Workgroup on the Assessment and Funding of School Facilities

Dr. Karen B. Salmon, Chair

Tuesday November 19, 2019
10:00 a.m. to 1:00 p.m.
3 West Miller Senate Office Building
Senate Budget and Taxation Committee

Agenda

I. Welcome and Opening Remarks

II. Review Discussion Matrix Items 1 through 10

III. Adoption of Final Discussion Matrix

IV. Review Draft Report of the Workgroup on the Assessment and Funding of School Facilities

V. Adopt Final Report of the Workgroup on the Assessment and Funding of School Facilities

VI. Closing Remarks and Adjournment

DRAFT

Requirements of Ed. Art. §5-310 and 2018 Md. Laws, Chap. 14 The Workgroup shall report its findings and recommendations to the Governor and General Assembly on or before December 1, 2019			
1. Statutory Requirement: 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. **Background Information:** The statewide school facilities assessment will assess both facility condition and educational sufficiency components (including available space for projected enrollment).			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
A. Recommend extension of Assessment and Funding Workgroup~~, or standing Public School Facilities oversight Workgroup,~~ to adopt final weightings and program recommendations upon completion of the Statewide facilities assessment and to guide and evaluate the pilot program(s).	• Allows continuous improvement of policies, practices, and procedures. • Increases transparency and expands stakeholder input to high-level decision makers	• Requires additional member and staff time and effort.	Workgroup recommends implementation of proposed solution so that draft recommendations proceed but that final decisions regarding assessment category weights and prioritization be postponed until assessment results become available.
B. Adopt weights for categories of deficiencies (except relocatables) to ensure that schools with the highest educational-sufficiency needs are prioritized to recognize deficiencies that have the greatest impact on teaching and learning.	• The needs-based ranking of schools based upon the assessment results provides a clear and comparable picture of facilities needs throughout the State. • Valuable data becomes available, including data on both facility condition and educational sufficiency. Even if a ranking is not generated, this information is critical to impartially support school facilities planning decisions. • Provides independent, unbiased justification of needs and priorities. • Provides more accurate estimates of future capital needs for planning purposes and as required by the Capital Debt Affordability Committee (CDAC).	• State prioritization may not take into account all local programmatic requirements or standards. • Local and State priorities may not always align perfectly.	There is agreement that the proposed category weightings are appropriate. Scoring prioritization of relative need will be a mechanical process. However, reasonable consideration of local priorities should be included in funding decisions. *Please note that special programmed schools (such as alternative, charter, or CTE schools) will be assessed differently than those that provide education via traditional methods as traditional space requirements as defined by the Maryland Sufficiency Standards may not be applicable to these methods of educational delivery.*
C. For relocatables, adjust the proposed weights. Under the original proposal, relocatables would be weighted first at .25 (Category 9) and then progress to a range between .25 and 1.5 weight (-Category 5) when they exceed twice their expected life span. Staff recommends quadrupling the initial weight to 1.0 (Category 7-Sufficiency Deficiency)) and then progressing to 3.0 (Category 2) when they exceed twice their expected life span.	• Puts a higher priority on relocatables • Applies weight that is less than the 3.0 weight for unhoused students	• Although students in relocatables are in less than ideal conditions, heavily weighting relocatables could draw funds from other educational sufficiency needs. • Will compete, in some cases, with unhoused students	The Workgroup agrees that relocatables should be weighted higher than originally proposed and that a final decision on relocatable weighting should be postponed until assessment data is available. *~~Staff is directed to provide the Workgroup with additional options for weighting relocatables.~~*

Items in italics are not recommendations of the Workgroup but represent directions to staff.

Requirements of Ed. Art. §5-310 and 2018 Md. Laws, Chap. 14 The Workgroup shall report its findings and recommendations to the Governor and General Assembly on or before December 1, 2019			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
C1. Relocatable Option A: Relocatables be weighted as Category 2 (weight of 3.0) regardless of age.	• Students housed in relocatables are not differentiated from students that are essentially unhoused.	• Students housed in relocatables are not differentiated from students that are essentially unhoused.	See recommendation for 1. C. above.
C2. Relocatable Option B: Relocatables begin as a Category 7 (weight of 1.0) until end of expected life and increase to category 4 (weight of 1.5) until twice expected life, at which point they are category 2 (weight of 3.0).	• Puts a higher priority on relocatables • Applies weight that is less than the 3.0 weight for unhoused students	• Although students in relocatables are in less than ideal conditions, heavily weighting relocatables could draw funds from other educational sufficiency needs. • Will compete, in some cases, with unhoused students	See recommendation for 1. C. above.
D. From the assessment, produce two reports– one with all schools in the state compared one against another and a second showing the schools in each county compared against only those within that county.	• Same pros as listed for ~~A1~~B above.	• State prioritization may not take into account all local programmatic requirements or standards. • Local and State priorities may not always align perfectly.	The Workgroup recommends implementation of this solution.
E. ~~Create a separate category or categories with higher weighting for issues/deficiencies found in selected building systems such as HVAC systems.~~	~~• Earmarks resources for building systems chosen [by the State] for special attention. Categories are able to account for the relevant needs of any building system without specific modification.~~ ~~• Weighting allows escalation of educational deficiency relevancy.~~	~~• The proposed categories already inherently account for the impact of HVAC issues because the proportionally high cost per square foot of HVAC systems ensures that HVAC needs greatly affect a facility's overall MDCI score.~~ ~~• Assigning one category and weight to all deficiencies pertaining to a given building system regardless of their effects on teaching and learning would preclude the progressive weighting of issues that the proposed categories enable.~~	

Requirements of Ed. Art. §5-310 and 2018 Md. Laws, Chap. 14 The Workgroup shall report its findings and recommendations to the Governor and General Assembly on or before December 1, 2019			
2. Statutory Requirement: The Workgroup shall determine whether—and, if so, how—the assessment results should be incorporated into State decisions about school-construction funding **Background Information:** Current state school-construction funding more or less follows LEAs' prioritizations, with mid- to large-sized LEAs receiving roughly the same proportional allocation each year and smaller LEAs receiving funding for projects in years when they have projects. Maryland school facilities have a current asset value of $55.3 billion and more than 140 million gross square feet. Despite combined state and local funding averaging $1.9 billion per year, facility conditions have not drastically improved and the average age of our facilities has risen significantly.			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
A. Do not use assessment ranking information in State or local funding decisions.	• Protects the autonomy of counties.	• Does not focus available resources on ensuring sufficiency for all students. • Does not maximize limited State and local resources.	Consider various options to utilize assessment results in State funding decisions. • Use assessment data in ways yet to be determined (potentially as described in B, C, and D below) for allocating new funding but do not take away from existing funding. •
B. Create a pilot program using new funding to prioritize State funding to the highest new, renewal, or replacement school needs, as measured by the assessment. The prioritized program would be only one of a mix of solutions for improving school conditions and the funding to the existing CIP program must be maintained to fund LEA priorities (often system replacements). The Pilot Program should apply the State and Local Cost Share and can 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. Adopted weightings can be reevaluated by the Workgroup (if extended) or by a similar advisory group after completion of the pilot program.	• Prioritized (standards-based) funding would maximize limited State and local resources to most efficiently improve the overall facility condition of the statewide portfolio, which will reduce the cost to own and operate the statewide portfolio over time. • Promotes sufficient facilities for every child in the State of Maryland. • Pilot program allows stakeholders to monitor and evaluate the effectiveness of a prioritized program while the IAC's traditional funding programs remain in place.	• Without incentives for good maintenance, could potentially "reward" poor maintenance practices since schools with highest needs are funded first. •	• Fund a standards-based pilot program with new money only for new, renewal, or replacement schools. • Funding prioritization for the pilot program should only be determined after the data from the statewide facilities assessment is available.
C. Allocate funds through additional funding programs for certain systemic needs, such as roofs, to compare and fund projects across the state in a systematic and prioritized way.	• Comparable and critical systems can be prioritized for need and addressed quickly, reducing the need for reactive maintenance on failed systems and subsequently reducing the facility's cost of ownership while improving the overall health of the facilities portfolio. • Allows targeting of specific needs. • Funding could have sunset dates.	• Issue-focused funding will not meet the overall facilities needs of the state. • Issue-focused funding programs are difficult to manage unless tied to specific needs that are mutually exclusive and objectively measurable and comparable. • Does not improve statewide portfolio health as efficiently as new, renewal, or replacement projects. • Primarily protects capital assets but does not necessarily address educational sufficiency needs.	The Workgroup recommends postponing consideration of this potential solution until assessment results are available and specific needs can be identified based upon the provided data.

Items in italics are not recommendations of the Workgroup but represent directions to staff.

Requirements of Ed. Art. §5-310 and 2018 Md. Laws, Chap. 14 The Workgroup shall report its findings and recommendations to the Governor and General Assembly on or before December 1, 2019			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
D. **[Potential Incentive – Capital Maintenance (Systemics)]** Calculate, from each year's assessment information, the number of systems in a facility that are beyond their expected life and by what amount. Correspondingly provide for an increase to the LEA's State Cost Share to incentivize good maintenance practices. Each year the assessment will provide the savings/loss percentages resulting from extended/reduced life cycles for each school facility and each LEA portfolio. The Incentive could increase the LEA's State share for the following year by ¾% for each percentage point increase of extended life of the LEA portfolio.	• Encourages good maintenance practices that extend the life of systems in facilities. • Rewards counties that have consistently maintained their schools. • Counterbalances for prioritized (standards-based) funding, which when unchecked, could potentially encourage poor facilities maintenance by funding schools with the highest needs.	• Understaffed and underfunded counties are likely to benefit to a much lesser degree than highly staffed and more well funded counties	The Workgroup recommends postponing a decision on this proposal until assessment data is available.
E. Collaborate with the Kirwan Commission, who are currently considering a dedicated maintenance funding stream, to coordinate efforts to incentivize and appropriately fund maintenance operations.	• Recognizes the interlinked nature of operational funding (for routine maintenance) and capital funding (for capital maintenance [systemics]) • Works with the proposed Capital incentive (2. D.) to appropriately fund and incentivize good maintenance practices.		The Workgroup recommends collaboration with the Kirwan Commission, who are currently considering a dedicated maintenance funding stream, to coordinate efforts to incentivize and appropriately fund maintenance operations.

Requirements of Ed. Art. §5-310 and 2018 Md. Laws, Chap. 14 The Workgroup shall report its findings and recommendations to the Governor and General Assembly on or before December 1, 2019			
3. Statutory Requirement: 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. **Background Information:** The costs of owning and operating a facility for 30 years can exceed the initial cost to construct the facility and those operational costs compete directly with teachers and supplies for operational funding. According to Industry standards, facility owners should annually invest an average of 2% of the initial construction cost in maintenance and operations (heating, cooling, custodial, grounds, etc.) and an additional 2% of the initial construction cost in replacement of building systems (capital maintenance).			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
A. 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 facility Total Cost of Ownership (TCO) when compared to the baseline.	• Immediately rewards small but powerful cost-saving decisions by LEAs in school construction. Encourages LEAs not only to look at total square footage and space use, but also to look at efficiencies that can be gained by the selection of certain efficient systems or materials. • Moves the conversation away from lower first-costs of construction that may ultimately cause higher total costs over the life of the facility. • Produces savings for the LEA both immediately and over time, but also would result in savings for the State over time as the need for systemic replacements is reduced. • Focuses local attention on total cost of ownership, laying the groundwork for greater fiscal capacity to support school construction over time. • Encourages renovations and use of existing facilities. • Incentivizes good and fiscally sustainable design.	• May require additional-up front State funding. (See Item # 5, below for information regarding Ed Spec Workgroup recommendation). • Will require additional resources to accurately analyze the estimated total cost of ownership requires additional resources. • Could reduce the emphasis on aesthetics.	The Workgroup recommends implementation of this incentive, as described in Scenario G of the Workgroup materials, to provide a ¾% State share incentive for each 1% reduction in TCO. LEAs with a State share of 89% or more shall receive a 1% State share incentive for each 1% reduction in TCO. Each reduction resulting in a State share above 100% will result in a ¾% increase to State share (regardless of LEA State share percentage) and may be used for any LEA educational facility project purpose. The incentive should be evaluated after a period of time and modified as necessary.

Recommendations of the Ed Specs Workgroup for the Workgroup on the Assessment and Funding of School Facilities			
Ed Specs Workgroup Recommendations	**Pros**	**Cons**	**Draft Workgroup Recommendations**
4. Create incentives that encourage LEAs to analyze and plan/design for total cost of ownership for new, replacement, and fully renovated school facilities based on the costs of building, operating, and maintaining facilities over the full life of a project. (Incentives as presented at the April 10 Ed Spec Workgroup Meeting to increase State participation by a percentage or a fraction of a percentage corresponding to the number of percentage points an LEA reduces the total cost of ownership under the baseline total cost of ownership (available at http://www.pscp.state.md.us/Workgroups/EDSW/EDSWindex.cfm))	This item is a statutory charge and a recommendation of the Workgroup on Educational Development Specifications. Please see item #3 for more detail.		

