

2ND
NATIONAL SUMMIT
ROAD



ON RURAL
SAFETY
bridging THE gap

Advancing Local Road Safety with State DOTs and Locals

Marie Walsh, Louisiana LTAP
Matthew Enders, Washington LTAP / WSDOT
December 6, 2018
Savannah, Georgia



National
Center
for
Rural
Road
Safety

ruralsafetycenter.org

Goals for Session

- Understand what a LRSP is
- Know the 6 steps of LRSP development
- Be aware of funding, resources, and partners
- Have a start on developing your own LRSP



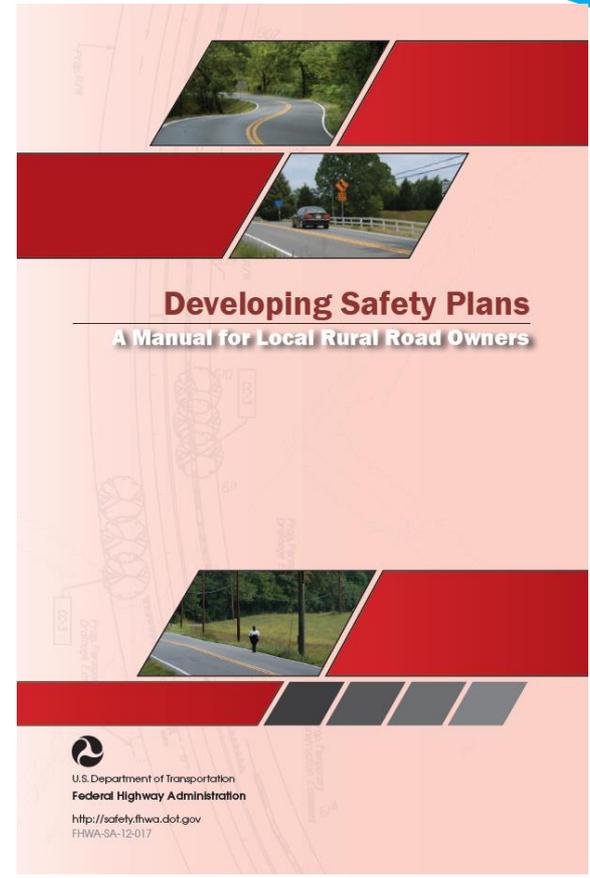
Local Road Safety Plan Overview

- Initiated at different levels
 - FHWA pilots, state initiatives, locally-led
- All E's vs engineering only
- Local staff vs consultants



6 Steps of LRSP Development

- Establish Leadership
- Analyze Safety Data
- Determine Emphasis Areas
- Identify Strategies
- Prioritize and Incorporate Strategies
- Evaluate and Update the LRSP



6 Steps of LRSP Development

- **Establish Leadership**
- Analyze Safety Data
- Determine Emphasis Areas
- Identify Strategies
- Prioritize and Incorporate Strategies
- Evaluate and Update the LRSP

Step 1: Establish Leadership

1. Identify a Champion	5. Develop a Vision, Mission Statement, and Goals
2. Convene a Working Group	6. Gain Leadership Support
3. Identify and Contact Stakeholders	
4. Program Coordination and Sustainability	



Identify Partners Exercise



Partners

Engineering	<ul style="list-style-type: none"> • County Engineer, Road Superintendent • Director of Public Works • Transportation Planner / Engineer • Local Engineering or Public Works Department • County Highway Department • State DOT Region or District Office • Federal Highway Administration Division Office • Bureau of Indian Affairs
Enforcement	<ul style="list-style-type: none"> • Chief of Police • Local/Tribal Police Department • County Sheriff's Department • State Police/Patrol
Education	<ul style="list-style-type: none"> • Public Safety Stakeholders (e.g., AAA, SafeKids, Operation Lifesaver, League of American Bicyclists, etc.) • Driving Education and Training Professionals • Local Public Information Official
Emergency Services	<ul style="list-style-type: none"> • Local Emergency Service Providers • Emergency Service Director • Hospitals • Fire Chief
Other Stakeholders	<ul style="list-style-type: none"> • School District (facilities and/or transportation) • Local Planning and Zoning Department or Commission • Governor's or State's Highway Safety Office • Local Agency Budgeting Office • Metropolitan Planning Organization (MPO) / Rural Planning Organization / Regional Council of Governments • AARP • Local Politicians/Commissioners • Local/Tribal Technical Assistance Program • Railroads • Park District/Authority • Transit Agency • Community Groups (Chamber of Commerce, Tourism Agencies, etc.)



