



FTA Annual Report on Technical Assistance and Workforce Development for FY 2022



PREPARED BY
Federal Transit Administration



U.S. Department of Transportation
Federal Transit Administration

FEBRUARY

20
23

COVER PHOTO

Courtesy of Edwin Adilson Rodriguez, Federal Transit Administration

FTA Annual Report on Technical Assistance and Workforce Development for FY 2022

FEBRUARY 2023

FTA Report No. 0240

PREPARED BY

Federal Transit Administration
Office of Research, Demonstration and Innovation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

AVAILABLE ONLINE

<https://www.transit.dot.gov/about/research-innovation>

Metric Conversion Table

SYMBOL	WHEN YOU KNOW	MULTIPLY BY	TO FIND	SYMBOL
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft³	cubic feet	0.028	cubic meters	m ³
yd³	cubic yards	0.765	cubic meters	m ³
NOTE: volumes greater than 1000 L shall be shown in m ³				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE February 2023		2. REPORT TYPE Annual Report		3. DATES COVERED October 1, 2021 - September 30, 2022	
4. TITLE AND SUBTITLE FTA Annual Report on Technical Assistance and Workforce Development for FY 2022				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Edwin Adilson Rodriguez Office of Research Management, Innovation, and Outreach Federal Transit Administration				5d. PROGRAM NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Federal Transit Administration U.S. Department of Transportation Office of Research, Demonstration and Innovation 1200 New Jersey Avenue, SE Washington, DC 20590				8. PERFORMING ORGANIZATION REPORT NUMBER FTA Report No. 0240	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Federal Transit Administration U.S. Department of Transportation Office of Research, Demonstration and Innovation 1200 New Jersey Avenue, SE Washington, DC 20590				10. SPONSOR/MONITOR'S ACRONYM(S) FTA	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Available from: National Technical Information Service (NTIS), Springfield, VA 22161; (703) 605-6000, Fax (703) 605-6900, email orders@ntis.gov ; Distribution Code TRI-30					
13. SUPPLEMENTARY NOTES [www.transit.dot.gov/research-innovation/fta-reports-and-publications] [https://www.transit.dot.gov/about/research-innovation] [https://doi.org/10.21949/1527653] Suggested citation: Federal Transit Administration. FTA Annual Report on Technical Assistance and Workforce Development for FY 2021. Washington, D.C.: United States Department of Transportation, 2022. https://doi.org/10.21949/1527653 .					
14. ABSTRACT This statutorily required annual report provides information on FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314). It provides information on technical assistance, standards development, training, human resources, and workforce development projects active in FY 2022. The report also includes information on FTA's process for making upcoming allocations for FY 2023.					
15. SUBJECT TERMS Public transportation, 49 U.S.C. § 5314, Section 5314, FTA appropriations, FAST Act, FTA demonstration and deployment, workforce development, workforce frontline, FTA innovation					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Unlimited	18. NUMBER OF PAGES 29	19a. NAME OF RESPONSIBLE PERSON
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			19b. TELEPHONE NUMBER

TABLE OF CONTENTS

viii	Abstract
1	Executive Summary
4	Section 1: Active Projects Results
4	Technical Assistance
4	Transit Workforce Development Technical Assistance Center (TWC)
5	Crime Prevention and Public Safety Awareness
5	National Center for Applied Transit Technology (N-CATT)
6	Bus Exportable Power System (BEPS) Standards
6	Research to Practice (R2P) Initiative
7	Transit Automation Technical Assistance
7	Accelerating Innovative Mobility (AIM) National Network (AIM-NNet)
8	Transportation Research Board (TRB) Core Program Support
9	Safety Awareness Technical Assistance
9	National Aging and Disability Transportation Center (NADTC)
10	National Center for Mobility Management (NCMM)
10	Transit Research Analysis Committee (TRAC)
11	Transit Survey Data Archiving and Analysis
12	Transportation Capacity Building Program and Planning Methods
12	Standards Development
12	Transit Standards Development Program – CUTR
13	Training
13	National Transit Institute (NTI)
15	Section 2: Frontline Workforce Development Program Trends and Next Steps
19	Section 3: FY 2023 Expected Activities and Program Planning Process for Technical Assistance and Workforce Development Allocations
20	Acronyms and Abbreviations

LIST OF TABLES

3	Table 1: Active Projects by Eligible Areas
---	--



U.S. Department
of Transportation

**Federal Transit
Administration**

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

February 2, 2022

Dear Colleague:

The Federal Transit Administration (FTA) is pleased to provide its Annual Report on Technical Assistance and Workforce Development for Fiscal Year (FY) 2022 as required by Federal public transportation law (49 U.S.C. § 5314(a)(3), (b)(2)(E)). This report describes the results from FTA's FY 2022 active projects in technical assistance, standards, workforce development, and training, totaling \$62,344,099.

