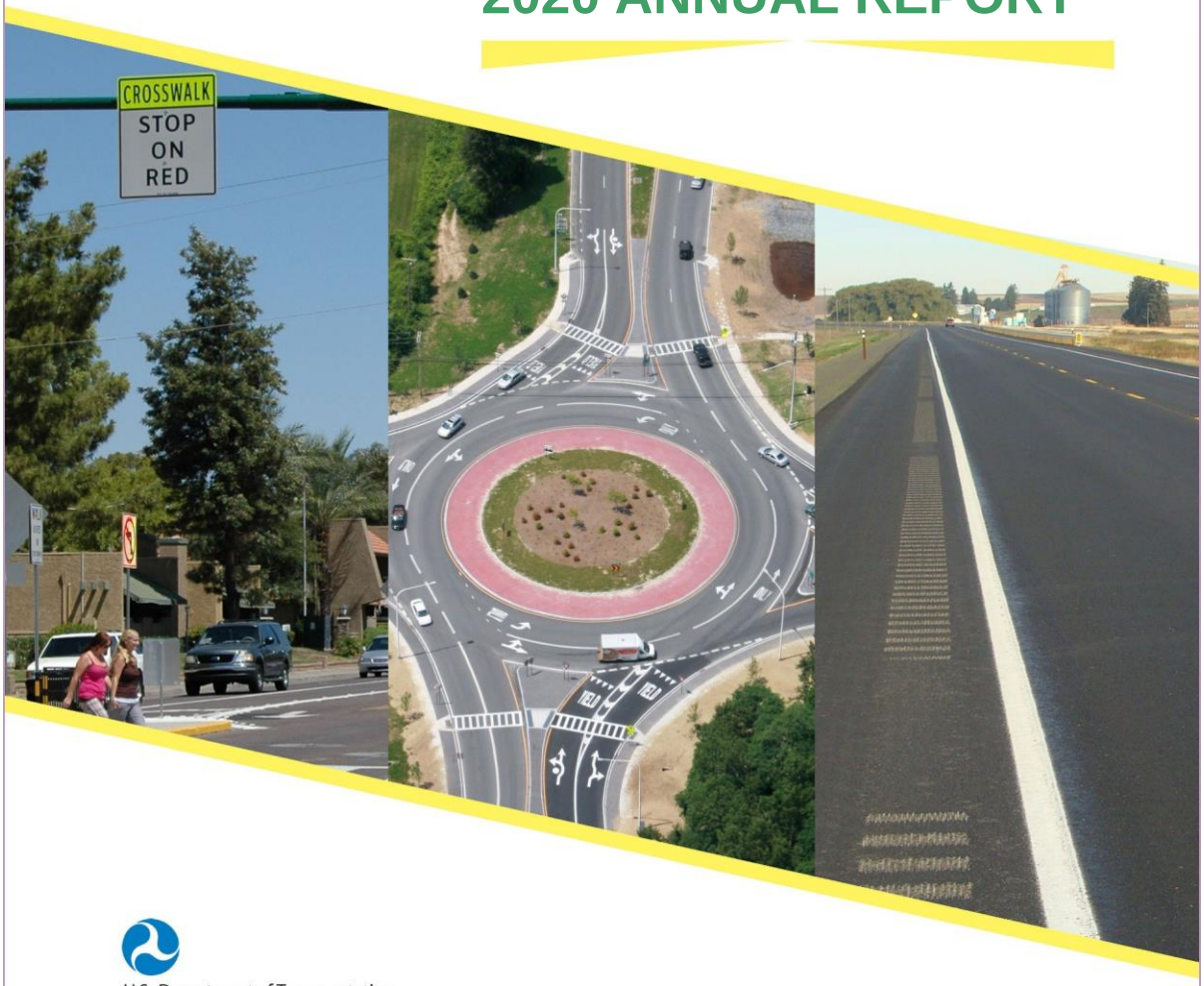
ALASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2020 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

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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. 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

Under the Alaska Highway Safety Improvement Program (HSIP), the Alaska Department of Transportation & Public Facilities (DOT&PF) identifies high risk intersections and roads, scopes and prioritizes corrective projects, funds the most cost-effective projects, and evaluates actual project and program effectiveness. HSIP dollars are distributed to the most effective projects from a single statewide fund. The purpose of the Alaska HSIP is to “maximize lives saved and major injuries eliminated per dollar spent.” We currently measure our post-construction program benefit-cost ratio at approximately 7:1, a successful ratio achieved through a program that blends spot and systemic projects throughout the State in urban as well as rural locations.

Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit-cost ratio (ranked projects) and potential for crash reduction (non-ranked projects). HQ Traffic & Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to DOT&PF's Chief Engineer for approval. Following approval of new HSIP projects, HQ Traffic and Safety selects the most effective projects and proposes a statewide HSIP funding plan for the coming federal fiscal year for approval by the Chief Engineer and the Director of Program Development.

The HSIP funding plan typically includes a blend of on-going projects and new projects. Regions design and construct funded projects and generate before-after studies when three years of post-improvement crash data becomes available. HQ Traffic & Safety manages funding for the statewide HSIP, annually updates the HSIP Handbook, maintains program effectiveness data, and produces the annual HSIP report.

Important Note on Performance Measures calculated by Online Reporting Tool: Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020.

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 general structure of Alaska's HSIP is described in Sec. 1.3 of the Alaska HSIP Handbook:

Regional Traffic and Safety Engineers in Alaska’s three regions (Northern, Central and Southcoast) screen crash data and consider other information to identify projects. Projects can be either ranked or non-ranked.

Ranked projects are implemented at locations with high crash history and are ranked by analyzing the benefit cost of specific safety-related improvements using estimated accident reduction factors and improvement costs. Non-ranked projects are implemented at locations with potential for severe crashes identified in SHSP strategies and may be spot or system-wide improvements. System wide, or systemic, improvement projects are implemented to reduce potential for fatal and serious injuries by mitigating road conditions or characteristics associated with specific crash types. Non-infrastructure projects are limited to those types specifically included in Appendix A (p. A-11) of this handbook, a reprinting of 23 U.S.C. Section 148 (a)(4)(B).

Alaska’s three regional traffic & safety sections submit proposed projects to the State Traffic and Safety Engineer for review. HQ Traffic & Safety reviews the proposed new projects, works with regions to clarify project descriptions and scope, and submits recommended projects to the Chief Engineer for advancement as safety projects. Following Chief Engineer approval of new HSIP projects, the State Traffic and Safety Engineer proposes a list of new and on-going projects for funding and coordinates with HQ Project Development to prepare a funding plan for the coming federal fiscal year.

State Traffic and Safety personnel manage the federal funds for approved projects. Regional Traffic and Safety personnel work with preconstruction and construction personnel to ensure projects remain consistent with their HSIP scope throughout design and construction. The regions conduct follow-up studies to determine the effectiveness of completed projects. HQ Traffic & Safety summarizes the overall effectiveness of the statewide program in the annual HSIP Report.

