

TRANSPORTATION APPRENTICESHIP WORKGROUP

2023

FINAL REPORT

 MARYLAND
APPRENTICESHIP
and TRAINING PROGRAM

June 30, 2023

The Honorable Guy Guzzone
Chairman, Senate Budget and Taxation Committee
3 W Miller Senate Office Building
Annapolis, MD 21401

The Honorable Ben Barnes
Chairman, House Appropriations Committee
House Office Building, Room 121
Annapolis, MD 21401

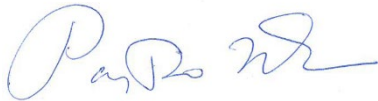
RE: Final Report on Apprenticeships in Transportation Workgroup – 2022 JCR

Dear Chairmen Guzzone and Barnes,

The Maryland Department of Labor (Labor) is pleased to transmit the enclosed final report on apprenticeships in transportation. Pursuant to committee narrative included in the 2022 Joint Chairmen’s Report, Labor has worked in close collaboration with the Maryland Department of Transportation and dozens of stakeholders from the workforce system to assess and better understand the role of apprenticeship in the construction, maintenance, and operation of our State’s transportation systems.

This final report summarizes the workgroup process, ongoing efforts to establish or grow apprenticeships in transportation, and cursory recommendations that can help Maryland build a world class transportation workforce through apprenticeship. We hope that this report can be a catalyst for continued collaboration and innovative thinking as we consider how to best support the vital workers in our transportation sector.

Sincerely,



Portia Wu
Secretary

Enclosure
cc: Members, Senate Budget and Taxation Committee
Members, House Appropriations Committee
Paul J. Wiedefeld, Maryland Secretary of Transportation

Report Background

During the 2022 session of the Maryland General Assembly, the Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee authored the [Report on the Fiscal 2023 State Operating Budget \(SB 290\) and the State Capital Budget \(SB 291\) and Related Recommendations](#). The committee narrative on “Apprenticeship Workgroups for Targeted Occupations,” outlined the Committees’ concern with workforce shortages among government employees in the public safety, health, and transportation sectors. The narrative directed the Maryland Department of Labor to convene workgroups to study and report on the short-term and long-term needs in each respective sector, as well as efforts to:

- identify the extent of vacancies at the State and local level within each sector, specifically including, but not limited to, police officers, correctional officers, parole and probation agents, direct care and public health workers, bus operators, and vehicle maintenance personnel;
- review existing apprenticeships in the United States and elsewhere specifically for occupations in these identified sectors;
- design apprenticeships in the occupations within the identified sectors that have the greatest recruitment challenges and training deficiencies, including estimated costs and potential funding opportunities;
- identify opportunities to start apprenticeships at the high school level consistent with the Blueprint for Maryland’s Future;
- identify opportunities, in coordination with the University System of Maryland (USM), the Maryland Association of Community Colleges (MACC), University of Maryland Global Campus (UMGC), the Maryland Career and Technical Education (CTE) Committee, and the Maryland State Department of Education (MSDE), to create degree apprenticeship programs and other ways to incorporate associate and bachelor’s degrees in apprenticeships; and
- identify potential apprenticeship sponsors in each occupation.

By request of the Chairmen, the Maryland Department of Labor has authored this final report to provide updates on the continued activities and final recommendations of the Maryland Apprenticeship in Transportation Workgroup.

This report will profile the workforce development initiatives, apprenticeship development processes, and ongoing work that has occurred within the Maryland Department of Transportation since the Interim Report. Finally, this report will offer some recommendations for future attention, and highlight new opportunities and potential resources to support Registered Apprenticeship in transportation.

The State of Apprenticeship Programs and Workforce Initiatives at MDOT

Workforce Development Progress at MDOT

Since the Interim Transportation Workgroup report was released in December 2022, apprenticeship development remains underway at MDOT. The Transportation Secretary's Office (TSO) has taken the lead in reviewing workforce needs of the modal administrations, assembling training and education partners, and increasing community outreach for hiring and recruitment. Since December 2022, MDOT TSO has increased participation and involvement in high school career/job fairs, and established a partnership with Maryland New Directions to develop community-based pre-employment training programs for the transportation industry.

The International Transportation Learning Center, a national clearinghouse for workforce development technical assistance, including Registered Apprenticeship, has been engaged with TSO to support training and apprenticeship development. MDOT TSO has ongoing partnerships with the Community College of Baltimore County (CCBC), Anne Arundel Community College, Morgan State University, University of Maryland Baltimore County, University of Maryland Global Campus, and Stevenson University for training and tuition reimbursement programs.

