Chapter 5: Open Space

A. INTRODUCTION

The *New York City Environmental Quality Review (CEQR) Technical Manual* guidelines indicate that an open space analysis is required when an action would result in the physical loss of public open space or the introduction of 200 or more residents or 500 or more workers to an area. The proposed action would result in such increases in the number of residents and employees in the Downtown Flushing area; consequently, these increased populations would result in greater numbers of people using local parks. Therefore, a detailed open space analysis was conducted to determine whether the proposed action would cause any significant direct or indirect adverse open space impacts. This chapter assesses existing conditions (both open space users and resources), probable conditions in the future without the proposed action, and potential impacts that would result from the proposed action.

B. PRINCIPAL CONCLUSIONS

The proposed action would add 1.52 acres of passive open space to the Flushing area and would not displace or eliminate any existing open space resources. The area currently suffers from a shortfall of passive open space resources, and the proposed action's new open space would provide a quality passive open space amenity—green, landscaped, and relatively separated from major traffic flows—that is notably absent in this densest portion of Downtown Flushing near the Main Street No. 7 subway station. As a result, passive open space ratios would increase in the future with the proposed action (see Table 5-1). While these ratios would increase from existing conditions, all except the passive open space ratio per 1,000 workers would continue to be below the optimal planning goals recommended by the City. Although not accounted for in the quantitative analysis, the Macedonia Plaza project would create an additional 18,834 square feet of private open space that would be located primarily around the north, west and south sides of the existing Macedonia AME Church. While this facility would not be public, it would provide an open space amenity for Macedonia Plaza residents and, therefore, could reduce incremental demand of this new population on area open space resources.

The active open space ratio in the residential study area would decrease in the future with the proposed action and continue to be below the level recommended by the City. Because the active open space ratio is substantially lower than established City guidelines, this decline would constitute a significant adverse impact on active open spaces. The *CEQR Technical Manual* recognizes that the optimal planning goals recommended by the City are not feasible in many areas of the City, and these goals are not considered impact thresholds. As described below, according to the *CEQR Technical Manual*, a 5 percent decrease in open space ratios is considered a substantial change warranting a detailed analysis. However, in areas where the open space ratio is very low (e.g., below 1.5 acres per 1,000 residents), a decrease of 1 percent or less in the open space ratio may result in a potential significant adverse impact on open space. The proposed action is located within such an area, and would reduce the active open space ratio by 2.82 percent (see

Table 5-1). Therefore, it is necessary to identify measures to mitigate this impact to the greatest extent practicable. The *CEQR Technical Manual* lists potential on- and off-site mitigation measures. Absent any such measures, an unmitigated significant adverse impact on active open spaces would result.

Table 5-1
2013 Future with the Proposed Action: Open Space Ratios Summary

Ratio	City Guideline	Open Space Ratios			Percent Change
		Existing Conditions	Future Without the Proposed Action	Future with the Proposed Action	Future Without the Proposed Action to Future With the Proposed Action*
Commercial Study Area					
Passive/Workers	0.15	0.291	0.258	0.320	24.07%
Passive/Total Population	weighted** (0.358)	0.110	0.102	0.130	27.73%
Residential Study Area					
Total/Residents	2.5	0.159	0.141	0.160	13.51%
Active/Residents	2	0.080	0.071	0.069	-2.82%
Passive/Residents	0.5	0.079	0.070	0.092	30.40%
Passive/Total Population	weighted (0.394)**	0.057	0.050	0.065	28.57%

Notes: * Ratios are presented to the third decimal digit to prevent rounding errors in calculating the percent change between the future without the proposed action and the future with the proposed action.
** Weighted average combining 0.15 acres per 1,000 workers and 0.50 acres per 1,000 residents is different in each condition. In commercial study area: existing conditions, 0.37; future without the proposed action, 0.36; future with the proposed action, 0.36. In residential study area: 0.40 for existing and future without the proposed action and 0.39 in the future without the proposed action.

