



# WORKGROUP ON THE ASSESSMENT AND FUNDING OF SCHOOL FACILITIES

The Findings and Recommendations of Maryland's Assessment and Funding Workgroup established under the 21<sup>st</sup> Century School Facilities Act (HB 1783)



DECEMBER 1, 2019



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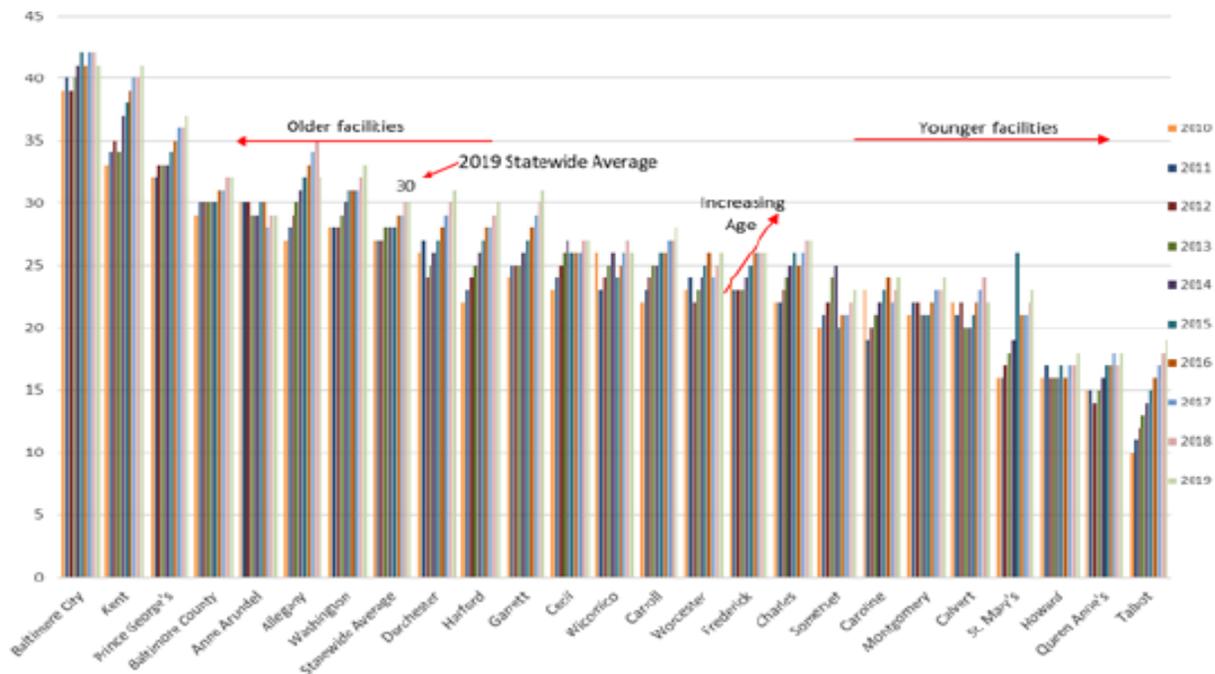
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## EXECUTIVE SUMMARY

In this report, the Workgroup on the Assessment and Funding of School Facilities (“the Workgroup”) provides its recommendations to the Governor and the General Assembly of Maryland as required in 2018’s House Bill 1783. Maryland has reached a critical juncture in the effort to ensure that public schools are designed and built to achieve state and local education objectives while remaining affordable to own and operate over time. The State invests hundreds of millions of dollars in school construction each year, yet conditions do not appear to be improving based upon the measures currently available and comparable (average age).

### Average Age of LEA Facilities 2010 - 2019



The relative age difference between LEAs has remained status quo, but overall the remaining expected life of facilities has almost uniformly declined within each LEA.

Figure 1. The IAC annually reports the average age of school facilities statewide.

In January 2016, the General Assembly established the 21<sup>st</sup> Century School Facilities Commission (Knott Commission) to review all aspects of the State’s school-construction funding process. The Commission held meetings and worked diligently for nearly two years to develop recommendations and issued its [final report](#) in January 2018. The recommendations of the Knott Commission provided the basis for 2018’s HB 1783, the *21<sup>st</sup> Century School Facilities Act* (2018 Md. Laws, Chap. 14).

The Act created the Workgroup on the Assessment and Funding of School Facilities to review the results of the Statewide assessment of all school facilities and to subsequently use the information to determine how to prioritize schools based upon the assessment and whether or not to use assessment information to determine State funding participation.