Apprenticeship Program Development Across the Modal Units

Transportation Secretary's Office: MDOT TSO has successfully partnered with CCBC as its employer for CCBC's Cybersecurity Apprenticeship Program. The program was registered with the Maryland Apprenticeship and Training Council in March 2023, and will support five initial apprentices over two years. Currently, there are five incumbent employees within the classification. MDOT TSO is working with CCBC to begin the selection process for new apprentices. One unique feature of this Apprenticeship program is the proposed rotation of apprentices within the different modes to provide the apprentices with a robust learning experience which includes MDOT operations across the agency. MDOT TSO is also partnering with SHA to run a pilot pre-apprenticeship program for Facilities Maintenance Technicians through Maryland Job Corps. TSO plans to host four pre-apprentices, and SHA will host two.

State Highway Administration: In March 2023, SHA successfully registered an Apprenticeship program through the Apprenticeship Maryland Program (AMP) for Heavy Equipment Maintenance Technicians. SHA is currently selecting mentors for the program and evaluating locations to host apprentices. There are two additional programs in early development at SHA for Diesel Mechanics and Facility Maintenance Technicians.

Maryland Port Administration: MPA has several apprenticeship programs under development. The Auto Diesel Apprenticeship program is undergoing final review and is pending review by the Maryland Apprenticeship and Training Council in July 2023. MPA also recently enrolled an employee in an electrical training program with the Associated Builders and Contractors (ABC) of Greater Baltimore. MPA is planning to launch a Registered Electrician program with ABC by December 2023. MPA has identified two additional areas for apprenticeship development - Marine

Terminal Repair Technician and Electro-Mechanical Crane Technician. Evaluations for training support and program structure are currently in development.

Maryland Transit Administration: MTA’s Bus Maintenance Mechanic Apprenticeship Program is undergoing final reviews and is pending review by the Apprenticeship and Training Council in July 2023. MTA management, in conjunction with Amalgamated Transit Union Local 1300, are currently evaluating apprenticeship needs across the agency. Additional occupations under immediate consideration for apprenticeship programs are Bus Operators, Facilities Maintenance Technicians, and skilled trades classifications (Electrician, HVAC-R, and Carpentry), and Systems Maintenance.

Maryland Transportation Authority: Currently in development at MDTA are apprenticeship programs for Heavy Equipment Maintenance Technicians (HEMT), Facilities Maintenance Technicians, and Electricians. MDTA has established an internal team that is pursuing Maryland Apprenticeship Registration for the HEMT program by September 2023.

MDOT Initiatives in Development or Under Needs Assessment

MAA and MVA are in the process of conducting a more thorough analysis of where apprenticeship programming would be supported by their current business needs. MVA has considered establishing apprenticeship programming for more IT related positions, similar to the Cybersecurity program. TSO is working with the Chief Information Officer’s office to determine a long-term strategy to address recruitment and retention needs.

The success of apprenticeship programming within MDOT will require additional internal support and investment beyond the delivery of training and coordination by Human Resources. Dedicated program management will eventually be needed to ensure program compliance and full integration across the modal administrations. While MDOT has already secured PIN allocations to support apprenticeship initiatives, additional budgetary support will be needed to support these programs outside of typical training budget allotments. MDOT reports that projected figures to facilitate the MTA Bus Maintenance Mechanic Apprenticeship Program for three years, including employing eight apprentices, cost allotments for mentors, tuition for training, and materials, totaled around \$4.8 million.

MDOT’s goal is to ensure that apprenticeship programming becomes an integral part of the internal structure of all modes and their respective businesses. Funding to support the expansion, oversight, training, and related activities associated with Apprenticeship is needed to ensure success and growth beyond the initial 2-4 years of program implementation.

Workforce Vacancy Updates

Since the Interim Report, MDOT has seen improvement in vacancy, churn, and turnover across many classifications, while others report persistently high vacancy rates. Data provided in the Interim Report identified 12 MDOT classifications with period vacancy rates at or exceeding 25 percent. As of this report, only seven classifications meet that threshold. Despite an overall

reduction in high-vacancy classifications, seven classifications saw increases in their vacancy rates since November 2022.

