# ARKANSAS 2017 STRATEGIC HIGHWAY SAFETY PLAN



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## Arkansas Highway Safety Steering Committee

American Association of Retired Persons – Arkansas (AARP) Arkansas Administrative Office of the Courts (AOC) Arkansas Department of Finance and Administration (DFA) Arkansas Department of Health (ADH) Arkansas Department of Transportation (ARDOT) Arkansas Highway Police (AHP), a Division of the ARDOT Arkansas Highway Safety Office (HSO), a Division of the ASP Arkansas Rehabilitation Services Arkansas State Police (ASP) Arkansas Trucking Association (ATA) Associated General Contractors Arkansas (AGC) Bicycle Advocacy of Central Arkansas (BACA) East Arkansas Planning and Development District (EAPDD) Federal Highway Administration (FHWA) Federal Motor Carrier Safety Administration (FMCSA) Frontier Metropolitan Planning Organization (MPO) Injury Prevention Center at Arkansas Children's Hospital Jonesboro Metropolitan Planning Organization (MPO) Little Rock Police Department (LRPD) Metroplan National Highway Traffic Safety Administration (NHTSA) Northwest Arkansas Regional Planning Commission (NWARPC) Pulaski County Pulaski County Sheriff's Office Southeast Arkansas Regional Planning Commission (SARPC) Texarkana Metropolitan Planning Organization (MPO) Time Striping, Inc. Tri-Lakes Metropolitan Planning Organization (MPO) University of Arkansas for Medical Sciences (UAMS) West Memphis Metropolitan Planning Organization (MPO)

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In 2013, the year of the last Strategic Highway Safety Plan (SHSP), 498 people lost their lives on Arkansas roadways. Since then, a number of measures have been implemented to reduce motor vehicle fatalities and serious injuries such as the passing of stronger impaired driving laws, implementation of traffic incident management, and implementation of innovative infrastructure improvements. As a result, the number of roadway fatalities in Arkansas decreased to 470 in 2014, a four percent decrease. The fatality rate on Arkansas roadways decreased to 1.38 deaths per 100 million vehicle miles (MVM) traveled in 2014, a seven percent decrease from 1.49 deaths per 100 MVM traveled in 2013. Arkansas went from having the second highest fatality rate in the nation in 2010 to the 13<sup>th</sup> highest in 2014, a substantial progress compared to other states.

Despite our accomplishments, the number of fatalities increased since 2014, mirroring a national trend. There is much more work to do to achieve our vision of Toward Zero Deaths on Arkansas roadways.

The Arkansas Highway Safety Steering Committee began the update of the SHSP in 2015. The Committee, which has expanded since the 2013 SHSP to bring in other safety stakeholders, helped convene a Safety Summit in September 2016 that brought experts and local professionals together to help shape the Plan. The Committee, with input received from the Summit, identified key safety areas and high payoff strategies to continue progress Toward Zero Deaths.

The SHSP is the culmination of joint efforts of various federal, state and local organizations in Arkansas to set the direction of our future collective safety efforts. The SHSP is not limited or focused on one organization or one area of concern. The SHSP is applicable to all organizations that play a part on addressing highway safety in Arkansas. The SHSP emphasis areas and strategies address the 4E's (E\engineering, education, enforcement and emergency services) of highway safety.

### Purpose

The Strategic Highway Safety Plan (SHSP) is a data-driven. comprehensive plan that establishes statewide goals, objectives, and strategies to address the safety areas of emphasis in Arkansas. The SHSP integrates the four "E's" engineering, education, enforcement, and emergency services—and was developed in coordination with local, state, and federal stakeholders. The intent of the SHSP is to act as a guide to direct the development of specific goals and strategies for organizations in Arkansas to reduce roadway fatalities and serious injuries, with an ultimate vision of

## Performance-Based Approach

While progress is being made to reduce fatalities and serious injuries on Arkansas' roadways, it is recognized that one is too many. Thus, the ultimate goal of the Arkansas Highway Safety Steering Committee is zero fatalities and serious injuries. The SHSP is an integral part to turn this vision into reality through a multi-organizational approach that utilizes engineering, education, and enforcement. emergency services strategies. This vision and strategy is consistent with the Toward Zero Deaths (TZD) National Strategy on Highway Safety sponsored by the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), the American Association of State Highway and Transportation Officials (AASHTO), and the Governor's Highway Safety Association (GHSA).

It was determined that the 2017 SHSP should focus on the five performance areas required by the Fixing America's Surface Transportation Act (FAST Act) passed by Congress and the President on December 4, 2015. Toward Zero Deaths. Through consultation and coordination with experts from manv organizations, and through various data sources, a data-driven approach was taken to establish five Critical Emphasis Areas and 17 Primary Emphasis Areas. It is not intended to replace existing plansused by other organizations, but can be used as a planning guide. It also does not address every safety strategy currently being implemented, but focuses primarily on strategies with the greatest potential to reduce fatalities and serious injuries.

The Steering Committee adopted five-year goals for each of the performance measures, along with goals for most of the emphasis areas in this SHSP. These were developed in cooperation with other SHSP stakeholders using a data driven process. They will be monitored for progress in meeting these goals as the SHSP strategies and actions are implemented.

#### PERFORMANCE GOALS

- 1. Reduce the **number of fatalities** in Arkansas to 485 by 2022.
- 2. Reduce the **fatality rate** in Arkansas to 1.43 by 2022.
- 3. Reduce the **number of serious injuries** in Arkansas to 3,055 by 2022.
- 4. Reduce the **serious injury rate** in Arkansas to 9.82 by 2022.
- 5. Reduce the **number of non-motorized fatalities and serious injuries** to 131 by 2022.

## **Evaluation of Progress for Performance Measures**

The breakdown for each of the performance goals is shown in Figures 1 through 5. Consistent with all five measures, the downward trend was broken in 2015, mirroring a nationwide trend. This increase may be attributed to lower gas prices and an improved state and national economy, which has led to an increase in vehicle miles traveled. Another contributor may be the increased use of smartphones. However, the goals outlined below are based on a five-year moving average which smooths any year-to-year variation in data.

As seen in Figure 1, the downward trend of the five-year moving averages for fatalities is 3.3 percent per year, resulting in a goal of 485 fatalities or fewer by 2022. When taking into account number of miles traveled by the motoring public on Arkansas roadways, the fatality performance measure can be viewed as a rate. Figure 2 illustrates the downward trend of the five-year moving averages for fatality rate (3.6 percent per year), resulting in a goal of 1.43 fatalities per 100 million vehicle miles traveled or fewer by 2022.



#### Figure 1. Arkansas Performance Measure – Number of Fatalities





 $2005\ 2006\ 2007\ 2008\ 2009\ 2010\ 2011\ 2012\ 2013\ 2014\ 2015\ 2016\ 2017\ 2018\ 2019\ 2020\ 2021\ 2022$ 

Unlike roadway fatalities, the recent trend of serious injuries is not as evident. As seen in Figure 3, the number of serious injuries has fluctuated since 2005. The increase in 2007 through 2009 was likely due to the serious injury definition change in Arkansas—as law enforcement agencies throughout Arkansas were made aware of this change through training with Arkansas State Police, the number of serious injuries increased, then continued on a generally downward path until 2015. In addition to the factors contributing to the recent increase in fatalities, this recent increase may be partly attributed to the rollout of the new electronic crash reporting system in Arkansas With the introduction to the new (eCrash). system, law enforcement agencies (and their officers) were re-trained to properly identify a serious injury. The goal for serious injuries is to decrease at a rate of approximately half of fatalities, or 1.5 percent, resulting in a goal of 3,055 serious injuries or fewer by 2022.

#### SERIOUS INJURY

The current serious injury definition in Arkansas is as follows:

Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. This is the most serious survivable injury. Inclusions: severe lacerations, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconsciousness at or when taken from the scene, unable to leave the scene without assistance, and others. Exclusions: momentary unconsciousness and others.

Arkansas plans to update the definition to be in compliance with the Minimum Uniform Crash Criteria Guideline or MMUCC 4<sup>th</sup> Edition definition for serious injury by January 1, 2019.







#### Figure 4. Annual Performance Measure – Serious Injury Rate

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

While the trend for number of serious injuries is increasing slightly, the serious injury rate trend is tracking downward as shown in Figure 4. Assuming this trend continues (0.3 percent decrease per year), the 2022 serious injury rate goal is 9.82 serious injuries per 100 million vehicle miles traveled.



Figure 5. Arkansas Performance Measure – Number of Non-Motorized Fatalities and Serious Injuries

Like the number of serious injuries, the number of non-motorized fatalities and serious injuries has fluctuated in recent years as seen in Figure 5. Non-motorized fatalities and serious injuries is a safety performance measure encompassing pedestrians, bicyclists, and other users of Arkansas roadways not in a motorized vehicle. Fatalities and serious injuries are combined into this one measure since the number is a relatively small portion of the overall total (2.7 percent of all fatalities and serious injuries on Arkansas roadways).

Similar to the number of serious injuries, the goal for non-motorized fatalities and serious injuries is to decrease at a rate of 1.5 percent, resulting in a goal of 131 or fewer by 2022 of non-motorized fatalities and serious injuries.

## High Risk Rural Road (HRRR)

Although Arkansas has not met the Federal criteria requiring Arkansas to have a HRRR Program, Arkansas has adopted a program to annually examine HRRRs and implement low cost countermeasures to reduce fatal and serious injuries on these routes. As required by 23 USC 148(a)(1), the definition of a High Risk Rural Road adopted in Arkansas is presented. This definition is the same as the Federal definition.

#### HIGH RISK RURAL ROAD

Any roadway functionally classified as a rural major or minor collector or rural ocal road:

- On which the accident rate for fatalities and incapacitating injuries exceeds the statewide average for those functional classifications or roadway; or
- That will likely have increases in traffic volumes that are likely to create an accident rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classifications of roadway.



## Updating the Arkansas SHSP

ARDOT convened the Arkansas Highway Safety Steering Committee in 2015 to discuss updating the Arkansas SHSP. A core group was developed to plan a summit and begin efforts to update the The Arkansas Safety Summit was Plan. conducted on September 13-14, 2016 in Little Rock, Arkansas. The Summit brought together approximately 150 highway safety experts and professionals representing the four "E's" to help shape the Plan. The attendees were broken out into various focus areas based on the previous SHSP and a review of fatality data. The breakout sessions allowed for a presentation on data for the given focus area and allowed participants to comment on priority strategies and actions to improve highway safety in Arkansas.

After the Summit, the Committee met to discuss the results of the Summit breakout sessions and to evaluate safety data. Based on this information, the Committee identified 17 Primary Emphasis Areas (PEAs) which were grouped under five overreaching Critical Emphasis Areas (CEAs). Leaders were identified for each of the CEAs and PEAs. The CEA leaders provided guidance and consistency for the PEA leaders in their respective areas. Each of the PEA leaders enlisted volunteers from the Committee and Summit attendees to participate in an Action Committee or Team. These teams met to determine strategies and action steps for the update.

In selecting the final strategies for the SHSP, the PEA teams:

- Reviewed the 2013 SHSP to determine if any strategies and actions should be retained.
- Reviewed results and recommendations from the Arkansas Safety Summit.
- Reviewed proven strategies and countermeasures from various sources such as the National Cooperative Highway Research Program Report 500, the Highway Safety Manual, the Handbook for Designing Roadways for the Aging Population, and other documents.
- Reviewed various applicable data sources to assist in determining the safety strategies with the highest potential of reducing fatalities and serious injuries.
- Utilized other highway safety planning documents such as the Arkansas State Police Highway Safety Office Highway Safety Plan and the Commercial Vehicle Safety Plan.

Documented in this Plan are strategies and action steps to reduce fatalities and serious injuries. The Plan includes measurable objectives to track the progress of each strategy and action step. This document provides a summary of the emphasis areas and strategies that will guide Arkansas' traffic safety efforts over the next five years. Action plans have been developed for each PEA that will be continually reviewed (see Appendix A). The action plans will be the basis for implementation tracking and evaluation efforts.

The final strategies and action steps were presented to the Highway Safety Steering Committee in June 2017.

## Coordination with other Highway Safety Plans and Planning Processes

The Arkansas SHSP is a comprehensive highway transportation safety plan. The development of the SHSP was accomplished through coordination with numerous federal, state, local and private highway safety stakeholders. Federal law requires Arkansas to coordinate this the ARDOT Highway plan with Safety Improvement Program (HSIP), the Arkansas State Police Highway Safety Office (ASP-HSO) Highway Safety Performance (HSP) Plan, the Arkansas Highway Police (AHP) Commercial Vehicle Safety Plan (CVSP), and other data collection and information systems. The Statewide Transportation Improvement Plan (STIP), Metropolitan Transportation Improvement Plans (TIPs), and any local agency highway plans should be developed in coordination with the SHSP. At a minimum, those plans must include high level goals, objectives, and strategies that are consistent with the SHSP.

To facilitate coordination with other Transportation Plans, the following steps will be performed:

- 1. Each of the eight Metropolitan Planning Organizations (MPOs) participated in the development of the Plan. All MPOs are represented on the Arkansas Highway Safety Steering Committee.
- 2. The Plan will be distributed to each MPO and other planning organizations following each update. These organizations will remain involved between updates through the PEA committees and Steering Committee meetings to discuss implementation progress.
- 3. Updates to transportation plans by each planning organization will explicitly address safety, and allow participation by Steering Committee members to align projects with goals of the Plan.
- 4. With each update to the SHSP, the STIP and TIPs will be reviewed to confirm consistency between plans and to identify components of the STIP/TIPs for inclusion in future SHSP updates.

The following steps were performed, and will continue to be performed, in an effort to facilitate coordination with the following safety programs and plans. Additionally, the goals, strategies, actions, and projects of each plan will be aligned with the SHSP for consistency.

**Highway Safety Improvement Program (HSIP)** – The SHSP will be used as a tool for selecting and prioritizing HSIP projects.

**Commercial Vehicle Safety Plan (CVSP)** – The CVSP will address enforcement and behavioral safety elements from the current SHSP in each CVSP update.