The increased investments of the Bipartisan Infrastructure Law created an opportunity for FTA to dramatically improve the lives of millions of Americans who rely on transit every day. Transit connects people to jobs, school, recreation, healthcare, and other services and supports. And, with the changes and challenges of the last several years, the provision of targeted support for transit agencies was critical. FTA's technical assistance, standards, workforce, and training programs played a vital role in helping transit agencies regroup, reassess, and address the changing travel patterns in their communities while also aiding them in workforce development.

Significant highlights for FY 2022 included: the launch of a new workforce development technical assistance center, the Transit Workforce Center (TWC); the development of an information-sharing center through the Accelerating Innovative Mobility (AIM) National Network (AIM-NNet); continued support of human services transportation technical assistance through the National Aging and Disability Transportation Center (NADTC); the continued transition of the National Transit Institute to virtual learning; and the release of six key standards reports, including one on *Rail Transit Roadway Worker Protection*.

The overarching benefit of investments in technical assistance and standards development is the improved effectiveness, efficiency, and safety of public transportation services as well as enhanced mobility for all who use public transportation. Workforce development programs like the TWC helped transit agencies recruit, hire, train, and retain a diverse workforce needed now and in the future.

FTA is grateful for the excellence and work of our technical assistance, standards development, workforce, and training partners. I hope you enjoy learning more about these programs by perusing this report. Thank you for your support and interest in public transportation.

Sincerely,

A handwritten signature in blue ink that reads "Nuria I. Fernandez".

Nuria I. Fernandez

Abstract

This annual Report to Congress provides information on the Federal Transit Administration (FTA) Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) for Fiscal Year (FY) 2022. The primary goals of this program are to provide technical assistance, standards development, human resources, training, and workforce development, and training projects to more effectively and efficiently improve public transportation. The report includes a section on frontline workforce activities and trends and notes expectations and processes for allocating funding for FY 2023.

Executive Summary

This report is required by Federal public transportation law (49 U.S.C. § 5314(a)(3), (b)(2)(E)), which requires the Secretary of Transportation to submit a Report to Congress for all projects active under this section during the previous fiscal year. This annual report must be submitted to the Committee on Banking, Housing, and Urban Affairs, the Committee on Appropriations of the U.S. Senate, the Committee on Transportation and Infrastructure, the Committee on Science, Space, and Technology, and the Committee on Appropriations of the U.S. House of Representatives, no later than the first Monday of February in the following year.

This annual report must include:

- A description of each project that received assistance under this program during the preceding fiscal year.
- An evaluation of the technical assistance and standards activities carried out by each organization that received assistance during the preceding fiscal year.
- A proposal for allocation amounts for the FTA Technical Assistance Program for the subsequent fiscal year.
- Measurable outcomes and impacts of the Human Resources & Training (Section 5314(b)) and National Transit Institute (NTI) (Section 5314(c)) programs.

Section 5314(b)(2)(E) requires the Secretary to submit a report on Frontline Workforce Development Program, to include a detailed description of activities carried out, an evaluation of the program, and policy recommendations to improve program effectiveness. Given that this report is partially duplicative of the report required by Section 5314(a)(3), in 2016, FTA's House and Senate authorizing committees approved FTA's request to submit one combined report.

Active projects refer to projects and programs that involved Federal Transit Administration (FTA) resources during the fiscal year and are typically funded from appropriations enacted by Congress in earlier fiscal years. This is a retrospective report on the results of prior investments. There are four major types of eligible projects for this FTA program: technical assistance, standards development, human resources and training, and workforce development. This report is organized into three sections:

- **Section 1** provides detailed information on technical assistance, standards development, human resources and training, and workforce development, and training projects, including key results of each project.

- **Section 2** discusses frontline workforce development projects, including key results of each project, and recommendations to improve program effectiveness.
- **Section 3** provides information on expectations, directions, and processes for allocating FY 2023 funding.

FTA has a long history of investing in technical assistance, standards development, human resources and training, and workforce development projects and programs. The major goals for activities funded from this statutory program include more effectively and efficiently providing public transportation services; training the public transportation workforce; and developing human resources and innovative workforce development initiatives.

Table 1 Active Projects by Eligible Areas

Program/Project Name	Eligible Activities											Amount
	Technical Assistance (TA)								Std*	HT**		
	1	2	3	4	5	6	7	8	9	10	11	
Transit Workforce Development Technical Assistance Center (TWC)								x			x	\$7,500,000
Crime Prevention and Public Safety Awareness						x		x				\$2,000,000
National Center for Applied Transit Technology (N-CATT)								x				\$4,500,000
Bus Exportable Power System (BEPS) Standards Development								x	x			\$1,000,000
Research to Practice (R2P) Initiative								x				\$545,000
Transit Automation Technical Assistance								x				\$450,000
Accelerating Innovative Mobility (AIM) National Network (AIM-NNet)								x				\$2,000,000
Transportation Research Board (TRB) Core Program Support								x				\$635,000
Safety Awareness Technical Assistance								x				\$800,000
National Aging and Disability Transportation Center (NADTC)	x	x	x									\$4,400,000
National Center for Mobility Management (NCMM)		x	x									\$5,760,507
Transit Research Analysis Committee (TRAC)							x	x				\$1,725,000
Transit Survey Data Archiving and Analysis								x				\$300,000
Transportation Capacity Building Program and Planning Methods								x				\$150,000
Transit Standards Development Program – Center for Urban Transportation Research (CUTR)									x			\$4,000,000
National Transit Institute (NTI)											x	\$26,578,592
											Total	\$62,344,099

