

Working Group 3

College and Career Readiness Pathways Preliminary Cost Estimates

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Preliminary Cost Estimates

Element 3a: Develop a fully aligned instructional system, including curriculum frameworks, course syllabi and assessments, together with clear examples of standard-setting work and formative assessments to ensure that student stay on track.

Baseline: Current State budget includes funds for new assessments. Only new costs will be for inspection teams that will recommend courses of action for addressing the problems revealed by the inspections.

Assumption: Inspection teams will inspect the schools that perform in the lowest 10% under the new assessments each year.

Costs: The costs associated with the inspection teach is estimated at \$1.2 annually beginning in fiscal 2023. This equates to approximately 12 inspectors.

Year 0 (FY 2020)	Year 1 (FY 2021)	Year 5 (FY 2025)	Year 10 (FY 2030)
\$0	\$0	\$1,150,466	\$1,150,466

Element 3b: Establish and implement a College and Career Readiness (CCR) standard set to global standards. At the outset, the CCR standard will be a score of 4 or higher on PARCC Algebra I and English 10 exams.

Baseline: 29.7% of the Class of 2020 (current Juniors) have met the CCR standard defined by the commission.

Assumption: By Year 10, 65% of students will achieve the CCR standard by the end of 10th grade.

The percentage of public school students achieving the CCR standard by the end of 10th grade will remain unchanged until SY 2020-21, and then grow in a linear fashion between SY 2020-21 and SY 2029-30, or roughly four percentage points each year, before reaching the 65% target in SY 2029-30.

Cost: The costs associated with getting more students to achieve the CCR standard by 10th grade are captured in other commission recommendations, most notably the Workgroup 2 recommendation to provide teachers with 20% more time in part to assist struggling learners, and Elements 3c and 3d, described below.

Element 3c: Transitional Supplemental Instruction (TSI), including tutoring, for all K–3rd grade students identified as struggling learners.

Baseline: Dedicated funding of \$2,500,000 is provided in fiscal 2019 through 2022 for the Maryland Early Literacy Program established in Chapter 361 of 2018.

Assumptions: Students scoring PARCC levels 1, 2, and 3 in English language arts for grades K–3. Grade 3 performance is a proxy for grades K–2 since PARCC begins in the third grade.

In combination with the compensatory education per pupil amount, provide tutors on a 1:125 (tutor:student) ratio and tutor coordinators on a 1:11 (coordinator:tutor) ratio.

Begin transitional supplemental instruction in fiscal 2020 and fully fund through fiscal 2024. Phase out by 1/3 each year beginning in fiscal 2025.

Cost of a tutor is a blended salary amount for a teacher and a paraprofessional to reflect flexible delivery methods.

Cost of a coordinator is the salary for a teacher.

Salaries were inflated to fiscal 2020 and then, for teacher salaries, an additional 10% was phased-in over three years in accordance with the recommendations of workgroup 2.

Benefits and retirement costs are included.

Cost:

Year 0 (FY 2020)	Year 1 (FY 2021)	Year 5 (FY 2025)	Year 10 (FY 2030)
\$48,132,741	\$49,275,397	\$33,780,095	\$0

Element 3d: Develop alternative educational approaches for students in middle school and early high school who are not likely to meet the CCR standard by the end of 10th grade that gives them extra time and more supports to help them meet that standard as soon as possible.

Costs: The costs associated with Element 3d will be accounted for under the Elements for Work Group 2.

Element 3e: Students who reach CCR by the end of 10th grade will choose from among four pathways for the remaining two years of high school:

1. A college preparatory pathway that includes completion of one of the following: the Advanced Placement (AP) Capstone program, the International Baccalaureate (IB) program, or the Cambridge Diploma program;
2. Dual enrollment in a public postsecondary institution that allows the student to earn up to an Associates' degree at no cost to the student;
3. A rigorous career and technology education (CTE) program that leads to an industry-recognized credential that provides entry to a challenging career; or
4. A fourth pathway developed by the student (in consultation with a guidance counselor) that blends elements of some or all of the other three pathways.

Baseline: In SY 2016-2017, almost 16,500 graduating seniors (28.5%) completed a rigorous high school program (as defined by the Maryland Report Card), and almost 17,900 (30.9%) enrolled in a selective college or university.

In SY 2016-2017, approximately 59,300 Maryland high school students (about two-thirds are juniors or seniors) took at least one AP exam, with an average of two exams per student.

In fiscal 2018, average community college tuition for a full-time student (30 credits) is approximately \$3,500 (\$350 for a single three-credit course); average student fees are approximately \$810 (full-time).

In SY 2016-2017, an average of about 7,600 high school students were dually enrolled in a Maryland community college in *each* semester (Fall/Spring). It is assumed that virtually all of these students were high school seniors. Although data on course enrollments by these students is not available, it is further assumed that each dually enrolled student took an average of two courses per year (one per semester).

In SY 2016-2017, 12,990 graduating seniors (22.5% of all graduates) completed a CTE program, but only about 4,500 graduating seniors (7.9%) earned an industry-recognized credential as part of their CTE program. Annual State/local expenditures (not including federal funds) for CTE programs is \$8,500 per CTE completer.

