

# Roadway Departure Safety Basics

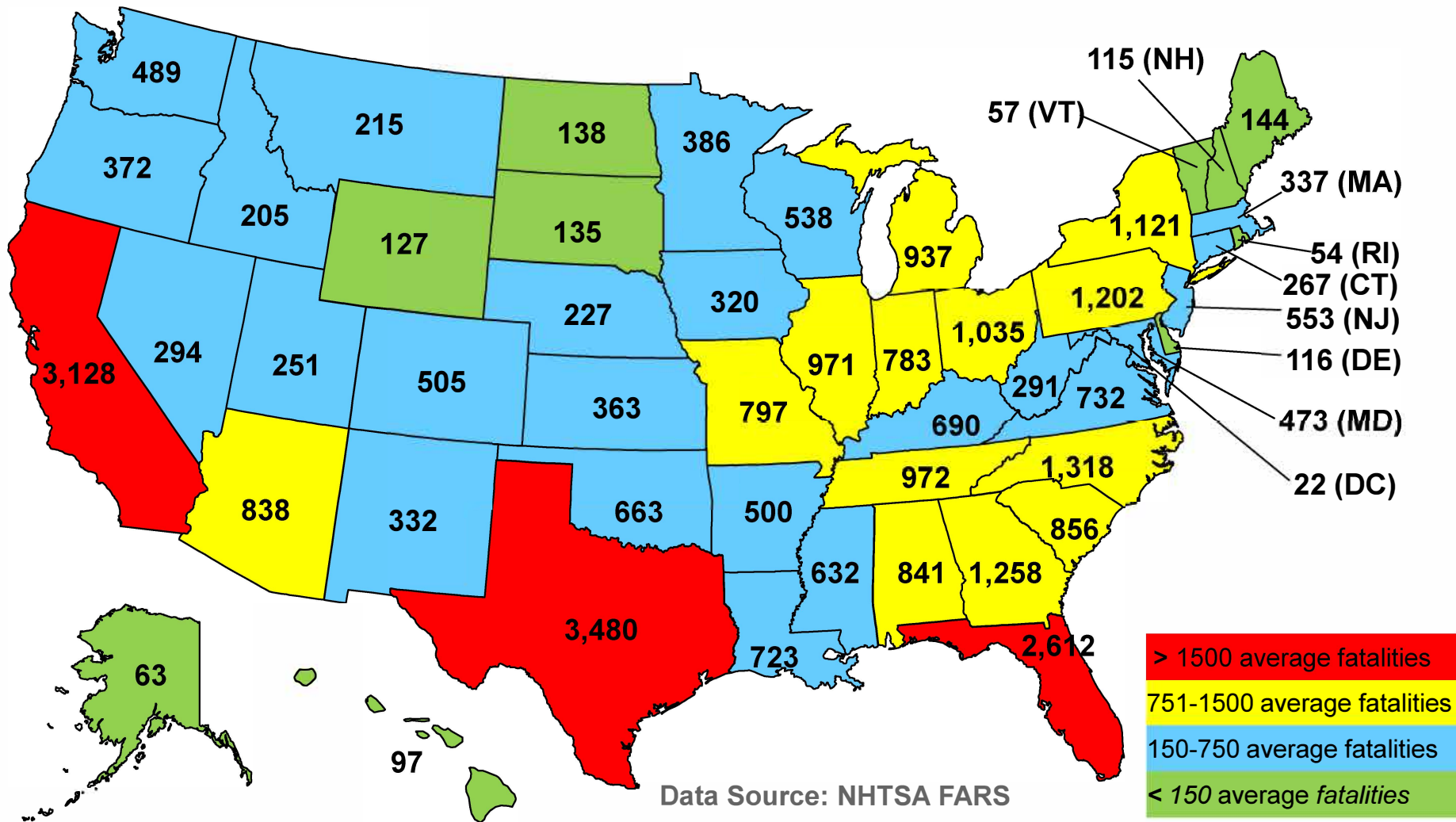
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**Safety Program Manager**



# Fatalities in the USA

(2013 - 2015 Average)