TECHNICAL ASSISTANCE (TA)

1. Americans with Disabilities Act (ADA) of 1990
2. Human Services Transportation Coordination
3. Transportation Needs of Elderly Individuals
4. Increase Transit Ridership in Coordination with Metropolitan Planning Organizations
5. Improve Transportation Equity and Efficient Public Transportation Planning for Low-income and Minority Individuals
6. Facilitate Best Practices in Bus Driver Safety
7. Meet Buy America and Rolling Stock Purchase Requirements
8. Other technical assistance activity that advances the interests of public transportation

***STANDARDS (Std)**

9. Standards

****HUMAN RESOURCES AND TRAINING (HT)**

10. Human Resources
11. Training

Section 1

Active Projects Results

This section describes all of the technical assistance, standards, workforce development, and training projects active in FY 2022 and their results.

Technical Assistance

Technical Assistance (TA) activities support public transportation agencies across a number of areas, including furthering the mobility of older adults and people with disabilities, expanding mobility management awareness, supporting the Americans with Disabilities Act (ADA) of 1990, enhancing public safety awareness, and developing workforce development programs.

Title: *Transit Workforce Development Technical Assistance Center (TWC)*

Recipient: International Transportation Learning Center (ITLC)

Project Description:

FTA established the first Transit Workforce Development Technical Assistance Center (TWC) in FY 2022. The TWC supports public transit agencies' workforce development needs for all modes of public transit across urban, tribal, and rural entities. Its overall mission is to help transit agencies recruit, hire, train, and retain the diverse workforce needed for today and the future. The TWC performs two main functions: 1) conduct technical assistance activities within and for transit agencies that promote more effective and efficient training of frontline workers involved in public transportation maintenance and operations; and 2) implement technical assistance activities through collaborative partnerships between transit agency management and labor, including apprenticeship development and implementation.

Results:

The TWC began its cooperative agreement in September 2021. In FY 2022, the center launched the Transit Workforce Center webpage at <https://www.transitworkforce.org>, hosted three Strategic Workforce Development Planning in Transit webinars, and debuted its National Bus Operator and Maintenance Technician Recruitment Campaign. The TWC created resources for applicants applying for funding for zero-emission projects under FTA's Low or No Emission Competitive Grant Program and the Buses and Bus Facilities Competitive Grant Program. The TWC also launched its peer-to-peer network, titled the American Transit Training and Apprenticeship Innovators Network (ATTAIN). These efforts provide the transit industry with information to recruit, hire, train, and retain a diverse workforce.

FTA Funding: \$7,500,000

Title: *Crime Prevention and Public Safety Awareness*

Recipients: The Council of State Governments (CSG), the Community Transportation Association of America (CTAA), and the Ending child pornography and trafficking (ECPAT-USA)

Project Description:

This technical assistance is part of FTA's Human Trafficking Awareness and Public Safety Initiative. The program will develop and disseminate technical assistance materials supporting public safety awareness campaigns that address public safety in transit systems, including crime prevention, human trafficking, and operator assault.

Results:

In FY 2022, CSG conducted a two-day virtual learning session, titled "Safety Awareness on Public Transit Virtual Learning Seminar," attended by 36 individuals representing 24 states, including executive branch member and legislators for each state. CSG conducted a webinar with 101 attendees. CSG also conducted scans on literature and legislation relevant to safety on public transit systems and publish a report generated from the scans and findings from the seminar (https://www.csg.org/wp-content/uploads/sites/7/2022/05/2022_FTA_HumanTrafficking_AS_v4.pdf). CTAA developed interactive learning resources, containing educational materials and interactive learning opportunities incorporating best practices. ECPAT-USA identified over 30 potential transit partner candidates.

FTA Funding: \$2,000,000

Title: *National Center for Applied Transit Technology (N-CATT)*

Recipient: Community Transportation Association of America (CTAA)

Project Description:

The Consolidated Appropriations Act, 2019 (Pub. L. 116-6), provided \$1,500,000 under FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) for a cooperative agreement to assist small urban, rural, and tribal public transit recipients and planning organizations with applied innovation and capacity-building. FTA provided an additional \$1,500,000 in FY 2021 and \$1,500,000 in FY 2022 for this effort. N-CATT provides practical, replicable resources that help solve local challenges by applying technological solutions. N-CATT accomplishes its mission through collecting, understanding, communicating, planning, encouraging, and spurring implementation of cost-effective, value-adding technologies.

