Chapter 5: Open Space

A. INTRODUCTION

This chapter examines the Proposed Project's potential effects on open space resources. The analysis updates changes in background conditions since the 1992 *Riverside South Final Environmental Impact Statement* (the 1992 FEIS), and assesses whether the changed background conditions and differences in program elements between the proposed development program and those assessed in the 1992 FEIS for the project site would alter the 1992 FEIS findings with respect to open space resources. The analysis considers effects on open space as defined in the 2001 *New York City Environmental Quality Review (CEQR) Technical Manual*[1].

The *CEQR Technical Manual* guidelines indicate the need for an open space analysis when an action would result in the physical loss of public open space, or when an action would introduce 200 or more residents or 500 or more workers to an area. The Reasonable Worst-Case Development Scenarios (RWCDSs) analyzed for the Proposed Project in this analysis would result in a net increase in the number of residents and employees as compared with the analysis in the 1992 FEIS, and this increase would exceed the *CEQR Technical Manual* thresholds requiring a detailed analysis. Therefore, an open space analysis was conducted to determine whether the Proposed Project would result in direct or indirect significant adverse impacts to open space resources. This chapter assesses existing conditions (both users and resources) and compares conditions in the Future With and Without the Proposed Project to determine potential impacts for the 2018 analysis year.

Two RWCDSs are assumed for the analyses: The analysis for the commercial study area is based on RWCDS 3d, which maximizes the amount of hotel, retail, and commercial office space and therefore maximizes the project-generated worker population; the analysis for the residential study area uses RWCDS 1, which introduces the maximum amount of residential use (3,000 units) and therefore maximizes the residential population that could be introduced by the Proposed Project (see Chapter 1, "Project Description"). Given that both RWCDS could not be realized simultaneously, the actual demands placed on open space by the project-generated residential and worker populations would be less than what is indicated by the quantified analysis.

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[1] In May 2010, shortly prior to the completion of the Draft SEIS, a substantive update to the 2001 *CEQR Technical Manual* was released. Prior to the public hearing for the Proposed Project, a Technical Memorandum was prepared (and published on DCP's website in September 2010) that considered whether one or more analyses contained in the Draft SEIS should be revised in the Final SEIS in light of the updated guidance set forth in the 2010 *CEQR Technical Manual.* The evaluation of the Proposed Project under the 2010 *CEQR Technical Manual* focused on technical areas where changes in methodology would have the potential to affect the analyses and/or conclusions of the Draft SEIS for the Proposed Project. With respect to Open Space, the 2010 *CEQR Technical Manual* updates would not materially change the analyses or conclusions presented in the Draft SEIS.

B. PRINCIPAL CONCLUSIONS

The Proposed Project would not have a direct effect on any nearby study area open spaces. The Proposed Project would create a total of 2.75 acres of new privately owned, publicly accessible open spaces on the project site. For analysis purposes, it is assumed that 2.66 acres would be for passive recreation and 0.09 acres would be for active recreation.[1] It is anticipated that its features would include landscaped and plaza areas. Connections would be made throughout the open space to adjacent streets and to Riverside Park South. The Proposed Project's publicly accessible open space would function as an integral part of the overall project and would provide respite for people who would live and work within the project site and in the surrounding neighborhood. In total, approximately one-third of the 8.18-acre site would be developed as open space.

Table 5-1 provides a summary of the changes to study area open space ratios in the Future Without and With the Proposed Project. As shown in the table, the Proposed Project would decrease open space ratios in the commercial (¼-mile) study area: it would decrease the passive open space ratio for workers by approximately 1.7 percent, and decrease the passive open space ratio for the total population (workers and residents) by 1.3 percent. The open space ratios for the commercial study area would continue to exceed the recommended city guidelines.

Table 5-1
2018 Future With the Proposed Project: Open Space Ratios Summary

Ratio	DCP Open Space Guideline	Open Space Ratios			Percent Change
		Existing Conditions	Future Without the Proposed Project	Future With the Proposed Project	Future Without to Future With the Proposed Project
Commercial (1/4-Mile) Study Area					
Passive/Workers	0.15	1.20	1.51	1.48	-1.7%
Passive/Total Population	Weighted 0.34 / 0.35 / 0.35* Existing/No Build/Build	0.54	0.63	0.62	-1.3%
Residential (1/2-Mile) Study Area					
Total/Residents	2.5	0.87	0.88	0.86	-1.8%
Passive/Residents	0.5	0.61	0.60	0.60	0.1%
Passive/Total Population	Weighted: 0.33 / 0.34 / 0.35* Existing/No Build/Build	0.32	0.33	0.34	2.5%
Active/Residents	2.0	0.27	0.27	0.26	-6.1%

Notes: Ratios in acres per 1,000 people.
* Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Because this guideline depends on the proportion of non-residents and residents in the study area's population, it is different for existing, No Build, and Build conditions. Each of these ratios is listed in this table.

Within the residential (½-mile) study area, the Proposed Project would result in a slight increase (0.1 percent) in the passive open space ratio for residents, and the ratio would remain at 0.60,

[1] For purposes of CEQR open space analyses, open space that is used for relaxation, such as sitting or strolling, is classified as "passive open space." Open space that is used for sports, exercise, or active play is classified as "active open space."

which is well above the New York City Department of City Planning (DCP) open space guideline (see **Table 5-1**). The Proposed Project would improve the passive ratio for the total population by 2.5 percent, nearly achieving the DCP open space guideline for the study area.

The Proposed Project would decrease active open space ratios in the residential (½-mile) study area. The total open space ratio for the residential population—which factors both passive and active open space—would decrease by 1.8 percent, and the active open space ratio for the residential population would decrease by 6.1 percent. The qualitative assessment indicates that the availability of open spaces outside the study area would to a large extent alleviate the burden on the study area's open spaces. Nonetheless, given the size of the decrease in the active open space ratio and the already high utilization of many of the active open space resources that would be available to the users in the Future With the Proposed Project, both within and outside the study area, the Proposed Project has the potential to result in a significant adverse active open space impact.

C. SUMMARY OF 1992 FEIS FINDINGS

The 1992 FEIS analyzed the potential impacts on open space resources from the proposed redevelopment of the full Riverside South project site, which comprised 15 development parcels (Parcels A through O) in the area roughly bounded by West 72nd Street and Riverside Park on the north, Freedom Place and West End Avenue on the east, West 59th Street on the south, and the Hudson River to the west. The 1992 FEIS concluded that the Riverside South development of 25 acres of publicly accessible open space would constitute a nearly 32 percent increase in the future open space inventory of the residential study area (a ½-mile radius of the project site) and an approximately 135 percent increase in the commercial study area (a ¼-mile radius of the project site). The 1992 FEIS therefore concluded that the project would not result in any significant adverse impacts to open space in either study area.

The project impacts were analyzed for two phases—Phase I in 1997 and Phase II in 2002.

By 1997 in Phase I, it was estimated that the project would add approximately 6,200 new residents and 765 new workers to the project site. To meet the city guidelines for open space adequacy, these residents and workers required a total of 15.6 acres of publicly accessible open space: 12.4 acres of active open space and 3.1 acres of passive open space to meet the needs of project residents; and 0.1 acres of passive open space to meet the needs of project workers. Since the project was anticipated to provide approximately 8.5 acres (1.7 acres of active space, and 6.8 acres of passive open space) of open space during Phase I, it was concluded that the project's residents' and workers' passive open space demands would be met. The project would have resulted in an increase in the active open space ratio in the residential study area from 0.19 in the future without the project to 0.20 with the project. Therefore, the 1992 FEIS did not identify any impacts on active and passive open spaces by 1997.

By 2002 in Phase II, the Riverside South project was anticipated to add a total of approximately 11,350 new residents and 6,800 new workers, which would have required a total of 29.40 acres of open space to meet the DCP guidelines. This included 22.7 acres of active open space and 5.7 acres of passive open space to meet the needs of project residents and 1.00 acre of passive open space to meet the needs of project workers.

Under the park program with the relocated highway alternative, there was anticipated to be approximately 25.0 acres of open space—3.0 acres of active open space and 18 acres of passive open space. Under the alternative without the highway relocation, there would have been

approximately 4 fewer acres of passive open space. The proposed open space was more than adequate to meet the passive open space demands for its new residents and workers, but would not have met the active open space demands of its residents. This deficiency in active space under both conditions required an assessment of the project's effects on active open space ratios. By 2002, the project was expected to provide approximately 3.00 acres of active open space. As a result, the inventory of active open space in the study area would have increased by 15 percent over future conditions without the project, i.e., the active open space ratio would have improved from 0.18 acres to 0.19 acres per thousand residents. Therefore, the 1992 FEIS did not identify any indirect significant adverse impacts on active and passive open spaces by 2002.

D. METHODOLOGY

DIRECT EFFECTS ANALYSIS

According to the *CEQR Technical Manual*, a proposed action would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or causes increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis. This chapter uses information from Chapter 7, "Shadows;" Chapter 19, "Air Quality and Greenhouse Gas Emissions;" and Chapter 20, "Noise," to determine whether the Proposed Project would directly affect any open spaces near the project sites. The direct effects analysis is included in this chapter in Section G, "The Future With the Proposed Project."

The potential for the Proposed Project to result in direct impacts on open space during the construction period is assessed in Chapter 21, "Construction."

INDIRECT EFFECTS ANALYSIS

Following the methodology of the *CEQR Technical Manual*, indirect impacts occur to an area's open spaces when a proposed action would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future population. The *CEQR Technical Manual* recommends an analysis of indirect effects if a proposed action would introduce 200 or more residents or 500 or more workers to an area. The *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment to determine whether more detailed analyses are appropriate, but also recognizes that for projects that introduce a large population in an area that is underserved by open space, it may be clear that a full, detailed analysis should be conducted.

For purposes of conducting a conservative open space analysis, two RWCDS are assumed for these open space analyses—one for the commercial study area and one for the residential study area. The RWCDS analyzed for the commercial study area—RWCDS 3d—would introduce 3,780 new residents and 2,187 new workers, while the RWCDS for the residential study area—RWCDS 1—would introduce 5,400 new residents and 913 new workers.[1] Because the new population

[1] Residential population estimates for the RWCDS are based on the Community District 7's Census 2000 average household size of 1.8 persons per household, and conservatively assume full occupancy. Worker population estimates are based on standard industry ratios of employment per square foot for the proposed uses.

under each RWCDS exceeds the *CEQR Technical Manual*'s threshold, a full, detailed open space analysis was conducted of the Proposed Project's potential indirect effects on the area's open space resources.

The adequacy of open space in the residential and commercial study area is assessed quantitatively using a ratio of usable open space acreage to the study area population—the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources in the future, both with and without the proposed project. In addition, qualitative factors are considered in making an assessment of the proposed project's effects on open space resources.

