

MEMORANDUM

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Subject: DRPT Apprenticeship Application Guidance

INTRODUCTION

The Transit Apprenticeship Application Guide is designed to assist transit agencies in developing and implementing a successful apprenticeship program that meets the requirements for transit apprenticeship program funding from the Department of Rail and Public Transportation (DRPT). This document supplements the grant description and application instructions provided in the DRPT Blue Book. By following this guide, transit agencies will be able to create a structured program that addresses key components necessary for a successful grant application.

Apprenticeships may be a useful structure for providing training for many roles at transit agencies, including dispatchers, road supervisors, and schedulers. Much of the material in this guide is applicable to any agency position. However, this guide provides specific guidance for two roles: transit mechanics and operators.

Transit apprenticeships can vary considerably between agencies. So long as applicant programs meet the criteria provided in the DRPT Blue Book, they may be eligible for funding. However, most transit apprenticeship programs can be classified into one of the two following categories:

Agency-Led Apprenticeships

Agency-led apprenticeships may take a variety of forms depending on the specific circumstances of each agency and their workforce needs. It can take the form of a small-scale effort tailored to a specific person or position in the agency. These programs can leverage DRPT funding to support their apprenticeship initiatives, which is suited for agencies that need to respond swiftly to changing operational demands or skill gaps without the need for a large-scale, ongoing training program. Agency-led apprenticeship programs may also take the form of a more programmatic and large-scale effort, with new classes of apprentices starting regularly, or as positions become open.

Registered Apprenticeships

Registered apprenticeships are an initiative of the federal Department of Labor and overseen in Virginia by Virginia Works. The criteria for registering an apprenticeship program in Virginia not only encompasses but

exceeds the requirements of DRPT’s grant program. Registering an apprenticeship program requires offering supplemental education, such as community college coursework, and providing apprentices with a nationally registered certification. While DRPT’s apprenticeship grant program is potentially open to all transit-agency positions, registered apprenticeships must involve an eligible occupation. Transit mechanics and operators are among the transit positions that the federal Office of Apprenticeships recognizes as eligible occupations.

Agencies with registered apprenticeship programs may use the DRPT transit apprenticeship funds to cover the wages and benefits of apprentices. Additionally, registered apprenticeship programs are eligible for additional grants through Virginia Works and the federal Office of Apprenticeships.

Considering these two types of apprenticeship programs, agencies can use this guide to develop content for the five sections of the application for the Public Transportation Workforce Development grant funds:

- Project Scope
- Apprentice Work Plan
- Technical Capacity
- Monitoring and Evaluation
- Expanding Partnerships

APPLICATION GUIDANCE

This section provides guidance on the information required for each of the five application sections. Although this document provides examples only for transit mechanics and operators, agencies may adapt the information to prepare applications for other roles as well.

Project Scope

In this section of the application, include a comprehensive overview of the apprenticeship program, including a program description, budget, schedule, and desired qualifications for apprentices. Furthermore, include a draft of the hiring announcement and an outline of the proposed hiring schedule.

Table 1 provides some of the key guidelines for developing the scope based on the nature of the apprenticeship program (i.e., Agency-Led vs Registered Apprenticeship Program):

Table 1: Apprenticeship Scope Guidelines

Key Components	Required Elements	Additional Elements <i>(Elements required of registered apprenticeship programs in blue.)</i>
Program Description	Make sure to incorporate the following information: <ul style="list-style-type: none"> ■ Purpose of the program and the need the program would meet. ■ Duration of the program. ■ Any external collaborations involved. ■ Key outcomes 	Additionally, incorporate the following: <ul style="list-style-type: none"> ■ A description of the supplemental education program ■ A description of the nationally recognized credential and or college credits that apprentices will earn during the program.

