Highway Safety Improvement Program

Data Driven Decisions

Kansas
Highway Safety Improvement Program
2014 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 RGCHP report. This is the second 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. These manuals will include performance measures, which continue to be a work in progress.

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 traffic signals and lighting, as well as field information from our Area Offices, and road safety audits performed by our Traffic Engineering Unit.

Signing sub-program: This blanket replacement program was programmed to cover the entire state highway system in ten years. It took longer than that, but we have completed the first cycle and are beginning a second cycle. Our Area Offices complete a sign inventory for each project. The Area Offices typically install the new signs and posts, which are purchased using HSIP funds. Although, many of the early projects in the second cycle will be let to a contractor because they are on urban interstate routes.

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 typically identified based on recommendations from cities. 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 Geometric and Accident Data Unit in our Bureau of Transportation Planning manage and report on roadway and 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-Local Roads Support Team (SHSP)

☒Other: Other-Kansas Association of Counties

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-beginning 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 $23,808,684 in safety funds (HSIP and Rail) was apportioned for FFY 2014, distributed to each sub-program as follows:

Lighting: $1,500,000 HSIP

Pavement Marking: $4,000,000 HSIP

Signing: $3,700,000 HSIP

Highway-Railway Grade Crossing and Rail: $9,886,861 ($5,886,862 Rail & $4,000,000 HSIP)

Intersection Safety: $1,921,822 HSIP

High Risk Rural Roads: $2,800,000 HSIP

General Safety Improvements: $0 HSIP

The following dollars were obligated for SFY 2014 in each program:

Lighting: $325,447.32 HSIP

Pavement Marking: $1,966,752.79 HSIP

Signing: $1,147,314.26 HSIP

Highway-Railway Grade Crossing and Rail: $14,969,539.01 ($2,462,326.21 Rail; $0 STP; $12,507,212.80 HSIP)

Intersection Safety: $6,762,669.57 ($163,352.07 STP; $6,599,317.50 HSIP)

High Risk Rural Roads: $4,999,960.07 ($2,405,948.36 HRRR; $2,594,011.71 HSIP)

General Safety Improvements: $351,423.03 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	☐ Volume	☐ Horizontal curvature
☐ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☐ Other	☐ 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

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

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

☒ 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?

9

Highway safety improvment program funds are used to address which of the following systemic improvments?

- ☐ 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:

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: Other-No changes from FY13 to FY14. However, beginning in FY15 Lighting hopes to advance LED lights, and Signing will move from a route to sub-area based approach. Intersections is planning changes beginning in FY16.

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 ninth 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 ninth 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 routemileage statewide and the total mileage of all the routes in each District for that year. This program excludes signs on any other state projects 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 seventh year KDOT has used HSIP funds to improve permanent signing. The projects in this program are typically not let to contract via the normal letting procedure. Instead, materials are purchased thru the purchase request process and signs and posts are installed by KDOT maintenance forces. However, with the beginning of a second cycle many of the projects are on urban interstates and these projects will be let to contract.

HRRR sub-program:

This program was established under SAFETEA-LU as a set-aside. It was eliminated under MAP-21 although states are required to address locally-owned roads if crash rates increase. Regardless, KDOT continues to fund HRRR as a sub-program to the HSIP program. The focus is on low-cost safety improvements at site-specific locations and systemic improvements to signing, pavement marking, and roadsides.

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 has developed a program that will direct up to $6,000,000 of HSIP funds to projects that will be selected using a new system that combines quantitative safety analysis and prediction (IHSDM) with District input. The goal is to distribute these funds throughout the state and address spot locations, like individual curves, intersections, or short tangent sections that are 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.

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 %	25491479	
HRRRP (SAFETEA-LU)	0	0 %	2405948	9 %
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 %	163352	1 %

Totals	17921822	100%	28060779	100%

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

38 %

How much funding is obligated to local safety projects?

$20,908,211.00

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

$273,999.00

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

$273,999.00

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.

Except as noted below, nothing to report at this time. We obligated an amount equivalent to 142% of our apportionment, plus an additional $2.5 million in HRRR (SAFETEA-LU).

Signing sub-program: The FY14 program is 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 obligations will not be shown in the HSIP annual report for FY14, since the obligations were previously shown in the FY13 report.

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-0047-01	Intersection geometry Intersection geometry - other	1 Numbers	307282	351808	HRRRP (SAFETEA-LU)	Rural Major Collector	1600	50	County Highway Agency	Intersections	Perform improvements of crash-prone intersections
C-0054-01	Roadside Removal of roadside objects (trees, poles, etc.)	6 Miles	75000	97508	HRRRP (SAFETEA-LU)	Rural Major Collector	220	55	County Highway Agency	Roadway Departure	Create a program that funds the removal of fixed objects
C-0059-01	Alignment Horizontal curve realignment	0.35 Miles	265405	294924	HRRRP (SAFETEA-LU)	Rural Major Collector	415	45	County Highway Agency	Roadway Departure	Create a program that funds the deploymen

											t of low-cost safety improvements at rural or high
C-0062-01	Alignment Horizontal curve realignment	0.5 Miles	218077	242459	HRRRP (SAFETEA-LU)	Rural Major Collector	370	55	County Highway Agency	Roadway Departure	Create a program that funds the deployment of low-cost safety improvements at rural or high
C-0063-01	Roadside Removal of roadside objects (trees, poles, etc.)	20 Numbers	71945	79939	HSIP (Section 148)	Rural Local Road or Street	0	0	County Highway Agency	Roadway Departure	Create a program that funds the removal of fixed objects
C-0064-01	Alignment Horizontal curve realignment	0.38 Miles	45894	50993	HRRRP (SAFETEA-LU)	Rural Local Road or Street	5	45	County Highway Agency	Roadway Departure	Create a program that funds the deploymen

											t of low-cost safety improvements at rural or high
C-0317-01	Alignment Horizontal curve realignment	0.2 Miles	225000	482573	HRRRP (SAFETEA-LU)	Rural Local Road or Street	175	35	County Highway Agency	Roadway Departure	Create a program that funds the deployment of low-cost safety improvements at rural or high
C-0321-01	Shoulder treatments Shoulder treatments - other	6.5 Miles	600000	923971	HSIP (Section 148)	Rural Major Collector	2620	55	County Highway Agency	Roadway Departure	Improve shoulders where reasonable
C-0323-01	Shoulder treatments Widen shoulder - paved or other	3 Miles	1000000	1547305	HRRRP (SAFETEA-LU)	Rural Major Collector	1100	55	County Highway Agency	Roadway Departure	Improve shoulders where reasonable
C-0324-01	Roadside Removal of roadside objects (trees, poles, etc.)	4.5 Miles	550000	638454	HRRRP (SAFETEA-LU)	Rural Major Collector	461	55	County Highway Agency	Roadway Departure	Create a program that funds the

											removal of fixed objects
C-0326-01	Roadway Roadway widening - travel lanes	0.81 Miles	500000	714955	HRRRP (SAFETEA-LU)	Rural Major Collector	1725	45	County Highway Agency	Roadway Departure	Improve shoulders where reasonable
C-0390-01	Roadside Removal of roadside objects (trees, poles, etc.)	0.82 Miles	57465	63850	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	Create a program that funds the removal of fixed objects
C-0484-01	Non-infrastructure Non-infrastructure - other	10 Numbers	54000	60000	HRRRP (SAFETEA-LU)		0	0	County Highway Agency	Roadway Departure	Experiment with the safety edge
C-0486-01	Intersection geometry Auxiliary lanes - modify free-flow turn lane	3 Numbers	285292	316991	HRRRP (SAFETEA-LU)	Rural Major Collector	684	50	County Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections
C-0493	Roadway delineation Longitudinal pavement	56	90755	90755	HSIP (Section	Rural Major	0	0	County Highway	Roadway	Maintain pavement

-01	markings - new	Miles			148)	Collector			Agency	Departure	marking retro-reflectivity
C-0508-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	17 Miles	30000	30000	HSIP (Section 148)	Rural Minor Collector	705	0	County Highway Agency	Roadway Departure	Maintain sign retro-reflectivity
C-0512-01	Shoulder treatments Shoulder treatments - other	12.65 Miles	228816	254333	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	Improve shoulders where reasonable
C-0619-01	Roadway Rumble strips - center	10.42 Miles	31719	31719	HSIP (Section 148)		0	0	County Highway Agency	Roadway Departure	Install centerline rumble strips where appropriate
C-4494-01	Intersection traffic control Intersection flashers - add stop sign-mounted	1 Numbers	35658	39741	HRRRP (SAFETEA-LU)	Rural Major Collector	3121	55	County Highway Agency	Intersections	Install flashing solar-powered beacons on intersection warning and stop signs

											where appropriate
C-4495-01	Intersection traffic control Intersection flashers - add stop sign-mounted	1 Numbers	46463	51701	HRRRP (SAFETEA-LU)	Rural Major Collector	5143	55	County Highway Agency	Intersections	Install flashing solar-powered beacons on intersection warning and stop signs where appropriate
C-4591-01	Roadway signs and traffic control Roadway signs (including post) - new or updated	0	129425	129425	HSIP (Section 148)		0	0	County Highway Agency	Roadway Departure	Maintain sign retro-reflectivity
C-4592-01	Shoulder treatments Shoulder treatments - other	9.06 Miles	1239030	1376700	HSIP (Section 148)	Rural Major Collector	1375	55	County Highway Agency	Roadway Departure	Improve shoulders where reasonable
C-4594-01	Roadway signs and traffic control Roadway signs (including post) - new or	112 Miles	103270	103270	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	Maintain sign retro-reflectivity

	updated										
KA-3028-01	Lighting Intersection lighting	1 Numbers	502525	502789	HSIP (Section 148)	Urban Principal Arterial - Interstate	62200	70	State Highway Agency	Intersections	Provide street lighting at higher-volume intersections and interchanges
KA-3029-01	Lighting Intersection lighting	1 Numbers	537954	538445	HSIP (Section 148)	Urban Principal Arterial - Interstate	79800	70	State Highway Agency	Intersections	Provide street lighting at higher-volume intersections and interchanges
N-0544-01	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbers	703800	782000	HSIP (Section 148)	Urban Minor Arterial	62808	40	City of Municipal Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections

N-0548-01	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	900000	1740000	HSIP (Section 148)	Urban Principal Arterial - Other	22932	35	City of Municipal Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections
KA-2617-01	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbers	200000	1064287.21	HSIP (Section 148)	Urban Principal Arterial - Other	11727	55	City of Municipal Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections
U-0161-01	Intersection traffic control Modify traffic signal - add additional signal heads	1 Numbers	144424.76	160763.8	HSIP (Section 148)	Urban Minor Arterial	21744	30	City of Municipal Highway Agency	Intersections	Perform improvements of crash-prone intersections
KA-2611-01	Intersection geometry Intersection geometry - other	1 Numbers	200000	160763.8	HSIP (Section 148)	Urban Principal Arterial - Other	38700	35	State Highway Agency	Intersections	Perform improvements of crash-prone intersectio

											ns
U-0066-01	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	1 Numbers	350000	783559.93	HSIP (Section 148)	Urban Principal Arterial - Other	11419	30	City of Municipal Highway Agency	Intersections	Perform improvements of crash-prone intersections
U-0065-01	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	400000	1607009.56	HSIP (Section 148)	Urban Principal Arterial - Other	20124	30	City of Municipal Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections
U-0162-01	Intersection geometry Auxiliary lanes - add two-way left-turn lane	1 Numbers	252812.98	294528.76	HSIP (Section 148)	Urban Minor Arterial	22836	30	City of Municipal Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersections
KA-0047-01	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	2753662.7	3338180.54	HSIP (Section 148)	Rural Principal Arterial - Other	9760	65	State Highway Agency	Intersections	Promote and construct roundabou

											ts
N-0547-01	Intersection traffic control Modify traffic signal - add additional signal heads	1 Numbers	650000	937880.5	HSIP (Section 148)	Urban Major Collector	9000	55	City of Municipal Highway Agency	Intersections	Perform improvements of crash-prone intersections
KA-3623-01	Roadway Pavement surface - high friction surface	0.3 Miles	72000	80000	HSIP (Section 148)	Rural Principal Arterial - Interstate	0	0	State Highway Agency	Roadway Departure	Expand the use of high-friction surfacing
KA-3645-01	Roadway Pavement surface - high friction surface	0.1 Miles	22808	25342	HSIP (Section 148)	Urban Principal Arterial - Other Freeways and Expressways	0	0	State Highway Agency	Roadway Departure	Expand the use of high-friction surfacing
KA-3301-01	Intersection geometry Auxiliary lanes - add two-way left-turn lane	0.7 Miles	163323	181470	HSIP (Section 148)	Rural Principal Arterial - Other	5030	55	State Highway Agency	Intersections	Provide left-turn and right-turn lanes at intersectio

											ns
KA-3461-01	Non-infrastructure Transportation safety planning	5 Miles	70000	70000	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	State Highway Agency	Intersections	Coordinate traffic signals along urban corridors
KA-3538-01	Non-infrastructure Non-infrastructure - other	126 Numbers	149999	166666	HSIP (Section 148)		0	0	State Highway Agency		Purchased portable rumble strips