Results:

N-CATT began its cooperative agreement in September 2019. Relevant activities for N-CATT in FY 2022 included developing resources to help rural, small-urban, and tribal transit providers understand the benefits of emerging technology and how to use the technology in their own transit systems. The resources developed included reports, training, online tools, podcasts, fact sheets, webinars, and in-person workshops. N-CATT also provided direct technical assistance at the state and local levels to help transit providers address transit technology issues.

FTA Funding: \$4,500,000

Title: *Bus Exportable Power System (BEPS) Standards Development*

Recipient: Inventev, LLC

Project Description:

BEPS enables public transportation agencies, communities, and States to access resilient and flexible power options through hybrid electric bus fleet vehicles during major power disruptions. The goal is to develop a national interoperable BEPS standard – working with FTA, industry stakeholders and technical partners – so that different manufacturers’ systems can use the same technology base and applications for BEPS solutions.

Results:

FTA hosted a webinar on Wednesday, May 25, 2022, on the Standard Development for Bus Exportable Power Systems Notice of Funding Opportunity (NOFO), which FTA announced in April. The NOFO made available \$1 million for the BEPS project. On August 4, 2022, FTA announced the selection of Inventev, LLC, in Detroit, Michigan, and entered into a cooperative agreement to start project activities in FY 2023.

FTA Funding: \$1,000,000

Title: *Research to Practice (R2P) Initiative*

Recipient: CALSTART

Project Description:

The purpose of this competitively awarded project is to develop and maintain a research-to-practice strategy to expand awareness of promising research results so transit agencies can adopt them. The goals of this project are to: 1) identify highest impact research to practice methods for the public transit industry; 2) assess and evaluate the adoptability and effectiveness of the methods derived from the literature review for use in public transportation;

3) develop an R2P plan; and 4) create an outreach program for FTA's research results to increase adoption of proven solutions.

Results:

CALSTART began work on the project in Summer 2022. The first task, to identify the highest impact research to practice methods for the public transit industry, is in process.

FTA Funding: \$545,000

Title: *Transit Automation Technical Assistance*

Recipient: The Volpe National Transportation Systems Center

Project Description:

The purpose of this program is to provide technical assistance on bus transit automation to public transit agencies. This project advances the adoption of automation technologies and related practices to improve the safety and performance of transit systems.

Results:

This program was awarded funding in September 2018 and is expected to conclude in November 2023. In FY 2022, the program continued the Transit Bus Automation Community of Practice (ongoing) and worked on an accessibility, data, contracting, and lessons learned scan. Through this program, FTA is developing a greater understanding of the state of transit bus automation and the potential opportunities for transit bus automation to improve safety and performance.

FTA Funding: \$450,000

Title: *Accelerating Innovative Mobility (AIM) National Network (AIM-NNet)*

Recipient: Shared-Use Mobility Center (SUMC)

Project Description:

The purpose of this national technical assistance effort is to assist public transportation agencies, communities, and regions in the development, selection, deployment, and oversight of innovative service delivery models, creative financing, novel partnerships, and integrated payment solutions. Key activities planned for AIM-NNet include workshops, peer exchanges, trainings, and creation of online knowledge sharing tools.

Results:

This program was awarded funding in September 2020. In FY 2022, AIM-NNet launched the Mobility Innovation Collaborative page, accessible at <https://sumcmic.org/>, an online space for AIM and IMI recipients to share updates, challenges, solutions, and news, giving FTA an up-to-date, easily digestible view on the status of Mobility Innovation projects. This FTA-funded resource contains more than 1,000 entries, including case studies, key project documents, analyses, and program profiles. The Learning Center has had over 80,000 page views, with nearly 30,000 unique visitors. AIM-NNet also supports group learning and problems solving through monthly meetings and quarterly meetings to address common challenges such as the use of data and standards, transitioning pilot projects to ongoing operations, marketing, and adapting to the challenges posed by the COVID-19 pandemic.

FTA Funding: \$2,000,000

Title: TRB Core Program Support

Recipient: Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine (NAS)

Project Description:

This project supports FTA staff engagement with TRB's core technical activities. It ensures access for all interested FTA staff to attend the TRB Annual Meeting and utilize TRB research databases and dissemination tools. Additionally, this activity facilitates the exchange of transit research information and results at the national level.

Results:

Key outcomes in FY 2022 included strong FTA staff attendance at the TRB Annual Meeting and providing FTA staff with access to all online TRB resources, including the Transportation Research International Documentation (TRID) database. Research sponsors use TRID to avoid costly duplication and assure timely dissemination of results. TRB processes approximately 30,000 new transportation-related publications into TRID per year. This year, FTA also sponsored the TRANSED accessibility, mobility, and demand response international virtual conference.

FTA Funding: \$635,000

Title: Safety Awareness Technical Assistance

Recipient: Operation Lifesaver, Inc. (OLI)

Project Description:

The objective of this project is to reduce grade crossing, trespassing, and related incidents on transit systems by increasing public awareness of safe behavior around tracks and trains. The project funds transit safety education grants for the development of training and educational materials, and the dissemination of information to assist transit agencies to make the public aware of transit-related rail safety issues.

