



IOWA

STRATEGIC HIGHWAY SAFETY PLAN

JULY 1, 2013 - DEC. 31, 2016



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Letter from Governor Terry E. Branstad

Dear Friend,

Thank you for your interest in the state of Iowa and the safety of our roadways.

Iowa is rapidly moving forward. Whether you are a current resident, business owner, student, vacationer, or looking for a great place to establish a career and raise a family, Iowa offers you a wealth of great opportunities. Ensuring we have an efficient and safe transportation system is key to many of those opportunities.



We are excited to join with our safety partners from around the state in supporting Iowa's 2013 Strategic Highway Safety Plan (SHSP). In it, you will read Iowa is adopting the national vision for highway safety – Toward Zero Deaths. Iowa's SHSP lays out the safety strategies and short-term goals we will implement as we strive for that vision.

Iowa's 2013 SHSP will build on and continue the success we have seen in recent years as a result of the efforts of safety professionals in our **educational, enforcement, engineering, and emergency medical services**. This multiagency plan introduces a fifth E - **everyone**. Because with **everyone** working together, we can change the traffic culture so that **everyone** arrives alive.

We urge all Iowans to join the effort to keep our roadways safe.

Sincerely,

Terry E. Branstad
Governor of Iowa

Partner pledge

This beautiful land known to us as Iowa stores a multitude of treasures for travelers. Whether on a weekend trek to the Maquoketa caves or a daily commute to the workplace, Iowa's highways provide safe passage to get you where you need to go. Maintaining safety on Iowa highways is a cooperative effort. Safety education for all drivers, effective enforcement of existing laws, implementing innovative safety engineering principals on our roadway system, and a cutting edge emergency response system all play a part to assure each mother, father, sister and brother arrives safely home.

In this pledge, we state our support for the goals in Iowa's 2013 Strategic Highway Safety Plan (SHSP) and the overall vision to move Toward Zero Deaths on Iowa's public roadways. Zero fatalities is already the personal goal of virtually every road user. Implementation of the safety strategies outlined in the SHSP will help road users keep that personal goal of staying safe while driving, walking or riding on Iowa's roadways.

Iowa has shown that with dedication to proven safety programs and projects, traffic fatalities and major injuries can be reduced. We are committed to furthering existing programs that work. We are committed to implementing the safety strategies outlined in the SHSP to continue to drive down fatalities and major injuries.

We specifically commit to:

- Lead SHSP strategy implementation that relate to the work of our agency.
- Provide necessary support and resources to implement SHSP strategies.
- Support partner agencies as they lead SHSP strategy implementation.
- Actively participate in SHSP events and initiatives.
- Promote the SHSP and its goals whenever and wherever possible.



Paul Trombino III, Director
Department of Transportation



K. Brian London, Commissioner
Department of Public Safety



Mariannette Miller-Meeks, B.S.N.,
M.Ed., M.D.
Department of Public Health

Executive summary

According to the U.S. Department of Transportation, a Strategic Highway Safety Plan (SHSP) is a statewide coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. The purpose of the SHSP is to identify effective safety strategies to address areas of greatest need in order to make our roadways safer.

Starting in early 2012, Iowa's traffic safety community began working to update Iowa's highway safety vision and goals. This effort began prior to, but has since been mandated by new federal legislation, the Moving Ahead for Progress in the 21st Century Act (MAP-21). The result of this effort is the **2013 Strategic Highway Safety Plan (SHSP)**.

The SHSP was written using a data-driven, innovative and proactive planning process that addresses not only the Four E's of roadway safety (**engineering, education, enforcement, and emergency medical services**), but also a fifth E – **everyone**. The last E is a reminder that **safety is everyone's responsibility**.

Iowa is adopting the national vision for highway safety – Toward Zero Deaths. The vision of the Toward Zero Deaths effort is to eliminate all traffic fatalities, and is consistent with the vision in our 2006 Comprehensive Highway Safety Plan – "One Death is One Too Many." The national goal is to reduce traffic fatalities by half by the year 2030.

In the 2013 SHSP, it is our collective goal to achieve a 15 percent reduction in fatalities and major injuries on Iowa highways by the year 2020. We intend to accomplish this goal through the efforts of all safety partners. Toward that end, the SHSP is linked to the Highway Safety Plan, prepared by the Governor's Traffic Safety Bureau, and the Commercial Vehicle Safety Plan, prepared by Iowa DOT's Motor Vehicle Division. We resolve to work together on the deployment and implementation of known safety strategies.

