TO: Members of the State Board of Education

FROM: Karen B. Salmon, Ph.D.

DATE: October 22, 2019

SUBJECT: Career and Technical Education Four-Year State Plan

PURPOSE:

The purpose of this agenda item is to provide an overview of the four-year career and technical education (CTE) plan for Maryland that is required to be submitted to the United State Department of Education for release of Perkins funds.

BACKGROUND/HISTORICAL PERSPECTIVE:

The *Carl D. Perkins Career and Technical Education Improvement Act of 2006* was amended in July 2018 by the *Strengthening Career and Technical Education for the 21st Century Act*, referred to as Perkins V. The revised law requires a new application from states and territories for federal CTE funding. Revisions in Perkins V requires states to submit a four-year CTE plan to the United States Department of Education, Office of Career, Technical, and Adult Education for approval. The four-year CTE plan must be developed in consultation with a variety of stakeholders and provide a summary of the degree to which CTE programs in the state address the needs of employers as identified by the state's workforce development board. Key shifts in the *Strengthening Career and Technical Education for the 21st Century Act* include:

1. Implementing a career and technical education (CTE) comprehensive local needs assessment to support data informed decisions to improve CTE systems and programs of study;
2. Aligning CTE programs of study to high-wage, high-skill, and/or in-demand careers;
3. Strengthening the CTE teacher and faculty pipeline;
4. Promoting innovative practices to reshape where, when, how, and to whom CTE is delivered;
5. Expanding the reach and scope of career guidance and academic counseling;
6. Increasing recruitment of specific student groups in CTE programs of study; and
7. Establishing new program quality measures and related levels of performance to optimize outcomes for students.

EXECUTIVE SUMMARY:

The draft Maryland CTE Four-Year State Plan was developed with input from over 300 stakeholders over the course of a year. The plan was informed by the Maryland Workforce Innovation and Opportunity Act State Plan, Maryland Every Student Succeeds Act Consolidated Plan, Maryland Commission on Innovation & Excellence in Education recommendations, and the requirements outlined in the *Strengthening Career and Technical Education for the 21st Century Act.* The draft plan is required to be shared with the State Board of Education for input prior to finalizing the plan. Input from the State Board will be used to inform revisions to the final plan. The final Maryland CTE Four-Year State Plan will be presented to the State Board of Education in December for approval prior to sending for signature to the Governor's Office.

ACTION:

Input is being requested from the State Board to inform revisions to the Maryland CTE Four-Year Plan.

Attachments (4)
Attachment I – Maryland Career and Technical Education Four-Year State Plan PowerPoint
Attachment II – Career and Technical Education Data
Attachment III – Maryland Career and Technical Education Four-Year State Plan (Draft)
Attachment IV – Career and Technical Education Comprehensive Local Needs Assessment and
                        Application

Maryland Career and Technical Education (CTE) Four Year State Plan

October 22, 2019

State Board Meeting

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

Division of Career and College Readiness

Three Branches with One Purpose:
To establish a foundation for students to engage in challenging academic and technical education that will allow for success in postsecondary study and careers.

Career and Technical Education
Preparing students for the workforce and postsecondary study.

Leadership Development
Fostering the growth of effective leaders.

School Improvement
Raising the quality of education.

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

Vision for Career and Technical Education

Each student has <u>access</u> and the <u>opportunity</u> to engage in career programs of study that

- ✓ align to high-skill, high-wage, and/or in-demand careers;

- ✓ lead to earning industry-recognized and/or postsecondary credentials that will allow entrance and/or advancement in a specific career cluster; and

- ✓ provide career-based learning experiences that require the application of academic and technical knowledge and skills in a work setting.

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

The Strengthening Career and Technical Education (CTE) for the 21st Century Act (Perkins V) Requires States to Develop a Four Year Plan

States must:

1. Implement a CTE needs assessment to support data informed decisions that improve CTE systems and programs of study;

2. Align CTE programs to locally identified high-wage, high-skill, or in-demand career fields;

3. Strengthen the CTE teacher and faculty pipeline;

4. Promote innovative practices to reshape where, when, how, and to whom CTE is delivered;

5. Expand the reach and scope of career guidance and academic counseling;

6. Increase recruitment of specific student groups in CTE programs; and

7. Establish new program quality measures and related levels of performance to optimize outcomes for students.

Timeline for the CTE Four Year State Plan

5. October 11 – November 11, 2019:
30-day public comment period on the full plan and public hearings.

6. October 22, 2019:
First presentation to the State Board of Education

7. October 25, 2019:
Business and industry meeting

1. August 1, 2019:
State plan meeting with stakeholders

10. January 1 – January 31, 2019:
Submit the Plan to the Governor for 30-day review

2. August 5 – October 5, 2019:
60-day comment period on CTE accountability

3. September 19, 2019:
Local school system meeting

4. September 26, 2019:
Postsecondary meeting

8. November 18-20, 2019:
Public hearings

9. December 3, 2019:
Final presentation to the State Board of Education for plan approval

11. February 2020:
Make any needed revisions

12. March 2020: Submit State Plan to the U.S. Department of Education

MARYLAND STATE DEPARTMENT OF **EDUCATION**
EQUITY AND EXCELLENCE

5

Key Shift For CTE In Maryland:

Aligning CTE Programs of Study to:

- ✓ High-wage,
- ✓ High-skill, and/or
- ✓ In-demand careers

High-Wage Careers

Careers that exceed the state average annual wage. The 2018 average annual wage in Maryland was $58,770.

High-Skill Careers

1. Requires previous work-related skills, knowledge, or experience of one or more years;
2. Requires over a year of training;
3. Requires state or federal licensing or industry-recognized certification; or
4. Requires a recognized postsecondary credential or degree.

In-Demand Careers

Careers with a growth rate over ten years of at least 7% or a two-year occupational projected growth of 2.5%.

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

Increase Student Access to High-wage, High-skill, or In-demand Careers

42% of High School Students are Enrolled in CTE

Highest Enrolled Programs:

- ✓ Human Resource Services
- ✓ Business Management Finance
- ✓ Information Technology
- ✓ Manufacturing Engineering and Technology

Arts, Media, and Communications

Business Management and Finance

Construction and Development

Consumer Services, Hospitality and Tourism

Environmental, Agriculture and Natural Resources

Health and Biosciences

Human Resource Services

Information Technology

Manufacturing, Engineering and Technology

Transportation Technologies

Career Research and Development

Apprenticeship Maryland

Key Shift For CTE In Maryland:

Expanding the Reach and Scope of Career Guidance

Allowing Perkins Funds to Be Used as Early as Grade 5 for Career Awareness and Guidance

Leveraging Business and Industry Partners to Provide Career Counseling

Key Shift For CTE In Maryland:

Promoting Innovative Practices to Reshape Where, When, How, and to Whom CTE Is Delivered

Expanding Access to Pathways in Technology Early College High School (P-TECH) Program

Expanding Opportunities for Students to Complete Apprenticeships

Expanding Access to Career and Technical Student Organizations

Key Shift For CTE In Maryland:

Promoting Innovative Practices to Reshape Where, When, How, and to Whom CTE Is Delivered

MARYLAND STATE DEPARTMENT OF EDUCATION
EQUITY AND EXCELLENCE

<u>Requiring each CTE program of study to:</u>

- ✓ provide the opportunity for students to participate in work-based learning experiences;

- ✓ provide the opportunity for student to earn college credit and/or industry credentials;

- ✓ prepare students with disabilities and other student groups for occupations that will lead to self-sufficiency; and

- ✓ provide equal access and supports for students with disabilities and other student groups to successfully complete the program of study.

Key Shift For CTE In Maryland:

Strengthen the CTE Teacher and Faculty Pipeline

Aligning Curricula to Industry Standards

Improving Instructional Supports for CTE Educators

Supporting School Systems in the Recruitment of CTE Teachers

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

Key Shift For CTE In Maryland:

Improving CTE Program Quality Measures
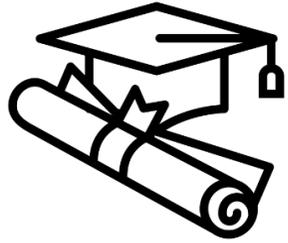
**Four-Year Graduation Rate**
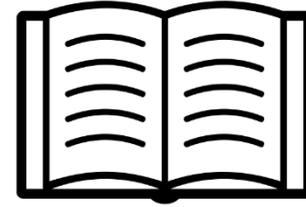
Academic Proficiency Reading/Language Arts
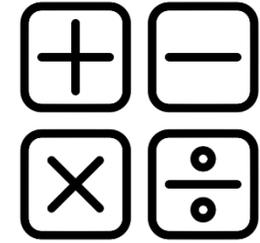
Academic Proficiency Math
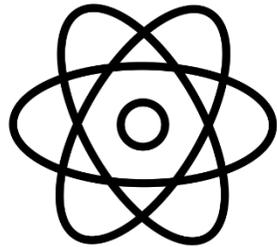
Academic Proficiency Science

Postsecondary Placement
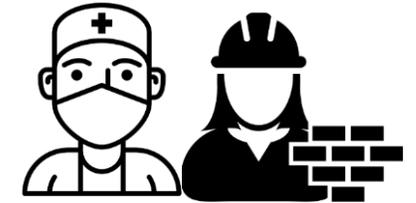
Non-traditional Program Enrollment

Postsecondary Credential Attainment

Technical Skill Attainment

Refer to Career and Technical Education Data – Attachment II for Comprehensive List

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

Key Shift For CTE In Maryland:

Establishing a CTE Advisory Committee

Charge: Provide guidance and direction for the statewide system of CTE.

Members will include representatives from:

Local School Systems	Postsecondary Institutions	Business and Industry
Chamber of Commerce	Department of Labor	Economic Development
Workforce Development Board	Maryland Higher Education Commission	Maryland Career and Technical Administrators Association

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

CTE Needs Assessment and Local Application
A Holistic Review of CTE in the School System and Community College

Needs Assessment

- Comprehensive Review of Data
- Identifies Areas of Promise and Opportunities for Growth

Local Application

- One Year Plan of Action to Address Identified Needs

**Community Colleges and School Systems Must Work Together to Address Regional Workforce Needs**

Division of Career and College Readiness

Career and Technical Education
Comprehensive Local Needs Assessment
and
Local Application

2020-2021 Draft Document
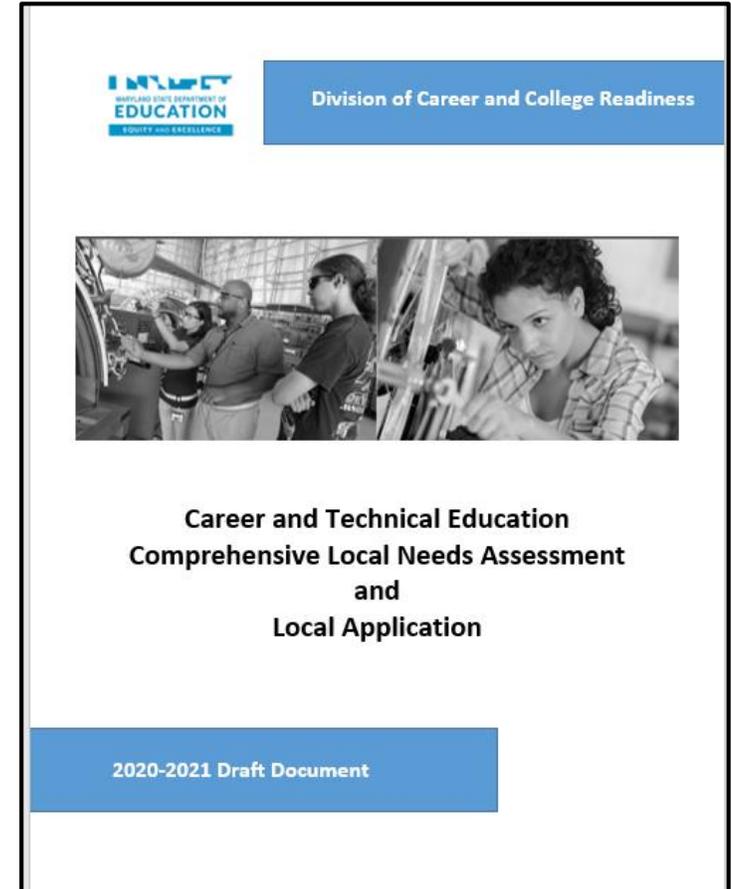
Perkins Funding

$17,951,226 in federal funds for fiscal year 2020

- **15%** retained by the Maryland State Department of Education for state administration and leadership

- **85%** awarded to all 24 school systems and 14 community colleges

Timeline for the CTE Four Year State Plan

1. August 1, 2019:
State plan meeting with stakeholders

2. August 5 – October 5, 2019:
60-day comment period on CTE accountability

3. September 19, 2019:
Local school system meeting

4. September 26, 2019:
Postsecondary meeting

5. October 11 – November 11, 2019:
30-day public comment period on the full plan and public hearings.

6. October 22, 2019:
First presentation to the State Board of Education

7. October 25, 2019:
Business and industry meeting

8. November 18-20, 2019:
Public hearings

9. December 3, 2019:
Final presentation to the State Board of Education for plan approval

10. January 1 – January 31, 2019:
Submit the Plan to the Governor for 30-day review

11. February 2020:
Make any needed revisions

12. March 2020: Submit State Plan to the U.S. Department of Education

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND EXCELLENCE

16

Career and Technical Education, Education that Works.

Division of Career and College Readiness
Office of Leadership Development and School Improvement

Career and Technical Education Data

The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Postsecondary Data Reporting Requirement	Required By….
The percentage of CTE concentrators who graduate high school, as measured by the four-year adjusted cohort graduation rate.	The percentage of CTE concentrators who, during the second quarter after program completion, remain enrolled in postsecondary education, are in advanced training, military service, or a service program.	Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators demonstrating proficiency in English language arts as measured by performance on state assessments.	The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within one year of program completion.	Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators demonstrating proficiency in mathematics as measured by performance on state assessments.	The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.	Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators demonstrating proficiency in science as measured by performance on state assessments.		Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program.		Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.		Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators graduating from high school having attained postsecondary credits in the relevant career and technical education program or program of study earned through a dual or concurrent enrollment or another credit transfer agreement.		Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The percentage of CTE concentrators who met state-recognized CTE technical assessments and/or college credit standards who, in the report year left secondary education.		Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
The number of students enrolled in each career and technical education program of study disaggregated by student group.		Strengthening Career and Technical Education for the

Career and Technical Education Data
The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Postsecondary Data Reporting Requirement	Required By….
		21st Century Act (Perkins V)

Evidence that the career and technical education program of study meets the criteria for size. Criteria include:
• All approved programs of study align with the definition of a CTE program of study as a coordinated, non-duplicative sequence of academic and technical content that:
    o are at least four credits (secondary);
    o are at least 12 credits (postsecondary);
• Each CTE concentrator course in approved CTE programs of study must have a minimum enrollment of ten concentrators over a four-year period.
• The local school system or community college have the required number of staff, availability of equipment, and access to facilities to meet requirements detailed by each program of study.
		Strengthening Career and Technical Education for the 21st Century Act (Perkins V) – State Defined Measure
		
		The Maryland State Department of Education Career and Technical Education Four Year Plan
		(pending approval by the United States Department of Education)

Evidence that the career and technical education program of study meets the criteria for scope. Criteria include:
• Curricula for each program of study is aligned to state-approved industry standards that lead to students earning recognized credentials, certifications, licenses, college credit, or degrees.
• Curricula for each program of study reflect a progression from secondary to postsecondary and community college to bachelor degree programs.
• Curricula for each program of study allow students to learn and demonstrate academic, technical, and employability skills.
• Curricula for each program of study demonstrate a continuum of learning that allows students to progress in a career field.
• Curricula for each program of study include differentiated supports and modifications to meet the needs of diverse learners.
• Each CTE program of study provides the opportunity for students to earn transcripted credit.
• Each CTE student in each program of study has a written career and academic plan in place that includes:
    o the required courses to complete their CTE program of study;
    o the required courses to graduate;
    o the required assessments to earn a certification, license, credential, or degree in the CTE program;
    o the required academic assessments to graduate; and
    o the timeline to take courses, assessments, and complete work-based learning experiences.
• All students, regardless of race, color, national origin, sex, or disability, have equitable access to high-quality CTE programs as required by Code of Maryland Regulation 13A.04.02.04.
		Strengthening Career and Technical Education for the 21st Century Act (Perkins V) – State Defined Measure
		
		The Maryland State Department of Education Career and Technical Education Four Year Plan
		(pending approval by the United States Department of Education)

Career and Technical Education Data
The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Postsecondary Data Reporting Requirement	Required By….
• Approved programs of study are guided by Local Advisory Councils and Program Advisory Committees according to the *Career and Technical Education Local Advisory Council and Program Advisory Committee Policies and Procedures COMAR EA Title 21.Sec.101*.		

Evidence that the career and technical education program of study meets the criteria for quality. Criteria include:
• CTE programs of study are delivered by teachers who meet state requirements to teach their content at the secondary level.
• CTE programs of study are delivered by teachers who earned a minimum of effective on their teacher evaluation as defined by Code of Maryland Regulation 13A.07.09 within three years.
• CTE programs of study are delivered by faculty who meet the requirements of the institution's or programmatic accrediting body (if applicable), and the college accrediting body.
• Each CTE program of study meets all the requirements of the MSDE evaluation criteria found in the Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study.
• For each CTE program of study, the local school system provides all students, including students in special populations, the opportunity to:
   o Participate in at least one work-based learning experience (internship, job shadow, apprenticeship, etc.);
   o Earn college credit and/or industry credentials; and
   o Participate in Career and Technical Student Organizations.
• Professional learning opportunities, informed by data, are provided for administrators, teachers, faculty, counselors and support personnel to improve student learning outcomes. All secondary professional learning must be guided by the Maryland-endorsed National Learning Standards.
• Human resources is included in the recruitment process to ensure a diverse CTE teacher and faculty member candidate pool.
• Metrics are used to ensure that CTE teacher and faculty member recruitment strategies are successful.
• Teacher retention rates are reviewed annually, for the most recent three years, to understand the top three contributing factors to CTE teacher and faculty member turnover.
		Strengthening Career and Technical Education for the 21st Century Act (Perkins V) – State Defined Measure
		
		 The Maryland State Department of Education Career and Technical Education Four Year Plan
		(pending approval by the United States Department of Education

Evidence that each career and technical education program of study lead to careers that are high-skill, high-wage, and/or in-demand.		

Career and Technical Education Data
The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Required By….
Percent of students graduating or exiting with a certificate of program completion: enrolled in an Advanced Placement (AP) or International Baccalaureate (IB) course; participated in dual enrollment; or enrolled in a MSDE-approved Career and Technical Education program at the CTE concentrator level or higher.	Maryland Every Student Succeeds Act Plan
Percent of students graduating or exiting with a certificate of program completion and achieving at least one of the following: • score 3 or higher on an Advanced Placement (AP) examination, or 4 or higher on an International Baccalaureate (IB) Program examination; • met a standard set by the College Board on the SAT examination (score of 530 or higher (math) and 480 or higher (reading)); • met a standard set by ACT, Inc. on the ACT examination (score of 21); • earned credit for dual enrollment; - met the University of Maryland entry requirements; • completed a youth or other apprenticeship training program approved by the Maryland Apprenticeship Training Council; • completed an industry certification aligned with an MSDE-approved CTE program and achieved CTE concentrator level status or higher; • completed an MSDE-approved Career and Technical Education program; • met a standard on the ASVAB examination (standard to be determined pending study); - • received The Seal of Biliteracy; or, • Students obtaining a Maryland High School Certificate of Program Completion: Entered the world of work through gainful employment; postsecondary education and training; supported employment; and/or other services that are integrated in the community	Maryland Every Student Succeeds Act Plan
Number of students enrolled in each P-TECH school.	Pathways in Technology Early College High (P-TECH) School Act of 2017
Industry partners associated with each P-TECH school.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The pathway sequence created for each P-TECH school.	Pathways in Technology Early College High (P-TECH) School Act of 2017

Career and Technical Education Data
The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Required By….
P-TECH student performance on state assessments for English language arts.	Pathways in Technology Early College High (P-TECH) School Act of 2017
P-TECH student performance on state assessments for mathematics.	Pathways in Technology Early College High (P-TECH) School Act of 2017
P-TECH student performance on state assessments for science.	Pathways in Technology Early College High (P-TECH) School Act of 2017
Year in which each P-TECH student graduated and received degree.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students graduating from each P-TECH school and receiving a high school diploma and an Associate's degree.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students in each P-TECH school who receive paid internships with each industry partner.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The rate of attrition for each P-TECH school by grade and cohort.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students at each P-TECH school with an Individual Education Plan.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students at each P-TECH school with a 504 plan.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students that are English Learners at each P-TECH school.	Pathways in Technology Early College High (P-TECH) School Act of 2017

Career and Technical Education Data

The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Required By….
The percentage of P-TECH students who meet the free and reduce meal plan income criteria at each P-TECH school.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students in each P-TECH school who, by the fourth year of the pathway sequence, complete the requirements for a high school diploma.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students on track for high school graduation in four years (high school diploma only).	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students on track for program completion in four years with a high school diploma and Associate's degree.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students on track for program completion in five years with a high school diploma and Associate's degree.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH students on track for program completion in six years with a high school diploma and Associate's degree.	Pathways in Technology Early College High (P-TECH) School Act of 2017
The number of P-TECH student in each P-TECH school who are employed after completion of the pathway sequence with each industry partner or who matriculate to the public or private senior higher education institution after finishing the pathway sequence.	Pathways in Technology Early College High (P-TECH) School Act of 2017
Number of students participating in the apprenticeship program.	House Bill 942
Wage Information regarding payments disbursed to students participating in the apprenticeship program.	House Bill 942
Feedback from students participating in the apprenticeship program.	House Bill 942
The types of workforce skills and training that the student participating in the program were able to acquire.	House Bill 942
The number of students who completed the apprenticeship program.	House Bill 942

Career and Technical Education Data

The table below provides an overview of career and technical education data reporting requirements.

Secondary Data Reporting Requirement	Required By….
The number of students that the employer retained.	House Bill 942
Number and names of participating businesses in the apprenticeship program.	Maryland State Department of Education
Number and names of participating school systems in the apprenticeship program.	Maryland State Department of Education

Career and Technical Education
Comprehensive Local Needs Assessment
and
Local Application

2020-2021 Draft Document

Maryland State Department of Education

Karen B. Salmon, Ph.D.
State Superintendent of Schools

Carol A. Williamson, Ed.D.
Deputy State Superintendent of Teaching and Learning

Brigadier General Warner I. Sumpter
President, Maryland State Board of Education

Tiara Booker-Dwyer
Assistant State Superintendent

Division of Career and College Readiness
Marquita Friday, Director of Career Programs
Jeanne-Marie Holly, Director of Finance and Legislation for Career Programs
Nicassia Belton, Ed.D., Director of Data and Accountability for Career Programs
Nina Roa, Coordinator of Career Programs and P-TECH
Charles (Chuck) Wallace, Coordinator of Career Programs and Student Organizations
Osh Oshitoye, Ph.D., Coordinator of Data and Accountability for Career Programs
Mary O'Connor, Coordinator of Finance and Legislative for Career Programs
Mike Beck, Equity and Civil Rights Compliance Specialist
Jennifer Griffin, Career Programs and Apprenticeship Specialist
Charles (Scott) Nichols, Career Programs, STEM, and Computer Science Specialist
Dean Kendall, Career Programs and Grants Specialist, Region I
Nancy Hauswald, Career Programs and Grants Specialist, Region II
Traci Verzi, Career Programs and Grants Specialist, Region III

Office of Leadership Development and School Improvement
Ed Mitzel, Executive Director of Leadership Development and School Improvement
Laura Liccione, Coordinator of Academic Improvement
Morrall Thompson, Coordinator of Systematic Improvement
Brian Eyer, Ed.D., Coordinator of Leadership Development
Tara Corona, Continuous Improvement Specialist
Mary Minter, Ed.D., School Leadership Support Specialist
Felicia Lanham Tarason, Ed.D., School Leadership Support Specialist

Larry Hogan, Governor

For Inquiries related to Department policy, please contact:
Agency Equity Officer
Equity Assurance & Compliance Office
Office of the Deputy State Superintendent for Finance and Administration
Maryland State Department of Education
200 West Baltimore Street, Baltimore, MD 21201-2595
410-767-0426 – Voice; 410-767-0431 – Fax; 410-333-6442 - TTY/TDD

For inquires regarding this publication, please contact Tiara Booker-Dwyer, Assistant State Superintendent for the Division of Career and College Readiness, at tiara.booker-dwyer@maryland.gov or 410.767.3676.

