

Southern Ute Indian Tribe Transportation Safety Plan



April 2016

Prepared by:

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April 2016

Developed for:

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1 Introduction and Background

1.1 Introduction

The Southern Ute Indian Tribe (SUIT) is committed to providing safer travel options for community members, including vehicular, pedestrian, and bicycle transportation. The Southern Ute Indian Tribe Transportation Safety Plan was developed to identify unsafe conditions associated with the Tribe's transportation infrastructure, and develop a clear plan for protecting the life and safety of community members, visitors and guests. This plan was funded by a 2014 National Tribal Transportation Program Safety Planning Grant from the Federal Highways Administration (FHWA). This plan was developed by the Tribe's Department of Planning.

1.2 Background

The Southern Ute Tribe is composed of two bands, the Mouache and Capote, and is governed by a seven member Tribal Council elected by the membership. The Tribe has approximately 1,500 tribal members, with half the population under the age of 30. The Southern Ute Reservation is located in southwest Colorado, near the border with northern New Mexico. The approximately 1,059-square mile reservation encompasses the communities of Ignacio and Arboles. Tribal lands fall within La Plata, Archuleta and Montezuma Counties. The Southern Ute reservation consists of timberlands on high mountains with elevations over 9,000 feet in the eastern portion, and flat arid mesas on the west. The eastern part of the reservation is forested, with elevations of more than 9000 feet. Figure 1, in Appendix A, shows the location of the Southern Ute Reservation, while Figure 2 shows the location of housing areas around the tribal campus.

1.3 Mission

The mission of the Southern Ute Indian Tribe Transportation Safety Plan is to provide safer conditions for motorists, bicyclists, and pedestrians traveling on or in the vicinity of Tribal lands.

To achieve this mission, the plan addresses the four elements of highway safety – engineering, enforcement, education, and emergency services, or the 4 Es – and how they can be used to address safety issues. Table 1-1 provides an overview of Emphasis Areas and the strategies to address concerns using the 4 Es. Since emergency services are adequate to the current need, the table only addresses education, engineering and enforcement. Additional expanded information about the Emphasis Areas and the strategies is provided in Section IV, as referenced throughout Table 1-1.

1.4 Priorities

After careful review of the strategies presented, the following key issues were brought forward.

1. Vehicle/animal collisions are the predominant form of crash within the study area. Relatively low cost measures can be implemented in the short term, such as increased signage in high risk areas, and brush clearing along the highway. Additional, higher cost measures such as animal crossing underpasses should be considered in conjunction with the Colorado Department of Transportation for longer range implementation. Vehicle/animal collisions are addressed in section 4.4.



2. Speeding is shown to be an issue, based on crash and citation data as well as survey results. Safety measures that can be taken in the short term include increasing Southern Ute Police Department (SUPD) presence in strategic areas, issuance of more citations, changing the legal code to include both Native and non-Native offenders, and installing increased speed zone signage. Speeding is further addressed in section 4.1.3.
3. Pedestrian safety is also a top priority for the Southern Ute Indian Tribe. As discussed in section 4.3, visibility is an issue for both pedestrians and cyclists, particularly children who are difficult to see due to size and unpredictability. Simple measures that can be implemented include providing reflectors or lights for bicycles, and reflective safety jackets (or reflective tape that can be affixed to jackets) for children out after dark. In the longer term, consideration should be given to installing streetlights at key locations, such as the Cedar Point residential area, where children are known to play outside after dark.

Table 1-1: Emphasis Areas and Strategies

	Education	Engineering	Enforcement
Driver Behavior: Distracted Driving (Section 4.1.1)	Distribute educational resources on the dangers of “distracted driving”.		Enact Tribal law banning distracted driving.
	Lead by example. Create a policy that employees of the Tribe are not to use handheld phones or text while driving.		
Driver Behavior: Alcohol or Drug Impaired Driving (Section 4.1.2)	Participate in nation-wide campaigns against driving under the influence.		Provide additional equipment to aid in enforcement.
	Support the work of <i>The Peaceful Spirit</i> in its efforts to rehabilitate those with drug and alcohol problems.		Collaborate with stakeholders to strengthen enforcement operations.
	Install signage reminding motorists not to drive while intoxicated.		
Driver Behavior: Speed Reduction (Section 4.1.3)	Work with local high schools to educate students on the dangers of speeding.	Install flashing “school zone” lights near Montessori Academy and in other school zones.	Enact new code making all traffic citations civil to ensure Natives and non-Natives can be prosecuted equally.
	Organize “slow down” campaign in the community.	Install or improve speed humps on local streets as needed.	Ensure that police are fully equipped for response.
	Hold traffic safety booth at one or more SUIT community events.		
Driver Behavior: Seatbelt Use (Section 4.1.4)	Inform children of the importance of seatbelt use.	Install “Click It or Ticket” signage.	Increase enforcement of seatbelt use laws.
	Conduct a “car seat drive”.		Conduct seatbelt and child seat check points.



	Education	Engineering	Enforcement
Driver Behavior: Motorcycle Awareness (Section 4.1.5)	Make motorcycle training programs available.		Provide motorcycle crash awareness course for officers.
	Encourage motorcycle helmet use.		
	Provide information and reminders of motorcycle awareness.		
Driver Behavior: Youth and Senior Drivers (Section 4.1.6)	Develop and distribute brochures for target-age drivers.		
	Encourage parents to ride with their teen drivers.		
Road Conditions: Traffic Patterns (Section 4.2.1)	Paint Ouray Drive curb red adjacent to Memorial Park between Capote and Memorial. Add no parking signage.	Remove parking on west side of Ouray Drive to return it to its intended two-way status with room for cars to pass in opposite directions.	Enact Tribal parking regulations and give SUPD enforcement authority. Cite motorists illegally parked.
Road Conditions: Road and Intersection Safety (Section 4.2.2)	Organize targeted education campaign on intersection safety risks.	Alter landscape as needed to improve sight distance at CR 318/CR 310 intersection.	Increase SUPD presence at intersections of concern.
		Reduce size or amount of shrubbery near Casino Resort entrance	
		Perform a feasibility study for replacement or rehabilitation of La Boca Bridge	
		Increase signage at La Posta curve.	
Road Conditions: Road Maintenance (Section 4.2.3)		Consider a guardrail plan for reservation roads.	
	Encourage road users to slow down on gravel and dirt roads.	Consider chip sealing, paving or use of dust palliatives.	Increase efforts to keep shoulders free of debris.
	Encourage residents to wear light colored or reflective clothing when walking or cycling at night.	Perform a lighting study and install streetlights where necessary.	
Road Conditions: Lighting and Visibility (Section 4.2.4)	Provide reflectors, reflective tape or lights for increased visibility.		
Pedestrian and Bicyclist Safety (Section 4.3)	Organize a bike fair to present bicycle safety clinic.	Consider pedestrian crossing between multipurpose facility and Bear Dance Grounds.	Involve local school districts in enforcing the use of helmets for students who bike to school.
	Provide clip on headlights and taillights for bicycles.	Install speed humps in residential areas.	
	Distribute bicycle helmets.	Conduct feasibility study on increased shoulders or multiuse paths.	



	Education	Engineering	Enforcement
Vehicle/Animal Strikes (Section 4.4)	Develop and distribute brochure on pedestrian and bicycle safety.	Develop alternate recreational facilities.	
	Organize a presentation on Safe Practices for Mature Motorists		
	Work with IHS on an Injury Prevention Program		
		Vegetation removal.	
		Install wildlife crossing structures	
		Increase size of culverts to accommodate animal passage.	
Hazardous Materials Route (Section 4.5)		Install signage to warn motorists of areas with high levels of animal presence or migration.	
		Study alternative routes for hazardous materials transport	





2 Existing Resources

Safety partners are those entities that contribute to the education, enforcement, maintenance and other aspects of transportation safety in the community.

2.1 Potential Safety Partners

Colorado Department of Transportation (CDOT): The Southern Ute Indian Reservation lies in CDOT's southwest planning region. CDOT has served as an active partner to the Southern Ute Indian Tribe in previous transportation endeavors, including the *Southern Ute Indian Tribe Long Range Transportation Plan Update* (2006) and the *Ignacio Area Corridor Access Plan* (2011). CDOT has several formalized agreements with the Southern Ute Indian Tribe which pertain to issues such as: construction, operation, improvement and maintenance of state and federal highways crossing Tribal land, inclusion of State Highways into the Indian Reservation roads inventory, and to formalize partnerships on specific projects¹.

