

# CONSTRUCTION OF PUBLIC SCHOOL FACILITIES

ANNUAL REPORT ON THE STATUS OF ALTERNATIVE PROCUREMENT, PROJECT  
DELIVERY AND FINANCING FOR MARYLAND PUBLIC SCHOOL CONSTRUCTION

SUBMITTED TO THE BOARD OF PUBLIC WORKS  
Governor Martin O'Malley  
Comptroller Peter Franchot  
Treasurer Nancy K. Kopp

September 1, 2010



Barbara Ingram School for the Arts  
Washington County Public Schools  
Hagerstown, Maryland

## The Interagency Committee on School Construction

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**BACKGROUND**

In 2002, the Task Force to Study Public School Facilities was formed under the leadership of Treasurer Nancy K. Kopp to determine the adequacy of public school facilities in Maryland. Specifically, the Task Force would determine if these facilities were adequate to support the educational programs that were to be funded through the Bridge to Excellence in Education Act of 2002. The Task Force investigation was broad, including not only the adequacy of existing public schools but also the procedures and practices that govern their procurement, delivery, and financing. A subcommittee of the Task Force investigated the feasibility of using alternative financing mechanisms to assist in building and renovating Maryland's public schools (Appendix A). Based on the experience of school districts in the United States and Canada that have used alternative financing for school construction, the subcommittee developed recommendations that were included in the Final Report of the Task Force, issued in February 2004.

During the 2004 session of the General Assembly, school construction received a great deal of attention. The Public School Facilities Act of 2004 addressed many aspects of school construction procedure and funding, included a section on alternative financing (Appendix B). The statute contains provisions that enabled the LEAs and local governments to use several alternative financing arrangements: lease-leaseback, sale-leaseback, public-private partnerships, and performance based contracting. The use of finance-design-build, a variant on the traditional design-build (DB) project delivery methodology in which the DB entity also provides financing for the project, was also allowed. The Act also addressed Construction Management At Risk (CMR), a method of project delivery that had been successful in the private sector but was not previously used for public schools in Maryland because of procurement restrictions. To further these progressive financing and delivery approaches, the statute enabled the local jurisdictions, under appropriate justification, to use alternative methods of project procurement - competitive negotiation, unsolicited proposal, and quality based selection (QBS) – in place of competitive bidding, the sole previous option.

While the 2004 enabling legislation opened a vigorous discussion about alternative financing, and has permitted several local educational agencies (LEAs) to apply alternative procurement and project delivery methods, it is only in the past year that an entire school facility has been completed that used an alternative financing arrangement. *Washington County Public Schools*, in collaboration with the City of Hagerstown and a community development non-profit organization, and with the input of a private consultant, private counsel, and the Public School Construction Program, developed a leaseback structure for the renovation of a historic building in downtown Hagerstown as a visual and performing arts high school. This project, described more fully below, utilized Maryland historic tax credits as a significant component of the financing arrangement. Although access to the historic tax credits presented WCPS with a unique advantage, in other respects the financing structure for this project may provide a valid model for more conventional school construction projects. In the current economic situation, in which the constraints on operating budgets may reduce the willingness or capacity of local governments to issue debt, interest in alternative financing appears to be gaining momentum among a few of the local jurisdictions.

## **REGULATIONS AND PROCEDURES**

The 2004 statute charged the Board of Public Works with developing regulations to govern the Public School Construction Program, the implementation of alternative financing, and other provisions of the Act. In January 2005 a workgroup consisting of superintendents and facility planners from the Maryland school districts, representatives of local governments, and officials from several State agencies that have an interest in public school construction was convened to study the problem (Appendix C). It was quickly found that project financing, project procurement, and project delivery are thoroughly interwoven with one another. Consequently, in 2005 and 2006 attorneys from the Office of the Attorney General and the Board of Public Works met regularly with the Executive Director and Deputy Director of the Public School Construction Program to develop coordinated regulations on these topics (Appendix D). A consolidated set of regulations was approved by the BPW for publication on December 6, 2006, and following regulatory review, became effective on May 21, 2007 as COMAR 23.03.01 – 23.03.05 (available at [http://www.dsd.state.md.us/comar/subtitle\\_chapters/23\\_Chapters.aspx](http://www.dsd.state.md.us/comar/subtitle_chapters/23_Chapters.aspx)). Amendments to the regulations were approved in November 2009 and March 2010.

In the field of construction procurement, delivery, and financing, new instruments as well as variants on traditional instruments are regularly developed. When interpreting the regulations, the consistent desire of the Interagency Committee has been to provide realistic guidance to facilitate innovation in the construction of public schools while honoring fundamental principles of public school procurement. These principles can be summarized as:

- Procurement must be open and fair, so that all vendors are provided with an opportunity to participate if they qualify;
- The process of procurement should result in the best value for the taxpayers of Maryland;
- The process should deliver public school facilities that meet the educational and building performance standards that are expected of all Maryland public school buildings, irrespective of how they are procured, delivered, or financed;
- State requirements for minority business participation, for use of prevailing wage rates, and for high performance buildings must be incorporated into projects procured, delivered and financed under alternative methods when applicable, as they would be for projects procured and financed through conventional methods.
- Public schools should be located and designed whenever possible so as to support existing communities and mitigate urban sprawl, and they should include high performance features that will conserve energy and water, improve the indoor environment for occupants, and reduce their environmental impacts.

While the regulations provide a great deal of procedural detail, they do not eliminate the need to develop sound procedures to address alternative methods of project procurement, delivery, and financing. Dating from May 2008, the PSCP and its three sister agencies within the interagency structure – the Maryland State Department of Education, the Maryland Department of Planning, and the Department of General Services – have met regularly to update the *Administrative Procedures Guide of the Public School Construction Program*. Development of procedures on the issues covered in this report is a part of this multi-year task.

## **SCOPE OF THE LEGISLATION**

The first project to be reviewed by the Office of the Attorney General for conformance with the alternative financing provisions of the Public Schools Facility Act of 2004 was the central administration building for *Harford County Public Schools* (HCPS). A description of the building and its financing structure is provided below on page 10.

In a letter dated September 21, 2004, the Office of the Attorney General indicated that projects of the type then proposed by HCPS fall under the authority of the Public School Facilities Act of 2004. Consequently, such projects were required to be procured in accordance with the requirements of the legislation and of regulations that had not, at that time, been drafted. However, because the HCPS project pre-dated passage of the Public School Facilities Act, the OAG excused it from compliance with review by the IAC and from the competitive procurement methods outlined in the legislation.

Subsequently, discussion between the OAG and the PSCP has led to a reappraisal of the scope of the legislation. In brief, the position of the PSCP and of the OAG is that neither the intention of the original legislation nor the traditional review and approval functions of the IAC and its designees warrant an extension of these activities into the arena of central administration buildings. The legislation was focused on the capacity of school facilities to support educational programs, not on the other functions of public school systems. As administration buildings are not funded by the State under the Capital Improvement Program (CIP) or the other programs that the PSCP manages, they have traditionally not been subject to the review and approval of the IAC. Nor do they contain the educational functions that warrant review and approval of locally funded projects by the State Superintendent.

As a result of this discussion, COMAR 23.03.05.01.B explicitly excludes from the requirements of the regulation "a building that is not used primarily for the instruction of students, including an office building, warehouse, or vehicle maintenance or repair building." Clarification of the scope of the Public School Facilities Act of 2004 with respect to central administration buildings not only preserves the traditional focus of the Public School Construction program on facilities that support educational programs, but also provides greater latitude to the LEAs to explore innovative solutions to their facility concerns. Currently, some of the most important and interesting alternative financing projects concern central administration facilities (see below, page 10). It is anticipated that these projects will provide lessons for the eventual application of alternative financing to school facilities.

## **SCHOOL DISTRICT INITIATIVES IN ALTERNATIVE FINANCING, PROJECT PROCUREMENT, AND PROJECT DELIVERY**

### **Alternative Financing**

As reported in September 2007, interest in the use of alternative financing methods to build schools continues to remain extremely hesitant. In previous reports, we have noted the risk-aversion that is inherent among local school districts in the construction of public schools and that restrains the adoption of innovative techniques, encompassing not only alternative financing but also alternative methods of procurement, delivery, and construction. Of greater importance is the question whether alternative financing offers any financial advantage over conventional financing using general obligation bond revenues. In 2005, *Charles County Public Schools* and *Harford County Public Schools* explored alternative financing for a new middle school and the replacement of an existing high school, respectively, and both concluded that their projects could be carried out at lower cost and with less risk using conventional bond financing. In the alternative financing proposals that were reviewed, neither school system found schedule advantages that might have warranted the higher financing costs that would have resulted from use of these methods. *Cecil County Public Schools* reported that it had abandoned study of alternative financing for the construction of a new technology high school. *Montgomery County Public Schools* reported that because of its AAA bond rating, it does not consider alternative financing to be effective (however, the school system remains receptive to its use under appropriate circumstances).

The general hesitancy of the LEAs to use alternative financing for school construction corroborates the findings of the alternative financing subcommittee of the Task Force to Study Public School Facilities. In 2003, the members of the subcommittee recognized that there was no evidence, all other things being equal, that a project can be delivered through alternative financing at lower cost than through the use of conventional general obligation bonds. The private sector does not have access to funds at the same favorable interest rates as do local and State governments, which can pledge the full faith and credit of the public to support the bonds. This disadvantage is fully acknowledged by almost all private sector vendors of alternative financing methods. Only two circumstances appear to warrant these additional

costs: when alternate financing can accelerate a project sufficiently to address an urgent educational issue or to offset the increased finance cost by forestalling construction cost escalation; or when the LEA can leverage a valued but underutilized asset as a component of the financial transaction. Special circumstances, such as the historic tax credit used in the Washington County project described below, can also influence the decision to use alternative financing over more conventional financing methods.

