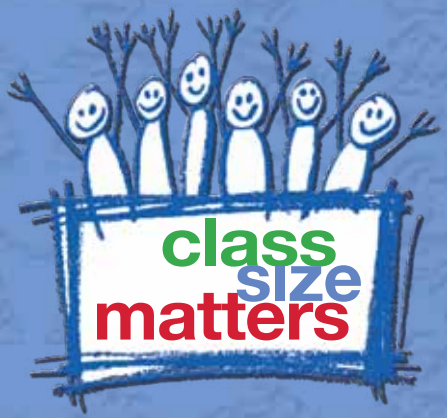
Space Crunch

in New York City Public Schools

Failures in policy and planning leading to overcrowding in the city's schools



By Leonie Haimson
with help from
Elli Marcus, Phyllis Eckhaus, Molly Moody,
Rachel Finkelstein and Peter Dalmasy

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most crucial
responsibility.

class size matters

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EXECUTIVE SUMMARY

This report reviews the record of the Bloomberg administration in addressing school overcrowding, analyzes the plans of the de Blasio administration dealing with this issue, and provides policy recommendations that would lead to improvements in the city's ability to ease overcrowding and reduce class size.

Despite promises in the new five year capital plan that it will alleviate overcrowding, eliminate the need for school trailers, and allow for class size reduction, little or no improvement in any of these categories is likely to be achieved. Currently, New York City elementary school buildings are at a critical level of 97.4 percent mean utilization, with a median utilization of 102 percent, according to the New York City Department of Education's target formula in its annual school utilization report. High schools are not far behind at an average of 95.2 percent utilization.

In eleven school districts, elementary schools average above 100 percent; in 20 out of the 32 districts, elementary schools average above 90 percent – showing that the tipping point is very near. In addition, high schools in Queens and Staten Island average above 100 percent mean utilization. More than 30,000 additional seats would be needed just to bring these figures down to 100 percent. Even more seats are needed to address local overcrowding at the neighborhood level, as evidenced by the existence of trailers in 21 districts, and wait lists for Kindergarten in 19 districts.

These average figures represent an underestimate of the actual level of overcrowding according to most experts, and in recognition of this reality, the Chancellor has created a Blue Book taskforce to improve the formula. Indeed, the Blue Book formula does not reflect the need to reduce class size, provide additional space to expand pre-Kindergarten seats, provide a full complement of art, music and science rooms, or ensure that special needs students receive their mandated services in dedicated spaces rather than hallways or closets.

In addition, the city's population is growing fast, and the two consulting companies hired by DOE to project enrollment predict further increases of 60,000 to 70,000 additional students over the next decade. There are only 33,754 to 38,654 school seats in the capital plan – with the latter figure dependent on whether the state's "Smart Schools" bond act is approved. Yet the real need is likely to be greater than 100,000 new seats. Unless the capital plan is significantly expanded, students are likely to be sitting in even more overcrowded schools in the years to come.

Nor is the capital plan likely to achieve the DOE's stated promise to eliminate trailers or temporary classroom units (TCUs). While it has been widely reported that "only" 7,158 students are sitting in these TCUs, the actual number is far larger and likely more than 10,000 students – as the DOE fails to report complete data for thousands of high school, middle school and elementary school students as well as severely disabled students in District 75 who attend classes in these trailers.

Moreover, although DOE officials have widely claimed that the capital plan will accomplish the goal of eliminating TCUs, many of which are in disrepair and long past their expected lifetime, and has allocated nearly $500 million to remove them and recondition the school yards on which they sit, there is not a single dollar in the capital plan dedicated to replacing their seats.

Overcrowding has contributed to sharp increases in class size, far above the levels mandated in the city's class size reduction plan, submitted in 2007 to comply with the new state Contracts for Excellence law. Currently, class sizes in grades Kindergarten to third grade are the largest in fifteen years, and in grades 4 through 8 are the largest since 2002.

The space crunch has also led to the continued loss of cluster rooms, specialty spaces like gymnasiums and libraries, and intervention rooms for students with special needs, and forced students to be assigned to eat lunch as early as 10 a.m.

The situation has become especially critical at the elementary school level, and will likely become even more pronounced as pre-Kindergarten programs are expanded, and charter schools are given preference for school space going forward to comply with the new state law.

The past failures of the city to adequately address the problem of school overcrowding is due to many factors, including the disappointing record of the Bloomberg administration in school construction, with fewer schools built than in earlier periods. This record is particularly unsatisfactory considering the additional state funding provided for school construction as a result of the Campaign for Fiscal Equity case, and the judgment of the state's highest court that New York City children were deprived of their constitutional right to an adequate education in large part due to chronic school overcrowding and excessive class sizes. We review the court's decision as well as the research on the impact of overcrowding on the learning environment.

In addition, the previous administration failed to project future enrollment accurately, to properly plan for new schools needed as a result of residential growth, to review and revise the flaws in their estimates of school space, and to put forward an adequately financed capital plan with better priorities.

The Department of Education has also made policy choices that have worsened overcrowding; including creating hundreds of small schools and charter schools, most of which have been inserted into existing buildings, eating up classrooms with the need to replicate administrative offices and specialty rooms, in a school system already starved for space. These breakdowns of policy and planning are revealed by the DOE's own data, the results of surveys, and interviews with principals and other school officials.

The report concludes with a number of policy recommendations:

- Revamp the school utilization formula, so that it provides sufficient cluster and specialty rooms; libraries, cafeterias and gyms large enough to accommodate all students at reasonable times; and is aligned with the city's class size goals and the actual number of students at each school who need special services.

- Any school that houses students in trailers should have this overflow reflected in its utilization figures, by attributing the number of students in trailers to the main building. A full size class room should return to its original specification of at least 600 to 750 square feet, rather than the redefined minimum of 500 square feet, to ensure that students have sufficient space to learn and no classroom is so overcrowded that it risks violating the building code. Special education self-contained classrooms should be at least 750 square feet as well, as state standards recommend.

- Co-locations should cease, which have led not only to worse overcrowding but also to fierce tension and conflicts.

- There needs to be substantial reform to the planning process to ensure that school capacity keeps up with residential development and enrollment growth. The formula that the city uses to estimate the impact of new construction on overcrowding should be updated based upon current data and differentiated according to neighborhood, and the impact thresholds lowered that require mitigation strategies.

- The city should use eminent domain more aggressively if no other opportunities for school sites are available, and explore the use of incentives for developers to include schools in their construction plans. As in inclusionary zoning, when developers receive a bonus of floor area by incorporating affordable housing, so should leeway be granted if they include a public school in their plans.

- In general, there needs to be enhanced transparency and scrutiny given to the enrollment projections produced by the DOE and City Planning. The City Council should commission an independent consultant to develop its own enrollment projections, based on multiple sources of data. Though the consultants hired by DOE now forecast enrollment growth, in the past their predictions as well as those of the City Planning have been badly off the mark by projecting continued decline even when enrollment had already begun to increase.

- There also should be an independent needs assessment, undertaken by the City Comptroller or the Independent Budget Office, to determine how much it would cost to address all the capital needs of the system, including school repair, maintenance, and expansion and to bring the entire system to adequacy. No such needs assessment has been done in at least twenty years. Yet it is only with such an analysis that stakeholders and elected officials can make informed decisions as to how much capital funding should be allocated towards our public schools and in what areas.

- New York should consider adopting "impact fees," charged to developers and designed to fund infrastructure improvements to accommodate growth. Over half of all states have adopted legislation allowing for impact fees, and 60 percent of cities with over 25,000 residents.

- Finally, the school capital plan needs to be significantly accelerated and expanded, so that our schools do not become even more overcrowded five to ten years from now than they are today. New York City students deserve safe and productive learning environments, rather than the space crunch they are currently subjected to in their classrooms and schools.

Without a better understanding of previous failures and action to address them, our students will continue to be subjected to substandard conditions and deprived of a quality education for the next decade or more. A community should be judged by how it treats its children. Unless we heed the lessons of past mistakes, New York City will continue to fail this crucial test.

MAYOR BLOOMBERG'S UNFULFILLED PROMISES TO OUR CHILDREN

The Bloomberg Record on School Overcrowding and Construction

In 2001, when Michael Bloomberg first ran for mayor, he promised to accelerate school construction so that overcrowding would be alleviated and class sizes could be reduced. Here is an excerpt from his 2001 campaign brochure:

> *New schools are needed, but they are not being built fast enough. Go-along, get-along career politicians gave us this mess…and they don't have the independence— or the guts— to fix it by standing up to the special interests. Here's what Mike will do: Put School Construction on the Fast Track.*[1]

In his 2005 State of the City address, and again, in the Department of Education's (DOE) five-year capital plan released that same year, the Mayor pledged that by the plan's conclusion, there would be enough new school space to ease overcrowding, eliminate the need for school trailers, and allow class sizes to be lowered to twenty students or less in every school in grades K-3.[2] Even as late as in the February 2008 amendment to the capital plan, the Bloomberg administration was still promising that the capital plan would achieve the following goals:

- Transition from the use of Transportable Classroom Units (TCUs), as well as mini-schools over 20 years old, throughout the system.
- Institute class size reduction for Grades K–3 at every elementary school throughout the City.
- Alleviate overcrowding system-wide, including on the high school level;
- Significantly reduce high school split sessions.[3]

Yet as a *New York Times* article pointed out in January 2012, the Mayor failed to achieve any of these promises:

> *There were no waiting lists for kindergarten that year (in 2005). Last spring, there were waiting lists in roughly 25 percent of city (elementary) schools, according to education department data. An analysis of the same data by Class Size Matters… showed that 42 percent of kindergarten students were in classes of 25 students or more in the current school year; 25 is the limit set in the teachers' union contract.*[4]

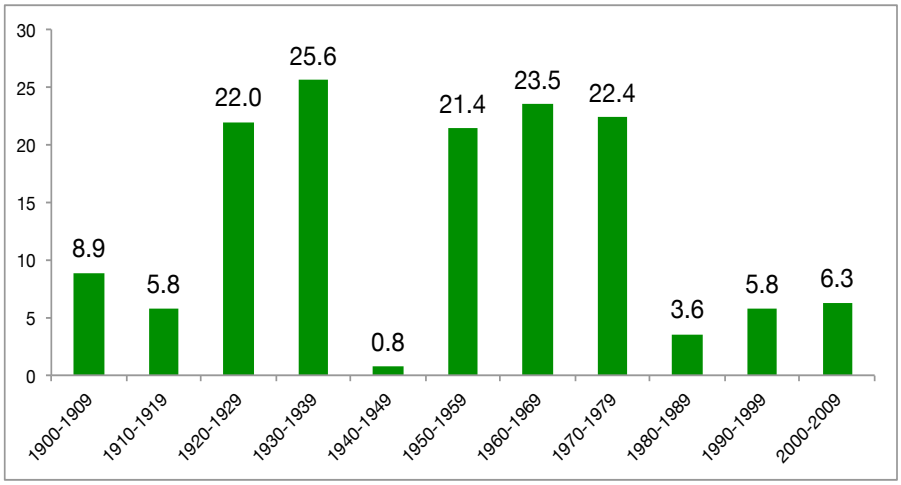
Indeed, as we shall see, New York City schools are as crowded with nearly as many trailers as in 2006; and class sizes in the early grades are the highest in 15 years.

One of the oft-repeated claims of Department of Education officials during the Bloomberg years was that their five-year capital plan for schools for the years 2004-2009 was "historic" and "the largest Department of Education Capital Plan ever funded." These claims of unprecedented scope and size were repeated in countless DOE testimonies before the City Council, and in many official documents, most recently in the November 2012 capital plan.[5] Yet when one examines the administration's actual record in school construction through a historical lens, it falls short of previous eras.

By analyzing data on the city's Municipal Building Energy file, which lists the square footage of every city-owned building and the date it was built, one can recreate the historical record of school construction since the beginning of the 20th century.[6] Our analysis of this database reveals that there were two extended periods when millions of square feet of schools were built each year: from 1920 to 1940, and again in the post-war period from 1950 to 1975. School construction fell sharply during World War II, and again when the city's fiscal crisis occurred in 1975.[7]

Efforts to create new school capacity have never rebounded since that time, despite the city's economic recovery and several years of substantial budget surpluses. Indeed, the last 35 years has shown minimal achievements in school construction in New York City compared to previous eras.

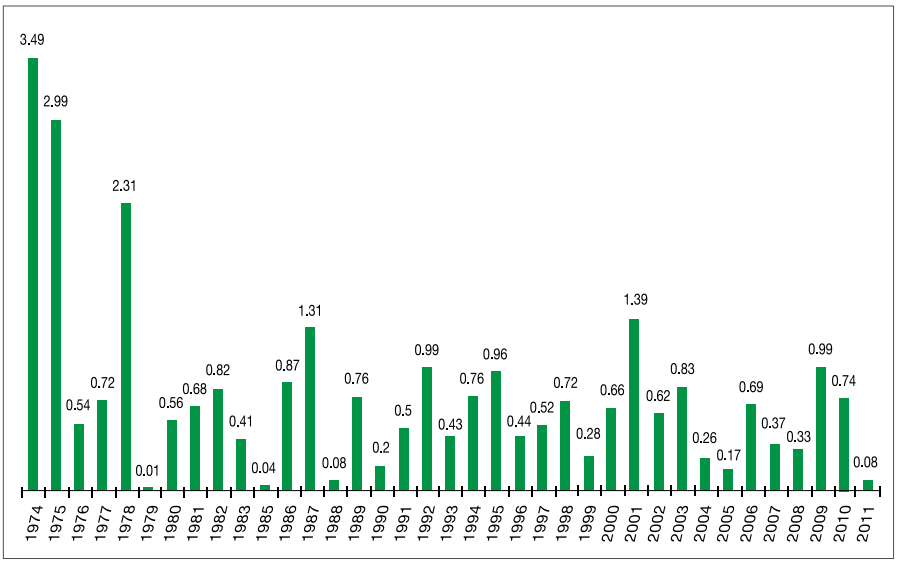
Figure 1: NYC Public Schools Built, Square Feet (Millions of) per Decade since 1900



Data Source: NYC Municipal Building Energy Benchmarking file, 2010 & 2011

A more detailed analysis of the period from 1975 onward, when the city's fiscal crisis occurred, reveals that the recent peak year of school construction occurred in 2001, during the Giuliani administration, when nearly 1.4 million square feet of schools were completed. This level was never matched during any of the Bloomberg years. The closest that the School Construction Authority has come since to completing one million square feet of school space per year was in 2009, when 991,000 square feet were built.

Figure 2: NYC Public Schools Built, Square Feet (Millions of) per Year since 1974



Data Source: NYC Municipal Building Energy Benchmarking file, 2010 & 2011

We also examined the average square footage of schools built per year during each mayor's administration since 1974, when Abraham Beame was elected. Their records were measured twice: once by the average number of square feet of schools built per year during each administration, and again two years after each man took office, to accommodate a lag in siting and building schools.

RECENT REPORTS ON SCHOOL OVER-CROWDING IN NYC PUBLIC SCHOOLS

Numerous studies in recent years have identified problems with the New York City Department of Education's system of reporting capacity and utilization data, and with its school construction plans. These reports provide abundant information and insights into the systemic overcrowding in our public schools.

Here are some of their key findings:

- In a 2007 report, the Education Priorities Panel stressed the need for more accurate measurements, better reporting of construction status, and more transparency in estimating costs for the DOE's 2005-9 capital plan. This report also illuminated the adverse effects of creating more small schools and placing them within the existing overcrowded infrastructure.[10]

- A study from the NYC Comptroller's office in 2008 found egregious errors by comparing population projections with funded seats in the capital plan. The report demonstrated that although the DOE projected a decrease in public school enrollment between 2005 and 2015, in many neighborhoods with new housing construction, "the demand for elementary and middle school seats is growing, and schools are operating near or above their capacity." [11]

- Similarly, a 2008 analysis conducted by the Manhattan Borough President's office found a "vast mismatch" between the city's plan to create new school seats and actual residential growth in that borough.[12] These findings were confirmed one year later in a 2009 follow-up report by the same office, which analyzed the inadequacies in the 2010-2014 Capital Plan.

- Another report released in 2009 by the NYC Comptroller concluded that in "most communities with over-crowded schools… the new capacity will be inadequate to reduce class sizes as required under the Campaign for Fiscal Equity lawsuit, (inadequate to) provide sufficient numbers of science, art, computer and other "cluster" rooms and end the use of temporary class room units...."[13]

- *A Better Capital Plan,* released by a coalition of groups including Class Size Matters in October 2008, summarized and synthesized the various critiques of the city's flawed capital planning process and inaccurate methodology for assessing overcrowding into several policy recommendations.

IMPACT OF SMALL SCHOOLS AND CHARTERS ON OVERCROWDING:

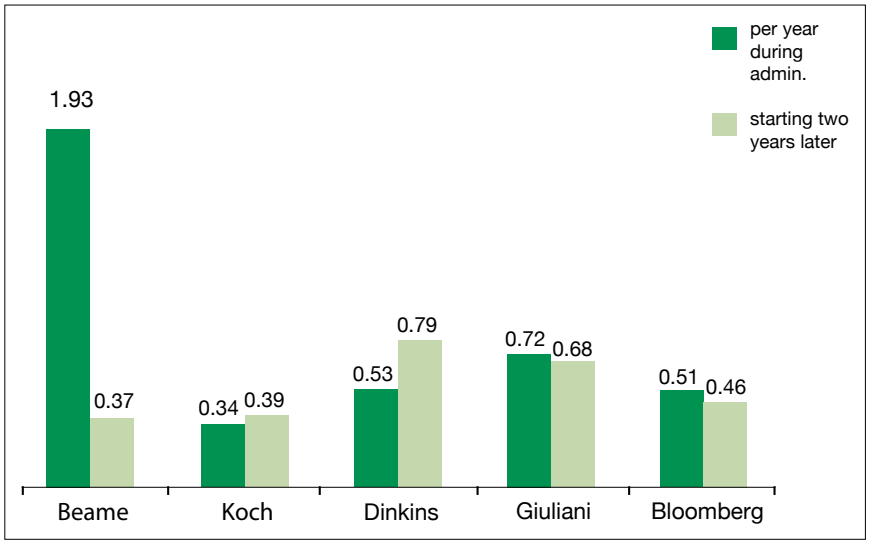
- A report by the Center for New York City found that DOE's process of phasing out large high schools by creating new small schools "had a harmful impact on thousands of students" by creating more overcrowding in nearby large schools.[15] The report also concluded that "the gains for students at the small schools came at the expense of other students, some of whom were needier than those who attended the new small schools." [16]
- An analysis by the New York City Independent Budget Office concluded that most of the schools slated for closure in 2012 had been very overcrowded four years before, when their 9th graders had entered school.[17] This could have undermined their ability to graduate in four years— a key factor in determining which schools would be closed. A 2010 analysis by the same office revealed that in every year from 2004 to 2008, those high schools that were closed for low performance were more overcrowded than the average New York City high school, up to 16 percentage points higher than the median. In every year from 2004-2010 except for 2009, these schools had an average utilization rate above 100 percent.[18] In 2012, many of the New York City high schools were slated for "turnaround" or closure still had utilization figures above 100 percent.[19]
- A report analyzing charter co-locations by the New York Communities Organizing Fund, including interviews, surveys and analysis, detailed some of the conflicts aroused by DOE's co-location policies when there is too little space and inadequate public input.[20]

Errors in DOE Reports on Capacity and Utilization of NYC Public Schools:

- A 2011 audit by the New York City Comptroller of the Blue Book, the annual DOE report on Enrollment, Capacity and Utilization, revealed that this document was full of errors. Measurements and computation of space had been incorrectly reported for nearly one quarter of the schools in the sample, and more than two-fifths of these errors "had implications for the capacity data presented in the Blue Book." As a result, the audit concluded, "the reliability of the school capacity and utilization information reported in the Blue Book is diminished." [21]

No matter how the record of the Bloomberg administration in school construction is measured, whether during his term in office or given a two-year lag, it is unimpressive even within the context of the post-1975 period, which as we have seen, is itself inferior compared to previous eras.

Figure 3: NYC Public Schools Built, Square Feet (Millions of) per Year by Mayor since 1974



Data source: NYC Municipal Building Energy Benchmarking file, 2010&2011

Figure 3 includes data on schools built through 2011. Mayor Bloomberg comes in third, behind both Mayors Dinkins and Giuliani in terms of the square footage of schools built per year. Given that Bloomberg had mayoral control of the schools, which many argued would result in more generous funding and focus on education, this is an especially disappointing record.[8]

Unfortunately, there would be declining figures for new seats in the last three years of the Bloomberg administration. According to the most recent Mayor's Management Report, 10,766 seats were created in FY 2012, 9,356 seats in FY 2013, and only 3,885 in fiscal year 2014.[9]

NYC SCHOOL OVERCROWDING: Historical and Legal Context

Campaign For Fiscal Equity Lawsuit and Court Decision

The Bloomberg administration's record in school construction is also particularly disappointing given the Campaign for Fiscal Equity (CFE) case, a landmark court decision. In 2001, State Supreme Court Justice Leland DeGrasse found that the quality of education received by NYC students was unconstitutionally inadequate— in part, because of the severely overcrowded conditions of the city's public schools.

In 2003, the Court of Appeals, the state's highest court, agreed that the deleterious effects of overly large classes deprived New York City students of their right to a sound basic education:

- *"Plaintiffs presented measurable proof, credited by the trial court, that New York City schools have excessive class sizes, and that class size affects learning."*
- *"Plaintiffs' evidence of the advantages of smaller class sizes supports the inference sufficiently to show a meaningful correlation between the large classes in City schools and the outputs. . . of poor academic achievement and high dropout rates."*
- *"(T)ens of thousands of students are placed in over-crowded classrooms…and provided with inadequate facilities and equipment. The number of children in these straits is large enough to represent a systemic failure."* [40]

In April 2004, CFE consultants analyzed the number of new seats that would be required to eliminate overcrowding and create sufficient space to reduce class sizes in all grades. They estimated a need for 120,000 new seats, at a cost of approximately $6.7 billion, with total expenditures of capital spending at $9.2 billion.[41] However, shortly after that, the New York City Council adopted a plan proposed by the DOE that included $4.2 billion for about 66,000 new seats— only about half the number of new seats recommended by these consultants.

After a panel of "special masters" appointed by the court affirmed the CFE findings, Justice DeGrasse concluded that New York City schools required an additional $9.2 billion in funds for school facilities. This amount was upheld by the Appellate Court; and the 2006-07 state budget yielded capital funding that was seen to satisfy the Court's order, with $6.5 billion in additional state grants and financing for school construction, with the rest to be supplied by the city.[42]

Even earlier, in 2005, the city was provided with a significant increase in the state reimbursement for school capital spending to about 50 percent, meaning that the state would from then on match every dollar the city spent on school construction.[43]

DEFINITION OF OVERCROWDING AND RESEARCH ON ITS EFFECTS

According to the National Center of Education Statistics, a school is overcrowded when "the number of students enrolled in the school is larger than the number of students the school was designed to accommodate." [22] The term generally refers to the physical capacity of a building and whether more students are enrolled than the facility can comfortably hold. However, as the conception of what programs or class sizes are needed for a minimally adequate education changes over time, this may lead to shifts in the definition of overcrowding.

In our report, for the purpose of analyzing school overcrowding trends in New York City, we will start by defining overcrowded as any school that is at or above 100 percent utilization, according to the historic figure in the DOE's annual report on school utilization, known as the Blue Book. The Blue Book's formula, though complex and controversial, is derived from dividing the number of students currently enrolled in a school by the number of students it was originally designed to hold. Yet, at the same time, we will also reveal how the Blue Book systematically underestimates the actual level of overcrowding in our schools— and shortchanges students by failing to incorporate reasonable standards for class size, cluster and specialty rooms, and space needed to provide services to struggling students or those with disabilities.[23]

Research has found that physically overcrowded environments have a negative impact on child development and student learning. Some features of crowded and substandard school buildings that have been found to decrease student achievement and teaching ability include:

- NOISE LEVELS: Crowded schools are noisier. A study by Gary Evans, a psychologist at Cornell University, found that, *"Teachers in noisy schools are more fatigued, annoyed, and less patient than teachers in quieter schools. Teachers in noisy schools also lose instruction time due to noise distractions and have a compromised teaching style. Children exposed to chronic loud noise also experience a rise in blood pressure and stress hormones."* [24]
- DENSITY (number of people per room): Crowded schools and crowded class- rooms have a greater density of people. Evans found that 10-12-year-old children tend to withdraw in

- (DENSITY) continued from page 7:

overcrowded situations, and "*children may engage in withdrawal behavior as a means of coping with an over-stimulating environment…*" [25]

- IMPACT ON CLASS SIZE: Students in crowded schools tend to have larger class sizes, which have a negative effect on student learning. There are a wealth of studies, both experimental and correlational, demonstrating that larger classes are detrimental to student engagement, motivation, time on task, achievement levels, and graduation rates. [26]
- RESULTS IN TERMS OF LEARNING: Many studies show an association between overcrowding and poor student outcomes, particularly for low-income students. An analysis conducted by the Teachers College of Columbia University in 1995 found that overcrowded schools with a high proportion of low-income students scored as much as nine percentage points lower on achievement tests than similar students in less crowded schools.[27] Many other studies have also found negative associations between crowded spaces and poor academic outcomes, particularly among low-income and minority students.[28]
- PSYCHOLOGICAL OUTCOMES: Substandard school environments have adverse psychological effects on children. A study of overcrowded and poorly maintained schools in California found that students in these schools exhibited anger and shame about the relative deprivation in their schools.[29] Another study found positive relationships between school conditions and student behavior.[30] A researcher concluded that "*the depressed physical environment of many schools…is believed to reflect society's lack of priority for these children and their education.*" [31]
- TEACHING: Teachers are more relaxed and more effective when schools are in good condition and facilities are clean and well-maintained. Studies find that teachers are more stressed, have more absences, and are more likely to experience "burnout" when schools are overcrowded.

Two legal decisions, one in New York and one in California, featured analyses of the negative effects overcrowding has on student achievement; concluding that school overcrowding infringed on the rights of students to receive an adequate education.

- CAMPAIGN FOR FISCAL EQUITY CASE: In New York, the state's highest court in the Campaign for Fiscal Equity found that

Despite this increase in the reimbursement rate, and the addition of billions awarded to the city for school construction, the DOE under Bloomberg failed to significantly expand the capital plan or the total amount spent on school construction. Instead, the city cut back on its own contribution from $1.26 billion in FY 2006, to less than $1 billion in FY 2007. [44] The city also cut the number of seats in the plan by 3,000 in November 2006.[45]

The Contracts for Excellence Mandate

In April 2007, New York State passed a new law called the Contracts for Excellence (C4E), to settle the CFE lawsuit. The state promised billions in additional operating aid to New York City and other high needs districts in exchange for a pledge that they would spend the funds on specific research-based programs, including class size reduction. In addition, New York City was required to submit a plan to lower class sizes in all grades, in recognition that this issue was a central focus of the CFE lawsuit and court decision. [46]

The C4E regulations specifically stated that the city's school construction plan and class size plan would have to be aligned, to ensure that there was sufficient space to lower class size. [47]

The state approved a class size reduction plan submitted by the city in the fall of 2007. The plan included goals of 20 students or less per class on average in grades K-3, 23 students per class in grades 4-8 and 25 students in core high school classes, to be achieved by the fall of 2012, with annual reductions phased in over time.[48] Unfortunately, no analysis was made of the existing capital plan, which was pegged to much larger class sizes in all grades but K-3, to assess whether it would need expansion to make these reductions in class size possible, and no improvements were made. The New York State Education Department, in charge of enforcement, failed to enforce the city's compliance with its own regulations.

Campaign for a Better Capital Plan and the 2010–2014 Capital Plan

In 2007, a number of parent leaders, unions and advocacy organizations, including Class Size Matters, in collaboration with the Manhattan Borough President's office, formed a task-force to analyze the overcrowding issue in the city's public schools and to lobby for improvements. In the fall of 2008, the task-force released a report that illuminated in detail how the enrollment projections and estimates of school space that the existing capital plan had been based upon were unrealistic and unreliable, and had resulted in a failure to ease overcrowding or allow for smaller classes in many parts of the city.

