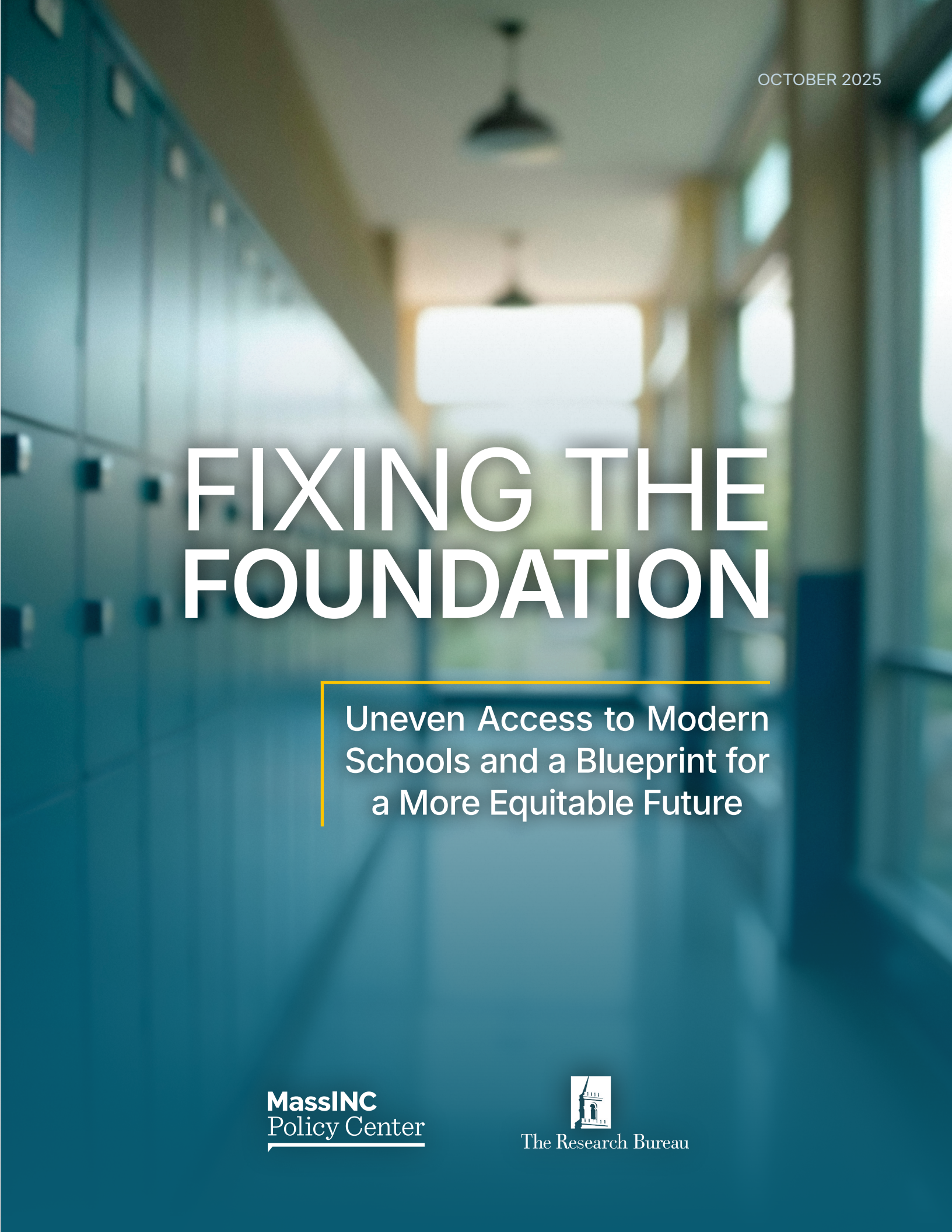


OCTOBER 2025

FIXING THE FOUNDATION

Uneven Access to Modern Schools and a Blueprint for a More Equitable Future

MassINC Policy Center

The Research Bureau

Dear Friends,

For over two decades, Massachusetts has pursued ambitious efforts to identify and close educational opportunity gaps. However, we have paid curiously little attention to how school facility conditions contribute to disparate student outcomes. One exception has been Gateway City leaders, who have long sought more state support to modernize their schools so that all students can learn in healthy environments that meet 21st century educational standards. The MassINC Policy Center and the Worcester Regional Research Bureau (WRRB) teamed up to examine this challenge.

Drawing on earlier analyses, including WRRB's 2024 report, Building the Future, we spent the past year digging into data, examining the academic literature, and speaking with experts in urban education and school construction. Our findings underscore three key points: First, school facility conditions have a much greater impact on student learning than is commonly recognized. Second, disparities in access to adequate school facilities likely contribute significantly to persistent achievement gaps in Massachusetts. Third, while state leaders have taken steps to improve school facility conditions, many students continue to receive their education in school buildings that are simply not up to the task.

This analysis suggests the school building problem is not insurmountable. With forceful state action and modest additional spending, all communities should be able to provide their children with the 21st century schools to which they are constitutionally entitled in Massachusetts.

Now is the time to earnestly pursue solutions. Across the state, school districts of every kind will see sharp declines in enrollment in the coming years. This will force communities to grapple with closing and consolidating schools. Massachusetts can work to right-size its portfolio of public schools in a manner that provides all students with the opportunity to attend well-resourced, economically-integrated public schools with high-quality buildings.

This report provides data, analysis, and policy recommendations to help chart the way forward, but we certainly do not have all the answers. We encourage readers to engage with us to further our shared understanding of these issues and build consensus on a path forward for not just urban districts, but all the students, teachers, and families in our commonwealth.

Sincerely,

Joe Kriesberg
CEO
MassINC

Paul Matthews
Executive Director and CEO
Worcester Regional Research Bureau

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Inequities in access to school facilities with conditions suited to 21st century learning contribute heavily to large and growing achievement gaps in Massachusetts. Despite considerable effort by the legislature over the past two decades, the data presented in this report show students in Boston and the Gateway Cities continue to learn in buildings that are deteriorating, lacking in basic features, and often cramped and overcrowded. Additional reforms and resource allocations to the Massachusetts School Building Authority (MSBA) are clearly required to ensure that all students can learn in adequate school facilities, a right granted to them under the Supreme Judicial Court's interpretations of the state constitution.[1]

This executive summary condenses the full report to show how state aid for educational facilities fails to prioritize those with the greatest need, the large socioeconomic disparities in facility conditions that result, the cost and timeframe for addressing the problem under various scenarios, and key actions policymakers can take now.

School Construction Aid Fails to Prioritize Communities with the Greatest Needs

With a progressive funding formula and an explicit mandate to prioritize obsolete buildings, the MSBA's statutory framework should position the authority to direct investment to urban districts with outmoded school facilities. However, state funding tied to sales tax revenue growth rather than an objective regular assessment of financial needs across the commonwealth, a competitive process that requires local school districts to opt in, and administrative policies instituted by the MSBA that result in sharper reductions for urban districts with fewer financial resources have resulted in patterns of aid distribution that favor school districts with less extreme facility deficiencies and greater fiscal capacity. The following datapoints illustrate the extent of the problem:

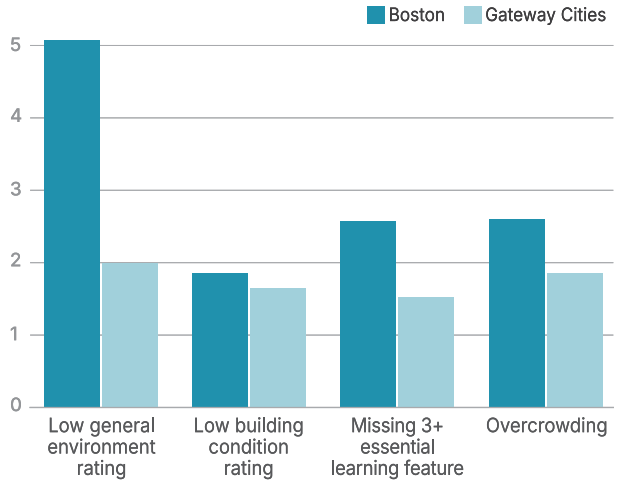
1. **The MSBA's Core Program has disproportionately benefited suburban districts.** Through its Core Program, the MSBA distributes large grants to help communities build new schools or fully replace or renovate existing facilities. From 2015 to 2024, suburban schools accounted for more than half (57%) of those invited to the Core Program, even though these buildings make up just 43 percent of all schools in Massachusetts. In sharp contrast, Boston and the Gateway Cities have been significantly underrepresented among invites to the Core Program. Together, these urban districts make up nearly one-third (32 percent) of all schools in Massachusetts, but they have received less than 19 percent of invitations to the Core Program since 2015.

   This allocation runs counter to the need. According to data from the statewide facility condition survey conducted in 2016, schools with low ratings for learning environment and building conditions, those missing essential learning features, and those with overcrowding were between two and five times more likely to be located in Boston and the Gateway Cities (**Figure ES1**).

2. **Since 2015, schools with the best Building Condition Ratings (BCR) have received nearly two-thirds of Core Program invitations.** Between 2015 and 2024, the MSBA invited 32 Level 1 schools and 52 Level 2 schools into the Core Program. Together, these schools accounted for 65 percent of all invitations. Only three of these top-rated buildings were over capacity in 2016, while 28 (33 percent) were underutilized.

ES1

Ratio of Boston and Gateway City schools with facility condition problems to all Massachusetts K–12 school buildings, 2016



Note: This figure only displays Boston and the Gateway Cities because the other geographies are not overrepresented in any of these categories.

Source: Analysis of MSBA data

3. **A needs-based allocation model between 2015 and 2024 could have addressed a majority of the most severe school facility condition issues in Massachusetts.** From 2015 to 2024, the MSBA issued 156 Core Program

invitations. Under a model that prioritized schools with the most severe physical deficiencies, it would have been possible to replace or renovate all 20 Level 4 schools and more than half of the Level 3 schools over the past decade.

4. **Cost-control policies disproportionately affect urban districts.** Compared to other communities, urban districts have been subject to much larger reductions from the maximum reimbursement rate allowed under state law. While all districts received less than their statutory reimbursement rate between 2008 and 2024, Boston and the Gateway Cities saw average reductions of 34 and 19 percentage points, respectively, compared to just 12 percentage points for suburban districts.

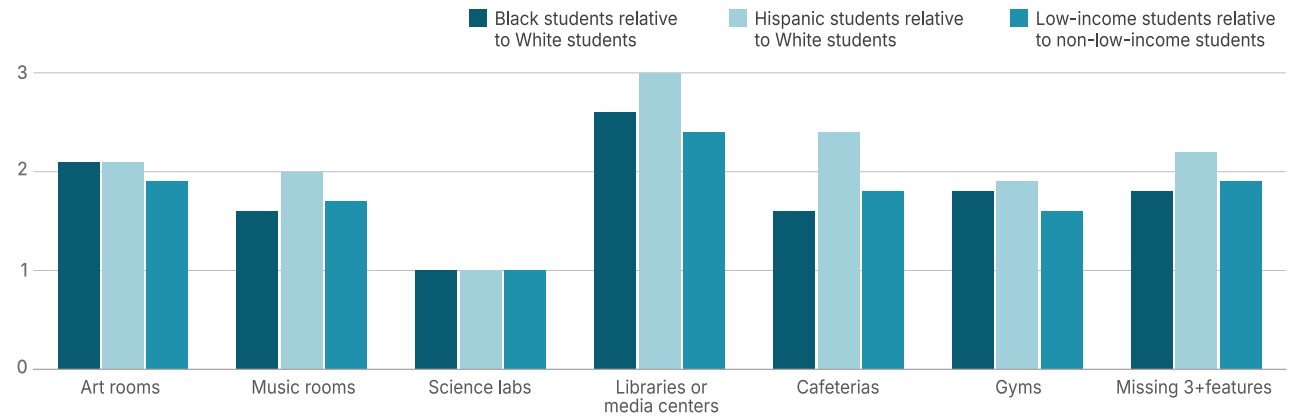
Students Who Disproportionately Attend Schools with Inhospitable Learning Environments

To date, there has been little effort to identify and address socioeconomic disparities in access to high-quality school facilities in Massachusetts. Quantifying these inequities is a key first step to remedying them. Examining 2024 enrollment in all public schools (excluding non-district charters), major inequities are readily apparent (**Figure ES2**):

- **Black, Hispanic, and low-income students are more likely to attend overcrowded schools.** In Massachusetts, 8 percent of Black students and 12 percent of Hispanic students attend overcrowded schools compared to just 4 percent of White students. Nearly 10 percent of economically disadvantaged students attend overcrowded schools, versus less than 5 percent of those without economic disadvantage.
- **Black, Hispanic, and low-income students are more likely to attend schools with inferior physical conditions.** Only 13 percent of White students attend schools with Level 3 or 4 Building Condition Ratings. In contrast, 22 percent of Black and Hispanic students learn in schools with substantial physical defects. Nearly 22 percent of economically disadvantaged students attend schools with poor physical conditions, versus less than 13 percent of those without economic disadvantage.
- **Black, Hispanic, and low-income students are more likely to attend schools lacking learning features that are essential to a well-rounded education.** Nearly 20 percent of Black and Hispanic students attend schools without an art room compared to less than 9 percent of White students. The disparity in access to art rooms is similar for low-income (18 percent lacking) and non-low-income students (9 percent lacking). Learning spaces for music are even more unevenly distributed in Massachusetts; nearly one-quarter of Black students and 30 percent of Hispanic students are enrolled in schools without this feature, versus just 15 percent of White students. While there is greater parity with access to science labs, libraries, and media centers present the most extreme disparity. Only 4 percent of White students attend a school without a library compared to 12 percent of Black students and over 13 percent of Hispanic students. Similarly, 11 percent of low-income students attend schools without libraries compared to 5 percent of non-low-income students.