Progress in Achieving Safety Performance Targets

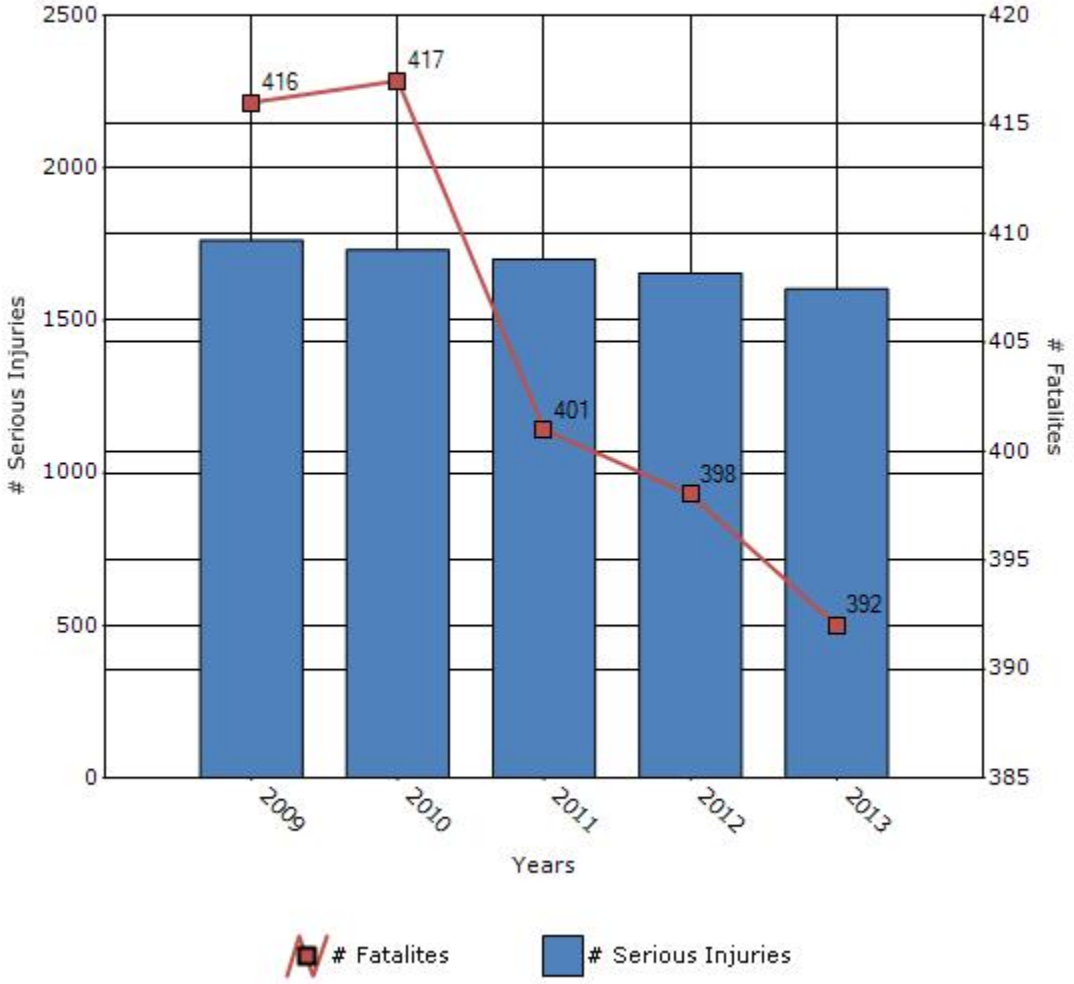
Overview of General Safety Trends

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

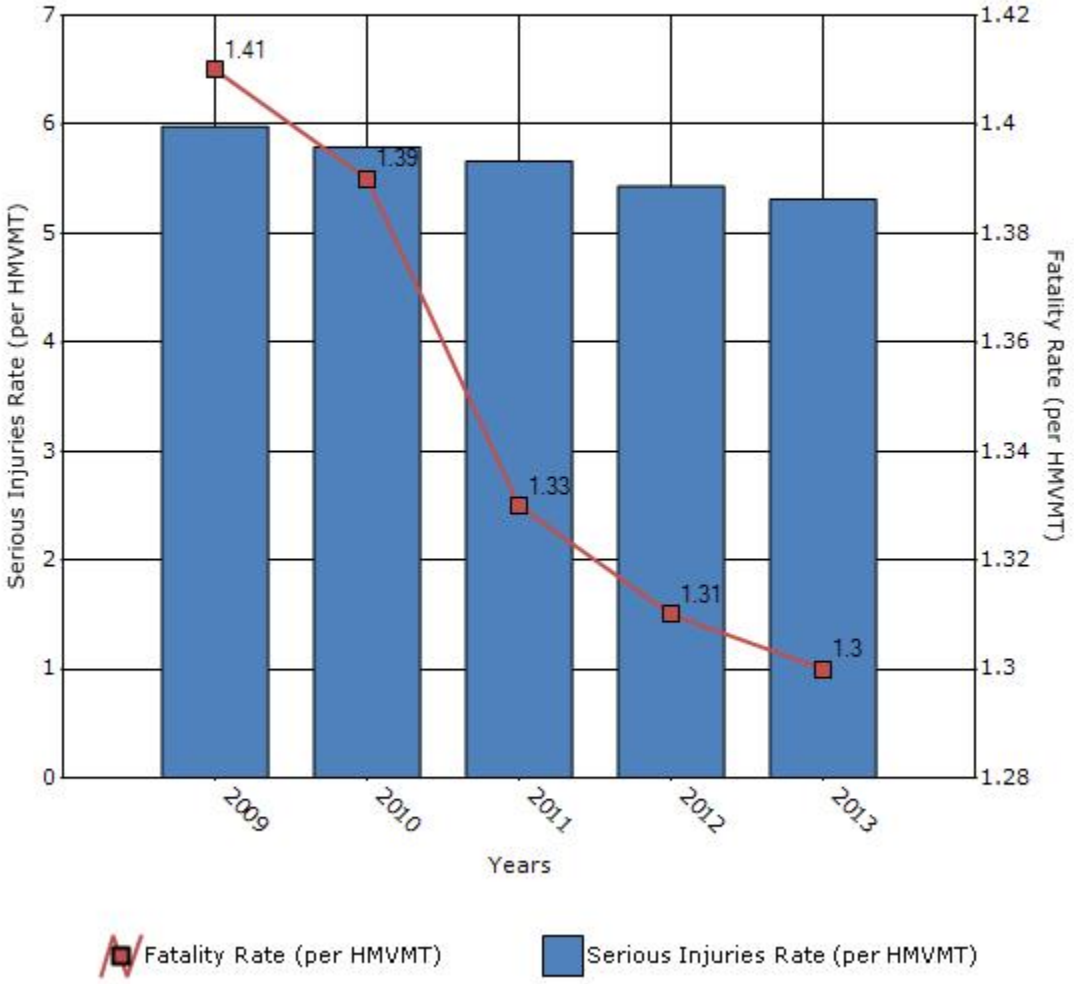
Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	416	417	401	398	392
Number of serious injuries	1763	1731	1700	1655	1603
Fatality rate (per HMVMT)	1.41	1.39	1.33	1.31	1.3
Serious injury rate (per HMVMT)	5.98	5.79	5.66	5.43	5.31

