
CHAPTER 5: OPEN SPACE

A. INTRODUCTION

According to the *CEQR Technical Manual*, open space is defined as publicly-accessible land, either publicly- or privately-owned, designated for leisure, play, sport, or land set aside for the protection and/or enhancement of the natural environment. Only open spaces that are accessible to the public on a regular basis or for designated daily periods are defined as public and analyzed for impacts. This chapter assesses the potential impacts of the proposed actions on the quality, use, and maintenance of public open space. The assessment will determine whether or not the proposed project would have either a direct impact resulting from the elimination or alteration of open space or an indirect impact resulting from over utilization of available open space. Active open space is defined as open space that is used for sports, exercise, or active play. Active open spaces consist primarily of recreational facilities such as playgrounds playing fields/courts, beach areas, greenways and esplanades, among others. Passive open space is used for relaxation, such as sitting or strolling, and generally includes plazas, medians with seating, picnic areas, lawns, gardens, among others. The analysis in this chapter follows the guidelines contained in Section 3D of the *CEQR Technical Manual*.

B. OVERVIEW

The open space study area, irrespective of the proposed actions, currently does not meet the *CEQR Technical Manual's* criteria as having an adequate amount of open and recreational space nor is it expected to under the future without the proposed actions scenario. Historically, many mixed-use and light industrial areas such as Dutch Kills developed with very little open space. The proposed project is expected to introduce new residents to the rezoning area, thus placing additional demand on existing open space resources. The open space ratio would decrease from 0.83 acres per 1,000 residents in the future without the proposed actions to 0.78 acres per 1,000 residents in the future with the proposed actions, a decrease of approximately 6.83 percent. This decrease would constitute a significant adverse impact.

The recreational space created under the Quality Housing Program in the future with the proposed project will contribute to alleviating some of the shortage of open space in the study area. In addition, there are several large open space resources just outside the study area which would also partially alleviate the shortage of open space for new residents of the proposed actions. However, despite these two additional open space opportunities, the proposed actions would still result in a significant adverse effect on open space.

Potential measures that could mitigate the significant adverse impact on open space resources are discussed ~~As discussed in Chapter 21, "Mitigation.," potential measures to mitigate the significant adverse impact on open space resources will be explored between the Draft and Final EIS. That chapter concludes that the significant adverse impact would remain unmitigated~~

C. METHODOLOGY

STUDY AREA

According to the *CEQR Technical Manual*, an indirect effects analysis for open space is recommended for any project that would introduce more than 200 residents or 500 employees. The proposed project would result in the incremental increase of 4,059 residents and the incremental decrease of approximately 440 employees to the rezoning area, as defined in Chapter 1, "Project Description." Because the proposed action would introduce a new residential population to the study area that would exceed the CEQR threshold, a residential study area based on a ½-mile distance has been established. The proposed actions would not generate enough new employment opportunities within the rezoning area to exceed the CEQR threshold of 500 new employees; therefore, the identification and analysis of a commercial open space study area is not warranted.

According to the *CEQR Technical Manual* guidelines, the study area for the evaluation of open space resources is defined by a reasonable walking distance that users would travel to reach local open space resources. The *CEQR Technical Manual* recommends the use of a ½ mile study area radius for residential populations (residential users are assumed to be willing to travel farther to reach open space resources). The open space study area includes those census tracts with 50.0 percent or more of their area within a ½ mile of the rezoning area. Figure 5-1 illustrates the ½ mile study area used in the open space analysis and resources within that study area. Because the Sunnyside Yards, which are located within the ½ mile study area, acts as a physical boundary, it is anticipated that few residents would cross this boundary to access open space resources. Therefore, the study area was adjusted to exclude census tracts south of Sunnyside Yard.

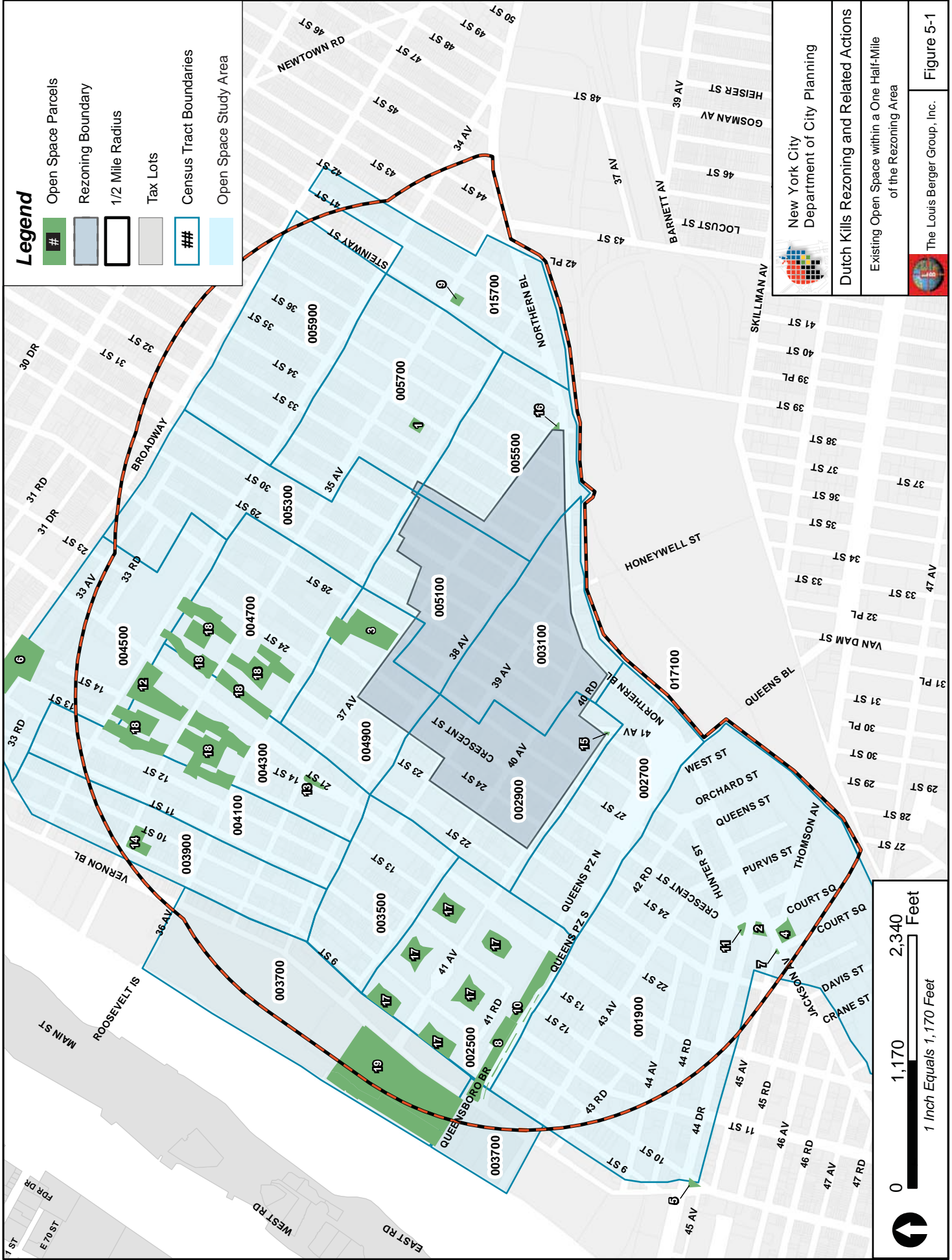
INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces in the residential study area was identified based on existing New York City Department of Parks and Recreation (NYCDPR) maps and records in addition to a field survey conducted in December 2007. Data collection for each open space resource included: the owner, total acreage, passive and active recreation acreage, the amenities provided by the resource, the quality of the resource and the utilization of the resource.

