Highway Safety Improvement Program

Data Driven Decisions

Kansas
Highway Safety Improvement Program
2015 Annual Report

Prepared by: KS

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."

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Executive Summary

In Kansas we continue to spend our HSIP dollars in a variety of independently managed sub-programs, including intersections, signing, pavement markings, lighting, rail, HRRR, and general safety improvements. The rail program is reported with the RHGCP report. This is the third year HRRR is reported with the HSIP report. We are working with our sub-program managers to develop program manuals specific to each sub-program in a manner consistent with the requirements of this report and related strategies in our Strategic Highway Safety Plan. These manuals will include performance measures, which continue to be a work in progress as we await a final rule on this subject from the FHWA.

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 MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

How are Highway Safety Improvement Program funds allocated in a State?

☒ Central

☐ District

☐ Other

Describe how local roads are addressed as part of Highway Safety Improvement Program.

Our HSIP program is made up of seven sub-programs: lighting, pavement marking, signing, rail, intersections, HRRR, and general safety improvements. Lighting, pavement marking, and signing projects are exclusive to the State Highway System, although projects may impact intersecting non-state roads. Intersections and rail projects may include local roads, that is, public roads not a part of the State Highway System. HRRR is exclusive to local roads. The rail program is addressed in the Rail-Highway Grade Crossing Program report.

Identify which internal partners are involved with Highway Safety Improvement Program planning.

☒Design

☒Planning

☒Maintenance

☒Operations

☐Governors Highway Safety Office

☐Other:

Briefly describe coordination with internal partners.

Lighting sub-program: Projects are selected with input from the structural engineer in our State Bridge Office responsible for foundations for lighting, as well as field information from our Area Offices, and road safety audits performed by our Traffic Engineering Section.

Signing sub-program: This blanket replacement program was programmed to cover the entire state highway system in ten years. Our Area Offices complete a sign inventory for each project. Projects that are primarily on conventional roads the Area Offices typically install the new signs and posts. Projects that are on urban expressways and freeways are typically contractor let. Area Offices then administer the construction engineering duties.

Pavement Marking sub-program: Our pavement marking technician works closely with our district maintenance engineers to identify recommended routes. Works also with Traffic Engineering Unit to identify locations in need of improved markings for safety.

Intersections sub-program: Projects are identified based on recommendations from cities, Traffic Engineering Assistance Program reports, and proactive road safey audits. When the intersection is located on the State Highway System, our District and Area Offices are made part of the discussion as well.

HRRR sub-program: District Offices provide construction oversight.

General Safety Improvements sub-program: Projects are selected and scoped in partnership with District and Area Offices.

All sub-programs: The Accident Data Unit in our Bureau of Transportation Safety & Technology manage and report on crash data as needed.

Identify which external partners are involved with Highway Safety Improvement Program planning.

☒Metropolitan Planning Organizations

☐Governors Highway Safety Office

☒Local Government Association

☒Other: Other-Kansas Association of Counties

☒Other: Other-Local Roads Emphasis Area Team (SHSP)

Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

☐Multi-disciplinary HSIP steering committee

☒Other: Other-Continuing transition to data-based allocation of funds to each sub-program.

Describe any other aspects of Highway Safety Improvement Program Administration on which you would like to elaborate.

A total of $23,808,683 in safety funds (HSIP and Rail) was apportioned for FFY 2015, distributed to each sub-program as follows:

Lighting: $1,000,000 HSIP

Pavement Marking: $3,000,000 HSIP

Signing: $8,000,000 HSIP

Highway-Railway Grade Crossing and Rail: $7,886,861 ($5,886,861 Rail & $2,000,000 HSIP)

Intersection Safety: $721,822 HSIP

High Risk Rural Roads: $3,200,000 HSIP

General Safety Improvements: $0 HSIP

The following dollars were obligated for SFY 2015 in each program:

Lighting: $2,227,909.42 HSIP

Pavement Marking: $3,332,864.81 HSIP

Signing: $4,017,837.47 HSIP

Highway-Railway Grade Crossing and Rail: $5,639,529.87 ($5,230,174.47 Rail; $25,430.80 STP; $383,924.60 HSIP)

Intersection Safety: $3,596,987.31 HSIP

High Risk Rural Roads: $4,402,863.96 ($2,841,588.53 HRRR & $1,561,275.42 HSIP)

General Safety Improvements: $2,928,660.76 HSIP

Each of the programs discussed further in this report are consistent with our SHSP. It is our intent that strategies identified or developed as part of the SHSP process will contribute to the continued success of these programs. A portion of our HSIP funding is programmed as part of our RHGCP. See RHGCP report for more information.

Program Methodology

Select the programs that are administered under the HSIP.

☐ Median Barrier	☒ Intersection	☐ Safe Corridor
☐ Horizontal Curve	☐ Bicycle Safety	☐ Rural State Highways
☐ Skid Hazard	☐ Crash Data	☐ Red Light Running Prevention
☐ Roadway Departure	☐ Low-Cost Spot Improvements	☒ Sign Replacement And

		Improvement
☒Local Safety	☐Pedestrian Safety	☐Right Angle Crash
☐Left Turn Crash	☐Shoulder Improvement	☐Segments
☒Other: Other-Pavement Marking	☒Other: Other-Lighting	☒Other: Other-General Safety Improvements

Program: **Intersection**

Date of Program Methodology: **1/1/1980**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒All crashes	☒Traffic	☐Median width
☐Fatal crashes only	☒Volume	☐Horizontal curvature
☐Fatal and serious injury crashes only	☒Population	☒Functional classification
☐Other	☐Lane miles	☐Roadside features
	☐Other	☐Other

What project identification methodology was used for this program?

☒Crash frequency

☐Expected crash frequency with EB adjustment

☒ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☒ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☒ Yes

☐ No

If yes, are local road projects identified using the same methodology as state roads?

☐ Yes

☒ No

If no, describe the methodology used to identify local road projects as part of this program.

State: consider only pattern and crash rate; The method for local road projects is more time-consuming to validate counter-measures, including information such as EPDO, CMFs and BC.

How are highway safety improvement projects advanced for implementation?

☒ Competitive application process

☐ selection committee

☐ Other

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☒ Ranking based on B/C	3
☒ Available funding	4
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	
☒ EPDO and crash rate	1
☒ Project viability	2

Program: **Sign Replacement And Improvement**

Date of Program Methodology: **7/1/2006**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☐ All crashes	☐ Traffic	☐ Median width

- ☐ Fatal crashes only
- ☐ Fatal and serious injury crashes only
- ☐ Other
- ☐ Volume
- ☐ Population
- ☐ Lane miles
- ☐ Other
- ☐ Horizontal curvature
- ☐ Functional classification
- ☐ Roadside features
- ☐ Other
- ☒ Other-Sign inventory

What project identification methodology was used for this program?

- ☐ Crash frequency
- ☐ Expected crash frequency with EB adjustment
- ☐ Equivalent property damage only (EPDO Crash frequency)
- ☐ EPDO crash frequency with EB adjustment
- ☐ Relative severity index
- ☐ Crash rate
- ☐ Critical rate
- ☐ Level of service of safety (LOSS)
- ☐ Excess expected crash frequency using SPFs
- ☐ Excess expected crash frequency with the EB adjustment
- ☐ Excess expected crash frequency using method of moments
- ☐ Probability of specific crash types
- ☐ Excess proportions of specific crash types
- ☐ Other
- ☒ Other-Pre-programmed blanket replacement program

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☐ Other

☒ Other-Projects were pre-programmed based on a blanket replacement program.

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Other

☒ Per established cyclical program 1

Program: **Local Safety**

Date of Program Methodology: **2/11/2011**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☒ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☒ Horizontal curvature
☐ Fatal and serious injury crashes only	☒ Population	☒ Functional classification
☐ Other	☒ Lane miles	☒ Roadside features
	☐ Other	☒ Other-Shoulder width, sign sheeting type, percent in district, past projects, cost, road safety audit, county priority

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☒ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☒ Probability of specific crash types

☒ Excess proportions of specific crash types

☐ Other

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

☒ Yes

☐ No

If yes, are local road projects identified using the same methodology as state roads?

☐ Yes

☒ No

If no, describe the methodology used to identify local road projects as part of this program.

This program applies only to local roads (non-state owned and operated.)

How are highway safety improvement projects advanced for implementation?

☒ Competitive application process

☒ selection committee

☒ Other-Scoring rubric

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☐ Ranking based on B/C

☒ Available funding 2

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Other

☒ Scoring rubric 1

☒ Geographical distribution 3

Program: **Other-Pavement Marking**

Date of Program Methodology: **7/1/2006**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☐ Horizontal curvature
☐ Fatal and serious injury crashes only	☒ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☒ Other-If we considered only traffic volumes, only high volume districts (1 and 5) would get funded, thus population is taken into account. At the district level, we then consider higher volume routes first and take into account retro-readings.	☒ Other-Retro-reflectivity.

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☒ Other-Pavement Marking Specialist works closely with district maintenance engineers to select

projects.

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

- ☐ Ranking based on B/C
- ☒ Available funding 1
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☐ Other

Program: **Other-Lighting**

Date of Program Methodology: **7/1/2006**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☐ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☐ Horizontal curvature
☐ Fatal and serious injury crashes only	☐ Population	☐ Functional classification

☐ Other

☐ Lane miles

☐ Roadside features

☐ Other

☒ Other-Road type: Interchanges

What project identification methodology was used for this program?

☐ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☒ Other-Locations are brought to our attention

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☒ Other-Lighting Unit

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☐ Ranking based on B/C

☒ Available funding 1

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Other

Program: **Other-General Safety Improvements**

Date of Program Methodology: **2/10/2012**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☐ All crashes	☐ Traffic	☒ Median width
☐ Fatal crashes only	☒ Volume	☒ Horizontal curvature

☒ Fatal and serious injury crashes only	☒ Population	☒ Functional classification
☐ Other	☒ Lane miles	☒ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☒ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☒ selection committee

☐ Other

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).

☐ Relative Weight in Scoring

☒ Rank of Priority Consideration

☐ Ranking based on B/C	
☒ Available funding	2
☐ Incremental B/C	
☐ Ranking based on net benefit	
☒ Cost Effectiveness	1

What proportion of highway safety improvement program funds address systemic improvements?

31

Highway safety improvement program funds are used to address which of the following systemic improvements?

☐ Cable Median Barriers

☐ Rumble Strips

☐ Traffic Control Device Rehabilitation

☐ Pavement/Shoulder Widening

☐ Install/Improve Signing

☒ Install/Improve Pavement Marking and/or Delineation

☐ Upgrade Guard Rails

☐ Clear Zone Improvements

☐ Safety Edge

☒ Install/Improve Lighting

☐ Add/Upgrade/Modify/Remove Traffic Signal

☐ Other

What process is used to identify potential countermeasures?

☒ Engineering Study

☒ Road Safety Assessment

☒ Other: Other-Highway Safety Manual and CMF Clearinghouse

☒ Other: Other-Crash data analysis to identify systematic countermeasures

Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.

☒ Highway Safety Manual

☐ Road Safety audits

☒ Systemic Approach

☐ Other:

Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.

Intersections sub-program:

Kansas chooses to devote a portion of its HSIP funding to intersection projects, as Intersections have been identified as one of the emphasis areas in our Strategic Highway Safety Plan. Recently, the majority of funds have been spent in the metro areas. Metropolitan and Urban jurisdictions are requested to submit three years of crash data for up to four high-crash locations on any system where the major street is not classified as a local street or rural minor collector within their areas. High-crash locations are determined and ranked by descending equivalent-property-damage-only (EPDO) accident rate. The top 20 (approximately) are considered for further analysis. To determine if a location is a high-frequency location on Rural State Highways, a comparison is made between the actual crash rate and the statewide average rate for similar highways. KDOT conducts county-wide road safety audits. From these audits and from traffic studies, high-crash locations are established. High-crash locations are ranked in descending EPDO crash rate order, with further analysis done on the top ten locations. Identified high-crash locations are prioritized on the basis of the average annual net return for each location. The average net return is a dollar amount found by subtracting the average annual costs from the average annual benefits. First priority is given to the location with the highest average annual net return. Remaining projects are selected in descending order until funds are exhausted. Exceptions to this practice might be caused by the unavailability of city matching funds, future projects that may encompass the selected location, a grouping of proximate locations into one project, or combining several smaller projects for a total net return larger than another single project. Projects on County Roads and other roadways are selected by local units of government. These projects are subject to approval by the Federal Highway Administration and are administered by KDOT.

Lighting sub-program:

Because lighting is beneficial to the safety and operation of the highway system, this set-aside program was established in FY 2000. Projects are selected by the Bureau of Transportation Safety & Technology (BTS&T) based on the roadway's volume and the potential for night-time crash history. This program is limited to projects which are not included under any other KDOT program. Projects are scheduled until the available lighting funds are exhausted. This is the tenth year KDOT has used HSIP funds to improve lighting.

Pavement Marking sub-program:

This set-aside program was established in FY 1996 to address pavement marking necessary due to pending new federal requirements for minimum retro-reftectivity of pavement markings. Improvements in this category utilize high-performance, long-life pavement marking materials. Efforts are also made to identify those marking materials with wet-weather retro-reftectivity. This program is limited to projects that do not have high-performance markings included under any other KDOT program. Projects are selected by the BTS&T based upon a roadway's traffic volumes, past performance of marking material, geometry,

surface condition, surface type, crash history, and, in the case of new marking materials, the research benefit. This is the tenth year KDOT has used HSIP funds to improve pavement markings.

Signing sub-program:

This program was established in 1996 to address necessary sign replacements on the State Highway System due to pending (now final) federal requirements for minimum retro-reftectivity of highway signs. This program schedules sign replacements based upon highway route-mileage statewide and the total mileage of all the routes in each District Sub-Area with multiple Sub-Areas in each District being addressed each year. This program excludes signs on any other state project that include sign replacement for that highway route in the same year. This program also excludes any signs that were replaced within seven years of the scheduled date of the replacement project. This is the eighth year KDOT has used HSIP funds to improve permanent signing. The projects in the program are administered using two separate methods. Sub-Areas comprised primarily of routes classified as freeways and expressways with interchanges are let to contract via normal letting procedures. Sub-Areas with routes that are classified as expressways and conventional roads are administered by releasing contracts to purchase the signs and posts with installation performed by KDOT maintenance crews. However, due to KDOT maintenance work force reductions, the program will rely on contractors to install the signs regardless of route classification within some Sub-Areas.

HRRR sub-program:

This program focuses on low-cost safety improvements at site-specific locations and systematiic improvements to signing, pavement marking, roadsides, and horizontal curves. A scoring rubric is used to rank applications.

