Highway Safety Improvement Program

Data Driven Decisions

Nebraska
Highway Safety Improvement Program
2015 Annual Report

Prepared by: NE

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

It was another successful year for Nebraska's HSIP program in 2014. Nearly $15 million was obligated, with over $17 million planned. Once again, Nebraska chose to use a portion of its funds for non-infrastructure projects that addressed the three behavioral critical emphasis areas of its Strategic Highway Safety Plan.

Although High Risk Rural Roads funding was discontinued, Nebraska used HSIP funds for several projects intended to reduce crashes on county roads. These included a project to provide up-to-date work zone signs to counties, the third phase of our successful horizontal curve signs project, and the purchase of two retro-reflectometers for use by counties to check the retro-reflectivity of their signs. The retro-reflectometers will be housed at the LTAP office. In addition, traffic control device packages were provided to local emergency response agencies as a part of a highly successful Traffic Incident Management Responder Training Program

Planning for three more roundabouts in Lincoln took place during 2014, as did proposals for adaptive signal systems in both Omaha and Lincoln. Trailer-mounted attenuators were purchased for the NDOR district trucks to help protect our employees when on the road. Dynamic Message Sign replacements were also funded in four districts.

Major infrastructure projects let during 2014 included the reconstruction of the intersection of 90th & Maple Street in Omaha (N-64 & N-133), the reconstruction of a curve on N-66 north of Ashland, and the conversion of a 4-lane stretch of US-77 in Fremont to a 5-lane section.

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 road projects are regularly funded under the HSIP. The NDOR's various safety committees identify potential locations for projects and send this information to local governments for their consideration as HSIP projects. City governments are encouraged to submit potential projects to the NDOR for consideration. Representatives of the state's two largest cities, Omaha and Lincoln, regularly attend Safety Committee meetings and officials from the smaller cities are always welcome. Representatives from the Nebraska LTAP Center and the Nebraska Highway Superintendents Association sit on the High Risk Rural Road committee, which continues to function despite the loss of dedicated funding. The number of projects built on local roads varies from year to year. During State FY 2015 seven HSIP

projects let were for local roads. Other local projects, five in FY 2015, are not included in this total because they are located on state highways.

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

☒Design

☒Planning

☐Maintenance

☒Operations

☒Governors Highway Safety Office

☒Other: Other-Traffic Engineering

☒Other: Other-Highway Safety

☒Other: Other-Local Projects

☒Other: Other-Program Management

☒Other: Other-Rail & Public Transportation

Briefly describe coordination with internal partners.

All of the above named disciplines play a role in the HSIP process. Highway Safety prepares collision diagrams, spot maps, or lists of high accident locations and presents them to committee members at their monthly meetings. They coordinate with the engineering divisions to get estimated project costs, from which they calculate benefit-cost ratios. They also complete evaluations of completed projects and present them to the group for use in making future decisions. The Traffic Engineering Division is the lead office for all HSIP activity. All HSIP projects are approved by either the NDOR Safety Committee or the Strategic Safety Infrastructure Team. The usual procedure is for an approved HSIP project to be assigned to Roadway Design Division, Traffic Engineering Division, or the Local Projects Section of Materials and Research Division as the lead element, depending on the type of project and whether or not it is on a local road. These units work with Program Management to get the project scheduled and to make sure it is progressing adequately through the steps in the Clarity software, which is used for project programming. This includes the important step of working with the Environmental Section to make sure

all environmental concerns are met. The lead units either design the project or oversee the design of a consultant and prepare the project for letting. If railroad property is involved in the project, Rail & Public Transportation Division must also be consulted. The Operations Division has taken the lead on projects involving bridge anti-icing systems, adaptive signal control, and dynamic message signs, which require systems engineering analysis. The Governor's Highway Safety Office is responsible for non-infrastructure projects addressing driver behavior issues. The NDOR has begun using the Highway Safety Manual procedures in the analysis and evaluation of some HSIP projects.

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

☐ Metropolitan Planning Organizations

☒ Governors Highway Safety Office

☒ Local Government Association

☒ Other: Other-City of Omaha Public Works Department

☒ Other: Other-City of Lincoln Public Works Department

☒ Other: Other-FHWA Division Office

☒ Other: Other-NE Local Technical Assistance Program (LTAP)

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-Other-NDOR has developed a Strategic Plan for HSIP and RHCP Expenditures with the help of FHWA

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

During FY 2015, Nebraska completed an update of its HSIP process document, which was approved by FHWA. NDOR also issued an RFP for the purchase of a web-based automatic collision diagramming system, to be paid for with HSIP funds. We are currently in the process of selecting a vendor.

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: **9/27/1990**

What data types were used in the program methodology?

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

- ☐ Fatal crashes only
- ☒ Fatal and serious injury crashes only
- ☐ Other
- ☒ Volume
- ☐ Population
- ☐ Lane miles
- ☐ Other
- ☐ Horizontal curvature
- ☐ Functional classification
- ☐ Roadside features
- ☒ Other-Land Use
- ☒ Other-Median Type
- ☒ Other-Number of Lanes

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.

The number and type of crashes to address systemic improvements and on occasion the same methodology as used on state roads.

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	2
☐Incremental B/C	
☐Ranking based on net benefit	
☐Other	
☒Design and Project	1

Development Time

Program: **Roadway Departure**

Date of Program Methodology: **9/27/1990**

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-Land Use
		☒ Other-Median Type
		☒ Other-Number of Lanes

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.

The number and type of roadway departure crashes on a particular roadway to address systemic improvements.

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	2
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	
☒ Design and Project Development Time	1

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

10

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

☐ Cable Median Barriers	☒ Rumble Strips
☐ Traffic Control Device Rehabilitation	☐ Pavement/Shoulder Widening
☒ Install/Improve Signing	☒ Install/Improve Pavement Marking and/or Delineation
☒ Upgrade Guard Rails	☐ Clear Zone Improvements
☒ Safety Edge	☒ Install/Improve Lighting

☐ Add/Upgrade/Modify/Remove Traffic Signal ☐ Other

What process is used to identify potential countermeasures?

☒ Engineering Study

☐ Road Safety Assessment

☐ Other:

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.

The NDOR has continued to increase its emphasis on systemic projects in the HSIP program. This is evident in the newly developed Strategic Plan for HSIP and RHCP Expenditures. Systemic projects are increasing in HSIP planning, and should increase in obligations in future years.

Likewise, the NDOR is increasing its use of the Highway Safety Manual in project evaluations. This use should continue to grow in the future.

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)	17116800	86 %	14651381	87 %
HRRRP (SAFETEA-LU)				
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)				
State and Local Funds	2802758	14 %	2171421	13 %

Totals	19919558	100%	16822802	100%

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

$6,317,891.00

How much funding is obligated to local safety projects?

$1,281,061.00

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

$2,532,080.00

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

$2,346,001.00

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.

Some local agencies are reluctant to apply for HSIP funds because of the perceived difficulty of following federal rules. For example, some counties chose not to take part in the statewide bridge object marker project due to the time needed to complete project requirements. The NDOR and LTAP will continue to encourage counties to take part in future projects of this type.

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

A major step in the HSIP implementation process was taken this year when NDOR and FHWA collaborated on a Strategic Plan for HSIP and RHCP Expenditures. This plan will allow NDOR to sustain consistent obligations of HSIP funds. It provides a list of countermeasures that is intended as an implementation document for the Nebraska Strategic Highway Safety Plan (SHSP). The document also lays out a 6-year plan for HSIP expenditures which incorporates the countermeasures listed in the plan.

NDOR will continue to use a crash data-driven analysis approach to justify expenditure of HSIP funds, but will also rely more on a systemic approach, as it is recognized that certain types of crashes occur randomly throughout the highway system. National research identifying best practices and FHWA endorsements of specific practices will also be followed.

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
00787 Horizontal Curve Signs, Phase 3	Roadway signs and traffic control Curve-related warning signs and flashers	Numbers	54646	54646	HRRRP (SAFETEA-LU)	Various - Major Collector, Local		50	County Highway Agency	Roadway Departure	Keep vehicles from encroaching on the roadside
00928B NDOR Safety Education Commercials	Non-infrastructure Educational efforts		50000	55573	HSIP (Section 148)	Not Applicable			State Highway Agency	Various	Improve driver behavior through education
12944 Lincoln - N. 14th & Cornhusker Highway	Intersection traffic control Modify control - two-way	1 Numbers	279824	1081040	HSIP (Section 148)	Urban Minor Arterial	13400	40	City of Municipal Highway Agency	Intersections	Choose appropriate traffic control to minimize crash

	stop to roundabout										frequency and severity
13147 Lincoln - S. Coddington & W. Van Dorn Street	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	577466	2357731	HSIP (Section 148)	Urban Minor Arterial	10090	40	City of Municipal Highway Agency	Intersections	Choose appropriate intersection traffic control to minimize crash frequency and severity
13227 Lincoln - N. 66th Street & Fremont Street	Intersection traffic control Modify control - two-way stop to roundabout	1 Numbers	125755	1204459	HSIP (Section 148)	Urban Major Collector	8745	35	City of Municipal Highway Agency	Intersections	Choose appropriate intersection traffic control to minimize crash frequency and severity
13244 Lincoln - N.	Intersection traffic	19 Numbe	13500	2000000	HSIP (Section	Urban Principal	29000	40	City of Municipa	Intersections	Improve safety

27th Street Adaptive Signals	control Modify traffic signal timing - signal coordination	rs			148)	Arterial - Other			l Highway Agency		through data analysis and coordination with local agencies
00894 Retro-Reflectometers	Non-infrastructure Non-infrastructure - other	2 Numbers	64225	64225	HRRRP (SAFETEA-LU)	Various - Major Collector or Local		50	County Highway Agency	Roadway Departure	Keep vehicles from encroaching on the roadside
00907 Trailer Mounted Attenuators	Work Zone	51 Numbers	777775	864194	HSIP (Section 148)	Not Applicable			State Highway Agency	Work Zones	Protecting highway workers from errant vehicles
00928C "Click It or Ticket" Overtime Enforcement	Non-infrastructure Enforcement		100000	111114	HSIP (Section 148)	Not Applicable				Unbelted Vehicle Occupants	Maximize use of occupant restraints by all vehicle occupants
00928D "Click It or	Non-infrastructu		50000	55555	HSIP (Section	Not				Unbelted Vehicle	Maximize use of

Ticket" PI&E Messaging	re Educational efforts				148)	Applicable				Occupants	occupant restraints by all vehicle occupants
00928E "You Drink, You Drive, You Lose" Overtime Enforcement	Non-infrastructure Enforcement		250000	277781	HSIP (Section 148)	Not Applicable				Impaired Driving	Enforce DUI laws
00928F "You Drink, You Drive, You Lose" PI&E Campaign	Non-infrastructure Educational efforts		100000	111114	HSIP (Section 148)	Not Applicable				Impaired Driving	Enforce DUI laws
00928G NDOR Safety Education Commercials	Non-infrastructure Educational efforts		200000	293930	HSIP (Section 148)	Not Applicable			State Highway Agency	Various	Improve driver behavior through education
00928H "Click It or Ticket" Enforcement - May	Non-infrastructure Enforcement		275000	275003	HSIP (Section 148)	Not Applicable				Unbelted Vehicle Occupants	Maximize use of occupant restraints by all vehicle

											occupants
00928J "Click It or Ticket" PI&E Messaging - May	Non-infrastructure Educational efforts		200000	200003	HSIP (Section 148)	Not Applicable				Unbelted Vehicle Occupants	Maximize use of occupant restraints by all vehicle occupants
00936 Statewide Work Zone Signs	Work Zone		220291	244768	HSIP (Section 148)	Various - Major Collector and Local			County Highway Agency	Work Zones	Warn drivers of potential work zone hazards
00942 "You Drink, You Drive, You Lose" Overtime Enforcement	Non-infrastructure Enforcement		207000	230003	HSIP (Section 148)	Not Applicable				Impaired Driving	Enforce DUI laws
00942A "You Drink, You Drive, You Lose" PI&E Campaign	Non-infrastructure Educational efforts		72000	80003	HSIP (Section 148)	Not Applicable				Impaired Driving	Reduce excessive drinking and underage drinking

12831 Ithaca - Ashland	Alignment Horizontal curve realignment	1 Numbers	2350730	1067979 7	HSIP (Section 148)	Rural Major Collector	1275	60	State Highway Agency	Roadway Departure	Keep vehicles from encroaching on the roadside
13231 District 1 - DMS Replacement	Advanced technology and ITS Dynamic message signs	3 Numbers	303419	338232	HSIP (Section 148)	Rural Principal Arterial - Interstate	29855	75	State Highway Agency	Roadway Departure	Keep vehicles in their lane
22336 Omaha - 90th & Maple Street	Intersection geometry Auxiliary lanes - add left-turn lane	4 Numbers	1909722	2124341	HSIP (Section 148)	Urban Principal Arterial - Other	53170	40	State Highway Agency	Intersections	Choose appropriate intersection traffic control to minimize crash frequency and severity
22434 Fremont - US-77, 5th St. to 10th St.	Roadway Roadway widening - add lane(s)	0.29 Miles	1028251	1459085	HSIP (Section 148)	Urban Principal Arterial - Other	12630	25	State Highway Agency	Roadway Departure	Keep vehicles in their lane

	along segment										
22482 Omaha - Dodge Street Adaptive Signals	Intersection traffic control Modify traffic signal timing - signal coordination	15 Numbers	638190	714200	HSIP (Section 148)	Urban Principal Arterial - Other	49650	40	State Highway Agency	Intersections	Improve safety through data analysis and coordination with local agencies
22490 District 2 - DMS Replacement	Advanced technology and ITS Dynamic message signs	3 Numbers	287573	322525	HSIP (Section 148)	Urban Principal Arterial - Interstate	152130	60	State Highway Agency	Roadway Departure	Keep vehicles in their lane
22596 Omaha - Southbound I-680 to Eastbound I-80 Ramp	Roadway Pavement surface - high friction surface	0.42 Miles	264142	294591	HSIP (Section 148)	Urban Principal Arterial - Interstate	73180	60	State Highway Agency	Roadway Departure	Keep vehicles in their lane
42739 District 4 - DMS	Advanced technology and ITS Dynamic	1 Numbers	201048	224486	HSIP (Section 148)	Rural Principal Arterial -	19200	75	State Highway Agency	Roadway Departure	Keep vehicles in their lane

