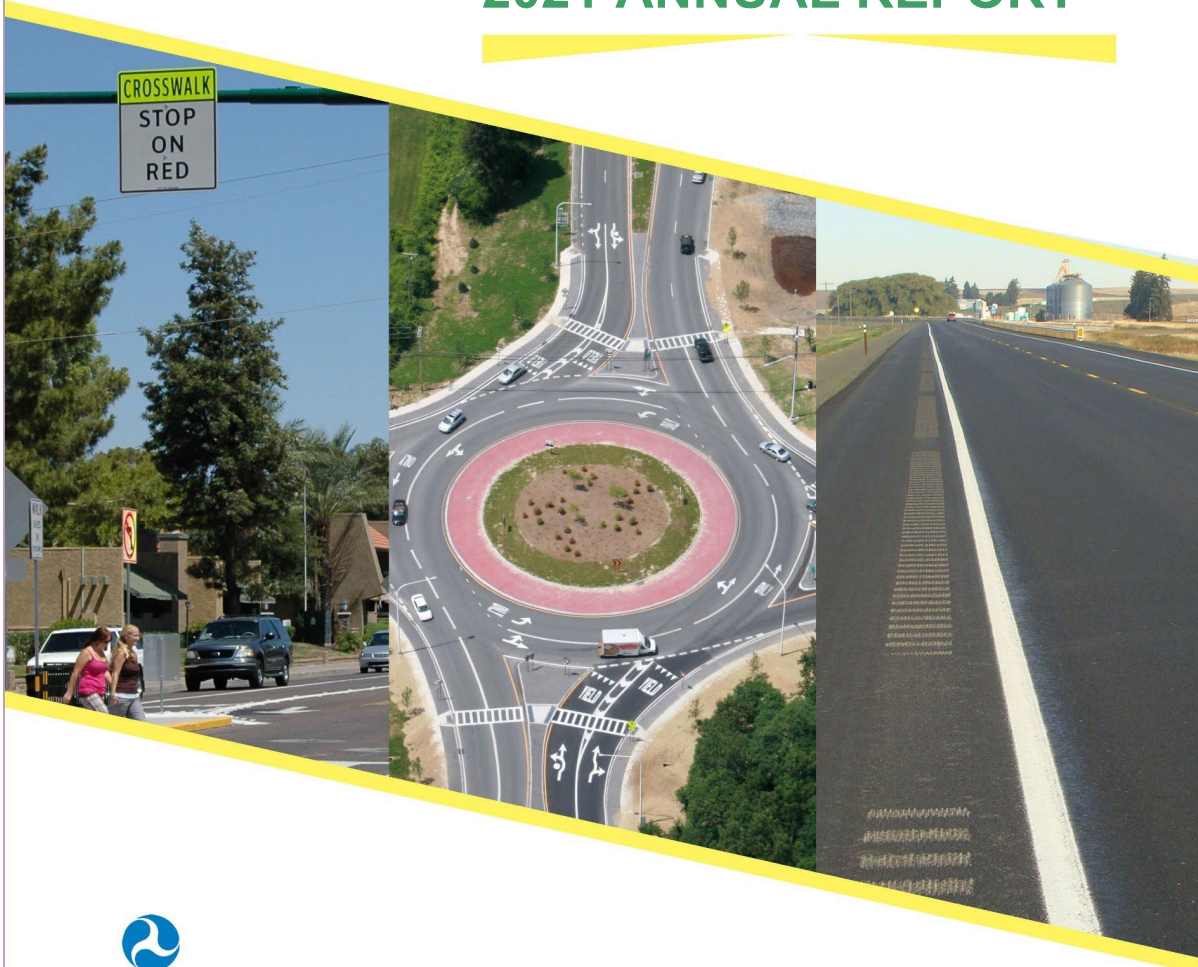




HAWAII

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2021 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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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. 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

State of Hawaii 2020 U.S.C. 148(g) Annual Highway Safety Improvement Program (HSIP) report.

The primary objective of HDOT's HSIP is to incorporate highway safety to reduce the number and severity of fatalities and injuries involving motor vehicle crashes. This goal is in line with Hawaii's SHSP.

The HSIP process for HDOT involves collecting all major traffic crash data, analyzing the data, proposing safety improvement projects, and evaluating the benefits from the projects. HDOT has moved away from addressing hot spot locations and toward systemic locations. This process allows better allocation of funds on a proactive approach.

With the implementation of the Highway Safety Manual and the Safety Management System next FFY, HDOT is working towards greater safety benefits from projects based on predictive methods and risk factors.

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.

HDOT uses the Number-Rate (N-R) Method, which establishes a minimum crash frequency and accounts for exposure. Listings for intersection locations on State roadways use a minimum criteria for a 3-year period and listings for non-intersection locations on State roadways use sliding 0.3-mile segments with a minimum criteria for a 3-year period. This method uses the best availability of required data and is manageable by our limited manpower.

Locations identified by the N-R method will be further analyzed in a Benefit-Cost (B/C) analysis procedure by incorporating crash costs established by FHWA and crash reduction factors (CRF). The crash costs will assign more weight to fatal and high severity crashes.

Project Prioritization and Selection uses the annual High-Crash Listings, which ranks the locations by crash rates, and injury severity to determine possible project locations. Project locations where existing, planned or recently completed projects are already addressing concerns are eliminated. Appropriate countermeasures for each location are determined, preliminary estimates for improvements are computed, CRFs are selected, and Benefit/Cost (B/C) ratios to prioritize individual listings are calculated.

“HSIP Field Investigation” of candidate projects are conducted using HSIP Field Investigation procedures and involving the following parties: Traffic Safety engineers, District engineers and maintenance workers, Traffic Design engineers, and the police. Field investigations of existing conditions are conducted to better understand deficiencies. Projects are selected to initiate based on revised scope of work and B/C. If funds are available, additional projects are selected according to overall priority. Note that projects may also be initiated if identified as priority according to the Hawaii Strategic Highway Safety Plan (SHSP).

