

**A. INTRODUCTION**

This chapter examines the Proposed Actions' potential effect, by 2015 and 2030, on services provided by public or publicly funded community facilities. Private facilities and services, such as private schools, are not assessed. A preliminary analysis was initially conducted to determine if the Proposed Actions would exceed the established thresholds in the 2001 *City Environmental Quality Review (CEQR) Technical Manual* for community facilities and if more detailed analyses would therefore be necessary. Where detailed analyses are required, the chapter describes existing conditions and examines and compares conditions in the future without the Proposed Actions with conditions in the future with the Proposed Actions to determine the Proposed Actions' potential impacts. This assessment also considers the effects of direct displacement of other community facilities located in the Project Area.

As described in Chapter 2, "Procedural and Analytical Framework," for EIS purposes, maximum and minimum ranges of floor area have been developed for each component of the Academic Mixed-Use Area, and these ranges have been used to establish a "reasonable worst-case development scenario." To conduct a conservative community facilities analysis, the reasonable worst-case development scenario assumes the maximum amount of housing for graduate students, faculty, and other employees for Columbia University in Subdistrict A. Based on the maximum housing for graduate students, faculty, and other employees, the reasonable worst-case development scenario for Subdistrict A would consist of approximately 281 units for the 2015 analysis year and approximately 2,087 units for the 2030 analysis year. The reasonable worst-case development scenario for the Other Areas, as described in Chapter 2, would consist of 99 units for both the 2015 and 2030 analysis years (on Projected Development Site 25). In total, the reasonable worst-case development scenario for the community facilities analysis would consist of 380 units for the 2015 analysis year and 2,186 units for the 2030 analysis year.<sup>1, 2</sup>

**PRINCIPAL CONCLUSIONS**

Although the Proposed Actions would introduce new residents to Manhattanville, the Proposed Actions would not create any significant adverse impacts on community facilities and services. By 2030, the community facilities reasonable worst-case development scenario for the Proposed Actions would introduce approximately 3,132 residents and 2,186 new housing units, which would likely generate approximately 328 new elementary and intermediate school children in the area. Even with this increased enrollment, the public elementary schools within approximately ½ mile of the Project Area would continue to operate below capacity. While intermediate schools

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<sup>1</sup> The total number of residential units for the 2030 analysis year is cumulative and includes the residential units for the 2015 analysis year.

<sup>2</sup> The reasonable worst-case development scenario results in a level of University housing that is permitted under the General Project Plan (GPP) but not expected to ever be developed.

## **Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS**

in the ½-mile study area would be above capacity in the future with the Proposed Actions, the increase in the deficiency of seats would be less than the *CEQR Technical Manual* threshold value of 5 percent, compared with the future without the Proposed Actions. Therefore, no significant impacts on public intermediate schools would occur as a result of the Proposed Actions.

The number of new residents added to library service areas by the Proposed Actions would be a very small percentage (1.1 percent) of the total annual library users. Therefore, the Proposed Actions would not cause a significant adverse impact on library resources.

According to the thresholds set forth in the *CEQR Technical Manual*, the Proposed Actions would not have significant adverse impacts on hospitals or health care facilities, or day care facilities. The Proposed Actions would not affect the physical operations of, or access to and from, a fire station or police precinct house, and therefore the Proposed Actions would not have a significant adverse impact on police and fire services.

### **B. SCREENING LEVEL ASSESSMENT**

The *CEQR Technical Manual* recommends a community facilities screening analysis for any proposed project that adds 100 or more residential units. Since the community facilities reasonable worst-case development scenario for the Proposed Actions would generate approximately 2,186 new residential units, an analysis of community facilities has been undertaken.

In accordance with the *CEQR Technical Manual*, a preliminary analysis was conducted to determine if the Proposed Actions would exceed the established thresholds for community facilities and if more detailed analysis would therefore be necessary. As shown in Table 5-1, different types of community facilities have different thresholds.

**Table 5-1**  
**Preliminary Screening Analysis Criteria**

<b>Community Facility</b>	<b>Threshold</b>
Public schools	More than 50 elementary/middle school or 150 high school students
Libraries	Greater than 5 percent increase in ratio of residential units to libraries in borough
Health care facilities (outpatient)	More than 600 low- to moderate-income units
Day care centers (publicly funded)	More than 50 eligible children based on number of low- to moderate-income units by borough
Fire protection	Direct effect only
Police protection	Direct effect only

**Source:** 2001 *CEQR Technical Manual*.

### **PUBLIC SCHOOLS**

Impacts on schools may result if there would be insufficient seats available to serve the population. The basic analysis typically begins with a calculation of the additional school-age population that would be introduced by a proposed action. To estimate the school-age population, the total number of units of the proposed action and the targeted income of prospective residents must be determined. A detailed analysis of public schools is required if a proposed action would generate more than 50 elementary/middle school students or 150 high school students.

By 2030, the community facilities reasonable worst-case development scenario for the Proposed Actions would introduce approximately 2,186 new housing units. Based on Table 3C-2 in the *CEQR Technical Manual*, the Proposed Actions would generate approximately 262 elementary school students, 66 middle school students, and 88 high school students. Since the Proposed Actions would generate more than 50 elementary/middle school students, further analysis of the Proposed Actions' potential effects on elementary and intermediate schools is required. Since the Proposed Actions are expected to generate fewer than 150 high school students, an analysis of public high schools is not required.

### **LIBRARIES**

Potential impacts on libraries may result from an increased user population. A noticeable change in service delivery is likely to occur only if a library is displaced or altered, or if a proposed action introduces a large residential population. As described in the *CEQR Technical Manual*, if the proposed action would increase by more than 5 percent the average number of residential units served by library branches in the borough in which it is located, the proposed action may cause significant impacts on library services and require further analysis.

Based on Table 3C-3 in the *CEQR Technical Manual*, a proposed action in the Borough of Manhattan that generates an additional 901 residential units would create a 5 percent increase in the number of units served per branch. For analysis purposes, the community facilities reasonable worst-case development scenario for the Proposed Actions would generate 2,186 units by 2030, and, therefore, additional analysis is necessary.

### **HEALTH CARE FACILITIES**

Analysis of health care facilities is generally conducted for a proposed action that introduces a sizable number of new low- or moderate-income residents, who may rely on nearby emergency and other outpatient clinic services. If the proposed action would generate more than 600 low- to moderate-income units, there may be increased demand on local public health care facilities, which may warrant further analysis. The community facilities reasonable worst-case development scenario for the Proposed Actions would generate approximately 99 residential units in the Other Areas. For analysis purposes, all of these units are being conservatively assessed as low-moderate income units. Even using this conservative analysis, the threshold is not reached, and no additional analysis is required for the Proposed Actions.

### **DAY CARE CENTERS**

Pursuant to the *CEQR Technical Manual*, a proposed action that would produce substantial numbers of subsidized, low- to moderate-income family housing units may generate a sufficient number of children eligible for subsidized day care to affect the availability of slots at public day care centers. If a proposed action generates 50 or more eligible children, further analysis may be appropriate.

