MARYLAND STATE DEPARTMENT OF EDUCATION
EQUITY AND EXCELLENCE

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

TO: Members of the State Board of Education

FROM: Karen B. Salmon, Ph.D.

DATE: March 26, 2019

SUBJECT: Maryland Career and Technology Education (CTE) Transition Year State Plan 2019 – 2020

PURPOSE:

To provide information on the Career and Technology Education Transition Year State Plan for Fiscal Year (FY) 2019 – 2020 and to request the Board's approval.

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 new law requires a new application from states and territories for federal CTE funding.

The U.S. Department of Education, Office of Career, Technical and Adult Education issued a guidance document for the submission of state plans. This document specified the questions to be answered and the process to be followed in the development of the State Plan/Application for funding. States had the option of preparing a one-year transition plan for the first fiscal year following the enactment of the law. Under this option, states were asked to submit their Perkins V State Plan covering FY 2019 – 2020.

States were given another option to submit a plan that covers five years, which includes a transition year in FY 2019 and then a four-year period covering FY 2020 – 23. Maryland chose the option of preparing a transition year plan option in order to allow time for decisions to be well thought out regarding a number of items that were new in the law and to be able to incorporate any changes that may affect CTE when the High School Graduation Task Force and the Kirwan Commission issue their final reports.

The CTE Transition Year State Plan was developed with over 320 individuals and representatives from state economic and workforce development agencies, including the Governor's Workforce Development Board, business and industry, secondary and postsecondary institutions. Also participating were individuals representing: members of special populations, students, out-of-school youth, historically black colleges and universities, organized labor, local school system superintendents, community college presidents, organizations involved with teachers, faculty, students with disabilities, and a host of others listed in the Perkins V Act. Three public meetings were held with an average of 95 attendees at each meeting.

During the public meetings, four subgroups were formed to provide feedback on the questions to be addressed in the State Plan/Application. These subgroups addressed the parts of the law that pertained to the Local Application/Comprehensive Needs Assessment/Monitoring; Accountability and Performance Targets; Special Populations; and Preparing an Educated and Skilled Workforce.

In addition to holding three public meetings, there was a sixty-day public comment period on the accountability/performance targets section of the state application, as well as a thirty-day public comment period, including two public hearings which were included in the *Maryland Register*. Comments received during the public comment periods are included in the Maryland CTE Transition Year State Plan.

EXECUTIVE SUMMARY;

The Maryland CTE Transition Year State Plan addresses the questions to be answered in the State's application for funding for FY 2019-2020.

ACTION:

Request approval of the Maryland CTE Transition Year State Plan 2019 – 2020 by the Maryland State Board of Education

KBS:LMG:jmsh

Attachments (4)

Attachment I - State Board Presentation
Attachment II - Executive Summary: Maryland Career and Technology Education (CTE) Transition Year State Plan 2019 – 2020
Attachment III - Maryland Career and Technology Education (CTE) Transition Year State Plan 2019 – 2020 http://www.marylandpublicschools.org/programs/Documents/CTE/PerkinsIV/Resources/Maryland-State-Transition-Plan_1-30-19_PUBLIC-COMMENT.docx

Attachment IV- 2018 Baseline Data Towards The Goal of 45% By 2025

Maryland Career and Technology Education (CTE) Transition Year State Plan

STATE BOARD MEETING

March 26, 2019

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

- The President signed the bill into law on July 31, 2018
- The law will take effect on July 1, 2019
- The law reauthorizes the federal investment in Career and Technical Education (CTE) from July 1, 2019 through June 20, 2025
- There is a transition year, July 1, 2019 – June 30, 2020 allowing time to fully align with the recommendations of the High School Graduation Task Force and the Commission on Innovation and Excellence in Education (Kirwan Commission)
- Maryland's State CTE Transition Year Plan for Fiscal Year 2020 is due in May 2019

State Plan Process and Timeline

1. **Preparation of a one-year Transition CTE State Plan**

2. **Three face-to-face meetings:**
   - October 11, 2018
   - October 25, 2018
   - November 9, 2018

3. **Public Hearings for input on the Core Indicators of Performance - December 2018 and January 2019**

Plan → Meet → Set Targets → Review → Approve → Submit

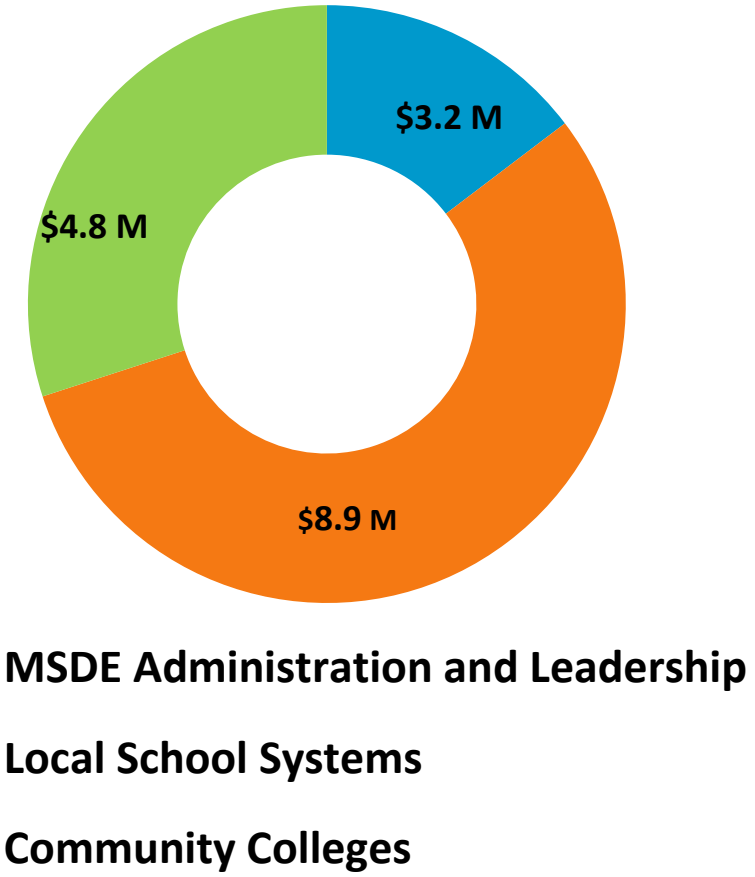
4. **Public Hearings for input on the CTE Transition Year State Plan – February 2019**

5. **Request State Board of Education approval - March 2019**

6. **Submission to the U.S. Department of Education by May 24, 2019**

- Perkins funds have been relatively flat for the past 10 years
- MD received $16,968,820 in federal funds in Fiscal Year 2019
  15% is retained by MSDE for State Administration and Leadership
- 85% is awarded by formula to eligible local recipients (school systems and 14 of 16 community colleges)
- Formula funds are distributed as follows:
  - 65% to local school systems
  - 35% to community colleges
- FY 2020 funds will not be known until April 2019

Fiscal Year 2020 funds will be distributed by formula as they were under the Carl D. Perkins Career and Technical Education Improvement Act of 2006



Federal Definition of a CTE Program – Perkins V

The current federal law defines a CTE program as a coordinated, non-duplicative sequence of **academic** and **technical** content at the secondary and postsecondary level that:

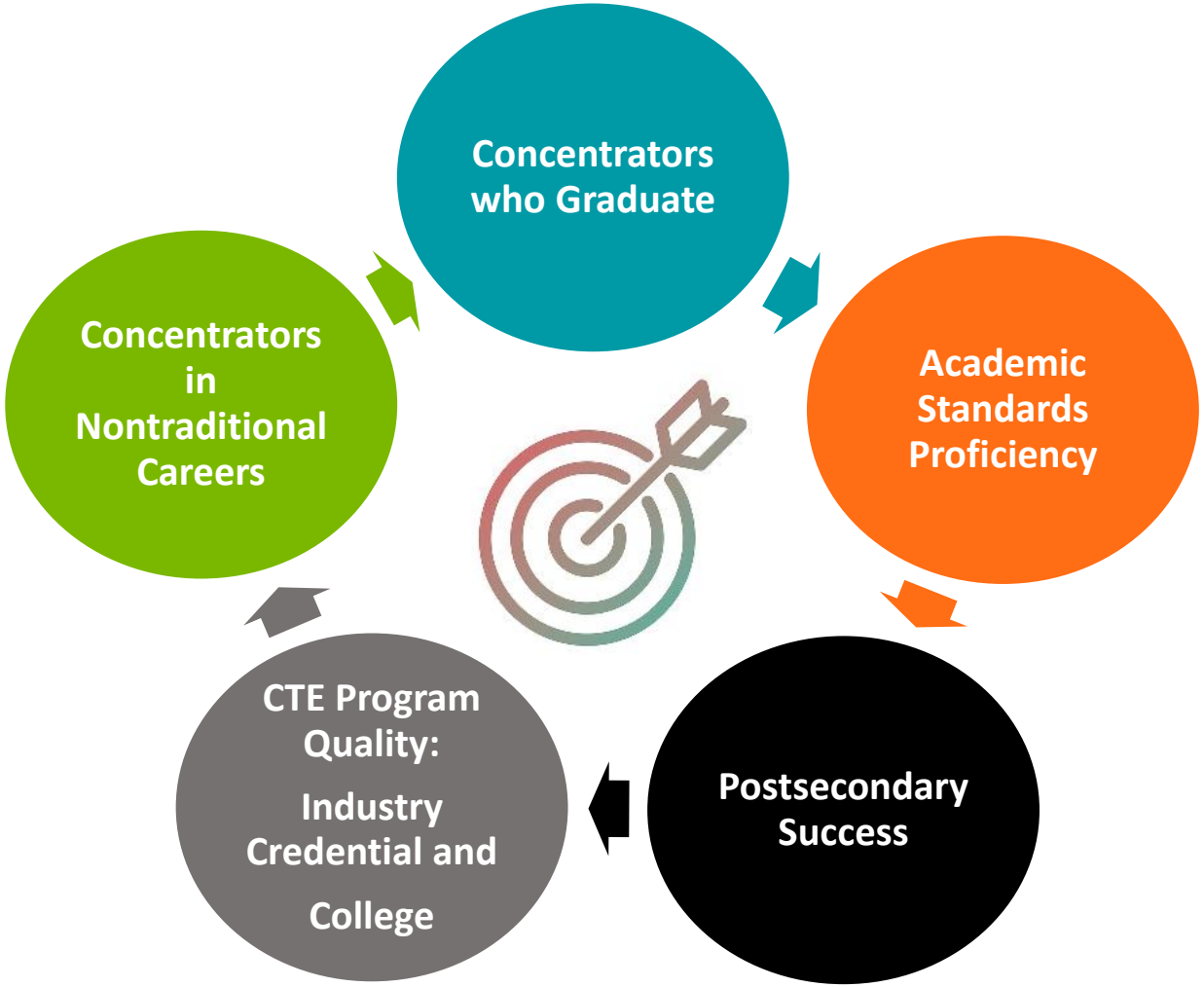
- Incorporates challenging State academic standards;
- Addresses both academic and technical knowledge and skills, including employability skills;
- Is aligned with the needs of industries in the economy of the State, region, or local area;
- Progresses in specificity (from all aspects of an industry or career cluster to more occupational-specific instruction);
- Has multiple entry and exit points that incorporate credentialing; and
- Culminates in the attainment of a recognized postsecondary credential.

Definition of a CTE Concentrator

- Secondary:
  - A student who has completed at least two courses in a single CTE program of study and is enrolled in the third course.

- Postsecondary:
  - A student who has earned at least 12 credits within a CTE program approved by the Maryland Higher Education Commission;
  - A student who completed a program that includes fewer than 12 credits or the equivalent in total (equivalent can be from transfer credit or credit by evaluation).

Core Indicators of Performance - Secondary



Secondary CTE Core Indicators of Performance

1. **Concentrators who graduate** high school, as measured by the four year adjusted cohort graduation rate.

2. **Academic Proficiency** - CTE concentrator proficiency in the State academic standards as measured by the State's academic assessments MCAPP (PARCC) for math and English and MISA for science attainment.

3. **Postsecondary Success** – Concentrators in the second quarter after exiting from secondary education, who are in postsecondary education, or advanced training, military service, a service program, or who are employed.

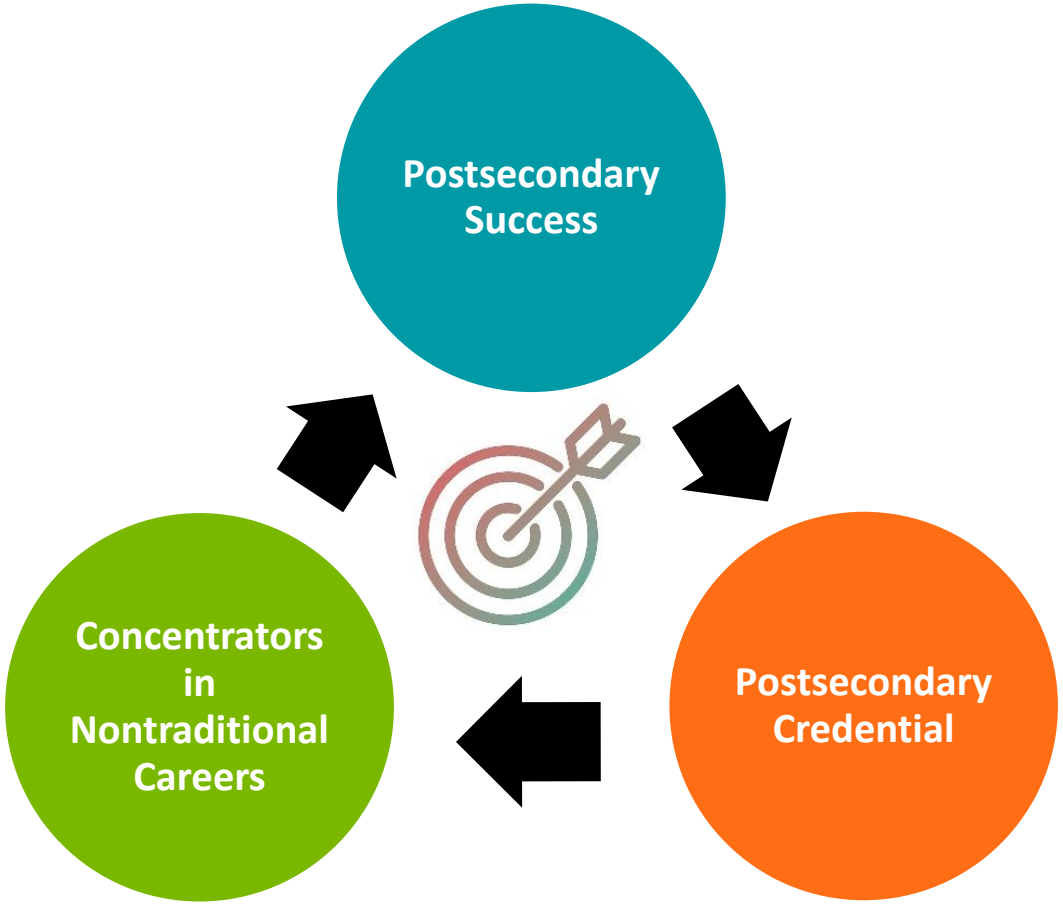
4. **CTE Program Quality (College Credit and Industry Credentials)** – The percentage of CTE concentrators:

   a. graduating from high school having attained a recognized postsecondary credential, (lower division certificate or Associates Degree; bachelor's degrees are not included).

   b. who have met state-recognized CTE standards in the program, including assessments aligned to industry standards, if available and appropriate.

5. **Nontraditional Careers** - The percentage of CTE concentrators in career and technical education programs of study that lead to nontraditional careers.

Core Indicators of Performance - Postsecondary



Postsecondary CTE Core Indicators of Performance

The percentage of CTE concentrators:

1. who remain enrolled in postsecondary education, are in advanced training, military service, or a service or volunteer program (e.g. Peace Corps), or are employed;
2. who receive a recognized postsecondary credential during participation in or within one year of program completion;
3. in career and technical education programs of study that lead to nontraditional fields

Perkins V - Opportunities to Expand CTE Innovations

- Expanding high-quality CTE programs leading to high-skill, in-demand occupations
  - CTE Programs of Study – including students completing programs in nontraditional careers
  - Apprenticeship Maryland
  - Pathways in Technology Early College High Schools (P-TECH)
- Increasing the number of students earning industry credentials
- Providing ongoing high-quality professional development for CTE faculty
- Reaching the 45% CTE completers goal by 2025 (More Jobs for Marylanders' Act)
- Increasing participation in CTE by members of special populations
- Expanding professional school counselors' knowledge of current & emerging careers
- Providing students with earlier career development opportunities (5th grade & up)
- Expanding CTE statewide partnerships with employers from business, industry, and labor
- Meeting State Performance Targets established for secondary and postsecondary indicators

Ongoing Implementation of the Plan

Regional Meetings were held for recipients to develop local plans.

- Data are used to develop local needs assessments to drive decision-making
  - MSDE establishes the Accountability and Performance Targets
  - Failure to meet 90% performance results in an improvement plan
- Local plans are due to MSDE by May 15, 2019
- MSDE approves local plans in time for grants to be awarded effective July 1, 2019
- MSDE conducts ongoing monitoring, provides professional development and technical assistance
- MSDE annually creates a plan of work and budget for investment of the federal funds

CTE in Maryland

The State Board of Education is designated as the sole agency responsible for the administration of the CTE federal law as noted in the Annotated Code of MD, Subsection 21-202.(d)

Action: Request approval of Maryland's CTE Transition Year State Plan

Number and Percentage of High School Graduates Completing CTE Programs, Attaining Industry Credentials as a CTE Concentrator or Completing a Registered Youth or Other Apprenticeship By Local School System, 2018

2018 Baseline Data Towards The Goal of 45% By 2025

	Total HS Grads 2018	Total CTE Grads 2018	Industry Certs. 2018	Registered Youth/Other Apprenticeship 2018	Total # Meeting 45% Goal 2018	45% Goal (%) 2018		# Needed to Attain 45% Goal 2018
Garrett	266	195	0	0	195	73.31%		0
Kent	145	96	0	0	96	66.21%		0
Talbot	337	188	3	0	191	56.68%		0
Queen Anne's	555	262	1	0	263	47.39%		0
Caroline	349	165	0	0	165	47.28%		0
Washington	1697	765	4	2	771	45.43%		0
Worcester	453	204	0	0	204	45.03%		0
Dorchester	251	111	0	0	111	44.22%		2
St. Mary's	1169	516	0	0	516	44.14%		10
Somerset	153	65	2	0	67	43.79%		2
Calvert	1227	500	0	0	500	40.75%		52
Carroll	2119	811	9	0	820	38.70%		134
Charles	2087	725	7	57	789	37.81%		150
Harford	2677	907	0	0	907	33.88%		298
Cecil	1094	320	33	0	353	32.27%		139
Baltimore City	4132	1302	0	0	1302	31.51%		557
Baltimore Co.	7083	1763	0	0	1763	24.89%		1424
Allegany	627	154	0	0	154	24.56%		128
Frederick	3031	639	0	6	645	21.28%		719
Howard	4011	775	0	0	775	19.32%		1030
Wicomico	919	177	0	0	177	19.26%		237
Anne Arundel	5222	747	0	0	747	14.30%		1603
Prince George's	7677	900	119	0	1019	13.27%		2436
Montgomery	10950	1124	0	0	1124	10.26%		3804
SEED School	31	0	0	0	0	0.00%		14
Total	**58262**	**13411**	**178**	**65**	**13654**	**23.44%**		**12564**

Based on 2018 baseline data, the larger school systems will need to increase CTE program completion, registered youth/other apprenticeship completion and/or industry credential attainment rates by far greater percentages than the smaller school systems in order to meet the 45% state goal by January of 2025.

Trend of High School Graduates Completing CTE Programs, Attaining Industry Credentials as a CTE Concentrator or Completing a Registered Youth or Other Apprenticeship by Local School System 2016-2018 Toward The Goal Of 45% By 2025

LEA Number	County	2016 45% GOAL ATTAINMENT *	2017 45% GOAL ATTAINMENT*	2018 45% GOAL ATTAINMENT
320000	SEED	0.00%	0.00%	0.00%
150000	Montgomery	9.74%	10.20%	10.26%
160000	Prince George's	9.72%	10.85%	13.27%
020000	Anne Arundel	12.35%	11.97%	14.30%
220000	Wicomico	26.08%	20.49%	19.26%
130000	Howard	17.68%	19.51%	19.32%
100000	Frederick	23.85%	20.89%	21.28%
010000	Allegany	23.82%	23.08%	24.56%
030000	Baltimore County	23.49%	24.43%	24.89%
300000	Baltimore City	31.18%	29.48%	31.51%
070000	Cecil	23.86%	30.83%	32.27%
120000	Harford	40.08%	38.38%	33.88%
080000	Charles	36.83%	42.14%	37.81%
060000	Carroll	42.45%	43.35%	38.70%
040000	Calvert	41.26%	41.95%	40.75%
190000	Somerset	52.74%	57.74%	43.79%
180000	St. Mary's	43.32%	40.70%	44.14%
090000	Dorchester	42.16%	48.81%	44.22%
230000	Worcester	40.47%	42.40%	45.03%
210000	Washington	49.58%	31.37%	45.43%
050000	Caroline	51.08%	35.87%	47.28%
170000	Queen Anne's	43.15%	42.91%	47.39%
200000	Talbot	50.64%	43.03%	56.68%
140000	Kent	70.31%	61.76%	66.21%
110000	Garrett	70.18%	68.77%	73.31%
250000	**Total**	**22.84%**	**22.47%**	**23.44%**

*45% Goal calculated **using only CTE completion rates** as accurate industry credential data collection in 2016 and 2017 was not yet established.

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020
For The
Strengthening Career and Technical Education for the 21st Century Act
(Perkins V)

EXECUTIVE SUMMARY

Robotics engineering, artificial intelligence, virtual construction sites, patient care simulators, three-D printing, and DNA testing are some of the innovations used in Career and Technology Education (CTE) in Maryland today. CTE programs of study are offered in Maryland's 24 local school systems and 16 community colleges, with over 100,000 secondary and over 50,000 postsecondary students enrolled in CTE courses each year. Fourteen of the 16 community colleges are eligible to receive funding. These programs have been funded, in part, by the federal *Carl D. Perkins Career and Technical Education Act of 2006* (also known as Perkins IV).

On July 31, 2018, the *Perkins Act* was reauthorized as the *Strengthening Career and Technical Education for the 21st Century Act,* commonly known as Perkins V. Building on the strong foundation provided by the preceding legislation, Perkins V requires data-driven decision making, reduces federal oversight, increases stakeholder involvement, and expands efforts to serve special populations. This new law requires the Maryland State Department of Education (MSDE) to develop a *Maryland Career and Technology Education Transition Year State Plan 2019-2020.* In accordance with the law, MSDE collaborated with many stakeholders to formulate the Plan which continues Maryland's support of secondary and postsecondary career and technology education programs in high-skill, high-wage, and in-demand career fields.

