There has been a significant increase in wrong-way crashes on divided full-control of access highways in Arkansas since 2015, resulting in 29 fatalities (as of 9/3/19). This has mirrored a broader trend of increased wrong-way crashes throughout the US. Approximately 60 percent of wrong-way in Arkansas crashes occur at night, and about 50 percent are the result of drug or alcohol impairment. Wrong-way crashes are largely random and scattered throughout the State's freeway system. As a result of the Department's annual review of wrong-way crashes, signs and markings at ramps and interchanges are checked to determine if any are missing or out of compliance. Furthermore, the Department implemented a statewide project (Job 012260) in 2017/2018 that upgraded and added additional signs and markings to deter wrong-way entry. Despite the improvements, the trend has remained unchanged, and therefore a need exists to test innovative countermeasures utilizing technology that can be implemented in a cost effective manner.

The objectives of this project are to: (A) identify potential contributing factors to wrong-way entry and (B) determine effective countermeasures that can be implemented in a cost effective manner. Proposed tasks include: (1) review existing data sources to determine factors correlating to wrong-way crashes, (2) literature review, (3) determine which countermeasures should be tested, and (4) conduct evaluation.

The results of this research will help the Department determine which countermeasures are effective to deter wrong-way entry onto freeways and that can be implemented in a cost effective manner.