As detailed in Table 3C-4 of the *CEQR Technical Manual*, 357 low-income or 417 low- to moderate-income units in Manhattan would yield 50 children eligible for public day care. The community facilities reasonable worst-case development scenario for the Proposed Actions would generate approximately 99 residential units in the Other Areas. For analysis purposes, all of these units are being conservatively assessed as low- to moderate income units. Even using this conservative analysis, the threshold is not reached, and no additional analysis is required.

## **FIRE PROTECTION**

Within the vicinity of the Project Area, Engine Co. 80/Ladder Co. 23 is located at 503 West 139th Street, and Engine Co. 37/Ladder Co. 40 is located at 415 West 125th Street. For fire protection services, the *CEQR Technical Manual* requires that a detailed assessment be conducted only if a proposed action would physically alter a fire protection facility, whether by displacement of the facility or by some other physical change. The Proposed Actions would have no such direct effect on fire protection services, and, therefore, no additional analysis is required.

## **POLICE PROTECTION**

The 26th Precinct, located at 520 West 126th Street, services the area within the vicinity of the Project Area. The 26th Precinct includes portions of the Columbia University Morningside campus; the campuses of City College of New York, Teachers College, Barnard College, and Union Theological Seminary; the Cathedral Church of St. John the Divine; Riverside Church; and Grant's Tomb.

Pursuant to the *CEQR Technical Manual*, police protection services only need to be analyzed if a proposed action physically alters a police facility, whether by displacement of the facility or by some other physical change. The Proposed Actions would have no such direct effect on police protection services, and, therefore, no additional analysis is required.

## **OTHER COMMUNITY FACILITIES**

Reality House, a private, nonprofit substance abuse and HIV treatment center, was formerly located at 637 West 125th Street between West 129th and West 130th Streets in the Project Area. Reality House provides employment, educational, housing, and legal services to the local population in Harlem, Washington Heights, and the South Bronx and is funded by the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

Reality House is currently in receivership and closed its operations at 637 West 125th Street in the middle of 2006 prior to Columbia entering into a contract to purchase the property. OASAS is working with the Reality House to reestablish and relocate its programs to other facilities in Northern Manhattan. During this period of transition, Columbia is providing temporary office space in 3280 Broadway, a University-owned building.

## **C. METHODOLOGY FOR DETAILED ANALYSIS**

### **PUBLIC SCHOOLS**

The Project Area is located entirely within Community School District (CSD) 5. The ½-mile study area extends slightly into portions of CSDs 3 and 6. According to the *CEQR Technical Manual*, the study area for analysis of educational facilities generally coincides with the region within the CSD serving the site of the proposed action. The Project Area is located within school planning region 1 of CSD 5; however, this school planning region extends east of the Project Area to the Harlem River and therefore includes schools far from the new housing units that would be created under the Proposed Actions. For a more conservative analysis on the potential impact of the project on nearby local public schools, a two-tier analysis was used. The first tier focused on the potential impacts to schools located within the ½-mile study area in CSD 5, since children residing in the Project Area would most likely attend elementary and intermediate schools in this area. The second tier analyzed the potential impacts to CSD 5 as a whole, since students may also attend schools within their district but outside their immediate vicinity. As population shifts within a

school district change over time, DOE can adjust attendance zones within districts to improve the composition and utilization of the affected school(s). This analysis focused on elementary and junior high schools because DOE assigns students to specific schools at these levels.

Since no part of the Project Area and only small portions of the ½-mile study area are located within CSD 3 and CSD 6, full impact analyses were not prepared for these school districts. However, a brief discussion of the districts' capacity has been included.

In addition, since 2003, DOE has been undergoing organizational and administrative changes based on City and federal policy. The No Child Left Behind Act of 2001, a federal initiative, is also being implemented. The No Child Left Behind Act is intended to help all students receive a quality education and attain academic achievement. Several schools in New York City have been identified as "schools in need of improvement." As a result of the No Child Left Behind Act, all students in these schools must be offered the option to transfer to another public school that has not been identified as a "school in need of improvement." Since these initiatives have not been fully implemented, the extent to which they may affect school placement and planning has not been fully determined. Therefore, no changes have been made to the methodology for analyzing school impacts.

Pursuant to the *CEQR Technical Manual*, if the detailed analysis finds that a proposed action would cause an increase of 5 percent or more in a deficiency of available seats in the affected schools (those within the study area), a significant adverse impact may result, warranting consideration of mitigation.

## **LIBRARIES**

The Proposed Actions would result in more than 901 new residential units in Manhattan, the threshold in the *CEQR Technical Manual* requiring a detailed public libraries analysis. According to the *CEQR Technical Manual*, neighborhood library branches serve areas based on the distance that residents would travel to use library services, which is typically not more than ¾ mile (referred to as the library's catchment area). All public libraries within a ¾-mile radius of the Project Area are included in the assessment. To determine the population of each library service area, 2000 U.S. Census data were assembled for all census tracts that fell primarily within the ¾-mile catchment area for each library. Pursuant to the *CEQR Technical Manual*, if a proposed action would increase the study area population by 5 percent or more over no action levels, and this increase would impair the delivery of library services in the study area, a significant impact could occur, warranting consideration of mitigation.

