American Indians and Alaska Natives experience higher rates of transportation-related fatalities than the general U.S. population, and motor vehicle crashes are a leading cause of unintentional injury for American Indians and Alaska Natives aged 1 to 44.¹

Many States and tribes are working together to reduce roadway injuries and fatalities in tribal communities. These efforts include collaborating during the State Strategic Highway Safety Plan (SHSP) process to bring together a diverse group of stakeholders, identify road safety challenges, and find solutions.

FHWA's Noteworthy Practices Database located at: [http://rspcb.safety.fhwa.dot.gov/noteworthy/Default.aspx](http://rspcb.safety.fhwa.dot.gov/noteworthy/Default.aspx) recently added practices for four States that have collaborated with tribal governments before, during, and after the SHSP process. Approaches and benefits from Washington, Montana, South Dakota, and North Dakota are highlighted below.

**Government-to-Government Collaboration**

Washington's Centennial Accord located at: [http://goia.wa.gov/Relations/Relations.html](http://goia.wa.gov/Relations/Relations.html) is the foundation of the collaborative environment for transportation and traffic safety efforts between tribes and the State of Washington. Signed in 1989, the Accord established government-to-government relations between the State and tribes, in an effort to resolve disagreements before they reached the courtroom. That framework of collaboration was applied to enhance tribal involvement in traffic safety planning.

The Centennial Accord gives State agencies a protocol for officially interacting with tribes, including having a tribal liaison. Washington transportation officials connect with tribal committees, boards, law enforcement groups, and planning organizations during SHSP updates to engage representatives from the 29 federally recognized tribes in Washington. Traffic safety boards and organizations provide a framework for communicating with tribal staff involved with the "4Es" of highway safety: education, enforcement, engineering, and emergency medical services (EMS).

**Safety Summits**

State and tribal planners in Montana share information and strengthen personal relationships during safety summits. In the lead-up to the Montana Comprehensive Highway Safety Plan (CHSP) update in 2014, State and tribal representatives collaborated on and conducted four safety summits. These summits were hosted by tribes in Montana, with rotating sponsorship each year to encourage tribal ownership over road safety best practices.

Tribes also host summits and meetings in South Dakota. Meetings often include FHWA division staff, representatives from the Bureau of Indian Affairs, the South Dakota Departments of Transportation (SDDOT) and Public Safety, tribal historic preservation officers, tribal chairs and presidents, and sometimes council members.

This year, SDDOT will hold its 6th Tribal Transportation Safety Summit (visit [http://www.sddot.com/services/civil/tero.aspx](http://www.sddot.com/services/civil/tero.aspx) for more information) The event will be hosted by the Standing Rock Sioux Tribe. The summit is an opportunity for State and tribal representatives to build relationships and to bring together representatives from the 4Es.

Before South Dakota completed its most recent SHSP update in 2014, SDDOT presented its draft SHSP at the Tribal Safety Summit to get input on how to integrate tribal road safety needs into the SHSP. Tribes were eager to provide feedback, and asked if SDDOT would be at the table—to provide technical assistance, data, and answer questions—as tribes created their own road safety plans.

(Continued on page 4)
The National Indian Justice Center is located in Santa Rosa, California. NIJC’s building also houses the administrative offices of the California Indian Museum and Cultural Center, the Intertribal Court of California and the Regional Tribal Justice Center. Construction is currently underway for the California Indian Museum and Cultural Center, which will include a storytelling venue, Native plants garden, California Indian foods, a small Native village, audio-visual displays that highlight California Indian history and the contributions of California Indians, as well as Edward Curtis prints and traveling exhibits. If you are in the area, please come visit and tour the facilities.

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NEWS & ANNOUNCEMENTS

Moving Towards Electronic-Only Editions
the Transportation Research Record:
Journal of the Transportation Research Board

The Transportation Research Record: Journal of the Transportation Research Board will be published in electronic format only starting in 2017. TRB will cease producing hard copy editions once all papers accepted for publication prior to July 1, 2016 have been produced in print versions. All papers that have been accepted for publication prior to that date will be included in both electronic and print formats. The Transportation Research Record online contains a full compilation of papers published since the 1996 series. For more information go to: http://trjournalonline.trb.org/

Federal Transit Administration
Final Rule Improves Bus Testing, Safety, Reliability

The FTA announced a Final Rule that will improve the process for ensuring the safety and reliability of new transit buses funded with FTA dollars. The new rule establishes minimum performance standards, a standardized scoring system, and a pass-fail threshold that will better inform local transit agencies as they evaluate and purchase buses.

Existing procedures used by the FTA Bus Testing Facility will largely remain intact, but data generated will be used to apply a new 100-point scoring system to tested buses, making it easier to compare similarly sized bus models from different manufacturers. For the first time, bus models that fail to meet one or more minimum performance standards will fail their test and thus be ineligible for purchase with FTA funds until the failures are resolved. FTA will be able to use this authority to make sure defects are fixed before vehicles are allowed to go into service. To view the final rule go to: https://www.gpo.gov/fdsys/pkg/FR-2016-08-01/pdf/2016-17889.pdf

California Department of Transportation
Caltrans Urges People Not To Play Pokemon Go Behind The Wheel

Following the huge popularity of the new game Pokemon Go, Caltrans is urging drivers to keep their eyes on the road and to not play the game while they drive.
The agency issued a playful social media graphic with a serious message: #PokemonGO
The “augmented reality” game, which layers gameplay onto the physical world, became the top grossing app in the iPhone app store just days after its Wednesday release in the United States, Australia and New Zealand. Players already have reported wiping out in a variety of ways as they wander the real world – eyes glued to their smartphone screens – in search of digital monsters. The game was created by Niantic Inc., a San Francisco spinoff of Google parent Alphabet Inc. that previously became known for a similar augmented-reality game called “Ingress.”

Tribal Transportation Self-Governance Program
Negotiated Rulemaking Proposed Committee Membership and First Meeting

As required by the Negotiated Rulemaking Act, the Secretary of Transportation has selected the proposed members of a committee to develop proposed rules for the Tribal Transportation Self-Governance Program (TTSGP). Tribes in each of the 12 Bureau of Indian Affairs (BIA) Regions, as well as national and regional tribal organizations were invited to nominate a primary and alternate representative to serve on the committee. After considering the nominations received, the Secretary proposes to appoint the persons named in this document as committee members.

Tribes, tribal organizations, and individual tribal members who believe that their interests will not be adequately represented by the persons identified in this document may submit comments on the proposed selection, apply for membership on the committee, or submit other nominations. Additionally,

The first meeting of the TTSGP committee was held in August. The second meeting was held in September. The third meeting will be held October 18-20, 2016.

Visit the FHWA TTSGP website for more information and documentation go to: https://flh.fhwa.dot.gov/programs/ttp/ttsgp/
To view August meeting minutes go to: http://www.nijc.org/pdfs/TTAP/Aug2016meetingsummary.pdf
To view September meeting minutes go to: https://flh.fhwa.dot.gov/programs/ttp/ttsgp/documents/Draft%20Meeting%20minutes%20for%20Meeting%202.docx
Addressing Data Challenges

North Dakota is a State with a small population and a prominent tribal culture. For decades, NDDOT has collaborated on road safety with tribal representatives. The established relationships between tribes and NDDOT made it relatively easy to incorporate tribal needs into the 2013 SHSP update. In addition, North Dakota's Local Road Safety Program (LRSP) has facilitated communication with tribal governments to ensure that tribal needs are reflected in selected projects. Despite this, data quality is a persistent challenge in reaching safety planning goals. Only one out of the four tribes in North Dakota has equipment compatible with the State's electronic crash reporting system. The State is exploring options for improving the ability of tribes to access and use data in project planning and selection.

Data-sharing is also a challenge in Washington State, where State and tribal planners need crash data on tribal roads to make the case for Federal and State grant money. But there are barriers, including staffing issues and finding the resources it takes to process data. To help, the Washington Traffic Safety Commission funded an ongoing project that allows each tribe's crash codes to be uploaded automatically to the State's electronic ticketing and crash reporting system.

Benefits of Tribal Involvement in SHSPs

In Washington, tribes gain increased awareness about the importance of addressing roadway safety, and they take ownership of the final SHSP plan. With ownership, tribes are more likely to use the SHSP as a guide and source of information for their own transportation plans. Tribal planners, enforcement, and EMS become familiar with target zero strategies, which can be valuable when applying for State grant funding. In addition, Washington's data on behavioral factors in fatal and serious injury crashes is now more complete and accurate.

In Montana, tribal involvement brings the entire State population closer to a cohesive vision zero goal: zero fatalities, zero serious injuries. Tribal issues and strategies are integrated into Comprehensive Highway Safety Plan (CHSP) emphasis areas, and there has been a downward trend in AI/AN fatalities. Participation from tribal safety representatives also helps builds trust between State agencies and tribal governments.

In South Dakota, tribal involvement ensures that tribal concerns and strategies are addressed in the SHSP. Close coordination with tribes has led to broad support of the annual traffic safety summit. The safety summit is a vehicle for SDDOT staff and tribal representatives to interact, and for tribes to share low-cost safety improvements. SDDOT staff also make a point to be available to help resolve any road safety or general transportation issues.

In North Dakota, ongoing coordination and collaboration is a success that begets success. Tribal involvement ensures that NDDOT is aware of concerns on reservations, especially regarding State-owned roads that go through tribal land. Years of outreach has led to SHSP updates that include strategies to reduce crashes on tribal lands and across the State, and there are now full-time Traffic Safety Outreach Program Coordinators who serve as contacts on two of the State's reservations and are funded through federal grants. For more information go to: http://www.nhtsa.gov/About+NHTSA/Highway+Safety+Grant+Programs


To view the California Department of Transportation (Caltrans) Strategic Highway Safety plan go to: http://www.dot.ca.gov/trafficops/shsp/docs/SHSP15_Update.pdf

To view the Nevada Department of Transportation (NDOT) Strategic Highway Safety Plan go to: https://www.nevadadot.com/uploadedFiles/NDOT/About_NDOT/NDOT_Divisions/Planning/Safety_Engineering/SHSP_Report_V8.pdf
Motor Vehicle Crash Fatalities in the U.S. Could Drop by Half with Proven Strategies
From Centers for Disease Control and Prevention (CDC)

About 90 people die each day from motor vehicle crashes in the United States, resulting in the highest death rate among 19 high-income comparison countries. Our nation has made progress in road safety, reducing crash deaths by 31 percent from 2000 to 2013. But other high-income countries reduced crash deaths even further—by an average of 56 percent during the same period, according to the latest Vital Signs report by the Centers for Disease Control and Prevention (CDC).

Lower death rates in comparison countries, as well as the high prevalence of risk factors in the U.S., suggest that we can make more progress in saving lives. Compared with other high-income countries, the US had the:

- most motor vehicle crash deaths per 100,000 population and per 10,000 registered vehicles;
- second highest percentage of deaths involving alcohol (31 percent); and
- third lowest front seat belt use (87 percent).

If the U.S. had the same motor vehicle crash death rate as Belgium—the country with the second highest death rate after the U.S.—about 12,000 fewer lives would have been lost and an estimated $140 million in direct medical costs would have been averted in 2013. And if the U.S. had the same rate as Sweden—the country with the lowest crash death rate—about 24,000 fewer lives would have been lost and an estimated $281 million in direct medical costs would have been averted in 2013.

“It is important to compare us not to our past but to our potential. Seeing that other high-income countries are doing better, we know we can do better too,” said Debra Houry, M.D., M.P.H., director of CDC’s National Center for Injury Prevention and Control. “People of our nation deserve better and safer transport.”