6 Steps of LRSP Development

- Establish Leadership
- **Analyze Safety Data**
- Determine Emphasis Areas
- Identify Strategies
- Prioritize and Incorporate Strategies
- Evaluate and Update the LRSP

Step 2: Analyze Safety Data

1. Gather Data
2. Data Analysis with Crash Data
3. Data Analysis with other Safety Data



Safety Data

Crash Data

Roadway Data

Traffic Data

2013-2017 Data	Fatal/Serious Injury Crashes Only														Total Crashes													
	All County Roads		County X												All County Roads		County X											
	2013-2017	%	2013-2017	%	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2013-2017	%	2013-2017	%	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Overall Numbers																												
Total # of Collisions	2,674		50		10	9	9	11	11	12	15	7	12	16	71,219		1,314		290	285	259	259	221	259	261	231	292	255
# of Fatal Collisions	654	24.5%	12	24.0%	3	4	3	0	2	2	3	2	1	2	654	0.9%	12	0.9%	3	4	3	0	2	2	3	2	1	2
# of Serious Injury Collisions	2,020	75.5%	38	76.0%	7	5	6	11	9	10	12	5	11	14	2,020	2.8%	38	2.9%	7	5	6	11	9	10	12	5	11	14
# of Alcohol-Related Collisions	706	26.4%	17	34.0%	5	3	3	2	4	5	2	4	2	7	7,046	9.9%	156	11.9%	43	28	27	26	32	34	25	34	44	42
Total # of Fatalities	702		13		3	5	3	0	2	2	5	2	1	2	702		13		3	5	3	0	2	2	5	2	1	2
Total # of Injuries	3,552		71		11	13	13	22	12	16	20	9	17	18	32,982		558		126	125	95	122	90	118	120	104	142	131
By Collision Type																												
Hit Fixed Object	1,164	43.5%	23	46.0%	5	5	3	6	4	9	9	4	5	13	28,093	39.4%	725	55.2%	177	149	136	147	116	136	127	112	129	141
Angle (T)	282	10.5%	8	16.0%	1	2	1	1	3	0	0	0	1	0	11,051	15.5%	133	10.1%	29	34	32	17	21	29	28	28	26	
Overturn	273	10.2%	4	8.0%	1	0	1	1	1	0	0	1	0	1	3,422	4.8%	40	3.0%	6	10	4	9	11	12	15	9	27	15
Head On	160	6.0%	4	8.0%	2	1	0	0	1	2	1	0	0	0	778	1.1%	11	0.8%	2	1	4	2	2	4	1	2	2	1
Hit Cyclist	87	3.3%	4	8.0%	0	1	2	1	0	0	0	0	0	0	544	0.8%	8	0.6%	1	2	2	1	2	3	0	3	2	1
Angle (Left Turn)	124	4.6%	2	4.0%	0	0	0	0	2	0	2	0	1	1	3,522	4.9%	34	2.6%	9	4	4	9	8	9	12	10	10	8
Wildlife	47	1.8%	1	2.0%	0	0	0	1	0	0	0	0	2	1	1,940	2.7%	137	10.4%	23	26	36	27	25	15	27	15	38	14



Data & Sources Exercise



6 Steps of LRSP Development

- Establish Leadership
- Analyze Safety Data
- **Determine Emphasis Areas**
- Identify Strategies
- Prioritize and Incorporate Strategies
- Evaluate and Update the LRSP

