Highway Safety Improvement Program

Data Driven Decisions

Indiana
Highway Safety Improvement Program
2015 Annual Report

Prepared by: IN

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

As required under 23 U.S.C. § 148(h), the following is the annual report to the Federal Highway Administration (FHWA) from the Indiana Department of Transportation (INDOT) for federal fiscal year (FFY) 2015. The content of this report combines information regarding the implementation status of the Highway Safety Improvement Program (HSIP) and associated sub-programs including the High Risk Rural Roads Program (HRRRP). This combined HSIP report, does not include the annual rail-highway crossing safety report as required under 23 U.S.C. § 130(g). INDOT is exercising the option provided to the states by 23 U.S.C. § 148 guidance, of preparing and submitting to FHWA separate reports.

The format of the annual HSIP report is in accordance with the FHWA online reporting tool. The focus of the report centers on development and implementation of the core federal aid safety program and associated safety spending in Indiana for FFY 2015, beginning October 1, 2014 and ending on September 31, 2015. In addition to the core safety programs, this report discusses the ongoing evolution of the INDOT asset management program mechanism for setting spending priorities for all projects on roads under INDOT jurisdiction.

In 2014, the estimated vehicle miles of travel increased by 2.57% above the 2013 estimate, to reach 81,406 Hundred Million Vehicle Miles of Travel (HMVMT). The number of fatal injuries rose from 743 in 2014 to 753 in 2015, or 1.3%. As a result of the VMT increase, the Annual Fatality Rate dropped from 0.94 fatalities per HMVMT in 2013 to 0.92 in 2014. The 5-year rolling average rate of fatalities rose slightly from 0.93 to 0.94 per HMVMT. 2014 compared to a rate of 0.97 in 2013. The rise is attributed to the fact that the 5 year average for 2013 included data from 2009 that was a historically low rate of 0.89.

While this report also indicates an increase in serious injury crashes, an actual comparison to prior years is inaccurate and is complicated by the implementation by Indiana of a new injury classification methodology that's described below and in more detail in the response to question 26. A new uniform method has been developed for declaring an injury to be "Incapacitating"; the definition used by Indiana to classify injury severity as an "A" severity on the KABCO scale, for crash events and casualties.

The new classification method was developed in response to agreement among members of the Indiana Traffic Records Coordinating Committee (TRCC); that the use of officer's judgment in regard to determination of incapacitating injuries in past years had been inconsistently applied. Inconsistency in classifying serious injuries was noticed both between officers, and regionally, among certain police agencies that were either instructing officers or developing informal approaches to marking injury severity that was different from other peer agencies.

The revised electronic reporting tool now classifies a crash participant as having an incapacitating injury if that person has been transported from the scene for medical treatment at an emergency room or trauma center. This change removes the subjective element from the determination of class "A" injury severity.

The Indiana TRCC made the decision to change the methodology in order to achieve more consistent, reliable data over the long term. The TRCC accepts the fact that over the next few years, the frequency and rate of serious injury data would appear to be distorted when compared to the data from past years.

INDOT along with the Indiana TRCC will continue to monitor and assess the effect of the change in the method of injury severity classification. To date, the apparent effect of this change has been a significant rise in the number of crash casualties that are classified as class "A" (incapacitating) injuries. It is expected that this trend will continue as full data for calendar 2015 is added to the records system. Also expected is a continuing effect on calculation of 5 year average data for serious injury (level A) crash frequency, casualty counts and resulting rate (per HMVMT). Offsetting reductions are expected in crash events and casualties classified at lower severity. We ask that FHWA consider this change in reporting methodology as part of any review of Indiana Crash data.

In FFY 2015, the total expected obligation of federal program funds for safety, from all programs will be about $47.8 million dollars. All projects approved for funding in HSIP or HRRRP programs are required to address at least one of the emphasis areas defined in the Indiana Strategic Highway Safety Plan (SHSP).

The selection and prioritization of all safety projects on roads under INDOT jurisdiction, including those funded with HSIP and HRRRP funds utilize the INDOT asset management process. The submission of the documents that describe INDOT's countermeasure selection methodology originally took place in September of 2008 with the submission of the FFY 2008 HSIP/HRRRP report. For roads under INDOT jurisdiction, regardless of funding program, the established selection process for safety projects prioritizes locations of highest need in terms of reducing the severity and frequency of crashes. The goal for all safety projects is to select the most appropriate and cost effective countermeasures available. The INDOT Office of Traffic Safety (OTS) ensures that each candidate safety project has a cost effective choice of proposed solution(s), the eligibility for federal safety program funding is determined and the relative priority of the candidate project's needs is established. All safety program projects address one or more of the emphasis areas enumerated in the Indiana SHSP.

Guiding the selection of projects on local jurisdiction roads, the document titled "Highway Safety Improvement Program Local Project Selection Guidance," issued on December 1, 2010 and "Special Rules for Eligibility of Highway Safety Improvement Projects," issued August 1, 2013, describes the selection methodology for local HSIP projects. INDOT is currently engaged in revising the Indiana's SHSP and will subsequently revise the HSIP Local Project Selection Guidance.

INDOT fiscal policy is to make one-third of its total FHWA apportionment from HSIP available to local public agencies for safety projects on local system roads. Individual Metropolitan Planning Organizations (MPO), receive annual apportionments of obligation authority, while predetermined amounts of obligation authority are set-aside for the use of rural public highway agencies. The “Highway Safety Improvement Program Local Project Selection Guidance,” provides local agencies guidance on the structure and content of applications for HSIP and HRRRP project funding. INDOT maintains a web-based information source on the various state and local safety programs, which is accessible at, http://www.in.gov/indot/2357.htm.

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.

In the State of Indiana, Local Public Agencies (LPAs) operate and maintain all local public roads. INDOT policy is to make one third of its total annual apportionment of HSIP funding available to local public agencies for safety projects on local system roads. An annual apportionment of obligation authority is assigned to each Metropolitan Planning Organization (MPO) serving Group 1 and Group 2 urban areas. A standardized population formula is used to determine the assigned funding made available to individual MPOs. For public agencies in rural (non MPO area) group 3 (incorporated cities and towns) and rural Group 4 (counties and un-

incorporated towns), a predetermined amount of HSIP funds are made available for funding eligible projects. The aforementioned population formula is also used to determine the total amount of the HSIP allotted for projects located in rural areas.

Rules have been established allowing LPAs to apply to INDOT for determination of project eligibility to utilized HSIP funds. These rules are contained in the INDOT guidance document titled, *Highway Safety Improvement Program Local Project Selection Guidance*. The latest INDOT version of this guidance document was approved by INDOT's Highway Safety Advisory Committee on December 10, 2010. In 2014 a supplement document titled FY 2014 Special Rules for HSIP Eligibility was published, principally to expand the choices of Systemic Safety improvement types available to local agencies. Both documents are on file at the FHWA Indiana Division Office. The document are also posted on the INDOT web site at: http://www.in.gov/indot/files/LocalHSIPProjectSelectionGuidance.pdf

Guidance and outreach efforts are routinely made by INDOT and the Local Technical Assistance Program (LTAP), in regard to selection of HSIP and HRRRP projects. INDOT's guidance to LPAs advocates the value of low cost systemic safety improvements to proactively address the risk of severe crashes on their entire roadway system, along with the treatment of locations with high risk of frequent severe crashes involving fatality or incapacitating (Class A) injury. Systemic projects are gaining increasing acceptance by LPAs. Notably, many applications have been submitted by LPAs to assist them in funding systemic projects to upgrade the retro-reflectivity of local regulatory and warning signs.

In urban areas, the MPOs serving Group 1 and 2 urban areas are tasked to perform initial screening of proposed safety improvements and select candidate projects subject to INDOT determination of HSIP eligibility. To provide a similar level of planning support to rural public agencies, INDOT has collaborated with the Indiana Local Technical Assistance Program (LTAP). INDOT sponsors an ongoing program with LTAP called the *Hazard Elimination Project for Local Roads and Streets* (HELPERS) Program. The HELPERS Program coordinates with rural planning organizations (RPOs) as well as rural counties, cities and towns to assist them in identifying, analyzing and prioritizing their needs in regard to severe crash reduction.

The HELPERS Program advises LPAs regarding management of safety risks and assists rural area LPAs in submitting project level funding proposals to INDOT for determination of HSIP project eligibility. The INDOT Office of traffic Safety makes a determination of eligibility for all applications to utilize HSIP or HRRRP funding.

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

☒ Design

☒ Planning

☐ Maintenance

☒Operations

☐Governors Highway Safety Office

☒Other: Other-Local Agency Assistance Divison and Budget & Project Accounting Division

☒Other: Other-Capital Asset Management

Briefly describe coordination with internal partners.

The INDOT Office of Traffic Safety (OTS) leads INDOT's coordinated efforts to identify locations with safety needs, plan improvements, prioritize and program traffic safety improvement projects on the Indiana State system of highways. OTS works with each of INDOT's district offices, as well as the divisions of Design, Planning, Traffic Engineering, LPA & Grant Administration, Capital Asset Management Office and Budget Divisions.

In the areas of finance, budget and project prioritization/programming, the Manager of the OTS acts as the chair to the INDOT Traffic Safety Asset Management Team to prioritize all proposed safety projects located on the INDOT system of highways. The six INDOT district traffic engineering offices act as voting members of the team and the INDOT Office of Capital Project Funds Management provides coordination with INDOTs other asset teams and upper management. The Traffic Safety Asset Management Team acts to deliberate the relative need and priority of proposed traffic safety projects on INDOT managed roadways. The overall budgeting of obligation authority for safety projects on both the state and local road systems is coordinated with the Division of Budget and Project Accounting.

For approved safety projects on the state highway system, the relevant INDOT district office is responsible for project programming and entry of the project into the State Transportation Improvement Plan (STIP) and any relevant local Transportation Improvement Plan (TIP). They also manage design and construction projects in coordination with INDOT Design and Construction Divisions, via a project manager assigned to the project to coordinate all project development tasks.

Regarding internal coordination of local safety projects, the OTS performs review of all proposed projects for compliance with eligibility requirements as defined in Indiana's Strategic Highway Safety Plan. Eligible projects are recommended to the INDOT Division of LPA & Grant Administration for funding approval and inclusion in the STIP and relevant TIP document. The LPA & Grants Division also develops an interagency agreement with the LPA to guide project

development. The relevant INDOT district then assigns a project manager to coordinate development of the construction project.

In addition, OTS consults with Design Division regarding new safety improvement design practices and the Office of Traffic Engineering Administration, regarding new Standards and Specifications. OTS also coordinates with the Research Division regarding the approval of safety related research efforts under the Joint Transportation Research Project (JTRP) and to plan implementation of successful research products.

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

☒ Metropolitan Planning Organizations

☒ Governors Highway Safety Office

☐ Local Government Association

☒ Other: Other-Local Technical Assistance Program

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-Project administration and funding approval resides with Division of Local Public Agencies and Grants Administration.

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

In response to the increased HSIP apportionments under MAP-21, INDOT has engaged in new strategies to increase the obligation of funds to construct worthy safety improvement projects. The number of systemic improvement types has been expanded along with expanded selection of hot spot safety improvement projects. One third of the total percentage of HSIP funds is made available to local agencies, resulting in more opportunity to combat severe crash risk in both urban and rural areas.

Regarding the process used by INDOT to conduct HSIP eligibility review for proposed local safety projects; urban LPAs must first submit to their local Metropolitan Planning Organizations (MPOs) for preliminary selection and funding prioritization. Rural group 3 and group 4 LPAs first submit their proposed projects to the LTAP HELPERS Program for compliance review, prior to INDOT determination of eligibility for HSIP or HRRRP funding.
INDOT determines eligibility in accordance with the emphasis area defined in the Indiana SHSP and HSIP Local Project Selection Guidance documents. If a proposed local project is found to be eligible for HSIP or HRRRP funding, the Division of LPA and Grant Administration provides oversight of project agreements between INDOT and the LPA to govern project development. The LPA and Grant Administration Division also supports the programming of safety projects by administering inclusion of projects on Local and State Transportation Improvement Plans and authorizing funding year for, scheduling of plan development and construction contract letting. Once a project is placed in Active status on the INDOT scheduling system, the INDOT district office assigns a project manager to coordinate the design and environmental documentation with the project sponsor agency, designer, and various INDOT Divisions and offices in order to bring the project to a construction contract letting.

Program Methodology

Select the programs that are administered under the HSIP.

☒ Median Barrier	☒ Intersection	☐ Safe Corridor
☒ Horizontal Curve	☐ Bicycle Safety	☒ Rural State Highways
☐ Skid Hazard	☒ Crash Data	☐ Red Light Running Prevention
☒ Roadway Departure	☐ Low-Cost Spot Improvements	☒ Sign Replacement And Improvement
☒ Local Safety	☒ Pedestrian Safety	☐ Right Angle Crash
☐ Left Turn Crash	☐ Shoulder Improvement	☐ Segments
☒ Other: Other-Centerline and Edgeline Rumble Stripes	☒ Other: Other-Traffic Signal Visibility Improvement	

Program: **Median Barrier**

Date of Program Methodology: **10/1/2010**

What data types were used in the program methodology?

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

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☒ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ selection committee

☐ Other

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☒ Cost Effectiveness 50

☒ Weighted ranking factors including safety need, roadway geometry and cost effectivness 50

Program: **Intersection**

Date of Program Methodology: **10/1/2010**

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-roadway conditions and sight distance

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical

rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☒ Cost Effectiveness 50

☒ Weighted factors addressing safety need, intersection geometry and cost effectivness 50

Program: **Horizontal Curve**

Date of Program Methodology: **10/1/2013**

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒Relative Weight in Scoring

☐Rank of Priority Consideration

☐Ranking based on B/C	
☐Available funding	
☐Incremental B/C	
☐Ranking based on net benefit	
☒Cost Effectiveness	50
☒Weighted Factors including safety need, roadway geometry and cost effectivness	50

Program: **Rural State Highways**

Date of Program Methodology: **10/1/2010**

What data types were used in the program methodology?

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

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☒ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☒ Competitive application process

☒ selection committee

☐ Other

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☒ Cost Effectiveness 50

☒ Weighted factors based on safety need and cost effectivness 50

Program: **Crash Data**

Date of Program Methodology: 10/1/2010

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

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	50
☐ Incremental B/C	
☐ Ranking based on net benefit	
☒ Cost Effectiveness	50

Program: **Roadway Departure**

Date of Program Methodology: **10/1/2010**

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☒ Cost Effectiveness 50

☒ Weighted factors based on safety need and cost effectivness 50

Program: **Sign Replacement And Improvement**

Date of Program Methodology: **10/1/2010**

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-Geometric Features

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-Retroreflectivity of Existing Signs

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒Relative Weight in Scoring

☐Rank of Priority Consideration

☐Ranking based on B/C

☐Available funding

☐Incremental B/C

☐Ranking based on net benefit

☒Cost Effectiveness 100

Program: **Local Safety**

Date of Program Methodology: **10/1/2010**

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-Geometric Features, marking and signs

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☒ Probability of specific crash types

☒ Excess proportions of specific crash types

☐ Other

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

☒ Yes

☐ No

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

☐ Yes

☒ No

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

State Roads are not addressed in this SubProgram

How are highway safety improvement projects advanced for implementation?

☒Competitive application process

☒selection committee

☐Other

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒Relative Weight in Scoring

☐Rank of Priority Consideration

☐Ranking based on B/C

☐Available funding

☐Incremental B/C

☐Ranking based on net benefit

☒Cost Effectiveness 50

☒Weighted scoring based on safety need and cost effectivness 50

Program: **Pedestrian Safety**

Date of Program Methodology: **10/1/2010**

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-Geometrics features and land use

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C	
☐ Available funding	
☐ Incremental B/C	
☐ Ranking based on net benefit	
☒ Cost Effectiveness	50
☒ Weighted factors using safety need and cost effectivness	50

Program: **Other-Centerline and Edgeline Rumble Stripes**

Date of Program Methodology: **10/1/2012**

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-Paved Shoulder Width

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

☐ Ranking based on B/C

☐ Available funding

☐ Incremental B/C

☐ Ranking based on net benefit

☒ Cost Effectiveness	50
☒ Weighted factors using safety need and cost effectivness	50

Program: **Other-Traffic Signal Visibility Improvement**

Date of Program Methodology: **10/1/2012**

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

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

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

☒ Relative Weight in Scoring

☐ Rank of Priority Consideration

- ☐ Ranking based on B/C
- ☐ Available funding
- ☐ Incremental B/C
- ☐ Ranking based on net benefit
- ☒ Cost Effectiveness 50
- ☒ Weighted factors using safety need and cost effectivness 50

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

54

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

- ☒ 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

What process is used to identify potential countermeasures?

☒Engineering Study

☒Road Safety Assessment

☐Other:

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

☐Highway Safety Manual

☐Road Safety audits

☐Systemic Approach

☒Other: Other-There have been no changes in program methodology since the FFY 2014 reporting period.

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

INDOT is seeking to achieve a balance between obligations of HSIP funds towards implementation of systemic improvements and supporting safety improvements at individual locations with high incidence or risk of severe crash outcomes. Project identification methods include conducting system wide analysis to identify both individual locations with high potential

for severe crashes or wide spread needs for systemic improvements. Also, projects may be programmed as a result of identification by other means such as public complaints filtered through one of the INDOT district offices.

Candidate locations on roads under INDOT jurisdiction are subject to an initial engineering review process similar to a road safety assessment (RSA), in order to identify safety needs and appropriate countermeasures. The INDOT Office of Traffic Safety (OTS) conducts these reviews with support of the INDOT district offices.

The process used to program traffic safety projects on INDOT system roads requires selection and prioritization by state fiscal year. Traffic Safety Asset Management (TSAM) Team produces a proposed list of safety improvement projects for programming in each fiscal year. A uniform scoring procedure is utilized to provide proposed projects with weighted scores that utilize the history of crashes and their severity, traffic volume and road inventory data to a uniform set of criteria in order to assess the relative intensity of safety needs. The process also considers the cost effectiveness of the proposed solution and other factors to generate a weighted score that encompasses the relative need and effectiveness of a proposed safety improvement project. The TSAM team then reviews and deliberates the relative priority of each proposed project and assigns a priority grade for targeted fiscal year of construction. An Executive Finance Committee later considers the proposed projects and then ratifies the safety program for the target construction year.

In regard to candidate projects on the local road system, OTS makes all eligibility determinations for HSIP and HRRRP funding. The necessary information to determine eligibility for HSIP/HRRRP funding typically consists of a Road Safety Assessment (RSA) report. An exception is the submission of eligibility information for certain approved systemic project types that may be provided via an INDOT approved form. Projects located in metropolitan planning areas must first be selected by the relevant MPO prior to eligibility review by INDOT. Rural Local Public Agencies (LPAs) are asked to first work with the LTAP HELPERS Program that acts to advise the LPA and to pre-screen applications for compliance with federal and state regulations. The HELPERS Program often provides valuable advice to the LPAs regarding best practices for traffic safety and facilitates the conduct of appropriate RSA procedures.