For this Vital Signs report, CDC analyzed data compiled by the World Health Organization (WHO) and the Organization for Economic Co-operation and Development (OECD). CDC determined the number and rate of motor vehicle crash deaths in the U.S. and 19 other high-income countries and reported national seat belt use and percentage of deaths that involved alcohol-impaired driving or speeding, by country, when available. Countries included in the study were Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Japan, Netherlands, New Zealand, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

Each country included in the study was a member of OECD, met the World Bank’s definition for high income, had a population of more than 1 million people, and reported the annual number of motor vehicle deaths and vehicle miles traveled. In addition, the difference between the country-reported motor vehicle crash death rate and the WHO-estimated rate could not exceed 1 death per 100,000 population.

“It’s unacceptable for 90 people to die on our roads each day, especially when we know what works to prevent crashes, injuries, and deaths,” said Erin Sauber-Schatz, Ph.D., M.P.H., transportation safety team lead, CDC’s National Center for Injury Prevention and Control. “About 3,000 lives could be saved each year by increasing seat belt use to 100 percent, and up to 10,000 lives could be saved each year by eliminating alcohol-impaired driving.”

The researchers recommend using seat belts in both front and rear seats, properly using car seats and booster seats for children through at least age 8, never drinking and driving, obeying speed limits, and eliminating distracted driving. In addition, states can use proven strategies to support these actions that save lives, prevent injuries, and avert crash-related costs.

CDC’s Injury Center works to protect the safety of all Americans, every day. For more information about motor vehicle safety, please visit www.cdc.gov/motorvehiclesafety.
Transportation Builder readers are likely familiar with the Local and Tribal Technical Assistance Program (LTAP/TTAP), a network of 58 centers established by the Federal Highway Administration (FHWA) to help local governments improve management of their transportation systems.

These centers support the local agencies that manage more than 3 million miles of roads and over 300,000 bridges. One of the focus areas of LTAP/TTAP is safety—a topic of impact for all of us. In summer 2011, the National Local Technical Assistance Program Association (NLTAPA) Executive Committee formally endorsed the FHWA strategic focus on safety and accepted the Association’s role as a leader in local road safety.

In a move to strategically manage LTAP/TTAP Center safety efforts, NLTAPA and FHWA agreed to bring greater alignment in their work to enhance both individual centers and the program as a whole.

NLTAPA is committed to its role as a primary partner in reducing deaths on our nation’s local and rural roads, and fully recognizes the challenges that local agencies face in this area.

One of the first actions that FHWA and NLTAPA took was to combine their individual safety groups into a jointly directed effort whose mission is to provide local, rural, and tribal road agencies with the safety training, materials, knowledge and technical assistance needed to reduce fatalities and injuries on their roads.

What this means in day-to-day activities is that there is a concerted effort to bring safety resources from both the FHWA Office of Safety and the Resource Center safety team, as well as partners such as ARTBA, American Public Works Association, American Association of State Highway and Transportation Officials, and National Association of County Engineers, into the hands of the LTAP/TTAP Center customers.

The joint program delivers safety tools, technical publications, technical assistance, and training materials to LTAP/TTAP Centers, where they can in turn reach tens of thousands of people every year. Safety training accounts for about 40 percent of all LTAP/TTAP training conducted annually. While the majority of these workshops are work zone and worker safety-oriented, 11 percent is constituted by roadway safety topics.

In 2014, LTAP/TTAP Centers provided more than 1 million participant hours of training to over 175,000 local, rural, and tribal road practitioners through nearly 2,000 workshops. LTAP/TTAP Centers are supporting their local agencies with more than training. Efforts to boost the capacity of local works and engineering departments are occurring through some very innovative activities.

Nearly 20 centers are engaged in road safety audits, and more than half of the centers are conducting site visits to local departments to help identify and solve local safety problems. These are tremendous contributions in many small towns across rural America, where public works and road crew personnel are often minimal. There are some great examples of where LTAP/TTAP Centers have been able to create programs that complement the capabilities of their local agencies.

Working with their state DOT and FHWA Division, the Connecticut LTAP implemented two “Circuit Rider” outreach programs in the past two years to assist local agencies. Two dedicated personnel, a Roadway Safety Circuit Rider and a Traffic Signal Systems Circuit Rider, allocate a considerable amount of time working in the field with municipalities identifying and addressing roadway safety issues to help cities and towns develop operation and maintenance plans to optimize their traffic safety.

Similar programs exist in other LTAP/TTAP Centers. In 2014, the Washington LTAP Center provided training and technical support to counties to develop local road safety plans. In Washington state, developing a local road safety plan was a requirement for eligibility for County Safety Program (CSP) funds, part of the local share of the federal Highway Safety Improvement Program. Washington LTAP provided summary data for each county in the state to both prioritize crashes by severity and type, and to provide comparisons to other county roads statewide. The Center also conducted workshops to increase understanding about local road safety plan content, and partnered with the FHWA Data and Analysis Technical Assistance Program to provide three training sessions on the Systemic Safety Project Selection Tool.

The Center then provided local technical support and content review to help counties finalize their plans. Ultimately, 31 of 39 counties completed a local road safety plan in 2014, without any additional funds provided, and 30 of those counties received funding from the CSP program. Identifying troublesome locations where safety countermeasures can be implemented is another area where centers have come to assist locals. Not only is access to crash data an issue for many local agencies, but having the means to use that data to conduct solution-oriented analysis is another void centers can help to fill.

About 65% of centers are able to access road safety data for their locals, and more than a third of centers are
involved with data analysis and problem prioritization. Some LTAP/TTAP Centers, including Illinois, Kansas, Utah, New Jersey, and Louisiana, are working to solve the challenges of collecting crash data and conducting objective crash analysis on local road networks as a service to their local agency customers. Looking at data for hot spots or locations for implementing systemic safety improvements is critical in the decision making process for local agencies.

Across the country, and certainly within tribal jurisdictions, LTAP/TTAP is looking at ways to spread the safety message. Introducing the Highway Safety Manual and reinforcing the Manual of Uniform Traffic Control Devices are practices occurring in almost every state, providing local agencies with the “how” and “why” to keep roadway users safe. Centers act as a national network to share information, and they are able to coordinate safety messages among their constituents through their role as a trusted resource that understands local agencies.

Thus, it is often the LTAP/TTAP Center that is able to bring together transportation professionals from different disciplines in order to address safety concerns at the local level. If you are interested in learning more about the LTAP and TTAP Center that serves your area, please visit LTAP.org and use the center locator tool.

LTAP Centers operate in all 50 states and Puerto Rico, and seven TTAP Centers serve regional tribal governments, all of which participate in some combination of safety activities.

Reprinted from: Transportation Builder, May/June 2015, pp. 32-33, with the permission of the New Jersey Local Technical Assistance Program Director, Rutgers, the State University of New Jersey.

**SAFETY CORNER**

**Te-Moak Shoshone Tribe of Nevada Brings Child Passenger Safety to Their Community**

By Carrie Brown, Western TTAP Safety Circuit Rider

Public health and transportation seem like they are worlds apart, but not for the Western Shoshone Te-Moak Tribe of Nevada. Here, these two disciplines go hand in hand, just as they should. Lacey Tom, has taken initiative to introduce life-saving proven strategies into her tribal community through her work as a Traffic Safety Specialist. She has established a Child Passenger Safety (CPS) Program, become a certified Child Passenger Safety Technician, and has acted as the catalyst to getting a seat belt and CPS ordinance drafted. As part of her CPS Program, Lacey is taking action to educate her community about Child Passenger Safety, about how to effectively install car seats, and where to find resources.

On July 15th, 2016, Lacey hosted a Safe Native American Passenger’s (SNAP) course followed by a Car Seat Checkpoint. The training was facilitated by the National Indian Justice Center’s Safety Circuit Rider, Carrie Brown, and was attended by 8 tribal and IHS employees. “I have taken this course twice before, but I learned a lot more this time around,” stated one trainee. This could be a direct result of the new curriculum developed by Indian Health Service. SNAP has been available for several years, but the curriculum was revised and implemented into tribal communities in 2014. During the training, participants learned:

- The basic components of correct car seat installation.
- How to recognize and correct obvious misuse of car seats.
- How to educate parents/caregivers to read both the child restraint and vehicle manufacturer's instructions to complete installation of child restraints.
- The importance of motor vehicle traffic safety in their community.

Following the SNAP course on July 16, 2016, Lacey held a Community Car Seat Checkpoint at the Te-Moak community gymnasium. At the checkpoint, participants brought their vehicles and car seats to be inspected by Child Passenger Safety Technicians. Technicians are certified by national Safe Kids, through a 36 hour training. A total of 9 car seats were inspected and corrected by Lacey and her team.

You can also make a difference in your community. For more information on SNAP please visit [https://www.ihs.gov/InjuryPrevention/index.cfm?module=toolbox&option=snap](https://www.ihs.gov/InjuryPrevention/index.cfm?module=toolbox&option=snap), or contact Carrie Brown at 775-432-4438, or e-mail cbrown@nijc.org.

For more information on how to become a Certified Child Passenger Safety Technician go to: [http://cert.safekids.org/](http://cert.safekids.org/).
Getting Started with UAS
By Devon Humphrey, Waypoint Mapping

Unmanned aerial systems (UAS) are demonstrating their value for capturing high-resolution aerial imagery and 3D terrain content for GIS and other uses. However, the wide variety of hardware, software, and regulations related to UAS can be baffling. If you want to start exploring the use of UAS for GIS, this brief explanation will get you off the ground.

Pick a Platform

As defined by the Federal Aviation Administration (FAA), UAS consists of the unmanned aircraft (UA) or drone and all the associated support equipment, control station, data links, telemetry, communications, and navigation equipment necessary to operate the UA.

In UAS, the unmanned aircraft is often referred to as the platform. Platforms consist of both fixed-wing and rotary-wing (rotorcraft) aircraft. Each platform has its own strengths and weaknesses. Many users start off with inexpensive consumer-grade rotor-craft. These aircraft allow them to more easily become familiar with the workflows and techniques involved with basic data capture.

Most rotorcraft can manage only 15 to 20 minutes of flight time on a full charge, but batteries can be swapped out and the survey resumed. Rotorcraft are easier to operate, thus requiring a minimum of training. The short duration of their flights makes them suitable for project areas that range from 1 to 100 acres. Many rotorcraft operators upgrade to fixed-wing platforms for larger surveys.

In general, fixed-wing aircraft commonly have flight times of 45 to 90 minutes, or roughly twice the duration of rotorcraft. In addition to covering hundreds of more acres in a single flight, a fixed-wing aircraft can often carry larger cameras and equipment and handle challenging weather conditions. However, they are considerably more complicated, expensive, and require more training to master.

This aspect of platform choice cannot be underestimated. A GIS manager at a pipe-line company recently shared the story of an overconfident radio control (RC) pilot who had convinced his boss to purchase a UAS on the basis of his many years of RC airplane aerobatic experience. The first day—while company representatives watched—he flew the company’s new $80,000 drone into the ground and smashed it to smithereens.

Deciding on the Payload

The payload that a UAS carries is determined by the project requirements and limits of the platform. Digital RGB cameras are the leading sensor type, ranging from inexpensive GoPro cameras to high-end digital SLR cameras with quality lenses.

GoPro cameras are popular because of their price but have some drawbacks. Their fish-eye lenses add curvature to imagery. This isn’t ideal for aerial photography because lines need to match up when creating a mosaic. Designed for sports photography, their focus settings are fixed at medium range to catch action in that range, rather than at infinity—the setting needed for long-range capture. As a result, imagery is often slightly out of focus at altitudes between 200 and 400 feet, where the UAS would usually be flown. However, GoPros are lightweight and inexpensive.

There are also specialized sensors for agriculture, wetlands analysis, and environmental monitoring. These are multi- or hyperspectral sensors that allow analysis of vegetation or wetlands through the use of remote-sensing software. Many of these sensors are now small enough to be carried on either platform.

Another sensor type is full-motion video (FMV), a special geocoded video taken with cameras that output files in Motion Imagery Standards Board (MISB) standard video format. Videos in this format can be overlaid and viewed in GIS in either real time or recorded mode using the ArcGIS Full Motion Video Add-In. In the past, these sensors were marketed to military and law enforcement and were too expensive for most GIS users. Now lower-priced FMV sensors are becoming available.

