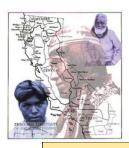
Tribal Transportation News

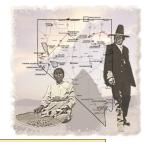


A Publication of the Western TTAP Published by the National Indian Justice Center



Success Stories Show Value of First Responder Training

Innovator Newsletter, July/August 2015, Volume 8, Issue 49



In 2013, about 40 vehicles crashed on I-70 near Indianapolis, Indiana, when snow squals kicked up one January afternoon, making the pavement slick and visibility poor. Cars and trucks blocked the interstate in both directions when emergency responders arrived.

The crews trained in traffic incident management techniques, worked efficiently ot clear the scene. The cooperated on a decision to move vehicles to a staging area off the interstate for further investigation. One towing company as incident commander for all towing agencies. The interstate was opened to traffic within seven hours

The incident might have caused another six hours of road closure time if responders had not used techniques they learned in the second Strategic Highway Research Program's *National Traffic Incident Management Responder Training* course. The Federal Highway Administration deployed the training during the second round of Every Day Counts.

Training teaches safe, quick clearance

The training for first responders—including police, firefighters, towing operators, medical personnel and transportation agency staff—focuses on safe, quick clearance at incident scenes that protects motorists and responders while minimizing the impact on traffic flow.

Traffic incidents put motorists and responders' lives at risk and account for about 25 percent of all traffic delays. Congestion from incidents can generate sec-ondary crashes, further increasing risk and delays and interrupting freight movement. Developing a cadre of well-trained responders can reduce the time it takes to clear incidents, saving lives, money and time.

During EDC-2, FHWA offered a train-the-trainer course for experienced incident responders that equips them to train other responders. Participants gave the course high marks, with about 98 percent of the nearly 3,600 who completed a course evaluation responding positively to the overall training and content.

By the end of 2014, 139 train-the-trainer sessions educated 5,589 responders who, in turn, instructed more than 80,700 responders in best practices for clearing crashes. The number trained is now nearly 114,000.

"At least 10 public safety academies for fire and law enforcement personnel adopted the traffic incident management training program in 2014. The training has been a catalyst for new relationships among emergency response disciplines at the national and local levels, and responders and motorists are now safer because of this effort," said Paul Jodoin, FHWA transportation specialist and Traffic Incident Management Responder Training Team member.

States benefit from training focus

Among the states that have made training in traffic incident management techniques a priority is Ohio, where the transportation department and state highway patrol have trained more than 11,000 responders. Ohio's training push has touched the entire responder community, from law enforcement and fire to towing and public works. In one case, a crash in Mansfield requiring a medical helicopter closed I-71 for only 20 minutes because crews had learned quick response techniques.

First responders in other states also have traffic incident management success stories to tell.

In Oregon, for example, where more than 2,000 responders have undergone training, interagency communication and coordination enabled responders to restore traffic less than 90 minutes after a dump truck spilled a load of gravel across both northbound lanes of I-5. When the gravel spewed across the interstate, three secondary crashes occurred almost immediately.

Oregon State Police relayed information to the Oregon Department of Transportation on the equipment needed to remove the debris. An Oregon DOT incident response vehicle quickly established a lane closure and set

(Continued on page 4)

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Western TTAP is administered by the NIJC. If you would like to submit an article or graphic (jpg or tif format) for publication in Tribal Transportation News, please send a text file (PC format) to Barry Litchfield, TTAP Coordinator/Editor, barry@nijc.org,

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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ANNOUNCEMENTS

Tribal Transportation Safety Assessments For California Native American Communities

Description

Based on the successful, award-winning, ongoing services funded by the California Office of Traffic Safety (OTS) for Safety Assessments for California Communities, this Caltrans funded program works similarly to help California Native American communities identify and implement transportation safety solutions that will lead to improved safety for all – motorists, passengers, bicyclists, and pedestrians.

This program will provide California Native American communities with highly focused, in-depth, expert safety reviews of problem areas and specific recommendations for safety improvements within their jurisdictions, as well as on the roadways accessing their land.

The technical assistance services offered by Tech Transfer and funded by Caltrans are intended to provide California Tribal governments with a reliable, respected, independent, and credible source of information that fosters collaboration between the Tribes and local engineering, public works, planning or community development, and police/sheriff departments of neighboring agencies. They also help Tribal governments identify potential sources of funding to make the improvements, and establish the justification to use in future grant applications.

Partners

- California Department of Transportation (Caltrans),
 Division of Transportation Planning, Office of Sustainable Community Planning, <u>Native American Liason</u>
 Branch (NALB)
- UC Berkeley, Institute of Transportation Studies, Technology Transfer Program (Tech Transfer)
- National Indian Justice Center (NIJC), <u>Western Tribal</u> <u>Technical Assistance Program</u>
- California Department of Public Health (CDPH), <u>Pe-</u> destrian Safety (PEDSAFE) Program
- UC Berkeley, Institute of Transportation Studies, <u>Safe</u>
 <u>Transportation Research and Education Center</u>
 (SafeTREC)

National Center for Rural Road Safety

Launched its website this week, which offers a variety of resources for transportation professionals working to make travel safer on our nation's rural roads. (http://ruralsafetycenter.org/). Also, announcing inaugural training on Tuesday, November 3rd from 9:00 - 10:30 AM MST for a FREE, 1.5 hour online training entitled "Introduction to the National Center for Rural Road Safety - What does the Safety Center offer to road agencies and their personnel?"

To find out more about this training and to register, please visit <u>Safety Center Trainings</u> at: http://ruralsafetycenter.org/training-education/safety-center-trainings/

California Department of Transportation

Caltrans has developed the California Statewide Federal Surface Transportation Reauthorization Consensus Principles document including a section on Tribal Transportation which was submitted to the California U.S. Congressional Delegation in September.

The entire document can be found at: http://www.dot.ca.gov/hq/transprog/map21/reauthorization/ca-statewide-fed-surface-transp-reauth-consensus-principles.pdf

Federal Highway Administration

National Network for the Transportation Workforce

The success of the United States to deliver and manage an efficient, safe, and effective transportations system is directly dependent on the knowledge, skills and abilities of the transportation workforce. To provide for a more strategic and effective approach to transportation workforce development, the Federal Highway Administration has established the National Network for the Transportation Workforce (NNTW) to consist of five Regional Surface Transportation Workforce Centers.

Mission

The Centers will serve as a resource to support, grow and maintain a skilled and career-ready transportation work-force in their respective regions. The Centers are network, rather than program focused and will engage in existing regionally based programs, to catalyze new strategic partnerships and communicate programs and best practices to educators, employers and those on the transportation career pathway.

Role of Stakeholders

The NNTW is actively soliciting the engagement of transportation workforce stakeholders at the national, regional and local levels to participate as strategic partners in these important efforts. Stakeholders can offer:

- On the ground assessments of labor supply and demand and workforce skill gaps;
- Assisting in crafting a unified message on career awareness; and
- Promotion of NNTW clearinghouse resources to their constituents.

(Continued on page 32)



(Continued from page 1)

up advance warning for motorists. A maintenance crew arrived with a grader, broom trucks and blowers to move the debris to the shoulder. Without enhanced collaboration, the incident could have taken two to three hours to clear.

