Photo by: Sam O'Keefe

MISSOURI RURAL TRANSIT ASSISTANCE PROGRAM

MISSOURI RTAP

MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

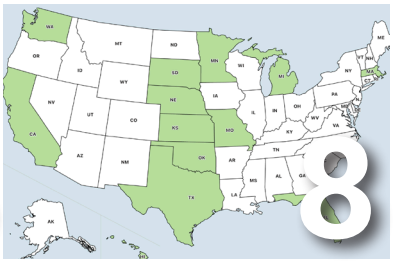
Third Quarter 2025

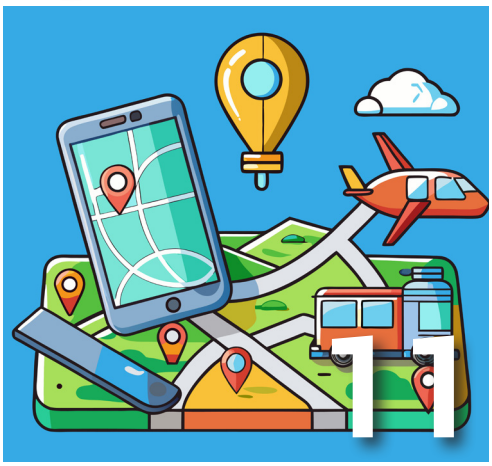
eNEWSLETTER

NEED TRAINING?

Call our office to schedule training for your agency at 573.341.6155.

TABLE OF CONTENTS





The Rural Transit Assistance Program (RTAP) was initiated in 1986 by the Federal Transit Administration (FTA) to provide resources, training and technical assistance to rural transit providers. The Missouri RTAP Center is located at Missouri University of Science and Technology (Missouri S&T) in Rolla. Since April 2012, Missouri S&T has been contracted by MoDOT to manage the RTAP program.

National RTAP
Rural Transit Assistance Program

National RTAP is a program of the Federal Transit Administration dedicated to creating rural transit solutions through technical assistance, partner collaboration and FREE training.

LETTER FROM THE MANAGER

Dr. Heath Pickerill
Missouri RTAP Manager

CONTACT INFORMATION

MISSOURI RTAP
710 University Drive, Suite 121
Rolla, MO 65401

Phone: 1.573.341.6155
Fax: 1.573.341.7245
Email: mortap@mst.edu
Web: mortap.com

MISSOURI RTAP/LTAP STAFF

Heath Pickerill, PhD
Director

Nicole Annis, Ph.D.
Assistant Director

Kristi Barr
Program Coordinator - LTAP
Grant Accountant - RTAP

Tina Monson
Education Program Coordinator

Shelby O'Keefe
Communications Coordinator

John Rice
Contract Instructor

PUBLICATION INFORMATION
Missouri University of Science and Technology

THE FINE PRINT
Missouri RTAP quarterly eNewsletter is published by the Missouri RTAP office located on the campus of Missouri University of Science and Technology. The opinions, findings, and recommendations expressed in this newsletter are not necessarily those of Missouri S&T, MoDOT or the Federal Transit Administration.

DEAR TRANSIT FRIENDS,

I enjoyed seeing many of you at the Midwest Transit Conference on September 3-5 in Kansas City. The conference provided an opportunity for me to share updates on our RTAP training and the data repository, which should be ready for testing in a couple months. I also provided an overview of the Scholarship Reimbursement program for the new transit managers and staff. Since the conference, Tina has received several Scholarship Reimbursement requests from those who attended. If you have not submitted your reimbursement requests for lodging, parking, mileage, per diem, and other conference expenses, please do so as soon as possible. The forms can be found at Missouri RTAP Scholarship Reimbursement Program.

As previously discussed, we are still interested in hosting meetings around the State for 5311 providers. I had tried arranging a couple this summer but did not have a strong response. Therefore, we are planning to schedule some online meetings. In addition, we are still interested in hosting a virtual orientation workshop for new directors. This workshop would allow new transit managers a forum to ask questions, engage in information sharing, and hear about available resources. Please note that National RTAP also has resources for new directors available such as the Transit Managers Toolkit. In addition, we would like to start a mentor program for new managers and other staff where we could help pair individuals with someone in the same or a similar position in another agency. This mentor would be someone who could provide suggestions and share lessons-learned through an informal collaboration. The National Local Technical Assistance Program Association (NLTAPA) has a successful peer-to-peer mentor program that we plan to use as a model.

Please keep the RTAP team informed of any upcoming events your agency will be hosting. We would like to highlight events in upcoming eNewsletters and attend in person if possible. Please feel free to contact me at pickerillh@mst.edu or by phone at 573-341-7637 with any questions, comments, or suggestion. The entire Missouri RTAP staff wish you a wonderful fall season.

Kind regards,

Heath Pickerill,
Missouri RTAP Manager

CONNECTING COMMUNITIES: OPTIONS AND CONSIDERATIONS FOR ENHANCING RURAL TRANSIT

Executive Summary

Connecting Communities: Options and Considerations for Enhancing Rural Transit was developed out of a partnership between the Eno Center for Transportation and the German Embassy to explore different strategies and innovative approaches to providing transit in rural cities and regions. The study examines the persistent obstacles for rural communities to provide equitable, efficient, and financially sustainable transit options and evaluates potential solutions.

Rural areas face a range of challenges in providing public transportation. Rural populations are often older, lower-income, and more likely to have disabilities, which increases the importance of providing public transportation services. However, the low population density, dispersed development patterns, and limited public resources contribute to a high reliance on personal vehicles and difficulty providing high-quality transit at financially sustainable costs. Because of these factors, traditional methods of transit provision, like fixed-route systems, can be ineffective and costly to operate in rural areas. While some rural areas do provide fixed-route service, many areas are seeking other models that prioritize flexibility and lower costs instead of regularly scheduled service routes. These different models include on-demand service, where rides can be scheduled in advance with specific pick-up and drop-off locations, as well as models relying on partnerships with rideshare companies.