As part of the State Highway Safety Plan, CDOT is partnering² with local communities and organizations that:

1. Conduct outreach or a program in Colorado that addresses at least one emphasis area of the Strategic Highway Safety Plan (SHSP) 2015-2019
 - Aging Road Users
 - Bicyclists and Pedestrians
 - Impaired Driving
 - Infrastructure - Rural and Urban
 - Motorcyclists
 - Occupant Protection
 - Young Drivers
 - Data
 - Distracted Driving
2. Commit to supporting the SHSP throughout its lifecycle
3. Has the capacity to gather and report data and other outcomes to the campaign

This program might benefit the Tribe.

CDOT offers grants to agencies, organizations, and tribal governments within the State of Colorado that provide programs, projects, services, and strategies that are intended to reduce the number of deaths and serious injuries resulting from traffic crashes on Colorado roads.

- Local Law Enforcement Agencies:

¹ CDOT (2013, April 17). *Tribal Coordination Plan*. Retrieved from <https://www.codot.gov/programs/statewide-planning/documents/cdot-tribal-coordination-plan-04-17-2012-final.pdf>

² Cole, Sam (2015). *Partner Certification Form*. Retrieved from <https://www.codot.gov/safety/partner-certification-form>



- ***Southern Ute Department of Justice and Regulatory:*** Composed of eight divisions, Tribal Court, the Ethics Office and Tax and Liquor, the Department is responsible for all enforcement (police, wildlife, animal control and gaming), as well as regulatory issues (environmental, air quality, water quality, gaming regulation, and tribal employment rights). The Department also has administrative authority over the Tribal Prosecutor's Office and the Tribal Public Defender's Office.

The mission of the Tribal Court is to exercise the sovereignty and jurisdiction of the SUIT by providing a forum for the enforcement of Tribal law and the administration of justice in disputes affecting the interests of the tribe or its members.

In addition, the Department of Justice handles the administrative process for driver's license revocations, pursuant to an Intergovernmental Agreement between the Southern Ute Indian Tribe and the State of Colorado.

- ***Southern Ute Police Department (SUPD):*** The Southern Ute Indian Tribe operates its own Tribal Police Department. Patrol Officers handle a variety of incidents including the following:

- Rural/Residential patrols
- D.U.I. Interdiction
- Drug Interdiction
- Traffic Code Enforcement
- Accident Investigations
- Civil Stand-by
- Community Policing
- Special Events



Photo 1: Southern Ute Police Department Vehicle

Law enforcement officers patrol Reservation lands, and work cooperatively with other agencies including Colorado State Patrol, La Plata and Archuleta Counties Sheriff's Departments, Ignacio Police Department and the Federal Bureau of Investigation.

- ***La Plata County Sheriff's Office (LPCSO):*** La Plata County Sheriff's Office jurisdiction includes the towns of Bayfield, Durango, and Ignacio and provides emergency peacekeeping and criminal investigation services for over 50,000 citizens. The LPCSO will be an important resource when considering options for improved traffic enforcement in the community. The Department may be an educational and enforcement resource to the SUIT in improving traffic safety conditions by implementing educational and enforcement strategies for traffic safety in the community.
- ***Archuleta County Sheriff's Office:*** The Sheriff's Office is responsible for over 1,300 square miles and serves a population of approximately 40,000 at peak season. The Archuleta



County Sheriff's jurisdiction ranges from the base of Wolf Creek Mountain to the valley of Bayfield, from the Weminuche Wilderness on to the New Mexico state line. The Archuleta County Sheriff works closely with the SUPD, providing each other backup and working together on cases, as needed.

- **Ignacio Police Department:** The Ignacio Police Department is a law enforcement agency providing public safety services within the community of Ignacio. The Department provides 24-hour law enforcement coverage. The Ignacio Police Department also offers free safety-related services to community members, such as child car seat inspections, free cars seats to those in need, and bike helmets for children. The Ignacio Police Department may serve as a partner to the Southern Ute Tribe in implementing education and enforcement strategies for traffic safety on the Southern Ute Reservation.
- **The Colorado State Patrol:** The Colorado State Patrol provides law enforcement on State Highways, not on federal lands. For this reason, they do not have jurisdiction on the Southern Ute Indian Reservation. They will assist with emergencies or investigations when invited by the Tribal police. The Colorado State Patrol is willing to provide educational talks by request on the Patrol's DUI, seat belt, aggressive and inattention driving behaviors, speeding enforcements and other traffic safety activities. These would be tailored to the needs of the group being addressed.



Photo 2: Southern Ute Education Center

- **Local Municipality:** Tribal lands encompass the town of Igancio; Bayfield, Pagosa Springs and the city of Durango are also in close proximity, and could serve as potential municipal partners in implementing safety measures within their boundaries.
- **Schools:** Southern Ute Montessori Academy is a operated by the Southern Ute Community Action Program (SUCAP). Older SUIT students attend one of several area schools within the Bayfield or Ignacio School District.



Photo 3: SUCAP facility



2.2 Overview of Existing Efforts

SUIT Long Range Transportation Plan Update: The Tribe is updating their LRTP simultaneously with this safety planning effort. The purpose of the LRTP is to provide a plan for transportation facilities that will enable Tribal leaders to take advantage of desirable development opportunities, protect community resources and traditions, and enhance the use of Tribal land by residents. Specifically, the purpose of the 2015 LRTP is to:

- Identify, evaluate and determine present and future public transportation needs.
- Provide a 20-year transportation plan that defines the Tribe's short and long-term transportation needs based on an analysis of current resources, demographic trends and future development projects.
- Develop a prioritized listing of recommended road improvements and construction projects for use by the Tribe, FHWA, and the BIA in implementing a construction program to meet current and projected (20-year) transportation needs.

The transportation plan is a fiscally and developmentally sound document that is intended to address the funding issues and eligibility restrictions associated with Highway Trust Fund (HTF) monies. Each tribe is a politically and geographically diverse entity with a unique set of transportation goals and objectives. However, because the TTP system is composed of public roads, many of which fall under BIA, state, county or municipal responsibility, several transportation goals common to all tribes can be identified. These are:

- Provide safe and convenient public access within Reservation boundaries
- Provide access to new and existing development
- Complement surrounding public transportation facilities as part of the area-wide public transportation system
- Promote the economic development of the Tribe
- Produce a plan for providing transportation facilities

Ignacio Area Corridor Access Plan: This plan represents a collaboration between the SUIT, CDOT, the Town of Ignacio, and La Plata County. Because of aggressive current and future development including the Sky Ute Casino Resort and Southern Ute Museum and Cultural Center, and new Growth Fund building, it was vital to consider how such development would influence traffic in the Ignacio area. Several alternatives were proposed in the plan that would improve traffic safety in the Ignacio corridor and the Southern Ute Reservation.

Colorado State Highway Safety Plan: Moving Towards

Zero Deaths: Colorado's Strategic Highway Safety Plan or SHSP represents a shared vision to significantly reduce serious injuries and fatalities on the state's transportation network. The emphasis areas, strategies and action steps outlined in the plan are the product of a data-driven, collaborative effort by numerous traffic safety professionals and stakeholders statewide.





Coordination Efforts with County Law Enforcement: Southern Ute Police Department officers have cross-jurisdictional responsibilities that allow them to serve Tribal members, non-members and non-Indians that live and work within the exterior boundaries of the Southern Ute Reservation. Officers receive cross-deputization that enables them to work efficiently with the many jurisdictions within the Reservation.

Coordination Efforts with State Law Enforcement: The Colorado State Patrol is responsible for traffic enforcement, crashes, criminal investigations, safety, human smuggling and hazardous materials on state highways and unincorporated county roads. However, the Colorado State Patrol's jurisdiction does not extend onto reservation (or other federal) lands. They will assist local tribal police by invitation only. According to their website, it is the mission of the Colorado State Patrol to "...ensure a safe and secure environment for all persons by utilizing the strengths of our members to provide professional law enforcement services that reflect our Core Values of Honor, Duty and Respect."

Substance Abuse Program: The Southern Ute Behavioral Health Program provides services to children and adult members. Services include evaluation, diagnosis, and the management of mental, behavioral, chemical dependency, or emotional conditions. The program provides in-patient treatment including a sweat lodge and counseling for program participants.



Photo 4: Southern Ute Social Services Program helps tribal members in need of assistance.

2.3 Emergency Response Resources

2.3.1 General Resources

Law Enforcement: The Southern Ute Police Department (SUPD) is available to respond in an emergency. It is made up of 22 officers including the chief, and 20 non-patrol support staff members. The department has 23 police vehicles.

State: As stated previously, the Colorado State Police work cooperatively with the Tribal Police and patrol along State routes on the Reservation.

County: Archuleta and La Plata County law enforcement provide assistance in their various jurisdictions.

