

# 5TH ANNUAL SOUTH DAKOTA TRIBAL TRANSPORTATION SAFETY SUMMIT

WATERTOWN, SOUTH DAKOTA  
OCTOBER 15-16, 2014



# RESPEC

---

---

**5th ANNUAL SOUTH DAKOTA TRIBAL TRANSPORTATION  
SAFETY SUMMIT, WATERTOWN, SOUTH DAKOTA  
OCTOBER 15–16, 2014**

---

---

Topical Report RSI-2470

*by*

RESPEC  
P.O. Box 725  
Rapid City, South Dakota 57709

*prepared for*

Tribal Transportation Safety Summit Planning Committee

December 2014



# TABLE OF CONTENTS

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 SUMMIT OVERVIEW .....	1
1.2 SUMMIT GOALS AND RECOMMENDATIONS.....	2
1.3 SUMMIT TOPICS .....	2
<b>2.0 BEST PRACTICES AND SUCCESS STORIES .....</b>	<b>3</b>
2.1 CHEYENNE SIOUX RIVER TRIBE.....	4
2.2 CROW CREEK SIOUX TRIBE .....	5
2.3 FLANDREAU SANTEE SIOUX TRIBE .....	6
2.4 LOWER BRULE SIOUX TRIBE.....	7
2.5 OGLALA SIOUX TRIBE.....	7
2.6 ROSEBUD SIOUX TRIBE.....	8
2.7 SISSETON-WAHPETON OYATE.....	9
2.8 STANDING ROCK SIOUX TRIBE .....	10
2.9 YANKTON SIOUX TRIBE.....	12
<b>3.0 PRESENTATIONS.....</b>	<b>13</b>
3.1 SIGNING AND OTHER PROACTIVE SAFETY MEASURES.....	14
3.2 TRAFFIC CALMING .....	15
3.3 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION TRANSPORTATION ADVISORY COUNCIL .....	17
3.4 MOTOR CARRIER SAFETY ISSUES.....	17
3.5 AD TIPS FOR SAFETY MESSAGES/EDUCATION EFFORTS.....	19
3.6 ACCESS MANAGEMENT.....	20
3.7 NEWS FROM THE BUREAU OF INDIAN AFFAIRS .....	22
3.8 INJURY PREVENTION AND LAW ENFORCEMENT.....	23
3.9 STRATEGIC HIGHWAY SAFETY PLAN.....	24
<b>4.0 MEETING SUMMARY AND CONCLUSIONS .....</b>	<b>25</b>
<b>5.0 REFERENCES .....</b>	<b>27</b>
<b>APPENDIX A AGENDA .....</b>	<b>A-1</b>
<b>APPENDIX B. SIGN-IN SHEETS.....</b>	<b>B-1</b>
<b>APPENDIX C. PRESENTATIONS .....</b>	<b>C-1</b>
<b>APPENDIX D. HANDOUT .....</b>	<b>D-1</b>

# LIST OF FIGURES

FIGURE	PAGE
1-1 The Dakota Sioux Casino and Hotel, the Venue for the 5th Annual South Dakota Tribal Transportation Safety Summit.....	1
1-2 The Honor Guard (Left to Right) Mr. Justin Chanku, Mr. John Feather, Mr. Clayton Ellingson, and Mr. Del Renvillen.....	3
2-1 Location of the Nine Indian Reservations in South Dakota .....	4
2-2 Ms. Korey Vrooman Presented the Cheyenne River Sioux Tribe’s Best Practices .....	5
2-3 Mr. Jason Shields During the Crow Creek Sioux Tribe Presentation .....	6
2-4. Ms. Carol Robertson Discussing Efforts of the Flandreau Santee Sioux Tribe.....	7
2-5 Mr. LeRoy Sleeping Bear and Ms. Lynda Douville Discussing the Rosebud Sioux Tribe Dispatch Office Projects.....	9
2-6 Mr. Cliff Eberhardt Presented on the Best Practices of the Sisseton Wahpeton Oyate.....	10
2-7 Ms. Leah Fool Bear Presented the Standing Rock Sioux Tribe’s Success Stories.....	11
2-8 Mr. Wesley Hare, Jr. Presented the Yankton Sioux Tribe’s Best Practices and Successes .....	13
3-1 Mr. Doug Kinniburgh Presenting on Signing.....	15
3-2 <b>Mr. Jim Allen Discussing Traffic Calming</b> .....	16
3-3 Mr. Wesley Hare Jr. and Mr. Doug Kinniburgh During the South Dakota Department of Transportation Advisory Council Presentation.....	17
3-4 <b>Captain John Broers Presenting on Motor Carrier Safety Issues</b> .....	18
3-5 Mr. Micah Aberson and Mr. Scott Wickman During the Ad Tips for Safety Messages Presentation.....	20
3-6 Ms. Brooke White Presented on Access Management.....	21
3-7 Mr. Tom Croymans Providing an Update From the Bureau of Indian Affairs.....	23
3-8 Sisseton Wahpeton Oyate Chief of Police Gary Gaikowski Presented on Injury Prevention and Law Enforcement.....	24
3-9 Mr. Andy Vandel During his Presentation of the South Dakota Strategic Highway Safety Plan .....	26

# 1.0 INTRODUCTION

The 5th Annual South Dakota Tribal Transportation Safety Summit (Summit) was held on October 15–16, 2014, in Watertown, South Dakota (Figure 1-1). The Summit was an opportunity for Tribes, nonprofit groups, and state and federal agencies to jointly address Tribal transportation safety, including fatalities and injuries on Tribal lands. The Summit supports the goal of Tribes to provide the safest transportation system possible for Tribal members and the traveling public. Participating in the Summit provides a way for Tribes to collaborate with each other, the state, and federal agencies to improve transportation safety for their respective reservations. The 2014 Summit was a collaborative effort by representatives from the Bureau of Indian Affairs (BIA), Federal Highway Administration (FHWA), Northern Plains Tribal Technical Assistance Program (TTAP), South Dakota Department of Public Safety (DPS), South Dakota Department of Transportation (SDDOT), and the Sisseton Wahpeton Oyate (SWO).

RSI-2330-14-026



**Figure 1-1.** The Dakota Sioux Casino and Hotel, the Venue for the 5th Annual South Dakota Tribal Transportation Safety Summit.

## 1.1 SUMMIT OVERVIEW

The purpose of the annual Summit is to allow Tribes and agencies to exchange information and ideas on transportation safety improvements and issues. The Summit organizers invited representatives from nine Tribes located throughout South Dakota to share ideas, concerns, and resources with each other and state and federal agencies. Together, Tribes and agencies identified opportunities to work together to reduce the number and severity of traffic crashes on reservation roads. The goal of this collaboration was to improve safety, identify funding sources, enhance transportation networks, and provide maintenance for Tribal roads and transportation infrastructure.



## **1.2 SUMMIT GOALS AND RECOMMENDATIONS**

Each year, goals and recommendations from the previous year's Summit are reviewed to measure progress. Goals and recommendations from the 4th Annual (2013) Summit included the following:

- Transit Safety
- Tribal Transportation Program—Safety Program
- Update on Tribal Crash Reporting
- Work Zone Safety and Maintenance Practices
- Tribal Tourism and Safety
- Update on the Process for Tribal Involvement in County Signing Projects
- Motor Carrier and Truck Safety.

## **1.3 SUMMIT TOPICS**

Building on the recommendations from the 4th Annual (2013) Summit, the agenda for the 5th Annual Summit was designed to increase awareness of specific Tribal transportation safety issues and to gain a better understanding of the needs of each South Dakota Tribe. Discussion topics for this year's Summit included the following:

- Signing and Other Proactive Safety Measures
- Traffic Calming
- Motor Carrier Issues
- Ad Tips for Safety Messages/Education Efforts on Dangers of Texting and Driving
- Access Management
- News from the BIA
- Injury Prevention and Law Enforcement.

Opening remarks were provided by Mr. Cliff Eberhardt, and Mr. Wesley Hare, Jr., gave the opening prayer. The Honor Guard presented the colors and placed the flags in the meeting room while the drum group, the Long Elk Singers, sang an entrance song and an honor song. (Figure 1-2). Mr. DelRay German moderated the Summit. The agenda is provided in Appendix A, and a copy of the sign-in sheet and list of participants is provided in Appendix B.

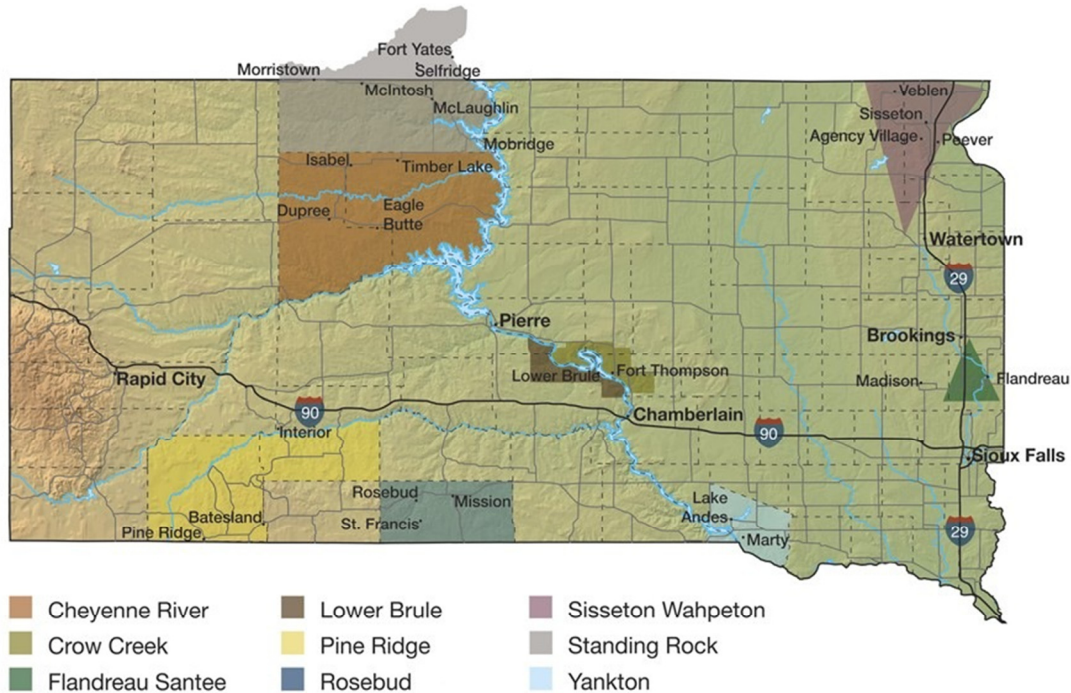


**Figure 1-2.** The Honor Guard (Left to Right) Mr. Justin Chanku, Mr. John Feather, Mr. Clayton Ellingson, and Mr. Del Renvillen.

## 2.0 BEST PRACTICES AND SUCCESS STORIES

Tribes attending the Summit were invited to speak on the knowledge gained, best practices, and success stories from traffic safety improvements. This chapter outlines each Tribe's discussion in regard to using resources, implementing improvements, and identifying and overcoming obstacles. Figure 2-1 illustrates the location of each American Indian reservation in South Dakota.

RSI-2330-14-028



**Figure 2-1.** Location of the Nine Indian Reservations in South Dakota [South Dakota Department of Tribal Relations, 2011].

### 2.1 CHEYENNE RIVER SIOUX TRIBE

Ms. Korey Vrooman, Department of Transportation Operations Manager for the Cheyenne River Sioux Tribe (CRST), discussed their current efforts (Figure 2-2). Recent transportation projects include the following:

- **Bridges:** replaced bridges include Green Grass, Stove Creek, and LeBeau Creek bridges. Replacing the Veo Creek bridge is planned for spring 2015.
- **Gravel Crushing:** the CRST Department of Transportation, through a direct contracting crew, is contracted for gravel crushing. The crew has crushed 70,000 tons at one site and is continuing work at a second site. Gravel will be used to maintain gravel roads on the reservation.





- Culverts: there are 700 culverts across the reservation requiring various levels of repair, that need to be scheduled. The department is working on reviewing the utility of each culvert and placing each in a system to be prioritized for replacement. Federal Emergency Management Agency (FEMA) funds will be used to replace some culverts.
- Sidewalks and Lighting: the department applied for a Tribal Assistance Program (TAP) grant for widening some existing sidewalks and installing other needed pathways. Enough funds were received to cover engineering costs, so the department is working on a plan for next steps in regards to pathway lighting.
- Transit System: the CRST's transit system uses the River Cities Public Transit as a subcontractor, which currently runs ten buses and costs an average of \$80,000 per month.
- Route 12: the plan for this 14-mile route is to mill the road and placing gravel for improving safety issues.

RSI-2330-14-029



**Figure 2-2.** Ms. Korey Vrooman Presented the Cheyenne River Sioux Tribe's Best Practices.

## 2.2 CROW CREEK SIOUX TRIBE

Mr. Jason Shields, Tribal Employment Rights Office (TERO) Director, spoke about the transportation plan for the Crow Creek Sioux Tribe (CCST) (Figure 2-3). He stated that transportation is planned mainly by the BIA, but the Tribe is working on taking back some of the responsibilities. The last time the Tribe had a transportation planning department separate from the BIA was in 2006. The CCST's projects include:



- Bridges: the BIA Route 4 bridge needs replacement. The Campbell Creek bridge has already been replaced.
- BIA Route 4: repairs to slide areas will begin in 2015

- Highway 47: the road from Fort Thompson to Highmore has been repaired. This highway was particularly important for safety because it is used by school buses. Completing this project has been the highlight of the year for the CCST.

Since signing a Memorandum of Understanding (MOU) in 2013, the CCST continues to work with the South Dakota Highway Patrol (SDHP) each year. Because of the increase of people during the CCST's annual pow wow, the Highway Patrol aids the Tribe with additional enforcement. Mr. Shields then introduced Lieutenant (Lt.) Jeff DeVaney (SDHP), who shared a PowerPoint presentation with the Summit that outlines the working relationship with the CCST by providing additional law enforcement for special events such as the Pow Wow and emergency situations.

RSI-2330-14-030



**Figure 2-3.** Mr. Jason Shields During the Crow Creek Sioux Tribe Presentation.

## 2.3 FLANDREAU SANTEE SIOUX TRIBE

Ms. Carol Robertson from the Flandreau Santee Sioux Tribe (FSST) described their current efforts and projects (Figure 2-4). The FSST is the smallest Tribe in South Dakota, with approximately 2,100 acres of Tribal land and 3,300 acres of fee land. The Tribe is in the process of acquiring more land. Ms. Robertson stated that in addition to functioning as the transportation planner, she is also the economic resource director, and the road director. Transportation projects and efforts are as follows:



- A cooperative agreement between the FSST and the city of Flandreau has been achieved. The Tribe and the city each share 50 percent of costs of projects on certain roads. The city of Flandreau maintains all roadway lighting for the Tribe. The Tribe has a great working relationship with the city.

- The FSST is applying for a safety grant to help purchase road and maintenance equipment, the budget for the roads and maintenance program is very small. The Tribe is also applying for a U.S. Department of Agriculture (USDA) grant to develop recreational grounds, which are located north of the pow wow grounds.
- One of the FSST's larger projects is to repair 3 miles of road on the reservation. This project was originally planned for 2014 but needed to be pushed until 2015.

RSI-2330-14-031



**Figure 2-4.** Ms. Carol Robertson Discussing Efforts of the Flandreau Santee Sioux Tribe.

## 2.4 LOWER BRULE SIOUX TRIBE

A representative from the Lower Brule Sioux Tribe (LBST) was not able to attend.



## 2.5 OGLALA SIOUX TRIBE

A representative from the Oglala Sioux Tribe (OST) was not able to attend.





## 2.6 ROSEBUD SIOUX TRIBE

The Rosebud Sioux Tribe's (RST) Best Practices and Success stories were presented by Ms. Lynda Douville, Planner, and Mr. LeRoy Sleeping Bear, Director of Transit. Ms. Douville shared how she looks forward to attending the Summit every year because of the opportunity for collaboration and improvement of safety for all county, state, Tribal, and nontribal individuals; helping everyone to improve their programs and systems. The program previously focused on main roadways in the Rosebud communities; currently they are working on highways. Transportation projects include:



- Converting 2 miles between BIA Route 1 and BIA Route 9 from two lanes to four lanes and adding pedestrian pathways. The project started in May 2014 and will be completed in time for the Rosebud Fair.
- Completed Phase 2 and 4 of the Rosebud Old Town project.
- Reconstructing/paving a 6-mile section of gravel road which is used by multiple residents in traveling to school and work. Partnerships for this project include Todd County commissioners and an engineering firm. The Tribe is applying for a Transportation Investment Generating Economic Recovery (TIGER) grant to work on this project, whose estimated total cost is \$22 million.
- Repair of Killgore Road, which runs from the Nebraska border to Rosebud, South Dakota, providing access to the Sinte Gleska University and the elementary, middle, and high schools. The road needs patch work and chip seal to increase its longevity.
- Completing the season's chip seal was successful because the RST has a maintenance department with its own machinery.

The RST Tribal Motor Vehicle Injury Prevention Program (TMVIPPP) grant ran out in September 2014. The director of this program, Mr. Wayne Boyd, was recently elected to council, as along with Mr. Richard Whipple. Both of these gentlemen were on the transportation committee and it has benefited the RST Transportation program to have these advocates in council.

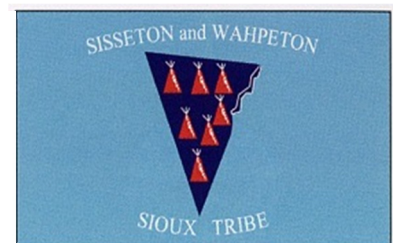
Mr. Sleeping Bear, along with Ms. Douville, spoke about the transit program operations (Figure 2-5). The transit program covers four counties and is heavily relied on by people living on the reservation. The program even provides transportation to Rapid City, South Dakota. There are currently six drivers and the buses operate from 5:30 a.m. until 6 p.m. Transit funds are being used this year to expand the transit building, add a dispatch office, and build enclosed bus stops for waiting riders. The transit program is also designing a fixed route between Rosebud and Mission.



**Figure 2-5.** Mr. LeRoy Sleeping Bear and Ms. Lynda Douville Discussing the Rosebud Sioux Tribe Dispatch Office Projects.

## 2.7 SISSETON WAHPETON OYATE

Mr. Cliff Eberhardt, SWO Transportation Coordinator, discussed the Tribe's Office of Construction Management (Figure 2-6). The Office of Construction Management oversees transportation and construction projects for the SWO. Efforts made include applying for safety funds for developing a safety plan, applying the four Es (Engineering, Enforcement, Education, and Emergency Services), and starting a SWO Safety Committee. Another goal has been to build relationships and stay positive in these relationships to break down any transportation barriers between counties, townships, and the state of South Dakota. Transportation projects include the following:



- Reservationwide Striping Project: an MOU was made with the Roberts County Commission and Swanston Equipment Company for this project. Collectively, they have completed 45 miles of edge lines.
- Signing Project for All Housing Sites: as a result of an increase in accidents, injuries, and deaths in housing sites, all signs in the neighborhoods were updated, speed limits were changed to 15 miles per hour (mph), and additional review of housing sites is being completed for other transportation-related improvements.
- Signing Project for BIA Routes. Global Positioning System (GPS) coordinates were collected for all existing signs along BIA Routes 2, 3, and 5, which in turn helped to show signing placement and replacement needs.

- Pathways/Sidewalk Planning and Construction: created a safer environment for the community by connecting all housing sites with pathways between the Agency Village Community, schools, college, and the administration building. Funding from the SDDOT Transportation Alternatives Program was used to complete this project.
- BIA Route 7 Reconstruction: this project is a very costly reconstruction project with a completion date of August 30, 2015. BIA Route 7 is the main connection between Sisseton and the Agency Village, and is used regularly by hundreds of people. Currently 2 out of the 6 miles of road have been completed.

RSI-2330-14-033



**Figure 2-6.** Mr. Cliff Eberhardt Presented on the Best Practices of the Sisseton Wahpeton Oyate.

## 2.8 STANDING ROCK SIOUX TRIBE

Ms. Leah Fool Bear presented on the challenges and successes of the Standing Rock Sioux Tribe's (SRST) traffic safety program (Figure 2-7). The existing safety plan (originally drafted in 2008) is being updated and will be completed by the end of November. The purpose of the new safety plan is to reduce deaths and injuries in Tribal communities as well as other communities, and to leverage resources in carrying out safety strategies. The plan will include data from the South Dakota DPS. One challenge the traffic safety program faces is acquiring accurate data for both North Dakota and South Dakota; Tribal police do not always communicate or distinguish crash reports between states. The following are projects and goals for the existing safety programs on the SRST reservation:



- Develop electronic crash records system
- Conduct Road Safety Audits (RSA) on BIA routes



- Implement the seat belt law as a primary law on the reservation, do more community outreach and Public Service Announcements (PSA)
- Provide car seats and bike helmets to the community
- Build pathways in Fort Yates (the Bullhead and Cannon Ball Pathway Project), originally scheduled to start in 2014 but the project was pushed back to begin and finish in 2015.

The traffic safety program has applied for Tribal Transportation Program (TTP) safety funds for building pathways and developing culturally relevant posters, banners, and billboards for a Safety education campaign. Safety issues that have been identified include animal crashes (deer and pheasants), lack of seat belt use, alcohol involvement, fixed objects such as signs, narrow roads, speeding, and distracted driving. There has also been an increase of accidents involving all-terrain vehicles (ATVs). To mitigate areas of concern, the program will use the following strategies:

- Develop and provide more educational materials for the community and schools
- Implement Traffic and Criminal Software (TraCS) System for crash records
- Hire a new Traffic Safety Officer
- Work on developing cross jurisdictional agreements
- Improve 911 addressing and response time.

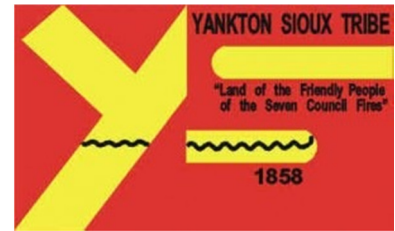
RSI-2330-14-034



**Figure 2-7.** Ms. Leah Fool Bear Presented the Standing Rock Sioux Tribe’s Success Stories.

## 2.9 YANKTON SIOUX TRIBE

Mr. Wesley Hare, Jr., Yankton Sioux Tribe (YST) Director of Transportation Planning, discussed the YST safety program (Figure 2-8). Funds were received in the amount of \$12,000 and the Tribe contributed \$47,000 enabling the safety program to start in April 2014 and to hire a director for the program. The new safety program director is Ms. Trisha Brown Bear. Currents efforts as part of the new safety program are as follows:



- The safety program purchased 100 car seats and toddler seats to provide to the community. Three car seat giveaways were done in three different communities. The program plans to buy more car seats in the future.
- The Tribe's safety plan was written and will continue to be updated as the program proceeds.
- A new transportation building for the safety program was constructed in Marty, South Dakota; additionally, Indian Health Service (IHS) provided an office for the safety program director at the hospital.
- The program has coordinated events between Tribal police and elementary schools, introducing the kids to the Tribal police. Discussion topics include bicycle and pedestrian safety.
- The transportation planning department recently completed a third year of sponsoring the safety poster contest for the middle school; 61 kids participated. This year's topic was distracted driving.
- A mile and a half of frequently used highway into Marty, South Dakota, which was full of potholes, was repaired.
- The program plans to advertise transportation safety on the local radio station out of Lake Andes, South Dakota.
- A transportation safety booth was set up during the YST pow wow. The program received back 165 of the 200 surveys handed out. The survey asked questions about safety, transit, and other Tribal programs. The program is trying to develop projects based on the input received from the community.
- Develop a comprehensive drug policy for all Tribal programs and train an individual to perform the drug test. This can save the Tribe money on sending tests out for analysis.
- The transportation planning department will continually review and update the emergency plan.



**Figure 2-8.** Mr. Wesley Hare, Jr. Presented the Yankton Sioux Tribe's Best Practices and Successes.

# 3.0 PRESENTATIONS

State, federal, and nonprofit agencies and organizations presented information and resources available to Tribes based on recommendations from the 4th Annual Summit. Copies of the presentation and handouts are included in Appendix C and Appendix D, respectively. This Chapter describes the presentations by the SDDOT, FHWA, SDHP, Lawrence & Schiller Advertising, BIA, and the SWO. It also includes luncheon remarks from the SDDOT Transportation Advisory Council (TAC).

## 3.1 SIGNING AND OTHER PROACTIVE SAFETY MEASURES

Mr. Doug Kinniburgh, SDDOT Local Government Engineer, discussed Signing and other proactive safety measures, focusing on fatalities because of signing needs (Figure 3-1). As of January 17, 2013, all post-mounted sign and object marker supports within a clear zone should have been updated to be crashworthy. The latest edition of the *Manual on Uniform Traffic Control Devices* (2009) can be found online (<http://mutcd.fhwa.dot.gov>). A clear zone is an unobstructed, relatively flat area beyond the edge of the traveled way that allows a driver to stop safely or regain control of a vehicle that leaves the traveled way. A clear zone is evaluated based on the number of crashes and the speed limit in a given area. Many state and interstate systems use a clear zone of 30 feet. For less traveled roads, a clear zone of 10 feet is used. Crashworthy means the sign support has met the test and evaluation criteria of the *National Cooperative Highway Research Program (NCHRP) Report 350* or *Manual for Assessing Safety Hardware (MASH)* and/or have received a “letter of acceptance” from the FHWA. Examples of sign supports that are not crashworthy are:

- If a car hits a post, the post should give way; otherwise, if the post stub sticks up out of the ground then it may catch the undercarriage of the vehicle.
- Fixed objects, such as mailboxes, that are in a line along one side of the road (containing more than two) can be hazardous.
- Because of wind and sign footing, some posts contain “kicker braces.” Many along the road are not crashworthy, because they will not allow the sign to break away in the event of a crash.

Mr. Kinniburgh also discussed countywide signing projects. These projects are funded 100 percent by federal safety funds which results in no cost to local governments. Although the program lost approximately \$1.5 million of funding last year, there is still approximately \$4.5 million to perform projects each year (this allocation funds approximately four to six countywide projects). Requests for a signing project are evaluated based on need and risk. Everyone is encouraged to submit an application for the signing program, even if your Tribe has just completed signing. Tribes are treated as local entities and will be contacted to participate when the program is working within their counties. Any information a Tribe can provide when submitting an application is reviewed. The program aids in developing an inventory of signs as well as reviewing signing needs.





**Figure 3-1.** Mr. Doug Kinniburgh Presenting on Signing.

## 3.2 TRAFFIC CALMING

Mr. Jim Allen, FHWA Resource Center, presented on traffic calming (Figure 3-2). According to the Institute of Transportation Engineers (ITE), traffic calming is defined as the combination of physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for nonmotorized street users. The question that Mr. Allen posed, as it related to traffic calming, is how do we plan for pedestrians? One way is to consider speeding. When there is a crash, even though there is no radar lock on the speed, it is evident that one vehicle was driving too fast for the conditions. The following include some consequences of excessive speeding:

- Loss of vehicle control
- Reduced effectiveness of occupant protection equipment
- Increased stopping distance
- Increased degree of crash severity
- Unexpected economic and psychological implications
- Increased fuel consumption and cost.

Mr. Allen emphasized the importance of a Speed Management Program as well as a Tribal Safety Program. Both programs can aid in addressing common safety issues experienced on Tribal roads. Tribal roads can be a challenge as they are rural in nature. Fatality rates are 2.3 times higher in rural areas versus urban areas. Unpaved roads can also be a challenge because they are more prone to cause injury and fatalities than paved roads. Note that when developing the statewide *South Dakota Strategic Highway Safety Plan*, all crashes from 2007 through 2011 were reviewed. There were 945 fatal and serious crashes reported on county and township roads. Of these, 62 percent occurred on the 12 percent of the system that is paved (per mile, 14 times more crashes occurred on paved roads than on gravel county and township roads).

The following are some common safety issues:

- User behavior on and offroad (aggressive driving, impaired driving, walking, biking, not wearing seat belts, inattention, and disobeying the rules of the road)
- Roadway (cross sections, alignment, signs, markings, and roadside)
- Weather and environment (rain, snow, sleet, ice, fog, wind, and sun)
- Vehicle (interactions between the various types of vehicles, performance, and maintenance)
- Nonmotorized (bicycles and pedestrians).

A speed management program should encompass the four Es. The four basic steps in a speed management program are:

- Identify Speeding Issues and Determine Partner Agencies: collect data, assess the speed limit, and determine if speeds are excessive
- Identify Countermeasures: pavement speed limit marking, advisory speeds, speed-activated signs, optical speed bars, reduced lane width, road diet, center island, roundabout, speed hump, speed table, traffic circle, rumble strips, barrier delineation, extension lines, chevron and large arrows
- Implement Countermeasures: seek support, prioritization of countermeasures, identify funding sources, and implementing pilot projects
- Evaluate Projects and/or Programs.

South Dakota State speeds limits are typically 65 mph on state and county roads and 55 mph on township roads. A tool called USLIMITS2 found online (<http://safety.fhwa.dot.gov/uslimits/>) can assist in determining proper speed limits. Another source to aid Tribes in developing a speed management plan is a manual called “Developing Safety Plans: A Manual for Local Rural Road Owners,” which can be found online at ([safety.fhwa.dot.gov/local\\_rural/training/fhwasa12017](http://safety.fhwa.dot.gov/local_rural/training/fhwasa12017)).

RSI-2330-14-037



**Figure 3-2. Mr. Jim Allen Discussing Traffic Calming.**

### 3.3 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION ADVISORY COUNCIL

Mr. Wesley Allen Hare, Jr., YST, and Mr. Doug Kinniburgh, SDDOT, provided an update on the SDDOT TAC (Figure 3-3). The TAC charter was adopted August 12, 2014. Mr. Hare, Jr. is the Tribal representative on the TAC. The Charter outlines the following:

- Established goals for the TAC
- Defined member roles and responsibilities
- Identified TAC membership and length of terms
- Set meeting location and frequency.

The overall goal of the TAC is to aid in breaking down barriers and getting rid of the “yours and mine” attitude. Membership consists of voting and non-voting members, and rotates membership every two years. The TAC works from a list of projects; the committee picked the top five to focus on initially, but once a project is addressed, the committee will move onto the other suggested projects. The next meeting is a video conference scheduled for November 12, 2014.

RSI-2330-14-038



**Figure 3-3.** Mr. Wesley Hare Jr. and Mr. Doug Kinniburgh During the South Dakota Department of Transportation Advisory Council Presentation.

### 3.4 MOTOR CARRIER SAFETY ISSUES

Captain John Broers, SDHP Motor Carrier, discussed Motor Carrier Safety Issues (Figure 3-4). The SDHP Motor Carrier Services have four ports of Entry located in Sisseton, Jefferson, Tilford, and Sioux Falls, eight Mobile Teams who set up all over the state, and six troopers dedicated solely to Motor carriers. Motor Carrier services focuses on three main areas:

- Driver and Vehicle Inspections: SDHP performs three levels of inspection, the first level is inspection of the truck and driver (everything), second level is inspection of everything but the brakes, and the third level is inspection of just the driver. Some carriers are selected for inspection while others are chosen randomly. If a carrier company has a record of violations and poor safety rating, they are most often selected for inspection.
- Size and Weight Enforcement: SDHP spends a lot of time on this area. Motor carriers pass over scales and are often weighed twice.
- Permitting: all the Port of Entries are also permitting centers.

The majority of crashes that involve a commercial motor vehicle (CMV) are caused by the actions of non CMVs. Statistics show that CMVs are more limited in their speeds and often cause issues in how non CMVs interact while driving along side or behind CMVs. The remaining violations are made up mainly from CMV driver behavior (exhaustion). In South Dakota, there is not a particular location that can be cited as a bad area for CMV crashes. Traffic volume and weather are the biggest contributors. In general, because of the rural nature of South Dakota, the state's crash rate is low.

The SDHP do write permits for oversize loads; numerous houses, barns, and sheds get hauled across the state. A motor carrier only gets an oversize load permit if their load cannot be reduced or broken down further. The SDHP have found that the more axels and tires that are beneath an oversize load, the less impact you see on the road. The SDHP knows that crashes are inevitable, but preventative measures are used when it comes to oversize load trucks. The SDHP ensure oversize loads are only routed on roads that can handle the impact. BIA and county roads are not in the SDHP system.

The SDHP welcomes opportunities to discuss motor carrier services with companies; they are happy to attend conferences or meetings to help companies that want help. The SDHP can provide trainings on log books, inspections, trucking enforcement, and regulations. The SDHP will work with the Tribe to ensure no jurisdiction issues with the Tribe and their members (SDHP have jurisdiction over nonmembers and the Tribal police have jurisdiction over Tribal members). Overall, the SDHP and the Tribes have the same goal of making the roads safe.

RSI-2330-14-039



**Figure 3-4. Captain John Broers Presenting on Motor Carrier Safety Issues.**



### 3.5 AD TIPS FOR SAFETY MESSAGES/EDUCATION EFFORTS

Mr. Micah Aberson, Mr. Scott Whickman, and Ms. Jody Stall, Lawrence & Schiller, gave a presentation on how to effectively advertise for safety messages/education efforts (Figure 3-5). They discussed principles of messaging, category expected/unexpected advertising, and provided creative samples. They also requested input from the Tribal attendees for their perspective on Tribal advertising. Mr. Aberson described advertising as trying to tell someone something, then getting them to feel something, and finally getting them to do something. Mr. Whickman explained the three Tiers of advertising, which include:

- Tier 1: The messaging goal is awareness and intrigue; what should the audience feel
- Tier 2: The messaging goal is awareness, intrigue, and interest; why should the audience feel this way
- Tier 3: The messaging goal is confirmation; make the audience an offer.

Next, Ms. Stall discussed what is meant by category expected/unexpected advertising. Category expected advertising is using what any audience would think of when they think of a particular topic. For example, if you were advertising fast food, one of the items an audience might expect to see in a fast food commercial is someone eating burgers and fries. Ms. Stall stated that sometimes you can advertise a product in an unexpected way and leave the audience with the impression of the product or message you are advertising, for example, an image of fries as a crosswalk on the street.

Finally, Mr. Aberson shared that when you advertise for highway safety, you are trying to change a behavior, connect emotionally, and appeal to common sense. Mr. Aberson then provided examples of several campaigns that the Lawrence & Schiller Company worked on with the DPS. Some of these campaigns included:

- 100 Days of Heat: keep dangerous drivers off South Dakota roadways from Memorial Day through Labor Day
- Marked for Life: reach South Dakotans under 21 with a message about underage drinking.
- Someone Needs You: remind South Dakota drivers that the decision to wear a seatbelt affects more than just one person.
- #WHYIBUCKLE: reach South Dakota teens, who view seat belts as uncool and freedom-restricting, that the decision to buckle up affects more than just one person.
- Where it Didn't Happen: motorcycle rider education and general motorcycle awareness
- Texting and Driving: educate South Dakota drivers on the dangers of texting and driving
- Don't Go It Alone: boost awareness of the risks of drinking and driving in rural areas.

One way to measure the success of these campaigns is to look at the number of crashes and fatalities during a specific timeframe, or do a seatbelt survey. It is difficult to quantify the effectiveness of advertising, whether it is expected category advertising or unexpected category advertising. It is important to know your audience, know what they want and provide them a way to get what they want.

Different mediums could be used to help reach a specific audience, such as local radio, local print, or social media. Sometimes by narrowing your goal, you can be more successful in reaching your intended audience.

RSI-2330-14-040



**Figure 3-5.** Mr. Micah Aberson and Mr. Scott Whickman During the Ad Tips for Safety Messages Presentation.

## 3.6 ACCESS MANAGEMENT

Ms. Brooke White and Mr. Dan Staton, SDDOT, presented on Access Management by providing a basic understanding of its concepts and applications (Figure 3-6). Access management is the process of providing access to residences and businesses along a roadway, while trying to preserve the safety and efficiency on the road. The task of the SDDOT is to find the right balance of access, safety and efficiency for each roadway. There are four situations in which to apply access management, those are:

- **Strategic Planning:** land development ordinances, site plan review ordinances, comprehensive plans, and South Dakota platting law
- **Functional Planning:** transportation plans, land use planning, local design standards
- **Design:** design considerations, techniques, new versus retrofit, guidance
- **Permitting Activities:** local and state.

Strategic planning efforts set the direction for all activities. Access management can also be implemented through functional planning, for example, the planning organizations in Sioux Falls and Rapid City produce a long-range transportation plan which provides more detail on access management objectives than are provided during strategic planning. Design is the “nuts and bolts” of access management. Through historical research, it has been shown that the highest propensity of crashes occurs when a driver is making a left-hand turn. Design considerations should be made to reduce or

eliminate this movement. Finally, one of the main ways that access management is implemented is through consideration of permits for access to the transportation system. These permits are finalizing decisions that were made as part of the site plan review during project planning.

Access management produces three main benefits. First, access management reduces the number, severity, and cost of access-related accidents. Second, access management can limit the number and location of accesses which can help keep traffic flowing. Third, good traffic flow can result in a more attractive business corridor which correlates to economic development. All modes of transportation can be impacted by access management. There is a lot more attention today on rebuilding roads to provide for bicyclists. Mr. Staton then shared some examples of access management in South Dakota. Examples included the following:

- SD44 (Jackson Boulevard) in Rapid City
- US18 in Pine Ridge
- SD 63 in Parmelee
- SD44 (Campbell Street) in Rapid City
- I90 Exit 61 in Rapid City
- Highway 10 in Sisseton.

SDDOT Access Management offered to share knowledge with Tribal departments who would like their assistance. If there is an area of concern for your Tribal department, contact a local area engineer because they can review the issue and provide feedback.

RSI-2330-14-041



**Figure 3-6.** Ms. Brooke White Presented on Access Management.

### 3.7 NEWS FROM THE BUREAU OF INDIAN AFFAIRS

Mr. Tom Croymans, BIA Regional Roads Engineer, provided an update from the BIA. There are 12 BIA regions across the country and 12 agencies within the Great Plains region. Mr. Croymans has worked for the BIA for 25 years and observed that Tribes have taken more of a leadership role in their transportation programs. The Summit only adds value to the Tribes' efforts and all others involved in transportation safety. From Mr. Croymans' experience, the SDDOT has set the bar high in developing working relationships with the Tribes.

Mr. Croymans discussed Tribal Transportation Program Safety Funds (TTPSF) for fiscal years (FY) 2014 and 2015, and stated that there is a draft speed bump policy being implemented in the future. The safety program is administered at the National level and the BIA gets two percent off the top for safety funds. Total fund requests within the Great Plains region for 2014 reached \$27 million. Currently, there is approximately \$8.5 million available. The current target date for announcing safety fund awards for FY2014 is the end of November. There are no proposed changes to the safety program, therefore funding for FY2015 will likely be similar to FY2014. The rating scheme and funding goals will be the same, but the Tribes will have 60 days versus 45 days to get the application submitted. Application scores will be better overall with more data provided. Scoring criteria percentages are broken down as follows:

- 40 percent safety planning activities
- 30 percent engineering
- 20 percent enforcement and emergency services
- 10 percent education.

The emphasis for funds is on Tribal Safety Plans; the transportation program would like to see all Tribes develop safety plans. While writing safety plans, make sure to include documentation and data to support projects. The BIA realizes that some Tribes have their safety plans implemented, while others are in the process of developing their plans. The following are some suggestions the BIA has for implementing safety plans:

- **Identify a Champion:** this does not have to be a planner, but someone with an interest in the plan, who will not allow it to sit on a shelf.
- **Project Development:** define your projects and identify all the characteristics. Consultants or the BIA can help in this but there may be other sources through SDDOT or FHWA.
- **Funding:** research and develop funding sources. Examples are Section 402 of the State and Community Highway Safety Grant Program or the Highway Safety Improvement Program.

