

# **21<sup>st</sup> Century School Facilities Commission**

*Martin G. Knott, Jr., Chair*

## **Agenda**

**October 27, 2016**

**10:00 a.m.**

**House Office Building, Room 120**

**Annapolis, Maryland**



- 
- I. Call to Order and Chair's Opening Remarks**
- II. Role of State Agencies and Local Governments in Interagency Committee on School Construction (IAC) School Construction Project Review/Decision Process**
- Maryland Department of Planning
    - Secretary Wendi W. Peters
  - Department of General Services
    - Secretary Ellington Churchill, Jr.
  - Maryland State Department of Education
    - Kristy Michel, Deputy State Superintendent Finance and Administration
    - Barbara Bice, School Facilities Branch Chief
  - Local Education Agencies and County Governments
    - Kevin Kamenetz, County Executive, Baltimore County
    - Ray Barnes, Frederick County Public Schools
    - George Leah, Calvert County Public Schools
    - Chris Hauge, Dorchester County Public Schools
- III. Review of Existing and Alternative State Procurement and Construction Methods**
- David Lever, former Executive Director of the Interagency Committee on School Construction
  - Leisl Ashby, Wicomico County Public Schools
- IV. Public Testimony**
- V. Chair's Closing Remarks and Adjournment**

# Public School Enrollment Projections 2016 - 2025

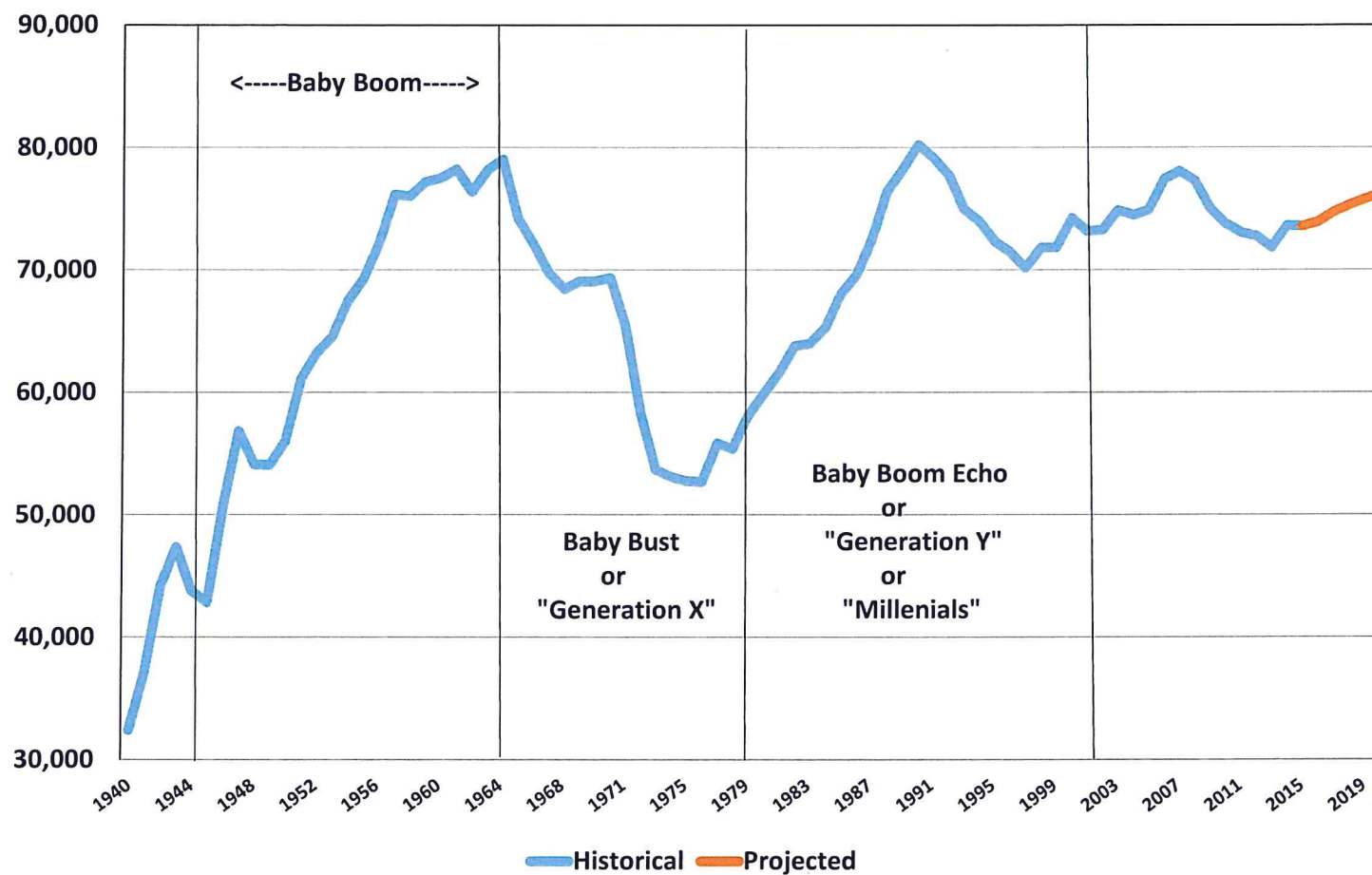
Alfred Sundara, AICP  
Maryland Department of Planning



# Enrollment Projections - Inputs

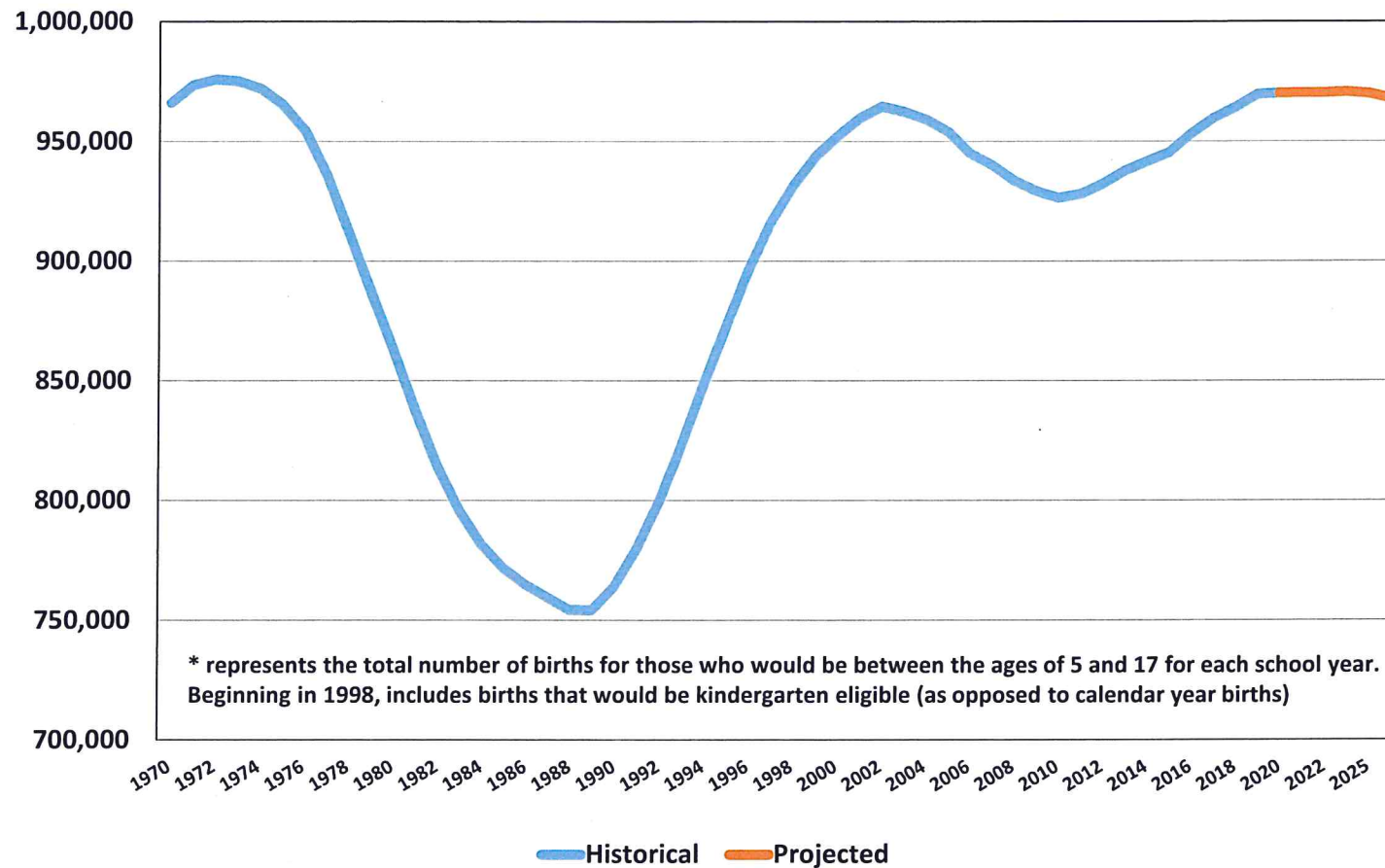
- Births
- Kindergarten to birth ratios
- 1<sup>st</sup>-grade to birth ratios
- Grade succession ratios

