



# Update on Several VDOT Highway Safety Initiatives

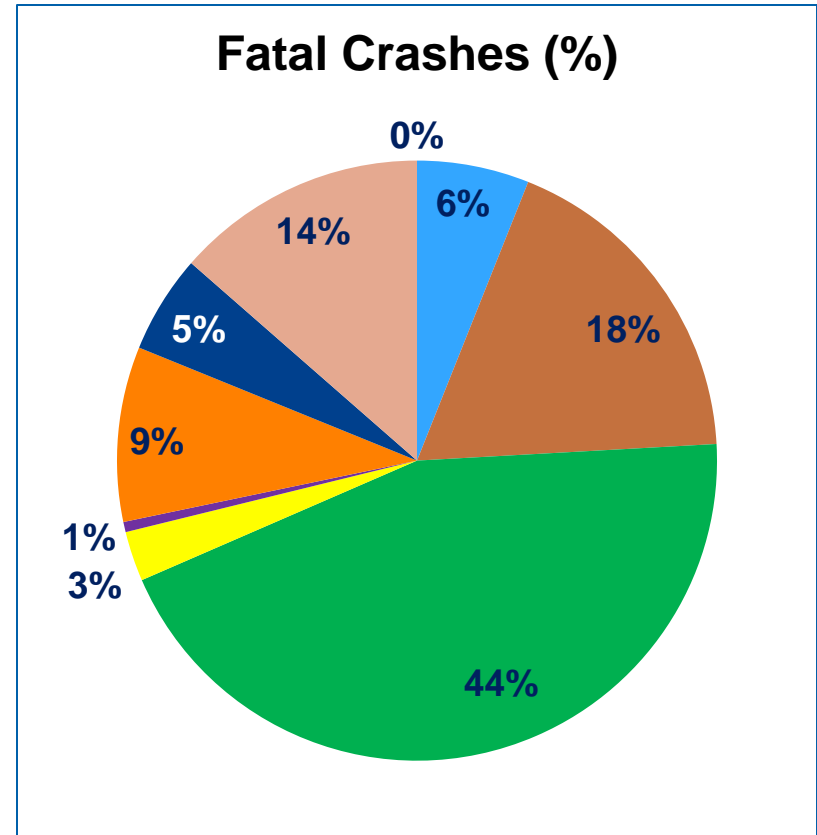
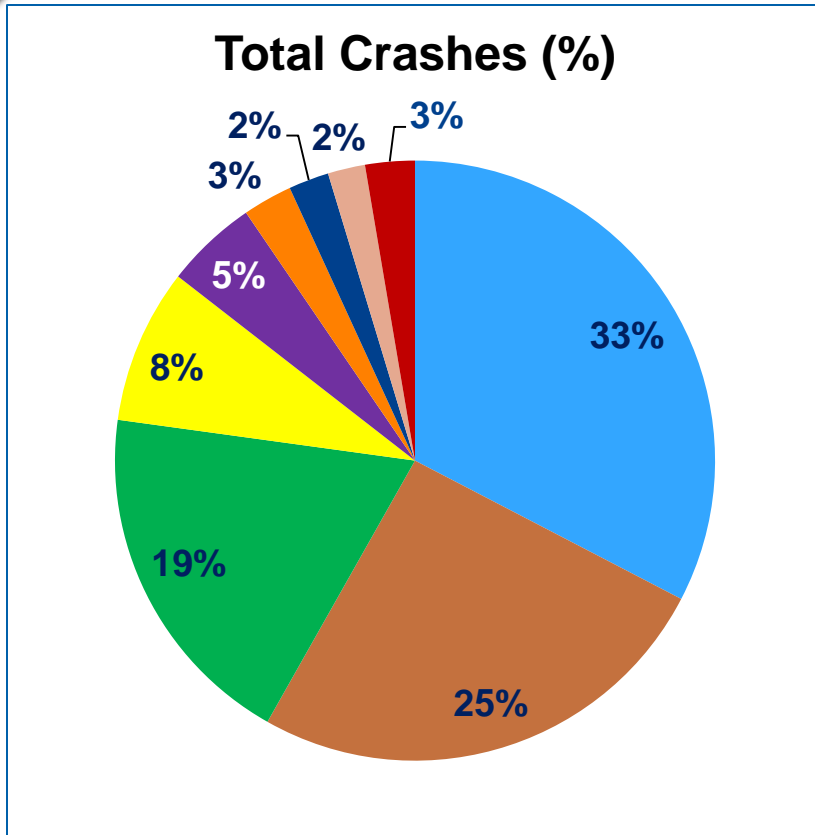
Virginia Statewide Bicycle and Pedestrian Advisory Committee  
Fall Meeting  
October 28, 2015