ES2

Disparate exposure to schools missing key learning features by race, ethnicity, and income



Note: Ratios based on 2024 enrollment patterns and the 2016 MSBA school facility conditions survey, excluding schools rebuilt, closed, or consolidated since 2016 and those with active Core Program projects.

Source: Analysis of MSBA data and DESE enrollment data

- **Black, Hispanic, and low-income students are more likely to attend schools lacking features that are essential to their health and well-being.** Nearly 7 percent of Black students and over 10 percent of Hispanic students attend schools without cafeterias where they can receive healthy foods and socialize and interact with peers outside of the classroom. In comparison, just 4 percent of White students go to schools that lack cafeterias. Students of color are also much more likely to attend schools without gymnasiums for physical fitness. Almost 13 percent of Black students and 14 percent of Hispanic students are at schools without a gym, compared to just 7 percent of White students. Compared to those without economic disadvantage, low-income students are also much more likely to attend schools without gyms (12 percent versus 7 percent, respectively).

- **Black, Hispanic, and low-income students are more likely to attend schools with multiple deficiencies.** Nearly one-fifth of Black students and almost one-quarter of Hispanic students attend schools missing three or more of the essential features for learning, health, and well-being included in the MSBA inventory. In comparison, only 10 percent of White students in Massachusetts are enrolled in schools with multiple facility limitations. Nearly 21 percent of economically disadvantaged students attend schools lacking multiple features, versus 11 percent of those who are not economically disadvantaged.

The full report provides a review of the academic research documenting the consequences associated with each of these disparities. The analysis also highlights the exceptionally strong relationship between measures of school building quality and school segregation. More specifically:

- Segregated non-White schools account for 19 percent of all schools in Massachusetts, but they make up 30 percent of schools with the lowest BCRs, 47 percent of schools missing three or more essential learning features, and 66 percent of overcrowded schools.[2]

- Schools with high concentrations of poverty account for 33 percent of schools in Massachusetts, but they make up 50 percent of schools with the lowest BCRs, 58 percent of schools missing three or more essential learning features, and 87 percent of overcrowded schools.[3]

Evaluating the Price and Pace of Progress

To address these uneven conditions, policymakers need an understanding of how much it will cost over various timeframes. While producing these figures with the limited data currently available is difficult, it is possible to develop low- and high-end scenarios to provide order-of-magnitude estimates:

- Massachusetts has 276 schools that have well-below-average facility condition ratings or operate significantly over capacity. Roughly 60 percent of these buildings are located in Boston or a Gateway City. Replacing or substantially renovating them would cost an estimated $14 billion. It will take nearly 50 years to rebuild all 276 schools with the current ratio of MSBA resources to high-need projects. Targeting two-thirds of resources toward high-need buildings would cut this timeframe in half. Massachusetts could replace or modernize all 276 buildings in just 16 years if it committed all MSBA resources to high-need projects.
- A much stricter definition of need produces a lower-bound estimate of just 46 high-need schools. Three-quarters of these buildings are located in Boston or a Gateway City. They total about 3.2 million square feet of space. Replacing them would cost approximately $2.1 billion. Prioritizing their replacement would require eight years to address under the business-as-usual allocation, four years with two-thirds prioritization, and just three years with full prioritization.

Seven Key Actions Policymakers Can Take Now

While additional data, analysis, and discussion will be necessary to identify precise solutions to these problems, an effective response will include the following:

1. **Increase MSBA funding and prioritize inadequate buildings.** To meaningfully address the growing backlog of school construction needs, the commonwealth must both increase funding for school infrastructure and strengthen the MSBA's mandate to prioritize projects based on the severity of building inadequacy and student need.
2. **Reexamine land acquisition, site preparation, and other reimbursement policies to increase equity and more effectively support high-need districts.** The data presented in this analysis clearly show that current reimbursement policies disadvantage urban districts with the greatest needs. The MSBA should work with qualified construction firms, architects, superintendents, and local government leaders experienced in urban school construction to identify specific ineligible and partially eligible cost areas that disproportionately impact urban districts. This review should include extra emphasis on the cost communities shoulder to acquire and prepare urban land. Many cities must consolidate schools on parcels large enough to serve more students with adequate outdoor recreational space. Often, this will require costly land takings. The MSBA should also conduct financial modelling to determine whether the maximum reimbursement rate under current state law makes adhering to a responsible cycle of school renovation or replacement financially affordable for all districts.

3. **Ensure that the next facility conditions survey provides an objective and transparent benchmark for adequacy.** The legislature has required the MSBA to conduct regular facility conditions surveys since its inception, yet this inventory has not given policymakers enough information to know when students are in facilities that do not meet objective standards for adequacy. This clarity is vital for policymakers to respond to these situations appropriately. Leaders in the legislature and the Healey-Driscoll administration can work with urban superintendents, educators, public health experts, and the MSBA to build consensus on how an adequacy measure can be developed from the new facility conditions survey currently underway.

4. **Require municipalities to co-invest with the state when buildings are deemed educationally inadequate.** Similar to the Chapter 70 formula, all communities must do their part within their means to ensure that students have access to adequate facilities for learning. The legislature should adopt provisions that make it mandatory rather than optional for school buildings in a poor state of repair to be rebuilt and/or closed and consolidated. In addition to increasing equity, this approach will help ensure that state dollars are not inefficiently expended repairing outmoded schools because communities are reluctant to invest in full rebuilds.

5. **Reimburse for the educational use of co-located facilities and offer incentive points to encourage agencies to bridge silos.** Current MSBA policies discourage school districts from bridging silos and optimizing the use of public land and facilities by incorporating municipal libraries, recreation centers, senior centers, community health centers, adult basic education centers, and other such community uses in their schools and school complexes. The legislature can address this shortcoming by requiring the MSBA to reimburse for the share of these spaces utilized by students, and awarding incentive points to encourage communities to undertake the challenging work of coordinating across systems.

6. **Help urban districts build regional magnet schools that increase racial and economic integration.** Massachusetts has a long history of providing additional resources for schools designed to promote integration. This practice was abandoned two decades ago, and schools have resegregated. Given that the concentration of low-income students and students of color in high-poverty schools is likely the largest single source of wide and growing achievement gaps in Massachusetts, and the state's highly segregated schools deprive all students of the benefits of integration, Massachusetts needs a school-building formula that provides very strong incentives to prioritize integration. As school districts statewide grapple with declining enrollment, a strong magnet school strategy could also help ensure more efficient and equitable utilization of resources as communities work to right-size their school facilities portfolios.

7. **Provide greater support for feasibility studies, master plans, and long-term stewardship.** Many urban districts struggle to develop accurate cost estimates in the initial stages of a project. As they learn more about the scope and site, cost estimates typically escalate considerably. State resources for feasibility studies can help communities mitigate this challenge. Urban districts with large school portfolios also struggle to produce and implement master facility plans. State planning grants, coupled with requirements that communities produce and adhere to a master plan, could help ensure that communities make consistent and responsible capital investments in their school facilities. Finally, buildings with state-or-the-art systems are much more challenging to operate and communities must properly maintain them. The state can provide both funding and accountability to help cities steward these long-term investments.

DATA AND DEFINITIONS

SCHOOL CONDITIONS

This study draws on data from the MSBA's 2016 School Survey, which provides an evaluation of the conditions and capacity of all public school facilities across the state (with the exception of Commonwealth Charter Schools that operate independent of local oversight and do not receive MSBA funding). The survey includes a wide range of data. This analysis relies on four key measures:

1. **Building Condition Rating (BCR).** This score (1 to 4) gauges the physical condition of a school's major systems, such as roofing, windows, and HVAC. Level 1 indicates the best condition, while Level 4 is the worst. Schools rated 4 are considered to have serious issues, and further study is needed to determine the extent of necessary renovations or potential replacement.
2. **General Environment Rating (GER).** This score (1 to 4) assesses how well a school's environment supports teaching and learning, evaluating factors like safety, accessibility, specialized classrooms (e.g., art rooms or science labs), and technology. Level 1 indicates an optimal environment for learning, while Level 4 means that the school's environment is poor and that many conditions present obstacles to learning and teaching.
3. **Capacity Rating.** This rating reflects how well a school's space matches its current enrollment. The categories are as follows: *Over Utilization,* where the facility may be too small for current enrollment and educational programs; *Average Utilization,* where the facility appears adequately sized for current enrollment and programs; and *Under Utilization,* where the facility may be larger than necessary for current enrollment and programs.
4. **Essential Features for Learning, Health, and Well-Being.** The survey records whether the school building includes specialized learning environments, such as art and music rooms, as well as larger spaces for group activities and recreation (e.g., auditoriums, cafeterias, gyms, and libraries). Drawing from the survey data, this analysis reports on students enrolled in schools lacking three or more of these essential features.

   While nearly a decade has passed since the 2016 survey, this analysis accounts for change by removing schools that have received major upgrades as well as those that have closed. For more information on the school ratings, refer to Appendix A or the MSBA's 2016 report itself.

REIMBURSEMENT RATES

MSBA funding is a state and local partnership. The MSBA reimburses communities for a portion of the cost that they incur building or renovating schools, at a rate based on each community's financial resources. The base formula for determining the reimbursement level is defined by state law. However, the MSBA has statutory authority to institute cost control policies that typically lower the actual reimbursement rate. This report uses the term *statutory reimbursement rate* to describe the maximum amount that communities are entitled to receive according to state law and *actual reimbursement rate* to describe state funding awarded by the MSBA as a percentage of the total project costs.

DATA AND DEFINITIONS, CONTINUED

GEOGRAPHIES

This report analyzes school facility conditions for several geographic entities:

Boston: All school facilities operated by the Boston Public Schools (including in-district Horace Mann Charters but excluding CVTE schools).

Gateway Cities: All school facilities operated by the public school districts in the 26 Gateway City municipalities (including in-district Horace Mann Charters but excluding CVTE schools). State law defines these communities as: Attleboro, Barnstable, Brockton, Chelsea, Chicopee, Everett, Fall River, Fitchburg, Haverhill, Holyoke, Lawrence, Leominster, Lowell, Lynn, Malden, Methuen, New Bedford, Peabody, Pittsfield, Quincy, Revere, Salem, Springfield, Taunton, Westfield, and Worcester.

Rural: Towns classified as either Rural 1 or Rural 2 by the Massachusetts Office of Rural Health.

Suburban: All other Massachusetts municipalities, excluding those with a city form of government that are not designated as a Gateway City.

CVTE: All career vocational and technical education schools, including agricultural schools and those operated by local school districts.

INTRODUCTION

The physical condition of school buildings plays a critical role in shaping educational outcomes, student well-being, and community vitality. In Massachusetts, access to safe and modern school facilities with sufficient space is unequal across communities. Stark disparities exist between urban districts—most notably Boston and the Gateway Cities—and more affluent suburban communities. This geographic variation in school building quality reflects and reinforces broader patterns of economic and racial inequality and persistent school segregation by income and race.

Complex historical forces lie behind these longstanding inequities. However, they are clearly rooted in the K–12 education system's heavy reliance on local property taxes, and the differential impact that Proposition 2½ has had on municipal finances over the past four decades. To ensure that all students receive an adequate public education regardless of where they live, as required by the Supreme Judicial Court's (SJC) interpretation of the Massachusetts constitution, the state must counterbalance dramatic differences in municipal tax capacity.

Recent efforts to fulfill this obligation have focused mostly on operational spending. In 2019, the legislature increased state aid to local school districts and made the allocation of these funds more progressive through the *Student Opportunity Act* (SOA). The SOA updated the Chapter 70 funding formula to better reflect current educational expenses, particularly for districts that serve large concentrations of high-need students. The SOA has increased the state contribution to local school districts by approximately $1 billion annually, with over 70 percent of these additional funds going to the lowest-wealth communities according to research by the Massachusetts Budget and Policy Center.[4]

Two decades ago, Massachusetts took similarly ambitious steps to increase equity in capital funding for school facilities by creating the Massachusetts School Building Authority (MSBA). The independent state authority replaced the School Building Assistance Program, which had been burdened by a large backlog, poor transparency, and financial mismanagement. The MSBA introduced a more accountable system for financing school construction and renovation, with stricter oversight, a per-project funding cap, and a competitive process through which districts apply for state funds. Legislators directed one penny of the sales tax to the authority, allowing it to predictably issue and service debt and provide state funds to communities in a timelier manner. Most importantly, they embedded a progressive funding formula in the school building statute; for the lowest-wealth communities, state funds can cover up to 80 percent of construction costs.

However, unlike operating dollars allotted by Chapter 70, there is no requirement that municipalities invest responsibly in their school facilities, nor is there a state commitment to provide adequate funding according to an objective standard. The competitive application process—combined with rising building costs that increase the financial burden on municipalities—results in regressive distribution of state aid for school construction in Massachusetts. This has consequences for cities struggling with tight capital budgets and limited political support from the electorate for taking on additional debt for school facilities, regardless of need.