A key training goal is responder safety, which paid off in Massachusetts, where more than 1,300 responders have been trained. After Captain Jason Cavallaro of the Hanover Fire Department attended a train-the-trainer session, he added traffic incident management to the department's training program.

"While working at the scene of a motor vehicle collision on Route 3, our engine was struck by a vehicle that had lost control due to slick road conditions," Cavallaro said. "Because of the placement of the engine in accordance with traffic incident management concepts, the engine took the hit and the vehicles and personnel operating at the original collision were protected."

The crash put the fire truck out of service, but a firefighter on board and the two occupants of the vehicle that struck the engine experienced only minor injuries. "The firefighters credited the traffic incident manage-ment training for the outcome of the incident," Cavallaro said.

In Arizona, where close to 3,700 responders have been

trained, clearance times for noninjury crashes improved by 52 percent after responders applied lessons learned through the traffic incident management program. In one case, the opportunity came quickly for trainees who had just finished the course. The two—members of the Arizona Department of Transportation Enforcement and Compliance Division—were traveling on I-15 near Mesquite, Nevada, when they witnessed a crash involving a car and tractor-trailer.

Using what they had learned, they created a safety zone around the two vehicles to keep a lane open down the middle of the highway. Minutes later, the Nevada Highway Patrol arrived and shut down the highway to southbound traffic. When emergency medical responders arrived, they parked just in front of the injured parties, a best practice from the course the Arizona.

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Note: the YouTube video noted in the photo may be viewed at: http://www.fhwa.dot.gov/hfl/innovator/e-version/issue 49/



Arizona DOT staff used traffic incident management techniques when they encountered a crash on their way back from a training class.

University of Minnesota

ROADWAY SAFETY INSTITUTE

Human-centered Solutions to Advance Roadway Safety



Current research shows the rate of death and significant injury from motor vehicle crashes is much higher for American Indians than for other populations in the United States. Tribal transportation leaders and federal agencies agree that this is an area of elevated concern and priority. Unfortunately, there is very little research to guide strategic policies and investments to improve safety. The Roadway Safety Institute, a regional University Transportation Center housed at the University of Minnesota, is collaborating with tribal governments on three projects to better address these challenges.

Collaborating with American Indian Communities to Re-Interpret and Strategize about Transportation Safety Risks in Tribal Lands

This study aims to get a better picture of the nature of transportation safety concerns in tribal governance areas, analyze the sources of safety risks and problems, identify successful programs and policies, and generate recommendations about policies and investments. Tribal government leaders, transportation coordinators, and other key community members can offer extremely valuable insights in this analysis. Therefore, this study centers around qualitative data collection and a problem-solving approach in collaboration with tribal governments. Our goal is to provide a more nuanced, informative, and fair picture of the problem and strategies to improve safety.

For more information:

Kathy Quick, 612-625-2025, ksquick@umn.edu Guillermo Narváez, 612-624-2465, gnarvaez@umn.edu

GIS Data Acquisition and Spatial Analysis of Factors Affecting Traffic Crashes on Tribal Lands

This study is investigating the potential for new advances in Geographic Information Systems (GIS) to enhance the collection, availability, and use of information related to transportation safety. Conducted in partnership with Esri, the study includes a preliminary assessment of geo-related traffic safety information. Through collaborative analysis with tribal communities, the study will also develop prototypes for potential use that will be evaluated through a series of stakeholder assessments.

For more information:

Tom Horan, 909-607-9302, tom.horan@cgu.edu

Education Activities for Tribal Youth

Several Institute initiatives are bringing our research projects and resources to underrepresented K-12 students—including those in tribal communities—to promote safety, education, and STEM careers.

The University of Minnesota Extension has a longstanding partnership with the White Earth Nation to operate a summer Academy of Math and Science for reservation youth in grades 4–8. The Institute is currently in discussion with the camp organizers to develop a safety curriculum for the next camp session in June 2015. Students will explore transportation safety and its connection to their tribe's history and culture. The Institute is also exploring opportunities to connect female American Indian youth to mentors through a partnership with WTS and its Transportation YOU program. Though the initial efforts are based in Minnesota, we plan to expand to the rest of Region 5 in our second year.

In addition, the Institute is developing new curriculum packages that can be easily shared with tribal and other communities through Transportation YOU programs, summer camps, STEM festivals, and other events that reach students of diverse backgrounds.



For more information:

Gina Baas, 612-626-7331, baasx001@umn.edu Barb Rohde, rohdebjr@aol.com

About the Institute

The Roadway Safety Institute is the Region 5 University Transportation Center, led by the University of Minnesota. Other members are the University of Akron, the University of Illinois at Urbana-Champaign, Southern Illinois University Edwardsville, and Western Michigan University. Driven by the goal of preventing crashes to reduce fatalities and life-changing injuries, the Institute's activities focus on human-centered solutions to advance roadway safety.

Reprinted with the permission of University of Minnesota Roadway Safety Institute. The website is: http://www.roadwaysafety.umn.edu/

Exploring Transportation on Tribal Lands



A residential road on Leech Lake Reservation In Belrami County, Minnesota. Photo: Guillermo. Narvaez

The fatality rate for motor vehicle crashes is higher for American Indians than for any other ethnic or racial group in the United States. The challenges of roadway safety on tribal lands were discussed during the Roadway Safety Showcase: Safety Innovations for Today and Tomorrow. The event, held in St. Paul in May, highlighted the latest work of Roadway Safety Institute (RSI) researchers.

In opening remarks, USDOT Assistant Secretary for Transportation Greg Winfree noted the importance of the tribal transportation issue not only from a safety perspective, "but from [its] ability to uplift all Americans and guarantee...ladders of opportunity," he said.

Winfree introduced assistant professor Kathryn Quick and research associate Guillermo Narváez, researchers at the U of M's Humphrey School of Public Affairs who are exploring this issue. In an RSI-sponsored project, Quick and Narváez are collaborating with American Indian communities to better understand the transportation safety risks on tribal lands and develop strategies to mitigate these risks.

Quick and Narváez are focusing on gathering on-theground knowledge about the nature of roadway risks and options to improve safety on reservations in Minnesota.

FROM 1975-2002,

the number of

FATAL CRASHES

in the United States decreased by 2 percent but

INCREASED BY

52 PERCENT

ON TRIBAL LANDS.

"We're also actively and intentionally trying to build and sustain relationships with tribal communities to address these kinds of issues over the long term," Quick said.

The researchers are reviewing crash data, collaborating with the Advocacy Council on Tribal Transportation, and conducting interviews with key stakeholders. They have collaborative research agreements with four tribal governments: the Red Lake Band of Chippewa, Leech Lake Band of Ojibwe, Fond du Lac Band of Lake Superior Chippewa, and Mille Lacs Band of Ojibwe.

Preliminary findings suggest that tribal transportation safety problems may not be so different from rural safety problems, except for a much greater concern for pedestrian safety.

Many reservation residents, by choice or necessity, travel on foot in the roadway as a way to get around, and several tribal governments are actively promoting walking, jogging, and biking for their recreational and health benefits. However, people feel unsafe because of narrow road shoulders, poor lighting, vegetation, or wildlife. In addition, there are many concerns that drivers who are not from the reservation do not expect or anticipate pedestrians in some locations, as well as concerns about congestion and speeding by non-locals, especially during peak tourism periods.