The quality of the resource was assessed based on NYCDPR inspection reports, which rate open space resources "acceptable" or "unacceptable" for overall condition and cleanliness. For publicly accessible open space resources not inspected by NYCDPR (e.g. publicly accessible private open space), quality ratings were assigned based on conditions observed during the field survey and NYCDPR's Guide to the Parks Inspection Program and Official Standards.


The use level at each facility was determined based on observations of the amount of space or equipment that was observed to be in use as described in the *CEQR Technical Manual*. Open spaces with less than 25.0 percent of space or equipment in use were categorized as low usage. Those with 25 to 75 percent utilization were classified as having moderate usage and those with over 75 percent utilization were considered heavily used.

An active open space area is defined as those resources that are used for sport, exercise, or active play. Many active open space resources offer recreational amenities such as playground equipment, playing fields or courts, greenways and esplanades, and multi-purpose play areas. Passive open space resources are defined as those recreational areas used for relaxation, sitting, or strolling. Such resources may



Legend


- Open Space Parcels
- Rezoning Boundary
- 1/2 Mile Radius
- Tax Lots
- Census Tract Boundaries
- Open Space Study Area



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Dutch Kills Rezoning and Related Actions

Existing Open Space within a One Half-Mile
of the Rezoning Area



The Louis Berger Group, Inc.

Figure 5-1

Source: MapPluto, NYCDP.
* This figure has been modified for the FEIS to exclude extraneous census tracts.

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include plazas or medians with seating, greenways and esplanades, paths, accessible restricted use lawns, gardens, and publicly accessible natural areas.

ADEQUACY OF OPEN SPACE RESOURCES

CRITERIA FOR QUANTITATIVE ANALYSIS

The determination of the need for a quantified open space analysis is based on the adequacy of the quantity of open space, and how the proposed actions would change open space ratios in the future with the proposed actions. If the potential exists for the open space ratio to decrease by 5.0 percent, it is generally considered to be a substantial change, thus warranting further analysis. However, if a study area already exhibits a low open space ratio (e.g., below the guidelines set forth in the *CEQR Technical Manual*, indicating a shortfall of open space), even a 1 percent decrease in that ratio as a result of a proposed project or action may be considered an adverse effect and would warrant a detailed analysis. Because the proposed action would introduce a substantial new residential population, with the potential to result in a significant, adverse open space impact. Therefore, the determination for a detailed quantitative analysis was undertaken.

COMPARISON TO DCP GUIDELINES

To assess the adequacy of the quantity of open space resources (both active and passive), open space ratios were compared against guideline values set by the New York City Department of City Planning (NYCDCP). These guideline values are based, in part, on the National Recreation and Park Association guidelines for adequate open space. Although these open space ratios are not meant to determine whether a proposed action would have a significant adverse impact on open space resources, they are helpful in understanding the extent to which an impact can occur.

For residential populations, a guideline of 2.5 acres per 1,000 residents is considered adequate. Ideally, this is comprised of 0.50 acres of passive space and 2.0 acres of active open space. This ratio has been employed for this analysis. For large-scale actions such as the proposed actions, the City seeks to attain a planning goal of a balance of 80.0 percent active open space and 20.0 percent passive open space.

IMPACT ASSESSMENT

The assessment of potential significant adverse impacts on open space is both quantitative and qualitative. The assessment considers nearby destination resources and project-created open spaces or private/quasi-private recreational facilities not available to the general public. It is recognized that NYCDCP open space planning goals are not feasible for many areas of the city, and as a result are not considered in impact thresholds. These thresholds are typically used as benchmarks indicating how well an area is served by open space.

D. EXISTING CONDITIONS

STUDY AREA POPULATION

The analysis has identified 18 Census tracts with at least 50 percent or more of their area within a ½ mile of the rezoning area. Additionally, two Census blocks, located just east of the East River, have been included since they are almost entirely within the study area and adjacent to Queensbridge Park.