Tribes can sustain their safety plans by monitoring progress of the plan, reviewing the plan periodically, and keeping the plan relevant. If progress is not measured then it really has not been made. Make sure your programs record progress and show the effectiveness of the plans. Safety plans should be a living document, as conditions change such as traffic patterns, economic conditions, and demographics revise the plan accordingly. Make sure to also tie the implementation and sustainment of



the safety plan back into the BIA scoring criteria/emphasis areas (engineering, education, and enforcement). Diagrams can go a long way in presenting this information.

Installation of speed bumps has been a topic that Tribes have asked about but the BIA has not had a policy to address them. Therefore, a draft speed bump policy was drafted and is currently being reviewed with plans to distribute to all Tribal planners for comment. The draft policy is recommending no speed bumps on the BIA system. Speed bumps can cause damage to cars and can be a liability to the SDDOT and the Tribes, although they have been known to benefit some areas such as hospitals and schools. The review process is looking to distribute the draft policy by November 1, 2014, and will have a published policy by mid-January.

RSI-2330-14-042



**Figure 3-7.** Mr. Tom Croymans Providing an Update From the Bureau of Indian Affairs.

### **3.8 INJURY PREVENTION AND LAW ENFORCEMENT**

SWO Chief of Police, Mr. Gary Gaikowski, presented on injury prevention and law enforcement (Figure 3-8). The SWO Tribal police have on staff 12 officers, five jailers, and one administrator. The jail contains 26 beds. The land base for the SWO is approximately 91 square miles with land ownership being “checkerboard,” meaning that trust lands, fee lands, and lands owned by Tribes, individual Indians and non-Indians are mixed together on the reservation

Because of a rapid increase in fatalities, the SWO Tribal police obtained funds through a grant and started the intervention prevention program. The main focus for the program has been enforcing laws to reduce Driving Under the Influence (DUI). The Tribal police recognize that 90 percent of crimes on their reservation are alcohol related. They are administering more checkpoints to enforce seatbelt and DUI laws. Data from these checkpoints is being logged so that the program can get additional funds to pay for more equipment and trainings for staff. It can be difficult to collect data because the Tribal police data system is out of date and a lot of data is logged by hand. The Tribal police and the injury prevention program have worked together on updating the Tribe’s DUI law and the child safety seat law. Child seat usage went from 30 percent in 2007 to as high as 70 percent and then back down to

50 percent in 2014; the Tribal police know that usage can fluctuate but they work towards continually increasing in seat belt and child seat usage. Traffic arrests have increased by 300 in the last year compared to previous years. In addition, the SWO Tribal police are working on the following efforts:

- **Community Outreach.** The SWO Tribal police are visiting schools (ranging from head start to high school) to raise awareness on seat belts and drunk driving.
- **Partnerships.** SWO Tribal police partnered with Mr. Cliff Eberhardt on a safety grant for implementing enforcement and education. There are several resources available for Tribal law enforcement to work with their transportation programs. The Tribal police have been developing working relationships with the state, counties, and other law enforcement. They currently have a MOU with state law enforcement to help with coverage on the reservation.
- **Data Collection System.** The SWO Tribal police and the transportation program are working towards getting software to aid in data collection.
- **Grant Opportunities.** The injury prevention program and Tribal police have an Indian Highway Safety Grant, which helps pay for staff and overtime. Other grants provide funds for equipment and billboards. The Injury Prevention Program can partner with IHS to help get equipment for law enforcement. Make sure to write Tribal law enforcement in as partners when writing grants.

RSI-2330-14-043



**Figure 3-8.** Sisseton Wahpeton Oyate Chief of Police Gary Gaikowski Presented on Injury Prevention and Law Enforcement.

### 3.9 STRATEGIC HIGHWAY SAFETY PLAN

Mr. Andy Vandel, SDDOT Highway Safety Engineer, presented on the SD Strategic Highway Safety Plan (SHSP) (Figure 3-9). The development of South Dakota's 2014 SHSP addressed the following key considerations:

- Establish a common mission, vision, and goal for all traffic safety partners in South Dakota
- Follow a transparent process, incorporate input from safety partners representing state, local, and private safety advocacy groups throughout the process
- Follow a comprehensive process that considers all users on all roads
- Use data-driven process based on detailed crash statistics to identify the primary factors contributing to fatal and serious injury crashes
- Identify priority areas and countermeasures to address crash factors
- Develop an SHSP which guides future safety investments and integrates other safety partners' plans
- Describe performance measures and the evaluation process for implemented safety initiatives
- Make the SHSP readily available to the public
- Maintain consistency with federal guidance contained in MAP-21.

SDDOT and statewide safety partners will implement the SHSP through a data-driven safety planning process that stresses the four E's of roadway safety. The purpose behind data analysis is to find out where are all the crashes happening and what are the primary contributors. Crashes are attributed to either driver behavior related crashes or roadway related crashes. The state analyzes crashes on the state system, county and township roads, and city streets. "Crash Tree" diagrams are a good tool used in the SHSP to identify all reported crashes. The South Dakota SHSP has identified safety emphasis areas based on analysis of available safety data and input from safety partners. These emphasis areas include:

- Roadway departure
- Intersections
- Motorcycles
- Unbelted vehicle occupants
- Speeding-related
- Drug and alcohol related
- Young drivers.

South Dakota SHSP will be implemented through the four Es, project planning partnerships, and research and data. Performance measures will show how successful the state is being with implementation strategies. As goals are met, funds and efforts are shifted to other areas of need. Even though South Dakota has crash-related fatalities, the number of fatalities is reasonable low compared to other states. The State's SHSP may be used as a guide for Tribal safety plans. They should use the data that the state has already analyzed to supplement other plans. The SD SHSP can be found online (<http://www.sddot.com/transportation/highways/traffic/safety/docs/FinalSHSP.pdf>).



**Figure 3-9.** Mr. Andy Vandel During his Presentation of the South Dakota Strategic Highway Safety Plan.



## 4.0 MEETING SUMMARY AND CONCLUSIONS

Participants in the Summit were encouraged to continue to collaborate and create partnerships as a means to grow and strengthen their programs and to look for other opportunities to share, be creative, and to be advocates of transportation safety on American Indian reservations by taking advantage of the resources available to them.

The first Tribal Transportation Safety Summit was held in 2010 in Lower Brule, South Dakota, and had 30 participants. Major issues that year included funding and using American Recovery and Reinvestment Act (ARRA) funds for roadway improvements. Several Tribes shared the current conditions of their roads. In 2011, the 2nd Annual Summit was held in Flandreau, South Dakota, and had approximately 50 participants. Major issues that year were construction, maintenance, and safer driving behaviors. In 2012, the 3rd Annual Summit was held in Rosebud, South Dakota, and had 80 participants. The issues focused on technology, the tools available to Tribes, and effective traffic safety programs. The 4th Annual Summit grew to nearly 100 participants with presentations topics on transit safety, Tribal tourism, and motor carrier safety. This year's Summit (5th Annual) had approximately 60 participants. Presentation topics included signing and other proactive safety measures, traffic calming, motor carrier safety issues, ad tips for safety messages/education efforts, access management, and injury prevention.

Ms. June Hansen, SDDOT, moderated the discussion for future recommendations of discussion topics and goals to accomplish by the 6th Annual Summit or in coming years. Discussion topics for the 6th Annual Summit included the following recommendations and goals:

- **Enforcement:** involve all the tribal law enforcement and traffic safety officers
- **Snow Removal and Maintenance:** safety practices in winter
- **Transportation Safety Plan Workshop:** what has been successful?
- **Emergency Services:** safety issues should be addressed that are not apparent?
- **Roundabout Training.**

The 6th Annual Summit will be held in October 2015 and hosted by the Standing Rock Sioux Tribe at the Grand River Casino and Hotel in Mobridge, South Dakota. All Summit reports can be downloaded from the SDDOT website ([www.sddot.com/services/civil/tero.aspx](http://www.sddot.com/services/civil/tero.aspx)).

## 5.0 REFERENCES

**South Dakota Department of Tribal Relations, 2012.** "Map of Tribes in South Dakota," *sdtribalrelations.com*, accessed October 16, 2012, from <http://www.sdTribalrelations.com/mapTribes.aspx>

# APPENDIX A

## APPENDIX A

### AGENDA



**South Dakota Tribal Transportation Safety Summit Agenda**  
**October 15-16, 2014**  
**Dakota Sioux Casino & Hotel, Watertown, SD**

**October 15<sup>th</sup> (Wednesday)**

**7:30am - Registration Opens**

**8:30am - Welcome, Opening Prayer & Introductions**

**Moderator - DelRay German, SWO TERO Director**

**Welcome Remarks: SWO Representative, Mark Hoines  
(FHWA), & June Hansen (SDDOT)**

**9:00am - Sisseton-Wahpeton Oyate (SWO) Presentation**

**9:20am - Signing & Other Proactive Safety Measures**

**Presenter: Doug Kinniburgh (SDDOT)**

**10:05am - Break**

**10:25am - Rosebud Sioux Tribe (RST) Presentation**

**10:45am - Traffic Calming**

**Presenter: Jim Allen (FHWA)**

**11:30am - Cheyenne River Sioux Tribe (CRST) Presentation**

**11:50am -- Lunch hosted by SWO**

**SDDOT Transportation Advisory Council Information**

**Presenter: Wesley Allen Hare, Jr. (YST)**

**1:15pm - Crow Creek Sioux Tribe (CCST) Presentation**

**1:35pm - Motor Carrier Safety Issues**

**Presenter: Captain John Broers (SDHP - Motor Carrier)**

**2:35pm -- Standing Rock Sioux Tribe (SRST) Presentation**

**2:55pm - Break**

**3:15pm - Flandreau Santee Sioux Tribe (FSST) Presentation**



**South Dakota Tribal Transportation Safety Summit Agenda**  
**October 15-16, 2014**  
**Dakota Sioux Casino & Hotel, Watertown, SD**

**October 15<sup>th</sup> (Wednesday) Continued**

3:35pm - Ad Tips for Safety Messages/Education Efforts on Dangers of Texting & Driving  
Presenters: Micah Aberson, Lawrence & Schiller

4:55pm - Lower Brule Sioux Tribe (LBST) Presentation

5:15pm - Daily Wrap-Up & Announcements

6:00pm - Dinner hosted by SWO

---

**October 16<sup>th</sup> (Thursday)**

8:00am - Continental Breakfast Hosted by SWO

8:30am - Yankton Sioux Tribe (YST) Presentation

8:50am - Access Management  
Presenters: Dan Staton & Brooke White (SDDOT)

9:20am - News from the BIA  
Presenter: Tom Croymans (BIA)

9:40am - Oglala Sioux Tribe (OST) Presentation

10:00am -- Break

10:20am - - Injury Prevention & Law Enforcement  
Presenters: Gary Gaikowski & Shannon White (SWO)

11:20am - SD Strategic Highway Safety Plan  
Presenter: Andy Vandel (SDDOT)

11:45am - Summit Wrap-Up & Discussion of topics for 2015 Summit  
2015 Summit - Hosted by SRST at Grand River Casino & Hotel

11:55am - Closing Prayer & Closing Remarks



# APPENDIX B

## APPENDIX B SIGN-IN SHEETS

First Name	Last Name	Title	Tribe/Agency	Email	Telephone No.
Micah	Abersson	Vice President	Lawrence & Schiller	<i>micahaberson@l-s.com</i>	605.261.3701
Haifa	Abou Samra	Assistant Professor	University of South Dakota	<i>Haifa.abousamra@usd.edu</i>	605.357.1569
Jim	Allen	Safety Engineer	Federal Highway Administration	<i>jim.p.allen@dot.gov</i>	217.737.1253
Zane	Arpan	Roads Director	Cheyenne River Sioux Tribe		605.964.8715
Bryan	Bald Eagle	Great Plains Regional Office/Department of Transportation	Bureau of Indian Affairs	<i>bryan.baldeagle@bia.gov</i>	605.226.7645
Larry	Barker	Tractor Operator	Cheyenne River Sioux Tribe	<i>lawrence.barker@bia.gov</i>	605.245.2311
Kim	Beck	Committee Secretary	Rosebud Sioux Tribe	<i>rstsec@gwtc.net</i>	605.828.6138
Philip	Beck	Mechanic-Supervisor	Rosebud Sioux Tribe		605.747.2872
Deb	Brandlee	Region 4 Supervisor	South Dakota Department of Health	<i>deb.brandlee@state.sd.us</i>	605.881.7282
Matt	Brey	Engineering Supervisor	South Dakota Department of Transportation	<i>matt.brey@state.sd.us</i>	605.882.5166
John	Broers	Captain	South Dakota Highway Patrol	<i>john.broers@state.sd.us</i>	605.773.4578
Scott	Brummond	Highway Project Manager Tribal	Nebraska Department of Roads	<i>scott.brummond@nebraska.com</i>	402.375.7071
Doug	Coughlin	Lieutenant	South Dakota Highway Patrol	<i>doug.coughlin@state.sd.us</i>	605.626.2286
Thomas	Croymans	Regional Roads Engineer	Bureau of Indian Affairs, GPRO	<i>thomas.croymans@bia.gov</i>	605.226.7645
Jeff	DeVaney		South Dakota Highway Patrol, Department of Public Safety	<i>jeff.devaney@state.sd.us</i>	605.201.4372
Lynda	Douville	Tribal Planner	Rosebud Sioux Tribe	<i>ldouville@gwtc.net</i>	605.856.2944
Cliff	Eberhardt	Transportation Coordinator	Sisseton Wahpeton Oyate	<i>clifforde@swo-nsn.gov</i>	605.742.0432
Leah	Fool Bear	Administration	Standing Rock Sioux Tribe	<i>lfoolbear@standingrock.org</i>	701.854.8611
Nicole	Frankl	Director	Nebraska Local Transportation Assistance Program	<i>nfrankl2@unl.edu</i>	605.391.3715

First Name	Last Name	Title	Tribe/Agency	Email	Telephone No.
Gary	Gaikowski	Captain of Police	Sisseton Wahpeton Oyate	<i>gaikowski@hotmail.com</i>	605.698.7661
Craig	Genzlinger		Kadrman, Lee & Jackson	<i>craig.genzlinger@kljeng.com</i>	406.461.2222
DelRay	German	Tribal Employment Rights Office Director	Sisseton Wahpeton Oyate		605.698.3549
June	Hansen	Tribal Liaison	South Dakota Department of Transportation	<i>june.hansen@state.sd.us</i>	605.773.3540
Vonnie	Hare	Middle School Counselor	Yankton Sioux Tribe		605.384.2231
Wesley	Hare, Jr.	Transportation Director	Yankton Sioux Tribe	<i>wesleyaharej@yahoo.com</i>	605.384.5003
Roland	Hawk	Treasurer	Crow Creek Sioux Tribe	<i>rolandhawk@midstatesd.net</i>	605.730.4050
Mark	Hoines	Planning/Civil Right Specialist	Federal Highway Administration	<i>mark.loines@dot.gov</i>	605.776.1010
Jeannie	Hovland	Senator John Thune's Office	Flandreau Santee Sioux Tribe		605.334.9596
Greg	Ingemunson	Highway Safety—Law Enforcement Liaison	Department of Public Safety	<i>greg.ingemunson@state.sd.us</i>	605.787.4181
Sharon	Johnson	Safety, Traffic & ROW Engineering	Federal Highway Administration	<i>sharon.johnson@dot.gov</i>	605.776.1011
Terry	Keller	Environmental Manager	South Dakota Department of Transportation	<i>terry.keller@state.sd.us</i>	605.773.3721
Doug	Kinniburgh	Local Government Assistance Engineer	South Dakota Department of Transportation	<i>doug.kinniburgh@state.sd.us</i>	605.773.4284
Scott	Kuznicki	Consultant	Toxcel, LLC	<i>sk@midwestroads.com</i>	847.769.1098
Lana	Lambert	Transportation Analyst	South Dakota Department of Transportation	<i>lana.lambert@state.sd.us</i>	605.773.4336
Pauline	Long Feather	Transportation Planning Director	Standing Rock Sioux Tribe	<i>paulinelongfeather@standingrock.org</i>	701.854.8648
Jessica	Muxen	Engineer Consultant	RESPEC/Independent	<i>jjmuxen@gmail.com</i>	605.863.0928

First Name	Last Name	Title	Tribe/Agency	Email	Telephone No.
Leonard	Pease, Jr.	Vice Chairman	Crow Creek Sioux Tribe		
Bobbie Jo	Peltier	Injury Prevention Specialist	Indian Health Service	<i>bobbi.peltier@ihs.gov</i>	605.226.7589
Mark	Peterson	Operations Engineering	South Dakota Department of Transportation	<i>mark.peterson@state.sd.us</i>	605.606.7877
Cliff	Reuer	Technical Assistance Provider	South Dakota Local Transportation Assistance Program	<i>cliff.reuer@state.sd.us</i>	605.773.5108
Carol	Robertson	Economic Development Coordinator	Flandreau Santee Sioux Tribe	<i>carol.robertson@fsst.org</i>	605.997.3891
LaDonna	Rodvold	Constituent Services Representative	Congresswoman Kristi Noem	<i>ladonna.rodvold@mail.house.gov</i>	
Ron	Sherman	Watertown Area Engineer	South Dakota Department of Transportation	<i>rsherman@itetel.com</i>	605.882.5166
Jason	Shields	Tribal Employment Rights Office Director	Crow Creek Sioux Tribe	<i>ccst_tero@hotmail.com</i>	605.730.2232
Leroy	Sleeping Bear	Transportation Director	Rosebud Sioux Tribe	<i>rsttrans@ywtc.net</i>	605.747.2718
David	Spider	Construction Manager	Sisseton Wahpeton Oyate	<i>davids@swo-nsn.gov</i>	605.698.8232
Robert	Starr	Tribal Employment Rights Office Compliance Officer	Sisseton Wahpeton Oyate	<i>robertstarr@swo-nsn.gov</i>	605.698.3549
Dan	Staton	Access Management Engineer	South Dakota Department of Transportation	<i>Daniel.staton@state.sd.us</i>	605.381.3806
Andy	Vandel	Highway Safety	South Dakota Department of Transportation	<i>Andy.vandel@state.sd.us</i>	605.773.4421
Korey	Vrooman	Operating Manager	Cheyenne River Sioux Tribe	<i>koreyleefischer@yahoo.com</i>	605.964.6960
Brooke	White	AM Engineer	South Dakota Department of Transportation	<i>brooke.white@state.sd.us</i>	605.367.5680
Ron	Williams	Consultant	Kadrman, Lee & Jackson	<i>ron.williams@kljeng.com</i>	605.786.5918



NAME	TITLE	TRIBE/AGENCY	EMAIL	PHONE NUMBER
Korey Vrooman	Operations Manager	CRST	Koreyleefischer@yahoo.com	605-964-6960
Scott Brummond	Highway Project Manager Tribal Liaison	NDDR	scott.brummond@nebraska.com	402-375-7071
Cliff Eberhardt	Transportation Coordinator	SWO Sisseton Way	cliffordE@sw-nsn.gov	605 742 0432
Larry Barker	TRACTOR OPERATOR	CCST	Lawrence.Barker@tia.gov	605-245-2311
Brooke White	AM Engineer	SDDOT	brooke.white@state.sd.us	605.367.5680
Jim Allen	Safety Eng	FAWA RC	jim.palley@dot.gov	217-737-1253
Carol Robertson	Ec Dev Coord	FSST	carol.Robertson@fst.org	605-992-3891
Haifa A. Samn	Assent profum	USD	haifa.abousam@usd.edu	357-1569
Matt Brey	Engineering Supervisor	SDDOT	matt.brey@state.sd.us	882-5166
Ron Williams	CONSULTANT	KLJ	Ron.Williams@KLJENG.com	605-786-5918
SCOTT KVENICKI	CONSULTANT	TRXCEL, LLC	sik @ midwestroads.com	847-769-1098
Bobbi Jo Peltner	IP Specialist	IHS-	bobbi.peltner@ihs.gov	605-224-7598
Rob Weinmeister	Captain	SDHP	robert.weinmeister@state.sd.us	605-626-2280
Lynda Douville	FAWA/RST Planner	RST	ldouville@guifanet	605-856-2944
DelRay German	SwOTERO Director			605 698 3549
Jeannie Halverson	Sen Thune	FSST		



NAME	TITLE	TRIBE/AGENCY	EMAIL	PHONE NUMBER
Mark Peterson	Operations Eng	SDDOT-Aberdeen	Mark.Peterson@state.sd.us	606-7877
CLIFF REUER	TECHNICAL ASST PROVIDER	SD LTAP	CLIFF.REUER@STATE.SD.US	773-5108
Jessica Muxen	Engineer Consultant Independent	jjmuxe@gmail.com	605-863-0928	
Mark Hoines	Planning/Civil Rights Specialist FHWA	mark.hoines@dot.gov	605-776-1010	
Sharon Johnson	Safety/ROW Eng. FHWA	sharon.johnson@dot.gov	605-776-1011	
Nicde Frankl	Director	NE LTAP	nfrankl2@unl.edu	605-391-3715
DAVID SPIDER	SWO CONST MGR	SWO	DAVIDS@SWO-NSW.GOV	405-698-8232
Doug Kinniburgh	Local Government Engineer	SDDOT	doug.kinniburgh@state.sd.us	605-773-4284
June Hansen	Tribal Liaison	SDDOT	june.hansen@state.sd.us	605-773-3510
GREG INGEMUNSON	<del>DEPT</del> LEL	DEPT Public Safety	GREG.INGEMUNSON@STATE.SD.US	605-787-4181
JEFF DEVANEY	SDHP	DPS	jeff.devaney@state.sd.us	(605) 201-4372
Wesley Hare, Jr	Trans. Director	YST	wesley.harej@yhdco	384-3203
DAN STATON	ACCESS MANAGEMENT ENGINEER	SD DOT	daniel.staton@state.sd.us	381-2806
John Broers	SDHP - Captain	SDHP	john.broers@state.sd.us	773-4578
Leah Fob (Bear)	Adm/ Traffic Spt	SRST	lfob@bear@standingrock.org	701-854-8611
Jason Shields	C.E.S.T. T.E.R.O. Pinel	Orin Creek	ceest.tero@hotmail.com	(605) 730-2232



NAME	TITLE	TRIBE/AGENCY	EMAIL	PHONE NUMBER
Philip Beck	mechanic / supervisor	Rosebud Sioux Tribe		605-747-2872
AM Arpon	MANHATTAN	Cherokee Nation		605 968-5715
Doug Coughlin	Lieutenant	SD DOT	doug.coughlin@sd DOT gov	626.2282
LaDonna Rodwold	Constituent Services Rep	Congresswoman Kristi Noem	ladonna.rodwold@mail.house.gov	
Donard Tease	Vice Chair	CCST		
Andy Vandell	Highway Safety	SD DOT		773-4421
Kim Beck	Committee Sec	RST	rstsec@gute.net	828-6138
Chad GENZLINGER	Pross m (son)	KLJ	chad.genzlinger@kljens.com	406-461-2222
Tom Croyman	Regional Roads Eng	BIA GPRO	thomas.croyman@bia.gov	605-226-7645
Ron Sherman	Wtr. Area Eng	SD DOT	rsherman@itctel.com	605-882-5166



NAME	TITLE	TRIBE/AGENCY	EMAIL	PHONE NUMBER
Deb Brandlee	Region 4 Supervisor	DOH	deb.brandlee@state.sd.us	605-881-7282
Leroy Sleeping Bear	RST-Trans Director	Rosebud	rsttrans.@ywc.org	605-747-2718
Gary Galkowski	Captain of Police	SWO	galkowski@hotmail.com	698-7661
Terry Keller	DOT	DOT	terry.keller@state.sd.us	773-3721
Roland Hawk	CCST Treasurer	Crow Creek Sioux	rolandhawk@midstatesd.net	730-4050
Bryce Bulaen	BIA-DOT Planner	BIA	Bryan.Bald Eagle@bingo.org	605-226-7445
Lana Lambert	Transportation Analyst	SD DOT	Lana.Lambert@state.sd.us	605-773-7336
Robert Starr	Compliance Office	SWO TERO	rstarr.Robert Starr@SWO-nsn.gov	605-698-3549
Pauline Long Feather	Director Transp. Planning	SRST	pauline.longfeather@standingrock.org	701-854-8618
Vonnie Hare	MS Counselor	YST/MIS		
Micah Aberson	VP	LBS	micah.aberson@l-s.com	261-3701
Scott				
Jodi				
Korey Vrooman	Operations Manager	CRST	koreyleefischer@yahoo.com	605-964-6960
Carol Robertson	Exec Dir	FSSST	Carol.Robertson@fssst.org	605-997-3891

# APPENDIX C

## APPENDIX C PRESENTATIONS



## **APPENDIX C**

### **PRESENTATIONS**

Tribal Transportation Safety Summit, Mr. Tom Croymans, Bureau of Indian Affairs

2014 South Dakota Tribal Transportation Safety Summit Presentation, Cheyenne River Sioux Tribe Department of Transportation

2014 Crow Creek Pow Wow, Crow Creek Agency and South Dakota Highway Patrol

Highway Traffic Signs, Mr. Doug Kinniburgh, South Dakota Department of Transportation

Messaging for Safer Highways, South Dakota Office of Highway Safety and Lawrence & Schiller

5<sup>th</sup> Annual Tribal Transportation Safety Summit, Sisseton Wahpeton Oyate

Stakeholder Partnering, U.S. Department of Transportation, Federal Highway Administration

2014 Tribal Transportation Safety Summit, Ms. Leah Fool Bear, Standing Rock Transportation Planning & Development

Access Management Principles, Benefits, and Applications, South Dakota Department of Transportation

South Dakota Highway Patrol Motor Carrier Services

South Dakota Strategic Highway Safety Plan, Mr. Andy Vandel, South Dakota Department of Transportation

Traffic Calming and Speed Management, Mr. Jim Allen, Federal Highway Administration Resource Center

# TRIBAL TRANSPORTATION SAFETY SUMMIT

MR. TOM CROYMANS

BUREAU OF INDIAN AFFAIRS

# TRIBAL TRANSPORTATION SAFETY SUMMIT

Tom Croymans  
Regional Roads Engineer  
Bureau of Indian Affairs  
Great Plains Region

Dakota Sioux Casino  
2014 Annual Conference  
October 15-16  
Watertown, SD



# Agenda

- TTPSF FY14 Update
- FY15 TTPSF Program Funding
- Draft Speed Bump Policy
- Safety Plan Implementation and Sustainment



# FY 14 TTP Safety Program

- Available funds = \$8.5 mil
- Applications received = 126
- Target date for announcing awards
- Scoring Criteria
  - Planning
  - Engineering
  - Enforcement & Emergency
  - Education





# FY 15 TTP Safety Program

- Available funding
- FY15 NOFA



# Draft Speed Bump Policy

- Discuss “speed bumps” vs “speed humps”
- Approval procedures and installation guide
- Field review timelines



# Safety Plan Implementation

- Identify a Champion
  - Lead person or organization
- Project Development
  - Identify goals and parameters of project
  - Identify other stake holders
- Funding
  - Research and develop funding sources





# Safety Plan Sustainment

- Monitor Progress
  - Establish milestones
  - Record progress
- Review the Safety Plan
  - Look back to evaluate effectiveness of the plan
- Keep the Safety Plan Relevant
  - Measure effectiveness
  - Adjust for changing conditions
  - Regularly scheduled updates



EMPHASIS AREA			STRATEGIC LINKAGE			
Intersection Safety			Intersection safety was identified in the state-wide Strategic Highway Safety Plan as one of seven emphasis areas for the State			
OBJECTIVES			SUCCESS INDICATORS			
Reduce the frequency and severity of crashes at signalized and unsignalized intersections			A reduction in intersection crashes, particularly severe intersection crashes for the Town of Sylvia and in the surrounding areas.			
	Actions	Target Output	Organizations and Persons Responsible	Date of Completion	Performance Measures	Monitoring and Evaluation
Education	Public service announcements regarding dangers of red light running and stop sign violations	Awareness of the dangers of running red lights and stop signs	Ms. Naomi Fay with the Gazette is coordinating PSAs in paper and on radio station (WKAE)	Dec. 2012	Number of PSAs	Informal survey of public response planned for June public meeting
Enforcement	Enforcement blitz for high-crash intersections	Reduction in signal and stop sign violations	Chief W. McGee is organizing both blitzes and coordinating with Ms. Fay for media coverage	May and Sept. 2012	Number of tickets issued	Crashes in 2012 where red light running was cited compared to 2011
Engineering	Increase visibility by removing vegetation at intersections; place stop ahead pavement markings	Increased compliance of traffic control because of increased visibility	Mr. Haley with the county maintenance staff	Aug. 2012	Number of intersections improved	Number of intersection crashes in 2012 where sight distance was cited compared to 2011
EMS	Install emergency signal outside ambulance depot	Increased response time to intersection crashes	Mr. Luca Burton from County Public Works	Sept. 2012	Ambulance response time	Compare average response times to 2011 times

Figure 2.2: Emphasis Area Table.



# Thank You

## Contact Information

Tom Croymans

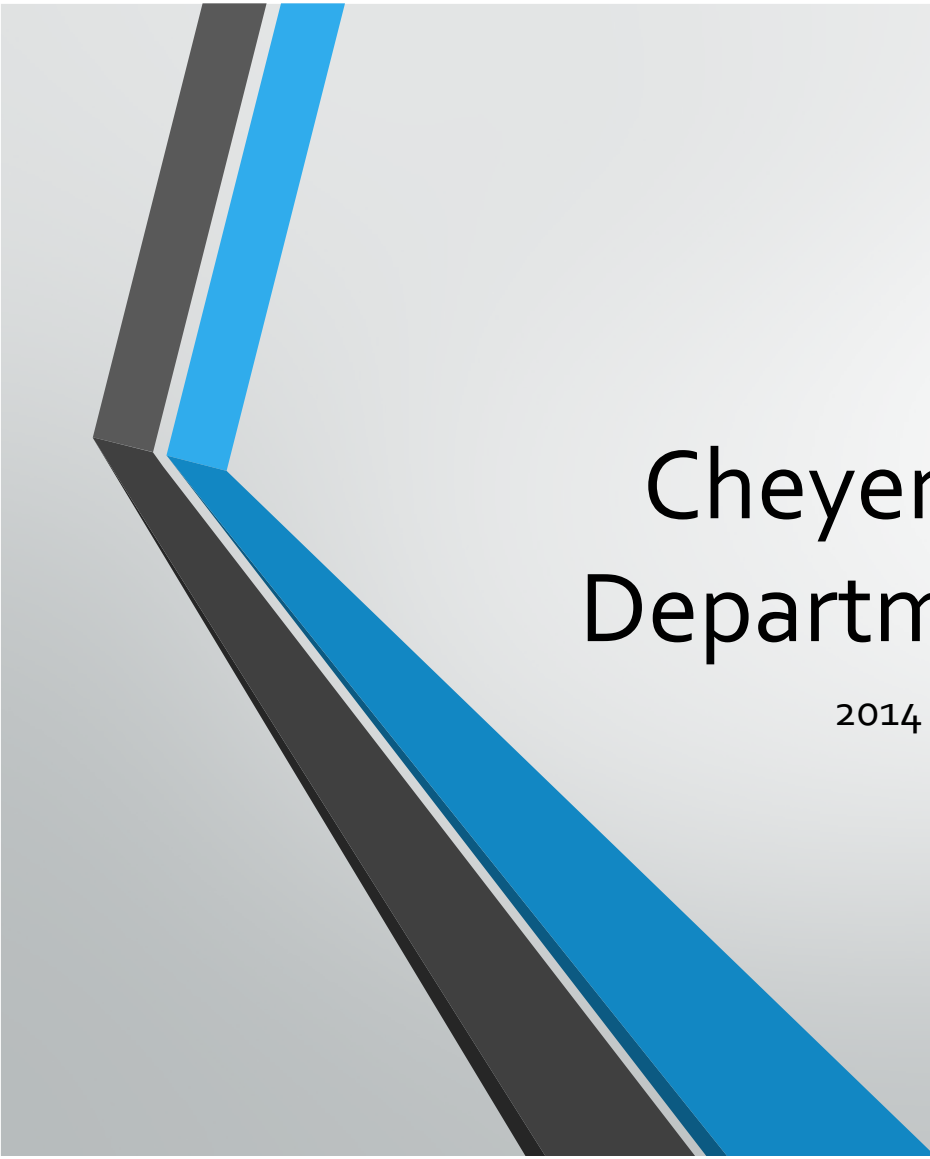
Regional Road Engineer– Great Plains Region

[thomas.croymans@bia.gov](mailto:thomas.croymans@bia.gov)

Work (605)226-7645

Cell (605)290-2539

2014 SOUTH DAKOTA TRIBAL TRANSPORTATION  
SAFETY SUMMIT PRESENTATION  
CHEYENNE RIVER SIOUX TRIBE  
DEPARTMENT OF TRANSPORTATION



# Cheyenne River Sioux Tribe Department of Transportation

2014 South Dakota Tribal Transportation Safety Summit  
Presentation





# Bridge Projects

- We have replaced three bridges that were failing. The bridges are Green Grass, Stove Creek, and LeBeau Creek.
- Veo Creek Bridge will also be replaced. We hope to start this project in the Spring of 2015.



# Gravel Crushing

- The Direct Contracting crew from our Department is crushing gravel.
- At the first site there was 70,000 ton crushed and we just moved to the second site.
- The gravel will be used to maintain gravel roads and keep the routes safe.



# Culverts

- We currently have several failing culverts.
- There are 700 culverts in our system at different levels of repair that need to be put on a schedule.
- We need to find out the utility of each culvert and place them in a system to see which ones need to be on the top of the list for replacement.



## Culverts Continued

- A.G.E will be doing the East Rousseau Culvert Replacement Project.
- FEMA funds will be used to replace a couple culverts as well.





## Sidewalks and Lighting

- Our Department has applied for the TAP grant to help widen some existing sidewalks and put in other needed pathways.
- We have received funds for lighting but only enough to cover the engineering cost and are in the process of figuring out the next step we want to take with the Pathway Lighting.



# Transit System

- River Cities Public Transit are the Sub-Contractors for our Transit System.
- They currently run around 10 buses.
- The average monthly cost is around \$80,000.00.



## Route 12

- Route 12 which is 14 miles long is in need of some work to provide a safer route. The plan is to mill it and see what we got and hopefully rotate enough gravel up so that the route will be safer and work properly.

2014 CROW CREEK POW WOW  
CROW CREEK AGENCY AND  
SOUTH DAKOTA HIGHWAY PATROL



2014 CROW CREEK POW WOW

Crow Creek Agency and South  
Dakota Patrol, once again unite to  
ensure a safe environment for  
everyone



KANGI OKUTE OYATE  
(CROW CREEK SIOUX TRIBE)

Crow Creek is located on the east bank of the Missouri River in central South Dakota in the United States. It has a land area of 422 square miles

Ft. Thompson is located adjacent to the Big Bend Dam, which holds back the waters of Lake Sharpe, one of the four Missouri River Main-stem reservoirs

CROW CREEK POINTS OF  
INTEREST

- Lode Star Casino and Hotel
- Lake Sharpe's fishing and boating
  - Big Bend Dam
- The Spirit of the Circle Monument: honors more than 1,300 people who died of malnutrition and exposure over a three-year period in the 1860s

TWO ARCHEOLOGICAL SITES  
DESIGNATED AS NATIONAL HISTORIC  
LANDMARKS

Fort Thompson Mounds is an archeological site  
with evidence of some of the first pottery  
makers on the plains.

The Crow Creek Massacre Site dates back to  
1325 AD

GOOD TIMES

Crow Creek Agency and the State Troopers  
always enjoy working together.

This team effort creates a safer environment  
for everyone

3 SMOKEY'S ???



LUNCH TIME – THANKS CHIEF  
SHIELDS AND STAFF









WHO'S THE NEW GUY?



HERE COMES THE PARADE



LET THE PARADE BEGIN



SDHP LEADS THE PARADE



ENJOYING THE ENTRIES





THE SCRAMBLE FOR CANDY



KIDS HIT JACKPOT



CANDY ALREADY BAGGED? CROW  
CREEK TAKES IT SERIOUS



PARTICIPANTS PASS ON  
TRADITIONS



GRAND ENTRY



GRAND ENTRY



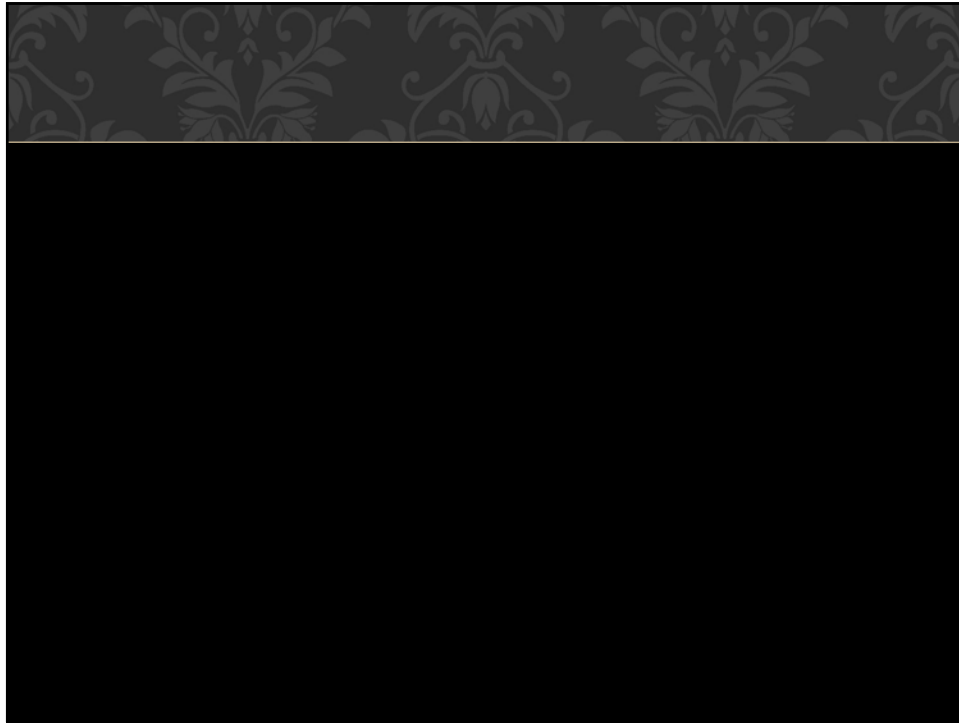
GRAND ENTRY



GRAND ENTRY







JINGLE DRESS DANCING



MORE DANCERS AND REGALIA



DANCE AND REGALIA





FLAG CEREMONY



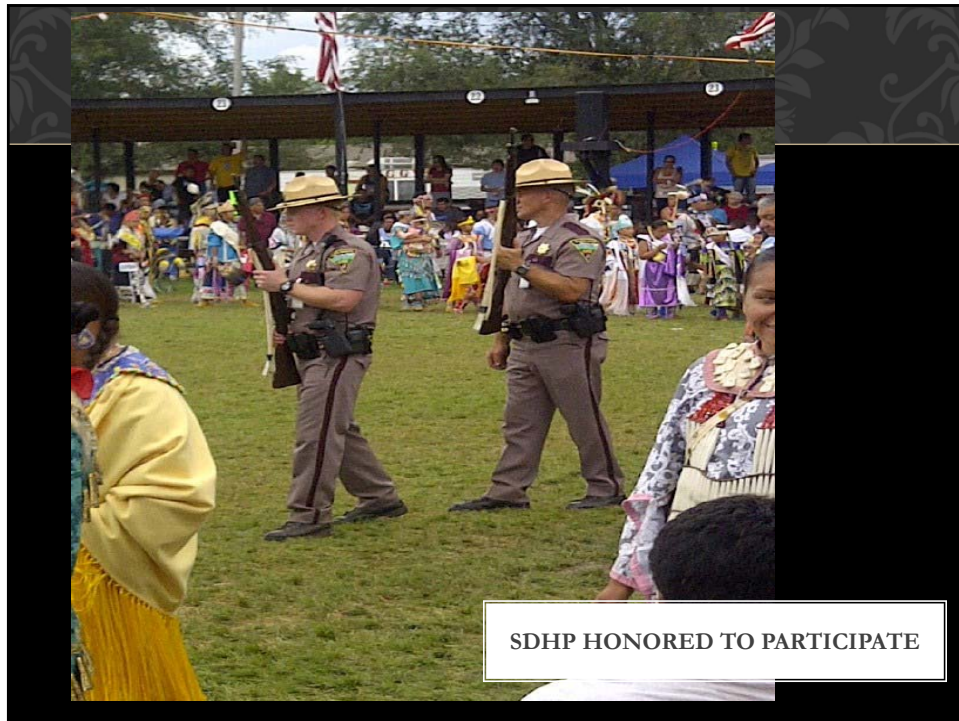
THESE CONGRESSIONAL MEDALS WERE GIVEN TO THE EDMOND ST. JOHN FAMILY AND THE CROW CREEK SIOUX TRIBE RECOGNIZING THE EFFORTS OF THE SIOUX INDIAN CODE TALKERS DURING WORLD WAR II.