A 2023 investigative report by *The Boston Globe* described how these structural issues are serving to reinforce, rather than reverse, stark racial disparities in access to high-quality school facilities. Between 2007 and 2022, White-majority districts received about $10,000 in construction aid per student, while districts serving mostly students of color received only $6,400. The gap was even wider among districts with the most extreme demographic compositions: Those with the highest shares of White students received $16,500 per student—two and a half times more than districts with the highest proportions of Black students.[5]

The Boston Globe also documented the struggles that large urban districts with significant facility needs face in winning approval for projects. Worcester, for example, submitted 30 requests and received just three approvals at the time of the report (now four); Boston submitted at least 36; and New Bedford submitted 30. This repeated rejection of high-need projects has contributed to growing skepticism among local leaders about whether the

MSBA's selection process truly prioritizes the most outmoded buildings as required by state law.

Education equity advocates have not been fully attentive to this problem because only a handful of schools receive capital investment each year. Moreover, research conducted during the height of the education reform era typically found little correlation between capital investment in school buildings and student outcomes.[6] However, this knowledge is dated. A growing body of evidence from studies with stronger designs shows that unequal school facility conditions do contribute significantly to large achievement gaps by race, ethnicity, and income. An extensive review of evidence from the high-quality research available today indicates that the achievement gains from capital spending are similar to equivalent increases in operational expenditure. Recent estimates suggest that equalizing school facility spending between low- and high-income districts could eliminate one-quarter of the achievement gap.[7]

Findings from recent studies also demonstrate how school facilities perpetuate racial, ethnic, and economic segregation in public education. Families with means choose to live in areas where the schools are in observably better physical condition, with better athletic facilities and other desirable amenities. This is reflected in higher property values for homes near these schools, all else being equal.[8] In Massachusetts, the overlap between intensely segregated schools and school facilities most in need of upkeep is strikingly clear. The fact that higher-income communities invest heavily in their educational facilities demonstrates that parents with means value building quality and that it influences where they send their children to school.

THE MSBA AS A STRONG PARTNER AND ASSET TO THE STATE

This report provides critical analysis from the perspective of urban districts. However, it is important to recognize at the outset that the MSBA is a small agency managing complex projects that include a high degree of risk and politically challenging decisions.

While urban leaders have many concerns about the MSBA's policies, they invariably acknowledge that the MSBA faces major resource constraints. Furthermore, they have considerable praise for the authority's professionalism and the support and assistance it provides. They lean heavily on the knowledge of MSBA staff along with technical assistance and other resources that the authority offers to help urban districts evaluate options and make hard decisions.

It is also important to note that there have been instances where the MSBA pushed urban communities to make deeper investments to ensure that students receive adequate facilities. For example, architects and designers can point to occasions when the MSBA resisted attempts by urban school districts to reduce the project budget by eliminating or downsizing facilities such as gyms.

As state leaders discuss changes to school facilities funding, they should recognize that the individuals who lead and work for the MSBA are a tremendous asset to the state. By all accounts, they are deeply experienced experts in school building and devoted public servants with a commitment to building better schools for all Massachusetts students.

Previous MassINC Policy Center research has sought to draw attention to the profound implications that growing levels of school segregation have for education and quality of life in the commonwealth more broadly. Concentrating low-income students in high-poverty schools is likely the largest contributor to achievement gaps in Massachusetts. School segregation also makes housing more unaffordable by fueling sprawling development patterns, and it makes it more difficult to draw resources into urban neighborhoods suffering from decades of disinvestment.[9] A 2024 report by the state Racial Imbalance Advisory Council painstakingly documented how this issue has been consistently overlooked by the Massachusetts Department of Elementary and Secondary Education.[10]

From the standpoint of state finances, increasing economic segregation has become enormously problematic. Legislators must find enough votes to pass extremely progressive funding formulas. Sustaining these large transfers to low-wealth communities indefinitely is difficult. Many rural and suburban communities that have experienced tight budgets in recent years did not benefit from the SOA, which likely explains much of the muted response to the glaring inequities in school building funding revealed by *The Boston Globe* in 2023.

This has not deterred Gateway City mayors, superintendents, and legislators. They are increasingly speaking out about the number of students attending antiquated schools with inhospitable learning environments in their communities. Leaders in Boston are also grappling with these challenges and urging the MSBA to provide more support. The experience of the COVID-19 pandemic and the increasing heat, humidity, and air quality issues of a warming climate have brought greater public attention to the consequences of attending urban schools that are not equipped with HVAC systems that are up to the task.

With changes at the federal level placing enormous strain on the state budget, addressing these needs will require considerable focus and a search for creative solutions. To help build public will and surface viable ideas, the MassINC Policy Center partnered with the Worcester Regional Research Bureau (WRRB) to produce this study. This work expands on WRRB's 2024 report *Building the Future,* which analyzed the MSBA's investments in Worcester Public Schools, identified persistent facility needs, and called for an equitable approach to continued investment in the district's facility needs.[11] Expanding the bureau's approach, this analysis draws on data provided by the MSBA, surveys completed by education and municipal leaders from Gateway Cities, and interviews with school construction experts. Section 1 provides an overview of MSBA policies and processes and the unique challenges that they present for urban districts. Section 2 demonstrates the extent to which these policies and processes have led to inefficient and inequitable state investment. Extrapolating from a statewide inventory of school conditions conducted by the MSBA, Section 3 attempts to quantify and benchmark socioeconomic disparities in access to adequate school facilities in Massachusetts. Section 4 examines the cost and timeframe required to provide more equitable access to adequate schools under various funding scenarios. The report concludes by presenting a policy framework to accelerate efforts to ensure that all students have suitable learning environments, and to sustain gains in facility conditions well into the future.

SECTION 1

How School Building Policies Underserve Urban Communities

The Massachusetts School Building Authority (MSBA) plays a fundamental role in helping communities build and renovate schools to provide students with 21st century learning environments. The investments that the authority makes are fundamental to addressing structural inequities and closing educational achievement gaps in the commonwealth. However, the MSBA policies and processes are not currently aligned with this objective. Too often, urban school districts cannot afford to build or renovate their schools even when state support is made available to them. And when they are able to replace outmoded schools, sometimes financial constraints force them to construct new buildings that remain inadequate by today's standards. To see why this occurs, this section details the MSBA process and pinpoints the unique challenges that urban districts encounter obtaining local approval for school building projects with low reimbursement rates.

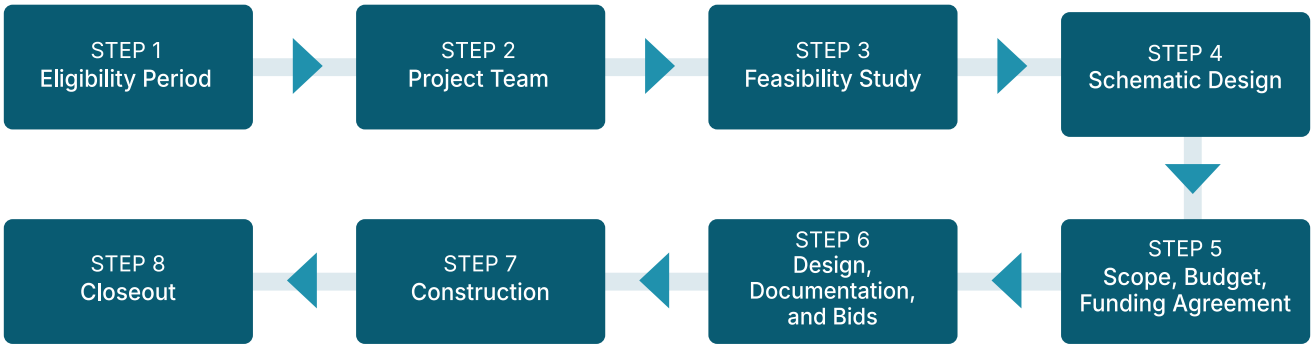
An Overview of the MSBA Process

The MSBA distributes state aid through two main grants. The **Core Program** supports major school construction projects, including new schools, substantial renovations, and building additions. These large-scale efforts require long-term planning and close coordination between local districts and the state. The authority also provides more modest grants for maintenance projects—including roof, window, and boiler replacements—through its **Accelerated Repair Program.** Urban districts have been heavy users of this program because they have had difficulty affording complete renovations. However, leaders from these communities say they take this course reluctantly, recognizing that further investment in buildings that are clearly inadequate by today's standards is an inefficient use of public resources. They also worry that addressing urgent facilities issues may mean that students will be left in buildings that do not fully meet their educational needs for many more years.

The process to enter both of these funding streams begins with a district submitting a **Statement of Interest (SOI).** The SOI outlines critical building deficiencies—such as overcrowding, outdated infrastructure, or safety concerns—that hinder learning. If the MSBA accepts the SOI, the project enters a 270-day **Eligibility Period**, during which the district must meet a series of readiness requirements. These include forming a School Building Committee, certifying enrollment projections, summarizing the district's maintenance history, and securing local authorization to fund the next stage.

When communities have met these readiness requirements, they proceed to the **Project Team** phase. At this stage, the school district hires an Owner's Project Manager (OPM) and a designer to oversee and guide the project. The team then conducts a **Feasibility Study,** a critical planning phase where the district

Overview of the MSBA Project Pipeline



Source: MSBA Modules Overview

explores various solutions—such as renovation, addition, or new construction—to address the community's needs. The study includes building assessments, community input, and educational programming analysis, resulting in the selection of a Preferred Schematic Option, which then must be approved by the MSBA board.

This is the first time municipalities gain a realistic sense of the cost of their project. However, they generally are not aware of how much reimbursement the MSBA will provide at this stage. This may give communities a false sense of being able to afford the proposed project.

The next phase is **Schematic Design**, where the selected option is developed in greater detail that includes draft architectural plans, cost estimates, and a project schedule. This leads to a **Project Scope and Budget Agreement**, outlining which costs are eligible for MSBA reimbursement. The district must then obtain local approval—through a council vote or ballot question—to commit its share of the funding. Upon approval, both the MSBA and the district sign a **Project Funding Agreement**, which locks in state support.

It is essential to note that at this stage the costs for the state are locked in and the municipality must absorb any cost overruns due to unforeseen challenges during construction. Complex urban projects often encounter unexpected problems with site work or during efforts to rehab older buildings. The MSBA process places all this risk on the municipality—the party with the least financial capacity to shoulder it. In some instances, the legislature has intervened with additional resources to help communities keep projects on track.

The project then advances into the **Design Development, Construction Documentation, and Bidding** phase. Here, detailed construction documents are created, and bids are solicited from contractors. Once a bid is accepted, the project moves into the **Construction** phase, during which the MSBA monitors progress through site visits and reports to ensure that the work meets established standards and stays on budget.

The final stage is **Closeout**, when the district submits all required documentation and financial records for a final audit. The MSBA reviews these materials to determine the actual reimbursable costs and issues the final grant payment. In some cases, the MSBA may also conduct a **Post Occupancy Evaluation** (POE) to assess how well the new or renovated building functions and supports learning. This evaluation helps inform future MSBA project planning and policy.

Stage that requires local approval

When a district submits more than one Statement of Interest (SOI) for the MSBA's Core Program in a given year, it is required to designate one of those submissions as its Priority SOI. This designation tells the MSBA which project the district considers its most urgent and is best positioned to pursue, both in terms of facility need and local readiness. While the MSBA allows districts to submit multiple SOIs, the Priority SOI helps guide the authority's due diligence and ensures that resources are focused on the project the district is most committed to advancing. If a district already has a project active in the Core Program pipeline, that project automatically becomes the Priority SOI until the building is substantially complete and turned over to the district. This policy prevents districts from taking on multiple major construction projects simultaneously, which disadvantages larger school districts with more buildings.

In addition to identifying a Priority SOI, districts are required to upload supporting documentation if they claim certain statutory priorities on the SOI form. For example, if a district selects Statutory Priority 1 (imminent health and safety risks due to building condition), it must submit an engineering or professional facilities report detailing the severity and urgency of the issue, along with photographs of the problem areas. If a district selects Statutory Priority 3 (threat to accreditation), it must upload a copy or summary of the official accreditation report identifying deficiencies that place the school at risk.

Accreditation for public schools in Massachusetts is not required by state law, but many districts voluntarily seek it through the New England Association of Schools and Colleges (NEASC)—an independent, nonprofit accrediting agency recognized by the US Department of Education. NEASC accreditation evaluates whether a school meets rigorous standards.

Once all SOIs are submitted for the year, the MSBA conducts a due diligence process to evaluate the urgency and feasibility of each proposal. This includes reviewing the documentation submitted,

ADDRESSING INEQUITIES IN GREEN BUILDING

In recent years, efforts to promote energy efficiency in schools have been another source of inequity because older urban schools are particularly challenging to retrofit for electric heating and cooling systems. Affluent suburban districts have been overrepresented among those taking advantage of state and federal funds to implement clean energy technologies and improve air quality and environmental conditions. The legislature and the MSBA have recently sought to address this issue by creating several new programs that exclusively support schools serving high concentrations of low-income students. They include the MSBA's Heat Pump Retrofit Program, the Regional School District Decarbonization Grant Program administered by the Department of Energy Resources, and the Green School Works Implementation Grant jointly awarded by the Department of Elementary and Secondary Education and the Massachusetts Clean Energy Center.

While these new programs certainly advance equity, operating modern HVAC systems requires skilled staff and regular maintenance. And air conditioning is an entirely new expense. These additional costs could surpass energy savings and cut into instructional budgets. As Massachusetts works to ensure that all students can learn in schools with healthy air and comfortable thermal environments, it must consider strategies to cost-effectively deploy and maintain green energy technologies at scale.

validating the identified deficiencies, and assessing the district's financial readiness, educational need, and ability to proceed with a project. The MSBA compares all submissions received within the filing window and invites those that best align with its priorities and available funding to join the Core Program. The Priority SOI designation, supporting evidence, and overall strength of the submission are key factors in the MSBA's project selection decisions.

