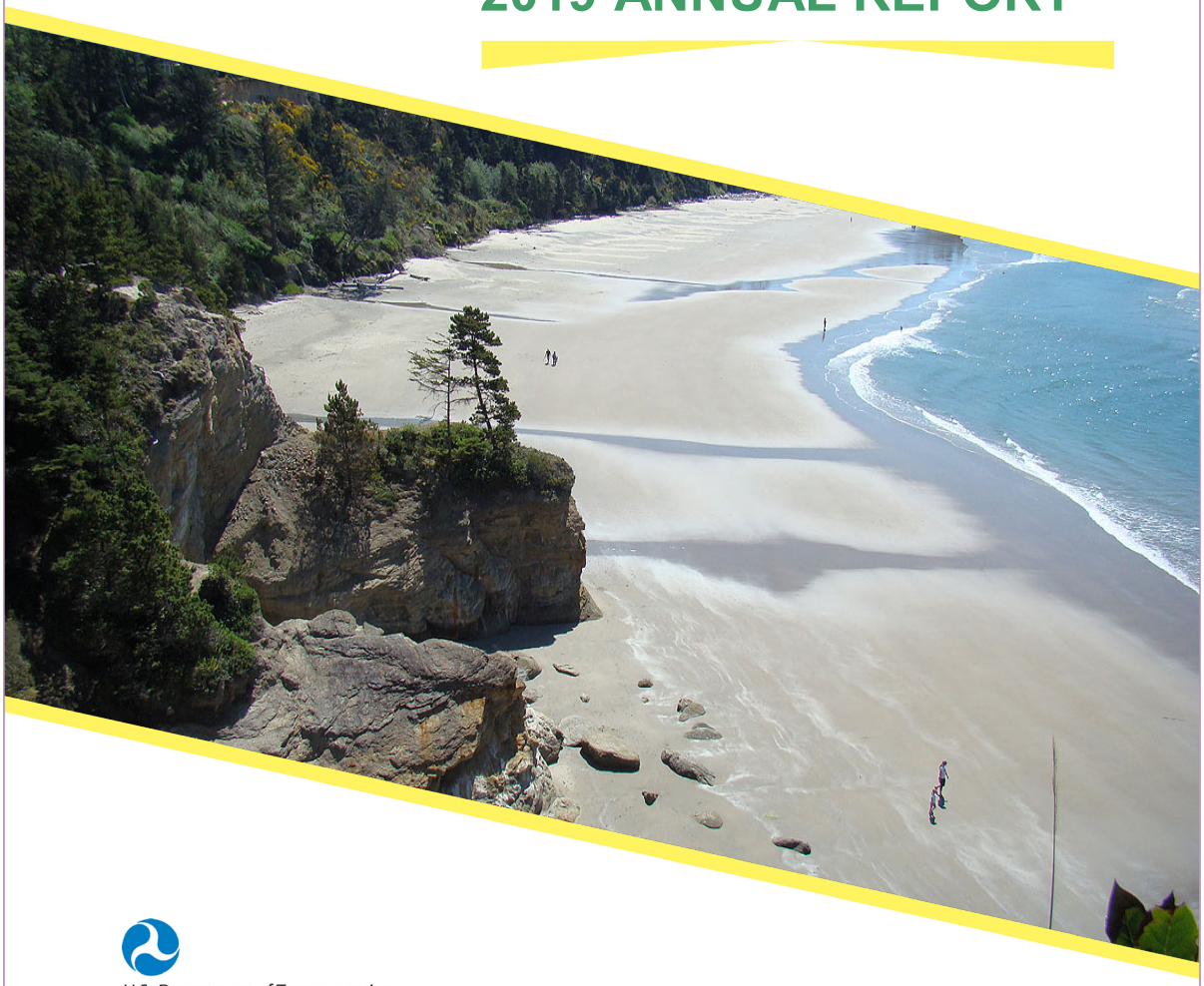
OREGON

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2019 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

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ODOT News Letter

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Disclaimer

Protection of Data from Discovery Admission into Evidence

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. 409 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

The Oregon Department of Transportation (ODOT) is responsible for administering Oregon's Highway Safety Improvement (HSIP) Program. All roads within the state of Oregon are eligible to receive HSIP funding under the All Roads Transportation Safety (ARTS) Program. The mission of the Highway Safety Program at the Oregon Department of Transportation (ODOT) is to carry out highway safety improvement projects to achieve a significant reduction in traffic fatalities and serious injuries. For purposes of programming Highway Safety funds in the Statewide Transportation Improvement Program (STIP), all highway safety infrastructure improvement projects shall follow these guidelines. The majority of the funding for the ODOT Highway Safety Program comes from the Highway Safety Improvement Program (HSIP), which is a core federal-aid program under the Fixing America's Surface Transportation (FAST) Act that went into effect in December, 2015. 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. The HSIP also requires a data-driven and strategic approach to improving highway safety on all public roads that focuses on performance. 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 Division (TSD), and are typically funded with separate funding from the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration (FHWA), or state funds.

Following the HSIP requirements, ODOT has developed a new safety program, known as the All Roads Transportation Safety (ARTS) Program, which addresses safety on all public roads including non-state roadways. ODOT worked with the representatives from the League of Oregon Cities (LOC) and the Association of Oregon Counties (AOC) to document principles for a jurisdictionally blind safety program for Oregon to address safety on all public roads of the state, which eventually led to the development of the ARTS Program. 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. The program is a data-driven program to achieve the greatest benefits in crash reduction and is blind to jurisdiction. Under the inaugural round of the ARTS Program, safety projects have been selected that will be delivered between 2017 and 2021. The Oregon Transportation Commission (OTC) has allocated approximately $31 to $37 million dollars per year to the ODOT Highway Safety Program for these five years (for a total of $166 million dollars) for infrastructure improvements. The majority of this funding will come from the federal HSIP. We have updated our Roadway Departure plan on Oregon roadways. ODOT is nearing the completion of the second round of the All Roads Transportation Safety (ARTS) program in the fall of 2019.

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. 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. But 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, as shown in Figure 2-1. The hotspot approach is the traditional approach used in safety analysis, 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 2009 through 2013 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

The Oregon DOT Highway Safety Engineer and Highway Safety Engineering Coordinator are located in our headquarters office in Salem. There are 5 Region Traffic offices across Oregon. Each Region Traffic office has several employees that work with Region staff to help develop appropriate safety projects using one of our safety plans (Roadway Departure, Intersection, Bike/ped plans) or using our Safety Priority Index System (SPIS) to help identify high crash locations.

How are HSIP funds allocated in a State?

- SHSP Emphasis Area Data

The available money is separated into two categories — systemic and hot spots. Systemic project are proven, low-cost measures that have successfully reduced the occurrence of fatal and serious injury crashes and that can be widely implemented, like rumble strips on the shoulder of the road. Hot spots are identified by a higher than normal crash occurrence. These are often higher cost projects and are targeted to a specific segment of roadway or intersection.

ODOT collected input from the local governments in each region of the state.

Funding is divided to each region based on the number of fatalities and serious injury crashes. Potential projects within each region are prioritized by their benefit cost or cost effectiveness index (CEI) for bike/ped projects.

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

Local and tribal roads are addressed through t he All Roads Transportation Safety (ARTS) Program a safety program that addresses safety needs on all public roads in Oregon. By working collaboratively with local road jurisdictions (cities, counties, MPO’s and tribes) can ODOT hopes 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. This program uses a data-driven approach that is blind to jurisdiction to achieve the greatest benefits in crash reduction and emphasize elements of the SHSP.

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. 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. But 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.

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• 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.

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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 2009 through 2013 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.

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)

ODOT established a Highway Safety Engineering Committee (HSEC) on February 18, 2005 which meet quarterly. This committee provides a leadership forum to strategize, coordinate and direct the engineering-related highway safety activities and is 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, Region Planner, District Maintenance and Roadway Section. The Traffic Operations and Leadership Team (TOLT) was also established several years ago which provides statewide policy and procedure leadership for traffic engineering related issues.

Describe coordination with internal partners.

ODOT established a Highway Safety Engineering Committee (HSEC) on February 18, 2005 which meet quarterly.

The Highway Safety Engineering Committee (HSEC) provides operational decisions for the Safety Management System within ODOT and provides advice and recommendations to Highway Leadership Team as well as other leadership teams within ODOT regarding funding issues or major safety policy matters.

The HSEC will be 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 Highway Safety Engineering Committee provides a leadership forum to enhance, strategize, coordinate, and direct the engineering/infrastructure related highway safety activities for the Department including the ARTS/HSIP program.

The Traffic Operations and Leadership Team (TOLT) was also established several years ago which provides statewide policy and procedure leadership for traffic engineering related issues.

Identify which external partners are involved with HSIP planning.

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

Our 5 Region Traffic offices work closely with all external partners in determining appropriate safety projects to fund in Oregon to reduce fatal and serious injury crashes.

Describe coordination with external partners.

Our 5 Region Traffic offices work closely with external partners in determining appropriate safety projects to fund in Oregon to reduce fatal and serious injuries crashes. We are in the process of completing our round 2, All Roads Transportation Safety (ARTS) program where the 5 Region Traffic offices conducted outreach meetings with local agencies interested in submitting proposed ARTS safety projects for funding consideration. They are currently in the project selection process to establish the 100% safety project list for funding.

Some External Partners are involved in HSEC, but all are involved in the planning through the SHSP process as stakeholders in the strategic planning document that defines Oregon’s traffic safety trends and challenges. The SHSP also 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.

The major change in the round 2 ARTS (All Roads Transportation Safety) program is that both the proposed hot spot projects and the proposed systemic project now require an application to be submitted for funding consideration. The second round of the ARTS program began in the fall of 2017 and extended through the fall of 2019. During this period, projects were selected for the STIP and to be delivered in the years 2022 through 2024. Approximately $30 million per year will be available for the ARTS program as determined by the Oregon Transportation Commission (OTC).

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

http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/docs/pdf/odot_safety_program_guide.pdf Oregon DOT updated their Roadway Departure plan in September 2017 for the state http://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/Departure-Implementation-Plan.pdf . Portland State University recently develop a plan regarding wrong way driving and recommendation on our interstate ramps http://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/Wrong-Way-Driver-Report.pdf . ODOT is in the process of implementing several of the recommendations in Region 3 using the ARTS funding. Although not as commonly used as benefit-cost analysis, cost-effectiveness analysis is another tool that is used by ODOT for project prioritization. Rather than comparing the economic value of the crash reductions to the project cost, cost-effectiveness analysis compares the change in crash frequency due to the implementation of a countermeasure to the project cost. For Oregon's pedestrian/bicycle projects under the ARTS Program, Cost-Effectiveness Index (CEI) is used to prioritize projects. CEI estimates the cost to reduce one crash. The lower the CEI value of a project, the higher it will rank in the prioritized list. Here is a link to the ARTS program for more information http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/ARTS.aspx .

Program Methodology

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

Yes
FileName:
odot_safety_program_guide[1].pdf

Here is a link to our 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

ODOT's common highway safety goal on Oregon roadways is to select appropriate safety projects that will reduce fatal and serious injury crashes. In our HSIP ARTS program, most all of these program topic areas can receive HSIP safety funding depending on the applicant justifying an acceptable benefit/cost analysis to reduce fatal and serious injury crashes. Bicycle and pedestrian projects are ranked using a cost effectiveness index.

ODO has a small fund called Quick Fix funding to address low cost safety spot improvements for our highway system only.

Program: Bicycle Safety

Date of Program Methodology:2/1/2014

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway	
Fatal and serious injury crashes only	Volume	Functional classification Roadside features	

What project identification methodology was used for this program?

- Other-Cost Effectiveness for Bike/Peds

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

The traditional approach to safety is to identify "hotspot" locations and then identify measures to implement by diagnosing the "hotspot". ODOT hired a consultant to create a draft list of potential hotspot projects (prioritized based on benefit cost ratios) for all roads in each Region identifying locations and the appropriate countermeasures. This doesn’t allow us to select hot spot.

The systemic approach identifies a few proven low-cost measures to be widely implemented, then implements the measures where there is evidence that they would be most useful. The systemic measures have been proven to successfully reduce the occurrence of fatal and serious injury crashes. The process for Systemic projects was an application-based process. Local Agencies and ODOT Regions submitted applications for systemic projects in three focus areas- roadway departure, intersections, and pedestrian/bicycle. Projects were prioritized based on benefit cost ratio (for roadway departure and intersections projects) and cost-effectiveness index (pedestrian/bicycle projects). Here is a link to the bicycle/pedestrian plan. http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/Bicycle_Pedestrian_Safety.aspx

Program: HRRR

Date of Program Methodology:9/1/2017

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	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

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Rank of Priority Consideration

Ranking based on B/C:100

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In mid August 2019, ODOT's Chief Financial Officer sent FHWA the letter shown below (draft) requesting a waiver to obligating the HRRR funds.

As part of Section 148(g)(l) of Title 23, United States Code (U.S.C.), the State of Oregon triggered the High Risk Rural Road (HRRR) special rule for Federal Fiscal Year (FFY) 2019. With this trigger, the Oregon Department of Transportation (ODOT) is required to obligate $2,440,120 in FFY 2019.

ODOT introduced the All Roads Transportation Safety (ARTS) Program in 2016, it is designed to be a data driven HSIP program to address needs on all public roads in Oregon. The Association of Oregon Counties and League of Oregon Cities participated in the development of the program. An integral part of the program is to improve safety on local agency roads including rural roads. The program is focused on a blend of hot spot and systemic safety. A major focus is on rural Roadway Departure and Intersection safety (as per Oregon's Strategic Highway Safety Plan).

ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

Here is a small list of projects which would have obligated the HRRR funding, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

STIP Key Number	Project Name	Project Amount
20526	Highland Ave (Hermiston) Safety Improvements	$118,830
20420	Cove Avenue at Albany St. (La Grande)	$46,060
20194	Josephine County Safety Improvements	$842,508
19683	OR 153: Bellevue-Hopewell Hwy Rail xing sfty Proj.	$771,395

19796	Region 2 (Central) local road roadway departure	$318,365
19797	Lane County local road roadway departures	$681,395
20142	OR211 @ Canby Marquam Hwy	$723,700
Total		$3,502,253

This situation has put ODOT in a unique situation, where the agency is delivering the projects which meet the intent for HRRR, but we do not have the mechanism to obligate. ODOT is requesting a waiver to transfer the remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

Program: Intersection

Date of Program Methodology:6/1/2012

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
Fatal and serious injury crashes only	Volume	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

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Program: Pedestrian Safety

Date of Program Methodology:2/1/2014

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway	
Fatal and serious injury crashes only	Volume	Functional classification Roadside features	

What project identification methodology was used for this program?

- 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

Cost Effectiveness:100

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Program: Roadway Departure

Date of Program Methodology:9/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
Fatal and serious injury crashes only	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

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Rank of Priority Consideration

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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
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Rumble Strips
- Wrong way driving treatments

The ARTS Program has two components – a hotspot component and a systemic component. The hotspot approach is the traditional approach used in safety analysis, 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 2009 through 2013 data, these three emphasis areas accounted for approximately 85% of the fatal and serious injury crashes in the state.

The ARTS Program funds will be allocated to the five ODOT Regions based on the proportion of the fatal and serious injury crashes occurred within the last five years in each Region. For a given Region, total funding should be divided equally between the hotspot and systemic components. Again, for the systemic component, it is recommended that Regions split the available funding between the emphasis areas identified in the TSAP (currently those are roadway departure, intersection, and pedestrian/bicycle) based on the proportion of the fatal and serious injury crashes occurred between these three areas within the last five years. For the first round of the ARTS Program, based on the crash data from 2009 to 2013, the statewide proportions of fatal and serious injury crashes between roadway departure, intersection, and pedestrian/bicycle crashes were 50%, 36%, and 14%, respectively.

ODOT has approximately $166 million of funding for the five years between 2017 and 2021. Here is a link to ODOT's CRF list http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/ARTS.aspx#Crash_Reduction_Factors

What process is used to identify potential countermeasures?

- Crash data analysis
- 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.

Once locations have been identified for potential safety improvements through networking screening and diagnoses, the next step is to identify potential countermeasures that can be implemented to improve safety. A countermeasure can be defined as a roadway strategy intended to decrease crash frequency and/or severity at a given site.

ODOT has compiled a list of countermeasures, known as the ODOT Crash Reduction Factor (CRF) List, which have been proven to reduce crashes. A Crash Reduction Factor (CRF) is the percentage crash reduction that might be expected after implementing a given countermeasure(s) at a specific site. These countermeasures were primarily chosen from the Highway Safety Manual, the Crash Modification Factors (CMF) Clearinghouse, and the FHWA Desktop Reference for Crash Reduction Factors. All the countermeasures were listed as either 'hotspot' or 'systemic' countermeasures. Any countermeasures listed in the ODOT CRF List can be used for hotspot projects. However, for systemic projects only countermeasures that are listed as 'systemic' shall be

used. The ODOT CRF List is updated periodically as new countermeasures or better studies on existing countermeasures become available. Suggestions for including new countermeasure(s) to the ODOT CRF List can be submitted to ODOT TRS Staff using the CRF Request Form provided on the ARTS website.

Some CRFs may be applicable to all crash types and/or all severities. Some CRFs may be applicable to a particular crash type and/or severity. Correct crash types and severities should be used in the benefit-cost analysis. Refer to the ODOT Highway Safety Investigation Manual for more information on the CRF http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/ARTS.aspx#Crash_Reduction_Factors .

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

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.

We are in the early stages of using the HSM to support HSIP efforts. Our ODOT Planning unit has incorporated several methodologies into their latest manual. We are using the cost-effectiveness analysis tool outlined in the HSM for project prioritization. Rather than comparing the economic value of the crash reductions to the project cost, cost-effectiveness analysis compares the change in crash frequency due to the implementation of a countermeasure to the project cost. For the pedestrian/bicycle projects under the ARTS Program, Cost-Effectiveness Index (CEI) is used to prioritize projects. CEI estimates the cost to reduce one crash. The lower the CEI value of a project, the higher it will rank in the prioritized list. ODOT uses some analysis methods from the HSM, including expected numbers of crashes for bikes and pedestrians, proportions of crashes in investigations and critical crash rates in planning and project level analysis.

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

Yes, we are in the process of implementing round two of the ARTS program.

The ARTS program primarily uses federal funds from the Highway Safety Improvement Program (HSIP). The principles and purpose of ARTS and HSIP are:

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 is be overseen by Oregon DOT Regions.

Both traditional "hot spot" methodology and systemic methodology is used based on an application process.

The objective of ARTS and HSIP is to significantly reduce the occurrence of fatalities and serious injuries. 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. Many highway projects incorporate design features or elements that relate to highway safety, such as updating guardrail or improvements to intersection channelization, signing and pavement markings. But 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.

Address a specific Safety problem contributing to fatalities and serious injuries

Use proven countermeasures that correct or substantially improve the fatal and serious injury problem

Use ODOT crash data to establish the Benefit/Cost ratio (so projects can be compared fairly)

Use ODOT Benefit Cost method (or Cost effectiveness for Bicycle/Pedestrian)

Be prioritized or categorized based on the Benefit/Cost Ratio for developing the 150% list

Use only proven countermeasures from the approved ODOT Crash Reduction Factor list (a written process is developed for considering new measures)

Projects must include written support from the Road Jurisdiction if the project is proposed by another agency

Benefit Costs will be based on the most recent available three to five years of crash data

The traditional approach to safety is to identify "hot spot" locations, and then identify measures to implement by diagnosing the "hot spot".

Hot Spot Projects shall:

Address a location with a crash history of at least one fatal or serious injury crash within the last five years

The systemic approach identifies a few proven low-cost measures to be widely implemented, then implements the measures where there is evidence that they would be most useful. The systemic measures have been proven to successfully reduce the occurrence of fatal and serious injury crashes. The sites may be selected from ODOT’s list of priority corridors for Roadway Departure, Intersections or Pedestrian/Bicycle crashes. Our Safety Priority Index System (SPIS) is another flagging tool used to select appropriate safety projects.

Systemic Projects shall:

Use only approved "Systemic" countermeasures as listed in the Crash Reduction factors list

Not require the acquisition of significant amounts of right of way (more than 10% of project costs), preferably no right of way

For the Pedestrian and Bicycle Analysis, use Highway Safety Manual methods to estimate predicted crashes for pedestrians and bicycles and Cost Effectiveness to prioritize projects selection.

Systemic Projects should:

Have a history of fatal or serious injury crashes or a risk of high severity crashes and preferably are selected from priority corridors within Systemic plans.

The Safety funds are split to each region based on the amount of fatalities and serious injuries occurring in the region on all public roads. Regions will be required to spend a minimum of 50% of their funding on Systemic projects.

Systemic funding is intended to be used for Roadway Departure, Intersections and Pedestrian/Bicycle type projects. At the statewide level the split in F&A between Roadway Departure, Intersections and Ped/Bike is about 40%/40%/20% respectively. Regions will be given the flexibility to determine the appropriate splits between systemic types of projects for their regions. It is suggested:

That at least one project per year be developed for each type, if possible.

Region splits of systemic funds for each systemic type be roughly equivalent to the proportion of F&A occurring in the region

Funding is eligible to be used for approved countermeasures as long as those countermeasures provide an improvement to reducing fatal and serious injury and are prioritized through the ARTS data driven process. Safety funds may be used to include or replace elements that are necessary to satisfactorily complete the project, such as replacing non-compliant ADA ramps, replacing pavement striping that is removed or right of way, but those elements must be included in the cost of the project and part of the prioritization process. Other elements (not applicable to the safety project) may be combined with the project (i.e., culvert), but must be funded by other sources, not safety funds.

Both Hot Spot and Systemic processes will be an application based process. Oregon jurisdictions will be invited to submit projects for Hot Spot and Systemic funding, using a large list of proven countermeasures. ODOT will distribute data on Hot Spots and Systemic Plans to help determine potential locations for improvement.

For Hot Spots projects agencies will be given the opportunity to submit projects with justification that it meets the program purpose. The number of submittals should be limited because of limited funds, but ODOT will ask for submittals amounting to 300 to 500% of the funding available to ensure sufficient worthwhile projects. Regions will categorize projects based on the project’s ability to reduce fatal and serious injury crashes and the benefit cost of the project, and finalize a draft 150% list for field scoping.

For Systemic projects the submittals will be for three systemic categories of funding, roadway departure, intersections and pedestrian/bicycle, attempting to solicit submittals amounting to about 300 - 500% of available funding. ODOT Regions will check all applications for program purpose and correctness, working with the submitting agencies when necessary in order to develop a potential list of projects. The intent is that the ODOT Regions will analyze and refine the list of submitted projects in order to prioritize the project list based on program purpose of reducing fatal and serious injuries and benefit cost, in order to finalize a draft 150% list for field scoping.

Once the refined 150% lists are ready, all projects (both hot spot and systemic) will go through a multi-discipline assessment to verify the solution. A multi-disciplinary team, including the owner of the facility, will ensure the best countermeasure is chosen to mitigate fatal and serious injury crashes. The project will also be

scoped to verify the costs and any possible barrier to implementation. A finalized list of prioritized projects can then be produced with the best solution and the best cost.

Once the list is prioritized and a final 100% list is produced ODOT Region's will work with Jurisdictions to determine the delivery methods, delivering agency and timelines (applicable funding year). For projects involving local agencies, the ODOT Regions will work with Jurisdictions to develop an Intergovernmental Agreement. The delivering agency will be accountable for timely and fiscally responsible delivery.

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

HSIP All Roads Transportation Safety (ARTS) Program

Key Facts —2018

 ODOT and representatives of the League of Oregon Cities (LOC) and the Association of Oregon Counties (AOC) have examined road safety statistics throughout the state. The results reveal a great need to improve local road safety.

 In February 2013, ODOT entered into a memorandum of understanding with AOC and LOC. The MOU establishes that all Oregonians share the roads and that safety is everyone's concern. The common purpose is to reduce fatal and serious injuries on all public roads through a data driven process.

 MAP 21 increased safety funding and emphasizes a focus on all public roads. Because of this, ODOT decided to offer a portion of its safety funds to improve safety on local roads, leading to the creation of the All Roads Transportation Safety (ARTS) program.

 The state road system makes up about 10 percent of the total mileage in the total road system. Ten percent of the system carries 50 percent of all traffic and has 50 percent of all crashes in the state. The other 50 percent of crashes occur off the state system. Under the ARTS program, available funds go toward the best and highest use.

 The available money is separated into two categories — systemic and hot spots.

o Systemic project are proven, low-cost measures that have successfully reduced the occurrence of fatal and serious injury crashes and that can be widely implemented, like rumble strips on the shoulder of the road.

o Hot spots are identified by a higher than normal crash occurrence. These are

often higher cost projects and are targeted to a specific segment of roadway or

intersection.

 ODOT collected input from the local governments in each region of the state. By

cooperating with local agencies we hope to raise the awareness of safety on all roads and

promote best practices.

 Funding is divided to each region based on the number of fatalities and serious injury

crashes.

 Potential projects within each region are prioritized by their benefit cost which factors in the

number of crashes, the crash reduction potential of the enhancement and the project cost.

 The program is data driven, using safety data to perform problem identification and analysis,

to achieve the greatest benefits in terms of fatal and serious injury crash reduction.

Here is a link to the 2018 ODOT ARTS Program Summary Report prepared for ODOT and prepared by DKS Associates:
https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/ARTS_SUmmary-Report-2018.pdf

All Roads Transportation Program: Frequently Asked Questions

1. What is the ARTS Program?

The All Roads Transportation Safety Program (ARTS) is a safety program that addresses safety for all public roads in the state of Oregon. This program uses federal funds from the 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 first round of ARTS began in 2014 with projects scheduled for delivery in years 2017-2021. The second round of project selection is scheduled to begin this fall for projects delivered in years 2022-2024.

2. What is the purpose of the ARTS Program?

The primary objective of the ARTS Program is to select the best projects to reduce fatalities and serious injuries on all public roads in the state.

3. What is the timeline for ARTS Program?

The second round of the ARTS project selection will begin in the fall of 2017 and extend through the spring of 2018. During this period, projects will be selected for the STIP and delivered in years 2022 through 2024. The Oregon Department of Transportation (ODOT) is currently working on developing the project criteria and plans on outreach to the local agencies sometime in late 2017.

4. What methods are used for project selection?

ODOT will use two different methods for selecting projects – traditional 'Hotspot' method and 'Systemic' method. ODOT regions are required 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.

5. How much funding is available and how is it allocated?

During the period of 2022 through 2024, approximately $30 million per year will likely be available for the ARTS program. This funding will be 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. The region allocations during the last round of ARTS funding was approximately:

Region 1 - 33%
Region 2 - 34%
Region 3 - 15%
Region 4 - 11%
Region 5 - 7%

6. What is the Hotspot method and how are the Hotspot projects selected?

The hotspot method identifies locations with documented crash problems, selects and then applies appropriate countermeasure(s) to mitigate the crash problems. Hotspot countermeasures are typically more expensive than systemic countermeasures. Examples of hotspot projects include installation of left turn lane(s), installation of a new traffic signal or roundabout at an intersection, or conversion of a signalized intersection to a roundabout.

ODOT will develop a list of locations for potential projects using its Safety Priority Index System (SPIS), and Safety Implementation Plans for three emphasis areas including potential remedies and countermeasures: Roadway Departure, Intersections and the Pedestrian and Bicycle. Local agencies can use the SPIS list or whatever method they choose to pick the best potential projects. These projects must address locations with a crash history of at least one fatal or serious injury crash within the last five years.

Local agencies and ODOT will both prepare applications for the projects that they believe will be the most effective at reducing fatal and serious injury crashes and yet have a good benefit cost ratio. All the proposed hotspot countermeasures must be from the ODOT CRF List .