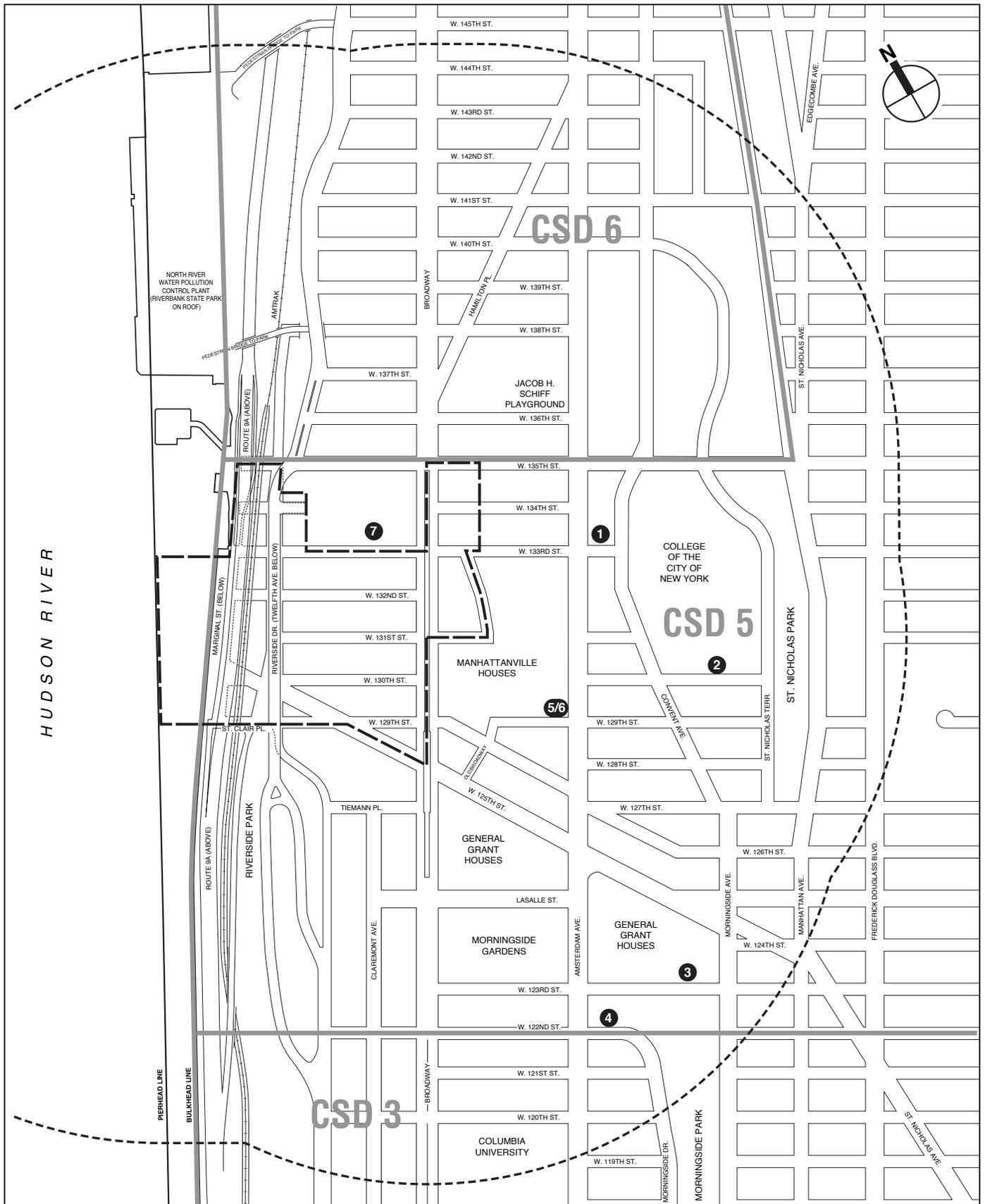
## **D. EXISTING CONDITIONS**

### **PUBLIC SCHOOLS**

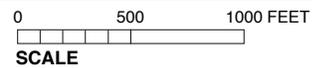
#### *ELEMENTARY SCHOOLS*

Four elementary schools are located within approximately ½ mile of the Project Area. (There are no elementary schools within the Project Area itself.) The schools are P.S. 161, located at Amsterdam Avenue and West 133rd Street; P.S. 129, on West 130th Street; P.S. 125, on West 123rd Street; and P.S. 36, on West 122nd Street (see Figure 5-1).

Additionally, CSD 5 is home to several charter schools, most of which share space with local public schools. At the present time, it is not known whether these charter schools will remain in



- Project and Rezoning Area Boundary
- CSD Boundary
- Study Area Boundary (1/2-Mile Perimeter)
- Public School



**MANHATTANVILLE IN WEST HARLEM REZONING AND ACADEMIC MIXED-USE DEVELOPMENT**

**Figure 5-1  
Public Schools**

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public school buildings in CSD 5 as they expand their programs. In 2005-2006, there were three charter schools housed in public elementary schools in CSD 5: the Harlem Children’s Zone/Promise Academy Charter School in P.S. 175 at 175 West 134th Street, with grades K and 6; the Kipp S.T.A.R. College Prep Charter School located in P.S. 125 at 433 West 123rd Street, with grades 5 and 6 (and plans to serve grades 7 and 8 as well in the future); and the Opportunity Charter School located in P.S. 92 at 222 West 134th Street with grades 6 and 7 (and future plans to serve grades 6–12).

According to the most recent enrollment and capacity figures available from DOE, which are for the 2005–2006 school year, three of the elementary schools in the study area are operating below their capacity, while one is operating slightly above capacity (see Table 5-2). P.S. 161 has 935 enrolled students, while the total capacity of the building is 853 students. Therefore, the school is utilizing 110 percent of its total capacity. P.S. 129 has 516 enrolled students. With a total capacity of 658 students, P.S. 129 is operating at only 78 percent of its total capacity. The P.S. 125 building operates at only 57 percent utilization, with 471 students enrolled in the P.S. 125 organization (and 244 students in the KIPP-Star Charter organization); the building capacity is 1,244 students. At P.S. 36, 564 students are enrolled. With a total capacity of 764 students, P.S. 36 is utilizing only 74 percent of its total capacity.

**Table 5-2**  
**Public Elementary/Intermediate School Enrollment, Capacity, and Utilization,**  
**2005–2006 School Year**

Map No. <sup>1</sup>	School Name	Enrollment	Program Capacity	Available Seats in Program	Program Utilization
<b>Elementary Schools Within ½-Mile Study Area<sup>2</sup></b>					
1	P.S. 161	<u>935</u>	<u>853</u>	<u>(82)</u>	<u>110%</u>
2	P.S. 129	<u>516</u>	<u>658</u>	<u>142</u>	<u>78%</u>
3	P.S. 125 <sup>3</sup>	<u>715<sup>4</sup></u>	<u>1,244</u>	<u>529</u>	<u>57%</u>
4	P.S. 36	<u>564</u>	<u>764</u>	<u>200</u>	<u>74%</u>
<b>Total</b>		<u>2,730</u>	<u>3,519</u>	<u>789</u>	<u>78%</u>
<b>CSD 5 Total</b>		<u>8,568</u>	<u>11,693</u>	<u>3,125</u>	<u>73%</u>
<b>Intermediate Schools Within ½-Mile Study Area<sup>2</sup></b>					
5	I.S. 286 <sup>5</sup>	<u>316</u>	<u>246</u>	<u>(70)</u>	<u>128%</u>
6	I.S. 172 <sup>5</sup>	<u>638</u>	<u>1,166</u>	<u>528</u>	<u>55%</u>
7	I.S. 195 <sup>3</sup>	<u>1,051</u>	<u>1,312</u>	<u>261</u>	<u>80%</u>
<b>Total</b>		<u>2,005</u>	<u>2,724</u>	<u>719</u>	<u>74%</u>
<b>CSD 5 Total</b>		<u>3,779</u>	<u>5,134</u>	<u>1,355</u>	<u>74%</u>
<b>Notes:</b>					
<sup>1</sup> See Figure 5-1 for school location.					
<sup>2</sup> P.S./I.S. 223 Mott Hall is located within the CSD 5 boundary but has not been included in the analysis. The school only serves students who reside within CSD 6’s boundaries.					
<sup>3</sup> P.S. 125 and I.S. 195 house charter schools.					
<sup>4</sup> <u>Includes 43 M226 SPED students</u>					
<sup>5</sup> I.S 286 and I.S. 172 are housed in the same building.					
<b>Sources:</b> Enrollment and capacity for individual schools and CSD 5: New York City Department of Education (DOE), <i>Utilization Profiles: Enrollment/Capacity/Utilization, 2005-2006</i> , target capacity. These figures include pre-K enrollment and charter schools housed in these buildings.					

As a whole, the four elementary schools within the ½-mile study area operate at 78 percent capacity. Overall in CSD 5, 8,568 students are enrolled in elementary schools that operate at an average utilization rate of 73 percent in the 2005–2006 school year.