Where is HSIP staff located within the State DOT?

Engineering

HSIP program manager is located with the DOT&PF Statewide Design and Engineering Services division (Chief Engineer's office). DOT&PF regional HSIP practitioners are located within the regional preconstruction divisions.

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process

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

Safety projects on all public roads in Alaska are eligible to compete for HSIP funding. The same process is used to prioritize projects on both state and non-state (including local and tribal) roads.

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
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

Design: Regional Traffic and Safety personnel identify, scope, estimate, and rank candidate projects according to benefit-cost ratio (ranked projects) and potential for crash reduction (non-ranked projects).

HQ Traffic & Safety reviews proposed new projects, works with the regions to clarify project description and scope, and submits recommended projects to the DOT&PF Chief Engineer for funding approval.

Planning: Funding plan developed in coordination with the Office of Program Development.

Maintenance and Operations: M&O staff consulted to determine alternative project nominations where safety problems may exist despite the lack of historic crash data.

Governors Highway Safety Office: Split penalty transfer funding to address engineering solutions to highway safety.

Identify which external partners are involved with HSIP planning.

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

SHSP is the forum through which external partners participate in the HSIP planning process.

Describe coordination with external partners.

Other than through SHSP implementation, there are no formal mechanisms in the program for coordination with local agencies. However, Regional Traffic & Safety Engineers continuously work with external partners to

identify and develop HSIP project nominations. Their input is valued and considered in the development and delivery of HSIP projects.

Coordination with FHWA is described under the most recent Stewardship and Oversight Agreement.

Program Methodology

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

Yes

Select the programs that are administered under the HSIP.

- HSIP (no subprograms)

Program: HSIP (no subprograms)

Date of Program Methodology:3/27/2020

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
• All crashes	• Volume	

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Critical rate

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

Yes

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

Yes

How are projects under this program advanced for implementation?

- Competitive application process

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

Rank of Priority Consideration

Ranking based on B/C:90
Available funding:10

What percentage of HSIP funds address systemic improvements?

18

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

- Add/Upgrade/Modify/Remove Traffic Signal
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Pavement/Shoulder Widening
- Upgrade Guard Rails

HFST was previously installed as an experimental treatment systemically at several urban intersections. The treatment did not perform well at those urban locations. The aggregate was ripped out over a few winter seasons by studded tires used by many drivers in Alaska. Without the aggregate, the remaining surface had less friction than typical pavement. HSIP funds are being used to return the urban intersections to typical pavement sections.

What process is used to identify potential countermeasures?

- Crash data analysis
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan

Does the State HSIP consider connected vehicles and ITS technologies?

No

Not at this time.

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

No

Not at this time. HSIP funding was used to develop Alaska specific calibration factors for some SPFs in the HSM. DOT&PF had envisioned the calibration factors for use at planning level for HSIP nominations, but the calibration factors were much higher than expected and may not result in reliable predicted outcomes.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$42,461,951	$30,074,551	70.83%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$900,000	$900,000	100%
Penalty Funds (23 U.S.C. 154)	$8,381,705	$13,949,366	166.43%
Penalty Funds (23 U.S.C. 164)	$8,381,705	$12,951,484	154.52%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$63,000	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$5,420,244	$3,579,459	66.04%
Totals	$65,545,605	$61,517,860	93.86%

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

$1,216,786

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

$964,440

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

$1,858,000

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

$1,237,004

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?

$16,102,295

Last year, CMAQ & NHPP funds were transferred in. Department needs for surface transportation and NHPP were greater, so we chose to advance construct our HSIP projects to allow us to obligate a larger NHPP and STP program. This year, $16,102,295 was transferred to the STBG Flexible Program.

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

Alaska DOT&PF believe the flexibility lost under the FAST Act by removing eligibility for non-infrastructure projects is an impediment not only to obligation of HSIP funds but to the purpose of the HSIP program listed in 23 USC 148(b)(2) to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

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
Fairbanks Area Signal Upgrades (combines 10NR01, 13NN05, 14NR01, 14NR02)	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	57	Intersections	$507819	$507819	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Implement infrastructure projects to address intersection crashes
Steese Expressway/Chena Hot Springs Road Ramp Termini Roundabouts	Intersection traffic control	Modify control - two-way stop to roundabout	2	Intersections	$5235985	$5235985	Penalty Funds (23 U.S.C. 154)	Urban	Principal Arterial-Other	8,155		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
Fairbanks Ramp Sight Distance Improvements	Alignment	Horizontal and vertical alignment	3	Locations	$125247.6	$139164	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
NR Guardrail Inventory and Upgrades	Roadside	Barrier - other	970	Miles	$3537003	$3537003	Penalty Funds (23 U.S.C. 154)	Rural	Principal Arterial-Other	0		State Highway Agency	Systemic	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Fairbanks Area Concrete Barrier Upgrade (HSIP)	Roadside	Barrier - concrete	35	Miles	$811984.5	$902205	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Old Steese @ Fox Shoulder Widening	Shoulder treatments	Widen shoulder - paved or other	2	Miles	$240000	$240000	Penalty Funds (23 U.S.C. 154)	Rural	Major Collector	1,446		State Highway Agency	Spot	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
NR Systemic Signal Upgrades	Intersection traffic control	Modify traffic signal - add additional signal heads	8	Intersections	$187200	$208000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Multiple / Varies	Systemic	Intersections	Implement infrastructure projects to address intersection crashes

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
Sterling Highway & Main Street (Homer) Intersection Improvements	Intersection traffic control	Intersection traffic control - other	1	Intersections	$546465.744	$607184.16	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	11,405		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
Parks Hwy Safety Corridor Median and Cont. Lighting	Access management	Grassed median - extend existing	6	Miles	$11164754.48	$11164754.48	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	0	55	State Highway Agency	Spot	Lane Departure	Implement infrastructure projects to address head-on crashes
George Parks Highway Systemic Passing Lanes Project	Roadway	Roadway widening - add lane(s) along segment	80.2	Miles	$919385.51	$919385.51	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	0	65	State Highway Agency	Systemic	Lane Departure	Implement infrastructure projects to address passing crashes
Bethel Ridgecrest Drive School Zone Upgrades	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	Miles	$127980	$142200	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,982	20	City or Municipal Highway Agency	Spot	Pedestrians	Identify and implement appropriate engineering strategies to address high-crash locations involving pedestrians
Seward Highway Rockfall Mitigation, MP 109.4	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$2781442.8	$3090492	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 111.3	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$7154835.3	$7949817	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 104.7	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$2348844.3	$2609827	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through

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															HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 113.6	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$1704626.1	$1894029	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 109.6	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$2852556.3	$3169507	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 110.5	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$975183.057	$1083536.73	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Seward Highway Rockfall Mitigation, MP 113.9	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Locations	$1687082.4	$1874536	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,283	55	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Glenn Hwy Median Barrier, MP 30-34	Roadside	Barrier - other	3.5	Miles	$3524221.989	$3915802.21	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	27,750	65	State Highway Agency	Spot	Roadway Departure	Implement infrastructure projects to address head-on crashes
Tudor Rd at C St and Dimond Blvd at C St - Right Turn Channelization	Intersection geometry	Splitter island - install on one or more approaches	2	Intersections	$360000	$400000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes

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Minnesota Dr Weaving Lane	Interchange design	Acceleration / deceleration / merge lane	1	Miles	$908.88	$908.88	Penalty Funds (23 U.S.C. 154)	Urban	Principal Arterial-Other	48,285	60	State Highway Agency	Spot	Roadways	Improve roadway safety through HSIP qualified activities and projects
Old Glenn Hwy and Knick Goose Bay Rd: Wider Lane Lines	Roadway signs and traffic control	Roadway signs and traffic control - other	23.5	Miles	$900000	$1000000	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Bogard Rd at Engstrom Rd / Green Forest Dr Intersection Improvements	Intersection traffic control	Modify control - two-way stop to roundabout	2	Intersections	$270000	$300000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
Vine Rd at Hollywood Rd Intersection Improvement	Intersection traffic control	Modify control - two-way stop to roundabout	1	Intersections	$400500	$445000	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
HSIP: Arctic Blvd RR Signal Relocation	Railroad grade crossings	Upgrade railroad crossing signal	1	Locations	$58500	$65000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	8,490	40	City or Municipal Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
Gambell St Utility Pole Removal & Increased Lighting	Roadside	Removal of roadside objects (trees, poles, etc.)	1	Miles	$1000000	$1000000	Penalty Funds (23 U.S.C. 154)	Urban	Principal Arterial-Other	15,512	35	State Highway Agency	Spot	Roadway Departure	Implement infrastructure projects to address run-off-road crashes
Gambell & Ingra Streets Overhead Signal Indications	Intersection traffic control	Modify traffic signal - add additional signal heads	10	Signal heads	$658800	$732000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0	35	State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
HSIP: HFST Removal in Select Locations	Roadway	Pavement surface - miscellaneous	5	Locations	$680177.367	$755752.63	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Implement infrastructure projects to

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
															address intersection crashes
A Street Midtown Couplet - Overhead Signal Indication Upgrades	Intersection traffic control	Modify traffic signal - add additional signal heads	2	Intersections	$705600	$784000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
Sterling Highway Shoulder Widening - Soldotna to Clam Gulch	Shoulder treatments	Widen shoulder - paved or other	20.3	Miles	$3262439.286	$3624932.54	Penalty Funds (23 U.S.C. 154)	Rural	Principal Arterial-Other	4,677	55	State Highway Agency	Systemic	Roadway Departure	Implement infrastructure to address SVROR and head-on crashes
Akakeek Street and Ridgecrest Drive (in Bethel) Intersection Improvements	Intersection geometry	Intersection geometrics - modify skew angle	1	Intersections	$28440	$31600	Penalty Funds (23 U.S.C. 154)	Rural	Major Collector	5,169	30	City or Municipal Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
SIT Halibut Point Road and Peterson Avenue Intersection Safety Improvements	Lighting	Intersection lighting	1	Intersections	$303800	$303800	Penalty Funds (23 U.S.C. 154)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Implement infrastructure projects to address intersection crashes
YAK School Zone Crossing Improvements HSIP	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Locations	$340789.4	$340789.4	Penalty Funds (23 U.S.C. 154)	Rural	Minor Collector	1,013	35	State Highway Agency	Spot	Pedestrians	Implement appropriate engineering strategies to address high-crash locations involving older drivers and pedestrians
SR Regionwide Horizontal Alignment Signing Compliance	Roadway signs and traffic control	Roadway signs and traffic control - other	36	Curves	$359525.29	$359525.29	Penalty Funds (23 U.S.C. 164)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadways	Implement infrastructure projects to address run-off-road crashes
FFY 20-21 Statewide HSIP	Non-infrastructure	Non-infrastructure - other	1	N/A	$789303.6	$877004	HSIP (23 U.S.C. 148)	N/A	N/A	0		N/A	non-infrastructure	Roadways	N/A

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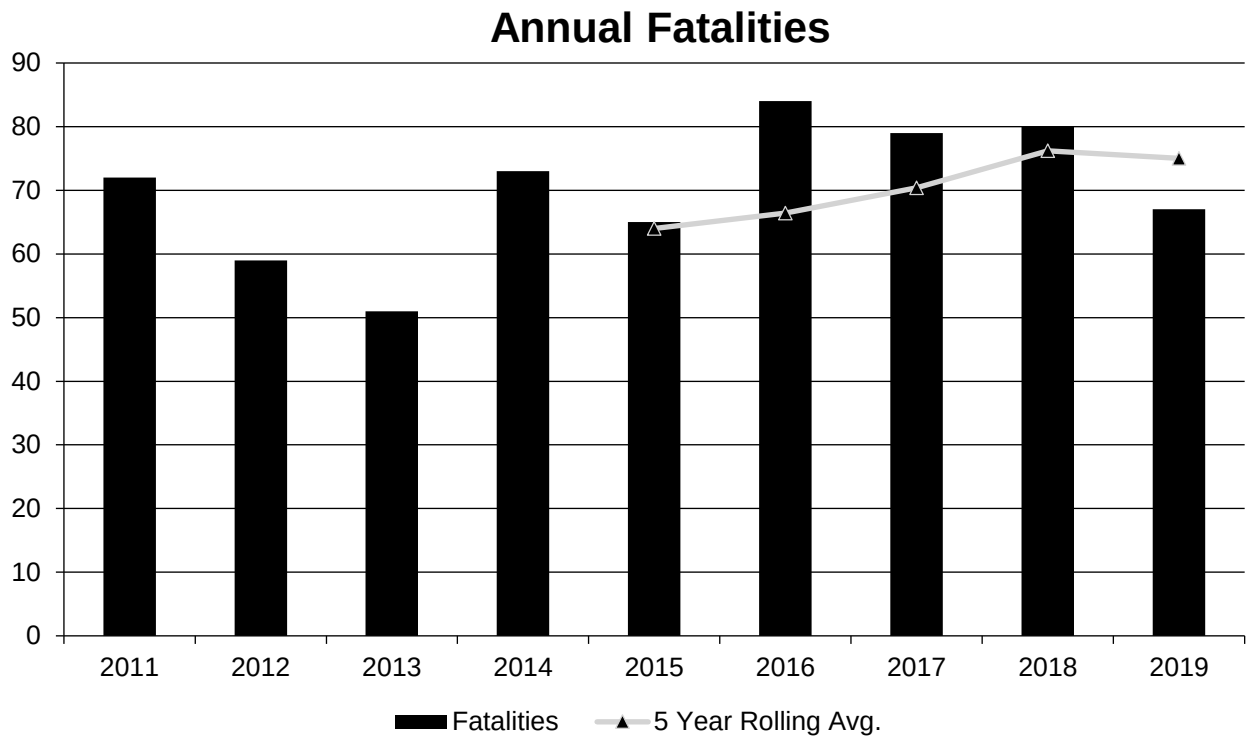
Safety Management															
NOR REG SMS/HSIP FFY2018-2020	Non-infrastructure	Non-infrastructure - other	1	N/A	$324000	$360000	HSIP (23 U.S.C. 148)	N/A	N/A	0		N/A	non-infrastructure	Roadways	N/A