This SHSP outlines key strategies we intend to deploy over the next three years and sets targets to move us toward our 2020 goal. This plan will be effective from July 1, 2013, to Dec. 31, 2016.



Safety leadership

Strategic Highway Safety Plan (SHSP) Advisory Team

Iowa Department of Transportation (DOT)

- Office of Driver Services
- Office of Motor Vehicle Enforcement
- Office of Systems Planning
- Office of Traffic and Safety

Iowa Department of Public Safety (DPS)

- Iowa State Patrol
- Governor's Traffic Safety Bureau

Iowa Department of Public Health (DPH)

- Bureau of Emergency Medical Services
- Office of Disability, Injury, and Violence Prevention

U.S. Department of Transportation

- Federal Highway Administration (FHWA)
- Federal Motor Carrier Safety Administration (FMCSA)
- National Highway Traffic Safety Administration (NHTSA)

Iowa County Engineers Association

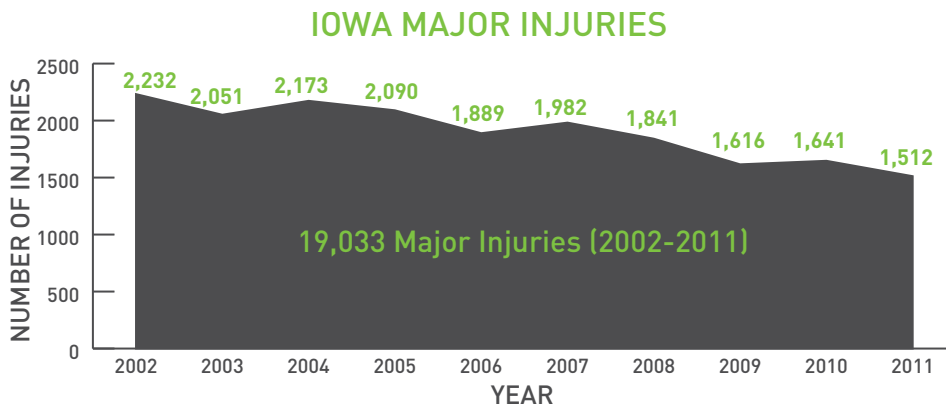
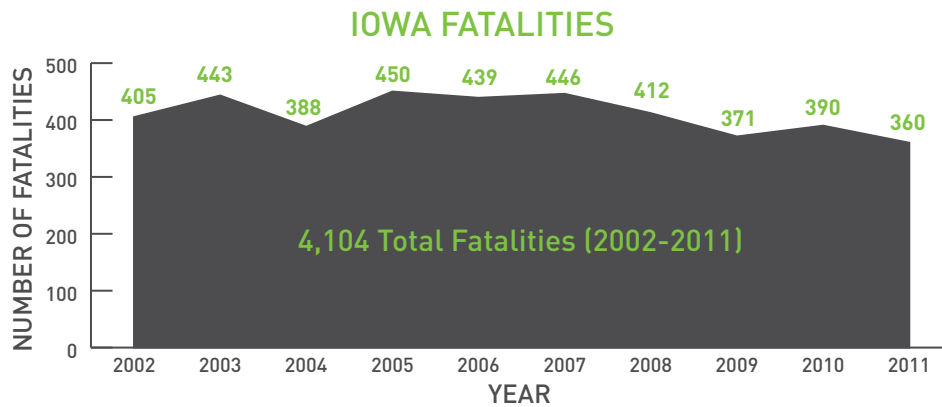
Blank Children's Hospital – Injury Prevention

Data analysis

The Strategic Highway Safety Plan (SHSP) is a data-driven process. The SHSP Advisory Team reviewed 2002-2011 crash data for each of 18 safety emphasis areas in order to identify overall trends. The trend chart for all crashes can be seen below. Further data analysis was performed on 2007-2011 crash data in order to identify relationships between safety emphasis areas and to identify roadway types or systems most at risk. These data analyses made possible the determination of appropriate safety strategies for implementation to make the largest impacts in reducing traffic fatalities and major injuries.

