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LETTER FROM GOVERNOR TERRY E. BRANSTAD

Dear Friend,

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

lowa 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, lowa offers you a wealth of great opportunities. Ensuring we have an efficient and safe transportation system is key to many of those opportunities.

We're excited to join with our safety partners from around the state in supporting lowa's 2017 Strategic Highway Safety Plan (SHSP). In it, you will read that lowa is continuing our Zero Fatalities program encouraging safe driving behaviors. Iowa's SHSP lays out the safety strategies and short-term goals we'll implement as we strive for that vision.



lowa's 2017 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 education, enforcement, engineering, and emergency response communities. This interagency plan includes a fifth E – everyone. Because with everyone working together, we can change the traffic culture so that everyone arrives alive.

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

Sincerely,

Terry E. Branstad Governor of Iowa

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PARTNER PLEDGE

lowa is located at the crossroads of America. With interstates 35 and 80 intersecting through the heart of lowa, state and county roads crisscrossing our countryside, and a vast network of city streets, it will take diligence from each and every driver to ensure the safety of all drivers and passengers on lowa's roadways.

In this pledge, we formalize our support for the goals in lowa's 2017 Strategic Highway Safety Plan (SHSP) and the overall vision of Zero Fatalities on lowa'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 lowa's roadways.

lowa has shown that with dedication to proven safety programs and projects, traffic fatalities and serious 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 serious injuries.

We specifically commit to:

- Lead implementation of SHSP strategies 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.

Mark Lowe, Interim Director

Iowa Department of Transportation

Dr. Roxann Ryan, Commissioner Department of Public Safety Gerd Clabaugh, Director
Department of Public Health



SAFETY LEADERSHIP

Strategic Highway Safety Plan (SHSP) Advisory Team

Iowa Department of Transportation (DOT)

Office of Driver Services

Office of Local Systems

Office of Motor Vehicle Enforcement

Office of Strategic Communications

Office of Systems Planning

Office of Traffic and Safety

lowa Department of Public Safety (DPS)

Iowa State Patrol

Governor's Traffic Safety Bureau (GTSB)

lowa Department of Human Rights (DHR)

Criminal Juvenile Justice Program

Iowa Department of Public Health (DPH)

Bureau of Emergency and Trauma 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

Iowa Local Technical Assistance Program

lowa State University's Institute for Transportation

The University of Iowa's Injury Prevention Research Center







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 2016, Iowa's traffic safety community began working on an update to Iowa's SHSP. This is the second of such efforts in Iowa that first became a federal requirement by the Moving Ahead for Progress in the 21st Century Act (MAP-21) legislation and was continued by the Fixing America's Surface Transportation (FAST) Act. The result of this effort is the 2017 SHSP.

This update of the 2013 SHSP was written using a data-driven, innovative, and proactive planning process addressing not only the Four E's of roadway safety (education, enforcement, engineering, and emergency responders), but also a fifth E – everyone. The last E is a reminder that safety is everyone's responsibility.

Since the adoption of the 2013 SHSP, lowa has continued to align with the national vision to eliminate all traffic fatalities on all public roads. In order to do this, the Zero Fatalities campaign was developed in 2014 in partnership with the lowa departments of Transportation, Public Safety, and Public Health. While the partner agencies realize that zero fatalities is a lofty goal for the state, messaging strategies focus on the fact that zero is the only acceptable goal for individuals when it comes to their loved ones. Therefore, it should be the only goal for the state. Messaging is meant to get people to understand that every fatality is a life that was important to someone and not just a statistic.

Following the development of 2013 SHSP, the state has made significant progress toward its goal of reducing fatalities and serious injuries by 15 percent by the year 2020. In order to continue this progress through the next update, safety stakeholders established two new goals related to exposure of life-altering injuries. For the first measure, the state coordinated with the Governor's Traffic Safety Bureau on setting a target fatality rate of 1 per 100 million vehicle-miles traveled (VMT). For the second measure, safety stakeholders set the target rate for serious injuries at 4.3 per 100 million VMT. These targets are set for 2020 and will be reexamined for the next SHSP update.

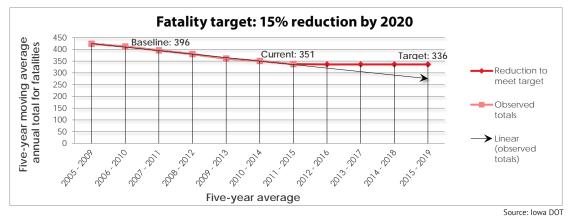
For this SHSP, two areas of concern were revealed after the crash data was analyzed. Both the older driver and motorcycle-related categories saw an upward trend in severe injuries since the 2013 SHSP was adopted. As these were the only two categories that did not consistently display a downward trend, a special emphasis was placed on them. New strategies have been defined for these categories. These strategies, along with the others throughout the plan, are intended to be deployed over the next years in the hopes to meet the goals outlined above.

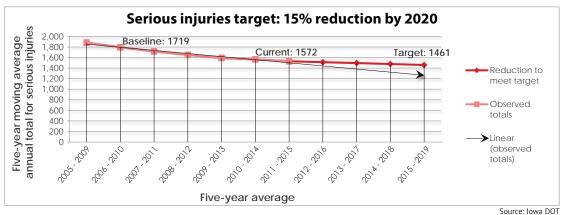
DATA ANALYSIS

Since the development of Iowa's 2013 Strategic Highway Safety Plan (SHSP), the state has made progress toward its goal of reducing fatalities and serious injuries on Iowa's roadways. In 2013, SHSP stakeholders set a collective goal of reducing severe injuries (fatal + serious) 15 percent statewide by the year 2020. To track progress on these goals, the state uses five-year moving averages (injuries averaged over the previous five years) instead of frequencies (fatality and serious injury totals for each year). Tracking the moving five-year averages as opposed to frequencies helps to provide a better understanding of long-term trends as frequencies can increase and decrease from year to year.

