



U.S. Department of Transportation  
Federal Highway Administration



CENTER FOR  
**LOCAL AID  
SUPPORT**



# DRIVING INNOVATION FORWARD

## 2024 PERFORMANCE ASSESSMENT REPORT

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# Build a Better **MOUSETRAP**

## **A CELEBRATION OF LOCAL INNOVATIONS**

See the exceptional stories of the frontline workers who use their expertise and creativity to solve everyday problems that improve safety, reduce costs, and increase efficiency.

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# INTRODUCTION

The Office of Innovation and Workforce Solutions (HIT), under the Federal Highway Administration (FHWA), provides transportation professionals with access to a wide range of resources, subject matter experts, innovative technologies, and practices to promote collaboration and encourage the use of innovative solutions in transportation programs. The office also offers training and creates workforce development opportunities for future practitioners.

The Local Aid Support (LAS) team, a unit within HIT, focuses on providing training and technical assistance to local government and Tribal agencies throughout the United States. This is achieved through the implementation of the Local Technical Assistance Program/Tribal Technical Assistance Program (LTAP/TTAP), which is the Highway and Training Program under (USC Title 23-504 (b)). The LAS team collaborates with LTAP/TTAP Centers to promote the use of innovative solutions in transportation programs and provide training and technical assistance. This helps FHWA achieve its primary goal of increasing safety on America's roadways while developing a workforce of the future.

## WHAT IS LTAP?

In every State of the United States, plus Puerto Rico and the Virgin Islands, an LTAP Center exists to offer direct access to transportation resources for local counties, city agencies, and Tribes. These resources aim to improve safety in every community and include training, technical assistance, and support to encourage the use of innovative solutions in transportation programs.

The LTAP Centers are housed within a State Department of Transportation (DOT) or a university. They are integral to developing the transportation workforce by creating access to training and technical assistance necessary for staying up to date with evolving technologies, laws or priorities aimed at improving safety, reducing costs, time, and operational efficiency. For more than 40 years, the success of the LTAP Centers is evident in the more than 38,000 local and rural agencies, focusing on these four primary areas:

- **Safety** – Improve awareness and apply best practices in roadway and worker safety.
- **Infrastructure Management** – Accelerate the implementation of best practices in planning, design, construction, maintenance, management, and operations of the surface transportation system.
- **Workforce Development** – Assist stakeholders attract, retain, and retrain a knowledgeable and skilled transportation workforce.
- **Organizational Excellence** – Deliver efficient services to stakeholders through the effective management of organizational resources, striving for continuous improvement.

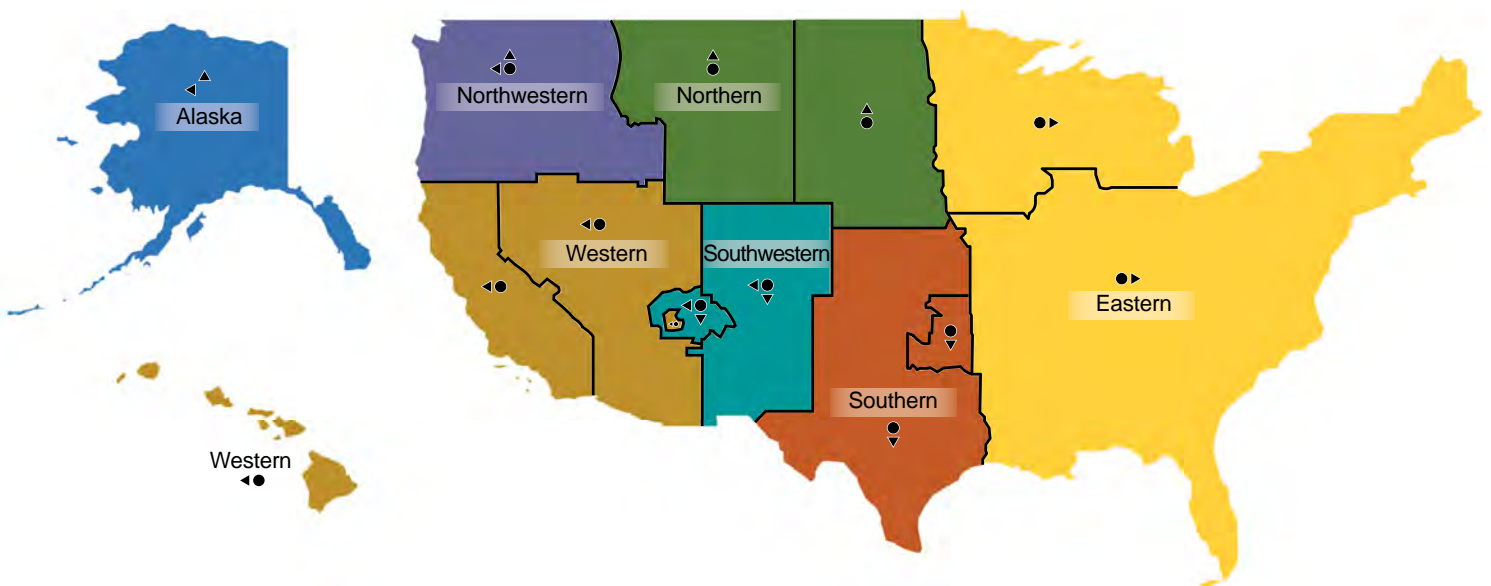
## WHAT IS TTAP AND HOW IS IT DELIVERED?

The Tribal Technical Assistance Program (TTAP) is the Tribal component of FHWA’s Local Technical Assistance Program with a mission to build capacity for Tribal nations to administer and manage their transportation programs and systems. The TTAP is delivered through TTAP Centers that serve as the go-to local resource for American Indian and Alaska Native Tribal governments, offering services that best meet the needs of Tribal communities to fulfill the mission of the TTAP.

In 2023, the “Next Generation of the TTAP” was launched with the return to a regional TTAP Center delivery model to better serve Tribal nations and meet local transportation service needs, re-establishing seven TTAP Centers. The TTAP Centers seek to preserve and enhance Tribal transportation systems by delivering quality training, technical assistance, and technology transfer services. Moreover, the TTAP Centers assist in the performance of Tribal transportation agency duties by operating in a safe, efficient, environmentally sound, and cost-effective manner while also allowing Tribal nations to maximize benefits from their often limited fiscal and staffing resources.

Each TTAP Center is informed by a Steering Committee that provides input on TTAP Center deliverables, including a Needs Assessment and Annual Workplan. The TTAP Center Steering Committee requires a minimum of 50% Tribal representation to provide local, Tribal context and perspective to the TTAP Center Steering Committee and consulted TTAP services. By establishing these relationships with Tribal transportation leaders, the TTAP Centers Strive to deliver quality training and technical assistance more effectively.

### REGIONAL TTAP CENTERS MAP



REGIONAL TTAP CENTERS	ASSOCIATED BIA REGIONS	TTAP CENTER AWARDS
◀● EASTERN	EASTERN & MIDWEST	UNIVERSITY OF WISCONSIN-MADISON
●▼ SOUTHERN	EASTERN OKLAHOMA & SOUTHERN PLAINS	OKLAHOMA STATE UNIVERSITY
◀●▼ SOUTHWESTERN	NAVAJO & SOUTHWEST	LENEA CORPORATION
▲● NORTHERN	ROCKY MOUNTAIN & GREAT PLAINS	NORTH DAKOTA STATE UNIVERSITY
◀● WESTERN	PACIFIC & WESTERN	APPLIED PAVEMENT TECHNOLOGIES
◀▲ NORTHWESTERN	NORTHWEST	UNIVERSITY OF WASHINGTON
◀▲ ALASKAN	ALASKA	UNIVERSITY OF ALASKA FAIRBANKS

## WHAT IS THE PERFORMANCE ASSESSMENT REPORT?

The LTAP/TTAP Performance Assessment Report (PAR) serves to monitor progress, evaluate, and assess outcomes, and recognize achievements. It offers an insight into the LTAP/TTAP Centers' commitment to developing the transportation community through training, encouraging the use of innovation, and advancing road safety across communities. Conducted on a Federal fiscal year basis, the report's data covers the period from October 1, 2022, through September 30, 2023, and focuses on the LTAP Centers due to the absence of reestablished TTAP Centers throughout the reporting period.

More than \$3 million in annual funds are provided from the FHWA and States that provide at least half the funds. This ensures that the FHWA's mission-critical services can meet the vital needs of local agencies and support traditionally underserved portions of the national roadway system.

In fiscal year 2023, FHWA increased the annual allocation for each Center from \$210,000 to "up to" \$350,000. The FHWA (Local Aid Support) LAS team issues a funding distribution via Allocation Memo upon final approval from the Office of Secretary of Transportation (OST). State Planning and Research (SPR) and funds per Section 504(e) provisions can be used by the States to satisfy the 50% match requirement. The LTAP services are either administered directly by the State DOTs or through contracts between States and universities or other entities.



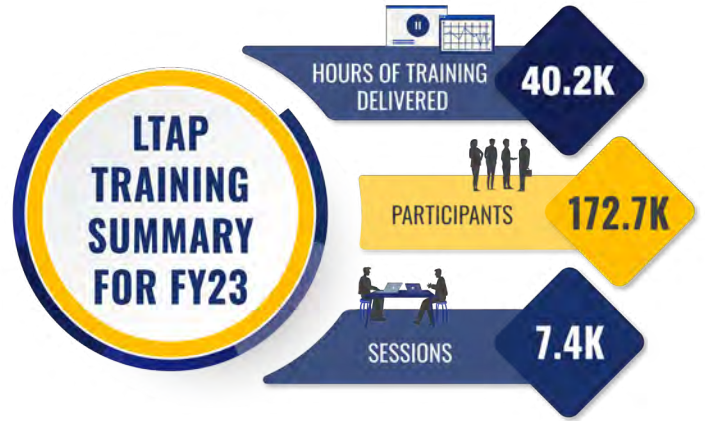
SOURCE: ADOBESTOCK - ANKO\_TER

# 2024 LTAP SUMMARY

## LTAP TRAINING SUCCESS

The LTAP Centers hosted 7,406 training sessions for local government and Tribal agencies in all 51 states. These sessions resulted in a total of 172,661 participants attending and 40,238 training hours to support roadway safety and transportation improvement at the local level.

