

Guided by the Traffic Safety Commission 1996-2025

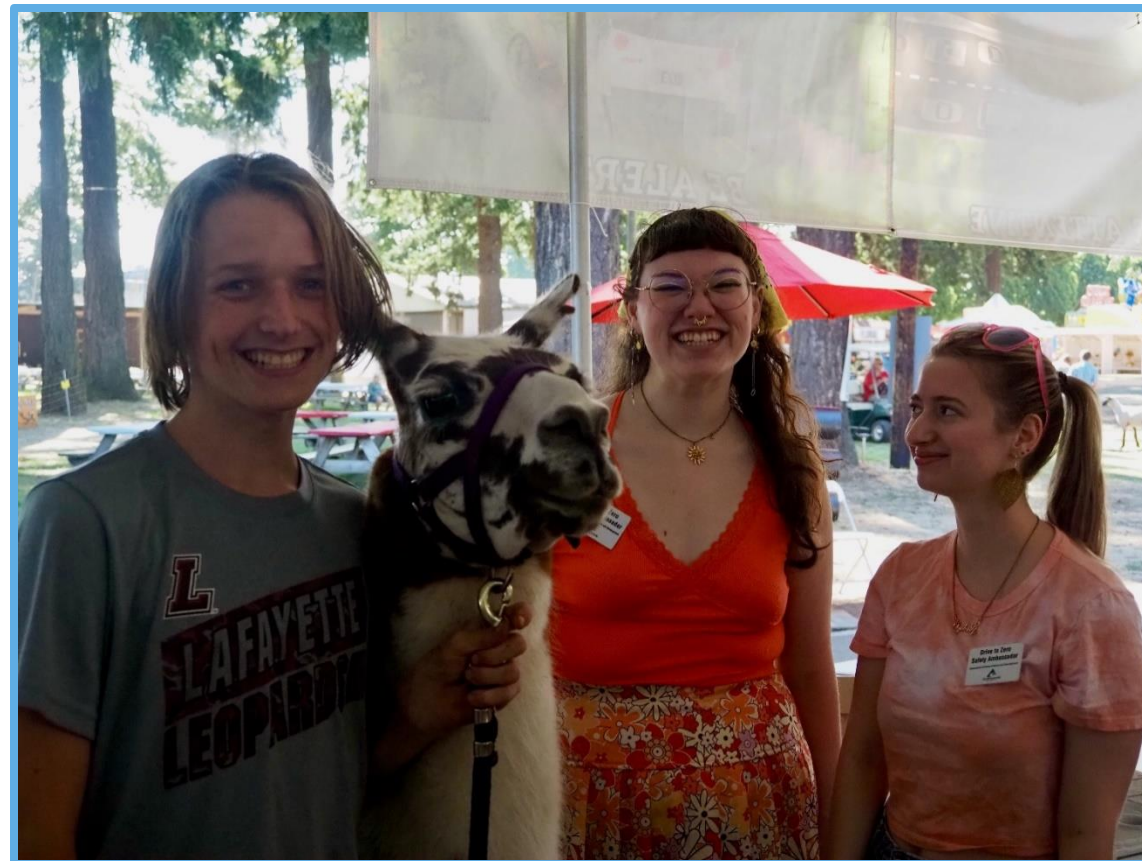
Joseph F. Marek, PE, PTOE , Traffic Safety Program Manager
Clackamas County, Oregon

April 2, 2025

What is most important?

EVERYONE

arrives home safely to
their family after
using the shared
space called the
**TRANSPORTATION
SYSTEM!**



History of Joe

- Began work at County in 1991
- TSC Liaison role started in April 1996 shortly after the floods
- Let's flashback to the Alliance for Community Traffic Safety Conference in 2002!
- Let's compare with 2025!



Downtown Oregon City during the 1996 flood. (The Oregonian)

18 / 61

Willamette Flood of 1996

Photo credit: Oregon Live

2002 vs 2025

SO - WHAT HAVE WE BEEN UP TO?

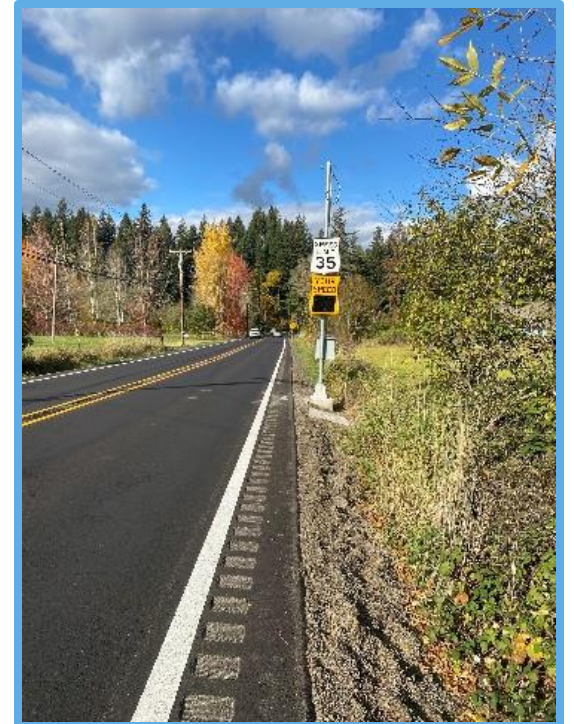
- Radar trailer grant - 1995
- 3,000 hours in field