According to an analysis of these five-year averages, the state met the 15 percent reduction goal for fatalities as of 2015 and is on track to meet the goal for serious injuries. Despite this progress, during the development year (2016) of this plan, the state saw an increase in fatalities. The 2016 count is likely to have a negative impact on the five-year moving average in the coming years of data collection. This increase reaffirmed the governor's commitment to the reduction of traffic fatalities as a legislative priority, and provided a reminder that Zero Fatalities is not just a goal to strive for, but an effort that will require continued diligence.

Below are charts displaying the 15 percent reduction goals for fatalities and serious injuries, with the chart for severe injuries on the next page. These charts display injury trends for the past six years, identifying the five-year average for the baseline period (2007-2011 data), where they are currently (2011-2015 data), and the 15 percent reduction target.

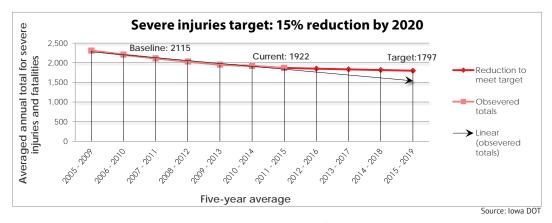








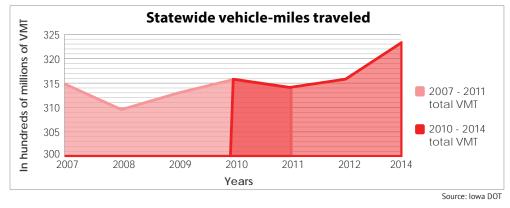




Understanding the progress that has been made in reducing fatal and serious injuries is important. However, to understand lowans' exposure to these life-altering injuries the state also looks at rates. These rates calculate the number of fatalities and serious injuries per 100 million vehicle-miles traveled (VMT) in the state. Since the 2013 SHSP, the fatality rate has declined from 1.26 fatalities per 100 million VMT to 1.05 in 2015. The serious injury rate has declined from 5.48 serious injuries per 100 million VMT to 4.78 in 2015.

To establish future reduction targets, safety stakeholders identified two additional measures for evaluating progress toward the reduction of fatalities and serious injuries on lowa's roadways. For the first measure, the state coordinated with the Governor's Traffic Safety Bureau on setting a target fatality rate of 1 per 100 million VMT. For the second measure, safety stakeholders set the target rate for serious injuries at 4.3 per 100 million VMT. These targets are both set for 2020 and will be reexamined for the next SHSP update.

Although a reduction in overall fatalities and serious injuries has been achieved, an analysis of the crash data revealed a few areas of concern. Older driver and motorcycle-related severe injuries have both trended up since the 2013 SHSP was adopted. Although any increase in severe injuries is counter to the goal of zero fatalities, it should be noted that these two areas were the only recognized categories that trended up consistently over the past two five-year average periods. Additionally, these increases have occurred in a context where total VMT on the state roadway system has been increasing in the years since crash data was last collected and analyzed.



In addition to the progress made on the reduction goals for fatalities and serious injuries, steps forward have also been made for the strategies and goals set forth in each safety-emphasis area. In the following section, each safety-emphasis area includes an update on progress achieved toward the goals, initiatives developed and carried out by safety stakeholders in each area, and how the SHSP will move forward with new strategies, goals, and targets.

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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 serious 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 partner agencies to enforce traffic laws during regular patrols, as well as during specialized mobilization efforts.

Engineering

The focus on safety within engineering begins with designing and building our roadways. Transportation engineers use design principles that are reliable and reduce the risk of crashes. 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.

EDUCATION SAFETY AREA

Multimedia education campaign

Multimedia education campaign	Status	Goal	Number completed as of 12/02/2016
Develop a strategic communication plan integrating the Toward Zero Deaths initiative, called Zero Fatalities.	Completed	N/A	N/A
Strengthen public perception of traffic safety by adding messages to all existing full-sized dynamic message signs along primary highways.	Ongoing	N/A	N/A
Deliver safety messages to multimedia net	works (television, r	adio, newspaper, ar	nd social media).
Television (Des Moines, Cedar Rapids and Sioux City designated market areas)	Completed	90 percent reached	99 percent of adults aged 25-54 reached; 16.1 frequency; 7.7 million impressions*
Radio (Des Moines and statewide)	Completed	250,000 impressions	7,512 radio spots; 1.1 million impressions on streaming radio
Display banners and online video	Completed	5 million impressions	6.7 million display banner ads; 170,000 video views
Newspaper	Ongoing	None	22 articles
Social media	Ongoing	None	19,960 Facebook Followers+; 1,520 Twitter Followers+

^{*} An impression is when an ad is fetched from its source. Each time an ad is fetched it is counted as one impression.

Progress

The Zero Fatalities campaign has been very successful, garnering statewide and national attention through television, radio, online marketing efforts, and the "Message Monday" element of the campaign. Targeted television and radio advertising included heavy coverage during a variety of sporting events, as well as other programming popular among the target audience. Additionally, unpaid or earned media coverage, on-air discussions about Zero Fatalities, and overall traffic safety behaviors helped spark conversations statewide about the program.

These safety conversations carried over to social media where posts to the Zero Fatalities Facebook page reached an average of more than 18,000 people per day in June and July 2016. On Twitter, in March 2016 alone

there were 110,000 tweets delivered to the Twitter stream. The Zero Fatalities outreach campaign is guided by the Five E's outlined in the 2013 SHSP (education, enforcement, engineering, emergency responders, and everyone).



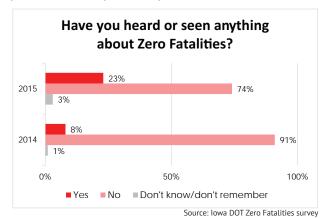
⁺ Facebook and Twitter followers are combined for the GTSB and the lowa DOT. Both accounts promote general messages relevant to the respective groups in addition to safety-related messages and the Zero Fatality branded messages.







Although it is difficult to quantify direct impact of education campaigns, the Zero Fatalities campaign has reached hundreds of thousands of lowans since its implementation. For the years 2014 and 2015, the lowa Department of Transportation conducted a randomized telephone survey to identify differences in awareness before and after the campaign. The survey demonstrated that awareness of the Zero Fatalities message had increased by 15 percentage points over the previous period.