In this study, the Eno research team developed a series of case studies of transit provision in communities across the country to evaluate best practices, including the following:

- Fixed-route service: Provided by NRoute in Vicksburg, Mississippi
- On-Demand Microtransit and Fixed Route Hybrid Service: Provided by Bay Transit Express in Virginia
- Uber Transit Partnership: Provided in Kyle, Texas
- Lyft Rideshare Partnership: Provided in Monrovia, California

The report also examines the city of Meridian, Mississippi in greater depth, looking at both transit needs and service provision, and identifying challenges and opportunities for the region. The resulting analysis includes factors that are unique to Meridian as well as considerations that are comparable to other locations.

In analyzing these case studies, the report outlines the strengths and limitations of each transit model, evaluating them through key criteria such as operating costs, rider affordability, service flexibility, accessibility, geographic coverage, and infrastructure needs. It also identifies a range of resources available to rural transit providers, including federal funding opportunities. Beyond funding, the report emphasizes the importance of building public and political support, implementing services strategically, and leveraging modern technology to improve access and usability.

Findings suggest that fixed-route systems remain an important option, particularly in moderately dense areas with centralized destinations, however new approaches to providing on-demand transit – particularly through microtransit providers like Via – offer important benefits

including greater flexibility, shorter wait times, and more inclusive service. Rideshare partnerships, such as those with Uber and Lyft, provide the highest level of user convenience but can be cost-prohibitive and less accessible to individuals with disabilities if not accommodated properly.

Although rural transit presents significant structural challenges, this report offers a practical roadmap for communities to achieve critical transit priorities, outlining available federal resources and comparing different service models, including their respective benefits and trade-offs. With the right tools and support, rural transit systems can improve access to essential services, promote greater equity, strengthen local economies, and enhance overall quality of life.

Rural Transit in the United States

In the United States, approximately 66.3 million people live in census-defined rural areas.[1] The small cities, counties, and regions in which these rural populations live face unique challenges in providing residents access to various needs. These can include basic needs such as employment, healthcare, education, and weekly groceries, as well as overall social inclusion and community engagement. Rural regions are also typically home to older populations, with higher percentages of individuals with disabilities[2] and lower income levels.[3] These three factors are significant indicators of the ability to own or operate personal vehicles, highlighting the pressing need for mobility options in these areas.

While the need for this service is apparent, the implementation of a rural transit system is a difficult task. Rural regions maintain lower population densities, requiring transit operators to cover much larger regions; transit users are sometimes forced to walk greater distances to access pickup points; and low frequency of the service can limit the feasibility of utilizing transit for daily work travel or other needs.[4] Additional challenges, like limited workforce and public support for a system, are also factors.

Ultimately many of these barriers are intertwined and linked to one major thing – funding. Operating a public transit system is costly, and in rural areas, where it is more difficult to operate efficient routes, and where infrastructure and capital are costly and ridership is low, funding becomes an even greater challenge. Compared to urban areas, rural areas tend to have fewer public resources since they have lower incomes and tax bases. Furthermore, they have higher automobile ownership rates which reduces the demand and public support for transit services.

In order to assist in filling the financial gap, for rural and urban regions alike, Congress began subsidizing transit provision in the 1960s through the Urban Mass Transportation Act of 1964. Since this time, various pieces of legislation have improved the allocation of federal funding for transit. Funding for rural transit specifically has been provided since 1978, when the Section 5311 formula funding program was created to provide grants for transit programs in areas with population levels below 50,000 people. In the most recent transportation legislation, the Infrastructure Investment and Jobs Act (IIJA), Congress authorized up to $108 billion for public transportation for fiscal years 2022 through 2026. Within this funding, more than $4.58 billion was allocated to the Section 5311 formula funding program.[5]

Although the COVID-19 pandemic impacted transit operations significantly, as of 2023, there were 1,754 transit agencies operating in rural areas.[6] These systems enable these populations to access the many day-to-day needs and have a better quality of life.

While these operators have all noted the importance of providing some kind of mobility service to residents, there are different types of transit systems which fill the needs of various communities most effectively. There are two main types of transit services in these areas: fixed route and demand response. (A "deviated fixed route service" is a combination of the two where a vehicle operates along a predetermined route with scheduled stops, but allows for the vehicle to deviate from the route to pick up or drop off riders within a defined area.) In addition to those traditional service types, some communities are also experimenting with rideshare solutions. For the purpose of understanding the benefits and effectiveness of each in rural regions, this paper will explore the three methods of provision – fixed route, demand response, and subsidized rideshare programs.

Comparing Rural Transit Options

The primary types of transit services in rural areas are fixed route and demand response, but this paper also explores innovative cities using rideshare partnerships to provide mobility options. For fixed route and demand response service, agencies use a transit bus or van to move passengers. Fixed route is a service where these vehicles are moving on set routes with a set timeline to pick up and drop off passengers at predetermined stops along the route.[7] Demand response service differs in that residents schedule a ride, typically by phone, online, or through a cell phone app, and the service picks up and drops off at locations determined by the user. While some demand response services may require some walking to optimize routes, this solution provides a greater level of

accommodation for riders.[8] This study relies on a case study of fixed route service in Vicksburg, Mississippi and an on-demand example from Bay Transit in Virginia to explore the difference between these two systems.

Rideshare partnerships are emerging solutions which rely on a rideshare service, in partnership with a city, to provide rides to residents through the app service. In this case, Uber's partnership with a city in Texas and Lyft's collaboration with a city in California are the cases explored. Residents rely on an app to call an Uber to their location, and this service delivers them to their destination in a traditional passenger vehicle.