Replacement	message signs					Interstate					
51480 Melbeta - Jct. of N-92 & L79E	Intersection geometry Splitter island - remove from one or more approaches	0.8 Miles	750407	1134118	HSIP (Section 148)	Rural Minor Arterial	2585	65	State Highway Agency	Intersections	Improve management of access near unsignalized intersections
61547 District 6 - DMS Replacement	Advanced technology and ITS Dynamic message signs	6 Numbers	618030	691800	HSIP (Section 148)	Rural Principal Arterial - Interstate	14615	75	State Highway Agency	Roadway Departure	Keep vehicles in their lane

Progress in Achieving Safety Performance Targets

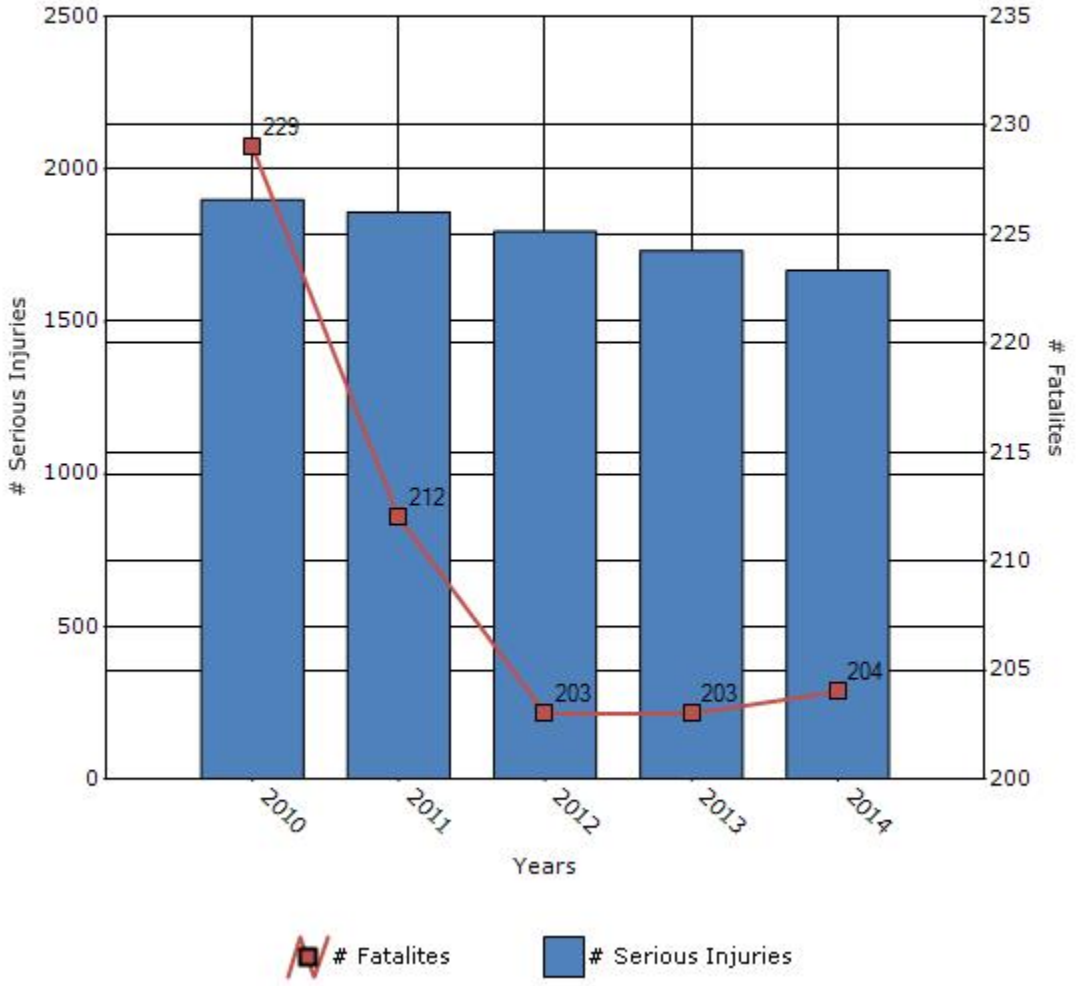
Overview of General Safety Trends

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

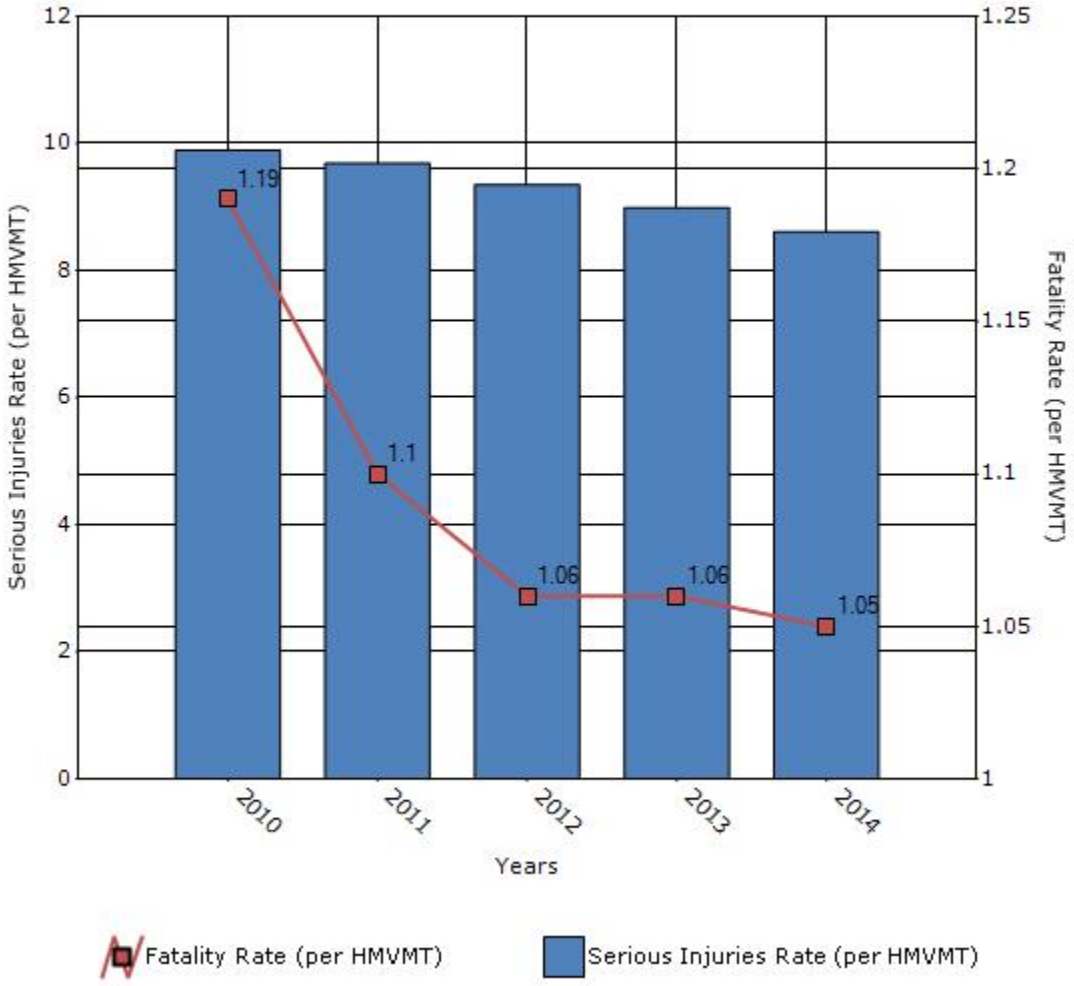
Performance Measures*	2010	2011	2012	2013	2014
Number of fatalities	229	212	203	203	204
Number of serious injuries	1898	1858	1795	1732	1667
Fatality rate (per HMVMT)	1.19	1.1	1.06	1.06	1.05
Serious injury rate (per HMVMT)	9.89	9.69	9.35	8.99	8.61