Message Monday is an initiative that uses dynamic message signs to increase public awareness regarding safety issues on the roadway. The messages were successful in the state and garnered national attention with 16 different states asking for program details and seven national news stories published about the program. Messages included thought-provoking phrases such as "KNOW SAFETY, NO CRASHES," "WHAT WOULD THEY DO WITHOUT YOU? DRIVE SAFELY," "DITCH THE DISTRACTION, NOT THE CAR," and "DRIVE SAFELY – THINK OF THE IMPACT YOU COULD MAKE."

Where we are going

- Sustain the multimedia Zero Fatalities campaign.
- Identify new partners that correspond with the Five E's-emphasis areas (e.g., education, schools, and driving programs).
- Work with partners to share Message Monday distribution as a method for engagement.

Leaders

- Iowa DPS
- Iowa DPH
- Iowa DOT
- The University of Iowa's Injury Prevention Research Center

How we get there

- Deliver three new safety messages to multimedia networks (television, radio, newspaper, and social media).
- Engage a minimum of 10 new partners that are willing to share the Zero Fatalities message over the plan period (e.g., education, schools, and community organizations).
- Develop partner engagement materials for the Zero Fatalities campaign.
- Place engagement materials at public rest areas and driver's license stations around the state.

In addition to the direct reach the campaign has had, there has been indirect reach through the numerous campaigns and initiatives it inspired. "Drive Safe Cedar Valley" is a local initiative inspired by the same traffic safety ideals as the Zero Fatalities campaign and partners with the lowa DOT and the local regional transportation planning agency lowa Northland Regional Council of Governments.

On the statewide level, the Governor's Traffic Safety Bureau and the Iowa Department of Public Safety have incorporated the Zero Fatalities goal and branding into their messages, programs, and plans. Through this adoption of the Zero Fatalities brand, awareness of the campaign has spread through many agencies and provides more opportunities to reach the public.

Moving forward

Given the success of the program, safety stakeholders have decided to maintain the existing Zero Fatalities campaign as well as add 10 new partners over the plan period. By engaging new partners in the Zero Fatalities messaging and supporting them with materials, safety stakeholders can expand their reach and make Zero Fatalities the goal for everyone involved in transportation safety.

EDUCATION SAFETY AREA

Enhance driver education

Enhance driver education	Status	Goal	Number completed as of 12/02/2016
Involve parents in driver education courses.			
Require more behind-the-wheel instruction time.	Ongoing	Enhance driver education programs in five school districts per year.	Five districts
Require a diversity of driving conditions (e.g., all weather conditions, daytime and nighttime, all road surfaces).		15 school districts	

Progress

The Iowa DOT's Office of Driver Services engages in driver education classes across the state on an annual basis. To date, an agreement has not been developed to provide parents/students with a way to log behind-the-wheel experience on multiple road surface types in various conditions.

In addition to the items mentioned above, research and training opportunities have been offered to engage professionals in current safety topics. Training and technical assistance, as well as research in emerging safety topics such as all-terrain vehicle (ATV) use and injuries help to inform current safety tools and practice.

Research

- ATV use and injuries
- Training/Technical assistance opportunities, including:
 - Motorcycle safety courses.
 - Work zone safety training.
 - Local Technical Assistance Program (LTAP).
 - Iowa Traffic Safety Data Service.
 - o Traffic and Safety Forum.

Program success story

Public Resource Officers (PROs) with the lowa State Patrol were not included as a part of the 2013 SHSP update strategies; however, their program has been very successful during the life of the plan. The PROs have provided educational presentations to the public on motor vehicle safety-related topics for over a decade. In recent years, the presentations have expanded to include online safety for youth, bicycle and pedestrian safety, and campus safety. During the plan period, PROs have given nearly 14,000 educational programs.









Moving forward

Safety stakeholders would like to support the enhancement of driver education programs throughout the state by providing them with educational materials, offering them access to tools that track student progress, and by increasing public outreach on drowsy driving. By providing parents with information on driver education and instruction, safety stakeholders hope to encourage more parent involvement and more behind-the-wheel instruction time for students. To make driving time more effective, safety stakeholders would like to develop a tool that helps instructors assess a student's exposure to different driving environments and encourage the use of simulators in driving programs.

With advances in engineering and design practices over the past several decades, drivers in lowa are being exposed to new types of roadway facilities such as bike lanes, roundabouts, and specialized traffic signals. Updating the driver education curriculum to include how new drivers can navigate these roadway features will be important as more of these facilities are constructed and installed.

Finally, safety stakeholders have recognized that educating current and future drivers about the dangers of drowsy and distracted driving is important to ensuring safety on lowa's roadways. Safety stakeholders plan to expand their public reach on this subject by partnering with private entities and airing public service announcements about these driver behaviors.



Where we are going

- · Support driver education programs.
- Increase public outreach and educational campaigns regarding unsafe driver behaviors.

Leaders

- · Iowa Department of Education
- Iowa DPS
 - o GTSB
 - Iowa State Patrol
- · Iowa DOT
 - Office of Driver Services
 - Office of Motor Vehicle Enforcement

- Develop a simple tool for logging student driving experience (e.g., weather conditions, daytime/nighttime, road surface, facility type, and urban/rural).
- Continue using driver training simulators in driving programs.
- Develop new administrative rules; provide multidisciplinary input into driver education curriculum restructuring.
- Gather and develop education materials for unique roadway features.
- Partner with private entities to increase public awareness of the dangers of drowsy and distracted driving, and develop public service announcements to address these driver behaviors.
- Continue educational programs created to provide situational awareness of drowsy and distracted driving.
- Iowa DOT's Office of Motor Vehicle Enforcement staff will conduct a minimum of 330 public education and awareness activities to increase safety awareness of the motoring public.