**Highway Safety Performance (HSP) Plan** – The ASP-HSO will ensure consistency between the plans at each update to the SHSP and the HSP.

**Traffic Records Strategic Plan** – The Traffic Records Coordinating Committee (TRCC) will continue to update the Arkansas Traffic Records Strategic Plan in accordance with 23 USC 408 and consistent with the SHSP.

## **SHSP Implementation**

Effective implementation of this Plan will be necessary to achieve the goal of reducing fatalities and serious injuries on Arkansas roadways. Successful implementation will require routine collaboration between stakeholders, constant communication between teams, regular data collection and analysis, and support from executive leadership.

Implementation of the SHSP will follow the current editions of the Strategic Highway Safety Plan Implementation Process Model and the Strategic Highway Safety Plan Evaluation Process Model, both published by FHWA. The SHSP program coordinators and other stakeholders will follow guidelines consistent with these models to implement and evaluate the Plan. When needed, the SHSP Steering Committee can approach agency executive leadership to address resource concerns for various areas of the Plan.

Implementation of the SHSP will be accomplished with the following steps:

- 1. Development and execution of emphasis area action plans.
- 2. Coordination of the SHSP with other transportation and safety plans.
- Development and execution of a marketing strategy.
- 4. Monitoring progress and evaluating results.

## SHSP Evaluation and Update

To obligate funds under the Highway Safety Improvement Program (HSIP), the SHSP must be evaluated on a regular and recurring basis to ensure the accuracy of priorities and proposed strategies.

The Steering Committee will meet periodically to review current safety data and to evaluate emphasis areas for past performance and future goals. The evaluation process will follow the current edition of the FHWA Strategic Highway Safety Plan – Evaluation Process Model. The Plan will be updated at each review period, which will be no greater than five years following adoption of the most current Plan. If changes in legislation, plan performance, or crash data warrant, the executive leadership will direct an update to the SHSP regardless of the planned update schedule.

Benefits of evaluating the SHSP on a regular basis include:

- Uncovering challenges in prioritizing or implementing programs and strategies.
- Determining progress in meeting SHSP goals and objectives.
- Validating emphasis areas and strategies, or revealing the need to revise them.
- Demonstrating the SHSP's contribution to roadway safety in Arkansas.

## **Critical and Primary Emphasis Areas**

To meet the Plan goals by 2022, highway safety focus areas in Arkansas were identified. Data analysis was performed on fatal and serious injury data for the various emphasis areas under consideration. This data analysis allowed the Steering Committee to determine which Primary Emphasis Areas (PEAs) to include and how to prioritize these PEAs. Since it is recognized that time, resources, and funding are limitations to organizations that can impact roadway safety, the Plan identified key safety areas where high payoff strategies using the four "E's" may best reduce fatalities and serious injuries. The Plan also recognizes other safety areas that have significant impact on roadway safety in Arkansas. The Steering Committee and PEA teams will continue to refine the prioritization of strategies and actions. The SHSP is comprised of five Critical Emphasis Areas and 17 Primary Emphasis Areas. The number of roadway fatalities for PEAs where data is available is shown in Figure 6.

Critical Emphasis Area	Primary Emphasis Areas
Driver Behavior	Impaired/Drowsy Driving, Occupant Protection, Aggressive Driving, Distracted Driving
Infrastructure Improvement	Roadway Departure, Intersections, Work Zones, Railroad Crossings
Special Road Users	Large Commercial Motor Vehicles, Motorcyclists
Vulnerable Road Users	Younger Drivers, Older Drivers, Drivers with Disabilities, Bicyclists/Pedestrians
Operational Improvements	Emergency Services Capabilities, Incident Management, Data Collection and Analysis



#### Figure 6. Roadway Fatalities by Emphasis Area in Arkansas

## **Primary Emphasis Area (PEA) Action Plans**

Each PEA leader championed the development of an action plan, often with assistance from their respective action plan committee, for their respective emphasis area. Action plans will play a key role in the effective implementation of the SHSP. Each action plan was developed using the available data and resources necessary to achieve the Plan's goals and objectives for that emphasis area. When possible, funding sources will be identified for each action.

Action plans also define the performance measures that will be tracked. The PEA leaders will provide regular updates to the Steering Committee regarding progress on the PEA action plan. ARDOT and the Steering Committee will monitor the performance of the SHSP by review of action plans each year. When appropriate, updates to action plans will be requested from the PEA leaders and/or the Steering Committee. A report summarizing the progress of each action plan will be provided to the executive leadership and the Steering Committee annually by the agency or group responsible for the respective emphasis areas. Appendix A contains the PEA Action Plans as developed to date.

The implementation of the strategies and actions in the PEA action plans will be tracked with the SHSP Implementation Tracking Tool. Appendix B contains a draft format of this tool. The action committees that are leading the implementation of the particular PEA will meet as needed to discuss implementation of strategies and actions. At the regular Steering Committee meetings, each action committee will provide an updated version of their section of the Tracking Tool. This will provide for a discussion opportunity that will improve communication between the 4Es and various PEAs. Each action committee will track their progress towards implementation of the various strategies and actions and monitor the data for meeting the identified PEA performance goals.

## **Monitor Action Plans Annually**

During interim years between scheduled SHSP updates, ARDOT and the Steering Committee will monitor the performance of each PEA action plan. The ARDOT SHSP Coordinator will assemble current crash statistics and distribute to each of the emphasis area leaders with a request for an updated plan and summary of the performance of the previous action plan. A summary of action plan reports provided by emphasis area leaders will be distributed to executive leadership and the Steering Committee for comment. Any necessary revisions to action plans will be requested at that time.

The Plan's success will be measured at the time of evaluation and updated with a comparison of actual data to the Plan's goals, along with each emphasis area goals. Performance will be tied to specific strategies as appropriate. This will illustrate how targeting safety improvements with specific strategies can yield positive results and will be the basis for future strategies. In some instances, it may reveal strategies that are not effective and should be eliminated from further consideration. In order to perpetuate lessons learned, results of the evaluation will be reported in the subsequent Plan update.

## **Critical Emphasis Area: Driver Behavior**



## Primary Emphasis Area: Impaired/Drowsy Driving

#### Challenge

Any crash involving a driver with a blood alcohol concentration (BAC) of 0.08 grams per deciliter (g/dL) or higher is considered alcohol impaired. Approximately 29 percent of all roadway fatalities in Arkansas involved an alcohol impaired driver in 2014, down from 31 percent in 2010.

Unlike alcohol impaired driving, measuring drug impaired driving is difficult due to the large number of substances, the variety of ways different drugs can impair driving, and the lack of information about many potentially impairing drugs. Due to these differences, there is a lack of consistent criteria regarding what constitutes a drug impaired driver, and thus no widely accepted performance measure is available at this time. However, according to a recent NHTSA report, an estimated 11 percent of all fatal crashes involved a drugged driver in 2010. Drug impaired driving is expected to be a challenge in Arkansas in the next five years, partly due to the recent voter approval of legalized medical marijuana.

Drowsy driving is much like alcohol and drug impaired driving—slow reaction times and difficulty to pay attention to the road. A driver who has been awake for a full 24 hours is similar to a driver with a BAC of 0.10 g/dL. However, there is no actual data regarding the number of fatal crashes per year involving a drowsy driver since there is usually no way to know if the driver fell asleep in a fatal crash and the driver may not admit to it in other crashes. However, NHTSA estimates that drowsy driving was responsible for 72,000 crashes, 44,000 injuries, and 800 deaths in 2013. These numbers are likely underestimated and up to 6,000 fatal crashes each year may be caused by drowsy drivers.

#### Goal

No more than 116 drowsy and alcohol impaired driving fatalities and 216 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

• Implement infrastructure strategies to help impaired/drowsy drivers stay on the road.

#### Education

• Make the public aware through education of the dangers and penalties involved with impaired/drowsy driving.

#### Enforcement

- Increase enforcement of impaired/drowsy driving laws.
- Increase the capabilities of law enforcement in enforcing impaired/drowsy driving laws.

#### **Emergency Services**

- Improve clarification of local protocols regarding blood draws for testing.
- Test every fatality in the state.

#### **Public Policy/Other**

- Strengthen impaired driving laws such as extending the "look-back" period for DWI convictions (currently 5 years) or increasing fines for repeat offenders and those who refuse testing.
- DWI Courts should be supported and expanded in Arkansas.



#### Figure 7. Alcohol Impaired Driver Involved Fatalities in Arkansas



## **Primary Emphasis Area: Occupant Protection**

#### Challenge

Safety restraint use in Arkansas has leveled off in recent years, decreasing to 74 percent in 2014 compared to 78 percent in 2010. In 2014, 36 percent of all roadway fatalities were motor vehicle occupants not wearing a safety restraint. When compared to only passengers who were killed in vehicles, 48 percent of the fatalities were not wearing a safety restraint.

#### Goal

No more than 182 unrestrained fatalities and 1,069 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Education

• Educate the public on the benefits of occupant protection as well as the penalties and dangers associated with non-compliance.

#### Enforcement

• Increase enforcement of state and CDL seat belt laws.



#### Figure 9. Fatalities by Occupant Protection Usage in Arkansas



## **Primary Emphasis Area: Aggressive Driving**

#### Challenge

As congestion continues to increase, aggressive driving becomes more common. This can include speeding, driving too fast for conditions, following too close, improper or erratic lane changing, and improper passing. Because speeding or driving too fast for conditions is considered a reliable measure, it is used as a proxy measure for aggressive driving. Approximately 12 percent of all roadway fatalities in Arkansas were aggressive driving related in 2014, down from 19 percent in 2010.

#### Goal

No more than 66 aggressive driving related fatalities and 154 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

Use engineering design and technology to reduce speeds.

#### Education

• Use a multi-media approach to educate drivers about the dangers of aggressive driving.

#### Enforcement

- Increase visibility and enforce penalties for aggressive driving behaviors.
- Create a statewide aggressive driving enforcement initiative. •



#### Figure 11. Aggressive Driving Fatalities in Arkansas





## **Primary Emphasis Area: Distracted Driving**

#### Challenge

Distracted driving is considered as any activity that could divert a person's attention away from the task of driving. Fatalities related to distracted driving, particularly involving a smartphone, are a growing concern in Arkansas and the US. Although reliable historical data does not currently exist for distracted driving related fatalities, there were 26 fatalities in Arkansas that involved a known distracted driver in 2015 (or five percent of all roadway fatalities). According to NHTSA, approximately 10 percent of all roadway fatalities in the US in 2013 involved a distracted driver. The actual number of fatalities involving a distracted driver is likely higher due to the difficulty law enforcement has in defining and identifying when distracted driving is a factor in a crash.

#### Goal

Reduce the number of distracted driving fatalities and serious injuries in Arkansas.

#### **Strategies**

#### Engineering

• Increase the use of infrastructure improvements to reduce the risk of distracted driving crashes.

#### Education

• Increase awareness of the dangers of distracted driving and laws, especially for children and younger drivers.

#### Enforcement

• Increase enforcement of distracted driving laws.

## **Critical Emphasis Area: Infrastructure Improvement**



## **Primary Emphasis Area: Roadway Departure**

#### Challenge

A roadway departure crash is defined as a non-intersection crash that occurs when a vehicle crosses the edge line, centerline, or otherwise leaves the traveled way. In 2014, 66 percent of all roadway fatalities in Arkansas involved a roadway departure crash, up from 63 percent in 2010.

Over 25 percent of roadway departure fatalities involve a vehicle crossing the median or centerline and striking an on-coming vehicle, and over 10 percent involve a vehicle striking a tree. Approximately 40 percent of roadway departure fatalities occur at horizontal curves, and approximately 80 percent of roadway departure fatalities occur in rural areas.

#### Goal

No more than 319 roadway departure fatalities and 1,611 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

- Mitigate consequences of, or prevent roadway departures through infrastructure improvements.
- Develop low cost systemic projects to reduce roadway departures on roadways with high risk factors.

#### Education

• Increase education of infrastructure improvements that address roadway departures.

#### Enforcement

- Increase enforcement in problem areas to reduce roadway departure crashes.
- Conduct road safety assessments to address areas with high roadway departure crashes.





Figure 13. Roadway Departure Fatalities in Arkansas

## **Primary Emphasis Area: Intersections**

#### Challenge

Approximately 17 percent of all roadway fatalities in Arkansas occurred at intersections in 2014, down from 20 percent in 2010. Approximately half of all intersection fatalities occur in urban areas, compared to 20 percent of all roadway fatalities that occur in urban areas. Approximately 90 percent of all intersection fatalities occur at un-signalized intersections. Almost half of all intersection fatalities are the result of angle collisions, virtually all of which involved a vehicle turning left or continuing through the intersection. The second most predominant type of intersection fatal crashes is single vehicle collisions, mainly as a result of the driver failing to stop at a T-intersection or attempting a turning maneuver.

#### Goal

No more than 82 intersection fatalities and 654 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

- Mitigate consequences of intersection crashes.
- Develop countermeasures for intersections with high crash rates and/or high risk factors.

#### Education

• Educate the public on proper negotiation of intersections such as roundabouts.

#### Enforcement

• Increase enforcement at intersections with high numbers of crashes.



Figure 15. Intersection Fatalities in Arkansas





## Primary Emphasis Area: Work Zones

#### Challenge

Although less than one percent of roadway fatalities in Arkansas occurred in construction work zones in 2014, the number is expected to increase due to additional highway construction activity as a result of the Connecting Arkansas Program. This 10-year program, funded by a temporary half-cent sales tax, was approved by Arkansas voters in 2012.

#### Goal

No more than 11 work zone fatalities and 12 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

- Continue to implement the Arkansas Work Zone Safety and Mobility Policy.
- Apply work zone countermeasures to reduce end of queue crashes.
- Improve work zone management.

#### Education

• Educate the public regarding work zone safety and penalties for violations in work zones.

#### Enforcement

• Involve law enforcement in work zones to reduce the risk of crashes.

#### **Emergency Services**

• Address incident response in work zones, particularly for high exposure projects.