STUDY AREAS

The *CEQR Technical Manual* recommends establishing study area boundaries as the first step in an open space analysis. Worker and residential populations tend to utilize open space resources differently. Workers typically use passive open spaces within walking distance of their workplaces; this area is roughly ¼ mile. Therefore, projects that would add substantial worker populations analyze their effects on passive open spaces within ¼ mile of the project site. Residents are more likely to travel farther to reach parks and recreational facilities, and they use both passive and active open spaces. Residents will typically walk up to ½ mile for recreational spaces. Therefore, projects that would add substantial residential populations analyze the effects of the project on active and passive open spaces within ½ mile of the project site. The Proposed Project has the potential to add both substantial worker and residential populations to the project site. Therefore, as recommended in the *CEQR Technical Manual*, two study areas are used—a commercial (¼-mile) and residential (½-mile) study area.

Commercial (¼-Mile) Study Area

The commercial study area for the Proposed Project was developed by indicating on a map a radius of ¼ mile from the boundary of the project site. The *CEQR Technical Manual* recommends using that radius to identify all census tracts with at least 50 percent of their area inside the ¼-mile radius.

Figure 5-1 shows the two census tracts with at least 50 percent of its area within ¼-mile of the project site—Census Tract 147 and Census Tract 151. Census Tracts 135 and 317.02 do not have 50 percent of their area within ¼-mile of the project site due to the size of the tracts. However, given the census tracts' close proximity to the project site—their boundaries are within two blocks of the project site—it is appropriate to include portions of the tracts within the commercial study area. Specifically, Census Tract 135 includes two block groups: Block Group 1 occupies the portion of the tract to the north of West 54th Street; and Block Group 2 occupies the portion of the census tract to the south of West 54th Street. Block Group 1 is located almost entirely within the ¼-mile radius. Therefore, Block Group 1 from Census Tract 135 has been included within the commercial study area. Census Tract 317.02 contains only one block group: Block Group 1, which stretches along the Hudson River from West 59th Street south to approximately Harrison Street in Tribeca. Only the open space portions of Hudson River Park located within the ¼-mile radius are included in the quantified analysis of the commercial study area. However, to be conservative the entire population of Census Tract 317.02 is included in the

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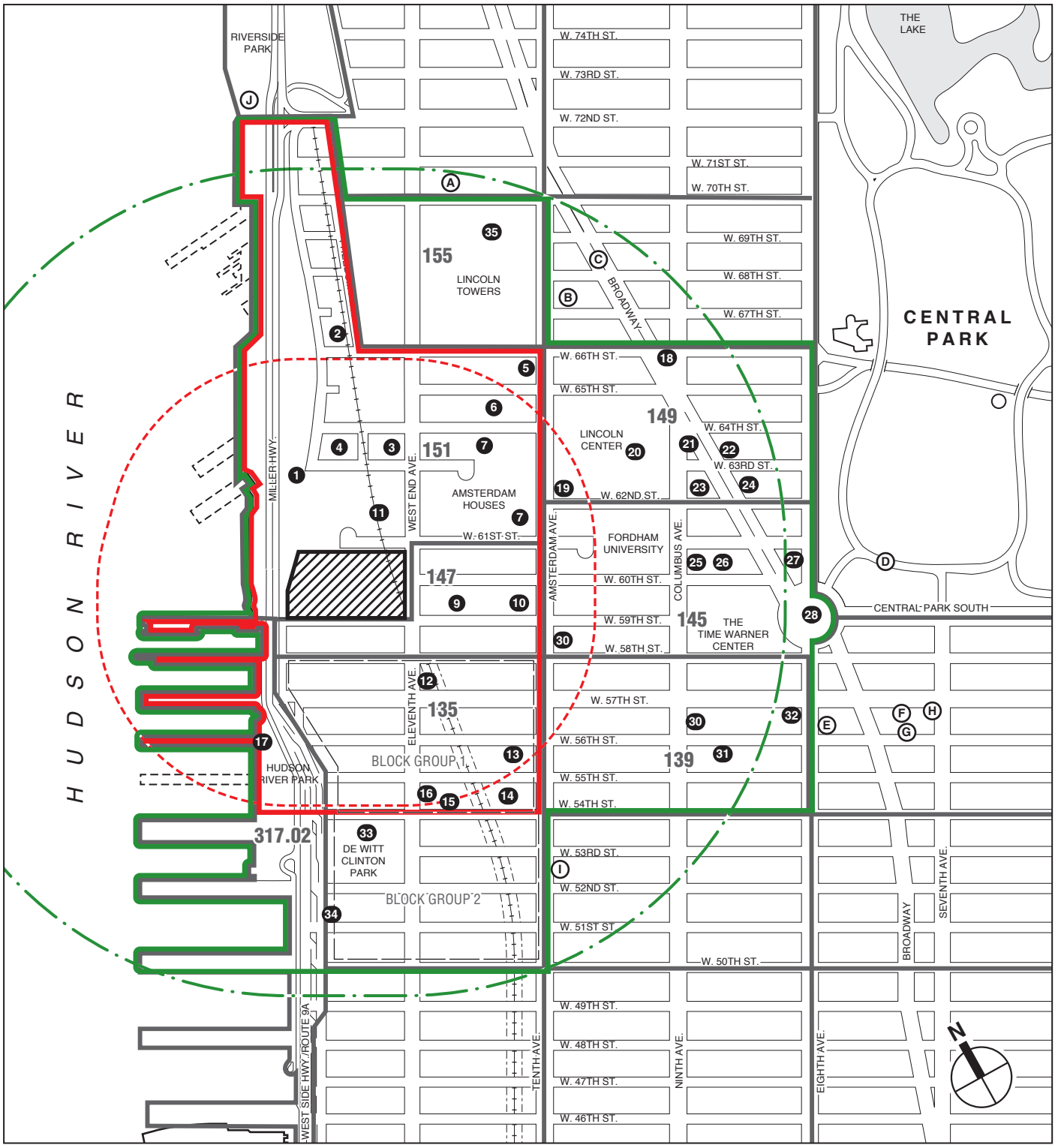


Project Site

1/4-Mile Radius

1/2-Mile Radius

Residential Study Area Boundary

Commercial Study Area Boundary

135 *Census Tract*

Block Group Boundary

1 *Open Space Included in Quantitative Analysis*

A *Open Space Not Included in Quantitative Analysis*

0 1000 FEET

SCALE

Open Space Resources

Figure 5-1

quantitative analysis.[1] The commercial study area extends from West 72nd and West 66th Street to the north, Amsterdam Avenue to the east, West 54th Street to the south, and Miller Highway and the Hudson River to the west.

Residential (½-Mile) Study Area

The residential study area, which includes the commercial study area, was developed by indicating on a map a radius of ½ mile from the boundary of the project site. All census tracts that fall at least 50 percent within that radius were included in the residential study area.

As shown in **Figure 5-1**, the residential study area includes eight census tracts: 135, 139, 145, 147, 149, 151, 155, and 317.02. The census tracts in the residential study area are generally bounded by West 70th and 72nd Streets to the north, Amsterdam Avenue and Eighth Avenue/Central Park West to the east, West 50th and West 54th Streets to the south, and Route 9A and the Hudson River to the west. Similar to the approach described above for the commercial study area, for Census Tract 317.02, only the open space portions of Hudson River Park located within the ½-mile radius are included in the quantified analysis of the residential study area. However, to be conservative the entire population of Census Tract 317.02 is included in the quantitative analysis.

OPEN SPACE USER POPULATIONS

Existing Conditions

The 2000 Census data was used to identify potential open space users within the study areas. The 2000 population obtained from the census was then adjusted for the two study areas to reflect any changes that have happened between 2000 and 2008, as follows. Real Property Assessment Data (RPAD) from the New York City Department of Finance were used to identify new residential units constructed between 2000 and 2008. The average household size for Community District 7 (1.8 persons per household), as reported in the 2000 Census, was applied to those new units to identify the number of new residents added to the study area since the 2000 Census. The existing residential population for both the ¼-mile and ½-mile study areas was determined by adding the number of residents reported in the 2000 Census and the residents occupying the new units that were completed since then.

In addition, the number of employees in each of the study areas was also determined based on the 2000 Census data for worker populations. To estimate the number of workers currently (in 2008) working within the study area, it was assumed that the study area's worker population grew by a rate of 0.5 percent per year since 2000.

This analysis assumes that residents and workers are entirely distinct populations and that no one both lives and works within the study area. While this assumption could double-count the daily user population, it also provides a more conservative analysis.

The Future Without the Proposed Project

As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," a number of new developments are expected to be constructed by 2018 in the ¼-mile and ½-mile study areas. To estimate the population expected in the study areas in the Future Without the Proposed Project,

[1] The total population in Census Tract 317.02 includes approximately three residents and approximately 2,395 workers.

Community District 7's Census 2000 average household size of 1.8 persons was applied to the number of new housing units expected to be built in the study areas by 2018.

The Future With the Proposed Project

This condition incorporated the development and population assumptions for the study areas in the Future Without the Proposed Project, and added the populations generated by the Proposed Project. The populations introduced by the Proposed Project were also estimated by multiplying the number of proposed new units by Community District 7's average household size.

INVENTORY OF OPEN SPACE RESOURCES

All publicly accessible open spaces and recreational facilities within the study areas were inventoried. The inventory of open spaces was compiled based on field visits conducted in May 2008 and information from the New York City Department of Parks and Recreation (DPR), DCP, and the Municipal Art Society's publication (*Privately Owned Public Spaces: The New York City Experience*). Published environmental impact statements for projects in or near the study area were also consulted.

Open spaces that are not publicly accessible or available to a limited number of people are not included in the quantitative analysis. An open space that charges a fee for access is an example of the latter.

The size, character, and condition of the publicly accessible open spaces and recreational facilities within the commercial and residential study areas were determined during field visits conducted in May 2008. Active and passive amenities were noted at each open space. Active facilities are intended for vigorous activities, such as jogging, field sports, and children's active play. Such facilities might include basketball and handball courts, jogging paths, ball fields, and playground equipment. Passive facilities encourage such activities as strolling, reading, sunbathing, and people watching. Passive open spaces are characterized by picnic areas, walking paths, or gardens. Certain areas, such as lawns or public esplanades, can be both active and passive open spaces.

In addition to the open spaces located within the commercial and residential study areas, open spaces falling immediately outside the study areas were considered qualitatively, as these spaces can provide additional resources to the residential and worker populations.

ADEQUACY OF OPEN SPACE RESOURCES

Comparison with City Guidelines

The adequacy of open space in the study area was then quantitatively assessed. In the quantitative approach, the ratio of useable open space acreage to the study area population—referred to as the open space ratio—is compared to guidelines established by DCP. The following guidelines are used in this type of analysis:

- For non-residential populations, 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate.
- For residential populations, two sets of guidelines are used. The first guideline is a citywide median open space ratio of 1.5 acres per 1,000 residents. Throughout New York City, local open space ratios vary widely, and the median ratio at the Community District level is 1.5 acres of open space per 1,000 residents. The second is an optimal planning goal established by DCP of 2.5 acres per 1,000 residents—2.0 acres of active and 0.5 acres of passive open

space per 1,000 residents—for large-scale plans and proposals. However, these goals are often not feasible for many areas of the city, and they do not constitute an impact threshold. Rather, they act as a benchmark to represent how well an area is served by its open space.