Table of Contents

Career and Technical Education in Maryland

Career and technical education (CTE) pairs academic knowledge with technical skills to prepare students to meet current and future workforce needs in Maryland. CTE programs of study provide the opportunity for students to earn industry-recognized certificates, acquire college credit, and gain work experience.

Vision for Career and Technical Education in Maryland

Each student has <u>access</u> and the <u>opportunity</u> to engage in career programs of study that:

- align to high-skill, high-wage, or in-demand careers;

- lead to earning industry-recognized and/or postsecondary credentials that will allow entrance and/or advancement in a specific career cluster; and

- provide career-based learning experiences that require the application of academic and technical knowledge and skills in a work setting.

In 2018, congress passed the [Strengthening Career and Technical Education for the 21st Century Act](#) (Perkins V). The revised law provides the opportunity to improve career and technical education in Maryland. Key shifts in the Strengthening Career and Technical Education for the 21st Century Act include:

1. Implementing a career and technical education (CTE) comprehensive local needs assessment to support data informed decisions to improve CTE systems and programs of study;
2. Aligning CTE programs of study to high-wage, high-skill, and/or in-demand careers;
3. Strengthening the CTE teacher and faculty pipeline;
4. Promoting innovative practices to reshape where, when, how, and to whom CTE is delivered;
5. Expanding the reach and scope of career guidance and academic counseling;
6. Increasing recruitment of specific student groups in CTE programs of study; and
7. Establishing new program quality measures and related levels of performance to optimize outcomes for students.

This document includes the CTE comprehensive local needs assessment and local application that are required to be completed by local school systems and community colleges to receive federal Perkins funds to support career and technical education.

Timeline for CTE Comprehensive Local Needs Assessment and Application

The timeline to complete the needs assessment and application will be released in November 2019. Team members in the Division of Career and College Readiness will be available to provide technical assistance to local school systems and community to complete and submit the needs assessment and application. Local school systems and community colleges can use this document to begin planning for the needs assessment and local application process.

Stakeholders Required to Participate in the Development of the CTE Comprehensive Local Needs Assessment and Application

The CTE comprehensive local needs assessment and application are designed to be completed by a team and informed by data. Perkins V requires the follow stakeholder groups to participate in the development of the needs assessment and application.

- Representatives from CTE programs of study at the secondary and postsecondary levels. This includes principals, administrators, faculty, teachers, professional career and academic counselors, instructional support personnel, and paraprofessionals.
- Representatives from state or local workforce development boards.
- Representatives from local businesses and industries that align with CTE programs of study.
- Representatives from parent and student groups.
- Representatives from agencies serving at-risk, homeless, and out-of-school youth.
- Representatives of special populations[1].

The stakeholder team will:
1. Analyze all data and information pre-populated by the state and gathered locally to identity areas of promise and opportunities for growth within CTE programs of study.
2. Prioritize needs based on data to inform the use of Perkins V funds.
3. Support the development of the local application to address prioritized needs.
4. Engage in on-going consultation to inform improvements to CTE programs of study.
   Evidence of on-going consultation will be collected during monitoring visits.

In addition to the core stakeholder team, local school systems and community colleges are required to assess regional needs for CTE. Each individual school system and community college will complete components one-four of their CTE local comprehensive needs assessment with their stakeholder teams. Each region will then bring their needs assessment to the Regional Joint Assessment of Needs Team to analyze the collective needs of the region based on the outcomes of each individual school system and community college needs assessment. The Regional Joint Assessment of Needs Team will collectively respond to questions in component five of the CTE comprehensive needs assessment. Assignment of regions is found in the Regional Joint Assessment of Needs Team table.

---

[1]According to Perkins V, special population means:
   a. individuals with disabilities;
   b. individuals from economically-disadvantaged families, including low-income youths and adults;
   c. individuals preparing for non-traditional fields;
   d. single parents, including single pregnant women;
   e. out-of-workforce individuals;
   f. English learners;
   g. homeless individuals as described in the McKinney Vento Act;
   h. youth who are in, or have aged out of, the foster cares system; and
   i. youth with a parent who
       i.   is a member of the armed forces; and
       ii. is on active duty.

Regional Joint Assessment of Needs Team Assignments

School System	Community College
Allegany Public Schools	Allegany College
Anne Arundel Public Schools	Anne Arundel Community College
Baltimore City Public Schools	Baltimore City Community College
Baltimore County Public School	Community College of Baltimore County
Calvert County Public Schools Charles County Public Schools St. Mary's County Public School	College of Southern Maryland
Carroll County Public Schools	Carroll Community College
Cecil County Public Schools	Cecil College
Frederick County Public Schools	Frederick Community College
Garret County Public Schools	Garret Community College
Harford County Public Schools	Harford Community College
Howard County Public Schools	Howard Community College
Montgomery County Public Schools	Montgomery College
Prince George's County Public Schools	Prince George's Community College
Dorchester County Public School Kent County Public Schools Queen Anne's Public Schools Caroline County Public Schools Talbot County Public Schools	Chesapeake College
Worcester County Public Schools Somerset County Public Schools Wicomico County Public Schools	Wor-Wic Community College
Washington County Public Schools	Hagerstown Community College

Complete the stakeholder table to identify individuals that will support the completion of the CTE comprehensive local needs assessment and application. Also, identify individuals that will participate on the regional Joint Assessment of Needs Team. One stakeholder cannot represent more than two groups. One representative from postsecondary and secondary should serve as coordinators for the Joint Assessment of Needs Team. The coordinators will be charged with organizing and facilitating collaborative meetings.

Stakeholder Table: Identify stakeholders that will support the development of the CTE comprehensive local needs assessment and application. Identify if an individual also served on the Regional Joint Assessment of Needs Team. Additional rows can be added to the table as needed.

Stakeholder Group	First and Last Name	Organization	Title	Email	Select the team(s) in which the stakeholder participated
Postsecondary Coordinator					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Secondary Coordinator					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Postsecondary Level Administration (Perkins Coordinator, Chair, Dean, etc.)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Secondary School-Level Administration (Principal, Assistant Principal, etc.)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Postsecondary Faculty					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Secondary Teacher(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Professional Career Counselor(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Professional Academic Counselor(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Instructional Support Personnel					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Paraprofessional(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Special Populations Representative(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Parent(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application
Student(s)					☐ Needs Assessment ☐ Joint Assessment of Needs ☐ Local Application

Stakeholder Group	First and Last Name	Organization	Title	Email	Select the team(s) in which the stakeholder participated
Agency(ies) Serving At-risk, Homeless, and Out-of-school Youth					☐Needs Assessment ☐Joint Assessment of Needs ☐Local Application
State or Local Workforce Development Board					☐Needs Assessment ☐Joint Assessment of Needs ☐Local Application
Local Business or Industry that Align with CTE Programs of Study					☐Needs Assessment ☐Joint Assessment of Needs ☐Local Application
Data Analyst					☐Needs Assessment ☐Joint Assessment of Needs ☐Local Application

Division of Career and College Readiness

Career and Technical Education Comprehensive Local Needs Assessment 2020-2021

Please complete the information below. The needs assessment must be submitted to the Division of Career and College Readiness by **<date will be announced in November 2019>**.

Date Submitted:

Local School System:

Community College:

Purpose of the CTE Comprehensive Local Needs Assessment

The needs assessment is designed to support local school systems and community colleges in identifying areas of promise and opportunities for growth within CTE programs of study. It is highly recommended that the needs assessment is done with a root cause analysis to address underlying performance problems. The ultimate goal is to engage in a continuous improvement cycle that will support student success in postsecondary study and careers.

The needs assessment is required as part of the Strengthening Career and Technical Education for the 21st Century Act (Perkins V). Local school systems and community colleges are required to submit a needs assessment once every two years.

Components of the CTE Comprehensive Local Needs Assessment

The needs assessment consists of five components.
1. Review CTE access, equity, and student performance based on Perkins core indicators;
2. Evaluate if CTE programs of study are sufficient in size, scope, and quality to meet the needs of all students served by the local school system or community college;
3. Assess evidence of alignment of CTE programs of study with state and/or local workforce and/or economic needs;
4. Evaluate the progress towards implementing CTE programs of study; and
5. Compose of list of needs/gaps to be addressed in the plan of action for Perkins funding.

Points of Contact for the CTE Comprehensive Local Needs Assessment

Questions about the needs assessment may be directed to:

Dr. Nicassia Belton
Director of Data and Accountability for
Career Programs
Nicassia.Belton@Maryland.gov
410-767-0186

Dr. Osh Oshitoye
Coordinator of Data and Accountability
for Career Programs
Osh.Oshitoye@Maryland.gov
410-767-0364

Component 1: Review and Analyze the Pre-Populated State-Collected CTE Participant Enrollment and Concentrator Performance Data

The CTE comprehensive local needs assessment identifies the number of students that participated in CTE programs of study by student groups. It also identifies student outcomes on core performance indicators[2] of CTE concentrators who have exited by student group and cluster as defined in Perkins V and the Every Student Succeeds Act (ESSA).

Concentrators at the secondary level are defined as students who have completed at least two courses in a single CTE program of study and are enrolled in the third course. Concentrators at the postsecondary level are defined as students who have earned at least twelve credits in a CTE program of study. Required student groups are identified by gender, race and ethnicity, migrant status, and special populations.

An example of CTE participant enrollment data, disaggregated by student group and career cluster, is provided in table 1. The Division of Career and College Readiness will provide this data for each local school system (LSS) for all student groups.

Table 1: CTE Enrollment by Student Group Example

	Student Groups *(fictitious data)*	**2017**		**2018**		**2019**	
		CTE	**LSS**	**CTE**	**LSS**	**CTE**	**LSS**
	Participant Enrollment	**N**	**N**	**N**	**N**	**N**	**N**
Sample of Student Groups and Special Populations By Cluster	**All CTE Students**	162	168	161	169	174	172
	Male	161	165	164	164	162	168
	Female	163	167	162	165	170	171
	Race (*by all races & ethnicity*)	***	***	***	***	***	***
	Students with Disabilities	151	155	150	152	152	156
	Students with Free and Reduced Priced Meals (FARMS)	153	159	152	158	161	162
	English Learners	166	164	163	166	165	163
	Foster Care	170	172	161	169	172	171

---

[2] **Secondary Performance Indicators: 1S1:** Four-Year Graduation Rate, **2S1:** Academic Proficiency in Reading/Language Arts, **2S2:** Academic Proficiency in Mathematics, **2S3:** Academic Proficiency in Science, **3S1:** Postsecondary Placement, **4S1:** Nontraditional Concentrator Enrollment, **5S1:** Recognized Postsecondary Credential Attainment, **5S4:** Technical Skill Attainment

Postsecondary Performance Indicators: 1P1: Postsecondary Retention and Placement, **2P1:** Credential, Certificate or Degree, **3P1:** Non-traditional Concentrator Enrollment

An example of the performance data, disaggregated by student group and career cluster, is provided in table 2. The Division of Career and College Readiness will provide this data for each local school system (LSS) for all student groups.

Table 2: CTE Student Performance Data Example

	Student Groups (*fictitious data*)	**2017**	**2018**	**2019**
		LSS	**LSS**	**LSS**
	1S1: Four-Year Graduation Rate	**N**	**N**	**N**
Sample of Student Groups and Special Populations By	**All CTE Concentrator Students**	62	61	70
	Male	63	6	61
	Female	65	61	70
	Race (*by all races & ethnicity*)	***	***	***
	Students preparing for Non-Traditional Fields	73	73	71
	Single Parents	61	65	61
	Out of Work Individuals	52	51	51
	Homeless Individuals	54	51	51

The Division of Career and College Readiness will also provide a CTE concentrator student performance analysis tool as shown in table 3, which will provide a comparison of performance data for all student groups for each year to previously established annual targets to produce a priority ranking for each data point over the most recent three years.

Examples of the data that will be provided by the Division of Career and College Readiness appear in the table 3. The items appearing in red indicate that the actual performance of that student group was less than 90% below the local annual target. Similar data will be provided for all ESSA and Perkins V special populations.

Table 3: Comparison of Student Performance Data to Annual Targets

	Student Groups (*fictitious data*)	**2016** **40% target**	**2017** **43% target**	**2018** **46% target**	**Priority Ranking**
	1S1: Four-Year Graduation Rate	%	%	%	
	All CTE Concentrator Students	49	50	52	0
Sample of Student Groups and Special Populations By Cluster	Male	24	48	56	1
	Female	53	23	22	4
	Hispanic/Latino	54	55	58	0
	American Indian/Alaska Native	23	24	25	3
	Asian	23	22	21	5
	Black/African American	53	40	63	2
	Native Hawaiian/Other Pacific Islander	46	37	62	2
	White	52	48	55	1

The data points are ranked by priority, using the CTE concentrator student performance analysis tool:

TARGET PERFORMANCE + TREND PERFORMANCE = PRIORITY RANKING

Target Performance
0 = Target was met for all three years
1 = Target was met for two years only
2 = Target was met for one year only
3 = Target was met for no years or no data was provided for all three years

+

Trend Performance
0 = Continuous positive trend
1 = Oscillating (inconsistent) trend
2 = Continuous negative trend

=

Priority Ranking
0, 1, 2 = Low Priority
3 = Medium Priority
4, 5 = High Priority

For each local school system, using the CTE concentrator student performance analysis tool, the Division of Career and College Readiness will provide the following data for the past three years noting in red performance data that did not meet annual local targets.

- Graduation and academic performance data for CTE concentrators and all high school graduates.
- Local school system data disaggregated by student group (Perkins V required student groups) and by career cluster.
- Performance data for all federal accountability indicators by programs of study.

For each community college, using the CTE concentrator student performance analysis tool, the Division of Career and College Readiness will provide the following data for the past three year, noting in red performance data that did not meet annual local targets.

- Data disaggregated by student group (Perkins V required student groups) for the community college by career cluster.
- Performance data for all federal accountability indicators by programs of study.

Local school systems and community colleges will use data in the pre-populated tables identify improvement for access, equity, and student performance.

Step 1: Analyze Progress Towards Improving Access and Equity

Local school systems and community colleges are required to provide support for special populations. Resources or supports must be directed to reduce performance gaps and remove barriers to student success.

1. Using data from the CTE participant enrollment table (table 1), identify student groups and special populations that are over- and/or under-represented in career clusters as compared to the general student group populations in the local school system or community college.

2. Using data from the CTE concentrator performance table (table 2), identify student groups and special populations in career clusters which may be performing lower than 10% of the highest performance score.

3. In the local application, local school systems and community colleges will identify evidence-based strategies to address over- and/or under-representation of various student groups and to improve the performance of low performing student groups.

Step 2: Analyze Student Program Performance

1. Using the data in the CTE concentrator student performance analysis tool (table 3) identify a maximum of three areas of promise and three opportunities for growth. Perkins V funds can only be used to address areas identified for improvement, which may include both high performing and low performing programs.

Areas of Promise	Evidence to Support Area of Promise
Example: Hispanic/Latino and white students have demonstrated positive graduation rate growth.	Student groups surpassed local growth target for graduation rate over the last three years by 5-12%.
1.	
2.	
3.	

Opportunities for Growth	Evidence to Support Opportunity for Growth
Example: American Indian/Alaska Native student groups did not meet graduate rate targets over the last three years.	On average, only 24% of American Indian/Alaska Native students are graduating in four years.
1.	
2.	
3.	

2. In the local application, local school systems and community colleges will need to address opportunities for growth with evidence-based strategies.

Component 2: Evaluate CTE Programs of Study for Size, Scope and Quality

All CTE programs of study must be sufficient in size, scope, and quality to meet the needs of all students served by local school systems and community colleges. Programs of study that do not meet size, scope and quality criteria may not be eligible for Perkins V funding.

Step 1: Analyze CTE Programs of Study Size

1. Complete the table below to determine if all CTE programs of study meet the required size criteria. Local school systems and community colleges will address programs that do not meet size criteria in the local application.

2. The Division of Career and College Readiness will conduct an audit of all CTE programs of study at the secondary and postsecondary levels during monitoring visits to collect evidence demonstrating that all requirements for size are met.

Criteria for Size		
Criteria	**Evaluation Results**	**Programs that Do Not Meet Requirements**
The local school system or community college offer at least two state-approved CTE programs of study in recognized career clusters.	☑ Yes ☐ No	The Division of Career and College Readiness will pre-populate this box to determine if the local school system or community college meets this requirement.
All approved programs of study align with the definition of a CTE program of study as a coordinated, non-duplicative sequence of academic and technical content that: • are at least four credits (secondary); • are at least 12 credits (postsecondary);	☐ Yes ☐ No	
Each CTE concentrator course in approved CTE programs of study must have a minimum enrollment of ten concentrators over a four year period. If this requirement is not met, the local school system or community college will provide evidence of continued progress toward increased class size to meet the minimum requirement.	☐ Yes ☐ No	
The local school system or community college have the required number of staff, availability of equipment, and access to facilities to meet requirements detailed by each program of study.	☐ Yes ☐ No	

Step 2: Analyze CTE Programs of Study Scope

1. Complete the table below to determine if all CTE programs of study meet the required scope criteria

2. The Division of Career and College Readiness will conduct an audit of all CTE programs of study at the secondary and postsecondary levels during monitoring visits to collect evidence demonstrating that all requirements for scope are met.

Criteria for Scope		
Criteria	**Evaluation Results**	**Programs that Do Not Meet Requirements**
Curricula for each program of study is aligned to state-approved industry standards that lead to students earning recognized credentials, certifications, licenses, college credit, or degrees.	☐ Yes ☐ No	
Curricula for each program of study reflect a progression from secondary to postsecondary and community college to bachelor degree programs.	☐ Yes ☐ No	
Curricula for each program of study allow students to learn and demonstrate academic, technical, and employability skills.	☐ Yes ☐ No	
Curricula for each program of study demonstrate a continuum of learning that allows students to progress in a career field.	☐ Yes ☐ No	
Curricula for each program of study include differentiated supports and modifications to meet the needs of diverse learners.	☐ Yes ☐ No	
Each CTE student in each program of study has a written career and academic plan in place that includes: • the required courses to complete their CTE program of study; • the required courses to graduate; • the required assessments to earn a certification, license, credential, or degree in the CTE program; • the required academic assessments to graduate; and • the timeline to take courses, assessments, and complete work-based learning experiences.	☐ Yes ☐ No	
All students, regardless of race, color, national origin, sex, or disability, have equitable access to high-quality CTE programs as required by Code of Maryland Regulation 13A.04.02.04.	☐ Yes ☐ No	
Approved programs of study are guided by Local Advisory Councils and Program Advisory Committees according to the *Career and Technical Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures COMAR EA Title 21.Sec.101*.	☐ Yes ☐ No	
Local School System Only All CTE secondary programs of study adhere to CTE Development Standards which are required by Code of Maryland Regulations 13A.04.02.01	☐ Yes ☐ No	

Step 3: Analyze CTE Programs of Study Quality

1. Complete the table below to determine if all CTE programs of study meet the required quality criteria.

2. The Division of Career and College Readiness will conduct an audit of all CTE programs of study at the secondary and postsecondary levels during monitoring visits to collect evidence demonstrating that all requirements for quality are met.

Criteria for Quality		
Criteria	**Evaluation Results**	**Programs that Do Not Meet Requirements**
The local school system or community college achieves or consistently makes progress towards local targets established for state and federal core indicators of performance.	☐ Yes ☐ No	
Local School System Only CTE programs of study are delivered by teachers who meet state requirements to teach their content at the secondary level.	☐ Yes ☐ No	
Local School System Only CTE programs of study are delivered by teachers who earned a minimum of effective on their teacher evaluation as defined by Code of Maryland Regulation 13A.07.09 within three years.	☐ Yes ☐ No	
Community College Only CTE programs of study are delivered by faculty who meet the requirements of the institution's or programmatic accrediting body (if applicable), and the college accrediting body.	☐ Yes ☐ No	
Each CTE program of study meets all the requirements of the MSDE evaluation criteria found in the Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study.	☐ Yes ☐ No	
For each CTE program of study, the local school system provides all students, including students in special populations, the opportunity to: • Participate in at least one work-based learning experience (internship, job shadow, apprenticeship, etc.); • Earn college credit and/or industry credentials; and • Participate in Career and Technical Student Organizations.	☐ Yes ☐ No	
Professional learning opportunities, informed by data, are provided for administrators, teachers, faculty, counselors and support personnel to improve student learning outcomes. All secondary professional learning must be guided by the Maryland-endorsed National Learning Standards.	☐ Yes ☐ No	
The local school system or community college meets local and state annual data-reporting requirements and conducts reviews of all annual Program Quality Index reports to inform program improvement.	☐ Yes ☐ No	
Human resources is included in the recruitment process to ensure a diverse CTE teacher and faculty member candidate pool.	☐ Yes ☐ No	
Metrics are used to ensure that CTE teacher and faculty member recruitment strategies are successful.	☐ Yes ☐ No	
Teacher retention rates are reviewed annually, for the most recent 3 years, to understand the top three contributing factors to CTE teacher and faculty member turnover.	☐ Yes ☐ No	

Component 3: Assess Evidence of Alignment of CTE Programs of Study With Local Workforce Needs

CTE programs of study must lead to careers that are high-skill, high-wage, and/or in-demand.

Definition of High-Skill Careers

CTE programs of study that demonstrate high-skill lead to careers that:

1. Require previous work-related skills, knowledge, or experience of one or more years;
2. Have a Specific Vocational Preparation (SVP) rating of at least six as defined by O*Net;
3. Require state or federal licensing or industry-recognized certification; or
4. Require a recognized postsecondary credential or degree.

Definition of High-Wage Careers

CTE programs of study that demonstrate high-wage are those that lead to careers that exceed the state average annual wage. The 2018 average annual wage in Maryland was $58,770.

Definition of In-Demand Careers

CTE programs of study that demonstrate in-demand are those that lead to careers with a growth rate over ten years of at least 7% or a two-year occupational projected growth of 2.5%.

Step 1: Verify that the Locally-Developed CTE Program of Study Leads to High-Skill, High-Wage, and/or In-Demand Careers

1. Utilize the labor market analysis tool provided by the Division of Career and College Readiness. The labor market analysis tool provides information on how each state-approved program of study aligns with each high-skill, high-wage, and/or in-demand occupation criterion. Table 4 provides an example of the data that will be provided in the labor market analysis tool.