Figure 17. Fatalities in Work Zones in Arkansas





## Primary Emphasis Area: Railroad Crossings

#### Challenge

Although railroad crossing fatalities represented less than two percent of all roadway fatalities in Arkansas in 2014, railroad crossing crashes tend to be more severe. There are almost five thousand public and private railroad grade crossings in Arkansas.

#### Goal

No more than five railroad crossing fatalities and 19 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

- Increase signing and pavement markings at at-grade railroad crossing approaches.
- Develop and implement a statewide railroad crossing safety plan.

#### Education

• Inform the public of the dangers of at-grade railroad crossings.

#### Enforcement

• Encourage the use of law enforcement at railroad crossings.



#### Figure 19. Railroad Crossing Fatalities in Arkansas

Source: FRA Data

#### Figure 20. Railroad Crossing Crashes and Injuries in Arkansas



Source: FRA Data; \*FRA does not maintain statistics on serious injuries.

## **Critical Emphasis Area: Special Road Users**



## Primary Emphasis Area: Large Commercial Motor Vehicles

#### Challenge

Collisions involving a large commercial motor vehicle (CMV) and passenger vehicles are more likely to be fatal due to the size differences between the two vehicles. Over 11 percent of all roadway fatalities in Arkansas involved a large commercial motor vehicle in 2014.

#### Goal

No more than 65 fatalities involving a large commercial motor vehicle and 915 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

• Reduce the risk of CMV driver fatigue by increasing availability and/or visibility of truck parking.

#### Education

- Encourage the inclusion of CMV related topics in driver education.
- Use media to educate the public on sharing the road with CMVs.
- Encourage occupant protection usage in CMVs.

#### Enforcement

- Reduce the risk of CMV crashes due to driver fatigue through enforcement activities.
- Increase the number of enforcement personnel trained to enforce CMV specific laws.
- Increase CMV enforcement of safety violations.

#### **Public Policy/Other**

• Encourage rulemakings that require new technology which increases safety in large commercial motor vehicles.



Figure 21. Fatalities Involving a Large Commercial Motor Vehicle in Arkansas



Figure 22. Serious Injuries Involving a Large Commercial Motor Vehicle in Arkansas

## **Primary Emphasis Area: Motorcyclists**

#### Challenge

Motorcycle crashes are a growing concern in Arkansas. Although less than one percent of all vehicles registered in Arkansas were motorcycles in 2014, 13 percent of all roadway fatalities were motorcyclists, down from 15 percent in 2010.

A major factor in the severity of a motor crash is helmet use. Arkansas repealed the helmet law in 1999, and now only requires helmets for motorcyclists age 21 or younger. In 2014, 59 percent of all motorcyclist fatalities were not helmeted.

#### Goal

No more than 58 motorcyclist fatalities and 279 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Education

- Encourage helmet and high visibility clothing usage.
- Encourage motorcycle safety training.

#### Enforcement

• Increase law enforcement efforts for motorcyclist violators.

#### Public Policy/Other

• Promote passage of a helmet law for all ages.







## Critical Emphasis Area: Vulnerable Road User



## **Primary Emphasis Area: Younger Drivers**

#### Challenge

Younger drivers (ages 15 to 20) typically account for a disproportionate number of roadway fatalities and crashes. Younger drivers lack driving experience and are more likely to take risks. Approximately 12 percent of all roadway fatalities in Arkansas involved a younger driver in 2014, up from 10 percent in 2010.

#### Goal

No more than 53 younger driver fatalities and 190 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Education

• Increase awareness of risks to younger drivers amongst teens, college age students, parents, and community members.

#### Enforcement

• Increase enforcement of younger driver laws.

#### **Public Policy/Other**

• Revise or add additional legislation to increase safety for younger drivers.









## **Primary Emphasis Area: Older Drivers**

#### Challenge

According to the US Census Bureau, the number of Arkansans aged 65 or older has increased over 10 percent from 2000 to 2010. This increase is expected to continue into the near future. In 2014, approximately 11 percent of all roadway fatalities in Arkansas involved an older driver.

#### Goal

No more than 54 older driver fatalities and 173 serious injuries in Arkansas by 2022.

#### **Strategies**

#### Engineering

- Improve visibility of traffic control devices and the roadway to reduce crashes by older drivers.
- Continue to utilize the Handbook for Designing Roadways for the Aging Population to identify countermeasures that address older driver safety concerns.

#### Education

• Support AARP and other agencies with driver education for older drivers.

#### Public Policy/Other

- Increase frequency of vision assessments for older drivers.
- Promote the use of restricted driver licenses for older drivers.



Figure 27. Older Driver Fatalities in Arkansas




### **Primary Emphasis Area: Drivers with Disabilities**

#### Challenge

Although many people with disabilities stay at a residence or rely on public transportation, there are a number who drive a personal vehicle. About 65 percent of people with disabilities drive a vehicle, compared with 88 percent of non-disabled people according to the US Bureau of Transportation Statistics. Disabled drivers may have slower reaction times, limited visual or hearing capabilities, or other physical restrictions. Although there are no statistics available about the safety performance related to disabled drivers, the new Arkansas Motor Vehicle Crash Report form available through the eCrash system will allow future tracking of some license restrictions that are associated with disabilities.

#### Goal

Ensure drivers with disabilities have all necessary tools and resources available to perform driving activities to reduce the number of fatal and serious injuries in Arkansas.

#### **Strategies**

#### Education

• Ensure disabled drivers have all necessary tools and resources available to safely perform driving activities.

#### **Emergency Services**

• Ensure ways that drivers with disabilities are aware of oncoming emergency vehicles.

# Primary Emphasis Area: Bicyclists/Pedestrians

#### Challenge

Approximately thirteen percent of all roadway fatalities and serious injuries in Arkansas were bicyclists and pedestrians in 2014, compared to seven percent in 2010.

Unlike other emphasis areas, many bicyclist and pedestrian fatalities occur in urban areas. In 2014, about 40 percent of all bicyclist and pedestrian fatalities and serious injuries on Arkansas roadways occurred in urban areas. About 52 percent of bicyclist and pedestrian fatalities occurred at night, which is higher than the 34 percent of total roadway fatalities and serious injuries that occurred at night in Arkansas in 2014.

#### Goal

Reduce the number of annual bicycle and pedestrian fatalities on Arkansas roadways to 43 and reduce the number of bicycle and pedestrian serious injuries to 87 by 2022.

#### **Strategies**

#### Engineering

- Implement the strategies from the Arkansas State Bicycle and Pedestrian Transportation Plan.
- Implement engineering countermeasures proven to reduce bicycle and pedestrian crashes.

#### Education

• Focus education efforts on awareness of laws regarding bicycle and pedestrian traffic.

#### Enforcement

- Focus enforcement on existing laws and corrective behavior.
- Focus enforcement in areas with high bicycle or pedestrian crash rate or traffic generators.



Figure 29. Bicycle/Pedestrian Fatalities in Arkansas







### **Primary Emphasis Area: Emergency Services Capabilities**

#### Challenge

According to 2014 data from the Centers for Disease Control and Prevention, unintentional injury is the leading cause of death in Arkansas between the ages of one and 44. The leading cause of unintentional injury deaths in Arkansas are motor vehicle crashes. To address this problem, implementation of the Arkansas Trauma System has progressed quickly since its initiation in 2009. Fifty-six hospitals have been designated as trauma centers at various levels, a statewide trauma communications system and call center have been created, protocols have been established to ensure emergency medical services transport patients with traumatic injuries to the most appropriate trauma center in the fastest time possible, and injury prevention education are now interwoven into the system. The trauma system has successfully reduced preventable mortality rate by 49 percent since inception.

#### Goal

Continue to reduce Arkansas' preventable mortality rate due to motor vehicle crashes.

#### **Strategies**

#### Engineering

• Coordinate with EMS regarding median crossover gaps on divided highways.

#### Education

- Educate the public to promote EMS safety and quicker response times.
- Promote trauma education on a statewide basis.

#### Enforcement

• Enforce state laws that enhance EMS safety and response.

#### **Emergency Services**

• Improve the Arkansas Trauma System.

### **Primary Emphasis Area: Incident Management**

#### Challenge

According to FHWA, approximately 20 percent of all highway crashes are due to a previous incident, 18 percent of which result in a fatality. Although reliable statistics related to incident management are not yet available in Arkansas, efforts are underway to improve data collection in this area. Secondary crashes and roadway clearance times are two performance measures that are in the process of being improved. With that said, preliminary statistics show that there were eight fatal crashes (resulting in eight fatalities) in 2016 in Arkansas. A secondary crash is a crash due to a previous incident on the roadway. Reducing the time to clear an incident, whether it is a previous crash, road debris, or a disabled vehicle, and warning drivers in advance of an incident are keys to minimizing the risk of secondary crashes.

#### Goal

Reduce the number and severity of secondary crashes on Arkansas roadways. Improve roadway clearance time when lanes are closed due to an incident.

#### **Strategies**

#### Engineering

- Improve traffic incident management (TIM) techniques to reduce roadway clearance times and reduce secondary crashes.
- Improve the incident management data system and statewide TIM program.
- Improve intelligent infrastructure capabilities to better inform drivers of roadway incidents.

#### Education

- Continue to implement TIM training statewide throughout various responder disciplines.
- Educate the public on Arkansas "Move Over" and "Move It" laws.

#### Enforcement

• Improve visibility of stopped traffic queues due to incidents with law enforcement.

#### **Public Policy/Other**

• Continue coordination with the Arkansas Traffic Incident Management (TIM) Committee, a multidisciplinary group made up of TIM stakeholders in Arkansas.

# Primary Emphasis Area: Data Collection and Analysis

#### Challenge

The development and collection of crash data, and other data related to roadway safety, is the foundation of a comprehensive system to reduce fatalities and serious injuries in Arkansas. Crash data, in particular, has traditionally been the most challenging to meet the quality and timeliness needs of organizations.

#### Goal

Through the efforts of the Traffic Records Coordinating Committee (TRCC), projects to improve the state's data systems by eliminating paper, reducing manual data entry, and integrating data are underway. The primary goals will be to improve the timeliness, accuracy and sharing of crash data, roadway data, injury data and any other data that can be useful in promoting roadway safety at the state and local levels.

#### **Strategies**

#### Engineering

- Improve crash data collection tools to make the data more timely, accurate and integrated to aid in problem area identification.
- Improve analysis techniques and tools to aid in the determination of countermeasures to improve safety at problem areas.
- Improve data sharing across agencies.
- Improve the roadway database to meet FHWA requirements for all public roads.

#### Education

- Educate law enforcement on the benefits and functionality of eCrash.
- Educate data analysts on the functionality of eCrash, MapClick, Advance and other analytical tools and programs.

#### Enforcement

• Require all law enforcement to adopt MapClick and eCrash as their sole means of crash reporting.

#### **Emergency Services**

• Connect medical injury data with the crash data for better analytics of data.

#### Public Policy/Other

• The TRCC will continue to utilize the Traffic Records Strategic Plan as an outline for improving traffic records in Arkansas.

# Previous Plan (2013) Emphasis Areas

#### **Primary Emphasis Areas**

Roadway Departure Intersections Impaired Driving Aggressive Driving Distracted Driving Younger Drivers Safety Restraints Motorcycles

#### **Secondary Emphasis Areas**

Pedestrians Bicyclists Older Drivers Drowsy Driving Large Commercial Motor Vehicles Work Zones Railroad Crossings

#### **Special Emphasis Areas**

Emergency Services Capabilities Traffic Data Systems Safety Management System

# Previous Plan (2013) Emphasis Areas Strategies and Implementation Efforts

### **Roadway Departure Strategies:**

#### Engineering

- Continue installation of rumble strips as needed.
- Continue installation of cable median barriers.
- Implement low-cost safety measures, particularly at curves, such as enhanced signing and delineation and high-friction pavements.
- Eliminate edge drop-offs by implementing Safety Edge on rural roadway projects where appropriate.
- Provide minor shoulder widening where possible.

#### Education

• Implement outreach program to local governments to provide information on roadway departure crashes.

#### Enforcement

• Focus enforcement on corridors with a high number or percent of roadway departure crashes.

#### **Emergency Services**

• Continue education to first responders about cable median barriers.

#### **Public Policy/Other**

• Implement a multi-disciplinary road safety assessment program to target high crash locations and corridors.

### **Roadway Departure Implementation:**

#### Engineering

- 550 miles of cable median barriers have been installed or are under construction since 2013.
- Completed three rumble strip projects (ARDOT Jobs 012228, 012229, 012230).
  - o 1,113 miles shoulder rumble strips
  - 1,580 miles of shoulder rumble stripes
  - o 150 miles of centerline rumble strips
- Completed three high friction surface treatment projects (ARDOT Jobs 012238, 012239, 090429).
  - o Over 14 miles installed on curves, intersections, and ramps
- Completed three enhanced pavement marking projects (ARDOT Jobs 012230, 012256, 012257).
  - o 5,615 miles of enhanced six inch centerline and edge line pavement markings

#### Enforcement

• Highway 70 enforcement resulted in nearly 300 speeding citations in the span of a month.

### **Intersections Strategies:**

Engineering

- Improve sight distance, visibility, lighting, pavement friction, signing, and other traffic control devices, particularly at un-signalized intersections.
- Implement techniques to reduce left-turning and through movement conflicts, such as median treatments and roundabouts, as appropriate.
- Implement access management strategies as appropriate.
- Install back plates with reflective borders on traffic signal heads as appropriate.
- Install left and right turn lanes as appropriate.

#### Education

• Implement outreach program to local agencies to provide information on intersection crashes.

#### Enforcement

• Focus enforcement on intersections with a high number or percent of crashes.

#### **Public Policy/Other**

• Implement a multi-disciplinary road safety assessment program to target high crash locations.

### **Intersections Implementation:**

- Added left turn lanes and exclusive right turn lanes where needed.
- Added two-way left-turn lanes through corridors where there were many driveways and intersections.
- Improved the visibility and sight distance of several intersections by removing trees, and other obstacles.
- Several rural roundabouts to address safety needs are under design.
- Installed reflectorized traffic signal back plates for night time and when there is sun glare toward the intersection.
- Added stop bars, delineators, and stop signs.

