Highway Safety Improvement Program

Data Driven Decisions

Nevada
Highway Safety Improvement Program
2014 Annual Report

Prepared by: NV

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

This annual Highway Safety Improvement Program (HSIP) report for 2014 summarizes the activities of the Nevada Department of Transportation's HSIP as required by MAP-21. MAP-21 continued the HSIP as one of the main core programs under USC Title 23 subsections 148 and 130, and increased the HSIP allocations in the Federal Fiscal Years 2013 and 2014. Available program funds for the purpose of this report are considered to be those funds obligated during the 2014 federal fiscal year. The activities of the Nevada Department of Transportation (NDOT) are primarily designed to develop safety improvement projects for the following areas:

- Systemic roadway improvements
  - Rural lane departure crash mitigation
  - Rural intersection low cost safety improvements
  - Urban intersection related crash mitigation
  - Safety management plans
- Pedestrian related crash mitigation
- High crash locations (intersections and roadway segments)

The crash data on all public roadways contained in this report is extracted from the Nevada Citation and Accident Tracking System (NCATS) and Brazos crash databases, and prepared for Safety Engineering's analysis as a normalized view. After the crash data is downloaded from the NCATS and Brazos databases, it is processed through our geo-location software and is linearly referenced to the statewide street centerline data. The geo-location software tools automate the cleanup of location attributes and assign a spatial location to the crash data through a series of database procedures.

The HSIP program is administered by the Safety Engineering section a centrally located component of the NDOT. The methods used by the Safety Engineering section to identify, select, implement, and evaluate safety improvement projects have been compiled in the NDOT's "Safety Procedural Manual," implemented in 1980, amended in 1990, and 2010. The current Safety Procedural Manual is in the process of being updated with the local FHWA program engineer and NDOT management and is anticipated to be completed in late 2014.

Nevada Strategic Highway Safety Plan

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.

Local roads are included in the HISP in the rural safety program administered by the Safety Engineering Division of the Nevada Department of Transportation. Safety Engineering is in the process of implementing an application for projects on local roads and this process should be included in the update of the Safety Procedural Manual.

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

☒Design

☒Planning

☒Maintenance

☒Operations

☒Governors Highway Safety Office

☒Other: Other-District offices

Briefly describe coordination with internal partners.

Safety Engineering coordinates with:

1. The Design team at many different levels to include, recommend or request the inclusion of safety improvements from strategies identified in the Strategic Highway Safety Program, Road Safety Audits (RSA) or locations identified as safety management areas:

- Preliminary Field Design Survey – at this level the safety team recommends possible improvements to include into the project.
- Pre-design – at this level the safety team evaluates the design for the inclusion of safety improvements and recommends possible safety improvements to include into the project.
- Intermediate design – at this level the safety team evaluates the design for the inclusion of safety improvements and recommends possible safety improvements to include into the project.
- Final design – at this level the safety team evaluates the design for the inclusion of safety improvements.

Also, Safety Engineering coordinates with the design team to educate them in the latest safety strategies and provides guidance regarding safety improvements and ideas. This includes the utilization of the strategies included in the SHSP, the HSM and the federal guidelines.

2. The Maintenance/Operations division during RSA's and miscellaneous field reviews.

3. The Planning division at many different levels to, provide guidance regarding safety improvements in

the development of projects and by recommending safety improvements for inclusion into projects that are in the early stage of development. Also, coordinates with the scoping section to initiate and recommend safety improvements into projects that are currently being evaluated. This coordination with the Scoping team also includes the 3R evaluation team when they complete their field reviews for upcoming projects.

4. The Traffic Operations division when developing / implementing safety projects, which includes signal design, lighting design, operational analysis of roadway segments and intersections, and development and discussion of safety strategies, methodologies and guidelines.

5. The Governors Highway Safety Office (The Department of Public Safety - Office of Traffic Safety, OTS). Safety Engineering has been coordinating with the OTS since the inception of the SHSP and has funded many behavioral components of the OTS. Because of this long ongoing coordination between Safety Engineering and OTS, the safety messages continue to reach more and more road users in the state of Nevada which results in achieving our combined performance measures.

6. The District offices to gain knowledge of the locations that are a concern of the district to determine if they are being identified as potential safety project locations.

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

☒Metropolitan Planning Organizations

☒Governors Highway Safety Office

☒Local Government Association

☒Other: Other-Emergency Medical Services

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-Following the updated processes defined in Map 21

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

Nevada Strategic Highway Safety Plan

During FY2014, five key activities were conducted for the implementation of the Nevada Strategic Highway Safety Plan (SHSP). These included incorporating special user groups into the five Critical Emphasis Area (CEA) strategies and action steps, preparations for hosting of the Nevada Safety Summit in March 2015, involvement in Federal Highway Administration (FHWA) Pooled Fund Studies on Highway Safety Manual (HSM) Implementation and Low Cost Safety Countermeasures, hosting FHWA led HSM Practitioners training, and agency meetings to expand participation in the Nevada SHSP. Brief descriptions of these five key activities are provided below. Recurring activities for the SHSP included semi-annual meetings of the Nevada Executive Committee on Traffic Safety (NECTS), and quarterly meetings for the SHSP Technical Working Group, and five SHSP CEAs Teams. The Data Team and Strategic Communications Alliance (SCA) are focusing on coordinating and disseminating materials among SHSP partners.

Incorporating Special User Groups into Five CEA Team Strategies and Action Steps

Nevada SHSP members agreed to include vulnerable road users into the SHSP and five CEAs in 2013. However, correspondence with safety officials from FHWA and NHTSA called to attention the challenge and inconsistency with definitions of vulnerable road users. For this reason, both agencies have dropped the use of the phrase and are specifically naming the included special user groups. An addendum to the 2011 to 2015 Nevada SHSP specifies that although not included as specific CEAs, the following specific road user groups will be addressed through strategies and action steps in the other CEAs:

- Bicyclists
- Pedestrians
- Motorcycles (including mopeds and scooters)
- Younger Road Users (Under 25)
- Older Road Users (65 and Over)

The intent of adding specific road users into the SHSP is not to mandate their inclusion but to provide the CEA teams the flexibility to include them in discussions and within proposed mitigation strategies for each of the five CEAs

2015 Nevada Safety Summit Preparations

The 2015 Nevada Safety Summit is being organized for March 2015 in Reno, Nevada. The summit will focus on gathering input from the 4 "Es" of transportation safety for the 2016 to 2020 Nevada SHSP Update. Large group sessions anticipated to include approximately 250 participants will begin and end the 1 ½ day summit. The core of the summit will include five concurrent interactive breakout sessions focusing on discussions among attendees. The summit will be preceded by ½ day workshops on focus areas, such as motorcycle safety.

FHWA Pooled Fund Studies

Nevada participated in two FHWA-sponsored Pooled Fund Studies (PFS) during fiscal year 2014. One PFS focused on HSM implementation and the other on low cost safety countermeasures. The purpose of these PFSs is to have coordination among multiple states on best practices and lessons learned on applying effective engineering safety countermeasures.

FHWA HSM Practitioners Training

Nevada hosted a two-day FHWA instructed HSM Practitioners Training plus a half day Interactive Highway Safety Design Model (IHSDM) training also instructed by FHWA in February 2014. This training was attended by approximately 25 safety practitioners from NDOT Safety, NDOT Scoping, NDOT Roadway Design, the Regional Transportation of Southern Nevada University of Nevada Las Vegas and local jurisdictions. The training provided transportation professionals in Nevada the guidelines and experience to apply substantive safety and therefore improving the safety performance of future transportation projects.

Agency Meetings to Expand Nevada SHSP Participation

During the week of December 9-13, 2013, meetings were held with seven agencies and organizations across Nevada to encourage their participation with the SHSP and to solicit ideas on how to improve traffic safety in the State. Meetings were held with:

- Southern Nevada Emergency Medical Services
- Nevada Eighth Judicial District Felony DUI Court
- Nevada Second Judicial District Felony DUI Court
- Fallon Paiute Shoshone Tribe
- Clark County School District
- Washoe County School District

- Nevada Department of Education (NDOE)

These meetings led to increased participation in the SHSP initiatives, including the addition of the Southern Nevada Emergency Medical Services and the Intertribal Council of Nevada to the NECTS and many new members to the SHSP TWG and CEA Teams.

Zero Fatalities Traffic Safety Campaign

Now in its fourth year, Nevada's Zero Fatalities public outreach and communications program is still actively engaging motorists through a variety of integrated methods with educational traffic safety messages. The program is a joint effort, leveraging and coordinating resources from the NDOT and the OTS by providing a powerful, cohesive and instantly-recognizable traffic safety campaign focusing most of these resources on promoting the five core driving safety messages defined by the state's SHSP.

Campaign Elements

Some of the public outreach channels the campaign utilized include:

- TV and radio ads
- Billboards, buses and posters
- Digital advertising (social media, Google, news & partner websites)
- Advertising at UNLV/UNR/Las Vegas 51s/Reno Aces and other sporting events
- Community and Safety Events
- Presentations to High School Driver's Education Classes
- Public Relations (media inerviews, etc.)

Campaign Updates

Campaign online messaging efforts increased significantly this year, leveraging more heavily on a variety of digital messages such as online video and radio. The campaigns promoted TV spots and extended story videos across channels like YouTube, Hulu, Pandora. Many of these services delivered messages to tablet and mobile devices as well, further expanding the reach of the campaigns into places where our audiences are increasingly interacting with the media.

While continuing to heavily utilize the public communications and outreach methods noted above, the campaign greatly expanded its outreach effort capacity in fiscal year 2014 by partnering with a few new local community firms that co-specialize in grassroots messaging. Through this additional Zero Fatalities training and coordination, we are seeing an expanded ability to meet the public need for safety presentations and a presence for these messages at more community events.

Partner agencies such as the Department of Motor Vehicle (DMV), the Nevada Highway Patrol (NHP) and the Commercial Enforcement Section continued to support the Zero Fatalities goal by running

media messages and participating in community safety outreach programs. The RTC of Washoe County and Clark County both collaborated again with Zero Fatalities to promote pedestrian safety messages to transit riders. Year-to-date traffic fatality counts were still periodically displayed on freeway digital message signs to raise traffic safety awareness.

Campaign Results

Between October 2013 and July 2014, Zero Fatalities-branded campaign delivered a total of 267 million impressions, which is an 84% impression increase over the previous year. Also during this same timeframe, 98% of Nevadans were exposed to the Zero Fatalities message. The most recent public opinion polling (February 2013) shows that 66% of Nevadans across the state said that the campaign helped influence them to avoid talking on their cell phones and 68% said it helped them avoid texting or emailing while driving.

Coordination with the Office of Traffic Safety

The NDOT Safety Engineering continues to coordinate with the Nevada Office of Traffic Safety (OTS). This coordination has been ongoing since the inception of the Strategic Highway Safety Plan. NDOT, through Flex Funding, has supported several behavioral components/programs of the OTS from the Highway Safety Improvement Funds.

This Federal Fiscal Year 2015, NDOT will support Distracted Driving, Pedestrian Safety, and Motorcycle Safety components of OTS programs in furtherance of the Nevada Strategic Highway Safety Plan (SHSP) strategies. These components are a portion of the Strategic Communication Plan. Paid media is a large part of the OTS marketing strategy. Media efforts conducted through OTS support Impaired Driving, the successful Click It or Ticket Campaigns, as well Child Passenger Safety efforts. Public Relations and Outreach, the Joining Forces high visibility enforcement program, Zero Teen Fatalities and Driver's Edge will also be supported in 2015 through HSIP Funding. Additional projects funded by NDOT HSIP funds that were awarded to OTS in 2015 address pedestrian, speed, and EMS strategies found within the SHSP.

Road Safety Audits (RSA's)

The NDOT Safety Engineering regularly uses Road Safety Audits (RSA) on Nevada roadways particularly on ongoing design projects and ad hoc traffic safety studies; an opportunity to include safety improvements for all road users. There were 3 RSAs performed in 2013 (from October 2013 to December 2013) and there have been 11 RSAs in 2014 as of August 2014.

Tribal Transportation Planning

NDOT Safety Engineering continuously coordinates the use of RSA with Tribal Transportation Planning Department statewide. Recently, an RSA was performed in May 2014 at the intersection of US 95A and Campbell Lane, an entrance to the Yerington Piute Tribe.

Work Zone RSA (WZRSA) Training

As reported last year, NDOT Safety engineering was a collaborating member of the Technical Working Group (TWG) for the development of the FHWA WZRSA Guidelines and Prompt Lists, and subsequent training level and materials. Nevada wasgranted an opportunity this year for WZRSA training; this training was conducted on June 24 & 25, 2014 by Science Application International Corporation (SAIC) in coordination with FHWA and American Traffic Safety Services Association (ATSSA) in Carson City, Nevada. It was attended by 25 participants from NDOT, Regional Transportation Commission, and consultants.