Maryland has contributed more than \$8 billion to school construction projects since the inception of the Public School Construction Program since its first year of funding in 1972. Based upon information from the National Center for Education Statistics (NCES), the state contribution is on average only around 25% of the total spending on educational facilities in the State. Decision makers at the local and State level continue to study and analyze school facilities needs and effective spending best practices in order to improve school facilities conditions. Since the creation of the Public School Construction program, a number of task forces, workgroups, and commissions have studied school construction funding and practices, with the Kopp Commission in the early 2000s and the Knott Commission (2016 to 2018) being the most recent. The 21<sup>st</sup> Century School Facilities Act included a goal that “as soon as practicable and within the current debt affordability guidelines, the State should provide at least \$400 million each year for public school construction”.

With this level of funding and attention from decision-makers at all levels, Maryland is poised to become a leader in school construction practices across the nation. It will be imperative that all aspects of facility management are considered, starting with the earliest prioritization and planning of facility projects and through the ownership and eventual renewal or disposition of a facility. This kind of cradle-to-grave analysis and planning requires that both the educational suitability of a school and the affordability of the facility to own over time are carefully considered. With the right processes and programs put in place now, and tweaked incrementally over time as necessary, Maryland can ensure that every child in every seat in a Maryland School has a sufficient place to learn.

Unfortunately, due to delays in procurement, the results of the statewide school facilities assessment were not available when the Workgroup began to meet in June, 2019. In lieu of this, IAC staff developed a model of hypothetical schools, with 10 scenarios demonstrating different facility and educational sufficiency components, to provide a general understanding of how the decisions of the Workgroup could impact the scoring methodology proposed by IAC staff.

With this model, the Workgroup was able to begin its work without the results of the assessment. However, the Workgroup deferred making decisions on some recommendations and also emphasized that their recommendations should be reconsidered once the results of the assessment are available and the implications of their decisions can be understood in the context of existing school facilities.

Early on, the Workgroup made it clear that any standards-based funding based upon the results of the assessment must be with new money, and that the current Capital Improvement Program (CIP) must continue in order to provide support to LEAs for their school facility projects.

## MAJOR DISCUSSION AREAS



### Standards-Based Funding

At the Workgroup's first meeting, staff proposed a separate funding program based upon the results of the Statewide assessment. This "standards-based" funding program would use the results of the assessment, which would be weighted for prioritization, to determine a score for each school facility, known as the Maryland Condition Index (MDCI). The score would describe the condition of the bricks-and-mortar elements of a school facility as well as the ability of the school facility to serve its educational function, as measured against the [Maryland Public School Facilities Educational Sufficiency Standards](#) adopted by the IAC on May 31, 2018. For additional information about how the MDCI is generated, please see Appendix 2 "DRAFT Maryland Condition Index (MDCI): How it is Calculated".

Staff proposed that, once MDCI scores are generated for each of Maryland's nearly 1,400 school facilities, those scores could be compared against one another and school facilities ranked from

the highest (poorest condition) to the lowest (best condition). Those that ranked highest would be eligible for funding consideration for a new, renewal, or replacement project under a standards-based program. Staff proposed the application of the State and Local Cost Share for the program, but also recommended that additional project expenditures be eligible under the program, such as design fees and expenditures for furniture, fixtures, and equipment (FF&E).

The Workgroup considered various components of the proposed standards-based program, modified some weighting factors and other program aspects, and recommended the implementation of a pilot program with at least \$50 to \$60 million in addition to the IAC's current funding programs. The Workgroup also recognized that standard and comparable facility information will be valuable to the LEAs as they prioritize and plan their future projects regardless of funding source.

## Total Cost of Ownership

Taken in isolation, neither the up-front cost of a construction project nor the long-term cost to own and operate a facility provides sufficient information with which to make informed portfolio- and facility-management decisions. Typically, a facility can last approximately 30 years before a major renovation project is necessary to keep the facility up-to-date and in working condition. The cost to own and operate a facility for those 30 years often exceeds the initial cost to build the facility. Therefore, facility-design decisions must be made both with up-front and long-term costs under consideration. With this in mind, the Workgroup discussed potential incentives to encourage LEAs to reduce total cost of ownership of their school facilities. Reducing the total cost of ownership of a facility would free up both State and local dollars for other needs.