The fiscal conservatism of local governments and the limitations of internal staff capacity in the school districts have also been cited as blockages to the use of alternative financing by smaller jurisdictions. While showing that alternative financing may allow a project to move forward in the absence of State and local capital funding, *Washington County Public Schools* also wrote in 2007 that “The coordination of multiple partners and potential donors can be cumbersome. Determining each party’s role and responsibility, and the scope of work outside of any donations, all while procuring the work within COMAR regulations can be daunting and time consuming.”<sup>1</sup> The fact that WCPS proceeded with a very complex financing arrangement for the Barbara Ingram School indicates that these barriers are not necessarily insuperable (see below).

Interest on the part of financiers in alternative financing for school buildings diminished significantly after 2004/2005. *Montgomery County Public Schools* states that developers have a strong interest in the parcels that the school system owns for its central administration buildings because of their location in high-use corridors, and a relatively weak interest in MCPS schools, because they are located in residential areas. Aside from administrative buildings, developer interest is now focused on the use of alternative *funding* sources in order to provide capacity to remove Adequate Public Facility Ordinance (APFO) closures to housing construction.

In counterpoint to these general trends, in the last year interest in alternative financing appears to have revived in at least two jurisdictions. The *Baltimore City Government* has partnered with *Baltimore City Schools* to explore alternative financing mechanisms for capital projects, inclusive of school construction. *Wicomico County Public Schools* reports that it is studying alternative financing in order to achieve an early start on a replacement middle school, taking advantage of the high level of contractor competition and attendant lowered construction costs that have resulted from the current economic downturn. In early 2009 the school system formed an Alternative Finance Committee composed of a variety of financial, political and school facility stakeholders to investigate alternative financing options to address its large backlog of project needs. Based upon the committee’s input, the system is working with a consultant to align specific capital project needs with the appropriate alternative finance option. The system is interested in exploring fast track methods to take advantage of the current positive bidding climate.

The current economic recession, with its reduction of private sector financing for office and residential construction, has resulted in a high degree of competition for public school construction contracts and the lowest prices seen in almost a decade. In an effort to take advantage of this situation, the Public School Construction Program is investigating whether public private partnership (PPP) initiatives in Canada, England, and Scotland may have application to our situation in Maryland. A list of relevant resources is provided in Appendix E.

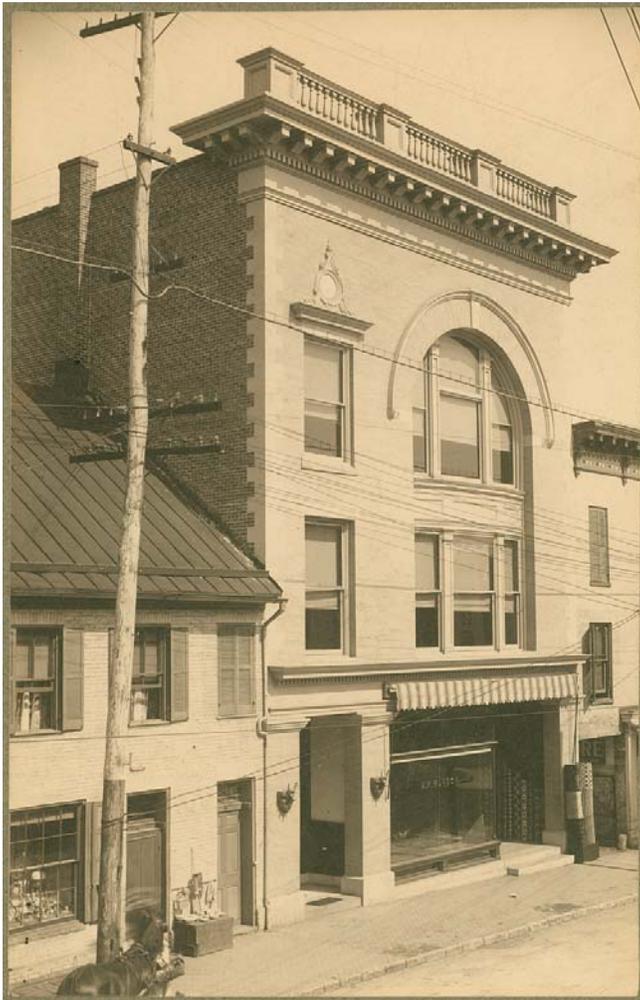
#### Current Projects and Programs Using Alternative Financing

*Washington County Public Schools* has renovated a historic structure in downtown Hagerstown to house a visual and performing arts high school, the Barbara Ingram School for the Arts. This project is noteworthy not only for its innovative financing approach, but also because it is a component of the redevelopment of downtown Hagerstown as a cultural and arts center for Western Maryland, and because the educational program uses the nearby public library, a downtown theater, and a University of Maryland facility to supplement the facility requirements of the program, with the renovated building serving for core program offerings in the arts. While in many respects this educational program is

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<sup>1</sup> Boyd Michael, Assistant Superintendent for School Operations, Washington County Public Schools, email dated August 9, 2007.

modeled on the very successful Baltimore School for the Fine Arts, its use of public and private institutions in the urban surroundings to extend the educational opportunities available to the students is a genuine innovation that has larger planning implications. If new schools are to be built within growth areas in order to promote walkability and become centers of community activity, it is likely that school districts will need to consider smaller sites that may not be able to support a full array of physical education and interscholastic sports facilities. Working models for the joint use of neighboring facilities owned by other government or community entities will assist school districts to acquire smaller sites without sacrificing their educational programs.



Historic Structure, Potomac Street  
Hagerstown, MD

The existing Hagerstown building, a three story iron-frame and masonry office structure dating from 1903, was donated to the City of Hagerstown specifically to house the arts high school. In turn, the City transferred the building title to a local non-profit corporation, the Hagerstown Neighborhood Development Partnership (HNDP). Washington County Public Schools (WCPS) entered into a 20 year, triple-net operating lease with HNDP, with a stipulation that ownership of the facility will be transferred to the school system at the end of the lease term. A private consultant engaged jointly by WCPS and HNDP competitively solicited financing for \$8.3 million to pay for the largest component of the renovations and additions required to support the educational program. The results on bid day exceeded expectations,

and in combination with the historic tax credit, delivered project financing at a total cost below conventional general obligation bond financing.



Barbara Ingram School for the Arts, Rear Facade  
Hagerstown, MD



Meeting Space Renovated as Dance Studio

The proceeds of the private financing were placed in an escrow account under an Escrow Manager. Once a financing vendor was selected, HNBP assigned the lease to the vendor but retained responsibilities as owner of the facility. HNBP and WCPS were jointly responsible for engaging the constructor; HNBP held the contract but WCPS supervised it as agent to HNBP, drawing from the proceeds of the lease transaction as needed to provide payments. WCPS was responsible for all costs that exceed the available financing; however, conservative management allowed the project to be completed within the established budget.

The total project cost of \$10.93 million was funded from various sources in addition to the \$8.3 million financing component. As a private entity, HNBP is eligible for State of Maryland Historic Tax Credits equal to 20% of the eligible costs of construction, a credit equaling \$1,300,035. Portions of the work eligible for the tax credit included restoration of the existing building but excluded a new fourth floor, a 5,000 square foot rear addition, and interior furnishings and equipment. Finalization of the tax credit process is nearing completion, at which point the tax credit will be assigned to WCPS.<sup>2</sup> The balance of the funds needed (\$1,082,125) was obtained through Legislative Bond Bills, a Maryland Department of Business and Economic Development (DBED) grant, and a Community Legacy Grant.

All parties in this arrangement demonstrated a great willingness to comply with the State regulations governing alternative financing of public school facilities, and provided both the required preliminary determination of justification as well as drafts of the comprehensive agreement and other legal instruments for early review by the PSCP. As a locally funded project that had not been submitted or approved in the State Capital Improvement Program, the agreement and the construction contract were subject to approval by the State Superintendent, not the IAC. However, in accordance with the spirit and letter of the regulations, the PSCP advised the Superintendent on the viability of the arrangement, and in particular its conformance to State requirements regarding competitive solicitation of the financing. The PSCP provided an informational report to the Interagency Committee on September 19, 2007. The separate construction contract, once submitted to MSDE for approval by the State Superintendent, was reviewed similarly to other construction contracts. The architectural design was fully reviewed by MSDE and was approved to proceed to bid by the State Superintendent.

Washington County included a request for planning and partial reimbursement of the Barbara Ingram School in their FY 2011 CIP submission. The project was reviewed according to the same factors that govern any project submission, namely local priority, enrollment, educational program, schedule, cost, and availability of funds, and it received a recommendation from the IAC and subsequent approval of planning and funding from the Board of Public Works. Because the cost of the project is spread across a number of years through the lease payments, the State is able to use a multi-year approach to reimburse the funding for this project, with annual funding allocations equal to WCPS's yearly lease payments up to the limit of eligible funding. This contrasts with the lump-sum grant approach that is typically applied to project funding. The reduced annual CIP allocations for this project allow the State to apply its available funding to more projects in both Washington County and elsewhere in the state.<sup>3</sup>

Other examples of alternative financing include:

- *St. Mary's County Public Schools* has used \$2 million in tax-exempt financing to purchase school-based equipment, STEM (Science, Technology, Engineering, and Mathematics) equipment, and busses.

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<sup>2</sup> The transfer of credits has been reviewed and approved by the Attorney General for the Maryland Historic Trust.

<sup>3</sup> These payments will be subject to the availability of State operating funds for capital projects. In accordance with Internal Revenue Service rules as interpreted by the Office of the State Treasurer, when more than 18 months have elapsed from final payment to the contractor, State tax-exempt bond proceeds cannot be used to reimburse local capital expenditures. In recent years, the availability of State operating funds for capital projects has been highly constrained.

- *Prince George's County Public Schools* procured the furnishings and equipment for the new Dr. Henry A. Wise, Jr., High School, which opened in August 2006, through a lease-purchase financing agreement for \$6,500,000 in moveable and infrastructure equipment. School board operating funds are being used to repay the five-year financing agreement. Redirecting the cost of this equipment to the operating budget released county debt to complete the construction of the school.

Alternative Forms of Debt: Qualified School Construction Bonds (QSCB).