Highway Safety Manual

NDOT Safety Engineering has been continuing their strategic deployment of the Highway Safety Manual (HSM). During FY2014, the following is a summary of the main accomplishments:

- Hosted quarterly HSM Implementation Task Force Meetings with representation from NDOT Directors Office, Roadway Design, Traffic Operations, Scoping, Safety and Districts 1, 2 and 3 as well as the four Metropolitan Planning Organizations (MPOs) in Nevada.
- Participated in the NCHRP Project 17-50 Lead States Initiative for Implementing the HSM as a Support State.
- Participated in the FHWA Pooled Fund Study on HSM Implementation and participated in numerous conference calls and project document reviews.
- Hosted a two day HSM Practitioner's Guide for Rural Two-Lane Roads and Rural Multilane Highways & Urban/Suburban Arterials in Las Vegas that was instructed by the FHWA Resource Center in February 2014.
- Hosted a ½ day hands-on training on the Interactive Highway Safety Design Model (IHSDM) in Las Vegas that was instructed by FHWA Technical Assistance in February 2014.
- Used the University of Nevada Reno Center for Advanced Transportation Education and Research to support HSM Implementation in Nevada.Tasks include Urban High Crash Corridor Criteria, Wildlife Highway Crossing Monitoring, and a Safety Performance Function Data Work plan.
- Completed the University of Nevada Las Vegas task to develop a Safety Analyst model for network screening and safety analysis for the Las Vegas Metropolitan Area.
- Prepared website materials for applying the Highway Safety Manual in Nevada.

- Applied the HSM predictive method to a widening of US 93 north of Lages Junction, SR 160 widening from two lanes undivided to four lanes divided, I-580 from Washoe Valley to Carson City and I-15 Dry Lakes Design Exception.

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:		

Program: **Intersection**

Date of Program Methodology: **3/9/1997**

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

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☐ Other

☒ Other-safety engineering selects projects after coordination with internal partners and external partners.

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

Program: **Rural State Highways**

Date of Program Methodology: **10/22/2012**

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

☒ Other-safety engineering selects projects after coordination with internal partners.

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	
☒ Crash Rate Score	1

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

80

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

- ☒ Cable Median Barriers
- ☐ Traffic Control Device Rehabilitation
- ☐ Install/Improve Signing
- ☐ Upgrade Guard Rails
- ☐ Safety Edge
- ☒ Add/Upgrade/Modify/Remove Traffic Signal
- ☒ Rumble Strips
- ☒ Pavement/Shoulder Widening
- ☐ Install/Improve Pavement Marking and/or Delineation
- ☐ Clear Zone Improvements
- ☐ Install/Improve Lighting
- ☒ Other Other-Safety Management Plans

What process is used to identify potential countermeasures?

- ☒ Engineering Study
- ☒ Road Safety Assessment
- ☒ Other: Other-Crash Data Evaluation

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.

Safety Management Plans:

One of the guiding principles of the Nevada SHSP is to integrate safety engineering type improvements across the entire system of roads and coordinate with all state and local agencies that have a hand in addressing public safety issues.

Furthermore, the Moving Ahead in the 21st Century (MAP 21) indicates Highway Safety Improvement Plan shall produce a program of projects or strategies to reduce identified safety issues; accordingly, the DEPARTMENT has a Safety Management Plan (SMP) that will deliver transportation safety improvements on Nevada roadways and address all aspect of traffic safety including road users' human factors consideration, and infrastructures issues in an effort of reducing the number and severity of roadway crashes. The DEPARTMENT Safety Engineering Division is responsible for program administration, and delivery of the projects.

The SMP is a planning level effort. To achieve the SMP goal, it may require corridor study, access management; input from the Technical Working Group, stake holders, and public hearing(s); it considers findings of the Road Safety Audits.

The anticipated outcome generated from the SMP process includes but not limited to; identified safety issues, recommended mitigation strategies, justification of the strategies, priorities, cost

and potential risks. An explanation of the criteria used to prioritize the strategies should be included (the criteria should consider the road safety benefits as well).

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)	21321175	68 %	21321175	68 %
HRRRP (SAFETEA-LU)	2346784	8 %	2346784	8 %
HRRR Special Rule	1487814	5 %	1487814	5 %
Penalty Transfer - Section 154	617861	2 %	617861	2 %
Penalty Transfer – Section 164				
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds	5420024	17 %	5420024	17 %

Totals	31193658	100%	31193658	100%

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

$1,488,121.00

How much funding is obligated to local safety projects?

$1,488,121.00

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

$1,700,000.00

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

$1,700,000.00

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.

None

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

Nevada Department of Transportation will continue implementing the HSIP as described in MAP-21 until MAP-21 is extended or there is a new Transportaion bill approved.

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
SR 147 Lake Mead CL 9.67 to CL 14.23	Shoulder treatments Widen shoulder - paved or other	5 Miles	1566120	8167761	HRRR-Special Rule	Rural Major Collector	1700	55	State Highway Agency	Lane Departure	Lessen crash severity in the event of a Lane Departure
SR 147 Lake Mead CL 9.67 to CL 14.23 (cont.)	Shoulder treatments Widen shoulder - paved or other	5 Miles	2346784	8167761	HRRRP (SAFETEA-LU)	Rural Major Collector	1700	55	State Highway Agency	Lane Departure	Lessen crash severity in the event of a roadway departure
Various intersections in Carson City N.Carson St. @ Winnie Ln N.Roop St. @ E.Robinson St.	Intersection traffic control Modify traffic signal - add flashing yellow	2 Numbers	28500	30000	HSIP	Many classes and locations	21000	25	City of Municipal Highway Agency	Intersections	Improve operating characteristics of intersections to reduce conflicts

	arrow										
Multiple Intersections in Dist. I, Las Vegas (Package 2)	Intersection traffic control Modify traffic signal - add flashing yellow arrow	48 Numbers	687427	723607	HSIP	Many classes and locations	25000	45	State Highway Agency and City of Municipal Highway Agency	Intersections	Improve operating characteristics of intersections to reduce conflicts
Multiple Intersections in Dist. I, North Las Vegas (Package 2)	Intersection traffic control Modify traffic signal - add flashing yellow arrow	23 Numbers	755755	795531	HSIP	Many classes and locations	55000	45	State Highway Agency and City of Municipal Highway Agency	Intersections	Improve operating characteristics of intersections to reduce conflicts
Enhanced Milepost Markers	Roadway signs and traffic control Roadway signs (including post) - new	111 Miles	541683	630193	HSIP	Rural Principal Arterial - Other	1200	65	State Highway Agency	Lane Departure	Keep vehicles in their lanes through engineering modifications

	or updated										
DPS-NHP Data Collection Upgrades (FY14-FY17)	Non-infrastructure Data/traffic records	0	1615000	1700000	HSIP-SHSP	Not on road network	0	0	State Highway Agency	Data	
US 395 south of Gardnerville at the Indian Colony MP DO 17.89	Roadway Roadway widening - add lane(s) along segment	1 Miles	1173999	1235789	HSIP	Rural Principal Arterial - Other	15000	65	State Highway Agency	Lane Departure	Keep vehicles in their lanes through engineering modifications
Acceleration Lanes: US 395@Airport Road, US395@Johnson Lane, and US395@Stephanie Way	Intersection geometry Auxiliary lanes - add acceleration lane	3 Numbers	114000	120000	HSIP	Rural Principal Arterial - Other	26000	65	State Highway Agency	Intersections	Implement geometric improvements
US 93 MP EL11.79 to EL 15.50 MP EL30.90 To EL 54.56 (Excepting out	Shoulder treatments Widen shoulder - paved or	27 Miles	8418108	8861165	HSIP	Rural Principal Arterial - Other	1300	65	State Highway Agency	Lane Departure	Lessen crash severity in the event of a roadway departure

EL15.5 EL30.90) Package 2	other										
SR 147 Lake Mead CL 9.67 to CL 14.23	Shoulder treatments Widen shoulder - paved or other	5 Miles	4131342	8167761	State and Local Funds	Rural Major Collector	1700	55	State Highway Agency	Lane Departure	Lessen crash severity in the event of a Lane Departure