Project Evaluation uses 3 year before and after crash history. Evaluation data is submitted to FHWA through the online HSIP reporting tool annually.

Where is HSIP staff located within the State DOT?

Engineering

HSIP staff is located in the Hawaii State Department of Transportation, Highways Division, Traffic Branch, Traffic Safety Section

How are HSIP funds allocated in a State?

- Other-Central Office

High crash listings and crash data for county roads are submitted to the county offices for internal design use. Local agencies can submit project proposals to be considered on the Statewide Transportation Improvement Program (STIP) and the projects can be funded through the HSIP funds if they are cost-effective. In addition, High Risk Rural Roads Program (HRRRP) Funds are offered to the counties for project proposals and consideration.

HSIP funds for State roadway projects are divided among the 4 different counties.

All projects are submitted through the Traffic Safety Section.

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

High crash listings and crash data for county roads are submitted to the county offices for internal design use. Local agencies can submit project proposals to be considered on the Statewide Transportation Improvement Program (STIP) and the projects can be funded through HSIP funds if they are cost-effective. In addition, HRRRP Funds are offered to the counties.

Hawaii does not have any tribal roads.

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

- Design
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Highway Safety Office

Other-The Highway Safety Office is a partner in the HSIP process. They assist with setting the performance targets. They also assist with the planning of the HSIP through the collaboration of the development of the SHSP.

Describe coordination with internal partners.

The HSIP projects are initiated through the analysis of crash data and traffic volume counts obtained by the Planning Branch. The HSIP project locations are evaluated to determine if other projects submitted by internal partners (Design, Planning, Maintenance, or Operations) can be coordinated or project scope can be incorporated within existing projects.

Internal partners assist with project selection preparation of preliminary project scope through field investigations. Partners from the offices of design, maintenance and law enforcement (external) participate in the preliminary project scope.

Identify which external partners are involved with HSIP planning.

- Local Government Agency
- Other-Police departments

Police department representatives have participated in preliminary project scoping through field investigations. Their input on enforcement and knowledge of the area are instrumental to the overall traffic safety recommendations.

Local government agencies would be involved when projects on local roads are proposed.

Describe coordination with external partners.

HSIP projects can be initiated through review of high crash listings and crash data for county roads submitted to the county offices. Local agencies can submit project proposals to be considered on the STIP.

Police department officers are requested to participate in field investigation of potential HSIP project locations. They provide personal knowledge of the area and can make safety recommendations that may be incorporated within HSIP projects.

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

Statewide projects are submitted to be considered on the STIP.

Focus is more on corridor low-cost safety improvements versus black spots.

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.

- HRRR

Program: HRRR

Date of Program Methodology:9/9/2006

What is the justification for this program?

- FHWA focused approach to safety

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

2021 Hawaii Highway Safety Improvement Program

Crashes

- Fatal and serious injury crashes only

Exposure

- Lane miles

Roadway

- Functional classification

What project identification methodology was used for this program?

- Crash frequency
- Crash 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?

No

Describe the methodology used to identify local road projects as part of this program.

Methodology for local roads use the crash frequency because of the lack of traffic volume data.
Methodology for State roads use the crash rate.

How are projects under this program advanced for implementation?

- Other-Submitted to be included in the STIP. Follow with collaboration with the Districts.

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:2

Available funding:1

Cost Effectiveness:3

What percentage of HSIP funds address systemic improvements?

82

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

- Rumble Strips

What process is used to identify potential countermeasures?

- Crash data analysis

2021 Hawaii Highway Safety Improvement Program

- Engineering Study

Does the State HSIP consider connected vehicles and ITS technologies?

No

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

No

HDOT will be implementing Highway Safety Manual (HSM) Predictive Methodology into our system. The implementation will include loading and massaging the roadway feature data, setting up the libraries, processing, and performing HSM processing to determine Crash Modification Factors (CMF)s, Expected Crashes, Safety Index scores based upon HSM predictive method, Safety Comparable Index, and Safety Rating. Completion of this implementation is expected this year.

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

During this period, run off roadway and median crossover type crashes were targeted. HDOT is currently focusing on reducing fatalities and serious injury type crashes by implementing cost-effective safety improvement projects along corridors with a history of these types of crashes. In Hawaii, these types of crashes have a greater potential of reducing fatalities and serious injury crashes cost-effectively, in comparison to "black spot" type projects. HDOT has collaborated with the University of Hawaii to develop a Systemic Roadway Departure Plan. With the development of this plan, HDOT hopes to address more systemic safety improvements with proven low-cost safety countermeasures.

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)	\$9,848,761	\$15,745,239	159.87%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$0	\$0	0%
Penalty Funds (23 U.S.C. 154)	\$2,667,376	\$2,667,376	100%
Penalty Funds (23 U.S.C. 164)	\$2,667,376	\$2,667,376	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$1,225,000	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
Totals	\$16,408,513	\$21,079,991	128.47%

The penalty transfer is impacting the HSIP core obligation rate. Our administration plans to introduce legislation to attain compliance.

We would like to have more projects initiated and assigned for design and construction. There is an inability of design staff to handle the workload. Areas such as: 106, right-of-way, and environmental requirements delay projects.

The obligated percentage is based on the latest project status report available. We anticipate obligating more HSIP funds before the end of FFY21.

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

0%

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

0%

HSIP funds are available to the local agencies for safety projects, as requested.

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

\$1,653,773

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

\$1,653,773

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.

The penalty transfer is impacting the HSIP core obligation rate. We would like to have more projects initiated and assigned for design and construction. We plan on utilizing IDIQ type contracts to facilitate the implementation of cost-effective safety improvements.

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

Progress of all HSIP projects is monitored very closely. HSIP program staff follow-up with project managers and fiscal staff on a regular basis to track project schedules and make adjustments and modifications to the program to minimize the potential for lapsing funds, as well as spend HSIP funds efficiently.

