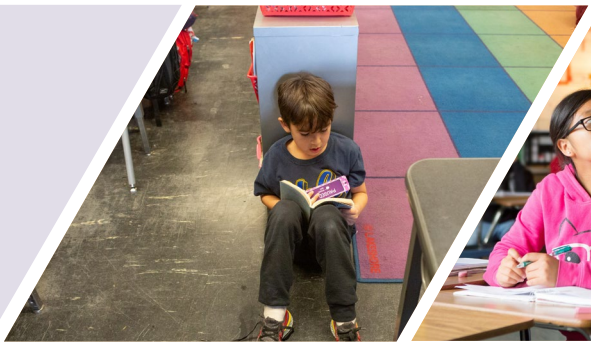
2025

STATE OF OUR SCHOOLS

America's PK–12 Public School Facilities



21st CENTURY SCHOOL FUND | Improving Public School Facilities for All Children

NATIONAL COUNCIL ON SCHOOL FACILITIES
States Advancing Effective K-12 Policy, Planning, and Practice

INTERNATIONAL WELL BUILDING INSTITUTE™

SPONSORS: WOOLPERT & DLR GROUP

Data Sources

FEDERAL DATA

The authors used a data- and standards-based framework to examine the most recent 10 years of publicly available local education agency (LEA) reported data on public facilities spending for fiscal years 2014 through 2023. Our primary data source for this report is the U.S. Census of Governments F-33 Fiscal Surveys, administered by the National Center for Education Statistics (NCES) in the U.S. Department of Education. The F-33 survey is a universal survey of all 19,503 local education agencies, including 13,444 regular K–12 school districts, 4,280 charter LEAs, 690 regional districts, and 1088 "other" districts (state, specialized, federal, and not designed). The National Center for Education Statistics (NCES) does quality control of this data and publishes it annually. It is also available from the U.S. Census. However, the U.S. Census does not report charter LEA data, but it is available through NCES.

NEW FEATURE: Facility Data Dashboard

The National Center on School Infrastructure has an interactive dashboard with twenty-eight years of maintenance and operations spending, facilities capital outlay, long-term debt, and interest expenditures by local education agencies, states, and the nation. The 10 years of enrollment and fiscal data used in the 2025 State of Our Schools are available from NCSI at www.school-infrastructure.org.

ESTIMATED DATA

There is no national data on public school building area, school land acreage, or state-by-state average cost of new school construction. However, these are essential data points for estimating funding requirements and any shortfall in facilities spending or investment. To address these data gaps. The National Council on School Facilities requests building area and new construction costs from state officials. Where states do not have this information themselves, or they have not provided it, the 21st Century School Fund has developed estimates. It estimated the gross square feet (GSF) district building area using 3.2 billion GSF of actual district- and school-specific data. The locale and grade level of the schools and districts were most predictive of building area, so these factors were used to create per-student GSF multipliers, which were applied to every public school in the U.S. The GSF data in this report is a combination of estimates and reported data. The states with reported versus estimated data are identified in Appendix A: Facility Inventory Data.

The cost estimates for new construction are based on state reports, online research, and regional matching. It is important to note that averages mask variation, and the cost of new construction varies widely depending on the project's quality, speed, complexity, and location.

INCOMPLETE DATA

Some federal survey data were missing for some states. This was the case for utility data (V95), as well as federally funded maintenance and operations revenue from ESSER funds (AE7) and capital outlay funding from ESSER (AE4). We note in the Appendices where we are estimating missing values. In these cases, we estimate a national average amount per student based on the states and districts that reported and use this estimate to impute missing values. We were able to collect ESSER capital outlay data directly from some states that omitted it from the F-33 district fiscal survey.

ADJUSTED DATA

It is neither possible nor necessary to audit the NCES fiscal data. Decades of working with this data and with state facility officials, along with knowledge of state policy and programs, have helped identify some data errors. The data errors have been most apparent for state revenue for capital outlay and debt service, which is the primary indicator of the states' contributions to school construction capital projects. This data point is differently understood from state to state. We have identified where state revenue for capital outlay or debt service (C11) is adjusted in Appendix D.

The spending data analyzed in this report covers fiscal years 2014 through 2023. We used the Consumer Price Index to inflate maintenance and operations, and the Turner Construction Index to inflate school construction and capital equipment outlays. The findings are in 2024 dollars.

STATE PROFILES

The facility data used in this report is provided in individual State Profiles. These profiles are available at www.facilitiescouncil.org and at www.21csf.org. These reports are not official state documents. While it is the best publicly available information, data should be reviewed by officials and stakeholders before being used for decision-making.

INVITATION FOR CORRECTIONS

In working with millions of rows of data from many years and multiple sources, we are well aware of the need for constant quality controls. We know there may be problems that we missed, or adjustments or imputations that could be improved. Please get in touch with us at info@21csf.org with any data concerns or comments. Error: Consumer Price Index Inflation adjustment (CPI) for M&O (V40) FY19-23 was run using year over year inflation, rather than cumulative inflation. Corrected: 01/27/2026.

State of Our Schools: America's K–12 Facilities is a joint publication of the 21st Century School Fund, Inc., the National Council on School Facilities, and the International Well Building Institute.

Filardo, Mary (2025). *State of Our Schools: America's K–12 Facilities 2025.* Washington, D.C.: 21st Century School Fund.

UPDATED JANUARY 22, 2026 AND JANUARY 30, 2026

Acknowledgements

The work on public school infrastructure requires government, civil society, the building industry, and labor to work together. I have appreciated the decades of work with officials, community members, building professionals, and labor who have engaged with the 21st Century School Fund on the challenges of modernizing our public school buildings and grounds. There are many voices listened to that have informed this work.

Sponsors

Woolpert is an international architecture, engineering, and geospatial (AEG) and strategic consulting firm, founded in 1911, with 75 global locations and over 3,000 employees. Woolpert's in-house fusion of AEG services creates innovative and robust solutions for complex challenges across many sectors, including for elementary and secondary buildings and grounds. www.Woolpert.com

DLR Group is a global, integrated design firm with a core practice in architecture, engineering, interiors, and planning. K-12 Education studio, is the firm's largest sector, with 36 DLR Group offices, executing future-focused educational designs across the United States, Puerto Rico, the U.S. Virgin Islands, Europe, and Asia.

www.DLRGroup.com/sector/k-12-education

21CSF is a not-for-profit organization dedicated to building the public will and capacity to modernize public school facilities so they support high-quality education and community revitalization. It is dedicated to helping local, state, and national stakeholders create a country where every child learns in an educationally appropriate, healthy, and safe school that serves as a community anchor and is built and maintained in an environmentally and fiscally responsible manner.

The International WELL Building Institute (IWBI) is a public benefit corporation and the global authority for transforming health and well-being in buildings, organizations, and communities. In pursuit of its public-health mission, IWBI mobilizes its community through the development and administration of the WELL Building Standard (WELL), WELL for residential, WELL Community Standard, its WELL ratings, and management of the WELL AP credential. IWBI also translates research into practice, develops educational resources, and advocates for policies that promote people-first places for everyone, everywhere. More information on WELL can be found here.

The National Council on School Facilities is a membership organization of state facilities officials that supports states in their varied roles and responsibilities for elementary and secondary public school facilities. It advocates for support mechanisms, innovations, and processes that equitably deliver safe, healthy, and educationally appropriate public school facilities that are sustainable and fiscally sound.

Contents

A Message from Dr. Richard Carmona, 17th U.S. Surgeon General

Deteriorated School Facilities Are Undermining the Dreams of Our Children and the Hope for a Healthier Nation

The principal story of America's public schools is one of hope, inspiring millions of students to learn, grow and dream. But today, the deteriorated state of America's school facilities is threatening that hope, slowly eroding the educational foundation of the next generation of leaders, thinkers and innovators.

As a former Surgeon General, I had the honor to serve as the 'Nation's Doctor,' and what I find particularly concerning are the serious health implications from poor conditions of school buildings and grounds. As I've said before, our facilities are not just walls, roofs and blacktop – they are health-critical environments. A wealth of rigorous research highlights the significant role of facilities in promoting human health, preventing disease and supporting well-being. This is particularly true for children.

Before they turn 18, America's children will have spent about 15,000 hours at school, with only 7% of this time at recess. This incredible amount of time students spend at school invariably has an impact on both their physical and mental health. Indeed, failing school infrastructure increases the risk of long-lasting, deleterious health effects.

We know that one in 10 students suffers from asthma, a condition that is often triggered or exacerbated by air contaminants in schools that may suffer from outdated HVAC systems or poor ventilation. Studies show poor indoor air quality in schools contributes to absenteeism, lower academic performance and increased healthcare costs. Indoor environments that are too hot lower student and staff performance. Deteriorating buildings compound security risks with deficiencies such as inadequate emergency exits, faulty public address systems and insufficient lighting. Limited access to the outdoors, physical activity, and healthy foods affect child health and development with vitamin D deficiencies, and increased incidents of type 2 diabetes. Poor facility conditions affect students' ability to focus, manage anxiety, and feel comfortable in an environment where they spend most of their formative years.

We should not be surprised by the conditions of our school facilities. Nearly half of the nation's main instructional buildings were built nearly 50 years ago and previous State of our Schools reports have documented persistent gaps in essential maintenance and capital work. These gaps are found in rural, town, suburban and urban communities, and are particularly extreme in low- and moderate-income communities.

We need to come together to turn this crisis into an opportunity. It's time to take decisive action to ensure our schools are adequately funded so they are healthy, sustainable, safe and secure, becoming places where learning thrives and dreams take hold. By investing in the future of our school facilities – indispensable centers of development and progress – we can restore the opportunity of a quality education for every child. In the end, our children deserve much better than this, for they are our gift to the future, whom we will entrust with our collective destiny.

Executive Summary

The 2025 State of our Schools Report is a call to reinvigorate efforts to stop the backsliding in our national pride in public school education by investing in its physical core—the school buildings and grounds in our communities and neighborhoods. It provides pathways for modernization of all PK-12 public school facilities by 2050. It makes clear the importance and tremendous scale of our elementary and secondary public education infrastructure, over 8.3 billion gross square feet of building area, and which accounts for 24% of all infrastructure spending, second only to highways.

The first State of Our Schools report in 2013 provided a national view of the state of our public school facilities. It urged Congress and the National Center on Education Statistics to expand the Common Core of Data to include school-level details on building age, size, site acreage, utility and maintenance expenditures, and capital investments.[1]

The 2016 *State of Our Schools* report analyzed facility spending by states and emphasized the need for strategic federal support to strengthen state and local capacity to plan, fund, and maintain safe, healthy, and educationally adequate school buildings. This analysis of facility spending and investment revealed a $46 billion annual gap for the nation's public school facilities.[2]

The 2021 State of Our Schools report highlighted disparities among districts by community type—rural, town, suburban, or urban—and by family wealth. This report recommended local, state, and federal policy reforms to enhance facilities governance, planning, data, management, funding, and accountability. This fiscal analysis of facilities spending and investment before the COVID-19 global pandemic revealed a $85 billion annual gap.[3]

The 2025 report looks at the period that included the COVID-19 pandemic. It shows continued increases in the nation's annual funding gap for elementary and secondary public school buildings and grounds, projected to persist at $85 billion each year. This represents a slowed growth to the gap, even in the face of increases in space and rising prices. This was a direct result of emergency federal funding for public education in response to the pandemic, which permitted the use of federal funds for capital health and safety projects.

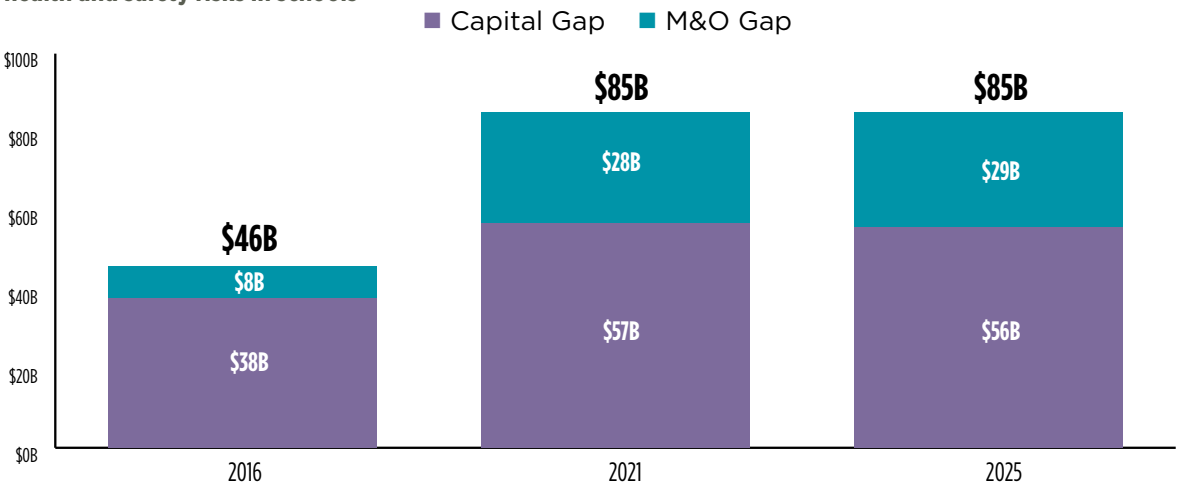
Table 1: Gap Estimates for PK-12 Public School Facilities from 2016, 2021, and 2025 *State of Our Schools* Reports

The average annual gap between what districts are actually spending on their public school facilities and what is needed is nearly $90 billion.

	2016 State of Our Schools	2021 State of Our Schools	2025 State of Our Schools
Facilities Capital Investment Standard - 4% CRV	$76,800,000,000	$111,132,000,000	$138,411,520,000
Capital Actual Annual Avg Expenditure (FY2014-2023)	$49,000,000,000	$54,000,000,000	$82,389,474,317
Capital Gap	-$27,800,000,000	-$57,132,000,000	-$56,022,045,683
M&O Standard - 3% CRV	$57,600,000,000	$83,349,000,000	$103,808,640,000
M&O Actual Annual Avg Expenditure (FY2019-2023)	$46,000,000,000	$56,000,000,000	$74,372,656,612
M&O Gap	-$11,600,000,000	-$27,349,000,000	-$29,435,983,388
TOTAL Annual Avg Facilities Gap	-$39,400,000,000	-$84,481,000,000	-$85,458,029,071

Chart 1: Capital Investment and Maintenance & Operations Spending Gaps

The growth of the annual facilities spending and investment gaps slowed from infusion of funds to address health and safety risks in schools



Yet alongside these sobering figures, progress has been made. Actual maintenance and operations spending, school construction, and equipment capital outlay investment averaged $152 billion each year (2024$) from fiscal years 2014 to 2023. Facility spending and investments have begun to address long-standing deteriorated building conditions laid bare by the COVID-19 pandemic. However, these efforts are still inadequate to address the deterioration of aging school buildings or the inequities found among the nation's public school facilities.

The gap documented for 2025 was mitigated by the fact that federal COVID-19 pandemic relief funds could be used for facilities, and districts reported using $27 billion in federal relief funds from FY20-FY23, with additional funds to be reported for FY2024.

Local districts and states have been improving their facility data management, conducting more thorough assessments, and making the data more accessible to the public and facility managers. States have undertaken more condition assessments and are working to standardize their collection and reporting of facility data.

The U.S. Department of Education launched the Supporting America's School Infrastructure (SASI) grant program to help state agencies expand their capacity to assist high-need school districts with facilities planning and management. It also supports the National Center on School Infrastructure (NCSI), which serves as a national resource for research, policy, guidance, and peer learning on public school facilities.

Current policies, practices, and budgets are incapable of delivering public school facilities that meet modern education, health, safety, and environmental standards at the scale required.

The 2025 State of Our Schools calls for a national commitment to reforming policy and practice, so communities get better value from the billions already being spent, and to dedicate new resources to close budget gaps. New resources will fund efficiencies and ensure that small, rural, and high-need schools in low-wealth communities also enjoy the educational and community benefits of modern public school buildings and grounds.

Modern public schools for all will yield lasting educational, health, environmental, economic, and social benefits that will reverberate through our communities. The planning and implementation of public education infrastructure improvements can uplift generations and ensure our nation's prosperity. This report is written to serve as a guide on that journey.

Delivering modern public school buildings and grounds will mean that districts must:

- **Improve management and labor practices** for facility operations, maintenance, and repairs.
- Plan and implement **comprehensive modernizations**, rather than just piecemeal projects.
- **Reform policies and practices** to get better value for M&O and capital expenditures.
- Explore **governance and space efficiencies** for PK12 buildings and grounds
- **Dedicate stable and sufficient revenue** to modernize and sustain modern public school buildings and grounds

Examples of effective planning, design, financing, engineering, construction, operations, and maintenance exist in every state and in all types of districts. However, the facility policy, practice, and budget support are not systemic or at scale.

The 2025 State of our Schools invites stakeholders to use and modify the vision, standards, data, information, and strategies proposed here to inform planning for modern facilities in your community and state. Together—the civic, education, labor, and industry stakeholders—can meet the challenge of creating educationally inspiring public school buildings and grounds that are healthy, safe, environmentally sustainable, resilient, and affordable.

Crestview ES, Kansas City, MO. Photo: DLR Group

U.S. PK-12 Public Education Infrastructure

Public education is the foundation for this nation's health, wealth, and power. Our public schools transfer generational knowledge and skills and model the values and social norms of our pluralistic civil society to elementary and secondary-age children in every community in the U.S. and its territories. Local, state, and federal governments are engaged in education because of the shared benefits of having the nation's children prepared to be productive in the modern workforce and global economy, and for them to be sufficiently educated to responsibly exercise the rights and responsibilities of citizenship in a democracy.

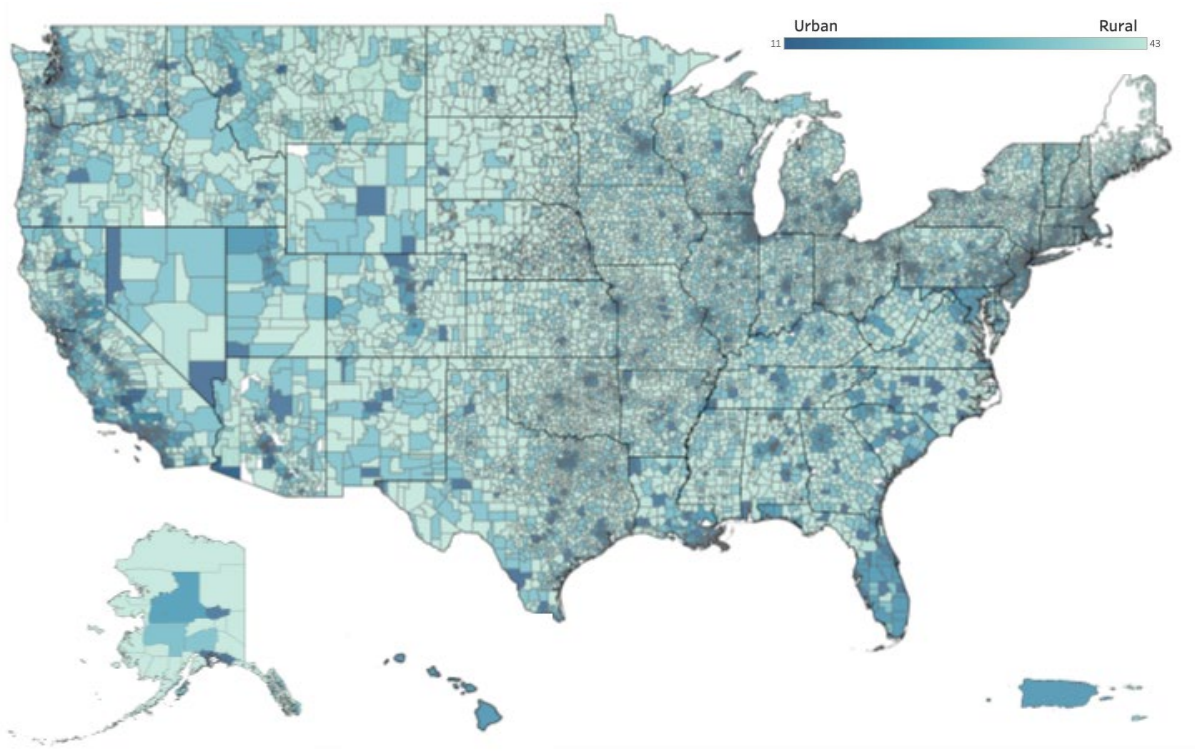
Public education is a state constitutional responsibility, and every state and U.S. territory provides a free public education for elementary and secondary school-age children.[4] Every state and territory has a state education agency. Their primary roles are to set vision, priorities, and goals for public education; set standards and facilitate assessments; manage accountability systems; administer state and federal funding; and communicate with stakeholders. The roles and responsibilities that State Education Agencies have assumed for the public school infrastructure vary widely. The National Center on School Infrastructure, in partnership with the 21st Century School Fund, is documenting state facility roles and responsibilities related to governance, data, planning, management, funding and financing, and standards and accountability. The searchable database of state facility policy is available at www.21csf.org/policy, and technical assistance with research and analysis is available to high-need districts and states from the National Center on School Infrastructure (NCSI) consortium.