Education

- Continue public outreach through media and public service announcements as part of nationally sponsored sobriety campaigns.
- Continue education on impaired driving with children and teens.
- Promote designated driver programs.

#### Enforcement

- Expand the Drug Recognition Expert (DRE) program.
- Provide incentives and recognition to law enforcement officers to encourage increased impairment detection.
- Enhance impaired driving enforcement with a focus on targeting specific corridors.

#### **Emergency Services**

• Improve clarification of local protocols regarding blood draws for testing.

#### **Public Policy/Other**

- Increased fine or penalty for repeat offenders and refusals.
- Extend look-back period (currently 5 years).
- Clarify existing state law regarding testing.
- Expand and support DWI courts.
- Consider supporting the passage of a federally compliant open-container state law.

### **Impaired Driving Implementation:**

- Legislation passed in 2015 making interlock mandatory for all DWI/BWI offenders.
- The HSO has continued public outreach through media and public service announcements during yearly sobriety campaigns on the national and local level.
- The Teen Coalition administered through Arkansas Children's Hospital has continued efforts to educate children and teens on the dangers of impaired driving.
- The Drug Recognition Expert Program continues to grow through the training efforts of the Criminal Justice Institute of the University of Arkansas.
- The number of DWI Courts in Arkansas has grown from 0 in 2009 to 11 in 2017.
- The Arkansas Impaired Driving Task Force was created in 2014 to address impaired driving issues.

### **Aggressive Driving Strategies:**

#### Engineering

• Consider traffic calming techniques as appropriate.

#### Education

- Promote defensive driving programs.
- Establish an educational program that identifies the dangers of aggressive driving.

#### Enforcement

• Enhance enforcement of aggressive driving with a focus on targeting specific corridors.

#### **Public Policy/Other**

• Support the passage of state law to define and address aggressive driving.

# **Aggressive Driving Implementation:**

- There were 36 agencies that were sustained in the Selected Traffic Enforcement Program (STEP).
- The University of Arkansas for Medical Sciences (UAMS) and Arkansas Children's Hospital Injury Prevention Center has conducted a project over the last three years in collaboration with the Arkansas Health Department (ADH), the Allstate Foundation Teen Driving Program and the Injury Free Coalition for Kids. The program utilizes school nurses from the ADH Hometown Health Coalitions to conduct peer to peer education projects in the high schools of each of these counties addressing primarily seat belt use but also other issues such as distracted, aggressive and drowsy driving.

### **Distracted Driving Strategies:**

#### Engineering

• Continue installation of rumble strips as needed.

#### Education

• Promote distracted driving awareness and educational campaigns.

#### Enforcement

• Enhance distracted driving enforcement with a focus on targeting specific corridors.

#### **Public Policy/Other**

- Improve the definition of distracted driving in law and the collection of this data by law enforcement.
- Support the ban of hand-held wireless devices for all ages while driving.
- Increase penalties for violators of distracted driving laws.

### **Distracted Driving Implementation:**

- Completed three rumble strip projects (ARDOT Jobs 012228, 012229, 012230).
  - o 1,113 miles shoulder rumble strips
  - o 1,580 miles of shoulder rumble stripes
  - o 150 miles of centerline rumble strips
- The University of Arkansas for Medical Sciences (UAMS) and Arkansas Children's Hospital Injury Prevention Center has conducted a project over the last three years in collaboration with the Arkansas Health Department (ADH), the Allstate Foundation Teen Driving Program and the Injury Free Coalition for Kids. The program utilizes school nurses from the ADH Hometown Health Coalitions to conduct peer to peer education projects in the high schools of each of these counties addressing primarily seat belt use but also other issues such as distracted, aggressive and drowsy driving.
- In 2017 the Legislature passed Act 706 concerning distracted driving. This amendment to the existing code clarified what conduct, related to texting and driving, constituted distracted driving. This amendment to the existing code also increased the fine associated with the violation, and removed provisions that allowed for a warning on first offense. The Act also increased the fine to \$500 for 2nd and subsequent offenses.

### Younger Drivers Strategies:

Education

- Support statewide coalitions for safer teen driving.
- Increase awareness of the Graduated Driver's License (GDL) law and requirements.
- Encourage use of NHTSA standardized driver education criteria.

#### Enforcement

• Improve and increase enforcement of the GDL law.

# Younger Drivers Implementation:

- Support statewide coalitions for safer teen driving—currently there is one multi-disciplinary team that meets twice a year and is supported with funds from the HSO and Allstate Insurance company. The Injury Prevention Center (IPC) at Arkansas Children's Hospital organizes the coalition meetings. The biggest success of this coalition so far is the passage of the Graduated Driver License (GDL) law in 2009.
- Increase awareness of the GDL law and requirements—the IPC at Arkansas Children's Hospital created
  a campaign to increase awareness of the GDL amongst Department of Motor Vehicle (DMV) workers to
  empower them to provide appropriate guidance to parents. DMV workers were trained on the
  components of the Arkansas GDL and the science behind the recommendations. Print materials
  addressing the GDL were created for distribution at DMVs. The IPC created and aired a public service
  announcement to increase awareness of the GDL amongst parents, teens and the general public. The
  IPC and Arkansas Center for Health Improvement have conducted two analyses of the impact of GDL
  and other policies on teen driver crashes in Arkansas, demonstrating reduction after 2009. Ongoing
  analyses are planned as data become available. The IPC conducts parent/teen education that explains
  the risks associated with teen driving and encourages families to write a teen driving contract. The IPC
  also conducts train-the-trainer for this program in order to expand the reach across the state.
- Improve and increase enforcement of the GDL law—the IPC led law enforcement summits around the state to educate law enforcement about the risks associated with teen driving and explain the science behind the GDL. Law enforcement engaged in this process by defining the factors contributing to weak enforcement of the current GDL.

### Safety Restraints Strategies:

#### Education

• Continue seat belt and child passenger safety education programs.

#### Enforcement

• Continue the Click It or Ticket Campaign.

#### **Emergency Services**

• Improve documentation of passenger restraints.

#### **Public Policy/Other**

- Support change in state law to conform to NHTSA child restraint recommendation.
- Support change in state law to an all-inclusive passenger restraint law.

# **Safety Restraints Implementation:**

- Since 2013 there were over 2,400 Child Care professionals trained in child passenger safety.
- Since 2013 there were 281 technicians certified in child passenger safety.
- Since 2013 there were 49 check events held for child passenger safety with over 1,800 child safety seats checked.
- Since 2013 there were over 15,000 students, student leaders, parents, medical students and law enforcement officers trained in the importance of safety restraint use.
- Averages of 135 agencies per year were mobilized for Click It or Ticket Campaigns.

### **Motorcycles Strategies:**

#### Education

- Increase public awareness of benefits of motorcycle helmet use and high-visibility wear.
- Expand motorcycle safety training.

#### Enforcement

• Increase testing for impairment of motorcyclists in crashes.

#### **Public Policy/Other**

- Support helmet law for all ages.
- Consider fine reductions for helmet users.
- Increase minimum level of liability coverage for non-helmet users.

### **Motorcycles Implementation:**

- A communication plan is in effect that allows for the purchase of educational materials concerning motorcycle safety. These items were used across Arkansas to educate and inform the public on motorcycle safety issues. Major motorcycle safety themes/slogans from the Motorcycle Safety Foundation (MSF) and NHTSA were used to enhance the program.
- The Motorcycle Safety Program Manager at the HSO made numerous presentations to public civic organizations, motorcycle rallies and Air Force and National Guard troops across the state promoting motorcycle safety. These presentations will continue.
- Motorcycle safety advocates, rider training programs and supporters were provided with educational and awareness materials to attend motorcycle rallies and other events to educate the public on motorcycle safety. Motorcycle dealerships were encouraged to distribute motorcycle safety education pamphlets as part of the literature accompanying the sale of motorcycles. This campaign to increase public awareness was utilized along with other promotional items to inform the public.
- The HSO has used a driving simulator at seminars and biker rallies to provide new motorcycle users an opportunity to learn good safety habits. The HSO purchased a riding simulator with the goal of "having people safely experience on simulators hazardous situations on the road", simulating the basic functions of motorcycles, the motions of "drive", "turn" and "stop" for the "training of skills" functions.

### **Pedestrians Strategies:**

#### Engineering

- Improve lighting in areas that experience pedestrian activity as appropriate.
- Implement access management strategies in urban areas as appropriate.
- Encourage use of pedestrian signing allowed in the MUTCD at marked crosswalks as appropriate.
- Consider High Intensity Activated Crosswalk (HAWK) pedestrian traffic signals as appropriate.
- Implement context sensitive design, including road diets, where appropriate.

#### Education

- Increase awareness of the risk to pedestrians on high volume/speed roadways resulting from disabled vehicles, law enforcement stops, etc.
- Increase public awareness of the benefits of high-visibility wear.

#### Enforcement

• Expand targeting enforcement at high pedestrian generators as appropriate.

#### **Public Policy/Other**

- Support and implement Transportation Alternatives Program.
- Create a statewide bicycle and pedestrian plan.

### **Pedestrians Implementation:**

- Improved lighting in areas that experience pedestrian activity as appropriate.
- Encourage use of pedestrian signing allowed in the MUTCD at marked crosswalks as appropriate.
- Support and implement the Transportation Alternatives Program at ARDOT.
- Installed High Intensity Activated Crosswalk (HAWK) pedestrian traffic signals as appropriate.
- ARDOT worked with MPOs to locate high pedestrian crash locations.
- The Arkansas Highway Commission adopted the Statewide Bicycle and Pedestrian Plan in 2017.

# **Bicyclists Strategies:**

#### Engineering

- Continue to accommodate bicycle use in new roadway construction where appropriate.
- Implement context sensitive design, including road diets, where appropriate.

#### Education

- Increase education of helmet use and high-visibility wear.
- Increase awareness of state bicycle laws to drivers and bicyclists.

#### Enforcement

• Increase education of state laws pertaining to bicyclists to law enforcement.

#### **Public Policy/Other**

- Support bicycle helmet law for young riders.
- Create a statewide bicycle and pedestrian plan.

# **Bicyclists Implementation:**

- ARDOT continues to accommodate bicycle use in new roadway construction where appropriate.
- The Arkansas Highway Commission adopted the Statewide Bicycle and Pedestrian Plan in 2017.

### **Older Drivers Strategies:**

#### Engineering

- Implement strategies, such as improved roadway visibility features, that benefit older drivers as appropriate.
- Implement the updated FHWA Highway Design Handbook for Older Drivers when it is released as appropriate.

#### Education

- Educate older drivers on the safety risks resulting from reduced driving task performance.
- Educate older drivers on alternative transportation modes available.

#### **Public Policy/Other**

- Increase frequency of vision assessments for older drivers.
- Promote the use of restricted driver's licenses for older drivers.

### **Older Drivers Implementation:**

• ARDOT has recently updated its striping and signing policies to provide better and brighter stripes and signs, improving visibility to the older driver population.

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### **Drowsy Driving Strategies:**

#### Engineering

- Continue installation of rumble strips as needed.
- Continue installation of cable median barriers.

#### Education

• Promote drowsy driving awareness and educational campaigns.

# **Drowsy Driving Implementation:**

- The installation of rumble strips and cable median barriers has increased and continues as needed.
- NHTSA has begun to develop educational materials to promote drowsy driving awareness on the national level targeting the most susceptible demographic groups.
- The University of Arkansas for Medical Sciences (UAMS) and Arkansas Children's Hospital Injury Prevention Center has conducted a project over the last three years in collaboration with the Arkansas Health Department (ADH), the Allstate Foundation Teen Driving Program and the Injury Free Coalition for Kids. The program utilizes school nurses from the ADH Hometown Health Coalitions to conduct peer to peer education projects in the high schools of each of these counties addressing primarily seat belt use but also other issues such as distracted, aggressive and drowsy driving.

### Large Commercial Motor Vehicle Strategies:

#### Engineering

• Continue installation of cable median barriers, including considerations for higher performance barriers on routes with high number of trucks or truck crashes.

#### Enforcement

- Increase compliance reviews through roadside inspections.
- Continue to identify truck high crash locations for targeted enforcement.
- Continue to conduct safety audits on commercial motor vehicle carriers.

### Large Commercial Motor Vehicle Implementation:

- Cable median barriers were installed on 550 miles of median since 2013.
- The Arkansas Highway Police (AHP) conducted motor carrier safety inspections throughout the state at weigh station and roadside locations.
- The AHP began uploading comprehensive, high-quality motor carrier safety inspection data from the roadside to FMCSA in order to expeditiously identify high-risk motor carriers operating in the state.
- The AHP enhanced and expanded traffic enforcement in order to identify unsafe passenger vehicles operating around CMVs.
- The AHP and ARDOT identified CMV high crash corridors within the state and conducted targeted enforcement.
- The AHP and FMCSA continued to conduct safety audits and investigations on motor carriers.
- The AHP began utilizing USDOT number and license plate reader, mainline weigh-in-motion and virtual weigh station technologies to identify high-risk motor carriers.
- Jointly, the AHP and FMCSA continued to conduct outreach to members of the commercial motor vehicle transportation community through FMCSA's Motor Carrier Safety Assistance Program.

### Work Zone Strategies:

#### Engineering

- Implement engineering and contracting methods to reduce the duration of work zones.
- Implement ITS strategies, such as dynamic message signs, where appropriate.
- Implement consistent traffic control strategies due to lane shifts or closures to meet driver expectations.
- Continue implementation and improvement of the ARDOT Work Zone Policy.
- Continue work zone training of appropriate personnel.

#### Education

• Continue to implement public information campaigns for significant work zone projects.

#### Enforcement

- Continue the use of law enforcement in work zones, particularly on high-speed, high-volume highways, that focus on a "presence" type enforcement near traffic queues.
- Improve how crash reports are noted by law enforcement.
- Continue training of law enforcement regarding work zones.

#### **Emergency Services**

• Implement incident management strategies that improve crash scene safety and clearance times.