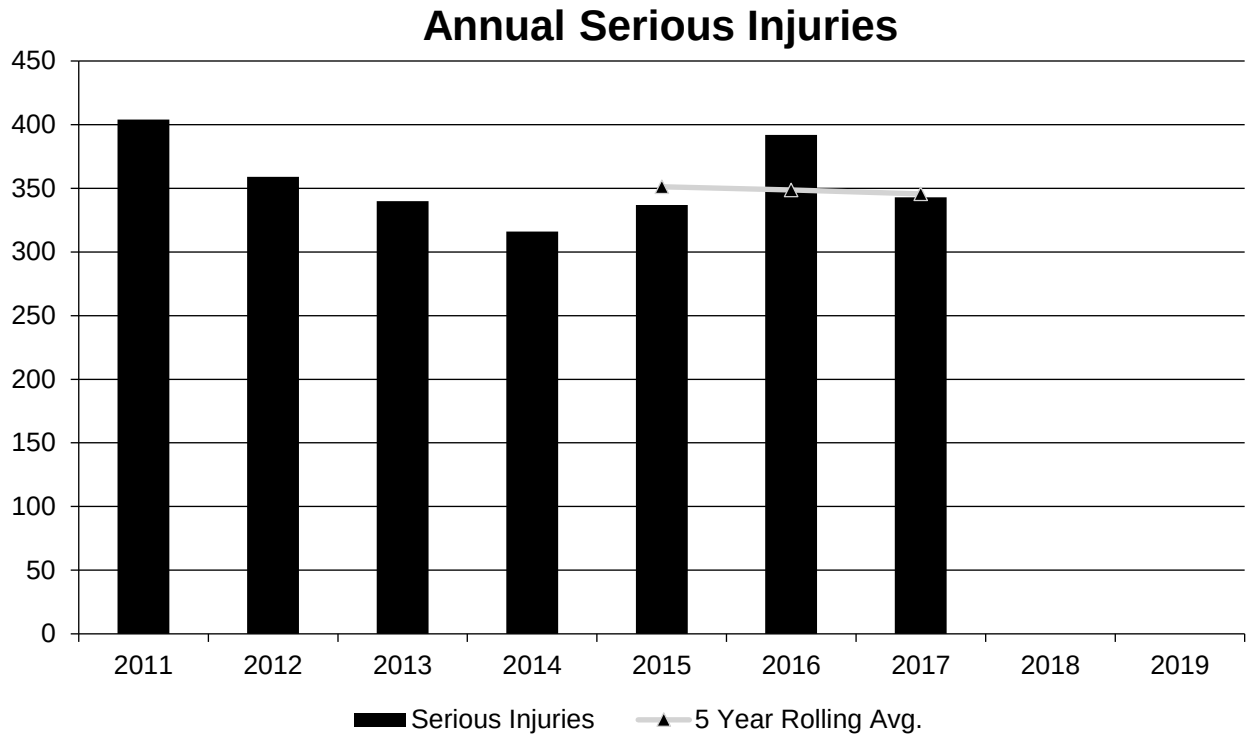
Safety Performance

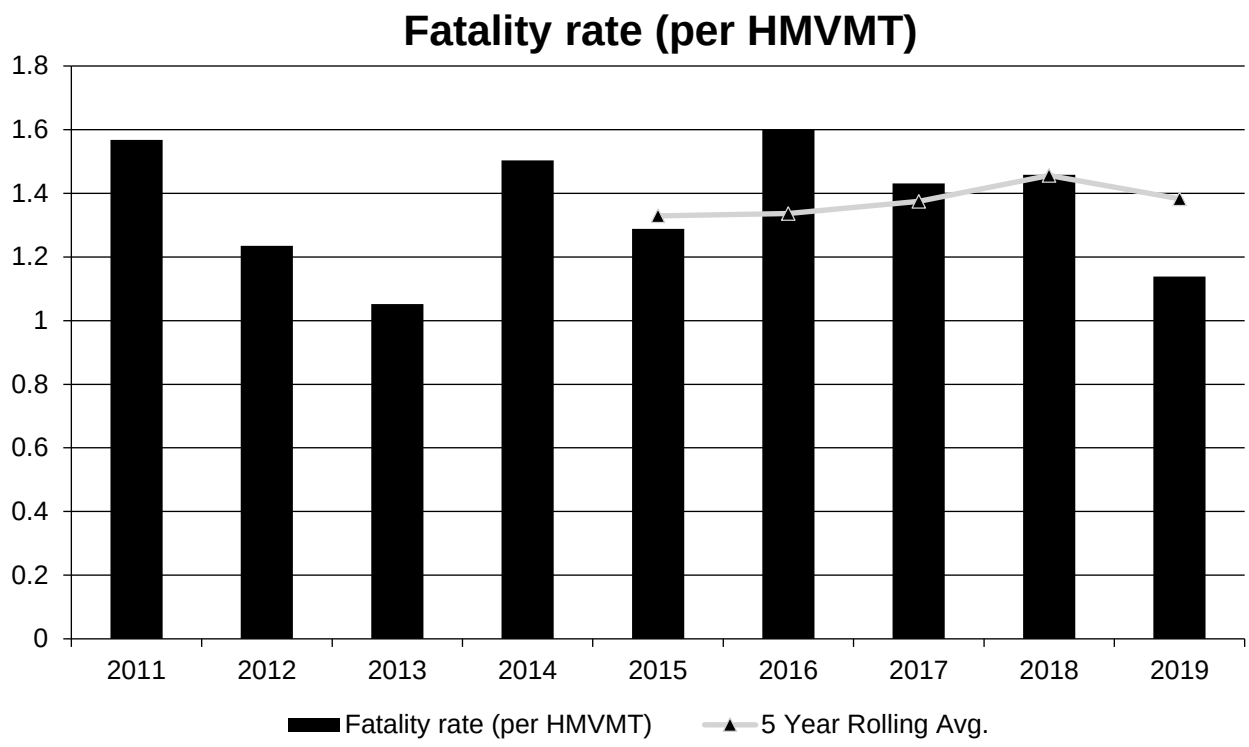
General Highway Safety Trends

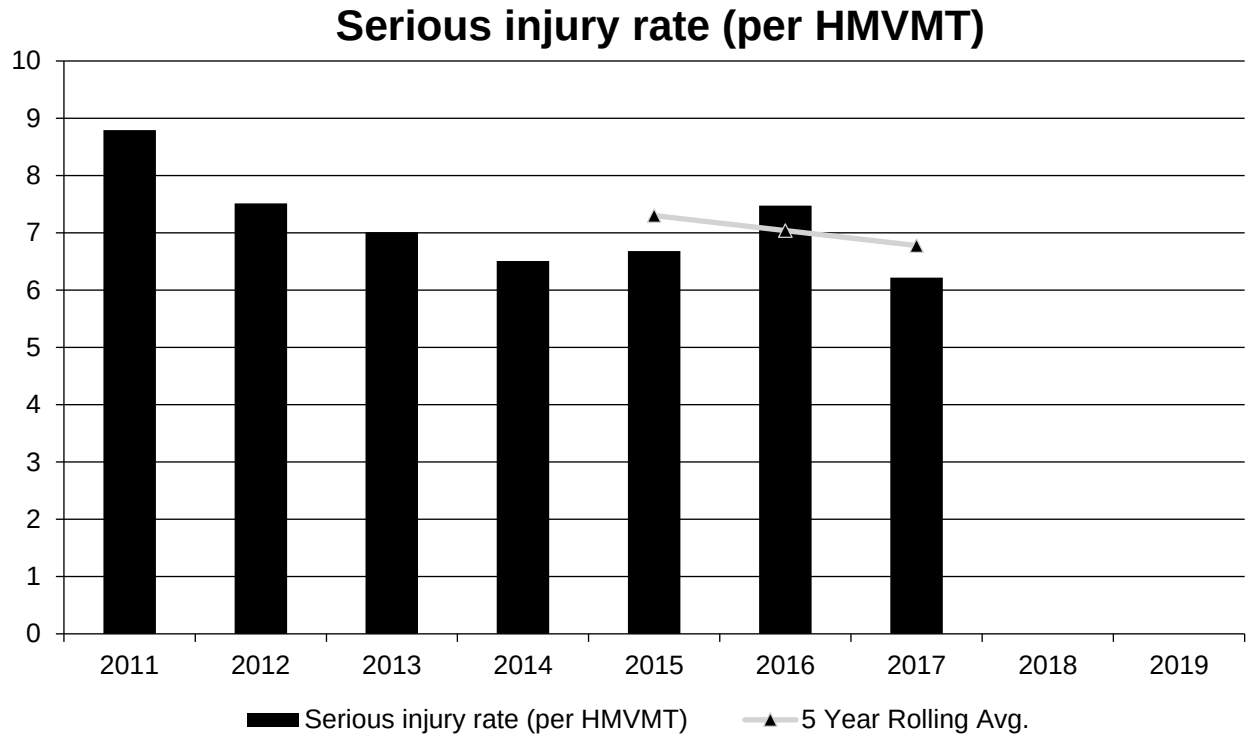
Present data showing the general highway safety trends in the State for the past five years.

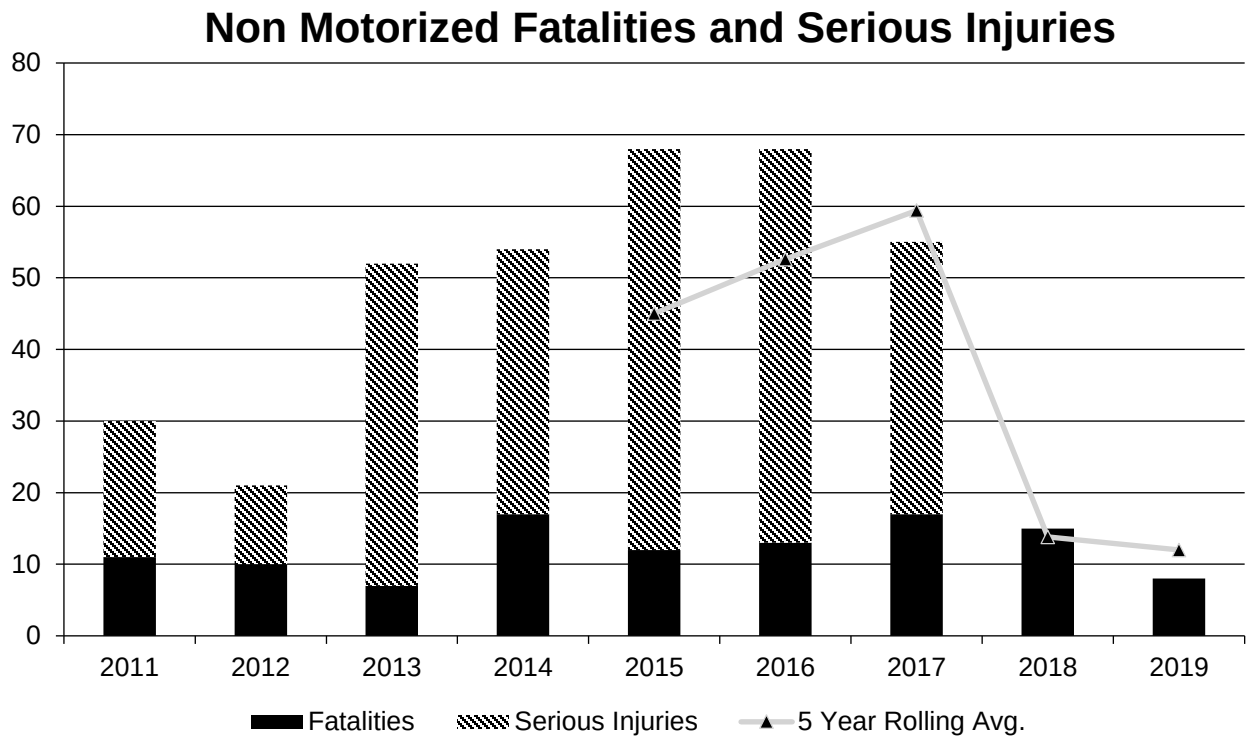
PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fatalities	72	59	51	73	65	84	79	80	67
Serious Injuries	404	359	340	316	337	392	343	0	0
Fatality rate (per HMVMT)	1.568	1.235	1.052	1.503	1.288	1.602	1.431	1.458	1.138
Serious injury rate (per HMVMT)	8.796	7.512	7.013	6.507	6.680	7.475	6.216	0.000	0.000
Number non-motorized fatalities	11	10	7	17	12	13	17	15	8
Number of non-motorized serious injuries	19	11	45	37	56	55	38	0	0


Annual Fatalities
90
80
70
60
50
40
30
20
10
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
450
400
350
300
250
200
150
100
50
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
10
9
8
7
6
5
4
3
2
1
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Important Note on Performance Measures calculated by Online Reporting Tool: Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020.

Describe fatality data source.