Obtaining Local Authorization

Under the MSBA process, local authorization for a school construction project must be secured at two key stages: the feasibility study phase and the project scope and budget phase. Both stages require many of the same requirements and procedures. Local approval for these steps must take the form of a warrant article, motion, order, or vote from the city council or town board, or a ballot question approved by a two-thirds vote. These must include:

- A description of the school site and subject of the feasibility study, including address and parcel.
- Acknowledgment that the MSBA grant program is a non-entitlement, discretionary program based on need, and that any costs exceeding the MSBA grant will be covered by the city or town.
- Specific language regarding the debt authorization provision, stating that the borrowing authorized pursuant to the vote will be reduced by any MSBA grant set forth in the Feasibility Study Agreement between the city or town and MSBA.

If a municipality needs to borrow for a school construction project and the resulting debt service would exceed its Proposition 2½ levy limit, a local ballot vote for a debt exclusion is required. This vote must be project-specific and cannot be bundled with unrelated items. This type of borrowing is approved by a simple majority.

Whether the threshold is majority or two-thirds, this approval process presents a more difficult barrier for urban communities by virtue of the number of buildings in these communities. Suburbs often have only one middle school that is utilized by families of the entire town. In contrast, a middle school in an urban community often serves residents of just one council district.

These difficult politics are compounded by the intense financial strains that many urban communities face. Recent MassINC Policy Center Research documented how large legacy obligations to municipal retirees consume a significant share of local revenue, straining fiscal capacity in most Gateway Cities, especially those with slower population growth and lower property values.[12] This means school districts must ask voters to pass relatively large debt exclusions to finance school construction. Some communities have abandoned projects altogether when voters would not approve the debt exclusion. Others have been forced to redesign buildings, reducing their size and eliminating spaces for specialized learning. Even when they have severely outmoded buildings, several Gateway City survey respondents noted that their communities have not pursued new school projects or full rebuilds because leaders believe voters will not pass the required debt exclusions.

Local leaders credit the MSBA with helping them manage a predictable process that will gain voter support. However, many say reimbursement rates for the final design often come in lower than anticipated (as described below), and this makes it more challenging to get a majority of voters to approve the project scope and budget, as well as pass any required debt exclusions.

CASE STUDY

Holyoke's new Peck school illustrates how cost-engineering deprives urban students of 21st century learning even when they attend schools built in the 21st century

Holyoke offers a telling case study of how limited local fiscal capacity can hamstring Gateway Cities from realizing equitable school facility improvements, even when the state acknowledges an urgent need. In 2018, the district (under state receivership) and the MSBA crafted a bold plan to move away from the city's outdated K–8 configuration and construct two new, dedicated middle schools for 550 students each—one on Chestnut Street to replace the aging H.B. Lawrence and another on the site of the deteriorating **William R. Peck School**. The two-school solution, chosen after an extensive feasibility study, was designed to support Holyoke's turnaround plan. It would replace three of the city's worst-conditioned schools with two new appropriately-sized schools, one on each side of the city. Renovation or repair options at Lawrence and Peck were studied and dismissed. A single 1,100-student middle school was also rejected as inconsistent with the turnaround plan.

Because the actual state reimbursement rate for these projects was well below the 80 percent statutory level, the city's large contribution required a Proposition 2½ debt-exclusion override. When voters rejected the override in 2019, Holyoke could no longer finance both projects. The district ultimately proceeded only with a new Peck Middle School, while shelving the downtown Chestnut/ Lawrence replacement.

Instead of Holyoke's 80 percent statutory reimbursement rate, the actual reimbursement rate for the $85 million Peck project was 68 percent. This 12-percentage point differential is significantly better than the 19 percentage-point average difference for all Gateway City projects, which may seem to indicate that Holyoke did with respect to state support. However, the truth is more likely that Holyoke significantly cost-engineered the project to maximize the state reimbursement rate at the expense of students. To contain costs, the new building combines the gym, cafeteria, and auditorium into a single multipurpose space. While this design is arguably more efficient, it also clearly means students get less when it comes to meals, athletics, music and theater, and school-wide gatherings. The move to constrain costs will impact students in other ways as well. For instance, visitors to the new building have noted that while it contains ample new library space, the district has not been able to purchase actual books. For now, students who visit are greeted by empty shelves.

The Reimbursement Rate Calculation

By statute, the MSBA process recognizes that communities have varying fiscal capacity to support school construction and renovation. When the authority selects a project for support, it apportions state aid largely according to this need. The state match or "reimbursement rate" is generated by a formula that starts with a base rate of 31 percent. As prescribed by statute, this base rate is then adjusted on a sliding scale according to three factors—each expressed as a percentage of the statewide average: the district's property wealth (as measured by equalized property valuations per capita), income levels (measured by income per capita), and low-income students as a percentage of total enrollment. Districts with lower property values, lower income levels, and a higher proportion of low-income students receive additional percentage points, depending on how much these factors differ from the state averages. The maximum reimbursement rate that a district can receive from the MSBA for eligible costs is 80 percent.[13]

In addition to these adjustments, state law gives the MSBA discretion to award up to 18 "incentive points" to encourage policy goals. Currently, the MSBA grants these percentage-point increases to the statutory reimbursement rate for newly formed regional school districts (+6 points), renovation of existing facilities (+5 points), maintenance best practices (+2 points), Chapter 40R Overlay Zoning (+2 points), and the high-efficiency Green School Program (+2 points).[14] The extra state aid available to communities that regionalize is especially notable. Many urban districts are eager to gain efficiencies by merging and consolidating schools, but they do not receive any financial incentive to make these complex and often politically challenging changes.

Not all cost areas are eligible for reimbursement under MSBA guidelines—a fact that is often overlooked in public discussions of reimbursement rates. The reimbursement formula is progressive by design. However, the MSBA has instituted a number of cost-control policies that tend to make the actual distribution of funds far less progressive. For instance, site work—encompassing infrastructure outside the building itself, including grading, utility connections, parking, and sidewalks—is reimbursed at a rate of up to 10 percent of the total building construction cost. Any costs (prior to 2022 the cap was 8 percent; in 2026, it will rise to 12 percent) exceeding this threshold are not eligible for reimbursement.

In developed urban areas, site work is generally more complex and costly, which makes this cap particularly challenging for cities. Often, urban districts rebuild adjacent to existing facilities and phase projects over several stages. This creates significant additional costs; providing safety and security on active construction sites over the span of several years while schools remain in operation is particularly expensive. In some cases, urban districts will move students to another school during a major renovation. However, preparing buildings that were not designed as schools or reopening schools that have been shuttered to serve as temporary facilities is costly. This expense is not reimbursable. Most leaders from these communities report significant difficulty shouldering these additional costs on their own.

Land acquisition presents another challenge. The MSBA does not include this cost in the reimbursement formula, assuming that communities can use the current school site or another parcel of municipally-owned land. However, this is challenging for Boston and the Gateway Cities. Current school sites are generally small, without the space to accommodate a modern school with recreational features. Larger municipally-owned parcels are rare, and often unavailable in the locations where they are needed. Exceptionally high land values in Boston make land acquisition

extremely expensive. Even in cities where land values are relatively low, available parcels often require significant remediation before they are suitable for construction. The cost of abating and removing contaminated materials, such as hazardous soils and fuel storage tanks, is not covered. Demolition costs are only reimbursed when replacing a school on its existing site, and even then, the cost of removing lead and asbestos is not eligible for reimbursement. These exclusions further compound the financial burden on urban districts.

While cities have many existing buildings, and the five additional incentive points they would get for renovation should help them reuse these structures, renovating or rebuilding on an existing site requires moving students to a temporary location during construction This is yet another expense that urban areas are more likely to shoulder because the MSBA has deemed it ineligible for reimbursement; the cost of relocation largely offsets the five extra points.

Another major concern is that the MSBA does not reimburse districts for costs associated with auxiliary spaces. Urban education leaders increasingly recognize that they cannot address the opportunity gaps that lead to wide disparities in student achievement without greater integration across systems. Many are working hard to build cross-authority partnerships, collocating municipal libraries, recreation centers, senior centers, community health centers, and adult basic education centers in their schools. While this is considered a cost-effective best practice in the field, the MSBA will not reimburse school districts even for the proportion of these spaces that students will utilize directly during the school day.

According to urban leaders and school construction experts, the most problematic policy that urban districts encounter is a cap on how much the MSBA will reimburse per gross square foot. This policy fundamentally fails to recognize that construction is more expensive in congested urban areas, particularly when the only way to accommodate the facility is to build vertically, which requires more steel, elevators, and other complex systems. And with scarce land, urban projects often require staging areas to be located some distance from the construction site. This means that police details are needed to move heavy equipment back and forth on a daily basis.

The data presented in the next section will show how the cost control standards adopted by the MSBA have made the reimbursement formula regressive rather than progressive, counter to what the legislature intended by embedding a progressive formula in law and explicitly authorizing the MSBA to consider the additional expenses that urban districts encounter when developing cost control policies.[15]

MSBA FUNDING CONSTRAINTS

Like the MBTA, the MSBA is primarily funded through one penny of the state's sales tax collection. This revenue source has mostly seen healthy growth for the past decade (with the exception of decreases in 2014 and 2024), but it has not kept pace with the rising cost of school construction in Massachusetts. Between 2012 and 2022, the MSBA's sales tax revenue grew by 77 percent (not adjusting for inflation). But during this 10-year stretch, the nominal price per square foot for school construction increased by 109 percent.

In addition to directing one penny of the sales tax to the MSBA, state law places several caps on the authority's borrowing authority: There is an annual limit on the total value of grants the MSBA may approve in a given fiscal year. Initially set at $500 million, this cap was raised to $800 million in the SOA and again to $1.2 billion in the FY2024 state budget. The total amount of debt the MSBA can have outstanding is capped at $10 billion. While the authority does expend up to the annual limit, it remains far from hitting the total debt outstanding ceiling.

SECTION 2

Regressive Funding for School Building in Massachusetts

Massachusetts has developed a robust formula to help ensure that all students attend schools with sufficient resources for annual operations. It begins with a Foundation Budget that calculates the minimum costs of delivering adequate education services in different parts of the state. The Chapter 70 formula then apportions these costs to local school districts and the state budget, according to the financial means of each district. Municipalities must furnish their required local contribution each year as dictated by the formula or they will face enforcement action, including loss of non-education state aid.

In sharp contrast, there is no mechanism to hold both the state and local communities accountable for ensuring that students attend schools with adequate facility conditions. This is problematic because failure to make responsible capital investments in the large stock of school buildings by either the state or a municipality has costly long-term financial repercussions. Boston presents a glaring example. Despite being the state's largest school system, Boston has received only five invitations to the MSBA's Core Program since 2008, when the authority began approving projects under the current system. This has left a large backlog that will require many billions of state and local dollars to address.

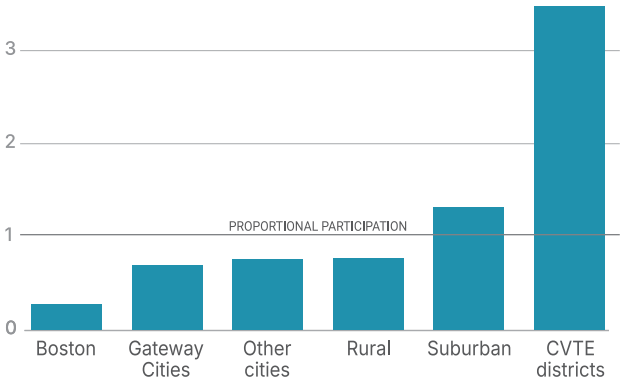
To be fair, at least part of the reason that Boston and other urban districts are years behind on school construction is that they lacked the means to fund this work. Suburbanization and deindustrialization took a heavy toll on their finances for the better part of the post-World War II era. In recent years, Boston has taken meaningful steps to reverse this trend. The city released a comprehensive, data-driven facilities master plan and has substantially increased its engagement with the MSBA to secure funding.

With a progressive funding formula and an explicit mandate to prioritize obsolete buildings, the MSBA's statutory framework should serve to Boston and other urban communities modernize their school facilities. School construction outcomes have not adequately met the needs of urban districts, and greater support has often gone to communities with more moderate needs and greater financial means. This section highlights four data points that provide strong empirical support for this conclusion:

1. **Suburban school districts have disproportionately benefited from the MSBA's Core Program despite urban districts having far greater needs as measured by both facility conditions and growth pressures.** Between 2015 to 2024, suburban school building projects accounted for more than half (57%) of those invited to the Core Program, even though these buildings make up just 43 percent of all schools in Massachusetts. In sharp contrast, Boston and the Gateway Cities have been significantly underrepresented among invitees to the Core Program. Together, these urban districts make up nearly one-third (32 percent) of all schools in Massachusetts, but they have received less than 19 percent of invitations to the Core Program since 2015. Rural schools have also been underrepresented, though not nearly to the same extent (**Figure 1**).