## Maintenance

After a facility is built, it must then be operated and maintained properly if the total costs of ownership are to be effectively controlled. While the Workgroup primarily focused on prioritization and funding of school construction projects, it also recognized that construction projects and facility ownership cannot be separated from one another. Inadequate maintenance shortens the life of the facility, which then results in additional costs to taxpayers and facility conditions that are not suitable for the education of children. Because maintenance includes both routine maintenance and the periodic replacement of building systems that wear out (capital maintenance), the Workgroup noted that LEAs and the State would benefit from having data on the actual life spans of building systems. Such data would enable LEAs and the State to

continually improve their management of their facilities and extract greater value from the dollars spent on facilities.

## STATUTORY CHARGES

The General Assembly of Maryland passed the [21<sup>st</sup> Century School Facilities Act](#) in the Spring 2018 Legislative Session, laying the groundwork to re-evaluate the State's approach to school construction funding based upon the work of the Knott Commission. Section 3 of the Act established the Workgroup and charged the Workgroup with taking the following actions: \

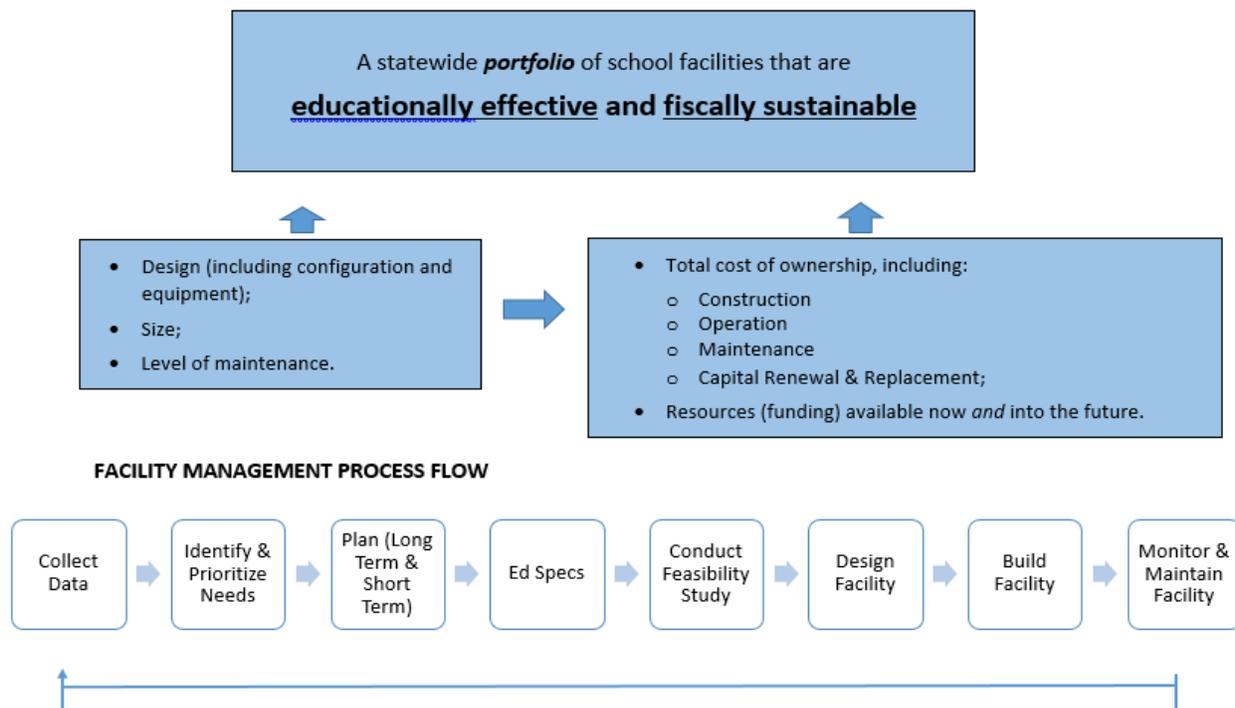
**(f) (1) After the initial school facility assessment required by §5-310(e) of the Education Article is completed, the Workgroup shall:**

- 1) Consider how the relative condition of public school facilities within the educational facilities sufficiency standards and the facility condition index should be prioritized, taking into account local priorities and in consultation with local jurisdictions, including whether the prioritization should be by category and by local jurisdiction or statewide;
- 2) Determine whether the results should be incorporated into school construction funding decisions;
- 3) If the Workgroup determines that the assessment results should be incorporated into school construction funding decisions, determine how the assessment results should be incorporated into school construction funding;
- 4) Consider whether the State should provide funding incentives for local jurisdictions that reduce the total cost of ownership of public school facilities.
- 5) On or before December 1, 2019, report its findings and recommendations to the Governor, and, in accordance with § 2-1246 of the State Government Article, the General Assembly.

