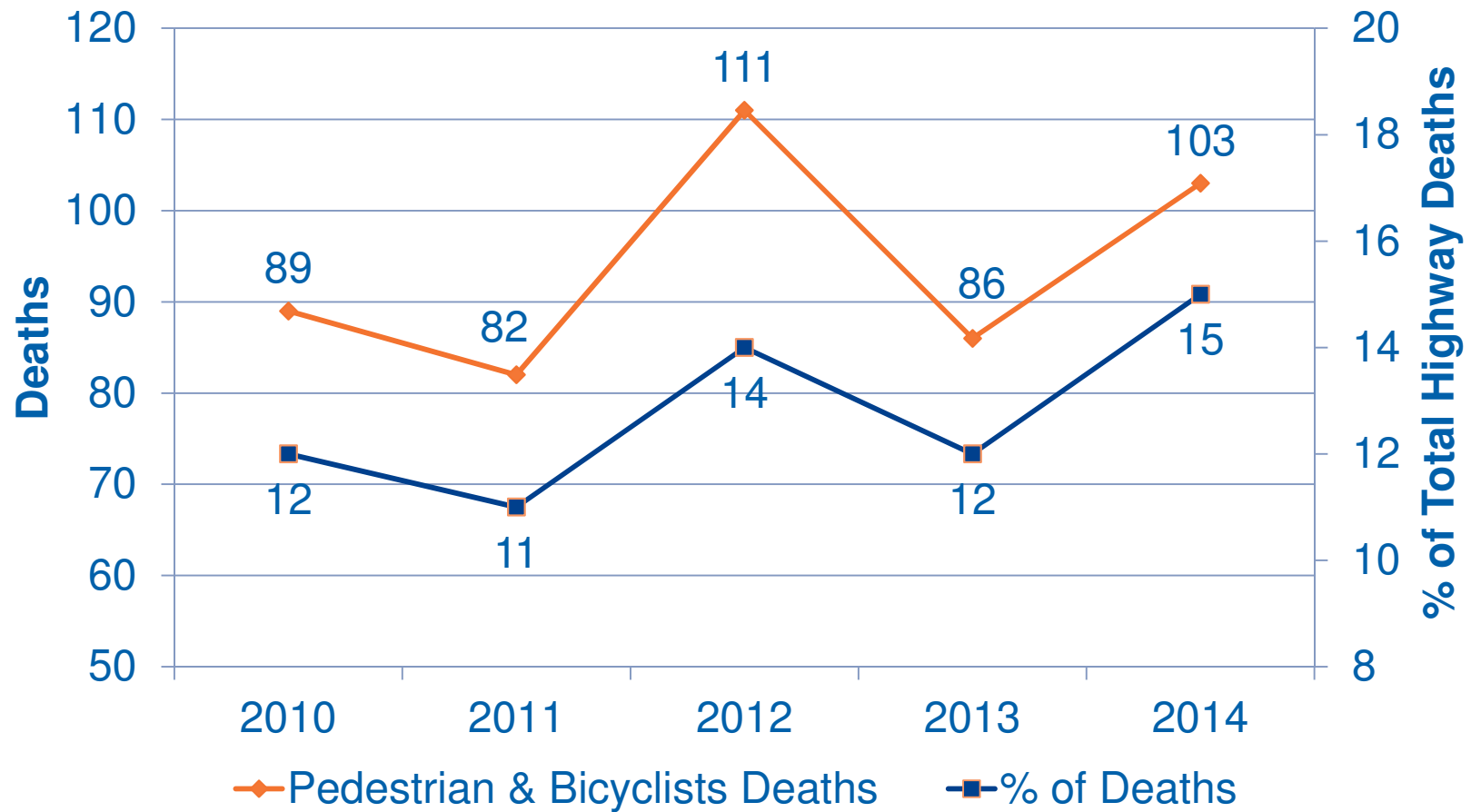
Reflective Backplates

- \$5-7K/intersection
- 15% all crash reduction
- 28% severe crash reduction

