# LOUISIANA Strategic Highway Safety Plan

JULY 26, 2022 | FINAL





#### Office of the Governor State of Louisiana

JOHN BEL EDWARDS GOVERNOR





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Louisiana Strategic Highway Safety Plan

**Destination Zero Deaths** is the vision for Louisiana's Strategic Highway Safety Plan (SHSP). It is how we imagine our future - where no one is killed or seriously injured in a traffic-related crash on all Louisiana public roads. Achieving the reality of zero fatalities and serious injuries is the number one priority for the state and is paramount to a multimodal transportation system that moves people and goods efficiently and safely.

In 2020, nearly 39,000 people were killed on US roads. This is nearly a 7 percent increase in crashes over 2019; and the National Highway Traffic Safety Administration estimates that the final number of fatalities on US roads in 2021 could be more than 42,000 people. In Louisiana the number of fatalities on our roads is also increasing. In 2020, 828 people were killed in Louisiana, and preliminary numbers show 971 people were killed on Louisiana Roads in 2021. Unfortunately, all too many of the deaths on our roadways each year are preventable; meaning a simple choice of safety (i.e., putting on a seat belt or using a ride share program instead of driving impaired) would have prevented the loss of a family member, friend, or colleague. Educating motorists, practicing safe driver behavior, and building infrastructure to protect users are critical to reaching our goal of Destination Zero Deaths.

The SHSP uses a data-driven approach to focus on the state's most severe traffic safety problems and identifies strategies and tactics with the greatest potential to reduce crash severity. As we implement the plan, we must consider both proven, evidence-based strategies and tactics, as well as new and innovative ways to improve safety for all Louisiana road users. Broadly, strategies in the SHSP incorporate: education campaigns to raise awareness and teach safe driving habits; enforcement activities to support traffic safety laws; engineering improvements to enhance safety on our roads, among others.

While the development of the 2022 SHSP update is a tremendous effort, its success will be measured during implementation of its strategies; which will ultimately be gauged through the potential decline in the number of fatalities and serious injuries. Reaching the goal of zero deaths and serious injuries requires traffic safety partners across all levels of government, communities and safety disciplines working in a coordinated effort. It is imperative that the partnerships made and strengthened during the SHSP update are carried forward to adequately direct and guide implementation over the next five years.

Numerous safety stakeholders and experts throughout the State joined forces to develop the recommended strategies aimed at reducing traffic fatalities and serious injuries on our roadways. Making zero traffic fatalities a reality will require the collective commitment and creativity of us all. By working across all agencies, we can identify and develop meaningful solutions to advance our traffic safety goals.

in Bel Edwards

Governor



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John Bel Edwards, Governor Shawn D. Wilson, Ph.D., Secretary



#### Louisiana Strategic Highway Safety Plan

The 2022 update of Louisiana's Strategic Highway Safety Plan (SHSP) demonstrates the State's continued commitment to the safety of all users of our multimodal transportation network. The Department of Transportation and Development is steadfast in its mission to reduce fatalities and serious injuries on Louisiana roadways; ultimately reaching our long-term vision of **Destination Zero Deaths** - where no one is killed or seriously injured in a traffic-related crash on Louisiana public roads. Moving towards zero deaths is an achievable vision through the integration of proven safety strategies, the implementation of measurable action plans, advancements in technology, and a positive safety culture.

Over the next five years, the SHSP will help guide federal and state funding towards the highest priorities and safety strategies for emphasis areas that are proven to be the most effective. We must continue to take an aggressive approach to address critical traffic safety

issues such as distracted driving, impaired driving, occupant protection, and improvements to infrastructure and operations. The SHSP will focus on addressing these four key emphasis areas which exhibit the greatest potential for reducing fatality and serious injury collisions. Older drivers, young drivers and pedestrians will also be evaluated within each emphasis area.

If we truly want to enhance quality of life, we need to make sure that transportation and traffic safety programs are designed and delivered in a way that will provide safe and equitable access to all. The SHSP was founded on the belief that all road users, no matter how they decide to travel, should be able to safely arrive at their destination. Everyone has the right to travel safely on our roads, regardless of race, socioeconomic status, gender, age, ability, or geographic location. It is important that we develop action plans and programs that improve safety for all groups, especially our most vulnerable and traditionally underserved populations.

What distinguishes the SHSP from other safety plans is the direct involvement and support of safety partners throughout the state. The plan could not have been updated, developed, implemented, and evaluated without the help and support of hundreds of safety stakeholders from every part of the State especially from the emphasis area teams, regional safety coordinators and other safety experts. This active involvement is crucial if we are to continue our record of success and make **Destination Zero Deaths** a reality.

Working together, every one of us can make a positive difference in the lives of all Louisiana citizens and visitors and contribute to the health and economic vitality of our state. The Louisiana SHSP offers a clear roadmap to make progress toward that goal. Let's work together to make zero fatalities and serious injuries a reality for all of us.

Sincerely, Shawn D. Wilson, Ph.D. Secretary

Louisiana Department of Transportation and Development | 1201 Capitol Access Road | Baton Rouge, LA 70802 | 225-379-1200 An Equal Opportunity Employer | A Drug-Free Workplace | Agency of Louisiana.gov | dotd.la.gov

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This document, and the information contained herein, is prepared for the purpose of identifying, evaluating, and planning safety improvements on public roads, which may be implemented utilizing federal aid highway funds. This information shall not be subject to discovery or admitted into evidence in a Federal or State court pursuant to 23 U.S.C. 407.

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Appendix E: Occupant Protection Crash Trends and Strategies

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# **Executive Summary**

Toward Zero Deaths (TZD) is a national strategy geared toward eliminating traffic-related fatalities on United States roadways. The national strategy serves as a springboard for state, regional, and local level safety programs, specifically Louisiana's Destination Zero Deaths (DZD) initiative.

Louisiana's DZD program provides a platform to tailor and scale the national strategy at a more local level to meet the specific needs of the state and serve its roadway users more effectively. Louisiana's DZD is important because it provides a way for the state's leaders and stakeholders to coordinate and collectively approach Louisiana's traffic safety issues with a common goal and regional focus. In fact, Louisiana has taken the national TZD initiative one step further and, as part of the state's Strategic Highway Safety Plan (SHSP), has established nine Regional Safety Coalitions to address traffic safety concerns at the parish and city levels. This is notable because it supports a safety-driven effort built on data-driven and targeted safety plans customized for localized crash trends. Furthermore, when countermeasures or safety initiatives are implemented, residents within each of Louisiana's parishes experience the safety benefits directly.

Louisiana has had historic success reducing fatalities and serious injuries on its roadways. In recent years, however, travel patterns and driver behavior have changed (including the impacts of the COVID-19 pandemic). As a result, past effective strategies and tactics need to be re-evaluated and determined if they are still applicable to the crash trends observed or if they need to be revisited and retailored to meet Louisiana's current needs.



Louisiana is a national leader in SHSP implementation. The collaboration between the Emphasis Area Teams and the Regional Safety **Coalition Coordinators** has led to successful implementation of safety programs across the state. Even with this collaboration, fatalities and serious injuries are rising, and more people are experiencing the trauma of traffic deaths than necessary. This SHSP focuses on data-driven solutions to work toward reversing this unfortunate trend.

fatalities and serious injuries per year

According to Louisiana's statewide crash records as documented by the Center for Analytics & Research in Transportation Safety (CARTS), between 2011 and 2019 there were on average 2,095 fatalities and serious injuries per year. Since then, fatalities and serious injuries have been increasing.

#### 2020

#### 828 fatalities & 1,518 injuries

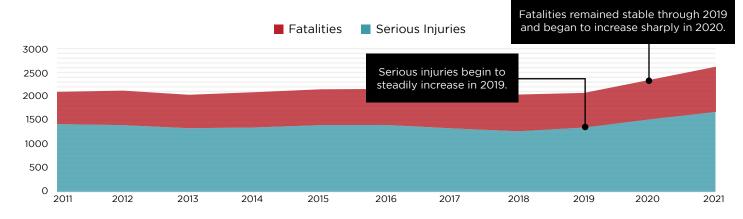
2021\*

#### 971 fatalities and 1,675 serious injuries

reported from roadway crashes in 2020.

in the preliminary numbers for 2021. (This SHSP is not based on 2021 data.) \*2021 preliminary data

#### **STATEWIDE FATALITIES AND SERIOUS INJURIES**



Fatalities and serious injuries are increasing in Louisiana. Serious injuries began increasing in 2019, and fatalities began increasing sharply in 2020. Like many other states, in 2019 Louisiana adopted the National Highway Traffic Safety Administration's (NHTSA) national definition for "suspected serious injury" and exhibited a large outreach effort that same year to train law enforcement on the new definition. This could be a contributing factor to the increase in reported serious injuries beginning in 2019.

In addition, in 2019 Louisiana met the threshold to qualify for the Federal Highway Administration (FHWA) Older Driver and Pedestrian Special Rule (Special Rule). The Special Rule identifies states with increasing trends in fatality and serious injury rates per capita of drivers and pedestrians over the age of 65 and requires them to include strategies to address those trends in their next SHSP update. In 2021, Louisiana was also identified by FHWA as a focus state for Roadway Departure, Intersection, and Pedestrian focus areas. Lastly, in 2022 Louisiana was notified that it met non-motorized fatality thresholds to meet FHWA's Vulnerable Road User (VRU) Special Rule based on 2020 data. Pedestrian fatalities have been on an increasing trend in Louisiana. Consistent with trends across the country, equity issues must be considered in relationship to vulnerable road user crashes. Louisiana has reviewed pedestrian crash data to identify characteristics, such as vehicle ownership, percentage of population employed, population density, and percentage of households below the poverty line, that also influence the occurrence of pedestrian crashes.

The combination of these issues has introduced an urgency for Louisiana to find innovative methods to address these crashes and effectively reduce fatalities and serious injuries.

#### **LOUISIANA SHSP**

The SHSP provides a framework of safety strategies and tactics for reducing fatalities and serious injuries on all roadways within the state through multidisciplinary coordination and input.

The Louisiana Department of Transportation and Development (DOTD), the Louisiana State Police (LSP), the Louisiana Highway Safety Commission (LHSC), and stakeholders have focused this plan on addressing four key Emphasis Areas (EA) during the next five years (shown on the right).

Strategies and tactics to address older drivers, older pedestrians, and young drivers involved in fatal and serious injury crashes are incorporated into each emphasis area.

#### **EMPHASIS AREAS**

	T.		
Distracted Driving	Impaired Driving	Occupant Protection	Infrastructure & Operations
OLDER DRIV	ERS	A driver 65	or older
	STRIANS	A pedestria	n 65 or older
YOUNG DRIV	'ERS	•	to 24 years old motor vehicle

#### **GOAL OF THE SHSP**

The goal of this SHSP is to focus traffic safety resources and provide data-driven strategies to decrease fatalities and serious injuries in each EA, with a long-term vision to achieve zero fatalities and serious injuries on Louisiana roads.

# **A Call to Action from Safety Stakeholders**

Traffic fatalities and serious injuries are increasing nationally and in Louisiana. In 2021, an average of three people were killed and five people were seriously injured every day in Louisiana by driving, walking, or biking on their way to play, home, work, or to run errands. These tragedies are largely predictable and preventable, and it must end.

Imagine a future where no family gets the news a loved one has died in a crash on Louisiana roads. Imagine never hearing about fatal crashes in the news, seeing memorial crosses along the highway, or worrying about answering the door and seeing a police officer who has come to deliver terrible news. The vision may seem unrealistic, but the quest to achieve this noble goal must be pursued. As advocates for roadway safety, we have a responsibility and an opportunity to help people arrive safely. To achieve this, it is vital that all roadway users, stakeholders, decision makers, public health representatives, and law enforcement are involved and working together toward the same goals.

The development of a successful SHSP begins with strong leadership and coordination from executive and implementation groups, which comprise members from DOTD, LHSC, LSP, and other organizations. The executive leadership committee provides oversight and decision making during the SHSP development.

Statewide EA Leaders and subject matter experts bring together a team of concerned, informed, and motivated individuals passionately dedicated to working on initiatives and sharing expertise related to strategies and tactics to improve safety.

MISSION

To reduce the human and economic toll on Louisiana's transportation system due to traffic crashes.



Louisiana has nine Regional Safety Coalitions (Coalitions) throughout the state. These Coalitions are tasked with collaborating with DOTD District Offices and Highway Safety Section, Metropolitan Planning Organizations (MPOs) and other local governments, law enforcement, public health organizations, education leaders, and other stakeholders and advocacy groups within each of their regions to carry out many of the strategies and tactics presented within the SHSP. Getting input from these coalitions is vital because they help implement and give action to the mission and vision of the SHSP. Lastly, stakeholders give a voice to the interests of support groups.

The Implementation Team is responsible for carrying out the action plans developed from the SHSP. The Implementation Team comprises Statewide EA Leaders, Regional Safety Coalitions, the Center for Analytics and Research in Transportation Safety (CARTS), the FHWA, the Federal Motor Carrier Safety Administration (FMCSA), the Jefferson Parish District Attorney's Office, the Louisiana Chiefs Association of Police, the Louisiana Department of Health (LDH), the Louisiana Emergency Response Network (LERN), the LHSC, the Louisiana Local Technical Assistance Program, Louisiana Operation Lifesaver, the Louisiana Sheriff's Association (LSA), the LSP, the LSP Crime Lab, and University Medical Center. Appendix A summarizes all of the people and organizations that participated in the SHSP development and implementation. The SHSP would not be successful without these people. Their time and efforts are deeply appreciated.

#### VISION

To reach destination zero deaths on Louisiana's roadways.



#### GOAL

To continue reducing fatalities and serious injuries by 50% by 2030.