The American Recovery and Reinvestment Tax Act of 2008 established a new tax-credit bond program that can be applied to all aspects of school construction, including new construction as well as renovation, modernization, and repair. A total of \$11 billion was authorized by Congress for 2009, with 40% of the authorization distributed by the Secretary of Education to 100 "large educational agencies", that is, school districts with the largest number of children from families living below the poverty level, and 60% to the States in proportion to their Title I eligible student populations. The 2009 authorization to the State of Maryland was \$50.4 million and the 2010 authorization was \$45.2 million. Maryland has three large educational agencies, Baltimore City, Baltimore County, and Prince George's County, which received distinct federal authorizations of \$58.1, \$19.4, and \$25.1 million respectively in 2009, and \$53.5, \$20.0, and \$25.8 million respectively in 2010. All projects funded with QSCB proceeds are subject to Davis Bacon wage rates; 10% of the proceeds must be encumbered within six months of issuance, and all of the proceeds must be expended within three years of issuance. A further condition applies to the authorizations granted to the large educational agencies, which must issue the 2010 bonds prior to December 31, 2010, or lose the authorization.

The State issued its 2009 authorization in lieu of an equivalent amount of general obligation bonds authorized by the General Assembly for the FY 2010 Public School Construction Capital Improvement Program. By issuing \$50.3 million in tax-credit bonds in place of the same amount of general obligation bonds, the State anticipates a savings of almost \$11 million in avoided interest costs. The balance of the FY 2011 CIP authorization, or \$209.7 million, was issued as general obligation bonds. The QSCB bond proceeds are applied to FY 2010 CIP projects that are about to begin construction, have begun construction but are not yet complete, or will be initiated and completed within three years of the issuance in the fall of 2009. A similar approach will be taken for the 2010 authorization.

For the three school districts that have received individual QSCB authorizations, our current understanding is that:

- *Baltimore City Public Schools* (BCPSS) sold approximately \$50 million of its federal authorization under the remaining balance of the \$100 million bond authorization cap that was approved by the General Assembly in 2000 (Annotated Code of Maryland, Education Article §4-306-2).<sup>4</sup> Legislation passed in the 2010 session of the legislature exempts the QSCB (and the related Qualified Zone Academy Bond, QZAB) authorizations from the 2000 authorization cap, freeing the School District to issue the balance of the 2009 federal authorization as well as the entire 2010 authorization. BCPSS has and intends to use its QSCB bond proceeds to provide the local match for projects that are concurrently funded through the State's QSCB proceeds, as well as a large number of "summer" projects that support the realignment of schools in preparation for school openings in the following autumn. BCPSS estimates that it may save as much as \$19 million in avoided interest through issuance of the 2009 and 2010 QSCB authorizations.
- *Baltimore County Public Schools* (BCPS) allowed the County Government to issue the bonds on its behalf, as permitted under the federal rules, on October 27, 2009. The bonds were issued with a premium.

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<sup>4</sup> Baltimore City Public Schools is the only school district in Maryland that has the authority to issue bonds on its own account.

- *Prince George's County Public Schools (PGCPS)* allowed the County Government to issue its QSCB authorization in early December 2009.

All local projects funded with QSCB proceeds are subject to State design and contract award review under the same conditions that now apply to locally funded and State-funded capital projects

Energy Performance Contracting (EPC, also called Performance Based Contracting and Guaranteed Performance Contract)

A number of LEAs are now involved with energy performance contracting, in which savings that accrue from energy-related improvements are used to finance the improvements over an extended amortization period. As energy costs continue to rise, this approach has become increasingly attractive in order to improve the energy performance and the comfort of Maryland's many older facilities, which were frequently built to low energy standards in the 1960s and 1970s. The scope of work may include both projects that result in energy savings, for example a roof and boiler replacement, as well as components that may have no energy-saving potential, e.g. expansion of a media center. By combining projects in this way, greater efficiency in procurement and better overall costs are obtained. Since the energy service companies (ESCOs) that provide the improvements must guarantee savings for a number of years (typically 15), they are obligated to provide routine preventive maintenance on the equipment that they install. If the savings are not realized, the ESCO is obliged to reimburse the "lost" savings to the local board. Following are current instances of this approach:

- *Baltimore City Public Schools (BCPSS)* has entered into agreements with four ESCOs under the Department of General Services EPC program. Each ESCO has and will provide energy improvements to a number of schools, and each is in addition contracted to provide preventive maintenance (PM) for mechanical systems in the schools that receive energy improvements as well as in selected geographically related schools, irrespective of whether the HVAC equipment was installed by the ESCO or not. The HVAC preventive maintenance tasks that lie outside of the ESCO's normal obligations with respect to the equipment they install are funded through the school system's operating budget. Due to budget constraints, the PM responsibilities for items not installed by the ESCOs were not as extensive as originally envisioned when the idea was broached in 2005. The energy improvements are often funded from several sources, for example lump-sum funding through the State's Capital Improvement Program and Aging School Program may be combined with the proceeds of the Qualified School Construction Bonds (see above, p. 8), financing secured by the long-term energy savings, and other local funds to execute the capital projects. As BCPSS has closed a number of schools in the 2006 through 2009 school years, priority has been given in recent summers to capital projects in the schools that were assigned to receive students from the schools scheduled to close; these schools also received other improvements unrelated to the EPCs, e.g. painting and new ceilings. Energy savings are reported to have been less than anticipated because of community use of the facilities in non-school hours.

Reports in late summer 2006 indicated that the ESCOs performed above expectations and that the level of quality was high. The Chief Operating Officer reported in 2009 a significant decrease in the number of complaint calls that are received from schools. However, it has also been found that staff oversight is an important factor in maintaining the quality of PM that is performed by the ESCOs. In addition, BCPSS has developed the practice of evaluating each capital project to determine if it is more economical to procure it through one of the ESCOs or to follow conventional procurement and project delivery practices.

BCPSS has provided a model of how a school system with an aged and deficient building inventory can accomplish significant upgrades, improve building performance, and concurrently implement a PM program for building components that have a considerable impact on occupant health and productivity.

- *Caroline County Public Schools* has entered into a second performance contract with an energy management company, valued in excess of \$3.5 million, that includes replacing existing steam boilers with new oil fired hot water boilers at two schools, in addition to a number of other energy saving projects (lighting, control upgrades, high efficiency HVAC equipment, solar domestic hot water heater, solar tracking skylights, etc). A recent benchmark analysis shows that most of the systems should qualify for Energy Star ratings; the vendor will complete the work associated with obtaining those ratings.
- *Carroll County Public Schools* has entered into a fourth performance contract with an energy management company that includes new air conditioning (AC) projects for three schools in addition to energy saving projects (lighting, bathroom fixtures, control upgrades, high efficiency HVAC equipment, billing evaluation services, etc). With the year of installation and the first year of operation included in the performance period of July 1, 2008 to June 30, 2009, a net cost avoidance of \$2.2 million has been achieved, exceeding by \$774,000 the cost avoidance that was originally estimated for the period.
- *Cecil County Public Schools* approved in 2005 a \$9.3 million performance contract with an energy management company for energy related facility improvements to all 29 schools in the county as well as the central office. Projects ranged from boiler replacements to lighting upgrades, as well as a complete wide area network (WAN) technology. These upgrades are expected to show a payback over a 15 year period, with the energy management company guaranteeing the energy savings. The school system received a favorable opinion from the county's bond council on the question of how bond ratings are affected when capital projects are funded through this method. The performance contract is now complete and some benefit in utility usage has already been experienced. The LEA reports that central office renovations not only provided for greater energy efficiency, but also allowed for architectural upgrades which are difficult to fund through conventional funding sources.
- *Howard County Public Schools* is in the fourth year of a multi-year energy performance project. To date, 13 schools have been contracted for conservation measures. An estimated \$600,000 in annual savings has been projected for the 13 schools. The school system is reviewing a recently completed systemwide facility assessment in order to determine whether it should proceed to a third phase involving a larger number of schools.
- *Prince George's County Public Schools (PGCPS)* is utilizing a Department of General Services' Energy Performance Contract (EPC) to upgrade, replace, and maintain building and energy components in schools and offices. PGCSP operating funds are used to service the debt on the financing agreement. Debt service and other costs of the projects will be fully recovered over a 15 year period through guaranteed lower energy and maintenance costs resulting from the improvements. Contracts totaling \$50.5 million are in place, funded from a combination of existing CIP systemic project resources (\$15.8 million) and lease-purchase financing (\$34.7 million). Implementation of the contract began in fiscal year 2007, with installation of the approved energy conservation measures scheduled over the following two years.

A second phase of the Energy Performance Management initiative is under consideration that will expand efforts by another \$100 million, to include additional schools and offices funded from a combination of existing CIP resources (approximately \$35 million) and future lease-purchase financing (approximately \$65 million). Prince George's County Public Schools writes that use "of alternative financing...provides a cost-effective vehicle (i.e., cost neutral over the financing term due to lower guaranteed energy and maintenance operating costs) for accelerating needed facilities improvements that would otherwise be deferred to future years based on available bond or pay-go funding."<sup>5</sup>

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<sup>5</sup> Eric Walker, Interim Chief Administrator for Supporting Services, Prince George's County Public Schools, letter dated August 10, 2007.

- *St. Mary's County Public Schools*. Over the last 15 years, SMCPS has entered into three energy performance contracts for the majority of its schools. A recent benchmark analysis by the vendor showed that St. Mary's County public schools use considerably less energy per square foot than the national medians for these types of facilities. The study also found few opportunities for additional equipment modifications to realize further savings over a 15 year term.
- *Somerset County Public Schools* engaged the services of Energy Education, Inc. (EEI) to help manage and track energy consumption. The contract is restricted to human behavior issues, not capital equipment; however, this is a performance contract in that if SCPS does not save enough in energy expenditures to cover the costs of the consultant, the latter will write a check for the difference. A base year has been established, and at the conclusion of the first anniversary a determination of savings will be made. Settlement will occur after reconciliation of figures by both parties, a process that will account for changes in energy sources and weather conditions. Thus far the system has saved about \$600,000 in cost avoidance. This has allowed SCPS to reallocate monies to instructional programs. Other LEAs have used a similar human behavior approach, but without the guarantee of savings: Allegany County Public Schools was the first county to run a full four year contract cycle, which they renewed after the initial contract period. On the Eastern Shore, other LEAs that participate with EEI are Queen Anne's, Talbot, Kent, Dorchester and Caroline.
- *Wicomico County Public Schools* is investigating performance based contracting for HVAC systemic project as a means to leverage limited funding, broadening this concept beyond the typical opportunities for potential energy savings.