According to the 2000 Census, the residential population of the study area was 46,783. In 2007, the residential population of the study area is estimated to be 47,668. Table 5-1 summarizes the population of the study area by age group. The percentage breakdown by age cohort assumes the same percentages as experienced by the study area at the time of the 2000 Census. Within the study area, adults between the ages of 20 and 64 represent approximately 62.7 percent of the total study area population. Persons 19 years of age and younger represent approximately 26.2 percent of the study area population while 11.1 percent of residents are years of age 65 or older.

Table 5-1
Study Area Residential Population by Age Group, 2007

Age Category	Number	Percent
<4 years	3,325	7.0%
5-9 years	3,252	6.8%
10-14 years	2,994	6.3%
15-19 years	2,897	6.1%
20-64 years	29,889	62.7%
65+ years	5,312	11.1%
Total	47,668	100.0%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. New York City Department of City Planning, 2008.

According to the *CEQR Technical Manual*, given the range of age groups present in the study area, the need exists for various kinds of active and passive recreation facilities, including those with amenities that can be used by children and adults. The age distribution of a population affects the way open spaces are used and the need for a variety of recreational facilities. 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.

OPEN SPACE RESOURCES

There are 19 publicly accessible open space resources within the study area (see Figure 5-1 and Table 5-2). The total acreage of open space in the study area is 43.89; 21.6 acres of which is passive open space and the remaining 22.29 acres are active open space. Descriptions of open space resources in the study area are provided below. If available, the most recent inspection report for each open space as listed on the NYCDPR website is provided below including the rating and level of use for each reported open space. Existing conditions at each open space was confirmed through additional field work.

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**Table 5-2
Open Space Resources**

Map ID	Name	Location	Owner	Total Acres	Passive Acres	Active Acres	Amenities	Condition	Use Level
1	ARROW Community Garden	35 th Street, 35 th Avenue, 36 th Avenue	DPR	0.287	0.232	0.058	Community center, gardens, playground equipment, landscaping, trees	Acceptable	Moderate
2	Citicorp Plaza (publicly accessible private open space)	One Court Square, Jackson Avenue, 44 th Drive	Citicorp	0.53	0.53	0.0	Benches, trees, landscaping	Acceptable	Moderate
3	Dutch Kills Playground	37 th Avenue, Crescent Street, 36 th Avenue, 28 th Street	DPR	2.4	0.37	2.03	Playground, handball, basketball, hockey, sitting area	Acceptable	Heavy
4	Court Square Park	Jackson Avenue, Thomson Avenue, Court Square	DPR	0.268	0.268	0.0	Fountain, benches, landscaping	Acceptable	Light*
5	Gordan Triangle	10 th Street, Vernon Boulevard, 44 th Drive, 45 th Avenue	DPR	0.13	0.13	0.00	Benches, trees, landscaping	Acceptable	Light
6	Long Island City High School	Broadway, 12 th Street, 33 rd Avenue	DOE	3.20	0.0	3.20	Playing field	Acceptable*	Moderate*
7	McKenna Triangle	Jackson Avenue, Thomson Avenue, 45 th Street	DPR	0.045	0.045	0.0	Trees, landscaping	Acceptable	Light
8	Playground	Under Queensboro Bridge, 10 th Street to 1 st Street	DPR	0.83	0.03	0.80	Playground, benches	Acceptable*	Light*
9	Playground 35	Steinway Street, 35 th Avenue	DPR	0.218	0.0436	0.1744	Playground, benches, trees, polar bear	Acceptable	Moderate*
10	Queensbridge "Baby" Park	Under Queensboro Bridge, Vernon Boulevard to 21 st Street	DPR	0.22	0.0	0.22	Walkway, trees, handball courts, benches, landscaping	Acceptable	Light*
11	Rafferty Triangle	Hunter Street, Crescent Street, 44 th Drive	DPR	0.14	0.140	0.004	Trees, landscaping	Acceptable	Light
12	Ravenswood Playground	35 th Avenue, 21 st Street, 34 th Avenue	DPR	2.758	0.2758	2.4822	Baseball diamond, basketball courts, handball courts, multi-purpose courts, benches, trees	Acceptable	Heavy*
13	Sixteen Oaks Grove	37 th Avenue, 21 st Street, 14 th Street	DPR	0.22	0.22	0.0	Benches, trees, landscaping	Acceptable	Light*
14	Spirit Playground	36 th Avenue, 9 th Street, 10 th Street	DPR	0.707	0.1414	0.5656	Basketball courts, handball courts, open play area, playground equipment, benches, comfort station	Acceptable	Moderate*
15	Triangle 41	41 st Avenue, 29 th Street	DPR	0.028	0.028	0.0	Landscaping	Acceptable*	Light*
16	Triangle 37	Northern Boulevard, 37 th Avenue	DPR	0.06	0.06	0.0	Landscaping	Acceptable*	Light*
17	Queensbridge Houses Open Space	Queens Plaza North, Vernon Boulevard, 21 st Street, 40 th Avenue	NYCHA	6.65	4.655	1.995	Playground, sitting area, basketball courts, paths, trees, landscaping	Acceptable*	Light*

**Table 5-2 (Continued)
Open Space Resources**

18	Ravenswood Houses Open Space	36 th Avenue, 12 th Street, 34 th Avenue, 24 th Street	NYCHA	16.80	13.44	3.36	Playground, sitting area, basketball courts, paths, trees, landscaping	Acceptable*	Light*
19	Queensbridge Park	21 st Street, Bridge Plaza, Vernon Boulevard, East River	NYCHA	8.40**	1.0	7.40	Playing fields, playground, sitting area, wading pool	Acceptable	Heavy
		Total		43.89	21.60	22.29			

Source: New York City Department of Parks and Recreation, 2007. The Louis Berger Group, Inc., 2008.