Assumptions:

Overarching Assumption: The implementation of alternate pathways for students achieving the college and career readiness standard is fundamentally a paradigm shift for how high schools should serve their students. It does not fundamentally alter the number of students to be

served (as is the case for Workgroup 1), and therefore does not require a significant increase in the number of teachers (as is the case for Workgroup 2). Rather, it generally involves the reallocation of existing human and financial resources to better serve the current population of high school students, which is projected to grow only modestly in size over the 10 year implementation period. This is not to say that there are no costs associated with this shift, as existing programs will need to expand and new programs will need to be established. It only means that the root cause of added costs associated with the implementation of the pathways is not about doing more things for more students, but rather it is about doing things differently for roughly the same number of students.

The funding model should not create incentives for local school systems to favor some pathways over others.

Each of the pathways already has established infrastructure on which to build (e.g., existing CTE programs; a substantial array of available AP courses and IB programs; dual enrollment arrangements with local colleges).

Students will have an opportunity to achieve CCR in English 10 and Algebra prior to the end of 10th grade, and students who are not CCR will be able to take some AP/introductory CTE courses prior to achieving CCR until the Commission's recommendations are fully implemented (as recommended by Working Group 3)

The incremental cost of providing Pathways 1, 3, and 4 (college preparatory, CTE, and the blended pathway) is therefore the cost of the training, administration, examination fees, program fees, and other related costs necessary to implement and/or expand each program (Pathway 3—dual enrollment—is discussed below).

\$1,000 per student who achieves the CCR standard by grade 10 (\$2,000 over a CCR student's final two years of high school) covers the cost of implementing the various pathways.

--The average cost of implementing AP/IB/Cambridge programs for 200 students (100 juniors and 100 seniors) in a high school in SY 2017-2018 is approximately \$850 per student.

--The incremental cost of implementing a rigorous CTE pathway may involve (1) developing/implementing new CTE pathways to replace those that do not provide an industry-recognized credential in a priority industry; (2) upgrading existing pathways that may not be sufficiently academically rigorous; and (3) expanding workplace learning/apprenticeship opportunities. The cost of these items (e.g., teacher training, credentialing exam fees,

transportation) cannot be reliably estimated but are assumed to approximate the cost of implementing the AP/IB/Cambridge programs.

\$1,000 per CCR student (or \$2,000 over a CCR student’s final two years of high school) covers the cost of five community college courses-- including tuition, fees, and books—which represents an increase of three courses over the current average per student. This will benefit students in Pathway 4 who wish to take some dual enrollment classes as part of their blended pathway, as well as CTE students (Pathway 3) who pursue pathways that are articulated with local community colleges.

CCR funding for dual enrollment students is not sufficient to achieve the commission’s goal of allowing students to earn an Associate’s degree (typically 60 credits) in two years at no cost to the student, which would cost in excess of \$9,000 in tuition, fees, and books over two years. However, since students who elect to pursue an AA degree while in high school will spend most of their time in dual enrollment/college courses and very little time in traditional high school courses, high schools will incur minimal costs for these students. Therefore, the cost for students who wish to pursue this pathway involves a shifting of costs rather than additional total costs. Students who pursue an Associate’s degree through dual enrollment will remain officially enrolled as a full-time student in high school (as long as their college courses also count for high school credit), but will likely take all their academic courses at the postsecondary institution. Local school systems will pay up to 75% of those students’ tuition and all fees/books using foundation formula dollars. Since per-pupil foundation funding amounts well exceed 75% of annual tuition plus fees/books for a full-time community college student, local school systems will still retain a substantial portion of their foundation amounts (plus the additional funding provided for CCR students) even though those students are not taking any (or only very few) classes at the high school.

As the proportion of students participating in dual enrollment increases, it may create surplus teaching capacity that can be reallocated to other pathways or alternative educational approaches.

Cost:

Year 0 (FY 2020)	Year 1 (FY 2021)	Year 5 (FY 2025)	Year 10 (FY 2030)
Not Applicable	\$43,691,767	\$62,464,626	\$90,186,125

Element 3f: The State Board will revise high school graduation requirements so that students who achieve CCR will be able to enter any post-CCR pathways and still earn a high school diploma.

Baseline: In order to graduate from public high school, students in Maryland must earn 21 credits, including 4 in English, and 3 each in math, science, and social studies. They must also complete 75 hours of community service and take and pass Maryland High School Assessments (currently PARCC) in Algebra I, English 10, science, and government.

The Maryland High School Graduation Task Force has reported its findings and recommendations to the State Board of Education, which has not yet acted on the recommendations.

Cost: The Maryland State Department of Education may incur some costs to implement this element, but a determination of what, if any costs, may be incurred is not feasible until the State Board and/or the General Assembly decides what, if any, changes it will make to current State graduation requirements. When a cost estimate is feasible, one will be provided to the Commission. Any costs resulting from this element, however, are not expected to be significant.