Table 4: Sample Labor Market Analysis Tool

Program Name (Fictitious Data)	High-Skill	High Wage	In-Demand
Culinary Arts	X		X
Landscape Design			
Physical Therapist Assistants	X	X	X
Computer Support Specialists	X	X	X

2. State data will be used to verify that state-developed program of study meet one or more of the high-skill, high-wage, or in-demand occupation criteria. For each locally-developed CTE program of study that does not have state data to support the high-skill, high-wage, or in-demand occupation criteria, provide evidence in table 5 that the program of study leads to a high-skill, high-wage, or in-demand careers using locally sourced data. Evidence only needs to be provided for one category to be in compliance with Perkins V. CTE programs of study that do not lead to high-skill, high-wage, or in-demand careers are ineligible for Perkins V funding.

Table 5: Evidence that Locally-Developed CTE Program(s) of Study Meet High-Skill, High-Wage, or In-Demand Criteria

Program of Study	Career(s) Connected to the Program of Study	Evidence that the Program of Study Leads to a High-Skill Career(s)	Evidence that the Program of Study Leads to a High-Wage Career(s)	Evidence that the Program of Study Leads to an In-Demand Career(s)

3. In the local application, local school systems and community colleges will need to address CTE programs of study that do not meet the high-skill, high-wage, or in-demand occupation criteria. A plan must be developed on how students will be transitioned to other state-approved programs that do meet high-skill, high-wage, or in-demand occupation criteria.

Component 4: Evaluate Progress Towards Implementation of CTE Programs of Study

The local school system and community college must conduct an evaluation of progress towards the implementation of CTE programs of study. This includes a backward and forward review of all programs of study offered. Three measures must be analyzed:
1. The rate of concentrators (unduplicated counts) being retained in the same program of study;
2. The rate of concentrators (unduplicated counts) earning recognized industry credentials, certifications, licenses, degrees, and college credit; and
3. The number of concentrators (unduplicated counts) participating in work-based learning opportunities.

The Division of Career and College Readiness will provide data for each career cluster (refer to table 6). Use the data to identify areas of promise and opportunities for growth. The local application must include strategies for addressing opportunities for growth.

Table 6: Career Cluster Data

Program of Study	Concentrator Retention			Concentrator Credential/College Credit Attainment			Concentrator Work-Based Learning Participation Rate		
	Number of concentrators from year 1 found in year 2 / number of concentrators in year 1			Number of concentrators attain credentials or college credit / number of concentrators			Number of concentrators participating in work-based learning / number of concentrators		
	2016	2017	2018	2016	2017	2018	2016	2017	2018

Component 5: Conduct a Joint Assessment of Needs and Compile List of Need/Gaps to be Addressed in Local Application for Perkins V Funding

Local school system and community colleges will collaborate on their Joint Assessment of Needs Team to analyze and address collective CTE needs of the region. Local school systems and community colleges will have to respond to the questions below as part of the local application. Responses to questions must reflect the input of the region.

Step 1: Identify Access and Equity Priorities

Local school systems and community colleges will need to address the over- and/or under-representation of various student groups and low performing student groups with evidence-based strategies. It is recommended that Equity and Excellence, A Guide to Educational Equity in Maryland be used as a guide to inform access and equity priorities.

Questions to consider:
1. What modifications will be made to student recruitment strategies to improve diversity in CTE programs of study?
2. What supports will be implemented to retain students in CTE programs of study?

Step 2: Identify Student Performance Improvement Priorities

Local school systems and community colleges will address opportunities for growth from the student performance section of the needs assessment and to. identify evidence-based strategies foster improvement

Questions to consider:
1. What evidence-based strategies will be used to improve CTE student performance? How can other funding sources, such as Title I, Title III, and IDEA, be used to support the academic improvement of CTE students?
2. What evidence-based strategies will be used to improve student completion of CTE programs of study?
3. What evidence-based strategies will be used to support students earning credentials, degrees, certifications, license, etc. in CTE programs of study?

Step 3: Identify Programs of Study that do not Meet Size, Scope, and Quality Criterion

Local school systems and community colleges will need to address programs that do not meet size, scope and quality criteria in the local application. Emphasis must be placed on meeting quality criteria especially with regards to the recruitment and retention of quality teachers and faculty.

Questions to consider:
1. How will teachers and faculty be trained to meet the needs of diverse learners?
2. How will teachers and faculty be trained on standards and program curricula?
3. What supports will be provided to professional counselors to advise students and families on CTE programs of study?

Step 4: Identify Programs of Study that do not Meet High-Skill, High-Wage, and/or In-Demand Occupation Criterion

In the application, local school systems and community colleges will need to address programs that do not meet any of the high-skill, high-wage, or in-demand occupation criteria. Explanation must be provided on how students will be transitioned to other state-approved programs that meet high-skill, high-wage, or in-demand occupation criteria.

Step 5: Identify Programs of Study Implementation Improvement Priorities

In the application, local school systems and community colleges will need to address programs of study with low concentrator retention rates, credential or college credit attainment rates, and work-based learning participation rates with evidence-based strategies.

Questions to consider:
1. What process will be used to support administrators in the implementation of CTE programs? This includes but is not limited to master scheduling, evaluation of CTE teachers and faculty, and inclusion of CTE in school improvement planning?
2. What process will be implemented to ensure that curricula are aligned to industry standards?
3. What process will be implemented to ensure that curricula are aligned to state academic standards?
4. What process will be implemented to ensure that approved curricula is implemented with fidelity?

Perkins V funds must be used to address gaps identified in the CTE comprehensive local needs assessments. The results of the needs assessment will inform the content in the application submitted by local school systems and community colleges for Perkins funding. It is strongly recommended that the local school system, community college, business partner, and other stakeholders collaborate to address identified needs.

Division of Career and College Readiness

Career and Technical Education Local Application 2020-2021

Please complete the information below. The local application must be submitted to the Division of Career and College Readiness by < **date will be announced in November 2019>.**

Date Submitted:

Local School System:

Community College:

Purpose of the CTE Local Application

The local application details how Perkins funds will be used to support CTE as informed by the needs assessment. The local application, which includes a plan of action, must be developed with a team of stakeholders and submitted annually. Approved applications will receive Perkins funding.

Components of the CTE Local Application

The CTE local application consists of six components.
1. Identify the local vision, mission, and goals for CTE;
2. Identify access and equity priorities;
3. Identify student performance priorities;
4. Identity size, scope, and quality priorities;
5. Identify program of study implementation improvement priorities;
6. Plan of action.

Points of Contact for the CTE Local Application

Jeanne-Marie Holly
Director of Finance and Legislation
for Career Programs
Jeanne-Marie.Holly@maryland.gov
410-767-0185

Mary O'Connor
Coordinator of Finance and Legislation
for Career Programs
Maryl.OConnor1@maryalnd.gov
410-767-0185

Dean Kendall
Career Programs and Grants
Specialist- Region I
Dean.Kendall1@maryland.gov
410-767-0164

Nancy Hauswald
Career Programs and Grants
Specialist- Region II
Nancy.Hauswald@maryland.gov
410-767-0175

Traci Verzi
Career Programs and Grants
Specialist- Region III
Traci.Verzi@maryland.gov
410-767-0165

Component 1: Identify the Local Vision, Mission, and Goals for CTE

Identify the local school system or community college vision, mission, and goals for CTE. Priorities identified in the local application must align with the locally developed vision, mission, and goals for CTE.

Vision	
Mission	
Goals	

Component 2: Access and Equity

Local school systems and community colleges are required to provide equitable opportunities for all students, including special populations, to experience success in CTE programs of study.

1. Using the data provided by MSDE in the CTE comprehensive local needs assessment, review the Access and Equity section.
2. Respond to the questions below.
   a. How does the local school system or community college provide equal access for special populations to CTE courses and programs of study? Identify processes in place for special populations to learn about programs of study; enroll in programs of study; participate in work-based learning experiences; and complete programs of study.
   b. How does the school system or community college ensure that members of special populations will not be discriminated against on the basis of their status as special population students?
   c. How will student recruitment strategies be designed to improve diversity in CTE programs of study?
   d. What supports will be implemented to retain students classified as special populations in CTE programs of study?
   e. How are special population student groups being prepared to successfully transition to the workplace after completion of CTE programs of study?

Component 3: Student Performance

Local schools systems and community colleges are required to analyze student performance to identify areas of promise and opportunities for growth.

1. Using the data provided by MSDE in the CTE comprehensive local needs assessment, review the Student Performance section.
2. Respond to the following questions:
   a. What evidence-based strategies[3] will be used to improve CTE student performance? How can other funding sources, such as Title I, Title III, and IDEA, be used to support the academic improvement of CTE students?

---

[3] Under the Every Student Succeeds Act, the term "evidence-based" means that the strategy is supported by research that proved it worked as intended.

b. What evidence-based strategies will be used to improve student completion of CTE programs of study?

c. What evidence-based strategies will be used to support students earning credentials, degrees, certifications, license, etc. in CTE programs of study?

d. What evidence-based strategies will be used to support recruitment of diverse students into CTE programs of study?

Component 4: Size, Scope, and Quality

Local school systems and community colleges are required to implement CTE programs of study that meet size, scope, and quality requirements.

1. Using the data provided by MSDE in the CTE comprehensive local needs assessment, review the Size, Scope, and Quality section.

2. Respond to the following questions:
   a. How are teachers and faculty trained to meet the needs of diverse learners?
   b. How are teacher and faculty trained on standards and program curricula?
   c. What process exists or will be implemented to ensure that approved curricula is implemented with fidelity?
   d. What supports are provided to professional counselors to advise students and families on CTE programs of study?
   e. How are CTE administrators supported in the implementation of CTE programs? This includes but is not limited to master scheduling, evaluation of CTE teachers and faculty, and inclusion of CTE in school improvement planning?
   f. How are faculty and staff supported by the local school system or community college to meet instructional or programmatic certification/licensure requirements?
   g. What opportunities are in place for students to explore and experience careers?
   h. How are students advised prior to enrolling in a CTE program of study? What processes are in place to ensure that CTE students continuously receive career and academic counseling?

Component 5: Program of Study Implementation

Local school system and community colleges are required to analyze programs of study and determine areas of improvement.

1. Using the data provided by MSDE in the CTE comprehensive local needs assessment, review the High-Skill, High-Wage-, and In-Demand and Programs of Study Implementation improvement sections.

2. Respond to the following questions:
   a. How was data used to determine current and anticipate future local employment needs?
   b. How will locally developed CTE programs of study at the school system or community level be revised to meet high-skill, high-wage, or in-demand career requirements, or how will program(s) of study be phased out?
   c. What new CTE programs of study are being developed for approval in the grant application year? How does the CTE local comprehensive needs assessment support the implementation of new programs?
   d. What is the process to determine which business and industry stakeholders are invited to participate on new Program Advisory Committees?
   e. How will the school system or community college work with employers to expand work-based learning opportunities?

    f.   How will the school system or community college provide opportunities for CTE students to earn postsecondary articulated, transcripted, or proficiency credit while still attending high school?

    g.   How will local school systems and community colleges work to support the recruitment, on-boarding/preparation, retention, and training/professional learning of CTE teachers, faculty, administrators, and specialized instructional support personnel?

Plan of Action

The plan of action details the activities that will be completed to address needs identified in the CTE comprehensive local needs assessment. The plan of action must be completed with the local application stakeholder group and informed by outcomes of the Regional Joint Assessment of Needs Team meetings.

Step 1: Identify Prioritized Needs and Root Causes

Identify prioritized needs that will be addressed in the local application. The needs must be informed by outcomes of the CTE comprehensive local needs assessment. For each prioritized need, a root cause analysis must be conducted to inform funding priorities. Additional rows can be added to the table. An example is included in the table 7.

Table 7: Prioritized Needs and Root Causes

Prioritized Needs What are the prioritized needs for CTE?	Justification from Data What data or findings from the needs assessment led the team to identity this prioritized need?	Root Causes Why does this problem exist?
Example: The percentage of CTE concentrators who have met state-recognized CTE standards in the Information Technology Career Cluster have decreased over the last three years.	Example: The needs assessment revealed that only 20% of CTE concentrators in the Information Technology Career Cluster graduate from high school having attained a recognized postsecondary or industry credential.	Example: There is a lack of access to needed equipment to prepare students for success on certification and/or licensure exams.

Step 2: Develop SMART Goals and Identify Benchmarks

Based on the prioritized needs and root causes, local school systems and community colleges will develop SMART goals. A goal must be developed for each identified need. Goals must be specific, measurable, achievable, realistic, and time-bound (SMART).

- **S**pecific: Is the goal clearly defined?
- **M**easurable: Are concrete criteria identified for measuring progress toward attainment of the goal?
- **A**chievable: Does the goal stretch the local school system or community college while still being attainable?
- **R**ealistic: Does the goal relate to CTE? Is it data-based?
- **T**ime-bound: Is the timeframe appropriate for accomplishment of the goal?

Local school systems and community colleges must also identify core indicators that will be impacted and benchmark data to assess progress towards meeting goal. Example information is included in table 8.

Table 8: SMART Goals

Cluster Name(s): Information Technology	**Program Name(s) and CIP(s):** IT Networking Academy (CISCO) **CIP:** XX.XXXX
Schools Approved to Offer the Identified Program (secondary only): Blue High School; Green Career Center; and Purple Academy of Arts and Science	
Prioritized Need: The percentage of CTE concentrators who have met state-recognized CTE standards in the Information Technology Career Cluster have decreased over the last three years.	
SMART Goal: By June of 2021, the percentage of CTE concentrators who have met state-recognized CTE standards in the Information Technology Career Cluster will increase from 20% to 23%.	

Benchmarks What data will be used to measure progress?	**Core Indicator** Which CTE accountability indicator will be used as annual measure of progress?
Student performance on course assessments (formative and summative).	5S4: Program Quality- Technical Skill Attainment

Step 3: Describe the Plan Action to Address Each SMART Goal

For each SMART goal, local school systems and community colleges will need to develop a plan of action that identifies what actions will be taken, the timeframe for the action, and the projected costs.

Plan of Action to Address SMART Goal			
What will Happen?	**When will it Happen?** **Month/Year**	**What is the Projected Cost?**	
Purchase updated equipment for IT Networking Academy.	September 2020	Equipment for IT Networking Academy	1 laptop at $840
Provide training to teachers on use of the new equipment in instruction.	October – November 2020	Teacher stipends for professional learning	5 teachers x 3 days at $120

Step 4: Complete Financial Compliance Forms

The Division of Career and College Readiness will provide local school systems and community colleges with the required financial compliance forms and provide technical assistance to complete forms.

Plan Approval Process

Needs assessments and applications will be reviewed by a team that is led by the Division of Career and College Readiness. Review team members may include representatives from business, industry, postsecondary institutions, professional organizations, local school systems, state agencies, and other Divisions at the Maryland State Department of Education. Feedback and technical assistance will be provided to local school systems and community colleges to get needs assessments and applications in an approvable state. Points of contact for the needs assessment and application are available at any time to provide support.

Maryland Career and Technical Education Four-Year State Plan

Career and Technical Education, Education that Works.

MARYLAND STATE DEPARTMENT OF
EDUCATION
EQUITY AND **EXCELLENCE**

**Strengthening Career and Technical Education for the 21st Century Act
(Perkins V)
Plan Submission**

October 2019

Maryland State Department of Education

Karen B. Salmon, Ph.D.
State Superintendent of Schools

Carol A. Williamson, Ed.D.
Deputy State Superintendent of Teaching and Learning

Brigadier General Warner I. Sumpter
President, Maryland State Board of Education

Tiara Booker-Dwyer
Assistant State Superintendent

Division of Career and College Readiness
Marquita Friday, Director of Career Programs
Jeanne-Marie Holly, Director of Finance and Legislation for Career Programs
Nicassia Belton, Ed.D., Director of Data and Accountability for Career Programs
Nina Roa, Coordinator of Career Programs and P-TECH
Charles (Chuck) Wallace, Coordinator of Career Programs and Student Organizations
Osh Oshitoye, Ph.D., Coordinator of Data and Accountability for Career Programs
Mary O'Connor, Coordinator of Finance and Legislative for Career Programs
Mike Beck, Equity and Civil Rights Compliance Specialist
Jennifer Griffin, Career Programs and Apprenticeship Specialist
Charles (Scott) Nichols, Career Programs, STEM, and Computer Science Specialist
Dean Kendall, Career Programs and Grants Specialist, Region I
Nancy Hauswald, Career Programs and Grants Specialist, Region II
Traci Verzi, Career Programs and Grants Specialist, Region III

Office of Leadership Development and School Improvement
Ed Mitzel, Executive Director of Leadership Development and School Improvement
Laura Liccione, Coordinator of Academic Improvement
Morrall Thompson, Coordinator of Systematic Improvement
Brian Eyer, Ed.D., Coordinator of Leadership Development
Tara Corona, Continuous Improvement Specialist
Mary Minter, Ed.D., School Leadership Support Specialist
Felicia Lanham Tarason, Ed.D., School Leadership Support Specialist

Larry Hogan, Governor

For Inquiries related to Department policy, please contact:
Agency Equity Officer
Equity Assurance & Compliance Office
Office of the Deputy State Superintendent for Finance and Administration
Maryland State Department of Education
200 West Baltimore Street, Baltimore, MD 21201-2595
410-767-0426 – Voice; 410-767-0431 – Fax; 410-333-6442 - TTY/TDD

For inquires regarding this publication, please contact Tiara Booker-Dwyer, Assistant State Superintendent for the Division of Career and College Readiness, at tiara.booker-dwyer@maryland.gov or 410.767.3676.

Table of Contents

U. S. Department of Education
Office of Career, Technical, and Adult Education

Strengthening Career and Technical Education for the 21st Century Act
(Perkins V) State Plan

I.   Cover Page

A.   State Name: <u>Maryland</u>

B.   Eligible Agency (State Board) Submitting Plan on Behalf of State:
<u>Maryland State Department of Education through the Maryland State Board of Education</u>

C.   Person at, or officially designated by, the eligible agency, identified in Item B above, who is responsible for answering questions regarding this plan. This is also the person designated as the "authorized representative" for the agency.

1.   Name: <u>Karen B. Salmon, Ph.D.</u>
2.   Official Position Title: <u>State Superintendent of Schools</u>
3.   Agency: <u>Maryland State Department of Education</u>
4.   Telephone: <u>410-767-0462</u>   5. Email: <u>karen.salmon@maryland.gov</u>

D.   Individual serving as the State Director for Career and Technical Education:

☐   Check here if this individual is the same person identified in Item C above and then proceed to Item E below.

1.   Name: <u>Tiara Booker-Dwyer</u>
2.   Official Position Title: <u>Assistant State Superintendent Division of Career and College Readiness</u>
3.   Agency: <u>Maryland State Department of Education</u>
4.   Telephone: <u>410-767-3676</u>   5. Email: <u>tiara.booker-dwyer@maryland.gov</u>

E.   Type of Perkins V State Plan Submission - FY 2019 (*Check one*):

☐   1-Year Transition Plan (FY2019 only) – *if an eligible agency selects this option, it will need only to further complete Items G and J.*

✓   **State Plan (FY 2019-23)** – *if an eligible agency selects this option, it will complete Items G, I, and J*

F. Type of Perkins V State Plan Submission - *Subsequent Years* (*Check one*):[1]

✓ **State Plan (FY 2020-23)**

☐ State Plan Revisions (Please indicate year of *submission:* _____ - *if an eligible agency selects this option, it will then complete Items H and J.*

G. Submitting Perkins V State Plan as Part of a Workforce Innovation and Opportunities Act (WIOA) Combined State Plan – FY 2019 (*Check one*):

☐ Yes
✓ **No**

H. Submitting Perkins V State Plan as Part of a Workforce Innovation and Opportunities Act (WIOA) Combined State Plan – *Subsequent Years* (*Check one*):[2]

☐ Yes (*If yes, please indicate year of submission:* _____)
✓ **No**

I. Governor's Joint Signatory Authority of the Perkins V State Plan (*Fill in text box and then check one box below*):[3]

Date Governor was sent State Plan for signature:

☐ The Governor has provided a letter that he or she is jointly signing the State plan for submission to the Department.

☐ The Governor has not provided a letter that he or she is jointly signing the State plan for submission to the Department.

4[1] Item F will only appear to the user in the Perkins V State Plan Portal in subsequent years (FY 2020-23).

5[2] Item H will only appear to the user in the Perkins V State Plan Portal in subsequent years (FY 2020-23).

[3] Item I is required in FY 2019 only for States that choose to submit a full Perkins V State plan, covering FY 2019-23.

J.   By signing this document, the eligible entity, through its authorized representative, agrees:

   1. To the assurances, certifications, and other forms enclosed in its State plan submission; and
   2. That, to the best of my knowledge and belief, all information and data included in this State plan submission are true and correct.

Authorized Representative Identified in Item C Above (Printed Name)	Telephone:
Karen B. Salmon, Ph.D.	410-767-0462
Signature of Authorized Representative	Date:

II.   Narrative Description

A. Plan Development and Consultation

Statutory Requirements: Plan Development and Consultation

1. Describe how the State plan was developed in consultation with the stakeholders and in accordance with the procedures in section 122(c)(2) of Perkins V. See Text Box 1 for the statutory requirements for State plan consultation under section 122(c)(1) of Perkins V.

2. Consistent with section 122(e)(1) of Perkins V, each eligible agency must develop the portion of the State plan relating to the amount and uses of any funds proposed to be reserved for adult career and technical education, postsecondary career and technical education, and secondary career and technical education after consultation with the State agencies identified in section 122(e)(1)(A)-(C) of the Act. If a State agency, other than the eligible agency, finds a portion of the final State plan objectionable, the eligible agency must provide a copy of such objections and a description of its response in the final plan submitted to the Secretary. (Section 122(e)(2) of Perkins V)

3. Describe opportunities for the public to comment in person and in writing on the State plan. (Section 122(d)(14) of Perkins V)

---

1.   Consultation with Stakeholders for Plan Development

Career and technical (CTE) education establishes a foundation to prepare Maryland's current and future workforce. The strategic direction and program content for CTE is informed by a variety of stakeholders to create an education and workforce pipeline that proactively address career demands in Maryland. The Maryland State Department of Education (MSDE) engaged over 300 stakeholders to inform the Maryland CTE Four-Year State Plan. The four-year CTE state plan was informed by representatives from:

- secondary and postsecondary CTE programs. This included eligible recipients and representatives of two-year minority-serving institutions and historically Black colleges and universities and adult CTE providers. Teachers, faculty, school system leaders, school leaders, specialized instructional support personnel, career and academic guidance counselors, and paraprofessionals also informed plan development. Maryland does not have tribally controlled colleges or universities, Indian Tribes, or Tribal organizations. Charter schools in Maryland were represented since they are included in the local school system for Perkins funding purposes.
- interested community representatives, including parents, students, and community organizations.
- representatives from the Governor's Workforce Development Board.
- members and representatives of special populations.
- representatives of agencies serving out-of-school youth, homeless children and youth, and at-risk youth.
- representatives of business and industry.

The comprehensive list of stakeholders by name and organization can be found in Appendix A.

2. Amount and Uses of Funds for Postsecondary and Secondary CTE

The MSDE allocates Perkins funding to support postsecondary and secondary CTE programs. .
Funding for CTE is allocated as follows:
- 15% of Perkins funds are retained by the MSDE for state administration and leadership.
- 85% of Perkins funds are awarded for CTE at the postsecondary and secondary levels.
  - 5% of funds are awarded through competitive reserve fund grants to support CTE at postsecondary or secondary levels.
    - 65% of the remaining amount is allocated to secondary CTE.
    - 35% of the remaining amount is allocated to postsecondary CTE.

Postsecondary and secondary institutions are required to spend Perkins funds to address needs identified in the Maryland CTE Comprehensive Local Needs Assessment. CTE reserve funds are used to support state CTE priorities (such as apprenticeships, computer science career pathways, etc.) and innovative CTE programs. The MSDE uses 5% of the 85% pass through funds for the CTE reserve fund. It was decided to use 5% for CTE reserve fund grants to ensure that all local school systems and community college were eligible to receive formula dollars. If the reserve fund grant increases beyond 5% then some local school systems and community colleges would be ineligible for the award.