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)	36749450.28	79 %	21396622.76	45 %
HRRRP (SAFETEA-LU)	0	0 %	94016.21	0 %
HRRR Special Rule	9360964.12	20 %	7091075.06	15 %
Penalty Transfer - Section 154				
Penalty Transfer – Section 164	0	0 %	17846130.77	38 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	316964	1 %	1037100	2 %
State and Local Funds				

Totals	46427378.4	100%	47464944.8	100%

Obligated program totals includes planned transfers from Advance Construction to the HSIP, HRRRP and 164-HE programs before October 1, 2015.

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

$11,822,848.00

How much funding is obligated to local safety projects?

$11,074,546.00

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

$219,600.00

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

$219,600.00

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

period?

0 %

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

50 %

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

MAP-21 makes it clear that cost effectiveness is to be considered in project selection decisions, and it's recognized that this may become a future requirement for most federal aid funding decisions. However, guidance under MAP-21 is currently unclear as to how the risk of future crashes can be accommodated under current cost effectiveness methodologies. The determination of project eligibility to utilize HSIP funds in a cost effective manner is typically based on past history of crashes. However, under changing traffic demand and operational conditions crash history is not always a useful indicator of future crash risk. In addition, the predictive functions contained in the Highway Safety Manual while helpful in this regard, are still limited in the range of specific situations that may be predicted. As a result proposed safety improvement projects that are seemingly promising candidates for HSIP funding are sometimes rejected due to an inability to meet cost effectiveness criteria. The lack of guidance regarding the application of risk factors relative to cost effectiveness has also had the effect of stifling innovation in regard to trying new types of crash countermeasures. Improved guidance by FHWA in regard to assessment of future traffic safety risk, would be a welcome feature in assessing changing conditions such as land use and travel demand.

The High Risk Rural Roads Program is ineffective and should be abandoned. It's far more likely that HSIP funds are used to make safety improvements on rural local roads. The requirement that ties safety improvement funds to roadway functional class is not an element that rural local agencies typically consider when developing or prioritizing proposed safety improvements, therefore projects submitted for eligibility often do not qualify for this funding program. In addition, many local roads lack accurate volume or inventory data, making a comparison of crash rate averages a difficult task. Analysis of current severe crash trends has not indicated a difference that can be directly attributed to functional class. Improved response to risk factors for severe crashes on rural local roads could be achieved by encouraging states to dedicate a percentage of their HSIP apportionments to construction safety improvements on rural roads medium to low volume roads found to have a higher than nominal severe crash frequency or rate regardless of functional class.

At a minimum state DOT's should be permitted to conduct the calculation of all current special rule requirements. State DOTs are more familiar with current status of roadway functional class and changing urban/rural boundaries. The current calculation conducted by NHTSA is dependent on data from the FARS system that has an inherent time lag. NHTSAs functional class definitions do not match FHWA. Finally, urban/rural boundaries often change and are not always consistent with current land use patterns.

In regard to rural road safety, INDOT plans to engage with LTAP and interested LPA agencies to look for improved data analysis and project selection methods to address severe crash risk on mid to high speed rural local roads. In addition we are hopeful that new guidance regarding the application of crash risk will result in new methodologies to address cost effectiveness analysis and allow for more flexibility regarding determination of project eligibility when spot improvements are needed.

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

INDOT has developed an Asset Management system to address the need for safety improvement actions and to prioritize potential safety improvement projects and actions that improves INDOTs ability to select and produce high value safety projects. Candidate safety projects undergo weighted scoring that emphasizes the need to address high severity crash locations with the construction of cost effective crash countermeasures.

The primary program goal for the Traffic Safety Asset Class is the reduction in the frequency of severe (fatal and incapacitating injury) crashes either by reducing the occurrence of these crashes or their relative severity. Current available analysis tools are designed to consider all injury crashes to be serious so fatal and injury crashes are used for prioritization of countermeasure proposals. For most crash studies conducted at specific locations (sites) property damage data is also used to reveal a complete picture of prevailing crash patterns. For sites on the INDOT system and in most local urban areas, traffic volume data is available to establish nominal and substantive crash rates. Unfortunately, most rural local roads lack recent volume data so a crash loss index was developed under a joint transportation research project with Purdue University. Socioeconomic data and road characteristics are used to develop a local expected road crash loss and crash loss density that is compared to existing crash history to determine relative safety need at a site or road segment. Prior to project programming a site investigation is performed for all crash studies using Road Safety Assessment (RSA) principles to determine if or how the road's design and maintenance characteristics influence crashes. The RSA also acts as an effective means to guide the selection of appropriate and effective crash countermeasures.

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
129629 7	Roadway signs and traffic control Roadway signs and traffic control - other	12 Numbers	195125.93	197704.56	HRRR Special Rule	Rural Principal Arterial - Other	8500	55	State Highway Agency	Intersections	Improve traffic control
129633 7	Intersection traffic control Intersection traffic control - other	20 Numbers	121736.26	121736.26	HRRR Special Rule	Rural Principal Arterial - Other	8500	45	State Highway Agency	Intersections	Install signal
129756 4	Roadway signs and traffic control Sign sheeting - upgrade or replacement	230 Numbers	65992.63	73325.15	HRRR Special Rule	Urban Minor Arterial	8500	35	City of Municipal Highway Agency	Upgrade signing	Improve sign visibility
810159	Roadway delineation Raised pavement markers	24151 Numbers	154832.66	154832.66	HRRR Special Rule	Rural Principal Arterial - Other	20000	55	State Highway Agency	Lane Departure	Guidance with RPM's

1296267	Intersection traffic control Systemic improvements - signal-controlled	27 Numbers	383651.34	383651.34	HRRR Special Rule	Rural Principal Arterial - Other	15000	55	State Highway Agency	Intersections	Improve signal visibility
1006776	Roadway Pavement surface - miscellaneous	2.15 Miles	765529.85	951470.32	HRRR Special Rule	Rural Major Collector	3187	55	State Highway Agency	Roadway Departure	HMA Overlay
1400212	Roadway signs and traffic control Sign sheeting - upgrade or replacement	235 Numbers	54360	68912.45	HRRR Special Rule	Urban Local Road or Street	8500	35	Town or Township Highway Agency	Upgrade signing	Improve sign visibility
1401231	Roadway Pavement surface - miscellaneous	7.86 Miles	951090.95	1188863.7	HRRR Special Rule	Rural Major Collector	831	55	State Highway Agency	Roadway Departure	HMA Overlay
1401308	Roadway Pavement surface - miscellaneous	10.46 Miles	1613668.19	2022285.25	HRRR Special Rule	Rural Major Collector	1135	55	State Highway Agency	Roadway Departure	HMA Overlay
1006645	Roadway Pavement surface - miscellaneous	7.72 Miles	3615026.14	3696326.14	HSIP (Section 148)	Rural Major Collector	1752	55	State Highway Agency	Roadway Departure	HMA Overlay
1297541	Intersection geometry Auxiliary lanes - miscellaneous/other/uns	1 Numbers	999736.1	1473113.88	HRRR Special Rule	Rural Major Collector	5000	45	County Highway Agency	Intersections	Improve geometrics and install

	pecified										traffic signal
100753	Miscellaneous	1 Numbers	2365229.92	2365229.92	Penalty Transfer – Section 164	Rural Principal Arterial - Other	16451	30	State Highway Agency	Bridge deck replacement	Increase pvmt friction
1296296	Intersection traffic control Systemic improvements - signal-controlled	60 Numbers	1036877.14	1037072.14	Penalty Transfer – Section 164	Rural Principal Arterial - Other	30000	55	State Highway Agency	Intersections	Improve signal visibility
1296334	Roadway delineation Roadway delineation - other	6.35 Miles	97204.31	97204.31	HSIP (Section 148)	Rural Minor Arterial	4472	45	State Highway Agency	Roadway Departure	Install CL rumble stripes and improve sign visibility
1296336	Miscellaneous	36 Numbers	530995.85	530995.85	Penalty Transfer – Sectio	Rural Principal Arterial - Other	8500	55	State Highway Agency	Intersections	Improve pavement markings and improve sign

					n 164						visibility
1400582	Roadway delineation Raised pavement markers	22740 Numbers	118868.44	118868.44	Penalty Transfer – Section 164	Rural Principal Arterial - Other	8500	55	State Highway Agency	Lane Departure	Guidance with RPM's
201320	Intersection geometry Intersection geometry - other	0.45 Miles	2298864.02	2358222.85	Penalty Transfer – Section 164	Rural Minor Arterial	1850	45	State Highway Agency	Roadway Departure	Curve Correction
1401096	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	1 Numbers	9600	12000	HSIP (Section 148)	Urban Local Road or Street	8500	35	City of Municipal Highway Agency	Pedestrians	Planning
1296268	Intersection traffic control Intersection flashers - modify existing	18 Numbers	185603.86	185603.86	Penalty Transfer – Section 164	Rural Principal Arterial - Other	10000	55	State Highway Agency	Intersections	Improve flashing beacon display and improve sign and marking

											visibility
810118	Roadway delineation Raised pavement markers	60771 Numbers	542288.06	542288.06	Penalty Transfer – Section 164	Rural Principal Arterial - Other	8500	55	State Highway Agency	Lane Departure	Guidance with RPM's
1296260	Intersection traffic control Systemic improvements - signal-controlled	53 Numbers	1078193.54	1083193.54	Penalty Transfer – Section 164	Rural Principal Arterial - Other	30000	55	State Highway Agency	Intersections	Improve signal visibility
1173414	Roadway delineation Raised pavement markers	25597 Numbers	175630.59	175630.59	Penalty Transfer – Section 164	Rural Principal Arterial - Other	8500	55	State Highway Agency	Lane Departure	Guidance with RPM's
901702	Roadway Pavement surface - miscellaneous	13.06 Miles	5112551.61	5452351.61	Penalty Transfer – Section 164	Rural Major Collector	774	55	State Highway Agency	Roadway Departure	Increase pvmt friction

1173409	Intersection traffic control Systemic improvements - signal-controlled	3 Numbers	461609.52	461609.52	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	40	State Highway Agency	Intersections	Improve signal visibility
1173410	Roadway delineation Raised pavement markers	21625 Numbers	194627.77	194627.77	Penalty Transfer – Section 164	Rural Principal Arterial - Other	8500	55	State Highway Agency	Lane Departure	Guidance with RPM's
1173673	Roadway signs and traffic control Sign sheeting - upgrade or replacement	30 Numbers	237897.73	237897.73	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1382688	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	8798.17	82315.53	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1382689	Intersection traffic control Systemic improvements - signal-	1 Numb	79705.96	79705.96	Penalty Transf	Urban Principal Arterial -	10000	45	State Highway	Intersections	Improve signal and sign

	controlled	ers			er – Section 164	Other			Agency		visibility
1382690	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	163481.66	163481.66	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1382691	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	80761.56	80761.56	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1382692	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	76478.26	76478.26	Penalty Transfer – Section 164	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1382693	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	80545.11	80545.11	Penalty Transfer – Sectio	Urban Principal Arterial - Other	10000	45	State Highway Agency	Intersections	Improve signal and sign visibility

					n 164						
1401166	Roadway delineation Longitudinal pavement markings - remarking	5.01 Miles	150640.21	150640.21	HSIP (Section 148)	Rural Minor Arterial	10000	45	State Highway Agency	Roadway Departure	Install CL rumble stripes and improve sign visibility
1401172	Interchange design Interchange design - other	7 Numbers	200256.96	200256.96	HSIP (Section 148)	Urban Principal Arterial - Interstate	25000	55	State Highway Agency	Roadway Departure	Provide positive guidance
1401174	Interchange design Interchange design - other	1 Numbers	69017.6	69017.6	HSIP (Section 148)	Urban Principal Arterial - Interstate	25000	65	State Highway Agency	Roadway Departure	Provide positive guidance
1172182	Intersection traffic control Systemic improvements - signal-controlled	10 Numbers	1242406.74	1243988.74	HSIP (Section 148)	Urban Principal Arterial - Other	20000	45	State Highway Agency	Intersections	Improve signal and sign visibility
1400718	Miscellaneous	1 Numbers	210000	210000	HSIP (Section 148)	Rural Principal Arterial - Other	1000	55	State Highway Agency	Data	Planning - SNIP 2 Development

100445	Roadway Roadway widening - add lane(s) along segment	0.8 Miles	2768240.36	5618286.77	HSIP (Section 148)	Urban Principal Arterial - Other	18969	30	State Highway Agency	Intersections	Redesign intersection approach
600630	Roadway Roadway widening - add lane(s) along segment	0.5 Miles	1911372.13	2091797.13	HSIP (Section 148)	Urban Minor Arterial	12050	55	State Highway Agency	Intersections	Redesign intersection approach
1173439	Roadway delineation Raised pavement markers	21137 Numbers	288099.63	288099.63	HSIP (Section 148)	Rural Principal Arterial - Other	8500	55	State Highway Agency	Lane Departure	Guidance with RPM's
1296877	Intersection traffic control Systemic improvements - signal-controlled	28 Numbers	410843.2	412343.2	HSIP (Section 148)	Rural Principal Arterial - Other	10000	55	State Highway Agency	Intersections	Improve signal and sign visibility
1296921	Roadway delineation Roadway delineation - other	9.19 Miles	240916.06	240916.06	HSIP (Section 148)	Rural Major Collector	7555	55	State Highway Agency	Roadway Departure	Install rumble stripes
1296934	Roadway delineation Roadway delineation - other	10.22 Miles	177106.38	177106.38	HSIP (Section 148)	Rural Major Collector	5902	55	State Highway Agency	Roadway Departure	Install rumble stripes
1401012	Roadway delineation Raised pavement markers	9919 Numb	226148.88	246148.88	HSIP (Sectio	Rural Principal Arterial -	25000	70	State Highway	Roadway Departure	Guidance with

		ers			n 148)	Interstate			Agency		RPM's
1006118	Intersection traffic control Systemic improvements - signal-controlled	12 Numbers	298146.4	299146.4	HSIP (Section 148)	Urban Principal Arterial - Other	20590	45	State Highway Agency	Intersections	Improve signal and sign visibility
1296912	Roadside Barrier - cable	13.9 Miles	1430851.49	1493707.72	HSIP (Section 148)	Rural Principal Arterial - Interstate	25000	70	State Highway Agency	Roadway Departure	Install Cable Barrier
1500255	Intersection geometry Auxiliary lanes - extend existing left-turn lane	1.83 Miles	2437793.22	2654733.22	Penalty Transfer – Section 164	Rural Principal Arterial - Other	5479	60	State Highway Agency	Intersections	Redesign intersection approach
1383253	Roadside Barrier - other	0.78 Miles	231316.2	231316.2	Penalty Transfer – Section 164	Urban Minor Arterial	8500	40	City of Municipal Highway Agency	Roadway Departure	Install wood guard rail
1297567	Intersection traffic control Systemic improvements - signal-controlled	79 Numbers	342674.55	380749.5	HSIP (Section 148)	Urban Minor Collector	8500	30	City of Municipal Highway	Intersections	Improved crossing signals

									Agency		
1297568	Intersection traffic control Systemic improvements - signal-controlled	26 Numbers	103992.33	115547.03	HSIP (Section 148)	Urban Minor Collector	8500	30	City of Municipal Highway Agency	Intersections	Improved crossing signals
1383068	Roadway signs and traffic control Sign sheeting - upgrade or replacement	331 Numbers	100351.6	108834.54	HSIP (Section 148)	Urban Minor Collector	8500	35	Town or Township Highway Agency	Upgrade signing	Improve sign visibility
1382938	Roadway signs and traffic control Sign sheeting - upgrade or replacement	1000 Numbers	155790	173100	HSIP (Section 148)	Urban Local Road or Street	8500	35	Town or Township Highway Agency	Sign Inventory	Sign inventory
1173467	Roadway signs and traffic control Sign sheeting - upgrade or replacement	916 Numbers	304076.48	337862.75	HSIP (Section 148)	Urban Minor Collector	8500	35	City of Municipal Highway Agency	Upgrade signing	Improve sign visibility
1400869	Roadway signs and traffic control Sign sheeting - upgrade or replacement	500 Numbers	20250	22500	HSIP (Section 148)	Urban Local Road or Street	8500	35	Town or Township Highway	Sign Inventory	Sign inventory

									Agency		
1383159	Pedestrians and bicyclists Pedestrian warning signs - add/modify flashers	166 Numbers	743531.14	826855.72	HSIP (Section 148)	Urban Minor Collector	8500	40	City of Municipal Highway Agency	Pedestrians	Install ped crossing signals
1006095	Roadside Barrier- metal	0.11 Miles	42231.3	42843.3	Penalty Transfer – Section 164	Urban Major Collector	8500	50	City of Municipal Highway Agency	Roadway Departure	Install guard rail
1173081	Intersection geometry Intersection geometrics - miscellaneous/other/unspecified	0.16 Miles	744315.69	827017.43	HSIP (Section 148)	Urban Major Collector	8500	35	City of Municipal Highway Agency	Intersections	Redesign intersection approach
1173287	Intersection traffic control Modify control - all-way stop to roundabout	0.2 Miles	379031.98	387781.99	Penalty Transfer – Section 164	Urban Major Collector	10000	40	Town or Township Highway Agency	Intersections	Install a roundabout
1383310	Roadway signs and traffic control Sign sheeting -	1962 Numb	205720.57	228578.42	HSIP (Sectio	Urban Local Road or	8500	35	City of Municipal	Upgrade signing	Improve sign

	upgrade or replacement	ers			n 148)	Street			Highway Agency		visibility
1383188	Roadway signs and traffic control Sign sheeting - upgrade or replacement	3139 Numbers	641670.27	666955.85	HSIP (Section 148)	Rural Minor Arterial	10000	45	County Highway Agency	Upgrade signing	Improve sign visibility
1401036	Intersection traffic control Systemic improvements - signal-controlled	25 Numbers	93384.48	93384.48	HSIP (Section 148)	Urban Principal Arterial - Other Freeways and Expressways	20000	35	State Highway Agency	Intersections	Improve signal and sign visibility
1006026	Roadway signs and traffic control Sign sheeting - upgrade or replacement	367 Numbers	123148.75	136831.95	HSIP (Section 148)	Urban Local Road or Street	8500	35	City of Municipal Highway Agency	Upgrade signing	Improve sign visibility
1173210	Intersection traffic control Systemic improvements - signal-controlled	6 Numbers	399877.01	444307.79	HSIP (Section 148)	Urban Local Road or Street	10000	35	City of Municipal Highway Agency	Intersections	Improve signal and sign visibility
1383061	Roadway signs and traffic control Sign sheeting -	250 Numb	130253.48	180529.78	HSIP (Sectio	Rural Local Road or	8500	50	County Highway	Upgrade signing	Improve sign

	upgrade or replacement	ers			n 148)	Street			Agency		visibility
1383087	Intersection traffic control Modify control - all-way stop to roundabout	0.19 Miles	1341118.04	1564512.04	HSIP (Section 148)	Urban Minor Arterial	15000	45	City of Municipal Highway Agency	Intersections	Install a roundabout
1383103	Roadway signs and traffic control Sign sheeting - upgrade or replacement	269 Numbers	75099.76	83444.18	HSIP (Section 148)	Urban Local Road or Street	8500	35	Town or Township Highway Agency	Upgrade signing	Improve sign visibility
1383252	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	424 Numbers	1436773.24	1606414.71	HSIP (Section 148)	Urban Local Road or Street	10000	35	City of Municipal Highway Agency	Intersections	Improve ped crossing signals
1383256	Intersection traffic control Modify traffic signal - miscellaneous/other/unspecified	5 Numbers	171609.35	190677.05	HSIP (Section 148)	Rural Principal Arterial - Other	25000	35	County Highway Agency	Intersections	Improve ped crossing signals
1383674	Roadway signs and traffic control Sign sheeting - upgrade or replacement	1504 Numbers	272119.45	302354.94	HSIP (Section 148)	Urban Local Road or Street	8500	35	City of Municipal Highway	Upgrade signing	Improve sign visibility