#### SHSP LEADERSHIP & STAKEHOLDERS



#### **Distracted Driving**

#### **Impaired Driving**

#### **Occupant Protection**

• Louisiana Child Passenger Task Force

#### **Infrastructure & Operations**

- Lane Departure
- Roadway Departure
- Intersections
- Pedestrians & Bicycles



Every person can make a difference, and it all starts with a view of positive change. When you imagine a future with no traffic fatalities and serious injuries, what can you contribute to make the vision a reality? If we work together to implement the strategies and tactics identified in this SHSP update, we can hold hope that our shared dream of a future with no roadway fatalities is within reach.

Acadiana Regional Transportation **Safety Coalition** 

**Capital Regional** Transportation **Safety Coalition** 

CenLA Highway **Safety Coalition** 

**New Orleans Regional Traffic** Safety Coalition

**Northeast Louisiana Highway Safety** Partnership

**Northwest Louisiana Transportation Safety** Coalition

North Shore Regional **Safety Coalition** 

Southwest Louisiana **Regional Safety** Coalition

South Central **Regional Safety** Coalition

To learn more about the SHSP, Emphasis Areas, strategies, and actions please visit:

- **Strategic Highway Safety Plan** 
  - Website: destinationzerodeaths.com
  - SHSP Data: datareports.lsu.edu/shsps.aspx
  - Contact: louisianadzd@gmail.com
- Louisiana Highway Safety Commission lahighwaysafety.org
- Louisiana State Police lsp.org

To actively participate in working toward the Louisiana SHSP mission and vision. contact SHSP Manager Autumn Goodfellow-Thompson (autumn.goodfellow-thompson@la.gov) or refer to the Destination Zero Deaths website.

# Introduction

The Destination Zero Deaths vision is the foundation of Louisiana's SHSP.

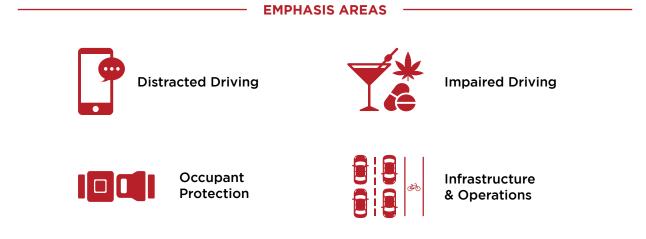
The SHSP identifies safety focus areas known as EAs and provides a framework of safety strategies and tactics for reducing fatalities and serious injuries on all roadways within the state. The SHSP is developed and implemented through multidisciplinary coordination and input. SHSP development, implementation, evaluation, and periodic updates (i.e., required every five years) is a federal requirement of the Highway Safety Improvement Program (HSIP). If a safety strategy is not included as part of the SHSP, then a countermeasure-related project will not qualify for funding under the HSIP.

The objective and focus of the SHSP is to identify Emphasis Areas, strategies, and actions to address current crash trends in Louisiana. The Statewide Emphasis Area Teams and Regional Safety Coalition Coordinators work collaboratively to carry out the strategies and tactics included in this plan.

The Louisiana DOTD, the LSP, the LHSC, and stakeholders have focused this plan on addressing four key Emphasis Areas during the next five years. O,

Louisiana is driving toward Destination Zero Deaths, with the Strategic Highway Safety Plan (SHSP) as its vehicle to reduce motor vehicle-related fatalities and serious injuries. The plan is multidisciplinary, data-driven, and constantly evolving. It is a living document updated every five years with input from a broad array of stakeholders and with leadership from the Louisiana Department of Transportation and Development (DOTD), Louisiana State Police (LSP), and the Louisiana Highway Safety Commission (LHSC).

destinationzerodeaths.com





The DZD initiative is focused on eliminating fatalities and serious injuries on all public roads. The SHSP works toward this target with a goal of reducing fatalities and serious injuries by 50% between 2010 and 2030. This target goal is consistent with the performance measure benchmarks provided in the CARTS dashboard and used by DOTD. To achieve this, targets are set for total fatalities and serious injuries within each EA. Between 2016 and 2020, Louisiana met the targets for impaired driving serious injuries and occupant protection fatalities. Targets were also met for young drivers, which are being integrated into all EAs.

While these successes are important to recognize, room for further improvements to reduce the tragic human and economic toll of fatal and serious injury crashes is evident.

According to CARTS, in 2020 the economic impact of crash costs in the state totaled more than \$8.6 billion per year. That is an estimated cost of \$2,850 per licensed driver. Total cost by injury including loss of quality of life totaled \$25 billion. Fatalities, severe injuries, and moderate injuries make up 41% of the economic costs and 74% of quality of life costs.



A target goal of reducing fatalities and serious injuries by 50% between 2010 and 2030

# FATALITIESSERIOUS<br/>INJURIESDistracted DrivingIImpaired DrivingIOccupant ProtectionIInfrastructure & OperationsIInfrastructure & Oper

#### **CURRENT GOAL PERFORMANCE**

# **SHSP Update Process**



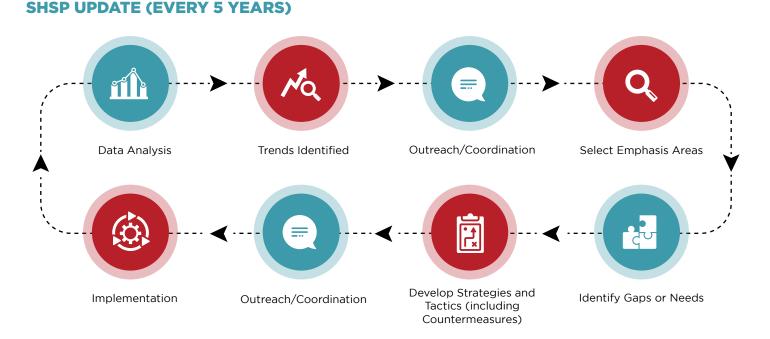
# 2.1 Implementation Team Coordination and Plan Development

Updating the SHSP calls for extensive coordination amongst the SHSP Implementation Team (Statewide EA Leaders, Regional Safety Coalitions, the CARTS, the FHWA, the FMCSA, the Jefferson Parish District Attorney's Office, the Louisiana zhiefs Association of Police, the LDH, the LERN, the LHSC, the Louisiana Local Technical Assistance Program, Louisiana Operation Lifesaver, the LSA, the LSP, the LSP Crime Lab, and University Medical Center) and partner agencies to understand current crash trends, reconsider Emphasis Areas, and identify best practice strategies to address crash conditions over the next five years. The SHSP development builds on itself and is an iterative process beginning with data evaluation, historical performance tracking, peer state SHSP reviews, and input from key stakeholders and SHSP Implementation Team members on strategy development. Appendix B provides a summary of the analyses and activities conducted to develop the 2022 SHSP.

The appendix itemizes and compares the activities to the FHWA SHSP Process Approval Checklist (October 2016).

Four rounds of meetings were held with the Implementation Team to solicit input on crash trends, Emphasis Areas, and strategies and tactics for each EA. With adoption of this plan, the SHSP Manager, the Statewide EA Leaders, and the Regional Safety Coalition Coordinators (RSCC) will begin the implementation process, which includes annual meetings to review work accomplished related to the strategies and tactics as well as update action items.

DOTD is initiating an update to the 2016 Statewide Transportation Plan. Safety will be a component of the update, and the SHSP will inform how safety should be integrated into statewide transportation policy.



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#### **NEW CRASH DEFINITIONS FOR 2022**

Another part of the SHSP update process included reviewing and updating crash definitions as needed. Louisiana is in the process of updating their crash report form. Crash definitions have been updated to be consistent with the current crash report form. Crash data definitions will be reviewed and updated again in the next SHSP for consistency with the new crash report form and analysis opportunities provided by it. Full crash definitions are provided for each EA in Section 4. The crash definitions that changed from the previous SHSP are:



#### Impaired Driving

**Alcohol-Related:** A crash involving at least one driver or motorcyclist predicted to have a blood alcohol content (BAC) greater than or equal to 0.02%. A Louisiana-specific regression equation is used to predict alcohol BAC when BAC is pending or unknown.

The 2022 "Alcohol-Related" definition excludes non-motorized users (pedestrians and pedalcyclists).

**Drug-Involved:** A crash involving a driver or motorcyclist identified by the police officer as either having a condition of drug use (whether impaired or not impaired), being suspected of having used drugs or both alcohol and drugs, or having drugs that were reported.

Drug involvement has not been officially included in previous SHSP data efforts. A new definition for "Drug-Involved" is incorporated in the 2022 SHSP analysis as an initial step toward capturing and developing strategies to address drug involvement in crashes and data improvement strategies.



#### **Distracted Driving**

A crash involving at least one driver or motorcyclist having either a driver condition of "distracted/inattentive" or a driver distraction of "cell phone," "other electronic device," "other inside the vehicle," or "other outside the vehicle" as determined by the police officer.

The 2022 "Distracted Driving" definition was updated to include only drivers of motorized vehicles and exclude non-motorized users.



#### **Infrastructure & Operations**

A crash involving intersections, lane departure (includes roadway departure and head-on), pedestrians, and/or bicyclists.

- Lane Departure: A crash involving a vehicle that traveled out of its travel lane and not occurring at an intersection, nor traveling from a median opening or driveway as determined by police officer in the crash report. With this updated definition, lane departure crashes now also include all roadway departure crashes and crashes where:
  - » The first harmful event or prior movement was "crossed the median/centerline;" or
  - » The prior movement was "crossed median into opposing lane;" or
  - » The manner of collision was either "head on," "sideswipe, same direction," or "sideswipe, opposite direction."
- Roadway Departure: A crash involving a vehicle that traveled off the road.

The 2022 "Roadway Departure" definition was updated to match the definition used in the "Roadway Departure Safety Implementation Plan" (DOTD 2020). Single-vehicle crashes involving animals, debris, pedestrians, and pedalcycles that were erroneously included previously are now excluded.

## 2.2 Outreach

Feedback was solicited early in the update process to learn lessons from the existing 2017 SHSP through a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. An email survey and roundtable discussions were conducted to gain a better understanding of perspectives regarding how existing SHSP strategies and processes were being followed and to gain insight on potential opportunities for improvement. Audiences identified for the survey and follow-up discussions included: DOTD staff, FHWA staff, Statewide EA Leaders, Implementation Team members, and Regional Safety Coalition Coordinators.

A Louisiana SHSP Stakeholders survey was also distributed by Louisiana Local Technical Assistance Program to Louisiana Parish Engineers and Supervisors Association (LPESA) and local road agency partners. Over 50 responses were received. Louisiana SHSP Stakeholders Survey results include:

Most prevalent local road safety issues include speeding, distracted driving, impaired driving, and vehicles running off the road.

Improvements that could be useful include intersection control changes, reconstruction of roadways to modify horizontal/vertical curvature, and pavement marking enhancements.

Assistance with potential safety funding opportunities would be most helpful in improving community road safety.

Tribal outreach was also conducted through letters sent to tribes and tribal representatives throughout the state. Regional Safety Coalition Coordinators followed up to answer questions and gain feedback. The letters included a description of the SHSP development process and provided contact information for sharing input and benefits of participating in relation to knowledge and opportunities of funding grants and projects.

#### SWOT ANALYSIS RESULTS

Survey responses pointed out numerous SHSP strengths, as well as some challenges, especially in terms of management and implementation structure. They include:

#### STRENGTHS

- Louisiana is unique to other states because it has deployed a formal business structure to implement and evaluate the SHSP plans and subsequent updates. The business structure includes leadership through a full-time SHSP Manager, a group of dedicated experts who lead the EA Teams, nine Regional Safety Coalitions led by full-time coordinators, and various stakeholders who serve on the teams as well.
- The EA strategies developed in the SHSP are data-driven and evidencebased. Accountability is established through an online reporting tool.

#### **CHALLENGES**

- Limited staffing at all levels was mentioned as a hindrance.
- Need for an updated resource directory for the RSCCs to assist with bringing new members and their partners up to date.
- Law enforcement received repeated attention in the responses as an opportunity. Many stakeholders believe increased law enforcement input, participation, and leadership is needed to increase their involvement in the SHSP process.
- Stakeholders also shared the need for greater collaboration both within and between stakeholder groups involved with SHSP implementation and encouraged increased visibility and active outreach efforts to involve more partners.

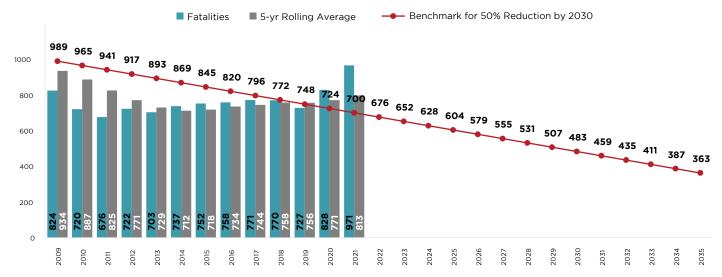
## **2.3 Goals and Performance Measures**

Overall, the EAs, strategies, and tactics are selected and developed to achieve the goal of reducing fatalities and serious injuries by 50% between 2010 and 2030 based on target benchmarks consistent with the Center for Analytics & Research in Transportation Safety's (CARTS) dashboard. The long-term aspirational goal of zero fatalities and serious injuries while traveling on Louisiana roads remains the same.

Fatalities and serious injuries are increasing and not matching the near term or aspirational goal.

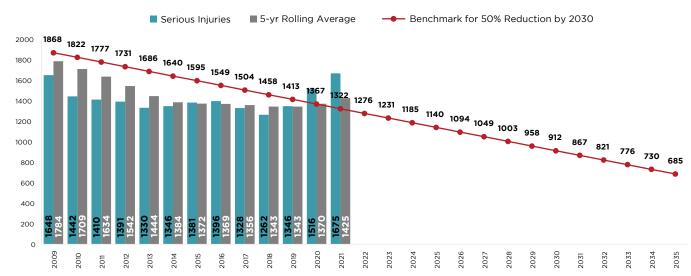
The performance goal of 50% reduction trendline shows that the annual number of fatalities on Louisiana roads has exceeded the target performance in 2020 and 2021. For the most recent three years of 2019, 2020, and 2021, the five-year rolling average of number of fatalities has also been higher than the benchmark goals for those associated years.