#### Power Purchase Agreements for Solar Power<sup>6</sup>

The Power Purchase Agreement (PPA) has emerged as a well-trying method for the implementation of solar power at public schools. *Montgomery County Public Schools* currently has eight schools with photovoltaic (PV) solar arrays financed through PPAs (see chart below). In the standard PPA financing arrangement, a third-party investment group contracts with a solar vendor through a Special Investment Vehicle (SIP) to install and maintain a solar array on the roof of a school building. The investors, who retain ownership of the solar array, receive federal tax credits valued at 30% of the cost of the installation and sell Renewable Energy Credits (RECs) to Maryland electricity providers.<sup>7</sup> The school contracts to host the PV array for 20 years and to purchase the electricity generated by the array from the owner at a competitive pre-determined rate which includes a cost escalation factor. Typically, the MCPS systems are sized to carry 20 – 40 percent of the building load during full building operations.

MCPS states that the benefits of a PV system include that it:

- Provides competitively priced electricity at a fixed rate for a long term.
- Lowers peak summer demand for electricity by 20 to 40 percent, and reduces very expensive capacity charges. Some of the MCPS systems are producing more electricity than can be used on weekends and holidays. MCPS is credited for the extra power that is produced that cannot be used at the time of generation. The Maryland Net Metering law requires the electric utility to give the user credit for that power and to provide that power back to the user at a time when it is needed, i.e., at night.
- Generates educational opportunities to study PV technology with real-time monitoring of electric production.

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<sup>6</sup> The information in this section is taken from a presentation by Mr. Joseph Lavorgna, Acting Director, Department of Facilities Management, Montgomery County Public Schools to LEA Facility Planners on May 7, 2010; a presentation to the Hyattsville Elementary Smart Sites Committee on June 23, 2010, by Mr. Lee Bristol of Standard Solar, Inc.; and emails dated June 24, 2010, from Mr. Sean Gallagher, Assistant Director, Department of Facilities Management, MCPS.

<sup>7</sup> For private sector owners, direct installation and ownership of the solar array provides access to the tax credits. This avenue is not available to public owners since they have no tax liabilities.

- Provides a regional benefit to the community by hosting local renewable energy production, reducing the stress and congestion on the electric distribution system.
- Supports Montgomery County's Climate Change Commitment and 2009 Climate Protection Plan.
- Large scale PV Solar projects generate attention from the media, students and staff, the board of education, local governmental leadership, and the county council, and well as from other government agencies, institutions, and potential host sites.

School	Capacity (kW AC)	Number of Panels	Construction Value (\$)	Completion
				Date
Clarksburg HS	260	1,466	\$1,504,000	1/23/2009
Lakelands Park MS	133	770	\$790,000	2/10/2009
College Gardens ES	86	497	\$510,000	2/12/2009
Richard Montgomery HS	135	784	\$804,000	6/30/2009
Parkland MS	151	851	\$873,000	1/20/2010
Francis Scott Key MS	100	564	\$578,000	12/20/2009
Quince Orchard HS	319	1799	\$1,846,000	12/20/2009
Sargent Shriver ES	80	495	\$508,000	12/20/2009
<b>Totals:</b>	<b>1,264</b>	<b>7,226</b>	<b>\$7,413,000</b>	

Lessons learned to date by MCPS include:

- Since the cost of coordination is high, the rate must be set far enough below market rates to generate a cost avoidance that can justify the effort.
- The cost avoidance achieved through a PV PPA is not particularly large as compared to that achieved through other energy conservation programs. The PV PPAs should consequently not be viewed as the most important prong of a comprehensive energy management program.
- MCPS is credited for the extra power that is produced that cannot be used at the time of generation. The Maryland Net Metering law requires the electric utility to give the user credit for that power and to provide that power back to the user at a time when it is needed, i.e., at night.
- A PPA PV system should not be installed on a roof that is not expected to last 20 years, or one that is expected to have significant problems.
- PV systems work best on the large roofs associated with middle and high schools.
- Stormwater management regulations must be taken into account, since the roof surface may be needed as a vegetative roof in order to offset the loss of pervious area cause by a later addition.

According to MCPS, there are several risks associated with the PPA approach. The contract for the PPAs requires the vendor to insure that the system installation will not void the 20 year NDL (no dollar limit) existing roof warranties, and if it does, to assume responsibility for this warranty. In addition, while the vendor is responsible for any roof leaks or problems that result directly from the installation and operation of the system which are outside of the NDL roof warranty, the owner is responsible for all leaks that result from other causes. Second, there is a very significant cost to be borne by the owner if the system needs to be partially or fully removed or relocated. This risk exposure needs to be understood and appreciated, and any projected savings should be discounted accordingly. Third, a potential cost exposure is related to the agreement to purchase the power for 20 years at a PPA contracted price with annual escalation. After comparing the unit price offered to the price being paid for conventional power, MCPS found that the differential was great enough, even with an escalation rate of 3% and with conventional rates stagnant or falling, to give confidence that some cost avoidance would be achieved.

Although no financial consideration is given on the part of the school system for the installation and maintenance of a PV PPA, MCPS believed that since the matter involves both the purchase of the full electricity output of the system as well as the hosting relationship of the system on the roof, it is necessary to procure the PPAs through a competitive process. Unit price as well as the experience, capabilities, and record of satisfactory projects of the vendor are considered in the selection. Sample solicitation and contract documents are available on request to the PSCP or to MCPS.

Other school systems considering a PPA arrangement are *Charles County Public Schools* and *St. Mary's County Public Schools*. *Washington County Public Schools* applied for and has been awarded a \$340,000 Project Sunburst grant from the Maryland Energy Administration for the installation of a photovoltaic solar array to generate electricity at Northern Middle School. WCPS will make use of the grant funds by entering into a 20-year term Purchased Power Agreement (PPA) with an independent contractor, which will use the funds (and other independent sources of funding and credits) to install and operate the array at the school and sell the generated electricity to WCPS at a lower than market rate. The contractor is being selected via an open request for proposal process, where both the technical capabilities and proposed energy pricing of each offeror are evaluated. The PPA is being written such that WCPS's only financial obligation within the agreement is the purchase of the generated electricity, which could save WCPS an estimated \$500,000 over the twenty year period of the agreement.

#### Central Administration Buildings

Aside from the projects described above in Washington County and Prince George's County and the investigations being undertaken by Baltimore City Schools and Wicomico County Public Schools, activity in alternative financing of LEA facilities is currently focused on central administration functions. Investor interest may have shifted to this type of facility for several reasons:

- A reluctance on the part of county governments to issue debt for administration facilities, in which the State does not participate through its capital funding programs. Consequently, school systems are often forced to seek other funding and financing arrangements to improve their central office facilities.
- Anticipated improvement of administrative and operating efficiencies by consolidating functions previously housed in geographically separated and obsolete buildings into a single facility, sometimes using the avoided costs of rent payments or the sales of the former administration buildings to offset the costs of the new structure.
- The view of developers and financiers that administration buildings that are built to office standards offer more possibilities for re-use and marketability than do school buildings, and consequently offset the risks associated with potential non-appropriation of lease payments.
- As noted above, developers appear to have a stronger interest in the parcels that the school system owns for its central administration buildings because of their location in higher density corridors, while schools tend to be located in low-density residential areas.

The following central administration projects are at various stages of development or completion:

- *Frederick County Public Schools (FCPS)* will not use any alternative financing approach in the foreseeable future to build a school facility; they wrote in August 2005 that "public financing is judged to be least expensive for long term project financing." However, the school system has implemented an alternative financing arrangement for a proposed central administration office in the City of Frederick that will consolidate functions now housed in four inefficient buildings located several miles apart. Although the Frederick County government did not want to issue debt for the project, the County and Board agreed that the new administrative building could be funded through the Board's operating budget.

An original concept, in which a developer would build and lease the facility to the Board, was rejected because the developer would not have access to tax-exempt debt and the property would be subject to real property taxation. Instead, the Board executed a tax-exempt lease-purchase agreement that will fund land acquisition from the City of Frederick, construction of the project, contingencies, and costs of closing. The Board will ground-lease the land for 40 years to the selected lease provider, which will in turn leaseback the land and the building, once constructed, for 25 or 30 years to the Board. The transaction will be structured as a conditional

purchase agreement, whereby the Board will own the property at the end of the 25 or 30 year period. Purchase installments, which will be considered a current expense of the Board subject to non-appropriation and not as debt, will have a principal and interest component. The interest will reflect tax-exempt rates that are approximately 30-40 basis points over general obligation debt, due to the non-appropriation risk and the illiquidity of the lease purchase agreement.

Advantages that FCPS sees in this arrangement are:

- The 40-year ground lease enables the lease provider to realize the economic value of the property in the event that the Board of Education does not appropriate funds to make the purchase installments.
- The arrangement overcomes several obstacles, including County constraints on issuance of debt for the administration building, the inability of the Board to issue debt on its own or secure real estate with a deed of trust, and the requirement of the Board and the County that payments fall within preconceived limits.
- While the interest component of the purchase installments is above what the County would have paid had it agreed to issue general obligation debt, issuance costs are lower. In addition, the occupancy cost will be significantly lower than if a developer had built and leased the building directly to the Board of Education.

In December 2006, FCPS issued a Request for Proposals (RFP) for design-build services for the new building, with alternates regarding the size of the building (75,000 or 90,000 square feet) and the extent to which it would be finished and furnished. Technical proposals from five entities were received, of which three were invited by the Evaluation Committee to submit cost proposals. One proposal submitted by a local team was approved by the Board of Education in June 2007. Financing through Sun Trust was approved in October 2007 and settlement on the land with the City of Frederick occurred in December 2007. Since that time design and permitting of the project has taken place and the new building. Construction was completed in July 2010. Staff has moved into the building and plans are underway to sell the newly vacant excess properties.