									Agency		
1400453	Intersection traffic control Systemic improvements - signal-controlled	322 Numbers	2499483.47	2777203.85	HSIP (Section 148)	Urban Local Road or Street	15000	35	City of Municipal Highway Agency	Intersections	Improve signal and sign visibility
1400580	Pedestrians and bicyclists Pedestrian warning signs - add/modify flashers	85 Numbers	1046817.6	1055824.27	HSIP (Section 148)	Urban Local Road or Street	15000	35	City of Municipal Highway Agency	Pedestrians	Install ped crossing signals
1400970	Pedestrians and bicyclists Pedestrian warning signs - add/modify flashers	194 Numbers	145173.19	161303.54	HSIP (Section 148)	Urban Local Road or Street	8500	35	City of Municipal Highway Agency	Pedestrians	Install ped crossing signals
1173396	Roadway signs and traffic control Sign sheeting - upgrade or replacement	753 Numbers	183150	203504	HSIP (Section 148)	Urban Local Road or Street	8500	40	City of Municipal Highway Agency	Upgrade signing	Improve sign visibility
1172053	Roadway signs and traffic control Sign sheeting - upgrade or replacement	415 Numbers	81000	96000.01	HSIP (Section 148)	Urban Local Road or Street	8500	35	City of Municipal Highway	Upgrade signing	Improve sign visibility

									Agency		
1383254	Roadside Barrier end treatments (crash cushions, terminals)	7 Numbers	319964.09	319964.09	HSIP (Section 148)	Rural Local Road or Street	15000	40	County Highway Agency	Roadway Departure	Upgrade Guardrail End Treatments
0600705	Intersection geometry Intersection geometrics - miscellaneous/other/unspecified	0.19 Miles	1101894.78	1201317	Penalty Transfer – Section 164	Urban Principal Arterial - Other	15000	45	State Highway Agency	Intersections	Redesign Intersection approach

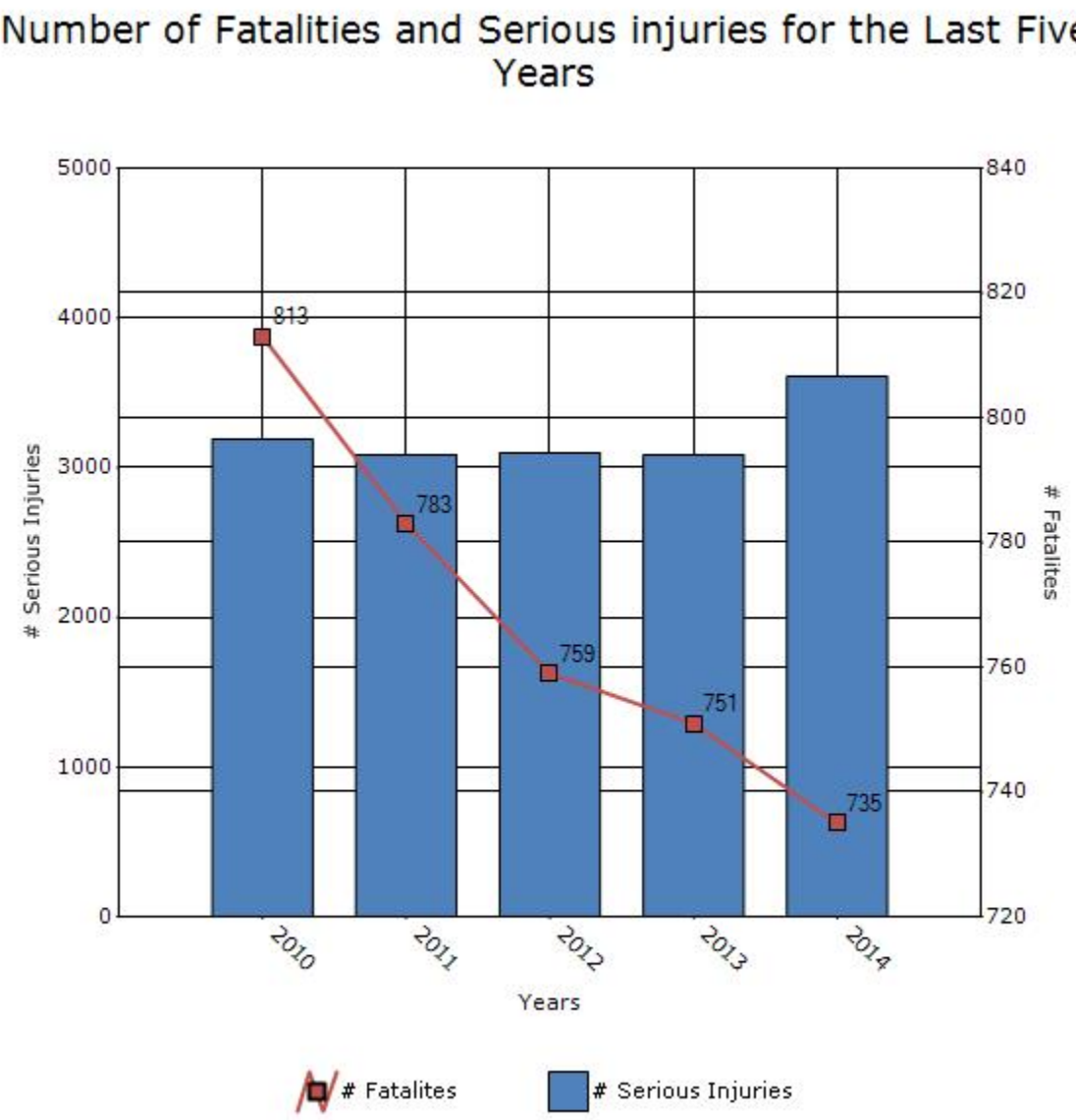
Progress in Achieving Safety Performance Targets

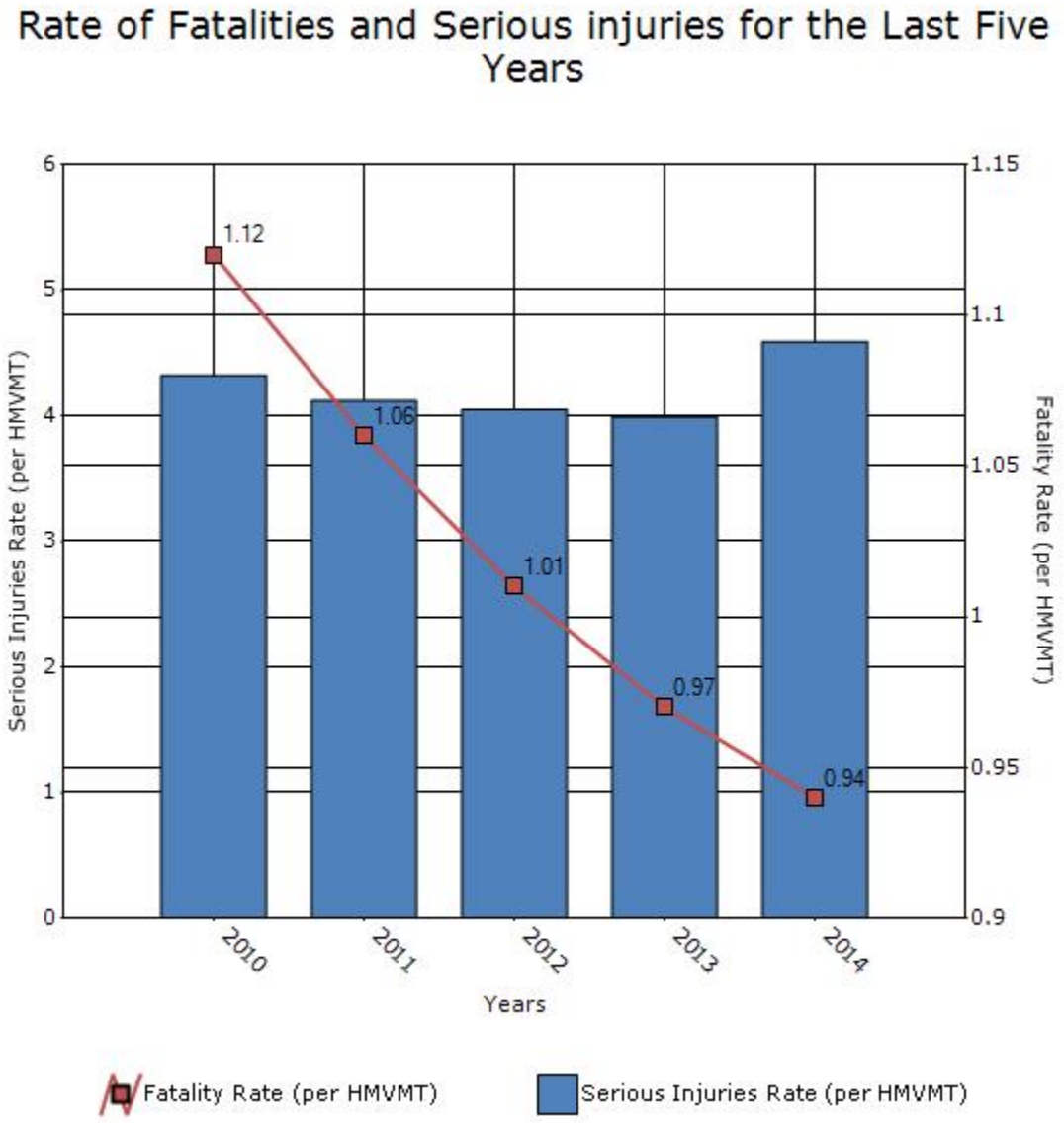
Overview of General Safety Trends

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	813	783	759	751	735
Number of serious injuries	3190	3086	3098	3086	3609
Fatality rate (per HMVMT)	1.12	1.06	1.01	0.97	0.94
Serious injury rate (per HMVMT)	4.32	4.12	4.05	3.99	4.59

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


Number of Fatalities and Serious injuries for the Last Five Years
5000
4000
3000
2000
1000
0
Serious Injuries
840
820
800
780
760
740
720
Fatalites
813
783
759
751
735
2010
2011
2012
2013
2014
Years
Fatalites
Serious Injuries



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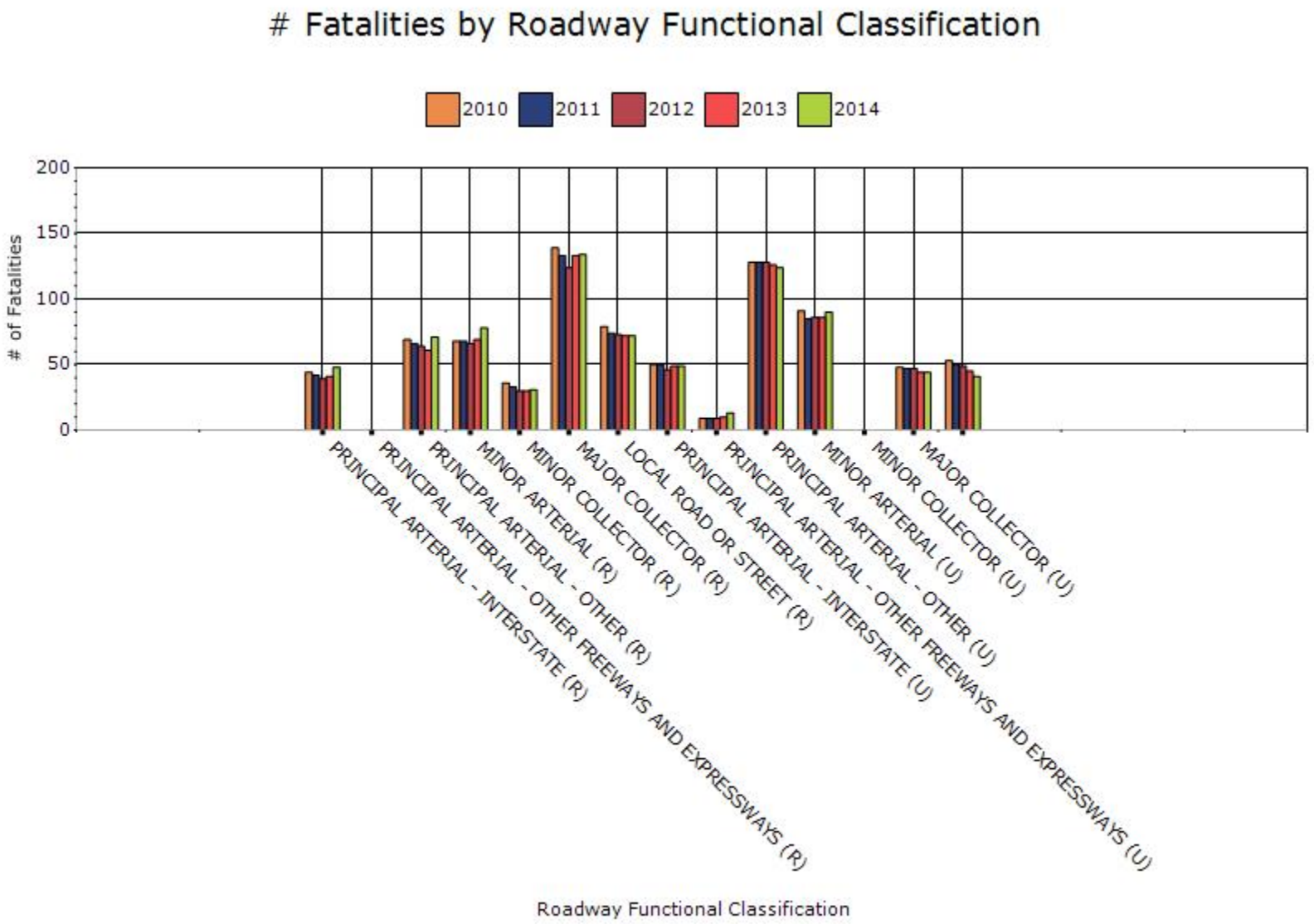
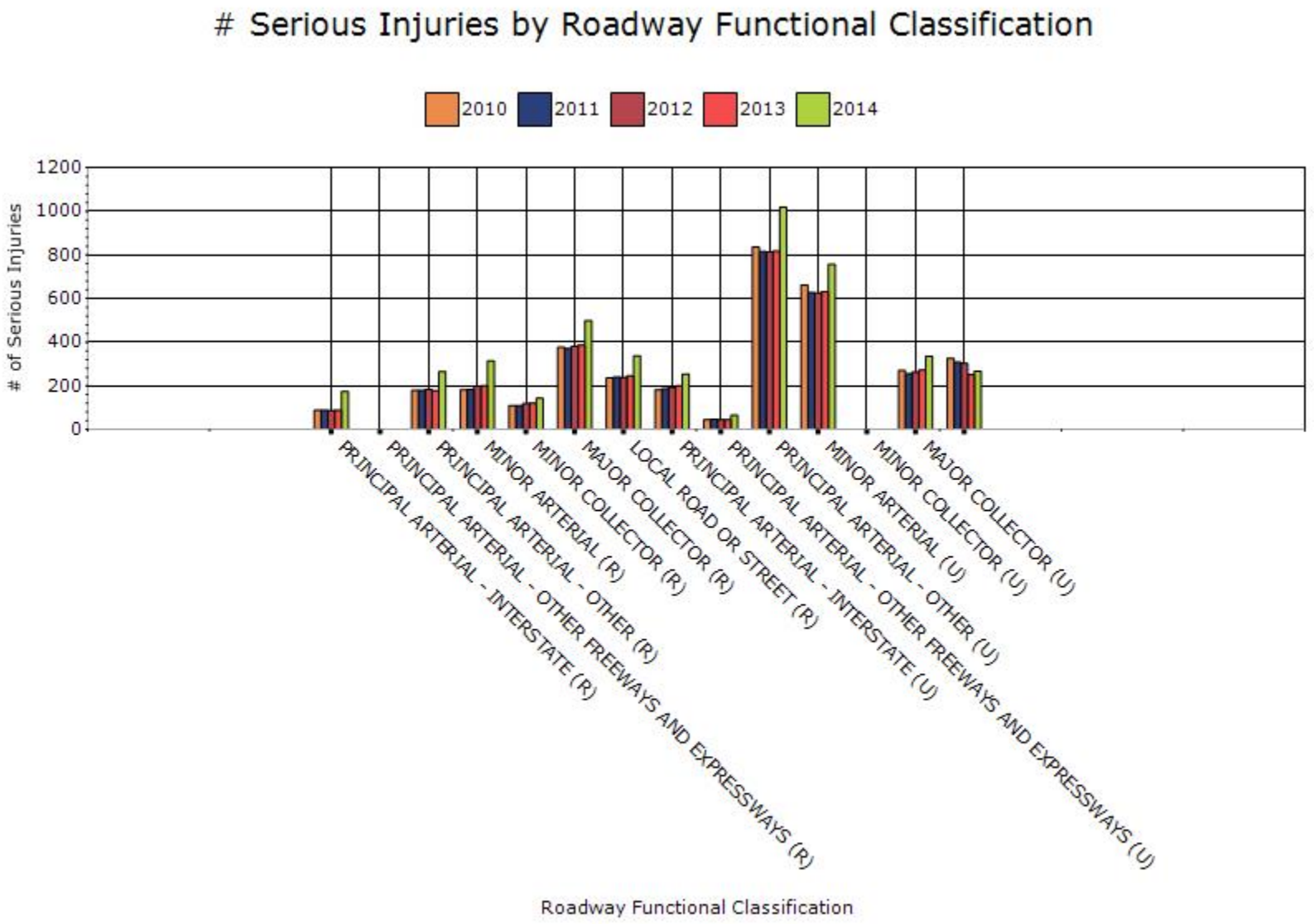
To the maximum extent possible, present performance measure* data by functional classification and ownership.

