OREGON

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2023 ANNUAL REPORT

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23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 407 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

Improving highway safety has long been a national goal, articulated through all major federal highway legislation. The Highway Safety Improvement Program (HSIP) is a federal program designed to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The primary goal of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-state owned roads and tribal roads. It requires a data-driven and strategic approach to improving highway safety on all public roads that focuses on performance.

The HSIP is a core federal-aid program under the Fixing America's Surface Transportation (FAST) Act that went into effect in December, 2015. The FAST Act, which replaced the Moving Ahead for Progress in the 21st Century Act (MAP-21), largely maintained the program structure of the HSIP with slight increases in funding and a change that disallows HSIP funds to be transferred to and used for educational and enforcement type activities. The HSIP funds are primarily intended for infrastructure improvement projects. Non-infrastructure highway safety improvements such as education and enforcement programs are administered by the ODOT Transportation Safety Office (TSO), and are typically funded through the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA), or state funds.

The Oregon Department of Transportation (ODOT) administers the federally-funded Highway Safety Improvement Program (HSIP) to implement safety projects. ODOT developed the All Roads Transportation Safety (ARTS) Program to achieve the goals of the HSIP using a data-driven, jurisdictionally-blind process. The majority of the funding for the ARTS Program comes from the Highway Safety Improvement Program (HSIP).

The ARTS Program is a statewide application based competitive process. Projects are ranked or prioritized based on an ODOT-approved prioritization method such as Benefit-Cost Ratio. Through the ARTS program, projects on all public roads in Oregon, regardless of roadway ownership, compete for HSIP funding.

The ARTS program principal guidelines include:

· The program goal is to reduce fatal and serious injury crashes.

· The program must include all public roads.

· The program is data driven and blind to jurisdiction.

· The process will be overseen by ODOT regions.

· Both "hot spot" methodology and systemic methodology will be used.

· Only proven countermeasures from the ODOT Crash Reduction Factor list will be used.

For purposes of programming Highway Safety funds in the Statewide Transportation Improvement Program (STIP), all highway safety infrastructure improvement projects shall follow these guidelines.

FHWA recently completed a comprehensive review to evaluate the policies, procedures, and achievements of Oregon's All Roads Transportation Safety Program, funded by HSIP funds. The review was done in partnership with ODOT and involved a series of structured interviews with ODOT and local agency staff involved with the program. In addition, technical analyses of crash data, safety screening, and countermeasures were included. The team also performed a comprehensive review of legislation, policies and

procedures, and institutional relationships. In addition, the team assessed how safety issues are identified and countermeasures are developed and chosen. This culminated with a look at how individual and bundled projects were developed and delivered.

The review confirmed that there were key strengths of the program, including a concentration of efforts on fatality and serious injury crashes, a well-documented and historically strong network screening process, strong project development and selection process that aligned with other transportation projects though a statewide delivery process, inclusion of local agencies in the program to ensure fair consideration of safety needs throughout the system, and a flexible organizational structure within ODOT that accounted for differences within the state and with local agencies yet still created a sound structure for the program. In addition, the six key actions below, which are already top priorities for ODOT, were identified to ensure a data driven program that reduces fatalities and serious injuries.

1. Improve processes for collecting and processing crash data so data can be available for analysis in a timelier manner.

2. Strengthen the analyses used for network screening, individual site analysis, and countermeasure selection.

3. Ensure the knowledge and skills evidenced in the ARTS program are fully engaged with transportation safety plans in the state, both those carried out by ODOT and those carried out by other agencies.

4. Streamline the safety project delivery processes to more rapidly deliver effective safety countermeasures.

5. Address funding gaps in the program (both addressing the size of projects and state and non-state projects) to ensure the full span of safety countermeasures with the best benefit-cost ratios can be delivered.

6. Develop comprehensive program and project metrics to monitor the effectiveness of the ARTS program and safety countermeasures.

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

The objective of the ARTS Program is to select the best safety projects using a jurisdictionally blind and data-driven approach to significantly reduce the occurrence of fatalities and serious injuries on all roads in the state. A data-driven approach uses crash data, risk factors, or other data supported methods to identify the best possible locations to achieve the greatest benefits. The ARTS Program is intended to address safety needs on all public roads in Oregon. About half of the fatal and serious injury crashes in the state occur on non-state roadways. By working collaboratively with local road jurisdictions (cities, counties, MPOs, and tribes) ODOT can expect to increase awareness of safety on all roads, promote best practices for infrastructure safety, complement behavioral safety efforts, and focus limited resources to reduce fatal and serious injury crashes in the State of Oregon.

ARTS Safety projects are selected using multiple tools. One of the main tools is the Safety Priority Index System (SPIS) that was developed in 1986 by the Oregon Department of Transportation (ODOT) for flagging potential safety problems. SPIS includes all public roads in Oregon (not just state highways) - the system includes both a component that produces Annual SPIS reports for both On-State Roadways (State Highways only) and Off-state Roadways (non-State Highways).

On state highways, project selection and identification is done at the region level using crash data, the Safety Priority Index System (SPIS), and safety implementation plans. At the local agency level, ODOT provides consultant services at no charge to support project selection therefore, projects can be selected based on local priorities or through consultant support using tools such as SPIS and the systemic safety plans. Oregon DOT primarily uses SPIS which is a flagging tool to assist Region Traffic Investigators in identifying high crash locations to investigate and determine if there are appropriate safety countermeasures that can be implemented within a safety project to eliminate or reduce fatal or serious injury crashes.

While many highway projects incorporate design features or elements that relate to highway safety, such as updating guardrail or improving intersection channelization, signing, and pavement markings, the projects are not aimed at correcting or improving hazardous road locations or features and thus could not be qualified for HSIP funds. The appropriate use of HSIP funds is only for locations or corridors where a known problem exists as indicated by location-specific data on fatalities and serious injuries, and/or where it is determined that the specific project can with confidence produce a measurable and significant reduction in such fatalities or serious injuries. To achieve the maximum benefit, the focus of the ARTS Program is on cost-effective use of the funds allocated for safety improvements addressing fatal and serious injury crashes. The general program guidelines are as follows:

· All projects shall address specific safety problems that contribute to fatal and serious injury crashes.

· All projects shall use only countermeasures from the ODOT approved countermeasure list.

· Only the most recent available five years of ODOT reported crashes shall be used for crash analysis.

· Projects shall be prioritized based on ODOT approved prioritization method such as Benefit-Cost Ratio.

· ODOT Regions will be responsible for developing and delivering projects.

The ARTS Program has two components – a hotspot component and a systemic component. The hotspot approach is the traditional approach used in safety analysis (ODOT users a program called SPIS), in which 'hotspot' locations are identified based on crash history and appropriate countermeasures are implemented to reduce crashes. Hotspot projects typically focus on a particular location (for example, an intersection or a short segment of a roadway) that may have multiple causes to address. For the ARTS Program, a hotspot location is defined as a location that has at least one fatal or serious injury crash within the last five years.

The systemic approach identifies a few proven low-cost countermeasures that can be widely implemented and then applies the countermeasures where there is evidence that they would be most useful. The HSIP places a significant emphasis on the systemic approach, which has been proven to successfully reduce the occurrences of fatal and serious injury crashes. The systemic component of the ARTS Program has been further divided into three emphasis areas – roadway departure, intersection, and pedestrian/bicycle. Based on Oregon data, these three emphasis areas accounted for approximately 85% of the fatal and serious injury crashes in the state.

The systemic approach originally used Section 164 penalty funds allocated to the Safety Program, but under the ARTS Program the systemic approach has been moved into the mainstream safety program equal with the hotspot approach

Where is HSIP staff located within the State DOT?

Other-Traffic-Roadway Engineering Section

How are HSIP funds allocated in a State?

- SHSP Emphasis Area Data

Describe how local and tribal roads are addressed as part of HSIP.

The State's annual safety performance targets represent an important step in helping States work toward the ultimate goal of eliminating traffic fatalities and serious injuries. About half of the fatal and serious injury crashes in the state occur on local (non-state) roadways. By working collaboratively with local road jurisdictions (cities, counties, MPOs, and tribes) ODOT can expect to increase awareness of safety on all roads, promote best practices for infrastructure safety, complement behavioral safety efforts, and focus limited resources to reduce fatal and serious injury crashes in the State of Oregon.

In order to deliver the All Roads Transportation Safety (ARTS) program effectively, ODOT provides consultant outreach services to support Local Agency and Tribal project selection. These services are provided to local jurisdictions and tribes at no charge. The consultant helps facilitate outreach meetings in each region as well as with tribes to make them aware of ARTS timelines. In addition, the consultant helps prepare local crash data summary reports that include:

· Number and location of fatal crashes

· Number and location of serious injury crashes

· Number and location of roadway departure, intersection, and bicycle and pedestrian crashes

· Number and location of older (greater than or equal to age 65) driver and older pedestrian crashes

· Number and location of younger (less than or equal to age 20) drivers crashes

· Fatal and serious injury crash patterns (predominant crash types, high-crash intersections, high-crash segments, and predominant contributing factors, etc.)

· All severity crash patterns (predominant crash types, high-crash intersections, high-crash segments, and predominant contributing factors, etc.)

· Summary of bicycle and pedestrian crashes by location

The existing crash data reports, SPIS lists, and safety implementation plans (Roadway Departure, Intersection, and Pedestrian and Bike Implementation Plans) and other sources as necessary are used to help identify and prepare ARTS safety projects.

Lastly, in an effort to better understand the challenges and barriers to participating in the ARTS program, ODOT conducts a two-part local agency survey (an online stakeholder survey and one-on-one interviews with local agencies that did not submit an application for funding). Responses help provide recommendations for facilitating improvements in future rounds of the ARTS program as well as evaluating the usefulness of existing methods and tools in the ARTS decision-making process.

Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.

- Design
- Districts/Regions
- Governors Highway Safety Office
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Highway Safety Engineering Committee (HSEC)
- Other-Traffic Safety Office (TSO)

Describe coordination with internal partners.

ODOT established a Highway Safety Engineering Committee (HSEC) on February 18, 2005 which met with some consistency until around 2020. The meetings scheduled in 2020 and 2021 were canceled because of COVID, scheduling conflicts and lack of agenda items. Towards the end of 2020, we were in the midst of the ARTS season (planning for the project selection and outreach) and we wanted a more ODOT centric group to discuss how we would solicit projects so that we would be able to talk openly about issues. We instituted the ARTS subgroup, which meets monthly during the ARTS cycle and functions much like an ODOT version of HSEC. Since a majority of the topics between ARTS and HSEC are very similar, there doesn't appear to be value in repeating the same topics for the HSEC when we're in the middle of the ARTS cycle.

Prior to COVID, the committee was comprised of individuals with a mix of expertise within the Department. Members of the committee represent the Transportation Safety Division, Region and Headquarters Traffic, Region Technical Centers, Transportation Development (Planning), Maintenance, Federal Highway, Transportation Safety, Association of Oregon Counties and Roadway Section. The purpose of the committee was to provide a leadership forum to enhance, strategize, coordinate, and direct the engineering/infrastructure related highway safety activities for the Department including the ARTS/HSIP program.

In addition to HSEC, the Traffic Operations and Standards Team (TOAST) was established to provide statewide policy and procedure leadership for traffic engineering related issues. This team involves a mix of internal and external (FHWA, local jurisdictions) partners and often covers safety topics.

Before we reconvene the committee and reschedule future meetings, we want to take some time to revisit the mission and vision for the committee to address:

· Better defining the purpose and need for the HSEC- what does this group do differently than the ARTS subcommittee.

· Is the committee a decision making committee or information sharing?

· Expanding the group to get more city and county representation

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency

Describe coordination with external partners.

ODOT Region Traffic offices work closely with external partners in determining appropriate safety projects to fund in Oregon to reduce fatal and serious injuries crashes.