The Workgroup met for six half-day meetings between June 20, 2019 and November 19, 2019. Each meeting was held in the Senate Budget and Taxation Committee Room in Annapolis. Meetings were live streamed and archived video is available on the [General Assembly's website](#) and can be linked from the [Interagency Commission on School Construction \(IAC\) website](#).

After the first meeting on June 20<sup>th</sup>, IAC staff conducted four webinars available to the Members and the public to provide foundational information on school facilities management best practices. The Webinars covered topics such as facility-portfolio management, total cost of ownership, maintenance effectiveness, and educationally sufficient facilities. The webinars and webinar slides are available to view and download on the IAC’s website.

### Workgroup on the Assessment and Funding of School Facilities Strategic Goal



*Figure 2. The Strategic Goal of the Workgroup on the Assessment and Funding of School Facilities*

Throughout their meetings, the members discussed a primary objective of Maryland’s school construction program—to support LEAs in providing [or maintaining] portfolios of school facilities that are educationally effective and fiscally sustainable. This was the framework initially adopted by the Workgroup on Educational Development Specifications, which began meeting in November of 2018.

To facilitate their conversation, a discussion matrix was utilized and updated based upon the Workgroup’s discussion at each meeting. The final discussion matrix is attached to this report as Appendix A.

## FINDINGS AND RECOMMENDATIONS

### Statutory Charge - Prioritization

"The Workgroup shall consider how the relative condition of public school facilities within the educational facilities sufficiency standards and the facility condition should be prioritized, taking into account local priorities and in consultation with local jurisdictions, including whether the prioritization should be by category and by local jurisdiction or statewide.

#### *Reviewing Decisions when Assessment Data is Available*

Although the Workgroup utilized the hypothetical schools model to understand the impact of certain weighting decisions, the members also recognized that their recommendations should be applied to the assessment data and the resulting school facilities scores should be reviewed and analyzed before weighting or funding decisions are finalized. The Workgroup therefore recommended that the Workgroup on the Assessment and Funding of school facilities be extended or that a standing public school facilities oversight workgroup be established to adopt the final weightings and program recommendations upon completion of the statewide facilities assessment and to evaluate the results of a pilot standards-based funding program.

#### *Prioritization through Weighting*

Throughout its discussions, the Workgroup focused heavily on the importance of various educational facility components and their proportional impact on teaching and learning. Staff provided a proposed list of nine categories into which a given facility system or attribute could be grouped. The repair values of those systems and attributes could then be weighted by a corresponding category weight value to ensure that the facility conditions that most affect teaching and learning are factoring most heavily into the Maryland Condition Index (MDCI) score of each facility. The Workgroup revised the staff proposal, resulting in draft categories as identified in Figure 3, in which immediate threats to life, safety, or health are weighted the most heavily (3.5 x repair value) and space deficiencies for essentially unhoused students are also weighted very heavily (3.0 x repair value).

The Workgroup agreed that the proposed category weights are appropriate, but also noted that special programmed schools (such as alternative, charter, or CTE schools) must be assessed differently than those that provide education via traditional methods since traditional space requirements as defined by the Maryland Sufficiency Standards may not be applicable to these methods of educational delivery. The Workgroup also agreed that relocatable facilities should be weighted higher than originally proposed.

Category #	Description	Weight
<b>1</b>	<b>Immediate Code/Life/Health Threat</b> Used only for critical issues that pose immediate threats to the life, health, or safety of persons within the facility. <ul style="list-style-type: none"> <li>• Obvious friable asbestos</li> <li>• Unprotected exit corridors</li> <li>• Electrical hazards</li> </ul> <i>Ex: Severe HVAC deficiencies requiring closure of a school</i>	<b>3.5</b>
<b>2</b>	<b>Sufficiency Deficiency – Space</b> Deficiencies that are related to sufficiency standards for inherent space-based issues in the facility. <ul style="list-style-type: none"> <li>• Not enough classrooms</li> <li>• Lacking square-footage requirements</li> <li>• Missing mission-critical space</li> </ul>	<b>3.0</b>
<b>3</b>	<b>Mitigate Additional Damage:</b> Systems or deficiencies that require repairs to mitigate additional damage. <ul style="list-style-type: none"> <li>• Leaking roof</li> <li>• Poor ventilation causing moisture buildup</li> </ul> <i>Ex: HVAC deficiencies that could result in damage to the facility, such as leaks</i>	<b>2.0</b>
<b>4</b>	<b>Degraded w/ Potential Mission Impact</b> Systems or deficiencies that are mission critical and beyond useful life, or most systems beyond 200% expected life. <ul style="list-style-type: none"> <li>• Fire alarm system beyond 200%</li> <li>• Severely damaged walls</li> <li>• Systems past 200% life expectancy</li> </ul>	<b>1.5</b>
<b>5</b>	<b>Beyond Expected Life:</b> Systems or deficiencies that are 100% to 200% beyond expected life and show no signs of required repairs. <ul style="list-style-type: none"> <li>• Expired portable buildings</li> <li>• Many interior finishes without damages</li> </ul>	<b>.25 to 1.5</b>