It is worth noting that public organizations that use federal funds to support their fixed route or on demand service are also required by law to provide paratransit service. Paratransit is provided to users with a disability which limits them from accessing the general fixed route service. Under the Americans with Disabilities Act (ADA), for fixed route service, paratransit must be provided, at minimum, within three-fourths of a mile of each side of a bus route, for the same hourly availability, and at no more than twice 4 the general route fare cost. This complementary service enables individuals with disabilities to access similar benefits as the general population, with consideration for any additional mobility challenges.

On-demand service can more easily accommodate paratransit users given that these vehicles operate on a more door-to-door model. Assuming vehicles are ADA accessible, these services can more easily integrate the operations and provide similar levels of service. For the case studies below, the research focuses on comparing the general transit service, with an understanding that each model has varying ability to integrate paratransit service.

Operating Cost

Transit provision is costly. This is a well-known fact in providing this service, and the per capita expense is particularly high in rural areas with large geographic service areas and low population density. The federal 5311 funds are critical for the capital purchases and operations of rural transit systems. Overall, on the cost front, fixed route and ondemand services can be relatively comparable, depending on the overall level of service and other geographic, etc. factors, so it is difficult to definitively determine which outperforms the other. In the case studies discussed in this research, Bay Transit, an ondemand provider, improved efficiency after shifting to an on-demand structure. When considering cost per ride, on-demand services likely also outperform fixed route service in rural areas given the greater level of access for users.

While a rideshare partnership model can be effective and offer a high level of accessibility, this service is costly. At this time, cities engaging in a rideshare partnership serving seniors and individuals with disabilities can be eligible for funding from the Federal Transit Administration (FTA). Costs incurred by contracting with a shared mobility operator can also be eligible for FTA funds. However, FTA funding is not available for "exclusive-ride" services – which largely prevents typical rideshare operators from being eligible.9 In the programs evaluated for this study, the cities with rideshare partnerships are spending nearly $1 million annually on their transportation programs. However, rideshare partnerships can be successful for cities and regions with larger tax bases and a high level of tourism traffic.

Cost to Users

Transit provision is a public service; it rarely breaks even or makes money. Most transit systems are subsidized by various federal, state, and local governments or other community partners. Because of this, the cost to residents typically does not reflect the full cost of the service and instead is a reflection of what service providers opt to charge riders – or how much a local entity is willing to provide in subsidies to riders. In the 5 cases of Vicksburg and Bay Transit operations, these entities charge low rates for service, between one to two dollars per ride. In Kyle, Texas, the city has opted to charge users $3.14 per ride but also caps the subsidy per ride at $10, therefore riders face the possibility that the fare will increase if the ride extends beyond the $10 subsidy cap. On average, the city's subsidy per ride falls below the $10 cap, but there is less certainty in rate as the cost per ride is contingent upon demand for rides at a given time. At this time the city of Kyle offers each resident and visitor 10 trips per month, which could change if popularity and ridership, and therefore costs, of the program increase.

Service Flexibility

The service flexibility category is intended to break down how amenable a service could be to changing schedules and the personal needs of users. With a fixed route system riders know that the service operates at certain times throughout the day – whether that is every 45 minutes, hourly, or on another timeline. Overall, the ability to cater to a specific schedule is very limited. An on-demand system does offer more flexibility in that a person can schedule a ride to a specific time that coordinates with their scheduling needs. Systems can vary here as some on-demand services require scheduling 24 hours in advance of the ride time. Others can accommodate rides in as little as 10-15 minutes, more closely mirroring a private rideshare timeline.

When comparing across the board, a rideshare partnership program does provide the greatest level of flexibility. These services operate as an on-demand system with less consideration for other riders and specific routes. While this is the case, a rideshare partnership is contingent upon the availability of drivers, meaning that an area with a lower population may not have the drivers available to respond to demand on a short timeline – or at all.

Level of Accessibility and Service Reach

Level of service measures the service experienced by users, considering factors like wait times, travel time, and comfort. Accessibility is a consideration within level of service, it is discussed independently here as the populations utilizing rural transit are often older or disabled. Accessibility is particularly important in these areas as required walking distance to bus stops can potentially be much greater distances – with populations of varying levels of ability.

A service functioning on a fixed route is often not able to pick users up near their front doors, and the locations someone can access once they are on a transit vehicle are also more limited. In rural areas, particularly those without town centers or high-density destinations, this leaves many riders outside a walkable distance to access the transit 6 services at the point of origin or from the closest stop to their destination, and therefore unable to rely easily on the service.

On-demand and rideshare models can offer much greater coverage and accessibility. While an on-demand service may require able-bodied individuals to walk a certain distance to a pickup point, both services function by picking up and dropping off at a pre-determined point. Transit provision of this nature may be more likely to provide accessibility needed for elderly people and others with limitations, while minimizing negative impacts from weather elements, and enhancing the overall comfort and ease of a transit experience. Additionally, because rides can be scheduled for specific times, these individuals are likely to experience lower waiting times and greater time reliability for pickup and drop off, further enhancing overall comfort.

Infrastructure and Capital Requirements

Different service types have differing infrastructure requirements, which may include the physical infrastructure needed at bus stops like benches, covering, stop signage, and other materials, as well as vehicles, bus depots, and maintenance facilities. Fixed route services require physical bus stop infrastructure as well as vehicles. For on-demand service, the requirements for infrastructure at a physical bus stop may be lower, but there are still vehicle needs. Compared to fixed route and on-demand services, the rideshare partnerships do not require the physical infrastructure costs given that rideshare functions by drivers utilizing personal vehicles.

In addition to these physical infrastructure costs, each of these services have some level of digital infrastructure, technology, and other administrative costs. While not required, fixed route services often offer some kind of smartphone application. On-demand and rideshare utilize a smartphone application in ideal situations. For an on-demand service, there would be early capital requirements to build out an application for trip scheduling, and a rideshare service would, at minimum, require some backend application adjustments to integrate subsidies into rides. It is likely a rideshare partner would design a corresponding application for program participants to utilize, as is the case with the partnership between Uber and Kyle, Texas.