Tribal transportation leaders have not mentioned alcohol-impaired driving as a top challenge, Quick said, which is a bit surprising given popular perceptions and some previous studies. "We will be continuing to probe that as we develop relationships and trust with them."

The team has also heard themes around enforcement and how it's key not just for supporting safety but also for reporting and monitoring safety issues.

"There are some collaborative issues around data quality, data sharing and barriers to interpreting that data. There are also many jurisdictional and coordination issues relating not only to data sharing but also around setting priorities for safety resources," Quick said.

On this issue, the team is collaborating with RSI researcher Tom Horan. That project is investigating the potential of new advances in GIS and how can it enhance the collection, availability, and use of information related to transportation safety within the tribal environment.

Related Links

Research project page:

http://www.roadwaysafety.umn.edu/research/search/projectdetail.html?id=2015031

Presentation slides from 2015 Roadway Safety Showcase:

http://www.roadwaysafety.umn.edu/events/ conference/2015/documents/01 quick.pdf

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Cut Crashes By Targeting Safety Improvements

Innovator Newsletter, September/October 2015, Volume 9 Issue 50

Data driven safety analysis help agencies make investment decisions

How many crashes on a roadway are too many?

Methods available today can help transportation professionals answer a question that has plagued them for years. Advances in highway safety analysis can provide transportation agencies with the reliable information they need to make smart investments in safety improvements.

Through the Every Day Counts initiative, the Federal Highway Administration is encouraging broader use of two approaches to data-driven safety analysis—predictive and systemic—to better target highway safety investments and reduce crashes and fatalities.

"Resources are scarce these days for all agencies, so we have to use the money we have wisely to help us make the best decisions for safety, for mobility and for our communities," said Hillary Isebrands, FHWA safety engineer.

Planning ahead with predictive approaches

Predictive approaches combine crash, roadway inventory and traffic volume data to provide more reliable estimates of an existing or proposed roadway's expected safety performance, such as crash frequency and severity. Results of the analysis can be used in roadway safety management and project development decisions and safety countermeasure selection and evaluation.

"Predictive analysis can help quantify safety impacts similar to the ways agencies do with construction costs, traffic operations and environmental impacts," said Jerry Roche of the FHWA Office of Safety and a leader, along with John McFadden of the FHWA Resource Center, of the EDC Data-Driven Safety Analysis Innovation Deployment

Among the state highway agencies using predictive safety analysis is the Ohio Department of Transportation, which applied the technique to estimate the expected performance of three alternatives for reconstructing the I-270 and U.S. 33 interchange inulin.

The analysis provided quantitative data that helped the agency choose a preferred alternative during the project's engineering and design stage that addressed both traffic congestion and safety. Construction of the new interchange began in spring 2015.

Taking a broad view with systemic approaches

Systemic approaches screen a road network for high risk features associated with severe crashes, such as certain types of horizontal curves, and identify low cost safety treatments, such as enhanced delineation with wider edge lines or chevrons. These techniques are particularly applicable when a significant number of crashes occur over a wide area, such as on rural and local roads, and for specific crash types, such as those involving vulnerable road users.







Using a systemic approach, the Missouri DOT added edge line stripes to improve safety on rural roads such as Route M in Boone County.

"Instead of implementing high-cost improvements at a small number of locations, agencies can use a risk-based approach to deploy low-cost improvements across the identified portion of the system, which is much more effective in reducing fatalities," said Roche.

Historically, the Missouri Department of Transportation painted centerline and edge line stripes on routes that carry an average of 1,000 or more vehicles a day, while routes with average daily traffic of less than 1,000 received just a centerline stripe.

When a systemic safety analysis found a large number of severe crashes on roads carrying 400 to 1,000 vehicles a day, the Missouri DOT took a proactive approach and painted edge lines on all 7,500 miles that fell in this ADT range. So far, crashes have dropped 15 percent.

(Continued on page 8)

(Continued from page 7)

For information and technical assistance on datadriven safety analysis, contact Jerry Roche and John McFadden.

Resources for Data Driven Analysis

- Mark your calendar for the Advancing Systemic Safety Implementation Efforts webcast from 1 to 3 p.m. ET on November 17. Register at: https://collaboration.fhwa.dot.gov/dot/fhwa/WC/Lists/Seminars/DispForm.aspx?ID=600
- View past webcasts in FHWA's systemic safety webinar series at: http://safety.fhwa.dot.gov/systemic/training.htm
- Watch the EDC Data-Driven Safety Analysis presentation for a discussion of safety analysis approaches and case studies. Go to: https://www.youtube.com/watch?v=z OPWbWDQ94&feature=youtu.be
- See the EDC Exchange: Data-Driven Safety Analysis webcast for details on how agencies are integrating safety performance into highway investment decisions.
 See webcast at: https://www.youtube.com/watch?
 v=z OPWbWDQ94&feature=youtu.be

Check out the following Safety Analysis Tools

Predictive approach tools

- FHWA's Interactive Highway Safety Design Model is a suite of software analysis tools to evaluate the safety and operational effects of geometric design decisions on highways. To view the tools go to: http://www.fhwa.dot.gov/research/tfhrc/projects/safety/comprehensive/ihsdm/index.cfm
- AASHTOWare Safety Analyst software can be used to proactively determine which sites have the highest potential for safety improvement. To visit the website go to: http://www.safetyanalyst.org/
- The Crash Modification Factors Clearinghouse, a web-based database of factors used to compute crash numbers after a safety countermeasure is implemented, can be used to identify appropriate countermeasures for a site. To visit the site go to: http://www.cmfclearinghouse.org/

Systemic approach tools

- FHWA's Systemic Safety Project Selection Tool provides a step-by-step process for conducting systemic safety analysis and a mechanism for quantifying the benefits of systemic safety improvements. To view the tools go to: http://safety.fhwa.dot.gov/systemic/fhwasa13019/
- The U.S. Road Assessment Program's usRAP Tools software is a safety planning tool that enables agencies

to generate a program of improvements for a road network, prioritized on a benefit-cost basis, without the need for site-specific crash data. To download the software go to: http://www.usrap.us/tools/index.cfm



The video can be viewed at: http://www.fhwa.dot.gov/hfl/ innovator/e-version/issue 50/

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Newest Addition to Training Module Series Supports Safety Planning on Tribal Lands

By: Jennifer Warren, FHWA Office of Operations

The "Tribal Transportation Planning Module Training Series" provides modules for eight planning topics, designed to assist transportation professionals responsible for planning for capital, operating, and maintenance needs on tribal lands. The FHWA Office of Planning produced this series, available at: http://www.fhwa.dot.gov/planning/processes/tribal/planning_modules/, to educate tribal planners and decision makers about the tribal transportation planning process and to provide them with useful program information. The series offers modules in transportation planning, transportation programming, intergovernmental relations, and safety and asset management.

The newest module in the series is "Developing a Transportation Safety Plan," available at: http://www.fhwa.dot.gov/planning/processes/tribal/ planning modules/safety/chapter00.cfm. This module provides a brief overview of how to conduct transportation safety planning and describes how tribes can develop transportation safety plans (TSP), which are documents that identify transportation safety issues and strategies to address them. TSPs can cover multiple transportation modes (driving, bicycling, boating, etc.) and multiple types of facilities (roads, trails, water transportation, etc.). TSPs may lead to new projects or programs, renewed efforts within an existing program, or further study of specific locations or safety issues. Transportation safety planning allows tribes to take a proactive approach to prevent crashes and improve unsafe transportation conditions.