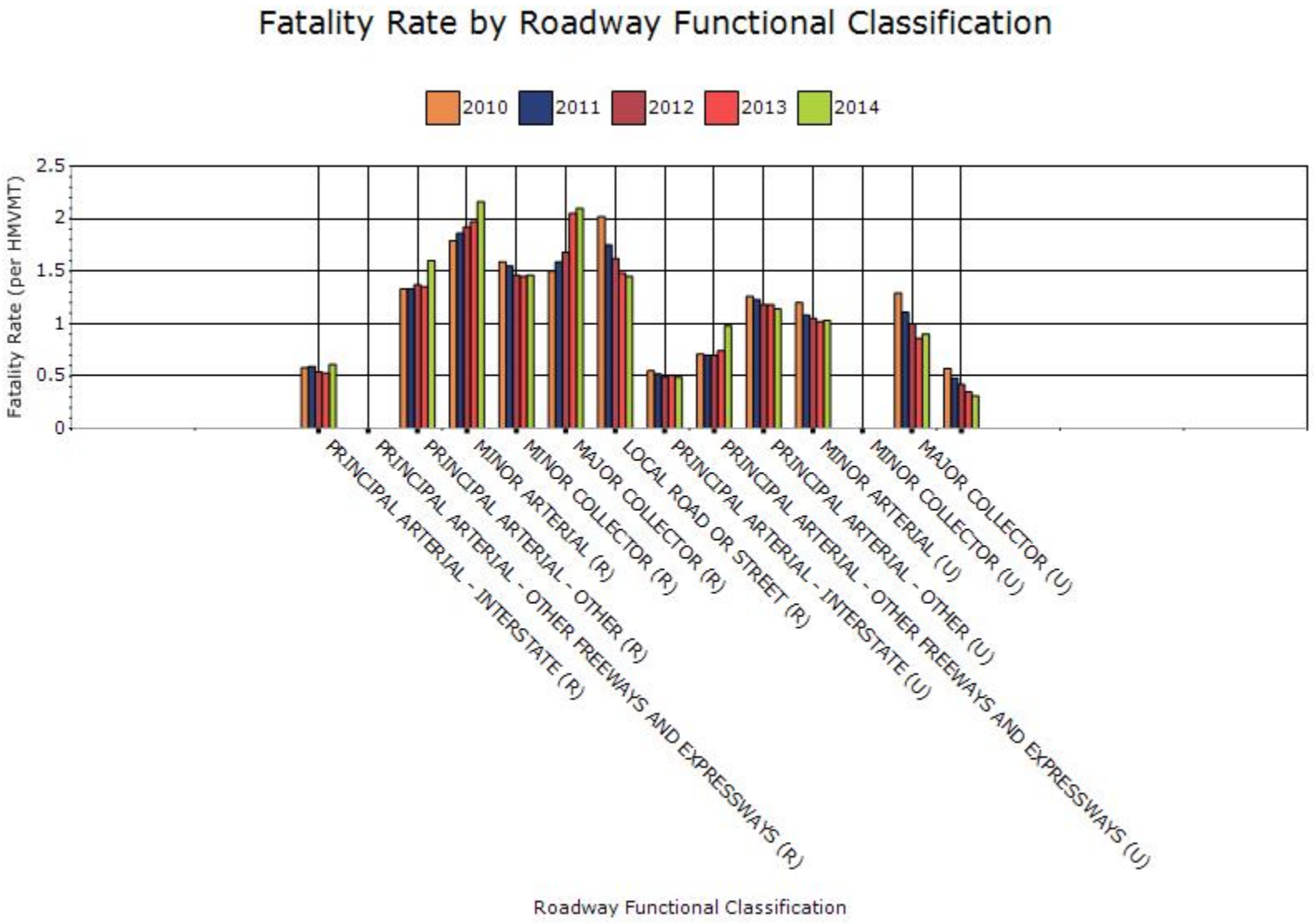
Year - 2014

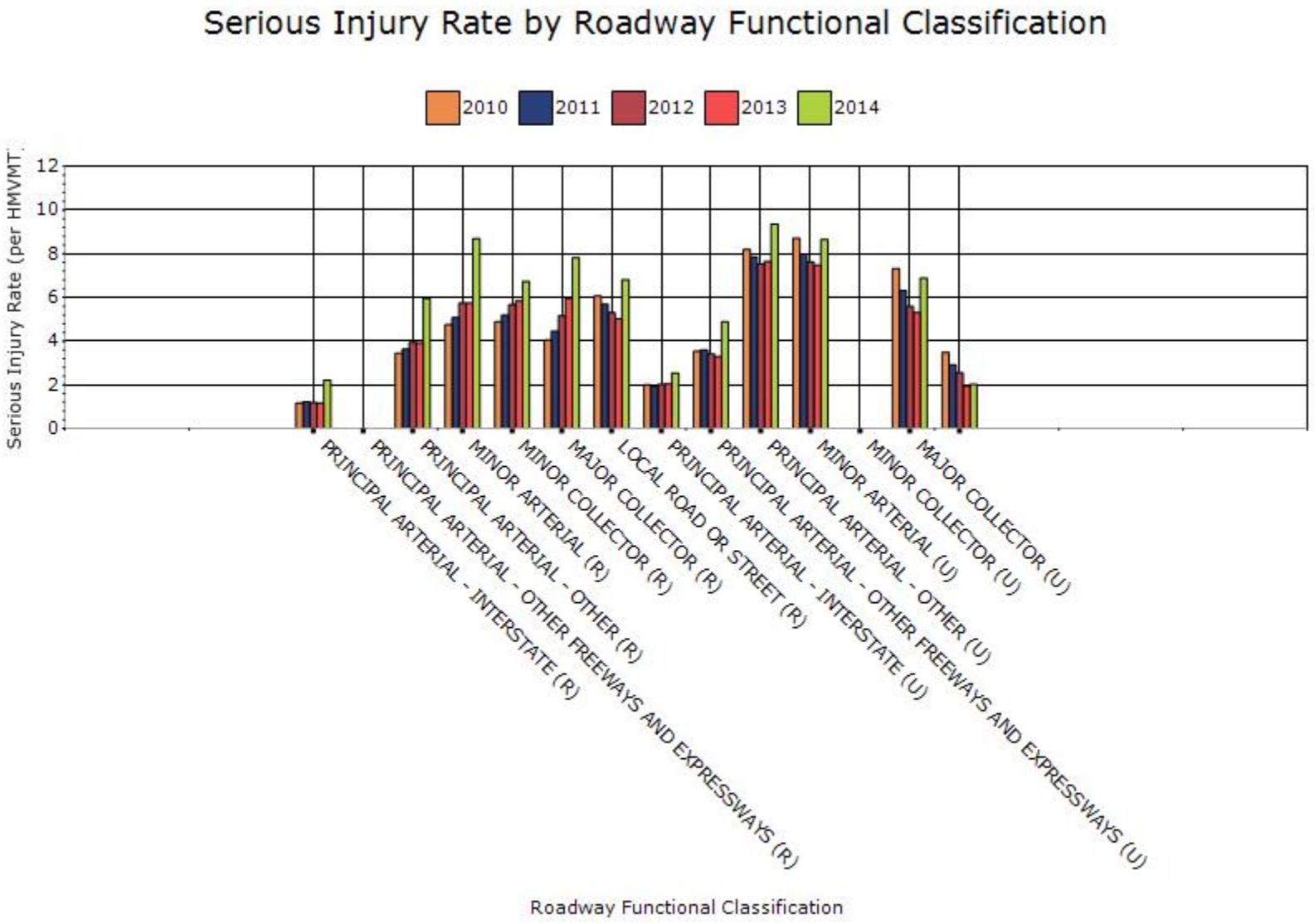
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	48	174	0.61	2.22
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER	71	265	1.6	5.95
RURAL MINOR ARTERIAL	78	314	2.16	8.69
RURAL MINOR COLLECTOR	31	143	1.46	6.73
RURAL MAJOR COLLECTOR	134	499	2.1	7.81
RURAL LOCAL ROAD OR STREET	72	337	1.45	6.81
URBAN PRINCIPAL	49	254	0.49	2.54

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	13	65	0.98	4.88
URBAN PRINCIPAL ARTERIAL - OTHER	124	1018	1.14	9.36
URBAN MINOR ARTERIAL	90	757	1.03	8.64
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	44	335	0.9	6.89
URBAN LOCAL ROAD OR STREET	41	267	0.31	2.03


Fatalities by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Fatalities
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

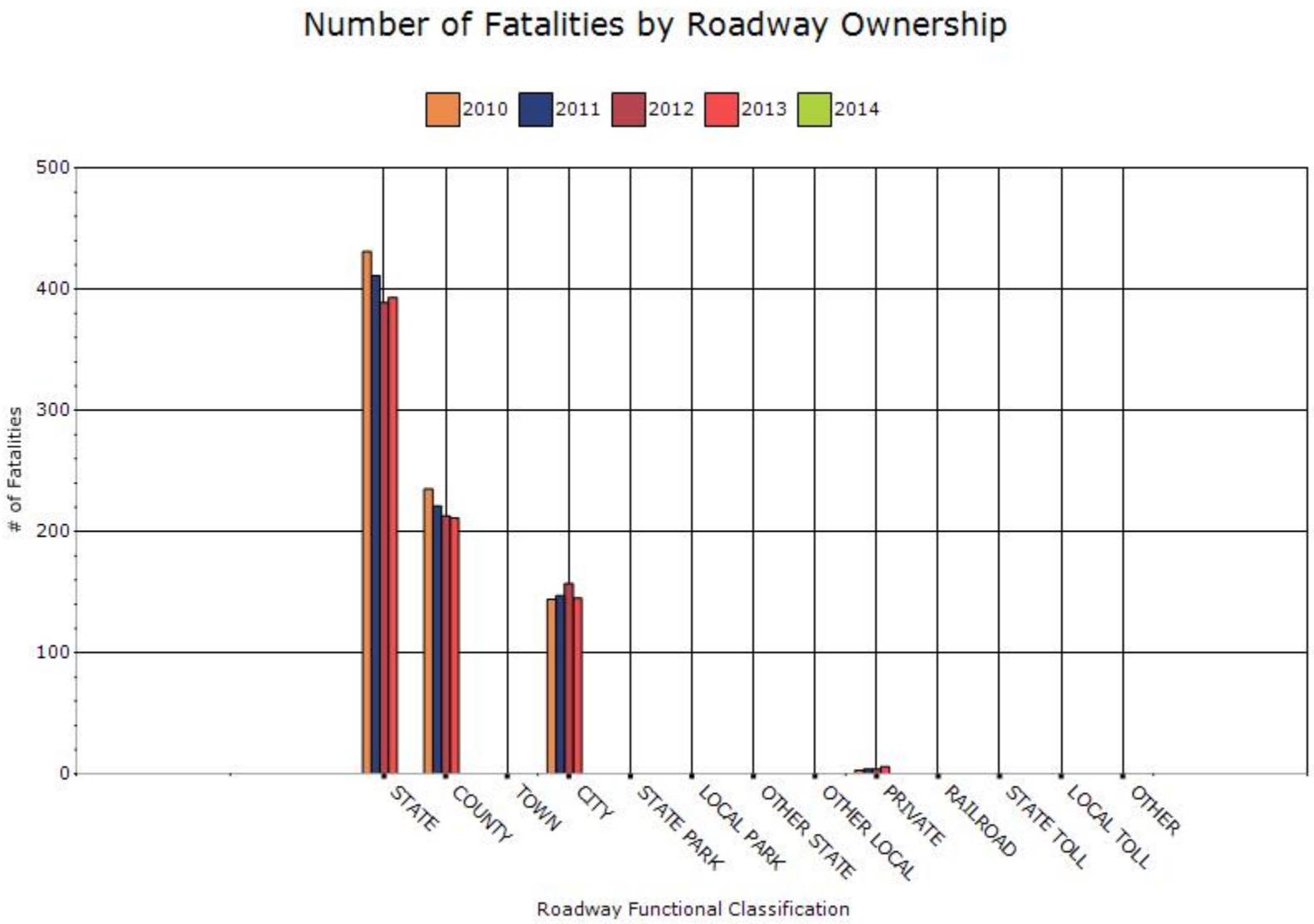

Serious Injuries by Roadway Functional Classification
2010
2011
2012
2013
2014
# of Serious Injuries
1200
1000
800
600
400
200
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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

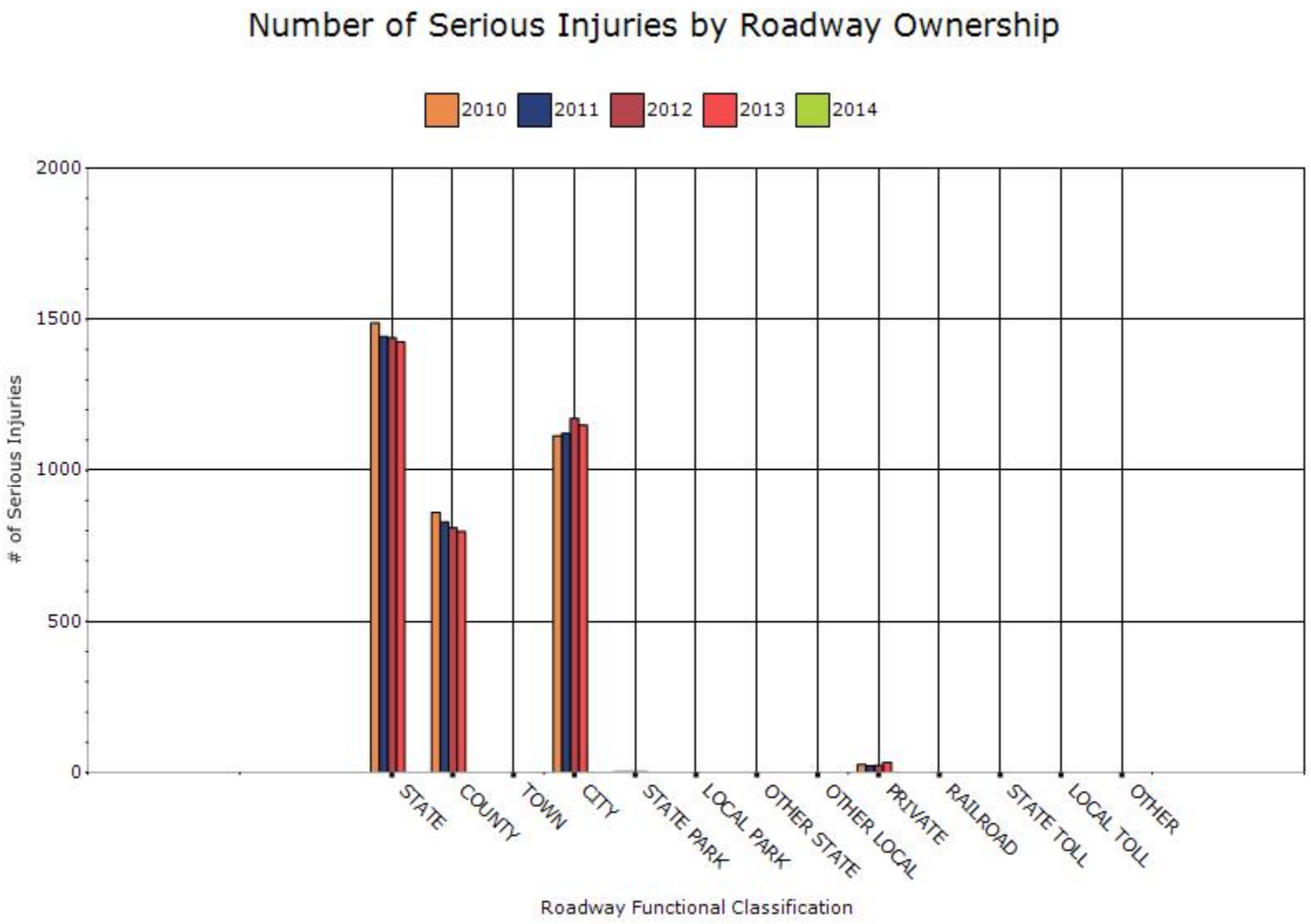

Fatality Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Fatality Rate (per HMVMT)
2.5
2
1.5
1
0.5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
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

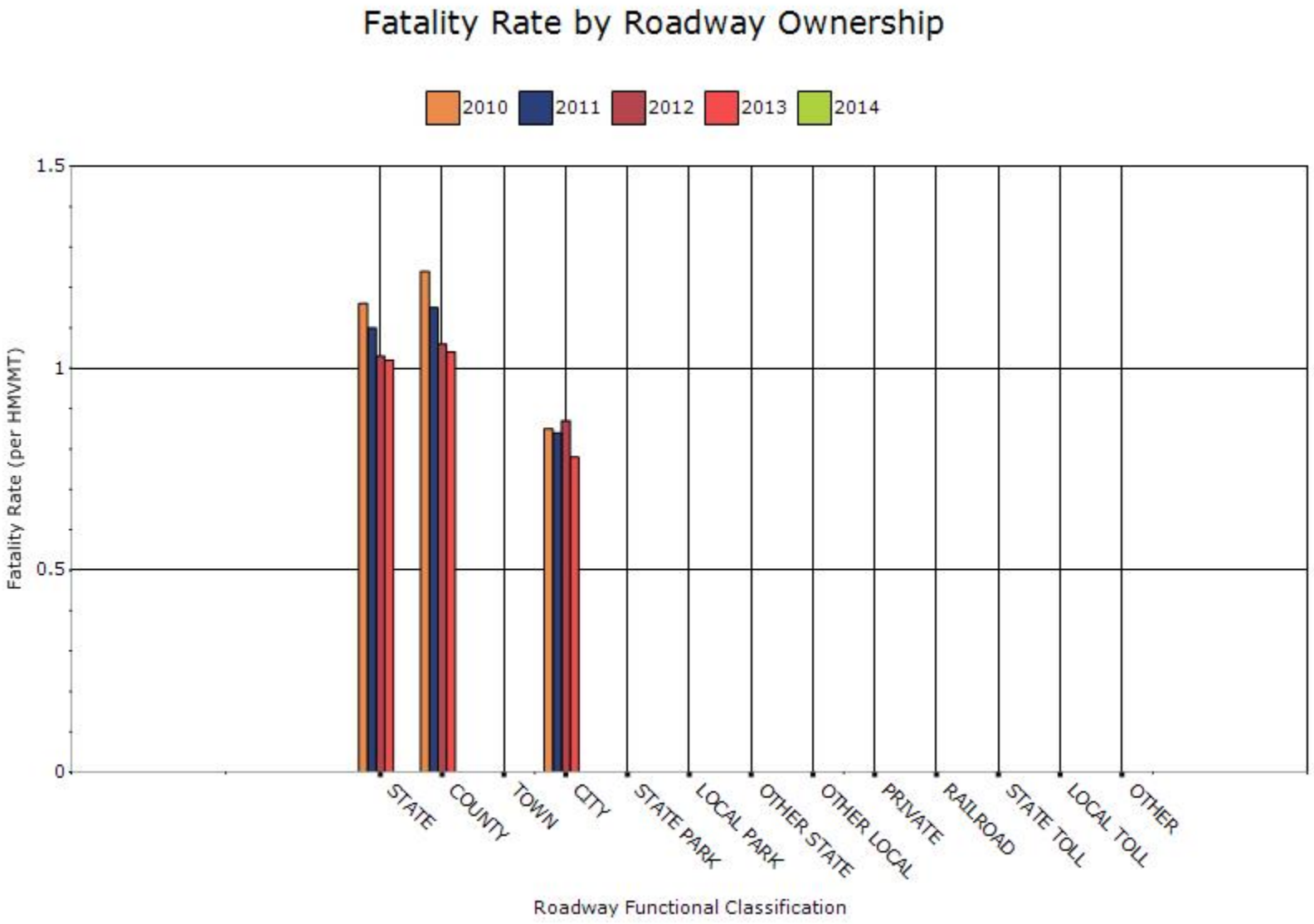

Serious Injury Rate by Roadway Functional Classification
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
0
2
4
6
8
10
12
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