Recommendations of the Ed Specs Workgroup for the Workgroup on the Assessment and Funding of School Facilities			
Ed Specs Workgroup Recommendations	**Pros**	**Cons**	**Draft Workgroup Recommendations**
5. 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. This recommendation is a component of the Total Cost of Ownership Incentive described in item #3. In order to estimate the cost of ownership of a designed facility to qualify for an incentive, comparable standards and measures of the life-cycle costs of various building systems must be developed.	• Supports reasonable and comparable total cost of ownership analysis, which is essential to making critical project decisions. • Could support the implementation of a TCO incentive as described in item 3.	• Creation of the LCCA standards and measures, as well as the tool to estimate TCO, will require some State resources.	The Workgroup recommends implementation of this solution.
6. Implement post-occupancy evaluations of new and renovated facilities utilizing a standard template that will facilitate collection and availability of comparable information for all LEAs.	• Post-occupancy evaluations analyze and report on best practices and lessons learned in school facility design and construction projects. Through the standard documentation and reporting of project successes and lessons learned, LEAs can learn from one another to increase the success of every project in the State.	• Post-occupancy evaluations require funding for a third-party vendor to conduct the evaluation.	The Workgroup recommends implementation of this state-provided solution. The Workgroup further recommends that Post Occupancy Evaluations be performed by State employees rather than third party vendors. Information gleaned from POEs shall not be used to retroactively modify funding for projects.
7. Implement the National Council on School Facilities' "Definitions of Key Facilities Data Elements" for activities related to facilities that make up the total cost of ownership that LEAs report to MSDE and track the cost of ownership.	• Standard definitions of activities related to facilities enable better analysis and reporting of facilities costs so that best practices can be measured and understood.	• Before the full benefits of the resulting data could be obtained, MSDE would need to replace its COBOL-based finance data system, which cannot accommodate further modifications. • Reporting requirements must be carefully considered to ensure that an additional burden is not placed on the LEAs.	The Workgroup recommends implementation of this solution.
8. Explore the implementation of a standard maintenance management system to collect data on LEAs' facility operations, maintenance, and capital-renewal activities. Analyze the data and provide reports to State and local stakeholders. Staff recommends that certain components required for effective maintenance management and comparable effective maintenance metrics be purchased by the State, which will be offered to every LEA without cost. LEAs should not be required to utilize the system, but could purchase additional components if desired.	• Almost every LEA currently uses a common computerized maintenance management system (CMMS) to track work orders, preventive maintenance logs, cost information, and other maintenance activities. Implementation of a Statewide system would have scale advantages, decreasing the cost to taxpayers to support isolated systems in each LEA, and would provide valuable information to the State for analysis and the dissemination of best practices information. • Shifts the financial burden of the maintenance management system from the LEAs to the State	• Shifts the financial burden of the maintenance management systems from the LEAs to the State • Some LEAs may want to use a different CMMS. • Some LEAs may not want the State to see their data.	The Workgroup recommends implementation of this state-funded solution to include preventive maintenance, work order management, and utility management. The Workgroup further recommends that the system and data collection reside within the purview of the IAC.

Items in italics are not recommendations of the Workgroup but represent directions to staff.

Recommendations of the Ed Specs Workgroup for the Workgroup on the Assessment and Funding of School Facilities			
Ed Specs Workgroup Recommendations	**Pros**	**Cons**	**Draft Workgroup Recommendations**
9. Explore the implementation of real-time utilities metering for each facility.	• Real-time utilities metering monitors energy consumption over time and can identify efficiency improvements, such as controls adjustments, to ensure that facilities efficiency meets design expectations. • Supports both accountability of facility systems performance and occupant behavior. • Provides basis for continuous improvement and best practices. • Provides the opportunity for information to be included in curriculum.	• Funding is required to support real-time utilities metering.	The Workgroup recommends implementation of this potential solution, initially with each new, renewed, or replacement schools that utilize any State funding be fitted with standardized M&V and that any associated costs be treated as an eligible cost of the project.

Optional Considerations			
Potential Solutions	**Pros**	**Cons**	**Draft Workgroup Recommendations**
10. Adopt a methodology for LEA CIP (Capital Improvement Program) funding allocations so that LEAs receive a formula-driven allocation (primarily based upon enrollment) each year. Revise ineligible items to more fully fund project obligations, and use existing Revolving Fund to "bank" or "advance" them as needed by each LEA, so that each LEA eventually receives their annual allocation but so that the full allocation does not have to be used by each LEA every year.	• LEAs know what funding to anticipate for local priorities and can develop better plans based upon anticipated funding levels. • State participates more fully in project costs, decreasing the burden on LEAs that struggle to fund their share of CIP projects. • Utilizes revolving fund to its maximum benefit. • LEAs without funding needs in a given year can "bank" and combine multiple annual allocations to fund complete projects.	• Will not completely eliminate the potential that in some years there will not be sufficient dollars banked for every need unless additional money is added to the Revolving Fund.	*Staff is directed to provide additional information and recommendations regarding formulaic CIP funding to the extended Workgroup following the completion of the Statewide assessment.*

Items in italics are not recommendations of the Workgroup but represent directions to staff.

INTERAGENCY COMMISSION ON SCHOOL CONSTRUCTION

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November 19, 2019

The Honorable Larry Hogan
Governor
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100 State Circle
Annapolis, Maryland 21401

The Honorable Thomas V. "Mike" Miller, Jr.
Senate of Maryland
State House, H-107
Annapolis, MD 21401

The Honorable Adrienne A. Jones
Maryland House of Delegates
State House, H-101
100 State Circle
Annapolis, MD 21401

Re: Report Required by HB 1783/Ch. 14(3), 2018, MSAR # 11523
Recommendations of the Workgroup on the Assessment and Funding of School Facilities and Request for Workgroup Extension

Dear Governor Hogan, President Miller, and Speaker Jones:

On behalf of the Workgroup on the Assessment and Funding of School Facilities, I am writing to respectfully request that the Workgroup be extended for one year in order for us to respond fully to our statutory charge.

The Workgroup was established by Chapter 14 of the 2018 Laws of Maryland—the 21st Century School Facilities Act—and was charged with making recommendations for the prioritization and funding of school facilities in Maryland, based upon the results of the Statewide school facilities assessment required by §5-310 of the Education Article. It was given until December 1, 2019 to submit its findings and recommendations.

The Workgroup has been working diligently and our preliminary findings and recommendations are enclosed for your information. Due to the delay in procurement of the statewide school facilities assessment, I respectfully request a one-year extension of the Workgroup to complete our statutory charge.

Best Regards,

Karen B. Salmon, Ph.D.
State Superintendent of Schools
Chair, Workgroup on the Assessment and Funding of School Facilities

Cc: Sarah Albert, DLS Library (5 Copies)
Rachel Hise, Department of Legislative Services
Michael Rubenstein, Department of Legislative Services
Michele Lambert, Department of Legislative Services

MARYLAND

PRELIMINARY REPORT OF THE WORKGROUP ON THE ASSESSMENT AND FUNDING OF SCHOOL FACILITIES

The Preliminary Findings and Recommendations of Maryland's ~~Assessment and Funding~~ Workgroup on the Assessment and Funding of School Facilities established under the 21st Century School Facilities Act (HB 1783)

DECEMBER 1, 2019

MESSAGE FROM THE CHAIR

The establishment of this Workgroup provided an opportunity for stakeholders from all around the state to consider the substantial challenges that we face as we seek to provide educationally sufficient facilities for students in every school in Maryland. The recommendations from this group point towards the future.

We must move forward by working together to sustain our facilities in a fiscally-responsible manner, with an eye on long-term outcomes by considering total cost of facility ownership. Identifying the most severe school facility needs across the State is the first step to reaching a comprehensive facilities portfolio that allows the State to maximize effectiveness in its role, and to provide local school systems with the tools they need to provide educational sufficiency.

I look forward to continuing the innovative discussions and providing further comprehensive recommendations as the statewide assessment data becomes available.

Karen B. Salmon, Ph.D.

State Superintendent of Schools

TABLE OF CONTENTS

MEMBERS & AFFILIATIONS

KAREN B. SALMON, PH.D.
WORKGROUP CHAIR AND STATE SUPERINTENDENT OF SCHOOLS, MARYLAND STATE DEPARTMENT OF EDUCATION (MSDE)

SENATOR BILL FERGUSON
APPOINTEE OF THE PRESIDENT OF THE SENATE

SENATOR DOUGLAS J.J. PETERS
APPOINTEE OF THE PRESIDENT OF THE SENATE

DELEGATE MARC KORMAN
APPOINTEE OF THE SPEAKER OF THE HOUSE

DELEGATE GERALDINE VALENTINO-SMITH
APPOINTEE OF THE SPEAKER OF THE HOUSE

THE HONORABLE NANCY K. KOPP
STATE TREASURER

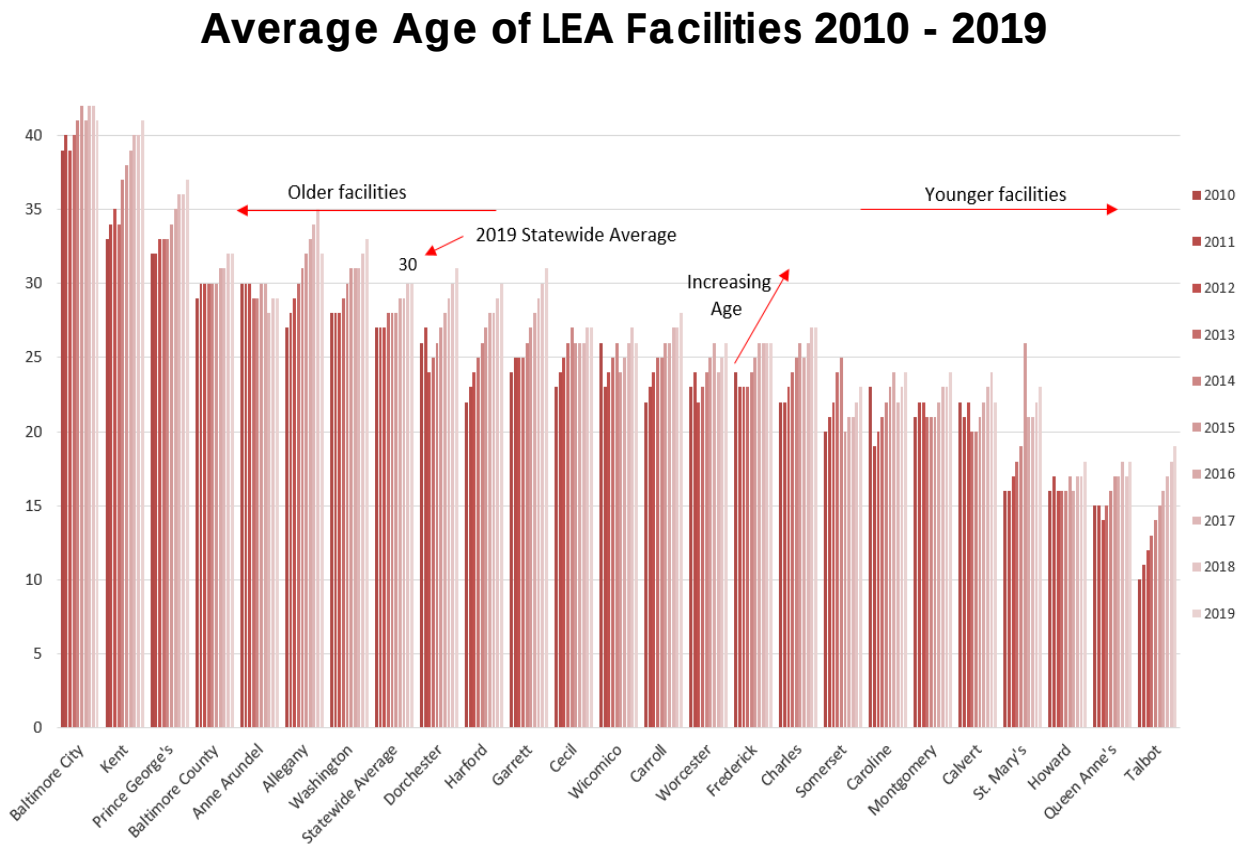
JAN H. GARDNER
REPRESENTATIVE OF THE MARYLAND ASSOCIATION OF COUNTIES (MACO) AND FREDERICK COUNTY EXECUTIVE

BRAD W. YOUNG
REPRESENTATIVE OF THE MARYLAND ASSOCIATION OF BOARDS OF EDUCATION (MABE) AND PRESIDENT OF THE FREDERICK COUNTY BOARD OF EDUCATION

PERRY WILLIS
REPRESENTATIVE OF THE PUBLIC SCHOOL SUPERINTENDENTS ASSOCIATION OF MARYLAND (PSSAM) AND EXECUTIVE DIRECTOR FOR SUPPORT SERVICES FOR CECIL COUNTY PUBLIC SCHOOLS

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 to be improving based upon the measures currently available and comparable (increasing average age and percentage of spending on capital maintenance, a.k.a. systemics).) At ~~30 years,~~ our current average age of 30 years (see figure 1), facility renewal is often needed to ensure proper program support and reliability.