Perkins V will take effect on July 1, 2019. This date will also mark the beginning of the one-year transition period, which allows eligible agencies to submit a one-year transition plan, followed by a four-year plan. By State law, the Maryland State Board of Education is designated the sole State agency responsible for the administration of the Act. Perkins V reauthorizes the federal investment for a total of six years, covering federal Fiscal Years (FY) 2019 through FY 2024 (July 1, 2019 through June 30, 2025). The amount of funding for the Title I Basic State Grant program is expected increase. It is important to note that authorization levels are a suggestion, not a guarantee of funding levels until the President signs funding legislation into law. For the past decade, Maryland has been level-funded at about $15 million per year in support of secondary and postsecondary CTE until this year when it was increased to almost $17 million. The amount of Maryland's grant under Perkins V will not be known until April of 2019.

This *CTE Transition Year State Plan* adheres to the requirements of the new Act by introducing a needs assessment, strengthening the CTE teacher and faculty pipeline, promoting innovative practices, expanding career guidance and academic counseling, and allowing states to determine performance measures. As stipulated in the Act, this Plan was crafted during three public meetings, to which 320 stakeholders from state agencies, local school systems and community colleges, workforce and labor organizations, non-profits, economic development boards, special populations representatives, and industry were invited. An average of 95 people attended each meeting, and the recommendations resulting from their discussions were incorporated into the

Plan. The draft Plan was posted on the MSDE website and Dropbox for thirty days, with an invitation for public comment, as well as a 60-day public comment period on Accountability. Two public hearings were also held, and all comments were recorded and included in the Plan.

The Maryland CTE Transition Year State Plan addresses the questions to be answered in the State's application for funding. This includes a comprehensive needs assessment to be undertaken by each local recipient, a local application for funding from each eligible recipient which must be approved by MSDE prior to releasing funding, identification of State leadership activities which includes professional development for teachers, assuring access to and success in CTE programs of study for members of special populations as defined in Perkins V, how students will be encouraged to participate and concentrate in career fields that are nontraditional for their gender as well as setting performance targets for secondary and postsecondary indicators.

The Core Indicators of Performance at the secondary level for local school systems are:

1. The percentage of CTE concentrators who graduate high school, as measured by the four year adjusted cohort graduation rate.
2. CTE concentrator proficiency in the challenging State academic standards as measured by the State's academic assessments.
3. The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education, or advanced training, military service, a service program, or are employed.
4. The following indicators of CTE program quality:
    (i) The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.
    (ii) 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.
5. The percentage of CTE concentrators in career and technical education programs of study that lead to nontraditional fields.

The Core Indicators of Performance at the postsecondary level for community colleges are:

1. 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, are volunteers as described in the Peace Corps Act, or are placed or retained in employment.
2. The percentage of CTE concentrators who receive a recognized postsecondary credential during participation or within one year of program completion.
3. The percentage of CTE concentrators in career and technical education programs of study that lead to nontraditional fields.

As Maryland continues to progress toward ensuring that every student graduates prepared for both a career and further education, the Plan presented within will contribute to increasing the pipeline of qualified employees to meet the workforce and economic development needs of the State.

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020

CTE Transition Year State Plan – Contents

II. NARRATIVE DESCRIPTIONS

A. Plan Development and Consultation

1. State Plan Development

Maryland embarked upon a comprehensive planning process for the development of *The Maryland Career and Technology Education (CTE) Transition Year State Plan for 2019 – 2020.* Letters of invitation to participate in the State workgroup were sent to the individuals and entities as required in the Strengthening Career and Technical Education for the 21st Century Act (Perkins V). Recommendations for workgroup participants were also made by people who responded to the letters of invitation to be part of the CTE Transition Year State Plan workgroup. Additional names of individuals who expressed interest in participating in the development of this Transition Year State Plan were collected from local directors of career and technology education within Maryland's local school systems; recommendations from community college Perkins Plan coordinators; members of Local Advisory Councils (LACs), representatives from Program Advisory Committees (PACs); the Maryland Association of Community Colleges (MACC); the Public School Superintendents Association of Maryland (PSSAM); the Governor's Workforce Development Board (GWDB); the State's Economic and Workforce Development State Agencies; representatives from Maryland's ten Career Clusters; private citizens; parents; several affinity groups representing education, special education, rehabilitation services, library services, and non-public schools. In addition, letters of invitation to participate in the State workgroup were sent to all of the individuals and entities required in section 122(c)1 of the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V).

The process involved over 320 individuals representing: secondary and postsecondary career and technical education programs; local career and technology education directors across Maryland's school systems; community college Perkins Plan coordinators; two year minority serving institutions and historically Black colleges and universities; adult education providers; teachers, faculty, school leaders, content supervisors; principals; specialized instructional support personnel; career and academic guidance counselors; career counselors; paraprofessionals; community representatives; parents, students and community organizations; the State workforce development board which in Maryland is the Governor's Workforce Development Board (GWDB); special populations; business and industry; organized labor as well as non-union representatives (Associated Builders and Contractors); representatives serving out-of-school youth, homeless children, at-risk youth, Juvenile Services Education System; Adult Correctional Education; and individuals with disabilities. In addition, representatives of career and technology education professional associations, community college presidents, local school system superintendents, the Maryland Higher Education Commission, the Maryland Department of Labor, Licensing and Regulation, the Maryland Department of Commerce, and the Maryland State Department of Education participated in the State Plan process. Each of Maryland's ten career clusters had industry representation, as well as the Governor through the Executive Director of the Governor's Workforce Development Board.

Maryland does not have tribally controlled colleges or universities, Indian Tribes or Tribal organizations. Also, charter schools in Maryland were represented since they are considered to be part of the local school system for Perkins funding purposes.

Input was also solicited from the following organizations/associations. A listing of members of the State Transition Plan Workgroup, delineated by subgroup, appears in Appendix A.

- AFL-CIO, Metropolitan Baltimore Council
- Allegany College of Maryland
- Allegany County Public Schools
- American Hotel and Lodging Educational Institute
- Anne Arundel Community College
- Anne Arundel County Detention Center
- Anne Arundel County Public Schools
- Anne Arundel Economic Development Corporation
- Anne Arundel Medical Center
- Associated Builders & Contractors, Inc.
- Associated General Contractors of America-MD Chapter
- Association of Teacher Educators
- Automotive Service Excellence Education Foundation
- Baltimore Alliance for Careers in Health Care
- Baltimore City Community College
- Baltimore City Public Schools
- Baltimore County Office of Human Resources
- Baltimore County Public Schools
- Baltimore Reads
- Baltimore Teachers Union
- Building Congress & Exchange of Metropolitan Baltimore
- Calvert County Public Schools
- Caroline County Public Schools
- Carroll Community College
- Carroll County Public Schools
- Cecil College
- Cecil County Public Schools
- Charles County Public Schools
- Chesapeake College
- Cisco Systems, Inc.
- College of Southern Maryland
- Community College of Baltimore County
- Community Law in Action, Inc.
- Council of Educational, Administrative & Supervisory Organizations of Maryland
- Dorchester County Board of Education
- FiberPlus, Inc.
- Finishing Trades Institute
- Fitzgerald Auto Malls
- Frederick Community College
- Frederick County Public Schools
- Fund for Educational Excellence
- Garrett College
- Garrett County Board of Education
- Glaxo Smith Kline (Rockville Biopharm, GMS)
- Governor's Workforce Development Board
- GROCO, Inc.
- Hagerstown Community College
- Harford Community College
- Harford County Public Schools
- Howard Community College
- Howard County Public Schools

II. NARRATIVE DESCRIPTIONS

Plan Development and Consultation

- Independent Electrical Contractors-Chesapeake
- Johns Hopkins Community Physicians - Odenton Pavilion
- Kent County Public Schools
- Kimball Construction Company, Inc.
- Legg Mason
- Living Classroom
- Lockheed Martin Corporation
- Lower Shore Workforce Alliance
- Maritime Institute
- Maryland Agricultural Education Foundation
- Maryland and DC AFL-CIO
- Maryland Automobile Dealers Association
- Maryland Business Roundtable for Education
- Maryland Career and Technical Administrators
- Maryland Chamber of Commerce
- Maryland Council of Community College Presidents
- Maryland Department of Commerce
- Maryland Department of Disabilities
- Maryland Department of Labor, Licensing and Regulation
- Maryland Emergency Management Agency
- Maryland Higher Education Commission
- Maryland Live! Casino
- Maryland PTA
- Maryland Public Television
- Maryland Retired School Personnel Association
- Maryland State Department of Education, Division of Assessment, Accountability and Information Technology
- Maryland State Department of Education, Division of Career and College Readiness
- Maryland State Department of Education, Division of Curriculum, Instructional Improvement & Professional Learning
- Maryland State Department of Education, Division of Early Childhood
- Maryland State Department of Education, Division of Early Intervention & Special Education Services
- Maryland State Department of Education, Division of Educator Certification & Program Approval
- Maryland State Department of Education, Division of Rehabilitation Services
- Maryland State Department of Education, Division of Student Support, Academic Enrichment, & Educational Policy
- Maryland State Department of Education, Office of School, Teacher, and Principal Improvement
- Maryland State Library
- MD Association for Supervision & Curriculum Development
- MD Association of Boards of Education
- MD Association of Community Colleges
- MD Association of Pupil Personnel
- MD Association of Secondary School Principals
- MD Career Development Association
- MD Educators of Gifted Students

II. NARRATIVE DESCRIPTIONS

Plan Development and Consultation

- MD Library Association
- MD Science Center
- MD Society for Educational Technology
- MD State Education Association
- Mid-Atlantic Center for Emergency Management
- Montgomery College
- Montgomery County Public Schools
- National Security Agency
- Next-Stage Development Group
- Oracle
- Platinum Hospitality Inc.
- Prince George's Community College
- Prince George's County Public Schools
- Public School Superintendents Association of MD
- Queen Anne's County Chamber of Commerce
- Queen Anne's County Department of Economic & Tourism Development
- Queen Anne's County Board of Education
- Queen Anne's County Public Schools
- Quick Study Consulting, LLC
- Sandy Spring Bank
- Shapiro and Duncan
- Somerset County Public Schools
- St. Mary's County Public Schools
- Susquehanna Workforce Network
- Talbot County Public Schools
- Terminal Corporation
- Towson University
- United Association (UA) Training Department – International Training Fund
- UM Baltimore Washington Medical Center
- University of Maryland Eastern Shore
- University of Maryland Extension
- Verdant Visions Horticultural Planning
- Washington County Public Schools
- Wicomico County Board of Education
- Wicomico County Public Schools
- Worcester County Board of Education
- Worcester County Public Schools
- Wor-Wic Community College
- Each of Maryland's Ten Career Clusters:
  1. *Arts, Media and Communication*
  2. *Business Management and Finance*
  3. *Construction and Development*
  4. *Consumer Service, Hospitality and Tourism*
  5. *Environmental, Agricultural and Natural Resources*
  6. *Health and Biosciences*
  7. *Human Resource Services*
  8. *Information Technology*
  9. *Manufacturing, Engineering Technology*
  10. *Transportation Technologies*

Maryland's extensive planning process involved three face-to-face meetings as well as opportunities to participate and provide input online through Dropbox. The first face-to-face meeting was convened on October 11, 2018 with 95 people in attendance. During this meeting, the workgroup was provided with an overview of the current status of Career and Technology Education in Maryland, including supporting data. This was followed by an in-depth explanation of the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V). There was a considerable amount of information to absorb, especially for those participants who were not familiar with the new law so an opportunity was provided for

questions and answers regarding Perkins V, CTE in Maryland and the State Transition Year process.

Four subgroups were identified prior to the first meeting and were organized around key components to be addressed in the State Transition Year Plan. During the working lunch, participants were provided with an explanation of each of the subgroups and what information would be gathered from each one. The four subgroups and their roles were explained to the participants in a paper handout and were made available electronically. The information that was shared follows.

a. The Role and Purpose of the Subgroups

The CTE subgroups helped to inform the development of the Maryland Career and Technology Education Transition Year State Plan for 2019 – 2020. The Maryland State Department of Education (MSDE) staff members were assigned to facilitate each of the four subgroups and record their input. The members of the following four subgroups were asked to provide input for the development of Maryland's State Transition Year Plan based on the following topics.

b. Subgroup 1: Local Application/Needs Assessment/Monitoring

This subgroup examined and provided input into the following required items: local application for funding; comprehensive needs assessment; monitoring process; improvement plan requirements when performance targets are not met by the 90% threshold; involvement of stakeholders in CTE programs; improvement of academic and technical skills for CTE students; keeping current with labor market data on high-skill, high-wage, or in-demand industry sectors or occupations; using data to drive funding and program decisions; and related areas.

c. Subgroup 2: Accountability and Performance Targets

Items for feedback and comments from this subgroup focused on performance measures and state and local targets for CTE concentrators; ways to address disparities or gaps in performance; recommendations of specific indicators in the law for secondary recipients to help to tell the story of successful CTE; capturing accurate data especially for those who have exited or completed a program and earned an industry credential; input on elements to consider being a part of a State Improvement Plan; elements of a local improvement plan; and other data points and challenges.

d. Subgroup 3: Special Populations

The definition for special populations expanded under the new federal act. This group examined ways that Maryland can recruit and ensure that special populations are active participants in CTE. They examined such topics as equal access to CTE programs; providing supports to ensure success; preparing special populations for high-skill, high-wage, or in-demand industry

occupations; ways to enable success to meet or exceed performance levels; preparing special populations for nontraditional careers; preventing and addressing barriers for success; ensuring and preparing special populations for the next learning level; and serving students who are members of special populations in student organizations.

e. Subgroup 4: Preparing an Educated and Skilled Workforce

This subgroup examined such topics as how all aspects of an industry are incorporated into CTE programs of study; how students can receive career guidance and academic counseling to ensure success in CTE programs of study; assuring that in-demand industry sectors or occupations are part of CTE programs of study; providing adequate and equitable professional development opportunities for educators; ensuring that Maryland's definition of a CTE program of study is easily understood and contains the requirements stated in the federal act; how Maryland's CTE programs of study support the State's workforce development activities and are aligned with and address the education and skill needs of the employers in the state; joining with other state workforce agencies to align the State's strategic vision for meeting the skilled workforce needs of employers, including emerging in-demand industry sectors and occupations; assisting counselors and others in making information available about CTE programs of study; ways to collaborate with and not duplicate efforts of other workforce partners; expanding upon the recruitment and preparation of teachers, including pre-service teachers, in CTE programs of study; and involving key stakeholders in preparing Maryland's future workforce.

Throughout the afternoon of October 11th participants rotated through the four subgroups with staff providing an explanation of what each subgroup would cover in its involvement with the development of Maryland's CTE Transition Year State Plan for 2019 – 2020. All participants were reconvened into one large group and any clarifying questions were answered. Then, participants were asked to select the subgroup in which they wanted to serve.

The first meeting concluded with information on how participants would have the opportunity to share their comments and provide input into all subgroups through electronic means. Each participant was invited to log in to the Dropbox platform. A demonstration was provided so that all participants could see how easy it was to access this platform and provide comments. Evaluations of the day's meeting were collected. The summary of these evaluations showed an overall 4.41 score out of a 5.0 rating scale.

The second face-to-face meeting of the Maryland CTE State Transition Plan Workgroup took placed on October 25, 2018 with 96 people in attendance. During this meeting, the process for the development of the CTE Transition Year State Plan for 2019 – 2020 was once again reviewed since some participants were new to this meeting. Time was provided for questions and answers on Perkins V as well as clarification of the State Transition Year planning process. In addition, questions or comments provided on the previous meeting's evaluations were addressed. Answers were provided to questions, explanations were given for the comments listed on the evaluations that were not questions, and clarification was provided on non-

negotiable items such as the Core Indicators of Performance. Participants were informed that the Core Indicators of Performance are not open to revision because they are defined by the federal law. Also requested on the evaluations, and provided on Dropbox, was a list of acronyms and what they mean.

Participants were then broken down into the subgroups of their choosing. If this was the first time they were attending a State Plan meeting, they were asked to select a subgroup. Everyone's first choice of a subgroup was honored, necessitating the subgroup, *Preparing an Educated and Skilled Workforce,* to be divided into two sections. This was due to the large number of people who selected this subgroup. Breaking it down into two smaller groups allowed for easier facilitation and for everyone's input to be captured.

The subgroups worked on responding to questions specific to the topics they selected, which were aligned to requirements in the Perkins V law. In-depth discussions took place and valuable comments and feedback were captured by staff members assigned to each group.

The day concluded with a recap summary of each of the subgroups' discussions. Once again, through a demonstration, all participants were briefed on how to provide input online via Dropbox. Evaluations were collected and the summary of these evaluations resulted in an overall 4.40 score out of a 5.0 rating scale.

The third face-to-face meeting of the Maryland CTE State Transition Plan Workgroup took place on November 9, 2018, with 78 people in attendance. Again, the process for the development of the CTE Transition Year State Plan for 2019 – 2020 was reviewed as some were new to this meeting. Time was again provided for questions and answers on Perkins V as well as clarification of the State Transition Year process. Questions or comments provided on the second meeting's evaluations were addressed. Answers were provided to questions, explanations were given for the comments listed on the evaluations that were not questions, and clarification was provided on feedback given. The non-negotiable items that will not be addressed during the Transition Year State Plan were reviewed. These were: the Core Indicators of Performance; allocation of funds between secondary and postsecondary local recipients; the questions for feedback from each subgroup; and any changes to current CTE programs eligible for the use of Perkins funds. Some of these items are not negotiable while others require a more in-depth discussion, as well as an analysis of accurate data to make informed decisions. Given that this is a transition year, it was decided to get all of the information and facts prior to making any changes to current policy regarding CTE programs eligible for the use of Perkins funds.

Participants moved to their subgroups and if this was the first time someone was attending a State Plan Meeting, they selected the subgroup to which they were interested in providing feedback. Because it was a priority to try and honor everyone's first choice of a subgroup, two subgroups were very large. This time, the subgroup *Preparing an Educated and Skilled Workforce* wanted to remain as one large group rather than to divide into two as they had previously. The *Local Application/Needs Assessment/Monitoring* subgroup was larger than in

previous meetings and they really combed through the requirements of the local application, making suggestions as to items to include and items that can be removed from the current local application.

Once again, the subgroups worked on responding to questions specific to the topics selected, which were aligned to requirements in the Perkins V law. Some subgroups did not get to all of the questions in the previous meeting so they continued where they left off. Other groups that provided feedback to all of the questions discussed items that related to their subgroup and Perkins V. Serious discussions took place and valuable comments and feedback were captured by staff members assigned to each group.

The day concluded with a recap summary of each of the subgroups' discussions. Once again, through a demonstration, all participants were briefed on how to provide input online via Dropbox. Dates for the public comment period for the Accountability Section, as well as dates, locations and times for the public hearings were shared. Evaluations were collected and the summary of these evaluations showed an overall 4.33 score out of a 5.0 rating scale.

The Maryland CTE Transition Year State Plan for 2019 – 2020 was developed with representation of the Governor by the Executive Director of the Governor's Workforce Development Board. It was submitted to the Governor by the State Superintendent of Schools, Dr. Karen Salmon, on March 1, 2019.

2. Amount and Uses of Funds for various learning levels

There were specific items related to funding which were shared with the State Plan workgroup that Maryland will be gathering more information and data on to make informed decisions as to whether to proceed in the same manner or to change current policies and practices. These items included such things as the percentage for the CTE Reserve Fund, allocation of funds between secondary and postsecondary recipients, as well as whether to expand CTE programs eligible for Perkins funding. During the Transition Year, data will be analyzed and discussed in consultation with other state agencies, in order to make a fair, equitable, and data-driven decision as to the above mentioned items. Data, performance targets, and other criteria and evidence-based factors will be involved in the study to make the final decisions will be included in the State Plan beginning in 2020.

Maryland uses five percent of the 85% pass through funds for the CTE Reserve Fund. This decision was based upon running formula amounts to local eligible recipients. In using more than five percent, Maryland would have eliminated some eligible recipients from receiving any formula dollars. Therefore, it was decided under Perkins IV, that the State wanted to be as inclusive as possible of the Perkins funds and therefore five percent is currently used for the CTE Reserve Fund. With the increase in federal Perkins funds, this decision will be evaluated and once Maryland receives its allocation for the next program year, formula grants will be run along with various scenarios for the CTE Reserve Fund. Since the exact amount to the State will not

be known until close to when the Transition Year State Plan must be submitted, Maryland will keep the CTE Reserve Fund at five percent of the pass through 85 % for the Transition Year.

Maryland permits Perkins funds to be spent for upgrades to CTE programs of study that are approved at the secondary level by the Maryland State Department of Education and at the postsecondary level by the Maryland Higher Education Commission. Both of these state agencies are the sole agencies for approval over such CTE programs at the stated learning levels.

In an effort to thoroughly think through these decisions, gather the appropriate information on which to base these decisions, and other factors, it was decided that Maryland will keep the allocation between secondary and postsecondary eligible recipients at the same ratio as it is currently. This is as follows: 5% of the 85% pass through formula dollars will be used for the competitive CTE Reserve Fund; 65% of the remaining formula dollars will be allocated for secondary CTE, and 35% will be allocated to postsecondary CTE. The decision to retain the current definition for eligible CTE programs of study will also remain until further study can be conducted. Both of these important issues will be studied and input provided from stakeholders prior to any changes in current practice. This will be done during the Transition Year and final decisions will be included in the next four-year Maryland CTE State Plan.

Maryland will comply with the required percentages in the Perkins V Act in how it allocates its funding. Consultation will continue to occur between the Maryland Higher Education Commission and the Maryland State Department of Education in making the decision about the allocation of funds to community colleges and secondary school systems. Currently, Maryland does not allocate funds for Adult Education through Perkins; however, the representative from the Department of Labor, Licensing and Regulation, where Maryland's Adult Education programs are housed, was involved in the development of the Transition Year State Plan.

3. Public Comment Opportunities

Opportunities have been provided both face-to-face and online for the public to comment on Maryland's CTE Transition Year State Plan. The three face-to-face meetings held on October 11, 2018, October 25, 2018, and November 9, 2018, afforded participants an opportunity to provide input into the Transition Plan development. Online opportunities were provided through Dropbox: https://www.dropbox.com/sh/he8nre79h2x5ozd/AADSMj3suy04txtxJSZssSGZa?dl=0 and through the posting of the CTE Transition Year State Plan on the Maryland State Department of Education's website: http://marylandpublicschools.org/Pages/default.aspx

From November 28, 2018, through January 28, 2019, a 60-day time period, the public and participants of the Transition Year State Plan workgroup were invited to provide comments on the Accountability portion of Maryland's CTE Transition Year Plan. Feedback was received from three individuals through Dropbox. The comments, along with the staff response can be found in Appendix B.