Progress in Achieving Safety Performance Targets

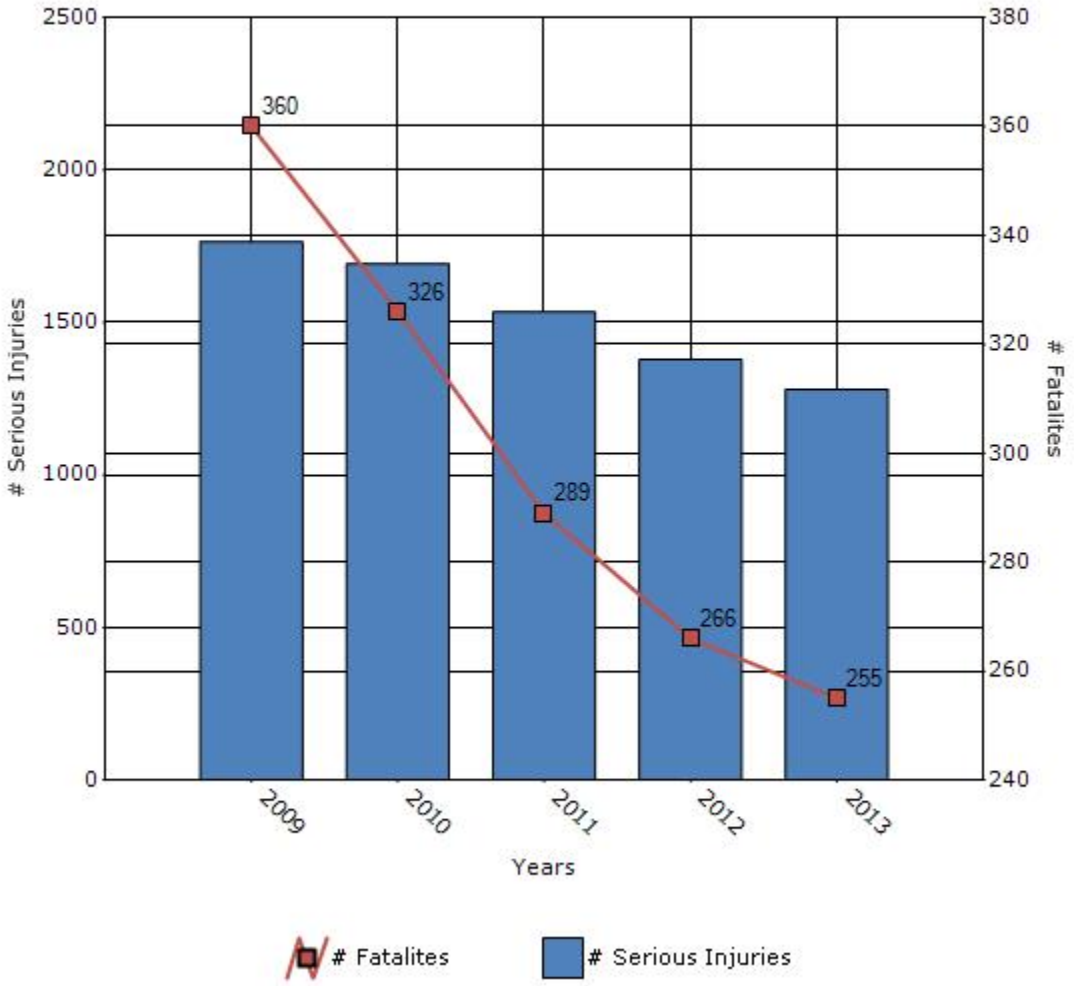
Overview of General Safety Trends

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

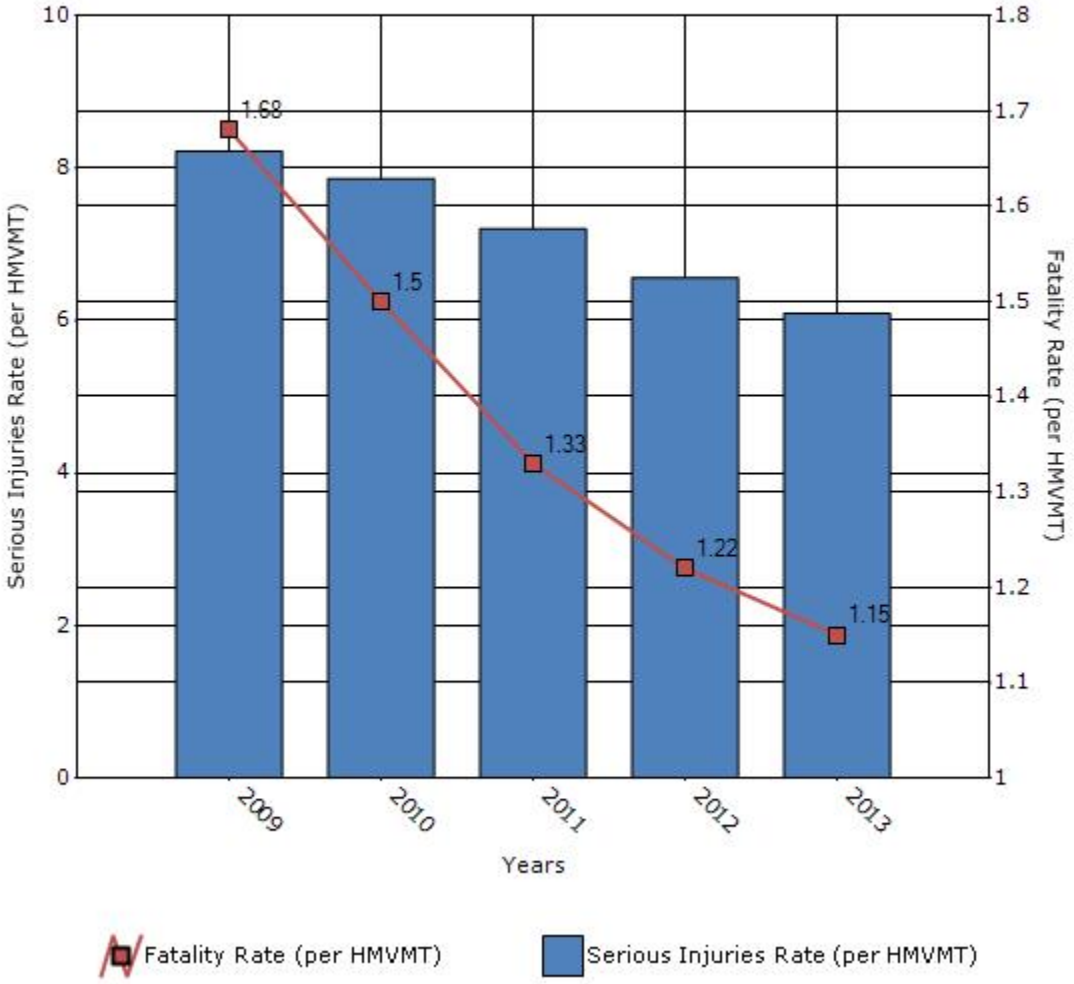
Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	360	326	289	266	255
Number of serious injuries	1765	1692	1534	1378	1281
Fatality rate (per HMVMT)	1.68	1.5	1.33	1.22	1.15
Serious injury rate (per HMVMT)	8.22	7.86	7.2	6.56	6.09

*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

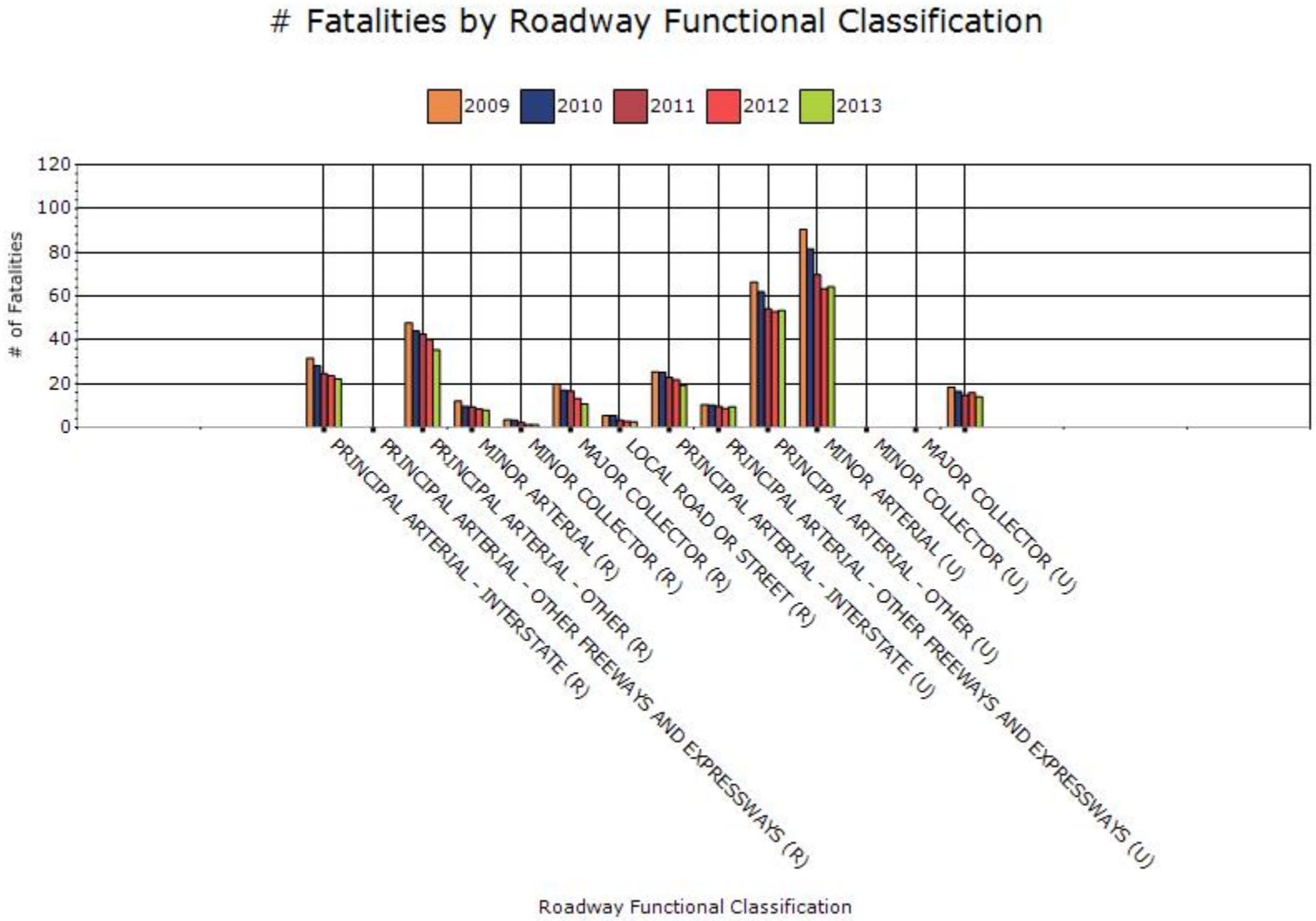


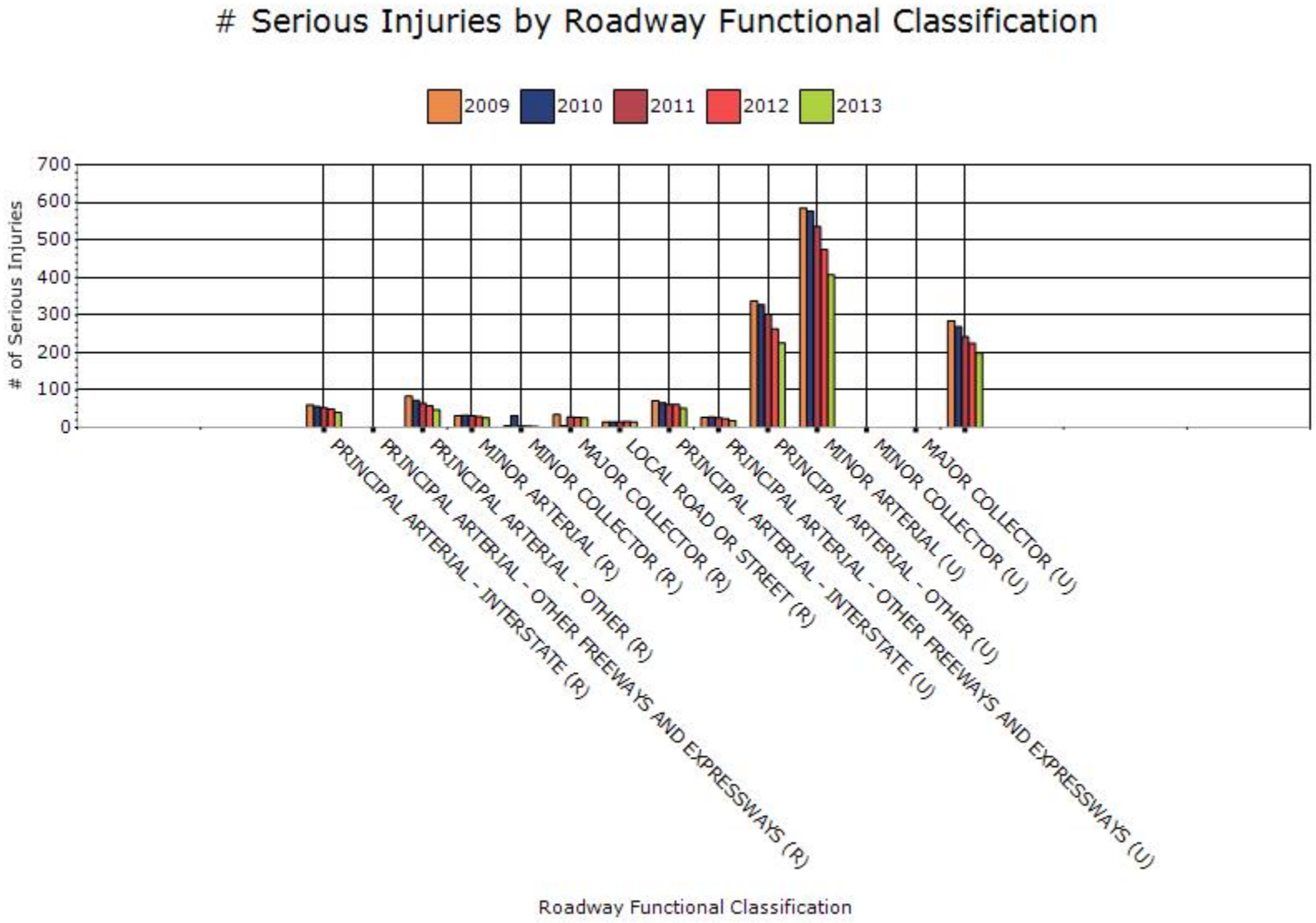
To the maximum extent possible, present performance measure* data by functional classification and ownership.