**Mark A. Cole, PE**  
Assistant State Traffic Engineer  
Highway Safety Programs

## Talking Points/Agenda

- 1 – Rumble Strip(e) Revisions
- 2 – Statewide Pedestrian Crash Analysis
- 3 – Ped/Bike Work Zone Guidance Document

# Virginia Highway Crash Types 2010-2014

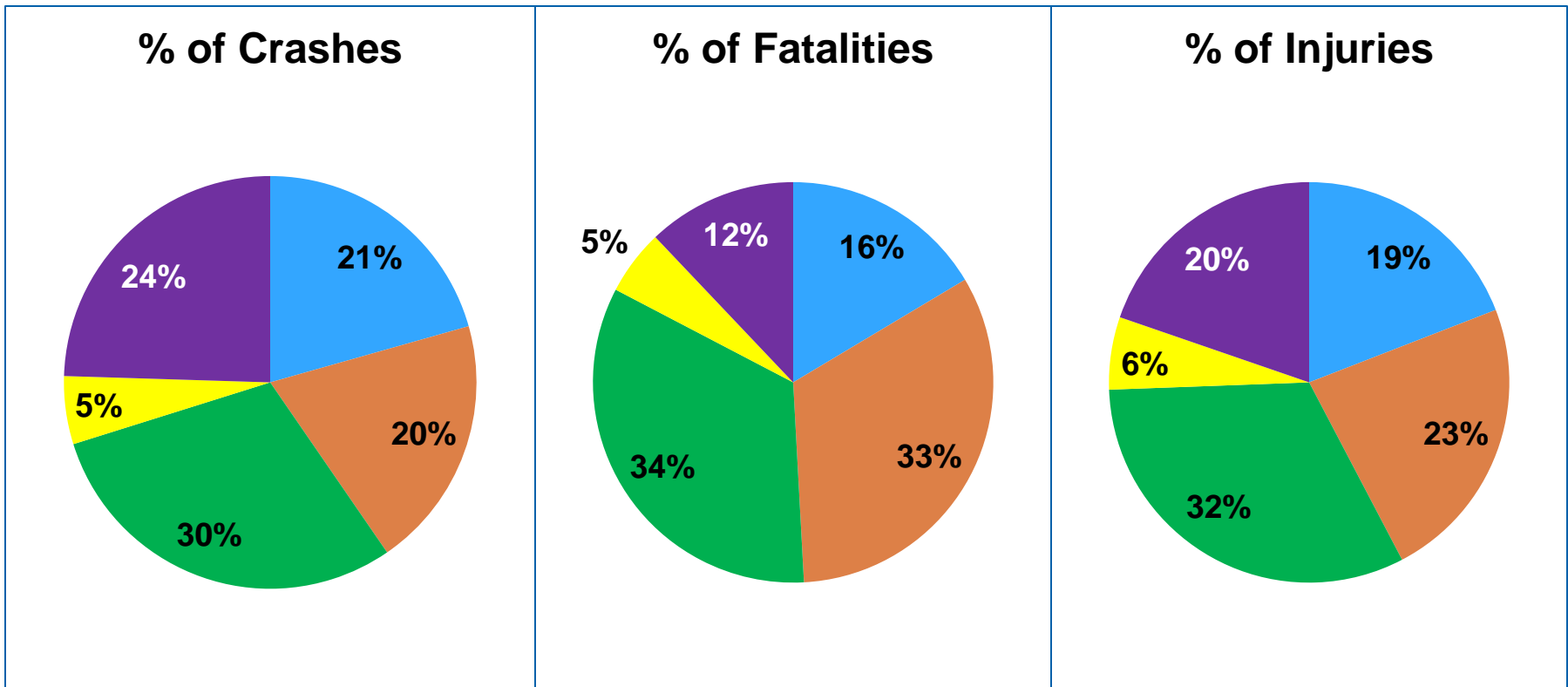


- Rear End
- Sideswipe
- Overtaken

- Angle
- Animal
- Ped/Bike

- Fixed Object Off Road
- Head On
- Others

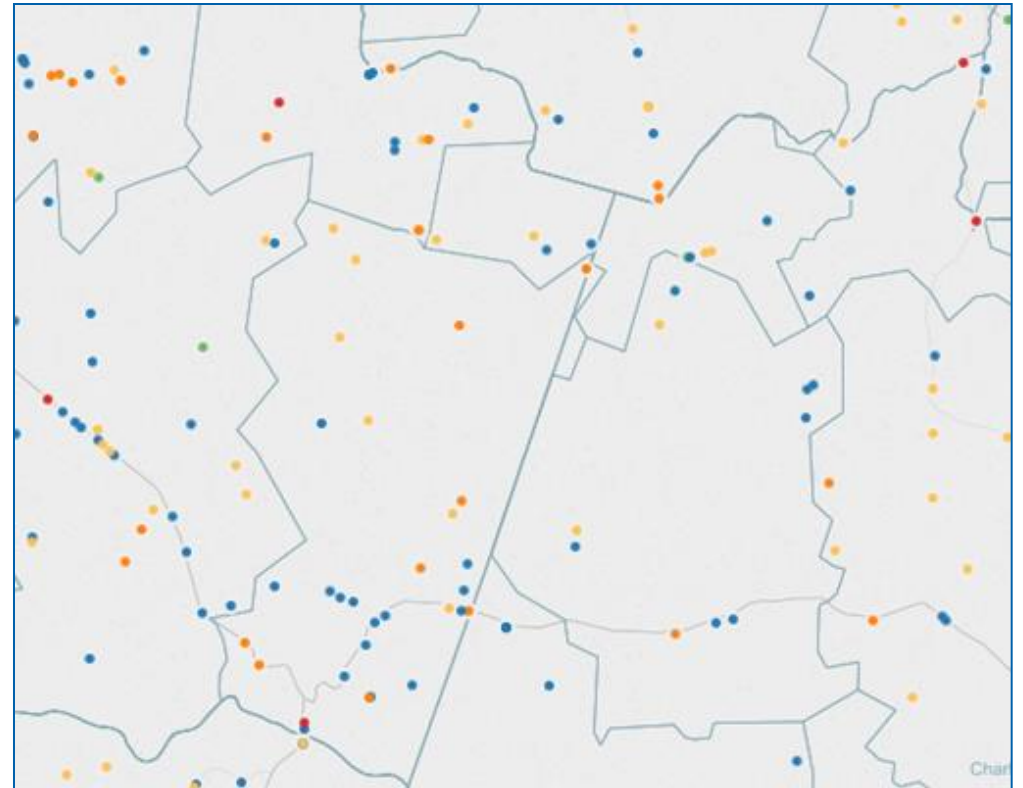
# Roadway Departure Crashes(2010-2014) By Maintenance and System



- VDOT Interstate
- VDOT Primaries
- VDOT Secondaries
- VDOT Primaries Maintained By Locality
- Other Locally-Maintained Roads

# Road Departure Crashes

- Non-Interstate Routes
  - 79% of Crashes
  - 81% of Injuries
  - 84% of Fatalities
- Serious Injuries & Fatalities are randomly dispersed across network
- Limited toolbox of roadway departure countermeasures that can be widely deployed