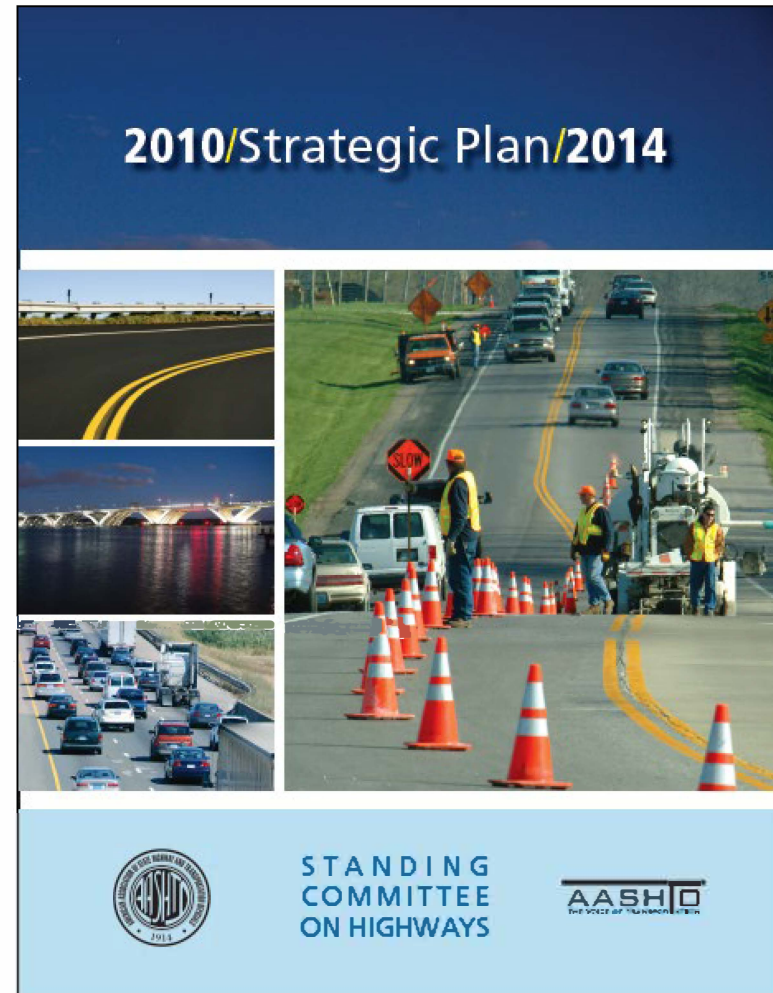
**National Average – 33,576 Fatalities**



