

# MOUNTAIN-PLAINS CONSORTIUM

RESEARCH BRIEF | MPC 19-399.1 (project 454) | October 2019

## Regional Implementation of Tribal Transportation Safety Program: Standing Rock Sioux Tribe Roadway Safety Improvement Program



### the ISSUE

Tribal communities recognize the need to improve roadway safety. A five-step methodology has been developed by the Wyoming Technology Transfer Center to improve roadway safety on reservations. This methodology was initially implemented on the Wind River Indian Reservation, which led to the Wyoming Department of Transportation's funding of three system-wide, low-cost safety improvement projects. Due to the success of the program on the Wind River Indian Reservation, tribes across the country have become interested in implementing the program. WYT2/LTAP and the Northern Plains Tribal Technical Assistance Program (NPTTAP) are helping tribes implement this program on their reservations in the Great Plains region, and have developed criteria to identify tribes for participation. This study aimed to improve roadway safety of the Standing Rock Sioux Reservation.

### the RESEARCH

The methodology applied for this study provided tools to prioritize safety improvement on the Standing Rock Sioux reservation. A combination of data driven, field verification, and trend analysis was used in the study. Crash data analysis, field evaluations of roadway conditions, a combined ranking to identify high risk locations, identification of countermeasures and a benefit cost analysis was undertaken for this study.



A University Transportation Center sponsored by the U.S. Department of Transportation serving the Mountain-Plains Region. Consortium members:

Colorado State University  
North Dakota State University  
South Dakota State University

University of Colorado Denver  
University of Denver  
University of Utah

Utah State University  
University of Wyoming



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### Project Title

Regional Implementation of  
Tribal Transportation Safety  
Program

### Sponsors | Partners

Wyoming Local Technical  
Assistance Program  
North Dakota State University  
Northern Plains Tribal Technical  
Assistance Program (NPTTAP)  
County Engineers  
Road Supervisors  
USDOT, Research and  
Innovative Technology  
Administration

### the FINDINGS

Ranking of sites was done using a data driven analysis. Road segments with low ranking scores were selected and evaluated for safety improvements. Countermeasures were proposed for the selected segments based on the analysis. It was found that crash data was incomplete due to the size of the reservation and low number of reported crashes. Many locations in both North and South Dakota were found to have good geometrics but several crashes and could be due to speeding.

### the IMPACT

The outcome of the research is the identification of low-cost safety improvement projects to advance for funding to respective state and federal governments. Strategic highway safety plans will be development and ready for full acceptance and approval by the stakeholders for each of these Tribes. This will help to improve roadway safety in the reservations.

For more information on this project, download the entire report at <http://www.ugpti.org/resources/reports/details.php?id=966>

For more information or additional copies, visit the Web site at [www.mountain-plains.org](http://www.mountain-plains.org), call (701) 231-7767 or write to Mountain-Plains Consortium, Upper Great Plains Transportation Institute, North Dakota State University, Dept. 2880, PO Box 6050, Fargo, ND 58108-6050.



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