ENFORCEMENT SAFETY AREA

High-visibility enforcement

High-visibility enforcement	Status	Goal	Number completed as of 12/02/2016
Deploy 1,000 hours of high-visibility, targeted enforcement activities per year with state enforcement officers during the three-year plan period.	Completed	3,000 hours	24,000 hours

Progress

The high-visibility enforcement goal was set at 3,000 hours for the three-year plan period. Over the plan period, 24,000 hours have been completed, well exceeding the goal established. On average, the GTSB funds approximately 6,700 high-visibility enforcement hours for the lowa State Patrol alone.

In addition to completing the goal by a high margin, several initiatives and high-profile campaigns have been implemented. This includes the High Five Rural Traffic Safety Project (High Five) and Iowa's involvement in the Interstate 80 Challenge enforcement event in 2013.

High Five is overseen by the GTSB and an advisory board comprised of traffic safety officials from different entities. The program involves increased patrols and awareness campaigns combating common misconceptions about wearing a seat belt.

The High Five Advisory Board selects rural county sheriff's offices to be offered special funding from the GTSB. Counties are selected through an analysis of crash data to identify those counties with low seat belt compliance and high crash numbers.

Program success story

The I-80 Challenge was a special enforcement event that involved all 11 states along the corridor and won an International Association of Chiefs of Police Award. The Iowa State Patrol participated in the national I-80 Challenge campaign July 24-31, 2013. The enforcement challenge included the entire 2,900 miles of I-80, with its goal to create public awareness of traffic safety through both an increased law enforcement presence and media outreach. Patrol agencies in the 11 states along the corridor dedicated an increased presence of troopers, with a total of 3,469 enforcement hours completed in Iowa for the challenge. During this enforcement challenge, lowa had no fatalities or crashes along the I-80 corridor.

Pre- and post-program seat belt surveys were conducted for counties involved in High Five. According to the data, four of the five participating counties reported an increase in seat belt usage. The largest increase in seat belt usage was identified in Allamakee County where before the program, usage was 61 percent. After the High Five project, usage was reported to be 76 percent. Post-program survey information for Marion, Palo Alto, and Webster counties was reported at 97 percent, 95 percent, and 97 percent respectively, which was above the state observational seat belt usage rate of 93 percent (2014).









Statewide observational surveys of seat belt usage are conducted on an annual basis to assess progress on safety belt compliance. Although these surveys provide a picture of which areas and counties have increased their seat belt usage, this survey only tracks the driver and passenger for a vehicle. The University of lowa's Injury Prevention Research Center conducts a separate survey for child passenger restraints. Although a larger proportion of the communities surveyed had anywhere from 90-100 percent of children properly restrained, there were some communities that had percentages as low as 76 percent, particularly in more rural areas.

Moving forward

After meeting the high-visibility enforcement goal set forth in the 2013 SHSP, safety stakeholders set a new goal of 12,000 hours to be completed. Additionally, two new goals have been set for the high-visibility enforcement area. Using the High Five project, safety stakeholders will work to increase seat belt compliance from 92.96 percent to 92.99 percent. Additionally, stakeholders recognize that there is an opportunity to increase proper child restraint across the state, and specifically in rural areas of Iowa. This could be addressed through increased emphasis on child passenger restraint in the High Five project. The success of the I-80 Challenge enforcement campaign shows that special enforcement campaigns can have an effect, even if temporary, on fatalities. Therefore, safety stakeholders have set an annual goal for special enforcement campaigns similar to the I-80 Challenge in state transportation corridors.



Where we are going

- Support additional officer hours on roadways.
- Encourage and support special enforcement campaigns.
- Work with local stakeholders to expand the reach of High Five.

Leaders

- Iowa DPH
- Iowa DPS
 - o GTSB
 - Iowa State Patrol
- Iowa DOT
 - Office of Driver Services
 - o Office of Motor Vehicle Enforcement
- The University of Iowa's Injury Prevention Research Center

- Deploy 12,000 hours of high-visibility enforcement funded by the GTSB over the plan period.
- Increase seat belt compliance from 92.96 percent to 92.99 percent over the plan period.
- Increase total child restraint use from 93.8 percent to 94.3 percent over the plan period.
- Increase child restraint use in communities with populations of 1,000 to 2,499 from 89.5 to 90 percent over the plan period.
- Run Zero Fatalities radio spots in High Five counties over the plan period.
- Hold an annual corridor special enforcement event in the state.
- Complete 96,000 motor vehicle inspections over the plan period.

ENFORCEMENT SAFETY AREA

Deploy state-of-the-art technology

Deploy state-of-the-art technology	Status	Goal	Number completed as of 12/02/2016
Equip all Iowa State Patrol and Iowa DOT Motor Vehicle Enforcement vehicles with light detection and ranging (LiDAR) equipment for speed enforcement.	Ongoing	330	75 LiDAR units provided
Sustain the GTSB equipment upgrade program for cities and counties.	Ongoing	N/A	N/A
Strengthen public perception of traffic safety by adding messages to all existing full-sized dynamic message signs along primary highways.	This goal was moved to the multimedia education campaign page.		

Progress

Although progress has been made equipping local and county law enforcement agencies with state-of-the-art technology, additional efforts should be made to reach the goal of equipping all lowa State Patrol and lowa DOT enforcement vehicles with this technology.

The GTSB has also made progress with its equipment upgrade program for cities and counties across the state. The equipment upgrade program purchases units such as speed trailers, in-car video cameras, preliminary breath testers, and impairment simulation goggle kits for law enforcement agencies across the state. In federal fiscal year 2014, 265 units were purchased.

Moving forward

Safety stakeholders will maintain the dual goals of increasing the percentage of Iowa State Patrol and Iowa DOT Motor Vehicle Enforcement vehicles with LiDAR, and sustaining the equipment upgrade program.

Where we are going

- Equip law enforcement with state-of-theart technology.
- Promote technologies to gather commercial vehicle information.

Leaders

- Iowa DPS
 - o GTSB
 - o Iowa State Patrol
- Iowa DOT
 - Office of Motor Vehicle Enforcement
 - Office of Traffic and Safety

- Increase the number of LiDAR units in Iowa State Patrol and Iowa DOT Motor Vehicle Enforcement vehicles by 50 units over the plan period for speed enforcement.
- Sustain the GTSB equipment upgrade program for cities and counties.