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

Number of Fatalities and Serious injuries for the Last Five Years



Rate of Fatalities and Serious injuries for the Last Five Years

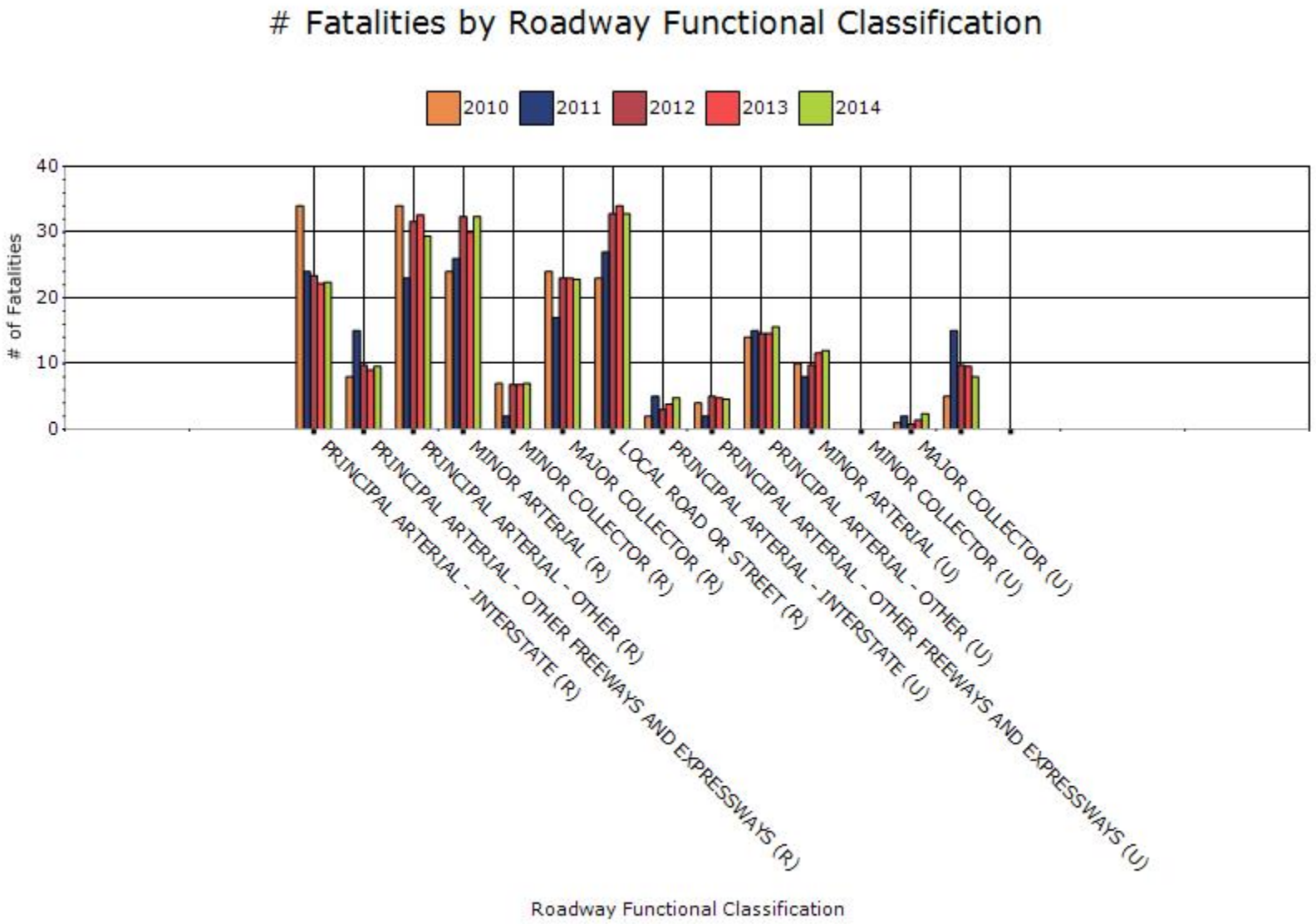


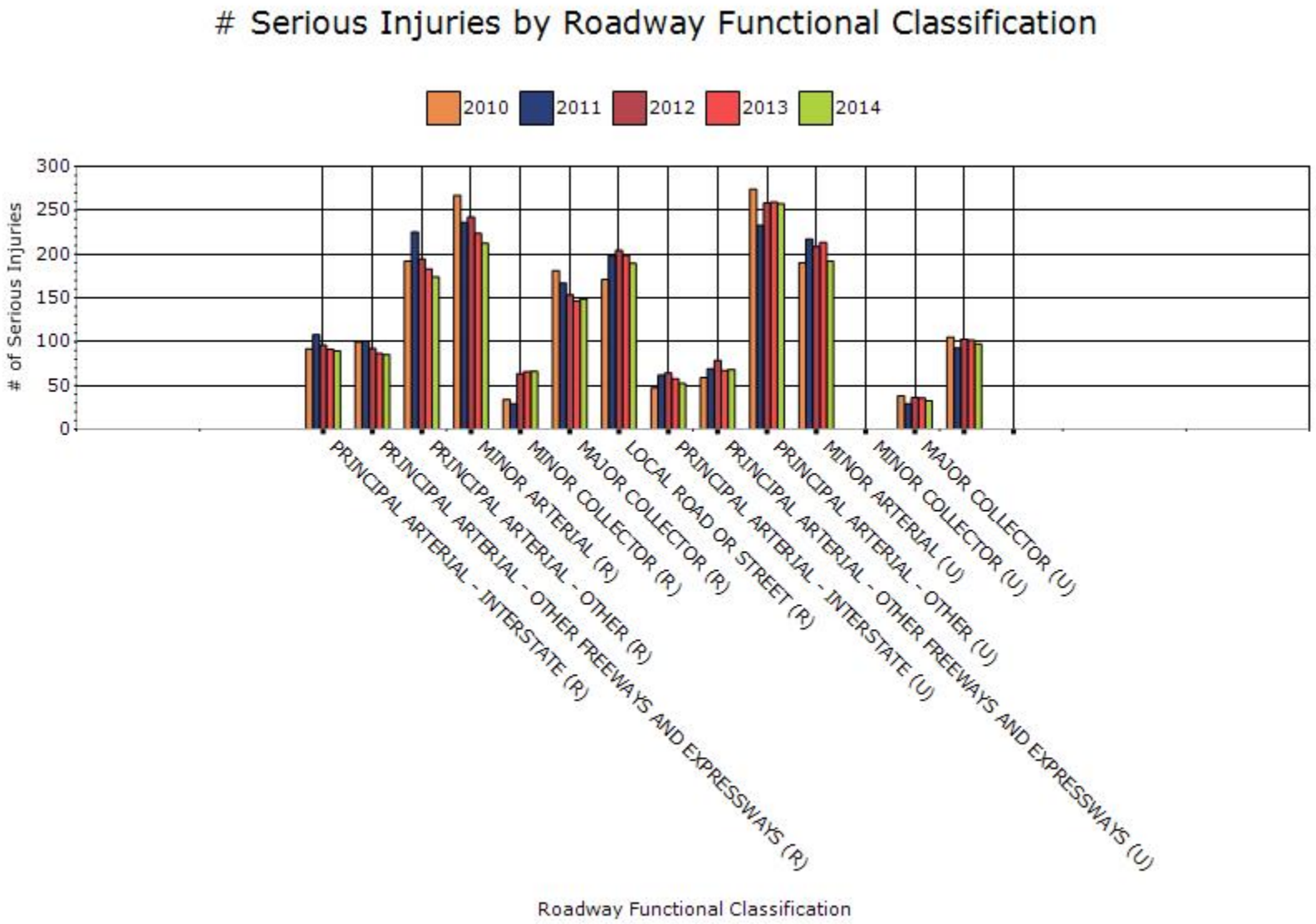
To the maximum extent possible, present performance measure* data by functional classification and ownership.

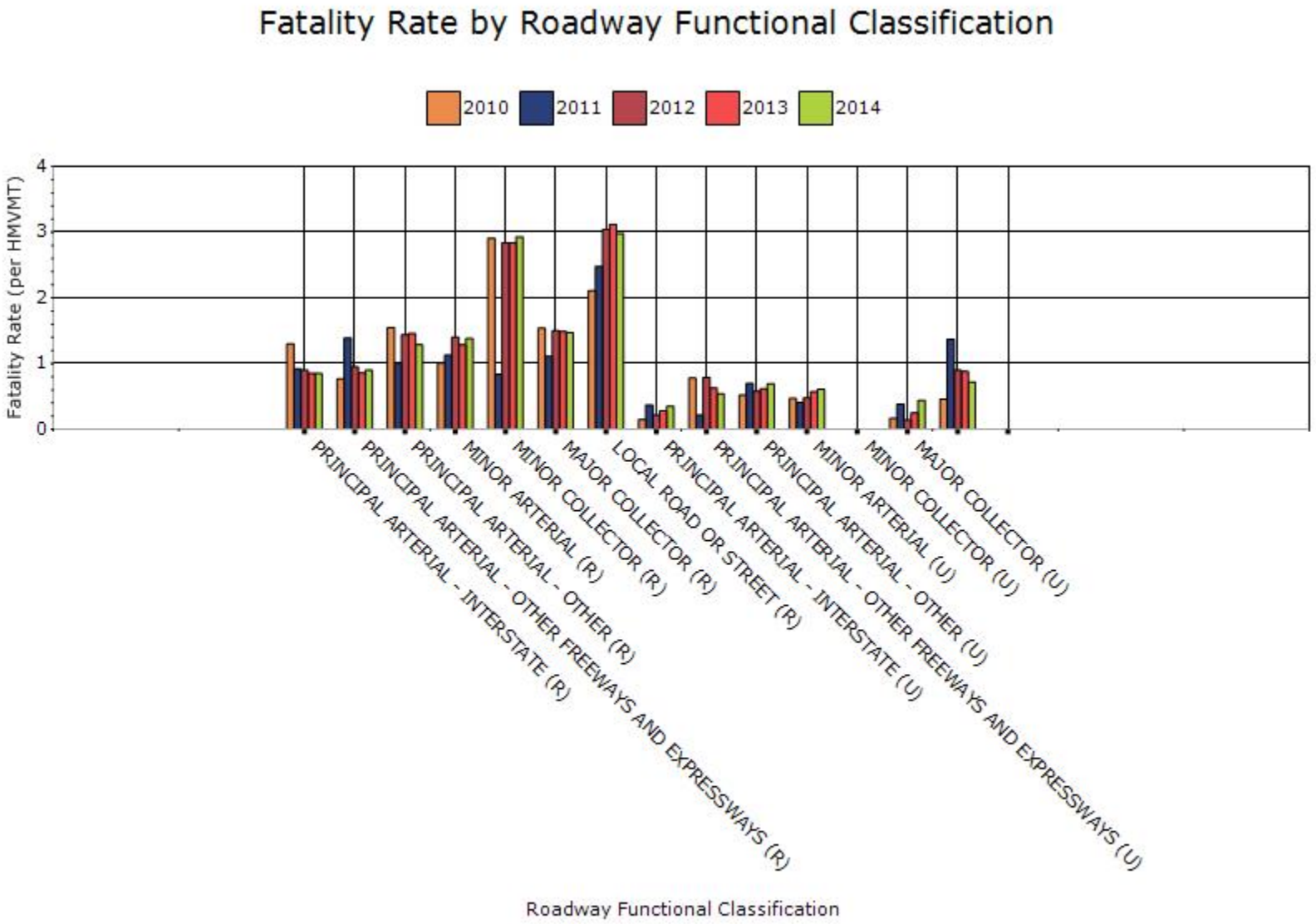
Year - 2014

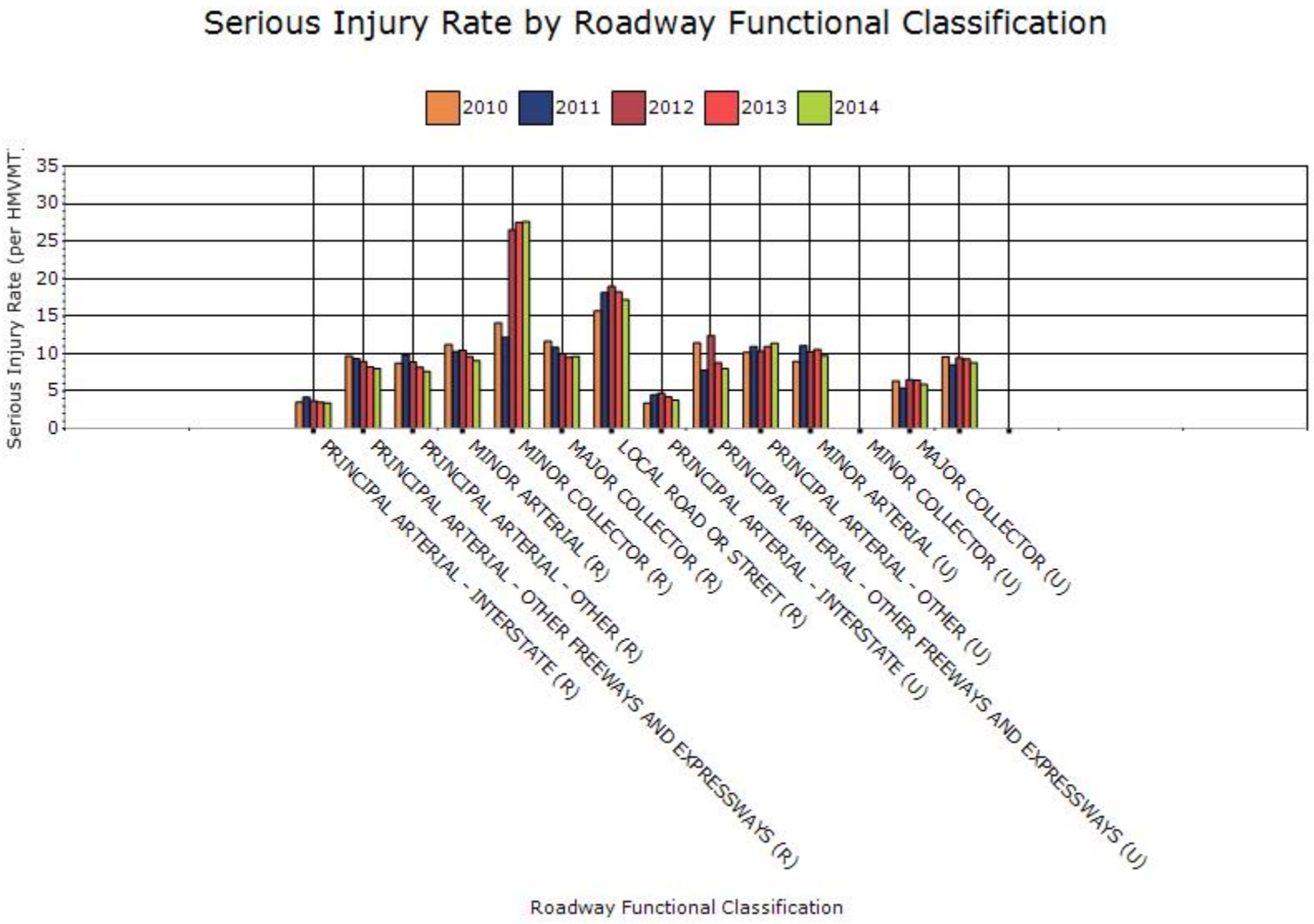
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	22.4	89.6	0.85	3.41
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	9.6	85.4	0.9	7.99
RURAL PRINCIPAL ARTERIAL - OTHER	29.4	174	1.29	7.61
RURAL MINOR ARTERIAL	32.4	212.2	1.38	9.05
RURAL MINOR COLLECTOR	7	66	2.93	27.63
RURAL MAJOR COLLECTOR	22.8	149	1.47	9.61
RURAL LOCAL ROAD OR STREET	32.8	189.4	2.98	17.19
URBAN PRINCIPAL	4.8	52.4	0.35	3.78

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	4.6	68.2	0.54	7.98
URBAN PRINCIPAL ARTERIAL - OTHER	15.6	257.4	0.69	11.37
URBAN MINOR ARTERIAL	12	192.2	0.61	9.7
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	2.4	32.6	0.44	5.92
URBAN LOCAL ROAD OR STREET	8	97.4	0.72	8.8
OTHER	0	0	0	0


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Fatalities
40
30
20
10
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