Regarding roadway systems:

The SHSP considers all public roadways, primary or secondary for safety strategy implementation. As part of Moving Ahead for Progress in the 21st Century Act (MAP-21) states must define high risk-rural roads. In Iowa, high-risk rural roads are defined as the paved rural major and minor collectors, and the paved local roads.



The Five E's

Four main types of safety professionals drive traffic safety initiatives. These are **education, enforcement, engineering,** and **emergency responders.** Each discipline has a unique perspective on how to improve traffic safety while also remaining connected to the other disciplines. The fifth key discipline in traffic safety is **everyone** who uses the road. Because **everyone** is responsible for staying safe.

Education

Education plays a key role in helping the public determine what they should and should not do when driving. Effective education efforts lead to a change in driving habits and ultimately, a decline in fatalities and major injuries on our roadways. Campaigns such as "Click It or Ticket" are directed toward all age groups and numerous safety issues.

Emergency medical services

Swift response from emergency personnel can save lives of those involved in a traffic crash. While emergency medical personnel assist anyone injured in a crash, other emergency responders can also clear roadways and therefore reduce the risk of secondary crashes.

Enforcement

Enforcement is needed to remind people of the laws associated with the use of our transportation system. Even with driver education and carefully designed roadways, the role of enforcement remains vital in ensuring drivers adhere to the rules of the road. State, county and municipal law enforcement agencies work alongside highway

safety partnering agencies to enforce traffic laws during regular patrols, as well as specialized mobilization efforts.

Engineering

The focus on safety within engineering begins with designing and building safe roadways. Transportation engineers use design principles that have been proven to be safe and reliable. National standards are used for signs and traffic markings to provide consistency for the traveling public. In addition to using proven design methods, engineers continue to research new ways to make transportation safer.

Everyone

No matter how hard we try to educate drivers to be safe, no matter how quickly we respond to a crash, no matter how many enforcement officers we send out on our roadways, no matter how many engineering innovations we implement, the ultimate responsibility rests on everyone who gets in a vehicle. We all need to work together toward increased traffic safety. **Everyone** is the most important E.





SAFETY STRATEGIES

The Strategic Highway Safety Plan (SHSP) doesn't discuss every safety strategy currently being implemented in the state of Iowa. Those strategies that are currently employed and working to impact traffic safety will be continued. Nor does the SHSP list every safety emphasis area that can be found in several national references. Instead, Iowa's 2013 SHSP focuses on strategies that have the greatest potential to reduce fatalities and major injuries on Iowa's public roadways. These strategies will be implemented in locations chosen using criteria, such as, crash history, system characteristics, and population demographics. The SHSP will be tied to each individual organization's plan and will therefore contribute to the development of specific goals, strategies, and performance measures for individual organizations. Next steps include individual organizations' implementation of the safety strategies outlined in the following pages.

Education safety area

Multimedia education campaign

Challenges

More than 90 percent of crashes are behavior-related, and it affects all age groups. Young drivers are involved in more than one-third of severe crashes. Experienced drivers often get too comfortable behind the wheel. Many drivers take risks that put them and other road users in danger because they don't understand the impacts of those risks. Data shows that the top behavioral causes of injuries are speeding, impaired driving, distraction, and not buckling up. These are choices drivers make. These are choices drivers can be convinced not to make.

Direction

Iowa drivers must be informed about their vital role in eliminating preventable crashes and injuries through communication, education, and community outreach.



Priority strategies

Develop a strategic communication plan integrating the Toward Zero Deaths initiative, called Zero Fatalities.

Deliver safety messages to multimedia networks (television, radio, newspaper, social media).

Leaders

Blank Children's Hospital – Injury Prevention

Iowa Department of Public Health

Iowa Department of Public Safety

Iowa Department of Transportation

University of Iowa – Injury Prevention Research Center

Goals

Launch multimedia Zero Fatalities campaign.



Education safety area

Enhance driver education

Challenges

Young drivers (under 25 years of age) accounted for 36 percent of major injuries or fatalities according to 2007-2011 data. This fact has been linked to young drivers' inexperience and/or driving habits. It has also been associated with distracted driving.

Direction

Target enhancements to strengthen driver education courses.

Priority strategies

Involve parents in driver education courses.

Require more behind-the-wheel instruction time.

Require a diversity of driving conditions (all weather conditions, daytime and nighttime, all road surfaces).