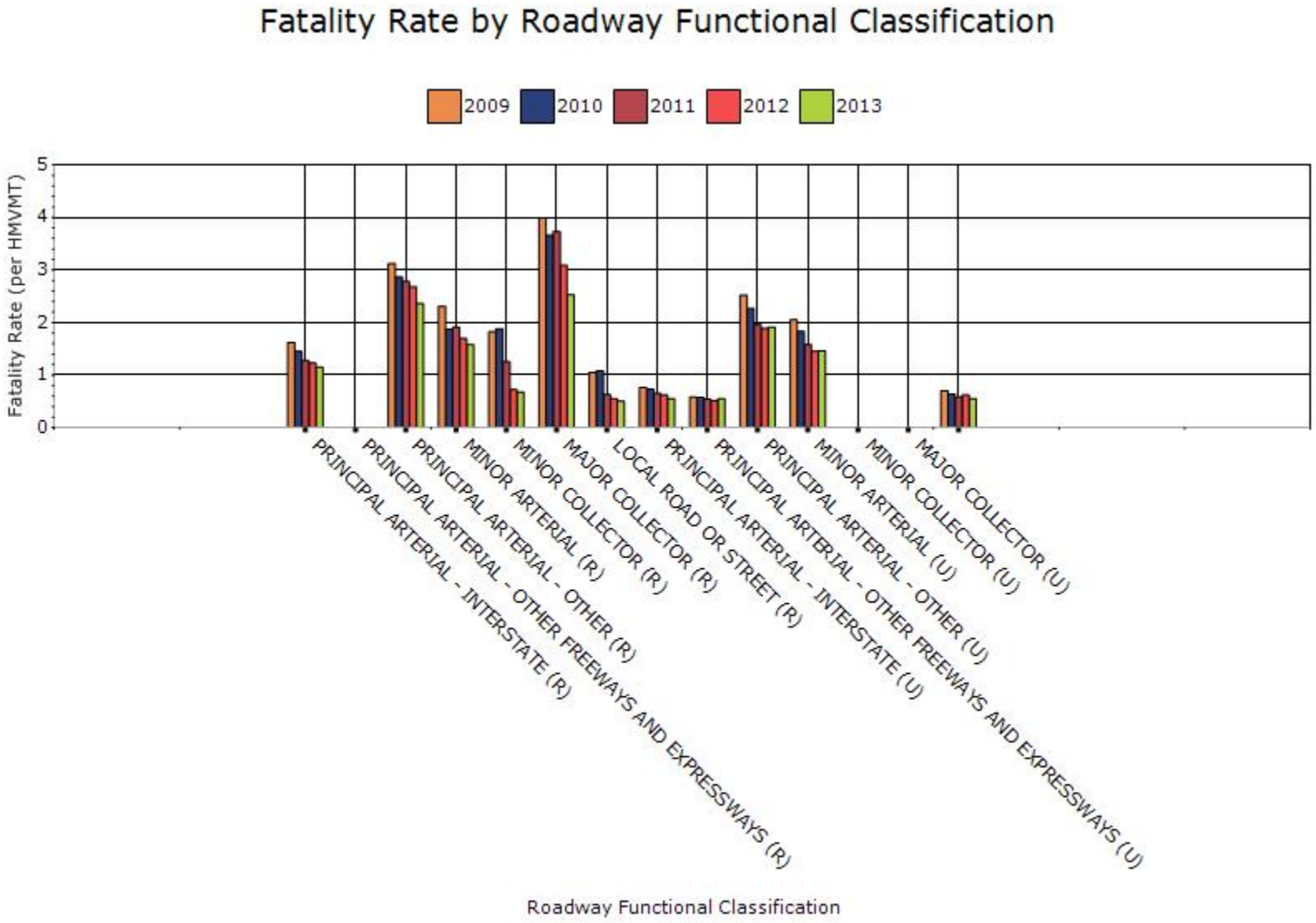
Year - 2013

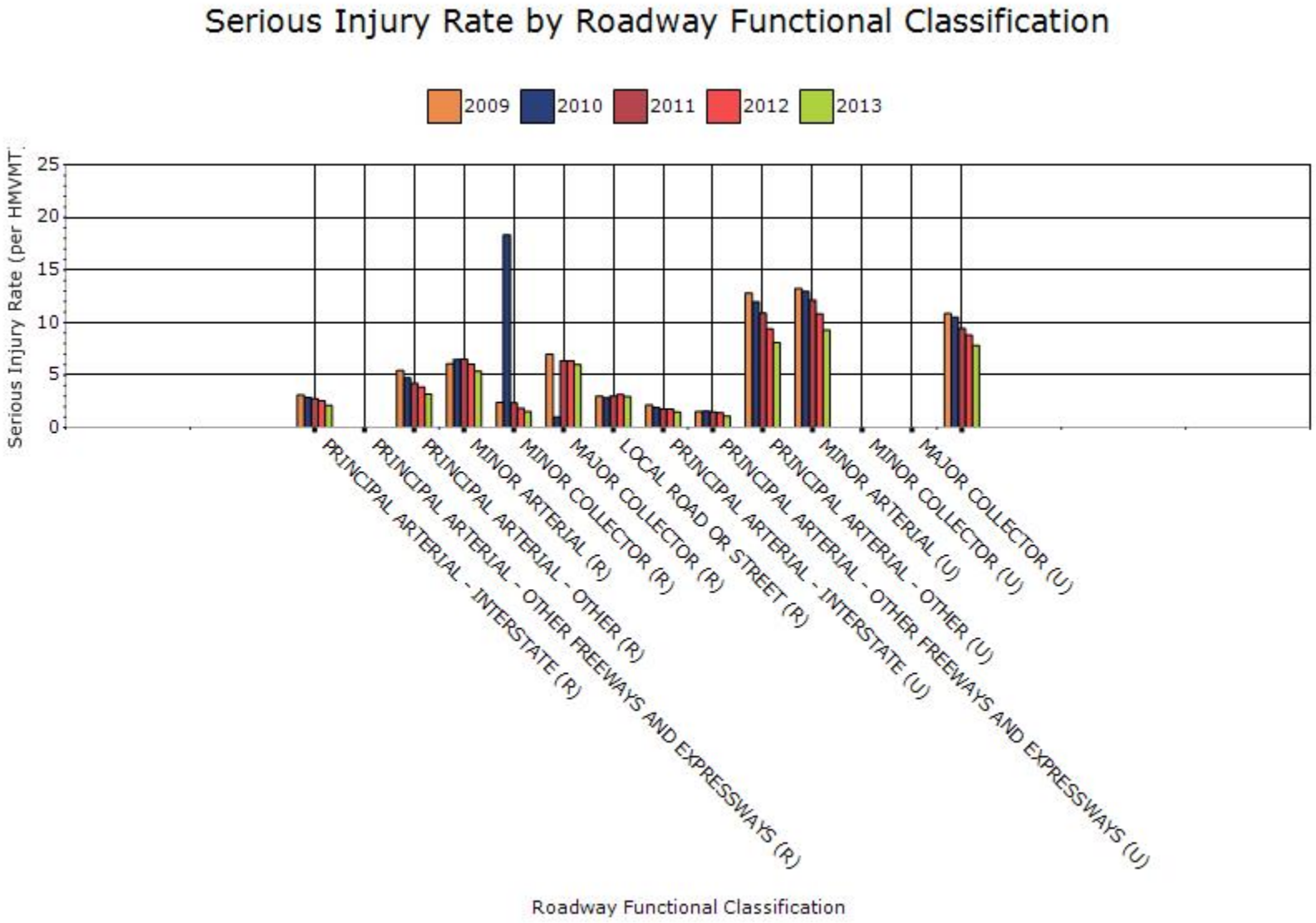
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	22.2	40.8	1.15	2.12
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	35.4	47.6	2.36	3.17
RURAL MINOR ARTERIAL	7.8	26.4	1.58	5.36
RURAL MINOR COLLECTOR	1.3	2.8	0.68	1.52
RURAL MAJOR COLLECTOR	10.8	25.6	2.53	5.99
RURAL LOCAL ROAD OR STREET	2.5	14.8	0.5	2.94
URBAN PRINCIPAL	19.2	51.6	0.55	1.48

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	9.4	18.4	0.55	1.09
URBAN PRINCIPAL ARTERIAL - OTHER	53.4	225.8	1.91	8.07
URBAN MINOR ARTERIAL	64.2	407	1.46	9.28
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	14	199.2	0.55	7.82


Fatalities by Roadway Functional Classification
2009
2010
2011
2012
2013
120
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

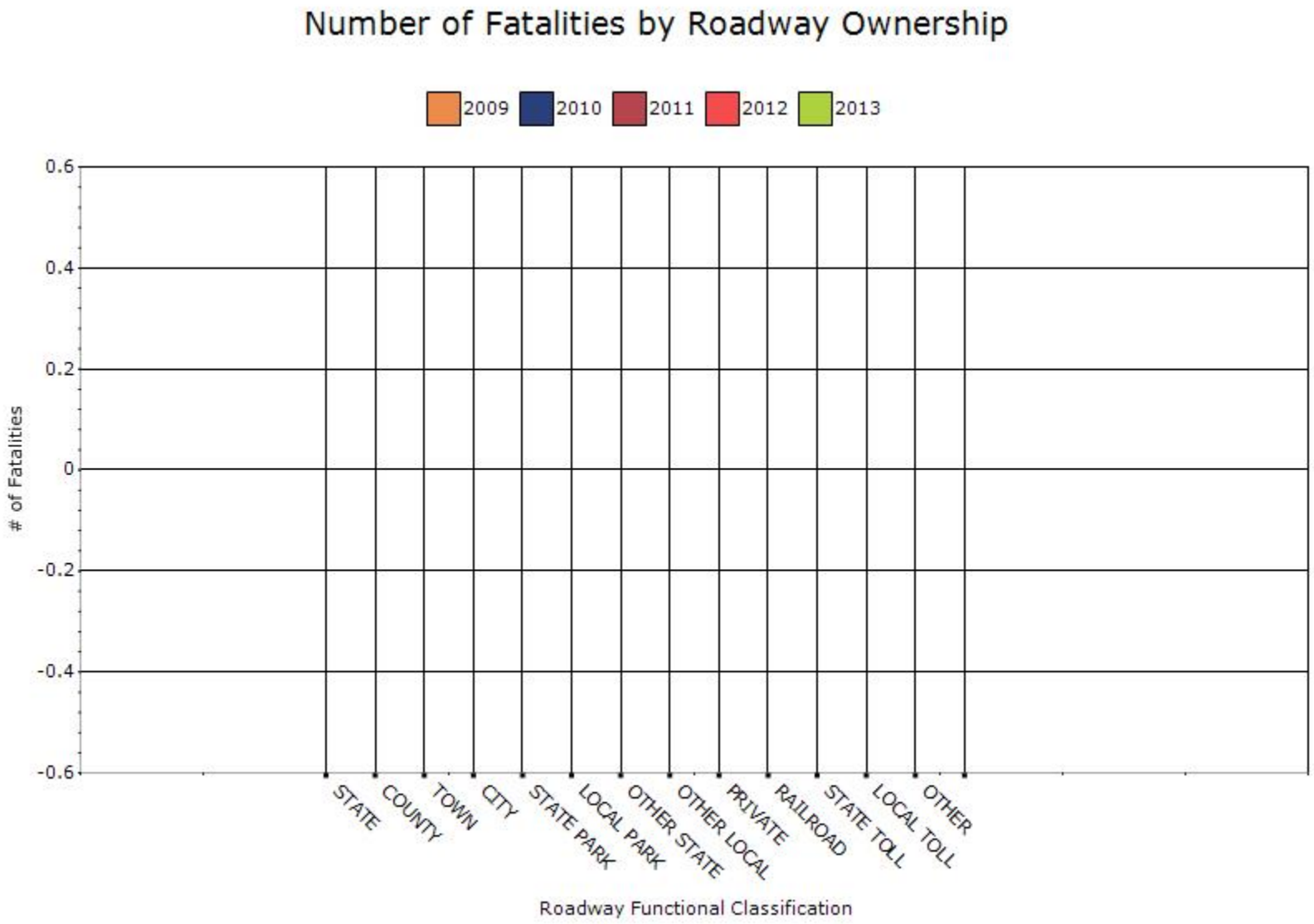

Serious Injuries by Roadway Functional Classification
2009
2010
2011
2012
2013
# of Serious Injuries
700
600
500
400
300
200
100
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

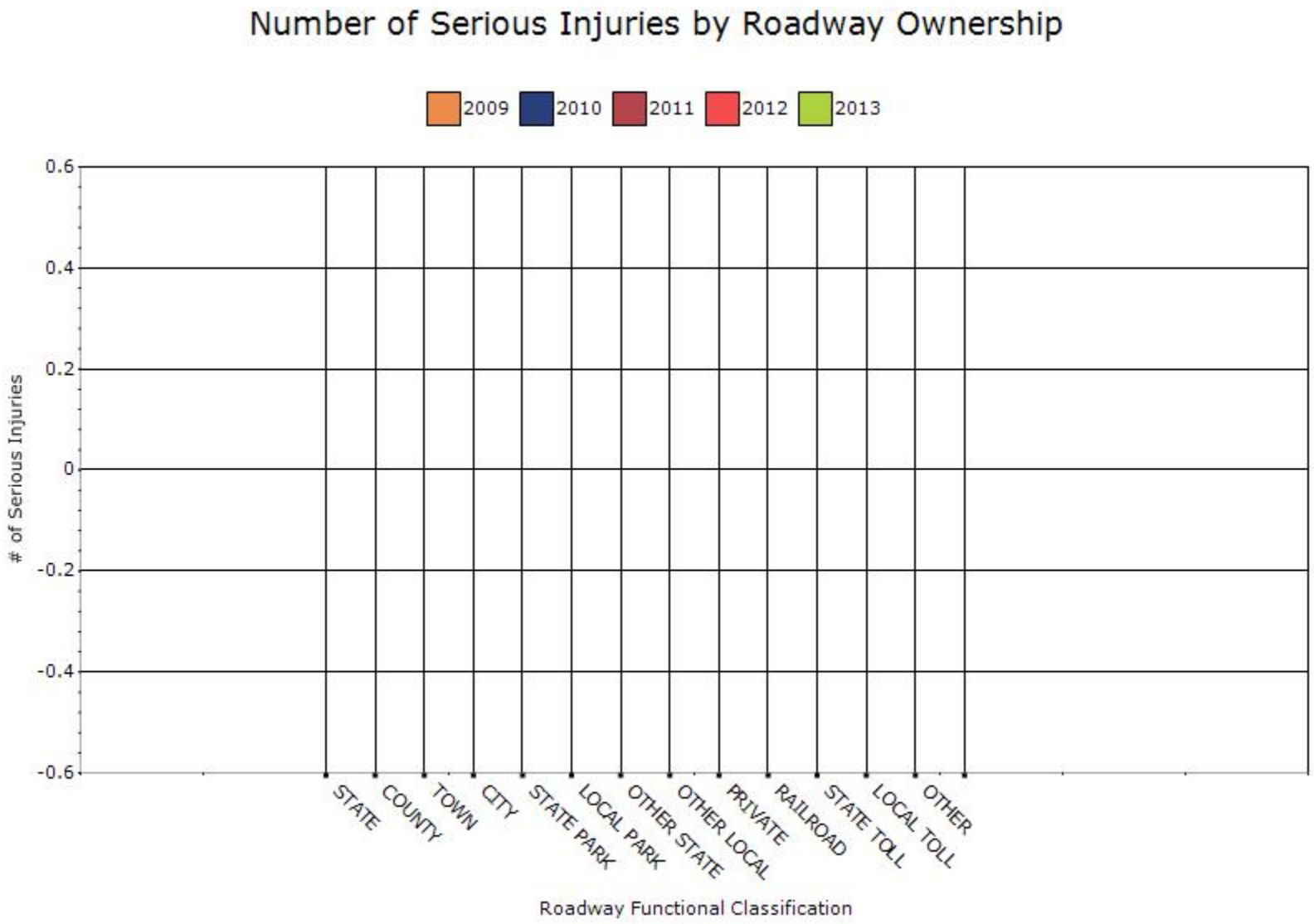

Fatality Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
0
1
2
3
4
5
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL 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)
25
20
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

