



**Maryland**

**GOVERNOR'S WORKFORCE  
DEVELOPMENT BOARD**

## **Pilot Visit Report**

**CTE Committee Expert Review Team**

Anne Arundel County Public Schools

CTE Committee, Governor's Workforce Development Board

**Date Visited: May 2, 2024**

**Date Submitted to LEA:**

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## EXECUTIVE SUMMARY

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The *Blueprint for Maryland's Future* ("the *Blueprint*") established the Career and Technical Education (CTE) Committee as a unit within the Governor's Workforce Development Board (GWDB); its purpose is to build an integrated, globally competitive framework for providing CTE to Maryland students in public schools, institutions of postsecondary education, and the workforce. The *Blueprint* requires the CTE Committee to establish, administer and supervise expert review teams (ERT) to visit schools with CTE pathways to review and report on LEA progress in implementing CTE aligned to the *Blueprint* vision and the CTE Committee's Framework and policies. The visits are also intended to provide support and identify technical assistance needs for LEAs as they build new CTE systems.

The CTE Committee spent SY 2023-24 developing its ERT program and organizing and conducting pilot visits to two districts. The goal of the pilot visits were to test the CTE Committee's draft protocols and tools as well as its visit design in districts of different sizes and structures. The second of these visits was to Anne Arundel County, which is the subject of this report.

AACPS offers CTE programs in 17 comprehensive high schools and in two regional Centers for Applied Technology (CAT North and CAT South). The CAT Centers serve students in the north and south regions of the county, with spots filled through a lottery process. Students travel to the two Centers for half days in 11<sup>th</sup> and 12<sup>th</sup> grade. Over 40% of students in AACPS enroll in CTE courses, with about 17% of graduates completing full CTE programs. Full CTE programs in Maryland are from three to five courses depending on the program areas, and often include work experience. CTE is managed across the district by an LEA CTE Coordinator; an LEA Workforce Development Director has been added as of SY 2024-25.

The CTE ERT team visited one comprehensive high school and one CAT center in Anne Arundel County. At each school, the team visited classrooms and met with groups of CTE instructors, students, school counselors, career coaches, and school administrators, aiming to capture a wide range of perspectives on the implementation and impact of CTE within the LEA. The team received extensive background materials and data and was briefed on the AACPS CTE system by the district director before the visit.

Based on a review of background material and the data gathered during the visits, the team summarized district strengths and challenges and offered some recommendations.

AACPS CTE system strengths include:

1. Alignment of programs with changing industry needs
2. Efforts to increase access to CTE for students
3. Commitment to increasing work-based learning across programs
4. A core of strong programming in place

5. Promising new efforts to expand career exploration and outreach
6. Well-regarded teachers

Challenges the districts faces include:

1. Lack of physical space to expand current programs and add new ones
2. Limited postsecondary connections as part of CTE programs
3. Relatively low CTE program completion rates
4. Uneven access to programs for students across the LEA

Suggested recommendations to address these challenges are:

1. Investigate new strategies to increase capacity of CTE system and programs
2. Strengthen postsecondary CTE connections
3. See the school as a work-based learning provider
4. Expand the apprenticeship route, particularly Registered Apprenticeships
5. Increase supports for CTE teachers to boost recruitment and retention
6. Focus on student completion of CTE, particularly that leads to completion of the high-school level of a Registered Apprenticeship or another industry-recognized credential (IRC)

## OVERVIEW OF THE CTE COMMITTEE EXPERT REVIEW TEAM VISIT

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### PURPOSE OF THE CTE EXPERT REVIEW TEAM (ERT)

The *Blueprint for Maryland's Future* ("the *Blueprint*"), Md. Ann. Code, Ed. Art. §21-209, established the Career and Technical (CTE) Committee as a unit within the Governor's Workforce Development Board (GWDB). The GWDB serves as the Governor's chief strategic and policy-making body for workforce development in the State of Maryland.<sup>1</sup> The GWDB is composed of key business, labor, education, community, and State and local government leaders appointed by the Governor to collaborate on business-led workforce approaches that advance Maryland's economic competitiveness and build pathways to work, wages and wealth for all Marylanders. The CTE Committee was established in 2022 and is composed of 11 members of the GWDB, as required in statute. The purpose of the CTE Committee is to build an integrated, globally competitive framework for providing CTE to Maryland students in public schools, institutions of postsecondary education, and the workforce.

Key to the design of this new system is alignment of CTE to the state's economic and workforce development strategy; the expansion of work-based learning (WBL) across the system, particularly of Registered Apprenticeships that begin during a student's high school years; a focus on awarding industry-recognized credentials that are valued by employers and help qualify students for family-sustaining jobs and careers; and a rigorous program of study to ensure that all students are well-prepared for their future career pathways.<sup>2</sup> The *Blueprint* requires the CTE Committee to establish, administer and supervise CTE ERTs to visit schools with CTE pathways, with the goal of reviewing how LEAs are implementing CTE aligned to this *Blueprint* vision and the CTE Committee's forthcoming CTE Framework and policies on Registered Apprenticeships and industry-recognized credentials. The CTE Committee is also designing these visits to provide support and identify technical assistance needs for LEAs as they build new systems, and to report back to the CTE Committee on the state of Maryland's CTE programming, existing strengths, and areas for further enhancement.