For more information on these or other tribal transportation safety resources, please contact Michelle Noch at michelle.noch@dot.gov

For more information on Tribal Transportation Planning go to: http://www.fhwa.dot.gov/planning/processes/tribal/

IMPACTS ON PRACTICE

National Cooperative Highway Research Program

Game-Changing Ideas in Transportation Research

While transformative technologies in transportation often begin simply as ideas, the gap between concept and practice can be formidable. Because the greatest innovations often involve the highest risks, funding for such research can be difficult to obtain. The NCHRP Innovations Deserving Exploratory Analysis (IDEA) program helps inventors take promising but unproven ideas in transportation engineering to the next level.

The next big idea

NCHRP's Highway IDEA program provides grants of up to \$150,000 for eight to 10 projects a year. "We're interested in high-risk but potentially game-changing concepts in transportation," says Jon Williams, IDEA program director. The program is a comple-ment to traditional applied research. "We want to hear the big ideas—those untested but visionary concepts that might not other-wise have a platform to develop," he says.

Created in 1988 as part of the Strategic Highway Research Program, the IDEA pro-gram was transferred to TRB in 1992 and is now funded by state highway agencies via AASHTO. The NCHRP IDEA program, which focuses on highway transportation sys-tems, is one of three active IDEA programs along with Transit IDEA and Rail Safety IDEA.

The NCHRP IDEA program is open to anyone with an innovative idea to solve a highway problem, and so far it has funded or approved 184 projects. Of 162 completed projects, one in six has been successfully commercialized, and many more show great promise.

"For such high-risk projects, we thought one in 10 would be a great success rate," says Inam Jawed, a senior program officer at TRB who manages the NCHRP IDEA program. "So we feel really good about a rate of one in six."

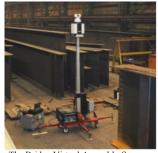
Reducing risk in bridge assembly

One of IDEA's success stories involves the development of a laser measurement system to dramatically increase the efficiency of the way steel bridge girders are assembled.

Developed by Paul Fuchs of Fuchs Consulting in Leesburg, Va., the Bridge Virtual Assembly System allows fabricators to generate 3-D computer models of girders to ensure that they will fit when assembled in the field.

Virtual fitting replaces a laborious manual process that can account for as much as 15 percent of manufacturing costs. It also increases accuracy by providing digital records that are orders of magnitude more detailed than typical paper records.

"Ensuring accuracy is critical to preventing costly errors in which girders get to the field and turn out not to fit," says Fuchs. "This system helps catch errors in the shop, before girders reach the field." When an error is discovered, the system provides precise and traceable documentation of what a fabrica-tor produced, which can be critical to finding out what went wrong.



The Bridge Virtual Assembly System's laser detection allows bridge girders to be fitted via a computer model rather than manually in fabrication shops.

The complexity of this system required development over many years to overcome both technical and institutional hurdles. "A system like this requires buy-in from fabrica-tors, states, and FHWA," says Fuchs, since all three must agree on any changes to standard procedures. That's a process that took more than 15 years, and wouldn't have been pos-sible without the assistance of the NCHRP IDEA program in 2007.

With an IDEA grant, Fuchs was able to test the system at the facilities of steel bridge fab-ricators in Pennsylvania and South Dakota, demonstrating its ability to work in a shop environment.

"The IDEA program was central to get-ting us where we are with the system," says Fuchs, "especially with initial system devel-opment."

The project also led directly to a follow-up pooled fund study in which the system could be put to the test. The system was recently used for the first time to manufacture a bridge in Tennessee, and will be used for a second production job on a bridge in Virginia.

Environmental and performance benefits with bioasphalt

Another IDEA-funded project is helping to address two problems at once: decreasing the environmental impacts of swine farming while producing a better method for incor-porating recycled tire rubber into asphalt.

While using recycled rubber in asphalt is both environmentally friendly and can improve pavement performance, mixing it with asphalt binder can be difficult. The process requires extensive grinding of the rubber, which can reduce the rubber's performance benefits by damaging its structure. These mixtures can also require more energy for heating and pumping, making some contractors reluctant to use them.



An IDEA project has unlikely partners in an effort to improve asphalt modification.

(Continued on page 10)

(Continued from page 9)

IDEA-funded research by Elham Fini of North Carolina A&T State University is us-ing swine manure to help rubber and asphalt work better together by developing a bio-binder alternative to the petroleum-based binder typically used in asphalt. "This binder reacts with the surface of rubber particles to produce a better mixture that is easier to pump and has a longer storage time," says Fini.

The resulting bio-asphalt also reduces con-struction costs and ensures that rubber-based asphalt will perform more consistently. Cost savings come from both the lower costs of using recycled rubber and the fact that farm-ers will pay to have swine manure reclaimed, which is also very beneficial to the environ-ment. Where typical asphalt costs around\$2 a gallon, Fini's bio-asphalt could cost as little as 50 cents a gallon.

While the environmental and cost benefits are important, the project's main goal was to improve pavement performance. "We were looking to develop a better pavement," says Fini. "What we found was a solution that also helps the environment."

With the first phase of the project nearly complete, several companies are showing in-terest in funding further development of the product. "We hope with the help of NCHRP and industry to bring the technology closer to market," says Fini. "The aim is not only to enhance the properties of rubber-modified asphalt but also to facilitate and promote scrap rubber application."

Building a better bridge beam

One of the IDEA program's most successful projects was funded by both the NCHRP IDEA program and the now closed High-Speed Rail IDEA program: developing a hybrid-composite bridge beam for highway and railroad construction. This beam combines concrete, steel, and a fiber-reinforced plastic shell to obtain the best combination of compressive strength, tensile strength, weight, and corrosion resistance.

"Fiber-reinforced polymer composites have long been used to build airplanes, boats, and anything else that benefits from the combina-tion of high strength, light weight, and cor-rosion resistance," says beam inventor John Hillman of HCB Inc. "We had the epiphany that you could combine concrete and steel with advanced composites to create a beam that's really efficient and utilizes material in the most structurally efficient manner."

At about one-tenth the weight of a typical precast concrete girder of the same length, the beam is far less costly to ship and much easier to erect, making it well suited to accelerated bridge construction. It also resists cracking and rusting, reduces the carbon footprint of structures by requiring fewer delivery trucks, and increases bridge service life to more than 100 years.

To date, Hillman's hybrid-composite beam has been installed in 18 highway bridges in nine states and is receiv-

ing tremendous interest internationally. Hillman is convinced that composites will one day be as commonplace in the transportation industry as they are in other industries.

A distinct place in transportation research

The hybrid-composite beam uses a tested technology to make structures lightweight, strong, and corrosion resistant

Moving forward, the IDEA program will continue to play its singular role in the trans-portation research landscape.

"This is a unique program," says Williams. "Instead of simply saying no to unconven-tional ideas that don't fit into their research programs, transportation agencies can send them to us."

"Generally research is funded when it looks promising or is already a proven concept," says Iowa DOT's Sandra Larson, chair for six years of the project panel that oversees the NCHRP IDEA program. "The IDEA program is really unique among transporta-tion research programs in providing

seed money to explore unproven ideas."