- The needs of the residents and non-residents are considered together because it is assumed that these populations will use the same passive open spaces. Therefore, a weighted average is also considered for the analysis that balances the amount of open space necessary to meet the DCP guideline of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents. Because this ratio changes depending on the proportion of residents and non-residents in each study area, **Table 5-1** outlines the amount of open space needed in each condition in each study area, and calculates the weighted average ratio of passive open space acres per 1,000 combined residents and non-residents.

Impact Assessment

Impacts are based in part on how a project would change the open space ratios in the study area. According to the *CEQR Technical Manual*, if a proposed project would result in a decrease in open space ratios as compared with those in the future without the project, the decrease is generally considered to be a substantial change, warranting a detailed analysis, if it would approach or exceed 5 percent. Or, if a study area exhibits a low open space ratio (e.g., below 1.5 acres per 1,000 residents or 0.15 acres of passive space per 1,000 non-residential users), indicating a shortfall of open space, smaller decreases in that ratio as a result of the action may constitute significant adverse impacts.

In addition to the quantitative factors cited above, the *CEQR Technical Manual* also recommends consideration of qualitative factors in assessing the potential for open space impacts. These include the availability of nearby destination resources, the beneficial effects of new open space resources provided by the project, and the comparison of projected open space ratios with established city guidelines. It is recognized that the open space ratios of the city guidelines described above are not feasible for many areas of the city, and they are not considered impact thresholds on their own. Rather, these are benchmarks that indicate how well an area is served by open space.

E. EXISTING CONDITIONS

STUDY AREA POPULATION

COMMERCIAL (¼-MILE) STUDY AREA

Using the methodology described above, the commercial study area was estimated to have a population of 18,737 residents and 15,440 workers for a total residential and worker population of 34,177 (see **Table 5-2**).

RESIDENTIAL (½-MILE) STUDY AREA

The residential study area was estimated to have a population of 49,117 residents and 45,822 workers, for a total residential and worker population of 94,940 (see **Table 5-2**).

Table 5-2
Existing Population in Commercial and Residential Study Areas
2008 Estimate

Tract	Residential Population	Worker Population*	Total Population*
Commercial Study Area			
135 BG 1	4,777	7,280	12,057
147	2,726	1,560	4,286
151	11,231	4,199	15,530
317.02	3	2,395	2,398
Total	**18,737**	**15,440**	**34,177**
Residential Study Area			
135	7,159	9,188	16,347
139	10,243	5,599	15,842
145	5,131	10,620	15,751
147	2,726	1,561	4,287
149	6,368	10,241	16,609
151	11,231	4,199	15,430
155	6,256	2,019	8,275
317.02	3	2,395	2,398
Total	**49,117**	**45,822**	**94,940**

Notes: The residential population was estimated based on 2000 U.S. Census data, supplemented by counts of new units constructed between 2000 and 2008 according to RPAD from the New York City Department of Finance. For the update, the number of residential units built between 2000 and 2008 was multiplied by Community District 7's average household size (1.8) to determine the post-census population increment. The total population of workers in 2008 is an estimate, which was determined by assuming that the worker population in each census tract grew by a rate of 0.5 percent per year since the population identified in the 2000 Census.

Sources: U.S. Census Bureau, 2000; Central Transportation Planning Package (CTPP) 2000—Part 2, New York City Department of Finance RPAD, 2006.

Age Distribution

The age distribution of a population affects the way open spaces are used and the need for a variety of recreational facilities. As described in the *CEQR Technical Manual*, typically children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreational activities such as rollerblading, biking, and jogging, which require bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

Table 5-3 summarizes the population of the study areas by age group, and compares their age distribution to Manhattan and New York City as a whole. The percentage breakdown by age cohort assumes the same percentages as experienced by the study area at the time of the 2000 Census.

Table 5-3
Residential Population Age Distribution
2008 Estimate

	Commercial Study Area		Residential Study Area		Manhattan		New York City	
Age Category	**Persons**	**Percent**	**Persons**	**Percent**	**Persons**	**Percent**	**Persons**	**Percent**
4 and younger	868	4.6	1,787	3.6	98,603	6.0	575,742	6.9
5 to 9	878	4.7	1,340	2.7	80,333	4.9	519,022	6.2
10 to 14	781	4.2	1,190	2.4	60,376	3.7	498,542	6.0
15 to 19	1,208	6.4	1,758	3.6	75,408	4.6	551,139	6.6
20 to 64	13,185	70.4	35,743	72.8	1,109,779	67.9	5,181,391	62.0
65 and over	1,818	9.7	7,298	14.9	210,296	12.9	1,037,874	12.4
Total	18,737	100.0	49,117	100.0	1,634,795	100.0	8,363,710	100.0

Notes: Year 2008 percentage age distribution for commercial and residential study areas is based on percentage age distribution for same areas from the 2000 Census. Age distribution for Manhattan and New York City from U.S. Census, 2008 estimates.

Sources: U.S. Census and New York City RPAD.

As shown in **Table 5-3** both the commercial and residential study areas have smaller proportions of young children (i.e., children 4 and younger, and 5 to 9 years old) as compared to Manhattan and New York City as a whole. Conversely, the percentages of working-age population (ages 20 to 64) are slightly higher within the commercial and residential study areas as compared to Manhattan and New York City. The commercial study area has a lower percentage of senior residents (ages 65 and over) than Manhattan and New York City, while the residential study area's percentage of seniors is higher.

STUDY AREA OPEN SPACE INVENTORY

COMMERCIAL (¼-MILE) STUDY AREA

The commercial study area contains a total of 25.11 acres of open space, of which 18.54 acres are passive open space and 6.57 acres are active open space (see **Table 5-4** and **Figure 5-1**).

Seventeen publicly accessible open space and recreational resources are located within the commercial study area. These open spaces include publicly owned open spaces and privately owned spaces that are required to be open to the public (e.g., zoning bonus plazas). They consist of a mix of small plazas with landscaping and seating, city playgrounds, community gardens, larger city parks with a mix of passive and active recreational facilities, and bikeways/walkways. Public open spaces with no useable public amenities were not included in the study area inventory. Four of the most prominent open spaces within the commercial study area are described below.

Riverside Park South Open Space

Of the total 22.51 acres of open space affiliated with the Riverside South development, 12.93 acres are complete. This park contains soccer fields, baseball fields, handball courts, playground equipment, a pier and an esplanade. The pier extends into the Hudson River at approximately West 70th Street and can be used for fishing, sunbathing or other passive activities. The approximately 20-foot-wide esplanade runs along the entire length of the development and connects to the existing esplanade at Riverside Park to the north and to the Hudson River Park esplanade to the south. The Riverside Park South Open Space is planned to be built in seven phases, of which four phases are complete and described below.

Phase I—This phase included the waterfront portion from 72nd Street to 70th Street with an upland connection to 68th Street. It included a 740-foot-long recreational pier, a multi-purpose athletic field, a café terrace, a historic upland stair connection at 72nd Street, basketball courts, a bike path, and an overlook terrace at 68th Street. The first phase of the park consisted of 5.05 acres of total open space, of which an estimated 3.63 acres were passive open space and 1.42 acres were active open space.

Phase II—This phase was entirely over the waterfront from 70th Street to 65th Street, with coastal plantings, a waterfront terrace at 68th Street and 66th Street, a boardwalk through coastal plantings, a pedestrian link at 68th Street, a continuation of the bike path and passive seating with a pedestrian walkway. The total open space in this phase equaled 2.37 acres, of which 2.11 acres were passive open space and 0.26 acres were active open space.

Phase III—This phase included the next addition to the waterfront, with a terrace on 64th Street with shade structures, a 63rd Street promontory, a continuation of the boardwalk through natural plantings, a continuation of the bike path, a pedestrian cove bridge, and a restored cove area. This phase contained a total of 2.69 acres of open space, of which 2.51 acres were passive open space and 0.18 were active open space.

Phase IV—This was the final waterfront link to Hudson River Park. It included a terrace on 62nd Street, shade structures, a restored locomotive, a river step down, overlook seating, overlook perch, lawn mounds and a boat landing. A 60-year-old, 95-ton locomotive engine, known as No. 25, is the centerpiece of this phase of Riverside Park South. This phase consisted of 2.17 acres of passive open space and 0.37 acres of active open space for a total of 2.54 acres.

Phase V—The children's play area (approximately 0.27 acres) located at West 67th Street is the only portion of this phase currently completed.

West End Towers Open Space

This open space is located on West End Avenue between West 63rd and West 64th Streets near the West End Towers residential buildings. Oriented toward active use, with children's play equipment and courts, this open space also includes attractive landscaping and topography, walking paths, lawns, trees, and sculptures. The West End Towers open space also includes an additional parcel (approximately 0.16 acres) directly across the street to the west. This recently opened "plaza" area is discussed in more detail below.

Amsterdam Houses Open Space and Playground

The Amsterdam Houses complex has some facilities that are open to the public and some that are for tenant use only. The 0.8-acre Amsterdam Houses playground contains a variety of publicly accessible active and passive spaces operated by DPR. Amsterdam Houses has an additional 2.5 acres of open space (operated by NYCHA), including landscaped walkways and a separate young children's playground that are publicly accessible.

Clinton Cove Section of Hudson River Park

This 2.2-acre park opened in 2005 and is located along the waterfront south of Pier 97 (west of West 57th Street) and north of Pier 94 (West of West 54th Street). The park includes an esplanade with benches, lawns, shade trees, and a public boat house at the waterfront. Park users also have access to a café in the UnConvention center, and access to a "get-down" which allows users to get closer to the water (below the level of the bulkhead). The park also hosts free live music performances during the summer months.

Table 5-4
Publicly Accessible Open Space Inventory

Map No.*	Name	Owner	Features	Size (Acres)			Condition/ Utilization
				Total Space	Passive Space	Active Space	
Commercial Study Area							
1	Riverside Park South	DPR	Soccer, handball courts, basketball courts, fishing pier, esplanade, bikeway, children's play areas, spray shower	12.93	10.43	2.50	Excellent/High
2	Freedom Place and 67th Street	EQR - 160 Riverside Blvd	Seating and plantings	0.03	0.03	0.00	Excellent/Low
3	West End Towers open space	Broadcom West Development Company	Animal art, lighting, lawns, playgrounds, benches, trees and plantings	1.03	0.26	0.77	Excellent/High
4	West End Towers open space – western plaza area	Broadcom West Development Company	Planters with ledges	0.16	0.16	0.00	Excellent/Low
5	Martin Luther King Jr. High School	DOE	Seating, planters, sculpture	1.00	1.00	0.00	Fair/High
6	James Felt Plaza	NYCHA	Seating, plantings, children's playground reserved for tenants	0.10	0.10	0.00	Fair/Low
7	Amsterdam Houses Playground/Samuel N. Bennerson Playground	DPR	Playground, basketball courts, plantings, seating	0.80	0.30	0.50	Good/High
8	Amsterdam Houses Open Space	NYCHA	Seating, plantings, playground	2.50	1.30	1.20	Good/High
9	W 59th St Recreation Center	DPR	Indoor pool, multi-use gym, paved outdoor area	0.50	0.00	0.50	Poor/Low
10	Concerto Public Plaza - 59th St between Amsterdam and West End Aves	Columbus/ Amsterdam Associates	Benches, trees, play equipment, spray shower, lawn	0.17	0.17	0.00	Excellent/ Moderate
11	Parcel "O" Open Space on West 62nd Street	DPR	Benches, trees, walkway	0.50	0.50	0.00	Good/Moderate
12	555 W 57th St	Green W. 57th Street LLC	Seating, plantings, walkways	0.53	0.53	0.00	Good/Moderate
13	Amsterdam Plaza at Harborview Terrace	NYCHA	Planting, seating, play-grounds, paved sports courts	2.10	1.30	0.80	Poor/Low
14	Harborview Terrace Plaza/530 W 55th St	HPD	Seating, plantings, flowers	0.10	0.10	0.00	Poor/Low
15	Clinton Towers Plaza/790 Eleventh Ave	P&L Management & Consulting	Trees, benches, plantings, children's basketball court, slides	0.40	0.30	0.10	Poor/Low
16	Clinton Towers Street Seating	Clinton Towers	Seating	0.06	0.06	0.00	Fair/Moderate
17	Clinton Cove Section of Hudson River Park	Hudson River Park Trust	Esplanade, lawn, shade trees, seating, public art, public boat house	2.20	2.00	0.20	Excellent/High
			Commercial Study Area Total	**25.11**	**18.54**	**6.57**	