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
H1 Safety Improvements, Palailai Interchange to Waiawa Overpass	Roadway	Rumble strips – edge or shoulder	9	Miles		\$913002.03	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	222,000	55	State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
HI State Pavement marking repairs and rumble strip installation at various locations, Hawaii	Roadway	Rumble strips – edge or shoulder		Miles		\$1147537.88	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
Mamalahoa Hwy Safety Improvements, MP 3.9 to MP 6.9	Roadway	Rumble strips – edge or shoulder	3	Miles		\$49606.65	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	0	50	State Highway Agency	Systemic	Lane Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
HON - Installation of Enhanced Pavement Marking and New Milled Rumble Strip at various locations	Roadway	Rumble strips – edge or shoulder		Miles		\$4281096.24	Penalty Funds (23 U.S.C. 164)	Urban	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
Maui State - Honoapiilani Hwy Safety Improvements, Kapoli St to Papalaua Beach Park	Roadway	Rumble strips – edge or shoulder	5.72	Miles		\$60495.17	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	27,400	45	State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
Piilani Hwy Safety Improvements, N Kihei Rd to	Roadway	Rumble strips – edge or shoulder	7.1	Miles		\$1130436.18	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Urban	Principal Arterial-Other	42,400	45	State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane

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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
vicinity of Wailea Ike Dr															departure crashes
Kauai State - Installation of Enhanced Pavement Marking and New Milled Rumble Strips at various locations	Roadway	Rumble strips – edge or shoulder		Miles		\$377545.53	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
Kamehameha Hwy Safety Improvements, Waikane Valley Rd to the vicinity of Kahekili Hwy	Roadway	Rumble strips – edge or shoulder	2.7	Miles		\$43257.46	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,500	35	State Highway Agency	Systemic	Lane Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
Maui - Installation of Enhanced Pavement Marking and New Milled Rumble Strips	Roadway	Rumble strips – edge or shoulder		Miles		\$1091653.77	RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	Multiple/Varies	Minor Arterial	0		State Highway Agency	Systemic	Roadway Departure	Improve roadway infrastructure by installing countermeasures to reduce lane departure crashes
HON State - Farrington Hwy Intersection Improvements at Nanakuli Ave and Haleakala Ave (C)	Intersection geometry	Intersection geometry - other	2	Intersections		\$132151.57	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	24,200	35	State Highway Agency	Spot	Intersections	Improve roadway infrastructure by installing countermeasures to reduce intersection crashes
State of Hawaii Advanced Crash Analysis	Miscellaneous	Data analysis				\$782999.96	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0		State Highway Agency		Data	Improve linkage and integration of data
Statewide - State Planning and Research Program	Miscellaneous	Transportation safety planning				\$1293218.99	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Minor Arterial	0		State Highway Agency		Data	Improve linkage and integration of data