Projects are prioritized based on benefit cost ratio. The projects selected for funding and addition to the Statewide Transportation Improvement Program (STIP) are those with the highest benefit cost .

To access data and tools, visit the ARTS Program website .

7. What is the Systemic method and how will the Systemic projects be selected?

The Systemic method takes a broader view by looking at the crash history and risks associated with an entire roadway/corridor and then applying proven low-cost countermeasures to reduce the risk along the entire roadway, corridor or jurisdiction. Examples of systemic projects include installation of curve warning signs, reflectorized backplates on signals, rumble strips, countdown pedestrian timers and conversion to flashing yellow left turn arrow (FYLTA) signal heads for protected-permitted left turn (PPLT) signal operation.

The ARTS Program consists of three emphasis areas for systemic improvements: Roadway Departure,

Intersection, and Pedestrian and Bicycle. Systemic project locations may be selected from ODOT's list of priority corridors for these three areas or from other sources. The systemic funds are roughly proportional to the number of fatalities and serious injuries that occur within the region.

Like the hotspot approach, the systemic approach is an application-based process. ODOT and all local jurisdictions within a region can submit an application for available Systemic funding. All the proposed systemic countermeasures must be from the ODOT CRF List . Projects are prioritized based on benefit cost ratio (for Roadway Departure and Intersection projects) and cost effectiveness index (Pedestrian and Bicycle projects).

8. Can the same countermeasures be used for Hotspot as Systemic projects? Can a single location use a Systemic approach?

While systemic and Hotspot countermeasures may be applicable at the same location, ODOT asks applicants to submit separate applications for hotspot and for systemic measures during this round. Once approved for funding, the measures can be combined under one project if desired. Separate applications allow similar comparisons of benefits for both methods.

9. If a local jurisdiction has supplemental crash data, can that data be used during the project selection process?

ODOT recognizes that some jurisdictions may have supplemental crash data (e.g. police reports) that might be different from ODOT crash data. This data is exempt from project prioritization and benefit cost analysis. For fairness and consistency, crash data from 2012-2016 obtained from ODOT Crash Reports must be used for analysis purposes. However, the supplemental data may be informative for selecting appropriate countermeasures at a given location.

10. How is the final project list prepared?

All projects in the refined lists (for both hotspot and systemic) go through multi-disciplinary assessment to verify the applicability of the proposed solution. A final list (100 percent list) is prepared and prioritized based on the best benefit cost ratios (Pedestrian and Bicycle projects are ranked based on cost effectiveness).

11. Can a Hotspot or Systemic safety project from the final list be combined with another Statewide Transportation Improvement Program (STIP) project at the same location?

Yes, if a hotspot or systemic safety project from the final list is at a location where another STIP project is planned, these two projects may be combined for efficiency. Similarly, if a Hotspot project is selected in a location that is in the corridor where there will be a systemic project, both projects may be combined to a single project for efficient design and delivery of the project. This typically occurs after project lists are completed and before the STIP is adopted.

12. Who designs and delivers the projects?

After the final 100 percent list is complete, ODOT regions work with the local jurisdictions to determine the delivery methods, timelines, and delivery agencies. Local agencies are encouraged to consider fund exchange (State Funded Local Projects) and deliver the projects themselves. The delivering agency is responsible for timely and fiscally responsible delivery.

13. Will a local match be required for selected projects?

The federal HSIP requires a 7.78 percent match for projects. This requires local agencies to contribute 7.78 percent of the total project cost. Local agencies are encouraged to fund exchange for state funds. More information can be found on the Local Agency Guidelines website.

14. Do HSIP projects follow Statewide Transportation Improvement Program process?

All the projects selected under the ARTS Program follow the STIP process. Refer to the STIP website for more information on the STIP process and stakeholder involvement.

15. Do the engineering countermeasures impact driver behaviors such as drinking and driving and speeding?

A direct relationship between countermeasures and driver behaviors has not been determined. Some countermeasures may directly improve driver behaviors, others may not, however the improvement may prevent similar crashes in the future. For example, a roadway with a countermeasure installed — such as a median barrier or centerline rumble strips — may prevent an intoxicated driver from crossing into oncoming lanes.

Countermeasures that effectively reduce crashes are developed using data from all types and causes of crashes. The Crash Reduction Factor represents the relative change in crash frequency for a particular countermeasure regardless of cause of a crash. Engineering judgment may be needed to determine the appropriate countermeasure to mitigate poor driver behaviors.

16. So what can my local agency do to start preparing for ARTS?

ODOT will reach out to local agencies in each region this fall. In the meantime, local agencies and ODOT can begin thinking about and looking for good safety project candidates that meet funding eligibility. ODOT will update the ARTS webpage as more information becomes available. The following are available now:

The most recent 2016 SPIS reports for State Highways and Local Roads and

- The new Roadway Departure Plan .

17. Who should I contact if I have questions?

For questions regarding the ARTS Program, please contact your local ODOT Region Traffic Office. While the FAQs are informative, some items like schedule and timelines could change.

In mid August 2019, ODOT's Chief Financial Officer sent FHWA the letter shown below (draft) requesting a waiver to obligating the HRRR funds.

As part of Section 148(g)(l) of Title 23, United States Code (U.S.C.), the State of Oregon triggered the High Risk Rural Road (HRRR) special rule for Federal Fiscal Year (FFY) 2019. With this trigger, the Oregon Department of Transportation (ODOT) is required to obligate $2,440,120 in FFY 2019.

ODOT introduced the All Roads Transportation Safety (ARTS) Program in 2016, it is designed to be a data driven HSIP program to address needs on all public roads in Oregon. The Association of Oregon Counties and League of Oregon Cities participated in the development of the program. An integral part of the program is to improve safety on local agency roads including rural roads. The program is focused on a blend of hot spot and systemic safety. A major focus is on rural Roadway Departure and Intersection safety (as per Oregon’s Strategic Highway Safety Plan).

ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

2019 Oregon Highway Safety Improvement Program

Here is a small list of projects which would have obligated the HRRR funding, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

STIP Key Number	Project Name	Project Amount
20526	Highland Ave (Hermiston) Safety Improvements	$118,830
20420	Cove Avenue at Albany St. (La Grande)	$46,060
20194	Josephine County Safety Improvements	$842,508
19683	OR 153: Bellevue-Hopewell Hwy Rail xing sfty Proj.	$771,395
19796	Region 2 (Central) local road roadway departure	$318,365
19797	Lane County local road roadway departures	$681,395
20142	OR211 @ Canby Marquam Hwy	$723,700
Total		$3,502,253

This situation has put ODOT in a unique situation, where the agency is delivering the projects which meet the intent for HRRR, but we do not have the mechanism to obligate. ODOT is requesting a waiver to transfer the remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

During the period of 2022 through 2024, approximately $30 million per year will be available for the ARTS program. This funding will be 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. The region allocations during the last round of ARTS funding was approximately: Region 1 - 33% Region 2 - 34% Region 3 - 15% Region 4 - 11% Region 5 - 7%

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$30,000,000	$30,000,000	100%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$3,502,253	$3,502,253	100%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
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	$33,502,253	$33,502,253	100%

ODOT has approximately $166 million of funding for five years between 2017 and 2021 for the first round of the ARTS Program. ODOT has approximately $87,396,000 of funding for the next three years between 2022 and 2024 for the second round of the ARTS program. Safety Leverage HB 2017 - The Safety Leverage Funds are meant to help improve the safety of the state highway system where the Agency is planning to make a separate Fix-It program investment. The intent is to improve the most important safety issues that are in the general area of a planned Fix-It project. Investment decisions from this leverage fund will follow the general priorities outlined in the 2016 Transportation Safety Action Plan (TSAP). The funds should be used for engineering countermeasures that can demonstrate a measurable cost-effective benefit and should generally follow the prioritization guidelines below: • Tier 1 - Infrastructure improvements that will reduce serious / fatal crashes within the Emphasis Areas of the 2016 TSAP, such as Intersection, Roadway Departure, Pedestrian, and Bicycle crashes. • Tier 2 - Regional safety priority areas, such as top 10% Safety Priority Index System (SPIS) sites, region-wide systemic safety features, or other documented crash locations. Safety leverage

opportunities are identified by the following process: • Regions review the Fix-It programs 150% lists for Tier 1 and 2 Safety Leverage qualification. • Scoping teams review the Fix-It programs 150% lists for project details, including: status of each project, location, noting whether it qualifies as Safety Leverage (identifying safety mitigation as appropriate), or

explaining why the project does not qualify in the "Leverage Opportunities" section of the Business Case. • The Safety Leverage portion of all projects is prioritized by Regions and ACTS within Tier 1 and 2. • Funding limitations are applied: Tier 1 in priority order first, then Tier 2 if funding allows. The outcome of Safety Leverage prioritization will be documented for each eligible project in the "Leverage Opportunities" section of the Business Case. Region Funding Allocation: Region 1 $10,680,000 Region 2 $9,273,000 Region 3 $4,431,000 Region 4 $3,108,000 Region 5 $2,508,000 Total $10,066,953

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ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

Here is a small list of projects which would have obligated the HRRR funding, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

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remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

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

40%

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

40%

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.

Benefit-cost analysis, which compares the economic benefits of the crash reductions to the project cost, is the traditional analysis tool that is used to determine financial viability of a project and to prioritize projects. The ODOT Benefit-Cost Workbook shall be used to calculate benefit-cost ratio for the ARTS Program. ODOT requires that five years of the most recent crash data available be used for the analysis and that the project has a benefit-cost ratio of 1.0 or greater. Projects with higher benefit-cost ratios will rank higher in the prioritized list.

ODOT's first round of ARTS has approximately $166 million of funding for the five years between 2017 and 2021. Approximate funding splits between the ODOT Regions for the first round of the ARTS Program are as shown, Region 1 = 33%, Region 2 = 34%, Region 3 = 15%, Region 4 = 11%, Region 5 = 7%. ODOT's second round of ARTS has approximately $29,132,000 of funding for three years between 2022 and 2024. Approximate funding splits between the ODOT Regions for the second round of the ARTS Program are shown, Region 1 = 31.4%, Region 2 = 35.7%, Region 3 = 15.7%, Region 4 = 10.2%, Region 5 = 7%.

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

$218,000

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

$218,000

These funds are used for roadway departure enforcement thru the Transportation Safety Division (TSD).

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.

Oregon DOT does a great job obligating the HSIP funds to appropriate safety project but the challenge is

getting the safety projects programmed and built in an appropriate time frame. We are working on writing IGA's with local agencies to ensure the HSIP funds get spent in a timely fashion. The Region Traffic offices monitor their safety funds.

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

One of the biggest challenges in HSIP implementation is programming and constructing these projects in a timely fashion, especially local safety projects. On State highway HSIP safety projects, the challenge is letting a lot of small dollar projects 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
Safe Routes to Schools - Non-Infrastructure 2018 19958	Pedestrians and bicyclists	Install sidewalk		Miles			Other Federal-aid Funds (i.e. STBG, NHPP)	Urban	Local Road or Street	0		City or Municipal Highway Agency	Systemic	Pedestrians	
Twin Creeks Rail, Crossing (Central Point) Local New Access Route Into the Twin Creeks Development Jackson Co. 18972	Railroad grade crossings	Railroad grade crossings - other		Numbers			RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		Railroad	Spot	Lane Departure	
City of Eugene Signal Enhancements 20216	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$125,000	HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Spot	Intersections	
River Rd. at Irving Rd. (City of Eugene) 20206	Intersection geometry	Intersection geometry - other		Intersections			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Spot	Intersections	
West Systemic Signals and Illumination (Forest Grove) 20375	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
City of Gresham Safety Project 20303	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Miles		$396,800	HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Pedestrians	
OR 140: Brett Way Extension (K-Falls) 18731	Roadway	Roadway widening - add lane(s) along segment				$380,036	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot		
East Systemic Signals and Illumination (Molalla) 20337	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
HSIP City of Portland and Bike/Ped 19723	Pedestrians and bicyclists	Pedestrian signal - audible device		Intersections			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	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
Central Systemic Signals and Illumination (Portland) 20334	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
Delaney Road Sidewalks and Bike Lanes (City of Turner)/Add Sidewalks and Bike Lanes on Delaney Rd between 3rd and 7th Ave. 16587	Pedestrians and bicyclists	Install sidewalk		Miles			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Pedestrians	
Barlow Rd. Zimmerman Rd. Intersection (Clackamas Co.) 15778	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		County Highway Agency	Spot	Intersections	
East Systemic Signals and Illumination (Clackamas County) 20336	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		County Highway Agency	Systemic	Intersections	
All Roads Transportation Safety (Deschutes County) 19799	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Intersections		$211,744	HSIP (23 U.S.C. 148)			0		County Highway Agency	Systemic		
Table Rock Road I-5 to Biddle 18974	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
Statewide Wigwag Elimination Project Statewide 14591	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
St. Louis Road Rail X'ing Safety Project (Marion)/PE for Safety Project to Install Automatic Gates and Signals/Marion Co. 17472	Railroad grade crossings	Railroad grade crossing gates		Access points		$2,557	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		Railroad	Spot	Intersections	
Rail Crossing Improvements (UPRR) Linn County 17752	Railroad grade crossings	Railroad grade crossings - other		Intersections			RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		Railroad	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
Safety Features for Local Roads and Streets/Statewide Transportation Safety Program 18299	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Intersections		$37,111	HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
Circuit Rider for Jurisdictionally Blind Safety/Statewide Transportation Safety Program 18301	Non-infrastructure	Outreach		Locations		$3,883				0		Other Local Agency	Systemic	Data	
Region 1 Curve Ball Banking Various Determine Curve Advisory Speeds Various 18402	Roadway signs and traffic control	Curve-related warning signs and flashers		Curves			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Region 1 Rumble Strip Installations Various Highways and Counties 18399	Roadway	Rumble strips - unspecified or other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
A Street Rail Safety Improvements (Rainier) 19462	Railroad grade crossings	Railroad grade crossings - other		Crossovers		$1,896,404	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		State Highway Agency	Spot	Intersections	
Region 4 Curve Warning Signs 19124	Roadway signs and traffic control	Curve-related warning signs and flashers		Curves			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Region 4 HSIP Transition Rural Various Sign Upgrades, Rumble Strips, Delineators and Stripping 19165	Roadway	Rumble strips - unspecified or other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Regionwide Rumble Strips Various Locations Run-off the Road Improvements 18880	Roadway	Rumble strips - unspecified or other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	