ENFORCEMENT SAFETY AREA

Expand impaired enforcement programs

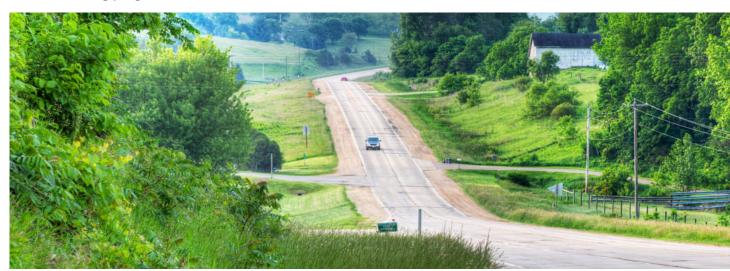
Expand impaired enforcement programs	Status	Goal	Number completed as of 12/02/2016
Provide drug recognition expert certification to 36 additional officers over the plan period.	Completed	36 officers	48 officers
Provide advanced roadside impaired driving enforcement training to 450 additional officers over the plan period.	Completed	450 officers	909 officers
Construct a training program for recognition of drowsy or inattentive drivers and schedule training session during the plan period.	This goal was revised as a public outreach goal and moved to the education safety emphasis area.		

Progress

Iowa's GTSB provides impaired driving enforcement and drug recognition training for law enforcement officers. The ARIDE (advanced roadside impaired driving enforcement) course is a 16-hour training to bridge the gap between Standardized Field Sobriety Test and Drug Recognition Expert Certification.

ARIDE training provides officers with an understanding of the impairing effects of drugs and alcohol. ARIDE training is offered multiple times per year to enforcement officers across all public safety agencies. Officers learn to identify a person under the influence of a drug or suffering from an injury or illness with signs similar to alcohol or drug impairment.

A drug recognition expert (DRE) is a law enforcement officer trained to recognize any type of impairment in drivers, including drugs and alcohol. DRE training is held annually for up to 15 officers. Once trained and certified, DREs can conduct a systematic and standardized 12-step evaluation consisting of physical, mental, and medical components. DREs are often called to assist other agencies and provide testimony in court as expert witnesses. The GTSB provides all program supplies and materials and coordinates officer registrations for both training programs.



Moving forward

Training and certifying more officers through the DRE and ARIDE programs is a priority for safety stakeholders. However, making sure officers maintain those certifications and continue to receive training is just as important. That is why safety stakeholders set goals of maintaining existing DRE certifications and adding 12 new certifications over the plan period. For ARIDE training, safety stakeholders would like to train 300 additional officers over the plan period.

Since Jan. 1, 2015, law enforcement agencies have been encouraged to test individuals involved in fatality-related crashes for blood alcohol content (BAC). This will likely increase the number of severe injuries attributed to impaired driving, but will also provide a clearer picture of the magnitude of impaired driving in the state. Supporting a 100 percent BAC testing in all fatality-related crashes will provide safety stakeholders with more information on the full impact impaired driving has on the Zero Fatalities goal.







Where we are going

 Expand law enforcement training to effectively identify impaired drivers.

Leaders

- Iowa DPS
 - o GTSB
 - o Iowa State Patrol
- Iowa DOT
 - o Office of Motor Vehicle Enforcement

- Maintain Drug Recognition Expert Certification for trained officers.
- Provide DRE training to 12 additional officers over the plan period.
- Provide ARIDE training to 300 additional officers over the plan period.
- Support a 100 percent BAC and drug (tetrahydrocannabinol [THC]) testing for all crashes involving fatalities.







ENGINEERING SAFETY AREA

Prevent lane departures

Prevent lane departures	Status	Goal	Number completed as of 12/02/2016
Add rumble strips on 350 miles of the primary system and 30 miles of local system per year.	Completed	Primary: 1,050 miles Local: 90 miles	Primary: 1,589 miles Local: 90 miles
Complete 200 miles of shoulder treatments on primary system per year.	Completed	600 miles	1,480 miles
Delineate 200 curves on primary system and 100 curves on local system per plan period.	Primary: Ongoing Local: Completed	Primary: 200 curves Local: 100 curves	Primary: 14 curves Local: 1,033 curves
Install 20 miles of median cable barrier per year.	Completed	60 miles of median cable barrier	60 miles of median cable barrier installed, 23.3 miles planned.
Write 15 local safety plans over the plan period to identify opportunity areas on county roads.	Completed	15 plans	29 plans

Progress

The state has made significant progress on the installation of engineering countermeasures that help prevent lane departure crashes. Nearly all goals were exceeded for the plan period. The goal for curve delineation on the primary system has not been reached. However, curve delineation for local roads was exceeded by nearly 10 times the goal set in the 2013 SHSP.

In addition to infrastructure projects, a goal was set for 15 Local Road Safety Plans (LRSPs) to be completed. The local roads safety-emphasis area accounted for 5,521 severe injuries and approximately 52 percent

Research

- Guidance and Evaluation of Iowa's Road Safety Audit/ Assessment Process
- Installation Guide for Centerline and Edgeline Rumble Strips on Narrow Pavements
- In-Service Performance Evaluation of Median Cable Barrier in Iowa
- Safety Guide for County Engineers
- Iowa HSM/IHSDM Calibration
 - Interstate
 - ° Rural, two-lane, primary
- Iowa-based Risk Factors
 - Rural, horizontal curves
 - Cable median barrier study

- Expanding the Usage of Four- to Three-Lane Conversions in Iowa
- Destination Lighting Specifications and Best Practices
- Iowa-based Crash Modification Factors
 - Safety edge
 - Curve chevrons
 - Destination lighting
- Iowa-based Safety Performance Functions
 - Horizontal curve
 - o Interstate

of all severe injuries, according to the crash data reviewed for the last update (2007-2011). LRSPs offered an opportunity to help reduce this number by encouraging and enabling local safety officials to go through the same Five E's process and identify engineering solutions that can be implemented on local roads.