# Six Year Plan Roadway Departure Prevention

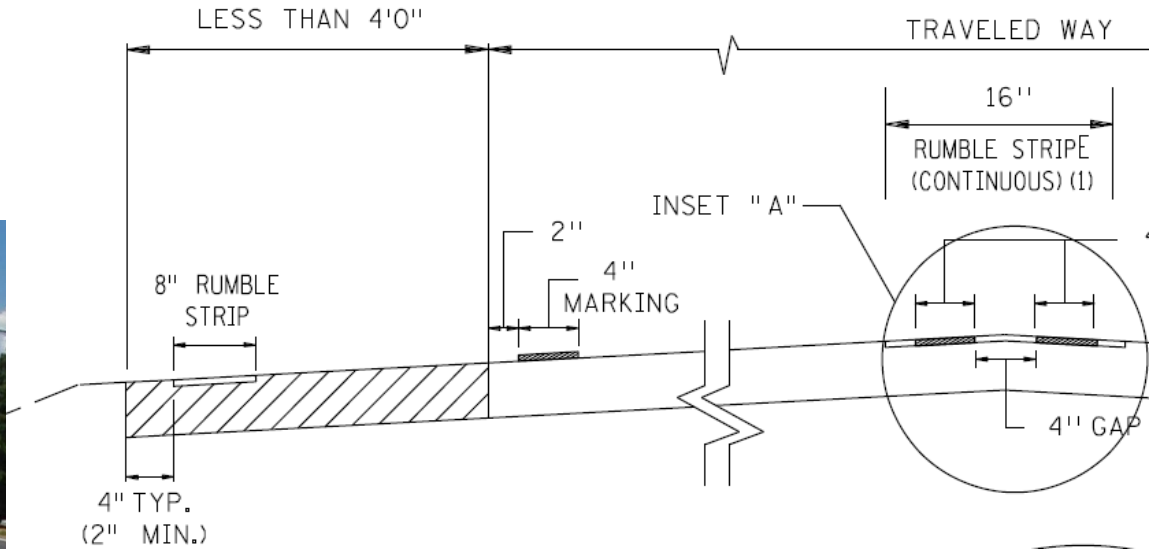


- **30-50% crash reduction**



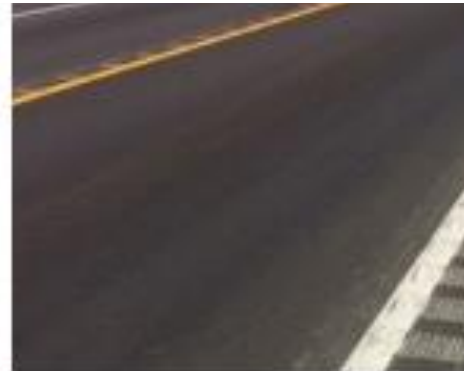
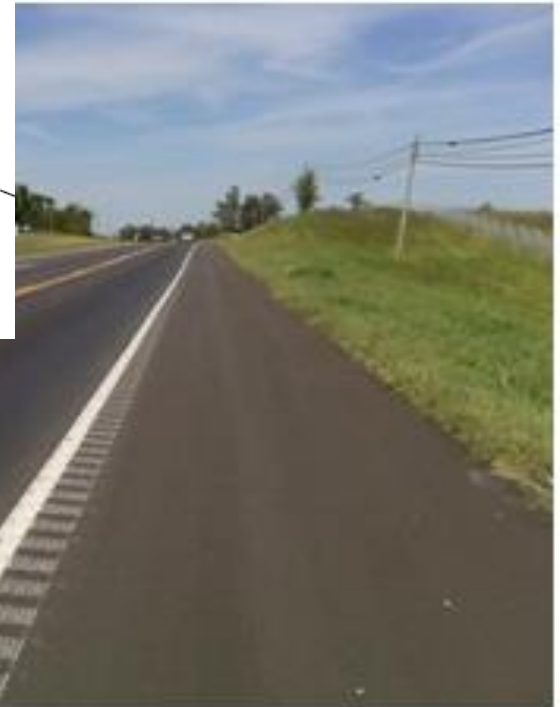
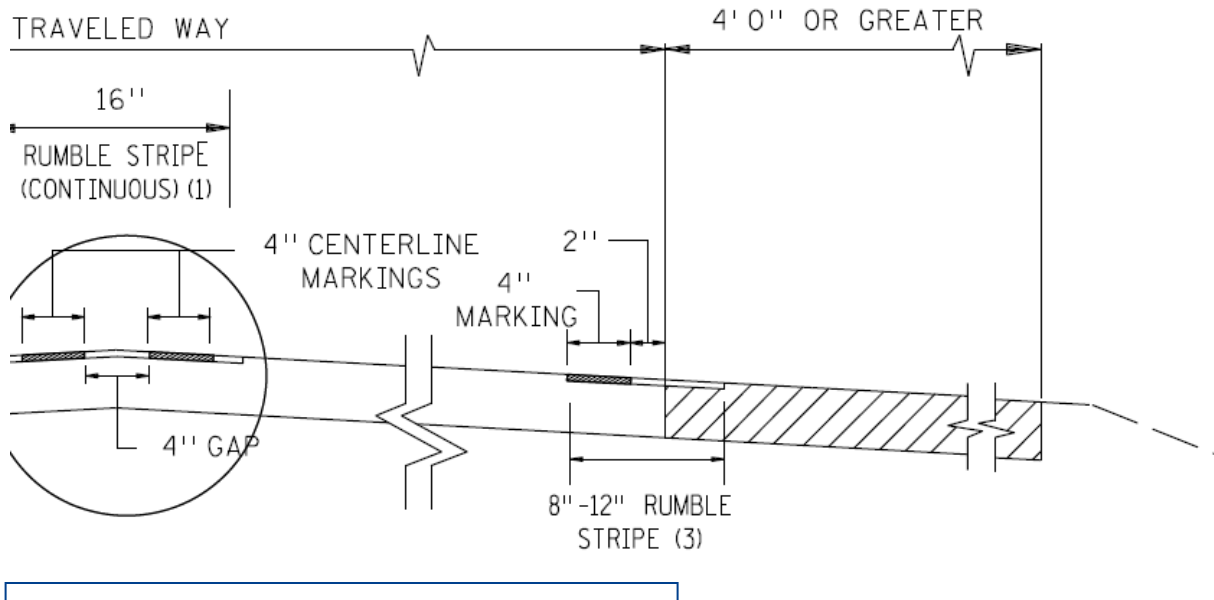
- **40-60% crash reduction**
- However,**
- **VDOT rumble strip options limited**
  - **Very few rumble strips other than interstate**
  - **Primary and Secondary routes need more rumble strip design options**