**Total Births in Maryland, Historical and Projected, 1940 - 2020**



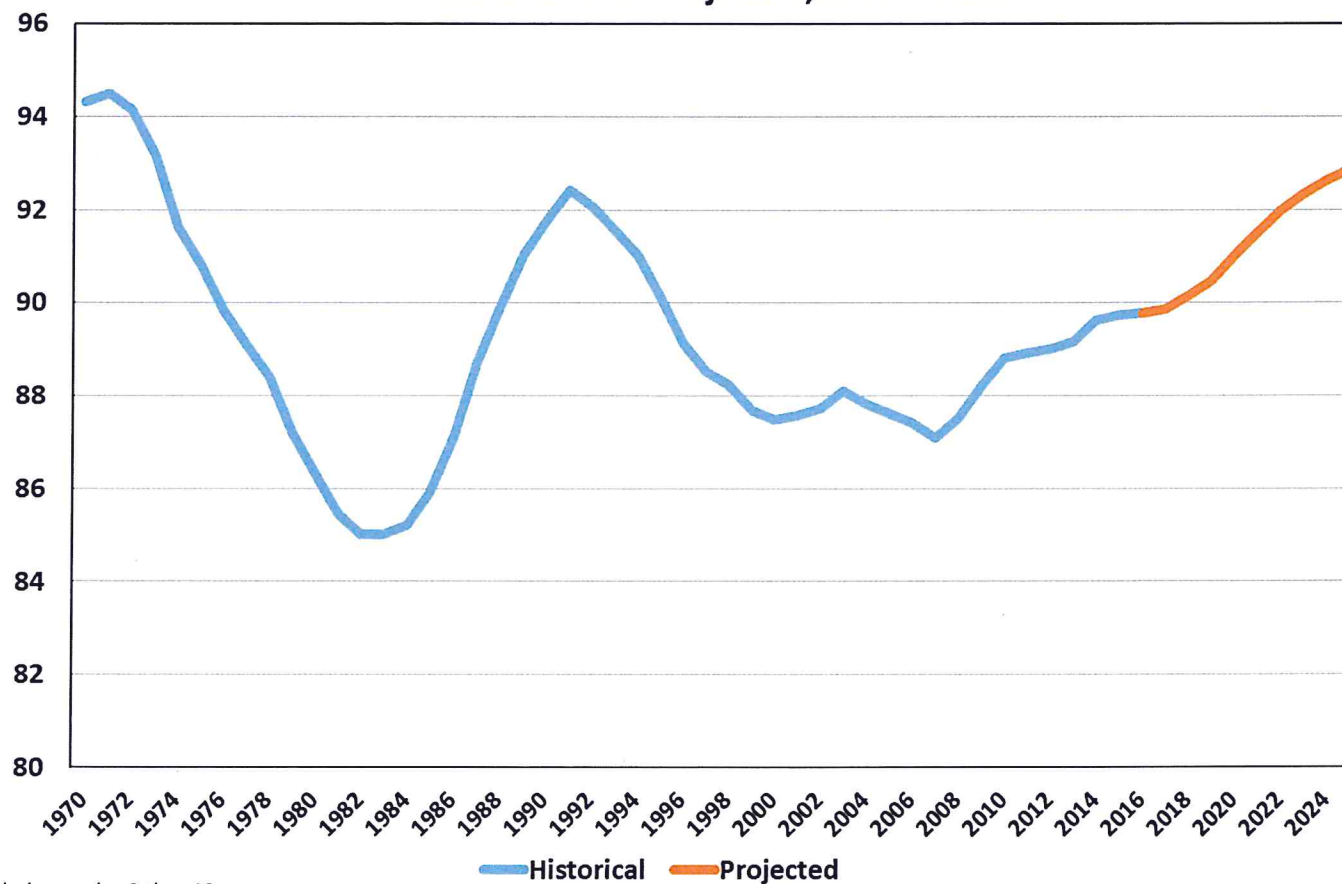
Source: Maryland Department of Health and Mental Hygiene (historical) and the Maryland Department of Planning (projections)

## Cumulative Births by School Year in Maryland Historical & Projected, 1970 - 2025 \*



Source: Maryland Department of Health & Mental Hygiene (historical) and the Maryland Department of Planning (projections)

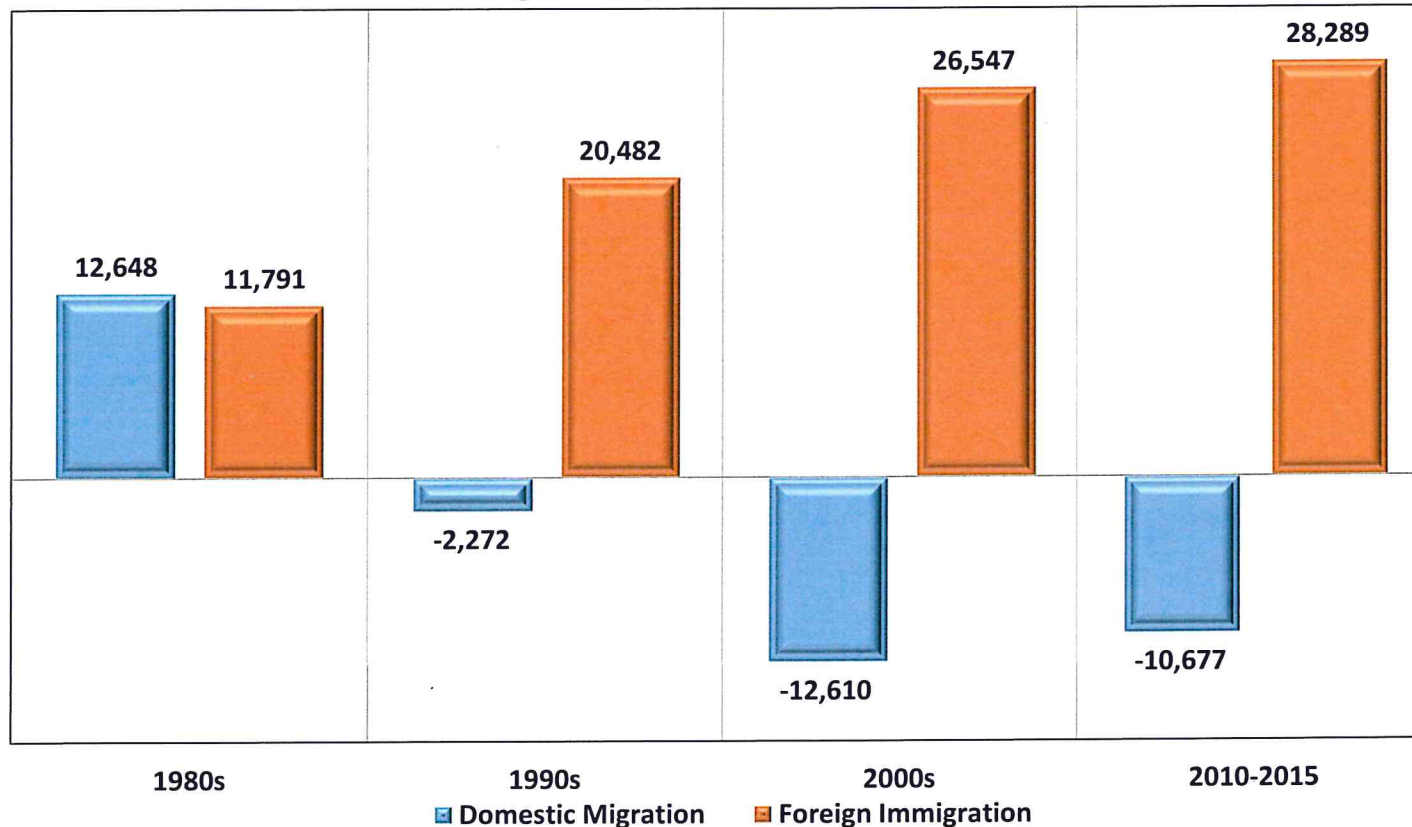
**Ratio of Total Enrollment to Cumulative Births in Maryland,  
Historical and Projected, 1970 - 2025**



\* includes grades 9 thru 12

Source: Maryland State Department of Education (historical) and the Maryland Department of Planning (projections)

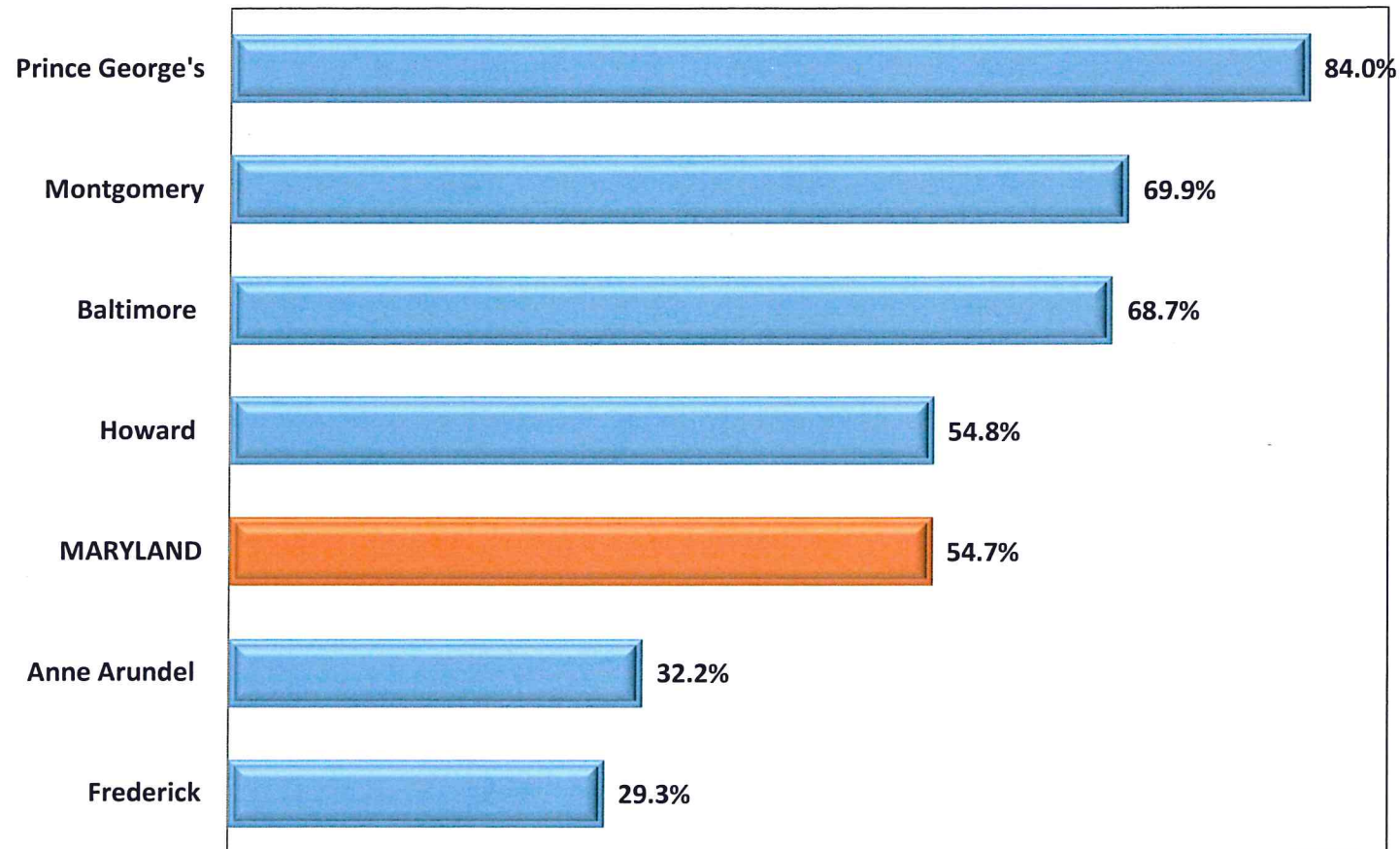
### Annualized Net Domestic Migration and Foreign Immigration into Maryland



Source: Maryland Department of Planning. Foreign immigration data is from the decennial census (1980s and 1990s) and the 2010 American Community Survey (2000s). Domestic migration is calculated as a residual for the 1980s to 2000s and for the 2010 to 2015 period is from the US. Census Bureau's components of population change as part of their annual population estimates for the April 1, 2010 to July 1, 2015 period.