The MSDE and the Maryland Higher Education Commission are the sole agencies for approval over CTE programs of study at the secondary and postsecondary levels.   The MSDE approves the use of funds at the secondary level. The MSDE works collaboratively with the Maryland Higher Education Commission approves the use of funds at the postsecondary level.

The MSDE will continue to comply with the required percentages identified in Perkins V to allocate funding. Consultation will continue to occur between the Maryland Higher Education Commission and the MSDE in making the decision about the allocation of funds to community colleges and school systems. Currently, Maryland does not allocate funds for Adult Education through Perkins; however, the representative from the Department of Labor, where Maryland's Adult Education programs are housed, was involved in the development of the Maryland CTE Four-Year State Plan.

3. Opportunities for the Public to Comment In Person and In Writing on the State Plan

Meetings, hearings, and public comment periods were held to provide the opportunity for stakeholders to provide input on the Maryland CTE Four-Year State Plan.
Table 1 identifies all of the opportunities that were provided for stakeholders to inform plan content.

Table 1: Opportunities to Provide Input in Person or In Writing on the State Plan

Meeting or Public Comment Date	Participants	Outcomes
July 16, 2019	National Center for Homeless Education	Introductory discussion about serving homeless youth under CTE in Maryland.
July 24, 2019	Maryland Career and Technical Administrators Meeting (MCTA)	The MCTA meeting provided the opportunity for participants to provide input on the vision for CTE and discuss the four-year state plan.
August 1, 2019	- Local School Systems, - Community Colleges, - CTE Professional Organizations, - Business and Industry - Governor's Workforce Development Board, and - Governmental Agencies (Maryland Department of Labor and Maryland Division of Rehabilitation Services).	The CTE State Plan Meeting was held to gather input to inform the development of the Maryland CTE Four-Year State Plan focusing on the vision and accountability system for CTE.
August 6 – October 7, 2019	60 Day Public Comment Period on Accountability Section of the State Plan	The public had the opportunity to provide input in writing on the accountability section of the state plan.
September 19, 2019	CTE Directors	The CTE Local Directors' Meeting was held to gather input from local school system leaders to inform the development of Maryland CTE Four-Year Plan focusing on the needs assessment, local application, and monitoring process.
September 26, 2019	Community College Perkins Coordinators	The CTE Perkins Coordinators' Meeting was held to gather input from community college representatives to inform the development of Maryland CTE Four-Year Plan focusing on the needs assessment, local application, and monitoring process.
October 11 – November 11, 2019	30 Day Public Comment Period on Entire State Plan	The public had the opportunity to provide input in writing on the entire state plan.
October 21, 2019	Maryland Career and Technical Administrators Meeting (MCTA)	The MCTA meeting provided the opportunity for members (CTE Directors, principals, etc.) to provide input on the entire four-year state plan.
October 22, 2019	Maryland State Board of Education	The State Board of Education had the opportunity to review and provide input on the draft plan.
October 24, 2019	- Local School Systems, - Postsecondary Institutions, and - Business and Industry	Meeting participants had the opportunity to discuss components of the state plan focusing on P-TECH.

Meeting or Public Comment Date	Participants	Outcomes
October 25, 2019	- Business and Industry, - Chamber of Commerce, - Workforce Development, - Local School Systems, and - Postsecondary Institutions	Meeting participants informed state plan content focusing on: - Improvements to career guidance that assist students in making informed academic and career and technical education decisions. - Support for the integration of employability skills in CTE programs of study. - Support for programs and activities that increase access, student engagement, and success in STEM. - Support for expanding work-based learning opportunities that are aligned to CTE programs of study.
November 18, 2019 November 19, 2019 November 20, 2019	Regional Public Hearings	Participants had the opportunity to provide feedback on the entire state plan.
December 5, 2019	Maryland State Board of Education	Maryland CTE Four-Year State Plan was presented to the State Board of Education for approval.

All materials for meetings and public comment periods can be found in the Maryland Perkins V CTE State Plan Dropbox folder.

All public hearings were announced through e-mail, MSDE's website, Dropbox, and the *Maryland Register*. The first hearing appeared in the *Maryland Register, Volume 46, Issue 1, Friday,* January 4, 2019 on page 26.

The second hearing appeared in *Maryland Register, Volume 46, Issue 2,* Friday, January 18, 2019 on page 36. <insert dates and links for other hearings>.

The Maryland CTE Four-Year State Plan was presented to the Maryland State Board of Education on October 22, 2019. The Maryland State Board of Education received information on the state plan and had the opportunity of provide input. The minutes of the October 22, 2019 State Board of Education were approved at the December 3, 2019 State Board of Education Meeting when the final version of the State Plan was presented.

Upon approval by the State Board of Education, the Maryland CTE Four-Year State Plan was submitted to the Governor for the thirty day comment period on January 1, 2020. Input from the Governor is included in Appendix XX. The Maryland CTE Four-Year State Plan was submitted to the U.S. Department of Education, Office of Career Technical and Adult Education by the March 2020 deadline.

B. Program Administration and Implementation

Statutory Requirements: Program Administration and Implementation

1. State's Vision for Education and Workforce Development

   a. Provide a summary of State-supported workforce development activities (including education and training) in the State, including the degree to which the State's career and technical education programs and programs of study are aligned with and address the education and skill needs of the employers in the State identified by the State workforce development board. (Section 122(d)(1) of Perkins V)

   b. Describe the State's strategic vision and set of goals for preparing an educated and skilled workforce (including special populations) and for meeting the skilled workforce needs of employers, including in existing and emerging in-demand industry sectors and occupations as identified by the State, and how the State's career and technical education programs will help to meet these goals. (Section 122(d)(2) of Perkins V)

   c. Describe the State's strategy for any joint planning, alignment, coordination, and leveraging of funds between the State's career and technical education programs and programs of study with the State's workforce development system to achieve the strategic vision and goals described in section 122(d)(2) of Perkins V, including the core programs defined in section 3 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3102) and the elements related to system alignment under section 102(b)(2)(B) of such Act (29 U.S.C. 3112(b)(2)(B)); and for programs carried out under this title with other Federal programs, which may include programs funded under the Elementary and Secondary Education Act of 1965 and the Higher Education Act of 1965. (Section 122(d)(3) of Perkins V)

   d. Describe how the eligible agency will use State leadership funds made available under section 112(a)(2) of Perkins V for each of the purposes under section 124(a) of the Act. See Text Box 2 for the required uses of State leadership funds under section 124(a) of Perkins V. (Section 122(d)(7) of Perkins V)

---

a. State-Supported Workforce Development Activities

Workforce development in Maryland represents a continuum of career awareness, exploration, and training to prepare Maryland's current and future workforce. Workforce development starts as early as elementary school and continues through secondary, postsecondary, and adult education. Every two years, the Maryland Department of Labor releases Maryland Occupation Projections. The MSDE regularly reviews the occupational projections to ensure that Maryland CTE career clusters are in alignment with workforce needs in Maryland. There are currently ten career clusters in Maryland:

1. Arts, Media, and Communications
2. Business Management and Finance
3. Construction and Development
4. Consumer Services, Hospitality, and Tourism
5. Environmental, Agriculture, and Natural Resources

6. Health and Bioscience
7. Human Resource Services
8. Information Technology
9. Manufacturing, Engineering and Technology
10. Transportation Technologies

Each career cluster has CTE programs of study containing content aligned to academic standards, industry standards, and employability skills. CTE programs of study provide the opportunity for students to engage in workplace learning experiences and earn postsecondary and/or industry-recognized credentials. Each program of study also provides the opportunity for students to participate in a Career and Technical Student Organizations (CTSOs). CTSOs are co-curricular learning experiences that extend course instructional content by engaging students in hands-on learning experience connected to CTE programs of study.

Workforce development activities are coordinated through collaborative partnerships. Each CTE program of study has a Program Advisory Committee. The Program Advisory Committee consists of representatives of business and industry from specific career fields; postsecondary, secondary, and workforce training programs; and special population student groups. Program Advisory Committees meet several times throughout the school year to inform, review, and monitor CTE programs of study. Each Committee is charged with reviewing curricula, equipment, assessments, course content, and professional learning experiences at the secondary and postsecondary levels to ensure alignment to industry and academic standards.

Maryland statute (Annotated Code of Maryland, Education Article 21, Section 101 [§21-101]) requires that local school systems and community colleges have an overarching Local Advisory Council. The Local Advisory Council consists of representatives from the various Program Advisory Committees. A joint Local Advisory Council between a local school system and its local community college is required if both are eligible for federal CTE funding. If either the school system or the community college does not meet the minimum criteria to receive federal CTE funding as stated in Perkins V, then the Local Advisory Council is comprised of a representative from each Program Advisory Committee for the recipient that is eligible for the federal CTE funding.

Program Advisory Committees and Local Advisory Councils must contain representatives that serve special population students as defined in Perkins V. This ensures that each program of study has the supports necessary for the success of all students. Guidance for Local Advisory Councils and Program Advisory Committees is provided in the *Career and Technical Education Local Advisory Council and Program Advisory Committee Policies and Procedures Guide*.

The MSDE is collaborating with the Maryland Business Roundtable for Education to establish a CTE Advisory Committee. This Committee is charged with providing guidance and direction for the statewide system of CTE. The Committee will be led by the Maryland Business Roundtable for Education and include members from the Governor's Workforce Development Board, Department of Labor, Chamber of Commerce, Economic Development, Maryland Career and Technical Administrators Organization, local school systems, postsecondary institutions, Maryland Higher Education Commission, and representatives that serve special population

students as defined in Perkins V. Table 2 summarizes councils, committees, and boards that inform workforce development activities in Maryland.

Table 2: Summary of Councils, Committees, and Boards that Inform Workforce Development Activities Maryland

Name	Charge and Membership
Program Advisory Committees	Charge: To inform, review, and monitor individual CTE programs of study. Membership: Each CTE program of study must have a Program Advisory Committee at the state, postsecondary, and secondary levels. Members must include business and industry representatives from career fields that align to the program of study. Members must also include representatives that serve special population students as defined in Perkins V.
Local Advisory Councils	Charge: To provide direction and guidance to meet regional workforce needs. Membership: Councils are formed between the local school system and community college for the region. Members include representatives from each local Program Advisory Committee. Members must also include representatives that serve special population students as defined in Perkins V.
Maryland CTE Advisory Committee	Charge: To provide guidance and direction for the statewide system of CTE. Membership: The Committee will be led by the Maryland Business Roundtable for Education and include members from the Governor Workforce Development Board; Department of Labor, Chamber of Commerce, Economic Development; Local School Systems, Postsecondary Institutions; Maryland Higher Education Commission; Maryland Career and Technical Administrators Association; and representatives that serve special population students as defined in Perkins V.
Governor's Workforce Development Board	Charge: Chief policy-making body for workforce development. Membership: The Governor's Workforce Development Board is a business-led board of 53 members consisting of the State Superintendent of Schools, presidents of community colleges and universities, elected officials, representatives of business and labor, and representatives of nonprofit organizations.

In addition to Program Advisory Committees, Local Advisory Councils, Maryland CTE Advisory Committee, and Governor's Workforce Development Board, workforce development activities are also informed by collaborative partnerships among the Maryland Department of Labor and the Maryland Department of Commerce.

b. Strategic Vision and Set of Goals for Preparing an Educated and Skilled Workforce

The state's strategic vison and goals for preparing an educated and skilled workforce are informed by Maryland's Workforce Innovation and Opportunity Act (WIOA) Plan; 2017-2021 Maryland State Plan for Postsecondary Education; Maryland Every Student Succeeds Act Consolidated State Plan; and the Maryland Commission on Innovation & Excellence in Education Report. These documents work in concert to establish a foundation that will prepare an educated and skilled workforce in Maryland. The Maryland CTE Four-Year State Plan was intentionally developed to align with priorities identified in each document. Figure 1 summarizes the vision for CTE in Maryland.

Figure 1: Vision for Career and Technical Education in Maryland

Vision for Career and Technical Education in Maryland

Each student has access and the opportunity to engage in career programs of study that:

- align to high-skill, high-wage, and/or in-demand careers;
- lead to earning industry-recognized and/or postsecondary credentials that will allow entrance and/or advancement in a specific career cluster; and
- provide career-based learning experiences that require the application of academic and technical knowledge and skills in a work setting.
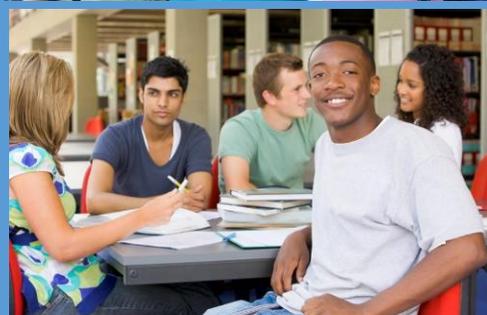
Division of Career and College Readiness

Maryland's Workforce Innovation and Opportunity Act Plan

Maryland's Workforce Innovation and Opportunity Act (WIOA) Plan identifies *The Benchmarks of Success for Maryland's Workforce System*. The Benchmarks seek to strengthen and enhance the workforce system through commitment to innovation, collaboration, and a true systems approach among the State's many workforce partners. The corresponding benchmarks are focused around a central vision of increasing the earning capacity of Marylanders by maximizing access to employment, skills and credentialing, life management skills, and supportive services.

Maryland's *Benchmarks of Success* are strategic goals focused on increasing the earning capacity of Marylanders by developing a system responsive to the needs of Maryland's jobseekers and businesses. They are:

1. Increase the earning capacity of Maryland's workforce system customers by maximizing access to employment;
2. Increase the earning capacity of Maryland's workforce system customers by maximizing access to and use of skills and credentialing;
3. Increase the earning capacity of Maryland's workforce system customers by maximizing access to and use of life management skills;
4. Increase the earning capacity of Maryland's workforce system customers by eliminating barriers to employment; and,
5. Strengthen and enhance the effectiveness and efficiency of Maryland's workforce system.

Each strategic goal has a set of corresponding benchmarks in which to measure success toward achieving the goal. Maryland's WIOA Target Populations are: Displaced Homemakers; Eligible migrant and seasonal farmworkers; Ex-offenders; Homeless individuals; Individuals facing substantial cultural barriers; Individuals with disabilities, including youth with disabilities; Individuals within two years of exhausting lifetime eligibility under Part A of the Social Security Act (Individuals who are English language learners; Individuals who are unemployed, including the long-term unemployed; Individuals who have low levels of literacy; Individuals without a High School Diploma; Low income individuals (including TANF and Supplemental Nutrition Assistance Program [SNAP] recipients); Native Americans, Alaskan Natives, and Native Hawaiians; Older individuals; Single parents (including single pregnant women and non-custodial parents); Veterans; and Youth who are in or have aged out of the foster care system. To the extent that the populations also address the populations in Perkins V, CTE is a partner in the state's workforce development system. CTE programs of study enhance the opportunities provided to achieve the goals of the workforce development system in order to improve the lives of Marylanders. The Maryland CTE Four-Year State Plan incorporates *The Benchmarks of Success* identified in Maryland's Workforce Innovation and Opportunity Act (WIOA) Plan.

2017-2021 Maryland State Plan for Postsecondary Education
The Maryland Higher Education Commission is charged with producing a statewide plan every four years that clearly outlines the priorities and major goals for the state's postsecondary system. In 2017, the *Maryland State Plan for Postsecondary Education* was released. It identified three primary goals for the postsecondary community in Maryland.

- Goal 1: Access: Ensure equitable access to affordable and quality postsecondary education for all Maryland residents.

- Goal 2: Success: Promote and implement practices and policies that will ensure student success.

- Goal 3: Innovation: Foster innovation in all aspects of Maryland higher education to improve access and student success.

Each goal highlights the current challenges higher education in Maryland faces and provides several strategies as opportunities to address those challenges. Key strategies identified that connect with CTE include:

- ✓ Align academic programs with CTE programs for a smooth transition.

- ✓ Work with local school systems to improve middle college programs that award degrees.

✓ Create and improve relationships with local professional school counselors and college access professionals.

✓ Expand outreach to communicate with non-traditional students and offer alternative pathways to access postsecondary education.

✓ Improve policies regarding academic program review that meet the State's needs – e.g., workforce shortages, do not duplicate, do not saturate, allow for responsiveness, do not sacrifice student growth and development, and allow for career exploration and goal setting.

✓ Create pathways of information sharing for students regarding employment, careers, and industries in Maryland.

✓ Find ways to incorporate career advising into academic advising.

✓ Create or expand existing career centers to be an essential element of a student's academic experience.

✓ Increase internship opportunities to improve career planning.

✓ Support local apprenticeship programs by coordinating efforts in required instruction for Registered Apprenticeships.

✓ Support faculty and staff in integrating career advising and internship opportunities.

The Maryland CTE Four-Year State Plan incorporates strategies identified the *Maryland State Plan for Postsecondary Education.*

Maryland Every Student Succeeds Act Consolidated State Plan
The Maryland Every Student Succeeds Act (ESSA) Consolidate State Plan outlines strategies to improve school performance, strengthen teacher pipelines, and improve data collection and analysis. The strategies identified in Maryland's ESSA plan directly connect to CTE. For example, Maryland ESSA plan requires low-performing schools to engage in a root cause analysis process. The outcomes of the root cause analysis conducted in some schools identified the need to improve the quality of CTE programs of study. The outcomes of the root cause analysis process will be used to inform content in the CTE local application for school systems.

Maryland's ESSA plan has embedded CTE measures that support the school quality/student success and readiness for postsecondary success performance indicators. Students can meet measures for the school quality/student success indicator by attaining concentrator status or higher. The readiness for postsecondary success indicator can be met in part by completing a youth or other apprenticeship program approved by the Maryland Apprenticeship Training Council; attaining CTE concentrator status and completing an industry certification aligned with an MSDE-approved CTE program; or completing an MSDE-approved CTE program.

Maryland Commission on Innovation and Excellence in Education
The Maryland Commission on Innovation and Excellence in Education released a report that contains recommendations to improve college and career readiness pathways. The recommendations called for a redesign of CTE pathways. The recommendations from the report

were used to inform the development of Maryland CTE Four-Year State Plan. A summary of recommendations for CTE are as follows:

- Establish a CTE Committee to create a system focused on developing the talent needed for staffing the high-tech industries on which Maryland's future depends.
- Create an advisory group to provide advice on skills standards that can be used to drive the new Maryland CTE system.
- Ensure every middle and high school student have ready access to individuals who can counsel and advise them on CTE pathway options and help them navigate among the available and emerging opportunities.
- Combine classroom education and training (the theory) with learning in a workplace (the practice).
- Ensure the CTE system is informed by a close relationship between CTE providers and the State's economic development, workforce development, and labor agencies.

c. Strategy for Joint Planning, Alignment, Coordination, and Leveraging of Funds
State CTE Programs of Study and the State's Workforce Development System
The InterAgency Workforce Committee of the Governor's Workforce Development Board meets on a bi-monthly basis. This Committee oversees Maryland's strategy for joint planning, alignment, coordination, and leveraging of funds between the CTE system and workforce development in order to achieve the strategic vision and goals of the State. The Committee members include senior officials from the Governor's Workforce Development Board partner agencies. The purpose of the Committee is to coordinate workforce development programs and policies to meet the demands of Maryland's businesses and industries. In these meetings, workforce partners share the initiatives they are working on and enlist the assistance from other workforce agencies with similar goals.

Perkins V and other Federal Programs
The MSDE holds monthly Federal Grants Collaboration Meetings. The purpose of these meetings is for all Directors of federal grants to engage in joint planning, alignment, coordination, and leveraging of federal funds. The outcomes of these meetings have resulted in alignment of needs assessments and other federally required documents for funding; coordination of supports to school systems and community colleges; and consistent messaging to school systems and community colleges regarding use of federal funds.

Core CTE Programs – Science, Technology, Engineering, Mathematics, and Computer Science
Maryland WIOA State Plan identified several occupational needs connected to science, technology, engineering, mathematics, and computer science fields. As a result, the MSDE will have a focus on CTE programs of study in the Health and Bioscience; Information Technology; and Manufacturing, Engineering and Technology career clusters. The MSDE recently added new pathways in cybersecurity and cyber operations to the Information Technology Networking Academy-Cisco CTE program. The MSDE will also develop new programs of study in artificial intelligence and cloud computing and unmanned aircraft technology. The MSDE will allocate reserve fund grant dollars to continue to expand CTE programs of study in Health and Bioscience; Information Technology; and Manufacturing, Engineering and Technology career clusters.

Local school systems and community colleges will continue to partner with key stakeholders, state workforce and economic development agencies, and others as appropriate to develop and implement CTE programs that meet high-skill, high-wage, and in-demand careers.

d. Use of State Leadership Funds

State leadership funds will be used to:

- develop, revise, or procure CTE curricula that is aligned to industry and academic standards;
- provide professional learning experiences to CTE teachers, faculty, and administrators;
- review local CTE comprehensive needs assessments and applications;
- monitor CTE programs of study;
- recruit and prepare CTE teachers, faculty, specialized instructional support personnel or paraprofessionals;
- develop statewide articulation agreements;
- establish statewide industry or sector partnerships among local school systems, postsecondary institutions, and others;
- market CTE programs of study;
- develop and/or secure a CTE data system;
- provide support to eliminate inequities in student access to high-quality CTE programs of study and effective teachers, faculty, specialized instructional support personnel, and paraprofessionals;
- prepare students for non-traditional fields in current and emerging professions;
- develop strategies to improve success in CTE programs of study for members of special populations;
- provide career and academic guidance activities;
- provide funding to CTE programs that serve individuals in State institutions;
- deliver technical assistance for eligible recipients;
- support the integration of employability skills into CTE programs of study;
- support programs and activities that increase access, student engagement, and success in science, technology, engineering, mathematics, and computer science fields;
- support career and technical student organizations;
- support expansion of work-based learning experiences;
- evaluate the effectiveness of these activities to continuously improve CTE programs of study; and
- ensure equitable and positive return on investment of State leadership funds.