General Safety Improvement sub-program:

Every year the FHWA provides funds for DOT's to make safety improvements to their system through the Highway Safety Improvement Program (HSIP). As a pilot KDOT developed a program that directed up to $6,000,000 of HSIP funds to projects that were selected using a new system that combines quantitative safety analysis and prediction (IHSDM) with District input. The goal was to distribute these funds throughout the state and address spot locations, like individual curves, intersections, or short tangent sections that were identified with tools developed for the Transparency Report. Moreover the hope is that the program can help address locations that demonstrate a potential safety issue but have not been addressed through traditional KDOT funding programs. This program has not received additional funding since the original $6,000,000 was allocated to it. However, projects in the program continue to be let to contract which is why the program continues to be included in this report.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

☐ Calendar Year

☒ State Fiscal Year

☐ Federal Fiscal Year

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

Funding Category	Programmed*		Obligated	
HSIP (Section 148)	17921822	100 %	18074891	86 %
HRRRP (SAFETEA-LU)	0	0 %	2841589	14 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164				
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	0	0 %	25431	0 %
State and Local Funds				

Totals	17921822	100%	20941911	100%

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

33 %

How much funding is obligated to local safety projects?

$5,640,038.00

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

0 %

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

0 %

How much funding was transferred in to the HSIP from other core program areas during the reporting period?

$0.00

How much funding was transferred out of the HSIP to other core program areas during the reporting period?

$0.00

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.

Signing sub-program:The FY15 program is a continuation of the FY13 program.Projects identified and obligated required additional funding above the allotment allocated to signing under the FY13 program. The decision was made to delay construction lettings and the purchase of materials for several projects. New project-level obligations are not shown in the HSIP annual report for FY15, since the obligations were previously shown in the FY13 report. It is anticipated many project-level obligations will be shown in next year's report.

HRRR sub-program: Project programming and design time requirements. Plan to overcome by selecting three year's worth of projects and programming projects with a potentially longer design period in later years.

Describe any other aspects of the general Highway Safety Improvement Program implementation progress on which you would like to elaborate.

Nothing to note at this time.

General Listing of Projects

List each highway safety improvement project obligated during the reporting period.

Project	Improvement Category	Output	HSIP Cost	Total Cost	Funding Category	Functional Classification	AADT	Speed	Roadway Ownership	Relationship to SHSP	
										Emphasis Area	Strategy
C-0051-01	Alignment Horizontal and vertical alignment	0.22 Miles	1500000	2494259	HRRRP (SAFETEA-LU)	Rural Major Collector	1700	45	County Highway Agency	Roadway Departure	
C-1183-01	Alignment Vertical alignment or elevation change	0.12 Miles	144823	161494	HRRRP (SAFETEA-LU)	Rural Major Collector	117	55	County Highway Agency	Intersections	
C-4595-01	Roadside Removal of roadside objects (trees, poles, etc.)	0.69 Miles	1003447	116203	HRRRP (SAFETEA-LU)	Rural Major Collector	4608	60	County Highway Agency	Roadway Departure	
C-0314-01	Roadside Removal of roadside objects	0.39 Miles	272762	303241	HSIP (Section 148)	Rural Major Collector	141	55	County Highway Agency	Roadway Departure	

	(trees, poles, etc.)										
C-4633-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	197 Miles	211362	211362	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	
C-4634-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	115 Miles	116500	116500	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	
C-4635-01	Roadway signs and traffic control Roadway signs (including	152 Miles	84834	84834	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	

	post) - new or updated										
C-4636-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	87.5 Miles	78808	78808	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	
C-4637-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	37.3 Miles	63000	73020	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	
C-4638-01	Roadway signs and traffic control Roadway signs (including	14 Miles	23531	50196	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	

	post) - new or updated										
C-4640-01	Roadside Removal of roadside objects (trees, poles, etc.)	3 Miles	498750	554259	HSIP (Section 148)	Rural Major Collector	4779	55	County Highway Agency	Roadway Departure	
C-4672-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	275.5 Miles	190000	190000	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	
C-4689-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	53 Miles	50620	50620	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	

KA-2770-02	Intersection geometry Intersection geometry - other	1 Numbers	1900000	4895875.09	HSIP (Section 148)	Urban Principal Arterial - Other	2400	70	State Highway Agency	Intersections	
KA-3074-01	Intersection traffic control Intersection traffic control - other	1 Numbers	850000	1290963	HSIP (Section 148)	Urban Minor Arterial	5800	50	State Highway Agency	Intersections	
N-0578-01	Intersection traffic control Intersection traffic control - other	1 Numbers	73249.03	263351.66	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Intersections	
N-0586-01	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbers	330000	546297.07	HSIP (Section 148)	Urban Principal Arterial - Interstate	0	0	City of Municipal Highway Agency	Intersections	
U-0168-	Intersection traffic	2 Number	450000	513351.39	HSIP (Section	Urban Principal	0	0	City of Municipal	Intersection	

01	control Intersection traffic control - other	s			148)	Arterial - Other			Highway Agency	s	
KA-3967-01	Lighting Site lighting - interchange	1 Numbers	355043.59	355043.59	HSIP (Section 148)	Urban Principal Arterial - Interstate	50880	70	State Highway Agency	Intersections	
KA-4019-01	Lighting Site lighting - interchange	1 Numbers	130474.99	130474.99	HSIP (Section 148)	Urban Principal Arterial - Interstate	5330	65	State Highway Agency	Intersections	
KA-4020-01	Lighting Site lighting - interchange	1 Numbers	1549355.15	1549355.15	HSIP (Section 148)	Urban Principal Arterial - Interstate	10590	55	State Highway Agency	Intersections	
KA-4017-01	Roadway delineation Longitudinal pavement markings - remarking	7.781 Miles	64197.55	64197.55	HSIP (Section 148)	Rural Minor Arterial	1540	65	State Highway Agency	Roadway Departure	Pavement Markings
KA-4018-	Roadway delineation Longitudinal	8.49 Miles	32829.16	32829.16	HSIP (Section	Rural Minor Arterial	1280	65	State Highway	Roadway Departure	Pavement Markings

01	pavement markings - remarking				148)				Agency		
KA-4027-01	Roadway delineation Longitudinal pavement markings - remarking	12.591 Miles	3180	164763.1	HSIP (Section 148)	Rural Minor Arterial	3180	65	State Highway Agency	Roadway Departure	Pavement Markings
KA-4140-01	Roadway delineation Longitudinal pavement markings - remarking	18.797 Miles	1091000	1091000	HSIP (Section 148)	Urban Principal Arterial - Interstate	16700	75	State Highway Agency	Roadway Departure	Pavement Markings
KA-4146-01	Roadway delineation Longitudinal pavement markings - remarking	5.97 Miles	230050	230050	HSIP (Section 148)	Rural Principal Arterial - Interstate	17600	75	State Highway Agency	Roadway Departure	Pavement Markings
KA-4147-01	Roadway delineation Longitudinal pavement markings -	5.488 Miles	201025	201025	HSIP (Section 148)	Rural Principal Arterial - Interstate	17700	75	State Highway Agency	Roadway Departure	Pavement Markings

	remarking										
KA-4150-01	Roadway delineation Longitudinal pavement markings - remarking	6.589 Miles	107500	107500	HSIP (Section 148)	Rural Minor Arterial	5350	65	State Highway Agency	Roadway Departure	Pavement Markings
KA-4157-01	Roadway delineation Longitudinal pavement markings - remarking	17.152 Miles	763000	763000	HSIP (Section 148)	Rural Principal Arterial - Interstate	18200	75	State Highway Agency	Roadway Departure	Pavement Markings
KA-4158-01	Roadway delineation Longitudinal pavement markings - remarking	2.839 Miles	74000	74000	HSIP (Section 148)	Rural Principal Arterial - Interstate	20300	75	State Highway Agency	Roadway Departure	Pavement Markings
KA-4160-01	Roadway delineation Longitudinal pavement markings - remarking	0.675 Miles	35500	35500	HSIP (Section 148)	Rural Minor Arterial	8840	55	State Highway Agency	Roadway Departure	Pavement Markings

KA-4169-01	Roadway delineation Longitudinal pavement markings - remarking	5.579 Miles	150000	150000	HSIP (Section 148)	Urban Principal Arterial - Other	6610	65	State Highway Agency	Roadway Departure	Pavement Markings
KA-4173-01	Roadway delineation Longitudinal pavement markings - remarking	7.036 Miles	419000	419000	HSIP (Section 148)	Urban Principal Arterial - Other	4160	55	State Highway Agency	Roadway Departure	Pavement Markings
KA-0004-01	Alignment Horizontal and vertical alignment	1 Numbers	2784705	3290047	HSIP (Section 148)	Rural Minor Arterial	920	65	State Highway Agency	Intersections	
KA-3143-01	Intersection traffic control Intersection traffic control - other	1 Numbers	250000	483223	HSIP (Section 148)	Urban Principal Arterial - Interstate			State Highway Agency	Intersections	
KA-3646-01	Roadway Pavement surface - high friction	0.2 Miles	115424	128248	HSIP (Section 148)	Urban Principal Arterial -			State Highway Agency	Roadway Departure	Install high friction surface

	surface					Interstate					treatments

Progress in Achieving Safety Performance Targets

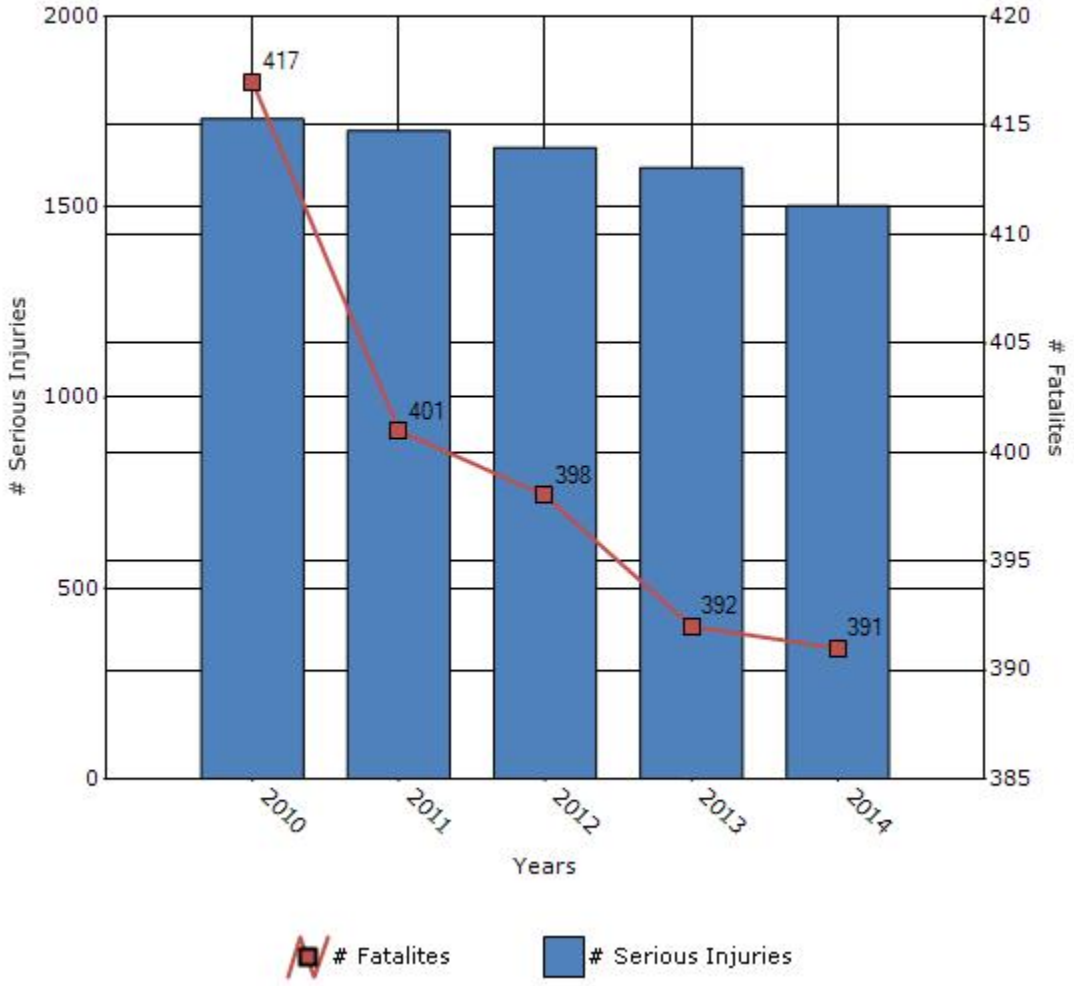
Overview of General Safety Trends

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

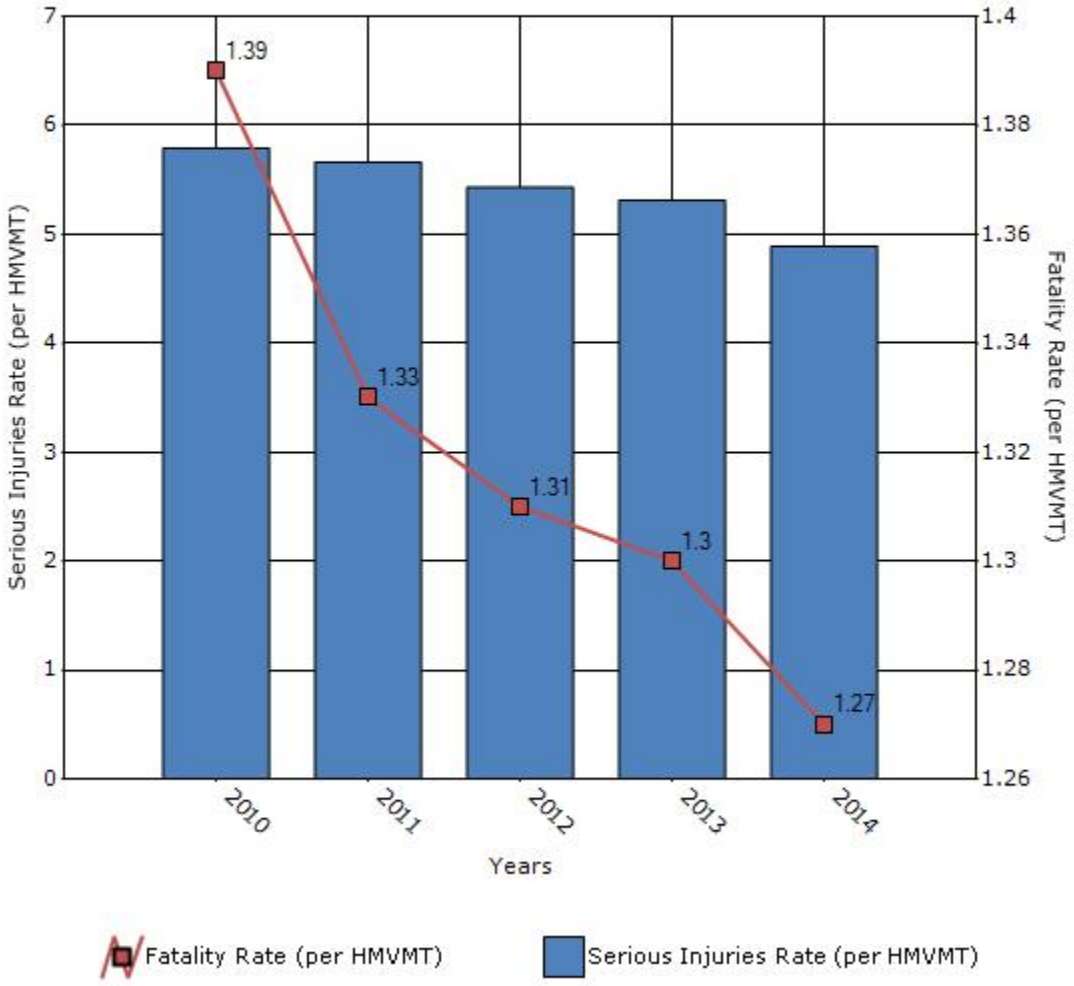
Performance Measures*	2010	2011	2012	2013	2014
Number of fatalities	417	401	398	392	391
Number of serious injuries	1731	1700	1655	1603	1503
Fatality rate (per HMVMT)	1.39	1.33	1.31	1.3	1.27
Serious injury rate (per HMVMT)	5.79	5.66	5.43	5.31	4.89

*Performance measure data is presented using a five-year rolling average.