Considering serious injuries, the annual number of serious injuries increased above the benchmark for 2020 and 2021. The five-year rolling average exceeded the benchmark performance goal for serious injuries for those years as well, indicating that the severity of crashes is trending upward.



#### **FATALITIES VS BENCHMARK FOR 50% REDUCTION BY 2030**

#### **SERIOUS INJURIES VS BENCHMARK FOR 50% REDUCTION BY 2030**

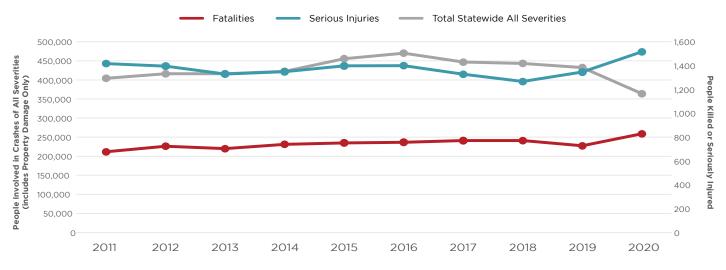


# **Louisiana Crash Trends**



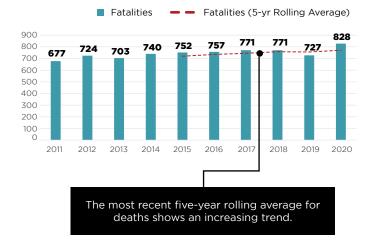
Between 2011 and 2019, there were on average 2,095 fatalities and serious injuries per year. Starting in 2020, fatalities and serious injuries have been increasing. In 2020, there were 828 fatalities and 1,518 serious injuries reported from roadway crashes. Preliminary 2021 data show still worse trends: 971 fatalities and 1,675 serious injuries.

Over the most recent five-year period of 2016 to 2020, the number of fatalities has increased by approximately 14 people per year. The largest spike occurred between 2019 and 2020, during which the increase in fatalities rose by 14% to 828. According to the CARTS summary of crash data between 2016 and 2020, a unique trend occurred in 2020 in which the total number of people involved in roadway crashes of all severities and property damage dropped (to approximately 364,000) due to the COVID-19 pandemic; however, the total number of fatalities and serious injuries increased to 828 and 1,518, respectively.

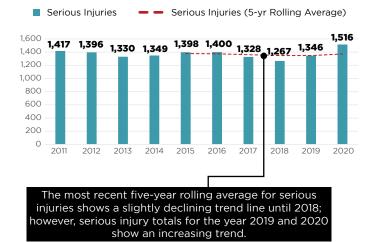


#### **PEOPLE INVOLVED IN CRASHES STATEWIDE (ALL SEVERITIES)**

#### FATALITIES



#### **SERIOUS INJURIES**



#### Who is being seriously injured or killed?

- Based on the most recent five-year crash data between 2016 and 2020, 67% of all injuries and fatalities involve males compared to 33% involving females. This includes drivers and occupants.
- The age range with the highest percentage of crashes resulting in serious injury and fatality is between 25 and 34 years old for both females and males (21% of all fatalities and injuries), followed by ages 15 to 24 years old (18% of all fatalities and serious injuries) and ages 35 to 44 years old (17% of all fatalities and serious injuries).

# Where and how are people being seriously injured or killed?

There are several high priority issues identified to address in this SHSP:

- Of the people injured and killed along roadway segments, 54% were involved in single-vehicle crashes.
- Of the people injured and killed at intersections, 34% were involved in right-angle crashes and 25% were involved in single-vehicle crashes.
- Crashes resulting in serious injury or death most commonly occurred on urban state highways, followed by urban parish highways.
- Almost 70% of all fatalities involved roadway departure crashes, head-on collisions (not at intersections), pedestrians, or bicyclists. These are high priority trends to address in this SHSP.



Overall, nearly 70% of the people seriously injured or killed in crashes were located along roadway segments.

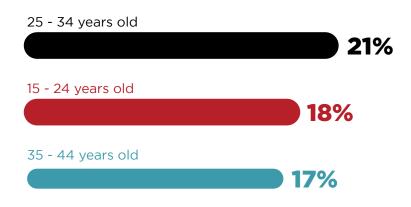


Approximately 30% of serious injuries and fatalities occurred at intersections.



Nearly 60% of all statewide serious injuries and fatalities occurred on two-way undivided highways.

# PERCENTAGE OF SERIOUS INJURY AND DEATH BASED ON AGE RANGE



#### What are the cross-cutting crash issues?

A correlation cluster analysis was conducted to determine relationships between Emphasis Areas. This was done by establishing a correlation matrix based on fatalities and serious injuries and corresponding Emphasis Areas that were contributing factors based on the associated crash reports.

Many crashes fell into multiple EAs. For example, if a driver was alcohol-impaired and unbelted, the injury or fatality associated with the crash would be counted as both "alcohol-related" (Impaired Driving EA) and "no restraint" (Occupant Protection EA). This overlap was documented through an EA correlation analysis. The EA correlation analysis provides a way to identify strong relationships between the EAs – meaning these crash types are likely to occur together and treatments for these crashes should consider the multiple contributing factors. The main relationships are:

- Roadway/lane departure crashes are highly correlated with crashes involving alcohol, drugs, and unrestrained occupants.
- Intersection collisions are closely related to crashes involving older drivers, young drivers, and distracted driving.
- Young driver crashes are highly correlated with lane departure (including roadway departure and head-on crashes), intersections, distracted driving, no restraint, and druginvolved crashes.

These relationships were considered while developing strategies.

#### **SPECIAL RULES**

The FHWA applies several Special Rules to identified states that meet the designated threshold fatality and serious injury requirements based on statewide crash data. The first rule is the High-Risk Rural Roads (HRRR) Special Rule [HRRR Special Rule at 23 U.S.C. 148(g)(1)], which applies to states where the fatality rate on rural roads within the state increases over the most recent twoyear period. If a state qualifies under this rule, then it is obligated to set aside funds for highrisk rural roads. In Louisiana, high-risk rural roads are classified as rural major or minor collector or rural local road on which the crash rate exceeds the statewide average for those functional classifications or roadways. It can also be roadways where traffic volumes are expected to increase, creating a crash rate that exceeds the statewide average. Louisiana did not meet the criteria for the High-Risk Rural Roads Special Rule for 2022.

The second Special Rule is for Older Drivers and Pedestrians [Older Drivers and Pedestrians Special Rule at 23 U.S.C. 148(g) (2)]. Under this rule, if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in the state increases during the most recent two-year period, the state is required to include specific strategies to address the increases in those crash rates in the next SHSP update. Louisiana met the threshold for this Special Rule in 2019 and plans to address the requirements through the integration of older drivers and pedestrian strategies into all of the EAs. Strategies and tactics to address older drivers and pedestrians are designated in the strategies tables for each EA.

In March 2022, Louisiana was notified that the state met non-motorized fatality thresholds for the new FHWA Special Rule for Vulnerable Road Users (VRU) [VRU Special Rule 23 U.S.C. 148(g)(3)]. This Special Rule, based on 2020 data, applies to states where total fatalities of vulnerable road users, also defined as a non-motorists, were not less than 15 percent of total state fatalities in a single year period. In states where the VRU Special Rule applies, the state is required to obligate not less than 15 percent of the amounts apportioned to the state under section 104(b) (3) for the following fiscal year of highway safety improvement projects to address the safety of vulnerable road users.



#### High-Risk Rural Roads HRRR Special Rule at 23 U.S.C. 148(g)(1)

Fatality rate on rural roads increased over the most recent two-year period. Louisiana did not meet the criteria for this Special Rule.



#### **Older Drivers and Pedestrians**

Older Drivers and Pedestrians Special Rule at 23 U.S.C. 148(g)(2)

Fatality and serious injury rates for drivers and pedestrians over the age of 65 increased during the most recent two-year period; Louisiana met the criteria for this Special Rule.



Vulnerable Road Users VRU Special Rule 23 U.S.C. 148(g)(3)

Total fatalities of vulnerable road users were not less than 15 percent of total state fatalities; Louisiana met the criteria for this Special Rule.

# **Emphasis Areas** and Strategies



#### **EMPHASIS AREAS**

The EAs were selected based on reviewing the crash data for common trends, most frequent types of crashes, and correlations among EAs. Based on review and collaboration, the four EAs are:



#### **STRATEGIES**

Strategies were developed from a review of the 2017 SHSP, existing SHSP action plans, FY 2022 Highway Safety Plan (HSP), and peer state SHSPs. Gaps were identified and filled to include emerging ideas. Statewide EA Leaders and Regional Safety Coalition Coordinators provided input and feedback, which was incorporated for subsequent rounds of stakeholder input meetings. In addition, cross-cutting issues and potential solutions were considered and integrated into the strategies for each EA.

Strategies are data-driven, and primary focus was given to strategies that are proven effective.

In some cases, a strategy is related to changes in legislation. Any changes in legislation would not be considered a measurable goal; however, they were included because many times they are necessary for additional countermeasures or enforcement measures to be implemented effectively. A comprehensive list of strategies and associated tactics for each EA can be found in Appendices C through F. Strategies, as well as tactics in the Appendices, are not listed by priority. Each tactic is also assigned a "category" that is consistent with the state's "State Approved Strategy" category list within Action Plans such as: Education, Coordination, Outreach, Operation, and Enforcement. Please note, a strategy is the big picture goal that you are trying to accomplish, while a tactic is the individual step and/or action that needs to be accomplished to get closer to that goal. Tactics are the building blocks of strategies.

# 4.1 Distracted Driving

Distracted or inattentive driving crashes are defined as crashes involving at least one driver or motorcyclist having either a driver condition of "distracted/inattentive" or a driver distraction of "cell phone," "other electronic device," "other inside the vehicle," or "other outside the vehicle" as determined by the police officer.

# In summary, for crashes between 2016 and 2020:

- Distracted and inattentive crashes accounted for nearly one-third of all fatal and serious injury crashes, which occured mostly on state roadways and two-way undivided highways.
- Most distracted driving fatalities and serious injuries did not involve a collision with another vehicle. Where a collision did occur, most were rear-end and angle crashes.
- More than one-third of all distracted driving fatalities and serious injuries occurred at intersections.
- Females, young drivers, commercial motor vehicles, and motorcyclists had a higher-thanaverage chance of being involved in a crash.

More details about distracted driving crash trends can be found in <u>Appendix C</u>.



Distracted driving crashes are closely aligned with crashes involving older drivers, young drivers, lane departure, and intersections.





#### STRATEGIES

As older drivers and pedestrians are often involved in distracted driving crashes, strategies were developed and included to address this trend.

#### Strategy 1

Increase public information, engagement, and education efforts regionally and statewide.

#### Strategy 2

Strengthen laws and public policies to prohibit distracted driving.

#### Strategy 3

Increase distracted driving enforcement.

#### Strategy 4

Reduce distracted driving through infrastructure/operational improvements and utilizing technology.

The Distracted Driving EA strategies and tactics are included in <u>Appendix C</u>.

## 4.2 Impaired Driving

The Impaired Driving EA includes crashes associated with alcohol or other drugs. An alcohol-related crash is defined as a crash involving at least one driver or motorcyclist predicted to have a BAC greater than or equal to 0.02%. A Louisiana-specific regression equation is used to predict alcohol BAC when BAC is pending or unknown. A drug-involved crash is defined as a crash involving a driver or motorcyclist identified by the police officer as either having a condition of drug use (whether impaired or not impaired), being suspected of having used drugs or both alcohol and drugs, or having drugs that were reported. Although these definitions differ from NHTSA requirements, the Louisiana Highway Safety Commission does also monitor impaired driving crashes consistent with NHTSA requirements.

Crash trends and performance measures are listed separately for alcohol-related crashes and other druginvolved crashes in this section. If a crash involved both, then it would be included in both summaries.

#### **Alcohol-related crashes:**

- Alcohol-related crashes contributed to approximately one-third of all fatalities in Louisiana between 2016 and 2020.
- Two-thirds of alcohol-related fatalities and serious injuries were single-vehicle crashes occurring during dark conditions between the hours of 6 PM and 3 AM.
- Males were much more likely to drive impaired, and the highest age concentration of drivers was between 25 and 34 years old (male and female).







Alcohol-related crashes are strongly correlated with roadway departure, lane departure, drugs,

and unrestrained occupants. Drug-involved crashes have been highly correlated with lane departure, roadway departure, and no restraint usage.



#### **Drug-involved crashes:**

- Drug-involved crashes contributed to more than half of all fatalities in Louisiana between 2016 and 2020.
- Approximately one-quarter of druginvolved crashes involved young drivers, and a nearly equal amount involved older drivers.
- Most drug-involved crashes occurred between 3 PM and 3 AM, with the highest peak occurring from 6 PM to 9 PM.
- Most drug-involved serious injuries and fatalities have been highly correlated with males between 25 and 34 years of age.
- Drug-invoved crashes have been highly correlated with lane departure, roadway departure, and no restraint usage.

More details about impaired driving crash trends are in <u>Appendix D</u>.





### STRATEGIES

The Impaired Driving EA strategies include cannibis and prescription drugs because they are identified as emerging issues in Louisiana.

#### Strategy 1

Reduce the number of impaired driving crashes involving drivers under the legal age to drink.

#### Strategy 2

Conduct education and community outreach programs.

#### Strategy 3

Reduce the number of repeat Driving While Intoxicated (DWI) offenders.

#### Strategy 4

Increase the number of high visibility enforcement DWI programs and improve support for enforcement related to DWI patrolling and arrests.

#### Strategy 5

Reduce drugged driving.

#### Strategy 6

Identify, develop, and deploy engineering solutions along corridors found to experience severe crashes related to impaired driving.

Impaired Driving EA strategies and tactics are included in <u>Appendix D</u>.

# 4.3 Occupant Protection

Crashes within the **Occupant Protection** (No Restraint) EA are defined as crashes involving a driver or occupant not using or improperly using their seatbelt.



A "no restraint" person is a driver or

occupant not using or improperly using their seatbelt. This includes child restraints as well.