Municipal: The Ignacio Police Department provides emergency response within the Town of Ignacio.

Fire: The Los Pinos Fire Protection District provides fire suppression and emergency medical services to a 325 square mile area of Southwest Colorado. The Fire District encompasses portions of La Plata and Archuleta Counties, and includes the communities of Oxford, Tiffany, Allison, Arboles, and the Town of Ignacio. A substantial portion of the District consists of Southern Ute Tribal Lands, Bureau of Land Management property, territory belonging to the U.S. Forest Service, Division of Wildlife areas, and land owned by the State of Colorado. The district is made up of five stations and a fleet maintenance and training facility.



In addition to Fire Suppression and Emergency Medical Services, the Fire District also provides Technical Rescue, Wildland Fire Suppression, as well as an Operations Level Hazardous Materials Response. The district maintains a strong working relationship with the Bureau of Indian Affairs Southern Ute Agency's Fire Management Branch and participates in providing mutual aid assistance to all of the neighboring fire agencies.³

Tribal Health Center: The Tribal Health Department provides health care services to tribal members and other Native Americans. Tribal funds are used to serve enrolled members, while federal and grant funding allow the department to serve other Native American and Alaska Natives with health related services.

Medical Evacuation: If a medical emergency requires more care than can be provided locally, Los Pinos Fire personnel transport patients via ambulance to Mercy Medical Center near Durango. The medical center also has ambulances and medevac capability, if needed.



Photo 5: The Southern Ute Indian Reservation is served by Los Pinos Fire Department. Pictured is Station #1 in the town of Ignacio.

³ Los Pinos Fire Protection District (2015) *About Us*. Retrieved from <http://lospinosfire.com/about.html>

3 Documentation of Needs and Priorities

3.1 Community Priorities

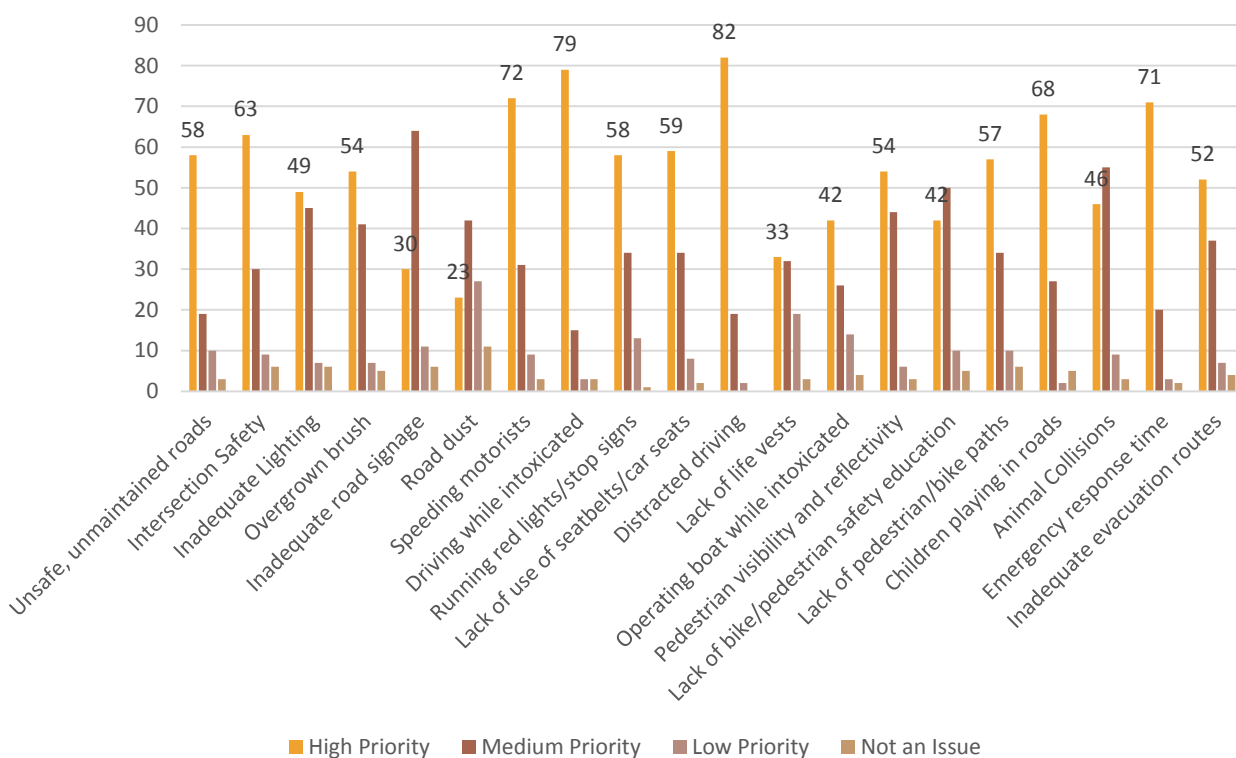
Community priorities were assessed based on a recent survey, as well as one conducted in association with the Southern Ute Indian Tribe's Long Range Transportation Plan planning process. See Appendix B for copies of both surveys. Part of this survey assessed the top transportation concerns of Southern Ute Tribal members. While many residents considered all safety issues to be high in priority, some stood out more notably. The greatest number of respondents indicated that distracted driving is a high priority. Coming in close behind were motorists driving while intoxicated, speeding and emergency response time.



Photo 6: Southern Ute Indian Reservation Tribal Administration Building (Leonard C. Burch Building)

More than 100 individuals returned the Transportation Safety Survey. Table 3-1 shows how respondents ranked specific concerns.

Table 3-1: Transportation Safety Survey Results





Comments received with the surveys voiced similar themes and could be broken down into the following locations and areas of concern:

- Driver behavior
 - Distracted driving
 - Lack of funding for traffic enforcement
 - Need for more police presence
 - Speeding (Buck Highway, CR 314, CR 316, Pow-Wow Circle, Howe Road, residential areas)
 - Intersection safety (drivers not stopping, Southern Ute Cultural Center and Museum, and Leonard C. Burch Building, CR 172 and CR 151, not yielding at Sky Ute Casino Resort)
 - Need increased motorcycle awareness
 - Elder drivers
- Road conditions
 - Difficult to distinguish the edges of the road
 - Big trucks speed and throw up rocks that break windshields
 - Heavy truck use degrades roads
 - Ruts in wet conditions, dust in summer (CR 316)
 - Inadequate/no lighting (Howe Drive, East and West Cedar Point Housing, Pow-Wow Circle, first stop light at Casino, from the Cultural Center to the Wood Yard)
 - Regrade topography to increase visibility at CR 318/CR 310
 - Overgrowth of trees and brush (near Casino)
 - Potholes
- Pedestrian and bicycle safety
 - Inadequate shoulders
 - Need for mixed use paths and lighting (CR 517, CR 521, Ignacio to Bayfield, Casino to town limits, between Tribal residential areas and Ignacio)
 - Provide recreational facilities for children to reduce play in the streets (playgrounds and basketball courts at East and West Cedar Point Housing, children in road at CR 316, unattended children in roads in residential areas)
- Other Hazards
 - Hazardous materials routes
 - Dirt bikes and ATVs in use in residential areas.
 - Children not in car seats, seatbelts not in use
 - Vehicle/Animal collisions