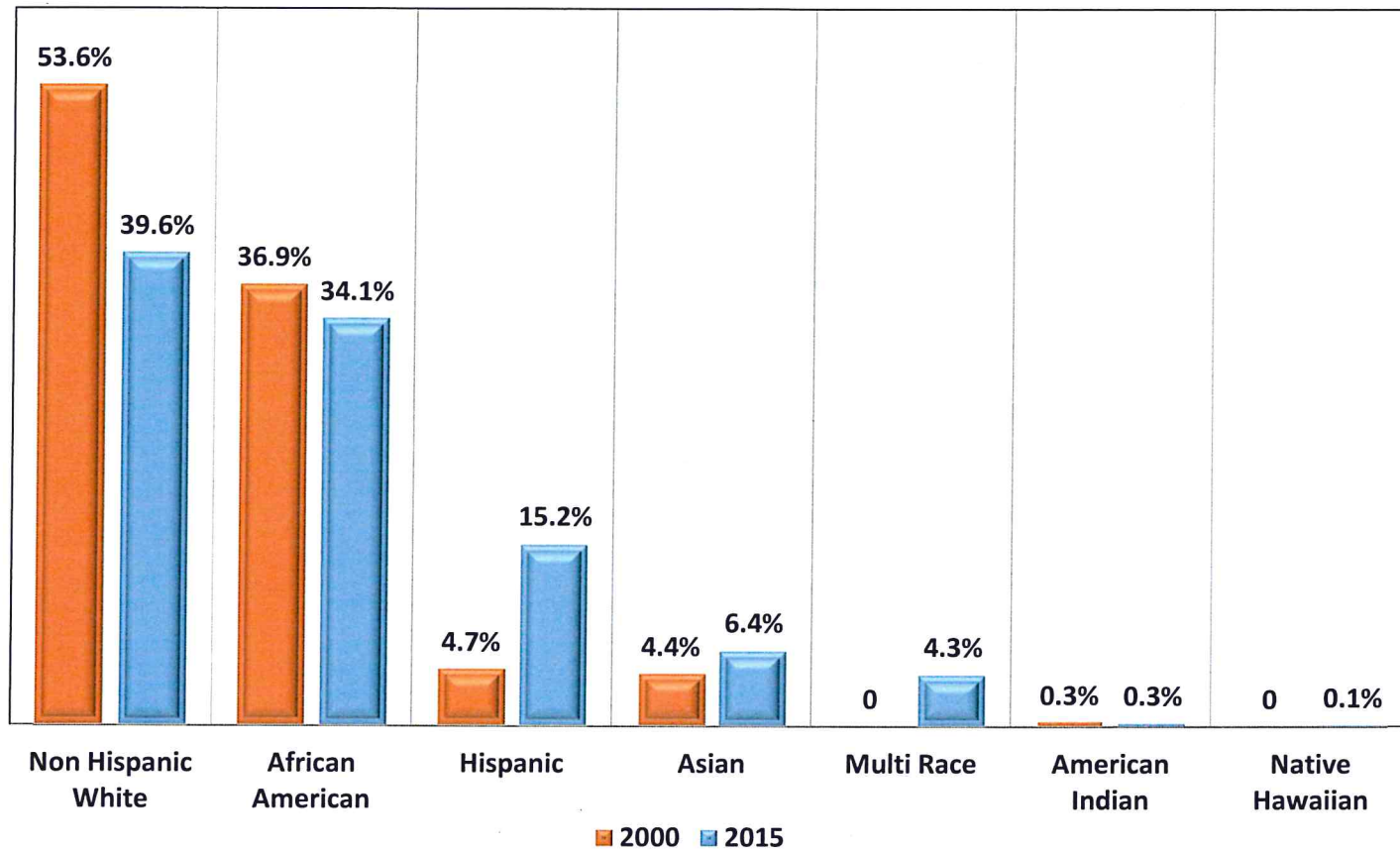
### Foreign Immigration as a Percent of Total Population Gain, 2000 - 2014



Source: Maryland Department of Planning, calculated using 2014 American Community Survey data.



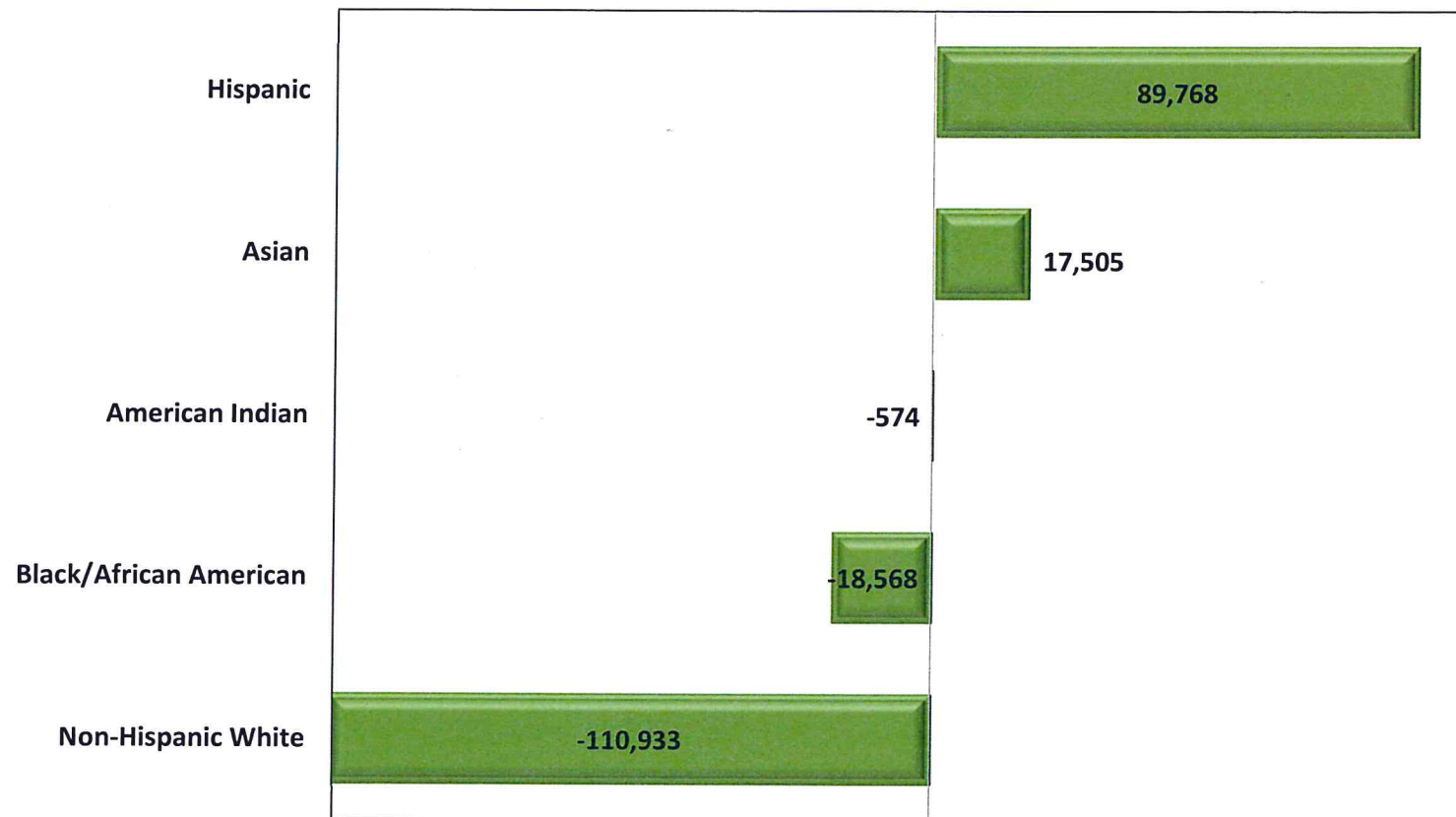
**Share of Total Public School Enrollment in Maryland by Race & Hispanic Origin, 2000 and 2015 \***



\* Multi-race and Native Hawaiian not available in 2000.

Source: Maryland Department of Planning from Maryland State Department of Education data.

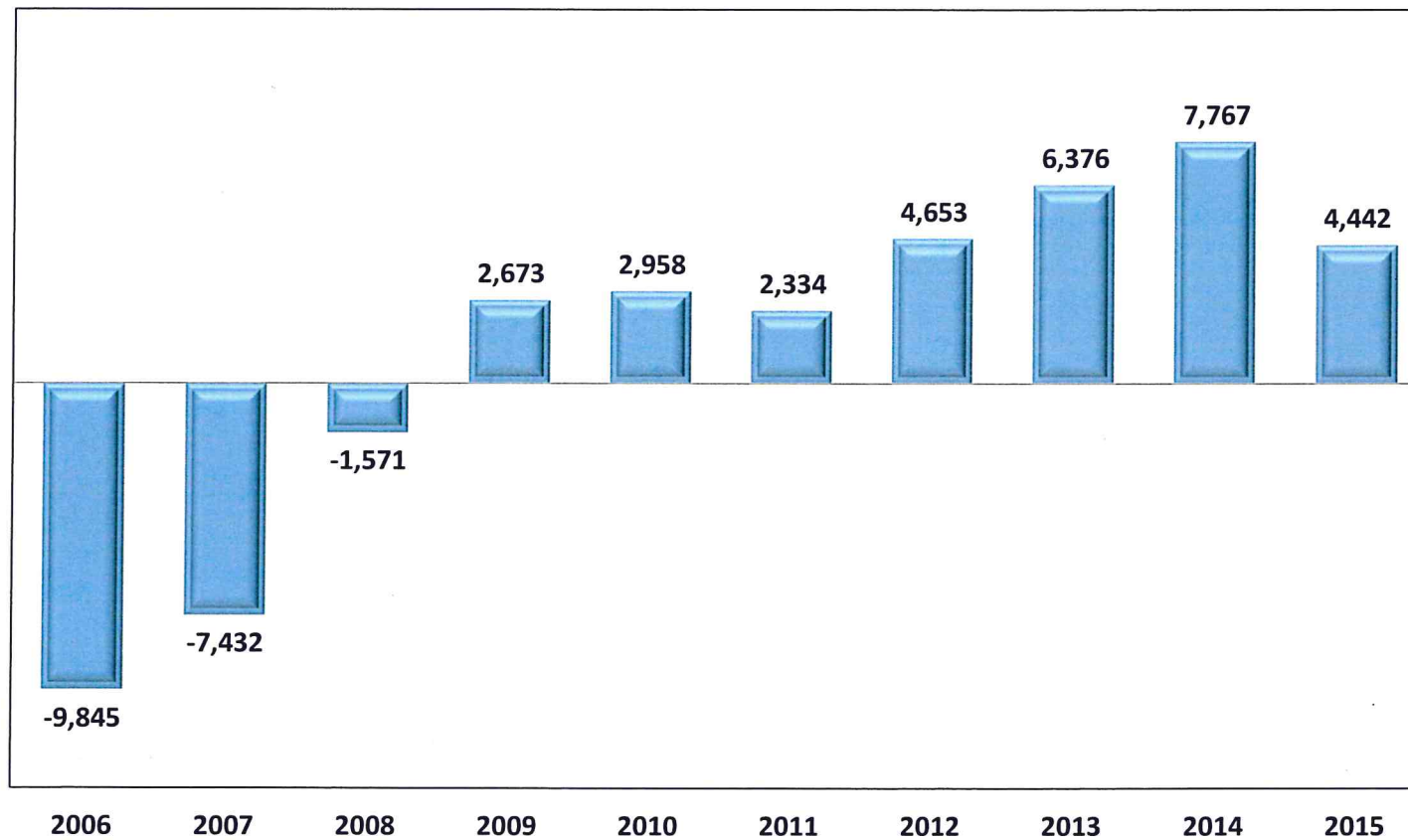
### Change in Total Public School Enrollment in Maryland by Race & Hispanic Origin, 2000 - 2015 \*