### PURPOSE OF CTE ERT PILOT VISITS

Anne Arundel County Public Schools (AACPS) hosted the second pilot CTE ERT visit for the CTE Committee in May 2024. The goals of this visit were to:

1. Test and modify CTE ERT tools and templates for visits, including questions, note taking, debriefing and follow-up reporting.

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<sup>1</sup> Executive Order No. 01.01.2023.22. (2023). <https://tinyurl.com/execorder01012023>

<sup>2</sup> AIB. (2023). *Blueprint Comprehensive Implementation Plan* (p. 129). <https://tinyurl.com/aibbpcompplan2023>

2. Design models for visiting LEAs of different sizes and structures, to inform the CTE Committee's planning for CTE ERT deployment for the 2024-2025 school year and beyond.
3. Understand the structure and effectiveness of current CTE offerings in the LEA, identify successful strategies already in place, pinpoint potential areas for growth, and identify challenges needing attention by the LEA and by the state.

## ABOUT ANNE ARUNDEL COUNTY PUBLIC SCHOOLS CTE SYSTEM

AACPS offers CTE programs in its 17 comprehensive high schools and in two CTE centers—the Center for Applied Technology (CAT)-North and CAT-South—designed to equip students with the skills and knowledge needed for a range of career paths. Students from across the LEA attend CTE programs either at their home high schools or at one of the two CTE centers that they apply for spaces in. AACPS has an A/B schedule for high school students which means students have 80 minute class periods for their CTE courses.

Almost half (44%) of AACPS high school students enroll in CTE courses, and 17% of the 2023 graduating class completed a full CTE program, which generally consists of three or four courses and work experience if required for their credentials. Currently, 6% of students who enroll in CTE earn an IRC, compared to 7% statewide. The LEA partners with local employers to offer approximately 850 internships and 130 apprenticeships (which were primarily youth apprenticeships) for students.

CTE programs are managed by the LEA-level Coordinator, with building administrators at each high school overseeing daily operations. Career coaches, introduced as part of the *Blueprint*, work alongside school counselors to provide career planning and facilitate WBL experiences. Starting in 2024-25 SY, AACPS is opening a new high school which will also offer CTE programming. In addition, AACPS added a Director of Workforce Development for the LEA starting in the 2024-25 SY.

Additional information about Anne Arundel County Public Schools can be located on the [Maryland Report Card website](#) and Appendix B LEA Brief.

## SUMMARY OF VISIT

This CTE ERT visit to AACPS included a team of eight members: GWDB CTE Committee staff, a CTE Committee member, staff representatives from MSDE, and Anne Arundel Workforce Development Corporation (the Local Workforce Development Board for Anne Arundel), and staff at the National Center for Education

and the Economy (NCEE).<sup>3</sup> The team's expertise spanned student learning, workforce development, and CTE.

Before the visit, the team participated in a virtual orientation to review the visit agenda, review visit materials and tools, and discuss key issues in the LEA with the LEA CTE Coordinator, Ryan Sackett. Mr. Sackett provided an overview of the AACPS system and programs at the schools to be visited. He also shared key challenges and strengths of the AACPS's CTE system and its current priorities.

During the visit to AACPS, the CTE ERT spent the morning at the CAT North, a shared-time CTE center, and the afternoon at Old Mill High School, a traditional comprehensive high school that houses some CTE programming but also core content courses such as Math, English Language Arts and Advanced Placement. At each school, the team visited classrooms and met with groups of CTE instructors, students enrolled in various CTE programs, school counselors, career coaches, and school administrators, aiming to capture a wide range of perspectives on the implementation and impact of CTE within the LEA.

## STRENGTHS

### 1. **Alignment of Programs with Changing Industry Needs**

AACPS has focused on ensuring that its programming is aligned to changing industry priorities. It currently has plans to expand programming in high growth areas such as aviation, robotics and Artificial Intelligence. In addition to the creation of new programs, the LEA is updating current programs such as shifting the auto tech curriculum to include skills in maintaining EV cars.

### 2. **Efforts to Increase Access to CTE for Students**

AACPS is also working to expand access to CTE programs in innovative ways. Both CAT centers offer evening programs, intended to serve more students and provide more flexibility in scheduling CTE courses. The LEA's A/B scheduling for high schools also allows it to offer CTE at the CAT Centers two days a week for longer periods, which means students need to travel to the Centers less days each week and are able to spend longer there each time. This makes the logistics easier for many students.

### 3. **Commitment to Increasing Work-Based Learning**

AACPS has increased its staffing of work-based learning (WBL) coordinators across schools and instituted LEA-wide regular planning meetings for these coordinators, with a goal of developing more internships, apprenticeships,

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<sup>3</sup> During the 2023-24 SY, NCEE has assisted CTE Committee staff in the planning, execution and revising of the CTE ERT Pilot Program. Staff members also participated as CTE ERT members on the pilot visits to provide context for visit reports.

both youth and Registered, and other work-based learning opportunities for students across programs. AACPS also has a plan to increase the work-based components of programs. The rationale is to both provide more practical experience for students but also to free up staff and classroom space to serve additional cohorts of CTE students.