· At the planning level, external partners are involved through the SHSP process as stakeholders in the strategic planning document that defines Oregon’s emerging trends & challenges on traffic safety and identify actions to address safety needs.

· At the project selection level, ODOT Traffic-Roadway Section (TRS) and Region Traffic offices conduct outreach meetings with local agencies interested in submitting proposed ARTS safety projects for funding consideration. In addition, ODOT provides consultant services at no charge to help support local jurisdictions. ODOT TRS also works closely with representatives from FHWA and the ODOT Transportation Safety Office (TSO) to assure coordination between HSIP and the SHSP which identifies Oregon’s policies and strategies to eliminate fatalities and serious injuries.

Describe HSIP program administration practices that have changed since the last reporting period.

As S afety involves the entire state's cooperation, local areas unable to participate in the ARTS program because of budget limitations are urged to contact the Regional ARTS program managers to explore potential options. There are cases where the matching requirement might be waived for tribes, small municipalities, and counties that satisfy the eligibility criteria outlined below. This exemption applies to those applying for safety countermeasures that align with the conditions for receiving 100% federal reimbursement.

· Traffic control signalization

· Maintaining minimum levels of retro-reflectivity of highway signs or pavement markings

· Traffic circles/roundabouts

· Pavement marking

· Shoulder and centerline rumble strips and stripes

· Installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments, breakaway utility poles

Eligibility:

· Tribal Lands: All tribal applications

· Cities: non-metropolitan Incorporated cities with populations of 5,000 or less (aligns with Small City Allotment Program)

· Counties: 50% or more of population is low income of economically disadvantaged as defined in the Climate and Economic Justice Screening Tool (Explore the map - Climate & Economic Justice Screening Tool (geoplatform.gov))

Describe other aspects of HSIP Administration on which the State would like to elaborate.

ARTS program support (https://www.oregon.gov/odot/Engineering/Pages/ARTS.aspx), updated documents, tools and guidance includes:

· Pedestrian and Bicycle Cost Effectiveness Tool (CEI)- Updated to incorporate risk factors associate with pedestrian and bicycle involved crashes. With this tool, analysts can better identify locations and supporting safety treatments, focus funding, and prioritize locations statewide where preemptive treatments can be implemented to enhance pedestrian and bicyclist safety. This tool will be available for use in this (current) round of STIP Safety project selection through our All Roads Transportation Safety (ARTS) program, which dedicates a portion of ODOT’s federal safety funding to pedestrian/bicycle focused countermeasures.

· Comprehensive Cost and B/C spreadsheet tool- updated to reflect new comprehensive costs as outlined insafety.fhwa.dot.gov/hsip/docs/fhwasa17071.pdf

· ARTS application form and guide- updated to incorporate equity and GHG considerations.

· CRF Appendix- revision/updates to CRF's used in the ARTS program.

· Countermeasure Search Tool- updated to reflect revisions to CRF's.

Updates to Manuals (Oregon Department of Transportation : Highway Safety : Engineering : State of Oregon):

· Currently reviewing/updating safety manuals to follow best practices for liability neutral language using NCHRP 20-06 "Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communications Strategies"

o CRF Appendix- complete

o Safety Investigations Manual (SIM)- ongoing

o ARTS/HSIP Manual- updated to incorporate equity and GHG considerations and to reflect new information and guidance.

Safety Improvement Plans (Oregon Department of Transportation : Highway Safety : Engineering : State of Oregon):

· Intersection Safety Implementation Plan- anticipated to be completed in September of 2023. This update helps analysts identify intersection crash patterns, trends and risk factors, focusing on fatal and suspected serious injury crashes, consistent with Safe Systems Approach ("SSA") principles, as outlined by What Is a Safe System Approach? | US Department of Transportation

SPIS:

Oregon DOT recently updated the SPIS to reflect 2020 crash data:

· State Highway reports: https://www.oregon.gov/odot/Engineering/Pages/SPIS-Reports-On-State.aspx

· Local road reports: https://www.oregon.gov/odot/Engineering/Pages/SPIS-Reports-Off-State.aspx

Vulnerable Road User Assessment project:

Our assessment is underway, and involves collaboration across various agencies, incorporating comments and input from multiple statewide partners to identify risk factors and strategies. The risk factors will be used to determine High-Risk areas statewide where funding can be focused on strategies, approaches and countermeasures with the greatest potential to reduce fatalities and serious injuries involving vulnerable road users.

Research:

· Truck Access into Roundabouts:

o Currently collaborating with Oregon State University and the Oregon Trucking Industry on a research study to review the tools, guidelines, and workflows currently used by ODOT to better understand the needs of heavy vehicles when accessing roundabouts. This work will make recommendations for improvements to tools, guidelines, and workflows where warranted. The work is being conducted in two phases:

§ Phase I- Evaluation of Existing Roundabout Modeling Practices in Oregon

§ Phase II- Evaluation of Alternative Designs and Traffic Control Strategies for Roundabouts in Oregon

· New context-sensitive Rules for setting speed zones in urban areas:

o Research study conducted by Portland State University is underway to study the new methods' outcomes with speed compliance and safety (SPR 854). Starting in May of 2020, Oregon's new Administrative Rules for setting speed limits in urban areas have incorporated new national research (NCHRP report 966). Speed setting now is based on ranges for urban contexts (such as Urban core, suburban commercial, etc.) and considers 50th percentile speeds instead of the old 85th percentile speed method. This should lead to speed limits more in line with multi-modal uses of the streets.

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?

Yes

Yes, ODOT currently has an HSIP Manual available on our website however, this manual is currently being updated (anticipated to be completed in September of 2023).

File Name: ODOT Highway Safety Improvement Program (HSIP) Guide

· Oregon DOT Safety:

https://www.oregon.gov/ODOT/Engineering/Pages/Highway-Safety.aspx

· All Roads Transportation Safety (ARTS) program:
http://www.oregon.gov/ODOT/Engineering/Pages/ARTS.aspx .

Select the programs that are administered under the HSIP.

- Bicycle Safety
- HRRR
- Intersection
- Pedestrian Safety
- Roadway Departure

Program: Bicycle Safety

Date of Program Methodology:11/30/2020

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• Fatal and serious injury crashes only	• Volume • Population • Other-Risk Factors	• Functional classification • Roadside features • Other-Risk Factors

What project identification methodology was used for this program?

- Other-Cost Effectiveness for Bike/Peds
- Other-Ped and Bicycle Safety Implementation Plan

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Cost Effectiveness:100

Program: HRRR

Date of Program Methodology:9/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway

- Fatal and serious injury crashes only

- Volume
- Population

- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Other-Crash Severity

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C:100

Program: Intersection

Date of Program Methodology:9/30/2023

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- Fatal and serious injury crashes only

Exposure

- Volume

Roadway

- Horizontal curvature
- Functional classification

- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Other-Crash Severity
- Other-Intersection Safety Implementation Plan
- Other-Risk factors

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C:100

Program: Pedestrian Safety

Date of Program Methodology:11/30/2020

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway

- Fatal and serious injury crashes only
- Volume
- Population
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Other-Cost Effectiveness for Bike/Peds
- Other-Ped and Bicycle Safety Implementation Plan
- Other-Risk factors

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Cost Effectiveness:100

Program: Roadway Departure

Date of Program Methodology:2/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- Fatal and serious injury crashes only

Exposure

- Volume

Roadway

- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Other-Cost Effectiveness for Bike/Peds
- Other-Crash Severity
- Other-Roadway Departure Safety
- Other-Roadway Departure Safety Implementation Plan

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- Competitive application process

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Cost Effectiveness:100

What percentage of HSIP funds address systemic improvements?

50

HSIP funds are used to address which of the following systemic improvements?

- Add/Upgrade/Modify/Remove Traffic Signal
- Cable Median Barriers
- Clear Zone Improvements
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge
- Traffic Control Device Rehabilitation
- Upgrade Guard Rails
- Wrong way driving treatments

Estimate of percentage of HSIP funds address systemic improvements based on statewide funding split- 50% hotspot / 50% Systemic (50% Systemic Roadway Departure, 35% Systemic Intersection, 15% Systemic Bike/Ped)

What process is used to identify potential countermeasures?

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input
- Other-Region Traffic Investigator's investigate the top 5% Safety Priority Index System (SPIS) each year and identify potential cost effective countermeasures.

The CRF Manual is developed internally to assist safety practitioners who plan to utilize HSIP funding. It offers a comprehensive list of effective countermeasures suitable for addressing a wide range of common safety concerns. Countermeasures are regularly revised in alignment with STIP cycles, but additional countermeasures can also be incorporated upon request.

oregon.gov/odot/Engineering/ARTS/CRF-Manual.pdf

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

ODOT's All Roads Transportation Safety (ARTS) program includes several ITS technologies as potential countermeasures, especially curve and intersection warning systems and variable speed signs.

Oregon is in the formative stages of developing connected vehicle technologies .

Intelligent Transportation Systems (ITS) connected vehicles website
https://www.oregon.gov/odot/Programs/Pages/Connected-Vehicles.aspx

Automated Vehicles website https://www.oregon.gov/odot/Programs/Pages/CAV.aspx

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

ODOT is implementing HSM methods and approaches to support HSIP efforts.

· The Safety Priority Index System (SPIS) tool is an example of an HSM sliding window application which is one of the three principal screening methods in the HSM. SPIS calculates a score for qualifying 0.10-mile segments of roadways (statewide) based on the frequency, rate and severity of crashes occurring within each segment over a three-year period.

· In ARTS, for Pedestrian and Bicycle safety project prioritization, we use the cost-effectiveness index (CEI) analysis tool outlined in the HSM. Rather than comparing the economic value of the crash reductions to the project cost, cost-effectiveness analysis compares the project cost to the reduction in one fatal and serious injury crash. The lower the CEI value of a project, the higher it will rank in the prioritized list.

· The HSM predictive spreadsheets have been updated to include Oregon specific calibration factors. While these predictive spreadsheets are not used for systemic analysis, they are used for project analysis where SPF's are available.

· In 2022, ODOT piloted the AASHTOWare Safety software. Some of the features and functions we're interested in learning more about include:

o The ability to query multiple years of crash data to identify crash trends by crash type, severity, and geometric features statewide.

o Determine whether or not the dashboard is self-guiding/intuitive and how insightful the graphs and data displays are.

o Accessibility and functionality for local jurisdictions- how easy is it for local jurisdictions to access the data and develop trends based on boundaries

· Our ODOT Planning unit has incorporated several methodologies and tools into the Analysis Procedures Manual (APM) such as the critical crash rate and the excess proportion of specific crash type calculators.

Oregon Department of Transportation : Technical Tools : Planning & Technical Guidance : State of Oregon

Describe other aspects of the HSIP methodology on which the State would like to elaborate.

The All Roads Transportation Safety Program (ARTS) is a statewide safety program that addresses safety for all public roads in the state of Oregon. The primary objective of the ARTS Program is use data driven safety methods to select the best projects to reduce fatalities and serious injuries on all public roads in the state. The program is a competitive program with a focus on implementation of cost-effective and proven safety countermeasures. It is supported through federal and state funds based on the federal Highway Safety Improvement Program . HSIP adopts a data-driven approach that uses crash data, risk factors, and other supported methods to identify the best possible locations to achieve the greatest benefits.

The fourth round of the ARTS project selection will begin in the fall of 2023 and extended through the spring of 2024. During this period, projects will be selected for the Statewide Transportation Improvement Program (STIP) and which will be delivered in years 2027 through 2030.