It is also noteworthy, she adds, in its level of success. "I'm amazed by the impacts some of the products funded by the IDEA program are making," says Larson. "The program really is making an incredible difference in the transportation world."

A recently published report, Products with an Impact or Potential Impact on Current Highway Practice—Notable Examples (www.trb.org/Main/



The program's annual progress report includes descriptions and updates for all ongoing and completed projects

Blurbs/172600.aspx), highlights com-mercialized and other promising NCHRP IDEA products. Additional information about the NCHRP IDEA program may be found at www.trb.org/IDEA Program/IDEAHighway.aspx.

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National Cooperative Highway Research Program (NCHRP) Report 813

A Guide to Agency-Wide Knowledge Management (KM) for State Departments of Transportation

KM in Practice

What Does It Mean to Implement KM?

KM includes a range of simple and relatively low cost actions that DOT executives can consider to reduce risks, leverage available opportunities for innovation, and ensure that what employees have learned in the course of their careers is shared with newer employees and contemporaries in other organizational units. Techniques include:

- Workforce planning to identify and close gaps between needed skills and existing capabilities;
- Communities of practice that enable less experienced employees to learn from their peers;
- Expertise directories that employees can use to identify who to contact if they have a question;
- Capture of specialized knowledge from employees before they leave the organization;
- Project management methodologies that ensure project teams learn from prior experience and document lessons learned for future efforts; and
- Use of information management methods to ensure that employees can quickly find the information they need to be effective.

Purpose of the Guide

This Guide was developed because KM offers promising solutions to DOT challenges, yet relatively few DOTs have implemented agency-wide approaches to KM.

The Guide is intended to help DOT leaders examine the business case for undertaking or strengthening KM in their agencies. It introduces a variety of KM tools and techniques that a DOT could apply and provides a roadmap for DOTs wishing to experiment or get started with implementing an agency-wide approach to KM. Finally, it provides links to resources that agencies can use to develop and strengthen their KM activities over time

The guide can be viewed at: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_813.pdf



New Mexico Tribe Deploys Innovative Contracting Method

The Pueblo of Acoma Tribe in New Mexico is requesting proposals for a suite of construction projects using the construction manager/general contractor project delivery method. The projects include major work items such as roadway construction, earthwork, retaining walls, accelerated bridge construction, interchange construction, stabilization and paving. The Pueblo of Acoma's goal in using CM/GC is to design and build projects in a way that maximizes the amount of project work that can be accomplished with available funding.

New York Tribal Projects Dedicated

Representatives of the Seneca Nation of Indians gathered on August 21 to dedicate \$32 million in road and infrastructure projects at various Seneca Nation sites in western New York. The event highlighted projects such as the NY Route 5/U.S. 20/NY Route 438 roundabout, NY Route 5/U.S. 20 Bridge, NY Route 438 Bridge and Mile Strip Road Bridge over I-90. Staff from the New York State Department of Transportation, New York State Thruway Authority, localities and FHWA also participated in the ceremony at a pocket park created next to the roundabout.

GRS-IBS Bridge Opens in Arizona

August 21 marked the grand opening of the new Dennehotso Bridge over Laguna Creek in Apache County, Arizona. Crews on the Federal Lands Highway project used geosynthetic reinforced soil-integrated bridge system technology to replace the bridge, which is on a route that serves as a local access road for the Dennehotso Navajo Chapter. The new bridge will enable the narrow stream channel to be widened, resulting in fewer flooding events.



TRANSPORTATION LEGISLATION

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)

New Laws Report 2010-2014

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 5, 2015.



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



Congress.gov

Congress.gov is the official source for federal legislative information. It replaces the nearly 20-year-old THOM-AS.gov site with a system that includes platform mobility, comprehensive information retrieval and userfriendly presentation. It currently includes all data sets available on THOMAS.gov except nominations, treaties and communications. These data sets will be added throughout 2014. Until that time they are still accessible through THOMAS.gov via the link below. THOMAS.gov will be permanently retired by the end of 2014.

To access THOMAS.gov 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 114th Congress (2015-2017) convened on January 3, 2015.

ANNOUNCEMENTS

Senate Passes Six-Year Highway & Transit Bill and Three-Month Extension

U.S. Senators on July 30 passed the "Developing a Reliable and Innovative Vision for the Economy (DRIVE) Act" 65 to 34. The measure would guarantee increased highway and public transportation investment for the next three years and distribute six years of contract authority to the states to aid in long-term transportation planning.

Shuster Eyes Highway Markup by Early October; Funding Unclear

House Transportation and Infrastructure Chairman Bill Shuster said Friday that his committee won't mark up a multi-year highway and transit bill next week and cited the need for a funding plan from the tax-writing Ways and Means Committee to get a bill to move.

Members of the Transportation and Infrastructure Committee told CQ early this week that a markup had been planned for Sept. 17. Shuster, R-Pa., confirmed that the date had been under examination for committee action. Pushing plans for a markup beyond next week reflects the difficulty of negotiations, and with the current highway funding authorization (PL 114-41) expiring Oct. 29, another short-term extension of programs is becoming more likely.

TRANSPORTATION EVENTS

Please visit the National Indian Justice Center web site to view more upcoming transportation events. Go

to: http://www.nijc.org/ ttap_calendar.html

OCTOBER 2015

October 7, 2015



October 11-13

National Transit Institute (NTI): Transit Trainers' Workshop

Loews New Orleans Hotel
New Orleans, LA
For more information go to:
National Transit Institute (NTI): Transit Trainers' Workshop

October 13-15

Pavement Preservation and Recycling Alliance (PPRA) 2015

Sheraton on the Falls
Niagara Falls, ON, Canada
For more information go to:
http://ppralliance.org/meetings/
ppra2015/

October 18-24, 2015



October 27-30

National RTAP's 2015 Conference: Reaching New Heights in Rural and Tribal Transit

Westin Denver Downtown Denver, CO For more information go to: http://nationalrtap.org/conference2015/ October 31-November 4 143rd APHA's Annual

143rd APHA's Annual Meeting and Exposition

McCormick Place Chicago, IL For more information go to: http://www.apha.org/events-and-meetings/annual/presenter-information/call-for-abstracts-information

NOVEMBER 2015

November 4-5

9th University Transportation Center (UTC) Spotlight Conference: Connected and Automated Vehicles

Washington, DC

For more information go to: http://www.trb.org/main/ blurbs/172496.aspx

November 11-15

Disrupting Mobility: A Global Summit Investigating Sustainable Futures

MIT Media Lab Cambridge, MA For more information go to: http://www.disrupting-mobility.org/ #welcome-

November 16-20

2015 National Tribal GIS Conference

Southwestern Indian Polytechnic Institute

Albuquerque, NM

For more information go to:

http://www.tribalgis.com/index.php?option=com_content&view=article&id=74:2013-confere

nce&catid=30:2013tribalgisconference

DECEMBER 2015

December 2-3, 2015

2015 California Transportation Planning Conference

Millennium Biltmore
Los Angeles, CA
For more information go to: http://2015ctpc.org/

December 7-8

2015 National Accelerated Bridge Construction Conference

Hyatt Regency Miami, FL For more information go to: http://www.2015abc.fiu.edu/

JANUARY 2016

January 10-14

TRB 95th Annual Meeting

Walter E. Washington Convention Center Washington, DC

For more information go to:

http://www.trb.org/AnnualMeeting/ AnnualMeeting.aspx

January 29-February 2

ATSSA 46th Annual Convention & Traffic Expo

Ernest N. Morial Convention Center New Orleans, LA For more information got to: http://expo.atssa.com/

SAVE THE DATE

2016 National Tribal Transportation Conference

October 3-6, 2016 Anaheim, California



TRIBAL TRANSPORTATION PARTNERS DIRECTORY

FEDERAL



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 http://www.cflhd.gov/index.cfm

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.