LRSPs provide a systemic approach to safety improvements on the transportation system by identifying high-risk roadway features before they become crash sites. LRSPs are developed by practitioners to assist with making informed decisions regarding safety programs, engineering improvements, and other strategies. These plans focus on the Five E's of safety and discuss how various agencies can coordinate to implement solutions. Plans use roadway risk factors and crash data analysis to develop solutions that identify potential safety countermeasures and screen the local road system to prioritize project locations. Since the last update, the number of severe injuries in the local roads safety-emphasis area has decreased to 5,072 and is 53 percent of all severe injuries. Despite the decrease overall, a large proportion of crashes resulting in severe injuries continue to be on local roads, making the continuation of these efforts important.

Over this plan period, SHSP partners have developed research to help inform planning and engineering practices that reduce lane departure crashes on lowa's roadways. On the next page is a list that includes some of this research.

Moving forward

As safety research evolves and advances in technology, data collection, and roadway design become more widely available, evidence-based decision-making will be an important component of the project development process. Therefore, safety stakeholders have set statewide and local goals to leverage data-driven processes in highway program management through the development of LRSPs, and the incorporation of safety data analysis in project development and prioritization. Pursuing these goals in combination with the installation of proven safety countermeasures will bolster lowa's strategic approach to making all of its roadways safer.

Where we are going

- Support the installation of engineering countermeasures on the primary and local roadway systems.
 - Centerline rumble strips
 - Shoulder/Edgeline rumble strips
 - Curve delineation
 - Shoulder treatments
 - Median cable barrier
- Support evidence-based decision making in highway management and program development.

Leaders

- Federal Highway Administration
- · Iowa County Engineers Association
- · Iowa DOT
 - Districts
 - Office of Design
 - Office of Local Systems
 - Office of Systems Planning
 - Office of Traffic and Safety

- Engineering
 - Add rumble strips on 700 miles of primary system and 60 miles of local system over the plan period.
 - Complete 400 miles of shoulder treatments on the primary system and 50 miles on the local system over the plan period. Install 10 miles of median cable barrier over the plan period.
 - Complete five four- to three-lane conversions over the plan period.
- Develop District Road Safety Plans utilizing similar methodology to the LRSPs.
- Write 15 LRSPs over the plan period to identify opportunity areas on county roads.
- Develop a Highway Safety Improvement Program (HSIP) manual for HSIP project management.
- Identify local road features that correlate with lane departure crashes.
- Establish safety data analysis processes in project identification, prioritization, selection, and development.







ENGINEERING SAFETY AREA

Improve intersections

Improve intersections	Status	Goal	Number completed as of 12/02/2016
Complete two rural expressway intersection improvements on the primary system per year.	Ongoing	6 improvements	4 improvements
Complete two multilane, urban intersection improvements on the primary system per year.	Completed	6 improvements	11 improvements
Complete 10 local system intersections improved with destination lighting per year.	Ongoing	30 improvements	2 improvements
Improve two signalized, urban intersections on the local system per year.	Completed	6 improvements	13 improvements

Progress

The state has completed several intersection improvements in its pursuit to enhance safety on the roadway system. The goals for multilane, urban intersection improvements on the primary system and signalized urban intersections on the local system were met. However, goals for rural expressway intersection improvements and local system destination lighting improvements require additional efforts in the next plan period.



Research

- Speed-Actuated LED Stop Sign Feasibility
- · Iowa-based Risk Factors
 - Intersections

- Rail Crossing Safety Educational Support
- · Iowa-based Crash Modification Factors
 - Stop Sign Mounted Beacons

While engineering solutions are important to enhancing safety at intersections, public awareness and training are recognized as key areas for improvement. This is why the lowa DOT, GTSB, and lowa County Engineers Association came together to develop the "Can't See? Don't Go!" campaign.

This campaign is intended to enhance public awareness of rural intersection navigation. The campaign was used to educate drivers that uncontrolled intersections in rural areas are hazardous when the driver is unable to see oncoming traffic due to:

- Tall corn in late summer and early fall.
- Buildings, trees, and snow.
- Dust thrown up by vehicles on gravel roads.

In addition to the "Can't See? Don't Go!" campaign, SHSP partners have been conducting research on intersection-related issues to address safety. The goal of this research was to provide educational support and guidance on engineering solutions.

Moving forward

In recent decades, advances in intersection design and traffic engineering have expanded the range of improvements communities can implement to enhance safety for all users. Innovative intersection designs and mode-specific traffic signals have expanded the choices available at both urban and rural intersections. This is why safety stakeholders have added the goal to develop an intersection evaluation tool for communities to use in project development.



Where we are going

Implement appropriate and cost-effective engineering solutions at intersections.

- Innovative intersection improvements
 - Roundabouts
 - Reduced conflict intersections
 - Diverging diamond interchanges
 - o Off-set turn lanes
- · Traffic signal modifications
- · Intersection lighting
- Bicycle-pedestrian intersection improvements

Leaders

- Federal Highway Administration
- Iowa County Engineers Association
- Iowa DOT
 - Districts
 - Office of Design
 - Office of Local Systems
 - Office of Systems Planning
 - Office of Traffic and Safety

- Improve four signalized, urban intersections on the local system over the plan period.
- Complete four rural expressway intersection improvements on the primary system over the plan period.
- Complete four multilane, urban intersection improvements on the primary system over the plan period.
- Develop an intersection evaluation tool for use in project development.







POLICY SAFETY AREA

Enhance multiagency collaborative efforts

Enhance multiagency collaborative efforts	Status	Goal	Number completed as of 12/02/2016
Explore funding an emergency medical services assessment by the National Highway Traffic Safety Administration.	Completed	N/A	N/A
Form an interdisciplinary advisory team for the Toward Zero Deaths program, Zero Fatalities.	Completed	N/A	N/A
Increase agency coordination and partnership by organizing and conducting an annual statewide conference focused on Toward Zero Deaths.	Ongoing	N/A	N/A

Progress

In 2015, the Iowa DPH partnered with NHTSA's technical assistance program to conduct a statewide emergency medical services assessment. This assessment was an update to the last assessment conducted, and evaluated the progress made by the emergency medical services system in the state. Additionally, a multidisciplinary team was formed to implement the goals and strategies of the Iowa SHSP, as well as implementing the Zero Fatalities initiative. This group has been meeting quarterly since the 2013 SHSP was developed and has assisted with the development of this update.