Leaders

Iowa Department of Education

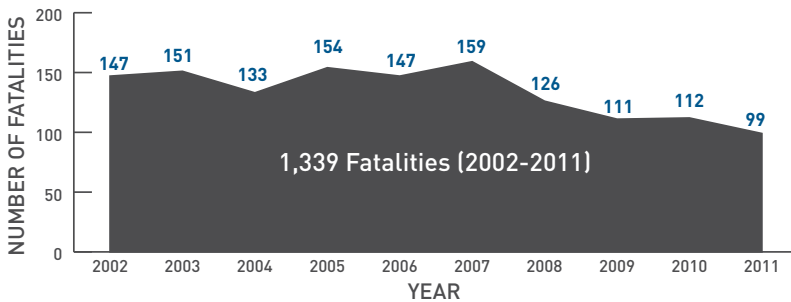
Iowa Department of Public Safety

Iowa Department of Transportation

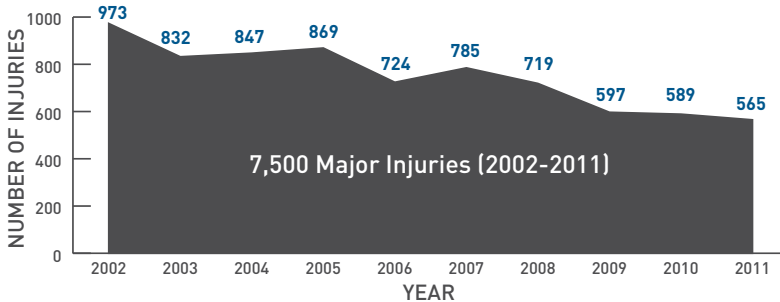
Goals

Enhance driver education programs in five school districts per year.

IOWA FATALITIES DRIVERS AGE 14-24



IOWA MAJOR INJURIES DRIVERS AGE 14-24



Enforcement safety area

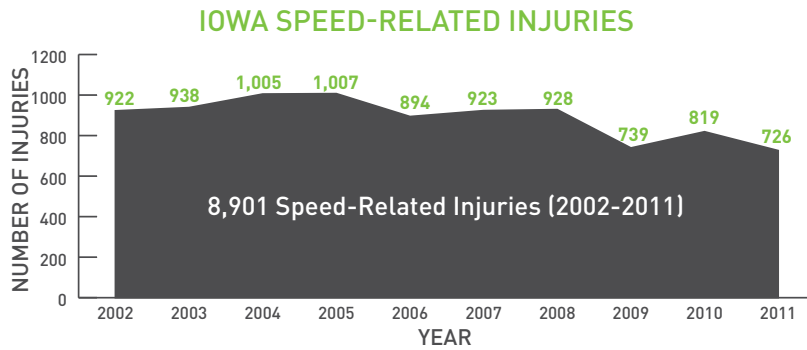
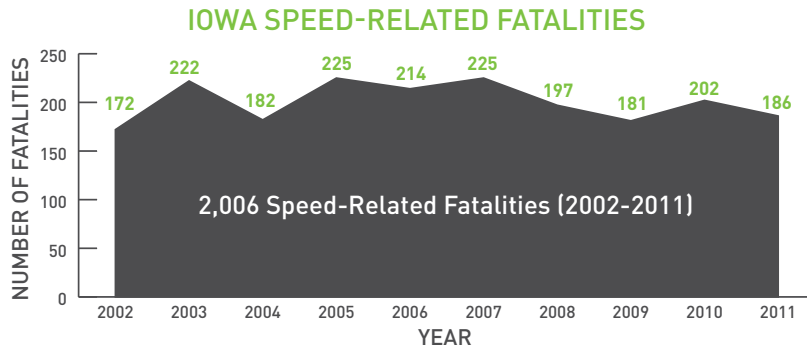
High visibility enforcement

Challenges

Choosing to drive while impaired, distracted, unbelted, drowsy or in any other way altered is a behavioral risk. High-visibility, targeted enforcement serves as a deterrent for high-risk driving behavior. More officer hours are needed in order to provide more visible enforcement.

Direction

Seek reductions of behavior-based fatalities and major injuries through educational and enforcement methods.



Priority strategies

Support additional officer hours on roadways.