Other Considerations

Several commercial off-the-shelf photogrammetry programs can process UAS imagery and flight logs into orthomosaics [collections of contiguous aerial photos that have been geometrically corrected to remove image distortion] and 3D point clouds. Evaluate them with sample imagery before choosing one.

Capture technique and GPS ground control have a huge impact on the quality of resultant output. Get some training or learn from experienced users to avoid wasting time using a flawed methodology.

Requirements for processing can be demanding on hardware depending on the number of images being processed per batch. Most software and hardware currently available will easily handle 100 to 200 images. Projects involving thousands of images will require increasing hardware processing, graphics, and memory capabilities.
UAS content can be delivered via traditional means, such as USB hard drive, but GIS users are increasingly using cloud delivery services such as Dropbox. Many customers are now receiving data through ArcGIS Online, which also gives non-GIS users access to the data through web maps that display on any client.

**Evolving Regulatory Environment**

Regulation of UAS is in flux and can vary significantly by location. UAS operators need to comply with FAA (federal), state, and possibly local regulations. The FAA handles everything to do with air safety.

Until permanent regulations are in place, the FAA has instituted an interim process for professional UAS operator authorization called the 333 Exemption. To obtain this exemption, organizations must submit system and operational information and specify how they intend to safely operate a UAS. In doing so, operators are requesting exemption from several FAA rules including the ban on commercial operation without a commercial pilot’s license. *All organizations using UAS in a professional capacity, even if not offering as a service and even if for in-house use only, are required to obtain a 333 Exemption prior to operating.* Hefty fines—as much as $1.9 million—have been levied against companies operating without FAA commercial authorization.

The exemption provides a blanket authorization as long as several key provisions are met. The main condition is that a licensed pilot, with at least a Sport Pilot Certificate, operates the UAS, but a commercial license is not required. This requirement ensures that the operator is aware of existing FAA air space and related flight safety regulations.

Other layers of regulation include state and local government restrictions that usually have more to do with privacy than safety. These vary by state, and some municipalities have passed local ordinances against UAS operations.

There are no-fly zones around airports, national parks, government facilities, and critical infrastructure. Prior to flight, any temporary flight restrictions (TFRs) or Notes to Airmen (NOTAMS) that the FAA may have issued should be confirmed.

In January 2016, the FAA released the B4UFLY smartphone app for iOS that tells users about any restrictions on the air space in which they wish to operate. A version for Android smartphones is in beta.

Although there is a lot to learn before taking to the skies, UAS can be a cost-effective way of capturing quality GIS content.

For more information, visit:

- [www.waypointmapping.com](http://www.waypointmapping.com)
- [www.flightlinegeographics.com](http://www.flightlinegeographics.com)

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**About the Author**

Devon Humphrey is a longtime GIS user, instructor, and system architect of Esri technology. He has worked in state and local government at the Esri San Antonio regional office and as an Esri partner with a special focus on emergency management. Since 2007, Humphrey has worked on federal government and university research projects for wildfire modeling, FMV, and other applications of UAS. He was the geographic information officer (GIO) and architect of the GIS common operating picture for the 2010 Deepwater Horizon oil spill in the Gulf of Mexico response effort. As an instructor at the Texas A&M National Spill Control School for the past 21 years, he has promoted the use of GIS and emerging technologies, including UAS, for disaster response to all hazards. He can be reached at: devon@flightlinegeographics.com.


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**Ambulance Drones" Could Pave the Way for Safer Rural Roads**

From the Safety Sidekick Newsletter Vol. 4 June 2016

One of the most important considerations in emergency medical treatment is response time. Rural roads pose a particular obstacle to quick and efficient medical response, as evidenced by the fact that “Motor vehicle crashes on rural roads account for more than half of all highway fatalities in the United States, yet less than one-quarter of the population lives in rural areas.”[1] This high rural fatality rate can be largely attributed to the challenges that Emergency Medical Services (EMS) face to be notified and respond to crashes and their victims in an efficient matter. Many have turned to research to find solutions that tackle the geographic boundaries that challenge emergency response times.

The drone, or unmanned aerial vehicle (UAV), is a growing concept in many fields, and is expected to potentially revolutionize EMS as an eye in the sky safety vehicle and for rapid delivery of potentially lifesaving supplies.

To read the full article from the National Center for Rural Road Safety go to:

Institute Teaches Transportation Concepts, Safety to Summer Campers
By Christine Anderson, Roadway Safety Institute

In June, more than 40 White Earth Nation (Minnesota) students were introduced to a variety of transportation topics in a daylong session offered by the Roadway Safety Institute (RSI). The session was part of the White Earth Indian Reservation Summer Academy of Math and Science, a two-week day camp for reservation youth in grades 4 to 8. The camp focuses on hands-on learning and uses Indian culture and heritage as a vehicle for studying math, science, and engineering. It is offered in partnership by the White Earth Nation and the University of Minnesota Extension. “This is a unique program that has been a great way to meet RSI’s objectives of teaching safety and building tribal partnerships,” says Colleen O’Connor Toberman, program coordinator with RSI.

This year, staff led students through a variety of interactive activities to spark their interest in transportation, engineering, and safety. In a lesson on road sign design, students learned about sign retroreflectivity, shape, and color before creating their own road signs using the Ojibwe names for local places. Students experienced the dangers of distraction by getting behind the wheel of pedal carts in a lesson co-taught by Minnesota Toward Zero Deaths program regional coordinator Tom Nixon. The lesson demonstrated how distractions and multitasking impair essential concentration while driving and walking. Nixon also engaged students in discussions about booster seats and seat belt use, sharing ideas to help students encourage their friends and relatives to buckle up. “Just knowing how high the [roadway] death rate is in our reservation communities…anything we can incorporate into our curriculum to try and keep our young people safe is a very worthwhile part of the program,” says Deb Zak, regional director of the U of M Extension’s Northwest District.

Nixon hopes students will make safer driving choices in the future based on what they learned. “The great opportunity we had today was to talk to them before they become drivers,” he says. “We wanted them to learn about what their actions will lead to and the limitations of their abilities [when they’re distracted]. The more educated they are, the more aware they’ll be of what their choices will mean.”

The Roadway Safety Institute also sponsored a day focused on safety at the second annual National Summer Transportation Institute (NSTI) hosted by the Center for Transportation Studies in July on the University of Minnesota campus. The interactive two-week day camp for students in grades 7 to 9 featured classroom and lab sessions with transportation experts as well as field trips to facilities across the Twin Cities.

The day began with RSI researcher Nichole Morris giving campers an introduction to human factors. Later, the students tried navigating a pedal cart obstacle course to learn about the dangers of distracted driving, wore specialized goggles to experience the impairing effects of alcohol, and explored a UMPD vehicle with a campus police officer. Overall, camper evaluations indicate that the program helped students become more aware of the wide range of possible careers in transportation. Parents reported that students not only enjoyed the camp but also took the lessons they learned to heart. “[My daughter] became more aware of the importance of road safety,” one parent said. “She’s constantly making sure we are not touching our phones while we’re driving.”

NSTI is part of a national program designed to attract a diverse range of students to education and career opportunities in transportation. It was sponsored by CTS with funding from the Federal Highway Administration administered by MnDOT.

This article appeared in the Roadway Safety Institute Summer News, Summer 2016, Vol.3, No.3, and was reprinted with the permission of the Roadway Safety Institute. Photos by Michael McCarthy.
The Federal Highway Administration invited state and local officials nationwide to nominate routes in their areas where drivers can charge up electric vehicles and those that run on other alternative fuels. These “zero-emission” and “alternative fuel” corridors will help to ensure drivers have the information they need to make their travel plans.

These vehicles are a growing segment of the transportation network. Secretary Foxx and I know that making sure low-emission vehicles aren’t limited only to cities will help their drivers enjoy more of our nation’s network of roads and bridges. It is the next step in ensuring our transportation system meets the 21st century needs of communities nationwide.

The Fixing America’s Surface Transportation (FAST) Act requires DOT to solicit and designate national corridors along major highways for plug-in electric vehicle charging, as well as for hydrogen, propane and natural gas fueling. FHWA’s notice – published today in the Federal Register – invites nominations from state and local officials to help us in making such designations.

Encouraging the use of alternative fuels is especially important as our nation has pledged to reduce greenhouse gas emissions by up to 28 percent by 2025, and 80 percent or more by 2050. By supporting lower-emitting vehicles, alternative fuel and zero-emission corridors will help to reduce vehicle exhaust – a significant contributor to U.S. emissions.

Initial nominations for corridor designations are due to the FHWA no later than August 20, 2016. In the months ahead, we will develop a process for future nominations and designations. For more information, please see Docket Number FHWA-2016-0017 at https://federalregister.gov/a/2016-17132. This new effort will also develop a process to make formal corridor designations – including identifiable national signs like the red, white and blue “shield” signs used on U.S. Routes. In every sense, these are the signs of things to come.

The Nation lost 35,092 people in crashes on U.S. roadways during 2015, an increase from 32,744 in 2014. The 7.2-percent increase is the largest percentage increase in nearly 50 years. The largest percentage increase previously was an 8.1-percent increase from 1965 to 1966. The estimated number of people injured on the Nation’s roads increased in 2015, rising from 2.34 to 2.44 million injured people. Fatalities increased from 2014 to 2015 in almost all segments of the population—passenger vehicle occupants, passengers of large trucks, pedestrians, pedalcyclists, motorcyclists, alcohol-impaired driving fatalities, male/female, daytime/nighttime. Fatalities of drivers of large trucks was one of the few groups that remained unchanged. The estimated number of police-reported crashes increased by 3.8 percent, from 6.0 to 6.3 million.

The Nation saw 2,348 more fatalities from motor vehicle crashes in 2015 than in 2014—a 7.2-percent increase.

- The number of passenger car and light-truck occupant fatalities is at its highest since 2009.
- SUV occupant fatalities increased by 382, an additional 10.1 percent over the number in 2014.
- Van occupant fatalities increased by 95, a 9.3-percent increase.
- Passenger car occupant fatalities increased by 681, a 5.7-percent increase.
- Pickup truck occupant fatalities increased by 200, a 4.7-percent increase.
- Motorcyclist fatalities increased by 382 (an 8.3-percent increase), and the number is the largest since 2012.
- Pedestrian fatalities increased by 466 (a 9.5-percent increase), and are at their highest number since 1996.
- Pedalcyclist fatalities increased by 89 (a 12.2-percent increase), and are at their highest level since 1995.
- Alcohol-impaired driving fatalities increased by 3.2 percent, from 9,943 in 2014 to 10,265 in 2015.
- Vehicle miles traveled (VMT) increased by 3.5 percent from 2014 to 2015, the largest increase since 1992, nearly 25 years ago.
- The fatality rate per 100 million VMT increased to 1.12 from 1.08 in 2014, which was the lowest since NHTSA began collecting fatality data through the Fatality Analysis Reporting System in 1975.
- The estimated number of injured people experienced a statistically significant increase. In 2015 there was an increase of 105,000 people injured in motor vehicle crashes over 2014.

To read the full report go to: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812318
This information is provided expressly for educational purposes. The Western TTAP hopes to inform and educate tribal communities about legislation that may impact California and Nevada tribal communities and their tribal transportation programs. The following legislation was current at the time of publication. Legislation may change or be repealed. For further information, please check the status of the legislation at the respective website sources noted below.

Due to the overwhelming number of pending transportation related bills in the California, Nevada, and Federal Legislatures, we have created a downloadable file on the NIJC Website that lists each bill, the sponsor, the status, and a brief summary. To view and download the file go to: http://www.nijc.org/ttap_legislation.html

**STATE LEGISLATION**

**CALIFORNIA LEGISLATION**
(For more information, go to http://www.leginfo.ca.gov/bilinfo.html)

**NEVADA LEGISLATION**
(For more information, go to http://www.leg.state.nv.us/Session/)

The 78th (2015) Session of the Nevada Legislature adjourned sine die on June 1, 2015. The legislature is now in the interim period between legislative sessions.