#### In summary, for crashes between 2016 and 2020:

- Occupant protection crashes made up one-third of all statewide fatalities and 18% of all serious injuryrelated crashes in Louisiana.
- Most fatalities and injuries related to occupant protection were due to drivers not wearing restraint devices.
- Nearly two-thirds of fatalities and serious injuries related to no restraint usage involved a single vehicle.
- Most occurred between 3 PM and 3 AM, with the highest peak occurring from 9 PM to midnight under dark conditions.
- Approximately one-quarter occurred at intersections, while the rest occurred on two-way undivided roadways.
- Males were more likely to avoid restraint use, and similar to impaired drivers, most were between the ages of 25 to 34 years old.

Occupant protection crash trends can be found in Appendix E.

Crashes in which the driver or passengers are not restrained are closely correlated with lane departure/roadway departure, young

drivers, and impaired driving crashes.

No restraint usage is a leading contributing factor for roadway fatalities in passengers under the age of four.

This document, and the information contained herein, is prepared for the purpose of identifying, evaluating, and planning safety improvements on public roads, which may be implemented utilizing federal aid highway funds. This information shall not be subject to discovery or admitted into evidence in a Federal or State court pursuant to 23 U.S.C. 407.



#### **STRATEGIES**

The following provides the strategies related to reducing occupant protection crashes. An effort was made to include a focus

on young drivers as they were shown to have a strong correlation with occupant protection-related crashes.

#### Strategy 1

Increase occupant restraint use rate through sustained enforcement.

#### Strategy 2

Increase public compliance through systems support.

#### Strategy 3

Increase the number of child passenger safety (CPS) and CarFit technicians in the state.

#### Strategy 4

Prioritize efforts geographically and by target populations with low use rates.

#### Strategy 5

Improve marketing, education, and outreach efforts.

#### Strategy 6

Improve occupant restraint use through regulatory and legislative enhancements.

The Occupant Protection EA strategies and tactics are included in Appendix E.



## 4.4 Infrastructure & Operations

The Infrastructure and Operations EA comprises crashes involving lane departure, including roadway departure and head-on collisions, intersections, and crashes between vehicles and non-motorized users, such as pedestrians or bicycles.

#### LANE DEPARTURE

Lane departure crashes are defined as crashes involving a vehicle that traveled out of its travel lane and not occurring at an intersection, nor traveling from a median opening or driveway as determined by police officer in the crash report. Lane departure crashes include all roadway departure crashes and crashes where:

- The first harmful event or prior movement was "crossed the median/centerline;" or
- The prior movement was "crossed median into opposing lane;" or
- The collision manner was either "head on," "sideswipe same direction," or "sideswipe opposite direction."

# Lane departure crash summary for crashes between 2016 and 2020:

- Lane departure crashes contributed to over half of all fatalities in the state between 2016 and 2020.
- Nearly two-thirds involved males and occurred between 3 PM and 3 AM.

#### **ROADWAY DEPARTURE**

Roadway departure crashes are defined as crashes involving a vehicle that traveled off the road.

# Roadway departure crash summary for crashes between 2016 and 2020:

- Roadway departure crashes contributed to 41% of statewide fatalities and almost 90% were single-vehicle crashes.
- Driver characteristics and time-of-day occurrence were similar to that of lane departure crashes.
- Roadway departure crashes involving young drivers resulted in head-on collisions 10% of the time, which is two times higher than the average for all drivers.
- Roadway departure crashes involving older drivers resulted in head-on collisions 10% of the time, two times higher than the average for all drivers.

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Lane departure crashes are closely correlated with drug-involved and alcohol-related crashes, occupant protection, and roadway departure.

Roadway departure crashes are highly correlated with lane departure, drug-involved and alcohol-related crashes, and occupant protection.



Intersection-involved crashes had the highest correlation with distracted driving, young drivers, and older drivers.



Pedestrian crashes are correlated with intersections and alcoholrelated crashes.



Bicycle crashes are highly correlated with intersections and older driver-related crashes.

#### **INTERSECTIONS**

Intersection crashes are defined as crashes occurring at an intersection as determined by the police officer in the crash report.

# Intersection crash summary for crashes between 2016 and 2020:

- Intersection-related crashes contributed to one-third of all fatalities and serious injuries in the state between 2016 and 2020.
- Most intersection-related fatalities and injury crashes occurred between noon and midnight, with the highest peak occurring between 3 PM and 6 PM and during daylight conditions.

#### **PEDESTRIANS & BICYCLES**

Pedestrian crashes are defined as crashes involving a person identified by the police officer as a "pedestrian." Bicycle crashes are defined as crashes involving a non-motorized vehicle propelled by pedaling (bicycle, tricycle, unicycle, pedal car) and defined by the police officer as "Pedalcycle."

# Pedestrian and bicycle crash summary for crashes between 2016 and 2020:

- Pedestrian crashes involving young drivers occurred more commonly later in the night between 9 PM and midnight, while pedestrian crashes involving older drivers were found to occur earlier in the day between noon and 3 PM.
- Male drivers between 45 to 54 years old were more likely to be involved in pedestrianrelated crashes than any other demographic. Pedestrian crashes showed the most overlap with intersections and alcohol-related crashes.
- Bicycle-involved crashes contributed to 3.5% of all fatalities and serious injuries between 2016 and 2020.
- Bicycle crashes most commonly involved angle and rear-end collisions and males between 55 and 64 years old.
- Pedestrian-involved crashes contributed to 14.2% of all fatalities and serious injuries between 2016 and 2020.

More crash facts related to the Infrastructure & Operations EA can be found in <u>Appendix F</u>.

This document, and the information contained herein, is prepared for the purpose of identifying, evaluating, and planning safety improvements on public roads, which may be implemented utilizing federal aid highway funds. This information shall not be subject to discovery or admitted into evidence in a Federal or State court pursuant to 23 U.S.C. 407.



#### STRATEGIES

The following provides the strategies related to reducing infrastructure and operations crashes. Effort was made to focus on older and young

drivers as they were shown to have a strong correlation with non-motorized and roadway departure crashes.

#### Strategy 1

Identify or develop sources of information that assist with the selection of safety projects and provide outreach and training to all SHSP/HSIP stakeholders.

#### Strategy 2

Improve data collection, quality, analysis, mapping, and reporting for all public roads and educate users on how to access the information for evaluation, project selection, and prioritization.

#### Strategy 3

Standardize the consideration of substantive safety of non-motorized users within the project development process for all projects.

#### Strategy 4

Increase statewide education and awareness via social media and other forms of communication.

#### Strategy 5

Reduce non-motorized user fatalities and serious injuries on all public roads through targeted investments and outreach.

#### Strategy 6

Reduce crashes at intersections for drivers, pedestrians, and bicyclists.

#### Strategy 7

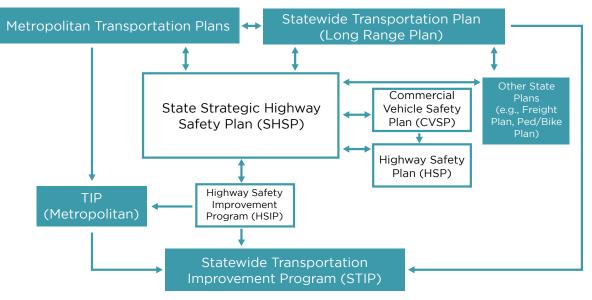
Reduce the number of fatalities and serious injuries related to vehicles leaving the roadway.

The Infrastructure and Operations EA strategies and tactics are included in <u>Appendix F</u>. Tactics are informed by the <u>FHWA's proven safety countermeasures</u>.

# Implementation and Evaluation



## **5.1 Implementation**



Source: FHWA, revised by Cambridge Systematics.

The SHSP is established through cohesive coordination between statewide transportation plans, the HSP, and the Commercial Vehicle Safety Plan (CVSP). Coordination between state plans is vital for implementation. For example, the impaired driving strategies in the SHSP and subsequent action plans have been adopted by LHSC for their Impaired Driving Plan for NHTSA. The SHSP establishes the goals and objectives for the HSP and CVSP to work from. Through the Regional Safety Coalitions, the SHSP is also coordinated with Metropolitan Transportation Plans, local road safety plans, and tribal safety and planning documents.



Louisiana has a designated Implementation Team that meets regularly to update and track progress of strategies and tactics outlined in the SHSP through the evaluation of action plans. Several support groups that aid in implementation include CARTS and law enforcement. Additional support for local road safety plans is provided through the Local Technical Assistance Program (LTAP) which provides guidelines, training, and technical assistance to local public agencies (LPAs) and the Regional Safety Coalitions.

Action plans are developed on an annual basis by the SHSP Manager, EA Teams, and Regional Safety Coalitions. The action plans are vital in carrying out strategies and tactics in a tangible, measurable way so the state can determine a timeline for implementing countermeasures, assign responsibilities, and readily assess completion rates and effectiveness. As the Implementation Team developed the 2022 SHSP, two concepts emerged that could be explored as part of on-going SHSP implementation: Clustering/Correlation of the Emphasis Areas and the Safe System approach.

#### Clustering/Correlation of the Emphasis Areas:

While not causal relationships, the clustering/ correlation analysis showed the following are commonly seen together:

- Distracted driving crashes are closely aligned with crashes involving older drivers, young drivers, and intersections.
- Alcohol-related crashes are strongly correlated with roadway departure, lane departure, drugs, and unrestrained occupants.
- Drug-involved crashes have been highly correlated with lane departure, roadway departure, and no restraint usage.
- A significant overlap exists between the Occupant Protection EA and other contributing factors, such as lane departure, roadway departure, young drivers, and impaired driving due to alcohol and/or drugs.
- Lane departure crashes are closely correlated with drug-involved and alcohol-related crashes, occupant protection, and roadway departure.
- Roadway departure crashes are highly correlated with lane departure, drug-involved and alcohol-related crashes and occupant protection.
- Intersection-involved crashes had the highest correlation with distracted driving, young drivers, and older drivers.
- Pedestrian crashes are correlated with intersections and alcohol-related crashes.
- Bicycle crashes are highly correlated with intersections and older driver-related crashes.

As the SHSP is implemented and action plans are developed, these relationships will be used to provide ideas for actions for enforcement, education, marketing, or engineering improvements. Going forward, Louisiana will continue to evaluate and evolve the implementation structure to develop multidisciplinary and coordinated EA Teams in an effort to address identified crash scenarios in a connected, comprehensive manner rather than through individual components. Safe System Approach: FHWA has endorsed the Safe System approach as a framework for developing a road system to reduce fatalities and serious injuries for all modes of transportation. The Safe System approach acknowledges that humans make mistakes and there are limits to the amount of impact a human body can tolerate. Elements of the Safe System approach are safe road users, safe vehicles, safe speeds, safe roads, and post-crash care. Countermeasures, programs, and policies within these elements are designed for redundancy and to limit the impacts on the human body. The Safe System approach is multidisciplinary, proactive, and recognizes a shared responsibility for transportation safety. The EA Teams will consider and implement strategies and tactics in support of the Safe System approach.

#### SAFE SYSTEM

The future of traffic safety coincides with the Safe System approach, a zero-death initiative adopted by the U.S. Department of Transportation (U.S. DOT) and outlined by FHWA. The Safe System approach takes a proactive stance on reducing fatal and serious injury crashes, specifically while embracing road-user behavior and tailoring countermeasures to identified needs rather than to a blanket approach. The U.S. DOT states that the Safe System approach incorporates the following principles:

#### **Death and Serious Injuries are Unacceptable**

Prioritizes the elimination of crashes that result in death and serious injuries.

#### **Humans Make Mistakes**

People will inevitably make mistakes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes to reduce severity when crashes occur.

#### Humans Are Vulnerable

It is critical to design and operate a transportation system that is human-centric and accommodates physical limitations and vulnerabilities of the human body.

#### **Responsibility is Shared**

All stakeholders and users are vital to preventing fatalities and serious injuries on roadways.

#### Safety is Proactive

Proactive tools should be used to identify and address safety issues rather than waiting for crashes to occur and reacting afterwards.

#### **Redundancy is Crucial**

All components of the transportation system should be strengthened to reduce risk, that way if one part fails the other parts are still in place to protect people.

## **5.2 Evaluation**

	IMPAIRED DRIVING	2020	2021	2022
<b>DEOTIMATION</b>	ACTION PLAN ATTAINMENT	99.73 🔨	100.00	
DESTINATION VICERO DEATHS	ACTION PLAN RATING	*** ^	****	WORK IN PROGRESS
	SERIOUS INJURY GOAL	Met (-9.67) 💊	Met (-12.59)	
	FATAL GOAL	Met (-5.23) 🔨	🗡 NOT Met (27.96)	

Evaluation is key to determining the most effective path for achieving the statewide goal of reducing fatalities and serious injuries by half in 2030. This critical step provides important feedback to measure if the implemented actions result in the desired outcomes. The state is using a Performance Action Compliance Tracking (PACT) system to help Regional Safety Coalition Coordinators and Statewide Emphasis Area Teams track and evaluate performance and overlay actions against the number of fatalities and serious injuries. PACT is a connected, collaborative, and live platform, which is updated regularly by all Regional Safety Coalition Coordinators and the SHSP Manager.

This system comprises multiple moving, interactive, and interdependent parts that come together to provide a way to continuously monitor and report progress and level of achievement, using pre-selected performance measures. Progress monitoring is a continuous process, and this platform, at any given time, provides a live, current, and to-date status snapshot of where we have been, where we are, and where we are going.

Collaborative evaluations are formally conducted by the Regional Safety Coalition Coordinators, Statewide Emphasis Area Leaders and the SHSP Manager on a quarterly and annual basis. Every year, the Regional Safety Coalition Coordinators and the state rate every action step based on feedback from stakeholders, personal experience, observations, and public insight. During quarterly

Example Results from PACT System

reviews, the team evaluates actions and looks for opportunities to improve implementation by analyzing feedback that captures hurdles as well as achievements. Both are essential for reducing fatalities and serious injuries. This evaluation and transparency provides accountability for all to continue working on the annual action plans.