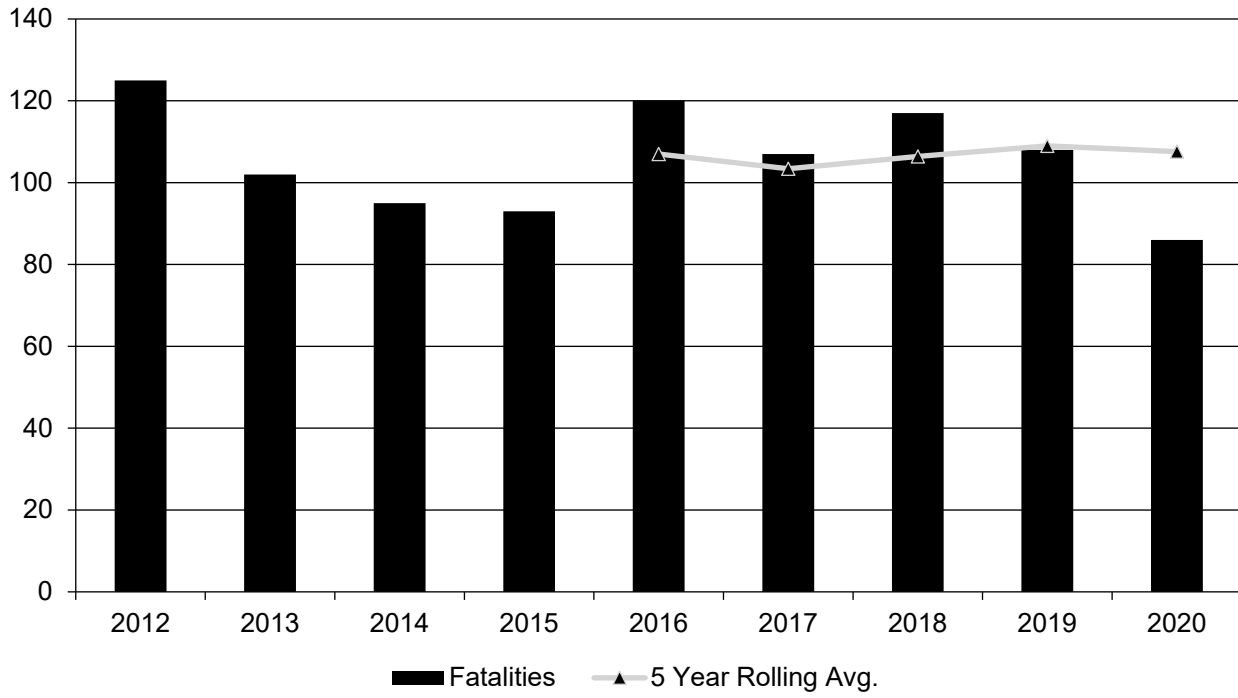
Safety Performance

General Highway Safety Trends

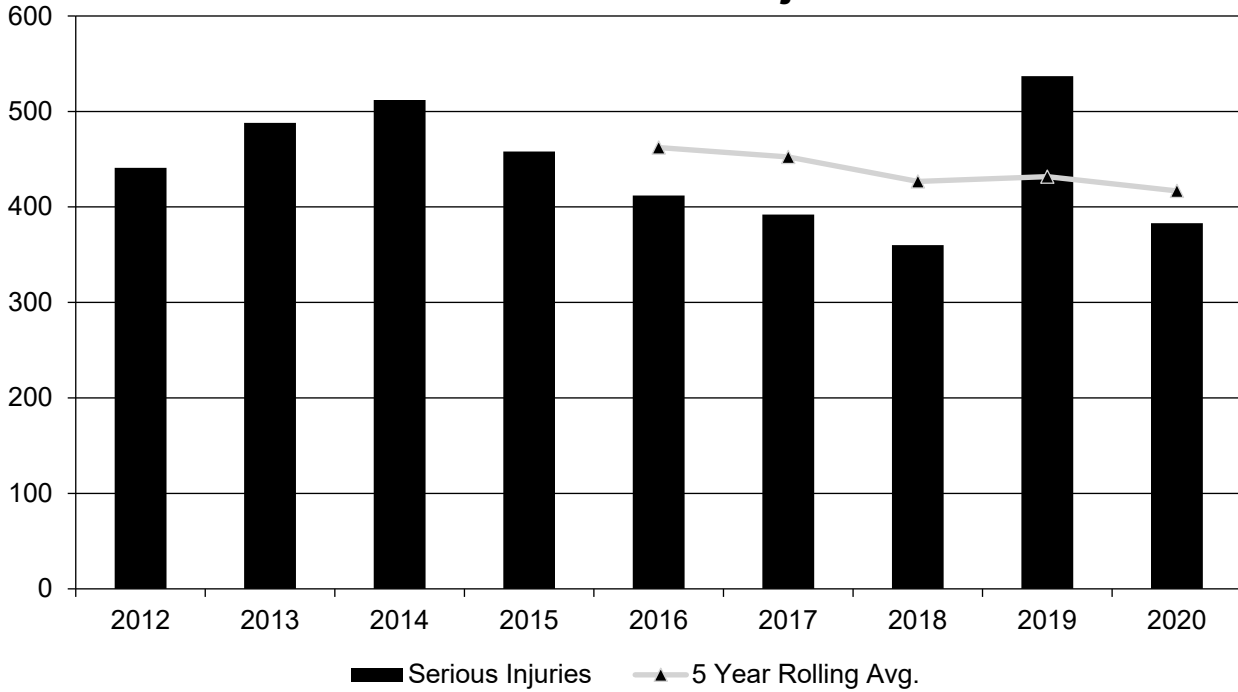
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fatalities	125	102	95	93	120	107	117	108	86
Serious Injuries	441	488	512	458	412	392	360	537	383
Fatality rate (per HMVMT)	1.251	1.010	0.933	0.908	1.136	0.997	1.075	0.984	0.784
Serious injury rate (per HMVMT)	4.412	4.833	5.028	4.472	3.900	3.653	3.307	4.892	3.489
Number non-motorized fatalities	28	27	32	30	32	21	46	41	25
Number of non-serious motorized injuries	73	82	87	94	102	87	81	120	111