Moving forward

To coordinate agency partnerships and initiatives for the Zero Fatalities campaign, SHSP partners plan to hold the annual GTSB conference and the Traffic and Safety Forum meetings concurrently and at the same location. This will encourage discussions between different safety stakeholders and agencies. In addition, concurrent sessions will be held that incorporate the Zero Fatalities message, as well as SHSP goals and strategies for both conferences.

Where we are going

 Engage professionals across disciplines and systems to participate in the Zero Fatalities campaign and carry forward its message.

Leaders

- Iowa DPH
- · Iowa DPS
- · Iowa DOT

- Continue to have cross-representation of stakeholders at all safety conferences and hold a concurrent Zero Fatalities session with the GTSB conference and Traffic and Safety Forum.
- Continue to have SHSP advisory implementation team meetings quarterly and increase local agency representation.

POLICY SAFETY AREA

Strengthen legislative policies

Enhance multiagency collaborative efforts	Status	Goal	Number completed as of 12/02/2016
Enact primary seat belt legislation for all positions.		Provide two safety issue reports to	
Modify careless driving law to include distracted driving as a primary offense.	Ongoing	legislators per year, six reports total.	
Enhance graduated driver's licensing.		Papers will be developed by an interagency team to	4
Tighten impaired driving tolerances and increase penalties for impaired driving violations.		provide key information related to public policies.	

Progress

The lowa DOT has produced several safety-related plans, presentations, and reports that have gone before the legislature to provide the public and elected officials with more information on traffic safety issues. The "Drive on the Right, Pass on the Left" social media marketing plan discussed how the lowa DOT would use numerous media platforms to discuss safe passing practices. Additionally, the lowa DOT published a press release detailing a 2005 study by the Center for Transportation Research and Education at lowa State University on the safety performance of rural stop-controlled intersections. This press release was meant to address growing concerns regarding uncontrolled rural intersections. The lowa DOT noted that placing stops at every intersection, as some were calling for, could actually have the inverse effect and desensitize drivers to the signage for no added safety benefit.

In June 2014, The University of Iowa published its report "A Comparative Policy Analysis of Seat Belt Laws," which used literature review, policy review, and crash data analysis to estimate the benefit of enhancing the existing seat belt law to require all vehicle passengers to use seat belts. The study found that rear seat fatalities could decrease by about 48 percent if an all-passenger law was implemented in the state. Despite this evidence, passenger seat belt safety laws were not passed.

Although not specifically outlined as a goal in the previous update, numerous reports have been undertaken by The University of Iowa on bicycle-pedestrian traffic safety issues. One of these reports discussed an issue that came up during the most recent legislative session, the issue of safe passing distances of bicyclists on the roadway.









Results from the passing study showed that the presence of shared-lane arrow markings increased the separation distance drivers gave to bicyclists. However, the majority (greater than 80 percent) of drivers in the study did not make a complete lane change to pass the bicyclist, regardless of whether or not shared-lane arrow marking were present. Age was found to be an important factor related to wait time, speed, and braking when a driver encountered the different bicycling events tested. Specifically, older drivers gave less passing separation distance to bicyclists compared to younger drivers, but only when there were no shared-lane arrow markings present. Although the safe passing distance legislation did not pass the session, the research offered insight into the effect of shared-lane markings on passing distances used by drivers.

Another law was considered in spring 2015 to make distracted driving a primary offense. A representative of the GTSB testified in front of the House and Senate Transportation committees in support of this bill. The legislation did not move forward, but has since morphed in late 2015 to a bill that would instead ban all handheld cell phone use while driving. This bill has also not yet passed in the legislature.

For the impaired driving legislative goal, efforts have been directed toward the creation of an impaired driving coalition. The governor signed a proclamation to this effect supporting and recognizing the importance of addressing impaired driving and the leadership provided by the GTSB and its partners in this effort. As a result of these actions, an impaired driving coalition has since been formed to seek strategies to address this issue.

Despite some of the specific legislative policies mentioned above failing to pass the legislature, a renewed emphasis in 2016 was seen in distracted, drowsy, and impaired driving. Governor Branstad highlighted these unsafe driving behaviors in relation to a cyclist fatality that occurred during the Register's Annual Great Bicycle Ride Across lowa. He made the point that this was a part of a concerning increase in overall fatalities during 2016. Discussing the overarching issues of unsafe driver behaviors, Branstad noted that passing legislation designed to curb these activities while driving will be a priority in the next legislative session.

Moving forward

SHSP partners do not have control over the bills that are passed or are not passed. However, there are options available for safety stakeholders to inform and support legislation that enhances safety. By providing research opportunities, educational programs, and agency support for national and state initiatives, SHSP partners and safety stakeholders can inform lawmakers and the public about the benefits of safety-related legislation.

Where we are going

- Encourage primary seat belt legislation for all positions.
- Promote modification of lowa law to include distracted driving as a primary offense.
- Enhance graduated driver's training programs.
- Support a review of impaired driving tolerances and promote an increase for impaired driving penalties.

Leaders

- · Iowa Department of Justice
- · Iowa DPH
- Iowa DPS
- · Iowa DOT

- Provide safety issue reports to legislators each year. Papers or presentations will be developed by traffic safety partners to provide key information related to public policies.
- Provide information supporting the governor's legislative priorities on distracted, drowsy, and impaired driving.