Within a larger context, the average utilization rate for elementary schools within CSD 3 was 77 percent, whereas the average utilization rate for elementary schools within CSD 6 was 101 percent.

**INTERMEDIATE SCHOOLS**

Three intermediate schools are located within the approximately ½-mile study area. I.S. 286 and I.S. 172 are located in a single building at Amsterdam Avenue and West 129th Street, and I.S. 195 is located on West 133rd Street. In the fall of 2005, the Kipp Infinity Charter School opened in I.S. 195 at 625 West 133rd Street with grade 5 (future plans include serving grades 5–8 at this school), and the Harlem Children’s Zone/Promise Academy opened its Upper School facility at 35 West 125th Street.

As indicated in Table 5-2, two of the intermediate schools within the study area operate below capacity, while the other operates slightly above. I.S. 172 has a total of 638 enrolled students. With a capacity of 1,166 students, I.S. 172 utilizes only 55 percent of its capacity. I.S. 195 has a total of 1,051 enrolled students (including 79 students in KIPP Infinity Charter) and a capacity of 1,312 students. Therefore, the school utilizes only 80 percent of its capacity. I.S. 286 has a total of 316 enrolled students and has a capacity of 246 students. The school is therefore over capacity, operating at 128 percent of its total capacity.

As a whole, all the intermediate schools within the ½-mile study area operate at 74 percent of their capacity. Overall in CSD 5, there are 3,779 students enrolled in intermediate schools that operate at an average utilization rate of 74 percent.

Within a larger context, intermediate schools within CSD 3 operate at a utilization rate of 76 percent, whereas intermediate schools within CSD 6 operate at a utilization rate of 88 percent.

**LIBRARIES**

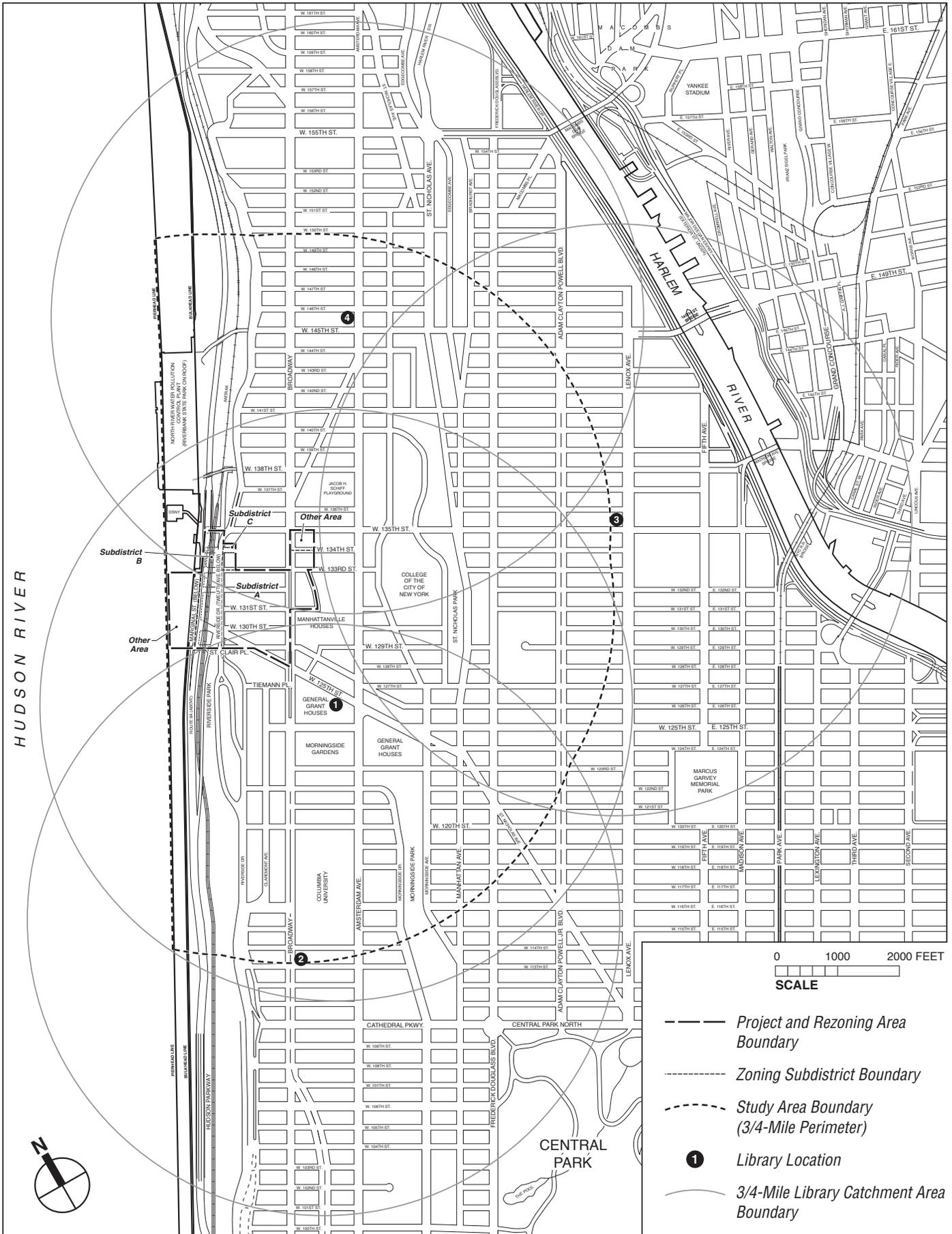
There are four New York Public Library (NYPL) neighborhood libraries located within a ¾-mile study area of the Project Area: the George Bruce, Morningside Heights, Countee Cullen, and Hamilton Grange branches. Both the George Bruce and the Morningside Heights branches are south of the Project Area, the Hamilton Grange branch is located to the north, and the Countee Cullen branch is almost directly east of the Project Area (see Table 5-3 and Figure 5-2).

**Table 5-3  
Library Services**

Map No. <sup>1</sup>	Library	Location	Volumes <sup>2</sup>	Circulation	Catchment Area Population
1	George Bruce Branch	518 West 125th Street	30,587	86,565	140,959
2	Morningside Heights Branch	2900 Broadway at West 113th Street	54,236	335,014	133,111
3	Countee Cullen Branch	104 West 136th Street	57,134	103,747	155,826
4	Hamilton Grange Branch	503 West 145th Street	42,368	39,302	162,789

**Notes:**  
<sup>1</sup> See Figure 5-2 for branch library locations.  
<sup>2</sup> Volumes include CDs, DVDs, and videotapes in addition to books.  
**Sources:** NYPL Government and Community Affairs FY 2005 Branch Statistics; DCP’s *Selected Facilities and Program Sites*, release 2005.1 (circulation data); US Census 2000 (catchment area population).