78th (2015) Session: All Bills that Became Law
To visit the website go to: http://www.leg.state.nv.us/Session/78th2015/Reports/AllBillsThatBecameLaw.cfm

**FEDERAL LEGISLATION**
(For more information go to: https://www.congress.gov/)

Browse Public Laws 114th Congress (2014-2015) and prior congressional sessions go to: http://thomas.loc.gov/home/LegislativeData.php?&n=PublicLaws&c=114

The House convened on January 5, 2016.
The Senate convened on January 11, 2016.

**ANNOUNCEMENTS**

2017 ATP Greenhouse Gas Reduction Fund Guidelines Workshop

On September 14, 2016, the Governor signed Assembly Bill (AB) 1613, appropriating $10 million from the Greenhouse Gas Reduction Fund (GGRF) for the Active Transportation Program. This is great news for active transportation in California! However, these funds have requirements that do not exist with other funds in the Active Transportation Program such as projects must show greenhouse gas reductions. The Commission is developing guidelines that address policies and procedures specific to the appropriation of funding from the Greenhouse Gas Reduction Fund in the 2017 Active Transportation Program.

The Commission held a workshop on October 5 to gather stakeholder feedback into these guidelines. The guidelines will be adopted by the Commission at the October 19 and 20 Commission meeting in San Jose.

For more information and the 2017 Active Transportation Program (ATP) Greenhouse Gas Reduction Fund Guidelines Workshop PowerPoint Presentation go to: http://www.cate.ca.gov/programs/ATP.htm

New Laws Report 2010-2016
A list of all bills enacted in a calendar year during the Regular Session of the Legislature, unless otherwise noted. To view the report go to: http://www.leginfo.ca.gov/NewLaws.html

The 2015-2016 Legislative Session convened on January 4, 2016
TRANSPORTATION EVENTS

October 2016

October 16-22, 2016
NATIONAL TEEN DRIVER SAFETY WEEK
For more information go to: http://www.trafficsafetymarketing.gov/teens

OCTOBER 2016

November 12-15
American Association of State Highway and Transportation Officials (AASHTO) Annual Meeting
Westin Boston Waterfront
Boston, MA
For more information go to: http://www.aashtoannualmeeting.org/

November 14-18
7th Annual National Tribal GIS Conference
Embassy Suites Albuquerque
Albuquerque, NM
For more information go to: https://www.regonline.com/builder/site/Default.aspx?EventID=1860340

November 16-18
California Transit Association 51st Annual Fall Conference and Expo
Oakland Convention Center
Oakland, CA
For more information go to: http://caltransit.org/events/fall-conference-and-expo/

DECEMBER 2016

December 1-2
FHWA Every Day Counts 4 (EDC)-4 California Regional Summit
Sacramento Hyatt Regency
Sacramento CA
If your agency is interested, please contact Larry Wooster
lwooster@dot.ca.gov

December 1-2
10th University Transportation Center (UTC) Spotlight Conference on Bicycles and Pedestrians
Keck Center
Washington, DC
For more information go to: http://www.trb.org/Calendar/Blurbs/174017.aspx

JANUARY 2017

January 8-12
96th Transportation Research Board (TRB) Annual Meeting
Walter E. Washington Convention Center
Washington, DC
For more information go to: http://www.trb.org/Main/Blurbs/171889.aspx

FEBRUARY 2017

February 10-14
Phoenix Convention Center
Phoenix, AZ
For more information go to: http://expo.atssa.com/

MARCH 2017

March 26-28
Lifesavers National Conference on Highway Safety Priorities
Charlotte Convention Center
Charlotte, NC
For more information go to: http://lifesaversconference.org/

APRIL 2017

April 9-13
National Association of County Engineers (NACE) Annual Meeting
Duke Energy Convention Center
Cincinnati, OH
For more information go to: http://www.countyengineers.org/events/nace17/Pages/NACE17.aspx

April 23-25
APWA North American Snow Conference
Iowa Events Center Hy-Vee Hall
Des Moines, IA
For more information go to: http://www3.apwa.net/snow
Federal Highway Administration
United States Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
http://www.fhwa.dot.gov/index.html

Federal Highway Administration (FHWA) is charged with the broad responsibility of ensuring that America’s roads and highways continue to be the safest and most technologically up-to-date. Although State, local, and tribal governments own most of the Nation’s highways, FHWA provides financial and technical support to them for constructing, improving, and preserving America’s highway system.

Office of Federal Lands Highway
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590
(202) 366-9494
http://flh.fhwa.dot.gov/

The Office of Federal Lands Highway (FLH) provides program stewardship and transportation engineering services for planning, design, construction, and rehabilitation of the highways and bridges that provide access to and through federally owned lands.

The primary purpose of the FLHP is to provide financial resources and technical assistance for a coordinated program of public roads that service the transportation needs of Federal and Indian lands.

Central Federal Lands Highway Division
Federal Highway Administration
12300 West Dakota Ave.
Lakewood, CO 80228
(720) 963-3500

The Central Federal Lands Highway Division (CFLHD) operates as part of the Federal Lands Highway Program, serving the needs of all central states. CFLHD actively administers the surveying, designing and constructing of forest highway system roads, parkways and park roads, Indian reservation roads, defense access roads, and other Federal lands roads. CFLHD also provides training, technology, deployment, engineering services, and products to other customers.

Federal Transit Administration
1200 New Jersey Avenue, SE
4th & 5th Floors East Building
Washington, DC 20590
http://www.fta.dot.gov/

FTA Region 9 Offices
Federal Transit Administration
201 Mission Street Suite 1650
San Francisco, CA 94105
(415) 744-3133
http://www.fta.dot.gov/about/region9.html

Federal Transit Administration (FTA) is one of 10 modal administrations within the U.S. Department of Transportation. Headed by an Administrator who is appointed by the President of the United States, FTA administers federal funding to support a variety of locally planned, constructed, and operated public transportation systems throughout the U.S., including buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, and people movers.

Rural Transit Assistance Program (RTAP)
The mission is to address the needs of rural, small urban and tribal transit operators across the nation.
Union Station Business Center
Ten G Street NE, Suite 710
Washington, DC 20002
Main: 202-248-5043
Fax: 202-289-6539
http://www.nationalrtap.org/
National Local Technical Assistance Program Association (NLTAPA)
A not-for-profit organization representing and serving the 58 LTAP and TTAP Member-Centers in the United States and Puerto Rico. All staff of Member-Centers are entitled to Association services and opportunities to serve. http://www.nltapa.org

Bureau of Indian Affairs
There are millions of acres of land held in trust by the United States for American Indians, Indian tribes, and Alaska Natives. There are 566 federal recognized tribal governments in the United States. Developing forestlands, leasing assets on these lands, directing agricultural programs, protecting water and land rights, developing and maintaining infrastructure and economic development are all part of the agency’s responsibility. In addition, the Bureau of Indian Affairs provides education services to approximately 48,000 Indian students.

Bureau of Indian Affairs
1849 C Street, N.W.
Washington DC 20240
(202) 208-7163
www.bia.gov

Pacific Regional Office
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825
(916) 978-6000

Western Regional Office
Bureau of Indian Affairs
400 N. 5th Street, 2 AZ Center, 12th Floor
Phoenix, AZ 85004
(602) 379-6600

CALIFORNIA

California Department of Transportation
Division of Transportation Planning, Native American Liaison Branch
1120 N Street
Sacramento, CA 95814
(916) 653-3175
http://dot.ca.gov/hq/tpp/offices/ocp/nalb/

The Native American Liaison Branch was created in 1999 in the Department of Transportation to serve as a

California Department of Transportation
Division of Local Assistance
http://www.dot.ca.gov/hq/LocalPrograms/index.htm

California LTAP
3000 State University Drive East, Napa Hall
Sacramento, CA. 95819
Contact: Michelle Gianini
Phone: (916) 278-6174, E-mail: gianinim@csus.edu
Website: http://www.californialtap.org/

NEVADA

Nevada Department of Transportation
1263 South Stewart Street
Carson City, NV 89712
(775) 888-7000
http://www.nevadadot.com

The Nevada Department of Transportation is responsible for the planning, construction, operation and maintenance of the 5,400 miles of highway and over 1,000 bridges which make up the state highway system.

Inter-Tribal Council of Nevada
680 Greenbrae Dr., Suite 280
Sparks, Nevada 89431
Phone: (775) 355-0600 Fax: (775) 355-0648
http://itcn.org/

Nevada Indian Commission
5366 Snyder Avenue
Carson City, NV 89701
(775) 687-8333 Fax: (775) 687-8330
http://www.nic.nv.gov

Nevada LTAP
TMCC Meadowood Campus
5270 Neil Road, Room 302
Reno, NV 89502
Program Director: Randy Bowling
Phone: (775) 829-9045
E-mail: rbowling@tmcc.edu
Program Director: Jim Nichols
Phone: (775) 829-9022
E-mail: jnichols@tmcc.edu
Website: http://www.tmcc.edu/ltap/
TRIBAL TRANSPORTATION RESOURCES

CALIFORNIA

California State Transportation Agency (CalSTA)
A new state agency focused solely on transportation.
To visit the website go to:
http://www.calsta.ca.gov/

California Department of Transportation (Caltrans)
Native American Liaison Branch
http://dot.ca.gov/hq/tpp/offices/ocp/nalb/

California Department of Transportation:
Division of Mass Transportation
http://www.dot.ca.gov/hq/MassTrans/

California Bay Delta Authority
http://www.calwater.ca.gov/calfed/Tribal.html

California Environmental Protection Agency
http://www.calepa.ca.gov/

California Rural Transit Assistance Program (RTAP)
California Association for Coordinated Transportation (CalAct) is under contract to Caltrans to implement RTAP in California.

ORGANIZATIONS

California Indian Basketweavers Association
http://www.ciba.org/

California Indian Manpower Consortium, Inc.
http://www.cimcinc.org/

California Indian Museum & Culture Center
http://www.cimcc.org/

California Indian Justice Center
http://www.nijc.org/

Center for Excellence in Rural Safety
Launched a new interactive Web tool called Safe Road Maps. It was developed by CERS researcher Tom Horan and his team at Claremont University. Visit the CERS home page for links to the releases and to Safe Road Maps: www.ruralsafety.umn.edu.