Workgroup participants from across MDOT’s modal administrations reported perceived reduction in turnover issues compared with fall 2022, while underlining that hard-to-fill positions remain mostly unchanged.

Summary Table:

High-Vacancy Classifications within MDOT, 11/2022 vs. 05/2023

Classification	Vacancy Rate for October 2022	Vacancy Rate for May 2023
MPA Electro-Mech. Crane Tech I – Elect. Opt.	66%	66.7%
MTA Repairman C – Rail	42%	60.0%
Heavy Equip Maint. Tech I	33.3%	57.1%
Heavy Equip Maint. Tech Apprentice	33.3%	44.4%
Skilled Trade Specialist I	31.5%	44.4%
MTA Repairman B – Bus	25%	37.5%
Heavy Equip Maint Tech II	28%	30.0%

Source: MDOT Human Resources Information System (HRIS)

The MPA Electro-Mechanical Crane Tech I class has the highest vacancy rate of all skilled trades position classifications at MDOT (66.7%). This classification is unique to the Maryland Port Administration. Positions in this classification have historically been categorized as “hard to fill”, due primarily to the specialized nature of the work, required work experience, and higher compensation offered for similar positions in the private sector.

MDOT reported that MTA has particular challenges in recruiting for positions and retaining staff in the Repairman classifications, especially for Masons, Carpenters, Rail and Bus Maintenance Technicians, and Plumbers. In the skilled trades classifications overall, there are a total of 37 vacant positions across MDOT as of May 2023; an increase from the Interim Report.

Positions in the Facilities Maintenance Technician (FMT) and Heavy Equipment Maintenance Technician classification series are utilized across most MDOT modal administrations. SHA, MTA, MDTA, and the MPA have expressed critical concern in attracting and retaining talent to fill these positions. As of May 2023, MDOT is recruiting to fill 122 vacancies in the FMT I-IV class series. Positions in this class series continue to be MDOT’s greatest recruitment and retention challenge.

Recommendations for Apprenticeships in Transportation in Maryland

With an ongoing need for skilled building trades workers, MDOT demonstrates that many of the public transportation sector’s greatest workforce issues already align with the strengths of Registered Apprenticeship. Similarly, MDOT has made significant progress in developing

Registered Apprenticeship programs that respond to these needs. All of the Workgroup's recommendations for furthering apprenticeship programs in public sector transportation center around improving and scaling the ongoing work highlighted in this report.

1. Draw on Best Practices from Joint and Labor-Management Apprenticeship Programs in the Industry

In the longest running and most successful Registered Apprenticeship programs, there are certain best practices that help enable sustainability, continuity, and apprentice success. Among them, MD Labor emphasizes the benefits for joint, group, and labor-management partnership sponsored apprenticeship programs. These arrangements can be considered a best practice because they have a demonstrated record of creating programs that help employers, unions, and workers share the costs and benefits associated with employment and training.

MDOT staff have been closely connected with the International Transportation Learning Center, a valuable clearinghouse and technical assistance agency with resources to support apprenticeship programs specific to the transportation sector. MDOT, MD Labor, and workforce system stakeholders should look to national and international models of apprenticeship for assistance with designing programs and solving workforce issues in Maryland.

2. Build Partnerships with Local School Districts, Local Workforce Boards, Bargaining Units, and Training Providers

Apprenticeship is a model for employment and training that requires investment. Partnerships are an important strategy for ensuring the sustainability of this investment. As MDOT continues to build and scale its apprenticeship programs, the agency should look to its unions representing collective bargaining units for collaboration and workforce analysis informed by worker voice. Simultaneously, bargaining units should consider supporting efforts to develop apprenticeship programs in partnership with MDOT and Maryland's many training resources.

The public workforce system, chiefly the Maryland Department of Labor and Maryland's 13 Local Workforce Development Boards, are also significant resources for any employer looking to pursue apprenticeship or other structured training programs. Apprenticeship Navigator staff from the Maryland Apprenticeship and Training Program (MATP) have played an integral role in supporting MDOT's exploration of apprenticeships, and Navigators can provide critical support to any transportation sector employer.

Finally, Maryland's community colleges, universities, and independent apprenticeship training centers are hubs of training and learning activity that can enable the creation of new and innovative apprenticeship programs. In Maryland and across the country, community colleges and universities serve as Registered Apprenticeship sponsors, helping employers to operate programs or deliver coursework in conjunction with On the Job Learning.