# AASHTO Strategic Plan

## Strategic Objective

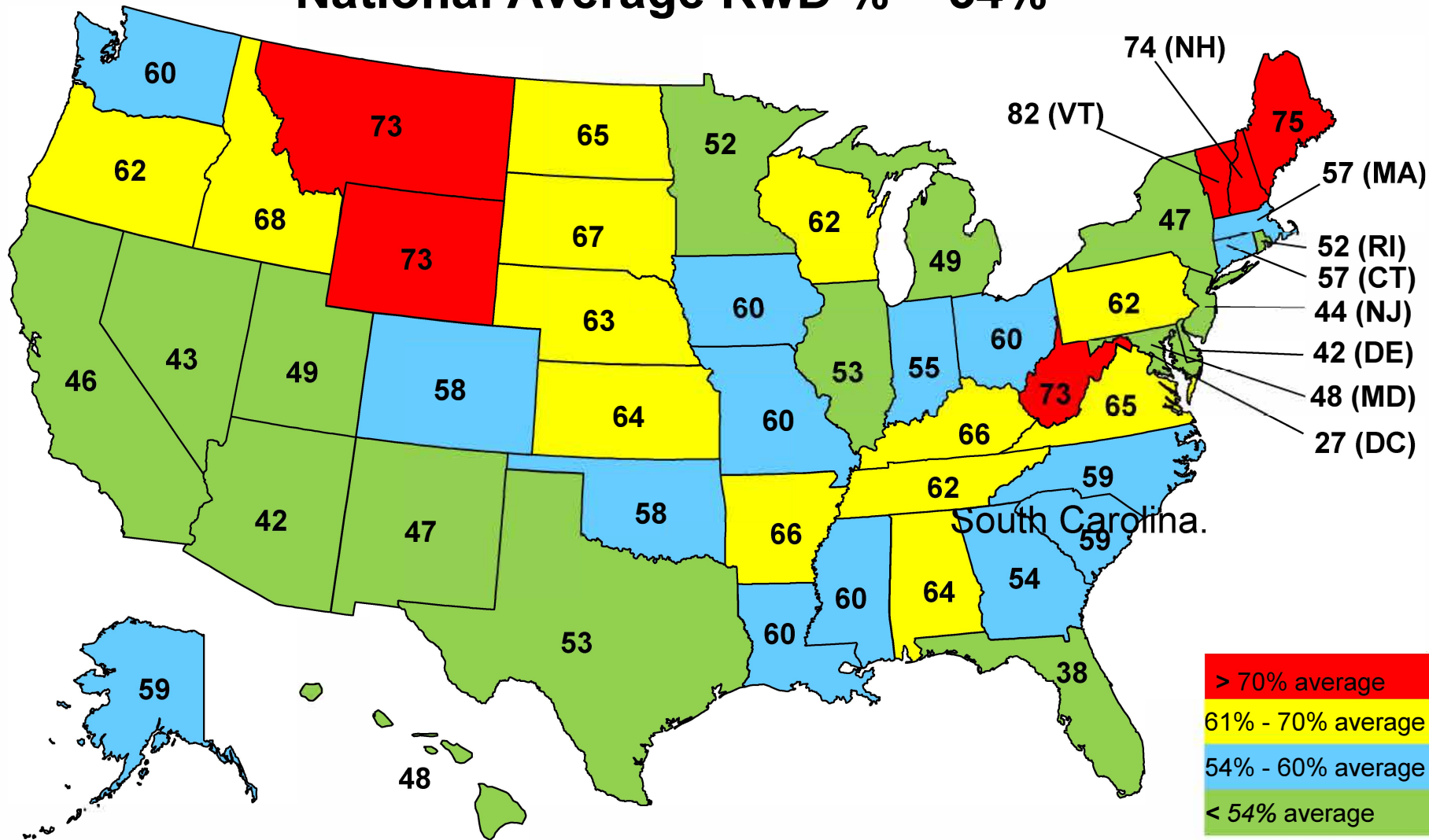
Promote highway-related strategies to assist in cutting fatalities by half by 2030 with a vision towards zero fatalities.



# Roadway Departure Fatalities Percent

(2013 - 2015 Average)