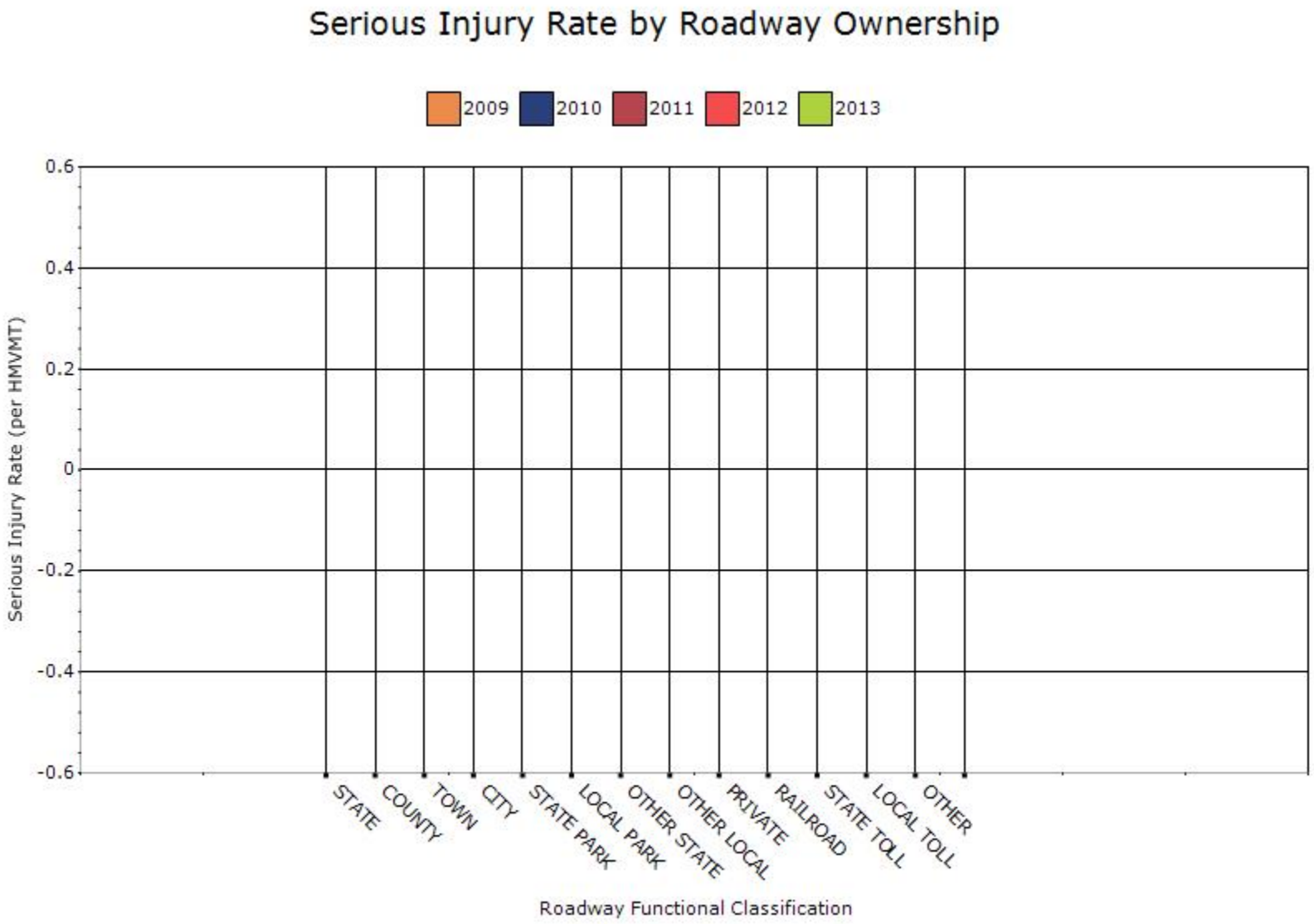
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	0	0	0	0
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	0	0	0	0
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
INDIAN TRIBE NATION	0	0	0	0


Number of Fatalities by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# 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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# 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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Fatality Rate (per HMVMT)
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
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Serious Injury Rate (per HMVMT)
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.

None

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)	0.008	0.006	0.006	0.008	0.008
Serious injury rate (per capita)	0.038	0.034	0.032	0.03	0.028
Fatality and serious injury rate (per capita)	0.048	0.044	0.042	0.038	0.036

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

Took the sum of 5 years, 05-09, and divided by 5, for the 2009 avg.

The rates were calcualted by taking the number of fatalities or injuries for the year X 100,000,000/AMV for the year.

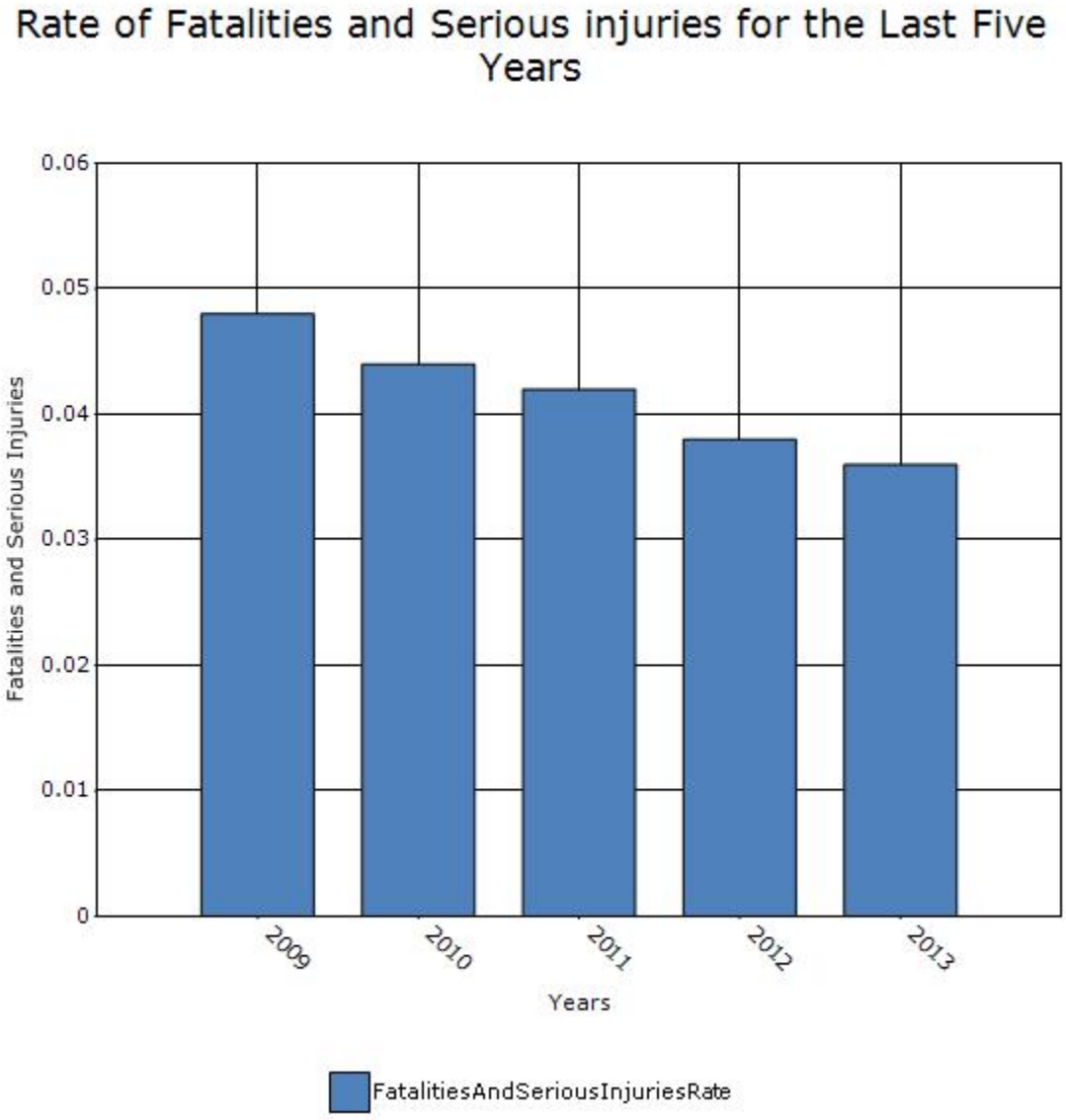
Per capita

Nevada State Demographers Office

Population Estimates and Projections released October 1, 2013

Added together the ages groups 65-69, 70-74, 75-79-, 80-84, 85+

Rates were calculated by taking the number of fatalities or injuries for the year and / by the total of the age groups for each year.



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: Other-Decrease in the Fatalities and Serious injuries over the last several years

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:

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

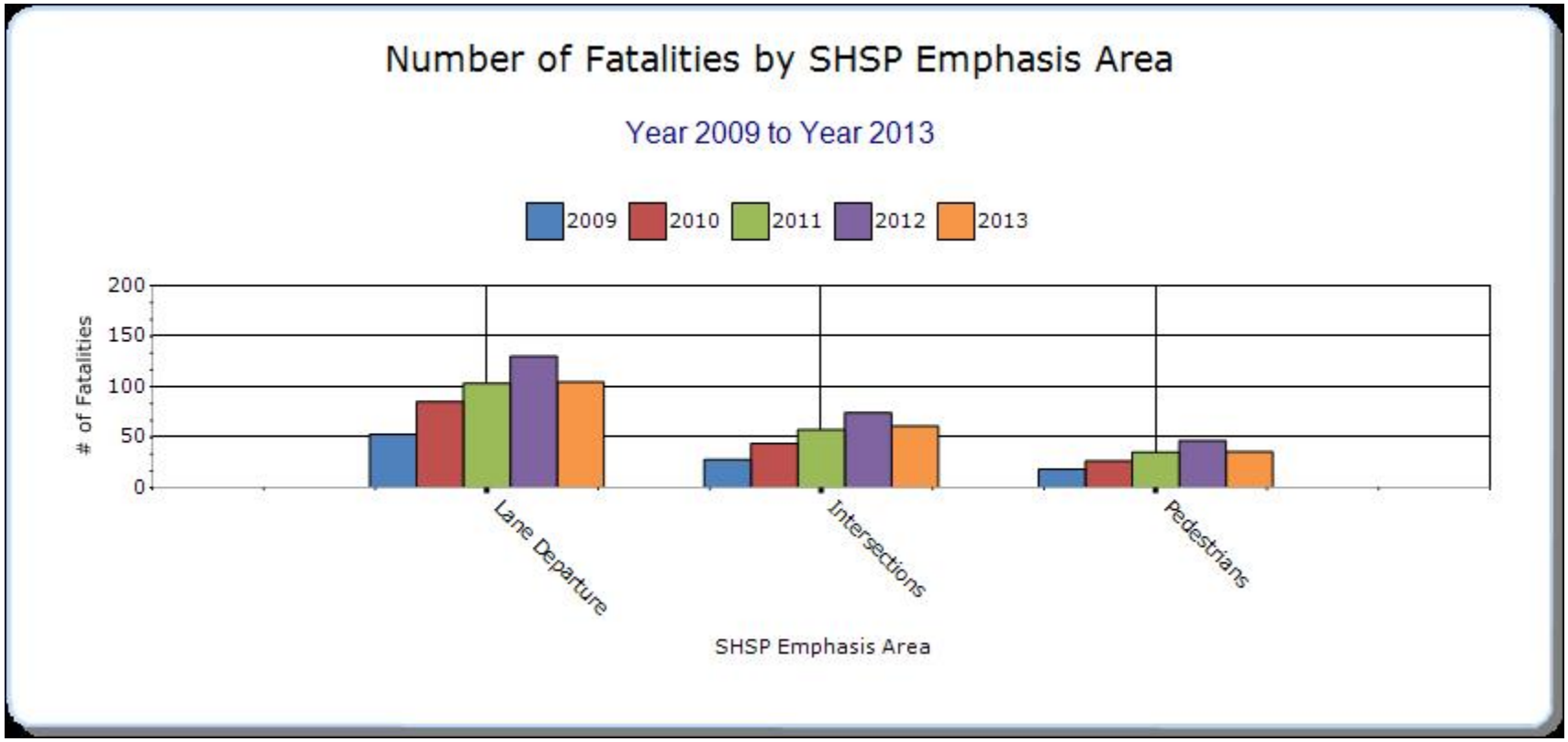
None

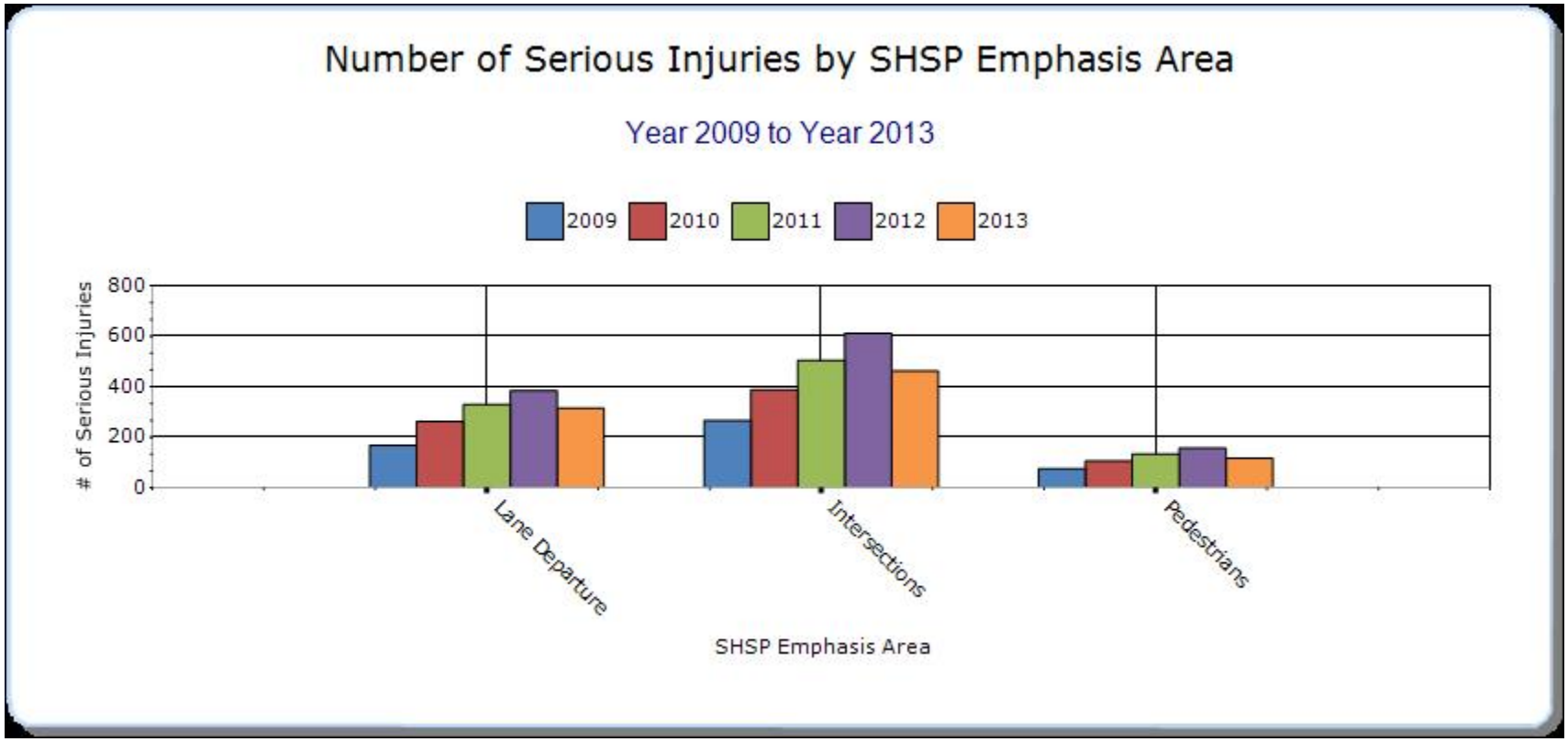
SHSP Emphasis Areas

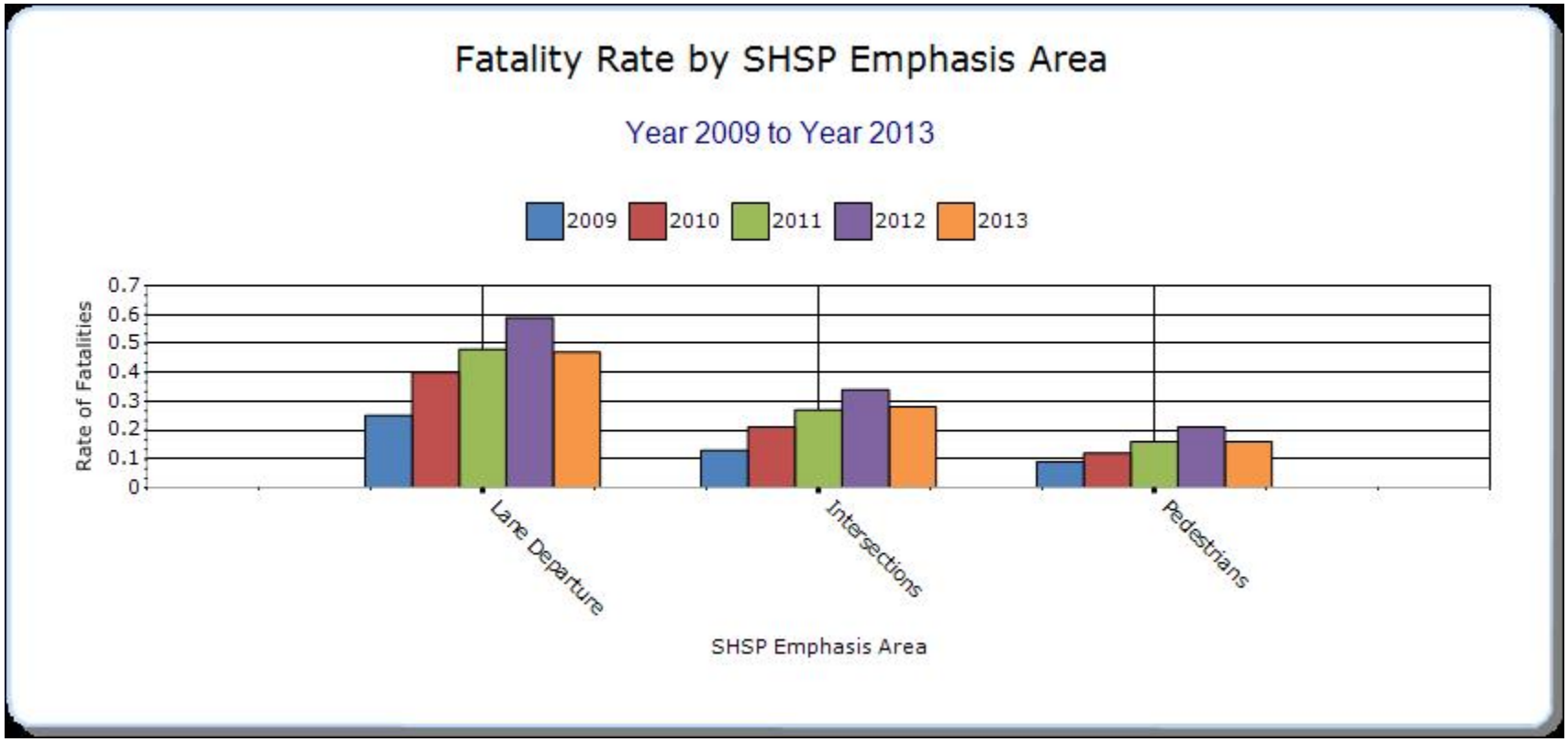
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

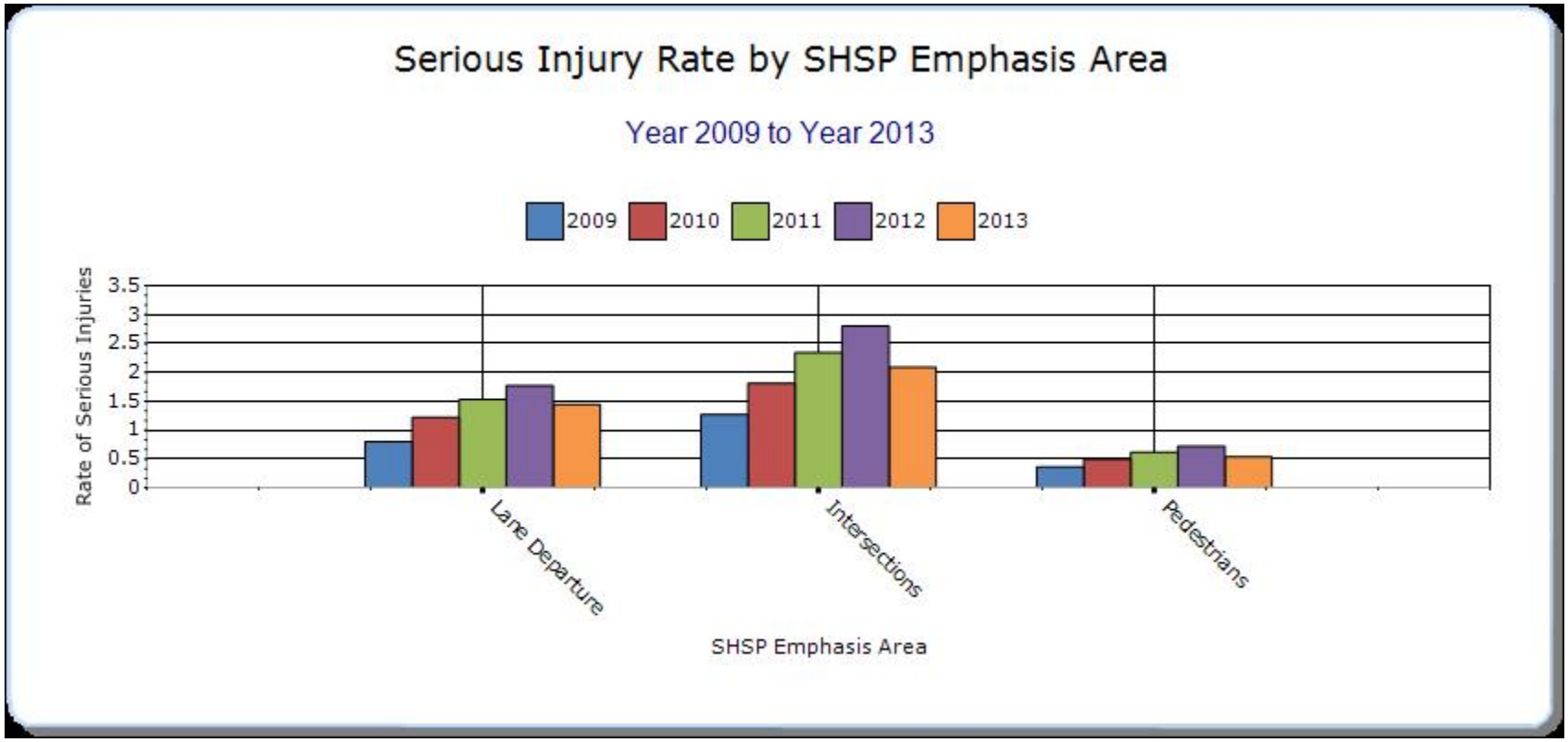
Year - 2012

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
Lane Departure		130	384.8	0.59	1.77	0	0	0
Intersections		74.2	611	0.34	2.8	0	0	0
Pedestrians		46.8	156.8	0.21	0.72	0	0	0
Impaired Driving		72.6	163.4	0.33	0.75	0	0	0
Seat Belts		78.8	234.2	0.36	1.07	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
200
150
100
50
0
Lane Departure
Intersections
Pedestrians
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
800
600
400
200
0
Lane Departure
Intersections
Pedestrians
SHSP Emphasis Area