Note: *Ratings are based on field inspection. There is no online data available from the NYC Department of Parks and Recreation.

** Queensbridge Park is approximately 12.68 acres in size, of which 8.40 acres are located within the study area.



ARROW COMMUNITY GARDEN



CITICORP PLAZA



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Open Space Photographs



The Louis Berger Group, Inc.

Figure 5-2

ARROW COMMUNITY GARDEN

The ARROW Community Garden, located on 35th Street between 35th Avenue and 36th Avenue, is owned by NYCDPR and managed by the neighborhood group Astoria Residents Reclaiming Our World (ARROW). It is part of the NYCDPR Parks Afterschool Program which aims to enhance communities and enrich the lives of children by providing safe, supportive, and structured environments that support the social, physical, intellectual, and emotional development of children. As seen in Figure 5-2 the garden features playground equipment including basketball hoops, an open green area, herb and vegetable gardens, flowers, trees, benches, and a community center. At the time of the last NYCDPR inspection, the area was rated acceptable. The open space is well used, and the community center provides additional space for indoor activities during the winter months.

CITICORP PLAZA

Citicorp Plaza, located at the intersection of 44th Drive and Jackson Avenue, is a publicly accessible, private open space, adjacent to the Citicorp Tower at One Court Square. As seen in Figure 5-2, the plaza provides benches, bicycle racks, trees and landscaping for passive recreational uses. The condition of Citicorp Plaza is rated as acceptable and use level is rated as moderate. Developed as part of the development of the Citicorp Tower, the plaza is used primarily by employees as passive recreational space to enjoy lunch.

DUTCH KILLS PLAYGROUND

Dutch Kills Playground is generally bound by 36th and 37th Avenues, Crescent Street and 28th Street. As seen in Figure 5-3 the playground offers a baseball diamond, a hockey rink with an electronic scoreboard, two basketball hoops (without nets), playground equipment, handball courts, and a sitting area. The entire area ~~is paved with concrete.~~ appears to be paved with concrete; however, there are existing tennis courts which comprise approximately half the concrete yard. These tennis courts are in poor condition and include cracked asphalt and faded lines. The courts are used only by the adjacent school (PS 112). The courts do not have nets; the school brings their own nets to make use of the courts. There are numerous lights which serve the area until the playground closes at 9:00 pm. At the time of its last inspection by NYCDPR, in October 2007, the condition was rated acceptable. However, the level of use was not reported at that time. The level of use is heavy, in part because it is adjacent to PS 112. At the time of the previous inspection in January 2007, the playground was rated unacceptable.

COURT SQUARE PARK

Court Square Park is located in front of the Queens County Court House at the intersection of Court Square, Jackson Avenue, and Thomson Avenue. As seen in Figure 5-3 Court Square Park features a large fountain surrounded by benches, paths, sizable grassy areas, trees and other landscaping for passive recreational use. At the time of the most recent inspection by the NYCDPR, the condition of Court Square Park was rated acceptable and the use level was not rated.

GORDAN TRIANGLE

Gordan Triangle is located on the western boundary of the study area at the intersection of 10th Street, Vernon Boulevard and 44th Drive. As seen in Figure 5-4 a pathway leads to a flagpole that is surrounded by benches, trees and other forms of landscaping. A sitting and pedestrian area is surrounded by a grassy



DUTCH KILLS PLAYGROUND



COURT SQUARE PARK



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Figure 5-3



GORDAN TRIANGLE



QUEENS PLAZA GREENSTREETS



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Figure 5-4

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lawn that could accommodate a number of active recreational activities. The condition of this resource is rated acceptable and the use level is rated moderate.

LONG ISLAND CITY HIGH SCHOOL FIELD

Owned and operated by the New York City Department of Education (DOE), the Long Island City High School field is located on Broadway between 12th Street and 14th Street. As seen in Figure 5-5 the relatively new area has one large field carpeted with AstroTurf that can accommodate either a football and soccer game. The area is equipped with bleachers for spectators. Since the field is owned and operated by DOE, DPR would not rate the level of use or if conditions are acceptable. However, a recent site inspection confirms the condition of this resource to be acceptable. As it is part of the adjacent high school, the field is not open to the public Monday – Friday from 8:00 a.m. until approximately 7:00 p.m. when afterschool activities have finished for the day. The field is open to the public from approximately 7:00 p.m. – 9:00 p.m. when it closes. The field is used on Saturdays and Sundays for school sporting events and is not generally open to the public.

McKENNA TRIANGLE

McKenna Triangle, as seen in Figure 5-5, located between Jackson Avenue, Thomson Avenue, and 45th Street, provides trees and landscaping. The condition of this resource is rated acceptable and the use level is rated light.

PLAYGROUND 35

Located at the intersection of Steinway Street and 35th Avenue, Playground 35 provides playground equipment (including a concrete polar bear), benches, and trees. As seen in Figure 5-6 there is a swing area that is separated from the rest of the playground by a short fence. The condition of this resource is rated acceptable and the use level is not known at this time. This resource closes at 9:00 pm.

QUEENSBRIDGE “BABY” PARK

Queensbridge “Baby” Park, as seen in Figure 5-6, refers to the portion of Queensbridge Park located underneath the northern side of Queensboro Bridge between Vernon Boulevard and 21st Street. This resource provides a concrete wall that could be used for handball and other games. The time of its last inspection, the condition of Queensbridge “Baby” Park was rated acceptable. Field work performed in December 2007 confirmed that the area directly south of the park and underneath the Queensboro Bridge is presently being used as a staging area for construction materials for bridge repair. Existing caution tape indicates that maintenance to this resource is necessary. The use level is not known at this time.