The report estimated that there was a need for approximately 168,000 new school seats to eliminate overcrowding and reduce class size to

the goals in the city's state-mandated class size reduction plan. The cost of creating these seats would have raised the estimated share of the city's total capital spending devoted to schools from 13 to 20 percent, still below the 23 percent that was the average during the period 2000-2007.[49]

Fifty-seven elected officials, including members of Congress, state legislators, and members of the City Council, endorsed the recommendations of the report, and urged the Department of Education to introduce a more ambitious five year capital plan for school construction when the current one lapsed.[50]

Yet in the five-year capital plan for the years 2010-2014 that was subsequently released in November 2008 and adopted that spring, the city cut back even more sharply on its plan for new seats— from 66,000 to only 25,000 seats, despite increased state aid for school construction, and the court's mandate to lower class size. When seats rolled over from the previous plan were counted, this meant that the new plan would create only 17,000 new seats, compared to 66,000 when the last plan was introduced. The overall spending on the capital plan was also scaled back, from $13.1 billion to $11.3 billion, with only $3.7 billion for new capacity. [51] The administration justified this contraction because of uncertain economic times— as well as their prediction that overall enrollment would continue to decline, a prediction that was soon proved wrong.

While the document did mention in passing its state-mandated class size plan, it also stated that the capital plan was designed according to a pre-existing capacity formula— one that assumed substantially higher class sizes in grades 4-12:

> *"Sustain the ability for lower class sizes by lowering the maximum classroom capacity as follows: Grades 4-8 to 28 (instead of 23); Grades 9-12 to 30 (instead of 25)."* [52]

This was clear evidence that the city's capital plan was not aligned with its class size goals, as required by state law.

Though in future years, the city would add and subtract seats to its capital plan, the plan would never produce enough seats to alleviate overcrowding or significantly reduce class size.

- (CFE) continued from page 8:

"(T)ens of thousands of students are placed in overcrowded class rooms… and provided with inadequate facilities and equipment. The number of children in these straits is large enough to represent a systemic failure." [3]

- *WILLIAMS v. CALIFORNIA:* The state of California was sued in 2004 to ensure quality learning conditions and alleviate school overcrowding, especially among poor students of color. Students were found to be disadvantaged if they were subject to a year-round or multi-track schedule, were forced to attend schools far from home, were placed in classrooms where they did not have their own desks or chairs, and/or enrolled in schools where the average classroom space per student was less than 25 square feet.[34] Being bussed far from home had a negative impact, since this displacement was found to result in reduced parental involvement, less access to after-school programs, and, poorer academic performance.[35] Under the settlement, California agreed to spend additional funds for school repair and to undertake a school facilities study.

- Subsequently, to settle the lawsuit and to relieve overcrowding, the Los Angeles Unified School District (LAUSD) invested more than $19 billion to build 130 new facilities, with $26.7 billion overall for school construction, renovation and repair over a decade. This was credited as the nation's largest public infrastructure effort since construction of the interstate highway system.[36] A subsequent study found that LAUSD elementary school students who moved from overcrowded to new more spacious facilities exhibited substantial gains in achievement, equal to about 35 days of additional instruction. The gains were greatest for elementary students who had moved from the most severely overcrowded facilities to new schools.[37]

- MORE LEARNING FROM NEW SCHOOL FACILITIES: In 1998, the New Haven school district embarked on a 15-year, $1.4 billion school construction program, believed to be the largest per-capita construction program in the nation. Researchers found strong evidence that the expansion of school facilities produced large and sustained gains in reading scores for elementary and middle school students. Home values were also significantly boosted in neighborhoods where new schools were built.

FLAWS IN THE CITY'S PLANNING AND ESTIMATION OF EXISTING SPACE

Inadequate Planning for Enrollment Increases

Despite the claims of the Bloomberg administration to be "data driven," it appeared to have had a persistent blind spot when it came to estimating the need for more schools due to population growth. PlanNYC 2030, the much-lauded report released by the Mayor's office in 2007, projected an increase of one million residents over the next 13 years. To meet the requirements of new residents, the authors projected a need for more housing, park land, playgrounds, sewage capacity, libraries, and a host of other public services, but the plan left out any mention of new schools.

In fact, the only reference to schools in the entire PlanNYC report was a case study to show how unused school buildings could be turned into more housing. [53] The updated 2011 report was no better, as its discussion of schools focused solely on energy efficiency, with no mention of the need to expand capacity. [54]

Similarly, over the last decade, DOE has routinely underestimated the need for new schools, based upon highly flawed predictions. Enrollment projections prepared by Statistical Forecasting and Grier Partnership, the two consulting companies hired by DOE, predicted that citywide enrollment would continue to decline until 2014 (Statistical Forecasting) and 2013 (Grier)— when presumably, Bloomberg would be safely out of office. [55] In 2010, when enrollment citywide began increasing, a full three to four years before the projected dates in these reports, neither the DOE nor the Department of City Planning were prepared— though they should have been. In fact, in three three out of the five boroughs (Manhattan, Queens and Staten Island) substantial increases had already begun by 2008-9 at the elementary and middle school levels.

Among the many factors that DOE and its consultants appeared to have ignored were rising birth rates, the sharp increase of the charter school student population (which was not counted in the consultants' projections, even though two thirds of these charter schools are housed in DOE buildings), the rapid growth in residential development, the closing of parochial schools, the continued growth in the number of District 75 and special education students, and a change in the migration rates of families, all of which have had substantial impacts on the need for more school space.

The New York City Department of City Planning (DCP) also failed to make accurate predictions when it came to school-aged population. In December 2006, DCP predicted the city's public school enrollment would fall until 2020.[56] At the same time, the Department projected a citywide 4.9 percent increase in the number of children under the age of five between 2000 and 2010, and an 8.2 percent increase for Manhattan.[57] Yet census figures from 2005 showed that these figures had already been surpassed by the time these projections were released in late 2006, and the number of children under age five living in Manhattan had already grown by more than 32 percent.[58]

DCP projections for the number of children age four and under in every borough for 2010 were also substantially below those that had already occurred as of 2005, according to census data. While the Department of City Planning projected a decrease of 13,524 in young children citywide between 2000 and 2010, for example, the American Community Survey census revealed that this population had already increased by 33,368 by 2005.[59]

Enrollment Projected to Continue to Increase

The city's overall population continues to grow. Between April of 2010 and July of 2013, it has increased by about a quarter of a million. The largest increases are in Brooklyn (3.5 percent), followed by Queens (2.9 percent), Manhattan (2.5 percent), the Bronx (2.4 percent), and Staten Island (0.8 percent). [60] This was at least partly due to the fact that the out-migration rate has sharply declined, to half of what it was in the previous decade.

The increase in enrollment has occurred most sharply among Kindergarten students between 2007 and 2011, from about 64,000 students to more than 71,400.[61] Census data suggests as the number of children under five and enrolled in preschools in Manhattan, Brooklyn, and Queens increased, the total number of school age students citywide will continue to grow. [62]

The worsening shortage of space will likely further intensify as a result of proposals to expand the number of pre-Kindergarten slots by approximately 41,000 over the next two years. Though most of those seats will be in Community Based Organizations, the city is adding 4,268 new full-day pre-kindergarten seats next fall in public schools.[63]

These proposals, though laudable, will put even more pressure on existing school capacity, and without a specific plan to lease or build more facilities, is likely to cause even more overcrowding and lead to yet larger class sizes.

In addition, the two consulting companies hired by the DOE to project enrollment, Grier Partnership and Statistical Forecasting, have now revised their predictions, and the estimations are that there will be 60,000 to 70,000 additional students in grades K-12 over the next ten years— not counting the increase in pre-Kindergarten children. [64]

The Impact of Residential Development

In addition to the significant errors in city- and borough wide enrollment projections, DOE's forecasts for specific neighborhoods have featured even more drastic miscalculations. For the Tribeca/City Hall area of Manhattan, which has seen massive development, DOE has consistently underestimated the number of new seats needed each year. As a result, this neighborhood has experienced long wait lists for Kindergarten, class size increases, and severe overcrowding. Despite the construction of new schools in the area, schools have to be rezoned several years in a row. Experts suggest that these problems could have been avoided. Enrollment projections made by Eric Greenleaf, a public school parent and NYU professor, based upon public data have been far more accurate than those made by DOE or its consultants.[65]

This issue is likely to repeat itself in other parts of the city, including the Upper West Side of Manhattan. According to an analysis from a real estate company, as quoted in the *Wall Street Journal:*

> *New elementary and middle schools planned for parts of the Upper West Side and Midtown West won't be enough to keep up with residential growth in the areas in coming years, according to estimates from a new report…. Thousands of housing units coming to Midtown West and the Upper West Side by 2015 will strain several schools that are currently near or exceeding capacity, the report, prepared by Barbara Byrne Denham, chief economist with real-estate services firm, Eastern Consolidated, said.*[66]

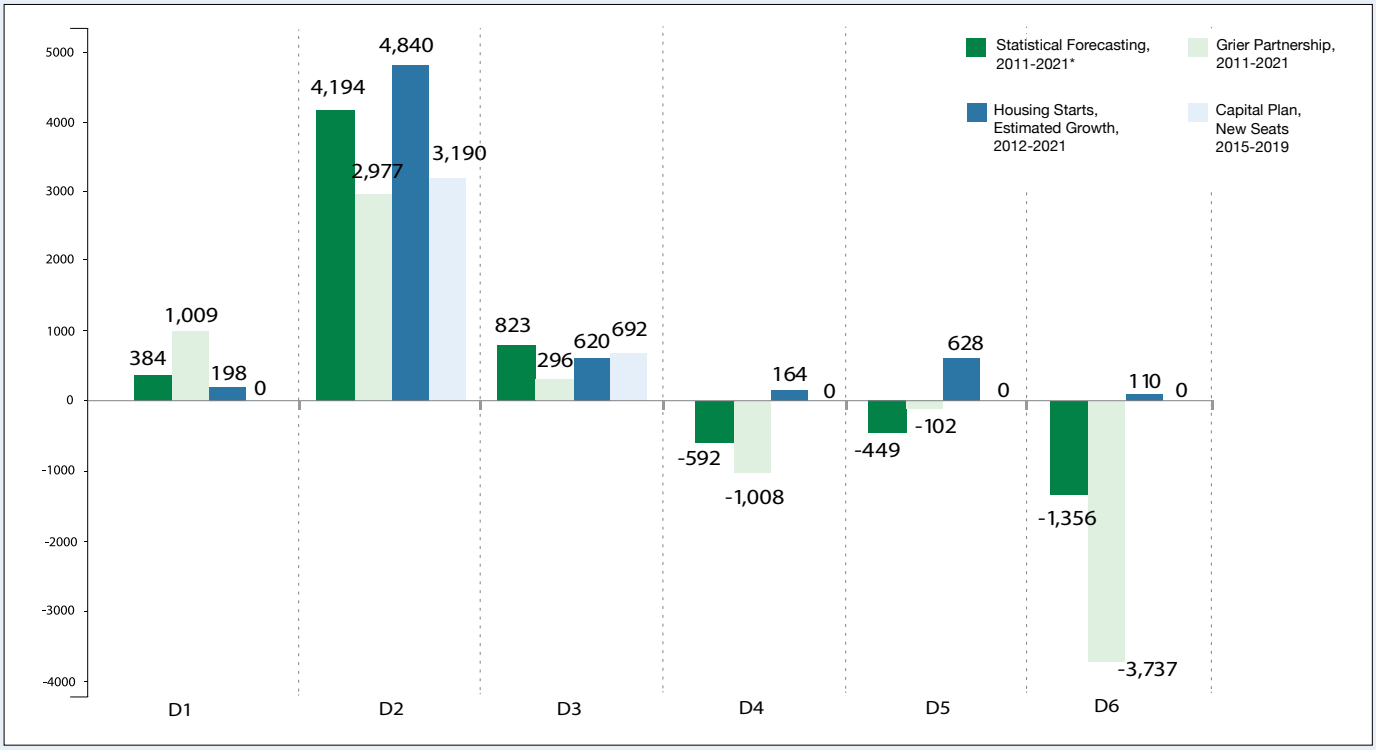
There has been a surge in residential development in recent years in many neighborhoods throughout the city which will cause more school overcrowding, including in Downtown Brooklyn, where thousands of new apartments are being built.[67] In many cases, this rapid development is the result of aggressive rezonings by the Bloomberg administration— pushed through in more than one third of the city. [68] Mayor de Blasio's promise to create 200,000 affordable housing units over the next decade will likely continue or accelerate that trend.[69]

We have analyzed enrollment increases that may be expected from increased residential development throughout the city, using the building start data provided on the School Construction's website, along with the City Planning Department multiplier that estimates how many public school-aged children are likely to be generated by each new housing unit. [70]

Our calculations suggest that more than 51,000 new seats will be needed from new housing alone— 38,000 elementary seats and 13,000 high school seats. [71] This estimate does not account for the need to alleviate existing overcrowding or to reduce class size. There is also particularly rapid enrollment growth in many areas of the city, such as in District 20 in southwest Brooklyn, without any apparent concomitant increase in housing units, because of the increase in immigrant households in two or three families living in single-family homes.[72]

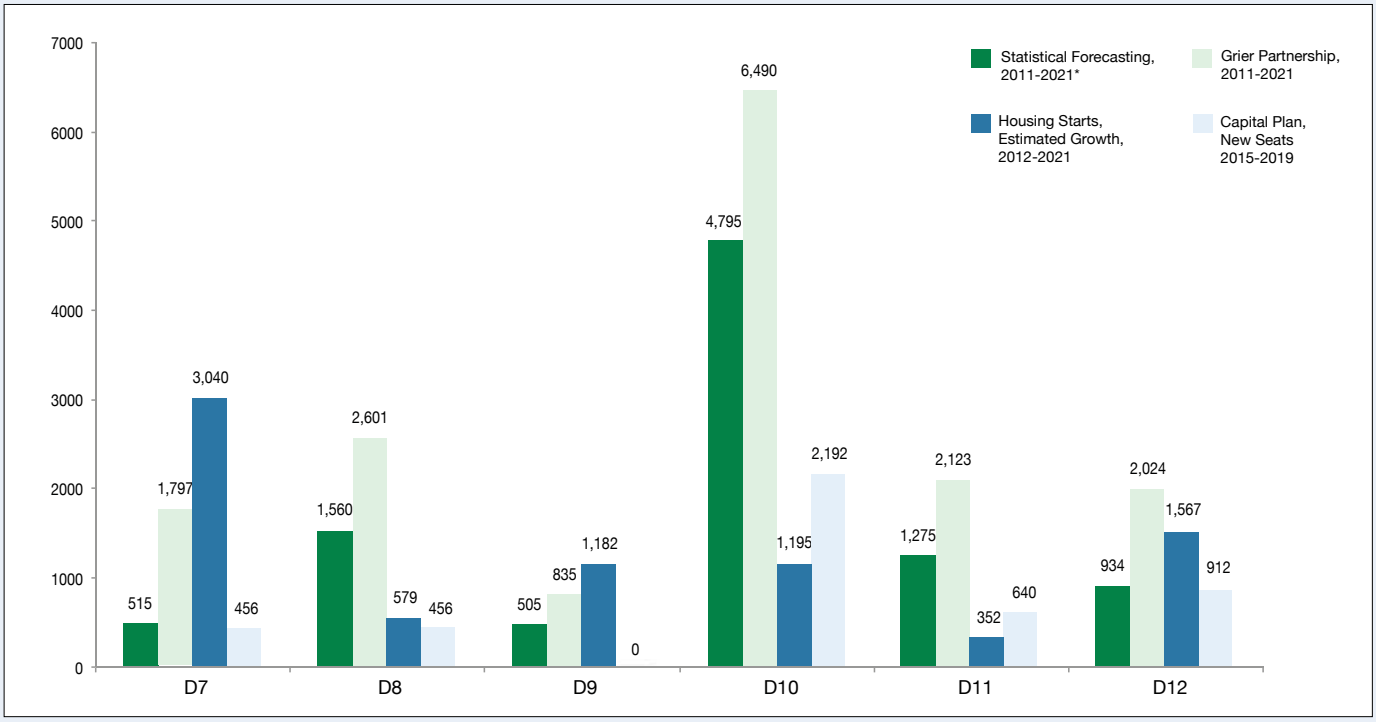
Below are charts showing citywide and by borough and school district the projected increases in enrollment as predicted from housing starts, and by the DOE two consultants, compared to the number of seats in the proposed five year capital plan.

Figure 4: Manhattan Enrollment Projections K-8 by District vs. New Seats in Capital Plan



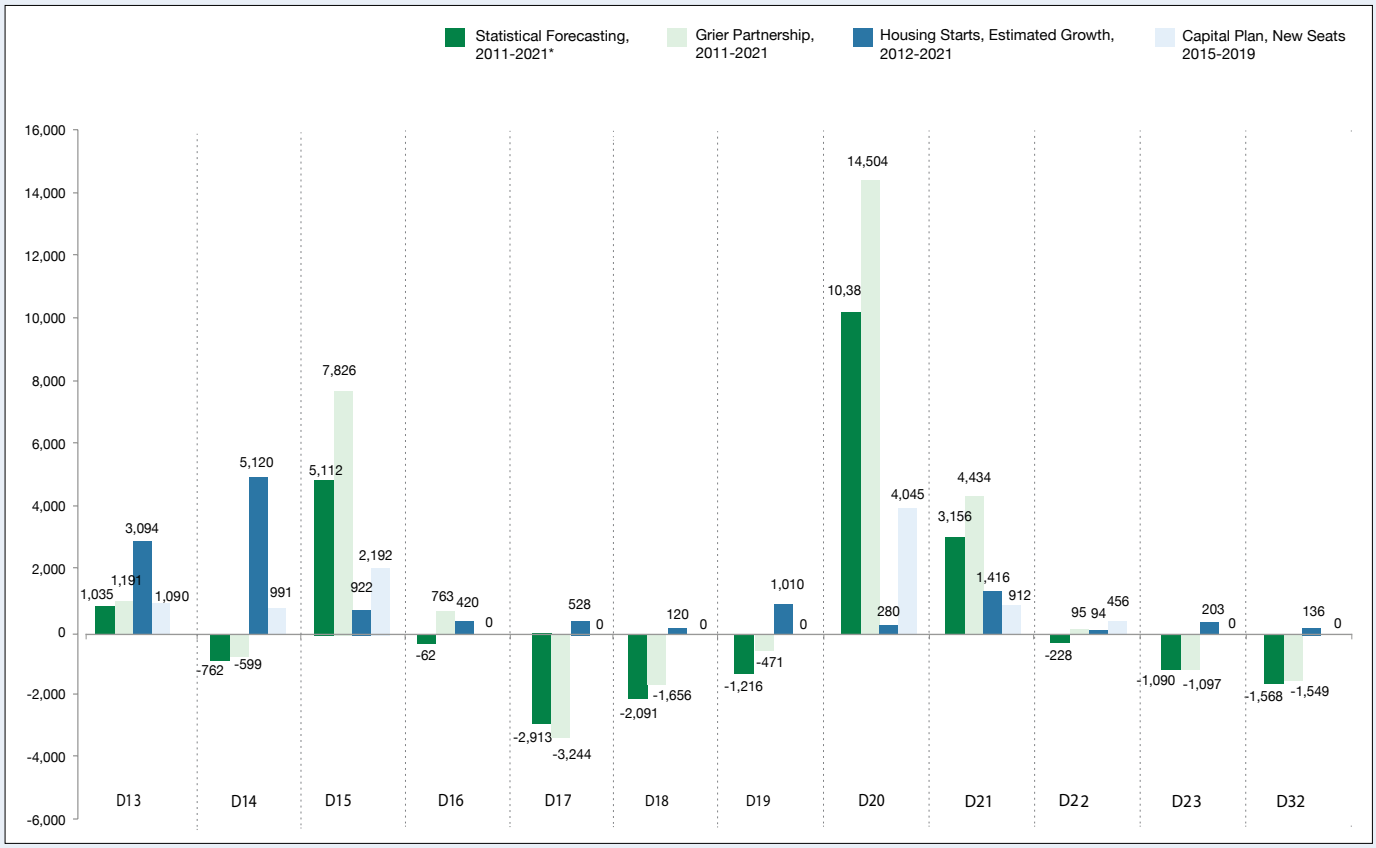
*Data Sources: Grier Partnership Enrollment Projections 2011-2021, Statistical Forecasting Enrollment Projections 2011-2021, NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019. *Statistical Forecasting does not include D75 students*

Figure 5: Bronx Enrollment Projections K-8 by District vs. New Seats in Capital Plan



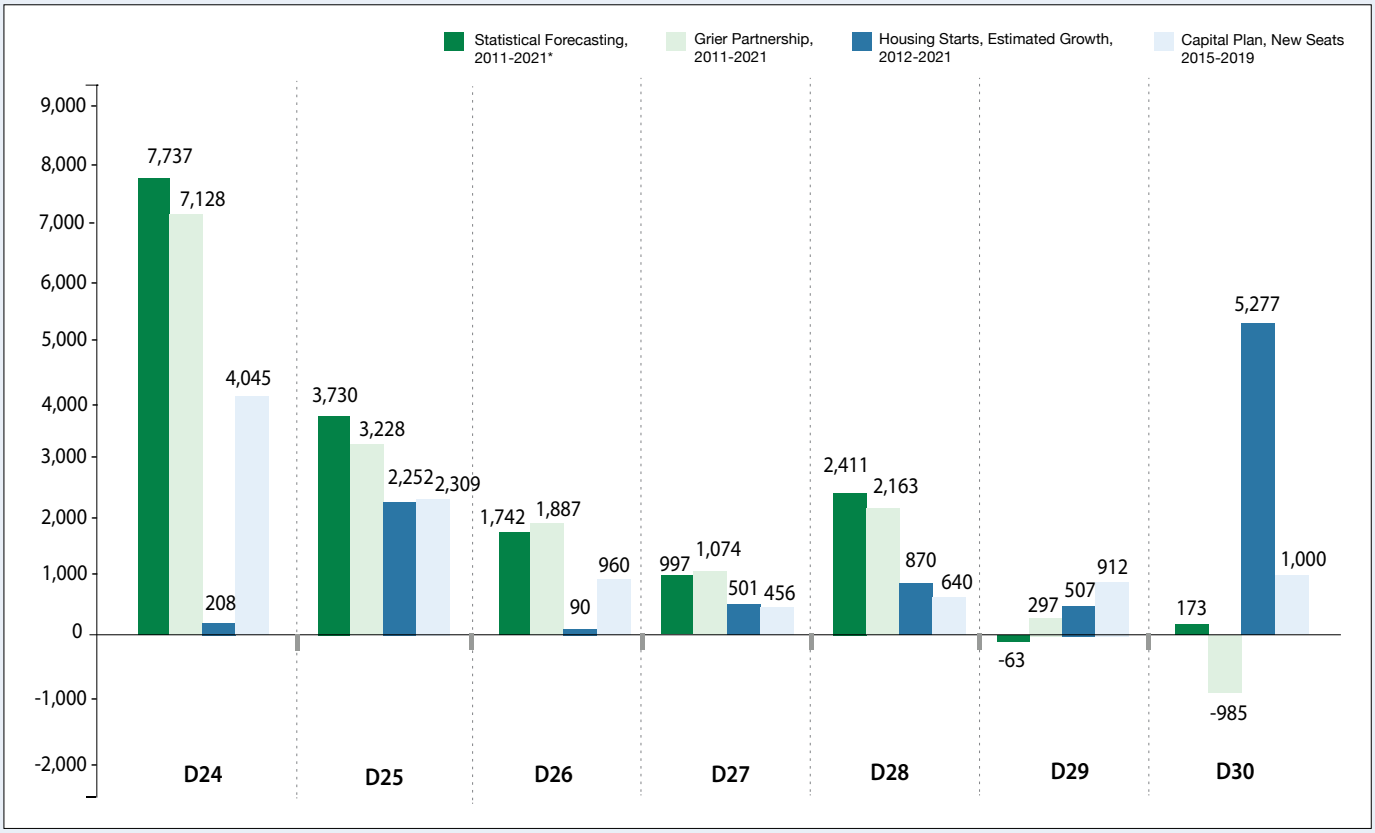
*Data Sources: Grier Partnership Enrollment Projections 2011-2021, Statistical Forecasting Enrollment Projections 2011-2021, NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019. *Statistical Forecasting does not include D75 students*

Figure 6: Brooklyn Enrollment Projections K-8 by District vs. New Seats in Capital Plan



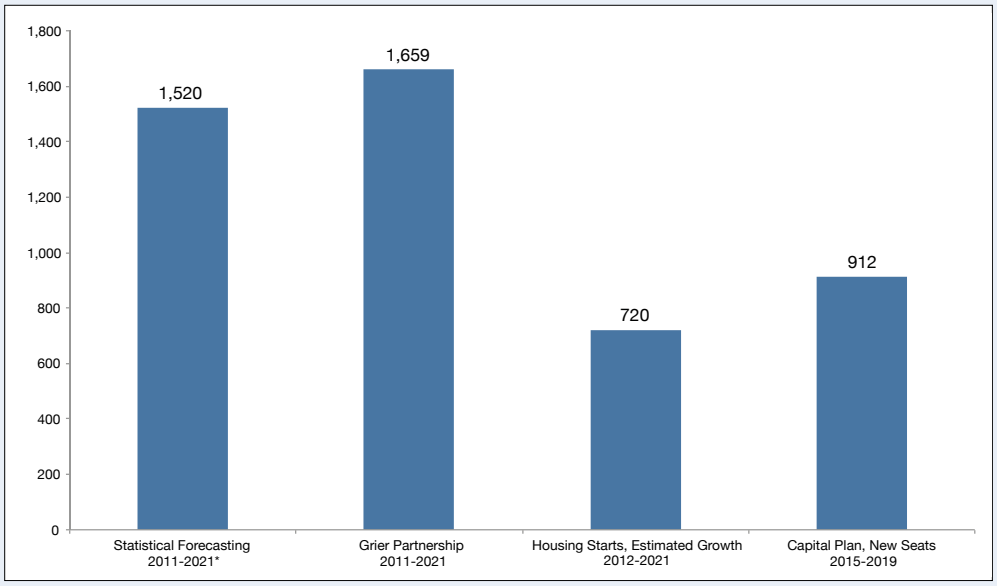
*Data Sources: Grier Partnership Enrollment Projections 2011-2021, Statistical Forecasting Enrollment Projections 2011-2021, NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019. *Statistical Forecasting does not include D75 students*

Figure 7: Queens Enrollment Projections K-8 by District vs. New Seats in Capital Plan



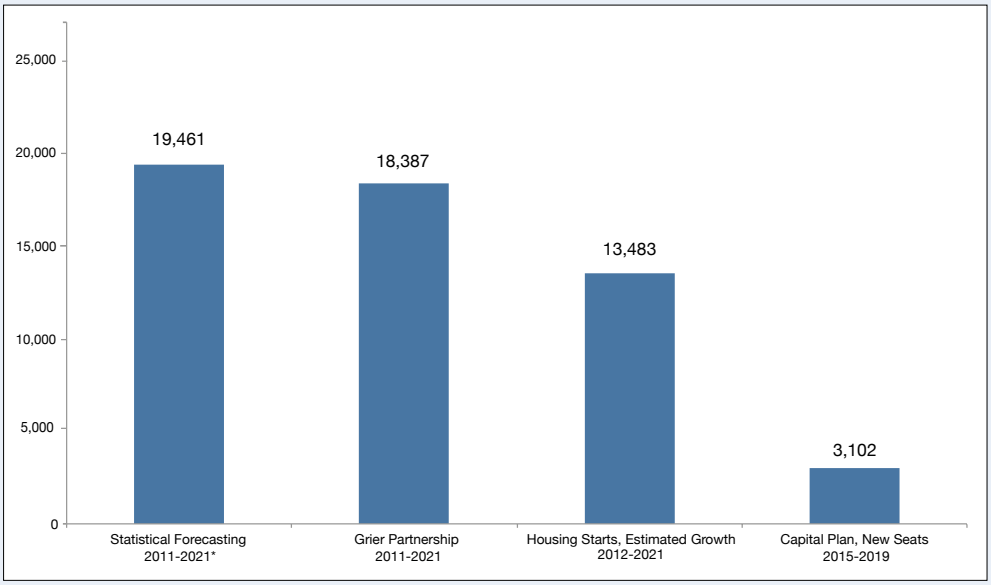
Data Sources: Grier Partnership Enrollment Projections 2011-2021, Statistical Forecasting Enrollment Projections 2011-2021, NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019

Figure 8: Staten Island Enrollment Projections K-8 by District vs. New Seats in Capital Plan



Data Sources:
Grier Partnership Enrollment Projections 2011-2021,
Statistical Forecasting Enrollment Projections 2011-2021,
NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019.
**Statistical Forecasting does not include D75 students*

Figure 9: Enrollment Projections High Schools Citywide vs. New Seats in Capital Plan



*Data Sources: Grier Partnership Enrollment Projections 2011-2021, Statistical Forecasting Enrollment Projections 2011-2021, NYCSCA Housing Starts 2012-2021, and NYC DOE Capital Plan 2015-2019. *Statistical Forecasting does not include D75 students*

As is evident, the new seats to be created by the Capital Plan are insufficient in nearly every district to address future enrollment growth—no less alleviate the existing overcrowded conditions.

