

# Safety Benefits of Highway Infrastructure Investments

C. Y. David Yang, Ph.D.  
Executive Director



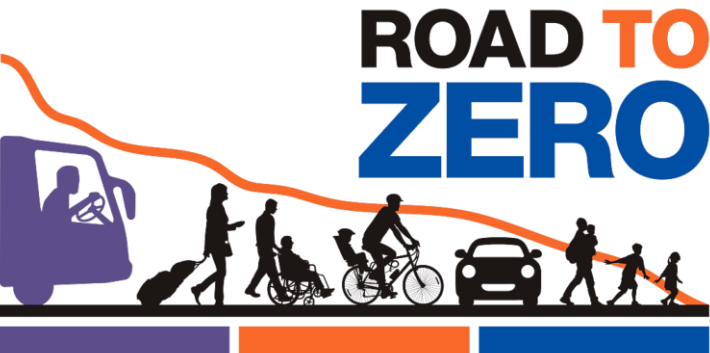
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# Background

Infrastructure improvements can reduce likelihood of

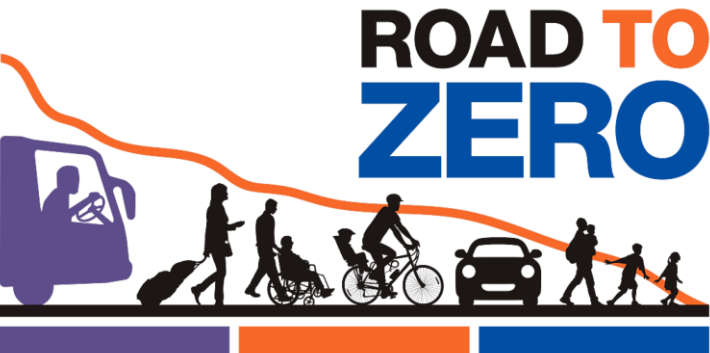
- Drivers making errors
- Errors leading to crashes
- Crashes leading to injuries & deaths



# Objective

*What would be the impact of implementing all highway infrastructure safety improvements whose benefits are greater than their costs?*

- Lives saved, injuries prevented
- Economic value



# AAA Foundation Study

- Performed by MRI Global for AAA Foundation
- Published May 2017



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# Approach

Used data from previous usRAP studies

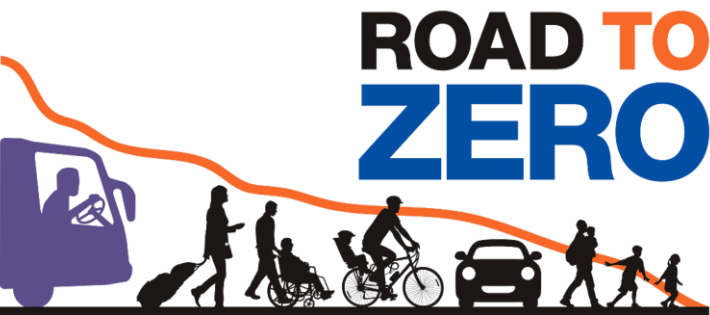
- 9 states: AL, IA, IL, KS, KY, MI, UT, WA, WI
- Data from ~12,000 miles of roads:
  - Freeways
  - Principal arterials
  - Rural minor arterials & collectors
- Identified cost-effective infrastructure improvements based on design features, traffic volumes, crash rates

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# Examples of Infrastructure Improvements Considered

- Adding passing lanes
- Widening lanes/shoulders
- Adding median/barrier
- Cycle lanes/paths
- Pedestrian facilities
- Improving delineation
- Adding Left-turn lanes
- Grade separation
- Signalization
- Roundabouts

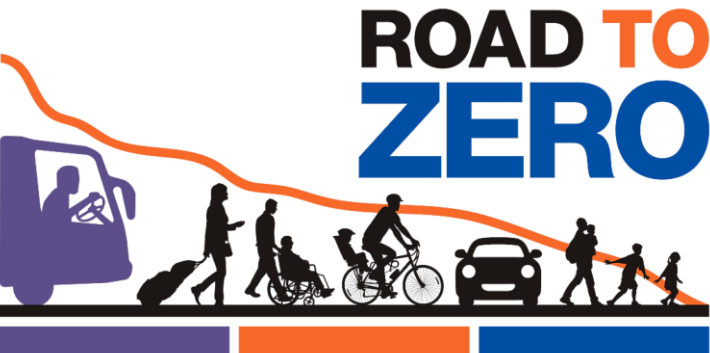


# Analysis

Previous usRAP studies estimated:

- Cost of implementation & maintenance for improvements
- Lives saved & injuries prevented
- Economic value of safety benefits

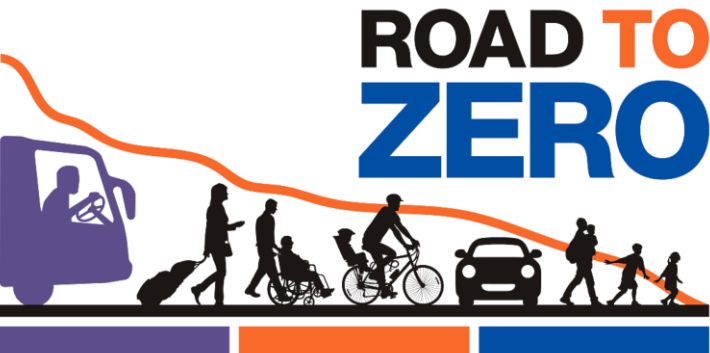
This study projected results to all roads nationwide