\* 2015 data also includes multi-race and Native Hawaiian students which cannot be directly compared to 2000 data. In 2015, there were 36,800 multi-race students and 1,198 Native Hawaiian students.

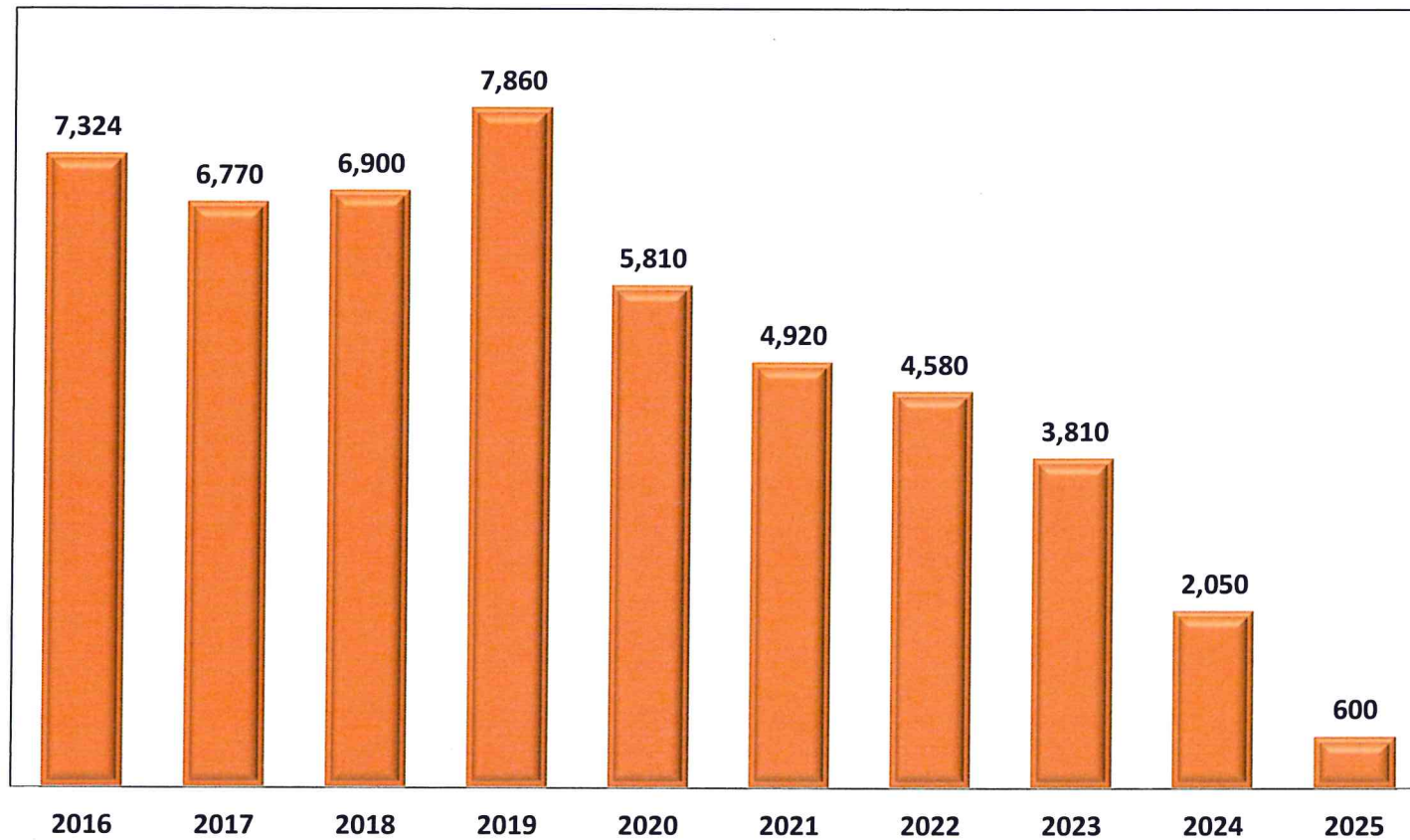
Source: Maryland Department of Planning, from Maryland State Department of Education data.