Element 3g: Develop 11th and 12th grade programs for students who do not meet the CCR standard by the end of 10th grade.

Baseline: Transition courses currently exist for students who are not CCR by the end of 11th grade, which are primarily delivering remedial education similar to what community colleges provide to students who are not ready for credit-bearing courses when they enroll.

Assumptions: The programs will be more applied, experiential, and “hands on” than typical high school courses. They may be similar to, or even the same as, introductory CTE courses that are enhanced to provide greater proficiency in literacy and numeracy skills.

MSDE may incur some costs to develop these programs, which can then be disseminated to high schools in the State.

High schools can implement these programs largely with existing resources.

Cost: MSDE may incur some one-time expenses to develop these programs (the Commission recommends hiring consultants from other countries that have already designed such programs). Cost estimates will be provided when available.

Elements 3h and 3i: Establish a Career and Technical Education (CTE) Committee with dedicated staff and a Skills Standards Advisory Board

Baseline: Currently there are no dedicated staff to do the work envisioned for the CTE committee.

Assumptions: There is a CTE committee with a dedicated staff, which monitors the progress of CTE in Maryland, including timely implementation of the Commission’s recommendations. The committee’s staff will obtain and analyze data on the CTE system’s performance and that of participating students. The staff will also assist the board with assembling data for the committee to create a robust array of CTE opportunities, including the organization appropriate industry groups to establish the standards and criteria by which candidates will be evaluated for credentials. Finally, the staff will also manage and distribute CTE related grants including \$2 million in existing Career and Technology Education Innovation grants from Chapter 361 of 2018 (HB 1415).

Cost:

- \$470,400 for 5 CTE committee staff beginning in Year 0
 - 1 Executive Director
 - 2 research analysts
 - 1 grants administrator/budget analyst
 - 1 support staff
 - includes communications, supplies, and materials
 - Year 0 includes start-up costs including computers
 - Does not include inflation or turnover assumptions
- \$50,000 annual database and other research subscription costs
- \$2 million in existing Career and Technology Education Innovation grants mandated by Chapter 361 of 2018 (HB 1415) end after Year 4. It is assumed that the framework and pathways will all be in place by Year 5; thus the grant program will no longer be necessary.

Costs

	Year 0 (FY 2020)	Year 1 (FY 2021)	Year 5 (FY 2025)	Year 10(FY 2030)
Costs	\$482,500	\$470,400	\$470,400	\$470,400
Savings			\$2,000,000	\$2,000,000

Element 3j: Every middle and high school student should have ready access to individuals who can counsel and advise them on CTE pathway options and help them navigate among the available and emerging opportunities.

Baseline: Guidance counseling services are already stretched thin in virtually all middle and high schools, so there is not capacity to provide these services with current staffing levels.

In SY 2017-2018, the median salary in the State for a guidance counselor was \$75,780; the first quartile salary was \$62,901.

In SY 2017-2018, there were 212 middle schools, 180 high schools, and 93 combined schools (which are assumed to be K-8 schools).

Assumptions: Each middle and high school will have a professional career counselor to provide the counseling services that are envisioned.

Most career counselors hired will be new counselors.

Health, retirement, and other benefits are estimated to be 15% of salaries/wages.

This level of funding could be made available through grants to LEAs and/or community colleges or other partners to provide career counseling as recommended by working group 3.

Cost:

Year 0 (FY 2020)	Year 1 (FY 2021)	Year 5 (FY 2025)	Year 10 (FY 2030)
	\$35,083,033	\$35,083,033	\$35,083,033

Element 3k: CTE instruction will take place in two kinds of high schools: Comprehensive CTE High Schools and regular comprehensive high schools. Existing Career and Technology Centers will transition into Comprehensive CTE High Schools as resources become available.

Baseline: Six local school systems operate 14 comprehensive CTE high schools as envisioned by the workgroup (in which all students participate in a CTE pathway). However, 14 school systems operate 16 CTE centers that serve students from multiple high schools. The remainder of CTE programs are located in traditional comprehensive high schools, where only a portion of students participate in CTE.

Assumptions: Local school systems will need to build new comprehensive CTE high schools and/or convert existing high schools to comprehensive CTE high schools. Local school systems with CTE centers will need to close/convert those centers.

Cost:

Construction/conversion of CTE high schools will occur within existing funding levels for the Public School Construction Program. Therefore, no additional capital expenditures are anticipated, but other school construction projects may be delayed or deferred.

Element 3l: The entire CTE system will be informed by a close relationship between CTE providers and the State’s economic development, workforce development, and labor agencies.

Assumption: The close relationship envisioned by the Commission will be achieved through the CTE Committee and Skills Standards Advisory Board, which will work in conjunction with the Governor’s Workforce Development Board and include representatives from all key stakeholder groups.

Cost: There is no added cost to implement this element.

Element 3m: Funds from local, State, and federal sources will be used to support development and delivery of course and program progressions approved by the CTE Committee that lead to industry credentials.

Assumption: Implementation of the post-CCR pathways will include this element.

Cost: There is no added cost to implement this element.