Organization of Districts, Schools, and Students

States established local education agencies (LEAs) to deliver public education in communities. There is a local public school district covering every geographic area within the United States and its territories. Map 1 shows U.S. public school districts, with shading indicating the 12 types of rural, town, suburban, or urban locales.

Map 1: Regular School Distrct Boundaries 2023

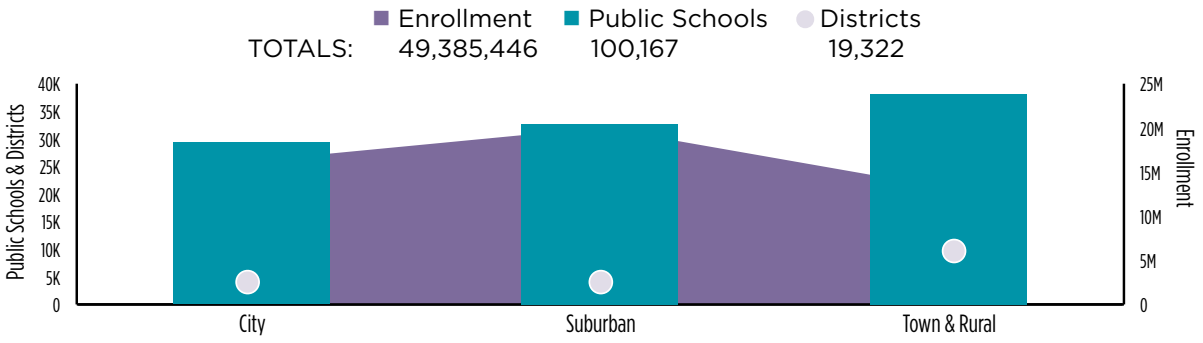
There are over 11,000 rural and town school districts serving students and communities throughout the states and territories with a total of over 19,000 local education agencies.



On a typical school day in 2023, about 56 million children and adults were in public school facilities, 17% of the U.S. population. Local public education agencies reported employing 6.8 million teachers and other staff for the 2023-24 school year. The vast majority of students, 80% (46 million students), were in their local district public schools. Another 7% (about 4 million students) were in publicly funded, but privately operated charter schools. The other 7.8 million students were in private schools or home-schooled.

Chart 2: Local Education Agencies (LEAs) by Locale 2023-24

There are more town and rural school districts than either city or suburban districts, even though their enrollments are smaller. The charter LEAs included in Chart 2 are concentrated in the 3,764 city districts.



	City	Suburban	Town & Rural
Enrollment	16,243,414	20,028,805	13,113,227
Public Schools	29,344	32,765	38,058
Districts	3,764	4,346	11,212

Data Source: 2023-24 data from NCES CCD for # of schools; enrollment, and LEA count for FY2024

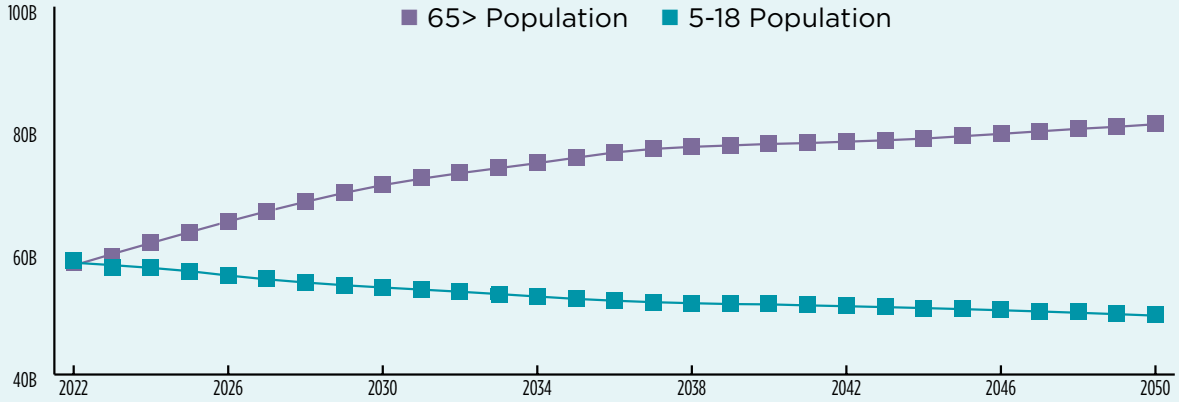
The median enrollment size for local education agencies (LEAs) was 731 students in 2024, down from 834 in 2000, even as enrollment has increased by about 2 million since 2000. The decrease in local education agency size is primarily due to state policies that authorize charter LEAs. In 2000, there were only 120,000 students in charter schools; in FY2023, there were nearly 3 million students in charter LEAs nationally.

UPCOMING CHALLENGE

The total U.S. population is projected to increase by 3.5% between 2022 and 2050, however, the population of children aged 5 to 18 years is projected to decline by 8.2 million, while the over-65 population will increase by 23 million.[5]

U.S. Census Age Level Population Projections to 2050, Low Immigration Estimate

Enrollment declines result from decreased school-age population and pose significant challenges for school districts.



Change is a constant for school districts. During segregation, the District of Columbia operated a Monroe Elementary School for white children and Bruce Elementary School for African-American children, who lived in the same neighborhood, but were assigned to different schools based on their race. Post de jure segregation, the schools were consolidated into Bruce-Monroe, and in 1972, a new school was built. By 2008, due to poor building conditions and under-enrollment, Bruce-Monroe EC was closed and consolidated into Bruce-Monroe at Park View. In 2010, the families gathered for a remembrance day, and the city demolished the 1970s school building and replaced it with a city park.

Inventory of PK-12 Public School Buildings and Grounds

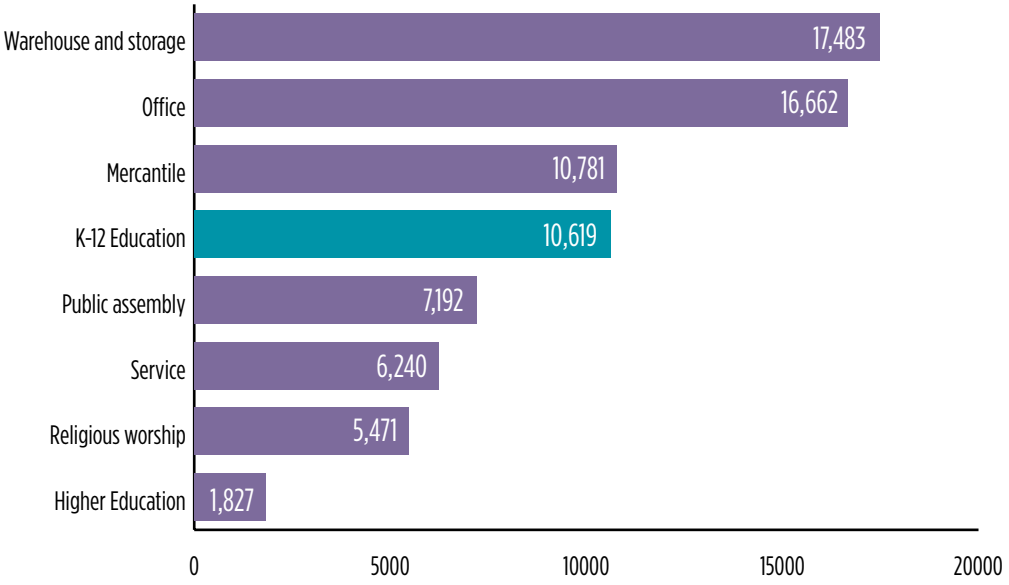
The public buildings and grounds required to support teaching, learning, administration, and operations are essential and extensive. The school closings during the global pandemic highlighted the importance of this community infrastructure. Public schools across the nation were used as emergency sites for food distribution, sites for delivering public health services, and day care locations for essential workers. Children and adults missed the social experience afforded by in-person schools. At-home virtual education adversely affected students' mental health and educational success, the economic productivity of parents and guardians, and teachers' job satisfaction.[6]

In the United States, there were 99,970 public schools in the 2023-2024 school year. These schools include regular public schools, special education schools, and career and technical schools in both regular and charter LEAs. A recent US ED survey found an average of 8 buildings per school, totaling nearly 800,000 public school buildings.[7,]

No facility data are collected by the U.S. Census or the National Center for Education Statistics on the amount of building or land area supporting our nation's public schools. However, the Chart 3 data from a 2018 Commercial Building Energy Consumption Survey (CBECS) estimates that K-12 public and private schools encompass about 10.6 billion gross square feet of building area.

Chart 3: Commercial Buildings by Gross Square Footage Totals (in millions)

Public and private K-12 schools are estimated at 10.6 billion GSF, public school district schools and other buildings are estimated to be about 8.3 billion—83% of the Department of Energy estimate.



The 21st Century School Fund estimates that 8.3 billion of this 10.6 billion gross square feet (GSF) of space is *public* elementary and secondary schools, including charter schools.[8] This estimate is based on a combination of the actual school building area of 3.2 billion GSF and school GSF estimates modeled by grade levels, locales, and enrollment size, then totaled by district and state.

School buildings are the primary building type owned and operated by local education agencies; however, the buildings needed to support public education are diverse. School districts feed and transport millions of students daily. They store a multitude of supplies, materials, and equipment. They employ administrative and operations staff who need offices. In remote districts, teacher housing is often provided. Districts also provide buildings to support physical education and athletic

activities. This means that, in addition to schools, school districts or regional offices of education may also own and manage:

- Central kitchens
- Warehouses
- Bus barns
- Gymnasia
- Teacher housing
- Office buildings
- Training centers
- Swimming pools, football stadiums, hockey rinks

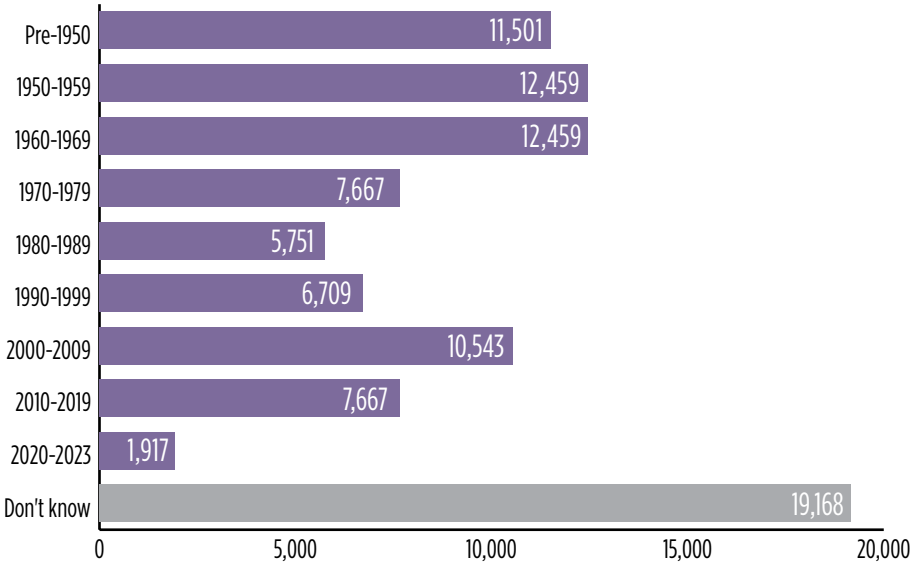
The average age of the main instructional building in U.S. public schools is about 40 years old, with 40% of schools built before 1980, as illustrated in Chart 4 below.[9] Public schools built before 1980 used asbestos, lead, and PCBs as standard construction materials. Asbestos—an effective fire retardant—was commonly used in insulation, plaster, drywall, and drywall spackle, as well as in floor and ceiling tiles. Lead—a non-rusting, pliable metal—was standard material in plumbing pipes and solder, and in paints for windows, heat pipes, and radiators. PCBs were in fluorescent lighting ballasts and caulk for their flame resistance, chemical stability, and electrical insulating properties. These materials are now known to be too toxic to use in our indoor environments.

The Americans with Disabilities Act was enacted in 1990. A 2020 GAO study found that two-thirds of U.S. public school districts have schools with physical barriers, such as a lack of accessible door hardware, steep ramps, double-door vestibules, and too-small restrooms that are barriers to students, teachers, and others with disabilities from using public school facilities.[10]

Only 2,000 public schools were built between 2020 and 2023, following the COVID pandemic, when public health professionals and engineers clarified for the public the relationship between viral spread and HVAC systems. This means the design and operation of most of our mechanical ventilation systems do not reflect this new knowledge.

Chart 4: Number of U.S. Public Elementary & Secondary Schools by Year Built

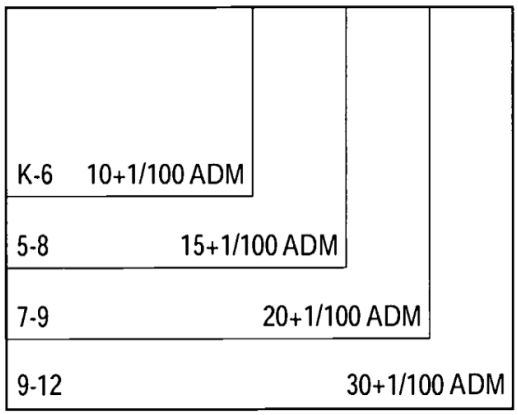
The main instructional buildings in 44,086 public schools were built before 1980 and are over 45 years old.



Land area used by the nearly 100,000 elementary and secondary public schools is also extensive. There is even less data on outdoor school space than on school buildings. So the 21st Century School Fund used minimum school site sizes of 10 to 30 acres for elementary and secondary schools to estimate that there are between 1.5 million and 2 million acres under the control of public school districts.[11] Site sizes vary widely, influenced by urban density, school design, land topography, land cost, and adjacency to municipal parks or other public open space. Just as with buildings, the school districts must maintain a diverse inventory of site infrastructure, including:

- outdoor classrooms
- playgrounds
- softscape athletic fields
- hardscape courts
- parking and access roads
- sidewalks
- retaining walls
- fencing
- shade canopies
- outdoor lighting
- drinking fountains
- irrigation systems
- electronic surveillance
- cisterns, wells, septic systems
- natural amenities of trees, bushes, grasses, and flowers
- Kitchen gardens
- Composting systems

Site Size In Acres of Land by Grade Levels



The minimum acreages increase by 1 acre for every 100 additional students, using average daily membership (ADM) counts.

Dulaney High School, in suburban Maryland, is an example of the scale and complexity of a typical high school site. The school was constructed in 1964 on 42.75 acres. It has had two additions, one in 1971 and the other in 1999. It features outdoor athletic fields and facilities, as well as multiple buildings that serve the 1,845-student school. It is now in design for replacement by 2029.[12]

Modern Standards for PK-12 Public School Infrastructure

There is an emerging consensus among educators, public health leaders, planners, architects, and engineers on modern facility performance standards for public schools. This section of the report provides an overview of the building performance areas that need to be addressed in modern public school infrastructure. The programming, design, and stewardship of the public land associated with public education are also critical for students, the community, and the environment. Any standards, guidelines, educational specifications, plans, and budgets need to explicitly include school sites.

The convergence of facility age and condition gives communities the opportunity to modernize public school buildings and grounds to meet all of the following standards affordably.

- Innovative learning environments
- Centers of community
- Healthy and safe places to occupy
- Secure from human threats
- Environmentally responsible
- Resilient to extreme weather

This section provides a framework for each performance area.

Find research on the effects of facilities on learning and communities, health, the environment, resilience, and security at www.school-infrastructure.org.

National Center on School Infrastructure

Innovative Learning Environments

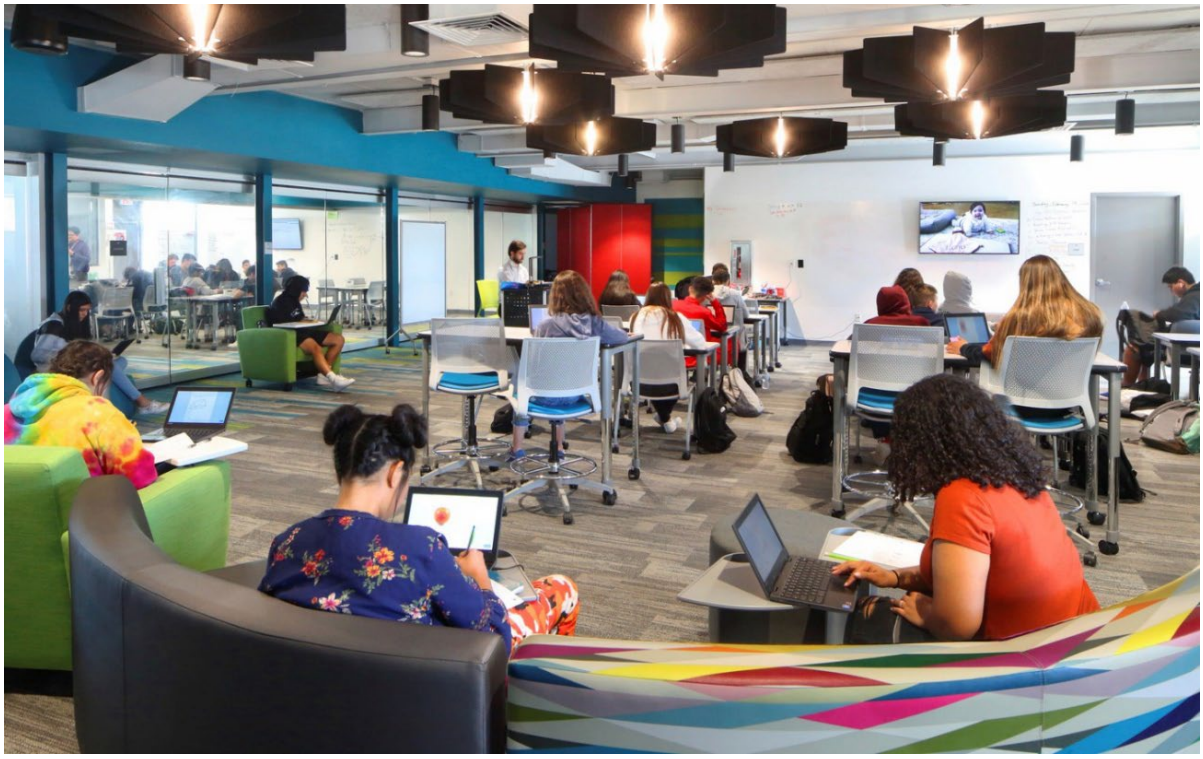
Schools need to be designed, furnished, and operated to support students' education, social, and physical development. The Organisation for Economic Co-operation and Development's (OECD) *Future of Education and Skills 2030* initiative identified three key learning requirements to prepare students for 21st-century challenges:[13]

- **agency**—students' ownership of their learning,
- **co-agency**—collaboration between learners and stakeholders, including educators, families, and communities, and
- **well-being**—basic mental and physical health.

The optimal teaching and learning spaces are referred to as Innovative learning environments. Innovative learning environments are defined as spatial designs that are intentionally used as pedagogical tools to improve student learning. They are created by specifically designing and furnishing spaces so they add educational value to existing practices.

To support these requirements, the OECD outlines a range of enabling conditions across system design, including coherent curriculum, educator capacity, and inclusive learning environments. The physical environment of schools is recognized as a critical factor influencing how students engage with learning.[14] Classroom size is key to creating instructional environments with room for student agency. In a classroom for 25 students, at the recommended 36 square feet (SF) per student, the classroom would be 900 SF. Many classrooms from the 1960s are less than 700 SF.