Increase special enforcement campaigns.

Leaders

Iowa DOT

- Office of Motor Vehicle Enforcement

Iowa DPS

- Iowa State Patrol
- Governor's Traffic Safety Bureau

Goals

Deploy 1,000 hours of high-visibility, targeted enforcement activities per year with state enforcement officers during the three-year plan period. This could be accomplished with special grants, and/or an increase in staffing.



Enforcement safety area

Deploy state-of-the-art technology

Challenges

Getting safety messages quickly and efficiently to the public when they are in a vehicle is difficult. Dynamic message signs can reach drivers and passengers regardless of what they're listening to or attending to in their car.

Along with many other public agencies, enforcement budgets are tight. Finding ways to enhance efficiency is critical.

Direction

Deploy technology to increase public awareness and law enforcement efficiency.



Priority strategies

Use dynamic message signs to convey safety messages.

Equip law enforcement with state-of-the-art technology for compliance.

Promote technologies to gather commercial vehicle information.

Leaders

Iowa Department of Public Safety

Iowa Department of Transportation

Goals

Equip all Iowa State Patrol and Iowa DOT motor vehicle enforcement vehicles with LIDAR for speed enforcement.

Sustain the Governor's Traffic Safety Bureau equipment upgrade program for cities and counties.

Strengthen public perception of traffic safety by adding messages to all existing full-size dynamic message signs along primary highways.

Enforcement safety area

Expand impaired enforcement programs

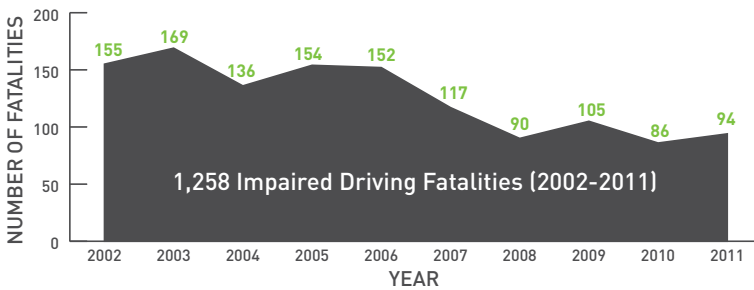
Challenges

Impaired driving has been recognized as a problem for decades, yet it remains a significant issue. Nearly 18 percent of major injuries or fatalities involved an impaired driver in the five-year study period. Choosing to drive while intoxicated or altered is a behavioral risk. More than 50 percent of impaired driving severe injuries also involved unprotected persons; and more than 70 percent of impaired driving severe injuries also involved speeding. This indicates drivers and passengers that are engaging in one risk behavior will also engage in others.

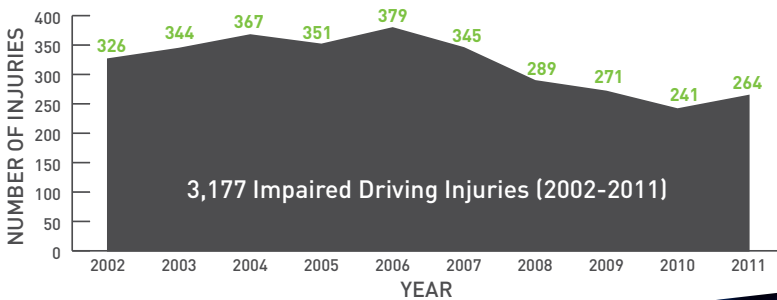
Direction

Continue to reduce impaired driving through educational and enforcement methods.

IOWA IMPAIRED DRIVING FATALITIES



IOWA IMPAIRED DRIVING INJURIES



Priority strategies

Expand law enforcement training to effectively identify impaired drivers.

Launch a drowsy driving program within the Iowa DOT's Office of Motor Vehicle Enforcement.