### Historical Annual Change in Total Public School Enrollment in Maryland, 2006 - 2015 \*



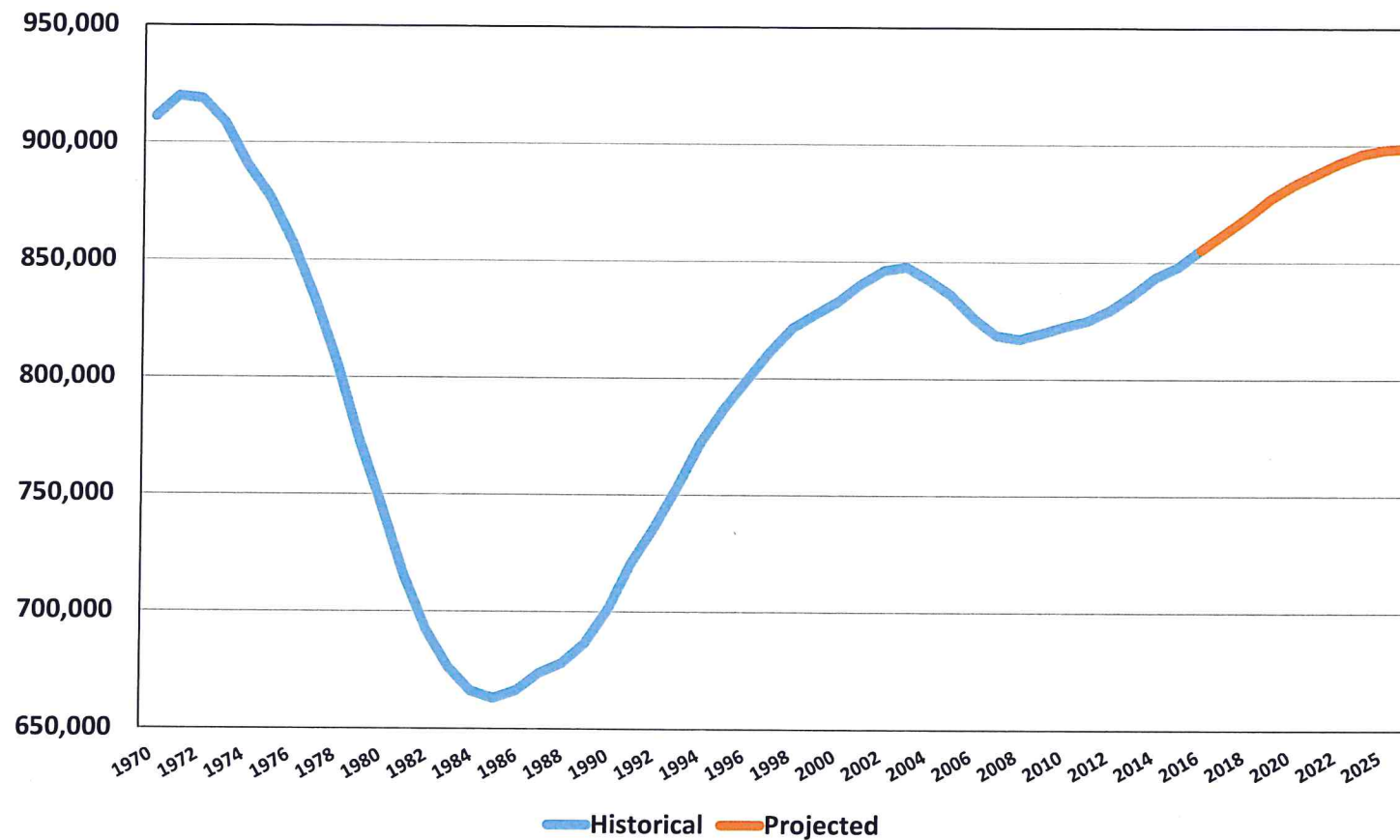
\* Grades K thru 12

**Projected Annual Change in Total Public School  
Enrollment in Maryland, 2016 - 2025 \***



\* Grades K thru 12

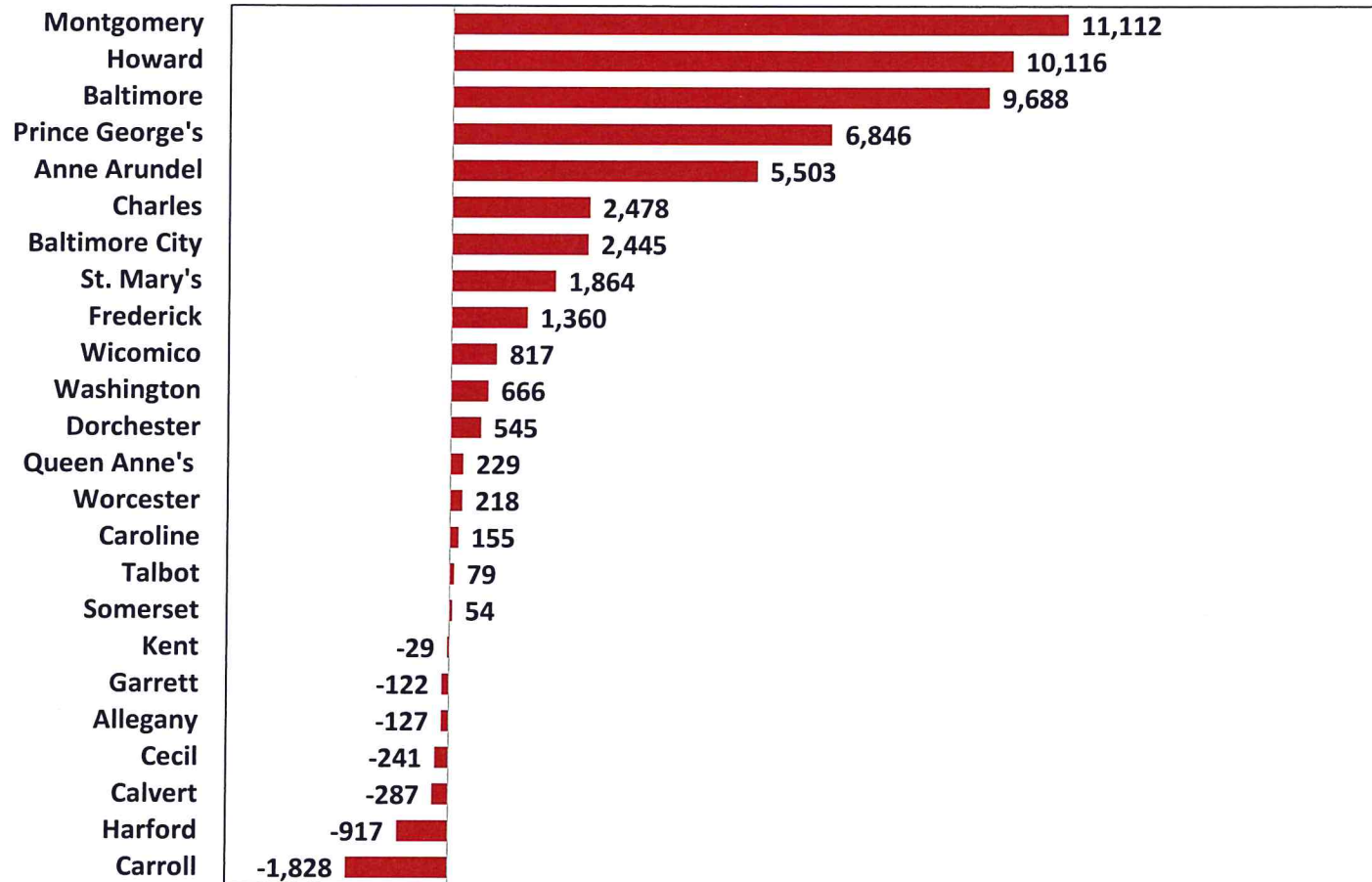
### Total Public School Enrollment in Maryland, Historical and Projected, 1970 - 2025 \*



\* Includes K thru 12

Source: Maryland State Department of Education (historical) and the Maryland Department of Planning (projections)

### Change in Public School Enrollment by Jurisdiction, 2015 - 2025



# Department of General Services

DGS Participation with the  
Inter-Agency Committee on Public School Construction  
and  
Local Education Agencies

21st Century School Facilities Commission  
October 27, 2016





# DGS – A Valuable Resource

- Public Schools & Community Colleges Team – 5 Members
  - Program Manager – Architect
  - Mechanical Engineering Reviewer/ Change Order Reviewer
  - Structural Engineering Reviewer/ Change Order Reviewer (started 10/26/16)
  - Administrator/ Regulatory Compliance Reviewer
  - Administrative Officer (shared)
- Design Team – 5 Members
  - Team Leader – Architect
  - Architectural Reviewer
  - Architectural Reviewer
  - Electrical Engineering Reviewer
  - Civil Engineering Reviewer (recruitment and hiring pending)

# DGS Adds Value

- Brings broad range of knowledge and experience.
  - Teams of professionals in architecture, engineering and administration
  - Fresh eyes, particularly for LEAs with limited internal capacity.
- Works collaboratively with LEAs and communicates state priorities.
- Leverages agency resources and relationships to benefit LEAs.
- Reviews and refines public school and community college projects continuously.

# DGS Positively Impacts School Construction

- Improves quality of Capital Improvement Program requests and recommends systemic renovation projects
- Improves quality and clarity of design documents
- Enhances regulatory compliance
- Provides ongoing technical advice
- Determines change order participation

# DGS Improves the Quality of CIP Requests Recommending Systemic Renovation Projects

- Primary activity in October, significant activity in November and December.
  - Meet with every LEA
  - Review CIP of every LEA – particular emphasis on systemic renovation projects
  - Review average of 275 requests; 180 are systemic renovation projects
  - Address clarity, comprehensiveness, coordination and cost; request improvements before determining eligibility
  - Recommend systemic renovation projects for funding eligibility

# DGS Improves the Quality and Clarity of Design Documents

- Ongoing, with the peak from December through May.
- Review for code compliance, drawing conflicts, areas of insufficient clarity, energy efficiency, and incorporation of previously-identified items
  - Improves quality of bid documents
  - Increases consistency
  - Reduce issues during bidding and construction

# DGS Improves the Quality and Clarity of Design Documents

- Average of 200 design reviews per year
  - 175 in-house; 25 major reviews out-sourced
- Review systemic renovation projects in-house
- Review small-to-medium renovations and addition projects in-house
- Coordinate external review of design development and construction document reviews for major projects

# Areas for Improvement in Design Review

- Strategically filling vacancies to increase internal capacity to conduct major project reviews
  - Reviewers in all major engineering disciplines in 2017.
- Developing a process - for review by the IAC - for “self-certification” of design reviews for local education agencies with significant internal capacity
  - DGS review of only a sample of projects.
- Reducing time from acceptance of a price proposal from an external reviewer to issuance of task approval
  - Part of DGS’s continuing process of procurement improvements.
- Striving to consistently meet 4-week goal for in-house reviews and 6 weeks for external reviews.



# DGS Enhances Regulatory Compliance

- All systemic renovations and design development and construction document submissions for major projects being reviewed for regulatory compliance, including
  - MBE analysis and goal setting
  - Prevailing wage
  - Solar energy analysis (major projects only)
  - Buy American Steel Act
  - Items ineligible for State construction funding (major projects only)
  - State construction sign

# DGS Provides Ongoing Technical Guidance

- Guidance to LEAs
  - submission requirements
  - review criteria
  - other areas of concern, particularly for new LEA staff
- Guidance enhanced by interactions with state agencies and community colleges on their projects
- Primary source among IAC member agencies for knowledge of engineering disciplines and technical aspects of construction

# DGS Determines Change Order Participation

- Ongoing process, with change order packages received almost weekly
- Review change orders to determine eligibility for state participation based on
  - Unforeseen conditions
  - Directives from code officials and authorities having jurisdiction
- Prepare and issue change order determinations

# Department of General Services

## Questions?

For more information contact

Fred D. Mason III, R.A., Program Manager

Public Schools & Community Colleges Construction Team

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Email: [fred.mason@maryland.gov](mailto:fred.mason@maryland.gov)





KEVIN KAMENETZ  
*County Executive*

October 27, 2016

Chairman Martin G. Knott, Jr.  
120 Lowe House Office Building  
6 Bladen Street  
Annapolis, MD 21401

**Re: Baltimore County Executive Kevin Kamenetz Remarks –  
21<sup>st</sup> Century School Facilities Commission**

Good Morning Chairman Martin Knott and Members of the 21<sup>st</sup> Century School Facilities Commission.

Thank you for the opportunity to share my thoughts regarding school construction spending, funding process and the need for off the shelf models as dictated by comparable factors shared by local education agencies (LEAs) throughout the State of Maryland.

School construction projects in Baltimore County as is the case in Baltimore City and other counties throughout this State comprise the bulk of the consolidated public improvement projects in the respective capital budgets. Specifically, in Baltimore County, school construction comprises more than half of the County's consolidated public improvement (CPI) projects and we, along with Baltimore City and Prince George's County, have the oldest school facilities in the State. This is why I requested and Baltimore County Council approved an unprecedented \$1.3 Billion "Schools For our Future" initiative 5 years ago, with the goal of eliminating overcrowding in schools, modernizing schools and installing central air conditioning in all County schools. We are halfway through and with the passage of the Baltimore County budget this past April, funding requests from the State and approval of the next two referenda, we will have funded 15 new schools and 11 additions, adding nearly 8,000 new classroom seats to accommodate future enrollment growth.

Baltimore County schools without air conditioning is reduced from 90 six years ago to 34 right now and 13 by next fall. And, those remaining 13 will be completed with renovated buildings or replacement elementary schools. All, while shuffling the deck to keep on schedule other sorely need infrastructure improvements that we are making throughout the County.

With the remaining time I have left, I would like to share my support for the following:

- Increasing the mandatory funding floor of \$250M;
- School construction block grant funding; and,
- Off the shelf school construction models.

### **Increasing the Mandatory Funding Floor of \$250M**

The time has long passed for an increase in the mandatory funding floor of \$250M adopted by the legislature as recommended by the Thornton Commission a decade ago. Cost of school construction projects have increased significantly due to the cost of labor and building materials alone. The new floor should account for these increased costs along with the age and needs of the facilities in accordance to the LEAs. On average, over the last 10 years, Baltimore County has received about \$28M in school construction funding from the State not including funding received from the Aging Schools Program (ASP) and Qualified Zone Academy Bonds (QZAB), limited in scope. Needs to modernize, eliminate overcrowding and install air conditioning in Baltimore County schools dictate State funding of at minimum \$40 million per year.

### **School Construction Block Grant Funding**

Currently, the State formula for school construction funding is a percentage of construction and, depending on the type of improvements, minimal formula driven contributions for site work and contingencies. The State does not contribute any funding for school construction projects' planning and design. School construction allocations for the Big 7 Counties as received from the State for construction only are as follows:

Anne Arundel, 83%

Baltimore City, 93%



Baltimore, 52%,

Harford, 63%,

Howard, 55%,

Montgomery County, 50%,

Prince Georges County, 63%

This State allocation is applied to the construction cost using specific formulas based on IAC project classifications. The classifications include, but are not limited to, systemic renovation, limited renovation and renovation. The formulas for calculating the Maximum State Construction Allocation are as follows:

- Systemic Renovation – Construction cost x State Allocation;
- Limited Renovation – Construction cost x State Allocation less any State funding for the school in the prior 15 years; and,
- Renovation – State approved enrollment x building cost/sf x State Allocation plus 5% site work plus 2.5% contingency less any State funding for the school in the prior 15 years.