II. NARRATIVE DESCRIPTIONS

Plan Development and Consultation

The thirty-day public comment period on the entire Transition Year State Plan was from January 30, 2019, to February 28, 2019. During this time, two face-to-face public hearings took place. The first was on February 4, 2019 from 4:30 to 7:30 p.m. This face-to-face public hearing was held at the Owings Mills Branch of the Baltimore County Public Library, located at 10302 Grand Central Avenue, Owings Mills, MD 21117. No one came to offer testimony in person. On February 21, 2019 from 4:30 to 7:30 p.m. another face-to-face public hearing was held at Chesapeake College in the Health Professions and Athletic Center (HPAC), Room 143, located at 1000 College Circle, Wye Mills, MD 21679. No one came to offer testimony in person. The selection of locations for the face-to-face public hearings were strategically chosen to allow people who wished to testify in person a chance to do so without burdensome travel time from their home. One occurred on the Western Shore (Owings Mills) and one on the Eastern Shore (Wye Mills) providing for the fact that no one had to cross the Chesapeake Bay to attend a face to-face public hearing. Both public hearings were announced via e-mail, on the MSDE website, through Dropbox and in the *Maryland Register*. The first hearing appeared in the *Maryland Register, Volume 46, Issue 1, Friday, January 4, 2019* on page 26 and is available at this link: http://www.dsd.state.md.us/MDR/4601.pdf. The second hearing appeared in *Maryland Register, Volume 46, Issue 2, Friday, January 18, 2019* on page 36 and is available at this link: http://www.dsd.state.md.us/MDR/4602.pdf. A total of three comments were provided electronically and by mail. The comments, along with the staff response can be found in Appendix C.

The CTE Transition Year State Plan was presented to the Maryland State Board of Education on March 26, 2019, the state agency eligible to submit Maryland's State Plan and receive the federal CTE funds. The Maryland State Board of Education approved the CTE Transition Year State Plan. It was submitted to the U.S. Department of Education, Office of Career Technical and Adult Education by the May 24, 2019 deadline.

B. Program Administration and Implementation

1. State's Vision for Education and Workforce Development

Maryland's vision for education and workforce development includes an aligned system where every person maximizes his or her career potential, and employers have access to the human resources they need to be successful. The vision includes:

- Alignment of the business, workforce system, and economic development interests in Maryland.
- Well-integrated, coordinated, and collaborative systems across agencies, institutions, local areas, and business.
- Preservation and expansion of Maryland's highly-educated workforce.
- Creation of opportunities for all Maryland residents to participate and succeed in the workforce.

To achieve this mission, Maryland's Workforce Development System is a partnership among state agencies including: Department of Labor, Licensing and Regulation (DLLR); Maryland State Department of Education (MSDE); Department of Human Services (DHS), and the Governor's Workforce Development Board (GWDB). Guided by the Benchmarks of Success for Maryland's Workforce System, which was signed by each of the Secretaries of the Departments listed, as well as the State Superintendent of Schools and the Chair of the Governor's Workforce Development Board, these goals seek to strengthen and enhance the workforce system with a commitment to innovation, collaboration, and a true systems approach among the State's many workforce partners. In the Maryland Workforce Innovation and Opportunity (WIOA) State Plan, page 35 of the document further provides a full list of the workforce system partner programs along with the agencies that manage them. It is available through this link: http://dllr.maryland.gov/wdplan/wdstateplan.pdf

A clear vision, goals, and measurable achievements that help define success and lay the core foundation of this new system are described in Maryland's WIOA State Plan. In keeping with Maryland's commitment to place "people before performance," these goals and 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. This signed document can be found at this link: https://www.dllr.state.md.us/employment/wioaletter.pdf. In addition,

a. State-supported workforce development activities

State-supported workforce development activities are coordinated through a collaborative partnership among the GWDB, the DLLR, and the Maryland Department of Commerce (DOC), that support in-demand career pathways and occupations. The in-demand occupations and careers are based on mutually agreed upon criteria including amount of wages, education/skill level required for entry into the job market, and the need for workers in that specified field.

According to the National Skills Coalition, workforce projections show that by 2024, 88% percent of the careers in Maryland will require middle-skills (more than a high school diploma but less than a baccalaureate degree) and high-skills (a baccalaureate degree or higher). At the state level, the State Superintendent of Schools and several presidents of community colleges, as well as University System of Maryland colleges and universities, participate in the GWDB quarterly meetings in which employers bring to the table areas of the state's workforce and economic development needs. Along with these leaders, representatives from other State agencies with similar missions, partner to ensure that duplication of effort does not occur and that Marylanders can truly benefit from programs and services offered at the American Job Centers across the State.

Representatives from Maryland's GWDB, DOC, DLLR, the Maryland Higher Education Commission (MHEC), the Maryland Apprenticeship and Training Council (MATC), Community College CTE Program Leaders, Local School System CTE Directors, the Maryland Association of Community Colleges (MACC); and the MSDE staff continuously collaborate to ensure alignment of workforce and economic development initiatives of the state with CTE programs. The partnership among these agencies is evidenced by their participation in the following: CTE Review Panel for locally developed CTE programs of study (POS); on-site CTE Monitoring Visits; evaluators for CTE Innovation Grants; presenters at statewide conferences such as the annual Counselor's Conference, Apprenticeship Maryland Conference for Youth Apprenticeships; Governor's Workforce Development Quarterly Meetings; and related statewide workforce development meetings.

Maryland's system of CTE is organized around 10 broad career clusters that reflect the State's middle- and high-skill economic sectors. The career clusters share a common core of knowledge and skills that provide students with an understanding of all aspects of the industry that they are planning to enter. Maryland's CTE cluster model is described in the publication *Maryland High School Career and Technology Education Programs of Study which is located at* *http://marylandpublicschools.org/programs/Documents/CTE/CTE%20Programs%20of%20Study/CTEBlueBook2017.pdf* . In partnership with statewide industry advisory groups, Maryland identified each career cluster by the core functions of the industry. The core functions were translated into career pathways and from there, into specific CTE Programs of Study that lead to early college credit and industry-recognized credentials at both secondary and postsecondary levels.

CTE POS are vetted to ensure alignment with standards so that students can qualify to earn industry-recognized credentials and/or early college credit. At the State level, each of the 10 career clusters has active Program Advisory Committees (PACs) for each CTE program within the cluster. The PAC consists of employers and program providers who review CTE curricula and assessments to ensure alignment with standards and valued credentials, share updates on equipment needs, and advise on needed program improvements. PACs are also required at the local level for each CTE program. Often times the PAC is a joint one with the school system and community college for the specific CTE program. Having one PAC serve both levels helps to ensure that CTE secondary programs are aligned with those at two- and four-year colleges. At

least two meetings are held annually, but most PACs meet more frequently and are continuously engaged with CTE educators to ensure program quality. A PAC is required for each CTE program. CTE Programs are updated regularly through the help of the PACs as industry requirements evolve.

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

Efforts to ensure success for members of special populations are provided through the Division of Early Intervention and Special Education Services (DEI/SES) by having staff: 1) participate in local PACs with representation from local transition coordinators and transition professionals from DEI/SES; and 2) engage with two- and four-year colleges partnering with local special education programs to promote career pathways that align with current CTE programs. Guidance for LACs and PACs is provided through *Career and Technology Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures at* *http://marylandpublicschools.org/programs/Pages/CTE/PerkinsIV/Advisory-Groups.aspx.*

Maryland's workforce development activities include joint efforts from all economic and workforce development agencies. The CTE POS address the State's need for a skilled workforce, are based on all aspects of an industry and are designed to help students make informed decisions regarding career pathways. They afford students with opportunities for employment and focused secondary and postsecondary education. Specific process steps and criteria to develop and adopt state-approved programs are outlined in the *Policies and Procedures for the Development and Continuous Improvement of CTE Programs of Study* at *https://msde.blackboard.com/webapps/blackboard/content/listContentEditable.jsp?content_id=_332253_1&course_id=_1332_1&mode=quick*

High school CTE POS typically consist of a four-course sequence of increasing rigor. Programs are developed in conjunction with curriculum experts and State Advisory Groups (SAG) comprised of cluster and occupation related industry representatives. Each POS contains occupation-specific curriculum focused on industry required skill sets, essential (employment) skills development, embedded academic standards, and value-added elements such as mentorships, internships, apprenticeships, dual enrollment, articulated/transcripted credit, and industry-recognized credentials. Additionally, students have the opportunity in every school system to participate in Career Technology Student Organizations (CTSO) that further develop essential skills required for career development. CTE POS are in continuous improvement and kept current through partnerships with representatives from key stakeholder groups that serve on PACs. All but one of Maryland's secondary CTE programs of study provide opportunities for

students to earn early college credit, industry recognized credentials, or both. The *Careers in Cosmetology CTE POS* offers students an opportunity to earn the state license; however, a business degree is the only postsecondary program for students who wish to pursue further study. Each example of a CTE POS includes an explanation of the alignment with community colleges and/or baccalaureate degree programs, as well as industry-recognized credentials.

Examples of CTE Programs that address high-skill, high-wage and in-demand career fields

Information Technology

Maryland is home to more than 12,000 IT and cybersecurity companies as well as more than 60 government agencies focused on cyber-crime. Additionally, in 2017, the Governor issued an executive order to strengthen computer science education for all students in order to meet the demands of the 21st century workforce and prepare students for the jobs and careers of the future. Here is the link:
https://content.govdelivery.com/attachments/MDGOV/2017/11/02/file_attachments/907094/Executive%2BOrder%2B01.01.2017.27.pdf

The Information Technology (IT) Career Cluster, was expanded to include computer science and cybersecurity CTE program options to address Maryland's growing workforce need. Programs in computer science and cybersecurity are supported at all levels (secondary and postsecondary) by employers and industry leaders through a variety of means. IT professionals/experts serve on advisory committees, provide professional development opportunities for teachers/faculty, as well as work-based learning for students. In addition, these IT experts assist with presentations at statewide conferences and symposia where they serve as key presenters in this in-demand industry. Here they share their expertise with CTE students, faculty, and teachers as well as industry leaders and employers.

In response to the growing need for IT professionals, cybersecurity pathways were added to the IT Networking Academy (Cisco) CTE Program; the Oracle Database Academy CTE program was updated; the Project Lead The Way Computer Science CTE Program was adopted for statewide implementation; and K-12 Computer Science standards were developed and approved by the State Board of Education. Going forward, MSDE will continue to expand computer science and IT related programs, provide CTE Reserve Fund Grants for new programs, and collaborate with SAGs to offer ongoing professional development to teachers.

Project Lead the Way (PLTW) Biomedical Science (BMS)

PLTW Biomedical Sciences program is one of Maryland's leading Science Technology Engineering and Math (STEM) focused CTE programs of study. The PLTW BMS program is a sequence of courses all aligned with appropriate national learning standards, which follow a proven hands-on, real-world problem-solving approach to learning. Students explore the concepts of human medicine and are introduced to topics such as physiology, genetics, microbiology and public health. Through activities, like dissecting a sheep's heart, students

examine the processes, structures and interactions of the human body – often playing the role of biomedical professionals. They also explore the prevention, diagnosis and treatment of disease, working in teams to investigate and design innovative solutions to the health challenges of the 21st century such as fighting cancer with nanotechnology. There are 50 PLTW BMS programs in 21 of Maryland's 24 school systems. Students who complete the four courses in the PLTW BMS at a PLTW certified high school can apply to receive up to eight transcripted credits from Stevenson University. PLTW BMS students may also sit for the Biotechnician Assistant Credentialing Exam (BACE).

Academy of Health Professions (AHP)

Maryland has expanded its Nursing Assistant program, now called the Academy of Health Professions, well beyond its original focus of preparing students for careers as Certified Nursing Assistants (CNA) and Geriatric Nursing Assistants (GNA). Students enrolled in the AHP program may now pursue certifications as Certified Clinical Medial Assistants (CCMA), Pharmacy Technicians, Dental Assistants and Personal Trainers. Early college credit is also available through Maryland's AHP affiliate, Stevenson University, for students who complete the AHP program.

Homeland Security and Emergency Preparedness (HSEP)

Maryland is positioned in a critical location in the United States with many federal agencies or large installations within its borders such as the Social Security Administration, National Security Agency, Food and Drug Administration, NASA's Goddard Space Flight Center, Naval Air Systems Command, National Institutes of Health, Beltsville Agricultural Research Center, The Naval Academy, and several military bases, as well as airports, ports for shipping and receiving cargo, and passenger cruise ship terminals. Therefore, to satisfy a growing workforce demand, the HSEP CTE program of study was developed in 2005 – 2006 to address the increasing need to protect not only these federal and military installations but due to the proximity of Washington DC to also guard against public safety threats both natural and manmade.

The HSEP program was developed with representatives from local school systems, community colleges, baccalaureate degree granting institutions, representatives from industry who are experts in the field, Maryland Emergency Management Agency (MEMA), workforce development professionals, economic development personnel and the MSDE. The program integrates government, academia, and private sector training/educational initiatives; aligns with the national skills standards in this career area including the Department of Homeland Security (DHS) Office of Domestic Preparedness (ODP) Responder Guidelines and the Office of Domestic Preparedness Security Guidelines for Prevention and Deterrence. It provides students with college level work and articulated credit and/or industry recognized credentials through University of Maryland, University College and the Mid-Atlantic Center for Emergency Management (MACEM) at Frederick Community College (FCC). The program offers three career strands which align with the six mission areas of the United States Department of

Homeland Security. They are: Homeland Security Sciences; Criminal Justice/Law Enforcement; and Information/Communications Technology.

The MACEM at FCC serves as the postsecondary affiliate partner which provides updates to curriculum as well as professional development for instructors, many who have come from the law enforcement/emergency management/homeland security career fields. During the 2018 year, the MACEM worked with the Maryland Apprenticeship and Training Program within Maryland's DLLR to develop a registered apprenticeship in Emergency Management. Other partners in this endeavor included: MEMA, Maryland Emergency Management Association, Montgomery and Anne Arundel Community Colleges, University of Maryland University College, Higher Education Federal Emergency Management Agency (FEMA) at the Emergency Management Institute in Emmitsburg, the International Association of Emergency Managers, and Maryland employers with the need for emergency management-related staffing. The registered apprenticeship is a three-year program with both workplace and academic outcomes. It includes 2,000 hours each year in the field under the direction of a knowledgeable supervisor, and 144 hours (nine credits each year) through one of the partner institutions. Maryland looks forward to growing this new registered apprenticeship during the coming years. The MACEM also developed and delivered a workshop on Inspiring Gender Diversity in the Workplace Today which featured women in the emergency management career field as well as lessons learned from the women of Katrina and how gender, race and class matter in an American Disaster.

Teacher Academy of Maryland (TAM)

In order to address the growing need for teachers, the TAM was developed to increase the pipeline of people entering the teaching profession. Maryland imports over 60% of the teachers needed to fulfill its teaching positions and still many positions remain temporarily filled with long term substitutes. TAM was developed with many partners including: local school systems; community colleges; baccalaureate degree granting institutions; the Maryland Higher Education Commission; the University System of Maryland; and the Maryland State Department of Education through two areas: the Division of Career and College Readiness, and the Division of Educator Certification and Program Approval. It is based upon Maryland's Associate of Arts in Teaching degree which completely transfers to teacher education programs at baccalaureate degree granting institutions leaving the remaining third and fourth year courses to complete.

The TAM program consists of four courses in a sequence culminating in a Teacher Academy Internship where students are partnered with a certified teacher and develop lesson plans, present lessons, evaluate student performance on selected activities and other aspects associated with the education field. TAM is implemented in 22 of Maryland's 24 school systems and has 10 statewide articulation agreements for three or more transcripted credits with both public and private colleges and universities in the state. In addition, some of the colleges and universities also provide scholarships to TAM students who matriculate to the institution of higher education as a declared education major. The scholarships range from $500, $1,000, and $1,500 per semester for up to eight semesters to $10,000 per year for up to four years. TAM students can also earn industry recognized credentials such as the ParaPro which in Maryland allows

immediate entry into employment in the education field, as well as PraxisCORE. In Maryland, if students make the cut score on the SAT, it is counted in lieu of having to take the PraxisCORE.

Medium/Heavy Truck (Diesel) Technician

Diesel technology advances quickly, and local school systems continue to offer the latest innovations in this program of study. Many students who complete these programs are immediately employed, due to Maryland's location on the major north-south traffic corridor of the eastern U.S., as well as being a railroad hub (with trains powered by diesel locomotives), and home to one of the busiest ports in the country. Diesel generators, used to produce electrical power, are also manufactured in Maryland and installed throughout the country, and technicians are needed to build, install and service these generators. Technicians entering this field command high wages, and those who continue their education and specialize in areas such as marine diesel or power generation are extremely valuable to employers.

The cost to a school system to initiate a diesel program is extremely high, yet Maryland received state funding for CTE Innovation Grants to fund two new programs beginning in Fall, 2019. These additions will bring the number of programs to seven, and the hope is that more diesel programs will come on line as State funding continues in future years. With the lowest unemployment rate in Maryland in decades, diesel technicians are in demand.

Postsecondary Programs

Maryland's 16 community colleges are essential to the education, training, and re-training of the region's workforce. Each college closely monitors current and emerging business and industry needs, and continuously updates programs being offered. For example, Howard Community College convenes a Commission on the Future every five years that brings together approximately 100 community members, mostly from the business and industry sectors, to foster community participation in preparing the college and its programs to meet the needs of the future. Other Maryland community colleges convene similar work groups and task forces to generate new ideas for programs and program improvements, such as *Journey to the Future* at Harford Community College. These work groups and task forces have been instrumental in creating new programs in emerging fields, such as Additive Manufacturing Technology, Geographical Information Systems, Geosciences, Construction Science and Management, Digital Design and Management, and multiple levels of Cybersecurity programs that have established the Maryland Interstate 95 corridor as the premier cybersecurity region in the United States.

Colleges also work directly with employers and government agencies to support course development and instruction, including relationships with Engineering Solutions Inc. (ESI), Amazon Web Services (AWS), Northrop Grumman, the National Security Agency (NSA), and the Federal Emergency Management Agency (FEMA). Finally, due to Maryland's proximity with Washington, DC, some community colleges have been designated as "White House Tech Hire" entities that, with support from local economic development authorities, expedite job

placement and promote synergy between education, government, and business/industry to assure educational and occupational programs that provide education on all aspects of an industry.

Two other statewide CTE initiatives that demonstrate collaboration among stakeholder groups are the Apprenticeship Maryland CTE Program of Study and Pathways in Technology Early College High School (P-TECH).

Apprenticeship Maryland

Apprenticeship Maryland is MSDE's newest state Career and Technology Education (CTE) program of study. The program is for students, ages 16 and up and was piloted in Frederick and Washington Counties prior to becoming a state CTE program of study. Staff members from the MSDE, in partnership with staff members from the Department of Labor, Licensing and Regulation, worked collaboratively on the pilot and collaborated to make the program available for statewide implementation. The program is designed to prepare students for sustainable employment and further education based on career pathways in manufacturing and Science, Technology, Engineering, and Mathematics (STEM) occupations.

Participating students start the program in their junior year of high school and complete at least one year of related classroom instruction and a minimum of 450 hours of paid (at least minimum wage) mentored, on-the-job, work experience with a formal agreement among the student, school and employer. The workplace component is supervised by a Youth Apprenticeship Employer sponsor (approved by the Maryland Apprenticeship and Training Council (MATC) through DLLR). The related classroom instruction may take place at the high school in existing CTE courses, at the employer's place of business, at a community college, in an on-line format, or a combination of any of these options. The content for the related instruction is agreed upon by the employer, the Apprenticeship Coordinator, and classroom teachers (if applicable). In 2015, Maryland House Bill 942 established a youth apprenticeship pilot program in two Maryland school systems - Frederick and Washington Counties. The Apprenticeship Maryland Program (AMP) pilot lasted from 2016 to 2018 prior to statewide adoption as a CTE Program of Study. Six local school systems have adopted AMP with more expressing interest. The goal is to expand AMP to every local school system in the State by 2025. Employers representing business, industry, and labor are engaging with local CTE directors to offer youth apprenticeships in STEM-related careers, manufacturing, and trade-related fields.

In 2018, Maryland was awarded a federal grant to further implement the Apprenticeship Maryland Program statewide. The grant is for $600,000 over three years and is called *Pathways to STEM Apprenticeship for High School Career and Technology Education Students*.

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

P-TECH is an early college initiative brought to Maryland by its Governor, Larry Hogan. Each P-TECH program requires a partnership among three entities: a local school system (LSS), a local institution of higher education, and a local employer. 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. P-TECH was designed to address Maryland's workforce needs by preparing young people from all backgrounds for academic achievement and technical, middle-skill employment.

The MSDE consulted with the Maryland Higher Education Commission throughout the development and implementation of the P-TECH program. Through funds appropriated by the State legislature, Maryland has established seven (7) P-TECH schools in five (5) school systems focusing on eight career pathways. The list can be found at http://www.marylandpublicschools.org/programs/pages/ptech/pilot.aspx.

CTE Legislation for Workforce Development

In 2018, the Maryland legislature passed a law appropriating $2 million to award CTE Innovation Fund grants to partnerships of secondary, postsecondary, and business/industry representatives to benefit students, including students with disabilities (Chapter 361/HB1415). Grant applications were due by December 28, 2018. A total of 17 grants were awarded. This was the first time that dedicated funding to CTE was appropriated in over 20 years. The CTE Innovation Grant provides funding to develop and implement a CTE curriculum framework and pathway that is innovative and includes promising practices that are used by the best CTE programs around the world in order to meet current and emerging workforce needs. The grant provides funding to develop CTE pathways or apprenticeships that lead to high-wage, and in-demand careers in support of Maryland's workforce and economic development needs as documented by labor market information. For secondary CTE Pathway Development the partnership must include at least one county board of education, one community college, and one industry partner. The pathway must include a CTE sequenced program of study incorporating academic and technical courses that enables students to qualify to earn an industry-recognized credential; and/or a skills credential issued by the DLLR; and/or early college credit, dual enrollment for high school students where appropriate, advanced placement in a registered apprenticeship, and include collaboration with at least one identified specific industry partner and at least one community college. For the postsecondary CTE Pathway development, the partnership must include a sequence of courses leading to an industry-recognized credential (license or certificate), may include opportunities for students to earn a lower division certificate or an Associate's Degree, allow students the opportunity to earn college credit or advanced placement in a registered apprenticeship, and include collaboration with at least one identified specific industry partner and at least one county board of education. An apprenticeship may also be developed or expanded under this grant program which would be the adoption of the Apprenticeship Maryland Program developed at the secondary level or an apprenticeship program at the postsecondary level which is registered with the Maryland DLLR. Maryland's CTE Innovation Grants focused on the following in-demand, as well as new and emerging career and workforce areas: biotechnology; physical therapy and rehabilitation; construction management apprenticeship; aviation technology; histotechnology; artificial intelligence and cloud computing (the first one in the state); diesel technology and cybersecurity.

Career Pathway Initiatives

The State has invested $1,000,000 of WIOA Governor set-aside funds for demonstration projects that support career pathway initiatives. The grant, targeted to low-skilled jobseekers, including individuals with limited English proficiency (LEP) and those with low reading, writing, and math skills, who may lack high school diplomas. This and other WIOA programs prepares participants for career pathways in local demand sectors by providing access to training, education, job placement, and career development services, while addressing basic needs and life issues that are barriers for success, in order to place participants in long-term, well-paying jobs. The State will continue to support the success of career pathways with technical assistance, clear guidance, and innovative funding mechanisms.