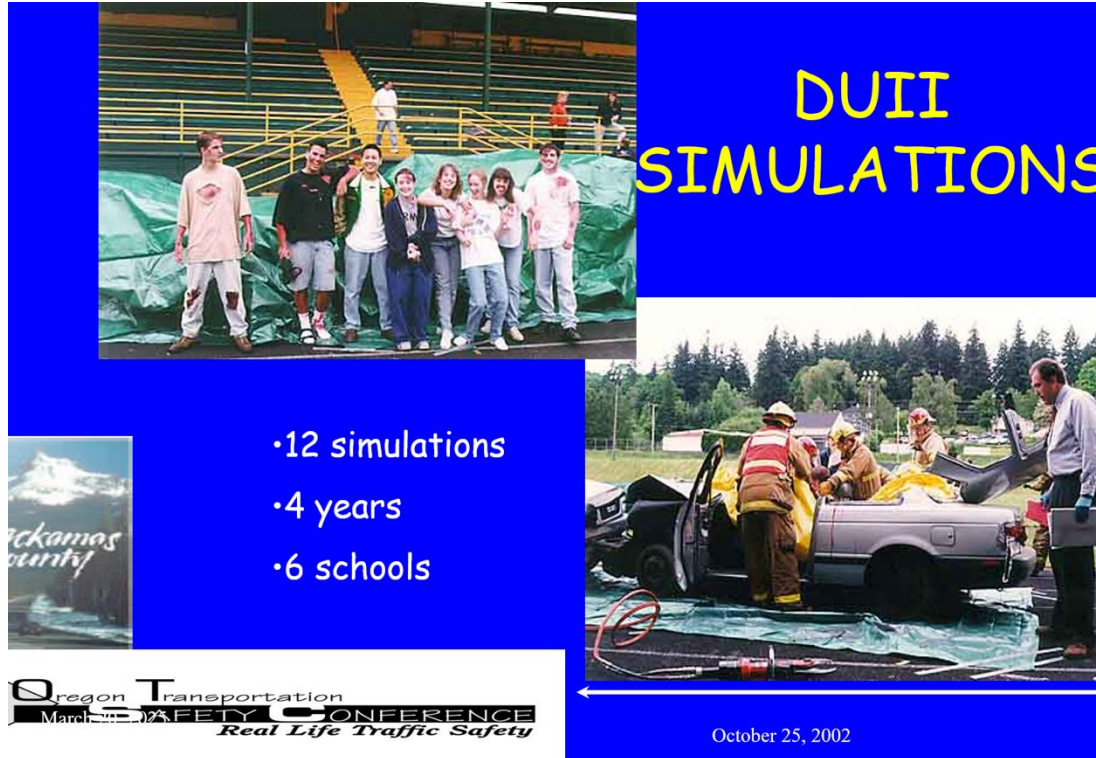
Transportation
SAFETY CONFERENCE
Real Life Traffic Safety

October 25, 2002

- 8 temporary radar feedback signs deployed 24/7
- 17 Permanent radar feedback signs operating 24/7
- Speed bumps
- Roundabouts
- Reduced speeds



School Outreach – 2002 vs 2025



DUI SIMULATIONS

- 12 simulations
- 4 years
- 6 schools

Oregon Transportation
SAFETY CONFERENCE
March 2002
Real Life Traffic Safety

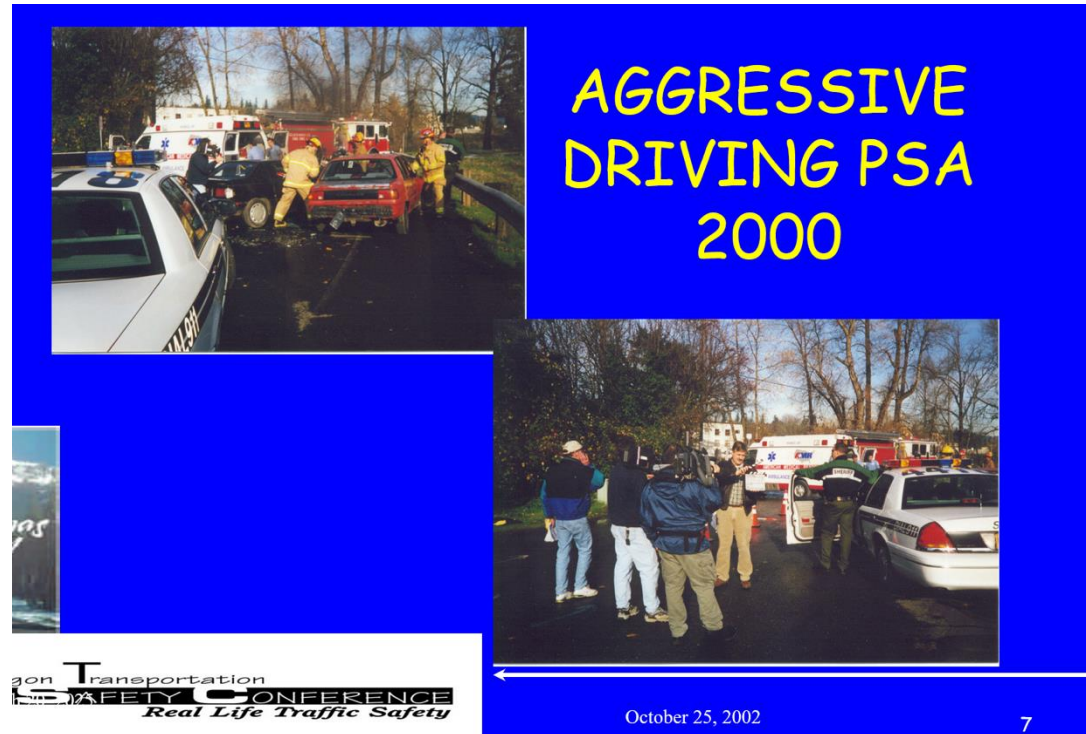
October 25, 2002

- Health 2 Classes at 4-5 schools per semester
 - DUI, Speeding, cultural norms
- Kevin Brooks presentations
 - Safety – mental health



Public Service Announcements

- Cell phone Chill Campaign
- Cannabis driving - WSTSC
- New campaign – attentive driving
- Plan ahead campaign - WSTSC



Safety Corridors – then vs now



**SAFETY
CORRIDORS**

- High crash corridors
- 3-E's
- So far - so good

gon Transportation
SAFETY CONFERENCE
Real Life Traffic Safety

October 25, 2002

- Every corridor is a Safety Corridor
- Systemic treatments for entire roads
 - Curve warning signs
 - Intersection warning signs
 - Reduced speeds
 - More All-Way Stops

Outreach



- Beyond fair – mobile Safety Street for use

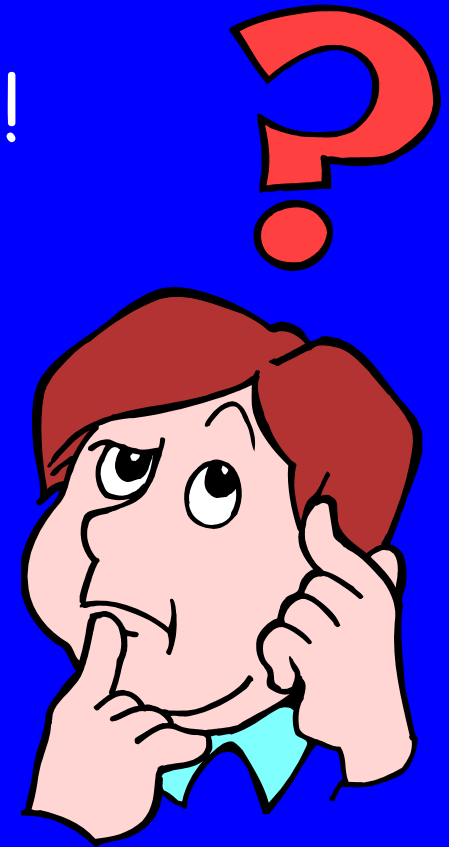
HOW DO YOU GET ALL THAT DONE?