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
Hill and Water Ave. (Albany): At Grade Crossing Signalization 19198	Railroad grade crossings	Upgrade railroad crossing signal		Intersections			RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		State Highway Agency	Spot	Intersections	
Greenhill Road Rail Xing Safety Project (Eugene) Lane County 16075	Railroad grade crossings	Railroad grade crossings - other		Intersections		$81,204	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		State Highway Agency	Spot	Intersections	
Region 2 Dynamic Warning Signs 19094	Roadway signs and traffic control	Roadway signs (including post) - new or updated		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
Region1 Rural Safety Improvements (delineators, signing, rumble strips on rural county roads 19502	Roadway delineation	Roadway delineation - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Region 5 Local Jurisdiction Sign Upgrades 2016 19509	Roadway signs and traffic control	Roadway signs (including post) - new or updated		Signs			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Safety Features for Local Roads and Streets 2016	Roadway	Roadway - other		Locations			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
I-5: S. Medford - N. Ashland Paving 18874	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
I-5 Cable Barrier - Southern Oregon 19659	Roadside	Barrier - cable		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
I-5: MP 303.27 to MP 308.63 20430	Roadway	Roadway - other		Miles		$7,118,430	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 97 @ Wickiup Jct. (La Pine); The Dalles-California Hwy.; Deschutes Co. 09679	Intersection geometry	Intersection geometry - other		Intersections			HSIP (23 U.S.C. 148)			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
US 97: Romaine Village Way - Lava Butte 17807	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
I-84: Baker Valley Variable Speed Limit (VSL) 2015 18135	Speed management	Speed management - other		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
I-84: NE OR Snow Zone Safety Improvements 18994	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Lane Departure	
US 101: Rail Crossing @ Newmark St. (North Bend) / Install Flashing Lilghts, Required Signs 19046	Railroad grade crossings	Railroad grade crossings - other		Intersections			RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		State Highway Agency	Spot	Intersections	
US 101 @ NE Devils Lake Rd. Oregon Coast, add left turn refuge Lincoln Co. 17811	Intersection geometry	Auxiliary lanes - add left-turn lane		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
US 101: Curve Warning Upgrades 20222	Roadway signs and traffic control	Curve-related warning signs and flashers		Curves		$366,300	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR82: Minam Curve 17047	Roadway	Roadway - other		Curves			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR126B @ 54th St. (Springfield) 20209	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR126B at MP 2.98 to 8.17 20144	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 20 @ Knox Butte/OR226 2014	Intersection traffic control	Intersection traffic control - other		Intersections		$145,743	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
US20 OR126 Jct. - Deschutes River Bridge 18684	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR 58: Black Canyon - Middle Fork Willamette	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	

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
River 1R Inlay (Travel Lanes) Lane Co. 18616															
OR140: Ritter Rd. Deer Run Rd. (Bly Mtn) Klamath Falls-Lakeview Hw., Klamath Co. 13828	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR66 @ Delap Rit Road (Klamath Falls) 20256	Roadway	Roadway - other		Miles		$247,530	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Grants Pass Signal and Pedestrian Upgrades 19960	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$382,950	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
US 199:MP 25 to Kerby Shoulder Widening 20191	Shoulder treatments	Widen shoulder - paved or other		Miles		$73,260	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
FFO - US26: MP 49.2 - 57.45 Mt Hood, Clackamas Co. 13717	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US26 (Powell Blvd): SE 20th - SE 34th, Mt. Hood Crosswalk Signals, RF Beacons, striping, signing and ADA Upgrades 18795	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$296,869	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Intersections	
FFO-US26: MP49.2 - MP 57.45 13717	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US26: SE Cesar E. Chavez Blvd - Wolf Dr. 18785	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US26 (Powell Blvd.): SE 122nd Ave. - SE 136th Ave. 19690	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$12,685,419	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Intersections	
OR8: SW 185th Ave. Sec Tualatin Valley Highway	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$822,961	HSIP (23 U.S.C. 148)			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
Washington, Co. 17704															
OR 8: Corridor Safety and Access to Transit 18839	Non-infrastructure	Non-infrastructure - other		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR22 @ Smithfield Rd./Kings Valley 20141	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$187,923	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
US20: Children's Farm Home to Merloy 20733	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 20: Safety Upgrades (Albany to Corvallis) 21191	Roadway	Roadway - other		Miles		$1,874,013	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 20: MP 4.60 Roadside Improvements 20202	Roadside	Roadside - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
I-5: Exists 119 and 120 Interchange Improvements 17918	Interchange design	Interchange design - other		Interchanges			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR18 @ Christensen Road 16118	Roadway	Roadway - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR38: US 101-Dean Creek Paving and Ped Improvements, Grind/Inlay, Douglas Co. 18869	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US26: NW Mountaindale Rd. - NW Glencoe Rd. Sunset Pavement Preservation Washington Co. 18777	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 395: Alkali Lake - Lake Abert Lakeview-Burns Highway Lake County 18694	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	

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
US26: Warm Springs Safety Corridor Warm Springs Intersection, Roadside and Bike Ped Safety Improvements Jefferson Co. 19640	Roadside	Roadside - other		Intersections		$427,350	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99E: @ Airport Rd. (Albany) 20183	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$260,406	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99: Rogue Valley Intersection Improvements 21408	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$81,030	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR126: Torrence Rd. - Cornerstone Dr. 18613	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR99: I-5 to Scenic Ave. 20185	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR99: Ashland Pedestrian Upgrades 20186	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists				$128,760	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Pedestrians	
I-84 and I-205 Barrier Installation 19691	Roadside	Barrier - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR213: Cascade Hwy. N. @ Stark and Washington (Portland) Cascade Hwy. N., Intersection/Signal Upgrade, Access Mgmt., Median/Curb 16150	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$221,507	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR213 (82nd Ave.): Sandy Blvd. Cascade Highway N. Multnomah County 17707	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			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
Mission St. Adaptive Signal Timing (Salem) 20214	Intersection traffic control	Modify traffic signal timing - general retiming		Intersections		$33,300	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99E: Young Street Safety & ADA Ramps (Woodburn) Pacific Highway East Marion Co. 16008	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99E: Enhanced Pedestrian Crosswalks (Woodburn) 20093	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Intersections		$1,209	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99W @ Clow Corner Rd. Pacific Highway West Channelize Turning Movements Polk Co. 16120	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99: Eugene-Junction City Safety Barrier 20244	Roadside	Barrier - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Region 2 (Central) Signal Improvements Part 2 20130	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$99,900	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99W: Orrs Corner Road - Clow Corner Road 21374	Roadway	Roadway - other		Miles		$860,250	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR99W: Salmon River Highway 20138	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OR99W (Barbur Blvd): MP 8.01 to MP 11.50 20439	Roadway	Roadway - other		Miles		$226,300	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
FFO - US30: Old Portland Road to Millard Lower Columbia River	Intersection traffic control	Modify traffic signal - modernization/replacement		Intersections		$420,864	HSIP (23 U.S.C. 148)			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
Intersection Improvements 17702															
US30 @ 8th St. (Astoria) 20177	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$121,434	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
US30: Millard and Bennett Roads (St. Helens) 21459	Roadway	Roadway - other		Miles		$733,230	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
US 30BY (Lombard) Safety Extension 20413	Roadway	Roadway - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR214: Jefferson St. (Silverton) 21190	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR217: Hall-Scholls Intchgs & OR10 @ Western Ave Various Highways Washington, County 17703	Roadway	Roadway - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
2016 Region 1 Local Roads Signal Upgrades (HSIP) Scholls Signal Safety Enhancements and Upgrades 19528	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR217: OR10 - 99W SB Auxiliary Lane 18841	Intersection geometry	Auxiliary lanes - miscellaneous/other/unspecified		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR154 @ Strongtown Road Lafayette T - Intersection and build left turn refuge Yamhill Co. 16119	Intersection geometry	Auxiliary lanes - add left-turn lane		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR213 At S. Union Mills Rd. Cascade S. Intersection Improvements	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified		Intersections		$159,986	HSIP (23 U.S.C. 148)			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
Clackamas Co. 18789															
OR211 @ Canby Marquam Highway 20142	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$723,700	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
FFO - OR212/224: Sunrise Corridor (I-205 SE 122nd Ave.) Various Highways, Clackamas Co. 15555	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR 9 (Clackamas Hwy.): SE 232nd Dr. Clackamas Add left & right turn lanes 17716	Intersection geometry	Intersection geometry - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR99: Urban Upgrade (Cottage Grove) 20242	Roadway	Roadway - other		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR540: Broadway @ Newmark Realign (North Bend) 20219	Intersection geometry	Intersection geometry - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR234: Gold Hill-Sams Valley Intersection 20196	Roadway	Roadway - other		Miles		$82,140	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OR207: 11th @ Orchard Ave. Signal (Hermiston) 17443	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
OR207: 11th @ Elm and Orchard Signals (Hermiston) 20671	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$112,115	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
Hwy 351: Joseph/Wallowa Lake Bike/Ped Improvements 18903	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Pedestrians	
OR361 @ Dover, Eurek, Gem and Highland 20706	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			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
OR140: Green Springs Intch-K Falls/Malin Hwy. S. Klamath Falls Structural overlay, upgrade signs, other safety features 18677	Roadway	Roadway - other		Interchanges			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
Region 5 Curve Warning Signs 2016 18984	Roadway signs and traffic control	Curve-related warning signs and flashers		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
US30 (Astoria) and OR 99W (McMinnville) Signal Upgrade 18665	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
I-84: Median Barrier Safety Improvement Project 19785	Roadside	Barrier - other		Miles		$1,193,174	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Region 2 Curve Warning Signs (Part 3) 19696	Roadway signs and traffic control	Curve-related warning signs and flashers		Signs			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Safety Features for Local Roads and Streets 2017 19665	Roadway	Roadway - other		Crosswalks			HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Pedestrians	
Southern Oregon Warning Sign Upgrades 20247	Roadway signs and traffic control	Curve-related warning signs and flashers		Signs		$1,531,659	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
OSU Engineering Safety Short Courses FFY18 19669	Non-infrastructure	Training and workforce development		Training and workforce development		$21,220	HSIP (23 U.S.C. 148)			0		State Highway Agency	Training and workforce development	Training and workforce development	
Queen Ave. Rail Crossing (Albany) 21185	Railroad grade crossings	Railroad grade crossings - other		Access points			RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))			0		State Highway Agency	Spot	Intersections	
West Lane County Curve Warning Upgrades 20223	Roadway signs and traffic control	Curve-related warning signs and flashers		Signs			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Central Systemic Signals &	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	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
Illumination (ODOT) 20335															
Region 1 High Friction Surface Treatment 20719	Roadway	Pavement surface - high friction surface		Locations		$568,407	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
Region 4 ARTS 20074	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists		Locations			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Pedestrians	
US20: Geary St. to Waverly St. (Albany) 20184	Roadway	Roadway - other		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Pedestrians	
Southern Oregon Signal Upgrades 21308	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Intersections	
Region 2 (North) Signal Improvements Part 2 20136	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$99,900	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
West Systemic Signals and Illumination (ODOT) 20376	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections			HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Intersections	
Malheur County Safety Improvements 20263	Roadway	Roadway - other		Miles			HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
Region 2 (Central and South) Rural Signal Improvements 20137	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$769,678	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
Josephine County Safety Improvements 20194	Roadway	Roadway - other		Miles		$842,508	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Roadway Departure	
OSU Engineering Safety Short Courses FFY19 20643	Non-infrastructure	Training and workforce development		Training and workforce development		$250,000	Other Federal-aid Funds (i.e. STBG, NHPP)			0		State Highway Agency	Training and workforce development	Training and workforce development	
Safety Features for Local Roads (U of P) FFY19 20647	Non-infrastructure	Training and workforce development		Training and workforce development		$150,000	Other Federal-aid Funds (i.e.			0		State Highway Agency	Training and workforce development	Training and workforce development	

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
							STBG, NHPP)								
Systemic signals and Illumination (Beaverton) 20374	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$285,900	HSIP (23 U.S.C. 148)			0		County Highway Agency	Systemic	Intersections	
Region 2 (South) Curve Warning Upgrades 20193	Roadway signs and traffic control	Curve-related warning signs and flashers		Signs		$91,241	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
Human Factors Engineering ffy19 20646	Non-infrastructure	Training and workforce development		Training and workforce development		$50,000	HSIP (23 U.S.C. 148)			0		State Highway Agency	Training and workforce development	Training and workforce development	
City of Springfield Signal Enhancements 20221	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified		Intersections		$158,952	HSIP (23 U.S.C. 148)			0		City or Municipal Highway Agency	Systemic	Intersections	
US20/OR201: Burns to Ontario	Roadway	Roadway - other		Miles		$2,222,000	HSIP (23 U.S.C. 148)			0		State Highway Agency	Systemic	Roadway Departure	
East Hardcastle Ave. Reallignment 21425	Alignment	Alignment - other		Locations		$221,999	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Intersections	
Region 2 Intelligent Transportation Systems Improvements 21466	Advanced technology and ITS	Advanced technology and ITS - other		Advanced technology and ITS - other		$2,258,295	HSIP (23 U.S.C. 148)			0		State Highway Agency	Spot	Advanced technology and ITS - other	

In mid August 2019, ODOT's Chief Financial Officer sent FHWA the letter shown below (draft) requesting a waiver to obligating the HRRR funds.

As part of Section 148(g)(l) of Title 23, United States Code (U.S.C.), the State of Oregon triggered the High Risk Rural Road (HRRR) special rule for Federal Fiscal Year (FFY) 2019. With this trigger, the Oregon Department of Transportation (ODOT) is required to obligate $2,440,120 in FFY 2019.