Category #	Description	Weight
<b>6</b>	<b>Grandfathered or State/District Standards:</b> Systems or deficiencies that are “grandfathered” code issues or specific to the local agency. <ul style="list-style-type: none"> <li>• Fire Sprinklers</li> <li>• Flooring consistent with local architectural standards</li> </ul>	<b>.5</b>
<b>7</b>	<b>Sufficiency Deficiency – Facility</b> Deficiencies that are related to sufficiency standards for inherent parts of the facility. <ul style="list-style-type: none"> <li>• ADA Issues</li> <li>• Insufficient Parking</li> <li>• Fixed Equipment (such as serving kitchens)</li> </ul>	<b>1.0</b>
<b>8</b>	<b>Sufficiency Deficiency – Equipment</b> Deficiencies that a related to sufficiency standards for non-fixed equipment. <ul style="list-style-type: none"> <li>• Missing playgroup equipment</li> </ul>	<b>.5</b>
<b>9</b>	<b>Normal/Within Life Cycle</b> Systems that are within the expected life cycle and do not require replacement. <ul style="list-style-type: none"> <li>• Functioning, new lighting</li> <li>• A 20 year old system with a 25 year life cycle</li> </ul> <i>Ex: HVAC within normal lifecycle and fully functioning</i>	<b>.25</b>

Figure 3. Draft Category Weights for MDCI Calculation

## Statutory Charge – State Funding Using Assessment Results

“The Workgroup shall determine whether—and, if so, how—the assessment results should be incorporated into State decisions about school-construction funding.”

### ***Pilot Standards-Based Funding Program***

The Workgroup recommends that a standards-based funding program be created and piloted to direct new state funding to the highest new, renewal, or replacement school needs as measured by the statewide facilities assessment. The standards-based program should be one of a mix of solutions for improving school conditions, including the continuance of the current

Capital Improvement Program (CIP) and the implementation of various incentives. The standards-based program should include funding for all project commitments except for land acquisition, offsite expenditures, and items with a median expected life span of less than 15 years. Final funding prioritization should only be determined after the data from the statewide facilities assessment is available.

***Using Assessment Data to Fund Additional Programs***

The Workgroup recognized that data from the assessment could be used to identify needs that could be funded through additional programs. For example, Facility Condition Index information could be used to compare needs and prioritize funding to address needs in specific category of building systems such as roofs. However, the Workgroup recommends postponing consideration of such programs until assessment results are available and specific needs can be identified based upon analysis of assessment data.

***Capital and Routine Maintenance Funding***

The Workgroup also recognized that data from the assessment could be used to identify where LEAs have obtained building-system life spans that are greater than the expected life spans. The data could be used as the basis for allocating additional funding that would incentivize maintenance practices that save local and State dollars by directing some of the State's savings to the LEA. However, the Workgroup recommends postponing a decision on a capital maintenance incentive program until assessment data is available.

The Workgroup also acknowledges that the Kirwan Commission is currently considering a dedicated maintenance funding stream for routine operational maintenance and recommends that the Workgroup and the Kirwan Commission coordinate and appropriately fund maintenance operations.

**Statutory Charge - Total Cost of Ownership (TCO) Incentive**

"The Workgroup shall consider whether the State should provide funding incentives for local jurisdictions that reduce the total cost of ownership of public school facilities."

The Workgroup on Educational Development Specifications outlined a potential incentive that would provide for additional State share percentage points that correspond to percentage reductions in the estimated facility total cost of ownership (TCO) for new, replacement, and fully renovated school facilities when compared to the baseline total cost of ownership. Total cost of ownership includes the costs of building, operating, and maintaining facilities over 30 years. The Ed Specs Workgroup discussed the incentive proposal in detail at their April 10<sup>th</sup> meeting, and full details of the proposed incentive are available on the [IAC's website](#).