- Great members
- Strong Chair
- BCC support
- Management support
- Charged staff
- Open forums
- Strong chair
- Diplomatic chair
- Work program
- Annual goals
- Active recruitment
- A budget
- Saving lives



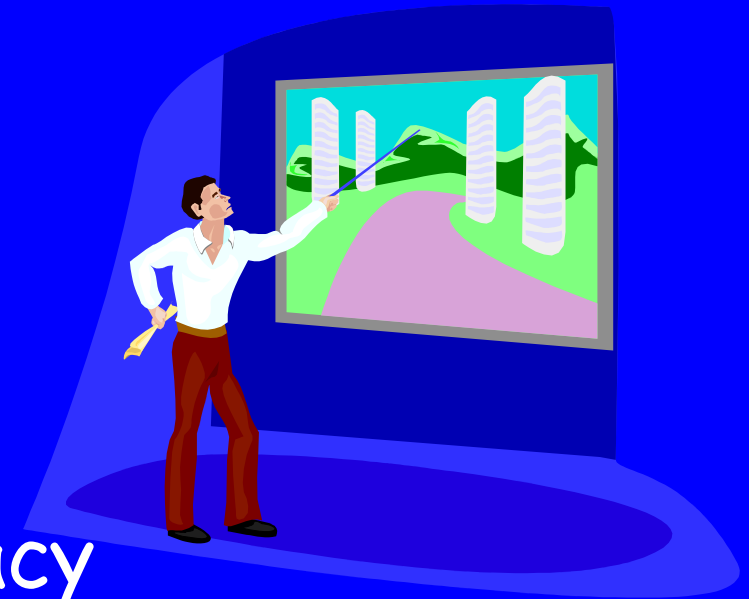
TSC MEMBER PERSPECTIVE

- I wish that County traffic engineer would get to work!!
- BCC recognition/ respect
- Taken seriously by staff
- Annual report - good recap



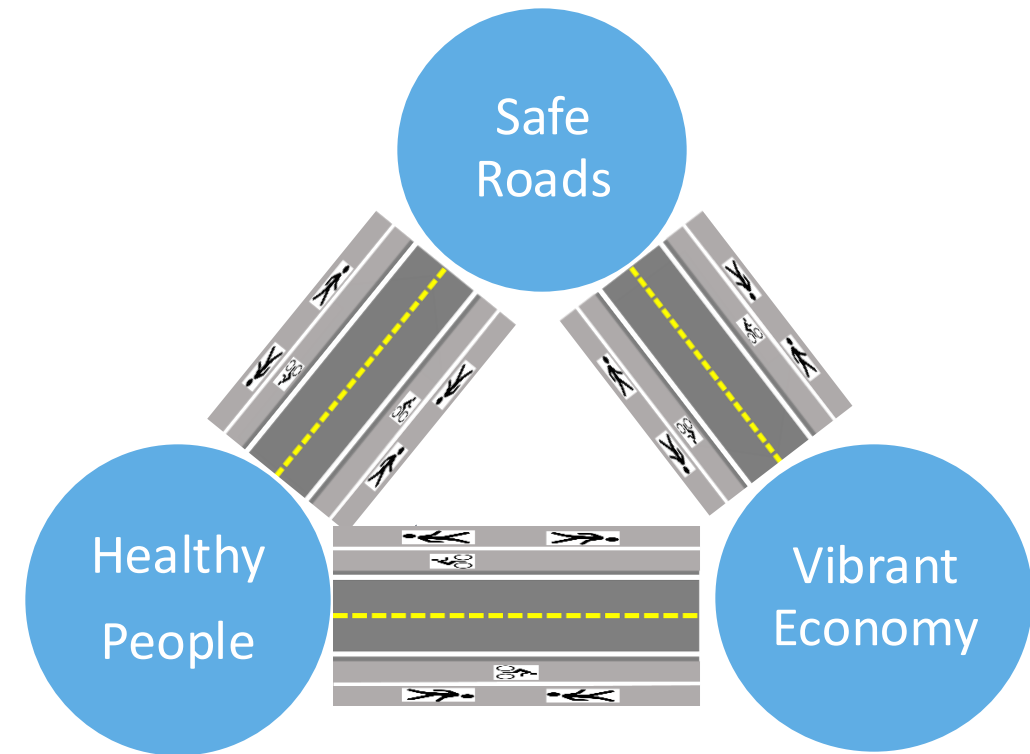
CONCLUSIONS

- *It's about saving lives!!!*
- Go forth - recruit good people
- Be positive
- Build broad support
- Have fun
- Teambuilding, diplomacy

