

# PENNSYLVANIA

Public Education Infrastructure Profile 2021 [www.StateofourSchools2021.org](http://www.StateofourSchools2021.org)

This profile examines Pennsylvania's elementary and secondary public school facilities, with a focus on understanding the gap between current levels of facilities funding and the level of investment necessary to provide healthy, safe, sustainable and equitable spaces for all students to learn and thrive.

## Pennsylvania Public School Facilities Overview

Pennsylvania's 573 regular school districts operate 2,789 public schools that serve over 1,801,745 students and staff.<sup>i</sup> These schools and other district facilities encompass an estimated 329 million gross square feet (GSF) of space in support of elementary and secondary public education.<sup>ii</sup> This public infrastructure is essential to families and communities. At an average new school construction cost of \$350.78 per GSF for 2020, Pennsylvania's elementary and secondary public education facilities have a current replacement value (CRV) of \$115 billion.<sup>iii</sup>

**Table 1: Scale of Pennsylvania Public School District Facilities Inventory 2018-19**

Districts	Schools	Staff	Students	2020 Bldg Area (GSF)	Current Replacement Value (CRV) 2020
573	2,789	233,060	1,568,685	329 million	\$115,249,910,758

School district responsibilities for school buildings and grounds fall into two categories:

1. **Maintenance and operations:** regular and routine facilities maintenance and operations, including cleaning, groundskeeping, preventive maintenance, minor repairs, utilities and building security which are funded from the annual operating budget; and
2. **School construction capital outlay:** periodic major facilities projects that involve planning, design, construction, renovation, retrofitting, and replacing of buildings, and building systems, components, and features, as well as site acquisition, site improvements, and new construction, which are funded from a multi-year capital budget, and usually financed with bonds.

Pennsylvania school districts spent a **combined annual average** of \$4.3 billion of their operating and capital budgets on facilities. However, the annual funding benchmark for good stewardship standards for PK-12 public school facilities operating and capital budgets is 7 percent of the CRV. Seven percent of CRV of all Pennsylvania's PK-12 public school buildings is \$8.07 billion per year.<sup>iv</sup> This means that Pennsylvania's students, teachers and communities are using public schools that have a combined facilities operating and capital budget gap of \$3.8 billion every year.

**Chart 1: Annual Operating and Capital Facilities Standard, Expenditures, and Gap** ▾



## Maintenance & Operations (M&O)

School buildings require continuous maintenance to be healthy, safe, and operationally efficient. At a 3% of CRV level of spending--\$3.5 billion per year, districts can meet good stewardship standards for cleaning, groundskeeping, routine and preventive maintenance, minor repairs, and energy management--as well as cover the costs of utilities and building security.

Pennsylvania public school districts spent an annual average of \$2.4 billion, about 8.5% of their total education spending on maintenance and operations of facilities for fiscal years 2017-2019. Compared to the 3% CRV M&O budget benchmark, Pennsylvania's public school districts are under-funded for annual maintenance and operations by \$1.1 billion every year.

**Table 2: M&O Annual Average Standard for Good Stewardship, Actual Expenditures, and Projected Gap**

Pennsylvania Maintenance & Operations of Plant	Total	Per Student 2018-19	Per Gross Square ft
<b>Standard:</b> M&O (3% of CRV)	\$3,457,497,323	\$2,204	\$10.52
<b>Actual:</b> M&O – Annual Avg FY2017-19	\$2,364,959,333	\$1,508	\$7.20
<b>Gap:</b> Annual Shortfall for M&O	<b>\$1,092,537,989</b>	<b>\$696</b>	<b>\$3.33</b>

Meeting the 3% M&O standard means increasing district operating budgets for facilities by \$1.1 billion a year, or \$696 per student.

## School Construction Capital Outlay (Capital Investments)

School facilities periodically require large capital investments to ensure schools are healthy, safe, educationally appropriate and sustainable. At a 4% CRV level of capital investment of \$4.6 billion per year, Pennsylvania school districts can meet good stewardship standards for school construction capital outlay.