In the capital plan, DOE officials claim that "public school enrollment is projected to only slightly increase citywide," whereas in a system that is already so overcrowded, increases of up to 70,000 students are indeed significant. In the past, they have also said that they no longer rely exclusively on either Grier or Statistical Forecasting for their own enrollment planning, but "overlay" their projections with their own estimates. But since the DOE has failed to make its own enrollment projections public, it is difficult to say how accurate they may be. In the proposed capital plan, they cite a need for 49,245 seats, that they claim will "*help us alleviate existing over-crowding, respond to ongoing pockets of growth in some neighborhoods, and enable us to remove all Transportable Classroom Units (TCUs).*"[73]

Yet there is no explanation of how this estimate of 49,245 seats was derived, and no analysis or breakdown provided.[74] During City Council hearings last year, Kathleen Grimm admitted that the DOE has never undertaken a complete needs analysis of what would be required for system-wide expansion and repairs, because the dollar figure would be too large.[75]

Blue Book Data shows Lack of Progress in Overcrowding since 2006

The annual report on the enrollment, capacity, and utilization of New York City public schools and buildings produced by the Department of Education— otherwise known as the Blue Book— contains data which is said to influence the administration's decisions concerning new school openings, re-sitings, co-locations, and school construction.[76]

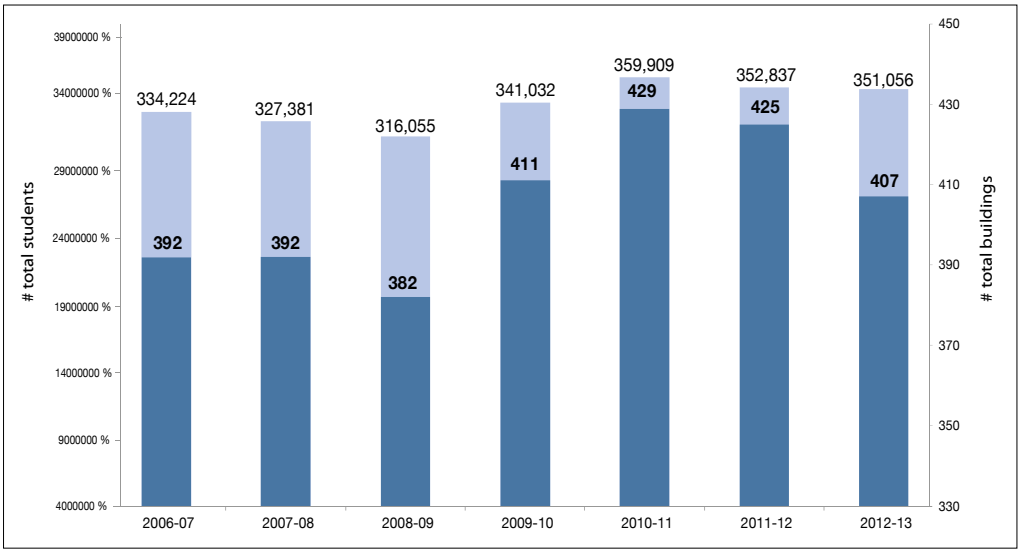
The Blue Book estimates school utilization from two figures: the official student enrollment as of October 31 of each school year; and the physical capacity of every school and building, arrived at through a complex formula developed by the Department of Education.

This algorithm is based upon the number of rooms in a school building, their function and size, which in turn is derived from an Annual Facilities Survey completed once a year by school principals or staff. The DOE has different algorithms for calculating the capacity of elementary, middle, and high schools, depending on different assumptions made about class size in each grade, how many periods a day each classroom should be occupied, and allowances for cluster and specialty rooms.

To make things even more complicated, the Blue Book includes two different figures for capacity and utilization: and target. The historic formula has remained stable over time, according to the DOE, while the target formula has changed to take into account "different assumptions about how classrooms are used," and, as a result, "will change as our goals change."[77] Thus in order to assess trends in overcrowding, we have looked at historic figures.

Despite the Mayor's pledge in his 2005 "State of the City" speech and in subsequent capital plans that overcrowding would be alleviated by the end of his term, 27 more school buildings were at 100 percent utilization or higher in 2012, enrolling 18,867 more total students compared to 2006. More than one third, 35 percent, of all New York City students were still sitting in highly overcrowded school buildings, according to the historic definition— schools that were 100 percent or more utilized.

Figure 10: Total Number of Buildings At or Above 100% since 2006 (Historic)

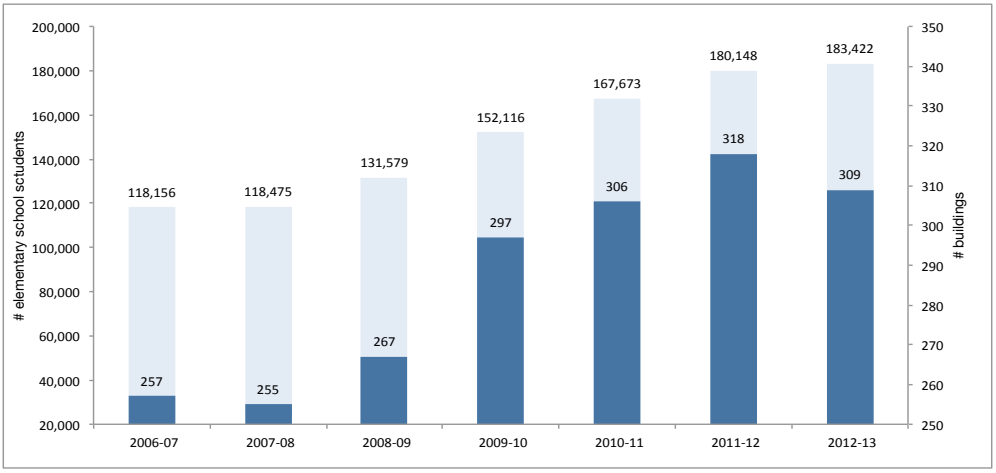


Data sources:
DOE Blue Book Reports, 2006-2012
(Historic Utilization Figures)

Overcrowding has increased most sharply in elementary schools. 52 additional elementary school buildings were at 100 percent utilization or more in 2012 compared to 2006, enrolling 65,266 more students. This represents 35 percent of all elementary school students, an increase of 11 percentage points since 2006.

Elementary schools in Brooklyn and Queens saw the greatest increase in overcrowding, followed by Staten Island. In addition, 3,326 more middle school students were in overcrowded buildings in 2012, according to the historic definition. Only high schools had become less overcrowded, with 13 percentage points fewer students in these buildings since 2006. Still, 33 percent of high school buildings were overcrowded according to the historic figures, containing 135,907 students, or nearly half of all high school students.

Figure 11: Number of Elementary School Students and Buildings At or Above 100% since 2006 (Historic)



Data source:
DOE Blue Book Reports, 2006-2012
(Historic Utilization Figures)

Target Blue Book Figures Reveal Even Worse Overcrowding

Yet the historic figures considerably underestimate the actual level of overcrowding in our schools, because, among other things, they assume maximum class sizes of 25 children in Kindergarten classes, 32 students per class in grades 1-5, 28 to 30 students in middle school classes, (depending on whether the school is Title I or not) and 34 students per class in high schools.

We also analyzed the trends in target utilization over time, whose formula assumes more reasonable class sizes of 20 students per class in grades K-3, 28 students per class in 4th-8th grade, and 30 students per class in high school. These class sizes are still considerably larger than the Contracts for Excellence goals that the city adopted in 2007, as shown in Figure 12– and are even larger than existing average class sizes in these grades.[78]

Figure 12: Class Sizes by Grade Level: Contractual Limits, Blue Book (Historic & Target Standards), C4E Goals & Building Code

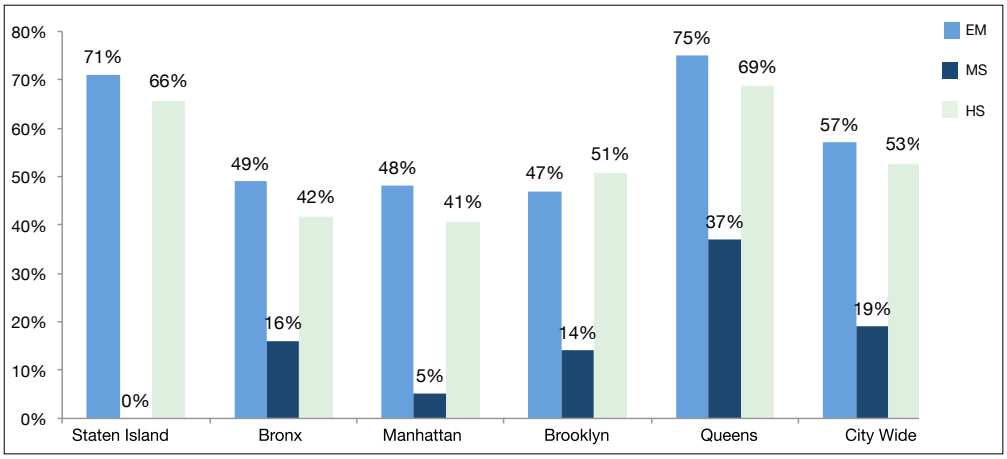
	UFT Contract Limits	Historic Class Sizes in Blue Book	Target Class Sizes in Blue Book	Five-Year C4E Class Size Goals by 2012	Building Code Sq. Ft. Minimum per Student
Kindergarten	25	25	20	19.9	35 Sq. ft.
1-3 grades	32	25	20	19.9	20 Sq. ft.
4-5 Title 1 Schools	32	25	20	22.9	20 Sq. ft.
4-5 (Non) Title 1 Schools	32	31	28	22.9	20 Sq. ft.
6-8 Title 1 Schools	30	28	28	22.9	20 Sq. ft.
6-8 (Non) Title 1 Schools	33	30	28	22.9	20 Sq. ft.
9-12 core classes	34	34	30	24.5	20 Sq. ft.

Data Sources:
UFT, DOE Blue Book Reports,
NYC C4E Plan, NYC Building Code

According to our analysis, during the 2012-2013 school year, more than 488,000 students or 48 percent of all public school students attended schools at or above 100 percent utilization, according to the target Blue Book formula, with the worst overcrowding overall in Staten Island and Queens. More than half— or 57 percent of elementary school students and 53 percent of high school students— were enrolled in overcrowded schools, according to these target figures.

The average (mean) target utilization of elementary schools was at 97.4 percent, high schools at 95.2 percent, and middle schools at 80.9 percent.[79] ***The median target figure for elementary schools was 102 percent– a truly startling figure that reveals how overcrowding has reached critical levels.*** According to the Blue Book, 486 elementary school buildings, or 33 percent of all elementary school buildings, were at or above 100 percent target utilization – and many more above nearing 100 percent, meaning any increase in enrollment would push them over this limit.

Figure 13: Percent of Students in Buildings At or Above 100% by Borough and Citywide (Target)

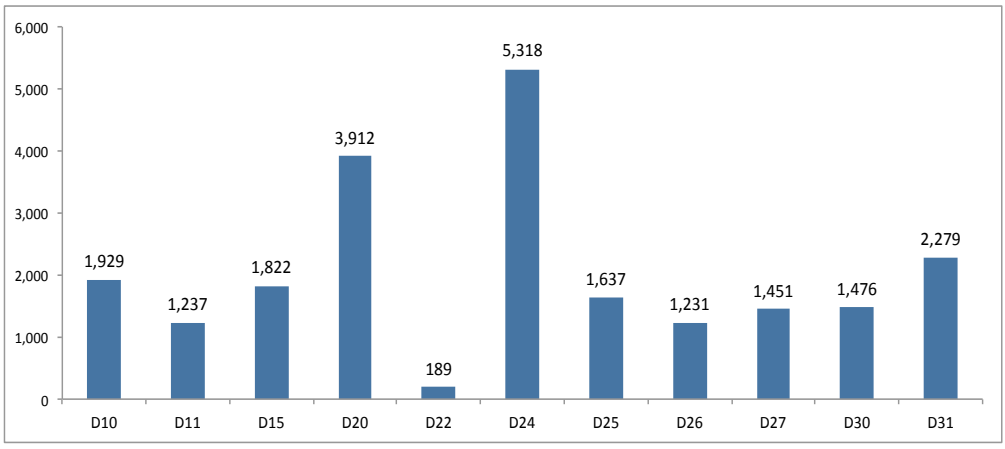


Data source:
DOE Blue Book Report, 2012-2013
(Target Utilization Figures)

Staten Island had the highest percentage of overcrowded elementary school buildings, and Queens the highest percentage of high schools— both at 67 percent. While the percentage of elementary students in over-utilized buildings was greatest in Staten Island and Queens, the level of overcrowding has grown most rapidly in Manhattan over the last two years – from 41 percent in 2010-11 to 48 percent in 2012-13. In eleven community school districts, the average utilization rate of elementary schools is above 100 percent, in 20 districts, the average is above 90 percent. High schools in both Queens (100.7 percent) and Staten Island (103.2 percent) average above 100 percent, according to the Blue Book target formula.

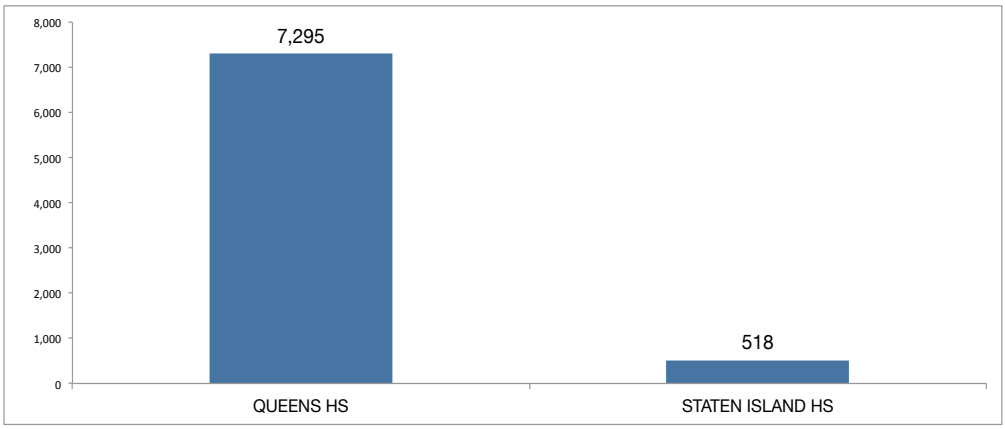
More than 30,000 seats would be needed just to bring these districts to 100 percent— not counting the need to address neighborhood overcrowding in many areas of the city, as evidenced by Kindergarten wait lists and trailers in 21 different districts, as discussed below.

Figure 14: Minimum Number of Elementary School Seats Needed in Districts Averaging Above 100% (Target)



Data source:
DOE Blue Book Report, 2012-2013
(Target Utilization Figures)

Figure 15: Number of High School Seats Needed in Boroughs Averaging Above 100% (Target)



Data source:
DOE Blue Book Report, 2012-2013
(Target Utilization Figures)

Thousands of Students in Trailers Unreported by the DOE

Temporary Classroom Units at Richmond Hill High School

Though Mayor Bloomberg promised to eliminate the use of temporary classroom units (TCUs) or trailers in his 2005 State of the City address, and in his five year school capital plan introduced that year, there are now nearly as many TCU units as before: 352 trailers in 2012-2013 compared to 368 in 2005-2006, according to the DOE's annual report to the City Council.

Moreover, the trailers for which there are enrollment figures— those that are used for general education classes in elementary and middle schools— are extremely overcrowded, at 102 percent utilization.[80] There are TCUs in 21 different school districts, in every borough of the city.

While the DOE officials have repeatedly claimed in testimony before the City Council and to reporters that a total of 7,158 students currently attend class in trailers, a careful examination of the latest TCU report reveals that the actual figure is thousands higher. [81]

According to the latest TCU report, there are at least 47 schools with 129 TCU classrooms whose students are not included in its enrollment figure of 7,158 students. This includes 14 high schools with 63 TCUs, two District 75 schools that have six TCUs, and 28 elementary and three middle schools with 76 TCUs.[82]

The number of students housed in TCUs at these 47 schools is not included in the above figure because their TCUs are listed as having zero or N/A enrollment in the report. According to the DOE report, high school students in TCUs are reported as zero or N/A as "enrollment is reported as part of the main building for the high schools, because high schools don't have home rooms." [83] This is an insufficient rationale; these figures are necessary to know how many classrooms and seats are needed to replace the TCUs.

One of the high schools whose enrollment in TCUs is listed as N/A is Francis Lewis High School in Queens. The chapter leader, Arthur Goldstein, estimates that about 250-272 students attend class in its eight trailers at any one time, and the DOE's claim that they could not be counted is "absolutely ridiculous." [84]

As to the elementary and middle schools reported as having no enrollment, the report writes, "it does not necessarily mean that the TCU(s) are not being used by the school. Sometimes schools use them as offices, art rooms, music rooms, etc. Since they are not being used as the homeroom for students, no enrollment is assigned to those TCUs." ***Yet these classrooms, whatever their function, would also presumably need to be replaced if the TCUs are to be removed.***

For the 47 schools whose TCU actual enrollment is unknown, there are at least 78 high school classrooms, 23 District 75 classrooms, and 28 elementary and middle school classrooms. (TCUs can have either one or two classrooms.) The total capacity (as opposed to enrollment) of these TCUs is more than 2,700.[85] The actual capacity figure is unknown as there are also TCUs in which neither capacity or enrollment is reported. *A full list of schools included in the TCU report but with unknown enrollment is in Appendix A of this report.*

The number of students attending class in TCUs and their condition is an issue that comes up frequently, because many of these structures are substandard and long past their assumed lifetime: leaky, moldy, infested with vermin, and rotting away.[86] In March 2012, when Ernest Logan, the president of the Council of School Administrators, was asked about trailers at a City Council budget hearing, he said:

> *As it goes for the trailers, we've been at this now— this administration's been in here ten years, we still have trailers sitting in here. I also heard testimony yesterday that we created seats, but we haven't gotten rid of any trailers. And then there was a comment made in Albany when the Chancellor testified and he said my members liked the trailers. Well I have yet to hear, I've been*

asking around, which one of my members like the trailers. They would like to have a permanent place for their students to be. The trailers have never been environmentally safe and sound, whether it's heating or air conditioning issues or air quality. Students deserve to be in a classroom setting. And if you want to use the trailer for administrative offices, fine, but you should not be trying to educate children in trailers. And especially when we have the wherewithal to build classrooms. [87]

In the proposed five year capital plan, officials claim that the new capital plan will "enable us to remove all Transportable Classroom Units (TCUs).[88] While the plan does contains $480 million to physically remove the trailers and recondition the schoolyards on which they sit, it does not allocate a single dollar specifically to replace the more than 10,000 seats that they contain.[89]

Problems with Blue Book Formula: the "Efficiency Ratio" In Middle Schools

Even the official DOE data, showing systemic and critical school overcrowding throughout the city, underestimates the actual problem. The Blue Book formula for capacity and utilization is so opaque that it is difficult to ascertain its methodology, no less critique its design. But even a cursory examination suggests it is fundamentally inadequate to properly assess whether there is sufficient space in any given school, and tends to misjudge the actual level of overcrowding that may exist.

While the target formula has changed over time to incorporate smaller class size goals, this has been partly offset as the formula assumes fewer cluster and specialty rooms, and a greater "efficiency ratio" – that is, how many periods a day rooms are expected to be occupied.[90] For example, in 2002-3, 29 percent of the classrooms in middle schools were assumed to be dedicated to art, music or science in the target formula, meaning that this percentage of rooms was automatically subtracted from the total number of classrooms before comparing enrollment to available space.

Yet by 2008-9, there were no longer any assumption that middle schools would have dedicated classrooms to art, music or science, and none were subtracted from the total amount of space. Thus, if a middle school art or science room was converted to a regular classroom because of overcrowding, the school's official capacity would increase – and its utilization rate would appear to fall – registering the school as having more room rather than less, even though actually it meant the opposite.

If a library or gym were converted to a classroom in an elementary or middle school as a result of overcrowding, the school would also register as having more capacity, unless the principal continued to identify that space as a library or gym, according to its original usage instead of its new purpose in the building "turnaround" survey.

According to the middle school formula, classrooms dedicated to art or science were assumed to be utilized 60 percent of the time, and other classrooms used 90 percent of the time. If rooms were occupied for fewer periods, because of difficulty programming and/or classroom teachers who would remain in their classrooms during their prep periods, this would tend to categorize the school as under-utilized.

Other Problems in the Blue Book's Formula for Space

- The class size standards in the Blue Book are much larger than the goals in city's Contracts for Excellence plan. The DOE's target class sizes in the Blue Book are 28 in grades 4-8 and 30 in high school, compared with the class size goals of 23 and 25 respectively at these grade levels in its Contracts for Excellence plan. Most New York City principals believe that class sizes of 20 to 24 are necessary to provide a quality education *(see survey results below)*. The Blue Book class size standards for grades 4-12 are also larger than current average class sizes in these grades, according to DOE data. Thus, if these target class sizes are continued to be used in the formula, they will tend to force class sizes even higher.

- A very limited number of specialty or "cluster" rooms, devoted to art, music or science, are allocated to schools in the Blue Book formula. For example, in elementary schools enrolling between 0-150 students, only one cluster room is allowed; for schools from 151-250 students, two rooms; from 251-750 students, three, and so on. An elementary school with 1,950 students is allowed only four cluster rooms.

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- The Blue Book does not take into account the difficulty that co-located schools have in scheduling shared spaces, such as the gymnasium or the lunchroom.
- As repeatedly cited in our interviews with principals that follow, the Blue Book formula fails to properly capture the need for space needed to provide counseling, intervention services, or speech, occupational and physical therapy for students with disabilities. It allots a very restricted amount of rooms for these purposes, and neglects to take into account the actual number of students who are mandated to receive these services. As a result, many students with disabilities receive their services in hallways and in closets. A representative of the teachers union has cited this phenomenon as one of the reasons for the shortage of speech therapists willing to work in the city's public schools.[91]

One of the most misleading aspects of the Blue Book is the way utilization and capacity figures are calculated for schools with multiple building spaces, including trailers that were added when the classrooms in the main building no longer could accommodate all its students. As principals pointed out in our survey, rather than treat students who are forced to attend class in these substandard spaces as assigned to the main building, the Blue Book lists each space separately with their own utilization, enrollment, and capacity figures in the case of elementary and middle schools. What this means is that a school can be reported at less than 100 percent utilized, yet require multiple trailers and annexes to house its students.

According to our analysis of the 2010-2011 Blue Book, 226 school buildings enrolling more than 200,000 students relied on TCUs, annexes, transportables or other substandard spaces to house their students. *Of these, nearly half— or 102 schools— were reported as officially under-utilized.* The subset of schools reported as under-utilized but with trailers or annexes enroll a total of 84, 336 students.

See the chart below for details:

Figure 16: Number of Students at School Buildings Listed as Under-utilized with Temporary Spaces

	Buildings with Temporary Spaces*	Students in School Buildings with Temporary Spaces	Buildings with multiple spaces with Main Buildings Listed as Under-Utilized**	Students in Buildings with Multiple Spaces with Main Buildings Listed as Under-Utilized
PS/IS (Districts 1-32)	192	163,731	88	70,568
D75	13	3,029	6	1,348
HS (District 78)	21	54,207	8	12,420
Total Citywide	**226**	**220,967**	**102**	**84,336**

*Data Source: DOE Blue Book Report, 2010-2011, *Temporary Spaces include spaces classified in the Blue Book as "Annex," "AX," "Portable," "Transportable," "Trans," "Temp C. R. Bldg.," and/or "Minischool."*
***Underutilized buildings were those with a Target utilization below 100% in the 2010-2011 Blue Book.*

The utilization figures for IS 125 in Queens exemplify the way in which the Blue Book distorts the reality of over- crowding. The school encompasses three separate buildings, each with individual enrollment, capacity, and utilization figures. The main building, Q125, has an enrollment of 1,104 students, and a target utilization of 88 percent. However, the two additional spaces for Building I.S. 125—"I.S. 125 Minischool" (code Q825) and "I.S. 125 Transportable" (code Q947), which according to the SCA are at the same site, have enrollments of 536 and 30 students, respectively. Because of the separate reporting of these spaces, the under-utilized rating of I.S. 125 is highly misleading.[92]

The "Instructional Footprint" has No Class Size Standards and Squeezes Students into Too-Small Rooms

To add yet another level of complication, the DOE relies on a separate document called the Instructional Footprint to help determine if there is sufficient space in a school to co-locate new schools. The Instructional Footprint is not completely consistent with the Blue Book, and its provisions have also changed over time, in an apparent effort to squeeze more schools into limited space.

The original Footprint from 2008 assumed class sizes of twenty students per class in grades K-3, and 25 students in grades 4-5, in apparent recognition of the city's Contracts for Excellence plan, submitted the year before (though the city's actual C4E Plan called for even smaller classes of 23 students in grades 4-5, and the Footprint omitted class size standards for any grades higher than fifth).[93]

In 2009, however, the Footprint raised the class size standards for grades 4-5 to 28, without explanation.[94] In 2011, the Footprint eliminated any standards for class size from the document except in the case of alternative learning centers, transfer high schools, full time GED programs, and Young Adult Borough Centers.[95] This removal of class size standards from the Footprint was made without public input or explanation.

In 2010, the Footprint made another radical and unannounced change, without any explanation: The definition of a full size classroom was reduced from 750 square feet to 500 square feet in Kindergarten, and from 600 square feet to 500 square feet in other grades.[96] In the most recent version, cluster rooms were also reduced in size by 50 percent, from 1000 square feet minimum to 500 square feet. This is much smaller than necessary for most enrichment purposes, like art and science— and may also put children at risk.

The New York City building code requires a minimum of 35 square feet per child in Kindergarten classrooms and 20 square feet per child in grades 1-12.[97] This means that only 14 children would be allowed in a minimum size Kindergarten classroom of 500 square feet, and only 25 students in a minimum size classroom in grades 1-12, yet the vast majority of New York City public schools have far larger class sizes.

As of the 2013-2014 school year, 99 percent of Kindergarten children in general education, inclusion or gifted and talented classes were in class sizes larger than 14 students. 68 percent of students in grades 1-8 had class sizes that surpassed 25 students, and 72 percent were in high school classes larger than this. All these classes could violate the building code if they were housed in the minimum size rooms specified by the Footprint.[98] The absence of class size standards in the Footprint and the shrinkage of full-size classrooms has led to many children being forced into rooms that may risk their safety, as the building code was devised to allow rapid egress during a fire or other emergency.

Many states require even larger classrooms than does New York City. For example, Georgia mandates at least 750 square feet for Kindergarten to third grade classrooms, 660 square feet for classrooms in grades four through eight, and 600 square feet for high school classrooms.[99] The Texas code requires a minimum of 800 square feet for classrooms in Kindergarten and first grade; or a minimum of 36 square feet per student; 700 square feet or a minimum or 32 square feet per student in grades two through five, and 28 square feet minimum per high school student.[100] The current California code requires that classrooms be at least 960 square feet or provide 30 square feet for all students.[101] Some experts believe that based on research, classrooms should be yet larger.[102]

Students enrolled in special education classes should be provided with even bigger classrooms. Indeed, New York State guidelines recommend 75 square feet for each special needs child.[103] Yet the NYC DOE Footprint specifies even smaller rooms for self-contained special education students— only 240 to 499 square feet. If the city adhered to the state guidelines, the Footprint's minimum size special education classroom of 240 square feet would allow only three students per class instead of twelve.

