Oregon Transportation Safety Action Plan (TSAP)

Steering Committee Meeting and Partner Workshop Agenda

Date/Time	Thursday, October 30 9:00 am. – 12:00 p.m.
Join the Meeting	Register to attend the meeting by filling out the form. You will receive information on how to join the virtual meeting.
Public Comment	How to submit a comment: You may submit written comments prior to the meeting by completing this online form or emailing your comment to safety@odot.oregon.gov. You may also deliver your comment in person at the meeting. Written comments are due by 10 a.m. October 29. If you submit your comment after the deadline, we'll include it at the committee's next meeting.
ADA Accessibility	A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours before the meeting to Alexis Bocanegra at 503-986-2845 (or statewide relay 711).

Meeting objectives

- Present finalized Emphasis Areas
- Connect what we have learned from qualitative and quantitative data to recommended actions
- Work together to prioritize recommended actions

9:00 a.m.	**Welcome and Roll Call**	Mary McGowan and Jenny Thacker
9:05 a.m.	**Meeting Objectives and Agenda Review**	Jenny Thacker
9:10 a.m.	**Introductions**	Jenny Thacker
9:15 a.m.	**Public Comment**	Jenny Thacker
9:20 a.m.	**Emphasis Areas Overview**	Mary McGowan and Lacy Brown
9:30 a.m.	**Emphasis Area Group 1: Intersections, Roadway Departures** • Conclusions from data and outreach • Recommended actions • Actions prioritizations activity	Lacy Brown and Jenny Thacker
10:00 a.m.	**Emphasis Area Group 2: Speeding** • Conclusions from data and outreach • Recommended actions • Actions prioritizations activity	Lacy Brown and Jenny Thacker
10:25 a.m.	**Emphasis Area Group 3: Young Drivers (15-20 yrs old) and Aging Drivers (65+ yrs old)** • Conclusions from data and outreach • Recommended actions • Actions prioritizations activity	Lacy Brown and Jenny Thacker
10:55 a.m.	**Break**	
11:05 a.m.	**Emphasis Area Group 4: Alcohol, Other Drugs, Unrestrained Occupants** • Conclusions from data and outreach • Recommended actions • Actions prioritizations activity	Lacy Brown and Jenny Thacker
11:30 a.m.	**Emphasis Area Group 5: Pedestrians, Bicyclists, Motorcyclists, Large Trucks** • Conclusions from data and outreach • Recommended actions • Actions prioritizations activity	Lacy Brown and Jenny Thacker
11:55 a.m.	**Next Steps**	Mary McGowan
noon	**Adjourn**	Jenny Thacker

Oregon Transportation Safety Action Plan (TSAP) Survey Report

ODOT 2026 Transportation Safety Action Plan

September 22, 2025

Report Description

The Oregon Department of Transportation (ODOT) fields the annual Oregon Public Opinion Survey (OPOS) to better understand Oregon residents' traffic safety behavior, and to compile recommendations from residents and general public on how to improve regional traffic safety. The purpose of this ongoing study is to learn about Oregon residents' driving habits and attitudes. The information provided is used to help ODOT develop traffic safety programs that increase public awareness of Oregon's roadway laws and encourage safer driving behavior. ODOT hired PRR, an independent research firm, to conduct the 2025 survey. PRR has previously supported data collection for iterations of the OPOS fielded throughout 2023-2024.

In 2025, ODOT fielded a supplement to the OPOS directed explicitly toward transportation agency and industry partners. This survey was intended to capture feedback on the existing Oregon Transportation Safety Action Plan (TSAP) to guide decisions statewide and shape a transportation system so that every traveler can get to their destination safely.

Research Methods

This report captures findings from the TSAP Survey and the OPOS, which was fielded in two separate waves (one in Spring 2025, and the second in Summer 2025). These data were used to compare differences in knowledge and attitudes among transportation partners versus local residents, and to assess the influence of existing local campaigns on public perceptions and behavior. PRR included a different set of program-specific questions in each wave, along with a standard suite of demographic and attitudinal questions.

The TSAP Survey and Wave 2 of the OPOS were scheduled to field concurrently, with both launching on July 7. A self-identification question was embedded into the TSAP survey to redirect members of the general public to the OPOS. This redirect also pointed respondents toward an online comment form that could be used to submit additional feedback.

Findings from the OPOS have been integrated below as a complement to the findings and recommendations collected in the TSAP survey.

Survey Recruitment

Invitations to complete the TSAP survey were widely circulated to industry partners, leveraging a variety of channels. Steps taken to distribute the survey included:

- Announcing the survey at a June **TSAP partner workshop** and at the July **TSAP steering committee**
- Two notifications using the **GovDelivery** news system
- Incorporating survey details into **industry newsletters.**
- Publicizing the survey through **internal ODOT channels** (direct presentations/discussions and email communications).

PRR used a convenience sampling approach to gather feedback from industry partners. These recruitment methods were not intended to produce a representative sample of the partners surveyed, but rather to maximize the diversity of perspectives represented in the study population and to reach the highest volume of agency partners possible.

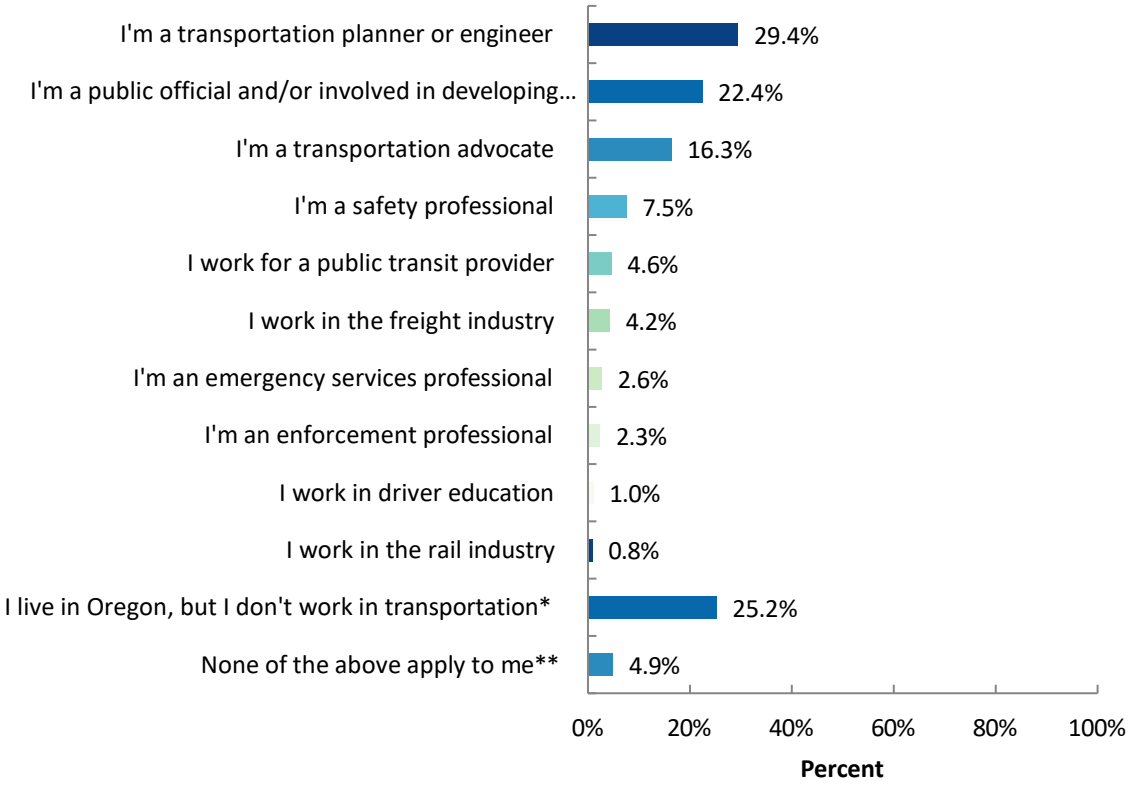
The TSAP survey fielded from July 7 through August 31, 2025. In total, 306 complete responses were collected (a completion rate of 73.4%), along with 111 partial surveys. Descriptive statistics relating to participant recruitment and regional representation* are included below. The remainder of the report characterizes detailed findings from the TSAP survey data. In some areas (marked in the text of the report), these findings have been paired with OPOS data to highlight areas of overlap between agency partners and local residents.

**NOTE: Recruitment statistics are available only for participants that completed the OPOS. Referral sources were not captured for TSAP agency partner responses.*

Detailed Findings – Transportation Safety Professionals

Survey respondents represented a diverse mix of transportation professionals and community advocates, from transportation planners or engineers (29%) to public officials (22%) to transportation advocates (16%).

As you fill out this survey, which of the following options best describes you? Please select all that apply. (Base: All respondents, n = 612).



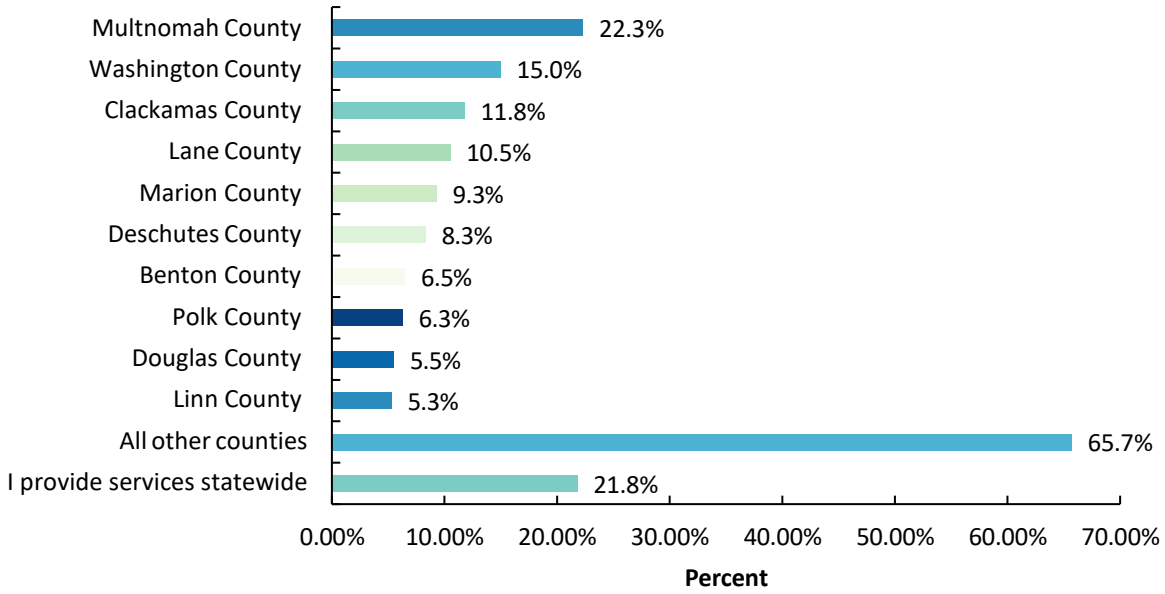
**Notably, one in four respondents were Oregon residents who did not work in the transportation field; these respondents were disqualified and redirected either to questions relevant to their perspective via ODOT's OPOS, or to a comment form to provide input, ensuring their voices were captured throughout the survey period.*

***Respondents who selected "None of the above" were disqualified from the survey.*

Value	Percent
I'm a public official and/or involved in developing transportation policy	22.4%
I work for a public transit provider	4.6%
I'm an emergency services professional	2.6%
I'm an enforcement professional	2.3%
I'm a safety professional	7.5%
I work in the freight industry	4.2%
I work in the rail industry	0.8%
I'm a transportation planner or engineer	29.4%
I work in driver education	1.0%
I'm a transportation advocate	16.3%
I live in Oregon, but I don't work in transportation	25.2%
None of the above apply to me	4.9%

Transportation Partner Tract

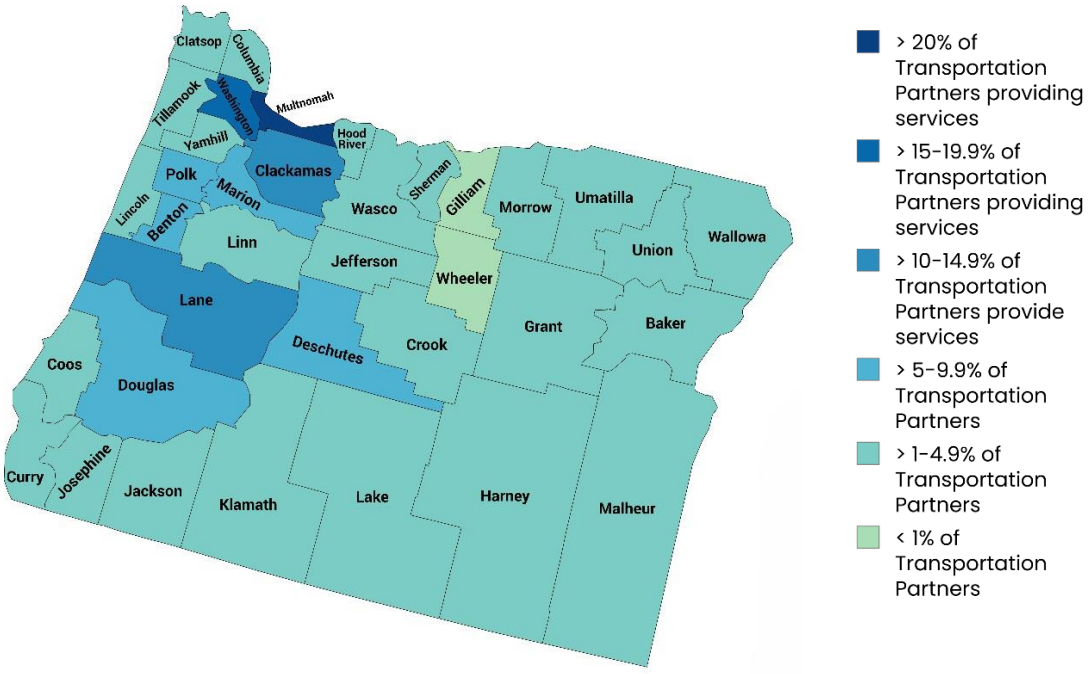
Where do you mainly provide services? Please select all that apply.
(Base: All transportation partner responses, n = 400.)



Value	Percent
Multnomah County	22.3%
Washington County	15.0%
Clackamas County	11.8%
Lane County	10.5%
Marion County	9.3%
Deschutes County	8.3%
Benton County	6.5%
Polk County	6.3%
Douglas County	5.5%
Linn County	5.3%
All other counties	65.7%
I provide services statewide	21.8%

Transportation Partner Service Provision by County

(Base: all transportation partner responses, n = 400.)



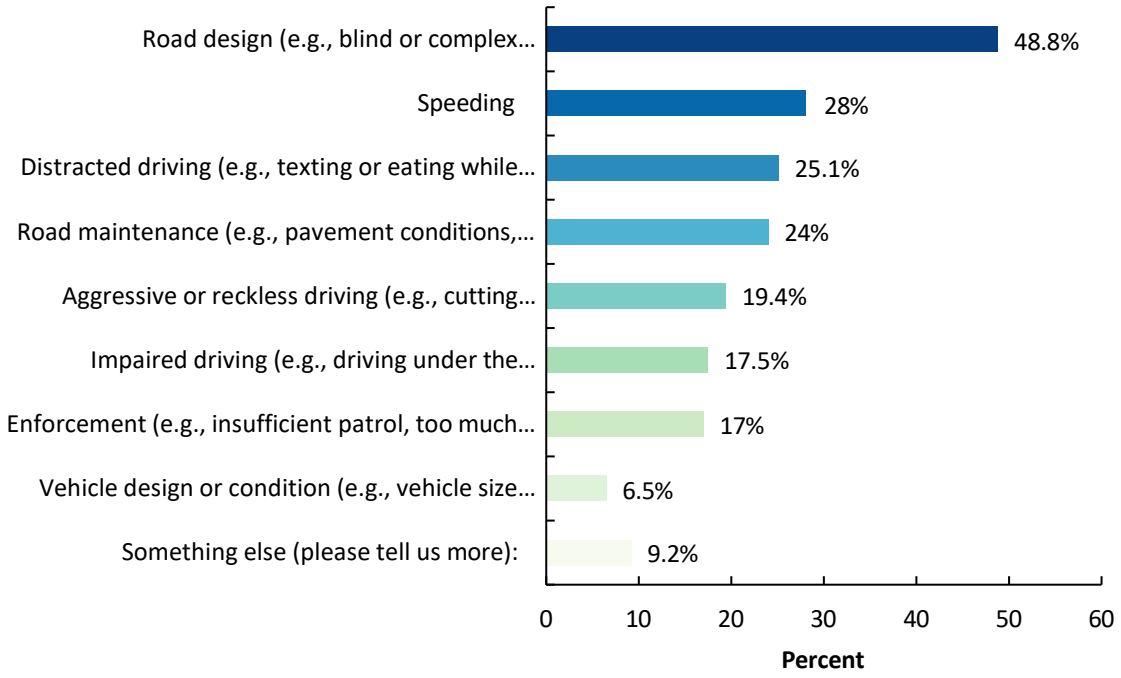
Please share the agency or organization you are affiliated with. (Base: All transportation partners, n = 356.)

Among transportation partners, the greatest share of respondents were affiliated with ODOT itself (n = 71, or **19.9%**). Other key contributors included:

- Clackamas County
- Multnomah County
- Washington County
- The City of Eugene
- The City of Bend
- The City of Salem
- The Portland Board of Transportation (PBOT)
- The Oregon Health Authority (OHA)
- Oregon State University (OSU)

- Members of the Oregon Cascades West Council of Governments (OCWCOG)

What are your top concerns related to roadway safety in your region or jurisdiction? Please select your top two. (All transportation partners, n = 371)



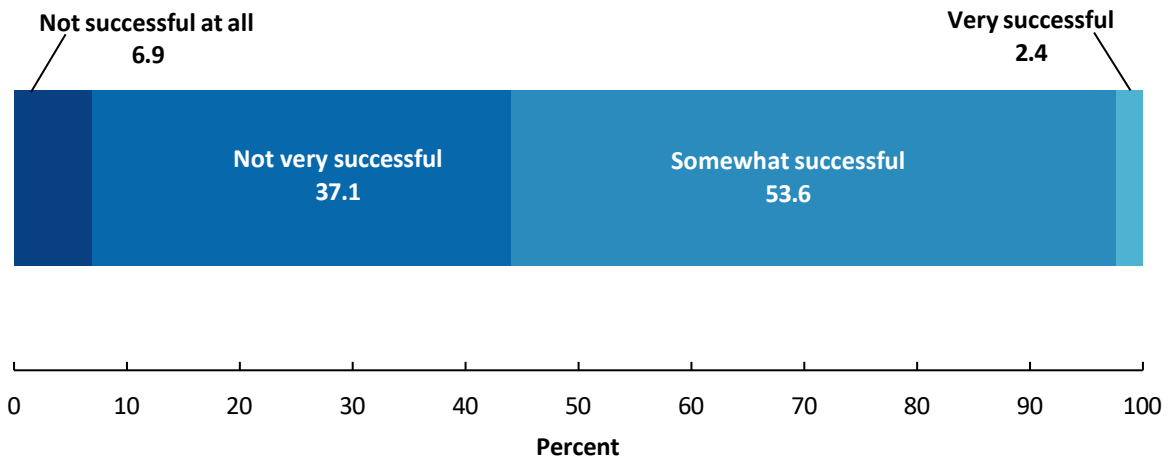
Value	Percent
Road design (e.g., blind or complex intersections, winding roads, narrow or too wide roads, lack of sidewalks/bike lanes/paths, inadequate signage, inadequate lighting, etc.)	48.8%
Speeding	28.0%
Distracted driving (e.g., texting or eating while driving)	25.1%
Road maintenance (e.g., pavement conditions, potholes, drainage, faded road striping)	24.0%
Aggressive or reckless driving (e.g., cutting people off or changing lanes quickly)	19.4%
Impaired driving (e.g., driving under the influence of alcohol, marijuana, or other drugs)	17.5%
Enforcement (e.g., insufficient patrol, too much or too little automated enforcement, etc.)	17.0%
Something else (please tell us more)*	9.2%

Vehicle design or condition (e.g., vehicle size and weight, lack of built-in safety features, etc.)	6.5%

Among those that responded “something else,” top responses included:

- **Concerns related to the safety of pedestrians and cyclists** (e.g., lack of separation between bicycle lanes and lanes used for road traffic)
- **Lack of accessibility** (including absent or poor-quality sidewalks, ramps, and crosswalks)
- **Speed limits that are set too high** or that feel inappropriate to the surrounding context (e.g., high speed limits in residential areas, or in close proximity to schools or parks)
- **Poor land use**; issues surrounding city planning

How effectively is safety addressed on roadways throughout Oregon? Consider success at the statewide, regional, and local levels. (Base: All transportation safety partners, n =354)



Value	Percent
Not successful at all	6.9%
Not very successful	37.1%
Somewhat successful	53.6%
Very successful	2.4%

The majority of partners surveyed (56%) felt existing procedures and protocols were at least somewhat successful. Less than 1 in 10 (6.9%) felt that the existing strategies had not been successful at all.

Please explain your response to the previous question. Include specific strategies and efforts that you think have been effective at addressing safety concerns in the last five years. Consider success at the statewide, regional, and local levels.

Current Areas for Improvement

On the whole, responses suggest that partners agree that traffic safety throughout Oregon has been improving in recent years. However, there remain several potential avenues for growth.

The top priority cited in these open-ended responses was to **improve enforcement** of local and state law (and to ensure that this enforcement is equitably applied). Many participants noted that law enforcement personnel seem overburdened and understaffed. **Speeding, aggressive driving, distracted driving, and DUI** are ongoing safety issues, and residents feel that more could be done to police these behaviors and hold drivers accountable. **Expanding automated enforcement campaigns** – for instance, the use of red light cameras – feels to many like a promising next step.

Recent **improvements to the built environment** – for example, the implementation of new traffic calming measures (discussed in more detail below) – have done a great deal to curb behaviors like speeding, but there is much more work to be done. Participants suggested that **increasing the overall capacity of roadways**, introducing **additional traffic calming tools**, and making interventions to prioritize the safety of non-drivers (e.g., adding **new crosswalks**; adding or extending **bicycle lanes**) would all be worthwhile investments when it comes to improving safety.

Finally, some noted that if ODOT hopes to continue improving conditions, they will need to **shift their overall approach to investigating** these issues. Right now, it feels to some respondents that both ODOT and local law enforcement personnel are in a *reactive* position, responding to emergent issues as they arise. To continue making progress, residents feel that ODOT will have to **take a more proactive approach** to addressing safety issues, surfacing them for public attention and addressing them *before* they have a chance to cause harm.