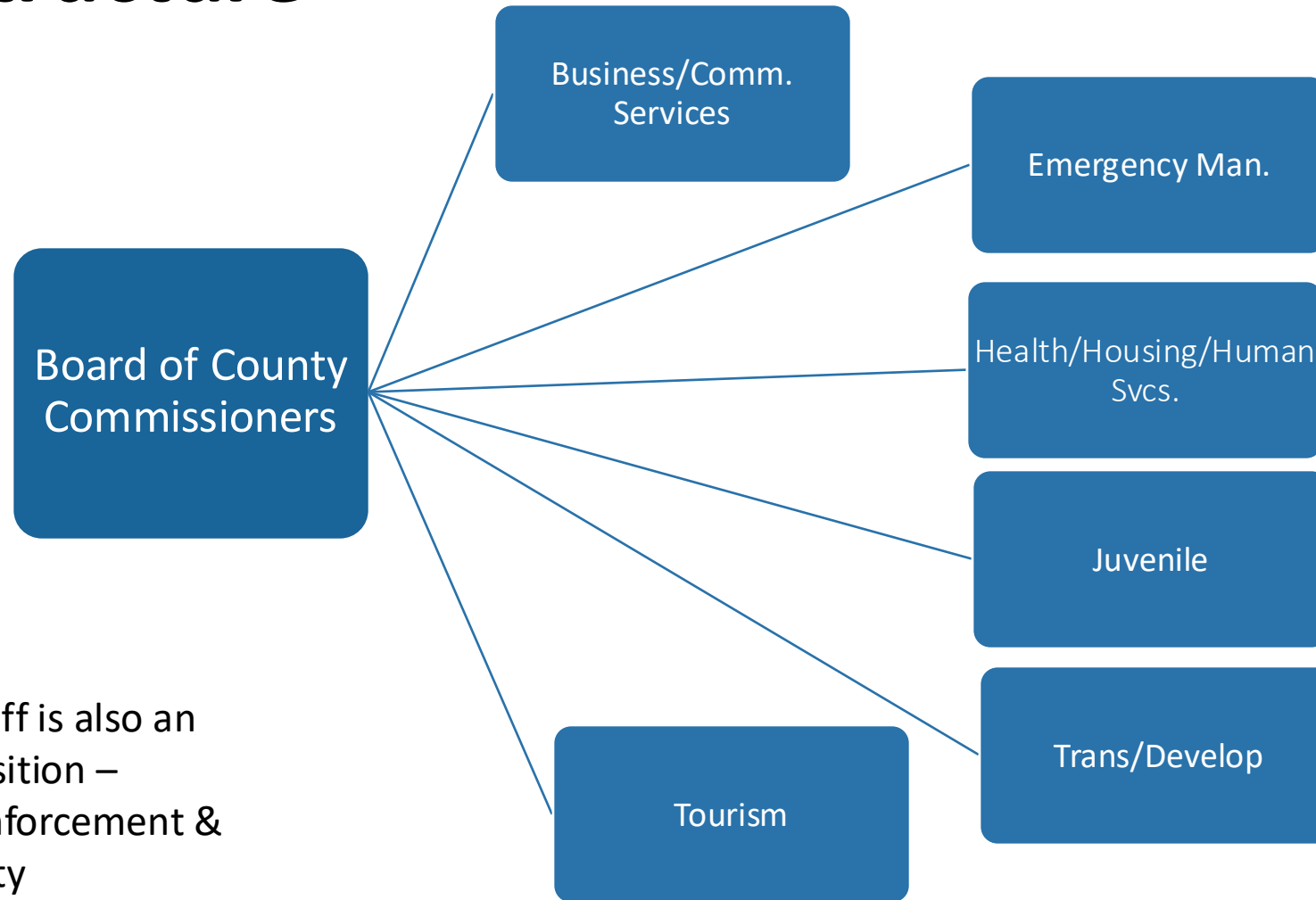


Clackamas County Strategic Priorities

- 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



County Structure



Note: Sheriff is also an elected position – includes enforcement & public safety

Evolution of Safety Terms

Public Roads - May/June 2013

Date: May/June 2013

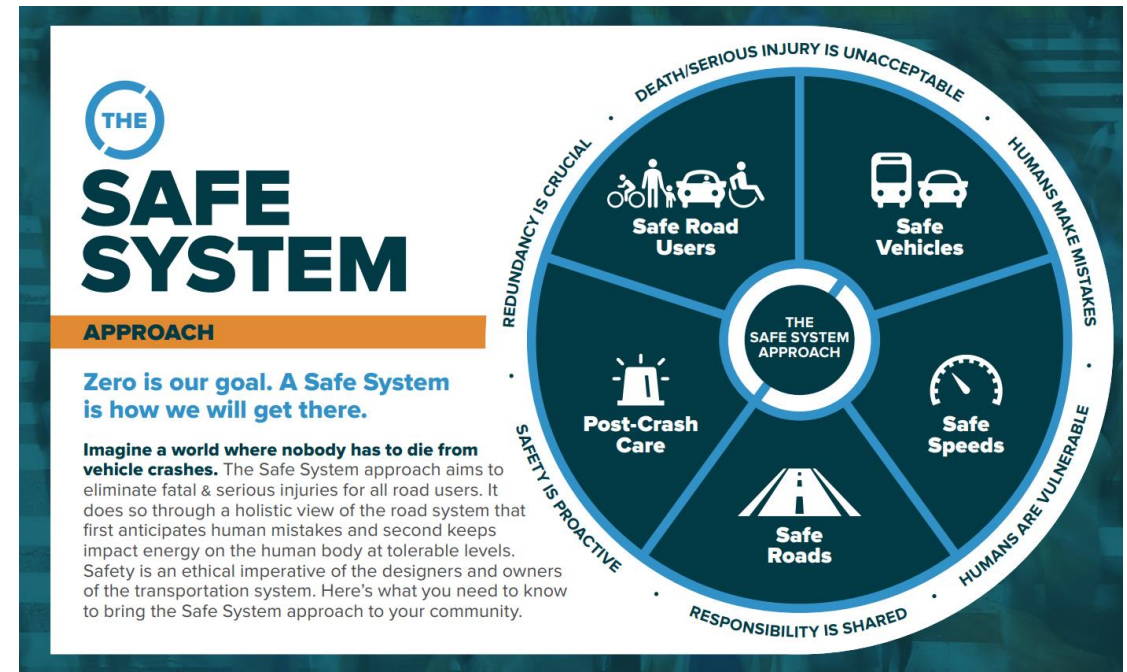
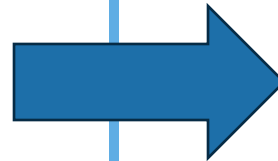
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Guest Editorial