### Work Zone Implementation:

• All strategies are developed through the Transportation Management Plan during project development in accordance with the latest edition of the Arkansas Policy For Work Zone Safety and Mobility, in particular the use of law enforcement presence at queues and use of automated work zone information systems (AWIS).

### **Railroad Crossing Strategies:**

#### Engineering

- Continue to improve safety at existing at-grade railroad crossings by adding lights and gates, improving sight distance, improving signing to current MUTCD standard, improving signal preemption, and other methods.
- Continue to encourage local jurisdictions, through the railroads and the ARDOT, to reduce the number of at-grade crossings.

#### Education

• Continue support of Operation Lifesaver educational efforts.

#### Enforcement

- Support agencies to enforce laws at railroad crossings.
- Continue support of Operation Lifesaver Grade Crossing Collision Investigation training.

### **Railroad Crossing Implementation:**

- Since 2013, ARDOT has issued work orders to install lights and gates at 68 at-grade railroad crossings and held diagnostic team meetings at an additional 21 crossings currently being developed for the installation of lights and gates. The potential for a closure is mentioned at every diagnostic team meeting.
- ARDOT closed three crossings in Osceola, one in Gould, and another in Atkins in 2016. ARDOT has met several times with the Blytheville City Council about a closure. The Morrilton City Council is considering two closures.
- ARDOT Job 012235 upgraded and standardized cross buck assemblies at 624 UPRR passive at-grade railroad crossings throughout the state.
- ARDOT continues to serve as a member of the Operation Life Saver Board and provides crash updates so the group can target specific geographical areas for educational purposes.

### **Emergency Services Capabilities Strategies:**

#### Engineering

• Coordinate with EMS regarding allowance of median gaps for construction of median barriers as appropriate.

#### Education

- Publicize "Move It" and "Move Over" laws.
- Continue to provide quality trauma education on a statewide basis.

#### Enforcement

• Enforce "Move It" and "Move Over" laws.

#### **Emergency Services**

- Develop incident management strategies to improve crash scene safety and to improve clearance times.
- Increase use of the Arkansas Trauma Communications Center.

### **Emergency Services Capabilities Implementation:**

- Coordinated with EMS regarding allowance of median gaps for construction of median barriers as appropriate.
- Developed incident management strategies to improve crash scene safety and to improve clearance times by providing training to the EMS staff, started using safety vests, increased awareness of not blocking the roadway, etc.
- Increased use of the Arkansas Trauma Communications Center.
- A PSA on the "Move Over Law" that has been publicized on the ASP website, aired on the monitors at the DL testing sites across the state and aired through the Arkansas Broadcasters Association.
- The "Move It" brochures have been distributed.
- Continued to provide quality trauma education on a statewide basis: two credit hours per year are required for the license renewal of EMS services.

### Traffic Data Systems Strategies:

#### Engineering

- Continue to implement crash data location methods and tools.
- Continue to improve roadway inventory database.

#### Education

- Continue to educate law enforcement agencies on the timeliness and quality of crash data.
- Continue to provide training to local agencies to improve crash location data.

#### Enforcement

• Require law enforcement agencies to submit the crash reports to ASP within five days as required by state law.

#### **Emergency Services**

• Provide access to injury data in coordination with crash data.

#### **Public Policy/Other**

- Implement electronic crash database system for all safety partners.
- Revise the state law regarding submitting crash reports to ASP.

# **Traffic Data Systems Implementation:**

- MapClick and eCrash was designed for the State of Arkansas and implemented in July of 2015 beginning with the Arkansas State Police.
- Currently there are approximately 80 agencies that are either using eCrash or are in the process of obtaining training and equipment to implement eCrash.
- A partnership with ARDOT and ASP is currently underway to expedite eCrash implementation to agencies statewide.
- eCrash has connected the roadway data associated with the crash locations to each individual crash location where roadway data exist. This will include all roads when the All Roads Network of Linear Referenced Data (ARNOLD) is implemented in the summer of 2017.
- The trauma band system has provided a link to join individual crashes with injury data at a future date.
- The sharing of data between state and local agencies has improved with the implementation of eCrash.

### Safety Management System Strategies:

#### Education

- Promote branding of Toward Zero Deaths (TZD) for all appropriate safety programs and campaigns.
- Establish a promotional campaign to raise awareness of TZD.

#### **Public Policy/Other**

- Continue to identify key leadership personnel in organizations that impact road safety in Arkansas.
- Adopt and promote aggressive TZD goals in all programs related to road safety in Arkansas.
- Implement the FHWA Implementation Process Model (IPM) and establish action plans for each Primary Emphasis Area or, if appropriate, any Secondary Emphasis Area.

### **Safety Management System Implementation:**

- Arkansas continues to support the Toward Zero Deaths initiative and goals.
- Although emphasis areas have changed slightly for the 2017 SHSP, action plans were designed for each emphasis area in the 2017 plan.

# Appendix A

**Action Plan** 

### Arkansas 2017 Strategic Highway Safety Plan Update

#### **Emphasis Area Action Plan Impaired/Drowsy Driving**

Emphasis Area Action Plan: Impaired/Drowsy Driving

Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures		
Use Engineering Design to help Impaired or Drowsy	Continue to implement shoulder and centerline rumble strips to alert drivers when leaving the roadway.	HSIP 148	ArDOT	HSIP 148	Ongoing			
Drivers maintain vehicles in the roadway.	Continue to implement cable median barriers to decrease median crossover crashes.	HSIP 148	ARDOT	ARDOT HSIP 148 Ongoing Impaired/ Driving				
	Continue to implement national campaigns such as Drive Sober or Get Pulled Over as well as other Public Service Announcements at a local level.	HSP	ASP/HSO	NHTSA 402	Ongoing	Fatalities Impaired/Drowsy Driving		
Make the public aware through education of the	Education emphasis should be placed on alternative means of transportation for impaired persons such as taxis, Uber or Lyft, etc.	HSP	ASP/HSO	NHTSA 402	TBD	Fatality Rate Impaired/Drowsy Driving		
dangers and penalties involved with impaired/drowsy driving.	Education in schools on the problem of impaired driving should be continued at the upper elementary, middle school and high school levels.	HSP	ASP/HSO	NHTSA 402	Ongoing	Serious Injuries Impaired/Drowsy Driving		
	Town Hall meetings in selected cities around the state could be held to both promote alternatives to impaired driving and allow citizens to voice their concerns and ask questions.	HSP	ASP/HSO	NHTSA 402	TBD	Serious Injury Rate		

	Educate judges regarding the qualifications of a Drug Recognition Expert (DRE) or an officer trained in Advanced Roadside Impaired Driving Enforcement (ARIDE).	HSP	ASP/HSO	NHTSA 402	TBD
	Educate the public in the benefits of using ignition interlocks for those convicted of DWI.	HSP	ASP/HSO	NHTSA 402	TBD
	Education is needed in the area of impaired driving due to the use of drugs.	HSP	ASP/HSO	NHTSA 402	TBD
Increase enforcement of Impaired/Drowsy driving	Encourage law enforcement to increase sobriety checkpoints around the state and make use of the "Batmobile" (Portable blood and alcohol testing vehicle).	HSP	ASP/HSO	ASP and Local Enf.	TBD
laws.	Target areas where most DWI incidents occur and make use of saturation patrols in those areas.	HSP	ASP/HSO	ASP and Local Enf.	TBD
	Continue use of ignition interlock devices as mandatory for all DWI convicted persons.	HSP	ASP/HSO	ASP and Local Enf.	Ongoing
Increase the capabilities of law enforcement in enforcing Impaired/Drowsy driving laws.	Encourage law enforcement officers to take advantage of training as Drug Recognition Experts (DRE) or Advanced Roadside Impaired Driving Enforcement (ARIDE).	HSP	ASP/HSO	ASP and Local Enf.	Ongoing
Improve clarification of local protocols regarding blood draws for testing. Test every fatality in the state.	Work with local EMS to standardize protocols.	NA	ADH/EMS	ADH/EMS	TBD

The Arkansas Impaired Driving Task Force (AIDTF) can advocate for laws that strengthen enforcement of impaired driving laws, such as possibly extending the "look-back" period for DWI convictions (currently 5 years) or increasing fines for repeat offenders and those who refuse testing.	Work with the State Legislature to improve and strengthen impaired driving laws.	HSP	ASP/HSO	NHTSA 402	TBD
DWI Courts should be supported and expanded in the state.	Work with local government to expand the use of DWI courts.	HSP	ASP/HSO	NHTSA 402	TBD

Emphasis Area Action Plan Occupant Protection

Emphasis Area Action Plan: Occupant Protection										
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
Educate the public on the benefits of occupant protection as well as the penalties and dangers associated with non-compliance.	Continue to implement national campaigns such as "Click It or Ticket" and "Buckle Up in your Truck" as well as other Public Service Announcements at a local level.	HSP	ASP/HSO	NHTSA 402	Ongoing					
	Continue to inform the motoring public about the importance of seatbelts and proper wear.	HSP	ASP/HSO	NHTSA 402	Ongoing	Fatalities				
	Effectively communicate the penalty for non-compliance to the public.	HSP	ASP/HSO	NHTSA 402	Ongoing					
	Maintain officer presence. Continued seatbelt enforcement.	HSP	ASP/HSO	ASP and Local Enf.	Ongoing	Serious Injuries				
Increase enforcement of state and	Implement the proposed gift card award program for a driver in compliance with the seatbelt law.	HSP	ASP/HSO	ASP and Local Enf.	TBD	Seatbelt Usage Rate				
CDL seatbelt laws.	Enforce seatbelt laws in Commercial Motor Vehicles (CMV); develop a plan to introduce into legislation to make it a requirement for all new CMV's to be equipped with bright colored seatbelts for visual aid in enforcement.	CVSP	Ardot/Ahp	FMCSA	Ongoing					

#### **Emphasis Area Action Plan Aggressive Driving**

Emphasis Area Action Plan: Aggressive Driving									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
Use engineering design and technology to reduce speeds.	Implement Traffic calming features at high risk areas such as roundabouts and signing/marking techniques in horizontal curves, etc.	2017 SHSP	ArDOT	HSIP 148	TBD				
	Increase usage of dynamic warning signs to remind drivers of their travel speed when entering urban areas or other high risk locations.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Aggressive Driving Fatalities			
	Add information into driver training manuals about dangers of aggressive drivers.	HSP	ASP/HSO	ASP	TBD	Aggressive			
	Involve parents in driver education.	HSP	ASP/HSO	ASP	TBD	Driving Fatality Rate			
Use a multi-media advertising approach to educate drivers	Utilize social media to share information about the dangers of aggressive driving.	HSP	ASP/HSO	ASP	TBD	Aggressive			
about the dangers of aggressive driving.	Develop media campaigns to increase public awareness about the dangers of speeding and aggressive driving.	HSP	ASP/HSO	ASP	TBD	Driving Serious Injuries			
	Report statistics regarding fatalities on dynamic message signs.	2017 SHSP	ARDOT	ARDOT	TBD	Aggressive Driving			
Increase high visibility and aggressive enforcement to	Encourage community based enforcement by creating a traffic complaint hot line.	HSP	ASP/HSO	ASP	TBD	Serious Injury Data			
reduce crashes associated with aggressive driving.	Develop high-visibility enforcement outreach programs.	HSP	ASP/HSO	ASP	TBD	Rate			
Create a statewide aggressive driving initiative.	Develop "TACT" campaign, "Ticketing Aggressive Cars and Trucks."	HSP	ASP/HSO	ASP	TBD				

#### **Emphasis Area Action Plan Distracted Driving**

Emphasis Area Action Plan: Distracted Driving									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
Increase the use of warning signs in problem areas.to reduce distracted driving accidents.	Increase use of dynamic message boards when approaching work zones or congested areas.	2017 SHSP	ArDOT	HSIP Funds	TBD				
	Install signs regarding unlawful use of cell phones in construction zones and school zones.	2017 SHSP	ARDOT	HSIP Funds	TBD	Distracted			
	Use dynamic message boards or billboards to indicate number of traffic fatalities in real time.	2017 SHSP	ARDOT	ARDOT Funds	TBD	Driving Fatalities Distracted			
	Integrate distracted driving with the D.A.R.E. program.	HSP	ASP/HSO	ASP/NHTSA	TBD	Driving Fatality Rate			
Increase education especially for children and younger drivers.	Increase the use of Public Service Announcements in the media regarding distracted driving.	HSP	ASP/HSO	ASP/NHTSA	TBD	, Distracted Driving			
	Encourage viewing distracted driving to be as dangerous as impaired driving.	HSP	ASP/HSO	ASP/NHTSA	TBD	Serious Injuries			
	Increase the use of defensive driving training with younger drivers.	HSP	ASP/HSO	ASP/NHTSA	TBD	Distracted Driving			
	Increase use of low profile vehicles in distracted driving enforcement.	HSP	ASP/HSO	ASP	TBD	Serious Injury Rate			
Increase enforcement of distracted driving laws.	Increase the number of points on driving records for distracted driving violations.	2017 SHSP	DF&A	DF&A	TBD				
	Initiate an outreach to judges concerning being tough on distracted driving violators.	HSP	ASP/HSO	ASP	TBD				

#### **Emphasis Area Action Plan Roadway Departure**

Emphasis Area Action Plan: Roadway Departure										
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
	Widen roadways when cost effective (e.g. center medians).	2017 SHSP	ARDOT	HSIP 148	Ongoing					
	Provide minor widening and improvement for shoulders.	2017 SHSP	ArDOT	HSIP 148 and other state and fed. funds	Ongoing					
	Continue increased use of shoulder rumble strips/stripes.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Roadway Departure				
	Further implement centerline rumble strips.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Fatalities				
Prevent roadway departures.	Realign horizontal/vertical curves and adjust superelevations when cost effective.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Roadway Departure				
	Upgrade signs and pavement markings	2017 SHSP	ArDOT	HSIP 148 and other state and fed. funds	Ongoing	Fatality Rate Roadway				
	Utilize techniques to reduce edge drop-offs (i.e. safety edge).	2017 SHSP	ArDOT	HSIP 148 and other state and fed. funds	Ongoing	Departure Serious Injuries				
	Develop horizontal curve low-cost countermeasure program, including signing, striping and high friction treatments, etc.	2017 SHSP	ArDOT	HSIP 148	Ongoing	Roadway Departure				
	Install barriers (rigid, flexible and semi-rigid).	2017 SHSP	ARDOT	HSIP 148	Ongoing	Serious Injury Rate				
Mitigate consequences of roadway departures.	Update guardrail.	2017 SHSP	ArDOT	HSIP 148 and other state and fed. funds	Ongoing					
	Remove or shield fixed objects.	2017 SHSP	ARDOT	HSIP 148	Ongoing					