Photo 7: Shoshone Avenue Apartments near Highway 151

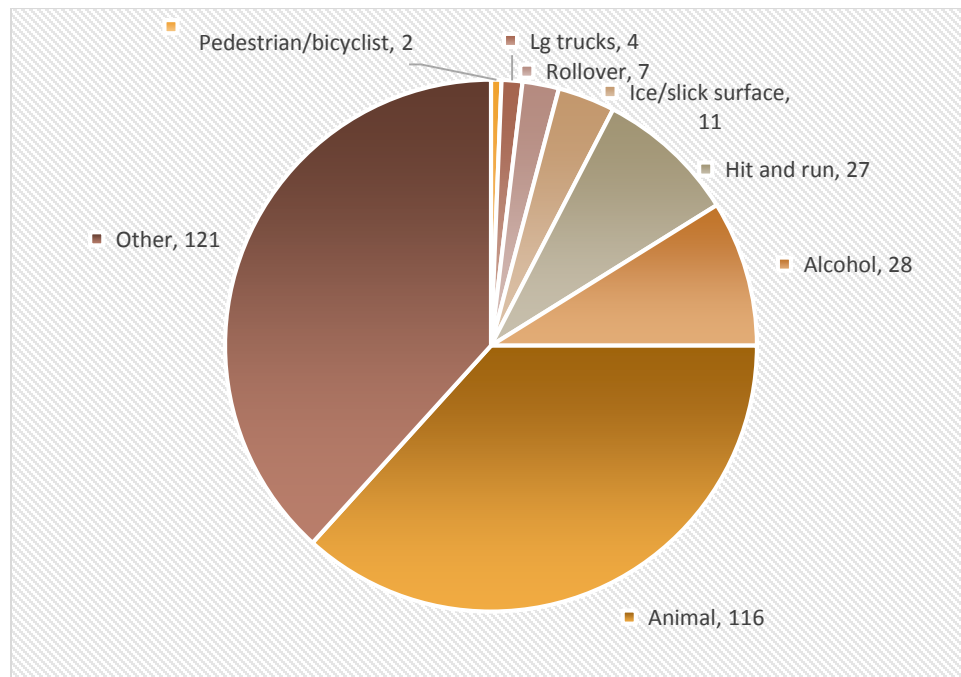


3.2 Safety / Crash Data Overview

Crash data provided in this section were received from the Colorado Department of Transportation and the SUPD. The majority of accidents on Southern Ute lands are associated with two main thoroughfares, CO-172 and CO-151. Discussion with the Archuleta County Sheriff's office indicated that parts of CO-151 between US-160 and Tiffany would benefit from additional patrols but staffing and location make it difficult⁴.

Crashes on the reservation occur as a result of a variety of factors as shown in Exhibit 3-1.

Exhibit 3-1: Causative factors in crashes, October 2013-June 2015



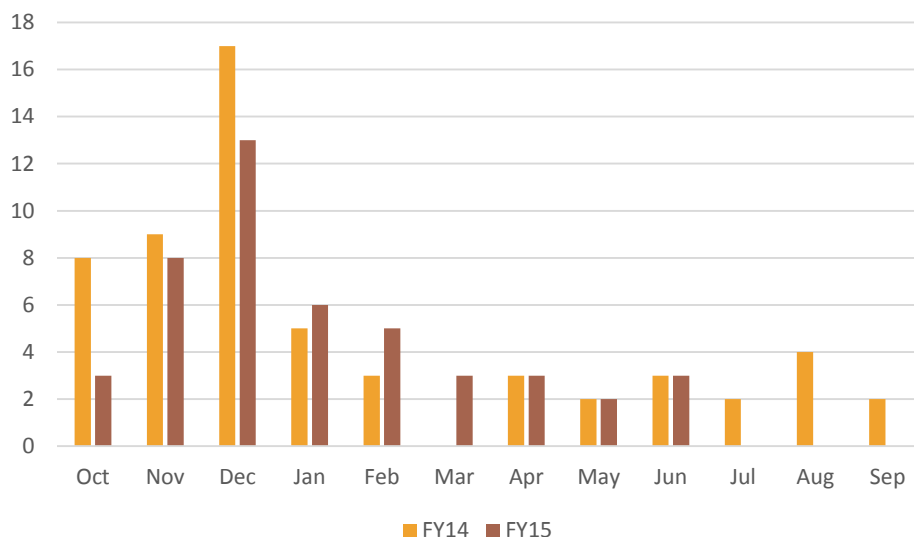
Data source: SUPD

The greatest single causative factor in crashes on the reservation is animal strikes, making up just under 37 percent of crashes. Over the period from October 2013 through June 2015, Tribal police responded to 116 animal strikes, 105 of which were vehicle/deer strikes. Other vehicle/animal strikes included five cows, a dog, an elk, a turkey, a moose, a raccoon and one unidentified animal. Exhibit 3-2 shows that the greatest number of deer strikes occur beginning in October and peaking in December, tapering off in January and February, with generally two to three strikes per month between March and September. Highway 172 sees the greatest number of deer strikes.

⁴ Conversation with Sheriff Rich Valdez, August 25, 2015.



Exhibit 3-2: Deer strikes by month, October 2013-June 2015



Data source: SUPD

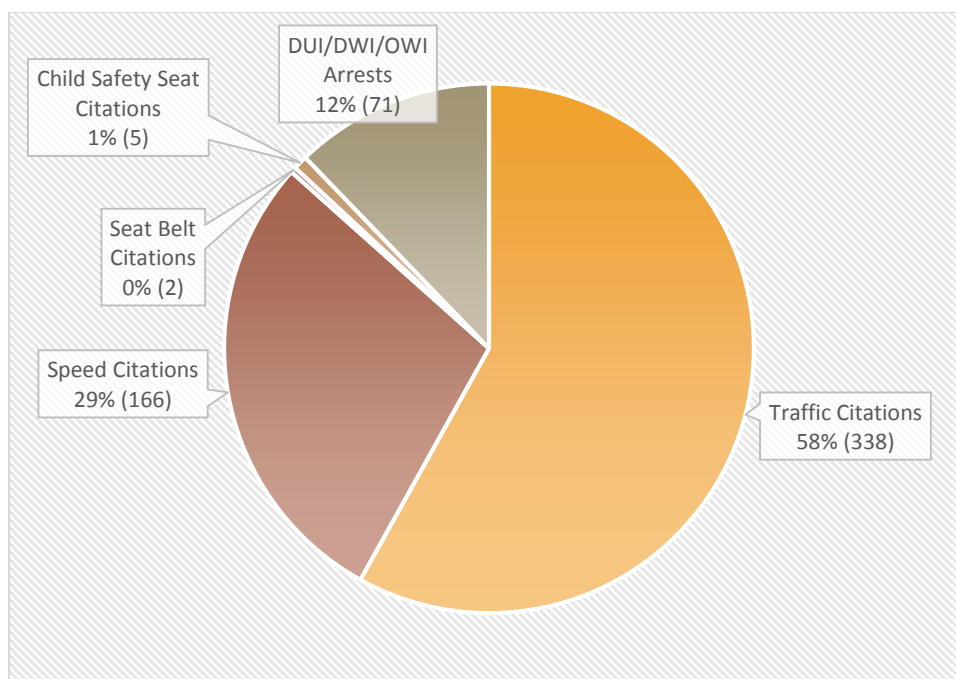
Aran Johnson of the Southern Ute Natural Resources Department has worked together with other entities to study the migratory patterns of mule deer on and near the Reservation. He reports that “thousands of mule deer spend winters on the reservation and summers to the north on the San Juan National Forest and adjacent wilderness areas.” He went on to say that Highway 160 bisects these seasonal ranges, so deer cross Highway 160 in May and November each year. Over the course of the study, the team lost as many as ten percent of radio collared deer to vehicle/animal collisions in a single year. Large numbers of hits occur annually along Highway 151 between Ignacio and Capote Lake; but fewer during migration and more when deer are already on their winter range. It is believed that Highway 172 vehicle/animal collisions follow a similar pattern.

Figure 3, provided by Mr. Johnson, shows a model that was constructed to show how deer move across their migrations routes. The model takes into account all useable data points and illustrates how fast (or slow) deer are moving during migration. The model shows very clearly road crossing areas. Comparing Figure 3 with Figure 6, Figure 7, and Figure 8 shows the high number of accidents in these areas, most of which are vehicle/animal collisions. The intersection of Highways 160 and 151 is reported to be a notorious area for both deer and elk hits. That area also has two sections of tribal land that are crossed by Highways 160 and 151 and both are heavily used by deer and elk during migration and during the winter when they are settled on winter range. Both these areas should be considered for dedicated wildlife crossing structures (underpasses) and fencing.

Intoxication constitutes the next highest single factor in crashes, at nearly nine percent of total crashes. Alcohol and drug citations make up a similarly high percentage of citations issued as shown in Exhibit 3-3, although speed is the most frequent cause of citation.



Exhibit 3-3: Types of citations issued (October 2013 through June 2015)



Data source: SUPD

Traffic citations may denote distracted driving, failure to stop, signal, yield, etc., and careless driving in general. Speeding makes up nearly 30 percent of citations, and is considered by the SUPD to be their biggest driver behavior concern.

In evaluating citations, it is important to note that only Natives are under the jurisdiction of the SUPD when it comes to traffic citations. Nonnatives are issued a written warning. So in the same time period illustrated in Exhibit 3-3, where about 580 citations were written, 3,416 written warnings were issued. To counteract this problem, new Tribal code has been developed and is under Council review that would make all traffic violations civil and therefore subject to enforcement in Tribal Court.

Maps illustrating crashes along the Reservation roadways are located in Appendix A. Data from CDOT covers the years from 2010 through 2014. Data from SUPD is labeled as either FY14 or FY15. Not every crash has been mapped, but those shown are indicative of areas of accident concentration. Raw accident data tables are presented in Appendix C.