PATRIOTISM RUNS DEEP AT  
CROW CREEK



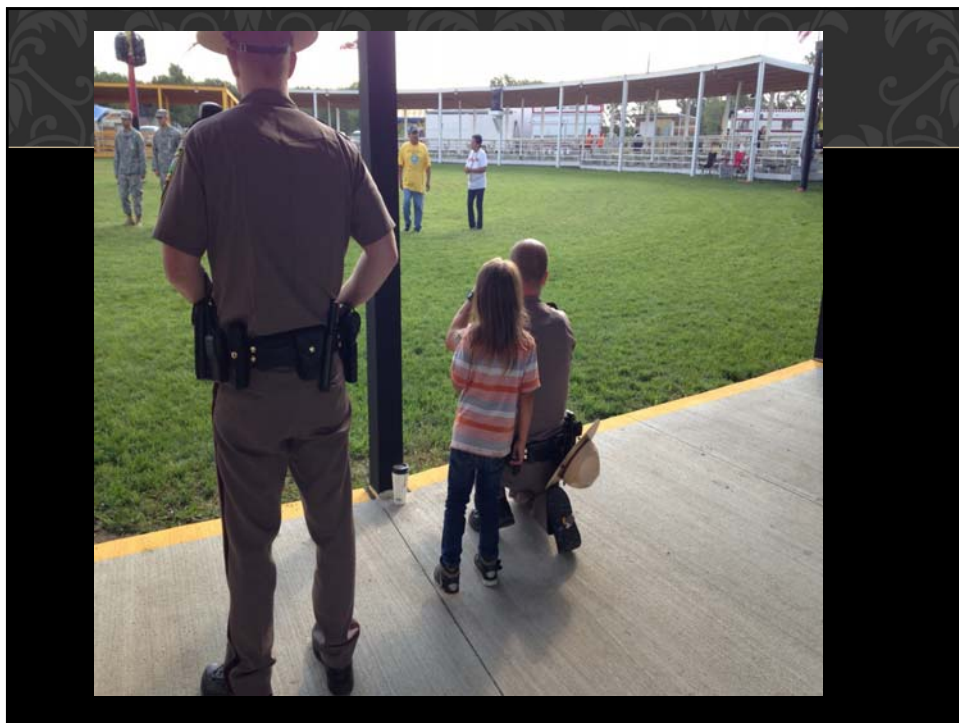
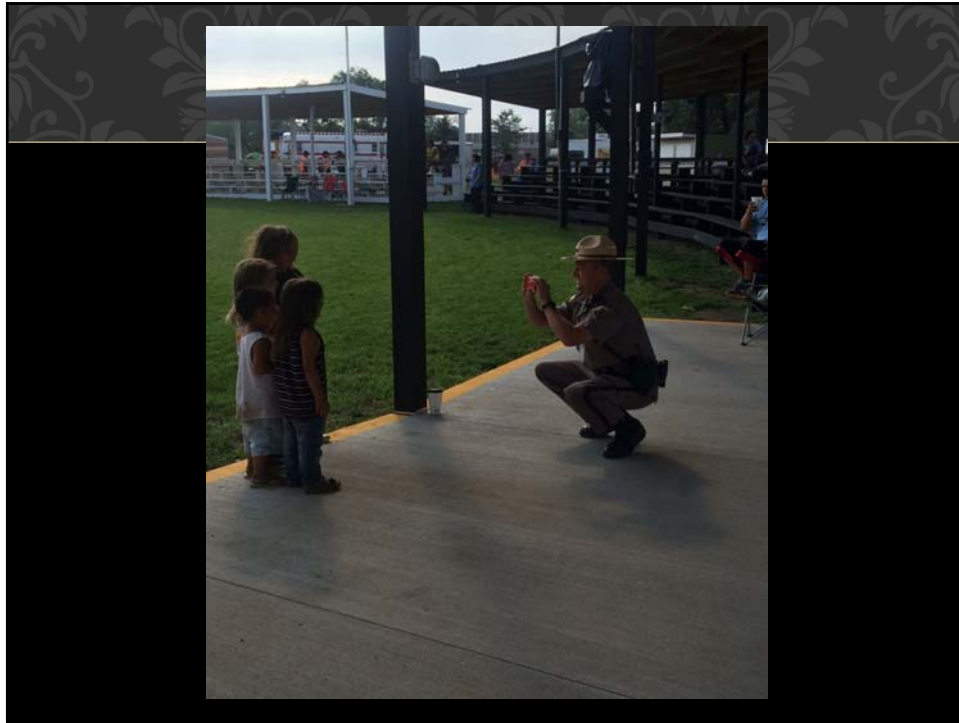




**TROOPER HOGAN GOING  
ABOVE AND BEYOND  
THE CALL OF DUTY**







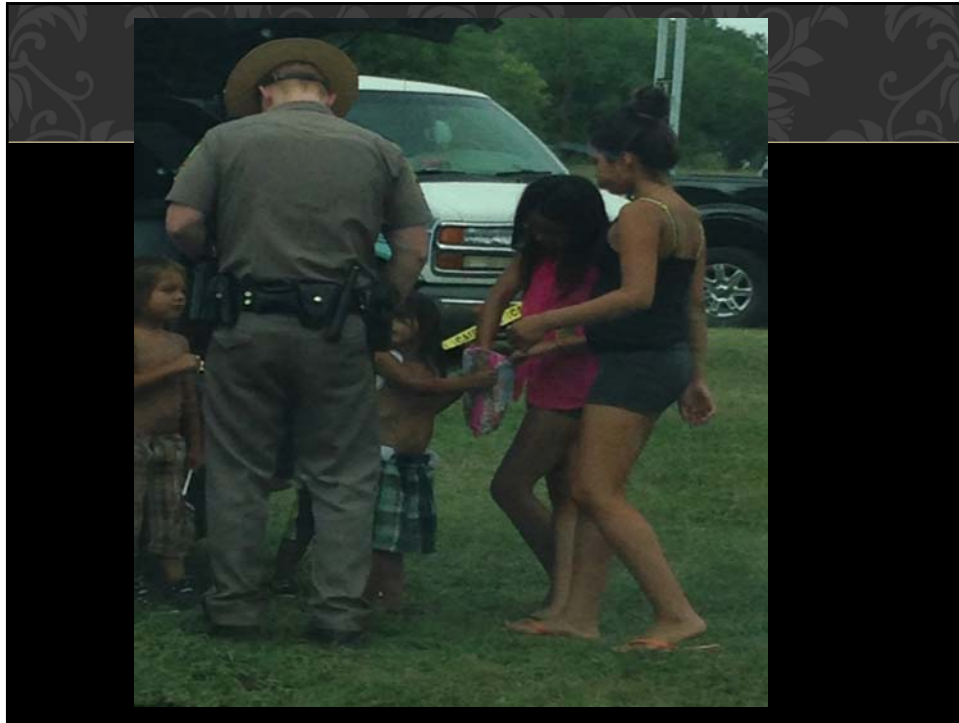


OPENING CEREMONIES



GIVING OUT CANDY AND STICKERS





PROUD FINISHER OF SUICIDE  
PREVENTION WALK





LT. DEVANEY JOINS IN THE  
SUICIDE PREVENTION EFFORT





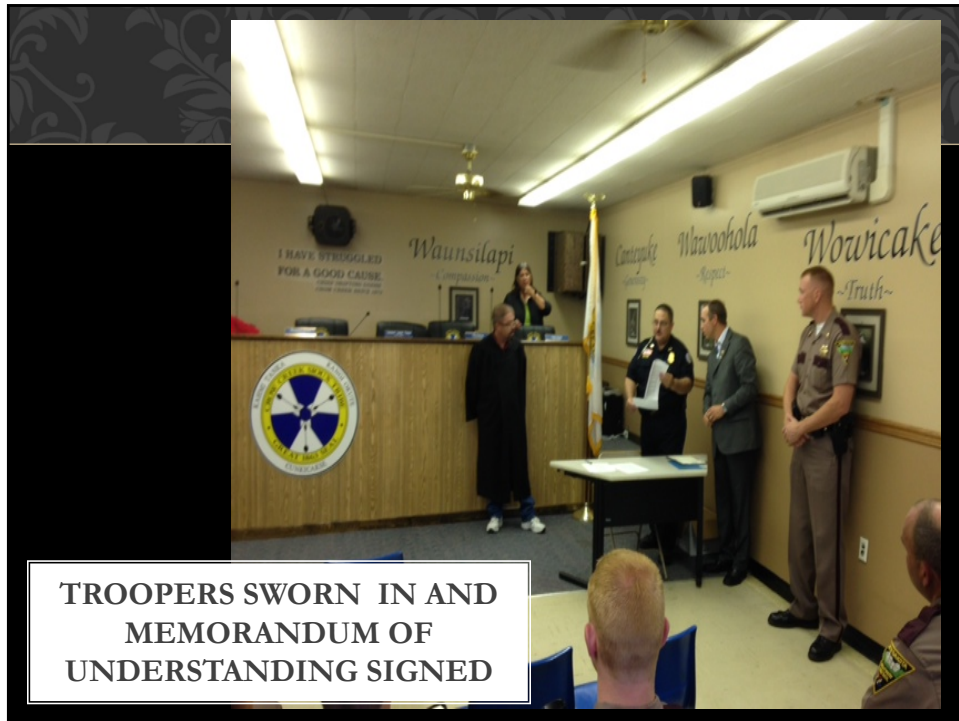
**TRIBAL CHAIRWOMAN ROXANNE SAZUE AND RETIRED  
HIGHWAY PATROL LT. ELMER DRAPEAU WITH FAMILY  
AND TROOPERS**

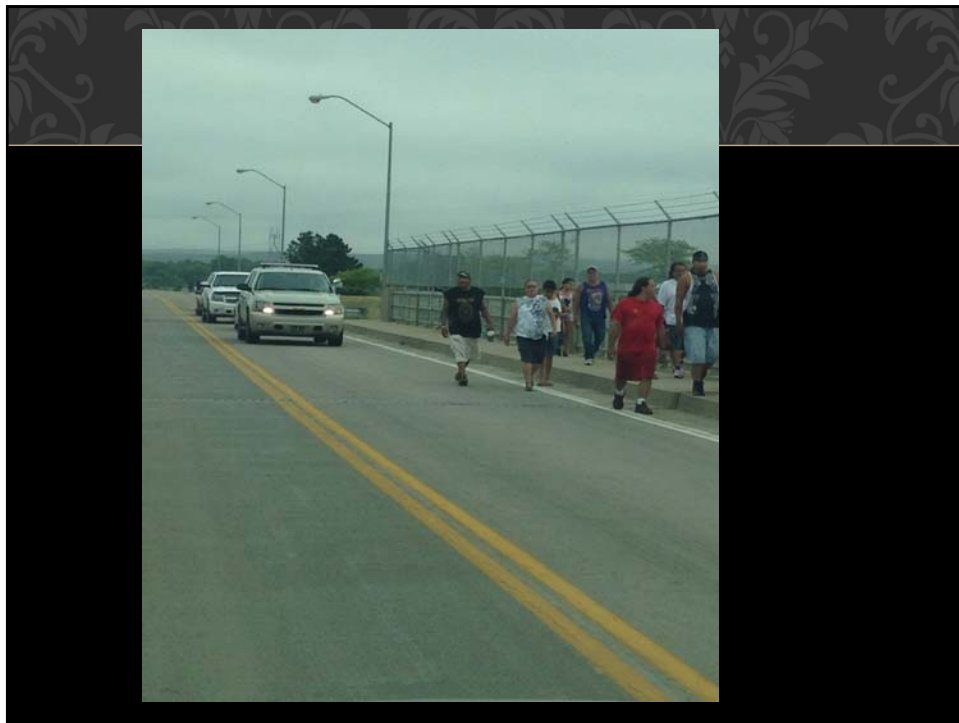
#### **SAFETY PRESENTATIONS**











## ENFORCEMENT

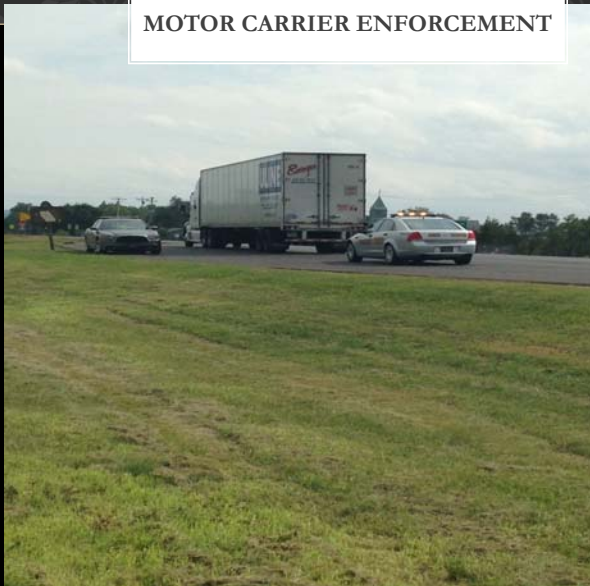
Troopers and BIA Officers worked together to enforce traffic and criminal laws. They responded to calls for service, worked together to deter problems and provide a safe environment for everyone.

## TRAFFIC ENFORCEMENT

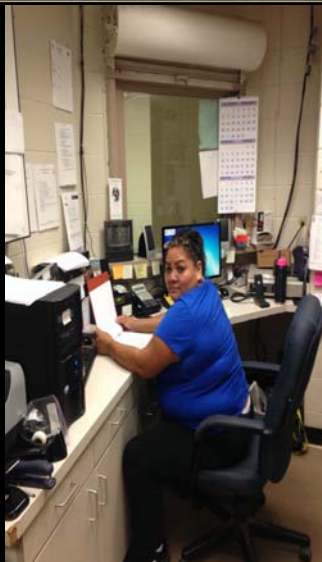




**MOTOR CARRIER ENFORCEMENT**



**PROFESSIONAL DISPATCHERS –  
VITAL TO THE JOINT EFFORT**



## WACIPI (POW WOW)



GREAT ATTENDANCE; NEW RECORD! CROW  
CREEK THANKS YOU FOR COMING!




HIGHWAY TRAFFIC SIGNS  
MR. DOUG KINNIBURGH  
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION





# Highway Traffic Signs

Doug Kinniburgh  
Local Government Engineer  
SDDOT





# Fixed Objects





# Fixed Objects





# Fixed Objects



# Fixed Objects



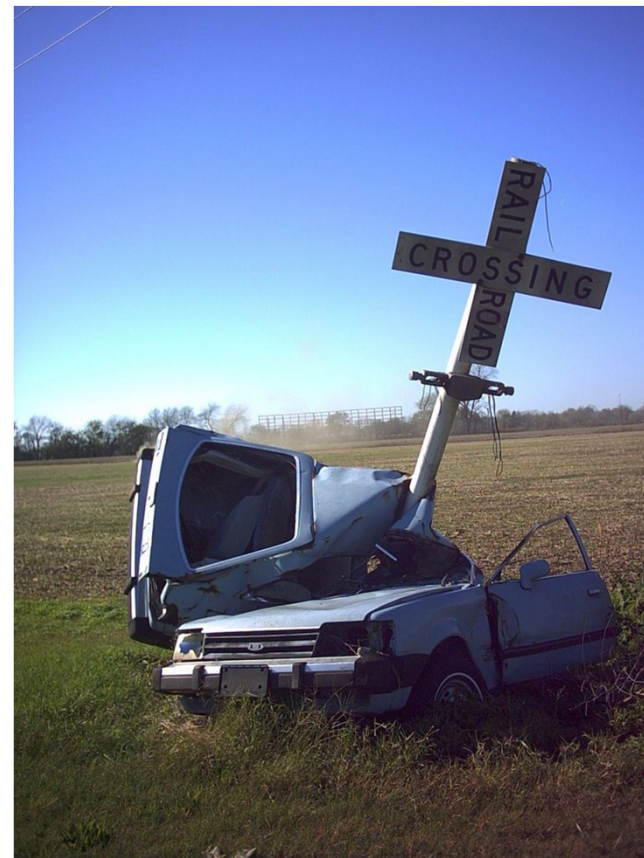
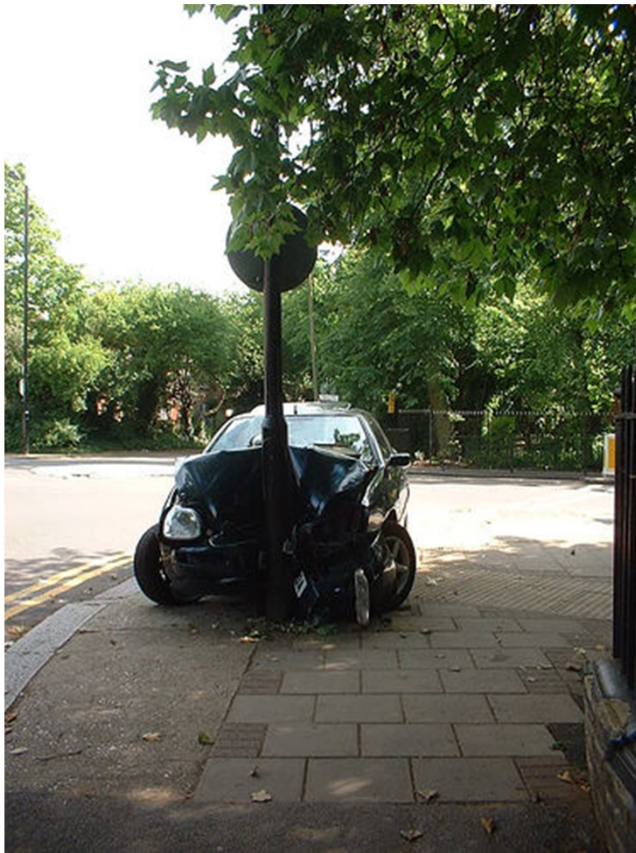


# Fixed Objects





# Fixed Objects





# Fixed Objects



# Crashworthiness

- As of January 17, 2013 – all post-mounted sign and object marker supports within the clear zone on roadways with speeds greater than 50 mph shall be crashworthy.
- On roads posted at 45 mph or less, the crashworthy criterion may be met when upgrading sign retroreflectivity or by 2019, whichever comes first.





## What is clear zone?

- It is an unobstructed, relatively flat area beyond the edge of the traveled way that allows a driver to stop safely or regain control of a vehicle that leaves the traveled way

# Clear Zone

U.S. Customary Units

Design Speed (mph)	Design ADT	Foreslopes			Backslopes		
		1V:6H or flatter	1V:5H to 1V:4H	1V:3H	1V:3H	1V:5H to 1V:4H	1V:6H or flatter
≤40	UNDER 750 <sup>a</sup>	7-10	7-10	Δ	7-10	7-10	7-10
	750-1500	10-12	12-14	Δ	12-14	12-14	12-14
	1500-6000	12-14	14-16	Δ	14-16	14-16	14-16
	OVER 6000	14-16	16-18	Δ	16-18	16-18	16-18
45-50	UNDER 750 <sup>a</sup>	10-12	12-14	Δ	8-10	8-10	10-12
	750-1500	14-16	16-20	Δ	10-12	12-14	14-16
	1500-6000	16-18	20-26	Δ	12-14	14-16	16-18
	OVER 6000	20-22	24-28	Δ	14-16	18-20	20-22
55	UNDER 750 <sup>a</sup>	12-14	14-18	Δ	8-10	10-12	10-12
	750-1500	16-18	20-24	Δ	10-12	14-16	16-18
	1500-6000	20-22	24-30	Δ	14-16	16-18	20-22
	OVER 6000	22-24	26-32 <sup>a</sup>	Δ	16-18	20-22	22-24
60	UNDER 750 <sup>a</sup>	16-18	20-24	Δ	10-12	12-14	14-16
	750-1500	20-24	26-32 <sup>a</sup>	Δ	12-14	16-18	20-22
	1500-6000	26-30	32-40 <sup>a</sup>	Δ	14-18	18-22	24-26
	OVER 6000	30-32 <sup>a</sup>	36-44 <sup>a</sup>	Δ	20-22	24-26	26-28
65-70 <sup>a</sup>	UNDER 750 <sup>a</sup>	18-20	20-26	Δ	10-12	14-16	14-16
	750-1500	24-26	28-36 <sup>a</sup>	Δ	12-16	18-20	20-22
	1500-6000	28-32 <sup>a</sup>	34-42 <sup>a</sup>	Δ	16-20	22-24	26-28
	OVER 6000	30-34 <sup>a</sup>	38-46 <sup>a</sup>	Δ	22-24	26-30	28-30



## What is crashworthy?

- "Crashworthy" means the sign support has met the test and evaluation criteria of the National Cooperative Highway Research Program (NCHRP) Report 350 or Manual for Assessing Safety Hardware (MASH) and/or have received a "Letter of Acceptance" from the FHWA



**Not Crashworthy!**





# Not Crashworthy!





# Not Crashworthy!



# Not Crashworthy!







# County Wide Signing Projects

- 100% federal safety funds at no cost to local government
- Local entity must agree to maintain signs to MUTCD standards
- Includes all regulatory, warning, and guide signs





# County Wide Signing Projects

- Future programming of these projects will require request for participation and a selection of choice of maintenance method.
- Evaluation based on need will be conducted by DOT Traffic Safety Office
- 4-6 new projects will be selected each year to be added to the fourth year of the State Transportation Improvement Plan.

# Current Projects

- 2014
  - Meade County
  - Fall River County
  - Brookings County
  - Clark County
- 2015
  - Codington County
  - Minnehaha County
  - Lake County
  - Grant County
  - McCook County
- 2016
  - Turner County
  - Miner County
  - Union County
  - Lincoln County
  - Yankton County
  - Brown County
- 2017
  - Day County
  - Potter County
  - Kingsbury County
  - Faulk County
  - Spink County
  - Beadle County
- 2018
  - Butte County
  - Roberts County
  - Hanson County
  - Marshall County
- 2019
  - ?
  - ?
  - ?
  - ?

# Questions?



State of South Dakota  
Department of Transportation  
Office of Administration

**Doug Kinniburgh**  
Local Government Engineer

Becker-Hansen Building  
700 East Broadway Avenue  
Pierre, SD 57501-2586

Office: (605) 773-4284  
Cell: (605) 381-1040  
Fax: (605) 773-4870

Email: [Doug.Kinniburgh@state.sd.us](mailto:Doug.Kinniburgh@state.sd.us)

MESSAGING FOR SAFER HIGHWAYS  
SOUTH DAKOTA OFFICE OF HIGHWAY SAFETY  
AND LAWRENCE & SCHILLER COMPANY



# Messaging for Safer Highways



LAWRENCE & SCHILLER  
5280. THE EXTRA MILE.

## AGENDA

Principles of Messaging  
Category Expected Advertising  
Creative Samples



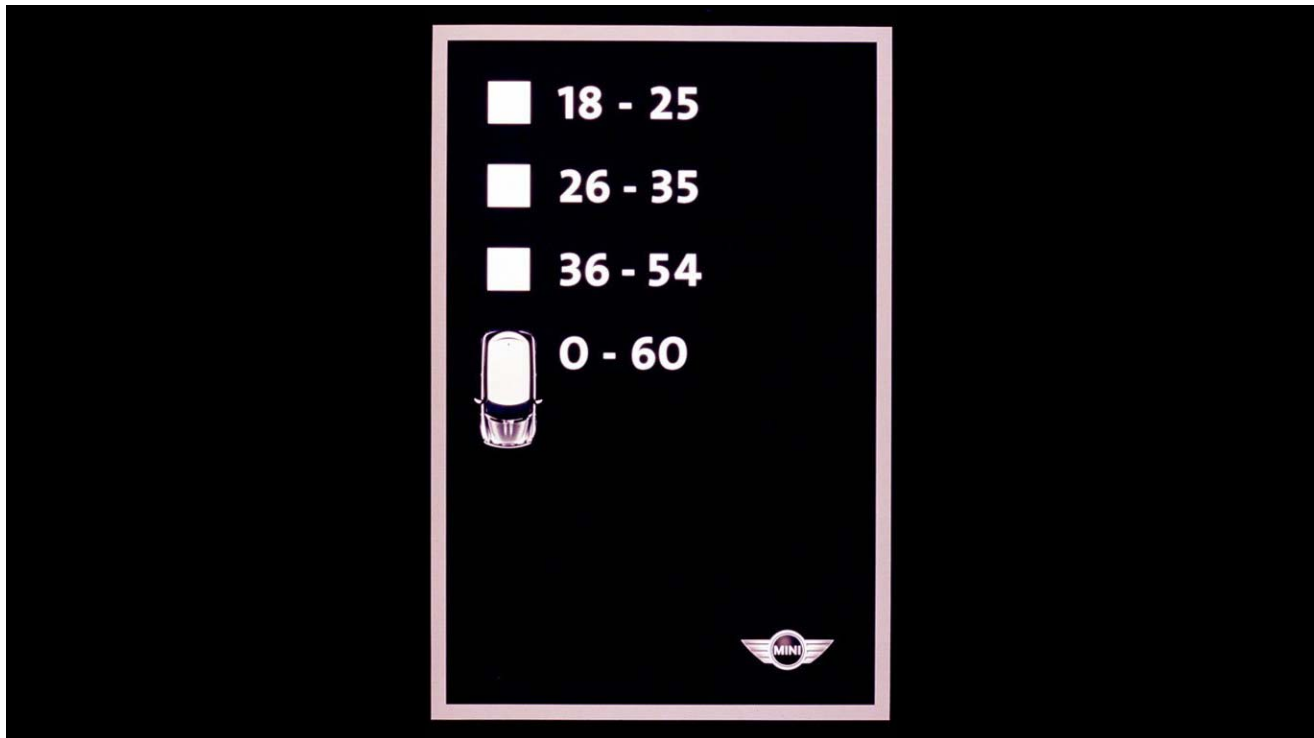
## PRINCIPLES OF MESSAGING



### FEEL, DIFFERENTIATE & ACTION

#### Advertising in Tiers

- TIER 1    Make me feel something.  
            **Messaging Goal:** Awareness + Intrigue
  
- TIER 2    Tell me why I should.  
            **Messaging Goal:** Awareness + Intrigue + Interest
  
- TIER 3    Make me the offer  
            **Messaging Goal:** Confirmation



## Tier 1

**LET'S JUMP IN THROUGH THE WINDOW.** Let's slide across the hood. Let's find a dirt road and kick up some dust. Let's Bo and Luke-it. Let's Daisy Duke-it. Let's install the loudest Dixie horn in all of Hazzard County. But seriously folks, let's keep them wheels on the ground. **LET'S MOTOR.™**



Tier 1



Tier 1





Tier 2

**BEEF.  
WITH A LOT  
OF HORSES  
HIDDEN IN IT.**



Experience the muscular MINI John Cooper Works Roadster. With an unexpectedly generous helping of 211 horsepower.

SEARCH MINI JCW ROADSTER

Official Fuel Economy Figures for the MINI Roadster Range: Urban 27.2-55.3 mpg (10.4-5.3 l/100km), Extra Urban 51.4-70.6 mpg (4.5-3.4 l/100km), Combined 38.2-62.8 mpg (7.5-4.5 l/100km). CO<sub>2</sub> Emissions 169-118 g/km.

Tier 2

**» 100-0 IN 2.7 SECONDS.**

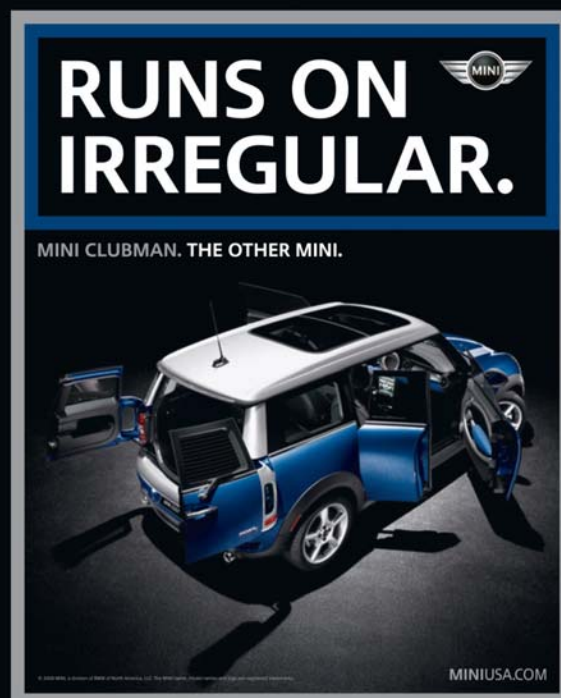


THE NEW MINI JOHN COOPER WORKS.

Tier 2



Tier 2



Tier 3

# BRING IT, PORSCHE.

Dear Porsche,

You've got a pedigree. A cachet. And lots of owners with pastel sweaters draped over their shoulders. And there's nothing wrong with that. Your legendary handling and performance might make some speechless, but we're not intimidated. Because we're tired of Porsche always getting the best valet spots, right out in front of the restaurant. And we want to race you for them. That's right. Porsche against MINI. Mano a mano. For the whole world to see. So, come on, it'll be fun. After all, rumor has it you've got some muscle under that fancy sheet metal. Why don't you come out and flex it?

See you there,  
MINI

<b>MINI Cooper S</b>	<b>VS</b>	<b>Porsche 911 Carrera S</b>
<ul style="list-style-type: none"> <li>Length: 146.2 in.</li> <li>Weight: 2,679 lbs.</li> <li>Horsepower: 172 HP</li> </ul>		<ul style="list-style-type: none"> <li>Length: 173.63 in.</li> <li>Weight: 3,131 lbs.</li> <li>Horsepower: 300 HP</li> </ul>



**MONDAY, JUNE 21, 2010**  
GET INFO & WATCH IT AT [FACEBOOK.COM/MINIUSA](http://FACEBOOK.COM/MINIUSA)

Tier 3

## BIG YEAR-END SAVINGS ON EVERY MINI IN STOCK

**2012 MINI COOPER S  
COUNTRYMAN ALL4  
AWD**



**2012 MINI COOPER HT  
LEASE FOR \$199\*  
PER MO./ 36 MOS.**

Midnight Black/  
Carbon Black  
VIN: 6U1255586  
AUTOCARS FOR THE US  
signing \$5,123



**HASSEL MINI**  
280 W Sunrise Hwy • Freeport NY 11520 (877) 212-0285  
[HASSELMINI.COM](http://HASSELMINI.COM)

\*Prices/Pmnts include all costs to consumer. Tax, title & MV fees additional. 10k mi/yr \$20 each add'l. model: \$5,123 due at signing (incl. \$1,999 cap cost reduc., \$200 sec., \$725 bank fee, \$199 1st pmt) TI/Residual \$7,164/\$15,711.50. Lessee responsible for excess wear/tear/main/repair. Photos for display purposes only. © 2011 MINI, a division of BMW of North America, LLC. The MINI name, model names and logo are registered trademarks. Offer expires 12/31/11.

# Herb Chambers MINI of Boston

1168 Commonwealth Avenue, Boston, MA 02134

## 855-796-8087

[New Car Inventory](#)
[Pre-Owned Specials](#)
[Email Us For a Quote](#)
[Map & Directions](#)
[Print This Ad](#)

**CURRENTLY LEASING A MINI?**  
We Will Waive Up to 6 Remaining Payments When You Lease a New MINI!\*

<p><b>2014 MINI Cooper Hardtop</b> <i>SPECIAL! Manager Demo</i> Stock # 6372230 MSRP: \$23,445</p> <p>Buy For <b>\$22,598</b> Lease For <b>\$239</b><sup>MO</sup></p> <p><a href="#">View Inventory</a></p>	<p><b>2014 MINI Cooper Countryman All4</b> Stock # 6706880 MSRP: \$30,695</p> <p>Buy For <b>\$26,639</b> Lease For <b>\$199</b><sup>MO</sup></p> <p><a href="#">View Inventory</a></p>	<p><b>2014 MINI Cooper S Convertible</b> <i>SPECIAL! Manager Demo</i> Stock # 6706265 MSRP: \$35,615</p> <p>Buy For <b>\$31,714</b> Lease For <b>\$329</b><sup>MO</sup></p> <p><a href="#">View Inventory</a></p>
<p><b>2014 MINI Cooper Countryman</b> Stock # 6362449 MSRP: \$23,995</p> <p>Buy For <b>\$21,454</b> Lease For <b>\$169</b><sup>MO</sup></p> <p><a href="#">View Inventory</a></p>	<p><b>2014 MINI Cooper Convertible</b> Stock # 1369746 MSRP: \$30,695</p> <p>Buy For <b>\$27,849</b> Lease For <b>\$169</b><sup>MO</sup></p> <p><a href="#">View Inventory</a></p>	<p><b>2013 MINI Cooper GP</b> Stock # 0721967 MSRP: \$20,395</p> <p><b>1 of 3</b> Currently Available in the U.S.</p> <p><a href="#">View Inventory</a></p>

OVER 2,000 PRE-OWNED VEHICLES

[www.HERBCHAMBERSMINI.com](http://www.HERBCHAMBERSMINI.com)

HIGH VOLUME  
LOW PRICE

Tier 3

DON'T INVEST IN BEING CATEGORY EXPECTED

8



## AIRLINE - Expected

American Airlines Flagship Lounge, JFK Terminal 5



**NEW YORK'S  
PREMIUM  
TRAVEL  
EXPERIENCE.**

Premium Check-In, PriorityAAccess™  
The Admirals Club® and Flagship Lounge®  
First and Business Class cabins, Arrivals Lounges.  
Our premium travel experience gives you  
the luxury and convenience you expect.  
And the comfort you deserve.

 **American Airlines**  
AA.com

American Airlines, PriorityAAccess, Admirals Club, Flagship Lounge and AA.com are marks of American Airlines, Inc. American Airlines and the American Airlines logo are registered trademarks of American Airlines, Inc. © 2011 American Airlines, Inc. All rights reserved.

## AIRLINE - Expected

emirates.com/au

**Fly with Emirates  
Fly with Elegance**



Fly doesn't mean any Air bus  
Air bus doesn't mean just Any  
Feel the difference, Travel with us  
**Fly Emirates, Keep discovering.**

  
**Emirates**

For more information on packages or flights to Dubai visit [emirates.com/au](http://emirates.com/au), contact your local Travel Agent or call Emirates Contact Centre on 1300 505 777

## AIRLINE - Expected



## AIRLINE - Expected

### Experience Paradise. On Earth.

- DOM PERIGNON WHITE GOLD JERONIM
- SEVEN COURSE, 7 STAR GOURMET
- OGAR AND WHISKY PLATINUM LOUNGE
- ERGONET SEAT WITH SHITZU MASSAGE
- 50,000 E-BOOKS LIBRARY + 1,500 3D FILMS
- JACUZZI HOT SPA AND FINNISH SAUNA
- 24H ULTRASTAR WFT & LANDLINE
- PRIVATE HOSTESS AND BED SERVICE
- CADRE FASHION ATELIER ON BOARD

**JESUS AIRLINES**

AIRLINE -  
Expected

Tools of productivity:  
**YOUR LAPTOP.  
YOUR CELL PHONE.  
YOUR AIRLINE.**



*Business is all about productivity. At Southwest Airlines, we have convenient nonstop flights, great on-time performance, and outstanding Customer Service giving business travelers like you the confidence to be more productive. Fly Southwest and watch your business take off.*

  
**SOUTHWEST.COM**

DING! You are now free to be more productive.

AIRLINE -  
Expected

**Schweizer Qualität. Auch für unterwegs.**

Fühlen Sie sich auch auf Reisen so wohl wie zu Hause. Mit einem persönlichen Service, feinem Essen und der gewöhnlichen Schweizer Zuverlässigkeit. Erfahren Sie mehr über unser Flugangebot mit 72 Zielen weltweit im Reisebüro oder besuchen Sie uns auf [swiss.com](http://swiss.com)



A STAR ALLIANCE MEMBER 

Our sign is a promise.





## AIRLINE - Expected

The airline that hates being late more than you do.

Everyone knows the Swiss value punctuality. So as you'd expect, we run our airline the same way. For daily nonstop flights from Hong Kong to Switzerland, with short connections to 48 other European destinations, contact your travel agent or visit swiss.com.

A STAR ALLIANCE MEMBER

Our sign is a promise. **SWISS**

## AIRLINE - Expected

flyer friendly

LEARN MORE →

From take off to landing, putting you first. fly the friendly skies™



AIRLINE -  
Expected

Hottest job in Football?  
#RedHotReporter

virgin atlantic  
OFFICIAL AIRLINE

INTERNATIONAL  
SERIES  
2013

AIRLINE -  
Expected

BRITISH AIRWAYS

**EXPERIENCE BRITAIN**  
Now flying from Colombo to London 3 times a week.

1. TEA Also English for water. 2. STONEHENGE Was it druids, Greeks or aliens? Its history shrouded in mystery makes it so appealing. 3. ROYAL GUARD We dare you to make a royal guard laugh. 4. PHONE BOOTH Once used for phone calls, now used for photoshoots. 5. RIVER THAMES All that London rain has to go somewhere! 6. DOUBLE-DECKER BUS Hop on, hop off! You haven't seen London till you've been on top. 7. NATURAL HISTORY MUSEUM Like an antique shop, only older, and nothing's for sale. 8. ABBEY ROAD Home of UK's most frequently stolen street signs. 9. PUB Museums of the neighbourhood. 10. FISH & CHIPS Today's catch in yesterday's paper. 11. PIE The best thing to put in an English pie is your teeth. 12. COVENT GARDEN Where the "sandwich" was born. 13. BIG BEN The grandfather of grandfather clocks. 14. BUCKINGHAM PALACE The most visited palace in the world. 15. WEMBLEY STADIUM A symbol of British football. 16. THE TUBE About the size of the Pin 17. THE OT MARK A 100% cotton t-shirt with a 100% British design.

AIRLINE -  
Unexpecte  
d

3 vols par jour de Mexico à Paris,  
la capitale de la mode,  
du romantisme et du glamour  
pour FAIRE DU CIEL LE PLUS BEL ENDROIT DE LA TERRE.

A woman is shown from the back, wearing a light-colored corset with white laces. Her arms are raised above her head. In the background, a clear blue sky features a white Air France jet flying away from her back, leaving a long white contrail that ends near her corset.

AIR FRANCE KLM

AIRFRANCE.FR

The Air France logo, featuring a stylized cockade.

AIRLINE -  
Unexpecte  
d

Cuisine gastronomique, fromages français,  
desserts gourmands et glaces en long-courrier  
pour FAIRE DU CIEL LE PLUS BEL ENDROIT DE LA TERRE.

A man is shown in profile, looking towards the left. He is holding a small glass filled with a green puree and topped with a garnish. In the background, a clear blue sky features a white Air France jet flying towards him, leaving a long white contrail that ends near the glass.

AIR FRANCE KLM

AIRFRANCE.FR

The Air France logo, featuring a stylized cockade.