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 21st 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 *21st 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. The Workgroup was tasked with ~~and to subsequently~~ usinge the assessment information to determine how to prioritize schools ~~based upon the assessment~~ and whether or not to use assessment information ~~to~~ in determininge 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 ~~Maryland S~~state's ~~contribution~~ has contributed ~~is~~ on average ~~only~~ around 25% of the total capital spending on educational facilities in the ~~State~~Maryland. 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 21st 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~~that can be tweaked 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 ten 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 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. The Workgroup adopted a recommendation to extend the Workgroup beyond ~~the November 19th meeting~~he December 1, 2019 statutory report deadline so that it can finalize its recommendations after the assessment results are available and oversee any pilot program, incentives, or other efforts put in place as a result of these recommendations.

~~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

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.

At the Workgroup's first meeting, staff proposed a separate funding program based upon the results of the ~~S~~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)~~school facilities should be ranked in order beginning with those demonstrating the greatest needs. ~~-~~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. Members of the Workgroup noted that legislation introduced but not passed in 2019, HB 727, included funding for a Public School Facilities Priority Fund ~~which~~ and would have required that $40 million be appropriated to the program in fiscal years 2022 through 2025, subsequently ~~and~~ increasing to $80 million beginning in fiscal year 2026.

The Workgroup ~~also~~ recognized that standard and comparable facility information provided by the statewide assessment 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. The IAC calculates the total cost of ownership as the cost to construct the facility initially plus the cost to own and operate the facility for thirty years. ~~Therefore, f~~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 21st 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) **Assessment prioritization.** *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) **Funding based upon assessment data.** *Determine whether the results should be incorporated into school construction funding decisions;*

3) **How to fund based upon assessment data.** *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) **Total cost of ownership incentives.** *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 20th, 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.

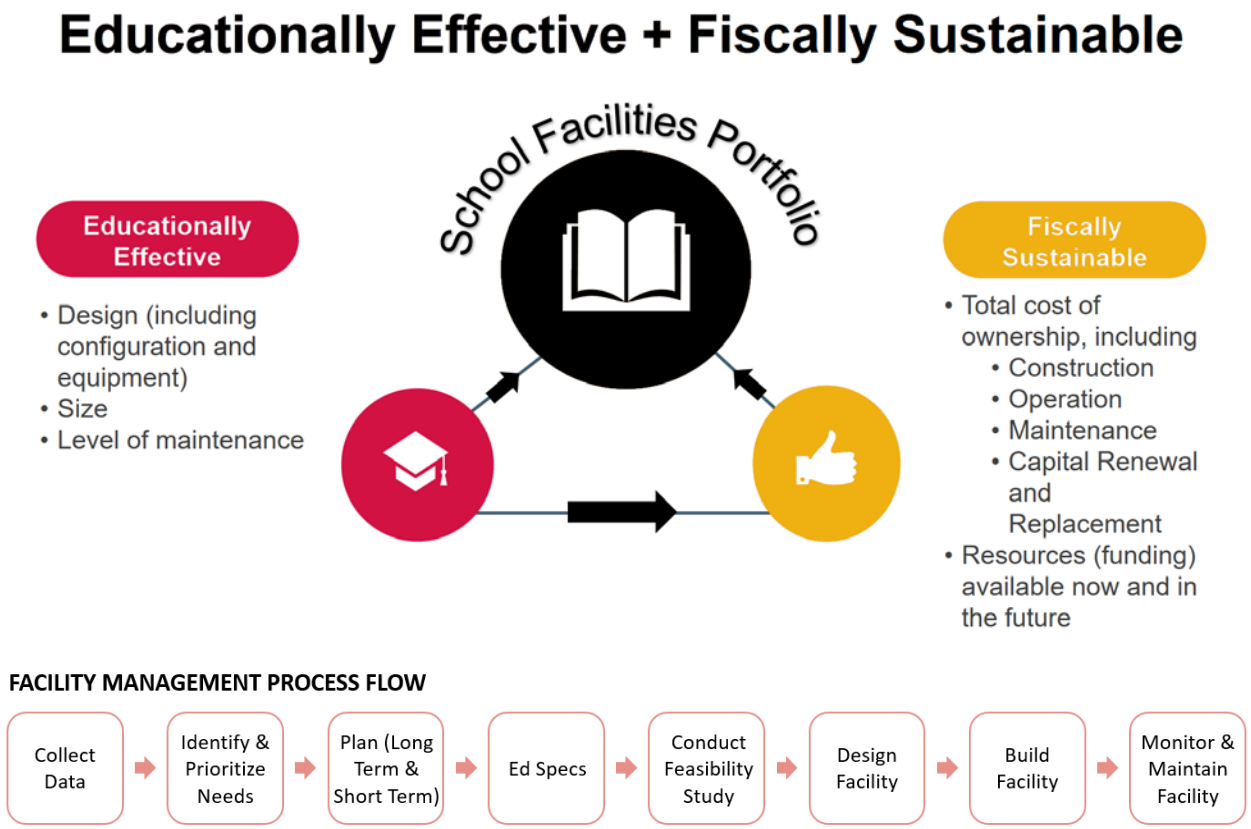


Figure 2. The Strategic Goal of the Workgroup on the Assessment and Funding of School Facilities

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 1~~A~~.

PRELIMINARY 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
1	**Immediate Code/Life/Health Threat** Used only for critical issues that pose immediate threats to the life, health, or safety of persons within the facility. • Obvious friable asbestos • Unprotected exit corridors • Electrical hazards *Ex: Severe HVAC deficiencies requiring closure of a school*	3.5
2	**Sufficiency Deficiency – Space** Deficiencies that are related to sufficiency standards for inherent space-based issues in the facility. • Not enough classrooms • Lacking square-footage requirements • Missing mission-critical space	3.0
3	**Mitigate Additional Damage:** Systems or deficiencies that require repairs to mitigate additional damage. • Leaking roof • Poor ventilation causing moisture buildup *Ex: HVAC deficiencies that could result in damage to the facility, such as leaks*	2.0
4	**Degraded w/ Potential Mission Impact** Systems or deficiencies that are mission critical and beyond useful life, or most systems beyond 200% expected life. • Fire alarm system beyond 200% • Severely damaged walls • Systems past 200% life expectancy	1.5
5	**Beyond Expected Life:** Systems or deficiencies that are 100% to 200% beyond expected life and show no signs of required repairs. • Expired portable buildings • Many interior finishes without damages	.25 to 1.5
6	**Grandfathered or State/District Standards:** Systems or deficiencies that are "grandfathered" code issues or specific to the local agency. • Fire Sprinklers • Flooring consistent with local architectural standards	.5
7	**Sufficiency Deficiency – Facility** Deficiencies that are related to sufficiency standards for inherent parts of the facility. • ADA Issues • Insufficient Parking • Fixed Equipment (such as serving kitchens)	1.0
8	**Sufficiency Deficiency – Equipment** Deficiencies that a related to sufficiency standards for non-fixed equipment. • Missing playgroup equipment	.5
9	**Normal/Within Life Cycle** Systems that are within the expected life cycle and do not require replacement. • Functioning, new lighting • A 20 year old system with a 25 year life cycle *Ex: HVAC within normal lifecycle and fully functioning*	.25

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 acknowledged~~s~~ at their October 7, 2019 meeting that the Kirwan Commission ~~is currently considering~~may consider 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 10th meeting, ~~and full details of the proposed incentive are available on the~~ IAC's website, and material was subsequently presented to the Assessment and Funding Workgroup at their meeting on October 7, 2019 (attached to this report as Appendix 3).

The Assessment and Funding Workgroup recommends implementation of the incentive as described in Scenario G of the October 7 meeting material, to provide an additional ~~¾~~0.75% to the calculated 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 ~~¾~~0.75% 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.

The baseline total cost of ownership uses the same five year enrollment projections for a facility as the statewide assessment. Use of future year enrollments assures that the needs for school facilities are properly assessed and then built with future populations in mind. The baseline calculation is based upon industry standards, and total cost of ownership estimates below the baseline may be achieved by a school facility either through reductions in square footage, selection of efficient systems or materials, or a combination of both. Even a 1% reduction in total cost of ownership can greatly benefit LEAs and the State in the long term. It is not anticipated that this incentive will result in drastic facilities solutions, but rather in thoughtful, inventive, and measured choices. The choices must be local and achieving a sufficient learning environment for every student in Maryland must always be the goal. This incentive contributes to that goal by lowering the total cost of ownership which frees up valuable resources to be used elsewhere.

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 21st 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 Assessment and Funding 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~~ agreed that a formulaic approach to allocating CIP funds ~~could [Workgroup Recommendation]~~merits further consideration, and directed staff to provided additional

information regarding potential formula-based CIP funding to the extended Workgroup when it begins meeting after the assessment data is available.

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 sStatewide 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 suggests that facility conditions are may be 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 by the Workgroup once facility assessment data becomes available, either by the Workgroup or by some other body. It is clear that tThe current approach to school facility funding in Maryland mayis insufficient not be adequate to create sustain a positive sufficient learning environment for every student in every seat in a Maryland School. The completion of the Sstatewide 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.

Appendix 2: DRAFT Maryland Condition Index (MDCI)
How It Is Calculated

Education Article, §5-310 requires the Interagency Commission on School Construction (IAC) to assess and maintain a database of the physical and educational sufficiency facility conditions of each public PK-12 school facility. A fiscally sustainable school-facilities portfolio requires actionable and reliable metrics to support efficient and effective facility management. Good facilities management begins with good planning based upon empirical data and ends with effective maintenance that maximizes the investment. A school facility is made up of a long list of quantifiable physical, spatial, and environmental attributes.

The Facility Condition Index (FCI) is used to quantify physical attributes, commonly referred to as the "bricks and mortar" of a school facility. The FCI quantifies the depleted life and value of a facility's primary building systems and components such as roofs, windows, walls, and HVAC systems. FCI metrics are useful for estimating levels of spending necessary to achieve and maintain a specific level of physical condition. **Lower scores are better**, as facilities with lower FCI scores have fewer building-system deficiencies, are more reliable, and will require less maintenance spending on systems replacement and mission-critical emergencies.

The Maryland Educational Facilities Sufficiency Standards define the **minimum attributes** necessary to support the delivery of State-required education curricula and programs within safe and healthy environments. The attributes required by the standards are specific to the grades served and the number of students attending an existing facility and those projected to attend the facility within five years (see page 3 for additional information regarding enrollment projections).

The proposed Maryland Condition Index (MDCI) is a metric representing how far a PK-12 school is from being aperfectly educationally sufficient school facility and can be used to compare each school against all others. As with the FCI, lower MDCI scores are better. The MDCI incorporates the weighted correction value of each Sufficiency Standards need with each FCI correction value. Each value is categorized into one of nine types (see page 6) and weighted to differentiate needs that significantly impede or prohibit learning from lesser needs. For example, missing or undersized facilities or space, and safety, health, and learning-climate issues such as a failing roof or HVAC system are weighted more heavily and therefore will yield a higher score than a building system that is old but still functioning.