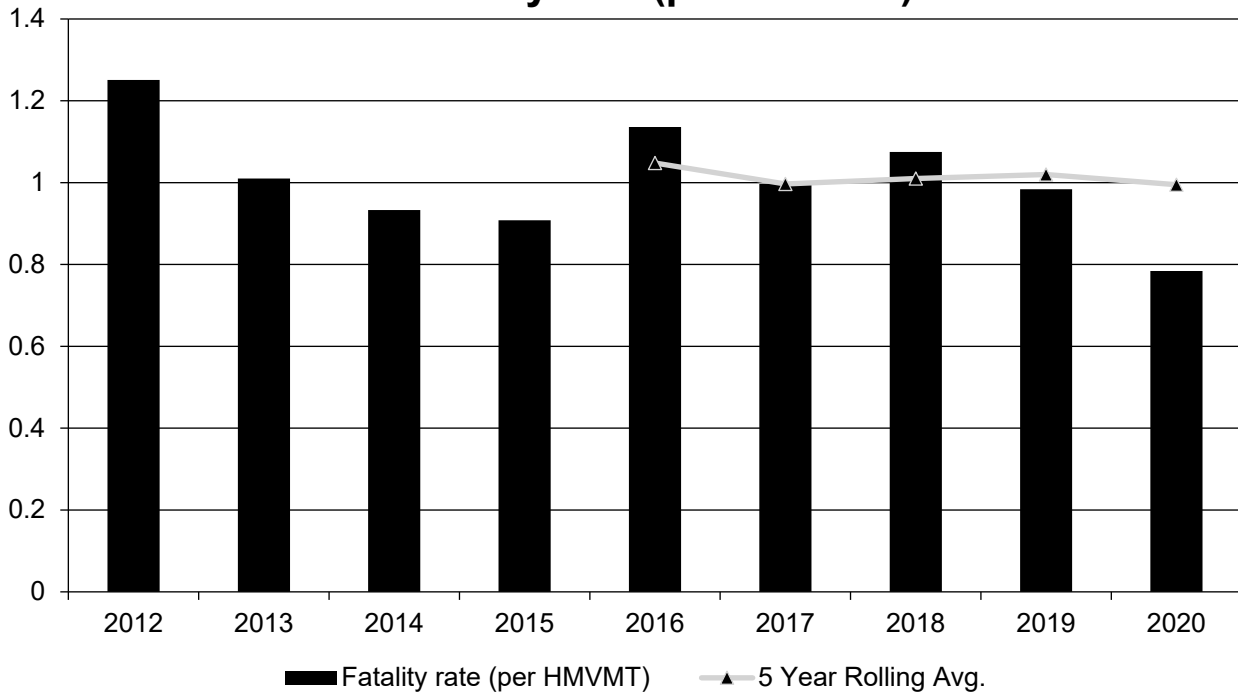
Annual Fatalities



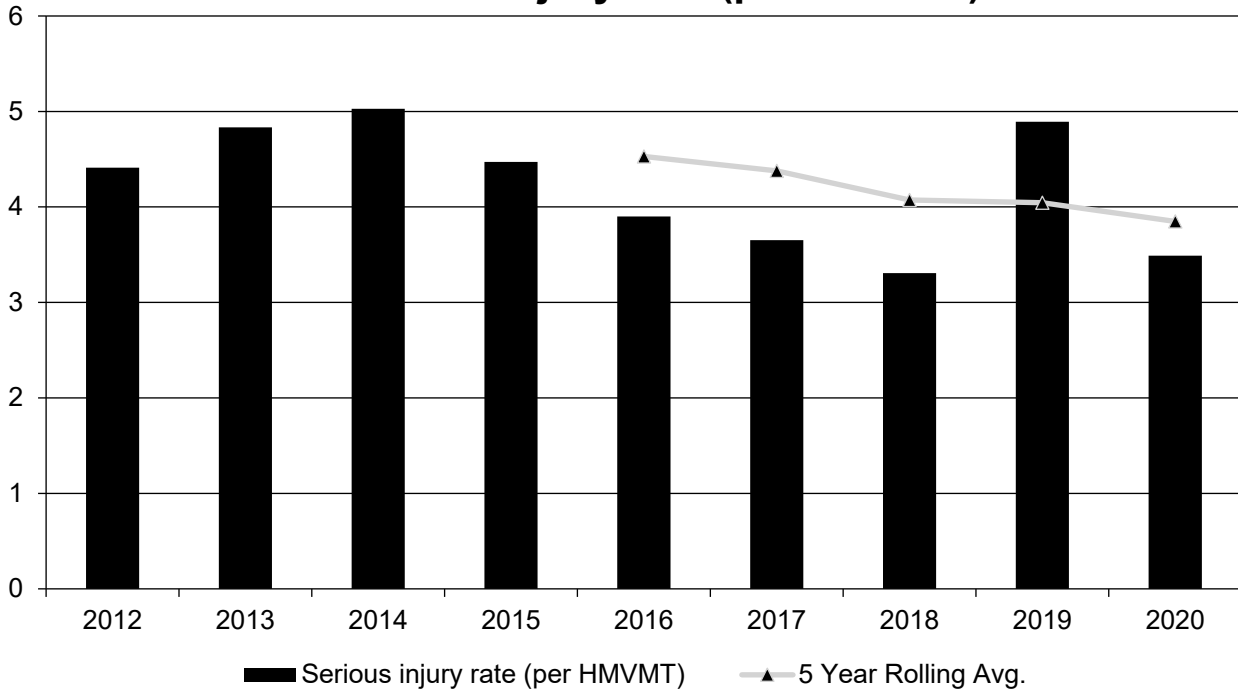
Annual Serious Injuries



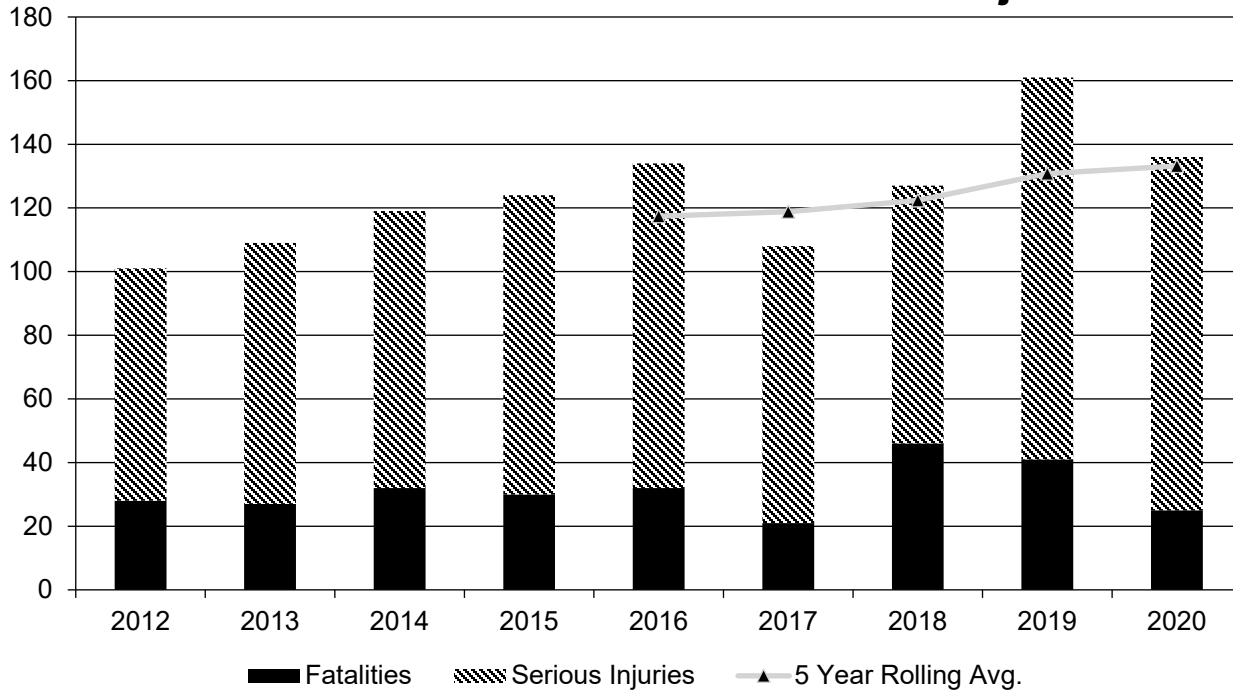
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

FARS

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

Year 2020

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	0	0	0	0
Rural Principal Arterial (RPA) - Other Freeways and Expressways	0	0	0	0
Rural Principal Arterial (RPA) - Other	16.8	16	0.17	0
Rural Minor Arterial	1.6	16.6	0.01	0
Rural Minor Collector	0	6.6	0	0
Rural Major Collector	0	0.4	0	0

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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	1.4	0.4	0.01	0
Urban Principal Arterial (UPA) - Interstate	7.2	31.6	0.07	0
Urban Principal Arterial (UPA) - Other Freeways and Expressways	0.2	11.4	0	0
Urban Principal Arterial (UPA) - Other	45.2	89.4	0.44	0.01
Urban Minor Arterial	16.2	24.8	0.15	0
Urban Minor Collector	0.8	6.4	0.01	0
Urban Major Collector	1	1.8	0.01	0
Urban Local Road or Street	15.2	1.8	0.15	0

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Year 2020

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	71.6	194	0.69	1.86
County Highway Agency	35.6	218.2	0.34	2.12
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				

Provide additional discussion related to general highway safety trends.