# AIRLINE - Unexpecte d



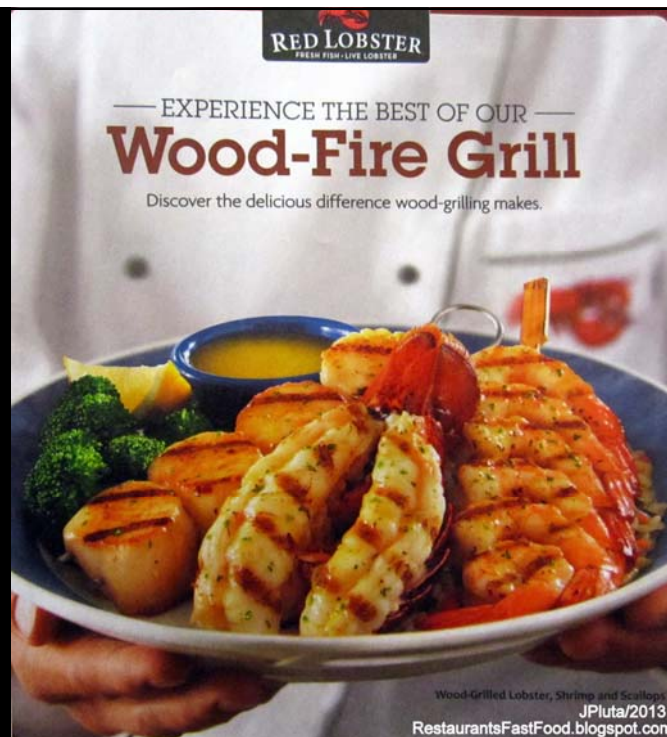
# AIRLINE - Unexpecte d



AIRLINE -  
Unexpected



FOOD -  
Expected





FOOD -  
Expected



FOOD -  
Expected



# CAMPBELLS

## FAST FOOD





**STOP IN TODAY**



**COME TRY OUR BBQ**

Please join us for our  
community family day

**FRIDAY JUNE 10TH, 2011 2-5pm**

(315) 565-4062

200 W. BRIGHTON AVE SYRACUSE, NY

FOOD -  
Expected

**YOU DESERVE A MEGA MAC**

**New!**

Mega Mac™ and Mega McSpicy™ are available from 11am to 4am. Last order at 3:45am. While stocks last.

Order Online Now!

**MEGA MAC**

**MEGA McSPICY**

**She'll tell you size doesn't matter. She's lying.**

**Super Star® with cheese**

**Carls Jr. It's gonna get messy.**

**IT JUST TASTES BETTER**

**IT'LL BLOW YOUR MIND AWAY**

**BK SUPER SEVEN INCHER**

**\$6.25 MEAL**

**BURGER KING**

FOOD -  
Expected

**100% BEEF**

**WHAT A WHOPPER!**

**BURGER KING**



FOOD -  
Expected



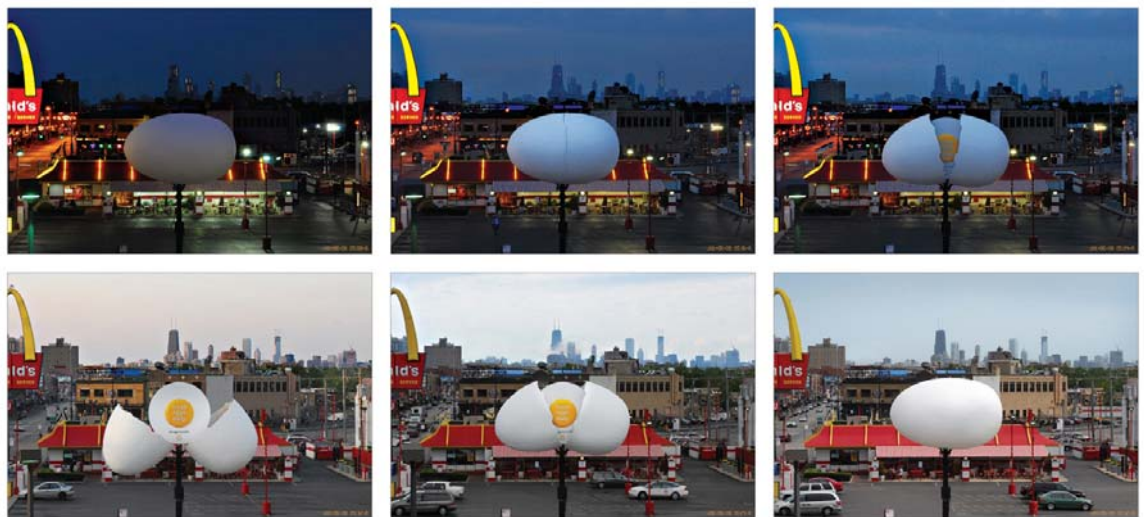
FOOD -  
Unexpected



FOOD -  
Unexpected



FOOD -  
Unexpected

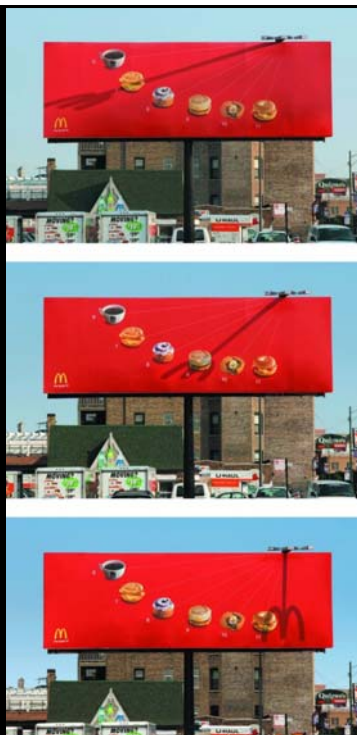




FOOD -  
Unexpected



FOOD -  
Unexpected



## FOOD - Unexpected



**TOLL THIS**

Love the road but hate the \$2 toll? Spend ten bucks or more at Burger King in Dairy Flat on SR1 (just food stop before you hit the new Northern Gateway) and we'll take \$2 off your purchase. Just show them this ad. See, we let nothing get in the way of a great trip North.

LET NOTHING GET IN THE WAY



## SHAMPOO — Expected



**99% OF HAIR'S NATURAL STRENGTH & BEAUTY COMES FROM THE SCALP.**

INTRODUCING NEW CLEAR SCALP & HAIR BEAUTY THERAPY™, a nourishing line of shampoos & conditioners. With Nutrium 10™, a rich blend of vitamins and nutrients, it feeds your scalp\* and gives you stronger, more beautiful hair in 7 days.



**new CLEAR**  
SCALP & HAIR BEAUTY THERAPY™

*Christine Lahti*

**FEED SCALP. FEED BEAUTY.**

[facebook.com/clearhaircare](https://www.facebook.com/clearhaircare)

## SHAMPOO

Expected



## SHAMPOO

Expected




## SHAMPOO

—  
Expected


www.dove.pk

*Dove*  
damage repair

Dove. The shampoo women  
are talking about.



At Dove we believe that just like you, your hair too is different; and different hair needs different solutions. So when your hair has split-ends, we know it's actually damaged on the inside. Dove Intense Repair corrects the real cause of split-ends - damage. Its 1/4 Moisture Milk and Fiber Actives go deep inside to repair damage so that you lose the split-ends without losing your hair-length.



LOVED BY REAL WOMEN

## SHAMPOO

—  
Expected

PANTENE



Pantene con pro-vitaminas.





## SHAMPOO

Expected



## SHAMPOO

Expected



SHAMPOO  
—  
Unexpected



SHAMPOO  
—  
Unexpected





SHAMPOO  
—  
Unexpected



SHAMPOO  
—  
Unexpected



HAIRSTYLE LOOKS BEST ONLY ON YOUR HEAD.

SHAMPOO  
—  
Unexpected



SHAMPOO  
—  
Unexpected





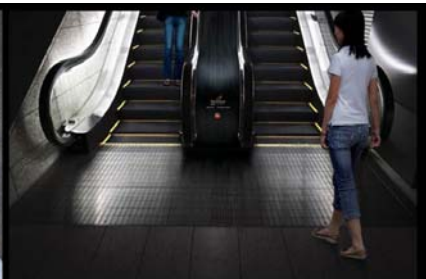
# SHAMPOO

—  
Unexpected



# SHAMPOO

—  
Unexpected



## PANTENE“Escalator”

We finished the ad of PANTENE shampoo in the space between two escalators. When people use the escalators, they could feel the smooth hair in body just like what was said in our slogan “Silky touch Irresistibly smooth”.

SHAMPOO  
—  
Unexpected



SHAMPOO  
—  
Unexpected



SHAMPOO  
—  
Unexpected



CREATIVE SAMPLES

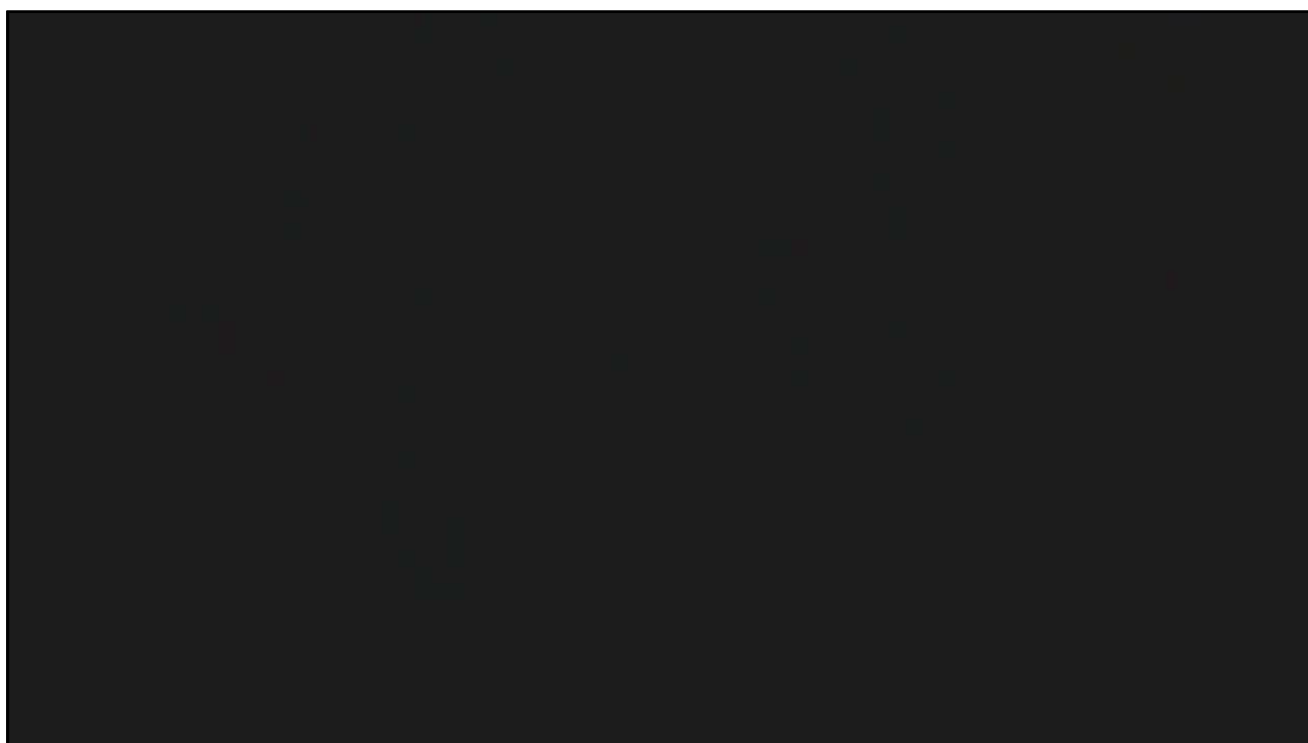
# 100 DAYS OF HEAT

Goal: Keep dangerous drivers off SD roadways from Memorial Day through Labor Day

Audience: SD Drivers

Mediums: TV, Website, Gas Station Ads, Bar Ads, Radio, Outdoor, Pre-Roll, Landing Page, PR Street Team







## MARKED FOR LIFE

Goal: Reach South Dakotans under 21 with a message about underage drinking.

Audience: College students in SD

Mediums: TV, Radio, Posters, Mirror Graphics, Wrist Bands, PR Street Team





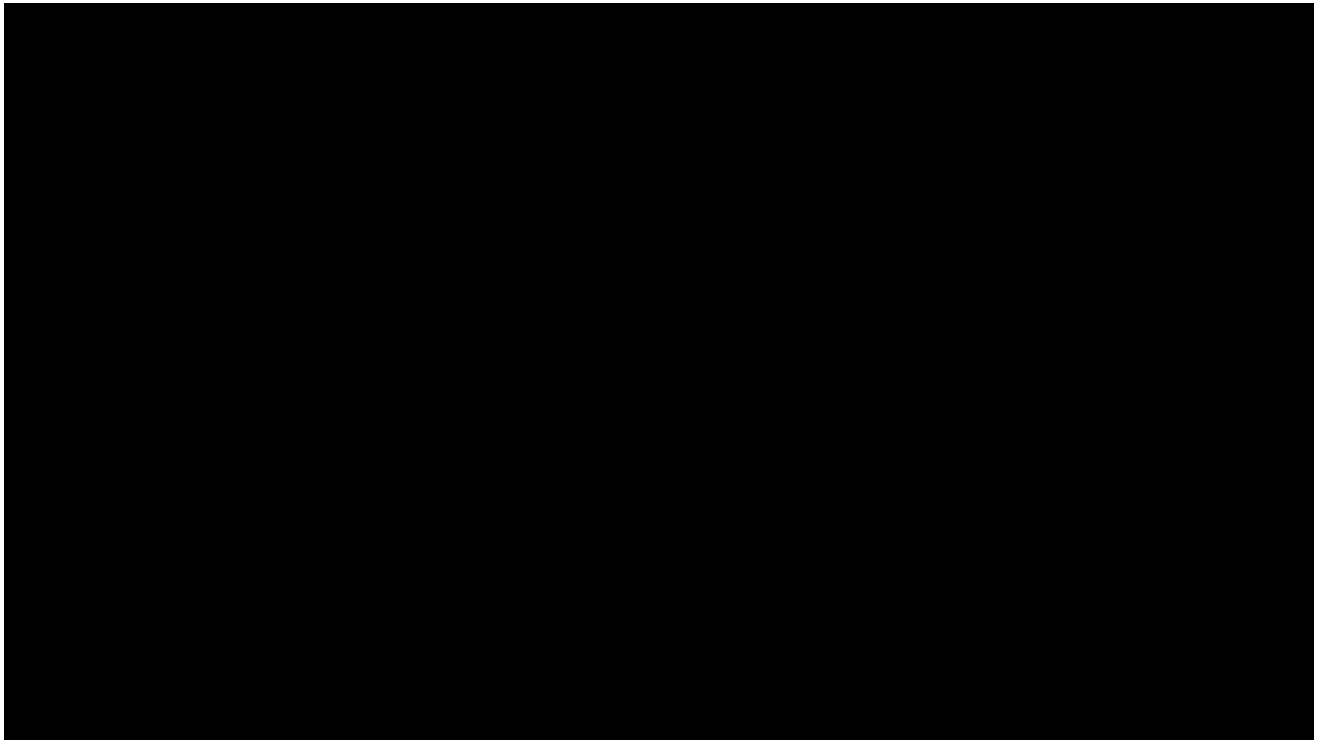
## SOMEONE NEEDS YOU

Goal: Remind SD drivers that the decision to wear a seatbelt affects more than just one person.

Audience: SD Drivers

Mediums: TV, Radio, Outdoor





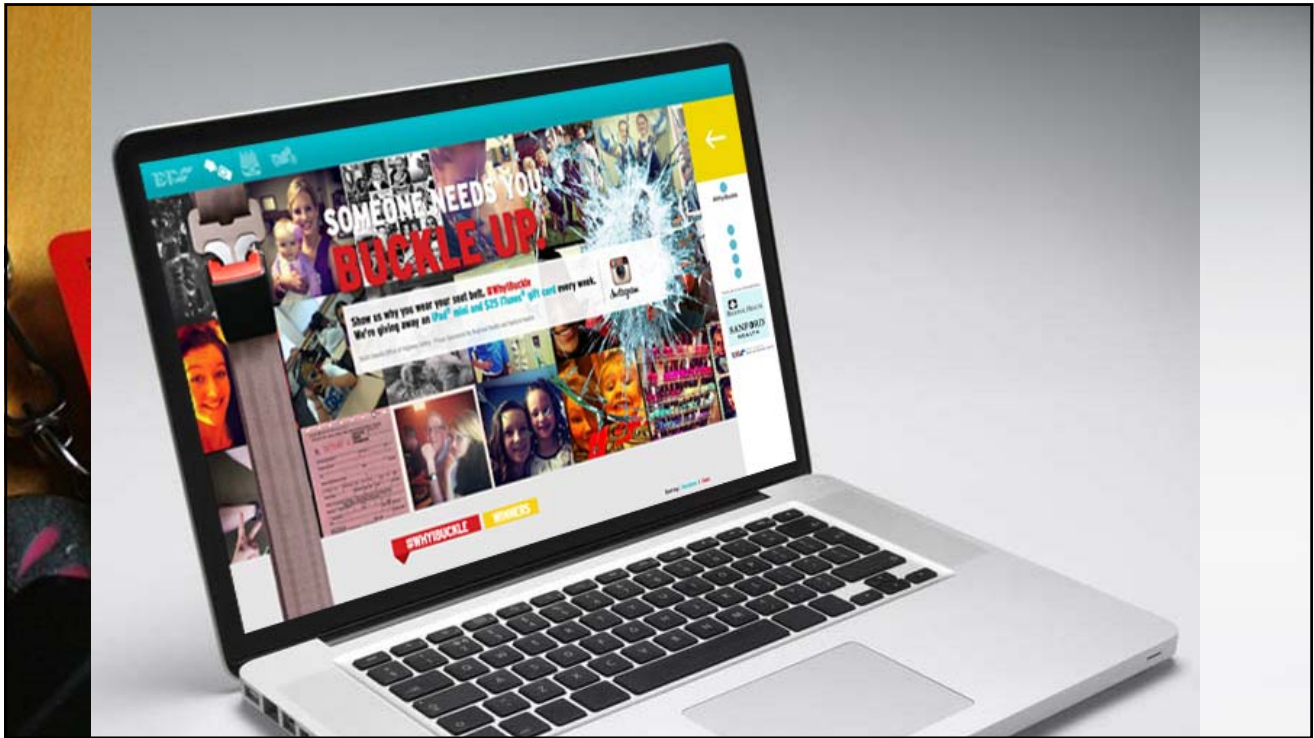
## #WHYIBUCKLE

Goal: Reach SD teens, who viewed seatbelts as uncool and freedom-restricting, that the decision to buckle up affects more than just one person.

Audience: SD teens

Mediums: TV, Social, School Collateral



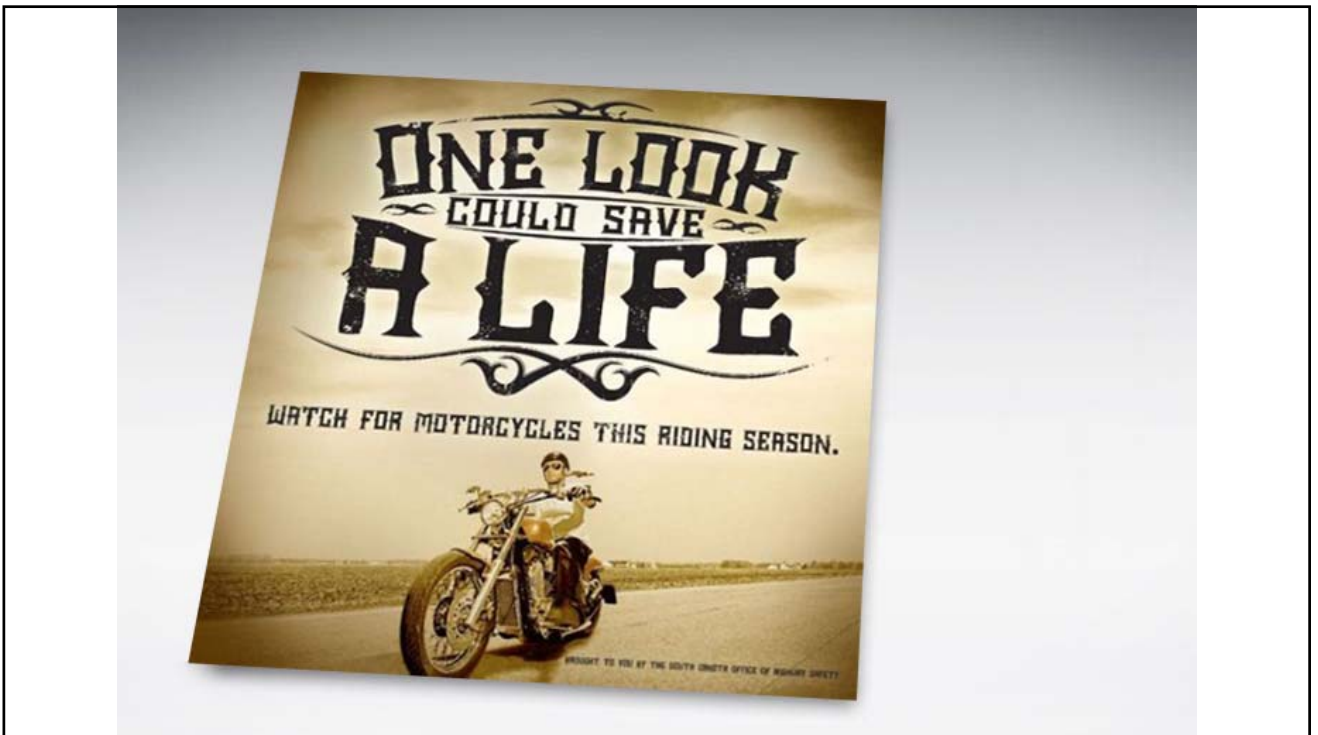
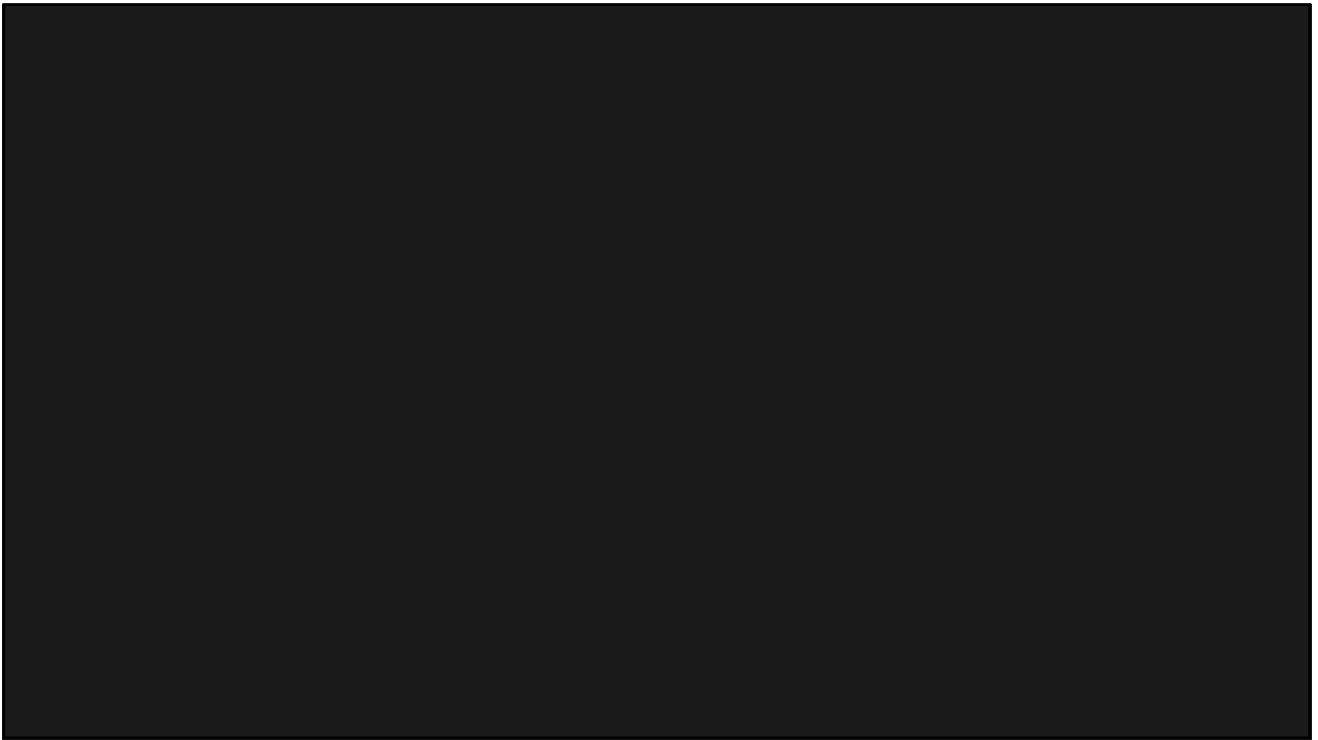


## WHERE IT DIDN'T HAPPEN

Goal: Rider Education, General Motorcycle Awareness

Audience: SD Drivers

Mediums: TV, Radio, Online Banners, Gas Station Ads,  
Online Banners, Pre-Roll, PR Street Team





## TEXTING & DRIVING

Goal: Educate South Dakota drivers on the dangers of texting and driving.

Audience: SD Drivers

Mediums: TV

# MOTORCYCLE MAX

Goal: Encourage motorcyclists to wear safety gear.

Audience: SD motorcyclists

Mediums: TV, Posters, Pre-Roll, Online Banners

## BE A HERO

Goal: Encourage South Dakotans to be a hero – the designated driver.

Audience: SD Drivers

Mediums: TV, Radio, Posters, Pre-Roll, Gas Station Ads, Bar Ads, Mirror Clings, Landing Page



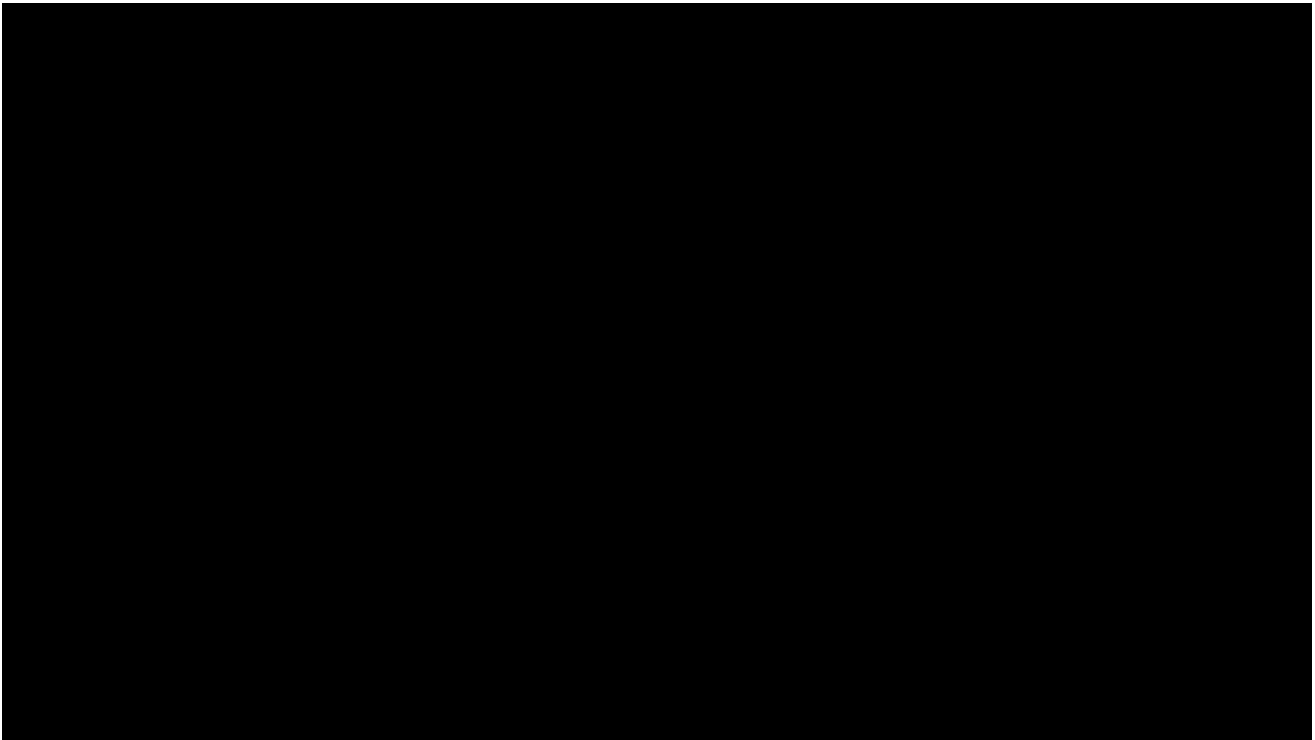
## DON'T GO IT ALONE

Goal: Boost awareness of the risks of drinking & driving in rural areas.

Audience: Rural, male drivers

Mediums: TV, Radio, Bar Ads, Gas Station Ads, Posters, Outdoor, Website





# SOUTHDAKOTARIDES.COM

Goal: Increase awareness for SDRides.com

Audience: SD Motorcyclists

Mediums: Website, TV, Pre-roll, Online Banners, PR Street Team, Tshirts, Print Collateral, Email

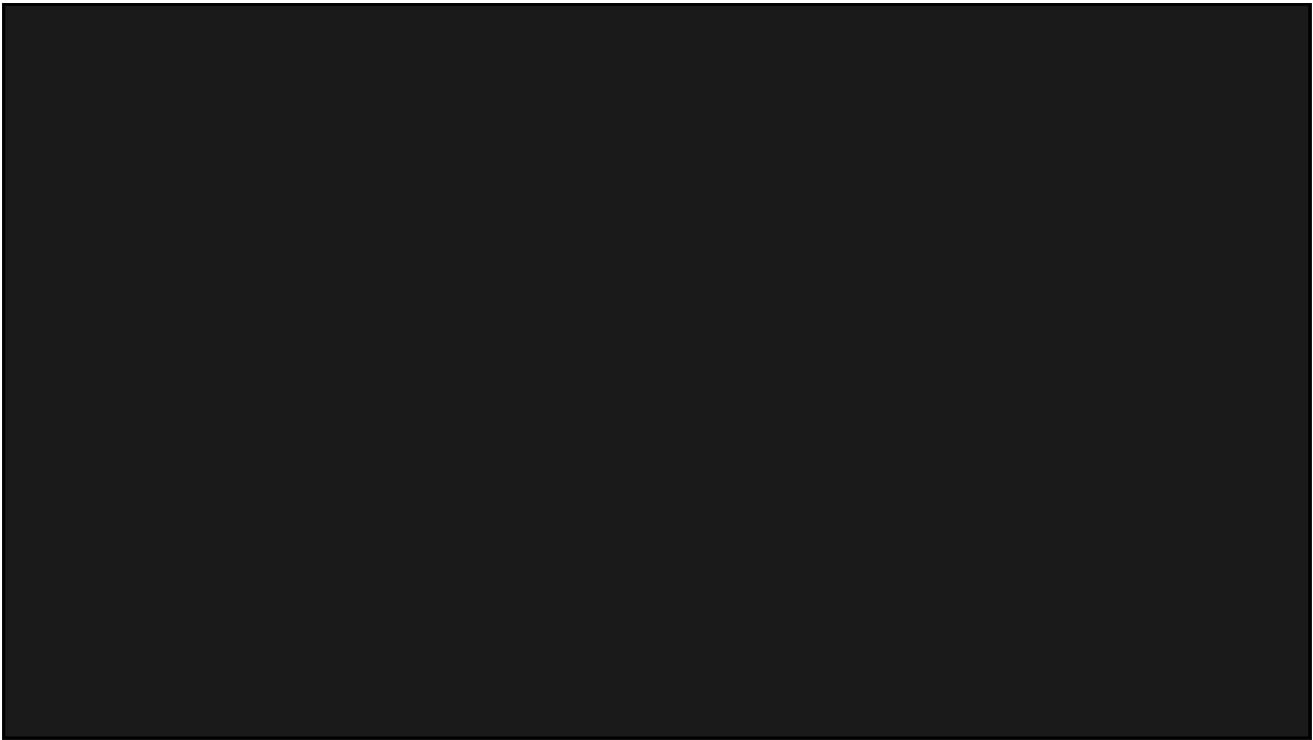


## HOME FOR THE HOLIDAYS

Goal: Use a designated driver during the holidays and every day.

Audience: SD Drivers

Mediums: TV, Website, Gas Station Ads, Bar Ads, Radio, Outdoor, Pre-Roll, Landing Page, PR Street Team



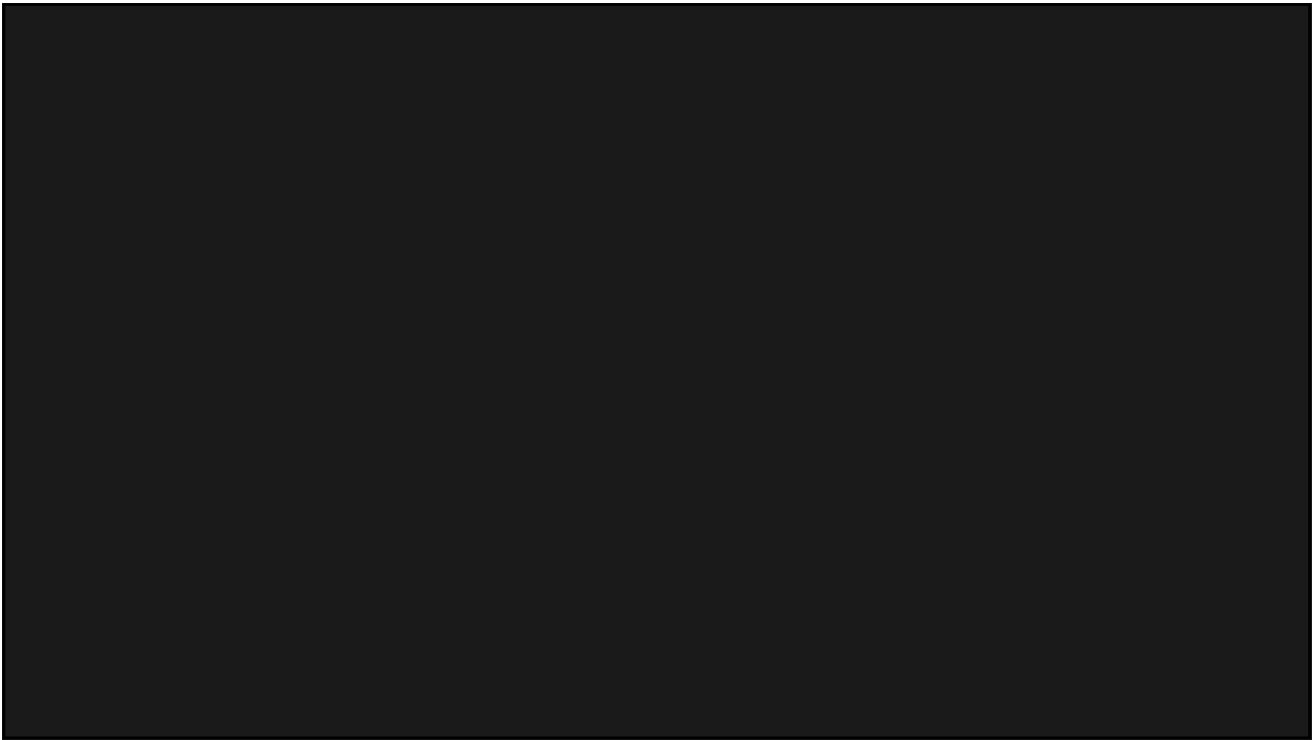
## SILENT NIGHT

Goal: Encourage SD drivers to use a designated driver around the holidays.

Audience: SD Drivers

Mediums: TV





# Messaging for Safer Highways



LAWRENCE & SCHILLER  
5280. THE EXTRA MILE.