RAFFERTY TRIANGLE

Rafferty Triangle is located between Hunter Street, Crescent Street, and 44th Drive. As seen in Figure 5-7 the resource provides a small area of landscaping and trees for passive recreational uses. The triangle is surrounded by benches that are set back from the street so pedestrian movements are not compromised. The condition of this resource is rated acceptable and the use level is not known at this time.



LONG ISLAND CITY HIGH SCHOOL FIELD



McKENNA TRIANGLE



PLAYGROUND 35



QUEENSBRIDGE "BABY" PARK



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Open Space Photographs



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Figure 5-6

RAVENSWOOD PLAYGROUND

Ravenswood Playground, as seen in Figure 5-7, located between 34th Avenue and 35th Avenue on 23rd Street provides a baseball diamond, basketball courts, handball courts, multi-purpose courts, benches and trees. Based on a site visit, the playground appeared to have relatively new equipment. During the most recent NYCDPR inspection in January 2007, the overall condition of the resource was rated unacceptable due to unacceptable conditions related to deteriorating benches, graffiti, and paved surfaces. According to DPR, Ravenswood Playground experiences a heavy level of use.

SIXTEEN OAKS GROVE

This open space is bound by 37th Avenue between 14th and 21st Streets, and is located across the street from Jacob Blackwell Public School 111. As seen in Figure 5-8, the features of Sixteen Oaks Grove include oak trees, landscaping and benches for passive recreation. The inner portion of the space is concrete with some gravel. Along the edges where the oak trees line the park are small grassy areas. Nearby residents enjoy this passive resource for feeding birds and conversing with others. At the time of the most recent inspection, the condition of Sixteen Oaks Grove was rated acceptable. However, the level of use was not known.

SPIRIT PLAYGROUND

Spirit Playground is adjacent to P.S. 76 at 36th Avenue, 9th Street and 10th Street. As seen in Figure 5-8, Spirit Playground provides several active recreation areas such as basketball courts, handball courts, an open play area, and playground equipment. The playground is well landscaped with plantings and large rocks embedded in the ground. The playground equipment is relatively new and in good condition. The resource also features benches, several trash receptacles, and restrooms. The area closes at 9:00 pm. At the time of the most recent inspection, the condition of this resource was rated acceptable, the level of use was not known. However, it is assumed that this open space is well used since it is located adjacent PS 76.

TRIANGLE FORTY ONE

This landscaped triangle is located at the intersection of 41st Avenue and 29th Street. As seen in Figure 5-9, the triangle is landscaped with a few small trees. The area is small and could serve as a gathering area. However, it does not offer seating. No inspection data are available from NYCDPR.

TRIANGLE THIRTY SEVEN

This landscaped triangle is located at the intersection of 41st Avenue and 29th Street. As seen in Figure 5-9, the triangle offers well maintained landscaping. The triangle itself does not accommodate leisure activities, however, the small area located on the opposite side of 37th Avenue offers benches. The area has not received a condition or level of use rated from the NYCDPR.

QUEENSBRIDGE HOUSES OPEN SPACE

The open space associated with NYCHA's Queensbridge Houses development provides, as seen in Figure 5-10, a playground, sitting areas, basketball courts, paths, trees, and landscaping. Although primarily intended for residents of the Queensbridge Houses, this open space resource is publicly accessible. The



RAFFERTY TRIANGLE



RAVENSWOOD PLAYGROUND



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Figure 5-7



SIXTEEN OAKS GROVE



SPIRIT PLAYGROUND



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Figure 5-8



TRIANGLE FORTY ONE



TRIANGLE THIRTY SEVEN



QUEENSBRIDGE HOUSES OPEN SPACE



RAVENSWOOD HOUSES OPEN SPACE



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Figure 5-10

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condition and level of use of this resource is not presently reported by NYCDPR. A December 2007 site visit shows that equipment is in need of repair.

RAVENSWOOD HOUSES OPEN SPACE

The open space associated with NYCHA's Ravenswood Houses development provides, as seen in Figure 5-10 a playground, sitting areas, basketball courts, paths, trees, and landscaping. Field inspection reveals that much of the equipment is relatively new and in good condition. Benches line the pathways and tables with chess boards scatter the area. Although primarily intended for residents of the Ravenswood Houses, this open space resource is publicly accessible.

QUEENSBRIDGE PARK

Acquired in two sections in 1939 by the City, Queensbridge Park is located just north of the Queensboro Bridge at the East River. Officially, the New York City Housing Authority owns the park, however, it is maintained by the new York city Department of Parks and Recreations. It is approximately 12.68 acres in size, of which 8.40 acres are located within the study area. The park offers a variety of amenities including baseball fields, a soccer-football combination field, basketball, volleyball and handball courts, a playground, wading pool, and picnic and other seating areas. The use of this resource is heavy and the condition is acceptable.

EXISTING CONDITIONS

ADEQUACY OF OPEN SPACE

The adequacy of open space is measured by the open space ratio which is defined as the acres of open space per 1,000 people. For residential populations, a guideline of 2.5 acres per 1,000 residents is considered adequate. Ideally, this is comprised of 0.50 acres of passive space and 2.0 acres of active open space. For large-scale actions such as the proposed actions, the City seeks to attain a planning goal of a balance of 80.0 percent active open space and 20.0 percent passive open space. Based on the 2007 study area population, 47,668 and the existing 43.89 acres of open space in the study area, the open space ratio in the study area is 0.92, which is substantially lower than the citywide median community district open space ratio of 1.5 acres per 1,000 residents and the City's goal of 2.5 acres per 1,000 residents. The active open space ratio is 0.47 acres per 1,000 residents and the passive open space ratio is 0.45 acres per 1,000 residents.

Overall, approximately 49.2 percent of open space in the study area is classified as passive space and the remaining 50.8 percent is classified as active space. The study area does not meet the NYCDCP goal of 80.0 percent active open space and 20.0 percent passive open space as presented in the *CEQR Technical Manual*.