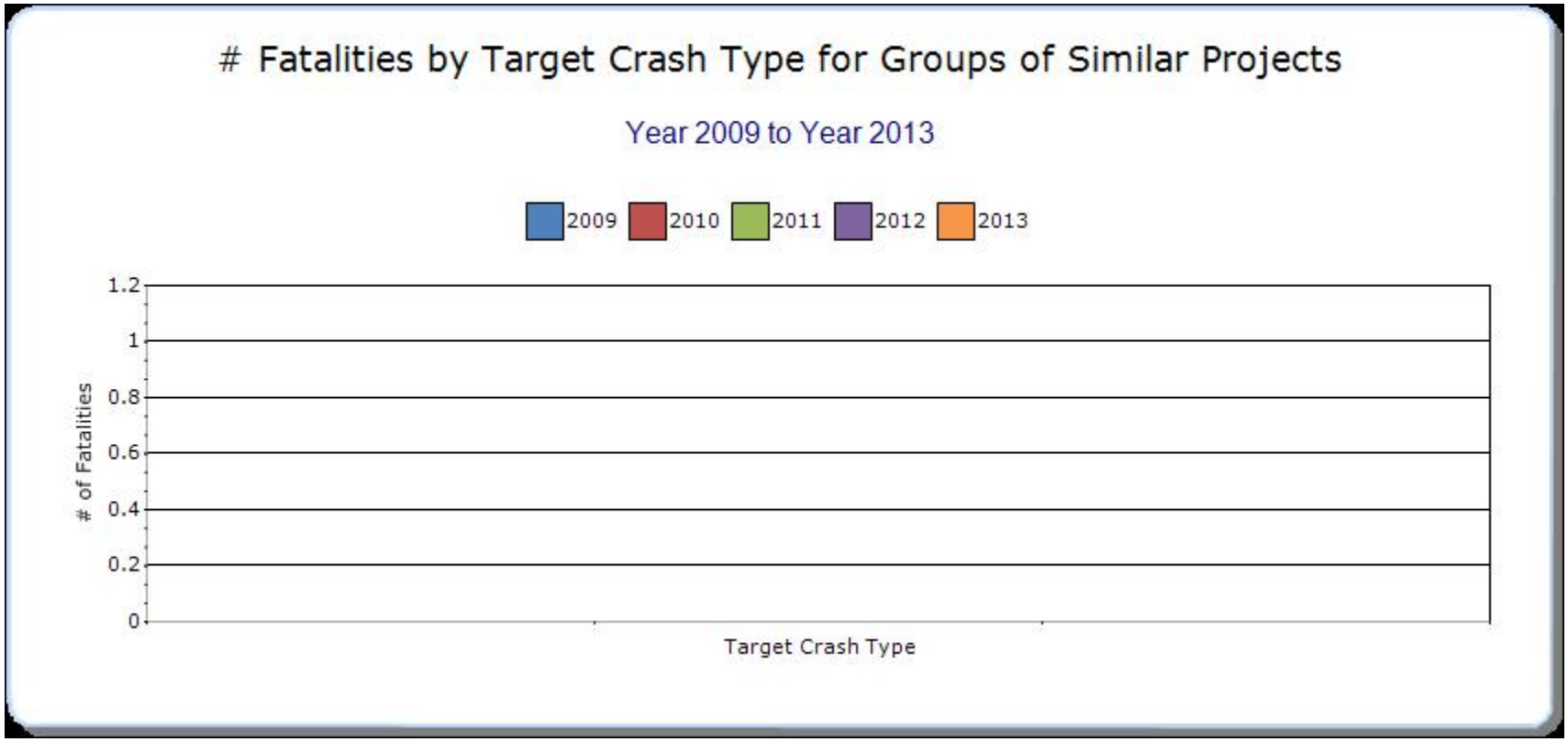

Fatality Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Lane Departure
Intersections
Pedestrians
SHSP Emphasis Area

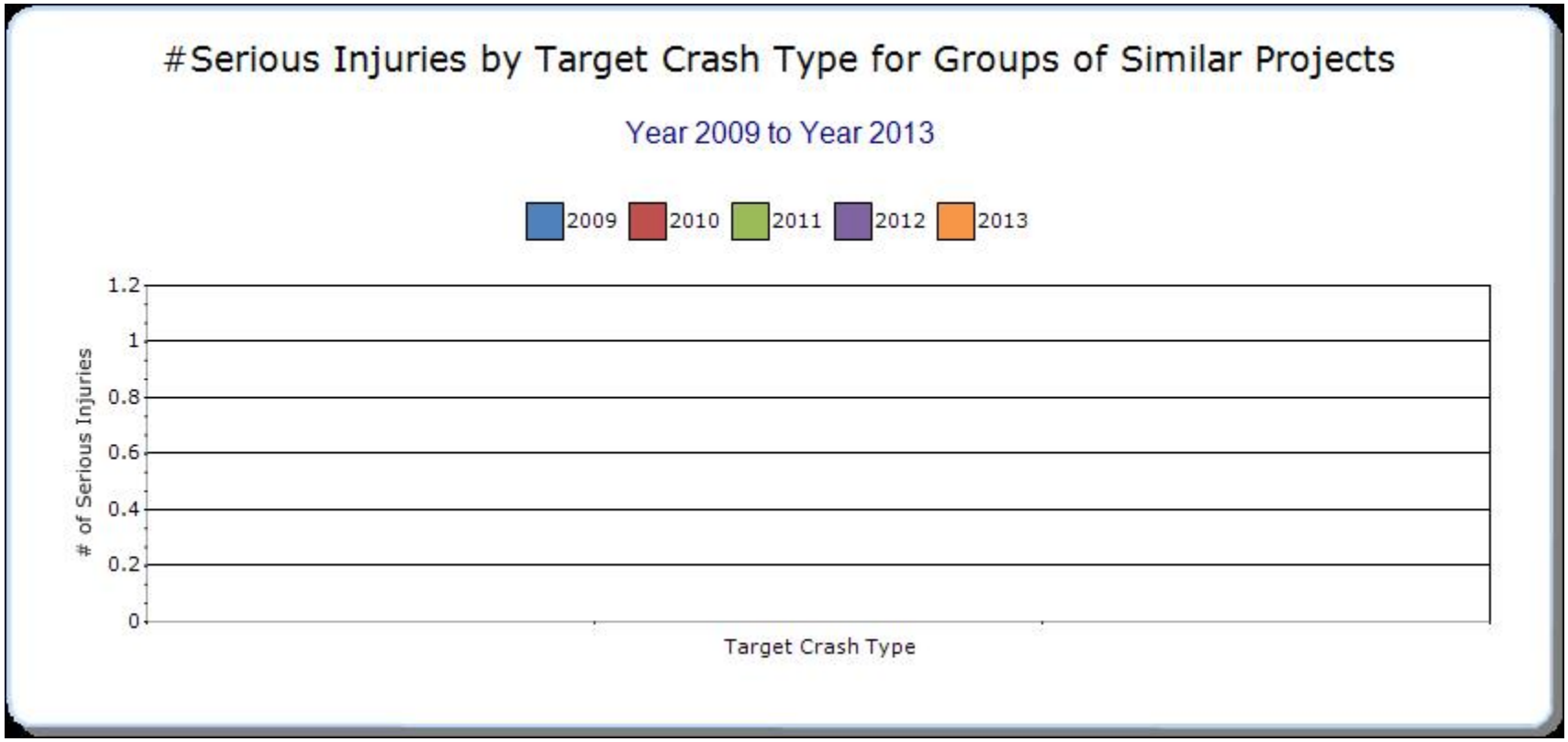

Serious Injury Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Serious Injuries
3.5
3
2.5
2
1.5
1
0.5
0
Lane Departure
Intersections
Pedestrians
SHSP Emphasis Area

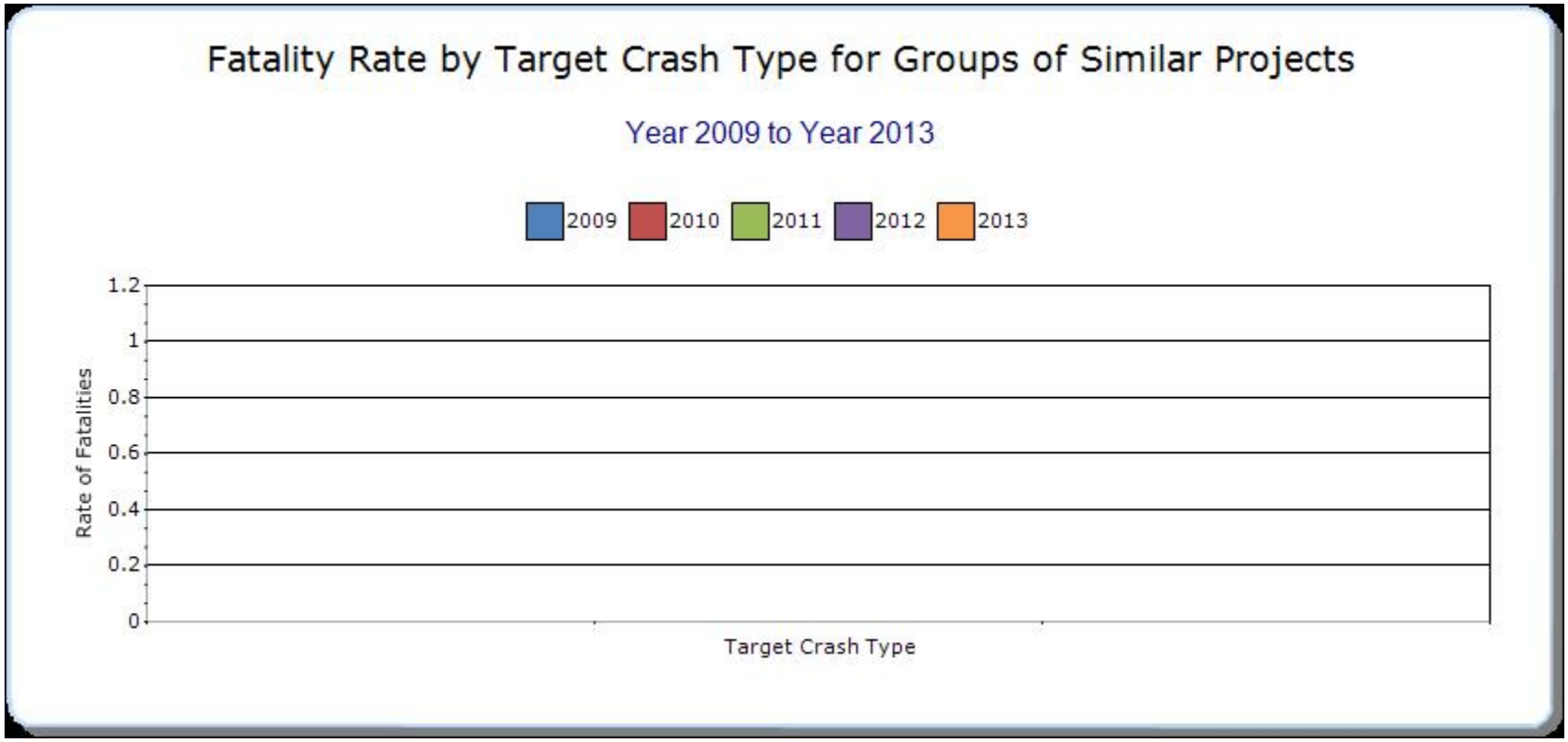
Groups of similar project types

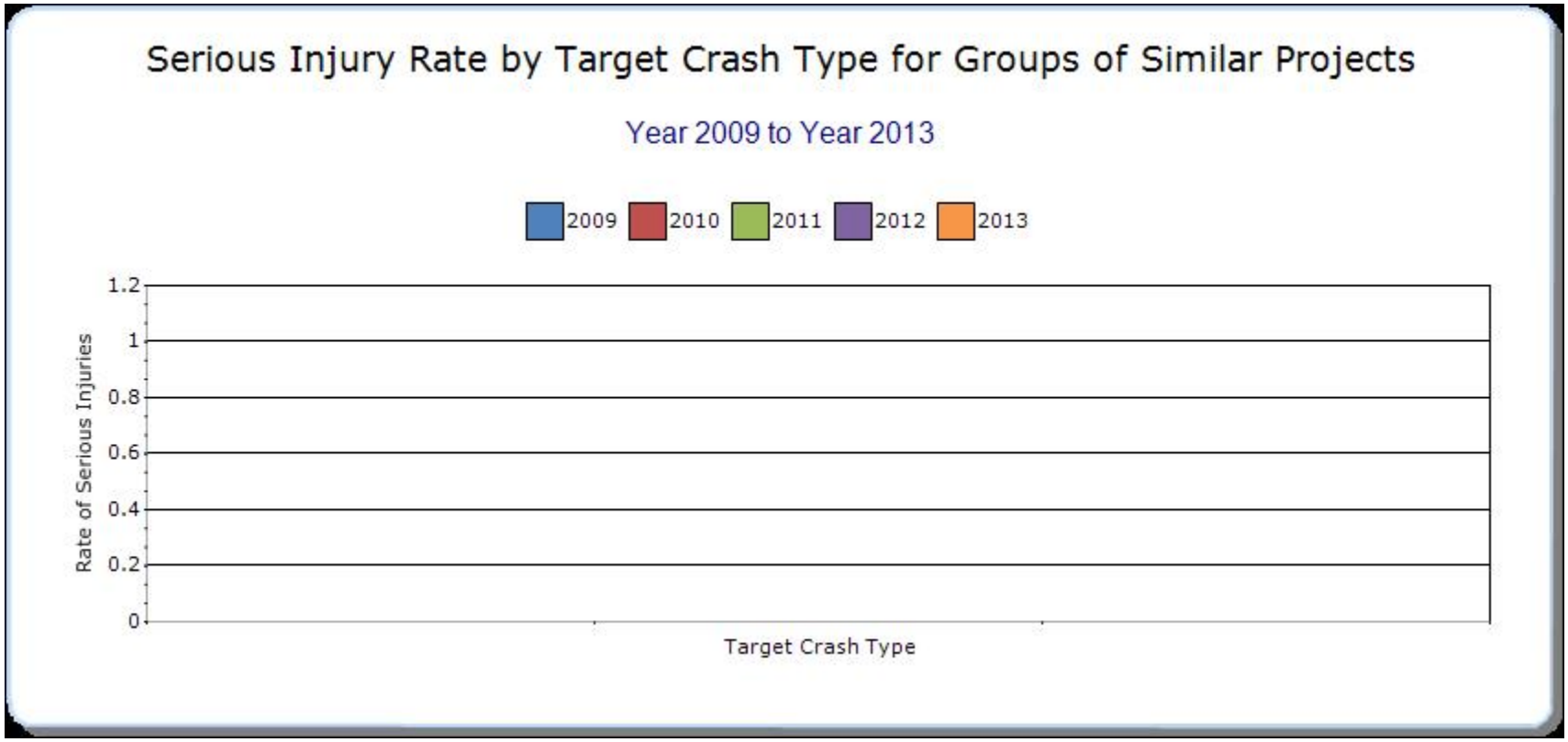
Present the overall effectiveness of groups of similar types of projects.