Some of these capital requirements are eligible to be covered with Section 5311 funding, like physical bus stop infrastructure and vehicle needs, but local match requirement still exists for servicers.

Funding Rural Transit

As discussed above, funding transit in rural areas is a significant challenge. The FTA maintains a few formula funding programs to aid rural areas in providing transportation services. The primary program for providing these services is Section 5311 Formula Grants for Rural Areas, but there are additional situational funding streams from FTA available through programs like Section 5310 Enhanced Mobility of Seniors, Individuals with Disabilities and Section 5399(c) Low or No Emission Grant Program, as well as some Federal Highway Administration (FHWA) programs.

Section 5311 Formula Grants for Rural Areas

Section 5311 funds provide capital, planning, and operating assistance to states and federally recognized Indian tribes in rural areas with populations below 50,000. These funds are allocated at the state level and then distributed down to governmental authorities, tribal governments, nonprofit organizations, and other eligible recipients for the provision of public transit and intercity bus service.[10]

These funds can be used to pay for up to 80 percent of the cost of capital projects and up to 50 percent of operating costs. Additionally, the federal coverage for paratransit service costs is up to 80 percent.[11]

To read the rest of the article, visit: enotrans.org/wp-content/uploads/2025/07/Rural-Transit-Report_V3.pdf

Rural and Tribal Transit Compendium of Best Practices

This map contains best practices for State and U.S. Territorial RTAPs and Tribal Transit Systems.

This is an update of our original State of the States article. If your RTAP or Tribal Transit System has a best practice to contribute, please contact info@nationalrtap.org or add it to our Padlet.

Major Benefits

Specific benefits that can be attributed to RTAP include:

- An increase in the skill levels and professionalism of rural transit system employees through increased training and technical assistance, especially in the area of safety.
- An improvement in the capacity of states to address the training and technical assistance needs of their rural operators, and to respond to new federal regulations in the areas of ADA, CDL and drug testing.
- An improvement in the functioning and useful life of rural transit system vehicles through an increased focus on procedures for vehicle procurement, vehicle inspection and inventory, and vehicle maintenance and repair.
- A reduction in the cost of insurance for rural transit systems through increased driver training and creation of statewide risk purchase programs.
- A heightened support for the coordination of public, private, and specialized and human service transportation services through increased creation of state-level coordinating councils, training in private sector initiatives, and rural connector assistance.
- An improvement in the overall effectiveness of rural transit systems through increased operations and management training, peer-to-peer exchanges, automation of management information systems, and peer performance reviews.

UPDATE MISSOURI:

Instructors train at agency locations on request. Scholarship reimbursement is as streamlined and quick as possible by maintaining a review and approval process and providing timely responses to all scholarship applications. Subrecipients can apply for scholarships for training conducted in-house, in-state, or out-of-state. Approximately 76 virtual and in-person courses classes are listed on the training website, broken down by LTAP, RTAP, community resilience, and soft skills. Innovative courses include a director's mentoring program, backing safety, fatigue awareness for drivers, night and winter driving, and sexual harassment. Missouri provides on-demand training to 5311 agencies.

For the full interactive map:
nationalrtap.org/Resources/Best-Practices-Compendium

State RTAP Manager's Peer Roundtable Summary

Our Summer 2025 State RTAP Manager Peer Roundtable was based on questions that State RTAP Managers asked within the past year, including discussions during National RTAP/State RTAP 1:1 outreach calls.

There were 13 attendees; the states that participated were Alaska, California, Florida, Massachusetts, Missouri, Minnesota, New Hampshire, Oklahoma, South Dakota, and Washington. The icebreaker question was, "What do you have growing in your garden?". Answers included flowers, snap peas, basil, pickles (or at least cucumbers), zucchini, dahlias, peace lilies, tomatoes, and of course, dandelions.

Q: How do you find the best trainers?

A: Missouri RTAP has had the same trainer, John Rice, who was a DOT employee, since they were granted the contract in 2012. They allow agencies to use RTAP funds to attend training conferences and purchase training materials. Oklahoma doesn't have their own trainers but gives subrecipients RTAP funds to travel for training. They also have monthly meetings with each of their 5310 and 5311 subrecipients, where one of their project managers presents a training that was drawn from an annual poll of trainings requested by the subrecipients. Florida has several trainers on staff including a safety manager, safety supervisor, training instructor, and former bus operator. All CUTR trainers working with Florida RTAP took National RTAP's Active Shooter training and will train others. They also use our Emergency Procedures and START Safety Training. Washington DOT does training primarily through their conference every year, including data management, mobility management, and hands on practical training. They use staff and subcontractors for training. They work with Community Transportation of the Northwest, which focuses on non-profits, rural, and Tribal agencies. Many grantee organizations also do trainings. California CALACT conferences use RTAP funds for Drug and Alcohol training; they also have 105 classes through third-party contracts. They find trainers through the transit community that attends the CALACT conference They also have DBE training for state employees through CALACT funds

Q: Do you have any formal succession planning for trainers?

A: California has a peer-to-peer program. Missouri would like to start one; CALACT's contact information was shared in the chat. Florida will send two trainers to a training to ensure that at least one of them gets the training in case there is a situation where the other can't make it.

Q: What role does your State RTAP have in mobility management?

A: Missouri RTAP is excited to work with Enjoli Dixon, our new National RTAP Rural Transit Program Manager. Washington State RTAP is supporting special projects

with mobility management. Their Mobility Management Coalitions are mostly funded by the State Consolidated Grant program, which uses both state and federal funds. In Oklahoma, Mobility Manager Olivia Hook has built their program to cover the entire state.

Q: National RTAP Compendium of Best Practices. Each participant is asked to list a best practices for their state.