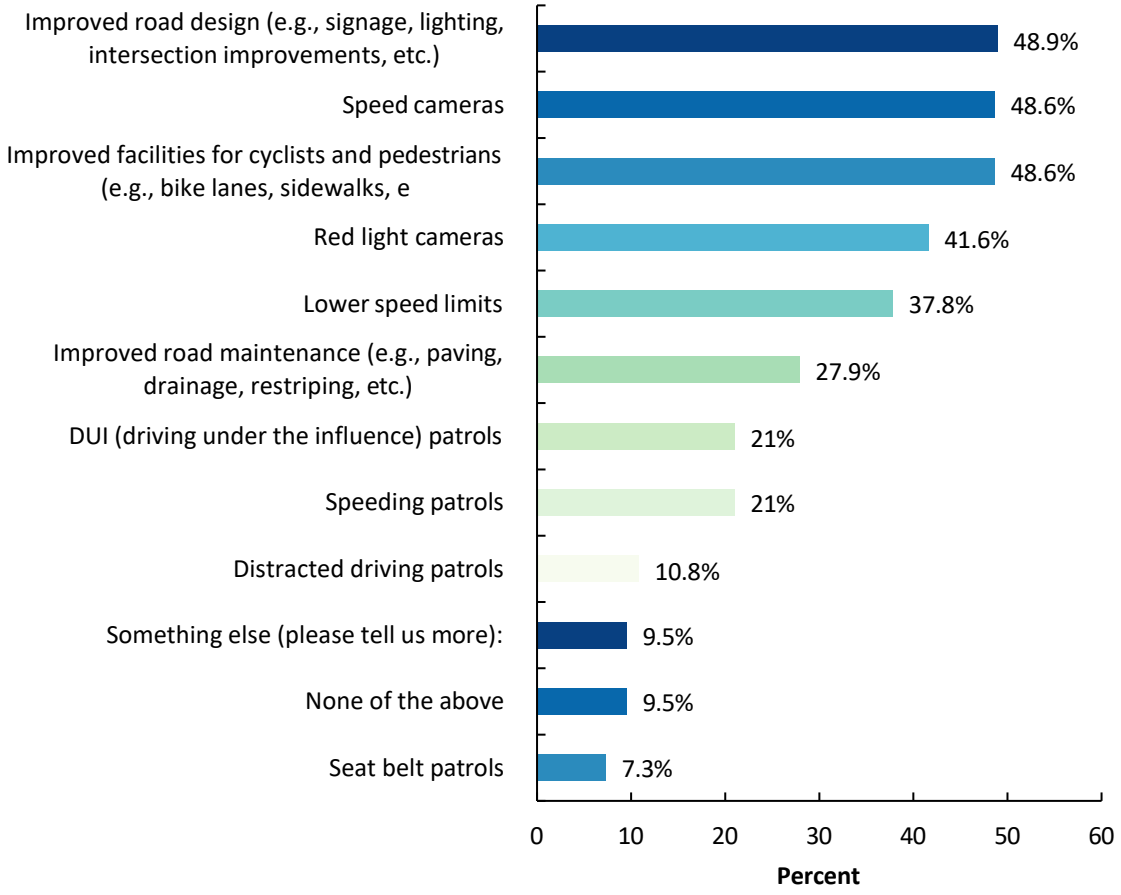
Strategies for Success

Participants also pointed to a suite of tactics implemented by ODOT that they feel have been *successful.* Specific success strategies referenced by participants included:

- **Increasing law enforcement** (particularly the presence of State Patrol officers); creating new means for law enforcement personnel and ODOT/local transportation jurisdictions to **collaborate** and work together
- Introducing **traffic calming measures** (e.g., roundabouts on state highways; speed limit reductions; speed bumps)
- Developing **traveler information systems** (e.g., LED signage) to notify drivers about slower conditions ahead
- Prioritizing the development of **pedestrian and cycling amenities** (particularly in rural areas with limited existing infrastructure for non-vehicle travel)
- Making structural investments in other domains (e.g., helping residents to find **affordable housing**; addressing the **substance abuse** crisis; offering **mental health support**)
- **Improving road conditions** – filling potholes, re-paving
- Restricting the **use of oversized vehicles**
- Upgrading intersections to include features like **stop light warning indicators, "splitter islands,"** and **additional signal heads**
- Requiring periodic **re-testing or recertification of drivers** to maintain their licensure; **increasing driver education** and training (as well as education for cyclists/scooter users)
- Expanding the use of **automated enforcement** (e.g., red light cameras; automated ticketing for speeders)
- Expanding **enforcement related to helmet** and **seat belt usage**
- Implementing the use of **"safety corridors"**
- Using **crash data** to model and identify high-risk areas for intervention

Finally, three recent public education and outreach campaigns -- PBOT's "Vision Zero" campaign, the All Roads Transportation Safety (ARTS) program, and Safe Streets for All -- have received significant praise from local residents. Transportation partners felt that these programs have proven successful overall, and that they have made important contributions to improving traffic safety. There is hope among transportation partners that these campaigns will be expanded in future to reach more rural areas.

In your opinion, which of the following are working well to improve roadway safety in Oregon? Please select all that apply. (Base: All transportation partners, n = 315.)



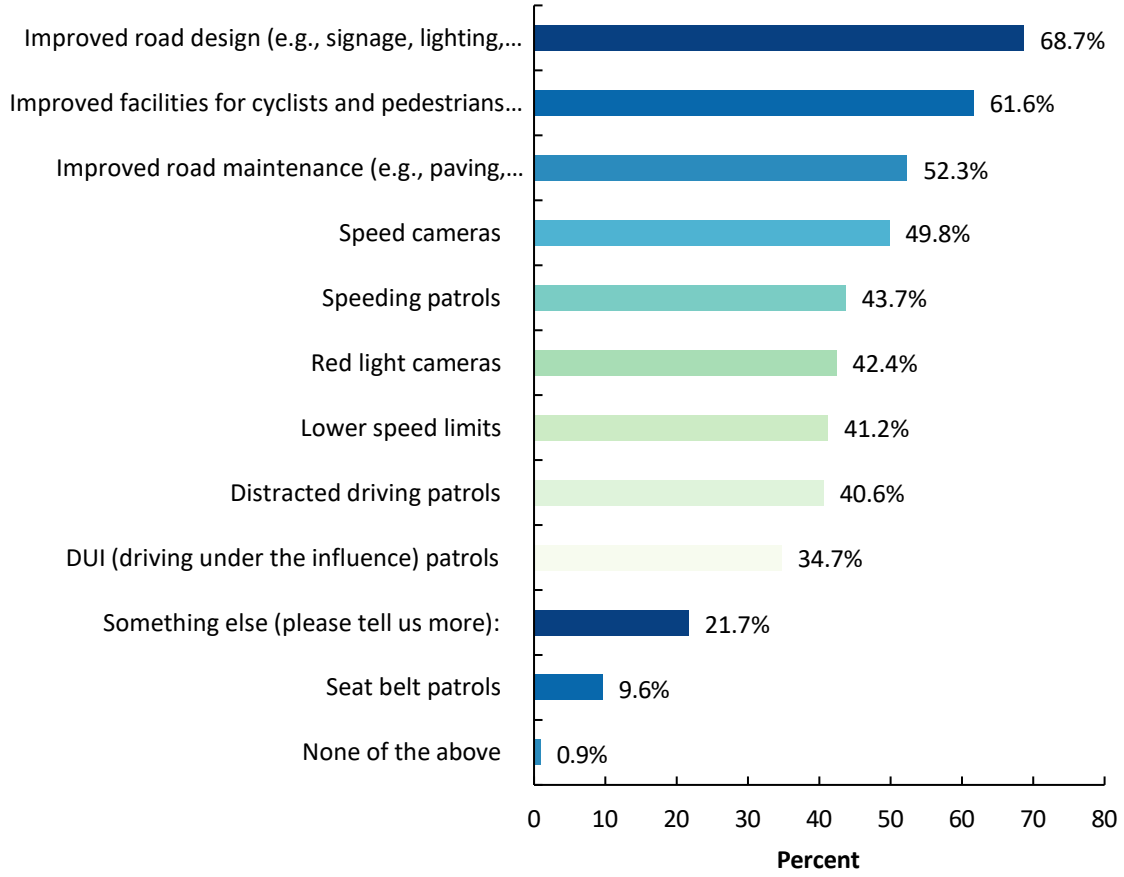
Value	Percent
Improved road design (e.g., signage, lighting, intersection improvements, etc.)	48.9%
Speed cameras	48.6%
Improved facilities for cyclists and pedestrians (e.g., bike lanes, sidewalks, etc.)	48.6%
Red light cameras	41.6%
Lower speed limits	37.8%
Improved road maintenance (e.g., paving, drainage, restriping, etc.)	27.9%
DUI (driving under the influence) patrols	21.0%
Speeding patrols	21.0%

Distracted driving patrols	10.8%
Something else (please tell us more)	9.5%
None of the above	9.5%
Seat belt patrols	7.3%

Among those that responded “something else,” some of the top responses included:

- Increased **automated enforcement** (e.g., speed cameras)
- Companies establishing **permanent procedures to facilitate remote work**
- Increasing **driver education**
- Adding **rumble strips** or **speed humps** to reduce speeding
- **Changing road design** – removing lanes, adding roundabouts and other traffic calming measures, or implementing “road diets” to reduce traffic.

In your opinion, what would you like to see more of to improve roadway safety in Oregon? Please select all that apply. (Base: All transportation partners, n = 323.)



Value	Percent
Improved road design (e.g., signage, lighting, intersection improvements, etc.)	68.7%
Improved facilities for cyclists and pedestrians (e.g., bike lanes, sidewalks, etc.)	61.6%
Improved road maintenance (e.g., paving, drainage, restriping, etc.)	52.3%
Speed cameras	49.8%
Speeding patrols	43.7%
Red light cameras	42.4%
Lower speed limits	41.2%
Distracted driving patrols	40.6%
DUI (driving under the influence) patrols	34.7%

Something else (please tell us more):	21.7%
Seat belt patrols	9.6%
None of the above	0.9%

Among those that responded “something else,” top responses included:

- Centering **micromobility access** and **pedestrian-first design**
- Introducing **congestion pricing** (as in New York City, for example)
- **Improving lighting conditions**; adding streetlights
- Introducing **more frequent crosswalks** and more distributed medians
- Improving **access to (and conditions while using) public transit**
- Adding new **traffic calming** features (e.g. **more roundabouts**)
- **Increasing signage** to notify drivers of upcoming hazardous conditions
- **Narrowing roads and shortening parking spaces** to discourage the use of oversized vehicles, or restricting vehicle size outright

What topics or focus areas would you recommend including in the 2026 Transportation Safety Action Plan update to better support the community you serve?

Additional areas of focus highlighted by transportation partners included:

- Improving and expanding **traffic patrols in rural areas**
- Expanding **automated traffic enforcement** (speed cameras; red light cameras; HAWK)
- Encouraging cities – particularly larger cities – to take on a greater role in championing urban road design and enforcement policy
- Honing in on **infrastructure improvements for non-drivers**
    - **Reducing lanes** and **slowing speeds**
    - Increasing **sidewalk and bike path connectivity**
    - **Creating more visible crossing opportunities** (per the Blueprint for Urban Design)
    - **Improving accessibility** for those with mobility needs
- Limiting or **restricting the use of oversized vehicles** (e.g., extended-cab pickup trucks)
- **Traffic calming measures** to reduce speeding and aggressive driving
- Expanding **driver education**
    - **Requiring periodic retesting and recertification** to maintain a license
    - **Mandating driver training courses** for high school students
    - Education for **cyclists and scooter users**

How will the additions you've recommended help us improve roadway safety in Oregon?

- **Additional enforcement (whether automated or through police patrols):** This intervention would help to address ongoing issues with driver behavior (including speeding, reckless driving, distracted driving, and DUI). Expanding automated enforcement will help to curb these behaviors even in less-patrolled areas, or during intervals where jurisdictions are overburdened or understaffed.

- **Reducing speed limits**: This measure could keep *everyone* safer – particularly if implemented in residential areas, but also on major highways!

- **Expanding amenities for non-drivers:** Implementing bicycle lanes, adding new sidewalks and crosswalks, and encouraging the use of public transit both helps to keep pedestrians/cyclists safer *and* reduces the traffic on Oregon's roads (for those that do choose to drive).

- **Restricting the use of oversized vehicles**: Oversized trucks and SUVs are environmentally unfriendly, create noise pollution, are harder to control while driving, and pose an ongoing danger to both pedestrians (who cannot easily be seen) and to other drivers (who may have trouble navigating around these vehicles). Limiting the size of such vehicles, restricting whether individual residents are allowed to own and operate them, or implementing different licensing requirements for the use of these vehicles would make the roads safer for all.

- **Improving driver education***:* Many of those licensed to drive in the U.S. completed their driver training many decades ago (or, indeed, may never have completed a course at all!). Increasing driver training – for example, by requiring periodic retraining or re-testing to maintain one's license – would help to ensure that those new to driving in the U.S. are acquainted with the rules of the road, reinforce pedestrian and cyclist safety, and help state agents to more readily identify drivers whose capacities may be changing (due to age, health status, or other factors).

What else should statewide, regional, and local safety partners address to create a safer environment for all road users?

Some of the other recommendations offered by transportation partners included:

- Expanding the **use of "diverters"** to direct car traffic away from streets that are heavily trafficked by cyclists and pedestrians

- Improving **communication between jurisdictions**

- Being more **intentional in selecting funded capital projects**; **prioritize these projects based on their contributions to safety**, and don't allow one major project to overshadow or obscure other regional needs

- Expanding support beyond ODOT – at the "highest political level" – to **champion some of the more controversial *but proven effective* traffic calming tools**

    - Promoting use of **rumble strips and speed humps**

    - Promoting the **use of roundabouts** on major thoroughfares

    - **Restricting driveways** to "right in, right out"

- **Working with insurance companies to create discounts or incentive programs** for those that invest in driver education and safety (e.g., by taking a "refresher" course)

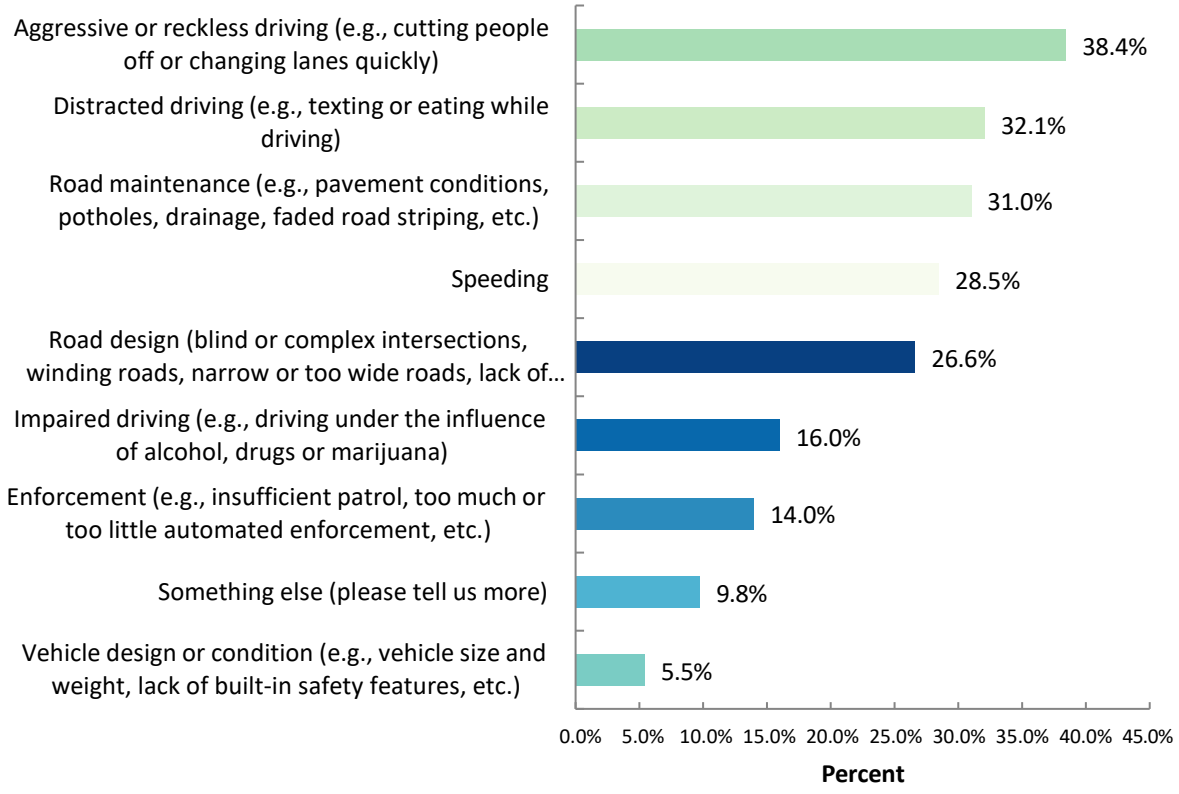
- **Reducing VMT** and taking measures to encourage mode shift; **motivating use of transit**

- **Empowering local safety action committees** to conduct their own community outreach

- **Improving statewide data collection and data sharing to better identify high-risk areas throughout Oregon (and collaborate to address them)**

Detailed Findings -- Public Tract

What are your top concerns about roadway safety in your community? Please select your top two. (Base: All public tract responses, n = 1,228.)



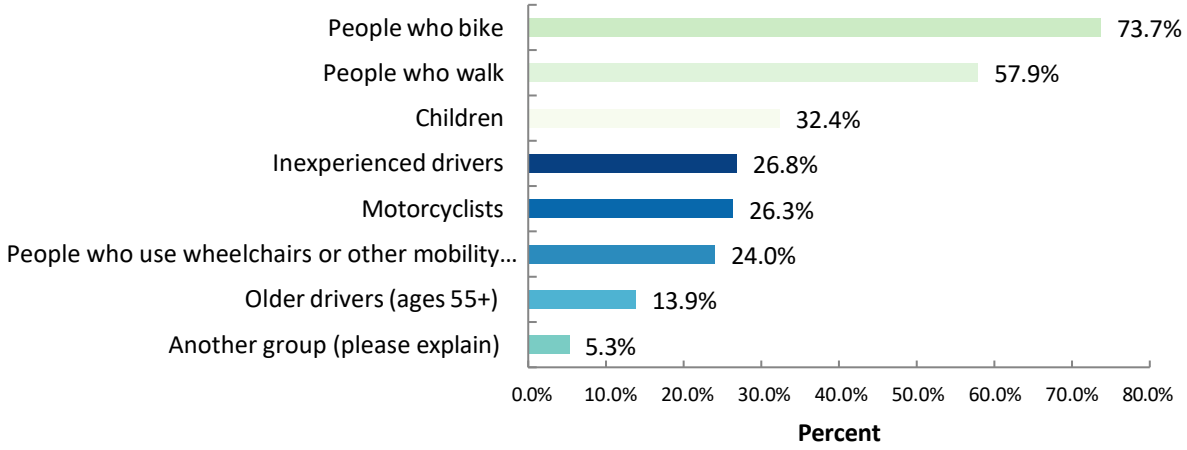
Value	Percent
Aggressive or reckless driving (e.g., cutting people off or changing lanes quickly)	38.4%
Distracted driving (e.g., texting or eating while driving)	32.1%
Road maintenance (e.g., pavement conditions, potholes, drainage, faded road striping, etc.)	31.0%
Speeding	28.5%
Road design (blind or complex intersections, winding roads, narrow or too wide roads, lack of sidewalks/bike lanes/paths, inadequate signage, lighting, etc.)	26.6%
Impaired driving (e.g., driving under the influence of alcohol, drugs, or marijuana)	16.0%

Enforcement (e.g., insufficient patrol, too much or too little automated enforcement, etc.)	14.0%
Something else (please tell us more)	9.8%
Vehicle design or condition (e.g., vehicle size and weight, lack of safety features, etc.)	5.5%

Top concerns not captured by these response options included:

- **Drivers not attending to pedestrians** (e.g., taking **a right turn on red** into a crosswalk where someone is actively crossing)
- **Narrowing lanes** to accommodate cyclists (but making the squeeze tighter for drivers)
- Drivers **tailgating or following too closely**
- **Speed limits set too high** on both highways and residential roads
- Drivers making **illegal lane crossings and turns**
- The **need for additional lighting** (both to improve visibility, and to discourage the use of high-beam headlights)
- Requiring **education, training, or licensure** for cyclists, e-bike users, and scooter riders

Which road users in your community are at greater risk of transportation-related injury? Please select up to three. (Base: All public tract responses, n = 1,211.)

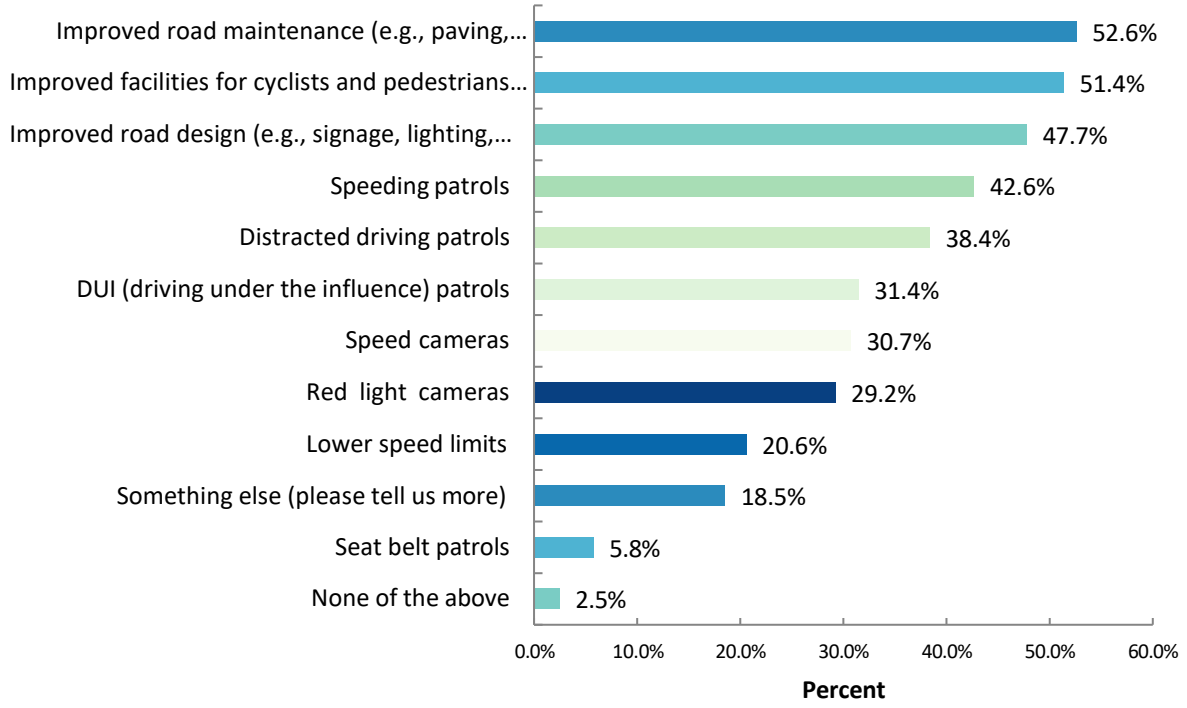


Value	Percent
People who bike	73.7%
People who walk	57.9%
Children	32.4%
Inexperienced drivers	26.8%
Motorcyclists	26.3%
People who use wheelchairs or other mobility devices	24.0%
Older drivers (ages 55+)	13.9%
Another group (please explain)	5.3%

Other populations identified as at-risk included:

- **Unhoused residents** (especially those living in their vehicles, in tent cities, or in other communities bordering major roadways)
- **Pets** and local **wildlife**
- Recent **immigrants**
- People using **scooters** or **skateboards**

What would you like to see more of to help improve roadway safety in your community? Please select all that apply. (Base: All public tract responses, n = 1,215.)