We are currently addressing the accuracy of our data. We are working with our vendor to address quality control of the backlog that was entered and the new data coming in. Data for next year's report should reflect more accurate data as the development of the database is currently underway.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2022 Targets *

Number of Fatalities:103.4

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

This performance target was determined by using a linear trend line based on the 2013-2020 five-year moving average data and an analysis of external factors, including the updated Hawaii SHSP; Vision Zero Plans developed and implemented in each county; planned roadway infrastructure safety improvement projects; and safety impacts of proposed grants.

This performance target is identical to the performance target in the state's HSP and is the result of collaborative efforts between HDOT's Highway Safety Section, HDOT's Traffic Safety Section, DOH's EMS & Injury Prevention Systems Branch and the Oahu MPO.

Number of Serious Injuries:426.8

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

This performance target was determined by using a linear trend line based on the 2013-2020 five-year moving average data and an analysis of external factors, including the updated Hawaii SHSP; Vision Zero Plans developed and implemented in each county; planned roadway infrastructure safety improvement projects; and safety impacts of proposed grants. Implementation of the newly revised Motor Vehicle Accident Report (MVAR) is also expected to impact the number of serious traffic injuries because of the change in terminology from "incapacitating injury" to "suspected serious injury" and a potential increase in crash reporting. This performance target is identical to the performance target in the state's HSP and is the result of collaborative efforts between HDOT's Highway Safety Section, HDOT's Traffic Safety Section, DOH's EMS & Injury Prevention Systems Branch and the Oahu MPO.

Fatality Rate:0.964

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

This performance target was determined by using a linear trend line based on the 2014-2020 five-year moving average data and an analysis of external factors, including impacts from COVID-19 and shelter-in-place orders; the updated Hawaii SHSP; Vision Zero Plans developed and implemented in each county; planned roadway infrastructure safety improvement projects; and safety impacts of proposed grants. This performance target is identical to the performance target in the state's HSP and is the result of collaborative efforts between HDOT's Highway Safety Section, HDOT's Traffic Safety Section, DOH's EMS & Injury Prevention Systems Branch and the Oahu MPO.

Serious Injury Rate:4.201

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

This performance target was determined by using a linear trend line based on the 2012-2020 five-year moving average data and an analysis of external factors, including impacts from COVID-19 and shelter-in-place orders; the updated Hawaii SHSP; Vision Zero Plans developed and implemented in each county; planned roadway infrastructure safety improvement projects; and safety impacts of proposed grants. Implementation of the newly revised Motor Vehicle Accident Report (MVAR) is also expected to impact the number of serious traffic injuries because of

2021 Hawaii Highway Safety Improvement Program

the change in terminology from "incapacitating injury" to "suspected serious injury" and a potential increase in crash reporting.

Total Number of Non-Motorized Fatalities and Serious Injuries:134.1

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

This performance target was determined by using a linear trend line based on the 2012-2020 five-year moving average data and an analysis of external factors, including impacts from COVID-19 and shelter-in-place orders; the updated Hawaii SHSP; Vision Zero Plans developed and implemented in each county; planned roadway infrastructure safety improvement projects; and safety impacts of proposed grants. Implementation of the newly revised Motor Vehicle Accident Report (MVAR) is also expected to impact the number of serious traffic injuries because of the change in terminology from "incapacitating injury" to "suspected serious injury" and a potential increase in crash reporting.

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

The numbers in the HSIP report should match the numbers in the HSP. We also shared the safety performance targets with Oahu Metropolitan Planning Organization (OMPO) to assist them in reporting their performance targets.

The performance targets are the result of collaborative efforts between HDOT's Traffic Safety Section, HDOT's Highway Safety Section, DOH's EMS & Injury Prevention Systems Branch and OMPO.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2020 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	100.8	107.6
Number of Serious Injuries	401.4	416.8
Fatality Rate	0.935	0.995
Serious Injury Rate	3.721	3.848
Non-Motorized Fatalities and Serious Injuries	101.8	133.2

Although fatalities and serious injuries decreased in 2020, it was not enough to meet our optimistic goals. Since Hawaii DOT has not met our targets last year, an HSIP Implementation Plan was developed for the first time. If a plan needs to be revised and resubmitted next year due to unmet goals, we will need to reevaluate and develop a better plan.

Implementation of the revised Motor Vehicle Accident Report (MVAR) has shown an increased impact on the number of serious traffic injuries because of the change in terminology from "incapacitating injury" to "suspected serious injury". Honolulu Police Department, which is the largest law enforcement agency in Hawaii, implemented the form at the beginning of 2019. This can be seen in the large increase in serious

injuries for 2019.

Applicability of Special Rules

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

No

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	2014	2015	2016	2017	2018	2019	2020
Number of Older Driver and Pedestrian Fatalities	20	13	20	17	24	18	13
Number of Older Driver and Pedestrian Serious Injuries	33	34	43	34	44	48	25

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.

If benefit/cost ratio is greater than 1 it is determined to be an indicator of success.

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

- HSIP Obligations

We need to continuously track the completion of HSIP projects to make sure there are no lapsing funds.