*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

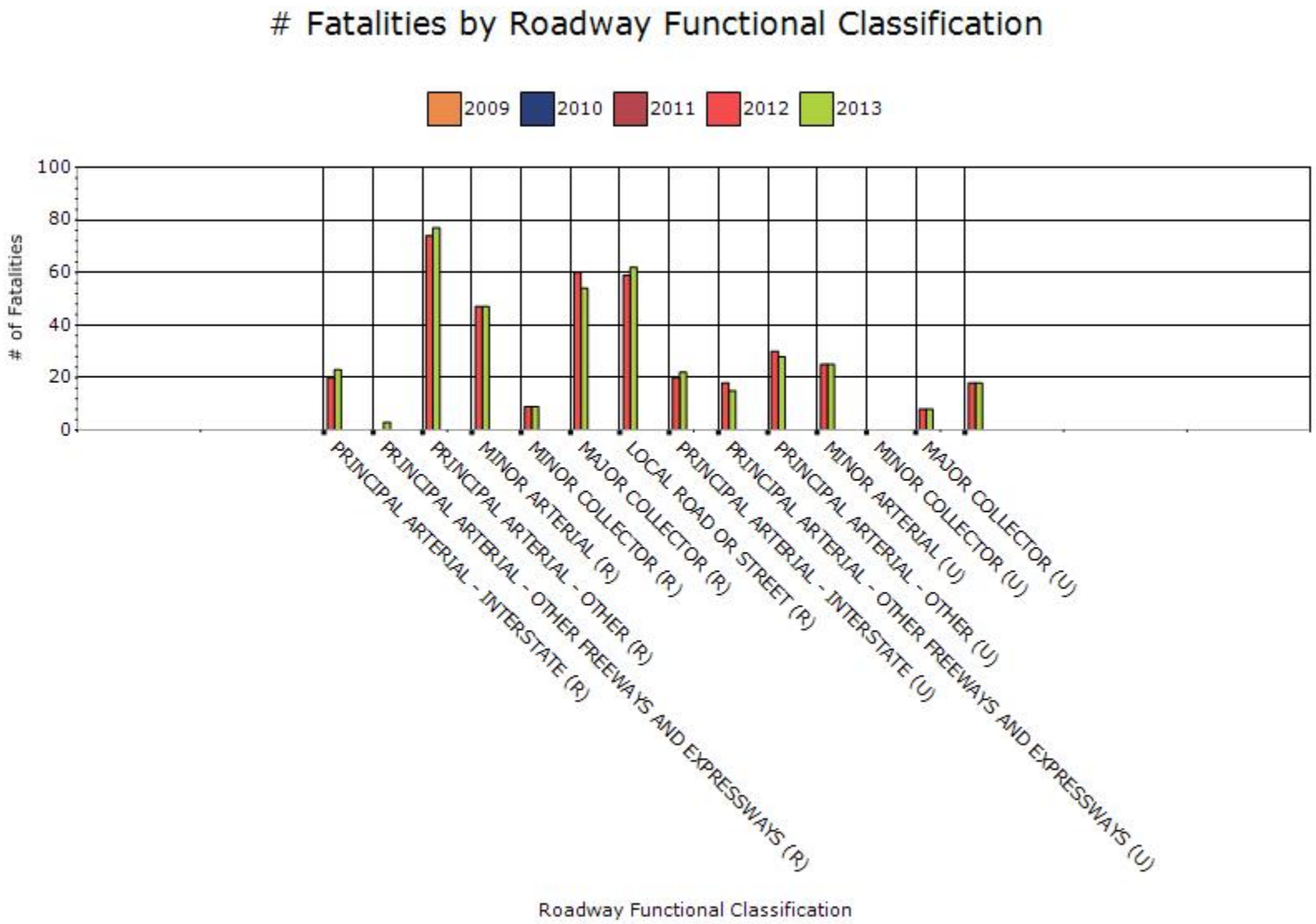


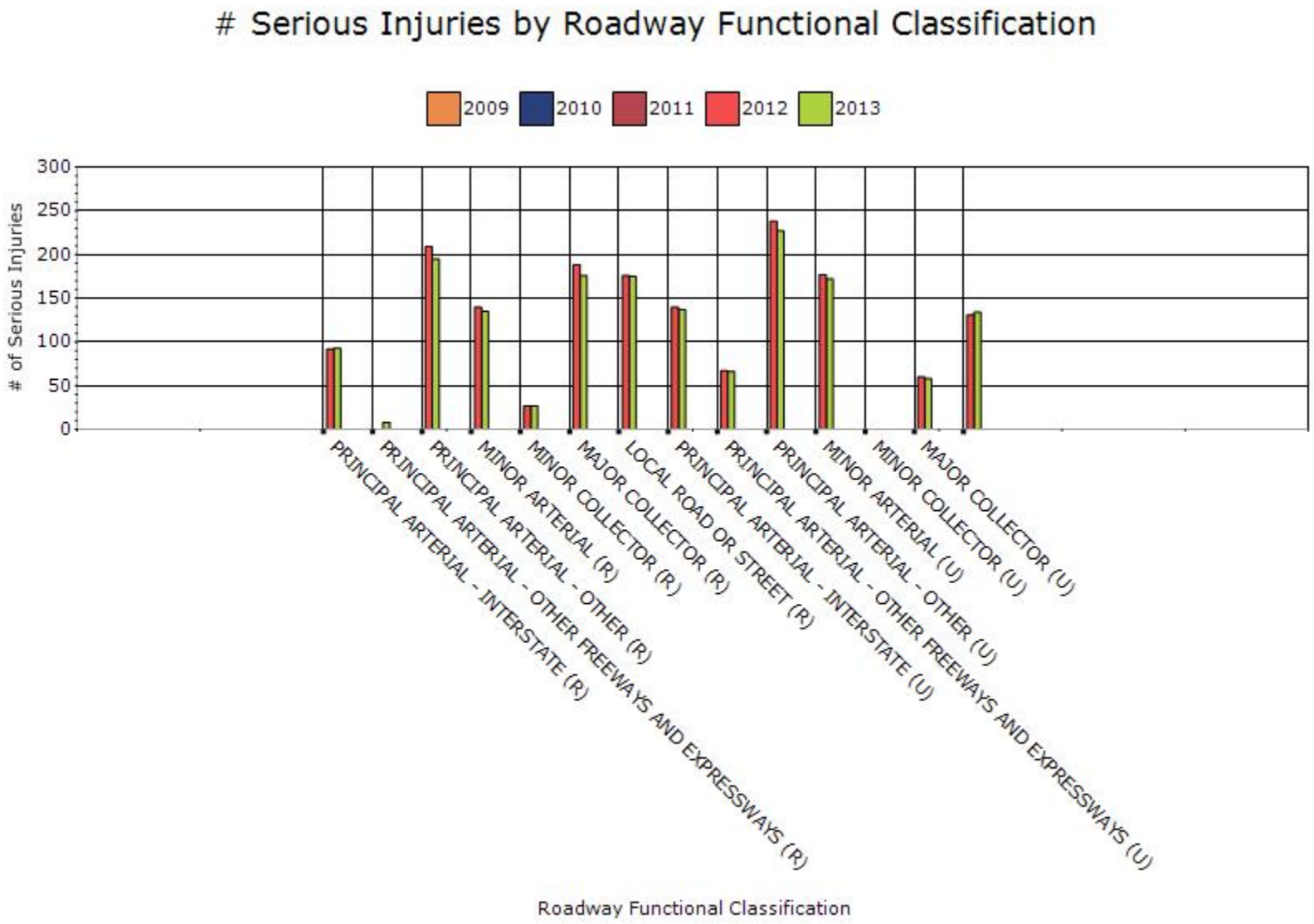
To the maximum extent possible, present performance measure* data by functional classification and ownership.

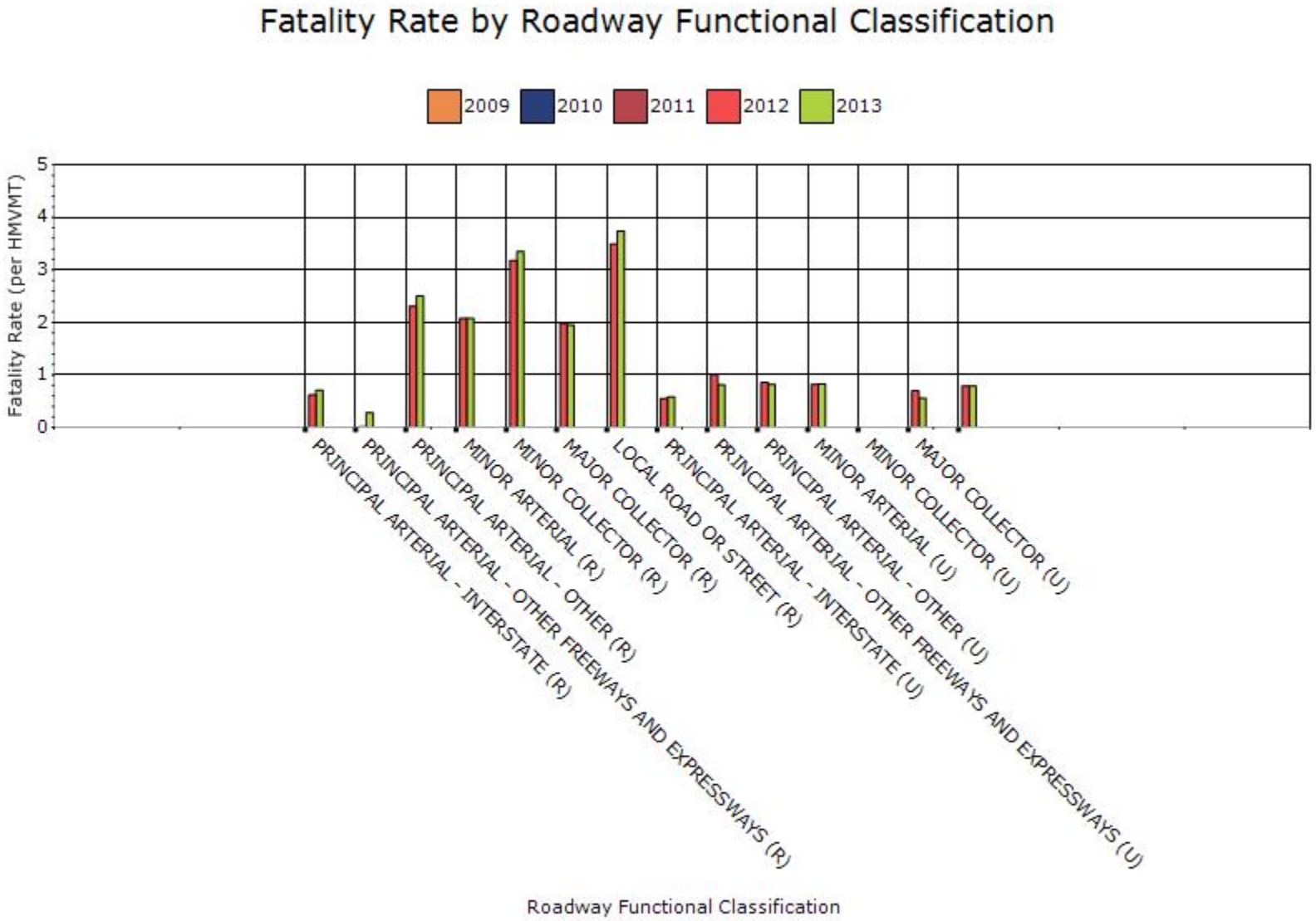
Year - 2013

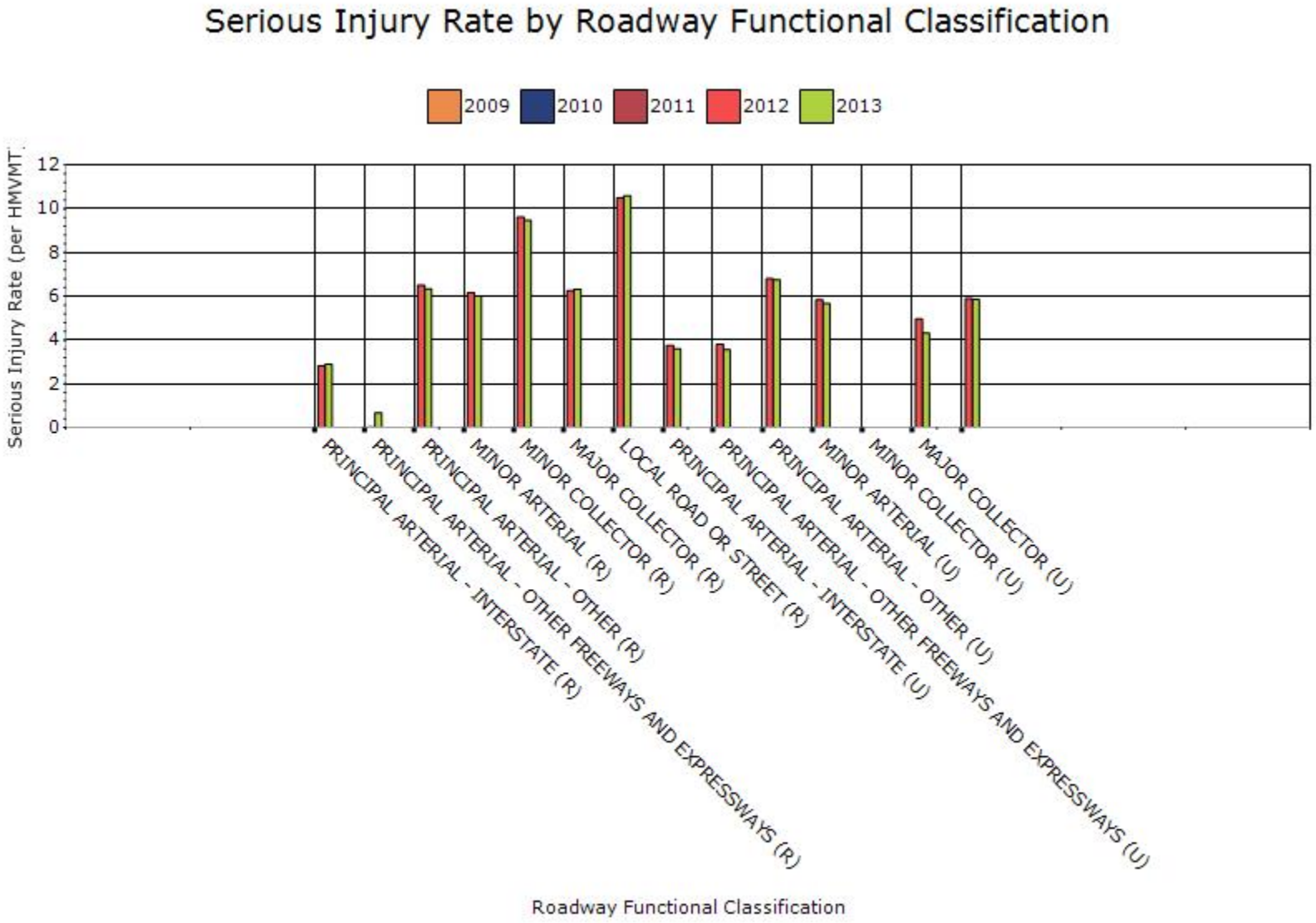
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	23	93	0.71	2.89
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	3	8	0.28	0.67
RURAL PRINCIPAL ARTERIAL - OTHER	77	195	2.5	6.34
RURAL MINOR ARTERIAL	47	135	2.08	6.01
RURAL MINOR COLLECTOR	9	27	3.35	9.47
RURAL MAJOR COLLECTOR	54	176	1.95	6.32
RURAL LOCAL ROAD OR STREET	62	175	3.74	10.59
URBAN PRINCIPAL	22	137	0.58	3.6

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	15	66	0.81	3.56
URBAN PRINCIPAL ARTERIAL - OTHER	28	227	0.82	6.75
URBAN MINOR ARTERIAL	25	172	0.83	5.66
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	8	58	0.56	4.32
URBAN LOCAL ROAD OR STREET	18	134	0.79	5.85


Fatalities by Roadway Functional Classification
2009
2010
2011
2012
2013
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