The George Bruce branch serves a population of 140,959, the Morningside Heights branch serves a population of 133,111 residents, the Countee Cullen branch currently serves a catchment area of 155,826 residents, and the Hamilton Grange branch serves an area of 162,789



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Figure 5-2 Library Locations

residents. However, it should be noted that each of these catchment areas overlaps with at least one other catchment area. These four libraries have a combined total of 184,325 volumes and a total residential population of 274,018. Residents can go to any NYPL branch and order from any of the other library branches.

All of these branches offer a wide selection of reading materials for people of all ages as well as computers with free Internet access. They also offer special programs, such as reading hours, book groups, puppet shows, films, lectures, and more. Both the George Bruce and Hamilton Grange branches offer a large collection of Spanish-language books, and include an auditorium and meeting room, respectively, for use by neighborhood children and local groups. The Countee Cullen branch also has a center for reading and writing in the library. The George Bruce branch's most recent renovation was completed in June 2001 and included a new façade, an elevator, and new computer work stations.

## **E. 2015 FUTURE WITHOUT THE PROPOSED ACTIONS**

Future development projects that have been announced, are in an approval process, or are being constructed, and proposals for rezoning and public policy initiatives likely to be built by 2015 without the Proposed Actions, are presented in Table 2-1 and shown in Figure 2-1 (see Chapter 2).

In the 2015 future without the Proposed Actions, new residential development is expected to occur in the study area. By 2015, two proposed residential development projects with substantial amounts of subsidized housing and six residential developments consisting entirely of market-rate housing are likely to be constructed. The developments with affordable housing are the 170-unit Strivers Gardens project and the 200-unit West 127th Street/Cornerstone project (see Table 5-4). The development of Strivers Gardens is a project of the New York City Housing Development Corporation and the Department of Housing Preservation and Development (HPD). Approximately 75 percent of the units in Strivers Gardens are required to be affordable units. The West 127th Street/Cornerstone project is being constructed under the HPD Cornerstone program. For this analysis, it has been conservatively assumed that all of the units in the HPD West 127th Street/Cornerstone project will be developed as affordable housing units. This analysis uses the more conservative assumption of low-income units over low-moderate-income units for units designated as affordable. Several rezoning applications have been submitted by Tuck-It-Away Associates, L.P., for five parcels in the Project Area. For each site, a development scenario has been identified by the applicant in which the existing storage uses would be demolished, and a new residential building would be developed. A rezoning application has also been submitted for one other parcel in the Project Area by Hudson North American. The redevelopment scenario for that site, as identified by the applicant, would convert the existing building to residential and retail uses and construct new residential development above. The development scenarios for all these rezoning applications, with market-rate units, have been assumed for purposes of this analysis (see Table 5-4). Together, it would result in 337 units of new housing.

A portion of the 125th Street Corridor Rezoning area would extend into the study area. Of the 26 total projected development sites identified in the DEIS for this rezoning (see Chapter 2), only five sites would overlap with the study area. Two sites would be located on the south side of 125th Street between Morningside and Manhattan Avenues, and three sites would be located between Manhattan Avenue and Frederick Douglass Boulevard—two on the north side and one on the south side of 125th Street. In total, these five projected development sites would result in 260 residential units, of which 52 would be affordable.

Table 5-4

**Expected Residential Development: 2015 Future Without the Proposed Actions**

<b>Project Name</b>	<b>Location</b>	<b>Total Units</b>	<b>Low Income Units</b>	<b>Market Rate Units</b>
Strivers Gardens	Frederick Douglass Boulevard between 134th Street and 135th Street	170	128	42
West 127th Street/Cornerstone	West 127th Street and Frederick Douglass Boulevard	200	200	0
655 West 125th Street	West 125th Street between Broadway and Twelfth Avenue	<u>80</u>	0	<u>80</u>
614 West 131st Street	Broadway between West 131st and West 134th Streets	<u>42</u>	0	<u>42</u>
3261 Broadway	Broadway between West 131st and West 134th Streets	<u>113</u>	0	<u>113</u>
3300 Broadway	Broadway between West 133rd and West 134th Streets	<u>125</u>	0	<u>125</u>
<u>3320 Broadway</u>	<u>Broadway between West 134th and West 135th Streets</u>	<u>103</u>	<u>0</u>	<u>103</u>
<u>3229 Broadway</u>	<u>Broadway between West 129th and West 130th Streets</u>	<u>18</u>	<u>0</u>	<u>18</u>
125th Street Rezoning	Portion of rezoning along 125th Street between Broadway and Frederick Douglass Boulevard	<u>260</u>	<u>52</u>	<u>208</u>
	<b>Total</b>	<b><u>1,111</u></b>	<b><u>380</u></b>	<b><u>731</u></b>
<b>Sources:</b> New York City Department of City Planning, <i>New York Construction</i> , March 2004; New York City Department of Housing Preservation and Development.				

In total, 1,111 units will be developed in the future without the Proposed Actions by 2015, of which 380 will be low-income units and 731 will be market rate units.

In addition, Columbia University will collaborate with the City of New York on the creation of a new public secondary school that will address education in science, math, and engineering. The new school is tentatively called the “Columbia Science, Math and Engineering Secondary School.” The school initially will be located in a transitional space and will serve approximately 650 students from grades six through 12. Enrollment will be selective, and priority will be given to high performing local students from northern Manhattan above 96th Street. At least half of the school’s total enrollment will comprise students from northern Manhattan.

Scheduled to open in September 2007 in a temporary location and before 2015 in a new building, the school will be operated by DOE in close collaboration with Columbia University, drawing on the University’s faculty and academic resources for the design of its curricula and instructional program. The University also will help develop joint curricular and extracurricular programs that provide opportunities for the school’s students to engage in early college experiences while actively contributing to Columbia University’s campus life. As described in Chapter 2, although the location of the school has not yet been finalized, it is anticipated that the school would be located in the Project Area on the east side of Broadway between West 131st and West 132nd Streets if the Proposed Actions are not approved and the Academic Mixed-Use Development does not go forward. Although the construction details regarding this school have not been finalized at this time, it is anticipated that Columbia would provide the property or site for the school, and DOE would fund its construction.

**PUBLIC SCHOOLS**

The future without the Proposed Actions’ utilization rate for school facilities was calculated by adding the estimated enrollment from known future proposed residential developments to DOE’s projected enrollment<sup>1</sup> from the DOE Division of School Facilities and then comparing that number with projected development capacity.

In applying these enrollment projections, it is important to note that school enrollment and utilization conditions in the City can change substantially over a long time horizon, such as 2015. Enrollment projections for DOE are only calculated for 10 years into the future. Therefore, based on consultation with DCP, it was determined that the last year for which projections were calculated (2015) would be held constant to project elementary and intermediate school enrollments for the 2015 and 2030 analysis years.

The *CEQR Technical Manual*, Table 3C-2, “Projected Public School Pupil Ratios in New Housing Units of All Sizes,” summarizes pupil generation rates, based on DOE’s analysis of income mix and location (borough) for new residential units. Table 5-5 shows the number of new public school students expected to be generated by the new residential developments identified earlier in Table 5-4.