Table 5-4 (cont'd)
Publicly Accessible Open Space Inventory

Map No.*	Name	Owner	Features	Size (Acres)			Condition/ Utilization
				Total Space	Passive Space	Active Space	
Residential Study Area							
18	Richard Tucker Park	DPR	Seating, plantings	0.05	0.05	0.00	Good/High
19	Damrosch Park	DPR	Bandshell, plantings, seating	2.44	2.44	0.00	Good/High
20	Lincoln Center Plaza	DPR	Seating, fountain, sculpture	3.80	3.80	0.00	Good/Moderate
21	Dante Park	DPR	Seating, plantings, statue	0.14	0.14	0.00	Good/High
22	One Lincoln Plaza	John Amodeo/ Condominium	Garden, seating; appears as part of restaurant	0.47	0.47	0.00	Good/Low
23	Harmony Atrium	61 West 62 Owners Corp	Indoor seating, piano, coffee bar, movable stage, skylight, climbing wall (climbing wall not included in quantified analysis because it requires a user fee)	0.20	0.20	0.0	Fair/Moderate
24	30 W 63rd St Plaza	S&P Associates	Trees, grass, seating, planters, fountain, waterfall	0.49	0.49	0.00	Excellent/ Moderate
25	The Regent - 28 Columbus Ave, 45 W 60th St	Columbus 60th Realty LLC	Seating, plantings, drinking fountain	0.20	0.20	0.00	Good/Moderate
26	The Beaumont 30 W 61st St	Condominium	Seating, plantings, pool and fountain, drinking fountain , lighting	0.27	0.27	0.00	Good/Low
27	Dale F. Frey Plaza	Trump International Homeowners Association	Sculpture, benches, trees	0.41	0.41	0.00	Good/Moderate
28	Columbus Circle	DPR	Statue, benches, fountain	0.20	0.20	0.00	Good/High
29	St. Luke's-Roosevelt Hospital Entrance Plaza	400 West 59th Street Partners, LLC	Trees, planters, benches, flowers, lighting	0.30	0.30	0.00	Excellent/ Moderate
30	Balsley Park	Rose 29 LLC	Gardens, lawn, toddler play area, food kiosk, seating	0.30	0.20	0.10	Excellent/High
31	330 W 56th St	Marbru Associates	Concrete seating, trees, planters, sculpture on arcade	0.17	0.17	0.00	Fair/Low
32	Parc Vendome/ Sheffield Plazas (322/350 W 57th St.)	Southcroft Company	Seating, plantings	0.50	0.50	0.00	Good/High
33	De Witt Clinton Park	DPR	Lighted ball fields; basketball courts; benches; plantings and trees, dog runs, playground, handball courts, volleyball courts	5.83	1.13	4.70	Good/High

Table 5-4 (cont'd)
Publicly Accessible Open Space Inventory

Map No.*	Name	Owner	Features	Size (Acres) Total Space	Passive Space	Active Space	Condition/ Utilization
Residential Study Area (cont'd)							
34	Route 9A	DOT	Bikeway, walkway	0.70	0.30	0.40	Excellent/High
35	P.S. 199 Playground (Playground 70)	DPR	Fountain, a comfort station, basketball courts, handball courts, play equipment with safety surfacing, a small garden, and benches.	1.37	0.10	1.27	Excellent/High
			Total ½ Mile Open Space	**42.95**	**29.91**	**13.04**	
Additional Open Spaces Not Included in Quantitative Analysis							
A	Septuagesimo Umo	DPR	Garden, seating	0.04	0.04	0.00	Good/ Moderate
B	145 W 67th St (Tower 67)	Amsterco	Plantings, seating, seasonable fountain, trees	0.33	0.33	0.00	Good/High
C	Broadway Malls	DPR	Benches in Broadway Median, planters	0.10	0.10	0.00	Good/High
D	Central Park	DPR	Trees, lawns, walking paths, benches, ballfield, jogging and bicycling routes	843.00	536.00	307.00	Excellent/High
E	Symphony Plaza 1755 Broadway	Broadway and 56th St Associates	Seating, plantings, café space	0.11	0.11	0.00	Good/Moderate
F	218 W 57th St / 888 Seventh Ave	200 W 57th St Associates	Trees, shrubs, seating, lighting	0.13	0.13	0.00	Good/Moderate
G	211 W 56th St	211 W56th St Associates	Planters, lights, seating	0.11	0.11	0.00	Good/Moderate
H	888 Seventh Ave	Paramount Group	Benches, trees	0.34	0.34	0.00	Good/Moderate
I	P.S. 111 Playground	DOE	Playground, basketball courts, paved ball field	0.80	0.10	0.70	Excellent/High
J	Riverside Park	DPR	Sports courts (basketball, tennis, handball, roller hockey) and fields, a skate park, dog runs, a large portion of the Manhattan Waterfront Greenway (for bicycles), running track, paved walkways, 110-slip public marina at 79th street	235.15	164.61	70.55	Good/Moderate
			Total, Additional Spaces Not Included	**1,080.11**	**701.90**	**378.25**	

Notes: * See Figure 5-1 for location of open spaces.
NYCHA = New York City Housing Authority
DOE = New York City Department of Education
DPR = New York City Department of Parks and Recreation
HPD = New York City Department of Housing Preservation & Development

Sources: New York City Department of Parks and Recreation open space database; AKRF, Inc. field surveys, May 2008 and August 2010; Oasis NYC; *Privately Owned Public Space: The New York City Experience*, by Jerold S. Kayden

RESIDENTIAL (½-MILE) STUDY AREA

In addition to the 17 open space resources within the ¼-mile area, there are 18 publicly accessible open spaces and recreational facilities that serve the surrounding residential and commercial populations. The residential study area includes all open spaces in the commercial study area. Public open spaces with no useable public amenities were not included in the study area inventory. Including all of the public parks and open spaces listed in the non-residential study area, the residential study area contains a total of approximately 42.95 acres of publicly accessible open space. Of this total, approximately 29.91 acres are passive space and 13.04 acres are active space (see **Table 5-4**). The open spaces within this study area consist of a mix of small plazas with landscaping and seating, city playgrounds, community gardens, larger city parks with a mix of passive and active recreational facilities, and bikeways/walkways. In addition to the four open spaces described above, other prominent study area open spaces are described below.

Damrosch Park

Damrosch Park is part of Lincoln Center for the Performing Arts. It is a 2.4-acre passive open space that has trees, plantings, benches, and a bandshell, but no lawns. The western portion of the park is dominated by the Daniel & Flor Guggenheim Memorial Bandshell, which faces into the park along the Amsterdam Avenue side. DPR recently completed a renovation of the bandshell. East of the bandshell is a paved, open viewing area that is flanked to the north and south by banks of trees and shrubs. The eastern half of the park includes a glade of trees with numerous benches, as well as a series of trees set in square raised planters that also function as seating. There is also a planted area that serves to buffer the park from an entrance to an underground parking area.

The park is a popular area for passive recreation and in the summer is heavily programmed with outdoor music and dance performances. From June through August, the park hosts Lincoln Center programming such as Lincoln Center Out of Doors, Midsummer Night Swing, and the Lincoln Center Festival. From mid-October to the end of January it is home to the Big Apple Circus. It is also used for other events which require tents that cover most if not all of the open space; access may be limited during these times. There are generally two seasons for tented activities—from March until the end of May and from September until just before the Big Apple Circus arrives. Activities requiring tents during this time may include galas for Lincoln Center as well as private functions such as Fashion Week starting in 2010.

Lincoln Center Plaza (Josie Robertson & North Plaza)

The 3.8-acre plaza between the theaters at Lincoln Center is a major open space and gathering place. It has a fountain, a reflecting pool with sculptures, and ledges for sitting. The less-utilized north part of the plaza between Avery Fisher Hall and the Vivian Beaumont and Mitzi Newhouse theaters is nicely landscaped and occupied by benches and modern sculpture. Lincoln Center began construction in March 2006 on a major transformation initiative that will renovate its campus and publicly accessible open spaces.

De Witt Clinton Park

This 5.8-acre park occupies two blocks between West 52nd and 54th Streets from Eleventh Avenue to Twelfth Avenue in an area dominated by auto-related uses in West Clinton. Although it has benches and plantings that make it suitable for passive recreation, most of the park is occupied by facilities for active recreation, including ball fields, basketball courts, handball courts, and a playground. The ballfields, which have lights and bleachers, are the most heavily

used facilities. The Erie Canal playground has been renovated with climbing rocks and colorful play equipment, including a jungle gym and swings.

P.S. 199 Playground (Playground 70)

Located on West 70th Street between Amsterdam and West End Avenue, this playground re-opened in 2003 after substantial renovation. The renovations, which were aimed at providing a playground where children of all abilities can play together, included the construction of a Children's Garden with accessible bridges running across it, musical instruments built into the play space, and basketball courts with adjustable basketball backstops that can be lowered for athletes in wheelchairs. The comfort station was also refurbished and picnic tables were constructed to allow handicap access. The park also contains a camel sculpture, and a spray shower with a map of the United States.

Columbus Circle

Another important and heavily used passive open space in the residential study area is Columbus Circle, located at the south western corner of Central Park. This plaza consists of a central statue of Christopher Columbus, and includes seating, fountains, and landscaping.

West 59th Street Recreation Center

This facility, on West 59th Street between Amsterdam and West End Avenues, is entirely an active recreation space with a multi-use gymnasium, indoor sports courts, an indoor pool, an outdoor pool, and an outdoor water play feature for children. On July 2, 2009 the facility closed for a one-year period while it undergoes renovation and new development (described in Section F, "The Future Without the Proposed Project").

West End Towers Open Space – Western Plaza

As mentioned above, the larger West End Towers open space bounded by West 63rd Street, West 64th Street, West End Avenue and Freedom Place South (also known as Thelonius Monk Circle) includes an additional space directly across the street to the west. This publicly accessible open space, completed in June 2009, forms part of the rear plaza associated with the apartment building adjacent on its western side (the Rushmore). It is paved and contains large ivy-filled planters with ledges, and no other amenities.