The U.S. research on facilities and student academic performance is consistent with international research, which has found that educational outcomes are shaped by instruction and by the physical conditions in which learning occurs.[15]



Students engage in direct instruction, but also work individually in the classroom and in groups just outside the classroom. The sliding glass walls enable multiple adults to connect visually with students, while also providing acoustic separation. The building systems provide healthy indoor air, daylight, and thermal comfort.
Photo: DLR Group

There are a number of educational forces that facilities need to respond to and support. Among these are:

- **Technology**—public schools were early and nearly universal adopters of technology, which made the U.S. a leader in tech development and innovation. As difficult as it was, the fact that virtual schooling was so widespread during the COVID-19 pandemic was a credit to how much of a tech adopter public education has been.
- **Early childhood education**—school districts have been expanding access to public schools for three and four-year-olds, both for the long-term benefit of early education, but also in response to the workforce, where in 2024, 68% of mothers of 0-6 year olds worked outside the home.[16]
- **Education of special needs students**—the Individuals with Disabilities Act (IDEA) requires districts to deliver the specifically appropriate education to children with special needs in the least restrictive environment. The educational requirements, along with the Americans with Disabilities Act building and grounds provisions for access, make these public places uniquely responsive.

- **Curriculum and instructional pedagogy**—school facilities need to be able to adapt to a global and fast-moving world where new knowledge, artificial intelligence, and diverse cultural contexts must be embedded into all levels of schools and where agency for teaching and learning is shared by teachers and students.
- **Student supports**—A Multi-Tiered System of Supports (MTSS) and Whole Child approaches to student supports address barriers to learning and teaching. Student supports are typically fragmented and reactive to students' social and emotional needs, but a comprehensive plan and program support equity, scalability, and are more cost-effective. [17]

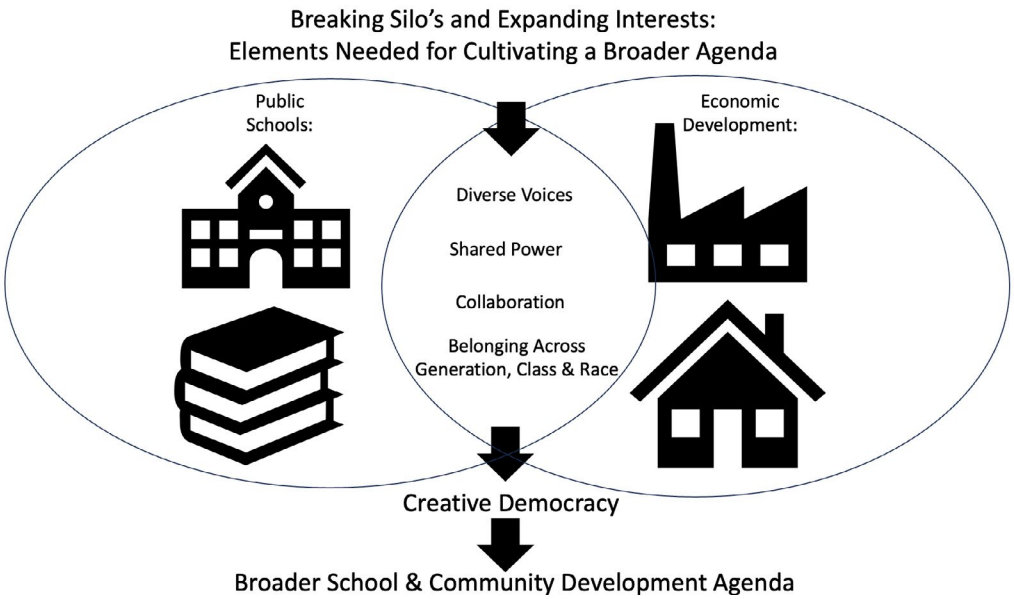
Centers of Community

Schools as centers of community are as varied as communities. Public schools are typically public shelters in emergencies, and civic places where voting and public meetings take place at no cost. In some cases, public schools house community library services, operate public swimming pools, or partner with community centers.

As districts were held accountable for student academic performance, districts increased their attention to barriers to learning. This resulted in an expansion of school-based social services. Increasingly, this has meant districts hiring social workers, psychologists, and nurses. But schools also house independent health-care providers for students, families, and the community.

As the average age of the U.S. population rises, there will be increasing demand for supports and services for the elderly—a population that can also be high-need, like children. The public schools, if planned and designed for these modern demands, will be a cost-effective way to serve both the children and youth, as well as the seniors of our communities.[18]

Modern public school facilities will intentionally plan to support shared use of buildings and grounds to adapt to their changing community needs. The graphic below, from a 2025 collection of essays and studies of community and school planning illustrates the complex relationships among stakeholders and to community housing and economic sectors.[19]



Healthy and Safe to Occupy

The health and safety of buildings and grounds is a shared concern. Independent of whether facilities support the activities of the users, is the question of whether the building is safe to occupy. Given that 90% of the time is spent indoors, the quality of the environment must do more than protect occupants from collapse and fire.[20] The indoor environment needs to be healthy.

Facility design, utilization, maintenance, and operation interact with the mental and physical health of occupants by their effects on natural biological systems — breathing, seeing, hearing, body temperature, thinking, eating, moving, and socializing. Most U.S. public schools were built between 1900 and 1979, when average temperatures were nearly 4 degrees cooler than in the last decade (2015-2024). Although there is no national dataset on which schools have mechanical air-conditioning, news of schools closing due to heat suggests that many were built without it. A Congressional Research Service report identified common infrastructure elements municipalities are using to mitigate extreme heat.[21] These are:

- Providing shade cover (including tree canopy) for pedestrians, particularly in urban areas;
- Providing chilled drinking water access in schools and public places; and
- Increasing tree and vegetative cover over built surfaces (e.g., roofs and pavement).

These strategies may particularly benefit urban "heat islands" where built surfaces absorb and re-emit heat in the absence of cooling, shade-creating vegetation.

The building performance framework for healthy indoor environments, including schools that is used by the International Well Building Institute and supported by extensive research sets the modern standard for healthy schools.

- **Air**—Implement strategies to remove airborne contaminants, prevent indoor air pollution, and purify incoming or recirculated air to optimize indoor air quality.
- **Water**—Optimize the quality of water through extensive filtration and treatment while promoting accessibility through strategic placement of fixtures.
- **Nourishment**—Encourage the adoption of healthy eating habits by providing occupants with nutritional food choices, healthy behavioral cues, and knowledge about nutrient quality.
- **Light**—Promote exposure to natural light and create lighting environments that are beneficial to occupants' visual, mental, and biological health.
- **Movement**—Maximize the use of design elements, policies, and programs that encourage physical activity in everyday life.
- **Thermal Comfort**—Ensure thermal comfort and productivity through the use of improved HVAC system design and control.
- **Sound**—Bolster occupant health, productivity, and wellbeing by designing acoustically-comfortable spaces that limit or mitigate noise pollution.
- **Materials**—Reduce human exposure to hazardous building material ingredients by restricting or altogether eliminating compounds, chemicals, and products known to be toxic.
- **Mind**—Maximize the use of strategic design elements, state-of-the-art technology, and relaxation spaces to support occupants' mental health and emotional wellbeing.

- **Community**—Support equal access to essential healthcare, workplace promotion, accommodations for new parents, and the development of integrated communities through accessible design, civic engagement, and social equity.
- **Innovation**—Recognize and reward projects that implement novel concepts and strategies not already included in WELL features.

The poor condition of (HVAC) systems, the need for more air conditioning due to warming average temperatures, and related concerns about occupant health provide an opportunity for facility-related energy and health improvements. Modernizing heating, ventilation, and air-conditioning (HVAC) systems involves removing old systems and the toxic materials associated with them—such as asbestos, lead-based paint, and man-made organic chemicals.

JOHN LEWIS ELEMENTARY SCHOOL

The new John Lewis public neighborhood Elementary School in Washington, D.C. replaced a 1970s open-plan school and now has the highest levels of certification from both LEED and IWBI and has a thriving educational program and community. The school is designed, constructed and maintained to achieve the intended health impacts of the IWBI framework.

The John Lewis Elementary School replaced a 1970s open-plan school. As shown in the photo of one of its classrooms, there were lighting issues. When filled with children, the open classrooms experienced acoustic problems with noise. These open-plan schools were often built with open plenums above ceiling areas, leading to poor air quality.

Photo: 21st Century School Fund

Secure from Human Threats

Tragically, since the mass shooting at Columbine High School in Colorado in 1999, there have been other student and staff fatalities and injuries in schools or on school grounds. These tragic events have introduced a level of parental and community grief and worry that has made the need for school security more urgent. The need to manage anti-social and aggressive human behavior is an ongoing and essential responsibility of schools and fortunately rarely generates horrific tragedies. There is research that shows the conditions, design, and utilization of schools impact school climate and that school climate affects how much bullying and other aggressive and other anti-social behavior. Mental health breakdowns and access to lethal weapons are necessary conditions for these tragedies, but the facility design and conditions also impact school security.

Crime Prevention Through Environmental Design (CPTED) provides a broad framework for security standards guided by four basic elements:[22]

- ensure natural surveillance,
- create natural access controls,
- provide territorial reinforcement, and
- maintain buildings and grounds.

Zero Now, a non-profit dedicated to ending school violence, has developed foundational physical security standards that specify the basics of territorial reinforcement of school buildings and highlight the importance of communication to security. They identify securing the school at the building envelope and classroom doors as a first priority. And second, they emphasize the need for effective communication within the school, including the ability to hear and be heard in all occupied spaces. These basic capabilities need to be incorporated into and available in every K-12 school.

> *Overwhelmingly, acts of school violence perpetrated by threat actors from outside the school community are made through building envelope openings that are not secure. At a minimum, all openings in a school envelope should be equipped with appropriate commercial-grade door hardware and a lock set. Additionally, each envelope opening should have a local door alarm with sufficient volume to be easily audible to staff in adjacent areas. This will create a secure portal and a self-correcting mechanism with staff addressing the unsecure condition by securing the door and silencing the alarm, much like the seat belt alarm in cars.*
>
> *A locked classroom door has consistently proven to be a highly effective protective measure in school shootings. All classroom doors in a K-12 school should be solid-core doors installed in welded metal frames with appropriate ADA-compliant hardware and locksets that can be secured from the interior of the classroom without a key. Secondary locking, barricade, and blockade-type devices should not be used.*

Communication is a commonly noted failure point in most after-action reports following violent incidents in schools. Minimum communication capability in all K-12 schools should include a robust public address system clearly audible and easily accessible in all occupied spaces. This must include hallways, restrooms, the cafeteria, and any other public or mass congregation spaces. Additionally, an intercom system capable of station-to-station and general announcement should reach all student-occupied instructional spaces. Both systems require power backup and should be designed with non-interdependent redundancies that ensure continued functionality in the event of power loss or other failures.

Environmentally Responsible and Energy Efficient

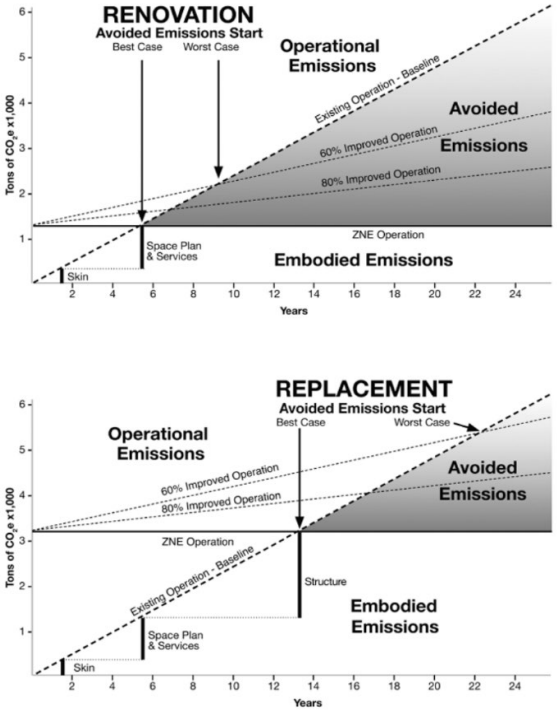
America's nearly 100,000 public schools affect the environmental quality of our communities through their use of land, raw materials, commercial products, energy, and water. School district facility decisions have ongoing environmental impacts. Many public schools need multiple systems upgraded or replaced.[23] With a comprehensive plan and modernization, school districts have the capacity to reduce or prevent greenhouse gas emissions. This can be done through a complex set of environmental and energy-efficiency practices for the maintenance and operation of buildings and grounds, and for planning, design, and construction of facilities, including modernization.

Schools are major energy consumers, but they are low-energy-intensity users compared to other types of commercial buildings.[24] This is because it is not unusual to find public schools without air conditioning, mechanical ventilation, or air filtration.[25] Additionally, the day-to-day operation of K-12 school facility spaces is limited to the school day and after-school activities. and K-12 public schools are typically only fully utilized during the 180-day school year. Reduced energy use results in lower greenhouse gas, particulate, and ozone emissions. However, with rising temperatures, benefits of better ventilation, and increasing need for community and other shared use of school buildings and grounds, the energy use intensity of schools will increase. This puts responsibility on school districts to minimize the environmental impact of increasing demand for energy.

One way school districts will be able to impact the environment is by building strategies for modernization, rather than replacement for buildings, whenever possible. School districts regularly must decide on capital plans and budgets. These include decisions on whether to replace or modernize a facility. Districts are routinely told that if modernizing a school costs more than 60% of its replacement value, it is better to build a new one. Modernizing existing facilities can deliver operational benefits by improving energy and other utility efficiency. But the most significant benefit may be avoiding emissions from new construction processes and materials by continuing to use existing building foundations, envelopes, and as much of the existing structure as possible.

In the book *Going for Zero: Decarbonizing the Built Environment on the Path to Our Urban Future, 2025,* Carl Elefante makes the case for developing the design, engineering, and construction skills to renovate existing 20th-century buildings. He says:

> *"The future of the late twentieth-century building stock is the single greatest building-sector challenge facing architects in the United States today. These buildings can remain viable for at least another century, requiring a fraction of the embodied carbon footprint resulting from their replacement. Incentivizing the repair and modification they need over the next two or three decades is both the best opportunity to rapidly reduce current operational greenhouse gas emissions and to avoid enormous increases in embodied emissions from constructing replacement buildings. The numbers make it clear that there is nothing more important for architects to contribute to decarbonizing the building stock than effectively reusing and renewing twentieth-century buildings."*[26]



An indication of the complexity of decisions about school facilities is the emergence of third-party certification systems that building owners use to determine whether the projects they

undertake will meet their desired health, safety, environmental, and resilience standards following renovation, modernization, or new construction.

There are third-party certification programs that include schools in their certification system. Some states and municipalities require third-party certification in their policy. The major U.S.-based third-party certification programs related to the impact buildings have on our environment are:

- **LEED (Leadership in Energy and Environmental Design)**: Developed by the non-profit U.S. Green Building Council (USGBC), LEED provides a framework for healthy, efficient, and cost-effective green buildings through a points-based system across categories like energy and atmosphere, water efficiency, and materials and resources. Certification levels apply to various project types, including new construction, existing building operations, and interior design. Schools are an important building type utilizing LEED. CHPS—the Collaborative for High Performance Schools recently merged with the Center for Green Schools @ USGBC.
- **Green Globes**: Managed by the Green Building Initiative (GBI), Green Globes is an online assessment and rating system for commercial real estate that evaluates environmental sustainability, health, wellness, and resilience, and also has schools among its projects.
- **Living Building Challenge (LBC)**: Created by the International Living Future Institute, LBC is a rigorous performance standard that aims to design and construct buildings that are self-sufficient and positively impact their surrounding environment. Projects must meet performance-based requirements across seven "Petal" areas (Place, Water, Energy, Health and Happiness, Materials, Equity, and Beauty) for at least 12 consecutive months to achieve full certification.

The U.S. needs a pipeline of trained workers to support the modernization of our public school infrastructure. Career and Technical Education Centers, in high schools and community colleges will need to be included in the nation's systemic reforms.

An example of a central mechanical room for heating and cooling found in modern schools

Resilient to Natural Hazards

Elementary and secondary public schools, located throughout the country on roughly 100,000 school sites and housing 17% of the U.S. population during the school year, play an important role and bear a responsibility for readiness in the face of natural hazards. According to FEMA, natural hazards such as flooding, high winds, extreme temperatures, droughts, earthquakes, wildfires, and landslides pose significant threats to communities across the United States. Sea level rise is increasing hurricane storm surge flooding, and tsunamis resulting from earthquakes pose risks to schools in low-lying coastal areas connect to underwater faults. The need to reduce these threats to lives, properties, and the economy is a top priority for communities and is not a matter of contention.

"Given all these compounding hazard risks, there is an increased need to focus on where we build, how we build, and investing in infrastructure updates that are designed for a 21st-century climate."

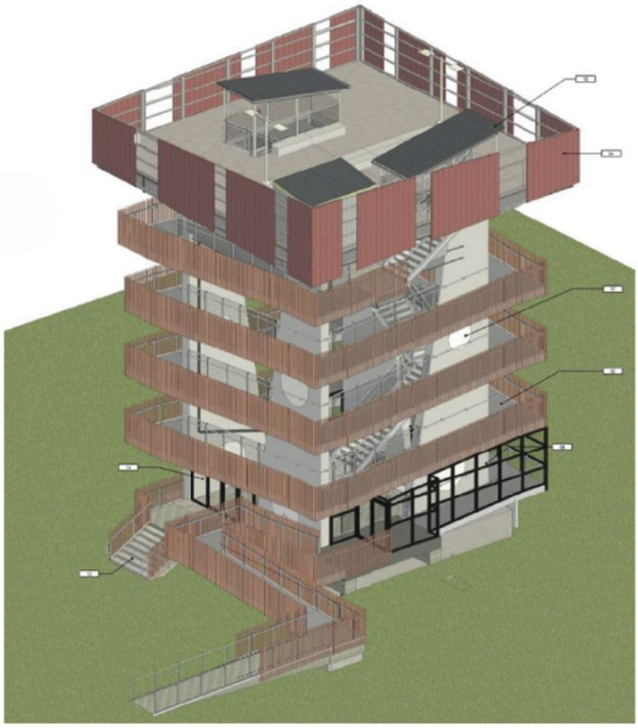
2023: A historic year of U.S. billion-dollar weather and climate disasters | NOAA Climate.gov

FEMA defines a mitigation activity as: "A hazard mitigation measure, project, plan, or action proposed to reduce risk of future damage, hardship, loss, or suffering from disasters."[27] However, this is also referred to as "climate adaptation." Climate adaptation includes strategies to prepare for and respond to the current and future impacts of climate change. These might consist of updating guidelines and planning for school disruptions; changing facilities and grounds practices to prepare for wildfires, heat, floods, or other extreme weather conditions; and partnering with local and state actors to prepare for and recover from such events.[28]

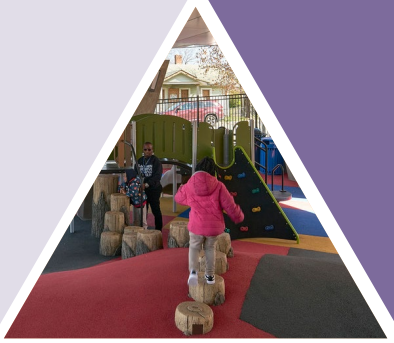
In climate considerations, mitigation is the action taken to prevent global warming. These would include building or modernizing schools to net-zero energy, reducing landfill waste, making schools walkable, siting schools to minimize vehicle miles traveled, and electrifying heating and cooling, among other measures.

School districts are called on to both adapt and mitigate to climate and context. In Washington state, because of the threat of tsunamis, they have moved schools from coastal areas, but in North Beach Ocean Shores, they are planning to build a tower as an emergency shelter for the elementary school.

Public school facilities need to be planned and designed to mitigate and adapt to natural hazards and to global warming.



North Beach Ocean Shores Elementary School tsunami safety tower plan.