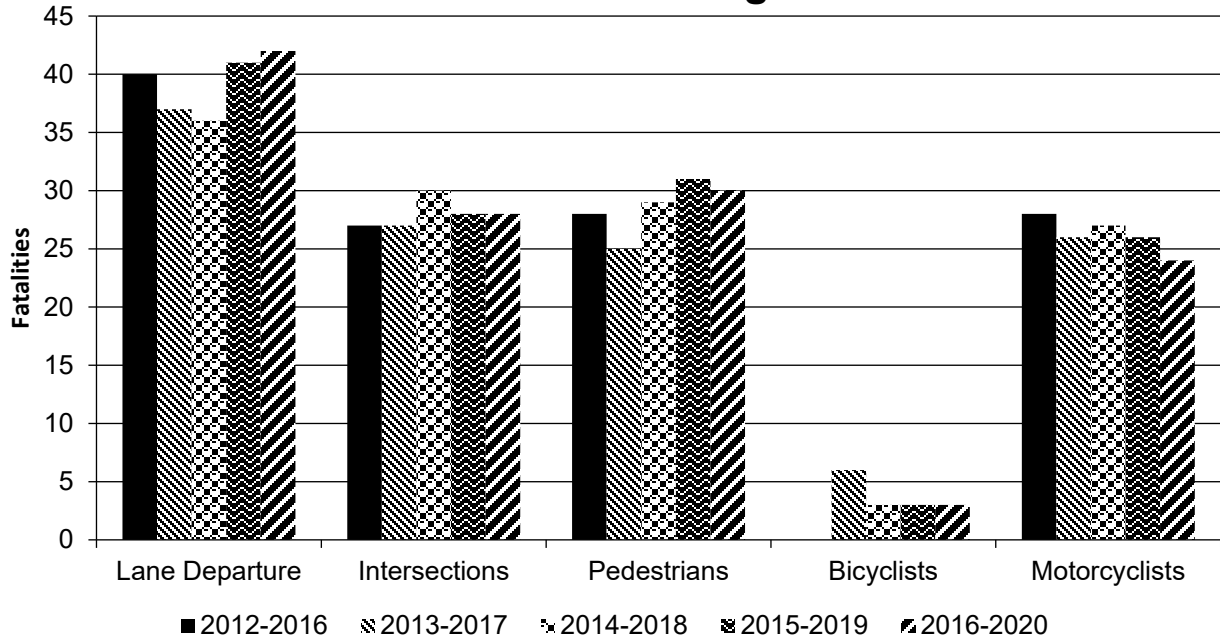
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

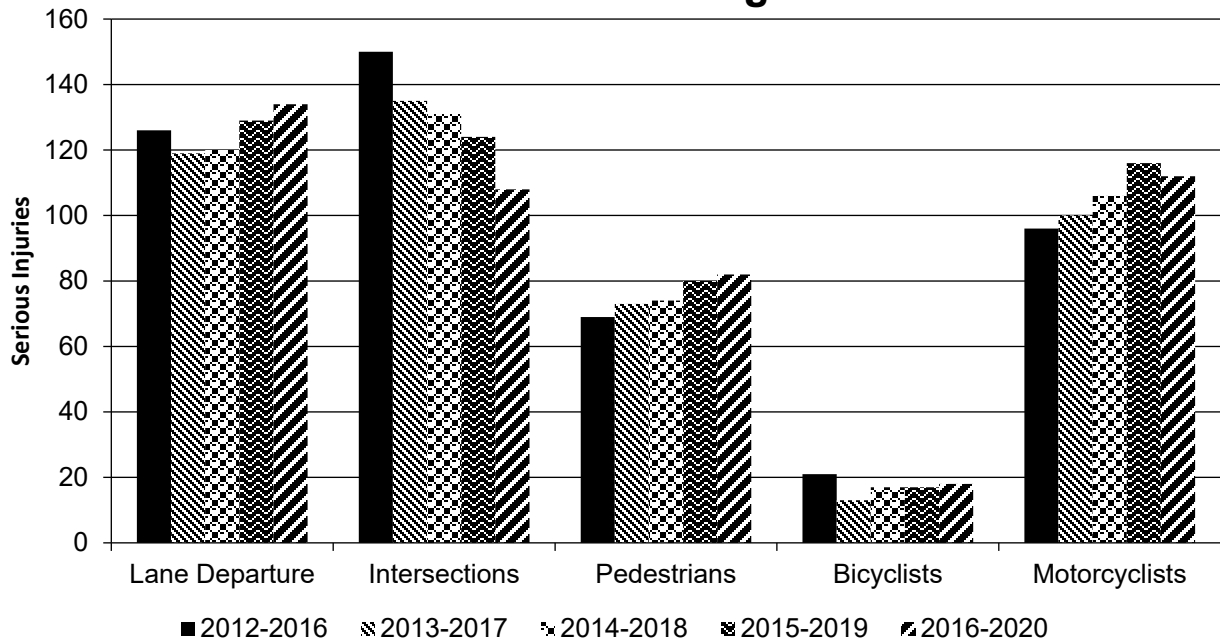
Year 2020

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)
Lane Departure	Run off road and cross centerline	42	134	0.39	1.24
Intersections	Intersections	28	108	0.26	1
Pedestrians	Vehicle/pedestrian	30	82	0.28	0.76
Bicyclists	Vehicle/bicycle	3	18	0.03	0.16
Motorcyclists	Motorcycles and mopeds	24	112	0.23	1.03