Qualitative Considerations

Several parks are located outside of the open space study area boundary, some within ½-mile of the project site.[1] The 843 acres of Central Park has active recreation such as jogging, biking, or rollerblading, and offers passive activities. Hudson River Park and Riverside Park are also nearby. They are located south and north, respectively, of Riverside Park South along the waterfront on the western edge of the study area.

[1] Some open spaces are located within the ½-mile radius, but are not included in the open space analysis since they are not located within the Census tract boundaries that are used for the quantitative analysis.

ADEQUACY OF OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

The commercial study area is well served by passive open space resources. **Table 5-5** shows the amount of open space needed to meet the city guidelines in the commercial study area, and presents the guideline weighted average ratio of passive open space acres per 1,000 combined residents and non-residents in the existing conditions, based on the study area's populations. With approximately 18.54 acres of passive open space, the commercial study area exceeds the city's planning guideline of 11.68 acres by 6.86 acres of passive space for the total residents and non-residents in the commercial study area. The commercial study area has a passive open space ratio of 1.20 acres of passive open space per 1,000 workers, which is also above the city's guidelines of 0.15 acres of passive open space. The combined passive open space ratio is 0.54; also well above the recommended weighted average ratio of 0.34 acres of open space per 1,000 residents and workers.

Table 5-5
Existing Conditions:
Commercial Study Area Open Space Guidelines and Ratios for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres / 1,000)	Passive Acres needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	15,440	0.15	2.32[2]	18.54	1.20
Total population	34,177	0.34[1]	11.68	18.54	0.54

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.
[3] Based on the number of residents in the study area and the guideline ratio of 0.50 acres per 1,000 residents.

RESIDENTIAL (½- MILE) STUDY AREA

The following analysis of the adequacy of open space resources within the residential study area takes into consideration the ratios of active, passive, and total open space resources per 1,000 residents, as well as the ratio of passive open space per 1,000 residents and workers. These open space ratios are shown in **Table 5-6**.

Table 5-6
Existing Conditions: Residential Study Area Adequacy of Open Space Resources

Population		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	49,117	42.95	29.91	13.04	0.87	0.61	0.27	2.50	0.50	2.0
Combined residents and workers	94,940				N/A	0.32	N/A	N/A	0.33*	N/A

Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.

The residential study area has a total open space ratio of 0.87 acres per 1,000 residents, considerably lower than the city's planning guideline of 2.5 acres of combined active and

passive open space per 1,000 residents and also lower than the citywide median of 1.5 acres per 1,000 residents. The active open space ratio is 0.27 acres per 1,000 residents, which is lower than the city's guideline of 2.0 acres per 1,000 residents. However, the residential study area's passive open space ratio, at 0.61 acres per 1,000 residents, is above the city's planning goal of 0.5 acres per 1,000 residents.

When considering residents and non-residents together, the residential study area has a passive open space ratio of 0.32 acres per 1,000 workers and residents, which is slightly lower than the city's weighted average guideline ratio of 0.33 acres per 1,000 residents and workers (0.33 acres is the weighted average allowing 0.15 acres per 1,000 non-residents and 0.5 acres per 1,000 residents).

QUALITATIVE CONSIDERATION

In addition to the open spaces described above, there are also non-quantified destination open space resources nearby such as Central Park, the remainder of Hudson River Park and Riverside Park which extend beyond the boundary of the residential study area and provide additional active and passive open space resources (see open spaces A through J in **Table 5-4**). These parks are considered "destination parks," and residents would typically travel farther than the ½-mile extent of the residential study area to enjoy the open space and recreational amenities within these parks. Much of the residential study area is within a ¼-mile distance of Riverside Park, Riverside Park South, and/or Central Park, and therefore is considered well served by open space according to *CEQR Technical Manual* guidelines.[1] There are also other playgrounds, pocket parks, and plazas that are located just outside the open space study areas.

As shown in **Table 5-3**, approximately 3.6 percent of the population within the residential study area is children 4 years old and younger. This percentage is far less than the percentages of residents within this age cohort for Manhattan (6.0 percent) and New York City (6.9 percent). Typically, children 4 years old and younger use traditional playgrounds that have play equipment for toddlers and preschool children. Facilities in the study area offering such amenities include Riverside Park South, West End Towers Park, Amsterdam Houses Playground, Balsley Park, Clinton Towers Plaza, and P.S. 199 playground.

Approximately 2.7 percent of residential study area residents are children between the ages of 5 and 9. The proportion of study area population within this cohort is less than that of Manhattan (4.9 percent) and New York City (6.2 percent). Children ages 5 through 9 use traditional playground and play equipment suitable for school-aged children, as well as grassy and hard-surfaced open spaces, which are important for ball playing, running, skipping rope, etc. Study area open space and recreational facilities with these amenities include Riverside Park South, West End Towers Park, Amsterdam Houses Playground, Amsterdam Houses Open Space, the West 59th Street Recreation Center, Balsley Park, Clinton Towers Plaza, De Witt Clinton Park, and P.S. 199 playground.

Approximately 6.0 percent of residential study area residents are children, teenagers and young adults between the ages of 10 and 19 (see **Table 5-3**). Again, the proportion of study area population falling within this age bracket is far less than that of Manhattan (8.3 percent) and

[1] The Mayor's Office of Environmental Coordination maintains online maps outlining the areas identified as underserved or well-served by open space for each community district in Manhattan. See http://www.nyc.gov/html/oec/html/ceqr/open_space_maps_manhattan.shtml.

New York City (12.6 percent). Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Demand for these more active recreational opportunities is served within the residential study area by numerous playgrounds and play surfaces at parks such as Riverside Park South, Amsterdam Houses Playground, Amsterdam Houses Open Space, Amsterdam Plaza at Harborview Terrace, Balsley Park, De Witt Clinton Park, and P.S. 199 playground. In addition, the West 59th Street Recreation Center offers an indoor pool and a multi-use gymnasium.

The senior population (ages 65 and above) comprises approximately 14.9 percent of the residential study area's population, a larger percentage than in Manhattan (12.9 percent) and New York City as a whole (12.4 percent). Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities. Within the residential study area, seniors' recreational demands are served by various active and passive spaces, as well as by parks just outside the study area that are not included in the quantitative analysis. These include: Septuagesimo Uno, a 0.04-acre park located on 71st Street between West End and Amsterdam Avenues; Broadway Malls, which includes a series of benches and planters located on the median along Broadway; and other bonus parks and plazas. These open spaces are very well used and add up to an additional 2 acres of open space (active and passive combined), excluding Central Park, which offers additional destination open space, but is located just outside the residential study area.

F. THE FUTURE WITHOUT THE PROPOSED PROJECT

This section projects open space conditions in 2018, the future analysis year, without the Proposed Project. These conditions are projected by considering the development that will occur on both the project site and in the study area independent of the Proposed Project.

OPEN SPACE USER POPULATION

PROJECT SITE

With regard to the project site, this section assumes that none of the discretionary approvals proposed as part of the Proposed Project would be adopted. Without these approvals, the analysis below considers two different scenarios for developing the site in the Future Without the Proposed Project.

No Build Scenario 1

Absent the Proposed Project under No Build Scenario 1, Parcels L, M, and N will be developed according to the original 1992 FEIS program. Parcels L and M will be developed with residential buildings with office space and accessory parking garages. Parcel N will be developed with a mix of retail, office, entertainment studio production, cinema, and parking uses. The total development program for the project site in this scenario includes approximately 577 market-rate residential units, 350,370 square feet of office space, 82,065 square feet of retail space, 1,962,554 square feet of entertainment production studio uses, and 743 parking spaces. In this scenario, all existing parking on the project site will be displaced, and the Amtrak passenger rail line will continue to operate. Based on the foregoing, No Build Scenario 1 will generate 1,039 residents and 3,473 employees on the project site.

No Build Scenario 2

In No Build Scenario 2, the original 1992 FEIS program will be completed for Parcels L and M, but Parcel N will remain in its current parking use. As described above, the 1992 FEIS program envisions Parcels L and M developed with residential buildings with office space and accessory parking garages. This scenario would result in the construction of 577 market-rate residential units, 20,370 square feet devoted to office uses, and 301 parking spaces. The existing parking uses on Parcel N, as well as the Amtrak passenger rail line that passes beneath the site, will continue operations.

No Build Scenario 2 will generate 1,039 residents and 111 employees on the project site. While both scenarios will generate the same number of residents, No Build Scenario 2 will generate 3,362 fewer employees than No Build Scenario 1, and will result in a larger increment between the No Build and Build conditions. Therefore, for purposes of a conservative analysis, this open space analysis assumes No Build Scenario 2 as a baseline condition for the project site in 2018, absent the Proposed Project.

COMMERCIAL (¼-MILE) STUDY AREA

A number of new residential, cultural, utility, and mixed-use projects will be completed in the commercial study area, resulting in an increase in residential and worker populations by the 2018 analysis year.

Planned development projects expected to be completed by 2018 include the full development of Parcels I, J, and K of Riverside South, which will add approximately 1,300 residential units along with office, retail, and parking uses to the study area. In addition, Riverside Park South will be completed with the construction of phases 5 through 7, resulting in approximately 9.58 acres of new, publicly accessible open space. East of the project site, development is progressing on the Adagio 60 Development, a large mixed-use project on the block bounded by West 61st Street, Amsterdam Avenue, West 60th Street, and West End Avenue. The development will consist of 384 residential units, medical offices, ground-floor retail, and public parking. The office/retail/institutional space within these projects, combined with the employment associated with the Riverside South parcels and No Build Scenario 2 for the project site, would add an estimated 1,056 workers to the commercial study area's worker population, bringing total employment within the commercial study area to 16,496 by 2018. The combined residential and worker population in the commercial study area is projected at 39,756 persons.

RESIDENTIAL (½-MILE) STUDY AREA

Residential and worker populations within the residential study area are also expected to increase by 2018 in the Future Without the Proposed Project. Significant new residential projects within the residential study area (but outside the commercial study area) include: Harborview Terrace Houses, a 320-unit building at 525 West 55th Street; the Red Cross Site at 130 Amsterdam Avenue, which will include 310 residential units, 25,000 square feet of retail and 13,000 square feet of community facility uses; and the Two Trees Site, a 900-unit residential development with retail, a 330,000-square-foot auto dealership, and community facility use. Several other residential developments between Tenth and Eleventh Avenues will introduce residential, retail, and auto-related uses. Along the Hudson River waterfront, Pier 97 (west of West 57th Street) will be redeveloped with an acre of open space, and Piers 92 and 94 (west of West 52nd and West 54th Streets) will have new exhibition space and a waterfront esplanade. Fordham University is planning substantial redevelopment of its campus in the ½-mile study area that will include 876

residential units, 695 dormitory beds, and approximately 383,000 square feet of academic uses. In addition, there is a proposal to rezone several lots in the block bounded by Eleventh Avenue, West 57th Street, Twelfth Avenue/West Side Highway, and West 56th Street from M1-5 and M2-3 to C4-7. This proposed rezoning would facilitate the development of 622 West 57th Street, which would include 750 residential units, 125,000 square feet of retail and 225,000 square feet of an auto dealership. These projects, along with the worker and residential population associated with the new residential buildings on the project site, will generate an estimated 12,705 residents and 5,788 additional employees within the residential study area by 2018. Together, by 2018 the total number of residents and workers in the residential study area will be an estimated 61,822 residents and 51,611 workers, for a total worker and residential population of 113,433 persons.