- *Harford County Public Schools (HCPS)*. In 2005, HCPS completed a 73,000 square foot central administration building in downtown Bel Air through a lease-leaseback financing arrangement. Central office functions previously housed in an administration building dating from 1872 and in four other leased offices were consolidated into the new facility. Avoided rents on two of these administrative offices are used to partially fund the lease payments. The deteriorated condition of the existing facilities precluded their further use as administrative quarters. It is expected that the administration of the school system will improve in efficiency through centralization of central office functions. Following competitive negotiation to procure a combined construction and finance package, the construction contract was awarded, but it was then decided to procure the financing separately through competitive negotiation with a number of banks. The term of the lease-leaseback finance agreement is 25 years, with a ground lease on the land only and assumption of title by the Board of Education after 25 years. There is no pre-payment penalty. Construction funds were placed in an escrow account through a Mutual Fund consisting of US Treasuries.

It is anticipated that the savings generated through avoided lease costs will reach a break-even point at 7.5 years. In the analysis of the payback period, HCPS compared renting an equivalent amount of space vs. the lease-leaseback option. The new administration building was designed to achieve a LEED (Leadership in Energy and Environmental Design) Silver certification, but was actually awarded a higher ranking of LEED Gold.<sup>8</sup>

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<sup>8</sup> A Powerpoint presentation on this project is available on request

- *St. Mary's County Public Schools (SMCPS)* used tax-exempt financing from a 15 year mortgage through Sun Trust for the purchase and construction of an addition to its main administrative facility in 2002. As a result of its conservative fiscal practices, SMCPS has accumulated a sufficient fund balance to pay off the remaining mortgage balance eight years ahead of schedule.
- *Wicomico County Public Schools* is currently working on a long term lease arrangement for an approximately 30,000 sq.ft. modular office complex to combine and replace its failing central office modular annexes.

### **Alternative Funding**

Five school districts, two of which have expressed no current interest in alternative financing, have reported on using or exploring alternative *funding* mechanisms to build public school facilities. In alternative funding, construction monies are provided from a third source – private developer, private foundation, non-profit organization, grants – to replace part or all of the local obligation for a project. The local government may use conventional general obligation bond revenues for the balance of their project funding, and the project is usually procured and delivered through conventional means, with the addition of State funds if the project is approved through the CIP process. Several current examples of alternative funding are provided below. Not included are charter schools facilities, which are funded through private fund-raising or other mechanisms: although charter schools in Maryland are approved by the local boards of education and their students are public school students, they are typically housed either in facilities already owned by the board of education, or are in buildings that are privately owned or leased. These latter facilities do not add to the building stock in the local board's inventory.

Also not included in this report are the numerous grants that school systems receive for a variety of purposes, some of which involve facility improvements. Since the interest of the Task Force to Study Public School Facilities was on methods to engage the private sector in the building of schools, grants that are provided through community and non-profit organizations, the State of Maryland, and the federal government are not covered. This includes grants provided through the State Fiscal Stabilization Fund of the American Recovery and Reinvestment Act of 2009. While the majority of these funds were used by LEAs to enhance their instructional resources, a few LEAs have used portions of the funds for facility work, including renovation of shops and classrooms for Career and Technology Education (CTE) programs and upgrade of special education classrooms to enhance security (*Charles County Public Schools*)

Current instances of alternative funding include:

- *Anne Arundel County Public Schools*
  - Broadneck HS Addition: A local developer has fully funded and is constructing an eight classroom addition to address the overcrowded condition at the high school. By increasing the school capacity, the developer will be able to resolve one of the adequate public facility ordinance (APFO) issues that prevents approval of a housing development. In this turnkey arrangement, the developer has designed and will construct and furnish the facility utilizing AACPS standards. The contractor was selected and is being managed by the developer in coordination with AACPS.
  - Imagine School: A developer is proposing to construct a kindergarten - eighth grade school to be operated by an outside school management company. The contract school developed educational standards that were approved by the Board of Education. The developer will lease the facility to the contract school using the per pupil allowance for Anne Arundel County as their funding source. The new school will draw students from three area elementary schools that are currently overcrowded.
- *Frederick County Public Schools* has three projects that have been or are using alternative funding sources:

- A wing for a new high school was funded entirely by a private developer to allow housing projects to move forward against an APFO restriction. The project, which was designed and procured according to FCPS standard methodologies, opened in phases, with the first phase completed for the beginning of the 2007-08 school year and the second phase for the second half of the school year. Funds were accessed by FCPS through a line of credit. This project has been successfully completed and closed out.
- A \$4.5 million Earth Space Science Laboratory was partly funded through private donations in the amount of approximately \$800,000. This highly popular program, which is attended by every elementary school child in the school system, had been housed in an obsolete wing of Lincoln Elementary School in Frederick City. The replacement structure is co-located on the same site with the school, which will be under renovation in FY 2011. The Earth Space Science Lab project was completed for the beginning of the 2009-10 school year.
- An addition to a middle school that opened in September 2006 received partial funding from a developer. To stay on schedule, the county funded and the school system built the addition even in the absence of State planning approval. The developer agreed to pay the interest for up to seven years on the funds that the County borrowed in advance of the State share it anticipated receiving through the CIP approval process. If State funds had not been received at the end of seven years, the county agreed to assume the interest payments from the developer. However, State funding for the project was completed in FY 2008, releasing the developer from the obligation.
- *Garrett County Public Schools* has completed an addition to Grantsville Elementary School that includes spaces for both kindergarten and a Head Start program. The Head Start portion of the addition is funded by a federal Community Development Block Grant (CDBG) secured by Community Action, a local non-profit entity. This approach mirrors projects carried out elsewhere that have used funds from public sector entities or non-profits, e.g. the Maryland-National Capital Park and Planning Commission in Prince George's County, to build facilities that provide services to the public in the same facility that houses a school. The approach reinforces the identity of the school as a community center.
- *Montgomery County Public Schools*. In 2008 MCPS entered into a cooperative financing agreement with Real Maryland, a professional soccer team, to help finance the installation of an artificial turf field at Richard Montgomery High School. In exchange for funding approximately 30 percent of the cost of the field, the team was granted preferred scheduling of the field during non-school activity hours. The arrangement also provides additional hours of use for other community users through the county's office of Community Use of Public Facilities. A similar arrangement has been approved for a local youth soccer organization to help finance an artificial turf field at Walter Johnson High School as part of the school's renovation project.
- *Washington County Public Schools*. In 2002 a community group approached WCPS to build a stadium and track for North Hagerstown High, which did not have a stadium and shared facilities with South Hagerstown High School. The community group obtained \$3,500,000 in pledges and donations for design and construction costs in the form of funds and in-kind donations from private and corporate donors, contractors and suppliers, the State's Program Open Space (POS) fund, the City of Hagerstown, and State general obligation bond proceeds (outside of the Public School Construction Program). On the basis of pledges for future and periodic donations secured by the community group, the County Commissioners provided interim cash flow and financing for the project.

The project, now substantially complete, was delivered through a Construction Management Agency method using competitive sealed bidding of trade contractors. Using this project as a model, the Board is encouraging other community groups to develop similar cooperative projects.

The use of historic tax credits can also be considered a form of alternative project funding. As described above, both the Baltimore School for the Fine Arts and the Barbara Ingram School for the Arts in Hagerstown used historic tax credits for the renovation of their facilities. Since these credits are only available to private entities, access to them requires establishing a third party, typically a non-profit 501(c)3 corporation, as intermediary. There are few school buildings in Maryland that are eligible for historic designation, but this source of funding can be considered in unique circumstances.

### **Project Procurement**

Competitive sealed bidding remains the preferred procurement method among the LEAs for construction services. The method has the advantage of complete objectivity, since selection is based on a single factor, price. The simplicity and transparency of the method are also attractive. St. Mary's County Public Schools writes, "Given ample planning time and quality design documents, competitive sealed bids have consistently resulted in cost effective and high performance educational facilities."<sup>9</sup> A major drawback, however, is the potential for the bid prices to be substantially higher than the budget allows, because estimates by the owner, architect, or even professional estimator may not reflect the precise bid climate that prevails on bid day. If costs are high relative to budget, the owner has three options, all unattractive: seek additional funds from the local fiscal authority; re-bid the project with the same scope, with the risk that market conditions may be even worse on the new bid day; or re-scope the project, incurring substantial delays and again with no assurance about the condition of the bidding market on a now distant bid day.

A further drawback to this procurement method is that a bidder who has not adequately covered the project scope will have a strong incentive to reduce quality during construction. Both problems increase during times of rapid construction escalation, since the bidder must shoulder enormous cost risks, particularly for items or systems that have volatile pricing, e.g. petroleum-based products, or that have very long lead times, e.g. mechanical equipment and windows. Paradoxically, the problem has re-emerged during the current economic downturn, in which public sector work is increasingly attractive to construction firms. With intensive levels of competition for almost every bid, contractors have a powerful incentive to underbid the work, sometimes at or below cost. This dangerous practice can lead to either a reduction of quality or to change orders as contractors seek to recoup their losses. Large change orders or lack of accountability for schedule delays can also result from the adversarial relationship between owner and contractor that competitive sealed bidding tends to generate. While payment and performance bonds, required of all general contractors and of major subcontractors in some jurisdictions, alleviate some of these risks, dissatisfaction with this form of security has increased due to the slowness of the cure process and, in a few instances, the refusal of sureties to honor their obligation to remedy the defaults of their bond holders. General experience indicates that institutionalized security can only supplement, not substitute for, the experience, integrity, and personal commitment provided by a good contractor.