Number of Fatalities and Serious injuries for the Last Five Years



Rate of Fatalities and Serious injuries for the Last Five Years

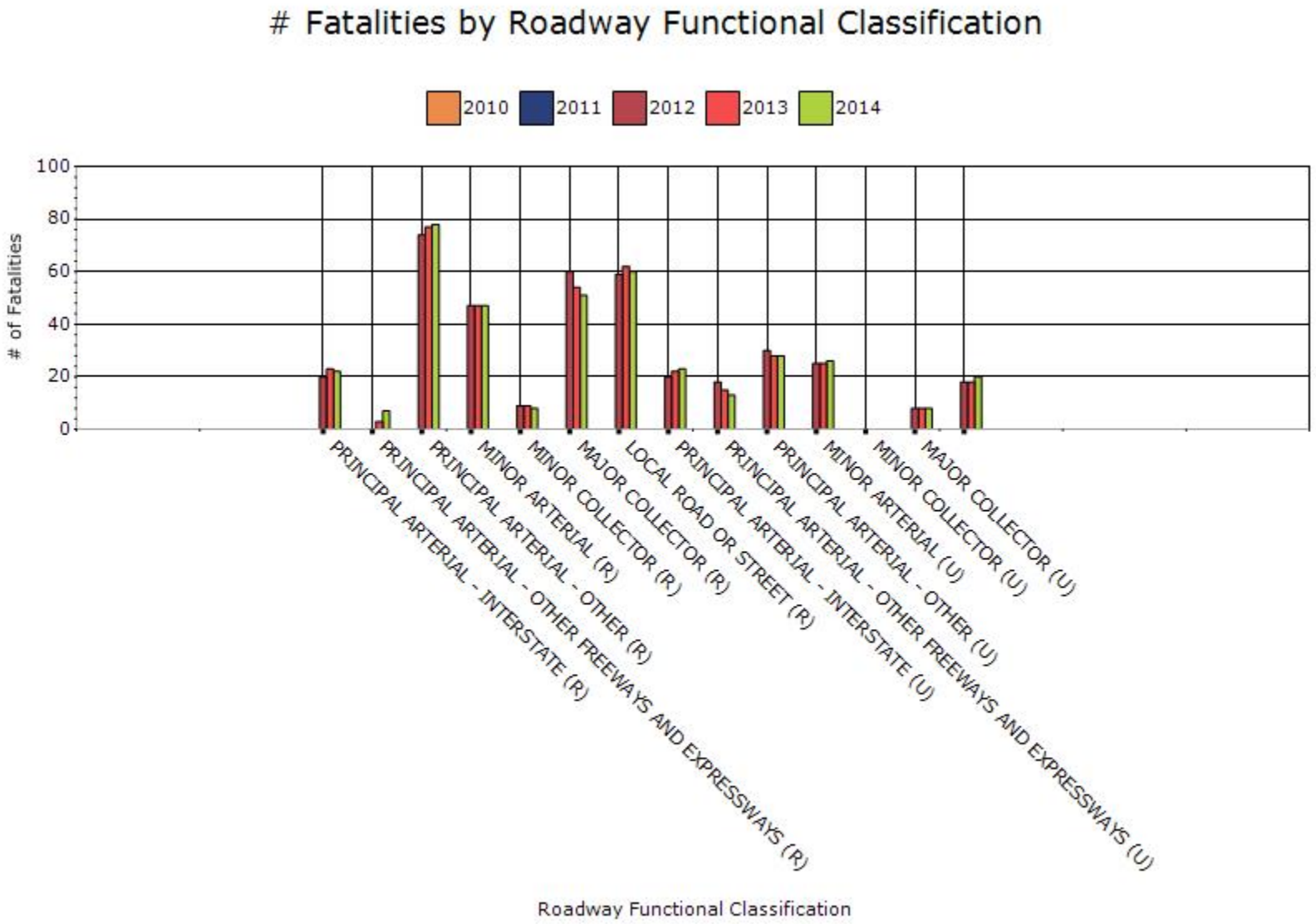


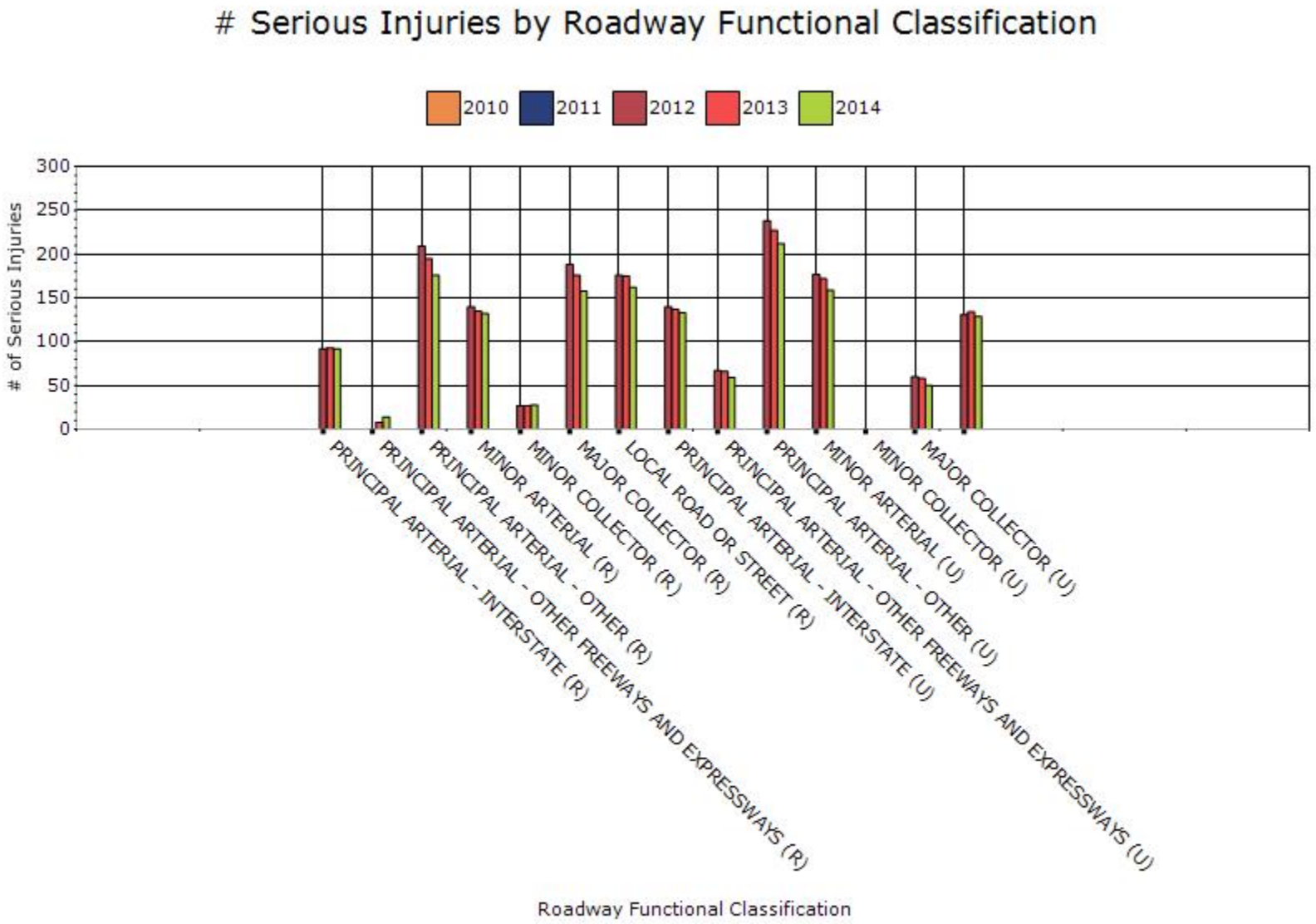
To the maximum extent possible, present performance measure* data by functional classification and ownership.