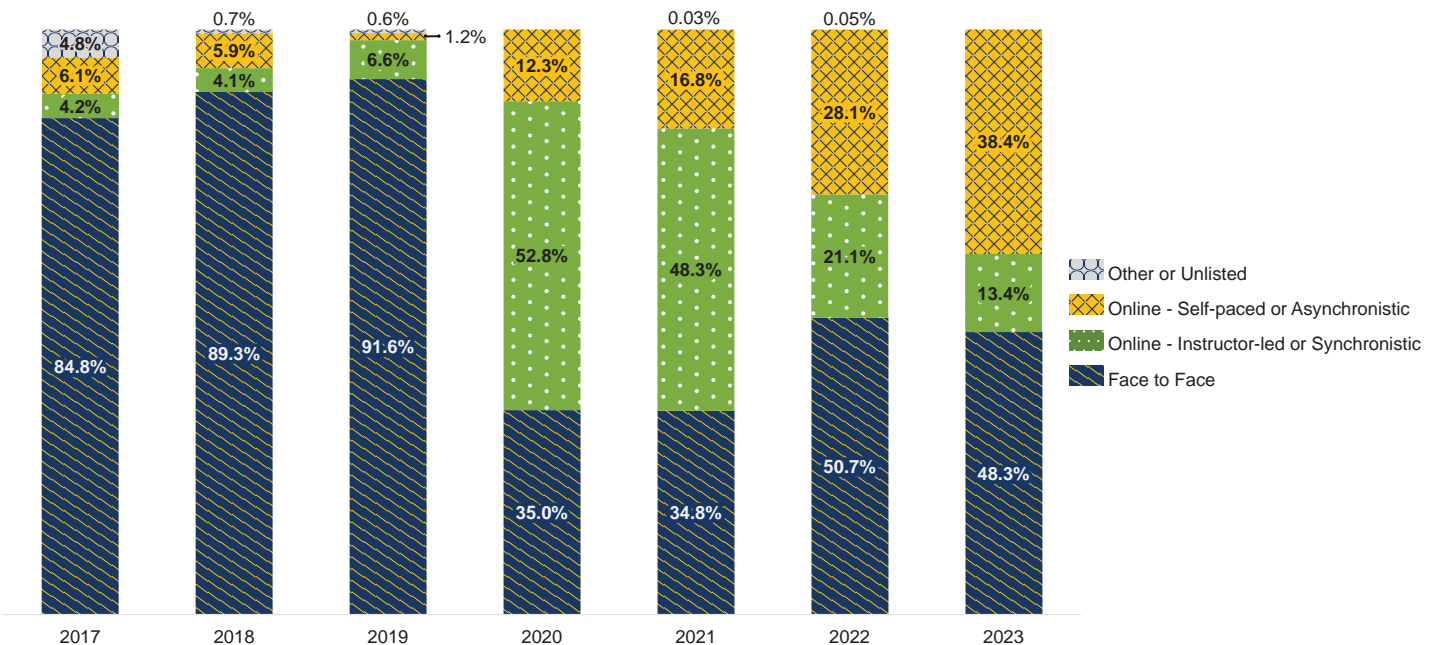
LTAP Centers with a budget of less than \$600,000 per year conducted an average of 129 training sessions, involving 5,581 participants, and totaling 623 training hours. In contrast, LTAP Centers with a budget of \$600,000 or more held an average of 182 training sessions, with 4,370 participants, and 1,063 training hours. The data unequivocally shows that budget differences did not hinder productivity. LTAP Centers with smaller budgets are delivering training and technical assistance at nearly the same rate as Centers with larger budgets. This clearly demonstrates the unwavering commitment of LTAP Centers to making a significant impact on transportation communities across the country.



## TYPES OF LTAP TRAINING

In 2017, the LTAP Centers primarily delivered training in-person at an 84% rate, with online training making up only about 10% of the offerings. This trend continued to rise in 2018 and 2019 until the COVID-19 pandemic prompted a significant shift to online training, with approximately 62% offered in 2020 and 64% in 2021. As we move into 2022 and 2023, post-COVID, the LTAP Centers are decisively reinstating more in-person training. However, it's important to note that online training will remain a crucial component due to its ability to reach a wider audience. Many local agencies are constrained by budgetary limitations, making the online training options more practical for them.

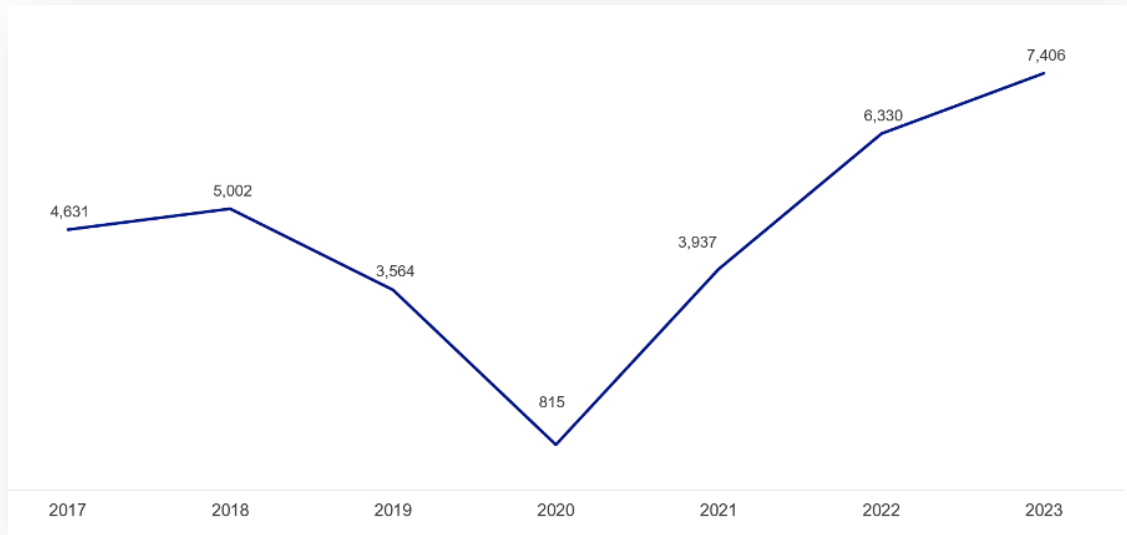
**FIGURE 1: TYPES OF TRAINING OVER TIME**



## TRENDS IN LTAP TRAINING SESSIONS

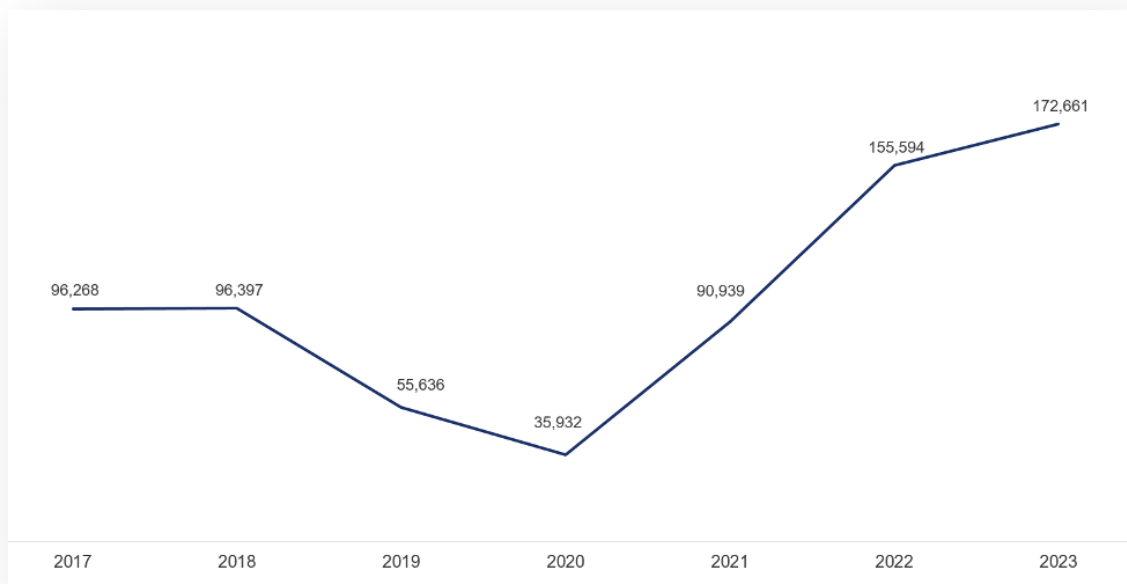
The LTAP Centers have reported a substantial increase in the number of training sessions, training hours, and participants enrolled in their programs. These remarkable figures far exceeded the previous year's levels. **Figure 2** portrays the total number of training sessions over time, based on 100% reporting from the LTAP Centers.

**FIGURE 2 - TRAINING SESSIONS OVER TIME**



The total number of participants in all training, in-person or online, increased from 155,594 in 2022 to 172,661 in 2023 as shown in **figure 3**. Both 2022 and 2023 surpass previous year attendance numbers for LTAP training sessions.