Value	Percent
Improved road maintenance	52.6%
Improved facilities for cyclists and pedestrians	51.4%
Improved road design	47.7%
Speeding patrols	42.6%
Distracted driving patrols	38.4%
DUI (driving under the influence) patrols	31.4%
Speed cameras	30.7%
Red light cameras	29.2%
Lower speed limits	20.6%
Something else (please tell us more)	18.5%
Seat belt patrols	5.8%
None of the above	2.5%

Other suggestions to improve roadway safety included:

- **Holding police accountable to public standards** (e.g., by discouraging officers from using cell phones or computing equipment while driving)

- Requiring **periodic retraining or recertification** of licensed drivers

- Implementing **patrols specific to the issue of drag racing**/street racing

- Adding **better signage and lighting** at major pedestrian crossings

- **Redesigning or redirecting roads** to help curb speeding

- **Ticketing pedestrians and cyclists** who do not follow the rules of the road

- Adding **physical barriers** to reduce/eliminate illegal turns

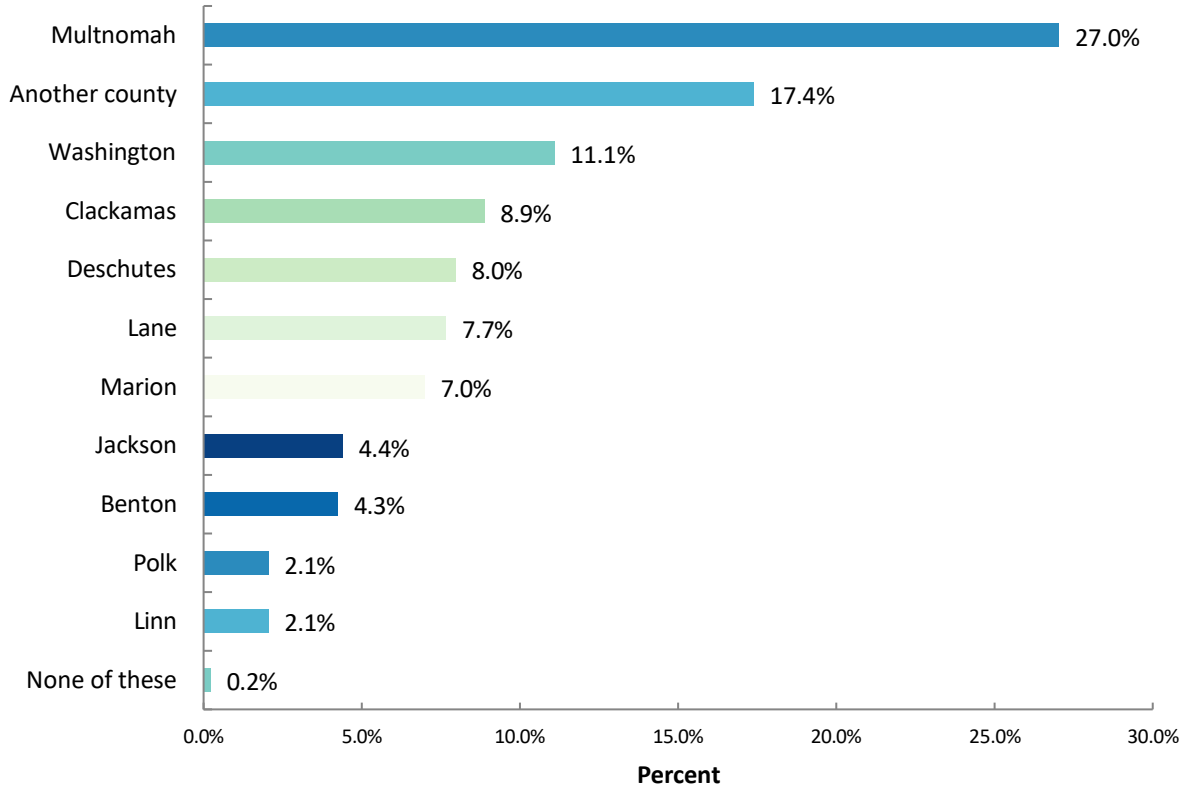
- **Reduce public investment in funding highway expansion projects** or adding lanes for car traffic; prioritizing capital projects focused on pedestrians, cyclists, and transit users

- **Improving accessibility** for people with mobility needs (e.g., added curb cuts)

- Implementing **congestion pricing** to reduce traffic (particularly in urban centers)

- Add regular **DUI checkpoints**, especially along major highways (e.g., Hwy 101)

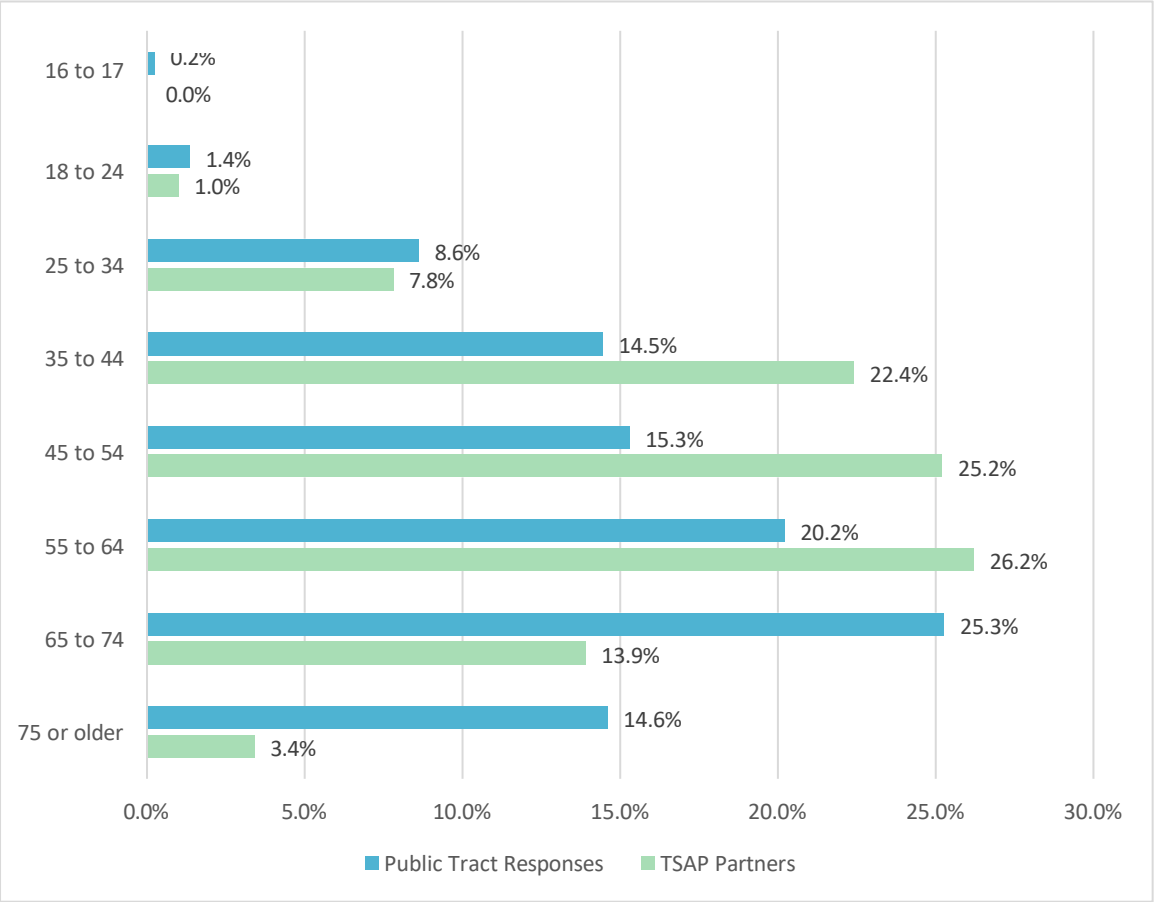
What Oregon county do you currently live in? (Base: All public tract responses, n = 1,317.)



Value	Percent
Multnomah County	27.0%
Another county	17.4%
Washington County	11.1%
Clackamas County	8.9%
Deschutes County	8.0%
Lane County	7.7%
Marion County	7.0%
Jackson County	4.4%
Benton County	4.3%
Linn County	2.1%
Polk County	2.1%
None of the above	0.2%

Demographics

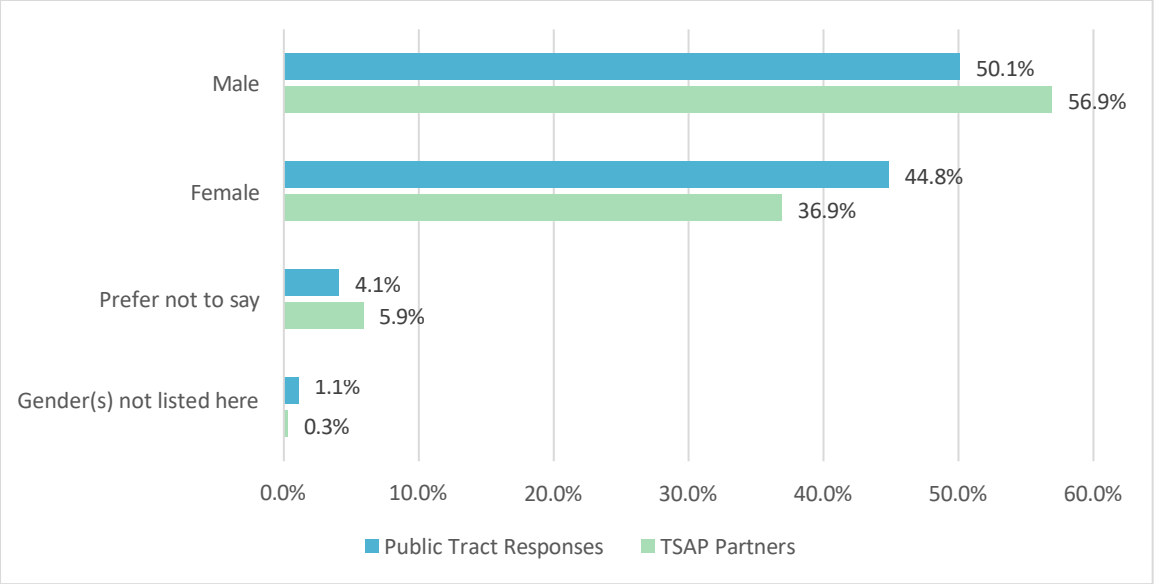
What is your age? (Base: All TSAP partners (n = 294), all public tract responses (n = 1,322).)



Value	Percent (TSAP Partners)	Percent (Public Tract)
16-17	0.0%	0.2%
18-24	1.0%	1.4%
25-34	7.8%	8.6%
35-44	22.4%	14.5%
45-54	25.2%	15.3%
55-64	26.2%	20.2%
65-74	13.9%	25.3%
75 or older	3.4%	14.6%

How do you identify?

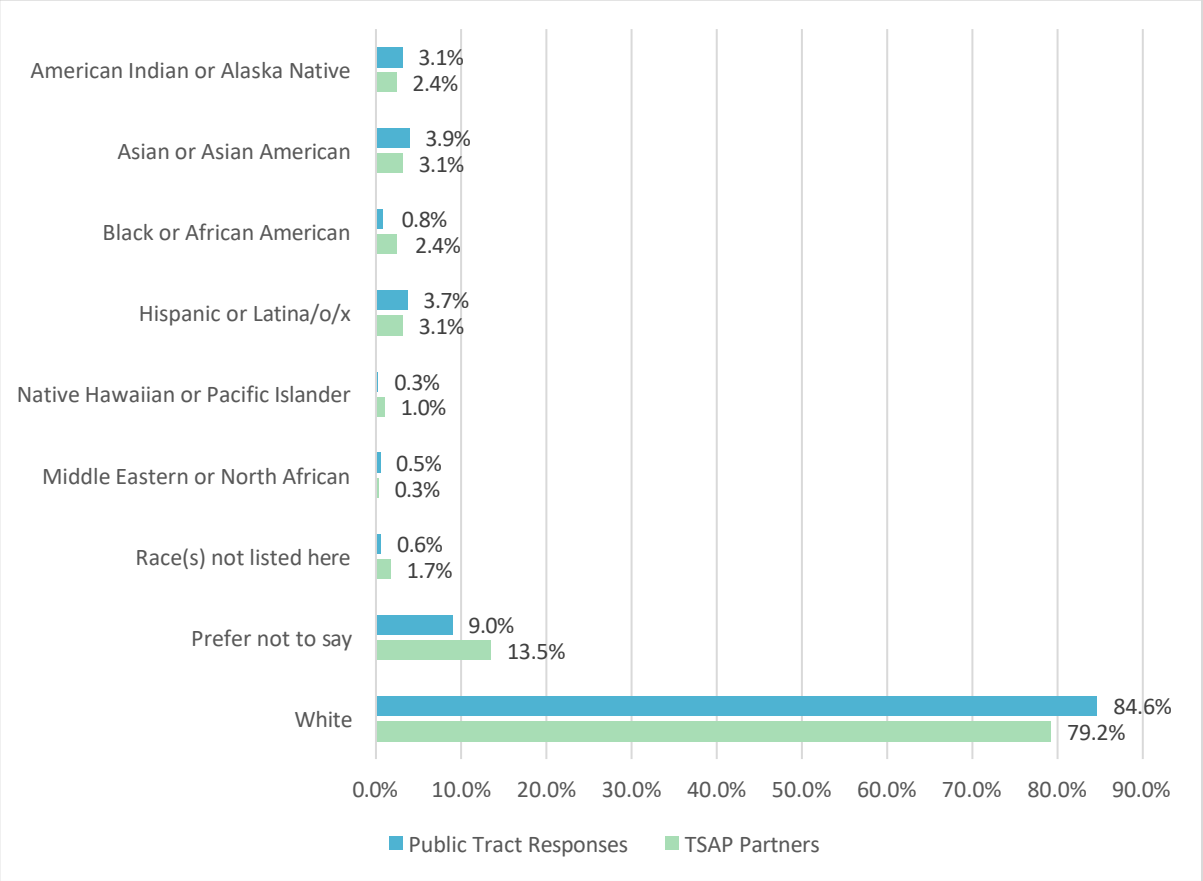
(Base: All TSAP partners (n = 290), all public tract responses (n = 1,206).)



Value	Percent (TSAP Partners)	Percent (Public Tract)
Male	56.9%	50.1%
Female	36.9%	44.8%
Prefer not to say	5.9%	4.1%
Gender(s) not listed here	0.3%	1.1%

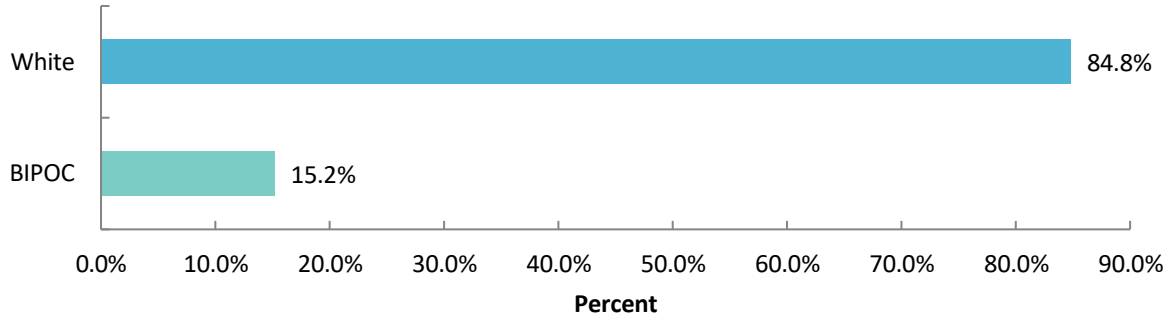
How do you identify? Please select all that apply.

(Base: All TSAP partners (n = 309), all public tract responses (n = 1,203).)



Value	Percent (TSAP Partners)	Percent (Public Tract)
American Indian or Alaska Native	2.4%	3.1%
Asian or Asian American	3.1%	3.9%
Black or African American	2.4%	0.8%
Hispanic or Latina/o/x	3.1%	3.7%
Native Hawaiian or Pacific Islander	1.0%	0.3%
Middle Eastern or North African	0.3%	0.5%
Race(s) not listed here	1.7%	0.6%
Prefer not to say	13.5%	9.0%
White	79.2%	84.6%

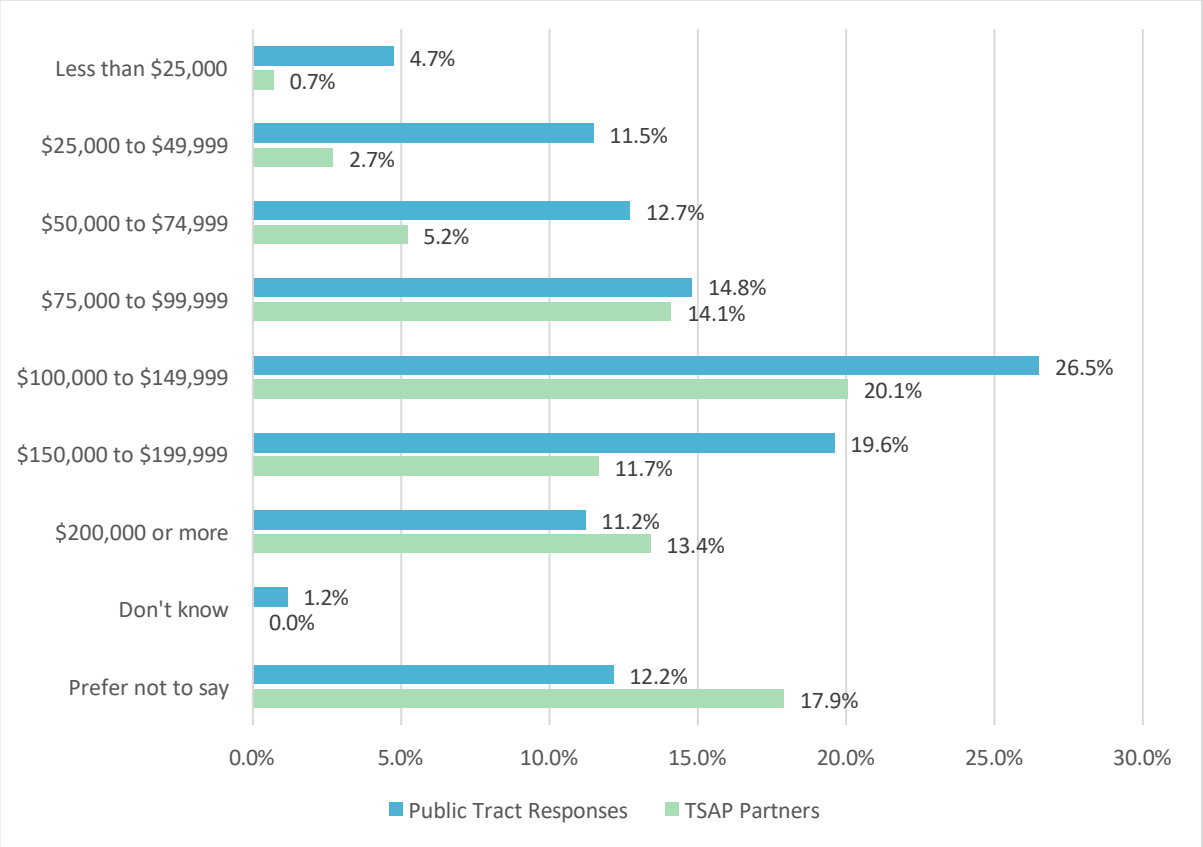
Grouped Race and Ethnicity (Base: all transportation partner responses, n = 270.)*



Value	Percent
BIPOC	15.2%
White	84.8%

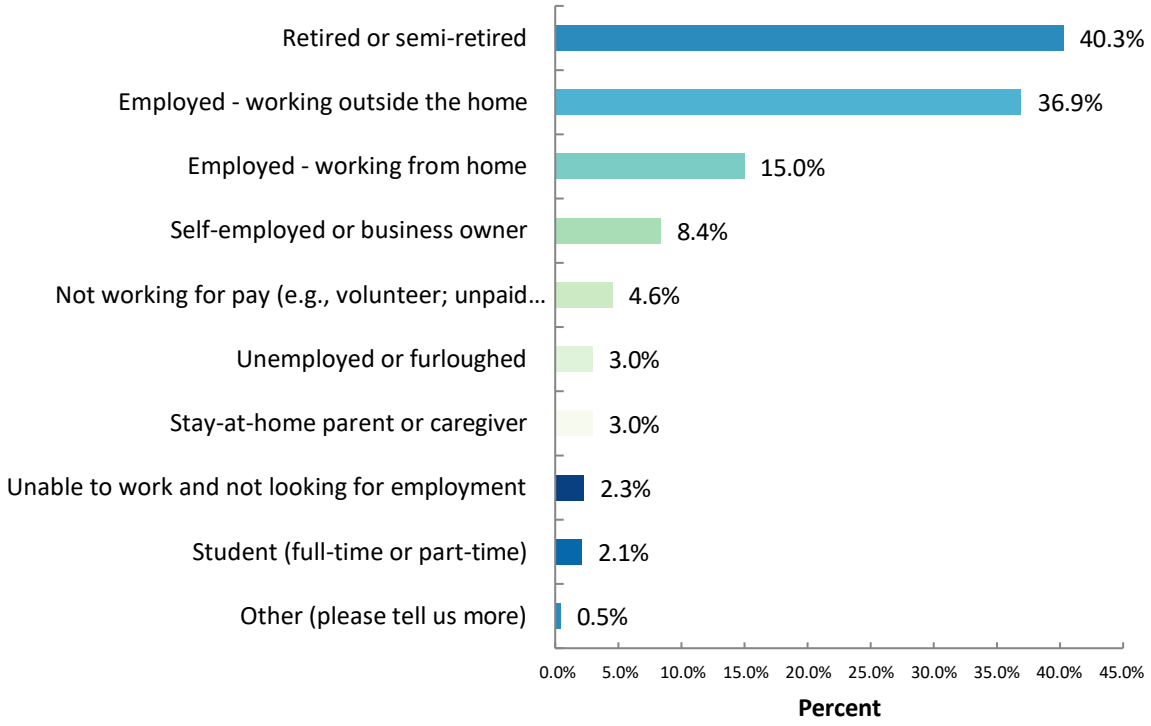
**Respondents that selected "prefer not to say" have been omitted from this calculation.*

What was your total household income in 2024? (Your best guess is fine.)
(Base: All TSAP partners (n = 291), all public tract responses (n = 1,202).)