ODOT uses two different methods for selecting projects – traditional ‘Hotspot’ method and ‘Systemic’ method. ODOT regions are encouraged to spend at least half of the funding for Systemic projects. These two methods are designed to select the most cost-effective projects among all public roads in Oregon to reduce the most fatal and serious injury crashes with available funds. The 2017 – 2021 crash data will be used to support applications for this round of ARTS. The following tools and safety plans will also be helpful in safety project identification:

Safety Priority Index System (SPIS): https://www.oregon.gov/ODOT/Engineering/Pages/Highway-Safety.aspx

Oregon Adjustable Safety Index System (OASIS): https://zigzag.odot.state.or.us/oasisapp/OasisTool.aspx

Systemic Roadway Departure Plan: https://www.oregon.gov/odot/Engineering/Pages/Roadway-Departures.aspx

Systemic Intersection Safety Plan: https://www.oregon.gov/odot/Engineering/Pages/Intersection-Safety.aspx

Systemic Pedestrian and Bicycle Plan: https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/Bike-Ped-Safety- Implementation-Plan.pdf

Addressing Oregon’s Rise in Deaths and Serious Injuries for Senior Drivers and Pedestrians: https://www.oregon.gov/odot/Programs/ResearchDocuments/SPR828Final.pdf

For the STIP period, 2027 through 2030, approximately $46 million per year of S afety projects will be programmed through the ARTS program. Funds are allocated to each ODOT region based on the proportion of fatalities and serious injuries that occurred within the region during the last five years of available crash data. The region allocations during the last round of ARTS funding was approximately:

Region 1 (31%), Region 2 (36%), Region 3 (15%), Region 4 (11%), Region 5 (7%)-

The ARTS FAQ is available at this link: https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/ARTS_Key-Facts.pdf

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Enter the programmed and obligated funding for each applicable funding category.

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$38,933,747	$38,933,747	100%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$2,440,120	$2,440,120	100%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	$5,840,062	$5,840,062	100%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$13,680,844	$13,680,844	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$60,894,773	$60,894,773	100%

During the period of 2027 through 2030, approximately $61 million per year will be available for the safety program (~$39 million of that is allocated through the ARTS program). This funding was determined by the Oregon Transportation Commission (OTC).

Funds will be allocated to each ODOT region based on the proportion of fatalities and serious injuries that occurred within the region during the last five years then funds will be further split between State highways (49%) and local roads (51%). The region allocations are: Region 1 - 31% Region 2 - 36% Region 3 - 15% Region 4 - 11% Region 5 - 7%.

How much funding is programmed to local (non-state owned and operated) or tribal safety projects?

50%

How much funding is obligated to local or tribal safety projects?

50%

How much funding is programmed to non-infrastructure safety projects?

0%

How much funding is obligated to non-infrastructure safety projects?

0%

Oregon has often collaborated with our partners on increased enforcement (including automated enforcement) and other strategies such as education campaigns which are very successful. Because this was previously not allowed under the HSIP program, other funds in the amount of $218,000 per year have been programmed for use for roadway departure enforcement through the Transportation Safety Office (TSO).

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

0%

How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?

0%

Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.

While Oregon DOT has had much success, we still face challenges with obligating HSIP funds to appropriate safety projects.

· Local jurisdictions' participation in the ARTS program:

§ Local jurisdictions typically submit small projects (~$500,000); however, these projects are less cost effective because of the project delivery constraints of the federal process. It would be helpful if FHWA reduces requirements for project development and oversight for Safety projects under a certain size (for example, less than $500,000) in order to facilitate delivery.

§ In general, it would be helpful if FHWA updated the countermeasures and project types that are fully reimbursable to include more countermeasures specific to vulnerable users and to make all local agency projects fully reimbursable.

· Getting safety projects programmed and built in an appropriate time frame:

§ Consider ARTS project delivery improvements (master agreement, uniform data, etc.) to improve delivery of non-State projects such as developing master intergovernmental agreements for ARTS projects or otherwise group projects to deliver under single Intergovernmental Agreement (IGA) .

§ Identify opportunities to program safety projects earlier in the STIP

§ Explore opportunities for Pubic Interest Finding with FHWA for use of state-forces to construct certain low-cost safety countermeasures.

§ Explore potential peer exchange opportunities of other states that use other methods to fund maintenance forces with the HSIP funds.

§ Examine efforts to use IDIQ (indefinite delivery/indefinite quantity) for contracting and delivering low-cost safety treatments. This approach appears to use federal funds to deliver low-cost safety improvements in a more rapid deployment of measures. This may be a more efficient way to deliver some more traditional STIP fixes.

Describe any other aspects of the State's progress in implementing HSIP projects on which the State would like to elaborate.

Several challenges we've come up against include:

- Several challenges we've come up against include:

  · Project costs, Resources and estimating safety project costs (inflation and increasing project costs),

  · Encouraging tribes and local jurisdictions to participate in the ARTS program

  · Programming and constructing projects in a timely fashion, especially local safety projects.

  · Small dollar safety projects (less than $500k) where the administration costs overrides the project costs. Some Regions have bundled safety projects where practical to reduce administration costs.

General Listing of Projects

List the projects obligated using HSIP funds for the reporting period.

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 20478, OR213 at MP 15.71 (Toliver Rd),Phase: CN	Intersection traffic control	Modify control – Modern Roundabout	1	Project	$2446944	$9653484	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		State Highway Agency	Spot	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 20478, OR213 at MP 15.71 (Toliver Rd),Phase: OT	Intersection traffic control	Modify control – Modern Roundabout	1	Project	$45000	$9653484	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		State Highway Agency	Spot	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 21613, US30: Sandy River - OR35,Phase: RW	Intersection traffic control	Systemic improvements – signal-controlled	1	Project	$7093	$508134	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 21615, Washington County safety, bike and pedestrian improvements,Phase: CN	Intersection traffic control	Systemic improvements – signal-controlled	1	Project	$2566941	$3818315	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 21621, S Redland Rd: OR213 - Springwater Rd (Clackamas County),Phase: CN	Roadway	Pavement surface – high friction surface	1	Project	$296278	$334358	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		Other Local Agency	Spot	Roadway Departure	
KN: 21621, S Redland Rd: OR213 - Springwater Rd (Clackamas County),Phase: PE	Roadway	Pavement surface – high friction surface	1	Project	$38080	$334358	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		Other Local Agency	Systemic	Roadway Departure	
KN: 21629, SE Division St: 148th Ave - 174th Ave (Portland),Phase: CN	Access management	Raised island - install new	1	Project	$2113472	$2595887	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 21629, SE Division St: 148th Ave - 174th Ave (Portland),Phase: PE	Access management	Raised island - install new	1	Project	$482415	$2595887	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 21630, SE Stark St: 148th Ave - 162nd Ave (Portland),Phase: CN	Roadway	Roadway - other	1	Project	$1146873	$1408655	HSIP (23 U.S.C. 148)	Urban	Major Collector	0		Other Local Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 21630, SE Stark St: 148th Ave - 162nd Ave (Portland),Phase: PE	Roadway	Roadway - other	1	Project	$261782	$1408655	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 21633, SW Shattuck Rd at OR10 (Portland),Phase: RW	Intersection traffic control	Modify control – other	1	Project	$36612	$1136751	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21635, SE Flavel St at 72nd Ave (Portland),Phase: CN	Intersection traffic control	Modify control – other	1	Project	$842362	$1020365	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21636, SE Johnson Creek Blvd: 79th Pl - 82nd Ave (Clackamas County),Phase: RW	Intersection traffic control	Modify control – new traffic signal	1	Project	$77622	$3185962	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21636, SE Johnson Creek Blvd: 79th Pl - 82nd Ave (Clackamas County),Phase: RW	Intersection traffic control	Modify control – new traffic signal	1	Project	$732340	$3185962	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21637, OR281, OR282 and OR35 signs, signals and lighting,Phase: CN	Intersection traffic control	Intersection signing –other	1	Project	$811876	$970616	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 20209, OR126B at 54th St. (Springfield),Phase: CN	Intersection geometry	Modify lane assignment	1	Project	$1609700	$2230400	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21301, Center St: Lancaster Dr to 45th Pl NE,Phase: CN	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$300000	$3483449	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 21565, Silverton Road at Desart Road (Marion County),Phase: RW	Intersection traffic control	Modify control – other	1	Project	$336800	$1565100	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		Other Local Agency	Spot	Intersections	
KN: 21566, OR22: Perrydale Rd to Kings Valley Highway,Phase: RW	Alignment	Alignment - other	1	Project	$536675	$11433800	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 21567, Lincoln St: 5th Ave. - 13th Ave. (Eugene),Phase: PE	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$152400	$342972	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 21576, Lane County Signing Improvements & Guardrail Installations (2024),Phase: CN	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$1186900	$1557800	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 21778, City of Springfield signal enhancements (state highways),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$50815	$1794138	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21778, City of Springfield signal enhancements (state highways),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$137932	$1794138	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21673, I-5: Azalea - Glendale,Phase: CN	Roadway	Roadway - other	1	Project	$769000	$14924462	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
KN: 21699, I-5: Southern Oregon Wrong Way Driver Mitigation,Phase: CN	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Project	$2231000	$2622000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Wrong Way Driving, Older Driver	
KN: 21699, I-5: Southern Oregon Wrong Way Driver Mitigation,Phase: RW	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Project	$6000	$2622000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Wrong Way Driving, Older Driver	
KN: 21724, McAndrews Road Cycle Track (Medford),Phase: CN	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$1754925	$2206156	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Bicyclists	
KN: 21724, McAndrews Road Cycle Track (Medford),Phase: PE	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$441231	$2206156	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Bicyclists	
KN: 21724, McAndrews Road Cycle Track (Medford),Phase: RW	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$5000	$2206156	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Bicyclists	
KN: 21724, McAndrews Road Cycle Track (Medford),Phase: UR	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$5000	$2206156	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Bicyclists	

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KN: 21728, Crater Lake Ave Signal Improvements (Medford),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$1611286	$2026608	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intersections	
KN: 21728, Crater Lake Ave Signal Improvements (Medford),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$405322	$2026608	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intersections	
KN: 21728, Crater Lake Ave Signal Improvements (Medford),Phase: RW	Intersection traffic control	Intersection traffic control - other	1	Project	$5000	$2026608	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intersections	
KN: 21728, Crater Lake Ave Signal Improvements (Medford),Phase: UR	Intersection traffic control	Intersection traffic control - other	1	Project	$5000	$2026608	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		Other Local Agency	Systemic	Intersections	
KN: 22562, I-5: Smith and Sexton Pass,Phase: RW	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Project	$125000	$2550000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure, Older Driver, Motoryclist	
KN: 21655, All Roads Transportation Safety Intersection Upgrades,Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$923060	$1294060	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21663, All Roads Transportation Safety (Wasco and Crook Counties),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$220148	$1230641	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21663, All Roads Transportation Safety (Wasco and Crook Counties),Phase: RW	Intersection traffic control	Intersection traffic control - other	1	Project	$10000	$1230641	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 22520, US97: Dover Ln - Bear Dr Safety Improvements,Phase: CN	Intersection geometry	Intersection geometry - other	1	Project	$1927639	$2778764	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21874, Morgan Lake Road safety improvements,Phase: CN	Roadside	Barrier- metal	1	Project	$1072734	$1746062	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Local Road or Street	0		Other Local Agency	Systemic	Roadway Departure	
KN: 21874, Morgan Lake Road safety improvements,Phase: RW	Roadside	Barrier- metal	1	Project	$92220	$1746062	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Local Road or Street	0		Other Local Agency	Systemic	Roadway Departure	