Partnership is perhaps the deepest toolbox that transportation sector employers can access when considering how to build or expand apprenticeship programs.

3. Connect MDOT’s Work with Public Sector Apprenticeship Initiatives in other State, County, and Local Agencies

As apprenticeship programs grow, a larger share of public sector agencies are building programs and examining how it may meet their workforce needs. Across Maryland, many agencies and employers are looking to apprenticeships to fill similar kinds of positions. The overlap of labor markets and the limited supply of skilled labor means that employer and apprenticeship sponsors often find themselves in competition.

As MDOT grows and scales its programming, the agency should consider possible points of overlap with other public agencies’ skilled workforces. This applies broadly to skilled trades positions, who are employed in large numbers by local, county, and State government units across Maryland, and specifically to the highly specialized workers such as bus and rail operators or right of way maintenance workers. There are opportunities for MDOT to collaborate with the Maryland Department of Budget and Management (DBM), Department of General Services, Amtrak, the Washington Metropolitan Area Transit Authority (WMATA), and private contract operators of bus, rail, and port operations to coordinate workforce solutions that limit competition for skilled workers between various agencies and employers.

While union representation, occupational standards, and wage schedules may place limits on this collaboration in terms of Registered Apprenticeships, MD Labor and Maryland's public workforce system can help multi-employer groups develop sectoral strategies that benefit both workers and employers.

State and Federal Resources and Initiatives to Support the Expansion of Apprenticeship Programs

As Apprenticeship grows as a means of training diverse pools of workers for the workforce, local, state, and federal entities continue to increase funding resources to support the expansion of apprenticeship programs. The following new resources or initiatives are expected to begin in 2023 and should be considered as tools for implementing strategies identified in this report:

State Apprenticeship Expansion Formula Grant Funds (US Department of Labor)

In the spring of 2023, the US Department of Labor (USDOL) Employment and Training Administration released an invitation to apply for federal funds to support the expansion of state apprenticeship programs. This included a portion of formula funds to support operations and modernization and a competitive fund to support innovative ideas for expansion. MD Labor submitted an application on behalf of the State of Maryland seeking funds for a range of State apprenticeship activities.

MD Labor sought \$3 million from this opportunity to establish a *Public Sector Registered Apprenticeship Innovation Fund*. The Fund would provide apprentice Related Instruction reimbursements, on the job learning assistance funds, and apprentice supportive service alliances for public sector employers including transportation agencies. USDOL is expected to make an award announcement in June 2023.

Blueprint for Maryland's Future Investments in College and Career Readiness

The Blueprint, Maryland's sweeping education reform legislation, sets new standards and goals for nearly all dimensions of education in Maryland. One of the Blueprint's College and Career Readiness goals specifies that 45 percent of Maryland high school graduates will complete the high school equivalent of Registered Apprenticeship or another industry recognized credential by the end of the 2030-2031 school year. This ambitious goal has created a mandate for Maryland's Local Education Agencies to invest in and partner with apprenticeship programs.

Another significant component of the Blueprint reforms affecting the public workforce system is the career counseling services arrangement with Local Workforce Development Boards. This new program will allocate formula based funding to Local Workforce Development Boards to cover the cost of career counseling services for students from Local Education Agencies (school districts). As discussed elsewhere in this report, LWDBs are crucial connection points for employers, job seekers, training providers, and Registered Apprenticeship sponsors. The counseling program, paired with other Blueprint investments, could be a significant tool for advancing Youth Apprenticeship and School to Apprenticeship programs.

The Apprenticeship 2030 Commission (Senate Bill 104)

On April 24, 2023, Governor Wes Moore signed SB104 into law, providing for the establishment of the Apprenticeship 2030 Commission. According to statute, the purpose of the Commission is to examine and make recommendations to reduce skill shortages in high-demand occupations and provide affordable training for career pathways for young people by expanding Registered Apprenticeships in industry sectors with skill shortages, growing the number of Registered Apprenticeships programs to at least 60,000 by 2030, and reaching the Blueprint goal for 45% of high school graduates completing the high school level of a Registered Apprenticeship.

The Commission, which is expected to begin meeting in July 2023, will play an important role in helping Maryland's policy makers and workforce system stakeholders understand the opportunities associated with apprenticeship programs, particularly in regard to the Blueprint for Maryland's Future and the State's youth employment goals. The Commission is positioned to play a significant role in advancing the recommendations and findings of this workgroup for apprenticeships in transportation.