**National Average Rwd % = 54%**





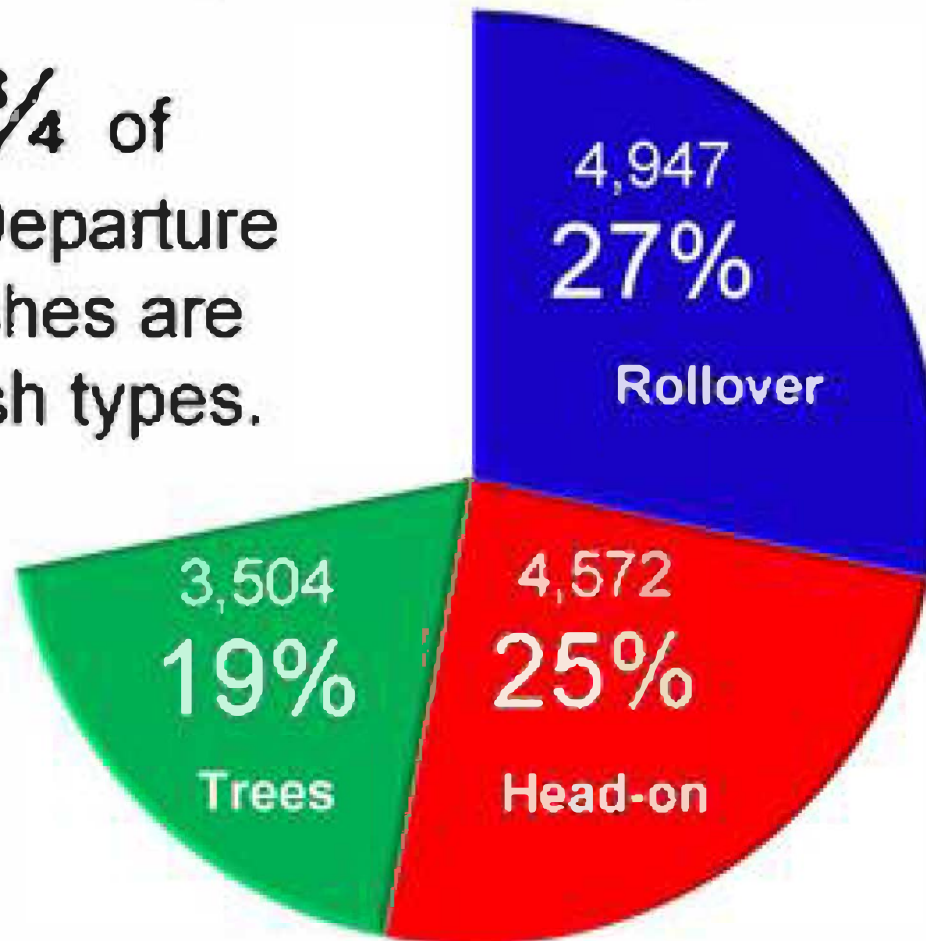




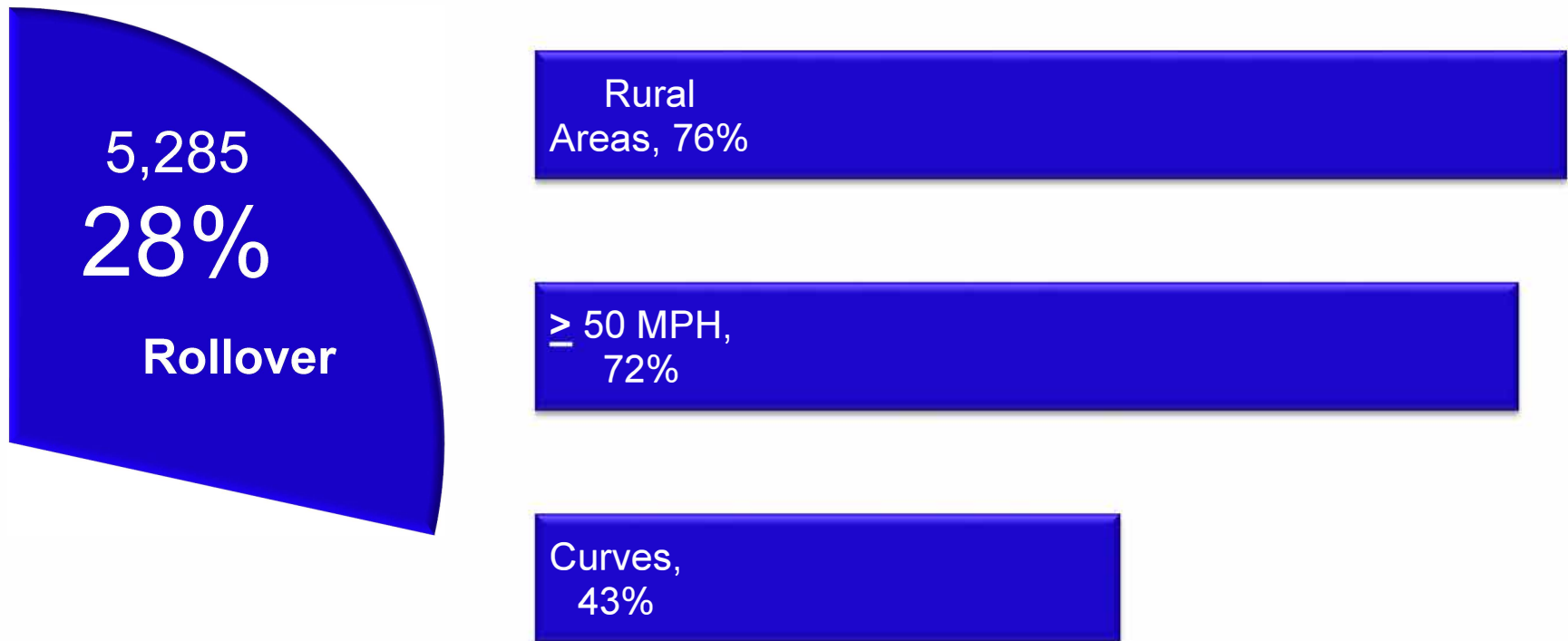
# FHWA Roadway Departure Strategic Plan

## Roadway Departure Fatalities by Most Harmful Event (FARS 2012-2014)

Nearly  $\frac{3}{4}$  of  
Roadway Departure  
Fatal Crashes are  
from 3 crash types.