WIOA also places emphasis on serving out-of-school youth, yet Maryland's WIOA partners remain committed to ensuring that clearly defined career pathways exist for in-school youth as well. The workforce system has a strong relationship with the CTE system across the State. Postsecondary CTE program leaders are members of the LWDB, bringing to the table the workforce investment activities in which they are actively engaged. Many CTE administrators at the secondary level also sit on LWDBs. Members are actively engaged with businesses and workforce providers to understand how CTE programs can meet industry needs. In some areas of the state, school systems and community colleges are well represented on the LWDBs by having them serve as their overarching LAC. In other instances, business representatives from a LWIB may also be asked to serve a member of the PAC. Community Colleges contribute to their LWDBs through in-kind and monetary contributions. There is a shared sense of responsibility to provide CTE programs of study that will assist local residents, including members of special populations, to receive the education needed to not only enter into a career field but to advance in that career as well.

Counselors' Conference

MSDE sponsors an annual Counselors' Conference which is attended by over 300 professional school counselors, principals, school-based and central office staff from across the State, as well as postsecondary institutions and employers. The conference format provides information on specific in-demand careers and the Maryland CTE programs of study that prepare students for those careers. Attendees learn about Maryland's CTE Programs of Study including student recruitment strategies, developing partnerships with business and industry, industry certification, college credit options, and career development strategies. The conference offers attendees a chance to hear from instructors, employers, students and others, about the importance of new and emerging career fields. Through an Employer Panel, employers share their needs for future workers, what they look for in potential employees, and other factors that help counselors and CTE staff understand the additional workforce skills needed for employment. Employers have the opportunity to meet students and provide information that helps CTE teachers and counselors better prepare students for careers.

b. State's strategic vision and set of goals for preparing an educated and skilled workforce

Maryland's Workforce Development System is comprised of a variety of partner programs. DLLR, MSDE; DHS, the Department of Human Services (DHS) and the GWDB work closely to ensure services are fully integrated. The Benchmarks of Success for Maryland's Workforce System, signed by each of the Secretaries of DLLR and DHS, as well as the State Superintendent of Schools and the Chair of the GWDB, seek to strengthen and enhance the workforce system with a commitment to innovation, collaboration, and a true systems approach among the State's many workforce partners. A clear vision, goals, and measurable achievements that help define success and lay the core foundation of this new system are described in Maryland's Workforce Innovation and Opportunity Act (WIOA) State Plan. In keeping with Maryland's commitment to place "people before performance," these goals and 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. This signed document can be found at https://www.dllr.state.md.us/employment/wioaletter.pdf.

These goals and benchmarks are not mere measures but rather provide a way of thinking systematically about how Maryland delivers services. They reflect Maryland's dedication to focusing its efforts on people who need the system's assistance the most. The five strategic goals and coinciding benchmarks set a high bar and are meant to be used as a leadership tool, guiding strategic conversations and defining a set of achievements for the workforce system to commit to and strive toward in our collective work to improve the lives of Marylanders.

Maryland's Benchmarks of Success, a shared vision for Maryland's Workforce System, 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:

Strategic Goal 1: Maximizing Employment Opportunities
Strategic Goal 2: Maximizing Skills and Credentialing
Strategic Goal 3: Maximizing Life Management Skills
Strategic Goal 4: Eliminating Barriers to Employment
Strategic Goal 5: Enhancing the 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, career and technology education 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 improving the lives of Marylanders. Maryland's WIOA State Plan can be found at http://www.dllr.maryland.gov/employment/wioa.shtml.

Higher Education

Other initiatives in Maryland to ensure a well-prepared workforce can be found in the *2017-2021 Maryland State Plan for Higher Education*). There are several college completion initiatives in which Maryland postsecondary education is currently committed, driven by a 55% completion goal set during the 2013 legislative session. The legislation set a 55% goal for Maryland adults age 25 to 64 to hold at least an associate's degree by the year 2025 (Education Article §10-205(A)). The Maryland Higher Education Commission (MHEC) reports that Maryland is on track to achieve the 55% completion goal. In addition, the legislation required several coordinated changes to improve postsecondary education and completion in Maryland, many of which impact or align with the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V). Changes include:

- Develop a statewide transfer agreement and reverse transfer agreement, streamlining the transfer process between community colleges and four-year institutions.
- Create the goal and develop incentives for community college students to complete an associate's degree before transferring to a four-year institution.
- Require students to file degree plans (a course of study requirement) at specific points during their academic career.
- Establish graduation benchmarks.
- Require remedial or developmental coursework to be a co-requisite of credit-bearing work or a pre-requisite that is taken the semester before enrolling in credit-bearing work.
- Require students in danger of falling behind meeting graduation and/or programmatic benchmarks to meet with an academic advisor.
- Standardizing an associate's degree to 60 credits (with specific exceptions).
- Establish an Early College Access Grant, which provides financial assistance to dually enrolled students.
- Create limitations on charging tuition for dually enrolled students and explicating tuition agreements between local school systems and institutions.

Other college completion initiatives noted in MHEC's *2017-2021 Maryland State Plan for Higher Education* are:

- Develop targeted campaigns and programs to support first-generation students.
- Identify and address obstacles that students face in preventing them from continued enrollment and completion, in order to address near completion withdrawals.
- Improve policies regarding academic program review that (a) meet Maryland's needs (e.g., workforce shortages and labor market demands), (b) do not saturate a geographical area, (c) allow for responsiveness to changing market and employer needs, (d) do not sacrifice student growth and development, and (e) allow for career exploration and goal setting.
- Ensure that academic policies and campus practices support all students, including non-traditional students.
- Review State policies on credit minimums for state financial aid in an effort to promote on-time completion, and coordinate similar efforts with federal partners to improve access to non-traditional students and improve on-time completion.

Every Student Succeeds Act (ESSA)

These goals are further supported in the MSDE's ESSA Consolidated Plan. The ESSA plan has embedded CTE measures that support the School Quality/Student Success and Readiness for Postsecondary Success performance indicators for the state of Maryland. Students can meet measures for the School Quality/Student Success indicator by attaining concentrator status or higher. While 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 (MATC); attaining CTE concentrator status and completing an industry certification aligned with an MSDE-approved CTE program; or completing an MSDE-approved CTE program. Page 28 and 29 of Maryland's ESSA Plan describes more specifics about this and is accessed through this link:
http://marylandpublicschools.org/about/Documents/ESSA/ESSAMDSubmissionConsolidatedStatePlan091718.pdf

College and Career Readiness and College Completion Act (CCR-CCA)

The CCR-CCA of 2013 passed by the Maryland legislature included the following statement: §7–205.1. (B) (1) Beginning with the 2015–2016 school year, all students shall be assessed using acceptable college placement cut scores no later than 11th grade to determine whether the student is ready for college–level credit–bearing course work in English Language Arts, Literacy, and Mathematics. Since the assessments required under the CCR-CCA must result in acceptable college placement cut scores in English and mathematics, the CTE technical skill assessments (TSAs) did not qualify as an initial assessment option. Career and Technology Education students are expected to meet the CCR designation in the same manner, with the same

options as other students. However, if they complete a State-Approved CTE Program of Study, they may use the CTE/TSA as an additional reassessment option in the event that they do not pass one or both of the required assessments. The MSDE developed a "tool kit" to help local school system leaders interpret and apply the requirements of the law titled: *Tool Kit to Determine Students' College and Career Ready Designation under the College and Career Readiness and College Completion Act of 2013*. It is located at http://marylandpublicschools.org/about/Documents/OCP/Publications/CCRToolKit.pdf Reassessment options include all of the CCR Assessments included in the tool kit for English/Language Arts (ELA) and mathematics, as well as the CTE TSAs.

If a CTE completer qualifies for one of the CTE Technical Skill Assessment or early college credit options prior to 11th grade, he/she is still required to take both the English/Language Arts and Mathematics assessments since the CTE/TSA remains a reassessment option. CTE students may "bank" any of the TSAs that they qualify for prior to 11th grade in the event that they do not pass either the ELA or mathematics assessments. CTE students who do not pass the ELA and/or mathematics assessments are still required to enroll in and complete a transition course or other instructional opportunity (unless it interferes with a graduation requirement). Thus, CTE students may be designated CCR as long as they complete their CTE program of study and qualify for the associated industry-recognized credential or early college credit listed in the tool kit. This policy affirms the importance of CTE and recognizes that TSAs lead to valuable industry-recognized credentials and early college credit that lead to further education and careers.

High School Graduation Requirements, High School Graduation Task Force and the Maryland Commission on Innovation and Excellence in Education

Since 1992, CTE has been an integral component of the Maryland high school graduation requirements as it is one of three elective pathways from which students can choose to receive a diploma. The requirements had not been thoroughly reviewed or changed since 1992. Therefore, in 2018, the Maryland High School Graduation Task Force was commissioned by Dr. Karen Salmon, State Superintendent of Schools, and was co-chaired by Dr. Carol Williamson, Deputy State Superintendent for Teaching and Learning, and Dr. Dara Shaw, Executive Director for Research and Strategic Data Use for the Maryland State Department of Education. Task Force members were presented with the following charge - "To make recommendations to the State Superintendent and Maryland State Board of Education on:

- Credit and program requirements for graduation (number of credits, subject area(s), and other requirements);
- Assessment requirements for graduation; and
- Options for awarding high school diplomas

All recommendations will consider current research, data, and policies on the impact of credits, assessments, and diploma types on college and career readiness and other outcomes.

In addition, the Task Force was given the responsibility to consider existing Maryland statute and policy recommendations generated by the Maryland Commission on Innovation and Excellence in Education (called the Kirwan Commission after the name of the Chairman). Both the High School Graduation Task Force and the Kirwan Commission in their reports recommend sweeping changes to CTE and all of education in Maryland.

The Task Force report recommends retaining CTE as an elective pathway to graduation, but increases its importance by suggesting the elimination of the advanced technology education pathway. This move, if adopted, will enable Maryland to move closer to the goal set in the More Jobs for Marylanders (MJFM) Act of 2017 that calls for 45% of students to complete a CTE program of study, earn an industry-recognized credential, or complete a youth or other apprenticeship program. The MJFM Act goal is also included in Maryland's approved ESSA plan and its measures are embedded in the State's accountability system. The other Task Force recommendation is for CTE to be considered as an endorsement on a student's high school diploma. These recommendations are still under deliberation by the State Board of Education, but if adopted, will give CTE greater visibility and prominence as a pathway for students interested in preparing for employment and further education in a global economy.

The Kirwan Commission's recommendations for CTE are integrated in the draft report of the High School Graduation Task Force. Since the Commission plans to continue its work for another year, it is premature to predict how the CTE recommendations will be funded and operationalized. The draft report calls for students to be assessed in tenth grade instead of eleventh to determine their college and career readiness. Once those assessments are passed, students may opt to enroll in a CTE program of study, an Advanced Placement (AP) or International Baccalaureate (IB) program, or complete the general requirements for a high school diploma. The draft recommendations include increasing access to career counselors so that students can make more informed decisions regarding their futures. Also, there are governance changes recommended that include the formation of a CTE oversight body and a State Skills Standards Board. These recommendations require legislative action and funding by the Governor and Maryland legislature and have yet to be formally considered or adopted.

The recommendations of these two bodies, the High School Graduation Task Force and the Kirwan Commission, must be carefully reviewed to ensure that Maryland's secondary and postsecondary CTE system continues to be aligned with the workforce and economic development needs of the State. In 2018, the Maryland legislature added community colleges to the reporting requirements under the goals of the MJFM Act. The legislature also passed the Career Preparation Expansion Act requiring the Maryland Higher Education Commission to collect information on students who earn "vocational" certificates from an institution of postsecondary education in the state. Coordination with licensing boards and certification providers will need to occur in order to obtain the data. Plans are to meet with MHEC's leadership to determine how to obtain the data on students who earn a "vocational" certificate from a public community college.

c. State's strategy for any joint planning, alignment, coordination, and leveraging of funds

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 GWDB's partner agencies. The Committee's purpose 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. There is mutual benefit from partnering with other workforce agencies through leveraging funds from sources that target similar populations and have comparable benchmarks for progress and measures for success.

Other examples include the partnership with the DLLR and MSDE in the development of the Apprenticeship Maryland Program. This CTE POS was created to engage high school youth in apprenticeship programs. The Governor's priority of establishing P-TECH schools is a partnership among secondary, postsecondary and industry. Both of these initiatives are described in detail elsewhere in this plan.

Maryland Higher Education

Postsecondary CTE is a required partner under WIOA. Some community colleges provide in-kind contributions to workforce initiatives in their particular region while others provide monetary support. Linking community colleges' CTE and the workforce and economic development initiatives under WIOA enhances the partnerships that support Maryland's priorities for a future workforce and growth of high-skill, high-wage, in-demand current and emerging career fields.

Maryland statute (Annotated Code of Maryland, Education Article 21, Section 101 [§21-101]) requires that local recipients have a Local Advisory Council (LAC). School systems and community colleges that receive Perkins funding and are located in the same county or city (Maryland's school systems are each located in a county and the city) must form a joint LAC according to Maryland statute. Many are doing this by using the LWDBs that serve the same jurisdiction as the local school system and community college as the LAC. The joint LAC assists in assuring alignment between the learning levels including opportunities for early college credit through dual enrollment, and articulated/transcripted credit.

In addition to the overarching LAC, CTE programs are guided by industry experts who are members of the Program Advisory Committee (PAC). Each local school system and community college is required to have a PAC for every program of study being offered, comprised of local

business and industry representatives. PACs perform a similar, but much more focused and occupation-specific function as the LAC and are much more involved with the programs and students. Many local school systems and community colleges that have joint LACs also have joint PACs which provides a seamless link between the learning levels. LACs and PACs are described more in depth later in this Transition Year State Plan.

Joint planning of CTE programs at the secondary and postsecondary levels provides students with an opportunity for a seamless transition from one learning level to the other. In addition, it helps to ensure that members of special populations are afforded the same opportunities as all students who wish to enroll in CTE programs.

The monitoring process, which is described in depth later in this document, is conducted jointly with local school systems and community colleges within the same jurisdiction. The monitoring team consists of agency workforce partners and representatives from both local school systems and community colleges. This allows for more opportunities to link CTE programs between the learning levels.

Science, Technology, Engineering and Math (STEM)

Maryland implements several STEM-related CTE Programs that address the state's economic and workforce needs—specifically in the Health and Bioscience; Information Technology; and Manufacturing, Engineering and Technology clusters. With over 11,000 students enrolled, the CTE Engineering program has one of the highest participation rates. Program enrollment increased exponentially since its initial implementation in 2004 with only 144 students. Furthermore, new pathways in cybersecurity and cyber operations were added to the IT Networking Academy-Cisco CTE program, leading to additional certification opportunities for students. In FY 2012 through FY 2016, Maryland received funding state under the General Assembly's Science and Math Education Initiative to grow STEM programs. Part of these funds, $4.5 million, supported the implementation and growth of CTE Biomedical Sciences Programs of Study, yielding $900,000 per year for this initiative. The partnership among industry, secondary and postsecondary education, as well as labor market data, helped to move the State's priorities for a skilled workforce in this area to reality. This funding resulted in the development of 28 new programs and enrollment increased from 181 students in the 2008 pilot year to over 2,840 by the end of the funding period.

Given Maryland's strong technology-based economy, 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. Examples of this include programs to be included in the CTE Reserve Fund Grants, the CTE Innovation Programs grants, (if state funds continue to be appropriated), making STEM CTE programs a priority, as well as the new Apprenticeship Maryland program focused on STEM careers.

CTE Innovation Programs

With the inclusion of the CTE Innovative Programs in 2018 which were described previously, a competitive grant process was opened to both local school systems and community colleges. The law governing this funding required at a minimum, a partnership among a local school system, a community college and an industry partner to develop or expand CTE Innovative Programs which must lead to the achievement of a technical skill assessment which is an industry-recognized credential or postsecondary credits. There must be credible labor market documentation and a business plan for sustainability beyond the grant period. Maryland received applications from school systems and community colleges for more than the $2M that was available. Reviewers from across state workforce and economic development agencies, as well as the GWDB and representation from the Maryland's Apprenticeship Programs scored the applications and then ranked them for funding. Only the most innovative programs were selected, resulting in 17 new CTE programs to be developed in the 2018 – 2019 academic year.

d. Use of State leadership funds

State leadership funds will be used to:

- provide sustained professional development for instructors;
- recruit, prepare or retain CTE teachers, faculty, specialized instructional support personnel or paraprofessionals such as preservice professional development or leadership development, including those who are new to teaching;
- provide upgrades to curriculum in State CTE programs of study through Program Affiliates who are postsecondary institutions, professional organizations, industry intermediaries and other professionals who elect to partner for the continuous improvement and upgrade to CTE programs of study;
- develop statewide articulation agreements;
- market CTE programs of study;
- prepare 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 guidance activities;
- provide funding to CTE programs that serve individuals in State institutions;
- deliver technical assistance for eligible recipients;
- 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.

Leadership funds support Maryland's Affiliates for CTE programs of study which are colleges and universities, as well as industry professional organizations. These entities provide

curriculum development and upgrades, professional development and subject matter expertise to teachers, in support of Maryland's CTE programs of study. In addition, they convene the SAGs to be sure that the state CTE POS are continually reviewed, data are evaluated and needed upgrades are implemented. Specific activities and corresponding expenditures for each activity will be delineated yearly in the annual plan of work.

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

a. Career and Technical Education Programs or Programs of Study

Maryland has developed 53 CTE State programs of study. These programs are available for adoption by local school systems. These CTE programs of study provide an industry-recognized credential where available and appropriate for high school students, as well as early college credit. They also offer statewide articulation agreements in which students from any local school system may receive credit at two- or four-year colleges or universities. 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 so designated and be considered an in-county student therefore eliminating the increased costs as an out-of-county student. 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. Maryland is among the first states in the nation to include Advanced Placement courses in CTE POS where appropriate. The College Board has used Maryland's work as an exemplary model. This can be found at the following link: https://careertech.org/resource/ap-cte-working-together.

New and Emerging CTE Programs

With input from employers, industry sector representatives, and apprenticeship possibilities, Maryland looks to develop new and emerging CTE programs of study in artificial intelligence and cloud computing (the first for the state), unmanned aircraft technology, biomedical science, cybersecurity, as well as apprenticeships including one recently developed for an Emergency Management Specialist through the Mid-Atlantic Center for Emergency Management at Frederick Community College. With Maryland's location in close proximity to Washington DC and to the number of military installations, as well as federal agencies in the intelligence fields, Maryland is encouraging the expansion of programs in emerging career areas in fields related to these high-skill, high-wage, in-demand occupations which provide career opportunities for advancement beyond entry level positions especially with advanced training and security clearances.

Apprenticeship Maryland Program

The Apprenticeship Maryland Program which was previously described, was developed and coordinated through a partnership between the MSDE and the Maryland DLLR. The program is based on a partnership among employers and mentors, school districts, and students and parents. Eligible employers (approved by the Maryland Apprenticeship Training Council (MATC) through DLLR) hire high school juniors and seniors to work in eligible career pathway occupations primarily in manufacturing and/or the science, technology, engineering and mathematics (STEM) industries and provide fair compensation, thus, creating an "earn and learn" opportunity. Students also receive training in employability skills, interpersonal/social skills, and a general knowledge of the world of work.

Pathways in Technology Early College High (P-TECH)

As of December 2018, Maryland has invested over $1.8 million in state funds in the development of the Pathways in Technology Early College High School (P-TECH) programs. P-TECH, which has been described previously, is an early college model which combines high school, college and employment.

Every Maryland P-TECH student will complete a MSDE approved CTE. In most cases, the college courses in which the students are enrolled, beginning as early as the 10th grade, are counted for dual credit, allowing the students to earn college credit towards an associate's degree as well as meet the requirements for being a CTE completer.

The Pathways in Technology Early College High (P–TECH) School Act of 2016 established the state's first two P-TECH schools in Baltimore City. In 2017, one school in Allegany County and two schools in Prince George's County were added. The P-TECH School Act of 2017 added another school in Baltimore City, one in Baltimore County, and one in Montgomery County for a total of eight P-TECH schools in five school systems partnering with community colleges and businesses. Maryland P-TECH students will earn associate's degrees in high-demand allied health careers including Nursing, Respiratory Therapy, Physical Therapy Assistant and Health Information Management. They are also earning degrees in Cyber Security, Computer Information Systems, Network Information Technology, and Engineering Technology.

There is currently a moratorium on new P-TECH schools until data can be examined on the success rate. However, the Governor will introduce legislation in the 2019 Maryland Legislative Session to lift the cap. If lifted, MSDE will release another Request for Proposals to establish additional P-TECH schools.

Maryland's Career Clusters

Maryland has identified ten career clusters and with multiple CTE Programs of Study to guide career development activities; more effectively integrate academic, technical, and industry proficiencies; and provide a framework to link secondary and postsecondary program development with industry career pathways. The career cluster framework was developed in consultation with representatives of business, industry, government, labor, and higher education.

The clusters support and complement Maryland's economic and workforce development strategies and include:

- Arts, Media and Communication
- Business Management and Finance
- Construction and Development
- Consumer Service, Hospitality, and Tourism
- Environmental, Agriculture, and Natural Resources
- Health and Biosciences
- Human Resource Services
- Information Technology
- Manufacturing, Engineering, and Technology
- Transportation Technologies

Maryland's State CTE POS

Each CTE program consists of a planned, sequential and increasingly rigorous program of study linking academic and technical courses from secondary to postsecondary education, all supported by industry input. Programs are designed according to the CTE Development Standards which are required under the Code of Maryland Regulations (COMAR) 13A.04.02.01 and can be found at this link: http://mdrules.elaws.us/comar/13a.04.02

A complete listing of Maryland's CTE Programs of Study at the secondary level can be found in the document *Maryland High School Career and Technology Education Programs of Study: Career and Technology Education Educating Tomorrow's Workforce Today* located at the following link:
http://www.marylandpublicschools.org/programs/Pages/CTE/index.aspx.

Governor's Workforce Development Board

The Governor's Workforce Development Board (GWDB) is the Governor's chief policy-making body for workforce development. The GWDB is a business-led board of 53 members who work to address the challenges of Maryland's workforce needs in the 21st century. Members include

the governor, cabinet secretaries, college presidents, the state superintendent of schools, elected officials, business people, labor, and representatives of nonprofit organizations.

The GWDB is responsible for developing policies and strategies to form a coordinated workforce system from a variety of education, employment, and training programs. It brings together and focuses various workforce development partners and stakeholders on two key outcomes—a properly prepared workforce that meets the current and future demands of Maryland employers, and opportunities for all Marylanders to succeed in the 21st century workforce.

State CTE staff will continue to actively work with the GWDB and all WIOA state partners to ensure that CTE programs of study remain current and aligned with emerging industries and workforce initiatives. The GWDB uses a cluster-based approach to workforce development that involves secondary, postsecondary and business/industry partners.

Through ongoing collaboration with the MDC and the DLLR, MSDE staff members are able to communicate the State's economic and workforce development needs to local partners and adapt programming to align with those needs. For instance, according to the National Skills Coalition, 88% of all jobs in Maryland will be considered middle- or high-skilled by 2024. This means that they will either require some postsecondary education but less than a bachelor's degree (middle-skill), or they will require a bachelor's or an advanced degree. Furthermore, according to the MDC, key Maryland industry areas include:

- BioHealth and Life Science,
- IT and Cybersecurity,
- Advance Manufacturing,
- Aerospace & Defense,
- Financial Services,
- Energy & Sustainability,
- Agribusiness, and
- Military & Federal

Maryland continues to have a strong need for a workforce with STEM knowledge and skills. CTE programs will continue to address the need to prepare students for postsecondary education as well as career options. To that end, CTE programs are developed for students to complete a planned, sequential program that blends academic, technical, and workplace skills.

b. Process and criteria for approval of locally developed programs of study or career pathways

Maryland's requirements for locally developed programs of study are located in the document titled: *Policies and Procedures for the Development and Continuous Improvement of Career*

and Technology Education Programs of Study which can be found at this link: https://msde.blackboard.com/webapps/blackboard/content/listContentEditable.jsp?content_id=_332253_1&course_id=_1332_1&mode=quick 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 its continuous improvement and upgrades, including curriculum and teacher professional development.