Leaders

Iowa DOT

- Office of Motor Vehicle Enforcement

Iowa DPS

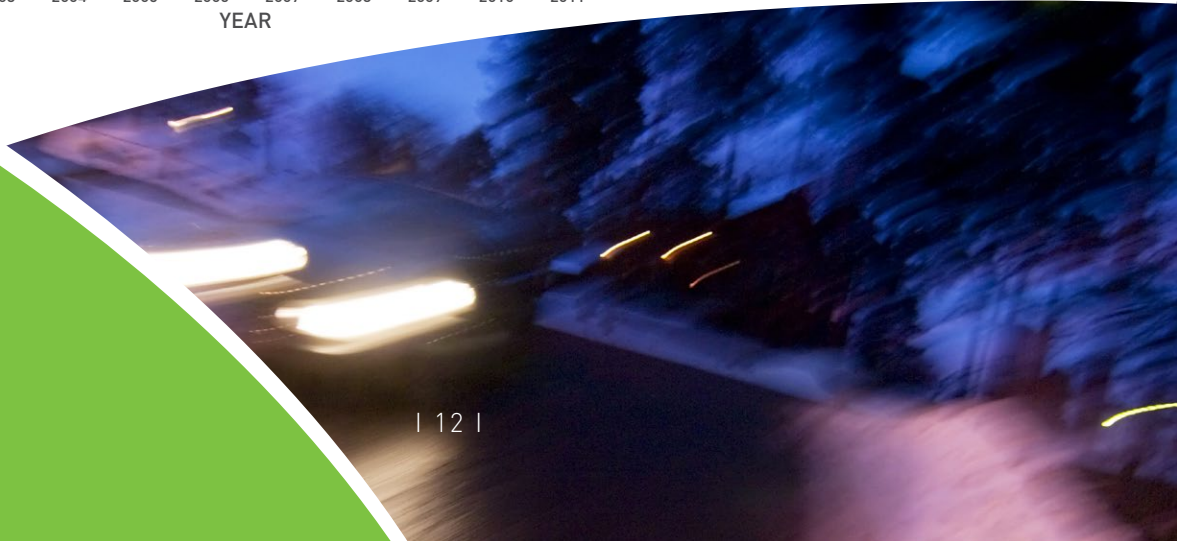
- Iowa State Patrol
- Governor's Traffic Safety Bureau

Goals

Provide drug recognition expert training to 36 additional officers over the plan period.

Provide advanced roadside impaired driving enforcement training to 450 additional officers over the plan period.

Construct a training program for recognition of drowsy or inattentive drivers and schedule training sessions during the plan period.



Engineering safety area

Prevent lane departure crashes

Challenges

Fifty-one percent of severe crashes involved a lane departure. These crashes may be caused by driver behaviors, such as drowsy driving, impaired driving, distraction, speeding, etc. The primary goal of rumble strips and larger, brighter signage is to return the driver's focus to the roadway to prevent the vehicle from departing its lane. The goal of paved shoulders and roadside barriers is to minimize the severity of injuries if the vehicle leaves the roadway.

Direction

Continue to implement engineering countermeasures to keep vehicles on roadways and/or mitigate the severity of results if vehicles leave the roadway.

Priority strategies

- Centerline rumble strips
- Shoulder/edgeline rumble strips
- Curve delineation
- Shoulder treatments
- Cable barrier rail

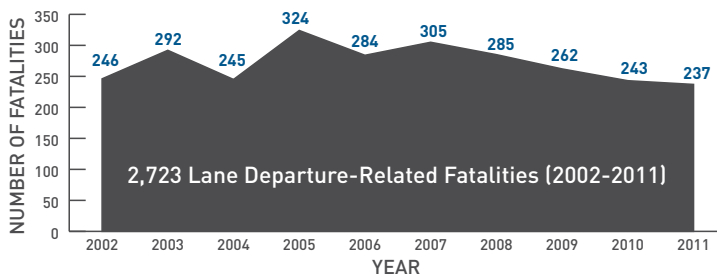
Leaders

- Federal Highway Administration
- Iowa County Engineers Association
- Iowa Department of Transportation

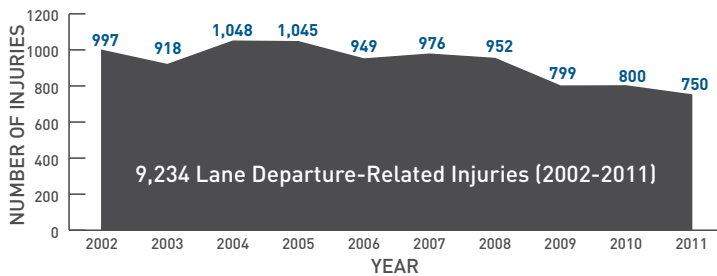
Goals

- Add rumble strips on 350 miles of primary system and 30 miles of local system per year.
- Complete 200 miles of shoulder treatments on primary system per year.
- Delineate 200 curves on primary system and 100 curves on local system per plan period.
- Install 20 miles of median cable barrier per year.
- Write 15 local safety plans over the plan period to identify opportunity areas on county roads.

