

Attachment 1

Recommendations for Standards on School Facilities Planning and Design, Construction and Renovation, and Maintenance and Operations Pursuant to SB 1124

Introduction

The 2023 General Assembly passed [SB 1124](#) requiring the Virginia Board of Education (“Board”) to make recommendations to the General Assembly for amendments to the Standards of Quality establishing standards for the maintenance and operations, renovation, and new construction of public elementary and secondary school buildings. This legislation also requires the inclusion of standards for the percentage of the current replacement value of a public school building that a school board should budget for the maintenance and operations of the building as well as other standards as the Board deems appropriate. To develop these recommendations, the Board was required to solicit the input of relevant stakeholders including the public. The Board’s final recommendations are to be submitted to the Chairmen of the House Committee on Education and the Senate Committee on Education and Health no later than July 1, 2024.

Stakeholder Workgroup Process

To seek input from relevant stakeholders, Department of Education staff established a workgroup comprised of various stakeholders. Department staff on the workgroup included the Chief of Staff, Deputy Superintendent of Operations, Assistant Superintendent of Policy and Government Relations, and the Director of Support Services.

External stakeholder members of the workgroup included representatives from the following organizations:

- Office of the Secretary of Education
- Virginia School Plant Managers Association
- Virginia School Boards Association
- Virginia Association of Counties
- Virginia Municipal League
- Virginia Association of School Business Officials
- Virginia Association of Elementary School Principals
- Virginia Association of Secondary School Principals
- Virginia Association of School Superintendents
- Association for Learning Environments
- National Council on School Facilities
- Virginia PTA
- Department of General Services
- American Institute of Architects - Virginia Chapter

The workgroup meetings were led by the Chief of Staff and the Deputy Superintendent of Operations. The dates and topics of the workgroup meetings were as follows:

- **October 4, 2023** - Organizational Meeting: welcome/introductions, purpose, overview of topics for future meetings, discussion of current school facilities issues, proposed schedule of workgroup meetings and activities.
- **November 8, 2023** - Standards for Building Planning and Design: overview of topics related to standards for school facilities planning and design, workgroup discussion and feedback, other topics or areas for consideration from the workgroup.
- **December 13, 2023** - Standards for Construction/Renovation: overview of current VDOE Guidelines for School Facilities, presentation by representative from the National Council on School Facilities on other factors to consider, workgroup discussion and feedback.
- **January 3, 2024** - Standards for Post-Construction Operations and Maintenance: VDOE staff overview, percentage of Current Replacement Value (CRV) for budgeting, presentation on CRV scenarios and standards using Virginia data sources, workgroup feedback and discussion.
- **February 14, 2024** - Discuss and Draft Recommendations: overview of key priorities, themes, and focus areas to include in recommendations to be considered by the Board of Education at its April 2024 meeting, format of recommendations document, standards content applicable to all divisions (i.e., planning/design, construction phase, operations and maintenance).
- **March 13, 2024** - Recommendations Feedback: finalize workgroup input included in recommendations to be considered by the Board of Education at its April 2024 meeting.

The SB 1124 workgroup makes the following recommendations related to school facilities standards as outlined in the remaining sections of this report.

School Facilities Maintenance and Operations Standards

School facilities maintenance and operations standards should reflect the vision and mission of the school board and locality for their schools by establishing industry level-acceptable plans for maintenance and upkeep of school facilities that will extend facility lifespans, result in increased efficiency, reduction in energy usage/cost, and improved overall health and safety and quality of learning space environments.

Specific school facilities maintenance and operations standards recommendations include:

1. Local school boards will develop a School Facilities Maintenance Plan that provides a detailed strategy for proactively maintaining school facilities.
2. Local school boards will prepare an annual budget to support their established School Facilities Maintenance Plan. When establishing this budget, it is recommended that school boards develop Key Performance Indicators (KPIs) that help identify areas of savings/efficiencies relative to resource levels and that help support positive impacts on

student outcomes and wellbeing. Such KPIs may include custodial workload (district wide as well as by site), work order completion time and rate, supply costs, and worker turn-over ratios as well as time to fill-in-vacancies. Local school boards will include local stakeholders in developing the School Facilities Maintenance Plan to be reviewed and updated annually.