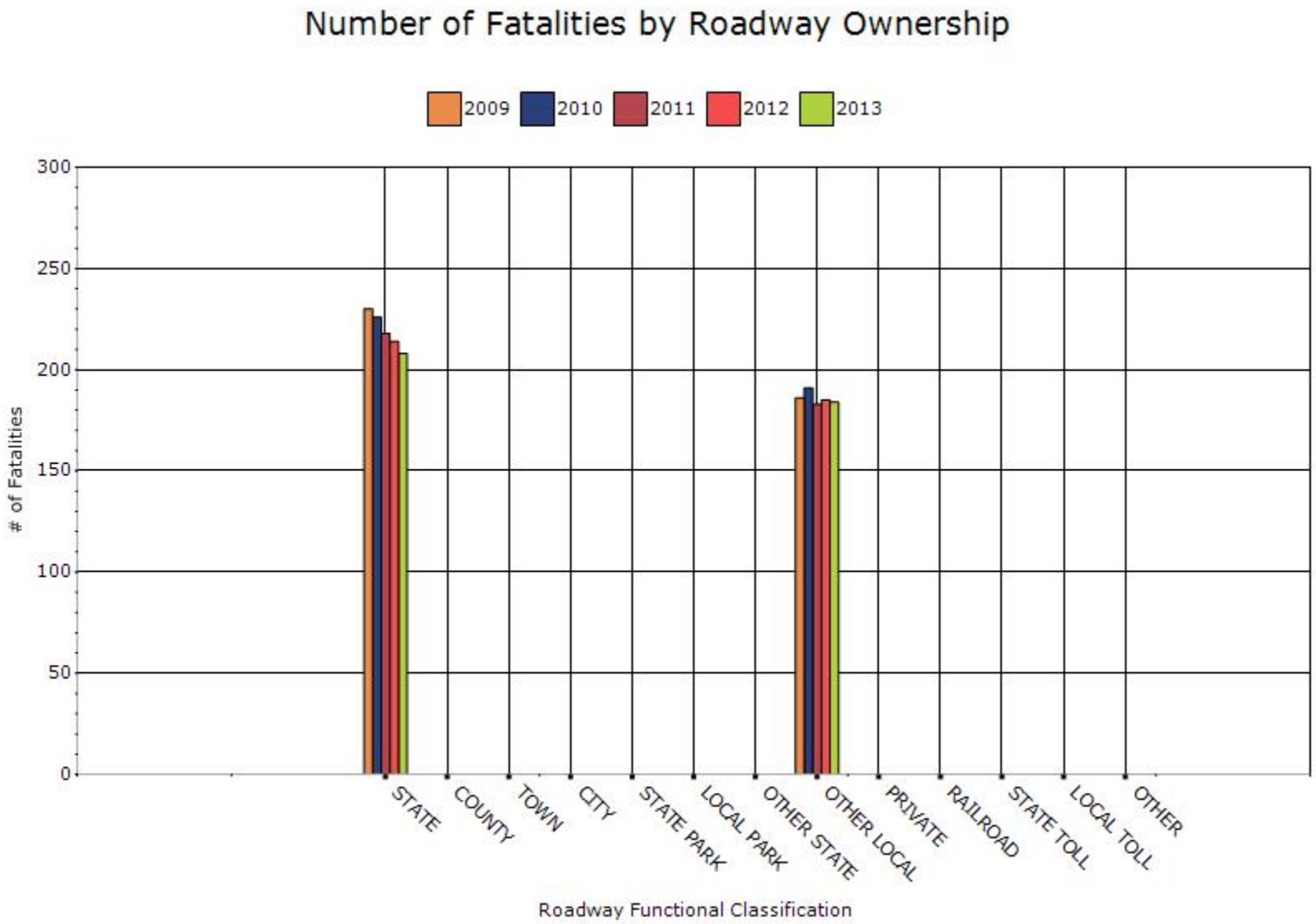

Serious Injuries by Roadway Functional Classification
2009
2010
2011
2012
2013
# of Serious Injuries
300
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

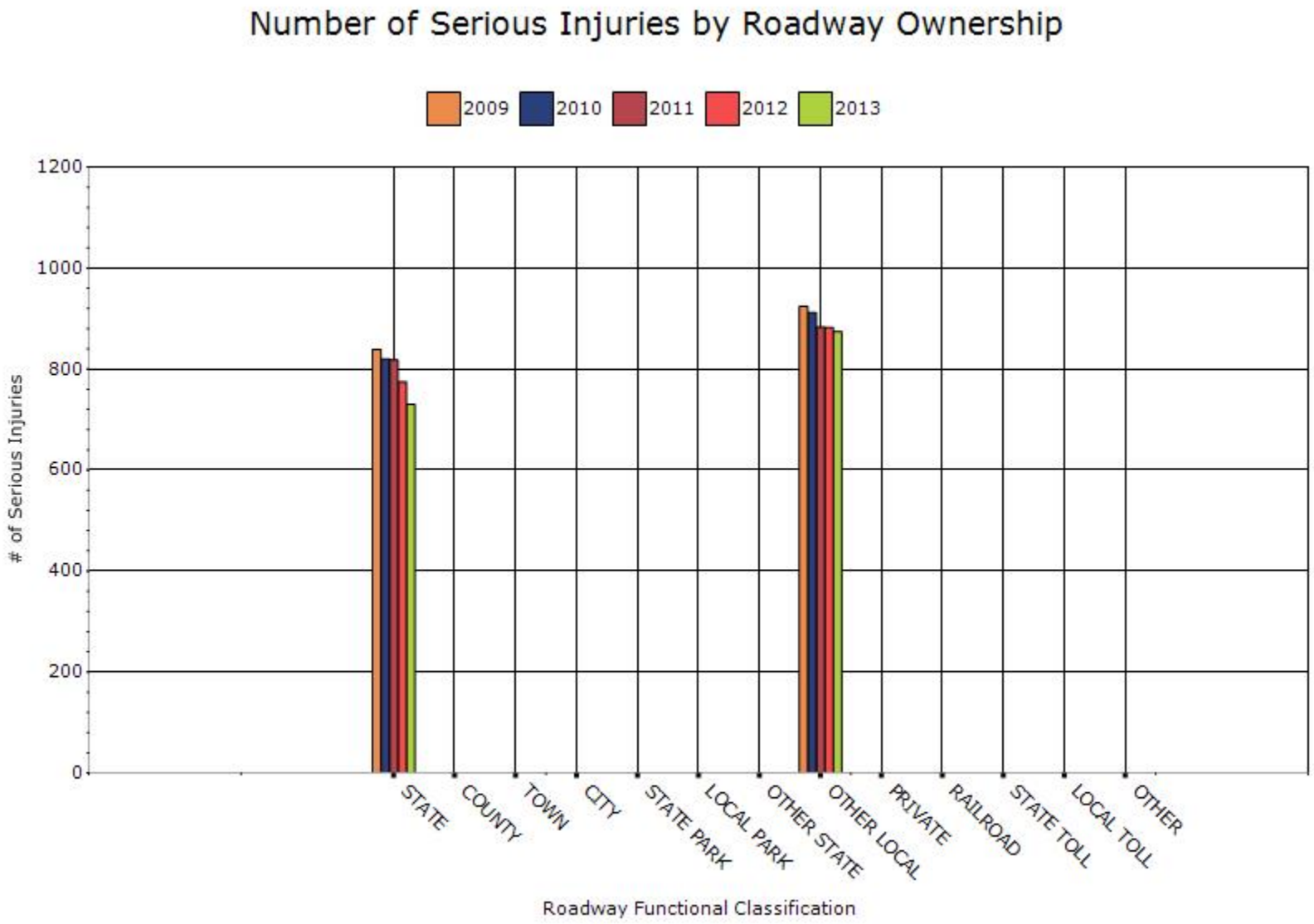

Fatality Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL 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

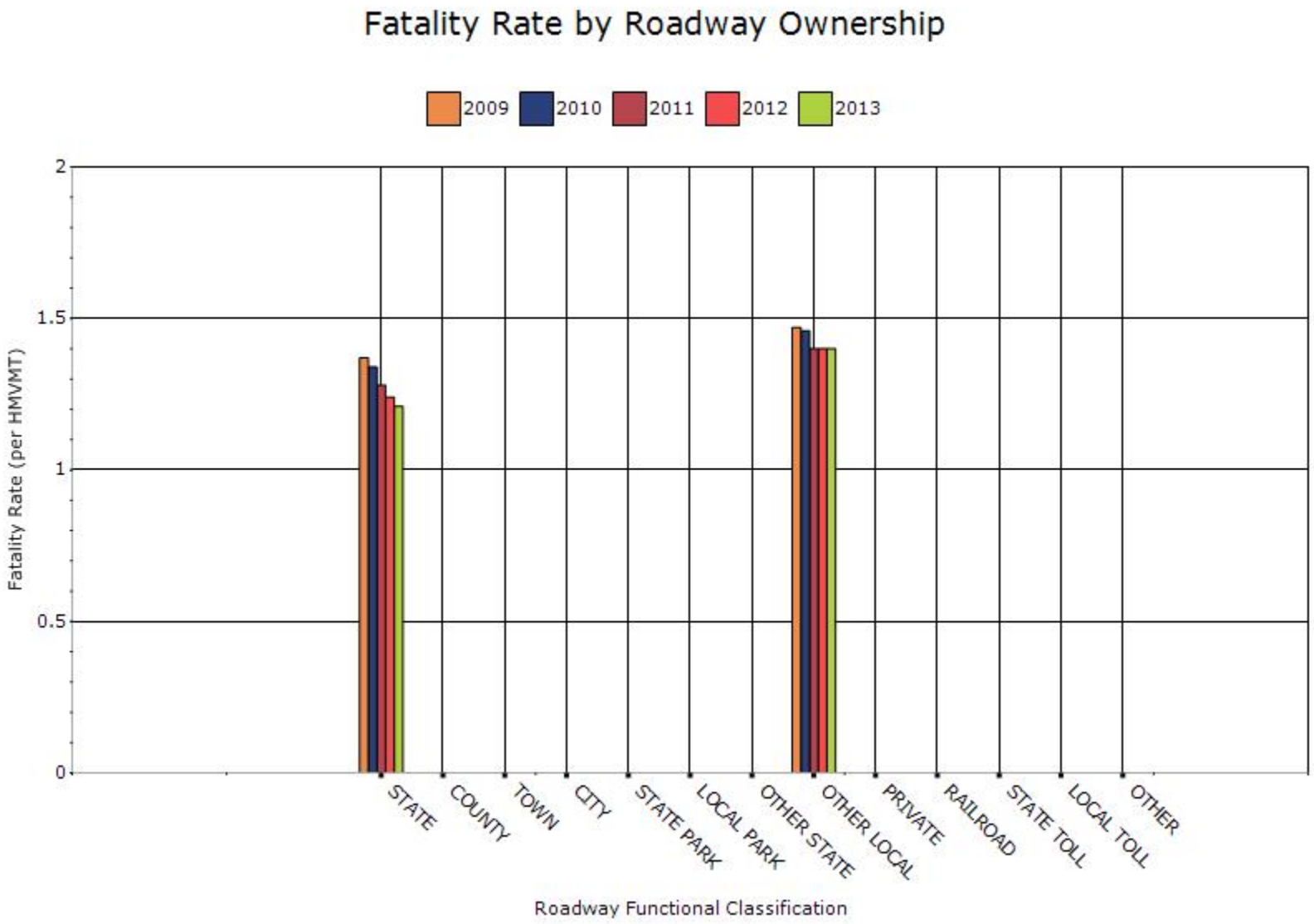

Serious Injury Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Serious Injury Rate (per HMVMT)
0
2
4
6
8
10
12
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