#### **4. Strong Programming in Place**

The LEA has some strong CTE programs in place, particularly at the CTE centers. The CAT North baking program provides catering across the LEA, partnerships with NSA, the Coast Guard and University of Maryland Medical Center among other large employers provided significant numbers of youth apprenticeships, and the comprehensive high school has “signature” CTE programs, as part of an effort to raise the profile of high school-based CTE programming. These include programs such as natural resources and conservation, entrepreneurship and small business management. CTE programs in the LEA are also designed well with 80 minute high school periods allowing students ample time to complete work tasks. Programs have a strong emphasis on preparing students to find full or part-time work, if that is their goal. The LEA organizes apprenticeship fairs to connect students with potential employers, and CTE teachers described spending time helping students to prepare resumés and interview. CAT North also integrates financial literacy into all programs, including understanding the compensation possibilities in their selected career field.

#### **5. Promising New Efforts to Expand Career Exploration and Outreach**

AACPS offers career exploration, with opportunities for 9th graders to try out four programs at the CAT centers to students across the LEA. These programs help students see options available to them and consider their path in high school. The LEA also offers a middle school CTE summer camp located at CAT North, for students from across the LEA.<sup>4</sup> AACPS has also sponsored new outreach activities to share information about CTE programming with students, parents and the community, aimed at building more understanding and recognition of the strong pathways available. The LEA held a CTE fair and invited parents to the high schools to learn about CTE and other elective programs. It is also revamping its website to provide more detailed information about CTE for the community.

#### **6. Well-Regarded Teachers**

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<sup>4</sup> AACPS funded the camp using Elementary and Secondary School Emergency Relief Fund (ESSER); with the end of the relief funding this year, AACPS will need to find alternate funding for the program in the future.  
<https://tinyurl.com/esserfundmdschools>



Students in the focus groups consistently remarked on the dedication of their CTE teachers, and how CTE made learning interesting and engaging for them. They mentioned that the programs were “a breath of fresh air” for them and the environment was supportive. Students in the CAT North focus group remarked that they felt more comfortable in CTE center classes than those at their home school. (A few notable student quotes from the focus groups were: “It is like a relief coming here”; we are “actually learning stuff that can help you in the real world”; at my home school I am “very quiet, but here I am very outgoing”). The CTE teachers we met were seasoned professionals in their field, including a top Baltimore chef and the owner of a small local barbering business.

## CHALLENGES

### 1. **Lack of Physical Space to Expand Current Programs and Add New Ones**

Anne Arundel has no additional space in its two CTE Centers to expand current programming, despite long waitlists. Baking, for example, had over 300 applicants for 20 spots last year. All expansion would reportedly need to be in the comprehensive high schools, which also have space constraints. It is the team’s understanding that the new CAT North building, planned for August 2027, would not have additional space.

### 2. **Limited Postsecondary Connections as Part of CTE Programs**

Unlike other LEAs where community colleges offer a possible way to expand capacity for certain programs, Anne Arundel Community College does not currently offer many entry level courses of the technical programs the LEA hopes to expand. This also means that many CTE programs are not connected to post-secondary pathways through the college, which means that students have limited opportunities to earn college credit locally in technical CTE courses.

### 3. **Relatively Low CTE Program Completion Rates**

About 17% of AACPS graduates complete their CTE program compared to 34% across the state. As the percentage of students who enroll in CTE in the LEA is much higher; the LEA may want to focus on what prevents students from finishing their program. Non-completion also impacts the number of spaces available. When a student drops from a CTE program, their “seat” is often left unfilled because a new student would not have the foundational knowledge from the prior CTE course to start at level 2. CTE teachers reported feeling this was a missed opportunity for the students who had wanted to be in the CTE program but were not selected off the waitlist.

#### **4. Uneven Access to Programs For Students Across the LEA**

CTE programs at the CAT centers provide students with an environment and staff totally focused on CTE programming, which differs from those at comprehensive high schools. These programs are also those that require specialized equipment and space. Access to these programs is limited, however, because almost all of CTE programs are oversubscribed. AACPS leadership suggests that almost every program has a waiting list.

### **CTE ERT RECOMMENDATIONS**

#### **1. Investigate New Strategies to Increase Capacity of CTE System and Programs**

Given that there is little space to add new programs and cohorts to the existing programming at the CTE Centers and even in high schools, AACPS will need to be creative in exploring ways to increase capacity to meet the interests of students. AACPS is already considering reshaping programming to focus more time on WBL opportunities to free up classroom space; this seems like a positive approach to find the right balance between the necessary technical classroom instruction and hands-on application at the worksite.

Other possibilities are to:

- Although some CTE programs are located both at comprehensive high schools and CAT centers, AACPS could consider housing only programs that cannot be accommodated in comprehensive high schools at the CAT centers (for example Business, Graphic Design, IT and PLTW might be able to be located in the comprehensive high schools rather than CAT-South)
- Expand virtual access to courses, in areas that lend itself to that mode of learning (and for students who would learn well in hybrid fashions).
- Consider requiring that students who apply for CAT center CTE programs get a recommendation letter from a school counselor or write a letter of interest, so as to reserve places for students with high levels of interest, preparation and commitment to programs; this might help reduce the drop-off rate in year 2 when seats are empty in some of the classes.
- Investigate other places in the community, including both worksites and the local community college, where there might be opportunities to share space or hold off-site courses or hands-on experience/WBL.
- Continue to expand access to CTE with evening, weekend and even summer programs, as staffing allows.

#### **2. Strengthen Postsecondary CTE Connections**

Given the limited current partnership with Anne Arundel Community College for CTE programming, AACPS might consider:

- Developing connections with other post-secondary providers in the county and outside the county to provide additional training capacity for students in areas in which Anne Arundel Community College does not offer programs, either virtually, over summers, or during the school year if distance and/or transportation allows
- Work with Anne Arundel Community College and the Local Workforce Development Board to consider initiating new certificate programming to align with local workforce priorities, as a way to expand their student base and employer connections. AACPS could then partner with the college to provide college courses and credits as part of their CTE programs.