Step 3: Determine Emphasis Areas

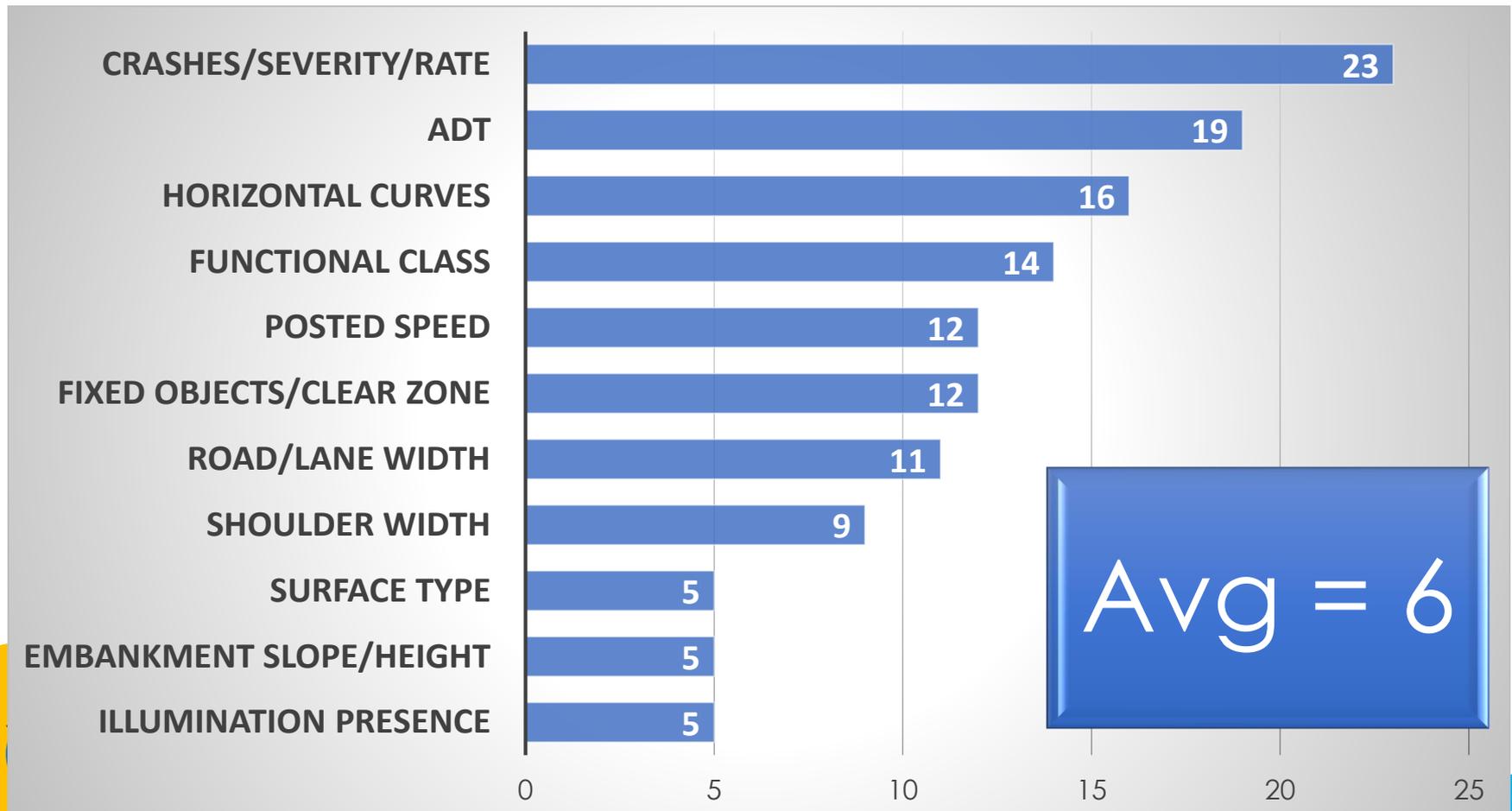
1. Identify Emphasis Area Objectives and Performance Measures
2. Emphasis Area Examples