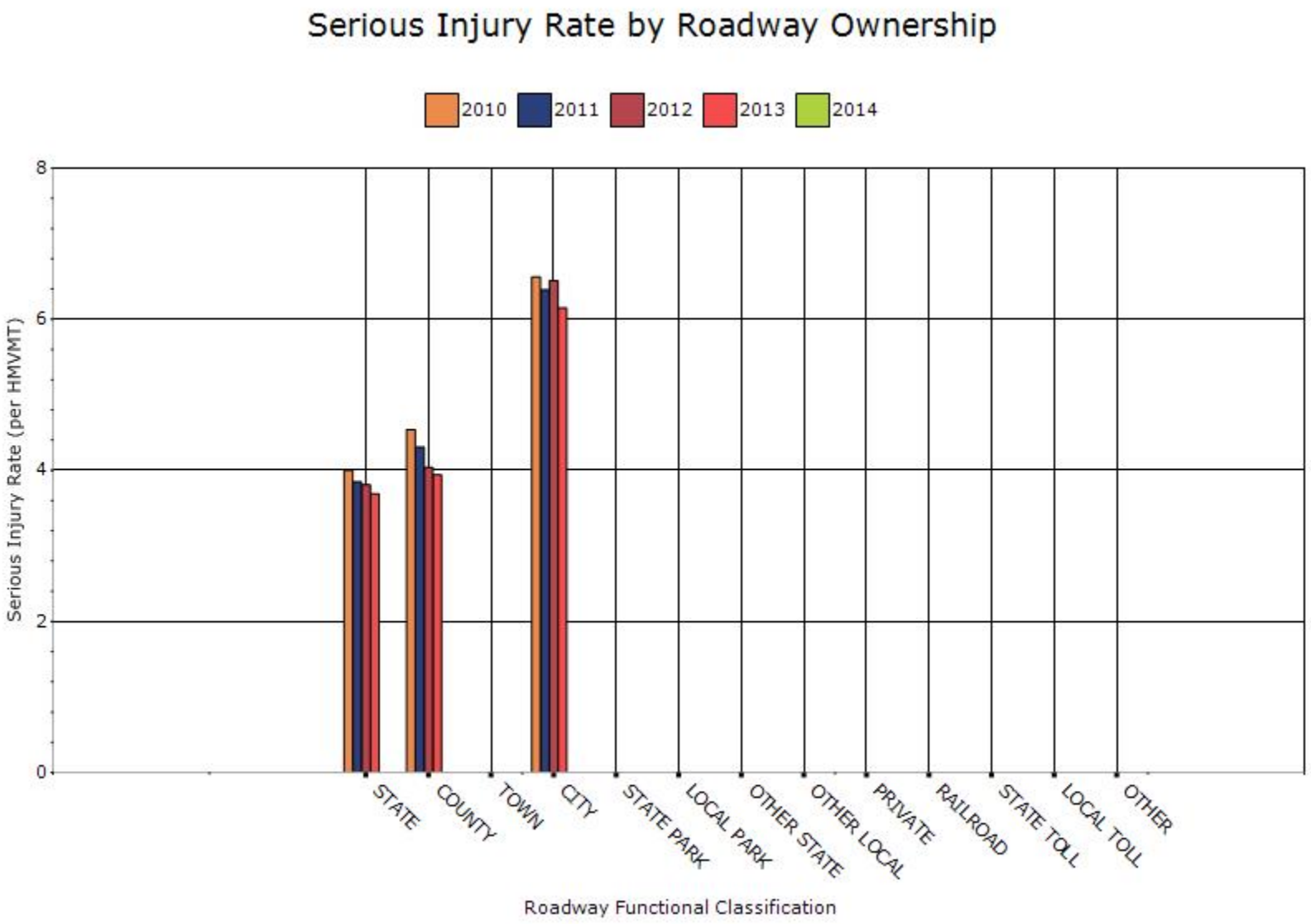
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	393	1425	1.02	3.69
COUNTY HIGHWAY AGENCY	211	798	1.04	3.94
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	145	1150	0.78	6.15
STATE PARK, FOREST, OR RESERVATION AGENCY	0	2	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)	6	34	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
500
400
300
200
100
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
2000
1500
1000
500
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
1.5
1
0.5
0
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
2010
2011
2012
2013
2014
Serious Injury Rate (per HMVMT)
0
2
4
6
8
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification

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INDOT along with the Indiana TRCC will continue to monitor and assess the effect of the change in the method of injury severity classification. To date, the apparent effect of this change has been a significant rise in the number of crash casualties that are classified as class “A” (incapacitating) injuries. It is expected that this trend will continue as data for calendar 2015 and beyond is added to the crash records system. Also expected is a continuing effect on calculation of 5 year average data for serious injury (level A) crash frequency, casualty counts and resulting rate (per HMVMT). Offsetting reductions are expected in crash events and casualties classified at lower severity. We ask that FHWA consider this change in reporting methodology as part of any review of Indiana Crash data.

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

In 2014, the early estimate of vehicle miles of travel increased by 2.57% above 2013. The number of police reported fatalities increased by 1.3%. All injury crashes increased by 2.9%. Reported incapacitating (severe) injury crashes increased by 51.3%, but the large increase is primarily the result of a change in the method used to classify the severity of casualties as Class "A" (incapacitating) injury. The new injury classification methodology will be described below.

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Statewide 2014 crash data shows that Indiana did not exceed the performance goals outlined in the Indiana SHSP for 5 year rolling averages of Fatalities, Severe (Incapacitating) Injuries, Fatality Rate and Severe Injury Rate. However in 2015, Indiana was part of a national trend of increased numbers of severe crash events.

Crashes resulting from vehicle departure from the travel lanes (including roadway departure, head-on and opposite direction sideswipe) continue to be the most numerous harmful events in 2014. In 2014, the 5 year average of fatalities resulting from single vehicle lane departures this crash category accounted for 46.1% of all Indiana motor vehicle fatalities, compared to the 5 year average of 48.7% calculated in 2013. As a result, INDOT has developed several systemic improvement types aimed at reducing the incidence and consequences of lane departure crashes.

Fatalities as a result of intersection crashes make up the second worst type of harmful event. In 2014 the 5 year average of intersection fatalities contributed 24.1% of total traffic fatalities, similar to the 24.2% average from 2013. INDOT is advancing systemic improvements to increase the visibility of both signalized and un-signalized intersections. INDOT is also engaged in a changing out older 5 section "permitted/protected" left turn traffic signal heads for the MUTCD approved 4-section heads using a flashing yellow arrow for permissive left turns. INDOT is also placing increased emphasis on timely modernization of traffic signals, along with increased use of innovative intersection types to reduce traffic conflicts; such as Roundabouts, J Turns and Michigan Left Turn designs. In 2014, INDOT produced a guideline document to assist traffic designers in the task of making preliminary determination of feasibility of various alternative intersection types on the basis of location and traffic data for site conditions.

Indiana is also concerned with the incidence of fatalities involving vulnerable road users such as pedestrians, bicycle and motorcycle riders, and is working with our partners on education efforts. In 2014 the 5 year rolling average rate of pedestrian fatalities made up 8.1% of all traffic fatalities. This is a slight drop from the 8.2% 5 year average recorded in 2013. The 5 year average percentage of fatalities that involve bicyclists was 1.85% compared to the 5 year average in 2013 of 1.70%. It should be kept in mind that rise may be due to larger numbers of bicycle users on Indiana roadways. The number of motorcycle and moped crashes was slightly lower in 2014 compared to 2013, but it should be noted that motorcycle/moped crashes are generally rising in numbers. On the basis of the 5 year rolling averages motorcycle and moped fatalities accounted for 15.9% in 2014 compared to 16.9% for 2013.

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)	0.746	0.752	0.756	0.732	0.758
Serious injury rate (per capita)	1.73	1.646	1.67	1.666	1.682

Fatality and serious injury rate (per capita)	2.48	2.398	2.424	2.396	2.44

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

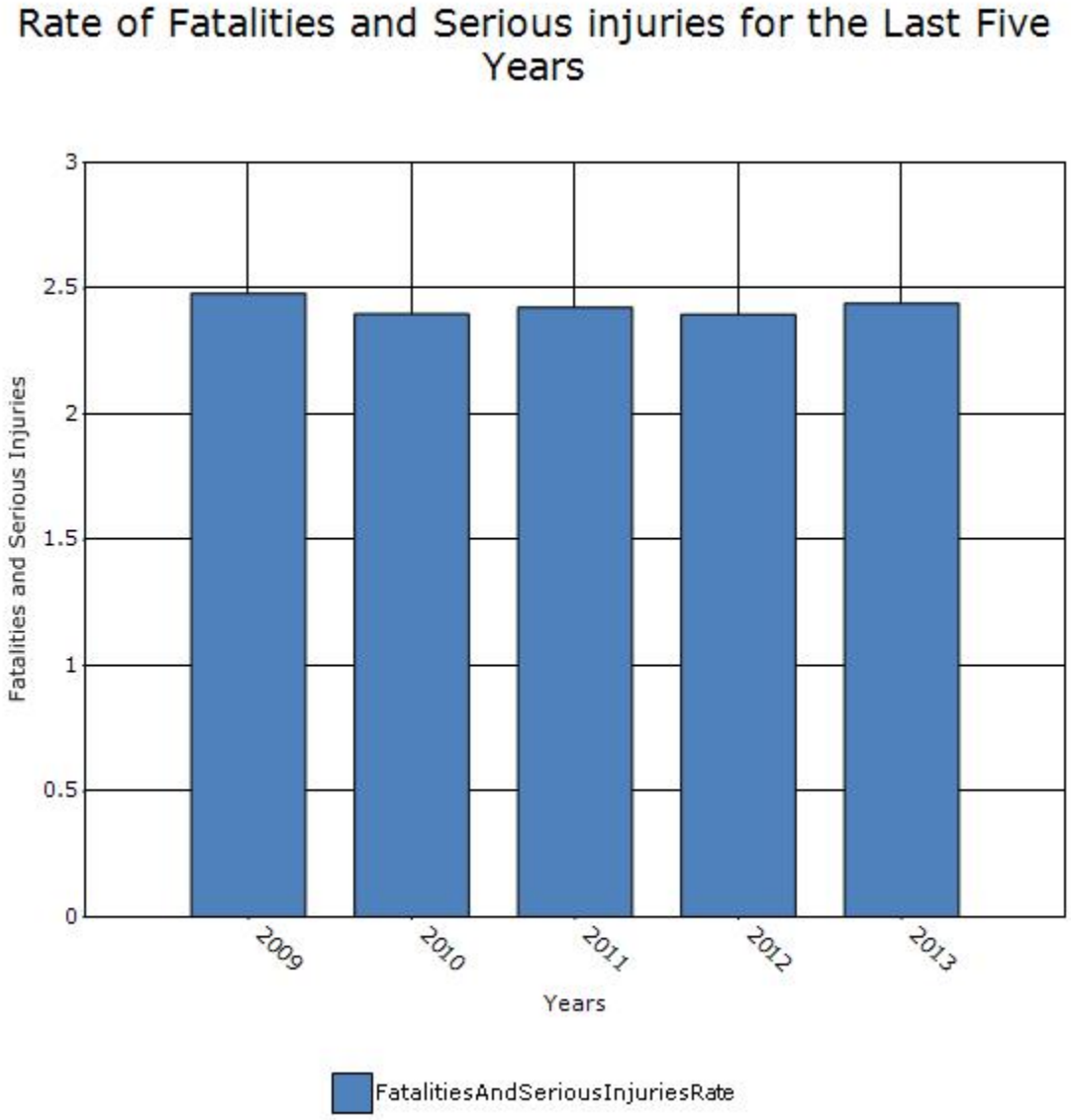
(A) Fatality rate per year = Number of persons age 65 and Older Fatalities (FARS data) for State of Indiana in a given year / FHWA Supplied Number of persons age 65 and Older (per 1,000 total population) for State of Indiana in the same year.

(B) Serious injury rate per year = Number of persons age 65 and Older Serious injuries (Indiana ARIES System) for a given year / FHWA Supplied Number of persons age 65 and Older (per 1,000 total population) for State of Indiana in the same year.

(C) Fatality and Serious injury rate per year = Fatalities of persons age 65 and over + Serious injuries of persons age 65 and over for State of Indiana a given year / FHWA Supplied Number of persons age 65 and Older (per 1,000 total population) for State of Indiana in the same year.

(2011) Calculation of 5 year rolling average for Fatality and Serious Injuries rate = (2011C + 2010C + 2009C + 2008C + 2007C) / 5 = $(2.57 + 2.45 + 2.29 + 2.31 + 2.50) / 5 = 2.42$ ~ rounded = 2.4

(2013) Calculation of 5 year rolling average for Fatalities and Serious Injuries rate = (2013C + 2012C + 2011C +2010C + 2009C) / 5 = $(2.53 + 2.36 + 2.57 + 2.45 + 2.29) / 5 = 2.44$ ~ rounded = 2.4



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:

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

INDOT is in the process with its partner agencies of rewriting the Indiana Strategic Highway Safety Plan (SHSP). In the DRAFT revision of the SHSP, specific countermeasures are generally avoided, in favor of broad National Toward Zero Deaths strategies. Indiana feels that making the SHSP as flexible as possible will provide an advantage in terms of addressing emerging issues and new countermeasures, methodologies or technologies in the coming years.

Greater emphasis has been placed on metropolitan planning organizations to make good choices in selecting safety improvements for HSIP funding. As a result INDOT has requested each of the Indiana MPOs to submit a document describing the data driven process that will be used by each MPO to select candidate safety improvement projects. The submitted procedures are reviewed for approval by the multi-agency Highway Safety Advisory Committee (HSAC). These individual MPO developed process documents will give the local agencies a clear set of criteria to prioritize candidate safety improvements prior to applying for HSIP funding, at the same time allowing for local input into the project selection process, and improve the ability of INDOT or FHWA to conduct future process reviews.

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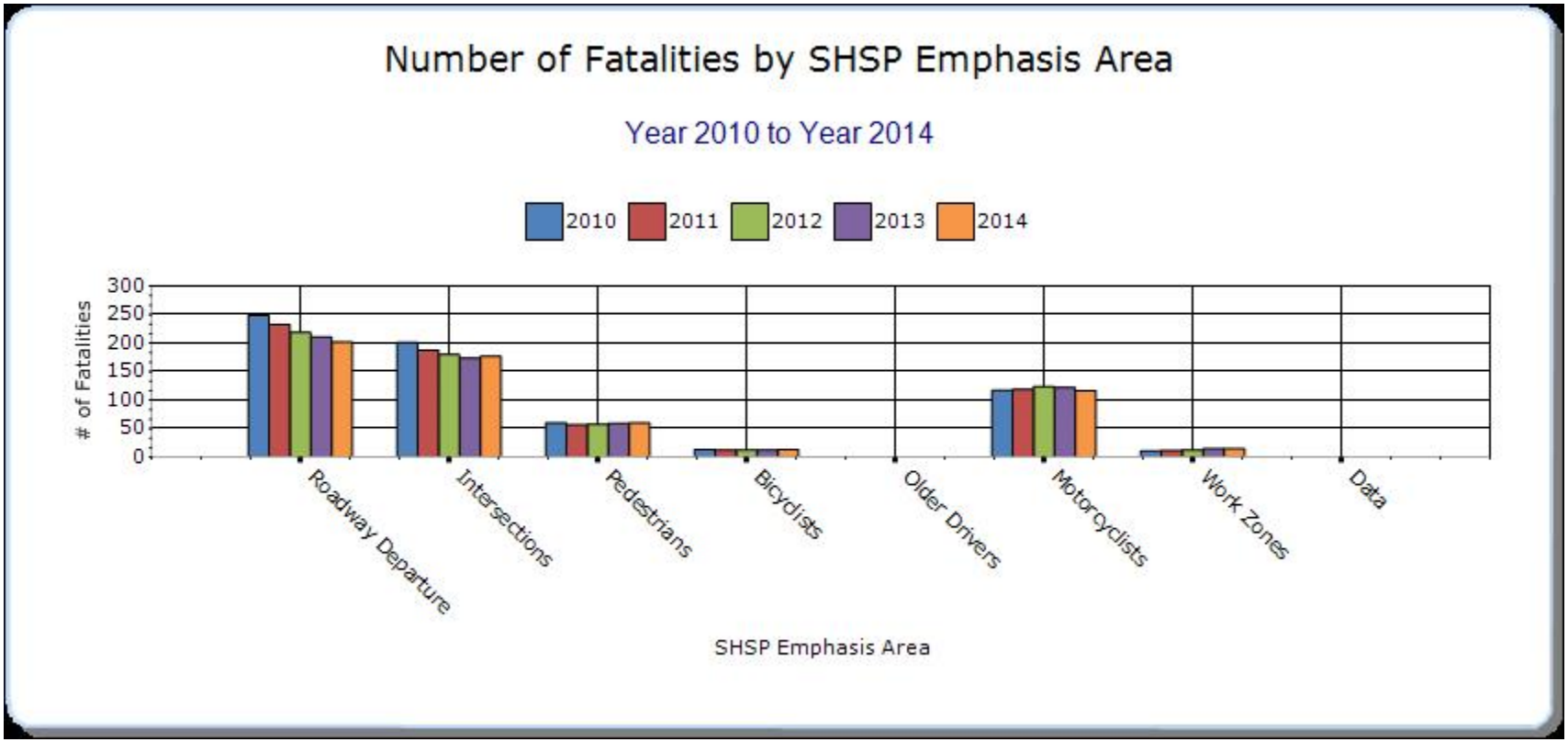
year average data for serious injury (level A) crash frequency, casualty counts and resulting rate (per HMVMT). Offsetting reductions are expected in crash events and casualties classified at lower severity. We ask that FHWA consider this change in reporting methodology as part of any review of Indiana Crash data.