### 3. **See the School as a Work-Based Learning Provider**

In addition to exploring offsite locations for WBL to take place, like worksites and community colleges, AACPS might consider encouraging programs to develop more school-based businesses to serve the school and wider community. A business would give students the opportunity not just to practice job-related skills but also to “run” a business; it might also be a way to provide WBL opportunities for students from more than one program to participate. For example, both business students and culinary students might help run a catering business. The barbering, cosmetology and graphic design programs at CAT North are good examples that do this currently. Programs that offer services can be found on the CAT North Products and Services page on their website.<sup>5</sup> Other possibilities are the construction programs performing services for the community or even building structures for school plays or other events.

### 4. **Expand the Apprenticeship Route, Particularly Registered Apprenticeships**

AACPS has a set of (non-registered) youth apprenticeships currently in place, which hold certain similarities but are different than the Registered Apprenticeships that meet the *Blueprint*'s 45% goal. Currently, less than 1% of all high school graduates participate in the high school level of a Registered Apprenticeship. In addition to working with regional apprenticeship navigators via the Maryland Department of Labor to “convert” these youth apprenticeship programs to Registered Apprenticeship, where appropriate, there are also specific sectors that provide some potential areas for expansion. These include opportunities in the public sector throughout the county, as well as in emerging industries like clean technology and renewable energy.

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<sup>5</sup>Anne Arundel County Public Schools Center for Applied Technology North. (n.d.). Products and services. <https://www.catnorth.org/products-and-services>

AACPS already has demonstrated that strong employer relationships already exist (Coast Guard, University of Maryland Medical Center, NSA), which will prove useful first strategies in expanding Registered Apprenticeship opportunities.

Building on AACPS's existing relationship between AACPS and the Anne Arundel Workforce Development Corporation (the Local Workforce Development Board) to identify potential employer partners would also be useful. In terms of facilitating development of Registered Apprenticeship programs and student and employer uptake, AACPS can explore allowable modifications to student schedules to support the on-the-job training component of Registered Apprenticeship, as well as identifying opportunities for CTE coursework to support the required related instruction component. Surveying students (and potentially parents) to learn about their career interests - perhaps by leveraging the career counselors being deployed to work with students in every middle and high school - and leveraging regional labor market information and consultation with apprenticeship navigators on which job openings may be low-hanging fruit for apprenticeships for high school students will also be helpful in developing a successful strategy.

#### **5. Increase Supports for CTE Teachers to Boost Recruitment and Retention**

While AACPS has a core of strong CTE teachers, recruiting and retaining a CTE workforce as CTE expands will be a challenge. AACPS may want to consider ways of strengthening support for current and new teachers, with a goal of making AACPS a more attractive workplace for CTE teachers. The new teacher orientation program at CAT North is a model that the LEA might expand to CAT South and comprehensive high schools. It is a four month program to provide support and information to new CTE teachers who are often new to teaching as they are straight from industry. Many enroll in a teaching credential program that takes multiple years as they begin teaching. The aim of the orientation is to bridge the knowledge gaps between working in industry and in the classroom; the program has no evaluations and is guided by a coaching mindset. AACPS may also want to leverage the *Blueprint's* new teachers career ladder to identify strong CTE teachers with National Board Certification (NBC) to provide mentoring to new teachers and help lead Professional Learning Communities to improve learning in CTE classrooms. Finally, AACPS may want to create peer networks of teachers in the same industry cluster across the county to meet regularly and learn from one another.

## **6. Focus on Student Completion of CTE, Particularly that Leads to Completion of the High-School Level of a Registered Apprenticeship or Another Industry-Recognized Credential (IRC)**

Given the goal in the *Blueprint* statute goal of graduating 45% of students having completed the high school level of a Registered Apprenticeship or another IRC, per the GWDB CTE Committee definitions, AACPS may want to focus on increasing its CTE completion rate especially as they build Registered Apprenticeships or other IRCs into CTE pathways. An initial step might be to survey students to gather information on reasons they do not complete programs and assess the weight of different factors. Some factors may include: not knowing enough about an industry area before enrolling in an initial course; difficulty in fitting CTE courses into their schedules (especially if they want to take an additional elective like band); lack of time to shift direction within CTE and still complete a program while in high school; CTE areas where valued industry certifications require more hours of practical experience than is possible to organize during the currently structured school day, which is sometimes the case in barbering and cosmetology.

Some possible strategies to respond to these issues include:

- Leverage the expansion of career coaching under the *Blueprint*, in partnership with the Local Workforce Development Board and community college, to support career exploration for both middle school students and 9<sup>th</sup> graders so that they can make more informed choices about their path. AACPS might also consider expanding summer programs, camps, and pre-tech programs at sites other than the CAT centers, if staffing and funding is available. Current advanced CTE students may be able to help lead some of the programs to help with staffing.
- Ensure new career coaches describe CTE as a career pathway that leads to a valued IRC, not just an elective, as they help students map out a career plan. The CAT centers do a good job of laying out programs and potential careers and further training in each pathway; the high school might consider producing similar materials that are shared with all students as part of the new career counseling initiatives.
- AACPS may also consider restructuring some of the pathways to make the first course in a CTE pathway an introduction to the broad industry area and potential specializations to allow students to make good choices that they can commit to after that. These introductory courses could help students have a broader understanding of the industry and make more informed decisions.
- Consider weighted grading for students in the final course of their CTE pathway. This might keep students motivated and more apt to

complete their program, rather than opt for other elective courses to raise their GPA.