In considering the significance of the projected decline in the active open space ratio, it is important to note that the proposed action would add open space where it would not otherwise exist. There are a number of factors not accounted for in the quantitative analysis of open space ratios in the future with the proposed action. The quantitative analysis does not account for the approximately 6.75 acres of active open space in the Department of Education-owned athletic field that lies within a ½ mile of the rezoning area. The field was not included in the open space calculation due to the vagaries of census tract boundaries. It is likely that residents generated by the proposed action would use this open space, thus allaying the shortage of active open space predicted by the quantitative analysis. In addition, Kissena Corridor West, a 100-acre City park, lies just beyond the residential study area and is within three-quarters of a mile of the rezoning area.

Additionally, the Flushing Commons project includes recreational space for the YMCA and exercise amenity space within the residential component of the project. The residential portion of Flushing Commons would include several thousand square feet of amenity space, including exercise rooms and equipment, as well as a children's play space. The proposed YMCA space in the Flushing Commons project would include approximately 62,000 sf of state-of-the art recreational facilities. In particular, it would contain two indoor swimming pools, a full basketball court, classrooms and meeting rooms for youth, as well as standard exercise equipment. While these facilities would not be considered public open space, the new YMCA will be an important active recreation center serving the entire Flushing community.

C. METHODOLOGY

STUDY AREAS

This analysis of potential open space impacts was conducted based on methodologies contained in the *CEQR Technical Manual*. According to CEQR guidelines, the first step in assessing potential open space impacts is to establish study areas appropriate for the new populations to be added as a result of the proposed actions. The study area is based on the distance a person is assumed to walk to reach a neighborhood open space. Workers are typically assumed to use passive open spaces and walk approximately 10 minutes (about a ¼-mile distance) from their workplaces. Residents are considered more likely to travel farther to reach parks and recreational facilities. They are assumed to walk about 20 minutes (about a ½-mile distance) to reach both passive and active neighborhood open spaces. Because the proposed action would involve both commercial and residential components, two study areas are evaluated—a commercial study area based on a ¼-mile distance from the project site and rezoning area, and a residential study area based on a ½-mile distance.

In accordance with *CEQR Technical Manual*, the commercial open space study area comprises all census tracts that have at least 50 percent of their area located within a ¼-mile of the project area. As Figure 5-1 shows, all open spaces, as well as all residents and employees within census tracts with at least 50 percent of their area within the ¼-mile radius, were included in this study area. The same methodology was applied to the ½-mile residential study area. Open spaces located within ½ mile of the project site and rezoning area but within a census tract having less than 50 percent of its area located within ½ mile of the project site and rezoning area were not included in the quantitative open space assessment, and are discussed qualitatively. While residents may also visit regional parks like Flushing Meadows-Corona Park, such open spaces are not included in the quantitative analysis.