During the annual review, the teams consider which actions should be Simplified, Amplified, Negotiated, and Eliminated (SANE). This part of the platform is a tool that provides the framework for the SHSP program to be continually evaluated and modified to work toward the goal of zero deaths and serious injuries.

After discussing the ratings, decisions are made at a statewide level as to how to proceed based on data, feedback, and-most recently addedcircumstances that fall outside of our control, such as natural disasters and pandemics. In addition, annually when the crash data from the previous year is complete, Louisiana convenes a statewide presentation and discussion of the crash data including overall numbers, trends, and performance relative to Emphasis Areas and overall goals. This presents an additional opportunity for the SHSP program to consider the relationship between actions and fatality and serious injury trends. We call this process the Annual Impact Overlay Analysis, and it has proven to be an invaluable piece of our evaluation process by providing a quantifiable program effectiveness metric.

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## **SHSP Safety Partners**

Developing and implementing the SHSP would not be possible without the commitment and expertise of our valued partners.

#### SHSP EXECUTIVE COMMITTEE

Louisiana Department of Education Louisiana Department of Health Louisiana Department of Transportation and Development Louisiana Highway Safety Commission Louisiana State Police

#### **FEDERAL PARTNERS**

Federal Highway Administration Federal Motor Carrier Safety Administration National Highway Traffic Safety Administration

#### SHSP IMPLEMENTATION TEAM AGENCIES

Acadiana Regional Transportation Safety Coalition Capital Regional Transportation Safety Coalition CenLa Highway Safety Coalition Center for Analytics & Research in Transportation Safety Federal Highway Administration Federal Motor Carrier Safety Administration Jefferson Parish District Attorney's Office Louisiana Chiefs Association of Police Louisiana Department of Health Louisiana District Attorneys Association Louisiana Emergency Response Network Louisiana Highway Safety Commission Louisiana Local Technical Assistance Program Louisiana Operation Lifesaver Louisiana Sheriff's Association Louisiana State Police Louisiana State Police Crime Laboratory New Orleans Regional Traffic Safety Coalition Northeast Louisiana Highway Safety Partnership North Shore Regional Safety Coalition Northwest Louisiana Transportation Safety Coalition South Central Regional Safety Coalition Southwest Louisiana Regional Safety Coalition University Medical Center To actively participate in working toward the Louisiana SHSP mission and vision, contact Autumn Goodfellow-Thompson (autumn.goodfellow-thompson@la.gov), the SHSP Manager, or contact a Regional Safety Coalition via the Destination Zero Deaths website: destinationzerodeaths.com/Home/ LouisianaSafetyCoalitions

#### **STATEWIDE EMPHASIS AREA LEADERS**

JESSICA BEDWELL LHSC/Statewide Distracted Driving Team Leader

**CATHERINE CHILDERS** LHSC/Statewide Impaired Driving Team Leader

KARLA COURTADE DOTD/Statewide Infrastructure and Operations Team Leader

**DORTHA CUMMINS** LHSC/Statewide Occupant Protection Team Leader

**NORMA DUBOIS** Jefferson Parish District Attorney's Association/ Statewide Impaired Driving Team Leader

**BRIDGET GARDNER** University Medical Center/Statewide Young Drivers Team Leader

**THOMAS GOSSEN** LSP/Statewide Occupant Protection Team Leader

**TREY JESCLARD** DOTD/Statewide Infrastructure and Operations Team Leader

**MELISSA MATEY** LSP/Statewide Occupant Protection Team Leader

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**RACHEL SMITH** Louisiana District Attorney's Association/Statewide Impaired Driving Team Leader

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#### SHSP MANAGER

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#### SHSP OUTREACH

ADRIANE MCRAE DOTD/Highway Safety Administrator

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#### REGIONAL SAFETY COALITION COORDINATORS

AMBER ASHWORTH Southwest Louisiana Regional Safety Coalition

**SHELLY BARRETT** Northwest Louisiana Transportation Safety Coalition

**RON CZAJKOWSKI** Acadiana Regional Transportation Safety Coalition

**MELISSA GUILBEAU** New Orleans Regional Traffic Safety Coalition

**APRIL HIGGINS** North Shore Regional Safety Coalition

**DESTINY KUNEFKE** CenLA Highway Safety Coalition

**BRIA LEE-HICKS** Capital Regional Transportation Safety Coalition

SUSAN MITCHELL Northeast Louisiana Highway Safety Partnership

**CASSIE PARKER** South Central Regional Safety Coalition

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#### SHSP LEADERSHIP

# Appendix

# **FHWA SHSP Process Approval Checklist**

The following provides a tabular summary of the outreach and activities conducted as part of the 2022 Strategic Highway Safety Plan update. The table shows each outreach/engagement activity and technical analysis conducted and relates the activity to the FHWA checklist area.

#### CHRONOLOGY OF SHSP ACTIVITIES, ANALYSES, AND RELATION TO FHWA CHECKLIST REQUIREMENTS

	-		vity to the FHWA checklist area. <b>TO FHWA CHECKLIST REQUIREMENTS</b>	Consultar:	uon-	Performance	Jement tidiscinu:	Implement Approach	Evaluation	Special -
Activity	Date	Attendees	Objective	Log	Data	Man	Muland	lqm <sup>1</sup>	Eval	Spe
Survey – SHSP strategies, process, and SWOT analysis	September 2021	Statewide EA Leaders and Regional Safety Coalition Coordinators	Identified opportunities and gaps in SHSP development and implementation	x			x	х		
Roundtable Discussion - SHSP strategies, process, and SWOT analysis	September 2021	Statewide EA Leaders and Regional Safety Coalition Coordinators	Identified opportunities and gaps in SHSP development and implementation	x			x	x		
Peer State SHSP Review/ Best Practices	October 2021	Technical Memo Submitted to DOTD	Reviewed SHSPs from other states. Identified concepts, analyses, or strategies to consider in the LA SHSP		х	х	х	х	х	х
Data compilation, data definitions review and update, data analysis	Fall 2021	DOTD, CARTS, Statewide EA Leaders, Highway Safety Commission	Reviewed and updated data definitions prior to conducting data analysis, verified data assumptions, conducted data analysis to show trends	x	x		x			х
Round 1 Outreach	October 21, 2021	Implementation Team	Introduced project, reviewed results of survey and roundtable discussion, summarized preliminary data analysis. Identified considerations for additional engagement and future SHSP implementation.	x	x		x			
Round 2 Outreach	December 8, 2021	Implementation Team	Reviewed Data Analysis, provided preliminary EA recommendations, discussed optional EAs, planned follow-up meeting for discussion, and recommended EAs	x	x		x			x
Round 2 Outreach Follow-Up Discussion	December 16, 2021	Implementation Team	Finalized EAs recommendations, began discussion of performance measures and goals	x	x	x	х	х		x
Highway Safety Commission Briefing	December 28, 2021	Louisiana Highway Safety Commission	Performance measures	x	x	x	х	х		
EA Team Lead Meetings	February 7-21, 2022	Statewide EA Leaders	Review and discuss preliminary strategies per EA				х	х		
Round 3 Outreach	March 3, 2022	Implementation Team	Review and discuss crash trends, discuss and begin writing EA strategies and tactics		x	x	х	х		х
Finalize Data Definitions	March 3, 2022	DOTD, CARTS, Statewide EA Leaders	Finalize data definitions for Impaired Driving EA and roadway departure		х		х			
Round 4 Outreach	April 20, 2022	Implementation Team	Continue refining draft strategies for Occupant Protection EA and Distracted Driving EA				х	х	х	х
Round 4 Outreach - Continued	Various	Implementation Team	Continue refining draft strategies and tactics for Impaired Driving EA and Infrastructure and Operations EA				х	x	x	х
SHSP Plan Review	July 2022	Implementation Team	Received feedback on draft plan	х	х		х	х		х
DOTD Secretary Meeting	July 2022	Executives on the Executive Committee	Review draft plan, discuss endorsement and implementation activities	x	x	х	х	х	х	х
Executive Committee Meeting	July 2022	Executive Committee	Review plan and kickoff implementation	x	x	х	х	х	х	х
		Ad Hoc	Activities							
Louisiana Parish Engineers and Supervisors Association Survey (Including two tribes)	April 15-27, 2022	LTAP Contact List, RSCC Stakeholders Contact List	Understand perceptions of local safety issues, data and training needs, SHSP process and resources.	x	x		x	х		
Regional Safety Coalition Coordinators Meeting	May 18, 2022	Regional Safety Coalition Coordinators	Discuss strategies, implementation opportunities and barriers, additional outreach activities	x	х	x	х	х		x
Regional Safety Coalitions Marketing Support	Ongoing after July 2022	Regional Safety Coalitions	Provide information and support on safety message targeting	x	x			x	x	
Tribal Nation Outreach	June 2022	Mailed Tribal Outreach Packet to four federally-recognized tribes and 11 state-recognized tribes.	SHSP overview and ways to participate	x			x			

# Appendix

# **Distracted Driving (DD) Crash Trends and Strategies**

In Louisiana, from 2016-2020, 3,161 fatalities and serious injuries were distracted driving-related. Distracted driving-related crashes had a high correlation with young drivers (34%) and intersections (37%). They also happened more frequently than average around the times of noon to 6PM.

Note: Data summaries presented in this fact sheet include Fatal (K) and Serious Injury (A) crashes only.

22% of fatalities and 34% of serious injuries between 2016-2020

in Louisiana involved distracted drivers.



of all people injured in DD crashes were men. 21% of all people injured in DD crashes were in the age group of 25-34.

AGES

25-34

non-intersection-related

63%



intersection-related

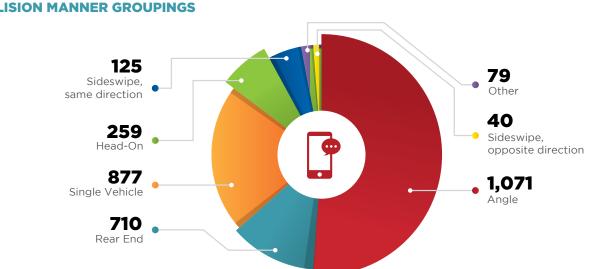


77%

of all DD-related K+A injuries occurred in an urban setting, higher than the statewide average.

73%

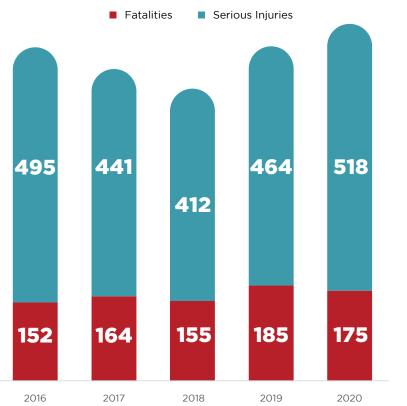
of all Louisiana K+A injuries occured in an urban setting.



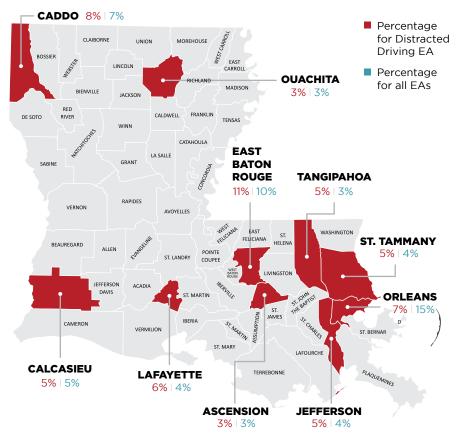
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#### **COLLISION MANNER GROUPINGS**

#### DISTRACTED DRIVING FATAL AND SERIOUS INJURIES



# PARISHES WITH HIGHEST PERCENTAGE OF FATALITIES AND INJURIES RELATED TO DISTRACTED DRIVING



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#### OVERLAPPING EMPHASIS AREA

Overlapping Emphasis Area percentages signify the number of people killed or injured categorized as distracted driving-related in addition to other EAs.



# **Distracted Driving Strategies and Tactics**

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TACTICS	OVERLAPPING EA	CATEGORY
A Support and promote participation in one distracted driving Public Service Announcement (PSA) contest in each region, hosted at the state level, to increase awareness of the effects of distracted driving.		
<b>B</b> Support RSCCs in educating local organizations and companies on the effects of distracted driving and on the importance and benefits of a cell phone policy by providing a standardized presentation.		1
<b>C</b> RSCCs collaboratively create traffic education materials for schools (K-12) and higher education facilities through the development of a DZD lesson plan template. Implement the DZD Distracted Driving lesson plan to a minimum of one high school and/or driving school in all nine regions.	15-24 YEARS	
Develop and distribute statewide safety-related data to promote awareness using social media platforms on the effects and statistics of distracted driving.		
E Support training, educational resources, and engagement targeted at underserved populations. Contact relevant organizations to increase understanding of distracted driving dangers.		
Conduct annual statewide attitudinal survey and/or observational surveys on distracted driving attitudes and behaviors.		🔎 📬
<b>G</b> In an effort to identify overrepresented demographics of those in fatal and serious injury crashes as a result of distracted driving, RSCCs will evaluate hot spot maps and regional data, select overrepresented demographics, and implement initiatives to address opportunities for increasing equity in traffic safety. (RSCCs will use 2016-2020 SHSP Dashboard Crash Data and CARTS 2015-2019 Hot Spot Maps).	15-24 YEARS YEARS	¢
Conduct an observation/education compliance event related to seat belt or distracted driving on high school and/or college campuses followed by a re-observation one week post-young driver education messaging.	15-24 YEARS	



Strengthen laws and public policies to prohibit distracted driving.

**OVERLAPPING EA** 

CATEGORY

#### TACTICS

- A Promote a "hands-free" cell phone law to legislators to strengthen cell phone laws. Steps to garner support and pass the law and include:
  - Conduct public education campaigns to inform the public about the benefits of a hands-free law.
  - Administer public opinion surveys to assess current levels of support for a hands-free law.
  - Develop summary briefing and talking points on the benefits of a hands-free law and distribute to elected and appointed officials and the media.
- **B** Coordination between agencies to work together in developing a plan of action.

opportunities appropriately from there.