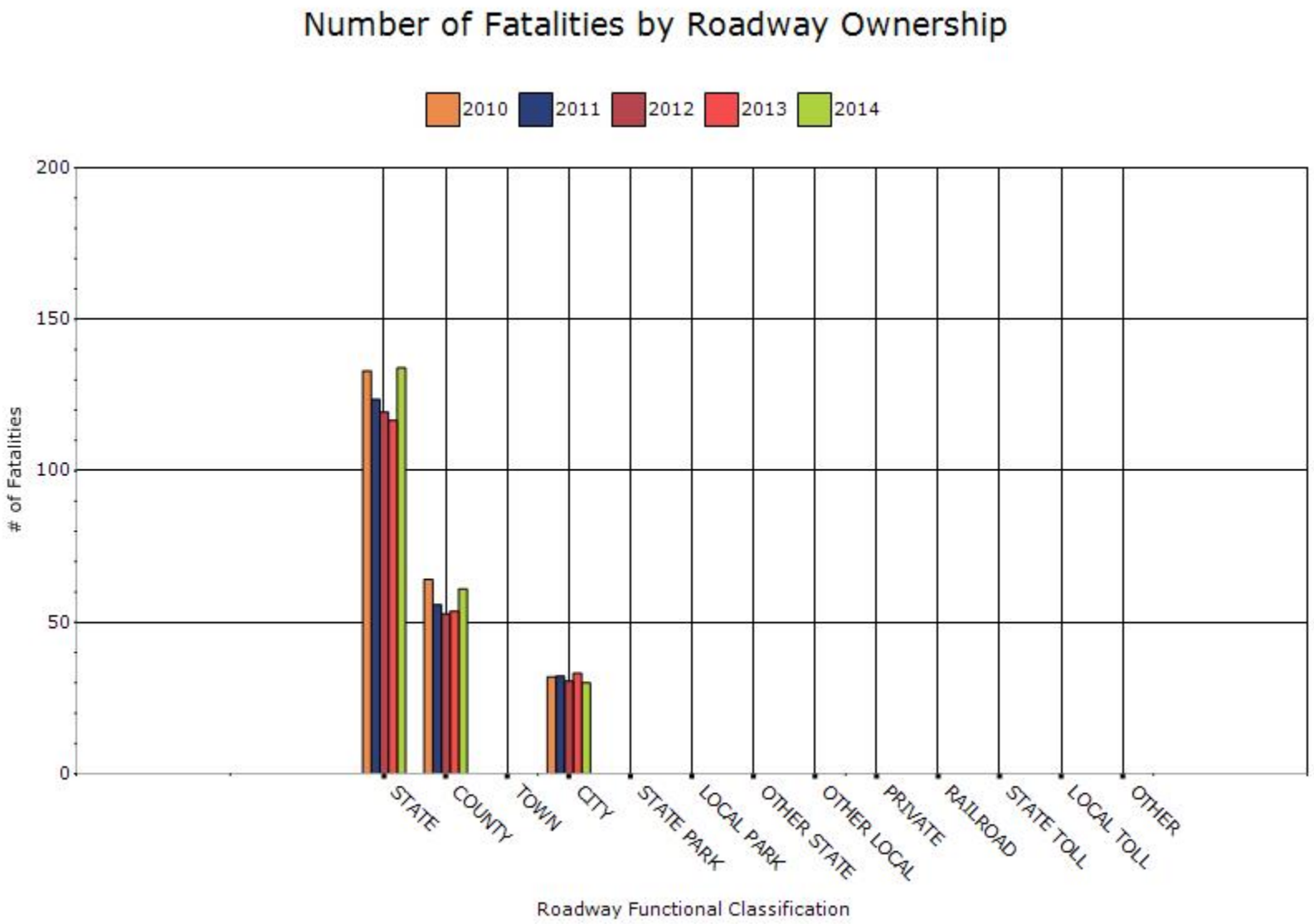

Serious Injuries by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Serious Injuries
300
250
200
150
100
50
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR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

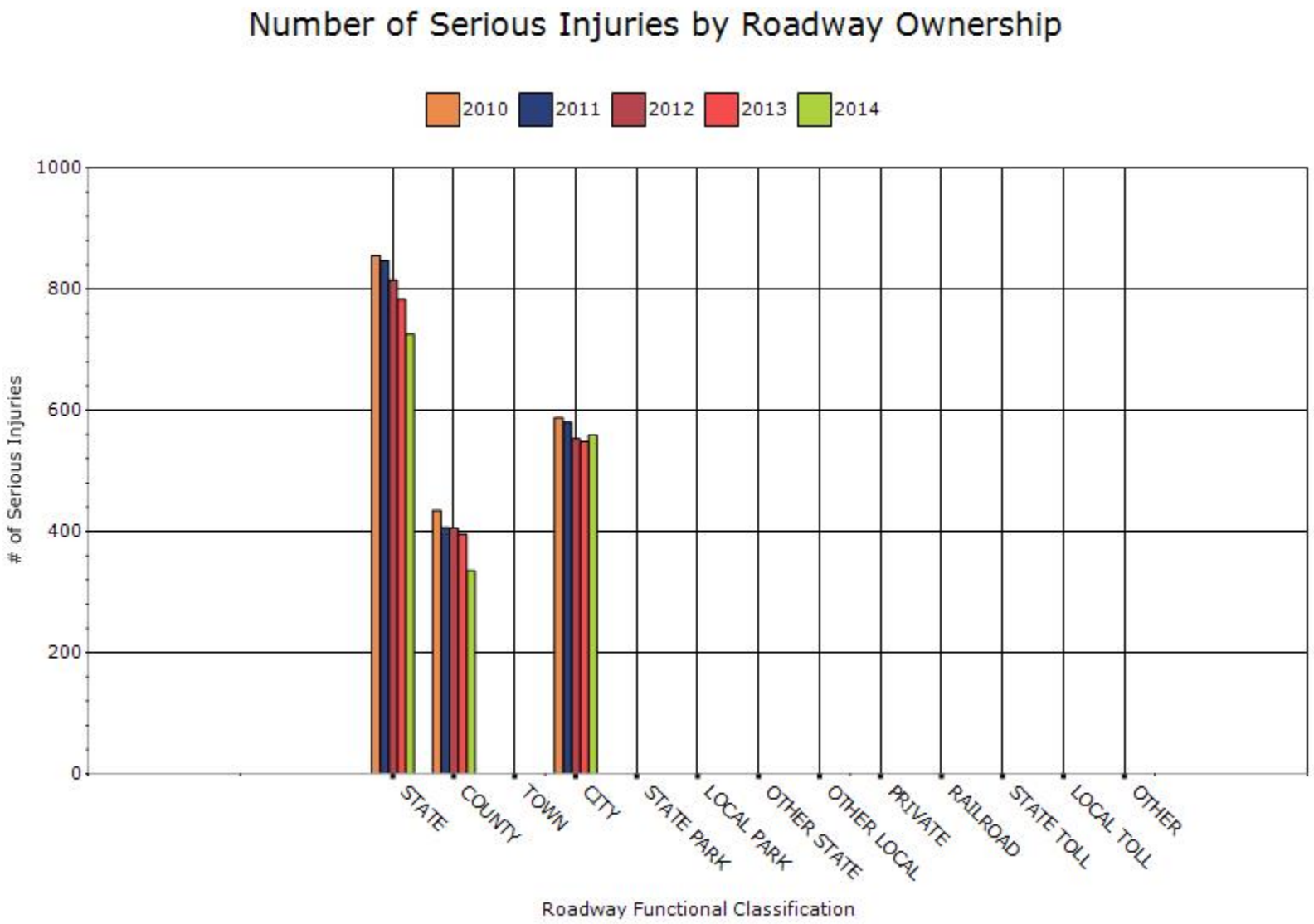

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
0
1
2
3
4
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD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

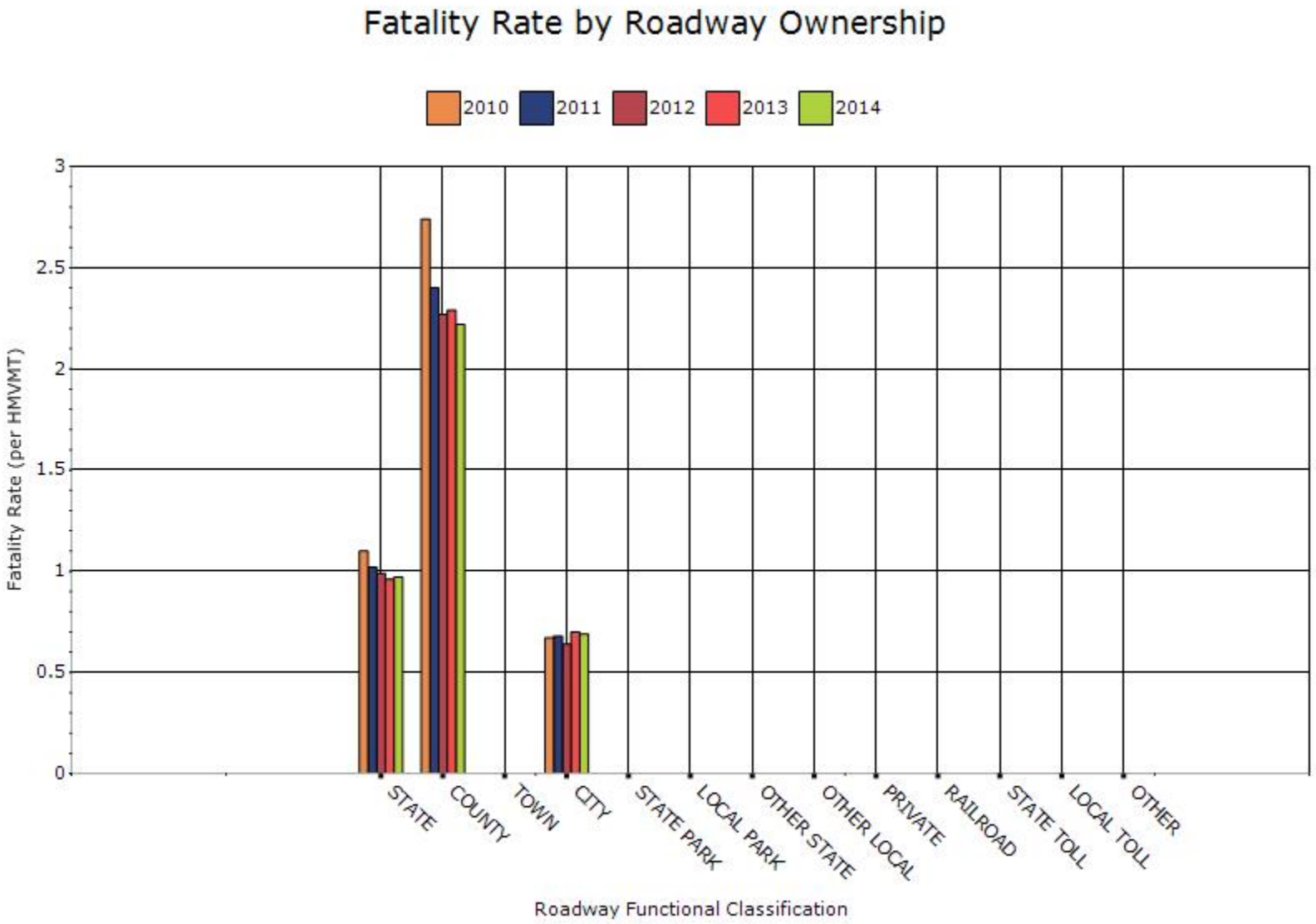

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
35
30
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR 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

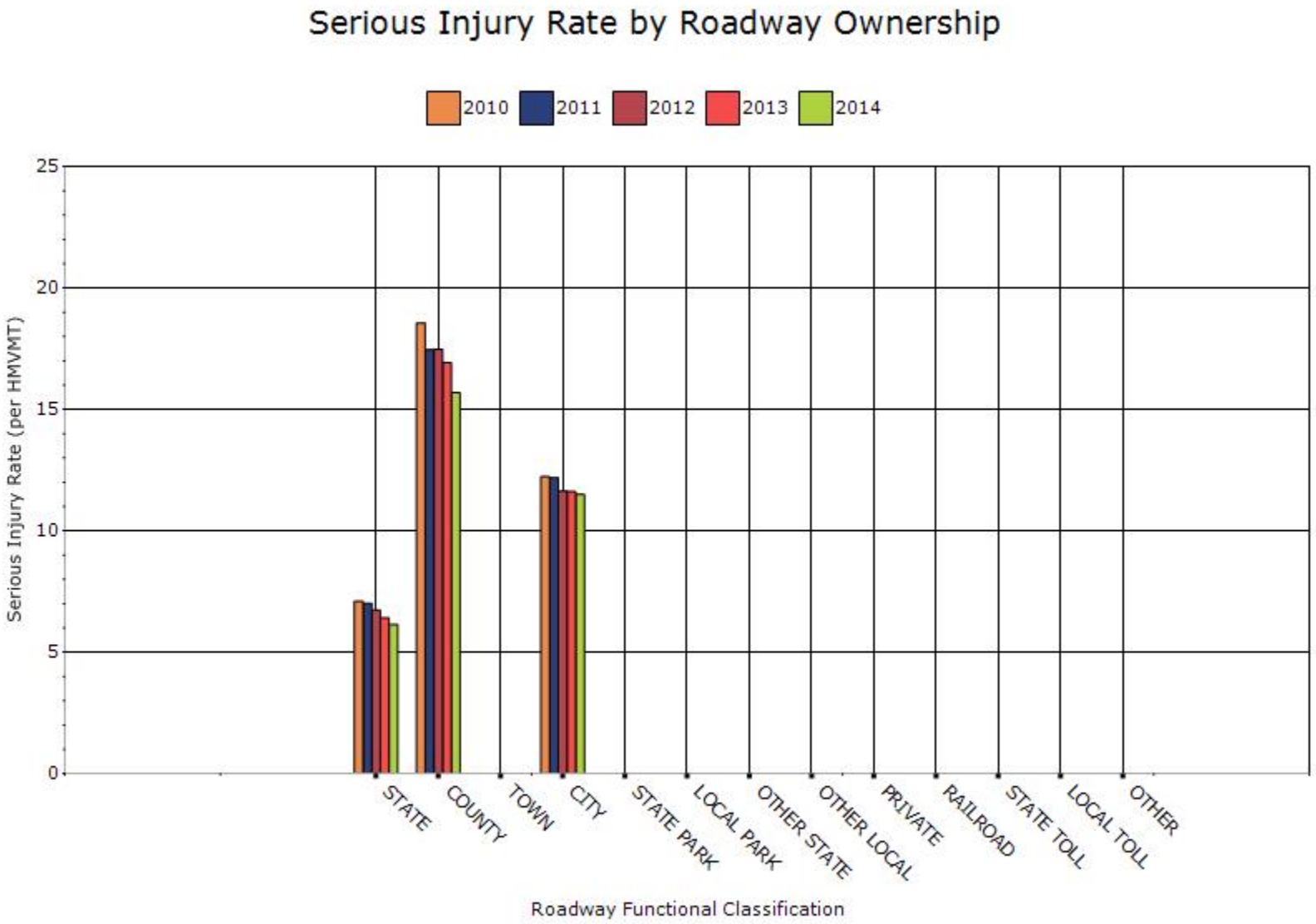
Year - 2014

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	134	726	0.97	6.14
COUNTY HIGHWAY AGENCY	61	335	2.22	15.69
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	30	559	0.69	11.49
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


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


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


Fatality Rate by Roadway Ownership
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
3
2.5
2
1.5
1
0.5
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
25
20
15
10
5
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.