Project Schedule	<p>Make sure to include the following information:</p> <ul style="list-style-type: none"> ■ Program start and end dates. ■ A rough description of the programs and tasks to be completed during various phases of the program (quarterly, etc.) ■ A schedule of collaborations with outside entities, i.e., local trade school, community college, etc. (if applicable) 	<p>Additionally, include the following:</p> <ul style="list-style-type: none"> ■ A schedule of the supplemental education program. ■ Indicate if the apprenticeship program is longer than a year
Apprentice Qualification	<p>Make sure to incorporate the following information:</p> <ul style="list-style-type: none"> ■ The minimum as well as preferred educational qualification. ■ Prior experience required. ■ U.S work eligible ■ Any other qualifications required 	<p>Additionally, incorporate the following information:</p> <ul style="list-style-type: none"> ■ Any special license or membership required (i.e., open to union member only vs public) ■ Any medical/drug test required.
Budget Details	<p>Include information related to expenses, including:</p> <ul style="list-style-type: none"> ■ The total number of apprentices. ■ Total program hours ■ The starting wage (with DRPT supporting a maximum wage of \$20 an hour) ■ State and local costs ■ State and local assistance available ■ Total project cost, as well as ■ Other costs. <p>Also, provide information related to funding, including any other grants or funding sources supporting the apprenticeship program.</p>	<p>Additionally, incorporate the following information:</p> <ul style="list-style-type: none"> ■ Wage increment rate through the life of the program.

To see a sample hiring announcement for transit mechanic and transit operator, refer to the following links:

Transit Bus Mechanic	Transit Bus Operator
Transit Mechanic Apprentice Job Announcement	Transit Operator Apprentice Job Announcement

Apprentice Work Plan

In this section, provide a detailed explanation of the activities and programs that participants complete during the apprenticeship. Include a thorough description of the work to be performed, the skills to be learned, and a timeline of tasks. Additionally, provide a section rotation schedule, which is a planned timetable that outlines how an apprentice would rotate between various tasks, sections of the program (i.e., on-the-job learning vs supplementary education and more). Section rotation schedules vary based on whether the program consists of only the on-the-job training or whether it consists of both on-the-job as well as supplementary education.

Table 2 provides some of the key guidelines for developing the apprenticeship work plan based on the nature of the apprenticeship program:

Table 2: Apprenticeship Work Plan Guidelines

Key Components		Required Elements
Description of Work		Description of the work may include: <ul style="list-style-type: none"> ■ A description of each task that to be performed to attain the target level of skills. ■ The schedule of tasks. ■ The number of hours of work required for each task.
Skills: Mechanics	Transit	Following is an example of some of the skills that would be acquired during a transit mechanic apprenticeship: <ul style="list-style-type: none"> ■ Vehicle Inspection & Shop Safety ■ Engine Repair ■ Automatic Transmission & Trans Axle ■ Manual Drivetrain & Axle ■ Suspension & Steering ■ Brakes ■ Electrical/Electronics ■ Heating, Ventilation, and Air Conditioning ■ Engine Performance ■ Electric Powertrain Maintenance ■ Electric Vehicle Charger Maintenance ■ Perform all duties in a safe manner. Promote safety awareness. ■ Work toward full accreditation.
Skills: Operators	Transit	Following is an example of some of the skills that would be acquired during a Transit Operator apprenticeship: <ul style="list-style-type: none"> ■ Adhering to policies, laws and regulations related to operating a bus. ■ Properly and safely operating transit vehicle during the day and night, in a variety of weather situations and road conditions. ■ Inspecting motor vehicles ■ Measure the level or depth of water or other liquids. ■ Record operation or production data. ■ Providing customer service to passengers; ensuring safe transportation of passengers. ■ Utilizing appropriate vehicle communication devices and techniques; communicating professionally with others to gain or convey information. ■ Battery-Electric Bus operation ■ Operating according to health, safety and environmental standards, best practices, and requirements.
Timeline of Tasks		<ul style="list-style-type: none"> ■ Include the ideal start and end date for each task.
Rotation Schedule		May include: <ul style="list-style-type: none"> ■ Potential hire date ■ First, second, third, and last quarter evaluation dates. ■ Final report date.

For a more comprehensive work plan for various apprentice roles, visit www.apprenticeship.gov

For an example of comprehensive workplan for transit bus mechanics and transit operators visit the following links:

Transit Bus Mechanic	Transit Bus Operator
Transit Bus Mechanic Work Plan	Transit Operator Work Plan

Technical Capacity

In this section identify an Apprenticeship Coordinator who would oversee the program and the apprentice’s progress. Include the coordinator’s contact information as well as a detailed job description to ensure that there is a clear point of accountability and supervision throughout the apprenticeship.