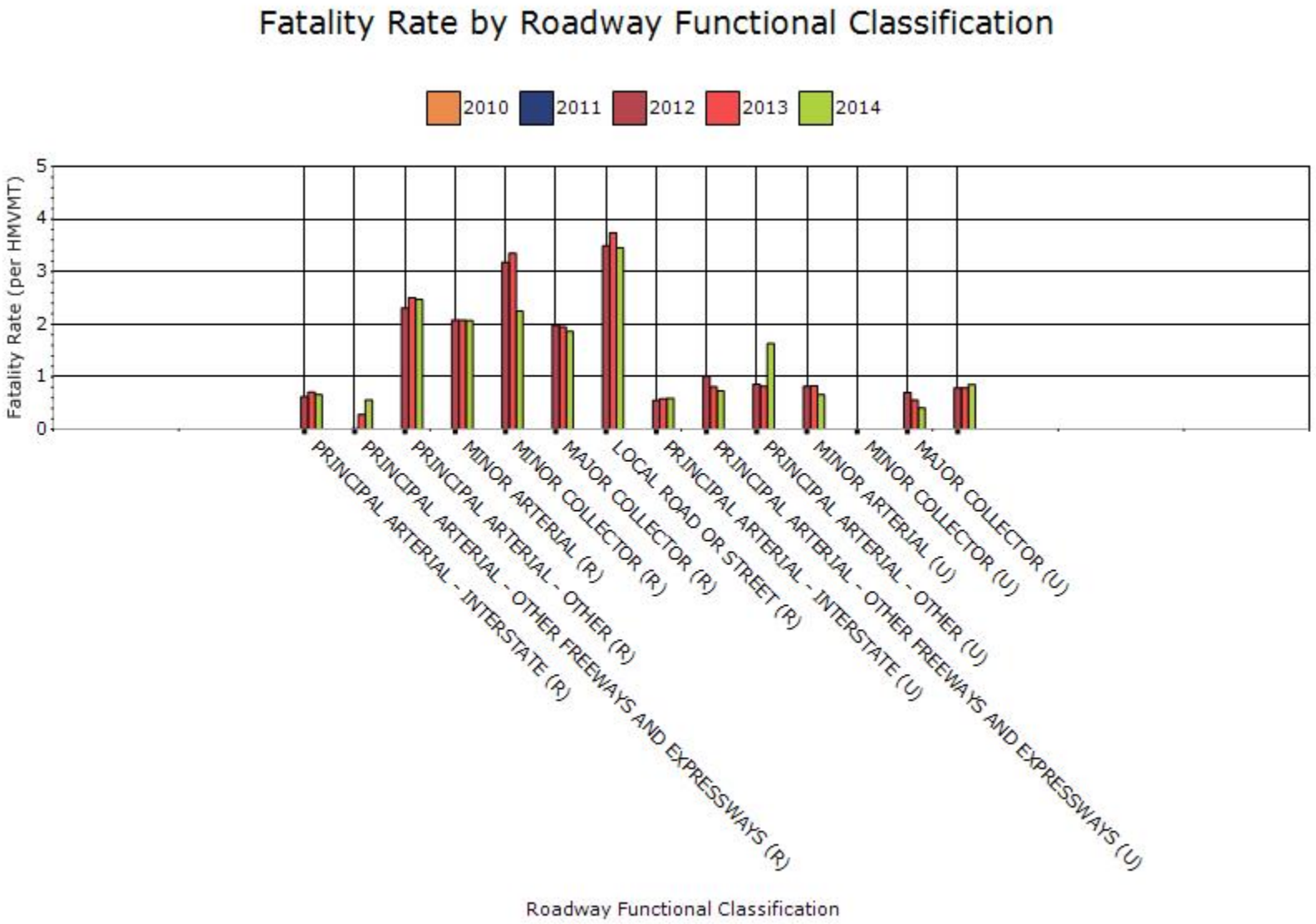
Year - 2014

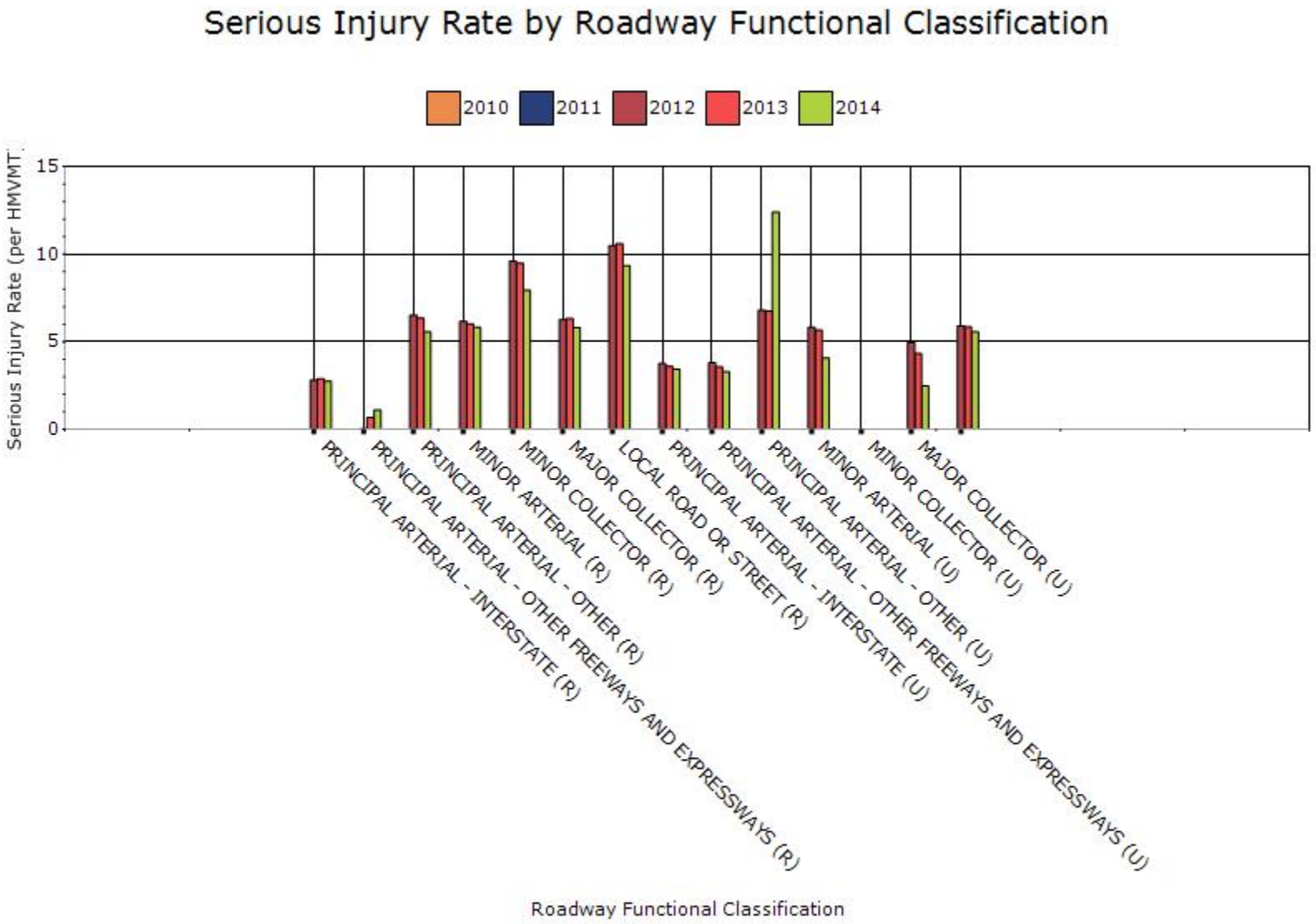
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	22	92	0.66	2.75
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	7	14	0.56	1.1
RURAL PRINCIPAL ARTERIAL - OTHER	78	176	2.47	5.56
RURAL MINOR ARTERIAL	47	132	2.07	5.82
RURAL MINOR COLLECTOR	8	28	2.25	7.94
RURAL MAJOR COLLECTOR	51	158	1.86	5.8
RURAL LOCAL ROAD OR STREET	60	162	3.45	9.34
URBAN PRINCIPAL	23	133	0.59	3.43

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	13	59	0.73	3.28
URBAN PRINCIPAL ARTERIAL - OTHER	28	212	1.63	12.4
URBAN MINOR ARTERIAL	26	159	0.66	4.08
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	8	50	0.41	2.47
URBAN LOCAL ROAD OR STREET	20	129	0.85	5.56


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
100
80
60
40
20
0
# of Fatalities
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

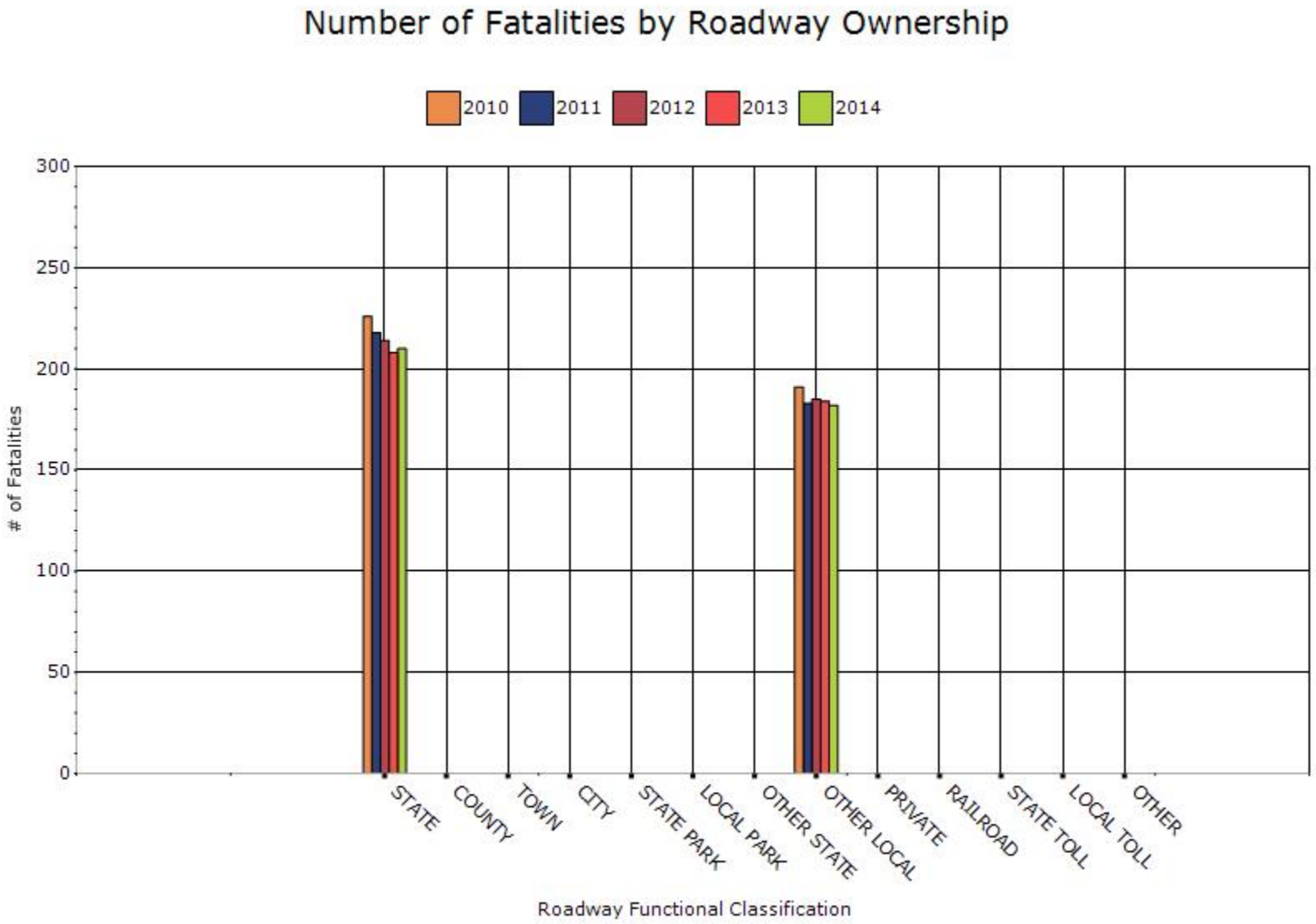

Serious Injuries by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Serious Injuries
300
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