Increase education regarding cable median barriers and	Provide education to law enforcement and EMS regarding breaching cable median barriers in crash situations.	2017 SHSP	ARDOT	ArDOT	TBD
rumble strips.	Educate public regarding use and purpose of shoulder and centerline rumble strips.	2017 SHSP	ARDOT	ARDOT	TBD
Increase enforcement in problem areas to reduce roadway departure crashes.	Focus enforcement on corridors with a high number or percent of roadway departure crashes.	HSP	ASP/HSO	ASP/AHP/ Local Enforcement	TBD
Hold road safety assessments to address areas with high roadway departure crashes.	Continue using multi-disciplinary road safety assessment program to target high crash locations and corridors.	2017 SHSP	ARDOT	HSIP 148	Ongoing

**Emphasis Area Action Plan Intersections** 

Emphasis Area Action Plan: Intersections									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
	Implement techniques to reduce turning conflicts and through movements, i.e. roundabouts, diverging diamond interchanges, single point urban interchanges.	2017 SHSP	ArDOT	HSIP 148 and other state and federal funds	Ongoing				
Mitigate Consequences of intersection crashes.	Improve maintenance/repair of non- operating traffic detectors in signalized intersections.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing				
	Implement access management in urban areas.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing	Intersection Related Fatalities			
	Install turn lanes and other geometric improvements.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing				
	Install transverse rumble strips on approaches to intersections where needed.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Intersection Related			
Develop countermeasures for signalized and un-signalized	Improve signage, lighting, friction, signal hardware, timing, phasing, and signal visibility back-plates where needed.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing	Serious Injuries			
intersections with high crash rates.	Enhance pavement markings and skid resistance where needed.	2017 SHSP	ARDOT	HSIP 148	Ongoing				
	Install multiway stop signs and/or signal as warranted.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing				
	Implement techniques to reduce left- turning and through movement conflicts, such as median treatments and roundabouts, as appropriate.	2017 SHSP	ARDOT	AFTD Funds	TBD				

Educate the public on proper negotiation of intersections including roundabouts.	Include intersection negotiation including roundabouts in driver education classes and on driver license testing.	2017 SHSP	ARDOT	ArDOT	TBD
Increase enforcement at intersections with high numbers of crashes.	Analyze intersection crash data to provide jurisdictional stakeholders information for use in targeted enforcement.	2017 SHSP	ARDOT	HSIP 148 and NHTSA 402	TBD

**Emphasis Area Action Plan Work Zones** 

Emphasis Area Action Plan: Work Zones									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
Follow the Arkansas Work Zone Safety and Mobility Policy.	Collect data on number of fatalities and serious injuries, location and cause of crashes in work zones for analysis.	2017 SHSP	ArDOT	NA	Ongoing				
	Continue to use and refine the Work Zone Safety and Mobility Policy.	2017 SHSP	ArDOT	ΝΑ	Ongoing				
	Increase use of temporary rumble bars/strips in advance of queue locations for work zones on interstates and other projects.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing	Work Zone Fatalities			
Reduce end of queue crashes.	Increase the use of temporary portable rumble strips and advance warning signs, in advance of queue locations.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	Ongoing	Work Zone Serious Injuries			
	Increase the use of "Mobile" Automated Work Zone Information Systems on short term interstate projects.	2017 SHSP	ArDOT	HSIP 148 and other state and federal funds	Ongoing				
Improve work zone management.	Require a certified Traffic Control Supervisor on significant projects.	2017 SHSP	ArDOT	ArDOT	Ongoing				
	Continue to refine the use of road user costs and appropriate lane/shoulder closure policies to improve the mobility and safety of work zones.	2017 SHSP	ArDOT	ArDOT	Ongoing				
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Educate the public regarding work zone safety and penalties for violations in work zones.	Initiate media campaigns to educate the public about work zone safety issues.	2017 SHSP	ArDOT	ArDOT	TBD				
Involve Law Enforcement in work zones to reduce the risk of crashes.	Continue to place law enforcement in work zone and at the end of the queue to enforce traffic laws and to warn drivers of upcoming queued traffic when needed.	HSP/2017 SHSP	ARDOT/ ASP/ AHP/ Local Enf.	ARDOT/ASP/AHP/ Local Enf. HSIP 148 and other state and federal funds	Ongoing				

#### **Emphasis Area Action Plan Railroad**

Emphasis Area Action Plan: Railroad								
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures		
Increase signing and pavement markings on grade crossing	Prepare a publication for local officials informing them of pavement markings and signing requirements at crossings. This will be distributed through the Municipal League and the Association of Arkansas Counties.	2017 SHSP	ArDOT	HSIP 148	TBD			
approaches to decrease crashes at grade crossings.	Develop a statewide project to update pavement markings and signing for on system crossings.	2017 SHSP	ARDOT	HSIP 148	TBD	RR Crossing		
	Develop a streamlined agreement with railroads to allow roadway authorities access to crossings.	2017 SHSP	ARDOT	NA	TBD	Fatalities		
	Detailed analysis of multi-incident crossings.	2017 SHSP	ArDOT	HSIP 148	Ongoing	RR Crossing		
Institute grade crossing safety plan statewide.	Continue to install lights and gates at crossings based on hazard rating.	2017 SHSP	ARDOT	HSIP 148	Ongoing	Serious Injuries		
	Encourage local officials to close redundant crossings.	2017 SHSP	ArDOT	HSIP 148	Ongoing			
Inform the public of the dangers of grade crossings.	Continue support of Operation Lifesaver educational efforts.	2017 SHSP	ARDOT	ArDOT	Ongoing			
Encourage the use of law enforcement at railroad crossings.	Continue to support Operation Lifesaver Grade Crossing Collision Investigation training.	2017 SHSP	ArDOT	ARDOT	Ongoing			

**Emphasis Area Action Plan Large Commercial Motor Vehicles** 

Emphasis Area Action Plan: Large Commercial Vehicles										
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
Reduce the risk of CMV crashes due to driver fatigue.	Emphasize opening/re-opening truck parking areas.	2017 SHSP	ArDOT	HSIP 148 and other state and federal funds	Ongoing					
Encourage rulemakings that require new technology that increases safety in large commercial motor vehicles.	Support additional research and potential future rulemakings for proven safety technologies (lane departure, rear end collisions, etc.).	2017 SHSP	ARDOT	ARDOT	Ongoing	CMV Involved				
Encourage the inclusion of CMV related topics in driver education.	Include "driving around a CMV" lessons in student driver manuals.	HSP	ASP/HSO	NHTSA 402	TBD	Fatalities				
Use media to educate the public on sharing the road with CMVs.	PR campaign on how to safely "share the road" with CMVs.	HSP	ASP/HSO	NHTSA 402	TBD					
Encourage occupant protection usage in CMVs.	Add CMV focus to "Click It or Ticket" type campaigns.	HSP	ASP/HSO	NHTSA 402	TBD	CMV Involved Serious				
Increase CMV enforcement of safety violations.	Investigate multi-state/regional Law Enforcement Officer (LEO) partnerships at points-of-entry to assist in CMV enforcement efforts.	CVSP	Ardot/Ahp	FMCSA	TBD	Injuries				
Increase the number of enforcement personnel trained to enforce CMV specific laws.	Offer training for local LEOs for CMV enforcement.	CVSP	ARDOT/AHP	FMCSA	TBD					

#### **Emphasis Area Action Plan Motorcycles**

Emphasis Area Action Plan: Motorcycles										
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
Encourage helmet and high visibility clothing usage.	Educate motorcyclists through the media of the importance of helmet usage and wearing highly visible clothing. Push for reinstatement of the helmet law.	HSP	ASP/HSO	NHTSA 402	TBD	Motorcycle				
Encourage motorcycle safety training.	Push for required safety training as a pre-requisite for motorcycle driver licenses.		ASP/HSO	NHTSA 402	TBD	Related Fatalities				
	Increase the number of check points and testing for impaired motorcycle operators.	HSP	ASP/HSO	ASP	TBD	Motorcycle Related Serious Injuries				
Increase enforcement efforts for motorcyclist violators.	Increase enforcement of the motorcycle DL endorsement laws.	HSP	ASP/HSO	ASP	TBD					
	Increase the quality of the driving portion of the motorcycle riders endorsement test.	HSP	ASP/HSO	ASP	TBD					
	Support efforts to pass improvements to the motorcycle helmet law.	HSP	ASP/HSO	ASP	TBD					

#### **Emphasis Area Action Plan Younger Drivers**

Emphasis Area Action Pla	Emphasis Area Action Plan: Younger Drivers									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
	Conduct media campaign to increase awareness of Graduated Driver's License (GDL) and dangers of texting and driving. Include social media outlets such as Twitter, Facebook, Instagram, etc.	HSP	ASP/HSO	NHTSA 402	TBD					
	Expand and continue support of coalitions for safer teen driving.	NA	ACHIPC	ACH	Ongoing					
	Expand and continue support of peer led education activities statewide.	HSP	HSO/HSP	NHTSA 402	Ongoing	Younger Driver Fatalities Younger Driver Serious Injuries				
Increase awareness of risks to young drivers amongst teens, college	Expand and continue support of teen/parent education activities in communities across the state. Examples: Teen Driving Roadeo, Teen Driving Safety Week, mock crash reenactment and discussion, parent/teen education, pledge parties, GDL awareness.	HSP	HSO/HSP	NHTSA 402	Ongoing					
age students, parents, and community members.	Continue support of GDL education through driver control offices.	DFA Driver Services	DFA	DFA	Ongoing					
	Develop and distribute guide for teaching teens to drive. To include lessons for nighttime and rainy weather.	HSP	ASP/HSO	NHTSA 402	TBD					
	Develop and implement use of GDL video for parents while waiting at DMV including mandatory sign off that video has been viewed.	HSP	ASP/HSO	NHTSA 402	TBD					
	Develop and implement use of GDL video for teens viewed before written portion of drivers test.	HSP	ASP/HSO	NHTSA 402	TBD					
	Develop and implement programs to increase traffic safety knowledge, attitude, and behavior amongst college age students.	HSP	ASP/HSO	NHTSA 402	TBD					

		Educate law enforcement regarding risks for young drivers and the GDL law.	HSP	ASP/HSO	ASP	Ongoing
		Create formal process for letting law enforcement know about new young driver laws.	HSP	ASP/HSO	ASP	TBD
	Increase enforcement of	Educate judges regarding risks for young drivers and GDL law, encouraging administering consequences for violators.	HSP	ASP/HSO	ASP	TBD
young driver laws.	Host GDL check points, similar to sobriety check points.	HSP	ASP/HSO	ASP/Local Enf.	TBD	
	Increase number of tickets written for violations of GDL.	HSP	ASP/HSO	ASP/Local Enf.	TBD	
		Mandate documented hands on driving practice before licensure.	HSP	ASP/HSO	ASP/Local Enf.	TBD
	Revise or add additional legislation for young drivers.	Eliminate age waivers.	HSP	ASP/HSO	ASP/Local Enf.	TBD
		Revise GDL to only 1 passenger, for intermediate drivers, with no caveats.	HSP	ASP/HSO	ASP/Local Enf.	TBD
		Require vehicle marking for easy identification of intermediate drivers.	DFA Driver Services	DFA	DFA	TBD
		Revise standards for on road portion of driver's testing to increase time in car to include demonstrations of specific skills (i.e.: left turns, merging, etc.).	HSP	ASP/HSO	ASP	TBD
		Revise violation penalties to include community service for young drivers as well as monetary fine.	HSP	ASP/HSO	ASP	TBD
		Suspend license for violation of GDL.	HSP	ASP/HSO	ASP	TBD
		Oppose actions to repeal or negatively amend teen driving laws that are currently in place.	HSP	ASP/HSO	ASP	TBD
		Mandate offering driver education in schools.	HSP	ASP/HSO	ASP	TBD
		Redirect funds from some traffic fines to support teen driving education.	HSP	ASP/HSO	ASP	TBD

#### **Emphasis Area Action Plan Older Drivers**

Emphasis Area Action Plan: Older Drivers									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
	Install brighter signs where appropriate to enhance visibility.	2017 SHSP	ArDOT	HSIP funds	Ongoing				
	Install Wrong Way pavement markings to help warn older drivers.	2017 SHSP	ArDOT	HSIP funds	Ongoing				
Improve visibility to reduce crashes by older drivers.	Lower wrong way sign heights to help alert older drivers and prevent wrong way crashes.	2017 SHSP	ARDOT	HSIP funds	Ongoing				
	Install route signs with larger numbers to aid older drivers.	2017 SHSP	ArDOT	HSIP funds	Ongoing	Older Driver Fatalities			
	Implement countermeasures from the FHWA Highway Design Handbook for Older Drivers.	2017 SHSP	ArDOT	HSIP funds	Ongoing				
Support AARP and other agencies with driver	Educate older drivers on the safety risk resulting from reduced driving task performance.	HSP	ASP/HSO	NHTSA 402	Ongoing	Older Driver Serious Injuries			
education for older drivers.	Educate drivers on alternative transportation modes available.	HSP	ASP/HSO	NHTSA 402	Ongoing				
Increase frequency of vision assessments for older drivers.	Insure older drivers' vision requirements on their DL are being followed.	HSP	ASP/HSO	ASP/Local Enf.	TBD				
Promote the use of restricted driver licenses for older drivers.	Enforce license restrictions for older and all drivers.	HSP	ASP/HSO	ASP/Local Enf.	Ongoing				