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KN: 21898, Baker & Union counties traffic signal safety improvements,Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$2357944	$2520954	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21874, US20/OR201: Burns to Ontario,Phase: CN	Roadside	Barrier- metal	1	Project	$136000	$17030003	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
KN: 21374, OR99W: Orrs Corner Road - Clow Corner Road,Phase: CN	Intersection geometry	Intersection geometry - other	1	Project	$7021322	$11445083	HSIP (23 U.S.C. 148)	Rural	Minor Collector	0		State Highway Agency	Systemic	Intersections	
KN: 21374, OR99W: Orrs Corner Road - Clow Corner Road,Phase: CN	Intersection geometry	Intersection geometry - other	1	Project	$2613762	$11445083	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Minor Collector	0		State Highway Agency	Systemic	Intersections	
KN: 21230, US20/OR201: Burns to Ontario,Phase: OT	Intersection traffic control	Modify control – Modern Roundabout	1	Project	$136000	$17030003	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 21230, US20/OR201: Burns to Ontario,Phase: UR	Intersection traffic control	Modify control – Modern Roundabout	1	Project	$30000	$17030003	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22799, OR99W: MP 78.9-79.0 signal replacement (Lewisburg),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$511560	$677983	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22798, US20: MP 0.52 signal replacement,Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$545428	$743039	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22724, OR99W: (3rd St) at Western Blvd (Corvallis),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$662017	$662017	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22706, OR6 at Wilson River Loop (East at MP 2.07) (Tillamook),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$654795	$727550	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22701, Division Avenue Roundabouts Corridor (Eugene),Phase: PE	Intersection traffic control	Modify control – Modern Roundabout	1	Project	$973000	$973000	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		Other Local Agency	Spot	Intersections	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 21875, Eastern Oregon roadside traffic & weather cameras,Phase: RW	Advanced technology and ITS	Advanced technology and ITS - other	1	Project	$45000	$3822440	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure, Older Driver, Motoryclist	
KN: 21875, Eastern Oregon roadside traffic & weather cameras,Phase: CN	Advanced technology and ITS	Advanced technology and ITS - other	1	Project	$3171161	$3822440	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure, Older Driver, Motoryclist	
KN: 21875, Eastern Oregon roadside traffic & weather cameras,Phase: OT	Advanced technology and ITS	Advanced technology and ITS - other	1	Project	$320000	$3822440	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure, Older Driver, Motoryclist	
KN: 21778, City of Springfield signal enhancements (state highways),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$50815	$1794138	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21778, City of Springfield signal enhancements (state highways),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$137932	$1794138	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 21636, SE Johnson Creek Blvd: 79th Pl - 82nd Ave (Clackamas County),Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$218682	$3185962	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22775, Northwest Oregon Rumble Strips (2027),Phase: PE	Roadway	Rumble strips – edge or shoulder	1	Project	$930000	$930000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
KN: 21447, City of Springfield signal enhancements (local roads),Phase: CN	Intersection geometry	Intersection geometry - other	1	Project	$1893100	$2033100	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	
KN: 20169, Commercial St: Oxford St SE to Madrona Ave SE (Salem),Phase: CN	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$1392400	$1692719	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 22902, US101 at Broadway Street Signal Upgrades (Seaside),Phase: PE	Intersection traffic control	Intersection traffic control - other	1	Project	$871844	$871844	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 22709, Northwest Oregon pedestrian crossing enhancements (2027),Phase: PE	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$328029	$364477	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 20303, City of Gresham safety project,Phase: CN	Intersection traffic control	Intersection traffic control - other	1	Project	$1091200	$1554285	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Multiple/Varies	Multiple/Varies	0		Other Local Agency	Systemic	Intesection, Pedestrian, Bicycle, Older Driver, Motorcyclist	
KN: 22723, I-5 (NW OR) & OR569 (Eugene) wrong way driving treatments,Phase: PE	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Project	$85173	$545290	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Wrong Way Driving, Older Driver	
KN: 22302, US20: Conifer Blvd to Merloy Ave,Phase: CN	Roadway	Roadway - other	1	Project	$5558829	$6890859	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
KN: 22335, Engineering Safety Short Courses & Distance Learning FFY24,Phase: OT	Miscellaneous	Miscellaneous - other	1	Project	$250000	$250000	Penalty Funds (23 U.S.C. 164)	N/A	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 21327, N Coburg Industrial Way (Coburg)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$88338	$300449	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Major Collector	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 21567, Lincoln St: 5th Ave. - 13th Ave. (Eugene)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$137160	$342972	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Local Road or Street	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 20743, Hollywood Dr: Silverton Rd to Greenfield Ln (Salem)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$817843	$4218166	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Major Collector	0		Other Local Agency	Systemic	Pedestrian and Bicycle	
KN: 19243, US101: Bunker Hill sidewalks & Flanagan signal	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$162143	$4481879	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 19243, US101: Bunker Hill sidewalks & Flanagan signal	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$29359	$4481879	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
KN: 19243, US101: Bunker Hill sidewalks & Flanagan signal	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$55331	$4481879	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 20191, US199: Holton Cr. Pedestrian Bridge (Kerby)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$624662	$1438641	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 20191, US199: Holton Cr. Pedestrian Bridge (Kerby)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$195442	$1438641	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 20191, US199: Holton Cr. Pedestrian Bridge (Kerby)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$110714	$1438641	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 22709, Northwest Oregon pedestrian crossing enhancements (2027)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$328029	$364477	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	
KN: 22709, Northwest Oregon pedestrian crossing enhancements (2027)	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Project	$44284	$364477	VRU Safety Special Rule (23 U.S.C. 148(g)(3))	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Pedestrian and Bicycle	

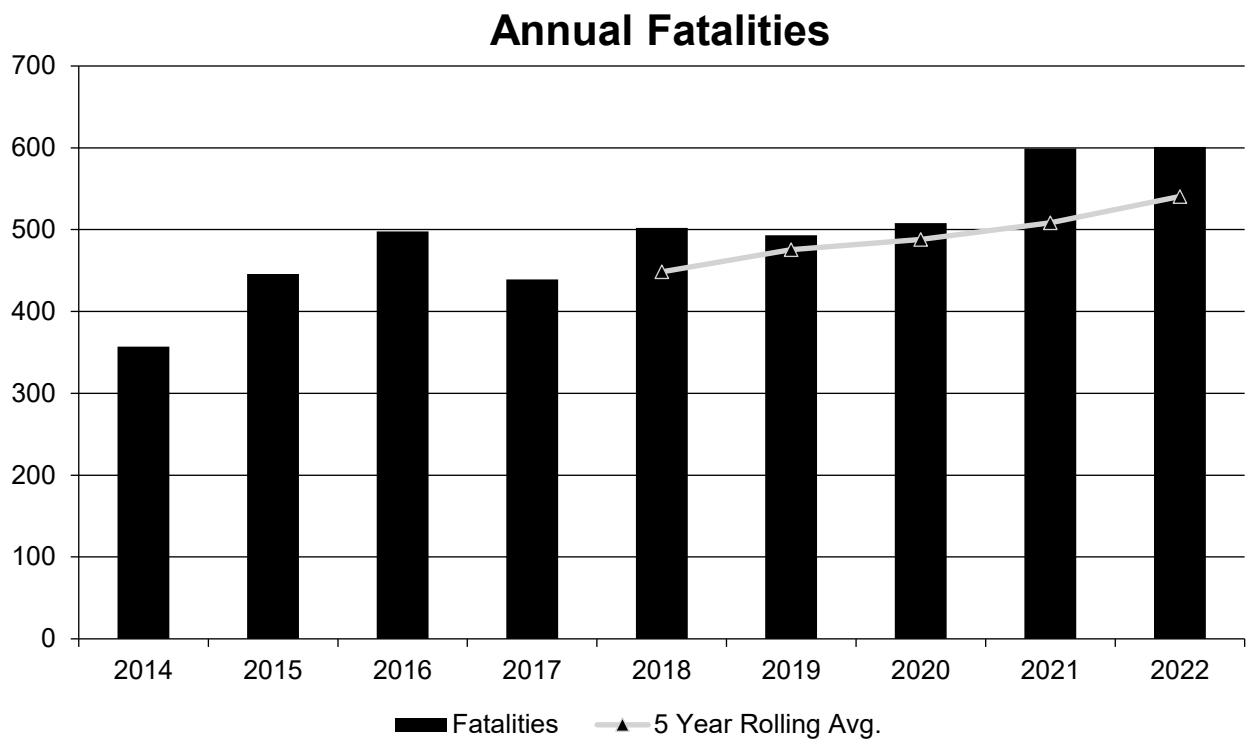
The project list represents a snapshot and contains project names and descriptions, some projects are spread out over multiple lines to account for different work phases of projects that may occur within 2022. One project may be listed multiple times representing different work phases that may be funded within the project.