Value	Percent (TSAP Partners)	Percent (Public Tract)
Less than $25,000	0.7%	4.7%
$25,000 to $49,999	2.7%	11.5%
$50,000 to $74,999	5.2%	12.7%
$75,000 to $99,999	14.1%	14.8%
$100,000 to $149,999	26.5%	20.1%
$150,000 to $199,999	19.6%	11.7%
$200,000 or more	13.4%	11.2%
Don’t know	0.0%	1.2%
Prefer not to say	17.9%	12.2%

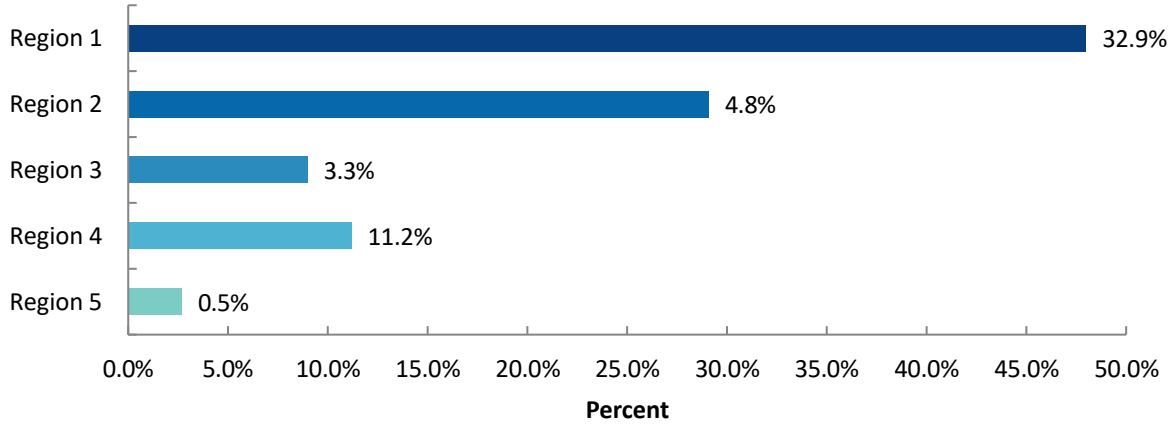
Which of the following best describes your current work status? Please select all that apply. (Base: All TSAP partners (n = 291), all public tract responses (n = 1,202))



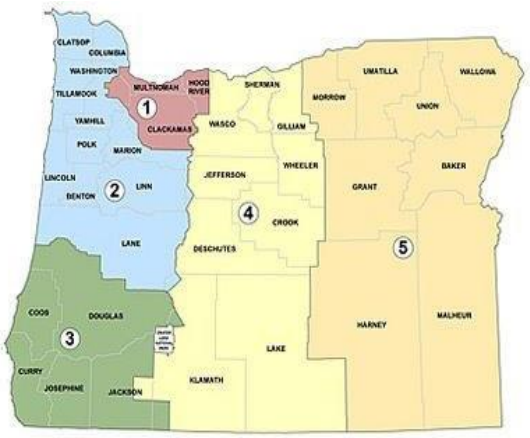
Value	Percent
Retired or semi-retired	40.3%
Employed – working outside the home	36.9%
Employed – working from home	15.0%
Self-employed or business owner	8.4%
Not working for pay (e.g., volunteer; unpaid work)	4.6%
Stay-at-home parent or caregiver	3.0%
Unemployed or furloughed	3.0%
Unable to work and not looking for employment	2.3%
Student (full time or part time)	2.1%
Other (please tell us more)	0.5%

Appendix A: Detailed Findings - Public Tract Responses

Regional Representation: Public Tract (Base: all public tract responses, n = 1,314.**)**

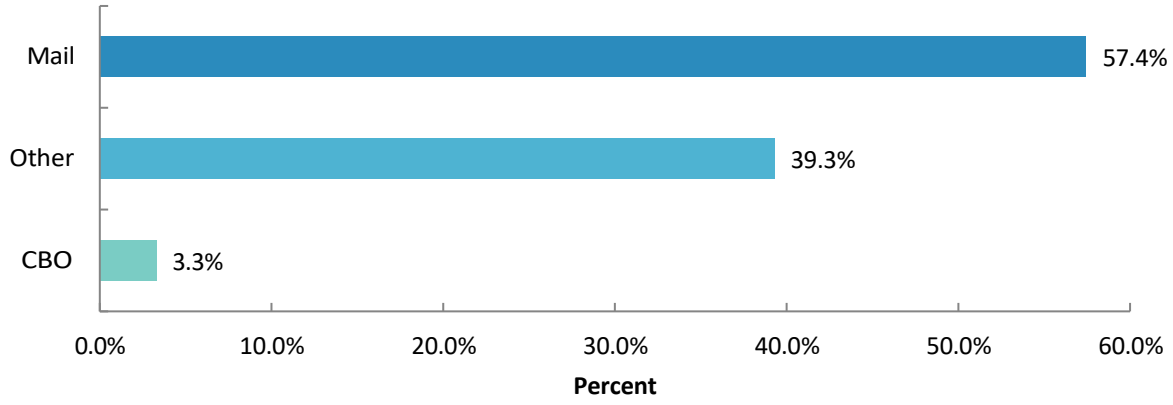


Value	Percent
Region 1	48.0%
Region 2	29.1%
Region 3	9.0%
Region 4	11.2%
Region 5	2.7%



- **Region 1**: Portland Metro (Clackamas, Hood River, Multnomah and eastern Washington counties)
- **Region 2:** Willamette Valley and North Coast (Clatsop, Columbia, Tillamook, Yamhill, Polk, Marion, Lincoln, Linn, Benton, Lane, western Washington and western Clackamas counties)
- **Region 3:** Southwestern Oregon (Douglas, Curry, Coos, Josephine, and Jackson counties)
- **Region 4:** Central Oregon (Wasco, Sherman, Gilliam, Jefferson, Wheeler, Crook, Deschutes, Lake, and Klamath counties)
- **Region 5:** Eastern Oregon (Morrow, Umatilla, Union, Wallowa, Baker, Grant, Harney, and Malheur counties)

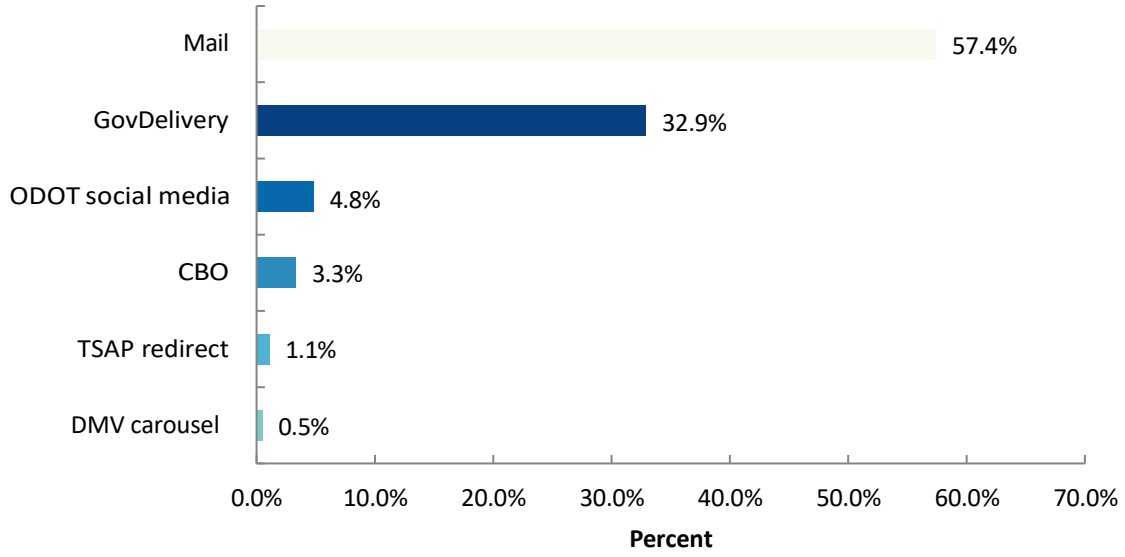
Recruitment Method (Base: all public tract responses, n = 1,322.**)**



Value	Percent
Mail	57.4%
Other	39.3%
CBO	3.3%

Responses from the general public were solicited in three different ways: by postal mail, through local community-based organizations (CBOs), and via other methods (such as word of mouth).

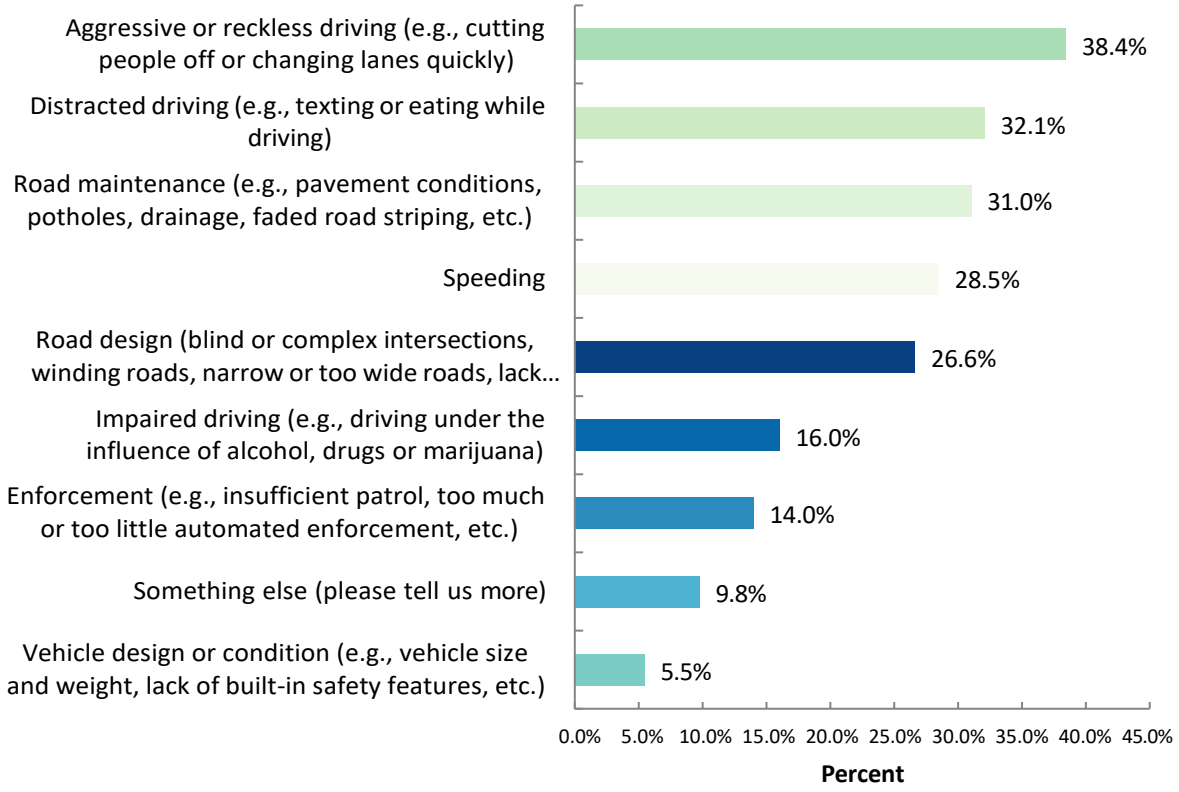
Response Rates by Recruitment Method (Base: All public tract respondents, n = 1,322.**)**



Value	Percent
Mail	57.4%
GovDelivery	32.9%
ODOT Social Media	4.8%
CBO	3.3%
TSAP Redirect	1.1%
DMV Carousel	0.5%

Referral links inviting residents to complete the ODOT OPOS were circulated using a variety of modes. The majority of participants that completed the survey responded to an invitation they received through the mail. The second most prominent referral source was the GovDelivery website, followed by ODOT's social media page. Advertisements circulated via the rotating digital message board at the Department of Motor Vehicles yielded the fewest responses.

What are your top concerns about roadway safety in your community? Please select your top two. (Base: All public tract responses, n = 1,228.)



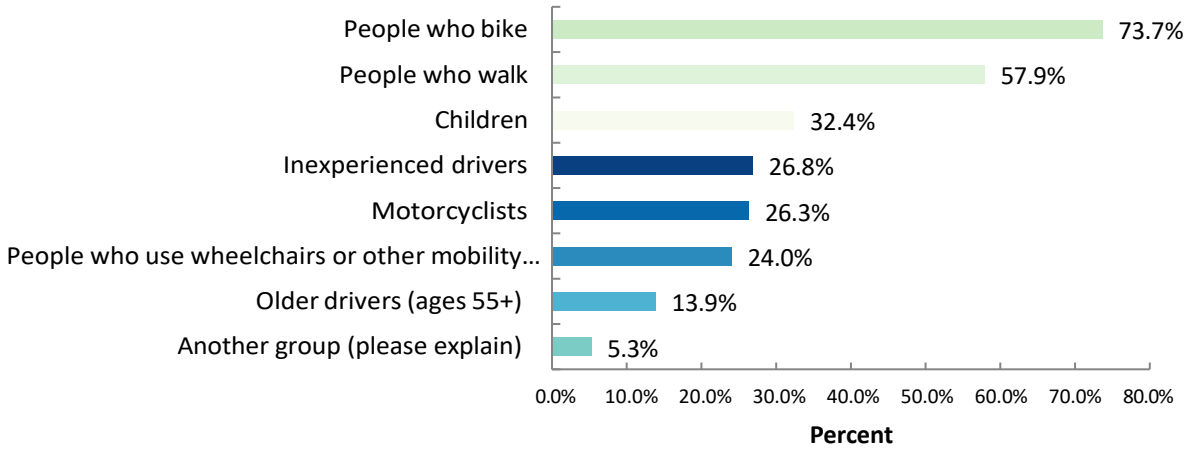
Value	Percent
Aggressive or reckless driving (e.g., cutting people off or changing lanes quickly)	38.4%
Distracted driving (e.g., texting or eating while driving)	32.1%
Road maintenance (e.g., pavement conditions, potholes, drainage, faded road striping, etc.)	31.0%
Speeding	28.5%
Road design (blind or complex intersections, winding roads, narrow or too wide roads, lack of sidewalks/bike lanes/paths, inadequate signage, lighting, etc.)	26.6%
Impaired driving (e.g., driving under the influence of alcohol, drugs, or marijuana)	16.0%
Enforcement (e.g., insufficient patrol, too much or too little automated enforcement, etc.)	14.0%
Something else (please tell us more)	9.8%

Vehicle design or condition (e.g., vehicle size and weight, lack of safety features, etc.)	5.5%

Top concerns not captured by these response options included:

- **Drivers not attending to pedestrians** (e.g., taking **a right turn on red** into a crosswalk where someone is actively crossing)
- **Narrowing lanes** to accommodate cyclists (but making the squeeze tighter for drivers)
- Drivers **tailgating or following too closely**
- **Speed limits set too high** on both highways and residential roads
- Drivers making **illegal lane crossings and turns**
- The **need for additional lighting** (both to improve visibility, and to discourage the use of high-beam headlights)
- Requiring **education, training, or licensure** for cyclists, e-bike users, and scooter riders

Which road users in your community are at greater risk of transportation-related injury? Please select up to three. (Base: All public tract responses, n = 1,211.)

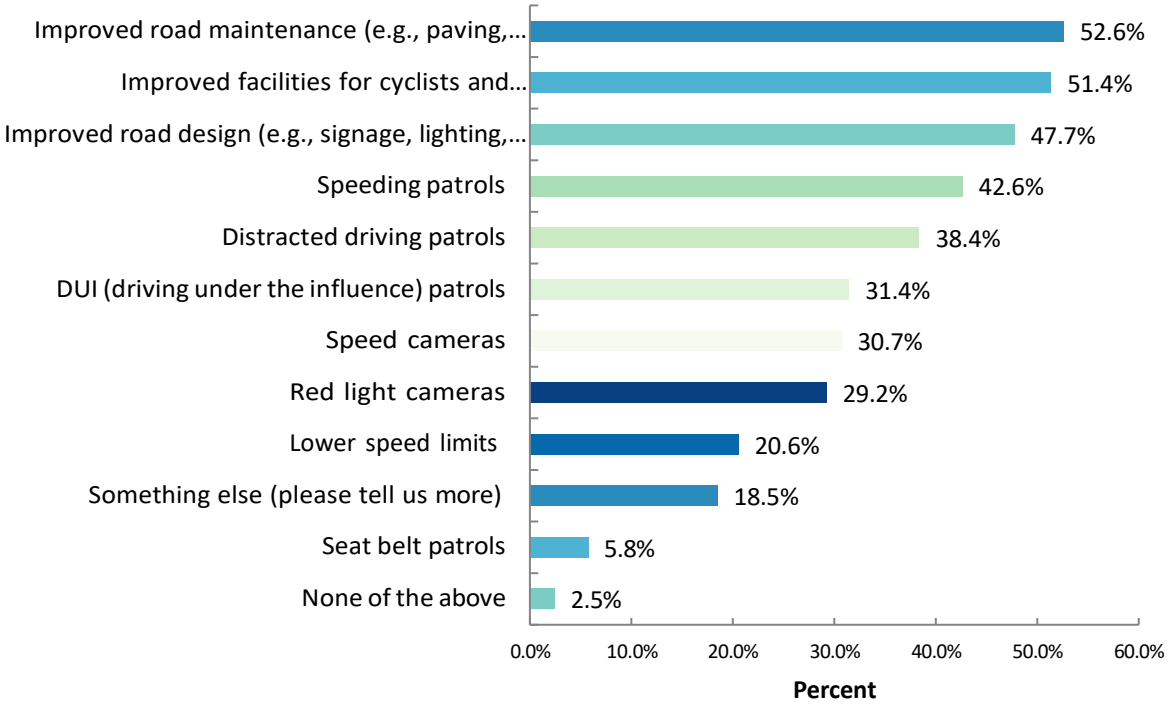


Value	Percent
People who bike	73.7%
People who walk	57.9%
Children	32.4%
Inexperienced drivers	26.8%
Motorcyclists	26.3%
People who use wheelchairs or other mobility devices	24.0%
Older drivers (ages 55+)	13.9%
Another group (please explain)	5.3%

Other populations identified as at-risk included:

- **Unhoused residents** (especially those living in their vehicles, in tent cities, or in other communities bordering major roadways)
- **Pets** and local **wildlife**
- Recent **immigrants**
- People using **scooters** or **skateboards**

What would you like to see more of to help improve roadway safety in your community? Please select all that apply. (Base: All public tract responses, n = 1,215.)

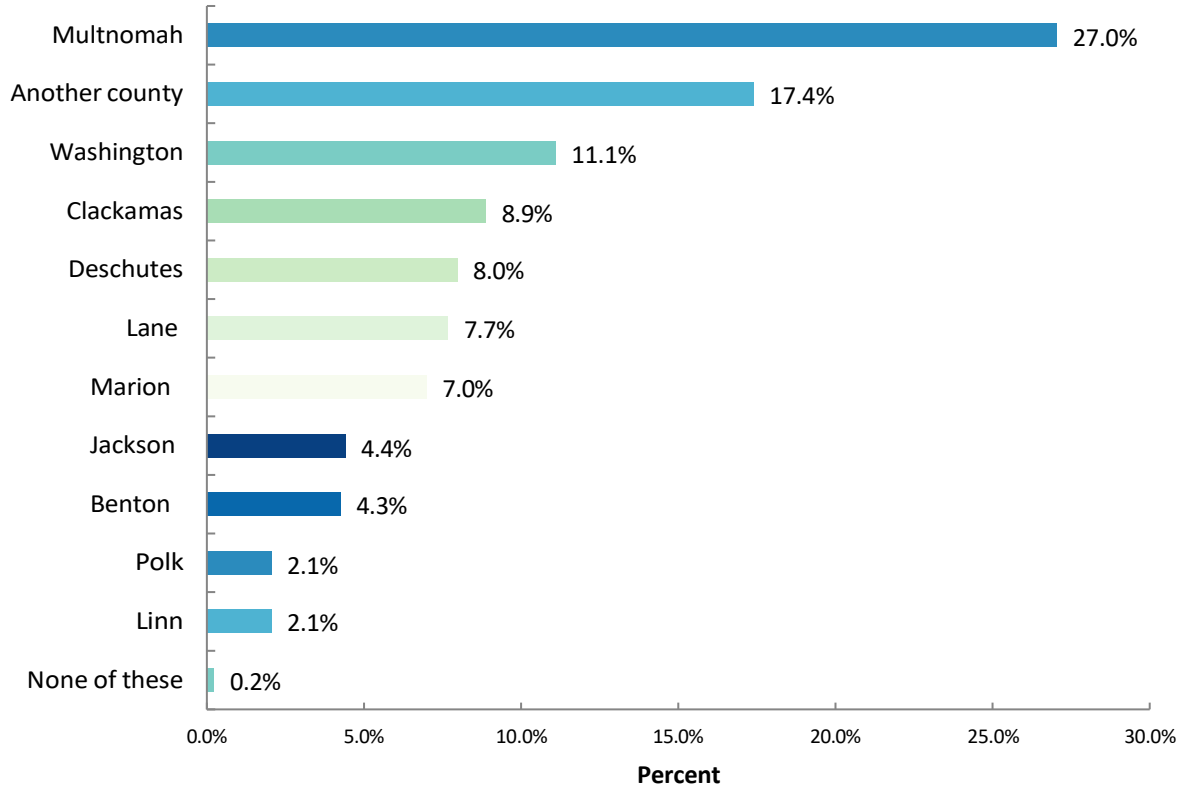


Value	Percent
Improved road maintenance	52.6%
Improved facilities for cyclists and pedestrians	51.4%
Improved road design	47.7%
Speeding patrols	42.6%
Distracted driving patrols	38.4%
DUI (driving under the influence) patrols	31.4%
Speed cameras	30.7%
Red light cameras	29.2%
Lower speed limits	20.6%
Something else (please tell us more)	18.5%
Seat belt patrols	5.8%
None of the above	2.5%

Other suggestions to improve roadway safety included:

- **Holding police accountable to public standards** (e.g., by discouraging officers from using cell phones or computing equipment while driving)
- Requiring **periodic retraining or recertification** of licensed drivers
- Implementing **patrols specific to the issue of drag racing**/street racing
- Adding **better signage and lighting** at major pedestrian crossings
- **Redesigning or redirecting roads** to help curb speeding
- **Ticketing pedestrians and cyclists** who do not follow the rules of the road
- Adding **physical barriers** to reduce/eliminate illegal turns
- **Reduce public investment in funding highway expansion projects** or adding lanes for car traffic; prioritizing capital projects focused on pedestrians, cyclists, and transit users
- **Improving accessibility** for people with mobility needs (e.g., added curb cuts)
- Implementing **congestion pricing** to reduce traffic (particularly in urban centers)
- Add regular **DUI checkpoints**, especially along major highways (e.g., Hwy 101)

What Oregon county do you currently live in? (Base: All public tract responses, n = 1,317.)



Value	Percent
Multnomah County	27.0%
Another county	17.4%
Washington County	11.1%
Clackamas County	8.9%
Deschutes County	8.0%
Lane County	7.7%
Marion County	7.0%
Jackson County	4.4%
Benton County	4.3%
Linn County	2.1%
Polk County	2.1%
None of the above	0.2%

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TSAP PARTNER INTERVIEW SUMMARY

DATE: September 2, 2025

TO: Mary McGowan, PMT | Oregon DOT

FROM: Brian Chandler, Consultant Team | DKS Associates

SUBJECT: TSAP Partner Interview Summary

Project #25008-000

Task 2.3.2

PURPOSE AND OBJECTIVE

In support of the 2026 update to the Oregon Transportation Safety Action Plan (TSAP), the project team facilitated a series of **six partner interviews** to help identify the following:

- Key issues to address, including elements of the 2021 TSAP that need to be reconsidered
- Refinement of the Public Involvement and Partner Consultation Plan (PIPCP) activities

The findings from the partner interviews will be used to inform future tasks, including emphasis areas, strategies, and actions in the 2026 TSAP update.

INTERVIEWEES

The selection of interviewees was consistent with FHWA's Strategic Highway Safety Plan Guidance, OTC's Public Involvement Policy, Oregon's State Agency Coordination Program, the standards for Bipartisan Infrastructure Law Public Participation and Engagement, and ODOT's commitment to Tribal government consultation for statewide planning.

The project team collaborated with the PMT to compile a list of interviewees, invited them to participate in a 1-hour virtual interview, and subsequently refined the list based on availability. Conducting the interviews in June and July posed scheduling challenges and limited the number of attendees at some of the events.

Following are the final interview groups, their role as it relates to the TSAP, and the date of each interview. The table below also lists the ODOT PMT and consultant team member(s) who participated in each interview.

TABLE 1. TSAP PARTNERS INTERVIEWS

Date	Role/ Perspective	Interviewees	TSAP Project Team
6/16/25	Regional agencies, local agencies, motorcyclists	Tyler Deke, Bend MPO Scott Fleury, City of Ashland Public Works Chris Henry, GAC Motorcycle Safety Chair and City of Eugene Carl Lund, Marion County Melissa Norman, Washington County Becky Taylor, Lane County Clay Veka, PBOT Vision Zero	Brian Chandler, DKS Anthony Gamallo, DKS Stacey Goldstein, ODOT
7/8/25	Behavioral	Angel Pairan, Oregon Criminal Justice Commission Amanda Salyer, ODOT Region 2 Jamie Schmidt, ODOT Region 2	Brian Chandler, DKS Troy Costales Walt McAllister, ODOT Mary McGowan, ODOT
7/14/25	Tribal Safety	Holly Anderson, Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Kristen Anderson, ODOT Tribal Affairs Dani Schulte, CTUIR	Brian Chandler, DKS Walt McAllister, ODOT
7/14/25	Young Drivers, Aging Drivers	Karen O'Fearna ODOT Department of Motor Vehicles Jody Raska, ODOT Transportation Safety Office	Brian Chandler, DKS Troy Costales Walt McAllister, ODOT
7/25/25	Modal Safety (Large Trucks, Rail)	Jana Jarvis, Oregon Trucking Association Karla Tackett, ODOT Commerce Compliance Division Abe Zumwalt, David Evans Associates	Brian Chandler, DKS Anthony Gamallo, DKS Mary McGowan, ODOT
7/31/25	Vulnerable User Groups	Zachary Lauritzen, Oregon Walks	Brian Chandler, DKS Walt McAllister, ODOT

INTERVIEWEE AGENDAS AND QUESTIONS

Each interview was conducted virtually using Microsoft Teams and lasted approximately one hour. The following agenda was used as a starting point for each interview.

1) Staff and Participation Introductions + Purpose and Goals of Conversation (5 min)
2) Project Overview + Timeline (5 min)
3) Interview Questions (40 min)
4) Wrap Up + How to Provide Additional Input (10 min)

INTERVIEW QUESTIONS AS PROMPTS

The interviewers used the following questions as initial prompts to an open conversation with each set of interviewees.