After two good years in 2010 and 2011, fatalities have begun to trend back upward in 2012-2014. The 5-year rolling averages for fatalities and fatality rate have held nearly constant over the last three years. Serious injuries, on the other hand, have been steadily decreasing. The 5-year rolling average for Serious Injury Rate has dropped from 9.89 in 2010 to 8.61 in 2014.

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)	0.3	0.29	0.28	0.27	0.25
Serious injury rate (per capita)	1.58	1.54	1.52	1.51	1.45
Fatality and serious injury rate (per capita)	1.88	1.85	1.8	1.78	1.71

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

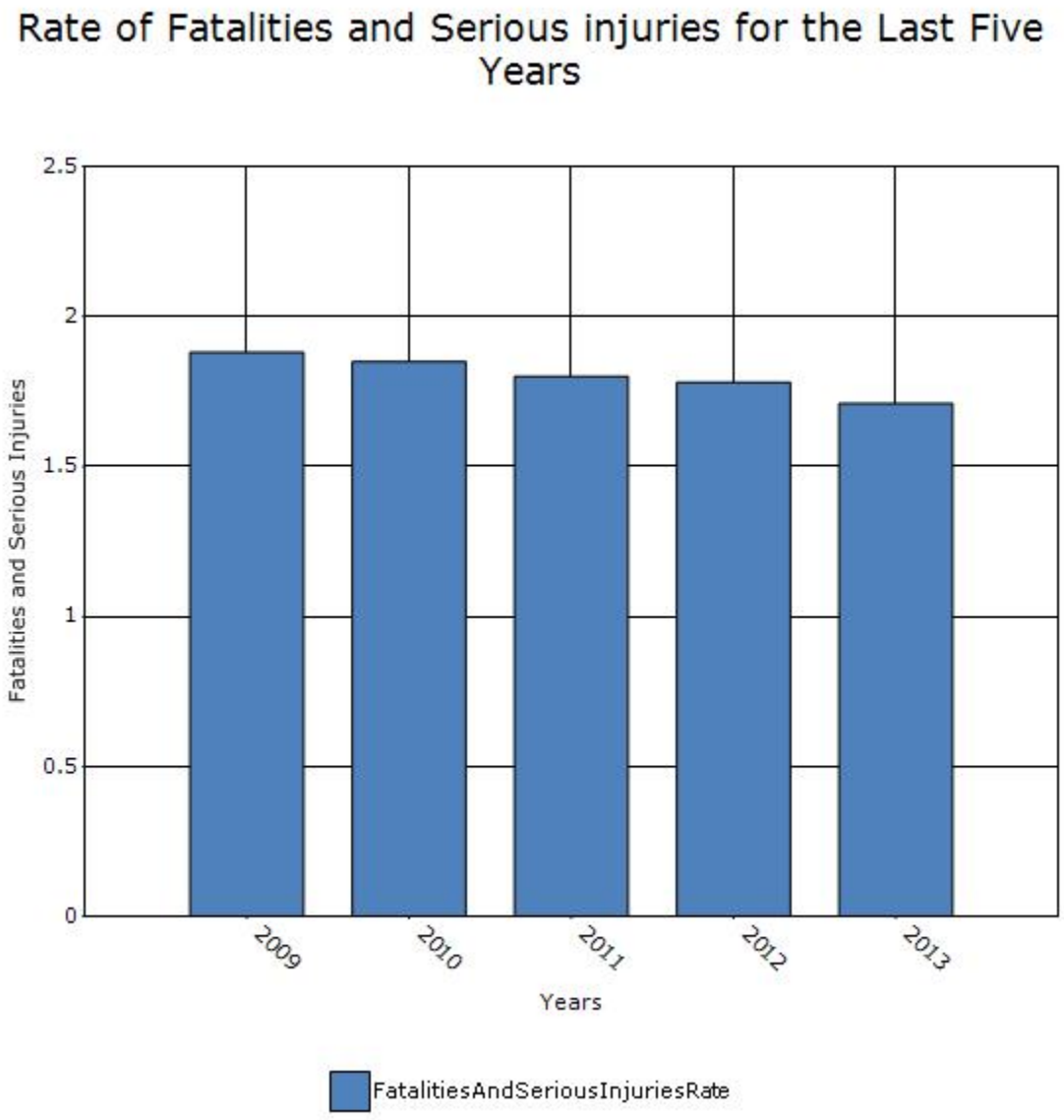
From Nebraska state crash database:

Drivers and Pedestrians age 65 and over:

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Fatalities (Driver + Peds)	36	42	42	41	36	41	29	39	28
Serious Injuries (Drvr + Peds)	215	219	194	210	206	203	206	194	180
Fatalities + Serious Injuries	251	261	236	251	242	244	235	233	208
Population Factor (FHWA)	128	132	133	134	134	135	136	138	142

Fatality + Serious Injury Rate (5-Yr. Rolling average 2007 - 2011): (236 + 251 +242 + 244 +235)/(133 + 134 + 134 +135 + 136) = 1.80

Fatality + Serious Injury Rate (5-Yr. Rolling average 2009-2013): (242 + 244 +235 + 233 + 208)/(134 + 135 + 136 + 138 + 142) = 1.71



Does the older driver special rule apply to your state?

No

Assessment of the Effectiveness of the Improvements (Program Evaluation)

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

☐ None

☐ Benefit/cost

☒ Policy change

☐ Other:

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

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☐ None

☒ Other: Other-Development of an NDOR Strategic Plan for HSIP and RCHP Expenditures

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

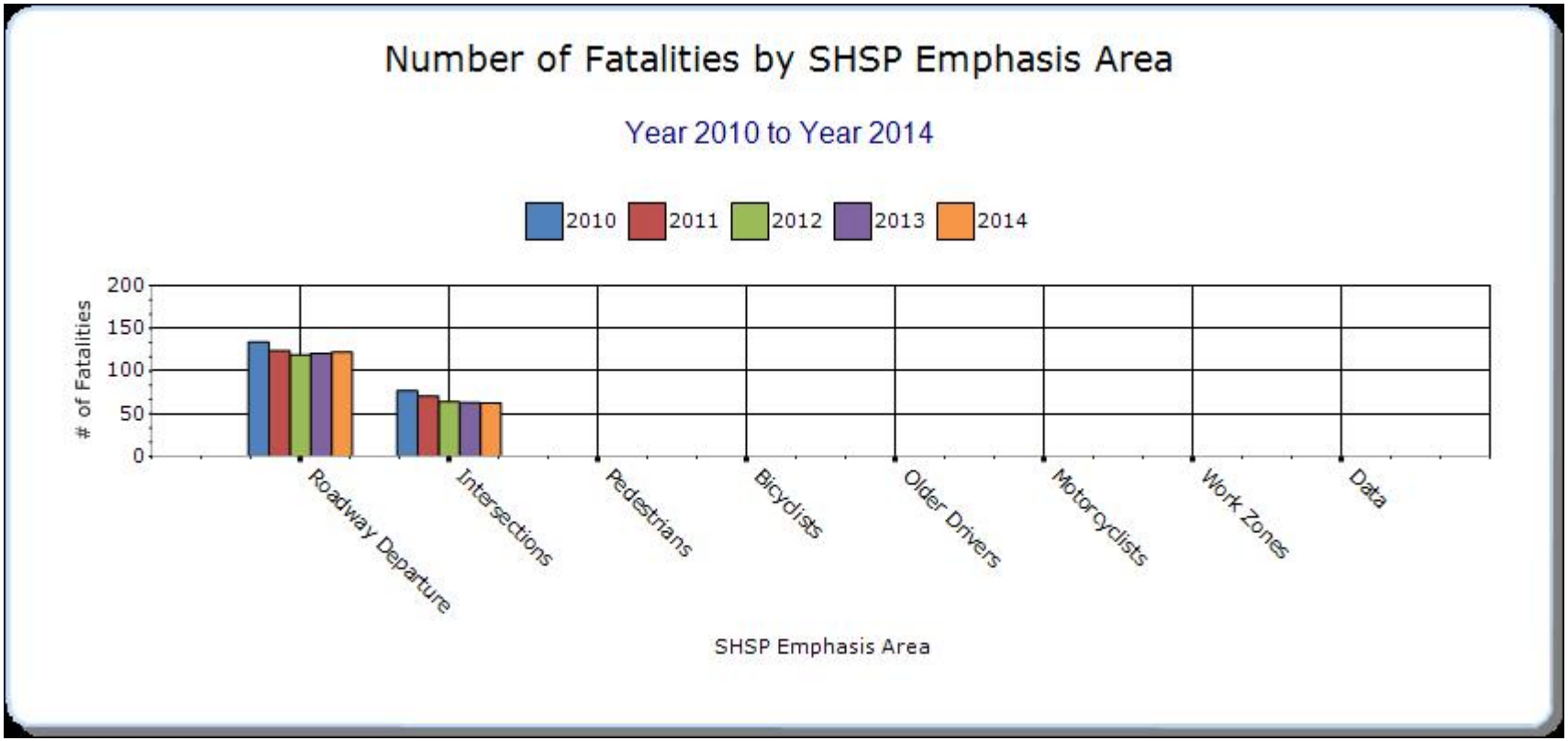
During the past year, NDOR developed a Strategic Plan for HSIP and RHCP Expenditures. This is a multi-year plan that lays out certain types of projects that will be funded into the future. The Plan will allow NDOR to make better use of its available HSIP funds.