FIGURE 1

Ratio of Core Program rebuilds relative to Massachusetts K–12 school buildings by region, 2015–2024



Source: Analysis of MSBA data

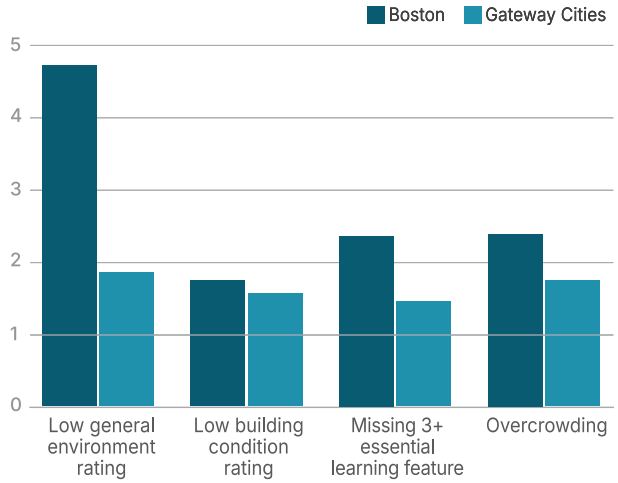
In some cases, suburban towns had increasing enrollment and therefore required additional buildings over the past decade. But this does not explain the wide disparities in Core Program invitations. Urban districts have a far larger share of both older obsolete facilities and crowded schools, according to the comprehensive survey of conditions conducted by the MSBA in 2016.

The MSBA commissioned this independent assessment to provide an objective measure that would help guide investment decisions. The survey rated every K–12 school building in Massachusetts on a scale of 1 to 4 based on its learning environment, and 1 to 4 based on its physical condition. It also identified buildings where student enrollment exceeded design capacity leading to overcrowding.

These data show suburban growth pressures cannot fully explain the disproportionate share of invitations that these districts have received. Nearly two-thirds of over-capacity schools were located in Boston or the Gateway Cities (**Figure 2**). Meanwhile, Boston and the Gateway Cities clearly have very disproportionate shares of the older obsolete schools. Together, they accounted for 85 percent of schools with the lowest recorded General Environment Rating and more than half of schools (52 percent) with the lower Building Condition Ratings (Levels 3 and 4), when again, Boston and the Gateway Cities are home to just 32 percent of Massachusetts schools.

FIGURE 2

Ratio of Boston and Gateway City schools with facility condition problems relative to all Massachusetts K–12 school buildings, 2016

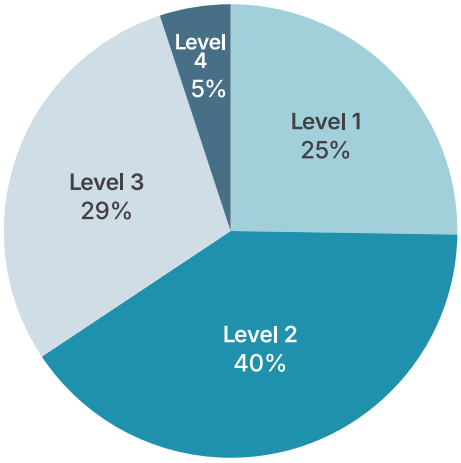


Note: This figure only displays Boston and the Gateway Cities because the other geographies are not overrepresented in any of these categories.

Source: Analysis of MSBA data

2. Since 2015, schools with the best Building Condition Ratings (Levels 1 and 2) have received nearly two-thirds of Core Program invitations. Between 2015 and 2024, the MSBA invited 32 Level 1 and 52 Level 2 schools into the Core Program. In comparison, only 38 Level 3 schools and seven Level 4 schools were selected for the Core Program during this period. While Level 3 and 4 schools were overrepresented among invitees relative to their share of all schools in Massachusetts, Level 2 schools were also significantly overrepresented, with 40 percent of all invitations going to a category that accounted for just 32 percent of all schools. Because Level 2 is a large category, this overrepresentation consumed significant resources (**Figure 3**).[16]

FIGURE 3
MSBA Core Program rebuilds by Building Condition Rating, 2015–2024



Source: Analysis of MSBA data

Only three of the Level 1 and 2-rated buildings invited to the Core Program were over capacity in 2016, while 28 (33 percent) were underutilized. This indicates that many of the schools receiving state investment did not face significant facility issues or overcrowding.

These patterns suggest that the current system or policies do not consistently direct resources toward upgrading the most outdated and overcrowded buildings. To improve outcomes, institutional processes should ensure that a needs-based and equity-focused allocation model is strengthened.

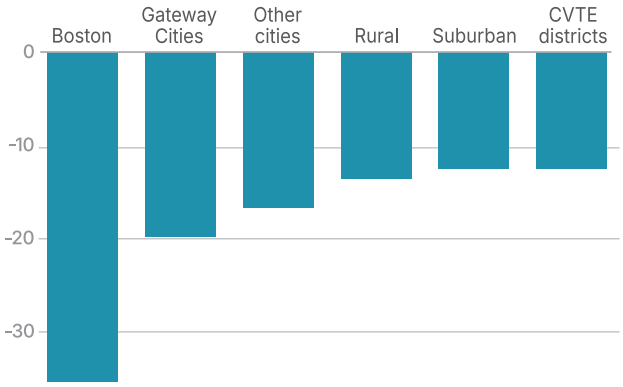
3. **A needs-based allocation model between 2015 and 2024 could have addressed a majority of the most severe school facility issues.** The MSBA issued 156 Core Program invitations between 2015 and 2024. Under a model that prioritized schools with the worst physical conditions for replacement or major rehabilitation, all 20 schools rated Level 4 and up to half of schools rated Level 3 could have been rebuilt over the past decade. This is an upper-bound estimate, as urban schools should generally cost more on average to construct. However, there is no question that all 29 over-capacity schools with poor building conditions (Levels 3 and 4) could have been addressed. Notably, 69 percent of the 29 over-capacity schools in ill repair are in Boston and the Gateway Cities.

4. **The MSBA's cost-control policies fall more heavily on urban districts, effectively reducing their reimbursement rates by a margin that is two-thirds greater for Boston and the Gateway Cities than for suburban districts.** Without a required local contribution or any means for the state to compel urban communities to seek help modernizing dilapidated buildings, one could argue that the disproportionate investment in suburban schools with less acute needs is a result of cities failing to enter the MSBA process. Examining this is difficult because the MSBA does not have complete data on municipalities that applied for the Core Program. However, data show the policies and practices adopted by the authority to control costs disproportionately reduced reimbursements to urban districts.

Between 2008 and 2024, the average reimbursement rate for Massachusetts suburbs based on the statutory formula was 55 percent. This was effectively reduced to 43 percent after the MSBA calculated the reimbursement rate following its cost-control policies, a 12 percentage-point reduction. In contrast, the statutory average for projects in Boston and the Gateway Cities was 80 percent, while their average actual reimbursement was just 60 percent of eligible costs. This 20 percentage-point reduction was the largest gap observed across all district types (**Figure 4**).

FIGURE 4

Mean percentage-point difference between the statutory and actual reimbursement rate for Core Program rebuilds, 2008–2024



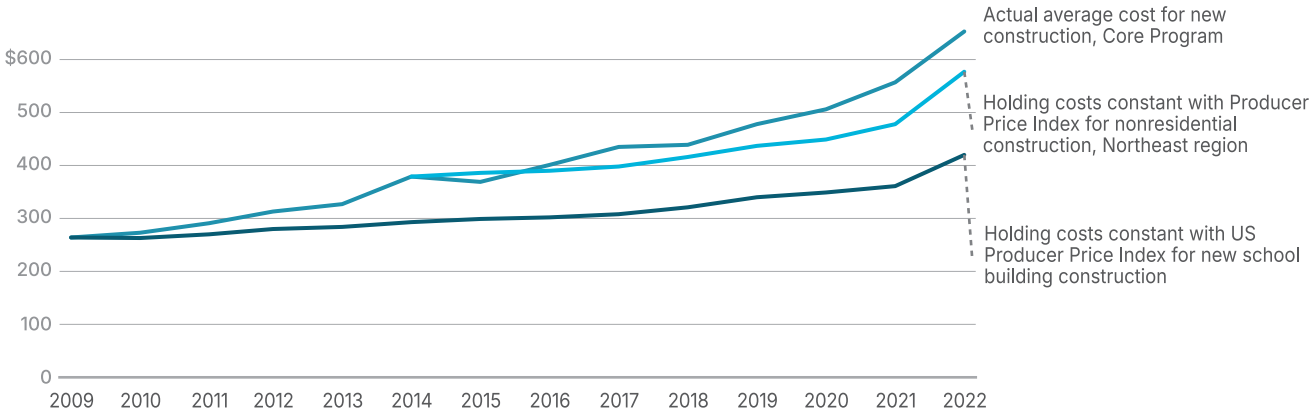
Source: Analysis of MSBA data

These low actual reimbursement rates combined with escalating prices for school construction are compounding the disadvantages that cities face. From 2009 to 2022, the nominal cost per square foot for completed projects increased from $275 to $645—almost 135 percent growth overall, and an annual average increase of 7.5 percent. While sales tax revenue growth has been strong over the past decade, prices have increased about 1.4 times faster than proceeds to the MSBA from this revenue stream.[17] The spike in school construction costs cannot be fully explained by broader inflationary trends. If school construction costs had increased at the same pace as the BLS Producer Price Index for construction-related inputs, the average price per square foot would be around $450 today instead of nearly $650 (**Figure 5**).

Still, these above-average price increases should not be seen as a failure of the MSBA to control costs, as school construction costs in Massachusetts are still well within the range of standard construction costs for commercial and institutional buildings in the Northeast.[18] These facilities are constructed with materials that can stand the test of time with heavy utilization. To meet today's needs, they also require IT, security, and HVAC systems. Recent school construction projects have skewed toward high schools and vocational schools. This reflects efforts to ensure that these buildings contain the advanced equipment and learning spaces necessary to prepare students for the state's knowledge industries.

FIGURE 5

Actual cost per square foot for Core Program projects compared to price index trends



Note: The PPI for nonresidential construction in the Northeast was first issued in 2014. For that series, prices are pegged to 2014 MSBA cost levels.

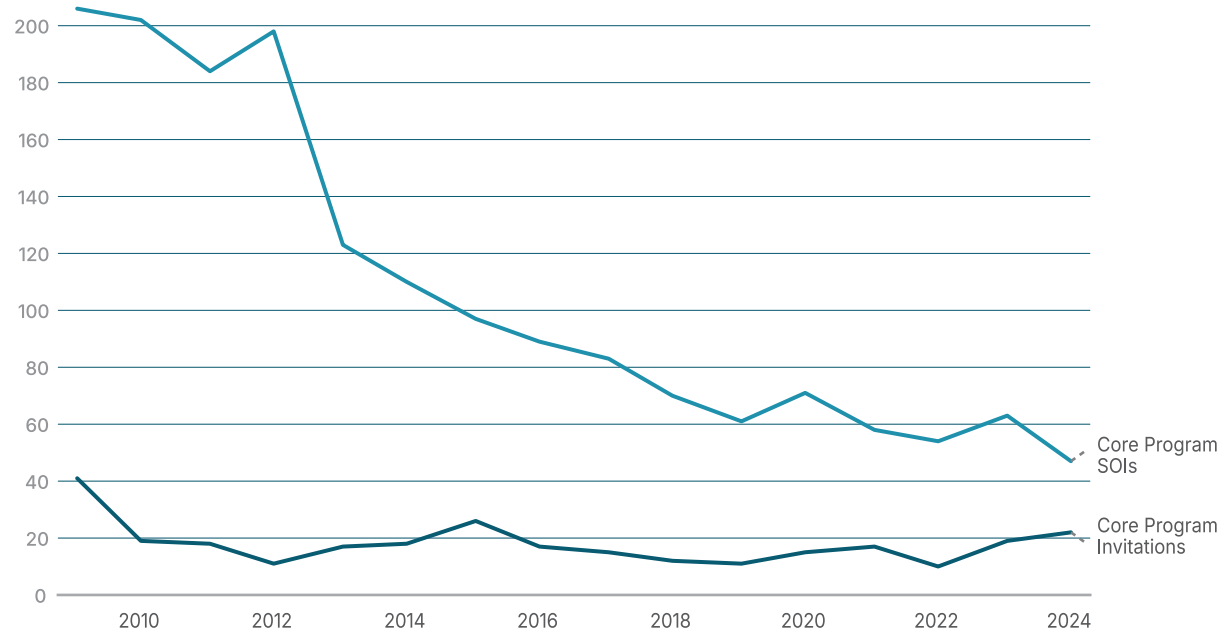
Source: MSBA data and US Bureau of Labor Statistics

The MSBA has not failed by allowing construction costs to rise—these increases reflect broader market forces. However, it has not examined how a one-size-fits-all approach to cost eligibility adjustments affects districts differently. This lack of targeted policy intervention has contributed to significant disparities in reimbursement outcomes, with urban districts often absorbing a larger share of project costs.

It is important to recognize that as school construction becomes more expensive, many communities are having difficulty paying for projects while operating within the constraints imposed by Proposition 2½. Since 2012, there has been a steady decline in Core Program SOIs (**Figure 6**). Some of this sharp drop off may reflect a wave of submissions in the early 2010s, which reflected pent up demand from the Great Recession as well as a pause in applications instituted by the MSBA from 2004 to 2007. However, there is no doubt that cost increases coupled with declining state reimbursement rates means many communities are no longer able to keep up with school improvement at previous levels.

FIGURE 6

Annual number of Core Program Statement of Interests (SOI) received and annual number of Core Program invitations extended



Source: MSBA data

SECTION 3
Disparities in Access to Adequate Educational Facilities

The new research cited in the introduction confirmed what many intuitively know about the physical condition and design features of schools. These buildings are more than just bricks and mortar. They shape how students learn and the identities that they build. Facility qualities also influence the teachers that schools attract and their ability to deliver effective instruction. And they impact where parents choose to live and the schools that they select for their children. Drilling deeper in the 2016 MSBA survey, this section shows how disparities in access to high-quality school buildings—along racial, ethnic, and socioeconomic lines—result in unequal opportunities to obtain an adequate public education in Massachusetts.