FARS

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

Year 2019

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	13	31.8	1.52	3.72
Rural Principal Arterial (RPA) - Other Freeways and Expressways	0	0	0	0
Rural Principal Arterial (RPA) - Other	5.6	10.2	1.85	3.21
Rural Minor Arterial	3.8	6.4	3.06	5.16
Rural Minor Collector	5.8	11.6	3.46	7.5
Rural Major Collector	6.2	18	2.06	5.96

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 Local Road or Street	4.2	9.2	0.82	2
Urban Principal Arterial (UPA) - Interstate	9	19.8	1.19	2.62
Urban Principal Arterial (UPA) - Other Freeways and Expressways	0	0	0	0
Urban Principal Arterial (UPA) - Other	12.6	43.8	1.34	4.62
Urban Minor Arterial	6.6	22.6	1.24	4.18
Urban Minor Collector	1.4	4.2	1.19	3.45
Urban Major Collector	1.4	14.4	0.57	5.96
Urban Local Road or Street	1.6	8.4	0.4	2
Other	0.2	9	0	0
Missing Function Class	0.2	5.8	0	0

Year 2019

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	60.6	155.2	0.6	0
County Highway Agency	7.6	30.6	0.36	0
Town or Township Highway Agency	0.4	0	0	0
City or Municipal Highway Agency	5	12	0.4	0
State Park, Forest, or Reservation Agency	0	0.2	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	0	0	0
Other Local Agency	0.4	0	5.27	0
Private (Other than Railroad)	0	0.2	0	0
Railroad	0	0	0	0
State Toll Authority	0	0	0	0
Local Toll Authority	0	0	0	0
Other Public Instrumentality (e.g. Airport, School, University)	0	0.2	0	0
Indian Tribe Nation	0	0	0	0
Other/Unknown	0.4	7	0.16	0
Federal	0.2	0	0	0

Important Note on Performance Measures calculated by Online Reporting Tool: Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020. Traffic volumes categorized by ownership only available since 2018.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2021 Targets *

Number of Fatalities:75.0

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an optimistic view of annual fatality numbers leveling off, possibly decreasing in light of COVID-19 factors, even considering the external upward pressures for this performance measure in light of the most likely scenarios. Alaska's SHSP was updated in 2018 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Number of Serious Injuries:330.0

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an optimistic view of annual serious injury numbers continuing to decline even considering the external upward pressures for this performance measure in light of the most likely scenarios. Alaska's SHSP was updated in 2018 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Fatality Rate:1.400

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an optimistic view of annual fatality numbers leveling off even considering the external upward pressures for this performance measure in light of the most likely scenarios. It is possible, however, that traffic volumes will decrease more than expected, resulting in a higher fatality rate than expected. Alaska's SHSP was updated in 2018 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Serious Injury Rate:6.000

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an optimistic view of annual serious injury numbers continuing to decline even considering the external upward pressures for this performance measure in light of the most likely scenarios. It is possible, however, that traffic volumes will decrease more than expected, resulting in a higher serious injury rate than expected. Alaska's SHSP was updated in 2018 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

Total Number of Non-Motorized Fatalities and Serious Injuries:60.0

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

Alaska followed the process described in FHWA-SA-16-101 to establish targets based on trend analysis, the influence of external factors, and the consideration of select scenarios. This target is representative of an upward trend combined with external upward pressures for this performance measure in light of the most likely scenarios. Alaska's SHSP was updated in 2018 and continues to reflect the State's vision of Toward Zero Deaths. Reporting on this target annually will keep the TZD vision firmly planted in Alaska's traffic safety efforts and will assist Alaska in consideration of program improvements to reinforce the SHSP TZD vision.

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

Both the Fairbanks Metropolitan Area Transportation System (FMATS) Executive Director and Anchorage Metropolitan Area Transportation Solutions (AMATS) Coordinator were included in meetings during the development of initial target recommendations that were delivered to DOT&PF management for review and edits.

The Alaska Highway Safety Office (AHSO) was involved in establishing targets throughout the entire process. An AHSO data analyst attended every meeting and was instrumental in the analysis of data trends and external factors. The Governor's highway safety representative was a signatory to the memo signed by the Governor establishing the State's targets.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2019 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	75.0	75.0
Number of Serious Injuries	350.0	
Fatality Rate	1.500	1.383
Serious Injury Rate	7.000	
Non-Motorized Fatalities and Serious Injuries	55.0	13.0

DOT&PF's primary effort in the upcoming year must be to improve and stabilize our data reporting and analysis infrastructure and eliminate the data entry backlog. Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020.

Fatalities: The 5 yr average meets the target.
Fatality Rate: The 5 yr average is lower than the target.
Serious Injuries: Serious injury data is not available for 2018 and 2019. See explanation above.
Serious Injury Rate: Serious injury data is not available for 2018 and 2019. See explanation above.

Non-motorized Fatalities and Serious Injuries: Serious injury data is not available for 2018 and 2019. See explanation above.

Applicability of Special Rules

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

Yes

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	2013	2014	2015	2016	2017	2018	2019
Number of Older Driver and Pedestrian Fatalities	5	3	11	11	9	10	15
Number of Older Driver and Pedestrian Serious Injuries	18	18	22	26	7	0	0

DOT&PF's primary effort in the upcoming year must be to improve and stabilize our data reporting and analysis infrastructure and eliminate the data entry backlog. Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio

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

The overall benefit / cost ratio of Alaska's HSIP program is 7.2:1 over the last 5 years of completed projects with at least 3 years of post construction crash data available. The B/C ratio includes seven projects which may be considered outliers due to their high B/C ratios and excluding them would result in a 5 yr program B/C of 2.4:1.