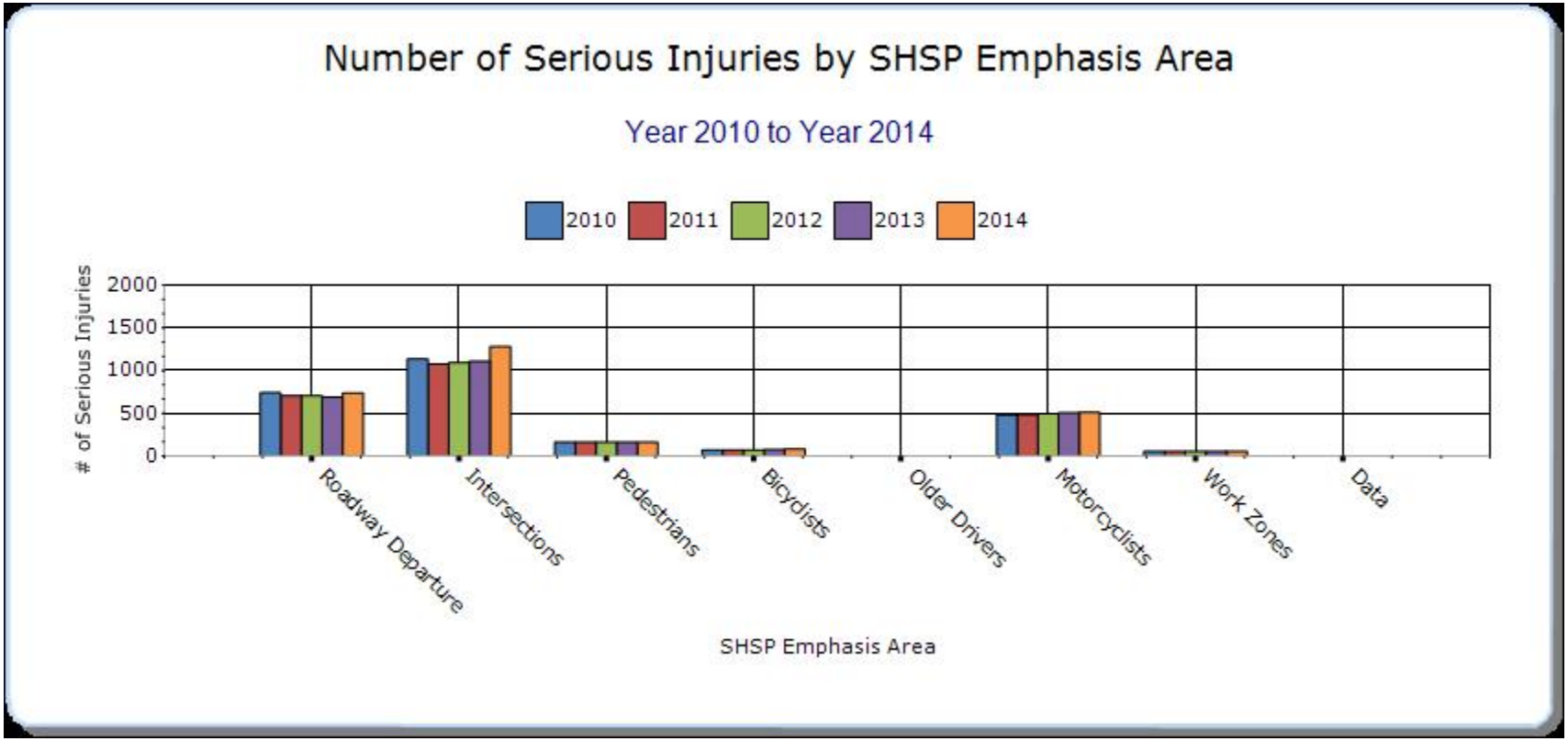
SHSP Emphasis Areas

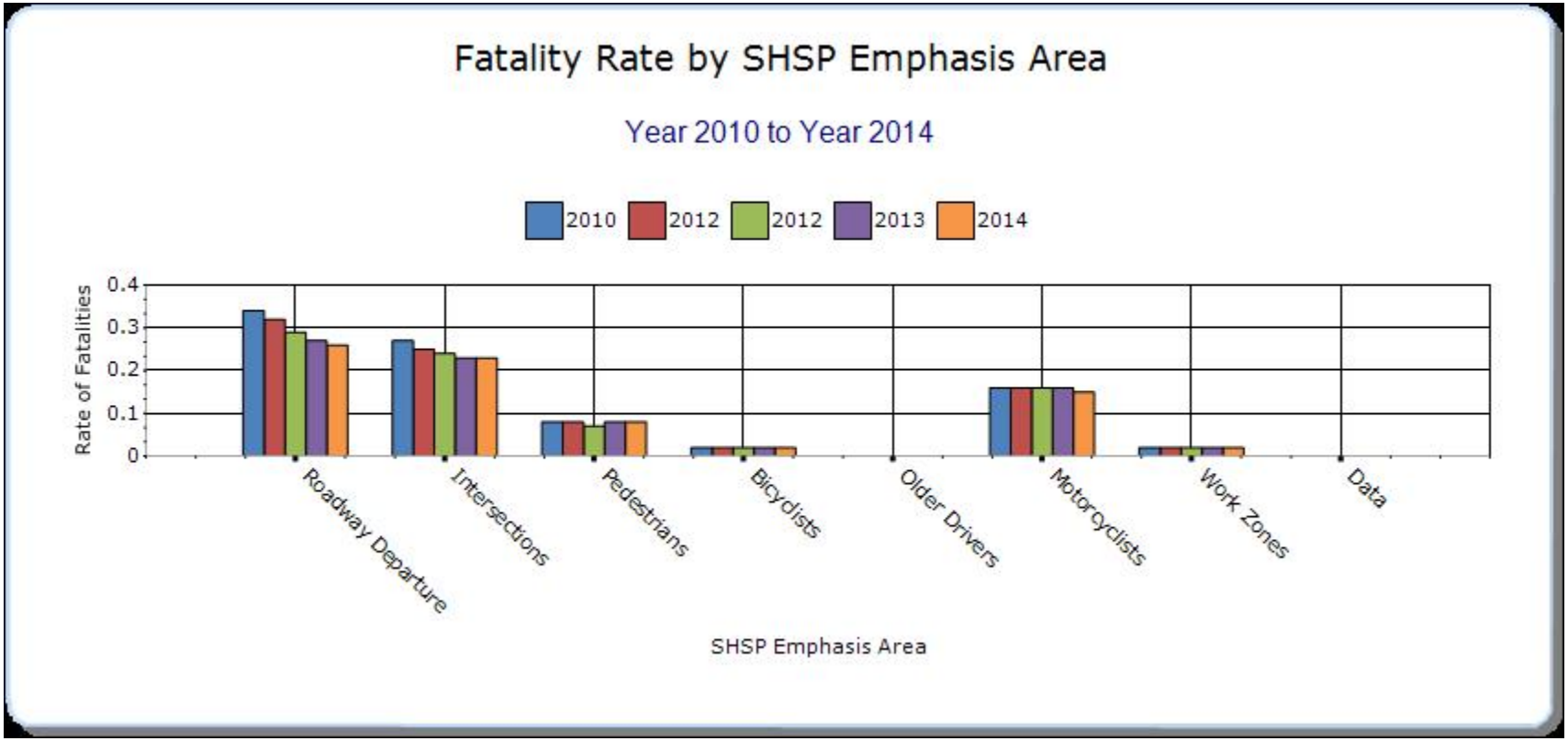
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

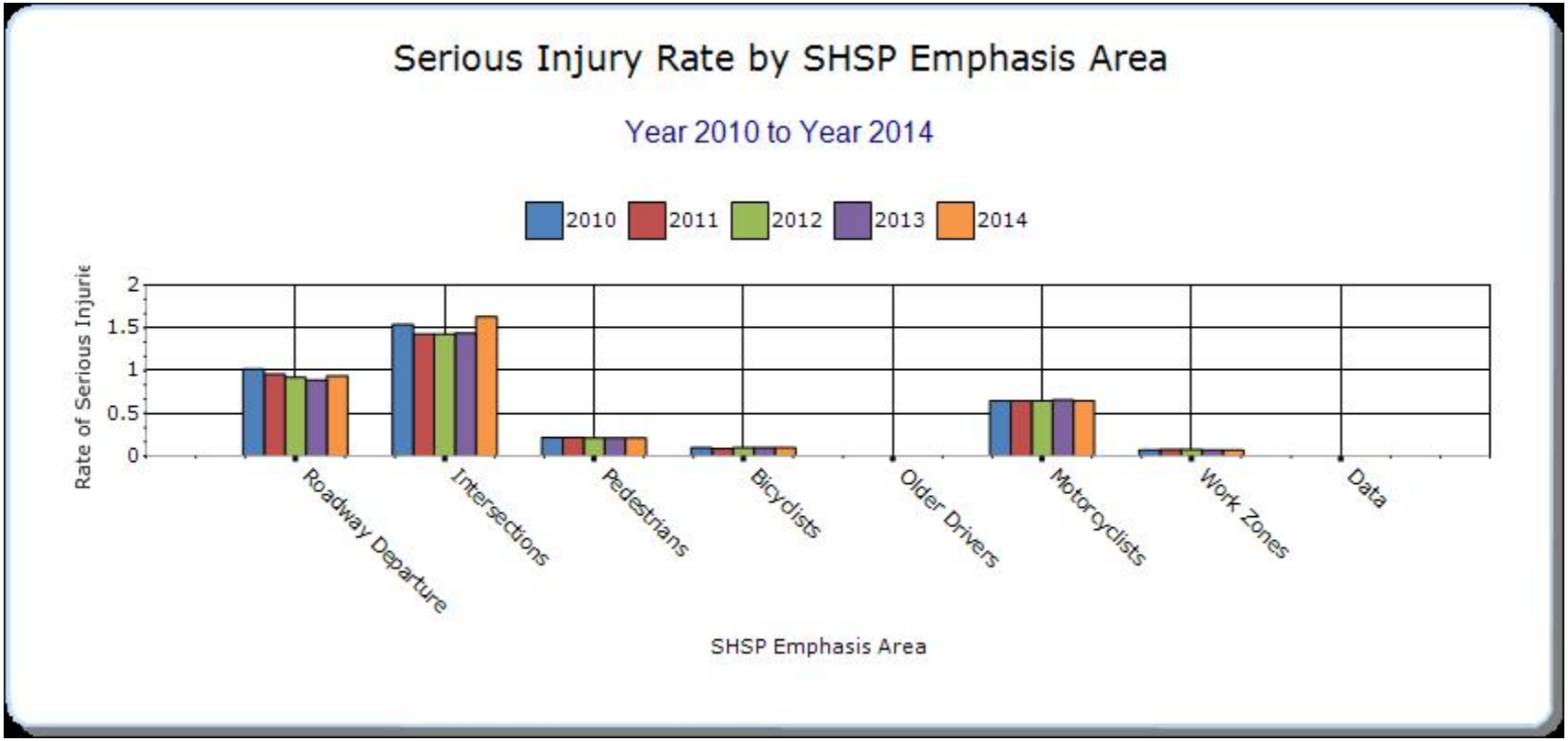
Year - 2014

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	202	741	0.26	0.94	0	0	0
Intersections	Intersections	177	1282.2	0.23	1.63	0	0	0
Pedestrians	Vehicle/pedestrian	60	161.6	0.08	0.21	0	0	0
Bicyclists	Vehicle/pedestrian	13.6	82	0.02	0.1	0	0	0
Motorcyclists	Motorcycle & Moped	116.8	512.2	0.15	0.65	0	0	0
Work Zones	Work Zone	15.2	57.8	0.02	0.07	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
300
250
200
150
100
50
0
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
2000
1500
1000
500
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
0.4
0.3
0.2
0.1
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
2
1.5
1
0.5
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
Data
SHSP Emphasis Area

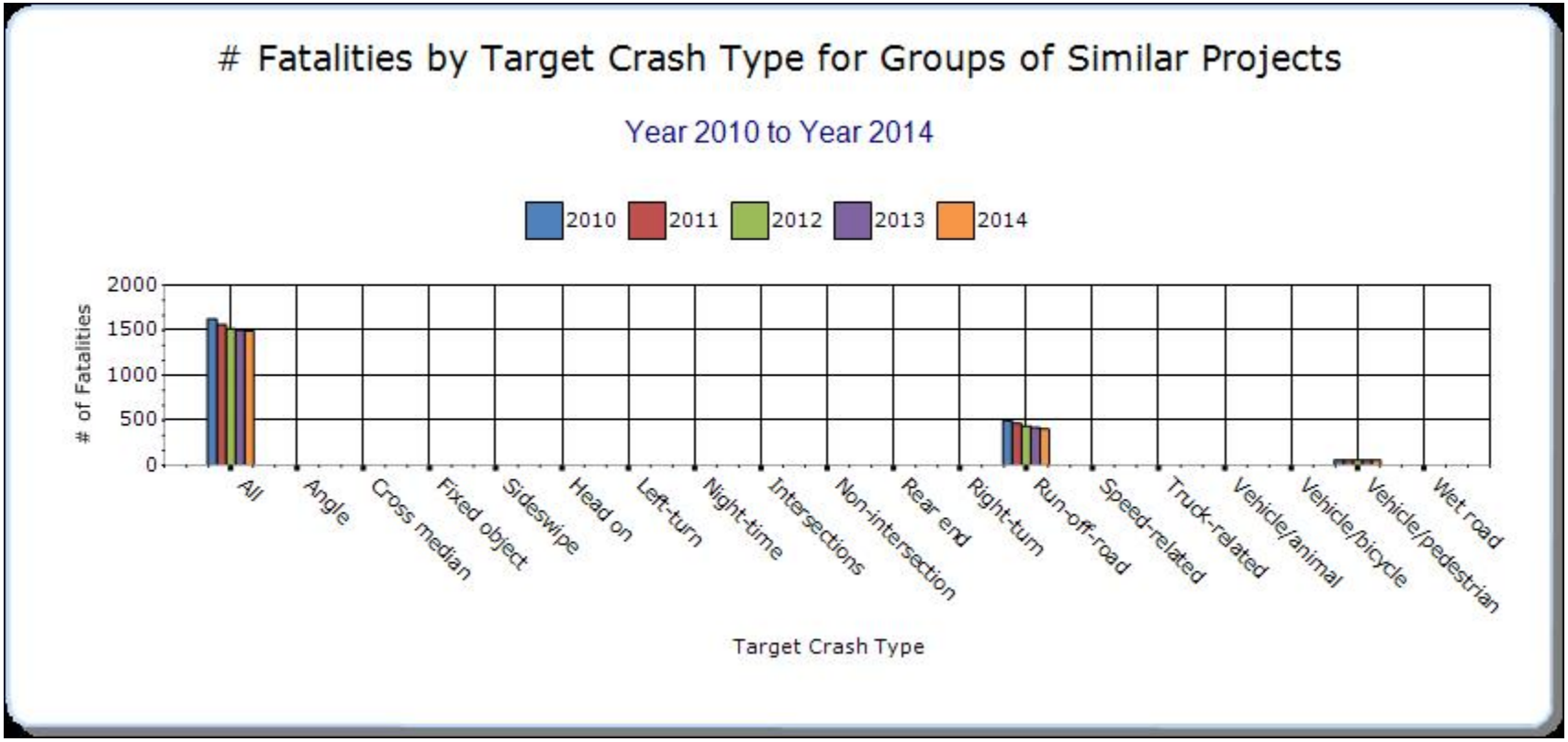
Groups of similar project types

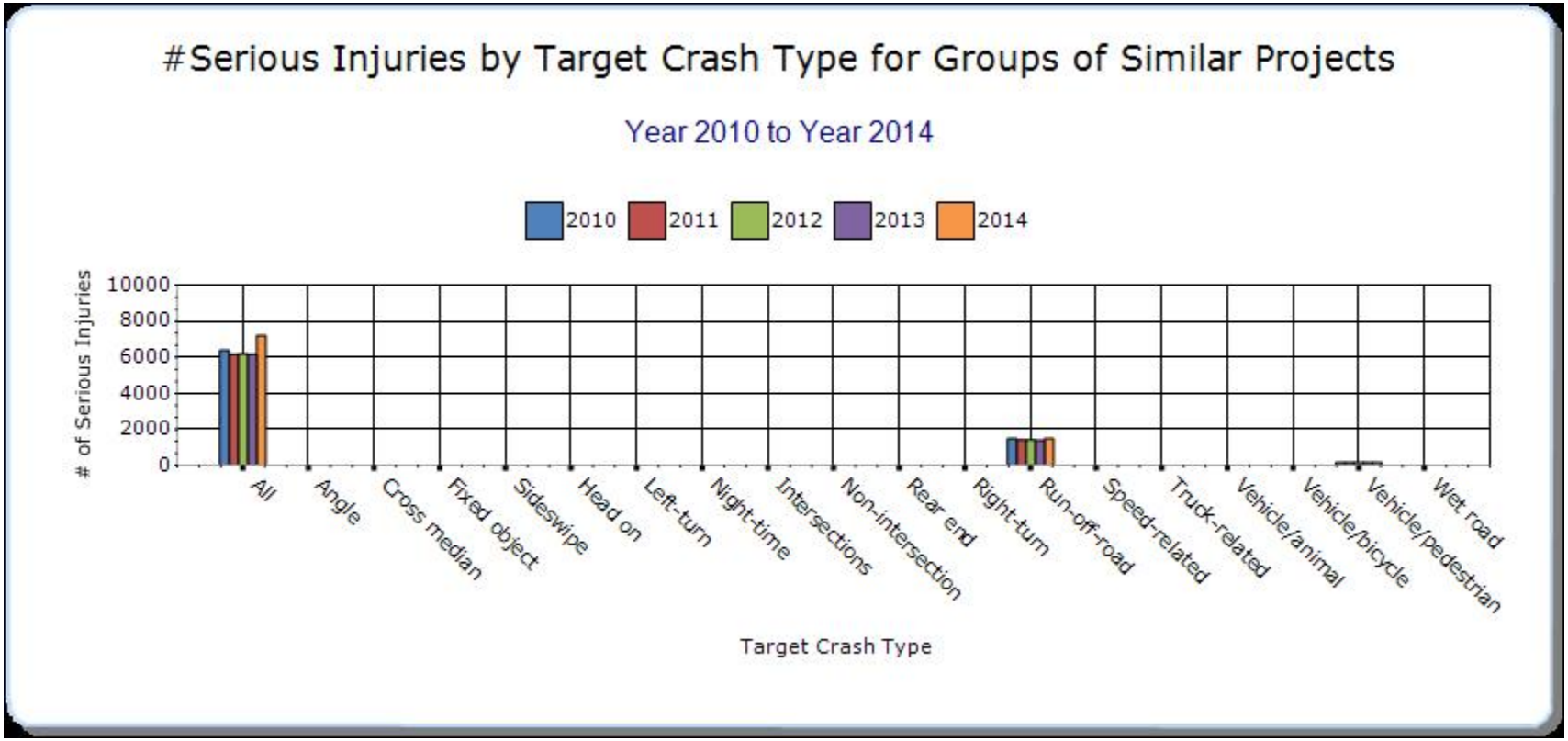
Present the overall effectiveness of groups of similar types of projects.