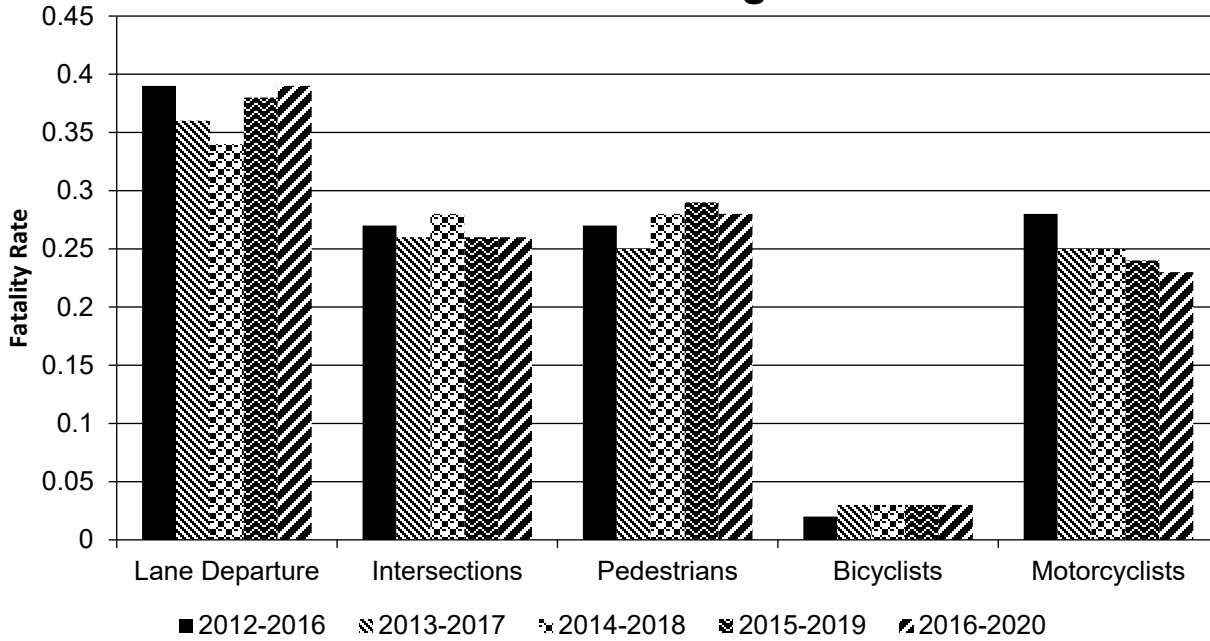
Number of Fatalities 5 Year Average



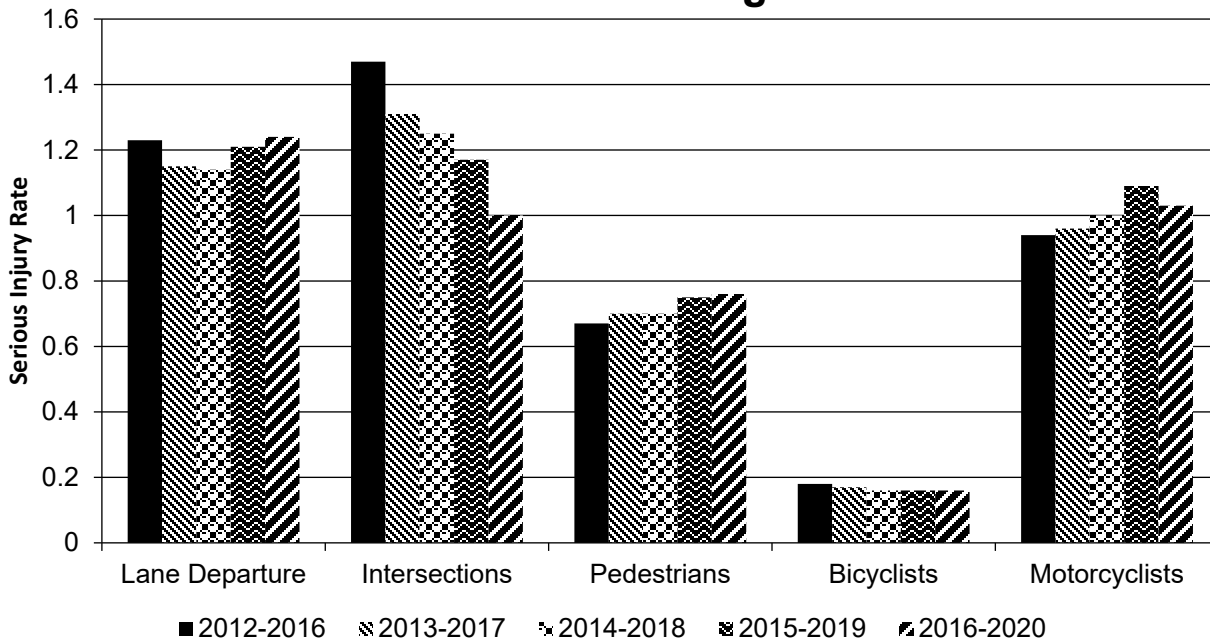
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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

No

2021 Hawaii Highway Safety Improvement Program

HDOT has collaborated with the University of Hawaii to develop a Systemic Roadway Departure Plan. With the development of the plan, HDOT plans to address more systemic safety improvements with proven low-cost safety countermeasures. The plan is still under review. HDOT will evaluate the effectiveness of the countermeasures.

Project Effectiveness

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

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

The State of Hawaii considers fatal and serious injury accidents for all analyses along with the total number of major traffic accidents. We will be working towards providing more of the requested data with next year's submittal as our database becomes more complete and accurate.

Compliance Assessment

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

11/20/2019

What are the years being covered by the current SHSP?

From: 2019 To: 2024

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

2025

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		
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	100					100	100		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100		
	End Point Segment Descriptor (11) [11]	100	100					100	100		
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
	Functional Class (19) [19]	100	100					100	100		
	Median Type (54) [55]	100	100								

2021 Hawaii Highway Safety Improvement Program

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
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	100		
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100		
INTERSECTION	Unique Junction Identifier (120) [110]										
	Location Identifier for Road 1 Crossing Point (122) [112]										
	Location Identifier for Road 2 Crossing Point (123) [113]										
	Intersection/Junction Geometry (126) [116]										
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]										
	AADT Year (80) [82]										
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					100	100				

2021 Hawaii Highway Safety Improvement Program

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]						100				
	Roadway Type at End Ramp Terminal (199) [189]						100				
	Interchange Type (182) [172]						100				
	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):		100.00	100.00	0.00	0.00	72.73	100.00	100.00	88.89	0.00	0.00

*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.

No actions at this time.
 We attended a MIRE FDE Peer Exchange webinar on September 1 with the Planning Branch.

Optional Attachments

Program Structure:

HSIP report.doc

HSIP report2006.doc

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.