Monitoring and Evaluation

In this section outline the methods for measuring performance and evaluating the results of the apprenticeship program. This would include monitoring the successful completion of various tasks by the apprentice as well as the trainers to make sure both parties are progressing towards the shared goal.

Table 3 provides some suggestions for developing the robust monitoring and evaluation program based on the nature of the apprenticeship program. (Note that agencies are **not** required to include all the elements included in Table 3.)

Table 3: Suggested Content for Monitoring and Evaluation Section of Application

Components	Description
Trainee/Trainer/Certifier Documentation	The documentation in this part is for identifying the personnel directly involved with the training processes, and may include details such as: <ul style="list-style-type: none"> ■ Name of the trainee, trainer, certifier ■ Date of involvement
Task Tracking	Describe your agency’s approach to monitor the progress of the apprentice throughout various tasks, including: <ul style="list-style-type: none"> ■ Name of the task performed. ■ Numbers of hours spent on the task. ■ Start and end dates, and ■ Name of the trainee
Written Test Tracking	Describe your agency’s approach to monitoring the ability of the Apprentice to utilize technical data to retrieve information, and could include: <ul style="list-style-type: none"> ■ The test subject. ■ Date of completion, and ■ Name of the trainee
Supplemental Instruction	<ul style="list-style-type: none"> ■ Describe your agency’s approach to monitor the progress of the supplemental instruction undergone by the apprentice. The section may include: ■ Name of the Course completed. ■ Start and end date. ■ Name of the Apprentice <p>(This section may not apply to agency-led apprenticeship programs)</p>

<p>Nationally Recognized Certification</p>	<p>Describe your agency’s approach to monitoring evaluating the progress of apprentice towards the successful completion of the required nationally recognized certification. The section may include</p> <ul style="list-style-type: none"> ■ Oral and written tests ■ Additional/special training <p>(May not be applicable to non-registered apprenticeship programs.)</p>
<p>Daily Progress Notes</p>	<p>If applicable, describe your agency’s approach monitoring the daily progress of the apprentice. The section may include:</p> <ul style="list-style-type: none"> ■ The system/s worked. ■ The trainer worked with, and ■ Apprentice notes/remarks
<p>Mentor/Trainer Performance Assessment</p>	<p>Describe your agency’s approach to encourage the trainers to be invested in the outcome of the apprenticeship and to incentivize high performance.</p> <p>Create a mentor/trainer performance assessment system to ensure the following best practices:</p> <ul style="list-style-type: none"> ■ Trainer is patient, ■ Trainer encourages the apprentice to learn, ■ Trainer cares and conducts fairly. ■ Trainer provides feedback to the apprentice. ■ Trainer knows their job.

Agencies may refer to the following training plans for Transit Bus Mechanic and Transit Bus Operator as reference:

Transit Bus Mechanic	Transit Bus Operator
Mechanic Evaluation Plan	Operator Evaluation Plan

Expanding Partnerships

Collaborations with external organizations can be a crucial component of an apprenticeship. Be sure to note any partnerships with any of the following:

- **Unions.** Developing an apprenticeship program requires collaboration with unions on a variety of topics including recruiting mentors and trainers from existing staff, opening apprenticeship positions to internal candidates, and setting the level of seniority that graduating apprentices receive.
- **External Trainers.** Trainers from outside your agency, such as original equipment manufacturer (OEM) trainers, may provide instruction on certain aspects of your agency’s operations, including the maintenance and operation of low- and zero-emission vehicles.
- **Community Colleges & Vocational Schools.** Educational institutions such as community colleges may provide classroom instruction to apprentices.
- **Virginia Department of Workforce Development:** Oversees the registration and certification of apprenticeship programs to ensure they meet federal and state standards, involves evaluating program structures, training methods, and checking compliance with regulatory requirements. Furthermore, the Virginia Employment Commission can assist agencies with advertising, candidate recruitment, and applicant screening.

CONSIDERATIONS

To create an effective apprenticeship, training directors should design their programs programs to reflect the priorities and structure of their agencies. This section offers suggestions related to the design of

apprenticeship programs that originated from background research and case study interviews with representatives from transit apprenticeships across the country. Summaries of those interviews are available in the appendix.