A Holistic Approach to Roadway Safety



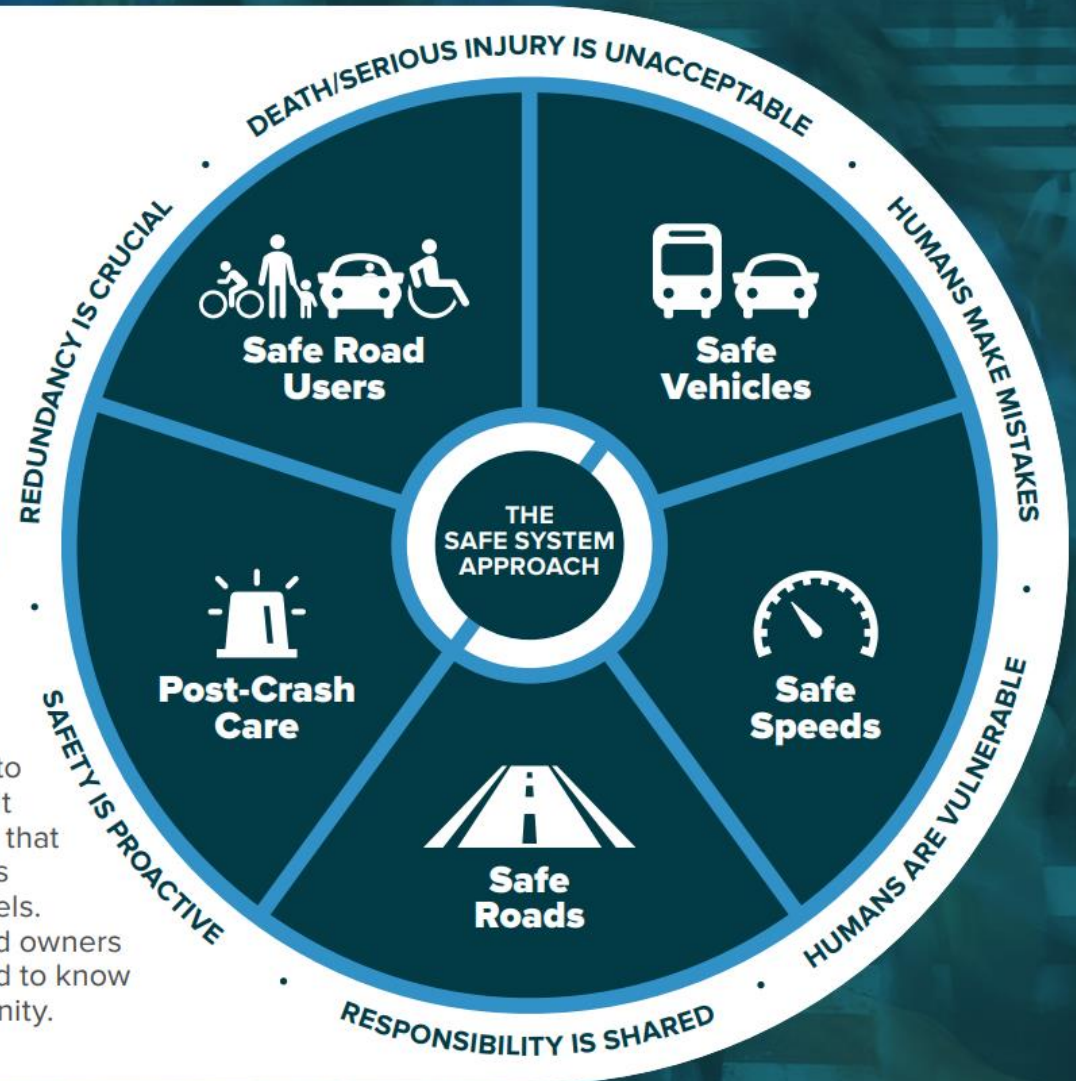


SAFE SYSTEM

APPROACH

Zero is our goal. A Safe System is how we will get there.

Imagine a world where nobody has to die from vehicle crashes. The Safe System approach aims to eliminate fatal & serious injuries for all road users. It does so through a holistic view of the road system that first anticipates human mistakes and second keeps impact energy on the human body at tolerable levels. Safety is an ethical imperative of the designers and owners of the transportation system. Here's what you need to know to bring the Safe System approach to your community.



SAFE SYSTEM PRINCIPLES



Death/Serious Injury is Unacceptable

While no crashes are desirable, the Safe System approach prioritizes crashes that result in death and serious injuries, since no one should experience either when using the transportation system.



Responsibility is Shared

All stakeholders (transportation system users and managers, vehicle manufacturers, etc.) must ensure that crashes don't lead to fatal or serious injuries.



Humans Make Mistakes

People will inevitably make mistakes that can lead to crashes, but the transportation system can be designed and operated to accommodate human mistakes and injury tolerances and avoid death and serious injuries.



Safety is Proactive

Proactive tools should be used to identify and mitigate latent risks in the transportation system, rather than waiting for crashes to occur and reacting afterwards.



Humans Are Vulnerable

People have limits for tolerating crash forces before death and serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates human vulnerabilities.