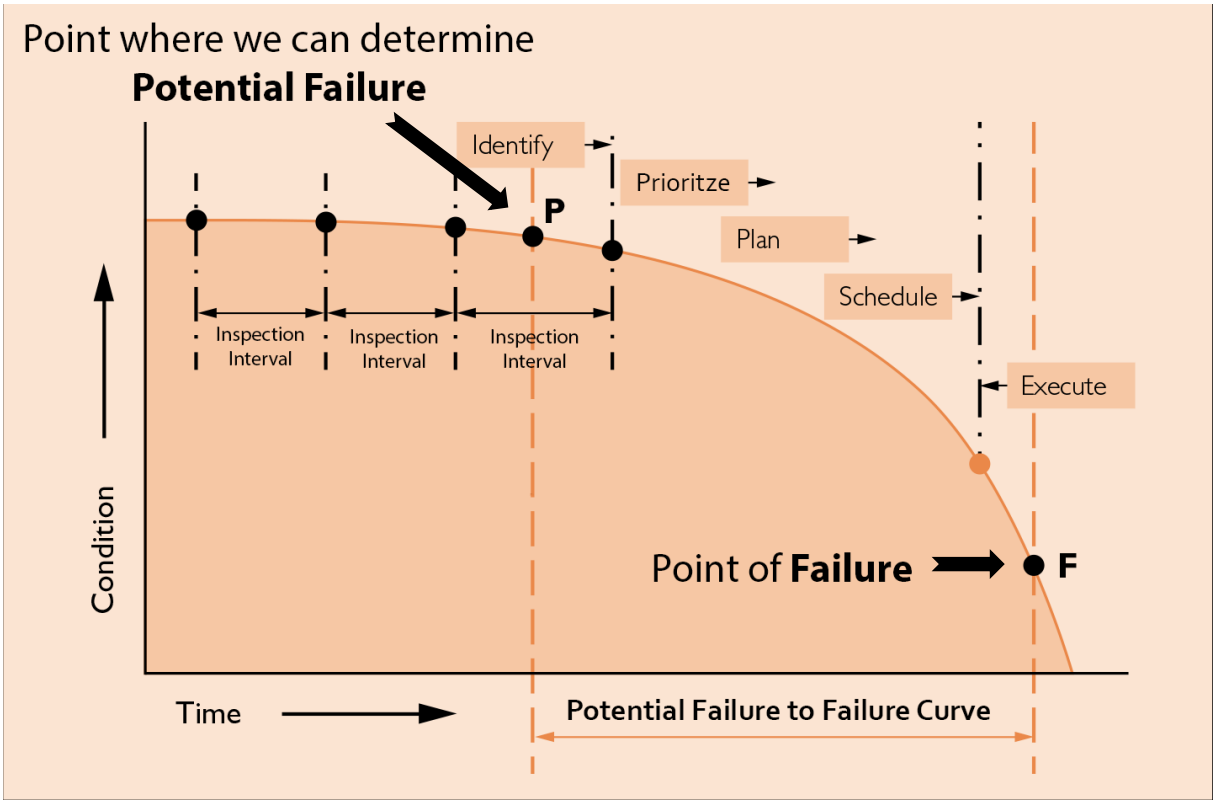
Data sources include field assessments, master-plan updates, student enrollments (current and five-year projections), and frequent LEA input. On-site facility assessments of each school will occur every three to four years and life-cycle renewal requirements required between the assessments will be automatically adjusted annually.

Calculations within the Maryland Condition Index

1. Life-cycle renewal requirements:

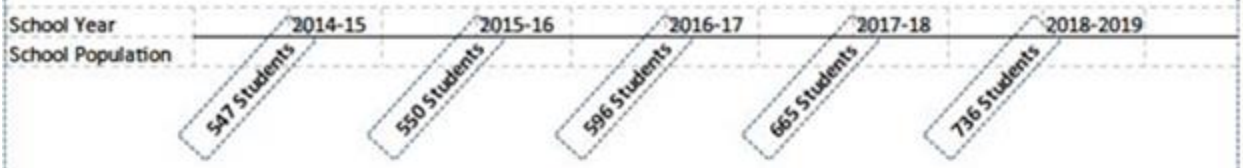
A life-cycle renewal requirement exists when a building system is in use beyond the average expected life of the system. Each building system is assessed against the original-installation or last-renovation date to determine the percent depleted based on Building Owners and Managers Association International (BOMA) and similar published mean life-cycle expectancy estimates. For example, a roof that has a 20-year life expectancy, installed in 2000, would be considered 100% used in the year 2020, unless observation during an assessment indicated that the Life-cycle renewal date (end-of-life date) should be adjusted. Life-cycle renewal requirements due to degradation can be estimated and recognized incrementally over time (see figure below) to approximate actual condition between assessments. At any time, if a system is determined to not be functioning effectively, the deficiency is placed into a higher weighted category (see page 6), which will increase the MDCI score.

$$Percent\ Degraded = \frac{(Current\ age\ of\ system)^2}{(System\ Expected\ Life)^2}$$



2. Growth Factor:

Example: The timeline below illustrates a change in population over a 5-year period. Student population increased from 547 students in School Year (SY) 2014-15 to 736 students in SY 2018-19, with an average increase of 7.79% per year.



Assuming this same trend will continue for the next 5-year period, it can be predicted that this school will have a population of 1,071 students in SY 2023-24.

$$(1+R)^5 \; Where \; R = Average \; Yearly \; Change \; of \; Growth \; Rate$$

To find the average yearly change of growth rate for the past five years:

$$R = \frac{\Delta Y_2 + \Delta Y_3 + \Delta Y_4 + \Delta Y_5}{4}$$

Note: Δ signifies differentiation in respect to the previous year

$$R = \frac{31.16\%}{4} = 7.79\%$$

$$Growth \; Factor = (1 + 0.0779)^5 = 1.455$$

An increase in population from 736 students in SY 2018-19 to 1,071 students in SY 2023-24 would result in a 5-year straight line projected percent-increase of 45.5%, which translates to a Growth Factor (GF) of 1.455

In the MDCI calculations, each school is assigned a GF*. This factor acts as a multiplier against a school's current population to determine potential space needs 5 years out. In this particular example the school will be assigned a GF of 1.455. By multiplying this GF against school's current population we are able to arrive at an Expected Population.

$$Expected \; Population = Current \; Population \; x \; Growth \; Factor$$

$$= 736 \; x \; 1.455 = 1{,}071 \; Students$$

When the school's current square footage fails to meet sufficiency standards for the newly calculated Expected Population, Category 7 Space Deficiencies are generated in the database, which have an additional weight factor that has been listed in the hypothetical weightings as 3.0, just below the 3.5 immediate life-health-safety weighting.

*Schools that have a declining student population or a 0% increase will be assigned a GF of 1.0, signifying no growth; thus Expected Population is equal to the current-year population. In addition, when there is a sudden percent increase or decrease in a school's population causing a large difference in the GF from year to year, the GF is validated against the Cohort Survival Projection Method and manual adjustments may be appropriate.

3. Facility Condition Index (FCI):

By assessing the remaining life of each major building system of a school facility against the average expected life-cycle of each building system and aggregating the building systems that make up the school facility, we are able to score the school facility using the industry standard methodology of the Facility Condition Index (FCI). The FCI is the tool commonly used for the general condition comparative rating of buildings. Buildings with lower FCI average percentages are in better condition.

$$FCI = \frac{\text{(Value to Replace) x (Percent Degraded)}}{\text{(Value to Replace)}}$$

It is important to note that this formula works for both individual building systems, as well as the entire facility. For our purposes, we need to find the FCI of each individual system in order to properly apply our weightings and calculate the MDCI.

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4. Maryland Educational Facilities Sufficiency Standards:

A deviation from the Maryland Educational Facilities Sufficiency Standard exists when a facility fails to meet any Maryland Educational Facilities Sufficiency Standard. Formulas that represent each Sufficiency Standard automatically generate repair costs when the school fails to meet the standards required to serve its five-year projected student enrollment. A Growth Factor (GF) based upon the previous 5-year trend is used as a multiplier against each school's current population to determine space needs (see page 5).

The following list shows a few of the many data elements that are used in formulas to calculate whether a school meets Maryland Educational Facilities Sufficiency Standards.

- Number of Students
- Growth Factor
- Grades Served
- General Classroom Net Square Footage
- Admin Net Square Footage
- Art & Music Net Square Footage
- Computer Lab Net Square Footage
- Media Center Space
- Physical Education Space
- Science Net Square Footage

5. Maryland Condition Index (MDCI):

The MDCI is calculated from the base formula for the FCI but takes into account the value to correct deviations from the Maryland Educational Facilities Sufficiency Standards (based upon the 5-year projected enrollment, as described on page 6) and weighting applied to each component for direct relevancy in supporting the delivery of educational support functions. Please see the proposed categories and weights table on page 6 for category descriptions and their corresponding proposed weights. Correcting health and safety issues or the provision of sufficient space for required educational programs are weighted much higher than building systems that are old but still functioning effectively.

By combining the value of sufficiency deviations and facility condition, and weighting each component we can calculate the MDCI.

$$MDCI = \frac{\begin{array}{c}(\textit{Category 1 Component} \times 3.5) + (\textit{Category 2 Component} \times 1.5) + \\ (\textit{Category 3 Component} \times 2) + (\textit{Category 4 Component} \times .25 \text{ to } 1.5) + \\ (\textit{Category 5 Component} \times .5) + (\textit{Category 6 Component} \times 1) + \\ (\textit{Category 7 Component} \times 3.0) + (\textit{Category 8 Component} \times .5) + \\ (\textit{Category 9 Component} \times .25)\end{array}}{\text{Value to Replace}}$$

Please keep in mind that the attached category weights are only proposed weights at the time of this publication.

Category #	Description	Weight
1	**Immediate Code/Life/Health Threat** Used only for critical issues that pose immediate threats to the life, health, or safety of persons within the facility. • Obvious friable asbestos • Unprotected exit corridors • Electrical hazards *Ex: Severe HVAC deficiencies requiring closure of a school*	3.5
2	**Sufficiency Deficiency – Space** Deficiencies that are related to sufficiency standards for inherent space-based issues in the facility. • Not enough classrooms • Lacking square-footage requirements • Missing mission-critical space	3.0
3	**Mitigate Additional Damage:** Systems or deficiencies that require repairs to mitigate additional damage. • Leaking roof • Poor ventilation causing moisture buildup *Ex: HVAC deficiencies that could result in damage to the facility, such as leaks*	2.0
4	**Degraded w/ Potential Mission Impact** Systems or deficiencies that are mission critical and beyond useful life, or most systems beyond 200% expected life. • Fire alarm system beyond 200% • Severely damaged walls • Systems past 200% life expectancy	1.5
5	**Beyond Expected Life:** Systems or deficiencies that are 100% to 200% beyond expected life and show no signs of required repairs. • Expired portable buildings • Many interior finishes without damages	.25 to 1.5

Category #	Description	Weight
6	**Grandfathered or State/District Standards:** Systems or deficiencies that are "grandfathered" code issues or specific to the local agency. • Fire Sprinklers • Flooring consistent with local architectural standards	.5
7	**Sufficiency Deficiency – Facility** Deficiencies that are related to sufficiency standards for inherent parts of the facility. • ADA Issues • Insufficient Parking • Fixed Equipment (such as serving kitchens)	1.0
8	**Sufficiency Deficiency – Equipment** Deficiencies that a related to sufficiency standards for non-fixed equipment. • Missing playgroup equipment	.5
9	**Normal/Within Life Cycle** Systems that are within the expected life cycle and do not require replacement. • Functioning, new lighting • A 20 year old system with a 25 year life cycle *Ex: HVAC within normal lifecycle and fully functioning*	.25

Appendix 3: Total Cost of Ownership (TCO) Incentive Program Scenarios

Spreadsheets of all eight scenarios have been provided to the members. Only Scenarios C, G and H will be handouts at the meeting, as they generally demonstrate total savings to the State as well as features of fair balance for State distributions. It should be noted that the total State and Local combined TCO savings are uniform for all eight scenarios.

Scenarios A – D:

State Share Percentage cannot exceed 100% of IAC-eligible project costs.

A. Scenario A: 1% State Share INCENTIVE for each 1% REDUCTION in TCO.

B. Scenario B: 3/4% State Share INCENTIVE for each 1% REDUCTION in TCO.

C. Scenario C: 3/4% State Share INCENTIVE for each 1% REDUCTION in TCO (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%).

D. Scenario D: 3/4% State Share INCENTIVE for each 1% REDUCTION (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%) PLUS 1/2% ADDITIONAL SAVINGS for reductions of 30% or more.

Scenarios E – H:

State Share Percentage may exceed 100% of IAC-eligible project costs. Under these scenarios, the LEA would receive 75 percent of any state share above 100% of project cost. This bonus above eligible project costs could be utilized for any tax-exempt bond qualified expense for the project such as design and furniture, or may be added to the LEA's Education Article 5-303 reserve account.

E. Scenario E: 1% State Share INCENTIVE for each 1% REDUCTION in TCO.

F. Scenario F: 3/4% State Share INCENTIVE for each 1% REDUCTION in TCO.

G. Scenario G: 3/4% State Share INCENTIVE for each 1% REDUCTION in TCO (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%).

H. Scenario H: 3/4% State Share INCENTIVE for each 1% REDUCTION in TCO (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%) PLUS 1/2% ADDITIONAL SAVINGS for reductions of 30% or more.

Scenario A: 1% SAVINGS INCENTIVE for each 1% REDUCTION.
No State Percentages above 100%.