As shown in Table 5-1, approximately 26.2 percent of the study area population is 19 years of age or younger. The active open space ratio for this population is 1.79 acres per 1,000 residents.¹ In the study area, active open space resources provide amenities catering to this population including play equipment, basketball courts, and other field spaces. Active open space resources in the study area are largely suitable for this population. However, adult populations also benefit from their presence. The active

¹ Open space ratios for each age cohort have been calculated by dividing the total acres, passive acres, and active acres by the population in each cohort and then multiplied by 1,000.

open space ratio for adults between the ages of 20 and 64 is 0.75 acres per 1,000 residents. It is anticipated that adult populations are more likely to access riverfront open spaces such as Queensbridge Park and Gantry State Park Peninsula Park for recreational activities.

QUALITATIVE ASSESSMENT OF OPEN SPACE ADEQUACY

The overall condition of open space resources in the study area is acceptable. Although the amount of active open space available does not meet CEQR guidelines, there are a variety of active recreational activities, offering amenities that address the needs of multiple age groups. There are several large open space resources just outside the boundary of the open space study area concentrated in areas adjacent to the East River. Queensbridge Park, located along the East River just north of the Queensboro Bridge, provides an open lawn, four softball fields, a soccer field, volleyball courts, and a picnic area. Other large parks outside the study area include, Gantry State Park Peninsula Park, Rainey Park and Socrates Sculpture Park. There are no large open space resources in the immediate area to the east of the study area. Based on the distribution pattern of open space, study area residents in the central and eastern portions of the study area experience a substantial shortage of open space in comparison to residents of the western portions of the study area that have excellent access to the large open space resources, such as those mentioned along the East River.

E. FUTURE CONDITION WITHOUT THE PROPOSED ACTIONS

STUDY AREA POPULATION

It has been estimated that the 2007 study area residential population is approximately 47,668. Projections prepared for the ½ mile study area census tracts indicate a residential population increase of 7,692 or approximately 1.51 percent annual growth between 2007 and 2017. Table 5-3 identifies those background development sites located within the study area that are expected to account for the increase in the residential population by 2017.

As demonstrated in Table 5-4, in 2017 without the proposed actions, it is anticipated that the study area would have approximately 55,359 residents.² No substantial changes in the age group structure of the residential population are expected by the 2017 Build Year. The number of residents in each age cohort as seen in Table 5-4 is based on the percent share for that age cohort at the time of the 2000 Census.

**Table 5-3
Background Development Sites within the Study Area**

Project	Address	Block/Lot	Residential (units)
Arris Lofts	27-28 Thomson Avenue	82/ 1	238
Fusion LIC (42-51 Hunter Street)	42-51 Hunter Street	432/ 47	24
View 59 (25-15 Queens Plaza N)	25-15 Queens Plaza North	415/ 4	39
44-27 Purves Street	44-27 Purves Street	267/ 11	64
Queens Plaza South	42-16 West Street	264/ 1	700
Crescent Club	41-17-23 Crescent Street	415/ 11	140

² The 2017 Future No Build Condition population has been derived by adding the 2007 study area population and the population generated by background development sites located within the study area as supplied by the New York City Department of City Planning.

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42-37 Crescent Street	42-37 Crescent Street	430/ 8	16
42-59 Crescent Street	42-59 Crescent Street	430/ 38	22
27-14 41 st Avenue	27-14 41 st Avenue	416/ 32	26
27-11 42 nd Road	27-11 42 nd Road	422/ 31	184
26-26 Jackson Avenue	26-26 Jackson Avenue	267/ 19	43
41-02 24 th Street	41-02 24 th Street	415/ 26	42
41-34 25 th Street	41-34 25 th Street	414/ 41	141
Queens Plaza North/24th (Venus)	41-50 24 th Street	413/ 2	292
35-16 32 nd Street	35-16 32 nd Street	604/ 31	3
41-18 27 th Street	41-18 27 th Street	415/ 30	15
38-10 27 th Street	38-10 27 th Street	387/ 24	3
10-07 36 th Avenue	10-07 36 th Avenue	330/ 3	2
35-21 33 rd Street	35-21 33 rd Street	606/ 16	3
35-14 31 st Street	35-14 31 st Street	603/ 30	3
35-12 31 st Street	35-12 31 st Street	603/ 29	3
35-18 31 st Street	35-18 31 st Street	603/ 32	3
35-16 31 st Street	35-16 31 st Street	603/ 31	3
41-02 Vernon Boulevard	41-02 Vernon Boulevard	470/ 1	30
Astoria Studio Apts. Rezoning	34-32 35 th Street	642/ 36,42, 44	60
Rockrose Parking Lot	24-02 43 rd Avenue		710
The Queens Plaza	41-28 27 th Street	415/33	66
	27-03 43 rd Avenue	432/25,26	50

Source: New York City Department of City Planning, 2008.

Table 5-4
Study Area Residential Population by Age Group, No Action Condition, 2017

Age Category	Number	Percent
<4 years	3,805	6.9%
5-9 years	3,694	6.7%
10-14 years	3,435	6.2%
15-19 years	3,308	6.0%
20-64 years	34,884	63.0%
65+ years	6,234	11.3%
Total	55,359	100.0%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. New York City Department of City Planning, 2008. The Louis Berger Group, Inc., 2008.

STUDY AREA OPEN SPACE RESOURCES

In addition to existing open space resources, new or modified open space resources would be added to the study area under the future no action condition. These open space resources are anticipated to be completed by 2017 and are shown on Figure 5-11 and Table 5-5 below.

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The Queens Plaza Bike and Pedestrian Improvement Project involves modifications to existing Greenstreets, the realignment of several roadways, and other improvements to encourage bicycle and pedestrian transportation between the East River, Queens Plaza North, Queens Plaza South and Queens Plaza East. The Queens Plaza Redesign project, with construction beginning sometime in 2008, will add landscaping, benches, lighting and art to create attractive public spaces.