No substantial changes in the age group structure of the residential population are expected by 2018. The number of residents in each age cohort as shown in **Table 5-7** is based on the percent share for that age cohort at the time of the 2000 Census.

Table 5-7
2018 Future Without the Proposed Project:
Residential Study Area Population by Age Group

Age Category	Number	Percent
Under 5 years	2,249	3.6
5-9 years	1,687	2.7
10-14 years	1,498	2.4
15-19 years	2,213	3.6
20-64 years	44,988	72.8
65+ years	9,186	14.9
TOTAL	**61,822**	**100%**

Sources: 2000 Census. New York City Department of City Planning.

STUDY AREA OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

The continued build-out of the Riverside Park South parcels will add 9.58 acres of new open space to the study area by 2018, of which 6.31 acres will be passive space and 3.27 acres will be active space. These phases of the park are described below:

Phase V—As noted above in the "Existing Conditions" section, the children's play area (approximately 0.27 acres), is the only portion of this phase currently completed. The remainder of the Phase V will include areas for passive seating, a lawn, a kiosk, a pedestrian link at 66th Street, and a naturalized planted slope. The open space acreage for this phase will be 2.27 acres of passive open space.

Phase VI—This upland portion of the park will include a children's play area, areas for passive seating, a shade structure, a pedestrian link at 64th Street, a multi-purpose athletic field, and a naturalized planted slope, which will be used as a lawn. The total open space acreage in this phase will be 3.28 acres of which 3.00 acres will be passive open space and 0.28 will be active open space.

Phase VII—This final link in the park will include athletic courts, a pedestrian link to 61st Street, a DPR maintenance facility, and a kiosk. This phase will consist of 1.05 acres of passive open space and 2.99 acres of active open space for a total of 4.04 acres.

Upon full build-out of Riverside Park South, the total amount of open space in the commercial study area will increase to 34.69 acres, of which 24.85 acres will be passive open space and 9.84 acres will be active.

Apart from Riverside Park South, another improvement in the commercial study area will be the renovation of the West 59th Street Recreation Center. The facility, on West 59th Street between Amsterdam and West End Avenues, was closed on July 2, 2009 for what will be a period of approximately one year. Plans include renovation of the historic 1902 bathhouse, construction of a major addition and extensive outdoor recreation space. The 23,000-square-foot building will contain a swimming pool, gymnasium, fitness center, aerobics studio, new lockers and multi-purpose community rooms. The amount of additional open space attributable to the renovation cannot be estimated at this time; therefore, the analysis only accounts for this improvement in the qualitative assessment.

RESIDENTIAL (½-MILE) STUDY AREA

As in the commercial study area, the development of open space at Riverside South will increase the acreage of open space within the residential study area. In addition, small boating facilities and a total of approximately 1.58 acres of open space will be added to Hudson River Park at Pier 92, 94 (west of West 52nd and West 54th Streets) and 97 (west of West 57th Street) on the Hudson River. The one-acre open space at Pier 97 will include lawn areas as well as active recreational facilities, including a playground.

While not an increase in acreage (and therefore not accounted for in the quantified assessment), there are plans to redesign and renovate the Harmony Atrium between West 63rd and West 62nd Streets immediately east of Lincoln Center Plaza. The goal is to transform the space, now an underused pass-through from Broadway to Columbus Avenue, into a "round-the-clock gathering place and a gateway to Lincoln Center's performing arts campus."[1] The redesigned atrium will feature benches, stone floors, 20-foot-high walls of plants and rods of falling water. The atrium's ceiling will have 16 intersecting openings that let in natural light and project artificial light. A removable stage will enable Lincoln Center to use the space for social dancing and for free weekly performances. There will be a visitors' center featuring a media wall for the screening of multimedia projects, historic archival footage and performance schedules. There will be a staffed information desk, public restrooms, free Internet access and a café.

Fordham University will be developing a publicly-accessible interim open space by 2014 as part of their redevelopment plans for the Fordham University Lincoln Center campus, The landscaped plaza, to be located on the west side of Ninth Avenue between West 60th and 61st Streets, would replace an existing gravel parking lot and would contain decorative paving, landscaping, seating, and a snack kiosk. This interim open space would be displaced by 2032, and therefore it is not accounted for in the quantified assessment.

[1] Pogrebin, Robin. "Vibrant Gateway Planned for Lincoln Center Campus" from the New York Times, July 17, 2008.

By 2018, an additional 11.16 acres of open space will be added within the residential study area, of which 7.39 acres will be for passive use and 3.77 acres will be for active use. Therefore, the total amount of open space in the residential study area will increase to 54.11 acres, of which 37.30 acres will be passive open space and 16.81 acres will be active.

ADEQUACY OF OPEN SPACES

COMMERCIAL (¼-MILE) STUDY AREA

Quantitative Analysis

In the Future Without the Proposed Project, the commercial study area will remain well served by passive open spaces to meet the needs of the non-residential and residential populations. The ratio of passive open space per 1,000 non-residents will be 1.51, well above the city's guideline ratio of 0.15 (see **Table 5-8**). The ratio for the combined population of residents and non-residents will be 0.63, again well above the city's calculated guideline ratio of 0.35.

Table 5-8
2018 Future Without the Proposed Project:
Commercial Study Area Open Space Guidelines and Ratios
for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres per 1,000)	Passive Acres Needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	16,518	0.15	2.47[2]	24.85	1.51
Combined non-residents and residents	40,373	0.35[1]	14.10	24.85	0.63

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.

RESIDENTIAL (½-MILE) STUDY AREA

In 2018, the additional population introduced to the study area by expected developments in the Future Without the Proposed Project will increase the demand on the area's open spaces. With that new population and the additional open space expected to be added at Riverside South and Pier 92, 94 and 97 on the Hudson River, the residential study area will continue to be underserved by open spaces in comparison to the city's guideline ratios. The overall open space ratio will increase slightly to 0.88 acres per 1,000 residents, but will remain considerably lower than the city's planning guideline ratio of 2.5 acres of total open space per 1,000 residents and the citywide median of 1.5 acres per 1,000 residents (see **Table 5-9**). The active open space ratio will remain at 0.27 acres per 1,000 residents, and will continue to fall well below the city's planning guideline of 2.00-acre active open space guideline.

The age profile of a study area population influences the demand for active open space. As described above, the residential study area has a lower proportion of children relative to the proportions for Manhattan and New York City. The study area therefore has a lower demand for active amenities such as playgrounds, play equipment, court spaces, and other hard-surfaced open spaces relative to the demand of the city as a whole, which is the baseline demand from which city guidelines were established. In contrast, the study area—which contains a senior population well above the average for the city—is projected to remain above city guidelines for passive open space with 0.60 acres per 1,000 residents.

Table 5-9
2018 Future Without the Proposed Project:
Residential Study Area Adequacy of Open Space Resources

Population		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	61,822	54.11	37.30	16.81	0.88	0.60	0.27	2.50	0.50	2.00
Combined residents and workers	113,433				N/A	0.33	N/A	N/A	0.34*	N/A

Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents

The combined residential and nonresidential populations, with a passive space ratio of 0.33 acres per 1,000 residents will be slightly below the city's planning guideline of 0.34 acres per 1,000 workers and residents.

G. THE FUTURE WITH THE PROPOSED PROJECT

This section describes the open space conditions that would result from the completion of the Proposed Project in 2018. This is the "Build" or "Future With the Proposed Project" condition. This section evaluates the potential for the Proposed Project to result in significant adverse impacts to open space resources directly and indirectly based on a comparison of the No Build condition (described above) to the Proposed Project in the Build condition.

DIRECT EFFECTS ANALYSIS

The Proposed Project would not have a direct effect on any nearby study area open spaces. Construction and operation of the proposed project would not cause the physical loss of public open space because of encroachment or displacement of the space; it would not change the use of an open space so that it no longer serves the same user population; it would not limit public access to an open space; and as disucssed in Chapter 6, "Shadows;" Chapter 18, "Air Quality and Greenhouse Gas Emissions;" and Chapter 19, "Noise," it would not cause increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis.

INDIRECT EFFECTS ANALYSIS

OPEN SPACE USER POPULATIONS

Project Site

RWCDS 3d—analyzed for the commercial study area—would introduce 3,780 new residents and 2,187 new workers, while the RWCDS for the residential study area—RWCDS 1—would introduce 5,400 new residents and 915 new workers (see **Table 5-10**).[1]

[1] Residential population for the RWCDS was estimated by multiplying the number of units built by the average household size of Community District 7. This methodology conservatively assumes 100 percent occupancy of project units. Worker population for the RWCDS was estimated using the following assumptions: 1 employee per 400 square feet of retail space; 1 employee per 250 square feet of office

Table 5-10
Open Space Reasonable Worst-Case Development Scenarios
Commercial and Residential Study Areas

Use	Maximum Allowable GSF	Commercial Open Space Study Area	Residential Open Space Study Area
Office	211,293	211,293	0
Retail	325,022[1]	165,938	131,622
Hotel	759,814	678,828 (1,012 rooms)	0
Residential	3,051,278[2]	2,032,888 (2,100 units)	2,957,325 (3,000 units)
Community Facility	151,598	151,598	151,598
Total Above-Grade Development	3,240,545[3]	3,240,545	3,240,545

Notes: gsf=gross square feet
[1] Minimum floor area for retail development is 35,060 square feet.
[2] Approximately 3,000 units, of which 360 would be affordable.
[3] In no case will the total zoning floor area exceed 3,014,829 sf, equivalent to approximately 3,240,545 gsf.

Commercial (¼-Mile) Study Area

With the additional residents and workers introduced by the Proposed Project, the commercial study area would contain an estimated total of 26,002 residents and 18,572 workers, for a total population of 44,574 residents and workers in the Future With the Proposed Project in 2018.

Residential Study Area

With the additional residents and workers introduced by the Proposed Project, the residential study area would contain an estimated total of 66,183 residents and 52,413 workers for a total population of 118,596 residents and workers in the Future With the Proposed Project in 2018. **Table 5-11** demonstrates the projected population by age cohort.

Table 5-11
2018 Future With the Proposed Project:
Residential Study Area Population by Age Group

Age Category	Number	Percent
Under 5 years	2,408	3.6
5-9 years	1,806	2.7
10-14 years	1,604	2.4
15-19 years	2,369	3.6
20-64 years	48,162	72.8
65+ years	9,834	14.9
TOTAL	**66,183**	**100%**

Sources: 2000 Census. New York City Department of City Planning.

space; 1 employee per 2.67 hotel rooms; 1 employee per 1,000 square feet of community facility/cultural space; 1 employee per 50 parking spaces, and 1 employee per 25 residential units.