IOWA LANE DEPARTURE-RELATED FATALITIES



IOWA LANE DEPARTURE-RELATED INJURIES



Engineering safety area

Improve intersections

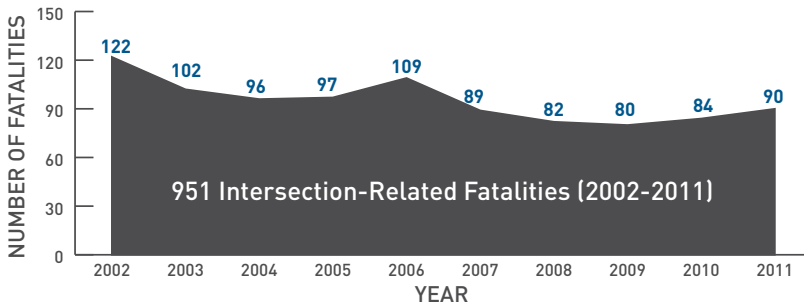
Challenges

Intersection crashes account for 30 percent of all severe crashes. Sixty percent of intersection crashes occur in urban areas leaving 40 percent of intersection crashes to occur in rural settings. Two challenges exist: (1) how to improve or reconfigure signalized intersections in urban areas; and (2) how to improve stop-controlled (or uncontrolled) intersections on the rural system.

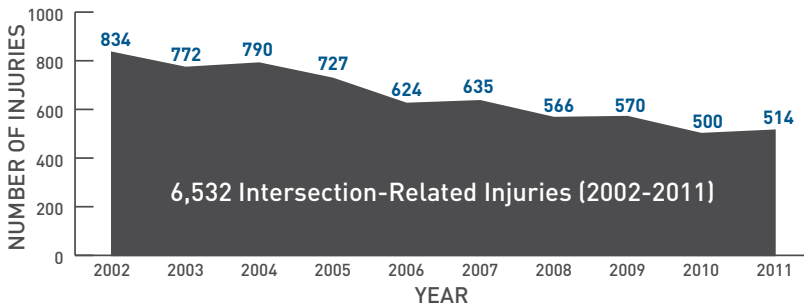
Direction

Reduce the chances for intersection crashes and mitigate the severity of injuries if crashes occur in intersections.

IOWA INTERSECTION-RELATED FATALITIES



IOWA INTERSECTION-RELATED INJURIES



Priority strategies

Urban

- Innovative intersection designs
- Traffic signal modifications

Rural

- Intersection lighting
- Stop controls

Leaders

Federal Highway Administration

Iowa County Engineers Association

Iowa Department of Transportation

Goals

Complete two rural expressway intersection improvements on the primary system per year.

Complete two multilane, urban intersection improvements on the primary system per year.

Complete 10 local system intersections improved with destination lighting per year.

Improve two signalized, urban intersections on the local system per year.

Policy safety area

Enhance multiagency collaborative efforts

Challenges

Each public agency has limited resources and many responsibilities. We need to work together and pool resources to communicate a unified safety message to the driving public, educate drivers on our roadways, and encourage policy changes that will enhance traffic safety.

Direction

Continue partnering efforts to spread a unified message to Iowa drivers about their role in eliminating preventable crashes. Continue partnering efforts to support traffic safety initiatives in both agency policy and the legislative arena.



Priority strategies

Create a multiagency group to carry out safety strategies across the Five E's.

Engage professionals across disciplines and systems to participate and create a unified message.

Leaders

Iowa Department of Public Health

Iowa Department of Public Safety

Iowa Department of Transportation

Goals

Explore funding an emergency medical services assessment by the National Highway Traffic Safety Administration.

Form an interdisciplinary advisory team for the Toward Zero Deaths program, Zero Fatalities.

Increase agency coordination and partnerships by organizing and conducting an annual statewide conference focused on the Toward Zero Deaths initiative.



