

Project Capsule



Assessing Speeding-Related Crashes in Louisiana to Support to Safe System Approach

PROBLEM

The role of vehicle operating speed in traffic crashes is a complex issue, as speeding-related crashes continue to pose significant challenges. Speed greatly impacts both the frequency of crashes and the severity of the resulting injuries. Additionally, excessive speed raises the likelihood of losing control during evasive maneuvers and amplifies crash energy disproportionately. At the national level, the U.S. Department of Transportation (USDOT) continues to recognize an urgent need to curb speeding-related crashes, particularly following their 14-year high in 2021. The department has adopted a new national directive implementing the Safe System Approach (SSA), which builds multiple layers of protection through safer roads, safer people, safer vehicles, safer speeds, and better post-crash care.

Safer speed is a key element of the SSA, which “promotes safer speeds in all roadway environments through a combination of thoughtful, equitable, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.” This approach focuses on managing speeds to ensure the forces experienced by crash victims remain within their physical tolerances, recognizing that even legal speeds can be unsafe when they exceed human injury thresholds. Roadway design also plays a critical role in this process, as agencies can set target speeds based on the roadway context and implement self-enforcing design elements that naturally encourage drivers to operate at speeds consistent with the safety of all road users.

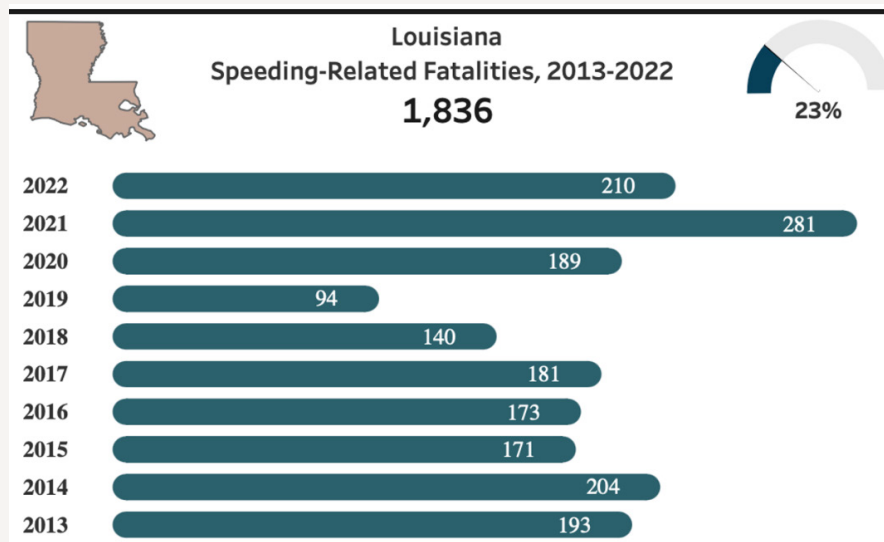


Figure 1. Speeding fatality trend in Louisiana
(Source: Fatality Analysis Reporting System, FARS)

Start Date

May 1, 2025

Duration

24 months

Funding

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As a part of the ongoing Louisiana 2022 Strategic Highway Safety Plan (SHSP) implementation efforts, the implementation team is considering exploring the SSA and implementing supporting strategies and tactics. To implement the SSA effectively, improved knowledge about speeding-related crashes in Louisiana is necessary. This understanding will enable the implementation of targeted measures to manage and mitigate speed-related crash risks.

OBJECTIVE

The goal of this project is to perform a comprehensive analysis of speeding-related crashes and speed data on interstate and non-interstate roadways in Louisiana to understand the magnitude of the problem. The specific objectives of this research are to:

- Perform crash analyses to identify speeding-related crash variables and high-risk locations associated with crashes;
- Investigate operating speeds at identified high-risk locations using probe data collected from the Regional Integrated Transportation System (RITIS) platform; and
- Make recommendations to promote safer speeds and reduce the rate of speeding-related crashes on Louisiana's roadways.

METHODOLOGY

To fulfill the objectives of this research, several tasks will be completed. First, the research team will conduct a comprehensive literature review to explore several areas associated with speeding-related crashes, the safer speed component of the SSA, and potential countermeasures. The next task will involve gathering and preparing datasets (e.g., crashes, operating speeds for identified high-risk locations from RITIS, and roadway characteristics) to support a comprehensive analysis of speeding-related crashes on Louisiana highways, followed by statistical analyses to obtain the necessary information. The insights gained from the data analysis and modeling efforts will be used to provide recommendations for effective countermeasures addressing speeding-related crashes. These recommendations will be grounded in the SSA while considering current relevant issues in Louisiana's SHSP. Finally, the research team will prepare a final report documenting the entire research effort.

IMPLEMENTATION POTENTIAL

This study will provide transportation safety engineers and decision-makers in Louisiana with a deeper understanding of speeding patterns and crash characteristics across different highway types. The findings will directly support Louisiana's SSA implementation by informing evidence-based speed management strategies, including any development of a future speed management action plan. Moreover, the results will guide the strategic deployment of engineering countermeasures, enforcement efforts, and educational campaigns to reduce speeding-related crashes throughout the state.