

**ZERO** IS OUR GOAL  
A SAFE SYSTEM IS HOW WE GET THERE



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

# Road Safety Plans

## A Framework for Moving from Intent to Action

April 13, 2022



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# Today's Agenda

- ↳ Introduction to Local Road Safety Plans
- ↳ New Funding Opportunities
- ↳ ID Crash Data and Local Road Safety Plans
- ↳ Local Road Safety Plan Steps & Resources
- ↳ Discussion

# Why Local Road Safety Plans?



- ↳ Local roads have a fatality crash rate that is **3x** higher than the Interstate Highway System
- ↳ More than **75%** of all roads are maintained by local agencies
- ↳ Approximately **30-40%** of fatalities occur on locally owned roadways
- ↳ Getting to Zero **0** means addressing safety on All roadways

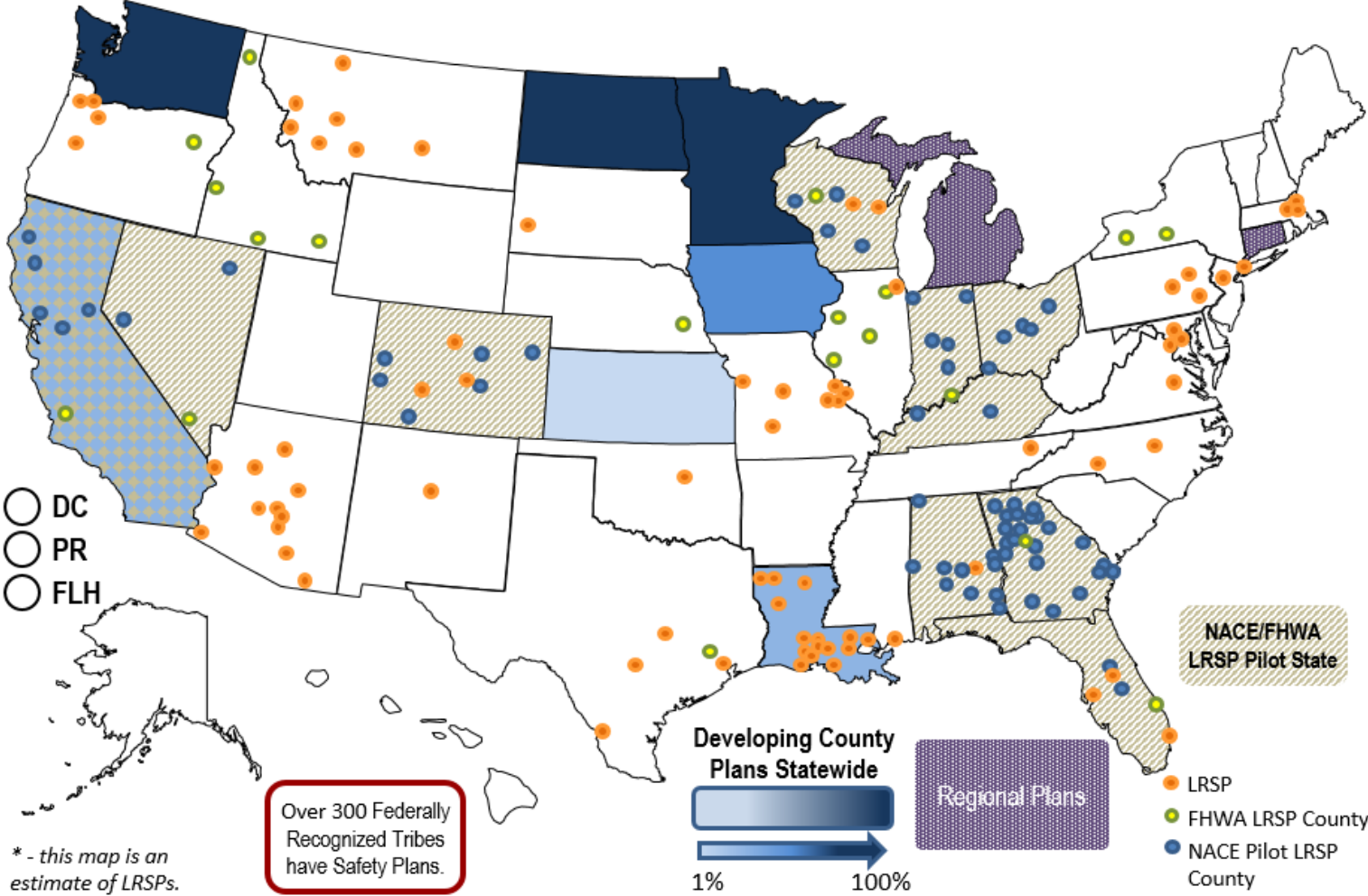
# Some History

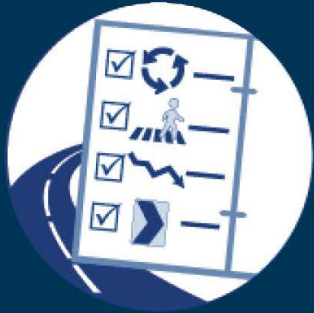
- Minnesota began comprehensive County Road Safety Plan Program in 2010 completed all 87 by 2014
- FHWA LRSP Peer Exchanges 2013 and 2016
- NACE/FHWA LRSP Pilots – 2018-2022
- In-state LRSP Peer Exchanges



Source: FHWA

# Local Road Safety Plans - 2022\*





#### **Safety Benefits:**

Agencies have experienced the following benefits after LRSP implementation:

**25%**

reduction in county road fatalities in Minnesota.

**17%**

reduction in fatal and serious injury crashes on county-owned roads in Washington State.

**35%**

reduction in severe curve crashes in Thurston County, WA.

Source: FHWA

# Local Road Safety Plans

- Provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads.
  - The LRSP development process and content are tailored to local issues and needs.
  - The process results in a prioritized list of issues, risks, actions, and improvements that can be used to reduce fatalities and serious injuries on local roads

# Benefits of LRSP



- Reduction in fatal and severe crashes
- Develop lasting partnerships (4 E's)
- Greater awareness of road safety and risks
- Leverage funding opportunities
- Transparency in prioritization and funding of projects
- Advance risk based, data driven and systemic approach to improving safety of local roadways for all users
- Incorporate safety into routine business (maintenance, capital improvements)
- Support the State's safety goals



# Aspects of LRSP

- Establish Leadership
- Analyze the Safety Data
- Determine Areas of Focus
- Identify Strategies
- Determine Available Resources
- Prioritize and Implement Strategies
- Evaluate and Update the LRSP



Source: FHWA

# Getting to Zero

A decorative banner at the top of the slide. The left portion features a dark blue background with a blurred image of a road scene, including a pedestrian crossing sign and a 'HERE FOR' sign. A large black arrow with a white outline points from the right side of this image towards the right edge of the banner. The right portion of the banner is a solid yellow rectangle.

**Consider Implementation During LRSP Development**

# Implementation of LRSPs

- ↳ Maintain Buy In and Support
- ↳ Identify Funding Mechanisms
- ↳ Identify and Prioritize Projects
- ↳ Determine Project Delivery Methods
- ↳ Evaluate Effectiveness
- ↳ Continue Communication and Coordination



Source: FHWA

# Bipartisan Infrastructure Law – Highway Safety Improvement Program



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## Related Links

- [HSIP Eligibility Guidance](#)
- [HSIP Special Rules Guidance](#)

## Tags

- [Pedestrian Safety](#)
- [Safety](#)
- [Bipartisan Infrastructure Law](#)

## Federal Highway Administration Announces More Funding and Flexibility for Key Highway Safety Program under President Biden's Bipartisan Infrastructure Law

Wednesday, February 2, 2022

FHWA 04-22

Contact: [FHWA.PressOffice@dot.gov](mailto:FHWA.PressOffice@dot.gov)

Tel.: (202) 366-0660

WASHINGTON - The U.S. Department of Transportation's Federal Highway Administration (FHWA) today released new guidance to implement changes in its signature highway safety funding program, which received substantial new funding under President Biden's Bipartisan Infrastructure Law. The guidance ensures that the new funds are used strategically to make travel safer, including protecting people outside of vehicles, such as people walking, biking, or using mobility assistive devices, thereby reducing the number of lives lost on the nation's highways, bridges, and roads. The efforts complement the Department's new [National Roadway Safety Strategy](#). (Read U.S. Transportation Secretary Pete Buttigieg's [remarks on the Strategy](#).)

In guidance issued today, FHWA outlined several changes to its Highway Safety Improvement Program (HSIP) that can help state, local, and tribal transportation agencies save lives on the roads and bridges they own and operate. The HSIP is one of the most important federal programs for transportation agencies in their efforts to protect all road users, and the Bipartisan Infrastructure Law bolsters it with an infusion of additional funds. HSIP funding levels from 2016 to 2020 under the Fixing America's Surface Transportation (FAST) Act totaled \$11.5 billion. Under the Bipartisan Infrastructure Law, HSIP funding from 2022 to 2026 will increase significantly to \$15.6 billion.

[https://safety.fhwa.dot.gov/hsip/rulemaking/docs/Section148\\_SpecialRule\\_Guidance.pdf](https://safety.fhwa.dot.gov/hsip/rulemaking/docs/Section148_SpecialRule_Guidance.pdf)

[https://safety.fhwa.dot.gov/hsip/rulemaking/docs/BIL\\_HSIP\\_Eligibility\\_Guidance.pdf](https://safety.fhwa.dot.gov/hsip/rulemaking/docs/BIL_HSIP_Eligibility_Guidance.pdf)

# Bipartisan Infrastructure Law – Complete Streets



U.S. Department of Transportation  
Office of Public Affairs  
1200 New Jersey Avenue, SE  
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<http://www.fhwa.dot.gov/briefingroom>  
Follow us on Twitter: [@USDOTFHWA](https://twitter.com/USDOTFHWA)

FHWA 07-22  
Wednesday, March 2, 2022  
Contact: [FHWA.PressOffice@dot.gov](mailto:FHWA.PressOffice@dot.gov)  
Tel.: (202) 366-0660

## Federal Highway Administration Details Efforts to Advance Complete Streets Design Model, Improve Safety for All Road Users in Report to Congress

WASHINGTON – The Federal Highway Administration (FHWA) today released a report to Congress detailing the agency’s commitment to advance widespread implementation of the Complete Streets design model to help improve safety and accessibility for all users. The report identifies five overarching opportunity areas that will inform FHWA as it moves ahead with its efforts to increase the proportion of federally funded transportation projects that are routinely planned, designed, built and operated as Complete Streets.