3. In alignment with [Code of Virginia § 22.1-138.1. School Maintenance Program Established.](#), school boards will evaluate existing facilities through facility audits and regular inspections using a Building Conditions and Maintenance Checklist that includes the physical structure, building systems, playgrounds, and athletic facilities. These inspections may include quarterly visual inspections and an annual detailed inspection using the Building Conditions and Maintenance Checklist or scheduled based on industry best practices or the local School Facilities Maintenance Plan.
4. School divisions will establish standard cleaning protocols and will implement maintenance, repair, and service plans to include the scheduling of routine maintenance, keeping maintenance equipment and spare parts inventory up to date, and develop a program for ongoing school maintenance needs.
5. It is recommended that school divisions provide regular training opportunities to ensure that their facilities, operations, maintenance, and custodial personnel are knowledgeable of and can apply the latest industry standards and best practices associated with their areas of responsibility.
6. Local school boards will calculate two industry standard building condition/replacement cost metrics: the Current Facility Replacement Value (CRV) and the Facility Condition Index (FCI). These metrics will be calculated for all school facilities in the division on a rotating schedule, not to exceed three years per facility, or more frequently in the event of a major physical or structural change to a facility or if used to establish and maintain a Maintenance and Operations Reserve Fund as discussed in Item 7.
7. The *Current Replacement Value* of school facilities is defined as the current cost of replacing the facilities on comparable sites (not the cost of original construction) and the total expenditure to meet currently acceptable standards of construction, facility regulatory requirements, and the changing needs of instructional programming and approaches housed within the buildings as follows:

Current Facility Replacement Value (CRV) = *gross square footage of existing building X estimated cost per square foot to design and build a new school of comparable size on a comparable site.*

The CRV is a key element of the Facility Condition Index metric described below and of the Maintenance and Operations Reserve Fund discussed in Item 7.

The *Facility Condition Index (FCI)* is used to provide a benchmark to compare the relative condition of a group of facilities and to aid in facilities investment decisions. FCI of a facility is calculated by estimating the cost to repair and modernize all building

systems of a facility to like-new condition divided by the current replacement value of the facility as follows:

Facility Condition Index (FCI) = *cost to correct facility deficiencies to like-new condition / Current Replacement Value (CRV) of facility.*

The FCI is a standard industry metric helpful in determining whether it is more economical to fully modernize a school facility or to replace it. An FCI of a facility greater than one may indicate it is more cost-effective to replace the facility rather than to modernize it.

8. School facility assessments should be a routine part of the building maintenance program. Findings of annual assessments can inform building maintenance strategies and future needs that the aging process might place on a school facility. Assessment information can increase the efficiency, cost effectiveness, and longevity of school facilities and improve long-term planning of school facility needs.

An industry standard recommendation is to annually budget for routine maintenance and repair of school facilities based on two to four percent of the aggregate current replacement value of facilities (excluding land and major associated infrastructure).

For a school division's annual maintenance and repair budget, this would represent a percentage of its total CRV as follows:

Maintenance and Operations Reserve (MOR) Funds = *budgeted percentage of aggregate Current Replacement Value (CRV) of school facilities.*

9. Local school boards will seek to establish cost or service sharing agreements and cooperative procurement arrangements with their locality or with other school divisions or localities for school facilities-related operations and maintenance purchases or provision of services.

School Facilities Renovations Standards

School facilities standards should include expectations for key facilities planning processes such as master planning, capital projects planning, individual project planning, maintenance and operations planning, and emergency preparedness planning. The planning process should consider current and future student enrollment trends affecting the need for new and renovated facilities and possible future school consolidations. Changes in educational best practices and learning that impact the design of educational spaces such as competency-based learning models should be considered in the early planning and design process. Public school facilities should be designed and built to support these best practices and include input from teachers, parents, students, and community members. The design of public schools should maximize shared community use of the school property and buildings.