Results:

The current agreement, which started in May 2021 and will end in January 2023, has benefited both individuals and transit agencies by increasing public awareness of safe behavior around tracks through safety outreach projects at six transit agencies across the country. FTA and OLI executed new activities for FY 2022-23 that directly support the goal of disseminating safety information to the public through Rail Safety Week 2022 and targeted outreach to children and youth.

FTA Funding: \$800,000

Title: National Aging and Disability Transportation Center (NADTC)

Recipient: Easterseals

Project Description:

The NADTC is a partnership between Easterseals and USAging (formerly the National Association of Area Agencies on Aging). Its purpose is to promote the mobility of people with disabilities and older adults, ensuring that public transportation supports independent living in communities. The Center provides training, technical assistance, best practice resources, partnerships with other national centers and industry organizations, and seed funding for targeted local projects.

Results:

The multi-year technical assistance program was initially awarded in September 2015. NADTC was re-competed in 2020 and awarded a five-year cooperative agreement from 2021 to 2025. In FY 2022, NADTC released findings from the national diversity, equity, and inclusion survey that was conducted in early 2021; convened focus groups of diverse older adults, people with disabilities, and caregivers; created a new educational method of Learning Shorts; provided online courses, webinars, and targeted technical assistance; hosted a learning collaborative and provided technical assistance for FTA direct grantees;

published a monthly newsletter and monthly blogs; actively participated on social media; maintained an updated website and added a multimedia resource page and learning center page; and developed useful resources including an annual trends report. NADTC provided grant assistance to local communities for planning and implementation of innovative transportation solutions and creating replicable models of excellence and coordination. NADTC's activities achieved broad outreach. From October 1, 2021, through March 30, 2022, 2,352 people participated in NADTC online courses, webinars, and conference presentations. There were 32,185 total visitors to the NADTC website, <https://www.nadtc.org> – 28,101 new and 4,085 returning visitors – from October 2021 through March 2022.

FTA Funding: \$4,400,000

Title: *National Center for Mobility Management (NCMM)*

Recipient: Community Transportation Association of America (CTAA)

Project Description:

The NCMM is a partnership among CTAA, the American Public Transportation Association (APTA), and Easterseals. It supports mobility management professionals in developing and implementing strategies that improve transportation access for older adults, people with disabilities, and low-income individuals and families.

Results:

The current project was first awarded funding in May 2019 and is expected to operate through December 2023. In FY 2022, NCMM supported the Coordinating Council on Access and Mobility (CCAM) in soliciting feedback on its strategic plan and shaping discussions with the Centers for Medicaid and Medicare Services on nonemergency medical transportation. To support the CCAM at the state and regional levels, NCMM provided intense technical assistance to 15 states, resulting in five of the states implementing a mobility management network to implement sustainable CCAM activities. In FY 2022, NCMM assisted in improving the supported mobility management professionals in having an impact in their community.

FTA Funding: \$5,760,507

Title: *Transit Research Analysis Committee (TRAC)*

Recipient: National Academies of Sciences, Engineering, and Medicine (NAS)

Project Description:

TRAC is an interdisciplinary committee of experts from industry, academia, and the private and public sectors that provides independent perspective to FTA on future investments in transit research, development, and innovation. Its goal is

to examine and recommend actions FTA can take to ensure that its research and innovation program is relevant, timely, and effective in meeting the diverse and changing needs of the public transportation community.

Results:

The current project was awarded funding in June 2018 and will be extended to March 31, 2023. FTA and the NAS met in Summer 2022 to discuss future meetings.

FTA Funding: \$1,725,000

Title: *Transit Survey Data Archiving and Analysis*

Recipient: U.S. Department of Energy National Renewable Energy Laboratory (NREL)

Project Description:

The objective of this project is to prevent valuable transportation datasets from becoming lost or destroyed and to make these data available for legitimate research while at the same time safeguarding survey participant privacy. The project will obtain transit rider survey data from agencies that collected information and convert this data to a standardized format for archiving. The project will also include public summaries of the available databases, which will help researchers and others gain a better understanding of the people who are riding public transit. The data will be archived on NREL's Transportation Secure Data Center (TSDC), accessible at <https://www.nrel.gov/transportation/secure-transportation-data/>.

Results:

The current interagency agreement started in July 2021 and will end in July 2023. In FY 2022, the project focused on implementing changes to the TSDC website to accommodate transit survey data and transfer over the initial inventory of transit surveys that Kansas State University had compiled in their prototype Central Archive for Transit Passenger Data (CATPAD). The project team also processed an initial batch of datasets from roughly 10 surveys and is currently working with transit agencies to obtain additional datasets. Through this project, FTA provided opportunities for researchers and others with an interest in transit to better understand the characteristics and travel patterns of the users of public transit.

FTA Funding: \$300,000

Title: *Transportation Capacity Building Program and Planning Methods*

Recipient: The Volpe National Transportation Systems Center

Project Description:

This project provides technical assistance with peer learning activities, effective practices and applied research, information development and dissemination, and program planning. The project supports peer-based events and technical assistance to build the capacity of transportation professionals via the sharing of experiences and lessons learned around specific planning-related topics. The goals of the project are to research and document best practices, synthesize information, and conduct other targeted research on planning-related topics.