When a local CTE POS 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, Licensing and Regulation, the Governor's Workforce Development Board, as well as other CTE Directors. Evidence of need in the career area is provided through labor market data. The PAC assembled to provide input and guidance for the program must include a majority of representatives from business and industry. Postsecondary partners are required. Students must have options to earn industry-recognized credentials, if available and appropriate, as well as the college credit as a component of the submission process. The development of the proposed CTE POS must provide evidence of collaboration from its beginning stages to the submission of the proposed program.

i. Continuous improvement and the local application

The process for continuous improvement of CTE programs includes several aforementioned actions such as:

- review and evaluation by the LAC and PAC,
- on-site and desk monitoring,
- analysis of program data against local labor market data and occupational outlook projections, and
- assessment of program performance against established measures.

The process of developing the local application, at both the secondary and postsecondary levels, must meet the required elements to be addressed as stated in the Act. Local recipients must provide the results of the comprehensive needs assessment as well as describe the data which were used to decide how the funds are proposed to be spent. The local application is a web-based application. A prototype of the questions can be found in Appendix D.

To ensure the continuous improvement of all programs of study, the state convenes on-going advisory groups for State developed programs. These are representatives from key stakeholder groups representing state economic and workforce development, business and industry, labor, education, GWDB, and other partners with knowledge and expertise about the CTE program. Maryland also requires local school systems and community colleges to convene advisory groups. Local Advisory Councils, are found in Maryland statute (Annotated Code of Maryland §21-101). These advisory groups are the overarching guidance structure for CTE programs. They consist of representatives from the LWDBs, industry partners, and secondary and

postsecondary education who serve on the local Program Advisory Committee. The document *Career and Technology Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures* guides the operation of LACs and PACs can be found at this link: http://marylandpublicschools.org/programs/Pages/CTE/PerkinsIV/Advisory-Groups.aspx.

Through work-based learning surveys, both employers and students provide feedback on student participation and suitability of placement. This input helps to drive continuous improvement of programs. The survey questions will be continually reviewed and improved as needed in order to gather better feedback.

Annually, 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 for the ensuing years 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 the 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.

Other continuous improvement activities include publishing annually the Program Quality Index (PQI) and the Local Program Accountability Report (LPAR) which school systems and community colleges analyze and include the data in their annual local applications. The PQI and LPAR data are also reviewed by MSDE in providing technical assistance to local recipients to show where improvements are needed. The data points included in these two reports speak to 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.

Technical assistance is also provided to local recipients as mandatory mid-year and final programmatic reports are submitted and read by staff. In addition to on-site monitoring, desk monitoring takes place as well as a final financial report is required. Each request for funds against formula dollars is reviewed and payments are authorized when all reports are submitted. These processes are ongoing and contribute to the continuous improvement of CTE programs.

ii. Expand access for special populations

The expansion of access to CTE programs for special populations across the state will be to develop a targeted recruitment plan for special populations groups starting in the sixth grade for all CTE programs, including those programs that lead to further learning and for high-skill, high-wage, or in-demand industry sectors or occupations. Informing students about CTE programs in the middle school through open houses, tours, job shadowing, social media, and/or exploratory

programs will help students identify their career interests and be able to have the necessary requirements to select and enroll in CTE programs of their choosing.

Maryland developed a Technical Assistance Bulletin (TAB) which was vetted through the Maryland Office of the Attorney General. This document provides guidance on providing equal access to CTE programs for members of special populations. Admission requirements for CTE programs must be eliminated unless such entrance requirements are absolutely essential for student success in the program. In cases where admissions requirements have been determined to be necessary, they must fully comply with the guidance issued in the TAB which is located at this link:
http://www.marylandpublicschools.org/programs/Documents/CTE/PerkinsIV/Resources/CTEAdditionalResources/Technical-Assistance-Bulletin.docx

iii. Support employability skills

In response to an evolving and more global economy as well as changes in employers' expectations, MSDE established a system of career development aligned to Maryland's career clusters to support students' employability skills. Academic and career plans are required for every student beginning in the eighth grade and school systems are required to implement a standards-based program of career development for every student beginning in the elementary years. Maryland's Career Development Framework, Career Clusters and CTE programs of study, along with a requirement that every eighth grader develop an aligned academic/career plan, provide the infrastructure to deliver career and college readiness and essential employability skills to students. The framework provides a structured, developmental approach for teaching students and adults about the world of work along with encouraging the development of positive personal characteristics and self-efficacy skills needed for making appropriate choices regarding their education and career paths. The framework also includes the ***Skills for Success*** workplace readiness skills. The *Skills for Success* is a Maryland model that is similar to the Partnership for 21st Century Skills and prepares students to work successfully in a diverse, innovation-driven economy. By encouraging skill building in the areas of learning, thinking, communicating, technology and interpersonal skills, the Maryland Career Development Framework provides educators with standards and learner objectives that are essential elements for curriculum, instruction and assessment activities to compliment the ***Maryland College and Career Readiness Standards***. They are accessible through this link:
http://marylandpublicschools.org/programs/pages/md-ccrs/index.aspx

Employability skills embedded in Maryland CTE programs of study are supported by various experiential learning opportunities, providing students with experience in and understanding of all aspects of an industry. Work-based learning opportunities are an integral programmatic component and exist through volunteer mentorships, youth apprenticeships, paid and unpaid internships, PAC member guidance, a project mentored by an employer, or a school-based clinic or enterprise.

Over the years, Maryland's school reform agenda has included major changes in CTE. The MSDE, DCCR created a new model of career and technology education that prepares students for both employment and further education. Rapid changes in the global economy provided the impetus for the establishment of Maryland CTE Programs of Study, which include both sequential technical and academic coursework guided by industry standards, including employability skills. Completion of the prescribed program can result in students earning early college credit and industry certifications, both clear indicators of being career and college ready.

Maryland CTE Programs of Study include a coherent set of academic, employability, and technical skills, based on national and state standards that provide students moving directly to employment or further education with a value-added competitive advantage. The document titled *Policies and Procedures for the Development and Continuous Improvement of Career and Technology Education Programs of Study* at: https://msde.blackboard.com/webapps/blackboard/content/listContentEditable.jsp?content_id=_332253_1&course_id=_1332_1&mode=quick is Maryland's guide to developing CTE programs of study. Within this document, policies clearly describe the required content for programs of study, including skills standards 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, and core skills or knowledge for an industry, to skills common to an occupational cluster, and specific occupational skills. Standards may cover basic and advanced academic competencies, employability competencies, and technical competencies. Development of these standards is tied to efforts to certify students' and workers' skills for a given career pathway.

Currently, Maryland is performing another extensive review of existing industry-recognized credentials to determine the degree to which each is perceived as value-added by Maryland employers. Once complete, value-added credentialing will be aligned with Maryland CTE programs of study and incorporated, if not already embedded, in the curriculum to provide students with the academic, technical, and employability skills to succeed in their careers.

c. Describe how the eligible agency will:

i. Make information on approved programs of study and career pathways available

Maryland has created a demand-driven labor market system through its industry sector initiative, led by GWDB. This initiative aligns with the State's Career Clusters and State CTE POS. Information about the State's CTE POS can be found at this link: http://www.marylandpublicschools.org/programs/Pages/CTE/index.aspx. Workforce and occupational information is provided through American Job Centers (WIOA) at http://www.dllr.state.md.us/county/ and the Maryland Workforce Exchange at https://mwejobs.maryland.gov/vosnet/Default.aspx, an internet Labor Market Information system (LMI).

The MSDE has also created Counseling and Advisory materials for students in grades seven through 12. Teachers, administrators and counselors receive professional development and coaching to implement the resources through a systemic approach that involves every student. A focus of the Maryland Counseling and Advisory resources is the development of a student's career plan; students using decision-making processes to plan, set and achieve goals; and their participation in scheduled career and school-based activities, counseling and postsecondary planning sessions. Students develop and continually update their career plan as stipulated in the Code of Maryland Regulations (COMAR) 13A.04.10.01. The career plan guides program and postsecondary degree completion in a CTE pathway program. As previously mentioned, a CTE program of study is designed to help students earn advanced college credit and technical skill assessment through work-based learning and industry-recognized certifications/licenses.

As previously mentioned, Maryland has developed the *Maryland Career Development Framework* which is available at this link: http://www.marylandpublicschools.org/programs/Documents/CTE/CDFrameworkAugustRevised2012.pdf. It includes career development for K – Adult.

Making CTE information available

On the state level, print, Internet, and social media marketing and promotional materials ensure that information is available to students, parents, counselors, and other key stakeholder groups. In 2017, MSDE was one of four states to receive a grant from Advance CTE. The grant, sponsored by the Siemen's Foundation, was intended to identify and implement strategies to attract students to high-quality CTE programs of study. The social media guide that was developed was disseminated at both state and national levels.

Maryland's project consisted of piloting social media campaigns in two local school system. Both school systems documented increased CTE awareness from parents, students, counselors as well as other educators. At the same time, MSDE increased its use of social media to include CTE student profiles and a series of CTE student videos that are posted on the website, greater use of Twitter to include a variety of CTE hashtags, and the development and launch of a new interactive CTE website called CTE Works at this link: https://mdcteworks.org/ MSDE is also benefitting from a partnership with a local marketing company that is working to update and brand several CTE products and publications through in-kind contributions.

Maryland convenes annual counselors' conferences to inform counselors and educational administrators about CTE. In addition to presentations on CTE programs of study, students share their experiences in CTE, employer panels provide insight into what they look for in potential employees, and administrators and college/university admissions staff members share their perspectives on being successful in postsecondary education.

Local school systems use a wide variety of platforms including student visits to CTE centers; open houses promoting CTE programs; back-to-school night activities; CTE student ambassadors to elementary schools, middle schools, Chambers of Commerce, and Rotary; local access cable announcements and promotional videos; generationally-aligned technology including Apps, video streaming, websites, and focused electronic geo-marketing targeting of student cohorts; program alumni speakers; library events; providing CTE information during sporting events; career inventory software (e.g., Naviance, Career Coach); and numerous local, regional, and state-wide career fairs. Postsecondary partners provide opportunities for high school students to visit college campuses and participate in observing college classes, visit dorms, and learn more about college life.

ii. Facilitate collaboration in the development and coordination of career and technical education programs and programs of study and career pathways

The Maryland Career Cluster Frameworks (http://www.marylandpublicschools.org/programs/Documents/CTE/CDFrameworkAugustRevised2012.pdf) were developed in consultation with representatives of business, industry, government, labor, and secondary and postsecondary education. To ensure the continuous improvement of all programs of study, the state convenes on-going advisory groups for State developed programs. It also requires local school systems and community colleges to do the same. Advisory groups are comprised of representatives from business and industry, education, organized labor, career guidance and academic counselors, parents and students, institutions of higher education, interested community members and organizations, representatives of special populations, and other key stakeholders. Program Advisory Committee requirements, as well as Local Advisory Councils, which consist of PAC member representatives, are in Maryland statute (Annotated Code of Maryland §21-101). The document *Career and Technology Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures* can be found at this link: http://marylandpublicschools.org/programs/Pages/CTE/PerkinsIV/Advisory-Groups.aspx

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 PACs, and assist in the professional development 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 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. There are four

CTSOs in Maryland: DECA, FBLA, FFA, and SkillsUSA that are supported through MSDE. Approximately 13,000 students participate in Maryland CTE student organizations. Through CTE program and leadership activities, CTSOs will continue to play an important role in developing students' academic, technical, and employability skills.

iii. Use of Labor Market Data

Labor market data is used to inform the development of CTE pathway programs at both state and local levels. In fact, one of the first steps 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. Thus, it is critical for CTE program developers to seek out and provide accurate labor market information about opportunities that add value to a student's educational program. Labor market information is gathered at local, regional, state, and national levels to design programs that meet economic and workforce development needs. 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 can be compiled from two sources for state, regional, and local purposes. Sources include the Maryland DLLR and employer feedback. The DLLR tailors state, regional, and county occupational projection data originally prepared by the Bureau of Labor Statistics (BLS). It is accessible through this link: http://www.dllr.state.md.us/lmi/.
BLS provides state and county data, and for WIOA purposes, DLLR has compiled occupational projection data for each regional workforce development area. This provides windows in all three tiers (state, regional and local) of projected Maryland employment needs in order to target CTE programs of study to meet high-needs projections at any level. This is done by accessing the occupational information and performing a crosswalk between those Standard Occupational Classification (SOC) codes and Classification of Instructional Programs (CIP). From the results, program-specific LMI can be created to target occupational trends.

Occupational projections data must also include real-time employer needs; therefore, MSDE actively seeks employer feedback to inform its State programs of study. Employer feedback occurs during state program-specific State Advisory Group (SAG) meetings, Local Advisory Council (LAC) meetings on the county or regional level, and county program-specific Program Advisory Committee (PAC) 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 programs.

iv. Equal access for special populations

There is a need to actively recruit special populations to enroll in all CTE programs. There must be equal access for members of special populations. By eliminating admission

requirements for CTE programs, unless such entrance requirements are absolutely essential for student success in the program, more opportunities exist for members of special populations. In cases where admissions requirements have been determined to be necessary, it must be ensured that these standards fully comply with the guidance issued in Maryland's TAB which was vetted through the Maryland Office of the Attorney General. Maryland's TAB is found at this link: http://www.marylandpublicschools.org/programs/Documents/CTE/PerkinsIV/Resources/CTEAdditionalResources/Technical-Assistance-Bulletin.docx.

Maryland has demonstrated a long-standing commitment to equity and ensuring that members of special populations are provided equal access to programs. MSDE, DCCR staff members work closely with MSDE's Division of Early Intervention and Special Education Services (DEISES) 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.

Two of the major purposes of the MOA OCR Compliance Review is to ensure that community colleges and local school systems are providing equal access to education and the promotion of educational excellence throughout the nation through vigorous 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 eligible recipients in setting forth a program of study aligned with industry standards, practices, and career development/assessment to improve career and technology education for special populations. Leadership, coordination, and expertise will be provided at the state level through career clusters, CTE programs of study, and sustained professional development to assist recipients in determining program effectiveness and student success. Data analysis will be used to identify successful programs and programs requiring change in order to assure equal access and success for special populations in quality career and technology education programs in the least restrictive and most integrated setting possible. All local school systems and community colleges selected for 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 the Act, describe how it will continue to comply with the intent of the law in increasing access and success of special populations in their local plan.

Maryland has a long-standing Interagency Agreement among nine state agencies/entities to assure 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. It 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.

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 technology 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).
- Blend 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" (UDL) model/format and provide professional development to high school and postsecondary faculty on UDL.
- 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

The 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 of the CTE system. The Board establishes 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 the goals and the actions taken to ensure the continuous improvement of the CTE system.

One example of coordination with the State Board of Education is the work of the Maryland High School Graduation Task Force that was commissioned in 2018 by Dr. Karen Salmon, State Superintendent of Schools, and was co-chaired by Dr. Carol Williamson, Deputy State Superintendent for Teaching and Learning, and Dr. Dara Shaw, Executive Director for Research and Strategic Data Use for MSDE. Task Force members were presented with the following charge - "To make recommendations to the State Superintendent and Maryland State Board of Education on:

- Credit and program requirements for graduation (number of credits, subject area(s), and other requirements);
- Assessment requirements for graduation; and
- Options for awarding high school diplomas

All recommendations will consider current research, data, and policies on the impact of credits, assessments, and diploma types on college and career readiness and other outcomes.

In addition, the Task Force was given the responsibility to consider existing Maryland statute and policy recommendations generated by the Maryland Commission on Innovation and Excellence in Education (called the Kirwan Commission after the name of the Chairman). Both the High School Graduation Task Force and the Kirwan Commission in their reports recommend sweeping changes to CTE and all of education in Maryland.

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

Maryland supports CTE collaboration between 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 career and technology education. By law, the voting membership of the Local Advisory Council (LAC) 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 LAC 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: distribution of career and technology education funds, county career and technology education program accountability reports, county job needs, and the adequacy of career and technology education programs being offered. This also occurs on a local programmatic level through Program Advisory Committees (PACs). Each local school system and community college is required to have a PAC for every program of study being offered, comprised of local business and industry representatives. PACs perform a similar, but much more focused and occupation-specific function as the LAC and are much more involved with the programs and students. PAC members provide students with an experience in and an understanding of all aspects of an industry by providing work-based learning

experiences/activities; conducting mock interviews and classroom presentations, mentoring students, sponsoring field trips, and assisting with CTSO competitions and preparation.

MSDE is an integral part in the development, oversight, guidance, and monitoring of county LACs, and publishes the *Career and Technology Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures* manual at this link*:* http://marylandpublicschools.org/programs/Pages/CTE/PerkinsIV/Advisory-Groups.aspx. State staff members often attend LAC 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 rotating in-depth monitoring visits that involve stakeholders from secondary education, postsecondary education, and business and industry.

As described previously, Maryland also develops and revises each CTE State Program of Study by convening SAGs comprised of business and industry representatives, along with secondary and postsecondary representation. These groups advise on program and curriculum upgrades, to arrange and provide professional development to instructors, and ensure that third-party credentials are still valid for the industry. Maryland has developed 53 CTE State Programs of Study endorsed by business and industry through these collaborative efforts and partnerships. The programs are available in the MSDE publication *Maryland High School Career and Technology Education Programs of Study*. It can be accessed at this link: http://www.marylandpublicschools.org/programs/Documents/CTE/CTE%20Programs%20of%20Study/CTEBlueBook2017.pdf.

Currently, MSDE is collaborating with the DOC and DLLR's Division of Workforce Development and Adult Learning - Apprenticeship, to expand youth apprenticeship opportunities in the high schools through a statewide program called Apprenticeship Maryland at https://www.dllr.state.md.us/employment/appr/youthapprguide.pdf. 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 DLLR noting the student's 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 members of special populations

Disaggregated data analysis is ongoing and assists LSS and community colleges as they improve outcomes and address performance gaps for students who are members of special populations. All LSS either have Support Services Teams or staff to provide dedicated support to 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 success. Services might include academic tutoring, help with financial obligations, social interaction support, and even wake up calls. Individualized support is provided for both students and teachers/faculty. 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.

Many secondary CTE POS offer the opportunity to students for dual/concurrent enrollment in the postsecondary program. For example, MSDE works with Anne Arundel County Public Schools (AACPS) and Anne Arundel Community College (AACC) 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 success of this program, combined with workforce information and in-depth studies, sparked other school systems' interest in transportation, distribution and logistics. Interested CTE directors recently gathered together to discuss all the facets of transportation, and work together to examine their counties' workforce needs, and what a high school/college statewide CTE program of study would encompass.

In its publication titled, "*Advanced Placement and Career and Technical Education: Working Together*" at link https://www.collegeboard.org/membership/all-access/counseling-admissions-financial-aid-academic/new-advance-cte-and-college-board, the College Board cited Maryland as an example on how the state is leveraging Advanced Placement (AP) offerings in CTE POS. AP course options exist for CTE programs in Computer Science, Engineering, and Business Management and Finance.

Other ways 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 right in their high school. The credit counts not only toward the CTE POS but also for college credit on an official transcript. One community college offers students proficiency credit. This option provides for students being offered 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 stakeholders in planning, development, implementation, and evaluation of CTE

The Governor's chief policy making body for workforce development is the GWDB. It develops and continuously improves the state workforce system, including creating linkages to assure coordination and collaboration among partner agencies. Its mission is to guide the entire Maryland workforce development system. The GWDB is a business-led board of 53 members, who work together to address the challenges of Maryland's workforce needs in the 21st century. Members include the Governor, cabinet secretaries, community college and University System of Maryland colleges and universities presidents, the State Superintendent of schools, elected officials, business people, labor, and representatives of nonprofit organizations.

The GWDB identified industry sectors and initiatives to attract and retain future workforce participants in areas of high-skill, high-wage, or in-demand occupations and critical shortage areas. The GWDB selected the aerospace, health care, retail, transportation logistics, and education industry sectors by convening key stakeholders to identify and address workforce, workplace and policy issues. Summits and symposia have been held with state and national experts addressing the identified issues and the monograph produced after each summit/symposium documents not only the issues but action plans as well. Working with the GWDB keeps state staff on the leading edge of Maryland's workforce initiatives and identified needs and helps to direct the work in statewide development of new CTE Programs of Study.

Maryland has partnered with many other key stakeholders to develop CTE programs of study at the state level. Each of Maryland's ten Career Clusters has a State Advisory Group (SAG) which consists of individuals representing parents, academic and career faculty, administrators, guidance, business and industry, labor organizations and other state economic and workforce agencies. These individuals cover all aspects of the industry.

As described previously, local recipients are required to each have a LAC and local PACs. The role and composition of the LAC is similar to that of the statewide Advisory Committee through the GWDB, and the SAG through MSDE, but also may include current and former students. The local PACs, consisting of the same stakeholders identified previously, provide the required local input for planning, developing, implementing and evaluating CTE programs. The local counterparts for economic and workforce development are included in these PACs as well as parents, faculty, business and industry, labor, educators, and current and former students. Oftentimes, PAC members serve as guest speakers and mentors, and provide apprenticeship and internship opportunities.

A CTE Program Review Panel, consisting of representatives from the GWDB, State economic and workforce development agencies, higher education, local recipients, parents, and labor and industry, reviews each newly developed local secondary CTE program of study that is submitted for state approval. State developed CTE programs of study that local school systems choose to adopt undergo similar review by the Career Cluster Teams prior to recommending state approval. This provides stakeholder input on program development, implementation and evaluation to ensure that CTE programs are relevant to economic and workforce development needs in Maryland and provide "value added" opportunities for Maryland students. Maryland's *Policies and Procedures for the Development and Continues Improvement of Career and Technology Education Programs* documents this process for secondary programs. It can be accessed at: https://msde.blackboard.com/webapps/blackboard/content/listContentEditable.jsp?content_id=_332253_1&course_id=_1332_1&mode=quick.

The process for the development and approval of postsecondary CTE programs of study includes required advisory committees, and must also follow the approval process of the Maryland Higher Education Commission (MHEC), the governing body in Maryland for postsecondary programs. Once a postsecondary CTE program is approved by MHEC it is submitted to MSDE/DCCR if the community college wants the program added to the approved list of lower division certificate or degree programs eligible for the use of federal funds.

Where there are joint LACs as required by State statute, there is seamless transition among CTE content across the learning levels. The law applies if both entities (LSS and community college) are located in the same county (this includes Baltimore City) and both received funding under the federal act. Many of these local recipients have also combined their PACs with the same success. In Maryland's more rural areas, one community college may serve up to five LSS. The LSS where the community college is located is required to convene the joint LAC however, if other LSS are in close proximity to the community college, they participate in the combined LAC. The joint LAC and PAC helps to keep secondary and postsecondary CTE programs aligned, which enhances students' transition from one learning level to the next.