1) What areas of roadway safety do you feel are most worrisome in your area of interest and influence?
2) Do you believe we have been successful, or not, in addressing these issues/areas of interest statewide, in the region, or at the local level?
    a. What are the opportunities and challenges to addressing this issue?
3) Are these issues something that should be addressed in the 2026 TSAP update?
    a. How will these additions help us meet Oregon's safety goals?
    b. How will these additions better support your community or the community you serve?
4) As we begin engaging partners, what information should the 2026 TSAP project team share and with whom? Why?
5) Is there anything we haven't cover so far that you think would be helpful to consider during this update process?
6) What questions might you recommend we ask other safety partners?

SUMMARY OF INTERVIEW FINDINGS

Following is a summary of the key themes and ideas the project team gleaned in each conversation, including findings and anticipated next steps in response to what the interview team learned.

1. LOCAL AGENCIES / MOTORCYCLIST SAFETY

This group consisted of transportation professionals from city, county, and regional agencies.

PRIMARY TAKEAWAYS AND APPLICATIONS

Participants noted significant challenges that should be addressed in the update:

- constrained budgets that prioritize capacity over safety
- lagging crash data
- rising impairment and distraction behaviors
- vulnerable road user risks
- speed management
- roadway maintenance challenges
- lack of enforcement
- motorcyclist behavior

Interviewees urged ODOT to improve collaboration with cities and counties, reform the speed zoning process, take stronger positions on impairment and motorcyclist safety, and confront the trade-offs between safety goals and funding priorities. For the updated TSAP, they requested clear

summary materials, stronger calls to action, and communication tools to help local agencies build public and political support for greater investment in transportation safety.

Interviewees shared a range of recent successful implementations they have participated in or are aware of, primarily on local roadways:

- automated speed enforcement
- VRU-focused treatments
- consistent traffic control
- lane reallocation
- transit priority measures
- roundabouts
- county corridor pilots
- near-miss reporting

SUMMARIZED NOTES

Overall value of the TSAP to local agencies:

- There is hope that the TSAP matters, but also a concern that the transportation safety efforts conducted in Oregon over the past several years has not resulted in a reduction in fatalities or serious injuries.
- TSAP (and thus ODOT) having a stated goal of zero fatalities and serious injuries is important.
- Making the Safe System Approach a foundation for this update is great, as it helps us lean into prevention and redundancy in our efforts.

Safety Concerns

Interviewees discussed several focus areas on local roadways.

- In a constrained budget environment, we are making choices to invest in motor vehicle capacity at the expense of safety. We must wrestle with hard trade-offs.
- Lagging Crash Data
    - It's difficult to attack emerging locations; we'd like to apply more low-cost treatments at other potentially-trending locations.
- Impairment
    - Alcohol impairment is challenging because it requires more person-to-person contact to address.
        - Need to learn more about the people who choose to drink and drive.
        - Need in-person law enforcement to identify impaired road users.
    - Multi-substance abuse and impairment are increasing as well
- Vulnerable Road Users
    - How do we provide a safer experience for VRUs while still letting motor vehicles do their job (e.g., Amazon delivery vehicles)?
    - People experiencing homelessness wander into traffic
    - People living outside have additional risk

    - People in many communities "just go" assuming motor vehicles will just get out of their way
- Speeds
    - How do we set the most appropriate posted speed limits?
    - How might lower speeds affect congestion?
- Roadway Maintenance
    - Keeping the system in a state of good repair will be an increasing challenge
    - Recent Road Safety Audits (RSAs) identified simple items like signing, striping, delineation, and vegetation clearing needs.
- Lack of Enforcement
    - Relying on engineering and education alone are like balancing on a 2-legged stool
    - Highway patrolling is much reduced. Compliance is challenging when no one is held accountable
    - Regulating and enforcing e-bikes is an issue (riding in bike lanes, off-network paths)
- Distraction
    - Smart phone use
    - Newer vehicles that require touch screens for basic features
- Motorcyclist Safety
    - Motorcyclists desire being in control. They don't like being passengers or being told what to do. They are risk seekers who often feel invincible.

Potential Solutions and Success Stories

- Speeding
    - Reduced motor vehicle operating speeds
    - Slower speeds help drivers to stop if there is "bad behavior" by pedestrians
    - Reduce super-speeders with intelligent speed control (disallows speeding)
    - Context sensitivity in transitions
        - Interstate ramps meeting surface streets: help drivers recognize they are transitioning into a complex urban environment
    - Automated speed safety cameras
        - Seeking ability to pilot automated enforcement in rural areas
- VRU Safety
    - RRFBs at protected pedestrian crossings
    - Green paint in bike lanes
    - Reduce travel lanes to 11 ft to add a bike buffer
    - Buffered bike facilities
- Traffic Control Consistency
    - Crosswalk marking and signing; parking signs; directional signs; City branding
- Reallocation of Travel Lanes
    - Bus lanes, parking, bicycle facilities, median pedestrian refuge islands
    - Seeing speed reductions (up to 70% lower top-end speeders) and crash reduction
    - Taking advantage of pavement projects to layer low-cost improvements over time
- Transit Priority (dedicated lanes, transit signal priority)
    - Sharing benefits of transit use

- Development
    - Requiring improvements like sidewalks, bike lanes
- Intersections
    - All-red signal phasing to reduce angle crashes
    - Retroreflective backplates: systemic installation
- Roadway Departure
    - Warning systems: Overheight warning to prevent roll-overs at curves
    - Median barrier (US 97, Bend to Redmond)
    - Mumble strips (lower volume)
    - Centerline rumble strips
- Roundabouts
    - 6 added on US 20; 50 now in Bend area
- County Safety Corridor Pilot
    - Combines engineering, enforcement, and education strategies
    - Double fines for infractions
- Crowdsourced Near-miss Reporting
    - Web application allows road users to report near-miss events, and the system filters inputs to traffic operations staff.
    - This often reveals obstructions or other sight distance issues

Ideas and Additional Requests for TSAP Update

- For State routes that go through cities, some are low-speed (e.g., 25 mph). We would like the ability to install a crosswalk on these roadways without requiring approval of the ODOT Region and State Traffic Engineer.
    - The City funded 100% of this treatment, but it's like pulling teeth to get anything done on State routes.
    - Request: Modify ODOT's approach to their relationships with cities and counties as collaborative. They could serve as a partner and problem-solver with the locals, rather than being seen as an obstacle, as is the current experience with ODOT.
- Speed Zone Requests
    - ODOT Region 2 has one person who handles all investigations.
    - Locals can sign up to conduct their own, but it is a one-time decision (all or nothing) and thus a big commitment.
- Impairment
    - Lower the legal blood alcohol concentration (BAC) from 0.08% to 0.05%
- Motorcyclist Safety
    - Oregon should take a stand that is not neutral but identifies the risks of allowing this activity.
- Trade-off Conversation in the TSAP
    - We say that safety is our top priority, but the transportation budget does not reflect this.
- Use TSAP as a call to action
    - Summary materials that local agencies can use to share with elected officials and the public

- Basic information about fatalities and serious injuries over the past few years, like numbers and leading causes
- Funds spent on infrastructure safety projects, and commitments to future safety projects

2. BEHAVIORAL SAFETY

While the stated objective of this interview was a focus on behavioral safety, two of the three interviewees were engineering staff at ODOT Region 2. That was balanced by an interviewer panel that included Walt (ODOT Traffic Safety Office) and Troy (former director of that office and consultant team member) to provide additional background.

PRIMARY TAKEAWAYS AND APPLICATIONS

Oregon has consistently failed to meet safety performance targets over the past several years, underscoring the need for the TSAP to acknowledge this reality and frame goals differently than in the past. A major theme is the lack of leadership support: roadway safety is not adequately represented at ODOT's executive level or to the legislature, safety engineering expertise is undervalued compared to other disciplines, and safety is understaffed in general (especially at ODOT). Law enforcement shortages were also identified as a weakness, alongside systemic concerns like the combination of a strained EMS system and an aging population. During this interview, education focused less on road user behavior and more on teaching maintenance staff, local agencies, and statewide leadership about safety. Successful practices highlighted included sharing data with law enforcement to target roadway departure crashes, and ODOT Region 2's shift toward performance measures beyond vehicle throughput.

The group recommended the 2026 TSAP include a stronger focus on safer speeds through strategies like lane narrowing and automated enforcement, while also noting and addressing the current resistance to some safety features. They supported a TSAP with a narrower scope to focus on fewer but more impactful actions directly connected to the OTP. They also pushed for an implementation plan with clear responsibilities, Safe System Approach alignment and expansion of ODOT's staffing capacity to deliver safety engineering and education statewide.

SUMMARIZED NOTES

Note: The summary below combines the 1-hour interview and follow-up written responses provided by ODOT Region 2 after the meeting.

Performance Measurement and Leadership

- We have failed to meet our safety performance targets for the past 6-7 years. We should write the TSAP differently when we are not meeting safety performance measures.
  - There is no single reason for this failure
  - The Transportation Research Board (TRB) has a national research project focused on addressing the issue nationally
- ODOT executive leadership has not effectively communicated safety to legislature

    - How can we expect roadway safety to get the best or prioritized representation if an expert in that field is not at the executive leadership table or presenting the full and accurate safety story to the Legislature/OTC?
    - Safety engineering is an engineering discipline requiring a certain expertise, just like bridge engineering. Decision-makers misunderstand this.
    - Worker safety and roadway safety are interchanged incorrectly all the time - they are two different things with different performance/PMs/goals
- Staffing Challenges
    - ODOT Regions: Not all regions have safety engineers (only Regions 1 and 2)
    - ODOT HQ Safety: With only Angela and Jiguang, the office has reduced from 4 to 2 staff, limiting their ability to support.

Law Enforcement

- Oregon's lack of law enforcement, compared to other states, is likely a contributing factor
- How can we support this with data and share it with decision-makers and state legislature? Will they care?

System of Systems

- If Medicaid and Medicare were cut nationally, rural emergency management systems (EMS) could become a huge challenge. Coupled with increasing rate of aging of Oregon's population and current older driver involvement in crashes, these are a potential problematic combination.

Education for Public Works Staff, Maintenance

- Educate local agency partners in best practices for safety
- The influence ODOT has on traffic features is not supported by Maintenance (not having funding to maintain extra) and the MAC (not wanting traffic calming features)
- Incorporate safety engineering practices into all STIP programs.
- Agencies often think they are making safety improvements whether they are or not. Example: 1R preservation projects do not inherently improve our safety performance measures even though this message is repeated that they do.
- Michigan conducts road shows to maintenance groups (state and local) to help them see where safety fits in
- Adding more "Es" to Road Safety Audits
- Oregon's Local Transportation Assistance Program (LTAP) is not focused on roadway safety; this is a prime source of safety education in other states
- The TSAP can help people know more about what options are out there to improve safety. In general, the TSAP could be a building block to education for safety professionals statewide

Safer Speeds

- ODOT Region 2 has reduced lane width to 11 ft to address speeding, but people see lane narrowing and road diets as capacity reduction only

- Automated enforcement is more available now as a tool for agencies, and it should be implemented widely
- Salem PD hires retired officers to review speed safety camera citations

Funding

- The STOP program[1] currently does not include Tribes. In most locations the local law enforcement and Tribal representatives are not connected.
    - Tribes don't have funding to purchase new equipment to be in the same system, leading to inconsistent data.

Successful Practices

- Safety screening every 3 years to identify target locations experiencing roadway departure crashes. Sharing this information with law enforcement and targeting speed enforcement at those locations. After investing for several years, some roads (e.g., OR 18 toward Lincoln City) have dropped off the list.
- ODOT Region 2 has shifted some of their key performance indicators away from vehicle throughput to other metrics.
    - They sometimes reduce traffic capacity for pedestrian safety. For example, when using a permissive left turn Flashing Yellow Arrow, ODOT Region 1 and Region 2 policies disallow an adjacent WALK signal for pedestrians.
    - Lead Pedestrian Interval signal timing is common
    - Congestion can help regulate speed, so it's not always a bad thing, especially for safety

2026 TSAP Recommendations

- Previous TSAPs had a lot of actions identified, including 74 actions/strategies in the 2021 update.
    - 2026 could focus on a few priority/key areas. If so, might that have a more significant impact?
- OTP Connections
    - The Safe System Approach is mentioned in the OTP, but without an implementation plan. ODOT does not have staffing resources to implement SSA within the STIP. Currently, ODOT has limited staff capacity for reactive safety.
- TSAP Implementation Plan and/or TSAP Roadshow could help - roles, responsibilities and deadlines provided
- Safe System Approach Implementation Plan
- Promote additional safety engineering and transportation safety positions at ODOT to support educating local agencies and implementing the safe systems approach

[1] Statistical Transparency of Policing (STOP) program, Oregon Criminal Justice Commission (CJC). CJC worked with OSP and DPS to standardize data collection, analyzing data for patterns, and report on results.

3. TRIBAL SAFETY

The group included Tribal representatives from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and ODOT Tribal Affairs.

PRIMARY TAKEAWAYS AND APPLICATIONS

"Tribes are spread out due to colonization, not because it's a natural land use."CTUIR provided a case study that we can apply more broadly to consider Tribal needs in Oregon. Interviewees emphasized historic inequities and current opportunities for improving transportation safety. Key priorities now include restoring regional transit connections, addressing rural road safety where pedestrians walk without shoulders, and overcoming challenges in federal grant access due to CTUIR's lack of eminent domain authority. Recent successes — such as the 2023 Transportation System Plan overhaul, the just-completed 2025 Transportation Safety Plan - expanded paths and Safe Routes to School projects, and cross-deputized Tribal police in Umatilla County (crash data sharing with ODOT is another success). For the 2026 TSAP, lessons include:

- importance of respecting Tribal sovereignty
- ensuring equitable access to grant resources
- supporting culturally significant signage
- pursuing collaborative approaches (among ODOT, CTUIR, the county, and cities) to deliver safety improvements that serve both Tribal and non-Tribal communities.

SUMMARIZED NOTES

The 2023 TSP and 2025 Safety Plan referenced below are available in the 2026 TSAP Update project's SharePoint site here: Group 3_Tribal_2025-07-14

Confederated Tribes of the Umatilla Indian Reservation (CTUIR)

- Tribal community of 3-4k residents in 271 square miles.
    - Grand Ronde is a "checkerboarded" jurisdiction, meaning Tribal and non-Tribal people live on the reservation.
    - Warm Springs has their land intact.
- There are three CTUIR Tribes, and the CTUIR is in Oregon and Washington
    - CTUIR interacts with OR more than WA
- ODOT and Umatilla County constructed roadways without the consent of CTUIR, including building on top of traditional Tribal travel routes
    - This has erased the previous transportation network.
    - This has resulted in fatalities and serious injuries.

Transit

- Fare-free transit service is provided within the Tribal area
    - Changed from dial-a-ride to fixed routes
- Restoring transit to the Tri-cities area is important, as it is a major employment link
    - Some CTUIR community members commute to the Tri-cities daily
- Coordination with Benton-Franklin Council of Governments

- Grant Funding Challenges
    - Grant delays are a huge concern

Safety Concerns

- Rural roads in the County with no shoulders. Actively used by pedestrians, who often walk along the roadway or in the ditch.
- Indigenous Language Signage
    - Tribes must pay for these on their own
    - MUTCD disallows multiple languages on Interstates
    - Residential Neighborhood – CTUIR supported signs ONLY in the Tribal language
        - There can be some internal politics due to different Tribal languages

Successes

- 2023 Transportation System Plan overhaul made major changes to the 2001 plan, which was largely focused on roadway improvement (widening shoulders, paving gravel roads). This was not serving the community.
    - Included 9 months of community outreach. Priority requests included trails, sidewalks, lighting, horseback riding facilities
- 2025 CTUIR Transportation Safety Plan
    - Updated 2016 plan and leveraged community engagement from the 2023 effort
    - Focused on driver behavior
- Umatilla County and Local City Coordination
    - Tribe has been involved in development of the County's safety plan
    - CTUIR is first or second largest employer in the county. CTUIR has friendly relationships with local jurisdictions
- Grant Funding Success: Paths, Safe Routes to School
    - Developed a partially-separated, extra wide sidewalk and multi-use path
    - Received SRTS grant for sidewalk and bike lane extensions
    - Received Oregon Community Paths funding for a trail
- Data Sharing
    - Umatilla Tribal Police Dept uses ODOT system to report crash data directly to ODOT
        - Cross-deputized with Umatilla County. Tribal Police can stop anyone
        - Interesting trade-offs: Tribal police represent 2 sovereigns. Sharing data with the State was approved by Tribal leadership because the benefits support Tribal sovereignty.
        - Tribal Police adopted Oregon State traffic laws. This allows them to stop and cite anyone violating the law.

Implementation Challenges – Federal Grant Funding

- CTUIR has been applying for federal grants for many years with no success: TIGER, BUILD, RAISE
- CTUIR does not have eminent domain powers like ODOT does

- OR-331 needs improvements in pedestrian access. It's near a casino, large businesses, and housing. Kids bike to school, and people use wheelchairs along the roadway. It's also a major freight route.
- Grants require CTUIR to already have property under their control to apply.
- If ODOT could acquire the property using eminent domain, then the Tribes could build a stronger grant application
- Or even more appropriately, ODOT should fund and implement the improvements themselves on this state roadway.

4. YOUNG AND AGING DRIVERS

The group included experts in novice/teen drivers and at-risk/aging drivers.

PRIMARY TAKEAWAYS AND APPLICATIONS

It's important to address novice (including teen) drivers and at-risk (including aging) drivers in the 2026 TSAP, noting that while age ranges are used for funding and reporting, risk stems more from inexperience or health conditions than age alone. Novice drivers face heightened crash risk in their first two years of driving, yet Oregon lacks universal driver education requirements. This is leading to fewer providers, high costs, and many novice drivers starting with limited or no training. At-risk (including aging) drivers face challenges related to medical conditions or prescription drug effects, but crash data on medical events are incomplete. Successes include Oregon's high-quality driver training curriculum, potential for strong parental involvement, evidence showing trained teens are safer drivers, improved at-risk driver reporting due to law enforcement outreach, and self-regulation by many older drivers. For the 2026 update, participants stressed the desire to see young drivers remain an emphasis area.

SUMMARIZED NOTES

Definitions

We use age ranges for these two categories primarily due to federal funding requirements and the ease of categorization (e.g., age of crash-involved parties is relatively available), but this is only a proxy for the real issues to address.

- ***Novice Drivers.*** While this does include teenagers, novice drivers can be of any age. Some elements of Young Driver safety are connected to their age, but others are not.
- ***At-Risk Drivers.*** Older Drivers do exhibit higher risk, but people of any age can have health conditions that affect the driving task, including diabetes, traumatic brain injury, seizures, mental health conditions, cardiac events, loss of consciousness.

Aging Driver Common Behaviors

- Slow, out-of-control driving
  - Symptoms can come on, often resulting in decreased pressure on gas pedal
  - Crashes are often single-vehicle, low-speed, no/minor injury

- Wrong Way Driving
    - Not seen as often with other health conditions
    - Often combined with DUI, including prescription medication for medically at-risk drivers (including aging drivers)

Safety Concerns: Novice Driver Training

- Lack of required new/teen driver education, resulting in a lack of providers and high cost for training
- Many instructors are older/retired adults using the work as supplemental income. After trying it for 1-2 years, they stop
- At 16yo, 100 hours of supervised driving is required (reduced to 50 hours if they take an approved driving course)
- At 18yo, no requirements
- As a result, Oregon is seeing novice driver experience extending older than in previous years. The first 2 years of driving (regardless of age) is the highest risk.

Safety Concerns: At-Risk Driving

- There is a lack of data for crashes that involve a medical event (non-BAC). This could be captured as its own data set.

Successes

- Driver Training
    - State-developed curriculum considers various learning styles and methods.
    - Provider approval process is rigorous, ensuring high quality
    - Parental involvement in training – approved programs in OR require a parent meeting at the beginning of the course. It describes to parents/guardians what they will be teaching.
    - Data indicates that most of the age 16-20 crash events and traffic convictions are by those who did not have driver training.
- At-risk reporting (medical, etc.) has much improved, from <50% to 90% acceptance rate now
    - Outreach to law enforcement led to these improvements
- Many older drivers are aware of their limitations and self-limit their driving (e.g., on specific roadways, nighttime/dark conditions, etc.)
- Public Engagement
    - Video content: Oregon's At Risk Driver Program

What should 2026 TSAP include to support your area?

- DMV had heard that teen drivers could be left out of the TSAP emphasis areas, and this is a major concern
    - Teens are overrepresented in crash data
- Include a "What's in it for me"
    - Example: For families where a 16yo is taking other kids to school, they need to experience the value of driver training.

    - Lower insurance rates could be a specific benefit
        - Challenge: Insurance already provides a discount for good grades, so driver training does not offer an additive reduction

5. MODAL SAFETY: RAILWAY-HIGHWAY CROSSINGS AND LARGE TRUCKS

The group included experts in rail safety and commercial motor vehicle safety.

PRIMARY TAKEAWAYS AND APPLICATIONS

Rail safety concerns include highway grade crossings, pedestrians (including unhoused individuals) using tracks as informal trails, and a public misconception of trains as slow when they are fast and massive. Successful efforts like Operation Lifesaver (OLI), crossing closures, and State Safety Oversight collaborations have demonstrated value, though OLI's reduced funding has coincided with increased incidents. Looking ahead, the 2026 TSAP could strengthen alignment with the State Rail Plan and federal programs, position Oregon for competitive safety grants, and expand passenger rail service to improve overall safety.

Safety issues related to large trucks are shaped by public misunderstanding of how to interact with them (e.g., blind spots and braking distances). Other key risks include truck driver fatigue, worsened by a lack of rest area or commercial parking, challenges from narrow lanes, and poorly located urban delivery zones. Strategies for the 2026 TSAP should include adding truck interaction guidance into driver training materials, investing in more truck parking at rest areas, and supporting roadway designs that separate trucks from vulnerable road users.

SUMMARIZED NOTES: RAIL SAFETY

Rail Safety Concerns

- Many rail safety concerns occur away from roadway crossings, so it can be easy for highway transportation professionals to see these as "outside their scope," ignoring some major issues
    - Accessing rails (or created/unofficial "trails" that cross rails) that should not be used as pedestrian trails
    - Railroads are attempting to build physical barriers to reduce pedestrians along and across the tracks. But they cannot fence 150,000 miles of track in the US.
- Summertime increases the train-involved fatalities
- Demographics
    - Young people accessing areas they should not access
        - Walk along tracks with headphones/earbuds, do not hear the approaching train
    - Unhoused people, especially in urban areas
- Misunderstanding
    - There is a cultural notion of a slow, lumbering, antique train using the tracks
    - Reality is a large train (size of a container ship) moving fast

Rail Safety Successes

- Operation Lifesaver (OLI) is a long-running program nationally
    - National/state partnerships have lessened in recent years as funding has become unreliable
    - Interviewees identified a correlation between reduced emphasis at the state level and increase in train-involved events
    - Dedicated volunteers in Oregon OLI that could be a strong partner to ODOT and other safety partners
- Crossing Closures
- State Safety Oversight (SSO)
    - Important collaboration that includes TriMet, Portland Streetcar, others
    - Corrective Action Plan (CAP)

TSAP Alignment and Strategies: Rail Safety

- Policies, Regulations: Oregon State Rail Plan and USDOT Section 130 Reporting
- Encourage more rail travel: An increase in train travel reduces motor vehicle VMT
    - Passenger rail ridership is booming
    - Train travel is 18 times safer than highway travel
        - It is feasible to expand Portland-Eugene from 2 trips per day to 6. The current use of this trip is 10 years ahead of projections
    - Understanding ridership
        - It's a misconception that trains replace bus trips: only 10% of train ridership would've otherwise taken a bus
        - 25% would've taken a plane if not the train
        - Half of all passenger train users arrived by motor vehicle
- Education: Emergency Notification System (ENS) provides a number for each grade crossing. Provide information to help the public and local emergency services know the value of these numbers for reporting.
- Position Oregon for the Rail Crossing Elimination Program competitive grants

SUMMARIZED NOTES: LARGE TRUCK SAFETY

Large Truck Safety Concerns

- Public misconceptions. People do not know how to safely interact with large trucks.
    - Passing on the right side ("If you can't see my mirrors, I can't see you.")
    - Not understanding how far a truck needs to slow and stop
    - Most truck-involved crashes with passenger cars – the passenger car driver is at fault. Public education is needed to help.
- Driver Fatigue
    - There is only one parking space (public and private) for every 11 large trucks on the road, and regulations require rest every 11 hours.
        - Drivers will often spend 30-60 minutes seeking a parking spot

        - Due to the general recession in the trucking industry for the past 2-3 years, truck stops are not making big capital investments in their facilities. Their business is fuel and food, not parking.
- Criminal Activity – Staged Crashes
    - Most common in the South right now, It's becoming more common for people to stage a crash (e.g., "brake-checking"), then file a lawsuit against large trucking companies
    - Some of these events have resulted in fatal and serious injury crashes
- Narrow Lanes
    - Increased pressure to narrow lanes for traffic calming from 12 ft to 11 ft
        - "Large trucks are 10.5 ft wide."[2]
- Delivery Zones (DZ)
    - This is becoming more of a problem in urban areas, especially in Portland
    - Identified DZ if not always in a convenient location for truck delivery, or it is actively used by ride share and food delivery services
        - When this occurs, a driver cannot park 6 blocks away to deliver pallets to a business, so they park in the lane.