Other Flaws in the Instructional Footprint:

- The Footprint allows schools only a baseline of two rooms (minimum 500 square feet each) for both student support services and resource rooms, and only one and a half size classrooms for administrative services.
- It does not take the size of the school into account for the allotment of cluster rooms, allowing for only three or four cluster rooms regardless of number of students in the school. Art advocacy organizations propose that schools should provide at least one dedicated arts space for every 400 to 500 students.[104]
- The Footprint is especially absurd for large high schools, which in New York City can serve as many as 4,000 students. The most recent Footprint appears to call for only two specialty classrooms and only one science lab— no matter what the size of the school— despite the fact that the state requires laboratory experience for all high school students.
- In addition, high schools need only to have two intervention rooms according to the Footprint, as small as 500 square feet each, to administer and house a plethora of services, such as SETSS guidance, records, college, and conference rooms.

Earlier Findings from a NYC Principal Survey

Many of the problems in the way the DOE calculates space were confirmed by a survey of New York City principals, conducted during the 2008-9 school year, and sponsored by the New York City Council. Nearly 500 New York City principals participated in this survey, at schools containing about 37 percent of the city's public school population. Their schools were roughly representative of the geographical and grade distribution of the city system as a whole.[105]

- ***Inaccuracy of Official Data:*** Nearly half (48 percent) of our respondents said that the official Blue Book's target utilization rate for their own school was inaccurate. For principals of schools whose official utilization rates are reported as under 100 percent, more than half (51 percent) said that the DOE utilization rate was incorrect and understated the actual level of overcrowding at their own school.
- ***Impact on Safety:*** Half of all principals reported that the overcrowding at their schools sometimes led to unsafe conditions for students or staff.
- ***Excessive Class Sizes:*** 86 percent of principals said that their schools were unable to provide appropriate class sizes, necessary for a quality education. The most important factors that principals said prevented them from reducing class size to appropriate levels were lack of control over enrollment (46 percent), lack of space (44 percent) and lack of funding (36 percent).
- ***Optimal Class Sizes:*** While the Blue Book assumes Target class sizes of 20 students per class in K-3, 28 students in 4-8th grades, and 30 students in high schools, most principals said that classes in K-3 should be no larger than 20, 4-5th grade classes no larger than 23, and there should be no more than 24 students per class grades 6-12 for their schools to able to provide a quality education.[106] These figures are very close to the class size targets in the city's Contracts for Excellence plan, but much smaller than the actual class sizes in most schools.
- ***Loss of Cluster Or Specialty Rooms:*** One quarter of all principals (25 percent) reported losing their art, music or dance rooms to academic classroom space; 20 percent said they had lost their computer rooms; 18 percent had lost their science rooms; 14 percent had lost their reading enrichment rooms, and 10 percent had lost their library space.
- ***Inadequate Access To Common Spaces:*** At 16 percent of schools, students had no regular access to the school's library; and at 29 percent of schools, lunch started at 10:30 AM or earlier. Almost half of all schools (47 percent) had less than one hour of gym per week, in stark violation of state regulations.[107] In ten percent of schools, students had no access to an auditorium; and many schools had no science labs.

- *Arbitrary Changes In Capacity Ratings:* 18 percent of respondents said that their school's official capacity rating had been boosted by DOE in recent years – that is, the number of students that the administration claimed the school could safely hold and educate. In many instances, this increase in the school's capacity seemed to be arbitrary, and occurred without any significant renovations or classrooms additions, leading principals to distrust the results.
- *Overcrowding Exacerbated Because of DOE Co-location Policies:* 27 percent of principals responded that overcrowding in their schools had resulted from new schools or programs being inserted in their buildings in recent years.
- *Substandard Spaces:* 18 percent of principals reported that their schools had some classrooms with no windows and 17 percent of principals said that their schools relied on one or more temporary spaces (trailers, Temporary Classroom Units, or annexes).

Photo: L..Haimson, Class Size Matters

Follow-Up Interviews with Principals

After the results of this survey were reported, principals who expressed interest were contacted by researchers for follow-up interviews regarding the realities of space utilization in their schools. Each principal was asked to provide an update on their space needs and report on any discrepancies between the data provided by the Blue Book and the actual amount of space within their respective schools.

Most of the principals expressed great frustration not only with the actual level of overcrowding in their schools, but with the substandard nature of the space they were forced to use as classrooms. Even in schools that were categorized as officially under-utilized, the inadequate quality of the space created serious problems.

Throughout their interviews, the principals also expressed their frustrations with the enrollment process, and provided disturbing anecdotes about the DOE's apparent disregard of the impact of overcrowding on their ability to provide a quality education to their students.

Inaccuracy in Utilization Calculations

Nearly all principals interviewed expressed concern with the lack of transparency in the way their utilization and capacity ratings were calculated. Principals of elementary, middle, and high schools in all five boroughs, with utilization rates both above and below 100 percent, all found problems with the manner in which DOE arrived at their ratings.

A principal of a Bronx elementary school with a utilization above 100 percent agreed that the method the DOE uses to arrive at the capacity ratings remained "very unclear." A principal of an overcrowded elementary school in Manhattan said that the formula used to calculate utilization was "convoluted" and outdated. The principal of an elementary school in Queens was unhappy with the way in which DOE ignored administrators in the process of devising these estimates: "the principal is left out."

- *Capacity and utilization ratings fluctuate inexplicably with errors in data:*

A Staten Island principal explained that while the school's enrollment has continued to grow by 10 to 15 percent, there had been no change in the school's utilization figures. A Manhattan principal reported that the capacity rating of her school had fluctuated from year to year, with no apparent reason.

A Brooklyn elementary school principal explained, "you have to be careful with room assignments" and that marking converted space is an issue," explaining how identifying a library room as a classroom would in turn cause a school's capacity rating to increase.

- *Blue Book data fails to reflect the realities of annexes, trailers, and co-located schools:*

For the principal of a Manhattan high school, the Blue Book capacity ratings were not a useful measure of the capacity in the school building, because the additions of numerous co-located schools to the building had created problems and conflicts over space that were not taken into account in the Blue Book's formula.

Similarly, principals of overcrowded schools that had students in multiple structures found their utilization figures to be highly misleading. A principal of a public school with three locations in Brooklyn – the original school building, an annex, and four portable classrooms – explained that the Blue Book classified the school as three separate entities, granting each space a separate utilization rate, explaining:

> *"My school occupies two buildings due to overcrowding in the main building. We have an annex which is one mile away from the main building and there are four portable classrooms in the school-yard; however due to the way that the DOE calculates space utilization, it does not deem my building as overcrowded."*

He further explained that portable sites shouldn't get separate utilization rates because they still must use the main DOE site for lunch, gym, the auditorium and cluster rooms. "If utilization were calculated for the main building alone, and the students who are being bussed to the annex were included, then we would be over-utilized and able to get on the capital plan to upgrade the main building and bring our students back to their neighborhood."

Several other principals in other boroughs repeated the same complaint, including a Bronx principal whose school utilization was rated under 70 percent, who pointed out that if the students in TCU's were included, the school would be over capacity.

- *When principals try to reduce class size, DOE sends them more students:*

Many principals expressed great frustration with the practices of DOE's Office of Student Enrollment Planning and Operations (OSEPO). They explained that when they attempted to reduce class size or made an agreement with DOE about capping enrollment at a certain level, OSEPO broke their promise and sent them even more students.

The principal of an over-utilized high school in the Bronx, for example, explained that he has not been able to lower the actual enrollment of his school to acceptable levels: *"The cap is reduced but I'm still over enrolled—the target (agreed upon with OSEPO) is never met."* The school still received many transfers and "over the counter" students, those who enrolled too late to go through the centralized admissions process, all of which contributed to chronic over-enrollment at his school. Furthermore, when he tried to reduce the class size of his special education classes, DOE sent him more students.

Many other principals echoed this observation that when they tried to reduce class size, they were sent more students. An assistant principal in Manhattan confided that her school principal had managed to create some small classes, but only because she kept them secret— to prevent the DOE from overfilling the classes once again with more students.

- *Officially under-utilized but still overcrowded:*

Principals of schools officially rated as under-utilized expressed frustration with the disconnect they perceived between the Blue Book data and the realities of their schools.

Although an elementary school in Queens, for example, had a Blue Book utilization rate of 88 percent, the principal explained that the school faces many difficulties with space in the building. The building is *"over 100 years old and has asbestos,"* which has reduced the amount of usable space with physical, occupational and speech therapists forced to provide services to children in the lunchroom.

The principal of another elementary school in Queens protested that though the school lacked any cluster rooms, and the school had four TCUs, it was still reported as under-utilized at 94 percent.

The principal of a Manhattan pre-K-6 school explained that even though the school has a Blue Book rating of 90 percent, the school lacked technology and science labs, preventing the school from accepting a $50 million magnet grant.

The principal of a Brooklyn elementary school disagreed with his school's Blue Book rating of 70 percent, saying that the school was really at 100 percent or more. He explained that the formula did not take into consideration the city's Contracts for Excellence goals of 23 in grades 4 and 5, instead of 28.

A Queens middle school principal reported that some of the school's offices and classrooms had no windows or doors. The auditorium has been converted to classroom space, the library was undersized, and there were five periods of lunch, so that students had to eat as early as 10:15 AM and as late as 2:30 PM. And yet his school was rated at only 95 percent utilized.

The principal of an elementary school in the Bronx that was rated as only 67 percent utilized explained that the building had no library or cafeteria, and eight classrooms shared space with other classrooms, without dividing walls.

The principal of an officially under-utilized Bronx high school explained that the school lacked any science lab— even though lab work is required for students to graduate from high school. Another school at 87 percent had forced the principal to convert the auditorium into classrooms.

Some principals reported that the bathrooms were inadequate to serve the needs of their students, while others, such as the principal of an elementary school in the Bronx, explained that they had been forced to convert bathrooms into administrative uses.

• Special services are held in inappropriate locations:

A frequently recurring theme in our interviews was the lack of appropriate space for special services for students with disabilities. A pre-K-6 school in Manhattan with an official utilization rate of 90 percent was forced to provide speech therapy and other mandated services in closets and shower rooms, with assistant principals using closets as offices.

The principal of an elementary school in Brooklyn with a utilization of 88 percent explained that the occupational, physical and speech therapists all shared space in the lunch room making "privacy an issue." The lunchroom also had to be used for physical education.

The principal of a Manhattan high school at 89 percent utilization explained that as a result of extreme overcrowding, support services, such as speech, OT/PT, and guidance were often given in hallways.

In the view of a principal of a District 75 school with a utilization rate of 70 percent, the problems with the Blue Book were especially grave for schools dedicated to a special needs population. This school shared a building with a general education school, which creates "a sensory overload for autistic kids." The principal explained that "*District 75 schools are not understood— it doesn't work when you combine special education with general education."*

As a result of both the shared building and high enrollment for both schools, there was simply not enough space: "the clusters travel from room to room, we have faculty meetings on the roof," and "some closets are used as teaching space."

- *Buildings lack necessary spaces for classrooms;*

Overcrowding forced the principal of an elementary school on Staten Island with a rating of 129 percent to schedule some classrooms to house two different classes simultaneously. She also had to convert a science room into a regular classroom, and divide her office into cubicles to accommodate other administrators.

In a middle school in Queens at 95 percent utilization, the principal was forced to use rooms that lack windows or doors as classrooms and convert the auditorium into classrooms.

- *No gymnasiums and other inadequate provision of space:*

Many schools lacked gymnasiums and proper space for physical education and exercise. The principal of an overcrowded elementary school in Brooklyn explained that the gymnasium has been converted to classrooms. The students had physical education in the school yard when it was warm and in the multipurpose room at other times.

However, this multipurpose room also had to serve as the library and art room, causing equipment to be moved around constantly. When she first started as principal, she explained that there were two computer labs, an art room, music room, and science room; now, *"the science room is the only one left."* Computers were wheeled-into classrooms, and art occurred in the multipurpose room. Due to overcrowding, *"we constantly are tripping over each other."*

The principal of a Manhattan elementary school with a utilization rate of 113 percent explained that the cafeteria also served as the auditorium. In addition, the building was not built with a gymnasium, so the main floor is used for physical education. Art is brought in on a cart.

An elementary school in Brooklyn that is 129 percent utilized previously had science, art, and speech rooms, but had been forced to convert all of these cluster spaces into classrooms, including the auditorium.

The principal of an overcrowded small high school in Queens that shared the building with other schools reported that there was no gymnasium or auditorium in the building for any of the schools housed in the building. All the schools shared a multi-purpose room for an auditorium, with students carrying in chairs from other classrooms when using the space for this purpose, and bussed to a Community based organization twice a week to use the gymnasium for physical education.

Similarly, the principal of an overcrowded Manhattan high school that shared a building with four other schools explained that, except for a single science lab shared by all five schools, the school had never had access to an auditorium or any specialized spaces in its five years of existence. The principal remarked that with no space dedicated for art or music: *"the kids deserve better than what they're getting."*

- *Overcrowding forces the conversion of cluster and specialized spaces:*

At a high school in the Bronx, overcrowding had taken a serious toll on specialized spaces. The school had no art, music or science rooms – everything had been converted into a regular classroom. All the specialty teachers were forced to travel. Closets with windows were used as resource rooms. Certain bathroom areas were used as offices. The students had no physical education as the school's gym had been converted to classrooms. They had to eat lunch very early or late in the day, and even the hallways were utilized as instructional spaces

Similarly, the principal of an overcrowded Bronx elementary school explained that the school building, converted from an old church, had only ten classrooms. Closets were used for speech therapy, and the gym, auditorium, and lunchroom were all situated in the same all-purpose room.

The principal of an overcrowded elementary school in Staten Island reported that because the enrollment has continued to grow by 10 to 15 percent, he had been forced to convert the library into a general education classroom. The gymnasium had already been converted to classrooms, and the school no longer had any cluster rooms. The cafeteria was used as both a lunchroom and a gym, and was extremely crowded during both activities.

Data Confirms Overcrowding via Lunch Periods and Widespread Use of Non-Instructional Spaces

According to the Local Law 60 Report published in November 2013 by DOE, principals at 1,660 schools reported that approximately 10 percent used one or more "non-instructional spaces" for instruction or other student services. Moreover, 37 percent of schools had no rooms labeled as gym. Only 67 percent had rooms dedicated to "Physical Fitness," including those specified as gyms, with descriptions as varied as playgrounds, "outside," cafeteria, pool, or dance room.[108]

A recent analysis by WNYC radio and the Daily News reveal that more than half of New York City schools scheduled lunch periods at or before 11:00 AM because of overcrowding. More specifically, 107 (6 percent) city schools start lunch between 9:00 AM and 10:00 AM, 821 (49 percent) of schools start lunch between 10:01 AM and 11:00 AM, and 601 (33 percent) schools begin lunch between 11:01 a.m. and 11:59 a.m. ***A total of 88 percent of schools have lunch periods before noon.***[109]

Photo: PBS Learning Matters

POLICY FAILURES

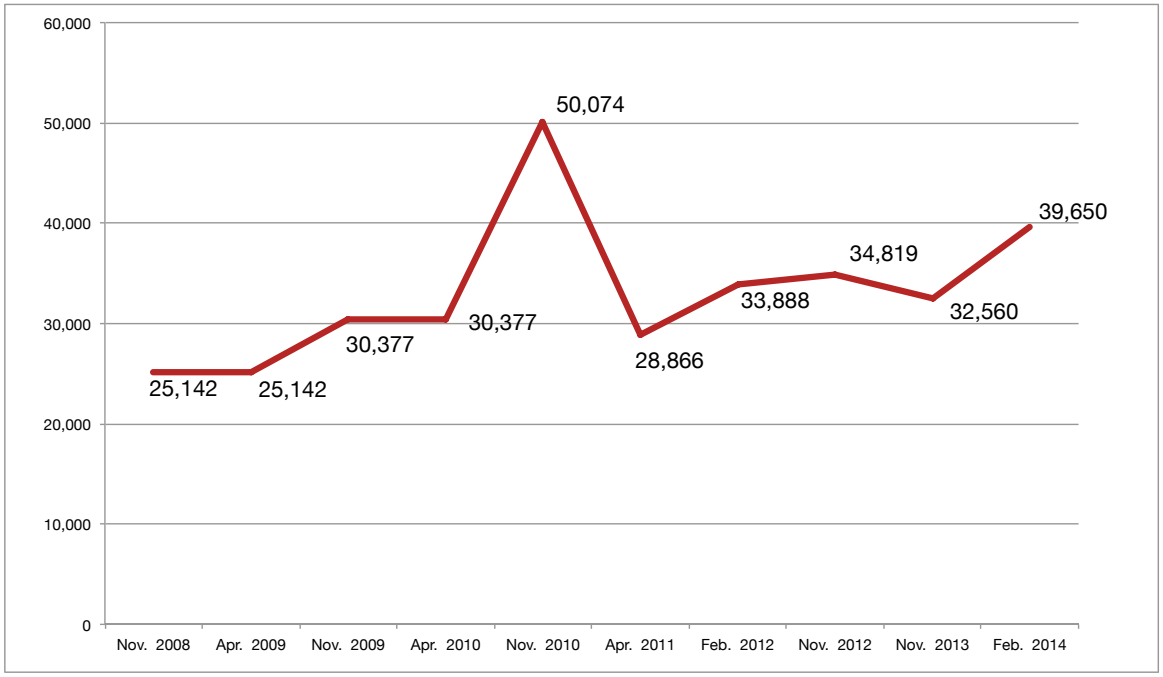
Insufficient Seats and Faulty Priorities in the Capital Plan

In addition to a drastic shortfall of seats, the capital plan for school construction has consistently exhibited wrong-headed priorities. Only 32 percent of funding was devoted to new capacity in the 2004-2009 school capital plan, 46 percent in the 2010-2014 plan, and 34 percent in the current 2015-2019 five year plan. Moreover, the capacity portion of the plan has invariably been most vulnerable to budget cuts.

When the 2010-14 capital plan was slashed between its initial November 2010 proposal and the adopted budget in the spring of 2011, new capacity was the category most directly affected. Even though the DOE admitted to a need of at least 50,000 new seats to accommodate expected enrollment growth, the total number of seats was slashed from 50,074 to 28,866.

By November 2012, two years later, the number of new seats in the plan had increased slightly from 2010 to nearly 35,000, but remained far below the level required to alleviate existing overcrowding, accommodate the expected influx of thousands of new students, and reduce class sizes. There are fewer than 39,000 seats in the current plan – despite the worsening of overcrowding, particularly at the elementary and high school levels, the planned expansion of pre-Kindergarten, the need for smaller classes, and new enrollment projections, predicting an increase of 60,000-70,000 students over the next decade.

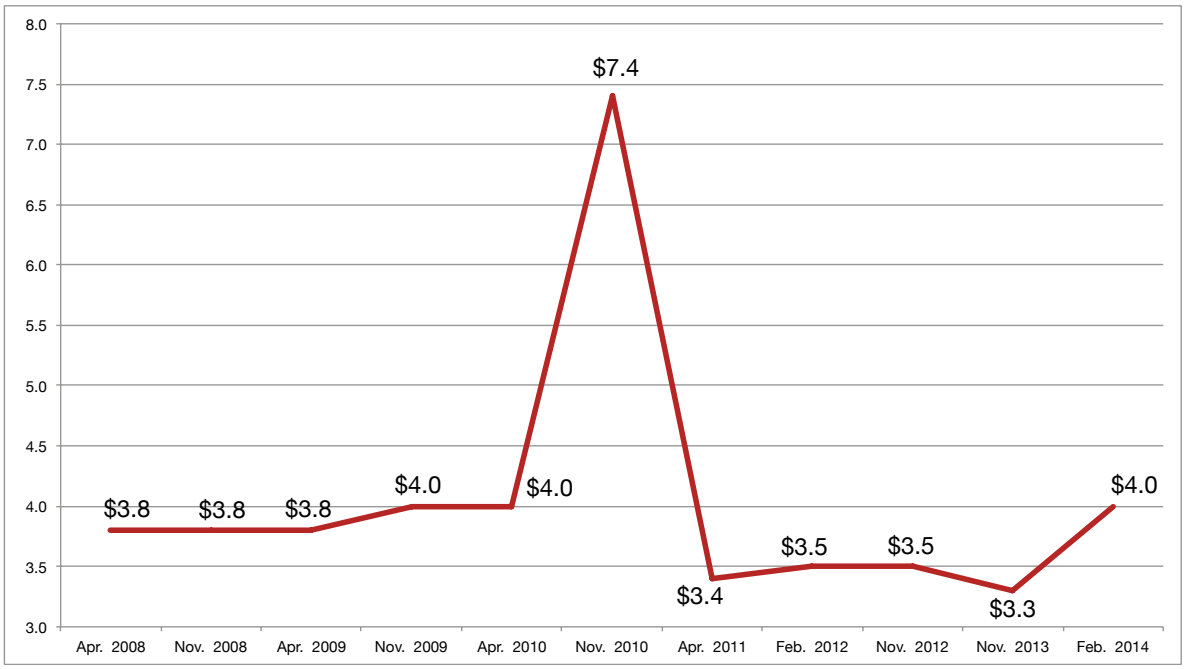
Figure 17: New Seats in the NYC School Capital Plans



Data source: DOE proposed and adopted capital plans, 2008-2014

Total dollars to be spent on new capacity decreased from $7.4 billion in November 2010 to $4.0 billion in February 2014, plunging by more than 45 percent – far below the levels anticipated in the proposed November 2010 plan.

Figure 18: Spending on New Capacity, NYC School Capital Plans ($ in Billions)



Data source: DOE proposed and adopted capital plans, 2008-2014

Spending on Charter School Construction Least Cost-Effective in Relieving Overcrowding

In contrast to the cuts of more than 54 percent in the number of new public schools seats that occurred between November 2010 and April 2011, the city's category for spending on charter school construction never varied during the Bloomberg administration. Each plan devoted $200 million for charter school construction. Even when other sections of the capital plan appear discretionary, city spending on charter school construction remained set in stone.[110] After Mayor de Blasio was elected, the new administration re-allocated these dollars to create seats for pre-K in public schools.[111]

Earlier, Department of Education officials had repeatedly claimed that the dollars spent on charter school construction were especially cost-effective, because the city's allocations would be supplemented with private dollars. For example, in the November 2008 capital plan, the DOE rationalized its charter construction program this way: *"Partners provide valuable private-sector resources to support the construction of these buildings, which support public school students— indeed, in the FY 2005-2009 Plan, the DOE paid only 73 cents on the dollar for construction."*[112] In May 2010, Kathleen Grimm, Deputy Chancellor reiterated this message, testifying to the Council that this program enabled the City "to leverage private dollars to partially underwrite the expansion of total public school seating capacity, thereby alleviating overcrowding at a reduced cost to taxpayers."[113]

Yet the reality was quite different. While the contribution of private dollars to charter school construction was only about 30 percent, the state provides about half of every dollar the city spends on new capacity for public schools seats.[114] ***Thus, for every dollar the city allocated towards building charter schools, this spending would have generated about 43 percent more space if it was used towards creating seats in public schools.***

Even as charter facilities were built at an increased cost to city taxpayers, they did not help to significantly alleviate overcrowding, because most were located in neighborhoods where schools were considered substantially under-utilized, according to DOE's estimates. Of the twelve charter schools that were built with city funds or were in the process of being built when the previous capital plan ended, only three were located in communities that the DOE considered to be in need of more seats. *(See table on the next page.)* Indeed, the

city spent nearly $300 million to build charter schools in areas where the public schools tended to be the least overcrowded.

If these same city dollars had been spent on public schools, and matched by state funds, they would have created six thousand additional school seats in overcrowded neighborhoods.

Figure 19: City Funds Spent on Charter School Construction and Cost per Seat, 2005–2009 Capital Plan

	DISTRICT	Number of Seats	City Spending *(in Thousands)*	Overcrowded Area/District?	City Cost per Seat *(In Thousands)*
Carl Icahn Bronx North Charter School	11	144	n/a	Y	n/a
Charter School for Excellence	13	510	n/a	N	n/a
Bronx Lighthouse Charter	8	520	n/a	N	n/a
Carl Icahn charter	9	324	n/a	Y	n/a
Achievement 1st/ Uncommon HS	16	1600	$60,014	N	$37.51
Achievement 1st Endeavor	13	692	$38,113	N	$55.08
Harlem Village Academy	3	400	$41,048	N	$102.62
Capital Plan Funding Total		**4,190**	**$359,000**		**$85.68**

Data Source: City Council Summary of DOE Capital Plan

Figure 20: City Funds Spent on Charter School Construction and Cost per Seat, 2010-2014 Capital Plan

	DISTRICT	Number of Seats	City Spending *(in Thousands)*	Overcrowded Area/District?	City Cost per Seat *(In Thousands)*
KIPP HS (carried over)	7	800	$25,000	N	$31.25
DREAM	4	450	$32,500	N	$72.22
ICAHN	11	924	$22,000	Y	$23.81
Harlem Promise Academy	5	1,200	$60,000	N	$50.00
PAVE	15	350	$32,500	N	$74.09
Capital Plan Funding Total		**3,724**	**$359,000**		**$44.42**

Data Source: City Council Summary of DOE Capital Plan

Now that the state law has been changed to give preference to charter schools to receive access to free space on demand, wherever they are located, it is uncertain how this will affect its capital plan. The DOE has announced the leasing of three parochial schools to house Success charter schools whose co-locations Mayor de Blasio reversed upon taking office, costing at least $5.4 million before renovations.[115] The new law requires that any charter school currently co-located in a New York City school building cannot be evicted and has veto powers if they are asked to leave the building – even if they are expanding and squeezing out public school students. This includes any charter co-location agreed to before the new mayor took office.[116]

In addition, any new charter school or one adding grade levels must be "provided access to facilities" within five months of requesting it. If they don't approve of the space offered by the city, they can appeal to the State Education Commissioner or an independent arbitrator.

If the city does not provide them with space, it must either pay the cost of the lease of a privately owned facility or provide the charter school with an additional 20 percent in per-pupil tuition costs. After the total cost to the city reaches $40 million per year, the state and the city will split the cost 60 to 40 percent.[117] This is different from the current state reimbursement for leasing space for public schools, in which the state provides matching funds for every dollar the city spends, as explained above.

At this point, there are 183 charters in New York City, 119 in co-located space.

- Twenty-two (22) new charters are approved to open next year or the year after, all of which will be entitled to free space.
- An additional 52 charter schools are left to approve in future years until the cap is reached, all entitled to free space.[118]
- Any charter that is authorized to expand grade levels will also be entitled to free space.

Neither the state nor the city has released any estimate of the fiscal Impact of the changes in state law as it relates to the DOE's obligation to provide charter schools with space going forward. In recent testimony, the DOE has said that *"We are in the process of reviewing these amendments and look forward to sharing more information soon."*[119] Yet it is likely that these provisions will cost the city hundreds of millions of dollars in future years, unless these amendments are rescinded.

Co-located New Schools and Charters Exacerbate Overcrowding

According to the administration, by the fall of 2012, the Department of Education will have closed 140 schools since 2002 and opened 589 new ones in their place— many of them small schools in existing buildings where they share space with other schools.[120]

Despite the claims of DOE that they only place schools where there is room, the creation of every new school within an existing school building has the effect of causing more overcrowding. When multiple schools share a building originally intended for one school, capacity and classroom space is lost as new administrative, cluster, and specialty rooms have to be replicated for each new school; including principal and secretary offices, art rooms and science labs.

The DOE has admitted in the Blue Book and elsewhere that "Large schools are assumed to be able to use space more efficiently." [121] As the Educational Priorities Panel report *"Capital Promises"* pointed out,

> *"the NYC Board of Education would reduce a building's capacity by 10 percent when a larger school was restructured into smaller schools to reflect the need for more specialized spaces and the creation of new administrative offices. …Restructuring of larger schools into smaller ones, especially at the high school level, has reduced building capacity. This reduction should be reflected in estimates of new seats needed to end overcrowding, but it is not."* [122]

The EPP report made clear that the DOE's capital plans had never taken into account how the creation of small schools should have triggered an increase in their estimate of how much new classroom space and new school buildings were needed. In none of the various reiterations of the capital plan since 2003 was it acknowledged that the restructuring of large schools into groupings of small schools and the hosting of charter schools significantly reduced the capacity of existing school buildings.[123] Thus, in a school system that is chronically overcrowded, the creation of hundreds of new small schools and charter schools has significantly exacerbated the problem.