## C STRATEGY

Increase distracted driving enforcement.

ТАС	TICS	OVERLAPPING EA	CATEGORY
A	Conduct high visibility enforcement campaigns coordinated with media partners. Evaluate performance and tailor implementation of future campaigns.		
В	Support RSCCs in identifying and securing Law Enforcement Agencies (LEAs) to commit to a one-week Back to School "B2S" distracted driving school zone enforcement campaign by providing a standardized campaign description.		🛋 🕄 🏹
С	Review the enforcement through judicial process to identify where support for distracted driving is lost. Target education		1

#### **DISTRACTED DRIVING STRATEGIES & TACTICS CONT.**

STRATEGY

-

Reduce distracted driving through infrastructure/operational improvements and by utilizing technology.

ТАС	TICS	OVERLAPPING EA	CATEGORY
A	RSCCs will support and advocate for infrastructure projects which may mitigate crash frequency or severity associated with distracted driving.		¢
В	Encourage the use of technology, such as apps, to prevent the use of a cell phone in a moving vehicle. For example, the You in the Driver Seat app provides incentive points for driving safely and without distractions, which then allows the driver to redeem points for fast food or other rewards.	15-24 YEARS	
С	Work with insurance and vehicle manufacturing companies to research existing distracted driving programs utilizing technology or infrastructure and/or develop and test a pilot program in Louisiana.	15-24 YEARS	1.
D	Identify high-risk locations for severe crashes through systemic network screening related to distracted driving. Target these locations for developing Safety Performance Functions (SPFs) and implementing systemic mitigation countermeasures, such as edge line, centerline and transverse rumble strips, wider and higher visibility striping, dynamic curve warning systems, wrong way driving warning systems, and lighting.		o <sup>¢</sup> ⊥

## Appendix

### **Impaired Driving (ID) Crash Trends and Strategies**

In Louisiana, from 2016-2020, 4,350 fatalities and serious injuries were impaired driving-related. Impaired driving-related crashes had a high correlation with young drivers (26%) and intersections (23%). They also happened more frequently than average around the times of 9PM - 3AM.

Note: Data summaries presented in this fact sheet include Fatal (K) and Serious Injury (A) crashes only.

### 69% of fatalities and 25% of serious injuries between 2016-2020

in Louisiana involved impaired driving.

#### ALCOHOL-RELATED

2,681 fatalities and serious injuries (25% for EA)

## 34% of fatalities & 20% of serious injuries

between 2016 and 2020 in Louisiana involved alcohol.

The percentage of people between ages 21 and 54 involved in fatal and severe alcohol-related crashes is **HIGHER** than the statewide average.

Specifically, people between the ages of 25-34 were mostly likely to be involved in drug-related crashes resulting in fatality or serious injury, as that age group was **4.3% higher** than the statewide average.

#### **DRUG-INVOLVED**

2,737 fatalities and serious injuries (26% for EA)

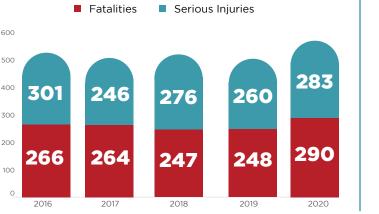
#### 55% of fatalities & 9% of serious injuries

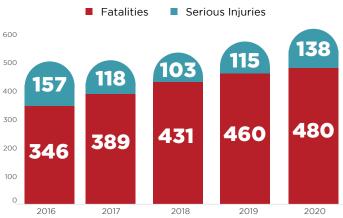
between 2016 and 2020 in Louisiana involved drugs.

The percentage of people between ages 21 and 54 involved in fatal and severe drug-involved crashes is **HIGHER** than the statewide average.

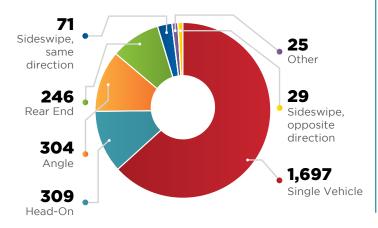
Specifically, people between the ages of 25-34 were mostly likely to be involved in drug-related crashes resulting in fatality or serious injury, as that age group was **2.3% higher** than the statewide average.

The percentage of drug-related fatalities and injuries that occurred on rural two-lane roadways and urban two-lane roadways were nearly the same at **32%**.

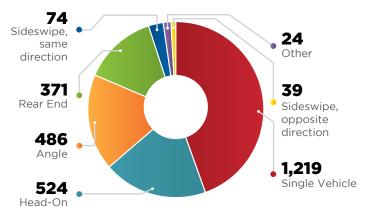




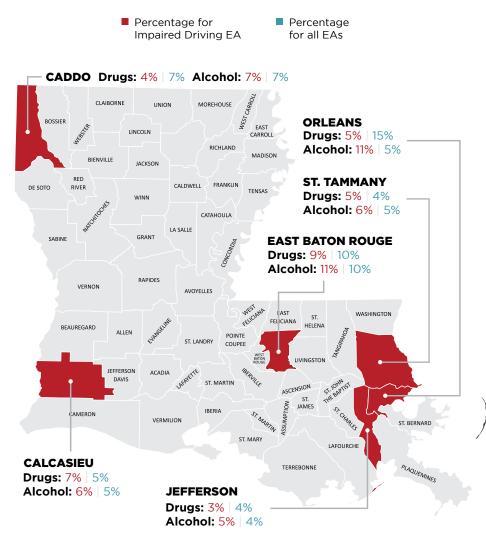
#### ALCOHOL-RELATED COLLISION MANNER GROUPINGS



#### DRUG-INVOLVED COLLISION MANNER GROUPINGS



## PARISHES WITH HIGHEST PERCENTAGE OF FATALITIES AND INJURIES RELATED TO IMPAIRED DRIVING



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#### OVERLAPPING EMPHASIS AREAS

Overlapping Emphasis Area percentages signify the number of people killed or injured categorized as alcoholrelated or drug-involved in addition to other EAs.

#### DRUG-INVOLVED DRIVING

- **39%** Occupant Protection
- 63% Lane Departure
- **28%** Young Drivers
- **39%** Alcohol-Related
- **16%** Older Drivers

#### ALCOHOL-RELATED DRIVING

- **36%** Occupant Protection
- 64% Lane Departure
- 22% Young Drivers
- 40% Alcohol-Related
- 7% Older Drivers

	ND		Emphasi	is Areas			Categorie	95			
$\bigcirc$	15-24 YEARS	65+ YEARS	•					1		o <sup>¢</sup>	
n Progress	s Young Drivers	Older Drivers	Distracted Driving	Impaired Driving	Occupant Protection	Infrastructure & Operations	Education	Coordination	Outreach	Operation E	Inforceme
Ъ			Reduce	the nur	nber of i	impaired o	drivina c	rashes			
STRAT	ſEGY					the legal					
ΤΑCΤΙΟ	cs						OVER	LAPPING E	A	CATEGOR	Y
<b>t</b>		respons	ible alcoh		ars, and eve to mitigate		15- YEA	247 65+ RS YEARS	لہ		
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t g a	hrough me groups. Use appropriate	edia cam e crash d e messag	paigns tar ata analys jing. Use fi	geting issu is and mai ull range o	rket researd f print, digi	red driving h-risk driver ch to develop ital, broadcast ublic awarenes		15-24 YEARS			Ų
	Promote Ju ocal law er				forcement	(JUDE) with		<b>15-24</b> YEARS		8	
E	Close the lo					le under the the Underage					

STRATEGY

cannabis).

or other drugs.

Conduct education and community outreach programs.

Develop and distribute standardized annual impaired driving

messages regarding prescription drug use (including medical

Create safer communities by promoting transportation choices

that encourage alternatives to driving when impaired by alcohol

Use data analysis to identify locations and demographic groups

with high instances of impaired driving to support the national "Drive Sober or Get Pulled Over" campaign with targeted

overtime enforcement and paid media outreach.

media campaign scheduler to RSCCs. Include targeted awareness

#### TACTICS

Α

В

С

**OVERLAPPING EA** 

CATEGORY





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0<sup>0</sup> 🗢 🖸 D-3

### IMPAIRED DRIVING STRATEGIES & TACTICS CONT.

materials to combat impaired driving and underage drinking, and provide paid media outreach for state-planned impaired driving education. Include messaging related to alcohol and all other

#### TACTICS

D

Ε

#### **OVERLAPPING EA**







Develop and promote Safe Ride services (free taxi or Uber/Lyft coupon or shuttle service or public transit) through grant and participating bars.

Produce and distribute public information and education



drug use.

#### Reduce the number of repeat Driving While Intoxicated (DWI) offenders.

ТАС	TICS	OVERLAPPING EA	CATEGORY
Α	Increase support of ignition interlock laws by providing ignition interlock resource information to probation officers and judges not previously educated by the coalitions.		
В	Support legislation that mandates screening for substance use disorder and treatment when indicated for all DWI offenders.		1
С	Support expansion and funding of DWI courts.		1
D	Establish a DWI adjudication tracking system or database so law enforcement, judges, and prosecutors can have access to case history from arrest through disposition, including certified convictions when possible.		o

# STRATEGY

Increase the number of high visibility enforcement DWI programs and improve support for enforcement related to DWI patrolling and arrests.

ТАС	TICS	OVERLAPPING EA	CATEGORY
A	Conduct law enforcement saturation patrols.		5
В	Conduct sobriety checkpoints.		3
С	Provide sustained enforcement of statutes addressing impaired driving.		8
D	Maintain and streamline the electronic DWI processing system to reduce the time needed to process a DWI arrest.		o
E	Reduce impaired driving by supporting the RSCCs in surveying officers' training needs in Standardized Field Sobriety Testing (SFST) Certification and/or refresher, Drug Recognition Expert (DRE), Advanced Roadside Impaired Driving Enforcement (ARIDE), Courtroom Testimony, Legal Update, DWI Hot Topics, Search and Seizure, and others.		↓ D-4



#### Reduce drugged driving.

TACTICS		OVERLAPPING EA	CATEGORY
A Reduce drugged driving by supporting officers to attend ARIDE training.	the RSCCs in recruiting		1.2
<b>B</b> Provide DRE training to revitalize the DF SFST Instructor and SFST Training Field			
C Support the expansion of search warran enforcement.	t blood draws for DWI		o <sup>o</sup> 🕹
Conduct prosecutor, law enforcement, a programs led by the Judicial Outreach L Traffic Safety Resource Prosecutor (TSR	iaison (JOL) or the		1
Educate legislators about drug-impaired	l driving.		
Review current laws and support legisla to incorporate national best practices re		15-24 YEARS	1
<b>G</b> Evaluate potential technology for impair	ed driving prevention.		<b>o</b> <sup>o</sup>
Support pilot projects related to oral flu enforcement phlebotomy.	id testing and law		<b>8</b> 🖓

STRATEGY

Identify, develop, and deploy engineering solutions along corridors found to experience severe crashes related to impaired driving.

#### TACTICS

- A Identify, develop, and deploy engineering solutions and best practices to reduce potential impacts (e.g., wrong way driving, lane departure, and intersection crashes) of impaired driving.
- **B** Conduct safety investigations in geographic areas or along corridors where impaired driving is a factor and consider engineering solutions to support enforcement and education strategies.
- C Improve data collection, data analysis, mapping, and reporting of impaired driving crashes and educate users (e.g., law enforcement, Regional Safety Coalition Coordinators, parish engineers) on how to access the data and information.

est ving, ing.	o
corridors	¢°⊥
rtina	

**OVERLAPPING EA** 

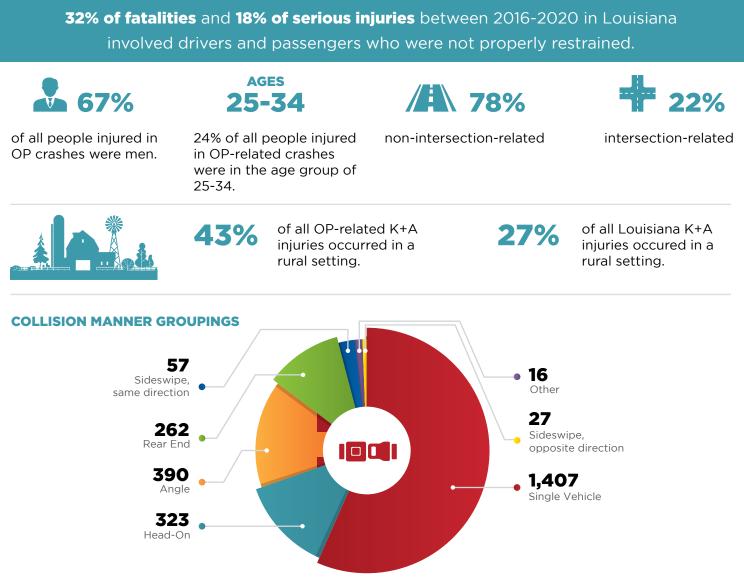
CATEGORY

# Appendix

### **Occupant Protection (OP) Crash Trends and Strategies**

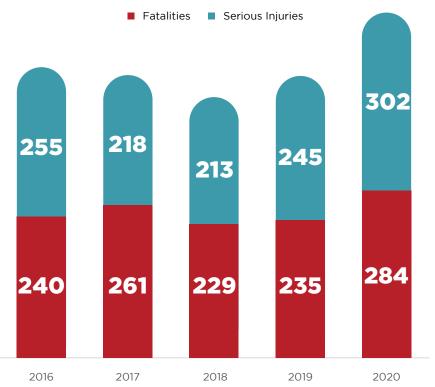
In Louisiana, from 2016-2020, a total of 2,482 crashes were occupant protection-related. Two out of every three occupant protection fatalities and serious injuries involved men. Occupant protection fatalities and serious injuries had a high correlation with impaired driving: 43% involved drugs and 39% involved alcohol. 43% of all occupant protection serious injuries and fatalities occurred in a rural setting, compared to 27% of all statewide crashes.