Low- and Zero-Emission Buses

Agencies adopting low- and zero-emission buses will need to provide their staff with training to understand how to operate, maintain, and plan service around their new fleets. While transit apprenticeships will have substantial similarities regardless of fuel type, agencies may want to bear in mind the following:

- **Apprenticeships at agencies with mixed-fuel fleets.** Most agencies with low- and zero-emission buses operate mixed-fuel fleets. In 2022, no agencies operated bus fleets exclusively powered by batteries or hydrogen, and 88 percent of agencies with CNG buses also had gasoline, deisel, or other high-emission vehicles in their fleets¹. Given the time and expense of acquiring low- and zero-emission vehicles, it is likely that most agencies will continue to operate mixed-fuel fleets for several years. Apprenticeships at agencies with both high-emission and low- and zero-emission vehicles usually train mechanics on the systems common to all buses, including brakes and suspension, and then train mechanics on propulsion systems in separate modules towards the end of the course of training.
- **OEM training.** Given the lack of standardization among low- and zero-emission manufacturers, and the proprietary nature of those technologies, many agencies currently rely on original equipment manufacturers (OEMs) for training. Apprentices may receive training directly from OEMs or may learn from agency mechanics who have been trained by OEMs—the so-called ‘train the trainer’ approach. Agencies should choose the approach that is best for them based on the availability of OEM trainers, and whether the apprentice program’s timeframe aligns with the vehicle acquisition timeline.

Developing a Staff of Trainers and Mentors

Many agencies find it challenging to develop a cohort of effective trainers and mentors. Agencies that have implemented transit apprenticeships offer the following suggestions:

- **Compensation for trainers and mentors.** Many agencies with apprenticeships pay an additional hourly wage for hours spent mentoring and training. Some agencies also provide bonuses to trainers whose apprentices complete the program, pass their exam, or based on some other criteria of success.
- **Guidance on pedagogy.** An agency’s experienced mechanics may have not developed the skills to be an effective teacher or mentor. Agencies should plan to provide feedback and guidance to workers who step up to serve in this role.

Coordination with Unions

Transit agency staff may wonder about the implications an apprenticeship program may have for their collective bargaining agreements. Establishing apprenticeship programs often requires coordination between transit agencies and the unions representing their workers. Points of coordination include:

- **Supplemental pay for trainers.** Unions often request that additional job responsibilities, such as supervising apprentices, be accompanied by additional pay.

¹ Source: Analysis of 2022 Annual Database Energy Consumption data, National Transit Database.

- **Offering apprenticeships to existing workers.** Unions may request that apprenticeship positions be open to existing workers (such as those in the general labor pool) before outside applicants.
- **Impact on seniority system.** Some apprenticeship programs offer participants the opportunity to enter the agency workforce with greater seniority upon completion, in recognition of their advancement. However, unions view the seniority system as an important way to protect the interests of members, so any program elements related to seniority must be discussed and agreed upon with union representatives.

Agencies should begin discussions with their unions early so that the bargaining unit participates in program design, thereby developing buy-in, and so that the process of developing an agreement does not delay the implementation of the apprenticeship program.

Funding

Agencies may request support identifying sources of funding for their apprenticeship programs, especially for expenditures not covered by the DRPT Workforce Development Grant Program, which can only provide funding for apprentice wages and benefits. In addition to DRPT's grant, funding for transit apprenticeships is available from several sources, including:

- **FTA grants**, including Low or No Emission Grant Program and Grants for Buses and Bus Facilities Competitive Program.
- **Grants for registered apprenticeship programs** from the Office of Apprenticeships of the U.S. Department of Labor and Virginia Works.
- The Federal Highway Administration (FHWA), through the **National Electric Vehicle Infrastructure (NEVI)** program. (Note that NEVI funding is not yet supporting education for transit workers in Virginia but may in the future.)

Agencies seeking more funding information can refer to the DRPT Apprenticeship Resource Guide.

Supplemental Education

Agencies may choose to provide their apprentices with classroom instruction to supplement on-the-job training. Such supplemental education can be provided through institutions in the Virginia Community College System, which offers vocational education, including automotive maintenance, at schools across the state.

The easiest way for agencies to engage community colleges about developing bus mechanic course offerings is by joining the Program Advisory Committee at institutions in the Virginia Community College System (VCCS). For more information on how agencies can benefit from VCCS programs, please refer to the Workforce Development chapter of the DRPT Modernizing Transit Fleet Guidebook.