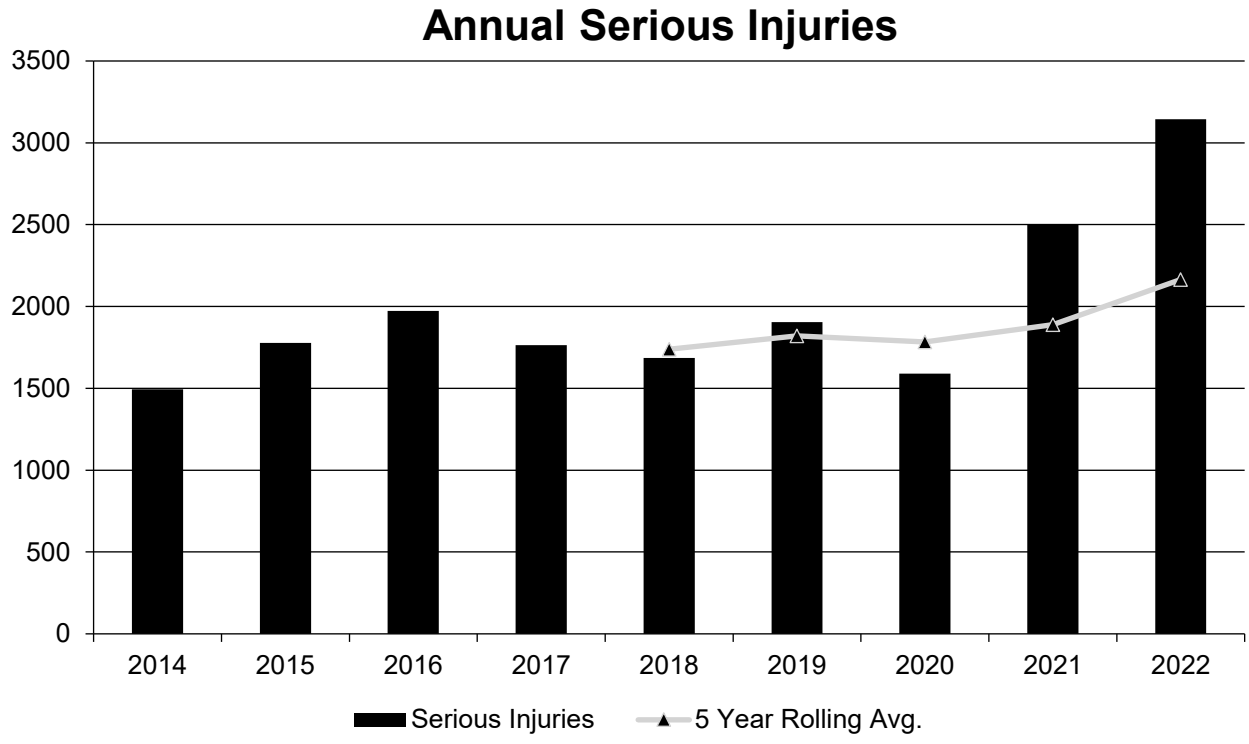
Safety Performance

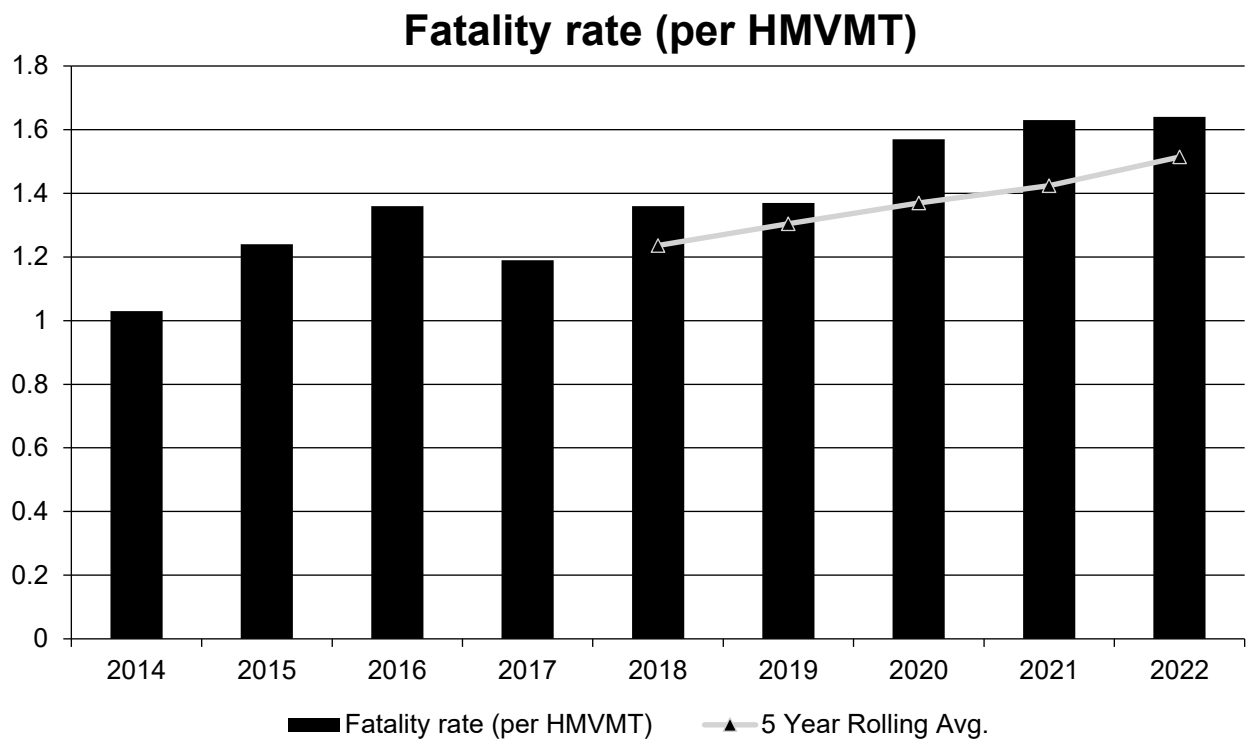
General Highway Safety Trends

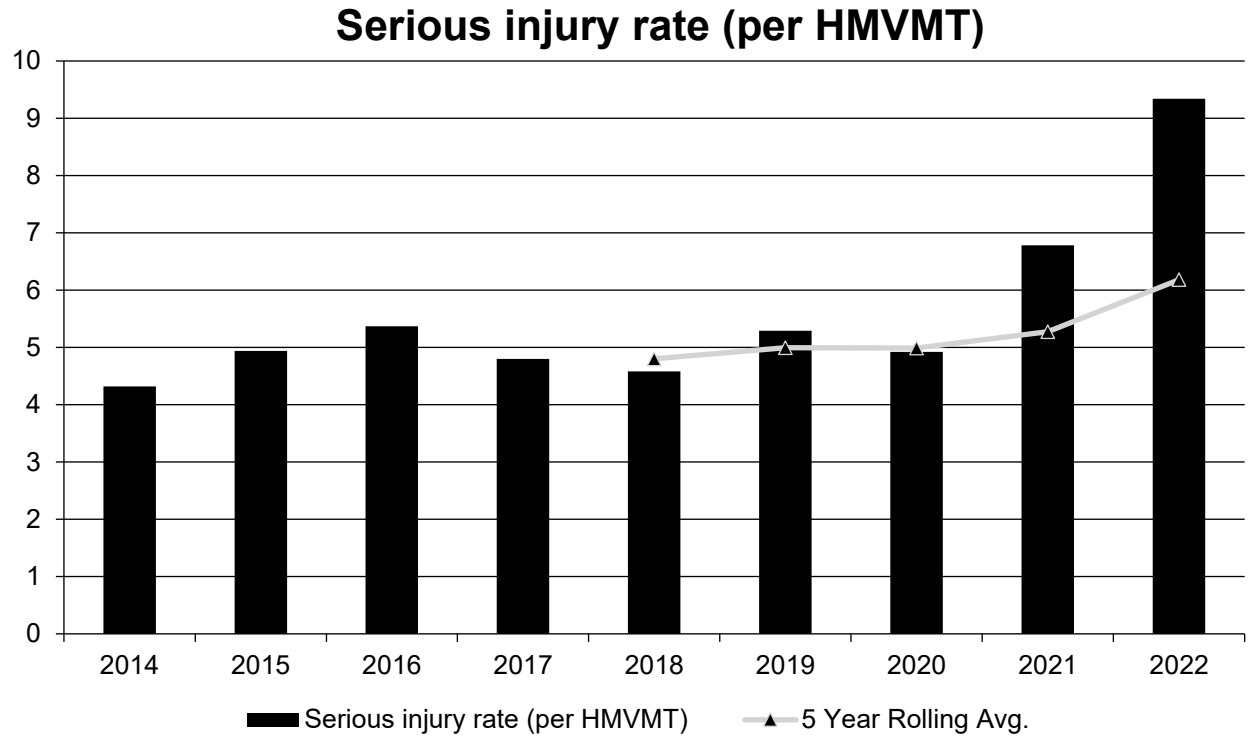
Present data showing the general highway safety trends in the State for the past five years.

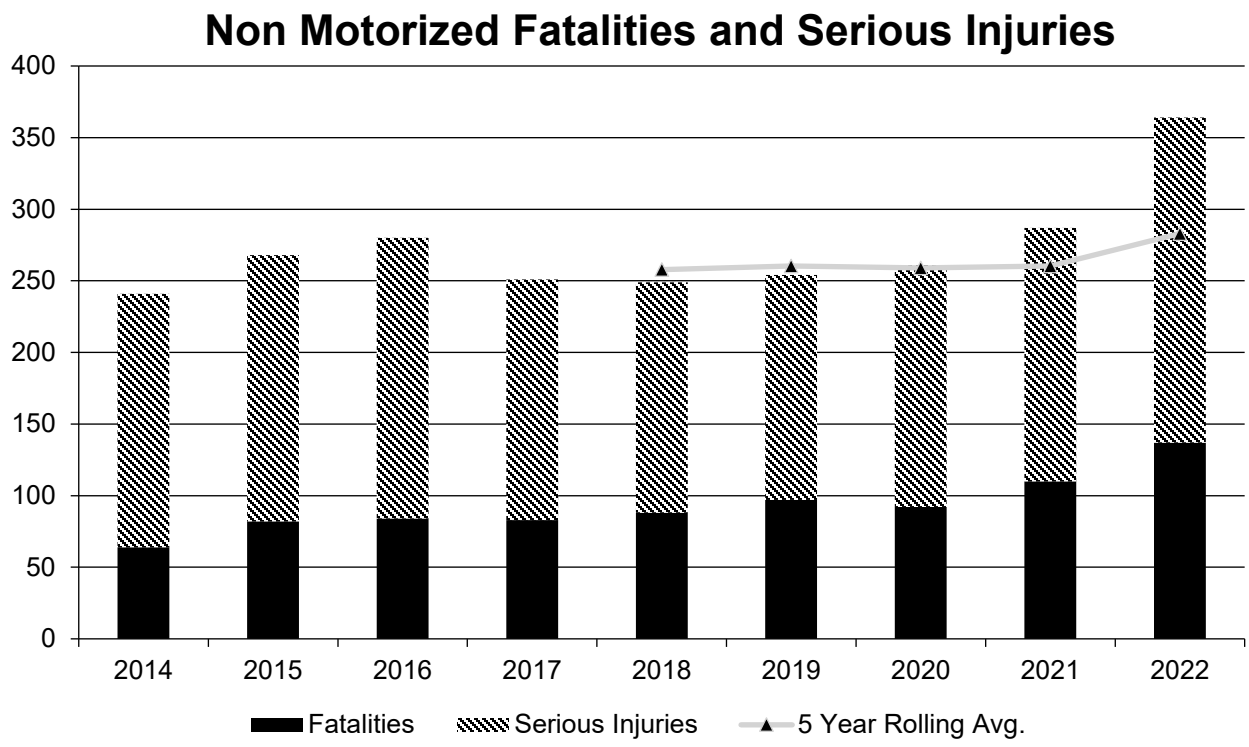
PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	357	446	498	439	502	493	508	599	601
Serious Injuries	1,495	1,777	1,973	1,764	1,686	1,904	1,590	2,499	3,145
Fatality rate (per HMVMT)	1.030	1.240	1.360	1.190	1.360	1.370	1.570	1.630	1.640
Serious injury rate (per HMVMT)	4.320	4.940	5.370	4.800	4.580	5.290	4.920	6.780	9.340
Number non-motorized fatalities	64	82	84	83	88	97	92	110	137
Number of non-motorized serious injuries	177	186	196	168	161	157	169	177	227
PDO Crashes	26,716	26,025	29,317	28,926	21,977	22,640	18,338	21,013	0

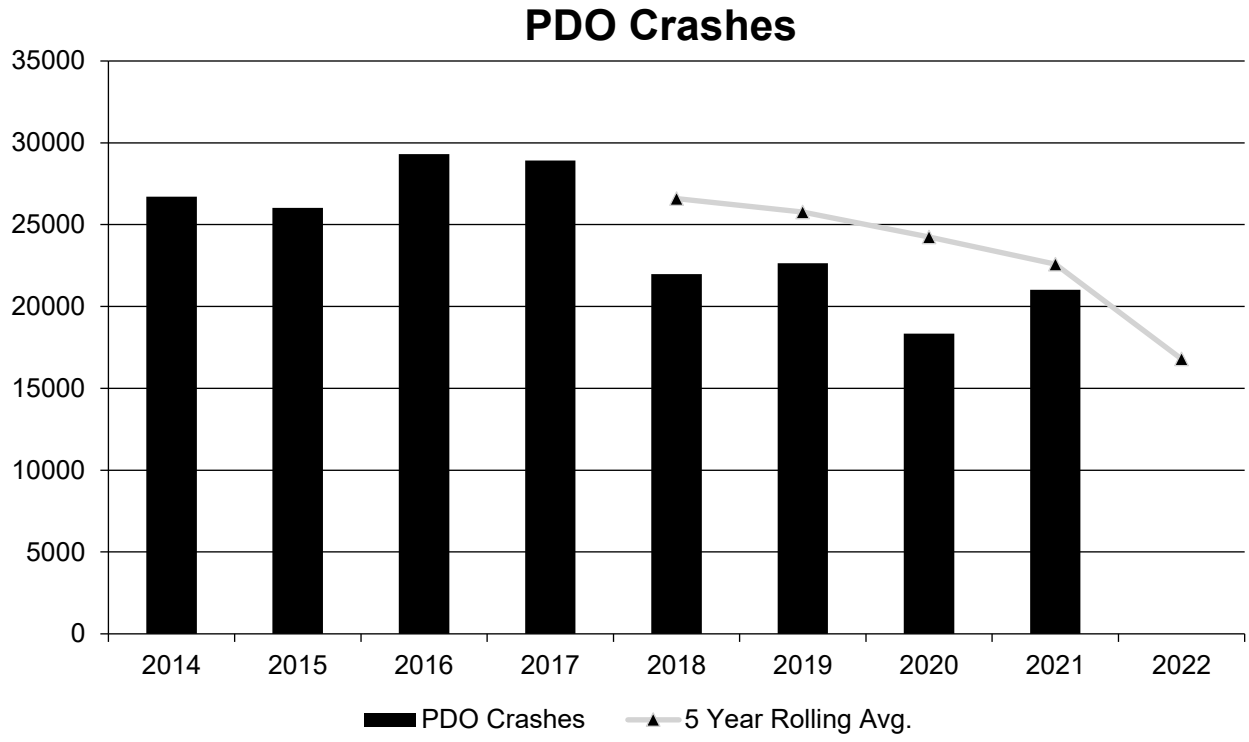

Annual Fatalities
700
600
500
400
300
200
100
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
3500
3000
2500
2000
1500
1000
500
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
10
9
8
7
6
5
4
3
2
1
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious injury rate (per HMVMT)
5 Year Rolling Avg.