The Assessment and Funding Workgroup recommends implementation of the incentive as described in Scenario G, to provide a  $\frac{3}{4}\%$  State share incentive for each 1% reduction in the estimated TCO. LEAs with a State share of 89% or more would receive a 1% State share incentive for each 1% reduction in estimated TCO. Each reduction resulting in a State share above 100% would result in a  $\frac{3}{4}\%$  increase to State share (regardless of LEA State share percentage) and

could be used for any LEA educational facility project purpose. The Workgroup further recommends that the incentive be evaluated after a period of time and modified as necessary.

Although the TCO incentive will likely encourage consideration of facilities solutions like net-zero energy efforts and the use of energy efficient materials in schools, the 21<sup>st</sup> Century School Facilities Act of 2018 also required the IAC to establish incentives for the construction of net-zero school buildings and the use of energy efficient of other preferred materials in public school construction (Education Article, §5-309(c)).

## The Ed Specs Workgroup Recommendations

Throughout the course of its work earlier in 2019, the Ed Specs Workgroup made several additional recommendations for consideration by the Assessment and Funding Workgroup. After review, the Workgroup on the Assessment and Funding of School Facilities concurred with the recommendations of the Ed Specs workgroup, and in some instances refined those recommendations. The recommendations of the Workgroup are as follows:

1. The IAC should create and maintain life-cycle-cost-analysis standards and measures to be used as part of a tool to estimate the total cost of ownership of potential projects. \
2. The IAC should implement post-occupancy evaluations (POEs) of new and renovated facilities utilizing a standard template that will facilitate collection and availability of comparable information for all LEAs. Further, the POEs should be conducted by State employees rather than by third-party vendors. Information gleaned from the POEs shall not be used to retroactively modify funding for projects.
3. The State should adopt and implement the National Council on School Facilities' "Definitions of Key Facilities Data Elements" in the financial reporting that LEAs provide to the Maryland State Department of Education (MSDE) for activities related to the total cost of ownership of school facilities.
4. The IAC should explore the practice of funding the use by LEAs of a standard web-based comprehensive maintenance management system (CMMS) to that would support LEAs' facility operations, maintenance, and capital-renewal activities and enable data analysis and reporting to State and local stakeholders. Any system selected must include preventive maintenance, work-order management, and utility management.
5. The IAC should explore the implementation of real-time utilities metering for each facility. Each new, renewed, or replacement school that utilizes any State funding should be fitted with standardized measurement and verification (M&V) equipment and any associated costs should be treated as an eligible cost of the project.

## Other Considerations

The Workgroup recognized that, for optimal planning, LEAs need predictable funding, but that, because the current CIP allocations are not formulaic, they are neither predictable nor easily understood by the public. After considering information provided by staff, the Workgroup found that a formulaic approach to allocating CIP funds could [\[Workgroup Recommendation\]](#)

## Conclusion and Next Steps

With an estimated asset value of \$56 billion, the size of the statewide school facilities portfolio in Maryland is second only to the State's portfolio of roads. In order for LEAs to successfully deliver education programs and services to Maryland's nearly 900,000 public K-12 students, the state's 1,400 public school facilities must remain perpetually in sufficient condition. For this to take place, planning, funding, and maintenance practices must be consistently and persistently effective.

State and local funding levels and allocation practices to date have not been sufficient to avoid a substantial decline in the condition of the overall Statewide school facilities portfolio. Although the average age of square footage—the only currently available comparable measure of facility condition—is insufficient to accurately convey the condition of an individual school facility, it does provide an order-of-magnitude representation of the overall condition of the portfolio of schools. The increase in the average age of Maryland's school facilities from 24 years in 2005 to 30 years in 2019 indicates that facility conditions are worsening across the State. The completion of the statewide school facilities assessment will provide invaluable information for school construction planning and funding and will provide measures that can be reviewed longitudinally over time to provide decision makers with information needed to determine appropriate funding levels and practices.

This report contains the draft recommendations of the Workgroup on the Assessment and Funding of School Facilities, many of which should be reviewed once facility assessment data becomes available, either by the Workgroup or by some other body. It is clear that the current approach to school facility funding in Maryland is insufficient to create a positive learning environment for every student in every seat in a Maryland School. The completion of the Statewide assessment is critical and will provide a foundation upon which good planning practices can drive decision making in order to achieve a school facilities portfolio that is both educationally sufficient and fiscally sustainable.