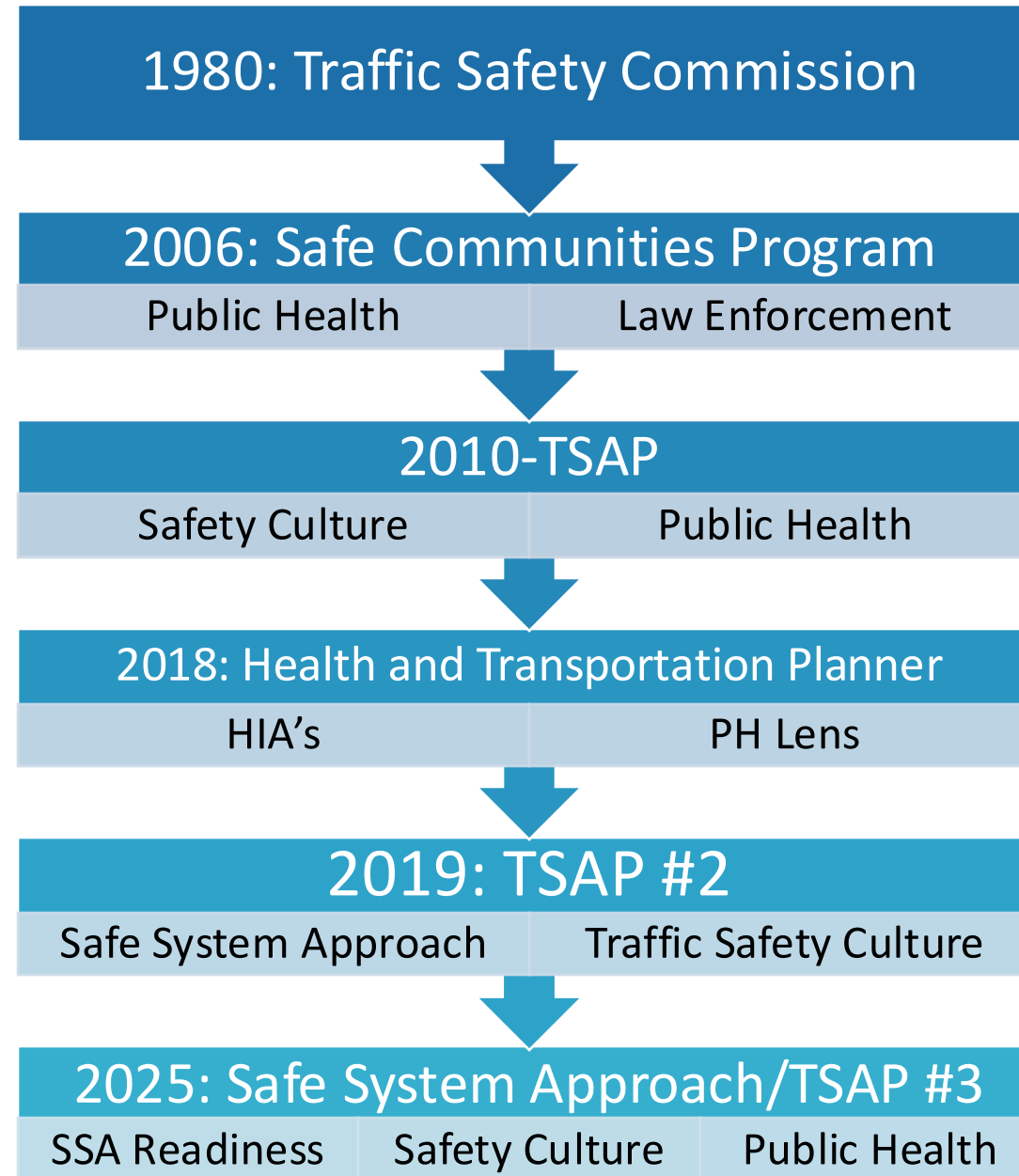


Redundancy is Crucial

Reducing risks requires that all parts of the transportation system are strengthened, so that if one part fails, the other parts still protect people.

Long Process

DOT grants for Safe Communities and TSAP work





Things to do TODAY

Safe vehicles

- Motor Carrier Safety
 - Commercial vehicle inspections
 - Coordination with regional law enforcement





Safe speeds

Things to do TODAY

- Reviewing roadway speeds
- Move away from 85th percentile speed
- Use context in decision making
- Speed zone laws based on research of NCHRP Report 966 (thanks Oregon DOT)
- County took over Speed Zoning Authority in 2024

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

NCHRP RESEARCH REPORT 966

Posted Speed Limit Setting Procedure and Tool

USER GUIDE

Kay Fitzpatrick
Subasish Das
Michael P. Pratt
Karen Dixon

TEXAS A&M TRANSPORTATION INSTITUTE
College Station, TX

Tim Gates
MICHIGAN STATE UNIVERSITY
East Lansing, MI



Things to do Today

Safe roads

- Lead with Safety
- Advocate for a Safety budget
- Diplomatic persistence to always look at safety
- Maintenance = Safety
- Low cost projects
 - Curve warning signs
 - FHWA safety countermeasures
 - Pavement markings