#### **Emphasis Area Action Plan Drivers with Disabilities**

Emphasis Area Action Plan: Drivers with Disabilities

Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures
Ensure disabled drivers have all necessary tools and resources available to safely perform driving activities.	Ensure that deaf drivers are able to take their driver's test in their own language with the provision of interpreters or having the test provided in a sign language video format.	ASP	ASP	ASP	TBD	
	Educate or make equipment more readily available to modify vehicles.	ARS	ARS	ARS	TBD	Fatalities
	Promote deaf driver safety through the provision of visor cards to deaf drivers and to law enforcement to aid in communication issues.	ARS	ARS	ARS	Ongoing	Fatality Rate Serious Injuries
Ensure ways that drivers with disabilities are aware of oncoming emergency vehicles.	Explore the use of signal light pre-emption at signalized intersections by emergency vehicles that are responding to emergencies, to aid in the safety of older and hard of hearing drivers that may not see or hear an approaching emergency vehicle.	HSIP	ARDOT	HSIP 148	TBD	Serious Injury Rate

#### Emphasis Area Action Plan Bicycle/Pedestrian

Emphasis Area Action Plan: Bicycle/Pedestrian									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
	Encourage local and public agencies which develop bicycle and pedestrian planning documents to include rules of the road and safety strategies.	AR Bike/Ped Plan	Multi	HSIP 148 and other state funds	Ongoing				
	Update existing pedestrian accommodations such as the use of High Intensity Activated Crosswalk (HAWK) pedestrian traffic signals as appropriate.	AR Bike/Ped Plan	Multi	HSIP 148 and other state funds	TBD				
Implement the Arkansas State Bicycle and Pedestrian Transportation Plan.	Continue use and refinement of the plan and implement best practices to improve pedestrian safety.	AR Bike/Ped Plan	Multi	HSIP 148 and other state funds	Ongoing	Fatalities and Serious Injuries for			
	Advocate widening of existing highway shoulders in ARDOT overlay projects.	AR Bike/Ped Plan	Multi	HSIP 148 and other state funds	Ongoing	Non-Motorist			
	Analyze bicycle and pedestrian crash data and identify countermeasures.	2017 SHSP	ArDOT	HSIP 148 and other state funds	Ongoing				
	Revise existing state bicycle/pedestrian policy to align with most recent version of statewide Bicycle/Pedestrian plan and other recent federal guidance.	AR Bike/Ped Plan	Multi	HSIP 148 and other state funds	Ongoing				

Continue to work with MPOs and jurisdictions to locate high pedestrian/bicycle crash locations.2017 SHSPARDOTHSIP 148 and other state fundsOngoingFocus education efforts aimed at safety and awareness of laws regarding bicycle and pedestrian safety.HSPASP/HSONHTSA 402TBDFocus education efforts aimed at safety and awareness of laws regarding bicycle and pedestrian traffic on bicycle/pedestrian traffic.HSPASP/HSONHTSA 402TBDFocus enforcement on existing laws and cafety.Provide public on bicycle/pedestrian laws.HSPASP/HSONHTSA 402TBDFocus enforcement on existing laws and corrective behavior.Enforce existing state laws such as as opposed to punish when warranted.HSPASP/HSONHTSA 402TBDFocus enforcement in areas with high bicycle or pedestrian crash rate or bicycle or pedestrian crash rate or bicycle or pedestrian crash rate or bicycle and pedestrian in problem areas.Singposed to public on bicycle/pedestrian to public on bicycle/pedestrian as opposed to punish when warranted.Singposed to punish when<						
Focus education efforts aimed at safety and awareness of laws regarding bicycle and pedestrian traffic on high volume/speed roadways.HSPASP/HSONHTSA 402TBDFocus education efforts aimed at safety and awareness of laws regarding bicycle and pedestrian traffic on high volume/speed roadways.HSPASP/HSONHTSA 402TBDUtilize social media to educate the public on bicycle/pedestrian laws and safety.AR Bike/Ped PlanMultiARDOTTBDFocus enforcement on existing laws and corrective behavior.Enforce existing state laws such as the Arkansas 3 Foot Law.HSPASP/HSONHTSA 402TBDFocus enforcement on existing laws and corrective behavior.Enforce existing state laws such as the Arkansas 3 Foot Law.HSPASP/HSONHTSA 402TBDFocus enforcement on existing laws and corrective behavior.Promote more leniencies in local laws that prevent bicycles from biergridden on sidewalks.HSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with target2017 StupARDOTHSIP 148 and other crate fundsOngoing		jurisdictions to locate high		ArDOT		Ongoing
Focus education efforts aimed at safety and awareness of laws regarding bicycle and pedestrian traffic on high volume/speed roadways.HSPASP/HSONHTSA 402TBDtraffic.and pedestrian traffic on high volume/speed roadways.Utilize social media to educate the public on bicycle/pedestrian laws and safety.AR Bike/Ped PlanMultiARDOTTBDFocus enforcement on existing laws and corrective behavior.Enforce existing state laws such as the Arkansas 3 Foot Law.HSPASP/HSONHTSA 402TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSOSSP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSOASP/Local Enf.TBD		that target school children on	HSP	ASP/HSO	NHTSA 402	TBD
Focus enforcement in areas with high bicycle or pedestrian cash rate orProvide crash studies to local law enforcement to aid with targetMulti ARDOTARDOTTBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSONHTSA 402TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetHSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with targetC017 CHSPARDOTHSIP 148 and other state fundsOngoing	safety and awareness of laws regarding bicycle and pedestrian	that are aimed at increasing the awareness of the dangers of bicycle and pedestrian traffic on high	HSP	ASP/HSO	NHTSA 402	TBD
enforcement on bicycle/pedestrian laws.HSPASP/HSONHTSA 402TBDFocus enforcement on existing laws and corrective behavior.Enforce existing state laws such as the Arkansas 3 Foot Law.HSPASP/HSOASP/Local Enf.TBDFocus enforcement on existing laws and corrective behavior.Suggest to law enforcement to use enforcement measures to educate as opposed to punish when 	traffic.	public on bicycle/pedestrian laws	Bike/Ped	Multi	ARDOT	TBD
HSPASP/HSOASP/Local Enf.TBDFocus enforcement on existing laws and corrective behavior.Suggest to law enforcement to use enforcement measures to educate as opposed to punish when warranted.HSPASP/HSOASP/Local Enf.TBDPromote more leniencies in local laws that prevent bicycles from being ridden on sidewalks.HSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with target2017 SHSPARDOTHSIP 148 and other state fundsOngoing		enforcement on bicycle/pedestrian	HSP	ASP/HSO	NHTSA 402	TBD
Focus enforcement on existing laws and corrective behavior.enforcement measures to educate as opposed to punish when warranted.HSPASP/HSOASP/Local Enf.TBDPromote more leniencies in local laws that prevent bicycles from being ridden on sidewalks.HSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with target2017 SHSPARDOTHSIP 148 and other state fundsOngoing		-	HSP	ASP/HSO	ASP/Local Enf.	TBD
Iaws that prevent bicycles from being ridden on sidewalks.HSPASP/HSOASP/Local Enf.TBDFocus enforcement in areas with high bicycle or pedestrian crash rate orProvide crash studies to local law enforcement to aid with target2017 SHSPARDOTHSIP 148 and other state fundsOngoing		enforcement measures to educate as opposed to punish when	HSP	ASP/HSO	ASP/Local Enf.	TBD
bicycle or pedestrian crash rate or enforcement to aid with target SHSP ARDOT ARDOT ARDOT Ongoing		laws that prevent bicycles from	HSP	ASP/HSO	ASP/Local Enf.	TBD
	bicycle or pedestrian crash rate or	enforcement to aid with target		ARDOT		Ongoing

#### **Emphasis Area Action Plan Emergency Services**

Emphasis Area Action Plan: Emergency Services Capabilities										
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures				
Coordinate with EMS regarding median cross over gaps for emergency purposes.	Provide for median gaps in cable median barriers for emergency purposes where deemed necessary by EMS.	2017 SHSP	ARDOT	HSIP 148	TBD					
	Provide locations of current median gaps to EMS to aid in EMS responses to emergencies.	2017 SHSP	ARDOT	HSIP 148	TBD	Fatalities				
Educate the public to promote EMS safety and quicker response times.	Publicize "Move It" and "Move Over Laws" through media, and social media campaigns.	HSP	ASP/HSO	NHTSA 402	TBD	Fatality Rates Serious Injuries				
Promote trauma education on a statewide basis.	Continue to provide quality trauma education on a statewide basis.	ADH	ADH	ADH	Ongoing	Serious Injury Rates				
Enforce state laws that enhance EMS safety and response.	Enforce "Move It" and "Move Over" laws statewide in Arkansas.	HSP	ASP/HSO	NHTSA 402	TBD	Fatalities and Serious Injuries for Non-Motorist				
Improve the Arkansas Trauma System	Continue to implement the Trauma Band System in Arkansas.	ADH	ADH	ADH	Ongoing					
	Increase the use of the Arkansas Trauma Communications Center.	ADH	ADH	ADH	Ongoing					

#### Emphasis Area Action Plan Incident Management

Emphasis Area Action Plan: Incident Management Capabilities									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
Reduce Secondary Crashes.	Define, locate, implement a Traffic Incident Management Plan for specific high volume, high crash corridors where Intelligent Transportation System elements and a Traffic Management Center can reduce response time, overall incident time, and travel time reliability.	2017 SHSP	ARDOT	HSIP 148 and other state and federal funds	TBD				
Improve Incident Management Strategies.	Create an Incident Management Committee to review all incidents that involved secondary crashes and make recommendations on improvement.	2017 SHSP	ArDOT	Ardot	Ongoing	Fatalities and Serious Injuries from			
Create an Incident Management Data System.	Research and determine the best data management systems utilized to track incident management data and performance measures.	2017 SHSP	ArDOT	HSIP 148 and other state and federal funds	Ongoing	Secondary Crashes Incident			
	Continue to promote and offer the 4hr National TIM Training to all active first responders in Arkansas.	2017 SHSP	ArDOT	ARDOT	Ongoing	Clearance Times (once developed)			
	Provide Incident Management Training Certification and track number of trainees.	2017 SHSP	ArDOT	ARDOT	Ongoing				
Improve Incident Management Responder Safety.	Encourage the development of regional TIM agreements.	2017 SHSP	ARDOT	ARDOT	Ongoing				
	Continue efforts of TIM Working Committee in making recommendations to the TIM	2017 SHSP	ARDOT	ARDOT	Ongoing				

	Executive Committee for action to improve Statewide TIM activities.				
	Consider the creation of a TIM training facility with an area to perform mock traffic incidents.	2017 SHSP	ARDOT	ArDOT	TBD
	Consider Safety Service Patrols in areas with high levels of congestions and incidents.	2017 SHSP	ARDOT	ARDOT	TBD
Improve travel time reliability to	Produce an advertising campaign to remind drivers not to follow too closely.	2017 SHSP	ARDOT	ArDOT	TBD
reduce crashes.	Develop and encourage after action reviews of traffic incidents.	2017 SHSP	ARDOT	ArDOT	TBD
	Request or require drivers to use flashers in stopped traffic queues.	2017 SHSP	ARDOT	ArDOT	TBD
Improve visibility of stopped traffic queues.	Develop process where when available officers provide end of queue presence patrol for queue's caused by incidents.	2017 SHSP	ArDOT	ArDOT	TBD

**Emphasis Area Action Plan Data Collection and Analysis** 

<b>Emphasis Area</b>	<b>Action Plan: Data</b>	a Collection and Analy	ysis
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Emphasis Area Action Plan: Data Collection and Analysis									
Strategy	Action	Plan	Agency	Resource	Timeframe	Performance Measures			
Improve Crash Data collection tools to make the data more timely and accurate to aid in problem area identification.	Continue to develop, improve and implement eCrash and MapClick statewide.	2017 SHSP	ARDOT	HSIP 148 and NHTSA 402	Ongoing				
	Continue to improve the collection of Model Inventory of Roadway Elements (MIRE) Fundamental Data Elements (MIRE FDE).	2017 SHSP	ARDOT	HSIP 148	Ongoing				
Improve analysis techniques and tools	Continue to improve Advance as a way of analyzing crashes.	2017 SHSP	ARDOT	HSIP 148	Ongoing				
to aid in determining countermeasures for problem areas to mitigate crashes.	Examine commercial software packages for use with eCrash to analyze crashes and implement crash mitigation counter measures.	2017 SHSP	ARDOT	HSIP 148	TBD	NA			
Improve data sharing across agencies.	Provide safety data to other agencies, including local and MPO organizations to aid in safety studies and projects conducted at a local level.	2017 SHSP	ArDOT	HSIP 148	Ongoing				
Educate law enforcement on the benefits and functionality of eCrash.	Work with the Arkansas State Police and the Highway Safety Office to set up and help fund an eCrash training program to expedite statewide use of eCrash.	ASP/HSO	ASP	HSIP 148/ASP	Ongoing				

Educate Data Analyst on the functionality of eCrash, MapClick, Advance and other Analytical tools and programs.	Set up a training program to educate end users of the eCrash data and analytical tools to aid in crash mitigation studies.	2017 SHSP	ARDOT	ARDOT	TBD
Require all law enforcement to adopt MapClick and eCrash as their sole	Work to provide funding for equipment and training associated with adoption of eCrash by law enforcement agencies statewide.	ASP/HSO	ASP	HSIP 148/ASP	Ongoing
means of crash reporting.	Work with the Arkansas State Police to set a statewide deadline for implementation of eCrash by all law enforcement agencies in Arkansas.	ASP/HSO	ASP	HSIP 148/ASP	Ongoing
Connect medical injury data with the	Continue usage and improvement of the Trauma Band System and require its use statewide.	ADH	ADH	ADH	Ongoing
crash data for better analytics of data.	Continue to work on linking the crash data and injury data for analytical purposes.	ADH/ ASP/HSO	ADH/ ASP/HSO	ADH/ HSIP 148/ASP	TBD

# **Appendix B**

# **Arkansas SHSP Implementation Tracking Tool Example**

The Arkansas Strategic Highway Safety Plan Steering Committee will develop a tracking tool to track the progress made in implementing the strategies and actions listed in the Primary Emphasis Area (PEA) Action Plans. The following draft tracking tool is the basic format that will be implemented. This tool will be maintained and updated as needed by the PEA Champions/Agencies.