Policy safety area

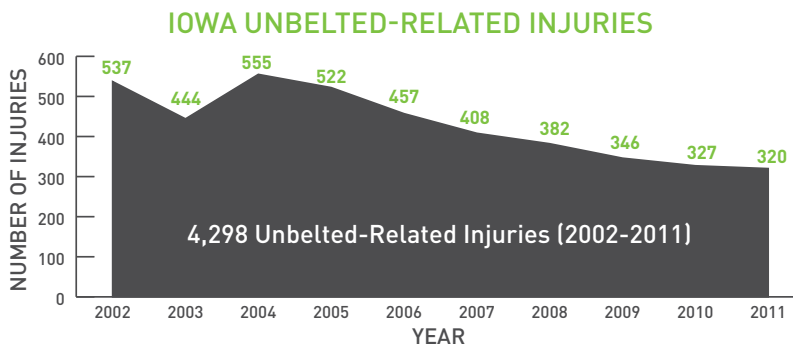
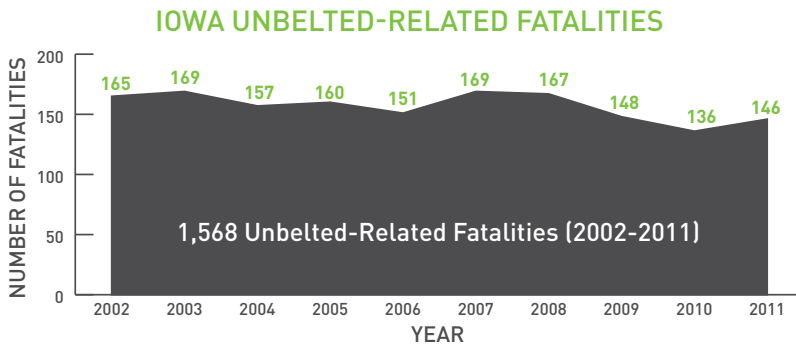
Strengthen legislative policies

Challenges

Changing or enacting legislation is a substantial objective. Public agencies must choose the messages they will focus efforts on with great care. Working together to focus efforts may result in greater outreach to representatives. Multiple agencies supporting a particular initiative should also show legislators its importance.

Direction

Continue partnering efforts to support traffic safety initiatives in legislation.



Priority strategies

Enact primary seat belt legislation for all positions.

Modify careless driving law to include distracted driving as a primary offense.

Enhance graduated driver's licensing.

Tighten impaired driving tolerances and increase penalties for impaired driving violations.

Leaders

Iowa Department of Justice

Iowa Department of Public Health

Iowa Department of Public Safety

Iowa Department of Transportation

Goals

Provide two safety issue reports to legislators per year. Papers will be developed by an interagency team to provide key information related to public policies.



Research and data safety area

Safety data improvement

Challenges

Data is the foundation of a strategic plan to reduce fatalities and major injuries. Crash records are just one data set out of the six needed for a complete picture of traffic safety. The other five are: vehicle, driver, roadway, citation, and medical outcome records. Sharing of data is a priority to gain a more complete picture to assist planning efforts. A single data portal must be developed and maintained in order to fully analyze all factors in a crash.

Direction

Continue partnering efforts to improve traffic safety data quality and availability. Multiple agencies supporting data sharing will provide for the most comprehensive data analysis.



Priority strategies

Expand statewide electronic crash reporting through TraCS.

Develop a Web portal to increase safety data availability.

Support creation of a Web-based analytical tool.

Leaders

Iowa Department of Justice

Iowa Department of Public Health

Iowa Department of Public Safety

Iowa Department of Transportation

Statewide Traffic Records Coordinating Committee

Goals

Launch a traffic records Web portal to provide access to all six safety data sets by the end of the three-year plan period.

Create a Web-based analytical tool by the end of the three-year plan period.



Iowa 76, between Waukon and Dorchester

CONCLUSION

Implementing the high-priority strategies outlined in this SHSP provides the greatest opportunity of achieving the goal of reducing fatalities and major injuries by 15 percent by 2020.

CONTACT US

Strategic Highway Safety Plan Advisory Committee

Jeremey Vortherms, P.E.

Jeremey.vortherms@dot.iowa.gov
Iowa DOT, State Safety Engineer
515-239-1267

Jan Laaser-Webb, P.E.

Jan.laaser-webb@dot.iowa.gov
Iowa DOT
515-239-1349