As a result of the liabilities inherent in competitive sealed bidding, a number of jurisdictions have embraced the multi-step sealed bid process, which requires bidders to pre-qualify for the specific project, often in addition to a general pre-qualification that applies to all projects. Short-listed constructors can then submit bids for the project. This approach typically results in a higher quality of bidder and consequently less risk to the owner, particularly with respect to change orders, schedule adherence, and a general improvement in teamwork and professionalism. School systems that use this method report a high level of satisfaction with the results, and the PSCP actively promotes the use of the approach whenever it is realistic. However, in locations where the supply of contractors and subcontractors is limited, there is concern that use of a method of selection based on any factor other than cost will diminish future competition by shrinking "an already small pool of prospective bidders. If, for example, the same electrical contractor was selected based on quality of bid rather than price, other prospective electrical bidders may stop coming to the table."<sup>10</sup>

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<sup>9</sup> J. Bradley Clements, Chief Operating Officer, St. Mary's County Public Schools, letter dated June 23, 2009

<sup>10</sup> Joseph Price, Facility Planner, Worcester County Public Schools, email dated August 1, 2007.

*Montgomery County Public Schools* uses a variant of the multi-step sealed bid process, in which contractors and subcontractors are pre-qualified for groups of projects based on their past record of successfully completing projects of similar scope and size. In order to become pre-qualified to bid on an upcoming project, a new subcontractor must submit qualification documents at least 30 days prior to the bid date. The 30-day requirement allows for the submission of references to a third-party survey company and the final evaluation of qualifications by MCPS staff, actions that must be completed prior to the time required for MBE outreach (10 days prior to bid-opening day). MCPS typically has two categories of projects for general contractors, those below \$1 million and those between \$1 million and \$10 million. Projects greater than \$10 million are procured using the Construction Management At-Risk method.

Competitive negotiation, in which a vendor is selected based initially on qualifications followed by negotiation over scope of services and cost, continues to be the preferred method of obtaining professional design and Construction Management Agency (CMA) services. In these areas of professional practice, quality of service is a paramount concern and the measures of successful service are less objective than the cost of “bricks and mortar.” This method is also being successfully used to procure the services of the construction manager in Construction Management At-Risk (CMR) projects; generally, this procurement method is combined with competitive sealed bidding for the trade packages. While there is still hesitation to pay more than the lowest price for hard construction costs, competitive negotiation substitutes the concept of “best value” for “best price,” under the argument that a well-constructed, professionally delivered facility will ultimately be of greater value, and potentially of less cost, to the public than one that is fraught with defects and has been built through a contentious and possibly litigious process. Competitive negotiation is the only procurement method that seems reasonable when the project is at less than 100% completion of design on the date of award, for example in the Design-Build or in some variants of the Construction Management At-Risk delivery methods, because it allows the owner to work with the constructor and others to arrive at the scope of services and project scope that fit the budget objectives.

Maryland has seen an increase in intergovernmental purchase agreements for school construction projects, a process in which an LEA procures construction services through another governmental agency’s previously competed contract with a vendor. The method appears to work best for small projects that involve very uniform materials, standard construction details, and extensive, multi-project scopes, such as roofing and paving. *Baltimore County Public Schools* has procured roofing replacements through the Pennsylvania Education Joint Purchasing Council (PAEJPC), a member of the twenty-two state Association of Educational Purchasing Agencies (AEPA). The AEPA solicits bids for products and services through national advertisements and makes award to the lowest, responsible, and responsive bidder. PAEJPC members who use the program benefit from the ability to pick from quality contractors at pre-established bid prices for any type of roofing system. Since members do not have to solicit their own bids, project approval times can be significantly reduced. All multi-state vendors are fully bonded and have met the bidding requirements for the various states in which they propose to work. BCPS reports that it has enjoyed guaranteed, quality workmanship overseen by the PAEJPC, and that the ability of the roofing services vendor to pick qualified roofing contractors has provided an almost risk-free roof replacement program. The services that are currently being provided include full time project management, allowing the school system to reduce its commitment of staff to manage the projects.

### **Project Delivery**

With the high level of State and local funding now dedicated to school construction, project procurement has become a lively arena for investigating new methods and discussing lessons learned. Project delivery affects every aspect of the project: the design approach, the schedule, the costs, the quality, and ultimately the satisfaction of the owner and the building’s users. In September 2007, the Public School Construction Program led a discussion among LEA facility planners to assess their current perceptions of the advantages and disadvantages of the various delivery methods described below. While experiences vary widely, the Construction Management At-Risk (CMR) delivery method offers schedule, cost, teamwork, and risk advantages that make it an attractive alternative to more traditional approaches. Use

of this trend was made possible through the 2004 legislation that liberalized project procurement requirements to allow for competitive negotiation in place of competitive sealed bid.

General Contracting (GC) remains the project delivery method used for the majority of public school construction projects. It is appropriate for straightforward projects in which the design is complete on bid day and there are no unusual schedule, site logistic, or construction demands. The simplicity of having a single point of responsibility and of knowing all costs on bid day recommends this method. Most school systems pre-qualify their bidders; however, since the capacity of most LEAs to conduct in-depth investigations into contractors' experience and qualifications is highly constrained by their limited staff and time, the ability of the contractors to obtain bonding often stands as a substitute for other, more complex pre-qualification criteria. Unfortunately, experience shows that bonding can be easily obtained by contractors who later prove to be irresponsible, under-qualified, or unresponsive, and that bonding does not always provide sufficient protection to the owner in the event of contractor default. The result has been, in some cases, excessive change orders, poor coordination among subcontractors, and deficient quality requiring extensive close-out corrections and proceedings. In these circumstances, the architect as agent to the owner and author of the construction documents is frequently placed in an adversarial role relative to the contractor, a time-consuming situation that works at odds with the concept of a team approach. Consequently, some LEAs have moved toward other forms of project delivery, as well as to the use of the multi-step competitive sealed bid approach described above in order to pre-qualify general contractors for specific projects or types of projects.

Construction Management Agency (CMA), in which the LEA holds multiple trade contracts but engages a professional construction manager to provide pre-construction consultation as well as construction-phase management services, has in the last fifteen years joined general contracting as a conventional project delivery approach for Maryland public schools. Some school systems, for example *Howard County Public Schools* and *Anne Arundel County Public Schools*, use it for all or almost all their major projects. CMA is advantageous during periods of economic prosperity when there are a large number of bidding opportunities available to general contractors in the private and public sectors, often making it difficult for school projects in general, and school projects in remote areas in particular, to receive sufficient competition. Since CMA allows local trades to bid directly on projects, the owner and CM can reach out to smaller trade contractors who otherwise would only participate through a general contractor. Depending on the local capacity in a particular trade, the results have been very mixed, but the method allows an owner to re-bid specific trade packages when the results of the initial solicitations are not satisfactory. The method also allows the owner to break up trade packages into smaller components, making them more accessible to firms with lower bonding capacity, increasing the participation of small and disadvantaged contractors. *Anne Arundel County Public Schools* writes "AACPS will continue using CMA for our large projects and general contractors for smaller projects. This method is currently the best way for us to attract local small and minority businesses and compete for the contractors who are working on the many federal construction projects that are in our area."<sup>11</sup>

CMA is also attractive because the constructor is not in an adversarial relation to the owner and therefore can act as an extension of staff, a point that is particularly important for large jurisdictions executing multiple projects, or for small jurisdictions with severe staff limitations. *Worcester County Public Schools* writes:

"WCBOE Facilities Department consists of one individual. This staffing makes the use of construction management (agency) delivery method invaluable. CM is responsible for execution of the work and management of the prime contractors reducing the amount of project oversight required of the Facilities Department as compared to general contractor method."<sup>12</sup>

Experience indicates that the most important common factor in projects that have used CMA successfully is the experience and commitment of the construction management firm itself, implying that selection of the CM needs to be done carefully and using well-tested procurement instruments that fully define the scope

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<sup>11</sup> Sandra Hughes, Manager of Facilities, Anne Arundel County Public Schools, email dated June 29, 2009.

<sup>12</sup> Joseph Price, Facility Planner, Worcester County Public Schools, email dated August 1, 2007

of services that are expected to be provided. A negative aspect of CMA is that the construction manager, as agent to the owner but not holder of trade contracts, is not at risk for the schedule, cost, or quality of the project. This point has become increasingly prominent in recent years, and has led some LEAs to adopt the Construction Management At-Risk (CMR) method described below. LEAs that like the CMA method have tended to use the same construction management firms for repeat projects, building up a solid client-consultant relationship and mitigating the effects of problematic projects with those that run smoothly. There have been instances, however, in which LEAs experienced excessive CMA fees when projects were extended past their completion dates due to bankruptcy or other performance issues among the trade contractors. LEAs also report that not being at risk, CMAs appear to be less inclined to fight for the owner's interests in disputes with the trade contractors, and to demand the level of accountability and contract follow-up that is necessary to maintain the schedule.<sup>13</sup> Just as CMA procurement needs to ensure that the construction manager is capable of forcefully managing the project with the owner's interests in mind, CMA contracts need to be written very carefully in order to limit the liabilities of the LEA in the event of unforeseen conditions, an extended schedule, or trade contractor default.

Construction Management At-Risk (CMR) is a method in which a construction management entity is involved in the project during design and then offers a Guaranteed Maximum Price (GMP) prior to the start of construction. It is frequently stated that CMR combines the advantages and corrects the deficiencies of both the General Contracting and the Construction Management Agency delivery methods. Like General Contracting it establishes a single point of responsibility, the CMR, which carries all risk for the project schedule and cost; like Construction Management Agency, it allows this constructor to be deeply involved in the early design process, helping to tailor the project scope to the approved budget before the owner is obligated to make a decision to proceed, and it provides considerable flexibility in the selection of the trade contractors.