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E + B	.45F x G unless G>100% then .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100%	D-M unless G>100% then D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	51.00%	$ 22,720,500	$ (220,500)	-0.98%	$ 135,000	$ (85,500)	$ 21,829,500	$ 670,500	2.98%	$ 135,000	$ 270,000	$ 1,075,500	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	97.00%	$ 43,213,500	$ (13,500)	-0.03%	$ 259,200	$ 245,700	$ 1,336,500	$ 463,500	25.75%	$ 10,800	$ 270,000	$ 744,300	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	55.45%	$ 22,458,465	$ (2,004,615)	-9.80%	$ 1,227,231	$ (777,384)	$ 18,041,535	$ 6,504,615	26.50%	$ 1,472,769	$ 2,700,000	$ 10,677,384	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	70.00%	$ 25,200,000	$ (2,700,000)	-12.00%	$ 2,700,000	$ -	$ 10,800,000	$ 11,700,000	52.00%	$ 2,700,000	$ 5,400,000	$ 19,800,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	80.00%	$ 25,200,000	$ (2,700,000)	-12.00%	$ 4,050,000	$ 1,350,000	$ 6,300,000	$ 16,200,000	72.00%	$ 4,050,000	$ 8,100,000	$ 28,350,000	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	106.00%	$ 40,500,000	$ 2,700,000	6.25%	$ 2,592,000	$ 5,292,000	$ -	$ 1,800,000	100.00%	$ 108,000	$ 2,700,000	$ 4,608,000	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	116.00%	$ 36,000,000	$ 7,200,000	16.67%	$ 5,184,000	$ 12,384,000	$ -	$ 1,800,000	100.00%	$ 216,000	$ 5,400,000	$ 7,416,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	126.00%	$ 31,500,000	$ 11,700,000	27.08%	$ 7,776,000	$ 19,476,000	$ -	$ 1,800,000	100.00%	$ 324,000	$ 8,100,000	$ 10,224,000	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	60.00%	$ 24,300,000	$ (1,800,000)	-8.00%	$ 1,350,000	$ (450,000)	$ 16,200,000	$ 6,300,000	28.00%	$ 1,350,000	$ 2,700,000	$ 10,350,000	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	70.00%	$ 28,350,000	$ (1,350,000)	-5.00%	$ 1,620,000	$ 270,000	$ 12,150,000	$ 5,850,000	32.50%	$ 1,080,000	$ 2,700,000	$ 9,630,000	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	80.00%	$ 32,400,000	$ (900,000)	-2.86%	$ 1,890,000	$ 990,000	$ 8,100,000	$ 5,400,000	40.00%	$ 810,000	$ 2,700,000	$ 8,910,000	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	90.00%	$ 36,450,000	$ (450,000)	-1.25%	$ 2,160,000	$ 1,710,000	$ 4,050,000	$ 4,950,000	55.00%	$ 540,000	$ 2,700,000	$ 8,190,000	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

Scenario A - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario A - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	**Present Value of TCO Savings**	Const Cost Escalation %	Years	**Future Value w/Const Escalation**
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario B: 3/4% SAVINGS INCENTIVE for each 1% REDUCTION.
No State Percentages above 100%.

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E(.75)+B	.45F x G unless G>100% then .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100%	D-M unless G>100% then D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .F5E x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	50.75%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.48%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	96.75%	$ 43,102,125	$ 97,875	0.23%	$ 259,200	$ 357,075	$ 1,447,875	$ 352,125	19.56%	$ 10,800	$ 270,000	$ 632,925	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	52.95%	$ 21,445,965	$ (992,115)	-4.85%	$ 1,227,231	$ 235,116	$ 19,054,035	$ 5,492,115	22.37%	$ 1,472,769	$ 2,700,000	$ 9,664,884	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	65.00%	$ 23,400,000	$ (900,000)	-4.00%	$ 2,700,000	$ 1,800,000	$ 12,600,000	$ 9,900,000	44.00%	$ 2,700,000	$ 5,400,000	$ 18,000,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	72.50%	$ 22,837,500	$ (337,500)	-1.50%	$ 4,050,000	$ 3,712,500	$ 8,662,500	$ 13,837,500	61.50%	$ 4,050,000	$ 8,100,000	$ 25,987,500	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	103.50%	$ 40,500,000	$ 2,700,000	6.25%	$ 2,592,000	$ 5,292,000	$ -	$ 1,800,000	100.00%	$ 108,000	$ 2,700,000	$ 4,608,000	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	111.00%	$ 36,000,000	$ 7,200,000	16.67%	$ 5,184,000	$ 12,384,000	$ -	$ 1,800,000	100.00%	$ 216,000	$ 5,400,000	$ 7,416,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	118.50%	$ 31,500,000	$ 11,700,000	27.08%	$ 7,776,000	$ 19,476,000	$ -	$ 1,800,000	100.00%	$ 324,000	$ 8,100,000	$ 10,224,000	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	77.50%	$ 31,387,500	$ 112,500	0.36%	$ 1,890,000	$ 2,002,500	$ 9,112,500	$ 4,387,500	32.50%	$ 810,000	$ 2,700,000	$ 7,897,500	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	87.50%	$ 35,437,500	$ 562,500	1.56%	$ 2,160,000	$ 2,722,500	$ 5,062,500	$ 3,937,500	43.75%	$ 540,000	$ 2,700,000	$ 7,177,500	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	97.50%	$ 39,487,500	$ 1,012,500	2.50%	$ 2,430,000	$ 3,442,500	$ 1,012,500	$ 3,487,500	77.50%	$ 270,000	$ 2,700,000	$ 6,457,500	$ 9,900,000

Scenario B - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario B - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	Present Value of TCO Savings	Const Cost Escalation %	Years	Future Value w/Const Escalation
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario C:	3/4% SAVINGS INCENTIVE for each 1% REDUCTION (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%). No State Percentages above 100%.

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E(mod)+B	.45F x G unless G>100% then .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100%	D-M unless G>100% then D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .F45 x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000 $ -	$ 22,500,000 $ -	1%	$ 99,000,000	50.75%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.48%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
$ 100,000,000	96%	$ 43,200,000 $ -	$ 1,800,000 $ -	1%	$ 99,000,000	97.00%	$ 43,213,500	$ (13,500)	-0.03%	$ 259,200	$ 245,700	$ 1,336,500	$ 463,500	25.75%	$ 10,800	$ 270,000	$ 744,300	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	52.95%	$ 21,445,965	$ (992,115)	-4.85%	$ 1,227,231	$ 235,116	$ 19,054,035	$ 5,492,115	22.37%	$ 1,472,769	$ 2,700,000	$ 9,664,884	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	65.00%	$ 23,400,000	$ (900,000)	-4.00%	$ 2,700,000	$ 1,800,000	$ 12,600,000	$ 9,900,000	44.00%	$ 2,700,000	$ 5,400,000	$ 18,000,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000 $ -	$ 22,500,000 $ -	30%	$ 70,000,000	72.50%	$ 22,837,500	$ (337,500)	-1.50%	$ 4,050,000	$ 3,712,500	$ 8,662,500	$ 13,837,500	61.50%	$ 4,050,000	$ 8,100,000	$ 25,987,500	$ 29,700,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	106.00%	$ 40,500,000	$ 2,700,000	6.25%	$ 2,592,000	$ 5,292,000	$ -	$ 1,800,000	100.00%	$ 108,000	$ 2,700,000	$ 4,608,000	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	116.00%	$ 36,000,000	$ 7,200,000	16.67%	$ 5,184,000	$ 12,384,000	$ -	$ 1,800,000	100.00%	$ 216,000	$ 5,400,000	$ 7,416,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	126.00%	$ 31,500,000	$ 11,700,000	27.08%	$ 7,776,000	$ 19,476,000	$ -	$ 1,800,000	100.00%	$ 324,000	$ 8,100,000	$ 10,224,000	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	77.50%	$ 31,387,500	$ 112,500	0.36%	$ 1,890,000	$ 2,002,500	$ 9,112,500	$ 4,387,500	32.50%	$ 810,000	$ 2,700,000	$ 7,897,500	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	87.50%	$ 35,437,500	$ 562,500	1.56%	$ 2,160,000	$ 2,722,500	$ 5,062,500	$ 3,937,500	43.75%	$ 540,000	$ 2,700,000	$ 7,177,500	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

Scenario C - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario C - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	Present Value of TCO Savings	Const Cost Escalation %	Years	Future Value w/Const Escalation
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario D: 3/4% SAVINGS INCENTIVE for each 1% REDUCTION (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%)
PLUS 1/2% ADDITIONAL SAVINGS for reductions of 30% or more. No State Percentages above 100%.

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E(mod)+B	.45F x G unless G>100% then .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100%	D-M unless G>100% then D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	50.7500%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.48%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	97.00%	$ 43,213,500	$ (13,500)	-0.03%	$ 259,200	$ 245,700	$ 1,336,500	$ 463,500	25.75%	$ 10,800	$ 270,000	$ 744,300	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	52.95%	$ 21,445,965	$ (992,115)	-4.85%	$ 1,227,231	$ 235,116	$ 19,054,035	$ 5,492,115	22.37%	$ 1,472,769	$ 2,700,000	$ 9,664,884	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	65.00%	$ 23,400,000	$ (900,000)	-4.00%	$ 2,700,000	$ 1,800,000	$ 12,600,000	$ 9,900,000	44.00%	$ 2,700,000	$ 5,400,000	$ 18,000,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	87.50%	$ 27,562,500	$ (5,062,500)	-22.50%	$ 4,050,000	$ (1,012,500)	$ 3,937,500	$ 18,562,500	82.50%	$ 4,050,000	$ 8,100,000	$ 30,712,500	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	106.00%	$ 40,500,000	$ 2,700,000	6.25%	$ 2,592,000	$ 5,292,000	$ -	$ 1,800,000	100.00%	$ 108,000	$ 2,700,000	$ 4,608,000	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	116.00%	$ 36,000,000	$ 7,200,000	16.67%	$ 5,184,000	$ 12,384,000	$ -	$ 1,800,000	100.00%	$ 216,000	$ 5,400,000	$ 7,416,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	141.00%	$ 31,500,000	$ 11,700,000	27.08%	$ 7,776,000	$ 19,476,000	$ -	$ 1,800,000	100.00%	$ 324,000	$ 8,100,000	$ 10,224,000	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	77.50%	$ 31,387,500	$ 112,500	0.36%	$ 1,890,000	$ 2,002,500	$ 9,112,500	$ 4,387,500	32.50%	$ 810,000	$ 2,700,000	$ 7,897,500	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	87.50%	$ 35,437,500	$ 562,500	1.56%	$ 2,160,000	$ 2,722,500	$ 5,062,500	$ 3,937,500	43.75%	$ 540,000	$ 2,700,000	$ 7,177,500	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

Scenario D - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario D - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	Present Value of TCO Savings	Const Cost Escalation %	Years	Future Value w/Const Escalation
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario E: 1% SAVINGS INCENTIVE for each 1% REDUCTION and LEA receives 3/4 of the Adjusted State Share Percentage above 100%.
~~No State Percentages above 100%.~~

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E + B	.45F x G unless G>100% then ((G-1)*.75) +1	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100% then (G-1)*75% x .45F	D-M unless G>100% then (M x-1) + D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	51.00%	$ 22,720,500	$ (220,500)	-0.98%	$ 135,000	$ (85,500)	$ 21,829,500	$ 670,500	2.98%	$ 135,000	$ 270,000	$ 1,075,500	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	97.00%	$ 43,213,500	$ (13,500)	-0.03%	$ 259,200	$ 245,700	$ 1,336,500	$ 463,500	25.75%	$ 10,800	$ 270,000	$ 744,300	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	55.45%	$ 22,458,465	$ (2,004,615)	-9.80%	$ 1,227,231	$ (777,384)	$ 18,041,535	$ 6,504,615	26.50%	$ 1,472,769	$ 2,700,000	$ 10,677,384	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	70.00%	$ 25,200,000	$ (2,700,000)	-12.00%	$ 2,700,000	$ -	$ 10,800,000	$ 11,700,000	52.00%	$ 2,700,000	$ 5,400,000	$ 19,800,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	80.00%	$ 25,200,000	$ (2,700,000)	-12.00%	$ 4,050,000	$ 1,350,000	$ 6,300,000	$ 16,200,000	72.00%	$ 4,050,000	$ 8,100,000	$ 28,350,000	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	106.00%	$ 42,322,500	$ 877,500	2.03%	$ 2,592,000	$ 3,469,500	$ (1,822,500)	$ 3,622,500	201.25%	$ 108,000	$ 2,700,000	$ 6,430,500	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	116.00%	$ 40,320,000	$ 2,880,000	6.67%	$ 5,184,000	$ 8,064,000	$ (4,320,000)	$ 6,120,000	340.00%	$ 216,000	$ 5,400,000	$ 11,736,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	126.00%	$ 37,642,500	$ 5,557,500	12.86%	$ 7,776,000	$ 13,333,500	$ (6,142,500)	$ 7,942,500	441.25%	$ 324,000	$ 8,100,000	$ 16,366,500	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	60.00%	$ 24,300,000	$ (1,800,000)	-8.00%	$ 1,350,000	$ (450,000)	$ 16,200,000	$ 6,300,000	28.00%	$ 1,350,000	$ 2,700,000	$ 10,350,000	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	70.00%	$ 28,350,000	$ (1,350,000)	-5.00%	$ 1,620,000	$ 270,000	$ 12,150,000	$ 5,850,000	32.50%	$ 1,080,000	$ 2,700,000	$ 9,630,000	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	80.00%	$ 32,400,000	$ (900,000)	-2.86%	$ 1,890,000	$ 990,000	$ 8,100,000	$ 5,400,000	40.00%	$ 810,000	$ 2,700,000	$ 8,910,000	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	90.00%	$ 36,450,000	$ (450,000)	-1.25%	$ 2,160,000	$ 1,710,000	$ 4,050,000	$ 4,950,000	55.00%	$ 540,000	$ 2,700,000	$ 8,190,000	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