**Table 5-5**

**2015 Future Without the Proposed Actions, Projected New Housing Units and Estimated Number of Students Generated by the New Housing Units**

Income Level of Units	Total Units <sup>1</sup>	Projected Elementary Students	Projected Middle School Students	Projected High School Students	Total Students Generated
Market rate	731	73	15	22	110
Low-income	380	53	11	19	83
<b>Total</b>	<b>1,111</b>	<b>126</b>	<b>26</b>	<b>41</b>	<b>193</b>
<b>Notes:</b> <sup>1</sup> Projected new housing units as shown in Table 5-4. <b>Sources:</b> Student generation rates are based on the <i>CEQR Technical Manual's</i> Table 3C-2, “Projected Public School Pupil Ratios in New Housing Units of All Sizes.” High-income ratios were used for market-rate housing.					

As described below and shown in Table 5-6, the elementary and intermediate schools in CSD 5 and within the ½-mile study area are not expected to operate at or above capacity in 2015.

<sup>1</sup> The DOE does not include Charter School enrollment in its enrollment projections. This analysis includes capacity currently used by charter schools in DOE buildings.

**Table 5-6**

**Public Elementary/Intermediate School Enrollment, Capacity, and Utilization:  
2015 Future Without the Proposed Actions**

	Projected Enrollment in 2015 <sup>1</sup>	Students Generated from New Residential Development	Total Projected Enrollment in 2015	Program Capacity	Available Seats in Program	Program Utilization
<b>Elementary Schools</b>						
½-mile study area <sup>2</sup>	2,498	126	2,624	3,519	895	75%
Totals, CSD 5	7,806	126	7,932	11,693	3,761	68%
<b>Intermediate Schools</b>						
½-mile study area <sup>2</sup>	2,011	26	2,037	3,003 <sup>3</sup>	966	68%
Totals, CSD 5	3,794	26	3,820	5,413 <sup>3</sup>	1,593	71%
<b>Notes:</b>						
<sup>1</sup> The last year for which projections were calculated (2015) has been held constant to project elementary and intermediate school enrollments to the 2015 and 2030 analysis years.						
<sup>2</sup> 2015 estimates for study area schools were derived proportionally from district-wide projections for 2015. To estimate enrollment in 2015 for elementary and intermediate schools within the study area, the total number of students enrolled in these schools (see Table 5-2) in 2005-06 was divided by the total number of students enrolled in CSD 5. Elementary and intermediate schools were handled separately. The resulting percentages of <u>32 percent</u> for elementary and <u>53 percent</u> for intermediate schools were applied to the district's projected enrollment in 2015 to estimate the total enrollment for elementary and intermediate schools within the study area.						
<sup>3</sup> Includes capacity of <u>279 seats</u> allocated to intermediate grades from new science, math, and engineering public secondary school.						
<b>Sources:</b> CSD 5 projected enrollment: <u>DOE Enrollment Projections 2006 to 2015</u> , Capacity numbers for CSD 5: DOE, <u>Utilization Profiles: Enrollment/Capacity/Utilization, 2005-2006</u> .						

### ELEMENTARY SCHOOLS

DOE's CSD 5 projections indicate that the trend in declining numbers of elementary school students that has been evident in recent years is expected to continue through 2015. For CSD 5 as a whole, projections show that there will be 890 fewer students by 2015, a 6.1 percent net decrease.

As discussed above, 126 new elementary school students are expected to be generated from new residential development that will occur by 2015 without the Proposed Actions. As described in the *CEQR Technical Manual*, public schools in the study area are assessed collectively for potential impacts rather than on an individual basis. These projections suggest that collectively all elementary schools within the ½-mile study area will operate below capacity in 2015.

As shown in Table 5-6, the elementary schools within CSD 5 as a whole will also operate below capacity in 2015. Projections indicate that 7,806 students will be enrolled in elementary schools in CSD 5 as a whole, a decrease from the 2005-2006 enrollment of 8,568 students. With the estimated 126 elementary school students that would be added by development projects in the future without the Proposed Actions, elementary schools in the ½-mile study area and CSD 5 as a whole are expected to operate at 75 and 68 percent of capacity, respectively.

In the wider area, elementary school enrollment in CSD 6 is also expected to be below capacity in 2015. In this district, DOE projections indicate that 11,864 students will be enrolled in elementary schools in 2015, down from 16,948 in 2005-2006. These schools will be operating at 72 percent of capacity, a significantly lower utilization rate from 2005-2006 conditions. In CSD 3, elementary schools are expected to have an enrollment of 11,102, slightly higher than in 2005-2006. The 2015 utilization rate for elementary schools in this district is expected to operate at 78 percent of capacity.

### *INTERMEDIATE SCHOOLS*

As described earlier, the new public secondary school for science, math, and engineering will include grades 6–12. For analysis purposes, the total enrollment, approximately 650 students, is allocated equally to each grade for approximately 93 students per grade. Therefore, it is assumed for this analysis that there would be an increase in capacity for approximately 279 students (grades 6–8) for intermediate schools in the study area as a result of the new public secondary school. Therefore, the total capacity for intermediate schools would increase to 3,003 in the ½ - mile study area and increase to 5,413 in all of CSD 5. Additionally, it is expected that the Democracy Prep Charter School will open at 300 West 135th Street in the 2006–2007 school year.<sup>1</sup> This school will initially serve only grade 6, but plans are to serve grades 6–12 at full build-out.

As shown in Table 5-6, DOE projections indicate that in CSD 5 as a whole, intermediate schools will have a total enrollment of 3,794 students in 2015, about the same as the 2005–2006 enrollment, the utilization rate is expected to be 71 percent. Within the ½-mile study area, intermediate schools are also expected to operate below capacity in 2015, at an average of 68 percent utilization. It is expected that 26 new intermediate school students will be generated from new residential development (see Table 5-5).

In CSD 6, DOE projects intermediate school enrollment to be 4,953 students, down from approximately 8,003 in 2005–2006 (57 percent of capacity) by 2015.

In CSD 3, DOE projections indicate that intermediate schools will have an enrollment of 4,001, down from approximately 5,109 in 2005–2006, and a utilization rate of 73 percent.

### **LIBRARIES**

In the future without the Proposed Actions, the population is expected to increase in the combined library catchment areas by 2,944 residents (based on the 1,111 new units and an average household size of 2.65), due to new residential developments expected to be completed by 2015, bringing the total population to 276,962 in the combined library catchment areas. This will represent an increase of less than 1 percent over the existing population.

## **F. 2015 FUTURE WITH THE PROPOSED ACTIONS**

As described in Chapter 2, by 2015 the reasonable worst-case development scenario for the Project Area includes full development of the projected developments sites in Subdistrict B and the Other Areas, and the first phase of development of Subdistrict A. However, no residential development is projected for Subdistrict B.<sup>2</sup> Since the actual program for the development of Subdistrict A (Academic Mixed-Use Area) would vary depending on Columbia University’s needs over the

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<sup>1</sup> Because the Democracy Prep Charter School will not be housed in a public school building, it is not included in the quantitative analysis.