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

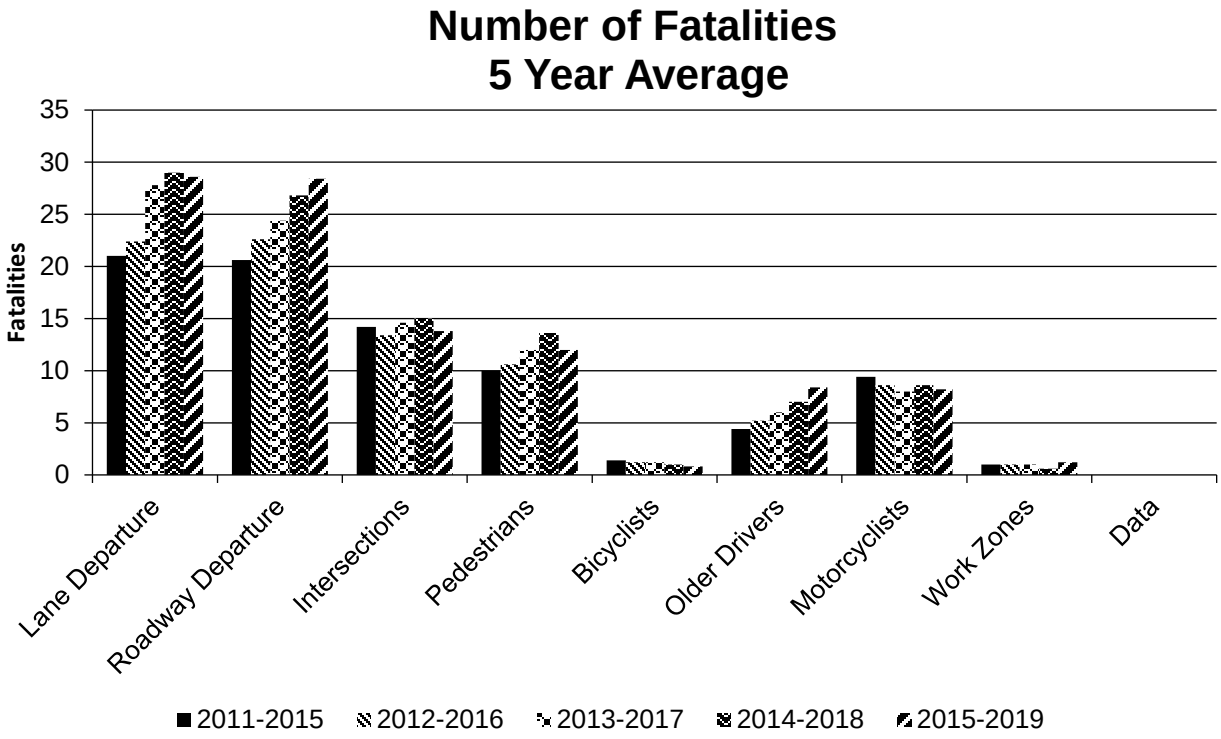
- HSIP Obligations

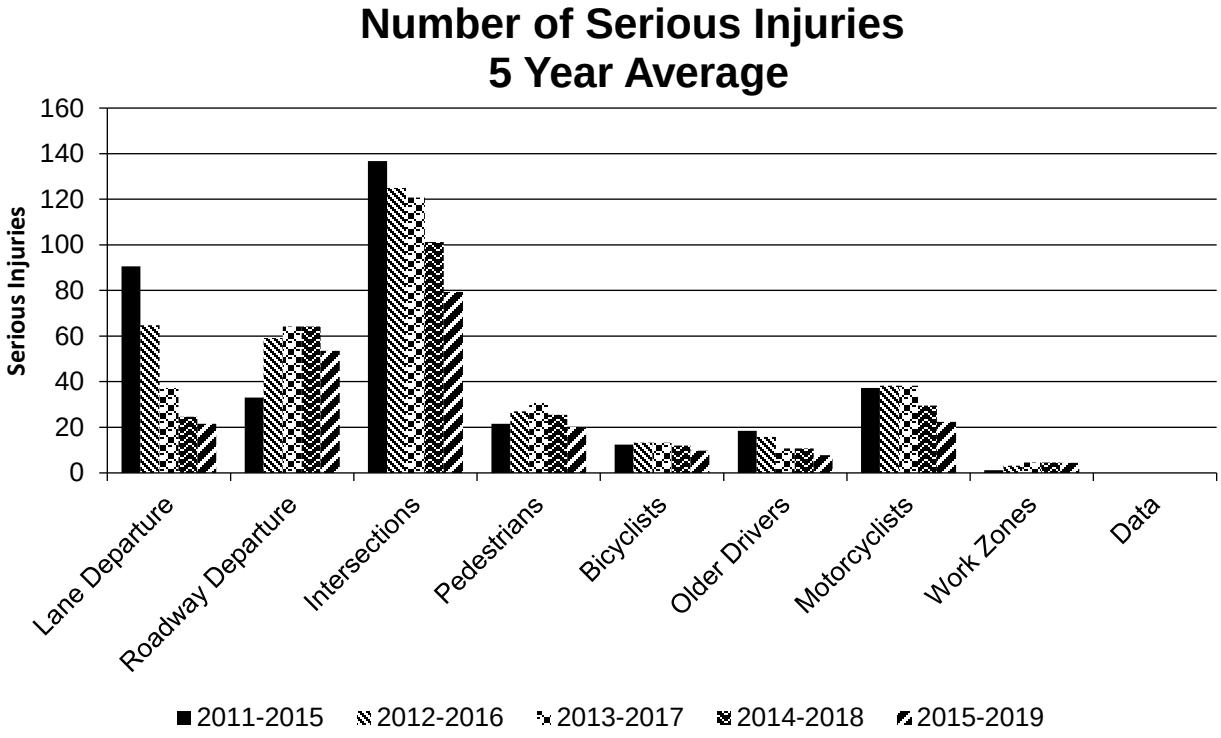
Effectiveness of Groupings or Similar Types of Improvements

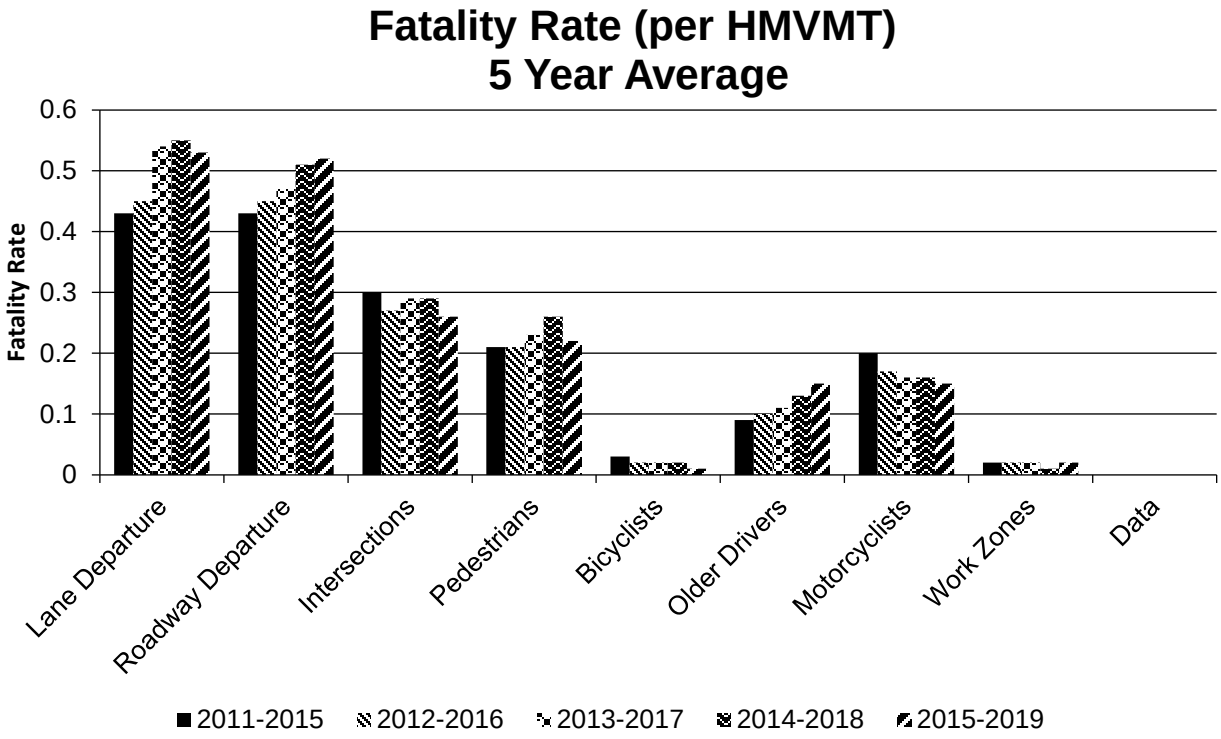
Present and describe trends in SHSP emphasis area performance measures.