## APPENDIX GUIDE

- A. Pilot Visit Structure & Participants**
- B. LEA Brief**
- C. Agenda for the Visit**

## Appendix A | Pilot Visit Participants

### Team Members:

<i>Name</i>	<i>Role</i>	<i>Contact</i>
Charnetia Young	Member, CTE Committee	
Bill Forrester	Office of College and Career Pathways, MSDE	
Jackie Kraemer	Director, Policy Analysis & Development, NCEE	
Molly Mesnard	Deputy Director, GWDB CTE Committee	<a href="mailto:molly.mesnard@maryland.gov">molly.mesnard@maryland.gov</a>
Rachael Stephens Parker	Executive Director, Governor's Workforce Development Board	
Lateefah Durant	Strategic Facilitator, CTE Committee	
Bekki Leonard	Dir of Strategic Initiatives, Anne Arundel Workforce Development Corp.	
John Strickland	ERT Manager, GWDB CTE Committee	<a href="mailto:john.strickland@maryland.gov">john.strickland@maryland.gov</a>

**LEA Brief**

<b>CTE LEA Leads</b>	
<b>Name</b>	<b>Role(s)</b>
Ryan Sackett	Coordinator of CTE
Kelly Stutzman	Manager of Work-Based Learning
Demetria Keller	Program Specialist
Amy Baer	Teacher Specialist
Jack Heinz	Teacher Specialist

<b>Comprehensive High Schools with CTE</b>	
Annapolis HS	North County HS
Anne Arundel Evening High	Northeast HS
Arundel HS	Old Mill HS
Broadneck HS	Phoenix Academy (K-12)
Chesapeake HS	<i>Severn Run HS (new 2024-25 SY)</i>
Chesapeake Science Point MS / HS	Severna Park HS
Crofton HS	South River HS
Glen Burnie HS	Southern HS
Meade HS	Virtual Academy (K-12)

<b>LEA CTE Centers</b>	
Center of Applied Technology-North	Center of Applied Technology-South

<b>CTE ERT Visit</b>	
Thursday, May 2, 2024	Center of Applied Technology North



	Old Mill HS
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## LEA CTE Enrollment, Participation, and Completion Rates

	Anne Arundel County
<b><i>Programs &amp; Enrollment, 2021-22</i></b>	
# of High Schools with CTE Programs	17 High Schools (1 more under construction and will open 24-25 SY)
# of CTE Centers	2
# of CTE Programs	51
Total High School Enrollment (2023)	25,581
<b><i>Participation &amp; Completion Rates, 2022-2023</i></b>	
CTE Participants <sup>6</sup> (% of all HS students)	44.6%
CTE Concentrators <sup>7</sup> (% of graduating students)	17.6%
CTE Completers <sup>8</sup> (% of graduating students)	16.9%
Percent of CTE completers who earn Dual Enrollment Credit	77.9%
WBL Participation (HS Students)	850 Internships 129 Apprenticeship Completers (including Youth & Registered Apprenticeships)
Number of CTE students who earn an IRC	695
Progress Towards 45% Goal (% of graduating students earning an IRC or completing an eligible apprenticeship)	15.5%

<sup>6</sup> CTE Participants are students completing not less than one credit in a MSDE-approved CTE program of study

<sup>7</sup> CTE Concentrators are students who have completed at least two courses and are enrolled in a third course in a single MSDE-approved CTE program of study

<sup>8</sup> CTE Completers are students who meet all requirements in a state-approved CTE program of study, typically three or four courses

## **LEA CTE Overview**

### **Overview**

Anne Arundel County Public Schools in Maryland offers about 50 Career and Technical Education (CTE) programs across all comprehensive high schools and two Centers of Applied Technology. Forty four percent of high school students enroll in at least one CTE course in the county, similar to the state average of 45%. Seventeen percent of AACPS graduates are CTE concentrators (completing at least two CTE courses and enrolled in a third in a single CTE program), compared to 37% statewide.

### **Career Exploration**

- Middle school courses in tech, engineering, computer sciences and family and community services provide an introduction to some CTE areas.
- Career Exploration programs are offered at CAT North and CAT-South for students across the LEA; the program allows students to sample 4 programs in one semester in their 9th grade year. Both Centers also offer summer camps for middle school students, which allows students to sample programs.

### **Enrollment Practices**

- All CTE programs at comprehensive high schools are open enrollment for students across the LEA; the exception is school-based signature CTE programs which are only open to the students at that school.
- Programs at CAT North and CAT-South are application based, with students typically applying at the midpoint of their 9th grade year, but students can apply at all grade levels except senior year. Most programs start in 10th grade. CAT North and South programs are open to all students in the North and South geographic regions of the state, respectively.