ADDITIONAL RESOURCES

The following are additional resources agencies may utilize to inform the development of a comprehensive apprenticeship application:

1. **Resource Guide:** This guide provides a survey of state and federal funding opportunities for apprenticeship programs, the types of expenses they can support, and the types of apprenticeship programs that are eligible.

2. [Modernizing Transit Fleets Guidebook](#): This guidebook outlines the essential skills for transit operators and mechanics, details how agencies can provide effective training, and offers guidance on structuring transitions to low- and zero-emission buses considering workforce needs of the agencies.

APPENDIX: TRANSIT APPRENTICESHIP CASE STUDIES

As part of the research conducted to develop this guide and the other guidance documents related to DRPT's Public Transportation Workforce Grant program, the study team conducted interviews with three transit agencies that have developed apprenticeship programs to help alleviate some of their transit workforce needs. A summary of those programs is provided below to provide additional insight for DRPT staff who are advising agencies interested in developing their own programs.

IndyGo (IN)

IndyGo, the transit provider in Indianapolis, IN, launched an apprentice program for bus mechanics in 2023 to address the agency's mechanic shortage. With an initial cohort of five apprentices, the program lasts two years and is officially registered with the state of Indiana's Department of Labor (the Indiana analog to Virginia Works). In May 2024, the program had six enrolled apprentices. The curriculum consists of 12 job function modules, including brakes, suspension, diesel engine maintenance, and electric vehicle maintenance. In addition to on-the-job training, apprentices receive technical instruction at a local community college. Upon enrollment, apprentices take an aptitude test to gauge their prior knowledge and identify the types of training they need. Trainers and mentors provide apprentices with structured feedback throughout the program. Funding primarily comes from IndyGo's general maintenance budget, augmented by FTA workforce development funding and additional grants. To attract and retain a cohort of trainers, IndyGo pays participating mechanics receive an increase in their hourly wage.

Pierce Transit (WA)

Initiated in 1986 and recently updated, Pierce Transit's apprenticeship program currently encompasses three agency roles:

- Transit Mechanics
- Communications Technician
- Body Shop Technician

The transit mechanic program lasts four years and requires 8,000 hours of training. Positions are first opened to internal candidates and then, if space is available, outside workers. In May 2024, Pierce Transit had five apprentices; three mechanics, one communications technician, and one body shop technician.

Pierce Transit's programs are characterized by flexibility and personalization. Apprentices with prior experience and skills can evaluate out of modules, and new training and coursework have been added to meet specific agency needs. For example, Pierce Transit arranged for a recent body shop apprentice to take a course in welding at a local vocational school.

Trainers evaluate the skills and knowledge of apprentices via an initial baseline assessment and skills tests at the conclusion of each job function module. Apprentices receive training from a range of sources including internal trainers, external trainers, and original equipment manufacturers.

Funding primarily comes from Pierce Transit's internal training budget, covering apprentices' wages and providing tools and materials. The agency's apprenticeship program is registered with the state Department of Labor & Industries, which has provided supplemental grant funding to Pierce Transit on occasion.

Fairfax Connector (VA)

Transdev, the contractor who operates Fairfax Connector, registered its transit mechanic training program in 2022 as a joint venture with the Teamsters; in 2023, Transdev registered a second program in conjunction with the Amalgamated Transit Union. The two programs together had ten apprentices in 2023.

Both programs last one year and involve 2,000 hours of training. Transdev says it is studying whether to launch a three-year journey-level apprenticeship program to provide participants with more robust training.

Transdev independently developed its curriculum and registered its program with the Virginia Department of Labor. Although Transdev has yet to receive any funding from the registered apprenticeship program, they opted to register the program because the increased credibility conveyed by the designation was seen as a tool for recruiting applicants. Transdev works with local vocational schools to recruit high school graduates into the apprenticeship program. Existing transit mechanics can serve as mentors in the program, for which they are paid a bonus.

As a registered apprenticeship program, the Fairfax Connector program must include classroom education. While Transdev approached the local community college about partnering to provide classroom education, no partnership came to fruition. Instead, Transdev constructed a classroom at one of their facilities, and participants from all the agency's garages attend classroom courses on Thursdays.

Transdev funds the program out of its operating budget, and pointed out that because it is not a federal recipient, it is not eligible for FTA-related workforce development funds.