5TH ANNUAL TRIBAL TRANSPORTATION SAFETY SUMMIT  
SISSETON WAHPETON OYATE

# Sisseton-Wahpeton Oyate

5<sup>th</sup> Annual Tribal Transportation Safety  
Summit

## Sisseton Wahpeton Oyate Office of Construction Management

Tribal Chairman – Robert  
Shepherd

Construction Manager – David  
Spider

Office Manager – Toni Heminger

Transportation Coordinator – Cliff  
Eberhardt

Project Coordinator – Harvey  
Renville

Receptionist – Jaime Lee

Oversee Transportation and  
Construction projects for the  
Sisseton Wahpeton Oyate

- Housing
- Transportation
- Building Infrastructure







# Transportation Safety Plan

- TTPSF Grant Application for \$12,500 to develop our Safety Plan
- The 4 E's:
  - Engineering
  - Enforcement
  - Education
  - Emergency Response
- SWO Safety Committee
  - Bryan Bald Eagle – BIA DOT
  - Gary Gaikowski – Tribal Police Chief
  - Shannon White – SWO Injury Prevention Program Coordinator
  - Sherry Johnson – SWO Education Director
  - Ella Robertson – SWO Community Planner
  - David Spider – SWO Construction Manager
  - Cliff Eberhardt – SWO Transportation Coordinator



## Debbie Shinstine with Wyoming Technology Transfer Center and Wyoming LTAP also Dennis Trusty Northern Plains TTAP

- Building Relationships in a good way using the Four E's
- Developing a survey to find low cost safety improvements for all our Roads on the reservation
- We feel Safety is a joint effort and are trying to see through the Multiple Jurisdictions and Barriers
- And seeking Cooperation from Counties, Townships, and the State of South Dakota



# Reservation Wide Striping Project

- Completion of striping of 40.0 miles of paved BIA Routes within the Lake Traverse Reservation Boundary





# Partnerships in Transportation

## Pictured SWO Tribal Members, Roberts County Commissioner's, Swanston Equipment company Employees





## Signing Project – All Housing Sites

- Recent increase in accidents, injuries and deaths in housing site locations
- Updated all signs in our housing neighborhoods
- Changed housing speed limit to 15 mph in all housing neighborhoods
- Review of each housing site for additional needs for signing, striping of crosswalks



# Signing Project – BIA Routes 2, 3 & 5

Final adjusted sign inventory 9-17-2013 [Read-Only] - Microsoft Excel

INVENTORY LIST										
		Longitude, Latitude	Route	Sign Description	Sign Number	Sign Size	Offset (Left,Right)	Condition of Sign	Condition of Pole	Other
1										
2										
3	1	97°7'28.224"W 45°28'18.023"N	2	R1-1	2-1	30"x30"	L	Old Replace	Wood Replace	
4	2	97°7'27.883"W 45°28'17.546"N	2	M1-15, R2-1	2-2	18"x18", 18"x24"	R	Old Replace	Steel Bent	
5	3	97°7'14.089"W 45°28'18.07"N	2	W3-1A	2-3	30"x30"	L	Old Replace	Steel Good	
6	4	97°7'11.798"W 45°28'18.177"N	2	W14-3	2-4	48"x48"x36"	L	Old Replace	Steel Good	
7	5	97°6'40.384"W 45°28'18.141"N	2	W14-3	2-5	48"x48"x36"	L	Bad Replace	Steel Bent	
8	6	97°6'12.466"W 45°28'17.737"N	2	W14-3	2-6	48"x48"x36"	R	Old Replace	Steel Bent	
9	7	97°6'12.383"W 45°28'17.857"N	2	W14-3	2-7	48"x48"x36"	L	Good	Steel Good	
10	8	97°5'18.2"W 45°28'17.018"N	2	W1-2AR	2-8	30"x30"	R	Missing	Wood Replace	
11	9	97°5'14.002"W 45°28'17.397"N	2	W14-3	2-9	48"x48"x36"	L	Old Replace	Wood Replace	
12	10	97°5'5.121"W 45°28'16.911"N	2	R1-1	2-10	30"x30"	L	Old Replace	Wood Replace	
13	11	97°4'57.416"W 45°28'11.764"N	2	R1-1	2-11	30"x30"	L	Old Replace	Wood Replace	
14	12	97°4'56.048"W 45°28'1.358"N	2	W1-2AL	2-12	30"x30"	L	Old Replace	Steel Bent	
15	13	97°4'56.603"W 45°27'57"N	2	W1-2L	2-13	30"x30"	R	Old Replace	Steel Bent	
16	14	97°4'56.139"W 45°27'56.042"N	2	W14-3	2-14	48"x48"x36"	L	Good	Steel Good	
17	15	97°4'55.182"W 45°27'49.857"N	2	R1-1	2-15	30"x30"	R	Bad Replace	Steel Good	
18	16	97°4'55.27"W 45°27'49.774"N	2	Street Name Signs	2-16	24"x6" x2	R	Good	Steel Good	BIA 2, 456th Ave.
19	17	97°4'46.896"W 45°27'43.009"N	2	W1-2R	2-17	30"x30"	L	Missing	Steel Bent	
20	18	97°4'45.068"W 45°27'40.958"N	2	R1-1	2-18	30"x30"	R	Good	Wood Replace	
21	19	97°4'39.582"W 45°27'37.576"N	2	W14-3	2-19	48"x48"x36"	L	Old Replace	Wood Replace	
22	20	97°4'37.704"W 45°27'35.572"N	2	W1-2L	2-20	30"x30"	R	Old Replace	Steel Bent	
23	21	97°4'22.312"W 45°27'29.559"N	2	W1-2R	2-21	30"x30"	L	Old Replace	Steel Bent	
24	22	97°4'18.923"W 45°27'28.333"N	2	W14-3	2-22	48"x48"x36"	R	Bad Replace	Wood Replace	
25	23	97°4'16.782"W 45°27'27.687"N	2	R1-1	2-23	30"x30"	R	Bad Replace	Wood Replace	
26	24	97°4'16.771"W 45°27'27.601"N	2	Street Name Signs	2-24	24"x6"	R	Good	Steel Good	BIA 200, BIA HWY 201
27	25	97°4'3.986"W 45°27'25.187"N	2	W14-3	2-25	48"x48"x36"	L	Old Replace	Wood Replace	
28	26	97°3'59.635"W 45°27'23.724"N	2	W1-2L	2-26	30"x30"	R	Missing	Missing	
29	27	97°3'31.895"W 45°27'31.153"N	2	W1-2R	2-27	30"x30"	L	Bad Replace	Steel Bent	
30	28	97°3'28.608"W 45°27'33.774"N	2	W14-3	2-28	48"x48"x36"	R	Bad Replace	Steel Replace	
31	29	97°3'26.162"W 45°27'35.589"N	2	W14-3	2-29	48"x48"x36"	L	Bad Replace	Wood Replace	
32	30	97°3'23.499"W 45°27'39.087"N	2	S1-2R	2-30	30"x30"	R	Missing	Missing	
33	31	97°3'19.178"W 45°27'42.977"N	2	W11-2, R2-1	2-31	30"x30", 18"x24"	R	Bad Replace	Steel Replace	
34	32	97°3'12.659"W 45°27'47.32"N	2	W14-3	2-32	48"x48"x36"	L	Bad Replace	Wood Replace	
35	33	97°2'55.351"W 45°27'52.061"N	2	W1-2L	2-33	30"x30"	L	Bad Replace	Steel Bent	Replace
36	34	97°2'50.025"W 45°27'52.875"N	2	W11-2, R2-1	2-34	30"x30", 18"x24"	L	Good	Steel Bent	



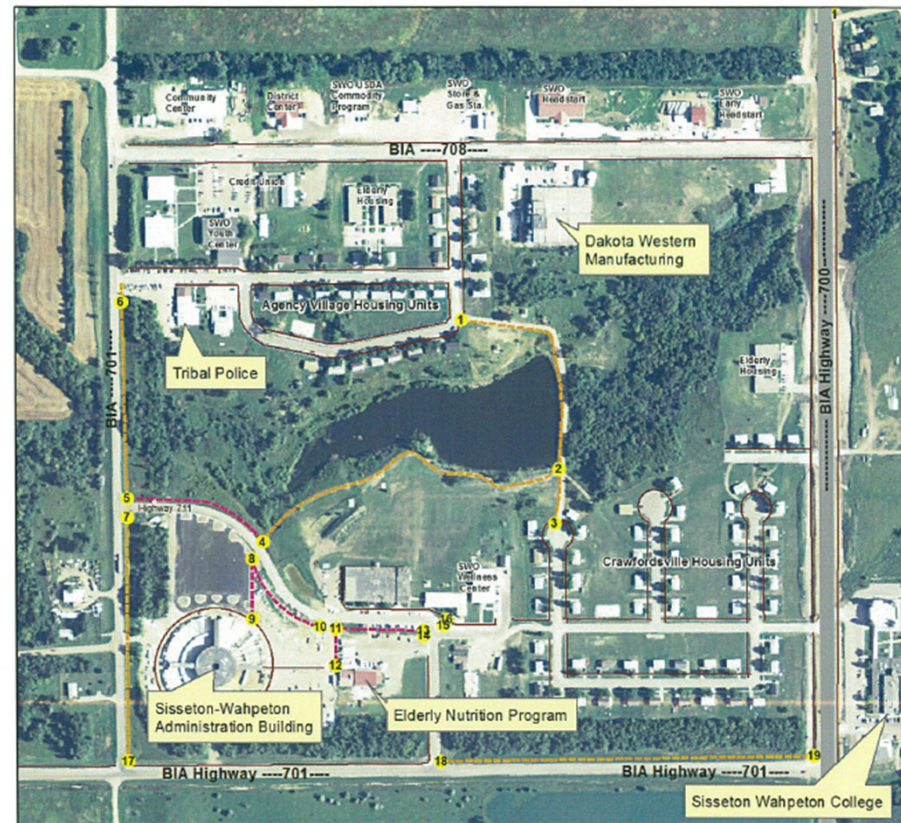
# Pathways/Sidewalk Planning & Construction

Developing pathways and sidewalks to connect all housing sites with the Agency Village Community, Schools, College and Tribal Administration Building

Safer environment to keep kids and adults from walking on the roads and streets

Applied for grant funding through the SDDOT Transportation Alternatives Program which we were successful in acquiring some funding to make a good start to the project

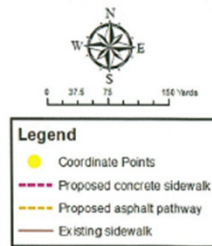
Agency Village, South Dakota



1:5,000

## Point Coordinates

1. 97°4'0.749"W 45°33'59.056"N	11. 97°4'7.355"W 45°33'47.899"N
2. 97°3'55.77"W 45°33'53.619"N	12. 97°4'7.43"W 45°33'46.563"N
3. 97°3'56.049"W 45°33'51.635"N	13. 97°4'2.907"W 45°33'47.783"N
4. 97°4'11.208"W 45°33'51.049"N	14. 97°4'2.899"W 45°33'47.637"N
5. 97°4'18.205"W 45°33'52.673"N	15. 97°4'1.891"W 45°33'47.969"N
6. 97°4'18.428"W 45°33'59.804"N	16. 97°4'1.717"W 45°33'48.199"N
7. 97°4'18.229"W 45°33'51.993"N	17. 97°4'18.322"W 45°33'43.127"N
8. 97°4'11.75"W 45°33'50.443"N	18. 97°4'2.058"W 45°33'43.044"N
9. 97°4'11.708"W 45°33'48.24"N	19. 97°3'42.662"W 45°33'43.168"N
10. 97°4'8.231"W 45°33'47.976"N	



Mapped by M. LaBatte 12-3-2013  
GIS CAD Dept.



# Agency Village Pathways/Sidewalks

Agency Village (West), South Dakota



1:3,168

## Point Coordinates

20. 97°4'35.249"W 45°33'49.268"N  
 21. 97°4'34.589"W 45°33'49.318"N  
 22. 97°4'34.545"W 45°33'47.027"N  
 23. 97°4'34.545"W 45°33'46.451"N  
 24. 97°4'34.524"W 45°33'44.79"N  
 25. 97°4'34.562"W 45°33'44.229"N  
 26. 97°4'34.586"W 45°33'42.967"N  
 27. 97°4'40.37"W 45°33'42.296"N  
 28. 97°4'40.803"W 45°33'41.899"N  
 29. 97°4'40.319"W 45°33'41.886"N  
 30. 97°4'40.249"W 45°33'41.238"N



Legend	
Yellow dot	Coordinate Points
Red dashed line	Proposed concrete sidewalk
Yellow dashed line	Proposed asphalt pathway
Black solid line	Existing sidewalk

Mapped by M. LaBatte 12-3-2013  
 GIS CAD Dept.

Agency Village (East), South Dakota



1:4,000

## Point Coordinates

31. 97°3'41.446"W 45°34'10.326"N  
 32. 97°3'32.844"W 45°34'11.759"N  
 33. 97°3'22.572"W 45°34'14.703"N  
 34. 97°3'41.176"W 45°34'21.354"N  
 35. 97°3'25.241"W 45°34'21.564"N



Legend	
Yellow dot	Coordinate Points
Red dashed line	Proposed concrete sidewalk
Yellow dashed line	Proposed asphalt pathway
Black solid line	Existing sidewalk

Mapped by M. LaBatte 12-3-2013  
 GIS CAD Dept.



# Route 7 Reconstruction

- Culverts failing
- Asphalt failing
- All around bad dis repair
- Very costly re-construction project
- Completion date August 30<sup>th</sup> of next year
- This project alone ties up funding for the next 3-5 years





## Contact Information

- Cliff Eberhardt – (605) 698-8355
- [clifforde@swo-nsn.gov](mailto:clifforde@swo-nsn.gov)
- David Spider – (605) 698-8232
- [davids@swo-nsn.gov](mailto:davids@swo-nsn.gov)
  
- SWO Construction Management
- P.O. Box 509
- 12554 BIA Hwy 711
- Agency Village, SD 57262

STAKEHOLDER PARTNERING  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION



U.S. Department  
of Transportation  
Federal Highway  
Administration



# Stakeholder Partnering





# Stakeholder Partnering Initiative - Benefits:

- Benefits to Local Agencies:
  - Understand federal project development and implementation requirements
  - Mitigate the potential for non-compliance
  - Ensure Consistency in LPA program
  - Streamline processes
  - Develop Stakeholder buy-in
  - Provide Transparency



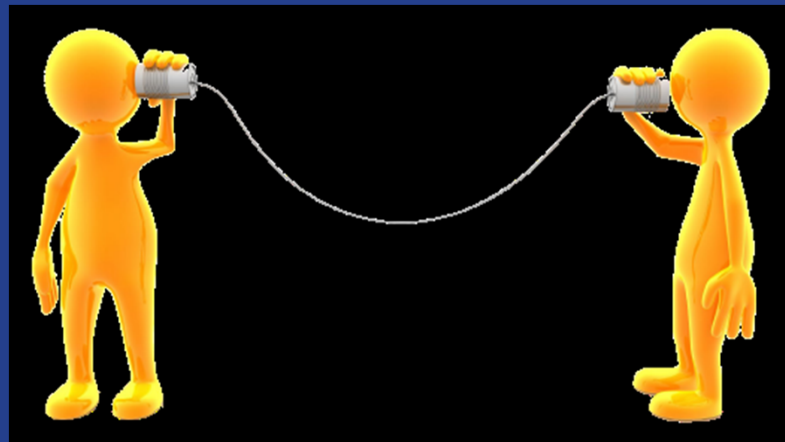


# Stakeholder Partnering Initiative

## Transportation Advisory Council (TAC)

### – Team Charter (adopted 8/12/14)

- Established goals for TAC
- Defined member roles and responsibilities
- Identified TAC membership & length of terms
- Set meeting location and frequency





# Goals for TAC

1. Disseminating information,
2. Facilitating continued partnering,
3. Establishing a venue to explain and discuss Federal-aid highway regulations/policies, SDDOT requirements, and other concerns
4. Discussing potential policy changes or refinements prior to implementing decisions affecting public agencies
5. Discussing the project delivery processes, and identifying potential process improvements





# Voting Membership

- SDDOT Division of Planning and Engineering, Director
- American Council of Engineering Companies of South Dakota (ACEC)
- SD Association of County Highway Superintendents (2 Positions)
- SD Association of County Commissioners
- SD Municipal League - Class 1 City (Public Works Director, Engineer or Planner)
- SD Municipal League - Class 2 City (Public Works Director, Engineer or Planner)
- Metropolitan Planning Organization Representative
- SD Association of Towns and Townships
- Tribal Representative
- Local Technical Assistance Program (LTAP)
- Planning Districts







# Steering Committee Membership (non-voting)

- Ron McMahon – FHWA
- Laurie Schultz – SDDOT
- Doug Kinniburgh – SDDOT
- Brad Remmich – SDDOT
- Noel Clocksin – SDDOT
- Steve Gramm – SDDOT
- Andy Vandel - SDDOT





# Top 5 Projects for Subcommittee Action

1. Guide for Working with Funding
2. Local Road Plan Design Guide
3. Distribution of Federal Bridge Funds
4. Highway Funding Needs
5. Standard Bridge Plans





# Other Suggested Projects

- Improving Lines of Communication among Agencies
  - Safety Projects
  - Historic Bridge Availability
  - ROW Acquisition Process
  - Initiating Research for Local Governments
  - Storm Sewer Sharing
  - Equipment Sharing
  - Procedural Training on Fed./State Regulations
  - Utility Locates / As-Built Plans
  - State Highway Standards on County Roads
  - Jurisdiction Agreements
  - Pavement to Gravel Criteria
  - Data Driven Decision Making
  - Outreach to Small Communities
  - Resource Allocation
  - Federal CFR & Policy Reviews
  - Signs & Risk Management
  - State Install – Locally Maintained Lighting
- 4



# Next Steps

## Subcommittee Meetings

- Currently being organized and meeting by the subcommittee chairmen.

## Committee Meeting

- Next meeting is scheduled for November 12, 2014 as a video conference.





# Questions?

# 2014 TRIBAL TRANSPORTATION SAFETY SUMMIT

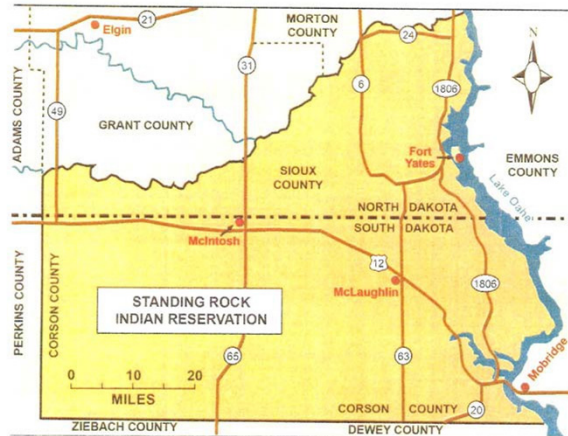
MS. LEAH FOOL BEAR

STANDING ROCK TRANSPORTATION  
PLANNING & DEVELOPMENT



Presented by: Leah Fool Bear  
701/854-1611  
[lfoolbear@standingrock.org](mailto:lfoolbear@standingrock.org)





Standing Rock Reservation has a land base of 2,346,221 mile of that 2,285 miles of road that SRST maintains-248 miles of road is maintained by others (state, county & Corp of Eng.)  
 15,550 enrolled members that live on the reservation.

## 2014 Tribal Transportation Safety Summit

Standing Rock Tribe





## Purpose of Safety Plan

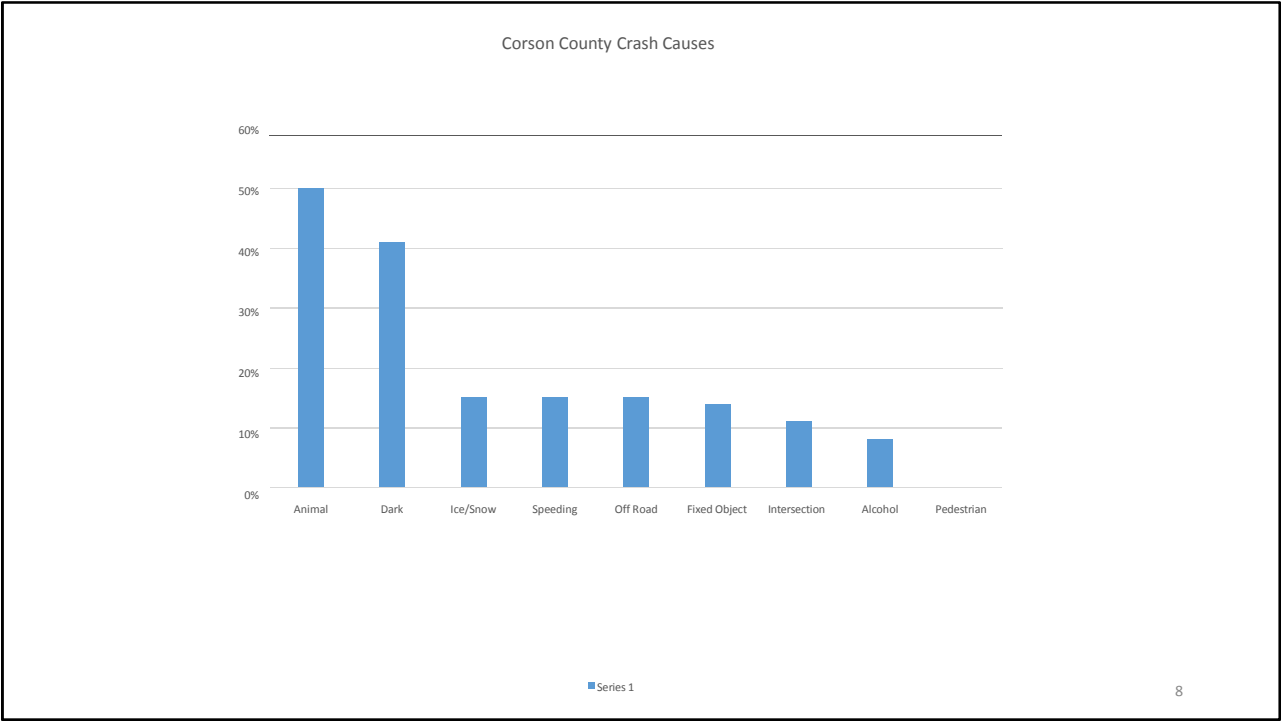
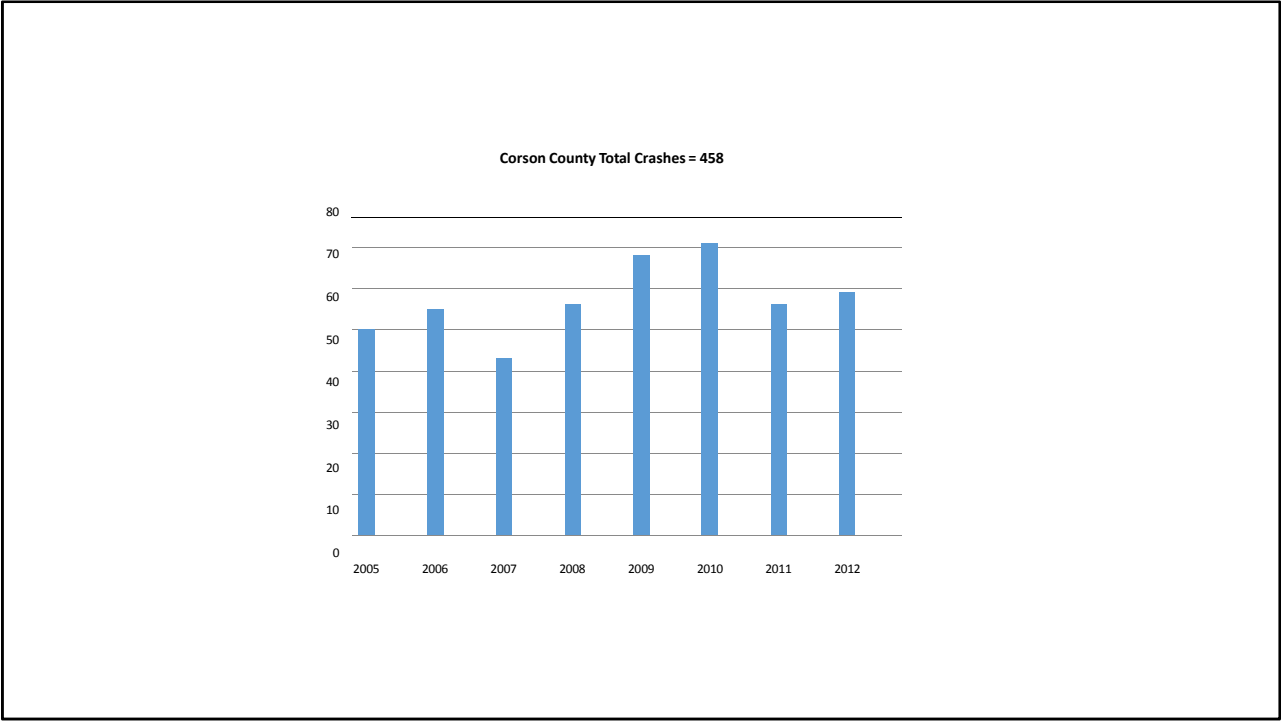
- To reduce deaths and injuries in tribal and other communities, and
- To coordinate and leverage resources to carry out safety strategies.

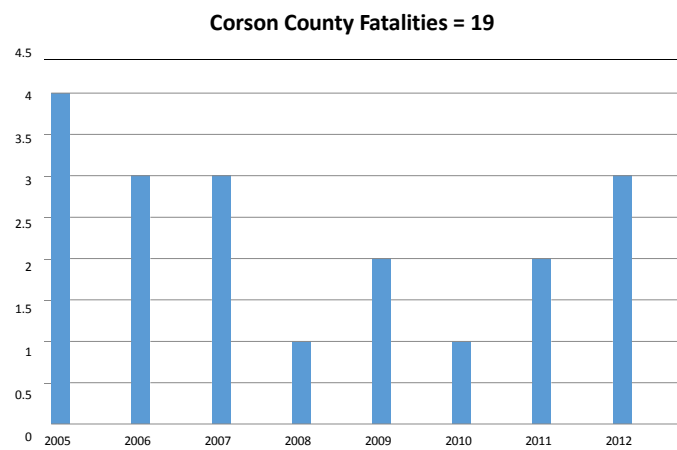
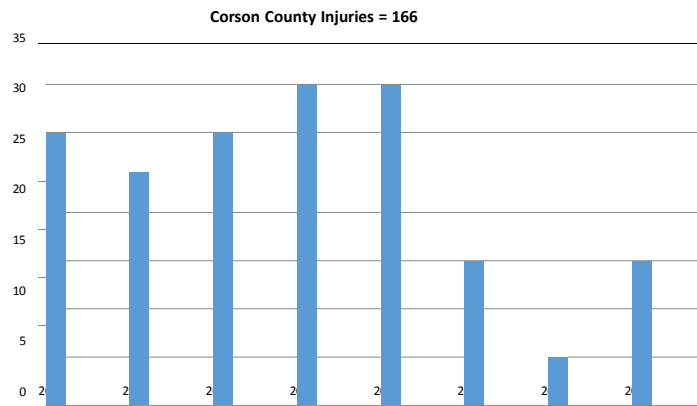
5

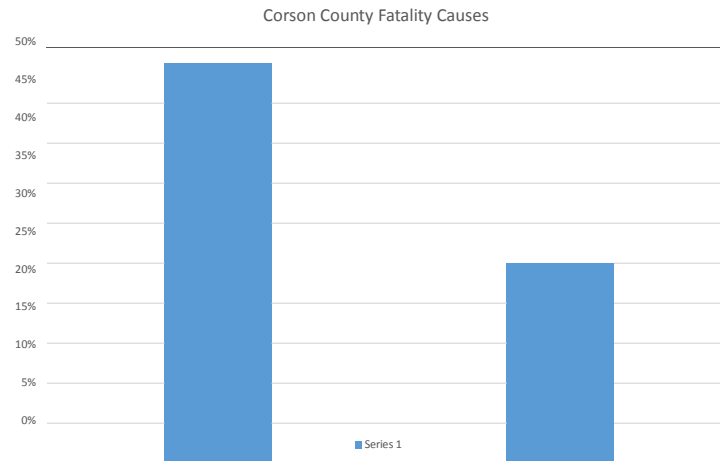
## Data Used

- South Dakota Department of Public Safety Data
- Looked at crash trends and crash causes

6







## Existing Safety Programs

- Funding received to develop electronic crash records system
- RSA are being conducted on BIA routes
- Implemented a Primary seat belt on reservation
- Providing car seats and bike helmets
- Separated pathway in Fort Yates



## Safety Issues Identified

- Animal crashes
- Lack of seat belts
- Alcohol involvement
- Overturning crashes
- Fixed objects
- Narrow roads
- Speeding
- Distracted Driving

13

## Emphasis Areas/ Strategies

- Develop Education Materials
- Implement TraCS System for crash records
- Obtain funding for traffic safety officer
- Cross Jurisdictional agreements
- Improve 911 Addressing
- Establish a safety program

14

## Emphasis Area/ Strategies

- Separated pathways in Cannon Ball and Bullhead

15

## Safety Funding Applications

- Bullhead Pathway
  - Requested \$160,000 in TTP Safety Funds
  - Separated pathway thru town with two pedestrian crossings.
- Safety Education Campaign Materials
  - Requested \$ 35,000 in TTP Safety Funds
  - Will develop culturally relevant posters, banners and billboards

16

## Safety Review

- Reviewed Intersections and problem locations with NDDOT
- Requested:
  - Signing upgrades
  - Additional signing
  - Speed Zone study
  - Relocation of speed limit signing

17

## Approach and Access Issues

18

## Sight Distance Issues



19

## Cross walk locations

20



## Sign Replacement



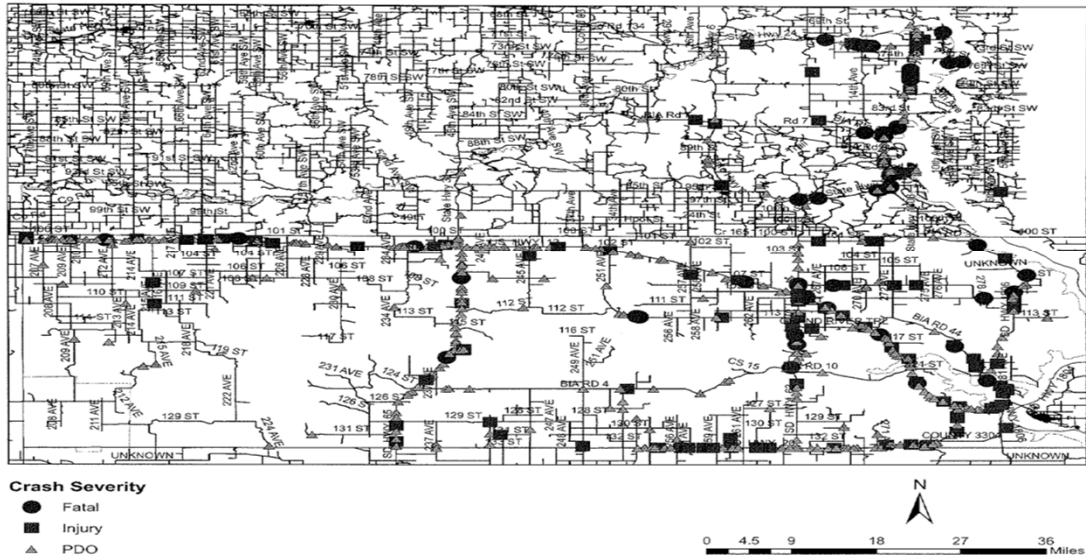
21

## Pedestrian Issues

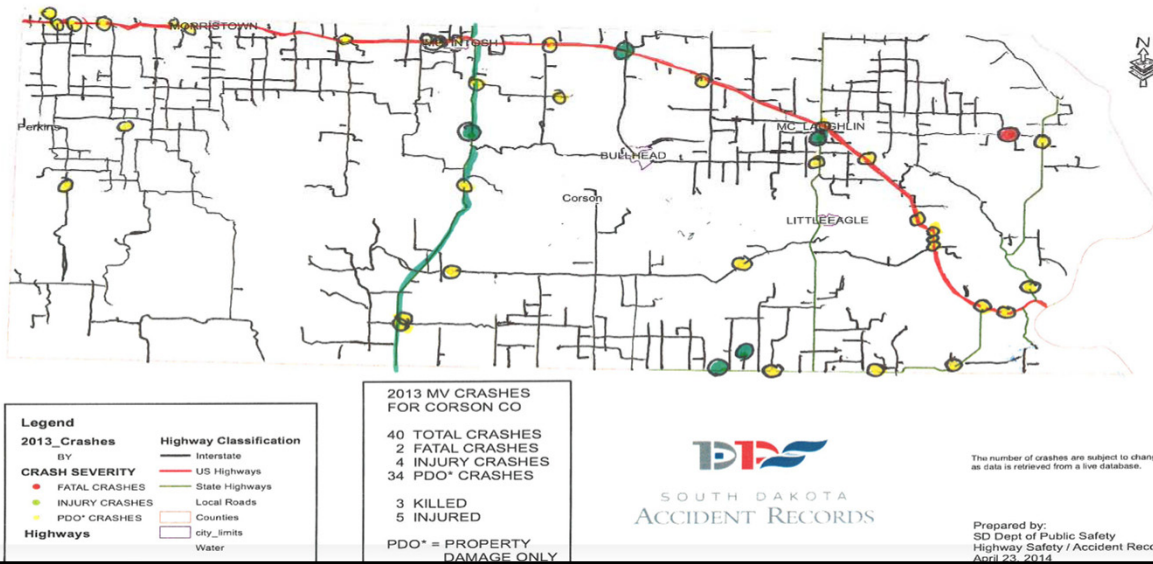


22

### Standing Rock Reservaton Crashes 2004-2013



### CORSON CO - 2013 STATE REPORTABLE MOTOR VEHICLE CRASHES



**Standing Rock BIA-OJS  
Traffic Stats: 2014**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	Nov	DEC
No Driver's License	50	45	27	31	33	22	61					
Permitting Minor to Drive	***	***	***	***	02		01					
No Reg.	06	14	05	06	06	03	05					
Starting, turning, stopping	04	12	04	03	03	08	07					
Speeding	14	32	13	31	30	08	16					
Reckless & Careless Driving	10	13	06	07	07	03	12					
DUI/APC	22	20	12	22	18	17	27					
Fail to drive on right side	01	01	***	***	02	01	***					
Overtaking Veh. W/O Safety	01	***	***	01	***	***	***					
Failed to give right of way	***	***	***	***	***	01	***					
Stopping, standing, Parking	***	***	***	***	01	***	1					
Ped. On roadway	02	06	08	07	10	18	11					
Littering	***	***	***	***	***	02						
Driving Violation of Court Order	01	***	***	***	***	***	***					
Duties in event of accident	01	01	***	02	02	01	4					
Unlawful use or Tampering	01	***	02	01	***	***	1					
Open Container	14	07	07	06	15	08	23					
No Liability Insurance	23	25	14	11	10	07	17					
Infant/Child Restraints	***	***	03	01	01	01	5					
Child Restraints Systems	***	06	***	03	04	02	1					
Safety belts	04	05	***	03	***	02	9					



**INDIAN HIGHWAY SAFETY PROGRAM  
MOBILIZATION AND SUSTAINED ENFORCEMENT FORM**  
(Revised June 2014)



**Enforcement Action Numbers and Traffic Statistics:** Dates: 08/15/14 - 09/01/14  
(All fields are required.)

DUI/DWI Alcohol Arrests	DUI/DWI Arrests Drugs Only	DUI/DWI Arrest Alcohol/ Drugs	Safety Restraint Citations	Child Passenger Citations	Felonies	Stolen Vehicles
18	0	18	1	0	16	1
Fugitives Apprehended	Suspended Licenses	Uninsured Motorists	Speeding	Reckless Driving	Other: (Anything not listed)	
15	10	3	20	0		
Motor Vehicle Crashes (MVC)	MVC Injury (Crashes)	MVC Fatalities	MVC Fatalities Under 20 YOA	Pedestrian Fatalities		
6	3	0	0	0		

**Information relating to the traffic statistics, (Ex: If this is a seatbelt mobilization (CIOT) and, you're reporting several speeding citations, you may state, "Ninety percent of traffic stops conducted found all drivers/passengers wearing seat belts.")**

**Media Activity during this reporting period:**

Enter the total number of each type of media during this reporting period.

TV Ads    Radio Ads    Print Ads    Outdoor    On-line Ads    Press Conferences

Briefly describe the above media advertising this mobilization. (Include local newspapers, website, casino marquee, billboards, TV and Radio news stories and, any other information activities taking place during this reporting).


**Total Amount Spent on Media Activities during Mobilization:** 0


**CONTACT INFORMATION**


(Enter the contact information of the person entering the data for this report. All fields are required).

FIRST NAME: DANIEL  
LAST NAME: GUINONES  
PHONE NUMBER: 701-854-7241  
E-MAIL ADDRESS: daniel.guiones@bia.gov  
DATE: 9/8/14






**INDIAN HIGHWAY SAFETY PROGRAM**  
**MOBILIZATION AND SUSTAINED ENFORCEMENT FORM**  
(Revised June 2014)



**PROJECT NUMBER/TRIBE:**

**MOBILIZATION**  
 Don't Shatter the Dream: ☐ (Impaired Driving, December 12, 2013, through January 1, 2014)  
 Click It or Ticket: ☐ (Seat belt enforcement, May 19, 2014, through June 02, 2014)  
 Drive Sober or Get Pulled Over: ☒ (Impaired Driving, August 15, through September 01, 2014)

Reporting on: DUI Enforcement: ☒ Safety Belt Enforcement: ☒ Reporting Dates 08/15/14 -- 09/01/14

Law Enforcement Agency	Total Number of Officers on Reservation	Total Number of Officer's Participating during Mobilization	Total Number of Officer's reporting information during this Mobilization	Percentage (ex: if you have a total of 10 officers and only 2 participated, the percentage is 20%)
Tribal Police (excluding HSO's)				
BIA Police	22	14	14	64%
Indian Highway Safety Officers				

Total number of **regular shift officers' hours** (excluding overtime) worked for each enforcement activity during this period: (If agency has full-time HSO's include **only** the **specific** enforcement activity hours worked. Example: HSO had to attend court, training or other administrative duties during his/her shift; you would not include these).  
 Specifically on DUI/DWI enforcement: ☒ (Regular hours spent specifically on DUI/DWI)  
 Specifically on Belt enforcement: ☒ (Regular hours spent specifically on seat belt)  
 Combined DUI/DWI and Belt enforcement: ☒ (Total hours of DUI/DWI and seat belt)

Total number of **Overtime** hours worked during this mobilization: ☒ (All officers' including HSO's)

Total number of Checkpoints: ☒ Number of hours worked per Checkpoint: ☒ Total checkpoint hours: ☒  
 Total number of Saturation Patrols: ☒ Total hours worked on Saturation Patrols: ☒

Provide a description of your DWI and/or Safety Belt enforcement operations:

Tribal Safety Belt Law: (Check One) Primary ☒ Secondary ☐ No Law ☐  
 Tribal Land Base: 27,300 acres / 3,600 sq miles Reservation Population: 6,171 Road Miles: \_\_\_\_\_

IHSP Mobilization Form Page 1













**Keep our families together and our children safe.**

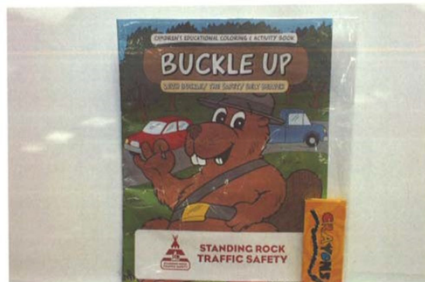
Injuries are the leading cause of death for American Indians age 1 to 44. American Indian children have the highest rate of death from motor vehicle crashes among all ethnic groups in the U.S.

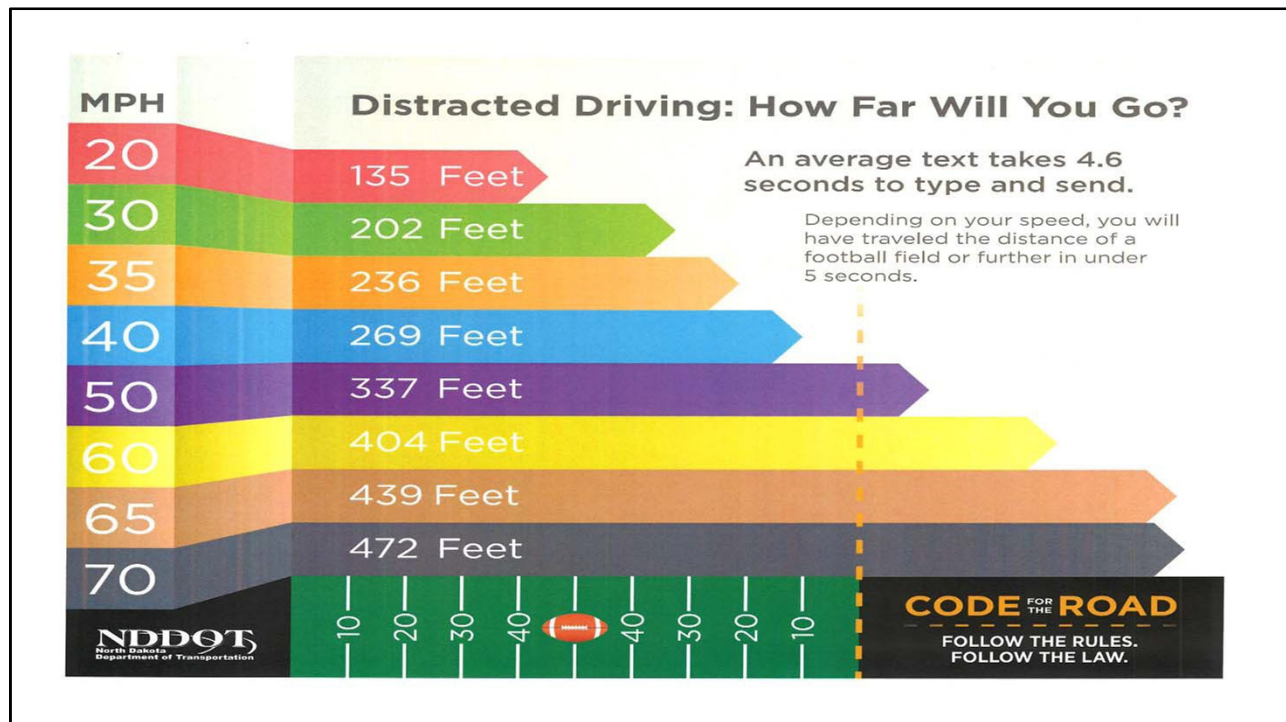
**Build a stronger future.**

Injuries and deaths from motor vehicle crashes drain our health care resources and take away lives that would have contributed to our tribal community.