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

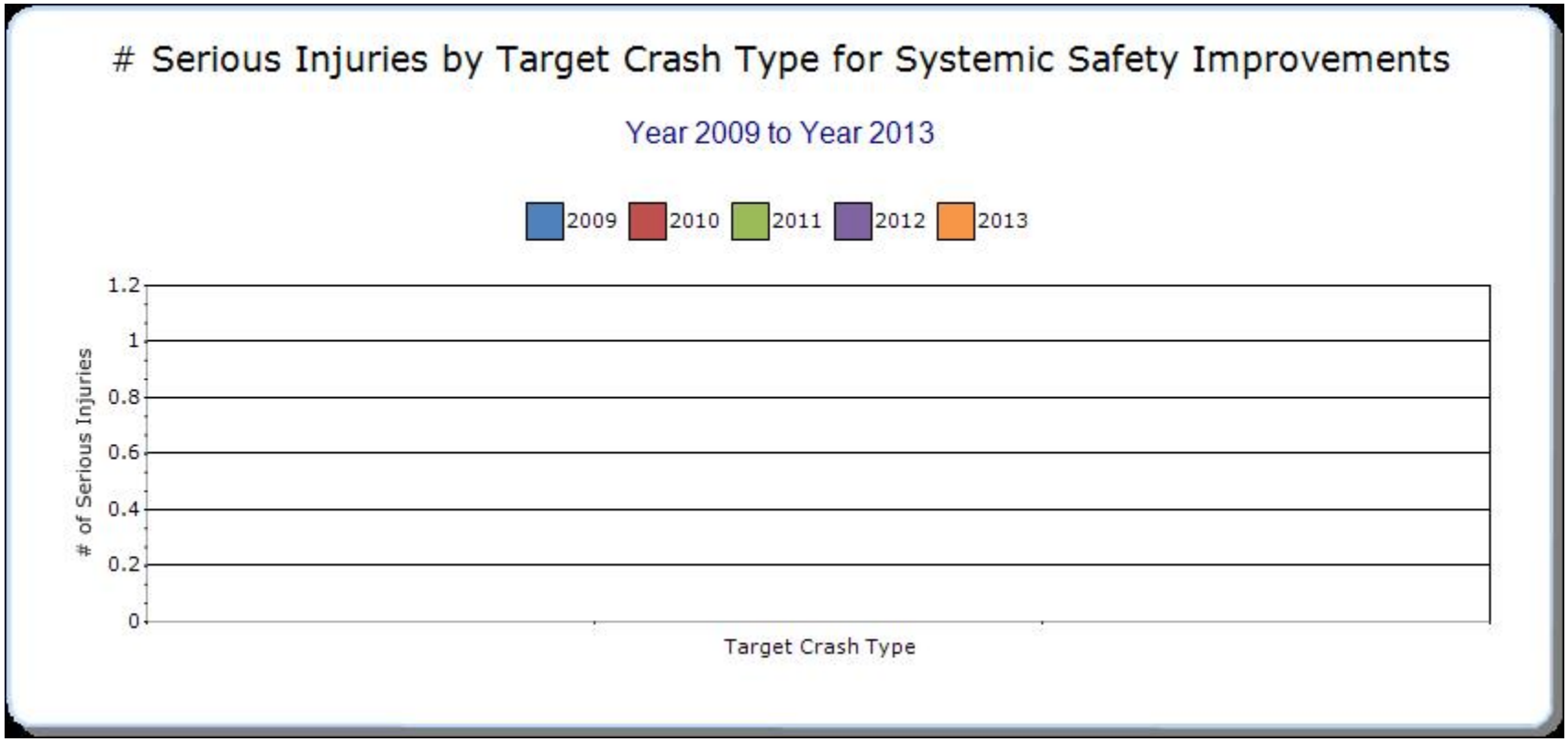

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
Target Crash Type

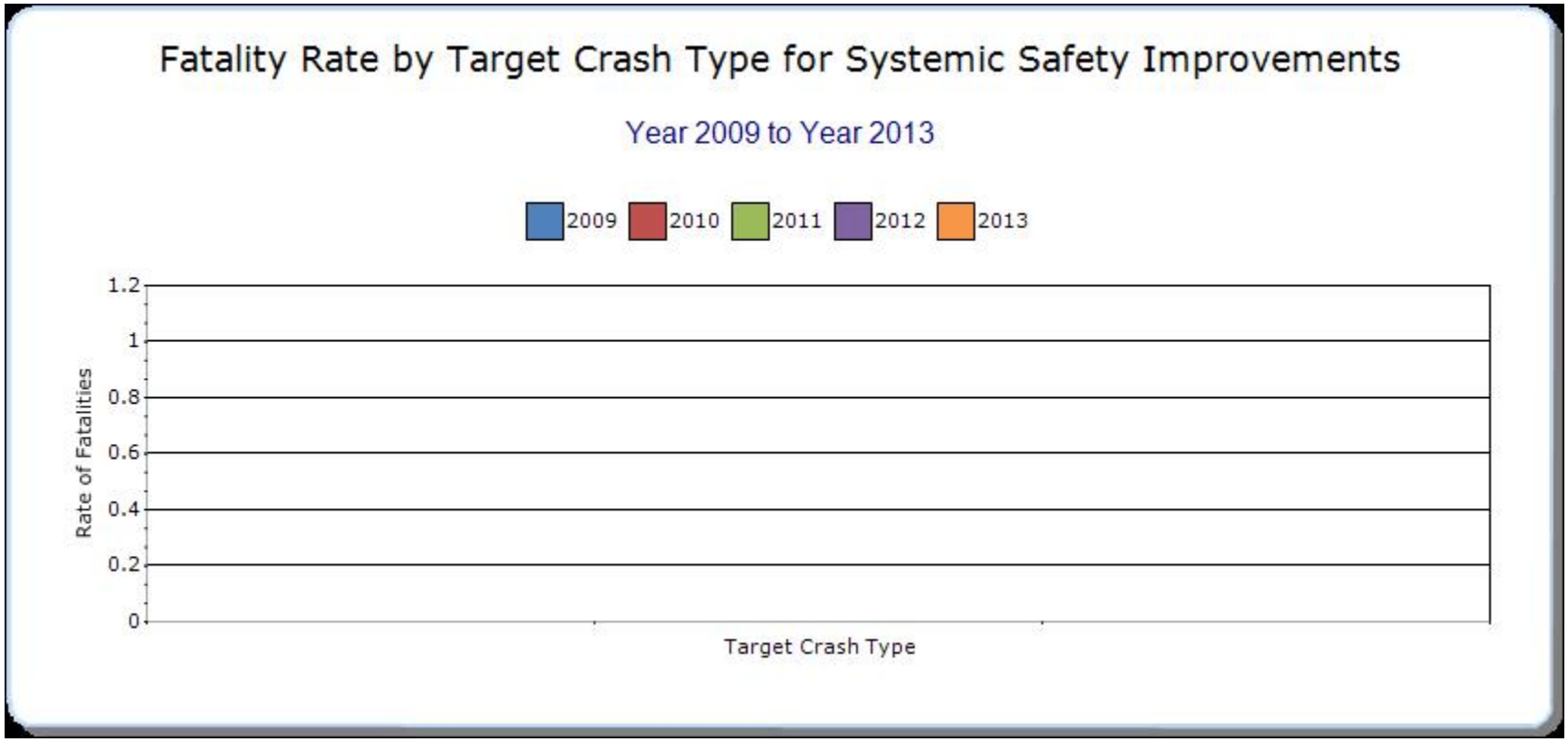
Systemic Treatments

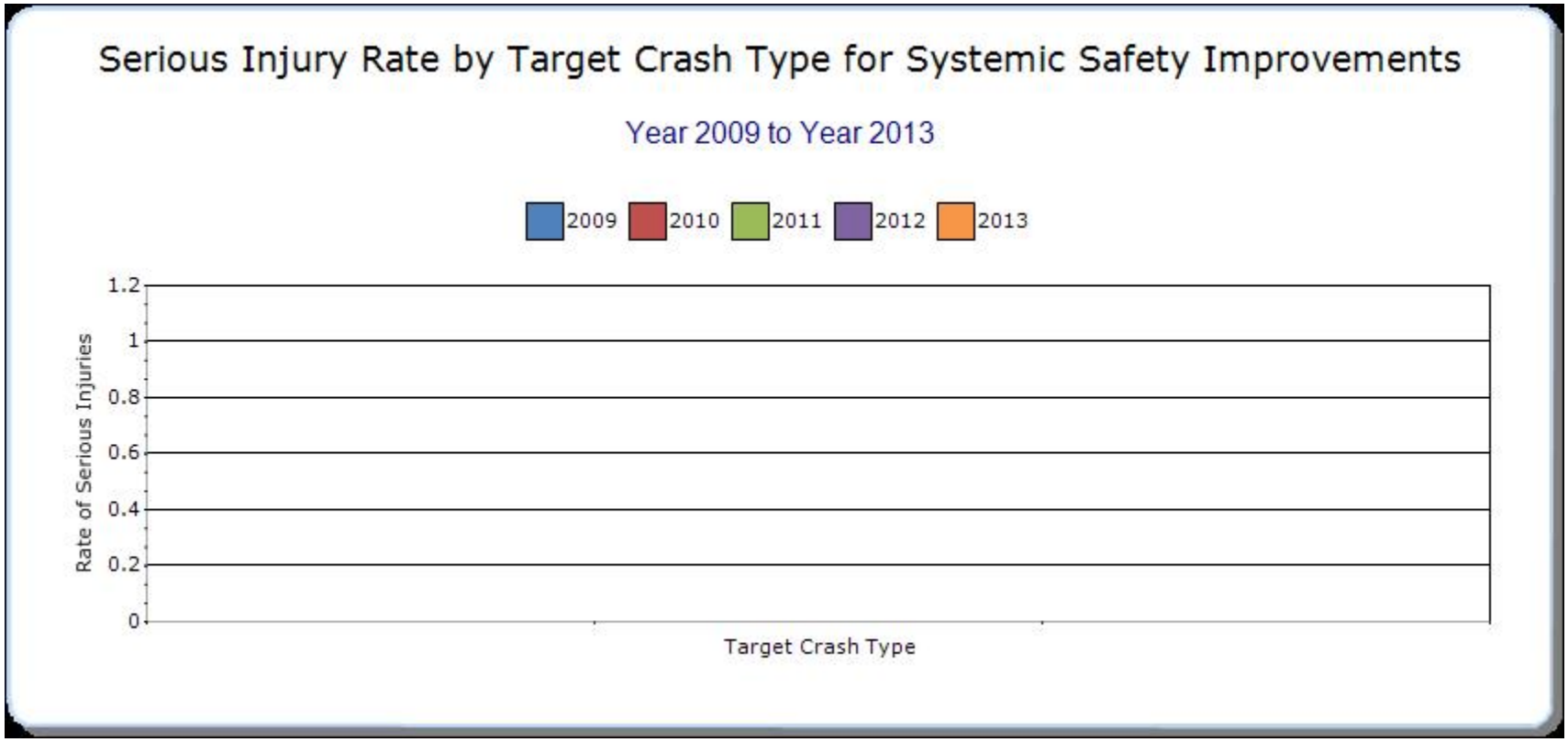
Present the overall effectiveness of systemic treatments.

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.

For Question # 34 we do not have the complete crash data for 2013. This will skew the 5 year rolling average in the table and graphs for the annual HSIP report.

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														

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.