# Findings

Implementing all cost-effective infrastructure safety improvements nationwide could, in a 20-year time period:

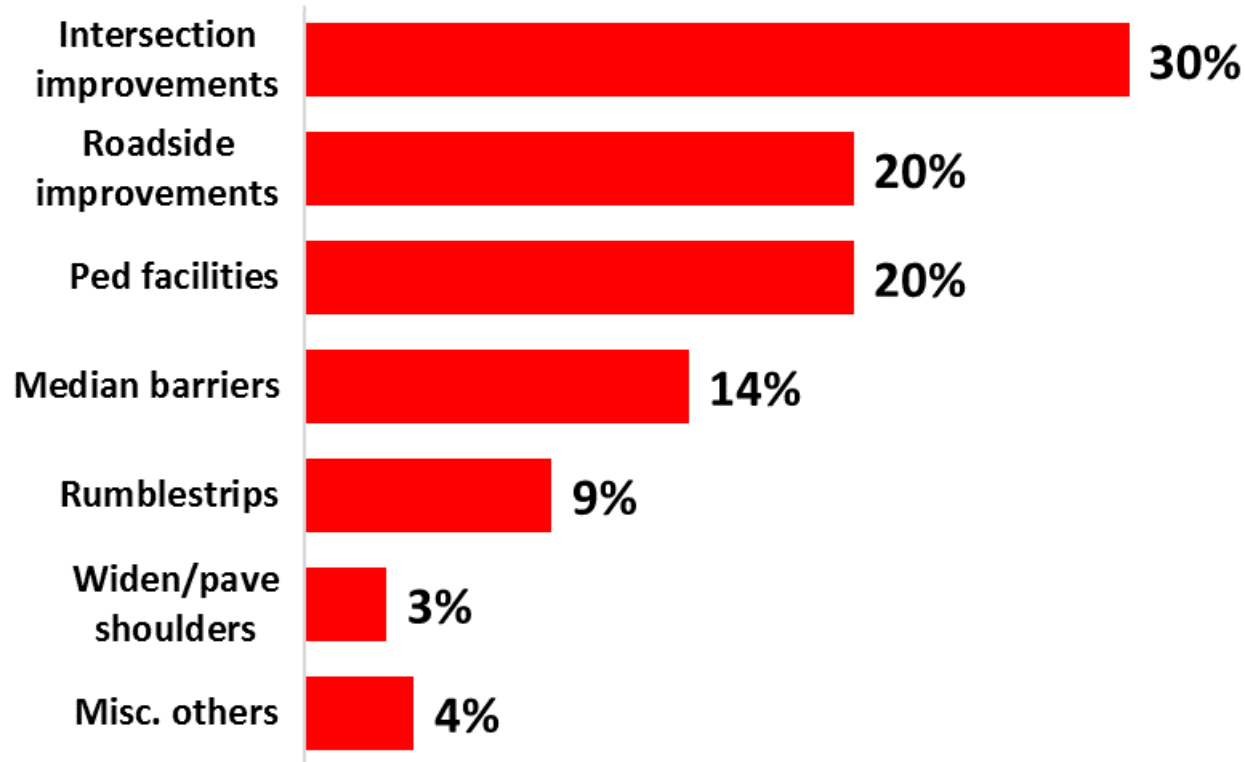
- **Save 63,700 lives**
- **Prevent 353,600 serious injuries**
- **Benefit-Cost Ratio = 2.4**





# Findings

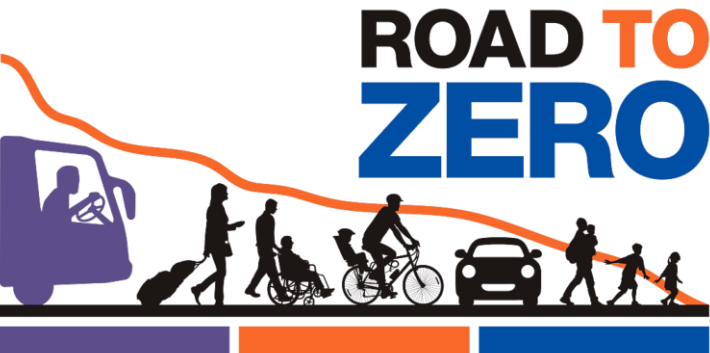
Key contributors to reductions in injuries/deaths:



# Conclusions

Increased investment in highway safety infrastructure is warranted,

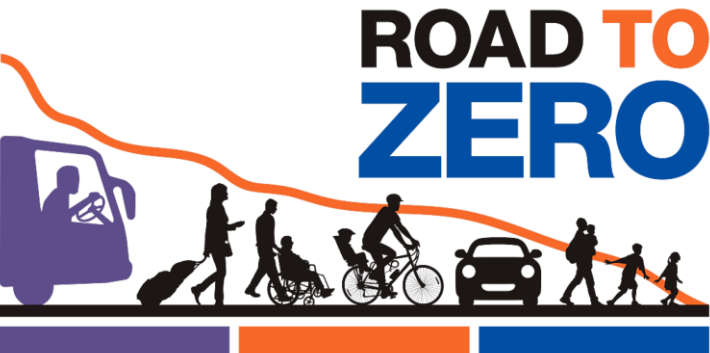
- Potential to prevent >400,000 serious injuries & deaths over 20 years
- Economic value of benefits outweighs costs



# Comment

## ***Study likely underestimates potential benefits***

- 36% of fatalities occur on roads not included in study
- Did not account for projected VMT growth
- Only considered economic value of safety benefits





[www.AAAFoundation.org](http://www.AAAFoundation.org)

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