It is recommended school facilities renovation be defined in two categories: major and minor. *Major school facilities renovations* involve structural changes to the foundation, roof, floor, exterior or load-bearing walls of an existing facility, envelope improvements including complete replacement of windows and doors, upgrades to major building systems including HVAC, electrical, and plumbing. The definition extends to building wide interior upgrades and extensive alteration of the facility to achieve a modernized facility and to extend the life of the building for at least 20 years. *Minor school facilities renovations* would be improvements to the interior or exterior of an existing facility to include replacing broken individual doors or windows, upgrade of interior walls and floor finishes, small bathroom updates and minor interior non-structural improvements such as adding new entry vestibules, small media center, cafeteria or theater alterations, and ADA bathroom, ramps, and handrails upgrades.

Specific school facilities renovations standards recommendations include:

1. School divisions planning a capital project, irrespective of funding source, shall establish a Local Building Committee that may be used to assist the school division with large-scale or complex projects or those with significant community impact as deemed necessary by the local school board. This Local Building Committee may be comprised of, but not limited to, an architect, planner, parent representatives, project management personnel, local stakeholders (including local government representatives), business representatives, and others. This Committee will support the school division in the implementation of the project by participating in the process of designing, bidding, evaluation of proposals for Design Build, bidder prequalification, or other project delivery methods such as Public-Private Partnership (PPP) and Construction Management At-Risk (CM At-Risk).
2. As part of master, capital, and project planning, finance and budget planning processes will consider budgeting for long-term capital projects, financing, and project delivery methods, building longevity, all-in cost of school facilities, and the indebtedness level of the associated locality. School divisions should aim to provide high-performance buildings as a valued community asset by minimizing negative impacts of renovation and new construction projects, including limiting harm to the site and surrounding area, including soil, water resources, air quality, and noise.
3. Quality school design will reflect the needs of a community for a quality educational program in modern facilities, with priority given to providing a safe and secure environment for all users that supports overall student and staff success and well-being. Site factors such as local zoning, physical hazards, ease of access, proximity to student populations, roadways, and public utilities, and adequate acreage should be considered. Consideration shall also be given to possible future expansion requirements, school redesigns, or school consolidations based on current and future student enrollment trends.
4. The VDOE [Guidelines for School Facilities in Virginia's Public Schools](#) shall be used as the operational minimum design and maintenance standard, with flexibility for school

divisions' educational and space requirements due to class size preferences and local instructional goals and initiatives. Key features in the design process should include a healthy indoor school environment with adequate ventilation, air quality, lighting, space per student, and absence of hazardous materials, as well as prioritizing building safety and security through intentional building design approaches. It should also provide for comprehensive instructional and support spaces such as technology, media center, school counseling, health clinic, teacher workroom/lounge spaces, lab spaces, and flexible multi-use spaces accessible to students, teachers, and community members.

5. Building plans shall comply with applicable *Code of Virginia* requirements for public school building design and maintenance including all local, state, and federal building codes, regulations, and guidelines. Designs should seek to meet or exceed industry standards for high efficiency buildings, and applicable industry standards including Leadership in Energy and Environmental Design (LEED), American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), and EPA's ENERGY STAR program.
6. Local school boards will seek to establish cost or service sharing agreements and cooperative procurement arrangements with their locality or with other school divisions or localities for school facilities-related renovation purchases or provision of services.

New School Facilities Construction Standards

New school facilities construction standards will include considerations for use of new and sustainable materials and construction practices that promote health, energy-efficiency, and environmentally friendly schools that have a positive impact on student learning, teacher and staff well-being, and the community resulting in reduced emissions and lowered operating costs. This will create healthier indoor environments, improve student attendance rates, and facilitate higher productivity.