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



TRIBAL TRANSPORTATION PARTNERS DIRECTORY

Western Regional Office

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

NATIONAL

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. www.nltapa.org

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 http://www.nationalrtap.org/

National Center for Rural Road Safety

www.ruralroadsafety.org

National Network for the Transportation Workforce

Southwest Transportation Workforce Center (SWTWC)
Cal State University Long Beach (CSULB)
1000 Studebaker Rd. Suite 3
Long Beach, CA 90815
(562) 985-2875
www.ccpe.csulb.edu/SWTWC

CALIFORNIA

CALIFORNIA DEPARTMENT OF TRANSPORTATION



California Department of Transportation

Division of Transportation Planning, Native American Liaison Branch 1120 N Street Sacramento, CA 95814 (916) 653-3175 http://www.dot.ca.gov/hg/tpp/offices/orip/na/index.html

The Native American Liaison Branch was created in 1999 in the Department of Transportation to serve as a liaison between the Department, federal, state, local, and regional transportation agencies to establish and maintain government to government working relationships with Tribal Governments throughout California.

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.cce.csus.edu/conferences/caltrans/

localAssistance/index.cfm

U.C. Berkeley, Institute of Transportation Studies

109 McLaughlin Hall Berkeley, CA 94720 (510) 642-3585 http://its.berkeley.edu/

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://www.itcn.org/ITCN%20Home.html

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: Jim Nichols

Phone: (775) 829-9022, E-mail: jnichols@tmcc.edu

Program Manager: Heather Lara

Phone: (775) 829-9045, E-mail: hlara@tmcc.edu

Website: http://www.tmcc.edu/ltap/

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/Default.htm

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.

http://www.calact.org/doc.aspx?13

NEVADA

Nevada Department of Transportation (NDOT)

Local Governmental Liaison http://www.nevadadot.com/

Southern Nevada Regional Transportation Commission

http://www.rtcsouthernnevada.com/

Regional Transportation Commission (RTC) of Washoe County, Nevada

http://www.rtcwashoe.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

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

Central Federal Lands Highway Division

http://www.cflhd.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/vdot.html

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/

National Indian Justice Center

http://www.nijc.org/

Roadway Safety Institute

The Roadway Safety Institute is the Region 5 University Transportation Center (UTC) funded through the Moving Ahead for Progress in the 21st Century Act (MAP-21) federal transportation bill passed in 2012. The region includes Minnesota, Illinois, Indiana, Michigan, Ohio, and Wisconsin http://www.roadwaysafety.umn.edu/index.html

Office of Indian Energy and Economic Development

Tribal Energy and Environmental Information Clearing-house (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 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:

<u>http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?</u>
a=49&z=36

National Association of County Engineers (NACE)

To visit the website go to:

http://www.countyengineers.org/

Northern California APWA Chapter

To visit the web site go to:

ENVIRONMENTAL

http://northernca.apwa.net/

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:

http://nepassisttool.epa.gov/nepassist/eismapper/index.html

US DOT FHWA Roadside Vegetation Management

A technical resource for the care of the land and vegetation management.

http://www.environment.fhwa.dot.gov/ecosystems/vegmgmt.asp

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 http://www.epa.gov/statelocalclimate/local/local-examples/action-plans.html

National Highway Traffic Safety Administration (NHTSA)

Final Environmental Impact Statement Corporate Average Fuel Economy Standards, Passenger cars and Light Trucks, Model Years 2011-2015.

To view the document go to

http://www.regulations.gov/#!

documentDetail;D=NHTSA-2008-0060-

0605;oldLink=false

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://meldi.snre.umich.edu/

California Research Bureau

Environment, Growth Management, and Transportation

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:

 $\underline{http://environment.transportation.org/}$

environmental issues/gis/

FHWA-Central Federal Lands Highway Division

Promoting Geosynthetics Use on Federal Lands Highway Projects

To view the study go to:

http://www.cflhd.gov/resources/geotechnical/

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 sates, 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

http://azmemory.azlibrary.gov/cdm/ref/collection/statepubs/id/6877

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)
http://www-fars.nhtsa.dot.gov/Main/index.aspx
FARS Native American Traffic Safety Facts
http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/NA Report.htm

National Institute for Occupational Safety and Health (NIOSH)

Construction Equipment Visibility

http://www.cdc.gov/niosh/topics/highwayworkzones/BAD/

Interactive Highway Safety Design Model -2014 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: http://www.ihsdm.org

Work Zone Law Enforcement

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

http://safety.fhwa.dot.gov/wz/law enforce/

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:

http://safety.fhwa.dot.gov/local_rural/training/fhwasa14072/isrltrst.pdf

Site Safety Analysis – User Guide #1

http://safety.fhwa.dot.gov/local_rural/training/fhwasa14073/isrltru1.pdf

Network Safety Analysis – User Guide #2

http://safety.fhwa.dot.gov/local_rural/training/fhwasa14074/isrltr2.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/policy_guide/

Sign Visibility: Training, Technical Guidance, & Research 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/

Intersection Safety Presentations

30 and 60 minute presentations on the topic of safety at intersections. The presentation is intended to relay safety issues at intersections (including the typical types of crashes) along with some techniques to address these issues.

To view the presentations go to:

http://safety.fhwa.dot.gov/intersection/resources/intsafpst092609/

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:

 $\underline{http://safety.fhwa.dot.gov/provencountermeasures/}$

Resources: Crash Modification Factors in Practice

To visit the website go to:

http://safety.fhwa.dot.gov/tools/crf/resources/cmfs/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:

http://www.workzonesafety.org/taxonomy/term/5606/all

The National Work Zone Safety Information Clearinghouse

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/

3M Roadway Safety

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

SAFETY RESOURCES (Continued)

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:

http://bussafetv.fta.dot.gov/splash.php

Utah DOT and the Utah Highway Safety Office

Zero Fatalities

To visit the web site go to:

http://ut.zerofatalities.com/

The National Work Zone Safety Information Clearinghouse

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

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

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.