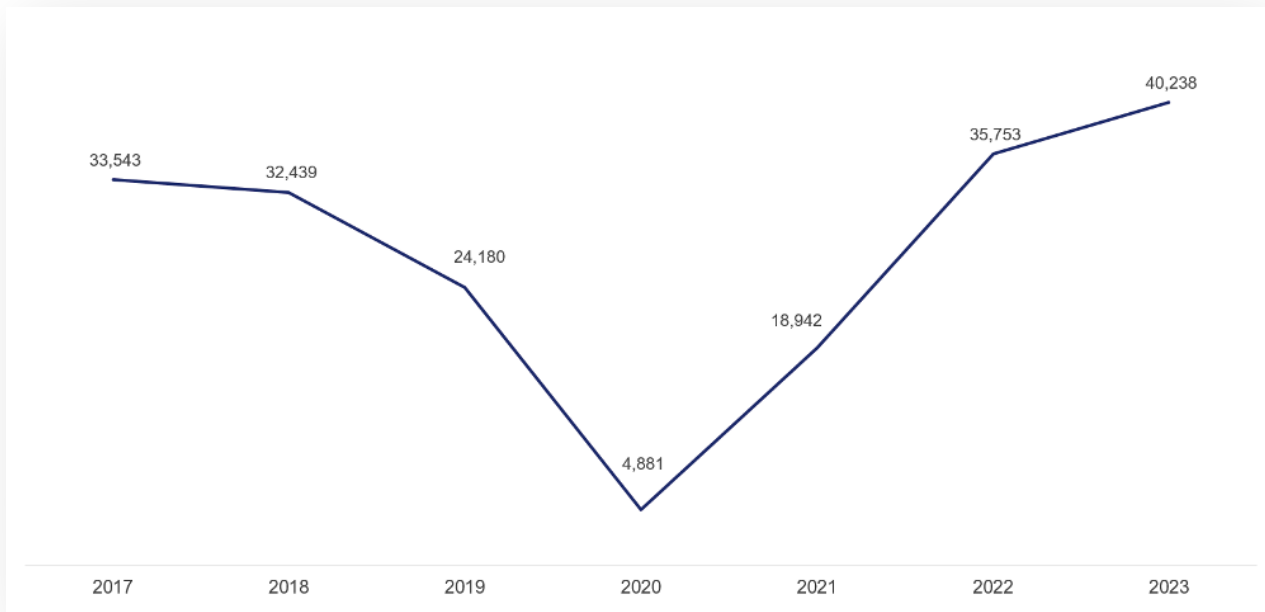
**FIGURE 3 - TOTAL NUMBER OF PARTICIPANTS OVER TIME**





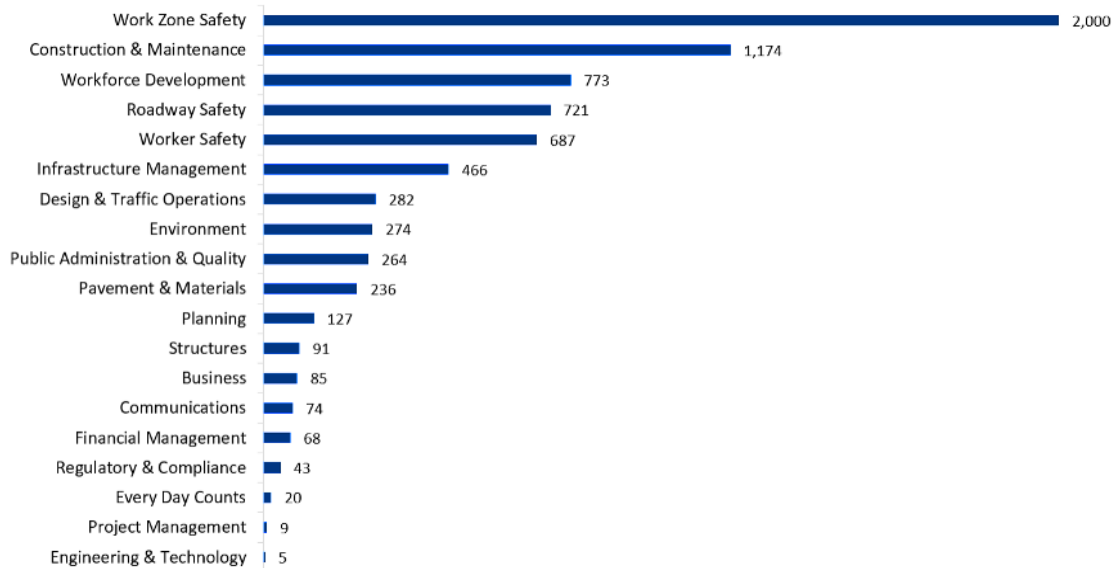
The total number of training hours taken by participants in LTAP programs has increased significantly from the previous year at 35,768 hours as shown in **figure 4**.

**FIGURE 4 - TRAINING HOURS OVER TIME**



Safety is a top priority for the FHWA and the LTAP Centers. This is why it is not surprising that topics such as Work Zone Safety, Roadway Safety, and Worker Safety are leading the top-5 list of training topics offered at the LTAP Centers. The other two leading topics are in the areas of Construction and Maintenance and Workforce Development, which signifies the transportation industry’s commitment to operating more efficiently and building the capacity of transportation workers. **Figure 5** below shows the LTAP Centers offered 2,000 training sessions relative to Work Zone Safety and 1,174 training sessions relative to Construction and Maintenance. The LTAP Centers regularly conduct needs assessments to ensure they are providing training that is required and desired for those front-line workers.

**FIGURE 5 - FISCAL YEAR 2023 NUMBER OF SESSIONS BY PROGRAM TYPE**





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# BIPARTISAN INFRASTRUCTURE LAW (BIL) AND FEDERAL REQUIREMENTS

## Guidance for Local & Tribal Agencies

The 2022 questionnaire by the National LTAP/TTAP Association revealed how LTAP Centers support local government agencies and provided recommendations to the FHWA for necessary support, technical assistance, and training.

### FHWA COMPREHENSIVE TRAINING PROGRAM

In 2023, the FHWA launched an extensive training initiative to aid local and Tribal agencies in securing transportation funding through the BIL. This program, backed by approximately \$567 billion over five years, with \$351 billion earmarked for highway programs, includes:

- Funding Opportunities: Detailed insights on BIL-provided funding for local and Tribal agencies.
- Federal Project Delivery Requirements: Step-by-step guidance on federal project phases and clarifications.
- Application Process: Essential steps from pre-award to post-award phases for Federal projects and BIL grants.
- Available Resources: An overview of the resources available throughout the application, award, and post-award stages.

The inaugural webinar in September 2023 drew in over 1,500 participants and garnered 12,000+ webpage views. The topics covered included funding opportunities, federal requirements, step-by-step application guidance, and a comprehensive resource overview.

### NEW TRAINING SESSIONS AVAILABLE!

The FHWA offers new training to assist local and Tribal agencies in navigating BIL funding and delivering infrastructure projects.

**GET THE SUPPORT YOU NEED TO SECURE FUNDING AND SUCCESSFULLY  
DELIVER YOUR INFRASTRUCTURE PROJECTS!**

**INTERESTED IN LEARNING MORE?**

**WATCH OUR LATEST VIDEO**



<https://www.youtube.com/watch?v=OPVGdDMv4NY>

## LTAP CENTER ACCOMPLISHMENTS

### ALABAMA

The **Alabama Transportation Assistance Program (ATAP)** made a significant effort to enhance communication with stakeholders by establishing a stronger bond with the Association of County Engineers of Alabama (ACEA). They accomplished this by presenting at the ACEA's annual meeting, involving the ACEA president in their conferences, and conducting a Qualtrics survey of their members. Through these initiatives, new outreach activities and topics were identified to better serve the community.

The LTAP worked with ten historically underserved communities in Alabama to enhance pedestrian facilities. The program "Step up Alabama" involves community residents early in the planning process and gathers their input. The goal is to develop "shovel-ready" plans that will help these communities compete for infrastructure funds, leading to the creation of safer, more pedestrian-friendly, and sustainable neighborhoods.



SOURCE: ADOBESTOCK - MIRANDA

### ARIZONA

The **Arizona's LTAP** collaborated with the **Arizona Department of Transportation** web team to enhance the functionality of their LTAP website. Amongst the latest updates is the integrated calendar that allows local agencies to schedule training events in advance, conveniently displayed on the website. Additionally, the team goes above and beyond by proactively reaching out to customers by sending weekly emails that highlight upcoming training opportunities.



SOURCE: ADOBESTOCK - APCHANEL

### CALIFORNIA

The **International Trade and Transportation Center at California State University** is always working with local public agency partners to facilitate more effective and efficient access to and execution of State-managed program funds. This past year, the Center hosted 16 Federal-aid classes and multiple webinars to specifically address LPA program delivery.

The LTAP launched its Sustainable Engineering Training Academy (SETA), a certificate program aimed at transportation construction professionals. The program offers stackable online training in various areas such as fugitive dust management, greenhouse gas emissions, energy management, net-zero structures, and structural health monitoring. The SETA courses are designed to help LPAs in planning for and adhering to California's aggressive air quality, sustainability, and carbon neutrality mandates.

During the second year of the State's participation in the FHWA's national Build a Better Mousetrap (BABM) Innovation Program, "Safe Sightings of Signs & Signals" project from Walnut Creek earned the prestigious 2023 Pioneer Award. This achievement marked the inaugural win for a LPA or Tribe in the national BABM competition.

### COLORADO

The **Colorado LTAP at Front Range Community College** hired a full-time training professional which resulted in a remarkable 142% increase in training compared to the previous fiscal year, with a corresponding 144% increase in registered participants. The recipient of the Colorado Trailblazer Contest for that same year was the Low Deck Equipment Trailer, a creation of the City of Monte Vista, Colorado. This innovative solution has significantly diminished the need for extensive manpower, resources, and time required to transport equipment to work zones, thereby improving the overall efficiency of the process.



## CONNECTICUT

The **Connecticut Training & Technical Assistance Center (T2 Center)** takes great pride in the innovative initiatives of the state's local agencies, particularly highlighting the City of Middletown's commitment to pedestrian safety. Recently, the city's efforts were recognized and awarded a Complete Streets grant by Smart Growth America. The grant is being used to install pedestrian-level crosswalk lighting at the signalized intersection of Grand Street and Main Street, an area that is heavily populated due to nearby residential areas, community centers, restaurants, and retail shops. This project is a result of the city's collaborative efforts between the city, the Complete Streets committee, and the business community with the goal of enhancing pedestrian safety and improving access to community amenities.

In addition, the Connecticut LTAP is diligently gathering and disseminating timely information through our BIL Resource site: [BIL Resources | T2 Center \(uconn.edu\)](#) and through our Connecticut Crossroads newsletters: [CT Crossroads electronic newsletter | T2 Center \(uconn.edu\)](#). The Connecticut LTAP closely collaborated with the Discretionary Program Manager in the FHWA Connective Division Office to gather and share timely information.

## DELAWARE

The **Delaware Center for Transportation (T2 LTAP)** at the **University of Delaware** expanded course offerings for municipal officials. These half-day sessions cover non-engineering topics to help project managers. Topics included the Americans with Disabilities Act (ADA), Streets and Road Maintenance, Drainage, Occupational Safety and Health Administration (OSHA) Safety, Roadway Safety, Traffic calming, and Project Management.

Despite the Delaware Department of Transportation's (DelDOT) responsibility for maintaining 90% of Delaware's roads, the low-clearance railroad bridge on Casho Mill Road in Newark had been frequently struck. In response, DelDOT, the city of Newark, and the consultant community collaborated to install a new overhead system and warning signs in 2022, which have proven highly effective. Since fall 2023, there have been no bridge strikes, and the system has received numerous awards for its innovative safety solution.

## FLORIDA

The **Florida Department of Transportation's (FDOT) LTAP** introduced an online tool allowing users to search for certificates using their email addresses. This new tool enabled access to recorded and live webinars, as well as in-person training, for up to five (5) years, streamlining certificate issuance and inquiries for participants, thereby enhancing efficiency and user experience.

The BABM competition received the highest number of entries to date, highlighting the State's progress in transportation. The competition showcased three (3) distinct innovations: FDOT's District 7 Roadway Design Red Team's modern roundabout, Broward Metropolitan Planning Organization (MPO's) Safety Program, and Lee County Transit's (LeeTran) Bonita Springs Ultra Service. These innovations underscore the State's commitment to enhancing safety, accessibility, and sustainability in its transportation infrastructure.

The LTAP website's "Funding News" page received regular updates on funding opportunities throughout the year, including information about the BIL. These updates were disseminated via email to over 14,000 email contacts, ensuring broad access to vital information.

## GEORGIA

The **Georgia Department of Transportation's LTAP** has introduced a new way of conducting needs assessments at conferences by implementing QR codes. These codes allow participants to easily complete surveys and subscribe to newsletters with a simple scan, enhancing accessibility to resources. This innovation has expanded online resources, including course manuals, saving valuable time and resources. By making these manuals accessible on electronic devices, participants can quickly and conveniently access the information they need. The LTAP encourages everyone to join in their mission to streamline the process and enhance accessibility to resources for all.



## HAWAII

The **Hawaii LTAP** permanently moved to the **University of Hawaii at Manoa's College of Engineering** in early 2023. Following the relocation, they implemented significant changes to keep the community on each island informed about various projects. This included improvements to their website, renewal of their newsletters, and re-establishing their LinkedIn social media communication channel.