ODOT introduced the All Roads Transportation Safety (ARTS) Program in 2016, it is designed to be a data driven HSIP program to address needs on all public roads in Oregon. The Association of Oregon Counties and League of Oregon Cities participated in the development of the program. An integral part of the program is to improve safety on local agency roads including rural roads. The program is focused on a blend of hot spot and systemic safety. A major focus is on rural Roadway Departure and Intersection safety (as per Oregon's Strategic Highway Safety Plan).

ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

Here is a small list of projects which would have obligated the HRRR funding, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

2019 Oregon Highway Safety Improvement Program

STIP Key Number	Project Name	Project Amount
20526	Highland Ave (Hermiston) Safety Improvements	$118,830
20420	Cove Avenue at Albany St. (La Grande)	$46,060
20194	Josephine County Safety Improvements	$842,508
19683	OR 153: Bellevue-Hopewell Hwy Rail xing sfty Proj.	$771,395
19796	Region 2 (Central) local road roadway departure	$318,365
19797	Lane County local road roadway departures	$681,395
20142	OR211 @ Canby Marquam Hwy	$723,700
Total		$3,502,253

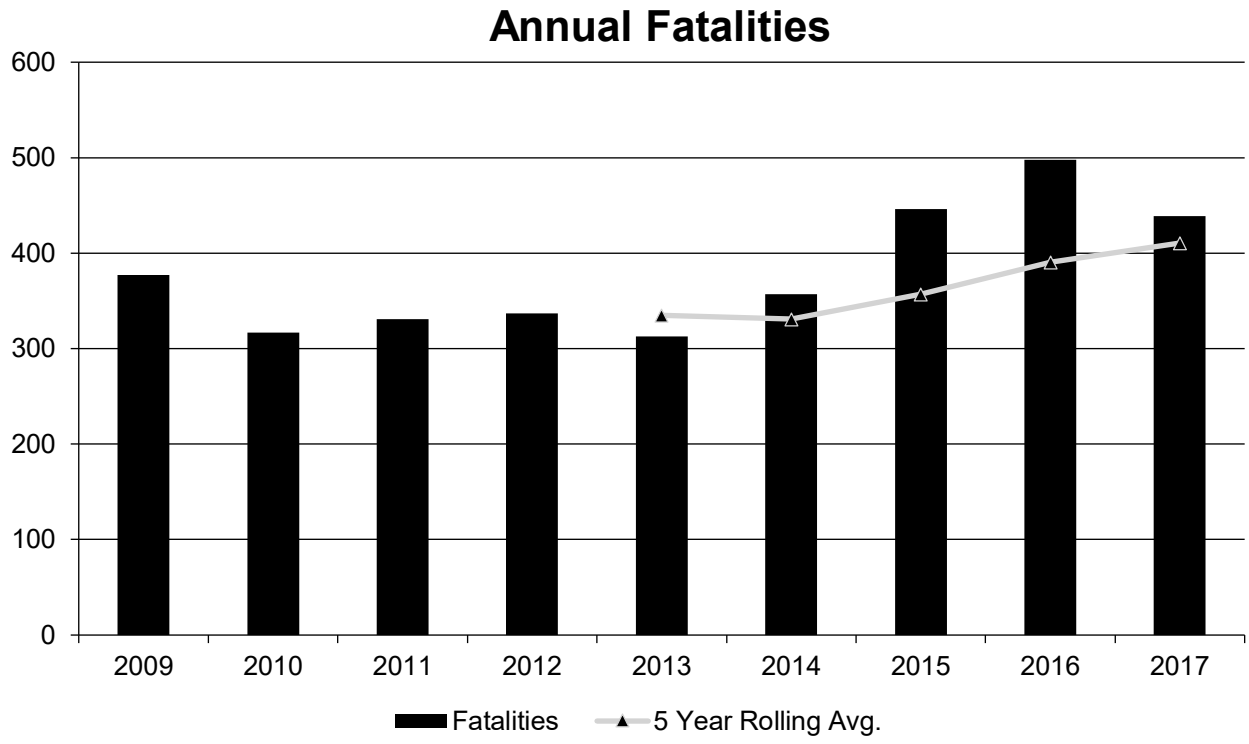
This situation has put ODOT in a unique situation, where the agency is delivering the projects which meet the intent for HRRR, but we do not have the mechanism to obligate. ODOT is requesting a waiver to transfer the remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

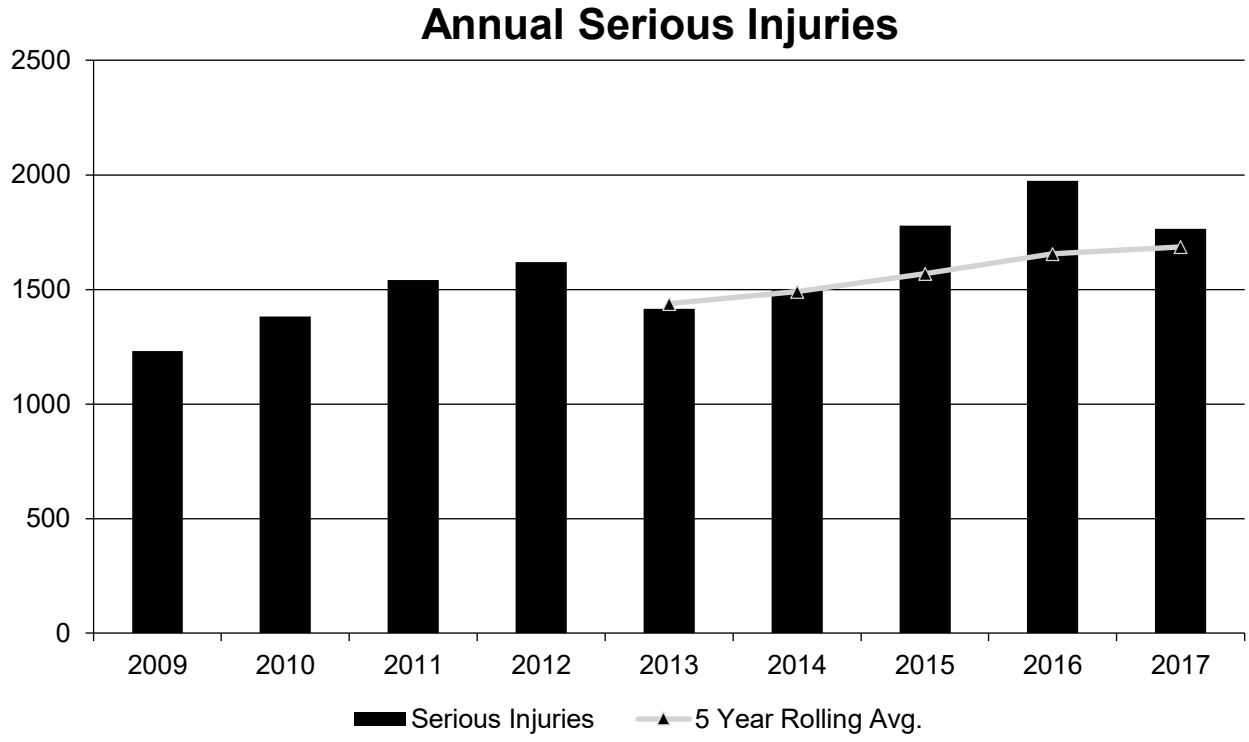
Safety Performance

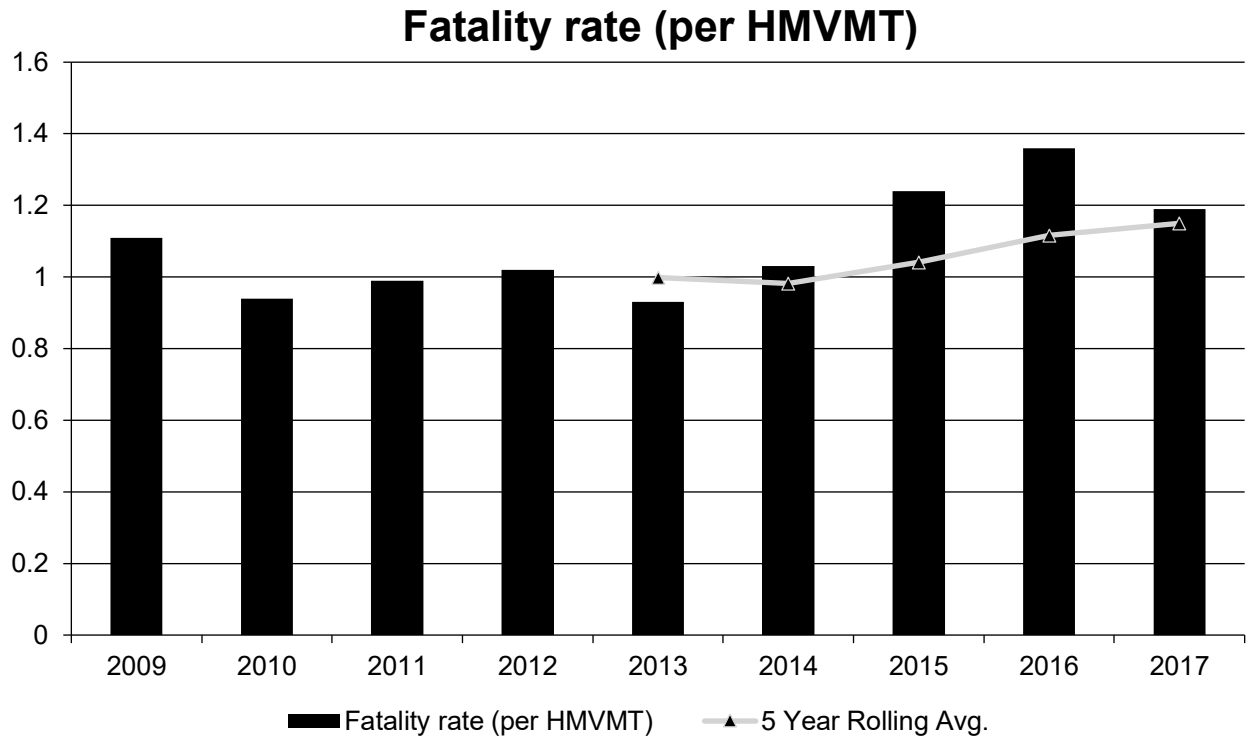
General Highway Safety Trends

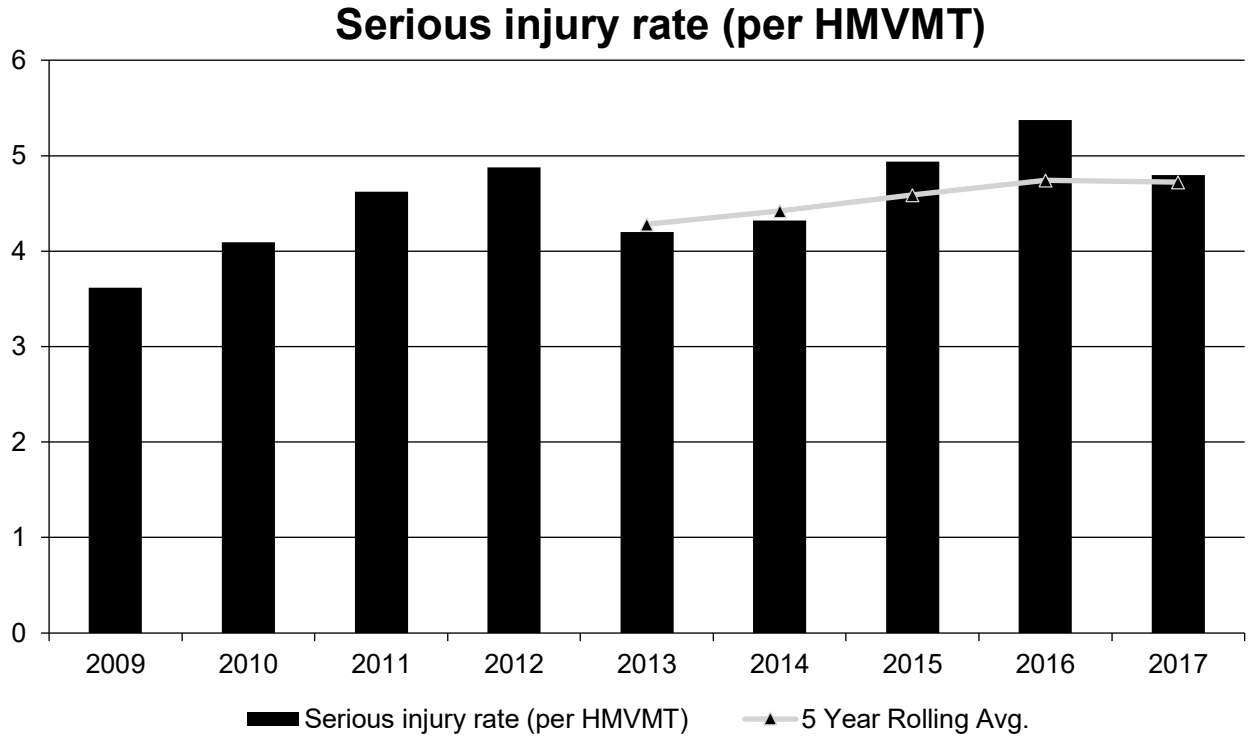
Present data showing the general highway safety trends in the State for the past five years.