Note: Data summaries presented in this fact sheet include Fatal (K) and Serious Injury (A) crashes only.

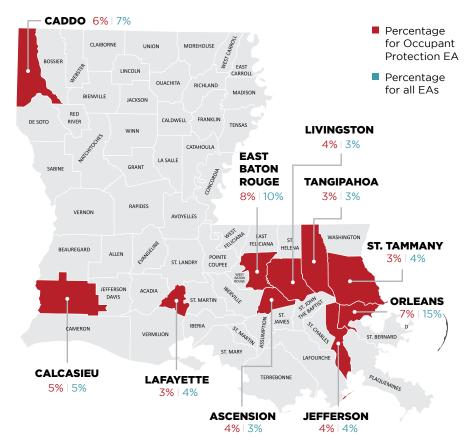


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#### **OCCUPANT PROTECTION FATAL AND SERIOUS INJURIES**



## PARISHES WITH HIGHEST PERCENTAGE OF FATALITIES AND INJURIES RELATED TO OCCUPANT PROTECTION



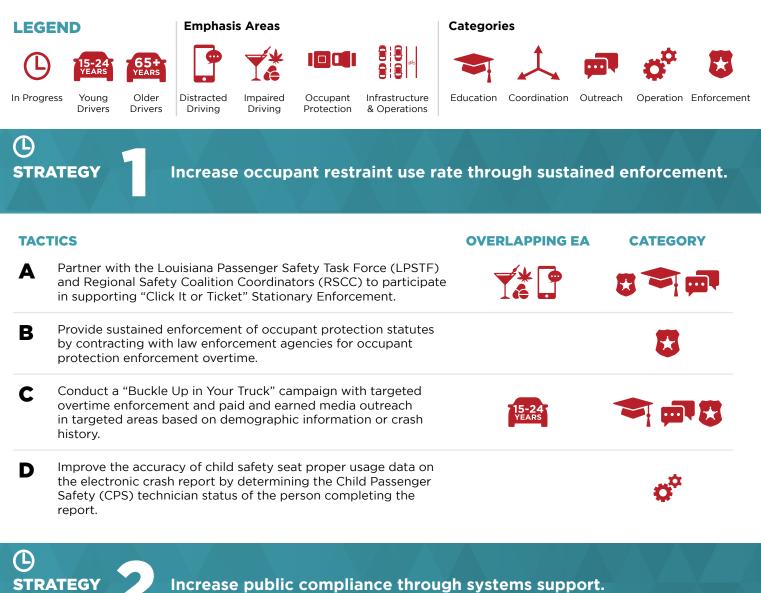
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#### OVERLAPPING EMPHASIS AREA

Overlapping Emphasis Area percentages signify the number people killed or injured categorized as occupant protectionrelated in addition to other EAs.

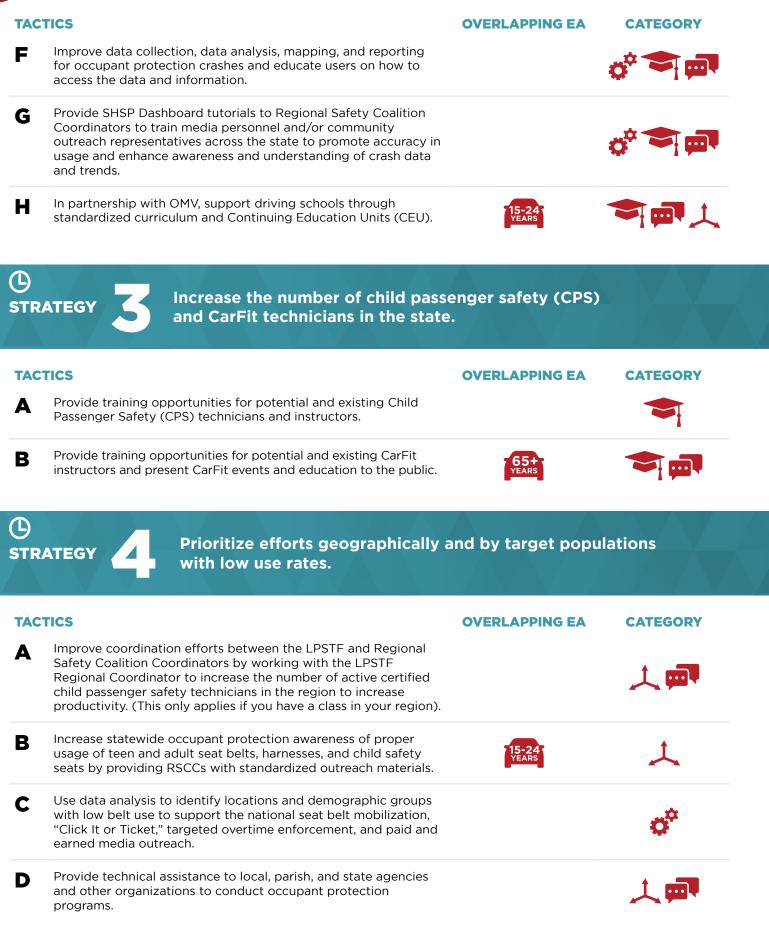


**Occupant Protection Strategies and Tactics** 

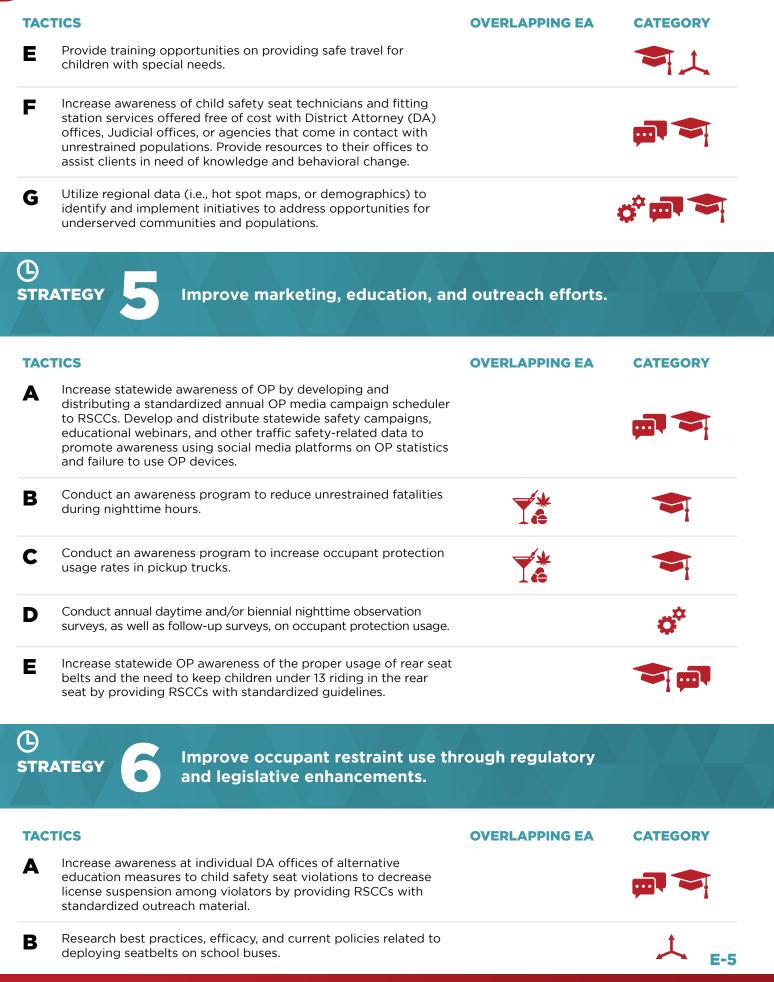


ТАС	TICS	OVERLAPPING EA	CATEGORY
A	Conduct regular child seat safety checks at daycares, preschools, and elementary schools.		
В	Identify best practice models of employer-based workplace policies on seat belt use.		
С	Promote hospital staff to seek and attend child passenger safety technical certification trainings and to perform child seat safety checks leading up to a baby's birth.		
D	In partnership with Office of Motor Vehicles (OMV), add training on the importance of proper use of child passenger safety seats to driver education curriculum standards.	<b>15-24</b> YEARS	
Ε	Support educational programs and engagement for elementary- aged students.	15-24 YEARS	

#### **OCCUPANT PROTECTION STRATEGIES & TACTICS CONT.**



#### **OCCUPANT PROTECTION STRATEGIES & TACTICS CONT.**

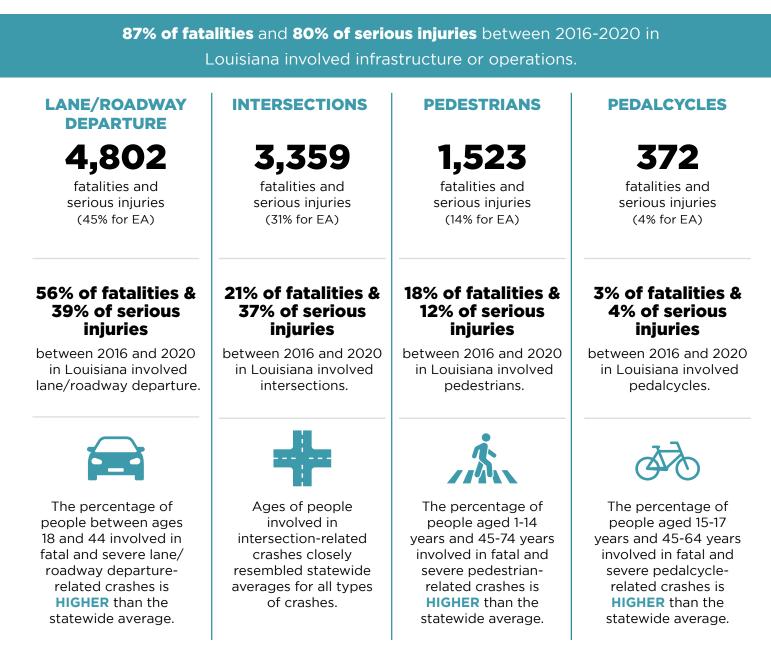


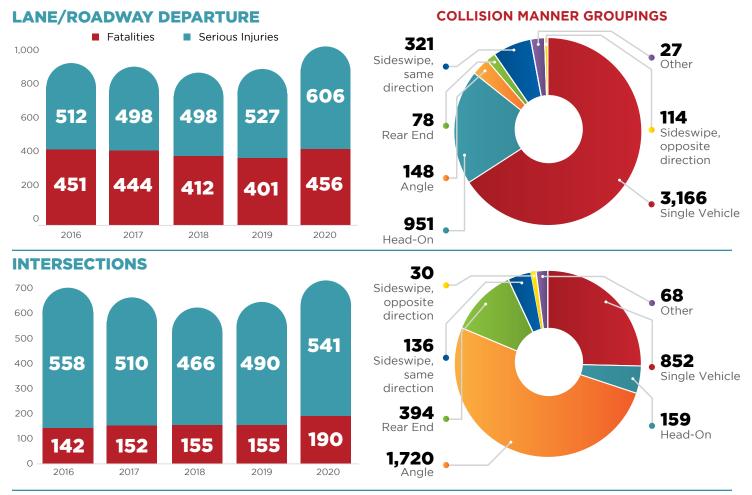
## Appendix

## Infrastructure and Operations (I/O) Crash Trends and Strategies

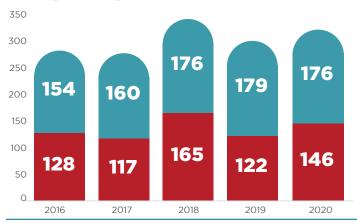
In Louisiana, from 2016-2020, 8,792 fatalities and serious injuries were infrastructure-related. Infrastructurerelated fatalities and serious injuries had a high correlation with young drivers (27%) and intersections (23%). They also happened more frequently in dark lighting conditions. Tactics within the I/O EA are informed by the <u>FHWA's proven safety countermeasures</u>.

Note: Data summaries presented in this fact sheet include Fatal (K) and Serious Injury (A) crashes only.

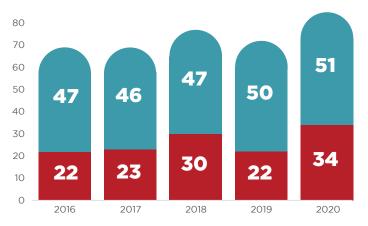




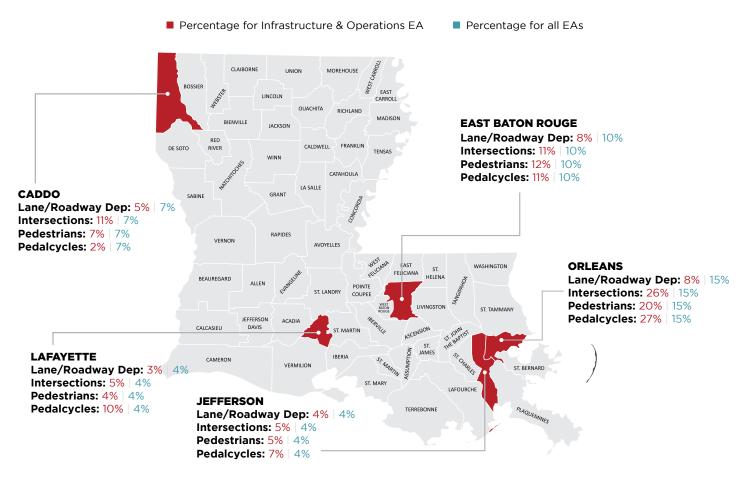
PEDESTRIANS



#### PEDALCYCLES



#### PARISHES WITH HIGHEST PERCENTAGE OF FATALITIES AND INJURIES **RELATED TO INFRASTRUCTURE AND OPERATIONS**



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#### **OVERLAPPING EMPHASIS AREAS**

Overlapping Emphasis Area percentages signify the number of people killed or injured categorized as intersection, lane departure, pedacycle, or pedestrian-related in addition to other EAs.