To support the community's transportation needs, Manoa's College of Engineering collaborated with the State Department of Transportation, Metropolitan Planning Organization (MPO) and City and County Traffic agencies throughout Hawaii, to organize a 9-month project management training program. The program included monthly 8-hour training courses from February to October 2023 and was highly valued by 30 State, county, and city employees.

## IDAHO

For years, the **Local Highway Technical Assistance Council (LHTAC) Training and Technical Assistance (T2) Center** has been providing training and technical assistance to local agencies to assist with repairing and replacing bridges exceeding 20 feet in length on Idaho's local road network. Their efforts culminated in a significant development, with legislature appropriating \$364 million over two-year period for the Leading Idaho Local Bridge Program.

The first construction-ready project began in October 2022 and was completed in January 2023. LHTAC has improved the delivery of the State-funded bridge program by implementing innovations in design contracting. This involved segmentation of design, geotechnical, and environmental contracts, reducing bottlenecks in specific service areas and ensuring an optimal workload balance through various bundle sizes.

For construction, LHTAC is bundling bridges by geographic location and provided contractors with flexible work schedules, making more attractive projects for them. As a result, LHTAC has become more efficient in Program Delivery. For fiscal year 2022, LHTAC received \$1,868,597.70 for Rural projects, \$6,889,808.36 for Local Bridge projects, \$490,420 for Off-system Bridge projects, \$3,479,314.30 for Safety Projects, and \$2,996,789.23 for Transportation Alternative Projects. This resulted in more Federal aid for local agencies.

## ILLINOIS

The **Illinois Technology Transfer (T2) Program at the Illinois Department of Transportation** welcomed two (2) new employees to the team! Both individuals bring many years of unique experience, which will support the T2 Center and its initiatives. Their presence on the T2 team will help support the ever-evolving mission of bringing the latest knowledge, technical assistance, and training to professionals in roads and highways, municipalities, and transportation across Illinois, ultimately expanding the program's reach to more LPAs.

Additionally, the Technology Transfer Program Manager at the T2/LTAP Center successfully passed the Federal Aviation Administration (FAA) Small UAS (Part 107) test and is now an FAA Certified Drone Pilot. This certification will enable the employee to assist Local Public Agencies (LPAs) in various situations. The LTAP is in the process of purchasing a drone to assist LPAs with bridge inspections, aerial views for flooding, contours, surveying, and other practical uses.

## INDIANA

The **Indiana LTAP at Purdue University** integrated the Technical Advisory Committee (TAC) into its operations. The TAC directs research activities and presents updates to the LTAP Advisory Board, collaborating closely with the research team. With the TAC's guidance, the program delivered a Local Agency Workforce Analysis and Toolkit developed a safer way to inspect roadside signage and provided specialized training for Municipal Separate Storm Sewer System (MS4) personnel to advance stormwater management principles.

The Dubois County Highway Department also designed and manufactured a mobile elevated wash platform, providing a safer and more efficient way for employees to clean dump trucks after snow events, road construction, and other hauling activities. The savings/benefits to the community are that we can keep our highway personnel as safe as possible, which will, in turn, keep them working and strengthen our workforce.

## IOWA

The **Iowa LTAP** at **Iowa State University** made improvements to their communications and outreach activities to generate more interest in their training programs. The increase in outreach and interest benefited the LTAP Center staff by encouraging more efficient allocation of resources and improved planning for sessions.

The LTAP received a record-breaking number of nominations for the State's BABM competition featuring a variety of innovative ideas, such as a hideaway stairwell, excavator snowplow, type 3 barricade weights, culvert inspector, pile bearing tester, guardrail cleaner, and an auger safety valve. The winner of the competition this year was the Clay County entry for their concept of type 3 barricade weight.



## KANSAS

The **Kansas LTAP** at the **University of Kansas** made significant strides in enhancing program delivery by implementing several key initiatives outlined in their strategic plan. The efforts included establishing a comprehensive shared calendar, digitizing printed resources to expand their online library, and meticulously enriching the LTAP contact database. To optimize program delivery, Advisory Board Meetings were increased in frequency, and input was proactively gathered through pre-meeting surveys. This allowed for more focused and productive discussions on "Hot Topics." The unwavering commitment to enhancing program delivery has yielded impressive results. Through strategic actions, it not only increased efficiency but also delivered more impactful outcomes. This dedication to serving the needs of our stakeholders remains as strong as ever, and the LTAP will continue to explore ways to improve and innovate.

At the local level, Saline County Road and Bridge have been setting the bar for innovation in the past several years. Saline County was the 2023 BABM winner for its pioneering approach to reducing high-speed collisions at intersections. Their method involved installing signpost sheeting to stop signs and stop ahead signs county-wide, thus enhancing the visibility of these warning signs.

## KENTUCKY

The **Kentucky Transportation Center** at the **University of Kentucky** embarked on a significant initiative to overhaul its Learning and Event Management Systems. The main objective is to ensure a seamless experience for all participants, enabling easy access to their training records and certifications. Through the automation of registration and payment processes, the LTAP ensures its staff can focus on other important aspects of course development and outreach activities.

The LTAP utilized a phone-based application capable of collecting ball bank data, recording, and logging the data digitally with Global Positioning System (GPS) location. This storage allows for remote assistance of agencies requesting support for establishing advisory speeds. It also eliminates the need for additional personnel to manually document runs and eliminates the need for delivery or shipment of a ball bank indicator from the equipment loan program. Furthermore, it allows data sharing by email or cloud services for quality checks and reviews.

Lastly, the LTAP developed a method for post-processing the data and determining advisory speeds, utilizing a single vehicular run, similar to the commercially available Collision Avoidance Radar System (CARS) methodology. By reducing the number of required runs, data collection times have been significantly reduced. Using GPS locations also enables direct mapping of advisory speed data that can be used to direct signing improvement plans.

## LOUISIANA

The **Louisiana Technology Research Center** made significant strides in enhancing the safety of the State's roadways. Among notable accomplishments was simplifying the renewal process for the Louisiana Parish Engineers and Supervisors Association (LPESA). This not only saved time and effort for the engineers and supervisors but also allowed them to focus on their primary duties of maintaining and improving our roads. In addition, the Center initiated the process of updating and sharing crash data profiles with local stakeholders and regional safety coalitions. This action enabled the State to provide valuable insights into the most common causes of accidents on the State roads and work towards preventing them in the future.

## MARYLAND

The **Maryland Transportation and Technology T2 Center** offered a diverse range of training courses to individuals and organizations, improving the virtual and in-person training programs to meet the evolving needs of the trainees. The program had a significant increase in privately requested courses, which is a testament to its high quality of training. In providing personalized training courses that cater to specific needs, the instructors are equipped to deliver these courses virtually or in-person to ensure that clients continue to receive the best possible training.

SOURCE: ADOBESTOCK - INSTA\_PHOTOS



## MASSACHUSETTS

The **Massachusetts Baystate Roads Program** made significant improvements by adding many training options to its program. The Center added a new course track option to the registration and training database, which allowed bundling multiple existing classes into a specific training curriculum. This feature offers a certificate of completion for each track series. The first track, “Public Works Principles,” is designed as an onboarding tool for new public works employees in municipalities. This track covers the fundamental skills necessary for a successful career.

The LTAP implemented a new monthly automated email system to optimize the billing process. The database support team created this system to promptly notify administrative staff of any outstanding balances from the previous 18 months, ensuring timely collection. The report generated by the system includes the names of the participants, their organizations, class names, and dates, along with the amounts due. This system will significantly reduce the manual workload of staff and streamline the billing process.

In early 2023, the new Knowledge Center Resource Library was introduced. The launch streamlines navigation and content by improving intuitive search functions and allowing quicker access to resources, tools, videos, documents, and more.

The Transportation Terminology outreach video series continues to add new content using Vyond, a video animation creator application. These short (2 min.), informative, and entertaining segments educate the public on transportation terms and concepts frequently encountered in news reports.

Videos can be located here:

<https://vimeo.com/umtc/albums>

The LTAP continues to expand the use of QR codes to streamline access to their materials and resources. The use of QR codes for conducting in-person workshop evaluations has proven to be an effective method for collecting more feedback while simultaneously saving administrative resources. In addition, the Vyond Zoom wait room video incorporates QR codes to raise awareness about their services and direct viewers to relevant webpages, including the training calendar, resource library, Roads Scholar award information, social media, and other pertinent resources.



### MICHIGAN

The **Michigan Center for Technology and Training** adopted advanced technology to improve the experience of large conferences and webinars, making them more accessible to remote audiences. To engage both remote and in-person attendees, the LTAP Center uses Mentimeter and Vevox. While in-person attendance is preferred, virtual attendance has increased due to the flexibility and convenience. With features such as closed captioning, access to digital presentation slides, and robust technical support, remote attendees enjoy a seamless experience. The hybrid conferences and webinars ensure that no one is turned away from sold-out events, promoting greater inclusivity.

### MINNESOTA

The **University of Minnesota Center for Transportation Studies** improved its workforce through increased skill development and training efforts and shifting team member roles to better align their interests with the program work.

The Roads Scholar Program is a notable initiative to equip local agency workers with the knowledge and skills to maintain and improve the road network. The impressive record-breaking number of 46 graduates highlight the program’s effectiveness in achieving its objective. The efforts to ensure local agencies possess the necessary workforce to tackle challenging positions are commendable. The introduction of the “Civil Engineering Technical Level I” certificate will further assist local agency workers in building their careers while contributing to the growth and development of the road network.

### MISSISSIPPI

Located at the **Mississippi Department of Transportation**, the **Mississippi LTAP Center** is dedicated to fostering an efficient and environmentally sound transportation system throughout the State. Its mission encompasses improving the skills and knowledge of transportation providers through training, technical assistance, and technology transfer initiatives. The LTAP successfully provided low-cost training to local agencies and newly elected officials, assisting them to effectively manage their local transportation programs. It continues to build partnerships with the Mississippi Municipal League, American Public Works Association, and Mississippi Association of Supervisors.

### MISSOURI

The **Missouri LTAP Center** at the **Missouri University of Science and Technology** took a significant step forward in streamlining its conference registration process. By working closely with the university’s marketing and communications department, they leveraged the new Cvent license to make the registration process more efficient and straightforward. This new approach eliminated the need for an external individual to manage the link and registration process, resulting in significant time and resource savings.

Notably, the registration process was transformed for the Missouri, Iowa, Nebraska, Kansas (MINK) Local Roads conference in partnership with their State LTAPs. Previously, attendees were invoiced after the conference, which was a tedious and time-consuming process. By providing a registration link, the attendee registration process has become much more straightforward and less confusing. This modification significantly reduced the time required to collect fees from months to just a few clicks, allowing resources to focus on more critical tasks. The commitment to improving the conference registration process demonstrates the dedication to providing the best possible experience for attendees. Moving forward, the LTAP will continue to explore new ways to streamline the processes and enhance the overall conference experience.