In FHWA’s Report to Congress, titled “[Moving to a Complete Streets Design Model: A Report to Congress on Opportunities and Challenges](#),” FHWA adopts Complete Streets as its default approach for funding and designing the majority of federally funded roadways in the US. Almost 70 percent of roads on the National Highway System are not access-controlled freeways, and these roads serve a wide variety of road users and purposes. These roadways, which include most arterials in urban areas and many small-town main streets, are the focus of FHWA’s Complete Streets initiative.

“A Complete Street is safe, and feels safe, for everyone using the street,” said Deputy Federal Highway Administrator Stephanie Pollack. “We can’t keep people safe on our roads if we don’t have safer roads and roads that slow down drivers to safe speeds. Through our Complete Streets initiative, FHWA will play a leadership role in providing an equitable and safe transportation network for travelers of all ages and abilities, including vulnerable road users and those from underserved communities that have faced historic disinvestment.”

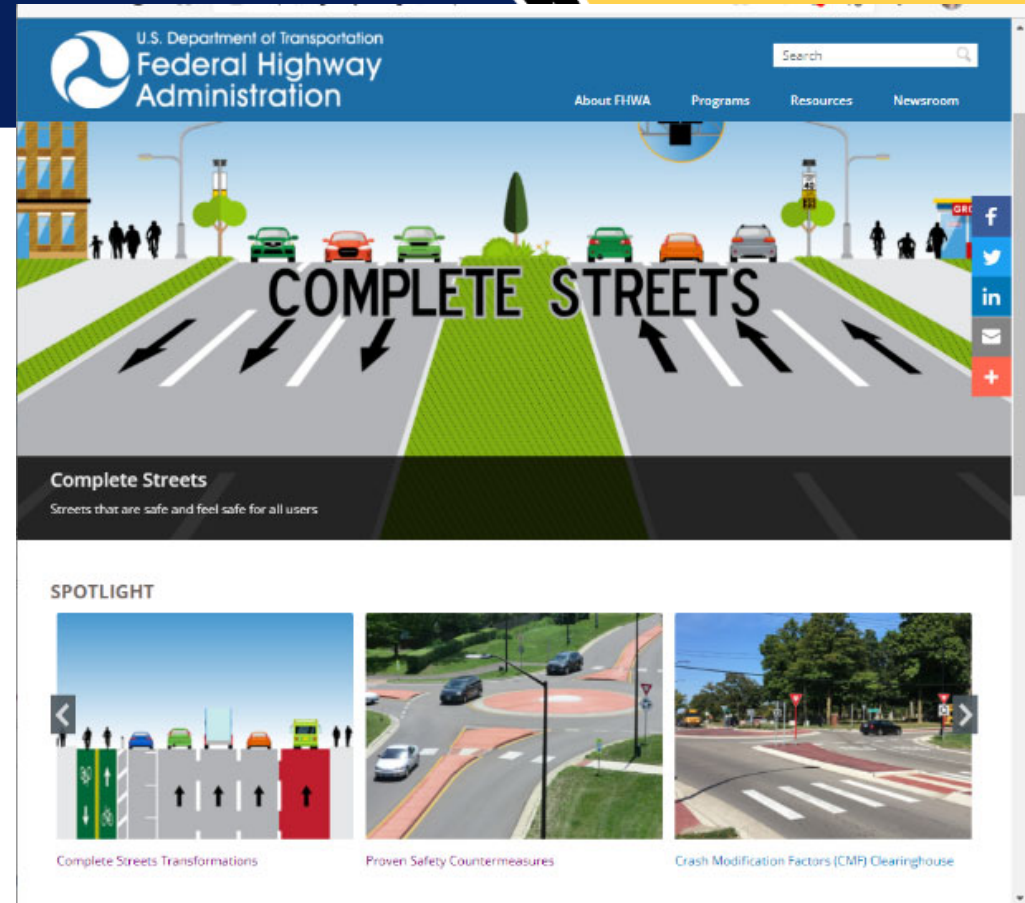
FHWA has committed to addressing our country’s crisis in roadway fatalities, including the recent increases among motorists, cyclists and pedestrians, by focusing on the design, construction, and operation of safe roads and on countermeasures that encourage safe speeds. The Complete Streets design model embodies both elements, making it a key component of FHWA’s implementation of the U.S. Department of Transportation’s [National Roadway Safety Strategy](#).

- ▶ The Bipartisan Infrastructure Law defines Complete Streets standards or policies as those which “ensure the safe and adequate accommodation of all users of the transportation system, including pedestrians, bicyclists, public transportation users, children, older individuals, individuals with disabilities, motorists, and freight vehicles.”
- ▶ The Bipartisan Infrastructure Law provides new tools and resources that allow states and local governments to build Complete Streets. This includes a requirement that states and metropolitan planning organizations use at least 2.5 percent of their planning funding on activities related to Complete Streets or travel on foot, by bike, in a vehicle or using public transit.

<https://www.fhwa.dot.gov/bipartisan-infrastructure-law/>

# FHWA Complete Streets Webpage

- Public facing web-portal to:
  - Publish all Complete Streets products
  - Link to CS resources across FHWA program offices and other stakeholders



<https://highways.dot.gov/complete-streets>

# New Funding Options



## Increasing Safe and Accessible Transportation Options

- Defines Complete Streets standards and policies
- Requires each State and MPO to carry out transportation planning activities related to complete streets or multimodal travel using—
  - State: at least 2.5% of its State Planning and Research (SPR) funds
  - MPO: at least 2.5% of its Metropolitan Planning (PL) funds

# New Funding Options



## Safe Streets and Roads for All (discretionary)

|                      |  |
|----------------------|--|
| Purpose              | Support local initiatives to prevent transportation-related death and serious injury on roads and streets (commonly referred to as “Vision Zero” or “Toward Zero Deaths” initiatives).   |
| Funding              | \$5.0B (FY 22-26) in advance appropriations from the GF  |
| Eligible entities    | <ul style="list-style-type: none"><li>• MPO</li><li>• Political subdivision of a State (e.g., local governments)</li><li>• Tribal government</li></ul>   |
| Eligible projects    | <ul style="list-style-type: none"><li>• Comprehensive safety action plan (planning grant)</li><li>• Planning, design, and development activities for infrastructure projects and other strategies identified in a comprehensive safety action plan</li></ul>   |
| Other key provisions | <ul style="list-style-type: none"><li>• Sets aside not less than 40% of total funding each FY for planning grants.</li><li>• Requires considering, among other factors, the likelihood of a project significantly reducing or eliminating fatalities and serious injuries involving various road users, including pedestrians, bicyclists, public transportation users, motorists, and commercial operators.</li></ul> |



# New Funding Options

## Wildlife Crossings Pilot Program (discretionary)

|                      |  |
|----------------------|--|
| Purpose              | Support projects that seek to reduce the number of wildlife-vehicle collisions, and in carrying out that purpose, improve habitat connectivity   |
| Funding              | <ul style="list-style-type: none"><li>• \$350 M (FY 22-26) in Contract Authority from the HTF</li></ul>  |
| Eligible entities    | <ul style="list-style-type: none"><li>• State highway agency (or equivalent)</li><li>• MPO</li><li>• Local government</li><li>• Regional transportation authority</li><li>• Special purpose district or public authority with a transportation function</li><li>• Indian Tribe</li><li>• Federal land management agency</li></ul>  |
| Eligible projects    | <ul style="list-style-type: none"><li>• Projects to reduce wildlife-vehicle collisions</li></ul>   |
| Other key provisions | <ul style="list-style-type: none"><li>• Sets aside not less than 60% of grant funds for projects in rural areas</li><li>• Provision related to pilot program requires:<ul style="list-style-type: none"><li>○ study of methods to reduce wildlife-vehicle collisions;</li><li>○ workforce development and technical training courses <b>with</b>;</li><li>○ standardized methodology for collecting and reporting spatially accurate wildlife collision and carcass data for the NHS; and</li><li>○ guidance on evaluating highways for potential mitigation measures to reduce wildlife-vehicle collisions and increase habitat connectivity.</li></ul></li></ul> |