Pennsylvania public school districts averaged \$1.9 billion (2020\$) a year on school construction capital outlay for fiscal years 2009-2019. Compared to the 4% CRV capital budget benchmark, Pennsylvania's public school districts are underfunded by \$2.7 billion every year.

**Table 3: Annual Average Capital Investment Standard for Good Stewardship, Actual Expenditures, and Projected Gap<sup>vi</sup>**

Pennsylvania Annual Construction Capital Outlay	Total	Per Student 2018-19	Per Gross Square ft
<b>Annual Standard:</b> 4% CRV	\$4,609,996,430	\$2,939	\$14.03
<b>Actual Annual Average:</b> FY09-19 (2020\$)	\$1,934,195,415	\$1,233	\$5.89
<b>Gap:</b> Annual shortfall for school construction	<b>\$2,675,801,015</b>	<b>\$1,706</b>	<b>\$8.14</b>

Pennsylvania's enrollment declined by (118,460) students from FY2009 to FY2019 and is projected to continue to experience some enrollment decline.<sup>vii</sup> However, if Pennsylvania provides universal PK-4 for an enrollment equivalent to 65% of the 2018-19 kindergarten enrollment, then its enrollment would increase by 72,921 early childhood students.

## District Spending and Investment Comparisons FY2009-2018

Pennsylvania's school district maintenance and operations, and school construction capital investments vary by student family income, race/ethnicity, and by geography. Economically disadvantaged, minority, and rural students disproportionately attend schools that have not had the funding needed for school facilities modernizations.

**Table 4: Minority students are over-represented in high poverty school districts.** <sup>viii</sup>

Pennsylvania Public Schools	Low Poverty	Medium Poverty	High Poverty	Total/Avg
# of Districts	170	274	65	509
# of Public Schools	963	1,178	588	2,729
2017-18 PK-12 Public School Enrollment	611,956	607,137	349,689	<b>1,568,782</b>
American Indian/Alaska Native Students	0.1%	0.1%	0.2%	<b>0.1%</b>
Asian, Native Hawaiian, and Pacific Islander	4.1%	1.2%	1.2%	<b>2.2%</b>
Black or African American Students	3%	4%	25%	<b>7%</b>
Hispanic Students	4%	5%	13%	<b>6%</b>
Two or More Races Students	3%	3%	6%	<b>3%</b>
White Students	85%	86%	54%	<b>82%</b>

High Poverty: Districts with >65% free/reduced lunch or direct certification students; Medium Poverty: >33-65%; Low Poverty: <33%.

**Per school spending average for M&O expenditures and capital investments are lowest medium poverty districts.**

**Chart 2: FY18 Average M&O Expenditures per School by % of District's Economically Disadvantaged Students (actual \$)**



**Chart 3: Total School District Capital Expenditures Averaged per School, by % Economically Disadvantaged Students FY2009-2018 (2020\$)**



## Pennsylvania PK-12 PUBLIC EDUCATION INFRASTRUCTURE PROFILE 2021

Where students live is a factor that affects the level of investments in public school facilities. School districts in town and rural locales, have had on average, lower M&O and school construction expenditures per school than any other geographic area.