A: 5310/5311 Funding

California has been looking into their formula that's used to distribute funding regionally. They are also developing their California Intercity Bus Study and looking into state resources that can complement Section 5311(f) so that their statewide intercity bus system can be enhanced. Ultimately it will be coordinated with their rail systems.

Subrecipient Procurement

Minnesota is developing an interactive procurement technology to assist their providers with their procurements.

Grant Management

Oklahoma switched from their old grant management software to a new grant management and oversight software and, rather than have each project manager overseeing their subrecipients' grants, they moved that oversight responsibility to a single manager, who they brought in from their Comptroller's office.

Mobility Management

Minnesota has worked to fund and support Regional Transportation Coordination Councils throughout the state to assist with collaboration/coordination effort to work toward meeting the needs of their rural communities.

Subrecipient Compliance

Oklahoma brought in an outside consultant to do a rewrite on their triennial review workbooks for 5310 and 5311 subrecipients, to update them to the current regulations and to streamline them, especially for the 5310s.

Technical Assistance

In South Dakota technical support is provided as deemed necessary or upon request for subrecipients or deemed necessary by SDDOT staff based on reporting, reviews, inspections, and other oversight.

Oklahoma provides technical assistance to their subrecipients as requested/needed. Some of their smaller, more rural agencies are understaffed due to driver shortages, and in a couple of instances their project managers actually perform those subrecipients' claims so they can maintain a steady stream of funding.

Training

Minnesota biennially provides a 'Transit 101' training and a leadership development program on alternate years.

Massachusetts is reconfiguring the process for scheduling training to more evenly distribute opportunities across the state and proactively solicit new training locations. This is helping to make training more accessible.

Missouri provides on-demand training to 5311 agencies.

South Dakota training is provided as deemed necessary or upon request for subrecipients or deemed necessary by SDDOT staff based on reporting, reviews, inspections, and other oversight.

Oklahoma has a monthly meeting with each of their 5310 and 5311 subrecipients, where one of their project managers presents a training that was drawn from an annual poll of trainings requested by the subrecipients.

Technology Implementation

Minnesota is working on a Mobility as a Service (MaaS) project to gradually integrate transit trips and trip planning across the state.

Q: Additional Questions

A: Cara asked if anyone or their subrecipients are interested in joining a TCRP focus group on the benefits of transit. Stephanie Lewis asked if anyone has ambassadors or crisis response/mental health programs in place. If anyone is aware of any at state agencies, let her know. Brian Travis would like to know if any of the states that have a significant or smaller Tribal population, have been contacted by the FTA about the Tribal Transit Readiness Program; no one in the roundtable has been contacted. He also asked if any states have had the circumstance where a rural town has become urban based on its year-round tourists as opposed to how many residents they have; this happened in Lake Tahoe, CA. Oklahoma just had one of their cities become urban after the last census, Tom predicted that four more will become urban after the next census. Cara will reach out to our FTA liaison for guidance then it can be added to the State RTAP Manager Toolkit and/or Transit Manager Toolkit.

Please reach out to info@nationalrtap.org if you would like to suggest any additional topic(s) for our next roundtable, which will be in January 2026.

rp.cdn-website.com/270961f6/files/uploaded/State_RTAP_Manager_Peer_Roundtable_Summary_July_29_2025.pdf

UPDATED GTFS BUILDER GUIDEBOOK

INTRODUCTION

Trip planning technology (the integration of transit route and schedule data on a map) enables riders to determine how to use transit to get where they need to go. General Transit Feed Specification, more commonly known as GTFS, is the world standard format for uploading schedule and geographic data (route alignment and bus stops) to trip planners, such as Google Transit, Apple Maps, Bing and Transit App, etc.

To get started with GTFS Builder, click the Download button in the banner above. For more introductory information, see the "Tools that Connect: Online Trip Planners and GTFS Builder" technical brief.

In support of the National Transit Database (NTD) GTFS reporting requirements for fixed and deviated fixed route service, National RTAP is offering GTFS Office Hours on Thursdays at 1:00-1:30 PM ET. Meet with our instructor, share your screen, and ask questions. Use this link to join via Zoom – no need to register.

ABOUT NATIONAL RTAP'S GTFS BUILDER

Anyone with a willingness to learn can build GTFS data files. National RTAP offers free, expert and personalized support through the process. GTFS Builder is a free Microsoft Excel-based web application which assists rural and tribal transit agencies to develop and generate fully valid GTFS for their bus routes. National RTAP partnered with Marcy Jaffe from Transnnovation, Inc. to develop GTFS Builder.

GTFS Builder consists of two Excel files including the ImportExport file and the Schedule Generator file. Using the ImportExport file, data which defines the attributes of agencies, service days, fare types, routes, stops and others are entered using one of the 12 data tabs.

The Schedule Generator file is used only to input trip schedules and generate trips and stop_times information. The Schedule Generator file can also be used independently to generate an agency's schedule or table to be uploaded to an agency website.

The GTFS Builder Guidebook provides a simple step by step instructions for entering data into each tab of the ImportExport and Schedule Generator files. The Guidebook also includes a checklist to help estimate the time to complete each step and track your progress. The Guidebook is included in the GTFS Builder download file or can be downloaded separately here:

GTFS BUILDER GUIDEBOOK

nationalrtap.eos-intl.net/N94067/OPAC/Details/Record.aspx?BibCode=548293

Finally, when data entry is completed in the ImportExport file, data in each tab is exported into separate text files using an automated process. A GTFS data file is the result of compressing or "zipping" these text files together. GTFS data can be posted to a URL, and that URL is then shared with trip planners, such as Google Maps. National RTAP offers free and secure hosting of a URL which

contains the GTFS data. This is available on your GTFS Builder Dashboard, which becomes visible once you have signed into your Cloud account.