SOURCE: ADOBESTOCK - BLAS

## MONTANA

The **Montana LTAP** at **Montana State University** adopted a new database management system developed by X-Catalyst/ESX. This user-friendly system has proven to be successful, especially with the custom reports feature, enhancing the management and administration of the Road Scholar programs. The Road Scholar Programs have again set a new standard of excellence with an unprecedented graduation rate this year. The program awarded 52 Road Scholars and 62 Road Master Awards, bringing the program's historical total to 469 Road Scholar Awards, up by 12.4%, and 83 Road Master Awards, a remarkable increase of 295%. These impressive numbers demonstrate the Road Scholar Programs' commitment to providing top-notch education and training.

## NEBRASKA

The **Nebraska LTAP** at the **University of Nebraska-Lincoln** increased the size of their equipment loan program this year. Through updating and servicing traffic counters and retroreflectometers, as well as an increase in program publicity, the equipment is being utilized more. The initiative also provides local agencies with valuable data to help them manage their assets. In September 2023, the LTAP attended a City Council meeting in Hastings, Nebraska, to present the State's innovation award to a City of Hastings Street Department employee who designed an asphalt hot box to assist them in repairing potholes. The innovative equipment was built from spare parts for a minimal cost and provided an advantage to the street department. Recognizing the employee in the presence of supervisors and elected officials proved beneficial to both the employee and the city while serving as a valuable opportunity for LTAP to gain exposure. Sharing these success stories and spreading information is essential the LTAP mission.

## NEVADA

The **Nevada LTAP** assisted two (2) agencies in implementing a Pavement Surface Evaluation and Rating (PASER) system. Additionally, the LTAP facilitated technology transfer by utilizing the data collected from the PASER activities. The agencies utilized this data to justify the Capital Improvement Plan (CIP) improvements for their roadways. The process resulted in the agencies' enhanced ability to make informed decisions regarding the prioritization of CIP improvements, thereby contributing to the overall safety and functionality of their road networks.

In addition, the LTAP adopted a comprehensive communications plan to foster outreach efforts. As a result, the number of e-blast subscribers, social media followers, and training participants has increased by a remarkable 42%.



SOURCE: ADOBESTOCK - JSM

## NEW HAMPSHIRE

The **New Hampshire LTAP** at the **University of New Hampshire** is dedicated to helping communities work together more efficiently. By streamlining the workshop preparation and check-in process, the need for paper materials was eliminated, except for loaner presentations for open-book exams. Following the workshop's conclusion, attendees receive a follow-up email containing all the necessary documents.

The LTAP also provides branded materials during the workshop that includes a QR code linking attendees to the LTAP website. The website features the new 2023 "Previews" video, which informs attendees of new resources, programs, and other items of interest. This approach has significantly reduced the time required for housekeeping and announcements, saving precious minutes that can be devoted to the actual presentation.

One of the most significant achievements is the release of a salary survey in fiscal year 2023. This survey is based on more than 20 public works titles from various communities in New Hampshire. It provides a breakdown of the results by population size, region, and other subsets. This data helps public works leaders to advocate for pay increases for their individual teams, resulting in many teams experiencing positive impacts from the survey. Overall, the LTAP is dedicated to improving collaboration and efficiency, which has resulted in significant improvements. Attendees can now access all necessary materials digitally, and public works leaders have access to valuable data that can help them support their organizational goals. For communities seeking to streamline their processes, the LTAP is ready to assist.

## NEW JERSEY

The **New Jersey LTAP** at **Rutgers Center for Advanced Infrastructure and Transportation** recently updated the procedures for organizing training events. All staff members are now required to use a standard form that helps provide consistent information for managing online events and posting relevant information on the website. Additionally, the course materials have been revised to ensure they remain up-to-date and effective.

## NEW YORK

The **New York State LTAP (NYSLTAP) Center Cornell Local Roads Program** initiated a series of infographics called "Community Corners". These infographics aim to educate elected municipal officials about their services and how we can assist the public and local highway community and serve as a tool for highway and Department of Public Works (DPW) crews to effectively communicate issues. They have proven to be an effective way to showcase the value of NYSLTAP to the elected boards.

In a specific instance, a local town was asked to install large blocks to prevent drivers from skidding into private property at the bottom of a steep hill. The NYSLTAP assisted them in understanding that a guiderail or a crash cushion would be a more suitable option. After evaluating the site, the town decided to implement a soil berm, which would divert traffic and provide resistance to vehicles entering the yard without becoming a fixed object. The berm also had the added benefit of diverting water and improving the drainage along the road.

SOURCE: ADOBESTOCK - JORDAN CLARKE/PEOPLEIMAGES.COM



## NORTH CAROLINA

The **North Carolina LTAP at North Carolina State University** offers a variety of affordable training courses covering road maintenance, traffic control, and safety. These courses address topics of interest to local agencies and North Carolina Department of Transportation (NCDOT) employees and include work zone safety, pavement maintenance, erosion control, utility cuts, traffic calming, sign retro-reflectivity, heavy equipment operator safety, Occupational Safety and Health Administration (OSHA), and supervisory skills.

The City of Charlotte implemented an innovative approach by using their GeoTab telematics system and Sawatch Labs to identify locations suitable for electric vehicle chargers and to determine which vehicles can be replaced by electric vehicles (EVs) in the future. The suggestions are based on various parameters, such as the time vehicles spend in one place, the number of vehicles located in one place, miles driven per day, and the estimated charging time needed for each cycle. This data also helped initiate conversations regarding vehicle replacement with internal departments that may be hesitant about converting to electric vehicles.

## NORTH DAKOTA

The **North Dakota State University LTAP (NDLTAP)** has taken several steps to improve its training program and better serve its clients. One key initiative is planning training sessions well in advance, affording clients ample time for preparation. Furthermore, the program has broadened its selection of local transportation professionals to encompass a wider range of subject matter expertise for training programs. The Road Scholar program continues to be revised to reaffirm the LTAP's commitment to ensure training topics continue to meet the needs of the state's workforce.

To better serve the needs of various cities, the NDLTAP increased its outreach and technical assistance efforts. The program aims to understand the specific needs of each community and provide comprehensive training to ensure success. It has also strengthened its partnership with the NDDOT Vision Zero program in promoting safer roadways across the State. The program is dedicated to ensuring that individuals reach their destination safely every day.

The Innovation Champions Award Program experienced a steady increase in the number of innovations submitted with the assistance of a staff member. These submissions are well-constructed and strongly emphasize safety for the roadway, public, and workers. The entities submitting these innovations are proud of their work and eager to participate in the program.



SOURCE: ADOBESTOCK - IVANBARANOV

## OHIO

The **Ohio Department of Transportation LTAP** received approval to purchase a tablet and a stand to be used at outreach events such as conference trade show booths (Ohio County Engineers' Association, Ohio Township Association, etc.). The tablet allowed individuals to directly sign-up for the email listserv program, eliminating the need for paper sign-up sheets. In years prior, the LTAP manually entered information upon returning to the office into the listserv program after the conclusion of tradeshow. This investment in mobile technology has significantly reduced staff time and eliminated the human errors caused by illegible email addresses.



SOURCE: ADOBESTOCK - IVANBARANOV



## OKLAHOMA

The **Oklahoma LTAP at Oklahoma State University** implemented hybrid virtual workshops that resulted in a significant increase in attendance. These workshops have been particularly useful for rural areas and smaller counties where budget constraints limit personnel training. The hybrid workshops are designed to combine live instruction sessions with independent online work, providing students with an immersive learning experience. The independent work includes short assignments such as videos, quizzes, and/or readings, which students upload on the Learning Management System. Instructors and peers provide students with immediate feedback on their completed assignments, enhancing the learning experience.

During the live session, students can apply the knowledge they acquired during the independent online work time, and they are expected to participate actively with their peers. The combination of live and independent work sets the stage for collaboration, enabling students to learn from each other's experiences. The workshops have successfully increased attendance from all areas of the State, especially in rural areas and smaller counties where it may not have been feasible to send personnel to regular training.

Students have praised the workshops for their effectiveness and usefulness. One student summarized their experience stating: "... *This program overall is a much better experience than other online courses I've taken over the years. I feel like I am actually learning something useful.*"

## OREGON

Before the onset of the COVID-19 pandemic, the **Oregon Technology Transfer Center's** Roads Scholar Program adhered to a fixed schedule, with specific classes being held annually. However, due to the travel limitations, numerous classes could not be offered virtually, as they demanded indoor or outdoor activities and extensive classroom participation. Subsequently, with the resumption of live classes and the high demand for the eighteen (18) Roads Scholar classes, the department has opted to provide the classes on-demand and enable agencies to host them at their convenience. This approach has been well-received, with some agencies scheduling up to six classes in one week. The program intends to continue offering classes in this manner until 2024. This revised structure ensures that agencies can complete the program at their convenience, ensuring their teams are equipped with the latest knowledge and skills.

## PENNSYLVANIA

The **Pennsylvania Department of Transportation LTAP** continues to enhance its website for a better user experience. This year, they introduced a user dashboard that allows easy access to frequently used website features, such as signing up for technical assistance and training courses.

London Grove Township has developed innovative inlet replacement tools that have proven extremely efficient. These tools allow for the inlets to be lifted from the inside, which means that most inlet tops can be replaced without removing adjacent rolled curbs. Moreover, this approach has helped reduce the size of associated asphalt repairs, resulting in significant cost savings in both material and labor. The new method of inlet top installation is much safer and has led to fewer disruptions to vehicular and pedestrian traffic.

## PUERTO RICO

The **Puerto Rico Transportation Technology Transfer Center** has expanded the scope of its Every Day Counts (EDC) hybrid peer exchange option and BIL Grants Opportunities bilingual training by incorporating new partners from the State, Federal and academia with common transportation needs. These virtual hybrid summits aim to enhance services to our stakeholders.

In collaboration with the Puerto Rico Highways and Transportation Authority (PRHTA), the LTAP Center coordinated the first e-Ticketing Demo Project on the island, held on Freeway PR-52 in the Municipality of Ponce. During the first day of the demo, the project manager, inspectors, and contractor received training using the DOT slip e-Ticketing application by HaulHub Technologies. The next day featured a field e-Ticketing demonstration showcasing the successful delivery, laydown, and compaction of a hot-mix Superpave. Participants from Federal, State, contractor, and academia sectors were involved in the event, with drones utilized to document the process. The highlights of this success story were published in the bilingual Newsletter *El Puente* 2023, Volume 37, Number 2.

## RHODE ISLAND

The **Rhode Island Department of Transportation LTAP (RILTAP)** developed and implemented a Personal Protective Equipment (PPE) Program/Work Zone (WZ) Safety Kit. The program distributed PPE packages that included hard hats, class III safety vests, water bottles, reusable totes, corded earplugs, and uncorded earplugs. Kits also included Rhode Island LTAP brochures and program flyers with additional information. Kits were hand-delivered to 38 of the 39 cities and towns and 1 kit was mailed. This program has encouraged increased communication and participation by and from municipalities that were previously unengaged.