Shared Public Health & Transportation Role



Position approved in 2018 - New staff hired 2019



Road Fund pays 50% of position salary



Position is "housed" in Public Health Division – one official manager

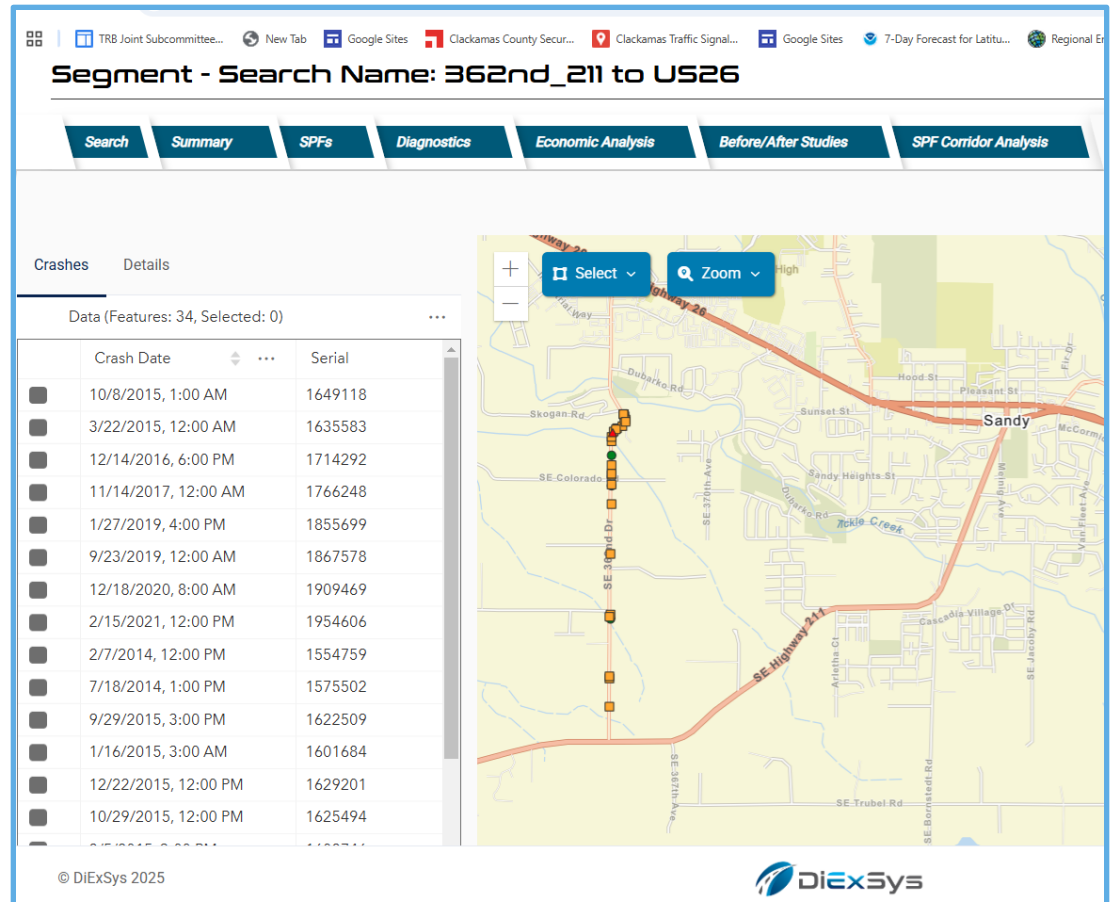


Approval from both PH and Transportation



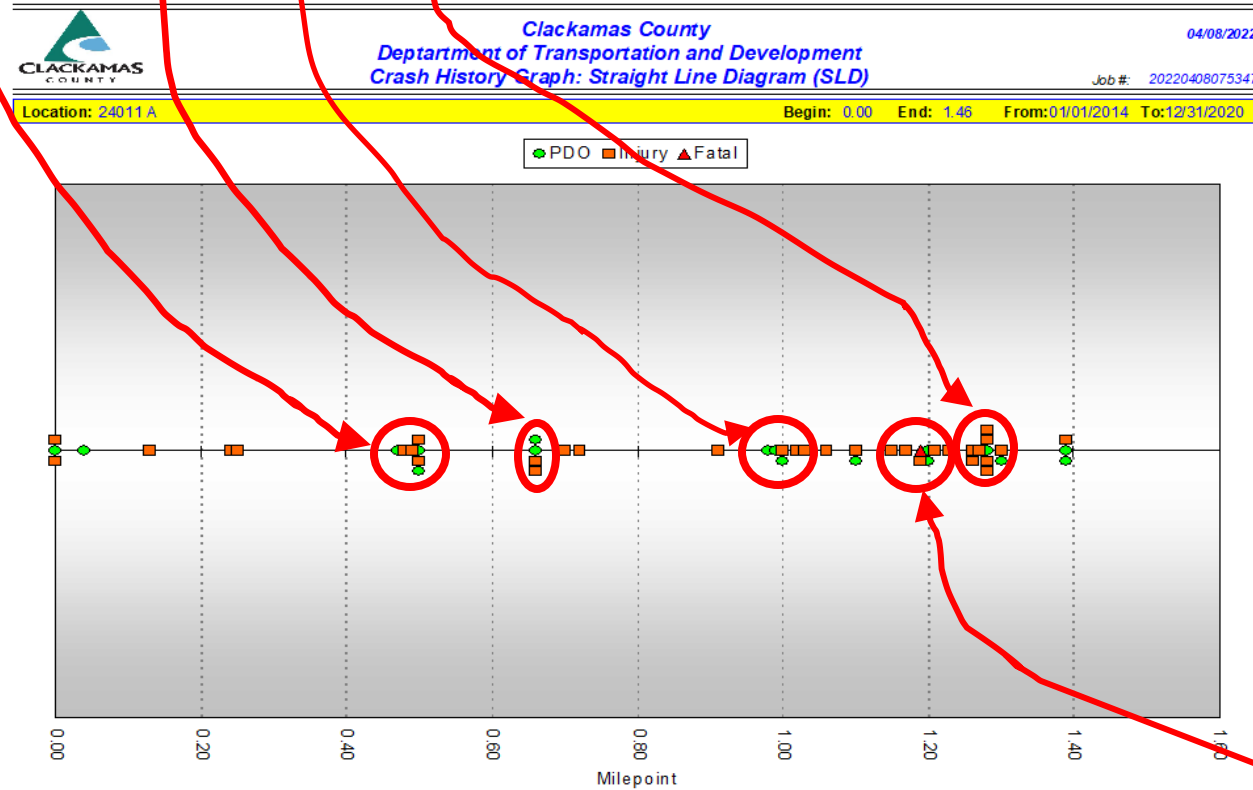
Lead with Safety!

- First roadway where we did a deep data dive using Vision Zero Suite traffic safety software
- Opportunity to identify areas with potential for crash reduction
- Using statistically robust Safety Performance Functions (SPF)





MP 0.5=Gunderson Rd
MP 0.66 = Deming
MP 1.0 = Colorado
MP 1.3 = Skogan



No. 24011 SE 362ND DR
Map: 77-23-SW

	BCM
0.000	OSH 211
0.000	CROSS
0.500	LEFT GUNDERSON RD (24015)
0.660	RIGHT DEMING RD (P4021)
1.000	LEFT COLORADO RD (24009)
1.000	RIGHT COLORADO RD (P4110)
1.300	LEFT SKOGAN RD (24010)
1.390	LEFT CT CHINOOK ST
1.460	RIGHT CT DUBARKO RD
1.460	ECM

Skogan curves

MP 1-1.46 – non intersection



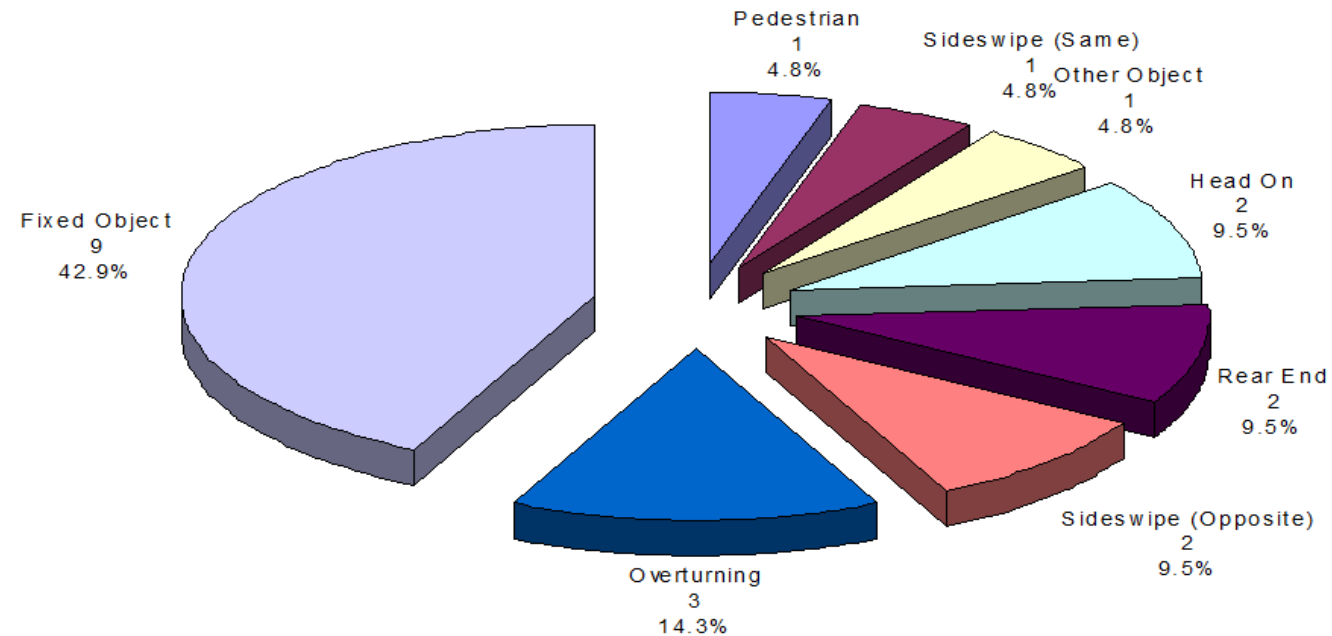
Clackamas County
Department of Transportation and Development
Crash Distribution Pie Chart Report