2. Implementing Career and Technical Education Programs and Programs of Study

Statutory Requirements: Implementing Career and Technical Education Programs and Programs of Study

    a. Describe the career and technical education programs or programs of study that will be supported, developed, or improved at the State level, including descriptions of the programs of study to be developed at the State level and made available for adoption by eligible recipients. (Section 122(d)(4)(A) of Perkins V)

    b. Describe the process and criteria to be used for approving locally developed programs of study or career pathways (see Text Box 3 for the statutory definition of career pathways under section 3(8) of Perkins V), including how such programs address State workforce development and education needs and the criteria to assess the extent to which the local application under section 1328 will—

        i. promote continuous improvement in academic achievement and technical skill attainment;

        ii. expand access to career and technical education for special populations; and

        iii. support the inclusion of employability skills in programs of study and career pathways. (Section 122(d)(4)(B) of Perkins V)

    c. Describe how the eligible agency will—

        i. make information on approved programs of study and career pathways (including career exploration, work-based learning opportunities, early college high schools, and dual or concurrent enrollment program opportunities) and guidance and advisement resources, available to students (and parents, as appropriate), representatives of secondary and postsecondary education, and special populations, and to the extent practicable, provide that information and those resources in a language students, parents, and educators can understand;

        ii. facilitate collaboration among eligible recipients in the development and coordination of career and technical education programs and programs of study and career pathways that include multiple entry and exit points;

        iii. use State, regional, or local labor market data to determine alignment of eligible recipients' programs of study to the needs of the State, regional, or local economy, including in-demand industry sectors and occupations identified by the State board, and to align career and technical education with such needs, as appropriate;

        iv. ensure equal access to approved career and technical education programs of study and activities assisted under this Act for special populations;

        v. coordinate with the State board to support the local development of career pathways and articulate processes by which career pathways will be developed by local workforce development boards, as appropriate;

        vi. support effective and meaningful collaboration between secondary schools, postsecondary institutions, and employers to provide students with experience in, and understanding of, all aspects of an industry, which may include work-based learning such as internships, mentorships, simulated work environments, and other hands-on or inquiry-based learning activities; and

        vii. improve outcomes and reduce performance gaps for CTE concentrators, including those who are members of special populations. (Section 122(d)(4)(C) of Perkins V)

a. Career and Technical Education Programs or Programs of Study

There are currently ten career clusters in Maryland:

1. Arts, Media, and Communications
2. Business Management and Finance
3. Construction and Development
4. Consumer Services, Hospitality, and Tourism
5. Environmental, Agriculture, and Natural Resources
6. Health and Bioscience
7. Human Resource Services
8. Information Technology
9. Manufacturing, Engineering, and Technology
10. Transportation Technologies

Each career cluster aligns to identified workforce needs in Maryland as defined by occupational projections and informed by industry partners. Career clusters allow student to explore a wide range of career options while applying academic content and technical skills to a career area. Each cluster contains several CTE programs of study that align to specific careers within the career cluster. Each CTE program consists of a planned, sequential, and increasingly rigorous program of study linking academic and technical courses from secondary to postsecondary education, informed by industry input. Programs are designed according to the CTE Development Standards that are required under the Code of Maryland Regulations (COMAR) 13A.04.02.

The MSDE will only implement CTE programs of study that:

1. align to high-skill, high-wage, or in-demand careers;
2. provide the opportunity for students to earn industry industry-recognized and/or postsecondary credentials;
3. provide the opportunity to participate in work-based learning experiences.

Over the course of three years, MSDE will phase out any CTE program of study that does not meet the criteria above.

MSDE currently has 53 CTE state programs of study. Statewide articulation agreements for each program of study (except for cosmetology) allow students from any local school system to earn credits at two- or four-year colleges or universities. Maryland was among the first states in the nation to include Advanced Placement (AP) courses in CTE programs of study. AP courses also provide the opportunity for students to earn college credit. Programs at the community college level that are statewide-designated programs of study by the Maryland Higher Education Commission are also part of the statewide articulation agreements. This designation permits students to attend the community college and be considered an in-county student, which eliminates the increased tuition costs if the student lives out of the county. Postsecondary CTE lower division certificate or associate's degree programs offer high school students a seamless pathway to the next learning level with college credits available to be earned while in high school.

New CTE Programs of Study

The MSDE will develop new CTE programs of study in artificial intelligence and cloud computing and cybersecurity. Each of these programs of study align to workforce needs in Maryland.

The MSDE will expand The Apprenticeship Maryland Program and Pathways in Technology Early College High (P-TECH) School Program.

Apprenticeship Maryland

The Apprenticeship Maryland Program was developed and coordinated through a partnership between the MSDE and the Maryland Department of Labor. The program is based on a partnership among employers and mentors, school systems, students, and parents. Eligible employers (approved by the Maryland Apprenticeship Training Council through the Department of Labor) hire high school juniors and seniors to work in eligible career pathway occupations. Most occupations are in manufacturing, science, technology, engineering, mathematics, and computer science industries. Students are provided compensation while apprenticing, thus creating an "earn and learn" opportunity. Students also receive training in employability, interpersonal, and social skills. Maryland will use Perkins funds to expand the apprenticeship program.

Pathways in Technology Early College High (P-TECH) School

P-TECH schools are innovative grade 9 to 14 public schools that create clear pathways from high school to college and career for young people from all academic backgrounds. In Maryland, each P-TECH student is required to complete a MSDE approved CTE program of study. In six years or less, students graduate with a high school diploma and a no-cost, two-year associate degree. Each P-TECH school works with industry partners and a local community college to ensure an up-to-date curriculum that is academically rigorous and economically relevant. The program also includes one-on-one mentoring, workplace visits and skills instruction, paid summer internships and first-in-line consideration for job openings with a school's partnering company. Currently, Maryland has P-TECH schools in eight school systems. Maryland P-TECH students are enrolled in CTE programs of study and will earn associate's degrees in high-demand careers including Nursing, Respiratory Therapy, Physical Therapy Assistant and Health Information Management, Cyber Security, Computer Information Systems, Network Information Technology, and Engineering Technology. Maryland will use Perkins funds to expand the P-TECH program.

b. Process and Criteria to Approve Locally Developed Programs of Study or Career Pathways

The process and criteria to approve locally developed programs of study or career pathways is described in the *Policies and Procedures for the Development and Continuous Improvement of Career and Technical Education Programs of Study*. These policies clearly describe the documentation needed to submit a locally developed CTE program of study for State approval. State approval allows for the program to use federal funds to support continuous improvement.

When a local CTE programs of study at the secondary level is submitted to MSDE, it is reviewed by a panel of individuals representing the Maryland Higher Education Commission, Maryland Department of Commerce, the Maryland Department of Labor, the Governor's Workforce

Development Board, and local CTE Directors to ensure that the proposed program meets Maryland workforce needs. Evidence of need in the career area must be provided through labor market data. The local school system or community college must demonstrate that the local Program Advisory Committee consisting of representatives from business, industry, and postsecondary institutions, informed the development of the CTE program of study. For each locally developed program of study, students must have options to earn industry-recognized credentials, if available and appropriate, college credit, engage in work-based learning experiences as a component of the submission process. The development of the proposed CTE program of study must provide evidence of collaboration from its beginning stages to the submission of the proposed program.

1. Promote continuous improvement in academic achievement and technical skill attainment

It is a priority of the MSDE to support school systems and community colleges in engaging in a cycle of continuous improvement to raise student achievement and technical skill attainment. The continuous improvement process is grounded in data-informed decisions to improve the quality of CTE programs of study. Local school systems and community colleges are required to regularly analyze data to identify opportunities for growth and areas of promise. MSDE uses the cycle in Figure 2 to support the continuous improvement process of CTE programs of study. The continuous improvement cycle is embedded in the CTE comprehensive local needs assessment, application, and program monitoring process.

Figure 2: Cycle of Continuous Improvement
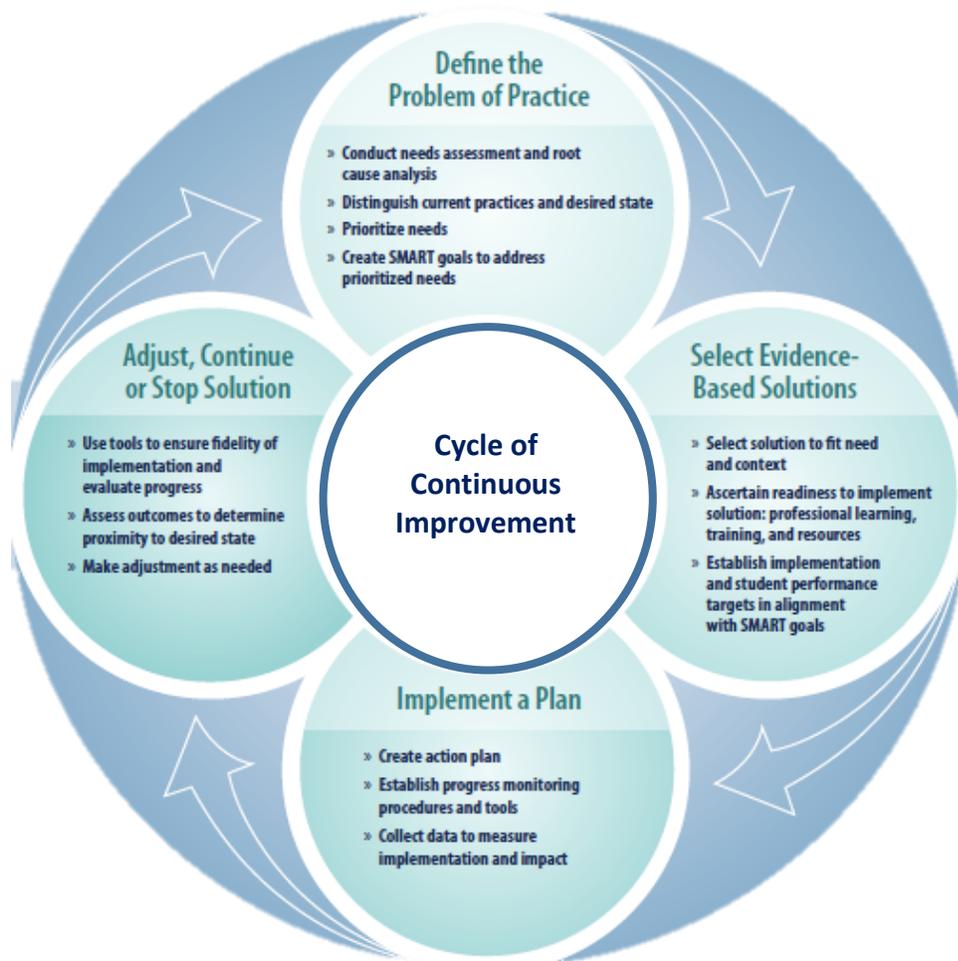
The continuous improvement process requires local school systems and community colleges to:

- review and analyze data with the Local Advisory Council and Program Advisory Committees to identify opportunities for growth and areas of promise within each program of study;
- assess program performance against established measures to ensure targets are met. If targets are not met, local school systems and community colleges will engage in the root cause analysis process to address underlying causes of performance problems;
- analyze program data against local labor market data and occupational outlook projections to ensure the program meets the workforce needs in Maryland; and
- participate in on-site and desk monitoring visits by the MSDE.

The MSDE administers work-based learning surveys to both employers and students in work-based learning experiences. The survey is one data point that can be used to inform the continuous improvement process of work-based learning experiences. Other data points used to inform continuous improvement include the outcomes of the Program Quality Index (PQI) and the Local Program Accountability Report (LPAR). The data points included in these reports address performance of concentrators, completers, special populations, non-traditional programs

and non-traditional students enrolled in and completing these programs, as well as the core indicators of performance and dual completion data for high school graduation information.

School systems and their corresponding community colleges undergo an on-site review through a formal monitoring visit. Due to the number of school systems and community colleges in the state, each receives the on-site visit every five years. Data is provided by MSDE prior to visits and reports are issued after the visits. Any findings are noted and must be included in the next submission of the local application. A unique feature of monitoring visits is that the local school system and its corresponding community college receive their monitoring visits together with representatives from both state and local workforce systems. This approach supports greater alignment of CTE programs of study to meet regional workforce needs. Local school systems and community colleges are required to submit mid-year and final programmatic reports as well as financial reports. Each request for funds against formula dollars is reviewed and payments are authorized when all reports are submitted. On-site and virtual monitoring is conducted by the MSDE. These processes are ongoing and contribute to the continuous improvement of CTE programs.

2. *Expand access for special populations*

Equity in education is a priority of the MSDE. A Network for Equity in Education working group comprised of representatives of the MSDE and each of Maryland's 24 local school systems collaborate to support the development of regulations, resources, and professional learning experiences that support equitable practices in education. This includes equitable access to CTE programs of study for all students, including special population students. Maryland's Guide to Equity and Excellence identifies key strategies that can be implemented at the state, local school system, and school levels to ensure that all students have equitable access to CTE programs of study.

Examples of actions that will be taken to expand access for special populations include:
1. Analyzing data to ascertain and address root causes of enrollment, completion, and student performance issues. A plan of action will be developed, informed by data, to improve enrollment and completion of CTE programs of study for special population students.
2. Providing professional learning experiences for CTE teachers on how to diagnose and respond to student learning needs; differentiate instruction; and engage diverse learners.
3. Providing professional learning experiences for counselors and school leaders on how to recruit and retain special population students in CTE programs of study and how to remove barriers and provide opportunities for special population students to engage in CTE.
4. Establishing targeted recruitment strategies for special population students to prepare for CTE programs of study starting as early as grade five.

The MSDE will continue to partner with representatives of special population groups to identify and implement strategies that will expand access to CTE for special population students.

3.   Support Employability Skills

All programs of study are required to be informed by a Program Advisory Committee. This committee is charged with ensuring that content in CTE programs are aligned with academic standards, industry standards, and employability skills. All CTE programs of study are required to provide the opportunity for students to engage in work-place learning experiences (apprenticeships, internships, etc.) and Career and Technical Student Organizations which allows students to implement employability skills in work-place settings. Maryland CTE programs of are guided by Maryland's *Policies and Procedures for the Development and Continuous Improvement of Career and Technical Education Programs of Study* This document describes the required content for programs of study, including skills that specify the knowledge and competencies required to perform successfully in the workplace. Standards are developed along a skill continuum ranging from general work readiness skills to specific skills required for an occupation.

The MSDE will continue to collaborate with representatives from business and industry to ensure that all CTE programs of study address employability skills.

c. Describe how the eligible agency will:

i. Make information on approved programs of study and career pathways available to students, representatives of secondary and postsecondary education, and special populations

The MSDE implements a comprehensive strategy to make information on approved programs of study, career pathways, career exploration, work-based learning opportunities, early college high high schools, dual/concurrent enrollment program opportunities, and guidance and advisement resources available to different stakeholder groups. Highlighted below are some implemented strategies:

1. Websites – The MSDE publically posts information on career clusters, approved programs of study, and other CTE-related topics on the MSDE webpage. Users of the MSDE website have the option to translate content to a variety of different languages. Workforce and labor market information is provided through O*NET and the Maryland Workforce Exchange.

2. Videos – The MSDE developed a video series highlighting students engaged in different CTE programs of study and workplace learning experiences. Videos are available on the MSDE webpage and MSDE TV YouTube channel.

3. Social Media – The MSDE has a dedicated twitter page for @Maryland_CTE. Information regarding programs of study and other CTE information can be accessed through the social media page. The MSDE developed a social media guide using grant funds from Advance CTE, sponsored by the Siemen's Foundation. The social media guide provides step-by-step instructions on using Facebook, Twitter, Instagram, Snap Chat, and YouTube to market CTE programs of study. Additionally, the guide provides campaign strategies as well as sample messages that can be tailored to the students, parents, and educators in the school system.

4. Community Meetings – The MSDE regularly participates in community meetings to discuss CTE program offerings and provide information to community members about opportunities for students in CTE.

5. Statewide Convenings – The MSDE regularly facilitates meetings with local directors of CTE, postsecondary Perkins coordinators, school counselors, principal supervisors, principals, and CTE teachers to share and discuss CTE-related information.

Information on state-approved CTE programs of study and pathways are also shared by secondary and postsecondary institutions through their websites, social media pages, course catalogs, advisement materials, degree publications, and other CTE awareness materials.

ii. Facilitate collaboration among eligible recipients in the development and coordination of career and technical education programs and programs of study and career pathways
Collaboration among stakeholders is essential and required among eligible recipients. Local schools systems and community colleges are required to collaborate to complete the CTE comprehensive local needs assessment and CTE local application. A joint Local Advisory Council between a local school system and community college is required if both are eligible for federal CTE funding. The Local Advisory Council must contain members of business and industry. The purpose of the collaboration among local school systems, community colleges, and business and industry is to ensure regional workforce needs are met and to identify opportunities to align and leverage resources.

The Maryland CTE Advisory Committee provides guidance and direction for the statewide system of CTE. The Committee will be led by the Maryland Business Roundtable for Education and include members from the Governor's Workforce Development Board; Department of Labor, Chamber of Commerce, Economic Development; Local School Systems, Postsecondary Institutions; Maryland Higher Education Commission; Maryland Career and Technical Administrators Association; and representatives that serve special population students as defined in Perkins V.

State programs of study serve as a means of fostering long-lasting partnerships with two- and four-year colleges/universities as well as with professional organizations. These partners, called "Affiliates," work in tandem with MSDE staff to help keep programs current, convene Program Advisory Committees, and assist in the professional learning of teachers. Many CTE programs are designed to include a work-based learning and/or capstone experiences. Many capstone experiences involve students working or being mentored by industry professionals to complete a project. Other collaboration efforts include employers who engage with students through the Career and Technical Student Organizations (CTSOs). These organizations provide opportunities for CTE students to gain leadership skills and further refine their technical skills through local, state, and national competitions. Employers serve as judges and advisors, and provide equipment, materials, and supplies for the competitions. Employers use their involvement in CTSOs to identify students for future employment and work-based learning opportunities.

iii. Use of State, regional, or local labor market data to determine alignment of eligible recipients' programs of students to the needs of the State, regional, or local economy
Labor market data is used to inform the development of CTE pathway programs at both state and local levels. The first step in developing CTE programs is to conduct an analysis of labor market needs. Labor market data are considered and reviewed by Program Advisory Committees at

local and state levels to determine whether there is a demand (or lack of demand) for employees in the industry. Program design also includes aligning secondary CTE programs to postsecondary CTE programs in order to provide secondary school students with the opportunity to link high school learning opportunities with opportunities for further education.

Labor market information is compiled from two sources for state, regional, and local purposes. Sources include the Maryland Department of Labor and employer feedback. The Department of Labor tailors state, regional, and county occupational projection data from the Bureau of Labor Statistics (BLS). The data is published on the website for the Department of Labor. BLS provides state and county data. The Maryland Department of Labor compiles occupational projection data for each regional workforce development area. This data is used to target CTE programs of study to meet high-needs projections at the state, regional, or local level.

Occupational projections data must also include real-time employer needs; therefore, MSDE actively seeks employer feedback to inform state programs of study. Employer feedback occurs during Maryland CTE Advisory Committee, Local Advisory Council, and Program Advisory Committee meetings. Additionally, employer surveys are used to collect data on real-time employment needs, and provide valuable feedback on the quality of program graduates to help drive the continuous improvement of CTE programs.

iv. Ensure equal access to approved CTE programs of study and activities for special populations
There is a need to actively recruit, enroll, and retain special populations in all CTE programs of study. The MSDE recommends that local school systems and community colleges eliminate admission requirements for CTE programs, unless such entrance requirements are absolutely essential for student success in the program. In cases where admissions requirements have been determined to be necessary, the MSDE provides technical assistance to ensure equitable entrance requirements.

Maryland has demonstrated a long-standing commitment to equity and ensuring that members of special populations are provided equal access to programs. The MSDE Division of Career and College Readiness team collaborates with the Division of Early Intervention and Special Education Services to provide guidance to local school systems on ensuring equal access to approved CTE programs of study. Moreover, all local school systems and community colleges receiving federal funding from the U.S. Department of Education and providing CTE programs of study are required to participate in the Methods of Administration (MOA) Office of Civil Rights (OCR) compliance reviews.

The major purpose of the MOA OCR Compliance Review is to ensure that community colleges and local school systems are providing equal access to education and promoting educational excellence through the enforcement of civil rights in compliance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Vocational Rehabilitation Act of 1973, and Title II of The Americans with Disabilities Act. MSDE annually conducts a minimum of two local MOA OCR on-site compliance reviews and provides ongoing technical assistance to local school system and community college staffs on equal access.

The state assists local school systems and community colleges in setting forth programs of study aligned with industry standards, practices, and assessments to improve CTE for special populations. Leadership, coordination, and expertise is provided at the state level through career clusters, CTE programs of study, and professional learning to assist recipients in determining program effectiveness and student success. Data analysis is used to identify opportunities for growth and areas of promise for each CTE program of study. All local school systems and community colleges selected for MOA OCR review are required to submit a compliance plan based on any issues cited during their review process. In addition, the state requires that each local school system and community college receiving funding under Perkins V describe how they will continue to comply with the intent of the law in increasing access and success of special populations in their local plan.

Maryland has an Interagency Agreement among nine state agencies/entities to support interagency coordination for students with disabilities. The work described in the agreement is ongoing and a function of the Interagency Transition Council for Youth with Disabilities (IATC). A MSDE CTE staff member serves as a representative on the IATC.
The member list can be found at
https://msa.maryland.gov/msa/mdmanual/26excom/html/12disco.html. The IATC is a partnership of State and local government agencies, educators, family members and advocates. The IATC's purpose is to help improve the policies and practices that affect Maryland students with disabilities preparing to transition from high school to adult services, college, employment, and independent living. They meet at least four times a year and regularly creates and reviews an Interagency State Plan for Transitioning Youth with Disabilities, as well as providing resources and best practices for individuals and their families through targeted workshops and statewide conferences.

To help ensure equal access for special populations, Maryland's local school systems and community colleges:
- Provide career information and related career development and advisement services in order to ensure the selection of appropriate career and technical education programs.

- Assess programs in terms of recruitment, retention, and success.

- Design and implement a comprehensive system of supportive services/intervention techniques for special populations.

- Develop focused needs assessments that target special needs students. Employers identify specific jobs available and essential duties required. Technology is utilized (i.e. simulated workplace).

- Braid funding streams where appropriate with the Division of Rehabilitative Services funds to support high school and postsecondary CTE students.

- Follow the Universal Design for Learning model/format and provide professional learning to high school and postsecondary faculty on Universal Design for Learning.

- Address barriers/challenges that may exist which enable students to participate in after school internships.

- Service childcare needs for single parents. Utilize "County Ride" service or other available resource within the school system or county.
- Educate teachers and faculty regarding availability of easily accessible resources.

v. Coordinate with the State Board to support the local development of career pathways and articulate processes by which career pathways will be developed by local workforce development boards

The Maryland State Board of Education retains the authority as the eligible agency under Perkins V. As such, the Board and State Superintendent of Schools have oversight over the entire CTE system in Maryland. The Board and State Superintendent of Schools establish annual goals for CTE and monitors them on a regular basis. The Assistant State Superintendent responsible for CTE provides ongoing updates and presentations to the State Board and Superintendent of Schools regarding the implementation of goals and actions taken to ensure the continuous improvement of the CTE system.

vi. Support effective and meaningful collaboration between secondary schools, postsecondary institutions, and employers to provide students with experiences in and understanding of all aspects of an industry

Maryland supports CTE collaboration among secondary schools, postsecondary institutions, and employers through a variety of means, beginning with State legislation. The Annotated Code of Maryland, Education Article, Title 21, Section 101 (§ 21-101), requires every county to have an advisory council on CTE. By law, the voting membership of the Local Advisory Council is drawn from business, industry, organized labor, members from each gender, diverse racial and ethnic populations, and members from the geographic regions of the county. Each Local Advisory Council is charged with advising the local county (includes Baltimore City) board of education and each county community college that receive CTE federal funding support, on four areas:

1. distribution of career and technical education funds,
2. county career and technical education program accountability reports,
3. county job needs, and
4. the adequacy of career and technical education programs being offered.

This also occurs on a local programmatic level through Program Advisory Committees. Each local school system and community college is required to have a Program Advisory Committee for every program of study being offered, comprised of local business and industry representatives. Program Advisory Committees perform a similar, but much more focused and occupation-specific function, as the Local Advisory Council. Program Advisory Committee members provide students with an experience in and an understanding of all aspects of an industry through work-based learning experiences/activities; conducting mock interviews and classroom presentations; mentoring students; sponsoring field trips; and assisting with Career and Technical Student Organization competitions and preparation.

MSDE is an integral part in the development, oversight, guidance, and monitoring of Local Advisory Councils. State team members often attend Local Advisory Council meetings; advise CTE directors and community college CTE coordinators on promising practices for developing

and holding impactful meetings; monitor progress through annual improvement plans; and conduct monitoring visits that involve stakeholders from secondary education, postsecondary education, and business and industry.