**In Baltimore County, we have found that on average this funding methodology leads to the State contributing one-third of the total project costs related to State capital budget requests with the County contributing the remaining two-thirds.**

An additional factor impacting County funding levels is IAC policy 102.6, State Maximum Construction Allocation, Section B(3) which restricts the State participation to the cost share established at the time of the first-time funding approval.

**In the event that bids come in higher than the funding formula approved by the State, the County is responsible for all increased cost.**

Further complicating this issue is the cost per square footage used by the IAC in calculating the Maximum State Construction Allocation. The cost per square footage is often less than the current market conditions. Dr. David Lever shared this information with the MACo Legislative Committee on February 17, 2016.

Specifically, he noted that actual construction costs for 2015 were \$38/sf higher than the IAC factor used.



## ***Recommendation***

State School Construction Funds should be distributed to the counties in the form of a block grant. The funding distribution formula can be developed using specific, equitable guidelines and local jurisdictions will be able to use up to their current maximum State percentage for total project costs. Projects can be required to continue to adhere to IAC policies and could be audited for compliance.

## ***Benefits***

- Eliminates formula driven State allocations based on project type;
- Eliminates cost per square foot estimates that are not consistent with market conditions;
- Local jurisdiction will still be obligated to follow State school construction guidelines;
- IAC staff time designated for review of construction documents will be reduced; and,
- Local jurisdictions will have greater flexibility in adjusting the capital program to meet market conditions.

## **Off the Shelf School Construction Models**

Off the shelf school construction models could benefit efforts to provide flexibility to LEAs, allowing projects to be begin and end sooner and potentially reduce cost. If off the shelf models were developed comparable to what LEAs know is a necessity for their school facilities, bureaucratic micro-managing of school construction projects would be eliminated all while maintaining IAC oversight and enforcement authority relative to guidelines as established. LEAs would essentially maintain State control by using IAC approved models.

Thank you for this opportunity.

Respectfully submitted,



Kevin Kamenetz  
County Executive

## Comments to the 21<sup>st</sup> Century School Commission: Oct 27, 2016

Ray Barnes, Chief Operating Officer

Frederick County Public Schools

My name is Ray Barnes, I am the Chief Operating Officer for the Frederick County Public Schools. I was asked to present a few comments about the mission of the IAC/PSCP and its relation to the FCPS's school construction program.

I have a 20+ year history of working with the IAC and the staff of the Public School Construction Program and I want to say the staff at the PSCP is first rate. They are dedicated and professional and I have nothing but positive comments to say about working together with them. My comments are more directed at the mission they have been given and whether it should be re-purposed or adjusted in the future.

I offer my remarks looking at the issue from a 50,000 foot level. If you go back and look at the origins of the State IAC in 1971, they were given a very specific mission, and that mission was to *achieve equity among school facilities throughout the state*. One way the State has accomplished this was establish a funding program that standardized the design and construction process across the state. Many of the procedures that are now in place date back from those days. In order to qualify for State funding, the state must grant planning approval, approve sites, approve educational specifications, school designs, bidding procedures, contracts, change orders and so on. A major focus of the State program became and is still process management. The LEAs are follow an established schedule and comply with key design and procurement rules in order to receive state funds. In this respect the PSCP has been

very successful providing a routine that has assisted in the meeting the mission outlined in the original legislation. It has established and standardized a review process across the state, and for this reason the IAC and PSCP has certainly become a major influence on the design and construction of new schools.

In my opinion, there is little incentive in the current process to attempt any dramatic changes in design or school construction methodologies that might reduce school construction costs. Each year, we basically take our past models and tweak or fine tune them to adjust to the changes required by new regulations and other instructional of code related issues. And this is important since this approach provides the most likelihood the project will pass through the review process with minimal delay. At the local level, we are schedule driven. We have overcrowded schools, schools in need of renovation, and demands by our local elected officials and community to fix things ASAP. Engaging in experiments or studies, or dramatic changes in design or construction methods that are going to take more time to prepare and process through the state procedures is something we would find difficult to consider.

A concentration on research and development would, however, be a useful focus for a State Agency like the Public School Construction Program. They could engage in research on new technologies in HVAC systems, less expensive approaches to construction methods, trending data on the impact of instructional technology on classroom design, options to the LEEDS program for meeting energy performance requirement, etc. In order to do this they would need to repurpose their mission from what it is now, *provide equity among school facilities throughout the State* to include something like: *Research emerging trends in design and construction to provide cost effective schools for Maryland students.*

Of course the repurposing of the PSCP to do more research and development might need to be accompanied by eliminating some of the oversight functions PSCP now performs. This might include eliminating some of the plan review, procurement or contract review functions. But this may require different types of partnerships between the State and LEA's. There are many functions that state performs that could be performed locally. New partnerships with the LEA's in this regard should be explored. I think we need to look carefully at how many budget and project review functions the PSCP currently performs and determine if they are still a priority for the State to perform or could be delegated to the LEA's, or some of the LEA's.

Another partnership opportunity with LEA's may be the establishment of pilot projects that seek to evaluate different approaches to design and construction. Perhaps using an enhanced State funding formula for such projects, and perhaps an expedited review process, a pilot program could be established whose outcome would benefit not only one LEA, but LEA's across the state. For instance, I do not object to further consideration of a pre-engineered building, but it would need to meet current educational specification requirements and be meet reasonable life cycle cost standards for a school that will be in use for 40-60 years. What will this look like? Would it save money? I don't know, but it would be a big leap for to take this on locally without a partnership with the State.

So in conclusion, the State needs to make some decisions on what its mission for the Public School Construction Program should be. The current program does a very good job at managing the State's funds by carefully scrutinizing the design and construction of public school projects through a lengthy and multi layered process to make sure state regulations and procedures are complied with. The result has been some well-designed schools following traditional models. However, the costs for these schools keep going up.

I think to address the problem of reducing school construction costs and finding new directions in building designs, the State will need to take a deep dive into research and development, providing proven strategies and alternatives for the LEA's to reduce costs in their designs, provide opportunities, to engage in pilot projects that will benefit all the LEA's, and commit less time to regulatory compliance and detailed project reviews.

I will now pass this on to.....

October 27, 2016

21<sup>st</sup> Century Schools Commission Testimony  
House Office Building, Rm 120  
Annapolis, Md.

George R. Leah, Jr.  
Director of School Facilities  
Calvert County Public Schools

Ray Barnes, Chief Operating Officer, Frederick County Public Schools  
Chris Hauge, School Facility Engineer, Dorchester County Public Schools  
George Leah, Jr., Director of School Construction, Calvert County Public Schools

Mr. Barnes and I have been before you previously. We spoke of the role the LEA Facility Planners have in the administration of our county's school infrastructure. Today we will speak more in terms of the LEA interaction with the IAC and the departments within that agency. It may be helpful to reference our testimony presented during the July 21<sup>st</sup> commission meeting as we will build from that discussion.

Throughout today's session you will hear about:

- Alternative Financing and Procurement
- Construction Delivery Methods
- Departments within the IAC and IAC interaction with the LEA

These items are part of a tool box of methods and information each LEA can utilize in the planning and development of a project. All of this is useful in containing the costs of a project.

So how does Alternative Financing, Procurement, Construction Delivery and the various agency interactions impact our ability to manage costs.

Let us assume a bid day hard cost of \$300/sf for a new school. What affect will...

- Alternative Financing: How will this affect the \$300/sf bid day number? It won't. This is more about getting a project delivered quicker. Most likely the traditional local and state participation is in question and to make the facility available now we look at an avenue to get us there. What this does is possibly lessen the traditional local and state funding commitment today. The end cost of the venture depends on the terms of the public/private agreement. It also can smooth the impact on the local government's debt affordability projection. But it does not affect the bid day cost.
- Procurement: How will this affect the \$300/sf bid day cost? It did. The state has imposed mandates and regulations affecting how a public school project is to be procured. (We offer wage scale and MBE for consideration.) These mandates and regulations have imposed increases in labor, material costs and risk. General condition costs are higher due to imposed compliance and record keeping obligations. The LEAs no longer have options here.
- Construction Delivery Methods: How will this affect the \$300/sf bid day number? It will not affect the state funding level. This is everything to do with the LEA, the comfort level of the LEA's in house management and organization. This is a soft cost which is the LEA's responsibility. This cost can be considered as a cost of construction or as an administrative cost.
- Agencies and the LEAs: For Calvert County the interaction with the IAC and the related departments has been productive. The pros and cons of construction delivery methods, alternative financing, best practices, life cycling, materials and equipment and the guidelines associated with instructional delivery and curriculum were part of face to face LEA dialog at regularly



scheduled facility planner meetings. Lessons learned from these meetings helped many of us avoid pitfalls or make better decisions while planning. Recently the IAC issued a memo relaxing the need to hard wire classrooms in light of recent technological advances in the IT industry (wi fi). How did that happen? Face to face dialog. Result...potential hard cost savings...potential life cycle savings for all of the LEAs. Definite cost savings.

As with any corporation or organization the need to visit the business model is key to the success of the business and those the business caters to. Why would this be any different for a government agency? First, as a tax payer, someone needs to mind the store. Second, this state enjoys a first class educational system. How is the instructional information between the LEAs and the state to be disseminated to the Facility Planners? An e-mail?

The complexities of our project submissions are a result of regulations. Building codes, LEED, sustainability, energy compliance to name a few have not only increased the hard and soft costs of a project but have increased the review periods. This review does not increase the bid day cost but certainly impacts the project schedule. Mr. Hauge and Mr. Barnes will further this discussion.

But if I may, I would ask the commission to refocus on the cost of construction. Take the \$300/sf build number and reflect on what the contents are and why the contents are in it. Look at those same contents and do a side by side private vs public sector

comparison. Are they the same? What would make them the same?