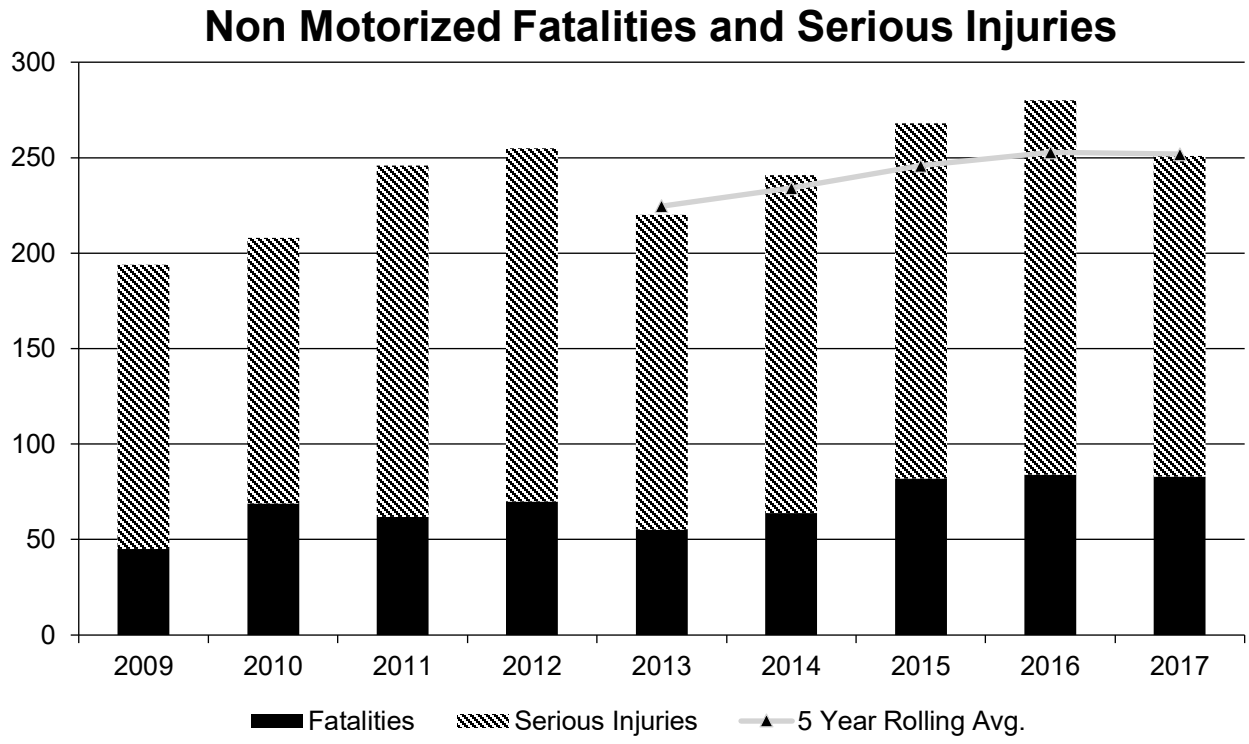
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	377	317	331	337	313	357	446	498	439
Serious Injuries	1,231	1,382	1,541	1,618	1,416	1,495	1,777	1,973	1,764
Fatality rate (per HMVMT)	1.110	0.940	0.990	1.020	0.930	1.030	1.240	1.360	1.190
Serious injury rate (per HMVMT)	3.620	4.090	4.620	4.880	4.200	4.320	4.940	5.370	4.800
Number non-motorized fatalities	45	69	62	70	55	64	82	84	83
Number of non-motorized serious injuries	149	139	184	185	165	177	186	196	168
PDO Crashes	21,887	22,922	24,853	25,036	26,228	26,716	26,025	29,321	28,926

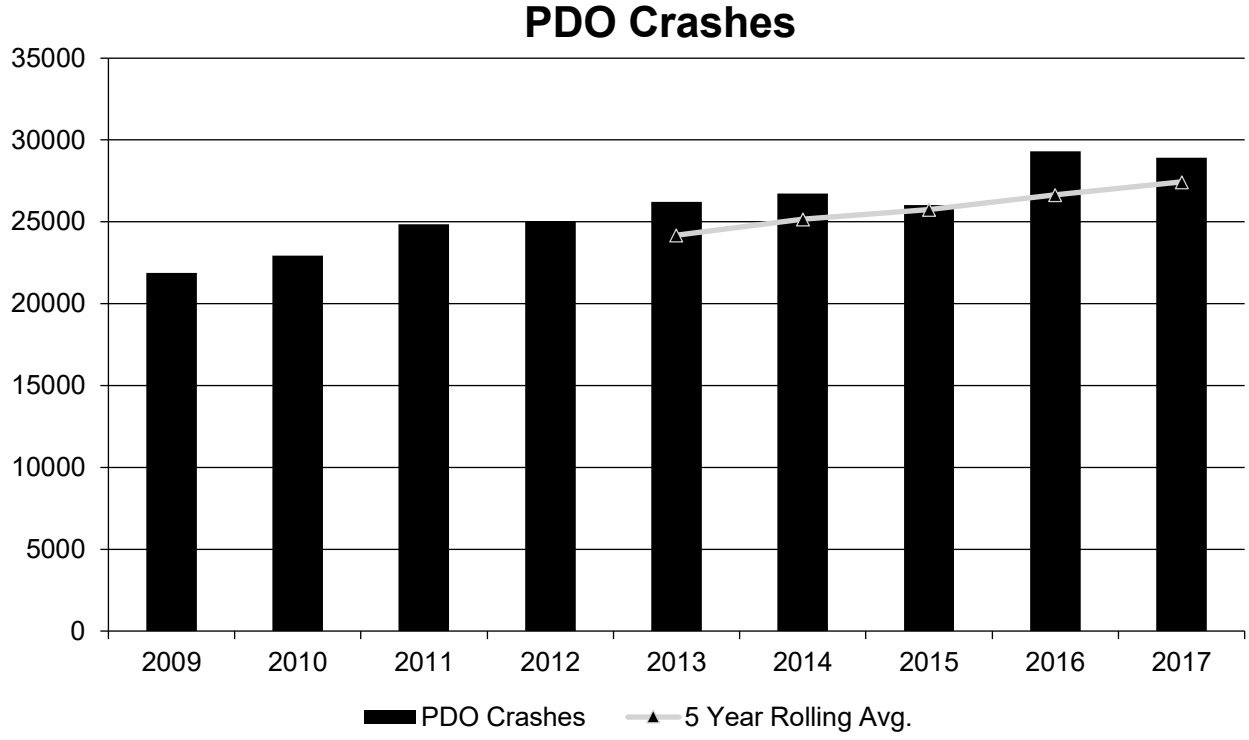

Annual Fatalities
600
500
400
300
200
100
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2500
2000
1500
1000
500
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
6
5
4
3
2
1
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious injury rate (per HMVMT)
5 Year Rolling Avg.





Please note that the 2018 crash data for Oregon has not been coded into our Crash Analysis and Reporting System (CARS) database yet. We anticipate that it will be available for next years 2020 HSIP annual report. In 2018 there were 506 fatalities in Oregon.

Number of non-motorized fatalities means the total number of fatalities (as defined in this section) with the FARS person attribute codes: Pedestrian, (6) Bicyclist, (7) Other Cyclist, and (8) Person on Personal Conveyance

Serious injuries means: (1) From April 14, 2016 to April 15, 2019, injuries classified as "A" on the KABCO scale through use of the conversion tables developed by NHTSA; and (2) After April 15, 2019, "suspected serious injury (A)" as defined in the MMUCC.

Describe fatality data source.

Other
If Other Please describe

Oregon Department of Transportation (ODOT) Crash Data Base System in comparison with FARS data

Primarily, we use the Oregon Department of Transportation (ODOT) crash data base system because the data is available sooner than the FARS data. We compare our ODOT fatality crash data with FARS when possible.

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

Year 2017

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	19.8	51.2	0.52	1.32
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	90.2	232.2	2.16	5.58
Rural Minor Arterial	47.2	141.6	2.59	7.74
Rural Minor Collector	15.6	42.6		
Rural Major Collector	60	167.8	3.27	9.1
Rural Local Road or Street	19.2	55.8	0.96	2.82
Urban Principal Arterial (UPA) - Interstate	16.6	78	0.3	1.46
Urban Principal Arterial (UPA) - Other Freeways and Expressways	4	28.2	0.29	2.04

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)
Urban Principal Arterial (UPA) - Other	67.2	386.8	1.23	7.14
Urban Minor Arterial	36.6	274	0.86	6.46
Urban Minor Collector				
Urban Major Collector	25	156.4	0.97	5.98
Urban Local Road or Street	8.2	64.8	0.39	3.04

Year 2015

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	1	1	1	1
County Highway Agency				
Town or Township Highway Agency				
City or Municipal Highway Agency				
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				
Suburban Minor Collector	1	1	1	1

Please note that the 2018 crash data for Oregon has not been coded into our Crash Analysis and Reporting System (CARS) database yet. We anticipate that it will be available for next years 2020 HSIP annual report.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities:328.0

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group. Decrease traffic fatalities to 328 by December 31, 2020.

Number of Serious Injuries:1368.0

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group. Decrease serious traffic injuries to 1,368 by December 31, 2020.

Fatality Rate:0.780

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group. Reduce the fatality rate to 0.78 by December 31, 2020.

Serious Injury Rate:4.060

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group. The serious injury rate for our 2020 target is 4.06 people per 100 million vehicle miles traveled (VMT).

Total Number of Non-Motorized Fatalities and Serious Injuries:215.0

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group. The non-motorized fatalities plus serious injuries for our 2020 target is 215 people.

For more information regarding how ODOT's performance measures were set, please refer to pages 100 - 105 of the Oregon Safety Action Plan (TSAP) 2016, http://www.oregon.gov/ODOT/TS/docs/TSAP/TSAP_2016_web.pdf .

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

The annual HSIP performance targets were developed during the last Strategic Highway Safety Plan update and were agreed upon by a multidisciplinary working group including the SHSO (and including a representative of an MPO). Afterwards ODOT held meetings with the MPOs from around the state and explained the process

and the outcome. The Oregon Transportation Safety Action Plan 2016 http://www.oregon.gov/ODOT/TS/docs/TSAP/TSAP_2016_web.pdf . There is some discussion around revisiting the annual HSIP performance targets in the near future.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2018 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.

There are probably several reasons why the State's 2018 Safety Performance Targets are not being met. The primary reasons is assumed to be distracted driving issues, a limited presence of law enforcement officers due to budget cuts and an increase in people moving to Oregon.

Applicability of Special Rules

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

Yes

The High Risk Rural Roads special rule is triggered in Oregon for this fiscal year 2019 (Oct. 1, 2018 - Sept. 30, 2019). We have qualifying roadway departure safety projects in FY 2019 and have not chosen which projects to code to those funds at this time. This information is awaiting processing by ODOT's Chief Financial Officer to enter into the Fiscal Management Information System (FMIS) under program code ZS60. Oregon DOT is addressing the High Risk Rural Roads (HRRR) by completing them utilizing the State Funded Local Program (SFLP) process which makes the true federal obligation hard to accomplish but the safety work totaling more than $2,440,120 is being completed on the appropriate functional class roadways despite not using the program code ZS60 federal funds. The High Risk Rural Roads (HRRR) program funds follow our All Roads Transportation Safety (ARTS) process which was outline in a previous question.

In mid August 2019, ODOT's Chief Financial Officer sent FHWA the letter shown below (draft) requesting a waiver to obligating the HRRR funds.

As part of Section 148(g)(l) of Title 23, United States Code (U.S.C.), the State of Oregon triggered the High Risk Rural Road (HRRR) special rule for Federal Fiscal Year (FFY) 2019. With this trigger, the Oregon Department of Transportation (ODOT) is required to obligate $2,440,120 in FFY 2019.

ODOT introduced the All Roads Transportation Safety (ARTS) Program in 2016, it is designed to be a data driven HSIP program to address needs on all public roads in Oregon. The Association of Oregon Counties and League of Oregon Cities participated in the development of the program. An integral part of the program is to improve safety on local agency roads including rural roads. The program is focused on a blend of hot spot and systemic safety. A major focus is on rural Roadway Departure and Intersection safety (as per Oregon's Strategic Highway Safety Plan).

ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

A small list of projects which would have obligated the HRRR funding are outlined in question #23, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

This situation has put ODOT in a unique situation, where the agency is delivering the projects which meet the intent for HRRR, but we do not have the mechanism to obligate. ODOT is requesting a waiver to transfer the remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

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	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	50	48	56	58	68	86	67
Number of Older Driver and Pedestrian Serious Injuries	162	169	134	167	197	232	219

Oregon DOT is currently conducting a research project with Portland State University and Oregon State University titled: "Addressing Oregon's Rise in Deaths and Serious Injuries for Senior Drivers and Pedestrians". This research project is scheduled to be completed by spring of 2020.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

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 have trended downwards, Since 2013 however there have been annual increases, this increase has been common across the country. Project level evaluations has shown that the projects implemented under HSIP funding have improved the locations where invested. A recent comparison of Roadway Departure has also shown that the last few years of investments in this key area has lessened the percentage of total roadway departure crashes, indicating Oregon's investments in systemic roadway departure has been moving the numbers.

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

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

With the implementation of the ARTS program, there is an increased awareness of safety and a data-driven process for developing safety projects across all jurisdictions in Oregon. Policy level changes that are a direct result of HSIP implementation efforts like the use of safety edge now incorporated into our Highway Design Manual. Improved guidance in our signing and striping manuals to reduce wrong way driving at interchange ramps taken from a recent research project that was completed in September 2017. Improved guidance in our signal policy and guidelines to eliminate conflicts between left turn traffic and pedestrians.

Describe significant program changes that have occurred since the last reporting period.

The second round of the ARTS program primarily uses federal funds from the Highway Safety Improvement Program (HSIP). The principles and purpose of ARTS and HSIP are:

• 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 Oregon DOT Regions.

• Both traditional "hot spot" methodology and systemic methodology is used. All Projects shall:

• The objective of ARTS and HSIP is to significantly reduce the occurrence of fatalities and serious injuries. 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. Many highway projects incorporate design features or elements that relate to highway safety, such as updating guardrail or improvements to intersection channelization, signing and pavement markings. But 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.

• Address a specific Safety problem contributing to fatalities and serious injuries

• Use proven countermeasures that correct or substantially improve the fatal and serious injury problem

• Use ODOT crash data to establish the Benefit/Cost ratio (so projects can be compared fairly)

• Use ODOT Benefit Cost method (or Cost effectiveness for Bicycle/Pedestrian)

• Be prioritized or categorized based on the Benefit/Cost Ratio for developing the 150% list

• Use only proven countermeasures from the approved ODOT Crash Reduction Factor list (a written process is developed for considering new measures)

• Projects must include written support from the Road Jurisdiction if the project is proposed by another agency

• Benefit Costs will be based on the most recent available three to five years of crash dataHot Spot Projects shall:

• The traditional approach to safety is to identify "hot spot" locations, and then identify measures to implement by diagnosing the "hot spot".