MSDE is collaborating with the Department of Commerce and Department of Labor to expand youth apprenticeship opportunities in the high schools through a statewide program called Apprenticeship Maryland. The program, targeted to students ages 16 and higher, is designed to lead to sustainable employment and further education based on career pathways in manufacturing and Science, Technology, Engineering, and Mathematics (STEM) occupations. The program provides high school youth with academic and occupational skills leading to both a high school diploma and a State Skill Certificate issued by the Department of Labor noting participation in the program. Eligible employers hire high school juniors and seniors in eligible career track occupations and provide paid compensation, thus creating an "earn and learn" opportunity. Students also receive training in employability skills, interpersonal and social skills, and a general knowledge of all aspects of the industry/occupation.

vii. Improve outcomes and reduce performance gaps for CTE concentrators, including those who are members of special population
It is a priority of the MSDE to provide support aimed at reducing the performance gaps for CTE concentrators, including members of special populations. Disaggregated data analysis is ongoing and assists local school systems and community colleges in making data-informed decisions to improve student performance. Local schools systems and community colleges will be required to conduct a root cause analysis to uncover core causes of student performance problems. Local school systems and community colleges are required to address identified root causes with evidence-based strategies in their CTE local application. Targeted professional learning experiences will be provided to local schools systems and postsecondary institutions by MSDE focusing on effective strategies to improve student performance.

All local school systems have dedicated staff and services to support all students, including special population students. Community colleges have student support services centers and faculty and staff to assist and support students. The team members or individuals meet with students and teachers/faculty regularly to analyze needs and design specific support plans to ensure student success. Services might include academic tutoring, help with financial obligations, or social emotional support.

Every community college has an Early Alert program with the goal of creating a success plan for each student to overcome barriers to college success. The system allows faculty to be proactive, supportive, and involved in facilitating the academic components of student retention through early detection and intervention for students who are experiencing problems, or it allows students to seek out other college resources, e.g., tutoring, career advisement, and testing assistance.

d. Opportunities for secondary students to participate in dual or concurrent enrollment programs, early college high school, or competency-based education
Pathways in Technology Early College High Schools (P-TECH) are innovative early college programs that create clear pathways from high school to college and career for young people

from all academic backgrounds. In six years or less, students graduate with a high school diploma and a no-cost associate's degree. Each P-TECH school works with industry partners and a local community college to ensure an up-to-date curriculum that is academically rigorous and economically relevant. P-TECH also includes one-on-one mentoring, workplace visits and instruction on the skills needed for the industry and paid internships and first-in-line consideration for job openings with a school's partnering companies.

P-TECH schools help students expand their understanding of potential careers and enable them to acquire the skills and experiences they will need to thrive in those careers. P-TECH students are matched with industry mentors and have opportunities to participate in workplace visits and internships. Every P-TECH student will complete a state-approved CTE program of study.

Many secondary CTE programs of study offer the opportunity to students for dual/concurrent enrollment in the postsecondary program. For example, MSDE works with Anne Arundel County Public Schools and Anne Arundel Community College to support their dual enrollment program in Transportation, Logistics and Cargo Security (TLCS). In this program, high school sophomores, juniors, and seniors take college-level courses in TLCS while also completing their normal high school curriculum. The inaugural cohort of ten students graduated with both their high school diplomas and a college-level certificate.

The MSDE leverages Advanced Placement courses in CTE programs of study. Advanced Placement course options exist for CTE programs of study in Computer Science, Engineering, and Business Management and Finance. The College Board cited Maryland as an example on how the state is leveraging Advanced Placement in publication titled, "*Advanced Placement and Career and Technical Education: Working Together.*"

Other opportunities for students to earn early college credit occur where high school teachers are considered adjunct faculty members of the local community college and students are taught the postsecondary course in their high school. The credit counts not only toward the CTE program of study, but also for college credit on an official transcript. One community college offers students proficiency credit. This option provides the opportunity for students to take the college course exam in high school as the CTE program is being completed. If the exam is passed at the appropriate cut score level, high school students are awarded the college credit for that course.

e.   Involvement of parents, academic and career CTE teachers, administrators, faculty, career guidance and academic counselors, local businesses, and others in planning, development, implementation, and evaluation of CTE

Stakeholders representing parents, academic and career CTE teachers, administrators, faculty, career guidance and academic counselors, and local businesses are represented on Program Advisory Committees, Local Advisory Councils, Maryland CTE Advisory Committee, and Governor's Workforce Development Board. Each of these groups meet regularly to inform the planning, development, implementation, and evaluation of CTE at the state and local levels.

Maryland Career and Technical Administrators (MCTA) is the professional organization for CTE administrators in Maryland. Members include CTE directors, principals, assistant principals, and other leaders from local school systems. Meetings are regularly held with MCTA to inform the planning, development, implementation, and evaluation of CTE.

The MSDE holds a biennial Counselors Conference, where school counselors from around the state convene to learn effective practices and discuss CTE. Information from the Counselors Conference is used to inform the planning, development, implementation, and evaluation of CTE.

The MSDE regularly convene CTE teachers for professional learning experiences and to inform the direction of CTE. The MSDE will also meet with the Maryland Parent Teacher Association to inform the planning, development implementation of CTE.

f.   CTE Local application template
Please refer to Appendix C for the Maryland CTE local application template.

g.   CTE Comprehensive local needs assessment template
Please refer to Appendix B for the Maryland CTE comprehensive local needs assessment template.

h.   Definition for size, scope, and quality
Identified below are the definitions for size, scope, and quality. The Division of Career and College Readiness at MSDE will conduct audits of all CTE programs of study at the secondary and postsecondary levels during monitoring visits to collect evidence demonstrating that all requirements for size, scope, and quality are met.

Size Definition
- The local school system or community college offers at least two state-approved CTE programs of study in recognized career clusters.
- All approved programs of study align with the definition of a CTE program of study as a coordinated, non-duplicative sequence of academic and technical content that:
  - Are at least four credits (secondary)
  - Are at least 12 credits (postsecondary)
- Each CTE concentrator course in approved CTE programs of study must have a minimum enrollment of ten concentrators over a four year period. If this requirement is not met, the local school system or community college will provide evidence of continued progress toward increased class size to meet the minimum requirement.
- The local school system or community college have the required number of staff, availability of equipment, and access to facilities to meet requirements detailed by each program of study.

Scope Definition
- Curricula for each program of study is aligned to state-approved industry standards that lead to students earning recognized credentials, certifications, licenses, college credit, or degrees.
- Curricula for each program of study reflect a progression from secondary to postsecondary and community college to bachelor degree programs.
- Curricula for each program of study allow students to learn and demonstrate academic, technical, and employability skills.

- Curricula for each program of study demonstrate a continuum of learning that allows students to progress in a career field.
- Curricula for each program of study include differentiated supports and modifications to meet the needs of diverse learners.
- Each CTE student in each program of study has a written career and academic plan in place that includes:
  - the required courses to complete their CTE program of study;
  - the required courses to graduate;
  - the required assessments to earn a certification, license, credential, or degree in the CTE program;
  - the required academic assessments to graduate; and
  - the timeline to take courses, assessments, and complete work-based learning experiences.
- All students, regardless of race, color, national origin, sex, or disability, have equitable access to high-quality CTE programs as required by Code of Maryland Regulation 13A.04.02.04.
- Approved programs of study are guided by Local Advisory Councils and Program Advisory Committees according to the *Career and Technical Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures COMAR EA Title 21.Sec.101*.
- All CTE secondary programs of study adhere to CTE Development Standards which are required by Code of Maryland Regulations 13A.04.02.01 (local school systems only).

Quality Definition

- The local school system or community college achieves or consistently makes progress towards local targets established for state and federal core indicators of performance.
- CTE programs of study are delivered by teachers who meet state requirements to teach their content at the secondary level (local school systems only).
- CTE programs of study are delivered by teachers who earned a minimum of effective on their teacher evaluation as defined by Code of Maryland Regulation 13A.07.09 within three years (local school systems only).
- CTE programs of study are delivered by faculty who meet the requirements of the institution's or programmatic accrediting body (if applicable), and the college accrediting body (community colleges only).
- Each CTE program of study meets all the requirements of the MSDE evaluation criteria found in the Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study.
- For each CTE program of study, the local school system provides all students, including students in special populations, the opportunity to:
  - Participate in at least one work-based learning experience (internship, job shadow, apprenticeship, etc.);
  - Earn college credit and/or industry credentials; and
  - Participate in Career and Technical Student Organizations.
- Professional learning opportunities, informed by data, are provided for administrators, teachers, faculty, counselors and support personnel to improve student learning

outcomes. All secondary professional learning must be guided by the Maryland-endorsed National Learning Standards.

- The local school system or community college meets local and state annual data-reporting requirements and conducts reviews of all annual Program Quality Index reports to inform program improvement.
- Human resources is included in the recruitment process to ensure a diverse CTE teacher and faculty member candidate pool.
- Metrics are used to ensure that CTE teacher and faculty member recruitment strategies are successful.
- Teacher retention rates are reviewed annually, for the most recent 3 years, to understand the top three contributing factors to CTE teacher and faculty member turnover.

3. Meeting the Needs of Special Populations

Statutory Requirements: Meeting the Needs of Special Populations
a. Describe the eligible agency's program strategies for special populations, including a description of how individuals who are members of special populations—

- will be provided with equal access to activities assisted under this Act;
- will not be discriminated against on the basis of status as a member of a special population;
- will be provided with programs designed to enable individuals who are members of special populations to meet or exceed State determined levels of performance described in section 113, and prepare special populations for further learning and for high-skill, high-wage, or in-demand industry sectors or occupations;
- will be provided with appropriate accommodations; and
- will be provided instruction and work-based learning opportunities in integrated settings that support competitive, integrated employment. (Section 122(d)(9) of Perkins V)

i.   Describe strategies for special populations, including a description of how individuals who are members of special populations will be provided with equal access to activities

Maryland has demonstrated a long-standing commitment to equity and ensuring that members of special populations are provided equal access to programs. Each year the MSDE conducts a minimum of two Methods of Administration (MOA) Office of Civil Rights (OCR) compliance reviews. The purpose of the MOA OCR Compliance Review are to ensure that community colleges and local school systems are providing equal access to CTE through enforcement of civil rights in compliance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Vocational Rehabilitation Act of 1973, and Title II of The Americans with Disabilities Act (ADA). In addition to conducting a minimum of two local MOA OCR On-Site Compliance Reviews each year, MSDE provides ongoing technical assistance to local school system and community college staff members on equitable pracitces.

Maryland has an Interagency Agreement among nine state agencies/entities to assure interagency coordination occurs for students with disabilities. The work described in the agreement is ongoing and a function of the Interagency Transition Council for Youth with Disabilities (IATC). A MSDE CTE staff member serves as a representative on the IATC. The member list can be found at https://msa.maryland.gov/msa/mdmanual/26excom/html/12disco.html. The IATC is a partnership of State and local government agencies, educators, family members and advocates. The IATC's purpose is to help improve the policies and practices that affect Maryland students with disabilities preparing to transition from high school to adult services, college, employment, and independent living. The group meets at least four times a year and regularly creates and reviews an Interagency State Plan for Transitioning Youth with

Disabilities, as well as providing resources and best practices for individuals and their families through targeted workshops and statewide conferences.

MSDE CTE team members work closely with the Division of Early Intervention and Special Education Services to provide guidance to local school systems on ensuring equal access to approved CTE programs of study. A MSDE staff member serves on the State Agencies' Transition Collaborative of Maryland (SATCM) leadership group. The overall goal of the Transition Collaborative of Maryland is to improve the state level coordination of transition services to increase outcomes for students and youth with disabilities in Maryland. Part of this partnership includes Maryland's Transition Coordinator attending CTE Local Directors Meetings at least once a year, and a CTE representative attending regional Transition Advisors' Meetings with the purpose of sharing updates, promising practices and ensuring that Transition Advisors have the information to assist with appropriate placements of students with disabilities in CTE. Topics focusing on access and equity are presented at quarterly CTE Local Directors Meetings, for example, in-depth sessions on equity were presented at all four meetings in 2018. Equity will continue to be a focus of professional development under Perkins V.

CTE team members collaborate with MSDE's Specialist for English Learners (EL) to ensure that school systems receive effective, research-based professional learning on improving their CTE marketing, recruitment and retention strategies for EL students. CTE staff at local school systems collaborate with their respective EL specialists for additional activities to promote the academic achievement, skills attainment, and family involvement of EL students participating in CTE.

CTE staff also work with MSDE's Pupil Personnel and School Social Worker Specialist to collaborate on strategies for better recruiting and supporting students who are homeless or are in, or about to age out of, the foster care system. Social Workers and Pupil Personnel Workers in the local school systems provide information and assistance to CTE directors to help the school systems better serve students who are members of these special populations.

In December 2018, Maryland joined the National Alliance for Partnerships in Equity (NAPE). NAPE's mission is to build educators' capacity to implement effective solutions for increasing student access, educational equity and workforce diversity. An orientation meeting was held in January 2019 that provided CTE staff with information on how to best utilize NAPE's resources at state and local levels: Toolkits, Online Courses, Professional Development and Conferences. These resources will continue to be disseminated throughout the implementation of Perkins V through ongoing professional development and peer-to-peer sharing.

MSDE assists eligible recipients in developing programs of study aligned with industry standards, practices, and career development strategies to improve CTE for all students, including those who are members of special populations. Leadership, coordination, and expertise are provided at the state level through aligning career clusters with CTE programs of study, and providing ongoing statewide sustained professional development to assist recipients in using data to determine program effectiveness and student success. Disaggregated data analysis is used to identify successful secondary and postsecondary programs and programs requiring improvement in order to assure equal access and success for members of special populations in

quality CTE programs. Data-driven decision-making guides program development and evaluation.

The workforce system has a strong, enduring relationship with its CTE schools and community colleges across the State. Many CTE administrators sit on local workforce development boards and are actively engaged with businesses and workforce providers to facilitate the improvement of high school programs in order to meet industry needs. Representatives from the Governor's Workforce Development Board and the Department of Labor's Division of Workforce Development and Adult Learning meet with MSDE and other key stakeholders to ensure ongoing alignment of Maryland's CTE system with in-demand careers. The group is committed to promoting CTE programs of study as an avenue to college and career readiness for all students, including students who are members of special populations.

The implementation of Workforce Innovation and Opportunity Act (WIOA) increased the focus on outcomes of individuals involved in postsecondary education and expectations that workforce programs, including Vocational Rehabilitation, will utilize community colleges to prepare individuals for employment within the local labor market. Community colleges continue to remain a major component of Maryland's workforce development system, as well as a primary training provider to Division of Rehabilitation Services' clients for both credit and non-credit instruction leading to workforce certificate training. Maryland is committed to serving all populations as evidenced in Maryland's WIOA State Plan.

The MSDE supports local school systems and community colleges to:
1. Develop targeted information and recruitment plans for the special populations groups beginning in the fifth grade through postsecondary education for all CTE programs, including those that lead to further learning and entrance into high-skill, high-wage, or in-demand industry sectors or occupations.

2. Inform students about CTE programs in the elementary school through open houses, tours, job shadowing, social media, and/or exploratory programs and experiences.

3. Provide professional development related to the needs of special populations to district personnel, administrative personnel, school counselors, teachers, social workers, pupil personnel workers and school psychologists in effective and promising practices for working with and supporting the unique needs of special populations.

4. Beginning in the fifth grade, inform parents and students about resources available in middle school, high school and college.

5. Work with other agencies and groups to provide support for students who are members of special populations.

6. Develop targeted information and recruitment plans for all special populations students enrolled in CTE programs to participate in student organizations including Future Business Leaders of America, FFA, and SkillsUSA.

7. Identify and collaborate with other agencies and departments in order to leverage additional funding sources such as Title IV A to ensure students have equal access to all CTE activities within and outside of schools.

ii. Describe the eligible agency's program strategies for special populations, including a description of how individuals who are members of special populations will not be discriminated against on the basis of status as a member of a special population

MSDE provides guidance to local school systems and community college to ensure that members of special populations are not discriminated against. Guidance includes strategies on how to:

1. Eliminate barriers to enrollment in CTE programs. MSDE's Technical Assistance Bulletin provides guidance on acceptable recruitment practices and oversubscription enrollment policies to ensure the policies are non-discriminatory and consistent with applicable federal laws that guarantee civil rights, including obligations imposed under the Individuals with Disabilities Act (IDEA) or section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794).In cases where admissions requirements have been determined to be essential for student success in specific programs of study, they fully comply with the guidance found in the Maryland Technical Assistance Bulletin.

2. Develop recruitment and enrollment methods that provide information and access to all students, including special populations. A *Request for Enrollment* template was created to ensure school systems are compliant with the guidance provided in the Technical Assistance Bulletin.

3. Use state level tools, such as MSDE's *Social Media- How To Guide,* to help identify, recruit, and retain non-traditional students in CTE programs.

4. Develop, identify, and implement models of effective collaborative relationships among schools, colleges, parents and other stakeholders for the development, implementation and evaluation of CTE programs.

5. Disaggregate and analyze data to ensure that students who are members of special populations have equitable access and success in all CTE programs.

iii. Describe the eligible agency's program strategies for special populations, including a description of how individuals who are members of special populations will be provided with programs designed to enable individuals who are members of special populations to meet or exceed Sate determined levels of performance and prepare special populations for further learning and for high-skill, high-wage, and in-demand careers

Under Perkins V, Maryland's local school systems and community colleges will continue to:

1. Actively recruit, enroll, and retain special populations in CTE programs of study.

2. Provide targeted professional learning, including topics such as Universal Design for Learning, to CTE teachers, school counseling staff, and administrative personnel in effective practices for working with and supporting special populations.

3. Provide special population students enrolled in CTE programs with all appropriate learning supports to enable them to maximize their learning and achievement. All school systems comply with the Individuals with Disabilities Education Act (IDEA), the federal law that requires schools to serve the educational needs of eligible students with disabilities with a free appropriate public education (FAPE). All community colleges comply with the Americans with Disabilities Act (ADA), the federal law that requires public and private colleges to provide equal access to postsecondary education for students with disabilities.

4. Ensure that special population students are provided with the testing accommodations

that they require and for which they qualify. MSDE created the publication *Tool Kit to Determine Students' College and Career Ready Design under the College and Career Readiness and Completion Act of 2013* that identifies accommodations for CTE assessments.

5. Inform postsecondary special populations of the vital importance of self-reporting their special needs to the appropriate office/division of their college. This information must be provided to all new students as part of the admissions/orientation process to ensure that allowable services are available.

6. Provide special population students with personalized and supportive placement/transition services as they exit CTE in high school and transition to further education and/or a career.

iv. Describe the eligible agency's program strategies for special populations, including a description of how individuals who are members of special populations will be provided with appropriate accommodations

Maryland local school systems and community colleges will continue to:

1. Ensure that parents of all middle school students with an Individualized Education Program (IEP) or a 504 Plan transitioning to high school are prepared to request that middle schools provide the IEP or 504 information to receiving high schools well in advance of the start of the ninth grade.

2. Provide special population students enrolled in CTE programs with all appropriate accommodations/learning supports under their IEP/504 Plans to enable them to maximize their learning and achievement in the least restrictive and most integrated setting possible.

3. Ensure that all CTE instructors have access to students' IEP/504 Plans and other accommodation information that will assist them as they teach students who are members of special populations.

4. Ensure and verify that accommodations extend to technical skill assessments as well as the work-based learning component of students' CTE programs.

5. Clearly inform postsecondary special populations of the importance of self-reporting their special needs to the appropriate office/division of their college. This information should initially be provided to all new students as part of the admissions/orientation process.

v. Describe the eligible agency's program strategies for special populations, including a description of how individuals who are members of special populations will be provided instruction and work-based learning opportunities in integrated settings that support competitive, integrated employment

Maryland's local school systems and community colleges will continue to:

1. Ensure that special population CTE students are integrated into the general CTE student population.

2. Ensure that CTE academic and learning requirements and expectations are applied equally to all students, including special populations. The appropriate learning supports and accommodations must be provided for those who qualify.

3. Ensure that the expectations and requirements for work-based learning opportunities remain the same for all secondary and postsecondary students. Work-based learning coordinators, along with other school system/college staff responsible for the oversight

and coordination of work-based learning, shall monitor and verify the rigor and expectations of all placements. Students participating in work-based learning opportunities must also meet the technical, performance, academic, and competency standards as prescribed by their program.

4. Preparing Teachers and Faculty

> Statutory Requirement: Preparing Teachers and Faculty
> a. Describe how the eligible agency will support the recruitment and preparation of teachers, including special education teachers, faculty, school principals, administrators, specialized instructional support personnel, and paraprofessionals to provide career and technical education instruction, leadership, and support, including professional development that provides the knowledge and skills needed to work with and improve instruction for special populations. (Section 122(d)(6) of Perkins V)

The MSDE implements a comprehensive strategy to recruit and prepare CTE educators and leaders.

Recruitment of CTE Educators
Recruitment of CTE teachers begins in high school through the Teacher Academy of Maryland CTE program of study. The Teacher Academy of Maryland program prepares high school students for the teaching profession with a focus on filling critical teacher shortage areas such as CTE. Students in the Teacher Academy of Maryland have the opportunity to earn scholarships to pursue an education degree at a Maryland University and signing bonuses for teaching in Maryland schools.

The MSDE provides several options to support career changers to enter the teaching field, especially to fill critical shortage areas such as CTE. Examples include:
- Troops to Teachers - Assists military personnel in making successful transitions to new careers in teaching.
- Resident Teacher Program - Recruits recent college graduates and career changers who possess academic content backgrounds into the teaching field.
- Scholarships Programs – Provides financial support to assist individuals interested in becoming teachers in specific areas of shortage. Scholarships are available through the Maryland Higher Education Commission.

The MSDE has revised teaching certification requirements to attract individuals with highly-specialized skill sets to enter the teacher field and to minimize the barriers to earning a certificate to teach. A Professional and Technical Education certification was developed to support career changers to become CTE teachers. An Adjunct certification was developed for individuals with highly specialized content expertise (engineers, physicists, medical providers, etc.) interested in teaching on a part-time basis in the classroom. The revised certification requirements will allow for additional CTE teachers to facilitate instruction in Maryland's public schools.

The MSDE will partner with local school systems on recruiting efforts and launch a campaign to encourage pursuing a career as a CTE teacher.

Preparation of CTE educators
Code of Maryland 13A.07.01 requires all teachers new to the profession to participate in induction activities until they receive tenure. First-year teachers must be provided a reduction in the teaching schedule and responsibilities for involvement in non-instructional activities other than induction support. Local school systems are also required to assign a mentor to new teachers. The MSDE will support the preparation of CTE teachers through the induction program and provide targeted professional learning experiences for CTE teachers. Professional learning experiences will focus on:
1. diagnosing and responding to student learning needs;
2. differentiating instruction;
3. engaging diverse learners;
4. using data to inform instruction;
5. implementing effective formative assessments to monitor student learning; and
6. implementing CTE curricula with fidelity.

Outcomes of the CTE Comprehensive Needs Assessment will be used to inform additional professional learning experiences.

Targeted professional learning experiences will be provided to current and future school leaders on how to support CTE teachers. The MSDE implements statewide leadership training through the Promising Principals' Academy and Leading for School Improvement Institute. The leadership trainings are yearlong professional learning experiences supported with on-site coaching and in-person convenings designed to build the capacity of school leaders. Specific training sessions for the CTE leader will be incorporated into statewide trainings.

All professional learning experiences for teachers and school leaders will be done in collaboration with the Office of Professional Learning and Office of Leadership Development and School Improvement at MSDE who oversees Title II funding. This will allow the state to align and leverage funding and resources to maximize support to local school systems. All professional learning experiences will have a focus on addressing the needs of special population students. As a result, the Division of Early Intervention and Special Education Services will participate in the planning of professional learning experiences.