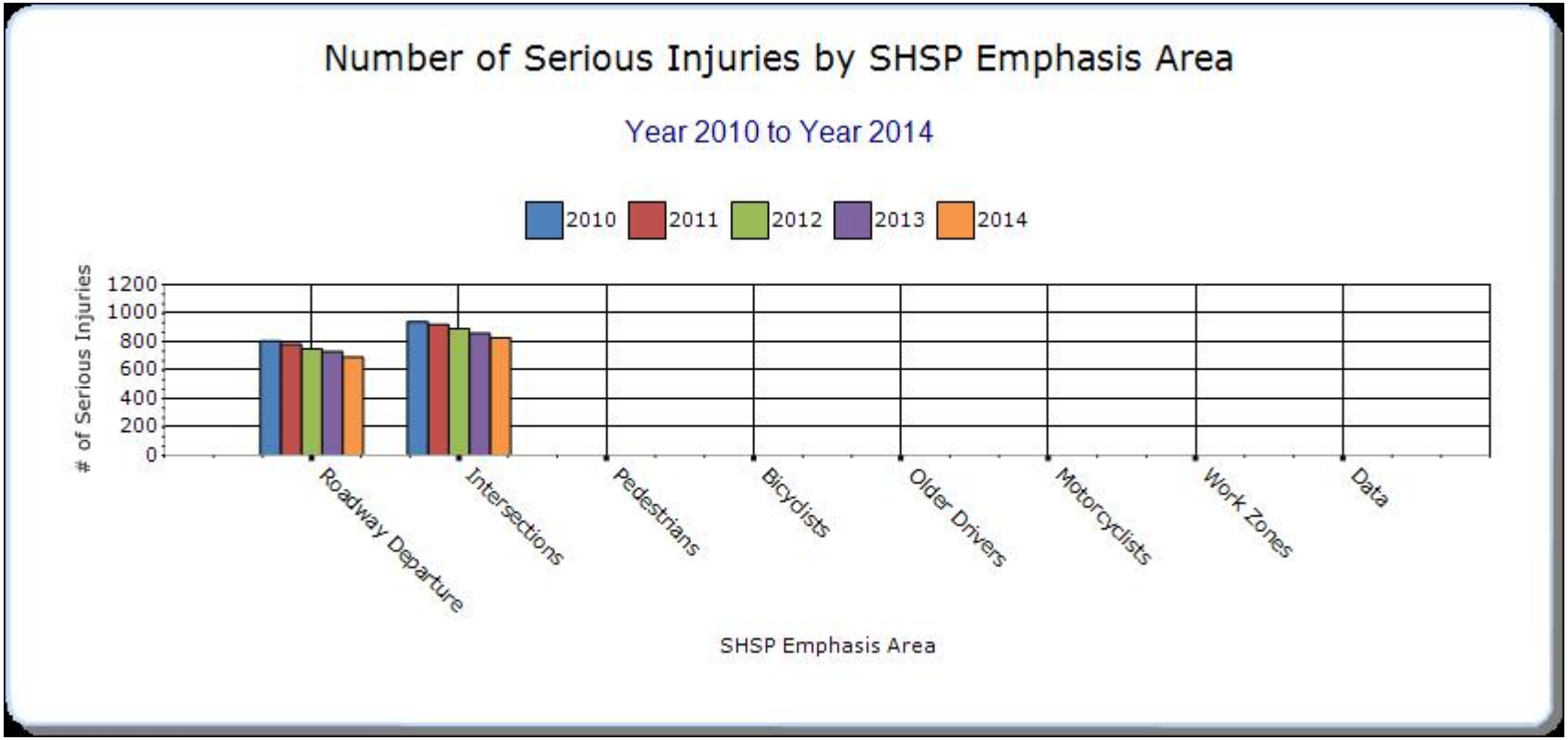
SHSP Emphasis Areas

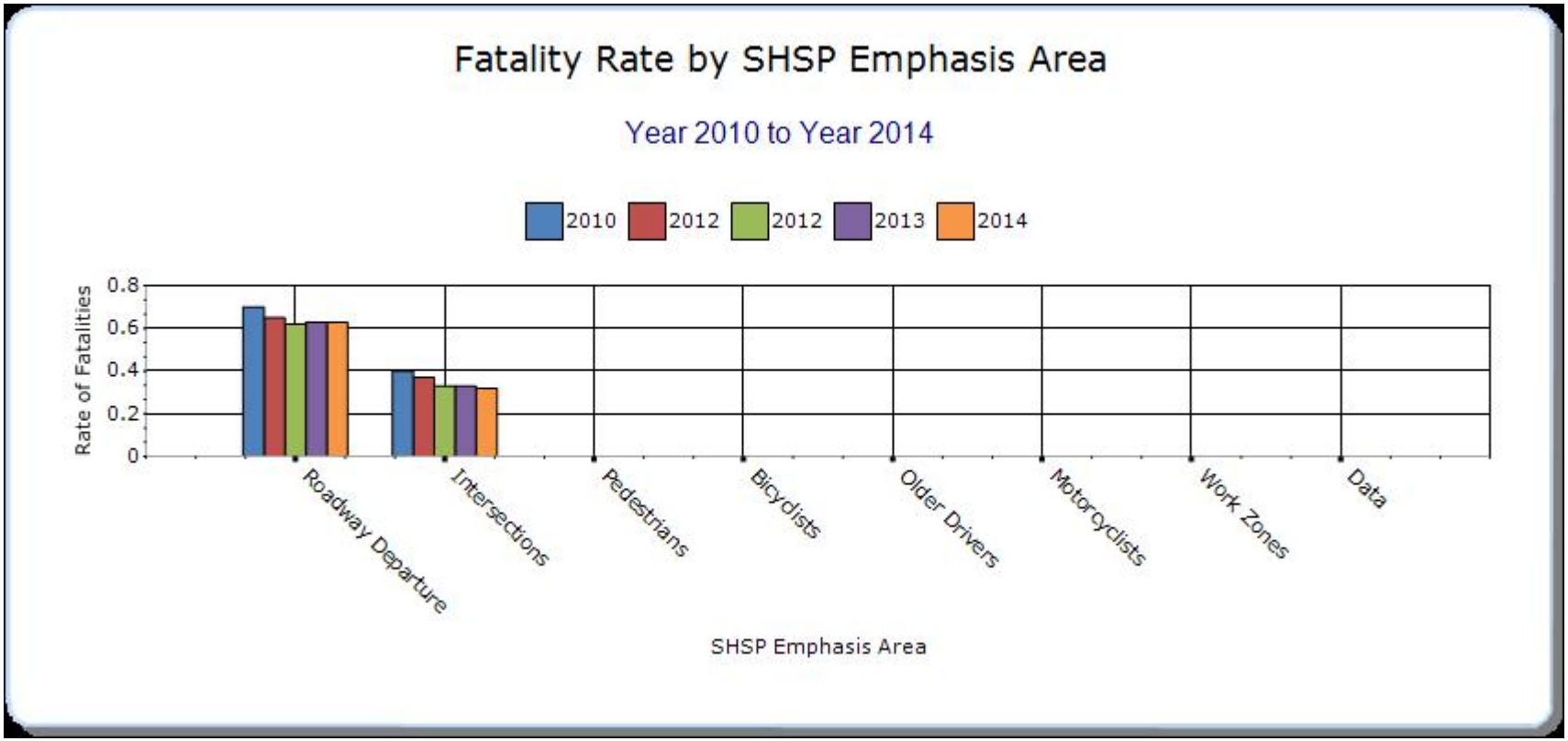
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

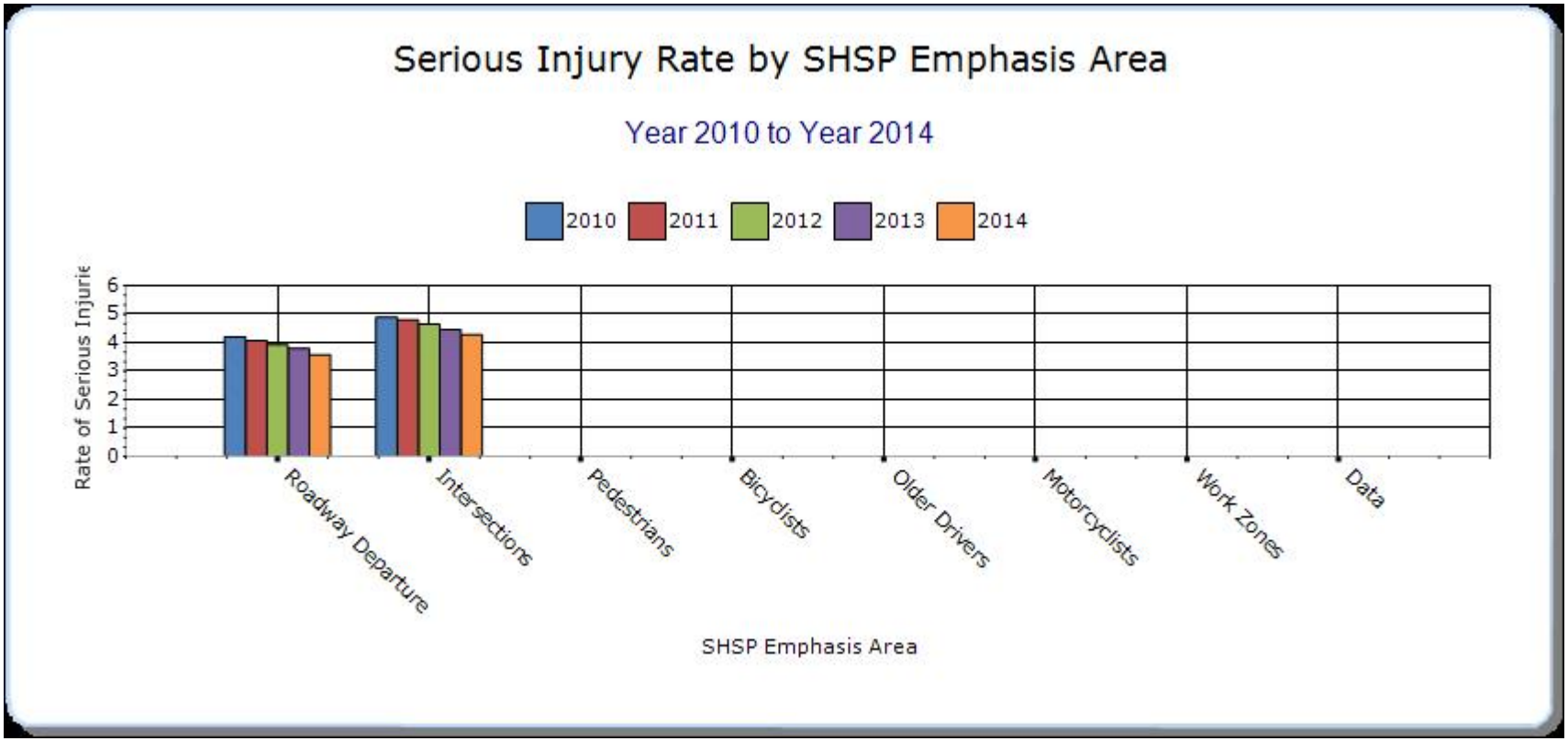
Year - 2014

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure	Run-off-road	122.4	693.2	0.63	3.58	0	0	0
Intersections	Intersection crashes	62.8	829	0.32	4.28	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
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 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
1200
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 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.8
0.6
0.4
0.2
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

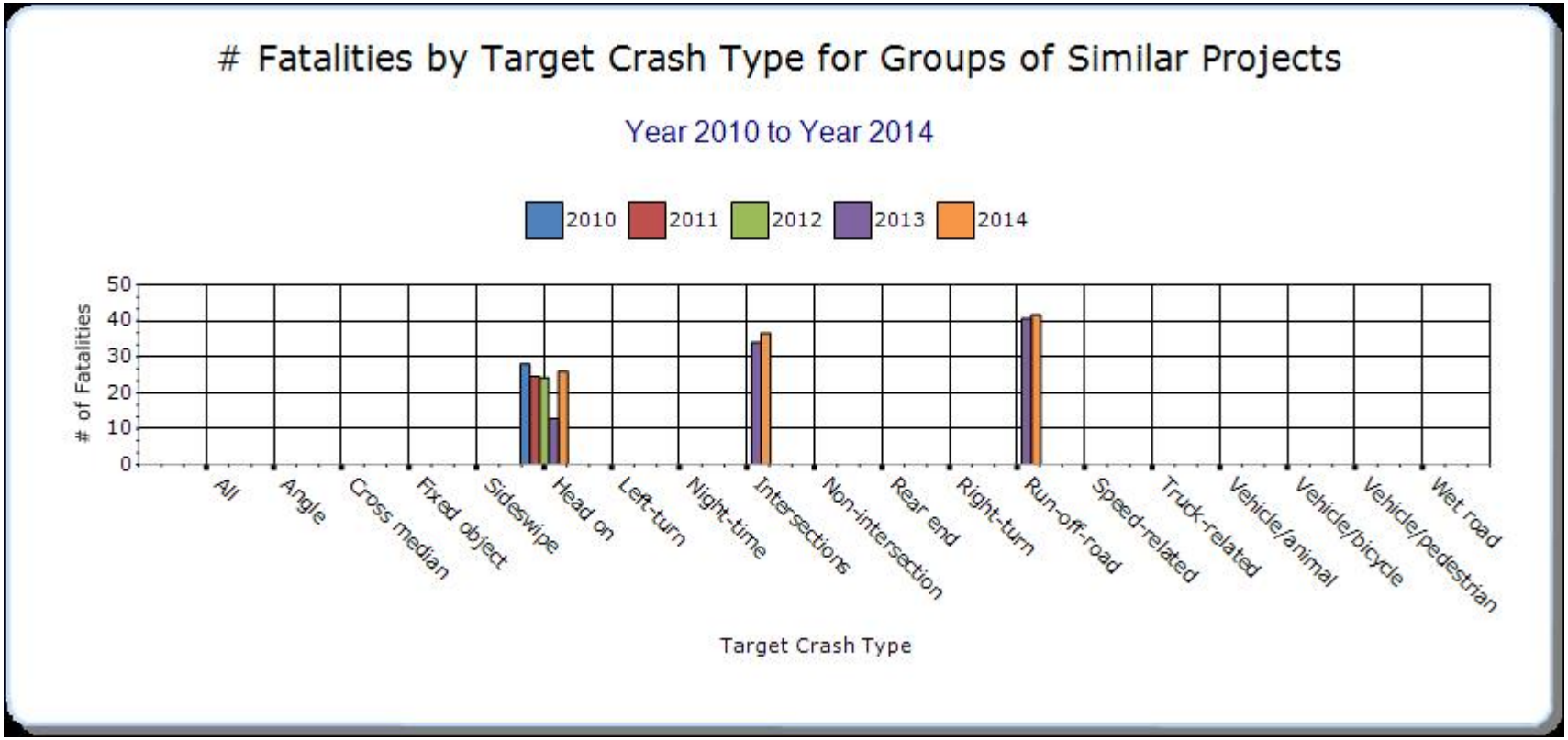

Serious Injury Rate by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
6
5
4
3
2
1
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