During the 2011-2012 school year, 895 schools were co-located in 328 school buildings. Of these, 102 were charter schools.[124] For the 2012-2013 school year, 1,063 schools and organizations were co-located across 485 buildings, including charter schools, District 75 (special education) programs and/or District 79 schools (alternative high schools). Some buildings house as many as eight schools and/or programs.[125]

Reports from the NYC Charter Center claimed that buildings where charter schools are co-located tended to be less overcrowded than average school buildings.[126] Yet an analysis of Education Impact Statements (EIS's) of all the 79 charter co-location proposals from the fall of 2010 through July 18, 2012 found that 22 of them, nearly 30 percent, were projected to push the building to 100 percent utilization or more during the following year or soon thereafter.[127] In 47 of these proposals, or nearly 60 percent, the charter co-location was projected to create a building utilization rate of 90 percent or more— a utilization rate that is often experienced as significantly overcrowded, because of the way the Blue Book formula underestimates the need for space.[128]

In recent months, this trend has worsened. Of the 17 co-location proposals approved in October 2013 that involved charter schools, nine of the proposals projected utilization rates at 100 percent or higher in their Educational Impact Statements.[129]

Charter Co-locations

It is indeed true that co-locations of all types of schools have produced increased overcrowding, yet charter school co-locations have sparked particularly strong resentment because of the widespread perception of inequities in the division of space and resources, causing students in the existing public schools to be unfairly squeezed out of rooms required for a quality education.

Our Survey on Charter Co-locations

In 2011, we conducted an online survey of 105 parents, teachers, paraprofessionals and principals at both public schools and charter schools about the impact of co-location on their schools. With responses roughly divided between district schools and charters, the survey was non-scientific. It does, however, offer a glimpse into how stakeholders experience the impact of these decisions.

- *Lack of Space*

Perhaps the strongest finding was the perception of inadequate space. Nearly 59 percent of public school respondents and more than 63 percent of charter school respondents reported that their schools had few specialized spaces, such as science labs, libraries, art rooms or gyms. Several also expressed deep concern about lack of adequate rooms for intervention and special services.

Staff and parents at both charters and public schools reported feeling squeezed. A teacher in a District 1 charter elementary school noted: *"Our art and Foreign Language department are on carts. We don't have enough space for both of our music programs/teachers. We don't have a running library... (A) lot of time PE and health class has to be in the classrooms."*

Public school respondents also noted the impact of overcrowding on instruction. A Queens high school teacher wrote, *"No spare space anywhere. Teachers often sit in the halls to get stuff done."* A teacher in a District 14 middle school noted: *"Our teachers go to multiple classrooms and can't bring all their teaching supplies... Classrooms are dismal because there's no ownership. Teacher moral(e) is rock-bottom."*

When respondents from public schools described the sacrifices that resulted from co-location, they typically did so with expressions of loss and anger, mourning space once possessed and now allocated to a charter school in the same building. A retired teacher volunteering in a District 15 elementary school reported: *"We've lost the science lab and art rooms; the music room has limited use... We have only part-time use of the gym. Children are humiliated by receiving services in public hallways or closets."*

A teacher in a Harlem public school described both loss and inequities: *"Due to lack of space that was stolen… there are classes in half size classrooms, 4 teachers in the library, 5 teachers in a basement classroom, a Computer Lab (and) Art Room closed and no Science Lab for the middle school. The charter school services K-2 and they have 3 Science Lab(s), an Art Lab and a Yoga Room. Is this fair to students who are testing? We no longer have space to test our Special Ed students with Testing Modification."*

Many respondents underscored the dire impact of co-location on intervention and special services. An elementary school teacher in District 5 reported: *"Our mandated Social services provider works in a room (too) small to service 3-5 students per session. The (occupational therapy and physical therapy) person shares a room with 2 speech teachers and a Special Ed class. The Dean, Intervention teacher and Guidance (counselor) share a room."*

A teacher from a Brooklyn elementary school noted overcrowding so severe that speech, physical therapy and occupational therapy were all being provided in hallways and closets. A parent from a K-8 school that shared space with a charter school also wrote that intervention and special services were conducted in the hallways.

Charter school respondents described a more mixed situation. A parent from a Bronx charter high school reported: *"No room for tutoring, and special education students are educationally neglected. They have the (motto) 'catch me if you can.' (Disabled) students have to go as fast as...non-disabled students."*

By contrast, a parent in charter middle school noted both ample space and services: *"Our speech/language therapist has her own office. The two social workers also have their own space."*

- *Impact of Co-locations*

Many of the respondents from district schools expressed anger at other consequences of charter co-location in their building, including lunch periods as early as 10:30 in the morning.

A paraprofessional at a District 4 alternative high school noted a severe shortage of bathroom facilities as a result: *"There is only 1 girl's room and 1 boy's (room) for 430 (students) except for lunchroom area and only during our scheduled lunch time."*

A teacher in a Brooklyn elementary school described constant conflict over "security and respect," while another teacher in the same school reported the charter's *"willful ignorance of simple safety protocols....Fire doors are constantly propped open, garbage is left in hallways, they mistakenly reported an angry parent as an 'intruder' in the building, involving the police and causing the entire building (to go into) "lockdown," they failed the AED defibrillator drill, and take time away from our principal as she must explain (safety protocols and everyday happenings.)"*

- *Coordination and Conflict*

73 percent of public school respondents reported conflicts over space. This contrasted with 44 percent of those from charter schools. The number and intensity of complaints from many district school respondents suggested that co-location creates a feeling of deprivation, combined with perceptions of neglect and injustice.

In overcrowded school settings, peaceful coexistence between co-located schools requires meticulous planning, as a teacher in a Manhattan middle school explained: "Everything has to be prescheduled and well-thought out and coordinated: use of the auditorium, lunch, dismissal...the computer lab, the gym."

A parent in a Brooklyn middle school reported conflict over inequities in funding and facilities: *"They have all and we have very little...Our students are receiving the short end of the stick. They see the charter school 'taking over' and getting all that we cherish about our school. They get the space and they renovate it, when our space has looked the same since the school was built."*

A teacher in an elementary school described similar frustrations: *"The charter school has brand new everything! Including all the latest technology. The public school children see this and wonder why they cannot have the same thing....Teachers have nothing to say. The charter rooms are cleaned first. They have had their rooms painted fresh and the floors waxed. My room has not been waxed in several years."*

Another teacher in the same school reported conflict over the use of corridors and hallways, as the charter school: *"Does not want us to walk in the corridor they occupy. Our students must make U-turns all day long. They have a main double staircase while some of our classes must use a single staircase"* resulting in congestion especially at lunchtime and dismissal. This teacher recounted quietly bringing her class through charter school corridor and stairs— and being chased and confronted by the dean and other school staff.

- *Lack of Support from DOE*

More than 83 percent of district school representatives and 64 percent of charter school representatives complained that the DOE had failed to provide their school with adequate support.

District school respondents repeatedly told stories of an indifferent DOE, allocating space without regard to student need and by adhering to a flawed formula that ignores realities on the ground. A teacher in a Manhattan elementary school reported: *"The office of portfolio development has given us misinformation over the last two years. Also, since restructuring in 2004...the DOE has not provided the support needed (...leading to a level A school) teetering on the brink of nonexistence."*

A parent in a Queens middle school asserted: *"We were using 90 percent of the building but DOE insisted there was room for the charter school. DOE used old and inaccurate data that dated back at least 3 years. We requested... another walkthrough but DOE NEVER responded to us."*

Nearly 90 percent of district school respondents reported that the DOE had not done an equitable job in dividing space between the schools that share the building. Charter school respondents were significantly less unhappy, with only 53 percent reporting that DOE had done an inequitable job.

The sense of DOE neglect was increased by a lack of outreach or communication. A Brooklyn middle school parent coordinator noted: *"There have been occasions when they (DOE) have been in the building to see the charter school and not even acknowledged their presence to the public school. It would have been a show of support to both schools to at least meet briefly with the other school."*

A teacher in a Brooklyn elementary school reported: *"My principal found out about the co-location...at a gathering, when someone came up to her and said 'I hear a charter school is going to be housed in your building.'"*

Another teacher in the same school summed up her simmering frustration: *"I feel like the Department of Ed is treating our school like a second class citizen within its own building and within the community it has served for over 40 years."*

A Harlem charter school parent suggested that DOE had deliberately used a "divide and conquer" strategy to deflect criticism: *"The DOE does not care about … children and while it has given (the charter) the classrooms it requested, it did so at the cost of other students. And yet the DOE managed to make this about the parents and school officials instead of its own mismanagement."*

In conclusion, though both co-located charters and district public schools experienced considerable frustration with overcrowding, parents and staff at district public schools were more often convinced that the DOE had divided space inequitably.

Follow-Up to Co-location Survey

The divisive nature of charter school co-locations has become a common concern of parents, teachers, and education advocates alike. We followed up our survey by conducting walk-throughs of some particularly contentious co-locations and compiled anecdotal evidence as to the effect of these decisions on the ground.

The way in which DOE's utilization formula and the Instructional Footprint underestimate the need for adequate space for students with disabilities has long been a topic of deep concern for parents, teachers and advocates. This is especially true when a school has a large population of special needs students, because the formula does not take into account the actual number of students with disabilities at any particular school.

The proposal for an extension of a co-location of PAVE charter school with PS 15 in Red Hook, Brooklyn, for example, was met with resistance by PS 15 parents. The community at PS 15, a school comprised of nearly one-third special needs students, appealed the decision of the DOE in 2010 to allow the PAVE charter school to remain and expand within its school building for an additional five years, beyond the two years that had been originally planned. The appeal pointed out that an extension and expansion of this co-location would cause them to lose an additional 11 full-size classrooms.[130]

In their appeal, the parents highlighted that students of PS 15 had already been forced to give up six full rooms and six half rooms to accommodate the charter school, including full service classrooms, a computer room, a science lab, an occupational therapy room, a full-time speech and language room, a room used for professional development and teacher meetings, a math intervention room, the special education office, a room used by a Community Based Organization for family and individual counseling, and another room used for arts enrichment.

The loss of these rooms forced PS 15 to increase class size for general education classes, expand the size of groups provided with academic intervention, and forced the two occupational therapists to sacrifice their rooms and give services in the library, computer room, or in hallways. Speech therapists had to share rooms, with the additional noise level making it hard for students to focus.[131]

One parent complained that her child was being given mandated occupational therapy in a locker.[132] Although the State Commissioner allowed the charter school's extension and expansion to occur despite the appeal, he did not dispute any of the facts of the case.[133]

In our walk-through of PS 15 in the spring of 2012, we found that the speech therapist, school psychologist, and guidance counselor and other specialists had to shift arrangements from day to day, and week to week to find empty rooms to provide services to students, despite the fact that more than 37 percent of the students in the school had special needs, more than twice as many than the students who attended PAVE charter school.[134] At times that meant sharing space with the Community Based Organization in the building, or working in the cramped dentistry office, when the dentist had no appointments. And because so many children needed individualized testing accommodations, every room in the school including the principal's office had to be used for testing when the state exams were given, bringing all other activities to a halt.

The co-location of Harlem Success Academy 4 Charter School had negative impacts on PS 241, a magnet school in the building that receives federal funds to increase enrollment and diversity by offering special programs in science and technology. Yet when HSA-4 first moved into the building in 2009, PS 241 had to give up their pre-K class, and was forced to phase out their middle school grades. They also lost their dedicated art room and one of their two science rooms. Art was provided in regular classrooms via a push-in cart.

As the charter school further expanded, PS 241 was forced to move a Kindergarten classroom and a middle school classroom into the basement— even though there was only one toilet on the floor. Then last year, HSA took over full size rooms in the basement and converted them to three part-time science labs.

PS 241 was left with one half-sized room and one quarter-sized room in the basement for its speech therapist, English as a second language teacher, and special education and academic intervention specialists, even though 27 percent of their students require special education services and 26 percent are English language learners.[135] The occupational and physical therapists were forced to provide services in hallways. The principal was situated in a quarter size room and guidance counselor in a converted closet.

The school's population of at-risk students increased as the number of charter schools proliferated in Harlem. Since the 2009-2010 school year, the school has enrolled 14 students who dropped out or were counseled out of Success Academy 4, half of whom were special education students.[136]

According to a notation in the 2012-2013 Blue Book, while PS 241 had only one cluster room (its science room), which is all that the target formula would allow given the school's enrollment, the charter school enjoyed six cluster rooms, three more than called for by the target formula.[137] These included three science labs, a state-of-the-art art room, a mirrored dance studio, a block room, and a dedicated speech room, the latter used only two days a week.

The expansion of Harlem Success Academy 4 also disadvantaged Opportunity Charter School, co-located in the same building; a school in which more than half of its students have disabilities, many of them serious.[138] According to a reporter's description:

> *"Two eighth grade students sat at a table in their school's hallway, trying to concentrate on their speech therapist's iPad screen. Elevator doors opened in front of them. Students walked in and out of restrooms less than five feet away. This was the regular 'classroom' for therapy at Harlem's Opportunity Charter on West 113th Street, where more than half its 420 middle and high school students have special needs. 'It's distracting, because you hear a lot of people talking,' said 13-year-old Senay Mejia, 'and I'm trying to work back here.'*
>
> *Making matters even more frustrating, one floor below were two often empty, locked classrooms—one for dance, and another for speech therapy, belonging to Harlem Success Academy 4, another charter school in the building with about 300 kindergartners through fourth graders."*

Even though its special education needs were intense, Opportunity no longer had a permanent room for students who needed therapy sessions outside of their classroom.[139]

PS 30 was another school that suffered from the co-location of a charter school in the same chain, Harlem Success Academy II. PS 30 was immediately forced to give up one of their pre-K classes and their sixth grade to make room for the school. While the charter had four science labs, PS 30 had only one. Despite the fact that more than 30 percent of its students had disabilities, the public school was forced to house seven different intervention specialists in a half sized room: an occupational therapist, a physical therapist, speech therapist, hearing services, and tutoring.[140]

The tensions between the public schools and the charter schools inserted into their buildings were not only aggravated by turf battles and an inequitable division of rooms, but also by the policies exhibited by charter school administrators to keep control over "their" space. An example was the way in which Girls Prep, when it was temporarily co-located with PS 158 on the Upper East Side, forbade the public school students from drinking at the water fountain outside the shared gymnasium, or from using the bathroom on the same floor because it was now "their floor." According to parents at the school, *"The kids were not allowed to use those water fountains during physical education— they had to go down two flights of stairs and come back up because those were charter school water fountains,"* (a parent) said. *"They have their space, and the school that is the DOE school has their space, and the two do not mix, and as a result we lose a gymnasium (and) we lose access to stairwells."*[141]

Girls Prep subsequently moved back to the East Village, but the experience of sharing a space with the charter has strengthened P.S. 158 parents' opposition to ever allowing another charter school into their building.

At other charters, including the Success Academy chain, their students are discouraged from speaking to students in the other school that shares their building, even when they are friends and relatives, further exacerbating the tensions.[142]

Credit: PBS Learning Matters

The physical therapy room at PS 149 in Manhattan, that shares space with Success Academy 1

IMPACTS OF OVERCROWDING

Worsening Crisis in Class Size

The most obvious impact of overcrowding on learning conditions is its effect on class size. Though the operating budget limits the number of teachers on staff, space is also a necessary prerequisite in reducing class size. The chronic and worsening overcrowding in New York City public schools has also had a decidedly negative impact on class size. Class size reduction is one of four K-12 education reforms proven to work through rigorous evidence, according to the Institute of Education Sciences, the research arm of the US Department of Education.[143] The benefits of smaller classes are especially large for disadvantaged and minority students; accordingly, the reform has been shown to be effective at narrowing the achievement gap.[144]

Yet New York City public schools continue to suffer from the largest class sizes in the state.[145] As noted in our principal's survey, 86 percent of New York City principals said that their class sizes at their schools were too large to provide a quality education. They reported that the most important factors that prevented them from reducing class size to appropriate levels were their lack of control over enrollment (45 percent), lack of space (44 percent) and lack of funding (35 percent).[146]

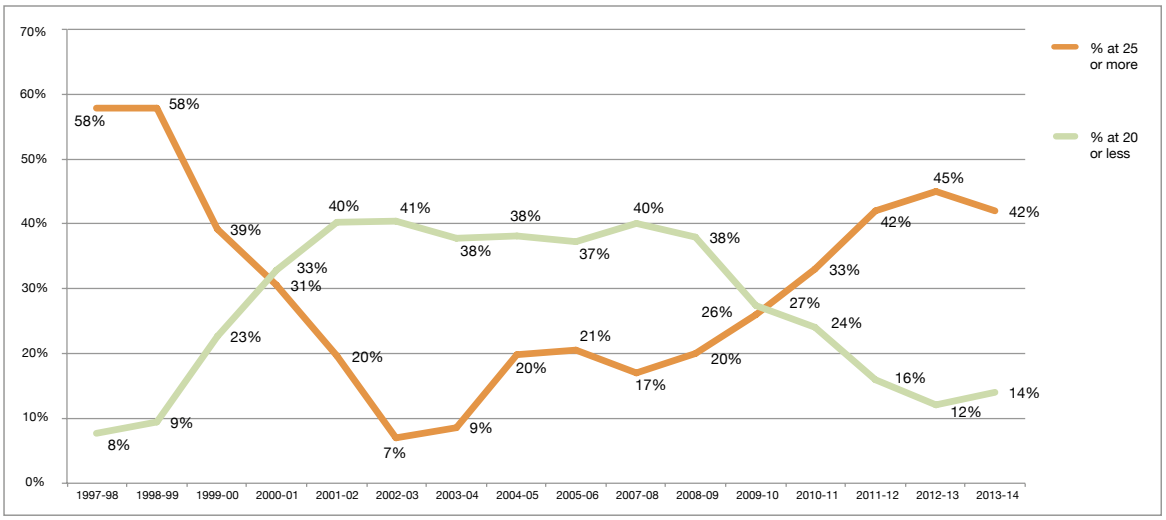
Class size reduction is also the top priority of parents in New York City schools according to the DOE's own Learning Environment Surveys, every year since it has been given.[147] Class size was also one of the major issues in the Court of Appeals decision in the Campaign for Fiscal Equity case, leading the court to conclude that the city's public schoolchildren had been deprived of their constitutional right to an adequate education:

> *"(T)ens of thousands of students are placed in overcrowded classrooms…. and provided with inadequate facilities and equipment. The number of children in these straits is large enough to represent a systemic failure."* [148]

In 2007, in order to settle the CFE case, the NY State legislature approved a new program called the "Contracts for Excellence," or C4E, and the city submitted a five year plan to reduce class size in all grades.[149] Despite the city's promise, class sizes have increased in all grades for the last five years— and most sharply in Kindergarten, most likely because of the fast growing enrollment in this grade.

By the fall of 2013, 42 percent of all Kindergarten students were squeezed into classes with 25 students or more, though 25 students per class is the maximum in the teachers' contract, and only 14 percent were at the recommended levels of the city's Contracts for Excellence plan.[150]

Figure 21: Percent Kindergarten Students in Classes of 25 or more Compared to 20 or less, 1997-2013

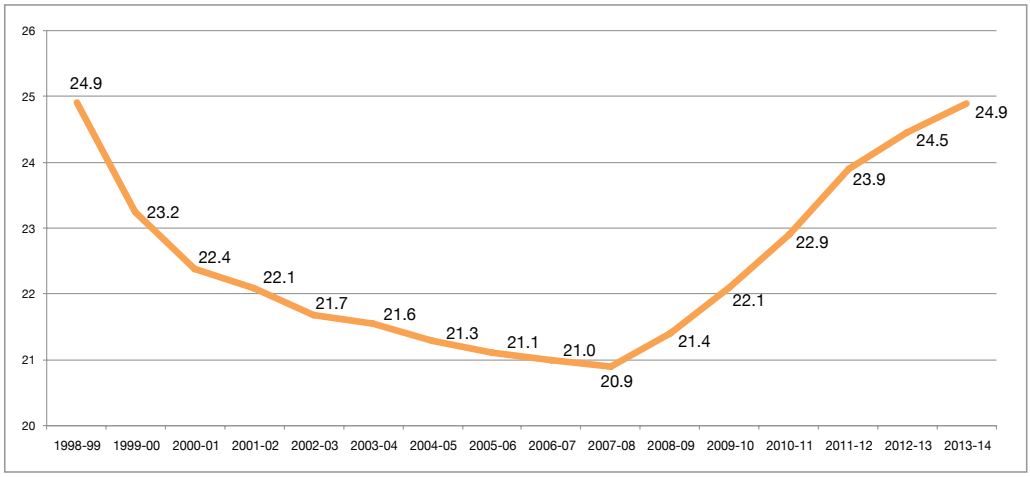


Data sources: IBO (1998-2005) and DOE class size reports (2006-2014)

(This does not include 2006-07 because the DOE failed to report distribution of class sizes that year)

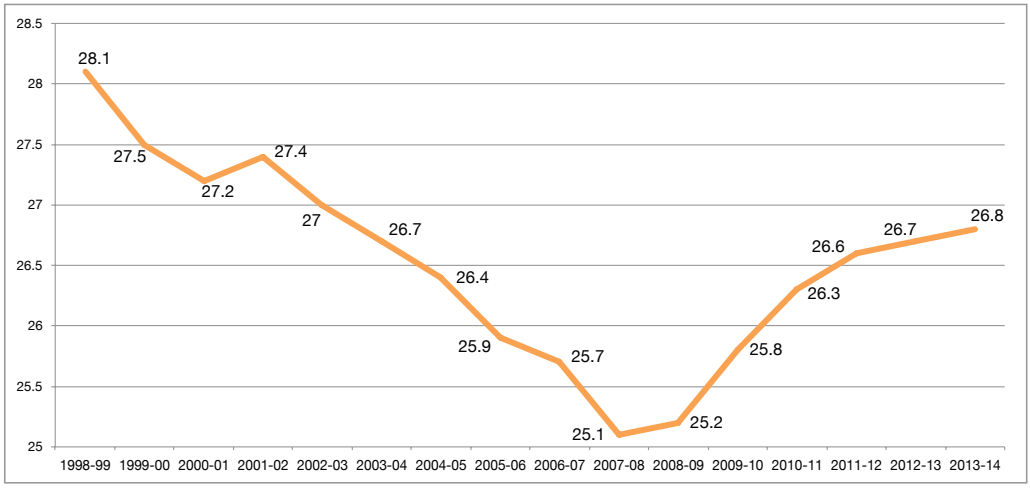
Class sizes were the largest in 15 years in the early grades (K-3) and 17 percent higher than in 2007.[151] In grades 4-8, class sizes were the largest since 2004.

Figure 22: Long Term Trend in Average Class Sizes in Grades K-3, 1998–2013



Data sources: IBO (1998-2005) and DOE class size reports (2006-2013)

Figure 23: Long Term Trend in Average Class Sizes in Grades 4-8, 1998–2013



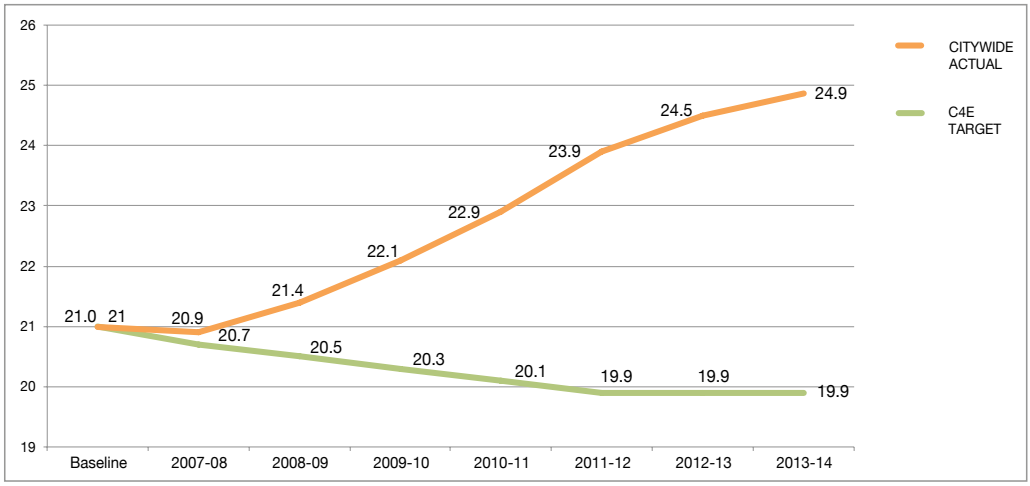
Data sources: IBO (1998-2005) and DOE class size reports (2006-2013)

Failure to comply with its Contracts for Excellence goals

The record of the DOE regarding its Contracts for Excellence goals is especially dismal. Here are charts that contrast the rise in class sizes to the city's goals in its original Contracts for Excellence Plan, submitted in 2007.[152]

As is clear, class sizes have increased substantially since 2007 and are now far above the goals in the DOE's plan. In grades K-3, there are nearly five students per grade over the C4E goals of 20 or less.

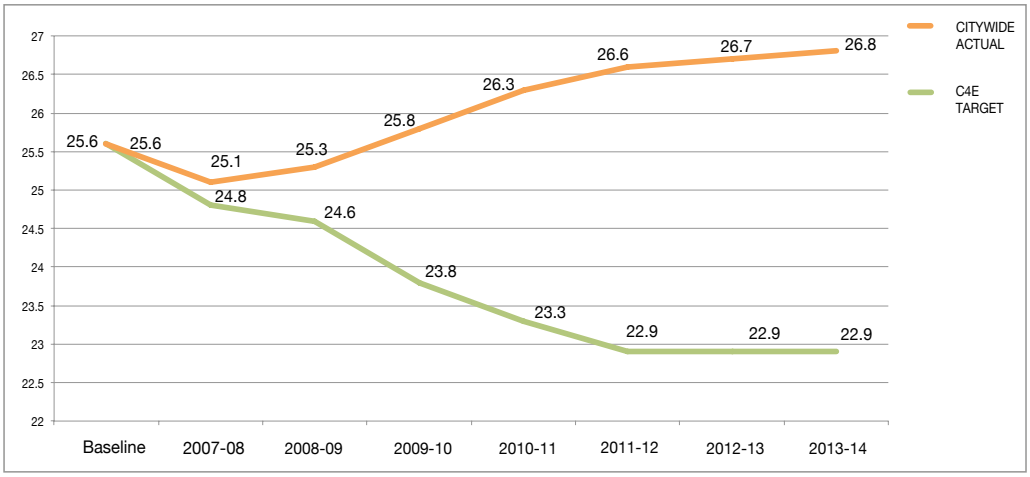
Figure 24: Grades K-3 Average Class Sizes Compared to Goals in NYC's C4E Plan, 2006-2013



Data sources: DOE class size reports (2006-2013) and approved 5-year NYC C4E Plan submitted in 2007

In grades 4-8, class sizes are also substantially larger than in 2006, with an average of 27 students per class in these grades rather than 23, as promised in the DOE's original plan.

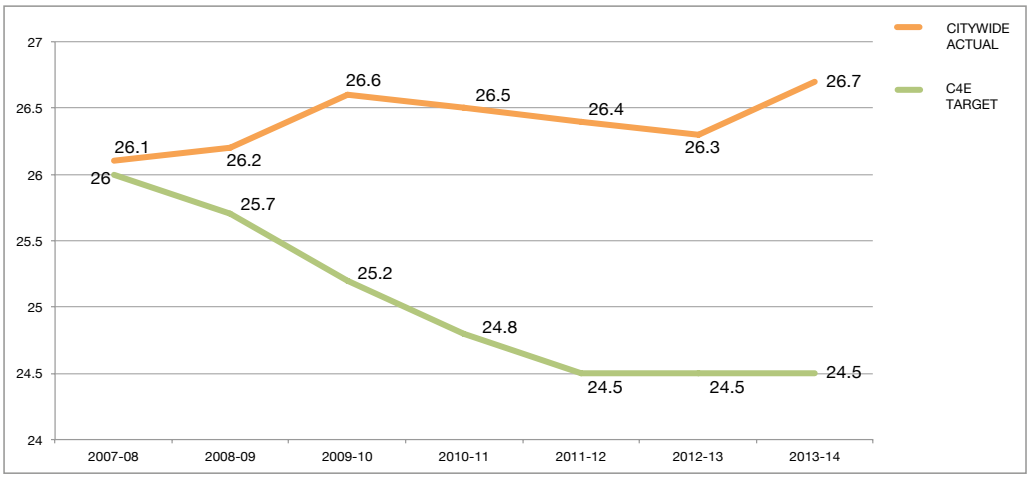
Figure 25: Grades 4-8 Average Class sizes compared to Goals in NYC's C4E Plan, 2006-2013



Data sources: DOE class size reports (2006-2013) and approved 5-year NYC C4E Plan submitted in 2007

The average class size figures for high school show a more gradual increase since 2007. However, for various flaws in the reporting methodology, DOE's high school figures are unreliable.