Condition of Public School Facilities

When districts or states want to understand the condition of their buildings, they often engage building professionals to inspect major components and systems of a school building, from foundations to roofs, mechanical systems, electrical, and plumbing systems and components, as well as interior finishes for age, life expectancy, and condition. Then, estimators use a schedule of replacement costs and life expectancies of these systems and components to create a Facility Condition Assessment (FCA). This assessment enables districts or states to estimate and rank the scale of needs at the school and district using a Facility Condition Index. Facility planners and communities use this information to explore remedies for the identified conditions and to set funding priorities.[29]

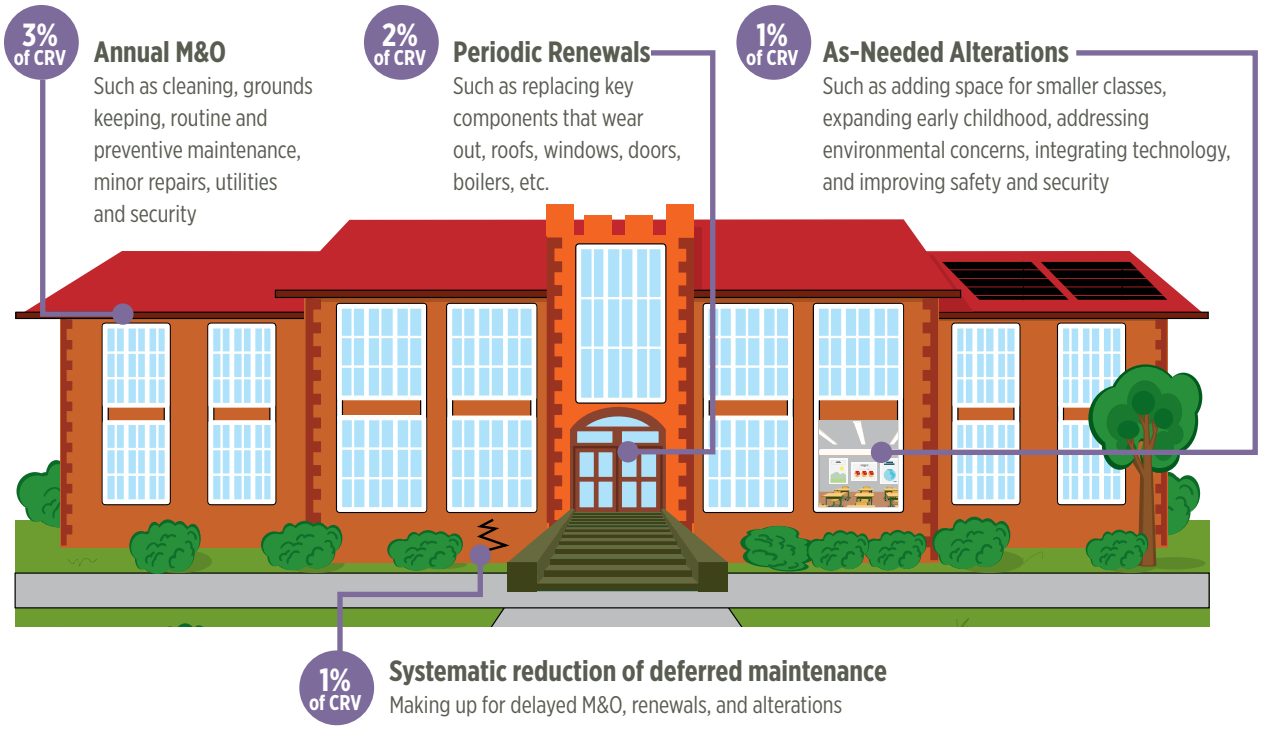
The State of Our Schools report uses a version of this, but at the district level. The "inspection" assesses the levels of maintenance and operations spending and capital investments made by the district relative to the school's current replacement value and average expected life. The difference between the two is the "gap." This gap analysis can be done at the building, school, district, and state levels. The gap analysis can be used to understand the scale of facility challenges and the distribution of facility spending and investments across geography and wealth.

The fiscal standards for the level of school facilities spending and investment needed to deliver modern school buildings and grounds are illustrated in Chart 5. The percentages refer to the percentage of facilities' current replacement value (CRV) that districts and states should plan for in their annual school district operating budgets for M&O and for multi-year capital budgets. The capital budget components include 2% of CRV for the periodic renewal of equipment, components, and finishes; 1% of CRV to make progress on deferred maintenance; and 1% CRV for alterations to the building in response to program and use changes. Capital budgets would also need to include funds for new construction if a district is growing and needs to build new schools to increase its enrollment capacity. The M&O responsibilities should be budgeted annually, however, the capital investment recommendations would be budgeted over the life of the asset. In this model, 4% CRV represents 25 year depreciation.

Chart 5: Standards for a Portfolio of Modern Facilities

Capital investment standards for public school facilities (4%) include the need for renewals, alterations, and when deferred maintenance has piled up, a plus-up for the inefficiencies of catching up.

The following proposed national standards for school facilities are based on building industry best practice. The percentages refer to the percentage of facilities' current replacement value that should be invested annually to maintain school buildings in good condition. Local conditions will vary. For example, school facilities in very poor condition will need more than 1 percent a year toward their deferred maintenance. But in general, if communities have stable funding at these levels, they should be able to deliver healthy, safe, educationally appropriate, and environmentally sustainable school facilities.



These industry benchmarks for estimating maintenance, operations, and capital expenditures for a school building to meet modern educational standards are a helpful resource. They model facility conditions because all facilities depreciate over time and with use. A fiscal assessment of school facilities that shows extremely low levels of maintenance, operations, and capital expenditures is likely to have adverse impacts on education, health, safety, and resilience. A fiscal assessment can help inform decision-makers and the public about the comparative scope of needs and support planning discussions.

Fiscal Assessment of Maintenance and Operations (M&O)

Operating school buildings and grounds requires continuous cleaning, groundskeeping, maintenance, and repairs to ensure they are healthy, safe, and operationally efficient. Maintenance and operations of the plant (M&O) are paid annually from education budgets. M&O expenditures reported by districts include costs for custodial, groundskeeping, and maintenance staff; materials; supplies; and contracts for any maintenance or operations activities. District expenditures for utilities (energy and water) and for building security staff, security contracts, materials, and supplies are also included in M&O expenditures. For the fiscal years 2019 to 2023, public school districts spent an average of $74 billion per year for maintenance and operations of facilities. (See Appendix B: PK-12 Public School Maintenance and Operations) Nationally, this was about 9.3% of their total education spending, excluding expenditures for capital outlay and debt service.

U.S. public school districts can meet modern stewardship standards for M&O when spending 3% of their Current Replacement Value (CRV—about $104 billion (2024$) each year on maintenance and

operations. Compared to this standard, U.S. public school districts are underfunded for maintenance and operations by $29.3 billion each year—$810 per student and $4.55 per square foot.

Table 2: PK-12 Facilities Maintenance & Operations Standard, Actuals, and Gap (2024$)

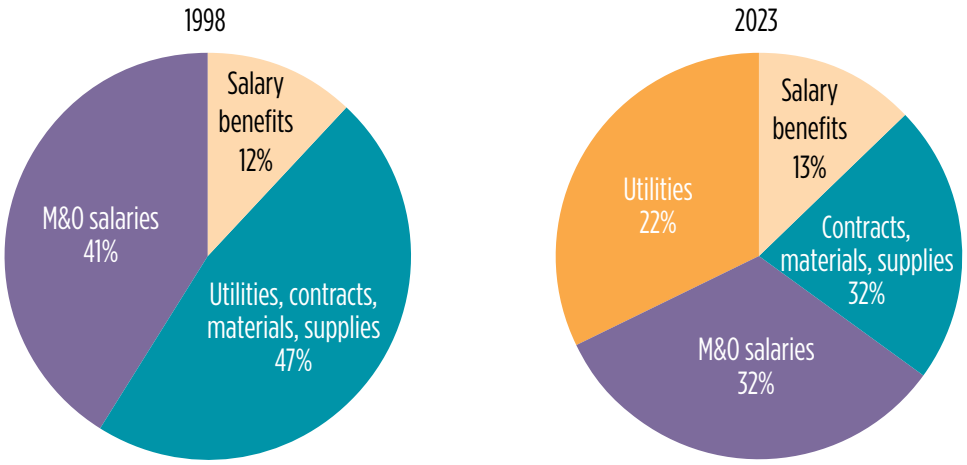
If the nation's public school districts spend at the same level as FY19-23, the annual M&O gap will be $32.3 billion.

Maintenance & Operations	Annual M&O Standard 3% of CRV	Actual Expenditures Annual Avg FY2019–2023	Gap Annual Avg Shortfall
Total	$103,646,135,991	$74,372,656,612	**-$29,273,479,379**
Per Student	$2,303	$1,527	**-$810**
Per Gross Square Ft	$13.37	$8.82	**-$4.55**

How districts are spending their maintenance and operations funds has been changing over time. In fiscal year 1998, 53% of their total M&O expenditure was for district salaries and benefits. In fiscal year 2023, only 45% of district expenditure was for district-employed personnel for the operations and maintenance of facilities. Utility data were not collected separately in FY1998, but in FY2023, utilities expenditures (reported and estimated) totaled — $15.7 billion, about $330 per student. FY2023 Utilities averaged *24%* of the five-year average of M&O spending. Utilities in FY2023 were *2.2%* of total district expenditures for elementary and secondary public schools.

Chart 6: Allocations for Operations & Maintenance of Plant FY1998 and FY2023

M&O staff salaries and benefits dropped from 53% of M&O expenditures to 45% of M&O spending from FY1998 to FY2023.

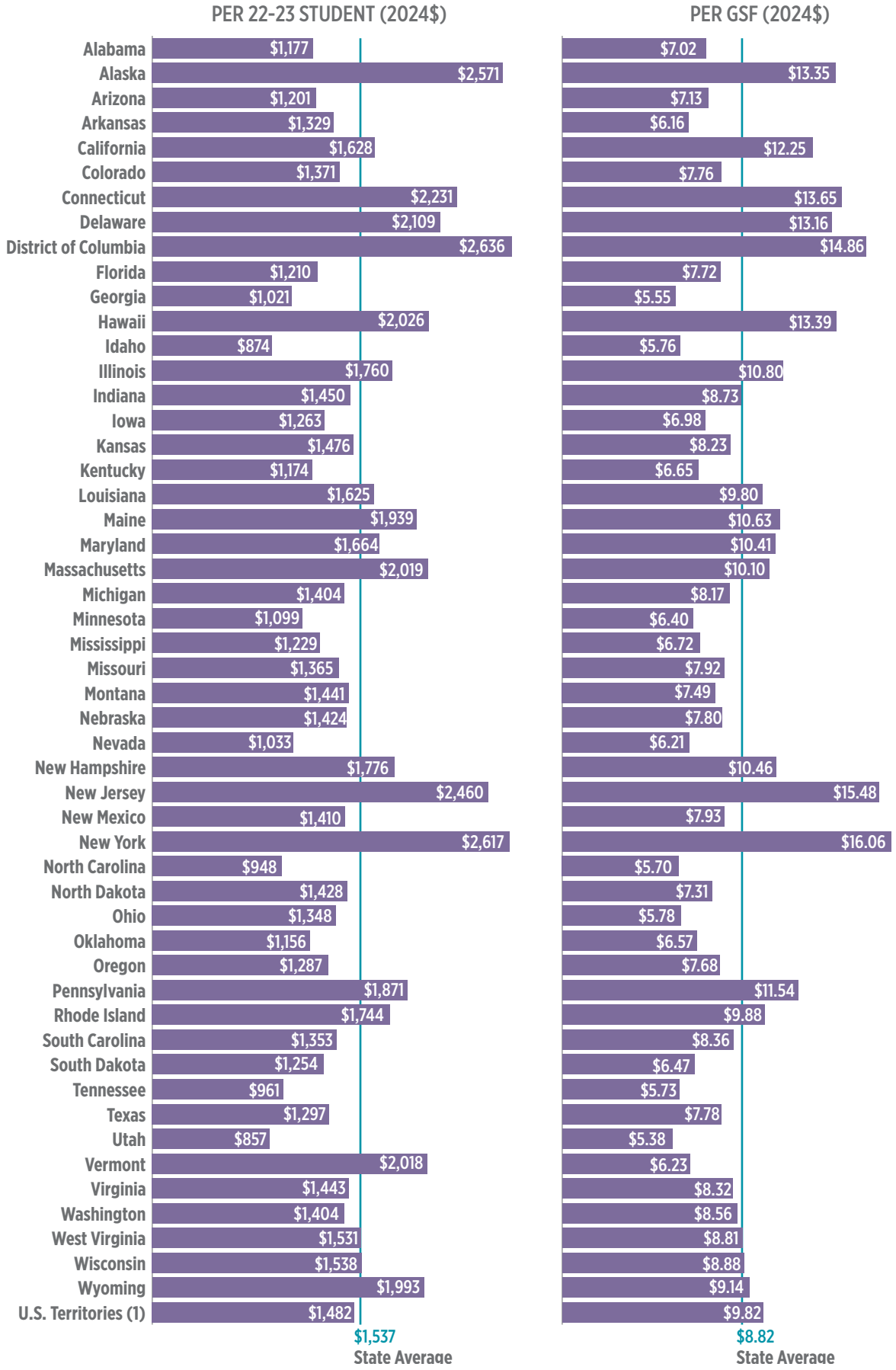


Note: District-level utility data was not collected on the U.S. Census Survey F-33 until FY2015.

With the complexity of facility operations and maintenance increasing, school districts are contracting out more M&O responsibilities, as is illustrated in Chart 6. The percent of M&O expenditures for benefits is increasing as a share of the amounts paid for salaries, further affecting school district in-house staffing for M&O. There is wide variation in M&O spending per student across states, as illustrated in Chart 7, which shows that while the national state average M&O expenditure per student was $1,537 the lowest was $857 per student in Utah. The highest was $2,571 per student in Alaska. In the lower forty-eight states, the highest spending is in New Jersey at $2,460 a student.

Chart 7: M&O Annual Average FY2019-FY2023

State variability may include factors such as utilities, labor costs, costs for private contracts for services, the average age and condition of buildings, and if the district has a funded capital program to prevent systems inefficiencies and failures.



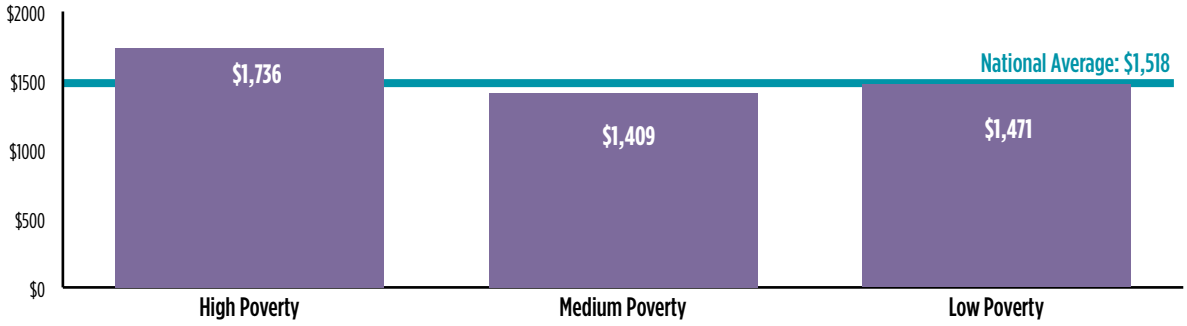
Patterns and Variation of M&O Spending Among Districts

There is variation in M&O spending between states and among school districts. Nationally, among 13,106 school districts, high-poverty districts spent the most on M&O per student, just a bit higher than high-poverty suburban districts.

- **Low Poverty**: 10.99% of children ages 5-17 live in households below the poverty income level.
- **Medium Poverty**: 11% to 20.99% of children ages 5-17 live in households below the poverty income level.
- **High Poverty:** 21% or more of children ages 5-17 live in households below the poverty income level.

Chart 8: M&O Expenditures per Student FY19–23 by Level of Household Poverty

High poverty school districts spent more per student on M&O in every locale, meaning there was less funding for instruction and other types of student support



	High Poverty	Medium Poverty	Low Poverty
City	$1,767	$1,373	$1,484
Suburb	$1,585	$1,398	$1,484
Town	$1,460	$1,387	$1,405
Rural	$1,566	$1,537	$1,582

Data Sources: Small Area Income and Poverty Estimates (SAIPE), U.S. Census and V40 data adjusted with CPI to 2024$, NCES/ U.S. Census Fiscal Survey.

Even these averages mask huge differences in district M&O spending per student across districts within states. For example, in Illinois, among high-poverty school districts in large suburbs, the North Palos School District, with about 3,400 students, reported spending $1080 per student on M&O. In contrast, Oak Park - River Forest School District 200, with about 3,400 students spent, an average of $2,723 per student on their facility operations and maintenance.

The variation in M&O per student could be explained by the condition of the schools, the district's square footage, the efficiency of utilities, or the cost of contracts or labor. It could also be explained by district or state policies and the priority and quality of the maintenance and operations of the school buildings and grounds.

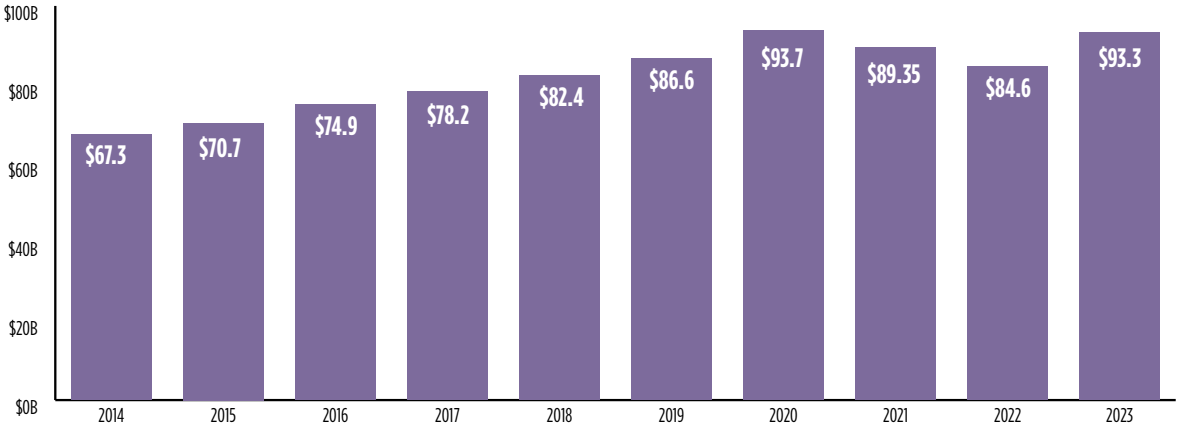
Example: One school district's pay for HVAC technicians was $16 per hour. At this below-market wage, the school district could not hire HVAC technicians, although they were essential personnel. Instead, the school district paid $112 per hour to private HVAC contractors for the HVAC technicians, who were paid $35 per hour by the private contractors.

Fiscal Assessment of Public School Facilities Capital Outlay

School construction and equipment capital outlay expenditures are for periodic spending for major construction projects. The capital outlay spending reported by districts includes retrofits or upgrades and replacement of building systems, components, and finishes, as well as expenditures to renovate, replace, or build new schools or other district facilities.

Chart 9: School Construction and Equipment Capital Outlay in Billions (2024$)

Following the recovery from the 2008 housing recession, districts increased their capital investments. Capital investments fell back amid labor and supply chain limitations caused by the COVID-19 pandemic, but approached FY2020 levels in FY2023 with support from federal Elementary and Secondary Emergency Relief funds.



Supporting the education of school-age population requires regular capital investments to replace and upgrade building systems and components, and to alter facilities to ensure schools meet modern health, safety, education, and environmental standards. U.S. school districts can meet good stewardship facility standards using a 4% CRV capital investment level of $138 billion per year.

U.S. public school districts averaged $82 billion (2024$) annually on school construction capital outlay from fiscal years 2014 to 2023. Compared to the 4% CRV capital budget benchmark, U.S. public school districts are underfunded by $56 billion each year, excluding funding for enrollment growth.