*Post testimony reflection: Secretary Peters could not have spoken of the roll of MDP in the public school arena more eloquently. Calvert has been wrestling with a declining enrollment for a number of years. I was unable to get a handle on what forces outside of a county induced reduction in commerce and housing were causing such a rapid decrease in enrollment. MDP prepared a 5 or 6 slide presentation which explained state wide issues related to the Federal Government sequestration period and regional beltway workforce dynamics. I used this information in presentations to both our BOE and County Commissioners.*

*Also, as with any good committee, various avenues of interest come to the floor for debate. Looking at the IAC and the related agencies is certainly healthy but will this have a major impact on school construction cost containment? Where is the value of collective collaboration between state agency and local educational agency in the discussion? I hear of redundancy...where? There will always be unrest between the rigors of government regulation and the imposition we often feel towards local administration. Alternative methodologies and a tighter agency process is always welcome. The LEAs have put a great deal of attention into cost containment. This is what some of us felt the thrust of the commission was to be. This is what would be of considerable benefit to the LEAs moving forward in what appears to be a lean fiscal forecast.*

## Introduction

Good morning Chairperson Knott and Members of the Commission. My name is Chris Hauge. Thank you for the opportunity to be here today.

As School Facilities Engineer for Dorchester County Public Schools my team and I oversee all facilities planning, approvals, procurements, construction, operations and maintenance related activities in the district. We face the typical challenges of aging infrastructure, facilities with significant educational inadequacies, changing demographics related to school capacities and capabilities, facilities maintenance, deferred maintenance, the changing role of facilities operations and most important for today's conversation capital renewal. At the same time we face fiscal limitations and economic conditions locally that leave no choice but to be thrifty, prudent and shrewd in every decision we make in the lifecycle of our facilities.

## Purpose

We are all here today to share our thoughts and reflections on what we hope the future will hold for the structure and process of school construction, a process that generally has served the state well over the last 40 plus years. One of the core principals of our process is to provide an opportunity for equity in facilities across the state that meet specific local needs while adhering to widely recognized standards. This is a theme we should improve upon moving forwards to ensure that all educators, students and communities have the appropriate platform on which to perform. While great strides have been made to meet the needs of all communities, large disparities remain and in some respects are increasing. While large suburban and metropolitan areas maybe thriving, with the attendant benefit to local funding opportunities, large parts of our state have never recovered from multiple previous economic downturns. This makes the undertaking of even small improvements monumental in our most challenged areas of the state. This is what is increasing our inequity gap in school facilities in some cases. Like in the classroom, some of us are rapidly moving forward while some of us slowly and quietly fall further behind. This is a significant threat to the future success of All of Maryland. We also recognize that all of our partners in the process, the individuals involved, are highly professional and focused on ensuring the best interests of students, local communities and public resources.

## Process

With respect to "How" the process works for all of the different types of work needed to maintain and improve our portfolios, there is much that has worked well for a long time. That for decades we have addressed sensitive critical issues locally (politics), before entering the State arena is foundational to our track record of success. It only lends to the transparency and trust that are essential in this work. Minimizing exposure to politics as we move from local conversations into the larger state process is a must.

## Successes

Under the guiding leadership and wisdom of both previous Executive Directors and their teams we have helped lead the nation relative to innovations in school facilities. This has occurred from a willingness at all levels to take prudent risks to explore new technologies, alternative project delivery vehicles, alternative or unconventional funding mechanisms and to quickly disseminate best practices to allow for positive and rapid change. This is change that supports better teacher, student and community performance. This is change that provides real return on the investment in annual operating budgets and minimizing exposure to future bonded indebtedness. It creates opportunity to further leverage limited local and state resources to improve our facilities. The reality that “change” is the new normal in the facilities world and our ability to change, will in no small measure be a metric to our continued success in the future.

### Challenges and Opportunities to Improve

There are both challenges and opportunities to improve the system we currently have to meet the reality of our changing world. In many respects; as in our personal lives, our time is our greatest resource. We need to look for the best opportunities to efficiently use time in the state process. The more efficient we are, the faster we can implement improvements, initiate critical economic activity locally and as importantly, not let committed state resources languish obligated but unused any longer than what is absolutely required.

We can make better use of our time in the funding application process, particularly once the IAC level process is completed. We lose months of opportunity each year as funding approvals are slowly revealed through the winter and spring each year, to then face the very real challenge to hit critical document submission deadlines the following summer and fall.

For large projects this is problematic as it creates opportunities for misses, busts and errors in documents and due diligence that will only cost us later in the process. For smaller projects it is the difference from being able to accomplish “just in time delivery” to being a “day late and a dollar short” in either critical scope delivery or avoiding turbulent market conditions. Our ability to be agile in both the approval and implementation phases of our work is what is in the public best interest, locally and across the state.

Relative to design review and approvals, there is a tremendous opportunity to gain time back. Yes it is important to have checks and balances in this regard, but the current system is little more than a pass through and adds no discernable value to our finished products. This is because of the volume of work and limited capacity to perform this task. This is not an indictment of the professionals who are involved but rather a recognition that these resources might be better leveraged.

The larger funding formula, associated regulations and state/local cost shares are worth looking at as well. It is at times challenging to understand when you look from one jurisdiction to another, at least when you are one of the poorest jurisdictions in the state. Access or rather inaccessibility of state contingency funds creates a pragmatic reality that all contingency costs should be planned for locally. Given this condition, all state contingency funds should simply be applied to project funding above and beyond conventional funds.

We have also collectively made decisions without fully understanding the impact to cost. Unfunded political mandates like prevailing wage rates, High Performance Certification Costs, Costs to comply with energy codes, Emergency Generators and a well-intended but concerning MBE program are areas that add real, significant first and long term costs. The point is not whether these types of items are good or bad, rather it is that when costs, funded or unfunded escalate, it only adds to the local burden. This is an impediment to building partnerships with our local funding authorities which only adds to the inertia of implementing improvements.

The last point that I would like to make is that LEA's need to be encouraged to innovate in this environment of perpetual change. Over the last 10 years access to local capital has been severely challenged and limited at best. Because in Dorchester we live so close to our money, we have no choice but to be creative in both funding opportunities and delivery methods.

Grant opportunities like QZAB have been critical in keeping our aging facilities viable. These opportunities should be expanded. Even when small funding opportunities like the Aged School Program are withheld, it has a real, significant impact locally.

We should allow for alternative delivery strategies like design-build in situations like the QZAB program that don't penalize LEA's for being creative. If we can partner with a contractor to absorb the cost of design delivery; which many are fully capable of doing, this should be an eligible cost inside the contract. This creativity also puts full ownership of the design in the contractor's hands, eliminating an avenue for later cost escalation and responsibility avoidance.

Project delivery methods like Construction Management at Risk, Design Build and Performance Contracting have given us tools to increase transparency and value. It also facilitates agility to leverage and maximize both state and local funds, while minimizing unnecessary spending and reducing delivery time. Locally we are now looking at how we can build on this innovation with local, long term, renewable energy projects. By tying long term, low cost renewable energy to our capital programs, we have the potential to create alternative funding streams to supplement conventional programs. This is an example of the type of innovation and change that our limitations demand. We have many tools in our toolbox. We need more.

In closing, we have an opportunity to improve our professional process for the world we live in today and tomorrow. Change is a reality that needs to be embraced for the innovation and opportunity it will bring us, if we can only see it. At the same time, the principals that have supported over 4 decades of success should not be discounted.

Thank you

# BOARD OF EDUCATION OF WICOMICO COUNTY



Donna C. Hanlin, Ed.D.  
*Superintendent of Schools*

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October 27, 2016

Martin G. Knott, Jr.  
Chairman, 21<sup>st</sup> Century School Facilities Commission  
c/o Department of Legislative Services  
Legislative Services Building  
90 State Circle  
Annapolis, MD 21401

RE: Construction Management at Risk Delivery Method

Chairman Knott and Commission Members:

I'm here today to discuss some highlights of how we choose to deliver construction projects for our public school projects. For example, Wicomico County Public Schools (WCPS) has been utilizing the Construction Management at Risk (CMr) project delivery method for the past eight (8) years for various projects. Later today, our CMr will be receiving bids for multiple trade contracts for our seventh (7<sup>th</sup>) CMr project, a replacement Pre-K to 2<sup>nd</sup> grade elementary school. We are anxious given the regional cost increases that the eastern shore has been experiencing over the past few months, with over \$100 million of public projects on the shore alone. Unfortunately, to keep this project moving forward we had to make some very difficult life cycle cost decisions and establish even more alternates to stay within the overall project budget. Thankfully, within the framework of the CMr process we were also able to develop some creative solutions so that we could off-set or balance out some of those life cycle cost decisions and maintain critically needed program square footage.

It's important to note that we aren't utilizing CMr exclusively, we also use Job Order Contracting (JOC) and General Contracting (GC), sometimes a combination of both. The decision to use a particular construction delivery method is determined on a project by project basis. Although we are a larger LEA for the eastern shore, we are considered a smaller LEA across the State. We have 24 school buildings that serve on average approximately 14,500 students within 2,200,000 sq.ft. of space (schools only).

Our planning & construction division is trim, with myself, a facility planner, planning coordinator and in-house construction managers with a combined one-hundred five (105) years of experience. All of us have private sector experience within our particular area of expertise. This allows us to address several smaller scale projects with in-house staff. Our construction managers implement annually on average \$20 million worth of construction projects made possible from various funding sources. As I explained to

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our new Superintendent back in July, we are small but we are mighty. With that being said, it is important that we are focused on the most optimal utilization of the limited staff that we have which is often a factor when making a decision regarding project delivery, both in size and timing. In addition, with our large back-log of projects and major capital projects becoming more spread out, it is important that we continue to be good stewards of limited tax dollars in the most economical way possible.

Back in 2007 after three (3) years of intensive planning efforts and the completion of a very detailed, multiple option feasibility study, the first phase of a joint county and state approved "Bennett Complex" plan was underway with the design of a replacement James M. Bennett High School (JMB). The overall project budget was approximately \$90 million and the largest project ever for WCPS which included three major phases. Phase 1, a replacement high school, phase 2, additions and renovation of an existing detached auditorium and phase 3, athletic fields associated with the new high school. Phase 1 started in 2008 and Phase 3 was recently completed at the beginning of this school year. Phase 1 was the most complex as it required the new high school to be constructed directly behind the existing high school, while keeping the existing high school, middle school and detached auditorium fully operational with limited site access.

WCPS weighed several different options for this challenging project. Our early thinking was either Construction Management Agency (CMA) or a more traditional GC approach. However, due to dissatisfaction with previous projects regarding these two methods and at the time, the recent availability of CMr as part of the Maryland Public School Facilities Act of 2004 we started looking more closely at CMr. The initial appeal of CMr was that it combined the project management expertise of CMA during pre-construction with the construction risk typically held by the GC during construction. Given the scale of the JMB project at 247,000 sq.ft., the higher combined project costs, the complicated phasing and sequencing, very tight site conditions and limited availability of staff due to overall work load, we decided it was worth investigating. We researched the pros and cons, looked at what other states and various public entities had done to implement CMr including lessons learned. Once our information gathering was complete, we began discussing CMr as a potential option with the School Building Commission (SBC). In Wicomico, decisions regarding major construction projects are vetted through the SBC, a county commission with representatives from the Board of Education, County Council and County Executive's Office and private citizens who have professional experience in construction, facilities management, engineering, architecture or a related field.