Figure 26: Core HS Average Class Sizes compared to Goals in NYC's C4E Plan, 2006-2013



Data sources: DOE class size reports (2006-2013) and approved 5-year NYC C4E Plan submitted in 2007

Wait Lists for Kindergarten

Problems with poor planning and increased overcrowding have become even more evident in recent years with the emergence of wait lists for Kindergartens.

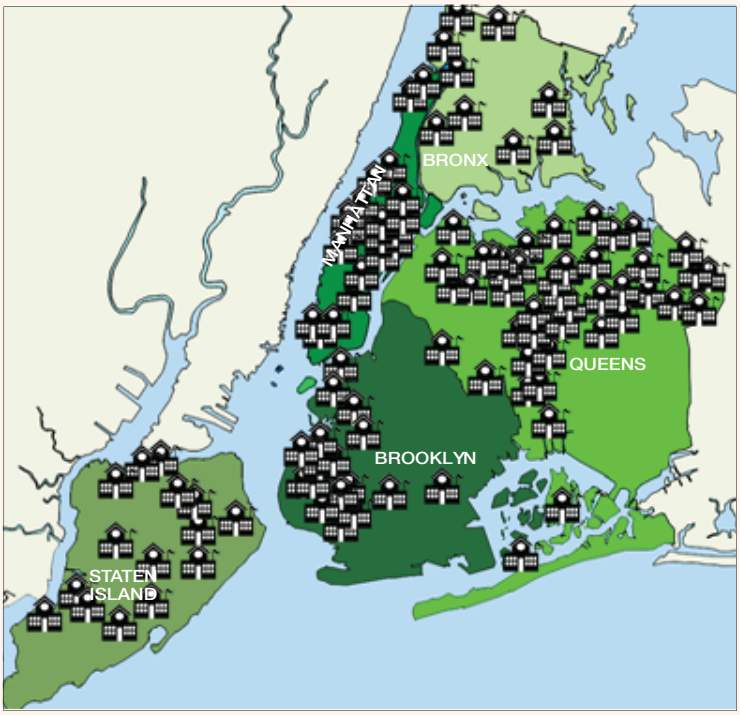
Prior to 2009, there were no wait lists for children to attend the public school in their neighborhood, or "attendance zone," except in isolated cases. But in 2009, the phenomenon emerged as a citywide problem, and has become even more widespread over time, as the maps and charts below demonstrate.

In the spring of 2013, there were 2,361 students on wait-lists at 105 schools, a slightly smaller total but for each of the schools the average wait list was 25 percent longer.

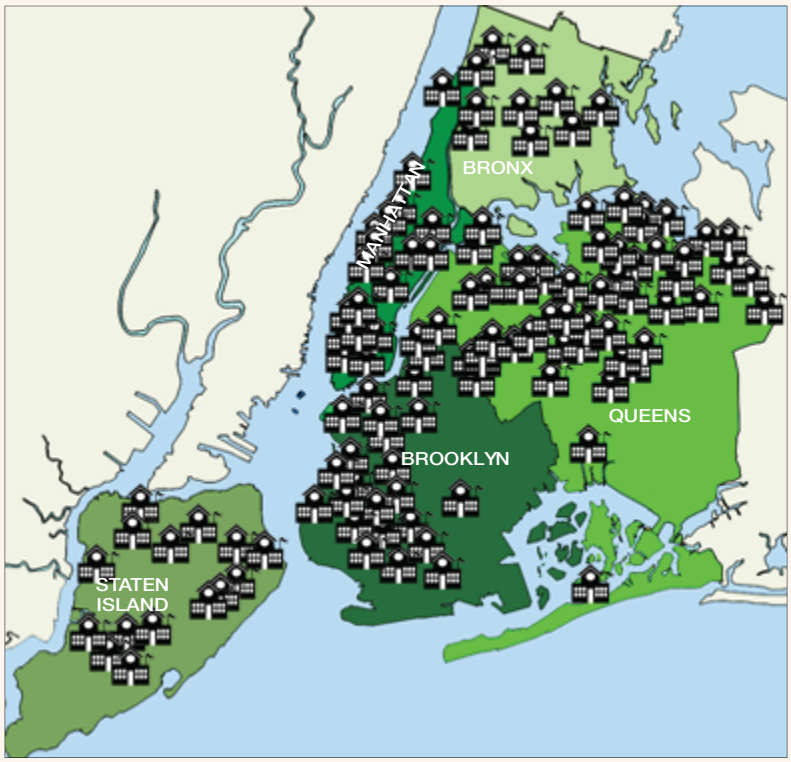
On the next page are some maps, highlighting the schools in nearly every area of the city, illustrating the problem.

Map 1: 2009 Kindergarten Wait List: (as of July)
28 schools, 474 children

Map 2: 2010 Kindergarten Wait List: (as of March)
99 schools, 2,217 children



2011 Kindergarten Wait List (as of March):
155 schools, 3193 children

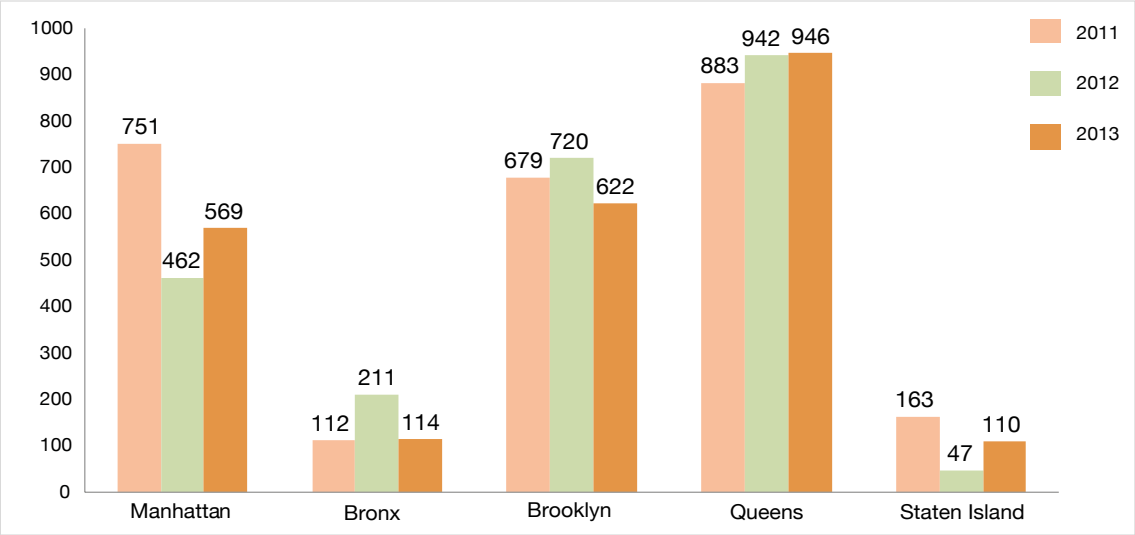


2012 Kindergarten Wait List: 124 schools, 2382 children

Map 5: 2013 Kindergarten Wait list: 105 schools, 2361 children

Wait lists for children to attend Kindergarten in the assigned school in their neighborhood occurred in nearly one fifth of all elementary schools in 2013, and for more than three percent of Kindergarten children. Although the total number of students on wait lists had slightly declined from the previous year, the number of students had grown in three out of the five boroughs in 2013— in Manhattan, Queens and Staten Island.

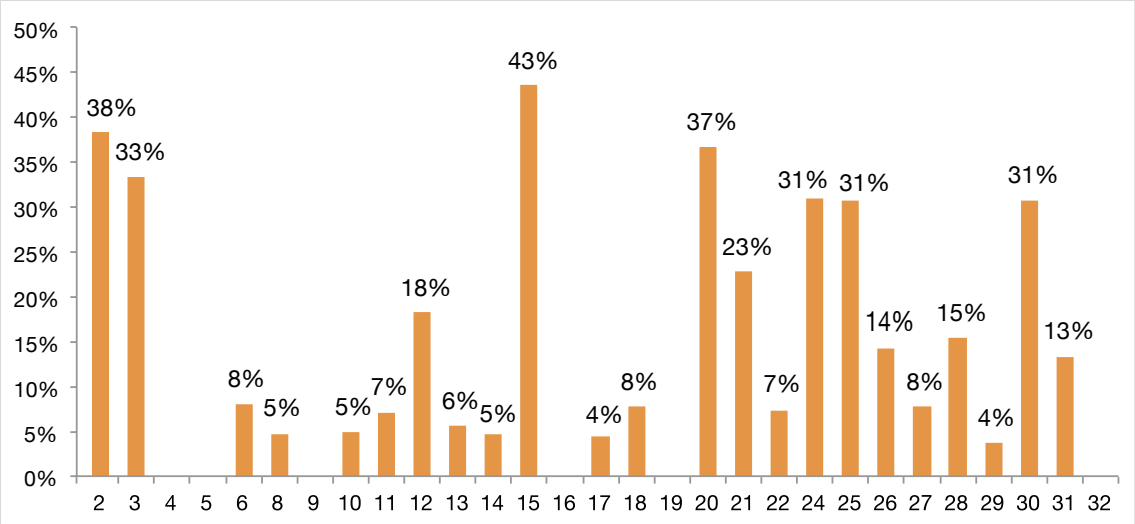
Figure 27: Kindergarten Students on Wait Lists for Zoned Schools by Borough 2011-2013



Data Source: DOE Kindergarten Wait List, 2011-2013

According to our analysis, in 2013 only six out of 29 community school districts had no schools with wait lists for their zoned Kindergarten students; not counting Districts 1, 7, and 23, which no longer had zoned elementary schools. In seven districts in Manhattan, Brooklyn and Queens (Districts 2, 3, 15, 20, 24, 25, and 30), more than 30 percent of their elementary or K-8 schools had wait lists for zoned Kindergarten students in 2013. This was hardly the "pocket overcrowding" scenario that DOE often described the situation in testimony and in official documents.

Figure 28: Percent of Elementary Schools with Zoned Kindergarten Wait Lists by District in 2013



Data Source: DOE Kindergarten Wait List, 2013

**District 1 , 7, and 23 are not included as they are "choice districts."*

In 2014, the DOE introduced a new centralized system for Kindergarten enrollment, after which they claimed a sharp reduction of the figures of children on wait lists for their zoned school, to 1,200 students— in 19 districts.[154] Unfortunately, they have not explained their methodology for composing these lists, and the reported figures were less transparent than previously. Among other things, for the first time, DOE did not reveal the specific number of children on wait lists at each school if there were fewer than ten. Nevertheless, the DOE did report that over 7,000 families received none of their choices for Kindergarten in 2014.[155]

As DOE often points out, many students vanish off wait lists by the start of the school year. This occurs for a variety of reasons: either families move to a new town or neighborhood, enroll their children in private, parochial or charter schools, or in gifted programs at other public schools. At times, more space has been made available within their neighborhood public school by increasing class sizes, far above what would be considered optimal, or by sacrificing pre-K, art, music or science rooms to be converted into classrooms.

POLICY RECOMMENDATIONS

As we have seen, the capital planning process for school construction in New York City is broken, as evidenced by increased school overcrowding as well as numerous other reports in recent years. Class sizes have increased sharply, Kindergarten wait lists have grown, thousands of students are still sitting in trailers, and many schools have lost their art rooms, science rooms, libraries, and dedicated spaces for special needs students to receive their mandated services.

The data in the Blue Book reveals school utilization rates have reached critical levels, particularly in elementary schools, and survey results from school principals suggest that even the official data understates the extent of the problem. Moreover, the decisions of the Department of Education, including aggressive co-location policies, have only exacerbated the problem. Here are some proposals to address the overcrowding crisis.

Revamp the School Utilization Formula

In 2011, the City Council approved new legislation (Introductory 155-A) requiring that the DOE supplement the Blue Book by reporting on the number of cluster rooms, locker rooms, teacher's lounges, auditoriums, libraries, lunchrooms, and other ancillary school spaces. While this has provided more information, it has done nothing to improve the formula itself, which too often suggests that there is under-utilized space in schools where none exists. The formula needs to be revamped, as does the Instructional Footprint, the working document that DOE uses when deciding whether to co-locate another school in the building. The Chancellor has appointed a taskforce to improve the formula, which should also examine the Footprint and correct its flaws as well.

Both the Blue Book and the Instructional Footprint should be aligned with the city's class size goals, especially given the fact that during his campaign, Mayor de Blasio promised to reduce class size in all grades by the end of his first term, and to comply with the city's original Contracts for Excellence plan.[156] The formula should be improved to ensure that the actual numbers of students who need special services at each school are able to receive them in appropriate rooms rather than hallways and closets. All classrooms must have an exterior window according to state law.[157] All schools should have sufficient cluster and specialty spaces as well as libraries, cafeterias and gyms that are sufficiently large to accommodate all students, at reasonable time periods and for at least the state-mandated minimum amounts.

Any school that houses students in trailers should have this overflow reflected in its utilization figures, by attributing these students to the main building, rather than counting these structures separately with their own capacities as DOE does in the case of elementary and middle schools. Finally, a full size classroom should return to its original definition of at least 600 to 750 square feet, to ensure that students are safe, have sufficient space to learn and no classroom is so overcrowded that it risks violating the building code. Special education self-contained classrooms, according to state guidelines, should be at least 750 square feet as well.

Strengthen the Planning Process and Reform the CEQR formula

There also needs to be substantial reform to ensure that school capacity keeps up with residential development and enrollment growth. Too often, development in New York City is haphazard and more responsive to political pressures than the needs of the communities in which it occurs. This is especially true when it comes to schools.

In some circumstances, many large-scale developments undergo review under ULURP (the Uniform Land Use Review Procedure) when a zoning override is required, or CEQR (City Environmental Quality Review), which attempts to assess the impact that new residential construction will have through an Environmental Assessment Statement ("EAS") and/or an Environmental Impact Statement ("EIS"). These reviews too often rely on inaccurate school utilization figures, do not feature reliable enrollment projections, and never take into account critical policy goals, such as the need to reduce class size.

In addition, the formula that the city uses to estimate the impact of new construction on student enrollment in the CEQR technical manual is outdated and inherently imprecise. It is based upon data from 1990 to March 2000, according to the School Construction Authority, and appears to make incorrect assumptions.[158] For example, each residential unit in the Bronx is assumed to produce about 30 percent more students than the same unit in Brooklyn – yet Brooklyn birth rates are now substantially higher than in the Bronx.[159] In addition, birth rates differ tremendously within different parts of each borough – and yet there is no differentiation for neighborhoods in the formula. Nor is there differentiation in the formula according to the size of the residential unit or number of bedrooms— as was previously done.[160]

The manual also sets unreasonably high thresholds for requiring a developer to mitigate the impact of large-scale development on school overcrowding. First, it must be expected to generate fifty or more elementary and/or middle school students and at least 150 or more high school students. Given the formula, this means that in Brooklyn, for example, no residential development is projected to have a "significant" impact on elementary schools unless it includes at least 121 units— and 1,068 units in the case of high schools. Of course, most developments are not this large, even though each individual proposal or several together could lead to sharply increased enrollment at the locally zoned school. Even in this narrow case, the next step is the planning process is that "further analysis of schools may be appropriate."

When that further analysis takes place, it has to meet yet another unrealistically high hurdle: only if the locally zoned school would exceed 100 percent utilization (according to the DOE's target figures) and its utilization increases by at least five percent should the proposed development require further planning efforts. [161] Even then, no specific mitigation measures are required. As a result, New York Lawyers for Public Interest and several Community Boards have called for reform of the CEQR formula review process, to ensure that development does not further worsen school overcrowding.[162]

Occasionally, voluntary agreements between the developer and the community result, called Community Benefit Agreements ("CBAs") that can include new schools being built alongside or within residential developments. Yet CBAs are difficult to enforce. Even when the project will lead to more overcrowding, offers by the developers to provide space for a new school are often turned down by the DOE, due to unwillingness to spend funds to "build out" the space.

Improve Enrollment Projections

Along with revamping the CEQR formula, there also needs to be more reliable and transparent enrollment projections than those currently provided by either DOE consultants or City Planning. While New York City Department of Education officials claim that they develop their own enrollment projections, separate from either their consultants or City Planning, they have so far refused to disclose them. Here are some recommendations to address this need:

- The City Council should commission an independent consultant to undertake a critique of DOE and City Planning methodology, and develop its own enrollment projections for one year, five years, and ten years out. These projections would be based on but not limited to the following data: changes in birth rate, residential development, existing enrollment trends, surveys of local pre-K classes and day care centers, trends in private and parochial school enrollment, and census data, indicating changes in family in-migration and out-migration rates. These enrollment projections should also incorporate data on the number of charter schools and their enrollment sited in DOE buildings, and the number of special education/District 75 students – both of which have a significant impact on the need for new space.

- These projections should forecast changes in enrollment citywide, by grade, district, and enrollment zone, and be posted online and made available to the public.

- This enrollment analysis, along with data sources and methodology, should be publicly released each fall as part of the capital planning process, before DOE's initial amendment to the capital plan. Following this, comments from the public should be elicited and posted online before the capital plan is voted upon in the spring.

Develop a Transparent Needs Assessment

Projecting enrollment into the future is not sufficient. There also should be an transparent needs assessment, to determine how much it would cost to address all the capital needs of the system, including school repair, maintenance, and expansion – to bring the entire system to adequacy.

In testimony before the City Council on June 24, 2013, Deputy Chancellor Kathleen Grimm admitted that the DOE had never done such a comprehensive needs analysis, as there were insufficient resources to address the multiple inadequacies of the system. She referred to a much earlier analysis done by the City Comptroller that had found the costs "astronomical." [163] Indeed, there has been no overall needs assessment in nearly twenty years. Yet it is only with such an analysis that stakeholders and elected officials can make informed decisions as to where and how much capital funding should be allocated towards our public schools.

The City Comptroller or Independent Budget Office should also explicitly reassess the capital plan in light of these projections; and make an independent analysis of the number of seats needed to achieve each of the following goals: eliminating the need for trailers, reducing class size to the Contracts for Excellence goals, alleviating overcrowding so that no school is at 100 percent utilization or more, addressing expected enrollment growth, and restoring a full complement of cluster rooms to every school, including dedicated spaces for art, music, science, and sufficient rooms for students to receive their mandated services.

Cease New Co-locations

By the fall of 2013, the Bloomberg administration had created more than 500 new small public schools and encouraged the opening of more than 100 new charters, the vast majority housed within existing school buildings.[164] This significantly contributed to the overcrowding crisis— as each new school ate up classroom space by replicating administrative and specialty spaces.

There has been weak quality control in the rapid development of all these new schools, which have been rigidly limited to about 400 students by the administration, and their size and restricted budgets meant that they have often struggled to provide a well-rounded education to their students. [165] In reality, there is little research in support of small schools, and most rigorous studies show that middle size schools lead to the highest achievement levels.[166] In addition, very few studies have controlled for both school size and class size; and those that did control for both factors concluded that class size, not school size, was more closely correlated with improved student outcomes.[167]

The co-location policy of the previous administration has led not only to worse overcrowding but also to tension and conflicts between the schools sharing buildings. The co-location of charter schools has engendered particular resentment and feelings of deprivation among public school students, parents, and teachers. If as a result of the new amendments to the state charter law, the city is now obligated to provide free space to co-located charter schools as well as all new and expanding charters going forward, it should attempt to cover the cost of their rent in private facilities, rather than continue to subject public school students to even worse overcrowding. As the costs mount, the Mayor and DOE officials should protest this preferential and expensive law, and urge the Governor and the State Legislature to rescind it.

Reform Site Selection, Use Eminent Domain and Inclusionary Zoning

DOE officials often claim that they are unable to build schools in overcrowded neighborhoods because of a lack of adequate sites. Yet at the same time, they often reject sites proposed by communities without explanation. In addition, the DOE rarely uses eminent domain. One School Construction Authority official has explained that they use this power "sparingly, as the exception rather than the rule," though this is one of the most justifiable uses of eminent domain.[168]

The city should use eminent domain more aggressively if no other opportunities for sites are available, and also explore the use of incentives for developers to include schools in their construction plans. As in

inclusionary zoning, when developers receive a bonus of permitted floor area by incorporating affordable housing units, so should proposals be considered to grant expanded leeway to developers if they include a public school in their plans.[169]

Impact Fees

Instead of this clearly inadequate planning process, which has contributed to worse school overcrowding in many parts of the city, there needs to be a more rational process that includes robust analysis and public input, and that puts restrictions on residential development in neighborhoods where there is already too little space in schools, unless the developer provides funds towards a new school or contributes sufficient resources to expand existing facilities— and the city commits to building new seats. These factors should also be taken into account in any rezonings likely to add significant numbers of residential units to the neighborhood.

Many states require "impact fees," sometimes also called "capacity fees," or "facility fees," charged to developers and designed to fund infrastructure improvements needed to accommodate growth, including school construction. Over half of all states have adopted legislation allowing for impact fees, including most of the large states other than New York, including Texas, California, and Florida.[170]

Impact fee payments are typically required as a condition to approve new development, either at the time of building or when the occupancy permit is issued. According to recent surveys, about 60 percent of all cities with over 25,000 residents and almost 40 percent of all metropolitan counties use some form of impact fees. In large states like California and Florida, between 83 and 90 percent of cities and counties impose these fees.[171] There is little or no evidence that the imposition of a fee system has stifled development.[172]

New York State should pass enabling legislation to allow for impact fees, and the City Council should approve such a program for New York City, while ensuring that the funds received are kept separate and used for the purposes for building or expanding schools.

Accelerate and Expand the Capital Plan

As we have shown throughout this report, the existing school capital plan is insufficient to alleviate existing overcrowding, accommodate future enrollment growth, and reduce class size. The sharp cuts to the capital plan made after November 2010 meant that the plan has not come close to meeting even DOE's own inadequate goals. The expansion of pre-Kindergarten programs will likely cause elementary schools to become even more congested.

In May 2012, John Liu, the former City Comptroller pointed out that by accelerating projects that were already in the capital plan and moving them forward in time, the city could save hundreds of millions of dollars by taking advantage of historically low interest rates and relatively low construction costs, while providing thousands of additional jobs for construction workers. He proposed that two billion dollars of infrastructure projects should be accelerated, including school instruction and repair.[173] In October 2013, the mayor announced that he would speed up one billion dollars of infrastructure projects, in the process saving more than $200 million in debt service. An additional $290 million would be spent over the next 20 months on upgrades and repairs to 100 public school buildings.[174]

Most of this funding will be focused on accelerating the removal of PCBs from leaky school lights, a very worthy goal, but none to expand school capacity. At the time, Mayor Bloomberg claimed that the city did not have enough construction projects in the pipeline to justify another $1 billion in spending, although less than two years before, the city had cut $4 billion of capacity projects out of the capital plan.[175] Certainly, an additional $1 billion in school construction spending could be identified that would have the added benefit of saving $200 million in interest payments, millions in construction costs and create thousands of additional jobs.

Only with significantly improved planning, policies and funding can the city's public school students be provided with the facilities— and the quality education— they need and deserve.

APPENDIX A

Gaps, Confusion and Inconsistent Data In DOE's TCU Report

The most recent DOE Report on Temporary Classroom Units, with figures from September 2012, includes 352 TCUs with an enrollment of 7,158 students. This enrollment figure has been cited by the DOE officials repeatedly in news accounts, at the Panel for Educational Policy and in testimony before the City Council.

However, there are 47 schools with over 129 classrooms in TCUs housing an unknown number of students that are not included in the above figure.

The students housed in TCUs at these 47 schools are not included because their TCUs are listed as having zero or N/A enrollment. This includes 14 high schools that have 63 TCUs, two District 75 schools that have 6 TCUs, and 28 elementary and 3 middle schools with 76 TCUs.

There are many TCUs listed with no enrollment, or enrollment N/A, and also many TCUs listed with no capacity. The reasons for this are obscure.

TCUs can have either one or two classrooms. In the 47 schools whose TCU actual enrollment is unknown, there are *at least* 78 classrooms in high schools, 23 classrooms in District 75 schools, and 28 classrooms in elementary and middle schools.

Five high schools, two D75 schools, and 23 elementary and middle schools do not have enrollment, capacity or classrooms included in Part 2 of the report, but are listed in Part 1 of the report.

According to the School Construction Authority, the reason the high school TCU enrollment figures are reported as zero or N/A is *"enrollment is reported as part of the main building for the high schools, because high schools don't have home rooms."* This is not a sufficient rationale; these figures are necessary to know how many classrooms and seats would be needed if the DOE plans to replace the TCUs.

For the 31 elementary and middle schools reported as having zero enrollment, the SCA writes, *"it does not necessarily mean that the TCU(s) are not being used by the school. Sometimes schools use them as offices, art rooms, music rooms, etc. Since they are not being used as the homeroom for students, no enrollment is assigned to those TCUs."*

Yet these classrooms would also presumably need to be replaced if the TCUs are removed.

There is no explanation offered for why the 6 TCUs used for District 75 classrooms at the two Staten Island schools do not report their enrollment (included in Part 1 but not Part 2 of the TCU report), and why the two schools in Queens with 23 TCU District 75 classrooms do not have reported enrollment (included in Part 2 but not Part 1 of the report).

Why schools with TCUs are included in Part I of the report, along with their capacity, but not in Part II, which includes TCU enrollment, and vice versa, is unexplained. The data provided by the report is also inconsistent with the TCU data provided in the Blue Book. All three documents should have consistent data; and the TCU report should have capacity and enrollment reported on the same page in order to eliminate this confusion.