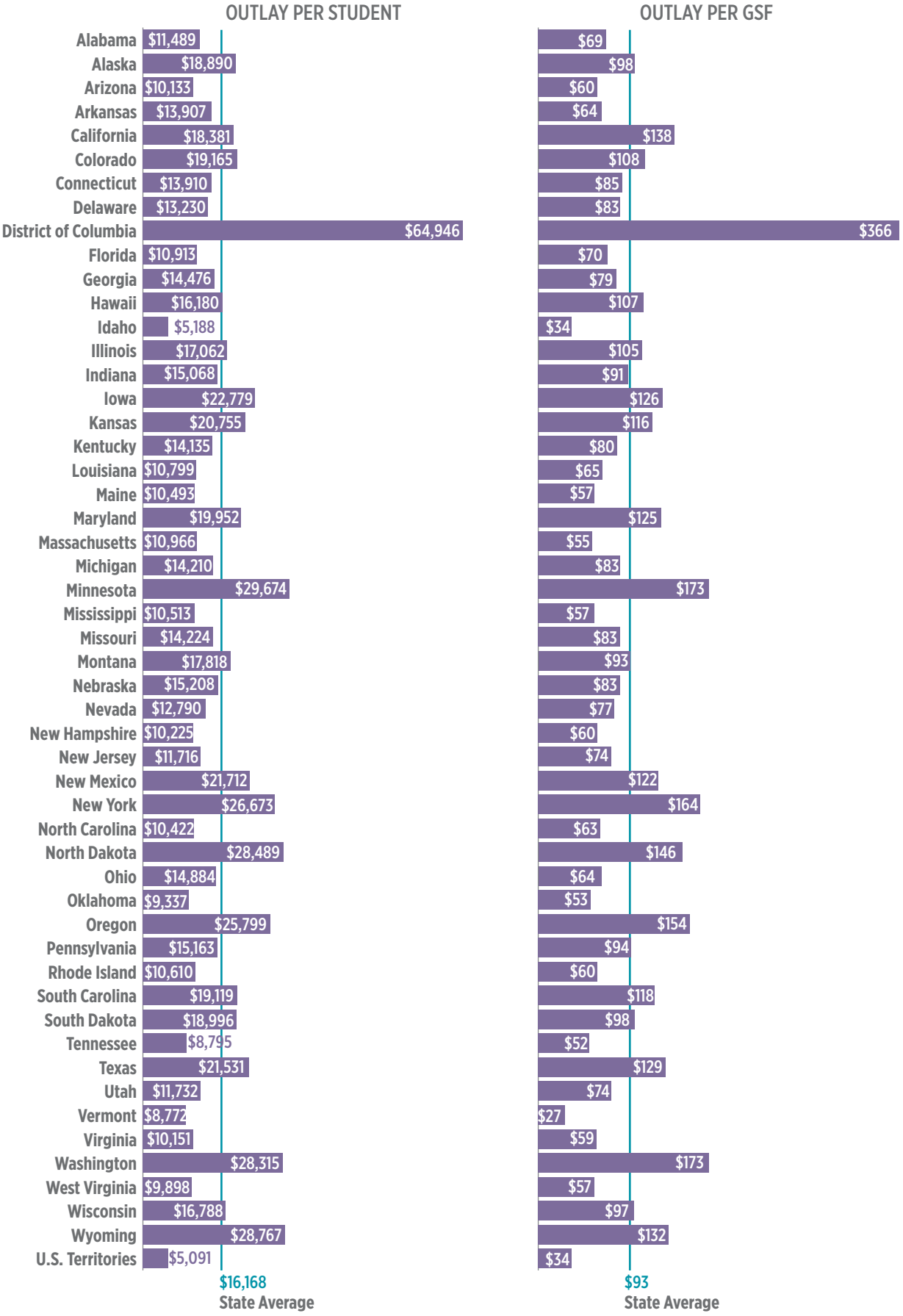
Table 3: School Construction and Equipment Capital Outlay FY2014-FY2023

Excluding estimates for new construction needed for growth, public schools need $138 billion every year to meet education, community, health, safety, security, environmental, energy, and resilience standards in existing facilities.

Facilities Capital Investment	Annual Capital Standard 4% of CRV	Actual Annual Average FY2014–2023 (2024$)	Annual Investment Gap Annual Avg Shortfall
Total	$138,436,124,903	$82,337,545,087	**-$56,098,579,815**
Per Student	$3,142	$1,617	**-$1,526**
Per Gross Square Ft	$17.70	$9.25	**-$8.44**

Chart 10: Facilities Capital Outlay Total (2024$) by State

There is tremendous variability in what school districts have invested in school facilities over the ten years from FY2014 to FY2023.



Just as with M&O, the differences in the levels of facilities capital investment per student and per GSF among the states are substantial. Idaho is the U.S. state with the lowest 10-year investment per student in its public school buildings and grounds, comparable to the U.S. Territories. However, Vermont had the lowest level of facilities capital investment per gross square foot. The contrast with Idaho can be explained by the fact that Idaho was experiencing growing enrollment. At the same time, Vermont's enrollment declined from FY2014 to FY2023. Neither had state funding, and local effort was minimal.

At the high end of investment in facilities-capital outlay is the District of Columbia. It is nearing the end of a capital program to modernize all of its public school facilities. This program combined parent and community advocacy, local government commitment, and business sector support to eliminate the deplorable conditions found in the public schools in the 1980s. At that time, it was not unusual for schools to be closed due to fire code violations, asbestos hazards, and extreme heat and cold. However, by 2025, over 70% of all District of Columbia Public Schools will have been fully modernized.

Wyoming, the state with the highest per-student spending, also initiated a major modernization program for all of its public schools in the 1990s, following a funding lawsuit. By 2015, they had modernized nearly all of their schools and were planning state strategies to preserve their investments.[30]

Patterns and Variation of Facilities Capital Investments Among Districts

The highest-poverty districts paid the most per square foot for their capital investments, but the least per student. Just as with M&O patterns and variations, the averages cover the extent of disparity in capital investments across districts. In Virginia, for example, Hampton City Public Schools invested only about $3,150 per student while Roanoke City Public Schools invested nearly $30,000 a student (2024$) over the same ten-year period from FY2014 to 2023. Even in low-poverty, growing-enrollment districts, significant differences are found. Loudoun County, with a 2022-23 enrollment of about 82,000 students, spent about $13,000 per student on school construction and capital equipment, while Chesterfield County Public Schools, also growing, albeit not as much, spent only about $6,500 per student over the same period.

It may seem that poor conditions in facilities go unnoticed. However, this is rarely the case. These photos were taken by a student who was discouraged by the neglected outdoor basketball court, and by a health and safety inspector of the Philadelphia Teachers Fund, concerned about the health impact of poor conditions.

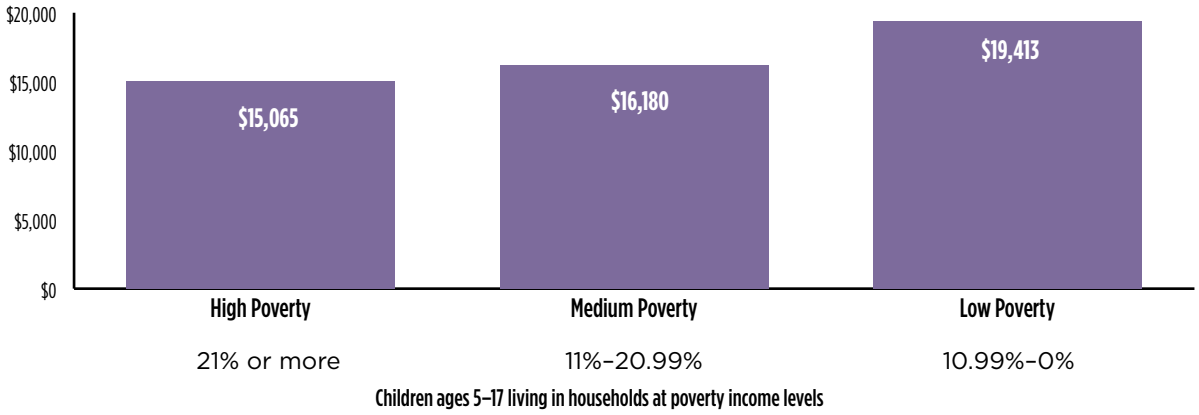
Table 4: School Construction & Equipment Capital, FY2014-FY2023 (2024$)

Low poverty districts invested the most to improve and build public school facilities on a per student basis, but building GSF costs in high poverty districts in cities and suburbs were the highest.

POVERTY LEVELS	PER STUDENT			PER GROSS SQ FOOT		
	HIGH	MEDIUM	LOW	HIGH	MEDIUM	LOW
ALL REGULAR DISTRICTS	**$15,065**	**$16,180**	**$19,412**	**$112**	**$78**	**$84**
City	$18,329	$18,833	$23,866	$153	$89	$98
Suburb	$11,375	$14,758	$17,721	$106	$83	$83
Town	$13,181	$16,725	$22,506	$81	$72	$77
Rural	$12,147	$15,352	$21,424	$62	$60	$74

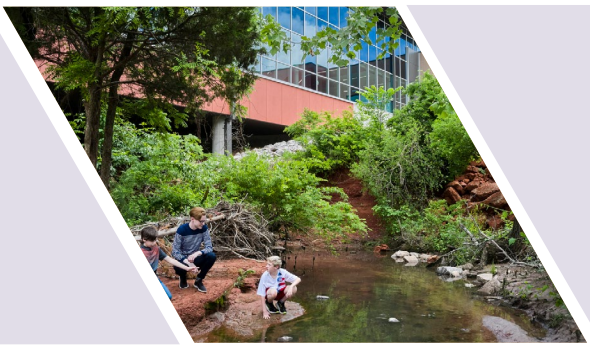
Chart 11: School Construction & Equipment Capital Outlay per Student, FY2014-FY2023 (2024$)

Even with substantially higher costs per GSF for capital outlay, high poverty districts had lower spending per student for capital investment.



Source: U.S. Census Small Area Income and Poverty Estiamtes (SAIPE)

A modernization and gym and community center addition to Savoy Elementary School, as part of a shared-use development with Thurgood Marshall Charter High School. Washington, D.C. Photo Credit: 21st Century School Fund

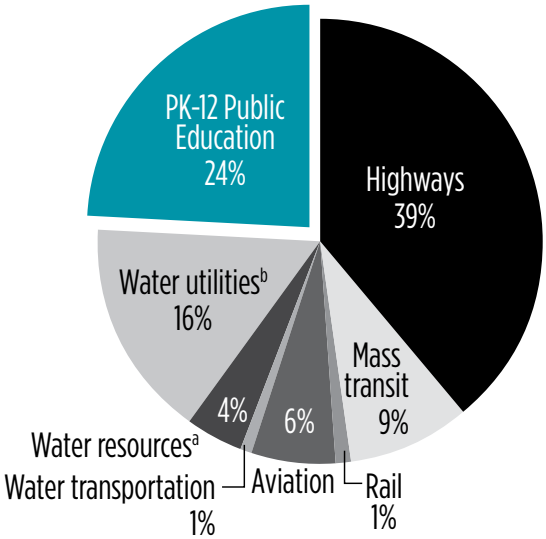


PK-12 Facilities Funding and Financing

School buildings and grounds require ongoing operations and maintenance to be habitable. School districts initiate and are responsible for new school construction when enrollments grow. Buildings and grounds also require the replacement of building and site systems and components; renovation of finishes, and furniture as they age; and alterations in design as programs and utilization change. The scale of capital investment in elementary and secondary public education is essential public work and is second only to highways.

Chart 12: U.S. Capital Outlay on Public Infrastructure FY2014-2023

The Congressional Budget Office Report on Infrastructure spending did not include PK-12 public education expenditures. But when included, school construction and capital equipment, without land or existing structures are nearly one quarter of all infrastructure capital outlay.[31]



(a) Includes water containment systems (dams, levees, reservoirs, and watersheds) and sources of freshwater (lakes and rivers).

(b) Includes water supply and wastewater treatment facilities.

Districts pay for school facilities from annual operating budgets and multi-year capital budgets. Maintenance and operations are paid for through school districts' yearly education operating budgets. Capital expenditures are periodic and drawn from a multi-year capital budget, often financed with long-term debt and repaid annually from the education budget. The help that districts get from states and the federal government for these responsibilities is varied, usually unstable, and inadequate. See Appendix C for state-by-state data on sources of capital revenue.

Local Communities Make the Greatest Effort

Public school districts spent an annual average of about 9% of their total education spending on maintenance and operations of facilities for fiscal years 2019-2023. Since states, on average, pay about 45% of total district education spending (excluding capital spending), through state funding formulas, states provide meaningful support for the annual maintenance and operations budgets of facilities.

It is a different story for capital expenditures. From FY14-23, U.S. local education agencies, including regular, charter, and other districts, paid 80.5% of school construction and capital equipment outlay with local funds. This results in facilities being one of the areas of greatest disparity among districts. As a consequence, school facilities have been a part of school finance challenges in states.[32]

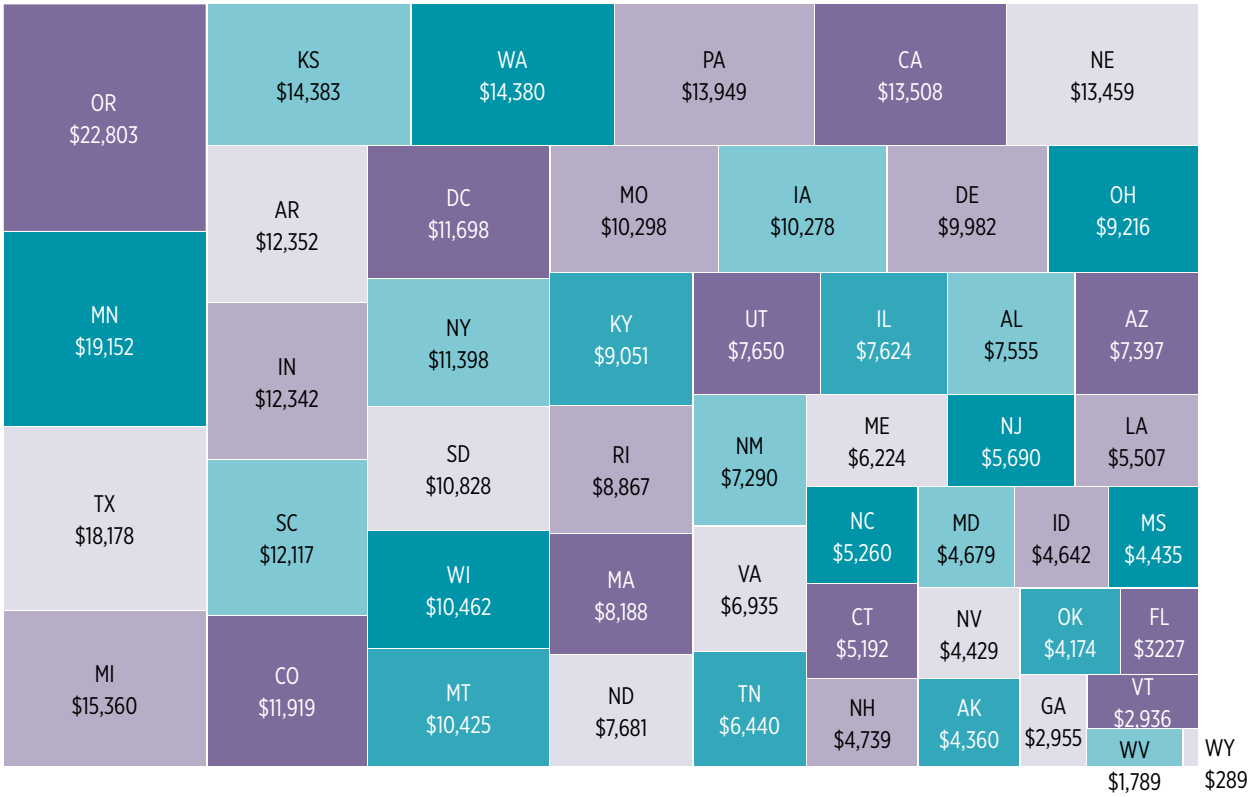
Chart 13: School Construction and Capital Equipment Outlay by Source of Funds FY2014-2023 in 2024$

Local districts carry by far the greatest share of capital construction and equipment expenditures, so that the disparities in wealth of districts are carried through to facility conditions, except where states take a significant role in funding and addressing wealth disparity.

Local education agencies held $585 billion in long-term debt at the end of fiscal year 2023—$8,953 per student. Local districts reported paying paid $22 billion for interest on long-term debt from their annual operating budgets in FY2023.

Chart 14: Debt per student end of fiscal year 2023

High levels of local debt can mean high effort on the part of districts, low state capital funding, new construction to address crowding, or major capital programs, or a combination of all of the factors.



State Support for Facility Funding Varies

The national totals for facilities spending mask variation by states. Over the 10 years from FY14-23, states paid about $135.5 billion, about 16% of all school construction and capital outlay expenditures. Map 1 shows how varied state funding for capital outlay or debt service is across states. Thirteen states contribute less than 10% toward local district investments in school construction and equipment capital improvements for the FY2014 to FY2023 period, with 10 states making no contributions at all. Eight states paid over 50% of school construction and equipment capital costs.

Map 2: State Contribution to School Construction and Equipment Capital Outlay FY2014-FY2023

24 states provide districts less than 10% toward their facilities capital needs.

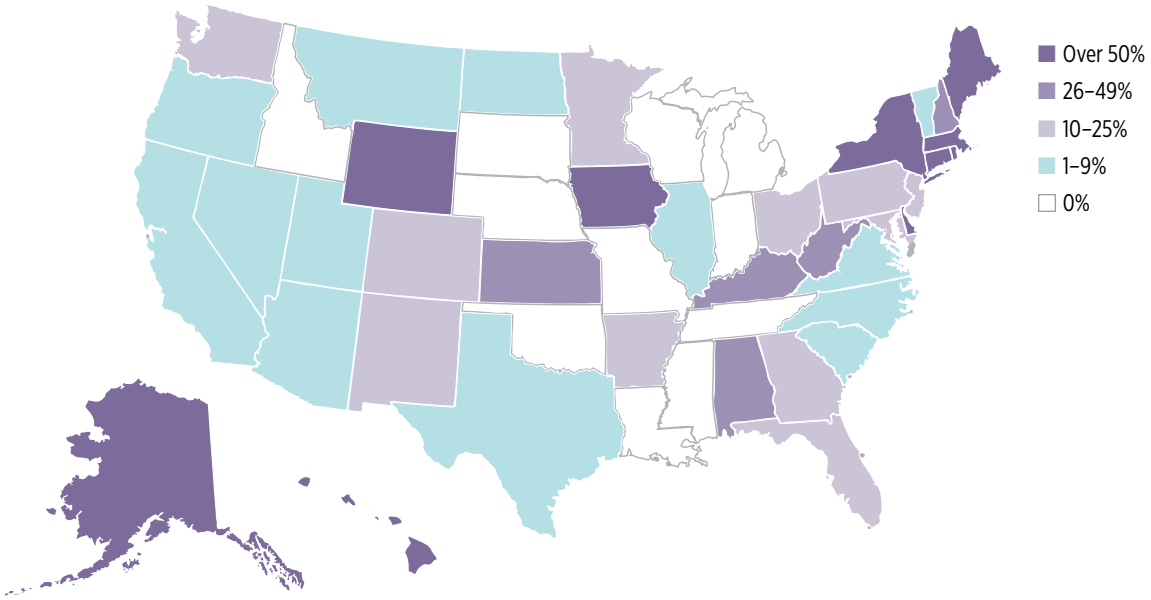
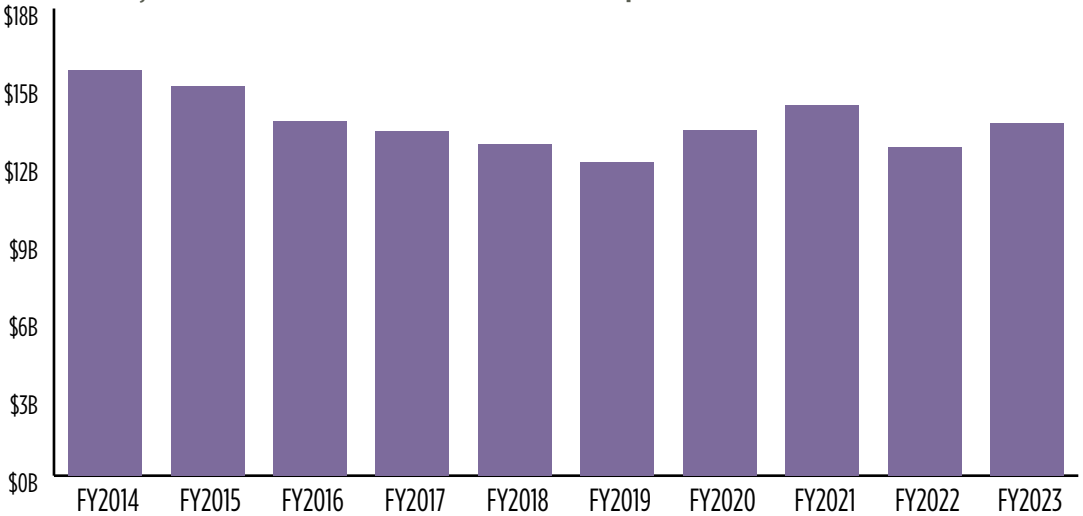


Chart 15: State Revenue and Debt Service to School Districts for Capital Outlay FY2014-FY2023 (2024$)

State contributions to districts for capital needs declined from FY14-19, even as costs increased and conditions deteriorated, but started to rebound before the COVID-19 pandemic.



Federal Funding for Public School Facilities

Most federal funding for PK-12 public education infrastructure has followed major crises. LEAs reported that they used about $8.6 billion in federal funds for the maintenance and operation of their facilities to meet more stringent health and safety standards during the COVID-19 pandemic.