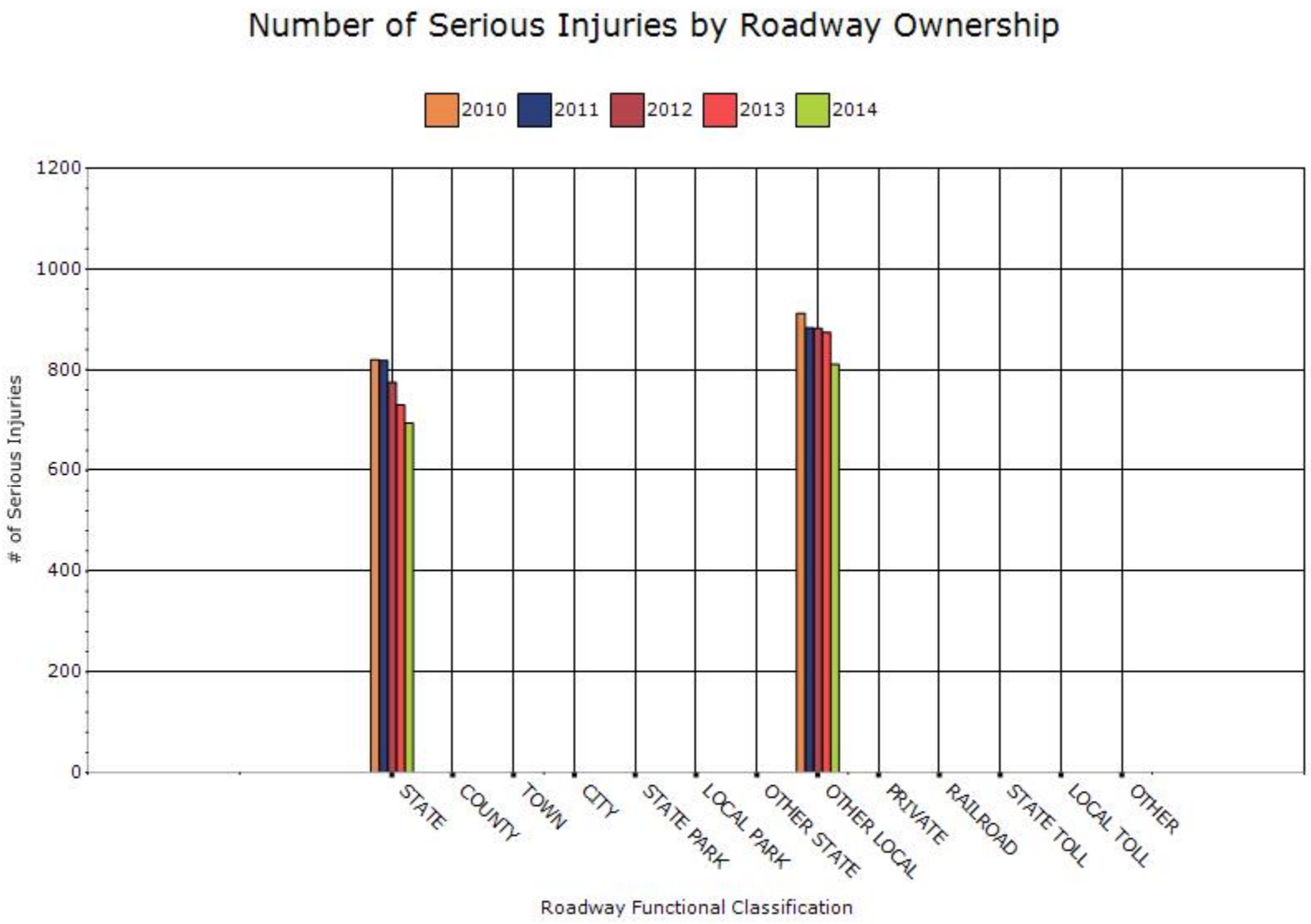

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

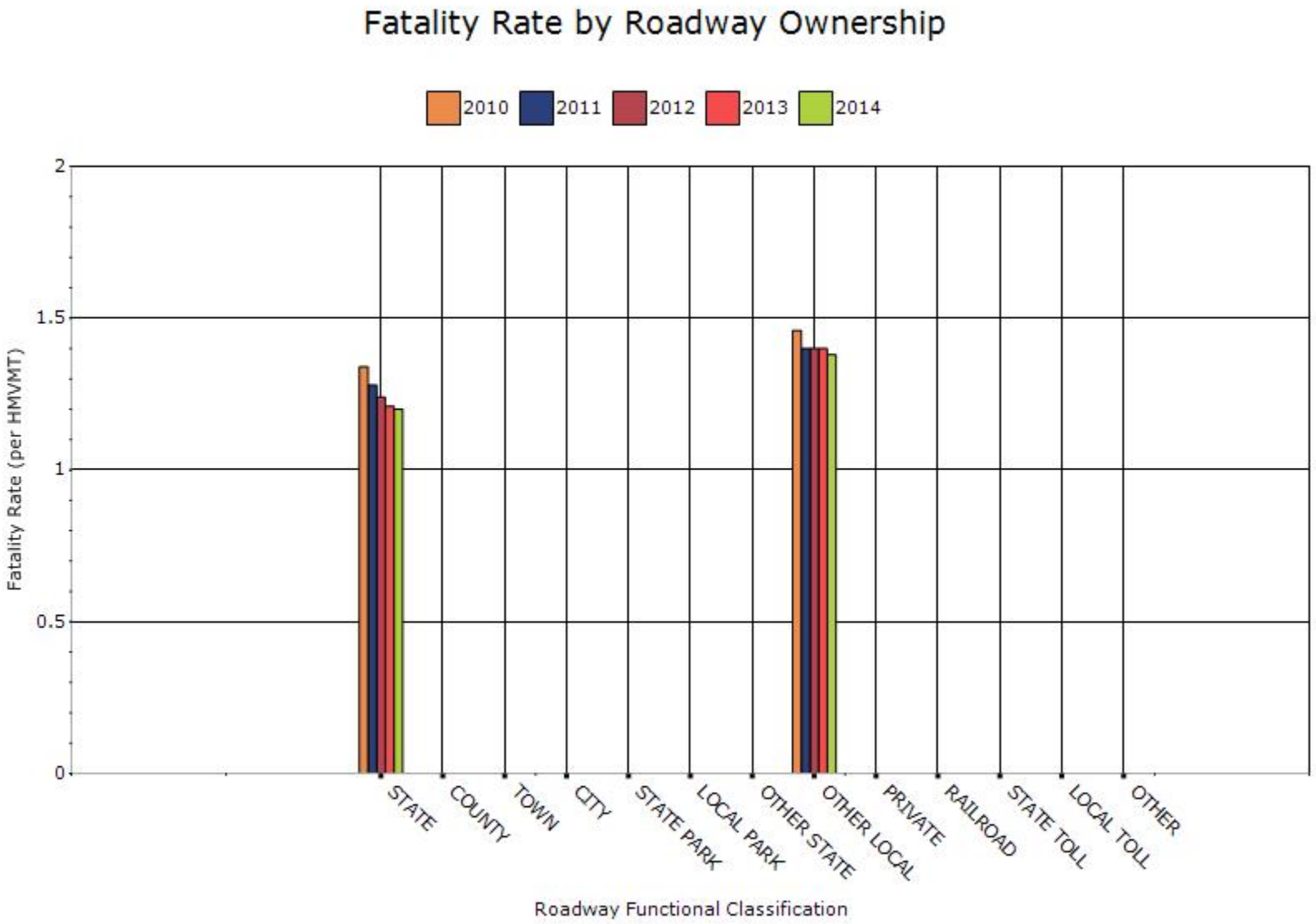

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

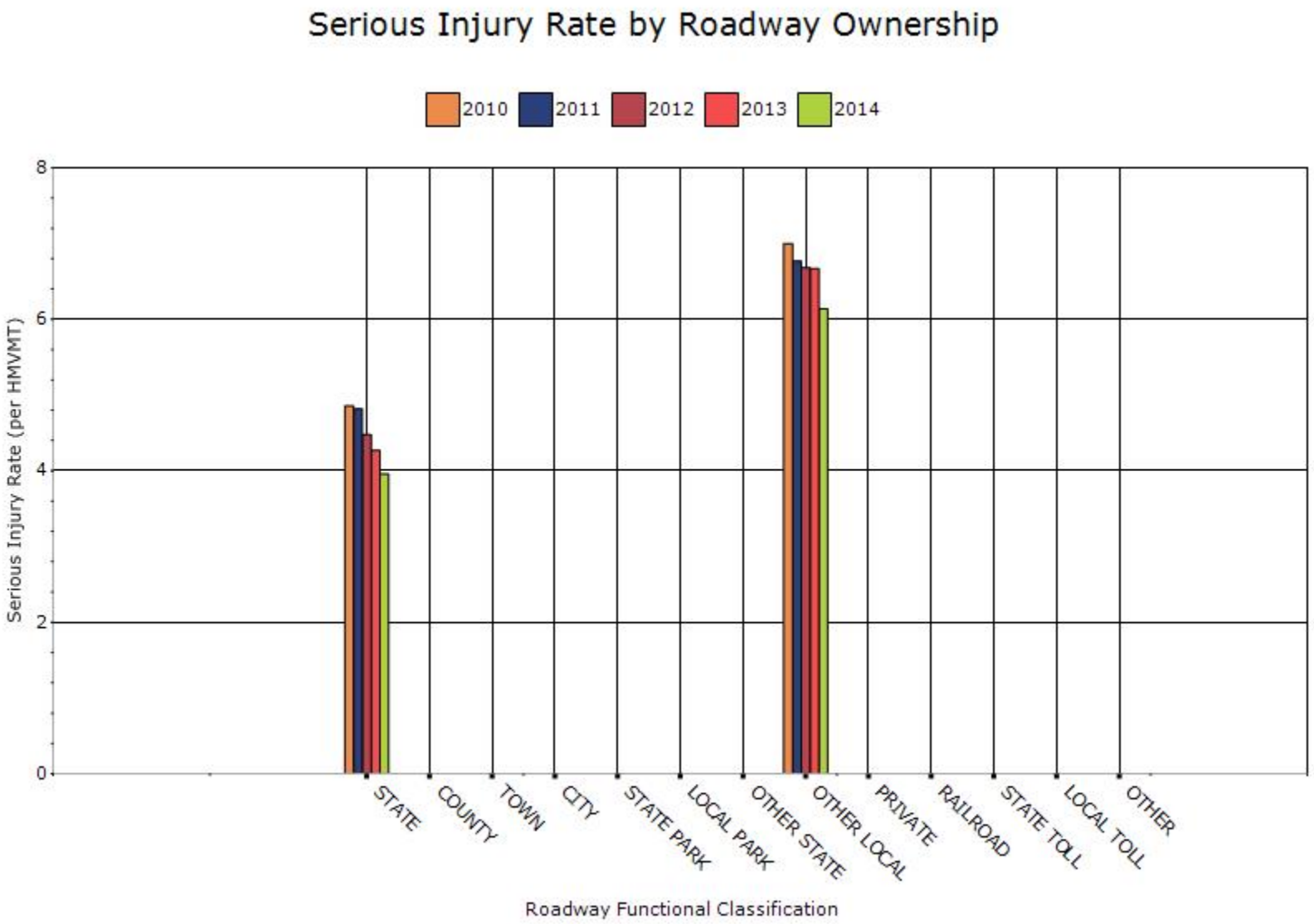
Year - 2014

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	210	694	1.2	3.96
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	0
LOCAL PARK, FOREST OR RESERVATION AGENCY	0	0	0	0
OTHER STATE AGENCY	0	0	0	0
OTHER LOCAL AGENCY	182	811	1.38	6.14
PRIVATE (OTHER THAN RAILROAD)	0	0	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	0	0


Number of Fatalities by Roadway Ownership
2010
2011
2012
2013
2014
300
250
200
150
100
50
0
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2010
2011
2012
2013
2014
1200
1000
800
600
400
200
0
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
2
1.5
1
0.5
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
0
2
4
6
8
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification

Describe any other aspects of the general highway safety trends on which you would like to elaborate.

Overall, based on five-year averages, fatalities are down nine percent from 2008 to 2014. On the State Highway System fatalities are down 15 percent. However, on locally-owned roads fatalities are essentially unchanged. Similarly, serious injuries are down 17 percent overall, 20 percent on state highways, while only 13 percent on locally-owned roads since 2008. The trend on locally-owned roads is discouraging and indicates more attention should be focused on the 93 percent of our public roads owned by cities, counties, and townships.

The goal in our Strategic Highway Safety Plan is to cut in half fatalities and serious injuries between 2009 and 2029. In 2009 our five-year fatality average was 416, meaning we need to be at 364 by 2014. We are at 391. In 2009 our five-year serious injury average was 1763, meaning we need to be at 1542 by 2014. We are at 1503. In summary, we are ahead of pace in serious injuries and behind pace in fatalities. Of course, the vision in our SHSP is zeros, across the board.

Application of Special Rules

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

Older Driver Performance Measures	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.418	0.432	0.4	0.428	0.456
Serious injury rate (per capita)	0.908	0.874	0.892	0.87	0.874
Fatality and serious injury rate (per capita)	1.33	1.31	1.296	1.302	1.334

*Performance measure data is presented using a five-year rolling average.

Fatality rate per capita per year equals total number of older drivers and pedestrians (65+) killed based on FARS data, divided by the state population figured for Kansas provided in the guidance.

Serious injury rate per capita per year equals total number of older drivers and pedestrians (65+) seriously injured based on the state crash database, divided by the state population figured for Kansas provided in the guidance.

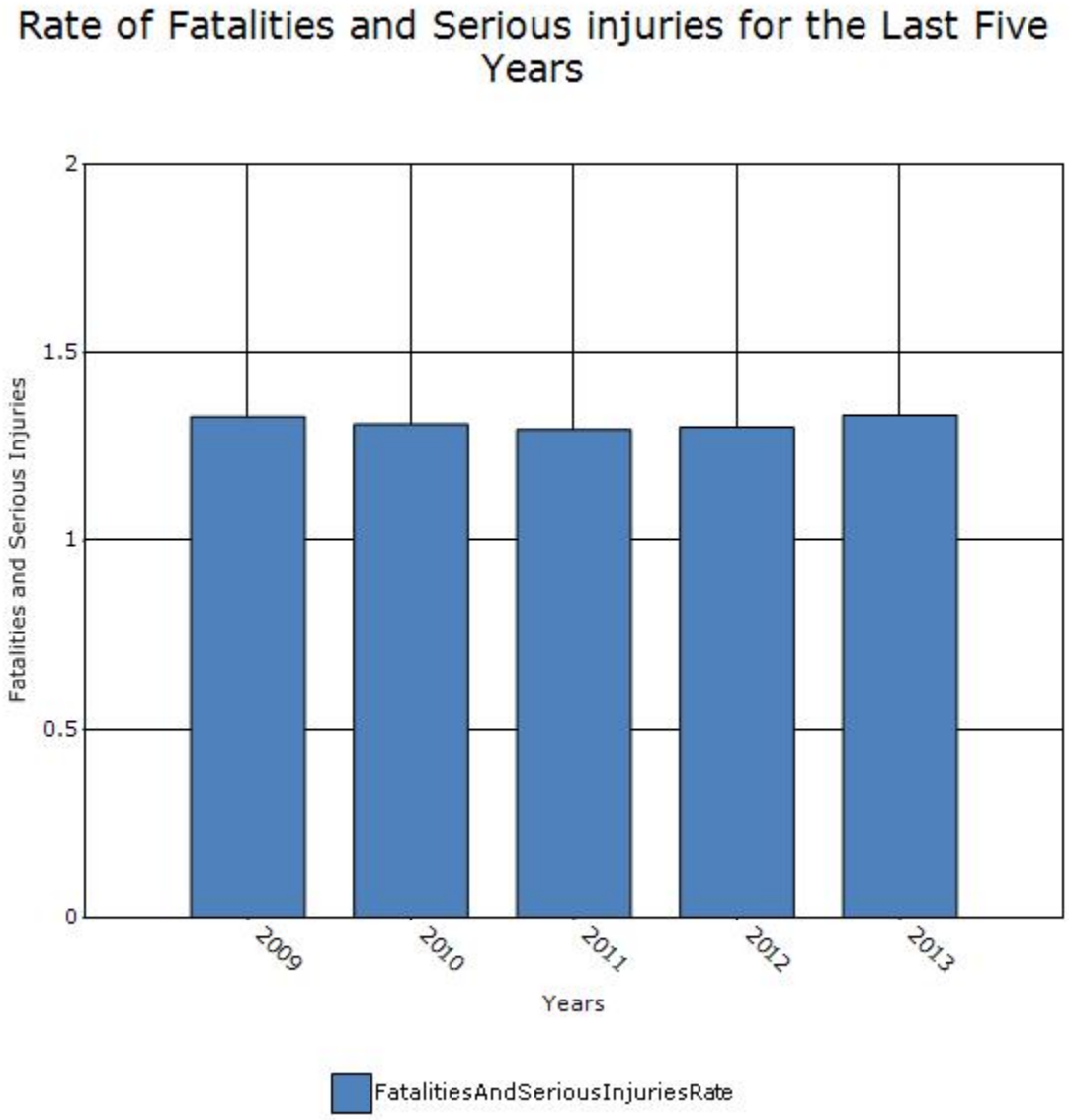
Fatality and serious injury rate per capita per year equals the fatality rate plus the serious injury rate.

The rates per capita per year are then averaged over five years. For example, the 5-yr average for 2010 equals the average of the five years 2006 thru 2010.

Here is the data we used, followed by the calculations:

Year	Fatals	Disabled	Total	State Population Figure
2006	74	105	179	129
2007	47	120	167	129
2008	47	109	156	131
2009	50	108	158	130
2010	65	129	194	133
2011	55	120	175	133
2012	68	113	181	137
2013	70	119	189	140

2010	((179/129)+(167/129)+(156/131)+(158/130)+(194/133))/5	1.309408	1.3
2011	((167/129)+(156/131)+(158/130)+(194/133)+(175/133))/5	1.295047	1.3
2012	((156/131)+(158/130)+(194/133)+(175/133)+(181/137))/5	1.300366	1.3
2013	((158/130)+(194/133)+(175/133)+(181/137)+(189/140))/5	1.332198	1.3



Does the older driver special rule apply to your state?

No

Assessment of the Effectiveness of the Improvements (Program Evaluation)

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program?

☒ None

☐ Benefit/cost

☐ Policy change

☐ Other:

What significant programmatic changes have occurred since the last reporting period?

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☐ None

☒ Other: Other-We continue to transition to a data-based distribution of HSIP dollars.

☒ Other: Other-Scoring rubric used to objectively evalute projects on locally-owned roads.

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

A scoring rubric was developed to help rank projects in the High Risk Rural Roads (Local Safety) sub-program:

	Points	
Past Project	10	None
	7	Obligated 2009
	6	Obligated 2010
	5	Obligated 2011
	4	Obligated 2012
	3	Obligated 2013
	2	Obligated 2014
	1	Obligated 2015
	0	Obligated 2016
Statewide Distribution	10	<3%
	9	<6%
	8	<9%District 3 - 9 projects 6.1%
	7	<12%
	6	<15%District 4 - 20 projects 13.6%
	5	<18%District 1 - 22 projects 15.0%
		District 2 - 28 projects 19.0%
	4	<21%District 5 - 29 projects 19.7%
	3	<24%
	2	<27%District 6 - 39 projects 26.5%
	1	>27%
Submittal	10	1 Project - Plan
	9	2 Projects
	8	3 Projects
	7	4 Projects
	6	5 Projects
	5	6 Projects
	4	7 Projects
	3	8 Projects
	2	9 Projects
	1	10 Projects
Type	10	LRSP
	0	Anything Else
Proposed FY	3	2016
	2	2017
	1	2018
	0	Not Specified
Roadway Type	10	Major Collector

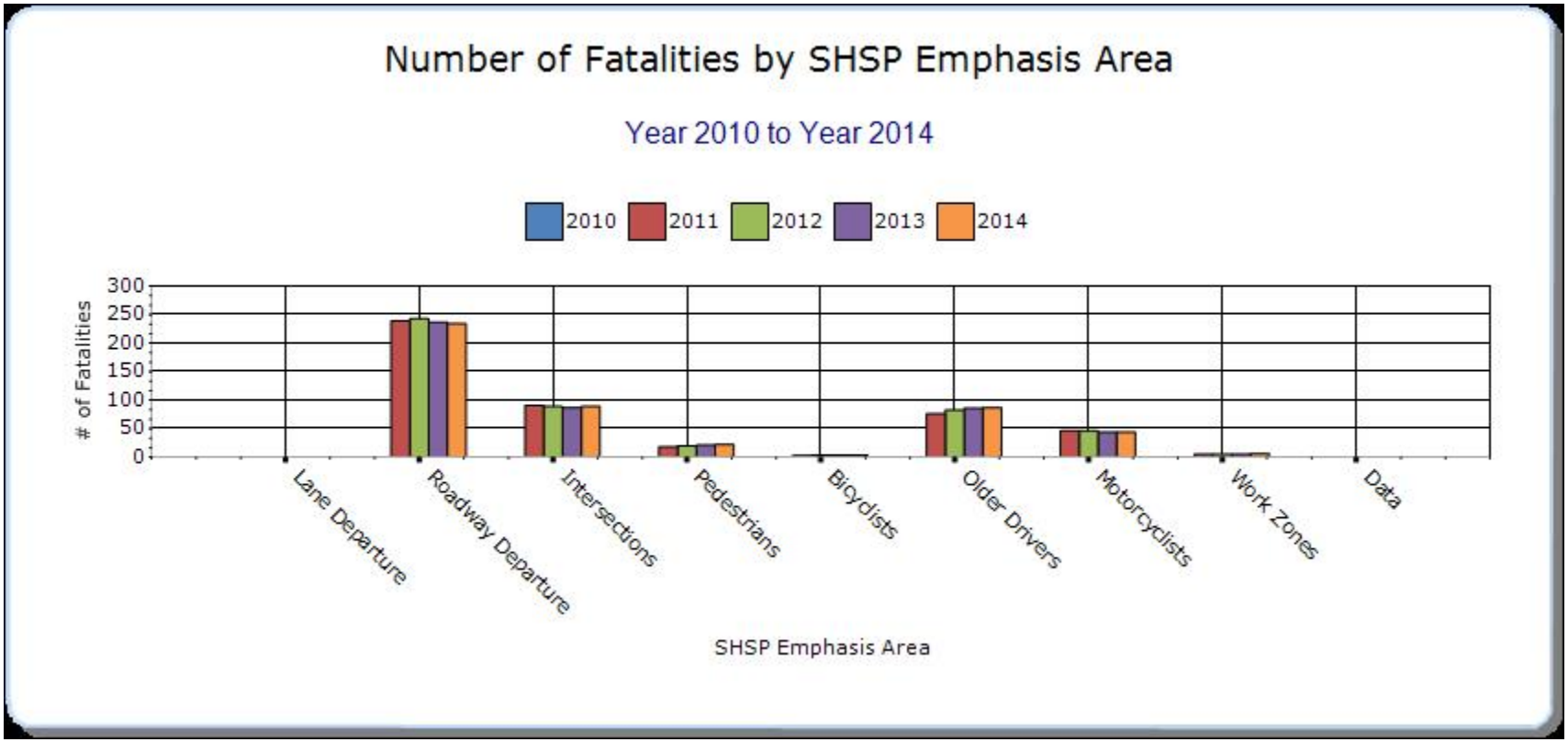
		5	Minor Collector
		0	Local Road
Low-Cost		10	<50k
		9	<100k
		8	<150k
		7	<200k
		6	<250k
		5	<300k
		4	<350k
		3	<400k
		2	<450k
		1	<500k
		0	>=500k
Length	Miles/100	LRSP assumed 500 miles	
Crashes	Crashes/Yr		