The full list of schools included in the TCU report but with unknown enrollment, is as follows:

14 High Schools With 63 TCUS and *More Than 78 Classrooms With Unknown Enrollment

BROOKLYN:
1 school, 6 TCUs, 12 classrooms

East New York Family Academy
6 - TCUs, 12 Classrooms
(Capacity is listed at 0 each for the 12 classrooms)

QUEENS:
7 schools, 33 TCUs, *more than 56 classrooms

Bayside High School: 3 - TCUs, 6 Classrooms
(Capacity is listed at 30 each for the 6 classrooms)

Benjamin Cardozo High School: 4 - TCUs, 3 Classrooms
(Capacity is listed at 30 each for the 3 classrooms)

Richmond Hill High School: 11 - TCUs, 21 Classrooms
(Capacity is listed at 30 each for the 21 classrooms)

William Bryant High School: 3 – TCUs, 6 Classrooms
(Capacity is listed at 28 each for the six classrooms)

John Bowne High School: 7 – TCUs, 12 Classrooms
(Capacity is listed at 28 each for the 12 classrooms)

Francis Lewis High School: 4 – TCUs, 8 Classrooms
(Capacity is listed at 28 each for the eight classrooms)

*** Queens Referral Center for High School Alternatives at Jamaica Learning Center:** 1 – TCU, number of classrooms unknown and not listed in the total above
(Capacity is not listed. School is listed in Part 1 but not Part 2 of the report)

STATEN ISLAND:
1 school, 2 TCUs, 4 classrooms

Curtis High School: 2 – TCUs, 4 Classrooms
(Capacity is listed at 30 each for the four classrooms)

THE BRONX:
5 schools, 13 TCUs

***South Bronx High School:** 2 – TCUs, number of classrooms unknown
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***Adlai E. Stevenson High School:** 2 – TCUs, number of classrooms unknown
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***John F. Kennedy High School:** 2 – TCUs, number of classrooms unknown
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***Morris High School**
4 – TCUs, number of classrooms unknown
(Capacity is not listed. School is listed in Part 1 but not Part 2)

Jane Addams High School
3 – TCUs, 6 Classrooms
(Capacity is listed at 30 each for the 6 classrooms)

4 D75 Schools With **More Than 6 TCUs, More Than 33 Classrooms and Unknown Enrollment

**QUEENS:
2 schools, *unknown number of TCUs, 23 classrooms

****PS Q256 Special Education:** 5 – D75 Special Ed Classrooms
(School is listed in Part 2 but not Part 1)

****PS Q255 Special Education:** 18 – D75 Special Ed Classrooms
(School is listed in Part 2 but not Part 1)

STATEN ISLAND:
2 schools, 6 TCUs, 10 classrooms

PS 37: 4 – TCUs, 8 D75 Special Ed Classrooms
(Capacity is listed at 0 each in its 2 Special Ed classrooms)

PS 25: 2 – TCUs, 2 D75 Special Ed Classrooms
(Capacity is listed at 0 each in its 2 Special Ed classrooms)

28 PS & 3 IS Schools: 31 schools with 76 TCUs and unknown enrollment

MANHATTAN:
1 school, 2 TCUs, 2 classrooms

PS 5: 2 – TCUs, 2 classrooms in District 6
(Capacity is listed at 28 each for the 2 multi-purpose rooms)

THE BRONX:
4 schools, 13 TCUs

PS 28: 1 – TCU, 2 classrooms in District 9
(Capacity is listed at 28 each for the 2 science classrooms)

***IS 117:** 1 – TCU, number of classrooms unknown in District 9
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***PS 106:** 5 – TCUs, number of classrooms unknown in District 11
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***PS 6:** 6 – TCUs, number of classrooms unknown in District 12
(Capacity is not listed. School is listed in Part 1 but not Part 2)

BROOKLYN:
11 schools, 33 TCUs

***PS 272:** 3 – TCUs, number of classrooms unknown in District 18
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 276: 8 – TCUs, 8 classrooms in District 18
(Capacity is 28 each for the eight classrooms: 1 science lab, 2 multi-purpose classrooms, 1 science classroom, 2 music rooms, 1 dance room, and 1 art room)

***PS 135:** 2 – TCUs, number of classrooms unknown in District 18
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***PS 208:** 4 – TCUs, number of classrooms unknown in District 18
(Capacity is not listed. School is listed in Part 1 but not Part 2)

***PS 219:** 1 – TCU, number of classrooms unknown in District 18
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 235: 4 – TCUs, 4 classrooms in District 18
(Capacity is listed at 28 each for the 4 classrooms: 1 funded literacy room, 1 dance room, 1 funded "other" room, and 1 theatre arts/drama room)

***PS 268:** 1 – TCU, number of classrooms unknown in District 18
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 202: 4 – TCUs, 4 classrooms in District 19
(Capacity is listed at 28 each for the 4 classrooms: 3 dance rooms and 1 multi-purpose classroom)

IS 302: 3 – TCUs in District 19
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 194: 1 – TCU in District 22
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 198: 2 – TCUs, 4 rooms in District 22
(Capacity is listed at 28 for the 4 classrooms: 2 dance rooms, 1 other shop room, and 1 regular classroom)

QUEENS:
14 schools, 27 TCUs

PS 193: 1 – TCU in District 25
(Capacity and/or classrooms are not listed. School is listed in Part 1 but not Part 2)

PS 106: 1 – TCU in District 27
(Capacity is not listed. School is listed in Part 1 but not Part 2)

IS 226: 2 – TCUs in District 27
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 123: 2 – TCUs in District 27
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 56: 1 – TCU, 2 classrooms in District 27
(Capacity is listed at 28 each for the 2 classrooms: 2 science demo rooms)

PS 121: 3 – TCUs in District 28
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 140: 4 – TCUs in District 28
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 30: 2 – TCUs in District 28
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 40: 3 – TCUs in District 28
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 35: 2 – TCUs in District 29
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 33: 1 – TCU, 2 classrooms in District 29
(Capacity is listed at 28 each for the 2 classrooms: 2 art rooms)

PS 156: 2 – TCUs in District 29
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 52: 2 – TCUs in District 29
(Capacity is not listed. School is listed in Part 1 but not Part 2)

PS 132: 2 – TCUs in District 29
(Capacity is not listed. School is listed in Part 1 but not Part 2)

STATEN ISLAND:
1 school, 1 TCU

PS 38: 1 – TCU
(Capacity is not listed. School is listed in Part 1 but not Part 2)

ENDNOTES

1 For an archived copy of Michael Bloomberg's 2001 campaign literature, see: http://web.archive.org/web/20011001055946/http:/www.mikeformayor.org/downloads/edubk3a.pdf. See also Leonie Haimson, *"Bloomberg's Campaign Promises: How'd He do?"* NYC Public School Parents Blog, Oct. 22, 2009, http://nycpublicschoolparents.blogspot.com/2009/10/bloombergs-original-campaign-promises.html. See also Leonie Haimson, *"Class sizes sharply rising & 7,000 violations this fall despite Bloomberg campaign promises,"* NYC Public School Parents Blog, September 24, 2011, http://nycpublicschoolparents.blogspot.com/2011/09/class-sizes-sharply-rising-7000.html.

2 Fernanda Santos, "Mayor Bloomberg's Promises for Education; an Annotated Scorecard," *WNYC*, January 13, 2012.

3 NYC Department of Education, New York City School Construction Authority, *Children First 2005–2009 Five-year Capital Plan, Proposed 2008 Amendment,* New York: New York City School Construction Authority, February 2008, 32, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/CapPlan/200802_CapPlanlAmendment.pdf.

4 Fernanda Santos, "Mayor Bloomberg's Promises for Education; an Annotated Scorecard."

5 New York City Department of Education, New York City School Construction Authority, *November 2012 Five-Year Capital Plan - Proposed Amendment,* New York: New York City School Construction Authority, November 2012, 14, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/CapPlan/111512_10-14_CapitalPlan.pdf.

These claims in written DOE documents continued long after education officials, confronted with their inaccuracy, admitted that they were probably false. See, for example, Philissa Cramer, "Live-blogging the City Council Capital Plan hearing, sort of," *Gotham Schools,* December 2, 2008, in which the reporter recounted how the chair of the Council's Education Committee, Council Member Robert Jackson, accused DOE of "exaggerated" claims, including "that the current capital plan is the largest in the city's history." He noted that more school seats were added in other periods, including in the "last six years of the Giuliani administration than in the first six years [sic] of Bloomberg's." Kathleen Grimm, the DOE's Deputy Chancellor responded that in the future, "she'll be specifying that it's the largest plan in SCA's history, not the DOE's. The state created SCA in 1988."

6 New York City Municipal Building Energy Benchmarking file; available at NYC Open Data, https://nycopendata.socrata.com/Government/2010-2011-NYC-Municipal-Building-Energy-Benchmarki/vvj6-d5qx.

7 To make things worse, during the 1975 fiscal crisis, the maintenance budget was sharply cut, resulting in deterioration of school buildings. In addition, the system was undergoing a slight decline in enrollment. As a result, 104 school buildings and other properties belonging to the Board of Education were abandoned, transferred to other City agencies or approved for alternate uses, or demolished. See Alan Hevesi, *Overcrowding in New York City Public Schools: Where Do We Go From Here?* New York City Comptroller Office, January 1995.

8 Many chancellors in the post-1975 era had seen their capital plans cut back by mayors. As recounted in the Educational Priorities Panel report, *Capital Promises: Why NYC Children Don't Have the School Buildings They Need,* New York: Educational Priorities Panel, July 2007, http://www.classsizematters.org/wp-content/uploads/2014/05/EPP-Capital-Promises-July-07-report.pdf, "Chancellor Green's and Chancellor Fernandez's $5.2 billion request for funding for the capital plan was cut twice by two different mayors. Chancellor Cortines' capital plan for 1995-99 was also cut twice….Chancellor Crew's capital plan for fiscal years 2000-04 was yet again introduced as a response to the overcrowding 'crisis' and yet again was cut by the Mayor [Giuliani]," 17. Yet Mayor Bloomberg's capital plan has only been cut back by himself; never by the City Council. Neither has the City Council ever increased spending on the plan, though it was granted these powers in 2002, when mayoral control was adopted.

9 New York City Mayor's Office of Operations, *Preliminary Mayor's Management Report,* New York: New York City Mayor's Office of Operations, February 2014, http://www.nyc.gov/html/ops/downloads/pdf/pmmr2014/2014_pmmr.pdf.

10 Noreen Connell, *Capital Promises: Why NYC Children Don't Have the School Buildings They Need,* New York: Educational Priorities Panel, July 2007, Introduction.

11 Office of the New York City Comptroller, William C. Thompson, Jr., *Growing Pains: Reforming Department of Education Capital Planning to Keep Pace with New York City's Residential Construction,* New York: Office of the New York City Comptroller, May 2008, http://www.comptroller.nyc.gov/bureaus/opm/reports/05-09-08_growing_pains.pdf.

[12] Manhattan Borough President Scott M Stringer, *School Daze: Fuzzy Numbers Mean Overcrowded Schools,* New York: Office of the Manhattan Borough President, September 2009.

[13] Office of the New York City Comptroller, *Underprepared for Overcrowding: New York City Department of Education School Construction, 2008-2017,* New York: Office of the New York City Comptroller, September 2009, http://comptroller.nyc.gov/wp-content/uploads/documents/sep09-underprepared.pdf.

[14] Class Size Matters, et al., *A Better Capital Plan: How to Make the City's New Five-Year Capital Plan for School Construction,* New York: The Campaign for a Better Capital Plan, October 2008, http://www.classsizematters.org/wp-content/uploads/2011/04/A_Better_Capital_Plan_final_final.pdf.

[15] Clara Hemphill, et al., *The New Marketplace: How Small School Reforms and School Choice Have Reshaped New York City's High Schools,* New York: Center for New York City Affairs, Milano New School, July 2009, http://www.newschool.edu/milano/nycaffairs/documents/TheNewMarketplace_Report.pdf.

[16] Clara Hemphill, et al., *The New Marketplace: How Small School Reforms and School Choice Have Reshaped New York City's High Schools,* 2.

[17] New York City Independent Budget Office, News Brief: Demographics, Performance, Resources: Schools Proposed for Closing Compared With Other City Schools, New York: New York City Independent Budget Office, January 2011, http://www.ibo.nyc.ny.us/iboreports/schoolclosingjan2011.pdf.

[18] New York City Independent Budget Office, Analysis on School Closures, Comparisons between Schools Slated for Closing and Other Schools, New York: New York City Independent Budget Office, January 25, 2010, http://www.ibo.nyc.ny.us/iboreports/schoolclosing012510.pdf.

[19] Leonie Haimson, Testimony Before the New York State Assembly Education Committee on New York City's Implementation of Federal School Intervention Models, April 11, 2012, http://www.classsizematters.org/wp-content/uploads/2012/04/CSM-testimony-PLA-4.11.12.pdf.

[20] New York Communities Organizing Fund Inc., *Charter Schools in Public School Buildings: Best Practices for Co-Location,* New York: New York Communities Organizing Fund Inc., January 2013, http://tiny.cc/5jivgx

[21] City of New York Office of the Comptroller, John C. Liu, *Audit Report on the Collection and Reporting of School Capacity and Utilization Data by the Department of Education and the School Construction Authority,* New York: Office of the Comptroller, September 2011, http://www.comptroller.nyc.gov/bureaus/audit/audits_2011/09-14-11_ME11-064A.shtm.

[22] National Center of Education Statistics, "Condition of America's public school facilities," 2000, 45.

[23] There is a range of somewhat arbitrary indicators that could be used to describe overcrowded schools. New York City Department of Education defines overcrowding as any school at 110 percent or more utilization; the US Department of Education defines it at 105 percent, and the New York City Independent Budget Offices above 102.5 percent. New York City Independent Budget Office, New York City Public School Indicators: Demographics, Resources, Outcomes, New York: New York City Independent Budget Office, May 2013, 24, We have adopted 100 percent in this report, since the evidence suggests that the DOE figures and formula tend to underestimate the actual level of overcrowding in New York City schools. See: http://www.ibo.nyc.ny.us/iboreports/2013educationindicatorsreport.pdf.

[24] Kimberly Kopko, *The Effects of the Physical Environment on Children's Development,* Ithaca: Cornell University College of Human Ecology, Department of Human Development Outreach & Extension, 2007, 2, http://www.human.cornell.edu/hd/outreach-extension/upload/evans.pdf.

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[26] For a summary of the research, see Leonie Haimson, "The Benefits of Class Size Reduction," June 2013, www.classsizematters.org/wp-content/uploads/2013/06/CSR-national-fact-sheet1.pdf. See also research links at http://www.classsizematters.org/research-and-links/.

[27] Francisco L. Rivera-Batiz and Lillian Marti, *A School System at Risk: A Study of the Consequences of Overcrowding in New York City Public Schools.* New York: Institute for Urban and Minority Education, January 1995. See also "Report Finds Overcrowding in NYC at Crisis Levels," *Columbia University Record* 20.17, February 1995, http://www.columbia.edu/cu/record/archives/vol20/vol20_iss17/record2017.31.html.

[28] Glen I. Earthman, *The Effect of the Condition of School Facilities on Student Academic Achievement,* 2004, 3, 12, http://decentschools.com/expert_reports/earthman_report.pdf. See also U.S. Department of Education, *Impact of Inadequate School Facilities on Student Learning,* Washington, DC: U.S. Department of Education, 2008, 1, http://www2.ed.gov/offices/OESE/archives/inits/construction/impact2.html. which found that students in school buildings in poor condition had achievement 11% below schools in excellent condition. Another study found that achievement tests when adjusted for socio-economic status was up to 5 percentile points lower in buildings with lower quality ratings, and yet another found that test scores were up to 11 percentile points lower in substandard buildings.

[29] Michelle Fine, *The Psychological and Academic Effects on Children and Adolescents of Structural Facilities' Problems, Exposure to High Levels of Under-Credentialed Teachers, Substantial Teacher Turnover, and Inadequate Books and Materials,* 2004, 3-4, http://decentschools.com/expert_reports/fine_report.pdf. Submitted in support of the plaintiffs in Williams vs. California.

[30] U.S. Department of Education, Impact of Inadequate School Facilities on Student Learning, 2.

[31] Mary Poplin and Joseph Weeres, *Voices from the Inside; A Report on Schooling from Inside the Classroom Part One: Naming the Problem,* Claremont: The Institute for Education in Transformation at the Claremont Graduate School, 1992.

[32] Glen I. Earthman, *The Effect of the Condition of School Facilities on Student Academic Achievement,* 12 and U.S. Department of Education, Impact of Inadequate School Facilities on Student Learning, 2.

[33] *Campaign for Fiscal Equity, Inc., et al. v. State of New York, et al.,* 100, N.Y. 2d 893, 911-12 (2003) ("CFE II").

[34] California Department of Education, *Notice of Proposed Settlement,* November 2008, http://www.cde.ca.gov/eo/ce/wc/documents/wmssettlenotice.pdf.

[35] Jeannie Oakes, *Concept 6 and Busing to Relieve Overcrowding: Structural Inequality in California Schools,* Williams Watch Series, October 1, 2002, http://escholarship.org/uc/item/30q9d8xn.

[36] Bruce Fuller, Luke Dauter, et al., *Building schools, rethinking quality? Early lessons from Los Angeles,* Journal of Educational Administration, Vol. 47, No. 3, 2009.

[37] William Welsh, et.al., *New Schools, Overcrowding Relief, and Achievement Gains in Los Angeles – Strong Returns from a $19.5 Billion Investment, Policy Analysis for California Education,* August 7, 2012, http://www.edpolicyinca.org/sites/default/files/pace_pb_08.pdf.

[38] Chris Neilson and Seth Zimmerman, *The Effect of School Construction on Test Scores, School Enrollment, and Home Prices,* IZA Discussion Paper No. 6106, http://ssrn.com/abstract=1962164. By the sixth year following the year of construction, student scores had risen an average of 0.21 standard deviation.

[39] See Supreme Court, Count of New York, Index No.: 111070/93, *Campaign for Fiscal Equity, et al., v. The State of New York, et al.,* 89.

[40] Campaign for Fiscal Equity, Inc., et al. v. State of New York, et al., 100 N.Y.2d 893, 911-12 (2003) ("CFE II").

[41] Campaign for Fiscal Equity, "CFE Building Aid Proposal Calls For New Multi-Billion Dollar 'Marshall Plan' For Major Construction In New York City," April 13, 2004, http://www.cfequity.org/press_releases/cfe_building_aid_proposal_calls_for_new_multibillion_dollar.php.

[42] See CFE, "Our History", undated, http://www.edlawcenter.org/about/mission-history.html. A detailed history of these developments is included in Noreen Connell, *Capital Promises: Why NYC Children Don't Have the School Buildings They Need,* New York: Educational Priorities Panel, July 2007, 22-35.

[43] See New York State Education Department, "New High Need Supplemental Building Aid Ratio," June 2005, https://stateaid.nysed.gov/build/hnsbar_060805.htm. Also see John Toscano, "'Private' Public Schools?" Queens Gazette, December 13, 2006. Although earlier the city had a building aid ratio of 64.7%, the actual amount reimbursed was limited by a maximum cost allowance that did not reflect the real cost of a new school in New York City, including the price of land, so the actual reimbursement rate was only about 25%. See Patricia Zedalis, "New York State Aid to School Districts for Construction," prepared for *The Rockefeller Foundation,* July 2003, http://www.goodflow.net/pdfs/resources/CFEvsNY/ZedalisExhibitB.pdf.

[44] New York City Department of Education, New York City School Construction Authority, *Children First 2005-2009 Five Year Capital Plan,* November 2007, 31.

[45] New York City Department of Education, New York City School Construction Authority, *Children First 2005-2009 Five Year Capital Plan,* November 2007, 54.

[46] Education Law § 211-D, New York State Contracts for Excellence Statute, passed April 1, 2007.

[47] "Such [class size reduction] plan shall be aligned with the capital plan of the city school district of the City of New York" in: 100.13 Contracts for Excellence; Contract requirements; Section b.1. vi; http://www.p12.nysed.gov/part100/pages/10013.html.

[48] New York State Education law § 211-D Contracts for Excellence; posted at: http://law.onecle.com/new-york/education/EDN0211-D_211-D.html. See also New York State Education Department, "Contracts For Excellence Approved For 55 School Districts," November 19, 2007, http://www.oms.nysed.gov/press/C4ERelease.htm. See also New York State Education Department, *Citywide Class Size Reduction Five-Year Plan, Five-Year Plan Executive Summary,* November 8, 2007.

[49] Class Size Matters, et al., *A Better Capital Plan: How to Make the City's New Five-Year Capital Plan for School Construction,* New York: The Campaign for a Better Capital Plan, October 2008, http://www.classsizematters.org/wp-content/uploads/2011/04/A_Better_Capital_Plan_final_final.pdf.

[50] For a list of signers, see the Appendix to the above report; and Philissa Cramer, "Parents, elected officials urge better education capital planning," *Gotham Schools,* October 3, 2008.

[51] Jennifer Medina, "With Budget Shrinking, Schools Will Get Fewer New Buildings," *The New York Times,* November 5, 2008.

[52] New York City Department of Education, New York City School Construction Authority, *Building on Success: Proposed 2010-2014 Capital Plan,* November 2008, http://source.nycsca.org/pdf/capitalplan/11-08_2010-14_CapitalPlan.pdf The DOE attempted to explain this apparent contradiction in a confusing manner on pp. 20-21. They wrote that not all schools were at 100% utilization, and thus could reduce class sizes below the levels assumed in the DOE's formula if they so wished; and could program classrooms more "efficiently" than the formula assumed – though the formula already assumed classrooms would be filled more than 84% of the time – a very high figure. Of course, this is an evasion. As their utilization formula was based upon larger class sizes, it would follow that many if not most schools would never have the space to achieve the smaller goals in their C4E plan.

[53] The City of New York, *PlaNYC 2030: A Greener Greater NY,* New York: The City of New York, April 2007, http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/full_report_2007.pdf.

[54] The City of New York, *PlaNYC 2030: A Greener Greater NY,* New York: The City of New York, updated April 2011, http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/planyc_2011_planyc_full_report.pdf.

[55] Includes pre-K, special education, GED programs. Grier projection calculated from adding New York City Total projected enrollment from pre-k to 8th Grade data (Appendix B, p. 17) and 9th – 12th Grade data (Appendix C, p. 2). Statistical Forecasting LLC, *Enrollment Projections for 2009-2018 For the New York City Public Schools,* Vermont: Statistical Forecasting LLC, October 2009, http://tinyurl.com/qepzuo9. Eunice and George Grier, *Enrollment Projections 2009 to 2018 New York City Public Schools,* Volume II: Narrative Report, Maryland: The Grier Partnership, September 2009, http://tinyurl.com/kpk2qz3.

[56] New York City Department of City Planning, *City Planning Demographers Paint Picture Of City's Future Population At 9.1 Million, Detailing How City Will Grow By 2030*, New York: New York City Department of City Planning, December 13, 2006, http://www.nyc.gov/html/dcp/html/about/pr121306.shtml.

[57] Although the New York City Department of City Planning (DCP) cites the 2000 Census as its source, DCP's baseline population information for 2005 and the resulting projections for 2010 and beyond, do not match the Census' American Community Survey Estimates.

[58] Sam Roberts, "In Surge in Manhattan Toddlers, Rich White Families Lead Way," *The New York Times,* March 23, 2007.

[59] United States Census Bureau, United States Census Factfinder 2010, http://home2.nyc.gov/html/dcp/pdf/census/projections_report.pdf; United States Census Bureau, United States Census Factfinder 2010, http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

[60] New York City Department of City Planning, "Current Estimates of New York City's Population for July 2013," undated, http://www.nyc.gov/html/dcp/html/census/popcur.shtml. See also: Sam Roberts, "Population Growth in New York City Is Reversing Decades-Old Trend, Estimates Show," *The New York Times,* March 27, 2014.

[61] Unfortunately, the DOE does not report on students in segregated special education classes by age or grade.

[62] The 2010 Census data does not reflect this increase but has been disputed and is currently under review.

[63] Erin Durkin, "City public schools to add over 4000 new pre-K seats this fall," *New York Daily News*, April 2, 2014.

[64] Eunice and George Grier, *Enrollment Projections 2012 to 2021 New York City Public Schools,* Volume II: Narrative Report, Maryland: The Grier Partnership, January 2013, http://tinyurl.com/ovbfgd4. See also: Statistical Forecasting LLC, Enrollment Projections for the New York City Public Schools 2012-13 to 2021-22, Volume II, New Jersey: Statistical Forecasting, LLC, February 2013, http://tinyurl.com/p7rfzqs.

[65] Julie Shapiro, "TriBeCa's Coveted P.S. 234 To Hold Lottery for Kindergarten Seats," *DNA Info,* February 2, 2011; Aline Reynolds, "School rezoning distresses Downtown community," *Downtown Express,* April 20, 2011; Eric Greenleaf, "School Overcrowding: Progress and disappointment," *Downtown Express,* April 11, 2012.

[66] Joseph Avila, "Added Schools Lag Housing," *The Wall Street Journal,* March 13, 2012.

[67] Matt Chaban, "A wave of development looms in downtown Bklyn," *Crains NY Business,* March 14, 2013.

[68] Matt Chaban, "A wave of development looms in downtown Bklyn."

[69] Mireya Navarro and Michael M. Grynbaum, "De Blasio Sets a 10-Year Plan for Housing, Putting the Focus on Affordability," *The New York Times,* May 5, 2014.

[70] New York City School Construction Authority, "Projected New Housing Starts as Used in 2009-2018 Enrollment Projection," http://tinyurl.com/mfhjv73; "Projected Public School Ratio," https://data.cityofnewyork.us/Education/Projected-Public-School-Ratio/n7ta-pz8k.

[71] NYC School Construction Authority, "Projected New Housing Starts as Used in 2012-2021 Enrollment Projection," http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Housing/2012-21HousingWebChart.pdf; "Projected public school ratio," https://data.cityofnewyork.us/Education/Projected-Public-School-Ratio/n7ta-pz8k.

[72] Personal communication, Laurie Windsor, President, Community Education Council, April 24, 2014.

[73] New York City Department of Education, *Proposed Five Year Capital Plan for FY 2015 – 2019*, 8.

[74] Class Size Matters has repeatedly asked for an analysis of the DOE's estimated seats need of 49,245, including how many of these seats are required to help alleviate existing over-crowding, how many to address enrollment growth, and how many to replace the TCUs or reduce class size. The DOE has failed to provide this analysis.

[75] New York City Council, *Transcript of the City Council Committee on Education Hearing on New York City School Facilities,* 88, June 24, 2013, http://legistar.council.nyc.gov/View.ashx?M=F&ID=2565615&GUID=FBEDC6FD-A63A-4373-A4D6-8207D549416E.

[76] New York City Department of Education, New York City School Construction Authority, *2010-2011 Enrollment, Capacity and Utilization Report,* New York: New York City School Construction Authority, September 2011, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Enrollment/2010-2011-Bluebook.pdf. According to the School Construction Authority (SCA), the Blue Book "identifies the maximum physical capacity of all Department of Education buildings to serve students, compared to actual enrollments, which together allow for a standard framework with which to assess the utilization of our buildings."

[77] New York City Department of Education, New York City School Construction Authority, *2010-2011 Enrollment, Capacity and Utilization Report.*

[78] All charts use target figures unless otherwise specified. New York City Department of Education, New York City School Construction Authority, *Enrollment, Capacity, and Utilization Reports, 2006-2011,* http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Pages/EnrollmentCapacityUtilization.aspx.

[79] These figures are calculated from the annual Blue Book report: New York City Department of Education, New York City School Construction Authority, *2012-2013 Enrollment, Capacity, and Utilization Report,* New York: New York City School Construction Authority, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Enrollment/2012-2013_Classic.pdf.

[80] There is no enrollment data listed for the thousands of New York City high school students housed in TCUs, only partial data for District 75 students, and no information about how many elementary and middle school students are assigned TCUs for their art, drama, or science classes. For more on the gaps, errors, and misleading reporting of DOE as regards TCUs, see Leonie Haimson, *Testimony Before the Report and Advisory Board Review Commission on why the DOE should continue to be obligated to report on class size and TCUs,* May 11, 2012, http://www.classsizematters.org/wp-content/uploads/2012/10/Testimony-Class-Size-Reporting-5-11-12.pdf.

[81] Al Baker, "Push to Rid City of Classrooms That Are Anything but Temporary, *The New York Times,* March 31, 2014. See also comments of Kathleen Grimm and Lorraine Grillo, New York City Council, *Transcript of the Minutes of the Committee on Education,* March 18, 2014, p. 38, http://legistar.council.nyc.gov/View.ashx?M=F&ID=3047297&GUID=7750345C-A677-43A9-ACBF-1B289245B542.

[82] NYC Department of Education, 2012-2013 TCU Report, New York: New York City Department of Education, http://www.classsizematters.org/wp-content/uploads/2014/04/Intro-550-Report-2012-2013.doc, http://www.classsizematters.org/wp-content/uploads/2014/04/Intro-550-12-13-Part-1.pdf, http://www.classsizematters.org/wp-content/uploads/2014/04/Intro-550-12-13-Part-2.pdf.

[83] New York City Department of Education, *2012-2013 TCU Report*.

[84] Arthur Goldstein, personal communication to Leonie Haimson, April 22, 2014.

[85] There are other confusing elements and omissions in the TCU report that comes in two parts, Part 1 with enrollment, and Part 2 with capacity. There is no explanation offered for why the six TCUs used for District 75 classrooms at the two Staten Island schools do not report their enrollment (included in Part 1 but not Part 2 of the TCU report), and why the two schools in Queens with 23 TCU District 75 classrooms do not have reported enrollment (included in Part 2 but not Part 1 of the report). Five high schools, two D75 schools, and 23 elementary and middle schools do not have enrollment, capacity or classrooms included in Part 2 of the report, but are listed in Part 1 of the report. Why schools with TCUs are included in Part I of the report, along with their capacity, but not in Part 2, which includes TCU enrollment, and vice versa, is unexplained. The data provided by the report is also inconsistent with the TCU data provided in the Blue Book. All three documents should have consistent data; and the TCU report should have capacity and enrollment reported on the same page in order to eliminate this confusion.