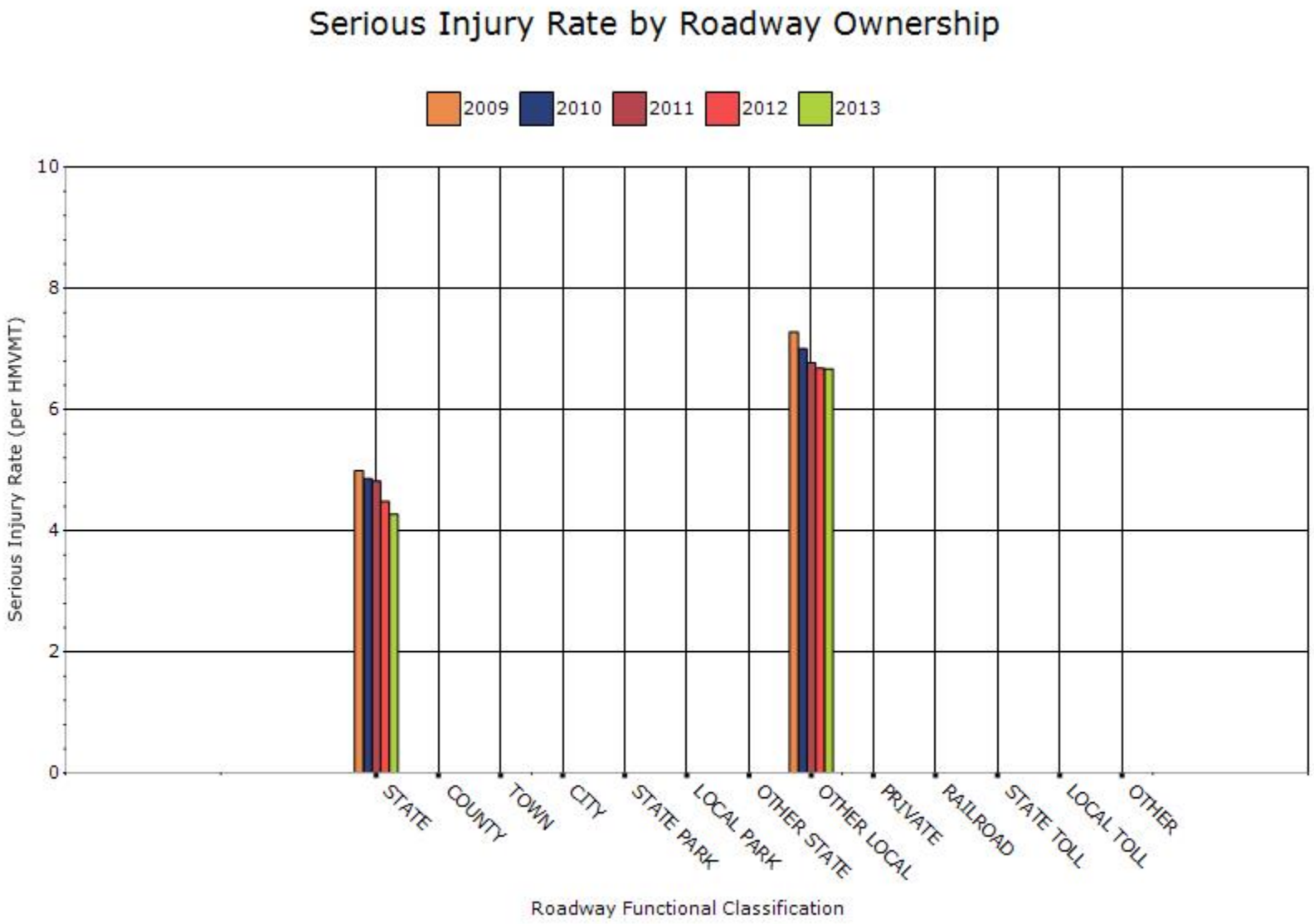
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	208	730	1.21	4.27
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	184	874	1.4	6.67
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
2009
2010
2011
2012
2013
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
2009
2010
2011
2012
2013
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
2009
2010
2011
2012
2013
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
2009
2010
2011
2012
2013
Serious Injury Rate (per HMVMT)
10
8
6
4
2
0
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 2013. On the State Highway System fatalities are down 16 percent. However, on locally-owned roads fatalities are essentially unchanged. Similarly, serious injuries are down 11 percent overall, 16 percent on state highways, while only six 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.

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	0.458
Serious injury rate (per capita)	0.908	0.874	0.892	0.87	0.878
Fatality and serious injury rate (per capita)	1.33	1.31	1.296	1.302	1.34

*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.

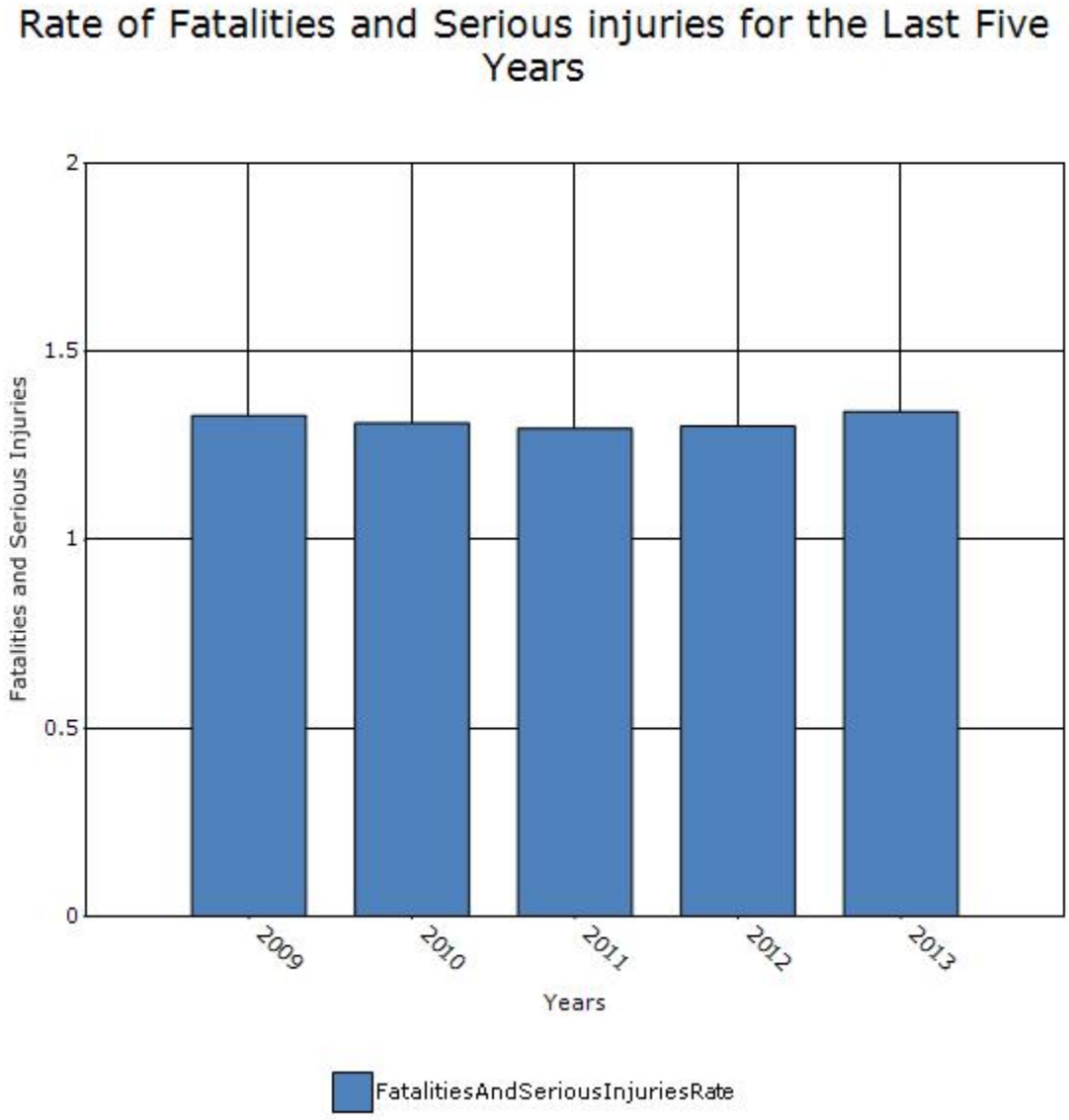
Fatality and serious injury rate per capita per year equals the fatality rate plus the serious injury rate.

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	
2005	54	147	201	129	
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	137	
2009	((201/129)+(179/129)+(167/129)+(156/131)+(158/130))/5				1.3
2010	((179/129)+(167/129)+(156/131)+(158/130)+(194/133))/5				1.3
2011	((167/129)+(156/131)+(158/130)+(194/133)+(175/133))/5				1.3
2012	((156/131)+(158/130)+(194/133)+(175/133)+(181/137))/5				1.3

* Assumes state population figure from 2012.



Does the older driver special rule apply to your state?

No

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

☐ None

☐ Benefit/cost

☐ Policy change

☒ Other: Other-The intersection sub-program is struggling to find locations in our urban areas that generate benefit-to-cost ratios greater than one; suggesting many of our old urban intersections with antiquated designs have been improved.

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 are beginning a transition to a data-based distribution of HSIP dollars.

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

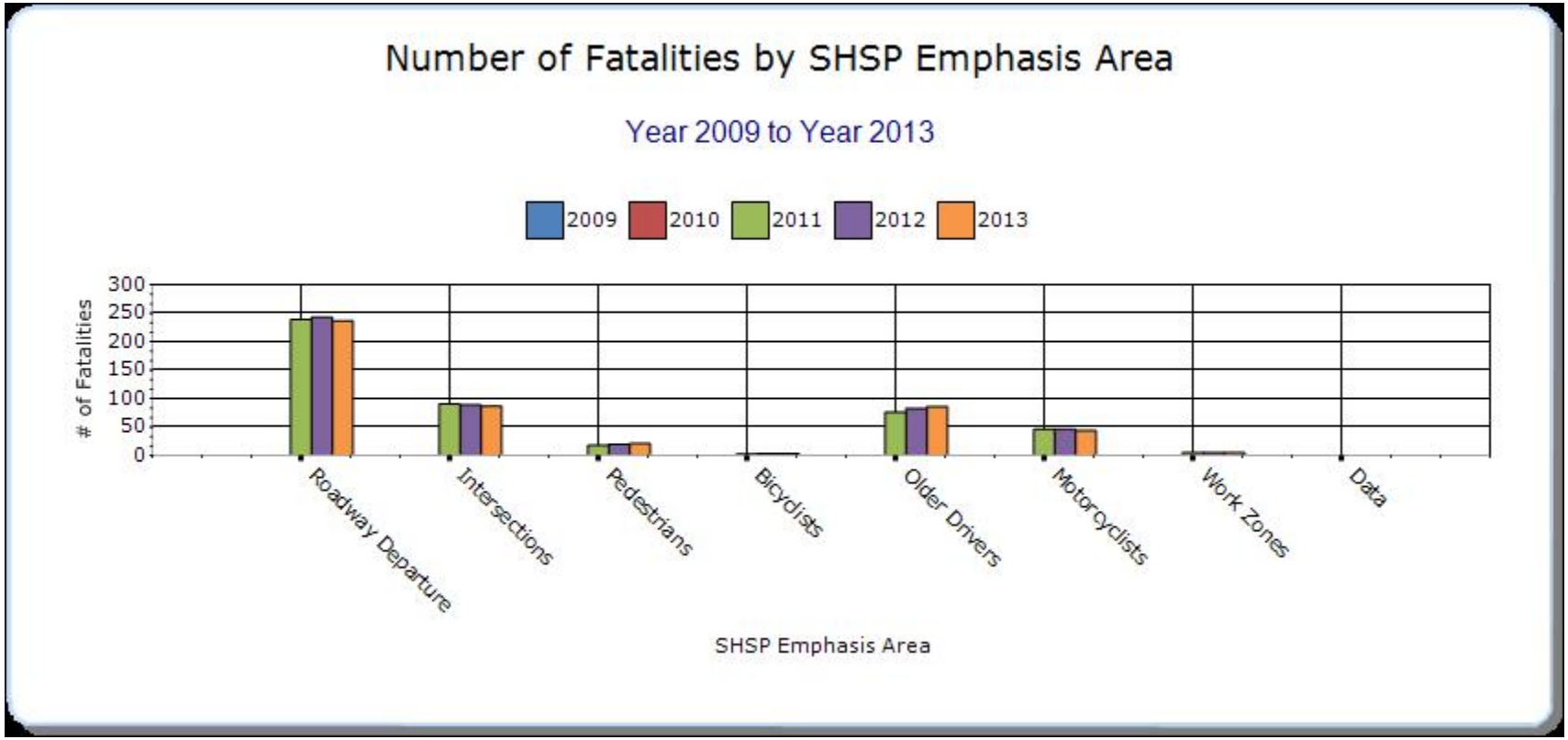
Nothing to note at this time.