It is recommended that local school boards develop a master school facility plan that reflects the long-term goals of the school board and that considers current and future student enrollment trends at the school and division levels, including school consolidation opportunities. The goals of the master plan should be used to develop a Capital Improvement Plan (CIP) for the school division.

School facilities should be designed and built in a manner that supports educational best practices. Desired learning approaches should impact the design of educational spaces and should be considered in the early planning and design process with the goal of creating safe and secure, flexible, efficient, multi-purpose learning spaces. The design and construction of school facilities should also facilitate and enhance shared community use of the school property and buildings.

It is recommended that new school construction be defined as a new school building or facility, including replacement of an existing facility or an additional school on an existing site. It should

be noted that a new law effective July 1, 2024 ([HB462](#) and [SB474](#) were signed by the Governor in April 2024) allows for new school construction to include any building or facility used for career and technical education programs provided at any regional comprehensive school. Renovations/alterations to an existing building layout that results in the net increase of the square footage of the existing facility would also be included in the category of new construction.

Specific new school facilities construction standards recommendations include:

1. The scope of a construction project, which may include new construction and replacement construction, should be developed and refined through the master, capital projects, and individual project planning and design processes. All applicable codes, regulations, and guidelines and industry best practices are to be followed.
2. It is recommended that a construction monitoring team be set up to develop a construction schedule and to ensure project supervision including on-site administrative supervision by a qualified construction representative to protect the interests of the school board, the local governing body, and the community during construction.
3. Health and safety concerns to be addressed during construction will include protection of construction workers and building occupants from pollutants and excessive noise and preventing the accumulation of potential pollutants and hazardous materials on the site. Health and safety plans will follow the Occupational Safety and Health Administration's (OSHA) guidelines, and include education and training of workers, promote waste prevention, and proper handling of hazardous and non-hazardous materials.
4. Building integration steps will maintain the transparency necessary to keep community stakeholders updated on construction progress, and coordinate site issues with the locality. Construction phases should be phased to prevent indoor air quality issues and protect mechanical systems to ensure good indoor air quality after completion of the construction phase.
5. A building commissioning process should be considered to ensure equipment, systems, and controls providing lighting, HVAC, technology infrastructure, etc. are effectively working together in conformance with the design intent. Local school boards shall evaluate the costs and benefits associated with commissioning their project upon completion.
6. Permanent project documentation including As-Build final drawings, equipment manuals and warranties, and other documents shall be provided to the school division at this stage for retention.
7. Local school boards will seek to establish cost or service sharing agreements and cooperative procurement arrangements with their locality or other school divisions or localities for new school facilities-related construction purchases or provision of services.

Conclusion

These school facilities standards recommendations will assist school divisions in developing local best practices for the operation and maintenance, planning and design, and construction and renovation of their school buildings, with the goal to provide cost effective, healthy, safe, and

secure learning environments that support quality instructional delivery, student services, and community interests and use.

An additional goal of these standards recommendations is to maximize the impact of local and state funding investments in local school facilities and to maximize facility longevity and functionality. As required in the SB 1124 legislation, the workgroup recommends local school boards include a percentage of the aggregate current replacement value of its school facilities as an aspirational funding goal that may be included in the annual school board budgeting process for purposes of establishing a maintenance and operations reserve fund as local fiscal conditions and resource availability allow. At local option, it is recommended that local school boards annually fund two percent of the aggregate current replacement value of their school facilities inventory as a funding target in implementing a division wide maintenance and operations reserve fund. Two percent of aggregate current replacement value is within the standard industry range for funding such a reserve.

As an additional consideration, the stakeholder group recommends that any school facilities standards ultimately codified in the Standards of Quality within the *Code of Virginia* be operationalized in more detail within the [Guidelines for School Facilities in Virginia's Public Schools](#) to facilitate effective local implementation of the standards. This would require longer-term development and decision-making by the Department of Education and the Board of Education.