Quantifying these inequities is a key first step to remedying them. Drawing on student enrollment data, Figure 7 shows exposure to different facility conditions and learning amenities by race, ethnicity, and income. The inequities presented in these two figures can be summarized as follows:

- **Black, Hispanic, and low-income students are more likely to attend overcrowded schools.** In Massachusetts, 8 percent of Black students and 12 percent of Hispanic students attend overcrowded schools compared to just 4 percent of White students. Nearly 10 percent of economically disadvantaged students attend overcrowded schools versus less than 5 percent of those without economic disadvantage.

  Students in schools with an insufficient number of classrooms for the current level of enrollment may have larger class sizes, which can negatively impact learning outcomes.[19] Overcrowding may have other indirect impacts on student achievement and well-being. For instance, students in overcrowded schools often have less time to eat and poorer nutrition as a result.[20] Overcrowding can also pose significant issues for school safety and discipline.[21]

- **Black, Hispanic, and low-income students are more likely to attend schools that are in inferior physical conditions.** Only 13 percent of White students attend schools with Level 3 or 4 Building Condition Ratings. In contrast, 22 percent of Black and Hispanic students learn in schools with substantial physical defects. Nearly 22 percent of economically disadvantaged students attend schools with poor physical conditions versus less than 13 percent of those without economic disadvantage.

  The physical condition of a building can impact student learning and well-being through numerous channels. Poor lighting, heating, ventilation, indoor air quality, and noise control negatively impact achievement. Run-down buildings also communicate negative messages about how the community and society values students, discouraging attendance and adversely impacting behavior.[22] There is also evidence that poor facility conditions increase teacher turnover.[23]

FIGURE 7
Share of students exposed to schools missing key learning features

Feature	Black	Hispanic	White	Low Income	Non-Low Income
Art rooms	19%	19%	9%	18%	9%
Music rooms	24%	30%	15%	26%	15%
Science labs	42%	44%	43%	44%	43%
Libraries or media centers	12%	13%	4%	11%	5%
Cafeterias	7%	10%	4%	8%	5%
Gyms	13%	14%	7%	12%	7%
Missing 3+ features	19%	23%	10%	21%	11%

Note: Shares based on 2024 enrollment patterns and the 2016 MSBA school facility conditions survey, excluding schools rebuilt, closed, or consolidated since 2016 and those with active Core Program projects.

Source: Analysis of MSBA data and DESE enrollment data

- **Black, Hispanic, and low-income students are more likely to attend schools lacking learning features that are essential to a well-rounded education.** Nearly 20 percent of Black and Hispanic students attend schools without an art room compared to less than 9 percent of White students. The disparity in access to art rooms is similar for low-income (18 percent lacking) and non-low-income students (9 percent lacking). Learning spaces for music are even more unevenly distributed in Massachusetts; nearly one-quarter of Black students and 30 percent of Hispanic students are enrolled in schools without this feature, versus just 15 percent of White students. While there is greater parity with access to science labs, libraries and media centers present the most extreme disparity. Only 4 percent of White students attend a school without a library compared to 12 percent of Black students and over 13 percent of Hispanic students. Similarly, 11 percent of low-income students attend schools without libraries compared to 5 percent of non-low-income students.

In some cases, urban schools built more than a century ago always lacked these learning features. But there are also many instances where overcrowding or building deterioration has forced schools to convert or close these rooms. While lack of access to these specific learning spaces is understudied in the school facility literature, there is a strong and growing body of causal research in education and neuroscience that shows that access to art and music can have a direct impact on the developing brain.[24] Schools that can offer arts and music help students increase their creativity and critical thinking skills, while also improving memory, focus, and communication skills.[25] Students in schools with arts and music education have greater attachment to school and higher levels of academic achievement.[26] The 1993 SJC decision specifically referenced the arts in defining an adequate education. In an economy that places an increasingly high premium on creativity, unequal access to these key learning spaces during formative periods of development will perpetuate racial and ethnic wealth gaps far into the future.

- **Black, Hispanic, and low-income students are more likely to attend schools lacking features that are essential to their health and well-being.** Nearly 7 percent of Black students and over 10 percent of Hispanic students attend schools without cafeterias where they can receive healthy foods and socialize and interact with peers outside of the classroom. In comparison, just 4 percent of White students go to schools that lack cafeterias. Students of color are also much more likely to attend schools without gymnasiums for physical fitness. Almost 13 percent of Black students and 14 percent of Hispanic students are at schools without a gym, compared to just 7 percent of White students. Compared to those without economic disadvantage, low-income students are also much more likely to attend schools without gyms (12 percent versus 7 percent, respectively).

  Compared to those without economic disadvantage, low-income students are 1.6 and 1.8 times more likely to attend schools without gyms and cafeterias, respectively.

  To the extent that the cafeteria and kitchen facilities impact nutritional quality, school meals will have an influence on academic achievement and socioeconomic inequalities all the way into adulthood.[27] Similarly, gymnasiums that provide space for vigorous physical activities also improve academic achievement.[28]

  While the MSBA's 2016 facilities survey included data on HVAC and other building systems, this analysis does not utilize those results because many districts have made significant improvements since the COVID-19 pandemic using federal recovery funds, which are difficult to track with currently available data. However, it is likely that large disparities persist with regard to environment and air quality.

- **Black, Hispanic, and low-income students are more likely to attend schools with multiple deficiencies.** Nearly one-fifth of Black students and almost one-quarter of Hispanic students attend schools missing three or more of the essential features for learning, health, and well-being included in the MSBA inventory. In comparison, only 10 percent of White students in Massachusetts are enrolled in schools with multiple facility limitations. Nearly 21 percent of economically disadvantaged students attend schools without multiple features versus 11 percent of those who are not economically disadvantaged.

A school lacking in one or two key learning features can likely compensate in other ways. However, it seems probable that the more features are lacking in a school, the more adverse the consequences for student learning and well-being. This hypothesis is consistent with studies that show that investments in new school facilities deliver double the benefit for students of color and low-income students.[29]

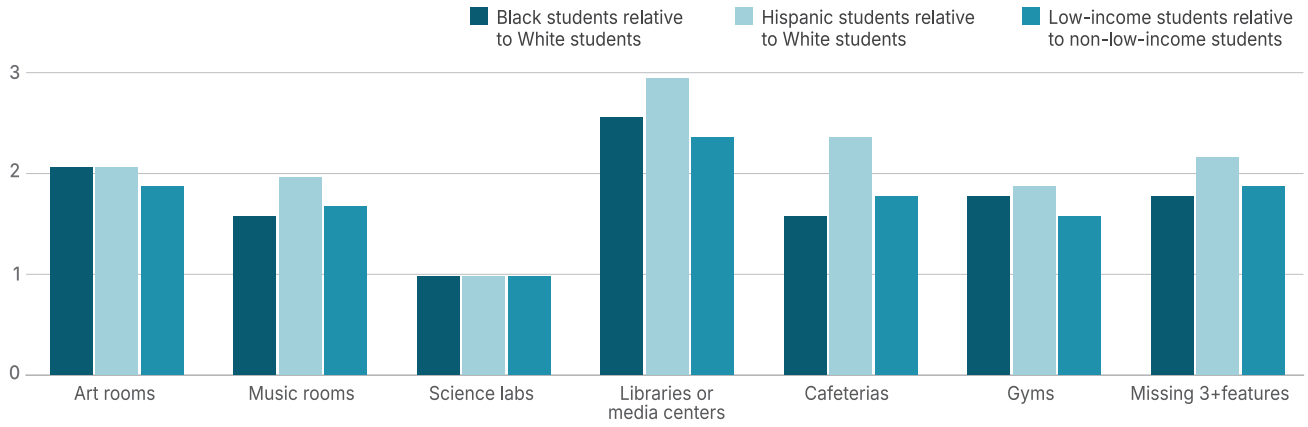
To further illustrate the greater likelihood that students of color and low-income students will be exposed to schools without key learning features, **Figure 8** displays these same data as ratios.

Not surprisingly, the disparities in access to high-quality facilities largely stem from the concentration of students of color in the state's urban school districts. Together, Boston and the Gateway Cities house one-third of all schools in Massachusetts, and yet they contain:

- **55%** of schools in Massachusetts without music rooms
- **57%** of schools in Massachusetts without art rooms
- **59%** of schools in Massachusetts without cafeterias
- **62%** of schools in Massachusetts without gyms

FIGURE 8

Disparate exposure to schools missing key learning features by race, ethnicity, and income



Note: Ratios based on 2024 enrollment patterns and the 2016 MSBA school facility conditions survey, excluding schools rebuilt, closed, or consolidated since 2016 and those with active Core Program projects.

Source: Analysis of MSBA data and DESE enrollment data

The data presented in **Figure 9** show significant variation across these communities and the relatively slow pace of progress for larger cities with particularly acute needs. More than half of the 123 schools surveyed in Boston were missing three or more learning features, and over one-quarter (25 percent) had low BCRs, but the city has had just 3 Core Projects in the past decade. With four rebuilds in a portfolio of 52 schools, Springfield has had the most Core Projects, but it also had the highest share of schools missing three or more essential learning features (67 percent). Half of Worcester's 44 schools received low BCRs in the 2016 MSBA survey, and over 40 percent were missing three or more essential learning features, but just two have been rebuilt. While nearly three-quarters of the 25 schools in New Bedford had low BCRs, and nearly half were missing three or more essential learning features, only two have received Core Program invitations over the past decade. The unmet need in Lynn is also apparent: More than half of the city's 26 schools were missing three or more essential learning features, nearly 20 percent had low BCRs, and 15 percent were over capacity. Despite considerable effort by city leaders, Lynn has only received one Core Program invitation since 2015.

New school building policies and processes that help urban districts modernize their school buildings will be essential to reducing these disparities and increasing racial, ethnic, and economic integration in Massachusetts public schools. The data from the 2016 facility conditions survey show very strong correlation between school quality and school segregation (**Figure 10**). More specifically:

- Segregated non-White schools account for 19 percent of all schools in Massachusetts, but they make up 30 percent of schools with the lowest BCRs, 47 percent of schools missing three or more essential learning features, and 66 percent of overcrowded schools.[30]
- Schools with high concentrations of poverty account for 33 percent of schools in Massachusetts, but they make up 50 percent of schools with the lowest BCRs, 58 percent of schools missing three or more essential learning features, and 87 percent of overcrowded schools.[31]

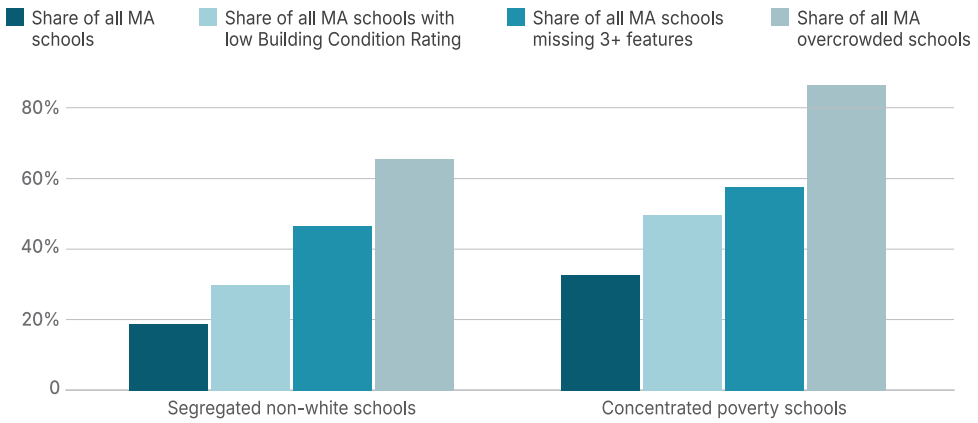
FIGURE 9

Schools, school improvement projects, and facility conditions by district

School District	# of Schools	# of Core Invites (2015-2024)	Low General Environment Rating		Low Building Condition Rating		Missing 3+ Features		Over Capacity	
			#	%	#	%	#	%	#	%
Boston	123	3	21	17%	35	28%	68	55%	19	15%
GATEWAY CITIES										
Attleboro	9	0	0	0%	1	11%	0	0%	1	11%
Barnstable	8	0	0	0%	1	13%	0	0%	0	0%
Brockton	23	1	0	0%	5	22%	5	22%	1	4%
Chelsea	9	0	0	0%	0	0%	4	44%	4	44%
Chicopee	14	1	0	0%	0	0%	6	43%	0	0%
Everett	8	1	1	13%	0	0%	2	25%	1	13%
Fall River	18	0	2	11%	6	33%	5	28%	2	11%
Fitchburg	8	1	1	13%	4	50%	1	13%	4	50%
Haverhill	13	2	0	0%	1	8%	3	23%	1	8%
Holyoke	11	1	0	0%	5	45%	2	18%	0	0%
Lawrence	24	2	4	17%	7	29%	15	63%	6	25%
Leominster	9	1	0	0%	2	22%	3	33%	3	33%
Lowell	26	0	0	0%	5	19%	5	19%	1	4%
Lynn	26	1	3	12%	5	19%	15	58%	4	15%
Malden	6	0	0	0%	0	0%	0	0%	0	0%
Methuen	5	0	0	0%	0	0%	0	0%	0	0%
New Bedford	25	2	3	12%	19	76%	12	48%	0	0%
Peabody	10	2	0	0%	1	10%	4	40%	0	0%
Pittsfield	12	1	0	0%	4	33%	0	0%	0	0%
Quincy	18	1	0	0%	1	6%	11	61%	1	6%
Revere	11	1	0	0%	3	27%	2	18%	1	9%
Salem	7	1	0	0%	0	0%	0	0%	0	0%
Springfield	52	4	1	2%	2	4%	35	67%	6	12%
Taunton	12	0	0	0%	0	0%	2	17%	0	0%
Westfield	10	1	0	0%	3	30%	3	30%	0	0%
Worcester	44	2	13	30%	22	50%	18	41%	11	25%
SUBTOTAL	418	26	28	7%	97	23%	153	37%	47	11%
State Total	1692	156	57	3%	257	15%	370	22%	102	6%

FIGURE 10

Relationship between measures of segregation and facility condition ratings



Source: Analysis of MSBA data and DESE enrollment data

CASE STUDY

Springfield's DeBerry–Swan Elementary exemplifies the need for new policies that support school-centered neighborhood development

The new **DeBerry–Swan Elementary School** complex in Springfield demonstrates why Massachusetts must strategically align investments in school facilities with neighborhood revitalization in high-poverty neighborhoods that have suffered from decades of disinvestment.