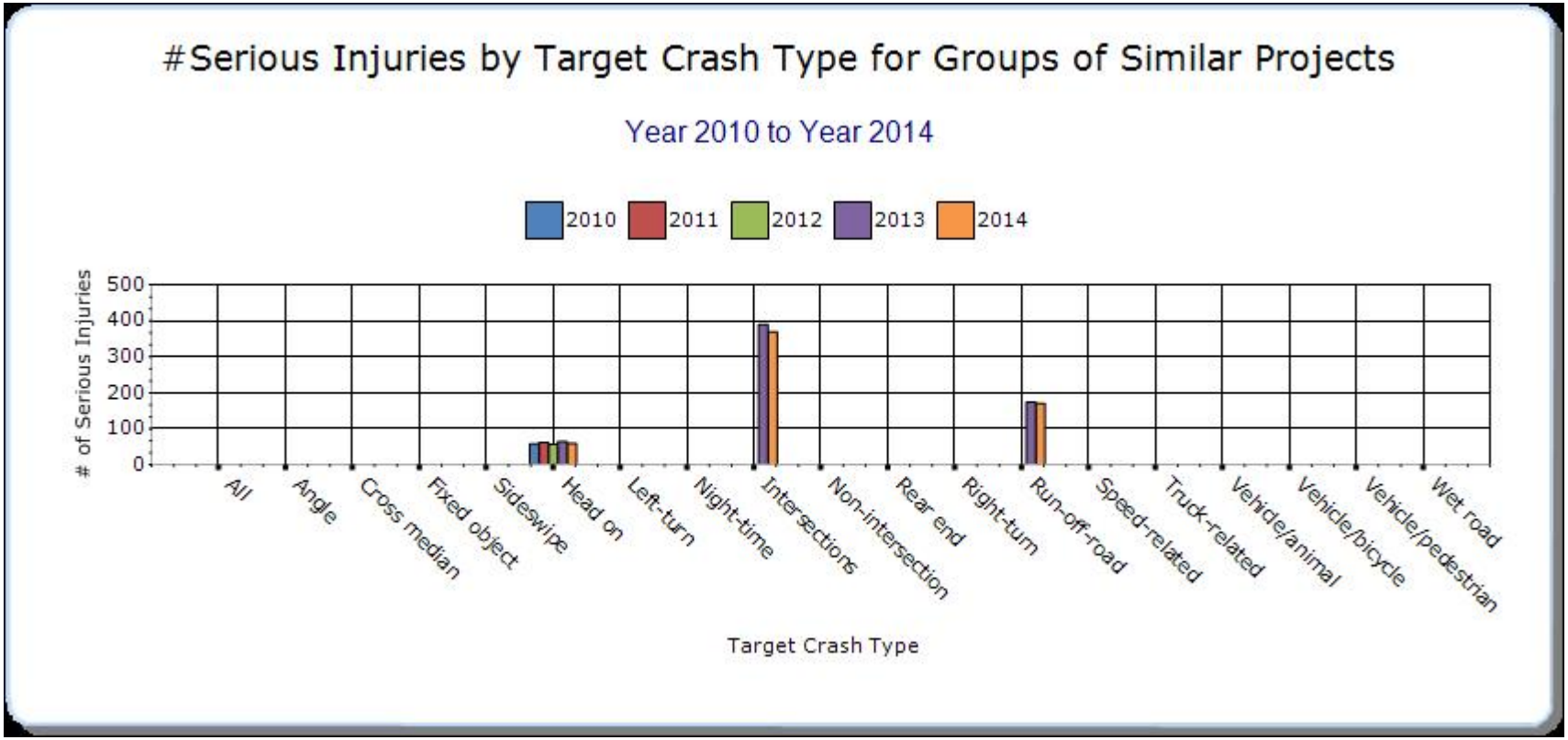
Groups of similar project types

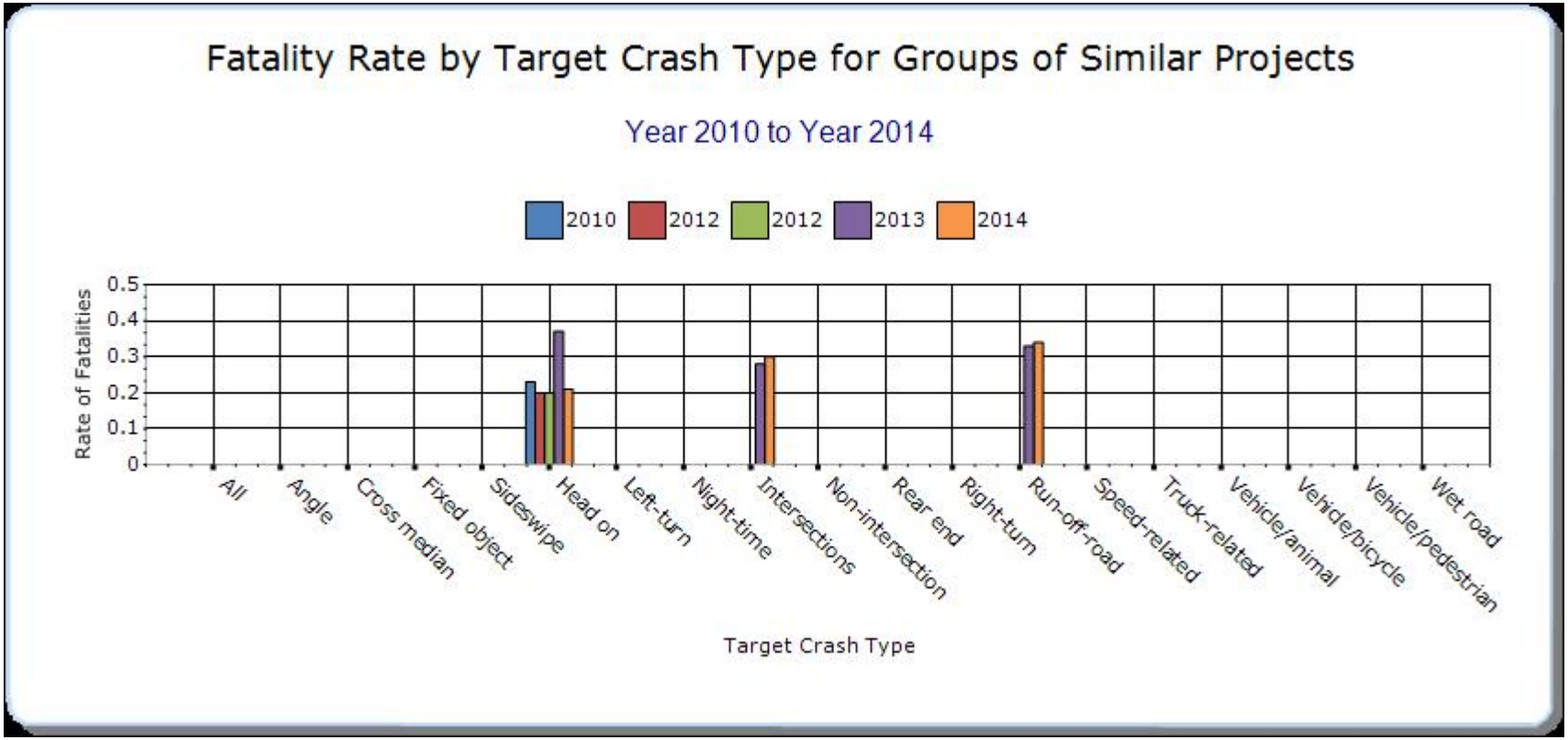
Present the overall effectiveness of groups of similar types of projects.

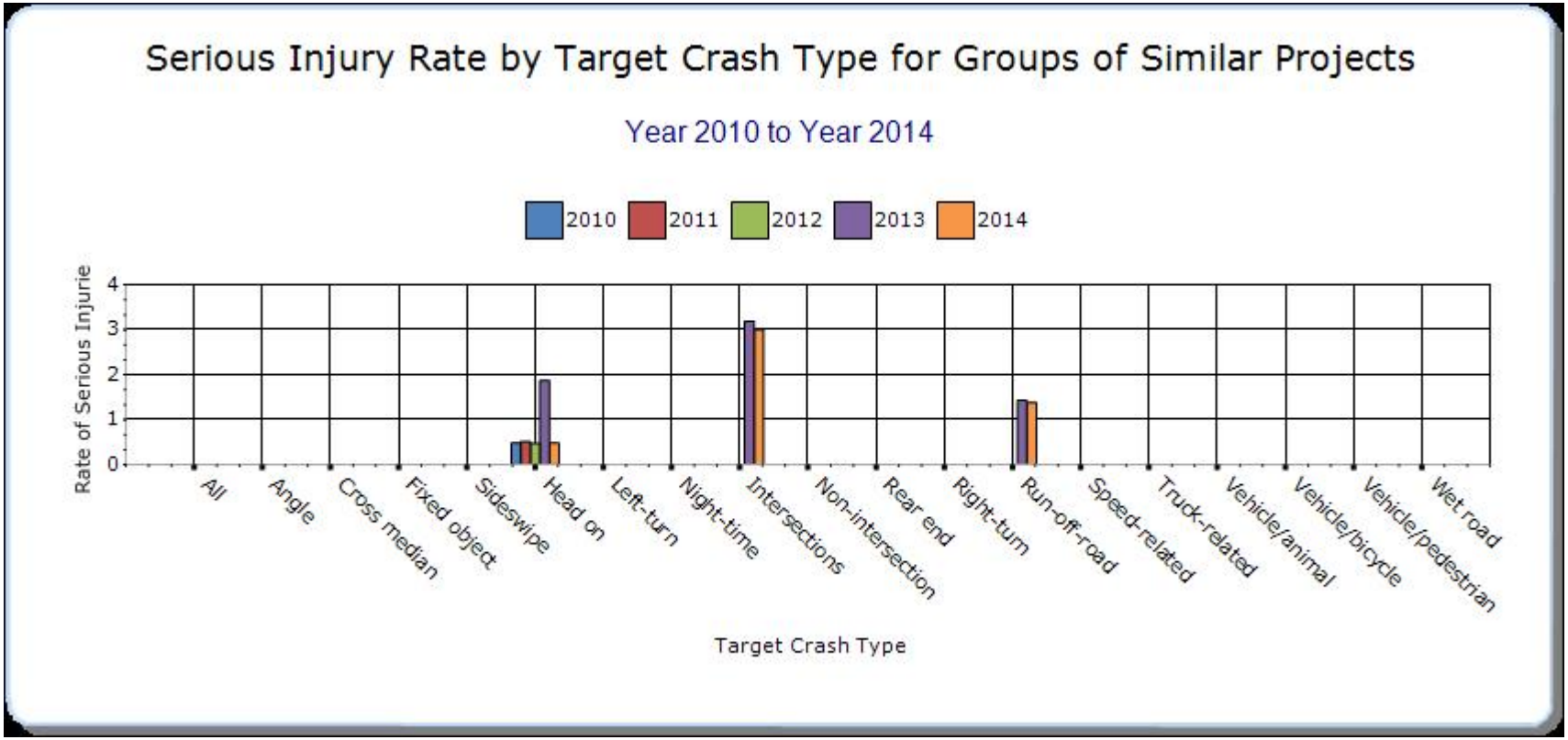
Year - 2014

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Intersection	Intersections	36.6	369.8	0.3	3	0	0	0
Centerline Rumble Strips	Head on	26	59.4	0.21	0.48	0	0	0
Roadway Departure	Run-off-road	41.6	170.6	0.34	1.38	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
50
40
30
20
10
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


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


Fatality Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.5
0.4
0.3
0.2
0.1
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

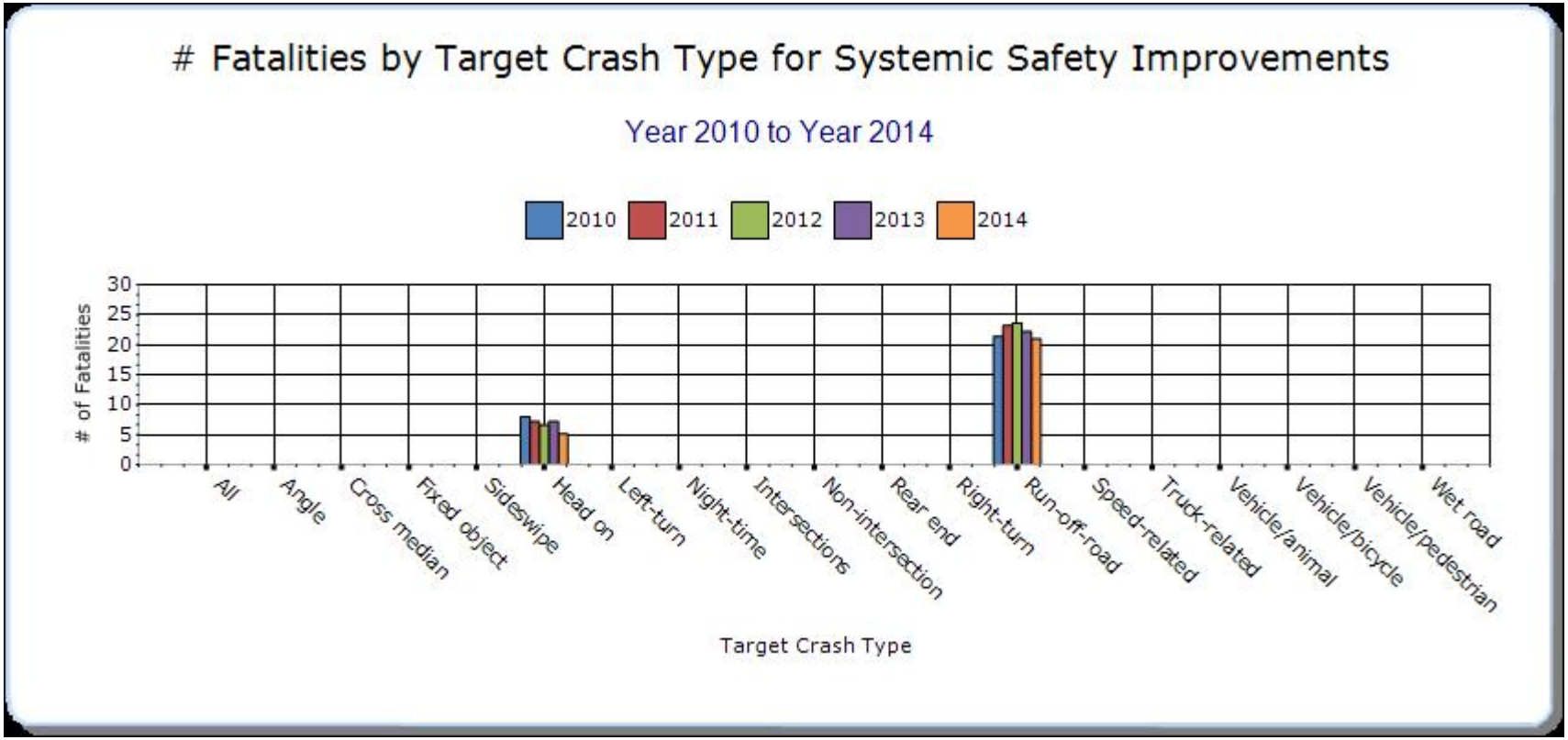

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
4
3
2
1
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