Office of Indian Energy and Economic Development
Tribal Energy and Environmental Information Clearinghouse (TEEIC)
The site includes information about energy resource development and associated environmental impacts and mitigation measures; guidance for conducting site-specific environmental assessments and developing monitoring programs; information about applicable federal laws and regulations; and federal and tribal points of contact.
http://teeic.anl.gov/

National Rural Transit Assistance Program (RTAP)
The program operates today under a cooperative agreement between the Federal Transit Administration and the

NEVADA

Nevada Department of Transportation (NDOT)
Local Governmental Liaison
http://www.nevadaroad.com/

Southern Nevada Regional Transportation Commission
http://www.rtsouthernnevada.com/

Regional Transportation Commission (RTC) of Washoe County, Nevada.
http://www.rtwashoe.com/home

FEDERAL

US DOT Federal Highway Administration (FHWA)
http://www.fhwa.dot.gov/

US DOT Federal Transit Administration (FTA)
http://www.fta.dot.gov/

FTA Region 9 Offices
http://www.fta.dot.gov/about/region9.html

Office of Federal Lands Highway & Central Federal Lands Highway Division

http://flh.fhwa.dot.gov/

Bureau of Indian Affairs
http://www.bia.gov/

US DOT/FHWA Federal Lands Highway Coordinated Technology Implementation Program (CTIP)
The Federal Lands Highway Coordinated Technology Implementation Program is a cooperative technology deployment and sharing program between the FHWA Federal Lands Highway office and the Federal land management agencies. It provides a forum for identifying, studying, documenting, and transferring new technology to the transportation community.
For more information go to:
http://www.ctiponline.org/

National Transportation Library (NTL)
Follow link: VDOT One Search
http://ntl.bts.gov/exit/ldot.html

http://ntl.bts.gov/exit/ldot.html
TRIBAL TRANSPORTATION RESOURCES

Neponset Valley Transportation Management Association. Our overarching mission is to address the needs of rural, small urban and tribal transit operators across the nation. http://www.nationalrtap.org/Home.aspx

TribalGIS.com
A technical forum for (and by) Tribal GIS Professionals across the country.
For more information go to: www.tribalgis.com

LTAPP/TTAP Interchange-Podcasts
An Audio Newsletter
Aims to share news between centers and the LTAPP/TTAP community.
To listen go to the news section at: http://www.ltap.org/podcasts/

California Tribal Transportation Coalition (CTTC)
Formed to ensure that California tribes are not left out of the next Federal Transportation Authorization bill.
For more information go to: http://www.californiatribes.org/

Community Transportation Association of America
Technical Assistance for Rural and Tribal Communities
For more information go to: http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=49&z=36

National Association of County Engineers
To visit the website go to: http://www.countyengineers.org/

Northern California APWA Chapter
To visit the web site go to: http://northerncalifornia.apwa.net/

ENVIRONMENTAL

US Environmental Protection Agency Region 9
http://www.epa.gov/region09/tribal/index.html

US EPA American Indian Environmental Office
http://www.epa.gov/indian/

US EPA Online Mapping Tool
Interactive web-based mapping tool that provides the public with access and information on Environmental Impact Statements (EIS). To visit the website go to: https://www.epa.gov/eiscreen

US DOT FHWA Roadside Vegetation Management
A technical resource for the care of the land and vegetation management.

US DOT FHWA Livability Initiative
This webpage is intended to provide information on the FHWA Livability Initiative as well as provide updates on the HUD/DOT/EPA Partnership for Sustainable Communities.
To view this website go to: http://www.fhwa.dot.gov/livability/index.cfm

ENVIRONMENT AND CLIMATE CHANGE

General Climate Change Information
Arnold & Porter Climate Change Litigation Summary Chart
http://www.climatecasechart.com/

US EPA
State and Local Government Climate Change Actions

National Highway Traffic Safety Administration (NHTSA)

FHWA—Travel Modeling
Using GIS in Planning and Environment Linkages (PEL) go to: http://gis.fhwa.dot.gov

California Climate Change Portal
http://www.climatechange.ca.gov/state/index.html

Multicultural Environmental Leadership Development Initiative (MELDI)
University of Michigan
Staff conduct research on environmental workforce dynamics and provides resources to help enhance the leadership and career development opportunities available to students, activists and environmental professionals. For more information go to: http://www.snre.umich.edu/research/centers_and_institutes/MELDI

California Research Bureau
Environment, Growth Management, and Transportation
TRIBAL TRANSPORTATION RESOURCES

RESOURCES (Continued)

Supplement
For more information and links go to:
http://www.library.ca.gov/sitn/crb/docs/20090504.pdf

AASHTO--Center for Environmental Excellence
The new web page offers background and an overview of GIS technology and its importance for environmental applications in transportation.
For more information go to:
http://environment.transportation.org/environmental_issues/gis/

FHWA-Central Federal Lands Highway Division
Promoting Geosynthetics Use on Federal Lands Highway Projects
To view the study go to:

SAFETY RESOURCES

Tribal Road Safety Audits: Case Studies
Sponsored by FHWA (Office of Safety and Office of Federal Lands)
Road Safety Audits (RSAs) are an effective tool for proactively improving the future safety performance of a road project during the planning and design stages, and for identifying safety issues in existing transportation facilities.
For additional information and resources on RSA’s go to:
http://safety.fhwa.dot.gov/rsa/

Arizona Department of Transportation
By Esther Corbett & Robert Mickelson at the Intertribal Council of Arizona, Inc.
592 Building Tribal Traffic Safety Capacity
And,
592 Tribal Traffic Safety Funding Guide
http://azmemory.azlibrary.gov/cdm/ref/collection/statepubs/id/7181

National Highway Traffic Safety Administration (NHTSA)
Fatality Analysis Reporting System (FARS)
FARS Native American Traffic Safety Facts

National Institute for Occupational Safety and Health (NIOSH)
Construction Equipment Visibility
http://www.cdc.gov/niosh/topics/highwayworkzones/BAD/

Interactive Highway Safety Design Model – 2016 Release
Includes a Beta version of crash prediction capabilities for freeway ramps/interchanges (including ramps, C-D roads and ramp terminals based on draft HSM Par C material developed under NCHRP Project 1-45. Available for free downloading at:

Work Zone Law Enforcement
Safe and Effective Use of Law Enforcement in Work Zones
For more information go to

FHWA Office of Safety

Local and Rural Road Safety Program
The FHWA Local and Rural Safety Program provides national leadership in identifying, developing, and delivering safety programs and products to local and officials and governments to improve highway safety on local and rural roads.
To visit the site go to:
http://safety.fhwa.dot.gov/local_rural/

Improving Safety on Rural Local and Tribal Roads — Safety Toolkit
The Safety Toolkit provides a step-by-step process to assist local agency and Tribal practitioners in completing traffic safety analyses, identify safety issues
To view the toolkit go to:
Site Safety Analysis – User Guide #1
Network Safety Analysis – User Guide #2
http://safety.fhwa.dot.gov/local_rural/training/fhwasa14074/isrlr2.pdf

Safety Circuit Rider Programs-Best Practices Guide
This guide is intended to provide state DOT and LTAP/TTAP centers with an easy-to-use resources for implementing or enhancing a Safety Circuit Rider (SCR) program.
Available on-line at:
http://safety.fhwa.dot.gov/local_rural/training/fhwasa09019/

Nighttime Visibility Policy/Guidance
http://safety.fhwa.dot.gov/roadway_dept/night_visib/

Sign Visibility: Training, Technical Guidance, & Research
TRIBAL TRANSPORTATION RESOURCES

go to:
http://safety.fhwa.dot.gov/roadway_dept/night_visib/sign_visib/

Maintenance of Drainage Features for Safety
A guide for local street and highway maintenance personnel
To view the guide go to:
http://safety.fhwa.dot.gov/local_rural/training/fhwasa09024/

Intersection Safety Resources
To visit the web page go to:
http://safety.fhwa.dot.gov/intersection/resources/

Work Zone Mobility and Safety Program
Work Zone Training Compendium
The U.S. Federal Highway Administration has released a compendium of information on available work zone training and guides.
To view the training program go to:
http://www.ops.fhwa.dot.gov/wz/outreach/wz_training/index.htm

Roundabouts
Roundabouts are circular intersections. Roundabouts reduce traffic conflicts (for example, left turns) that are frequent causes of crashes at traditional intersections.
Unlike a traffic circle or a rotary, a roundabout's incoming traffic yields to the circulating traffic
For more information visit the website at:
http://safety.fhwa.dot.gov/intersection/roundabouts/

Roundabout Outreach and Education Toolbox
This Toolbox is designed to be a highly useable, online reference that connects transportation professionals with outreach resources from across the country to help them obtain public support for roundabouts.
To utilize the tool box go to:
http://safety.fhwa.dot.gov/intersection/roundabouts/roundabouttoolbox/

Roadway Worker Safety Website
The U.S. Federal Highway Administration’s Office of Operations has launched a new page on its Work Zone Safety website designed to be a central source of data and links to information and technical resources on roadway worker safety.
To visit the website go to:
http://www.ops.fhwa.dot.gov/wz/workersafety/index.htm

Training, Tools, Guidance and Countermeasures for Locals
Local and Rural team is continuously looking for new ways to meet the needs of local and rural road owners and operators. Insuring that tools meet the needs of the users and that they have the resources and training they need to effectively use the tools is a critical part of the solution.
To visit the web site go to:
http://safety.fhwa.dot.gov/local_rural/training/

Local & Rural Road (LRR) Safety Peer-to-Peer (P2P) Program
Open to public highway agencies seeking to adequately address safety problems on their local and rural road network.
To visit the website go to:
http://safety.fhwa.dot.gov/local_rural/training/p2p/

Proven Safety Countermeasures
New website from the Office of Safety
To visit the website go to:
http://safety.fhwa.dot.gov/provencountermeasures/

Resources: Crash Modification Factors in Practice
To visit the website go to:

Roadway Safety Noteworthy Practices Database
To visit the website go to:
http://rspcb.safety.fhwa.dot.gov/noteworthy/

Horizontal Curve Safety
A focus on horizontal curves can prove to be a cost effective approach to reducing roadway departure crashes.
To visit the website go to:
http://safety.fhwa.dot.gov/roadway_dept/horicurves/

Pedestrian Safety Guide and Countermeasure Selection System (Pedsafe)
An online toolbox that communities can use to improve pedestrian safety in their area.
To visit the website go to:
http://www.pedbikesafe.org/PEDSAFE/index.cfm

The National Work Zone Safety Information Clearinghouse
Work Zone Safety and Flagger Tutorial
The purpose of this tutorial is to provide the fundamentals of work zone safety and to explain the concepts of flagging in a work zone. It is not intended to replace comprehensive instruction of the topic.
To view the tutorial go to:
https://www.workzonesafety.org/training/work-zone-safety-and-flagging-tutorial/

The National Work Zone Safety Information Clearinghouse is dedicated to providing the transportation construction industry and the general public with comprehensive information to improve motorist, worker and pedestrian safety in roadway work zones.
Now a new international section in six languages.
For more information go to:
http://www.workzonesafety.org/
SAFETY RESOURCES (continued)

The National Work Zone Safety Information Clearinghouse held Traffic Management & Work Zone Safety Power Workshop at International Bridge Conference. The workshop was packed with timely information related to night work, federal regulations, worker protection and the latest strategies in temporary traffic control.

To view the workshop go to:
http://www.workzonesafety.org/news_events/wz_conferences/power_workshop2010_PA

3M Roadway Safety
Understanding Minimum Reflectivity Standards go to:
http://solutions.3m.com/wps/portal/3M/en_US/NA_roadway/safety/safetyinitiatives/minimumretroreflectivity/

Federal Transit Administration
Transit Bus Safety Online resources and tools, designed to help rural and small urban transit bus providers develop and strengthen their programs.

To access the website go to:

Utah DOT and the Utah Highway Safety Office
Zero Fatalities

To visit the web site go to:
http://ut.zerofatalities.com/

Crash Modifications Clearinghouse (CFM)
The CMF Clearinghouse is funded by the U.S. DOT-FHWA and maintained by the University of North Carolina Highway Safety Research Center. A CMF is an estimate of the change in crashes expected after implementation of a countermeasure.

To visit the website go to:
http://www.cmfclearinghouse.org/

Impact Teen Driver
Impact Teen Drivers was organized for the purpose of providing awareness and education to teenagers, their parents, and community members about all facets of responsible driving, with the goal of reducing the number of injuries and deaths suffered by teen drivers as a result of distracted driving and poor decision making.

To view the website go to:
http://www.impactteendrivers.org/

Road Safety Foundation

To visit the web site go to:
http://www.roadwaysafety.org/about-us/

Center For Disease Control (CDC)

Native American Road Safety
To visit the web site go to:
http://www.cdc.gov/Motorvehiclesafety/native/index.html

Distraction.gov
The official U.S. Government website for distracted driving.

To visit the website go to:
http://www.distraction.gov/index.html

Safety Edge Resources
The Ohio LTAP Center is committed to providing our local roadway agencies the necessary information for implementing the Safety Edge on their paving projects across our state.