Throughout the year, the Narragansett Indian Tribe participated in this program for the first time, which was a significant achievement for the Rhode Island LTAP. The increased communication and direct outreach helped to achieve this milestone, and it will continue and expand in 2024.



SOURCE: ADOBESTOCK - TONG2530

## SOUTH DAKOTA

The **South Dakota State University LTAP** is committed to proactively combining entities and scheduling training on consecutive days to reduce travel and facilitate the scheduling for neighboring counties and local tribes. This approach is designed to streamline the training process, minimize travel-related costs and time commitments, and foster a more efficient and effective learning environment for all participants. By leveraging the expertise and resources of multiple entities and stakeholders, the LTAP program offers a comprehensive and inclusive training experience that meets the unique needs and challenges of the transportation community.

## TENNESSEE

The **Tennessee Transportation Assistance Program (TTAP)** at the **University of Tennessee Knoxville** achieved success by expanding its outreach through online training initiatives. A notable 86% increase in participants was due to free registration, additional instructors, and a diverse array of topics in online workshops. Although classroom training remains available for specific workshops, online training is a preferred option due to its cost-effectiveness. Despite increased funding positively impacting training efforts, the program now faces the challenges of managing limited time constraints.

The City of Knoxville showcased its “Night Vision” traffic signal controller cabinet specification as part of the Build a Better Mousetrap contest. This specification, characterized by a white interior finish of the cabinet, combined with LED lights, improves the working conditions for traffic signal technicians at night by reducing eye strain and enabling hands-free operation, previously occupied by flashlights.



## VERMONT

The **Vermont Local Roads (VLR)** successfully launched an online New Employee Onboarding Program for road crew employees using the State Transportation Innovation Council (STIC) funding. This program offers new employees the necessary safety awareness training and certification training to ensure they excel in their new roles. A committee of municipal road foremen was assembled to identify the required and desired training for the program. This resulted in the identification of training already in possession, training necessitating modification, and training that would require development. The program, fully available through the Learning Management System, received positive feedback, and with twelve participants working towards completion in the first month, it has proven to be a useful tool for new employees.

To expand the heavy equipment and leadership training options, the VLR established a contractual relationship with Technical Centers that provide heavy equipment and supervisory training. This partnership has been mutually beneficial, increasing the capacity to offer heavy equipment and supervisory training while providing Technical Centers with exposure through the program.

## VIRGINIA

The **University of Virginia Training Academy** has recently expanded its training delivery methods, making it easier for a wider audience to access their programs. What was once limited to in-person and instructor-led online training now includes roundtables through the Safety Circuit Rider Program. These highly popular events cover various safety topics and feature different guest speakers on each occasion. In addition, the academy has added ten Lunch and Learns focusing solely on innovation.

These programs have generated significant interest in the LTAP Center, resulting in a considerable increase in the number of individuals subscribing to the mailing list. The attendance for these programs continues to grow as they expand outreach across the Commonwealth. With these new additions, the University of Virginia Training Academy is demonstrating its commitment to offer high-quality training opportunities that cater to a broader audience.

## TEXAS

The **University of Texas Arlington Division of Enterprise Development (TxLTAP)** personnel met with the Training Director of Fort Worth's Public Works Division to discuss their training needs. The University of Texas at Arlington's Public Works Institute sets limits on grant-funded training courses per city/county to maximize the grant's reach. Fort Worth partnered with nearby cities and counties to create the Fort Worth Regional Training Center, providing consistent training throughout the region. The program offers professional development beyond what one organization could provide. Other Texas cities and counties followed Fort Worth's model. The University of Texas Arlington (UTA's) Public Works Institute aims to maximize TxLTAP's reach and provide high-quality training across Texas.

The City of Arlington (COA) implemented a groundbreaking LiDAR-based system at intersections to enhance traffic safety for all users. The partners in this endeavor were the University of Texas at Arlington and Cepton Technologies Inc., with COA leading the deployment efforts, hardware installation, and network sensor connection while setting up the central data platform for data-driven evaluation. COA provided valuable feedback on system functions throughout the project. The novel aspect of this solution lies in its use of emerging automobile-grade LiDAR sensors, which offer several advantages over traditional radar and video sensors. These benefits include superior detection performance in dark and foggy conditions due to independent firing and reflection of active laser beams; strong perception of slow and stationary objects such as pedestrians and waiting vehicles; and high-quality, future-proof raw data that ensures flexibility in more challenging environments.

## WASHINGTON

The **Washington State LTAP Center** has undergone a series of personnel changes. The arrival of a new training coordinator has prompted a comprehensive review of the Center's processes, including an evaluation of its training database, tracking of past and upcoming needs, and more. As a result of this effort, the Center is executing a novel approach to monitoring its previous training courses. The courses will be categorized by calendar, partners, locations, and other relevant factors to better anticipate and plan for future training. The Center anticipates that this new method will improve efficiency and provide valuable insights into when and how to incorporate additional training in the future.

One of the most noteworthy innovations by a local agency last year was the implementation of virtual road safety assessments. To enhance pedestrian safety, a city conducted several road safety assessments along crucial corridors. The assessments were carried out virtually, using maps and street view imagery, with technical assistance provided by city staff. Video analytics examined crashes and near misses at intersections along the corridors, and this data was shared with a wider group of stakeholders. In addition to the virtual review, an on-site assessment was carried out during evening hours to identify lighting needs and other factors that may have been overlooked during the virtual review.



## WEST VIRGINIA

The **West Virginia Department of Transportation's LTAP** strives to foster a positive, constructive learning environment for public works personnel at all levels. In line with this vision, the LTAP partnered with two (2) statewide workforce development programs, STRIVE WV and YouthBuild, to offer American Traffic Safety Services Association (ATSSA) Flagger Certification classes to individuals who have faced challenges securing or maintaining employment due to substance abuse or educational barriers.

To enhance the quality of the training programs offered, the program established a closer working relationship with West Virginia University (WVU) Extension Services. This collaboration has resulted in the successful delivery of a thirty-minute flash webinar on controlling the spotted lanternfly, which was highly appreciated by the target audience. Based on this success, the LTAP expanded its training offerings to include controlling invasive weeds and pests, a key topic at this past years Roadway Management Conference. This partnership also enabled the LTAP to offer an in-person Roads Scholar I class on "How to Deal with Invasive Vegetation Species." The Center is excited about building on this partnership and identifying new opportunities to deliver high-quality training programs to public works personnel in West Virginia.

## WYOMING

The **Wyoming Technology Transfer Center at the University of Wyoming LTAP** offered more online training opportunities. This included several certification programs and training workshops. All materials certification classes in aggregate, asphalt, and concrete were available online. Previously, participants had to travel to Laramie and spend multiple days to get certified. However, transitioning to online delivery streamlined the operation and made it more cost-effective.

The LTAP also provided ATSSA Flagger Certification classes to all counties in the State. Various counties ordered several on-demand classes, which were delivered by the staff at the counties' facilities to make them cost-effective and reduce travel time.

Additionally, a new online certification program for flaggers was established in collaboration with the Wyoming Department of Transportation and the Associated General Contractors of Wyoming. The program was first tested in 2022 and fully implemented in 2023. Hundreds of individuals from WYDOT and the construction industry were certified for three years through this program.



# 2024 TTAP SUMMARY

## MAJOR TTAP UPDATES

In the Spring of 2023, the Eastern TTAP Center was awarded to the University of Wisconsin-Madison and launched in Summer of 2023. The Eastern TTAP Center will serve Tribal nations in the Eastern and Midwest Bureau of Indian Affairs (BIA) regions. Dedicated to empowering Tribal communities and enhancing Tribal transportation, the Eastern TTAP Center stands to support 72 Tribal nations across its thirty States. The Eastern TTAP Center leadership shares, *“We are committed to forging a brighter, safer future for Tribal transportation through collaboration with Local and Tribal governments, Federal agencies, United Southern Eastern Tribes, Inc. (USET), and dedicated partners. We look forward to the work the Eastern TTAP Center will provide Tribal nations as they stand-up their steering committee in the coming months in partnership with USET and other Tribal transportation affiliated organizations.”*

The Western TTAP Center that was awarded to the National Indian Justice Center (NIJC) in October 2022 was closed in the Spring of 2023 at the request of the NIJC. The Western TTAP Center serves Tribal nations in the Pacific and Western BIA regions. FHWA worked expeditiously to readvertise the Western TTAP Center, and published the Western TTAP Center Notice of Funding Opportunity (NOFO), resulting in the award to Applied Pavement Technologies, INC in Reno, NV in Spring 2024. While the Western TTAP Center was being re-advertised, other TTAP Centers stepped in to assist with interim services, including the Southwest TTAP Center expanding training to Tribal nations in Arizona. This call to services by the other TTAP Centers represents this “Next Generation” of TTAP where we are, “One TTAP- Seven TTAP Centers”, working as a team to deliver quality services to Tribal communities.

The 2023 National Transportation in Indian Country Conference (NTICC) was held in September 2023 in Anchorage, Alaska was the first major national event that

the FHWA TTAP and a TTAP Center partnered on as a major sponsor. The Alaska TTAP Center leveraged the NTICC to outreach to Alaskan natives in attendance to build awareness of their local services and deployed their Needs Assessment survey at their booth. The NTICC offered 90 learning sessions in eight conference tracks, namely Workforce Development, Transit, TTP 101, Safety, Hot Topics, Planning, Leadership and Infrastructure Bill, and Project Management and Maintenance. These conference tracks catered to the transportation-related professional development needs of Indian Country and provided a platform for networking with peers and industry experts.

In Fall of 2023, the FHWA implemented a significant administrative change to the TTAP. The FHWA TTAP Program manager position was moved from the Local Aid Support team at the FHWA HIT to the FHWA Office of Tribal Transportation (OTT) of the Federal Lands Highway to consolidate all Tribal transportation programs under one Office. This strategic move aimed to improve the coordination of Tribal transportation services and foster new opportunities for collaboration in the delivery of OTT and TTAP complementary services.

The TTAP is funded from two program sources: Training and Education (T&E) 23 U.S.C. 504(b) funding managed by the FHWA HIT and Tribal Transportation Program (TTP) 23 U.S.C. 202(d) funding managed by the FHWA OTT and Department of the Interior (DOI) BIA. As the operating agencies FHWA HIT, FHWA OTT and DOI BIA provide guidance, interpretation, and oversight of the respective programs. FHWA and BIA are committed to providing quality customer service to Tribal nations in partnership with TTAP through effective collaboration. The TTAP will coordinate with OTT and BIA on TTP programmatic and regulatory topics; and with FHWA HIT Local Aid Support team on T&E programmatic and LTAP related topics.



## MAJOR TTAP UPDATES - CONTINUED

In this next generation of TTAP, FHWA emphasized partnerships in the cooperative agreements to maximize TTAP funding and services for Tribal nations. In 2023, TTAP Centers began laying the groundwork for these partnerships by beginning coordination with FHWA Offices, BIA and State DOT, and LTAP Centers on trainings and regional workshops. These workshops will be designed to address the specific transportation needs of Tribal communities in their respective regions while maximizing their participation by offering targeted topics. The TTAP Center continue to keep a busy calendar building awareness and conducting outreach for training and technical assistance services.