Table 5: U.S. Federal Facilities Funding FY2014-FY2023 (2024$)

FEMA Public Assistance		$12,773,858,217
American Recovery & Reinvestment Act (ARRA) FY14		$73,053,155
Elementary and Secondary Education Relief (ESSER) FY21-23	Capital Projects (43 states & D.C.)	$14,113,640,566
	Maintenance & Operations	$8,836,581,415
	TOTAL Federal $	**$35,839,504,183**

Capital funds from federal sources from FY14-23 were $27 billion, about (3.2%) of all school construction and equipment capital outlays.

One of the largest sources of federal funds for school infrastructure is from the FEMA Public Assistance grants following natural disasters. FEMA reported grants of nearly $13 billion for school districts from FY2014 to FY2023, with $9 billion for the disastrous hurricanes hitting the Virgin Islands, Puerto Rico.[33].

Following the housing crisis of 2008, capital expenditures were included as an allowable use of federal Education Stabilization Funds of the American Recovery and Reinvestment Act (ARRA). While only $73 million was reported spent in FY2014, the last year Education Stabilization Funds were available, districts had reported using a total of $3.3 billion from ARRA for school construction—this was about 5% of the $65 billion of education stabilization funds made available for PK-12 public education.

The most substantial federal funds for school facility improvements over the last generation were to address the impacts of the COVID pandemic and were not primarily for or used on school facility improvements. The three major pieces of COVID federal legislation for public education were:

- **CARES Act:** Passed in 2020, provided the initial ESSER I fund of about $13.5 billion.
- **CRRSA Act:** Passed in 2021, provided the ESSER II fund with an additional $54.3 billion.
- **ARPA (American Rescue Plan):** Passed in 2022, provided the ESSER III fund, which distributed approximately $122 billion in funding for K-12 education.

Public school capital projects were a permissible use of these Elementary and Secondary Emergency Relief (ESSER) funds, when focused on health and safety. The U.S. Fiscal Survey requested that districts report Capital Outlay paid from COVID generated funds. Seven states and five territories did not report using federal American Rescue Plan Act funds for school capital outlay on their U.S. Census of Government F-33 Fiscal Surveys. During this period, among the states and districts that reported ESSER capital spending, 5% of their school construction and equipment capital outlay expenditures were paid by ESSER funds.

Expenditures of ESSER funds for capital outlay will likely be higher in FY24 and FY25, the last years during which ESSER funds could be used. This is because capital projects take time for planning, design, procurement, and construction and school districts and state education agencies, as well as the U.S. Department of Education itself took time to figure out how to use federal funds in multi-year capital budget processes.

Other Federal Facility Support for PK-12 Public School Construction

Federal funds for school facilities following major national or regional crises have been the primary federal response to the challenges of providing appropriate public education infrastructure. However, federal programs for public school facilities are spread across many agencies, indicating widespread community needs and interests in public school buildings and grounds.

In August 2020, the Congressional Research Service updated a 2015 report, "School Construction and Renovation: A Review of Federal Programs and Legislation." This report divides federal school construction support into four major categories:

1. **Broadly Available** Sources of Federal Support- IRS related tax benefits, ongoing programs with facility spending as an eligible use (IDEA, Head Start, Child Care, State Energy Program, and School-Based Health Center Capital Program)
2. **Episodically Available** Sources of Federal Support – grants from U.S. Department of Education and FEMA for mitigation or following a natural or biological disaster.
3. **Targeted Geographic Areas or Populations** – compensation due to loss of local tax base due to federal ownership of property; eligibility for facilities funding in economically distressed areas from the Department of Commerce; and eligibility for school construction targeted to military bases, and Native American communities.
4. **Federal Support for Specific Institutions or Types of Institutions –** federal facility funds for schools for the deaf, charter schools, and schools operated by the Department of Defense Education Activity Agency.

Since this 2020 Congressional Research Service report, two important programs have been authorized for school facilities funding.[34]

Infrastructure Investment and Jobs Act 2021- Schools were included in this infrastructure bill, with a $500 million appropriation to the U.S. Department of Energy for health-focused school district capital energy efficiency capital improvement projects. About $278 million went out to districts from $5.5 billion in requests, but the last round of funding was cancelled in 2025. This bill also included funds for technical assistance and training for school districts on supporting energy-efficient and healthy schools.

Investment Tax Credit (Sec. 48) - Within the IRS tax credit program, public owners can obtain Investment Tax Credits (Sec. 48) for geothermal heat pumps through Elective Pay. The reimbursements may range from 6% to 50% of the project costs for a ground-source heat pump, depending on whether various criteria outlined in the program are met. This program formerly included tax credits for the installation of solar panels and battery storage, but eligibility for this was cancelled, and it now applies only to geothermal heat pumps.[35]

Two pilot programs were initiated in the U.S. Department of Education to address the complex facility challenges districts are facing. This is new territory for US ED, but early results show that building and supporting state capacity for effective management of facilities may bring a strong return on the investment.

Supporting America's School Infrastructure (SASI) – Starting in November 2023, the U.S. Department of Education (US ED) began a Federal partnership with state agencies to "build capacity of states to support high-need school districts with technical assistance and training for public school facilities." The concept of building state capacity was included in the Rebuild America's School Act (RASA) which was introduced in the House and Senate starting in 2016, but it

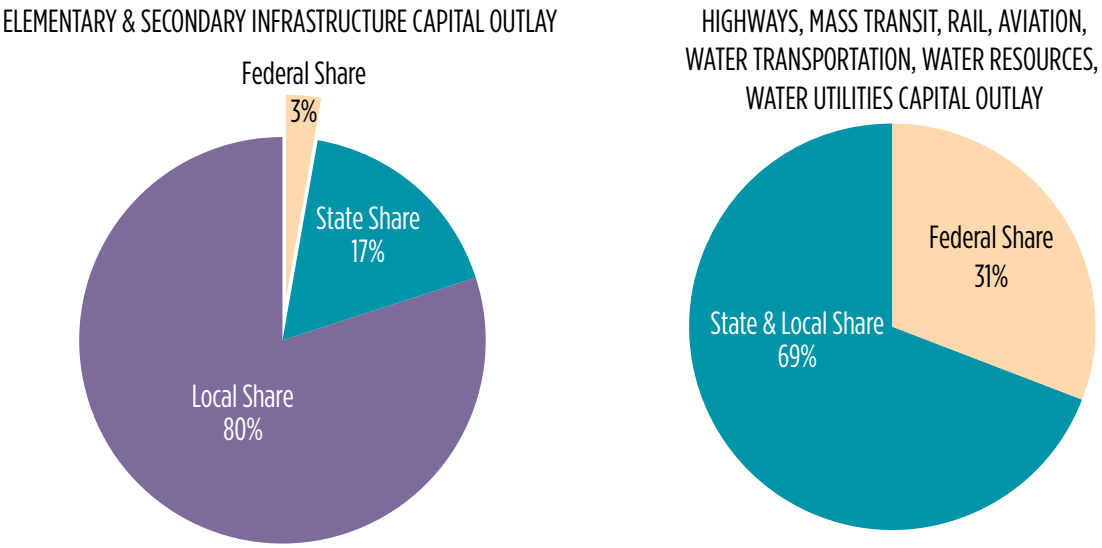
was the challenges and complexities of the Pandemic that lead Senator Shelby (AL -R) and Senator Reed (D-RI) to work together on the FY2023 budget to secure funding for building state facilities capacity.

U.S. ED selected seven states and one territory for funding and obligated $37,160,012 over the five-year grant period to support facility capacity building in Alabama, Arizona, California, Oregon, the Northern Mariana Islands, Pennsylvania, Rhode Island, and Virginia. All but one of the grantees are State Departments of Education. In Arizona, the funding was awarded to the Department of Administration, under the Governor, which holds state-level responsibility for public school facilities oversight and project funding.

National Center on School Infrastructure - As part of the same Senate-proposed initiative, the US ED has also approved a cooperative agreement for $10 million over five years to establish the National Center on School Infrastructure (NCSI). Based at the University of California, Berkeley, and in consortium with the 21st Century School Fund, National Council on School Facilities, and Child Trends. NCSI is a clearinghouse for data and research findings and a hub of resources, assistance, and knowledge-sharing about best practices in the stewardship of public school facilities.

Chart 16: Federal Funding for Infrastructure Capital Outlay FY2014-FY2023

Federal funds provide 31% of the capital outlay for U.S. infrastructure. Only 3% for elementary and secondary infrastructure capital outlay.



Data Source: CBO's Febraury 2025 report Public Spending on Transportation and Water Infrastructure, 1956 to 2023, www.cbo.gov/publication/60874; PK12 capital outlay from U.S. Census of Governments and NCE Fiscal Survey FY2014–23; enrollment 2023–24, NCES Common Core Data.

Pathways to Modern Public School Facilities by 2050

The U.S. system of public education will remain the foundation for the health, wealth, and power of this nation if we support it. Given the age and condition of the nation's public schools, the U.S. has a tremendous opportunity to modernize its deteriorating buildings and grounds into better facilities and better schools. The buildings and grounds required to educate millions of children are complex, changing, and costly. Modernizing and maintaining the public buildings and grounds in our communities is essential, but communities need a high return on their investments to increase and sustain their support. Fortunately, the need for, and the benefits of, modern public school buildings and grounds have never been more evident.

- Modernizing public school infrastructure **provides economic benefits** to the U.S. economy at the local and national levels. School facilities operations, management, and construction—especially modernization—are labor-intensive. For every $1 billion spent on capital projects, 18,000 direct and indirect jobs are created.[36] U.S. workers and the local economies are important beneficiaries of school modernization and the ongoing maintenance and operation of public school buildings and grounds.
- Modern public school buildings and grounds **improve educational quality** by boosting student and teacher engagement and fostering innovative educational practices. The OECD's 2018 report *Responsive School Systems* offers a governance perspective on how countries align infrastructure decisions with broader education strategies.[37] Although not focused solely on facilities, it emphasizes that decisions about school organization are most effective when integrated into long-term educational planning that also addresses curriculum, staffing, and student support services.
- Modern school facilities **benefit the community** by serving as resilient shelters and adapting to support the rapidly increasing population of residentws over 65, while continuing to serve children. These modern public schools can be some of the healthiest, safest, and most secure environments. They help attract and retain teachers, students, and families, and remain centers of community.

Americans have spent $150 billion each year (2024$) over the last ten years on the maintenance, operation, capital improvements, and new construction of public school buildings and grounds. Although this level of effort has fallen short by nearly $90 billion a year, it is still substantial. A priority for district, state, and federal leaders should nonetheless be to at least sustain current funding levels.

However, to close the gap between modern standards and current conditions will require systemic changes. The public sector needs new capabilities and tools. The private sector needs to employ innovations and develop more productive practices to contain costs, without compromising quality. Examples of effective policies and practices can be found throughout the nation, but these examples are rarely systemic.

Every district needs a long-range plan, capital plans and budgets, as well as regular site-specific maintenance and operations plans. Each should be tailored to its context, developed with good data, broad stakeholder and technical participation, and openly communicated. Five key strategies for reducing the facility gap are briefly described. Each strategy should be included in the facilities plans, along with the activities, schedule, and costs associated with it. These will need to be developed with technical input and stakeholder engagement and will make it possible for all communities to have modern public education infrastructure by 2050.

1. Improve management and labor practices for facility M&O.

Routine cleaning and preventive maintenance of school buildings and grounds can immediately improve health and safety conditions, reduce utility costs, prevent costly emergency breakdowns, and extend the useful life of building and site components and systems.

2. Execute comprehensive school facility modernizations, not piecemeal projects.

Since so many of the nation's public school elementary and secondary buildings are over 40 years old, the space designs and construction elements are obsolete and often pose health risks from legacy toxics. A school facility is an integrated system of location, space design, and the construction of its systems, components, equipment, fixtures, finishes, and furniture. Addressing the integrated systems together saves money and delivers greater educational, community, and environmental benefits.

3. Reform policies and practices to increase return on investments.

The current policies and practices of local, state, and federal government and of our building industry professionals are not delivering modern public school buildings and grounds at the scale, urgency, or price point needed. Facilities management has become increasingly complex as standards change, buildings and grounds age, and costs continue to rise unsustainably.

4. Explore governance and space efficiencies for districts and PK-12 buildings and grounds.

Building construction, operations, and maintenance costs continue to rise. The amount of square footage districts manage is a key factor affecting facilities M&O and capital spending. The cost to operate and maintain modern school buildings and grounds is most directly affected by the amount of building square footage and grounds acreage a district is responsible for.

5. Dedicate adequate and stable funds for buildings and grounds.

Public school infrastructure spending and investments have the capacity to deliver strong returns to families and communities. With adequate and stable sources of funds, districts and communities can plan their priorities, and costs will be better controlled because industry will have less demand risk to manage. Districts will avoid expensive emergency breakdowns. They will be able to adapt the school for shared uses to enable its continued community service and enhance the educational performance of students and staff.

Budget Impact of Gap Reduction Strategies

Systemic change in how school districts and states manage facility planning, information, funding, and accountability can positively affect the quality and the affordability of the nation's public school buildings and grounds. But districts need support to improve M&O, execute comprehensive modernizations, reform public and private processes, address governance and space inefficiencies, and sustain and increase their local and state funding. Intentional focus on implementing these strategies can substantially reduce the gap—from $85 billion a year to $25 billion a year—a $60 billion reduction in demand.

Chart 17: A Scenario for Modern PK-12 Public School Infrastructure 2025-2050

Combining strategies for improved M&O, modernizations, reforms of public policy and private industry practices, as well as exploring building use efficiencies will increase the return on our investments and reduce the annual gap in the nation's facility funding demands.

Community education facilities planning meeting. Fargo, North Dakota Photo: Woolpert

Table 6 illustrates the assumptions that were made to come up with the estimates on the impact on the size of the annual gap. This scenario can be run and modified by state, district, and even school. It can provide a basis for community engagement around the vision, plans, and affordability of reaching modern schools in your state and districts by 2050.

Table 6: A Scenario for Modern School Facilities by 2050.

Each state and community has a different set of challenges and opportunities, but they all involve space, costs, and public policy and industry practices. This scenario reduces the annual gap by $60 billion.

	Current Path	Comprehensive Modernizations	Public Policy & Private Practice Reform	Governance & Use Efficiencies
U.S. PK-12 public school GSF	8,318,000,000	8,318,000,000	8,318,000,000	7,902,155,539
Current Replacement Value (CRV) $/Gross Square Foot (GSF)	$416	$450	$450	$450
CRV of U.S. Inventory	$3,460,288,000,000	$3,743,100,000,000	$3,743,100,000,000	$3,555,969,992,550
Capital Standard of CRV	4%	3%	3%	3%
Capital Investment Average Annual Need	$138,411,520,000	$112,293,000,000	$112,293,000,000	$106,679,099,777
Avg Annual Capital Investment FY2014-23	$82,346,132,688	$82,346,132,688	$82,346,132,688	$82,346,132,688
Avg Annual Capital Gap	($56,065,387,312)	($29,946,867,312)	($29,946,867,312)	($24,332,967,089)
M&O Standard % of CRV	3%	3%	2.5%	2%
M&O Annual Average Need	$103,808,640,000	$112,293,000,000	$93,577,500,000	$71,119,399,851
Avg Annual M&O Expenditure FY19-23	$74,372,656,612	$74,372,656,612	$74,372,656,612	$74,372,656,612
Avg Annual M&O Gap	($29,435,983,388)	($37,920,343,388)	($19,204,843,388)	($1,369,504,229)
Avg Annual Projected Gap TOTAL	($85,501,370,700)	($67,867,210,700)	($49,151,710,700)	($25,702,471,318)

The final $25 billion needed to close the gap and meet the challenge of modern elementary and secondary public school infrastructure should be provided through a federal program that incentivizes reforms in government policies and industry practices. As a sign of long-standing federal interest in public school infrastructure, there are already numerous agencies with programs for public education facilities, including the U.S. Departments of Education, Homeland Security, Justice, Energy, Agriculture, Defense, Commerce, EPA, Bureau of Indian Affairs, and even the Internal Revenue Service. But these are siloed, each complex to navigate, and they come with barriers to bundling with one another and with state or local funds. They are also not stable funding sources, often providing only short-term infusions of funds. A key requirement for cost-effective capital investment is stability.

Civic, education, and industry stakeholders need to examine the current federal funding programs for PK-12 public infrastructure and work with Congress to make sure they are stable, efficient to access and use, and commensurate with how critical and extensive our nation's public school buildings and grounds are to the well-being, wealth, and power of this nation.

APPENDIX A

PK-12 Public Schools Inventory

	ENROLLMENT - ALL LOCAL EDUCATION AGENCIES				SCHOOL BUILDING INVENTORY 2024					CRV IN BILLIONS - 2024	
	FY14 Enrollment	FY23 Enrollment	Enrollment Change FY14 -23	% Change Enrollment	# Public Schools 2014	# Public Schools 2023	# Public Schools Change	Bldg Gross Square Footage (GSF) in millions	GSF per Student	New Construction Est per GSF	Current Replacement Value (CRV)
Alabama*	746,204	750,923	4,719	0.6%	1,640	1,520	(120)	125.8	168	$303	$38.1
Alaska*	130,944	129,330	(1,614)	-1.2%	518	490	(28)	24.9	193	$787	$19.6
Arizona*	1,104,727	1,126,028	21,301	1.9%	2,446	2,561	115	189.6	168	$435	$82.4
Arkansas	489,979	493,031	3,052	0.6%	1,126	1,098	(28)	106.3	216	$290	$30.8
California	6,227,585	5,871,717	(355,868)	-5.7%	10,468	10,356	(112)	779.9	133	$597	$465.6
Colorado*	876,064	866,157	(9,907)	-1.1%	1,860	1,930	70	153.1	177	$419	$64.1
Connecticut	533,510	499,918	(33,592)	-6.3%	1,166	995	(171)	81.7	163	$563	$46.0
Delaware	131,687	141,465	9,778	7.4%	236	235	(1)	22.7	160	$509	$11.5
District of Columbia	76,854	90,925	14,071	18.3%	248	242	(6)	16.1	177	$726	$11.7
Florida	2,720,744	2,868,193	147,449	5.4%	4,414	4,270	(144)	449.5	157	$309	$138.7
Georgia*	1,723,909	1,750,972	27,063	1.6%	2,406	2,317	(89)	321.8	184	$330	$106.2
Hawaii	186,825	170,209	(16,616)	-8.9%	290	295	5	25.7	151	$915	$23.5
Idaho*	296,315	317,232	20,917	7.1%	745	804	59	48.1	152	$424	$20.4
Illinois	2,066,990	1,852,242	(214,748)	-10.4%	4,304	4,408	104	301.9	163	$319	$96.4
Indiana	1,045,635	1,035,947	(9,688)	-0.9%	1,943	1,921	(22)	172.1	166	$331	$57.0
Iowa	502,816	511,297	8,481	1.7%	1,413	1,328	(85)	92.6	181	$414	$38.3
Kansas	496,440	487,965	(8,475)	-1.7%	1,360	1,355	(5)	87.5	179	$334	$29.3
Kentucky	677,389	660,029	(17,360)	-2.6%	1,623	1,542	(81)	116.6	177	$302	$35.3
Louisiana	711,491	717,936	6,445	0.9%	1,438	1,340	(98)	119.1	166	$321	$38.3
Maine*	182,752	173,566	(9,186)	-5.0%	625	597	(28)	31.7	183	$478	$15.1
Maryland*	866,169	889,960	23,791	2.7%	1,454	1,415	(39)	142.3	160	$438	$62.3
Massachusetts*	955,739	923,349	(32,390)	-3.4%	1,888	1,841	(47)	184.6	200	$580	$107.1
Michigan	1,509,447	1,386,632	(122,815)	-8.1%	3,676	3,516	(160)	238.2	172	$330	$78.6
Minnesota	848,821	864,090	15,269	1.8%	2,521	2,712	191	148.4	172	$431	$63.9
Mississippi	492,953	440,285	(52,668)	-10.7%	1,074	1,038	(36)	80.5	183	$268	$21.6
Missouri	918,288	892,246	(26,042)	-2.8%	2,424	2,473	49	153.7	172	$333	$51.2
Montana	144,209	150,190	5,981	4.1%	834	831	(3)	28.9	192	$368	$10.6
Nebraska	309,743	331,207	21,464	6.9%	1,127	1,105	(22)	60.5	183	$333	$20.1
Nevada	452,136	484,392	32,256	7.1%	691	765	74	80.6	166	$433	$34.9
New Hampshire	184,473	168,447	(16,026)	-8.7%	487	502	15	28.6	170	$563	$16.1
New Jersey	1,368,412	1,383,785	15,373	1.1%	2,615	2,566	(49)	219.9	159	$590	$129.8
New Mexico	339,244	315,023	(24,221)	-7.1%	885	892	7	56.1	178	$373	$20.9
New York	2,695,524	2,532,777	(162,747)	-6.0%	4,907	4,835	(72)	412.6	163	$643	$265.5
North Carolina	1,499,879	1,541,722	41,843	2.8%	2,635	2,741	106	256.5	166	$303	$77.6
North Dakota	103,706	118,444	14,738	14.2%	531	514	(17)	23.1	195	$368	$8.5
Ohio*	1,724,111	1,680,478	(43,633)	-2.5%	3,783	3,633	(150)	391.6	233	$345	$135.1
Oklahoma	684,090	701,301	17,211	2.5%	1,808	1,781	(27)	123.5	176	$320	$39.5
Oregon*	577,290	552,311	(24,979)	-4.3%	1,255	1,286	31	92.5	167	$484	$44.8
Pennsylvania	1,734,263	1,673,044	(61,219)	-3.5%	3,172	2,943	(229)	271.2	162	$424	$115.1
Rhode Island*	141,871	137,318	(4,553)	-3.2%	310	316	6	24.2	177	$595	$14.4
South Carolina	745,657	789,231	43,574	5.8%	1,256	1,278	22	127.8	162	$301	$38.5
South Dakota	128,709	139,330	10,621	8.3%	695	721	26	27.0	194	$368	$9.9
Tennessee	993,556	1,006,750	13,194	1.3%	1,864	1,900	36	168.7	168	$347	$58.6
Texas	5,153,702	5,476,561	322,859	6.3%	9,336	9,587	251	912.8	167	$320	$292.0
Utah	622,326	688,889	66,563	10.7%	1,002	1,093	91	109.7	159	$328	$36.0
Vermont*	87,477	83,232	(4,245)	-4.9%	315	302	(13)	27.0	324	$563	$15.2
Virginia*	1,273,825	1,260,351	(13,474)	-1.1%	2,197	2,153	(44)	218.5	173	$446	$97.5
Washington	1,058,552	1,089,425	30,873	2.9%	2,409	2,549	140	178.6	164	$512	$91.4
West Virginia*	280,958	251,224	(29,734)	-10.6%	761	685	(76)	43.7	174	$367	$16.0
Wisconsin	874,414	822,327	(52,087)	-6.0%	2,293	2,236	(57)	142.3	173	$319	$45.5
Wyoming	92,218	92,451	233	0.3%	370	360	(10)	20.1	218	$401	$8.1
Bureau of Indian Education (BIE)	36,692	36,617	(75)	-0.2%				10.4	285	$401	$4.2
U.S. Territories	495,939	312,704	(183,235)	-36.9%	1,591	989	(602)	47.2	151	$1,081	$60.1
U.S. TOTAL/STATE AVG	50,323,253	49,731,175	(592,078)	-1.2%	102,435	101,162	(1,666)	8,318	167	$416	$3,459

Gross square footage (GSF) was reported by state.