The decision was made to further pursue the use of CMr for the complex, multi-phased JMB project. Next steps included work sessions with the Board of Education, briefing them regarding specific qualification and proposal requirements based upon the recommendations and oversight of the SBC as well as a pros & cons comparison of previously utilized project delivery methods for frame of reference. Because we were one of the early LEA's who implemented this contracting method, we coordinated in advance with the IAC to ensure that we were meeting the intent and requirements of COMAR in advance of the written notification requirements, including advance review of the solicitation documents. In addition, we specifically sought Board approval to utilize CMr for the JMB project.

We utilize a two-step competitive negotiation selection process initiated by issuing a public notice. Part one includes the Request for Qualifications (RFQ), once Statements of Qualifications (SOQ) are accepted they are evaluated by a Qualification Evaluation Committee (QEC), who then recommends a short-list of the most qualified firms. Firms are then invited to proceed into the second step, the Request for Proposal (RFP) phase of the selection process. Once detailed proposal packages are received they are reviewed by a Construction Manager Selection Committee (CMSC), part of which includes a separate interview presentation which requires the presence of the CMr teams' proposed staff members. A fee proposal is also required. Once the top ranked firm is determined, a recommendation is made to the Superintendent to enter into negotiations. Negotiations include finalizing the scope, schedule,

contingencies and general conditions including any clarifications of responsibilities or risk along with a fixed fee for both pre-construction and construction phase services. A recommendation is then made to the Board to accept the final proposal and issue a Notice to Proceed (NTP) including finalizing the terms and conditions of a formal contract.

The bidding phase which is part of the pre-construction services includes confirmation of budget, development of bid packages, competitively bidding the trade packages, evaluating subcontractor qualifications, separate scope reviews and preparing a Guarantee Maximum Price (GMP) proposal. Once the GMP is approved a contract amendment is issued to incorporate the GMP. The CMr holds all trade contracts including bonds and insurances. All aspects of subcontractor performance is the responsibility of the CMr including schedule, quality, financial and safety aspects.

We've found several advantages in utilizing CMr. Overall, it provides the opportunity for a team approach that includes the Owner, Architects, Engineers and CM working more cooperatively with the CMr providing oversight to keep everyone on track for both schedule and budget. It allows for better coordination between the Architect and CMr by extending the already improved coordination process during design with Building Information Modeling (BIM) for clash detection. This more collaborative effort minimizes RFI's and Change Orders during construction. On the close-out end, we've been able to be more resourceful by shifting from the multiple copies of operation and maintenance manual (O&M) binders to a database so that our Maintenance staff can more efficiently access the information they need in the field and update any associated changes. The project is an open book regarding accounting and the Architect and Owner continually review the project costs and any cost savings are returned to the Owner at project completion. Project management is improved, with the CMr's increased financial responsibility there is a strong incentive for the CMr to staff the project appropriately for success and allows for flexibility so that services can be tailored to the unique needs of the Owner.

Thus far, the advantages of CMr have outweighed the disadvantages. Again, CMr is not the only project delivery tool that we use, it depends on availability of staff, scope of work, available funding and schedule. Our goal is to always deliver the highest quality product by leveraging limited funding while balancing our staff resources. Having options is important as we are continually faced with additional project challenges. For example, we are currently expanding our CMr experience with an \$18 million systemic renovation project by combining it with Design-Build (D-B) because it currently meets the complex multiple funding sources of that particular project with a tight schedule in the most economical way possible.

Thank you for the opportunity to be here today and we appreciate your efforts to improve the public school construction process in the State of Maryland.

Sincerely,



Leisl J.F. Ashby, AIA, CCS, NCARB  
Director of Facility Services | Planning & Construction



October 26, 2016

Martin G. Knott  
Chair, 21<sup>st</sup> Century School Facility Commission  
Department of Legislative Services  
90 State Circle  
Annapolis, MD 21401

Dear Chairman Knott and Members of the Commission:

Gordian respectfully submits its support for cooperative purchasing agreements as a successful and established alternative procurement method for school construction and maintenance in Maryland.

Gordian is comprised of a team of national experts on construction pricing and efficient procurement methods. We invented a suite of alternative procurement methods that are currently used by a broad range of public entities. Our clients include federal agencies, state and local governments, K-12 educational institutions, colleges and universities, and many others across the country, including several public entities in Maryland. Our experience and expertise uniquely qualify us to serve as a resource on procurement-related issues, and we take this opportunity to voice our support for the 21<sup>st</sup> Century School Facilities Commission as it seeks information about procurement and construction methods currently used in Maryland and works to identify efficiencies and cost-saving measures for school construction and maintenance.

State and local governments across the nation have successfully used cooperative purchasing agreements for decades. By leveraging national purchasing power, this vital procurement method allows government entities to purchase a broad range of goods and services, including construction services, at significantly reduced costs. This is particularly true for smaller jurisdictions which lack the same purchasing power as a larger entity.

In addition to cost savings, cooperatively purchased construction can help local jurisdictions reduce administrative burdens and speed project delivery. Cooperatively purchased construction is particularly useful for school systems, which often need to complete a large number of straightforward construction and renovation projects within a very short window of time. By taking advantage of ready to use, competitively bid, cooperative contracts, school systems can often complete construction tasks up to 80 percent faster than undertaking the traditional design-bid-build process.

It is also worth noting that cooperative construction contracts can increase participation by Minority Business Enterprises, small businesses, or other similar entities. Cooperative purchasing consortiums often bring additional resources to the process to help educate small and minority-owned business enterprises and encourage participation in relevant solicitations or projects. Cooperative contracts also can help local governments to better track and meet small and minority-owned business enterprise goals.

Currently, cooperative purchasing consortiums are highly regulated in Maryland to ensure accountability by local governments and to protect taxpayer resources. Disallowing cooperative purchasing as a tool available to Maryland's local jurisdictions may actually roll back many of those existing safeguards and unnecessarily increase costs, delay project completion, and increase administrative burdens on local school systems.

Gordian is grateful for this opportunity to share its experience and expertise in construction procurement and looks forward to working with the members of the Commission to develop fair and efficient procurement policy that benefits the State of Maryland.

2022-2023 School Year

October 27, 2016

Charles, MD 21401

October 27, 2016

Chairman Martin G. Knott, Jr.  
21<sup>st</sup> Century School Facilities Commission  
Legislative Services Building, 90 State Circle  
Annapolis, MD 21401

Chairman Knott,

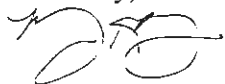
The National Joint Powers Alliance® (NJPA) supports the Commission's efforts to identify and report on efficiencies and cost saving mechanisms and how best to meet urgent school construction and maintenance needs across the state. As a national purchasing cooperative, NJPA offers competitively solicited and awarded cooperative purchasing contracts available for use by state and local governments, school districts, higher education institutions and nonprofits.

Cooperative purchasing is an established method of procurement which increases efficiency in government purchasing. Competitive solicitation is conducted on behalf of all eligible governments resulting in increased competition. Competitively awarded contracts reflecting discounted volume pricing may then be utilized by government or nonprofit entities. When used as a procurement tool by purchasing officials, cooperative purchasing results in significant time savings, reduced administrative costs and access to the best value of products and services needed to maximize taxpayer resources.

The value of cooperative purchasing has long been recognized in Maryland, with the General Assembly first authorizing use by State agencies in 1997 and Boards of Education in 2002. The 2004 Kopp Commission's recommendations and later approval of the School Facilities Act by the legislature recognized the need for alternative financing methods in school construction. Subsequent Board of Public Works regulations authorized schools to utilize cooperative purchasing as a method for school construction procurement. These regulations require additional due diligence to verify that cooperative purchasing is not being used to avoid competition and results in actual cost savings or efficiencies gained over traditional procurement.

In light of this Commission's charge to review implementation of the Kopp Commission recommendations, NJPA respectfully requests that any effort to restrict the use of cooperative purchasing by governments in Maryland be excluded as antithetical to the goal of identifying cost saving and efficiency tools in school construction procurement.

Sincerely,



Misty J. Myers  
General Counsel and Director of Government Relations

cc: Members of the 21<sup>st</sup> Century School Facilities Commission

# Caroline County Public Schools

*Partnerships for Excellence*

Administrative Services Division  
204 Franklin Street  
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Milton E. Nagel, CPA, Assistant Superintendent

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TO: Mr. Peter Franchot, Comptroller of Maryland

FROM: Milton Nagel, Assistant Superintendent

SUBJECT: Ductless Split System Project

DATE: October 12, 2016

In an effort to control on-going indoor air quality issues associated with excessive humidity at Federalsburg Elementary School, we installed Panasonic ductless split systems in seven (7) classrooms. We installed one split system for each classroom and all classrooms contained exterior windows. Our maintenance coordinator, working directly with the product salesman, designed the systems. The sizing of each system did not have to be exact because these units are capable of running anywhere from 40% to 100% with no issues.

The complete installation of each classroom unit required two HVAC trained maintenance staff approximately one and one half (1 and ½) days. Each unit installation involved the following:

- Mounting the exterior wall bracket
- Mounting the exterior unit on the wall mounted bracket
- Running the exterior wiring and refrigerant lines
- Covering the exterior wiring and lines with color coordinated aluminum trim
- Creating a 3" wall penetration for wiring and lines
- Mounting the interior wall unit
- Connecting the electrical wiring to the units
- Start-up of each system

All electrical work was contracted to a certified electrical contractor. The electrical work consisted of running new wiring from the nearest electrical panel to provide a separate 20 amp circuit for each classroom unit with an exterior wall mounted disconnect. It is important to note that each classroom did not have enough electrical power to run the unit and therefore an electrical contractor had to run new wiring. Had there been existing power within the classroom, the electrical work could have been done by in-house maintenance staff.

The material cost for each classroom unit was \$1,550 and the contracted electrical cost for each unit was \$750 for a total classroom cost of \$2,300. The total project cost for seven classroom units was \$16,100. This total project cost does not include the labor for the school system maintenance staff.

These units provide automatic temperature control, heating and cooling and special humidity control. These units have performed better than we anticipated, totally eliminating all indoor air quality issues. Teachers love the systems because each unit can be programmed independently, and the units are quieter than the existing HVAC system.