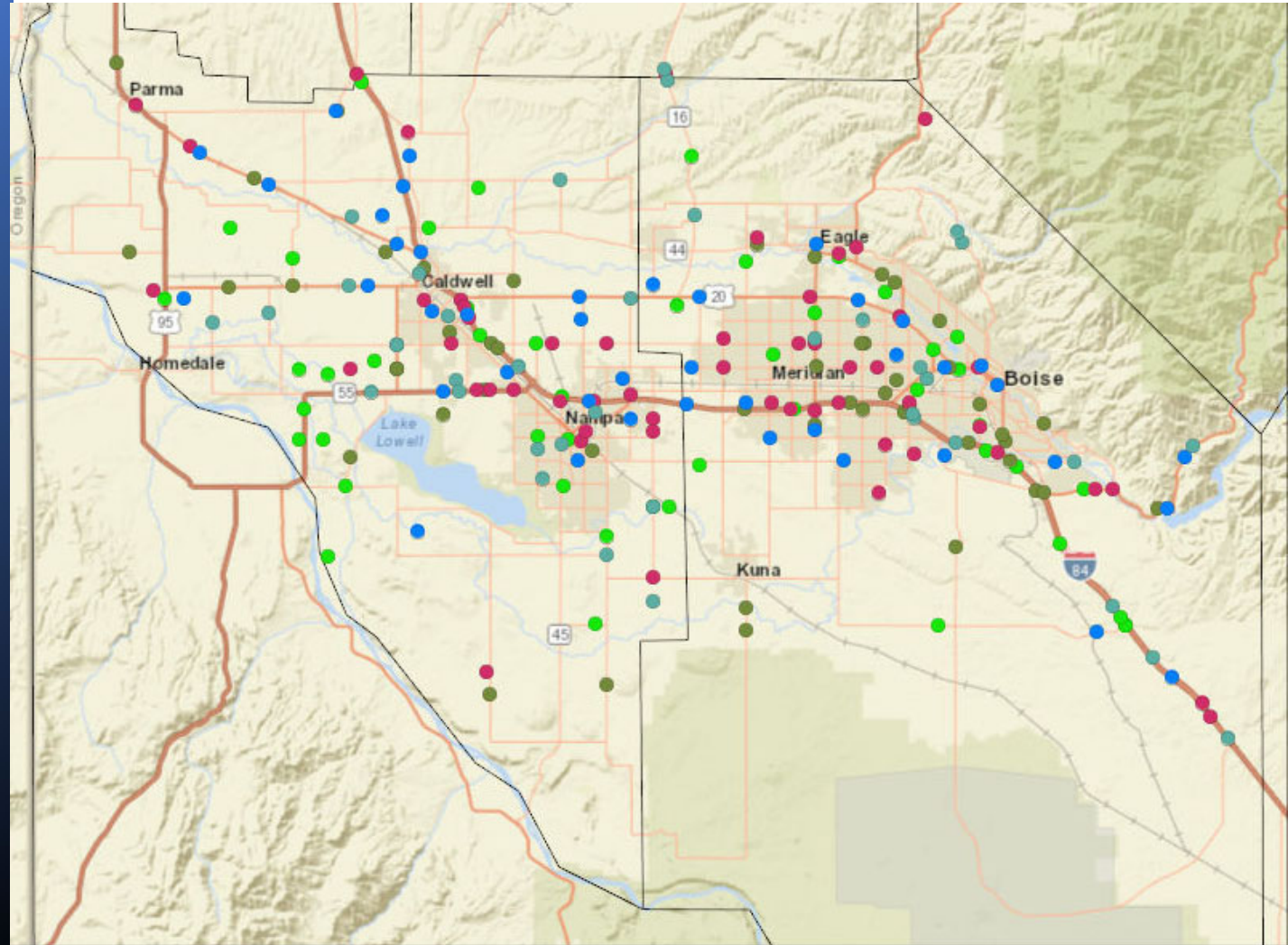
# New Funding Options



## Rural Surface Transportation Grants (discretionary)

|                      |  |
|----------------------|--|
| Purpose              | Improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.   |
| Funding              | \$2 B (FY 22-26) in Contract Authority from the HTF  |
| Eligible entities    | <ul style="list-style-type: none"><li>• State</li><li>• Regional transportation planning organization (RTPO)</li><li>• Local government</li><li>• Tribal government</li></ul>  |
| Eligible projects    | <ul style="list-style-type: none"><li>• Highway, bridge, or tunnel projects eligible under NHPP, STBG or the Tribal Transportation Program</li><li>• Highway freight project eligible under NHFP</li><li>• Highway safety improvement project</li><li>• Project on a publicly-owned highway or bridge improving access to certain facilities that support the economy of a rural area</li><li>• Integrated mobility management system, transportation demand management system, or on-demand mobility services</li></ul> |
| Other key provisions | <ul style="list-style-type: none"><li>• Sets aside each FY: ≤10% for grants to small projects (&lt;\$25M); 25% for designated routes of the ADHS; and 15% for projects in States with higher than average rural roadway lane departure fatalities</li></ul>  |

Fatal Crashes  
Ada and Canyon  
Counties  
2016-2020

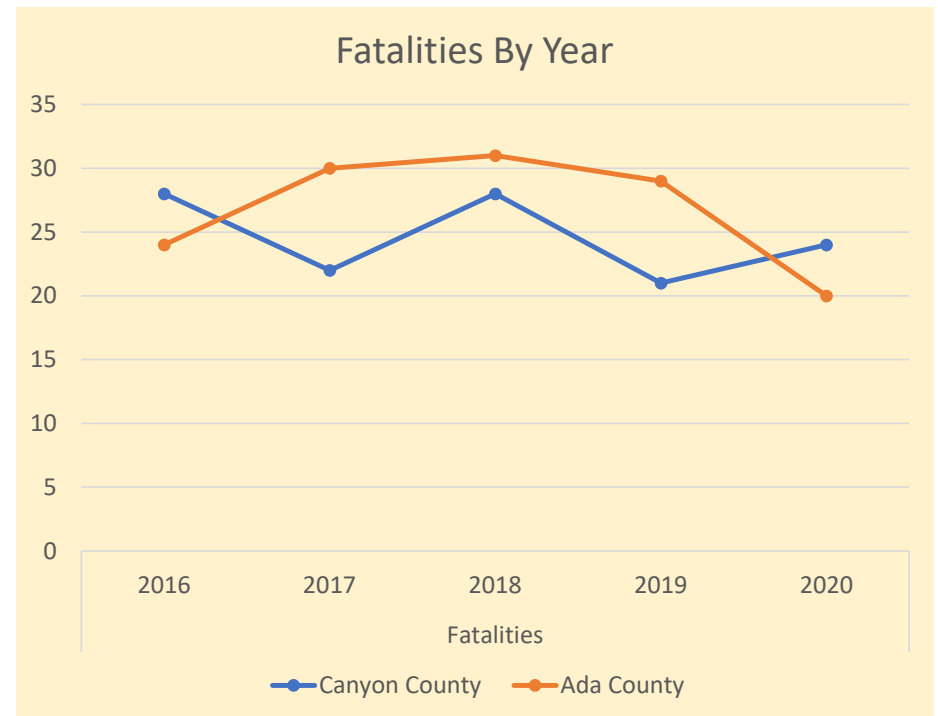


# Fatalities



5 Year Trend For The Top 10 Counties of 2020 - Fatalities

| Idaho Counties by 2020 Ranking |                           | Fatalities |           |           |           |           | Percent of Total |           |           |           |           |
|--------------------------------|---------------------------|------------|-----------|-----------|-----------|-----------|------------------|-----------|-----------|-----------|-----------|
|                                |                           | 2016       | 2017      | 2018      | 2019      | 2020      | 2016             | 2017      | 2018      | 2019      | 2020      |
| 1                              | <b>Canyon County</b>      | <b>28</b>  | <b>22</b> | <b>28</b> | <b>21</b> | <b>24</b> | <b>11</b>        | <b>9</b>  | <b>12</b> | <b>9</b>  | <b>11</b> |
| 2                              | <b>Ada County</b>         | <b>24</b>  | <b>30</b> | <b>31</b> | <b>29</b> | <b>20</b> | <b>9</b>         | <b>12</b> | <b>13</b> | <b>13</b> | <b>9</b>  |
| 3                              | Bonneville County         | 12         | 11        | 11        | 10        | 13        | 5                | 4         | 5         | 4         | 6         |
| 4                              | Kootenai County           | 15         | 19        | 18        | 15        | 13        | 6                | 8         | 8         | 7         | 6         |
| 5                              | Twin Falls County         | 18         | 9         | 10        | 7         | 12        | 7                | 4         | 4         | 3         | 6         |
| 6                              | Bannock County            | 10         | 13        | 8         | 9         | 9         | 4                | 5         | 3         | 4         | 4         |
| 7                              | Fremont County            | 1          | 2         | 6         | 5         | 9         | 0                | 1         | 3         | 2         | 4         |
| 8                              | Gooding County            | 4          | 6         | 1         | 5         | 9         | 2                | 2         | 0         | 2         | 4         |
| 9                              | Boise County              | 3          | 4         | 6         | 6         | 8         | 1                | 2         | 3         | 3         | 4         |
| 10                             | Elmore County             | 9          | 12        | 7         | 6         | 8         | 4                | 5         | 3         | 3         | 4         |
| <b>Sub Total 1.*</b>           | <b>Top Ten Counties</b>   | 160        | 143       | 141       | 132       | 125       | 63               | 58        | 60        | 59        | 58        |
| <b>Sub Total 2.**</b>          | <b>All Other Counties</b> | 93         | 102       | 93        | 92        | 89        | 37               | 42        | 40        | 41        | 42        |
| <b>Total</b>                   | <b>All Counties</b>       | 253        | 245       | 234       | 224       | 214       | 100              | 100       | 100       | 100       | 100       |



# Idaho LRSP Efforts

- ↳ Attended LRSP Peer Exchange 2016 in Ohio
- ↳ In-State Peer Exchange in 2017
- ↳ Developed LRSPs for 4 Counties 2021
  - Bonner
  - Bonnick
  - Canyon
  - Twin Falls





# Questions

[Rosemarie.Anderson@dot.gov](mailto:Rosemarie.Anderson@dot.gov)

**ZERO**  **IS OUR GOAL**  
A SAFE SYSTEM IS HOW WE GET THERE

# Local Road Safety Plans

## *Developing a Local Road Safety Plan*



U.S. Department of Transportation  
**Federal Highway Administration**

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# LRSP DIY Site

**LOCAL ROAD SAFETY PLANS:**  
Your Map to Safer Roadways

Step 1 Identify Stakeholders

Step 2 Use Safety Data

Step 3 Choose Proven Solutions

Step 4 Implement Solutions

Finish Line

Welcome to the local road safety plan do-it-yourself website! We are so happy you are here. On this site, you'll find everything you need to make a plan that fits your community and gets people home safely. Watch the video below to learn how to use the site and build your plan. If you need help contact us anytime.

SCROLL DOWN FOR MORE VIDEOS

Welcome - FHWA Leadership

**LOCAL ROAD SAFETY PLANS:**  
Your Map to Safer Roadways

Welcome

Local Road Safety Plan

TOOLS & RESOURCES

Guides & Training

LRSP Examples

State LRSP Sites

<https://safety.fhwa.dot.gov/LRSPDIY/>





# Overview of LRSPs

# LOCAL ROAD SAFETY PLANS:

Your Map to Safer Roadways

No matter what your resources, a Local Road Safety Plan will guide you to data-driven solutions and safer roads.

[https://safety.fhwa.dot.gov/provencountermeasures/local\\_road/](https://safety.fhwa.dot.gov/provencountermeasures/local_road/)

Chevron signs reduce nighttime crashes by 25%.

## Choose Proven Solutions

- Chevrons
- Roundabouts
- Targeted Enforcement
- Crosswalks

## Identify Stakeholders

- Law Enforcement
- Public Health
- EMS
- Elected Officials

START HERE!

## Use Safety Data

- Crashes
- Maintenance Logs
- Safety Audits
- Traffic Violations

In 2017, over 50% of fatalities occurred on rural roads, but just 19% of Americans live in rural areas.

## Implement Solutions

- Education & Enforcement
- Capital Projects
- Maintenance Work

Safer Roads Ahead

More than 75% of all roads are maintained by local agencies.

LOCAL ROAD SAFETY PLANS

Help Get People Home Safely



U.S. Department of Transportation  
Federal Highway Administration

# Why should my community create a Local Road Safety Plan?

- **Reduction in fatal and severe crashes**
- **Develop lasting partnerships (5 E's)**
- **Greater awareness of road safety and risks**
- **Leverage funding opportunities**
- **Transparency in prioritization and funding of projects**
- **Advance risk based, data driven and systemic approach to improving safety of local roadways**
- **Incorporate safety into routine business (maintenance, capital improvements)**



# Idaho Highway Safety

Your Safety. Your Mobility. Your Economic Opportunity.