Scenario E - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	$ 16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	$ 16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario E - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	Present Value of TCO Savings	Const Cost Escalation %	Years	Future Value w/Const Escalation
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario F: 3/4% SAVINGS INCENTIVE for each 1% REDUCTION and LEA receives 3/4 of the Adjusted State Share Percentage above 100%.
~~No State Percentages above 100%.~~

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			.75E + B	.45F x G unless G>100% then ((G-1)*.75) +1	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100% then (G-1)*75% x .45F	D-M unless G>100% then (M x-1) + D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	50.75%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.48%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	96.75%	$ 43,102,125	$ 97,875	0.23%	$ 259,200	$ 357,075	$ 1,447,875	$ 352,125	19.56%	$ 10,800	$ 270,000	$ 632,925	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	52.95%	$ 21,445,965	$ (992,115)	-4.85%	$ 1,227,231	$ 235,116	$ 19,054,035	$ 5,492,115	22.37%	$ 1,472,769	$ 2,700,000	$ 9,664,884	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	65.00%	$ 23,400,000	$ (900,000)	-4.00%	$ 2,700,000	$ 1,800,000	$ 12,600,000	$ 9,900,000	44.00%	$ 2,700,000	$ 5,400,000	$ 18,000,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	72.50%	$ 22,837,500	$ (337,500)	-1.50%	$ 4,050,000	$ 3,712,500	$ 8,662,500	$ 13,837,500	61.50%	$ 4,050,000	$ 8,100,000	$ 25,987,500	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	103.50%	$ 41,563,125	$ 1,636,875	3.79%	$ 2,592,000	$ 4,228,875	$ (1,063,125)	$ 2,863,125	159.06%	$ 108,000	$ 2,700,000	$ 5,671,125	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	111.00%	$ 38,970,000	$ 4,230,000	9.79%	$ 5,184,000	$ 9,414,000	$ (2,970,000)	$ 4,770,000	265.00%	$ 216,000	$ 5,400,000	$ 10,386,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	118.50%	$ 35,870,625	$ 7,329,375	16.97%	$ 7,776,000	$ 15,105,375	$ (4,370,625)	$ 6,170,625	342.81%	$ 324,000	$ 8,100,000	$ 14,594,625	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	77.50%	$ 31,387,500	$ 112,500	0.36%	$ 1,890,000	$ 2,002,500	$ 9,112,500	$ 4,387,500	32.50%	$ 810,000	$ 2,700,000	$ 7,897,500	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	87.50%	$ 35,437,500	$ 562,500	1.56%	$ 2,160,000	$ 2,722,500	$ 5,062,500	$ 3,937,500	43.75%	$ 540,000	$ 2,700,000	$ 7,177,500	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	97.50%	$ 39,487,500	$ 1,012,500	2.50%	$ 2,430,000	$ 3,442,500	$ 1,012,500	$ 3,487,500	77.50%	$ 270,000	$ 2,700,000	$ 6,457,500	$ 9,900,000

Scenario F - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	$ 2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	$ 2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

Scenario F - State and Counties estimated 30-year future value of savings (cost avoidance) at 4% per year construction cost escalation and with .

State Share %	TCO Reduction	Present Value of TCO Savings	Const Cost Escalation %	Years	Future Value w/Const Escalation
65%	1%	**$554,400,000**	4%	30	**$1,798,139,580**
65%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**
77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario G: 3/4% SAVINGS INCENTIVE for each 1% REDUCTION (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%) and LEA receives 3/4 of the Adjusted State Percentage above 100% . ~~No State Percentages above 100%.~~

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

Baseline				Proposed With Incentive													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E(mod)+B	.45F x G unless G>100% then ((G-1)*.75) +1 x .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45F x 30 x B)	I+K	(1-G) x .45F unless G>100% then (1-G)*75% x .45F	D-M unless G>100% then (M x-1) + D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA) over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	50.75%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.49%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	1%	$ 99,000,000	97.00%	$ 43,213,500	$ (13,500)	-0.03%	$ 259,200	$ 245,700	$ 1,336,500	$ 463,500	25.75%	$ 10,800	$ 270,000	$ 744,300	$ 990,000
$ 100,000,000	45%	$ 20,453,850	$ 24,546,150	10%	$ 90,000,000	52.95%	$ 21,445,965	$ (992,115)	-4.85%	$ 1,227,231	$ 235,116	$ 19,054,035	$ 5,492,115	22.37%	$ 1,472,769	$ 2,700,000	$ 9,664,884	$ 9,900,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	20%	$ 80,000,000	65.00%	$ 23,400,000	$ (900,000)	-4.00%	$ 2,700,000	$ 1,800,000	$ 12,600,000	$ 9,900,000	44.00%	$ 2,700,000	$ 5,400,000	$ 18,000,000	$ 19,800,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	72.50%	$ 22,837,500	$ (337,500)	-1.50%	$ 4,050,000	$ 3,712,500	$ 8,662,500	$ 13,837,500	61.50%	$ 4,050,000	$ 8,100,000	$ 25,987,500	$ 29,700,000
		$ -	$ -															
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	10%	$ 90,000,000	106.00%	$ 42,322,500	$ 877,500	2.03%	$ 2,592,000	$ 3,469,500	$ (1,822,500)	$ 3,622,500	201.25%	$ 108,000	$ 2,700,000	$ 6,430,500	$ 9,900,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	20%	$ 80,000,000	116.00%	$ 40,320,000	$ 2,880,000	6.67%	$ 5,184,000	$ 8,064,000	$ (4,320,000)	$ 6,120,000	340.00%	$ 216,000	$ 5,400,000	$ 11,736,000	$ 19,800,000
$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	126.00%	$ 37,642,500	$ 5,557,500	12.86%	$ 7,776,000	$ 13,333,500	$ (6,142,500)	$ 7,942,500	441.25%	$ 324,000	$ 8,100,000	$ 16,366,500	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
$ 100,000,000	70%	$ 31,500,000	$ 13,500,000	10%	$ 90,000,000	77.50%	$ 31,387,500	$ 112,500	0.36%	$ 1,890,000	$ 2,002,500	$ 9,112,500	$ 4,387,500	32.50%	$ 810,000	$ 2,700,000	$ 7,897,500	$ 9,900,000
$ 100,000,000	80%	$ 36,000,000	$ 9,000,000	10%	$ 90,000,000	87.50%	$ 35,437,500	$ 562,500	1.56%	$ 2,160,000	$ 2,722,500	$ 5,062,500	$ 3,937,500	43.75%	$ 540,000	$ 2,700,000	$ 7,177,500	$ 9,900,000
$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

Scenario G - Estimated 30-year **State and Counties savings** (cost avoidance) what-if for entire Statewide School Facilities Portfolio

Notes: 1) Baseline construction is 45% of TCO; 2) State share average is an assumption; 3) All numbers x 1,000;

56,000,000	65%	16,380,000	8,820,000	1%	55,440,000	65.75%	16,403,310	$ (23,310)	-0.04%	$ 98,280	**$ 74,970**	$ 8,544,690	$ 275,310	3.12%	$ 52,920	$ 151,200	**$ 479,430**	**$ 554,400**
56,000,000	65%	16,380,000	8,820,000	10%	50,400,000	72.50%	16,443,000	$ (63,000)	-0.11%	$ 982,800	**$ 919,800**	$ 6,237,000	2,583,000	29.29%	$ 529,200	$ 1,512,000	**$ 4,624,200**	**$ 5,544,000**
56,000,000	77%	19,404,000	5,796,000	10%	50,400,000	84.50%	19,164,600	$ 239,400	0.43%	$ 1,164,240	**$ 1,403,640**	$ 3,515,400	2,280,600	39.35%	$ 347,760	$ 1,512,000	**$ 4,140,360**	**$ 5,544,000**

150M GSF x $379/sf = **$ 56,000,000,000** < --Estimated total Statewide school facilities portfolio replacement value

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77%	10%	**$5,544,000,000**	4%	30	**$17,981,395,796**

Scenario H:

3/4% SAVINGS INCENTIVE for each 1% REDUCTION (except, for LEAs with state share of 89% or more, a 1% savings incentive up to 100%) and 3/4 of the Adjusted State Percentage above 100% PLUS 1/2% ADDITIONAL SAVINGS for reductions of 30% or more. ~~No State Percentages above 100%.~~

Assumptions: **Baseline Project Construction Cost is $45M** or 45% of TCO Baseline [Middle School, w/915 students, $49,195/student (IAC Cost w/site is $379/SF)]. TCO is project cost plus 30 years of M&O including systemics.
M&O baseline is project cost times 2% per year for systemics (capital maintenance) plus 2% per year for routine M&O (heat, cool, custodial, routine-emergent-preventive maintenance, grounds maint, etc.)

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
$45,000,000 Project Construction Cost						For State						For LEA						Combined
		A x .45 x B	A x .45 x (1-B)			E(mod)+B	G>100% then ((G-1)*.75) +1 x .45F	C - H	I/A	(.02 x .45A x 30 x B) - (.02 x .45E x 30 x B)	I+K	(1-G) x .45F unless G>100% then (G-1)*75% x .45F	D-M unless G>100% then (M x-1) + D	N/D	(.02 x .45A x 30 x (1-B)) - (.02 x .45F x 30 x (1-B))	(.02 x .45A x 30) - (.02 x .45F x 30)	N+P+Q	L+R
Total Cost of Ownership (TCO) for the Facility	State Share % of Constr/Systemics for the County	State Share of Baseline Construction Cost w/ Site	LEA Share of Baseline Construction Cost w/Site	TCO Cost Reduction Percentage	Proposed TCO for the Facility	Adjusted State Share Percentage	Adjusted State Share of Construction	State Savings On Construction	% State Savings On Construction	Est. Reduced State Cost of Systemics over 30 years	Est. Net State TCO Savings over 30 years	Adjusted LEA Share	LEA Savings on Construction	% LEA Savings On Construction	Est. Reduced LEA Cost of Systemics over 30 years	Est. Reduced LEA Cost of Maint & Ops. over 30 years	Est. LEA TCO Savings over 30 years	Est. Net TCO Savings (State+LEA)over 30 years
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	1%	$ 99,000,000	50.75%	$ 22,609,125	$ (109,125)	-0.48%	$ 135,000	$ 25,875	$ 21,940,875	$ 559,125	2.48%	$ 135,000	$ 270,000	$ 964,125	$ 990,000
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$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	30%	$ 70,000,000	87.50%	$ 27,562,500	$ (5,062,500)	-22.50%	$ 4,050,000	$ (1,012,500)	$ 3,937,500	$ 18,562,500	82.50%	$ 4,050,000	$ 8,100,000	$ 30,712,500	$ 29,700,000
		$ -	$ -															
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$ 100,000,000	96%	$ 43,200,000	$ 1,800,000	30%	$ 70,000,000	141.00%	$ 41,186,250	$ 2,013,750	4.66%	$ 7,776,000	$ 9,789,750	$ (9,686,250)	$ 11,486,250	638.12%	$ 324,000	$ 8,100,000	$ 19,910,250	$ 29,700,000
$ 100,000,000	50%	$ 22,500,000	$ 22,500,000	10%	$ 90,000,000	57.50%	$ 23,287,500	$ (787,500)	-3.50%	$ 1,350,000	$ 562,500	$ 17,212,500	$ 5,287,500	23.50%	$ 1,350,000	$ 2,700,000	$ 9,337,500	$ 9,900,000
$ 100,000,000	60%	$ 27,000,000	$ 18,000,000	10%	$ 90,000,000	67.50%	$ 27,337,500	$ (337,500)	-1.25%	$ 1,620,000	$ 1,282,500	$ 13,162,500	$ 4,837,500	26.88%	$ 1,080,000	$ 2,700,000	$ 8,617,500	$ 9,900,000
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$ 100,000,000	90%	$ 40,500,000	$ 4,500,000	10%	$ 90,000,000	100.00%	$ 40,500,000	$ -	0.00%	$ 2,430,000	$ 2,430,000	$ -	$ 4,500,000	100.00%	$ 270,000	$ 2,700,000	$ 7,470,000	$ 9,900,000

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MABE
MARYLAND ASSOCIATION OF BOARDS OF EDUCATION

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November 13, 2019

Dr. Karen B. Salmon
State Superintendent of Schools
Chair, Workgroup on the Assessment & Funding of School Facilities
Maryland State Department of Education
200 West Baltimore Street
Baltimore, Maryland 21201

Dear Dr. Salmon and Workgroup Members:

The Maryland Association of Boards of Education (MABE), representing Maryland's 24 local boards of education, requests your consideration of the following positions and perspectives as the Workgroup on the Assessment and Funding of School Facilities prepares to adopt final recommendations. MABE greatly appreciates the ongoing efforts to improve Maryland's state and local school construction programs through the implementation of the 21st Century School Facilities Act of 2018. The Act created the Workgroup on Educational Development Specifications, which recently completed its work, and the Assessment and Funding Workgroup, which has discussed a draft of its final report and is scheduled to adopt final recommendations on November 19, 2019.