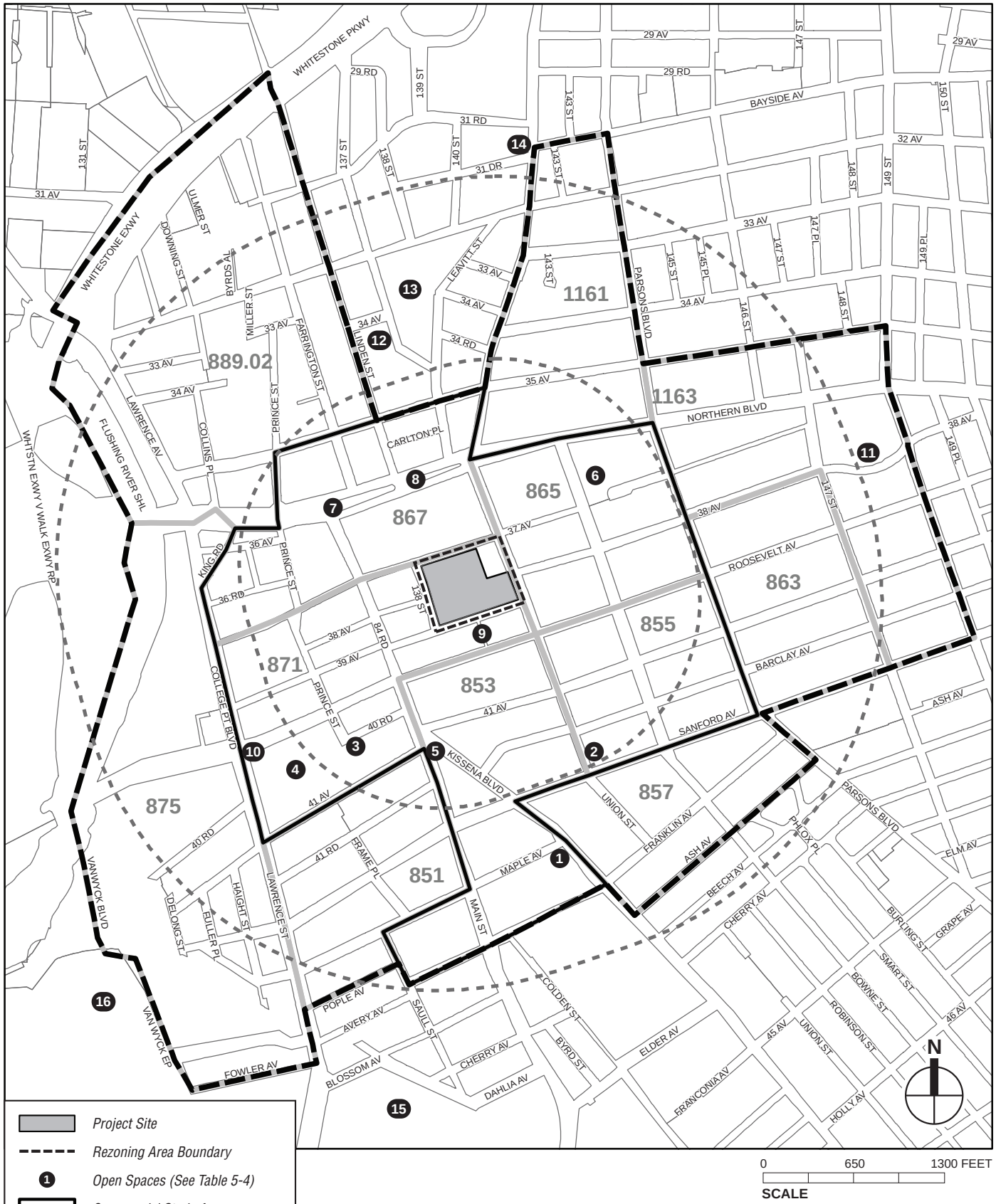
OPEN SPACE USER POPULATIONS

Demographic data were used to identify potential open space users (residents and workers) within the ¼- and ½-mile study areas. To determine the number of residents currently located within the study areas, data were compiled from the 2000 U.S. Census for the tracts in each study area. The age distribution of the residential population was noted, as children and elderly residents are typically more dependent on local open space resources. The number of employees in each of the study areas was determined based on 2000 reverse journey-to-work data compiled by the New York City Department of City Planning (NYCDCP).

INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities within the commercial and residential study areas were inventoried to determine their size, character, and condition. Public spaces that do not offer useable recreational areas were excluded from the survey, as were open spaces that are not accessible to the general public. The information used for this analysis was gathered through field studies conducted in March 2006 and from the New York City Department of Parks and Recreation (NYCDPR) and other City agencies responsible for public open spaces.

At each open space, active and passive recreational spaces were noted. Active open space facilities are characterized by such activities as jogging, field sports, and children's active play. Such open space features might include basketball courts, baseball fields, or play equipment.



Flushing Commons

Open Space Resources

Figure 5-1

Passive open space facilities are characterized by such activities as strolling, reading, sunbathing, and people-watching. Some spaces, such as lawns and public esplanades, can be both active and passive recreation areas.

In addition to the open spaces located within the commercial study area and the residential study area, open spaces outside the study areas were considered qualitatively. These spaces provide additional open space resources to the residential and commercial populations that are located beyond the ½-mile radius of the project site and rezoning area but likely to be visited by the study area user populations.