**IDAHO**  
TRANSPORTATION DEPARTMENT

ENHANCED BY Google

HOME DMV ROAD REPORT BUSINESS PROJECTS BOARD ABOUT ITD CAREERS CONTACT US

## Highway Safety

Crash Records & Statistics News Child Safety Seat Aggressive Driving Distracted Driving Seat Belts Youth Education Grant Programs & Funding Forms and Resources

Contacts

Crash Data and Statistical Information - Thousands of crashes happen each year on Idaho roads. Collection and analysis of crash reports is a crucial function of the Office of Highway Safety (OHS) to help make data-driven decisions that affect Idaho's transportation system and the people who use it.

A Vehicle Crash Report (VCR) is filled out for every crash that involves a motor vehicle, occurs on public property and results in more than \$1500 (\$750 before January 1, 2006) property damage for any one person involved in the crash, or results in an injury to any person involved. Law enforcement officers who respond to crashes identify a number of factors that contributed to the crash. These factors encompass all three aspects of the crash: environment (including location and road conditions), vehicle, and person information.

Once a crash report is completed, the responding law enforcement agency transmits the information to OHS electronically where the report is reviewed by a crash analyst. The crash analyst then checks the report for accuracy before entering the information into Idaho's crash database.

### Idaho Crash Data Map

Click on Map to View Crash Data

Red = Fatal Injury, Red/Orange = Suspected Serious Injury, Orange = Suspected Minor/Visible Injury, Yellow = Possible Injury/Complaint, Blue = Property Damage Report

<https://itd.idaho.gov/safety/>



### COMMUNITIES IN MOTION 2050 GOALS AND OBJECTIVES

The Complete Network Policy was designed to support the goals and objectives of the region's long-range transportation plan, *Communities in Motion*. Plan goals are reviewed, and updated as appropriate, with each update to the long-range plan.

*Communities in Motion 2050* addresses four goal areas: safety, economic vitality, convenience, and quality of life. The *Communities in Motion 2050* goals and objectives are included here as examples of how the Complete Network Policy can be used to support long-range plan goals. These goal focus areas are reflected throughout this policy and are shown using the icons at the bottom of this page.

| Goal                     | Objectives                                | Auto | Bicycle | Freight | Pedestrian | Public Transportation |
|--------------------------|---|------|---------|---------|------------|-----------------------|
| <b>Safety</b>            | Safety                                    | X    | X       | X       | X          | X                     |
|                          | Security                                  |      |         | X       |            | X                     |
|                          | Resiliency                                |      |         | X       |            |                       |
| <b>Economic Vitality</b> | Economic Vitality                         | X    | X       | X       | X          | X                     |
|                          | Freight Accessibility and Mobility        |      |         | X       |            |                       |
|                          | Preservation and Infrastructure Condition | X    | X       | X       | X          | X                     |
|                          | Reliability                               | X    |         | X       |            | X                     |
|                          | Travel and Tourism                        | X    | X       |         |            | X                     |
|                          | Growth Management                         |      | X       |         | X          | X                     |
|                          | Farmland Preservation                     |      |         |         |            | X                     |
| <b>Convenience</b>       | Accessibility and Mobility                | X    | X       |         | X          | X                     |
|                          | Connectivity                              |      | X       |         | X          |                       |
|                          | Efficiency and Congestion Reduction       | X    |         | X       |            | X                     |
| <b>Quality of Life</b>   | Environment                               |      | X       |         | X          | X                     |
|                          | Health                                    |      | X       |         | X          |                       |
|                          | Open Space                                |      | X       |         | X          |                       |
|                          | Housing and Affordability                 |      | X       |         |            | X                     |
|                          | Equity                                    |      | X       |         | X          | X                     |



## Poll...

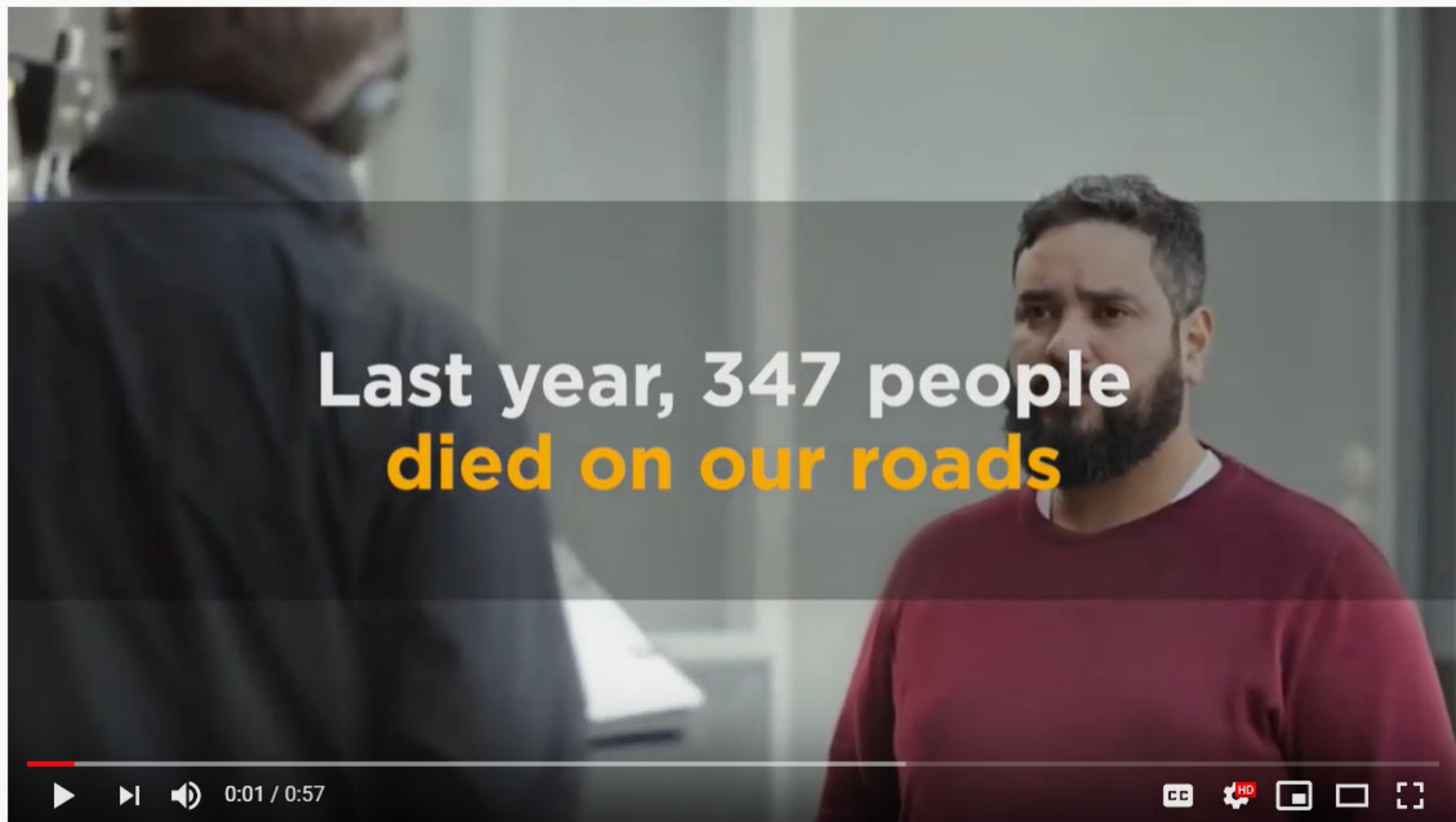
How many deaths occurred  
on your road network last  
year?



**Menti.com**  
**4677 7210**



# Towards Zero Video – New South Wales



<https://www.youtube.com/watch?v=ra5LK8x86zU>



# Vision

- The “dreaming” component
- An idealized future description of your success
- Should inspire, energize, focus, and help you and your partners picture success as you develop the plan

Vision

Mission

Goals

# Mission

- The “doing” component
- Describes what a community is going to do to achieve its vision
- States their objectives and approach
- Should energize and focus and your partners on something that everyone can work towards to achieve





# Goals

Vision

Mission

Goals

- **Help refine the team's focus and work towards outputs and outcomes that are measurable**
  - *Reduce the number of fatal crashes to Zero by 2030.*
  - *Implement proven safety solutions systemically to reduce fatal and severe crashes.*
  - *Reduce the number of severe Run off the Road crashes by 50% by 2025.*
  - *Increase seat belt usage by 20% for teenage drivers.*



# Step 1

# Identify Stakeholders

# Identify Stakeholders

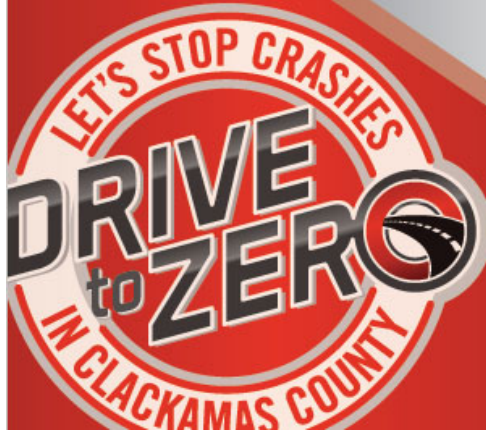


- **Identify a Champion (you!)**
- **Identify and Contact Stakeholders from the “Five Es” of Traffic Safety:**
  - *Engineering*
  - *Enforcement*
  - *Education*
  - *Emergency Medical Services*
  - *Everyone Else*
- **Convene a Working Group**
- **Develop a Vision, Mission Statement, and Goals**
- **Gain Support**



Clackamas County

# DRIVE TO ZERO SAFETY ACTION PLAN



March 2019

## County Strategic Priorities

- Build public trust through good government
- Grow a vibrant economy
- Build a strong infrastructure
- Ensure safe, healthy and secure communities
- Honor, utilize, promote and invest in our natural resources



National Strategy On Highway Safety  
PROUD PARTNER  
TowardZeroDeaths.org



## DRIVE TO ZERO

Achieving the goal of zero traffic fatalities will involve everyone.