**Chart 4: FY18 Average M&O Expenditures per School, by School District Locales (actual \$)**



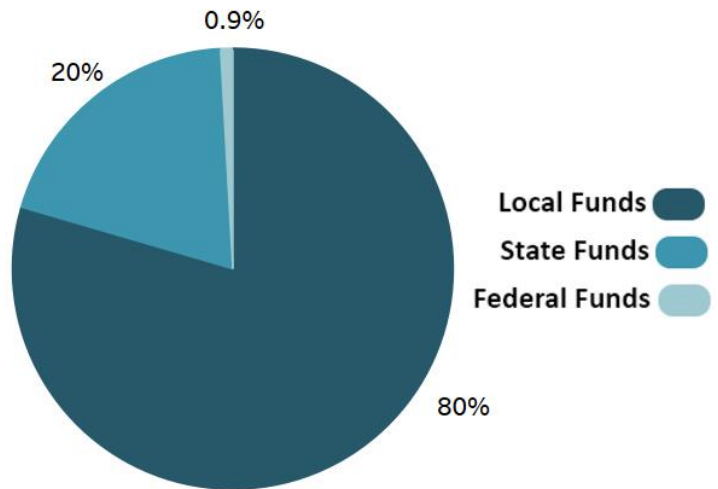
**Chart 5: Total School District Capital Expenditure Averaged per School, by District Locales FY2009-2018 (2020\$)**



## Sources of Funding for Pennsylvania Public School Facilities

Pennsylvania's local school districts paid 80% of the costs for K–12 capital projects with local funds and held \$24.5 billion in long-term debt at the end of fiscal year 2019, \$15,605 per student, as compared with the national average of \$11,016 per student. The state paid for 20% of school construction capital outlay over the period of FY2009-FY2019, as compared to a national average of 22%.<sup>ix</sup> Federal funds for capital outlay was \$185,726,461 (0.9%). Table 5 shows the major sources for federal funding over the last 11 years: FEMA for disaster relief and the funding from American Recovery and Reinvestment Act (ARRA) after the great recession, in 2009.

**Chart 6: Who Pays for Capital Construction in Pennsylvania**



**Table 5: Pennsylvania's Capital Outlay Funding from Federal Sources FY2009-2019\***

Pennsylvania's Federal Support	FEMA Grants	ARRA	TOTAL Federal \$
2009-2019	\$10,780,192	\$174,946,269	\$185,726,461

## Looking Ahead: Pennsylvania Public School Facilities

Under-investment in school facilities maintenance and operations negatively affects the daily lives of students, teachers and school staff. However, closing the gap for M&O comes with strong returns. By fully funding maintenance and operations, school environments will be healthier and safer, utility costs can be reduced, and the useful lives of building systems, components and equipment can be extended. This will save millions of dollars in future capital costs. Additionally, raising the levels for M&O stewardship to recommended standards would support an estimated 12,606 good new jobs dedicated to this critical work.<sup>xi</sup> Eliminating the capital investment gap will bring all of Pennsylvania's rural, town, suburban and urban public schools into the 21<sup>st</sup> century. Closing this capital construction gap will also support an additional 43,883 direct, indirect, and induced jobs.<sup>xii</sup>

The Elementary and Secondary Emergency Relief (ESSER) Funds appropriated as part of the American Rescue Plan can provide help to close the M&O gap over the next three years. If Pennsylvania school districts apply only \$1,083,287,577 of Pennsylvania's ESSER funds toward facilities, then public school districts could reduce their projected fiscal year 2022-2024 maintenance gap by 33%. This will make schools healthier and safer.

However, public schools need capital investments to address longstanding deficiencies in schools. Capital funding is especially needed in high poverty, minority, and rural districts. If the federal funds to rebuild America's schools were approved at the \$130 billion level nationally, then Pennsylvania would receive about \$5.1 billion over 10 years. Federal funds would increase state capacity to assist the small and high need urban and rural districts modernize their crumbling facilities and help close the capital investment gap between the wealthiest and poorest districts.