APPENDIX B

PK-12 Public School Maintenance & Operations

	ANNUAL AVG OPERATING BUDGET EXPENDITURES FY19-23 (2024$)					FY2023 UTILITY EXPENDITURES IN 2024$					ESSER REVENUE
	Total Education Expenditures (TCURELSC) in billions	M&O Expenditures (V40) in billions	M&O Expenditures as % of Total Education Expenditures	M&O per 22-23 Student	M&O per GSF	Utilities in millions	Utilities (V95) as % of M&O	Utilities % of Total Education Expenditures	FY23 Utilities per Student	Utilities Per GSF	Federal Revenue from COVID Relief (AE7) FY20-FY23 CPI adjusted $
Alabama	$9.33	$0.88	9.5%	$1,177	$7.02	$265.6	32%	3.1%	$354	$2.11	$100,792,937
Alaska	$2.86	$0.33	11.6%	$2,571	$13.35	$106.3	35%	4.1%	$822	$4.27	$21,561,330
Arizona	$12.36	$1.35	10.9%	$1,201	$7.13	$321.8	25%	2.8%	$286	$1.70	$346,878,381
Arkansas	$6.29	$0.66	10.4%	$1,329	$6.16	$144.8	23%	2.5%	$294	$1.36	$141,118,998
California*	$105.47	$9.56	9.1%	$1,628	$12.25	$1,937.6	21%	2.0%	$330	$2.48	$1,532,707,863
Colorado	$12.62	$1.19	9.4%	$1,371	$7.76	$219.8	20%	1.9%	$254	$1.44	$102,976,542
Connecticut*	$12.66	$1.12	8.8%	$2,231	$13.65	$165.0	16%	1.4%	$330	$2.02	*NOT REPORTED*
Delaware	$2.80	$0.30	10.6%	$2,109	$13.16	$39.5	14%	1.5%	$279	$1.74	$62,883,551
District of Columbia	$2.58	$0.24	9.3%	$2,636	$14.86	$49.6	22%	2.1%	$545	$3.07	$12,546,487
Florida	$33.76	$3.47	10.3%	$1,210	$7.72	$824.6	25%	2.7%	$288	$1.83	$580,568,575
Georgia	$24.89	$1.79	7.2%	$1,021	$5.55	$530.4	31%	2.3%	$303	$1.65	$480,900,040
Hawaii	$3.47	$0.34	9.9%	$2,026	$13.39	$78.0	22%	2.5%	$458	$3.03	$163,765,012
Idaho*	$3.15	$0.28	8.8%	$874	$5.76	$104.7	39%	3.6%	$330	$2.18	$60,292,204
Illinois*	$39.11	$3.26	8.3%	$1,760	$10.80	$611.2	20%	1.7%	$330	$2.02	$325,747,288
Indiana	$13.34	$1.50	11.3%	$1,450	$8.73	$409.5	29%	3.3%	$395	$2.38	$146,493,277
Iowa	$7.39	$0.65	8.7%	$1,263	$6.98	$146.9	24%	2.2%	$287	$1.59	$79,152,085
Kansas	$7.49	$0.72	9.6%	$1,476	$8.23	$181.9	27%	2.6%	$373	$2.08	*NOT REPORTED*
Kentucky	$9.52	$0.78	8.1%	$1,174	$6.65	$197.1	27%	2.3%	$299	$1.69	$147,669,229
Louisiana	$10.59	$1.17	11.0%	$1,625	$9.80	$219.3	20%	2.3%	$305	$1.84	$113,717,458
Maine	$3.35	$0.34	10.0%	$1,939	$10.63	$67.0	19%	2.2%	$386	$2.12	$185,115,303
Maryland	$16.90	$1.48	8.8%	$1,664	$10.41	$196.6	14%	1.3%	$221	$1.38	$226,107,685
Massachusetts*	$21.31	$1.86	8.7%	$2,019	$10.10	$304.7	17%	1.6%	$330	$1.65	$159,808,612
Michigan	$22.72	$1.95	8.6%	$1,404	$8.17	$371.3	20%	1.8%	$268	$1.56	$378,170,870
Minnesota	$14.35	$0.95	6.6%	$1,099	$6.40	$316.6	35%	2.4%	$366	$2.13	$120,429,923
Mississippi	$5.35	$0.54	10.1%	$1,229	$6.72	$117.0	23%	2.4%	$266	$1.45	$47,229,001
Missouri	$12.34	$1.22	9.9%	$1,365	$7.92	$325.3	28%	2.9%	$365	$2.12	$170,568,977
Montana	$2.17	$0.22	9.9%	$1,441	$7.49	$38.3	19%	1.9%	$255	$1.32	$29,447,032
Nebraska	$5.15	$0.47	9.2%	$1,424	$7.80	$95.6	22%	2.0%	$289	$1.58	$628,702
Nevada	$5.68	$0.50	8.8%	$1,033	$6.21	$118.2	25%	2.3%	$244	$1.47	$71,577,063
New Hampshire	$3.63	$0.30	8.2%	$1,776	$10.46	$55.7	20%	1.7%	$331	$1.95	$20,483,565
New Jersey*	$35.74	$3.40	9.5%	$2,460	$15.48	$456.6	15%	1.4%	$330	$2.08	*NOT REPORTED*
New Mexico	$4.52	$0.44	9.8%	$1,410	$7.93	$110.2	25%	2.6%	$350	$1.97	$170,070,673
New York*	$79.25	$6.63	8.4%	$2,617	$16.06	$835.8	14%	1.1%	$330	$2.03	*NOT REPORTED*
North Carolina	$18.97	$1.46	7.7%	$948	$5.70	$402.8	29%	2.3%	$261	$1.57	$309,539,744
North Dakota*	$1.98	$0.17	8.5%	$1,428	$7.31	$39.1	25%	2.1%	$330	$1.69	*NOT REPORTED*
Ohio	$27.58	$2.27	8.2%	$1,348	$5.78	$407.4	19%	1.6%	$242	$1.04	$383,357,056
Oklahoma	$7.96	$0.81	10.2%	$1,156	$6.57	$177.2	21%	2.4%	$253	$1.43	$476,881,647
Oregon	$9.16	$0.71	7.8%	$1,287	$7.68	$138.2	21%	1.6%	$250	$1.49	$100,828
Pennsylvania	$34.46	$3.13	9.1%	$1,871	$11.54	$540.3	19%	1.7%	$323	$1.99	$214,862,786
Rhode Island	$2.96	$0.24	8.1%	$1,744	$9.88	$45.1	20%	1.7%	$328	$1.86	$17,563,256
South Carolina	$11.20	$1.07	9.5%	$1,353	$8.36	$201.1	21%	2.0%	$255	$1.57	*NOT REPORTED*
South Dakota	$1.71	$0.17	10.2%	$1,254	$6.47	$26.5	16%	1.7%	$190	$0.98	$12,541,722
Tennessee	$12.17	$0.97	7.9%	$961	$5.73	$298.1	34%	2.7%	$296	$1.77	*NOT REPORTED*
Texas*	$67.80	$7.10	10.5%	$1,297	$7.78	$1,807.2	27%	2.9%	$330	$1.98	$931,717,480
Utah	$6.89	$0.59	8.6%	$857	$5.38	$153.0	28%	2.4%	$222	$1.40	$31,722,830
Vermont	$2.18	$0.17	7.7%	$2,018	$6.23	$32.7	20%	1.6%	$392	$1.21	$32,190,163
Virginia	$20.26	$1.82	9.0%	$1,443	$8.32	$809.5	48%	4.3%	$642	$3.70	$48,001,703
Washington	$19.89	$1.53	7.7%	$1,404	$8.56	$225.6	16%	1.2%	$207	$1.26	$142,107,403
West Virginia	$3.88	$0.38	9.9%	$1,531	$8.81	$88.1	24%	2.5%	$351	$2.02	$57,656,857
Wisconsin	$12.87	$1.26	9.8%	$1,538	$8.88	$247.4	21%	2.1%	$301	$1.74	$155,448,720
Wyoming	$1.88	$0.18	9.8%	$1,993	$9.14	$44.1	25%	2.6%	$477	$2.19	$23,480,827
U.S. Territories	$3.80	$0.46	12.2%	$1,482	$9.82	$103.2	22%	2.7%	$330	$2.19	*NOT REPORTED*
U.S. TOTAL/STATE AVG	$820	$74	9.3%	$1,537	$8.82	$15,749	24%	2.2%	$330	$1.89	$8,836,581,415

*Estimated utilities, based on national average per student.

APPENDIX C

PK-12 Facilities Capital Outlay, Debt, and Revenue Sources

	FACILITIES CAPITAL OUTLAY FY2014-23 (2024$)			LONG TERM DEBT AT THE END OF FY2023				STATE & FEDERAL REVENUE FOR SCHOOL INFRASTRUCTURE			
	Total (FY14-FY23) School Construction & Capital Equipment Outlay (2024$) in billions	FY14-FY23 Total School Construction $ Capital outlay Per Student (2024$)	10 year Facilities cap outlay per GSF	Total Long Term Debt in billions (_41f)	Debt per Student SY22-23	Interest Paid (i86) in millions	% of Interest Paid of Total Education Expenditures	Total c11_FY14-23 (2024$) in billions	% State Revenue for Capital Outlay or Debt Service	Total Federal Capital Funding (AE4, FEMA, HE2) FY14-23 (2024$)	% Federal Revenue for Capital Outlay
Alabama	$8.63	$11,489	$69	$5.67	$7,555	$165.6	1.7%	$2.45	28%	$237,446,880	2.8%
Alaska	$2.01	$15,542	$81	$0.61	$4,680	$22.2	0.8%	$2.07	103%	$91,792,808	4.6%
Arizona	$11.41	$10,133	$60	$8.33	$7,397	$374.6	3.0%	$0.79	7%	$431,528,127	3.8%
Arkansas	$6.86	$13,907	$64	$6.09	$12,352	$150.8	2.4%	$1.17	17%	$438,963,035	6.4%
California	$107.93	$18,381	$138	$107.87	$18,371	$3,797.7	3.5%	$10.01	9%	$1,819,445,039	1.7%
Colorado	$16.60	$19,165	$108	$13.29	$15,345	$690.4	5.4%	$1.91	12%	$140,842,513	0.8%
Connecticut	$6.95	$13,910	$85	$2.60	$5,192	$132.4	1.1%	$4.78	69%	$149,501,418	2.1%
Delaware	$1.87	$13,230	$83	$1.41	$9,982	$23.4	0.8%	$1.57	84%	$150,652,759	8.0%
District of Columbia	$5.91	$64,946	$366	$1.06	$11,698	$37.2	1.3%	$5.91	100%	$73,177,787	1.2%
Florida	$31.30	$10,913	$70	$14.74	$5,138	$589.9	1.8%	$4.04	13%	$768,950,594	2.5%
Georgia	$25.35	$14,476	$79	$5.17	$2,955	$262.0	1.0%	$2.73	11%	$353,254,780	1.4%
Hawaii	$2.75	$16,180	$107	$0.00	$0	$0.0	0.0%	$2.75	100%	$110,884,577	4.0%
Idaho	$1.65	$5,188	$34	$1.47	$4,642	$73.3	2.3%	$0.00	0%	$99,795,560	6.1%
Illinois	$31.60	$17,062	$105	$23.23	$12,540	$1,144.0	3.1%	$0.59	2%	$1,770,015,401	5.6%
Indiana	$15.61	$15,068	$91	$12.79	$12,342	$385.8	2.8%	$0.00	0%	$462,875,896	3.0%
Iowa	$11.65	$22,779	$126	$5.25	$10,278	$154.3	2.2%	$6.36	55%	$274,827,726	2.4%
Kansas[9]	$10.13	$20,755	$116	$7.02	$14,383	$226.3	3.1%	$2.97	29%	$1,276,462	*NOT REPORTED*
Kentucky	$9.33	$14,135	$80	$5.97	$9,051	$242.3	2.5%	$3.12	33%	$385,699,622	4.1%
Louisiana	$7.75	$10,799	$65	$3.95	$5,507	$142.3	1.3%	$0.00	0%	$1,718,552,909	22.2%
Maine*	$1.82	$10,493	$57	$1.08	$6,224	$52.0	1.6%	$1.18	65%	$175,274,073	9.6%
Maryland	$17.76	$19,952	$125	$6.77	$7,607	$198.4	1.2%	$4.42	25%	$170,285,712	1.0%
Massachusetts	$10.13	$10,966	$55	$7.56	$8,188	$339.7	1.6%	$7.09	70%	$47,504,514	0.5%
Michigan	$19.70	$14,210	$83	$22.94	$16,544	$740.8	3.2%	$0.00	0%	$432,040,069	2.2%
Minnesota	$25.64	$29,674	$173	$16.55	$19,152	$500.3	3.6%	$2.68	10%	$195,810,225	0.8%
Mississippi	$4.63	$10,513	$57	$1.95	$4,435	$67.6	1.3%	$0.00	0%	$777,292,926	16.8%
Missouri	$12.69	$14,224	$83	$9.19	$10,298	$319.3	2.6%	$0.00	0%	$129,103,541	1.0%
Montana	$2.68	$17,818	$93	$1.57	$10,425	$52.6	2.5%	$0.03	1%	$92,149,694	3.4%
Nebraska	$5.04	$15,208	$83	$4.46	$13,459	$138.6	2.8%	$0.00	0%	$135,603,401	2.7%
Nevada	$6.20	$12,790	$77	$5.13	$10,586	$232.4	4.3%	$0.01	0%	$5,528,290	0.1%
New Hampshire	$1.72	$10,225	$60	$0.80	$4,746	$40.9	1.2%	$0.52	30%	$228,541,576	13.3%
New Jersey[9]	$16.21	$11,716	$74	$7.87	$5,690	$276.9	0.8%	$3.67	23%	$43,373,670	0.3%
New Mexico	$6.84	$21,712	$122	$2.30	$7,290	$67.9	1.4%	$1.26	18%	$122,007,739	1.8%
New York*[9]	$67.56	$26,673	$164	$28.87	$11,398	$1,738.9	2.3%	$39.92	59%	$66,685,183	0.1%
North Carolina	$16.07	$10,422	$63	$8.11	$5,260	$243.3	1.3%	$1.00	6%	$355,131,461	2.2%
North Dakota	$3.37	$28,489	$146	$0.91	$7,681	$37.4	2.0%	$0.08	2%	$445,642	*NOT REPORTED*
Ohio*	$25.01	$14,884	$64	$15.49	$9,216	$547.0	2.0%	$3.92	16%	$1,002,426,969	4.0%
Oklahoma	$6.55	$9,337	$53	$2.93	$4,174	$53.9	0.7%	$0.00	0%	$285,151,747	4.4%
Oregon	$14.25	$25,799	$154	$12.61	$22,830	$524.1	5.5%	$0.48	3%	$249,601,976	1.8%
Pennsylvania	$25.37	$15,163	$94	$26.49	$15,833	$1,017.4	3.1%	$3.70	15%	$192,234,810	0.8%
Rhode Island*	$1.46	$10,610	$60	$1.22	$8,867	$48.8	1.7%	$0.97	66%	$92,244,226	6.3%
South Carolina*	$15.09	$19,119	$118	$9.56	$12,117	$342.5	3.1%	$0.24	2%	$6,625,227	*NOT REPORTED*
South Dakota	$2.65	$18,996	$98	$1.51	$10,828	$46.1	2.8%	$0.00	0%	$177,053,854	6.7%
Tennessee	$8.85	$8,795	$52	$6.48	$6,440	$244.1	2.0%	$0.00	0%	$85,645,184	1.0%
Texas	$117.91	$21,531	$129	$116.66	$21,301	$4,444.4	6.6%	$6.56	6%	$954,436,022	0.8%
Utah	$8.08	$11,732	$74	$5.27	$7,650	$221.4	3.2%	$0.35	4%	$91,375,362	1.1%
Vermont	$0.73	$8,772	$27	$0.24	$2,936	$9.1	0.4%	$0.02	3%	$38,728,207	5.3%
Virginia	$12.79	$10,151	$59	$8.80	$6,978	$307.8	1.5%	$1.14	9%	$1,106,691,308	8.7%
Washington	$30.85	$28,315	$173	$15.67	$14,380	$598.8	3.0%	$3.17	10%	$141,015,915	0.5%
West Virginia	$2.49	$9,898	$57	$0.45	$1,789	$9.1	0.2%	$0.82	33%	$665,286,908	26.8%
Wisconsin	$13.81	$16,788	$97	$8.60	$10,462	$281.1	2.3%	$0.00	0%	$179,754,370	1.3%
Wyoming	$2.66	$28,767	$132	$0.03	$289	$0.8	0.0%	$2.69	101%	$36,534,452	1.4%
U.S. Territories	$1.59	$5,091	$34	$0.00	$0	$0.0	*NOT REPORTED*	$1.59	*NOT REPORTED*	$9,241,854,622	*NOT REPORTED*
U.S. TOTAL/STATE AVG	823	$16,168	$93	$585	$8,953	$22,358.4	2.2%	$140.76	17%	$27,002,922,768	3.3%

**State revenue for capital outlay or debt service is from state data sources, not district reported C11 NCES data.*

[9] Districts reported $0 for federal revenue for school construction capital outlay with federal COVID-19 funds.

