Project Title: SHRP 2 Naturalistic Driving Study Data Usage Guidance for Nevada

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Abstract:
The second Strategic Highway Research Program (SHRP 2) has sponsored the Naturalistic Driving Study (NDS), with its central goal to address the role of driver performance and behavior in traffic safety. In this study, participants from six sites across the United States were recruited, with each site hosting 150 to 450 participant vehicles. By the end of the study (2014), a total of 3,700 participant-years is expected from the nearly 2,600 participants, and the final SHRP 2 NDS database is expected to approach 2 petabytes (2,000 terabytes). NDS data is critical to safety analysis at the microscopic level. This data can provide insight on the influences and collision risk associated with roadway, environmental, vehicular, and human factors on driver behaviors and performance. The data can help to determine accurately a driver’s behavior before the crash, which could not be learned from after-the-fact crash investigations. When crash data have been widely used, the surrogate measures of collisions recorded in NDS data, such as conflicts, critical incidents, near-collisions and roadside encroachments, should also be taken into consideration for safety analysis. This project is to answer the following three questions for using NDS data to improve highway safety in Nevada:

1. How will NDS data for safety analysis be selected in Nevada?
2. How will NDS data and related data be obtained from other data sources?
3. How should the NDS data be used?

To efficiently use NDS data for safety analysis, NDS data usage guidance should be developed to assist and extend the data usage in Nevada by answering the three major questions. The guidance could also be used as a reference for future driver behavior data collection in Nevada.