#### LANE DEPARTURE

36% Occupant Protection

**36%** Drug-Involved

**36%** Alcohol-Related **26%** Younger Drivers **11%** Older Drivers

#### PEDESTRIAN

**27%** Intersections **22%** Alcohol-Related 16% Younger Drivers **9%** Older Drivers

#### INTERSECTION

**34%** Distracted Driving **30%** Young Drivers **18%** Alcohol-Related

**18%** Older Drivers

17% Drug-Involved

#### PEDALCYCLE

42% Intersections	27% Young Drivers
<b>7%</b> Lane Departure	17% Older Drivers
<b>2%</b> Distracted Driving	

**Infrastructure and Operations Strategies and Tactics** 



C STRATEGY

Identify or develop sources of information that assist with the selection of safety projects and provide outreach and training to all SHSP/HSIP stakeholders.

ТАС	TICS	OVERLAPPING EA	CATEGORY
Α	Provide the RSCCs with the information to support the Highway Safety Improvement Program (HSIP) and other safety related efforts including current safety trends, data, targets, and I/O projects.		1
В	Ensure RSCCs have knowledge of Road Safety Assessments (RSA). Encourage them to assist local agencies in developing RSAs.		1
С	Educate local elected and appointed officials, parish engineers, et al. on proven effective safety countermeasures.		
D	Coordinate the development of district wide investment plans with relevant stakeholders. Include locally owned road high risk locations even if criteria differ between locally owned and state owned roads.		1.00
Ε	Educate DOTD districts and RSCCs on the process for funding future safety projects on state and local roads.		
F	Develop and promote tools (e.g., priority corridor maps, crash data portal) to educate districts and RSCCs on priority road departure corridors and utilize DOTD template for Roadway Departure (RWD) crash HSIP applications.		¢
G	Conduct workshops for local agencies on the Roadway Departure Plan (FoRRRwD) and Every Day Counts (EDC) initiative.		
н	Provide information on training/webinars/workshops to DOTD, RSCCs, locals, and consultants for all users.		
I	Provide Traffic Incident Management (TIMS) and Work Zone (WZ) Safety Training to support statewide LEAs.		
J	Provide technical assistance and continued guidance for local road safety plan development for the remaining top 20 parishes identified as having the highest number of crashes, serious injuries, and fatalities (or other parishes as agreed on by the team) and provide technical assistance for implementation of completed local road safety plans.		<b>°</b>

	INFRASTRUCTURE & OPERATIONS STRATEGIES &	TACTICS CONT.	
ТАС	TICS	OVERLAPPING EA	CATEGORY
Κ	Conduct training/outreach to local decision-makers about safety issues and corrective resources. This could potentially be facilitated by LTAP in cooperation with RSCCs, Louisiana Municipal Association, Police Jury Association, etc.		
L	Encourage active participation in Regional Safety Coalitions and completion of training to qualify for safety funding and related infrastructure initiatives. State or local agency road owner (responsible charge) may present their proposal in person to the RSCC I&O team to encourage participation and knowledge sharing.		⊥.¢
Μ	Conduct training for LPAs that includes but is not limited to crash data analysis, countermeasure selection and development.		o <sup>o</sup>
Ŀ	Improve data collection, quality, a	nalvsis, mapping, a	and reporting
	ATEGY 2 Improve data collection, quality, and for all public roads and educate us information for evaluation, project	ers on how to acc	ess the
STR	ATEGY for all public roads and educate us	ers on how to acc	ess the
STR	<b>ATEGY</b> for all public roads and educate us information for evaluation, project	ers on how to acco selection, and pri	ess the oritization.
STR	ATEGY 2 for all public roads and educate us information for evaluation, project TICS Provide SHSP Dashboard tutorials to RSCCs to train media personnel and/or community outreach representatives across the state to promote accuracy in use and enhance awareness and	ers on how to acco selection, and pri	ess the oritization.
STR TAC A	ATEGY 2 for all public roads and educate us information for evaluation, project   STICS Provide SHSP Dashboard tutorials to RSCCs to train media personnel and/or community outreach representatives across the state to promote accuracy in use and enhance awareness and understanding of crash data and trends.   Research equity-related crash analyses and program approaches in other states and countries to identify alternate means for performing crash analyses and program development addressing	ers on how to acco selection, and pri	ess the oritization.
TAC A B	ATEGY 2 for all public roads and educate us information for evaluation, project   FICS Provide SHSP Dashboard tutorials to RSCCs to train media personnel and/or community outreach representatives across the state to promote accuracy in use and enhance awareness and understanding of crash data and trends.   Research equity-related crash analyses and program approaches in other states and countries to identify alternate means for performing crash analyses and program development addressing equity issues for all modes of transportation.   Educate stakeholders on the use of the DOTD's highway safety tools. (i.e. CATScan, Crash Analysis Tool, CRASH 1, and other	ers on how to acco selection, and pri	ess the oritization.

Complete an existing network of pedestrian and bicyclist facilities. F

o<sup>¢</sup>



#### **INFRASTRUCTURE & OPERATIONS STRATEGIES & TACTICS CONT.**



Standardize the consideration of substantive safety of nonmotorized users within the project development process for all projects.

ТАС	TICS	OVERLAPPING EA	CATEGORY
Α	Develop an approach to each project that incorporates consideration for complete streets concepts, multimodal facilities where applicable, and opportunities for other safety improvements in efforts to maximize the impact of available funds during the planning stage, prior to final design.		o
В	Improve community and organizational engagement around engineering issues. Form a task force to examine disparities in pedestrian and bicycle safety infrastructure investments and develop a plan to improve the process.		
С	Identify high-risk locations through a systemic process and identify contributing factors for pedestrian, bicyclist, and personal mobility crashes.		<b>o</b> <sup>o</sup>
D	Develop a process and approach for RSCCs to facilitate a timely response investigation into pedestrian and bicycle crashes. Identify opportunities for small-scale treatments.		o



Increase statewide education and awareness via social media and other forms of communication.

TAC	TICS	OVERLAPPING EA	CATEGORY
Α	Increase statewide awareness of I/O via social media by developing and distributing a standardized annual I/O media campaign schedule to RSCCs. Provide training on how to use social media effectively.		
В	Support and enhance driver education and awareness programs. Create an inventory of existing driver education programs and determine the extent to which curriculum and behind-the- wheel training address crashes that are over-represented by young drivers. Examples include, but are not limited to, red light running, failure to yield, roadway departure, etc.	15-24 YEARS	
С	Coordinate the facilitation of Operation Lifesaver presentations by authorized volunteers and safety partners in the RSCCs.		1
D	Support educational outreach activities that educate all road users on state statutes and best practices for relatively newer safety countermeasures as they are implemented (i.e., flashing yellow arrows, queue detection systems, pedestrian hybrid beacon, rectangular rapid flashing beacon, sequential lighting in WZs, etc.).	15-24 765+ YEARS YEARS	
Е	Fund a paid media campaign focused on non-motorized safety- related state laws.		



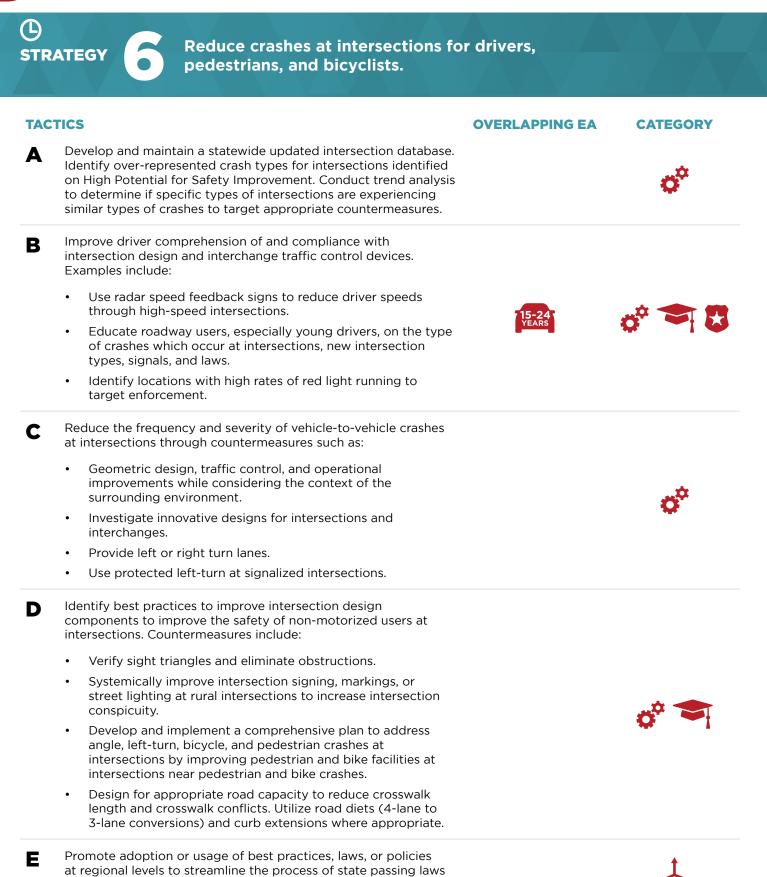
### **INFRASTRUCTURE & OPERATIONS STRATEGIES & TACTICS CONT.**

C STRATEGY

Reduce non-motorized user fatalities and serious injuries on all public roads through targeted investments and outreach.

TAC	TICS	OVERLAPPING EA	CATEGORY
Α	To increase the number of HSIP project applications, review best practices from states with greater allocations of HSIP funds. Identify policies or programs which might help the current DOTD HSIP program.		o <sup>o</sup>
В	Allocate resources to support districts and local public agencies in implementation of projects through the HSIP.		o
С	Continue to develop bike and pedestrian plans and Complete Streets policies at regional and local levels.		o
D	Advocate for motorist speed management techniques and consideration for engineering judgement beyond the 85th percentile, as well as new proven speed countermeasures, where pedestrians or bicyclists are expected.		1
E	Identify corridors and locations having concentrations of bike and pedestrian activity or the potential for crashes to apply proven bike and pedestrian safety countermeasures. Identify a funding program for systemic treatments related to pedestrian and bicycle crashes.		<b>o</b> ¢
F	Improve access management in corridors with high levels of access through a systemic approach for predefined countermeasures with favorable Crash Modification Factors, including closing or restricting access locations, implementing a road diet, and pedestrian refuge and curb extensions.		o <sup>¢</sup>
G	Implement and encourage pedestrian facility safety improvements through a systemic approach (e.g., facilities, including Leading Pedestrian Interval, Rectangular Rapid Flashing Beacon, etc.).		o <sup>o</sup>
н	Partner with Emergency Medical Services (EMS), bike advocacy groups, community groups, and fire departments to teach pedestrian and bicycle safety to children by conducting safety rodeos and safety towns.	15-24 YEARS	1.
I	Explore best practices of school bus stop arm violation camera enforcement. Explore fines and related penalties as part of the evaluation.		1
J	Provide RSCCs with knowledge and resources to coordinate with relevant stakeholders on the development of pedestrian improvements using the results from the pedestrian crash assessment.		1
K	Develop a process and approach for RSCCs to facilitate a quick response investigation into pedestrian and bicycle crashes. Identify opportunities for timely small-scale treatments.		o

#### **INFRASTRUCTURE & OPERATIONS STRATEGIES & TACTICS CONT.**



and regional local parish level implementation.

#### INFRASTRUCTURE & OPERATIONS STRATEGIES & TACTICS CONT. **TACTICS OVERLAPPING EA** CATEGORY Research and promote education related to best practices on F speed management at intersections (e.g. signal timing, setting speed limits, striping, etc.). Encourage leaders to require taking safety into consideration as G a requirement during all project development phases rather than just HSIP projects and others where safety is a known problem. Reduce the number of fatalities and serious injuries related to STRATEGY vehicles leaving the roadway. TACTICS **OVERLAPPING EA** CATEGORY Use the Roadway Departure Implementation Plan to minimize the Α adverse consequences of leaving the roadway through proven effective countermeasures, such as: • Remove or relocate fixed objects outside the travel lane. **\*\* |** Widen and/or pave shoulders to provide drivers a larger recovery area. Roadside clearance countermeasures, such as ditch slope modifications. Pavement taper angle reduction, also known as "Safety Edge." Use the RWD Implementation Plan to reduce the likelihood of B vehicles leaving the travel lane(s) through implementation of proven countermeasures such as: Deploy enhanced pavement markings (wider or wet-• reflective materials). Utilize High Frication Surface or Enhanced Friction Treatments to increase traction through sharp curve. Provide enhanced curve delineation, such as chevrons, for **\*\*** [• sharp curves. Increase horizontal curve radii. Install median barriers at locations identified high-risk for centerline crossing. Install centerline, shoulder, or edge line rumble strips. Implement intelligent transportation system (ITS) dynamic warning signs and other ITS technologies to reduce lane departure at locations with a sustained crash pattern. Identify and map high-risk locations through a systemic approach С considering both roadway segments and intersections. LRS program work with local agencies to find source of funding D assistance for implemented countermeasures at high-risk locations of roadway departure.

#### **INFRASTRUCTURE & OPERATIONS STRATEGIES & TACTICS CONT.**

TACTICS		OVERLAPPING EA	CATEGORY
E	Enhancing the presence of police and enforcement of the law near high-risk locations due to correlation between roadway departure crashes and high relation to alcohol, drugs, and lack of seatbelt use.		₿
F	Pilot districtwide/parishwide(force account) projects for utilizing district staff and equipment for installing safety countermeasures.		⊥. ø <sup>¢</sup>
G	Partner with statewide preservation program for streamlining implementation of systemic countermeasures.		¢
Η	Streamline the process for reviewing and accepting roadway departure projects into HSIP.		<b>o</b> <sup>o</sup>
I	Review and reconsider the methods used for setting speed limits, especially in urban communities. Develop speed limit guidelines based on the five context categories (Rural, Rural Town, Suburban, Urban, and Urban Core) and roadway types specified in NCHRP 966 and other Expert Systems.		1