APPENDIX D

PK-12 Facilities Standards, Expenditures, and Gap

	2025 CAPITAL OUTLAY MODERN STANDARDS			2025 CAPITAL OUTLAY GAP			2025 M&O MODERN STANDARDS			2025 M&O GAP		
	4% CRV - Capital Standard	4% CRV - Capital Standard per Student	4% Capital Standard per GSF	Annual Capital Outlay Gap	Annual Capital Outaly Gap per Student	Annual Capital Outlay Gap per GSF	3% CRV - Modern M&O Standard	M&O Standard per Student	M&O Standard per GSF	Annual Avg Gap M&O	Annual M&O Gap per Student	Annual M&O Gap per GSF
Alabama	$1,522,778,454	$2,028	$12.10	$660,032,551	$879	$5.24	$1,142,083,840	$1,521	$9.08	$258,031,301	$344	$2.05
Alaska	$784,227,903	$6,064	$31.48	$583,222,295	$4,510	$23.41	$588,170,927	$4,548	$23.61	$255,651,316	$1,977	$10.26
Arizona	$3,297,448,836	$2,928	$17.40	$2,156,422,580	$1,915	$11.38	$2,473,086,627	$2,196	$13.05	$1,121,247,065	$996	$5.92
Arkansas	$1,233,313,589	$2,501	$11.60	$547,650,731	$1,111	$5.15	$924,985,192	$1,876	$8.70	$269,895,042	$547	$2.54
California	$18,624,198,145	$3,172	$23.88	$7,831,662,848	$1,334	$10.04	$13,968,148,608	$2,379	$17.91	$4,411,442,684	$751	$5.66
Colorado	$2,565,798,724	$2,962	$16.76	$905,784,279	$1,046	$5.92	$1,924,349,043	$2,222	$12.57	$736,499,084	$850	$4.81
Connecticut	$1,840,401,697	$3,681	$22.53	$1,145,019,681	$2,290	$14.02	$1,380,301,273	$2,761	$16.90	$265,093,164	$530	$3.25
Delaware*	$461,308,496	$3,261	$20.34	$274,151,664	$1,938	$12.09	$345,981,372	$2,446	$15.26	$47,589,945	$336	$2.10
District of Columbia*	$468,508,418	$5,153	$29.04	-$122,014,075	-$1,342	-$7.56	$351,381,314	$3,865	$21.78	$111,680,245	$1,228	$6.92
Florida*	$5,547,116,072	$1,934	$12.34	$2,417,067,686	$843	$5.38	$4,160,337,054	$1,451	$9.26	$689,944,590	$241	$1.54
Georgia	$4,247,498,864	$2,426	$13.20	$1,712,814,183	$978	$5.32	$3,185,624,148	$1,819	$9.90	$1,398,464,267	$799	$4.35
Hawaii	$941,920,066	$5,534	$36.59	$666,516,514	$3,916	$25.89	$706,440,049	$4,150	$27.44	$361,641,650	$2,125	$14.05
Idaho*	$814,958,142	$2,569	$16.94	$650,384,095	$2,050	$13.52	$611,218,607	$1,927	$12.71	$334,020,408	$1,053	$6.94
Illinois	$3,857,422,172	$2,083	$12.78	$697,049,224	$376	$2.31	$2,893,066,629	$1,562	$9.58	-$366,303,893	-$198	-$1.21
Indiana	$2,280,708,392	$2,202	$13.25	$719,701,016	$695	$4.18	$1,710,531,294	$1,651	$9.94	$208,625,230	$201	$1.21
Iowa	$1,531,703,156	$2,996	$16.55	$367,013,278	$718	$3.97	$1,148,777,367	$2,247	$12.41	$502,854,482	$983	$5.43
Kansas	$1,170,985,042	$2,400	$13.38	$158,215,854	$324	$1.81	$878,238,782	$1,800	$10.03	$157,819,945	$323	$1.80
Kentucky	$1,410,660,094	$2,137	$12.10	$477,691,839	$724	$4.10	$1,057,995,071	$1,603	$9.07	$282,909,547	$429	$2.43
Louisiana	$1,530,417,890	$2,132	$12.85	$755,094,542	$1,052	$6.34	$1,147,813,418	$1,599	$9.64	-$18,728,498	-$26	-$0.16
Maine	$605,603,123	$3,489	$19.12	$423,481,398	$2,440	$13.37	$454,202,342	$2,617	$14.34	$117,574,066	$677	$3.71
Maryland	$2,492,220,578	$2,800	$17.52	$716,609,647	$805	$5.04	$1,869,165,434	$2,100	$13.14	$388,668,961	$437	$2.73
Massachusetts	$4,285,545,053	$4,641	$23.22	$3,272,992,038	$3,545	$17.73	$3,214,158,790	$3,481	$17.41	$1,349,683,491	$1,462	$7.31
Michigan	$3,143,005,913	$2,267	$13.20	$1,172,578,375	$846	$4.92	$2,357,254,435	$1,700	$9.90	$410,144,786	$296	$1.72
Minnesota	$2,556,871,587	$2,959	$17.23	-$7,270,819	-$8	-$0.05	$1,917,653,690	$2,219	$12.92	$967,661,631	$1,120	$6.52
Mississippi	$864,519,736	$1,964	$10.74	$401,626,180	$912	$4.99	$648,389,802	$1,473	$8.05	$107,465,334	$244	$1.33
Missouri	$2,047,621,755	$2,295	$13.32	$778,520,843	$873	$5.06	$1,535,716,316	$1,721	$9.99	$317,637,577	$356	$2.07
Montana	$425,663,025	$2,834	$14.74	$158,055,191	$1,052	$5.47	$319,247,269	$2,126	$11.05	$102,890,754	$685	$3.56
Nebraska*	$805,686,156	$2,433	$13.32	$301,991,503	$912	$4.99	$604,264,617	$1,824	$9.99	$132,531,295	$400	$2.19
Nevada*	$1,396,257,250	$2,882	$17.32	$776,732,413	$1,604	$9.64	$1,047,192,937	$2,162	$12.99	$546,758,244	$1,129	$6.78
New Hampshire	$644,286,267	$3,825	$22.53	$472,043,273	$2,802	$16.51	$483,214,700	$2,869	$16.90	$184,064,702	$1,093	$6.44
New Jersey	$5,193,032,475	$3,753	$23.62	$3,571,837,173	$2,581	$16.25	$3,894,774,356	$2,815	$17.71	$491,276,576	$355	$2.23
New Mexico	$835,684,901	$2,653	$14.91	$151,692,667	$482	$2.71	$626,763,676	$1,990	$11.18	$182,434,083	$579	$3.25
New York	$10,618,752,334	$4,193	$25.74	$3,863,202,467	$1,525	$9.36	$7,964,064,250	$3,144	$19.30	$1,336,038,516	$527	$3.24
North Carolina	$3,103,449,213	$2,013	$12.10	$1,496,674,743	$971	$5.84	$2,327,586,909	$1,510	$9.08	$866,244,041	$562	$3.38
North Dakota*	$340,790,710	$2,877	$14.74	$3,352,663	$28	$0.14	$255,593,032	$2,158	$11.05	$86,478,482	$730	$3.74
Ohio	$5,404,939,735	$3,216	$13.80	$2,903,757,968	$1,728	$7.41	$4,053,704,802	$2,412	$10.35	$1,788,576,968	$1,064	$4.57
Oklahoma	$1,580,316,132	$2,253	$12.80	$925,515,562	$1,320	$7.49	$1,185,237,099	$1,690	$9.60	$374,419,737	$534	$3.03
Oregon	$1,790,838,623	$3,242	$19.36	$365,914,293	$663	$3.96	$1,343,128,967	$2,432	$14.52	$632,287,410	$1,145	$6.84
Pennsylvania	$4,604,477,250	$2,752	$16.98	$2,067,636,204	$1,236	$7.62	$3,453,357,938	$2,064	$12.73	$322,504,299	$193	$1.19
Rhode Island	$577,060,560	$4,202	$23.80	$431,370,420	$3,141	$17.79	$432,795,420	$3,152	$17.85	$193,357,456	$1,408	$7.97
South Carolina*	$1,538,782,225	$1,950	$12.05	$29,833,655	$38	$0.23	$1,154,086,668	$1,462	$9.03	$86,429,845	$110	$0.68
South Dakota*	$397,633,446	$2,854	$14.74	$132,966,326	$954	$4.93	$298,225,084	$2,140	$11.05	$123,558,401	$887	$4.58
Tennessee	$2,344,014,284	$2,328	$13.89	$1,458,563,081	$1,449	$8.64	$1,758,010,713	$1,746	$10.42	$791,011,408	$786	$4.69
Texas*	$11,680,490,468	$2,133	$12.80	-$110,826,101	-$20	-$0.12	$8,760,367,851	$1,600	$9.60	$1,659,194,860	$303	$1.82
Utah*	$1,438,784,742	$2,089	$13.12	$630,552,062	$915	$5.75	$1,079,088,556	$1,566	$9.84	$488,886,704	$710	$4.46
Vermont	$607,180,658	$7,295	$22.53	$534,173,702	$6,418	$19.82	$455,385,494	$5,471	$16.90	$287,433,158	$3,453	$10.67
Virginia	$3,898,187,769	$3,093	$17.84	$2,618,856,057	$2,078	$11.99	$2,923,640,827	$2,320	$13.38	$1,105,346,537	$877	$5.06
Washington	$3,657,040,643	$3,357	$20.47	$572,382,673	$525	$3.20	$2,742,780,483	$2,518	$15.35	$1,212,978,078	$1,113	$6.79
West Virginia	$640,658,516	$2,550	$14.67	$391,989,397	$1,560	$8.97	$480,493,887	$1,913	$11.00	$95,800,680	$381	$2.19
Wisconsin	$1,818,698,019	$2,212	$12.78	$438,190,262	$533	$3.08	$1,364,023,514	$1,659	$9.58	$99,449,068	$121	$0.70
Wyoming	$322,777,129	$3,491	$16.02	$56,823,501	$615	$2.82	$242,082,847	$2,618	$12.02	$57,857,710	$626	$2.87
U.S. Territories	$2,402,603,562	$7,683	$50.89	$2,243,415,701	$7,174	$47.52	$1,801,952,672	$5,762	$38.17	$1,338,456,945	$4,280	$28.35
U.S. TOTAL/STATE AVG	$138,362,034,400	$3,157	$16.63	$55,848,715,300	$1,540	$8.52	$103,646,135,991	$2,347	$13.37	$29,273,479,379	$810	$4.55

**Enrollment growth was > 5% FY2014-FY2023. New construction for growth hides the capital investment gap of existing facilities.*

Supporting Organizations of 2025 SooS Report

- **A4LE**—An interdisciplinary association of professionals working at the intersection of learning and place to drive the evolution of learning environments. *www.a4le.org*
- **AASA, The School Superintendents Association**—A professional home for school system leaders committed to providing high-quality public education to all students. *www.aasa.org*
- **Center for Green Schools @ USGBC**—The Center for Green Schools at the U.S. Green Building Council is a global leader in advancing green schools and providing the resources needed to create sustainable, healthy, resilient, and equitable learning environments. *centerforgreenschools.org*
- **Children and Nature Network**—We support and mobilize leaders, educators, activists, practitioners and parents working to turn the trend of an indoor childhood back out to the benefits of nature–and to increase safe and equitable access to the natural world for all. *www.childrenandnature.org*
- **Education Market Association** —Our association connects manufacturers, dealers, architects, designers, and schools to positively impact education. *www.edmarket.org*
- **Go Green Initiative**—The Go Green Initiative works to improve lifelong outcomes for children in communities most impacted by environmental harm by advancing environmental health, safety, and sustainability at school. *gogreeninitiative.org*
- **Green Schools National Network** —We partner with school leaders to embed sustainability, well-being, and innovation into school culture, learning, and daily practice. *greenschoolsnationalnetwork.org*
- **Green Schoolyards America** —Green Schoolyards America seeks to transform asphalt-covered school grounds into park-like green spaces that improve children's well-being, learning, and play while contributing to their communities' ecological health and climate resilience. *www.greenschoolyards.org*
- **Healthy Schools Network** —Founded in 1995, Healthy Schools Network is an award-winning 501(c)3 that has fostered the national healthy school environments movement. We are widely recognized as the nation's leading voice for children's environmental health at school. *healthyschools.org*
- **North American Association for Environmental Education** —For more than 50 years, NAAEE has been a trusted partner, working to advance environmental education throughout North America and around the world. *naaee.org*
- **School Board Partners**—School Board Partners is a nonprofit organization focused on transforming education in America by supporting, connecting and re-electing representative, student-focused school board members across the country to lead with courage, competence, and impact. *www.schoolboardpartners.org*
- **Southern Echo Inc.** —Southern Echo's mission is to empower African Americans and low wealth communities throughout Mississippi and the Southern Region with the knowledge, skills and resources needed to impact and demand accountability of the political, education, economic and environmental systems to address the needs of communities through comprehensive organizing, leadership development, training and technical assistance programs. *southernecho.org*
- **Southern Rural Black Women's Initiative** — The Southern Rural Black Women's Initiative for Economic and Social Justice (SRBWI) is a 501c3 Human Rights organization, formed in 2001 to address historical race, class, cultural, religious and gender barriers faced by Black women and young women in the rural U. S. South. *srbwi.org*

Endnotes

1 2013 State of Our Schools, Center for Green Schools @ USGBC, https://www.21csf.org/uploads/pub/249_2013StateofOurSchoolsReport.pdf

2 Filardo, Mary (2016). State of Our Schools: America's K–12 Facilities 2016. Washington, D.C.: 21st Century School Fund. www.21csf.org/uploads/pub/331_StateofOurSchools2016.pdf

3 Filardo, Mary (2021). 2021 State of Our Schools: America's PK–12 Public School Facilities 2021. Washington, D.C.: 21st Century School Fund. www.21csf.org/uploads/pub/SOOS-IWBI2021-2_21CSF+print_final.pdf

4 21st Century School Fund. Governance: State constitutional responsibility for public education. https://www.21csf.org/policy-areas.php?area=Governance.

5 U.S. Census Bureau. (2023). 2023 national population projections: Low-immigration scenario. https://www.census.gov/data/datasets/2023/demo/popproj/2023-popproj.html

6 Loades, M. E., et al. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. Journal of the American Academy of Child & Adolescent Psychiatry, 59(11), 1218–1239. https://doi.org/10.1016/j.jaac.2020.05.009

7 National Center for Education Statistics. (2024, December 5). Results from the School Pulse Panel: December 2023. U.S. Department of Education. https://nces.ed.gov/whatsnew/press_releases/12_5_2024.asp

8 The National Council on School Facilities has collected the actual gross square foot areas of 3.2 billion GSF of public elementary and secondary school building space from 15 states. This actual data was used to create a model to estimate the gross building area of all PK-12 public district-operated schools based on school enrollment, grades offered, and geographic locales.

9 See National Center for Education Statistics (2024), Results from the School Pulse Panel: December 2023. https://nces.ed.gov/whatsnew/press_releases/12_5_2024.asp

10 U.S. Government Accountability Office. (2020, June). K–12 education: School districts need better information to help improve access for people with disabilities (GAO-20-448). https://www.gao.gov/assets/gao-20-448.pdf

11 To estimate site acreage, the 21st Century School Fund used the site size recommendations of the Council of Educational Facility Planners (A4LE), which was commonly used when thousands of U.S. schools were built. These were 10 acres for PK-5 grades; 15 acres for 6-8th grades and 30 acres for 9th-12th grades. These acreage standards were then multiplied by the number and grade levels of schools in each state to arrive at acreage estimates by district and state.

12 Baltimore County Public Schools. (2024, December 20). Dulaney High School project update information. https://cdnsm5-ss3.sharpschool.com/UserFiles/Servers/Server_2744/File/DFMSP/FCI/Dulaney%20HS/2024-12-20%20Project%20Update%20Information%20(2).pdf

13 Future of Education and Skills 2030/2040 Organisation of Economic Development (OECD) www.oecd.org/en/about/projects/future-of-education-and-skills-2030.html

14 Imms, W., Morris, J., Bradbeer, C., & Mahat, M. (2023). What should be the focus of next-generation learning spaces research? An international cross-sector response. ILESE scoping study white paper, Learning Environments Applied Research Network (LEaRN), The University of Melbourne.

15 Making the Space for Learning, Paula Garza Gonzalez, Daniel Noh, and Daniel Wilson, Project Zero at Harvard's Graduate School of Education, 2022.

16 See U.S. Bureau of Labor Statistics (2025). As children aged at home, labor force participation increased for mothers but decreased for fathers.

17 Building on MTSS to Enhance How Schools Address Barriers to Learning (2025), Howard Adelman and Linda Taylor, co-directors Center for Mental Health in Schools Student/Learning Supports. https://files.eric.ed.gov/fulltext/ED671942.pdf

18 McWilliams, J., Bierbaum, A. H., Bach, A., & Simon, E. (2026). Schools for Sale: Disinvestment, Dispossession, and School Building Reuse in Philadelphia. University of Chicago Press.

19 Community Development and Schools: Conflict, Power and Promise, 2025. Open access: www.routledge.com/Community-Development-and-Schools-Conflict-Power-and-Promise/Warner-Reece-Zhang/p/book/9781032730288

20 U.S. Environmental Protection Agency. (2025, April 9). Improving your indoor environment. https://www.epa.gov/indoor-air-quality-iaq/improving-your-indoor-environment

21 Congressional Research Service. (2024, April 9). Emergency response to extreme heat: Federal financial assistance and considerations for Congress.

22 EBSCO Information Services. (n.d.). Crime prevention through environmental design. EBSCO Research Starters: Social Sciences & Humanities. https://www.ebsco.com/research-starters/social-sciences-and-humanities/crime-prevention-through-environmental-design

23 U.S. General Accounting Office. "K-12 Education: School Districts Frequently Identified Multiple Building Systems Needing Updates or Replacement." Washington, D.C.: United States Government Accountability Office, June 4, 2020. https://www. gao.gov/assets/gao-20-494.pdf.

24 2018 Commericial Buildings Energy Consumption Survey. Data Access to Building Characteristics, Consumption and Expenditures. www.eia.gov/consumption/commercial/data/2018/

25 Hotter days, Higher Costs: The Cooling Crisis in America's Classrooms, The Center for Climate Integrity, Resilient Analytics, Sept. 2021. www.coolingcrisis.org

26 Going for Zero: Decarbonizing the Built Environment on the Path to Our Urban Future, 2025 Carl Elefante, Island Press.

27 Hazard Mitigation Assistance Program and Policy Guide, Effective January 20, 2025, Version 2.1 Federal Enterprise Architecture (FEA) Number: FP-206-21-0001 G. National Mitigation Investment Strategy: A product the Mitigation Framework Leadership Group developed upon the recommendation of the Government Accountability Office in GAO-15-515: Hurricane Sandy: An Investment Strategy Could Help the Federal Government Enhance National Resilience for Future Disasters (July 2015). It was published in the summer of 2019. The goal of the Investment Strategy is to identify, prioritize and guide investments in pre- and post-disaster resilience and hazard mitigation-related activities. The Investment Strategy is risk-informed; grounded in data; and incorporates state, local, tribal, territorial and private-sector perspectives. Federal Enterprise Architecture (FEA) Number: FP-206-21-0001

28 Definition of Climate Adaptation. https://school-infrastructure.org/resources/k12-climate-action-plan-gqa

29 National Forum on Education Statistics. (2018). Forum guide to facilities information management: A resource for state and local education agencies (NCES 2018-160). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018160

30 21st Century School Fund. (2015). Now and for the future: Adequate and equitable K–12 facilities in Wyoming. National Council on School Infrastructure. https://school-infrastructure.org/resources/now-and-for-the-future-adequate-and-equitable-k-12-facilities-in-wyoming-qsa/

31 This file presents data that supplement Congressional Budget Office's February 2025 report Public Spending on Transportation and Water Infrastructure, 1956 to 2023. www.cbo.gov/publication/60874

32 The 21st Century School Fund with the National Center on School Infrastructure maintain a public policy database that catalogs state school facilities policies by topic area (www.21csf.org). Readers may explore state policies related to school facility funding and finance and court decisions affecting public school facilities through the organization's policy pages.

33 U.S. Government Accountability Office. (2025, March 25). Disaster assistance: Improving the federal approach (GAO-25-108216). https://files.gao.gov/reports/GAO-25-108216/index.html

34 Congressional Research Service Report: School Construction and Renovation: A Review of Federal Programs and Legislation, Updated Aug. 31, 2020.

35 Energy Tax Credits for Schools Hub. UndauntedK12. www.undauntedk12.org/energy-tax-credits-for-schools-hub

36 Bureau of Labor Statistics, Direct, Indirect, and Induced Jobs.

37 OECD (2018), Responsive School Systems: Connecting Facilities, Sectors and Programmes for Student Success, OECD Reviews of School Resources, OECD Publishing, Paris, https://doi.org/10.1787/9789264306707-en.

21CSF.org

21st CENTURY SCHOOL FUND | Improving Public School Facilities for All Children

NATIONAL COUNCIL ON SCHOOL FACILITIES
States Advancing Effective K-12 Policy, Planning, and Practice

INTERNATIONAL WELL BUILDING INSTITUTE™