**Table 6: Potential of Federal Assistance for Pennsylvania's PK-12 Facilities** <sup>xiii</sup>

Good Stewardship of PK-12 Facilities – Projected (in 2020\$)		
	M&O FY22-24	Capital Investment FY22-31
School District Facilities Needs	\$10,372,491,968	\$46,099,964,303
School District Facilities Gaps	\$3,277,613,968	\$26,758,010,151
Source of Federal Funds	15-20% of PA ESSER Appropriation for Facilities	PA Share of \$130B Proposed in Rebuild America's Schools Act Grants & Bonds
Federal Funds	\$1,083,287,577	\$5,096,520,000
Federal Funds as % to Needs	10%	11%
Federal Funds as % of Total GAP	33%	19%

Adding federal funds to district and state funds will provide a tremendous return. Increasing M&O capabilities creates healthier environments for occupants and reduces the costs for future capital investment by extending the life of building systems. Timely capital investments increase educational opportunities for students and communities and reduce the financial and environmental costs to operating and maintaining schools. Modern facilities will be more resilient and better able to withstand extreme weather events.



## End Notes

---

i U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey", 2008-09 & 2018-19; "State Nonfiscal Public Elementary/Secondary Education Survey", 2008-19 & 2018-19.

ii State gross square feet of building space, provided by National Council on School Facilities state officials, or estimated by the 21st Century School Fund based on estimates of gross square feet by student, multiplied by 2018-19 enrollments. Data excludes charter students, schools, and districts.

iii The Current Replacement Value (CRV) is calculated by taking the state GSF multiplied times the average hard and soft costs for new construction (no land costs) provided by National Council on School Facilities. When this data was unavailable, the 2016 new school construction estimate from the State of our Schools 2016, was used and inflated to 2020\$ using Turner Construction Index to account for changing costs for construction labor, materials, and market conditions.

iv Filardo, Mary (2021). 2021 State of Our Schools: America's PK-12 Public School Facilities 2021. Washington, D.C.: 21st Century School Fund.

v Data source for M&O and school construction capital outlay expenditures is the U.S. Census of Governments F-33 Fiscal Surveys (FY2009-2019) as published by the National Center on Education Statistics (NCES). These data include annual revenues and expenditures of local school districts. The M&O expenditure used data field V40, in actual \$ annual average for fiscal years 2017-2019; and the school construction capital outlay data field is V12, in 2020\$ averaged for fiscal years 2009-2019. These data exclude charter schools.

vi Estimates were made for new construction due to enrollment growth. For capital investments, we subtracted an estimate for new school construction expenditures from actual expenditures to establish a gap based on levels of capital investment on **existing** facilities. See Appendix B: M&O Spending and Capital Investment Data, 2021 State of our Schools for state-by-state new construction investment estimates.

vii Hussar, W.J., and Bailey, T.M. (2020). Projections of Education Statistics to 2028 (NCES 2020-024). U.S. Department of Education, Washington, DC: National Center for Education Statistics.

viii State percentage of Economically Disadvantaged Students is defined by combination of Free/Reduced lunch enrollment and direct certification enrollment. F/R lunch, direct certification, and race data: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey, 2017-18.

ix Data from the U.S. Census of Governments Fiscal Survey, field C11—State revenue for capital outlay and debt service. Corrected for: Ohio, Massachusetts, New York from state level public documents.

x FEMA Data: U.S. Federal Emergency Management Agency, OpenFEMA Data Sets, Hazard Mitigation and Public Assistance, FY 2009 – 2019; and for capital outlay using ARRA funding data field HE2 for FY09-14 in the F-33 Fiscal Surveys of the U.S. Census of Governments.

xi 21<sup>st</sup> Century School Fund estimate based on 25% for added material and supplies, and 75% for wages for custodians, building engineers, repair workers, and supervisors, with an average total cost for wages and benefits of \$65,000 per employee.

xii Bivens, Josh and Hunter Blair "A public investment agenda that delivers the goods for American workers needs to be long-lived, broad, and subject to democratic oversight." Economic Policy Institute, December 8, 2016.

xiii Data sources: Federal allocations to states for American Rescue Plan (ARP), Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA), and Elementary and Secondary School Education Relief (ESSER) funds from U.S. Department of Education; and Reopen and Rebuild America's Schools (RRASA) funding state levels per Title I Part A: July 2021 CRS memo.