Local Road Safety Plans

# Convene a Working Group

## THE CASE FOR A COMPLETE NETWORK

A complete transportation network has wide-ranging benefits for all stakeholders; portions of this policy, and other COMPASS policies and programs, support those benefits with implementation tools and guidance. The complete network benefits also align with *Communities in Motion 2050* objectives, as shown in bold.

| Stakeholder                    | Benefit  | Tools and Guidance   |
|--------------------------------|--|--|
| <b>Land Use Agencies</b>       | Supports <b>transportation and land use integration</b> by providing a long-term, multimodal vision to help identify infrastructure and services to serve future growth and development.   | The complete network map (page 19) helps define the vision for the transportation system to aid in long-range planning.<br><br>COMPASS development review checklists support local land-use decision-making by providing congestion management strategies to mitigate increased traffic congestion generated by new development. See Appendix. |
| <b>Transportation Agencies</b> | Provides a <b>coordinated approach</b> that identifies needs and provides solutions for all transportation modes. This leads to a safer, more comfortable, economically viable, and convenient transportation system that supports a high quality of life for all users. | The regional transportation improvement program provides a short-term capital plan to help fund projects that support the Complete Network Policy.<br><br>For unfunded priorities, COMPASS uses a performance-based planning approach to prioritize needs based on goals and purposes articulated for each corridor.                           |
| <b>Business Community</b>      | Provides a <b>safe and convenient</b> multimodal transportation system that can support business expansion and provides a <b>reliable system</b> to bring goods to stores without delay.   | The complete network map highlights the future needs of the transportation network to help in siting anticipated developments.   |
| <b>General Public</b>          | Maintains the region's <b>quality of life</b> by assisting government agencies in building a cohesive multimodal transportation system.  | The complete network map provides insight into the vision for the region's transportation system to enable the general public to anticipate future transportation projects and growth.   |



## TRANSPORTATION MODES

The Complete Network Policy addresses five distinct transportation modes: automobile, bicycle, freight, pedestrian, and public transportation. These modes are depicted by the following icons throughout this policy.



Automobile



Bicycle



Freight



Pedestrian



Public Transportation



# Download the LRSP Templates

- Available on DIY Site

# Poll...

Who are some of your stakeholders?



**Menti.com**  
**4677 7210**



## Step 2

### Use Safety Data – Part 1



# Types of Safety Data

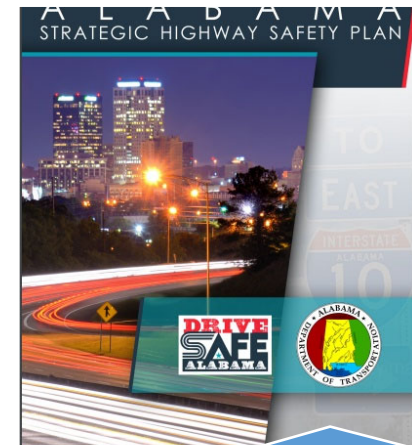


# Sources of Data



Maintenance History  
Citizen Requests  
Law Enforcement

Collision Reports &  
Roadway Attributes



Strategic Highway Safety  
Plans



Poll...

**What sources of safety data  
are available to you?**



**Menti.com  
4677 7210**



# Systemic Safety Analysis

FHWA-SA-17-043

## Rx How Healthy is Your Road System?

Find out with systemic analysis

*Systemic analysis is like a health screening for your road system. Just as your doctor identifies risk factors for illness, systemic analysis identifies locations that are at highest risk for severe crashes. Practitioners can then prioritize projects based on risk and apply low-cost safety treatments to reduce severe crashes across the whole at-risk system.*

### CURVE COUNTY - X RAY RESULTS

| Curve   | Risk Factors  |
|---------|---------------|
| Curve A | 🚗             |
| Curve B | 🚗 + 🚗 + 🚗 + 🚗 |
| Curve C | 🚗 +           |
| Curve D | 🚗             |
| Curve E | 🚗 + 🚗         |

### Symptoms

Severe roadway departure crashes on curves.

**Possible Risk Factors:**

- 🚗 Avg. Daily Traffic > 1,000 vehicles
- 📏 Curve Radius < 1,000 feet
- ⊕ Intersection within Curve
- 🚗 Visual Trap within Curve
- 🚗 Severe Crash within Curve

### Diagnosis

11% of all curves have 3 or more risk factors.

**Lab Results:**

### Treatment

Prioritize highest risk sites and treat with low-cost countermeasures such as chevron signs or rumble strips.

### Follow-Up

Track and evaluate safety improvements. Further remediation can be implemented as needed.

**Systemic vs. Systemwide**  
Systemic does not mean treating all locations. It allows agencies to treat the highest-risk sites within limited budgets.

[https://safety.fhwa.dot.gov/rsdp/ddsa\\_resources/ddsa\\_systemic\\_analysis.pdf](https://safety.fhwa.dot.gov/rsdp/ddsa_resources/ddsa_systemic_analysis.pdf)



Local Road Safety Plans

# Video: Minnesota's Systemic Approach to Safety on All Roads

- Available on DIY Site



A screenshot of the "LOCAL ROAD SAFETY PLANS: Your Map to Safer Roadways" website. The page features a navigation bar with five steps: "Step 1 Identify Stakeholders", "Step 2 Use Safety Data", "Step 3 Choose Proven Solutions", "Step 4 Implement Solutions", and "Finish". Below the navigation bar is a text block: "Your local road safety plan should be data driven as much as possible. Don't have great data? No worries, everyone has some data and you can always get more as you go. Use the resources on this page to help you discover and use the data you have. Remember, do what you can, with what you have, where you are!". A central video player is titled "LRSP DIY: Use Safety Data" and features the same "LOCAL ROAD SAFETY PLANS" logo and the text "USE SAFETY DATA". To the right, there are two video thumbnails: "Systemic Analysis" and "DDSA Minnesota Case Study 2016". At the bottom, there is a "TOOLS &amp; RESOURCES" section with links for "Guides", "Systemic Tools", and "Training".

<https://youtu.be/jVds3AWWqbk>



# Crash Tree Combinations

## Primary

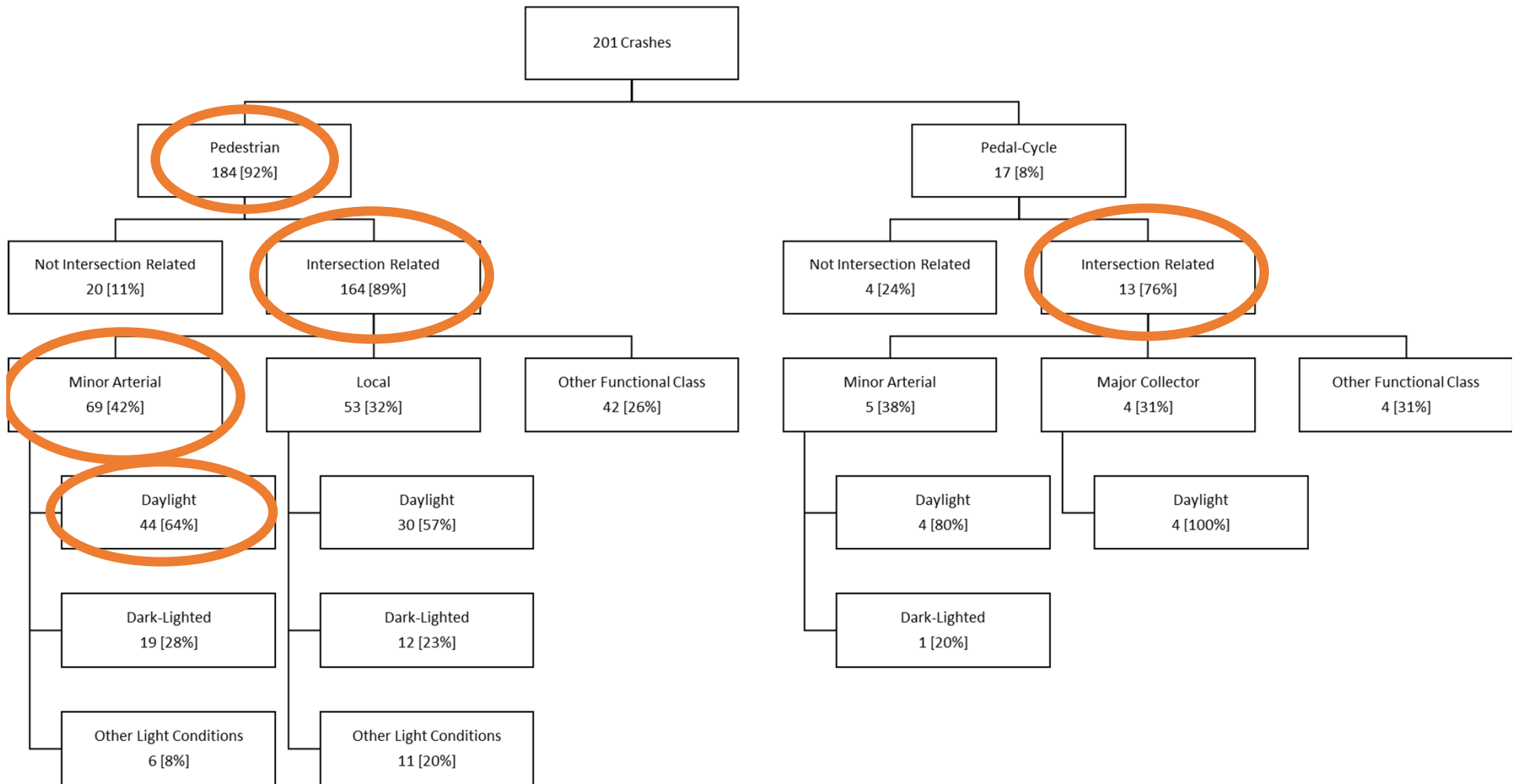
- State / local
- Rural / urban
- Segment / intersection
- Segment type
  - *Freeway, multilane, two-lane, one-way*
- Intersection control
  - *Signalized*
  - *Unsignalized*
  - *Uncontrolled*

## Secondary

- Tangent / curve
- High-speed / low-speed
- Street lighting
- District or regions
- Traffic volume
- Lane width
- Shoulder type/width
- Alignment
- Land use



# KABC Vulnerable User Crashes on City Roads



# Potential Risk Factors – Roadway Departure

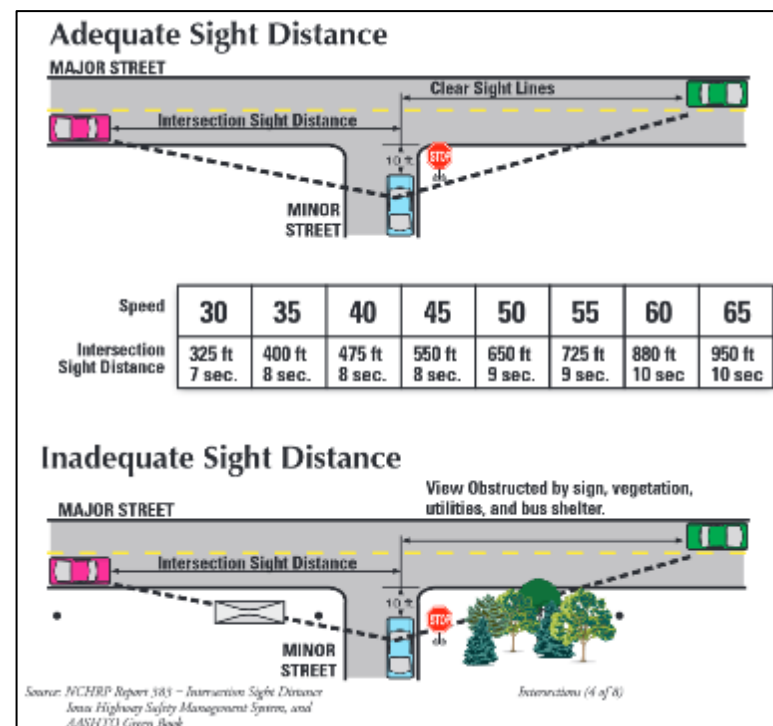
- Number of lanes
- Lane width
- Shoulder width / type
- Median width / type
- Horizontal curvature
  - *Superelevation*
  - *Delineation*
  - *Advance warning*
  - *Speed differential*
  - *Visual trap*
- Pavement condition / friction
- Roadside features
  - *Sideslope design*
  - *Clear zone*
- Driveway density
- Other features
  - *Rumble strips*
  - *Lighting*
  - *On-street parking*