[86] Ewa Kern-Jedrychowska, "Thousands of City Students Have Trailers For Classrooms," *DNA Info,* September 20, 2012,; Tanyanika Samuels, "'Small victory' for PS 106 parents; Students move out of moldy trailers to main building," *New York Daily News*, February 2, 2010.

[87] New York City Council, *Transcript of the Minutes of the Committee on Education, Hearings on the Expense Budget,* March 27, 2012, 295-6.

[88] New York City Department of Education, New York City School Construction Authority, *FY 2015 – 2019 Proposed Five Year Capital Plan,* New York: New York City School Construction Authority, February 2014, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/CapPlan/02012014_15-19_CapitalPlan.pdf.

[89] New York City Department of Education, New York City School Construction Authority, *FY 2015 – 2019 Proposed Five Year Capital Plan,* 30.

[90] Between 2006 and 2008, for example, the Target capacity for grades 9-12 was lowered to 30 students per class from 34, and was set at 28 instead of a range of 28-31 for middle grades, depending on whether the school was Title One. The Target capacity of grades K-3 remained at 20 students per class, and grades 4-5 at 28. One should note that apart from grades K-3, these class size targets are still much greater than those included in the city's class size reduction plan, which adopted targets of 23 in grades 4-8 and 25 in high school after the Contracts for Excellence law was passed by the state in 2007.

[91] Yasmeen Khan, "Special Ed Provider Shortage Persists," *WNYC,* October 8, 2012.

[92] According to the annual facilities survey, I.S. 125 used one of these temporary spaces, Q947 (the eight room transportable with a current utilization of 123%) for 1st grade in the 2009-2010 year, but is currently using them for 5th grade, Special Education, and multipurpose space according to the facilities survey for 2010-2011. The DOE does not provide enrollment information for non-general education or special education spaces (in the Blue Book or elsewhere), further distorting the overcrowding at I.S. 125, since the utilization does not reflect the use of the special education and multipurpose temporary spaces. See also New York City Department of Education, New York City School Construction Authority, *2009-2010 Enrollment, Capacity and Utilization Report*, September 2010, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Enrollment/2009-2010-Bluebook.pdf; NYC Department of Education, School Construction Authority, 2010 Annual Facilities Survey I.S. 125., http://schools.nyc.gov/SchoolPortals/24/Q125/AboutUs/Statistics/facilities.htm.

[93] Though the original 2008 Instructional Footprint is no longer online, a Power Point that includes excerpts including its class size standards are contained in this DOE document, "The NYC DOE Footprint: A Data Tool for the assessment of school space within NYCDOE buildings," http://schoolsstg.nycenet.edu/NR/rdonlyres/262D4535-6A99-460A-A2EF-239FC22FC533/51667/NYCDOEFootprint.pdf This document also states, "The DOE will consider a school's current class size – or an approved plan to reduce class size– but will also expect that the school is making full use of specialty rooms consistent with the Footprint." This statement is not included in any of the following Footprints.

[94] New York City Department of Education, *The NYC DOE Instructional Footprint,* revised May 2009, http://tiny.cc/0unvgx

[95] New York City Department of Education, *Instructional Footprints, Consolidated Version,* 2011, http://tiny.cc/sppvgx

[96] New York City Department of Education, *The NYC DOE Instructional Footprint: School program for assessment of DOE buildings,* New York: New York City Department of Education, May 2009; http://tiny.cc/svovgx and September 2010 version, http://tiny.cc/d1ovgx

[97] New York City Department of Buildings, *Building Code of the City of NY Plus Reference Standards and Selected Rules and Regulations of the Department of Buildings, Includes Amendments to October 1, 2004,* New York: New York City Department of Buildings, 2004, 166, http://www.nyc.gov/html/dob/downloads/bldgs_code/amendement_set_1.pdf.

[98] New York City Department of Education, *2013-14 Preliminary Class Size Report,* New York: New York City Department of Education, November 15, 2013, http://schools.nyc.gov/AboutUs/data/classsize/classsize_2013_11_15.htm. All figures are for General Education, CCT (inclusion) and gifted and talented classes.

[99] Georgia Department of Education, "Guideline for Square Footage Requirements for Educational Facilities," May 30, 2012, http://tiny.cc/oqqvgx

[100] Texas Education Agency, Texas Administrative Code, School Facilities Standards for Construction on or after January 1, 2004, http://tiny.cc/l7ovgx

[101] California Department of Education memo, "School Facility Recommendations for Class Size Reduction," May 1998; http://www.cde.ca.gov/ls/cs/k3/recommend.asp.

[102] C. Kenneth Tanner, *Minimum Classroom Size and Number of Students Per Classroom, Revised Findings and Conclusions,* Athens: University of Georgia School Design and Planning Laboratory, September 1, 2009, http://sdpl.coe.uga.edu/research/territoriality.html.

[103] See New York State Education Department, "State Building Aid For Public School Districts and BOCES," July 2004, http://www.p12.nysed.gov/facplan/publicat/building_aid_guidelines_072804.html; and New York State Education Department, "Room sizes for Special Education Classes," undated, http://www.emsc.nysed.gov/facplan/articles/F01_room_sizes_for_spec_ed.html. The state guidelines recommend classrooms of at least 770 square feet for 12:1:1 classes, and 550 square feet for 5:1:1 classes, instead of the minimum size of 240 square feet.

[104] Class Size Matters, et al., *A Better Capital Plan: How to Make the City's New Five-Year Capital Plan for School Construction,* New York: Campaign for a Better Capital Plan, October 2008, http://www.classsizematters.org/wp-content/uploads/2011/04/A_Better_Capital_Plan_final_final.pdf.

[105] Emily Horowitz and Leonie Haimson, *How Crowded Are Our Schools? New Results from a Survey of NYC Public School Principals,* October 3, 2008, http://www.classsizematters.org/wp-content/uploads/2011/04/principal_survey_report_10.08_final1.pdf.

[106] This is the mean average response of principals. The median and mode responses are reported in the survey's appendix.

[107] A subsequent report from the New York City Comptroller found that not a single school in its sample complied with the state's minimal requirements for physical education. Office of the New York City Comptroller, *Audit Report on the Department of Education's Compliance with the Physical Education Regulations in Elementary Schools,* New York: Office of the New York City Comptroller, October 2011.

[108] The descriptions of those labeled gym includes AUDGYM, which implies that the room is also used as an auditorium. Our calculations are from the data in New York City Department of Education Office of Public Affairs, *Local Law 60 Report,* New York: New York City Department of Education, November 13, 2013, http://schools.nyc.gov/documents/CUReport/LocalLaw60Report.xls.

[109] We analyzed the DOE data supplied by *WNYC* here: http://project.wnyc.org/school-lunch-times/data/school_lunches_wnyc.csv. See also: Coulter Jones, "Is It Still Lunch at 10:45 a.m.? City Schools Serve Meals at Odd Hours," *WNYC,* February 10, 2014; Joseph Stepansky and Ben Chapman, "Lunch starts before 11 a.m. at more than half of city schools," *New York Daily News,* February 10, 2014.

[110] Section 2853(4)(c) of the New York State Education Law allows charter schools to lease public school "buildings and grounds" and to contract for the operation and maintenance, but also provides that "any such contract shall provide such services or facilities at cost." DOE provides space and services to co-located charter schools for free– which subsidy provides these schools with more than the average per pupil public funding for district public schools, according to the Independent Budget Office. See Ray Domanico and Yolanda Smith, *Charter Schools Housed in the City's School Buildings Get More Public Funding per Student than Traditional Public Schools,* New York City Independent Budget Office, February 15, 2011, http://ibo.nyc.ny.us/cgi-park/?p=272.

[111] For the stability of other categories of spending in the capital plan as compared to new capacity, see the charts in Class Size Matters, "The overcrowding crisis in NYC schools and the need to expand the Capital Plan," May 2011, http://www.classsizematters.org/wp-content/uploads/2011/05/2011-capital-plan-charts1.pdf.

[112] New York City Department of Education, New York City School Construction Authority *"Building on Success: Proposed 2010-2014 Capital Plan,"* New York: New York City School Construction Authority, November 2008, 7-8, http://source.nycsca.org/pdf/capitalplan/11-08_2010-14_CapitalPlan.pdf.

[113] See Kathleen Grimm, *Testimony of the New York City Department of Education and School Construction Authority on the FY 2011 Executive Budget,* May 14, 2010, http://legistar.council.nyc.gov/View.ashx?M=F&ID=936928&GUID=6EFADF9C-5933-483A-B7B4-1CD8C837CF69.

[114] DOE reported that charter schools created during the 2005-2009 Capital Plan were built for 73 cents on the dollar; meanwhile the city pays only 50 cents on the dollar for district public schools as the state puts up matching funds. See New York City Department of Education, *Building on Success FY 2010 – 2014 Five-Year Capital Plan; Proposed 2012 Amendment,* February 2012, 8. See also New York City School Construction Authority and New York City Department of Education, "Charter Facilities Matching Grant Program," http://source.nycsca.org/pdf/rfq_charter_facilities_matching_program.pdf in which the DOE requires a range of contributions of 10% to 33% from private sources depending on the length of the lease. For a discussion of the fact that the city gets matching funds from the state for district public school construction, and no state funds for charter school construction, see the discussion between Councilmember Robert Jackson and Deputy Chancellor Grimm in: New York City Council, *Transcript of the Minutes of the Committee on Finance, Executive Budget,* May 14, 2010, 212-214, http://legistar.council.nyc.gov/View.ashx?M=F&ID=939387&GUID=02185D6D-B3CD-4923-A515-CDBAB5D348A0.

[115] Ben Chapman, "City to pay $11G per student in three Success Academy charter schools booted from public space by Mayor de Blasio," *New York Daily News,* May 29, 2014.

[116] New York Assembly Bill A08556/Senate Bill S06356, Section 2853 of Education Law, Subdivision 3, http://assembly.state.ny.us/leg/?default_fld=&bn=A08556&term=2013&Summary=Y&Text=Y.

[117] Christina A. Samuels and Katie Ash, "N.Y.C. Hustles to Make Use of Pre-K Windfall From State," *Education Week,* April 7, 2014.

[118] Geoff Decker, "In New York City, a new siting process paves the way for more charter schools," *ChalkbeatNY* , March 31, 2014.

[119] Laura Feijoo, Office of School Support and Supervision, *Testimony of the New York City Department of Education On Charter School Management and Accountability Before the New York City Council Committee on Education,* May 6, 2014.

[120] Kate Taylor and Anna Phillips, "54 New Schools Will Open This Fall, Bloomberg Says," *The New York Times,* April 17, 2012.

[121] New York City Department of Education, New York City School Construction Authority, *2011-2012 Enrollment, Capacity and Utilization Report,* New York: New York School Construction Authority, September 2012, 5; http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Enrollment/2011-2012_Classic.pdf.

[122] Noreen Connell, *Capital Promises: Why NYC Children Don't Have the School Buildings They Need,* New York: Educational Priorities Panel, July 2007, ii.

[123] Noreen Connell, *Capital Promises: Why NYC Children Don't Have the School Buildings They Need,* 41.

[124] Marc Sternberg, *Testimony of the New York City Department of Education on Co-location in New York City Public Schools Before the New York City Council Education Committee,* April 19, 2012.

[125] See, for example, M440 in Manhattan in the untitled list of co-located schools and programs, New York City Department of Education, "current as of 5.8.12 for the 2012-2013 School Year," October 19, 2012, http://tiny.cc/vypvgx

[126] New York City Charter School Center, *Unequal Shares: The Surprising Facts About Charter Schools and Over-crowding,* New York: New York City Charter School Center, October 2011, http://www.nyccharterschools.org/storage/documents/unequal_shares.pdf. See also NY Charter School Center, *"Unequal Shares: The Surprising Facts About Charter Schools and Overcrowding – UPDATE,"* December 2012, http://www.nyccharterschools.org/sites/default/files/resources/unequal_shares_update.pdf.

[127] This figure was derived by analyzing every Panel for Educational Policy meeting agenda item under the "Significant Changes in School Utilization" link for the 2010-2011, 2011-2012, and 2012-2013 school years up to July 18, 2012. Each time "co-location" was included in the classification of an agenda item, we looked at utilization data provided by DOE in the most up-to-date EIS.

[128] New York City Department of Education, Amended Proposed Co-location of the Fifth Grade of Harlem Success Academy Charter School 2 (84M384) and the Fifth Grade of Harlem Success Academy Charter School 3 (84M385) with P.S. 185 Early Childhood Discovery and Design Magnet School, (03M185), P.S. 208 Alain L. Locke Magnet School for Environmental Stewardship (03M208), Harlem Link Charter School (84M329), P226M@P208M (75M226), in Building M185/208 During the 2012-2013 School Year, February 28, 2012, http://tiny.cc/aaqvgx . An example of this is PS 208, an environmentally-themed school on the Upper West Side, received a federal magnet grant to expand and diversify its enrollment, and yet its co-location with another charter school threatens their ability to do so. In response, the DOE pointed out that the building that houses PS 208 and three other schools was only at 79 percent capacity during the 2011-12 school year. Yet they failed to mention that in the 2012-13 year, as a result of the charter co-location, the utilization rate would be increased to 85-101 percent, according to the official Educational Impact Statement. Even these figures do not adequately take into account the need for smaller class sizes, adequate space dedicated to intervention and special education services – and the specialized programs intended to attract and diversify the student population at PS 208 that are funded by its magnet grant.

[129] New York City Department of Education, Educational Impact Statements for the following proposals for significant change in school utilization: Co-location of grades 5-8 of SA - Harlem 4 @ M149, Opening and Co-location of Success Academy - NY 1 K-4 @ M520/Murry Bergtraum, Opening and Co-Location of SA - New York 5 @ Q400, Co-location of Explore Exceed Grades 6-8 @ K320, Co-Location of New School Achievement First North Brooklyn Preparatory 5-8 @ K299, Co-Location of American Dream @ X030, TER of I.S. 131 and Opening and Co-location of Success Academy - NY 2 @ X131, Co-location of Girls Prep Charter School Grades 6-8 @ X120, Co-location Expansion of Mott Hall Charter School @X063, TER of 13K113 and Opening and Co-Location of Compass Charter School @ K113, Resiting and Co-location of Success Academy 7 from K167 to K161, Co-location of Uncommon High School 3 @ K515/South Shore, Co-location Extension of Invictus Preparatory Charter School @ K218, Opening and Co-location of Success Academy - NY 3 @ K096, Co-location of Coney Island Prep K-4 @ K281, TER of 22K078 and Opening and Co-location of Success Academy - NY 4 @ K078, SA 6 into IS 59 Springfield Gardens (29 Q059) & PS 176 Cambria Heights (29Q176). Educational impact statements individually available at http://tinyurl.com/meafwz3 and http://tinyurl.com/m5erxc2

[130] New York City Department of Education. Revised Educational Impact Statement, Extension of the Co-Location of PAVE Academy Charter School (84K651) and P.S. 15 Patrick F. Daly (15K015) in School Building K015, April 9, 2010, http://tinyurl.com/k9psenr.

131 Petition to the Commissioner of Education and Request for Stay, *In the Matter of John Battis and Lydia Bellahcene,* from action of the New York City DOE regarding the resolution to continue and expand the co-location of PAVE Academy Charter School with PS 15 Patrick F. Daly School, March 1 2010, http://www.advocatesforchildren.org/Petition%20for%20Website.pdf?pt=1; See also Advocates for Children, *Public School Parents Challenge City Vote to Give Public School Classrooms to Charter School: Complaint to the State Education Commissioner Alleges Legal Violations,* March 1 2010, http://www.advocatesforchildren.org/Press%20Release%20Final.pdf?pt=1; See also Juan Gonzalez, "Public School 15 in Brooklyn one of many struggling against charter schools," *New York Daily News*, January 19, 2010.

132 Ben Chapman, "Red Hook Parents Push to Toss PAVE Charter School from PS 15 Space," *New York Daily News,* May 12, 2010; See also: Michele De Meglio, "P.S. 15 Parents Sue City," *New York Post,* March 3, 2010.

133 New York State Education Department, *Appeal of John Battis and Lydia Bellahcene* from action of the New York City Department of Education and PAVE Academy Charter School regarding school utilization, Decision No. 16,115. August 2, 2010. http://www.counsel.nysed.gov/Decisions/volume50/d16115.htm.

134 Data on the percent of students with IEPs at PS 15 and at PAVE are from DOE's 2011-2012 Progress report spreadsheet, http://tiny.cc/8wqvgx. The school also has significantly higher percent of English Language Learners (8.5% compared with 5.4%); a higher economic need index (0.87 vs. 0.64); and a higher peer index (65.27 vs. 51.36) than the charter school. The Economic Need Index is based on the percent of students in Temporary Housing, the percent eligible for public assistance and the percent eligible for free lunch. The Peer Index is determined by the Economic Need Index, combined with the percent of students with disabilities, percent Black/Hispanic, and percent English Language learners. For the definition of the peer and economic indices, see New York City Department of Education, Educator Guide for the New York City Progress Report for Elementary/Middle/K-8 for 2011-12, January 4, 2013,http://tinyurl.com/mlz9rb6.

135 Data on IEP and ELL students at PS 241 are from DOE's 2011-2012 Progress Report spreadsheet, see link above. Harlem Success Academy 4 had a much lower need level, based on data from the same spreadsheet: 17% of students had IEPs and 7.5% were ELLs. Moreover, the students at PS 241 had a higher economic need index at 0.83 vs 0.67 at Harlem Success 4; and a higher peer index of 64.17 vs. 54.28. See footnote 134 for definitions of economic need and peer indices.

136 The transfer and special education figures were confirmed by school staff at PS 241.

137 By comparing the last columns in the 2011-2012 Blue Book, which contain the words Actual #CL (meaning actual number of cluster rooms) and Target CL #. The information in these columns are not always accurate however; for example, according to sources, the Blue Book lists PAVE Academy as having no cluster rooms, when the school really had a science lab, an art room, a PD room, and several offices.

138 Data on Opportunity charter students with IEPs from DOE's 2011-2012 Progress report spreadsheet; see link at endnote #134 above.

139 Rose D'souza, "Opportunity Locked," *School Stories,* May 11, 2012.

140 According to *InsideSchools,* 10.9% of PS 30 students were English Language Learners and 30.1% had IEPs (individualized education plans, indicating special needs) in 2010-2011, http://insideschools.org/elementary/browse/school/192. By 2011-2012 the percent of ELL students had risen to 13.1 %, and those with IEPs increased to 33%. Compare that to the Harlem Success II: 10.1 % students with IEPs, and only 6.3% ESL students. Data from DOE's Progress report spreadsheet, http://tiny.cc/pfrvgx. Also compare the Economic Need index of the two schools: PS 30 much higher at 1.02, HSA II at 0 .67.

141 Victorian Bekiempis, "Upper East Side Parents Speak Out Against Charter Schools at P.S. 158," *DNA Info*, February 12, 2013.

142 This is confirmed by staff and students at several of the schools co-located with Success Academy.

143 Institute of Education Sciences, US Department of Education, "Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User Friendly Guide," December 2003.

144 Spyros Konstantopoulos and Vickie Chun, *What Are the Long-Term Effects of Small Classes on the Achievement Gap? Evidence from the Lasting Benefits Study,* American Journal of Education, 116, November 2009; Alan B. Krueger, *Economic Considerations and Class Size,* The Economic Journal, 113, February 2003.

145 New York State Education Department, "Information, Reporting and Technology Services, Average Class Size for Selected Assignment Codes, 2010-2011," http://www.p12.nysed.gov/irs/pmf/2010-11/2011-Avg-Class-Size.pdf.

[146] Emily Horowitz and Leonie Haimson, *How Crowded Are Our Schools? New Results from a Survey of NYC Public School Principals,* October 3, 2008, 7, http://www.classsizematters.org/wp-content/uploads/2011/04/principal_survey_report_10.08_final1.pdf.

[147] See Slide 9, with "smaller class size" the top choice of ten options offered to parents for changes they would like to see at their children's schools, for all three years the survey has been given; New York City Department of Education, New York City School Survey Citywide Results, June 2011, http://tiny.cc/0jrvgx

[148] Campaign for Fiscal Equity, Inc., et al. v. State of New York, et al., 100 N.Y.2d 893, 911-12 (2003) ("CFE II").

[149] New York State Education law § 211-D Contracts for Excellence, http://law.onecle.com/new-york/education/EDN0211-D_211-D.html. See also New York State Education Department, "Contracts For Excellence Approved For 55 School Districts," November 19 2007, http://www.oms.nysed.gov/press/C4ERelease.htm. See also NYS Education Department, *Citywide Class Size Reduction Five-Year Plan, Five-Year Plan Executive Summary,* November 8, 2007, http://tinyurl.com/kbyv4pm.

[150] The sharp increase in Kindergarten class sizes over the last three years is particularly deplorable; a recent study revealed that students who are placed in small classes in Kindergarten were more likely to graduate from college, own their own home and have a 401(k) more than 20 years later. Raj Chetty, et. al., *How Does Your Kindergarten classroom affect your earnings? Evidence from Project Star,* NBER Working Paper 16381.

[151] New York City Department of Education, *2013-14 Preliminary Class Size Report,* New York: New York City Department of Education, November 2013, http://schools.nyc.gov/AboutUs/data/classsize/classsize_2013_11_15.htm.

[152] For the original class size goals in the city's Contract for Excellence plan, see p. 2 of the DOE's 2008-2009 submission to the state, http://tinyurl.com/kbyv4pm.

[153] Philissa Cramer, "Annual tally of soon-to-be kindergartners on wait lists is 2361," *Chalkbeat NY,* April 12, 2013. See also Anna Schneider, "K waitlists persist; 2 overflow schools to open," Inside Schools, April 12, 2013. Data file available at: http://insideschools.org/blog/item/download/33_1127b3a0770556758d0becad4490edad.

[154] Amy Zimmer and Nigel Chiwaya, "Number of Waitlisted Kindergarteners Dropped by Half this Year, DOE Says," *DNAInfo*, April 21, 2014.

[155] Pamela Wheaton, "Long Kindergarten Waitlists Persist at 5 schools," InsideSchools.org, April 23, 2014.

[156] Leonie Haimson, "Mayor-elect Bill de Blasio's Education Promises," *NYC Public School Parents Blog,* November 15, 2013, http://nycpublicschoolparents.blogspot.com/2013/11/mayor-elect-bill-de-blasios-education.html. See also de Blasio's signed responses at a Mayoral candidate forum, June 14, 2013, at http://www.classsizematters.org/wp-content/uploads/2013/06/Bill-deBlasio.pdf and his responses to the NYC Kids PAC candidate survey, July 2013, http://nyckidspac.org/wp-content/uploads/2013/06/NYC-Kids-PAC-Questionnaire-Bill-de-Blasio.pdf.

[157] See New York State Education Chapter II, Regulations Of The Commissioner, Part 155, Educational Facilities § 155.1 "Teaching areas shall have fenestration which permits a view of the exterior, unless otherwise approved by the commissioner," http://www.p12.nysed.gov/facplan/Laws_Regs/8NYCRR155.htm

[158] School Construction Authority, *Projected Public School Ratio # Of Pupils Generated From New Housing Per Unit by Borough And Age,* undated, http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Housing/NewHousingMultiplier.pdf Also in: Mayor's Office Of Environmental Coordination, *City Environmental Quality Review Technical Manual,* March 2014, New York: Mayor's Office of Environmental Coordination, Table 6-1, 172, http://www.nyc.gov/html/oec/downloads/pdf/2014_ceqr_tm/2014_ceqr_technical_manual.pdf.

[159] New York City Department of Health and Mental Hygiene, *The City Of New York Summary Of Vital Statistics 2012 Pregnancy Outcomes,* Table 1, New York: New York City Department of Health and Mental Hygiene, February 2014, http://www.nyc.gov/html/doh/downloads/pdf/vs/vs-pregnancy-outcomes-2012.pdf.

[160] See the analysis of different versions of the CEQR housing ratio discussed in: Lindsay Fritchman, *Request for Reform of CEQR Analysis of Impacts on Public Schools,* New York: New York Lawyers for the Public Interest, April 2014. This paper also identifies many of the flaws in the CEQR planning process in relation to schools.

[161] Mayor's Office Of Environmental Coordination, *City Environmental Quality Review Technical Manual,* Table 6-8, 177, http://www.nyc.gov/html/oec/downloads/pdf/2014_ceqr_tm/2014_ceqr_technical_manual.pdf.

[162] See above and: Corey Johnson and Robert J. Benfatto, Jr., *Statement of District Needs,* Manhattan Community Board No. 4 (Fiscal Year 2014), New York: Manhattan Community Board No. 4, http://www.nyc.gov/html/mancb4/downloads/pdf2012/32%20BTF%20Statement%20of%20District%20Needs%20FY%2014.pdf.

[163] Alan Hevesi, *Overcrowding in New York City Public Schools: Where Do We Go From Here?* New York: New York City Comptroller's Office, January 1995.

[164] Al Baker, "With Legacy on His Mind, Mayor Adds More Schools," *The New York Times,* April 2, 2013.

[165] See also the examination of this issue in Clara Hemphill, et al. *The New Marketplace: How Small School Reforms and School Choice Have Reshaped New York City's High Schools,* New York: Center for New York City Affairs, Milano The New School, July 2009, 50-51; showing student outcomes at about the same level for midsize schools of 600-1400 students, with more advanced course offerings and sports teams.

[166] The most cited research on school size showing optimal results for schools 600-900 students: Valerie E. Lee and Julia B. Smith, *High School Size: Which Works Best and for Whom?* Educational Evaluation and Policy Analysis, Vol. 19: 3, September 21, 1997, 205-227.

[167] We have found only three studies that controlled for both school size and class size; and all three concluded that class size was the factor more closely correlated with improved student outcomes. For elementary schools, see Douglas Ready and Valerie E. Lee, *Optimal Context Size in Elementary Schools: Disentangling the Effects of Class Size and School Size,* Brookings Papers on Education Policy, 2006, 99-135. For all schools, Donald McLaughlin and Gili Drori, *School-Level Correlates of Academic Achievement: Student Assessment Scores in SASS Public Schools,* Washington, DC: U.S. Department of Education, 2000, http://nces.ed.gov/pubs2000/2000303.pdf. Also see Denise C. Gottfredson and Stephanie M. DiPietro, School Size, Social Capital, and Student Victimization, which suggests that reducing the ratio of students to teachers and reducing the number of different students taught by the average teacher are likely to reduce student victimization, while reducing school size is not.

[168] See for example, the comments of Russ J. Holden, School Construction Authority counsel in *Meeting of the Trustees of the NYC School Construction Authority,* March 16, 2012, http://www.nycsca.org/Business/WorkingWithTheSCA/Legal/MeetingMinutes/20120316SCABoTMinutes.pdf.

[169] See New York City Department of City Planning, *Inclusionary Housing Program,* http://www.nyc.gov/html/dcp/html/zone/zh_inclu_housing.shtml.

[170] Texas adopted the first general impact fee enabling act in 1987. To date, twenty-eight states have adopted impact fee enabling legislation. See Clancy Mullen, State Impact Fee Enabling Acts, Duncan Associates, January 21, 2012, http://www.impactfees.com/publications%20pdf/state_enabling_acts.pdf. An article by an attorney argues that New York State may not need enabling legislation for cities or counties to impose them: Barnard V. Keenan, *A Perspective: New York Communities and Impact Fees,* 7 Pace Environmental Law Review 329, 1990, http://digitalcommons.pace.edu/pelr/vol7/iss2/4.

[171] Duncan Associates, "Impact Fees FAQ," undated, http://www.impactfees.com/faq/general.php#.

[172] American Planning Association, "Policy Guide on Impact Fees," 1997, http://www.planning.org/policy/guides/adopted/impactfees.htm.

[173] New York City Comptroller's Office, *New York City Capital Acceleration Plan: Creating Jobs Today by Improving Tomorrow's Infrastructure,* New York: New York City Comptroller's Office, May 2012, http://www.comptroller.nyc.gov/bureaus/opm/reports/2012/NYC_CapAccelerationPlan_v28.pdf.

[174] Michael M. Grynbaum, "Effort to Speed Up Repairs Will Save the City $200 Million," *New York Times,* October 17, 2012; Hilary Russ, "New York City to speed up $1 billion in capital projects," *Reuters,* October 17, 2012.

[175] Henry Goldman, "NYC to Accelerate $1 Billion in Capital Expenditures, Mayor Says," *Bloomberg News,* October 17, 2012.

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