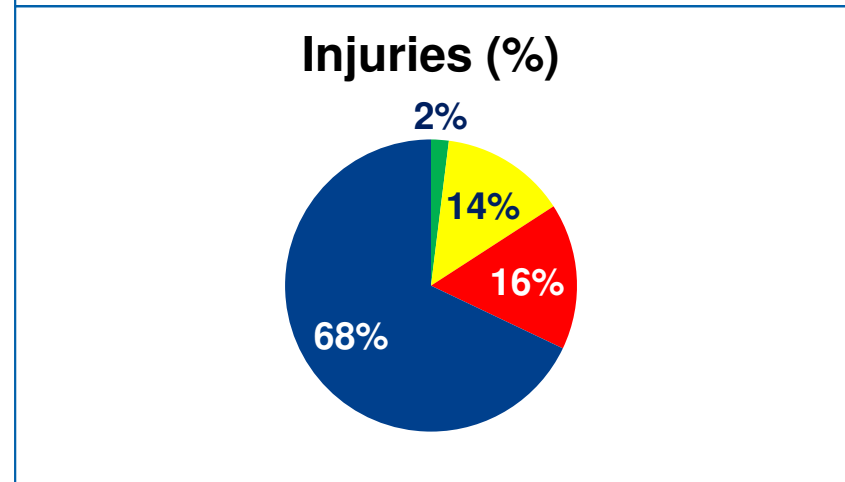
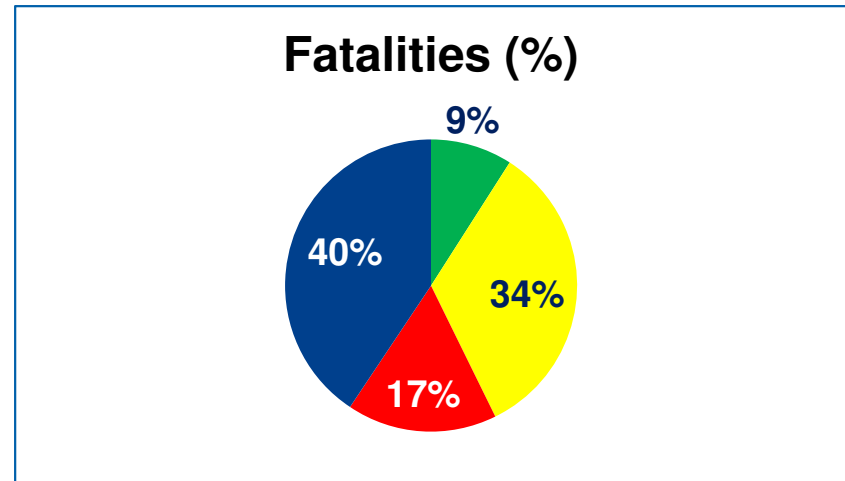
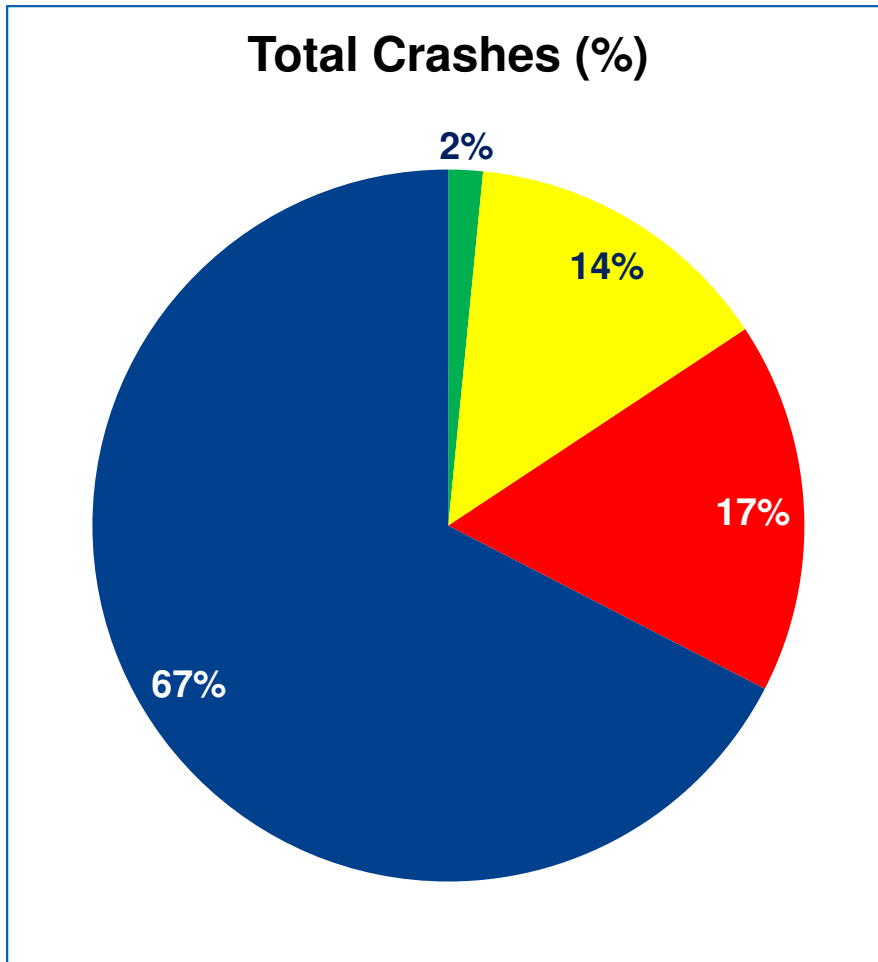
Signal Timing