# DRAFT Rumble Strip(e) Revisions Shoulder Less Than 4 ft wide



- **Would include intermittent gaps**
- **8-9-inch wide rumble stripe placed in last foot of asphalt**
- **3/8' deep rumble**
- **Not recommended in urban area**

# DRAFT Rumble Strip(e) Revisions Shoulders Greater Than 4 ft wide



- **Would include intermittent gaps**
- **8-12-inch wide rumble stripe placed between travel lane and shoulder**
- **3/8' deep rumble**
- **Not recommended in urban area**



# Virginia Pedestrian Crash Assessment

# Virginia Pedestrian Crash Assessment 2012-2014

## Ongoing Task Order with Kimley-Horn includes:

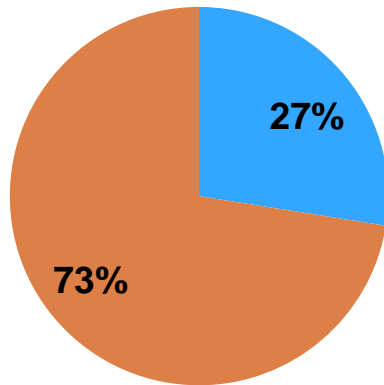
- Review of all fatal pedestrian crashes and sample of injury crashes
- Detailed review of crash document and Google Street View to determine
  - Whether crash was mid-block or at intersection
  - Adjacent land uses
  - Presence of infrastructure such as sidewalk, crosswalk, pedestrian signals
  - Other relevant characteristics of each crash
- Purpose is to help inform future discussion and decisions surrounding policies to provide pedestrian infrastructure and consideration.

## Pedestrian Actions in Fatal Crashes 2012-2014

- **Crossing (not at an intersection) – 33%**
- **Crossing (at intersection against traffic signal) – 20%**
- **Walking in roadway – sidewalks not available – 14%**
- **Standing/lying/playing in roadway – 13%**
- **Not in roadway – 5%**
- **Crossing (at intersection with signal) – 2%**
- **Walking in roadway – sidewalks available – 2%**
- **Working in roadway – 2%**
- **Other/unknown – 9%**