Stakeholders play an integral role in CTE POS through CTSOs. Opportunities exist for employers to become involved with students and instructors through participation in these organizations through CTE POS in all Career Clusters. CTSOs help to develop and strengthen parent/teacher relationships, as well as increase employer involvement.

f. Local application template

The local application is a web-based format. Please see Appendix D for the prototype of the application.

g. Local needs assessment template

The local needs assessment is a web-based format. Please see Appendix D for the prototype of the needs assessment.

h. Definition for "size, scope, and quality"

Maryland's definition for "size, scope, and quality" includes the following:

Size

- At least two State approved CTE programs of study in recognized career clusters. State approval at the secondary level is through the Maryland State Department of Education, Division of Career and College Readiness and at the postsecondary level, CTE is aligned with either an associate degree program or Lower Division certificate approved through the Maryland Higher Education Commission (MHEC).
- A minimum class size of 10 students or continuous progress towards increased class size. Facilities, equipment and resources are of sufficient size and number to accommodate students in the program.
    - Each community college must qualify for a minimum allocation of $50,000 or join in a consortium with another eligible college(s). Each local school system must qualify for a minimum allocation of $15,000, or enter into a consortium that meets the minimum allocation requirement.

Scope

- Links across the learning levels through articulation/ transcripted credit.
- A graduation plan/pathway plan is in place for each student in the MSDE/MHEC approved coordinated, non-duplicative, sequence of academic and technical content in the CTE POS.
- CTE State approved programs of study relate to high-skill, high-wage, or in-demand careers aligned with the economic and workforce development needs in the State or region.

- CTE programs lead to an industry-recognized credential, postsecondary credits or lower division certificate at the postsecondary level, or an associate or baccalaureate degree, with multiple entry and exit points.
- Students are provided with equitable access to CTE programs of study.
- CTE secondary programs adhere to CTE Development Standards which are required under the Code of Maryland Regulations (COMAR) 13A.04.02.01 and can be found at this link: http://mdrules.elaws.us/comar/13a.04.02

Quality

- Local recipients achieve local targets established for State and federal Core Indicators of Performance.
- CTE POS programs are delivered by instructors who meet the State requirements to teach at the secondary and/or the postsecondary level.
- CTE POS of study are guided by Local Advisory Councils and Program Advisory Committees according to the *Career and Technology Education (CTE) Local Advisory Council (LAC) and Program Advisory Committee (PAC) Policies and Procedures*
- CTE students are provided with an organized, systematic framework of career exploration and career development.
- Local recipients demonstrate the need for state CTE programs by presenting labor market data and economic development projections that indicate current or projected employment demand exists in the programs' occupational field of study.
- CTE programs of study are continuously reviewed prior to inclusion in the local application.
- CTE Programs of study provide students with strong experience in, and comprehensive understanding of, the industry for which the program is preparing students.
- Professional development is provided for administrators and faculty to enhance student learning and ensure the implementation of high-quality CTE programs of study.
- State and Local reporting requirements are met to ensure CTE programs are continuously improved to meet industry standards.
- Meets the requirements for CTE program approval in MSDE's or MHEC's policies and procedures.

3. Meeting the Needs of Special Populations

a. Program strategies for special populations

i. Will be provided with equal access to activities assisted under this Act

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. Two of the major purposes of the MOA OCR Compliance Review are to ensure that community colleges and local school systems are providing equal access to CTE through

vigorous 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 equal access.

Maryland has a long-standing 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. It 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 staff members work closely with the Division of Early Intervention and Special Education Services (DEISES) to provide guidance to local school systems on ensuring equal access to approved CTE programs of study. An MSDE staff member serves on the State Agencies' Transition Collaborative of Maryland (SATCM) leadership group. The overall goal of MD SATCM 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 staff members work with MSDE's Specialist for English Learners (EL) to ensure that school systems receive effective, research-based professional development 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.

Though WIOA places a greater emphasis on serving out-of-school youth, Maryland's WIOA partners remain committed to ensuring that clearly defined career pathways exist for in-school youth as well. The workforce system has a strong, enduring relationship with its CTE schools and community colleges across the State. Many CTE administrators sit on LWDBs 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 GWDB and the DLLR'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.

With the implementation of WIOA, there is increased focus on the outcomes of individuals involved in postsecondary education, in general, as well as an expectation 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 at the following link: http://www.dllr.maryland.gov/employment/wioa.shtml.

Maryland's local school systems and community colleges:

1. Develop targeted information and recruitment plans for the special populations groups beginning in the sixth 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 middle 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 sixth 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 FBLA, FFA, DECA 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. Non-discrimination

Maryland's local school systems and community colleges:

1. Eliminate barriers to enrollment in CTE programs. MSDE's Technical Assistance Bulletin provides guidance on acceptable recruitment 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).
2. 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.
3. 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. The template can be found at this link: http://www.marylandpublicschools.org/programs/Documents/CTE/PerkinsIV/Resources/CTEAdditionalResources/Technical-Assistance-Bulletin.docx.
4. Provide state level tools, such as MSDE's *Social Media- How To Guide*, at

http://marylandpublicschools.org/programs/Documents/CTE/HowToGuide.pdf, to help identify, recruit, and retain non-traditional students in CTE programs.

5. Develop, identify and replicate models of effective, evidenced-based collaborative relationships among schools, colleges, parents and other stakeholders for the development, implementation and evaluation of CTE programs.
6. Disaggregate and analyze data to ensure that students who are members of special populations have equitable access and success in all CTE programs.

iii. Meet/exceed State determined levels of performance described in Section 113

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

1. Actively recruit and retain special populations to enroll in CTE programs, including those that lead to further learning and lead to high-skill, high-wage, or in-demand industry sectors or occupations.
2. Provide targeted professional development, including topics such as Universal Design for Learning, to CTE teachers, school counseling staff and administrative personnel in effective evidence-based promising 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*. http://www.marylandpublicschools.org/about/Documents/OCP/Publications/CCRToolKit.pdf
5. Clearly inform postsecondary special populations of the vital 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 to ensure that allowable services are provided.
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.

One action that is currently underway is the repeal of an outdated regulation in Maryland's Code of Regulations (COMAR). A new regulation is proposed, *Educational Equity*, which establishes

equity as a priority for MSDE and all local school systems. A request for permission to publish this new regulation was presented to the Maryland State Board of Education in December 2018.

iv. 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. Instruction and work-based learning opportunities

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. However, 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

a. Support recruitment and preparation of teachers

Historically, over 60% of Maryland's teachers are imported from other states, and there are several content areas, including CTE, that are considered critical teacher shortage areas. Thus, it is necessary for DCCR staff members continue to work closely with staff members from the Division of Educator Certification and Program Approval on policy and regulations supporting the recruitment and preparation of CTE teachers. This included working collaboratively to convene a design team comprised of state and local certification specialists, CTE administrators as well as principals of CTE centers to amend regulations for CTE teacher certification. The Professional and Technical Education (PTE) certification regulation replaced the teacher certification regulations for Trades and Industry and were approved by the Maryland State Board of Education.

In conjunction with updated regulations, it was also necessary to establish policy to expand CTE recruitment efforts. For example, general secondary teachers can add an endorsement to their certification if they take and pass the Praxis content exam in another area that aligns to a MD CTE program of study. However, there was no direct pathway for academic teachers to add CTE endorsements to their certifications as most CTE areas do not have a Praxis exam aligned to the content. Currently, policy is under development to allow academic teachers to earn CTE endorsements by attaining industry-recognized credentials aligned to the CTE program of study they will teach. For example, English teachers who earn Cisco Information Technology (IT) Networking Certifications can add the PTE endorsement to their teacher certifications. Additionally, DCCR staff members provided local school systems with an alignment table showing which general secondary certifications align to the Maryland CTE model programs.

CTE staff members also served on the Teacher Induction, Retention and Advancement (TIRA) Act of 2016 Workgroup. The purpose of the TIRA workgroup was to provide a national perspective on the best practices regarding recruitment, induction, and retention of teachers while providing context for how these trends are manifesting in Maryland. Stakeholder groups from across the Prek-12 and Higher Education Communities determined that current practices in Maryland may be hindering recruitment and retention efforts designed to place the most proficient teachers in front of Maryland's students. The workgroup included recommendations to recruit and retain CTE teachers and to ease the path to certification for people coming into teaching from industry. Updated regulations will be presented to the State Board before the end of the current school year.

Maryland also initiated the Teacher Academy of Maryland (TAM) CTE program of study in an effort to increase the pipeline of teachers. The number of CTE teachers needed is at a higher proportion due to their being no colleges/universities in Maryland offering a CTE teacher education program or degree. The TAM CTE program encourages high school students to

pursue the teaching profession and is even linking bonuses for first year teachers to those who have majored in what Maryland has determined the critical shortage areas. These areas are included in the bi-annual Maryland Teacher Staffing Report conducted by the Maryland State Department of Education to highlight where shortage areas and critical shortage areas exist or are projected to exist within the next few years. The link to the Maryland Teacher Staffing Report is:
http://www.marylandpublicschools.org/about/Documents/DEE/ProgramApproval/MarylandTeacherStaffingReport20162018.pdf.

Resources are also aligned to support ongoing professional development for CTE teachers. This includes collaborative partnerships with affiliate colleges, universities, and/or professional organizations as well as a combination of funding (Leadership funds and CTE Reserve Fund grants). Maryland reserves 5% of its Perkins formula pass through funds for a CTE Reserve Fund competitive process open to eligible local recipients (in MD it's school systems and community colleges). The CTE Reserve Fund grant supports the implementation of model and innovative CTE programs, transitional services for students as well as professional development for CTE teachers and faculty.

Partnering with the Division of Educator Certification and Program Approval, Maryland continues to develop and adopt procedures that help with recruitment and retention of CTE teachers. Examples of this include online teacher certification programs as well as the ability to access certification records via the internet.

Maryland offers other means of becoming a teacher such as:

- Troops to Teachers which assists military personnel in making successful transitions to new careers in teaching.
- Resident Teacher Program which is designed to attract and recruit into teaching recent college graduates as well as career changers who possess academic content backgrounds in the arts and sciences, but who did not complete teacher preparation programs.
- Various scholarships, available through MHEC, designed to assist individuals interested in becoming teachers in specific areas of shortage. (https://mhec.maryland.gov/preparing/Pages/FinancialAid/index.aspx)

Maryland will explore more ways to recruit instructors by working more closely with LAC/PAC/SAG members. Externships and industry hosted/facilitated professional development for current teachers/faculty will allow CTE program teachers to recruit employers to serve as industry mentors to CTE programs of study. Connections to employers made through youth apprenticeships opportunities for students will also assist in the recruitment of instructors.

When Maryland CTE Programs of Study are developed, teachers are identified locally. Professional development is provided through summer training institutes and year-long professional development with representatives from business and postsecondary education to develop and retain teachers. Teachers from underrepresented groups are recruited locally to

reflect the demographics of the student population. Maryland has some targeted recruitment programs outside of the state, such as in the Philippines, since Maryland imports the majority of its teacher to the state.

Career guidance and academic counselors participate in professional development provided by MSDE/DCCR. Ongoing professional development enables counselors to understand CTE offerings and help with the recruitment and retention of students. Maryland's career development resources for grades seven through twelve enable counselors to work with teachers to develop career advisories. MSDE will continue offering counselors' conferences as has been the practice since 2008.

In order for students to meet performance goals, high quality professional development that supports the CTE learning community at both the secondary and postsecondary levels is integral to program success. Many CTE program areas are also critical shortage areas with regard to teaching staff; thus, recruitment, preparation, and retention of teachers are extremely important. Maryland imports more teachers from other states than it produces, and there are no Maryland baccalaureate programs that specialize in preparing CTE teachers. In response to the shortage of CTE teachers, Maryland has worked to create more flexible options for candidates to enter the profession. Affiliate partners provide professional development (PD), and teachers may obtain credit for the PD to work toward their teaching certification. Maryland has employed a "grow your own" philosophy by implementing the Teacher Academy of Maryland (TAM) CTE Program, designed to attract high school students into the education field. There are several agreements in place with two- and four-year colleges and universities in the state that allow TAM completers to get early college credit and scholarships.

In Maryland, comprehensive professional development is guided by Maryland's Teacher Professional Development Standards which are used to direct efforts to improve professional development for all teachers. These standards call on teachers, principals and other school leaders, district leaders and staff, the Maryland State Department of Education, institutions of higher education, and cultural institutions and organizations across the state to work together to ensure that professional development is of the highest quality, ongoing and readily accessible to all teachers. These standards also acknowledge that teacher professional development encompasses a wide variety of learning activities.

Maryland uses a collaborative approach in providing professional development to teachers in Maryland CTE Programs of study. The process starts after a design team comprised representatives from business and labor as well as postsecondary and secondary educators has identified the courses and technical and academic content for each course. The design team also identifies relevant industry certifications and assessments. After the course content is determined, a common syllabus is developed for each course. Common course syllabi are comprised of a sequence of integrated projects that align to the content and standards of each course. Professional development is provided to teachers on the delivery of instruction on the common course syllabi. This helps to ensure consistent statewide implementation of both the

academic and technical content. Program content is continuously reviewed and updated to ensure that it is current with industry demands.

Maryland uses professional learning communities (PLC) to ensure that professional development is high-quality, sustained, intensive, and focused on instruction, as well as increases the academic knowledge and understanding of industry standards. In a PLC, teachers work with industry and postsecondary partners to evaluate student work and instructional methodologies. Through the use of common course syllabi, teachers compare the quality of the student work on the common projects that are taught. This comparison opens up a dialogue among teachers to see how they can raise the level of their instruction in order for students to achieve at higher levels and meet industry standards. With input from industry and postsecondary partners, teachers are also able to improve the quality of the projects that make up the common course syllabi. This approach creates an effort-based model of instruction (one that relies on the effort that the student puts forth) as opposed to the traditional ability-based model.

Another quality of professional development in Maryland comes through the many state level partnerships with industry that exist. These partnerships help to ensure that CTE teachers are provided with relevant professional development that aligns with the economic and workforce development needs that the program represents. The professional development that is provided to CTE teachers is coordinated and delivered with these partners. Maryland works with many partners to provide teacher PD, including the American Hotel and Lodging Educational Institute, Maryland Hospitality and Education Foundation, the Printing and Graphics Association Mid-Atlantic, Automotive Service Excellence Education Foundation, Cisco, Oracle, and the National Center for Construction Education and Research, to name a few.

C. Fiscal Responsibility

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

Local recipients' funds at both the secondary and postsecondary levels must be approved through a local application. Maryland will provide an evaluation rubric to local recipients in order for them to understand the criteria that must be included and the level to which questions, data, upgrades, 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 PQI and LPAR 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 not only PQI and LPAR data, but local data as well. Local recipients must address any Core Indicators of Performance not meeting the 90% threshold and prepare an Improvement Plan as required. After the CTE Regional Meetings, the CTE Regional Coordinators provide intense one-on-one technical assistance to local recipients regarding any clarifications or questions they may have regarding the local application.

Local applications, any 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 the 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 Maryland's 38 eligible 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. Promote academic achievement

Maryland will use the State's academic standards to determine proficiency for CTE concentrators. School systems provide supports to students to ensure success in the achievement of these standards and to meet the graduation requirements including passing required assessments. If funds were to be requested from Perkins, a clear description would need to provide the exact use of the funds and evidence that the use of such funds would not be considered supplanting since supports are already in place locally to provide for the successful academic achievement of students as well as appropriate interventions.

At the postsecondary level, a lower division certificate which also includes academic credentials, is approved by the Maryland Higher Education Commission. MHEC also approves the CTE associate's degree programs at the postsecondary level. An associate's degree requires both academic and technical achievement. Supports, such as tutoring and other services, are in place to assist in achievement of academic success. Perkins funds may be approved for such uses if justified in the community college's local application.

b. Promote skill attainment, including recognized postsecondary credentials

Maryland permits Perkins funds to be used at the local level to pay the assessment fees for students earning industry-recognized credentials in state approved programs of study (those approved by MSDE and MHEC). Students must be provided equal opportunity to take advantage of this. 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.

All of Maryland's CTE programs of study at the secondary level include either an industry-recognized credential or early college credit. Some include both, depending upon their availability and appropriateness for high school students. For example, some industry-recognized credentials require years of experience in the field before an individual may qualify to earn a certification. A legal studies program is an example. Therefore, the student would have the opportunity to be awarded college credit through a transcripted credit agreement, an articulation agreement or by dual enrollment. Many school systems are having qualified CTE teachers named as adjunct faculty of the local community college. In this way, high school students may earn early college credit through dual enrollment while remaining in their high school.

c. Local needs assessment including local economic and education needs and where appropriate, in-demand industry sectors and occupations

Maryland has developed a self-assessment under Perkins IV. The self-assessment is to be completed each year as the basis for determining areas of need for improvement and helps provide data to make decisions regarding funding in the local plan, now called the local application. The self-assessment is to be submitted to MSDE with the local plan/application when the local recipient is scheduled for an on-site monitoring visit. During the Transition Year, Maryland will examine the current self-assessment through the formation of a design team consisting of local recipients to determine revisions needed to meet the requirements for the Comprehensive Needs Assessment as referenced in Perkins V.

2. Fund distribution

a. Secondary level and postsecondary level

Maryland will retain the current allocation of formula dollars between secondary and postsecondary local recipients during the Transition Year, which includes 65% to eligible secondary recipients and 35% to eligible postsecondary recipients. This will allow time to thoroughly examine data, current programs of study, labor market needs, enrollment, concentration and completion data, and other relevant factors to determine if the allocation between the two local recipient entities in Maryland will need to be changed. 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, and 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 education agencies in proportion to the number of individuals aged five through 17, inclusive, who reside in the school district served by local education agency 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 education agencies in proportion to the number of individuals aged 5 through 17, inclusive who reside in the school district served by local educational agency 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 be requesting, 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 secondary local school systems not meeting the $15,000 minimum amount if the secondary local 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 be requesting, 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.

b. Among consortia that may be formed among secondary schools and eligible institutions

Maryland has had a long history of local school systems not forming 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 Maryland's 16 community colleges, two are not eligible for formula dollars. One is due to the limited number of CTE programs of study, being mostly a transfer college, and the other 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

This will be possible once the U.S. Department of Education's Office of Career Technical and Adult Education releases draft amounts to states which is typically in April.

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

This will be possible once the U.S. Department of Education's Office of Career Technical and Adult Education releases draft amounts to states which is typically in April.

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**
   a. **Include a proposal for such an alternative formula**
   b. **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**
   a. **Include a proposal for such an alternative formula**
   b. **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© 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 technology education completers; or
- has a high number of career and technology education students.

The Request for Proposal includes five priority areas that support programs and activities eligible for funding, and for FY2020 they are:

- supporting Maryland's State Career and Technology Education (CTE) Programs of Study at the secondary level;
- enhancing existing Project Lead the Way (PLTW) Computer Science Programs of Study;
- supporting Maryland's Career and Technology Education (CTE) Programs at the postsecondary level; and
- preparing high school and community college students for further education and careers; and
- providing comprehensive, ongoing, professional development for CTE instructors, faculty, administrators, and counselors.

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 is proposing to establish a new baseline for the State's maintenance of effort as permitted under the new Act. Maryland's current maintenance of effort is based on aggregate expenditures. In the State Combined Annual Report (CAR) which was submitted in December 2018, the maintenance of effort listed for the state under non-federal share of expenditures (Column H) was $371,739,151. Under Perkins V, states can request to readjust the current maintenance of effort to 95%. Maryland proposes to readjust its maintenance of effort to 95% of the current fiscal year effort or $353,152,193.

D. 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 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**
   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.

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.

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

See Table 7 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. **Provide a written response to the comments provided during the public comment period.**

See Appendix C.

4. **Describe the procedure adopted for determining State determined levels of performance including:**

   a. **a description of the process for public comment as part of the development of the State determined levels of performance**

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. The Accountability and Performance Targets Workgroup, one of the four subgroups from the broad State workgroup convened to develop the State Transition Plan, provided input on accountability. This subgroup met three times over a two-month period.

b. an explanation for the State determined levels of performance

The State Accountability subgroup developed recommendations for Perkins performance measures, numerator and denominator definitions as well as 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 as well as 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. a description of how the state determined levels of performance align with the levels, goals and objectives other Federal and State laws

Maryland designed a coherent state system of accountability by aligning Perkins V performance measures with priority measures embedded in ESSA and the State's College and Career Readiness and College Completion Act (CCR CCA) 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.

d. 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 its ESSA 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.

5. Describe how disparities or gaps in performance will be addressed 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 to be taken to eliminate these disparities or gaps.

Each secondary school system and postsecondary institution will receive an annual Local Program Accountability Report (LPAR) and a State performance report Program Quality Index (PQI) 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 plan/application.

Maryland's Measurement Definitions

Maryland's measurement approaches are based on the secondary and postsecondary participant and concentrator definition. Based on the *Strengthening Career and Technical Education for the 21st Century Act of 2018* (Perkins V), Maryland has established the following definitions:

CTE participant: The term "CTE participant" means an individual who completes not less than one course in a career and technical education program of study of an eligible recipient.

CTE concentrator: The term "CTE concentrator" means:

(A) At the secondary school level, a student served by an eligible recipient who has completed at least two courses in a single career and technical education program of study and enrolled in the third course.

(B) At the postsecondary level, a student enrolled in an eligible recipient who has
- (i) Earned at least 12 credits within a career and technical education program or program of study not to include any courses not included in the approved program/plan of study approved by the Maryland Higher Education Commission such as prerequisites; or
- (ii) Completed a program that includes fewer than 12 credits or the equivalent in total (equivalent could be transfer credit/credit by evaluation).

a. Secondary Measurement Definitions

In addition to program quality, Maryland has established the following measurement definitions for each of the core indicators of performance for CTE students at the secondary level:

Core Indicator of Performance 1S1: Four-Year Graduation Rate

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).

Numerator: Number of CTE concentrators who, in the reporting year, were included as graduated in four years in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the ESEA.

Denominator: Number of CTE concentrators who, in the reporting year, were included in the State's computation of its four-year adjusted cohort graduation rate as defined in in Section 1111(b)(2)(C)(vi) of the ESEA.

Core Indicator of Performance 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 reading/language arts as described in section 1111(b)(2) of such Act.

Numerator:	Number of CTE concentrators who met or exceeded expectations on the Statewide high school reading/language arts assessment as administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (ESEA) as amended by the *Every Student Succeeds Act* (ESSA) whose scores were included in the computation of the State's secondary education Academic Achievement indicator and who, in the reporting year left secondary education.
Denominator:	Number of CTE concentrators who took the Statewide high school reading/language arts assessment as administered by the State under Section 1111(b)(3) of the ESEA as amended by ESSA whose scores were included in the computation of the State's Academic Achievement indicator and who, in the reporting year left secondary education.

Core Indicator of Performance 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 mathematics as described in section 1111(b)(2) of such Act.