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:

http://www.saferoutespartnership.org/media/file/ Local Policy Guide 2011.pdf

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:

<u>http://www.osha.gov/dte/outreach/construction/focus_four/index.html</u>

FHWA

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

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 (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/index.htm

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:

http://www.nhtsa.gov/nhtsa/everyoneisapedestrian/index.html

FHWA

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

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:

http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA WEB REPORT.HTM

FHWA

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/

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:

 $\frac{http://www.cdph.ca.gov/programs/SACB/Pages/}{ItsUp2Us.aspx}$

Centers for Disease Control and Prevention (CDC)

CDC's WISQARSTM (Web-based Injury Statistics Query and Reporting System) CDC's WISQARSTM (Web-based Injury Statistics Query and Reporting System)

To visit the web site 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/

SAFETY RESOURCES (Continued)

Tribal Transportation Safety

To visit the website go to:

http://www.tribalsafety.org/

CONSULTATION

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

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:

 $\underline{http://www.transportationresearch.gov/rppm/default.aspx}$

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

Research Hub Website

A searchable database of the latest U.S.DOT-sponsored research, development and technology projects

To visit the website go to:

http://ntlsearch.bts.gov/researchhub/index.do

FHWA

National Highway Specifications

Clearinghouse and electronic library. Current specifications, construction manuals and drawings.

For more information go to:

www.specs.fhwa.dot.gov

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/

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/

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:

http://www.cflhd.gov/programs/techDevelopment/geotech/SNAP/

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

In Cooperation with the Federal Transit Administration

Planning for Transportation in Rural Areas

To view the guide go to:

http://www.ewu.edu/Documents/CBPA/NWTTAP/

RuralGuidebookfinal 7 10 01.pdf

Office of Planning, Environment, & Realty (HEP)

Livable Communities

To visit the website go to:

http://www.fhwa.dot.gov/livability/

The Federal-aid Highway Program Policy & Guidance Cen-

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/

INVEST (Infrastructure Voluntary Evaluation Sustainabil-

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 proiects.

To visit the website go to:

https://www.sustainablehighways.org/

Tribal Transportation Planning

To visit the website go to:

http://www.fhwa.dot.gov/planning/processes/tribal/

Federal-aid Essentials for Local Public Agencies

To visit the homepage go to:

http://www.fhwa.dot.gov/federal-aidessentials/

Civil Rights: Title VI/Nondiscrimination 17 videos

http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?

category=civilrig

Finance: Administrative Requirements 9 videos

http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?

category=finance

Environment: NEPA Regulatory Framework and Process 17

http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm? category=environm

Right-Of-Way 6 videos

http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?

category=rightofw

Project Development: Required Approvals 19 videos http://www.fhwa.dot.gov/federal-aidessentials/

catmod.cfm?category=develop

Project Construction and Contract Administration: Safety

and Operations 14 Videos

http://www.fhwa.dot.gov/federal-aidessentials/

catmod.cfm?category=construc

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

National Transportation Atlas Database (NTAD) 2015 DVD.

To download the DVD go to:

http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/ publications/national transportation atlas database/2015/ index.html

Construction

To visit the website go to:

http://www.fhwa.dot.gov/construction/

Federal Lands Highway (FLH)

Strategic Transportation Safety Plan Toolkit for Tribal Governments

To visit the web site go to:

http://flh.fhwa.dot.gov/programs/ttp/safety/stsp-

toolkit.htm

FTA

National Transit Data Base

To visit the website go to:

http://www.ntdprogram.gov/ntdprogram/

Strategic Highway Research Program (SHRP 2)

Non-Destructive Testing (NDT) Toolbox

Web-Based electronic repository now available.

To visit the site go to:

http://www.ndtoolbox.org/

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

MORE TRANSPORTATION RESOURCES (Continued)

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/

anmviewer.asp?a=1790&z=95

Research and Innovative Technology Administration (RITA): University Transportation Centers

The Research and Innovative Technology Administration (RITA) coordinates the U.S. Department of Transportation's (DOT) research programs and is charged with advancing the deployment of cross-cutting technologies to improve our Nation'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 web site go to:

http://www.go-explore-trans.org/

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/

 $\underline{Implementing a Traffic SignRetror effectivity Maintenance-}$

Program.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

AASHTO 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.aashtosomguidance.org/

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/

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

National Center for Mobility Management

Focuses on transportation's many customer groups: current and potential riders; employers, economic development 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 web site 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

MORE TRANSPORTATION RESOURCES (continued)

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/Road_Charge.html

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 got to: http://www.tripspark.com/

MAP—21

FHWA

Federal Highway Administration website: Moving Ahead for Progress in the 21st Century

To visit the site go to:

http://www.fhwa.dot.gov/map21/

AP-21 Performance Measurement Requirements To visit the website go to: http://www.fhwa.dot.gov/tpm/

Performance Management Questions and Answers on the Federal Highway Administration's MAP-21 website have been updated. Go to:

http://www.fhwa.dot.gov/map21/qandas/qapm.cfm

FTA

Federal Transit Administration website: Moving Ahead for Progress in the 21st Century

To visit the site go to:

http://www.fta.dot.gov/map21/

California DOT (Caltrans)

Enhanced National Highway System

As per the new federal authorization MAP-21, starting October 1, 2012 the existing National Highway System (NHS) has been expanded to include all Principal Arterials (i.e. Functional Classifications 1, 2 and 3) to the new Enhanced NHS.

To visit the website go to:

http://dot.ca.gov/hq/tsip/hseb/map21nhs.html

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.

Android and IPhone.

To visit the website go to:

http://lifesaver-app.com/

TRANSPORTATION PROGRAMS AND DEVEL-OPMENT



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:

http://www.scribd.com/doc/63745094/Culvert-Technologies-List

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

In partnership with the University of Texas at El Paso, two free web based training courses on Intelligent Compaction and Asphalt Stringless Paving

Intelligent Compaction: http://ctis.utep.edu/

FHWA_TrainingCourse/

Stringless or GPS Based Asphalt Paving: http://ctis.utep.edu/FHWA AsphaltString/

National Transit Institute (NTI)

Rutgers, the State University of New Jersey

Assault Awareness and Prevention for Transit Operators course. Three hours FREE..

For more information go to:

http://www.ntionline.com/courses/courseinfo.php?id=274

National Highway Institute (NHI) 2015

Transportation Asset Management (TAM) Courses. moving Ahead for Progress in the 21st Century Act (MAP-21) mandates that all STATES must have asset management plans in place by 2015.

- 131106 Introduction to Transportation Asset Management
- 131106A Introduction to Transportation Asset Management with Workshop
- 131106B Development of a Transportation Asset
- Management Plan
- 131106C Introduction to the Development of a Transportation Asset Management Plan

To View the course details got to the NHI website: http://www.nhi.fhwa.dot.gov/default.aspx

National Highway Institute (NHI) 2015

Free web-based training:

- New. Introduction to FRP Materials and Applications for Concrete course 130105A
- New. Applying Section 4(f): Putting Policy into Practice course 142073.
- New. National Traffic Incident Management Responder Training course 133126.
- New. Combating Roadway Departures Course 380117. The following updated training is available.
- New 130093W 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 sign of Transportation Geotechnical Features".
- 132094B entitled "LRFD Seismic Analysis and Design of Structural Foundations and Earth Retaining Structures".

To view the course details go to: http://www.nhi.fhwa.dot.gov/default.aspx

National Transportation Training Resource (NTTR)

The National Transportation Training Resource (NTTR) is an online database of information about learning resources for the public-sector transportation workforce. The NTTR is a tool for training managers and frontline transportation professionals.