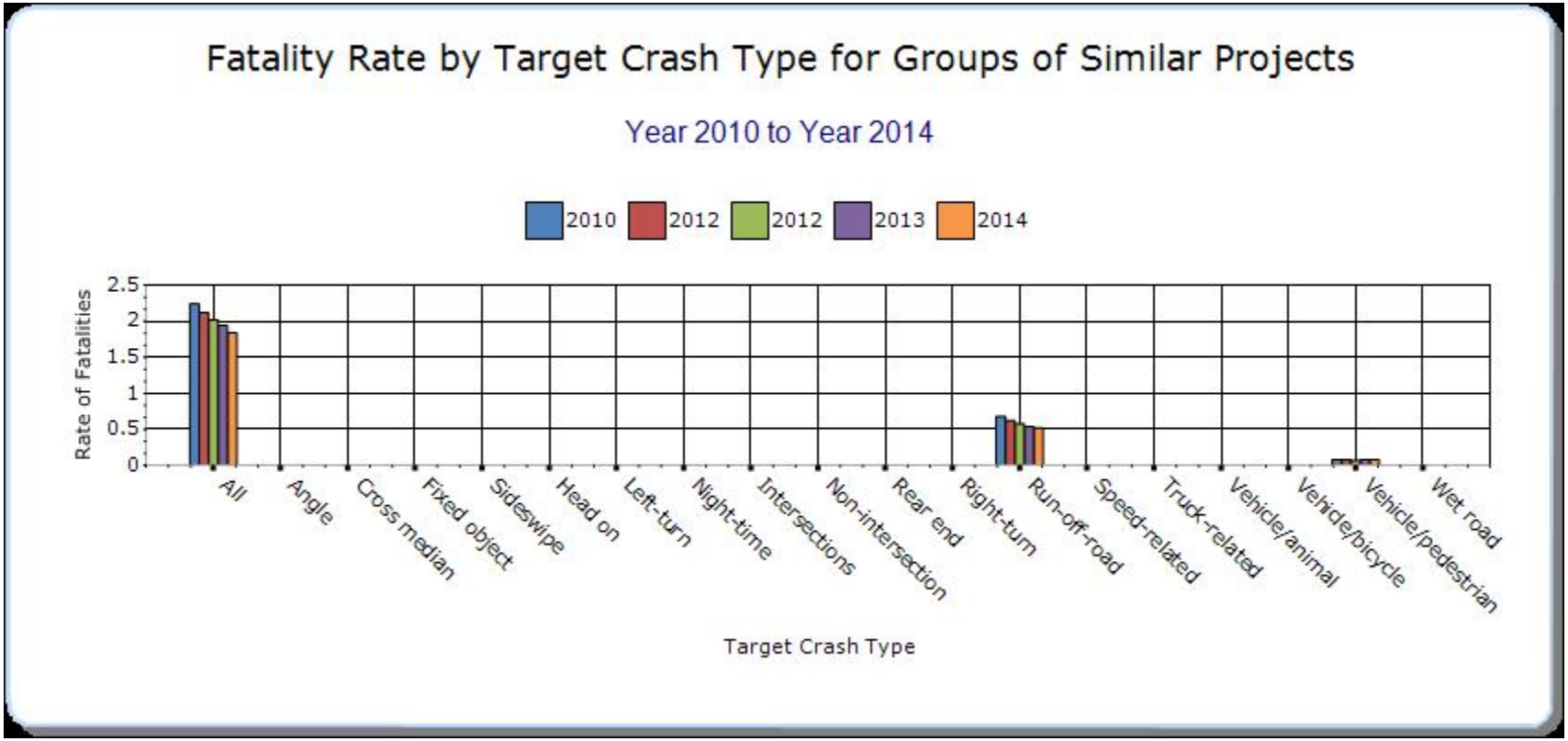
Year - 2014

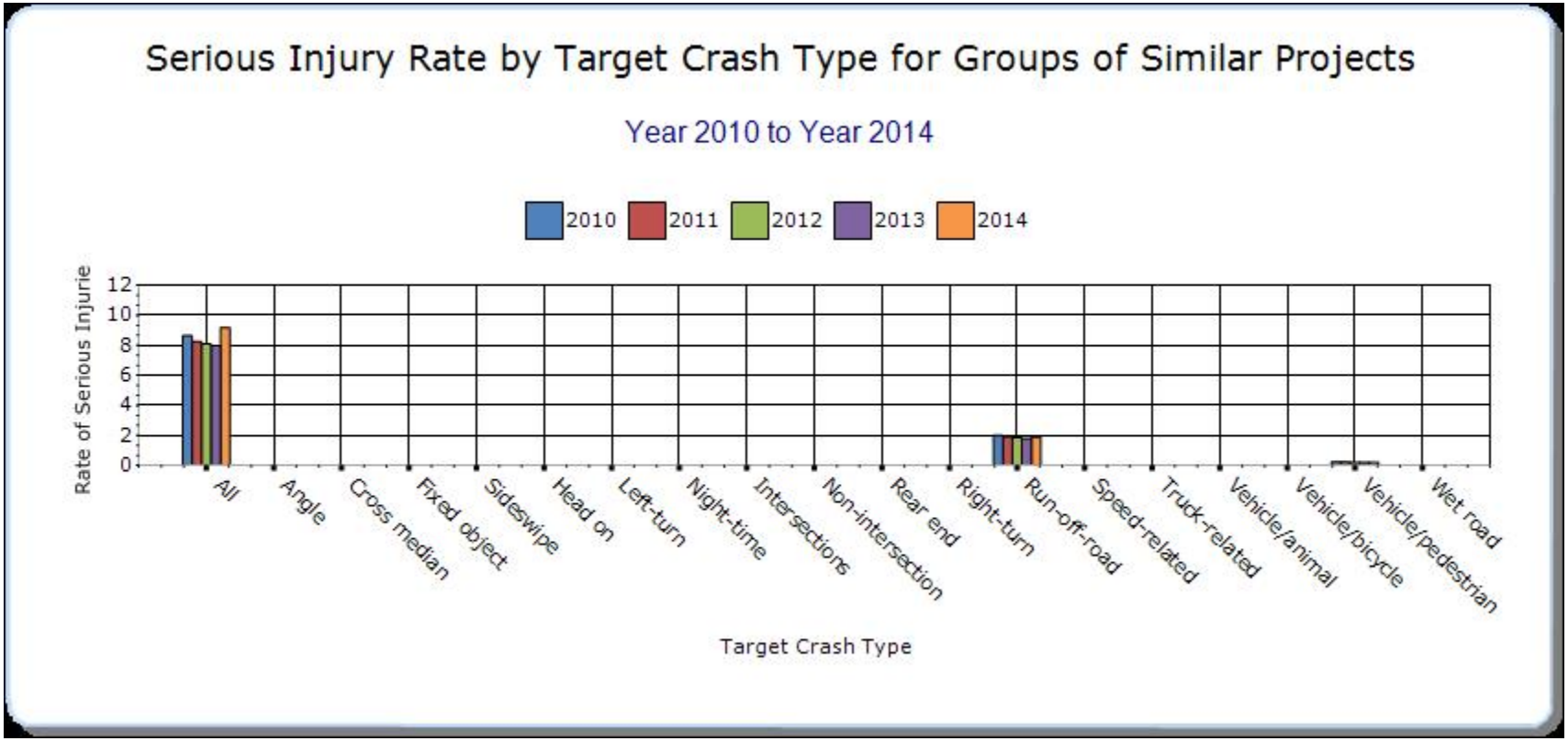
HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Rural State Highways	Rural State Highways	314.2	1002.2	0.81	2.55	0	0	0
Pedestrian Safety	Vehicle/pedestrian	60	162	0.08	0.21	0	0	0
Sign Replacement And Improvement	All	746	3609.4	0.92	4.59	0	0	0
Other-Traffic Signal Visibility Improvement	Intersection Crashes	177	1282	0.23	1.63	0	0	0
Other-Centerline and Edgeline Rumble Stripes	Run-off-Road & Left of Centerline	540.4	1912	0.69	2.44	0	0	0
Local Safety	Local Roads	322.6	1956.2	0.84	5.09	0	0	0
Crash Data	All	746	3609.4	0.92	4.59	0	0	0
Roadway Departure	Run-off-road	202	741	0.26	0.94	0	0	0
Median Barrier	Run-off-road	202	741	0.26	0.94	0	0	0

Intersection	Intersection Crashes	177	1282.2	0.23	1.63	0	0	0




#Serious Injuries by Target Crash Type for Groups of Similar Projects
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
10000
8000
6000
4000
2000
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
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



In October of 2015 a new version of the Electronic Crash Reporting Tool used by officers was deployed to law enforcement agencies across the State of Indiana. The new version of the crash reporting tool changed the parameters for determination of injuries as class “A” severity on the KABCO scale. A new uniform method has been developed for declaring an injury to be “Incapacitating”; the definition used by Indiana to classify injury severity “A” for crash events and casualties. The new classification method was developed in response to agreement among members of the Indiana Traffic Records Coordinating Committee (TRCC); that the use of officer’s judgment in regard to determination of incapacitating injuries had been inconsistently applied. Inconsistency was noticed both between officers, and regionally, among certain police agencies that were either instructing officers or developing informal approaches to marking injury severity that was different from other peer agencies.

Previously, officers were asked to use subjective judgment to decide if injuries would be classified as incapacitating. The revised electronic reporting tool now classifies a crash participant as having an incapacitating injury if that person has been transported from the scene for medical treatment at an emergency room or trauma center. This change removes the subjective element from the determination of class “A” injury severity.

The Indiana TRCC made the change in order to achieve more consistent, reliable data over the long term. The TRCC accepts the fact that over the next few years, the frequency and rate of serious injury data would appear to be distorted when compared to the data from past years.

INDOT along with the Indiana TRCC will continue to monitor and assess the effect of the change in the method of injury severity classification. To date, the apparent effect of this change has been a significant rise in the number of crash casualties that are classified as class “A” (incapacitating) injuries. It is expected that this trend will continue as full data for calendar 2015 is added to the records system. Also expected is a continuing effect on calculation of 5 year average data for serious injury (level A) crash frequency, casualty counts and resulting rate (per HMVMT). Offsetting reductions are expected in crash events and casualties classified at lower severity. We ask that FHWA consider this change in reporting methodology as part of any review of Indiana Crash data.

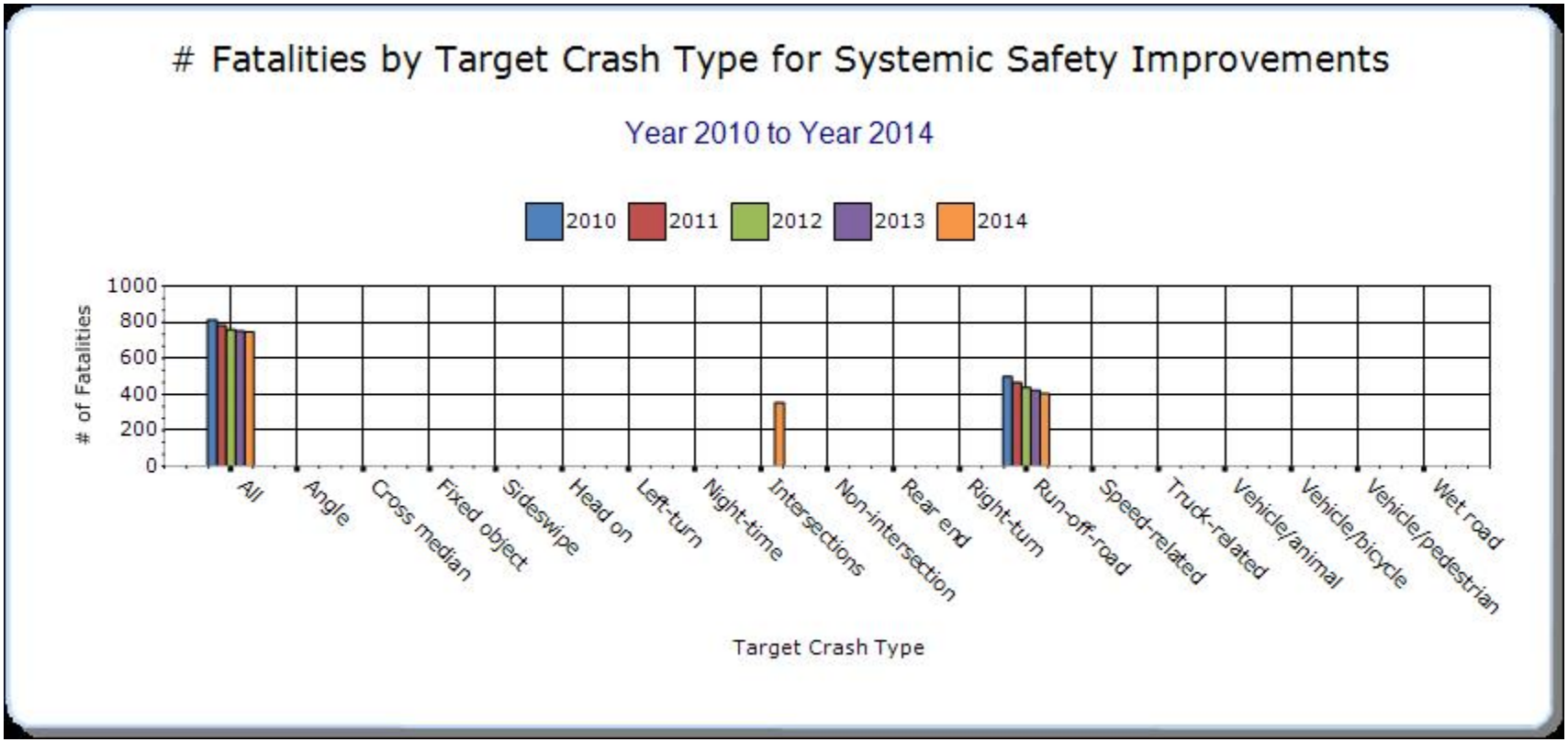
A revision is made to data for the subprogram “Other-Centerline and Edge-line Rumble Stripes. All 5 year average measure of effectiveness data fields for 2010, 2011, 2012, 2013 and 2014 now include all Fatal and Serious Injury crashes and rates involving Run-off-Road to the right and all crashes left of the roadway centerline (Run-off-road to the left, Head-On and Opposite Direction Sideswipe).

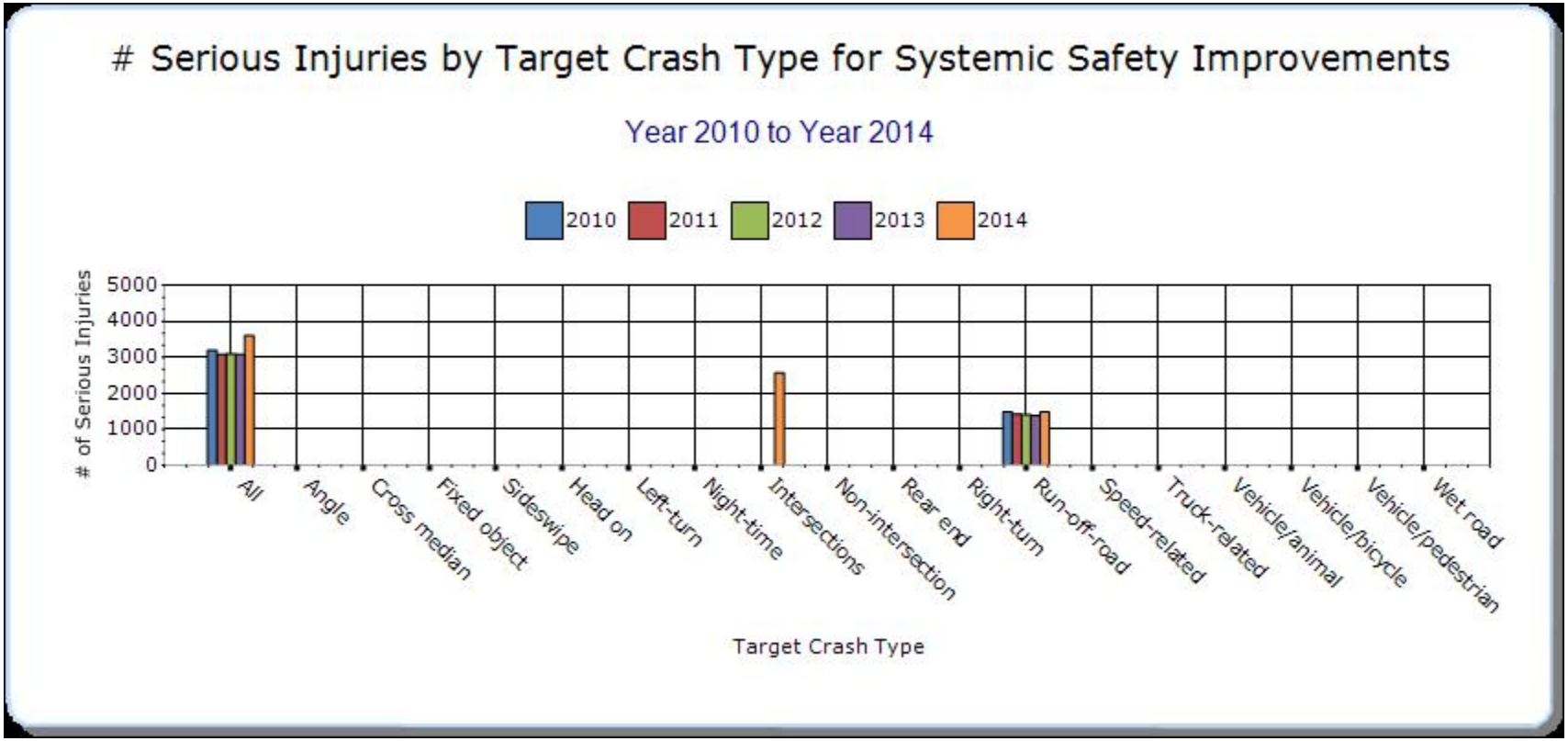
Systemic Treatments

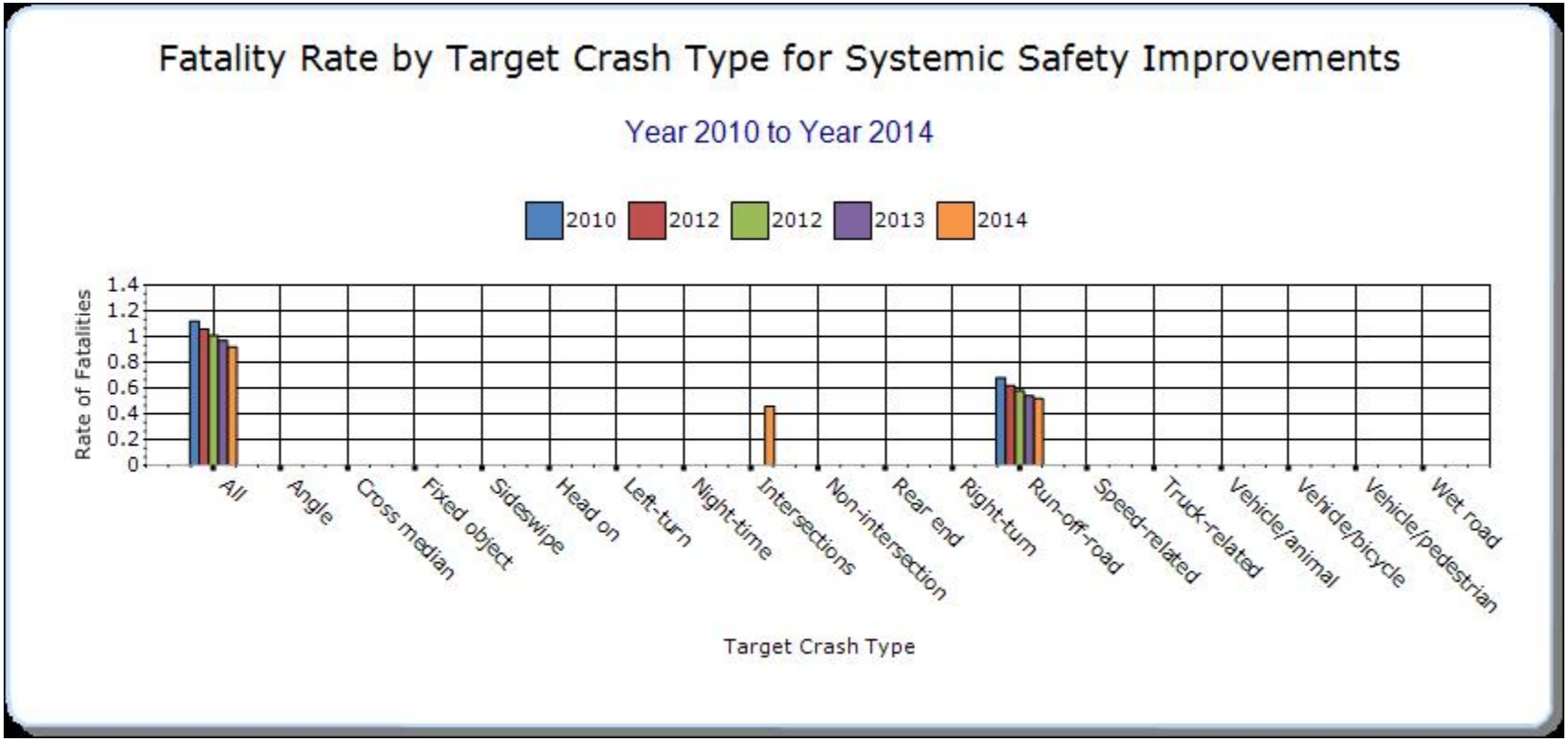
Present the overall effectiveness of systemic treatments.