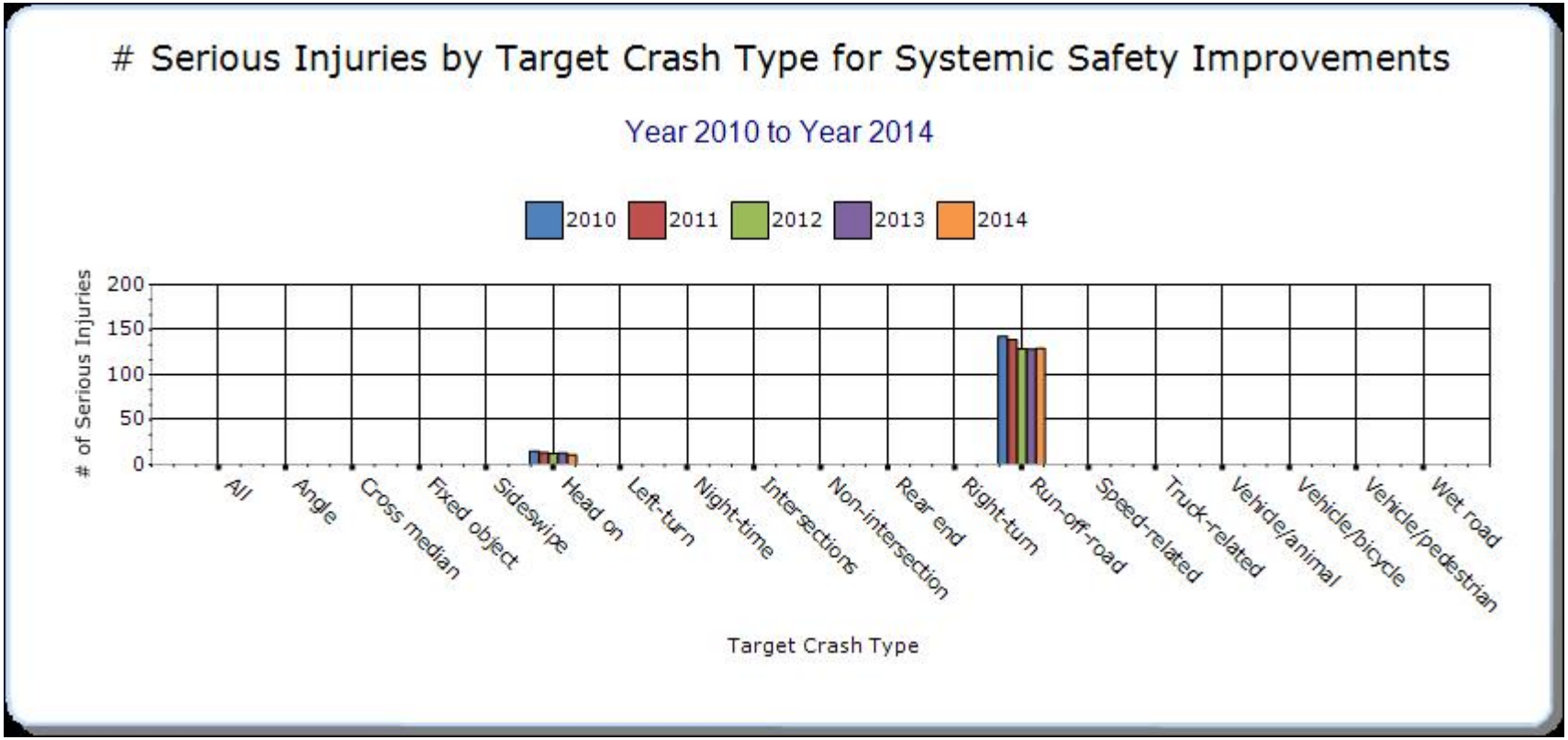
Systemic Treatments

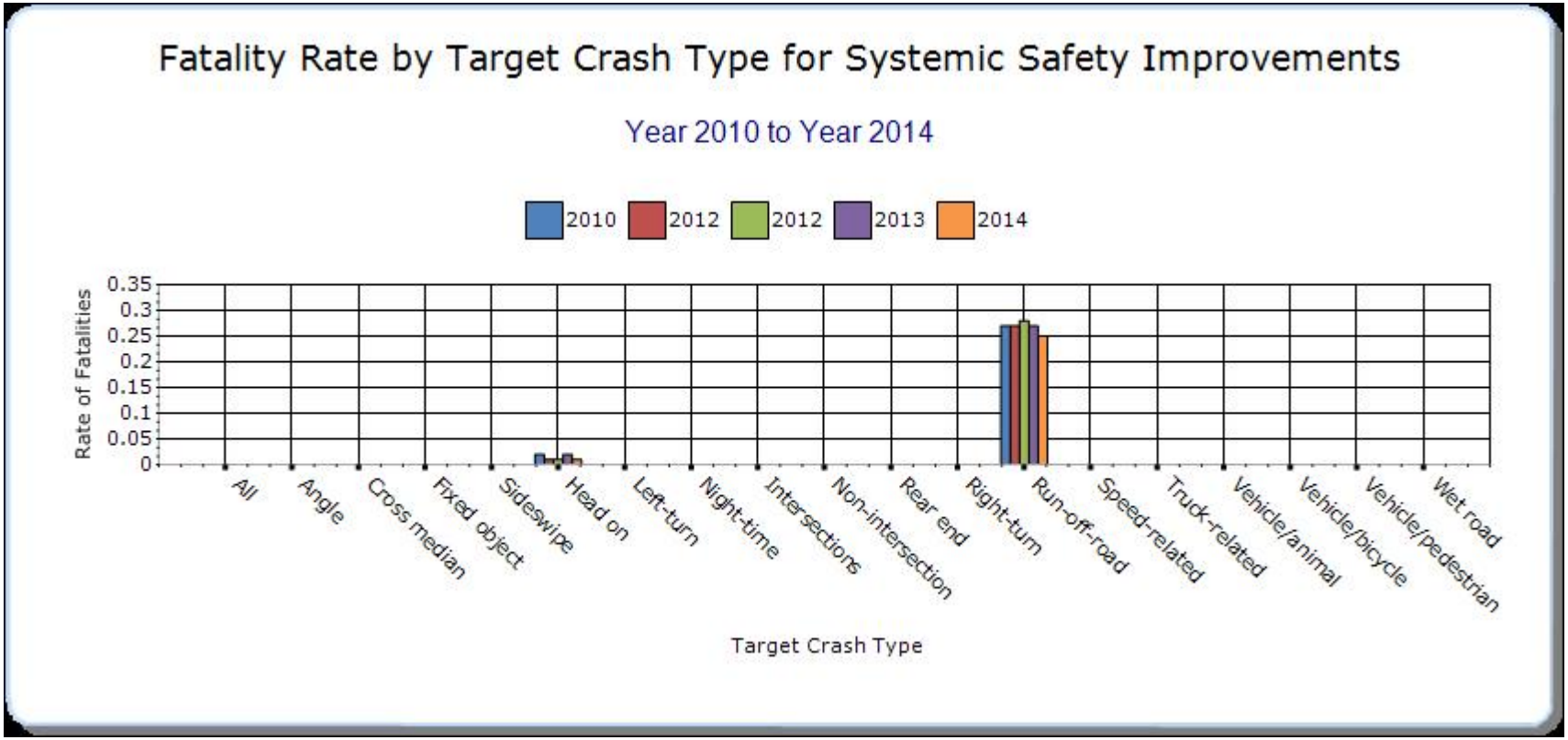
Present the overall effectiveness of systemic treatments.

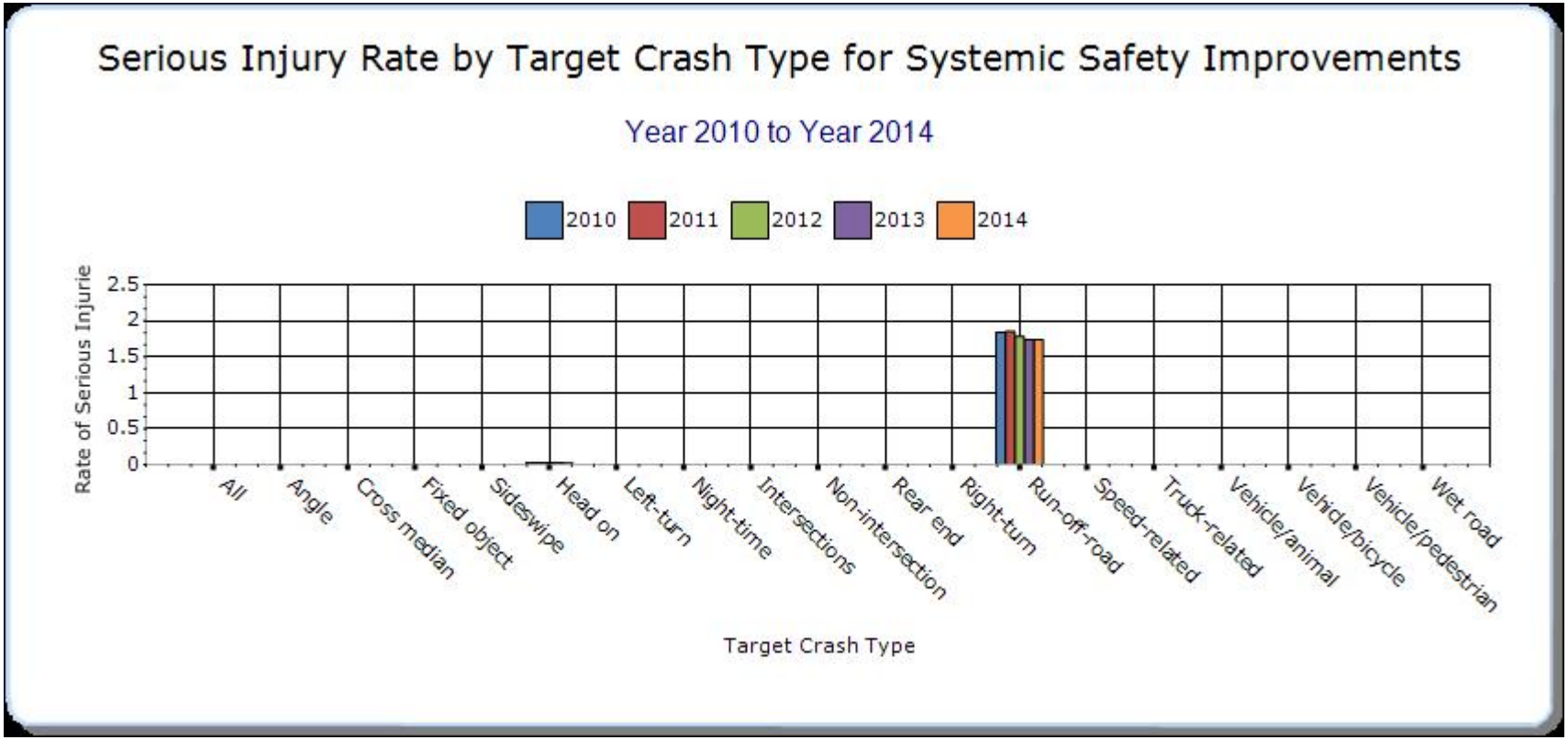
Year - 2014

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
Shoulder Rumble Strips	Run-off-road	11.8	65	0.02	0.12	0	0	0
Rumble Strips	Head on	5.2	10.8	0.01	0.02	0	0	0
Install/Improve Pavement Marking and/or Delineation	Run-off-road	9.2	64.4	0.23	1.62	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
30
25
20
15
10
5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


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


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2012
2012
2013
2014
Rate of Fatalities
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Serious Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
Rate of Serious Injurie
2.5
2
1.5
1
0.5
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

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

The Nebraska HSIP program continues to be effective in reducing crashes. Most of our project evaluations had positive outcomes. The six evaluations completed in 2014 showed an overall decrease in crashes of 35%.

Project Evaluation

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-All Injuries	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-All Injuries	Aft-PDO	Aft-Total	Evaluation Results (Benefit/Cost Ratio)
Omaha - Intersections of 19th/20th Streets with Cass Street	Urban Minor Arterial	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	0	2	23	28	53	0	1	16	32	49	0.00
Omaha - Intersection of Northbound US-75 (Kennedy Freeway) Ramps/25th Street and "Q" Street	Urban Minor Arterial	Intersection traffic control	Intersection traffic control - other	0	1	9	18	28	0	0	3	15	18	2.58

Grand Island - US-30 & Engleman Road	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	2	5	4	11	0	0	0	3	3	4.41
North of Pleasant Dale - Jct. of US-6 & N-103	Rural Minor Arterial	Intersection traffic control	Modify control - two-way stop to roundabout	0	0	4	4	8	0	0	2	2	4	0.00
Southeast of Bancroft - Jct. of N-16 & N-51	Rural Minor Arterial	Roadside	Removal of roadside objects (trees, poles, etc.)	0	0	3	1	4	0	0	0	0	0	0.00
East of Kearney - I-80 - Remove viaduct, replace with culvert	Rural Principal Arterial - Interstate	Roadside	Roadside grading	0	1	1	12	14	0	0	0	2	2	0.81

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.