• Address a location with a crash history of at least one fatal or serious injury crash within the last five yearsSystemic Projects shall:

• The systemic approach identifies a few proven low-cost measures to be widely implemented, then implements the measures where there is evidence that they would be most useful. The systemic measures have been proven to successfully reduce the occurrence of fatal and serious injury crashes. The sites may be selected from ODOT’s list of priority corridors for Roadway Departure, Intersections or Pedestrian/Bicycle crashes.

• Use only approved "Systemic" countermeasures as listed in the Crash Reduction factors list

• Not require the acquisition of significant amounts of right of way (more than 10% of project costs), preferably no right of way

• For the Pedestrian and Bicycle Analysis, use Highway Safety Manual methods to estimate predicted crashes for pedestrians and bicycles and Cost Effectiveness to prioritize projects selection.

• Systemic Projects should:

• Have a history of fatal or serious injury crashes or a risk of high severity crashes and preferably are selected from priority corridors within Systemic plans.Systemic funding is intended to be used for Roadway Departure, Intersections and Pedestrian/Bicycle type projects. At the statewide level the split

in F&A between Roadway Departure, Intersections and Ped/Bike is about 40%/40%/20% respectively. Regions will be given the flexibility to determine the appropriate splits between systemic types of projects for their regions. It is suggested:

• The Safety funds are split to each region based on the amount of fatalities and serious injuries occurring in the region on all public roads. Regions will be required to spend a minimum of 50% of their funding on Systemic projects.

• That at least one project per year be developed for each type, if possible.

• Region splits of systemic funds for each systemic type be roughly equivalent to the proportion of F&A occurring in the region Both Hot Spot and Systemic processes will be an application based process. Oregon jurisdictions will be invited to submit projects for Hot Spot and Systemic funding, using a large list of proven countermeasures. ODOT will distribute data on Hot Spots and Systemic Plans to help determine potential locations for improvement. For Systemic projects the submittals will be for three systemic categories of funding, roadway departure, intersections and pedestrian/bicycle, attempting to solicit submittals amounting to about 300 - 500% of available funding. ODOT Regions will check all applications for program purpose and correctness, working with the submitting agencies when necessary in order to develop a potential list of projects. The intent is that the ODOT Regions will analyze and refine the list of submitted projects in order to prioritize the project list based on program purpose of reducing fatal and serious injuries and benefit cost, in order to finalize a draft 150% list for field scoping.

• Once the refined 150% lists are ready, all projects (both hot spot and systemic) will go through a multi-discipline assessment to verify the solution. A multi-disciplinary team, including the owner of the facility, will ensure the best countermeasure is chosen to mitigate fatal and serious injury crashes. The project will also be scoped to verify the costs and any possible barrier to implementation. A finalized list of prioritized projects can then be produced with the best solution and the best cost.

• For Hot Spots projects agencies will be given the opportunity to submit projects with justification that it meets the program purpose. The number of submittals should be limited because of limited funds, but ODOT will ask for submittals amounting to 300 to 500% of the funding available to ensure sufficient worthwhile projects. Regions will categorize projects based on the project’s ability to reduce fatal and serious injury crashes and the benefit cost of the project, and finalize a draft 150% list for field scoping.

• Funding is eligible to be used for approved countermeasures as long as those countermeasures provide an improvement to reducing fatal and serious injury and are prioritized through the ARTS data driven process. Safety funds may be used to include or replace elements that are necessary to satisfactorily complete the project, such as replacing non-compliant ADA ramps, replacing pavement striping that is removed or right of way, but those elements must be included in the cost of the project and part of the prioritization process. Other elements (not applicable to the safety project) may be combined with the project (i.e., culvert), but must be funded by other sources, not safety funds.

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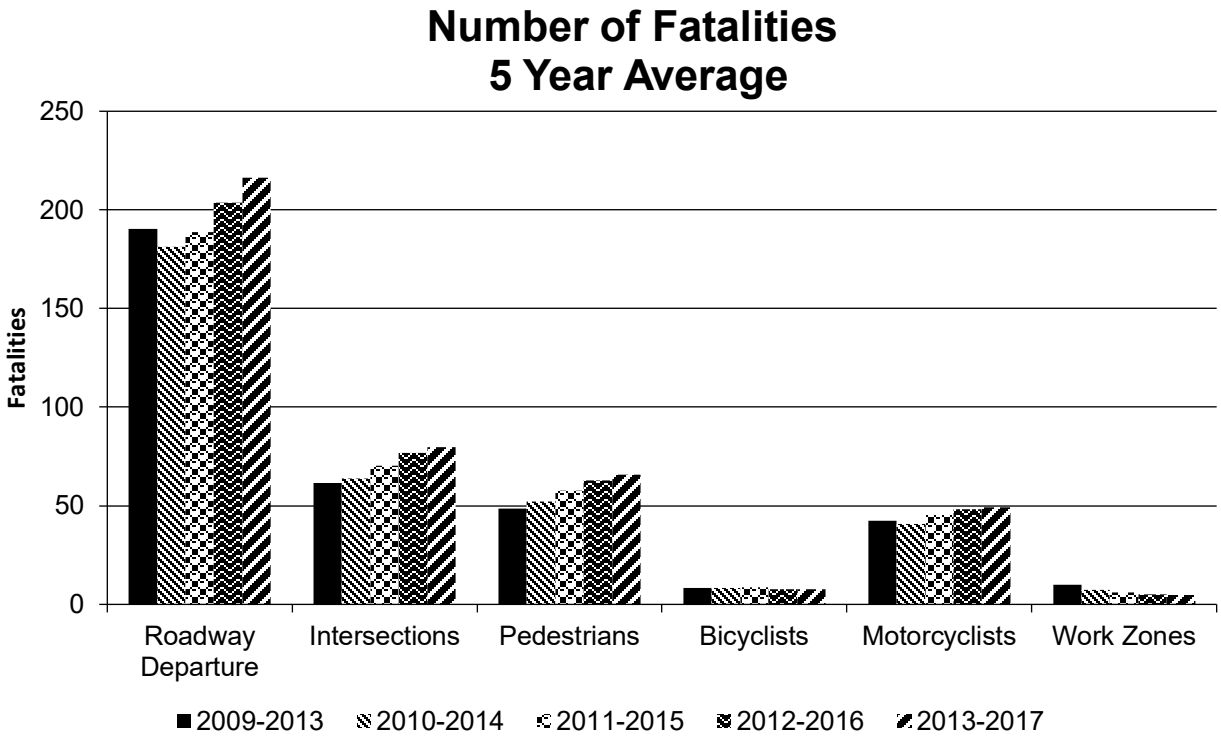
Once the list is prioritized and a final 100% list is produced ODOT Region's will work with Jurisdictions to determine the delivery methods, delivering agency and timelines (applicable funding year). For projects involving local agencies, the ODOT Regions will work with Jurisdictions to develop an Intergovernmental Agreement. The delivering agency will be accountable for timely and fiscally responsible delivery.

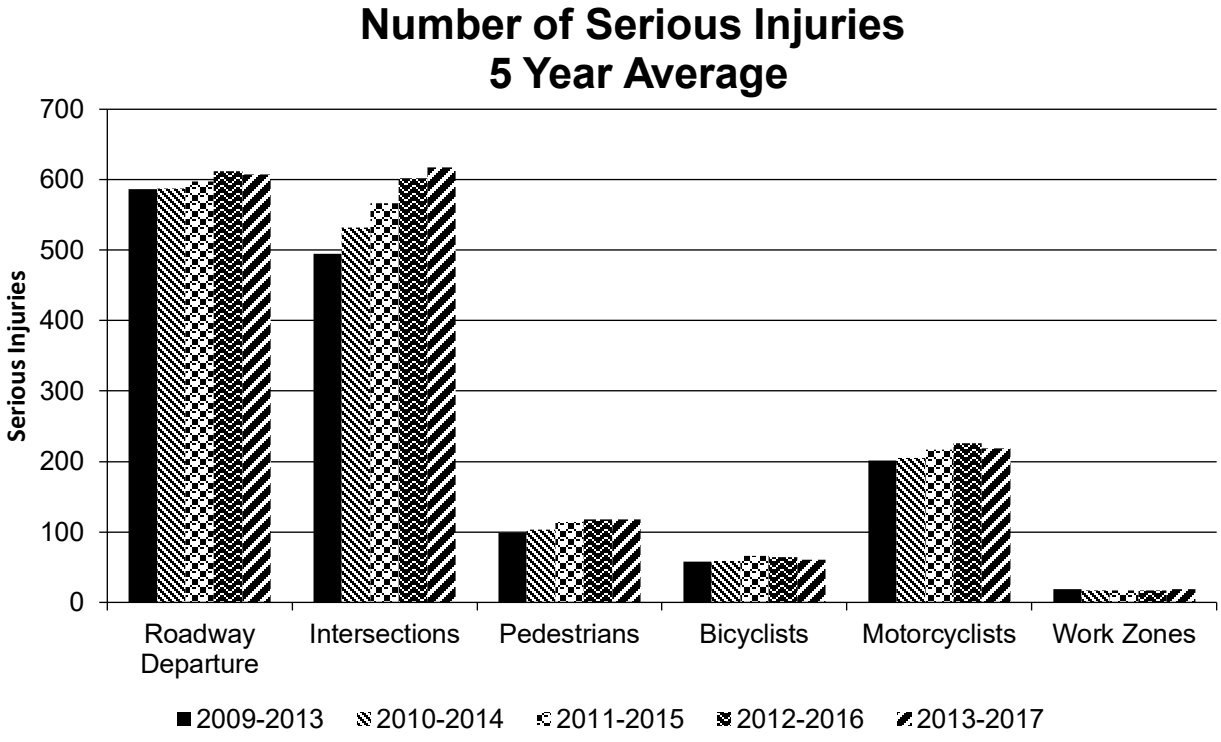
Effectiveness of Groupings or Similar Types of Improvements

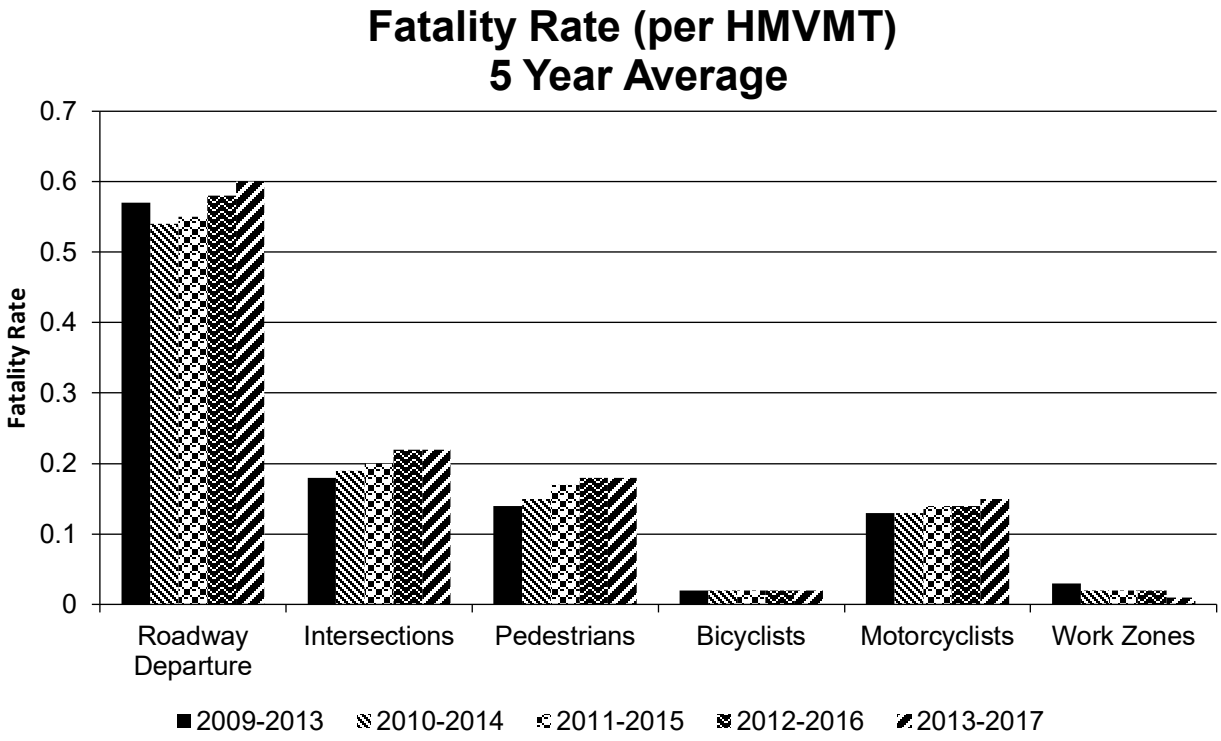
Present and describe trends in SHSP emphasis area performance measures.