## **Schools Overview**

### **Center for Applied Technology-North**

School Leadership:

Joseph Rose, Principal

Sheila Coffman, Assistant Principal

Caroline Hathaway, Assistant Principal

[School Website](#)

### **Old Mill Senior High School**

School Leadership:

Mrs. Alison Mikeska, Principal

Mrs. Farissa Elvis, Assistant Principal

Mrs. Tracy Stakem, Assistant Principal  
 Mr. Timothy Redman, Assistant Principal  
 Mrs. Holly Holman, Assistant Principal  
 Mr. Bernie Edwards, Assistant Principal  
 Mrs. Lyndsey Huerbin, Assistant Principal

[School Website](#)

## Anne Arundel County CTE Programs

Schools Visited	CTE Program	# Students Enrolled Level 1 / Level 2
Center of Applied Technology- North  Total student population:  >1700 including students enrolled in Career Exploration and CTE Programs	Academy of Health Professions	45/34
	Automotive Collision Repair & Refinishing	32/16
	Automotive Technology	32/18
	Baking & Pastry	40/20
	Barbering	14/10
	Building/ Industrial Maintenance	29/9
	Career Exploration	900
	Carpentry	30/12
	CASE: Natural Resources	17/16
	Cosmetology	22/17
	Culinary Arts	31/15
	Drafting and Design Technology	39/13
	Electricity	33/18
	Graphic Design	31/7
	Heating, Ventilation and Air Condition (HVAC)	29/15

	IT Networking Academy (Cisco)	17/27
	Manufacturing Technology	26/8
	Masonry	32/4
	Medium/Heavy Truck and Equipment Technology	16/10
	Plumbing	32/16
	Print Media Technology	23/10
	Welding	31/16
Old Mill Senior High School  Total student population: 2,445	Accounting and Finance- Dual Enrollment	27/0
	Administrative Service Management	10/0
	Apprenticeship Maryland	28
	Business Management	24/24
	Career Transitions	16/1
	Child Development Associate-CDA	27/10
	Computer & Information Sciences	17/0
	Engineering Systems	15
	Food and Beverage Management (ProStart)	8/0

\*According to the 2022 Youth Apprenticeship Advisory Committee Annual Report developed by the Maryland Department of Labor, the following employers are approved to offer youth apprenticeships for Anne Arundel County students:

- Anne Arundel County Public Schools (Education)
- Bailey and Shipp (Construction)

- Bayside Fire Protection (Construction)
- Bello Machre (Healthcare)
- Blades of Green, Inc. (Agriculture)
- BoMark Electric (Construction)
- Bopat Electric (Construction)
- Brawner Builders (Construction)
- C&R Electric (Construction)
- C-Care, LLC (Manufacturing)
- Control Sources, LLC (Construction)
- Cynergy Electric Company, Inc. (Construction)
- DEL Electric (Construction)
- Denver-Elek, Inc. (Construction)
- EVENTEQ, LLC (Transportation and Logistics)
- Efficiency Enterprises (Transportation and Logistics)
- Fixed Right and Guaranteed (Construction)
- Grounded Electrical Construction (Construction)
- Hartge Yacht Yard, Inc. (Marine Trades)
- Hayes Construction Company (Construction)
- iFrog Digital Marketing (Marketing and Communications)
- J. M. Mullen Electrical Service, Inc. (Construction)
- JPG Plumbing and Mechanical Services (Construction)
- Koons Toyota of Annapolis (Automotive)
- Mechanical Engineering & Construction Services (Construction)
- Nancy Arias State Farm (Finance, Insurance and Real Estate)
- National Security Agency (Government)
- NRL and Associates, Inc. (Manufacturing)
- Nealey Auto Service (Automotive)
- Paramount Mechanical (Construction)
- Power Design, Inc. (Construction)
- Pro-Air, Inc. (Construction)
- Rommel Construction (Construction)
- Skyline Technology Solutions (Information Technology)
- Smith Mechanical (Construction)
- The Narrows, Inc. (Hospitality and Tourism)
- Toyota of Bowie (Automotive)
- US Coast Guard Yard (Government)
- Weisman Electric, Inc. (Construction)
- Windsor Electric Company Inc. (Construction)

LEA Student Demographics compared to state

	AACPS	Maryland
LEA Student Demographics (2023)	84,774	889,971
<i>% Asian</i>	<1	6
<i>% American Indian / Alaska Native</i>	<1	<1
<i>% African-American</i>	22	33
<i>% Hispanic</i>	20	22
<i>% Native Hawaiian / Other Pacific Islander</i>	<1	<1
<i>% Two or More Races</i>	6	5
<i>% White</i>	47	33
<i>% Students with Disabilities (2021-22)</i>	11	12
<i># of English Learners</i>	10	12
<i>% Low-Income (FARMS)</i>	43	52
Child Poverty Rate % (2022)		12
Unemployment Rate % (2022)		3
Educational Attainment Rate (bachelor's or higher) (2022)		42

\*This is the most recent data provided by the USWIB: The unemployment rates for the state and the five counties were presented. The state is below 2% in the state. In particular, youth unemployment is 4 - 5 times higher than average. The unemployment rate for July 2023 in Caroline County was 1.6 %, Dorchester was 1.8%, Kent County was 1.8%, Queen Anne's was 1.5%, and Talbot County was 1.7%. Maryland gained 12,400 jobs in August.

# Community Context

## Universities & Community Colleges

- Chesapeake College, 2 year
- Anne Arundel Community College, 2 year
- University of Maryland, College Park, 4 year

## Economic Profile (per Anne Arundel Workforce Development Center)

Anne Arundel County is the third largest county in Maryland, with a diverse \$51.5 billion economy. Almost all employers are small businesses, employing under 50 workers. Anne Arundel is considered to be part of the both the Baltimore and Washington DC metropolitan regions. Both regions are heavily represented by government organizations, their contractors, as well as healthcare and professional/scientific services..