DATA MANAGEMENT AND USE SAFETY AREA

Safety data improvement

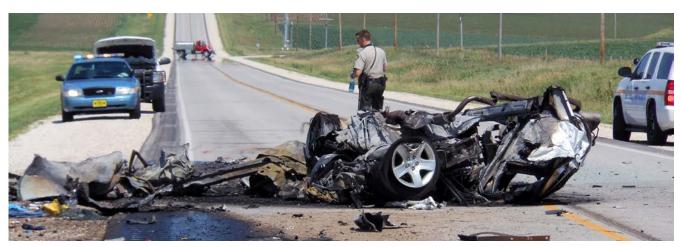
C-C-t	Status	Cool	Number completed as of
Safety data improvement	Status	Goal	12/02/2016
Launch a traffic records web portal to provide access to all six safety data sets by the end of the three-year plan period.	Completed	N/A	N/A
Create a web-based analytical tool by the end of the three-year plan period.	Ongoing	N/A	N/A
Expand statewide electronic crash reporting through Traffic and Criminal Software (TraCS).	Ongoing	100 percent	97.98 percent

Progress

Out of the three research and data goals established for the plan period, one of these three goals are completed and two are nearly completed. The lowa DOT's Traffic Safety Data and Analysis website has been operational since 2014. The website features reports and summaries that cover NHTSA's six safety data areas (crash, road, driver, vehicle, citation/adjudication, and injury surveillance system/emergency medical services). The site also features crash maps that provide an in-depth look at the SHSP emphasis areas along with accompanying data and graphs.

The first phase of the web-based analytical tool discussed in the last update is nearly complete and will provide direct public access to crash data. Web-SAVER will be a web-browser-based, open access analysis tool available to anyone with an internet connection. The tool will enable users to interact with the crash data via a map interface, identify locations of interest, perform queries, produce a variety of reports, and more. The tool can be used by a variety of traffic safety stakeholders, including the public, agency partners, university/research partners, consultants, engineers, planners, and special users. The tool was released with base functionality in August 2016.

The TraCS program is an initiative to collect data from law enforcement at the scene of a motor vehicle crash and send that data electronically to the lowa DOT. The TraCS program and software support is provided by the









lowa DOT at no charge to lowa public safety agencies and information is collected and stored in the lowa DOT's database. Agencies can use the software and house the data themselves, or they can use the web portal to report information such as crashes and citations. Expanding the use of TraCS to more agencies will expand citations that are electronically submitted and speed up data for crash reports. This will make citations quicker to process and allow conviction notices to be sent by the lowa DOT in a more timely and accurate fashion.

Electronic reporting with TraCS has expanded from 92 percent of all crash reports submitted electronically in 2013 to 98 percent of crashes transmitted through TraCS during first quarter 2016. Currently, there is only one county that does not have any TraCS reporting, otherwise most counties in the state have at least one police department or sheriff's office that uses it in some form.

Moving forward

Safety stakeholders have made strides toward creating more complete datasets across the six NHTSA safety data areas. However, safety research and programming is reliant upon analyses that integrate multiple data areas. This requires standardized definitions, procedures, and fields that assist researchers with summarizing and analyzing information. To address this, safety stakeholders will facilitate access to crash records data between departments and work to facilitate integration between the different departments involved in transportation safety.

Where we are going

- Facilitate access between departments to traffic safety records data and track usage.
- Work to facilitate connections and integration between justice, licensure, crash, trauma, and emergency medical services (EMS) traffic-related data sets.

Leaders

- Iowa DHR
- Iowa DPH
- Iowa DPS
- · Iowa DOT
- Statewide Traffic Records Coordinating Committee

- Establish Highway Safety Manual incorporation meeting to accomplish peer exchange action items.
- Hold six Data Quality and Analysis
 Coordination Committee meetings over the
 plan period to facilitate connections between
 justice, licensure, crash, trauma, and EMS
 traffic-related datasets.
- Complete curve and intersection databases and make them accessible and usable by all interdisciplinary professionals.











EMERGING TRENDS

Motorcyclists

Motorcycle vehicle-miles traveled percent	Motorcycle severe injuries percent	Motorcycle fatalities percent
0.44	16	14

Over the past decade severe injuries for motorcyclists have increased in the state of lowa. In fact, the motorcyclist emphasis area is the only safety-emphasis category that has not had a percentage decrease for the past five years of data collection. Motorcyclists account for 14 percent of all fatalities in the state, while only accounting for 0.44 percent of all vehicle-miles traveled in the state, a very concerning trend.



Older drivers

Crashes involving older drivers (65 and older) that result in severe injuries have been on a decline for more than a decade. However, for the last two years of data collection, there has been an increase in severe injuries for older drivers.

Traffic violations provide a key moment for families to begin conversations with their loved ones about safe driving practices for older drivers. According to recent study results from The University of Iowa's Injury Prevention Research Center, receiving a traffic violation increases risk of having an at-fault crash by as much as 28 percent in the following 30 days for those aged 50 to 64; 64 percent for those aged 65 or older.

Where we are going

- Work with state agency partners to identify relevant stakeholders for each emphasis area.
- Incorporate the safety-emphasis areas into the Zero Fatalities messaging and campaign.

Leaders

- Iowa DPS
 - o GTSB
- Iowa DOT
 - o Office of Motor Vehicle Enforcement
 - Office of Driver Services
 - Office of Systems Planning
 - Office of Traffic and Safety

- Review crash data concerning older drivers and motorcyclists and provide that data to stakeholders.
- Hold two forums with statewide agency partners and emphasis area stakeholders over the plan period.
- Develop Zero Fatalities messaging tailored to the motorcycle and older driver emphasis areas.
- Develop a program to encourage training and licensure of motorcycles.
- Develop a publication that provides resources for families and discusses when and where to have conversations with loved ones on driving limitations.

Challenges

Balancing the state's responsibility for promoting the safety of the public on its roadways and the freedom of individuals to travel how they see fit has always been a difficult relationship to navigate. Nurturing this relationship will require additional research, discussion, and education for these safety areas. To address these emerging trends and identify strategies that will reduce severe injuries for motorcyclists and older drivers, all interested stakeholders must first be brought to the table.

Direction

Raise public awareness of the emerging safety concerns for the motorcycle and older driver emphasis areas and work with stakeholders to begin conversations on safety strategies.



CONCLUSION

Further documentation of the team members involved and the process utilized in developing Iowa's Strategic Highway Safety Plan (SHSP) can be found in the SHSP Process Documentation Report online at **www.iowadot.gov/traffic/shsp**.

Implementing the high-priority strategies outlined in this SHSP provides the greatest opportunity to reduce fatalities and serious injuries in pursuit of the overarching goal of achieving Zero Fatalities.

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