The MSDE holds a biennial Counselors Conference, where school counselors from around the state convene to learn effective practices to recruit and retain students, with a focus on special population students, in CTE programs of study. The Counselors Conference is collaboratively planned with representatives from local school systems, community colleges, and the Office of Student Services and School Counseling at MSDE.

The MSDE will collaborate with the Maryland Higher Education Commission to identify and develop support for CTE faculty at postsecondary institutions based on outcomes of the CTE Comprehensive Needs Assessment.

C. Fiscal Responsibility

Statutory Requirement: Fiscal Responsibility

1. Describe the criteria and process for how the eligible agency will approve eligible recipients for funds under this Act, including how—
   a. each eligible recipient will promote academic achievement;
   b. each eligible recipient will promote skill attainment, including skill attainment that leads to a recognized postsecondary credential; and
   c. each eligible recipient will ensure the local needs assessment under section 134 takes into consideration local economic and education needs, including, where appropriate, in-demand industry sectors and occupations. (Section 122(d)(5) of Perkins V)
2. Describe how funds received by the eligible agency through the allotment made under section 111 of the Act will be distributed—
   a. among career and technical education at the secondary level, or career and technical education at the postsecondary and adult level, or both, including how such distribution will most effectively provide students with the skills needed to succeed in the workplace; and
   b. among any consortia that may be formed among secondary schools and eligible institutions, and how funds will be distributed among the members of the consortia, including the rationale for such distribution and how it will most effectively provide students with the skills needed to succeed in the workplace. (Section 122(d)(8) of Perkins V)
3. For the upcoming program year, provide the specific dollar allocations made available by the eligible agency for career and technical education programs and programs of study under section 131(a)-(e) of the Act and describe how these allocations are distributed to local educational agencies, areas career and technical education schools and educational service agencies within the State. (Section 131(g) of Perkins V)
4. For the upcoming program year, provide the specific dollar allocations made available by the eligible agency for career and technical education programs and programs of study under section 132(a) of the Act and describe how these allocations are distributed to eligible institutions and consortia of eligible institutions within the State.
5. Describe how the eligible agency will adjust the data used to make the allocations to reflect any changes in school district boundaries that may have occurred since the population and/or enrollment data was collected, and include local education agencies without geographical boundaries, such as charter schools and secondary schools funded by the Bureau of Indian Education. (Section 131(a)(3) of Perkins V)
6. If the eligible agency will submit an application for a waiver to the secondary allocation formula described in section 131(a)—
   a. include a proposal for such an alternative formula; and
   b. describe how the waiver demonstrates that a proposed alternative formula more effectively targets funds on the basis of poverty (as defined by the Office of Management and Budget and revised annually in accordance with section 673(2) of the Community Services Block Grant Act (42 U.S.C. 9902(2)) to local educational agencies with the State. (Section 131(b) of Perkins V)

Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).

7. If the eligible agency will submit an application for a waiver to the postsecondary allocation formula described in section 132(a)—
   a. include a proposal for such an alternative formula; and
   b. describe how the formula does not result in a distribution of funds to the eligible institutions or consortia with the State that have the highest numbers of economically disadvantaged individuals and that an alternative formula will result in such a distribution. (Section 132(b) of Perkins V)

Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).

8. Provide the State's fiscal effort per student, or aggregate expenditures for the State, that will establish the baseline for the Secretary's annual determination on whether the State has maintained its fiscal effort, and indicate whether the baseline is a continuing level or new level. If the baseline is new, please provide the fiscal effort per student, or aggregate expenditures for the State, for the preceding fiscal year. (Section 211(b)(1)(D) of Perkins V)

1. Criteria and process for approval of eligible recipient's funds

Local school systems and community colleges must complete the [CTE Comprehensive Needs Assessment](#) and [Local Application](#). The local application must address needs identified in the needs assessment. Funds are released after the MSDE reviews and approves local applications. The MSDE provides guidance through regional technical assistance and one-on-one meetings to support the completion and submission of approvable applications. Technical assistance is provided to support local recipients in understanding the content that must be included in the application and the level to which questions, data, and other criteria must be addressed in order to receive approval.

Maryland's process for local application approval begins with CTE Regional Technical Assistance meetings. The meetings are held in various parts of the state. At these meetings, local recipients are provided with Program Quality Index and Local Program Accountability Report data for their specific school system or community college. Information is shared regarding Perkins V and the local application is reviewed section by section providing local recipients with the specific information that is needed to respond to each question. All local applications must include an analysis of Program Quality Index, Local Program Accountability Report data, and local data. Local recipients must address any Core Indicators of Performance not meeting the 90% threshold and prepare an improvement plan. After the CTE Regional Meetings, the CTE Career Programs and Grants Specialists provide intense one-on-one technical assistance to local recipients regarding any clarifications or questions they may have about the local application.

Local applications and improvement plans (if required) must be received by the due date determined by MSDE. All local applications are read by a team of reviewers. Feedback is provided to local recipients and a time frame is given for making any requested changes or edits that are needed in order to make the local application approvable. Typically, the due date is mid-May with all feedback being provided to local recipients by the end of June. All revisions/edits must be submitted by July 31st in order for spending authority to be granted as of July 1.

a. Describe the criteria and process for how the eligible agency will approve eligible recipients for funds including how each eligible recipient will promote academic achievement

At the secondary level, the MSDE will use the State's academic standards to determine proficiency for CTE concentrators. At the postsecondary level, the percentage of CTE concentrators who have earned a recognized postsecondary credentials will be used to determine proficiency. Local school systems and community colleges will be allowed to use funds to provide targeted academic support to CTE students. A clear description and evidence of effectiveness of identified support will be required in the local application.

b. Describe the criteria and process for how the eligible agency will approve eligible recipients for funds including how each eligible recipient promote skill attainment, including recognized postsecondary credentials

Local school systems and community colleges can use Perkins funds to promote skill attainment, including recognized postsecondary credentials. This includes covering the costs for tutoring, assessment fees, and other supports needed to earn credentials. CTE students must be provided

equal access to take advantage of opportunities provided through Perkins funds. However, if funds are not sufficient for all students to participate, local recipients may elect to provide monetary support to cover the cost of industry-recognized credentials only to members of special populations.

c. Describe the criteria and process for how the eligible agency will approve eligible recipients for funds including how each eligible recipient will ensure local needs assessment take into consideration local economic and education needs and where appropriate, in-demand industry sectors and occupations

The MSDE developed, in collaboration with stakeholders, a CTE Comprehensive Local Needs Assessments. The needs assessments requires local school systems and community colleges review the local economic, education, and occupational needs of their entity and region. Local school systems and community colleges must address identified needs in the local application for Perkins funding.

2. Describe how funds received by the eligible agency will be distributed

a. Among career and technical education at the secondary level, or career and technical education at the postsecondary and adult level, or both, including how such distribution will most effectively provide students with the skills needed to succeed in the workplace

Maryland will retain the current allocation of formula dollars between secondary and postsecondary local recipients, which includes 65% to eligible secondary recipients and 35% to eligible postsecondary recipients. The formula dollars in Maryland go to eligible secondary school systems and eligible community colleges. Maryland is not a state that has consortia or area technical schools that cross school district lines. Adult education is not funded under CTE in Maryland.

The formula funds will be allocated according to the requirements of the Perkins V Act. The following will be used to determine formula allocations for secondary local recipients and postsecondary local recipients.

Secondary recipients shall receive an allocation as follows:
- *Thirty percent* shall be allocated to local school systems in proportion to the number of individuals aged 5 through 17, inclusive, who reside in the school district served by local school system for the preceding fiscal year compared to the total number of individuals who reside in the school districts served by all local education agencies in the State for such preceding fiscal year, as determined on the basis of the most recent satisfactory –(A) data provided to the Secretary by the Bureau of the Census for the purpose of determining eligibility under title I of the Elementary and Secondary Education Act of 1965; or (B) student membership data collected by the National Center for Education Statistics through the Common Core of Data survey system.

- *Seventy percent* shall be allocated to such local school systems in proportion to the number of individuals aged 5 through 17, inclusive who reside in the school district served by local school system and are from families below the poverty level for the preceding fiscal year, as determined on the basis of the most recent satisfactory data used

under section 1124(c)(1)(A) of the Elementary and Secondary Education Act of 1965, compared to the total number of individuals who reside in the school districts served by all the local education agencies in the State for such preceding fiscal year.

Adjustments – Maryland, in making the allocations as previously stated, shall adjust the data used to make the allocations to (A) reflect any change in local school system boundaries that may have occurred since the data were collected; and (B) include local education agencies without geographical boundaries, such as charter schools and secondary schools funded by the Bureau of Indian Education. NOTE: Maryland's charter schools, under State statute are considered part of a local school system and not a separate entity. Maryland does not have any secondary schools funded by the Bureau of Indian Education. Nor does Maryland have any Area Career and Technical Education Schools.

Maryland will not request, nor is currently under a waiver for, a more equitable distribution for secondary recipients. No local school system shall receive an allocation of formula funds unless the amount to the local school system is greater than $15,000. Local school systems may enter into a consortium with other local school systems for purposes of meeting the minimum allocation, any amounts that are not allocated by this reason shall be redistributed to local school systems that meet the requirements in accordance with the provisions outlined in the Perkins V Act as referenced in Section 131.

Maryland will provide a waiver to local school systems not meeting the $15,000 minimum amount if the slocal school system is located in a rural, sparsely populated area as defined by the Maryland Office of Planning and in accordance with Section 131(c)(2)(A)(i).

Postsecondary recipients, or consortium of eligible institutions, shall receive funding allocation based upon the formula of the number of audited Federal Pell Grant recipients and recipients of assistance from the Bureau of Indian Affairs enrolled in programs meeting the requirements of section 135 offered by the postsecondary institution or consortium of eligible institutions in the preceding fiscal year to the sum of the number of such audited Federal Pell Grant recipients and recipients of assistance from the Bureau of Indian Affairs enrolled in such programs within the State for such year.

Maryland will not request, nor is currently under a waiver for, a more equitable distribution for postsecondary recipients. No postsecondary institution or consortium of eligible institutions shall receive an allocation of formula funds unless the amount to such postsecondary institution or consortium of eligible institutions is $50,000 or more; funds awarded to consortia must follow the provisions explained in Section 132(a)(3) of the Perkins V Act; any amounts that are not distributed by this reason shall be redistributed to postsecondary institutions or consortium of eligible institutions in accordance with the provisions outlined in the Perkins V Act as referenced in Section 132.

These funds will provide students the opportunity to gain skills needed to succeed in the workplace. The use of funds will be informed by analysis of state and local data, state and local needs, and input from Local Advisory Councils and Program Advisory Committees to:

- improve CTE programs of study.
- develop state CTE programs that meet current and emerging career fields based upon labor market data (current careers) and labor market projections (emerging careers) including statewide articulation agreements for such programs.
- equip classrooms and CTE laboratories with industry standard equipment and updated technology modeling the workplace.
- provide professional learning for CTE instructors and faculty.
- assist in marketing to recruit members of special populations to enroll, concentrate and complete CTE programs, especially in career fields non-traditional for their gender, assist with the recruitment of CTE teachers.
- cover the assessment fees for industry-recognized credentials for students, including members of special populations.
- provide tutoring and other supports for members of special populations.
- support individuals in state institutions in CTE programs at both state correctional institutions as well as juvenile justice facilities.
- provide technical assistance to local recipients, and other activities that are deemed beneficial to assist students with skill development for success in careers and further learning.

b. Among any consortia that may be formed among secondary schools and eligible institutions, and how funds will be distributed among the members of the consortia, including the rationale for such distribution and how it will most effectively provide students with the skills needed to succeed in the workplace

Local school systems in Maryland have never formed a consortia, either among school systems, between school systems and eligible postsecondary institutions, or among community colleges. The rationale behind this has been that all local school systems meet the minimum grant award amount. Among the 16 community colleges in Maryland, two are not eligible for formula dollars. One college has a limited number of CTE programs of study, being mostly a transfer college. The other college is a very small community college with limited Federal Pell recipients. It is unlikely that these two community colleges will form a consortium as they are not located in close proximity to each other. One is in a rural area and the other in an urban area with several hours of travel between them. If a consortium is formed, Maryland will amend its State Plan to include how funds would be distributed among members of the consortia, including the rationale for such distribution and how it will most effectively provide students access to CTE programs leading to the skills needed to succeed in the workplace.

3. Provide the specific dollar allocations and how these allocations are distributed to eligible secondary recipients

The following distribution will be made to secondary recipients. In Maryland, all 24 school systems meet the requirements in the Act to be eligible to receive the federal funds.

Maryland allocates the 85% formula dollars as follows:
- 5% of the 85% are targeted for the competitive CTE Reserve Fund.
- Of the remaining balance of formula dollars, 65% is distributed to secondary eligible recipients and 35% to eligible postsecondary recipients.

The allocation is listed below:

Local School System	Allocation
Allegany County Public Schools	$143,932
Anne Arundel County Public Schools	$673,486
Baltimore City Public Schools	$1,747,304
Baltimore County Public Schools	$1,110,948
Calvert County Public Schools	$108,549
Caroline County Public Schools	$78,256
Carroll County Public Schools	$159,126
Cecil County Public Schools	$177,241
Charles County Public Schools	$238,485
Dorchester County Public Schools	$89,303
Frederick County Public Schools	$307,256
Garrett County Public Schools	$53,856
Harford County Public Schools	$318,610
Howard County Public Schools	$384,550
Kent County Public Schools	$32,633
Montgomery County Public Schools	$1,454,077
Prince George's County Public Schools	$1,340,295
Queen Anne's County Public Schools	$62,766
Somerset County Public Schools	$67,006
St. Mary's County Public Schools	$194,488
Talbot County Public Schools	$56,338
Washington County Public Schools	$301,273
Wicomico County Public Schools	$239,319
Worcester County Public Schools	$83,051

4. Provide the specific dollar allocations and how these allocations are distributed to eligible postsecondary recipients

The following distribution will be made to postsecondary recipients. In Maryland, 14 of 16 community colleges meet the requirements in the Act to be eligible to receive the federal funds. For the two that are not eligible because they do not meet the minimum threshold amount, Maryland does not distribute these potential allocations during that program year. Should the two ineligible community colleges join in or form a consortia during the year that these funds are available, Maryland would need to have these funds to distribute to them. If no consortia is joined or formed, these funds are included in the next program year's distribution to all eligible postsecondary recipients.

Maryland allocates the 85% formula dollars as follows:
- 5% of the 85% are targeted for the competitive CTE Reserve Fund.
- Of the remaining balance of formula dollars, 35% is distributed to postsecondary eligible recipients and 65% to eligible secondary recipients.

Community College	Allocation
Allegany College of Maryland	$231,043
Anne Arundel Community College	$371,563
Baltimore City Community College	$237,358
Community College of Baltimore County	$1,305,207
Carroll Community College	$37,893*
Cecil Community College	$102,890
Chesapeake College	$125,784
College of Southern Maryland	$153,941
Frederick Community College	$76,312
Garrett College	$21,578*
Hagerstown Community College	$195,518
Harford Community College	$206,044
Howard Community College	$503,136
Montgomery College	$425,771
Prince George's Community College	$809,702
Wor-Wic Community College	$269,725

*Figures in red indicate minimum allocation required in the Perkins V was not met. No Perkins formula funds can be awarded.

5. Describe how any adjustments to the data used for allocations will reflect any changes to reflect changes in school district boundaries

If local school system boundaries are changed in Maryland, adjustments will be made. This is highly unlikely because in Maryland, local school systems are determined for every county and Baltimore City, resulting in 24 secondary entities. There are no schools that are regional or shared with any other school system. All schools reside within their own school system.

6. If the eligible agency submits an application for a waiver to the secondary allocation formula include a proposal for such an alternative formula and describe how the waiver demonstrates that the proposed alternative formula more effectively targets funds on the basis of poverty

Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV)

Maryland is not submitting an application for a waiver to the secondary allocation formula nor does it currently have a waiver request from any of its eligible agencies.

7. If the eligible agency will submit an application for a waiver to the postsecondary allocation formula include a proposal for such an alternative formula and describe how the formula does not result in a distribution of funds to the to the highest numbers of economically disadvantaged individuals and that an alternative formula will result in such a distribution.

Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV)

Maryland is not submitting an application for a waiver to the postsecondary allocation formula nor does it currently have a waiver request from any of its eligible agencies.

8. If the eligible agency will award reserve funds to eligible recipients under section 112(c) of Perkins V, describe the process and criteria for awarding those funds.

Reserve Fund Grants are awarded on a competitive basis to school systems and community colleges meeting at least one eligibility requirement, which are:
- is located in a rural area;
- has a high percentage of career and technical education completers; or
- has a high number of career and technical education students.

Reserve fund grants are used support the implementation or enhancement of CTE programs of study, prepare students for careers, improve career and technical student organizations, or provide professional learning experiences to CTE educators, administrators, counselors, or faculty.

9. Provide the State's fiscal effort per student, or aggregate expenditures for the State, that will establish the baseline for the Secretary's annual determination on whether the State has maintained its fiscal effort, and indicate whether the baseline is a continuing level or new level. If the baseline is new, please provide the fiscal effort per student, or aggregate expenditures for the State, for the preceding fiscal year.

Maryland requested to establish a new baseline for the State's maintenance of effort in its Transition Year State Plan. Maryland's current maintenance of effort is based on aggregate expenditures. In the State Combined Annual Report (CAR) which will be as submitted in December 2019, the maintenance of effort listed for the state under non-federal share of expenditures (Column H) will be 95% of the previous fiscal year effort. Under Perkins V, states can request to readjust the current maintenance of effort to 95%. Maryland will readjust its maintenance of effort to 95% of the current fiscal year effort stated in the December 2019 CAR.

D. Accountability for Results

Statutory Requirements: Accountability for Results

1. Identify and include at least one (1) of the following indicators of career and technical education program quality—
   a. the percentage of CTE concentrators (see Text Box 6 for the statutory definition of a CTE concentrator under section 3(12) of Perkins V) graduating from high school having attained a recognized postsecondary credential;
   b. the percentage of CTE concentrators graduating high school having attained postsecondary credits in relevant career and technical education programs and programs of study earned through a dual or concurrent enrollment program or another credit transfer agreement; and/or
   c. the percentage of CTE concentrators graduating from high school having participated in work-based learning. (Section 113(b)(2)(A)(iv)(I) of Perkins V)

Include any other measure(s) of student success in career and technical education that are statewide, valid, and reliable, and comparable across the State. (Section 113(b)(2)(A)(iv)(II) of Perkins V) Please note that inclusion of "other" program quality measure(s) is optional for States.

Provide the eligible agency's measurement definition with a numerator and denominator for each of the quality indicator(s) the eligible agency selects to use.

2. Provide on the form in Section V.B, for each year covered by the State plan beginning in FY 2020, State determined performance levels or each of the secondary and postsecondary core indicators, with the levels of performance being the same for all CTE concentrators in the State. (Section 113(b)(3)(A)(i)(I) of Perkins V)
3. Describe the procedure the eligible agency adopted for determining State determined levels of performance described in section 113 of Perkins V, which at a minimum shall include—
   a. description of the process for public comment under section 113(b)(3)(B) of Perkins V as part of the development of the State determined levels of performance (see Text Box 7 for the statutory requirements for consultation on State determined performance levels under section 113(b)(3)(B) of Perkins V);
   b. explanation for the State determined levels of performance that meet each of the statutory requirements in Text Box 8; and
   c. description of how the State determined levels of performance set by the eligible agency align with the levels, goals and objectives other Federal and State laws, (Section 122(d)(10) of Perkins V).

As part of the procedures for determining State determined levels of performance, describe the process that will be used to establish a baseline for those levels.

4. Provide a written response to the comments regarding State determined performance levels received during the public comment period pursuant to section 113(b)(3)(B) of Perkins V. (Section 113(b)(3)(B)(iii) of Perkins V). As part of the written response, include a description of any the changes made to the State determined performance levels as a result of stakeholder feedback.
5. Describe how the eligible agency will address disparities or gaps in performance as described in section 113(b)(3)(C)(ii)(II) of Perkins V in each of the plan years, and if no meaningful progress has been achieved prior to the third program year, a description of the additional actions the eligible agency will take to eliminate these disparities or gaps. (Section 122(d)(11) of Perkins V)

   As part of the written response, and pursuant to the Report of the Senate Committee on Health, Education, Labor, and Pensions (HELP),8 the eligible agency could indicate that it will analyze data on the core indicators of performance to identify gaps in performance, explain how they will use evidence-based research to develop a plan to provide support and technical assistance to eligible recipients to address and close such gaps, and how they will implement this plan. The eligible agency is not required to submit a new State plan prior to the third program year in order to address this requirement.

1. Identify and include at least one (1) of the following indicators of career and technical education program quality:
    a. the percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential
    b. the percentage of CTE concentrators graduating high school having attained postsecondary credits in relevant career and technical education programs and programs of study earned through a dual or concurrent enrollment program or another credit transfer agreement; and/or
    c. the percentage of CTE concentrators graduating from high school having participated in work-based learning

Maryland is selecting 1.a. and an additional measure for program quality called Technical Skill Attainment.

Core Indicator of Performance 5S1: Program Quality – Attained Recognized Postsecondary Credential
The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.

Numerator: Number of CTE concentrators who met or exceeded proficiency on industry standards to attain a recognized postsecondary credential (approved for a specific CTE program) and who, in the reporting year, exited from secondary education.

Denominator: Number of CTE concentrators who took an assessment aligned to industry-standards leading to attainment of a recognized postsecondary credential and who, in the reporting year, exited from secondary education.

Include any other measure of student success in career and technical education that is statewide, valid, and reliable, and comparable across the State.

Provide the State's measurement definition with a numerator and denominator for each of the quality indicator(s) the State selects to use.

Core Indicator of Performance 5S4: Program Quality – Technical Skill Attainment
The percentage of CTE concentrators who have met state-recognized CTE standards in the program, including assessments aligned to industry standards, if available and appropriate.

Numerator: Number of CTE concentrators who met state-recognized CTE standards, including assessments aligned to industry standards and who, in the reporting year, left secondary education.

Denominator: Number of CTE concentrators who took an assessment aligned to state-recognized CTE standards and industry standards, and who, in the reporting year, left secondary education.

---

2. Provide on the form in Section V.B, for each year covered by the State plan beginning in FY 2020, State determined performance levels or each of the secondary and postsecondary core indicators, with the levels of performance being the same for all CTE concentrators in the State. (Section 113(b)(3)(A)(i)(I) of Perkins V)

> Refer to Table 6 for each year covered by the State plan beginning in FY 2020, State determined levels of performance for each of the secondary and postsecondary core indicators, with the levels of performance being the same for all CTE concentrators in the State.