The following comments provided by MABE are informed by input from local facility planners from the majority of local school systems. The primary concerns raised in response to this Workgroup's recommendations are stated as follows:

- *The original intent of the 21st Century School Facilities Act of 2018 (HB 1783) was for the Funding Workgroup to have the facility assessment data available before they made recommendations about how to use the information. We, the facility planners, feel strongly that any recommendations about how to use the information for funding decisions should be delayed until the assessments are completed. Although local facility planners were asked for input on the categories and weighting factors, they were only given three weeks for that review. This is not a sufficient amount of time to consider the categories and the weightings. The use of hypothetical modeling makes it difficult to discuss and develop recommendations on policy changes. It would be more valuable to conduct one initial assessment in each local school system so that actual building scores can be reviewed by each school system. These initial assessments would give something tangible for each system to look at and compare with their local knowledge and expertise regarding their school facilities.*

In light of these concerns, and based on our support for fidelity in implementing the 21st Century School Facilities Act, MABE opposes the Assessment and Funding Workgroup's adoption of funding policy or legislative recommendations in the absence of a completed statewide school facilities assessment; an assessment called for in the law establishing the Workgroup and intended to be the basis of the Workgroup's deliberations and recommendations.

School Conditions: Adequacy, Equity and Excellence
MABE greatly appreciates the State's participation in funding a significant share of school construction and renovation costs. For Maryland's 24 local school boards, the mission to provide all of Maryland's students with high performing school facilities conducive to learning is a top priority. The Maryland

Constitution requires that the State provide a "thorough and efficient" system of public education; and MABE believes that this includes the duty to equitably provide safe, high quality school facilities in which all students can learn.

MABE has consistently advocated for increased State investments in school facilities, both in the overall annual capital budget and also through many initiatives to provide targeted funding to address priority needs, including: heating and air conditioning, school safety and security, overcrowding and use of relocatable classrooms, schools serving low-income students, and systemic improvements in aging schools. MABE has adopted a legislative priority to secure a baseline annual State capital investment in school construction of at least $400 million; a clear indication that we believe much more needs to be done.

However, MABE rejects the premise that Maryland's school facility conditions "do not appear to be improving based upon the measure currently available and comparable (average age)." This opening statement in the draft report's executive summary is telling, both in terms of the overly broad and negative assessment of Maryland's public school facilities, and in the assertion that other comparable measures of school conditions are not available. MABE firmly believes that the condition of our schools is improving, based on ample and readily available evidence of the many newly constructed and renovated schools and systemic projects to improve school conditions successfully completed across the State.

Local boards appreciate the State's role in making this progress possible, while at the same time applauding the enormous role our local governments play in providing local funding and support for excellent school buildings and programs. In this regard, both the Educational Specifications Workgroup's report and this Workgroup's draft report refer to a State portfolio of school facilities. However, the State does not own, operate or maintain any public school facilities. Rather, local systems and local governments collaborate in identifying needs, priorities, and local resources, and then pursue the available amount of state funding, which varies significantly as a percentage of total costs, allowing them to proceed to design, build, and maintain their own local school facilities. In short, MABE recognizes that there are 24 local school facility portfolios.

The Workgroup's Charge and Timeline

The Workgroup was created by the 21st Century School Facilities Act of 2018 and provided with specific duties and timelines. The newly formed Interagency Commission on School Construction was to adopt educational facility sufficiency standards (completed on May 31, 2018) and a facilities condition index (FCI) and then conduct a statewide facility assessment. More specifically, the law directs the IAC to contract with a third-party to conduct the assessment, utilize the FCI and existing data sources, coordinate with local school systems to identify data elements, and to complete the assessment by July 1, 2019.

All of this work was to benefit the next step, which was the convening of the Workgroup on the Assessment and Funding of School Facilities. To the best of MABE's knowledge, other than the adoption of sufficiency standards, none of the other steps intended to precede this Workgroup and inform its recommendations have been completed, and the facilities assessment itself has not begun.

The assessment, incorporating the FCI and professional input from local school systems, was clearly intended to inform the deliberations of the Workgroup and its recommendations, which were to be completed by December 1, 2019. In this context, MABE requests that the draft report be re-titled "Preliminary Recommendations" as opposed to "Findings and Recommendations", recognizing that without the statewide assessment data there should be no final findings or recommendations.

The timeline set forth in the law is doubly impacted by the failure to complete the assessment. In our view, the Workgroup should not be making recommendations without the benefit of the assessment, and any such recommendations should not result in regulations or funding decisions. The law provides that based on the recommendations of the Workgroup … and not before May 2, 2020, for use in funding decisions no sooner than fiscal year 2021, the IAC shall adopt regulations establishing the use of the facility assessment results in annual school construction funding decisions" (Education Article, Section 5-310 (g)). MABE believes that without the assessment, proposed regulatory changes and revised funding criteria are not in compliance with the statute, and premature by at least a full fiscal year. Specifically, due to the delay in conducting the statewide assessment, MABE believes that the dates referenced above should be amended to May 2, 2021 and fiscal year 2022, respectively.

Total Cost of Ownership (TCO)

The Workgroup was charged with considering whether to create a funding incentive for local school systems to build schools with reduced total costs of ownership over a 30-year period. MABE does not believe the Workgroup has been presented with sufficient evidence or analysis to adopt a recommendation to apply the proposed total cost of ownership (TCO) calculation as the basis of a new State funding incentive program.

Local boards object to incentivizing a reduction in TCO, or adherence to a TCO baseline, given the over-emphasis on limiting gross square footage and other state level, one-size-fits-all criteria, and the under-emphasis on local priorities and challenges, including design preferences, providing community space, compliance with mandated environmental design standards, and locally funding and administering facility maintenance staff and programs. School systems unable to fund amenities which may be considered major facility enhancements would be rewarded with additional state funding for the construction of minimally sufficient schools, and jurisdictions with more wealth will be penalized by funding calculations that impose a higher burden on local governments and school systems that choose to fund and build excellent schools.

MABE did not support this Workgroup charge as amended on to the School Facilities Act and does not support the recommendation from IAC staff that such an incentive be recommended by the Workgroup. Local facility planners have also raised the concern that a rigid application of the TCO proposal would promote the construction of schools opening at full capacity unless the local school system funds additional space above the baseline to accommodate projected enrollment growth. Local systems strongly believe that given the significant role of local funding and long-term capital and operating budget planning, we already have the incentive to weigh long-term planning decisions with the fiscal sustainability of those choices.

Further, MABE is troubled by the reference in the draft report to the Workgroup recommending "implementation" of this TCO funding incentive, even as a pilot program. As stated previously in these comments, MABE opposes any final policy, regulatory or statutory changes recommended by this Workgroup as being premature until the statewide assessment is completed.

Category Weights for the MDCI Calculation

The Workgroup is poised to recommend a table or rubric of categories and weights of school facility conditions and needs. The IAC staff has proposed category weights for the purpose of establishing a Maryland Condition Index (MDCI) calculation, or score, for each of Maryland's 1,400 schools. MABE has serious concerns with the current iteration of the proposal, and is even more troubled by the apparent reluctance of staff to acknowledge the de facto insufficiency of relocatable classrooms in assessing school facility conditions. MABE is pleased that the Workgroup appears to have reached consensus on rating relocatables in Category 2, which would define them as space deficiencies of the

second highest priority. Another issue of concern is the proposal to assign the lowest possible rating to HVAC systems until they reach 200% of their life expectancy.

The intent of this recommendation is also rather unclear given the draft report's statement that "final funding prioritization should be determined only after the data from the statewide facilities assessment is available." Given these concerns, MABE objects to the recommendation to create and pilot a standards-based funding program utilizing the proposed category weights and MDCI calculation.

Maintenance Incentive Program

Local facility planners have raised major concerns regarding the proposal to create an incentive program based on maintenance practices. The explanation of this proposal in the draft report, albeit conditioned on the completion of the facilities assessment, raises the specter of rewarding systems that fail to replace aging systems and instead continue to utilize them for many years beyond the equipment's useful life. This program appears to be contrary to industry standards for proactive planned replacement cycles for building systems. Again, this proposal references the need to review the results of the statewide assessment before proceeding. However, the underlying concern is that the proposal itself does not reflect best practices or the desire of local school systems to secure sufficient funding to upgrade systemics in accordance with industry standards, and the local policies and priorities for maintaining high quality school facilities.

A Formula-based CIP

MABE opposes the recommendation that the Workgroup propose a formula-based approach to developing the CIP. This recommendation represents a radical departure from Maryland's longstanding and highly successful State and local school facility funding program. However, the concept is not entirely new. Maryland's Public School Construction Program convened a workgroup on enrollment-based school funding many years ago, without reaching any consensus on recommendations. One issue of major concern was the per pupil weighting of state funding for school projects or jurisdictions based on the operating funding categories for students receiving special education services, economically disadvantaged students, and students learning English. MABE cautions that any similar analysis today would need to be fully informed by the work of the Kirwan Commission on Innovation and Excellence. While a formula-based approach may have merit, it would involve a complex and comprehensive study that is outside the scope of the charge of this Workgroup.

Conclusion

The Knott Commission's final report appropriately characterized their efforts as follows: "Our work reflects our shared dedication to providing the students, teachers, and parents of Maryland with the finest educational facilities in which our children can learn and grow." By contrast, the draft Assessment and Funding Workgroup report appears to be focused on recommendations couched in terms of "minimum sufficiency", "baseline total cost of ownership", and the creation of incentive programs leading to smaller school facilities with older HVAC, roofing, and other systems.

MABE urges the Workgroup to revise its final recommendations toward the goal of enhancing and improving the State's role in funding a significant share of school construction costs, providing significant requirements and guidance to local school systems in support of high quality schools, and providing flexibility in the design and construction of schools where local resources and expertise warrant delegated authority to do so. These are the hallmarks of the Knott Commission report and resulting School Facilities Act that established this Workgroup. Again, MABE respectfully requests the Workgroup to forestall any final recommendations until it has the benefit of a completed statewide school facilities assessment; a process that will help ensure the full engagement of local school systems and school facility design, construction, and maintenance professionals.

Maryland has many outstanding school facilities, and many in need of total renovation or replacement with a new school. MABE is not convinced that the Workgroup's draft report recommends funding and policy reforms designed to promote the completion of these much needed projects. Instead, the draft report appears to focus on adopting a statewide school facility condition index and funding incentives that will reduce the State's participation in the construction of high quality schools.

MABE wholly appreciates the State's responsibility to develop funding strategies to provide outstanding schools as replacements for our highest need schools; schools often located in low-wealth school systems and communities. A clear focus on equity in State funding priorities and allocations is certainly called for to benefit the students and families in these communities. This is why MABE strongly supports sustained and increased investments in initiatives such as the Baltimore City 21st Century School Building Plan, and the program providing supplemental funding to correct systemic HVAC problems. In addition, MABE supports the proposed expansion of school construction bonding and financing authority to the Maryland Stadium Authority. Most importantly, MABE believes that these initiatives are capable of achieving major improvements in the equity of state funding and the overall quality of learning environments for students, teachers, and communities, while being far less disruptive to the State's appropriate role in providing funding and oversight and the successful track record of local school systems operating high quality school construction programs across the State.

As you prepare to adopt final recommendations in light of these comments, please feel free to contact MABE's Director of Governmental Relations, John R. Woolums, for additional information.

Thank you again for your commitment to equity and excellence in teaching and learning conditions, including ensuring high quality school facilities, for all of Maryland's nearly 1 million students.

Sincerely,

Martha James-Hassan
President

Julie K. Hummer
Legislative Committee Chair

Cc:
Local Board Presidents/Chairs
Local Superintendents/CEOs
School Facilities Workgroup Members
House Speaker Adrienne A. Jones
Senate President Thomas V. Mike Miller, Jr.
Robert A. Gorrell, Director, Public School Construction Program

Maryland

Robert Gorrell -IAC- <robert.gorrell@maryland.gov>

FW: Evaluation of the Assessment and Funding Workgroup Recommendations-

Robert Gorrell -IAC- <robert.gorrell@maryland.gov> Wed, Nov 13, 2019 at 9:18 AM
To: "Valentino-Smith, Geraldine Delegate" <Geraldine.Valentino@house.state.md.us>
Cc: "cassandra.viscarra@maryland.gov" <cassandra.viscarra@maryland.gov>, Jay Schulte -IAC- <jay.schulte@maryland.gov>, "Peters, Douglas Senator" <Douglas.Peters@senate.state.md.us>, Karen Salmon -MSDE- <karen.salmon@maryland.gov>, Zachary Hands -MSDE- <zachary.hands1@maryland.gov>

Delegate Valentino-Smith,

Thank you for passing on these comments from the PGCPS CEO. I'm pleased to know that the LEAs are following the work of the Assessment and Funding Workgroup closely, as their involvement in this process will surely lead to better recommendations and cooperation as the LEAs and the State both work to achieve school facilities that are educationally sufficient and fiscally sustainable so that every child in every Maryland school has a good learning environment.