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4 Emphasis Areas and Implementation Plan

Reducing transportation fatalities and serious injuries with any sustained success requires that all four elements of highway safety be addressed – engineering, enforcement, education, and emergency services. A Tribal Transportation Safety Program, whether large or small, should work to address the 4 Es, and have data as its foundation. Data collection and analysis provide technical staff and decision makers the ability to identify and prioritize safety needs. Crash data, roadway data, and citation information provide a basis for developing the safety plan, proposing strategies, and developing needed education programs on tribal lands. The strategies that follow in this Safety Plan will support the Southern Ute tribal government as they manage the safety program. No significant improvements were found necessary to the current emergency services.

The Tribe has identified the following emphasis areas from survey data, crash analysis, and stakeholder interviews, in accordance with the plan's mission to provide safer conditions for motorists, bicyclists, and pedestrians traveling in the vicinity of Tribal lands:

- Driver Behavior including:
 - Distracted driving
 - Impaired driving
 - Speed reduction
 - Seatbelt/car seat use
 - Motorcycle awareness
 - Youth and senior drivers
- Road Conditions including:
 - Traffic patterns
 - Intersection safety
 - Road maintenance
 - Lighting and visibility
- Pedestrian and Bicyclist Safety
 - Shoulders or paths
 - Recreational facilities
- Other Hazards including:
 - Vehicle/animal strikes
 - Hazardous materials
 - ATVs/dirt bikes

The following section provides background on each emphasis area, outlines the Tribe's goals in improving conditions, and describes specific strategies in the areas of education, engineering, enforcement, and emergency management.



4.1 Driver Behavior

4.1.1 Distracted Driving

Background

Distraction.gov⁵ defines distracted driving as any activity that could divert a person's attention away from the primary task of driving. All distractions endanger driver, passenger, and bystander safety. These types of distractions include:

- Texting
- Using a cell phone or smartphone
- Eating and drinking
- Talking to passengers
- Grooming
- Reading, including maps
- Using a navigation system
- Watching a video
- Adjusting a radio, CD player, or MP3 player

Text messaging is especially distracting because it requires visual, manual and cognitive attention from the driver. The Virginia Tech Transportation Institute reports a driver is three times more likely to get into a crash when engaging in visual-manual subtasks (such as reaching for a phone, dialing and texting) associated with the use of hand-held phones and other portable devices. In 2010, the National Highway Traffic Safety Administration (NHTSA) conducted a representative phone survey on distracted driving attitudes and behavior. More than half of the respondents indicated that they believe using a cell phone and/or sending a text message or email makes no difference in their own driving performance—yet as passengers, 90 percent said they would feel very unsafe if their drivers were talking on a hand-held cell phone, texting, or e-mailing. These findings are consistent with other research showing that despite well-publicized dangers of distracted driving, many Americans choose to use cell phones while driving.⁶

Table 4-1: Odds Ratios for Driving Distractions

Type of Distraction	Times more likely an event will occur
Compose/send text message	23.24
Interact with keyboard/screen	9.93
Write on pad/notebook	8.98
Read a map	7
Use electronic device or 2-way radio	6.72
Dial cell phone	5.93
Read newspaper /do paperwork	3.97
Reach for object in vehicle	3
Source:2009 Virginia Tech research study	

⁵ National Highway Transportation Safety Administration. Accessed from www.distraction.gov. July 2015. Materials are available for downloading at distraction.gov for the community to launch its own campaign.

⁶ NHTSA (2012, June). *Blueprint for Ending Distracted Driving*.



In the 2009 legislative session, the Colorado General Assembly passed House Bill 09-1094⁷ to strengthen and add new cell phone use and text messaging restrictions for drivers. As of December 1, 2009, except in the event of an emergency:

- Any driver under 18 years of age is prohibited from using a cell phone while driving.
- Adult drivers are prohibited from text messaging, but may make voice calls.

Goal

Reduce the number of crashes, injuries or fatalities caused by distracted driving.

Strategies

Education

- **Distribute educational resources on the dangers of “distracted driving”** (e.g. texting, etc.). Many downloadable resources are available online including posters and banners that could be displayed at the High School and in other public places⁸. Additional information is available at distraction.gov.
- **Lead by example.** Create a policy that prohibits employees of the Tribe from using handheld phones or texting while driving.

Enforcement

- **Enact Tribal law banning distracted driving.** Current code on careless driving can be used to cite distracted drivers; however, specific laws and enforcement on distracted driving would bring the issue to the forefront and underscore its seriousness. NHTSA has initiated pilot programs that indicate that drivers do change their cell phone use when faced with good laws, tough enforcement and public education campaigns.⁹

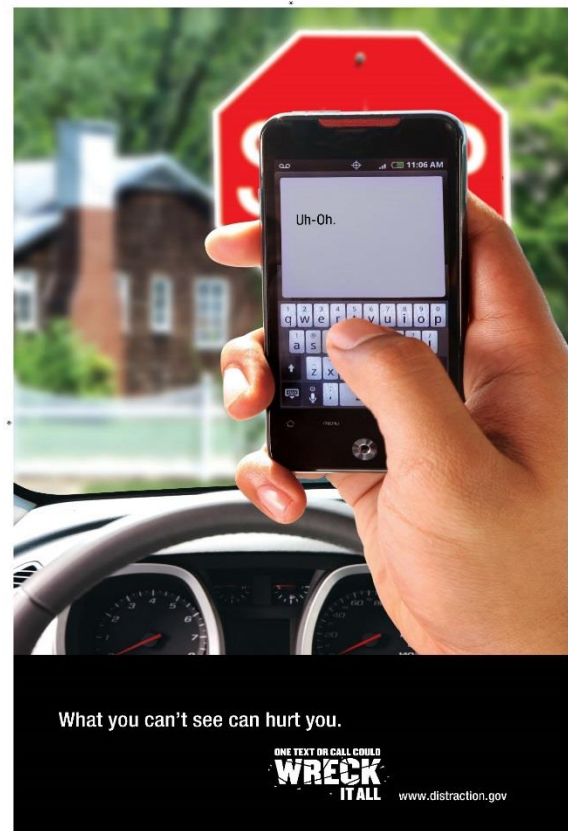


Photo 8: Poster from a national campaign against distracted driving.

⁷ Colorado Legislative Council Staff Issue Brief, *Cell Phone Use and Distracted Driving Laws*, February 2, 2010.

⁸ NHSTA, (2015). *Traffic Safety Marketing*. Retrieved from <http://www.trafficsafetymarketing.gov/CAMPAIGNS/Distracted+Driving/One+Text+or+Call+Could+Wreck+It+All>

⁹ NHTSA (2012, June). *Blueprint for Ending Distracted Driving*.



4.1.2 Alcohol or Drug Impaired Driving

Background

Approximately nine percent of accidents reported from October 2013 through June 2015 on the Southern Ute Reservation listed alcohol as the main causative factor in the accident¹⁰. When impaired drivers are in minor or single-vehicle accidents, the incidents may go unreported. It is likely that the actual percentage of alcohol-related accidents is even greater than the official number reported.

The SUPD has a strong program of sobriety check points and approximately 12 percent of citations are for impaired driving. The SUPD police chief indicated that they participate in the Drive Sober or Get Pulled Over campaign and that checkpoints are set up in strategic locations every one to two months.



Photo 9: Sobriety Checkpoints can Discourage Drunk Driving

The department also practices “DUI saturation,” keeping units in high visibility locations at peak drinking times around happy hour and bar closing times.

Goal

Reduce the number of alcohol-related accidents on SUIT lands.

Strategies

Education

- **Continue to participate in nation-wide campaigns against driving under the influence.** Organizations such as the NHTSA offer free materials for public awareness campaigns including posters, videos to post on local websites, such as the Tribe’s, and radio spots. See www.nhtsa.gov/Impaired.
- **Alcohol and Drug Rehabilitation Services.** The Peaceful Spirit is a residential and outpatient addiction treatment facility located in Ignacio, Colorado. The facility is part of Southern Ute Community Action Program, and offers rehabilitation programming for individuals and therapy for families in which a juvenile is struggling with addiction.
- **Install signage reminding motorists not to drive while intoxicated.** Colorado has had public information campaigns with anti-DWI billboards. Memorial signs may be purchased for \$100 for installation along Colorado State highways, but not interstates.¹¹ Photo 10 shows an example of Colorado’s anti-drunk driving campaign signs and a memorial sign.



¹⁰ This statistic was derived from the crash data tables provided by SUPD

¹¹ CDOT, (2014). *Roadside Memorial Signage Program*. Application and regulations on memorial signs may be found at <https://www.codot.gov/library/Brochures/cdot1314.pdf>



Photo 10: Sample signage reminding motorists not to drive while intoxicated.