In the private sector, in which negotiated contracts are the rule, the GMP is generally offered before the construction documents are complete, allowing the owner to work with the CM to arrive at a final scope of work that meets both the performance objectives of the project and the owner's project budget. In the public school construction arena, LEAs that have used CMR have selected the CM through a competitive negotiation process early in the design process, giving high priority to the CMR's qualifications, including previous experience with similar projects and their overall record of responsibility, integrity, and responsiveness. However, in contrast to the private sector, these LEAs have elected to have the trade contractors selected through a competitive sealed bid process, based on 100% complete construction documents. While this approach reduces the flexibility of the CMR to put forward value engineering suggestions in order to align the project scope with the budget, it also has a level of objectivity that virtually ensures that protests will not be upheld based on a charge of subjectivity in the selection of the trade contracts. The process of trade selection is already very familiar to the bidding community, and it allows Minority Business Enterprise goals and subgoals to be established for each individual trade package. In distinction to the individual package goals and subgoals that apply to the trade contractors, the CMR is obligated to meet or exceed the overall *project* MBE goal and subgoals, or to request a waiver. While trade contractors are obligated to meet the MBE goal and/or subgoals for their particular trade or to request a waiver if the goal and/or subgoals cannot be met, the CM has the latitude to work with the trade contractor during the post-bid, pre-GMP period to increase the MBE participation within the trade. Without violating the integrity of the State MBE process, CMR introduces a level of flexibility that has produced high MBE participation levels in areas of the state which previously delivered very little participation.

Since the CMR approach works best if the GMP can be negotiated between the owner and the CM, it was not widely used for public schools in Maryland before the Public School Facilities Act of 2004 enabled the use of competitive negotiation for project procurement. In the standard method for procurement described above, the entirety of the construction value is awarded through a combination of competitive negotiation for the CM's fee and general conditions, or through competitive sealed bids for the trade

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<sup>13</sup> Brian Foret, Director of Facilities Services, Wicomico County Public Schools, email dated September 5, 2007

packages. Under the regulations that govern delivery of public school construction projects (COMAR 23.03.04.06), this approach avoids the necessity for the LEA to re-solicit the entire GMP, a procedure that could possibly result in engagement of a different construction-phase CMR from the CM which provided services during pre-construction.

Those LEAs that have put CMR into effect report that teamwork has improved on the project, change orders have been reduced, and project schedules have exceeded expectations. Several school systems that are using CMR report that their projects are substantially ahead of schedule. Caroline County Public Schools writes "Our previous two major projects were performed using a different methodology and neither was completed on time, yet this project is ahead of schedule. The major difference is the increased level of risk associated with not completing on time that is passed on to the Construction Management firm."<sup>14</sup> However, during the current economic downturn a number of projects using various delivery methods have been reported ahead of schedule. It is difficult to determine if the reported acceleration is due to the increased level of risk associated with not completing on time that is passed on to the Construction Management firm in a CMR structure, or to the increased availability of quality subcontractors who have sufficient workforce in place. It may also be due to a unique combination of these factors: quality contractors are attracted to the CMR arrangement, and concurrently the CM is incentivized to deliver the project ahead of schedule due to the large risk associated with delays.

- *Carroll County Public Schools* is using CMR for a large high school HVAC replacement project. The CMR was selected via a two step procurement process utilizing qualifications to develop a short list and sealed competitive bids for the selection of the successful firm, establishing the GMP. This method was possible because the design documents were 100% complete and pre-construction services had been provided by a firm other than the successful firm. This school system is also pursuing the procurement of CMR for the replacement of a middle school. The CM for this project will be selected through a competitive sealed proposal process and the trade packages will be selected through competitive sealed bids in order to establish the Guaranteed Maximum Price (GMP).
- *Caroline County Public Schools* and *Dorchester County Public Schools* are utilizing CMR services, respectively, for renovation of a major high school and replacement of the Dorchester Career and Technology High School (DCTC). In each case, the CMR was selected through competitive negotiation and the trade packages through competitive sealed bid. The facility planner for Dorchester County Public Schools, who has extensive private-sector experience with a variety of delivery methods, has written:

"[We] are convinced that CM at Risk is the best delivery method to control cost, schedule, engender a team approach to the project and ultimately to deliver a high quality, well thought out facility that will stand the test of time. The project team has the incentive to pursue both quality and profit in an atmosphere of trust and mutual respect. The owner mitigates the risk on the front end by knowing the "price tag" for a given scope at the outset."<sup>15</sup>

Dorchester County Public Schools reports that at 50% completion of the DCTC project, cost, quality and schedule have been quantifiable and manageable. The project is currently moving forward on budget and schedule, despite losing over 60 days due to the severe weather of the previous winter.

- *Montgomery County Public Schools* has used a modified form of the CMR approach, in which the LEA procures certain major trades independently through a multi-step sealed bid process and then assigns them to the CMR as part of the GMP. The balance of the trade packages are procured by the CMR through competitive sealed bids.

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<sup>14</sup> Milton Nagel, Chief Operating Officer, Caroline County Public Schools, email dated August 3, 2010.

<sup>15</sup> Christopher Hauge, School Facilities Engineer, Dorchester County Public Schools, email dated July 24,

- *Prince George's County Public Schools* has obtained pre-construction and construction-phase services for a major high school replacement project through a process of competitive negotiation that was exceptionally objective, involving a rigorous point system. The CMR will present the GMP during the Design Development phase, i.e., at approximately 50% to 70% of design completion. The trade packages will be procured through competitive sealed bidding, obligating the CMR to re-bid or re-scope individual packages as necessary in order to bring costs within the GMP.
- *Wicomico County Public Schools* is using CMR for the replacement of James M. Bennett High School. Since the construction documents were 100% complete, the CMR was selected using a two-step competitive negotiation process. The GMP was then finalized by using competitive sealed bidding for the individual trade packages. WCPS writes that "we have found so far that the CMR contract structure creates a more cooperative project team during construction in comparison to our CMA experiences providing the Owner with quicker solutions. In addition the Owner is more insulated from the overall number of contract disputes that are inevitable in any construction project."<sup>16</sup> Based upon this experience, WCPS intends to use CMR with a similar procurement approach for the replacement of Bennett Middle School.

Design-Build (DB), in which a single entity is responsible for both design and construction of the project, has been used only for small projects, e.g. replacement of a portion of a mechanical system, science classroom renovations, and open space classroom enclosures. No large school construction project in Maryland has been carried out using DB. This is partly due to the increased management responsibilities placed on the owner, requiring qualified owner staff or contracted outside services to ensure proper oversight. In addition, there are concerns about releasing control of the design process to an entity other than the owner's architect, who serves as an independent check on the constructor. In a 2005 experience, the constructor wing of the DB entity refused to honor its initial cost estimate for a major addition project because of cost escalation, and withdrew from the project just before construction was to begin. Since a performance bond is not normally in effect for the pre-construction part of the DB process, the LEA in this situation had no recourse but to convert the project to a conventional general contracting approach, with attendant delays and costs. This failure of the DB to deliver as promised stands as a warning about a potential vulnerability in the DB process when applied to large projects.

Job Order Contracting (JOC), in which a constructor bids only on the overhead and profit associated with an extensive fixed-price list of construction items, has been used successfully for smaller projects by several LEAs. It can be used with a design-build approach, for example with mechanical system retrofits and open space classroom renovations that are relatively small in scope but require initial investigation to uncover existing conditions and arrive at the best solution. With the exception of locally-funded science classroom and open space classroom renovation projects in Prince George's County, no school system has used this method to build a major project. *Montgomery County Public Schools* writes that "for most systemic projects, it is less expensive to do public bids with defined scopes and drawings."<sup>17</sup>

## CONCLUSION

Following enactment of the Public School Facilities Act of 2004, the private sector was active in soliciting the interest of school boards and county governments to use alternative financing arrangements for school construction. To date, the response of the LEAs has been largely tentative: many are interested, but almost all want to see a successful educational project completed in another jurisdiction before they are willing to engage in the complexity and risk of developing their own procurement. However, two jurisdictions have initiated studies to determine if, in today's relatively favorable market, alternative financing can accelerate needed projects or expand the range of projects that can be undertaken. The Barbara Ingram School for the Arts project in Washington County may serve as the test case that will

<sup>16</sup> Leisl Ashby, Facility Planner, Wicomico County Public Schools, email dated July 27, 2010.

<sup>17</sup> James Song, Director, Division of Construction, Montgomery County Public Schools, letter dated August 2, 2007

encourage other LEAs to investigate alternative financing for their school construction tasks. Meanwhile, interest on the part of both the LEAs and the private sector continues to shift toward the construction of central administration facilities. Concurrently, the PSCP is evaluating whether some form of the public private partnership (PPP) structures used in England, Scotland, and Canada might have application in Maryland.

While interest in alternative financing remains hesitant, the liberalized procurement and project delivery methods made available by the Public School Facilities Act of 2004 have substantially broadened the range of tools available to the LEAs to achieve their school needs. The ability to negotiate scope and price when justified by circumstances opens the field of public school construction to the Construction Management At-Risk project delivery method, which is currently being applied successfully in a limited number of major projects around the state. Through these techniques and through access to potential private capital, the range of tools available to school districts and county governments to meet their school facility needs has been greatly expanded by enactment of the Public School Facilities Act of 2004.

## APPENDICES

### A. Alternative Financing Subcommittee, Task Force to Study Public School Facilities

- Dr. David Lever, Chair, Executive Director, Public School Construction Program
- Ms. Jan Gardner, County Commissioner, Frederick County Board of County Commissioners
- Dr. Nancy Grasmick, State Superintendent of Schools
- Mr. David Harrington, Member, Prince George's County Council
- Senator Patrick J. Hogan
- Mr. Roy Kirby, President, Roy Kirby Construction, Inc.
- Mr. Brian Morris, Member, Board of School Commissioners, Baltimore City Public Schools
- Mr. Daniel Smith, private environmental consultant
- Dr. Yale Stenzler, former Executive Director, Public School Construction Program
- Mr. Konrad Wayson, Member, Board of Education, Anne Arundel County Public Schools
- Mr. Tim Woodring, Member, Board of Education, Allegany County Public Schools

### B. Senate Bill / 787House Bill 1230: Public School Facilities Act of 2004

#### Public School Facilities Act of 2004

#### Article - Education

#### Provisions on Alternative Financing and Project Delivery

##### 4-114.

- (a) All property granted, conveyed, devised, or bequeathed for the use of a particular public school or school system:
- (1) Except as provided in subsection (c) of this section, shall be held in trust for the benefit of the school or school system by the appropriate county board; and
  - (2) Is exempt from all state and local taxes.
- (b) Money invested in trust for the benefit of the public schools for any county or city is exempt from all state and local taxes.
- (c)
- (1) A private entity may hold title to property used for a particular public school or local school system if the private entity is contractually obligated to transfer title to the appropriate county board on a specified date.
  - (2) The conveyance of title of school property to a private entity for a specified term under this subsection may not be construed to prohibit the allocation of construction funds to an approved school construction project under the Public School Construction Program.
  - (3) A county or county board may convey or dispose of surplus land under the jurisdiction of the county or county board in exchange for public school construction or development services.