Results:

The current agreement started in June 2021 and will end in May 2026. In FY 2022, FTA and the Volpe National Transportation Systems Center discussed next steps in supporting activities under this new interagency agreement, drafted a project management plan, and statement of work.

FTA Funding: \$150,000

Standards Development

FTA funds the development of voluntary and consensus-based standards and best practices for the public transportation industry in the areas of safety, fare collection, intelligent transportation systems, accessibility, procurement, security, and asset management to maintain a state of good repair, operations, maintenance, vehicle propulsion, communications, and vehicle electronics.

Title: *Transit Standards Development Program – CUTR*

Recipient: University of South Florida (USF) Center for Urban Transportation Research (CUTR)

Project Description:

This program collects, reviews and analyzes and transit industry data. The program also reviews literature, conduct scans, surveys, case studies, and develops findings and recommendations for the development of voluntary standards, guidelines, and best practices.

Results:

This program started in September 2017 and will end in December 2022. In FY 2022, the program completed reports in roadway worker protection, effective practices in bus and rail accident investigations, track inspection and maintenance, pedestrian grade crossing and over the counter and prescription

drug use in public transportation. In FY 2022, FTA published the following reports:

- Effective Practices in Bus Transit Accident Investigations, accessible at <https://rosap.ntl.bts.gov/view/dot/60626>.
- Effective Practices in Rail Transit Accident Investigations, accessible at <https://rosap.ntl.bts.gov/view/dot/60625>.
- Rail Transit Roadway Worker Protection, accessible at <https://rosap.ntl.bts.gov/view/dot/62619>.
- Review of Standards for Track Inspection and Maintenance, accessible at <https://rosap.ntl.bts.gov/view/dot/62549>.
- Rail Transit Roadway/Pedestrian Grade Crossing, accessible at <https://rosap.ntl.bts.gov/view/dot/62548>.
- Over-the-Counter and Prescription Drug Use in the Public Transit Industry, accessible at <https://rosap.ntl.bts.gov/view/dot/62543>.

In addition, the program completed studies and developed reports in battery electric bus safety certification testing, battery electric bus procurement and maintenance, and mitigations for trespasser and suicide fatalities and injuries. The program also conducted virtual and in-person meetings with industry working groups to present findings and recommendations from the completed projects and reports.

FTA Funding: \$4,000,000

Training

FTA funds a national public transportation training program that develops and conducts training and educational programs for transportation employees at the local, state, and national level.

Title: *National Transit Institute (NTI)*

Recipient: Rutgers, The State University of New Jersey

Project Description:

FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) funds NTI (49 U.S.C. § 5314(c)), housed at Rutgers, The State University of New Jersey, which develops and conducts courses, educational programs, and webinars for Federal, State, and local government employees and for non-profit leaders engaged in government-funded public transportation work. NTI strategically develops and delivers courses across the country in partnership with regional transit agencies, state DOTs, municipal governments, metropolitan planning organizations (MPOs), and state and national transit-related associations. NTI plans and develops its work in close alignment with

FTA's respective offices and with the public transit industry to ensure that NTI courses and activities are tied to FTA's strategic goals and support the training needs of the public transit industry.

Results:

The Bipartisan Infrastructure Law (BIL) authorized \$6,578,592 in FY 2022 to carry out NTI activities. The FY 2022 funds are aggregated to active projects from previous fiscal years, totaling \$26,578,592 for ongoing NTI activities. In FY 2022, NTI delivered 169 virtual training courses to 4,697 transit and transportation professionals. As in FY 2021, due to COVID-19, in FY 2022, NTI experienced a sharp reduction in the delivery of training courses compared to pre-COVID years. NTI continues to expand its virtual course portfolio, with plans to continue 100% virtual course delivery until January 2023, and may resume a limited scheduled of on-site course offerings soon after.

FTA Funding: \$26,578,592

Section 2

Frontline Workforce Development Program Activities, Trends, and Next Steps

Federal public transportation law (49 U.S.C. § 5314(b)(2)(E)) requires the Secretary of Transportation to make publicly available a report on the Frontline Workforce Development Program for each fiscal year, not later than December 31 of the calendar year in which that fiscal year ends. The report must include a detailed description of activities carried out under this section, an evaluation of the program, and policy recommendations to improve program effectiveness.

Program Activities

Transit Workforce Center (TWC)

FTA solicited applications for and awarded to ITLC the first workforce development technical assistance resource center, called the Transit Workforce Development Technical Assistance Center (TWC). The TWC was established on September 15, 2021, to help transit agencies recruit, hire, train, and retain the diverse transit workforce needed today and in the future. The TWC supports public transit agencies' workforce development needs for all modes of public transit across urban, tribal, and rural entities. The TWC has two key functions: 1) conducting technical assistance activities within and for transit agencies that promote more effective and efficient training of frontline workers involved in public transportation maintenance and operations; and 2) implementing technical assistance activities through collaborative partnerships between transit agency management and labor, including apprenticeship development and implementation.