Numerator:	Number of CTE concentrators who met or exceeded expectations on the statewide high school mathematics assessment as administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (ESEA) as amended by the *Every Student Succeeds Act* (ESSA) whose scores were included in the computation of the State's secondary education Academic Achievement indicator and who, in the reporting year left secondary education.
Denominator:	Number of CTE concentrators who took the Statewide high school mathematics assessment as administered by the State under Section 1111(b)(3) of the ESEA as amended by ESSA whose scores were included in the computation of the State's Academic Achievement indicator and who, in the reporting year left secondary education.

Core Indicator of Performance 2S3: Academic Proficiency in Science
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.

Numerator:	Number of CTE concentrators who met or exceeded expectations on the statewide high school science assessment as administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (ESEA) as amended by the *Every Student Succeeds Act* (ESSA) whose scores were included in the computation of the State's secondary education Academic Achievement indicator and who, in the reporting year, left secondary education.
Denominator:	Number of CTE concentrators who took the statewide high school science assessment as administered by the State under Section 1111(b)(3) of the ESEA as amended by ESSA whose scores were included in the computation of the State's Academic Achievement indicator and who, in the reporting year, left secondary education.

Core Indicator of Performance 3S1: Postsecondary Placement
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.

Numerator:	Number 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 Community Service Act of 1990, or are employed.
Denominator:	Number of CTE concentrators who exited from secondary education.

Core Indicator of Performance 4S1: Nontraditional Enrollment
The percentage of under-represented CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.

Numerator:	Number of under-represented CTE concentrators in non-traditional CTE programs during the reporting year.
Denominator:	Number of CTE concentrators in non-traditional CTE programs during the reporting year.

b. Postsecondary Measurement Definitions

Maryland has established the following measurement definitions for each of the core indicators of performance for CTE students at the postsecondary level:

Core Indicator of Performance 1P1: Postsecondary Retention and Placement
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.

Numerator:	Number of CTE concentrators who in the second quarter after program completion are in a postsecondary education or advanced training, military service or a service program, that receives assistance under Title I of the National Community Service Act or are employed.
Denominator:	Number of CTE concentrators who completed their CTE program in the reporting year.

Core Indicator of Performance 2P1: Credential, Certificate or Degree
The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion

Numerator:	Number of CTE concentrators who have received a degree, certificate, or industry credential approved for a specific CTE program in the prior reporting year or within one year of program completion
Denominator:	Number of CTE concentrators who left postsecondary education in the prior reporting year

Core Indicator of Performance 3P1: Non-traditional Program Enrollment
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.

Numerator:	Number of under-represented CTE concentrators in non-traditional CTE programs during the reporting year.
Denominator:	Number of CTE concentrators in non-traditional CTE programs during the reporting year.

c. Table 7: Section 113(b) Core Indicators of Performance

Indicator Descriptions	Indicator Codes	Indicator Names
Secondary Level		
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
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

Indicator Descriptions	Indicator Codes	Indicator Names
Secondary Level		
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 1 year of completion. The Department interprets "within 1 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 1 year following that student's completion of the program.

d. State Determined Performance Levels (SDPL) Form Using FY 2017-1018 Data to Project Baseline Data for FY 2018-2019 and Four Year Projections for FY 2020-2023

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

Provide any additional information regarding SDPLs, as necessary:

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020

APPENDIX A

Maryland Public Meetings – Registrants/Participants

FirstName	LastName	Organization Name
Theresa	**Alban**	Frederick County Public Schools
Jaime	**Alvarez**	Community College of Baltimore County
Angela	**Anderson**	Prince George's Community College
Sandra	**Armstrong**	Community College of Baltimore County
Bryan	**Ashby**	Wicomico County Public Schools
Bob	**Aydukovic**	MCCEI
Dawn	**Balinski**	MD Association of Boards of Education
John	**Barber**	Keystone Mountain Lakes Carpenters
Johari	**Barnes**	Community College of Baltimore County
Tamara	**Barron**	Maryland Department of Labor, Licensing and Regulation
Michael	**Beck**	Maryland State Department of Education
Natalie	**Belcher**	Howard County Public Schools
Jaime	**Bell**	Community College of Baltimore County
Nicassia	**Belton**	Maryland State Department of Education
Judy	**Blum**	Community College of Baltimore County
Jay	**Bouis**	Community College of Baltimore County
Todd	**Brace**	Anne Arundel Medical Center
Christine	**Brown**	Harford Community College
Michelle	**Butt**	Associated Builders & Contractors, Inc.
Nancy	**Cahlink-Seidler**	Maryland State Department of Education
Alexandra	**Cambra**	Maryland State Department of Education
Katie	**Campbell**	Harford County Public Schools
Candy	**Canan**	Allegany County Public Schools
Denise	**Carnaggio**	Harford Community College
Stephen	**Carter**	Mid-Atlantic Center for Emergency Management
Traci	**Chappelear**	Charles County Public Schools
Emilie	**Cherry**	Community College of Baltimore County
Allen	**Clinedinst**	Plumbers and Steamfitters Local 486
Joseph	**Collins**	Harford County Public Schools
Victor	**Cyran**	Harford Community College
Renee	**Davis**	Frederick Community College

FirstName	LastName	Organization Name
Donna	**De Marco**	Building Congress & Exchange of Metropolitan Baltimore
Scott	**Dennis**	Department of Rehabilitation Services
Christine	**DeStefano**	Community College of Baltimore County
Elizabeth	**Devlin**	Chesapeake College
Anita	**Dewling**	Anne Arundel Economic Development Corporation
Michael	**DiGiacomo**	Governor's Workforce Development Board
Jeanne	**Donlick**	Harford County Public Schools
Mark	**Drury**	Shapiro & Duncan, Inc.
Christy	**Dryer**	Cecil College
Arthur	**Edge III**	Glaxo Smith Kline
Sara	**Eger**	Anne Arundel Community College
Don	**Elliott**	Community College of Baltimore County
Tom	**Ellis**	Chesapeake College
Judi	**Emmel**	National Security Agency
Brian	**Eyer**	Maryland State Department of Education
Stephanie	**Farmer**	MD Association of Secondary School Principals
Genevieve	**Floyd**	Montgomery County Public Schools
Kathy	**Francis**	Mid-Atlantic Center for Emergency Management
Linda	**Friday**	Queen Anne's County Chamber of Commerce
Marquita	**Friday**	Marlyand State Department of Education
Steven	**Garland**	Washington County Public Schools
Simone	**Geness**	Montgomery County Public Schools
Lynne	**Gilli**	Maryland State Department of Education
Jade	**Gingerich**	Maryland Department of Disabilities
Elena	**Gowe**	Chesapeake College
Candice	**Grayson**	Community College of Baltimore County
Debra	**Greene**	Howard Community College
Kathy	**Gress**	Associated Builders & Contractors, Inc.
Jennifer	**Griffin**	Maryland State Department of Education
Lynn	**Grimm**	Allegany College of Maryland
Don	**Gross**	GROCO, Inc
Robin	**Gross-Sutton**	MD Association of Secondary School Principals
Michael	**Grubbs**	Baltimore County Public Schools
Amy	**Gumaer**	Montgomery College
Anita	**Hammond**	Baltimore Alliance for Careers in Health Care

FirstName	LastName	Organization Name
Douglas	**Handy**	Baltimore County Public Schools
Nancy	**Hauswald**	Maryland State Department of Education
Eileen	**Hawkins**	Baltimore City Community College
Rob	**Hess**	Community College of Baltimore County
Kermit	**Hines**	Dorchester County Public Schools
Jean	**Hohrein**	Dorchester County Public Schools
Jeanne-Marie	**Holly**	Maryland State Department of Education
Keena	**Howell**	MD Association of Pupil Personnel
Anna	**Howie**	Talbot County Public Schools
Denisha	**Jackson**	National Security Agency
Kirsten	**Jackson**	Montgomery County Public Schools
Scott	**Jeffery**	Community College of Baltimore County
Richard	**Jester**	Harford County Public Schools
Trevor	**Jones**	Wor-Wic Community College
Jennifer	**Judkins**	Maryland State Department of Education
Steve	**Jurch**	Community College of Baltimore County
Jason	**Kahler**	Maryland State Department of Education
Jody	**Kallis**	Maryland Association of Community Colleges
Andrea	**Kane**	Queen Anne's County Board of Education
Patrick	**Kelleher**	Community College of Baltimore County
Dean	**Kendall**	Maryland State Department of Education
Douglas	**Kendzierski**	Community College of Baltimore County
Michael	**Kiphart**	Maryland Higher Education Commission
Kelly	**Koermer**	Harford Community College
Julie	**Koontz**	Carroll County Public Schools
Sharon	**Kramer**	Howard County Public Schools
Deborah	**Kremer**	Anne Arundel County Public Schools
John	**Lang, III**	Council of Educational, Administrative & Supervisory Organizations of Maryland
Debbie	**Langer**	Maryland State Department of Education
Debra	**Lichter**	Maryland State Department of Education
Robert	**Limpert**	Harford County Public Schools
Dawn	**Lindsay**	Anne Arundel Community College
Dina	**Link**	Montgomery County Public Schools
Rachel	**London**	Maryland Developmental Disabilities Council
Jon	**Longest**	Chesapeake College
Tom	**Loveland**	University of Maryland Eastern Shore

FirstName	LastName	Organization Name
Nancy	**Magloire**	Prince George's County Public Schools
Donna	**Mandl**	Community College of Baltimore County
Janice	**Marks**	Howard Community College
George	**Mayo**	Maryland Agricultural Education Foundation
Angela	**McCauslin**	Carroll County Public Schools
Champe C.	**McCulloch**	Associated General Contractors of America-MD Chapter
Ebony	**McFadden**	Baltimore City Community College
Jack	**McLaughlin**	Community College of Baltimore County
Edward "Ted"	**McNett**	Carroll County Public Schools
Christopher	**McRoberts**	Community College of Baltimore County
Kelly	**Meadows**	Maryland State Department of Education
Patricia	**Meyer**	Frederick Community College
Erik	**Miller**	Community College of Baltimore County
Rebecca	**Minor**	Community College of Baltimore County
Melody	**Moore**	Carroll Community College
Rhonda	**Moreno**	Montgomery County Public Schools
Kathy	**Morgan**	Carroll County Public Schools
Claudia	**Morrell**	STEM Equity Initiative, Inc.
Susan	**Moylan**	Community College of Baltimore County
Lynne	**Muller**	Maryland State Department of Education
Maureen	**Murphy**	College of Southern Maryland
Scott	**Nichols**	Maryland State Department of Education
Mary	**O'Connor**	Maryland State Department of Education
Rebecca	**Pearson**	Charles County Public Schools
Thomas	**Pfundstein**	Finishing Trades Institute International
Brian	**Phillips**	Worcester County Board of Education
Jill	**Pierce**	Maryland State Department of Education
Douglas	**Prouty**	MD State Education Association
Peggy	**Pugh**	Washington County Public Schools
Tonja	**Ringgold**	Baltimore City Community College
Nina	**Roa**	Maryland State Department of Education
William "Bill"	**Rocks**	Allegany College of Maryland
Sharon	**Schmickley**	Howard Community College
Corrie	**Schoenberg**	Fund for Educational Excellence
Roger	**Schulman**	Fund for Educational Excellence

FirstName	LastName	Organization Name
Carolynnette	**Scott**	Maryland Department of Labor, Licensing and Regulation
Terrie	**Shank**	Maryland State Department of Education
Gene	**Smith**	Caroline County Public Schools
Nancy	**Smith**	Community College of Baltimore County
Daphne	**Snowden**	Baltimore City Community College
Yvette	**Snowden**	Maryland Community College Association for Continuing Education and Training
Shawn	**Somerville**	MD Association of Secondary School Principals
Kathleen	**Spain**	Anne Arundel Community College
Christina	**Sprague**	Charles County Public Schools
Sarah	**Spross**	Maryland State Department of Education
Danielle	**Staton**	Fund for Educational Excellence
Diane	**Stulz**	Worcester County Public Schools
Ebony	**Tara Scurry**	MD Career Development Association
Maria	**Tarasuk**	Montgomery County Public Schools
Jazmone	**Taylor**	The Parents' Place of Maryland
LiLi	**Taylor**	Maryland Department of Labor, Licensing and Regulation
Michael	**Thomas**	Baltimore City Community College
Adam	**Tolley**	Queen Anne's County Public Schools
Mark	**Trexler**	Johns Hopkins School of Education
Patti	**Turner**	Howard Community College
Traci	**Verzi**	Maryland State Department of Education
Alex	**Vitalo**	Maryland Public Television
Charles	**Wallace**	Maryland State Department of Education
Lisa	**Warren**	College of Southern Maryland
Mark	**Wilding**	Calvert County Public Schools
Julie	**Yoder**	Garrett College
Ken	**Young**	Maryland State Department of Education
Marie	**Ziobro**	Mercy Medical Center

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE) TRANSITION YEAR STATE PLAN 2019 – 2020

APPENDIX B

PUBLIC COMMENTS ON THE DRAFT ACCOUNTABILITY SECTION OF THE MARYLAND CAREER AND TECHNOLOGY EDUCATION TRANSITION YEAR STATE PLAN 2019 – 2020

ORGANIZATION/ INDIVIDUAL	COMMENT	STAFF RESPONSE
Bernadette France Teacher Academy of Maryland (TAM) teacher Caroline County Public Schools	I taught the TAM program in Caroline County for 10 years. I am writing in with concerns about the designation of concentrator being given after students complete the second course in a CTE program. They should be enrolled in the third course before being given this designation. Students can often take two classes in any program as electives. This should not allow them to be a concentrator. Concentrators should be students who are intent on finishing the program of study. Counting students who complete two classes as concentrators will also unfairly inflate the CTE data that is calculated using the concentrator totals. Please take the statement with the asterisk out of this document and leave part A as it is (without the asterisk).	In Perkins V, the term "CTE concentrator" means: at the secondary school level, a student served by an eligible recipient who has completed at least two courses in a single career and technical education program of study and enrolled in the third course. The State's definition of a concentrator at the secondary level will include: a student served by an eligible recipient who has completed at least two courses ***and enrolled in a third course*** in a single career and technical education program of study and enrolled in the third course.

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020

ORGANIZATION/ INDIVIDUAL	COMMENT	STAFF RESPONSE
Deborah Albert Kremer Coordinator, Career and Technology Education Anne Arundel County Public Schools	There are only two points of clarification: 1. Please provide clarification of the term 'recognized postsecondary credential' as it appears in D.1.a. The Performance measure for 5S1 only identifies an assessment as proof of achievement when numerous postsecondary credentials exist, but are not measured by an assessment. 2. The 'definition' for 3S1 Placement appears to include the statement…'or are employed' at the end, however, employment does not seem to be mentioned in the numerator/denominator measure description.	Perkins V defines the term "recognized postsecondary credential" as the meaning given to the term in section 3 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3102). The State's identification of recognized postsecondary credentials will include all eligible recognized postsecondary credentials as the meaning given to the term in section 3 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3102) approved for a specific CTE program. "Or are employed" has been included in the statement of the numerator definition for the performance indicator 3S1 description.

ORGANIZATION/ INDIVIDUAL	COMMENT	STAFF RESPONSE
Kathleen Spain Grant Writer/Coordinator | Office of Sponsored Programs Anne Arundel Community College	Appreciate seeing this verbiage as well given that some students sit for certification exams after they graduate and/or course ends. Would benefit from learning how other community colleges obtain these results after the fact though. [Comment provided on **Core Indicator of Performance 2P1: Credential, Certificate or Degree** ***The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion***] Just want to confirm that phrase "remain enrolled in postsecondary education" includes transferring to 4-year institution. This was not the case under Perkins IV and was an issue for us. If interpreting this correctly, glad to see the inclusion of transfer to 4-year as part of postsecondary enrollment. [Comment on **Core Indicator of Performance 3P1: Non-traditional Program Enrollment** ***The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non- traditional fields for their gender.***] Curious why relevant to track non- traditional fields based on gender and how we should account for students who select "non-binary" or "prefer not to disclose" when asked for their gender.	For the State's definition of performance indicator 3P1, the phrase "remain enrolled in postsecondary education" does include transferring to 4-year institution. Currently Federal reporting requires all CTE data to be reported in binary format (M,F). The State is continuing discussion on how we can accommodate reporting that includes non-binary and null responses.

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020

APPENDIX C

PUBLIC COMMENTS
On The Maryland Career and Technology Education (CTE)
State Transition Year Plan 2019 – 2020

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	It would be great if you could show the fuller scope of the workforce system by talking a little bit about the wide range of programs included in Maryland's State Plan. For a full list of the workforce system partner programs along with the agencies that manage them, see page 35 of the plan at http://www.dllr.maryland.gov/wdpaln/wdstateplan.pdf	Due to space limitations, the entire list cannot be accommodated in the Transition Plan, but the website address for that list will be incorporated into the paragraph in Section II.B.1.a.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	The discussion of PACs, LACs, and SAGs is very confusing. This sentence was especially confusing: "If one entity is not eligible for federal CTE funds, then the LAC consists of representatives from the PACs for the entity that receives the federal CTE funds." I'm not sure what this means. Because these bodies figure so prominently throughout the document, suggest providing a clearer, fuller descriptions of what they are and how they interrelate at the very beginning. The content on pages 16 and 32 is pretty good.	More clarity has been provided.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	Is the apprenticeship in Emergency Management a registered apprenticeship? If so, should this terminology be used throughout?	The term "registered" has been inserted when reference is made to this apprenticeship.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	"AMP" pilot is abbreviated before the full term is introduced.	This has been changed and the full name has been spelled out prior to using the acronym.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	While it is an advantage to have CTE representatives on local workforce boards, this is not a requirement under statute. (https://www.law.cornell.edu/cfr/text/20/679.320). There are more confusing references to PACs and LACs without a clear distinction in roles. Also, it would be helpful to understand the overlap in the composition of LACs and LWDBs. If more people understood that the two are very similar, more local areas might opt to integrate their LACs with their LWDBs.	Clearer definitions of the roles of LACs and PACs have been made. The inclusion of the LWDBs, or some portion of it, on the LACs and PACs has been further delineated as this partnership is encouraged by MSDE. At least one local school system/community college partnership uses their LWDB as their LAC.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	The first word in the paragraph is "Maryland". Did you mean "MSDE" there?	MSDE sponsors this statewide activity and it has been changed to reflect this.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	I believe you already spelled out DLLR, so you can abbreviate here. It would be more accurate to say that "Maryland's Workforce Development System is comprised of a variety of partner programs. DLLR, MSDE, the Department of Human Services, the Department of Housing and Community Development, and the GWDB work closely to ensure services are fully integrated."	The abbreviation has been made as well as using the suggested wording.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	Is it an overstatement to suggest that many LACs are forming as an overlay to LWDBs? I only know about one.	LACs have been a federal requirement under Perkins I, II, III, IV and now V. Prior to the Workforce Innovation Opportunity Act (WIOA), LACs contained representatives from the Private Industry Councils (PIC) under the Job Training Partnership Act (JTPA) and the Local Workforce Investment Board under the Workforce Investment Act (WIA) and now as Local Workforce Development Boards (LWDB) under the Workforce Innovation and Opportunity Act (WIOA). The LAC is not an overlay to the LWDB. What both Perkins and WIOA brought to light is that these entities should partner together rather than exist in silos. Thus, MSDE has encouraged local school systems and community colleges to utilize representatives from the LWIBs on the LACs and to serve as members of the LWIBs as appropriate.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	The first sentence is a little misleading. I suggest replacing with some version of the information from the GWDB's "about" page on their website and weave in the CTE element you already have for this section: "The Governor's Workforce Development Board (GWDB) is the governor's chief policy-making body for workforce development. The GWDB is a business-led board of 53 **members** who work to address the challenges of Maryland's workforce need in the 21st century. Members include the governor, cabinet secretaries, college presidents, the state superintendent of schools, elected officials, business people, labor, and representatives of nonprofit organizations. The GWDB is responsible for developing policies and strategies to form a coordinated workforce system from a variety of education, employment, and training programs. It brings together and focuses various workforce development partners and stakeholders on two key outcomes – properly prepared workforce that meets the current and future demands of Maryland employers, and opportunities for all Marylanders to succeed in the 21st century.	The comments have been incorporated.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	Change Council to Program as such: the MACEM worked with the Maryland Apprenticeship and Training Program within Maryland's DLLR to develop an apprenticeship in Emergency Management. Other partners in this endeavor included:	The change has been made.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
	The highlighted portion is confusing, what is the intent of this sentence: The program is for students, ages 16 and up and was piloted in Frederick and Washington Counties prior to becoming a state or model CTE program.	MSDE has developed state programs of study in CTE. Local school systems can adopt the state program once they form the PAC and meet the other requirements. The word "model" has been removed but the Apprenticeship Maryland Program (AMP) is considered a state CTE program of study.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	Insert the word paid as noted below: Participating students start the program in their junior year of high school and complete at least one year of related classroom instruction and a minimum of 450 hours of paid work-based experience under the supervision of an eligible employer.	The word "paid" has been inserted.
Department of Labor, Licensing and Regulation LiLi Taylor Senior Policy Analyst	The beginning and end of the paragraph repeats itself. Could be restructured.	The paragraph has been reformatted to eliminate redundancy.
Department of Labor, Licensing and Regulation, LiLi Taylor Senior Policy Analyst	The below is not by a registered apprentice sponsor. Change to: The workplace component is a paid (at least minimum wage), mentored, on-the-job, work experience with a work-based learning plan and a formal agreement among the student, school and employer. The workplace component is supervised by a Youth Apprenticeship Employer sponsor (approved by the Maryland Apprenticeship and Training Council (MATC) through DLLR).	The change has been made.
Department of Labor, Licensing and Regulation, LiLi Taylor	Second sentence does not fit in correctly, I suggest reworking it. Maryland will explore more ways to recruit instructors by working more closely with LAC/PAC/SAG	The sentence was modified for clarity.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Senior Policy Analyst	members. Externships for current teachers/faculty will provide a recruitment tool for CTE program teachers. Utilize apprenticeships and industry hosted/facilitated professional development to provide teachers with experiential learning and recruit employers to serve as industry mentors to CTE programs of study.	
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In response to: *Given Maryland's strong technology-based economy, 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.* (page 17): MOST has been working with Maryland afterschool programs to increase access to STEM learning opportunities which has a demonstrated impact on students' engagement and excitement with science. In a 2017 evaluation, 77% of students participating in MOST supported afterschool STEM reported an increase in their science career knowledge and more than 73% reported they were more interested in science careers. (STEM Ready American, 2017). The development of STEM Identity during the middle school years in particular, has been found to be a greater predictor of future participation and success in STEM careers than eight grade academic performance. Afterschool programs allow students to be exposed to STEM concepts, careers and the applications of STEM	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
	learning in low-stakes (non-graded) environments that build confidence, connections and relevance. Students that participation in STEM competitions like robotics, cyber or Maryland Science Olympiad will likely be more engaged and prepared to participate in High School STEM CTE program	
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In response to *Informing students about CTE programs in the middle school through open houses, tours, job shadowing, social media, and/or exploratory programs will help students identify their career interests and be able to have the necessary requirements to select and enroll in CTE programs of their choosing.* (page 24): Afterschool and summer programs offer the perfect opportunity to provide "exploratory program" that serve as the precursors to enrollment in CTE. Coordination with afterschool programs can happen at the state level with the 21st Century Community Learning Centers, Public School Opportunity Enhancement, Leap and Next Generation Scholars grant programs. MOST can provide a landscape and connections to additional afterschool programs not currently supported through these state level funded streams.	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In response to: *Employability skills embedded in Maryland CTE programs of study are supported by various experiential learning opportunities, providing students with experience in and understanding of all aspects of an industry. Work-based learning opportunities are an integral programmatic component and exist through volunteer mentorships, youth apprenticeships, paid and unpaid internships, PAC member guidance, a project mentored by an employer, or a school-based clinic or enterprise.* (page 25): Afterschool and summer programs have increasingly focused on intentionally developing 21st Century skills that support employability in addition to providing specific, technical skills connected to high demand jobs. Included in the drop box along with these comments is a brief that describes three programs that are providing employability skills connected to industry.	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In response to: *Local school systems use a wide variety of platforms including*…(page 27): MOST would happily include information about CTE programming and resources in our communications – our email newsletter, which is sent every two weeks, reaches more than 3000 formal and informal educators statewide. We would also include CTE relevant content in our training and professional development opportunities for afterschool program and in career and college readiness tracks at our annual statewide conference.	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In response to: *Other ways 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 right in their high school. The credit counts not only toward the CTE POS but also for college credit on an official transcript. One community college offers students proficiency credit. This option provides for students being offered 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.* (page 34): High School afterschool programs provide additional opportunities for partnerships for students to earn college credit while building workforce skills. Current examples include the Code in the Schools in partnership with University of Baltimore summer program Code Works, where students participate in a five-week boot camp getting paid to code and earning a 1-hour credit course through University of Baltimore that can be transferred once a student is matriculated at a college or university. Digital Harbor Foundation collaborated with Baltimore County Community College for student to earn college credit in digital fabrication as student's learned 3D printing at DHF's Tech Center. Encouraging and supporting more afterschool and higher education partnerships will	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	allow student's more flexibility with when and where they earn credit and gain certifications.	
Maryland out of School Time network (MOST) Ellie Mitchell Director, Maryland Out of School Time Network	In reference to involvement of stakeholders in planning, development, implementation and evaluation of CTE (page 36): MOST would encourage inclusion of experts in the field of afterschool and summer with career and college focus in groups that are planning and designing Maryland's CTE systems. MOST can help identify qualified and interested people and organizations to join stakeholder groups.	MSDE will include MOST as an integral member of the stakeholder community for CTE Perkins V plans going forward, and looks forward to MOST's input in future Perkins V plans.
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	Can we include a presentation on how work is an appropriate outcome for youth with disabilities at the annual counselors conference (if something has not already occurred)—need to ensure the message is clear beyond special education. (page 10)	This suggestion will be given to the planning committee of the counselors conference.
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	What is the process to review and ensure academic policies and campus practices support all students? Does it include individuals with knowledge and expertise regarding students with disabilities? (page 13)	All local school systems and community colleges ensure that all CTE programs are open to all students. For students who need support in a CTE program, that support is available in every school system and community college, and is provided by a team of experts to ensure the success of all students.
Maryland Department of Disabilities Jade Ann Gingerich	Use of term transition course may be confused with transition for students with IEPs (page 14)	MSDE will evaluate the use of the phrase, as this is used throughout the agency.