Large Truck Safety Strategies

- Include information about interacting with trucks safety in the drivers manual to support young/novice drivers
- Investment in rest areas to add truck parking
    - Some have ODOT-owned land around the current rest area that could be expanded for more parking
    - Other rest areas are underutilized, so balancing needs with locations could also help
- Outward-facing cameras have helped reduce trucking company liability
- Supportive of projects that separate trucks from active transportation users as much as possible (e.g., buffers, separate paths)

6. VULNERABLE ROAD USERS

After several attempts at engaging a larger group of pedestrian and bicyclist advocates, this interview ended up being with just one person – Zacharay Laurizen from Oregon Walks.

PRIMARY TAKEAWAYS AND APPLICATIONS

The conversation about safety for pedestrians and bicyclists highlighted Oregon's stated commitment to safety, but the reality is that funding decisions reveal other priorities, leaving the car-oriented culture intact. Motor vehicle drivers expect to travel quickly and directly, and they seek inexpensive, quickly-delivered products and services; this reflects broader societal choices

[2] This did not sound right during the interview, so consultant team did a little more digging, and it appears that a typical large truck is approximately 8.5 ft wide. With mirrors included (typically 6-12 in beyond the vehicle), the total width with mirrors can approach 10.0-10.5 ft. https://schneiderjobs.com/blog/semi-truck-trailer-dimensions

that affect safety outcomes. Oregon Walks emphasized that while pedestrians sometimes make mistakes, urban environments must be designed to prevent those mistakes from being fatal, with slower speeds as a core principle. Successes like the 82nd Avenue redevelopment show potential, but overall progress has been limited due to decision-makers deprioritizing pedestrian safety. For the 2026 TSAP, strategies could include adopting technology-driven solutions such as speed limiters and geofenced vehicle speed controls - along with traditional sidewalk and bike lane projects - while also preparing for the impacts of connected and automated vehicles on vulnerable road users.

SUMMARIZED NOTES

Current Conditions and Culture

- Leadership and Planning Culture
    - Due to the extreme complexity of the transportation system, the status quo often remains in place.
    - In talking with leaders, one of the primary problems is that they say Safety is a priority, but it is not. Funding is the real proof behind priorities.
- Road User Culture
    - Car-oriented city planning and building has resulted in people expecting to drive far and fast to reach their destinations.
    - Parents would drive their kids through the inside hallway, right up to the classroom door. They don't even consider parking 4 blocks away and walking their kids a few minutes to school.
    - We have decided as a society that we want cheap stuff delivered immediately. This disallows regulations like in Europe to only deliver overnight

Oregon Walks Mission and Messages

- "Oregon Walks promotes walking and advocates for safe, convenient, and attractive walking conditions as an essential part of thriving, sustainable, and connected communities."
- OR Walks concedes that some pedestrians make mistakes, including "jumping in front of cars."
    - OR Walks agrees that they should not do that. And they should not die.
    - Urban environments should have much slower vehicle speeds to address the mixed modes on these areas

Successful Implementations

- Portland 82nd Ave Redevelopment. BRT to increase modal options
- It's a struggle to identify much success in this area of safety, as it's simply not a priority for decision-makers

TSAP Update: Potential Strategies

- Railroad crossing arm model to close streets by time of day, reducing vehicle traffic
- Speed limiter for speeding offenses

    - It’s reasonable that a driver who cannot drive below the speed limit should receive the consequence of having that choice taken away from them.
- Stop allowing the sale of motor vehicles that can drive 130 mph
- Geolocate vehicles: In a 30 mph zone, there should be no way any vehicle can go 80 mph.
- Prepare for connected and automated vehicles and their impact on VRUs

DKS 117 COMMERCIAL STREET NE, SUITE 310, SALEM, OR 97301 • 503.391.8773 • DKSASSOCIATES.COM

2026 OREGON TSAP UPDATE

DATE: October 10, 2025

TO: Mary McGowan and PMT | ODOT

FROM: Lacy Brown and Brian Chandler | DKS Associates

SUBJECT FINAL Crash Trends Analysis Summary Memo Project #25008-000

INTRODUCTION

This memo summarizes the statewide crash patterns and trends observed in the 2019-2023 crash dataset with the primary purpose of selecting emphasis areas and actions for the 2026 TSAP update. Where possible and relevant, comparisons are made to the 2014-2018 crash dataset (included in the 2021 TSAP). All 2019-2023 data queries were conducted by the ODOT Statewide Traffic Engineering Section and provided to DKS.

This memo is divided into two main sections:

- Statewide Fatality and Serious Injury Crash Trends
  - Focused on identifying the key patterns that are contributing to people being killed and seriously injured, which also informs the selection of emphasis areas
- Statewide Vulnerable Road User Safety Assessment
  - Focused specifically on crash trends and safety risks contributing to people being killed and seriously injured when walking and biking

STATEWIDE FATALITY AND SERIOUS INJURY CRASH TRENDS

STATEWIDE FATALITIES AND SERIOUS INJURIES OVER TIME

The number of people killed and seriously injured in traffic crashes in Oregon has continued to rise over the last decade (Figure 1). The increase in serious injuries post-pandemic (2021 and later) is particularly notable. Before 2020, an average of 448 deaths and 1,739 serious injuries occurred on Oregon roadways each year. Comparatively, post-pandemic fatalities and serious injuries have increased by 33% and 82%, respectively, with an average of 596 deaths and 3,172 serious injuries each year between 2021 and 2023.

The fact that fatalities and serious injuries are increasing at vastly different rates is a complex issue that we cannot pinpoint as part of the TSAP. There are likely a variety of confounding factors, which may include lesser injury outcomes due to safety interventions (i.e., a crash that had the

potential to be fatal resulted in a lesser injury because of better vehicle design), or the reverse scenario where injury outcomes became more severe due to increased crash forces (i.e., a crash type that had the potential to be a minor injury resulted in more severe injuries because the vehicle speeds were higher, which increased crash forces).

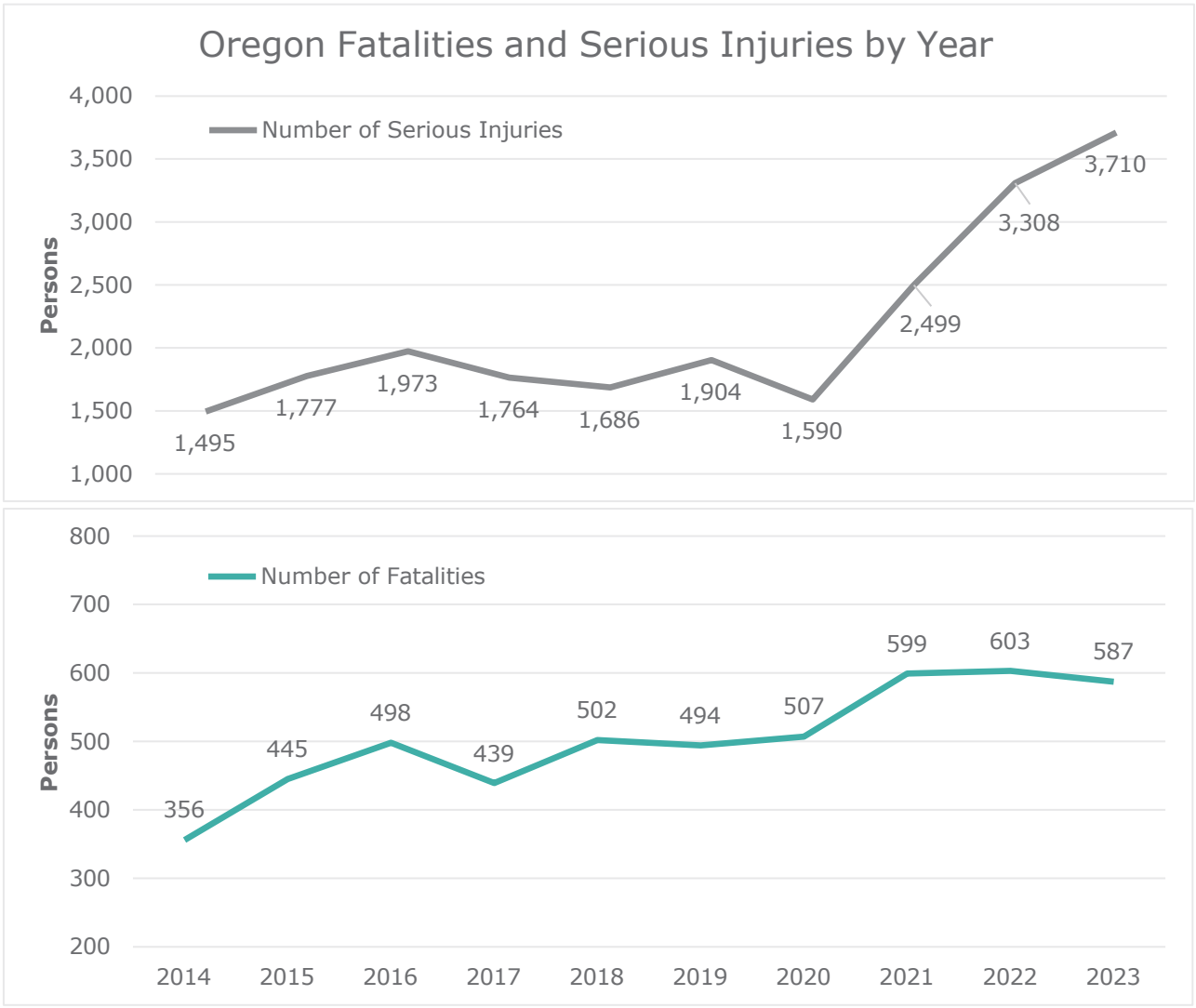


FIGURE 1. FATALITIES AND SERIOUS INJURIES, 2014-2023

Figure 2 shows the fatality rate per capita (1 million population) and per vehicle miles traveled (100 million VMT). The temporal trends for both rates are similar and show decreasing rates in recent years.

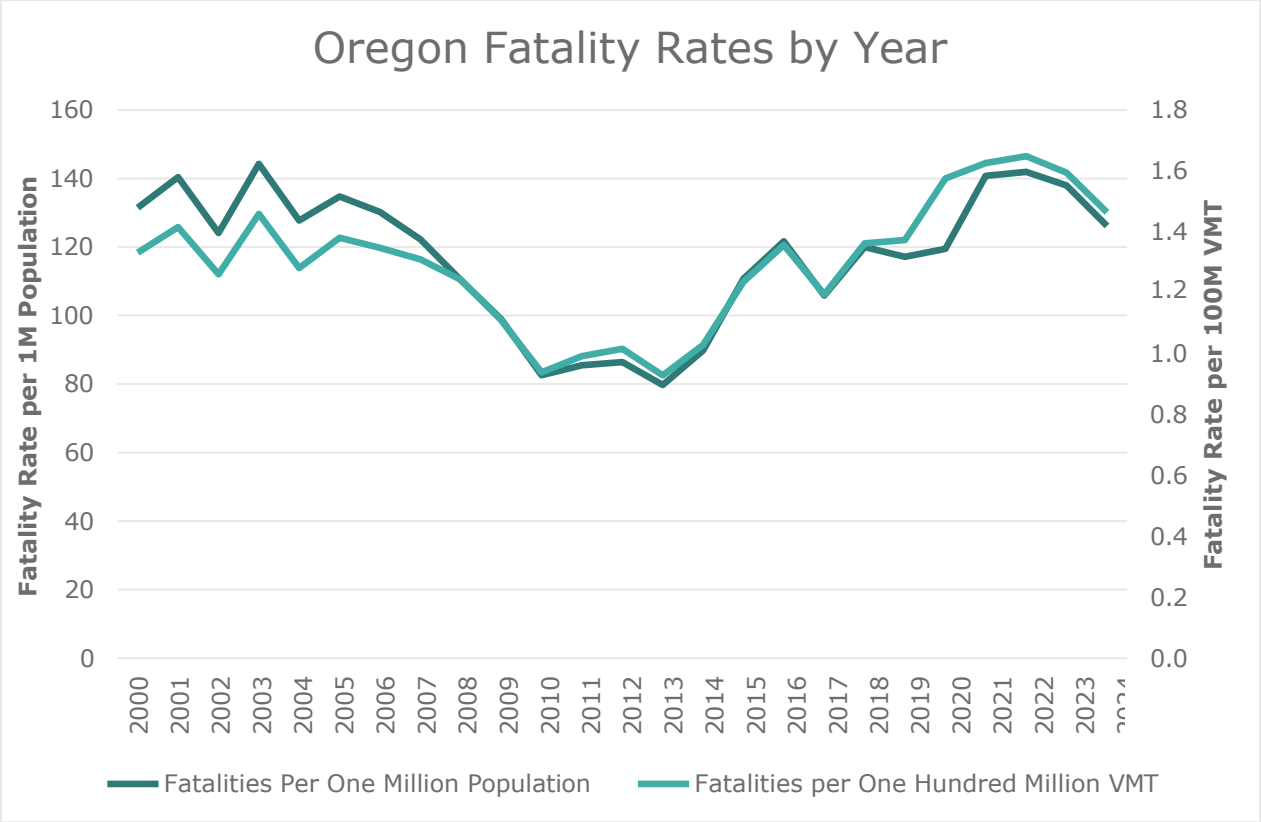


FIGURE 2. OREGON FATALITY RATES BY VEHICLE MILES TRAVELED AND POPULATION, 2000-2024

FACTORS REPORTED IN FATAL AND SERIOUS INJURY CRASHES

Table 1 on the following page provides the key crash attributes table from the most recent (2021) TSAP, updated to compare the 2014-2018 dataset to the 2019-2023 dataset. For each selected attribute, the number of crashes with that attribute in each time period, and the percent increase in those crashes, is shown on the left side. On the right side of the table, the proportion of all fatal and serious injury crashes with that attribute is summarized for each time period, and the corresponding change over time. It is important to consider all the information in Table 1—frequency (number of crashes), proportion, and how each metric changes over time—to fully understand the prevalence of each attribute.

*For comparison purposes, the total number of fatal and serious injury crashes increased by **44%** from 2014-2018 to 2019-2023.*

TABLE 1. 2014-2018 AND 2019-2023 FATAL AND SERIOUS CRASH ATTRIBUTE COMPARISON

ATTRIBUTE	NUMBER OF FATAL AND SERIOUS INJURY CRASHES		('14-'18) TO ('19-'23) INCREASE	PROPORTION OF FATAL AND SERIOUS INJURY CRASHES		('14-'18) TO ('19-'23) PROPORTION CHANGE
	'14-'18	'19-'23		'14-'18	'19-'23	
ROADWAY DEPARTURE CRASHES	3,888	5,299	36%	41.0%	38.9%	-2.1%
INTERSECTION CRASHES	3,413	5,201	**52%**	36.0%	38.2%	2.2%
SPEED-RELATED CRASHES	2,251	3,360	**49%**	23.7%	24.7%	1.0%
ALCOHOL AND/OR OTHER DRUGS INVOLVED	2,121	3,179	**50%**	22.4%	23.3%	0.9%
ALCOHOL INVOLVED (NO DRUGS)	1,335	1,680	26%	17.4%	12.3%	-5.1%
CRASHES INVOLVING UNRESTRAINED OCCUPANTS	900	1,513	**68%**	9.5%	11.1%	1.6%
YOUNG DRIVERS (15-20) INVOLVED	1,350	1,962	45%	14.2%	14.4%	0.2%
AGING DRIVERS (65+) INVOLVED	2,082	3,196	**54%**	21.9%	23.5%	1.6%
CRASHES INVOLVING PEDESTRIAN(S) INJURED OR KILLED	926	1,171	26%	9.8%	8.6%	-1.2%
CRASHES INVOLVING DISTRACTED DRIVERS	806	1,737	**116%**	8.5%	12.7%	4.2%
CRASHES INVOLVING BICYCLIST(S) INJURED OR KILLED	333	381	14%	3.5%	2.8%	-0.7%
MEDIUM OR HEAVY TRUCK INVOLVED	527	805	**53%**	5.6%	5.9%	0.3%
MOTORCYCLE INVOLVED	1,364	1,903	40%	14.4%	14.0%	-0.4%
WORK ZONE INVOLVED	121	173	43%	1.3%	1.3%	0.0%
SCHOOL BUS OR SCHOOL ZONE INVOLVED	68	74	9%	0.7%	0.5%	-0.2%

Bold: Attribute increased more than the overall increase in crashes (44%) between 2014-2018 and 2019-2023 study periods

Highlight: Attribute associated with 20% or more of fatal and serious injury crashes from 2019-2023

NOTABLE CHANGES IN CRASH FREQUENCY AND PROPORTION

While the number of fatal and serious injury crashes associated with all attributes has increased since the last TSAP, the number of distracted driving crashes more than doubled (both increased by 116%). The number of fatal and serious injury crashes involving several other factors also increased significantly, including speeding (49%), alcohol and/or drug impairment (50%), intersections (52%), commercial vehicles (53%), aging drivers (54%), and unrestrained occupants (68%).

However, because the total number of fatal and serious injury crashes has increased overall, the increase for individual attributes is not unexpected and should be considered in context with the rest of the table. For example, while the number of intersection crashes increased by 52%, the proportion of all fatal and serious injury crashes occurring at intersections increased by 2.2%, from 36.0% to 38.2%. While a 2.2% increase may not be alarming, it is the second-highest increase among all attributes studied.

The proportion of crashes involving distracted driving increased by 4.2% (from 8.5% to 12.7%), which is the highest increase of any attribute.

Some attributes make up a smaller proportion of fatal and serious injury crashes now than they did in the last TSAP, including alcohol-only impairment (down by 5.1%) and road departure crashes (down by 2.1%). The proportion of crashes involving vulnerable road users of all types (pedestrians, bicyclists, and motorcyclists) also decreased slightly.

OVERLAPPING ATTRIBUTES

The data presented in Table 1 is not mutually exclusive. For example, a single crash might be attributed to roadway departure, motorcycles, and aging drivers. Risky behaviors, in particular, are often observed in combination. The following Venn diagram (Figure 3) shows the overlap between crashes that were reported to involve speeding, impairment, and/or unrestrained occupants.

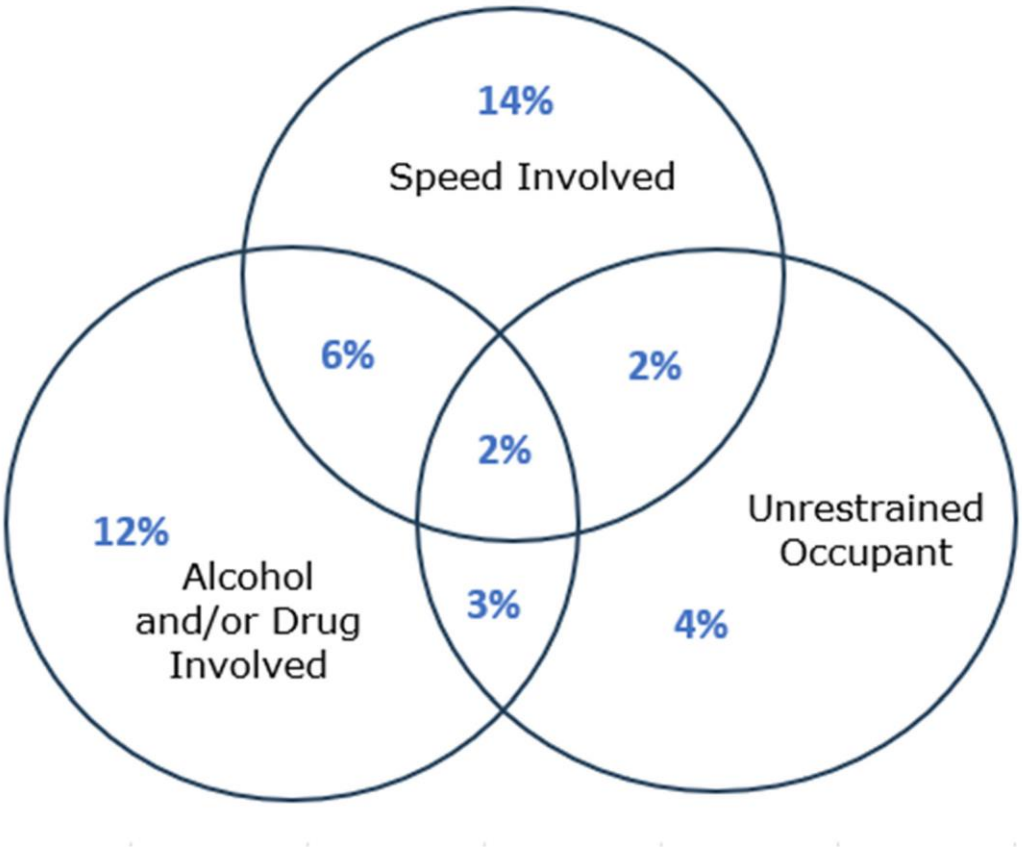


FIGURE 3. OVERLAP IN REPORTED RISKY BEHAVIORS IN FATAL AND SERIOUS INJURY CRASHES, 2019-2023

EMPHASIS AREAS

An essential component of the TSAP is the set of Emphasis Areas (EAs) which reflect the crash patterns and attributes that are most contributing to fatal and serious injury crashes in Oregon. These EAs provide the focus for establishing strategies and actions that will move us towards zero deaths and serious injuries.

Table 2 summarizes the attributes that were flagged in Table 1 above. These attributes are the starting point for determining EAs.

TABLE 2. FOCUS ATTRIBUTES FOR EMPHASIS AREAS

CONTRIBUTES TO MORE THAN 20% OF FATAL AND SERIOUS INJURY CRASHES	NUMBER OF FATAL AND SERIOUS INJURY CRASHES INCREASED BY 50% OR MORE	PROPORTION OF FATAL AND SERIOUS INJURY CRASHES INCREASED	PROPORTION OF FATAL AND SERIOUS INJURY CRASHES DECREASED
• Road/Lane Departure • Intersections • Speed • Alcohol and/or Drugs Involved • Aging Driver Involved	• Intersections • Distracted Driver Involved • Unrestrained Occupants • Aging Driver Involved • Medium and Heavy Trucks • Alcohol and/or Drugs Involved • Speed	• Distracted Driver Involved • Intersections • Unrestrained Occupants • Aging Driver Involved • Speed	• Alcohol Only Impairment • Road/Lane Departure • Pedestrian-Involved

Notes:

- For situations where the number or proportion increased significantly (e.g., Medium and Heavy Trucks), it is important to note that some of these contribute a very small number of fatal and serious injury crashes to the total (e.g., 5.9% for Medium or Heavy Trucks)
- For EAs with a decreased proportion compared to previous years, it is important to note that some are still significant in overall contribution (e.g., Road/Lane Departures are involved in 38.9% of fatal and serious injury crashes).

Along with creating the list of these EAs, some safety plans prioritize or "tier" them based on how impactful addressing these areas can be to helping a jurisdiction achieve their main goals. In Oregon, we are reassessing EAs to ensure that limited resources are distributed to those strategies and actions that can make the most difference.

This crash data analysis revealed that five attributes were present most often in FSI crashes in both the 2014-18 and the 2019-23 data set.