Emphasis Area Exercise



WA State Counties Risk Factors (2017)



Risk Factors

Systemic Safety Project Selection Tool



U.S. Department of Transportation
Federal Highway Administration



Potential Risk Factors

Roadway and Intersection Features

- Number of lanes
- Lane width
- Shoulder surface width and type
- Median width and type
- Horizontal curvature, superelevation, delineation, or advance warning devices
- Horizontal curve density
- Horizontal curve and tangent speed differential
- Presence of a visual trap at a curve or combinations of vertical grade and horizontal curvature
- Roadway gradient
- Pavement condition and friction
- Roadside or edge hazard rating (potentially including sideslope design)
- Driveway presence, design, and density
- Presence of shoulder or centerline rumble strips
- Presence of lighting
- Presence of on-street parking
- Intersection skew angle
- Intersection traffic control device
- Number of signal heads vs. number of lanes
- Presence of backplates
- Presence of advanced warning signs
- Intersection located in or near horizontal curve
- Presence of left-turn or right-turn lanes
- Left-turn phasing
- Allowance of right-turn-on-red
- Overhead versus pedestal-mounted signal heads
- Pedestrian crosswalk presence, crossing distance, signal head type

Traffic Volume

- Average daily traffic volumes
- Average daily entering vehicles
- Proportion of commercial vehicles in traffic stream

Other Features

- Posted speed limit or operating speed
- Presence of nearby railroad crossing
- Presence of automated enforcement
- Adjacent land use type (e.g., schools, commercial, or alcohol-sales establishments)
- Location and presence of bus stops



Qualitative Data



- Use the data that you have
- Use qualitative ratings when needed
 - Good, fair, not-so-good (curve radius, roadside, etc.)
 - Number per segment, mile, roadway (curves, driveways, intersections, etc.)
 - High, medium, low (traffic volumes, pedestrian volumes, crash frequency, etc.)
- **It is important to include the risk factors that are key to your roadway network**



6 Steps of LRSP Development

- Establish Leadership
- Analyze Safety Data
- Determine Emphasis Areas
- **Identify Strategies**
- Prioritize and Incorporate Strategies
- Evaluate and Update the LRSP