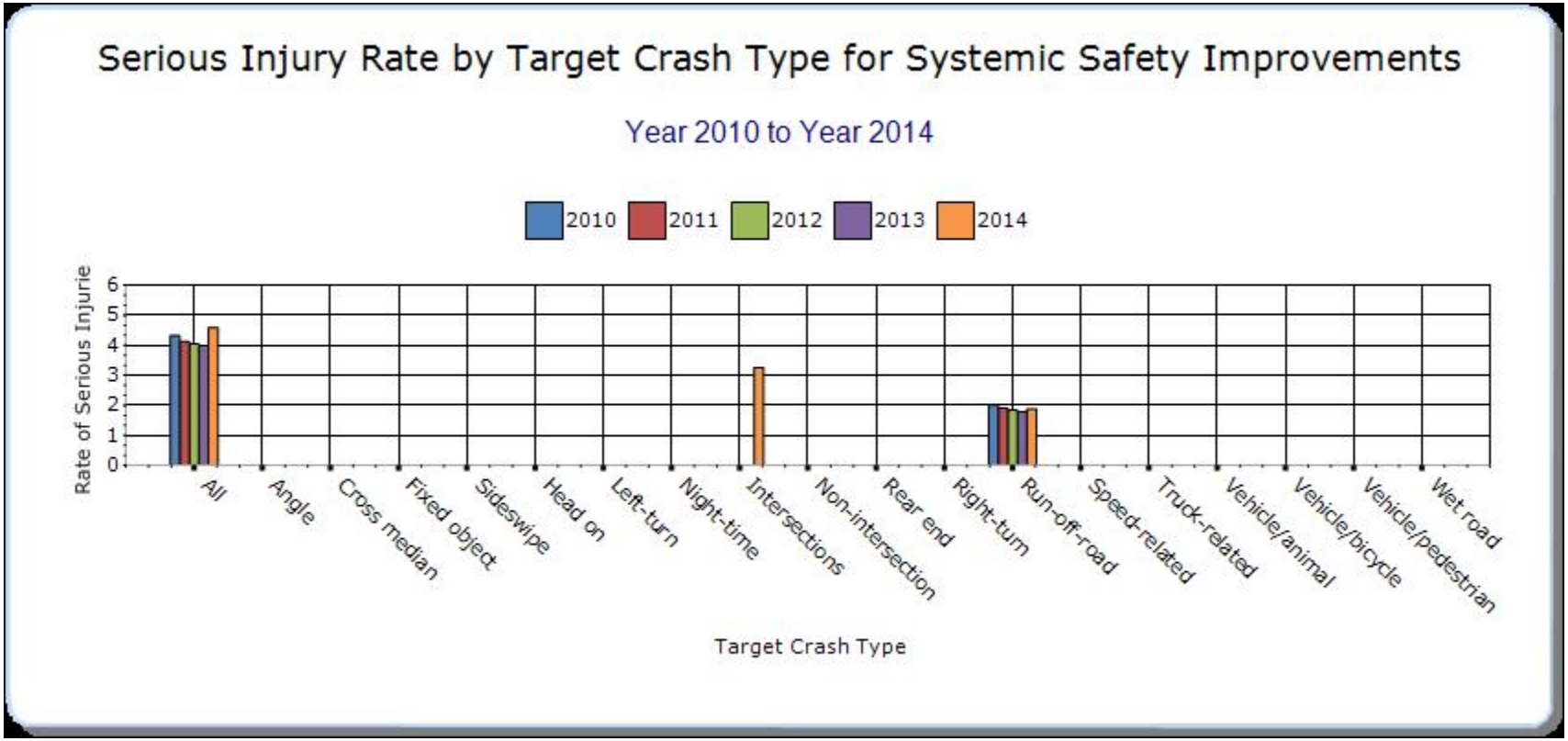
Year - 2014

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
Traffic Control Device Rehabilitation	Intersections	177	1282.2	0.23	1.63	0	0	0
Rumble Strips	Run-off-Road & Left of Centerline	540.4	1912	0.69	2.44	0	0	0
Add/Upgrade/Modify/Remove Traffic Signal	Intersections	177	1282.2	0.23	1.63	0	0	0
Cable Median Barriers	Run-off-road	202	741	0.26	0.94	0	0	0
Install/Improve Signing	All	746	3609.4	0.92	4.59	0	0	0
Upgrade Guard Rails	Run-off-road	202	741	0.26	0.94	0	0	0


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
1000
800
600
400
200
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
5000
4000
3000
2000
1000
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
1.4
1.2
1
0.8
0.6
0.4
0.2
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



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A revision is made to data for the systemic subprogram “Rumble Strips” (Centerline and Edgeline Rumble Stripes). All 5 year average measure of effectiveness data fields for 2010, 2011, 2012, 2013 and 2014 now include all Fatal and Serious Injury crashes and rates involving Run-off-Road to the right and all crashes left of the roadway centerline (Run-off-road to the left, Head-On and Opposite Direction Sideswipe).

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

The combined efforts of Indiana's engineering, education, law enforcement, and emergency medical communities are contributing to an overall decline in serious crash outcomes. A trend of fewer severe crashes and increasing percentage of property damage crashes has occurred since the beginning of the HSIP. The extent of contribution by HSIP projects to improved safety is difficult to quantify with current data sources and analysis capabilities, but it's clear that safety programs are a factor influencing the downward trend in severe crash outcomes. Fatal and injury crash trends experienced a somewhat consistent rate between the start of SAFTEA-LU in 2005 through 2007 then experienced a larger downward trend in 2008 and 2009, at the same time as VMT estimates declined. From year 2010 through 2014, the estimated VMT has resumed its previous growth trends. The incidence of severe injury crashes in most of the monitored emphasis areas increased in calendar year 2014, however the recent change in classification of serious injury crashes was a significant factor in this increase.

When comparing 2014 to 2013, the estimated vehicle miles of travel increased by 2.57%. Over the same period, rates of fatal crashes increased slightly by 0.01%, while the rate of crashes involving injury outcomes increased by 4.22%. In response to these trends INDOT will seek to increase the number and variety of systemic safety programs applicable to both state and local roads.

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)
9801040 SR 26, 1.96 miles and 4.09 miles W of SR 526 at Tippecanoe CR 300W and 500W	Rural Major Collector	Alignment	Horizontal curve realignment	0	0	1	13	14	0	0	1	0	1	3
0003600 SR 26 @ Dixon Rd(CR 200W)	Rural Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	1	10	11	0	0	3	8	11	0.769230769230769
9610040 SR 26 @ Dixon Rd(CR 200W)	Rural Principal Arterial - Other	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	0	0	1	10	11	0	0	3	8	11	0.772727272727273
0002710 SR 37 @ 131st Street	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	2	13	15	0	0	0	0	0	0.76

9901380 SR 37 @ 131st Street	Urban Minor Arterial	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	0	0	2	13	15	0	0	0	0	0	0.24
9902740 SR 62, From Salem Church Rr/Dave Carr Rd to Sycamore Dr	Rural Minor Arterial	Roadway	Roadway - other	0	0	1	1	2	1	1	0	7	9	0.142857142857143
0300577 Red Bank Rd, at Upper Mt.Vermont Rd	Rural Minor Arterial	Intersection traffic control	Intersection flashers - add overhead (actuated)	0	0	1	5	6	0	0	0	14	14	0.612903225806452
0400756 ST 1010, At State and 24th Streets, four hundred feet N of SR 25 (Teal Road)	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	1	0	3	24	28	0	0	3	13	16	1.84615384615385
0400646 10th Street at Shadeland Ave.	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0	1	36	103	140	0	0	16	47	63	2.40350877192982
0400083 ST 1018, At Day Road and Bittersweet	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0	0	1	4	5	0	0	4	9	13	0.333333333333333

0100477 US 231, At Lane Street, 4.25 miles E of US 41	Urban Principal Arterial - Other	Intersection geometry	Intersection geometrics - modify intersection corner radius	0	0	3	3	6	0	0	3	8	11	0.898305084745763
9900700 US 231, At Smith Rd, 0.2 mi S of I-74	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	4	9	13	0	0	1	8	9	2.0188679245283
0002790 US 231, At Smith Rd, 0.2 mi S of I-74	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	4	9	13	0	0	1	8	9	2
9611730 US 31, At Whiteland Rd (Main St)	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	1	8	12	21	0	1	7	12	20	1.16666666666667
971173A US 31, At Whiteland Rd (Main St)	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	1	8	12	21	0	1	7	12	20	1.17182130584192
0100706 IR 1003, Aboite Center Rd from W Jefferson Blvd to Coventry Ln	Urban Minor Arterial	Roadway	Roadway widening - add lane(s) along segment	0	0	22	87	109	0	1	8	50	59	1.77272727272727

0600173 IR 1021, Smith Road at Rogers Road, SE of Bloomington	Rural Local Road or Street	Alignment	Horizontal curve realignment	0	0	1	2	3	0	0	1	2	3	1.1
0013110 SR 127, At Mill St, 0.279 mile N of US 20	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add right-turn lane	0	0	2	13	15	0	0	6	20	26	0.557377049180328
0300359 SR 127, At Mill St, 0.279 mile N of US 21	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - add additional signal heads	0	0	2	13	15	0	0	6	20	26	0.802955665024631
0015040 SR 162, At CR 1600N and E jct with SR 245	Rural Major Collector	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0	0	4	22	26	0	0	0	6	6	6.9
0100648 SR 19, At Bristol and Cassopolis Streets, 1.98 miles S of I-80/I-90	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0	0	16	94	110	0	0	5	55	60	2.164804469273374
0300289 SR 19, At Bristol and Cassopolis Streets, 1.98 miles S of I-80/I-	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	16	94	110	0	0	5	55	60	2.163513513513351

91														
0400889 SR 2, At Burr Street	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	8	38	46	0	0	6	26	32	1.42857142857143
0013760 SR 28, At SR 213 and SR 213 at CR 150S	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - extend acceleration/deceleration lane	0	0	3	5	8	0	0	1	2	3	2.14285714285714
0600129 SR 39, At I-70 interchange	Rural Minor Arterial	Lighting	Intersection lighting	0	0	5	14	19	0	0	9	14	23	0.9
8574400 SR 59, From 0.1 mile N of SR 58 to 0.4 mile N of SR 58	Rural Major Collector	Alignment	Horizontal curve realignment	0	0	0	2	2	0	1	1	1	3	0.125
0101128 ST 1002, Intersection of 6th Street /Rickey Road	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	0	0	1	15	16	0	0	0	3	3	5.2
0400897 ST 1010, Main Street, Wiggs Street and Industrial Dr at	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	2	10	12	0	0	1	2	3	3.33333333333333

Canadian National RR tracks														
0400740 ST 1020, Cleveland Road at Hickory Road	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	4	16	20	0	0	1	17	18	1.25
0500180 ST 1022, Bittersweet at Cleveland Road, just S of the I-80/90 Toll Rd	Urban Minor Arterial	Intersection geometry	Intersection geometrics - re-assign existing lane use	0	1	6	32	39	0	0	2	16	18	2.66666666666667
0100660 US 231, At CR 600N, 1.08 miles S of SR 56 (N jct)	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	2	6	8	0	0	0	8	8	1.89130434782609
9901980 US 6, At Mander Road, 1.54 miles E of SR 49	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add auxiliary through lane	0	0	2	12	14	1	0	1	12	14	0.630434782608696
0000260 US 6, At SR 15 (Inclds Channelization)	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	0	2	7	44	53	0	0	3	30	33	2.23333333333333
0400084 Eddy at LaSalle	Urban Principal Arterial -	Intersection geometry	Auxiliary lanes - add left-turn lane	0	1	10	17	28	0	0	3	18	21	1.83333333333333

	Other													
0901956 From 0.05 mile W of US 31 to US 31 West Stop Bar	Urban Principal Arterial - Other	Roadside	Barrier - other	0	0	7	32	39	0	0	3	23	26	1.68446601941748
0710356 Intersection of Ireland Rd and Locust Rd	Urban Local Road or Street	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	0	1	1	13	15	0	0	0	7	7	2.82608695652174
0400363 IR 1020, CR 15 at CR 45	Rural Minor Arterial	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	0	0	1	16	17	0	0	2	10	12	1.20967741935484
0300578 Jenning St at Main St and Plum St Intersection, 2.0 mi E of I-64	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add slip lane	0	0	0	0	0	0	0	0	1	1	0
9901020 SR 19, At CR 42, 1.0 miles north of SR 119.	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	1	12	13	0	1	2	7	10	0.5
9901410 SR 32, At Rangeline Rd, 0.72 mile E of SR 9	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add right-turn lane	0	0	4	9	13	0	0	1	7	8	2.17241379310345

0003700 SR 32, At Rangeline Rd, 0.72 mile E of SR 9	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	4	9	13	0	0	1	7	8	2.17592592592593
0003610 SR 56, At CR 500W	Rural Major Collector	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	0	0	2	3	5	0	0	1	4	5	1.3780487804878
9405020 SR 56, At CR 500W	Rural Major Collector	Intersection geometry	Auxiliary lanes - add right-turn lane	0	0	2	3	5	0	0	1	4	5	1.375
0501100 ST 1001, Frontage roads from Taney Pl, .39 mi W of SR 55 to 81st Pl, .2 mi E of SR 53	Urban Principal Arterial - Other	Roadway	Roadway - other	1	7	224	530	762	0	1	49	180	230	4
0400649 ST 1009, At Westlane Road and Michigan Road	Urban Principal Arterial - Other	Intersection geometry	Intersection geometrics - re-assign existing lane use	0	0	9	22	31	0	0	5	14	19	1.625
0501098 US 30, At Polo Club Drive/Saturn Drive, .31 mile E of SR 55 (Taft St)	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - add additional signal heads	0	0	2	5	7	0	0	3	14	17	0.605326876513317

0501099 US 30, US 30 approach to Kmart 1500 feet W of SR 53	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	0	0	0	0	0	0	0	0	0	0	0
0101486 US 33, At Clingerman Avenue, 0.5 mile N of SR 205	Urban Principal Arterial - Other	Alignment	Horizontal curve realignment	0	0	1	3	4	0	0	2	2	4	0.823529411764706
0100750 SR 144, At Kitchen Road, 3.2 miles E of SR 67	Rural Minor Arterial	Intersection traffic control	Modify control - two-way stop to roundabout	0	1	11	15	27	0	0	7	7	14	2.45454545454545
0810012 ST 1001, On Lincoln Ave, from Rotherwood Ave to S Hebron Ave	Urban Minor Arterial	Roadside	Barrier - other	0	2	45	109	156	0	2	14	111	127	1.63640595903166
0800443 ST 1024, Atwater Ave @ Henderson St./relocation of access to Dun St. fr Atwater Ave	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	0	12	26	38	0	1	8	10	19	1.96296296296296
0810293 IR 1001, Relocate entrance to Portage HS on	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	0	0	5	5	10	0	0	7	9	16	0.625

Airport Rd appx 1400' no of US6 at mile 23.1														
1005759 ST 1031, Intersctns of S 4th with South St (SR26 east) and with Columbia St (SR26 west)	Urban Principal Arterial - Other	Intersection traffic control	Modify traffic signal - add additional signal heads	0	0	21	59	80	0	1	11	69	81	1.09819699001639
1005765 ST 1001, Intersection of Dragoon Trail and Logan Street	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - modify two-way left-turn lane	0	0	7	25	32	0	1	6	17	24	1.23611111111111
0012870 SR 267, At CR 100N, 1.01 mile N of US 36	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	3	7	53	63	0	1	6	54	61	1.5781990521327
0200389 SR 267, At CR 100N, 1.01 miles N of US 36	Rural Principal Arterial - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	0	3	7	53	63	0	1	6	54	61	1.58356164383562
0013100 US 27, At SR 218	Rural Principal Arterial -	Intersection geometry	Intersection geometrics - re-assign existing lane use	0	0	2	10	12	0	0	1	10	11	1.23809523809524

	Other													
0100662 SR 64, At CR 350 E	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	0	0	1	22	23	0	0	0	14	14	2.11111111111111
0100771 SR 46, At Parkview Drive, E of Nashville	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	8	8	0	0	1	7	8	0.6
0101485 SR 15, At CR 100 South / Rozella Road	Rural Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	1	0	1	16	18	0	0	0	1	1	28
0201142 US 40, 2.50 miles E of SR 1 at Pennville/Jacksonburg Road	Rural Major Collector	Roadway	Roadway - other	0	1	1	5	7	0	1	1	8	10	0.961538461538461
0200749 SR 59, 0.5 mile N of SR 67	Rural Major Collector	Alignment	Horizontal curve realignment	0	1	4	6	11	0	0	1	3	4	5.1
0600172 ST 1021, Dartmouth Dr & Washington Center Rd	Urban Major Collector	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	0	0	21	45	66	0	1	0	15	16	3.68852459016393

0710474 IR 1016, CR 300N at Fortville Pike	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	1	0	2	9	12	0	0	3	7	10	1.25
0501101 US 30, from Taney Pl, .39 mi W of SR 55 to 81st Pl, .2 mi E of SR 53	Urban Principal Arterial - Other	Roadside	Roadside - other	2	7	109	521	639	0	7	121	591	719	1.01988568706835

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.