- Roadway Departure
- Intersections
- Speed-related
- Alcohol and/or Other Drugs
- Aging Drivers (65+)

While all fatal and serious injury crashes increased significantly (44%) between the two 5-year periods, the following attributes increased even more than the total number of fatal and serious injury crashes. The four EAs in **bold** are on both lists (high proportion and increases greater than the average for all fatal and serious injury crashes).

- Distracted Drivers (+116%)
- Unrestrained Occupants (+62%)
- **Aging Drivers (+54%)**

- Commercial Motor Vehicles (+53%)
- **Intersections (+52%)**
- **Alcohol and/or Other Drugs (+50%)**
- **Speed-related (+49%)**
- Young Drivers (+45%)

While Oregon has typically not tiered its EAs, this update presents an opportunity to focus more on some areas than others and align with the Oregon Transportation Plan.

Oregon Transportation Plan. The OTP states: ”With limited resources, Oregon must strategically invest in the transportation system. The OTP identifies the need to focus dollars on eliminating fatalities and serious injuries, maintaining lifeline routes and key corridors, sustaining transit service, and adding critical connections for biking, walking, and rolling. As additional funds become available, focus can expand to broader maintenance and heightened transportation system resilience, increasing active transportation connections, and improving overall safety.” The OTP includes three tiers for strategic investments, two of which are most relevant and applicable to the TSAP.

Top Tier

- Address fatalities and serious injuries.
- Maintain and preserve critical assets, key corridors, and critical lifeline routes.
- Add critical bikeway and walkway connections in “high need locations” (e.g., transportation-disadvantaged areas and surrounding schools, shopping, employment centers, medical services, connections to transit, and downtowns).
- Preserve current public transportation service levels and maintain a state of good repair for vehicles and facilities.

Second Tier

- Address contributing factors and reduce the severity of crashes and safety incidents.
- Maintain the broader transportation system and assets.
- Complete the active transportation network.
- Improve the efficiency, frequency, and reliability of public transportation services.
- Improve the efficiency and capacity of existing transportation infrastructure and facilities through operational improvements, exclusive of adding new through lanes, for the movement of people and goods.

For the 2026 TSAP, the two EA tiers are as follows:

Top Tier. These Emphasis Areas reflect:

- Crash attributes with the highest proportion of FSI crashes (Table 1): present in greater than 20%.
- Alignment with OTP Top Tier criteria to "address fatalities and serious injuries" and "add critical bikeway and walkway connections."
- Fulfillment of USDOT requirement to develop a Vulnerable Road Users Safety Assessment as part of the TSAP.

These Top Tier EAs will be the priority for funding.

- **Roadway Departure**
- **Intersections**
- **Speed-related**
- **Alcohol and/or Other Drugs**
- **Aging Drivers (65+)**
- **Pedestrians and Bicyclists**

Second Tier. These Emphasis Areas reflect one or more of the following:

- Additional crash attributes that have a contributing role in reducing FSI crashes (present in less than 20% of FSI crashes)
- Alignment with OTP Second Tier criterion
- USDOT requirements (e.g., Highway Safety Improvement Program requires items to be in TSAP to be eligible for funding)
- Attributes that are less common in crashes, due in part to safety partners' successful efforts over time.

Second Tier Emphasis Areas include the following:

- **Young Drivers (15-20)**
- **Unrestrained Occupants**
- **Distracted Drivers**
- **Commercial Motor Vehicles**

NOTABLE CRASH TRENDS BY REGION, CONTEXT, AND FUNCTIONAL CLASSIFICATION

ODOT REGION AND CONTEXT

Fatal and serious injury crashes do not occur evenly throughout the state. The distribution of fatalities and serious injuries in urban and rural areas reflects the geographic differences, with Region 1 being primarily urban, Regions 4 and 5 being primarily rural, and Regions 2 and 3 having a mix of urban and rural areas (Figure 4). Statewide, 58% of fatalities and serious injuries occurred in urban areas, and 42% occurred in rural areas.

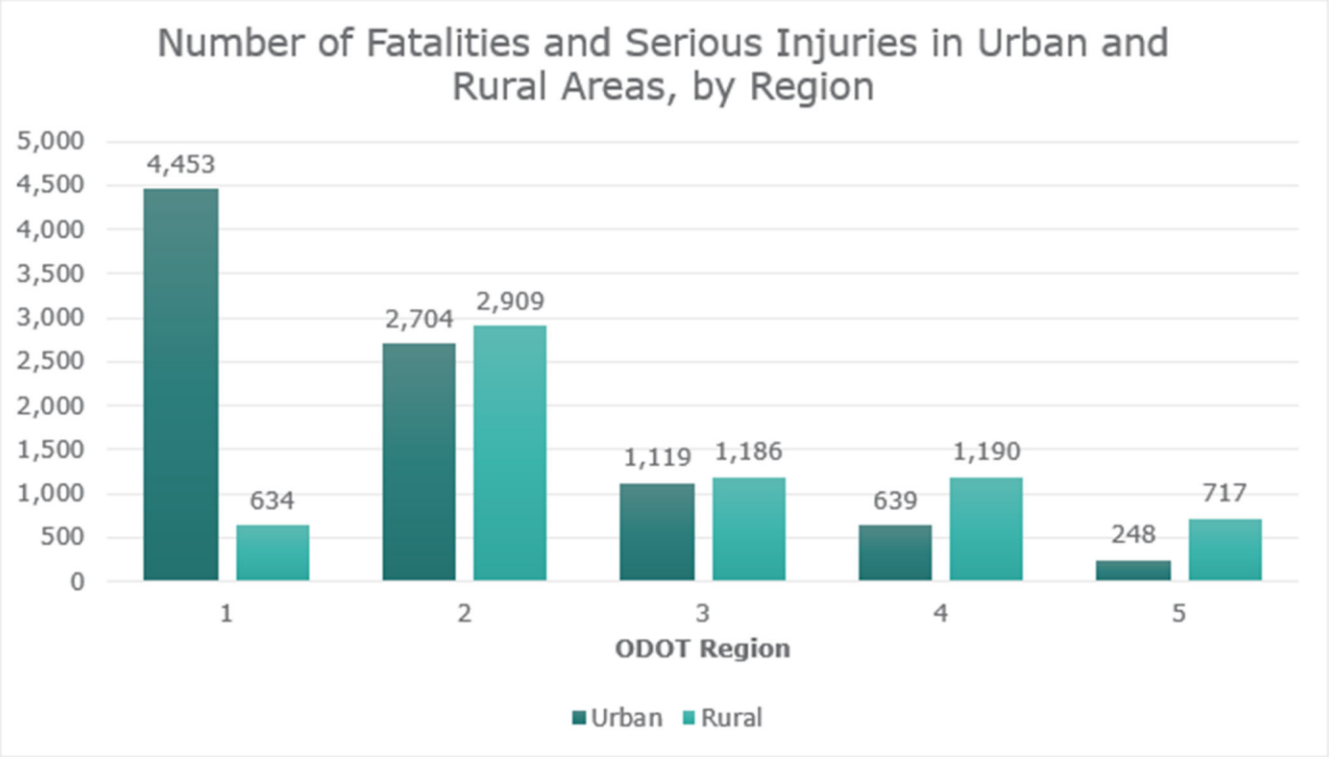


FIGURE 4. FATALITIES AND SERIOUS INJURIES BY REGION AND CONTEXT, 2019-2023

The 2021 TSAP did not provide urban versus rural breakdowns of the attributes in Table 1, so a comprehensive comparison of key attributes in different regions or contexts cannot be completed. However, when looking at the attributes reflected in the highest proportions of fatal and serious injury crashes, the urban and rural results are only slightly different (Table 3). Additionally, the underlying challenges associated with the Emphasis Area tend to be similar in urban and rural areas, while the strategies (treatments) may be different. This suggests that there should be a consistent set of Emphasis Area for the state, and that the associated strategies and actions should reflect both urban and rural needs.

TABLE 3. COMMON CRASH ATTRIBUTES BY CONTEXT

	URBAN	RURAL
ATTRIBUTES CONTRIBUTING TO MORE THAN 20% OF CRASHES	• Road/Lane Departure • Intersections • Alcohol/Drug Impairment • Aging Drivers	• Road/Lane Departure • Speeding • Alcohol/Drug Impairment • Aging Drivers

ROAD OWNER

As shown in Table 4, approximately half of all fatal and serious injury crashes occur on state highways, while half occur on local roads (including county roads and city streets). These roadway ownerships can also be normalized by road mileage.

When comparing to the overall mileage across the state, the data indicates an overrepresentation of fatal and serious injury crashes on the statewide system, since 49% of fatal and serious injury crashes occur on just 15% of the statewide centerline mileage.

- City streets also have an overrepresentation of these crashes, with 29% of fatal and serious injury crashes occurring on 22% of road miles.
- Basing this on statewide centerline miles, not lane miles, can skew the results. At least part of this overrepresentation of state highways can be attributed to the prevalence of multi-lane facilities on state highways and city streets.
- Similarly, Table 4 does not factor in vehicle miles traveled, which tend to be higher on state highways and local roads.

TABLE 4. FATAL AND SERIOUS INJURY CRASH AND MILEAGE PROPORTION BY ROAD OWNER

	FATAL AND SERIOUS INJURY CRASH PROPORTION	STATEWIDE CENTERLINE MILEAGE PROPORTION
STATE HIGHWAYS	49%	15%
COUNTY ROADS	22%	63%
CITY STREETS	29%	22%

FUNCTIONAL CLASSIFICATION

Roadway functional classification describes the intended function of a roadway, and is an indicator of the roadway design, posted speed, traffic volume, and adjacent land use – all of which influence the potential for a fatal or serious injury crash to occur. Table 5 shows the proportion of fatal and serious injury crashes that occurred on each functional classification of roadway across the state, as well as the breakdown of statewide mileage. The majority of fatal and serious injury crashes in

Oregon occur on arterial roadways (major and minor) and major collector roadways. Approximately 62% of fatal and serious injury crashes occur on arterial roadways, which make up just 45% of the statewide roads by mileage. Major collectors are also overrepresented, with 19% of fatal and serious injury crashes compared to 14% of statewide mileage.

The TSAP should include targeted strategies and actions to address the complex road environments and safety needs on arterials and collectors, with an understanding that rural arterials/collectors and urban arterials/collectors require different analysis and treatments.

TABLE 5. FATAL AND SERIOUS INJURY CRASH AND VMT PROPORTIONS BY ROADWAY FUNCTIONAL CLASSIFICATION, 2019-2023

FUNCTIONAL CLASS	FATAL CRASH PRORPORTION	SERIOUS INJURY CRASH PROPORTION	FATAL AND SERIOUS INJURY CRASH PROPORTION	STATEWIDE VMT PROPORTION
INTERSTATE	8.1%	7.9%	8%	26%
OTHER FREEWAYS AND EXPRESSWAYS	0.8%	2.0%	2%	4%
OTHER PRINCIPAL ARTERIAL	39.9%	36.3%	37%	28%
MINOR ARTERIAL	22.3%	25.1%	25%	17%
MAJOR COLLECTOR	18.9%	18.8%	19%	14%
MINOR COLLECTOR	3.6%	3.5%	4%	3%
LOCAL	6.4%	6.4%	6%	7%

Highlight: Fatal and serious injury crashes are overrepresented by 5% or more

Expanding upon the finding that most fatal and serious injury crashes occur on arterials and collectors,

Table 6 shows the distribution of crashes on these roadways based on context and owner (state highway versus non-state highway). As shown, most principal arterial crashes happen on state highways, with a relatively even split between urban and rural areas. In contrast, minor arterial crashes are most common on non-state roads in urban areas. Major collector crashes mainly occur on non-state highways in both urban and rural areas.

TABLE 6. FATAL AND SERIOUS INJURY CRASH PROPORTION BY FUNCTIONAL CLASS, CONTEXT, AND ROAD OWNER

FUNCTIONAL CLASS.	FATAL AND SERIOUS INJURY CRASH PROPORTION	URBAN		RURAL	
		STATE HIGHWAY	NON-STATE HIGHWAY	STATE HIGHWAY	NON-STATE HIGHWAY
PRINCIPAL ARTERIAL	**37%**	15%	9%	13%	0%
MINOR ARTERIAL	**25%**	3%	14%	6%	2%
MAJOR COLLECTOR	**19%**	1%	8%	2%	8%

STATEWIDE VULNERABLE ROAD USER SAFETY ASSESSMENT

The Vulnerable Road User Safety Assessment (VRU SA) evaluates safety performance for people walking, biking, and rolling in Oregon. ODOT performed quantitative analyses of vulnerable road user fatalities and serious injuries, considering relevant crash event data and demographics at the locations of those crash events.

ODOT analyzed human behavior and contributing factors, social equity disparity, factors such as lighting condition and posted speed limit, and a series of other risk factors as described below. Further details regarding the analysis methodology are available in the technical memos developed in support of this assessment.

VRU FATAL AND SERIOUS INJURY CRASH TRENDS

After a gradual 30-year decline, traffic fatalities involving people walking are at a 40-year high nationally. Oregon mirrors these national trends. In the 5-year period between 2005 and 2009, an average of 47 people walking were killed in traffic crashes each year in Oregon. In comparison, between 2019 and 2023, an average of 97 people walking were killed in traffic crashes each year, a 106% increase.

In the five-year period between 2019 and 2023, a total of 484 people walking and 72 people bicycling were killed in vehicle crashes on Oregon roadways (see Figure 5). Another 707 people walking and 312 people bicycling sustained serious injuries during that period. This section describes some of the most notable VRU safety trends.

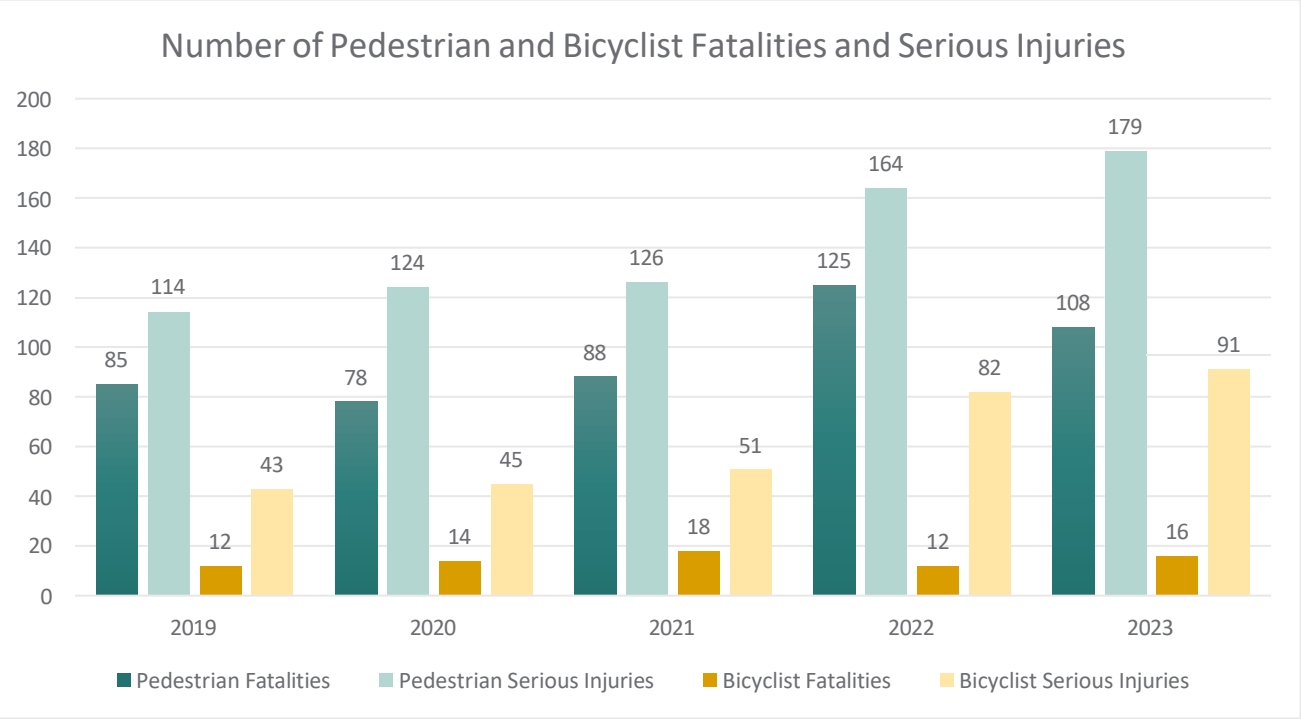


FIGURE 5. PEDESTRIAN AND BICYCLIST FATALITIES AND SERIOUS INJURIES, OREGON, 2019-2023

CONTRIBUTING FACTORS

Table 7 below shows the primary contributing factors reported in Oregon crashes between 2019 and 2023 that involved a vulnerable road user fatality or serious injury. The percentages show the proportion of all assigned contributing factors for fatal or serious injury VRU crashes. These factors come from cause, error, and/or event codes derived from police reports which include accounts from the person driving and any witnesses. It is important to note that these reports may not include the account of the vulnerable user who was seriously injured or killed.

As shown, road users failing to yield contributes to approximately 54% of fatal and serious injury crashes involving people bicycling and to approximately 41% of fatal and serious injury crashes involving people walking. Other common contributing factors include non-motorists illegally in the roadway[1] (48% of fatal and serious injury crashes involving people walking and 16% of fatal and serious injury crashes involving people bicycling) and non-motorists identified by the reporting officer/witness as not visible or wearing non-reflective clothing[2] (36% of fatal and serious injury

[1] Non-motorists illegally in roadway include VRUs who violated Oregon State laws. Some examples include crossing a freeway (except from a disabled vehicle), suddenly stepping into the roadway causing a hazard, etc.

[17] Although there is no legal requirement for people walking or biking to wear high-visibility or reflective clothing, this has been included as an option on police crash reporting forms in Oregon because it is helpful for law enforcement to determine whether a driver had a reasonable amount of time (based on speed, lighting, geometrics, etc.) to identify a person in the roadway and avoid a crash.

crashes involving people walking and 16% of fatal and serious injury crashes involving people bicycling).

TABLE 7: PRIMARY CONTRIBUTING FACTORS IN VULNERABLE USER FATAL & SERIOUS INJURY CRASHES

CONTRIBUTING FACTOR	% OF PEDESTRIAN F&SI	% OF BICYCLIST F&SI
DID NOT YIELD RIGHT-OF-WAY	40.6%	54.4%
NON-MOTORIST ILLEGALLY IN ROADWAY	47.7%	15.8%
NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHING	35.6%	16.1%
DISREGARDED TRAFFIC SIGNAL	9.4%	11.7%

Although there are additional factors involved (not included in this table), none of these were identified as contributing significantly to fatal and serious injury crashes involving vulnerable road users in Oregon. It's important to note that the low occurrence of speeding, inattention, or other behaviors being cited as contributing factors to crashes may be because people involved in a crash are unlikely to self-report such behavior. Underreporting can make it challenging to gather accurate data and statistics on the prevalence of these factors which are needed to diagnose and implement effective safety treatments.

Road User Distraction. Distraction includes driving, walking, or biking while engaging in another activity that diverts the road user's attention away from safely navigating the transportation system. The proliferation of cell phones and other mobile electronic devices has resulted in increasing distractions. Available data and anecdotal evidence point to distraction as a significant traffic safety concern. For example, a survey conducted by Southern Oregon University found that three out of four drivers surveyed engage in distracted driving. Distraction can be a difficult element to include in the crash report, because it relies on a witness testimony or a road user's self-reporting. Table 8 below shows the average yearly proportion of fatal and serious injury crashes that involve a vulnerable user and report distraction between years 2019 and 2023.

TABLE 8. PROPORTION OF FATAL AND SERIOUS INJURY CRASHES THAT INVOLVE A VULNERABLE ROAD USER AND REPORT DISTRACTION, 2019-2023

FATAL AND SERIOUS INJURY CRASHES	AT LEAST ONE DISTRACTED ROAD USER
INVOLVING A PERSON WALKING	10.0%
INVOLVING A PERSON BIKING	10.6%

Road User Impairment. Fatal and serious injury crashes involving people walking or biking are affected by impairment, both for motor vehicle drivers and people walking or biking.

As shown in Table 9, crash reports indicate that more than 34% of fatal and serious injury crashes that involve a person walking also include at least one road user impaired by alcohol or other drugs; for fatal and serious injury crashes involving a person biking, 15% included impairment.

TABLE 9: PROPORTION OF FATAL AND SERIOUS INJURY CRASHES THAT INVOLVE A VULNERABLE ROAD USER AND REPORT IMPAIRMENT

FATAL AND SERIOUS INJURY CRASHES	AT LEAST ONE IMPAIRED ROAD USER (ALCOHOL AND/OR OTHER DRUGS)
INVOLVING A PERSON WALKING	34.0%
INVOLVING A PERSON BIKING	14.5%

EQUITY CONSIDERATIONS

The Social Equity Index (SEI) is a measure of disparity focusing on economically and socially vulnerable populations in Oregon. It serves as a decision support tool, assisting agency staff in identifying communities of concern, thereby aiding in the allocation of transportation resources to reduce social disparities. The SEI is informed by socio-demographic data from the U.S. Census Bureau's American Community Survey (ACS). More information about the SEI can be accessed through the ODOT website.[3]

SEI Values are categorized as:

- Low Disparity
- Low/Medium Disparity
- Medium/High Disparity
- High Disparity

Figure 6 and **Error! Reference source not found.**Figure 7 show the pedestrian and bicyclist fatalities and severe injuries per 100k population for each SEI disparity level. Based on the analysis, medium/high and high disparity areas have a higher number of fatalities and severe injuries per population compared to low and low/medium disparity areas.