In January 2024, FHWA held its first TTAP Center Peer Exchange to bring together TTAP Center leadership and staff to discuss specific challenges and successes, and external Federal resources to support the delivery of the TTAP. This is anticipated to be a regional event moving forward.

The Southern TTAP Center held its first Safe Systems Approach (SSA) in Action event in Tulsa, Oklahoma in February 2024. This is the first TTAP led Tribal transportation safety peer exchange in partnership with National Center for Rural Road Safety (NCRR) and the National Highway Traffic Safety Administration (NHTSA). This SSA in Action event will put SSA principles into practice for Tribal members through hands-on-learning opportunities with topics ranging from Tribal Safety Planning to Child Passenger Safety.

The Northwestern TTAP Center also expanded their role at the annual Northwest BIA Symposium held annually in Spokane, Washington in May 2024. The Northwest TTAP Center co-hosted this event with BIA for the first-time and offer trainings on Grants Management 101; Right-of-Way; Murdered Missing Indigenous Women (MMIW); Safety program, data and devices including the Yakama Nation 2023 Build a Better Mousetrap Innovation award winning project for installing a mobile unit for sensing traffic (MUST) sensor.

The Northern TTAP Center hosted the National Tribal Road Maintenance Symposium from May 2024, in Rapid City, South Dakota. This premier event attracted Tribal road maintenance practitioners and staff from the BIA Divisions of Transportation and BIA Regional Tribal Transportation Program. The symposium will provide essential support information and training for Tribal transportation directors, supervisors, planners, office staff, equipment operators, project managers, and other stakeholders.



## TTAP TRAINING HIGHLIGHTS

FHWA TTAP offers courses aimed at providing valuable insights and knowledge regarding infrastructure, safety, and related areas for the Tribal transportation workforce. Under this next generation, FHWA TTAP will be collaborating and coordinating with FHWA OTT, BIA and other Federal partners administering Tribal transportation programs on development and delivery of TTAP trainings offered. Additionally, the TTAP will continue to partner with LTAP Centers and State DOTs on their legacy training programs where applicable.

**Below is a list of TTAP trainings in 2023:**

- Grant Writing and Discretionary Funding
- Road Maintenance: Road Scholar Series
- Dust Management
- Bridge Maintenance
- Geographic Information System (GIS)
- Right-of-Way (ROW): Coordinated with BIA
- Dust Management for Unpaved Roadways
- Tribal Transportation Program (TTP) Data Assessment and Reporting: Coordinated with FHWA OTT and BIA
- NEPA 101: Coordinated with FHWA OTT
- Long Range Transportation Planning (LRTP): Coordinated with FHWA OTT
- RIFDS (Road Inventory Field Data System): Coordinated with BIA
- TTP Management
- Project Management for Road Maintenance Supervisors
- Entry Level Commercial Driver License (CDL)



A FINAL NOTE FROM THE FHWA TTAP PROGRAM MANAGER

***“WE’RE JUST GETTING STARTED!”***

# APPENDICES

## LTAP CENTER LOCATIONS

STATE	CENTER NAME	CONTACT INFORMATION
Alabama	Alabama Transportation Research Institute	<b>Auburn University Transportation Research Institute</b> 1301 Shelby Center Auburn, AL 36849 800.446.0382 <a href="http://eng.auburn.edu/atap/">http://eng.auburn.edu/atap/</a>
Alaska	Alaska DOT & Public Facilities Local Training & Assistance Program	<b>Alaska DOT &amp; PF-LTAP/T2</b> 820 East 15th Avenue Anchorage, AK 99501 907.269.7383 <a href="https://dot.alaska.gov/ltap/">https://dot.alaska.gov/ltap/</a>
Arizona	Arizona LTAP	1130 North 22nd Avenue Phoenix, AZ 85009 602.712.4050 <a href="https://www.azltap.org/">https://www.azltap.org/</a>
Arkansas	Arkansas Technology Transfer Center	<b>University of Arkansas Dept. of Civil Engineering</b> 10324 Interstate 30 Little Rock, AR 72209 501.569.2380 <a href="https://cttp.uark.edu/technology-transfer/index.php">https://cttp.uark.edu/technology-transfer/index.php</a>
California	California LTAP Center	<b>Center for International Trade &amp; Transportation California State University, Long Beach</b> 6300 State University Drive, Suite 255 Long Beach, CA 90815 916.278.4433 <a href="https://www.caltap.org">https://www.caltap.org</a>
Colorado	Colorado LTAP	<b>Front Range Community College</b> 4616 S. Shields St. LBP 144 Fort Collins, CO 80526 970.204.294 <a href="http://www.coloradoltap.org">http://www.coloradoltap.org</a>
Connecticut	Connecticut Training and Technical Assistance (T2) Center	<b>University of Connecticut</b> 270 Middle Turnpike, Unit 5202 Storrs, CT 06269-5202 860.486.5400 <a href="https://t2center.uconn.edu/">https://t2center.uconn.edu/</a>
Delaware	Delaware T2 Center	<b>Delaware Center for Transportation at the University of Delaware</b> 355A DuPont Hall University of Delaware Newark, DE 19716 302.831.6241 <a href="https://sites.udel.edu/dct/t2-center/">https://sites.udel.edu/dct/t2-center/</a>

## APPENDICES - LTAP CENTER LOCATIONS

STATE	CENTER NAME	CONTACT INFORMATION
Florida	Florida LTAP	<p><b>Center for Urban Transportation Research (CUTR)</b>  <b>University of South Florida</b>                      4202 E. Fowler Avenue, CUT100                      Tampa, FL 33620</p> <p>813.974.4450  <a href="https://floridaltap.org/">https://floridaltap.org/</a></p>
Georgia	Georgia Department of Transportation LTAP Center	<p>3993 Aviation Circle                      Atlanta, GA 30336</p> <p>404.507.3437  <a href="https://www.dot.ga.gov/gdot/pages/ltap.aspx">https://www.dot.ga.gov/gdot/pages/ltap.aspx</a></p>
Hawaii	Hawaii LTAP	<p><b>University of Hawaii</b>  <b>Hawaii Department of Transportation</b>                      869 Punchbowl Street #514                      Honolulu, HI 96813</p> <p>808.832.3405 Ext 105  <a href="https://hidot.hawaii.gov/highways/other/hawaii-local-technical-assistance-program/">https://hidot.hawaii.gov/highways/other/hawaii-local-technical-assistance-program/</a></p>
Idaho	Idaho Technology Transfer (T2) Center – LTAP	<p>3330 W. Grace Street                      Boise, ID 83703</p> <p>208.344.0565  <a href="https://htac.org/">https://htac.org/</a></p>
Illinois	Illinois Technology Transfer Center	<p><b>Illinois Department of Transportation</b>                      2300 South Dirksen Parkway, Room 208                      Springfield, IL 62764</p> <p>217.720.2300  <a href="http://idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/technology-transfer-center/index">http://idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/technology-transfer-center/index</a></p>
Indiana	Indiana LTAP	<p><b>Purdue University</b>                      1281 Win Hentschel Blvd, Suite 2111                      West Lafayette, IN, 47906</p> <p>765.494.2164  <a href="https://www.purdue.edu/inltap/">https://www.purdue.edu/inltap/</a></p>
Iowa	Iowa LTAP	<p><b>Institute for Transportation</b>                      2711 S. Loop Drive, Suite 4700                      Ames, IA 50010</p> <p>515.294.8103  <a href="https://iowaltap.iastate.edu/">https://iowaltap.iastate.edu/</a></p>
Kansas	Kansas LTAP	<p><b>University of Kansas</b>                      M2SEC Room G520                      1536 W 15th Street                      Lawrence, KS 66045</p> <p>785.864.5658  <a href="http://kutc.ku.edu/ltap">http://kutc.ku.edu/ltap</a></p>

## APPENDICES - LTAP CENTER LOCATIONS

STATE	CENTER NAME	CONTACT INFORMATION
Kentucky	Kentucky Transportation Center	<p><b>College of Engineering</b> 176 Raymond Building Lexington, KY 40506 800.432.0719 <a href="https://www.kyt2.com/">https://www.kyt2.com/</a></p>
Louisiana	Louisiana LTAP Technology Transfer Center	<p>4099 Gourrier Avenue Baton Rouge, LA 70808 225.767.9717 <a href="http://www.ltrc.lsu.edu/ltap/">http://www.ltrc.lsu.edu/ltap/</a></p>
Maine	Maine Local Roads Center	<p><b>Maine Department of Transportation</b> Sta. 16 Augusta, ME 04333-0016 800.498.9133 <a href="https://www.maine.gov/mdot/mlrc/">https://www.maine.gov/mdot/mlrc/</a></p>
Maryland	Maryland T2 Center	<p><b>University of Maryland</b> <b>A. James College of Engineering</b> 5000 College Avenue, Suite 2217 College Park, MD 20742 301.403.4623 <a href="http://www.mdt2center.umd.edu/home">http://www.mdt2center.umd.edu/home</a></p>
Massachusetts	Massachusetts LTAP - Baystate Roads Program	<p><b>UMass Transportation Center</b> 214 Marston Hall 130 Natural Resources Way Amherst, MA 01003 413.545.2604 <a href="https://www.umasstransportationcenter.org/umtc/baystate_roads.asp">https://www.umasstransportationcenter.org/umtc/baystate_roads.asp</a></p>
Michigan	Michigan LTAP	<p>309 Grover C. Dillman Hall 1400 Townsend Drive Houghton, MI 49931 906.487.2102 <a href="http://www.michiganltap.org/">http://www.michiganltap.org/</a></p>
Minnesota	Minnesota LTAP	<p><b>Center for Transportation Studies</b> <b>University of Minnesota</b> University Office Plaza, Suite 440 2221 University Avenue SE Minneapolis, MN 55414 612.626.1077 <a href="https://mnltp.umn.edu">https://mnltp.umn.edu</a></p>
Mississippi	Mississippi LTAP	<p><b>Mississippi Department of Transportation</b> 401 North West Street 85-01 (PO Box 1850) Jackson, MS 39215 601.359.7685 <a href="https://mdot.ms.gov/portal/ltap/">https://mdot.ms.gov/portal/ltap/</a></p>