The new $95 million state-of-the-facility houses two independent schools, each with its own principal. They share modern amenities, including art and music rooms, a media center, a gym, and a cafeteria. This new complex is a vast improvement over the two former schools, which were in poor condition and lacked all of these basic learning features. However, the gleaming new building will not undue the impact of redlining and decades of disinvestment on its own.

The 1935 Home Owners' Loan Corporation map for the city affixes a "Definitely Declining" grade to the neighborhood where the new DeBerry-Swan complex is located. This designation became a self-fulfilling prophecy. It lowered property values and cut off access to capital. Residents moved out, small businesses lost patrons, providing basic services became more difficult, and environmental hazards mounted, with more and more boarded-up storefronts and homes.

In DeBerry-Swan's immediate census tract, today 38 percent of residents—including 57 percent of children—live below the poverty line. The annual per capita income is less than $19,000. Over 15 percent of homes are vacant, and this figure does not account for the many empty lots, where homes lost to arson and fire previously stood.

These environmental conditions impact student health and well-being directly. They also lead to extremely high concentrations of poverty in the public schools, which makes it difficult for them to effectively serve their students. Over 90 percent of DeBerry's students are low-income. The most recent test scores place the school at the 3rd percentile of performance statewide.

MassINC Policy Center (MPC) research points to the need for a more comprehensive approach to school improvement and neighborhood revitalization in these circumstances. Drawing on leading examples of school-centered neighborhood development in other cities and states, MPC has advanced strategies to bring housing and community development leaders to together with educators to strategically build mixed-income neighborhoods and mixed-income schools.

CASE STUDY

Mason Square, where the DeBerry-Swan complex is located, has all of the ingredients to become a strong and stable neighborhood of choice. In addition to this new state-of-the-art school complex, the neighborhood has a small business district at its center. There are several parks providing open space, as well as a community center, and strong early learning providers. It is just blocks from the headquarters of MassMutual, the third largest business in Massachusetts by revenue. And there are two private colleges and a community college within walking distance. Equally important, there is ample underutilized land available to accommodate both commercial and residential growth.

Massachusetts needs policies that recognize the latent potential of investments in public school facilities and synergistically aligns them with investment in housing, public infrastructure, and economic development to heal the wounds of the past and help residents of communities of color build wealth.

SECTION 4

The Price and Pace of Progress

There is widespread agreement that Massachusetts is failing to keep pace with school building modernization. The contribution of school facility conditions to growing racial and ethnic achievement gaps is also increasingly clear. To intervene, policymakers need an understanding of how much it will cost to address this problem over various timeframes. While producing these figures with limited data is difficult, this section synthesizes the best available information to provide low- and high-end estimates.

Estimating the Current Backlog and the Cost of Replacement

There are 276 schools that received a Building Condition Rating (BCR) of 3 or 4, a General Environment Rating (GER) of 3, or a designation as being over capacity in the 2016 MSBA survey, which have not been rebuilt through the MSBA's Core Program and remain in operation today. Roughly 60 percent of these schools are located in Boston or a Gateway City. Together, they represent over 21 million square feet of deteriorated, outmoded, or overcrowded school infrastructure. At an average construction cost of $653 per square foot, $14 billion is a rough estimate for the total cost to modernize or replace these high-need buildings.

This estimate based on current gross square footage is far from precise. These projects may be more complex and cost more to deliver than average. And rebuilds will likely require more space to address overcrowding and ensure that students have access to all the learning environments that a 21st century education requires. On the other hand, some of these issues can be addressed through lower-cost additions as opposed to complete rebuilds. While allowing room for significant variation, policymakers can view $14 billion as an upper-bound estimate, as facility issues and overcrowding can also be addressed by closing and consolidating schools.

A stricter definition of high-need buildings will produce a lower-bound estimate for consideration. For instance, limiting the list of high-need schools to those that are more than 100 years old with a BCR Level 3 or 4 yields 46 schools that remain in operation today. Three-quarters of these buildings are located in Boston or a Gateway City. They total about 3.2 million square feet of space. Replacing these schools would cost approximately $2.1 billion. This is a far more manageable figure, and it could also be further reduced by negotiating with districts to encourage closures and consolidations where appropriate.

Estimating the Time to Address the Backlog

From 2016 to 2024, only about one-third of MSBA Core Program projects were approved for schools with any of the three key indicators of need selected for the upper-bound estimate. If this pattern persists, and the MSBA continues to make awards to an average of 17 projects each year, it will take nearly 50 years to rebuild all 276 schools included in the upper-bound estimate. At this pace, it is not clear that the state will make any real progress on the backlog, as other buildings will likely deteriorate in the interim, perpetually leaving students in harmful conditions.

If the MSBA flipped the current ratio so that two-thirds of resources were directed at high-need buildings, it would cut the time to rebuild all 276 buildings in half. Devoting all of its resources to high-need projects, the authority could replace all 276 buildings in just 16 years.

The more limited list of 46 schools would require eight years to address under the business-as-usual approach, four years with two-thirds prioritization, and just three years with full prioritization.

Accounting for Revenue Variation

These projections assume the MSBA has sufficient resources to continue supporting 17 projects through its Core Program each year. This will require efforts to ensure that building costs do not continue to escalate faster than sales tax revenue in the coming years. While tariffs may lead to additional inflation for building materials, the marked slowdown in commercial construction in Massachusetts has already moderated price increases, and it may keep overall costs in check for an extended period. However, funding at least 17 projects each year also means ensuring revenue growth keeps pace, and there is considerable uncertainty in this regard.

SECTION 5

The Blueprint for a More Equitable Future

This report has surfaced the urgent need for change so that all Massachusetts students can attend schools with healthy environments for learning. Despite efforts to create a progressive and transparent school construction system, current policies and funding structures have proven insufficient to address the scale of the challenge. Students in Boston and the Gateway Cities are far more likely to attend schools that are physically inadequate, overcrowded, and missing critical spaces for learning, health, and development. Without bold changes to how Massachusetts prioritizes, funds, and supports school construction, a generation of students will continue to learn in conditions that fall far short of the commonwealth's commitment to equity in education.

By channeling more funds to where they are most needed, MSBA reforms can help ensure that state capital dollars produce cost-effective improvements in student achievement. Pushing for a more systemic approach to school facility investment will also help reduce high concentrations of poverty, which harm student learning and require the state to provide urban districts with large operating subsidies year after

year. While more data, analysis, and discussion will be necessary to identify a precise solution set, a forceful response will include the following main components:

1. **Increase MSBA funding and prioritize inadequate buildings.** To meaningfully address the growing backlog of school construction needs, the commonwealth must both increase funding for school infrastructure and strengthen the MSBA's mandate to prioritize projects based on the severity of building inadequacy and student need.

   Currently, the MSBA's allocation model may inadvertently advantage more affluent districts. These communities have smaller schools with lower overall construction costs, meaning the state can approve more of them within existing budget constraints. In contrast, projects in urban districts typically involve larger, older buildings on more constrained sites. The state is required to reimburse these projects at a higher rate, which may hurt urban districts' chances of receiving approval for a large number of projects every year. Without increased overall funding, prioritizing these larger, more expensive urban projects becomes more difficult politically.

   There is also a strong case for increasing school construction funding now. Construction activity has slowed in recent years, presenting a potential window for obtaining more competitive pricing.

   As a recent MassINC Policy Center report described, stimulating demand for construction labor during the current slowdown could help insulate the state's skilled construction workforce from the long-term scarring that the previous recession imposed. There is also an argument for directing Fair Share revenue to the MSBA. These collections have remained strong. Making pay-as-you go capital investments in educational facilities with these funds will help legislators manage this relatively volatile revenue stream.

2. **Reexamine reimbursement policies to increase equity and more effectively support high-need districts.** The data presented in this analysis clearly show that current reimbursement policies disadvantage urban districts with the greatest needs. The MSBA should work with qualified construction firms, architects, superintendents, and local government leaders experienced in urban school construction to identify specific ineligible and partially eligible cost areas that disproportionately impact urban districts. This analysis will help ensure that reimbursement guidelines provide a level playing field by recognizing the real costs of building in dense, older, and often more complex urban environments. To ensure equity, the MSBA should gather similar input from experts in rural school construction to identify the unique challenges that those districts may face.

   The MSBA should also conduct financial modelling to determine whether the maximum reimbursement rate under current state law makes adequate school construction levels financially affordable for all districts. With Chapter 70, the state covers more than 90 percent of the operational expenditures of some urban districts. Shifting slightly more of the costs for construction projects to communities may help ensure that cities are doing their part to maximize the benefits of these expensive capital investments. However, some communities may simply not be able to afford 20 percent or more of the cost for school improvement projects. To the extent that the state reimbursement formula does not reflect current fiscal capacity levels of low-wealth communities, it should be revised to ensure that all cities and towns are positioned to responsibly keep pace with their school renovation and replacement needs.

3. **Ensure that the next facility conditions survey provides an objective and transparent benchmark for adequacy.** Since its inception, the MSBA has been required to conduct regular facility conditions surveys and report annually on anticipated needs, yet this inventory and reporting requirement have not given policymakers enough information to know when students are in facilities that do not meet objective standards for adequacy.[32] This clarity is vital so they can respond to these situations appropriately.

   The MSBA is currently working toward completing its next survey, with the report scheduled for release in December 2025. The MSBA policy clearly states that the data collected during these assessments are just one factor used to determine which school facilities present the highest level of need and urgency, and the results are not the sole criterion that the MSBA uses to determine any district's eligibility for funding.[33] This makes sense as the MSBA must also consider how a building fits within changes to a district's large school portfolio. However, the survey should clearly flag facilities that fall below a minimum standard, so policymakers and the general public have an understanding of how many students are learning in conditions that are unacceptable and of the steps that are being taken to remedy the situation.

   While it is too late to require this information by statute from the survey currently in the field, leaders in the legislature and the Healey-Driscoll administration can still work with urban superintendents, educators, public health experts, and the MSBA to build consensus on how an adequacy measure can be developed from the new data.

4. **Require municipalities to co-invest with the state when buildings are deemed educationally inadequate.** Similar to the Chapter 70 formula, all communities must do their part within their means to ensure that students have access to adequate facilities for learning. The legislature should adopt provisions that make it mandatory rather than optional for school buildings in a poor state of repair to be rebuilt and/or closed and consolidated. In addition to increasing equity, this approach will help ensure that state dollars are not inefficiently expended repairing outmoded schools because communities are reluctant to invest in full rebuilds.

5. **Reimburse for the educational use of co-located facilities and offer incentive points to encourage agencies to bridge silos.** Current MSBA policies discourage school districts from bridging silos and optimizing the use of public facilities. The legislature can address this shortcoming by requiring the MSBA to reimburse school districts for the share of these spaces utilized by K–12 students, and by awarding incentive points to encourage communities to undertake the challenging work of coordinating across systems.

   Urban education leaders increasingly recognize that they cannot address the opportunity gaps that lead to wide disparities in student achievement without greater integration across systems. While the costs for these shared spaces must be distributed to systems proportionate to their use, the MSBA should encourage urban districts to build these cross-authority partnerships and reimburse them appropriately for the share of these spaces that are primarily associated with student activity during the school day.

   Strategic co-location can also help ensure that new schools provide attractive amenities to all residents of a neighborhood, providing as much positive impact as possible in communities with high concentrations of poverty from redlining and decades of disinvestment. MassINC Policy Center research has pointed to instances in which

intentional "school-centered neighborhood development" has led to mixed-income neighborhoods and schools. In Atlanta, Baltimore, Cincinnati, and many other cities, new schools have been a driving force behind these efforts.[34]

6. **Help urban districts build regional magnet schools that increase racial and economic integration.** Massachusetts has a long history of providing additional resources for schools designed to promote integration. In 1974, amendments to the state's *Racial Impact Act* (1964) gave communities a 90 percent state match when they built or expanded schools to enroll a diverse student body. However, the state removed this provision in 2001. More recently, the statute directed the MSBA to provide 10 bonus points for projects with a clear plan to increase racial balance. However, this provision is no longer active as it only applied to projects approved before June 2006.