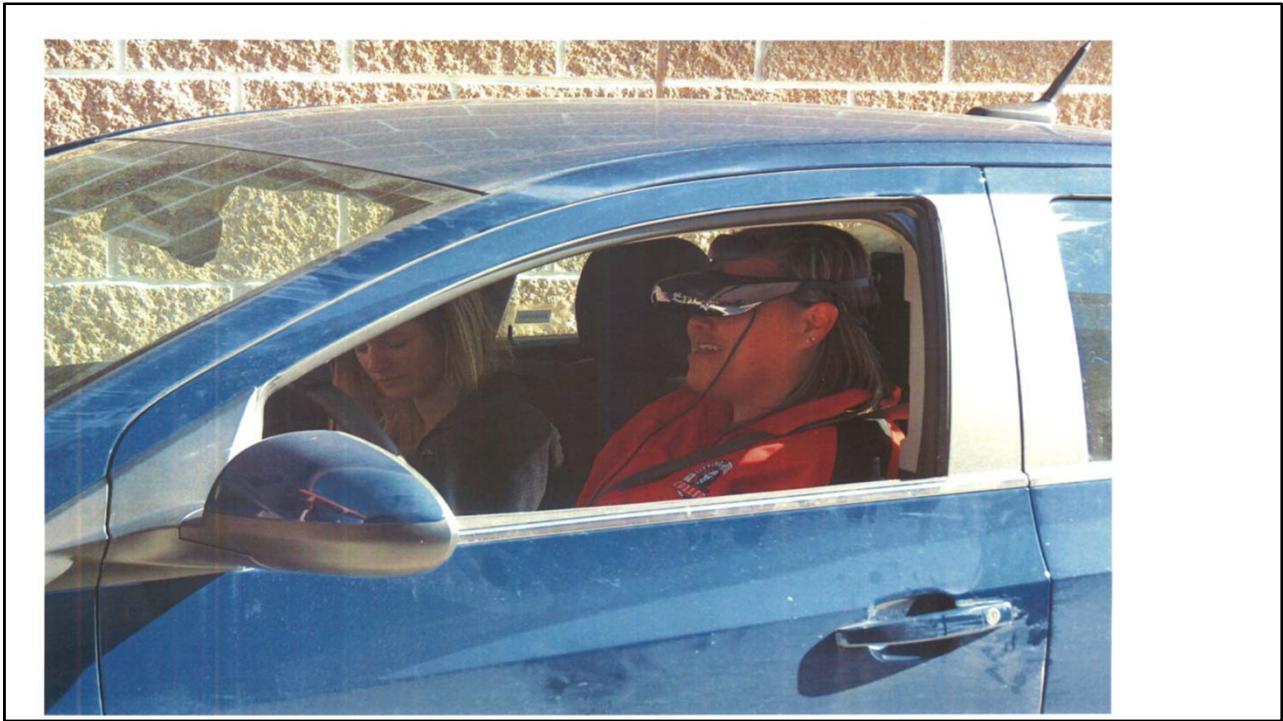
- Buckle up, every trip, every time.
- Never ride with a driver who has been drinking.
- Be sober when you drive.
- Put your phone away and drive alert.
- Teach young drivers to be responsible and safe.

**Buckle Up. Drive Alert.**  
So everyone gets home safely.











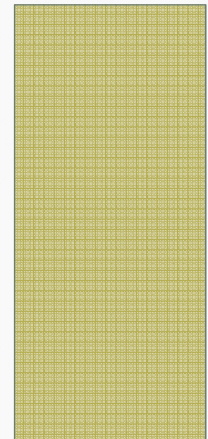
ACCESS MANAGEMENT PRINCIPLES,  
BENEFITS, AND APPLICATIONS  
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION





# ACCESS MANAGEMENT

PRINCIPLES, BENEFITS AND APPLICATIONS





# PRESENTATION CONTENTS

- What is Access Management?
- General Principles
  - Strategic Planning
  - Functional Planning
  - Design
  - Permitting
- Benefits of Access Management
- Access Management Resources
- Application Examples

# ACCESS MANAGEMENT

What is Access Management?

- The process of providing access to land development while preserving traffic flow, safety, capacity, and speed on the surrounding highway system.



# STRATEGIC PLANNING

- Land Development Ordinances
- Site Plan Review Ordinances
- Comprehensive Plans
- South Dakota Platting Law

# STRATEGIC PLANNING LAND DEVELOPMENT ORDINANCES

- Restrict number of driveways per lot
- Locate driveways away from intersections
- Connect parking lots and consolidate driveways
- Provide residential access through neighborhood streets
- Increase minimum lot frontage on major roads
- Promote a connected street system
- Promote internal access to outparcels



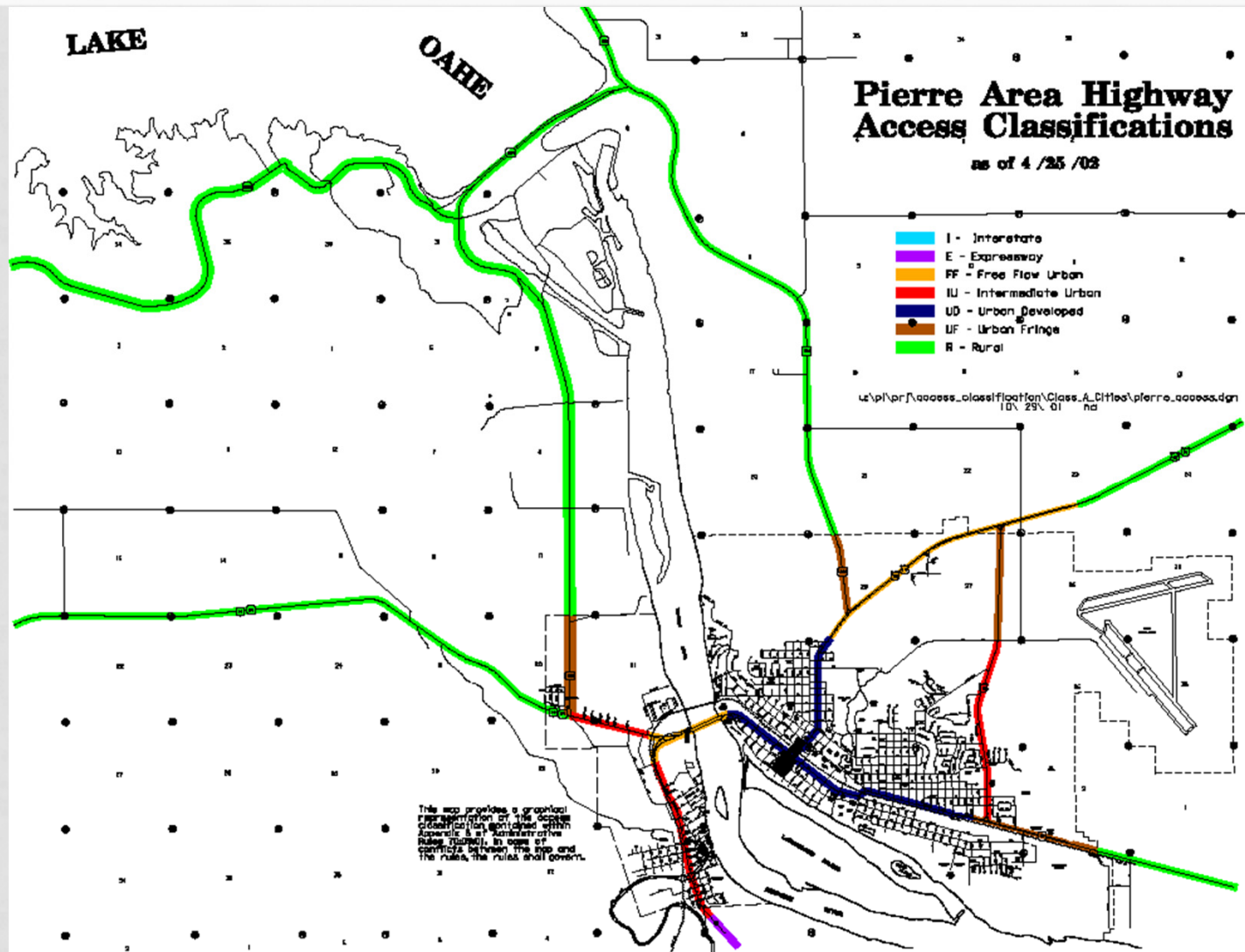
# STRATEGIC PLANNING SITE PLAN REVIEW ORDINANCES

- Allow consideration of access at early steps of development
- Allow for smooth coordination between agencies

# STRATEGIC PLANNING COMPREHENSIVE PLANS

- Set the goals, objectives and policies for access management
- Establish functional classification as it relates to how the access will be managed
- Provide for a variety of street types

# STRATEGIC PLANNING COMPREHENSIVE PLANS



# STRATEGIC PLANNING

## SOUTH DAKOTA PLATTING LAW

- 11-3-12.1 Approval of access to street or highway prerequisite to filing plat. The owner of any parcel of land proposing to develop such land for residential or commercial purposes shall obtain written approval of the proposed access to an abutting highway or street from the appropriate highway or street authority. The approval shall be obtained prior to filing of the plat in accordance with this chapter and may not replace the need for any permits required by law.



# FUNCTIONAL PLANNING

- Transportation plans
- Land use planning
- Local design standards

# FUNCTIONAL PLANNING TRANSPORTATION PLANS

- Future new construction, reconstruction or resurfacing of transportation routes
- Future new construction or reconstruction of pedestrian facilities
- Future funding mechanisms for planned construction projects

# FUNCTIONAL PLANNING

## LAND USE PLANNING

- Future planned residential, commercial and industrial land uses
- Future planned educational and public services land uses
- Future planned green spaces

# FUNCTIONAL PLANNING LOCAL DESIGN STANDARDS

- Driveway width
- Driveway radius
- Driveway density along local route
- Driveway spacing along local route

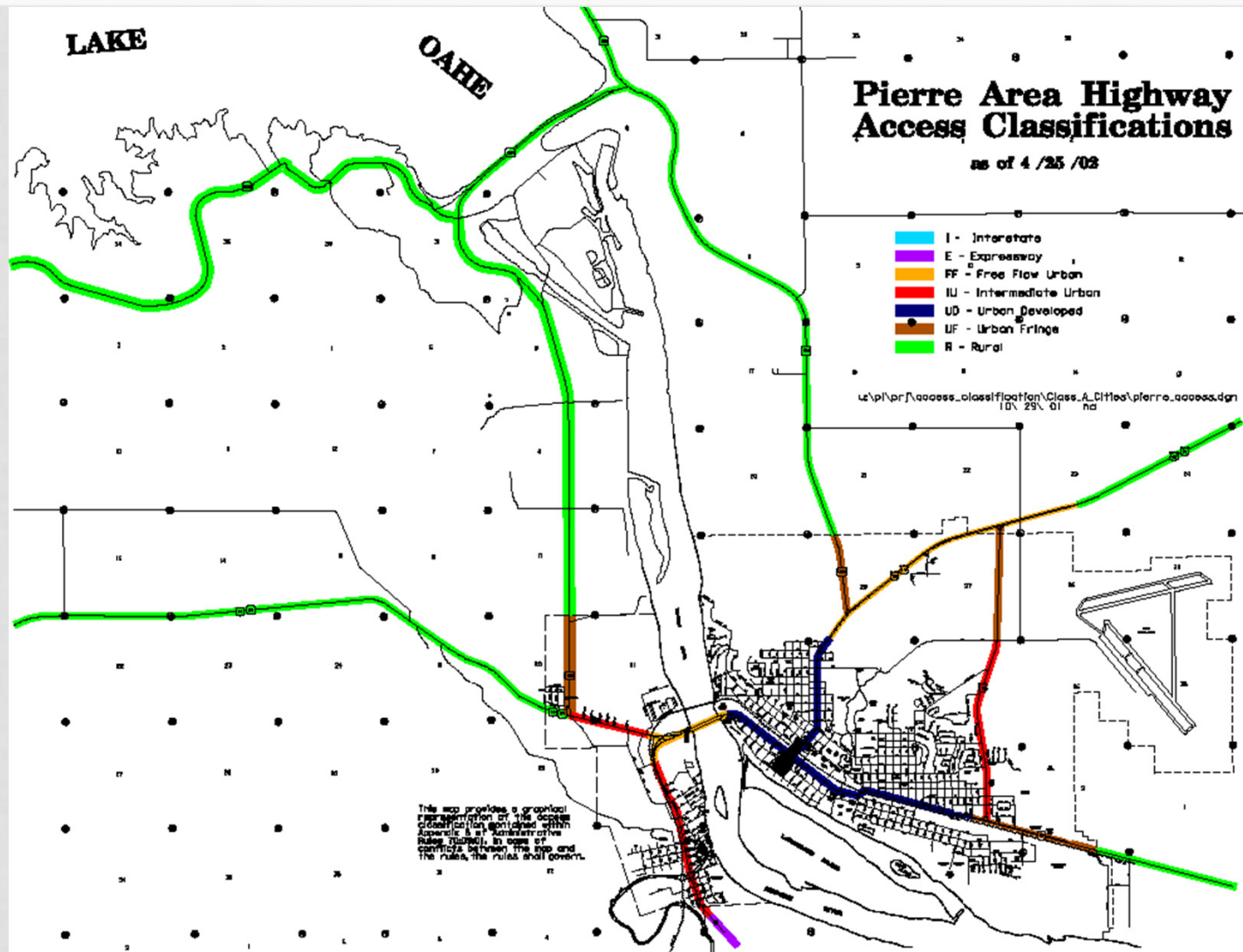


# FUNCTIONAL PLANNING LOCAL DESIGN STANDARDS

Access Class	Signal Spacing Distance (mile)	Median Opening Spacing (mile)	Minimum Unsignalized Access Spacing (feet)	Access Density	Denial of Access When Other Available
Interstate	N/A	N/A	N/A	N/A	Yes
Expressway	1/2	1/2	2640	at half-mile increments	Yes
Free Flow Urban	1/2	1/2F, 1/4D	1320	at quarter-mile increments	Yes
Intermediate Urban	1/2	1/2F, 1/4D	660	at eighth-mile increments	Yes
Urban Developed	1/4	1/4	100	2 accesses/block face	Yes
Urban Fringe	1/4	1/2F, 1/4D	1000	5 accesses/side/mile	Yes
Rural	N/A	N/A	1000	5 accesses/side/mile	Yes

- F = Full Movement
- D = Directional Movement (e.g. right-in-right-out)

# FUNCTIONAL PLANNING LOCAL DESIGN STANDARDS

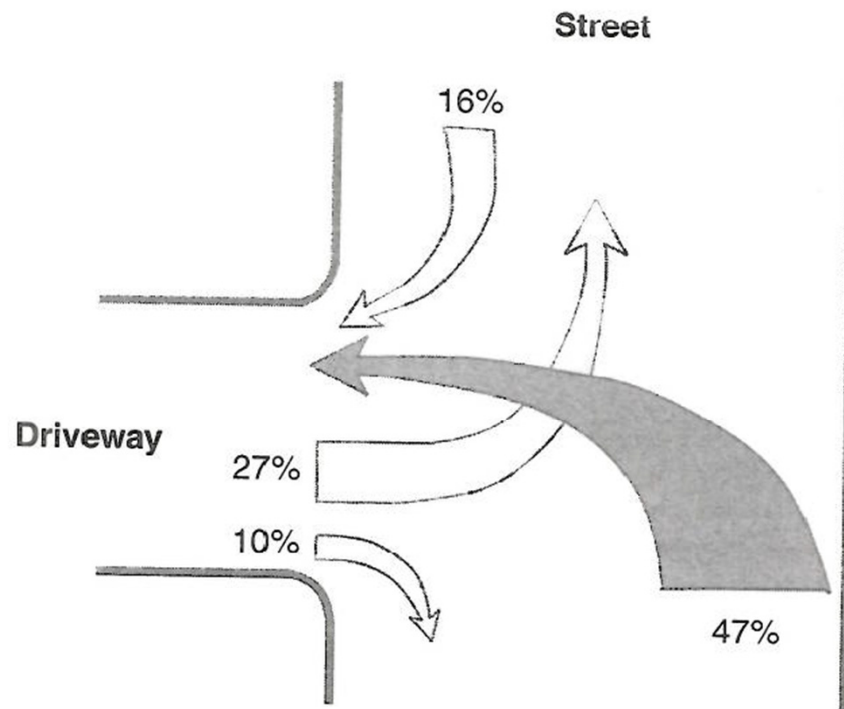


# DESIGN

- Design Considerations
- Techniques
- New vs Retrofit
- Guidance
  - Landowners

# DESIGN CONSIDERATIONS

## CRASH HISTORY

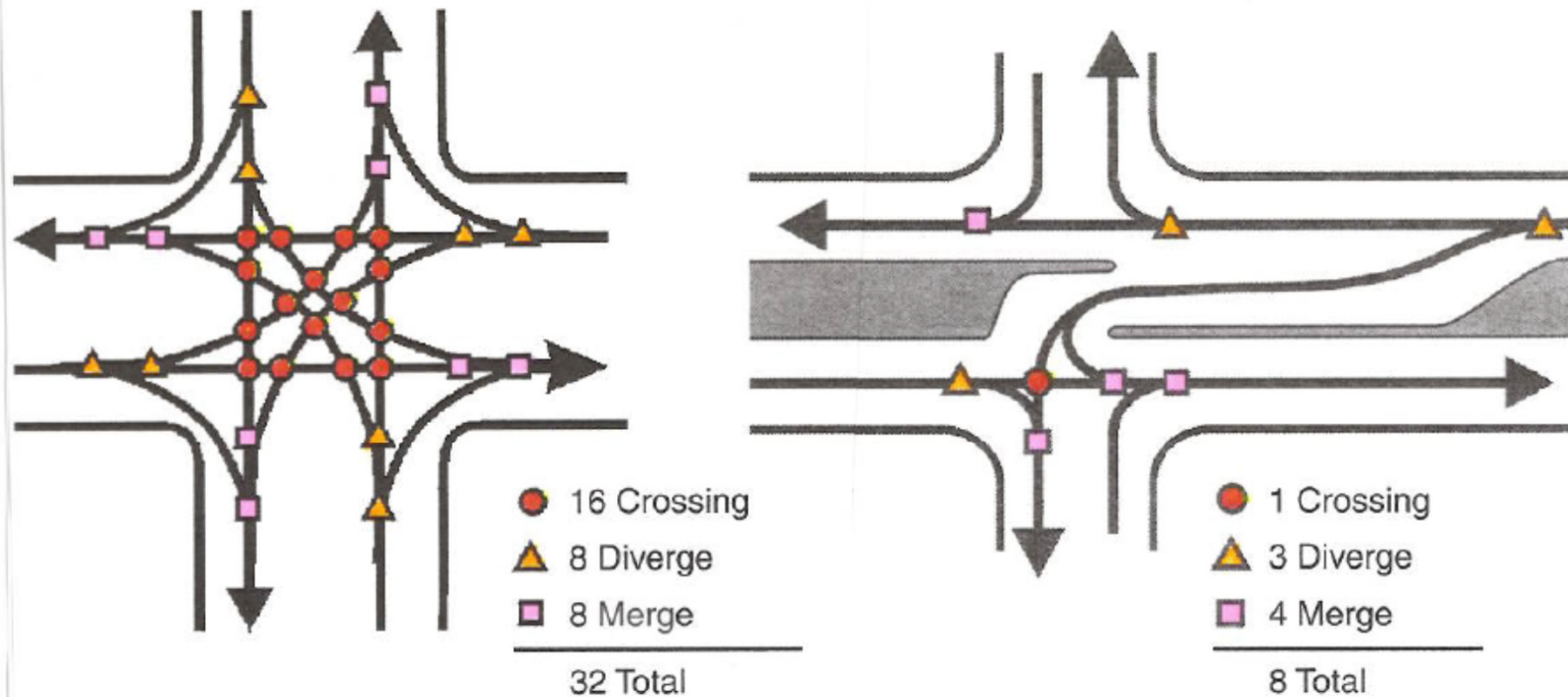


**FIGURE 1-6** Percentage of driveway crashes by movement (1).



# DESIGN CONSIDERATIONS

## CONFLICT POINTS



**FIGURE 1-4** Vehicular conflict points at a typical four-way intersection versus a directional median opening.

# DESIGN

## TECHNIQUES-SIGNAL SPACING

### Optimum Signal Spacing (feet)

Cycle Length (sec.)	Speed (mph)						
	25	30	35	40	45	50	55
60	1,100	1,320	1,540	1,760	1,980	2,200	2,430
70	1,280	1,540	1,800	2,050	2,310	2,500	2,820
80	1,470	1,760	2,050	2,350	2,640	2,930	3,220
90	1,630	1,980	2,310	2,640	2,970	3,300	3,630
120	2,200	2,640	3,080	3,520	3,960	4,400	4,840
150	2,750	3,300	3,850	4,400	4,950	5,500	6,050

Source: National Highway Institute, *Access Management, Location, and Design*, NHI Course No. 15255, 1991.

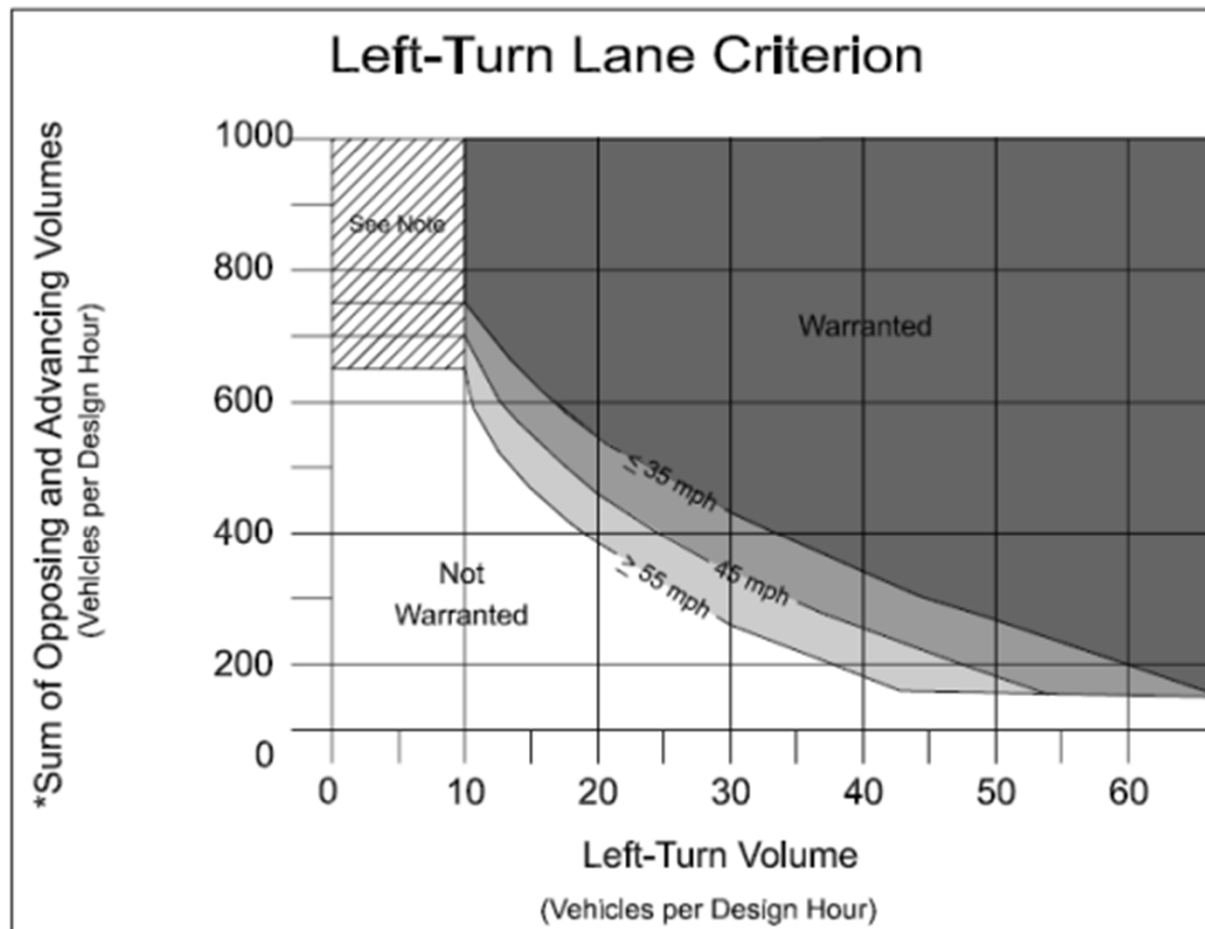
# DESIGN

## TECHNIQUES-TWLTL vs MEDIAN

- Volumes up to 24,000 vpd
- No more than 60 access points per mile
- Adequate spacing of moderate to high volume access points

# DESIGN

## TECHNIQUES-TURN LANES



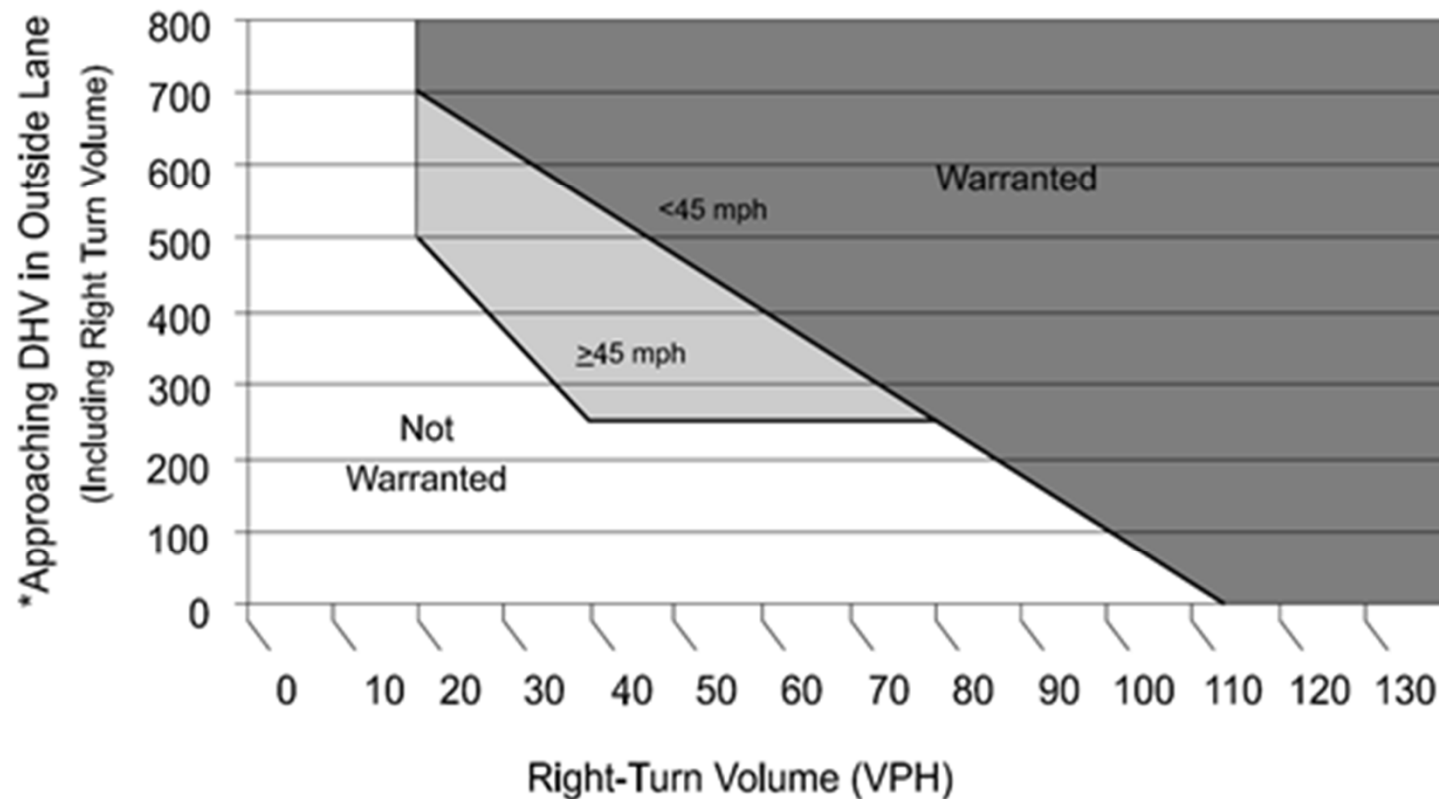
Source: Oregon DOT Analysis Procedures Manual 2008

\*(Advancing Vol/ # of Advancing Through Lanes)+  
(Opposing Vol/ # of Opposing Through Lanes)



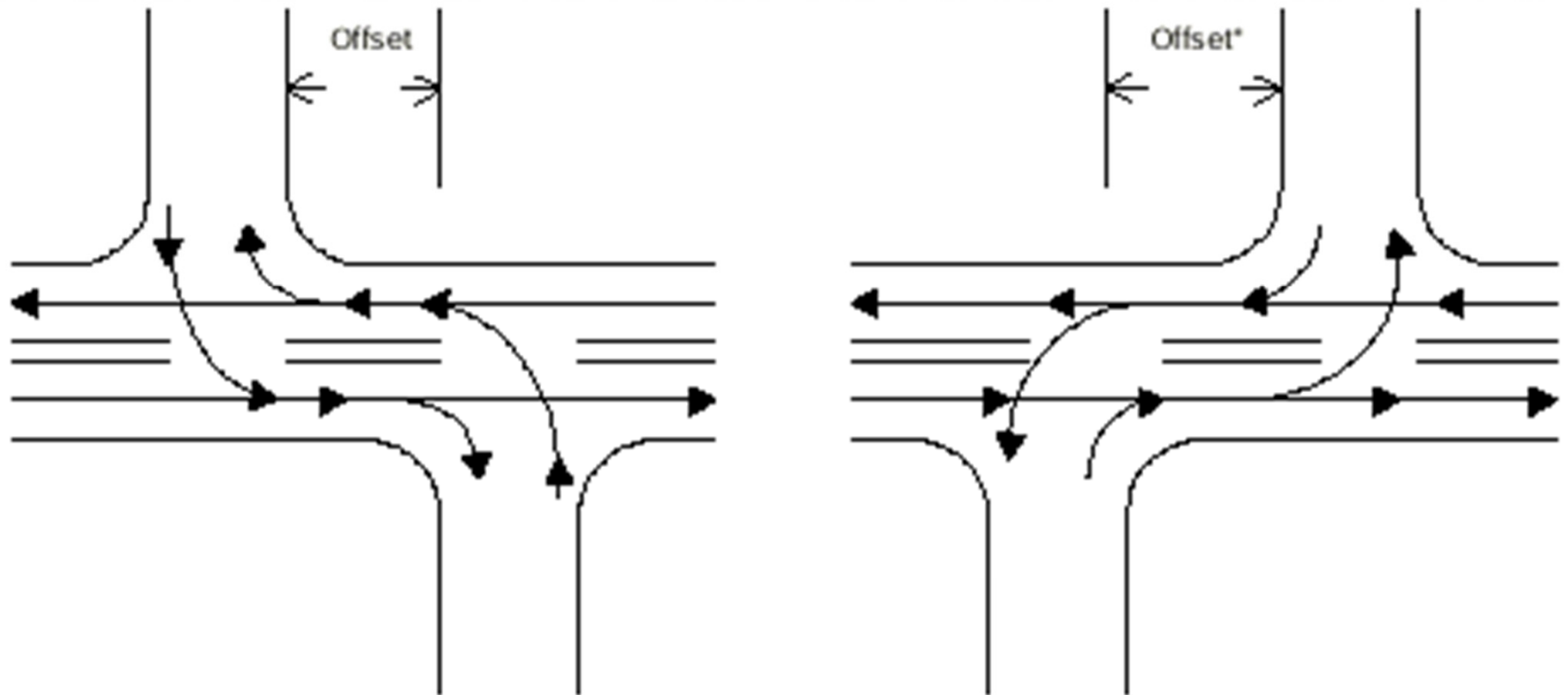
# DESIGN TECHNIQUES-TURN LANES

## Right-Turn Lane Criterion



\*Assume 50/50 lane split unless field data is available

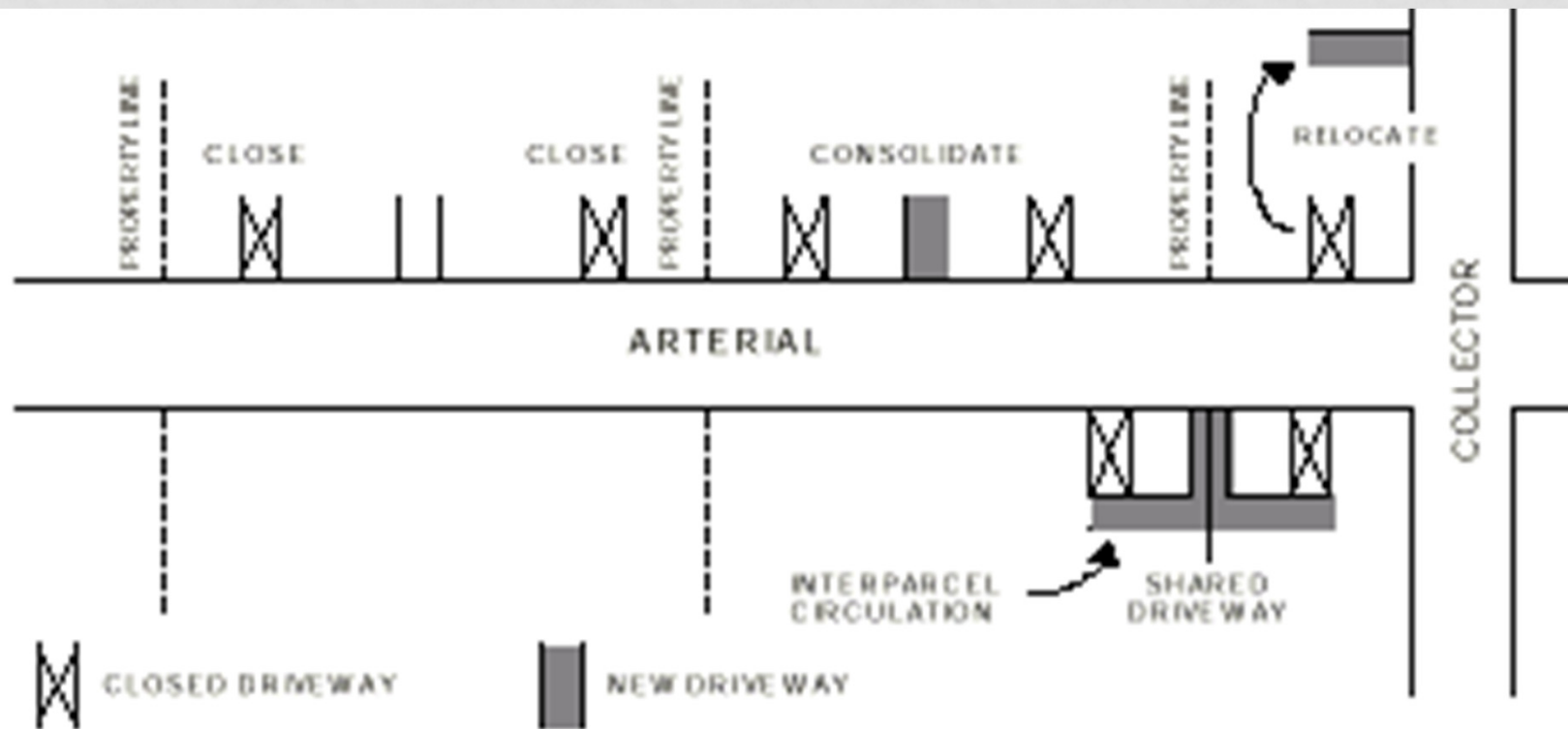
# DESIGN TECHNIQUES-ALIGNING DRIVEWAYS



Align driveways or, as shown above, provide sufficient offset distance.

\* sum of storage requirements for both left-turn maneuvers on arterial.