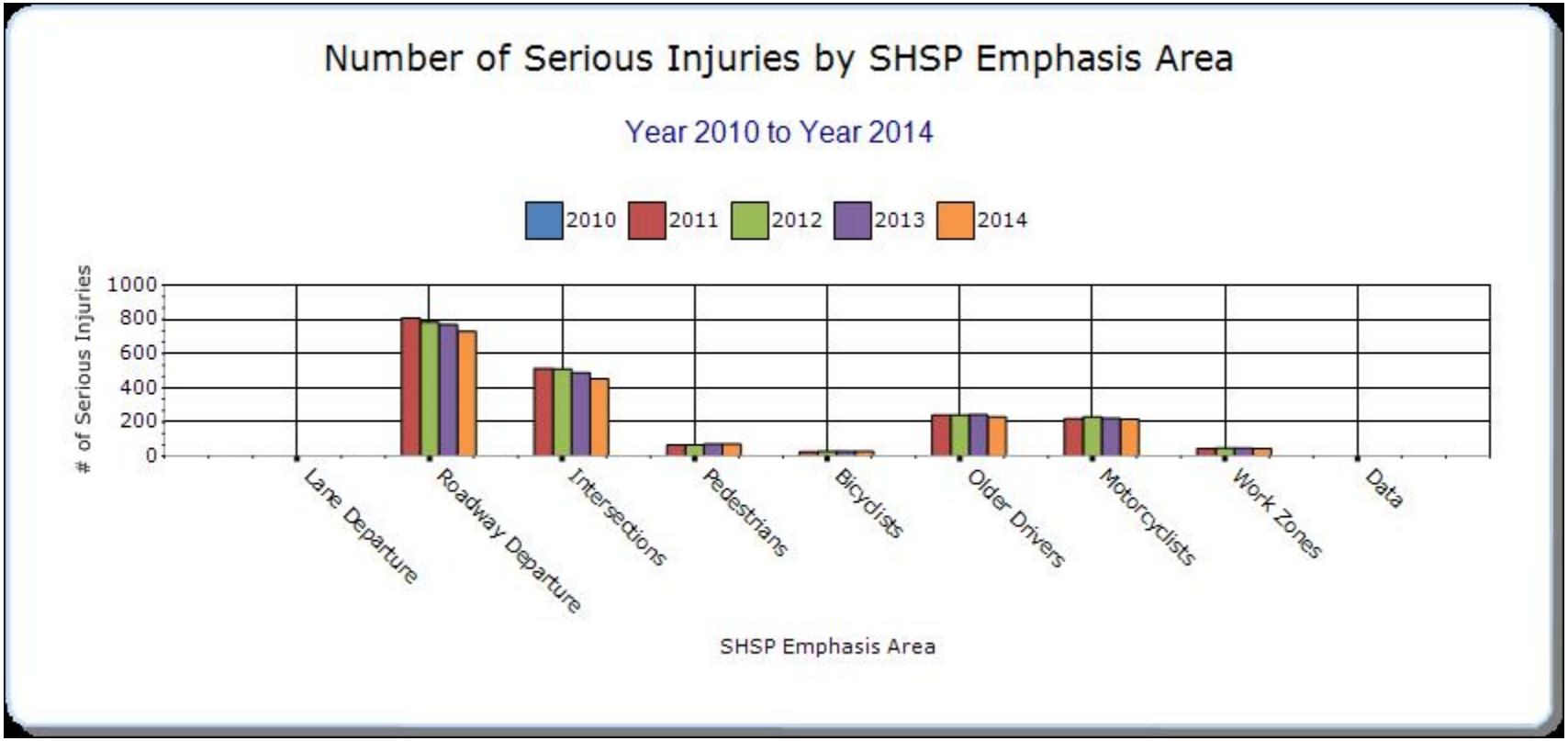
SHSP Emphasis Areas

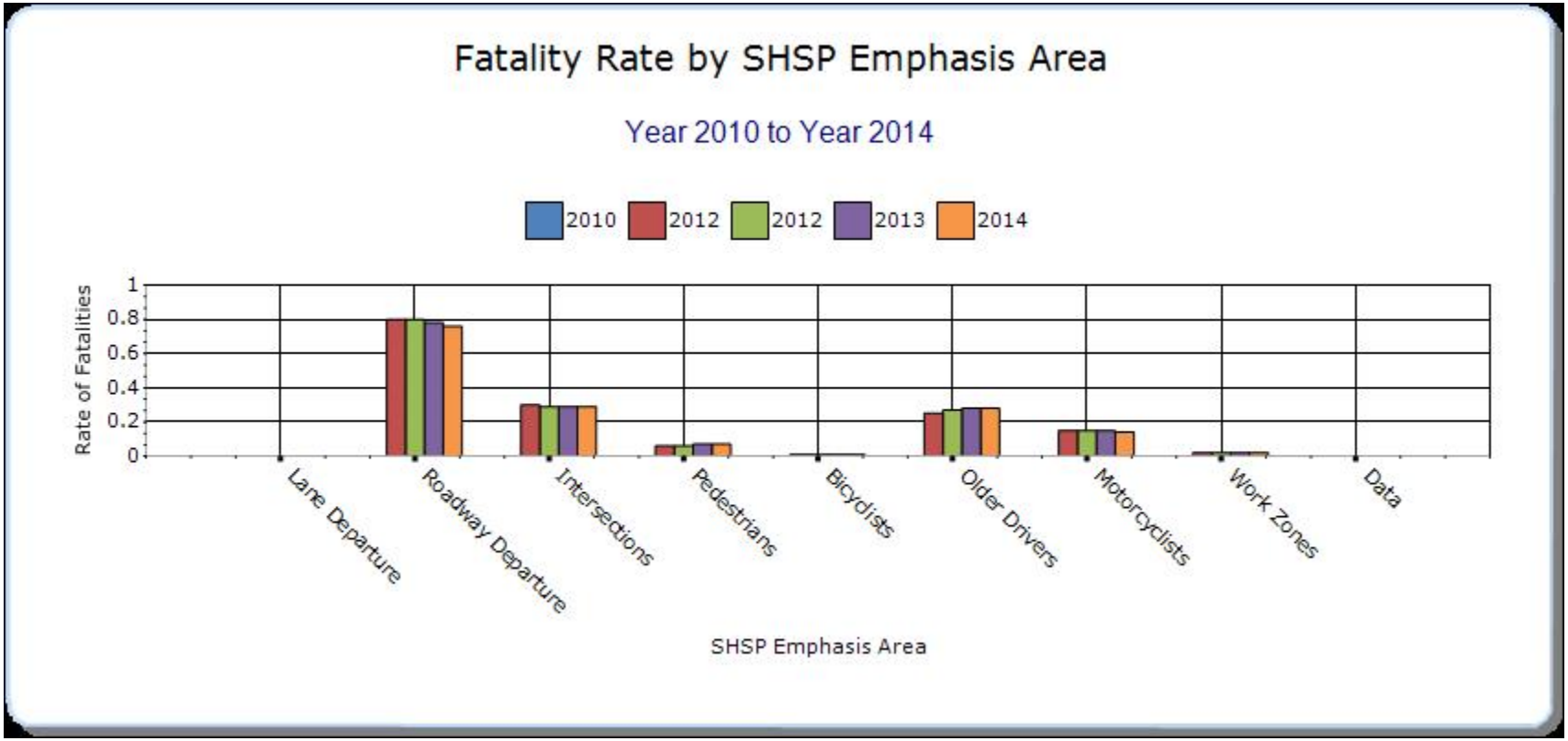
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

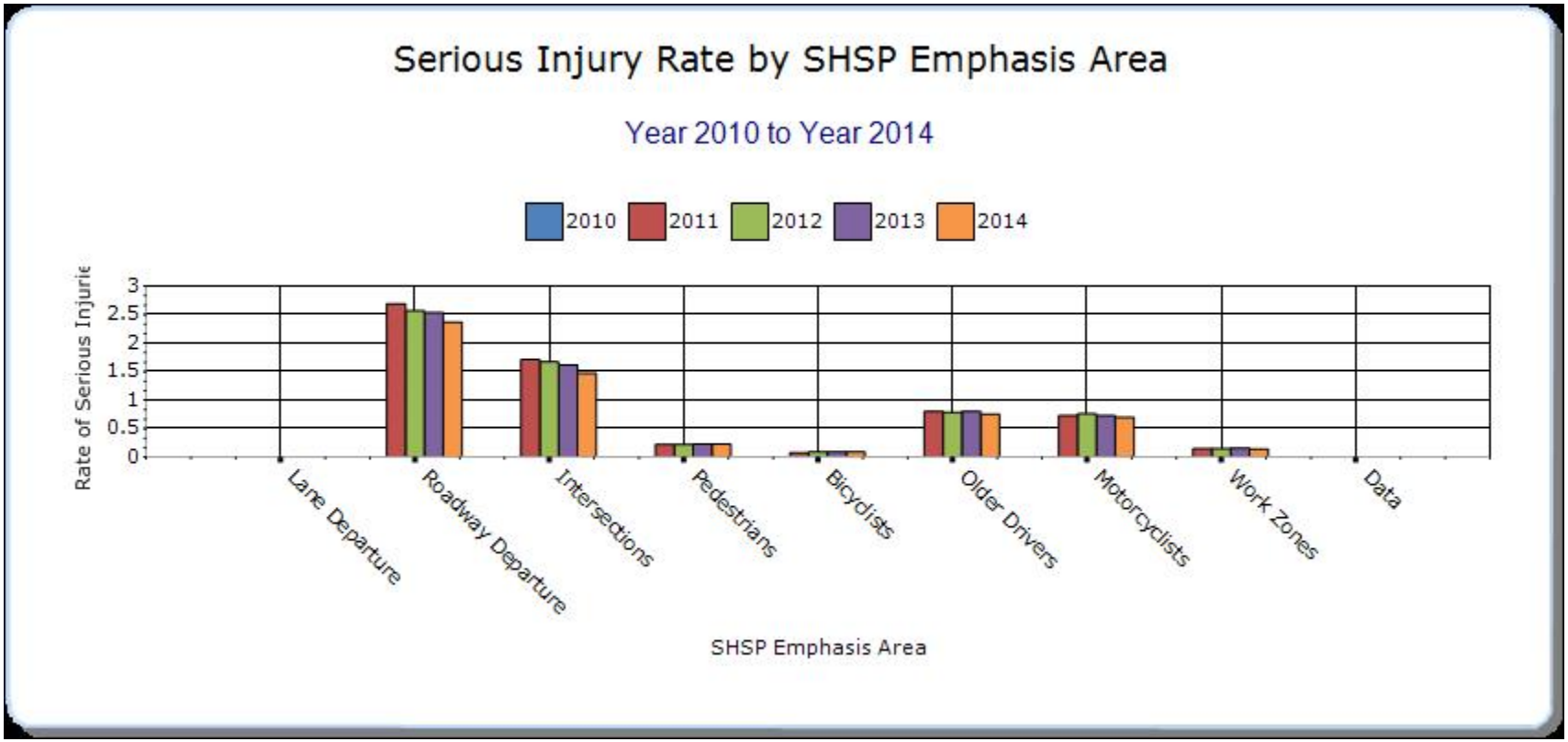
Year - 2014

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure		234	729	0.76	2.37	0	0	0
Intersections		89	452	0.29	1.47	0	0	0
Pedestrians		22	70	0.07	0.23	0	0	0
Bicyclists		4	27	0.01	0.09	0	0	0
Older Drivers		87	229	0.28	0.75	0	0	0
Motorcyclists		44	216	0.14	0.7	0	0	0
Work Zones		6	44	0.02	0.14	0	0	0
Occupant Protection		167	350	0.54	1.14	0	0	0
Teen Drivers		50	283	0.16	0.92	0	0	0
Impaired Driving		148	288	0.48	0.94	0	0	0
Large Commercial Vehicles		65	136	0.21	0.44	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
1000
800
600
400
200
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
1
0.8
0.6
0.4
0.2
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