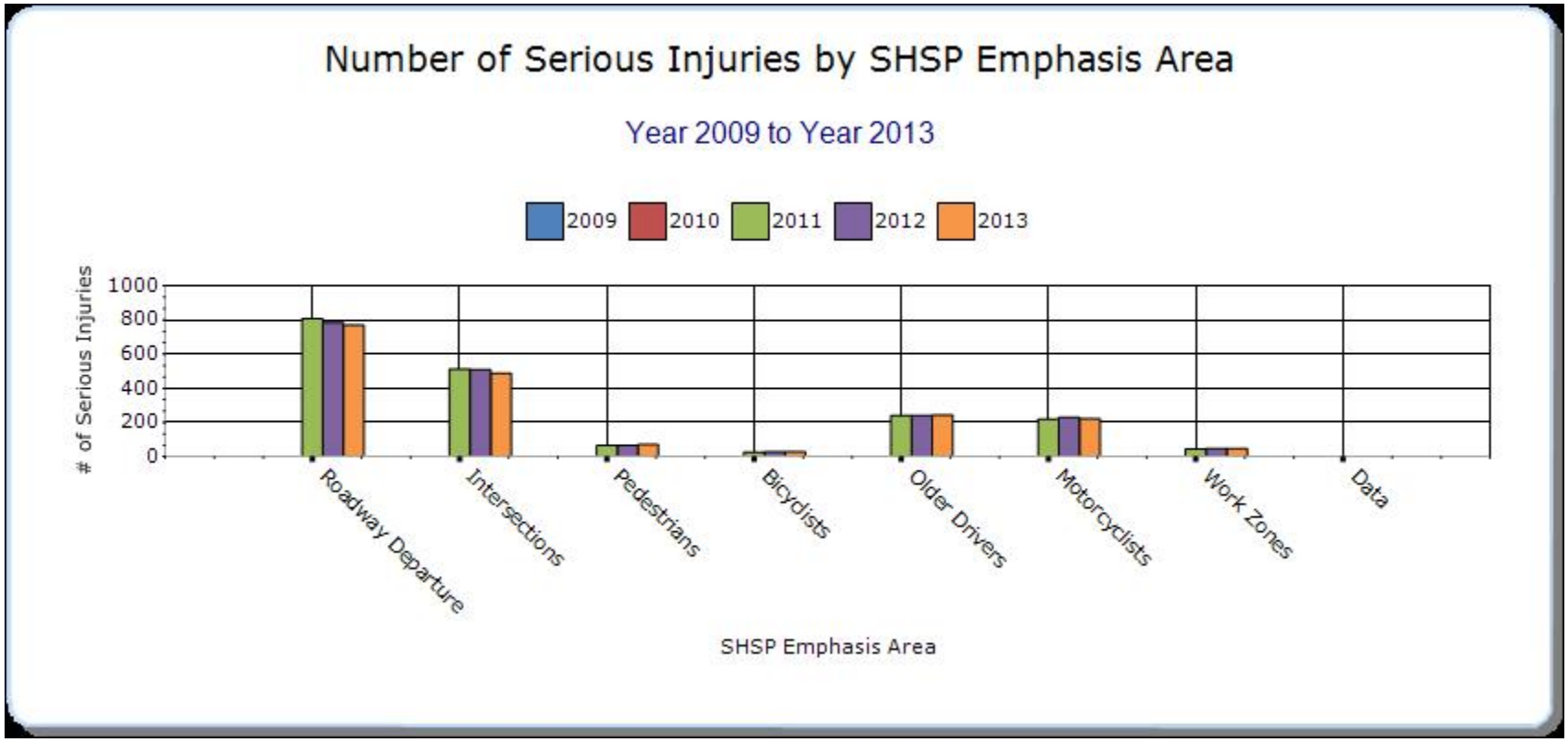
SHSP Emphasis Areas

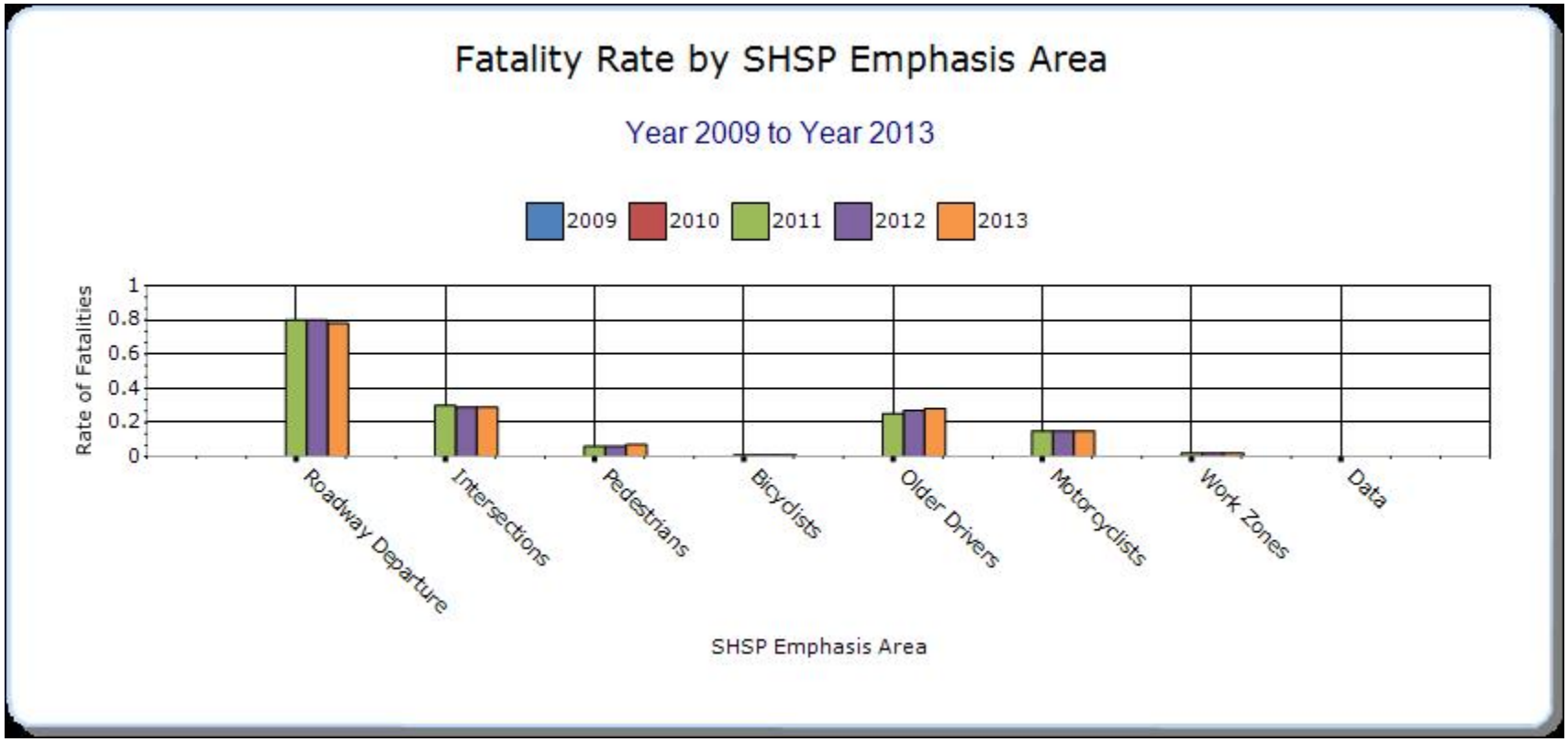
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

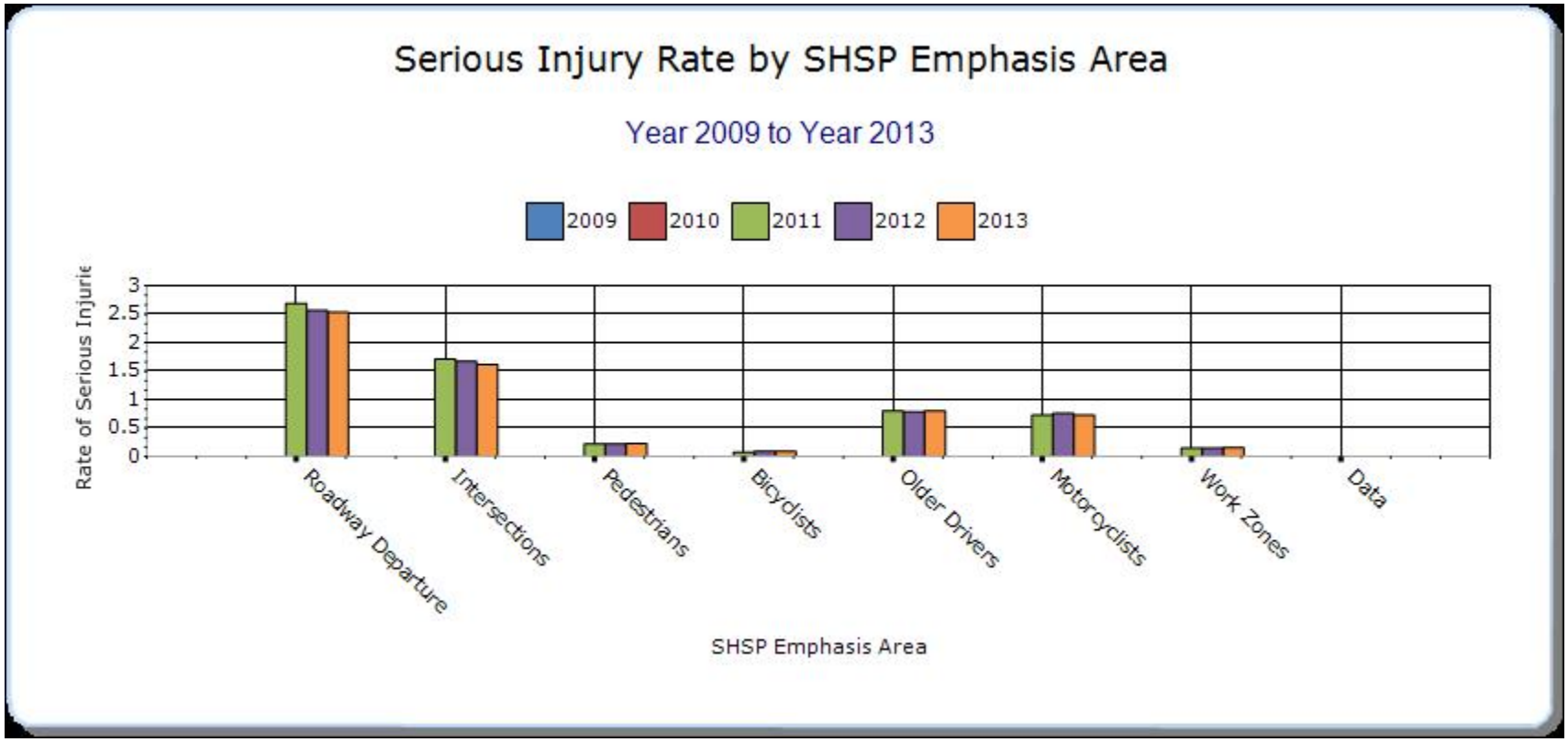
Year - 2013

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		237	769	0.78	2.54	0	0	0
Intersections		87	488	0.29	1.62	0	0	0
Pedestrians		21	70	0.07	0.23	0	0	0
Bicyclists		4	28	0.01	0.09	0	0	0
Older Drivers		86	242	0.28	0.8	0	0	0
Motorcyclists		44	222	0.15	0.73	0	0	0
Work Zones		5	48	0.02	0.16	0	0	0
Occupant Protection		171	392	0.57	1.3	0	0	0
Teen Drivers		55	322	0.18	1.06	0	0	0
Impaired Driving		140	300	0.46	0.99	0	0	0
Large Commercial Vehicles		67	138	0.22	0.46	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
300
250
200
150
100
50
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
1000
800
600
400
200
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