[3] Social Equity, Oregon Department of Transportation. https://www.oregon.gov/odot/equity/pages/about.aspx

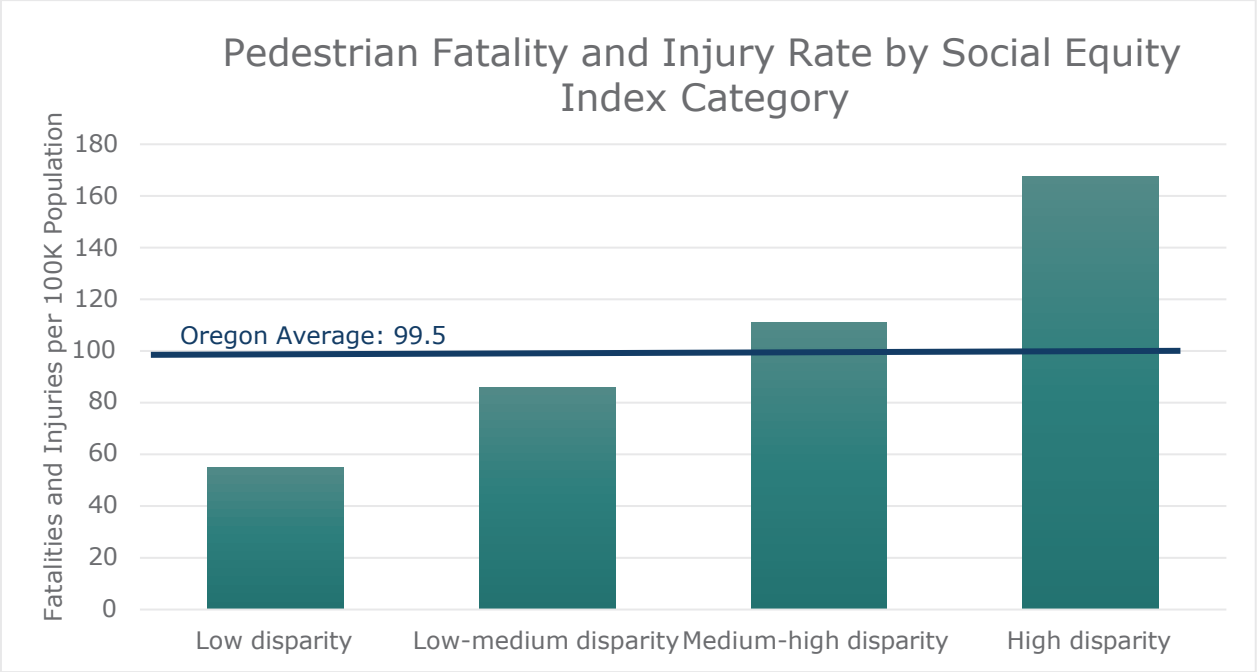


FIGURE 6. PEDESTRIAN OVERREPRESENTATION ANALYSIS BY SOCIAL EQUITY INDEX

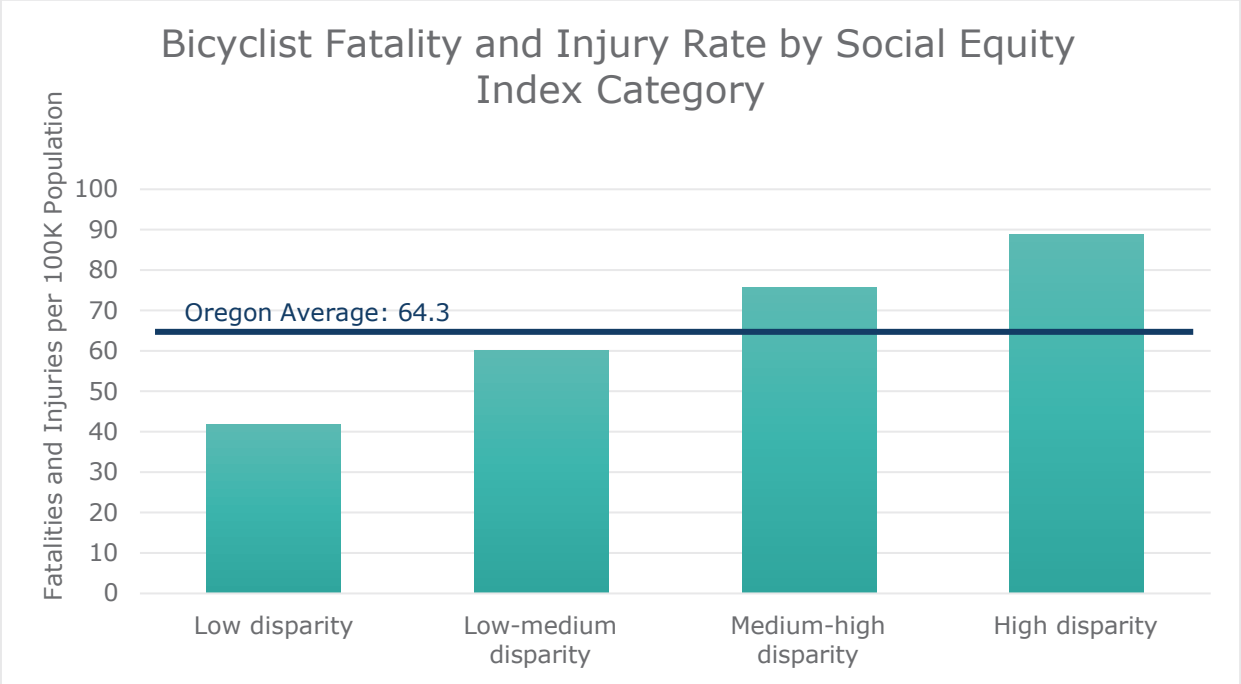


FIGURE 7. BICYCLE OVERREPRESENTATION ANALYSIS BY SOCIAL EQUITY INDEX

Table 10 shows the number of fatalities by race and ethnicity group during the five-year period from 2019 to 2023 using data from the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS). Population data is based on the 2021 U.S. Census

Bureau dataset.[4] Of the total 545 fatalities reported in the FARS dataset, Black or African Americans and American Indians or Alaska Natives are the people of color most over-represented in fatal crashes compared to the total population.[5]

TABLE 10. VULNERABLE ROAD USER FATALITIES BY RACE AND ETHNICITY, 2019-2023

RACE / ETHNICITY	NUMBER OF VRU FATALITIES	VRU FATALITIES PROPORTION	POPULATION (ESTIMATE)[6]	POPULATION PROPORTION
WHITE (NON-HISPANIC)	408	75%	3,138,802	74%
HISPANIC	64	12%	512,544	12%
TWO OR MORE RACES	4	1%	177,908	4%
ASIAN, ASIAN AMERICAN, OR OTHER PACIFIC ISLANDER ALONE	9	2%	232,975	6%
BLACK OR AFRICAN AMERICAN ALONE	14	3%	97,426	2%
AMERICAN INDIAN OR ALASKA NATIVE ALONE	26	5%	80,482	2%
OTHER RACE OR UNKNOWN	20	4%	0	0%
TOTAL	545	100%	4,240,137	100%

NOTABLE TRENDS IN CRASH LOCATION

The Safe System Approach encourages transportation infrastructure design that prioritizes safety for the traveling public and accommodates human mistakes and injury tolerances to reduce the severity of crashes that do occur. To evaluate environmental and roadway design elements related to the safety of vulnerable users, reported roadway condition data associated with vulnerable user crashes was analyzed.

INTERSECTIONS AND SEGMENTS

Location on the road has a different potential impact for people killed or seriously injured while walking or bicycling along roadway corridors. Roadway segments tend to be the primary location

[4] https://www.census.gov/quickfacts/OR?

[5] Understanding Pedestrian Crash Injury and Social Equity Disparities in Oregon, Project SP 841, Phase I Analysis. Oregon DOT. https://www.oregon.gov/odot/Programs/ResearchDocuments/SPR%20841Injuries-Equity.pdf

[6] Population is estimated using the race percentage and the total population of all races using parameters from this website: https://www.census.gov/quickfacts/OR?

for crashes involving people walking (Table 11). Roadway segments account for 60% of fatalities and serious injuries to people walking, while intersections account for 40%. Conversely, when it comes to people bicycling, intersections pose a higher risk. Intersections account for 61% of fatalities and serious injuries to people bicycling, while roadway segments account for 39%.

TABLE 11. VULNERABLE USER FATALITIES AND SERIOUS INJURIES BY LOCATION TYPE

ROAD USER	% OF F&SI AT INTERSECTIONS	% OF F&SI ON SEGMENTS	TOTAL
PEDESTRIAN	40%	**60%**	100%
BICYCLIST	**61%**	39%	100%

LIGHTING CONDITION

Navigating the transportation system can be more challenging at night for all road users, including people walking and rolling. As shown in Table 12 below, 67 percent of fatal and serious injury crashes involving people walking occur in dark, dawn, or dusk conditions. Crashes involving people biking exhibit different characteristics, with only 26 percent occurring in dark, dawn, or dusk. Understanding these differences is challenging without considering factors like exposure (e.g., the number of cyclists and miles traveled in both daylight and dark conditions), making it complex to establish a cause-and-effect relationship.

TABLE 12. OREGON VULNERABLE USER FATALITIES AND SERIOUS INJURIES BY LIGHTING CONDITION

ROAD USER	DARK	DARK (WITH LIGHTS)	DAWN/DUSK	DAY
WALKING	24%	**37%**	6%	33%
BICYCLING	8%	13%	5%	**74%**

VEHICLE SPEEDS

The probability of a vulnerable user being seriously injured or killed in a crash increases as vehicle speed increases. Survivability at different speeds is further influenced by socio-environmental factors such as a person's age or health. For example, as illustrated in Figure 8, a 30-year-old has only a 50% chance of being killed in a crash with a car traveling 45 mph, while a 70-year-old has a 50% chance of being killed in a crash with a car traveling 35 mph.

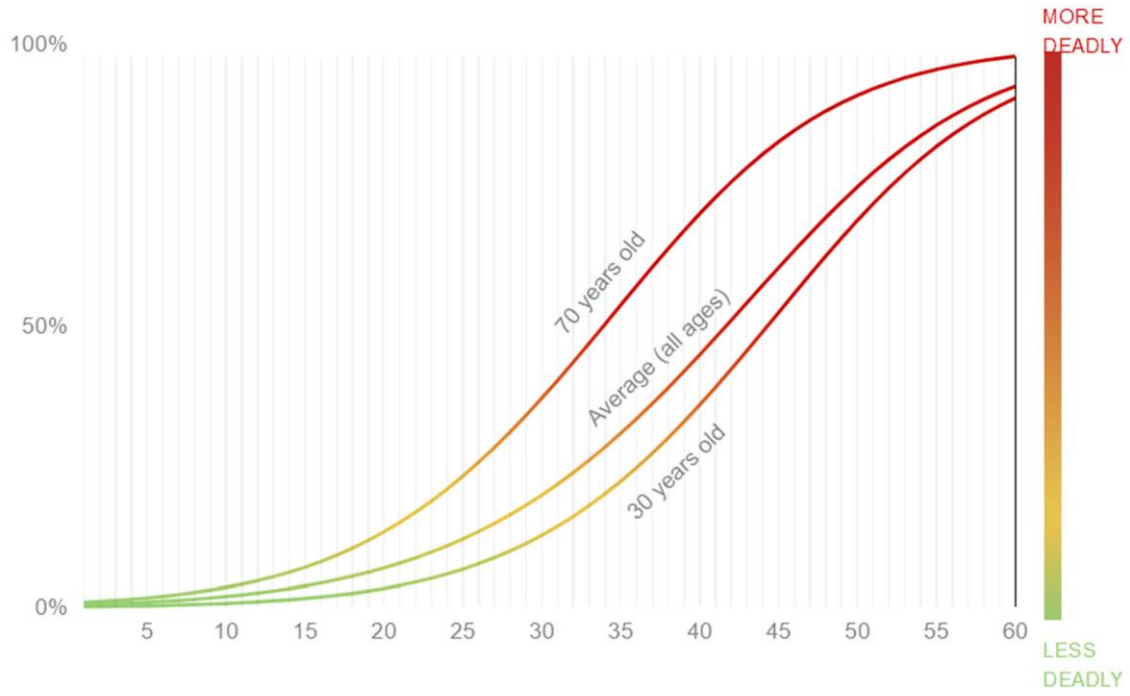


FIGURE 8. RISK OF PEDESTRIAN-VEHICLE FATALITY BY VEHICLE OPERATING SPEED AND PEDESTRIAN AGE

The size, type, and design of the vehicle involved in a crash further influences the impact of speed on vulnerable user crash outcomes. As illustrated in Figure 9, the probability of a vulnerable user being seriously injured or killed in a crash increases even more rapidly as the speed and size of vehicles increases.

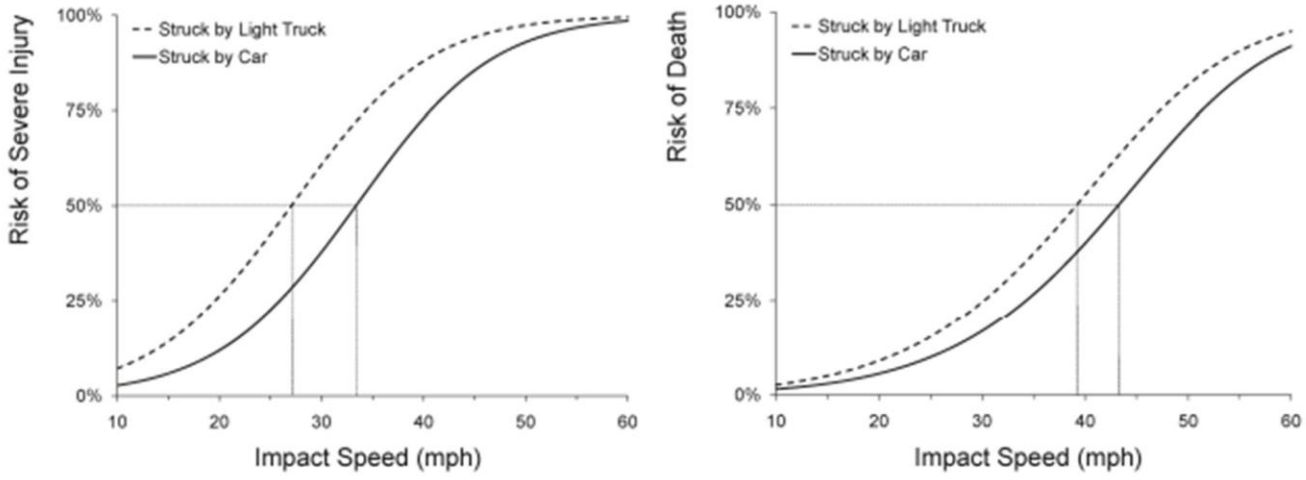


FIGURE 9. RISK OF SEVERE INJURY OR DEATH BY VEHICLE TYPE

To evaluate trends related to speed and vulnerable user safety in Oregon, ODOT evaluated posted speeds and vulnerable user crash data.

Vulnerable User Crash Severity by Posted Speed Limit. Figure 10 below shows the number of vulnerable user fatalities and injuries on roadways by posted speed limit,[7] which serves as a rough estimate for relative motor vehicle operating speed. It is important to note that the posted speed limit is available on state highways but is not consistently reported for local roadways. Of the vulnerable road user crashes studied, approximately 30% did not include a posted speed limit and are not reflected in Figure 10.

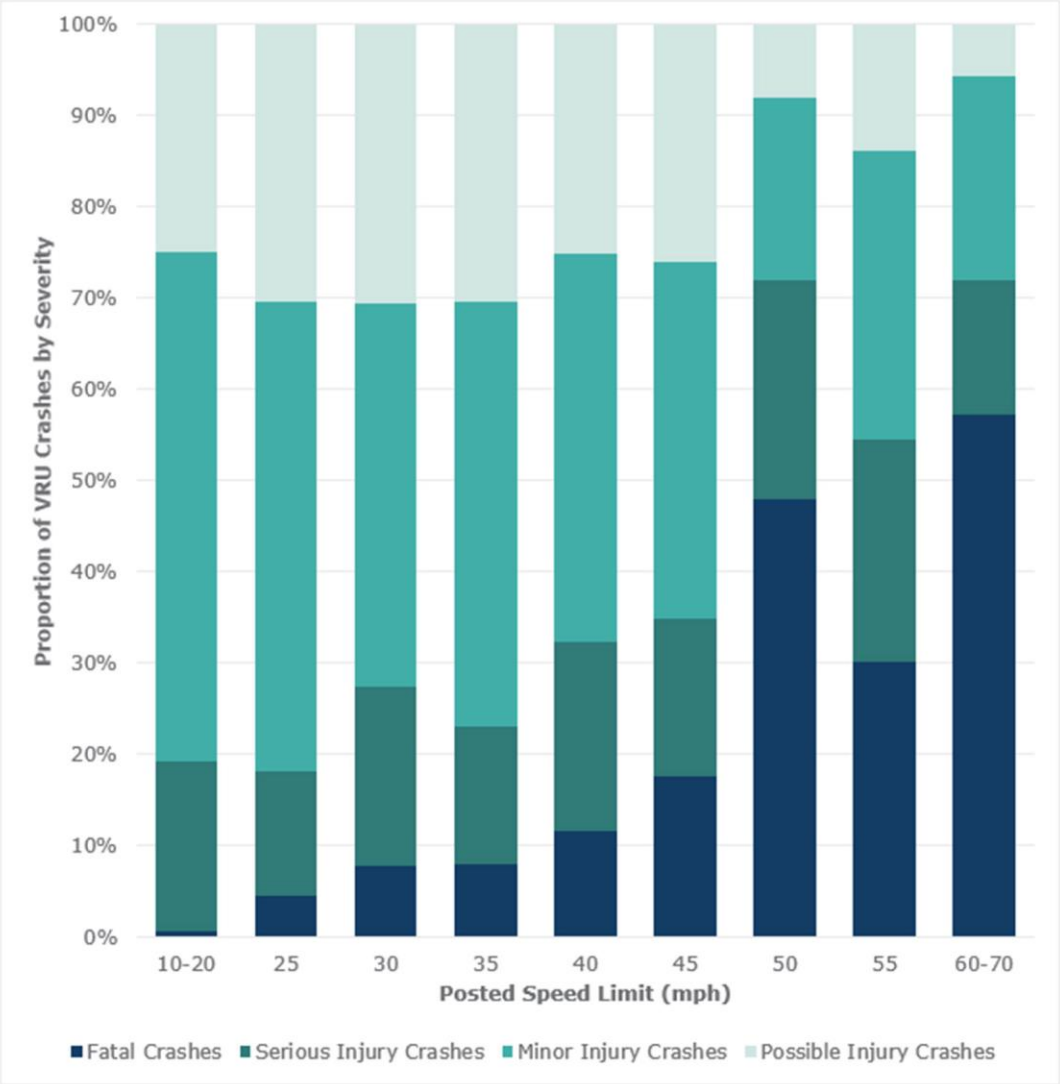


FIGURE 10.PROPORTION OF VULNERABLE ROAD USER CRASHES BY INJURY SEVERITY AND POSTED SPEED LIMIT, OREGON, 2019-2023

[7] Speed limit data collected from the law enforcement crash reports for each reported crash.

The figure demonstrates that higher posted speed limits are correlated with greater severity. For example, at posted speed limits of 45 mph and higher, very few possible injuries or minor injuries were reported.

SAFER VEHICLES

Vehicles are designed and regulated to minimize the severity of crashes – primarily focused on the vehicle's occupants. Unfortunately, some changes to vehicle design may increase safety risk for vulnerable road users outside of vehicles. As vehicles increase in weight and size, often reflecting consumer preferences and accommodating features such as expanded protective zones for occupant safety and space for electric batteries, the likelihood of a pedestrian or bicycle crash leading to fatal or serious injuries also rises. Larger, heavier vehicle designs also often require structures that can obstruct a driver's view of vulnerable users when making turns or backing up, increasing the likelihood of a crash.

The average weight of passenger vehicles has grown, with the average vehicle up 6% in total weight with pickups up 30% compared to pickups of the 1970s. Since 2010, the percentage of new vehicle sales in the US that are light trucks (Sport Utility Vehicles, Crossover utility vehicles, and pickups) has increased from approximately 53% to nearly 80% of all sales.

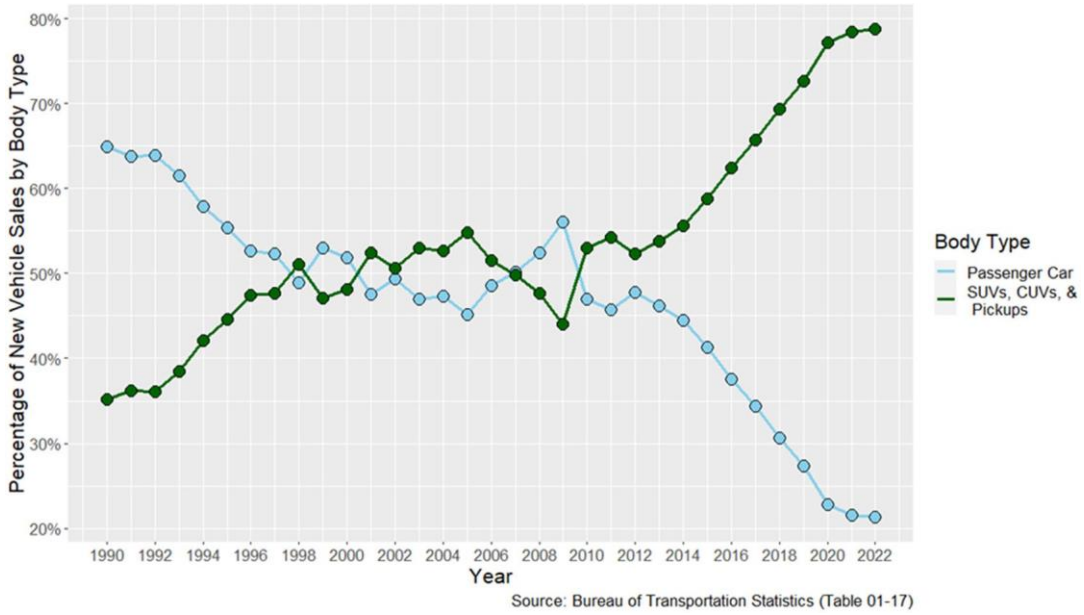


FIGURE 11. VEHICLE SALES BY BODY TYPE, 1990-2022

At an aggregate level, SUVs and pickup trucks are being linked to an increase in overall traffic injury for vehicle occupants and vulnerable road users alike. Without significant efforts directed towards safer vehicles, this trend is likely to continue.

POST CRASH CARE

The Safe System Approach promotes increasing the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and forensics teams investigating the scene.

Humans have a limited tolerance for crash forces, which necessitates swift action when a crash occurs. This is particularly important for vulnerable users because the initial impact with a motor vehicle is likely to cause personal injury. The "Golden Hour" in the context of post-crash care refers to the critical period following a traumatic injury, such as a roadway crash, when the likelihood of a positive outcome is highest if the injured person receives prompt and effective medical treatment within the first 60 minutes after the injury occurs.

On a state level, Oregon's state trauma system ensures that high quality community resources are available to respond to individuals who are traumatically injured by assuring an integrated statewide system of resources, including establishment of trauma regions and designation of trauma care hospitals.[8]

Within the Oregon Health Authority (OHA), the Emergency Medical Services and Trauma Systems Section administers Oregon's emergency medical services (EMS) data.[9] The Oregon Emergency Medical Services Information System (OR-NEMSIS) is Oregon's prehospital emergency medical services data system. OR-NEMSIS includes EMS agency and personnel licensing, EMS agency prehospital patient care reporting, and hospital trauma registry reporting. All licensed transporting EMS agencies submit patient care reports electronically to this central repository.

FIGURE 12. MEDIAN RESPONSE TIME BY ODOT REGION

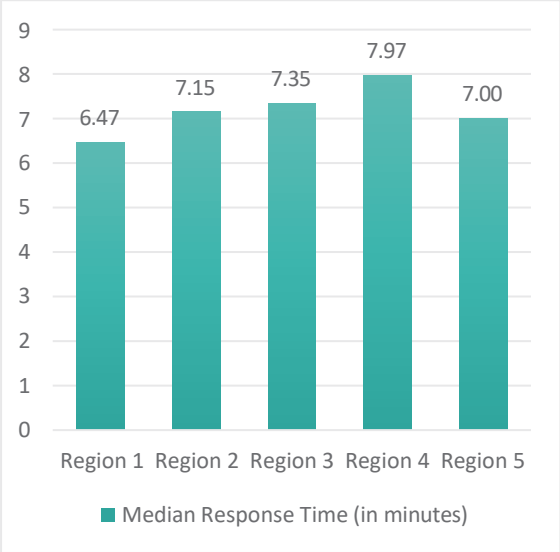
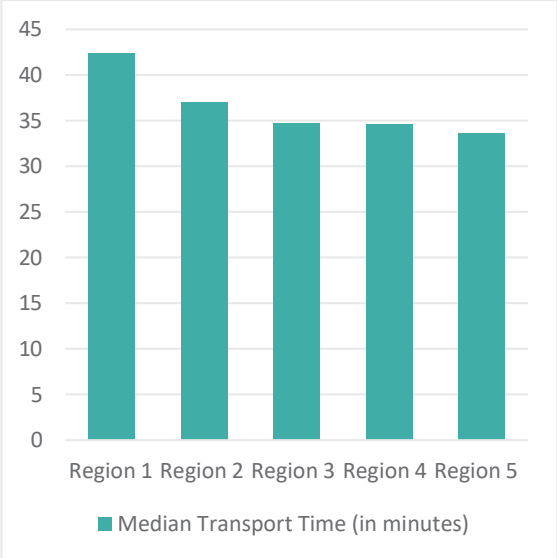


FIGURE 13. MEDIAN TRANSPORT TIME BY ODOT REGION



The efficiency of EMS plays a critical role in ensuring the well-being of those involved in roadway crashes. Median response and transport time varies by region. Varying terrains and population densities contribute to unique challenges for emergency response teams. In densely populated urban areas, factors such as traffic congestion and the complex layout of streets can affect how quickly emergency services can reach the scene. On the other hand, in rural or remote regions, where

[8] Oregon Health Authority : The Oregon Trauma and Tertiary Care Program : Trauma Systems : State of Oregon

[9] Oregon EMS Data Strategic Plan, 2022-2024

distances are often greater and road conditions may be less predictable, response times face a different set of challenges.