ADEQUACY OF OPEN SPACE RESOURCES

After completing the inventory, the adequacy of open space in the study area was assessed both quantitatively and qualitatively. 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 with guidelines established by the City. To determine the adequacy of open space resources for the working (daytime) population of a given area, the City has established that 0.15 acres of passive open space per 1,000 workers represents a reasonable amount of open space. For the residential population, two sets of guidelines are used. The first guideline is a City-wide median open space ratio of 1.5 acres per 1,000 residents. The second is an optimal planning goal established by the City 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. The needs of these populations also are considered together because it is assumed that both residents and workers will use the same passive open spaces. Therefore, a weighted average of the amount of open space necessary to meet the City guideline of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 workers is considered in this analysis. Because this ratio changes depending on the proportion of residents and workers in each study area, the amount of open space needed in each condition in each study area is outlined, and the recommended weighted average ratio of passive open space acres per 1,000 residents and workers is calculated below.

Impacts are based on how the proposed action would change the open space ratios in the study area. It is recognized that these goals are not feasible for many areas of the City, and they are not considered impact thresholds. Rather, these are benchmarks indicating how well an area is served by open space.

D. EXISTING CONDITIONS

STUDY AREA POPULATION

COMMERCIAL STUDY AREA

Based on the study area criteria, described above, the commercial study area generally extends to 35th Avenue and Northern Boulevard to the north, Parsons Boulevard to the east, Sanford Avenue and Franklin Avenue to the south, and Main Street and College Point Boulevard to the west. It includes five census tracts: 853, 855, 865, 867, and 871.

Based on 2000 Census reverse-journey-to-work data, the worker population in the ¼-mile study area is estimated to be 12,090. Including the 2000 Census estimated residential population of 19,794, the total commercial study area population is 31,884 (see Table 5-2). Though this analysis conservatively assumes that residents and employees are discrete populations, it is

possible that some residents both live and work within the study area. As a result, there is likely to be some double-counting of the daily user population in which residential and commercial populations overlap, resulting in a more conservative analysis.

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

Census Tract	Residential Population	Commercial Population	Total User Population
Commercial Study Area			
853	5,861	3,980	9,841
855	7,135	655	7,790
865	4,156	905	5,061
867	867	2,315	3,182
871	1,775	4,235	6,010
Commercial Study Area Total	**19,794**	**12,090**	**31,884**
Residential Study Area			
851	7,033	1,210	8,243
857	6,207	635	6,842
863	7,207	540	7,747
875	385	2,045	2,430
889.02	602	2,380	2,982
1161	4,542	935	5,477
1163	9,375	1,125	10,500
Residential Study Area Total	**55,145**	**20,960**	**76,105**

Notes: Residential Study Area Totals include census tracts in commercial study area.
Source: U.S. Census of Population and Housing, 2000; Central Transportation Planning Package (CTPP) 2000 – Part 2.

RESIDENTIAL STUDY AREA

The residential study area includes the five census tracts located in the commercial study area plus seven additional census tracts, delineating a study area that generally extends to the Whitestone Expressway and Bayside Avenue to the north; 149th Street to the east; Sanford, Ash, Franklin, and Fowler Avenues to the south; and the Flushing River to the west (see Figure 5-1).

Although there is no quantitative analysis dedicated exclusively to the commercial population within the residential study area, the *CEQR Technical Manual* calls for a quantitative analysis of the total population within the residential study area, which includes the commercial as well as the residential populations.

Based on census reverse-journey-to-work data, the worker population within the residential study area was an estimated 20,960 in the year 2000. The residential study area, which includes the smaller commercial study area, has a residential population of 55,145, for a total residential and commercial population of 76,105. Again, this estimate conservatively assumes that the residential and commercial populations are entirely distinct from each other.

As Table 5-3 shows, approximately 78 percent of the residential study area's residential population consists of adults aged 20 and older (65 percent of the population is aged 20-64, and 13 percent is 65 or older). Adults tend to use a variety of active and passive open space facilities. Persons aged 19 and under account for approximately 23 percent of the residential study area's residential population. This segment of the population tends to use active amenities, such as play equipment and basketball courts, more often than passive facilities.