- \$5K/intersection
- 20-33% crash reduction

Virginia Pedestrian & Bicyclists Deaths 2010 - 2014



Virginia Pedestrian & Bicycle Crashes 2010-2014



■ Interstate
 ■ Primary
 ■ Secondary
 ■ Local/Urban

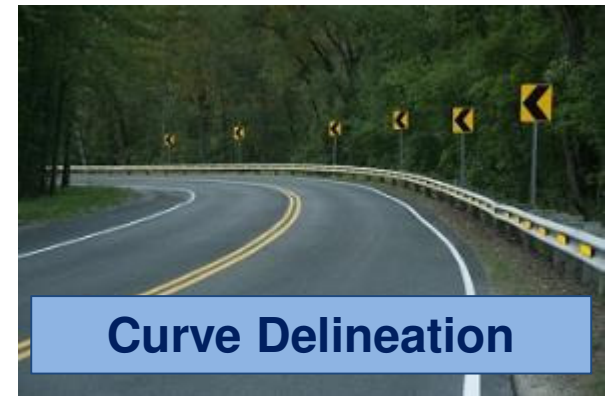
Pedestrian and Bicycle Safety Projects



Deliver Highway Safety Six-Year Plan

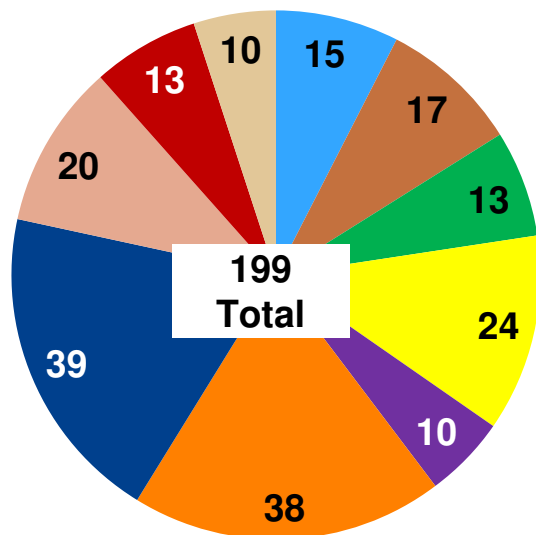
Data-Driven Projects Focusing on:

- Roadway Departure crashes
- Intersection crashes
- Bicycle and Pedestrian safety
- Low-cost/high-benefit safety solutions



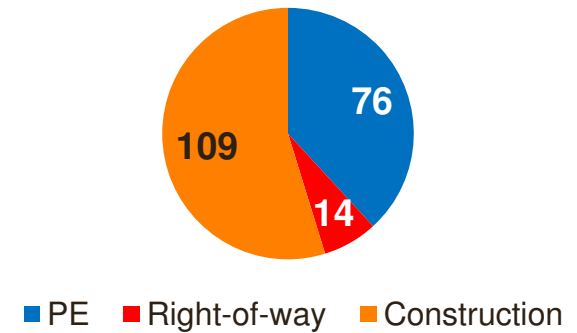
Highway Safety Project Inventory

Active Projects By District*

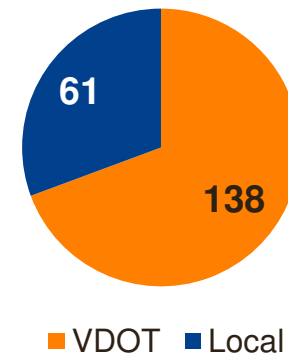


- Bristol
- Culpeper
- Fredericksburg
- Hampton Roads
- Lynchburg
- Northern VA
- Richmond
- Salem
- Staunton
- Statewide

Active Projects By Phase*



Project Administration*



*Active means in preliminary engineering, right-of-way, or construction phases as of June 17, 2015

Before-and-after Results

Where 113 highway safety-funded projects have been deployed since 2004...

Fatal Crashes



92%

Injury Crashes



55%

Questions?

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