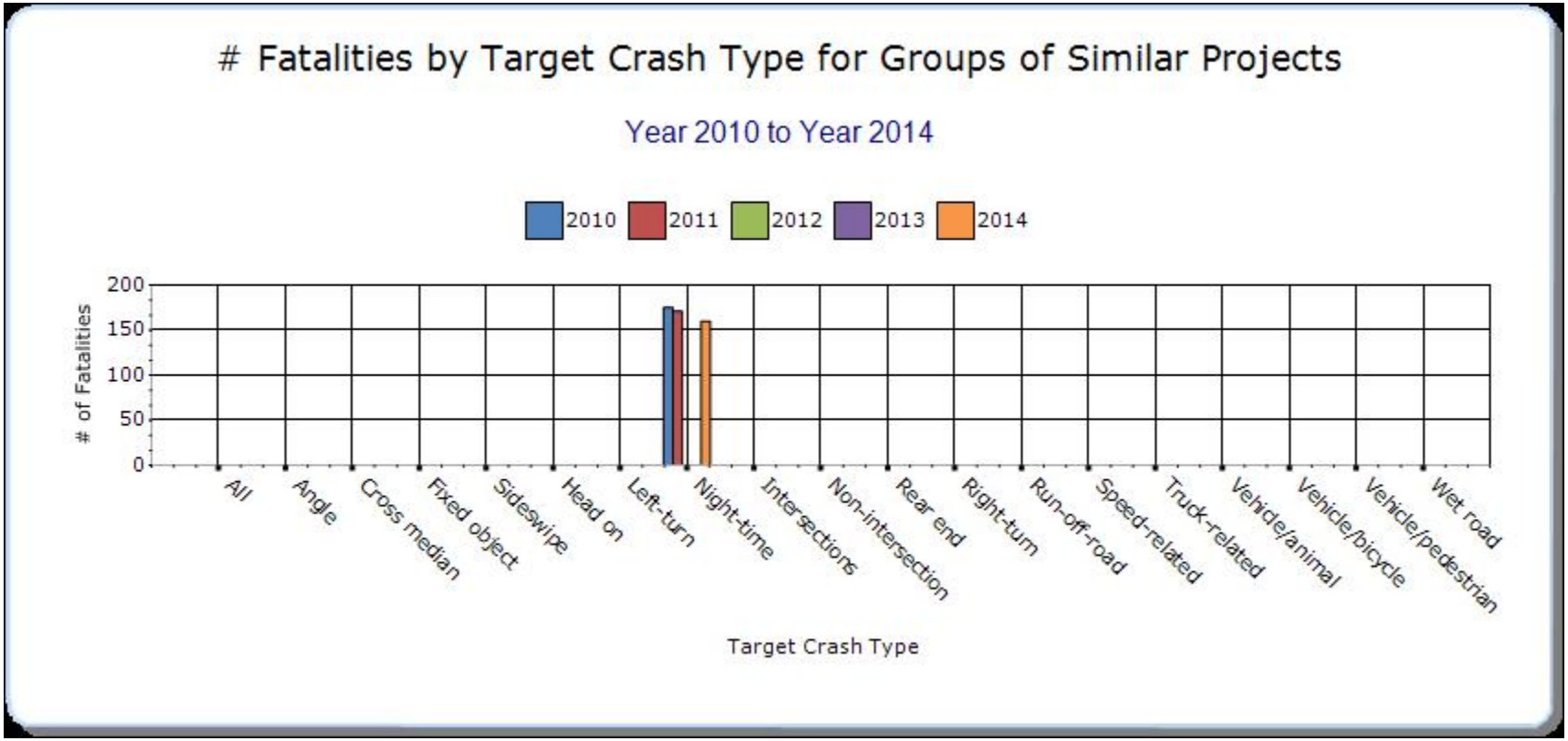

Serious Injury Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
3
2.5
2
1.5
1
0.5
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

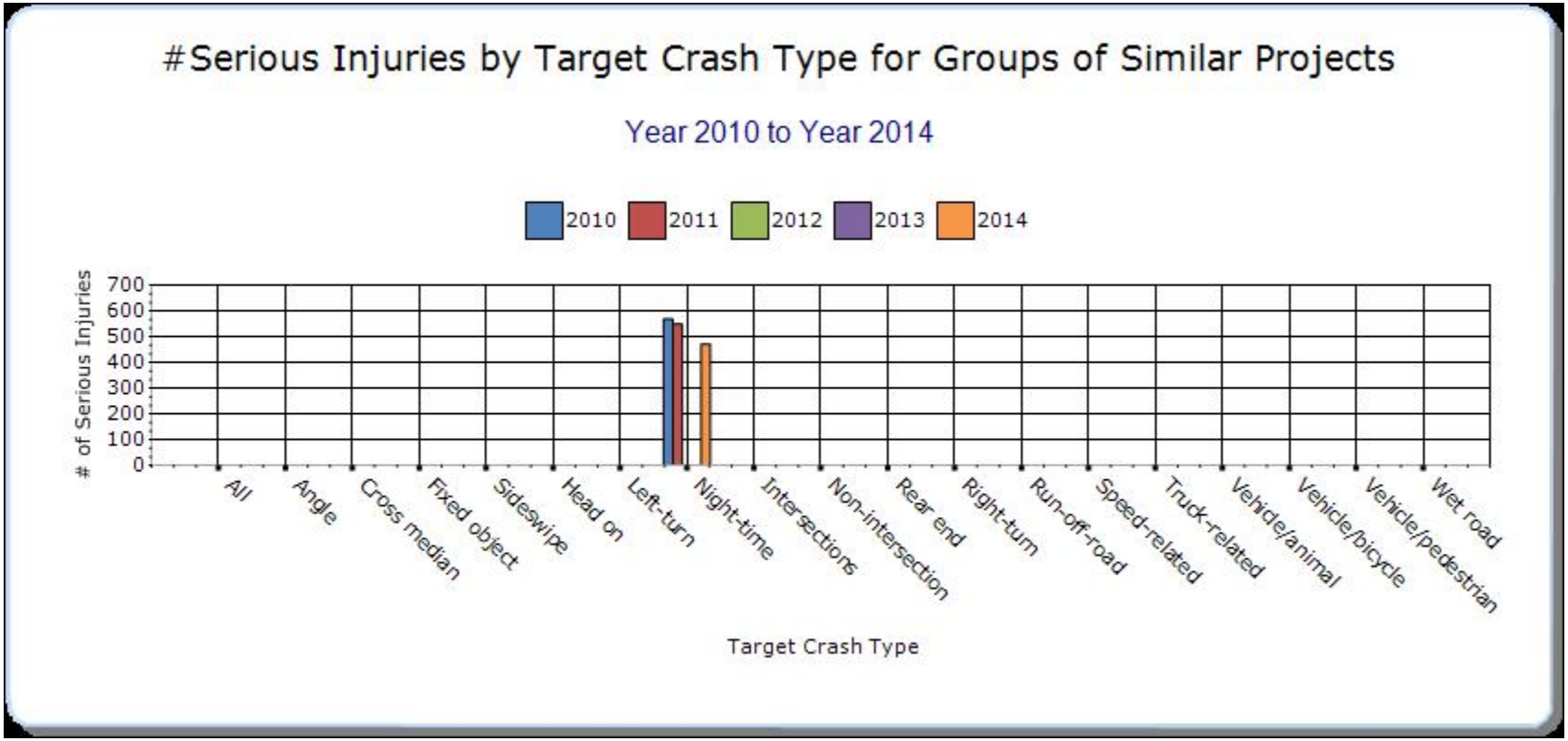
Groups of similar project types

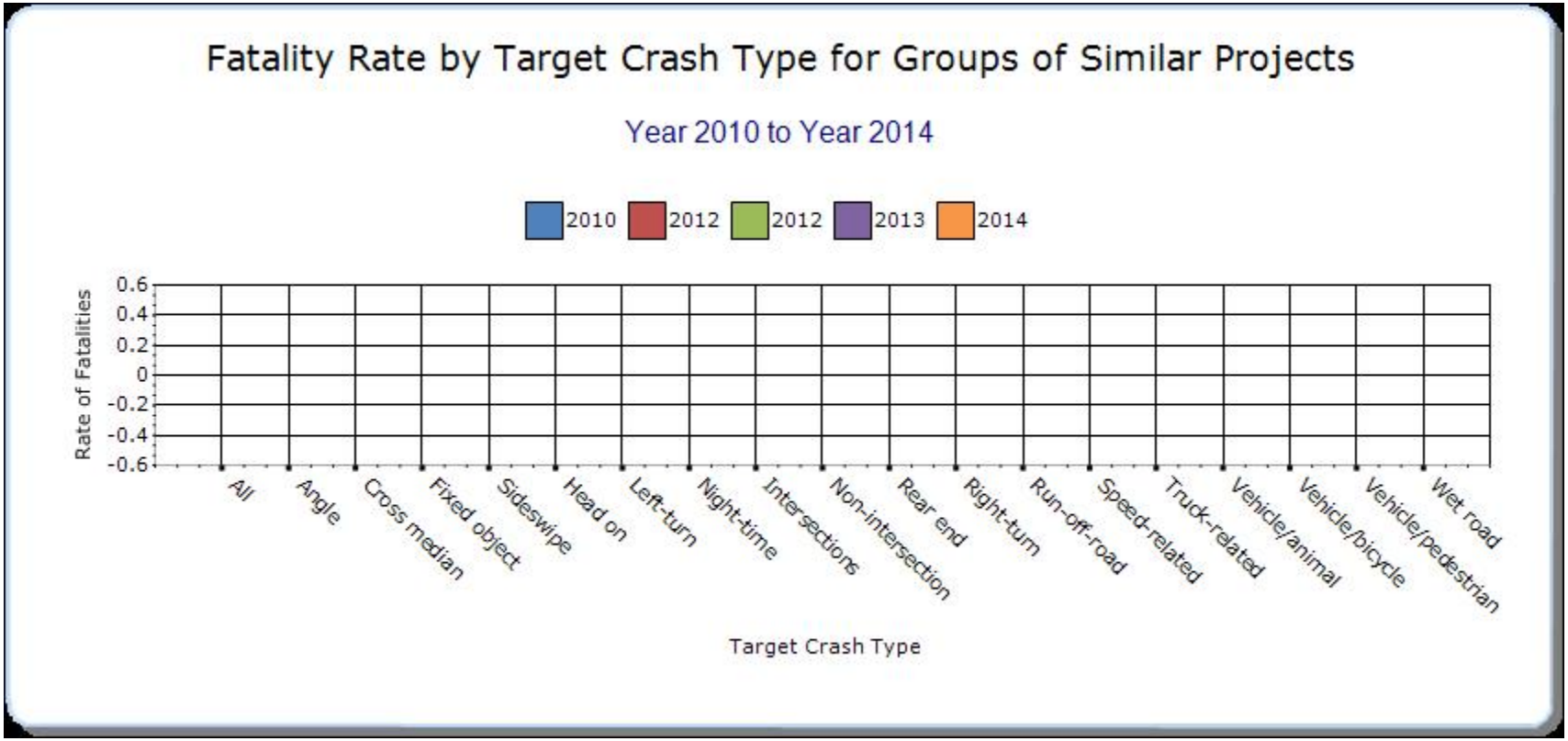
Present the overall effectiveness of groups of similar types of projects.

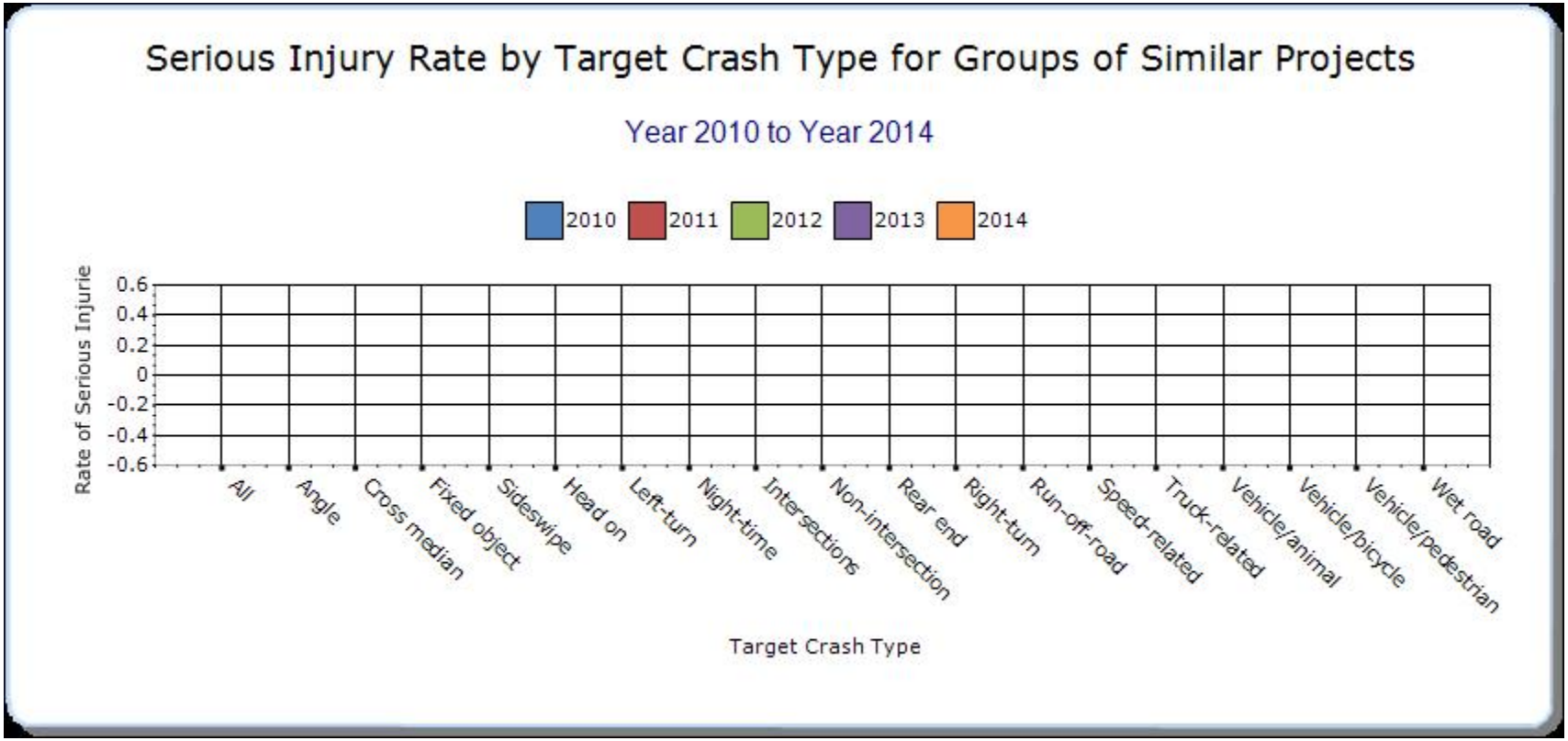
Year - 2014

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Other-Lighting	Night-time	160	471	0	0	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
700
600
500
400
300
200
100
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