In November 2021, during National Apprenticeship week, the TWC launched the American Transit Training & Apprenticeship Innovators Network (ATTAIN). ATTAIN was developed to encourage and invite transit agencies interested in exploring and starting apprenticeship programs for the frontline workforce, as well as those with established programs, to join the peer network. ATTAIN will have separate committees for different occupational areas. Based on knowledge of industry needs, the initial committees will be: 1) Bus Operator Apprenticeship Committee; 2) Bus Maintenance Apprenticeship Committee; 3) Railcar, Signals, and Traction Power Apprenticeship Committee; and 4) Facilities and Elevator/ Escalator Maintenance Apprenticeship Committee. To date, there have been 33 transit locations where trainers have been attended h ATTAIN meetings. ATTAIN includes soliciting aid from unions, the Department of Labor (DOL), and others to ensure that we address the needs for skilled workers in electronics and electrical skills for future fleet transitions. Partnering with DOL and labor management organizations is critical and will enable the transit industry to develop the skills of frontline transit workers and will aid in recruiting, hiring, training, and retaining the diverse transit workforce of the future.

- On December 8, 2021, the TWC kicked off the industry strategic planning process by engaging the Board of Directors of its umbrella organization, the International Transportation Learning Center (ITLC), outlining key strategic plan elements. The ITLC Board, consisting of leadership from transit management, labor, national nonprofits, industry associations, and academia, reflected on their extensive experience with and knowledge of the industry and identified critical challenges and opportunities that should be included in the industry strategic plan. This will culminate in a finalized Transit Workforce Strategic Plan by the end of June 2023.
- In February 2022, the TWC posted resources to assist public transit agencies in developing Zero-Emission Transition Plans for zero emission applications to the Low or No Emissions and Buses and Bus Facilities Competitive programs, including: Examining the impact of the transition on the applicant's current workforce by identifying skill gaps, training needs, and retraining needs of the existing workers of the applicant to operate and maintain zero-emission vehicles and related infrastructure and avoid displacement of the existing workforce.
- In April and June 2022, the TWC held three Strategic Workforce Development webinars. Topics discussed in these webinars included: Supporting and Strengthening Your Incumbent Workforce; Recruiting and Developing Today's Transit Workforce; and Fundamentals of Mentoring. There were over 1,000 registrants from transit agencies and their partners across the country.
- On September 14, 2022, the FTA/TWC National Transit Frontline Worker Recruitment Campaign Toolkit was launched. This Recruitment Toolkit will aid transit agencies in addressing the national bus operator and maintenance staff shortages. The toolkit is a repository of information and a one-stop-shop for developing recruitment materials for transit entities. The toolkit consists of templates of commercial scripts, postcard mailers, exhibit banners, talking points for public meetings, social media postings, informational video scripts, and letters of introduction. The toolkit also contains written instructions for creating these items, with a focus on smaller, rural transit entities with fewer staff. This tool can be accessed at: <https://www.transitworkforce.org/twc-launches-national-frontline-worker-recruitment>.
- The TWC provides public transportation workforce development technical assistance to public transit agencies and targeted technical assistance to public transportation organizations. This is reflected in its continued engagement of industry stakeholders in ongoing dialogs on key components for strategic workforce development, data needs, and performance measures, through its targeted technical assistance to transit organizations, and in-person and virtual meetings at partner organizations including the American Public Transportation Association (APTA), Community Transportation Association of America (CTAA), National Skills Coalition, state transit associations, the Amalgamated Transit Union (ATU), and Transport Workers Union (TWU), to name a few.

- The TWC website (<https://transitworkforce.org/>) has had 1,409 visits in FY 2022. There have been 1,500 views for the TWC-developed “Resources and Best Practices for Zero-Emission Bus Workforce Transition,” which was released in March 2022.

Frontline Workforce Trends

There are a number of workforce challenges and opportunities facing public transit agencies today. Some of the major challenges are frontline worker shortages for bus operators and low/no emission bus technicians, as well as replacing or retraining employees and knowledge management related to a surge of retirements. Opportunities in workforce development include the increase in information technology roles which enable new career ladders and career development for public transit agency personnel. Workforce shortages also exist in new and emerging technology skills such as in data management, automation, and digital infrastructure. Skilled and experienced procurement personnel, especially those able to develop competitive procurements for new technologies, remain an area of need. Additionally, public transit agencies report struggling with the expectations of new entrants to their workforce. Issues exist with a lack of flexible schedules for bus operators and competing with the trucking industry or large package delivery companies that may pay more and provide more flexible schedules.