Enforcement

- **Provide additional equipment** to aid in enforcement. SUPD indicates a need for 260 36-inch dual reflective cones as approved by the Manual on Uniform Traffic Control Devices (MUTCD) to direct and channel traffic during sobriety checkpoints.
- **Collaboration is a key component to enforcement operations:** When conducting impaired-driving enforcement activities, law enforcement agencies value the assistance of other law enforcement agencies and non-law enforcement groups. Law enforcement, especially in rural areas, relies on collaborating with city police departments, Federal law enforcement agencies (such as the Bureau of Land Management), tribal law enforcement agencies (cross-commissioning agreements), and sheriffs' offices. They also value the assistance that community groups can provide, such as mapping capabilities, support at sobriety checkpoints, or talking with the media in support of enforcement operations.

4.1.3 Speed Reduction

Background

SUPD identifies speeding as its number one driver behavior concern and 29 percent of citations from October 2013 through June 2015 were for speeding. Areas identified as of particular concern to residents included Buck Highway, CR-314, CR-316, Pow-Wow Circle and Howe Road. Fourteen crashes in the time period reported were directly related to speeding. Additionally, speeding motorists in residential areas threaten the safety of pedestrians, children, cyclists and other road users.

Goal

Decrease the number of speeding vehicles on SUIT reservation roads and streets.

Strategies

Education

- Work with local high schools (Ignacio, Durango and Bayfield) to **educate students on the dangers of speeding.**
- **Organize "slow down" campaign in the community.**



Photo 11: Slogan from a "Slow Down" campaign to increase public awareness.



- Hold **traffic safety booth** at one or more SUIT community events.

Engineering

- **Install flashing “school zone” lights** near Head Start and in school zones to alert drivers of when children are present.
- **Install or improve speed humps** on local and residential streets as needed.

Enforcement

- Enact **new code making all traffic citations civil** so that Native and non-natives can be prosecuted equally in Tribal Court.
- Ensure that **police are fully equipped for response**. Many (14 as of this report) of the radars in use in SUPD vehicles are outdated and should be replaced.

4.1.4 Seatbelt Use

Background

According to the NHTSA and the BIA Indian Highway Safety Program, the 2013 overall rate of seat belt use on 16 reservations is 69.6 percent. Belt use varies greatly across reservations, ranging from a low of 36.4 percent to a high of 90.7 percent. Reservations with primary seat belt laws have the highest use rates, followed by reservations with secondary seat belt laws; reservations with no seat belt laws have the lowest use rates.¹²

More than half (56 percent) of American Indian or Alaska Native passenger vehicle occupants who died in motor vehicle crashes were unrestrained at the time of the fatal crash.¹³ Residents of rural communities often feel that seatbelts are unnecessary because they are only driving a short distance and/or are less likely to encounter other cars than in an urban environment. Some also assert that, in the event of an accident, they can escape their vehicle more quickly if they are not belted in. Only two seatbelt citations were issued in FY14 and none as of June FY15. No child safety seat citations were issued in FY14, but five were issued as of June FY15 according to SUPD records.

A safety belt, when worn properly, is the single most effective way to save lives and reduce injuries in crashes. Safety belts keep motorists in their seats during a crash and spread the crash forces across the stronger parts of the upper body. These restraints also can prevent injuries in a secondary collision inside the vehicle and prevent ejection from the vehicle. Occupant protection also includes child passenger safety and restraints, including child safety seats and booster seats that have proven to be highly effective in preventing child deaths and injuries in traffic-related crashes.¹⁴

¹² Department of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Bureau of Indian Affairs Indian Highway Safety Program (2014, February). *Final Report - 2013 Safety Belt Use Estimate for the Indian Nations*.

¹³ Department of Transportation (US), National Highway Traffic Safety Administration (NHTSA) (2014). *Fatality Analysis Reporting System (FARS)*(online)

¹⁴ CDOT (2015). *Colorado Strategic Highway Safety Plan*.



Goal

Increase the use of seatbelts and car seats among SUIT Tribal members.

Strategies

Education

- Work with local schools and youth recreation leaders to **inform children of the importance of seatbelts.**
- **Conduct a “car seat drive”** to provide free car seats and booster seats, perform car seat inspections, and educate community members about car seat laws.

Engineering

- **Install “Click it or Ticket” signs** within the Tribal community (with fine amounts noted).

Enforcement

- Tribal Police and other law enforcement agencies work together to **increase enforcement of seatbelt use laws** (including seatbelt compliance and car seat use).



Photo 12: Sample Click It or Ticket sign.

- Conduct **seatbelt / child seat checkpoint** events.

4.1.5 Motorcycle Awareness

Background

Motorcycles have become an increasingly popular mode of transportation which can lead to fatalities and serious injuries involving motorcycle riders and passengers (collectively referred to as motorcyclists). Motorcyclists have all the same rights, privileges, and responsibilities as any motor vehicle driver on the roadway. However, like other vulnerable road users (bicyclists and pedestrians), their size relative to passenger vehicles makes the likelihood of a fatality or serious injury in the event of a crash much greater.¹⁵

No motorcycle fatalities were reported by SUPD; however, they made up 18 percent of fatalities and 17 percent of serious injuries in Colorado in 2012.¹⁶

¹⁵ Colorado Department of Transportation. 2015. *Strategic Highway Safety Plan*.

<<http://coloradotransportationmatters.com/wp-content/uploads/2013/04/Colorado-Strategic-Highway-Safety-Plan-2015-05.pdf>>

¹⁶ Colorado Department of Transportation. 2015. *Strategic Highway Safety Plan*.

<<http://coloradotransportationmatters.com/wp-content/uploads/2013/04/Colorado-Strategic-Highway-Safety-Plan-2015-05.pdf>>



Goal

Increase awareness of motorcyclists on roads on Tribal lands.

Strategies

Education

- **Make motorcyclist training programs** available to teach motorcycle safety and skills to avoid crashes.
- **Encourage helmet use** through poster contest or other media campaign.
- **Provide information and reminders of motorcycle awareness** through schools and media outlets (such as radio spots or newsletter articles).

Enforcement

- **Provide a motorcycle crash awareness course for uniformed law enforcement officers** to improve their understanding of motorcycle crash dynamics and general motorcycle safety issues.

4.1.6 Youth and Senior Drivers

Background

Young adult and senior drivers present unique challenges. According to the Centers for Disease Control (CDC), in 2011, about 2,650 teens in the United States aged 16 to 19 were killed and almost 292,000 were treated in emergency departments for injuries suffered in motor-vehicle crashes.¹⁷

Young people ages 15 to 24 represent only 14% of the U.S. population. However, they account for 30 percent (\$19 billion) of the total costs of motor vehicle injuries among males and 28 percent (\$7 billion) of the total costs of motor vehicle injuries among females.¹⁸ The Highway Safety Research Center pinpoints the following reasons for the greater risk to young drivers:

- Inexperience – teens just haven't driven enough yet to be able to smoothly handle the complex task of driving.
- Impulsiveness – because of their level of development, teens tend to engage in more impulsive behavior than older drivers.
- Exposure – driving more frequently at night and with multiple passengers.

Similarly, senior citizens are at higher risk as drivers. Per mile traveled, fatal crash rates increase noticeably starting at ages 70–74 and are highest among drivers age 85 and older. This is largely due to increased

¹⁷ Centers for Disease Control (2015, October 14). *Teen Drivers: Get the Facts*. Retrieved from http://www.cdc.gov/motorvehiclesafety/teen_drivers/teendrivers_factsheet.html

¹⁸ Centers for Disease Control (2015, October 14). *Teen Drivers: Get the Facts*. Retrieved from http://www.cdc.gov/motorvehiclesafety/teen_drivers/teendrivers_factsheet.html



susceptibility to injury and medical complications among older drivers rather than an increased tendency to get into crashes.¹⁹

Goal

Reduce crashes involving young drivers and senior citizens.