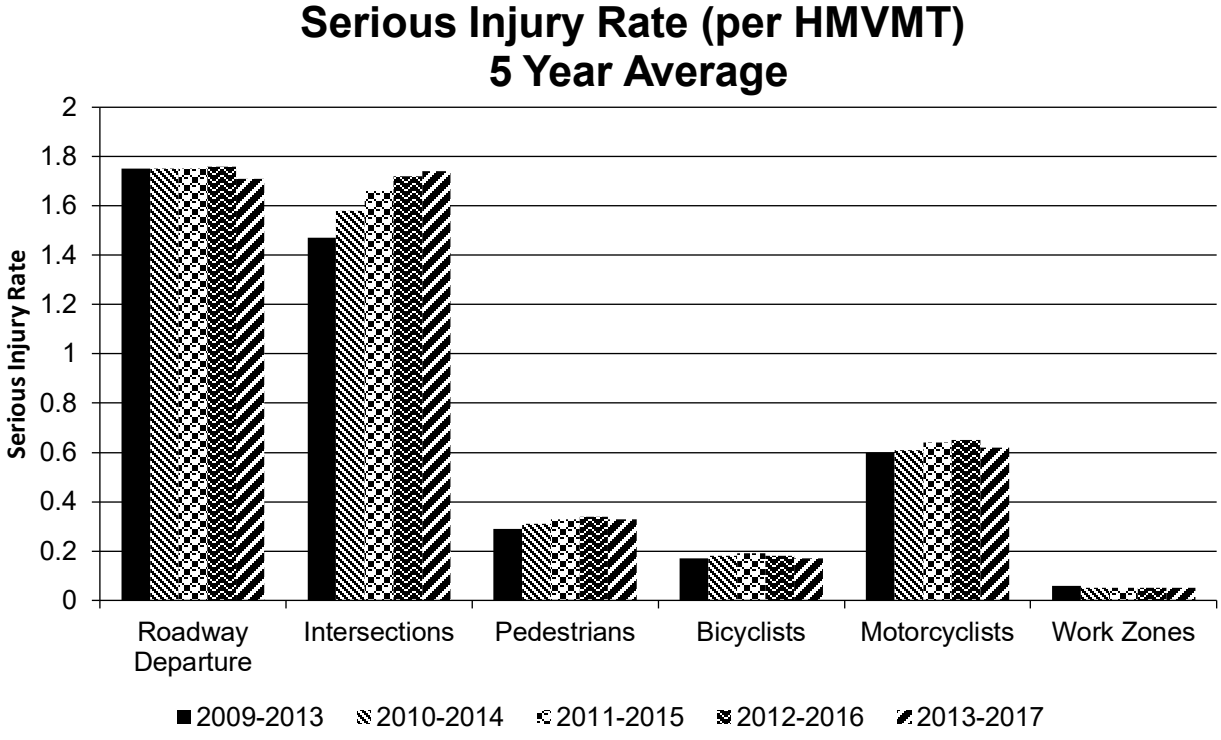
Year 2017

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)	Other 1	Other 2	Other 3
Roadway Departure	Run-off-road	216.4	607.8	0.6	1.71	0	0	0
Intersections	All	79.8	617.6	0.22	1.74	0	0	0
Pedestrians	Vehicle/pedestrian	65.6	118	0.18	0.33	0	0	0
Bicyclists	Vehicle/bicycle	7.6	60.4	0.02	0.17	0	0	0
Motorcyclists	Motorcyle Crash	49.2	218.6	0.15	0.62	0	0	0
Work Zones	All	4.8	18.8	0.01	0.05	0	0	0


Number of Fatalities
5 Year Average
Fatalities
250
200
150
100
50
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
700
600
500
400
300
200
100
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017





Please Note: It is anticipated the 2018 fatal and serious injury crashes will be coded in our ODOT crash data system in late fall 2019.

Has the State completed any countermeasure effectiveness evaluations during the reporting period?

No

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)
"B" Street: 23rd Road Ave - Primrose Lane (Forest Grove) Washington County	Urban Local Road or Street	Pedestrians and bicyclists	Install sidewalk	1.00						1.00		2.00		
Pedestrian crossing and sidewalks @ 3 Schools (Corvallis) Benton County	Urban Local Road or Street	Pedestrians and bicyclists	Install sidewalk											
US 97 @ 1st St. (LaPine) Deschutes County	Urban Principal Arterial (UPA) - Other	Intersection geometry	Intersection geometry - other	13.00	4.00			1.00	1.00	6.00	4.00	20.00	9.00	
Hermiston Signals Safety Improvements	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	82.00	133.00	1.00	1.00	6.00	8.00	161.00	121.00	250.00	263.00	
OR 62 & OR 140 Intersection	Urban Principal Arterial (UPA) - Other	Intersection geometry	Auxiliary lanes - miscellaneous/other/unspecified	3.00	1.00					3.00	2.00	6.00	3.00	
Coos County Signal Upgrades	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	213.00	255.00	3.00	2.00	6.00	6.00	154.00	166.00	376.00	429.00	
OR-217: Hall - Scholls Intchs & OR 10 @ Western Ave.	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Intersection traffic control	Modify traffic signal - modernization/replacement	166.00	69.00			7.00	3.00	135.00	91.00	308.00	163.00	
OR 224 (Clackamas Hwy): SE 197th Ave.	Urban Minor Arterial	Roadway	Roadway - other	1.00								1.00		
Region 2 Rumble Strips (Various Area 3)	Rural Minor Collector	Roadway	Rumble strips - unspecified or other	85.00	69.00	1.00	5.00	13.00	12.00	171.00	136.00	270.00	222.00	

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)
Region 2 Durable Striping Projects (2015)	Rural Minor Arterial	Roadway delineation	Improve retroreflectivity	105.00	91.00	6.00	3.00	10.00	11.00	130.00	137.00	251.00	242.00	
Buff St: 10th St. - McTaggart Rd. (Madras)	Urban Local Road or Street	Pedestrians and bicyclists	Install sidewalk											
Deborah Rd/Mabel Rush ES: Speed Signs & Bike Parking	Urban Local Road or Street	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	2.00	1.00					3.00	1.00	5.00	2.00	
Region 1 Rumble Strip Installations	Rural Principal Arterial (RPA) - Other	Roadway	Rumble strips - unspecified or other	430.00	335.00	11.00	12.00	37.00	29.00	460.00	379.00	938.00	755.00	
District 7 Rumble Strips and Warning Signs	Rural Principal Arterial (RPA) - Other	Roadway	Rumble strips - unspecified or other	602.00	282.00	20.00	18.00	50.00	29.00	514.00	278.00	1186.00	607.00	
US 97: Military Crossings - Spring Creek Hill	Rural Principal Arterial (RPA) - Other	Roadway delineation	Longitudinal pavement markings - remarking	32.00	63.00		1.00	2.00	4.00	20.00	42.00	54.00	110.00	
District 8 Rumble Strips & Warning Signs	Rural Minor Arterial	Roadway	Rumble strips - unspecified or other	289.00	212.00	13.00	11.00	51.00	23.00	340.00	242.00	693.00	488.00	
Region 2 Curve Warnings, Part 2	Rural Minor Arterial	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	311.00	156.00	11.00	6.00	28.00	20.00	363.00	228.00	713.00	410.00	
US30 - & OR34 Contiuous Left Turn Lane, Rumble Strips	Rural Principal Arterial (RPA) - Other	Roadway	Rumble strips - unspecified or other	143.00	92.00	6.00	3.00	12.00	7.00	140.00	101.00	301.00	203.00	
Region 4 Centerline Rumble Strip	Rural Principal Arterial (RPA) - Other	Roadway	Rumble strips - unspecified or other	123.00	74.00	3.00	3.00	12.00	9.00	115.00	69.00	253.00	155.00	
2015 Region 1 Curve Warning Sign Project	Urban Major Collector	Roadway signs and traffic control	Curve-related warning signs and flashers	323.00	195.00	7.00	5.00	25.00	15.00	410.00	240.00	765.00	455.00	

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

In mid August 2019, ODOT's Chief Financial Officer sent FHWA the letter shown below (draft) requesting a waiver to obligating the HRRR funds.

As part of Section 148(g)(l) of Title 23, United States Code (U.S.C.), the State of Oregon triggered the High Risk Rural Road (HRRR) special rule for Federal Fiscal Year (FFY) 2019. With this trigger, the Oregon Department of Transportation (ODOT) is required to obligate $2,440,120 in FFY 2019.

ODOT introduced the All Roads Transportation Safety (ARTS) Program in 2016, it is designed to be a data driven HSIP program to address needs on all public roads in Oregon. The Association of Oregon Counties and League of Oregon Cities participated in the development of the program. An integral part of the program is to improve safety on local agency roads including rural roads. The program is focused on a blend of hot spot and systemic safety. A major focus is on rural Roadway Departure and Intersection safety (as per Oregon's Strategic Highway Safety Plan).

ODOT is currently operating in the 2018-2021 STIP, and the highway safety improvement program projects were selected in early 2017. Later that year, ODOT initiated a new way of delivering local projects. The program is known by ODOT as the State Funded Local Program (SFLP). Projects selected for SFLP provide the opportunity for the local partner to exchange their federal funding for state funding and the local agency then takes ownership of delivering the project. This new program is still delivering the same projects which would address the HRRR program requirements, however, the funding is no longer federal.

Here is a small list of projects which would have obligated the HRRR funding, but are now being delivered via this SFLP program. The amount of these projects is more than the allocation from FHWA.

STIP Key Number	Project Name	Project Amount
20526	Highland Ave (Hermiston) Safety Improvements	$118,830
20420	Cove Avenue at Albany St. (La Grande)	$46,060
20194	Josephine County Safety Improvements	$842,508
19683	OR 153: Bellevue-Hopewell Hwy Rail xing sfty Proj.	$771,395
19796	Region 2 (Central) local road roadway departure	$318,365
19797	Lane County local road roadway departures	$681,395
20142	OR211 @ Canby Marquam Hwy	$723,700
Total		$3,502,253

This situation has put ODOT in a unique situation, where the agency is delivering the projects which meet the intent for HRRR, but we do not have the mechanism to obligate. ODOT is requesting a waiver to transfer the remaining balance of HRRR funds to HSIP as ODOT is meeting the intent. ODOT can provide additional information if needed.

Compliance Assessment

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

10/01/2016

What are the years being covered by the current SHSP?

From: 2016 To: 2021

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

2021

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

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	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT	Segment Identifier (12)	100	100					100	100		
	Route Number (8)	100	100								
	Route/Street Name (9)	100	100								
	Federal Aid/Route Type (21)	100	100								
	Rural/Urban Designation (20)	100	100					100	100		
	Surface Type (23)	100						100			
	Begin Point Segment Descriptor (10)	100						100			
	End Point Segment Descriptor (11)	100						100			
	Segment Length (13)	100	100								
	Direction of Inventory (18)	100									
	Functional Class (19)	100	100								
	Median Type (54)	100									
	Access Control (22)	100									
	One/Two Way Operations (91)	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	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Number of Through Lanes (31)	100						100			
	Average Annual Daily Traffic (79)	100	100					100			
	AADT Year (80)	100									
	Type of Governmental Ownership (4)	100	100					100	100	100	
INTERSECTION	Unique Junction Identifier (120)										
	Location Identifier for Road 1 Crossing Point (122)										
	Location Identifier for Road 2 Crossing Point (123)										
	Intersection/Junction Geometry (126)										
	Intersection/Junction Traffic Control (131)										
	AADT for Each Intersecting Road (79)										
	AADT Year (80)										
	Unique Approach Identifier (139)										
INTERCHANGE/RAMP	Unique Interchange Identifier (178)										
	Location Identifier for Roadway at Beginning of Ramp Terminal (197)										
	Location Identifier for Roadway at Ending Ramp Terminal (201)										
	Ramp Length (187)										

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	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Roadway Type at Beginning of Ramp Terminal (195)										
	Roadway Type at End Ramp Terminal (199)										
	Interchange Type (182)										
	Ramp AADT (191)										
	Year of Ramp AADT (192)										
	Functional Class (19)										
	Type of Governmental Ownership (4)										
Totals (Average Percent Complete):		**100.00**	**50.00**	**0.00**	**0.00**	**0.00**	**0.00**	**88.89**	**33.33**	**20.00**	**0.00**

*Based on Functional Classification

Two years ago we had plans to do more collecting MIRE fundamental data elements but priorities like the ADA litigation requirements temporarily delayed our efforts.

We are currently working on establishing an intersection ID, planning for a non-state road ID in Trans Info and plan to conduct an operations evaluation for MIRE element to start in 2021.

All three of these effort will help us in collecting the MIRE fundamental data elements for all roads by September 30, 2026.

Please note the table in question 49 was difficult to provide exact percentages at this time.

MIRE Fundamental Data Elements: Non Local Paved Roads – Segment , State 70%, Non-State 15%; Non Local Paved Roads – Intersection , State 70%, Non-State 5%; Non Local Paved Roads – Ramps , State 60%, Non-State 20%; Local Paved Roads , State 90%, Non-State 5%; Unpaved Roads , State 90%, Non-State 5%.

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.

Oregon DOT performed a phase 1 pilot to estimate the work necessary to collect intersection data on state highways, the finding of the pilot are being used to plan a phase pilot to collect signalized intersection data in the most populous region of the state. While there are about 500 signalized intersections on state highways in this region, the quantity and density will be very useful to hone the attributes collected and the methods used for optimum efficiency. In addition, Region 1 was identified for collection of signalized intersection data so HSM methods could be used to identify signalized intersections which, are often over capacity and already identified as crash hot spots, for potential safety improvements.

The objectives of this pilot is to collect the FDE for signalized intersection only, utilize HSM methods of network screening for potential safety improvements and finalize the methodology before implementation in other regions of the state. Tentatively we have a planned schedule of collection of the data elements.

Winter 2017 Prepare to implement Phases 3-7

Spring 2018 Begin Phase 3, FDE data collection for signalized intersections in Regions 2, 3, 4 and 5

Fall 2020 Estimated completion of Phase 3 collection of FDE

Spring 2021 Begin Phase 4, FDE data collection for signalized interchange-only intersections state-wide

Winter 2021 Estimated completion of Phase 4 collection of FDE

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

Did the State conduct an HSIP program assessment during the reporting period?

Oregon DOT collected comments and surveyed participants of the All Roads Transportation Safety (ARTS) program in order to determine effectiveness of the program and to determine potential program changes. Several of the comments from ARTS round 2 will be incorporated into the next round of the ARTS round 3 program. ODOT has plans to participate in a more detailed HSIP program assessment with the Oregon FHWA office in late 2019. The 2018 ODOT ARTS program summary report prepared by DKS Associates can be found at this link, https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/ARTS_SUmmary-Report-2018.pdf .

Optional Attachments

Program Structure:

odot_safety_program_guide[1].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.