# DESIGN TECHNIQUES-CONSOLIDATING ACCESS



# DESIGN

## NEW vs RETROFIT

- New-approval decision based on a site development which falls purely within the established design criteria
- Retrofit-approval decision based on an existing site having existing property and access rights; majority of access decisions fall into this category



# DESIGN

## NEW vs RETROFIT

### Retrofit Guidelines:

- Try to get as close as possible to design standards
- Research and recognize existing access rights
- Utilize turn lanes and medians as appropriate
- Review site for alternate access
- Evaluate the cost vs the benefit of the changes attempting to be made
- Consider incremental changes

# DESIGN GUIDANCE-LANDOWNERS

- Consistency
  - Recognition of existing access rights
  - Application of standards
  - Recognition of unique site developments
- Communicate Benefits
- Education of Commercial Impacts

# PERMITTING

- Local
- State

# PERMITTING

- Apply via local highway authority
- Applications generated through highway projects
  - Coordination with other local authorities



# BENEFITS OF ACCESS MANAGEMENT— SAFETY

- Reduces the number, severity, and cost of access-related accidents
- Saves lives



# BENEFITS OF ACCESS MANAGEMENT— CONGESTION MITIGATION

- Prolongs useful life of existing roads
- Frees scarce resources that would otherwise be spent on new roadway projects
- Maintains or increases capacity to carry traffic
- Enhances environmental and aesthetic vitality of communities





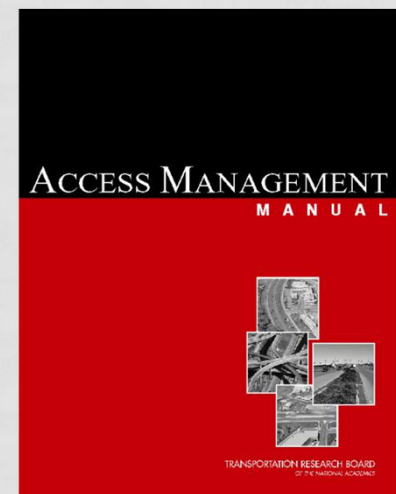
# BENEFITS OF ACCESS MANAGEMENT— ECONOMIC DEVELOPMENT

- Establishes common access design criteria in advance of development
- Improves access to property adjacent to highways
- Provides safe access for customers
- Protects value of private investments
- Preserves key economic corridors



# RESOURCES

- National Access Management Manual
- Access Management Applications Guide (AMAG)
- AASHTO Green Book
- NCHRP Research
- National Access Management Website
  - [www.accessmanagement.gov](http://www.accessmanagement.gov)
- NHI Course





# ACCESS MANAGEMENT

# EXAMPLES

# SD44 JACKSON BLVD COMMON CENTS





# SD44 JACKSON BLVD COMMON CENTS



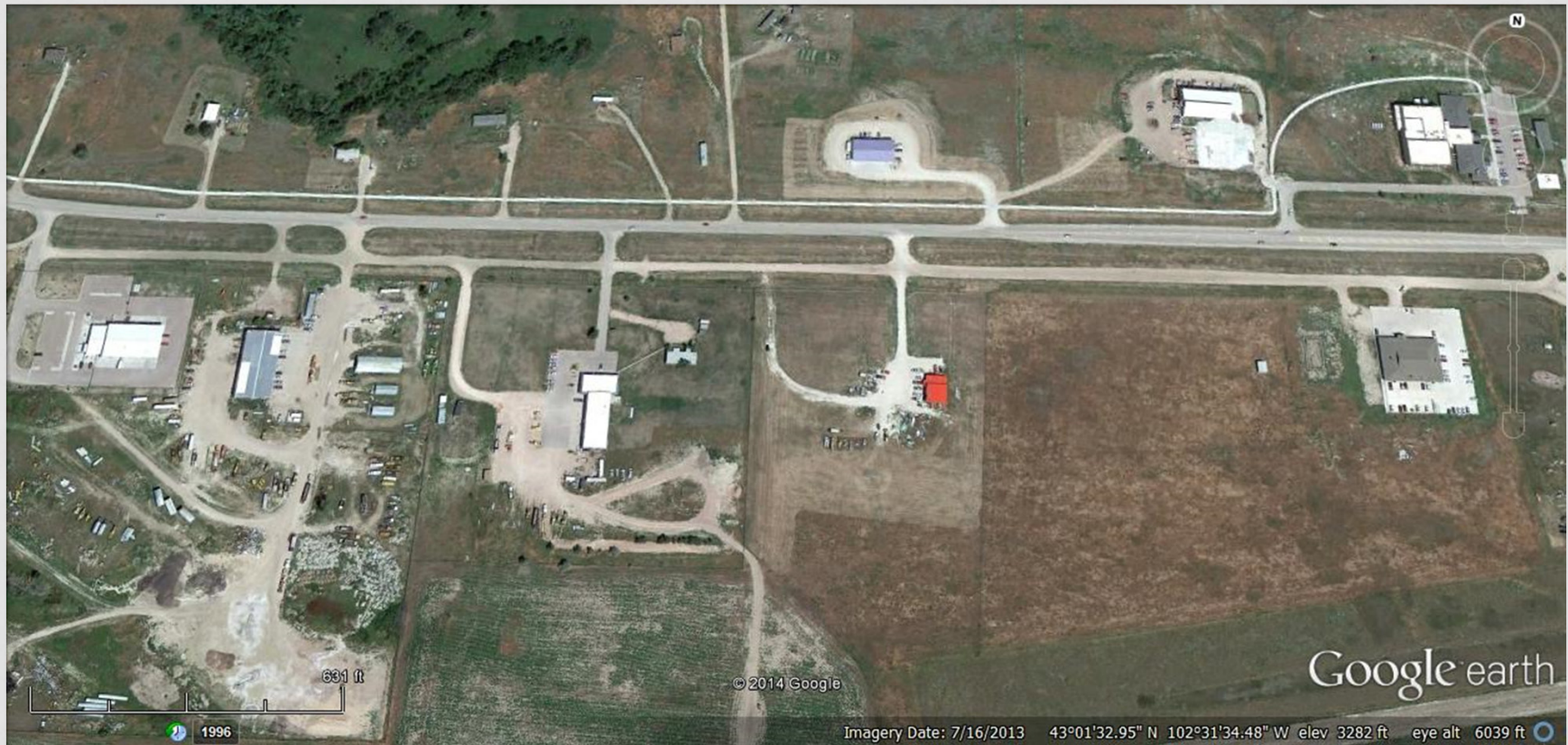
<https://maps.google.com/>

# US18 PINE RIDGE

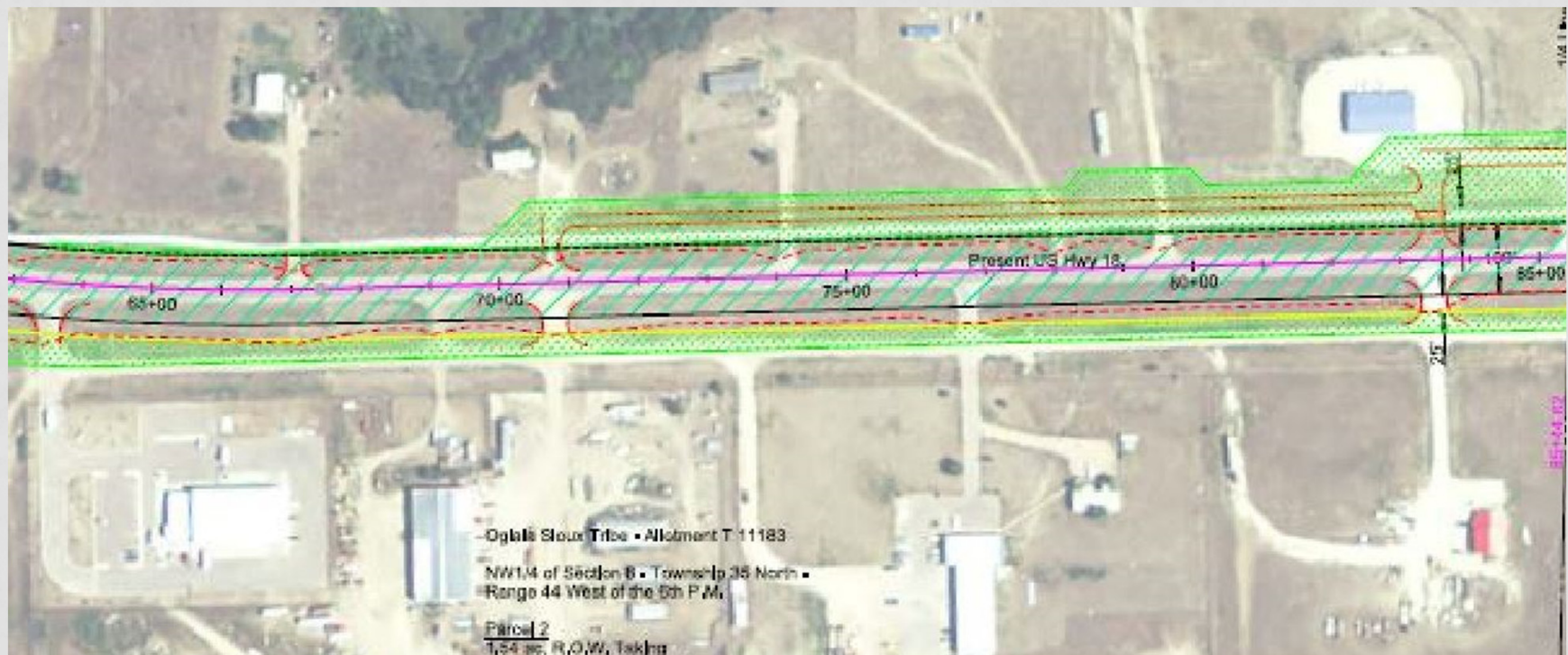




# US18 PINE RIDGE



# US18 PINE RIDGE





# SD63 PARMELEE SEWING FACTORY

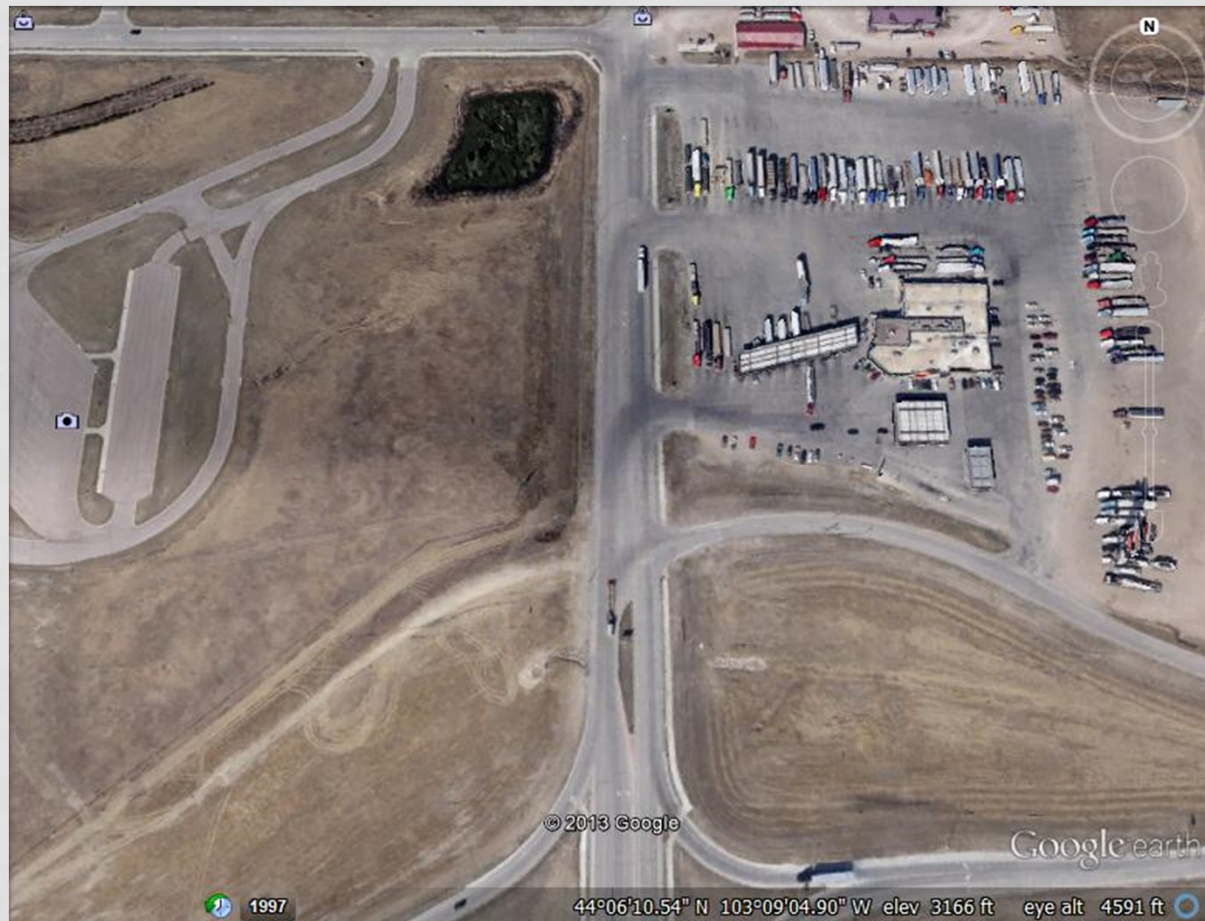


# SD44 USED CAR SALES





# RAPID CITY I90 EXIT 61



# RAPID CITY I90 EXIT 61





# RAPID CITY I90 EXIT 61



**SISSETON**

4+02.15-4.19° R to 4+02.99-6.24° L  
Install 18"-8" RCP  
(Between Drop Inlets)

5+31-10.89° R to 5+48.39-11.54° R  
Install 24"-18" RCP  
(Between Drop Inlets)

5+48.39-11.54° R to 5+80.99-24.70° R(RAW)  
Install 24"-102" RCP

2+99-24.20 47° R(RAW) to 5+48.39-11.54° R  
Install 24"-18" RCP  
(Between Drop Inlets)

3+98.05-27.15° L to 4+02.99-6.24° L  
Install 18"-20" RCP  
(Between Drop Inlets)

3+98-22.71° R to 4+02.16-4.19° R  
Install 18"-18" RCP  
(Between Drop Inlets)

5+15.89 (Maximum)  
4'-38.61' (RAW)

R.O.W. Line

Hickory Street

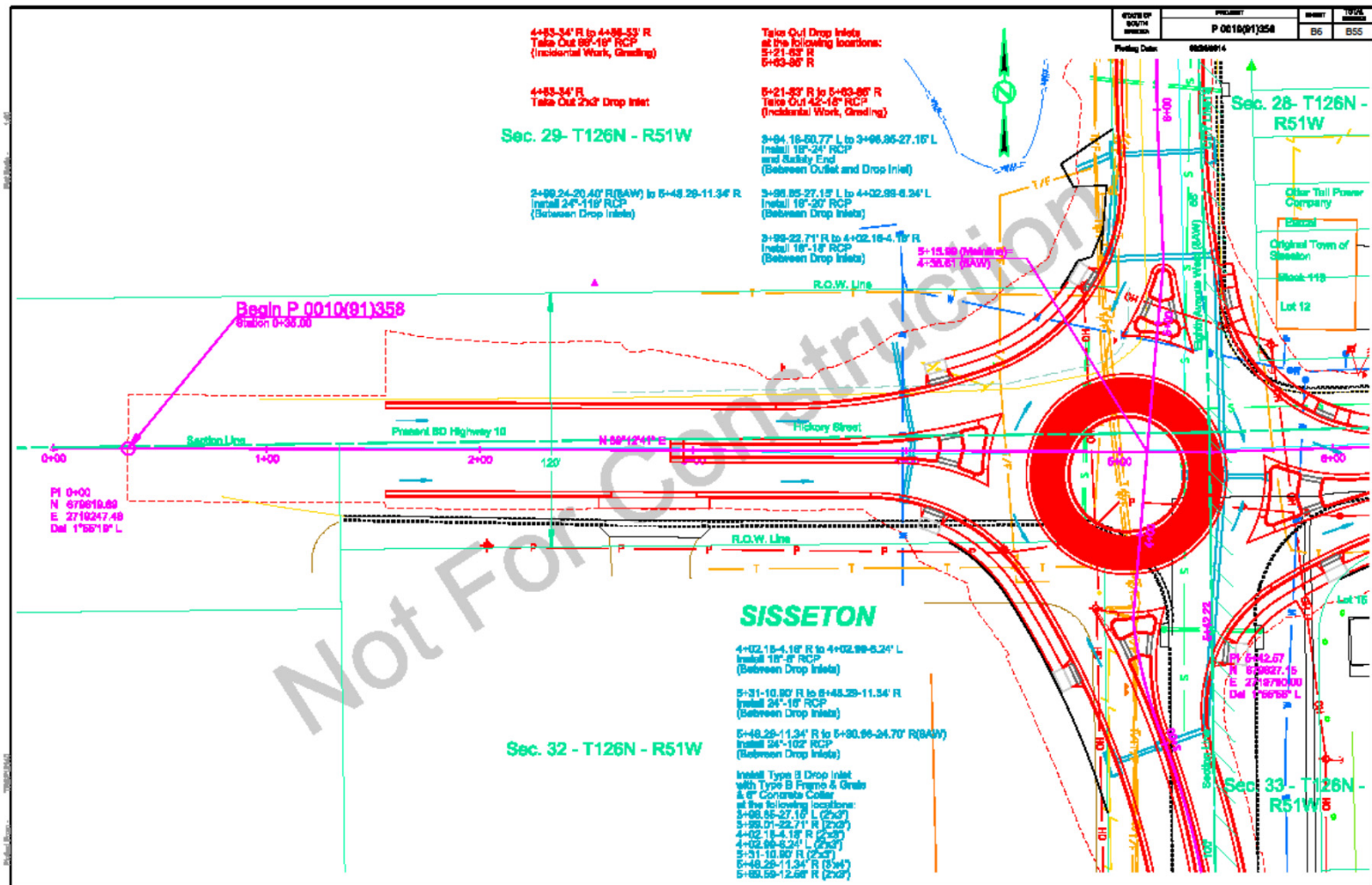
Proposed BD Highway 10

N 89°12'41" E

Stationing: 0+00, 2+00, 3+00, 4+00, 5+00, 6+00

Drop Inlet locations marked with blue dots.

Watermark: Not For Construction





[illegible]

# LESSONS LEARNED

- Access management preserves safety and efficiency of roadways
- Access management can be applied through planning design and permitting
- Access management uses different techniques based on new verses retrofit land uses

# FINAL QUESTIONS?

Brooke White  
Access Management Engineer  
SDDOT  
5316 W 60<sup>th</sup> Street North  
Sioux Falls, SD 57107  
605-367-5680  
[brooke.white@state.sd.us](mailto:brooke.white@state.sd.us)

Daniel Staton  
Access Management Engineer  
SDDOT  
PO Box 1970  
Rapid City, SD 57709  
605-394-2244  
[daniel.staton@state.sd.us](mailto:daniel.staton@state.sd.us)

SOUTH DAKOTA HIGHWAY PATROL  
MOTOR CARRIER SERVICES



# South Dakota Highway Patrol Motor Carrier Services



## SDHP MC Staff

- ▣ 4 Ports of Entry
- ▣ 8 Mobile Teams
- ▣ 6 Troopers

# Motor Carrier Services

- ▣ Driver and Vehicle Inspections
- ▣ Size and Weight Enforcement
- ▣ Permitting

# Commercial Motor Vehicle Crashes

- ▣ Majority of crashes that involve a Commercial Motor Vehicle are caused by the actions of non CMV's.



# Oversize Loads/Permits



**What can  
brown do  
for you?**

**(well, blue and gray soon)**

# Standing Rock



# SOUTH DAKOTA STRATEGIC HIGHWAY SAFETY PLAN

MR. ANDY VANDEL

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION





# South Dakota Strategic Highway Safety Plan

Andy Vandell, PE

Highway Safety Engineer

South Dakota Department of Transportation

October 16, 2014

<http://www.sddot.com/transportation/highways/traffic/safety/docs/FinalSHSP.pdf>



- SDDOT mission Statement
  - **Provide a safe and efficient transportation system**
- Safety Vision Statement
  - **Every Life Counts: Partnering to Save Lives**
- Traffic Safety Goal
  - **Reduce the fatal and serious-injury crash rates 15 percent by 2020**





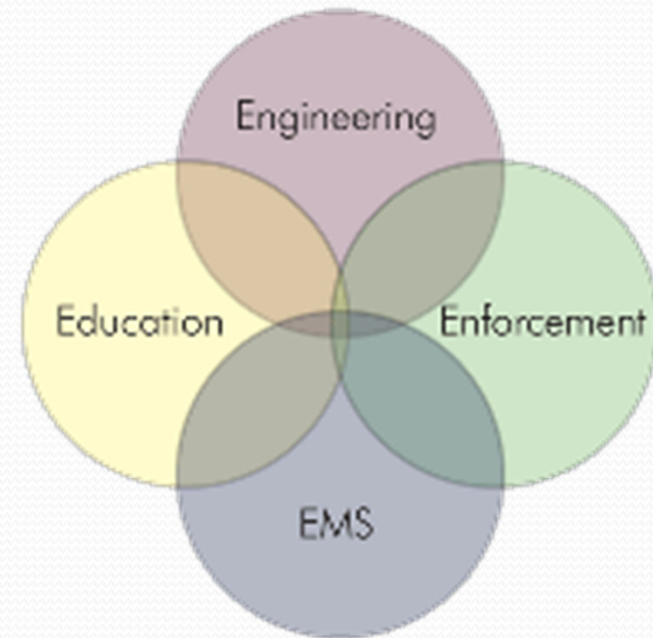
## Development of South Dakota's 2014 SHSP addressed the following key considerations:

- Establish a common mission, vision, and goal for all traffic safety partners in South Dakota
- Follow a transparent process, incorporate input from safety partners representing state, local, and private safety advocacy groups throughout the process
- Follow a comprehensive process that considers all users on all roads
- Use data-driven process based on detailed crash statistics to identify the primary factors contributing to fatal and serious injury crashes.
- Identify priority areas and countermeasures to address crash factors
- Develop an SHSP which guides future safety investments and integrates other safety partners' plans
- Describe performance measures and the evaluation process for implemented safety initiatives
- Make the SHSP readily available to the public
- Maintain consistency with federal guidance contained in MAP-21



# 4Es of Roadway Safety

- Engineering
- Education
- Enforcement
- Emergency Medical Services







# Data Analysis

- Driver-Behavior-Related Crashes
  - Primary contributing factor in fatal and serious injury crashes in South Dakota
  - Equally divided between state and local road systems
  - 67% of crashes on two-lane roadways, 33% on freeways and expressways

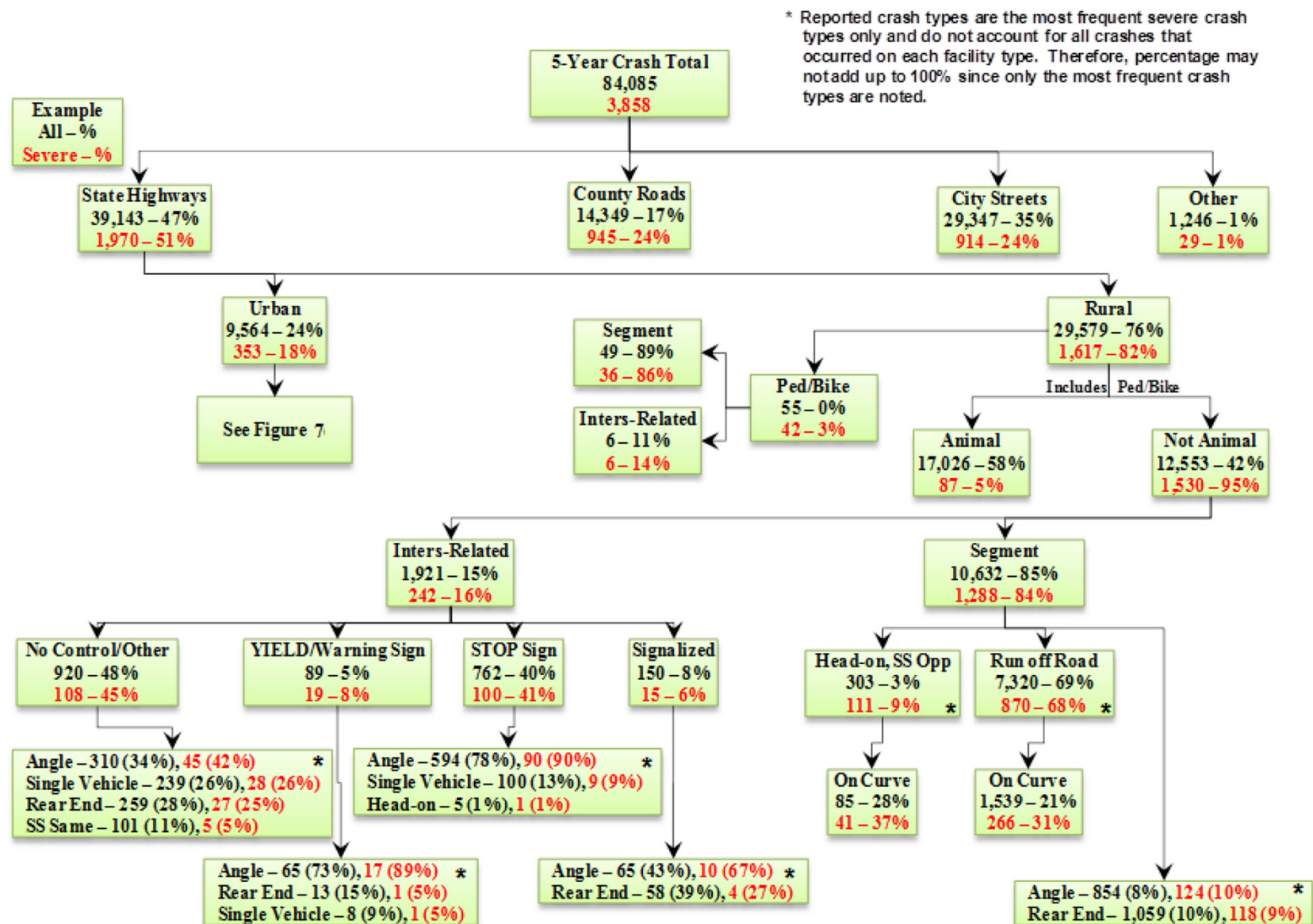
- **South Dakota Crashes**
- From 2007 to 2011, 3,585 fatal and serious injury crashes were reported on South Dakota's roadways:
- 52 percent were attributed to driver behavior
- 48 percent were attributed to roadway characteristics



# Data Analysis

- Roadway-Related Crashes
  - Equally divided between state and local road systems
- State System
- 1,970 fatal and serious injury crashes along state roads
  - 82% in rural areas, 18% urban areas
  - 68% on two-lane roads, 31% on expressways and freeways
  - 76% on dry pavement and 16% during adverse weather





Source: South Dakota Accident Records System, 2007-2011

Figure 6. South Dakota Rural State Highway Crash Tree

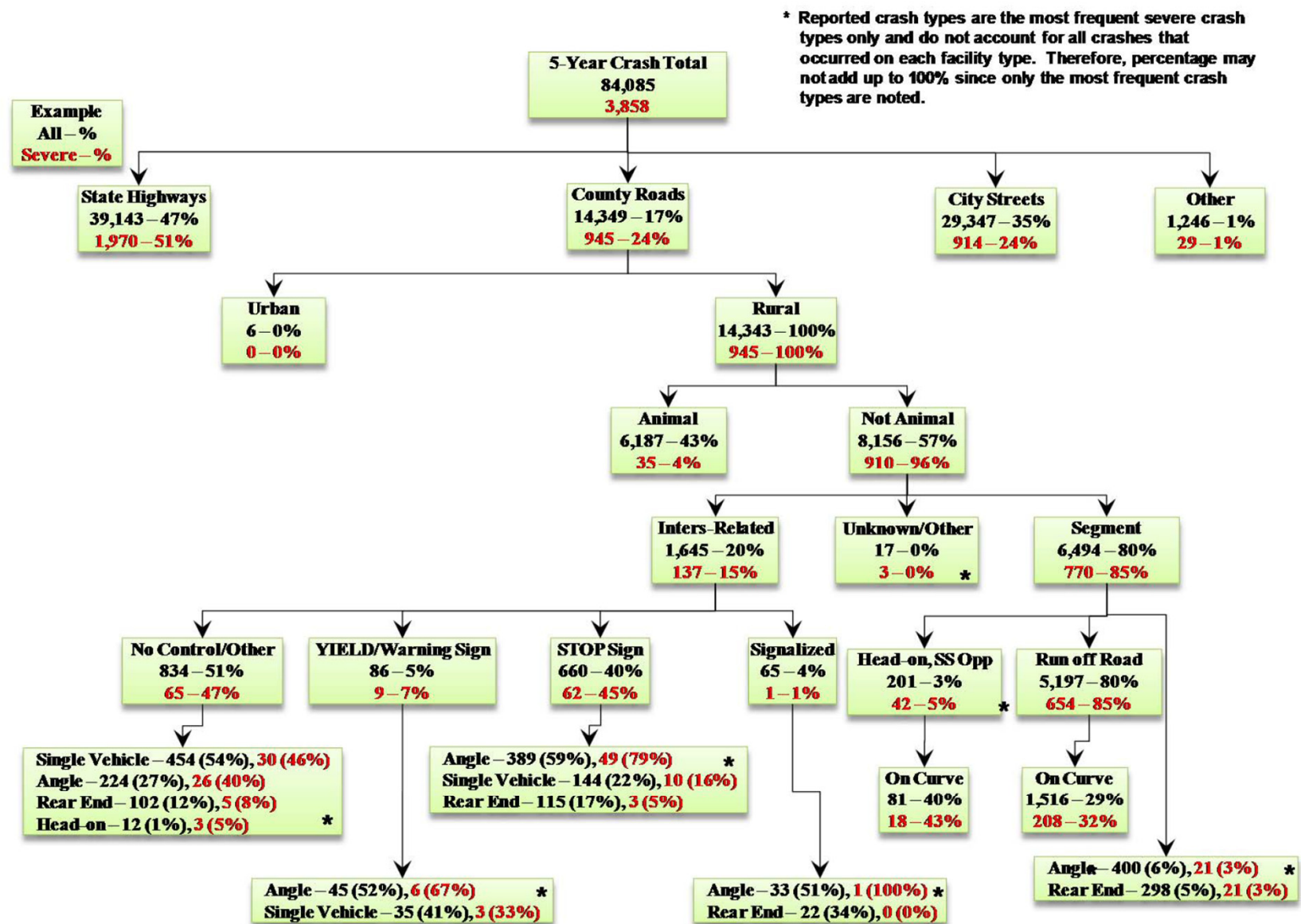


# Data Analysis

## County and Township Roads

- 945 fatal and serious injury crashes reported:
- 4% involved a vehicle striking a deer
- 85% involved a single vehicle running off the road, with 32% of these occurring within a horizontal curve
- 62% occurred on the 12% of the system that is paved (per mile, 14 times more crashes occurred on paved roads than on gravel county and township roads)





Source: South Dakota Accident Records System, 2007-2011

Figure 8. South Dakota County & Township Road Crash Tree

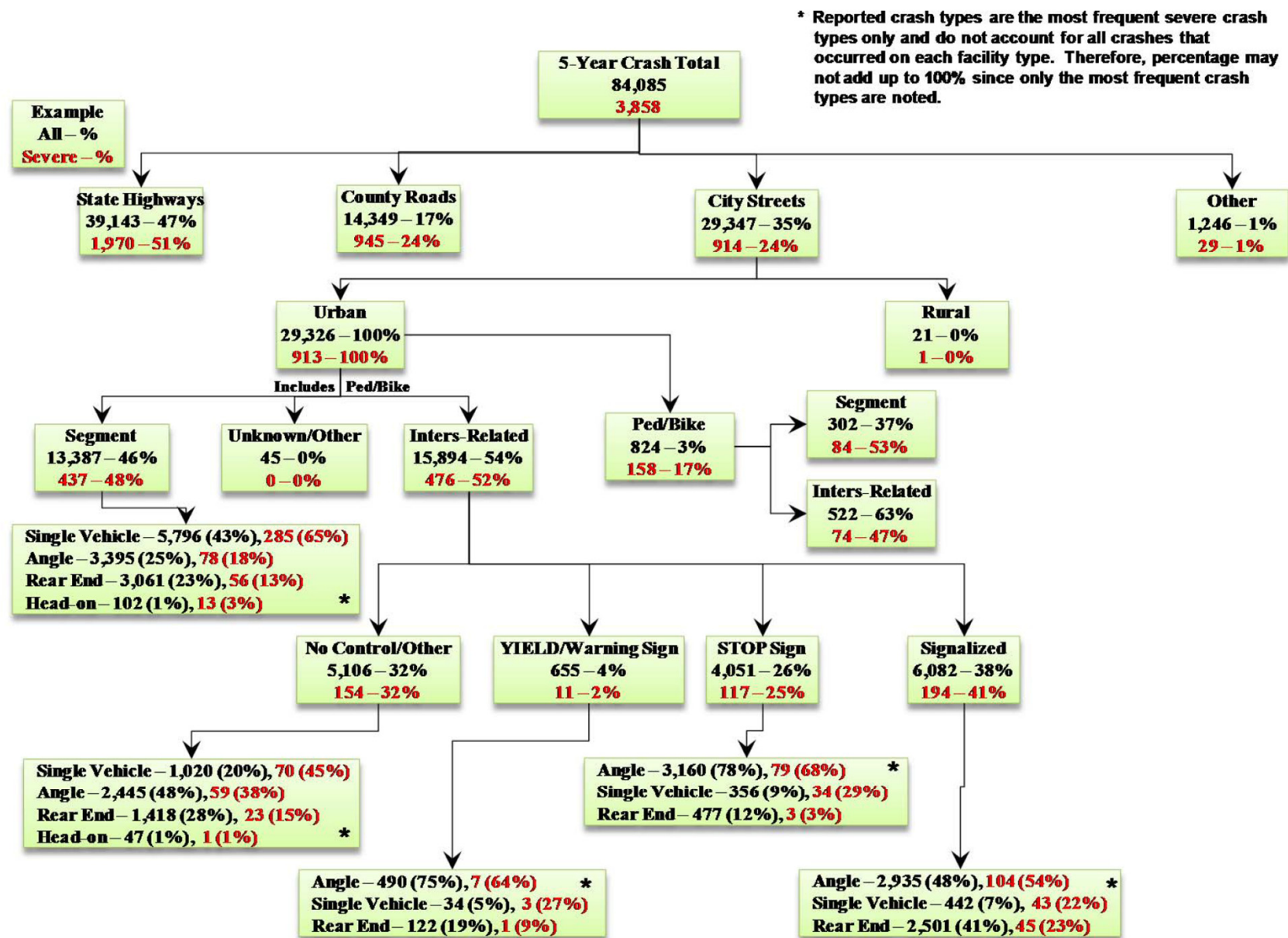


# Data Analysis

## City Streets

- 913 fatal and serious injury crashes
- 52% of these crashes occurred at an intersection
  - 41% of those occurred at intersections with traffic signals
- 63% occurred on collectors and arterials
- 62% occurred on undivided roadways
- Five cities (Sioux Falls, Rapid City, Aberdeen, Watertown, and Mitchell) accounted for 80% of the fatal and serious injury crashes on city streets





Source: South Dakota Accident Records System, 2007-2011

Figure 9. South Dakota City Street Crash Tree







# South Dakota's Safety Emphasis Areas

- Roadway Departure
- Intersections
- Motorcycles
- Unbelted Vehicle Occupants
- Speeding-Related
- Drug- and Alcohol-Related
- Young Drivers

Safety Emphasis Area	Statewide	State Highways	County/Township Roads	City Streets	Other
<b>Statewide Totals</b>	<b>3,858</b>	<b>1,970 (51%)</b>	<b>945 (24%)</b>	<b>914 (24%)</b>	<b>29 (1%)</b>
Roadway Departure	2,211	1,175 (53%)	767 (35%)	248 (11%)	21 (1%)
Unbelted Vehicle Occupants	1,440	706 (49%)	475 (33%)	251 (17%)	8 (1%)
Speeding-Related	1,080	573 (53%)	267 (25%)	227 (21%)	13 (1%)
Intersections	1,041	419 (40%)	137 (13%)	477 (46%)	8 (1%)
Drug- and Alcohol-Related	926	386 (42%)	345 (37%)	184 (20%)	11 (1%)
Young Drivers (age 20 and younger)	899	350 (39%)	257 (29%)	286 (32%)	6 (1%)
Motorcycles	825	504 (61%)	175 (21%)	134 (16%)	12 (1%)
Note: Percentages indicate percent of total number of fatal and serious injury crashes statewide.					





# Safety Strategies – Roadway Departure Crashes

- Keep vehicles from encroaching on the roadside
- Minimize crashing if vehicle leaves the roadway
- Reduce the likelihood of a head-on vehicle collision







# Safety Strategies – Intersection Crashes

- Reduce frequency and severity of signalized intersection conflicts through traffic control and operational improvements
- Reduce frequency and severity of intersection conflicts through geometric improvements
- Improve sight distance at signalized and unsignalized intersections







# Safety Strategies – Motorcycle Crashes

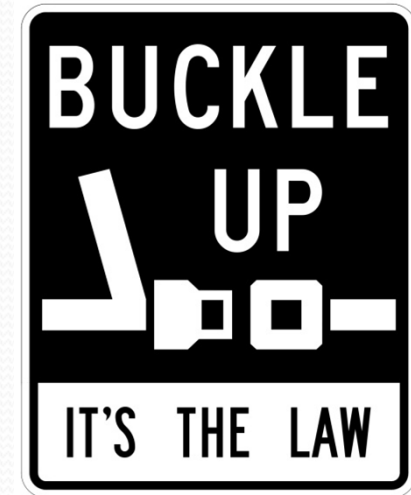
- Incorporate motorcycle-friendly roadway design, traffic control, construction, and maintenance policies and practice
- Perform education and outreach regarding motorcycle safety





# Safety Strategies

- Unbelted Vehicle Occupant Crashes
- Speeding Related Crashes
- Drug and Alcohol Related Crashes
- Young Driver Crashes







# SHSP Implementation

- Education
- Enforcement
- Engineering
- Emergency Medical Services
- Project Planning Partnerships
- Research and Data





# Education

- Focused messaging for a target group
- Longer-term programs delivering messages of sufficient intensity over time
- Messages communicating new information not previously well known
- Messages that are part of a broader-based, longer-term community program with similar messaging coming from multiple sources







# Enforcement





# Engineering

- Roadway Departure
- Intersections
- Motorcycles
- Speed-Related
- Young Drivers

## Low-Cost Treatments for Horizontal Curve Safety



U.S. Department of Transportation  
Federal Highway Administration

December 2006





# Emergency Medical Services

- Support rural emergency response to maintain staff level resources and training
- Provide adequate signing for local roads to enhance/sustain response time





# Project Planning Partnerships

- Fatal Crash Investigation Team
- Tribal Partnerships
- Federal/State Planning Partnership
- Local Safety System Partnerships







## Research and Data

- Conduct research to identify regions and populations that have low seat belt use.
- Conduct research and data to identify common attributes of crash casual factors related to crashes and their severity. Examples include interrelationships with alcohol crashes
- Conduct factual research related to public attitudes towards safety issues and legislative initiatives



# Performance Measures



- Traffic fatalities
- Serious injuries
- Rural and urban fatality rates
- Unrestrained passenger vehicle occupant fatalities
- Fatalities involving operator with BAC > 0.08
- Speeding related fatalities
- Motorcyclist fatalities
- Unhelmeted motorcyclist fatalities
- Pedestrian fatalities
- Observed seat belt use
- Seat belt citations issued during grant funded enforcement activities
- Impaired driving arrests made during grant funded enforcement activities
- Speeding citations issued during grant funded enforcement activities





# MAP-21 SHSP Process and Special Rules

- SHSP development process and content
- Safety performance measures
- Crash data (safety emphasis areas)
- Safety fund investment (safety strategies)
- Safety program implementation and evaluation processes
- Stakeholder involvement and transparency
- Older drivers and older pedestrians
- High Risk Rural Road Safety Program
- Penalty to have an approved/updated SHSP



# Questions?







## Contact Information:

Andy Vandel, PE  
Traffic Safety Engineer  
SDDOT

700 E. Broadway Ave.

Pierre, SD 57501

[andy.vandel@state.sd.us](mailto:andy.vandel@state.sd.us)

605.773.4421

Find the South Dakota Strategic Highway Safety Plan on our website:

<http://www.sddot.com/transportation/highways/traffic/safety/docs/FinalSHSP.pdf>

# TRAFFIC CALMING AND SPEED MANAGEMENT

MR. JIM ALLEN

FEDERAL HIGHWAY ADMINISTRATION

RESOURCE CENTER

# Traffic Calming and Speed Management

**Tribal Transportation Safety Summit**

**October 15, 2014**

**Dakota Sioux Casino and Hotel**

***Jim P. Allen, P.E.***

***FHWA Resource Center***

***Safety and Design Technical Service Team***

***jim.p.allen@dot.gov***

***Ph: 708.283.3591***



U.S. Department of Transportation  
**Federal Highway Administration**



**Safe Roads for a Safer Future**  
*Investment in roadway safety saves lives*

<http://safety.fhwa.dot.gov>

# Traffic Calming Definition (ITE, 1997)

Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users .

*\* typically involves reducing speed or reducing volume*





# Introduction

***Speeding*** –  
exceeding speed  
limit or driving  
too fast for  
conditions



# Introduction

## Consequences of Excessive Speeding

- Loss of vehicle control.
- Reduced effectiveness of occupant protection equipment.
- Increased stopping distance.
- Increased degree of crash severity.
- The unexpected economic and even psychological implications.
- Increased fuel consumption and cost.

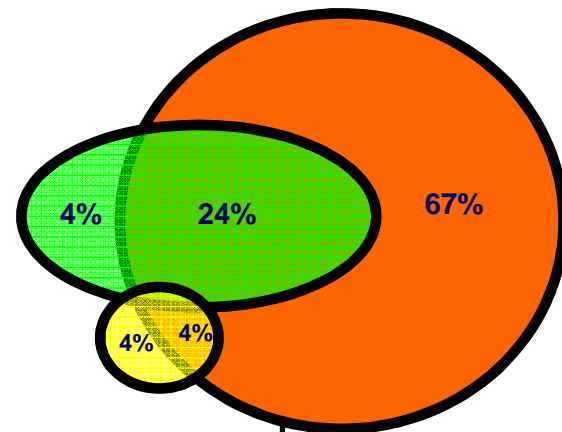
# Purpose

*A Speed Management Program can be effective in lowering the number of speeding crashes and the resulting fatalities and serious injuries on local rural and tribal roads.*



# Importance of a Tribal Safety Program

- Magnitude of problem
  - Nationally, more than 30,000 killed and 3,000,000 injured
  - Leading cause of death for Native Americans up to age 44
  - Risk is 2x to 3x higher for Native Americans
- Diversity of issues
  - Human factors
  - Roadway factors
  - Vehicle factors
- Limited Resources
  - Multiple efforts working toward a common goal
  - **Coordinate efforts, funding, and resources**





# Introduction

## Rural Roads

- Approximately 60 percent of all road miles in the U.S.
  - Non-Interstate
  - Owned and operated by local entities
- Disproportionate number of fatalities in rural areas
  - 23 percent of Americans
  - 33 percent of road miles
  - 56 percent of highway deaths (2009)
- Fatality rate
  - 2.3 times higher in rural vs. urban areas



# Introduction

**Fatalities on Local Rural Roads involving Speeding**

**3,427**

# Common Safety Issues

- User Behavior (on-road and off-road)
  - Aggressive driving
  - Impaired driving/walking/biking
  - Lack of occupant protection (seat belts and helmets)
  - Inattention
  - Disobeying rules of the road (speeding, j-walking, etc.)