*For year 2022, the data is preliminary and only includes information for fatal and serious injuries, PDO crash summary data is not available at this time.

*Sources:
Fatalities: Fatality Analysis Reporting System (FARS), Oregon Satellite Office.

For 2019: FARS excluded a bicycle fatality vs. parked car/opened door into traffic, that is included in the State's crash data file.
For 2020: A fatal crash was deleted from both FARS and CDS. It was a non-traffic-related crash per the death certificate, which was received late.
For 2021: FARS excluded 2 eBike-only crashes that are included in the State file.
Serious Injuries: Oregon DOT, Crash Data System (CDS)

** Per FHWA Section 148 Special Rule Guidance 2014 & 2022, FARS data for the "Non-Motorist Fatalities" category includes Persons on Personal Conveyances.
For data prior to 2020, FARS Person Type codes 5,6,7,8 were used. For 2020 and later, codes 5,6,7,11,12,13 are used.
ODOT CDS Participant Type codes 3, 4, 5, 6 & 7 are used to represent Non-Motorist Serious Injuries from the State file, and include non-motorized
pedestrian conveyances.

^ The property damage threshold for reporting crashes to DMV was changed from $1,500 to $2,500, effective 1/1/2018. The decrease in
reported PDO crashes as of 2018 may be due, in part, to this change.

† This annual report may include updates to the prior year's data, due to incoming official source documents received after that year's HSIP reporting
deadline.
The 2019 Oregon FARS data file was incomplete and frozen by FARS HQ when the 2019 HSIP submittal was due.
Additional serious injury crashes were received and entered into CDS after the 2019, 2020, and 2021 HSIP submittals.

Describe fatality data source.

FARS

Fatalities: Fatality Analysis Reporting System (FARS), Oregon Satellite Office.
For 2019: FARS excluded a bicycle fatality vs. parked car/opened door into traffic, that is included in the State's crash data file.
For 2020: A fatal crash was deleted from both FARS and CDS. It was a non-traffic-related crash per the death certificate, which was received late.
For 2021: FARS excluded 2 eBike-only crashes that are included in the State file.

To the maximum extent possible, present this data by functional classification and ownership.

Year 2022

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	20.6	53.6	0.51	1.36
Rural Principal Arterial (RPA) - Other				

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	114	281.4	2.63	6.43
Rural Minor Arterial	60.6	177.8	3.21	9.39
Rural Minor Collector	17.8	62.6	2.93	10.02
Rural Major Collector	64.8	210.6	3.24	10.29
Rural Local Road or Street	25	65	2.62	6.41
Urban Principal Arterial (UPA) - Interstate	24	106.8	0.44	1.92
Urban Principal Arterial (UPA) - Other Freeways and Expressways	4	40.8	0.27	2.83
Urban Principal Arterial (UPA) - Other	106.6	522.4	1.93	9.39
Urban Minor Arterial	57.2	362.4	1.33	8.38
Urban Minor Collector	3.6	16.2	1.29	5.76
Urban Major Collector	33	192.4	1.21	7
Urban Local Road or Street	9.4	72.6	0.5	3.83

Year 2021

Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	296.4	904.4		
County Highway Agency	128.8	403.6		
Town or Township Highway Agency				
City or Municipal Highway Agency	83.2	547.6		
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

Provide additional discussion related to general highway safety trends.

For Oregon, 2021 represents a 32-year high in traffic fatalities (599 total) and a 25-year high in serious injuries (2498 total). According to initial fatal crash notifications, we anticipate these trends continued through 2022 and into 2023.

While vehicle technology and infrastructure continues to improve, user behaviors have changed substantially. We know that factors such as speed, distracted driving, and impairment (especially polysubstance where alcohol AND drugs are present) continue to increase while enforcement for traffic infractions such as these remains low.

Oregon's crash data includes multiple contributing factors for each crash. Key findings for contributing factors in the*2021 fatal and serious injury* crash data are as follows:

· Nearly all contributing factors have increasing trends over the 2016-2020 average.

· A little more than half occurred on state highways (52%). This is up from 49% from 2016-2020.

· Crashes on rural roads has increased to 43% (this is up from 40% from 2016-2020 average) and crashes on urban roads has decreased to 57% (this is down from 60% from 2016-2020 average).

· Consistent with past years, the highest percentage resulted from roadway departure (40%) or occurred at intersections (37%).

· Almost one-third (29%) were flagged as speed related.

· Almost one-quarter (23%) involve impaired users (alcohol and/or other drugs).

· Almost one-fifth (17%) involved unlicensed drivers.

· Fifteen percent involved distracted drivers.

· Although motorcycles make up a small portion (3.5%) of the registered vehicles in Oregon, 14% of the fatal and serious injury crashes involved a motorcycle.

· Crashes involving a pedestrian or bicyclist have continued to increase. Pedestrian deaths have increased from an average of 78 people killed annually between 2016 and 2020 to 89 people in 2021. This is similar to national trends that show pedestrian fatalities on the rise, with Oregon as a middle growth state. For bicycling, those killed have increased from an average of 11 in that same time period to 18 in 2021.

ODOT continues to employ a multi-pronged approach to reduce fatal and serious injury crashes. Reducing the number of traffic crashes is the primary strategy to reduce fatalities and serious traffic injuries. However, when a crash does occur, reducing the injury severity becomes the secondary strategy which is influenced in three ways: infrastructure work implementing design practices to mitigate structural safety risks; providing education and outreach programs utilized statewide, and specifically in identified problem locations; and through timely emergency medical services at the scene and in transport to trauma centers.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2024 Targets *

Number of Fatalities:488.0

Describe the basis for established target, including how it supports SHSP goals.

The OTC adopted the 2021 SHSP (TSAP) in September 2021, as recommended by the OTSC. The 2024 HSIP performance goal was established using the procedure outlined in the TSAP and was collectively agreed upon by a diverse working group. This goal is grounded in crash data from 2017 to 2021. While the preferred strategy was to establish a target that showcases enhanced performance, the continuing upward trend in

fatalities led to the decision that the 2024 target would maintain consistent performance, aligning with the 2023 target. Annual targets were documented and approved through by the OTSC.

Number of Serious Injuries:1783.0

Describe the basis for established target, including how it supports SHSP goals.

The OTC adopted the 2021 SHSP (TSAP) in September 2021, as recommended by the OTSC. The 2024 HSIP performance goal was established using the procedure outlined in the TSAP and was collectively agreed upon by a diverse working group. This goal is grounded in crash data from 2017 to 2021. While the preferred strategy was to establish a target that showcases enhanced performance, the continuing upward trend in serious injuries led to the decision that the 2024 target would maintain consistent performance, aligning with the 2023 target. Annual targets were documented and approved through by the OTSC.

Fatality Rate:1.370

Describe the basis for established target, including how it supports SHSP goals.

The OTC adopted the 2021 SHSP (TSAP) in September 2021, as recommended by the OTSC. The 2024 HSIP performance goal was established using the procedure outlined in the TSAP and was collectively agreed upon by a diverse working group. This goal is grounded in crash data from 2017 to 2021. While the preferred strategy was to establish a target that showcases enhanced performance, the continuing upward trend in fatalities led to the decision that the 2024 target would maintain consistent performance, aligning with the 2023 target. Annual targets were documented and approved through by the OTSC.

Serious Injury Rate:4.990

Describe the basis for established target, including how it supports SHSP goals.

The OTC adopted the 2021 SHSP (TSAP) in September 2021, as recommended by the OTSC. The 2024 HSIP performance goal was established using the procedure outlined in the TSAP and was collectively agreed upon by a diverse working group. This goal is grounded in crash data from 2017 to 2021. While the preferred strategy was to establish a target that showcases enhanced performance, the continuing upward trend in serious injuries led to the decision that the 2024 target would maintain consistent performance, aligning with the 2023 target. Annual targets were documented and approved through by the OTSC.

Total Number of Non-Motorized Fatalities and Serious Injuries:259.0

Describe the basis for established target, including how it supports SHSP goals.

The OTC adopted the 2021 SHSP (TSAP) in September 2021, as recommended by the OTSC. The 2024 HSIP performance goal was established using the procedure outlined in the TSAP and was collectively agreed upon by a diverse working group. This goal is grounded in crash data from 2017 to 2021. While the preferred strategy was to establish a target that showcases enhanced performance, the continuing upward trend in pedestrian and bicycle fatalities and serious injuries led to the decision that the 2024 target would maintain consistent performance, aligning with the 2023 target. Annual targets were documented and approved through by the OTSC.

The TSAP is the framework for engaging residents, stakeholders, employers, planners, engineers, enforcement agencies, emergency medical service providers, and others across the state to improve transportation safety in Oregon. The 2024 targets (S-Curve trend line) are established by meeting with a multi-disciplinary working group (MPO's, City, Counties) to review the most recent crash data (2017-2021), assess progress achieved, and confirm the target setting approach and new targets for the next year which are approved by the Oregon Traffic Safety Committee (OTSC).

The S-Curve forecast was developed assuming the most recent five-year average number of crashes may be relatively flat in the near future; start to decline in a few years in recognition of different programs of the plan being implemented and potential benefits of connected and/or automated vehicles; and flatten out again in the future as it becomes more difficult to address the remaining fatalities.

Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.

The 2021 TSAP update was designed to be a limited and focused revision to the 2016 plan. The overall

TSAP vision, goals, policies, and Emphasis Areas stayed the same. Identification of emerging safety

needs (via stakeholder feedback and safety data analysis) resulted in edits throughout the TSAP and modifications to the Emphasis Area actions planned for the next 5 years.

During the 2021 TSAP update, ODOT and other safety stakeholders decided that instead of a single 5-year update of the Safety Performance Measures' targets, Oregon would adopt an annual update process to review the federal requirements to determine the state's safety performance targets.

ODOT Traffic-Roadway Section coordinated with the ODOT Traffic Safety Office and stakeholders from MPO's, City and County agencies early in 2023 to establish the 2024 targets for all five performance measures. The safety performance targets were calculated with four different methods: straight line to zero by 2035, three percent reduction per year, S-curve, and 2016 TSAP tend. The values calculated with the S-curve method were selected as the safety performance targets for year 2024.

Collectively these stakeholders have the opportunity to improve Oregon's transportation system and save lives by integrating safety into all aspects of planning, programming, project development, operations, and maintenance. Not only is the system improved with responsive investments targeting specific safety issues, the transportation system also is improved by investing in projects, programs, and policies that proactively save lives and prevent injuries. The annual HSIP performance targets were developed and agreed upon by a multidisciplinary working group (including a representative of an MPO). While the COVID-19 pandemic response limited the ability for in-person public outreach, the public was engaged at key points on the project.