## APPENDICES - LTAP CENTER LOCATIONS

STATE	CENTER NAME	CONTACT INFORMATION
Missouri	Missouri Local Training & Resource Center (MLTRC)	<b>Missouri S&amp;T</b> 710 University Drive, Suite 121 Rolla, MO 65401 573.341.7200 <a href="https://mltrc.mst.edu/moltaphome/">https://mltrc.mst.edu/moltaphome/</a>
Montana	Montana LTAP	<b>Montana State University</b> 2327 University Way, Room 340 Bldg. CFT5 Bozeman, MT 59715 406.994.6100 <a href="http://www.montana.edu/ltap/">http://www.montana.edu/ltap/</a>
Nebraska	Nebraska LTAP	<b>University of Nebraska – Lincoln</b> 650 J Street, Suite 215 A Lincoln, NE 68508 402.472.5748 <a href="https://www.ltap.unl.edu/neltap/default.asp">https://www.ltap.unl.edu/neltap/default.asp</a>
Nevada	Nevada LTAP Center	<b>Airport Plaza Office Building</b> 1755 E. Plumb Lane, Suite 264 Reno, NV 89502 775.420.4811 <a href="https://nvltap.com/">https://nvltap.com/</a>
New Hampshire	New Hampshire LTAP	<b>UNH Technology Transfer Center</b> 33 Academic Way, Room W220 Durham, NH 03824 603.862.1362 <a href="https://t2.unh.edu">https://t2.unh.edu</a>
New Jersey	New Jersey LTAP	<b>Center for Advanced Infrastructure and Transportation Rutgers, The State University of New Jersey</b> 100 Brett Road Piscataway, NJ 08854 848.445.2906 <a href="https://cait.rutgers.edu/njltap/">https://cait.rutgers.edu/njltap/</a>
New Mexico	New Mexico LTAP	<b>New Mexico Department of Transportation</b> P.O. Box 1149 Santa Fe, NM 87504 505.277.0767 <a href="https://ltap.unm.edu">https://ltap.unm.edu</a>
New York	New York State LTAP	<b>Cornell Local Roads Program</b> 416 Riley-Robb Hall Ithaca, NY 14853 607.255.8033 <a href="http://www.nysltap.org">www.nysltap.org</a>

## APPENDICES - LTAP CENTER LOCATIONS

STATE	CENTER NAME	CONTACT INFORMATION
North Carolina	North Carolina LTAP	909 Capability Drive Centennial Campus Research Building IV Mailing: Campus Box 8601 Raleigh, NC 27695  919.515.3983 <a href="https://itre.ncsu.edu/focus/ltap/">https://itre.ncsu.edu/focus/ltap/</a>
North Dakota	North Dakota LTAP	<b>Upper Great Plains Transportation Institute                      North Dakota State University</b> 515 1/2 E. Broadway, Suite 101 Bismarck, ND 58501  701.328.9855 <a href="https://www.ndltap.org/">https://www.ndltap.org/</a>
Ohio	Ohio LTAP	1980 W. Broad Street, 2nd Floor Columbus, OH 43223  614.466.7170 <a href="https://www.transportation.ohio.gov/programs/ltap/ltap">https://www.transportation.ohio.gov/programs/ltap/ltap</a>
Oklahoma	Oklahoma LTAP	<b>Oklahoma State University</b> 5202 N Richmond Hills Drive Stillwater, OK 74078  405.744.9907 <a href="http://ltap.okstate.edu/">http://ltap.okstate.edu/</a>
Oregon	Oregon Technology Transfer Center	<b>ODOT Mill Creek Building</b> 555 13th Street NE, Suite 1 Salem, OR 97301  888.275.6368 <a href="https://www.oregon.gov/odot/programs/t2/pages/default.aspx">https://www.oregon.gov/odot/programs/t2/pages/default.aspx</a>
Pennsylvania	PennDOT LTAP	<b>PA Department of Transportation Bureau of Planning and Research</b> 400 North Street, 6th Floor   Harrisburg PA 17120  717.425.5672 <a href="https://gis.penndot.gov/ltap/">https://gis.penndot.gov/ltap/</a>
Puerto Rico	Puerto Rico Transportation Technology Transfer Center	<b>University of Puerto Rico at Mayaguez                      Civil Engineering and Surveying Department</b> Call Box 9000 Mayaguez, PR 00681  787.832.4040 <a href="https://prltap.org/eng/">https://prltap.org/eng/</a>
Rhode Island	Rhode Island LTAP	<b>Rhode Island Department of Transportation</b> Two Capitol Hill Providence, RI 02903  401.463.4144 <a href="http://www.dot.ri.gov/about/riltap.php">http://www.dot.ri.gov/about/riltap.php</a>

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STATE	CENTER NAME	CONTACT INFORMATION
South Carolina	South Carolina Transportation Technology Transfer Service	<p><b>Clemson University</b>  <b>Glenn Department of Civil Engineering</b>                      202 Hugo Drive                      Clemson, SC 29634                      864.656.4183  <a href="https://www.scltap.org/">https://www.scltap.org/</a></p>
South Dakota	South Dakota LTAP	<p><b>South Dakota State University</b>                      11104 9th Street                      Brookings, SD 57007                      605.688.4121  <a href="https://www.sdstate.edu/jerome-j-lohr-engineering/sd-local-transportation-assistance-program">https://www.sdstate.edu/jerome-j-lohr-engineering/sd-local-transportation-assistance-program</a></p>
Tennessee	Tennessee Transportation Assistance Program	<p><b>University of Tennessee – Knoxville Center for Transportation Research</b>  <b>Tickle College of Engineering</b>                      309 Conference Center Building                      600 Henley Street                      Knoxville, TN 37996                      865.974.5255  <a href="https://ttap.utk.edu">https://ttap.utk.edu</a></p>
Texas	Texas LTAP	<p><b>The University of Texas Arlington</b>  <b>Division for Enterprise Development</b>                      140 W. Mitchell Street                      Arlington, TX 76019                      817.272.9617  <a href="https://www.txltap.org">https://www.txltap.org</a></p>
Utah	Utah LTAP Center	<p><b>Utah State University</b>                      4111 Old Main Hill                      Logan, UT 84322                      435.797.2918  <a href="https://www.utahltap.org/">https://www.utahltap.org/</a></p>
Vermont	Vermont Local Roads Program	<p><b>Barre City Place</b>                      219 North Main Street                      Barre, VT 05641                      802.828.3537  <a href="https://localroads.vermont.gov/">https://localroads.vermont.gov/</a></p>
Virginia	UVA Transportation Training Academy	<p><b>University of Virginia</b>  <b>Center for Transportation Studies</b>                      Olsson Hall Room 114                      151 Engineers Way                      P.O. Box 400747                      Charlottesville, VA 22904                      434.982.2897  <a href="http://uva-tta.net/">http://uva-tta.net/</a></p>



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STATE	CENTER NAME	CONTACT INFORMATION
Washington	Washington State Department of Transportation	310 Maple Park Avenue SE Olympia, WA 98504 360.705.7355 <a href="https://wsdot.wa.gov/business-wsdot/support-local-programs/local-programs-training">https://wsdot.wa.gov/business-wsdot/support-local-programs/local-programs-training</a>
West Virginia	West Virginia LTAP	395 Evansdale Dr, Rm 651A P.O. Box 6103 Morgantown, WV 26506 304.293.9924 <a href="https://www.wvltap.org/">https://www.wvltap.org/</a>
Wisconsin	Wisconsin Transportation Information Center	<b>University of Wisconsin – Madison</b> 432 N Lake Street Madison, WI 53706 800.442.4615 <a href="https://interpro.wisc.edu/tic/">https://interpro.wisc.edu/tic/</a>
Wyoming	Wyoming Technology Transfer Center (WyT2/LTAP/TTAP)	<b>University of Wyoming</b> 1000 E University Ave, Dept 3295 Laramie, WY 82071 307.766.6743 <a href="http://www.uwyo.edu/wyt2">http://www.uwyo.edu/wyt2</a>

## APPENDICES - TTAP CENTER LOCATIONS

REGION	BIA	STATES	RECIPIENT	POINT OF CONTACT
Eastern	<b>Bureau of Indian Affairs (BIA) Region(s): Eastern and Midwest</b>	AL, AR, CT, DE, FL, GA, IL, IN, IA, KY, LA, ME, MD, MA, MI, MN, MS, MO, NH, NJ, NY, NC, OH, RI, SC, TN, VT, VA, WV, WI	University of Wisconsin-Madison	<p>Director: David Noyce danoyce@wisc.edu 608.265.1882</p> <p>Associate Director: Andrea Bill bill@wisc.edu 608.890.3425</p> <p>–</p> <p>Local Address 2205 Engineering Hall 1415 Engineering Drive Madison, WI 53706</p> <p><a href="https://ettap.cae.wisc.edu/about/tribes/">https://ettap.cae.wisc.edu/about/tribes/</a></p>
Southern	<b>Eastern Oklahoma and Southern Plains</b>	KS, OK, TX	Oklahoma State University	<p>Director: Kim Johnson kimberly.ann.johnson@okstate.edu 405.744.9907</p> <p>–</p> <p>1201 S Innovation Way Drive Stillwater, OK 74074</p> <p><a href="https://ceat.okstate.edu/extension/ttap/">https://ceat.okstate.edu/extension/ttap/</a></p>
Northern	<b>Great Plains and Rocky Mountain</b>	MT, NE, ND, SD, WY	North Dakota State University- Upper Great Plains Transportation Institute (NDSU-UGPTI)	<p>Co-Director: Ron Hall ronald.hall@ndsu.edu 970.217.9076</p> <p>Co-Director: Bryon Fuchs bryon.fuchs@ndsu.edu 701.328.9857</p> <p>–</p> <p>Bismarck, North Dakota 608 East Boulevard Avenue Bismarck, ND 58505-0700</p> <p><a href="https://www.northernrtap.org/">https://www.northernrtap.org/</a></p>
<b>Western</b> <i>Awarded May 2024</i>	<b>Western and Pacific</b>	CA, HI, NV, UT	Applied Pavement Technology, Inc.	<p>Director: Carrie Brown cbrown@appliedpavement.com 775.345.1999</p> <p>–</p> <p>Airport Office Plaza 1755 E. Plumb Lane, Suite 264 Reno, NV 89502</p>

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REGION	BIA	STATES	RECIPIENT	POINT OF CONTACT
Northwestern	Northwest	ID, OR, WA	University of Washington	<p>Director: Yin Hai Wang yinhai@uw.edu 206.616.2696</p> <p>Associate Director: Margo Hill mhill86@ewu.edu –</p> <p>University of Washington Civil and Environmental Engineering More Hall Room 121F Seattle, WA 98195-2700 <a href="https://nwttap.org/">https://nwttap.org/</a></p>
Alaskan	Alaska	AK	University of Alaska-Fairbanks	<p>Director: Billy Connor bgconnor@alaska.edu 907.474.5552</p> <p>Coordinator: Vicky Wolf vgwolf@alaska.edu 907.474.1989 –</p> <p>1764 Tanana Loop, ELIF Suite 240 PO Box 755910 Fairbanks, Alaska 99775-5910 <a href="https://aidc.uaf.edu/ttap">https://aidc.uaf.edu/ttap</a></p>
Southwest	Navajo and Southwest	CO, NM, AZ	Lenea Corporation	<p>Director: Todd Macalady 480.738.8989</p> <p>Associate Director: Tara Chief 928.637.3571 –</p> <p>100 Sun Ave NE Suite 650 Albuquerque, NM 87109 <a href="https://www.swttap.com/">https://www.swttap.com/</a></p>



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