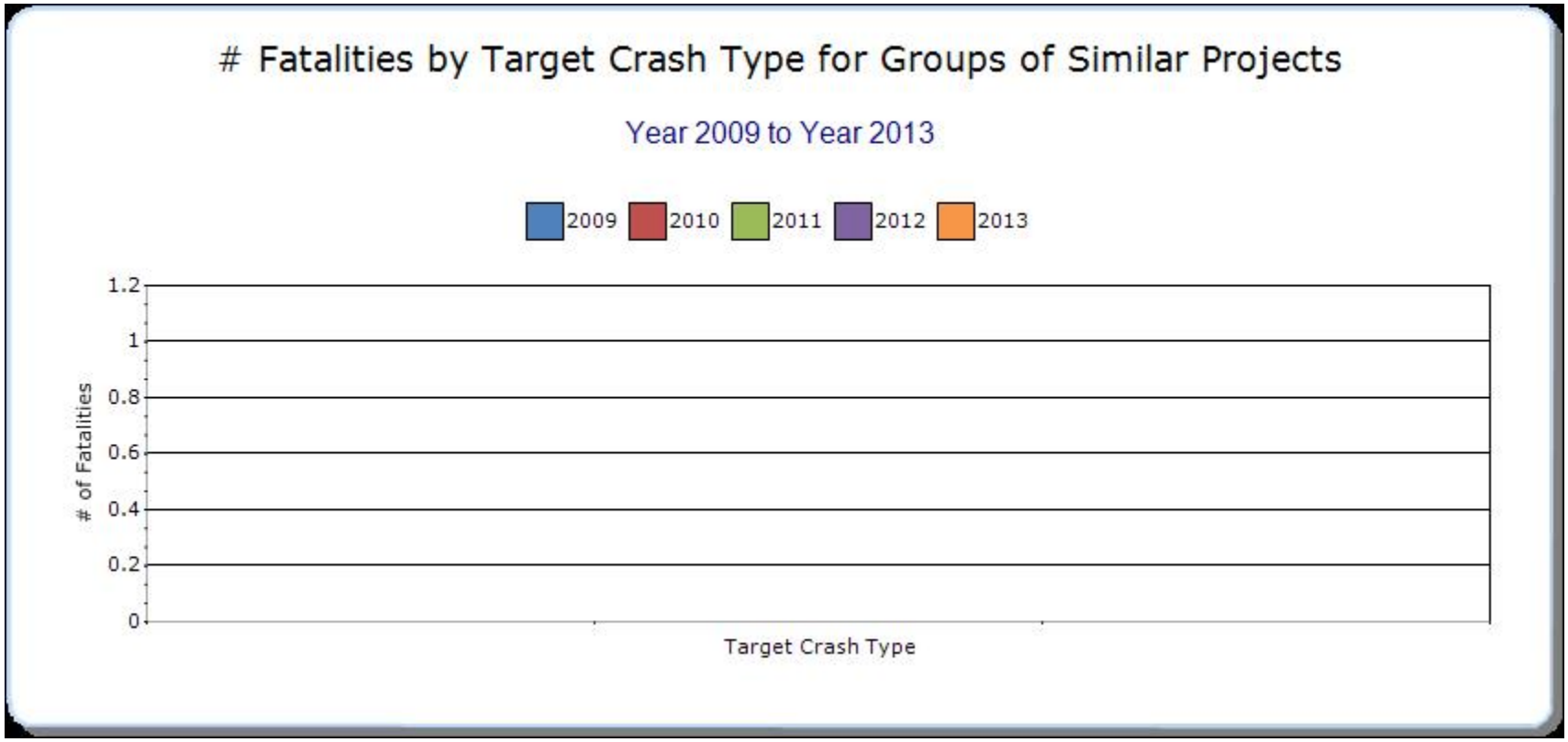

Fatality Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
1
0.8
0.6
0.4
0.2
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

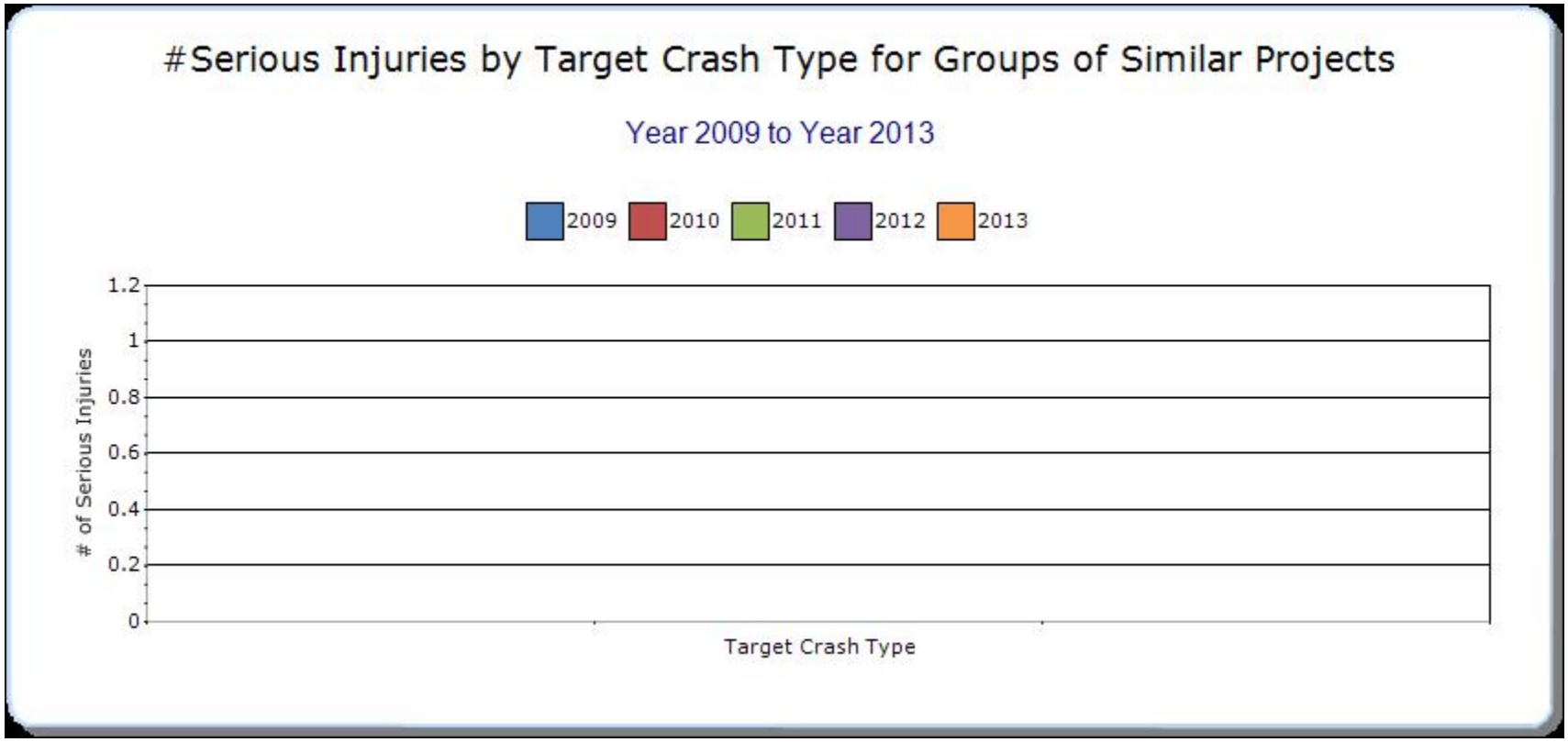

Serious Injury Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Serious Injurie
3
2.5
2
1.5
1
0.5
0
Roadway Departure
Intersections
Pedestrians
Bicydists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

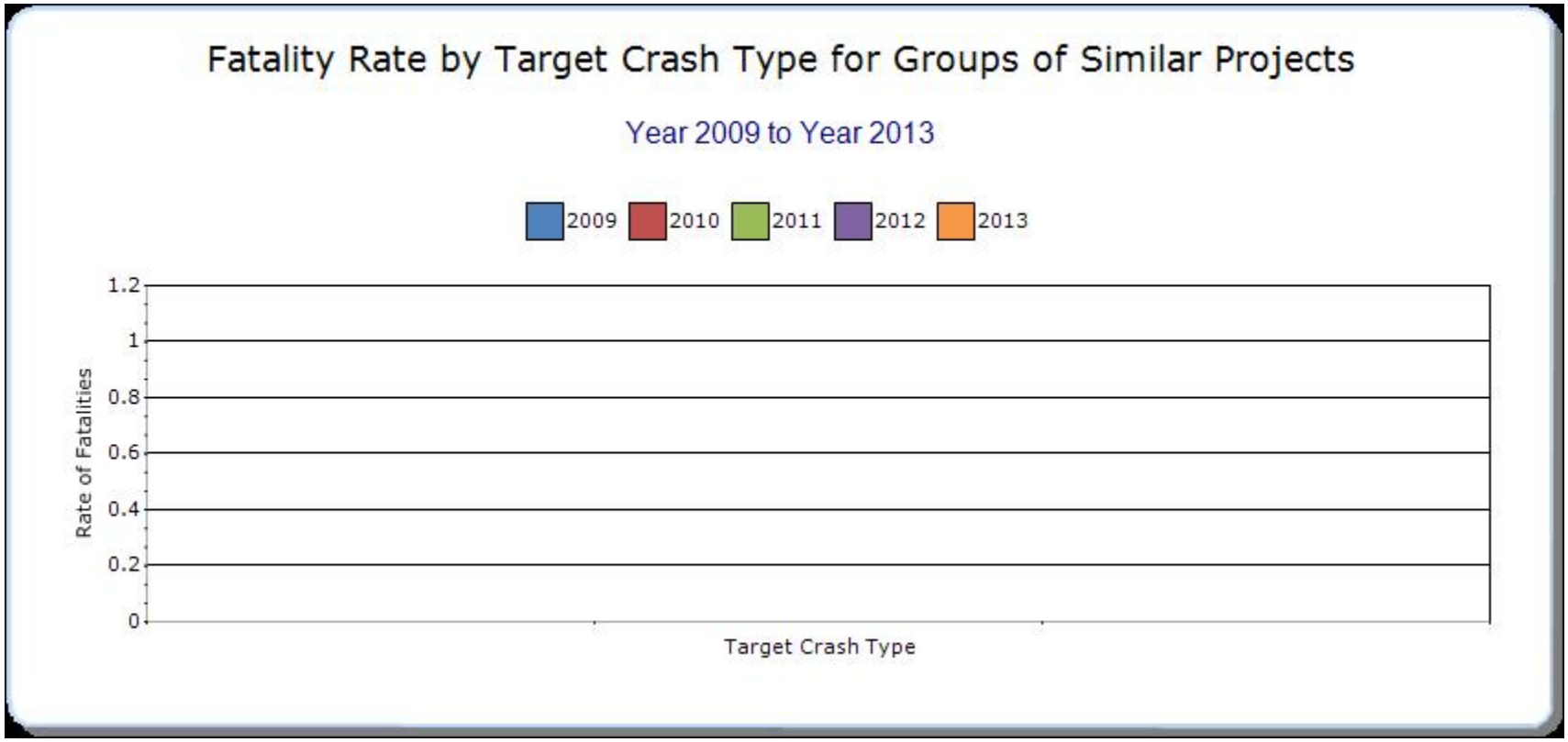
Groups of similar project types

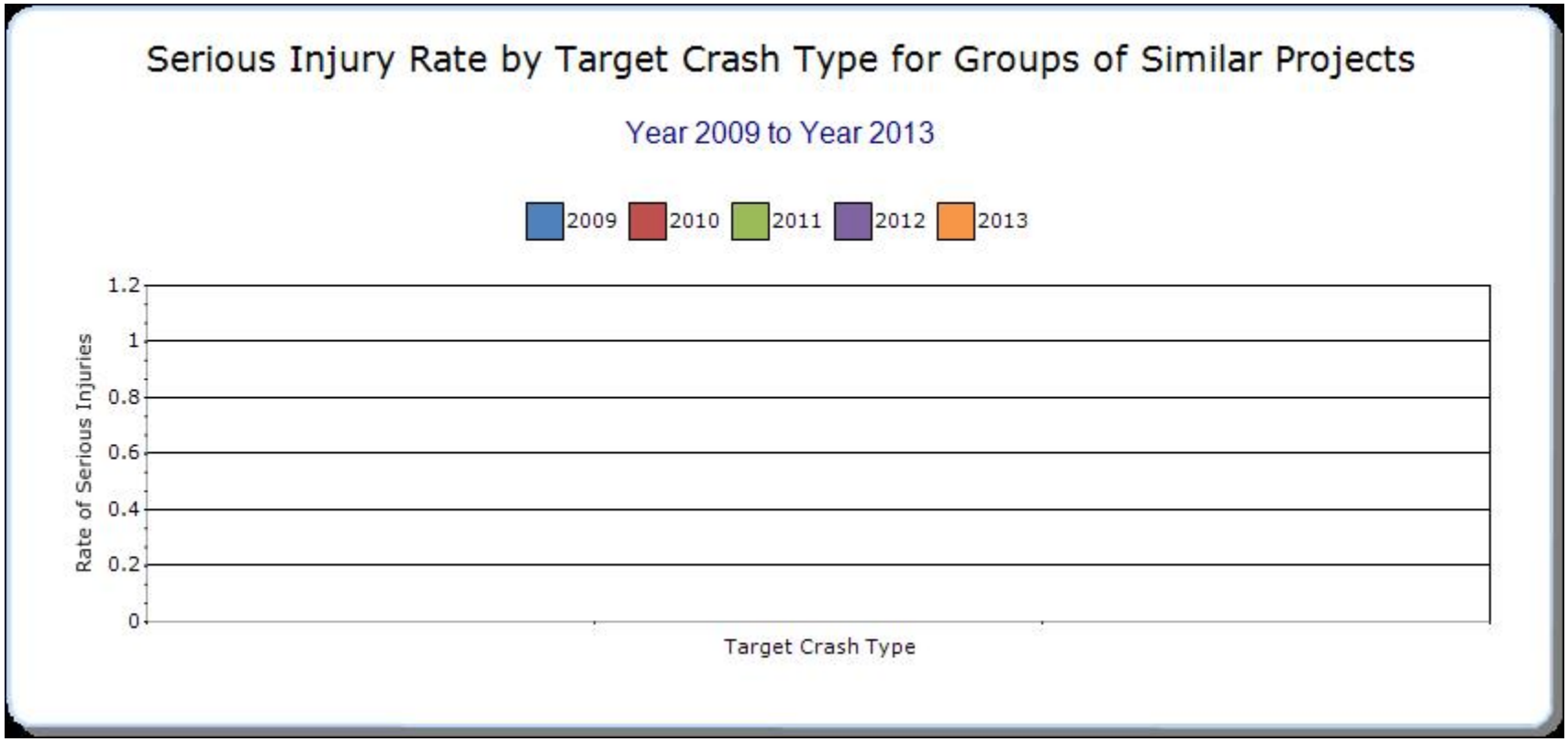
Present the overall effectiveness of groups of similar types of projects.