STUDY AREA OPEN SPACES

Project Site

The Proposed Project would include approximately 2.75 acres (119,781 gsf) of privately owned, publicly accessible open space.[1] For analysis purposes, it is assumed that 2.66 acres would be passive and 0.09 acres would be active open space.[2] The privately owned, publicly accessible open space would function as an integral part of the overall project and would provide a respite for people who would live and work within the project site and in the surrounding neighborhood. In total, approximately one-third of the 8.18-acre project site would be developed as open space.

Riverside Center Open Space

Approximately 2.75 acres are proposed as public open space within the 8.18-acre Riverside Center site. Within the project site, these publicly accessible open space areas would be accessible between 6 AM and 1 AM daily. The open space would be organized around the axis of West 60th Street as it traverses the site from West End Avenue to Riverside Boulevard (see **Figure 5-2**). Along West 60th Street, street trees and backed benches would be located within a 5-foot-wide cobble planting strip, which would extend from West End Avenue to Freedom Place South. On the north side of the street where the sidewalk is wider, a terrace raised one and a half feet would define a space for outdoor dining. Large planters along this terrace would soften the space and provide seating opportunities at the sidewalk.

At the intersection of West 60th Street and Freedom Place South, a 1.2-acre plaza would be provided as the centerpiece of this open space. Within this plaza, dynamic fountains with interactive water jets would create a focal point that would provide a play area for children. Adjacent to the fountain, a terrace would contain a grove of trees providing shade for moveable tables and chairs for general public use. On the north side of Building 4, backed benches located under the canopy of tall shade trees would provide views in all directions.

Extending west from the plaza, the West 60th Street axis would become a "scrim" of water intended as an interpretation of the street. This would serve as a visual extension of West 60th Street, reinforcing an axial relationship to the New York City grid. Trees would line both sides of the scrim and benches would line the southern path to allow users to face the water scrim and lawn to the north. This lawn area would provide opportunities for passive recreation and limited active recreational activities (e.g., ball-playing, Tai Chi, Frisbee). To the south, a rolling meadow landscape would be traversed by multiple pathways leading to benches located within the small landscape "rooms." To the west, a dense planting of conifer trees would embrace the site, providing filtered views and a visual buffer to the elevated West Side Highway.

The water scrim would terminate in a waterfall dropping from the higher plaza elevation to the sidewalk elevation along Riverside Boulevard. A seatwall would be provided along the sidewalk to allow pedestrians the opportunity to enjoy this water feature. Criss-crossing paths through the

[1] The 2.75 acres of privately owned, publicly accessible open space does not include streets and sidewalks, seasonal outdoor restaurant space, residential entry areas, or vehicular drop-off areas.

[2] Following *CEQR Technical Manual* guidelines, the amount of publicly accessible open space allocated to active uses (0.09 acres) and passive uses (2.66 acres) are estimated based on the facility type and amenities planned. The Proposed Project's lawn is an unprogrammed area that could be used for both active and passive recreational activities. For purposes of the quantified analysis, this space is assumed to be evenly divided between active and passive uses. All other publicly accessible open space areas are considered entirely passive.

For Illustrative Purposes Only

Proposed Project Site Plan
Figure 5-2

open space would provide seating opportunities and would connect to the streets at the perimeter of the site enabling pedestrians to move easily among destinations. All paths and nodes would be illuminated with dark-sky compliant poles.

There are two additional landscaped areas planned within the Riverside Center site. On West End Avenue, Building 5 is required to step back from the street to avoid the Amtrak tunnel below. The resulting area would be raised from the sidewalk and defined by an architectural column stepping into the space and a large planter with seatwalls along its eastern edge (street tree planting is not permitted within the Amtrak right-of-way). The second space would be along West 59th Street between Buildings 3 and 4. Here a grade transition would be accommodated with stepped seating that would face south with small planters softening the space.

A significant objective of the open space plan is to connect the West 60th Street corridor to Riverside Park South. A path would be created along the south and west sides of Building 1 to link the central plaza to a stair and ramp to Riverside Park South at the intersection of Riverside Boulevard and West 61st Street. This would become the most direct connection from Central Park and Columbus Circle to the Hudson River waterfront.

Commercial (¼-Mile) Study Area

With the Proposed Project's addition of 2.75 acres of publicly accessible open space, the total amount of publicly accessible open space in the commercial study area would increase from 34.69 acres in the Future Without the Proposed Project condition to 37.44 acres. The total amount of passive open space would increase to 27.51 acres, an approximate 11 percent increase over the Future Without the Proposed Project amount of 24.85 acres.

Residential (½-Mile) Study Area

The Proposed Project's 2.75 new acres of publicly accessible open space would increase the total amount of publicly accessible open space within the residential study area to 56.86 acres from the Future Without the Proposed Project condition total of 54.11 acres. The amount of passive open space in the residential study area would improve to 39.96 acres as compared to 37.30 acres in the Future Without the Proposed Project condition. The active open space in the residential study area would also increase from 16.81 acres in the No Build conditions to 16.90 acres in the Build conditions.

ADEQUACY OF OPEN SPACES

Commercial (¼-Mile) study area

Quantitative Analysis

In the Future With the Proposed Project, the commercial study area would remain well served by passive open spaces to meet the needs of the non-residential and residential populations. The ratio of passive open space per 1,000 workers would decrease from 1.51 in the Future Without the Proposed Project to 1.48 in the Future With the Proposed Project (an approximately 1.7 percent decrease), but would remain well above the city's guideline ratios (see **Table 5-12**). The ratio of passive open space for the total population (workers and residents) in the commercial study area would also decrease (by 1.3 percent) from a ratio of 0.63 in the Future Without the Proposed Project to a ratio of 0.62 with the Proposed Project. However, this ratio would also still exceed the city's guideline ratio of 0.15 acres per 1,000 workers and 0.50 acres per 1,000 residents, which combined, result in a weighted guideline ratio of 0.35.

Table 5-12
2018 Future With the Proposed Project:
Commercial Study Area Open Space Guidelines and Ratios for Combined Residential and Worker Populations

Population	People	Guideline Ratios (Acres / 1,000)	Passive Acres Needed to Meet Guidelines	Passive Acres Present	Actual Ratios
Non-residential population	18,572	0.15	2.79[2]	27.51	1.48
Combined non-residents and residents	44,574	0.35[1]	13.00	27.51	0.62

Notes:
[1] Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents.
[2] Based on the number of non-residents in the study area and the guideline ratio of 0.15 acres per 1,000 non-residents.

Qualitative Analysis

The Proposed Project's open space would function as an integral part of the overall project, providing a respite for people who would live and work within the project site and in the surrounding neighborhood. The proposed privately owned, publicly accessible open space would connect the West 60th Street corridor to Riverside Park South, which would become the most direct connection from Columbus Circle to the Hudson River waterfront. The landscaping design is intended to provide respite for people who would live and work within the project site and in the surrounding neighborhood, but is also intended to draw people through the complex to the Hudson River waterfront and to the 22.51-acre Riverside Park South, which is a major amenity for the future and existing community.

Therefore, based on the quantitative and qualitative open space evaluations, the Proposed Project would not result in significant adverse open space impacts in the commercial study area.

Residential (½-Mile) Study Area

Quantitative Analysis

Under the Proposed Project, total open space ratios in the residential (½-mile) study area would decrease slightly (by 1.8 percent), from 0.88 in the Future Without the Proposed Project to 0.86 with the Proposed Project (see **Table 5-13**). The passive open space ratios per 1,000 residents would increase slightly by 0.1 percent and remain at 0.60 in the Future With the Proposed Project, and would remain above the city's guideline ratio of 0.50. The passive open space ratios for combined worker and residential population would increase by 2.5 percent, from 0.33 to 0.34, and would be slightly below the calculated guidance ratio for this population of 0.35.

Table 5-13
2018 Future With the Proposed Project:
Residential Study Area Adequacy of Open Space Resources

Population		Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	66,183	56.86	39.96	16.90	0.86	0.60	0.26	2.50	0.50	2.00
Combined residents and workers	118,596				N/A	0.34	N/A	N/A	0.35*	NA

Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents

For active open space, the Proposed Project would decrease the active open space ratio in the residential study area by 6.1 percent, from 0.27 acres per 1,000 residents in the Future Without

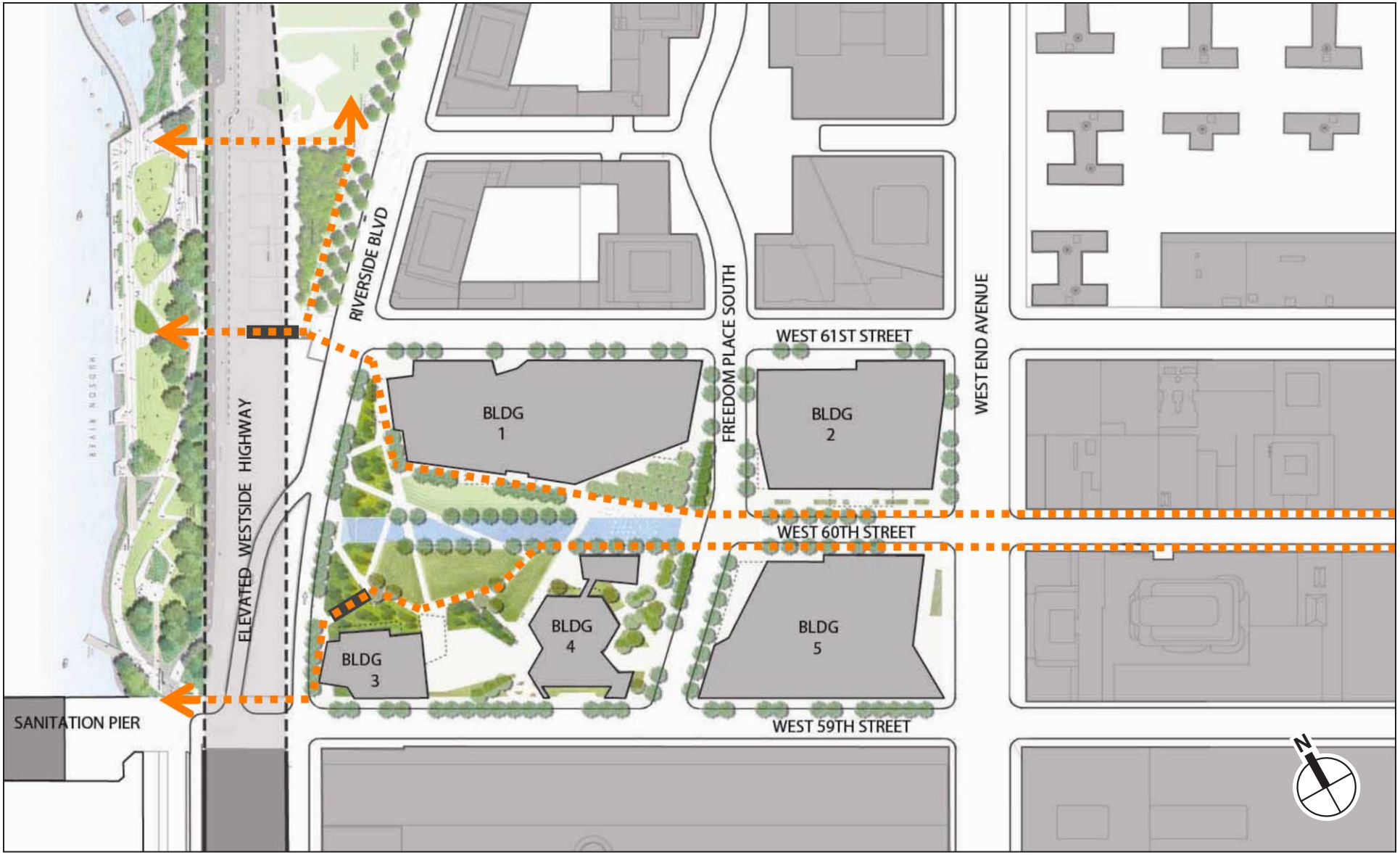
the Proposed Project to 0.26 acres per 1,000 residents with the Proposed Project. This ratio is below the city's guidance ratio of 2.0 acres per 1,000 residents.