   Given that the state's highly segregated schools deprive all students of the benefits of integration, and the concentration of low-income students and students of color in high-poverty schools is one of the largest single sources of wide and growing achievement gaps, Massachusetts needs a school building strategy that provides very strong incentives to prioritize integration.[35]

   As school districts statewide grapple with declining enrollment, a strong magnet school strategy could also help ensure more efficient and equitable utilization of resources as communities work to right-size their school facilities portfolios. A recent report from the Century Foundation and Brown's Promise points to the organization Magnet Schools for America and other initiatives that states with declining enrollment can tap to right-size their school portfolios in a manner that is pro-integration.[36]

7. **Provide greater support for feasibility studies, master plans and long-term stewardship.** Many urban districts struggle to develop accurate cost estimates in the initial stages of a project. As they learn more about the scope and site, cost estimates typically escalate considerably. State resources for feasibility studies can help communities mitigate this challenge. Resources for feasibility studies can also provide incentives and support for communities exploring school consolidations to reduce costs and/or increase integration. State funds would be particularly helpful when regionalization presents an option.

   Urban districts with large school portfolios struggle to produce and implement master facility plans. This is partially due to the expense of conducting these complex studies, but the larger issue is one of state funding uncertainty coupled with the difficult politics of choosing schools for closure, consolidation, or renovation and replacement. Additional funding for school construction will help reduce uncertainty so cities can layout a plan and stick to it, but the MSBA can also support this best-practice by providing independent technical support and stringent requirements that communities develop and adhere to established master plans to the greatest extent possible.

   Communities must also properly maintain new school facilities. The Student Opportunity Act increased the foundation budget for maintenance, but buildings with state-or-the-art systems are much more challenging to operate. The MSBA can provide technical assistance and professional development, but the legislature must also empower it to hold districts accountable for properly maintaining these systems.

APPENDIX A
Background Information on Facility Condition Ratings

This analysis relies heavily on three elements from the MSBA's 2016 School Building Survey: the Building Condition Rating, the General Environment Rating, and the Capacity Rating. This appendix provides more information on these metrics by drawing on information published by the MSBA.

Building Condition Rating (BCR)

The BCR is a score ranging from 1 to 4 that reflects the overall physical condition of a school facility. This score is based on an assessment of the facility's 25 major systems, including seven site systems and 18 building systems, all of which are essential for the school's functionality and safety. Examples of these systems include HVAC, roofing, flooring, and windows. As shown in the table below, the building's Facility Condition Index (FCI) evaluates each of these systems on a 100 percent scale. The FCI is then used to assign the following ratings and potential future courses of action:

BCR	Description	Potential Future Action	Building Facility Condition Index (FCI)
Level 1	Building in good condition; few or no systems need attention.	General Maintenance	Less than 24.5%
Level 2	Generally good condition; a few systems may need attention.	Minor Repair or Renovation	Between 24.5% and 39.5%
Level 3	Fair to poor condition; some systems need repair or replacement.	Moderate Repair or Renovation	Between 39.5% and 59.5%
Level 4	Poor condition; many systems require attention; further study needed to determine extent of renovations or potential replacement.	Major Renovation or Potential Replacement	59.5% or higher

General Environment Rating (GER)

The GER assesses the school building's condition across six domains: Learning Environment, Building Safety, Universal Accessibility, Academic Sufficiency, Program Sufficiency, and Instructional Technology. The school's general environment was rated on a scale of 1 to 4, with a rating of 1 indicating the best environment and 4 indicating the poorest.

1. **Learning Environment:** quality of the space and education (natural light, open floor plans, restroom availability), cleanliness and maintenance of the school, and BCR.
2. **Building Safety:** school security (surveillance cameras, alarms, detectors, security staff, communications, site lighting) and fire and life safety (fire alarm and fire suppression ratings).
3. **Universal Accessibility:** site accessibility (designated parking stall and access to site and playgrounds) and building accessibility (accessible entrances, floors, and bathrooms) for both ambulatory and non-ambulatory users.
4. **Academic Sufficiency:** capacity score based on the number of academic and modular classrooms relative to enrollment.
5. **Program Sufficiency:** presence of specialized rooms (art rooms, music rooms, science rooms, computer labs, vocational shops, vocational classrooms) and the presence of core spaces (libraries, gyms, cafeterias, and auditoriums).
6. **Instructional Technology:** internet access (Wide Area Network and Local Area Network capabilities, fiber connection, and data capacity per student), cable/Wi-Fi extent (percentage of classrooms with cabling or wireless and core areas with wireless), power infrastructure (electrical distribution rating and electrical capacity), classroom technology (device-to-student ratios, ability to conduct testing, classrooms with display technologies).

Each of the data elements was scored and then combined into an overall General Environment Rating with the following descriptions and potential future actions:

GER	Description	Potential Future Action	General Environment Score
Level 1	The school's general environment is good and is conducive to teaching and learning.	No Action Required	Less than 24.5%
Level 2	The school's general environment is good, but a few conditions may make teaching and learning less than ideal.	Minor Improvements	Between 24.5% and 39.5%
Level 3	The school's general environment is fair, with multiple conditions that may negatively affect teaching and learning.	Moderate Improvements	Between 39.5% and 59.5%
Level 4	The school's general environment is poor, and many conditions present obstacles to teaching and learning.	Major Improvements or Potential Facility Upgrades	59.5% or higher

Capacity Rating

In the 2016 survey, capacity utilization measures how fully a school is using its available classroom space for educating students. It is calculated by dividing the number of students enrolled by the school's Factored Capacity, which estimates how many students the school can realistically serve (rather than how many it can physically fit).

Capacity Utilization = Enrollment / Factored Capacity x 100

The survey evaluates each classroom and applies three key factors:

- **Base Classroom Capacity Model:** This is a set of rules for determining how many students a classroom is designed to hold. The capacity is assigned based on the type of room and grade level:
  - Elementary: 20 students per room
  - Middle and high: 23 students per room
  - Special education classrooms: 12 students per room
  - Non-classroom spaces like gyms, art rooms, music rooms, hallways, or storage closets are not counted toward capacity.
- **Classroom Size Adjustment Factor:** This adjusts the base capacity for classrooms smaller than the standard 700 square feet. Smaller rooms hold fewer students effectively, so their capacity is reduced accordingly.
  - If the average classroom size is less than 700 square feet, the capacity is adjusted downward proportionally. The exact adjustment is based on the room's actual size compared to the 700-square-foot standard. Larger classrooms are not adjusted upward because they are less likely to be fully utilized.
- **Utilization Factor:** This factor adjusts how frequently classrooms are used:
  - 100 percent for elementary schools (since students stay in one room all day)
  - 85 percent for middle and high schools (due to rotating schedules, prep periods, and diverse course offerings)

The data include three capacity levels based on the capacity utilization calculation:

Capacity Rating	Description	Capacity Utilization (%)
Over Utilization	Facilities may be too small for current enrollment and educational programs.	≥ 125%
Average Utilization	Facilities appear adequately sized for current enrollment and programs.	≥ 80% and < 125%
Under Utilization	Facilities may be larger than necessary for current enrollment and programs.	< 80%

The MSBA notes that these results are not definitive judgments about a school's capacity (as the survey does not account for factors like class schedules, school policies, or district-specific needs), but merely serve as a starting point for deeper analysis.

APPENDIX B
Scenario Modeling the Price and Pace of Progress

This analysis estimates the cost and timeline required to rebuild and renovate school buildings across Massachusetts, focusing on two different definitions of "schools in need" and examining two funding allocation scenarios. The goal is to highlight disparities in capital funding and evaluate potential benefits of a needs-based allocation model. The first, broader definition of schools in need includes any school that has a Building Condition Rating (BCR) of 3 or 4 or a General Environment Rating (GER) of 3, or that is operating over capacity. Under this definition, 350 schools meet the criteria, with 276 schools remaining that have not been rebuilt, consolidated, or closed since 2016. The second, stricter definition focuses on schools rated BCR Level 3 or 4 that are also over 100 years old, yielding 58 schools, 46 of which still require rebuilding or renovation. Data on building conditions, environment ratings, age, capacity, and gross square footage were drawn from MSBA assessments and district records.

Construction costs were held constant at $653 per square foot based on 2022 dollar values consistent with MSBA data. The average gross square footage per project was calculated separately for each definition—77,310 square feet under the broad definition and 69,827 square feet under the stricter definition. This was done by dividing the gross square footage by the number of projects in need.

The analysis assumes that the MSBA approves 17 school construction projects annually, a figure based on historical data from 2008 to 2024. However, the actual number of project invitations extended each year varies.

Between 2016 and 2024, approximately 37 percent of MSBA Core Program projects were approved for schools meeting the broader definition of need, while 34 percent met the stricter criteria. Based on these historical patterns, this analysis assumes that, under the current model, 6 of the 17 projects approved each year will go to in-need schools, and the remaining 11 will be awarded to schools with fewer or less urgent facility needs. In contrast, the needs-based model assumes all 17 projects would be allocated exclusively to in-need schools.

APPENDIX C
Analysis of Reimbursement Rates

This analysis relied on data provided directly by the MSBA, which maintains project-specific information on its website. The dataset, accurate as of April 29, 2025, included project-level details, such as the total project cost, amounts paid to date by the MSBA, amounts remaining to be paid, district name, and the reimbursement rate (statutory plus incentive points applicable at the time of approval). From this dataset, the research team focused on Core Program projects and applied several refinements to ensure data quality.

Projects that had been removed from the capital pipeline were excluded, as were Core Program projects without a defined project scope (all in the feasibility study phase). The research team also removed 13 projects with no total project budget values and 24 projects in the "Final Audit Approved" stage with implausibly low budgets, all from 2008 and 2009 and likely inherited from the prior School Building Assistance program. In addition, the dataset was narrowed further by excluding 3 projects in the "Approved Project Vote Pending" phase and 9 projects in the "Schematic Design" phase.

After these refinements, the final dataset consisted of 237 Core Program projects categorized as Design Development (five projects, all with budgets of $80 million or more), Construction, Building Complete, Closeout, or Final Audit Approved.

The research team then compared the statutory reimbursement rate assigned to each project (including incentive points where applicable) with the actual reimbursement rate, calculated by dividing the MSBA's total payment (amounts paid to date plus amounts remaining) by the total project cost. Each project was coded by district type, consistent with the categories used elsewhere in the report. The average statutory rate for each group was compared to the average actual rate, and the difference provided a measure of the gap between statutory reimbursement levels and the actual cost shares borne by districts. This revealed systematic differences in how the MSBA's reimbursement framework operates across district types.

NOTES

1 In the 1993 ***McDuffy v. Sec'y of the Executive Office of Education*** ruling, the Supreme Judicial Court determined that an educated child must possess "at least the seven following capabilities: (i) sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization; (ii) sufficient knowledge of economic, social, and political systems to enable students to make informed choices; (iii) sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and nation; (iv) sufficient self-knowledge and knowledge of his or her mental and physical wellness; (v) sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage; (vi) sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently; and (vii) sufficient level of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market."

2 Following the definition utilized in the recent report of the Racial Imbalance Advisory Council, "segregated schools" refers to those where White students make up less than 30 percent of enrollment. See: "Racial Imbalance in Massachusetts Public Schools: Annual Report of the Racial Imbalance Advisory Council." (June 2024).

3 Following the common standard, schools with highly concentrated poverty are those where low-income students make up more than 40 percent of enrollment.

4 See: https://massbudget.org/2024/11/08/interactive-school-district-funding/.

5 James Vaznis and Christopher Huffaker. "Massachusetts spends thousands more on school construction aid for white students than for students of color." ***Boston Globe*** (May 27, 2023).

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9 See: Ben Forman and Simone Ngongi-Lukula. "Choosing Integration: A Discussion Paper and Policy Primer." (Boston, MA: MassINC, 2022).

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13 See: Massachusetts General Laws, Chapter 70B, Section 10.

14 See: https://www.massschoolbuildings.org/sites/default/files/edit-contentfiles/Documents/Guidelines_Policies/Reimbursement-Rate-Calculation-UPDATE.pdf.

15 Massachusetts General Laws, Chapter 70B, Section 9(b) reads: "The authority shall issue annually, as hereinafter provided, maximum eligible cost standards and size standards for school projects. These standards may take into account the type and location of a proposed school project and may also take into account the difficulty of siting school facilities in dense urban areas in which there exists a shortage of available municipally-owned sites and the increased cost of construction and major renovation in such urban areas."

16 To provide a clearer indication of the impact of the survey results on project selection, this calculation of proportionality removes from the denominator schools that were already in the pipeline when the 2016 survey results became available as well as those that had been rebuilt since 2000.

17 Between 2012 and 2022, the MSBA's sales tax revenue grew by 77 percent (not adjusting for inflation). During this 10-year stretch, the nominal price per square foot of school construction increased by 109 percent.

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31 Following the common standard, schools with highly concentrated poverty are those where low-income students make up more than 40 percent of enrollment.

32 See: Massachusetts General Laws, Chapter 70B, Section 17.

33 See: https://www.massschoolbuildings.org/programs/school_survey.

34 See: "The Massachusetts School-Centered Neighborhood Development Playbook." (Boston, MA: MassINC, 2024).

35 For a full review of the evidence on the contribution of economic segregation to achievement gaps, see: Ben Forman and Simone Ngongi-Lukula. "Choosing Integration: A Discussion Paper and Policy Primer." (Boston, MA: MassINC, 2022).

36 See: https://static1.squarespace.com/static/66232b75bbf84455e30c8a48/t/689278b56cf4532fc484a1e6/1754430254300/When-enrollment-drops.pdf.

ACKNOWLEDGMENTS

We would like to express our gratitude to MSBA staff for providing access to data and answering numerous questions on multiple calls. We would also like to thank the many experts who participated in interviews and group discussions to help the research team better understand the school construction process and how school facilities impact students and teachers. This project would not have been possible without generous financial support from the Barr Foundation and the Nellie Mae Education Foundation. While these leaders and organizations provided invaluable contributions to the project, the authors bear all responsibility for the analysis and recommendations contained in this report.

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