"GTFS Builder allows transit agencies to have more control over the nuances of how trips and stops appear in Google Maps as well as in third party applications. Having GTFS Builder means the ability to tailor the solutions in a simple, streamlined way that is often overlooked in larger, more expensive solutions. Our riders are able to more effectively trip plan, and this adds value to their transit experience."

—Jamie McKay, Deputy Director
Transit Services of Frederick County, MD

PRODUCT FEATURES

- GTFS Builder Guidebook
- Two Excel spreadsheets (ImportExport.xlsm and Schedule Generator.xlsm) that work together to compile a GTFS data file.
- Sample Files including ImportExport – Sample Data.xlsm and Schedule Generator – Sample Data.xlsm that show correctly input GTFS data.
- Free hosting of your complete GTFS files from a stable URL that Google Transit, and other apps, can download from.
- Eleven training videos
- Free technical assistance (by phone and email).

BEFORE BEGINNING

Agency Website with Schedules

If your agency plans to publish its GTFS data at Google Maps, Google Inc. requires an agency have a website and that the website accurately displays routes and schedules that exactly match those represented by GTFS data. National RTAP can help! Build your own website using Website Builder 3.0 or contact us for further assistance (support@nationalrtap.org).

License Agreements

At this time, many trip planners do not require signing a formal licensing agreement. However, for your trip data to be available on Google Maps, Google Inc. requires an agency to agree to the terms of its License Agreement. The agreement is provided by Google Inc. as part of the Google Transit Program. There is no fee to sign the agreement. The agreement must be digitally signed by an authorized representative of your agency. A sample agreement can be reviewed here: Sample Agreement.pdf

Some agencies find understanding and signing the Google License Agreement difficult. A practicing attorney provides a detailed explanation of terms of agreement in this video. Otherwise, consider publishing to many other trip planners and re-evaluating Google Maps at a later date.

Hardware/Software Requirements

- A Personal Computer (PC) or Mac operating with Bootcamp or Parallels
- Microsoft Excel, version 2010 or more recent (macros enabled)
- Google Earth Pro on Desktop. A free version of Google Earth Pro can be downloaded here.

Skill and Time Requirements

- Beginner to intermediate level Microsoft Excel skills
- Beginner familiarity with Google's My Maps
- Beginner familiarity with Google Earth
- Initial Data Input - Average 4 hours per route
- Maintenance: Approximately 4 hours per year, assuming minor route or stop changes

UPLOAD GTFS ZIP FILE

National RTAP offers a stable URL or web link for your standardized, GTFS data to meet NTD reporting for P-50. This service is free and optional. You may post this URL at your website so trip planners or mobile app can download your most current GTFS data.

To access this service, you will need to create an account with National RTAP. Once you create/access your account, you will be redirected to a page to validate your file, address errors and review warnings, and upload GTFS data to obtain the URL web link for your GTFS.

Create/Access National RTAP Cloud Account

https://bit.ly/46r6hfm

NATIONAL RTAP GTFS BUILDER SUPPORT

The GTFS Support Center offers targeted, how-to videos, links to Google's Transit Partners Program and other important resources. The how-to videos demonstrate how to gather and input your transit routes, stop locations and schedule data into the GTFS Builder Excel files.

Most importantly, our technical support staff is available to answer question by phone or email and review your GTFS files.

Go to GTFS Builder Support

nationalrtap.org/Technology-Tools/GTFS-Builder/Support

nationalrtap.org/Technology-Tools/GTFS-Builder

Rural and Urban Transportation Coordination

There are many reasons why rural and urban transportation organizations may want to coordinate. This technical brief prepared collaboratively by National RTAP and Shared-Use Mobility Center (SUMC) describes how to plan, fund, and sustain rural and urban transportation coordination projects and provides case studies of successful initiatives.

Released May 2024, Updated August 2025

Introduction

Transportation needs are quite different in rural and urban areas. Unlike densely populated urban communities, residents in rural areas and small towns do not usually have access to a wide range of mobility options. According to the Small Urban and Rural Center on Mobility (SURCOM) 2022 Rural Transit Fact Book, the most rural counties have higher percentages of older adults (22%) and people with disabilities (18%). On the other hand, the most urban counties have higher percentages of households without a vehicle (10.3%). Despite these statistics, all residents need a reliable mode of transportation. Through the coordination of services, both rural and urban residents can get to where they need to go and there is connectivity between rural and urban areas.

Data on rural and urban transportation coordination is scarce. In 2006, the University of Montana Rural Institute identified 4,835 Section 5310 recipients in 49 states and the District of Columbia and surveyed them on aspects of transportation coordination. 29% of respondents participated in a mixed urban and rural coordinated transportation system and 5% participated in a consolidated system (Seekins, 2006). SURCOM found that in 2020, the most recent data available at the time of this writing, urban transit agencies provided 31.2 million rides in rural areas (SURCOM, Rural Transit Fact Book, 2022).

Coordinating rural and urban transportation can improve transportation for people with a wide range of needs. For example, urbanites may want to "escape from the city" to spend the day at a state park in a rural area. People in rural areas may want to apply for jobs in an urban area and having public transportation available may be the only way they can get to work. There may only be one dialysis facility in a county, and both rural and urban patients need to travel to receive care.

Benefits of rural and urban transportation coordination include:

- Regional connectivity provides access to healthcare, jobs, education, social services, shopping, and more to residents across a region, whether urban or rural.
- Reductions in regional service gaps (transit deserts)
- Possible cost reductions for transit partners
- Potential to reduce costs to travelers, possibly

boosting ridership
- Increases in tourism and shopping for both the rural and urban areas are possible, leading to economic gains for all communities involved

Planning

The first step in planning any type of transportation service is taking a thorough look at the needs of the communities the agencies will be serving. A Coordinated Human Services Transportation (HST) Plan is an excellent place to start as it has already done much of this work. Transit agencies should look to partner with other agencies that are geographically situated to coordinate services, share common goals, and may be able to fill service gaps.