# Potential Risk Factors - Intersections

- Traffic control device
- Left-turn or right-turn lanes
- Skew angle
- Advance warning signs
- Located in or near horizontal curve
- Type of development (e.g., commercial)
- Signals
  - *Left-turn phasing*
  - *Number of signal heads vs. number of lanes*
  - *Backplates*
  - *Right-turn-on-red*
  - *Overhead versus pedestal mounted*



# Potential Risk Factors - Pedestrians

- Type of intersection control
- Crosswalk presence
- Lanes to cross/crossing distance
- Pedestrian signal/type
- Sidewalk presence
- Adjacent land uses
- Transit stops
- Lighting

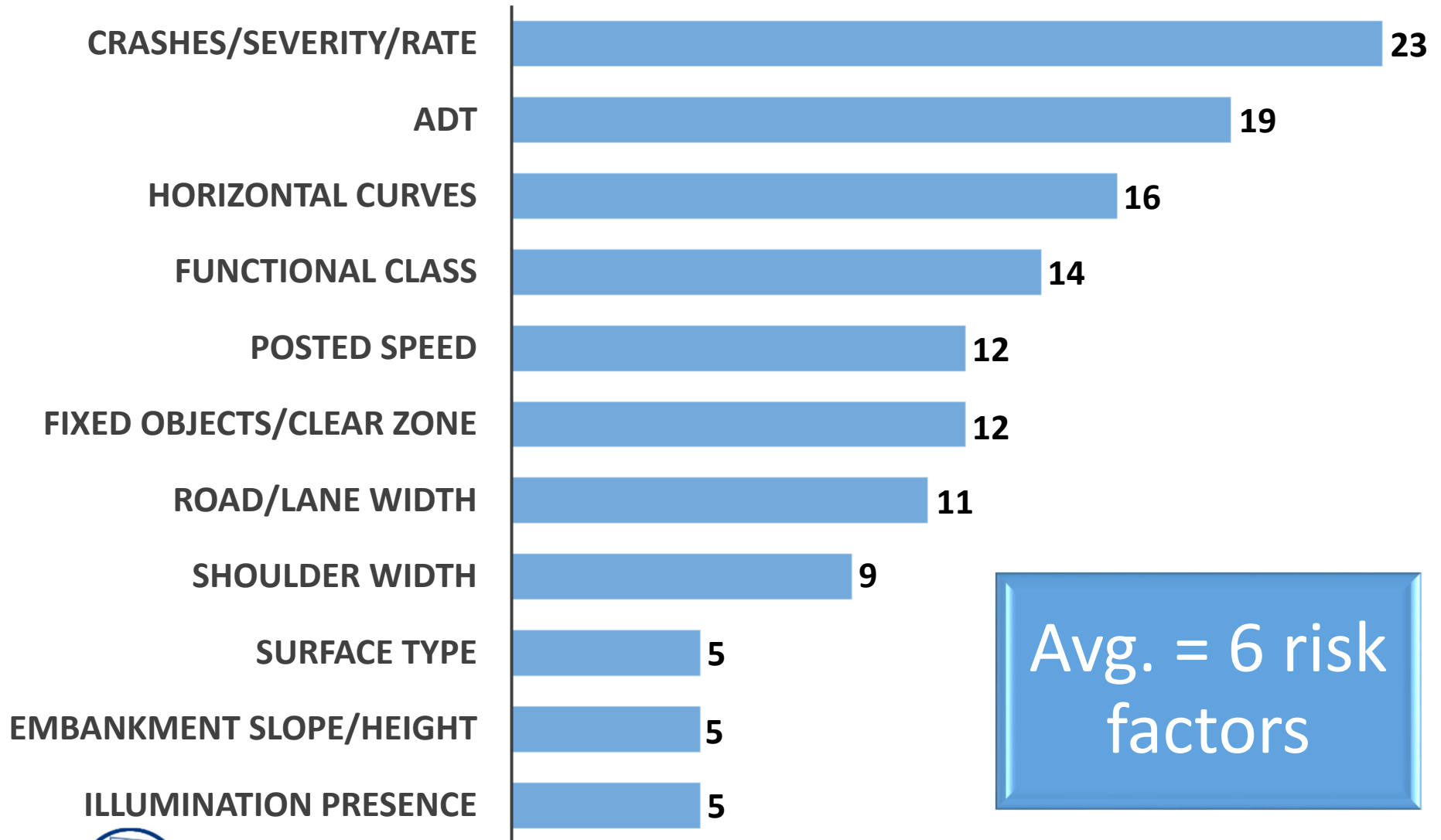


# Other Potential Risk Factors

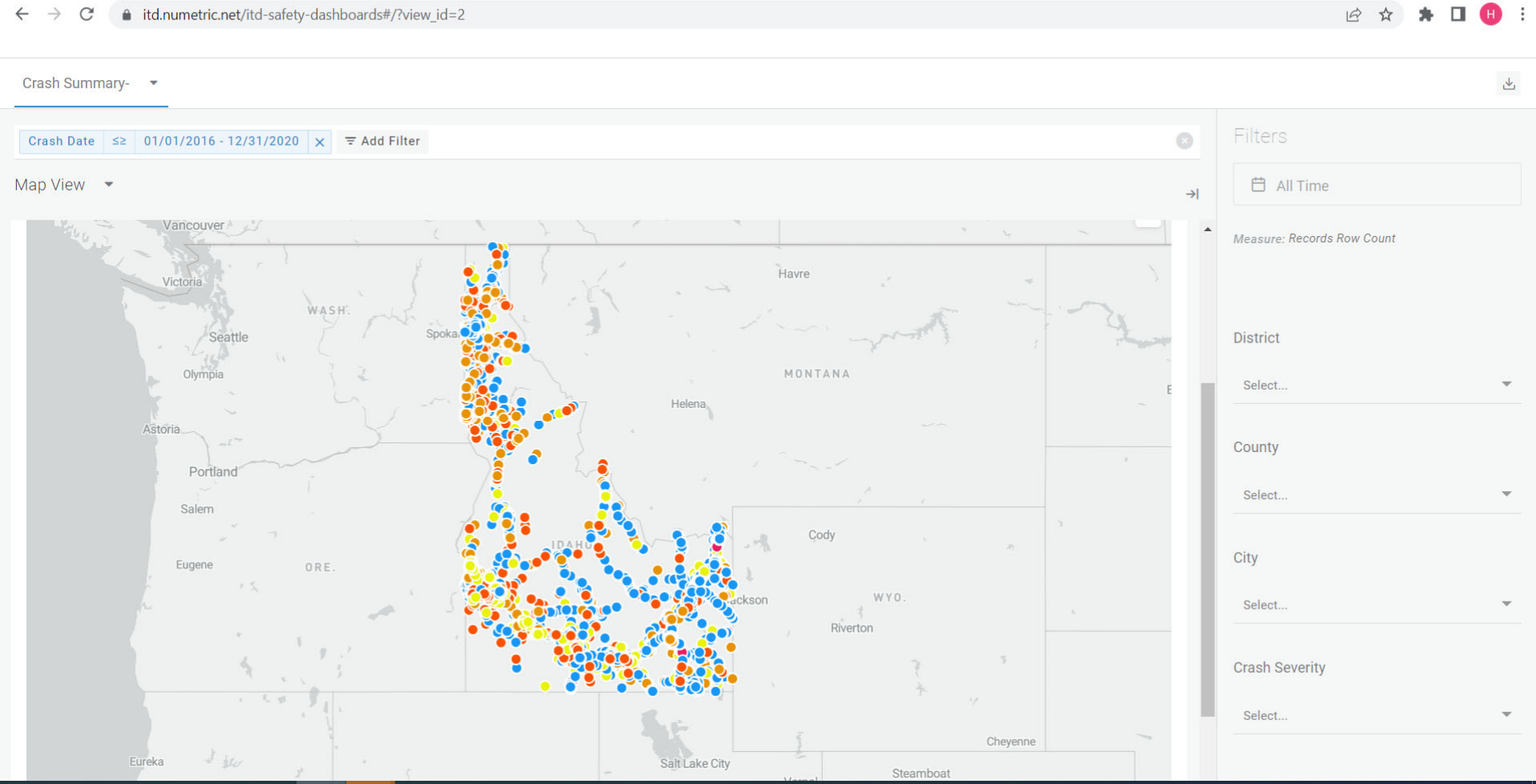
- **Traffic volume**
- **Speed**
  - *Posted, operating*
- **Railroad crossing**
- **Automated enforcement**
- **Adjacent land use type**
  - *Schools, commercial, or alcohol-sales establishments*
- **Bus stops (presence and location)**



# Risk Factors (WA Counties 2017)



# Idaho Highway Safety Crash Data



<https://itd.idaho.gov/safety/>



## Step 3

Choose Proven  
Solutions

# FHWA Proven Safety Countermeasures

OFFICE OF SAFETY  
Proven Safety Countermeasures

**SPEED MANAGEMENT**

-  Speed Safety Cameras
-  Variable Speed Limits
-  Appropriate Speed Limits for All Road Users

**ROADWAY DEPARTURE**

-  Wider Edge Lines
-  Enhanced Delineation for Horizontal Curves
-  Longitudinal Rumble Strips and Stripes on Two-Lane Roads
-  SafetyEdge<sup>SM</sup>
-  Roadside Design Improvements at Curves
-  Median Barriers

**INTERSECTIONS**

-  Backplates with Retroreflective Borders
-  Corridor Access Management
-  Dedicated Left- and Right-Turn Lanes at Intersections
-  Reduced Left-Turn Conflict Intersections
-  Roundabouts
-  Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
-  Yellow Change Intervals

**PEDESTRIANS/BICYCLES**

-  Crosswalk Visibility Enhancements
-  Bicycle Lanes
-  Rectangular Rapid Flashing Beacons (RRFB)
-  Leading Pedestrian Interval
-  Medians and Pedestrian Refuge Islands in Urban and Suburban Areas
-  Pedestrian Hybrid Beacons
-  Road Diets (Roadway Reconfiguration)
-  Walkways

**CROSSCUTTING**

-  Pavement Friction Management
-  Lighting
-  Local Road Safety Plans
-  Road Safety Audit

FHWA-SA-21-082



**Local Road Safety Plans**

<https://safety.fhwa.dot.gov/provencountermeasures/>

# Enhanced Delineation and Friction for Horizontal Curves

## Enhanced Delineation

- Pavement Markings
- Post-mounted delineators
- Brighter/larger signs
- Dynamic curve warning signs



## Increased Pavement Friction

- Sharp Curves
- Wet Conditions
- Polished Surfaces
- Excessive Speeds



Chevron signs installed along a curve.