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


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
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 Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type

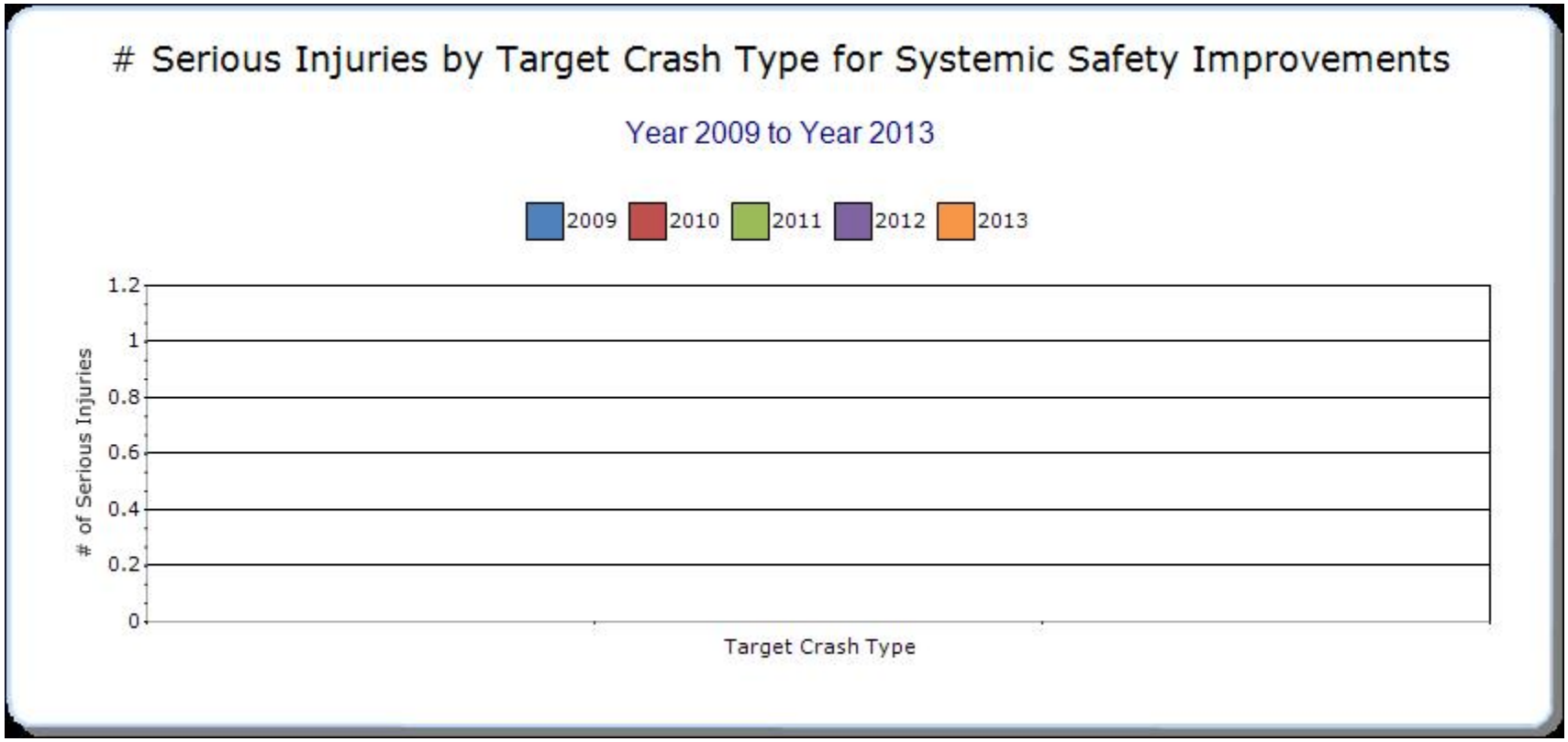

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
Target Crash Type

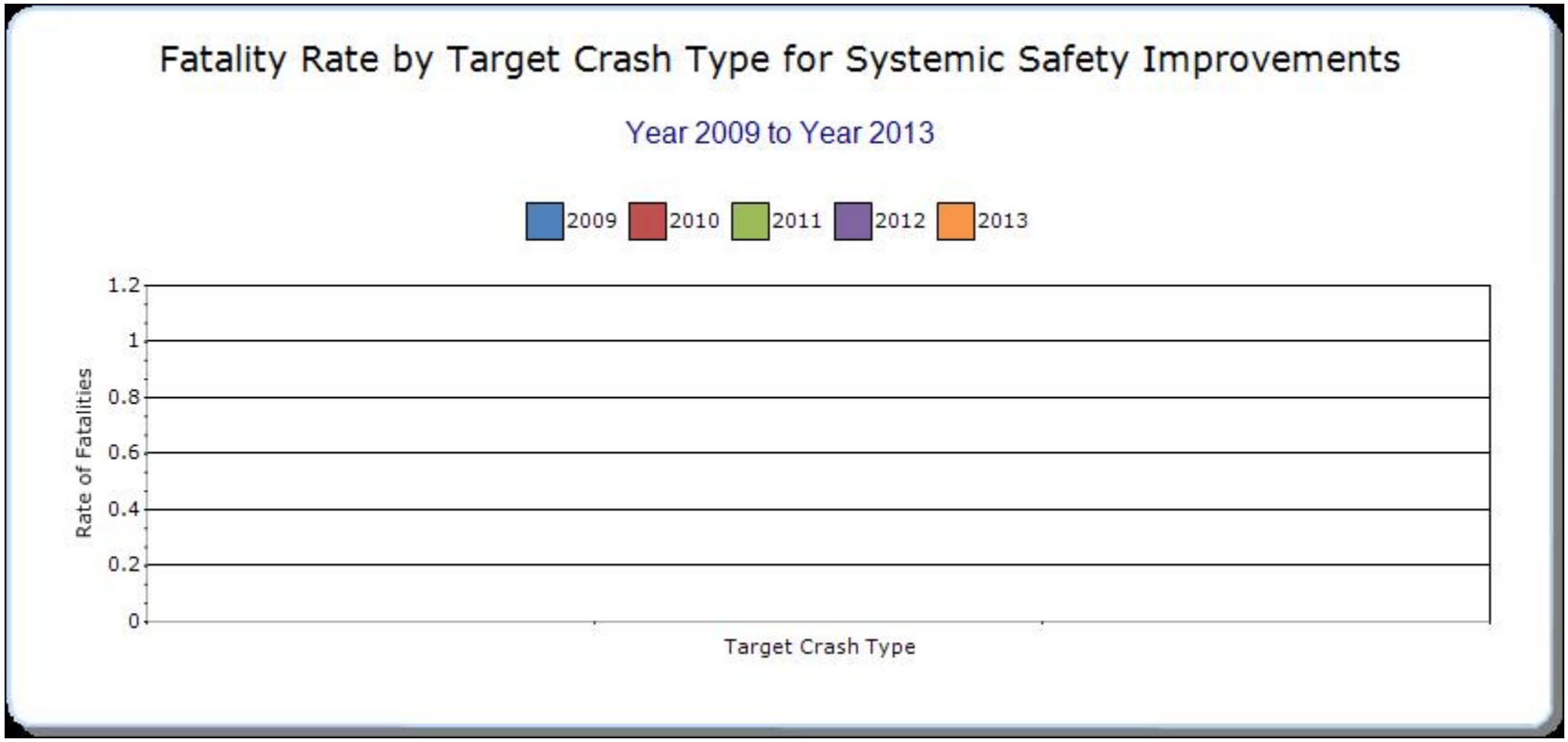
Systemic Treatments

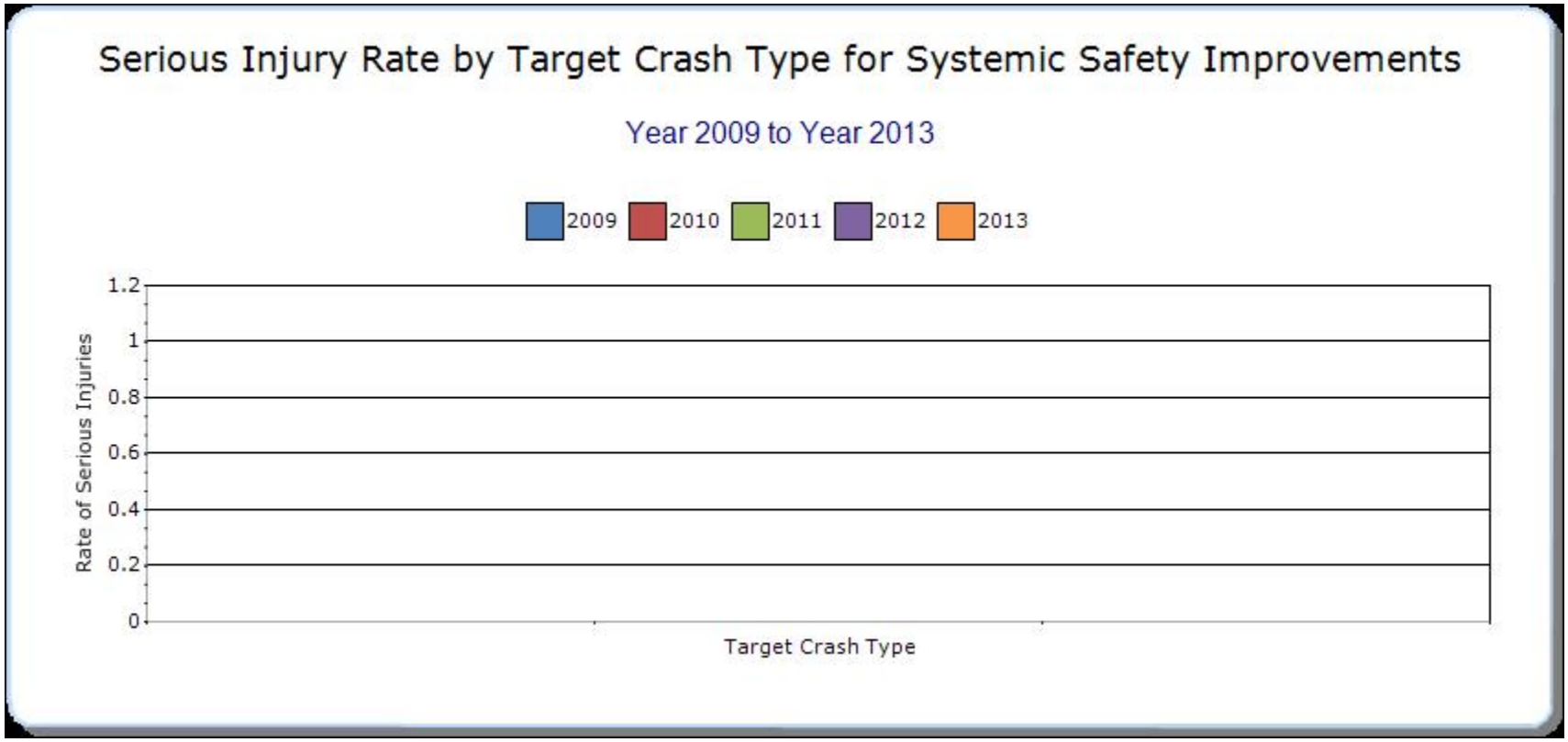
Present the overall effectiveness of systemic treatments.

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 2009 to Year 2013
2009
2010
2011
2012
2013
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 2009 to Year 2013
2009
2010
2011
2012
2013
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 2009 to Year 2013
2009
2010
2011
2012
2013
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 2009 to Year 2013
2009
2010
2011
2012
2013
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 is 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 nearly complete revised SHSP which will include 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.

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-Other Injury	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-Other Injury	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.