<sup>2</sup> CPC is contemplating certain modifications to Subdistrict B. The proposed modifications would rezone Subdistrict B to a modified M1-2 light manufacturing district to support light manufacturing and retail uses. It is anticipated that this modification would not result in any projected development sites in Subdistrict B. The proposed modifications are more fully described in Chapter 29, “Modifications to the Proposed Actions.” Chapter 29 also analyzes the potential environmental impacts that could result from the proposed modifications.

long-term future, for EIS purposes, maximum and minimum ranges of zoning floor areas were established for the Academic Mixed-Use Development for the full build and 2015 development. The 2015 and 2030 maximum and minimum floor ranges are fully described in Chapter 2.

To conduct a conservative community facilities analysis, the reasonable worst-case development scenario assumes the maximum amount of housing for graduate students, faculty, and other employees for Columbia University in Subdistrict A. Based on the maximum housing for graduate students, faculty, and other employees (175,000 sf), the reasonable worst-case development scenario for 2015 for Subdistrict A would consist of approximately 281 units. These units are being assessed as moderate-high income units for a conservative schools analysis.<sup>1</sup> The reasonable worst-case development scenario for the Other Areas would consist of 99 units (on Projected Development Site 25), all of which are being conservatively assessed as low-moderate income units. Using an average household size of 2.65, the projected development in the Other Areas is anticipated to generate 262 residents. The total residential population generated by the Proposed Actions would be approximately 646 residents (approximately 384 residents in Subdistrict A and 262 residents in the Other Areas).

As described in Chapter 2, in the future with the Proposed Actions condition, the analysis assumes the development scenarios developed for the Tuck-It Away and Hudson North American rezoning applications would not occur. Instead, the analysis considers that these sites would be rezoned as the Special Manhattanville Mixed-Use Zoning District under the Proposed Actions and redeveloped in accordance with the proposed Academic Mixed-Use Development. Therefore, the 2015 future with the Proposed Actions condition would not include the following associated with the Tuck-It Away and Hudson North American rezoning applications from the future without the Proposed Actions condition: 48 elementary school students, 10 intermediate school students, and 1,275 residents.

**PUBLIC SCHOOLS**

Based on the methodology described above, the Proposed Actions would generate an estimated 46 elementary school students and 11 intermediate school students (see Table 5-7).

**Table 5-7  
Projected New Housing Units and Estimated Number of  
Students Generated: 2015 Future with the Proposed Actions**

	Housing Units	Elementary School	Intermediate School	High School	Total Students Generated
Moderate-high income	281	34	8	11	53
Low-moderate income	99	12	3	5	20
<b>Total</b>	<b>380</b>	<b>46</b>	<b>11</b>	<b>16</b>	<b>73</b>

**Sources:** Student generation rates are based on the *CEQR Technical Manual's* Table 3C-2, "Projected Public School Pupil Ratios in New Housing Units of All Sizes."

<sup>1</sup> The University housing units for graduate students, faculty, and other employees would be considered unassisted or market-rate housing for high-income levels. However, the units have been conservatively considered as moderate-high rather than high-income households for the purpose of estimating the number of public school students generated.

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*ELEMENTARY SCHOOLS*

Based on the methodology described in the *CEQR Technical Manual*, the Proposed Actions would generate 46 new elementary school students. Such an increase would only marginally affect the school utilization rate, as illustrated in Table 5-8. As in the future without the Proposed Actions, the utilization rate for elementary schools within the ½-mile study area in the future with the Proposed Actions would be 74 percent. Overall in CSD 5, the elementary schools would average a utilization rate of 68 percent in the future with the Proposed Actions, the same as conditions in the future without the Proposed Actions. The elementary schools within the study area and CSD 5 overall would have ample capacity for the students generated by the Proposed Actions. Therefore, no significant adverse impacts to elementary schools would occur as a result of the Proposed Actions.

**Table 5-8  
Public Elementary/Intermediate School Enrollment, Capacity, and Utilization:  
2015 Future with the Proposed Actions**

	Total Projected 2015 Enrollment Without Proposed Actions <sup>1</sup>	Students Generated by the Proposed Actions	Enrollment with the Proposed Actions	Program Capacity	Available Seats in Program	Program Utilization
<b>Elementary Schools</b>						
½-mile study area <sup>2</sup>	<u>2,576</u> <sup>3</sup>	46	<u>2,622</u>	<u>3,519</u>	<u>897</u>	<u>74%</u>
CSD 5 total	<u>7,884</u> <sup>3</sup>	46	<u>7,930</u>	<u>11,693</u>	<u>3,763</u>	<u>68%</u>
<b>Intermediate Schools</b>						
½-mile study area <sup>2</sup>	<u>2,027</u> <sup>3</sup>	11	<u>2,038</u>	<u>3,003</u> <sup>4</sup>	<u>965</u>	<u>68%</u>
CSD 5 total	<u>3,810</u> <sup>3</sup>	11	<u>3,821</u>	<u>5,413</u> <sup>4</sup>	<u>1,592</u>	<u>71%</u>
<b>Notes:</b>						
<sup>1</sup> The last year for which projections were calculated (2015) has been held constant to project elementary and intermediate school enrollments to the 2015 analysis year. <sup>2</sup> 2015 estimates for study area schools were derived proportionally from districtwide projections for 2015. <sup>3</sup> Excludes the <u>78</u> elementary and <u>16</u> intermediate school students associated with the Tuck-It Away <u>and Hudson North American</u> rezoning applications. <sup>4</sup> Includes capacity allocated to intermediate grades from science, math, and engineering public secondary school developed in the future without the Proposed Actions. <b>Sources:</b> CSD 5 projected enrollment: <u>DOE Enrollment Projections 2006 to 2015</u> . Capacity numbers for CSD 5: <u>DOE, Utilization Profiles: Enrollment/Capacity/Utilization, 2005-2006</u> .						

*INTERMEDIATE SCHOOLS*

Based on the pupil generation rates in the *CEQR Technical Manual*, the Proposed Actions would generate 11 new middle school students. Such an increase would only marginally increase the school utilization rate (as shown in Table 5-8) for both the schools in the ½-mile study area and CSD 5 overall. As a result, the utilization rate would stay the same or increase by less than 1 percent over the future without the Proposed Actions in both the ½-mile study area and within the intermediate schools in CSD 5 as a whole. This is below the *CEQR Technical Manual* impact threshold of an increase in 5 percent or more in the deficiency of available seats. Therefore, no significant adverse impacts to intermediate schools would occur as a result of the Proposed Actions.

## **LIBRARIES**

By 2015, the Proposed Actions would result in an increase of 646 additional residents, for a total of 276,334 residents in the combined library catchment areas. The number of new residents added to the combined library catchment areas by the Proposed Actions would represent an increase by less than 1 percent over the future without the Proposed Actions population. This change in population would be small and, therefore, there would be no significant adverse impact on library resources.

## **G. 2030 FUTURE WITHOUT THE PROPOSED ACTIONS**

### **PUBLIC SCHOOLS**

As discussed above in “2015 Future Without the Proposed Actions,” enrollment projections for DOE are calculated for 10 years into the future, and conditions can change substantially over an extended time. DCP determined that the last year for which projections were calculated (2015) would be held constant to project elementary and intermediate school enrollments to the 2015 and 2030 analysis years.