ORGANIZATION /INDIVIDUAL	COMMENT	STAFF RESPONSE
Director, Employment Policy/PROMISE		
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	Use of state leadership funds…develop strategies to improve success in CTE programs for members of special populations? Note: Would love to explore this potential opportunity further (page 18)	MSDE collaborates with the Department of Disabilities, and will convene a meeting to explain the use of these funds.
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	Who will develop and review the targeted recruitment plan for special populations? Will be it be vetted by representative partners serving those special populations? Who reviews and approves the academic and career plans starting in 8th grade and do they possess the knowledge experience to ensure work is an outcome for youth with disabilities? (pages 24/40)	Recruitment plans are developed by the school system, not just the CTE staff. The school system staff who work with members of special populations are involved in the development of these plans. The middle school staff would develop plans for their students.
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	Do the MSDE Counseling/Advisory materials for students in grades 7-12 include a focus on work for students with disabilities and provides information to address misperceptions they may have about work and its impact on benefits? (page 26)	CTE programs are open to all students, including members of special populations, and external work experiences are available to all. Future presentations will include information that addresses these misperceptions concerning work and benefits.
Maryland Department of Disabilities Jade Ann Gingerich Director, Employment Policy/PROMISE	Who/how will outreach occur to students from special populations going off to college and universities to self-report? (page 42)	This would be a school system decision, not an issue that is CTE specific. This is a topic that is covered by every school system's Transition Advisor, as well as the Governor's Interagency Transition Council for Youth with Disabilities.

MARYLAND CAREER AND TECHNOLOGY EDUCATION (CTE)
TRANSITION YEAR STATE PLAN 2019 – 2020

APPENDIX D

1. Local Application/Plan Template

Certification of Consultation

1. [Perkins V §134(d)] DESCRIBE HOW THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WILL CONSULT[1] WITH A DIVERSE BODY OF STAKEHOLDERS TO DEVELOP THIS LOCAL APPLICATION. EACH OF THE FOLLOWING GROUPS IS SPECIFICALLY IDENTIFIED IN PERKINS V:

Group	Manner of Consultation	Description
Secondary and post-secondary teachers/faculty and administrators		
Career and academic counselors/advisors		
School/College leaders		
Specialized instruction support personnel and paraprofessionals		
State, regional or local workforce development boards		
Local or regional business leaders		
Parents and students		
Representatives of special populations		
Representatives of agencies serving out-of-school youth, homeless children and youth, and at-risk youth		
Other (Identify: _____)		

2. [Perkins V §134(e)] PERKINS V REQUIRES THAT CONSULTATION WITH STAKEHOLDERS IS ONGOING. DESCRIBE HOW THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WILL BE MEETING[2] THIS REQUIREMENT.

2A. CONSULTATION IN ORDER TO PROVIDE INPUT ON ANNUAL UPDATES TO THE COMPREHENSIVE NEEDS ASSESSMENT. [§134(e)(1)]

_____

[1] "… ***will*** consult…" only for the transition year; thereafter, changed to "… ***have*** consulted…"
[2] "… ***will be*** meeting…" only for the transition year; thereafter, change to "… ***is*** meeting… "

2B. CONSULTATION TO ENSURE PROGRAMS OF STUDY ARE RESPONSIVE TO COMMUNITY EMPLOYMENT NEEDS. [§134(e)(2)(A)]

2C. CONSULTATION TO ENSURE PROGRAMS OF STUDY ARE ALIGNED WITH EMPLOYMENT PRIORITIES IN THE STATE, REGIONAL, OR LOCAL ECONOMY IDENTIFIED BY EMPLOYERS AND OTHER STAKEHOLDERS, WHICH MAY INCLUDE IN-DEMAND INDUSTRY SECTORS OR OCCUPATIONS IDENTIFIED BY THE LOCAL WORKFORCE DEVELOPMENT BOARD (LWDB). [§134(e)(2)(B)]

2D. CONSULTATION TO ENSURE PROGRAMS OF STUDY ARE INFORMED BY LABOR MARKET INFORMATION. [§134(e)(2)(C)]

2E. CONSULTATION TO ENSURE PROGRAMS OF STUDY ARE DESIGNED TO MEET CURRENT, INTERMEDIATE, OR LONG-TERM LABOR MARKET PROJECTIONS. [§134(e)(2)(D)]

2F. CONSULTATION TO ENSURE PROGRAMS OF STUDY ALLOW EMPLOYER INPUT, INCLUDING INPUT FROM INDUSTRY OR SECTOR PARTNERSHIPS IN THE LOCAL AREA, WHERE APPLICABLE, INTO THE DEVELOPMENT AND IMPLEMENTATION OF PROGRAMS OF STUDY TO ENSURE PROGRAMS OF STUDY ALIGN WITH SKILLS REQUIRED BY LOCAL EMPLOYMENT OPPORTUNITIES, INCLUDING ACTIVITIES SUCH AS THE IDENTIFICATION OF RELEVANT STANDARDS, CURRICULUM, INDUSTRY-RECOGNIZED CREDENTIALS, AND CURRENT TECHNOLOGY AND EQUIPMENT. [§134(e)(2)(E)]

2G. CONSULTATION TO IDENTIFY AND ENCOURAGE OPPORTUNITIES FOR WORK-BASED LEARNING. [§134(e)(3)]

2H. CONSULTATION TO ENSURE PERKINS FUNDING IS USED IN A COORDINATED MANNER WITH OTHER LOCAL RESOURCES. [§134(e)(4)]

Comprehensive Local Needs Assessment

[§ 134(c)(1)(A-B)] Perkins V requires that all local school systems and community colleges eligible to receive Perkins financial assistance must:

(A) conduct a comprehensive local needs assessment related to career and technical education and include the results of the needs assessment in the local application; and

(B) update the comprehensive local needs assessment at least every 2 years.

1. EVALUATE THE PERFORMANCE OF STUDENTS SERVED BY THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WITH RESPECT TO STATE DETERMINED AND LOCAL LEVELS OF PERFORMANCE, INCLUDING AN EVALUATION OF PERFORMANCE FOR SPECIAL POPULATIONS AND EACH SUBGROUP DESCRIBED IN SECTION 1111(H)(1)(C)(II) OF THE ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965. [§134(c)(2)(A)]

2. DESCRIBE HOW THE LOCAL SCHOOL SYSTEM'S OR COMMUNITY COLLEGE'S CTE PROGRAMS ARE SUFFICIENT IN SIZE, SCOPE, AND QUALITY TO MEET THE NEEDS OF ALL STUDENTS SERVED. [§134(c)(2)(B)(i)]

3. DESCRIBE HOW THE LOCAL SCHOOL SYSTEM'S OR COMMUNITY COLLEGE'S CTE PROGRAMS ARE ALIGNED TO STATE, REGIONAL, OR LOCAL IN-DEMAND INDUSTRY SECTORS OR OCCUPATIONS IDENTIFIED BY THE GOVERNOR'S WORKFORCE DEVELOPMENT BOARD (GWDB) OR LOCAL WORKFORCE DEVELOPMENT BOARD (LWDB), INCLUDING CAREER PATHWAYS, WHERE APPROPRIATE. [§134(c)(2)(B)(ii)(I)]

4. DESCRIBE HOW THE LOCAL SCHOOL SYSTEM'S OR COMMUNITY COLLEGE'S CTE PROGRAMS ARE DESIGNED TO MEET LOCAL EDUCATION OR ECONOMIC NEEDS NOT IDENTIFIED BY STATE BOARDS OR LOCAL WORKFORCE DEVELOPMENT BOARDS. [§134(c)(2)(B)(ii)(II)]

5. EVALUATE THE PROGRESS TOWARD THE IMPLEMENTATION OF NEW CTE PROGRAMS AND PROGRAMS OF STUDY. [§134(c)(2)(C)]

6. DESCRIBE HOW IMPROVEMENTS WILL BE MADE TO RECRUITMENT, RETENTION, AND TRAINING OF CTE TEACHERS, FACULTY, SPECIALIZED INSTRUCTIONAL SUPPORT PERSONNEL, PARAPROFESSIONALS, AND CAREER GUIDANCE AND ACADEMIC COUNSELORS, INCLUDING INDIVIDUALS IN GROUPS UNDERREPRESENTED IN SUCH PROFESSIONS. [§134(c)(2)(D)]

7. PROGRESS TOWARD IMPLEMENTATION OF EQUAL ACCESS TO HIGH-QUALITY CTE COURSES AND PROGRAMS OF STUDY FOR ALL STUDENTS.

   7A. DESCRIBE STRATEGIES TO OVERCOME BARRIERS THAT RESULT IN LOWER RATES OF ACCESS TO, OR PERFORMANCE GAPS IN, THE COURSES AND PROGRAMS FOR SPECIAL POPULATIONS. [§134(c)(2)(E)(i)]

   7B. DESCRIBE HOW CTE PROGRAMS ARE DESIGNED TO ENABLE SPECIAL POPULATIONS TO MEET THE LOCAL LEVELS OF PERFORMANCE. [§134(c)(2)(E)(ii)]

7C. DESCRIBE ACTIVITIES PROVIDED TO PREPARE SPECIAL POPULATIONS FOR HIGH-SKILL, HIGH-WAGE, OR IN-DEMAND INDUSTRY SECTORS OR OCCUPATIONS IN COMPETITIVE, INTEGRATED SETTINGS THAT WILL LEAD TO SELF-SUFFICIENCY. [§134(c)(2)(E)(iii)]

Local Application

[Perkins V §134(a)] Perkins V requires all eligible local school systems and community colleges desiring Perkins financial assistance to submit an annual local application to MSDE.

1. *NOT INCLUDED IN FY20 TRANSITION YEAR PLAN* SUMMARIZE THE RESULTS OF THE COMPREHENSIVE NEEDS ASSESSMENT. [§134(b)(1)]

2. DESCRIBE EACH NEW CTE PROGRAM OF STUDY ANTICIPATED TO BE DEVELOPED AND SUBMITTED FOR APPROVAL IN FY20. [§134(b)(2)(B)]

3. SUMMARIZE HOW STUDENTS, INCLUDING STUDENTS WHO ARE MEMBERS OF SPECIAL POPULATIONS, LEARN ABOUT AVAILABLE CTE PROGRAMS OF STUDY. [§134(b)(2)(C)]

4. SUMMARIZE HOW THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE, IN COLLABORATION WITH LOCAL WORKFORCE DEVELOPMENT BOARDS, OTHER LOCAL WORKFORCE AGENCIES, ONE-STOP DELIVERY SYSTEMS UNDER WIOA, AND OTHER PARTNERS, WILL PROVIDE THE FOLLOWING: [§134(b)(3)(A-C)]
   a. CAREER EXPLORATION AND CAREER DEVELOPMENT COURSEWORK, ACTIVITIES, OR SERVICES.

   b. CAREER INFORMATION ON EMPLOYMENT OPPORTUNITIES THAT INCORPORATE THE MOST UP- TO-DATE INFORMATION ON HIGH-SKILL, HIGH-WAGE, OR IN-DEMAND INDUSTRY SECTORS OR OCCUPATIONS, AS DETERMINED BY THE COMPREHENSIVE NEEDS ASSESSMENT.

   c. AN ORGANIZED SYSTEM OF CAREER GUIDANCE AND ACADEMIC COUNSELING TO STUDENTS BEFORE ENROLLING AND WHILE PARTICIPATING IN A CTE PROGRAM.

5. SUMMARIZE HOW THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WILL IMPROVE THE ACADEMIC AND TECHNICAL SKILLS OF STUDENTS PARTICIPATING IN CTE PROGRAMS BY STRENGTHENING THE ACADEMIC AND CTE COMPONENTS OF SUCH PROGRAMS THROUGH THE INTEGRATION OF COHERENT AND RIGOROUS CONTENT ALIGNED WITH CHALLENGING ACADEMIC STANDARDS AND RELEVANT CTE PROGRAMS TO ENSURE LEARNING IN THE SUBJECTS THAT CONSTITUTE A WELL-ROUNDED EDUCATION. [§134(b)(4)]

6. DESCRIBE HOW SPECIAL POPULATIONS IN CTE PROGRAMS OF STUDY WILL BE PREPARED FOR HIGH-SKILL, HIGH-WAGE, OR IN-DEMAND INDUSTRY SECTORS OR OCCUPATIONS THAT WILL LEAD TO SELF-SUFFICIENCY. [§134(b)(5)(A)]

7. DESCRIBE HOW CTE PARTICIPANTS WILL BE PREPARED FOR NON-TRADITIONAL FIELDS.

[§134(b)(5)(B)]

8. DESCRIBE HOW EQUAL ACCESS WILL BE PROVIDED FOR SPECIAL POPULATIONS TO CTE COURSES, PROGRAMS, AND PROGRAMS OF STUDY. [§134(b)(5)(C)]

9. DESCRIBE HOW YOUR LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WILL ENSURE THAT MEMBERS OF SPECIAL POPULATIONS WILL NOT BE DISCRIMINATED AGAINST ON THE BASIS OF THEIR STATUS AS MEMBERS OF SPECIAL POPULATIONS. [§134(b)(5)(D)]

10. SUMMARIZE THE WORK-BASED LEARNING OPPORTUNITIES THAT WILL BE PROVIDED TO STUDENTS PARTICIPATING IN CTE PROGRAMS, AND HOW REPRESENTATIVES FROM EMPLOYERS WILL BE INCLUDED TO DEVELOP OR EXPAND WORK-BASED LEARNING OPPORTUNITIES FOR CTE STUDENTS. [§134(b)(6)]

11. SUMMARIZE HOW STUDENTS PARTICIPATING IN CTE PROGRAMS WILL BE PROVIDED WITH THE OPPORTUNITY TO GAIN POSTSECONDARY CREDIT WHILE STILL ATTENDING HIGH SCHOOL, SUCH AS THROUGH DUAL OR CONCURRENT ENROLLMENT PROGRAMS OR EARLY COLLEGE HIGH SCHOOL, AS PRACTICABLE. [§134(b)(7)]

12. SUMMARIZE HOW THE LOCAL SCHOOL SYSTEM OR COMMUNITY COLLEGE WILL COORDINATE WITH MSDE, OTHER STATE AGENCIES, INSTITUTIONS OF HIGHER EDUCATION, OR PROFESSIONAL ORGANIZATIONS TO SUPPORT THE RECRUITMENT, PREPARATION, RETENTION, AND TRAINING, INCLUDING PROFESSIONAL DEVELOPMENT, OF TEACHERS, FACULTY, ADMINISTRATORS, AND SPECIALIZED INSTRUCTIONAL SUPPORT PERSONNEL AND PARAPROFESSIONALS WHO MEET APPLICABLE STATE CERTIFICATION AND LICENSURE REQUIREMENTS, INCLUDING INDIVIDUALS FROM GROUPS UNDERREPRESENTED IN THE TEACHING PROFESSION. [§134(b)(8)]

13. DESCRIBE HOW DISPARITIES OR GAPS IN PERFORMANCE BETWEEN GROUPS OF STUDENTS IN EACH YEAR OF THE PLAN WILL BE ADDRESSED. IF NO MEANINGFUL PROGRESS HAS BEEN ACHIEVED PRIOR TO THE THIRD PROGRAM YEAR, DESCRIBE THE ADDITIONAL ACTIONS THAT WILL BE TAKEN TO ELIMINATE THOSE DISPARITIES OR GAPS. [§134(b)(9)]

ACTIVITY WORKSHEETS TO REQUEST CTE PROGRAM OF STUDY PERKINS FUNDS		
Cluster Name:		
Program Name:		
Program Other:		
Consultation[3]:		
Needs Assessment/Data Support[4]:		
Outcome(s):	**Description(s) of the Planned Improvement Activity:**	**Core Indicator(s):**
Budget Information		
Title I Budget Information:		
Other Funding Sources:		
	Title I Budget Amount:	
	Title I Equipment Amount:	

Note: The Maryland State Department of Education has a standardized budget form for local recipients to use. The budget information that will appear here is from the web-based plan and is automatically tallied. The MSDE budget form must be used as well, appropriate categories completed, and the required signatures affixed to the document to make it an official submission.

[3] Brief description of how a diverse group of stakeholders were consulted on the selection of ***this specific*** CTE program and activity/activities to be funded [§134(d)].

[4] Brief description of how the results of the comprehensive needs assessment or program-specific needs assessment informed the selection of ***this specific*** CTE program and activity/activities to be funded [§134(b)(2)(A)].

Perkins V Required Local Application/Plan Elements Checklist

	Required Local Application/Plan Elements	Location of Element
1	A description of the results of the comprehensive needs assessment conducted under subsection 134(c).	Local Application, Question #1
2A	Information how the results of the comprehensive needs assessment described in subsection 134(c) informed the selection of the specific career and technical education (CTE) programs and activities selected to be funded.	Worksheets A and B, Consultation, Needs Assessment/Data
2B	A description of any new programs of study that will be developed and submitted to the State to be funded within the next fiscal year.	Local Application, Question #2
2C	Information on how students, including students who are members of special populations, will learn about their school's CTE course offerings and whether each course is part of a CTE program of study.	Local Application, Question #3
3A	A description of how the eligible recipient, in collaboration with local workforce development boards and other local workforce agencies, one-stop delivery systems described in section 121(e)(2) of the Workforce Innovation and Opportunity Act (29 U.S.C. 3151(e)(2)), and other partners, will provide career exploration and career development coursework, activities, or services.	Local Application, Question #4a
3B	A description of how the eligible recipient, in collaboration with local workforce development boards and other local workforce agencies, one-stop delivery systems described in section 121(e)(2) of the Workforce Innovation and Opportunity Act (29 U.S.C. 3151(e)(2)), and other partners, will provide career information on employment opportunities that incorporate the most up-to-date information on high-skill, high-wage, or in-demand industry sectors or occupations, as determined by the comprehensive needs assessment in subsection 134(c).	Local Application, Question #4b
3C	A description of how the eligible recipient, in collaboration with local workforce development boards and other local workforce agencies, one-stop delivery systems described in section 121(e)(2) of the Workforce Innovation and Opportunity Act (29 U.S.C. 3151(e)(2)), and other partners, will provide an organized system of career guidance and academic counseling to students before enrolling and while participating in a CTE program.	Local Application, Question #4c
4	A description of how the eligible recipient will improve the academic and technical skills of students participating in CTE programs by strengthening the academic and career and technical education components of such programs through the integration of coherent and rigorous content aligned with challenging academic standards and relevant CTE programs to ensure learning in the subjects that constitute a well-rounded education (as defined in section 8101 of the Elementary and Secondary Education Act of 1965)	Local Application, Question #5

	Required Local Application/Plan Elements	Location of Element
5A	A description of how the eligible recipient will provide activities to prepare special populations for high-skill, high-wage, or in-demand occupations that will lead to self-sufficiency.	Local Application, Question #6
5B	A description of how the eligible recipient will prepare CTE participants for non-traditional fields.	Local Application, Question #7
5C	A description of how the eligible recipient will provide equal access for special populations to CTE courses, programs, and programs of study.	Local Application, Question #8
5D	A description of how the eligible recipient will ensure that members of special populations will not be discriminated against on the basis of their status as members of special populations.	Local Application, Question #9
6	A description of the work-based learning opportunities that the eligible recipient will provide to students participating in the CTE programs and how the recipient will work with representatives from employers to develop or expand work-based learning opportunities for CTE students, as applicable.	Local Application, Question #10
7	A description of how the eligible recipient will provide students participation in CTE programs with an opportunity to gain postsecondary credit while still attending high school, such as through dual or concurrent enrollment programs or early college high school, as practicable.	Local Application, Question #11
8	A description of how the eligible recipient will coordinate with the eligible agency and institutions of higher education to support the recruitment, preparation, retention, and training, including professional development of teachers, faculty, administrators, and specialized instructional support personnel and paraprofessionals who meet applicable State certification and licensure requirements (including any requirements obtained through alternative routes to certification), including individuals from groups underrepresented in the teaching profession.	Local Application, Question #12
9	A description of how the eligible recipient will address disparities or gaps in performance as described in section 113(b)(3)(C)(ii)(II) 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 such recipient will take to eliminate these disparities or gaps.	Local Application, Question #13