To visit the website go to: http://www.nttr.dot.gov/

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:

http://www.fema.gov/training/training-tribal-representatives

FHWA Wildlife Vehicle Collision Reduction Study Training Course

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

TRANSPORTAION PROGRAMS AND DEVELOP-MENT (continued)

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:

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp rpt 667.pdf

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.triptac.org/

University of California, Berkeley, Institute of Transportation Studies

Technology Transfer Program
To visit the website go to:
http://www.techtransfer.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:

http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=32&z=36

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:

http://www.fta.dot.gov/newsroom/12910 14467.html

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 workzone 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/web/workzone/

TRIBAL TRANSPORTATION FUNDING RESOURCES

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 Resourcelist.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 Resourcelist.asp

CALIFORNIA



CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

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. 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.

To view the 2015 Cycle 2 applications and progress go to: http://www.catc.ca.gov/programs/ATP.htm
For more information go to:

http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html

Memorandum of Understanding (MOU)

The California Department of Transportation (Caltrans), in consultation with the Governor's Office of Small Business Advocate, have entered into a Memorandum of Understanding (MOU) with the U.S. Small Business Administration (SBA), to offer a technical assistance surety bond guarantee program to promote increased small business participation in this initiative provides a viable means to advance the unimpeded participation of all willing, ready, and able construction contractors and subcontractors, professional architectural and engineering firms, suppliers and truckers, without regard to race, ethnicity, gender, or physical disability to participate in the State's Contracting Program.

For more information contact a Small Business Development Center in your area, or call Linda Madden 919-324-8384; e-mail Linda_Madden@dot.ca.gov

California Department of Resources Recycling and Recovery (CalRecycle)

CalRecycle offers a variety of grant funding opportunities to assist public and private entities in safely and effectively managing California's waste stream.

Application materials forthcoming:

- Beverage Container Recycling Grants.
- Farm and Ranch Cleanup Grants. FY 2015-2016 applications due November 3, 2015 and February 9, 2016.
- Household Hazardous Waste (HHW) Grants.
- Local Enforcement Agency Grants. FY 2016-2017 applications tentatively available Spring 2016.
- Illegal Disposal Site Abatement Grant Program. FY 2015-2016 applications due November 5, 2015, and February 4, 2016.
- Legacy Disposal Site Abatement Partial Grant Program.
 FY 2015-2016 applications due November 5, 2015

TRIBAL TRANSPORTATION FUNDING RESOURCES

FUNDING (continued)

and February 4, 22016.

- Waste Tire Cleanup grants. FY 2016/17 will tentatively be available winter 2015.
- Rubberized Pavement (TRP) Grant Program. **FY 2015- 16 applications due December 2015.**
- Tire-Derived Aggregate (TDA) Grant Program. FY 2015-16 will tentatively be available Fall 2015
- Tire-Derived Product Grant Program.. FY 2015-2016 applications due October 15, 2015

Additional grant information and list of active grants can be found at:

http://www.calrecycle.ca.gov/Funding/

Highway Safety Improvement Program (HSIP)

It is never too early for local agencies to analyze their roadway network to 1) identify their highest crash locations and corridors, 2) consider effective and efficient countermeasures to improve the safety of these locations/corridors, and 3) identify projects that have the highest Benefit-to-Cost ratios. Cycle 8 date to be determined.

http://www.dot.ca.gov/hq/LocalPrograms/HSIP/prepare now.htm

Sustainable Transportation Planning Grant Program

The program was created to support the California Department of Transportation's (Caltrans) current Mission: Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

Deadline to apply for FY 2016-2017 is October 30, 2015 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.

FY 2015 funding to be determined.

For more information go to:

http://www.nevadadot.com/tap/

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.
- 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/

RFP: IDEA Program Announcement 2015:

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 two review cycles in 2015; Transit IDEA proposals are due May 1st and November 2nd, depending on which of the two funding cycles is targeted.
- NCHRP IDEA proposals are due March 1st and September 1st, depending on which of the two funding cycles is targeted.

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.

TRIBAL TRANSPORTATION FUNDING RESOURCES

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:

The IDEA Program

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 will open Spring 2016.

For more information go to:

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

Department of Housing and Urban Development (HUD)

Indian Housing Block Grant Program (IHBG)

Funds appropriated by Congress for the Indian Housing Block Grant Program (IHBG) are made available to eligible grant recipients through a formula. Regulations governing the formula can be found at 24 CFR Part 1000, Subpart D. On April 20, 2007, the Native American Housing Assistance and Self Determination Final Rule was published revising the IHBG Formula.

In brief, the formula has two components; Need and For-

mula Current Assisted Stock. The Need component considers population, income, and housing conditions. The Formula Current Assisted Stock component reflects housing developed under the United States Housing Act (the predecessor of the IHBG program) which is owned and/or operated by the IHBG recipient and provides funds for ongoing operation of the housing.

An Indian tribe may challenge the Need portion of the IHBG formula provided the data are gathered, evaluated, and presented in a manner that is fair and equitable for all participating tribes. Tribes have until March 30 of each year to submit challenges to their Needs data in consideration for the upcoming fiscal year.

For more information go to:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/onap/ihbgformula

Department of Health and Human Services

NICHD Consortium for Research on Pediatric Trauma and Injury Prevention (R24).

The purpose of this funding opportunity announcement (FOA) is to encourage multidisciplinary collaborations to target gaps in research on pediatric trauma and injury prevention. The team science approach encouraged by this FOA could be used to generate a research resource, which may include discovery-based or hypothesis-generative approaches, to advance the relevant area of biomedical research or to devise breakthrough ideas, concepts and approaches to therapies in pediatric trauma and injury prevention research.

Deadline to apply: January 7, 2017

To view the announcement go to:

http://www.grants.gov/web/grants/view-opportunity.html? oppId=261949

Department of Energy-Golden Field Office

Deployment of Clean Energy And Energy Efficiency Projects on Indian Lands-2015.

Through this Funding Opportunity Announcement (FOA), the Department's Office of Indian Energy is soliciting applications from Indian tribes (including Alaska Native regional corporations, village corporations, tribal consortia, and tribal organizations) and Tribal Energy Resource Development Organizations to install (1) facility-scale clean energy and energy efficiency projects and (2) community-scale clean energy projects on Indian lands.

Deadline to apply is December 10, 2015 by 5:00 PM Eastern Time.

For more information go to:

http://www.grants.gov/web/grants/view-opportunity.html?oppId=278838



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.

(Continued from page 3)

Southwest Transportation Workforce Center

The Southwest Transportation Workforce Center (SWTWC) is dedicated to connecting and empowering the 21st Century transportation workforce. SWTWC builds strategic partnerships and engages regional and national stakeholders to develop skilled and career-ready transportation workforce throughout SWTWC's eight member states—California, Nevada, Arizona, New Mexico, Colorado, Utah, Texas, and Oklahoma.

Center Activities:

- Perform labor market analysis and identify workforce and training needs for various transportation sectors
- Evaluate the effectiveness of existing educational materials
- Establish a resource clearinghouse for educators, employers, and those on the transportation career pathway

Focus areas

Corridor management and ITS (freight and people), gateways (ports, airports, border crossings), and language acquisition.

Contact information:

Center for International Trade and Transportation (CITT) At California State University, Long Beach (CSULB) 1000 Studebaker Road, Suite 3
Long Beach CA 90815
www.ccpe.csulb.edu/SWTWC

Director: Thomas O'Brien

(562) 985-2875

E-mail: Thomas.O'Brien@csulb.edu

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(562) 985-2879

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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