# Common Safety Issues

- Roadway
  - Cross-Section, Alignment, Signs, Markings, Roadside





# Common Safety Issues

- Weather / Environment

- Rain
- Snow, sleet, and ice
- Fog
- Wind
- Sun



# Common Safety Issues

- Vehicle
  - Cars
  - Trucks
  - Buses
  - Motorcycles
  - Mopeds
  - Snowmobiles
  - Marine vehicles
  - ATVs



# Common Safety Issues

- Non-motorized (Bicycle / Pedestrian)



# Speed Management Program

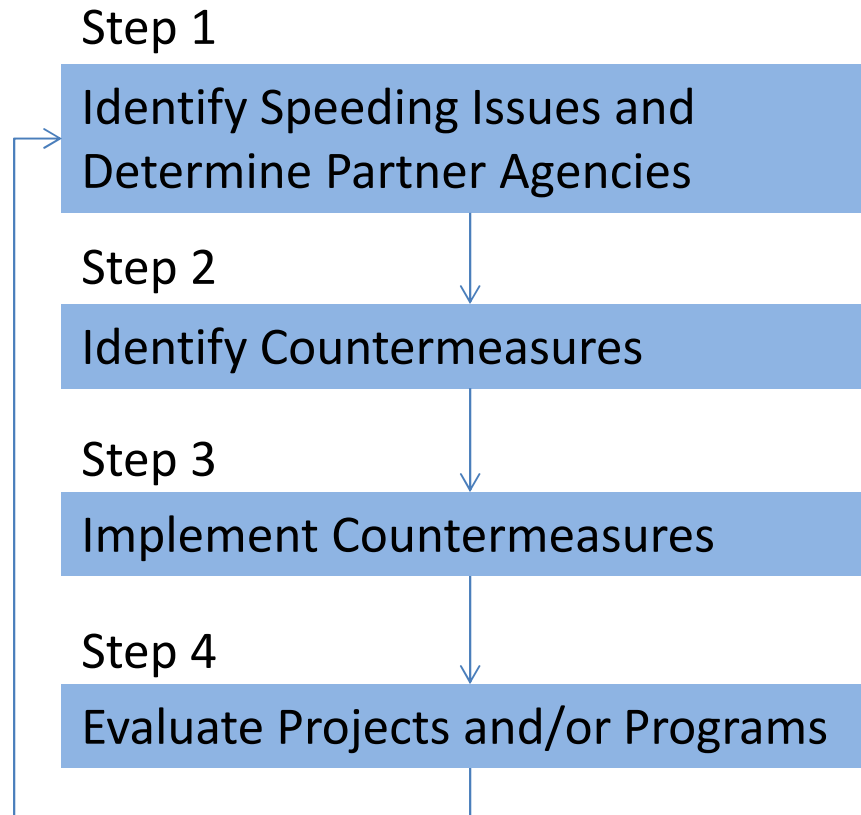
**Factors influencing the development and implementation:**

- Engineering
- Enforcement
- Education
- Emergency Services





# Steps in a Speed Management Program



# Speed Management Program Benefits

- Reduced fatalities and serious injuries from speeding-related crashes.
- Greater potential for motorists to avoid a crash.
- Enhanced safety for pedestrians, cyclists, and other vulnerable road users.
- Driving population educated on the risks and consequences of speeding .
- Enhanced community-wide safety culture, where safety is a top priority.

# Step 1: Identify Speeding Issues

- Is speeding occurring?
  - Collect data
  - Assess the speed limit
  - Determine if speeds are excessive



# Data Collection

## Step 1



*GIS Map of Speeding Related  
Crashes on Big Bay Road*

- Crash records
- Road conditions
- Citation history
- Partner agencies
- Citizen concerns




# Data Collection

## Step 1

### *Sources of Crash Records*

- State DOT
- Department of Motor Vehicles
- State Police/Highway Patrol
- Department of Public Safety
- Strategic Highway Safety Plan

 OHIO BUREAU OF MOTOR VEHICLES  
**CRASH REPORT**  
You Must Complete All Sections Of This Report And Sign

Please Type or Print in Ink (Blue or Black) **BMV USE ONLY**

The driver of a vehicle which is involved in a motor vehicle accident may file this report with the BMV within six months after the accident if both the following apply: (1) there was any personal injury or there was property damage in excess of \$400.00, and (2) the driver or owner of the other vehicle did not have insurance or other financial responsibility coverage at the time of the accident. **PLEASE NOTE:** Medical expenses or property damages **MUST** be documented and submitted with this report. Incomplete reports or forms received more than six months after the date of the accident **WILL NOT** be processed or returned. Please answer all questions to the best of your knowledge.

DATE OF ACCIDENT: (Month / Day / Year) Time of Day		ACCIDENT LOCATION: (County) City	
Was a Police Report Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No		Where Accident Occurred (Street Name)	
Number of Vehicles Involved			
<b>1 YOUR VEHICLE INFORMATION</b>		<b>2 OTHER VEHICLE INVOLVED</b>	
DRIVER'S NAME		YOU MUST PROVIDE IDENTIFIERS	
ADDRESS		WAS THIS VEHICLE INVOLVED? <input type="checkbox"/> Yes <input type="checkbox"/> No	
CITY STATE ZIP CODE		DRIVER'S NAME	
DATE OF BIRTH SOCIAL SECURITY NUMBER		ADDRESS	
DRIVER LICENSE NUMBER ISSUING STATE		CITY STATE ZIP CODE	
TYPE OF VEHICLE YEAR MAKE WAS THIS VEHICLE LEGALLY PARKED? <input type="checkbox"/> YES <input type="checkbox"/> NO		DATE OF BIRTH SOCIAL SECURITY NUMBER	
LICENSE PLATE NUMBER ISSUING STATE		DRIVER LICENSE NUMBER ISSUING STATE	
OWNER'S NAME		TYPE OF VEHICLE YEAR MAKE WAS THIS VEHICLE LEGALLY PARKED? <input type="checkbox"/> YES <input type="checkbox"/> NO	
OWNER'S ADDRESS		LICENSE PLATE NUMBER ISSUING STATE	
CITY STATE ZIP CODE		OWNER'S NAME	
DATE OF BIRTH SOCIAL SECURITY NUMBER		OWNER'S ADDRESS	
DRIVER LICENSE NUMBER ISSUING STATE		CITY STATE ZIP CODE	
<b>A INSURANCE INFORMATION</b>		DATE OF BIRTH SOCIAL SECURITY NUMBER	
INSURANCE CLAIM OFFICE HANDLING THE CLAIM		DRIVER LICENSE NUMBER ISSUING STATE	
NAME		POLICY NUMBER EFFECTIVE DATES	
ADDRESS		From To MUST COVER ACCIDENT DATE	
CITY STATE ZIP CODE		<b>YOUR INSURANCE AGENT MUST FILL OUT AND SIGN THIS SECTION</b>	
TELEPHONE NUMBER		WAS THERE A LIABILITY INSURANCE POLICY IN EFFECT COVERING YOUR INSURED IF A DAMAGE CLAIM AROSE FROM THIS ACCIDENT? <input type="checkbox"/> YES <input type="checkbox"/> NO	
INSURANCE COMPANY NAME		AGENTS SIGNATURE	
SELF INSURED OR UNDER FLEET COVERAGE, ICC OR PUCO		<input checked="" type="checkbox"/>	
Do you operate under fleet coverage? <input type="checkbox"/> YES <input type="checkbox"/> NO		Has Registrar issued a Certificate of Self-ins? <input type="checkbox"/> YES <input type="checkbox"/> NO	
Was your vehicle operating under authority of PUCO or ICC? <input type="checkbox"/> YES <input type="checkbox"/> NO		Permit No. <input type="checkbox"/> YES <input type="checkbox"/> NO	

BMV 3303 1/03 **NOW COMPLETE REVERSE SIDE**

# Data Collection

## Step 1

### *Evidence of Speeding*

- Skid marks
- Rutting
- Worn centerline Markings
- Sign knockdowns or guardrail/fencing strikes



Source: FHWA

# Assessing Speeding

## Step 1

- Assess the following:
  - Posted Speed Limit
  - Vulnerable Road Users and Farm Vehicles
  - Proper Signage
  - Unexpected Conditions
  - Engineering Deficiencies





# Assessing Speed Limit

Step  
1



*Statutory Speed Limit*



*Prima Facie Speed Limit*





# Assessing Speeding - USLIMITS

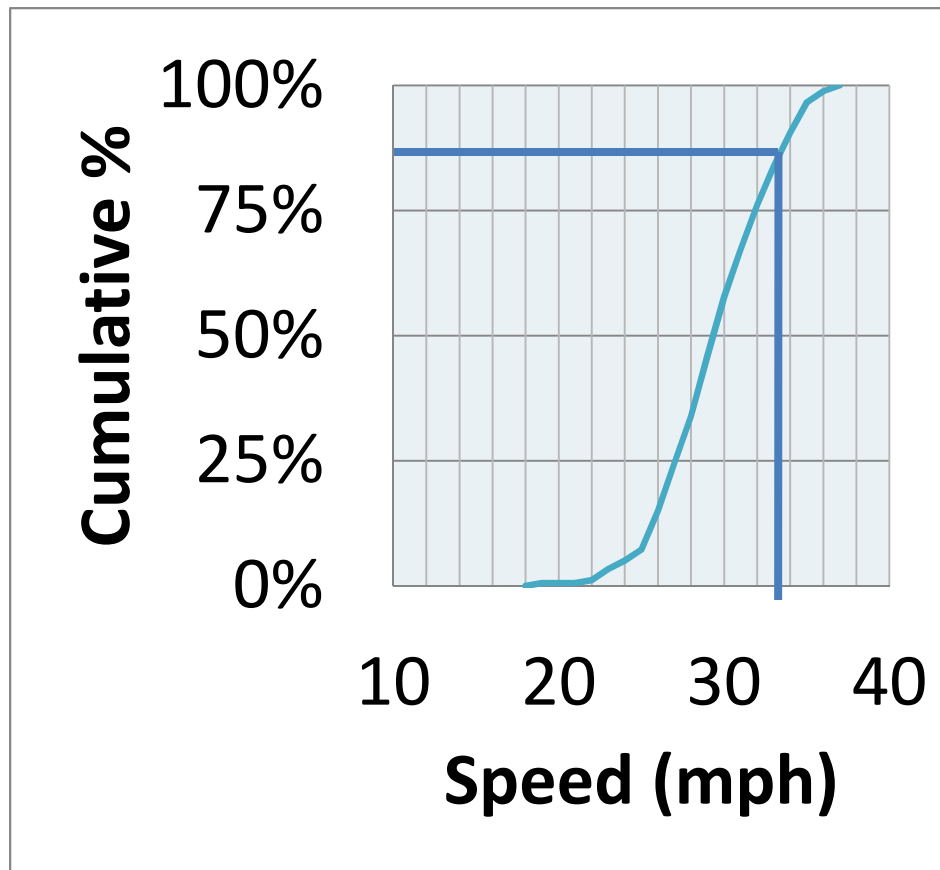
## Step 1

- Land Use (e.g. High density, low density, rural)
- Frequency of roadside access (e.g. Number of driveways, intersecting roads)
- Road function (e.g. Traffic movement vs. access to abutting properties)
- Facility characteristics (e.g. Divided or undivided, number of lanes, lane width)
- Special conditions (e.g. Alignment, presence of pedestrians/bicyclists, high crash rate)
- Vehicle speed data
- Existing speed limits



# Determining if Speeds are Excessive

Step  
1



***85<sup>th</sup> Percentile Speed*** – Speed at which 85% of vehicles travel at or below.

# Unpaved Roads

## Step 1

- 1.4 million miles of unpaved roads in USA.
- More prone to injury and fatality producing crashes than paved roads.
- Speeding issues best addressed using 4 E's.



## **Step 2: Select Countermeasures**





# Step 2: Identifying Countermeasures

- Engineering
  - Traffic Control Devices
  - Road & Street Design
  - Traffic Calming
- Enforcement
- Education
- Emergency Services



# Countermeasures



## *Pavement Speed Limit Marking*

- Used to emphasize speed limit
- Requires regular maintenance

# Countermeasures

## *Advisory Speeds*

- Crash reductions of 13% injury crashes and 29% property damage crashes
- Speed reduction of 2-3 mph



# Countermeasures



## *Speed Activated Signs*

- Can reduce speeds by 2-10 mph
- Effective in speed transition zones
- Can be accompanied by SLOW message



# Countermeasures

## *Optical Speed Bars*

- Can reduce speeds by up to 2 mph
- Effective in speed transition zones
- Novelty effect



# Countermeasures

## *Reduced Lane Width*

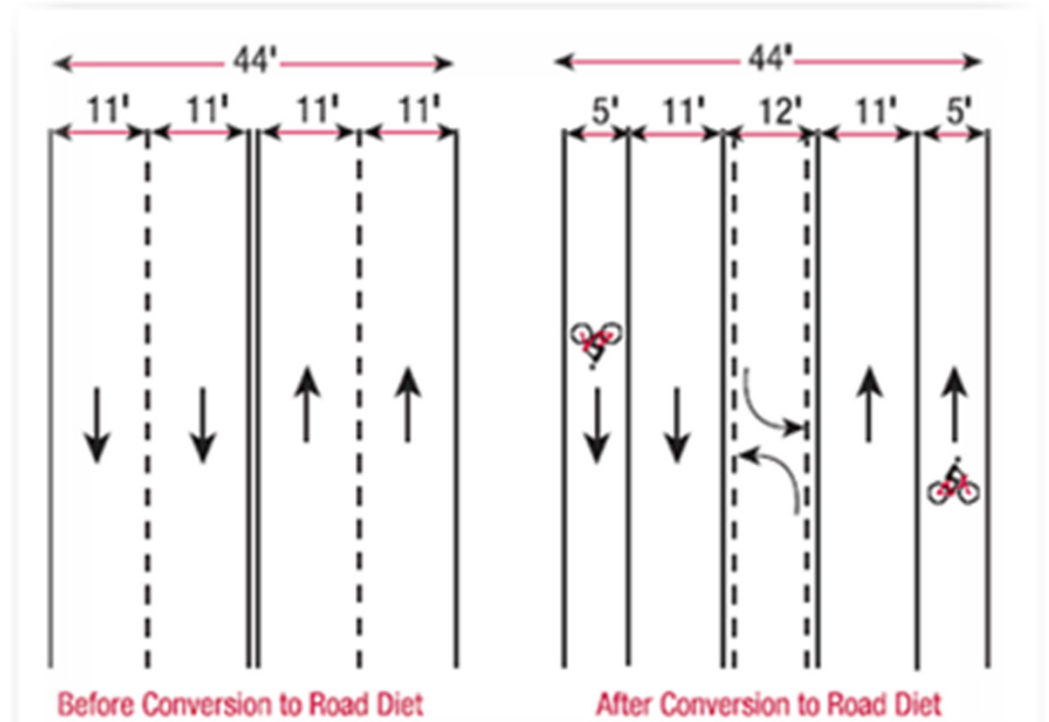
- 1-3 mph speed reduction for each foot narrowed
- Only consider on low speed roadways



# Countermeasures

## *Road Diet*

- Nearly 30% reduction in crashes
- Have potential to reduce speeds
- Feasible on roadways with volume less than 20,000 vehicles per day



# Countermeasures



## *Center Island*

- More than 35% reduction in injury crashes
- Speed reduction of 2-3 mph
- Shifting of traffic lowers the speeds
- Best use in rural villages or other areas where speeds are low



# Countermeasures

## *Roundabout*

- Nearly 90% reduction in fatal and injury crashes at high speed rural intersections
- Effective at managing speeds



# Countermeasures



## *Speed Hump*

- 40-50% reduction in injury crashes
- Speed reduction of up to 9 mph
- Only apply to roads with operating speeds of up to 30 mph

# Countermeasures

## *Speed Table*

- Use on roadways with minimal truck traffic
- Only apply to roads with operating speeds of up to 30 mph
- Reduce speeds by about 7 mph



# Countermeasures



## *Traffic Circle*

- Raised center island
- Only apply to low speed roads in residential areas
- Speed reduction of up to 15 mph



# Countermeasures

## *Mini Roundabout*

- Mountable center island
- Can be applied on roadways with speed limits of up to 35 mph
- Speed reduction of up to 10 mph



# Countermeasures



## *Gateway Treatment*

- Enhanced signing
- Lane reduction
- Pavement markings
- Gateway structures
- Can reduce speeds by 5 mph



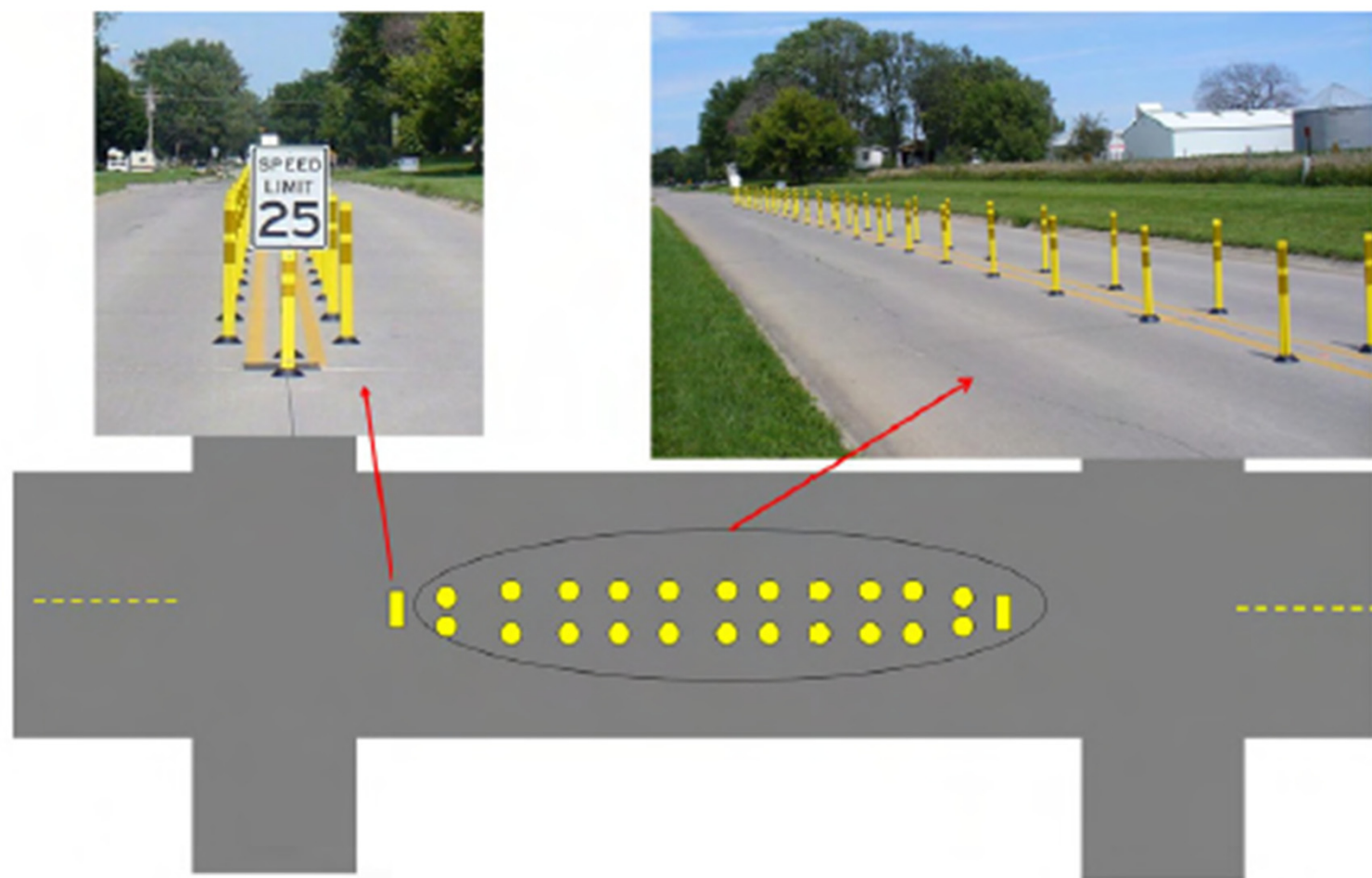


**Figure 5.4. Before installation of lane narrowing in Union**



**Figure 5.5. After lane narrowing was installed**





**Figure 5.30. Layout of tubular channelizers for southern section of R-38**





Variable message  
driver feedback sign

Island with longitudinal  
channelizers



On-pavement  
"SLOW"

# Countermeasures



## *NHTSA High Visibility Enforcement Model*

- Public Information
- Education
- Targeted Speed Enforcement

# Countermeasures



## *Traditional Enforcement*

- RADAR
- LIDAR
- Vehicle Pacing

# Countermeasures

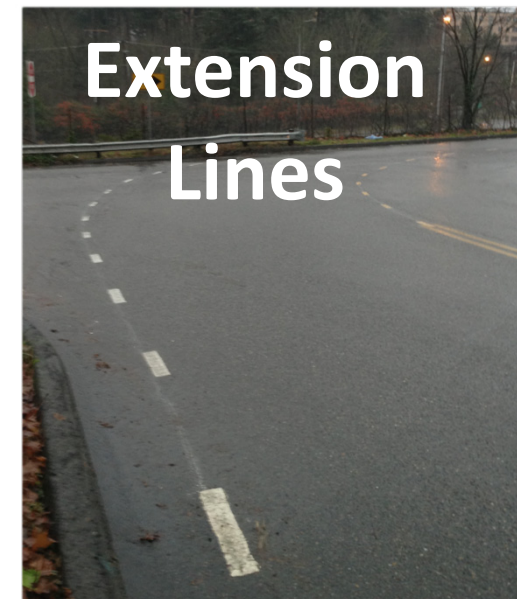
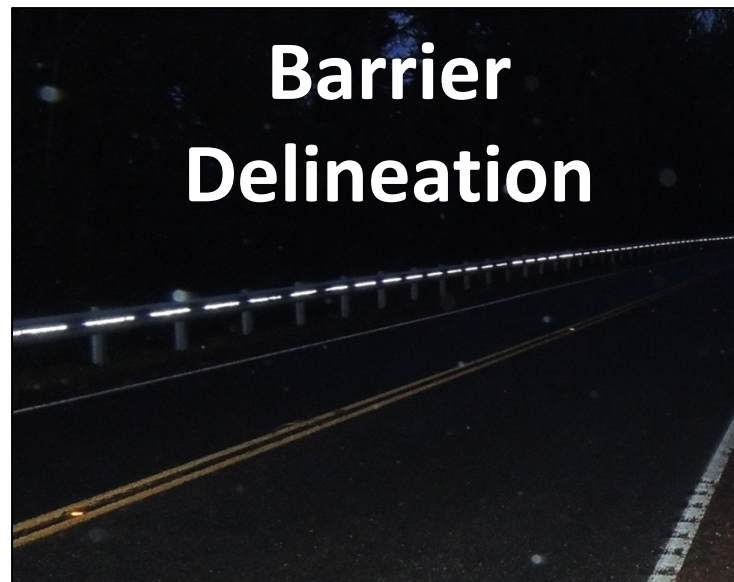


## *Automated Enforcement*

- Areas where traditional methods are not feasible or practical
- Reduce impacts of driver distraction and congestion



# Countermeasures



# Countermeasures



<http://trafficsafetymarketing.gov/speed/toolkit/>



# Step 3: Implementing Countermeasures

- Seeking Support
- Prioritization of Countermeasures
- Identifying Funding Sources
- Implementing Pilot Projects



# Seeking Support

## Step 3

- Identify appropriate stakeholders
- Enlisting stakeholders may involve:
  - Holding a meeting
  - Making a short presentation
  - Providing a written report





# Prioritization of Countermeasures

Step  
3

- Ability to reduce crashes
- Potential for quick implementation
- Benefit/cost results
- Potential to reduce speeds



# Prioritization of Countermeasures

Step  
3

Example: *PennDOT Ranking System*

- Speed
- Volume
- Crashes
- Elementary and middle school
- Pedestrian generators



# Funding

Step  
3

## *Engineering*

- Highway Safety Improvement Program (HSIP)

## *Enforcement & Education*

- Section 402

## *State, Local and Tribal Funding*



# Step 4: Evaluate Programs and Projects

- Crash data
- Speed data
- Citation data

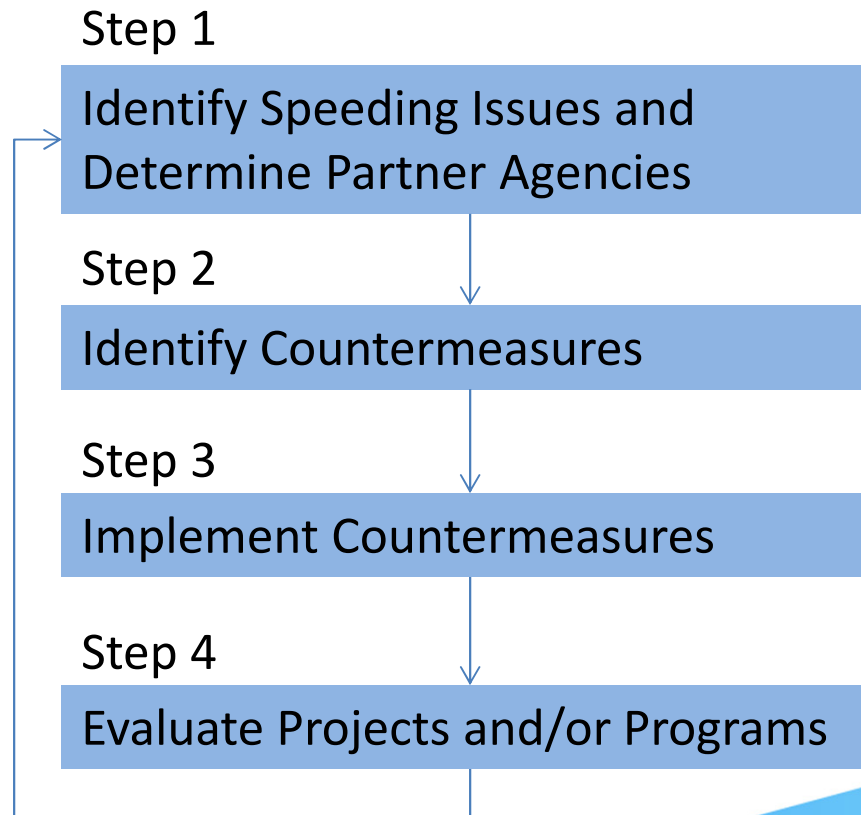


*Source: Pierce County, WA*



# Summary

## Speed Management Program Process



# Speed Management Manual

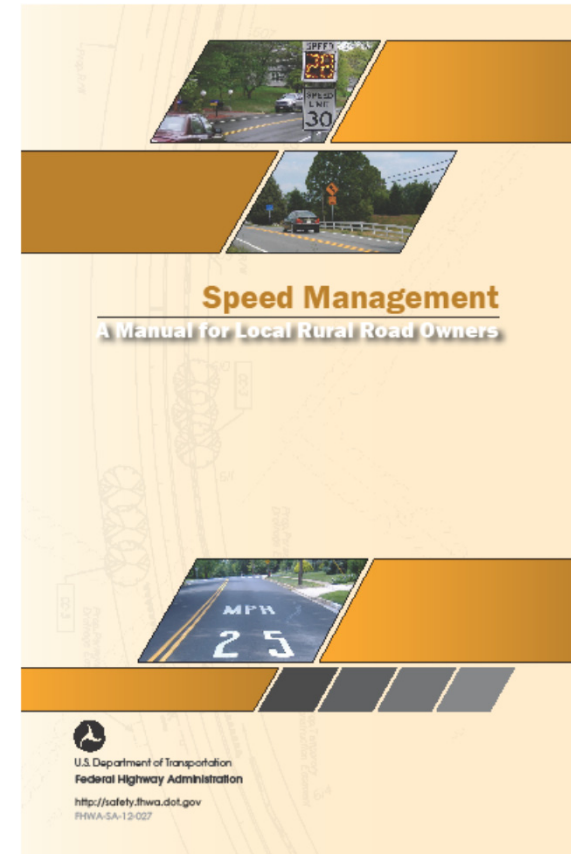
**Purpose:** To save lives and prevent injuries from motor vehicle crashes involving speeding.

**Audience:** Road supervisors, engineers, planners, local and tribal officials, law enforcement officers.

## Includes:

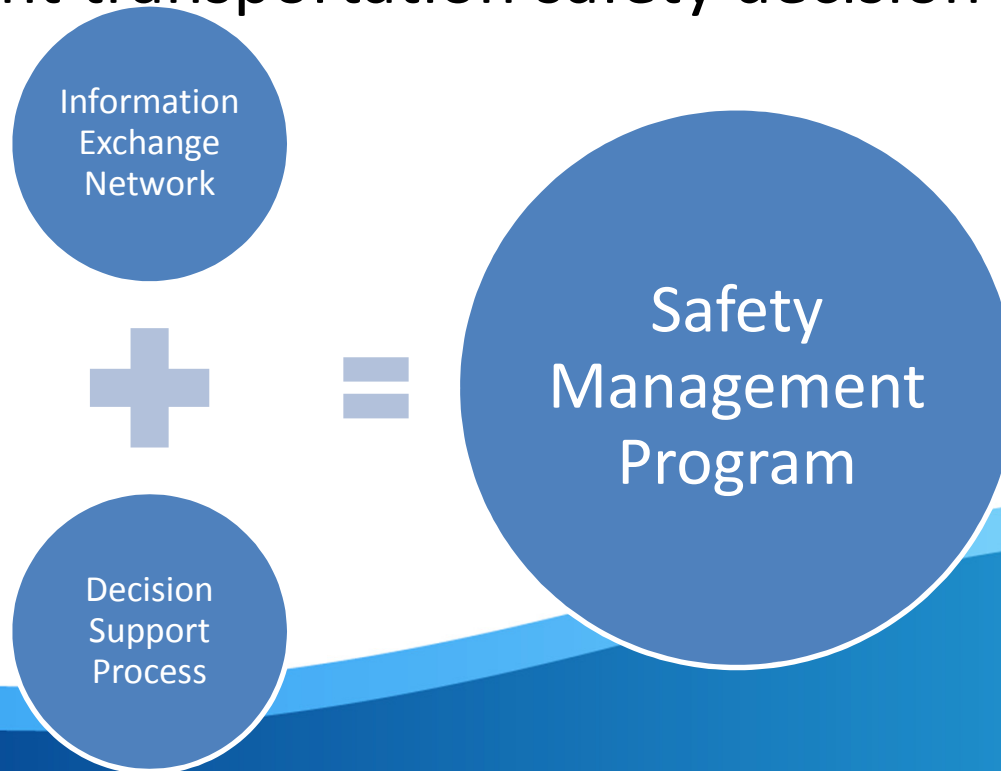
- How to identify speeding issues
- Practical countermeasures
- How to implement and find funding
- How to conduct a speed study

[http://safety.fhwa.dot.gov/local\\_rural/training/fhwasa12017/](http://safety.fhwa.dot.gov/local_rural/training/fhwasa12017/)

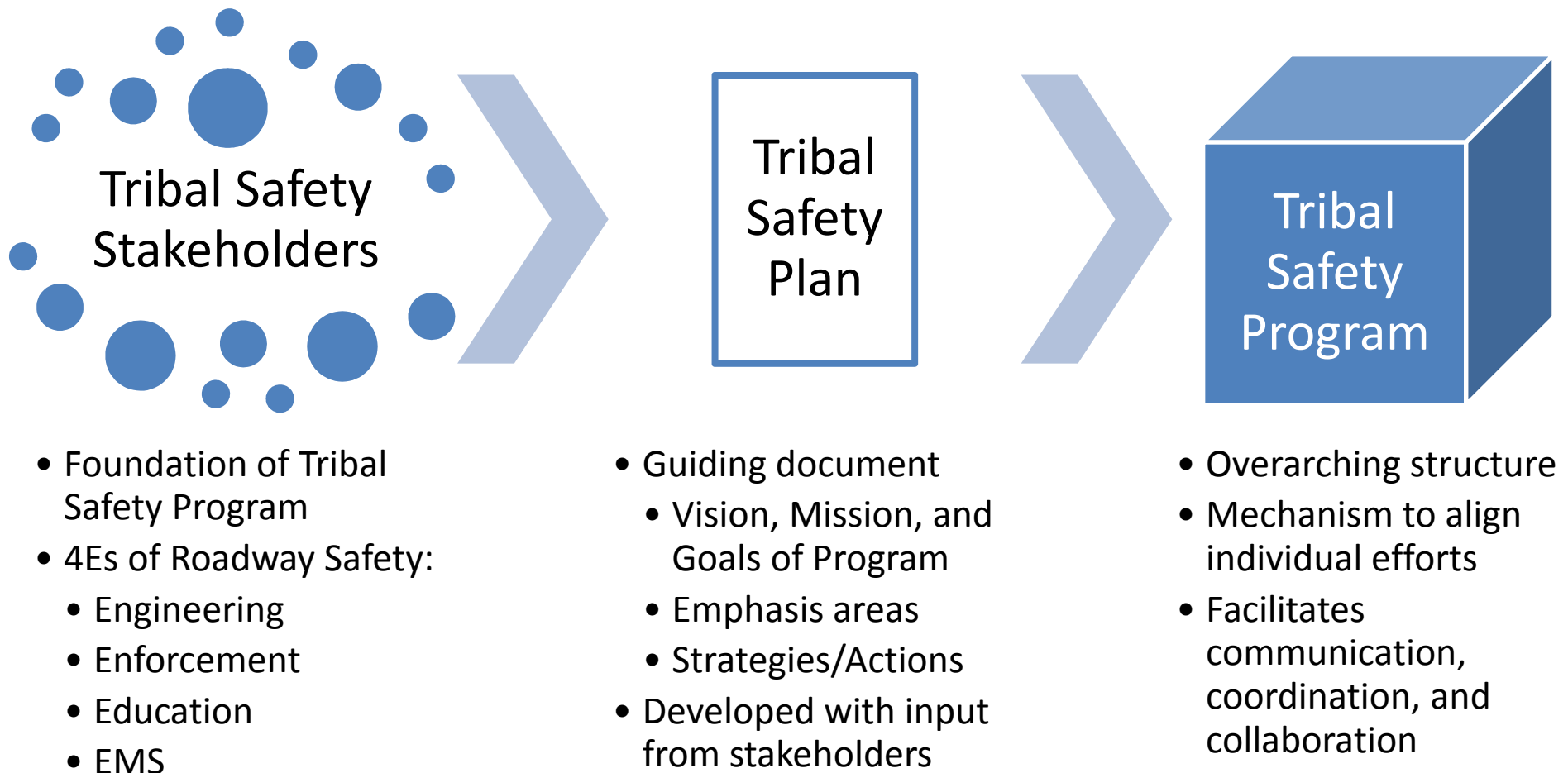


# What is a safety management program?

- A Tribal Safety Program has two basic components:
  1. Collaborative information exchange network.
  2. 8-element transportation safety decision support process.



# How does it all fit together?





# What are benefits of a safety program?

## Benefits

Community-focused

Multidisciplinary

Considers all road users

Flexible framework

Collaborative approach

**Fewer Deaths and Injuries!!!**

What are potential challenges and related opportunities?

# Potential Challenges

Lack of Stakeholder Support

Communication Barriers

Limited Community Resources

Workforce Turnover and Attrition

# What resources are available to help overcome challenges?

## Local Experience

- Law Enforcement
- Medical/Emergency Services
- Tribal/City Officials
- Chamber of Commerce
- Engineers
- Educators

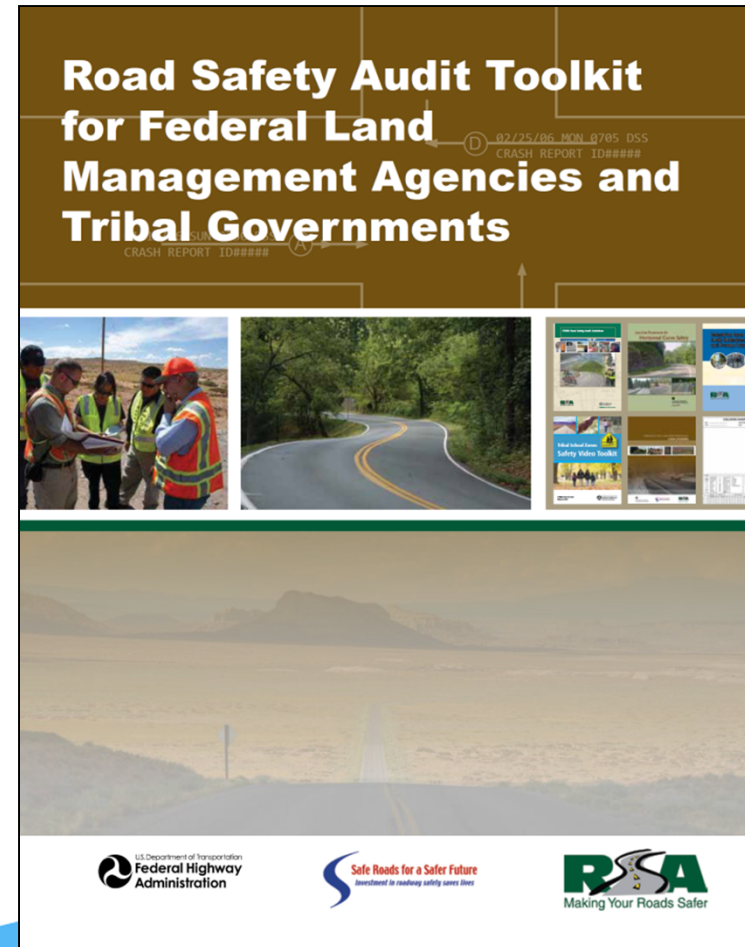
## Regional Centers

- Tribal Technical Assistance Program (TTAP)
- Local Technical Assistance Program (LTAP)
- State DOT

## National Agencies

- Bureau of Indian Affairs (BIA)
- Bureau of Indian Education (BIE)
- Indian Health Service (IHS)
- Federal Highway Administration (FHWA)
- National Highway and Traffic Safety Administration (NHTSA)
- National Highway Institute (NHI)

# What resources are available to help overcome challenges?





# Reflection

- Reflect on your current safety program.
  - How might you improve the current level of safety and implement traffic calming countermeasures and strategies?



# Questions and Discussion



# APPENDIX D

## APPENDIX D

## HANDOUT



# United States Department of the Interior

## BUREAU OF INDIAN AFFAIRS

Standing Rock Agency  
Office of Justice Services

P.O. Box E, Proposal Avenue, Bldg. #51  
Fort Yates, North Dakota 58538

Telephone: (701) 854-7241 Facsimile: (701) 854-7543



IN REPLY REFER TO:  
Office of Justice Services

Tuesday, July 08, 2014

To: David Lawrence, Chief of Police

Cc: Michael Hayes, Lieutenant; Daniel Quinones, Lieutenant; Sgt. Delano Good Shield

From: Chad Harmon, Lieutenant

Reference: 4<sup>th</sup> of July Holiday Weekend Saturation Patrols

Our agency conducted saturation patrols in the following districts on the Standing Rock Sioux Indian Reservation on Friday, July 4, 2014 and on Saturday, July 5, 2014:

1. Fort Yates, ND
2. Cannon Ball, ND
3. McLaughlin, SD
4. Little Eagle, SD

This table shows the number of traffic stops conducted and the traffic violations cited by the officers. Our agency focused on traffic and highway safety during the saturation patrols. There were a total of 10 DUI arrests over the 4<sup>th</sup> of July Holiday Weekend, 9 enrolled tribal members and 1 non enrolled tribal member. Note: No alcohol related motor vehicle accidents or fatalities were reported.

	Friday, July 4, 2014	Saturday, July 5, 2014	Total
Traffic Stops	46	50	96
Tribal Members	41	43	84
Non Tribal Members	5	7	12
DUI Arrests	5	5	10
Speeding			25
Driving Without a License			24
Safety Belts			13
Child Restraints			7
Open Container			5
No Liability Insurance			5
Stop Sign Violation			4
No Vehicle Registration			2
Permitting Minor to Drive			1
Reckless Driving			1
Citations Written			61
Traffic Violations to Court			97