##### 4-126.

- (a) In this section, "alternative financing methods" includes:
- (1) Sale-leaseback arrangements, in which a county board agrees to transfer title to a property, including improvements, to a private entity that simultaneously agrees to lease the property back to the county board and, on a specified date, transfer title back to the county board;
  - (2) Lease-leaseback arrangements, in which a county board leases a property to a private entity that improves the property and leases the property, with the improvements, back to the county board;
  - (3) Public-private partnership agreements, in which a county board contracts with a private entity for the acquisition, design, construction, improvement, renovation, expansion, equipping, or financing of a public school, and may include provisions for cooperative use of the school or an adjacent property and generation of revenue to offset the cost of construction or use of the school;

- (4) Performance-based contracting, in which a county board enters into an energy performance contract to obtain funding for a project with guaranteed energy savings over a specified time period; and
  - (5) Design-build arrangements, that permit a county board to contract with a design-build business entity for the combined design and construction of qualified education facilities, including financing mechanisms where the business entity assists the local governing body in obtaining project financing.
- (b) Except when prohibited by local law, in order to finance or to speed delivery of, transfer risks of, or otherwise enhance the delivery of public school construction, a county may:
- (1) Use alternative financing methods;
  - (2) Engage in competitive negotiation, rather than competitive bidding, in limited circumstances, including construction management at-risk arrangements and other alternative project delivery arrangements, as provided in regulations adopted by the Board of Public Works;
  - (3) Accept unsolicited proposals for the development of public schools in limited circumstances, as provided in regulations adopted by the Board of Public Works; and
  - (4) Use quality-based selection, in which selection is based on a combination of qualifications and cost factors, to select developers and builders, as provided in regulations adopted by the Board of Public Works.
- (c) The Board of Public Works shall adopt regulations requiring a project that qualifies for alternative financing methods under this section to meet requirements regarding the advantages of the project to the public that include provisions addressing:
- (1) The probable scope, complexity, or urgency of the project;
  - (2) Any risk sharing, added value, education enhancements, increase in funding, or economic benefit from the project that would not otherwise be available;
  - (3) The public need for the project; and
  - (4) The estimated cost or timeliness of executing the project.
- (d) Projects that qualify for alternative financing methods under this subsection:
- (1) Shall meet the educational standards, design standards, and procedural requirements under this article and under regulations adopted by the Board of Public Works; and
  - (2) Consistent with the requirements of this article, shall be approved by:
    - (i) The county governing body;
    - (ii) The state Superintendent of Schools; or
    - (iii) The Interagency Committee on School Construction and the Board of Public Works.
- (e) Use of alternative financing methods under this section may not be construed to prohibit the allocation of state funds for public school construction to a project under the Public School Construction Program.
- (f) A county board may not use alternative financing methods under this section without the approval of the county governing body.
- (g) The Board of Public Works shall adopt regulations recommended by the Interagency Committee on School Construction to implement the provisions of this section, including:
- (1) Guidelines for the content of proposals, for the acceptance and evaluation of unsolicited proposals, and for accepting competing unsolicited proposals;
  - (2) Requirements for the content and execution of a comprehensive agreement governing an arrangement authorized under this section;
  - (3) Guidelines for content and issuance of solicitations;
  - (4) Requirements for the prequalification of bidders or offerors;
  - (5) Requirements for public notice of solicited and unsolicited proposals and proposed execution of a comprehensive agreement;
  - (6) Regulations that require compliance with requirements applicable to qualified projects that would otherwise be in effect under the state procurement law if the procurement were competitively bid; and
  - (7) Regulations that require that contracts and subcontracts adhere to the requirements of title 17, subtitle 2 and title 14 of the State Finance and Procurement Article if the requirements would otherwise be applicable.

### **C. Workgroup on Project Procurement, Delivery, and Alternative Financing**

- Dr. David Lever, Chair, Executive Director, Public School Construction Program
- Mr. Adam Zimmerman, Vice-Chair, Program Manager, Public School Construction Program
- Mr. Donald Arnold, Member, Board of Education, Baltimore County Public Schools
- Dr. William AuMiller, Superintendent, Allegany County Public Schools
- Mr. Ray Barnes, Executive Director, Frederick County Public Schools
- Mary Jo Childs, Esq., Counsel, Board of Public Works
- Mr. Bernard Fox, Supervising Budget Examiner, Department of Management & Budget
- Ms. Jan Gardner, County Commissioner, Frederick County Commissioners
- Mr. Richard Hawes, Director, Facilities Management, Montgomery County Public Schools
- Mr. Carl LaVerghetta, Director of Procurement, Department of General Services
- Mr. Rupert McCave, Capital Improvement Program Officer, Prince George's County Public Schools
- Sheila McDonald, Esq., Executive Secretary, Board of Public Works
- Mr. Gary McGuigan, Project Director, Maryland Stadium Authority
- Mr. Mark Moran, Facilities Planner (retired), Anne Arundel County Public Schools
- Mr. John O'Neill, Director of Administration, Harford County Government
- Elizabeth Roese, Esq., Director, Public Finance, Office of the Attorney General
- Dr. Bernard Sadusky, Superintendent, Queen Anne's County Public Schools
- Elliott Schoen, Esq., Assistant Attorney General, Office of the Attorney General
- Dr. Beatrice Tignor, Chair Board of Education, Prince George's County Public Schools; Director of Procurement, Montgomery County Government
- Dr. Jerry Weast, Superintendent, Montgomery County Public Schools

### **D. Workgroup on Public School Construction Regulations**

- Mr. Allen Abend, RA, Deputy Director, Public School Construction Program
- Mary Jo Childs, Esq., Counsel, Board of Public Works
- Dr. David Lever, Executive Director, Public School Construction Program
- Sheila McDonald, Esq., Executive Secretary, Board of Public Works / Treasurer
- Elliott Schoen, Esq., Assistant Attorney General, Office of the Attorney General

### **E. Public Private Partnerships in Canada, England, and Scotland: Resources**

Note: All items below are available on the internet. Web sites are listed where known.

#### Canada

- Infrastructure Ontario, "Assessing Value for Money: A Guide to Infrastructure Ontario's Methodology" (2007)  
(<http://www.infrastructureontario.ca/en/projects/files/VFM-GUIDE-WEB.pdf>)
- Ministry of Public Infrastructure Renewal, "Building a Better Tomorrow: Investing in Ontario's Infrastructure to Deliver Real Positive Change," February 2004  
(<http://www.ontla.on.ca/library/repository/mon/7000/10319145.pdf>)
- Office of the Auditor General Nova Scotia, 1999 Report, Chapter 5, "Education: Public-Private Partnerships (P3s) for School Construction – Follow-up Review"  
(<http://www.oag-ns.ca/1999ag.htm>)
- Office of the Auditor General Nova Scotia, February 2010 Report, Chapter 3, "Education: Contract Management for Public-Private Partnership Schools"  
(<http://www.oag-ns.ca/feb2010/full0210.pdf>)

- Ontario Secondary School Teachers' Association (OSSTF/FEESO), "Just say 'NO' to Privatization and P# schools: OSSTF Response to 'Building a Better Tomorrow: Investing in Ontario's Infrastructure to Deliver Real Positive Change'," March 30, 2004  
(<http://www.osstf.on.ca/adx/asp/adxGetMedia.aspx>)

#### England

- CABE (Commission for Architecture and the Built Environment), "Creating Excellent Secondary Schools: A guide for clients," 2007  
(<http://www.cabe.org.uk/publications/creating-excellent-secondary-schools>)
- CABE, "Client Guide: Achieving Well Designed Schools Through PFI," September 1, 2002  
(<http://www.cabe.org.uk/publications/achieving-well-designed-schools-through-pfi>)
- National Audit Office, "The Building Schools for the Future Programme: Renewing the Secondary School Estate," 2009  
([http://www.nao.org.uk/publications/0809/schools\\_for\\_the\\_future.aspx](http://www.nao.org.uk/publications/0809/schools_for_the_future.aspx))
- Department for Children, Schools and Families / Partnerships for Schools, "Building Schools for the Future," 2008 edition
- Department for Education and Skills, "Private Finance Initiative for Schools: A guide for School Governors and Governing Bodies," 2002
- Global Legal Group, "The International Comparative Legal Guide to: PFI / PPP Projects 2007," Chapter 4, "England and Wales"
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([http://www.teachernet.gov.uk/\\_doc/14728/DCSF\\_BSF\\_Final\\_Report.pdf](http://www.teachernet.gov.uk/_doc/14728/DCSF_BSF_Final_Report.pdf))

#### Scotland

- Audit Scotland, "Taking the initiative: Using PFI contracts to renew council schools," June 2002  
([http://www.audit-scotland.gov.uk/docs/local/2002/nr\\_020612\\_PFI\\_schools.pdf](http://www.audit-scotland.gov.uk/docs/local/2002/nr_020612_PFI_schools.pdf))
- Scottish Futures Trust (<http://www.scottishfuturestrust.org.uk>)
- Scottish Futures Trust Business Plan 2010 – 2011  
(<http://www.scottishfuturestrust.org.uk/docs/80/Business-Plan-2010v1.pdf>)
- Scottish Futures Trust Corporate Plan 2009 – 2014  
(<http://www.scottishfuturestrust.org.uk/docs/44/SFT-Corporate-Planv-181109.pdf>)