Who should be involved in the planning process:
- Rural and Urban transit agency leadership
- Associations of Governments (AOGs) in rural areas
- Metropolitan Planning Organizations (MPOs) in urbanized areas1
- Regional Planning Organizations (RPOs)
- Councils of Governments (COGs)
- County governments
- Volunteer Transportation Organizations (VTOs)
- Regional Areas Agencies on Aging
- Intercity bus and other private transportation providers
- Employers, schools, medical facilities, and other community organizations
- Mobility managers

In a coordinated system, it is important to decide early on how operating costs will be paid. Will they be shared equally among the partners based on travel needs and use, or are urban areas able to take on a larger proportion of the costs? How will local matches be handled throughout the coordinated system?

The following are examples of planning for rural and urban transportation coordination. Valley Regional Transit (VRT) in Idaho provides most of its service in the urban area, but some of the specialized services operate in rural areas. There is a department within VRT dedicated to filling the gaps in the traditional transit service by working with several partners to find solutions to transportation issues in the community. In Oregon, Ride Connection, a nonprofit organization that serves multiple counties including both rural and urban areas, has a planning staff that provides coordinated planning services, benefiting the participating agencies. Their Travel Options Counselors gather information and work to determine the full range of available transportation options for riders and connect them to other regional services if needed.

Intercity transportation, such as Greyhound, FlixBus, Peter Pan Bus, and other carriers, regularly transport riders to both rural and urban areas - partnering with Intercity carriers is a good way to start coordinating service between areas. Challenges identified by agencies that coordinate rural and urban transportation include:

- Consistency in costs of rides
- Urban areas may be able to offer evening and weekend trips, while many rural areas cannot
- Riders are often unsure of who to contact for information
- Difficulty in sharing administrative staff, buses, fuel, or drivers with the other agencies
- Differences in insurance coverage between the rural and urban systems
- Marketing varies among the services, or marketing of the coordinated service is difficult to develop
- Separate contracts may be needed for each partner in the coordinated service system
- Different service providers and operation models, (e.g., hours of operation, eligibility requirements, limited to specific jurisdictional boundaries)
- Lack of governmental support for this type of coordinated service

No Kid Hungry, in its brief Bridging the Gap: Building Authentic Partnerships Between Urban and Rural Organizations, described a Kids Eat Free shuttle bus that serves both rural and urban communities. The brief provides the following guidance for developing partnerships between rural and urban communities, and organizations in the following ways:

- Gain a deep understanding of the historical and cultural context of the region, both rural and urban
- Identify partners and common goals and work toward a shared vision
- Set partnership expectations early and often
- Commit to long-term partnerships

Funding

The Federal Transit Administration (FTA) provides many active grants and has also funded demonstration projects to test public transit coordination initiatives. These include, but are not limited to:

- Formula Grants for Rural Areas - Section 5311
- Urbanized Area Formula Grants - Section 5307
- Metropolitan and Statewide Planning Program - Section 5304
- Enhanced Mobility of Seniors & Individuals with Disabilities - Section 5310
- Public Transportation Innovation Program - Section 5312
- Innovative Coordinated Access and Mobility Grants (ICAM)

- Public Transportation on Indian Reservations Program; Tribal Transit Competitive Program
- Tribal Transit Formula Grants - Section 5311(c)(1)(B)

These Demonstration Project funding programs have also funded transportation coordination initiatives. They are not currently active at the time of this writing.

- Integrated Mobility Innovation Program (IMI)
- Accelerating Innovative Mobility (AIM)
- Enhancing Mobility Innovation (EMI)
- Mobility on Demand (MOD) Sandbox Program

Note that rural program funding (Section 5311) may not be used to provide service exclusively within an urban area.

Section 5304 (Metropolitan and Statewide Planning Program) funds can be used for statewide transit planning needs for areas outside the urbanized MPO boundaries.

Recipients of FTA grants need to comply with all applicable requirements, including local match.

Funding may also be available through federal agencies such as the Department of Health and Human Services (DHHS) or the Department of Labor (DOL). The CCAM Program Inventory lists agencies that may potentially be able to provide funding for coordination initiatives. State funding may be available as well, through the State DOT and/or the State Transit Association.

Recommended Practices

The following practices are intended to assist transit stakeholders in planning for rural and urban transportation coordination:

- Open communication is crucial between partners. Address problems promptly. Treat relationships with all network providers as collaborative and supportive.
- Leverage existing networks to bring rural and urban agencies together to discuss coordination needs and opportunities.
- Work with established intercity carriers who already have service in both rural and urban areas.
- Create transfer stops between rural and urban areas.
- Explore data specifications as they provide a common framework to communicate across providers and coordination of services. Under development, the Transactional Data Specification is helping to fill this need through a handful of demonstration projects.
- Technology and data sharing are important considerations when coordinating rides across service areas (for example, using a shared scheduling system).
- Share mobility management and travel training functions.
- Systems can display the rural and urban systems they coordinate with and connect with on their websites.
- Develop a plan with interagency responsibilities for data reporting.
- It may be easier to start small by just coordinating one aspect of transportation, such as travel from a rural area to a nearby urban college campus.
- Consider implementing a centralized way for coordinating agencies to purchase vehicles, fuel, and other operating needs. This organization can also potentially arrange for volunteer drivers throughout the service area. Insurance may be available at a lower cost through statewide or regional insurance pools.

Conclusion

While there are challenges to implementing transportation coordination across rural and urban areas, there are also many long-term benefits to both the partners involved and the riders in all areas. Once the service is established, it is important to continue to track performance metrics to determine whether the coordination is consistently meeting the goals of the program and the needs of all the community members.

Acknowledgments

National RTAP and Shared-Use Mobility Center (SUMC) express appreciation to the following individuals who helped shape this technical brief: Christy Allen, Chair, Coordination and Legislative Committee, URSTA and Manager of the Coordinated Mobility Department, UTA; Tracy Young, Grants Director, UTA and President, URSTA.