The following coordination and outreach opportunities were provided for the 2021 TSAP update:

· 29 Outreach meetings with a variety of leadership teams and transportation safety advisory committees were conducted

· 10 Stakeholder interviews with Oregon safety stakeholders across the 4 E's were conducted to solicit feedback on the 2021 TSAP and implementation progress

· 2 Fact sheets (English/Spanish) were developed to introduce the 2021 TSAP update and provide mid-project progress reports

· 1 Online survey to learn about public perceptions of safety

· 2 Online stakeholder workshops and performance measure meetings

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2022 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	444.0	540.6
Number of Serious Injuries	1722.0	2164.8
Fatality Rate	1.460	1.514
Serious Injury Rate	4.980	6.182
Non-Motorized Fatalities and Serious Injuries	254.0	283.0

Oregon recognizes that eliminating traffic deaths and serious injuries will require time and significant effort by multiple disciplines and we face several challenges regarding why the State's 2024 Safety Performance Targets are not being met. While Oregon's Performance Targets were adopted before our current rising crash trends began, we continue to strive towards those goals of reducing Fatal and Serious crashes. We are confident that were we not applying proven countermeasures as consistently as we are, our current crash trends would be even higher (project level evaluations have shown that the projects implemented under HSIP funding have improved the locations where invested). In addition, increases in VMT, distracted driving issues, an increased in speed related crashes, a limited presence of law enforcement officers due to budget cuts and an increase in people moving to Oregon have also contributed to increasing fatal and serious injury crashes.

Below is a link to the current TSAP: https://www.oregon.gov/odot/Safety/Documents/2021_Oregon_TSAP.pdf

Applicability of Special Rules

Does the VRU Safety Special Rule apply to the State for this reporting period?

Yes

Oregon was flagged for the VRU Safety Special Rule Special Rule and obligated, in FY 2024, an amount equal to at least 15% of our apportionment to address the safety of vulnerable road users.

Does the HRRR special rule apply to the State for this reporting period?

Yes

Oregon was flagged for the High Risk Rural Roads (HRRR) Special Rule and obligated, in FY 2023, an amount equal to at least 200 percent of its FY 2009 high-risk rural roads set-aside in the amount of $2,440,120.

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2016	2017	2018	2019	2020	2021	2022
Number of Older Driver and Pedestrian Fatalities	87	67	101	100	88	110	110
Number of Older Driver and Pedestrian Serious Injuries	232	219	206	256	197	318	416

2022 data is preliminary for reporting at this time

*Older Driver and Pedestrian Fatalities data source: Fatality Analysis Reporting System (FARS)

**Older Driver and Pedestrian Serious Injuries data source: ODOT Statewide Crash Data System (CDS)

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio
- Change in fatalities and serious injuries
- Other-Fatal free days

In Oregon, the HSIP program is the biggest contributor of funds the All Roads Transportation Safety (ARTS) program, an application-based program funding to address safety concerns on all public roadways within the State of Oregon. The ARTS Program is designed to address safety needs on all public roads in Oregon by collaborating with local road jurisdictions. With the ARTS program, the Oregon Department of Transportation can expect to:

· Increase awareness of safety on all roads;

· Promote best practices for infrastructure safety;

· Compliment behavioral safety efforts; and

· Focus limited resources to reduce fatal and serious injury crashes in the state of Oregon by selecting projects with the highest benefit/cost ratio.

The ARTS program is data-driven to achieve the greatest benefits in crash reduction and should be blind to jurisdiction. Detailed information for ARTS program can be found at this link: https://www.oregon.gov/odot/Engineering/Pages/ARTS.aspx

The ARTS program includes hotspot projects as well as systemic projects for roadway departure, intersection, and pedestrian and bicycle crashes. Hotspot, systemic roadway departure and systemic intersection projects are evaluated based on a benefit-cost ratio, while systemic pedestrian and bicycle projects are evaluated based on a cost effectiveness index (CEI). Project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where invested.

Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

Historically Oregon’s fatalities and serious injuries were trending downwards until 2013. However, since 2013, Oregon has been experiencing an upward trend which has also been experienced across the country. Project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where safety funds have been invested.

Below is a link to the 2021 ODOT ARTS Program Summary Report:

https://www.oregon.gov/odot/Engineering/ARTS/2021-ARTS-Summary-Report.pdf

What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

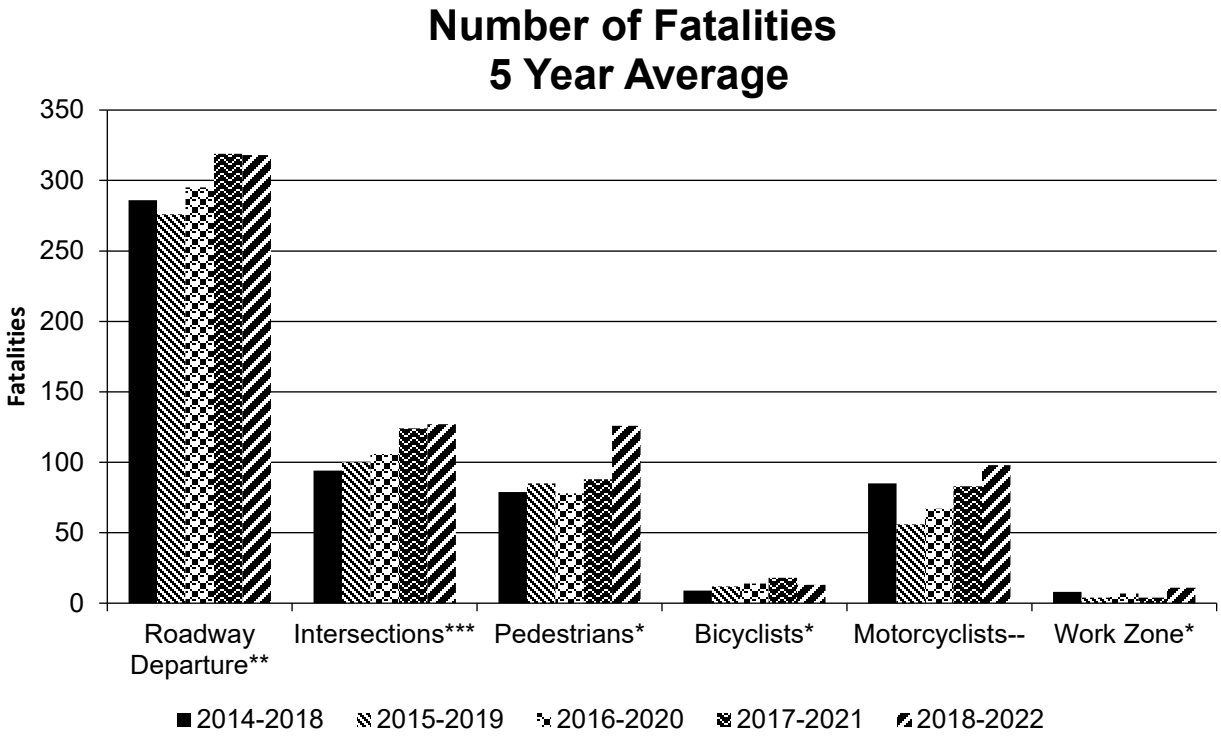
- HSIP Obligations
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- More systemic programs
- Policy change

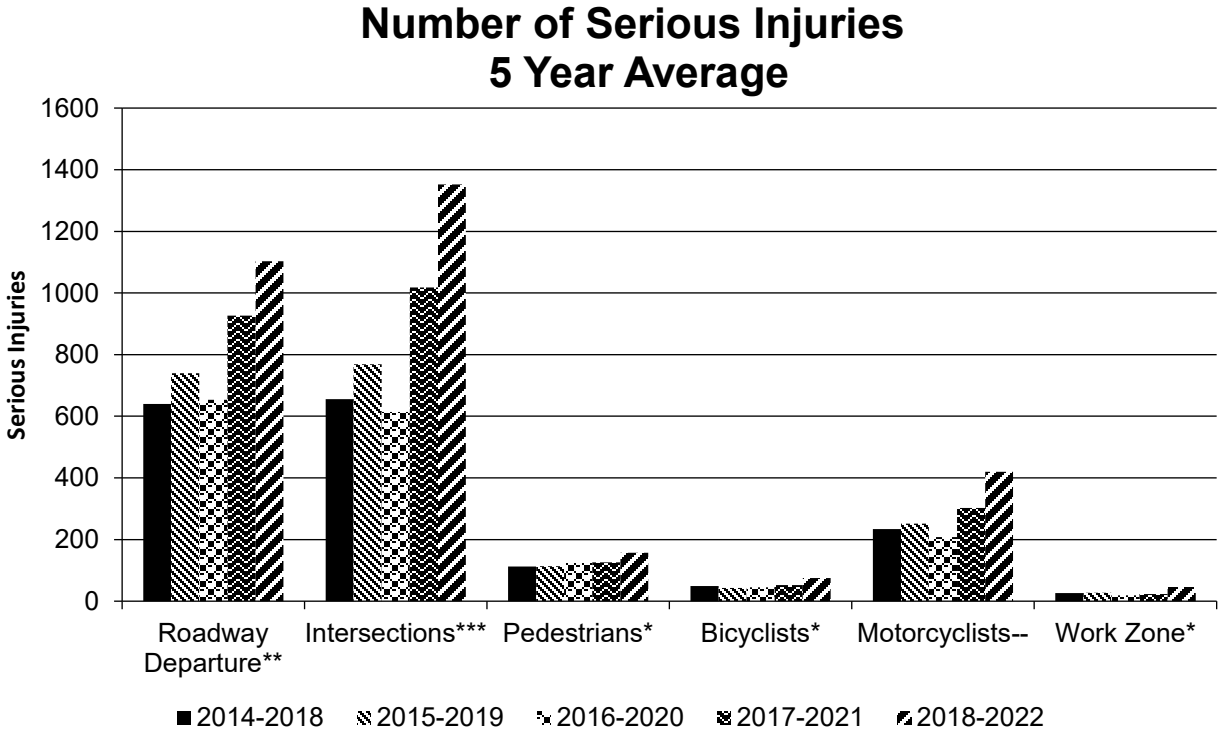
Effectiveness of Groupings or Similar Types of Improvements

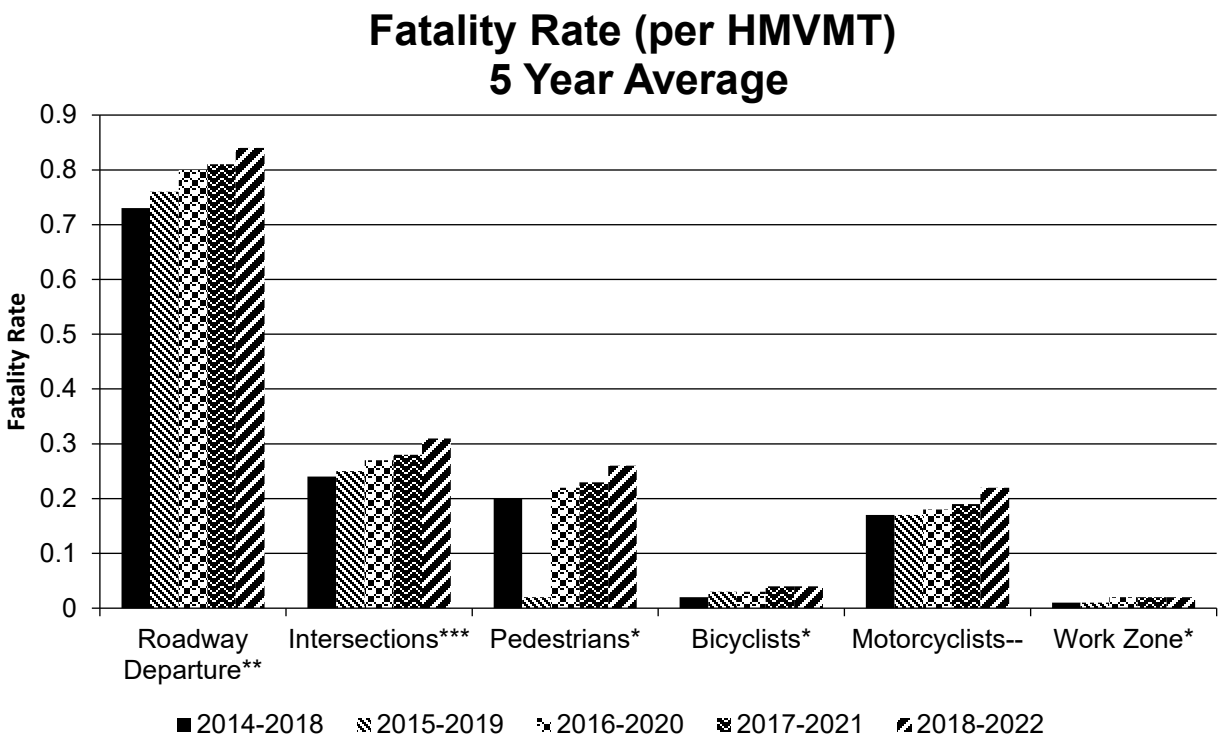
Present and describe trends in SHSP emphasis area performance measures.