Source: Thinkstock



Safety Benefits:

### Chevron Signs

**25%** reduction in night-time crashes<sup>1</sup>

**16%** reduction in non-intersection fatal and injury crashes<sup>2</sup>

### Oversized Chevron Signs

**15%** reduction in fatal and injury crashes<sup>3</sup>

### Sequential Dynamic Chevrons

**60%** reduction in fatal and injury crashes<sup>3</sup>

### In-Lane Curve Warning Pavement Markings

**35-38%** reduction in all crashes.<sup>4,5</sup>

### New Fluorescent Curve Signs or Upgrade Existing Curve Signs to Fluorescent Sheeting

**18%** reduction in non-intersection, head-on, run-off-road, and sideswipe in rural areas.<sup>1</sup>



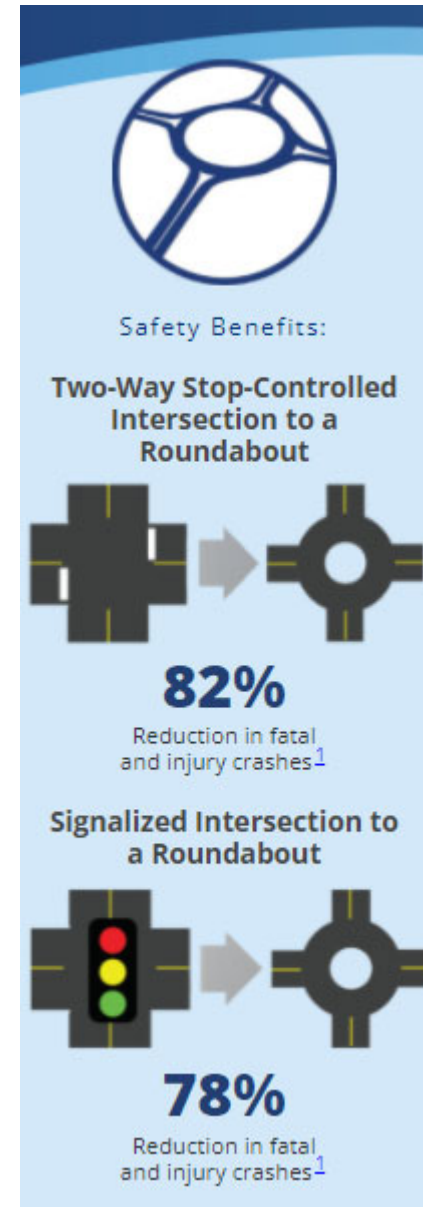
[https://safety.fhwa.dot.gov/provencountermeasures/enhanced\\_delineation/](https://safety.fhwa.dot.gov/provencountermeasures/enhanced_delineation/)

Local Road Safety Plans



# Roundabouts

- Slow speeds for all users (15-25 mph)
- Reduced conflict points
- Less severe crashes



# Leading Pedestrian Interval

- Increased visibility of crossing pedestrians
- Reduced conflicts between pedestrians and vehicles
- Increased likelihood of motorists yielding to pedestrians
- Enhanced safety for pedestrians who may be slower to start into the intersection



Safety Benefit:

**13%**

reduction in pedestrian-vehicle crashes at intersections.<sup>1</sup>



LPIs reduce potential conflicts between pedestrians and turning vehicles. Source: FHWA



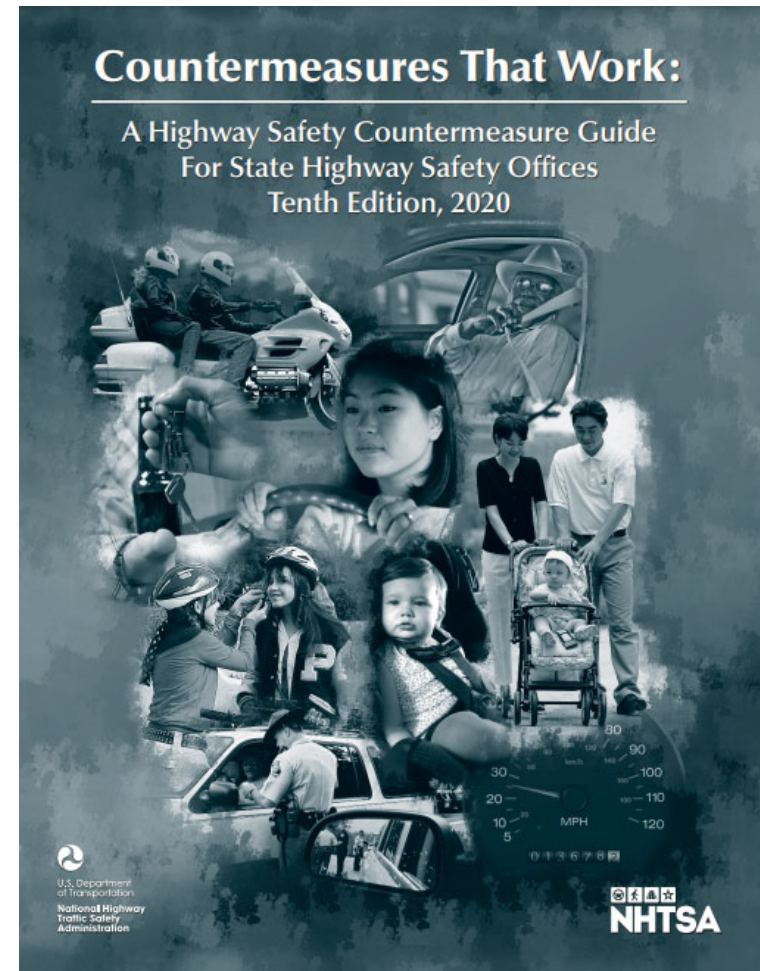
# VERY Low Cost Countermeasures

- **Clear the vegetation**
  - *Signs, signals, intersections, driveways, and sideways*
- **Observe and adjust signal timing**
  - *Particularly off-peak*



# NHTSA's Countermeasures that Work

1. Impaired Driving
2. Seatbelts
3. Speed Limits
4. Distracted Driving
5. Motorcycles
6. Young Drivers
7. License Renewal
8. Education Campaigns
9. Bicycle Helmets

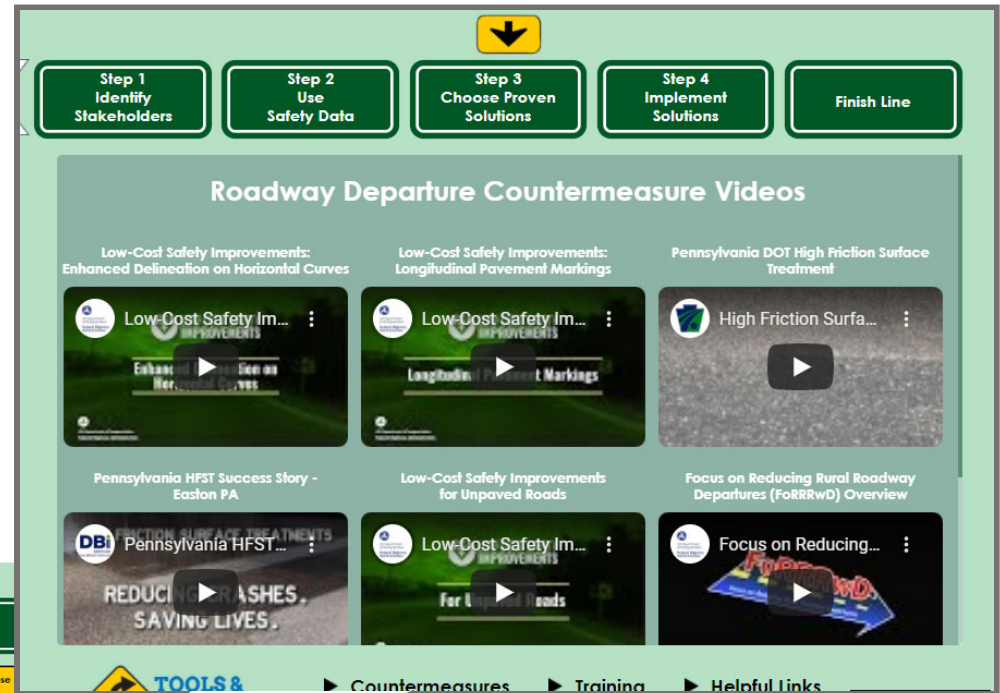


[https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th\\_080621\\_v5\\_tag.pdf](https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf)