Strategies

Education

- Develop **educational brochures for target-age drivers**. Information could include such as the following from the CDC:

Older adults can take several steps to stay safe on the road, including:

- Exercising regularly to increase strength and flexibility.
 - Asking your doctor or pharmacist to review medicines—both prescription and over-the-counter—to reduce side effects and interactions.
 - Having eyes checked by an eye doctor at least once a year. Wear glasses and corrective lenses as required.
 - Driving during daylight and in good weather.
 - Finding the safest route with well-lit streets, intersections with left turn arrows, and easy parking.
 - Planning your route before you drive.
 - Leaving a large following distance behind the car in front of you.
 - Avoiding distractions in your car, such as listening to a loud radio, talking on your cell phone, texting, and eating.
 - Considering potential alternatives to driving, such as riding with a friend or using public transit that you can use to get around.
- **Encourage parents to ride with their teen drivers frequently**. When teens begin driving without an adult in the car, their crash rate increases sharply. Acquiring a substantial amount of practical, on-the-road experience with parental supervision can reduce the likelihood that young drivers will have a crash.²⁰

4.2 Road Conditions

4.2.1 Traffic Patterns

Background

One critical area in the main Tribal Campus is Ouray Drive, between Tribal Council Chambers and Veteran's Park due to current parking patterns, flow of traffic, road design and congestion in the area. Individuals report frequent near misses and at least one crash in that area.

¹⁹ Centers for Disease Control (2015, May 27). *Older Adult Drivers*. Retrieved from http://www.cdc.gov/motorvehiclesafety/older_adult_drivers/

²⁰ University of North Carolina (2015). *Why Young Drivers Are at a Greater Risk*. Retrieved from http://www.hsrb.unc.edu/safety_info/young_drivers/index.cfm

Additionally, it is reported that some drivers fail to stop at the designated stop signs and at times travel at excessive speeds through the intersection of Ouray Drive and Capote Drive.

WHPacific traffic engineers considered potential solutions to this traffic problem. Potential solutions included:



Looking up Ouray Drive from Capote Drive, cars parked on the right make the road too narrow for safe two-way traffic.

1. One way traffic around Memorial Park so that the four streets serve as a traffic circle.
Option 1 is the most annoying to motorists, requiring relearning traffic patterns and modification of driving behaviors. Additionally, most of the affected roads are two way in the BIA Inventory and would require modification in that data base.
2. Eliminate parking on the west side of Ouray Drive. Pedestrian access from the parking lot on the west side of Memorial Park to the buildings on Ouray Drive is good. No Parking signage would be needed on Ouray Drive. The curb should be painted red and parking will need to be enforced by SUPD. This would require a parking ordinance to be enacted by the Tribe. If additional parking is needed to compensate for on-street parking that is eliminated:
 - a. Provide additional parking by adding additional spaces to lot on the southeast corner of Ouray and Memorial.
 - b. Provide additional parking by adding lot space around buildings on east side of Ouray.
 - c. Better utilize the lot on the west side of Capote Drive by adding tire stops or divider wires to show where rows and spaces should be.

Option 2 can be implemented with very few impacts. Ouray Drive was designed to support two-way traffic, but not west side on-street parking. So it will require only the elimination of on-street parking adjacent to the Park, removal of parking striping, and painting the curb red. It is critical that the SUPD be given authority to cite parking violators in order to modify behavior and stop parking at the Memorial Park side curb.
3. Widen Ouray Drive or Memorial Drive into Memorial Park to provide on-street parking.
Option 3 has the highest impact as far as losing land and requiring redesign and construction. However, it has the advantage of allowing people to park where they are used to parking.

The planning team believes that Option 2 will provide the least disruption, least expense and safest solution for the outlay.

Goal

To alleviate congestion and reduce crashes and near crashes on Ouray Drive.



Strategies

Education

- **Paint Ouray Drive curb adjacent to Memorial Park red. Place “No Parking” signage.**

Engineering

- **No parking on the west side of Ouray Drive.**
- **Place lane or parking space markers in gravel lot.** This will allow for additional parking by better organizing the lot.

Enforcement

- **Increase law enforcement presence** and strictly enforce speed regulations on the streets abutting Veteran’s Park.



Parking will remain unchanged on the east side of Ouray Drive.

- **Create a means to cite motorists illegally parked.** The Tribe must have the ability to enforce parking regulations for them to be successfully implemented.

4.2.2 Specific Road and Intersection Safety

Background

The risks associated with unsignalized rural highway intersections are well documented. Approximately 56 percent of road fatalities occur in rural areas.²¹ Motorists often travel at high speeds on rural highways, not expecting to have to suddenly yield to a slowing vehicle, a crossing pedestrian, animal, or bicyclist. While rural intersection collisions occur less frequently than urban intersection collisions due to lower traffic volume, the risk of injury and/or fatality tends to be higher in rural collisions due to the average vehicle speed. Over 80 percent of rural intersection fatalities occur at unsignalized intersections.²² Rural unsignalized intersections experience twice as many fatal crashes as urban unsignalized intersections.²³

In addition to general concern for intersection safety, certain locations of concern have arisen through the public involvement process, including:

²¹ National Highway Traffic Safety Administration (NHTSA) (2008) *Traffic Safety Facts*. Retrieved from <http://www-nrd.nhtsa.dot.gov/>

²² FHWA, (2011). *Volume 5, NCHRP Report 500: A Guide for Addressing Unsignalized Intersection Collisions*

²³ National Cooperative Highway Research Program (2003). *Report 500, Volume 5: A Guide for Addressing Unsignalized Intersection Collisions*.



- The intersection of Highway 172 and Highway 151. The Ignacio Area Corridor Access Plan described this intersection as “significantly congested” particularly at morning and evening peak traffic times. Long backups are reported at this intersection during peak hours.
- Museum/Leonard C. Burch intersection
- Highway 172 and CR 318: drivers entering CR 318 need to stop and yield.
- Intersection of CR 318 and CR 310: poor visibility
- La Posta curve: motorists miss curve and crash in neighboring yard.
- La Boca Bridge: bridge is in disrepair and motorists are advised to cross at their own risk. The bridge is an access point for some homes and emergency vehicles have to travel far out of their way to serve this part of the reservation because of the problems with this bridge.

Strategies

Education

- **Organize targeted education campaign on safety problems at “high risk” intersections.** This may entail posters, Public Service Announcement or distribution of information at Tribal events where a safety booth could be set up to distribute a wide variety of safety information.

Engineering

- Work with CDOT to **facilitate installation of a traffic signals as delineated in the Ignacio Area Corridor Access Plan (IACAP).** Work is being done on the intersection of Highways 172 and 151 project at the time of this report. It is described in the IACAP as “the only intersection requiring a signal under current conditions.” Other intersections are identified in the IACAP as potentially needing signals in the future.
- Investigate whether **alterations to the landscape** at CR 318/CR 310 intersection would improve sight distances and allow vehicles coming around the curve to be seen.
- **Reduce size or amount of shrubbery** near the Casino Resort entrance to improve sight distances. Visibility at this intersection was a concern in member survey.
- **Perform a feasibility study at La Boca Bridge** to determine if a new bridge is needed or rehabilitation of the old one. Seek funding to perform necessary design and construction to improve crossing.



Photo 13: The intersection of Highways 172 and 151 experiences heavy backup at peak traffic hours.

The USGS has a stream gauge on the downflow abutment of La Boca Bridge, which has been in place for many years and provides river flow data used by the State, Tribe, and others. When improvements or replacement of the bridge are considered, the USGS should be a part of the



conversation to ensure that the gauge is preserved and continues to provide this valuable information.

- **Post increased signage** at La Posta to warn drivers of upcoming curve. Consider reflectors or guardrails along the curve to additionally alert drivers and protect neighboring properties. Consider developing guardrail plan for reservation roads.

Enforcement

- **Increase police presence** at intersections of concern to cite speeders and those who fail to stop or yield. Even intermittent increased ticketing is shown to reduce infractions.

4.2.3 Road Maintenance

Background

Residents complain of mud and ruts damaging to vehicle wheel alignment along CR 316 during wet weather. The same route is reported to be dusty in the summer, which can prove a health risk to elders and resident suffering from asthma or other respiratory conditions.

Oil and gas trucks are reported to kick up dust and gravel, at times causing windshield chips.

Bicycle commuters complain of gravel, dirt and debris along the shoulders where they ride between Ignacio and Bayfield. This can impede traction and debris that is thrown up by passing vehicles can cause injuries if a pedestrian or bicyclist is struck.

Strategies

Education

- Encourage residents and other road users to **slow down on gravel or dirt roads**. This may be done through posters, signage, or public service announcements. Reduced speeds will reduce the amount of dust raised and will reduce rutting in wet weather, as well.

Engineering

- Consider **paving or the use of dust palliatives on CR 318**. BIA maintenance staff suggest the Tribe consider chip sealing as a lower cost alternative to paving.²⁴

Enforcement

- Request that those entities responsible for road maintenance **increase efforts to keep shoulders free of debris to** facilitate cycling or walking along roadsides. A tribal road maintenance department could be established to deal with this issue.

²⁴ Conversation with Vickie Begay, Supervisory Civil Engineer, BIA. October 27, 2015.