Three passive open spaces will added as part of the Queens Plaza Bike and Pedestrian Improvement Project: 1) a landscaped median next to the Queensboro Bridge abutment on the south side of Queens Plaza North between 23rd Street and Crescent Street (0.38 acres); 2) a landscaped median between Crescent Street and 29th Street (0.64 acres); and 3) the landscaped JFK Plaza between 29th Street and Queens Plaza East (0.79) acres. As part of the Queens Plaza Bike and Pedestrian Improvement Project, a Class I bike lane will run through all of the above listed spaces and seating and pedestrian paths will be provided in areas 2 and 3.

In addition, passive open space resources will be added at Court Square as part of the Jackson Avenue Streetscape Project by the 2017 Build Year. The Jackson Avenue Streetscape Project is being sponsored by the New York City Economic Development Corporation (NYCEDC) and includes the creation of

**Table 5-5
Anticipated Future Open Spaces within a ½ Mile within the Study Area
2017**

Map No.	Name	Location	Acres Added
<i>Queens Plaza Bike and Pedestrian Improvement Project</i>			
A-1	Landsaped Median next to Queensboro Bridge	Between 23 rd Street and Crescent Street on south side of Queens Plaza North	0.38
A-2	Landsaped Median	Between Crescent Street and 29 th Street	0.64
A-3	Landsaped JFK Plaza	Between 29 th Street and Queens Plaza East	0.79
<i>Court Square</i>			
B-1	Enlarged McKenna Triangle	Jackson Avenue, Thomson Avenue, 45 th Street	0.06
B-2	Enlarged Rafferty Triangle	Hunter Street, Crescent Street, 44 th Drive	0.24
B-3	Sundial Park	Northwest Corner of Crescent Street and 44 th Road	0.11
B-4	Hunter Street Park	Northeast Corner of 27 th Street and Hunter Street	0.21
Total			2.19

Sundial Park (0.11 acres), Hunter Street Park (0.21 acres), and the enlargement of McKenna Triangle (0.10 acres) and Rafferty Triangle (0.38 acres).

As indicated on Table 5-5 above, a total of 2.19 acres of open space resources will be added to the study area as a result of these projects. These projects would increase the total acreage of open space within the study area to 46.08 acres by the year 2017, 22.29 acres of which would be considered active.

ADEQUACY OF OPEN SPACE

The total open space ratio in the future without the proposed actions would be 0.83 acres per 1,000 people, below the citywide median community district open space ratio of 1.5 acres per 1,000 residents and the planning goal of 2.5 acres per 1,000 residents. The total open space ratio will decrease from 0.92 to 0.83 acres per 1,000 people, an overall 9.6 percent decrease. The active open space ratio will decrease from 0.47 to 0.40 acres of active open space per 1,000 residents, a 13.9 percent decrease over existing conditions. The passive open space ratio will decrease from 0.45 to 0.43 acres per 1,000 residents, a 5.2 percent decrease. Table 5-6 demonstrates the number of acres per 1,000 residents by age cohort in the future without the proposed actions. Active open space acres are greatest for children 19 years of age or younger. Expected population growth by 2017 would decrease open space ratios by approximately 9.6 percent from existing conditions and would strain existing open space resources within the study area.

**Table 5-6
No Build Scenario Acres per 1,000 Residents by Age Cohort, 2017**

Age Category	Total Acres	Passive Acres	Active Acres
<4 years	12.11	6.25	5.86
5-9 years	12.48	6.44	6.03
10-14 years	13.42	6.93	6.49
15-19 years	13.93	7.19	6.74
20-64 years	1.32	0.68	0.64
65+ years	7.39	3.82	3.57

Note: Open space ratios for each age cohort have been calculated by dividing the total acres, passive acres, and active acres by the population in each cohort and then multiplied by 1,000.
Source: New York City Department of Parks and Recreation, 2007. New York City Department of City Planning, 2008. The Louis Berger Group, Inc., 2008.

QUALITATIVE ASSESSMENT OF OPEN SPACE ADEQUACY

Planned improvements and increased accessibility of riverfront areas along the East River would enhance open space resources in the area. Initiatives, such as those discussed above, would offer valuable and much needed recreational space to the areas in and around Dutch Kills. Once completed, any initiative located in the study area would increase the open space ratio. New residential populations that are likely be introduced to the study area as a result of background development sites will greatly benefit from such enhancements.

Upon completion, the proposed Queens East River and North Shore Greenway Projects would include a 10.6-mile urban shared-use trail, intended to provide access to the shoreline in Queens and improve non-motorized commuter options. The greenway would connect the neighborhoods running along the east side of the East River, including Dutch Kills, Ravenswood, and Long Island City. Linkages would be made to connect four parks located adjacent to the East River into the proposed greenway. These projects would be located outside of the study area and are not included in open space ratios.

Long Island City Links is part of a broader effort to redevelop the waterfront between Queens Plaza and Court Street. The primary objective of this plan is to develop a comprehensive network of pedestrian and bicycle connections between residential, commercial, and recreational areas. It is anticipated that these initiatives will move forward in tandem with open space goals as set forth by PlaNYC, New York City’s 2030 plan.

F. FUTURE CONDITION WITH THE PROPOSED ACTIONS

STUDY AREA POPULATION

The proposed actions would result in approximately 4,059 new residents by 2017. This estimate paired with the forecasted future residential population, 55,359 residents, would increase the study area population to 59,420, resulting in an annual growth rate of 2.2 percent between 2007 and 2017. Table 5-7 demonstrates the projected population by age cohort.