Within the county, the government sector is the largest employer. Fort George G. Meade alone employs more than 62,000 workers. Other economic drivers and employment hubs in the local area include the North County Industrial Zone, BWI Airport area, Arundel Mills, and two regional hospitals.

Median household income in Anne Arundel County is relatively high at \$108k and the poverty rate is relatively low at 6% compared 10% for the state). Still, there are population segments that have substantial barriers that prevent a sustainable income.

## Data (per AAWDC)

### Overview

- Population: 599,616 (2023)
- Total Regional Employment: 332,848
- Median Household Income: \$108.0k (2021)
- Total Number of Households: 255,064
  - Number of ALICE<sup>9</sup> Households: 24%
  - Households in Poverty: 6%

### Labor Force (Jan 2024)

- 16+ Civilian Non-Institutionalized Population – 466,421
  - Not in Labor Force (16+) – 154,764
  - Labor Force – 311,657
    - Employed – 304,504
    - Unemployed – 7,153
- Under 16, Military, and institutionalized Population – 138,777

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<sup>9</sup> ALICE is an acronym for Asset Limited, Income Constrained, Employed – households that earn more than the Federal Poverty Level, but less than the basic cost of living for the County. – United Way

#### Business Size

- Under 50 employees: 95.5%
- 50-99 employees: 3.0%
- 100+ employees: 1.5%

#### Largest Industries – Jobs

1. Government
2. Healthcare and Social Assistance
3. Retail Trade
4. Professional, Scientific, and Technical Services
5. Accommodation and Food Services

#### Largest Industries – Job Growth

1. Manufacturing
2. Transportation and Warehousing
3. Construction
4. Administrative and Support and Waste Management and Remediation Services
5. Health Care and Social Assistance

Note: Northrup Grumman is categorized as Manufacturing

#### Largest Occupations – Jobs

1. Office and Administrative Support
2. Business and Finance Operations
3. Transportation and Material Moving
4. Sales and Related
5. Management

#### Largest Occupations – Job Growth

1. Management
2. Business and Financial Operations
3. Computer and Mathematical
4. Transportation and Material Moving
5. Military-only

#### In-Demand Skills

1. Nursing
2. Computer Science
3. Project Management
4. Merchandising
5. Auditing



### Leading Business Groups (per AAWDC)

Employer	Estimated Employees	Description	Industry
Fort George G. Meade	62,680	U.S. Dept of Defense installation; 119 tenant organizations	Government
Anne Arundel County Public Schools	14,852	County public education k-12	Education
State of Maryland	12,256	State government services	Government
BWI Thurgood Marshall Airport	9,717	Regional airport	Government/Transportation, Warehousing & Distribution/Hospitality - Accommodation, Retail, and Food Service
Northrop Grumman	9,500	CHDQT Electronic Systems Sector & marine division	Manufacturing
Anne Arundel County Government	6,348	Local government services	Government
Anne Arundel Health System	5,100	Hospital	Healthcare
Southwest Airlines	4,857	Airline	Transportation, Warehousing & Distribution
University of MD Baltimore Washington Medical Center	3,328	Hospital	Healthcare
U.S. Naval Academy/Naval Support Activity	3,000	Federal naval education facility and support facilities	Government
Live! Casino and Hotel	3,000	Casino	Hospitality - Accommodation, Retail, and Food Service
Amazon	2,210	Warehouse & Distribution	Transportation, Warehousing &

			Distribution
Booz Allen Hamilton	2,100	Information assurance & signals Intelligence solutions	Information Technology & Professional Services
Anne Arundel Community College	1,555	Public two-year college	Education
Allegis Group	1,500	HDQT, IT & engineering placement	Information Technology & Professional Services

## Appendix C | VISIT AGENDA

Visit Date: Thursday, May 2, 2024  Times: 8:00am-3:30pm	Location AM: <b>Center of Applied Technology-North</b> <a href="#">800 Stevenson Rd</a> <a href="#">Severn, MD 21144</a>	Location PM: <b>Old Mill Senior HS</b> <a href="#">600 Patriot Ln</a> <a href="#">Millersville, MD</a> <a href="#">21108</a>	Arrival Time: 8:00am  Morning Meet & Greet: 8:00am-8:30am  WIFI is public and has no password
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### AM Session: Center of Applied Technology-North

Team 1: Rachael S Parker, Jackie Kraemer, Charnetia Young, Lateefah Durant, Bekki Leonard (Ryan Sackett/Other Staff)		Team 2: John Strickland, Bill Forrester, Molly Mesnard, (AACPS/School Staff)	
Time	Activity	Time	Activity
8:00am-8:30am (30)	Meet and Greet Sheila Coffman, Caroline Hathaway, Joe Rose, Ryan Sackett	8:00am-8:30am (30)	Meet and Greet Sheila Coffman, Caroline Hathaway, Joe Rose, Ryan Sackett
8:30am-9:20am (50)	School Counselor & Career Coach Mtg <sup>1</sup> Location: School Counseling Office	8:30am-9:20am (50)	Teacher Focus Group <sup>2</sup> Location: Media Center
9:25am-10:10am (45)	Classroom Visits	9:25am-10:10am (45)	CTE Student Focus Group <sup>3</sup> Location: Media Center
10:10am-10:20am (10)	Break	10:10am-10:20am (10)	Break
10:20am-11:00am (40)	Classroom Visits	10:20am-11:00am (40)	Classroom Visits
11:00am-12:15pm (45) (30)	CTE Staff/Admin Mtg <sup>4</sup> & Lunch (at CAT North)	11:00am-12:15am (45) (30)	CTE Staff/Admin Mtg <sup>4</sup> & Lunch (at CAT North)
12:15am-12:45pm (30)	Travel Time	12:15am-12:45pm (30)	Travel Time