This document was prepared by National RTAP and SUMC with the financial assistance of the U.S. Department of Transportation. The contents do not necessarily represent the opinions or policy of any agency of the U.S. Government, and the U.S. Government assumes no liability for the contents or use thereof. It does not have the force and effect of law and is not meant to bind the public in any way.

For further information and case studies, please visit the full document here:

nationalrtap.eos-intl.net/elibsql16_N94067_Documents/Resource%20Share%20Files/Rural_and_Urban_Transportation_Coordination.pdf

Upcoming EVENTS

NATIONAL RTAP TRAINING - TRIBAL AND RURAL TRANSIT MINI-CONFERENCE

October 14 · 8am - October 16 · 4:30pm

Rapid City, SD | Hotel Alex Johnson Rapid City

National RTAP Rural Transit Assistance Program

National RTAP is providing three (3) full days of Tribal and rural transit training. The mini-conference kicks off with a plenary roundtable discussion of attendee agencies' best practices and challenges, then continues with 90-minute breakout sessions covering a wide range of transit-specific and hot topics by experts in Tribal and rural transit program development, including, but not limited to: Transit Planning I and II, long range transportation planning, National Environmental Policy Act I and II, procurement and the use of NRTAP's ProcurementPro tool, grant writing, the latest research on right-sizing your fleets, as well as how transit agencies can "do more with less" in this new environment of uncertain future Federal funding.

Register today!
https://www.eventbrite.com/e/national-rtap-training-tribal-and-rural-transit-mini-conference-tickets-1237769916139

Wrangling Access and Mobility in Rural and Tribal Transit

December 7-10, 2025 in Austin Texas

National RTAP Rural Transit Assistance Program

6TH NATIONAL RTAP CONFERENCE

Dec. 7-10, 2025

Austin, TX | Hyatt Regency Austin

The National Rural Transit Assistance Program (National RTAP) invites you to participate in the 6th National RTAP Conference, Wrangling Access and Mobility in Rural and Tribal Transit. Five Topical Conference Tracks, plus preconference/conference workshops

Lillian Karabaic will deliver the keynote presentation at the conference. She is the host of Oregon Public Broadcasting's Weekend Edition and also hosted Stop Requested, a series about traveling around Oregon on Public Transit.

Register today!
https://www.nationalrtap.org/News/Conference/2025-Austin

AVAILABLE TRAINING PROGRAMS

The following is a list of the training programs and course length of each that are currently available to rural transit providers through Missouri RTAP. Requests for training can be made by contacting Tina Monson Education Program Coordinator, at tina.monson@mst.edu or 573-341-6155.

1. ACTIVE SHOOTER PREVENTION AND RESPONSE — 2 HOURS.
2. AGGRESSIVE DRIVING —1 HOUR.
3. ASSAULT AWARENESS AND PREVENTION FOR TRANSIT OPERATORS — 1.5 HOURS
4. BACKING SAFETY — 1 HOUR.
5. BASIC FIRST AID — 1 HOUR.
6. BLOOD BORNE PATHOGENS — 1 HOUR.
7. CPR & BASIC FIRST AID — 4 HOURS.
8. DEALING WITH DIFFICULT PASSENGERS — 2 HOURS.
9. DEFENSIVE DRIVING — 3 HOURS.
10. DISTRACTIVE DRIVING — 1 HOUR.
11. DIVERSITY & AWARENESS TRAINING - PROVIDING QUALITY CUSTOMER SERVICE FOR TRANSPORTATION PASSENGERS WHO HAVE DISABILITIES — 2 HOURS.
12. DRIVEN TO EXTREMES — 1 HOUR.
13. DRUG & ALCOHOL AWARENESS — 1 HOUR.
14. EMERGENCY & EVACUATION PROCEDURES — 1 1/2 TO 2 HOURS.
15. FATIGUE AWARENESS FOR DRIVERS — 2 HOURS.
16. HIPAA — 1 HOUR.
17. NIGHT DRIVING — 1 HOUR.
18. OPERATION LIFESAVER – HIGHWAY-RAIL CROSSING SAFETY — 1 HOUR.
19. PASSENGER ASSISTANCE/MOBILITY AID SECUREMENT — 2 HOURS.
20. REASONABLE SUSPICION TRAINING FOR SUPERVISORS — 2 HOURS.
21. SAFE & SECURE PROPER INFANT AND CHILD SEAT INSTALLATION — 2 HOURS.
22. SENSITIVITY AWARENESS — 1 HOUR.
23. SEXUAL HARRASSMENT — 1 HOUR.
24. SLIPS, TRIPS AND FALLS — 1 HOUR.
25. VIOLENCE IN THE TRANSIT WORKFORCE – PREVENTION, RESPONSE AND RECOVERY — 1.5 HOURS
26. WHEELCHAIR SECUREMENT — 2 TO 3 HOURS DEPENDING ON NUMBER OF PARTICIPANTS.
27. WINTER DRIVING SAFETY — 1 HOUR.

For more information on classes and to register please visit: mltrc.mst.edu/mortaphome/mortaptraining/

RESOURCES

National RTAP – Rural Transit Assistance Program
www.nationalrtap.org/

Transportation Safety Institute – Transit Safety & Security Training Division
www.tsi.dot.gov/Transit.aspx

Federal Transit Administration – Rural Transit Assistance Program Page
www.fta.dot.gov/funding/grants/grants_financing_3554.html

Missouri Public Transit
www.mopublictransit.org/

National Transit Institute
www.ntionline.com/

Kansas RTAP – Kansas University Transportation Center
www.kutc.ku.edu/cgiwrap/kutc/rtap/index.php/index.html

Transportation Research Board's (TRB) Transit Cooperative Research Program (TCRP)
www.tcrponline.org/