To visit the website go to:
http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/LTAP/Pages/SafetyEdge.aspx

Safe Routes to School Local Policy Guide
An additional effort to bring public health considerations into the development of transportation policies and practices.

To view the guide go to:

The California Safe Routes to School Technical Assistance Resource Center (TARC)
Assists local communities with creating Safe Routes to School (SRTS) programs by providing trainings, technical assistance, and resources to implement safe and successful SRTS strategies throughout California.

To visit the website go to:
http://www.casaferoutestoschool.org/

Department of Labor-OSHA
OSHA Construction Focus Four Hazards Training materials

For more information go to:
http://www.osha.gov/dte/outreach/construction/focus_four/index.html

LTAP/TTAP Safety Toolkit
National LTAP/TTAP

To visit the website go to:
http://www.ltap.org/resources/safety/

University of Minnesota Center for Transportation Studies
"Distraction Dodger" Game

Distraction Dodger is an online game designed to help teens and young adults understand the importance of concentrating on driving.

To view the game go to:
http://www.its.umn.edu/DistractionDodger/

National Highway Traffic Safety Administration
TRIBAL TRANSPORTATION RESOURCES

(NHTSA)
Emergency Medical Services
To reduce death and disability by providing leadership and coordination to the EMS community in assessing, planning, developing, and promoting comprehensive, evidence-based emergency medical services and 9-1-1 systems.
To visit the website go to:
http://www.ems.gov/

Everyone is a Pedestrian
A one-stop shop website safety tips and resources for local leaders, city planners, parents and others involved in improving pedestrian safety.
To visit the website go to:

Federal Government
Data.gov - Empowering People
Data.gov increases the ability of the public to easily find, download, and use datasets that are generated and held by the Federal Government.
To visit the website go to:
http://www.data.gov/

High Friction Roads
The Transtec Group is a pavement engineering firm
Surface Enhancements At Horizontal Curves (SEAHC)
To visit the website go to:
http://www.highfrictionroads.com/

National Highway Traffic Safety Administration (NHTSA)
Native American Data available in FARS
Native American fatalities, Native American fatalities on Tribal reservations, and all fatalities on Tribal reservations from 2007-2011
To visit the website go to:

California Department of Public health
WalkSmartCA is part of the It's Up to All of Us public education campaign, which is designed to educate both pedestrians and drivers on what steps they can take to keep our streets safe.
To visit the website go to:
http://www.cdph.ca.gov/HealthInfo/injviosaf/Pages/WalkSmartCA.aspx

California Pedestrian Safety (PedSafe) Program
PedSafe aims to create environments where these activities can happen safely by implementing a multi-faceted approach of education, media outreach and messaging, technical assistance, and training and facilitation.
To visit the website go to:
http://www.cdph.ca.gov/programs/SACB/Pages/ItsUp2Us.aspx

Centers for Disease Control and Prevention (CDC)
CDC’s WISQARS™ (Web-based Injury Statistics Query and Reporting System) CDC’s WISQARS™ (Web-based Injury Statistics Query and Reporting System)
To visit the website go to:
http://www.cdc.gov/injury/wisqars/

National Road Safety Foundation (NRSF)
To Visit the website go to:
http://www.nrsf.org/

Animated Traffic Law
Visualizing traffic law
To visit the website go to:
http://animatedtrafficlaw.org/atlc/

Teens In The Drivers Seat
Texas A&M Transportation Institute
To visit the website go to:
http://www.t-driver.com/

Tribal Transportation Safety
To visit the website go to:
http://www.tribalsafety.org/

California Department of Transportation (Caltrans)
Caltrans has begun the process of creating the State’s first Bicycle and Pedestrian Plan. They are seeking feedback and will be conducting public outreach over the next year. Caltrans has posted a public survey to provide input on their website here: www.cabikepedplan.org.

National Center for Rural Road Safety
The center was created to identify the most effective current and emerging road safety improvements and deploy them on rural roads.
To visit the center's website go to:
http://ruralsafetycenter.org/

Indian Health Service (IHS) Injury Prevention Program
To visit the website go to:
https://www.ihs.gov/InjuryPrevention/

National Aging and Disability Transportation Center
To visit the website go to:
http://www.nadtc.org/

BIA-Tribal Leaders Directory
Provides contact information for each federally recog-
TRIBAL TRANSPORTATION RESOURCES

CONSULTATION RESOURCES (Continued)

nized tribe. The electronic, map based, interactive directory also provides information about each BIA region and agency that provides services to a specific tribe. Additionally, the directory provides contact information for Indian Affairs leadership. For more information go to:
http://www.indianaffairs.gov/WhoWeAre/BIA/OIS/TribalGovernmentServices/TribalDirectory/index.htm

California Office of the Tribal Advisor
Responsible for overseeing and implementing effective government-to-government consultation between the Governor's Administration and California Tribes on policies that affect California tribal communities. To visit the website go to:
http://tribalgovtaffairs.ca.gov

TRB Committee on Native American Transportation Issues
TRB has provided links to examples of federal, state and non-governmental organization online resources related to tribal consultation policies and guidelines. To view the resources go to:
http://sites.google.com/site/trbcommitteeabe80/WELCOME/links

FHWA-Tribal Transportation Planning
Delivers products and services that provide information, training, and technical assistance to the transportation professionals responsible for planning for the capital, operating, and maintenance needs on Tribal lands. To visit the website go to:
http://www.tribalplanning.fhwa.dot.gov/

FHWA-Transportation Planning Capacity Building (TPCB) Tribal Planning Resources
Offers transportation planning professionals legislative, regulatory, and general guidance; technical resources; and relevant links related to Tribal planning issues. To visit the website go to:
http://www.planning.dot.gov/focus_tribal.asp

U.S. Department of Housing and Urban Development (HUD)
Tribal Directory Assessment Tool (TDAT) v2.0
TDAT was designed to help users quickly identify tribes and provide appropriate tribal contact information to assist with initiating Section 106 consultation. To visit the website go to:
http://egis.hud.gov/tdat/Tribal.aspx

FHWA-Tribal Transportation Self-governance Program (TTSGP)

As required by Section 1121 of the Fixing America’s Surface Transportation (FAST) Act, the Secretary shall, pursuant to a negotiated rulemaking process, develop a Notice of Proposed Rulemaking (NPRM) that contains the regulations required to carry the TTSGP. For more information go to:
https://flh.fhwa.dot.gov/programs/tp/tp/TTSGP

MORE TRANSPORTATION RESOURCES

U.S. DOT
U.S. Research and Innovative Technology Administration (RITA)
Research Program and Project Management Website
To visit the website go to:
http://www.rita.dot.gov/

U.S. DOT
U.S. Research and Innovative Technology Administration (RITA)
ITS ePrimer
Provides transportation professionals with fundamental concepts and practices related to ITS technologies. To visit the website go to:
http://www.pcb.its.dot.gov/ePrimer.aspx

U.S. DOT-Tribal Transportation Planning
Delivers products and services that provide information, training, and technical assistance to the transportation professionals responsible for planning for the capital, operating, and maintenance needs on Tribal lands. To visit the website go to:
http://www.tribalplanning.fhwa.dot.gov/

FHWA-Transportation Planning Capacity Building (TPCB) Tribal Planning Resources
Offers transportation planning professionals legislative, regulatory, and general guidance; technical resources; and relevant links related to Tribal planning issues. To visit the website go to:
http://www.planning.dot.gov/focus_tribal.asp

U.S. DOT-Transportation.gov
Transportation and Health Tool
Developed by the U.S. DOT and the Centers for Disease Control and Prevention to provide easy access to data that practitioners can use to examine the health impacts of transportation systems. To visit the website go to:
https://www.transportation.gov/transportation-health-tool

FHWA-National Highway Specifications
Clearinghouse and electronic library. Current specifications, construction manuals and drawings. For more information go to:
http://www.fhwa.dot.gov/construction/

FHWA Resource Center Planning Team
The Planning Technical Service Team at the Federal Highway Administration (FHWA) Resource Center helps support the planning process through the provision of training, technical assistance, technology deployment, and partnerships. For more information go to:
http://www.fhwa.dot.gov/resourcecenter/teams/planning/
TRIBAL TRANSPORTATION RESOURCES

FHWA Federal-Aid Program Administration
The guide is intended to provide basic information for FHWA and State personnel involved in the administration of the Federal-Aid Highway Program. It is not intended to be an eligibility guide, but contains basic descriptions and historical information on active and inactive programs. This guide should be of interest to FHWA, State highway agencies, local governments, and private sector personnel interested in a basic understanding of Federal-Aid programs, projects, or other program characteristics. In addition to basic information, sources of additional information are provided.
For more information go to:
http://www.fhwa.dot.gov/federalaid/

FHWA Soil Nail Analysis Program (SNAP) & Users Manual– Geotechnical.
FHWA-CFL/TD-10-004
A program for designing soil nail earth retaining structures, including both the nail and wall-facing elements of the structure.
To download the program go to:

FHWA-Bureau of Indian Affairs (BIA)
Indian Reservation Roads Program: Stewardship Plan
To view the plan go to:
http://www.ewu.edu/Documents/CBPA/NWTTAP/StewardshipPlan.pdf

FHWA In Cooperation with the Federal Transit Administration (FTA)
Planning for Transportation in Rural Areas
To view the guide go to:
http://www.ewu.edu/Documents/CBPA/NWTTAP/RuralGuidebookfinal_7_10_01.pdf

FHWA Office of Planning, Environment, & Realty (HEP)
Livable Communities
To visit the website go to:
http://www.fhwa.dot.gov/livability/

FHWA
The Federal-aid Highway Program Policy & Guidance Center
The PGC provides a central location of laws, policies, and guidance about the Federal-Aid Highway Program (FAHP)
To visit the website go to:
http://www.fhwa.dot.gov/pgc/

FHWA
INVEST (Infrastructure Voluntary Evaluation Sustainability Tool) was developed by FHWA as a practical, web-based, collection of voluntary best practices, called criteria, designed to help transportation agencies integrate sustainability into their programs (policies, processes, procedures and practices) and projects.
To visit the website go to:
https://www.sustainablehighways.org/

FHWA
Tribal Transportation Planning
To visit the website go to:
http://www.fhwa.dot.gov/planning/processes/tribal/

FHWA
Federal-aid Essentials for Local Public Agencies
To visit the homepage go to:
http://www.fhwa.dot.gov/federalaidessentials/

Federal-aid Program Overview. 24 videos.
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=overview

Civil Rights: Title VI/Nondiscrimination 17 videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=civilrig

Finance: Administrative Requirements 9 videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=finance

Environment: NEPA Regulatory Framework and Process 17 videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=environm

Right-Of-Way 6 videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=rightofw

Project Development: Required Approvals 19 videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=develop

Project Construction and Contract Administration: Safety and Operations 15 Videos
http://www.fhwa.dot.gov/federalaidessentials/catmod.cfm?category=construc

FHWA
Asset Management
The mission of the Asset Management team is to provide leadership and expertise in the systematic management of highway infrastructure assets.
To visit the website go to:
http://www.fhwa.dot.gov/asset/about.cfm

FHWA
TRIBAL TRANSPORTATION RESOURCES

MORE TRANSPORTATION RESOURCES (Continued)

National Transportation Atlas Database (NTAD) 2015 DVD.
To download the DVD go to:

FHWA-Federal Lands Highway (FLH)
Strategic Transportation Safety Plan Toolkit for Tribal Governments
To visit the website go to:

FTA
National Transit Data Base
To visit the website go to:
https://www.transit.dot.gov/ntd

FTA
National Resources & Technical Assistance For Transit-Oriented Development (TOD)
The TOD Technical Assistance Initiative is a project of the Federal Transit Administration administered by Smart Growth America that provides on-the-ground and online technical assistance to support transit-oriented development, improve access to public transportation, and build new economic opportunities and pathways to employment for local communities
For more information go to:
https://todresources.org/