As no known residential projects are expected to be completed between 2015 and 2030, the projections for the 2030 future without the Proposed Actions would be the same as those described above for 2015 in the future without the Proposed Actions.

### **LIBRARIES**

There are no known residential projects that have been identified for completion between 2015 and 2030. In the future without the Proposed Actions, the population is expected to increase in the Project Area by 2,944 residents (based on the 1,111 new units and an average household size of 2.65), due to new residential developments expected to be completed by 2015, bringing the Project Area population to 276,962. This will represent an increase of less than 1 percent over the existing population.

## **H. 2030 FUTURE WITH THE PROPOSED ACTIONS**

As previously described, by 2030 the reasonable worst-case development scenario for the Project Area includes full development of the Academic Mixed-Use Development in Subdistrict A and the projected development sites in Subdistrict B and the Other Areas, although no residential development is projected in Subdistrict B. Similar to the analysis for Subdistrict A in 2015, ranges of zoning floor areas have been established to develop the reasonable worst-case development scenario for Subdistrict A in 2030. The 2030 maximum and minimum floor ranges are fully described in Chapter 2.

Similar to the 2015 analysis, for purposes of conducting a conservative community facilities analysis, the reasonable worst-case development scenario assumes the maximum amount of housing for graduate students, faculty, and other employees for Columbia University in Subdistrict A. Based on the maximum housing for graduate students, faculty, and other employees (1,300,000 sf), the reasonable worst-case development scenario for 2030 in Subdistrict A would consist of approximately 2,087 units. These units are being assessed as moderate-high income units to conduct a conservative schools analysis. The reasonable worst-case development scenario for the Other Areas would consist of 99 units (on Projected Development Site 25). Using an average household size of 2.65, the projected development in the Other Areas is anticipated to generate 262 residents. The total residential population generated by the Proposed Actions by 2030 would be

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approximately 3,132 residents (approximately 2,870 residents in Subdistrict A and 262 residents in the Other Areas).

**PUBLIC SCHOOLS**

Based on the methodology described above, households occupying the new development with the Proposed Actions would generate an estimated 262 new elementary school students and 66 intermediate school students (see Table 5-9).

**Table 5-9**  
**Projected New Housing Units and Estimated Number of**  
**Students Generated: 2030 Future with the Proposed Actions**

	Housing Units	Elementary School	Intermediate School	High School	Total Students Generated
Moderate-high income	2,087	250	63	83	396
Low-moderate income	99	12	3	5	20
<b>Total</b>	<b>2,186</b>	<b>262</b>	<b>66</b>	<b>88</b>	<b>416</b>

**Sources:** Student generation rates are based on the *CEQR Technical Manual's* Table 3C-2, "Projected Public School Pupil Ratios in New Housing Units of All Sizes."

*ELEMENTARY SCHOOLS*

As shown in Table 5-9, the Proposed Actions would generate 262 new elementary school students. Such an increase would only marginally increase the school utilization rate, as illustrated in Table 5-10. Within the ½-mile study area, all public elementary schools would operate below full capacity. While the Proposed Actions would cause an increase in the average utilization rate of elementary schools within the study area of 8 percent over the future without the Proposed Actions, all schools would continue to operate below capacity. In CSD 5, overall the elementary schools would average a utilization rate of 70 percent of total capacity. The elementary schools within the study area and CSD 5 overall would have ample capacity for the students generated by the Proposed Actions. Therefore, no significant adverse impacts to elementary schools would occur as a result of the Proposed Actions.

*INTERMEDIATE SCHOOLS*

New residential development with the Proposed Actions would generate 66 new intermediate school students. The public intermediate schools within the ½-mile study area would continue to operate below capacity with an average utilization rate of 70 percent (see Table 5-10), a 2 percent increase over the future without the Proposed Actions. This is below the *CEQR Technical Manual* threshold for a significant adverse impact (the threshold is an increase of 5 percent or more in a deficiency of seats).

In CSD 5, the intermediate schools would average a utilization rate of 72 percent of total capacity, an increase of approximately 1 percent over the future without the Proposed Actions, which is below the CEQR impact threshold. Therefore, no significant adverse impacts to intermediate schools would occur as a result of the Proposed Actions.

DOE monitors school enrollment trends and would be expected to respond to the projected overcrowded conditions in intermediate schools that have been identified in the future without and with the Proposed Actions. Possible measures to relieve overcrowding could include relocating

administrative functions to provide more space for classrooms, restructuring or reprogramming existing school space within a district, adjusting school service area boundaries (provided that this would not redistribute students to even more crowded districts), and providing new school facilities through the Five-Year Capital Plan.

**Table 5-10**

**Public Elementary/Intermediate School Enrollment, Capacity, and Utilization:  
2030 Future with the Proposed Actions**

School Name	Total Projected 2030 Enrollment Without Proposed Actions <sup>1</sup>	Students Generated by the Proposed Actions	Enrollment with the Proposed Actions	Program Capacity	Available Seats in Program	Program Utilization
<b>Elementary Schools</b>						
½-mile study area <sup>2</sup>	<u>2,576</u> <sup>3</sup>	262	<u>2,838</u>	<u>3,519</u>	<u>681</u>	<u>81%</u>
CSD 5 totals	<u>7,884</u> <sup>3</sup>	262	8,146	11,693	3,547	70%
<b>Intermediate Schools</b>						
½-mile study area <sup>2</sup>	<u>2,027</u> <sup>3</sup>	66	<u>2,093</u>	<u>3,003</u> <sup>4</sup>	<u>910</u>	<u>70%</u>
CSD 5 totals	<u>3,810</u> <sup>3</sup>	66	<u>3,876</u>	<u>5,413</u> <sup>4</sup>	<u>11,537</u>	<u>72%</u>
<b>Notes:</b>						
<sup>1</sup> The last year for which projections were calculated (2015) has been held constant to project elementary and intermediate school enrollments to the 2030 analysis year. <sup>2</sup> 2030 estimates for study area schools were derived proportionally from district-wide projections for 2030. <sup>3</sup> Excludes the <u>78</u> elementary and <u>16</u> intermediate school students associated with the Tuck-It Away <u>and Hudson North American</u> rezoning applications. <sup>4</sup> Includes capacity from science, math, and engineering public secondary school developed in the future without the Proposed Actions. <b>Sources:</b> CSD 5 projected enrollment: <u>DOE Enrollment Projections 2006 to 2015</u> . Capacity numbers for CSD 5: <u>DOE, Utilization Profiles: Enrollment/Capacity/Utilization, 2005-2006</u> .						

**LIBRARIES**

By 2030, the Proposed Actions would result in an increase of 3,132 additional residents, for a total of 278,820 residents in the combined library catchment areas. This represents an increase in approximately 1.1 percent over the population in the future without the Proposed Actions, which is below the CEQR threshold for a significant adverse impact. The number of new residents added to the combined library catchment areas by the Proposed Actions would be a very small percentage of the total annual library users. Therefore, no significant adverse impact on library resources would occur as a result of the Proposed Actions. \*