Qualitative Analysis

The Proposed Project's open space would provide respite for people who would live and work within the project site and in the surrounding neighborhood. In total, approximately one-third of the 8.18-acre project site would be developed as open space. A vast majority of the open space is programmed for passive recreational activities; however, a small portion of the lawn area north of West 60th Street and west of Freedom Place South, as previously noted above, would provide some opportunities for active recreational activities (e.g., Tai Chi, Frisbee). The availability and duration of sunlight that the Proposed Project's open space would experience was considered in its design, and will be taken into account in the selection of appropriate plantings. It is anticipated that the plant species to be chosen would be generally shade tolerant (thriving in both sun and shade) for new open space areas that would be cast in shadow for extended periods, such that shadows cast on the plantings in these areas would not be expected to have their growth and/or continued propagation adversely affected.

A significant objective of the open space plan is to connect the West 60th Street corridor to Riverside Park South. A path would be created along the south and west sides of Building 1 to link the central plaza to a stair and ramp to Riverside Park South at the intersection of Riverside Boulevard and West 61st Street (see **Figure 5-3**). This would become the most direct pedestrian connection from Central Park and Columbus Circle to the Hudson River waterfront. The landscaping design is intended to draw people through the complex to the Hudson River waterfront and to the 22.51-acre Riverside Park South, which is a major amenity for the future and existing community. Riverside Park and Hudson River Park (located largely outside the study areas) also have large amounts of active open space. By establishing a highly visible and prominent pedestrian connection to these parks, the proposed open space would enhance these existing and planned active open space offerings for area residents. For example, in the future with the Proposed Project study area residents would have an immediate pedestrian connection to active amenities planned for Riverside Park South including, between West 61st and West 65th Streets, additional planned playground facilities, a multi-purpose field, a skate park, and four basketball half-courts.

The quantitative analyses do not consider the extensive open space resources just beyond the study area boundary, particularly the numerous passive and active recreational amenities in Central Park, the remainder of Hudson River Park, and Riverside Park that extend beyond the boundary of the residential study area. These parks are considered "destination parks," and residents would typically travel farther than the ½-mile extent of the residential study area to enjoy the open space and recreational amenities within these parks (and many of the residents in the residential study area live within ½-mile of these resources). For example, Heckscher Playground is located within the southwest corner of Central Park, approximately 1/8-mile from the residential study area boundary at Central Park West. Approximately 49 percent of the study area population lives within ½-mile of this playground. The three-acre playground is the largest in Central Park, and offers a range of play equipment including a special area for toddlers, over 20 swings, seesaws, sprinklers on warm days, a wooden suspension bridge, and restroom facilities. There are also six softball-sized fields located adjacent to the playground. However, many of the active open space recreational amenities in Central Park are located further than 1/8-mile from the residential study area boundary. Further, as noted in **Table 5-4**, "Publicly Accessible Open Space Inventory," Central Park is already highly utilized.



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Pedestrian Connections to Riverside Park South

Within Hudson River Park, there is a jogging and bicycle path that extends from within the study area boundary south to Battery Park City in Lower Manhattan. Immediately north of the residential study area, Riverside Park contains a number of active recreational opportunities, including: the 73rd Street Track (a 1/8-mile running track); Classic Playground west of West 75th Street; and Neufeld Playground at West 76th Street and Riverside Drive, containing two modern climbing structures, a swing area, a sandbox, restrooms, and there are basketball courts adjacent to this playground. Riverside Park is in good condition with moderate utilization which could allow for some additional park users. There are also other playgrounds, pocket parks, and plazas that are located just outside the open space study areas.

The above described open space resources would to a large extent offset the deficiency in active space within the residential study area. In total, these nearby parks offer an additional 1,080 acres of open space, including approximately 378 acres of active open space.

The population generated by the Proposed Project is not expected to have any special characteristics, such as a disproportionately younger or older population, that would place a proportionally heavier demand on facilities that cater to specific user groups. As shown in **Tables 5-3** and **5-11**, the projected percentages of the future population that will be children—and who typically demand more varied active open space amenities—would be less than the percentages for Manhattan and New York City as a whole. Demand for these more active recreational opportunities is served within the residential study area by numerous playgrounds and play surfaces at parks such as Riverside Park South (in excellent condition with high utilization), Amsterdam Houses Playground (good condition/high utilization), Amsterdam Houses Open Space (good condition/high utilization), Amsterdam Plaza at Harborview Terrace (poor condition/low utilization), Balsley Park (excellent condition/high utilization), De Witt Clinton Park (good condition/high utilization), and P.S. 199 playground (excellent condition/high utilization). In addition, the West 59th Street Recreation Center (poor condition/low utilization) offers an indoor pool and a multi-use gymnasium, and is currently undergoing renovation and expansion that would address the present poor condition of this facility.

The senior population (ages 65 and above) is projected to comprise approximately 14.9 percent of the residential study area's population, a larger percentage than in Manhattan (12.9 percent) and New York City as a whole (12.4 percent). Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities. Within the residential study area, seniors' recreational demands will continue to be served by various active and passive spaces, as well as by parks and other small open space resources just outside the study area that are not included in the quantitative analysis. These include: Septuagesimo Uno (good condition/moderate utilization), a 0.04-acre park located on 71st Street between West End and Amsterdam Avenues; Broadway Malls (good condition/high utilization), which includes a series of benches and planters located on the median along Broadway; and other bonus parks and plazas. Many of these open spaces are very well used and add up to an additional 2 acres of open space, excluding Central Park, which offers additional destination open space, but is located just outside the residential study area.

DETERMINING IMPACT SIGNIFICANCE

In the future with the Proposed Project, the commercial (¼-mile) study area would remain well-served by passive open spaces to meet the needs of the non-residential and residential populations. Although the open space ratio would decrease slightly from 1.51 in the future

without the Proposed Project to 1.48 in the future with the Proposed Project (an approximately 1.7 percent decrease), it would remain well above the city's guideline ratios of 0.15 and 0.35, respectively. Therefore, the Proposed Project would not result in significant adverse open space impacts in the commercial study area.

The passive open space ratios in the residential (½-mile) study area would increase slightly by 0.1 percent and remain at 0.60 in the future with the Proposed Project, and would remain above the city's guideline ratio of 0.50. The passive open space ratios for combined worker and residential population would increase by 2.5 percent, from 0.33 to 0.34, and would be slightly below the calculated guidance ratio for this population of 0.35. Although this guideline would not be met in full, the Proposed Project would improve the passive open space ratios and would not result in significant adverse passive open space impacts in the residential study area.

For active open space, the Proposed Project would decrease the active open space ratio in the residential study area by 6.1 percent, from 0.27 in the future without the Proposed Project to 0.26 with the Proposed Project. This ratio is below the city's guidance ratio of 2.0 acres per 1,000 residents. The decrease in the active open space ratio for the residential study area is sizable. The qualitative assessment indicates that the availability of open spaces outside the study area would to a large extent alleviate the burden on the study area's open spaces. Nonetheless, given the size of the decrease in the active open space ratio and the already high utilization of many of the active open space resources that would be available to the users in the Future With the Proposed Project, both within and outside the study area, the Proposed Project has the potential to result in a significant adverse active open space impact. Mitigation measures to address this impact are discussed in Chapter 22, "Mitigation."

H. FUTURE CONDITIONS WITH THE MILLER HIGHWAY RELOCATION

As described in Chapter 1, "Project Description," for certain environmental issues—including open space—the 1992 FEIS analyzed an additional scenario in which the elevated portion of the Miller Highway (also known as Route 9A) between 59th Street and 72nd Street would be relocated to an inboard, below-grade location by 2002, the anticipated completion year for the Riverside South project.

At this time the Miller Highway has not been relocated, and there is no funding allocated toward advancing the project. However, since the highway may, in the future, be relocated, this section considers an additional future condition in which the highway relocation takes place by the Proposed Project's Build year of 2018, in a manner similar to that described in the 1992 FEIS, and as analyzed in greater detail as part of the Preferred Alternative scenario in the October 2000 Miller Highway Project FEIS.

In this condition, the Miller Highway would be relocated inboard under and next to Riverside Drive. The relocation of the Miller Highway would eliminate the highway as a visual and physical barrier to the Hudson River waterfront, enhancing views west from the project site and the surrounding area. As discussed in the FEIS, the park with the relocated highway would provide an escape from the city by hiding the highway in a partly covered depression. With the relocated highway, park users would have free and unimpeded movement between Riverside Boulevard and the water's edge in Riverside Park South. In addition, the relocation of the Miller Highway would provide for an uninterrupted extension of parkland between Riverside Park to

the north and Hudson River Park to the south. Any recreation features currently located under the Miller Highway viaduct could be reconstructed within the park with the relocated highway.

As discussed in the FEIS, the relocated Miller Highway would be depressed and separated from Riverside Park South by a barrier, which would reduce shadows and noise within the park. As noted in the FEIS, the park with the relocated highway would have more sunlight because the highway would no longer cast shadows on the waterfront areas in the morning and on the upland areas in the afternoon. Furthermore, portions of the park with the relocated highway would have lower noise levels than portions of the park with the elevated highway.

The relocation of the Miller Highway would also change pedestrian access to Riverside Park South. The relocated highway would eliminate the pedestrian access point at West 59th Street because the highway would be at grade at that intersection. Pedestrian access to the park would continue to be available at West 61st Street with the relocated highway. The next closest access point to the south would be at West 56th Street, where park users could enter Hudson River Park and continue north to Riverside Park South along the waterfront esplanade. Existing pedestrian access points to the park north of West 61st Street would be unaffected by the relocation of the Miller Highway.

Overall, the relocation of the Miller Highway would result in an improved and more cohesive Riverside Park South. Therefore, the Miller Highway relocation would not alter the conclusion that the Proposed Project—compared with No Build Scenarios 1 and 2—would not result in significant adverse impacts to passive open space resources in the commercial and residential study areas. Although the Miller Highway relocation would improve the condition of Riverside Park South, it is not expected to result in substantial changes to the amount of active open space in the residential study area. Therefore, the Miller Highway relocation would not alter the conclusion that the Proposed Project would not result in a significant adverse impact to active open space resources in the residential study area. ✷