Strategic Highway Research Program (SHRP 2)
Non-Destructive Testing (NDT) Toolbox
Web-Based electronic repository now available.
To visit the site go to:

Rural Transit Assistance Program (RTAP)
National RTAP proudly serves tribal communities residing in rural areas. Tribes are encouraged to access all of the National RTAP best practices, reports, training videos, workbooks, surveys and direct one-on-one technical assistance through our resource center.
To visit the center go to:
http://www.nationalrtap.org/Tribal-Transit

Victoria Transportation Policy Institute
Transportation Cost and Benefit Analysis
A guidebook for quantifying the full costs and benefits of different transportation modes. A comprehensive study of transportation benefit and costing research, and a guidebook for applying this information in planning and policy analysis.
To view the guide book go to:
http://www.vtpi.org/tca/

Partnership for Mobility Management
The Partnership for Mobility Management is a joint effort of technical assistance partners that work with local, state and regional leaders and organizations to realize the possibilities of improving transportation options for all Americans wherever they live and to assist those especially in need of alternative transportation options.
For more information visit the website at:
http://web1.ctaa.org/webmodules/webarticles/amviewer.asp?a=2620

Research and Innovative Technology Administration (RITA): University Transportation Centers
The Research and Innovative Technology Administration (RITA) coordinates the U.S. Department of Transportation’s transportation system. Within the Office of RD&T, the University Transportation Centers (UTC) program funds transportation research at 136 colleges and universities and provides the education and training needed to advance the nation’s transportation system.
To view the UTC website go to:
http://www.rita.dot.gov/utc/

Montana State University, Western Transportation Institute, (WTI)
The country’s largest National UTC focused on rural transportation issues. Because we live and work in rural communities, we understand the critical roles rural transportation plays in the lives of people, in the environment and in the economy.
To visit the website go to:
http://www.wti.montana.edu/

ArcGIS Online—Map Services
ArcGIS Online base maps published and hosted by Esri are now freely available to all users regardless of commercial, noncommercial, internal, or external use. This means that you no longer have to pay a subscription fee for including ArcGIS Online base maps in your commercial-use web applications.
Base maps included in this new business model are World Imagery Map, World Street Map, World Topographic Map, USA Topographic Maps, and DeLorme World Base map.
To visit the website go to:
http://www.esri.com/

Go! Exploring the World of Transportation
A dynamic online magazine for teens ages 13–19 on careers in transportation. Published by the Institute for Transportation, Iowa State University.
Top visit the website go to:
http://www.go-explore-trans.org/
TRIBAL TRANSPORTATION RESOURCES

Rural Transit Assistance Program (RTAP)-Procurement Pro
Designed to give Indian tribes, non-profit organizations, municipalities and transportation agencies the appropriate federal clauses and certifications regarding federal procurement requirements and processes when utilizing federal funds.
To visit the website go to: http://webbuilder.nationalrtap.org/WebApps/ProcurementPRO.aspx

Bicyclinginfo.org
Pedestrian and Bicycle Information Center
Provides resources and information to promote bike to work events and bike commuting.
To visit the website go to: http://www.bicyclinginfo.org/index.cfm

Traffic Sign Retroreflectivity Maintenance Program
This resource publication/package was developed to assist Ohio local agencies in their efforts to meet the national January 2012 compliance date for implementing a program that can regularly address the new sign Retroreflectivity maintenance requirements.
To download the program go to: http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/LTAP/Pages/ImplementingaTrafficSignRetroreflectivityMaintenanceProgram.aspx

Indian Land Tenure Foundation (ILTF)
A national, community-based organization focused on American Indian land recovery and management.
To visit the website go to: http://www.iltf.org/

Coordinated Technology Implementation Program (CTIP)
Roadside Revegitation Portal-An Integrated Approach to Establishing Native Plants
To visit the website go to: http://www.nativerevegetation.org/

Interactive Map for Supplemental Transportation Programs
Beverly Foundation's Interactive Map of 1038 Supplemental Transportation Programs (STP), community-based organizations providing transportation.
To visit the website go to: http://beverlyfoundation.org/map-of-stps-in-america/

One Call - One Click Transportation Services Toolkit
Community Transportation Association of America (CTTA)
Provides information for communities interested in working together--whether locally, regionally or statewide—to develop a one-call or one-click service for transportation.
To visit the website go to: http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=2428&z=101

ASHTO Systems Operations & Management Guidance
An online tool that uses self-evaluation and best practice experience that managers can use to identify key program, process and institutional preconditions to achieve more effective SO&M.
To visit the website go to: http://www.its.dot.gov/press/2011/aashto_guidance.htm

Small Urban and Rural Transit Center (SURTC)
The purpose is to increase the mobility of small urban and rural residents through improved public transportation.
To visit the site go to: http://www.surtc.org/

United States Transportation Facts and Figures
Find state-by-state transportation facts, comparisons and rankings.
To visit the website go to: http://gis.rita.dot.gov/StateFacts/

Transportation for Communities - Advancing Projects Through Partnerships (TCAPP)
The CAPP website provides a systematic approach for reaching collaborative decisions about adding highway capacity that enhance the environment, the economy, and the community and improve transportation.
To visit the website go to: http://transportationforcommunities.com/

CalTrans Earth
GIS interface as a resource for public use.
To visit the website go to: http://earth.dot.ca.gov/

California Department of Public Health (CDPH)
California Environmental Health Tracking Program (CEHTP)
To visit the website go to: http://www.ehib.org/project.jsp?project_key=EHSS01

National Transportation Consortium (NTC)
The NTC is a non-profit corporation created for one purpose: provide tribal governments and their enterprises a better method for buying buses and transportation services.
To visit the website go to: http://www.nativetransit.org/

National Center for Mobility Management
Focuses on transportation’s many customer groups: current and potential riders; employers, economic development
MORE TRANSPORTATION RESOURCES (Continued)

groups, and local business associations; human service agencies and their clients; taxpayers and other funders; and local governments.
To visit the website go to:
http://nationalcenterformobilitymanagement.org/

American Road and Transportation Builders Association (ARTBA)
Transportation Investment Advocacy Center (TIAC)
The program is aimed at helping private citizens, legislators, organizations and businesses successfully grow transportation infrastructure resources at the state and local levels through the legislative and ballot initiative processes.
To visit the website go to:
http://www.transportationinvestment.org/

Ready Indian Country
The goal of Ready Indian Country is to collaborate with tribal governments to build emergency management capability and partnerships to ensure continued survival of Tribal nations and communities.
To visit the website go to:
http://www.ready.gov/make-a-plan/indian-country

CalACT
California Association for Coordinated Transportation is a statewide, non-profit organization that has represented the interests of small, rural, and specialized transportation providers since 1984.
To visit the website go to:
http://www.calact.org/home

California Department of Transportation (Caltrans)
California Transportation Plan (CTP) 2040 website
CTP provides a long-range policy framework to meet our future mobility needs and reduce greenhouse gas emissions.
To visit the website go to:
http://www.dot.ca.gov/hq/tpp/californiatransportationplan2040/index.shtml

California Transportation Commission
California Road Charge Technical Advisory Committee and Pilot Program
The California Road Charge Technical Advisory Committee was established in 2014 by Senate Bill 1077 (Chapter 835, Statutes of 2014). SB 1077 created the California Road Usage Charge Pilot Program and tasked the Chair of the Commission, in consultation with the California State Transportation Agency (CalSTA) to convene a fifteen member Technical Advisory Committee (TAC) to study road usage charge alternatives to the gas tax, gather public comment, and make recommendations to CalSTA regarding the design of a road usage charge pilot program.

To visit the website go to:
http://www.catc.ca.gov/meetings/Committees/Road_Charge

Community Transportation Association of America (CTAA)
FedCentral
The site offers news and analysis of Congressional hearings, regulatory news, important resources and more
To visit the website go to:
http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=2923&z=37

TripSpark
TripSpark makes this possible by linking the latest technologies with a dedicated focus to help you grow your operation and meet evolving community transit needs.
To visit the website go to:
http://www.tripspark.com/

National Aging and Disability Transportation Center (NADTC)
The goal is to promote the availability and accessibility of transportation options for older adults, people with disabilities and caregivers.
To visit the website go to:
http://www.nadtc.org/

WEBSITE APPLICATIONS—APPS

Heat Safety Tool App
U.S. Department of Labor (DOL), Occupational Safety and Health Administration (OSHA)
The App allows workers and supervisors to calculate the heat index for their worksite.
To download the app go to:
https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html

Transportation Construction Advocate App
American Road & Transportation Builders Association (ARTBA)
Available for both Android and Apple devices.
To download the app go to:
Google Play or iTunes.

Asphalt Calculator+ App
This iPhone/iPod Touch app will calculate the amount of cubic yards needed for a given job. It will also calculate hot mix tonnage. Polyclef Software.
To download the app go to:
Google Play or iTunes.

Life Saver Apps
Distracted driving for parents and students.
TC3 Free Mobile App
TC3 is an AASHTO technical service program focused on the web-based training of front-line workers in the areas of construction, maintenance, and materials. Download the app today at:
http://tc3app.com/install/

B4UFLY App
Federal Aviation Administration
Helps unmanned aircraft operators determine whether there are any restrictions or requirements in effect at the location where they want to fly.
For more information go to:
http://www.faa.gov/uas/b4ufly/

# Hands Off App
A project developed by the Milt Olin Foundation to raise awareness about the dangers of distracted driving. Users commit to safe driving by downloading #HandsOff and taking the #HandsOff pledge, then sharing their video pledge with friends. Download the app from iTunes or Google Play.
For more information go to:
http://miltolinfoundation.org/

Pocket Guide to Transportation App
The 50th anniversary of the U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) is introducing its most innovative product yet – a smartphone app for the Pocket Guide to Transportation.
For more information go to:
https://www.transportation.gov/fastlane/introducing-pocket-guide-transportation-app

TRANSPORTATION PROGRAMS AND DEVELOPMENT

FHWA Resource Center
The Mission to advance transportation technologies and solutions through training, technical assistance, technology deployment, and partnerships.
For more information go to:
http://www.fhwa.dot.gov/resourcecenter/

The FHWA has developed an extensive list of resources that focus specifically on the latest culvert technology. To view this list go to:

Pavement Construction and Safety Training on Demand
New free Web-based courses sponsored by the Federal Highway Administration (FHWA)
To view the courses go to:
http://www.fhwa.dot.gov/publications/focus/13jul/13jul02.cfm

National Transit Institute (NTI)
Rutgers, The State University of New Jersey, The mission of the National Transit Institute is to provide training, education, and clearinghouse services in support of public transportation and quality of life in the United States.
To visit the website go to:
http://www.ntionline.com/

National Highway Institute (NHI)
Free web-based training:
- NEW. Culvert Hydraulic Analysis and Design Program (HY-8) (WBT) 135094.
- Introduction to FRP Materials and Applications for Concrete course 130105A.

The following updated training is available.
- National Traffic Incident Management Responder Training course 133126.
- 130093W entitled "Introduction to Earthquake Engineering is a web based prerequisite to 130093A Displacement-Based LRFD Seismic Analysis and Design of Bridges"
- 132010A entitled "Earthquake Engineering Fundamentals" is a Web-based prerequisite to 132094A and
- 2094B. Participants will generally be notified to take the WBT course about 1 month before the following two sessions.
- 132094A entitled "LRFD Seismic Analysis and Design of Structural Foundations and Earth Retaining Structures".

2016 New and Updated Instructor-led Courses
To view the course details go to:

Federal Emergency Management Agency (FEMA)
Emergency Management Institute Tribal Curriculum
To collaborate with tribal governments to build emergency management capability and partnerships to ensure continued survival of Tribal nations and communities.
To view the course go to:
https://training.fema.gov/tribal/

FHWA Wildlife Vehicle Collision Reduction Study Training Course
PROGRAMS AND DEVELOPMENT (Continued)

A national study was conducted on the causes and impacts of wildlife vehicle collisions (WVCs). This study also provides recommendations and solutions for reducing these collisions.