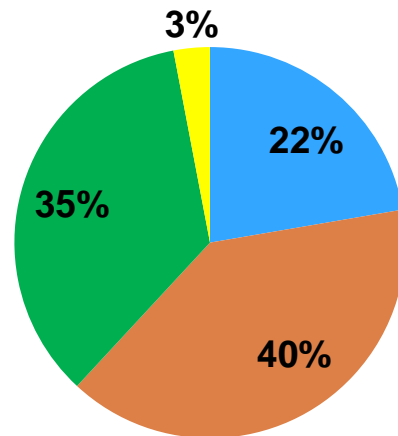
# Some Initial Findings

### Location of Fatal Crash



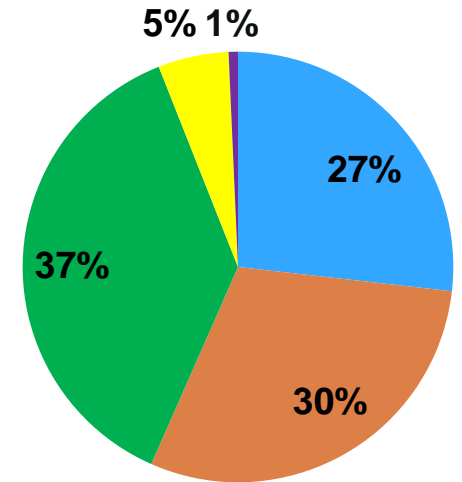
- Intersection
- Mid-Block/Other

### Predominant Land Use Fatal Crashes



- Agricultural/Rural
- Commercial
- Residential
- Recreational

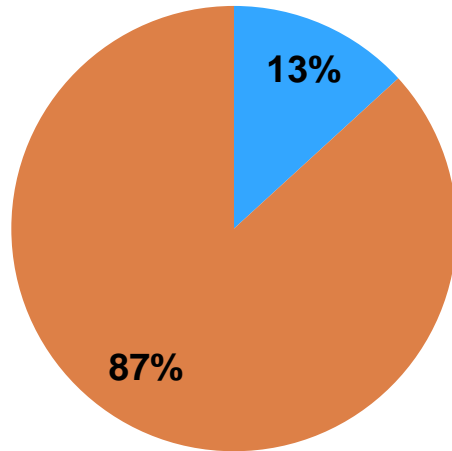
### Light Condition Fatal Crashes



- Daylight
- Darkness - Road Lighted
- Darkness - Road Not Lighted
- Dawn/Dusk
- Other/Unknown

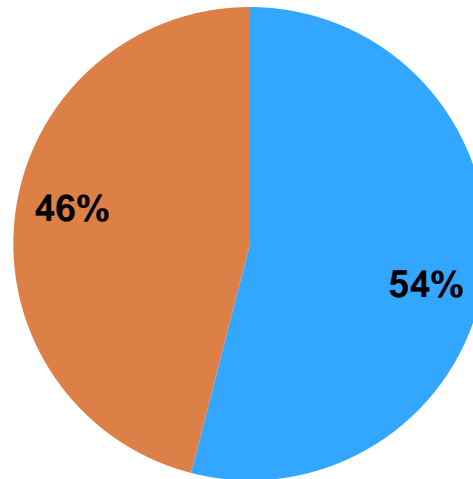
## Some Initial Findings (Continued)

**Presence of Crosswalks Fatal Crashes**



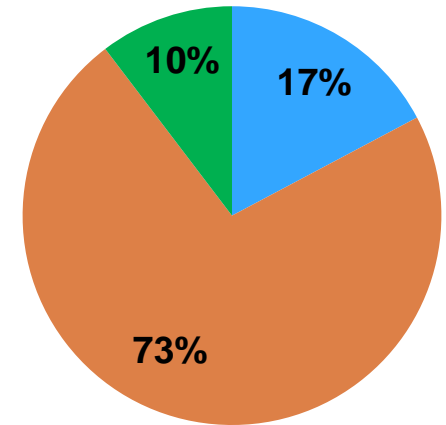
- Crosswalk Present
- No Crosswalk Present

**PED Location when Crosswalk Present Fatal Crashes**



- In Crosswalk
- Outside Crosswalk

**PED Action at Signal when Crosswalk Present Fatal Crashes**



- Crossing With Signal
- Crossing Against Signal
- Other

# **VDOT Work Zone Pedestrian & Bicycle Guidance Document**

# DRAFT Ped/Bike Work Zone Guidance Document



**Virginia  
Department  
of  
Transportation  
Work Zone  
Pedestrian  
and  
Bicycle  
Guidance**

## Document Discusses:

- ADA requirements
- Typical pedestrian devices
- Determining Appropriate access for work zones
- Checklist
- Examples of work zone layouts that provide for pedestrians and cyclists

**Document provided to John Bolecek for distribution and comments by November 24th**

# Questions?

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