												Project Date	s		Emp	hasis Ar	eas												
tterm Status	Project Name	Focus Area	Agency	District	County	Office or Troop	Contact	Created By	Funding	Estimated Cost	Details	Begin Date	End Date	Entered On	Aggressive Driving	At Risk Drivers	-Aging Road Users	Teens	Distracted Driving	Impaired Driving	Intersection Crashes	Lane Departure Crashes	Occupant Protection	Traffic Data	Vulnerable Road Users	Bicyclists	Motorcyclists	Pedestrians	Total
Completed	2016 Crawfordville Elementary School Open House	Safe Routes To School Program	N/A	3	WAKULLA		Jane Doe	Jane Doe	Federal Dollars	0	Educated school families on safe biking, walking, school crossing guards.	8/9/2016	8/9/2016	11/30/2016	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	3
Completed	07/18/16 MPOAC Meeting - St Petersburg	Safe Routes To School Program	N/A	7	PINELLAS		John Smith	John Smith	Federal Dollars	0	Presented to the Committee as well as the governing board.	7/18/2016	7/18/2016	11/30/2016	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	3

# **Appendix C**

In September of 2016, the Strategic Highway Safety Plan Steering Committee held a two day Safety Summit in Little Rock, AR. The purpose of the Safety Summit was to receive ideas and feedback from stakeholders, and to provide direction for the SHSP moving forward. Preliminary emphasis areas were discussed and sub-committees were formed which consisted of volunteers from various stakeholder groups. These sub-committees were instrumental in providing information and guidance which was instrumental in creating the 2017 SHSP. There were 165 in attendance which are listed below.

Courtesy Title	First Name	Last Name	Company
Mr.	Steven	Abed	ARDOT-Legal Division
Mr.	Chad	Adams	ARDOT-District 4
Mr.	Chris	Adkins	Signs and Safety Equipment
Mr.	Glenn	Alkire	ARDOT-Traffic Safety
Cpt.	Ronnie	Anderson	Arkansas Highway Police
Mr.	John (J.P.)	Ampleman	Sun Safety, Inc.
Cpt.	Kelly	Baggett	Jonesboro Police Department
Cpt.	Ross	Batson	Arkansas Highway Police
Ms.	Teresa	Belew	AR Impaired Driving Prevention Task Force
Mr.	Kenny	Bennett	ARDOT-District 3 Maintenance Engineer
Mr.	Scott	Bennett	ARDOT Director
Mr.	John	Bettis	ARDOT-Maintenance
Cpt.	Jeff	Bickerstaff	Arkansas Highway Police
Mrs.	Melissa	Blakely	3M-Traffic Safety and Security
Deputy	Adam	Bledsoe	Faulkner County Sheriff's Office-Patrol/PIO
Mr.	Seth	Bleiler	3M-Traffic Safety and Security
Mrs.	Anita	Boatman	DFA-Driver Services
Mr.	Glenn	Bolick	ARDOT-Public Information
Mr.	Charlie	Bond	Nippon Carbide Industries/Nikkalite Reflective Div.
Mr.	Scott	Bowles	FHWA Arkansas
Mr.	Bobby	Bradshaw	ARDOT-System Information & Research

Mr.	Eddie	Brawley	Brawley Consulting Engineers
Mr.	Kevin	Breedlove	Federal Motor Carrier Safety Administration-AR
Mr.	Andrew	Brewer	ARDOT-Transp. Planning and Policy
Mr.	Charles	Brewer	ARDOT-Public Transportation Program
Mr.	Greg	Brown	ADH-Trauma, Preparedness, EMS Branch
Col.	William "Bill"	Bryant	Arkansas State Police
Lt.	Cody	Burk	Pulaski County Sheriff
Chief	Ronnie	Burks	Arkansas Highway Police
Ms.	Brittani	Burnette	Faulkner County District Court
Mr.	Cannon	Callicott	ARDOT District 1 Construction Engineer
Ms.	Sherri	Cannon	USDOT-NHTSA-Region 7
Mr.	Gary	Carnahan	Hot Springs, AR
Mr.	Brian	Casey	ADH/EMS-Data Mgmt. Division
Dr.	Yupo	Chan	UALR-Dept. of Systems Engineering
Judge	Bob	Clinard	Benton County
Ms.	Karla	Cochran	DFA-Driver Services-Driver Control
Mr.	Jamie	Collins	City of Little Rock-Public Works
Mr.	Nick	Collins	ASP-Highway Safety Office
Mr.	Tim	Conklin	Northwest Arkansas Regional Planning Commission
Sgt.	Bryan	Corbett	Mountain Home Police Department-Patrol
Mr.	Angel	Correa	FHWA- Arkansas Division
Mr.	J.R.	Courtright	AR School for the Deaf
Ms.	Tracy	Covington	ARDOT-Traffic Safety
Mayor	Jill	Dabbs	City of Bryant
Mr.	Chad	Davis	ARDOT-District 4 Maintenance Engineer
Ms.	Susan	DeCourcy	USDOT-NHTSA-Region 7
Mr.	Jon	Dierberger	FHWA-Southern Region
Ms.	Danelle	Duplantis	Arkansas Rehabilitation Services
Chief	Rick	Elliott	Jonesboro Police Department
Mr.	Rick	Ellis	ArDOT-Bridge Division

Mr.	Matt	Emberton	ARDOT-District 1 Maintenance Engineer
Mr.	Ted	English	ArDOT-Traffic Safety
Cpt.	Keith	Eremea	ASP-Highway Patrol Division
Mr.	Andre	Favret	Gulf Industries, Inc.
Mr.	John	Fleming	ARDOT-Environmental Division
Mr.	Neil	Foreman	Arkansas Municipal League
Mr.	Bryan	Freeling	ArDOT-Bridge Division
Mr.	Steve	Frisbee	ARDOT-District 3 Engineer
Mr.	Scott	Gann	AR Department of Health /EMS
Mr.	Frank	Gardner	AARP Arkansas-Driver Safety Program
Ms.	JoAnne	Gray	Texarkana MPO
Sgt.	Steven	Hacker	Searcy Police Department
Judge	"Butch"	Hale	Sherwood District Court
Mr.	Ron	Hale	Operation Lifesaver, Inc.
Mr.	David	Hall	ARDOT-Surveys Division
Mr.	Wayne	Hamric	DFA-Office of Motor Vehicles
Mr.	Derrick	Harris	Jonesboro MPO
Mr.	Hans	Haustein	Metroplan
Mrs.	Sharon	Hawkins	ARDOT-GIS and Mapping
Mr.	Mark	Headley	ARDOT-District 6 Engineer
Mr.	Joe	Heflin	FHWA Arkansas
Mr.	David	Henning	ARDOT-State Construction Engineer
Ms.	Debby	Hester	DFA-Driver Services-Driver Control
Mr.	Drew	Hoggard	ARDOT-District 7 Maintenance Engineer
Ms.	Debra	Hollis	ASP-Highway Safety Office
Cpt.	Addison	Holloway	Arkansas Highway Police-D3
Cpt.	Jeff	Holmes	Arkansas Highway Police
Mr.	Tim	Holthoff	AR Administrative Office of the Courts
Mr.	Steve	Hulse	Jefferson County Road Department
Ms.	Ashley	Hunter	ARDOT-System Information & Research

Mr.	Billy Don	Johnson	Prairie County Road Department
Mr.	Ken	Jordan	ARDOT-HR/Training and Safety
Mr.	Jim	Kelly	American Traffic Safety Services Association
Mr.	Michael	Kelly	ARDOT-System Information & Research
Mr.	Tim	Kelly	ARDOT-District 2 Maintenance Engineer
Ms.	Holly	Ketchum	Arkansas Rehabilitation Services
Mr.	John	Lasley	ARDOT-Traffic Safety
Mr.	Steve	Lawrence	ARDOT-District 9 Engineer
Sgt.	Rodney	Lewis	LRPD-Special Operations
Ms.	Rita	Looney	ARDOT-Legal Division
Mr.	Chris	Madison	City of Bryant-Legal
Mr.	John	Mathis	ARDOT-Maintenance
Mr.	Chuck	Martin	ARDOT-Roadway Design
Mr.	Joe	Martin	ADH/Injury & Violence Prevention
Mr.	David	Mayo	ARDOT-State Aid
Mr.	Brad	McCaleb	ARDOT-System Info and Research
Mr.	David	McDonald	Arkansas Rehabilitation Services
Judge	Rusty	McMillon	Greene County
Dr.	Mojtaba	Mohammadi	ARDOT-Traffic Safety
Mr.	Joe	Morgan	AGC Arkansas
Mr.	Johnathon	Mormon	ARDOT-District 6 Maintenance Engineer
Mr.	Greg	Nation	ARDOT-System Info and Research
Mr.	Travis F.	Nelson, Jr.	ARDOT-Human Resources
Mr.	Dean	Newell	Maverick USA Transportation
Mrs.	Shannon	Newton	Arkansas Trucking Association
Mr.	David	O'Neal	Arkansas Trucking Association
Mr.	Arron	Paduaevans	AR Dept. of Health/EMS
Ms.	Sandra	Patterson	Prairie County Road Department
Mr.	Chip	Payne	ASP-Highway Safety Office
Mrs.	Sarena	Peace	Stephens District Court

1Lt.BradPerkinsArkansas Highway PoliceMr.JeffPresleyCity of Jonesboro-E911Mr.MontyPrideArkansas State PoliceMr.AdnanQaziARDOT-Traffic SafetyMrs.KatherineRasmussenARDOT-Traffic SafetyMr.LarryReynoldsSoutheast Arkansas Regional Planning (MPO)Ms.BarbaraRichardPulaski County Public WorksMr.JeffRobinsonSigns and Safety EquipmentMr.StephenSampleARDOT-Computer ServicesMs.KimSandersARDOT-Program ManagementMr.JoeSartiniARDOT-State Maintenance Engineer
Mr.MontyPrideArkansas State PoliceMr.AdnanQaziARDOT-Traffic SafetyMrs.KatherineRasmussenARDOT-Traffic SafetyMr.LarryReynoldsSoutheast Arkansas Regional Planning (MPO)Ms.BarbaraRichardPulaski County Public WorksMr.JeffRobinsonSigns and Safety EquipmentMr.StephenSampleARDOT-Computer ServicesMs.KimSandersARDOT-Program Management
Mr.AdnanQaziARDOT-Traffic SafetyMrs.KatherineRasmussenARDOT-Traffic SafetyMr.LarryReynoldsSoutheast Arkansas Regional Planning (MPO)Ms.BarbaraRichardPulaski County Public WorksMr.JeffRobinsonSigns and Safety EquipmentMr.StephenSampleARDOT-Computer ServicesMs.KimSandersARDOT-Program Management
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Mr.StephenSampleARDOT-Computer ServicesMs.KimSandersARDOT-Program Management
Ms. Kim Sanders ARDOT-Program Management
IVII. JOE Saltiii AKDUI-State Maintenance Engineer
Ms. Maria Schenetzke ARDOT-Legal Division
Mr. Michael Schiffl ARDOT-Traffic Safety
Mr. Dean Scott NHTSA-Region 7 Program Management
Mrs. Stephanie Shaw Northwest Arkansas Regional Planning Commission
Mr. Paul Simms ARDOT-MPO Coordinator
Judge Mike Skarda Prairie County
Dr. Nate Smith Arkansas Department of Health
Mr. Trinity Smith ARDOT-Roadway Design
Mr. Brad Smithee ARDOT-District 10 Maintenance Engineer
Mayor Charles Snapp City of Walnut Ridge
Sgt. Roger Snook LRPD-Special Operations
Mr. John Spears, Jr. ARDOT-System Info and Research
Mayor Bob Stacy City of Wynne
Cpt. Jack Stepp Arkansas Highway Police
Mr. Bryan Stewart ARDOT-Computer Services
Mr. Spencer Stillman Time Striping, Inc.
Mr. Rick Stone Ver-Mac Industries
Mr. Bruce Street ARDOT-District 5
Ms. Cheryl Sugg Arkansas Rehabilitation Services

Judge	Chaney	Taylor	Independence County District Court
Ms.	Mandy	Thomas	ADH/Injury & Violence Prevention
Mr.	Patrick	Thomas	ARDOT-Human Resources
Major	Jay	Thompson	Arkansas Highway Police
Mr.	Jayson	Thompson	ARDOT-Human Resources
Mr.	Kevin	Thornton	ArDOT
Mr.	Lou	Tobian	AARP Arkansas
Mr.	Jerry	Trotter	ARDOT-Construction
Mr.	Robert	Tucker	Tri-Lakes MPO
Mr.	Lloyd	Vanover	ASP-Highway Safety Office
Mr.	Jeff	Venable	ARDOT-District 7 Engineer
Mr.	Rex	Vines	ARDOT-District 1 Engineer
Mr.	Charles	Wagener	AARP Arkansas
Mr.	Tom	Welch	AARP Arkansas Volunteer
Mr.	Mark	Westmoreland	Federal Motor Carrier Safety Administration
Mr.	Ben	Whatley	ARDOT-Traffic Safety
Mr.	Jeffrey	Wheeler	ARDOT-District 9 Maintenance Engineer
Mr.	Steve	Weston	ARDOT- Multimodal and Project Planning
Mrs.	Bridget	White	ASP-Highway Safety Office
Ms.	Ann	Whitehead	ASP-Highway Safety Office
Mr.	Jared	Wiley	ARDOT-Program Management
Mrs.	Cindy	Williams	ATSSA-AR Chapter
Mr.	Deric	Wyatt	ARDOT-District 2 Engineer
Mrs.	Anita	Young-Sattler	ADH/Injury & Violence Prevention