4.2.4 Lighting and Visibility

Background

Public comments indicated a need for streetlights between the Casino and Ignacio town limits. One particular area of concern was at the first stop light south of the Casino.

Residents also indicated that Howe Drive and East and West Cedar Point Housing have inadequate lighting. Pedestrians and children are difficult to see, particularly at twilight.

Strategies

Education

- Encourage residents to **wear light colored or reflective clothing** when walking after twilight.
- **Provide reflectors or reflective tape** that parents can put on children's clothing when they are outside after dusk. This can be helpful when waiting for school buses or walking to pick up points.

Engineering

- **Perform a lighting study** to determine the most effective locations for street lighting. Work with responsible entities to install streetlights where they will provide the greatest benefit.



Photo 14: Streetlights would increase visibility at the first intersection south of the Sky Ute Casino.

4.3 Pedestrian and Bicyclist Safety

4.3.1 Background

The emphasis areas of intersection safety and pedestrian / bicyclist safety are closely related, as approximately 32 percent of all pedestrian-related crashes occur within 50 feet of an intersection.²⁵ Drivers and pedestrians share the responsibility for avoiding these types of collisions. Approximately 22 percent of pedestrian / vehicle collisions occur when a pedestrian darts in to the road, whereas 16 percent of such collisions are due to driver violations.²⁶

Residents have expressed a desire for greater walkability and accommodation for bicycle commuters between the community center and residential areas, as well as for longer mixed use pathways to facilitate cycling between the community center and outlying areas such as Bayfield.



Photo 15: The community center can be an excellent partner in safety education.

Pedestrians fill the street and bridge near the multipurpose facility during the Bear Dance. This creates traffic congestion and endangers pedestrians who walk in the roadway, including children who may dart out unexpectedly.

Children play in the streets in residential areas. Because of their tendency to dart into traffic and their small size, they are at a higher risk for being struck than older pedestrians.

4.3.2 Goal

The goal of this emphasis area is to reduce the number of pedestrian/vehicle conflicts by improving pedestrian/bicycling infrastructure and encouraging safe crossing practices.

4.3.3 Strategies

Educ+tion

- **Organize a bike fair** for Southern Ute reservation children. A Bike Fair is a great opportunity to present a bicycle safety clinic featuring instruction in safe bicycling practices, related traffic laws, bike safety inspections, minor repairs, helmet fit test, a safety lecture, drawings, and prizes.
- Purchase **clip-on headlights and flashing red taillights** for distribution during the annual Bike Fair to increase bicycle visibility.

²⁵ National Cooperative Highway Research Program (2003). *Report 500, Volume 5: A Guide for Addressing Unsignalized Intersection Collisions*.

²⁶ National Cooperative Highway Research Program (2003). *Report 500, Volume 5: A Guide for Addressing Unsignalized Intersection Collisions*.



- **Organize bicycle helmet distribution** programs. Approximately 70-80 percent of bicycle fatalities involve head injuries.
- **Develop Tribal brochures highlighting pedestrian and bicycle safety guidelines** (e.g. walk opposing traffic, wear reflective gear at night, use crosswalks, etc.).
- **Organize a presentation on “Safe Practices for Mature Motorists”** (AARP and AAA offer this) to discuss issues among older drivers that can lead to pedestrian / bicyclist conflicts (e.g. compensating for slower response times, etc.).
- Work with Indian Health Services (IHS) to **develop an Injury Prevention Program**.

Engineering

- **Consider a separate pedestrian crossing between the multipurpose facility and the Bear Dance Grounds** to remove the majority of pedestrians from vehicular traffic areas during festival.
- **Speed Humps.** Install speed humps to slow traffic in the housing area. Target streets where children wait for school busses. Renovate or replace damaged and degraded speed humps as needed.
- **Conduct a feasibility study** to determine costs and benefits of additional shoulder lanes or separated mixed use paths for walking and cycling between Ignacio and the Tribal Campus and between Ignacio and Bayfield. Work with CDOT and County transportation departments to increase bicycle and pedestrian facilities.



Photo 16: A designated pedestrian crossing between the multipurpose facility and Bear Dance Grounds would alleviate pedestrian traffic mixed with vehicle traffic on bridge.

- **Provide alternate recreational facilities.** Playgrounds located in housing areas and basketball courts or other recreational facilities for youth can provide a safer alternative to playing in the street.

Enforcement

- Involve **local school district in enforcing the use of helmets by students who bike to school.**

4.4 Vehicle/Animal Strikes

4.4.1 Background

As described in Section 3.2, vehicle/animal collisions are one of the most serious issues on Southern Ute Reservation roads. Extensive study has been done on the migratory patterns and habits of the mule deer



and elk that inhabit the Reservation and adjacent lands. Measures to reduce vehicle/animal collisions span a wide range in terms of effort and cost.

4.4.2 Goal

- Reduce vehicle/animal strikes on Reservation roads.

4.4.3 Strategies

Engineering

- **Vegetation removal.** Removing vegetation on both sides of roadways creates increased lines of sight for motorists and animals alike. It is much easier to avoid animals when drivers can see them far enough ahead.
- **Install wildlife crossing structures.** Work with CDOT to determine the appropriate locations and types of structure most appropriate for wildlife passage along Highways 160, 151, and possibly 172.
- **Fences can be used to encourage animals to use favorable crossing locations.** Wildlife friendly fencing prevents injuries and allows animals to move off the roadway and out of traffic. Barriers to such movement should be removed.
- **As upgrades are made to culverts and other drainage ways,** increase size to accommodate animal passage. Consider having the floor of the culvert be natural biostrate to encourage animals to use that means of crossing. This is a measure that can be piggy backed on other funded projects.
- Install **signage** warning drivers of areas with high levels of animal presence or migration.

4.5 Hazardous Materials

4.5.1 Background

Trucks carrying chemicals, oil, etc., move through Ignacio creating a potential hazard in the event of a crash or spill in a populous area.

4.5.2 Goal

- Move hazardous material transport away from more populous areas.

4.5.3 Strategies

Engineering

- **Study alternative routes for hazardous materials transport.** Removing the potential for spills and contamination in Ignacio would be beneficial. A feasibility study should be undertaken to establish if other potential routes are available and whether alternative infrastructure is able to sustain heavy truck traffic.



5 Implementation

The SUI Tribal Transportation Safety Plan is now ready for implementation. The plan should be disseminated in the community to potential safety partners and made available to residents. The first step for the Tribe is to appoint their Tribal Transportation Safety Committee. The committee should be a team of advisors that allow for a quick response to the opportunities that may arise to accomplish the projects laid out in this plan.

Most projects will require outside funding to accomplish, so it will be necessary to monitor funding cycles from the Federal Highways Administration, Colorado Department of Transportation, and BIA Tribal Transportation Program. As needed, the Transportation Safety Committee can help safety partners identify appropriate funding sources.

As work continues on Safety Plan action items, it will be necessary to evaluate success of the efforts. The plan should be reviewed on an annual basis and, after five years, updated to reflect current conditions.

5.1 Evaluation

Ongoing evaluation is important to the success of any safety plan. The purpose of ongoing evaluation is to determine if safety plan goals are being met, if action items for emphasis areas are being pursued, and if new issues have developed since the plan was created. The safety planning committee will help to provide accountability on the action items identified in this transportation safety plan. The standing committee should include representatives of the significant transportation safety entities in the community, including the Tribe, local municipalities, the Southern Ute Tribal Police, local emergency agencies, La Plata and Archuleta Counties, the Tribal Membership. Meeting frequency can be determined by the Committee, but the group should meet annually, at a minimum.

The Safety Planning Committee will be responsible for monitoring progress on action items through interviews with agencies or staff responsible for each emphasis area. For instance, an interview with local police will provide data on what actions recommended in the Safety Plan have been pursued, and whether citations for DUI or speeding have decreased. Findings from interviews will be reported to the committee. If the results suggest that sufficient progress is not being made, the committee will take steps to accelerate work on the action item. The Transportation Safety Planning Committee can assist safety partners with identifying potential funding sources or assign this responsibility to someone at the tribal level.

Results of the evaluation of the safety plan should be shared with the community as a “progress report” on transportation safety.

5.2 Updates

The Transportation Safety Plan should be reviewed annually and updated at least every five years to reflect completed projects, add new safety data that has been collected, and comment on any additional safety issues that need to be addressed. Past efforts to address safety issue should be described in the plan in order to streamline future approaches.



This Transportation Safety Plan is the first step in a series of steps needed to improve transportation safety on the Southern Ute Reservation. With diligent advocacy, evaluation and updates, the Plan can be a strong foundation for improved transportation safety.





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