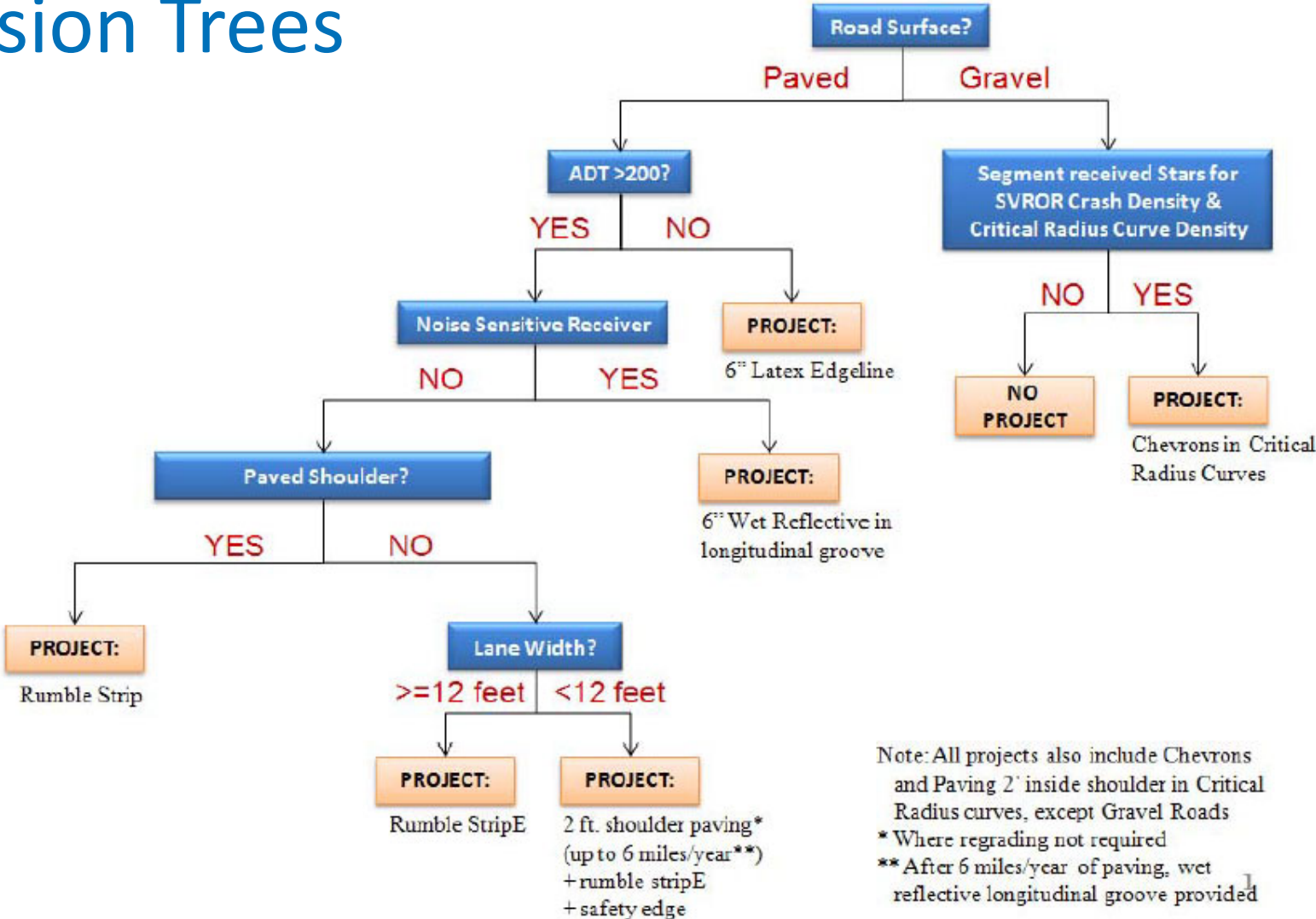
# Countermeasure Videos

- Available on DIY Site
  - Roadway Departure
  - Intersections
  - Pedestrians
  - Cross-Cutting Solutions

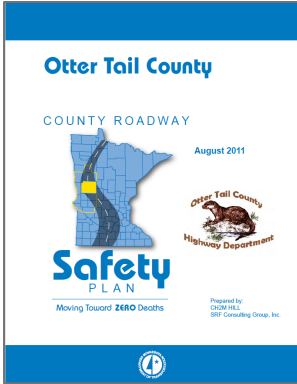


# Countermeasure Decision Trees

# Decision Trees



Note: All projects also include Chevrons and Paving 2' inside shoulder in Critical Radius curves, except Gravel Roads  
 \* Where regrading not required  
 \*\* After 6 miles/year of paving, wet reflective longitudinal groove provided



<https://www.dot.state.mn.us/stateaid/trafficsafety/county/ottertail-crsp-final-aug2011.pdf>



# Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

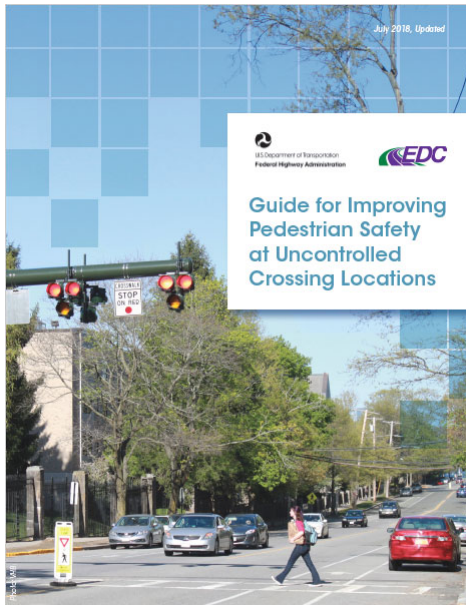


Table 1. Application of pedestrian crash countermeasures by roadway feature.

| Roadway Configuration  | Posted Speed Limit and AADT |                |                |                           |                |                |                      |                |                |
|--|-----------------------------|----------------|----------------|---------------------------|----------------|----------------|----------------------|----------------|----------------|
|  | Vehicle AADT <9,000         |                |                | Vehicle AADT 9,000–15,000 |                |                | Vehicle AADT >15,000 |                |                |
|  | ≤30 mph                     | 35 mph         | ≥40 mph        | ≤30 mph                   | 35 mph         | ≥40 mph        | ≤30 mph              | 35 mph         | ≥40 mph        |
| <b>2 lanes</b><br>(1 lane in each direction)   | ① 2<br>4 5 6                | ① 5 6<br>7 9   | ① 5 6<br>7 9   | ① 4 5 6<br>7 9            | ① 5 6<br>7 9   | ① 5 6<br>7 9   | ① 4 5 6<br>7 9       | ① 5 6<br>7 9   | ① 5 6<br>7 9   |
| <b>3 lanes with raised median</b><br>(1 lane in each direction)                              | ① 2 3<br>4 5                | ① 5<br>7 9     | ① 5<br>7 9     | ① 3<br>4 5                | ① 5<br>7 9     | ① 5<br>7 9     | ① 4 5<br>7 9         | ① 5<br>7 9     | ① 5<br>7 9     |
| <b>3 lanes w/o raised median</b><br>(1 lane in each direction with a two-way left-turn lane) | ① 2 3<br>4 5 6              | ① 5 6<br>7 9   | ① 5 6<br>7 9   | ① 3<br>4 5 6              | ① 5 6<br>7 9   | ① 5 6<br>7 9   | ① 4 5 6<br>7 9       | ① 5 6<br>7 9   | ① 5 6<br>7 9   |
| <b>4+ lanes with raised median</b><br>(2 or more lanes in each direction)                    | ① 5<br>7 8 9                | ① 5<br>7 8 9   | ① 5<br>7 8 9   | ① 5<br>7 8 9              | ① 5<br>7 8 9   | ① 5<br>7 8 9   | ① 5<br>7 8 9         | ① 5<br>7 8 9   | ① 5<br>7 8 9   |
| <b>4+ lanes w/o raised median</b><br>(2 or more lanes in each direction)                     | ① 5 6<br>7 8 9              | ① 5 6<br>7 8 9 | ① 5 6<br>7 8 9 | ① 5 6<br>7 8 9            | ① 5 6<br>7 8 9 | ① 5 6<br>7 8 9 | ① 5 6<br>7 8 9       | ① 5 6<br>7 8 9 | ① 5 6<br>7 8 9 |

Given the set of conditions in a cell,  
 # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.  
 ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.  
 ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.\*  
 \*The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

- 1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
- 2 Raised crosswalk
- 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
- 4 In-Street Pedestrian Crossing sign
- 5 Curb extension
- 6 Pedestrian refuge island
- 7 Rectangular Rapid-Flashing Beacon (RRFB)\*\*
- 8 Road Diet
- 9 Pedestrian Hybrid Beacon (PHB)\*\*

[https://safety.fhwa.dot.gov/ped\\_bike/step/docs/STEP\\_Guide\\_for\\_Improving\\_Ped\\_Safety\\_at\\_Unsig\\_Loc\\_3-2018\\_07\\_17-508compliant.pdf](https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf)





# Poll...

What safety countermeasures are deployed in your community?



**Menti.com**  
**4677 7210**



Step 4

Implement Solutions

# Communicating Safety to Local Elected Officials Video



<https://youtu.be/vQd8feJyXH0>



# LRSP - Brown County, WI



<https://www.wbay.com/content/news/Brown-County-focuses-on-road-safety-in-newly-proposed-budget-495196441.html>





**Someone told me one time the best time to plant a tree was 40 years ago, and the second best time is today. And so to the extent that you can get started and formalize your process of increasing the safety and improving the safety in your county, there's no better time than today.**

**- Kevin Russel  
Former County Engineer  
Harrison County, IN**



# LOCAL ROAD SAFETY PLANS:

Your Map to Safer Roadways

No matter what your resources, a Local Road Safety Plan will guide you to data-driven solutions and safer roads.

[https://safety.fhwa.dot.gov/provencountermeasures/local\\_road/](https://safety.fhwa.dot.gov/provencountermeasures/local_road/)

Chevron signs reduce nighttime crashes by 25%.

## Choose Proven Solutions

- Chevrons
- Roundabouts
- Targeted Enforcement
- Crosswalks

## Identify Stakeholders

- Law Enforcement
- Public Health
- EMS
- Elected Officials

START HERE!

## Use Safety Data

- Crashes
- Maintenance Logs
- Safety Audits
- Traffic Violations

In 2017, over 50% of fatalities occurred on rural roads, but just 19% of Americans live in rural areas.

## Implement Solutions

- Education & Enforcement
- Capital Projects
- Maintenance Work

Safer Roads Ahead

More than 75% of all roads are maintained by local agencies.

LOCAL ROAD SAFETY PLANS

Help Get People Home Safely



U.S. Department of Transportation  
Federal Highway Administration

# LRSP DIY Site

**LOCAL ROAD SAFETY PLANS:**  
Your Map to Safer Roadways

Step 1 Identify Stakeholders    Step 2 Use Safety Data    Step 3 Choose Proven Solutions    Step 4 Implement Solutions    Finish Line

Welcome to the local road safety plan do-it-yourself website! We are so happy you are here. On this site, you'll find everything you need to make a plan that fits your community and gets people home safely. Watch the video below to learn how to use the site and build your plan. If you need help contact us anytime.

SCROLL DOWN FOR MORE VIDEOS

▶ Welcome - FHWA Leadership

**LOCAL ROAD SAFETY PLANS:**  
Your Map to Safer Roadways  
Welcome

▶ Local Road Safety Plan

**TOOLS & RESOURCES**    ▶ Guides & Training    ▶ LRSP Examples    ▶ State LRSP Sites

<https://safety.fhwa.dot.gov/LRSPDIY/>



“Do what you can,  
with what you have,  
where you are.”  
– *Theodore Roosevelt*



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