Per the CEO's comments, we agree that the assessment data will need to be studied and validated with the LEAs as we finalize our numbers. Each assessment will be sent to the LEA immediately following the generation of the school's assessment report, and the LEA will have an opportunity to provide feedback. The IAC will accordingly make adjustments when necessary. We also agree that further conversations will need to occur with the LEAs around things like real-time utilities metering and will certainly engage the LEAs as we begin to move forward.

The items identified by DCP as potential items of concern are listed in blue, below, with the IAC's response in black.

We have concerns with the incentivizing of "good maintenance practices." This will insert the State into LEA decision-making processes regarding maintaining school facilities without an understanding of jurisdictional budgetary constraints.

The idea here is not for the State to become involved in LEA level decision making, but only to assess the achieved life span of LEA systems compared to their expected life span and to provide a corresponding funding incentive when an LEA demonstrates that their local practices—whatever they may be—are effectively maintaining their systems and saving both State and local dollars because of their extended life spans. It is true that this may not benefit all LEAs to a great extent, but is one of a mix of solutions (including standards-based funding and other State funding initiatives) that is intended to ensure that unique LEAs all have avenues of funding to assist them with their School Facilities portfolios. As we learn from LEAs the methodologies that work best, we will share them as best-practices.

The same is true for the "total cost of ownership incentives, and a Standard Maintenance Management System described in Paragraph 10.

Like maintenance incentives, the total cost of ownership (TCO) incentive reward LEAs that are making decisions resulting in fiscally sustainable facilities. Because this incentive is on a project by project basis, rather than based on the entire LEA portfolio, every LEA regardless of their current situation will have an opportunity to achieve this incentive. The standardized maintenance management system is intended to benefit the LEAs by providing the kind of system that almost all LEAs are using already but at no cost to the LEA. This will also alleviate the workload of LEA staff that are required to extract reports from the LEAs CMMS to provide to the IAC prior to each maintenance assessment.

The pilot program does address the importance of HVAC systems in their assessments (potentially rating failing HVAC systems in Category 1 (the highest rating category with a score of 3.5) however, we would not be opposed to these systems being addressed in a separate category (with a higher scoring range).

We agree that a non-working HVAC system will shut down a school quickly and why we have recommended the relevancy of educational impact weighting. Both the assigned category and the proportional value of a system (compared to other systems) determine its impact on the final MDCI score. Because the HVAC is typically 20% of the overall building cost, HVAC will proportionally have more impact on the MDCI score than other systems. As the assessment work occurs after the vendor is under contract, the IAC will continue to reach out to the LEAs for feedback to ensure that the values identified by the vendor are correct.

We have concerns about a formula driven capital allocation. We believe this recommendation could add complexity to the assessment process needlessly when the current system works well when adequately funded.

The Assessment and Funding Workgroup has requested additional information on a formula driven Capital Improvement Program (CIP) allocation, but has not made any recommendations to move forward at this time. Any changes to the existing CIP must be reviewed carefully.

I believe that the CEO's recommendations—and specifically the recommendation that the Workgroup continue to carefully study and review potential solutions before implementation—have been captured in the current version of the report. The revised draft will be distributed tomorrow before close of business for your review prior to Tuesday's meeting. The workgroup has been very clear that the consequences of potential solutions should be well understood prior to implementation. We will, of course, be in constant contact with the LEAs as we move forward with the assessment and the Workgroup's recommendations.

Please contact me if you have any questions or concerns.

Best Regards,

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CHANGING Maryland *for the Better*

Robert A. Gorrell
Executive Director
Interagency Commission
on Public School Construction
200 W. Baltimore Street, 2nd floor
Baltimore, MD 21201
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On Tue, Nov 12, 2019 at 2:28 PM Valentino-Smith, Geraldine Delegate <Geraldine.Valentino@house.state.md.us> wrote:

> Hello all, Below are the recommendations from our County's CEO regarding the workgroup. I am sorry to be a little late on this deadline. Please let me know if you have questions.
>
> Delegate Geraldine Valentino-Smith
>
> 6 Bladen Street Room 201
>
> Annapolis, MD 21401
>
> 301-858-3101/410-841-3101
>
> **From:** Monica Goldson CEO [mailto:ceo@pgcps.org]
> **Sent:** Friday, November 8, 2019 8:49 AM
> **To:** Valentino-Smith, Geraldine Delegate <Geraldine.Valentino@house.state.md.us>
> **Subject:** Evaluation of the Assessment and Funding Workgroup Recommendations-

Good morning Delegate Valentino-Smith,

Please see below my recommendations.

Do not hesitate to contact me if you have any questions or concerns.

Thanks,

Monica

The Department of Capital Programs (DCP) staff has reviewed the Assessment and Funding Workgroup recommendations. In summary, the Workgroup recommendations are as follows many of which are postponed until the completion of a statewide facilities assessment. I think these represent a measured approach that is consistent with what we and other jurisdictions recommended. These include the following:

- Extension of their tenure to adopt final weightings and program recommendations
- Changes to weighting factors giving greater priority to immediate threats to life, safety or health; portables reprioritized see Figure 3
- Different principles for the evaluation of special programmed schools as defined by the Maryland Sufficiency Standards to be determined
- Pilot-program parameters clarified
- Using Assessment Data to Fund Additional Programs (postponed until Assessment data is available)
- Capital Maintenance Incentive Program (postponed until Assessment data is available)
- Total Cost of Ownership Incentive clarified
- IAC given permission to create and maintain a life-cycle cost analysis standards and measures to be used as a tool in estimating total cost of ownership
- IAC given permission to implement post-occupancy evaluations of new and renovated facilities using a standard template that will facilitate collection and availability of comparable information for all LEA's
- The State should adopt and implement the National Council on School Facilities' Definitions of Key Facilities Data Elements" in the financial reporting that LEA's provide to the Maryland Department of Education (MSDE) for activities related to the total cost of ownership
- The IAC should explore the practice of funding the use by LEAs of a standard web-based
- Comprehensive Maintenance Management System (CMMS) to support LEAs' facilities' operations, maintenance, and capital-renewal activities, enables data analysis, and reporting to State and local stakeholders. Any system selected must include preventive maintenance, work-order management, and utility management
- 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

Findings and Recommendations

Reviewing Decisions when Assessment Data is Available

Despite the detailed nature of the hypothetical schools model to understand the impact of certain weighting decisions, without the assessment data to compare actual scoring the Workgroup had decided to recommend extending their tenure to adopt final weightings and program recommendations based on a completed statewide facilities assessment.

Prioritization through Weighting

The Workgroup amended the draft categories. Immediate threats to life, safety or health are weighted most heavily (3.5 repair value). Space deficiencies for essentially unhoused students are also weighted heavily (3.0 repair value). The differing principles under which special programmed schools operate as defined by the Maryland

Sufficiency Standards (such as alternative, charter, or CTE schools) warrants a different criteria for their assessment.

Pilot Standards-Based Funding Program

The Workgroup also clarified the parameters in which the pilot-based funding program will operate. The program will utilize new state funding, focus on the highest new, renewal, or replacement school needs as measured by the statewide facilities assessment. In addition, the program will be one of a mix of solutions for improving school conditions, including the continuance of the current CIP and the implementation of various incentive, but will not fund land acquisition projects, off-site expenditures, or items with a median expected life span of less than 15 years. Nevertheless, 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 the data from the statewide assessment could be used to identify needs that could be funded through additional programs or used to compare needs and prioritize funding in a specific category or for a specific building system. However, the Workgroup recommends postponing consideration of such programs, until the assessment's results are available and specific needs identified based upon analysis of assessment data.

Capital and Routine Maintenance Funding

The Workgroup recognized that data from a statewide assessment could identify where LEA's have extended building system life spans greater than expected via preferred maintenance practices. The data can provide a 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 any capital maintenance incentive program until the assessment data is available.

Total Cost of Ownership Incentive

The Assessment and Funding Workgroup recommends implementation of a 3/4% State share incentive for each 1% reduction in the estimated TCO for new, replacement and fully renovated school facilities when compared to the baseline total cost of ownership. LEAs with a State share of 89% or more could 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 ¾ of 1% increase to State share (regardless of LEA State share percentage) and used for any LEA educational facility project purpose. The Workgroup further recommends evaluating the incentive, after a pilot period, and modifying it as necessary.

DCP staff recommends that Prince George's County Schools and their representatives agree with and support the following:

1. A period of testing where an in-depth assessment of a facility or facilities for which the resident LEA has local and historical data. This will allow LEA's to get a feel for future assessments and how their ratings compare with the States
2. The assessment criteria currently exists for this program. The LEAs should be permitted evaluate assessment criteria prior to the initiation of the pilot program, to do a more thorough analysis of how facilities are likely to be scored.
3. Due to our heavy reliance and the varying conditions of portables in our County, we support potential funding for temporary classrooms as part of this pilot program
4. We support the idea of standard definitions of facilities data elements but also recognize its difficulty as explained in Paragraph 9.
5. We support the use of Real Time Utilities Metering, but a discussion is required on costs to purchase, install and maintain the required equipment.

DCP Staff has identified the following items as potential problems, which do not appear to favor PGCPS and should be opposed or at least be studied further:

1. We have concerns with the incentivizing of "good maintenance practices." This will insert the State into LEA decision-making processes regarding maintaining school facilities without an understanding of jurisdictional budgetary constraints.
2. The same is true for the "total cost of ownership incentives, and a Standard Maintenance Management System described in Paragraph 10.
3. The pilot program does address the importance of HVAC systems in their assessments (potentially rating failing HVAC systems in Category 1 (the highest rating category with a score of 3.5) however, we would not be opposed to these systems being addressed in a separate category (with a higher scoring range).
4. We have concerns about a formula driven capital allocation. We believe this recommendation could add complexity to the assessment process needlessly when the current system works well when adequately funded.

Monica E. Goldson, Ed.D.

Chief Executive Officer

Prince George's County Public Schools

MARYLAND Association of COUNTIES

November 13, 2019

Dr. Salmon and Workgroup Members
State Superintendent of Schools
Maryland Department of Education
200 West Baltimore Street
Baltimore, MD 21201

Dear Dr. Salmon and Workgroup Members:

The Maryland Association of Counties (MACo) respectfully requests the Workgroup on the Assessment and Funding of School Facilities consider the following sentiments before adopting final recommendations. MACo appreciates the hard work and effort put forth by the Workgroup and staff, but as no statewide school facilities assessment has yet been completed, there should be no report with final recommendations. Instead, the final work product should simply summarize the major areas of discussion.

MACo strongly supports maintaining local authority to establish school construction priorities and opposes the recommendation of departing from project-based funding to a formula-based approach when developing the CIP. In the formula approach, categories and weightings under-emphasize local priorities and challenges, such as design preferences, community space, environmental considerations, contractual obligations, and local funding availability. Furthermore, the IAC staff recommendation of piloting a standards-based funding program could reward LEAs that fail to address critical needs while reducing funding for LEAs taking excellent care of facilities. Without detailed provisions to offset these perverse incentives, such a proposal could frustrate the goals of our very successful program of school investments.

We urge the Workgroup to appropriately recognize the insufficiency of relocatable classrooms when assessing the space sufficiency of a given school. We sincerely appreciate the continuance of discussion on this issue and are hopeful that the Workgroup will recommend relocatable classrooms be weighted as Category 2, regardless of age. We also question the funding incentives for local school systems to build schools with reduced total costs of ownership over a 30-year period. This may discourage local school systems from securing funding to upgrade systemics in accordance with industry standards or local policies and building codes, since the objective would be to outlast the useful life of the building-system. The focus of all school facilities should be on the delivery of a 21st century education to students.

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MACo agrees that the State's commitment to school construction funding needs to remain strong in order to best serve the modern needs of our schoolchildren, educators, and communities. We support the reference to increasing funding to at least $400 million annually.

State funding needs to recognize modern cost factors as Maryland achieves new environmental and energy standards, satisfies heightened needs for technology, ensures student safety, fulfills community resource needs, and integrates evolving teaching methods. Superficial comparisons between buildings created for the needs of yesterday versus those built for tomorrow only undermine the importance of the effort to recognize modern educational requirements and expectations. County governments share responsibility for financing K-12 school construction with the State and we all need effective formulas and guidelines in order to promote smart and effective funding for modern schools.

Sincerely,

Michael Sanderson
Executive Director
Maryland Association of Counties