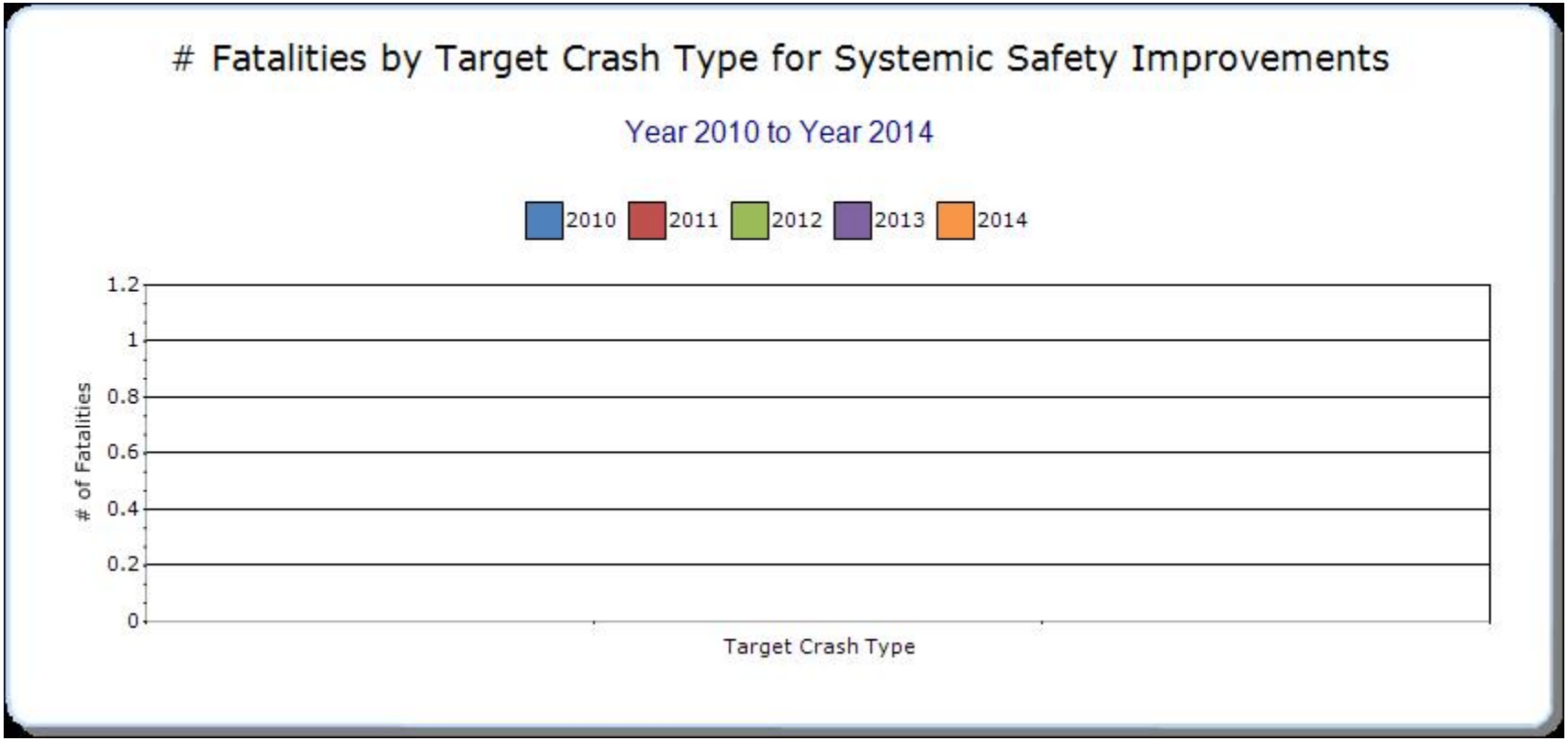

Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

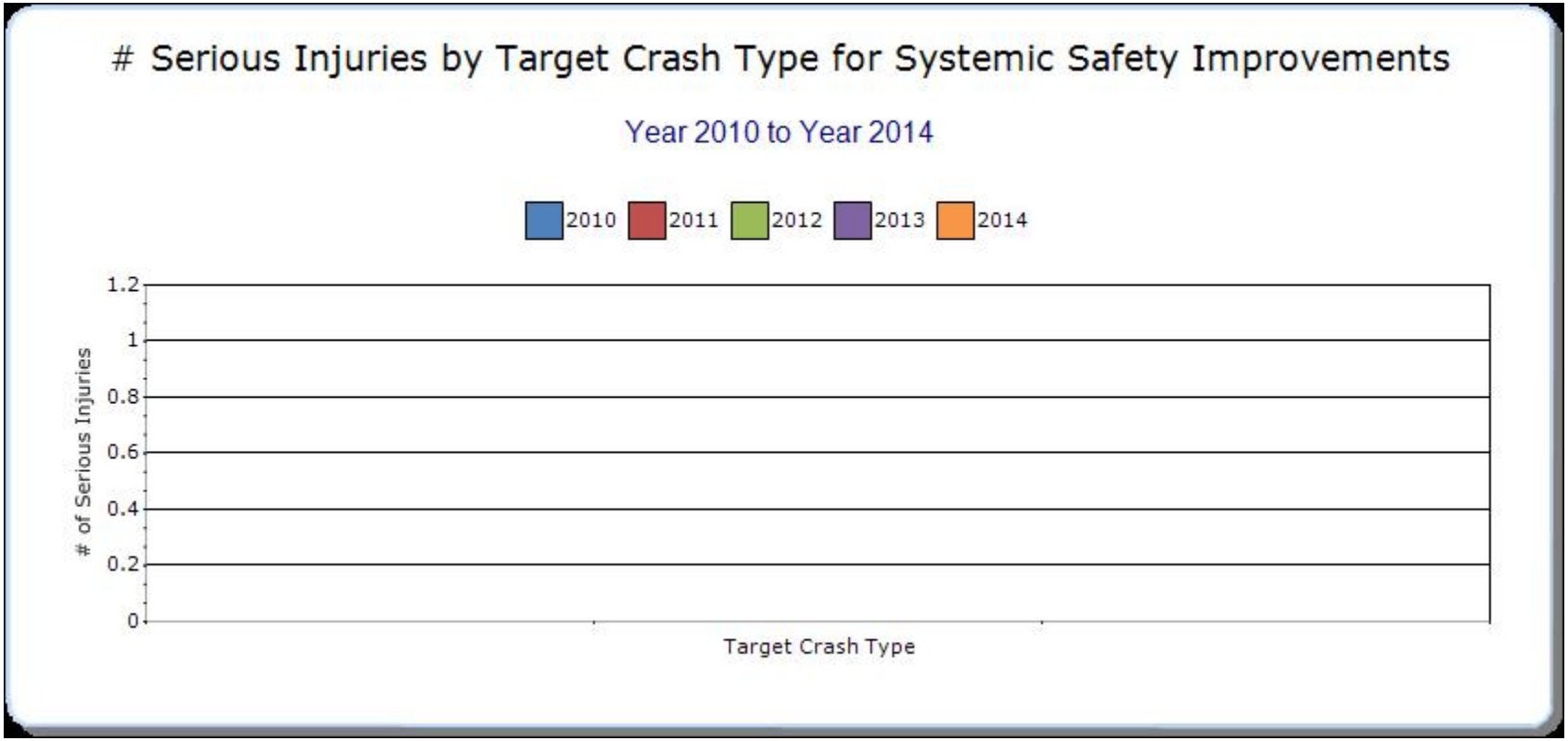

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

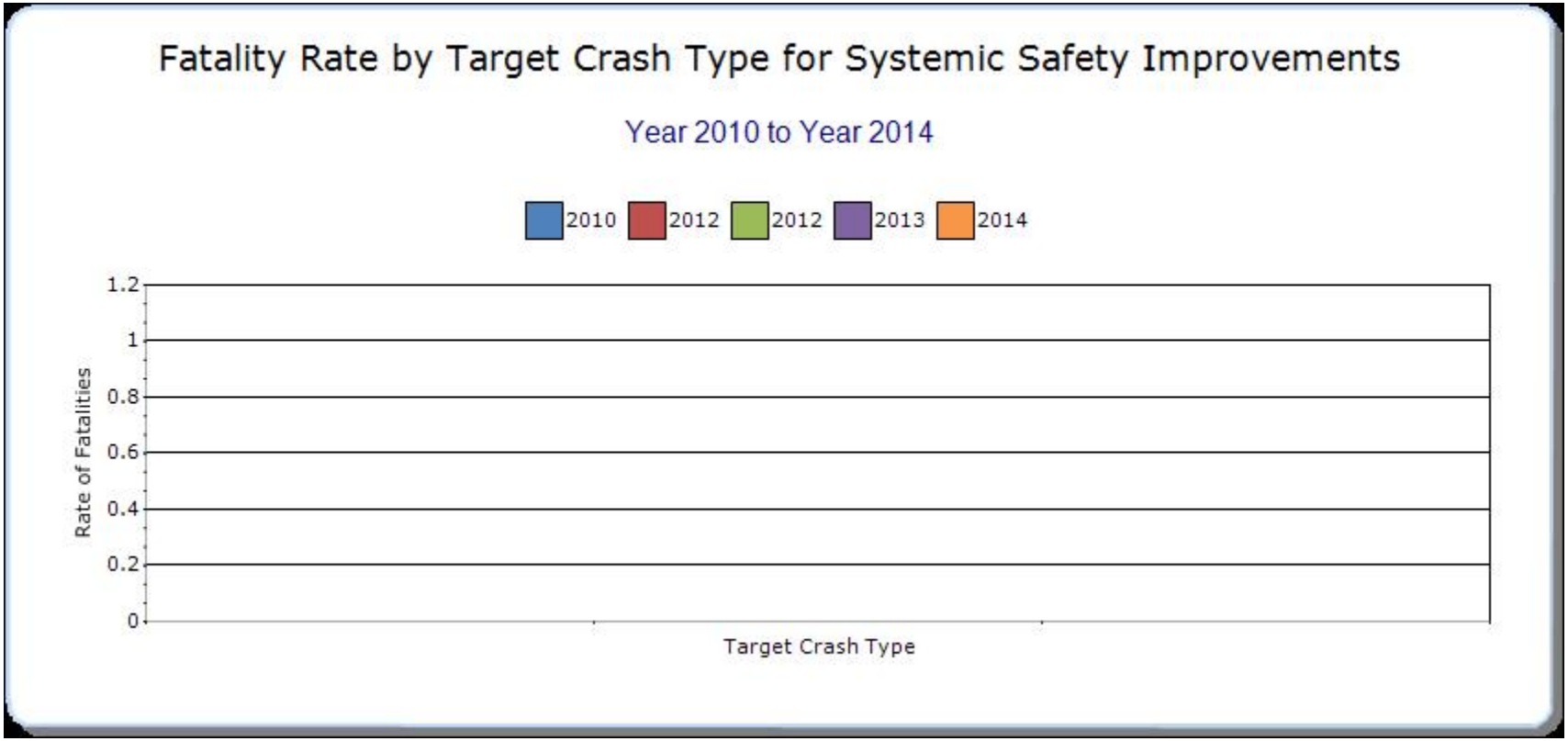
Systemic Treatments

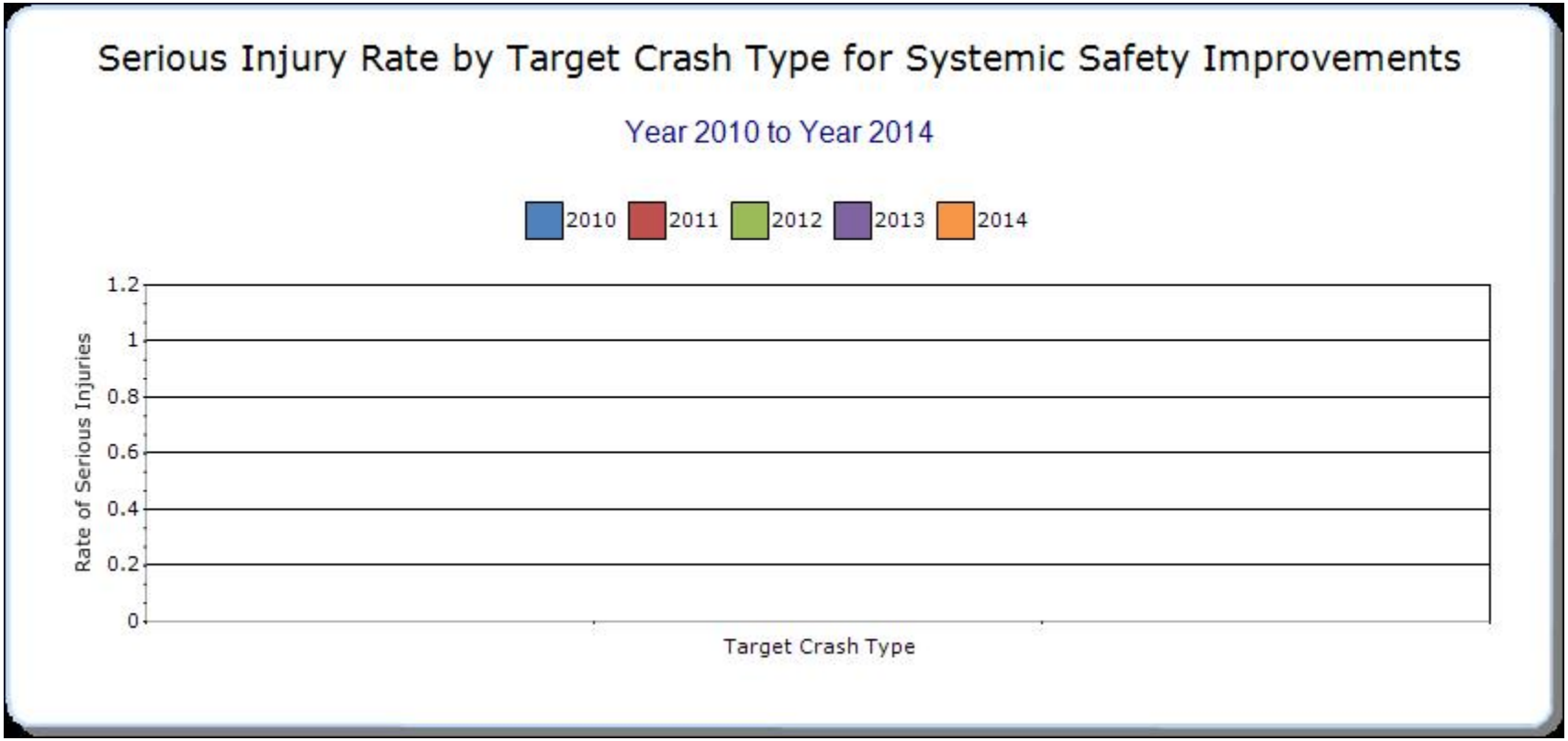
Present the overall effectiveness of systemic treatments.

Systemic improvement	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2012
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type


Serious Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
Target Crash Type

Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

It remains our intent to develop performance measures for each of these HSIP sub-programs in preparation for next year's report. This will be in concert with completing new "white papers" for each eligible sub-program, and be driven by our SHSP which includes reallocation of HSIP funding as a key strategy for the emphasis areas intersections and roadway departure. As an example, three of these programs (lighting, pavement marking, and signing) can be measured by wet-weather and/or nighttime crashes. Data can be shown to demonstrate a positive trend in each of these areas.

Project Evaluation

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-All Injuries	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-All Injuries	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
None														NA

Optional Attachments

Sections	Files Attached

Glossary

5 year rolling average means the average of five individual, 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.

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.