04/08/2022

Job #: 20220408084027

Location: 24011 A

Begin: 1.00 End: 1.46 From: 01/01/2014 To: 12/31/2020



Level-of-Service of Safety – All Crashes



Clackamas County
Department of Transportation and Development
SPF Model: OR - Rural Rolling and Mountainous 2-Lane UnDivided Highways (2021)

04/08/2022

Job #: 20220408080219

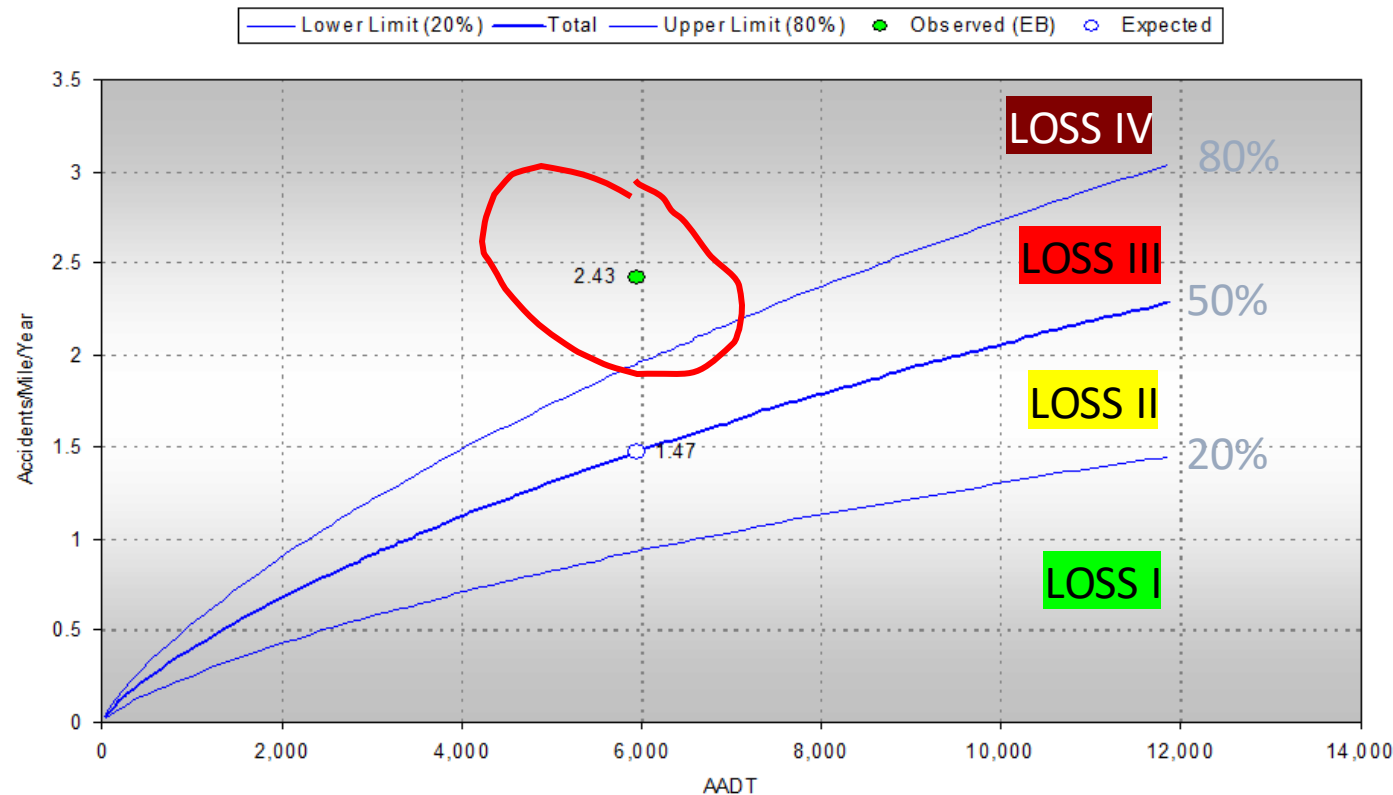
Location: 000024011A

Begin: 0.00

End: 1.46

From: 01/01/2014

To: 12/31/2020



MP 0-1.4 – add Edge & center rumble strips

Clackamas County
Department of Transportation and Development
Economic Analysis Report

04/26/2022

Job #: 20220426095459

Location: 24011 A Begin: 0.00 End: 1.46 From: 01/01/2014 To: 12/31/2020

Benefit Cost Ratio Calculations

Crashes		Projected Crashes and Reduction Factors			Other Information				
PDO:	6	Weighted PDO:	0.94	27% :CRF for PDO	Cost of PDO:	\$ 11,100			
INJ:	23	37 :Injured	Weighted INJ:	5.80	27% :CRF for INJ	Cost of INJ:	\$ 101,800		
FAT:	1	1 :Killed	Weighted FAT:	0.16	27% :CRF for FAT	Cost of FAT:	\$ 1,820,600		
		B/C Weighted Year Factor:	7.00	27% :Weighted CRF	Interest Rate:	5%			
				AADT Growth Factor:	2.0%				
				Service Life:	10				
				Capital Recovery Factor:	0.129				
Cost: \$ 150,000				Annual Maintenance/Delay Cost:	\$ 0				
From: 01/01/2014									
To: 12/31/2020		Days: 2557							
Benefit Cost Ratio: 12.32		(B/C Based on Injury Numbers : PDO/Injured/Killed)							

Type of Improvement: Centerline & Shoulders (Specific) - CL and Edge Rumble Strips
Special Notes: Head-On, Sideswipe Opposite Crashes and Run off the Road Crashes



Conclusions

- Safety has advanced considerably in 34 years
- Cultural norms and other factors influence tolerance of risk
- Hard to change
- Big road system – not big piggy bank!
- Safety versus convenience

What is most important?

EVERYONE

arrives home safely to their family after using the shared space called the
TRANSPORTATION SYSTEM!



Thank You for all that you do!

Joseph Marek

JoeMar@clackamas.us