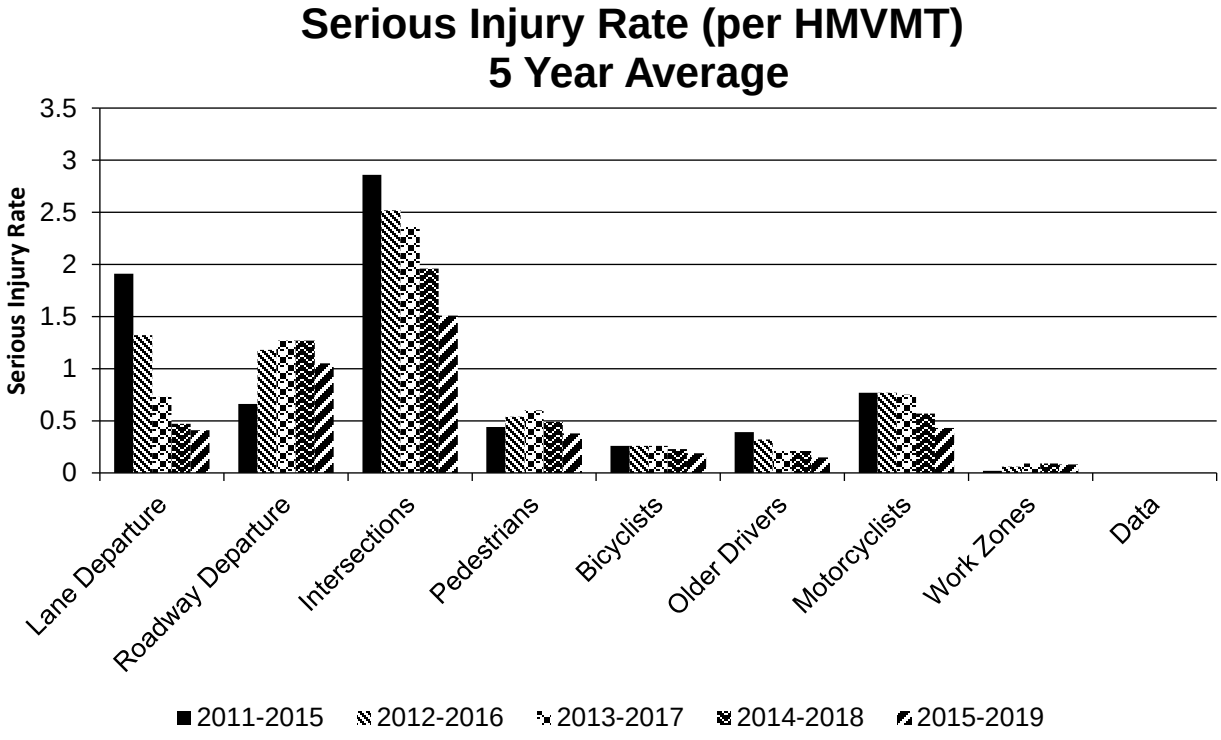
Year 2019

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
Lane Departure		28.6	21.6	0.53	0.41	0	0	0
Roadway Departure		28.4	53.6	0.52	1.05	0	0	0
Intersections		13.8	79.4	0.26	1.51	0	0	0
Pedestrians		12	20.2	0.22	0.38	0	0	0
Bicyclists		0.8	9.8	0.01	0.19	0	0	0
Older Drivers		8.4	7.8	0.15	0.15	0	0	0
Motorcyclists		8.2	22.4	0.15	0.43	0	0	0
Work Zones		1.2	4.4	0.02	0.08	0	0	0
Data		0	0	0	0	0	0	0


Number of Fatalities
5 Year Average
Fatalities
35
30
25
20
15
10
5
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019


Number of Serious Injuries
5 Year Average
Serious Injuries
160
140
120
100
80
60
40
20
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019





Important Note on Performance Measures calculated by Online Reporting Tool: Alaska does not yet have serious injury data for 2018 - 2019. Our goal is to catch up on 2018 - 2019 crash data entry by March 2020.

Project Effectiveness

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

Alaska did not have any completed projects that had 3 years post-construction crash data on which to evaluate performance. The process DOT&PF uses to evaluate all HSIP projects is outlined in Alaska's HSIP Handbook.

Compliance Assessment

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

01/21/2019

What are the years being covered by the current SHSP?

From: 2018 To: 2022

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

2022

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

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

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	100	100					100	100	100	100
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	100					100	75		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	100
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	100
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]										
	Functional Class (19) [19]	100	100					100	100	100	100

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	60	60								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	80		
	Average Annual Daily Traffic (79) [81]	100	100					100	100		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]			30	30						
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]										
	Location Identifier for Roadway at					100	100				

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]										
	Roadway Type at End Ramp Terminal (199) [189]										
	Interchange Type (182) [172]										
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		**92.22**	**92.22**	**28.75**	**28.75**	**63.64**	**63.64**	**100.00**	**95.00**	**100.00**	**100.00**

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

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

The response below is unchanged from the 2019 annual report. While there was not substantial progress this year toward completing MIRE FDEs, the plan is still valid and we expect to meet the 2026 compliance date. To help lay the groundwork for positive progress, GIS staff is meeting weekly with the HPMS staff to start to address the overlapping requirements between HPMS and MIRE.

Alaska DOT&PF's Statewide Design and Engineering Services (D&ES) division continues to use R&H to maintain the state's road centerline/linear reference system network as well as the related roadway features and attributes required for the annual submittal to the Highway Performance Monitoring System. It's expected R&H will also be the system of record for the MIRE FDEs.

D&ES is in the process of developing a plan to meet the MIRE FDE requirements and deadline by reviewing each FDE and grouping them into the following categories:

- Elements that already exist as feature classes or those that could be derived from existing feature classes in the department’s R&H geodatabase,
- Elements that could be produced from feature classes in the department’s R&H geodatabase but would require modifications to the existing data set,
- Elements that will need to be added to the departments R&H geodatabase, and
- Elements which the department needs clarification to fully understand and develop a solution.

Potential data owners and data sources for each FDE were also identified and technical questions for some of the elements were documented.

During the coming performance period the FDE plan and timeline will be finalized. Anticipated tasks in the formalization process include:

- Seek clarification from FHWA on some of the FDEs
- Model the modifications to the existing R&H feature classes as well as the new feature classes required to address the FDE requirements
- Designate data owners and data stewards
- Verify data sources and secure funding (if needed)
- Develop a strategy to prioritize element deployment
- Deploy the initial subset of prioritized elements (likely to be those that already exist or could be derived from the current geodatabase)

Optional Attachments

Program Structure:

L_8-31-20 HSIP Ann Report Cover.pdf
HSIP Hdbk 19th Ed FINAL_200327.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.