## PM Session: Old Mill High School

Team 1: Rachael S Parker, Charnetia Young, Lateefah Durant, Bekki Leonard (Ryan Sackett/CTE Staff)		Team 2: Bill Forrester, Jackie Kraemer, John Strickland, Molly Mesnard (CTE Staff/School Staff/AACPS Staff)	
Time	Activity	Time	Activity
12:45pm-1:00pm (15)	Arrival and Check In: Counseling Conference Room	12:45pm-1:00pm (15)	Arrival and Check In: Counseling Conference Room
1:00pm-1:50pm (50)	Classroom Visits	1:00pm-1:50pm (50)	CTE Student Focus Group <sup>5</sup> Location: Media Conference Room
1:50pm-2:00pm (10)	Break	1:50pm-2:00pm (10)	Break
2:00pm-2:50pm (50)	School Counselor, WBL Facilitator & Career Coach Mtg <sup>6</sup> Location: Counseling Conference Room	2:00pm-2:50pm (50)	CTE Teacher Focus Group <sup>7</sup> Location: Media Conference Room
2:50 pm-3:30 pm (40)	End of Day Debrief & Gathering Counseling Conference Room	2:50pm- 3:30pm (40)	End of Day Debrief & Gathering Counseling Conference Room

[Old Mill HS Bell Schedule](#)

## CAT North Focus Group Participants

School Counselors & Career Coach(es) <sup>1</sup>	Teachers in Focus Group <sup>2</sup>	Students in Focus Group <sup>3</sup>	CTE Staff/Administrator or Meeting <sup>4</sup>
<i>School Counselor, Department Chair</i>	<i>Printing Technology</i>	<i>Academy of Health Professions</i>	<i>CTE Coordinator</i>
<i>School Counselor</i>	<i>Barbering</i>	<i>Barbering</i>	<i>Principal- CAT North</i>
<i>Work-Based Learning Facilitator</i>	<i>Automotive Collision</i>	<i>Barbering</i>	<i>Assistant Principal</i>
<i>Middle School Career Coach</i>	<i>Automotive Technology DC Transportation</i>	<i>Drafting &amp; Design Technology</i>	<i>Assistant Principal</i>
	<i>Drafting &amp; Design Technology</i>	<i>CASE</i>	<i>AVID Site Coordinator</i>
	<i>CASE</i>	<i>Cosmetology</i>	<i>Business Support Technician</i>
	<i>Culinary Arts</i>	<i>Electricity</i>	<i>Principal- Old Mill HS</i>
	<i>HVAC, DC Construction</i>	<i>Transportation</i>	

## CAT North Team Member Roles

AM Roles (Team 1)		AM Roles (Team 2)	
<b>Facilitator</b>	Rachael Stephens Parker	<b>Facilitator</b>	John Strickland
<b>Facilitator</b>	Charnetia Young	<b>Facilitator</b>	
<b>Notes/Recorder</b>	Lateefah Durant	<b>Notes/Recorder</b>	Molly Mesnard
<b>Time</b>	Jackie Kraemer	<b>Time</b>	Bill Forrester

## CTE Staff /Administrator Meeting

<b>Facilitator</b>	Bill Forrester
<b>Facilitator</b>	Lateefah Durant
<b>Notes/Recorder</b>	Jackie Kraemer
<b>Time</b>	Molly Mesnard

## Old Mill HS Focus Group Participants

<b>Students in Focus Group<sup>5</sup></b>	<b>School Counselors WBL Facilitator &amp; Career Coaches Focus Group<sup>6</sup></b>	<b>Teachers in Focus Group<sup>6</sup></b>
<i>H Culinary/Hospitality 1</i>	<i>Internship/Work Study</i>	<i>CTE DC</i>
<i>H Culinary/Hospitality 1</i>	<i>WBL Facilitator</i>	<i>FACS DC</i>
<i>Technological Design</i>	<i>WBL Facilitator</i>	<i>Business Teacher</i>
<i>Princ Business Mgt &amp; Ent, Career Conn</i>	<i>Counseling DC</i>	<i>Computer Sci Teacher</i>
<i>H Culinary/Hospitality 2, H Business Mgt</i>	<i>Principal</i>	<i>Technology Teacher/SkillsUSA</i>
<i>Marine Tech, Career Conn, SkillsUSA</i>		<i>Computer Science Teacher</i>
<i>H Culinary/Hospitality 1</i>		

## Old Mill HS Team Member Roles

<b>PM Roles (Team 1)</b>		<b>PM Roles (Team 2)</b>	
Facilitator	Jackie Kraemer	Facilitator	John Strickland
Facilitator	Lateefah Durant	Facilitator	Molly Mesnard
Notes/Recorder	Rachael Stephens Parker	Notes/Recorder	
Time	Bekki Leonard	Time	John Strickland

## Appendix D | VISIT TOOLS

[Interview & Focus Group Questions](#)

Classroom Visit Protocol

[Addendum to the Agenda](#)