**Table 5-7
Study Area Residential Population by Age Group, Action Condition, 2017**

Age Category	Number	Percent
<4 years	4,084	6.9%
5-9 years	3,964	6.7%
10-14 years	3,687	6.2%
15-19 years	3,550	6.0%
20-64 years	37,442	63.0%
65+ years	6,691	11.3%
Total	59,418	100.0%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. New York City Department of City Planning, 2008. The Louis Berger Group, Inc., 2008.

STUDY AREA OPEN SPACE RESOURCES

The proposed action would not directly decrease or increase the available open space in the study area. As discussed in Chapter 18, Shadows, Chapter 11 Air Quality, and Chapter 12 Noise, the proposed project would not result in significant adverse shadow, odor or noise impacts that could affect the usability of the study area open space resources.

ADEQUACY OF OPEN SPACE

In the future with the proposed actions, the total open space ratio within the residential open space study area would decrease from 0.83 to 0.78 acres per 1,000 residents, a decrease of approximately 6.8 percent from the Future No Build Condition. This ratio is also substantially below the CEQR guideline of 2.5 acres per 1,000 residents. The active open space ratio would decrease from 0.40 acres per 1,000 residents in the future no action condition to 0.38 acres per 1,000 residents in the future with the Proposed Action. This ratio is below the NYCDCP recommended guideline of 2.0 acres of active space per thousand residents. The passive open space ratio would decline from 0.43 to 0.40 acres per 1,000 residents and is also below the NYCDCP recommended guideline of 0.50 acres of passive space per 1,000 residents. Table 5-8 demonstrates the acres per 1,000 residents in each age group in the future with the proposed actions.

According to the *CEQR Technical Manual*, given the range of age groups present in the study area, the need exists for various kinds of active and passive recreation facilities, including those with amenities that

can be used by children and adults. The age distribution of a population affects the way open spaces are used and the need for a variety of recreational facilities. 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,

**Table 5-8
Build Scenario Acres per 1,000 Residents by Age Cohort, 2017**

Age Category	Total Acres	Passive Acres	Active Acres
<4 years	11.28	6.25	5.86
5-9 years	11.62	6.00	5.62
10-14 years	12.50	6.45	6.04
15-19 years	12.98	6.70	6.28
20-64 years	1.23	0.64	0.60
65+ years	6.89	3.56	3.33

Note: Open space ratios for each age cohort have been calculated by dividing the total acres, passive acres, and active acres by the population in each cohort and then multiplied by 1,000.
Source: New York City Department of Parks and Recreation, 2007. New York City Department of City Planning, 2008. The Louis Berger Group, Inc., 2008.

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. Given that active and passive open space ratios are decreasing at virtually the same rate (5.0 percent decrease in active/6.9 percent decrease in passive) under the future conditions with the proposed actions, no particular age cohort would be more affected as a result of the proposed actions.

QUALITATIVE ASSESSMENT OF OPEN SPACE ADEQUACY

Approximately half of the residential development expected to result from the proposed actions would improve open space conditions by including private recreational space available to residents. As shown on Figure 1-4 in Chapter 1, “Project Description,” the proposed zoning includes R6A and R7X contextual districts, which require that new developments meet the standards of the New York City Zoning Resolution’s Quality Housing Program. Under the Quality Housing Program, buildings with nine or more dwelling units must include recreational space amounting to 3.3 percent of the residential floor area. The recreational space provided must be accessible to all building residents and may be indoors or outdoors. The minimum size of any outdoor recreation space is 225 square feet, and the minimum size of any indoor recreation space is 300 square feet.

As a result of the proposed project, approximately 27.6 percent of the housing units created in the future with the proposed actions would be in contextual zoning districts where the Quality Housing program provisions apply. While it is not accessible to the general public and therefore not included as part of the quantitative analysis, open space provided under the Quality Housing Program would help to meet the

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open space needs of the new residents that would be introduced to the area as a result of the proposed actions.

As described in other chapters, the proposed actions would not have a significant adverse effect on open space resources as a result of increased shadows, noise, air pollutant emissions or odors in comparison to the future no action condition.

The Quality Housing Program regulations that apply to 27.6 percent of the growth expected with the proposed actions would not add new publicly accessible open space, but help address the open space needs of a portion of new residents introduced as a result of the proposed actions.

As previously described there are several large open space resources just outside the study area adjacent to the East River available to residents of the western portions of the study area. Residents of the eastern portions of the study area are less well served in terms of access to open space resources. As stated above, identified initiatives to improve both access and recreational spaces can help offset the lack of adequate open space resources in the study area.

G. CONCLUSION

Per *CEQR Technical Manual* guidelines, 1.5 acres of open space resources per 1,000 residents is considered adequate for the residential population. As a planning goal, the DCP attempts to achieve a ratio of 2.5 acres per 1,000 residents for large-scale proposals. In the future without the proposed actions, the open space ration would be 0.83. When compared to the future with the proposed actions, the open space ratio would decrease from 0.83 to 0.78 acres per 1,000 residents, a decrease of approximately 6.02 percent. However, like projects in so many areas of the city, the open space ratio (0.78 acres per 1,000) in the future with the proposed actions is less than the DCP goal of 2.5 acres and the CEQR guideline of 1.5 acres for open space; therefore, a significant adverse impact to publicly-accessible open space would result from the proposed project.

The recreational space created under the Quality Housing Program in the future with the proposed project will contribute to alleviating some of the shortage of open space in the study area. In addition, there are several large open space resources just outside the study area which would also partially alleviate the shortage of open space for new residents of the proposed actions. However, despite these two additional open space opportunities, the proposed actions would still result in a significant adverse effect on open space.

As discussed in Chapter 21, "Mitigation," potential measures to mitigate the significant adverse impact on open space resources will be explored between the Draft and Final EIS. Potential measures that could mitigate the significant adverse impact on open space resources are discussed in Chapter 21, "Mitigation.," That chapter concludes that the significant adverse impact would remain unmitigated