3. Describe the procedure the eligible agency adopted for determining State determined levels of performance described in section 113 of Perkins V, which at a minimum shall include—

a. description of the process for public comment under section 113(b)(3)(B) of Perkins V as part of the development of the State determined levels of performance (see Text Box 7 for the statutory requirements for consultation on State determined performance levels under section 113(b)(3)(B) of Perkins V);
The procedures employed to include input from eligible recipients in establishing the State determined level of performance for each of the core indicators of performance consisted of a series of meetings with the Accountability and Performance Targets Workgroup. This workgroup met three times over a two-month period. A statewide meeting to discuss accountability and performance targets was held on August 1, 2019. At this meeting, stakeholders representing business, industry, local school systems, postsecondary institutions, representatives of special groups, and others met to provide input on the accountability system. A 60-day public comment period on the CTE accountability system was held from August 5-October 5, 2019. No public comments were received during that time period.

b. explanation for the State determined levels of performance that meet each of the statutory requirements
The State Accountability and Performance Targets Workgroup developed recommendations for Perkins performance measures; numerator and denominator definitions; and the levels of performance for each measure at the secondary and postsecondary level. These measures and levels of performance were reviewed by a variety of stakeholders including: directors of CTE for each local school system; community college Perkins Plan contacts, instructional, occupational and career program deans from each community college; and all State workgroup participants. Recommendations for performance measures and levels of performance on which consensus was reached were then submitted for public comment through the *Maryland Register*. All participants were made aware that additional indicators of performance, with corresponding measures and levels of performance, could also be developed if needed.

c. description of how the State determined levels of performance set by the eligible agency align with the levels, goals and objectives other Federal and State laws, (Section 122(d)(10) of Perkins V).
Maryland designed a coherent state system of accountability by aligning Perkins V performance measures with priority measures embedded in the Maryland Every Student Succeeds Act Consolidated State Plan and the College and Career Readiness and College Completion Act of 2013. These performance measures and performance levels spanning across these State and Federal laws present a clear and consistent message to stakeholders about what outcomes are valued in increasing the career and college readiness for all students.

As part of the procedures for determining State determined levels of performance, describe the process that will be used to establish a baseline for those levels.

The approach used to establish State determined levels of performance for each of the Perkins performance measures is consistent with the State accountability approach using a growth model. Each recipient is expected to demonstrate progress (growth) on each measure, relative to their previous performance. Performance level baselines for indicators 1S1, 2S1, 2S2, 2S3 were established using the State's baselines and projections approved by the US Department of Education in the Maryland Every Student Succeeds Act Consolidated State Plan approved in January 2017. Performance level baselines for indicators 3S1, 4S1, 5S1, 5S4, 1P1, 2P1, 3P1 were established using the lower of either a three-year average (including SY2017-2018) of performance for CTE students in Maryland or the performance target previously set for the reporting year 2018-2019.

4. Provide a written response to the comments provided during the public comment period.
Refer to Appendix D for written responses to comments regarding state determined levels of performance. Stakeholder feedback did not necessitate any changes to the state determined performance levels.

5. Describe how the eligible agency will address disparities or gaps in performance as described in section 113(b)(3)(C)(ii)(II) of Perkins V in each of the plan years, and if no meaningful progress has been achieved prior to the third program year, a description of the additional actions the eligible agency will take to eliminate these disparities or gaps
Each secondary school system and postsecondary institution will receive an annual Local Program Accountability Report and a State performance report Program Quality Index for each of the Performance Measures for the Core Indicators of Performance. These reports include trend data, state comparison points, and local performance targets given their own baseline data for use in the analysis of CTE performance and annual planning. Each recipient will be required to provide an analysis of CTE student performance and target improvement efforts in their annual application.

III. Assurances, Certifications, and Other Forms
A. Statutory Assurances
☐ The eligible agency assures that:

1. It made the State plan publically available for public comment for a period of not less than 30 days, by electronic means and in an easily accessible format, prior to submission to the Secretary for approval and such public comments were taken into account in the development of this State plan. (Not required for the Transition Year)

See II. Narrative Descriptions Plan Development and Consultation.

2. It will use the funds to promote preparation for high-skill, high-wage, or in-demand industry sectors or occupations and non-traditional fields, as identified by the state.

See Sec. II. Narrative Descriptions Program Administration and Implementation.

3. It will provide local educational agencies and eligible institutions in the State with technical assistance, including technical assistance on how to close gaps in student participation and performance in career and technical education programs.

See Sec. II. Narrative Descriptions Program Administration and Implementation.

4. It will comply with the requirements of this Act and the provisions of the State Plan, including the provision of a financial audit of funds received under this Act, which may be included as part of an audit of other Federal or State programs.

The signed Assurances page, as well as the required EDGAR certifications and other forms assure compliance with these requirements.

5. None of the funds expended under this Act will be used to acquire equipment in any instance in which such acquisition results in a direct financial benefit to any organization representing the interests of the acquiring entity or the employees of the acquiring entity, or any affiliate of such an organization.

Maryland, as well as local recipients, must follow the procurement policies and regulations established in state statute and within each local school system and community college. These procurement processes establish a fair and equitable process to acquiring goods and services.

6. It will use the funds under this Act to implement career and technical education programs and programs of study for individuals in State correctional institutions, including juvenile justice facilities.

Two percent of Maryland's leadership dollars will be used to implement CTE programs in State institutions. These include correctional institutions which house the adult correctional education programs as well as juvenile services education in treatment and detention facilities which are housed in juvenile justice facilities.

B. EDGAR Certifications

☐By submitting the Perkins V State Plan the Maryland State Department of Education, the eligible agency, certifies that:

1. It is eligible to submit the Perkins State Plan

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

2. It has authority under State law to perform the functions of the State under the Perkins program.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

3. It legally may carry out each provision of the plan.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

4. All provisions of the plan are consistent with State law.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

5. A State officer, specified by title on the Cover Page has the authority under State law to receive, hold, and disburse Federal funds made available under the plan.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

6. The State officer who submits the plan, specified by title on the Cover Page, has authority to submit the plan.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

7. The entity has adopted or otherwise formally approved the plan.

The Maryland State Board of Education approved the plan at the December 3, 2019 State Board of Education meeting.

8. The plan is the basis for State operation and administration of the Perkins program.

The Annotated Code of Maryland §21-201 and §21-202 states that the Maryland State Board of Education is the sole State agency responsible for the administration of the Perkins Act.

C. Other Forms

☐The eligible agency certifies and assures compliance with the following enclosed forms:

1. Assurances for Non-Construction Programs
2. Disclosure of Lobbying Activities
3. Certification Regarding Lobbying
4. General Education Provisions Act (GEPA)

All required forms have been sent through the U.S. mail with tracking to ensure that they were received.

IV. Budget

State Name: Maryland
Fiscal Year: 2020
The budget requires input from stakeholders before percentages and amounts can be finalized. The budget will be finalized prior to submission to the US Department of Education.

Line Number	Budget Item	Percent of Funds	Amount of Funds
1	**Total Perkins V Allocation**	**Not applicable**	$ 17,951,226
2	**State Administration**	%	$
3	**State Leadership**	%	$
4	• Individuals in State Institutions	%	$
4a	– Correctional Institutions	**Not required**	$
4b	– Juvenile Justice Facilities	**Not required**	$
4c	– Institutions that Serve Individuals with Disabilities	**Not required**	$
5	• Non-traditional Training and Employment	**Not applicable**	$
6	• Special Populations Recruitment	%	$
7	**Local Formula Distribution**	%	$
8	• Reserve	%	$
9	– Secondary Recipients		$
10	– Postsecondary Recipients		$
11	Allocation to Eligible Recipients	%	$
12	- Secondary Recipients	%	$
13	- Postsecondary Recipients	%	$
14	**State Match** *(from non-federal funds)*	**Not applicable**	$

V. State Determined Performance Levels

Table 6: Section 113(b) Core Indicators of Performance

Secondary Level		
Indicator Descriptions	**Indicator Codes**	**Indicator Names**
The percentage of CTE concentrators who graduate high school, as measured by the four-year adjusted cohort graduation rate (defined in section 8101 of the Elementary and Secondary Education Act of 1965).	1S1	Four-Year Graduation Rate
(At the State's discretion) The percentage of CTE concentrators who graduate high school, as measured by extended-year adjusted cohort graduation rate defined in such section 8101.	1S2	Extended Graduation Rate
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in reading/language arts as described in section 1111(b)(2) of such Act.	2S1	Academic Proficiency in Reading/Language Arts
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in mathematics as described in section 1111(b)(2) of such Act.	2S2	Academic Proficiency in Mathematics
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in science as described in section 1111(b)(2) of such Act.	2S3	Academic Proficiency in Science
The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are employed.	3S1	Postsecondary Placement

Secondary Level		
Indicator Descriptions	**Indicator Codes**	**Indicator Names**
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.	4S1	Non-traditional Program Enrollment
The eligible agency must include at least one program quality indicator—5S1, 5S2, or 5S3—and may include any other quality measure that is statewide, valid, reliable, and comparable across the State, 5S4.		
The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.	5S1	Program Quality – Attained Recognized Postsecondary Credential
The percentage of CTE concentrators graduating from high school having attained postsecondary credits in the relevant career and technical education program or program of study earned through a dual or concurrent enrollment or another credit transfer agreement	5S2	Program Quality – Attained Postsecondary Credits
The percentage of CTE concentrators graduating from high school having participated in work-based learning.	5S3	Program Quality – Participated in Work-Based Learning
The percentage of CTE concentrators achieving on any other measure of student success in career and technical education that is statewide, valid, and reliable, and comparable across the State. Please identify.	5S4	Program Quality – Other

Indicator Descriptions	Indicator Codes	Indicator Names
Postsecondary Level		
The percentage of CTE concentrators who, during the second quarter after program completion, remain enrolled in postsecondary education, are in advanced training, military service, or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are placed or retained in employment.	1P1	Postsecondary Retention and Placement
The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion.*	2P1	Earned Recognized Postsecondary Credential
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.	3P1	Non-traditional Program Enrollment

* This means that a student gets counted under this indicator whether the student obtains the credential during participation or within one year of completion. The Department interprets "within one year of completion" to have the plain meaning of those words: that the student would be counted if the student obtains the credential in the one year following that student's completion of the program.

B. State Determined Performance Levels (SDPL) Form

State Name: Maryland

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Indicators	**Baseline Level**	**Performance Levels**			
		FY 2020	**FY 2021**	**FY 2022**	**FY 2023**
Secondary Indicators					
1S1: Four-Year Graduation Rate	87.76	88.49	89.22	89.97	90.71
1S2: Extended Graduation Rate	N/A*	N/A*	N/A*	N/A*	N/A*
2S1: Academic Proficiency in Reading Language Arts	45.8	48.0	50.2	52.3	54.5
2S2: Academic Proficiency in Mathematics	40.9	43.2	45.6	48.0	50.3
2S3: Academic Proficiency in Science	TBD need 2016/2017 baseline data				
3S1: Postsecondary Placement	75.60				
4S1: Non-traditional Program Enrollment	28.10	28.30	28.51	28.72	28.92
5S1: Program Quality – Attained Recognized Postsecondary Credential	77.50	77.80	78.11	78.41	78.71
5S2: Program Quality – Attained Postsecondary Credits	N/A*	N/A*	N/A*	N/A*	N/A*
5S3: Program Quality – Participated in Work-Based Learning	N/A*	N/A*	N/A*	N/A*	N/A*
5S4: Program Quality – Other (TSA Attainment)	77.50	77.80	78.11	78.41	78.71

Maryland opted not to use this performance indicator and as such no performance levels are provided.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Indicators	**Baseline Level**	**Performance Levels**			
		FY 2020	**FY 2021**	**FY 2022**	**FY 2023**
Postsecondary Indicators					
1P1: Postsecondary Retention and Placement	70.80	70.98	71.15	71.33	71.51
2P1: Earned Recognized Postsecondary Credential	44.10	44.20	44.30	44.40	44.50
3P1: Nontraditional Program Enrollment	24.41	24.53	24.65	24.85	24.97

Appendix A: Stakeholders that Informed Plan Development

Maryland Public Meetings – Registrants/Participants
Additional names will be added after all meetings are complete.

Last Name	First Name	Organization Name
Akins	Carrie	Calvert County Public Schools
Alban	Theresa	Frederick County Public Schools
Alston	Trushay	Chesapeake College
Alvarez	Jaime	Community College of Baltimore County
Anderson	Angela	Prince George's Community College
Armstrong	Sandra	Community College of Baltimore County
Ashby	Bryan	Wicomico County Public Schools
Aydukovic	Robert	Maryland Center for Construction Education & Innovation
Balinski	Dawn	Maryland Association of Boards of Education
Balinski	Dawn	Calvert County Board of Education
Bannerman	Quiana	Prince George's County Public Schools
Barber	John	Keystone Mountain Lakes Carpenters
Barnes	Johari	Community College of Baltimore County
Barron	Tamara	Maryland Department of Labor
Barth	Heidi	Community College of Baltimore County
Beck	Michael	Maryland State Department of Education
Belcher	Natalie	Howard County Public Schools
Bell	Jaime	Community College of Baltimore County
Belton	Nicassia	Maryland State Department of Education
Berhane	Yonas	Howard Community College
Blaylock	Arlene	Montgomery College
Blum	Judy	Community College of Baltimore County
Booker-Dwyer	Tiara	Maryland State Department of Education
Bouis	Jay	Community College of Baltimore County
Boyle	Michael	St. Mary's County Public Schools
Brace	Todd	Anne Arundel Medical Center
Breiterman	Regina	Montgomery County Public Schools
Brereton	Chelsea	Hagerstown Community College
Brice	Keith	Prince George's County Public Schools
Brown	Christine	Harford Community College
Brown	Clary	Montgomery College
Buckel	Mark	Kent County Public School
Butt	Michelle	Associated Builders & Contractors, Inc.
Cadet	Jean-Paul	Prince George's County Public Schools
Cahlink-Seidler	Nancy	Maryland State Department of Education

Last Name	First Name	Organization Name
Cambra	Alexandra	Maryland State Department of Education
Campbell	Katie	Harford County Public Schools
Canan	Candy	Allegany County Public Schools
Carnaggio	Denise	Harford Community College
Carter	Stephen	Mid-Atlantic Center for Emergency Management
Chappelear	Traci	Charles County Public Schools
Cherry	Emilie	Community College of Baltimore County
Clinedinst	Allen	Plumbers and Steamfitters Local 486
Collins	Joseph	Harford County Public Schools
Corona	Tara	Maryland State Department of Education
Cyran	Victor	Harford Community College
Davis	Renee	Frederick Community College
De Marco	Donna	Building Congress & Exchange of Metropolitan Baltimore
Dean	Miles	Cecil College
Dennis	Scott	Maryland State Department of Education - Division of Rehabilitation Services
DeStefano	Christine	Community College of Baltimore County
Devlin Hackett	Elizabeth	Chesapeake College
Dewling	Anita	Anne Arundel Economic Development Corporation
DiGiacomo	Michael	Governor's Workforce Development Board
Donlick	Jeanne	Harford County Public Schools
Dow	Emily	Maryland Higher Education Commission
Drury	Mark	Shapiro & Duncan, Inc.
Dryer	Christy	Cecil College
Durant	Lateefah	Prince George's County Public Schools
Eckles	William	Carroll County Public Schools
Edge III	Arthur	Glaxo Smith Kline
Edwards	Paul	Garrett County Public Schools
Eger	Sara	Anne Arundel Community College
Elliott	Don	Community College of Baltimore County
Ellis	Tom	Chesapeake College
Emmel	Judi	National Security Agency
Eppig	Peggy	Maryland Agriculture Education Foundation
Eyer	Brian	Maryland State Department of Education
Farmer	Stephanie	Maryland Association of Secondary School Principals
Flewelling	Colleen	Cecil College
Floyd	Genevieve	Montgomery County Public Schools
Francis	Kathy	Mid-Atlantic Center for Emergency Management
Friday	Linda	Queen Anne's County Chamber of Commerce

Last Name	First Name	Organization Name
Friday	Marquita	Maryland State Department of Education
Gale	Melodie	Howard Community College
Gallagher	Susan	Anne Arundel Community College
Garland	Steven	Washington County Public School
Geness	Simone	Montgomery County Public Schools
Gilli	Lynne	Maryland State Department of Education
Gingerich	Jade	Maryland Department of Disabilities
Gowe	Elena	Chesapeake College
Grayson	Candice	Community College of Baltimore County
Greene	Debra	Howard Community College
Gress	Kathy	Associated Builders & Contractors, Inc.
Griffin	Jennifer	Maryland State Department of Education
Grimm	Lynn	Allegany College of Maryland
Gross	Don	GROCO, Inc
Gross-Sutton	Robin	Baltimore City Public Schools
Grubbs	Michael	Baltimore County Public Schools
Gumaer	Amy	Montgomery College
Hackett	Elizabeth	Chesapeake College
Hall	Carl	Prince George's County Public Schools
Hammond	Anita	Baltimore Alliance for Careers in Health Care
Handy	Douglas	Baltimore County Public Schools
Harvey	Tricia	Jesco Inc
Hauswald	Nancy	Maryland State Department of Education
Hawkins	Eileen	Baltimore City Community College
Hess	Robert	Community College of Baltimore County
Hill	Miranda	Maryland State Department of Education
Hines	Kermit	Dorchester County Public Schools
Hodges	Gregory	STEM Equity Initiative, Inc.
Hohrein	Jean	Dorchester County Public Schools
Holly	Jeanne-Marie	Maryland State Department of Education
Howell	Keena	Maryland Association of Pupil Personnel
Howie	Anna	Talbot County Public Schools
Jackson	Denisha	National Security Agency
Jackson	Kirsten	Montgomery County Public Schools
Jeffery	Scott	Community College of Baltimore County
Jester	Richard	Harford County Public Schools
Jones	Trevor	Wor-Wic Community College
Judkins	Jennifer	Maryland State Department of Education

Last Name	First Name	Organization Name
Jurch	Steve	Community College of Baltimore County
Kahler	Jason	Maryland State Department of Education
Kallis	Jody	Maryland Association of Community Colleges
Kane	Andrea	Queen Anne's County Board of Education
Kelleher	Patrick	Community College of Baltimore County
Kendall	Dean	Maryland State Department of Education
Kendzierski	Douglas	Community College of Baltimore County
Kilbourne	Jennifer	Community College of Baltimore County
Kiphart	Michael	Maryland Higher Education Commission
Koermer	Kelly	Harford Community College
Koontz	Julie	Carroll County Public Schools
Kramer	Sharon	Howard County Public School System
Kremer	Deborah	Anne Arundel County Public Schools
Lang, III	John	Council of Educational, Administrative & Supervisory Organizations of Maryland
Langer	Debbie	Maryland State Department of Education
Lanham Tarason	Felicia	Maryland State Department of Education
Leach	Marci	Chesapeake College
Levy	Mitchell	College of Southern Maryland
Liccione	Laura	Maryland State Department of Education
Lichter	Debra	Maryland State Department of Education
Limpert	Robert	Harford County Public Schools
Lindsay	Dawn	Anne Arundel Community College
Link	Dina	Montgomery County Public Schools
Lohnes	Marjorie	Maryland Career and Technology Association
London	Rachel	Maryland Developmental Disabilities Council
Longest	Jon	Chesapeake College
Loveland	Thomas	University of Maryland Eastern Shore
Magloire	Nancy	Prince George's County Public Schools
Makinen	Carla	Wor-Wic Community College
Mandl	Donna	Community College of Baltimore County
Marks	Janice	Howard Community College
Mayo	George	Maryland Agricultural Education Foundation
McCauslin	Angela	Carroll County Public Schools
McCulloch	Champe C.	Associated General Contractors of America-MD Chapter
McFadden	Ebony	Baltimore City Community College
McGaughey	Norm	Frederick County Public Schools
McLaughlin	Jack	Community College of Baltimore County
McNett	Edward	Carroll County Public Schools

Last Name	First Name	Organization Name
McRoberts	Christopher	Community College of Baltimore County
Meadows	Kelly	Maryland State Department of Education
Meyer	Patricia	Frederick Community College
Miller	David	Maryland Agriculture Education Foundation
Miller	Erik	Community College of Baltimore County
Minor	Rebecca	Community College of Baltimore County
Minter	Mary	Maryland State Department of Education
Mitzel	Ed	Maryland State Department of Education
Moore	Melody	Carroll Community College
Moreno	Rhonda	Montgomery County Public Schools
Morgan	Kathy	Carroll County Public Schools
Morrell	Claudia	STEM Equity Initiative, Inc.
Moylan	Susan	Community College of Baltimore County
Muller	Lynne	Maryland State Department of Education - Student Services
Murphy	Maureen	College of Southern Maryland
Naughton	Brandy	Harford Community College
Navarro	Kristin	Howard Community College
Nichols	Scott	Maryland State Department of Education
O'Connor	Mary	Maryland State Department of Education
O'Neal	Keith	Somerset County Public Schools
Oshitoye	Osh	Maryland State Department of Education
Parr	Nicole	Cecil County Public Schools
Payne	George	Montgomery College
Pearl	Kristine	Frederick County Public Schools
Pearson	Rebecca	Charles County Public Schools
Pfeifer	Rachel	Baltimore City Public Schools
Pfundstein	Thomas	Finishing Trades Institute International
Phillips	Brian	Worcester County Public Schools
Pierce	Jill	Maryland State Department of Education
Pine	Cody	Washington County Public School
Powell	Ruth	Maryland State Department of Education
Prouty	Douglas	MD State Education Association
Pugh	Peggy	Washington County Public Schools
Ringgold	Tonja	Baltimore City Community College
Roa	Nina	Maryland State Department of Education
Rocks	William	Allegany College of Maryland
Schmickley	Sharon	Howard Community College
Schoenberg	Corrie	Fund for Educational Excellence

Last Name	First Name	Organization Name
Schulman	Roger	Fund for Educational Excellence
Scott	Carolynnette	Maryland Department of Labor, Licensing and Regulation
Scurry	Ebony	Eidolon Career Solutions
Selby	Tricia	Anne Arundel Community College
Shank	Teresa	Maryland Agriculture Education Foundation
Shell	Nickisha	Prince George's County Public Schools
Shoemaker	Korbin	Frederick County Public Schools
Silberquit	Paul	Wor-Wic Community College
Smith	Gene	Caroline County Public Schools
Smith	Nancy	Community College of Baltimore County
Snowden	Daphne	Baltimore City Community College
Snowden	Yvette	Maryland Community College Association for Continuing Education and Training
Solembrino	Karie	Wor-Wic Community College
Somerville	Shawn	Maryland Association of Secondary School Principals
Spain	Kathleen	Anne Arundel Community College
Sprague	Christina	Charles County Public Schools
Spross	Sarah	Maryland State Department of Education
Spruill	Regina	Prince George's County Public Schools
Staton	Danielle	Fund for Educational Excellence
Stewart	Latellya	Chesapeake College
Stulz	Diane	Worcester County Public Schools
Tara Scurry	Ebony	Maryland Career Development Association
Tarasuk	Maria	Montgomery County Public Schools
Taylor	Jazmone	The Parents' Place of Maryland
Taylor	LiLi	Maryland Department of Labor
Thomas	Michael	Baltimore City Community College
Thompson	Morrall	Maryland State Department of Education
Tolley	Adam	Queen Anne's County Public Schools
Trexler	Mark	Johns Hopkins School of Education
Turner	Patti	Howard Community College
Turner	Paula	Dorchester County Board of Education
Verzi	Traci	Maryland State Department of Education
Vitalo	Alex	Maryland Public Television
Wallace	Charles	Maryland State Department of Education
Wang	Li	Maryland State Department of Education
Warren	Lisa	College of Southern Maryland
Washington	Adrianne	Prince George's Community College
Wilding	Mark	Calvert County Public Schools

Last Name	First Name	Organization Name
Wildy	Denise	Maryland State Department of Education
Wolfe	Stanley	Baltimore City Public Schools
Woo	Minah	Howard Community College
Yoder	Julie	Garrett College
Young	Ken	Maryland State Department of Education
Zhang	Lili	Community College of Baltimore County
Ziegler	Tonia	Prince George's County Public Schools
Ziobro	Marie	Mercy Medical Center

Appendix B: CTE Comprehensive Local Needs Assessment

Refer to Attachment IV - CTE Needs Assessment and Application

Appendix C: CTE Local Application

Refer to Attachment IV - CTE Needs Assessment and Application

Appendix D: Public Comments on the Maryland Career and Technical Education Four-Year State Plan

Comments will be added after public comment period is over.