Step 4: Identify Strategies

1. Categorize and Review

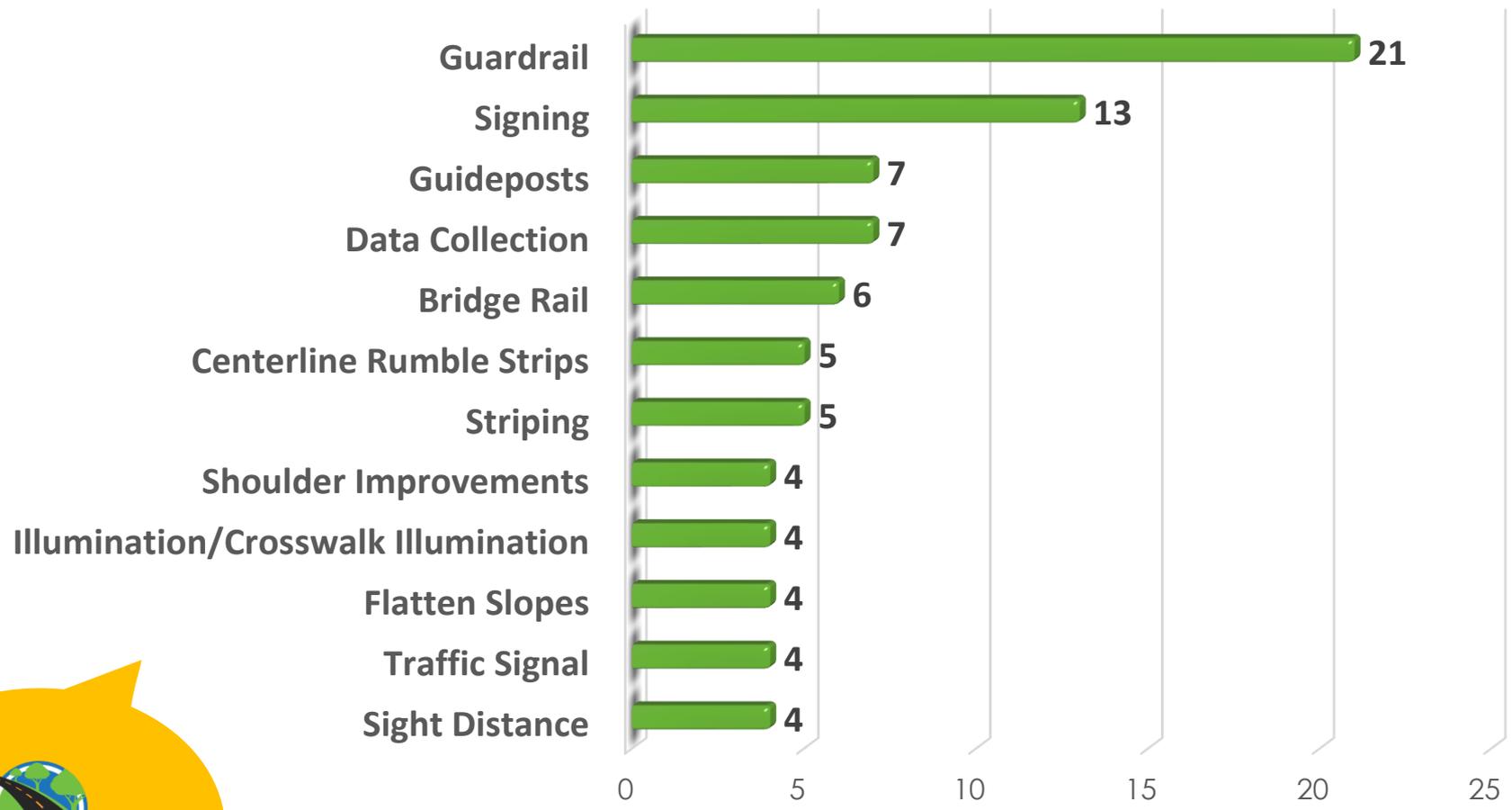
2. Propose Ordinances and Policies



Identify Strategies Exercise



WA State Counties Top Countermeasures (2017)



6 Steps of LRSP Development

- Establish Leadership
- Analyze Safety Data
- Determine Emphasis Areas
- Identify Strategies
- **Prioritize and Incorporate Strategies**
- Evaluate and Update the LRSP

Step 5: Prioritize and Incorporate Strategies

1. Identify Priorities
2. Determine Intended Implementation Approach for Strategies
3. Draft the Plan



Prioritize Locations



6 Steps of LRSP Development

- Establish Leadership
- Analyze Safety Data
- Determine Emphasis Areas
- Identify Strategies
- Prioritize and Incorporate Strategies
- **Evaluate and Update the LRSP**

Step 6: Evaluate and Update the LRSP

- | | |
|---------------------|--------------------|
| 1. Monitor Progress | 3. Living Document |
| 2. Plan Evaluation | |



Funding Opportunities (or Challenges!)

- Federal Highway Safety Improvement Program (HSIP) funds
- State funds
- Local funds



Resources

- FHWA Systemic Safety Project Selection Tool
 - <https://safety.fhwa.dot.gov/systemic/fhwasa13019/>
- FHWA Crash Modification Factor Clearinghouse
 - <http://www.cmfclearinghouse.org/>
- State SHSP
- Every Day Counts 5
 - https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/index.cfm
- Reducing Rural Roadway Departures



Partners

- LTAP Center
- FHWA
- NACE Safety Committee
- APWA Safety Committee



Questions?

Marie Walsh, PhD

Marie.Walsh@LA.gov

(225) 767-9184

Matthew Enders, PE

Matthew.Enders@wsdot.wa.gov

(360) 705-6907