# Overturn Crashes



Source: FARS 2010-2013

# Opposite Direction Crashes

4,570  
25%  
Head-on

Undivided,  
83%

Rural, 70%

≥ 50 MPH,  
70%

Curves,  
31%

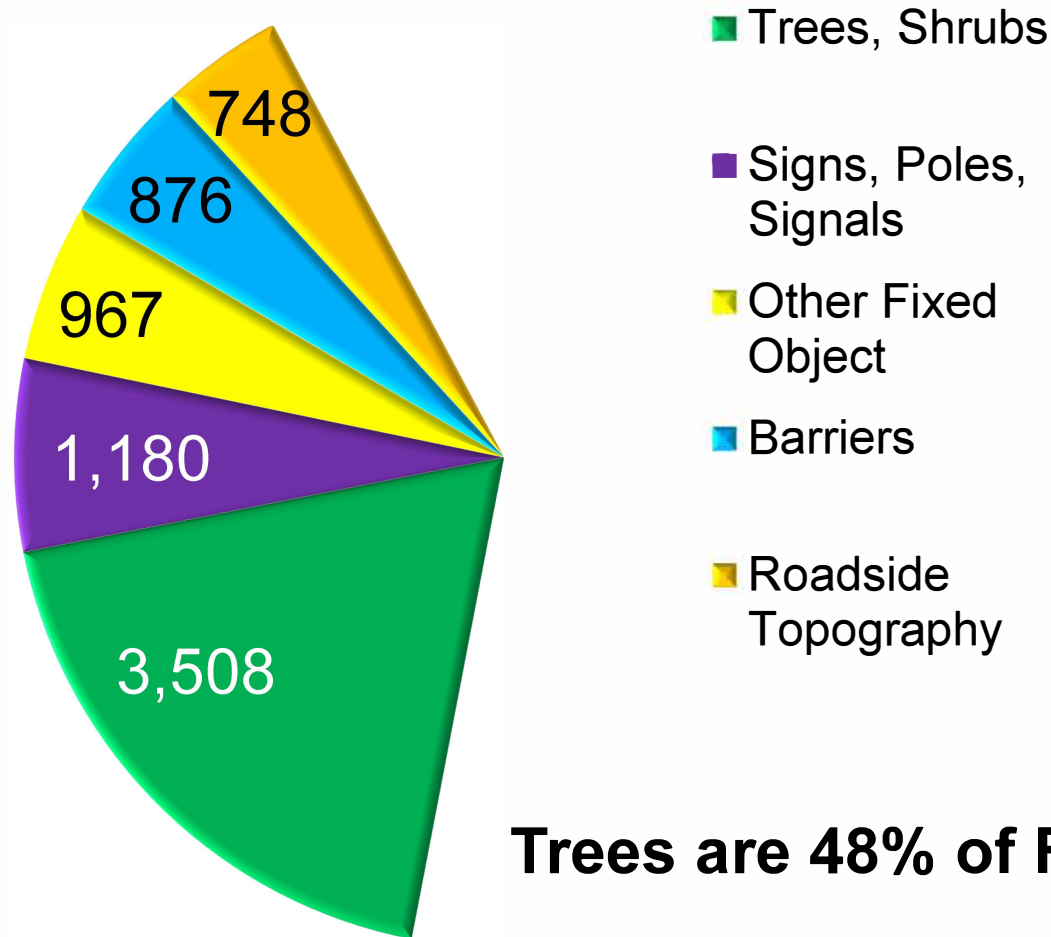
Wet/Icy,  
23%

NCHRP Report 500, Volume 6  
Reported that only 4.2% of head-ons  
involved a passing vehicle.