To view the course go to:
www.environment.fhwa.dot.gov/WVCtraining/index.asp

National Cooperative Highway Research Program (NCHRP)
Report 667
Model Curriculum for Highway Safety Core Competencies presents course materials, including the instructor’s guide and student workbook, for a fundamental highway safety training course. The course is designed to address the core competencies highway safety practitioners should have or acquire. An accompanying CD-ROM includes a brochure and short Microsoft PowerPoint presentation for marketing the training course.

To view the report go to:

Paul S. Sarbanes Transit in Parks Technical Assistance Center (TRIPTAC)
The TRIPTAC is available to all Federal Land Management Agencies (FLMAs), not only those applying for or receiving funds from the Transit in Parks program. State, local or tribal governments who are working in collaboration with an FLMA to expand public lands access are also welcome to use TRIPTAC services to obtain alternative transportation information and assistance.

To view available training courses go to:
http://www.trip tac.org/

University of California, Berkeley, Institute of Transportation Studies
Technology Transfer Program
To visit the website go to:
http://www.techtransfer.berkeley.edu/

University of California, Berkeley, Safe Transportation Research and Education Center (SafeTREC)
Affiliated with the School of Public Health and the Institute of Transportation Studies, with additional partnerships with the Department of City and Regional Planning, Public Policy, and Transportation Engineering.

To visit the website go to:
https://safetrec.berkeley.edu/

U.S. Small Business Administration (SBA)
Online Courses for Starting Your Business
Several free online courses are offered by the SBA to help prospective and existing entrepreneurs understand the basics about writing a business plan.
For more information go to:
http://www.sba.gov/content/online-courses-starting-your-business

Community Transportation Association of America (CTAA)
Passenger Service and Safety PASS Basic Training Program The PASS Basic program consists of 6 modules and includes comprehensive training on the assistance that drivers should be providing to passengers with special need.
For more information go to:
http://training.ctaa.org/

Community Transportation Safety and Security Accreditation (CTSSA)
The program is designed to promote the safety and security of the customers of community and public transportation systems and also to promote the safety and security of the women and men who deliver these services and provide mobility for the riding public every day.
For more information go to:

Minnesota Local Technical assistance Program (LTAP)
Gravel Road Maintenance and Design (Online)
This course helps supervisory personnel and operators better understand the materials, techniques, and equipment needed for maintaining gravel roads.
To enroll in the course go to:
http://www.mnltap.umn.edu/training/topic/maintenance/gravel/online.html

Curbing Transit Employee Distracted Driving
The 30-minute course, was developed by FTA in conjunction with the Florida Department of Transportation. It’s an excellent tool to educate, inform, and increase awareness among all transit workers about the dangers and challenges associated with distracted driving.
For more information go to:

Work-Zone Safety Tutorial
Minnesota LTAP has launched a new online free tutorial that offers a convenient opportunity for new, seasonal, or temporary staff to learn about the fundamentals of work-zone safety and the basic concepts of the work-zone area before arriving at the job site.
There is no cost to take the tutorial, and registration is not required.
To view the tutorial go to:
http://www.mnltap.umn.edu/training/online/workzone/
On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation. 

### CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

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### TRIBAL TRANSPORTATION FUNDING RESOURCES

**Cal EPA**

Training: California Indian Tribal Relations

Cal EPA’s step forward toward meeting our “commitment to educate appropriate staff, to become informed about the cultural setting of California Native Americans, their environmental issues and Tribal histories, for the purpose of improving Cal EPA’s understanding of and connection to California Native American Tribes.”

To visit the website go to:

http://calepa.ca.gov/tribal/training/

**Minnesota Local Road Research Board (LRRB)**

YouTube video library with 34 videos to date.

For more than 50 years, the Local Road Research Board (LRRB) has brought important developments to transportation engineers throughout Minnesota. Those developments range from new ways to determine pavement strength to innovative methods for engaging the public. Today, the LRRB remains true to its important mission: supporting and sharing the latest transportation research applications with the state’s city and county engineers.

To view the videos go to:

https://www.youtube.com/user/lrrbmn

**FHWA-Developing a Transportation Safety Plan**

How to conduct transportation safety planning and develop Transportation Safety Plans. It is based on the Developing a Transportation Safety Plan module, which is one of 12 modules in the series Transportation Decision-making: Information Tools for Tribal Governments. The FHWA Office of Planning produced this series to educate tribal planners and decision makers about the tribal transportation planning process and to provide them with useful program information.

To visit the website go to:


**Newly Revised Emergency Procedures for Rural Transit Drivers Training Module**

National RTAP

The Emergency Procedures module offers the most current training on preparedness for hazards and threats that transit operators may encounter. The free module contains a Learner's Guide, a Self-paced eLearning Course Disc, an Instructor's Guide, a disc with videos and a trainer's PowerPoint presentation. Email info@nationalrtap.org or call 888-589-6821 to order.

**Center for Transportation e-Learning's Computer-Based-Educational Program**

To visit the website go to:

http://ctel.mrooms.net/

### PUBLICATIONS

The NIJC web site has the complete list of publications, newsletters, videos, CDs, and DVDs going back several years. To view the Tribal Transportation (TTAP) Resources data base go to:

http://nijc.org/datasheets/ttap/ TAP_Resourceslist.asp

**Ordering Information**

Printed copies of our in-house publications are available on a first-come, first served basis. Priority is given to Tribal Transportation Personnel. PDF versions of most of our publications are available on our website: http://www.nijc.org/ttap_resources.html

All our videos, publications and CD-ROMs in our lending library are loaned for a four-week period. Two titles may be borrowed at a time.

To order or borrow materials, please send a request to: barry@nijc.org or, nijc@aol.com or Fax a request to: 707-579-9019.

To view past issues of publications, videos and development programs, please visit our website library at:

http://nijc.org/datasheets/ttap/TTAP_Resourceslist.asp

**CALIFORNIA**
TRIBAL TRANSPORTATION FUNDING RESOURCES

FUNDING (Continued)

transportation. The ATP administered by the Division of Local Assistance, Office of Active Transportation and Special Programs. The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for non-motorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas (GHG) reduction goals,
- Enhance public health,
- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

Cycle 3 FY2016 is closed.

For more information go to: http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html

Sustainable Transportation Planning Grant Program
Caltrans is pleased to release the FY 2017-18 Sustainable Transportation Planning Grant Application Guide. A total of $9.3 million is available for transportation planning projects statewide. The information provided below will assist with the successful completion of transportation planning grant applications, due Friday, November 4, 2016 by 5 PM. Please contact the appropriate District staff (listed in the Grant Application Guide) if there are any questions about developing a competitive grant application.

For more information go to: http://www.dot.ca.gov/hq/tpp/grants.html

NEVADA

Nevada Department of Transportation (NDOT) Transportation Alternatives Program (TAP)
The Nevada TAP provides federal transportation funds for projects that improve non-motorized mobility, historic preservation, scenic accessibility, safe routes to school (SRTS) and environmental/vegetation management. The FY 2016-2018 cycle is now open.


Nevada Transportation Enhancement Program
The Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA) share your interest in these projects and others that enhance the transportation experience in your area and make our communities more livable. The TE program was developed to fund projects that go beyond where typical transportation projects usually stop.

Applications due the second Monday each March
For more information go to: http://www.nevadadot.com/Projects_and_Programs/Landscape_and_Aesthetics/Landscape_Aesthetics_Program.aspx

FEDERAL

U.S. DEPARTMENT OF TRANSPORTATION

Transportation Alternatives Program (TAP)

- Safe Routes to School Program.
TRIBAL TRANSPORTATION FUNDING RESOURCES

- **National Scenic Byways**
  The Moving Ahead for Progress in the 21st Century Act (MAP-21) authorized the Transportation Alternatives Program (TAP) to provide funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways. The TAP replaced the funding from pre-MAP-21 programs including the Transportation Enhancement Activities, Recreational Trails Program. For more information go to: [http://www.fhwa.dot.gov/environment/transportation_alternatives/](http://www.fhwa.dot.gov/environment/transportation_alternatives/)

- **IDEA Program**
  TRB’s Innovations Deserving Exploratory Analysis (IDEA) annual program announcement solicits funding proposals for the upcoming review cycles. The announcement explains the IDEA programs, describes the types of eligible projects and their funding structures, suggests general areas for which IDEA proposals can be submitted, and provides guidelines and forms for submitting proposals.
  - The Transit IDEA program has one or more cycles each year. **Deadline is November 2, 2016.**
  - NCHRP IDEA cycles are twice each year. **FY 2016 is closed**
  - The Rail Safety IDEA program has one review cycle per year.

  If the proposal submission due date for any IDEA program falls over a weekend or on a federal holiday, the due date automatically moves to the next business day. The IDEA programs provide start-up funding for promising, but unproven, innovations in surface transportation systems. The programs’ goals are to seek out and support new transportation solutions that are unlikely to be funded through traditional sources.

  Top 3 Criteria by Which Selection Committees Evaluate IDEA Proposals:
  1. **Innovation** -- Emphasize the innovation. Say it first, say it fast, and make it clear. What problem does your project address? How is your solution better than current practice?
  2. **Benefits** -- Describe the expected benefits. Why is this project worth investing in?
  3. **Science** -- Stick to the science. Be sure the research approach is sound and sensible

  For more information go to: [IDEA Program](http://www.fhwa.dot.gov/environment/transportation_alternatives/)

- **FHWA**
  **Strategic Highway Research Program (SHRP2)**
  The objective of the SHRP2 Education Connection is to incorporate SHRP2 products into collegiate level lesson plans and curricula. FHWA anticipates awarding up to 10 cooperative agreements to help professors and instructors bring state of the practice solutions to their classrooms. **Round 7 is closed.**
  For more information go to: [http://www.fhwa.dot.gov/goshrp2/](http://www.fhwa.dot.gov/goshrp2/)

  **Accelerated Innovation Deployment Demonstration (AID)**
  The final notice announces the availability of funding and requests grant applications for FHWA's Accelerated Innovation Deployment (AID) Demonstration authorized within the Technology and Innovation Deployment Program (TIDP) under the Moving Ahead for Progress in the 21st Century Act (MAP-21). Consistent with other FHWA funding provided to tribes, federally recognized tribe identified on the list of “Indian Entities Recognized and Eligible to Receive Services from the Bureau of Indian Affairs” (published at 77 FR 47868) is eligible to apply for AID Demonstration. All applications will be evaluated on a rolling basis and be assigned a rating of “Qualified” or “Not Qualified.”
  For more information go to: [http://www.grants.gov/web/grants/view-opportunity.html?oppId=245654](http://www.grants.gov/web/grants/view-opportunity.html?oppId=245654)

- **Environmental Protection Agency (EPA)**
  **New Request for Proposals - FY 2017 Brownfields Assessment and Cleanup Grant Guidelines**
  These Brownfields grants may be used to address sites contaminated by petroleum and hazardous substances, pollutants, or contaminants (including hazardous substances co-mingled with petroleum). **The proposal submission deadline is December 20, 2016.**
  For more information go to: [https://www.epa.gov/brownfields/apply-brownfields-grant-funding](https://www.epa.gov/brownfields/apply-brownfields-grant-funding)
NATIONAL INDIAN JUSTICE CENTER
5250 Aero Drive
Santa Rosa, CA  95403
Phone: (707) 579-5507
Fax: (707) 579-9019
Email: nijc@aol.com
Http://www.nijc.org

NIJC SERVICES
The National Indian Justice Center (NIJC) provides a range of services, including regional and local training sessions under contracts with tribes, court evaluation and court planning services, and other resource services.

WESTERN TTAP

For more details, please contact Western TTAP Coordinators
(707) 579-5507
Barry Litchfield, x 224
Email: barry@nijc.org
Margaret Browne, x 225
Email: tcoord@nijc.org