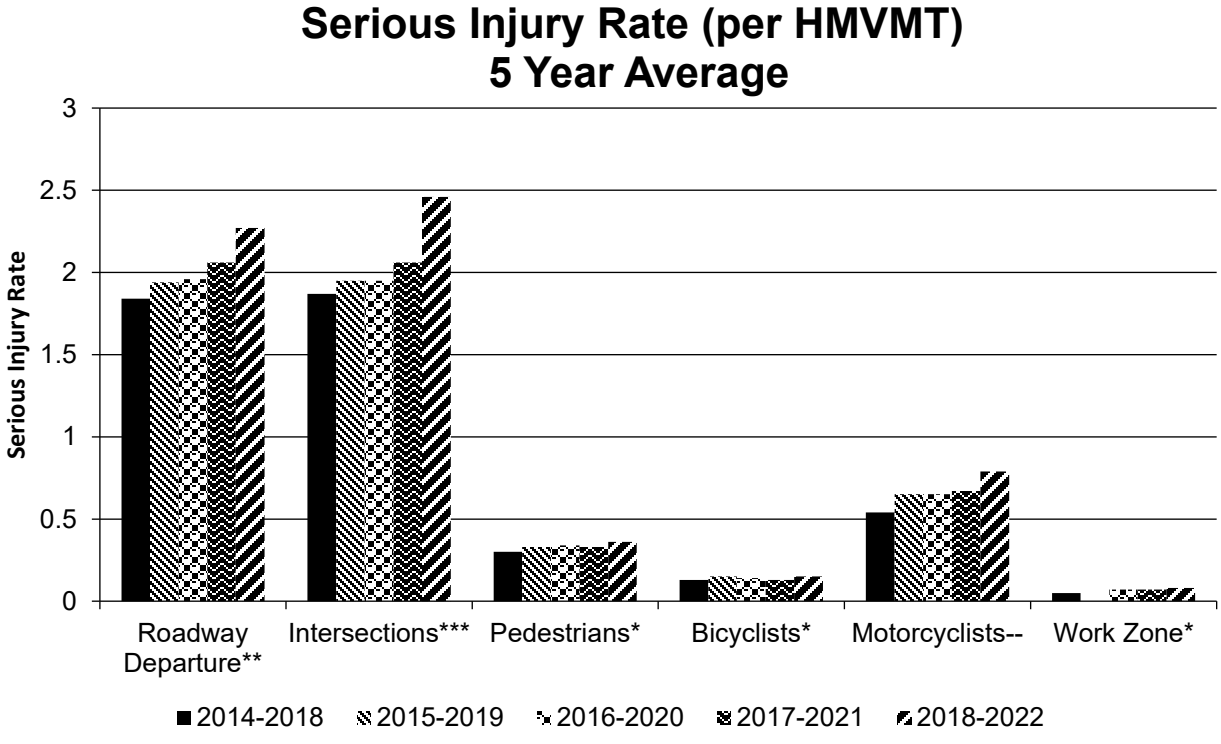
Year 2022

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure**	All	318	1,103	0.84	2.27
Intersections***	All	127	1,352	0.31	2.46
Pedestrians*	All	126	157	0.26	0.36
Bicyclists*	All	13	75	0.04	0.15
Motorcyclists--	All	98	420	0.22	0.79
Work Zone*	All	11	46	0.02	0.08


Number of Fatalities
5 Year Average
Fatalities
350
300
250
200
150
100
50
0
Roadway Departure**
Intersections***
Pedestrians*
Bicyclists*
Motorcyclists--
Work Zone*
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022


Number of Serious Injuries
5 Year Average
Serious Injuries
1600
1400
1200
1000
800
600
400
200
0
Roadway Departure**
Intersections***
Pedestrians*
Bicyclists*
Motorcyclists--
Work Zone*
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022





*Sources:
Fatalities: Fatality Analysis Reporting System (FARS), Oregon Satellite Office.
For 2020: A fatal crash was deleted from both FARS and CDS. It was a non-traffic crash per the death certificate, which was received late.

For 2021: FARS excluded 2 eBike-only crashes that are included in the State file.
Serious Injuries: Oregon DOT, Crash Data System (CDS)

**ODOT revised its Roadway Departure query in February 2020 to align more closely with FHWA's 2009 safety field criteria and ODOT's
TSAP definition. Roadway Departure figures in this table were updated to reflect this change, as of the submittal of the 2019 report.

*** For the 2020 submittal that occurred calendar year 2021, ODOT's "Intersections" query was revised to align with ODOT's TSAP definition,
which includes "Intersection-Related" crashes. Figures for all years in this table were updated to reflect that change.

-- This annual report may include updates to the prior year's data (updates are in red), due to incoming official source documents received after
that year's HSIP reporting deadline.
The 2019 Oregon FARS data file was incomplete and was frozen by FARS HQ when the 2019 HSIP submittal was due.
Additional serious injury crashes were received late and entered into CDS after the 2019, 2020, and 2021 HSIP submittals.

Project Effectiveness

Provide the following information for previously implemented projects that the State evaluated this reporting period.

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
KN: 18795, US26 (Powell Blvd): SE 20th - SE 34th	Muiltiple/varies	Intersection traffic control	Modify traffic signal timing – left-turn phasing	91.00	20.00	1.00	3.00	7.00	3.00	101.00	37.00	200.00	63.00	
KN: 18819, St Johns Truck Strategy Phase II	Muiltiple/varies	Intersection geometry	Intersection geometry - other	47.00	14.00	1.00		3.00	1.00	58.00	7.00	109.00	22.00	
KN: 18838, OR99W: SW Lane St (Portland)- SW Naeve St (Tigard)	Muiltiple/varies	Pedestrians and bicyclists	Pedestrians and bicyclists – other	2.00	1.00			1.00		3.00		6.00	1.00	
KN: 19660, I-84: Snake River bridges deck repairs	Muiltiple/varies	Roadway	Roadway - other	4.00						8.00	2.00	12.00	2.00	
KN: 19661, OR126: Walker Creek-Chickahominy Creek	Muiltiple/varies	Roadway	Roadway - other	4.00						8.00	2.00	12.00	2.00	
KN: 19696, Region 2 curve warning signs (part 3)	Muiltiple/varies	Roadway signs and traffic control	Roadway signs (including post) - new or updated	151.00	105.00	8.00	3.00	10.00	12.00	125.00	90.00	294.00	210.00	
KN: 19722, HSIP 2016 Signalized Improvements (Portland)	Muiltiple/varies	Intersection traffic control	Modify traffic signal –other	416.00	177.00	3.00	2.00	20.00	17.00	542.00	262.00	981.00	458.00	
KN: 19723, HSIP City of Portland BikePed	Muiltiple/varies	Pedestrians and bicyclists	Pedestrians and bicyclists – other											
KN: 19799, All Roads Transportation Safety	Muiltiple/varies	Roadway signs and traffic control	Roadway signs (including post) - new or updated	39.00	21.00	1.00	2.00	2.00	4.00	48.00	28.00	90.00	55.00	

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
(Deschutes County)														
KN: 19928, I84: Traffic barrier upgrades	Muiltiple/varies	Roadside	Barrier - other	404.00	175.00	10.00	6.00	10.00	10.00	226.00	142.00	650.00	333.00	
KN: 20137, Region 2 (Central & South) rural signal improv	Muiltiple/varies	Intersection traffic control	Modify traffic signal –other	62.00	42.00			4.00	3.00	78.00	36.00	144.00	81.00	
KN: 20194, Josephine County Safety Improvements	Muiltiple/varies	Roadway	Roadway - other	72.00	35.00	6.00		13.00	9.00	69.00	46.00	160.00	90.00	
KN: 20244, OR99: Eugene - Junction City safety barrier	Muiltiple/varies	Roadway	Roadway - other	2.00	4.00	2.00		1.00	3.00	7.00	7.00	12.00	14.00	
KN: 20247, Southern Oregon Warning Sign Upgrades	Muiltiple/varies	Roadway signs and traffic control	Roadway signs (including post) - new or updated	109.00	65.00	8.00	8.00	11.00	11.00	124.00	47.00	252.00	131.00	
KN: 20430, I-5: Marine Dr - Fremont Bridge	Muiltiple/varies	Roadway signs and traffic control	Roadway signs (including post) - new or updated	250.00	68.00	2.00	3.00	3.00	4.00	287.00	81.00	542.00	156.00	
KN: 20719, Region 1 High Friction Surface Treatment	Muiltiple/varies	Roadway	Pavement surface – high friction surface	8.00	1.00	1.00		1.00		16.00	4.00	26.00	5.00	
KN: 21308, Southern Oregon signal upgrades	Muiltiple/varies	Intersection traffic control	Modify traffic signal –other	952.00	713.00	8.00	6.00	47.00	33.00	1136.00	700.00	2143.00	1452.00	

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative?

09/01/2021

What are the years being covered by the current SHSP?

From: 2021 To: 2026

When does the State anticipate completing it's next SHSP update?

2026

The current TSAP covers 5 years, October 2021 – October 2026.

More information can be found at this link: Oregon Department of Transportation : Transportation Safety Action Plan : Safety : State of Oregon

Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					100	100	100	100
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	100					100	100		
	Begin Point Segment Descriptor (10) [10]	100	100					100	75	100	75
	End Point Segment Descriptor (11) [11]	100	100					100	75	100	75
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Functional Class (19) [19]	100	100					100	100	100	100
	Median Type (54) [55]	100	100								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100			
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	90
INTERSECTION	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]										
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]										
	AADT Year (80) [82]										
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]										

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					100	100				
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					90	60				
	Roadway Type at End Ramp Terminal (199) [189]					90	60				
	Interchange Type (182) [172]										
	Ramp AADT (191) [181]					100	90				
	Year of Ramp AADT (192) [182]					100	90				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		**100.00**	**100.00**	**0.00**	**0.00**	**80.00**	**72.73**	**100.00**	**72.22**	**100.00**	**88.00**

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

We are still working on establishing an intersection ID, working through the non-state road ID in Trans Info as well as an operations evaluation for the MIRE elements. All three of these effort will help us in collecting the MIRE fundamental data elements for all roads by September 30, 2026. The local road network was incorporated into TransInfo in October of 2022 and is being used for data reporting.

· Spring 2022 Begin Phase 5, FDE data collection for signalized intersections on local roads

· Winter 2023 Estimated completion of Phase 5 collection of FDE

· Spring 2024 Begin Phase 6, FDE data collection for state-owned highway segments between signalized intersections state-wide

· Winter 2024 Estimated completion of Phase 6 collection of FDE

· Spring 2025 Begin Phase 7, FDE data collection for local road segments between signalized intersections state-wide

· Winter 2026 Estimated completion of Phase 7 collection of FDE

· Spring 2027 Data maintenance cycle begins

Optional Attachments

Program Structure:

OregonDOT_Safety_HSIP-Guide.pdf
Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average: means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).

Emphasis area: means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project: means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT: means hundred million vehicle miles traveled.

Non-infrastructure projects: are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule: applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure: means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds: mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification: means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP): means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systematic: refers to an approach where an agency deploys countermeasures at all locations across a system.

Systemic safety improvement: means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer: means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.