Source: FARS 2010-2013



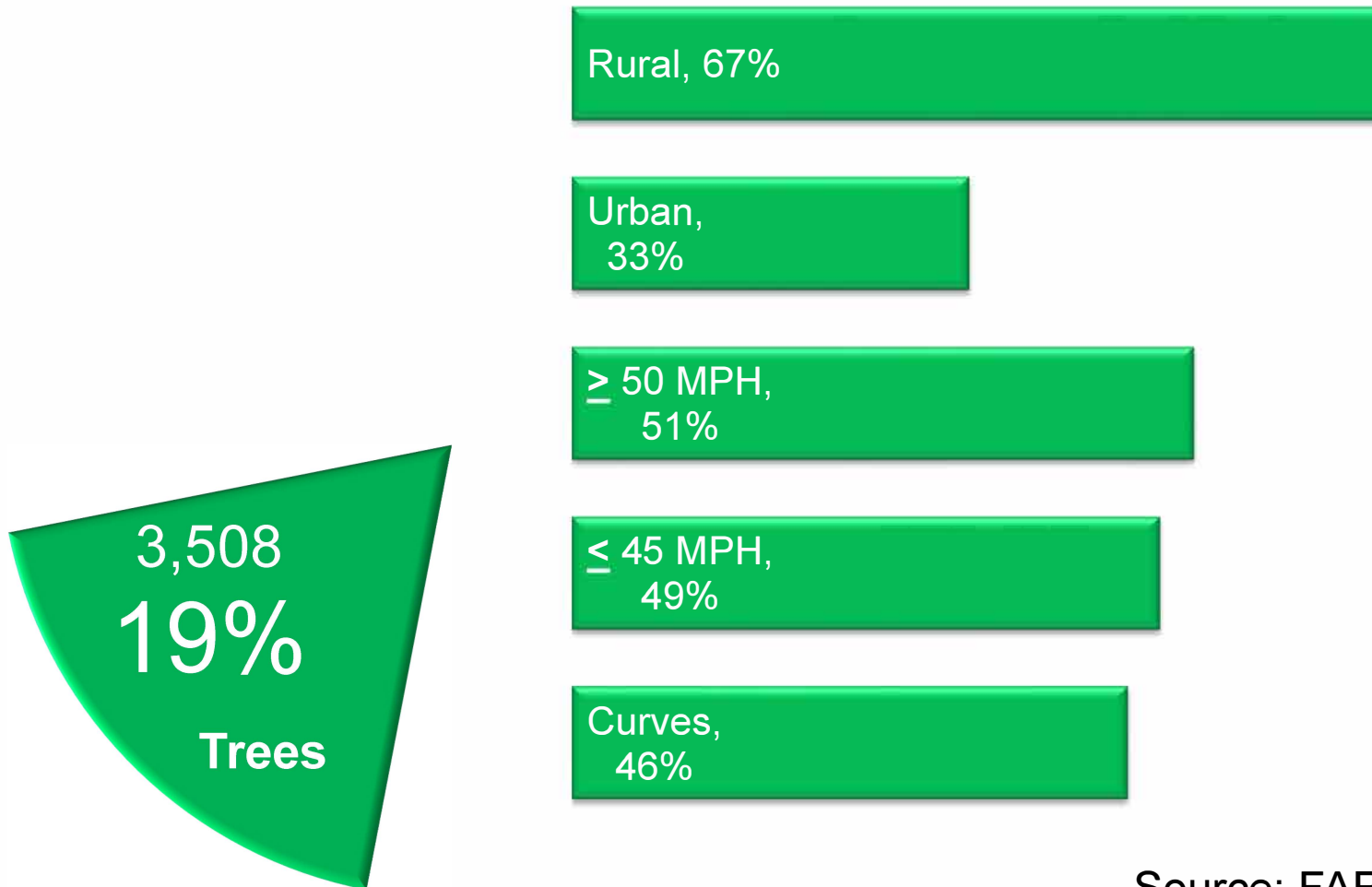
# Fixed Object Fatal Crashes



**Trees are 48% of Fixed Object Fatalities**

Source: FARS 2010-2013

# Tree Crashes



Source: FARS 2010-2013

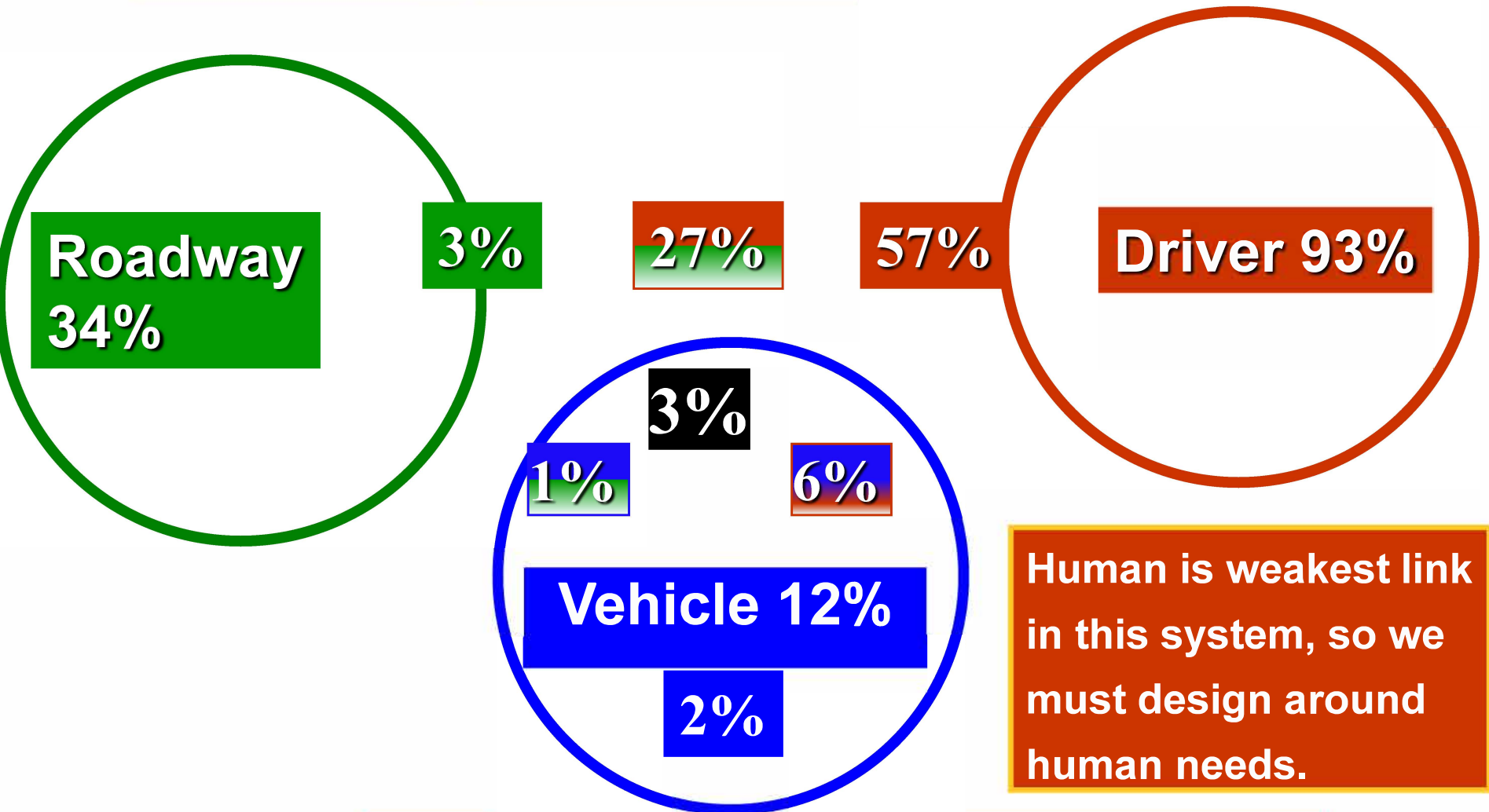
**Trees are 48% of Fixed Object Fatalities**

# So, why do drivers leave the road?

- **Roadway Condition**
- **Collision Avoidance**
- **Vehicle Component Failure**
- **Driver Error**



# Crashes Caused by Various Factors: Systems Approach



Human is weakest link in this system, so we must design around human needs.

FROM: Lum & Reagan, Public Roads Magazine, Winter 1995, "Interactive Highway Safety Design Module"

# Questions and Discussion