Agencies report to FTA that they cannot implement all of the needed services due to a lack of bus operators – an area particularly difficult for agencies to recruit and retain workers. Increased operator assaults contribute to operator shortages. FTA took aggressive action to address this issue by increasing operator training to help them de-escalate situations. Additionally, agencies increased measures to protect operators with plexiglass shields and increased law enforcement assistance. To assist public transit agencies to overcome the workforce challenges they are facing and leverage workforce development opportunities in new and emerging technologies, the TWC did extensive outreach to understand the issues, and then develop programs and field technical assistance to support workforce recruitment campaigns. The National Bus Operator and Maintenance Technician Recruitment Campaign noted earlier is active and rolling out in cities across the country in fall 2022. The hope is that by tailoring the resources to their specific needs, transit agencies can successfully recruit and then training new workers. Additionally, the ATTAIN apprenticeship program will help address shortages for skilled workers in the electronics and electrical areas, which are essential to future fleet zero-emissions transitions.

To help identify both the extent of workforce development shortages and measure the success of mitigation efforts, FTA and the TWC studied the data collection needs for public transportation occupation information. This is one of the recommendations of a U.S. Government Accountability Office report on public transportation workforce issues. FTA is working with the Department

of Transportation's Bureau of Transportation Statistics and the Department of Labor's Bureau of Labor Statistics to ascertain the options for gathering more specific public transportation occupation information from transportation workforce statistical surveys. Currently, many of the statistics aggregate public transportation information with other transportation services such as taxis, school buses, etc. FTA will make a policy decision regarding this area by the end of calendar year 2022. In addition, the TWC is integrating a Transit Workforce Data Dashboard into its new website (<https://www.TransitWorkforce.org>). This dashboard will include key metrics and trends for the transit workforce at the national and possibly regional level. The TWC will continue to partner with the Bureau of Labor Statistics and Bureau of Transportation Statistics staff, to craft occupational data specific to transit careers and occupations, while also crafting demographic data for those who work in public transit.

Finally, there remains the need to ensure equity and diversity at all levels of public transportation agencies. There is a renewed focus on the diversity, equity, inclusion, and accessibility of those who can obtain careers in public transit. Women, veterans, people with disabilities, and people from disadvantaged communities have always been a focus of FTA's workforce development efforts. Also included in recent years is a focus on returning citizens, unhoused individuals, and those exiting the foster care system. These audiences often hail from disadvantaged communities and are often people of color. In an effort to address the current transit worker shortages, these audiences can be recruited for good paying jobs and economic stability with careers in transit.

Next Step – Develop a National Public Transportation Workforce Strategic Plan to Support Public Transportation Workforce Development

FTA continues to assess public transportation workforce development issues, working closely with national associations like the American Public Transportation Association, the Community Transportation Association of America, and other national nonprofits like TransitCenter, in addition to the International Transportation Learning Center, which manages the TWC. FTA convened many meetings, conference discussions, listening sessions, and other activities in FY 2022 to understand the scope of public transit workforce needs and potential solutions to address those needs.

In December 2022, the ITLC will hold its Making Connections conference, where a draft Strategic Plan will be vetted with transit stakeholders, industry partners, and labor organizations for their input into the plan. Particular emphasis will be placed on defining goals, measures, and scorecards related to equity, diversity, inclusion, and accessibility. The goal is to finalize and publish the National Public Transportation Workforce Development Strategic Plan in the summer of 2023.

Section 3

FY 2023 Expected Activities and Program Planning Process for Technical Assistance and Workforce Development Allocations

FTA follows a multi-pronged approach to finalize technical assistance and workforce investments for the upcoming year. There are three major ways that FTA finalizes decisions – the Presidential and Congressional Budget process; addressing any Congressional requirements from yearly Appropriations legislation; and an internal FTA program planning process that gathers the collective input and wisdom of experienced colleagues from across the agency.

Each year, FTA's first priorities are to ensure that current competitively selected technical assistance centers have enough funding to continue operations. Next, FTA assesses and implements applicable provisions in Appropriations legislation enacted by Congress. Lastly, FTA asks each of its program offices to note key technical assistance projects and activities to implement priorities of the Administration. For FY 2023, FTA will prioritize technical assistance, standards, and workforce development activities that further DOT's strategic goals of Safety, Economic Strength and Global Competitiveness, Equity, Climate and Sustainability, Transformation, and Organizational Excellence.



Acronyms and Abbreviations

ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
CTAA	Community Transportation Association of America
DOT	U.S. Department of Transportation
FTA	Federal Transit Administration
NADTC	National Aging and Disability Transportation Center
NAS	National Academy of Sciences, Engineering, and Medicine
NCMM	National Center for Mobility Management
NTI	National Transit Institute OLI Operation Lifesaver, Inc.
SDO	Standards Development Organizations
TCRP	Transit Cooperative Research Program
TRAC	Transit Research Analysis Committee
TRB	Transportation Research Board
TRI	FTA Office of Research, Demonstration, and Innovation
TWC	Transit Workforce Center



U.S. Department of Transportation
Federal Transit Administration

U.S. Department of Transportation
Federal Transit Administration
East Building
1200 New Jersey Avenue, SE
Washington, DC 20590
<https://www.transit.dot.gov/about/research-innovation>