Table 5-3
Residential Study Area: Existing Residential Population by Age

Census Tract	Total Population	Under 5 Years		5-9 Years		10-14 Years		15-19 Years		20-64 Years		65 Years and Over	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
853	5,861	290	5%	266	5%	262	4%	336	6%	4,024	69%	683	12%
855	7,135	401	6%	395	6%	385	5%	395	6%	4,735	66%	824	12%
865	4,156	181	4%	184	4%	149	4%	189	5%	2,628	63%	825	20%
867	867	41	5%	43	5%	57	7%	46	5%	611	70%	69	8%
871	1,775	116	7%	135	8%	135	8%	122	7%	1,059	60%	208	12%
851	7,033	429	6%	409	6%	437	6%	469	7%	4,816	68%	473	7%
857	6,207	400	6%	376	6%	363	6%	313	5%	3,810	61%	945	15%
863	7,207	446	6%	462	6%	397	6%	455	6%	4,775	66%	672	9%
875	385	20	5%	26	7%	21	5%	15	4%	272	71%	31	8%
889.02	602	23	4%	30	5%	30	5%	46	8%	426	71%	47	8%
1161	4,542	264	6%	252	6%	183	4%	221	5%	2,598	57%	1,024	23%
1163	9,375	600	6%	547	6%	488	5%	526	6%	5,846	62%	1,368	15%
Total	**55,145**	**3,211**	**6%**	**3,125**	**6%**	**2,907**	**5%**	**3,133**	**6%**	**35,600**	**65%**	**7,169**	**13%**

Note: Cumulative percentages may not equal 100 percent due to rounding.
Source: 2000 U.S. Census.

STUDY AREA OPEN SPACES

COMMERCIAL STUDY AREA

10 public open space and recreational resources are located within the commercial study area. These open spaces are all publicly owned and open to the public. Taken together, the open space resources in the commercial study area total approximately 7.92 acres (see Figure 5-1 and Table 5-4). They include several small parks and playgrounds, the open space associated with the New York City Housing Authority (NYCHA) Bland Houses, the steps of the Flushing branch of the Queens Public Library, and Lippmann Arcade, a recently renovated public walkway that connects Roosevelt Avenue to 39th Avenue. Of these open spaces, Weeping Beech Park/Carman Green is the largest, at 2.07 acres. This park, located at 37th Avenue and Bowne Street, provides benches and landscaped areas in addition to its active facilities, and it appears to be well used by neighborhood residents, particularly seniors. Two of the study area's resources, Daniel Carter Beard Mall and Flushing Greens, are entirely passive in nature and contain benches that could be attractive to nearby workers on Main Street. A GreenStreet is located at the intersection of Roosevelt Avenue and College Point Boulevard. This resource is entirely passive as well.

RESIDENTIAL STUDY AREA

There are 11 public open space and recreational resources serving the residential and commercial populations in the ½-mile residential study area. These include the 10 that also lie within the smaller commercial study area plus the publicly accessible courtyard of a private housing complex. Including all of the public parks and open spaces listed in the commercial study area, the residential study area contains a total of approximately 8.75 acres of publicly accessible open space. Several of the facilities listed in the commercial study area are primarily active in nature, including Maple Playground, Bowne Playground, and Bland Playground. While there are no active open spaces that lie beyond the commercial study area but within the residential study area, there is one significant open space (a City-owned athletic field north of the project site discussed below) that is within ½ mile of the project site and rezoning area, but it is not included in the residential study area due to the vagaries of census tract boundaries.

Table 5-4
Open Space Inventory

Map Ref.*	Name	Owner/ Agency	Features	Acres of Active Open Space	Acres of Passive Open Space	Condition/ Utilization
Commercial Study Area						
1	Maple Playground	NYCDPR	Basketball courts, handball courts, benches, swings, slides, jungle gyms, fountain (for children's play), water fountains, bathrooms	0.69	0.29	Good / heavy
2	Bowne Playground	NYCDPR	Basketball courts, handball courts, baseball/softball field (paved), swings, slides, bathroom, fountain (for children's play),	1.64	0.18	Good / moderate
3	Bland Playground	NYCDPR	Basketball courts, handball courts, benches, swings, jungle gyms, fountain (for children's play)	0.5	0.05	Good / heavy
4	Bland Houses	NYCHA	Basketball courts, walkways, lighting	0.44	1.3	Good / light
5	Flushing Branch Library	Queens Library	Stairway (suitable for sitting)	0	0.02	Good / heavy
6	Weeping Beech Park/Carman Green	NYCDPR	Handball courts, benches, swings, jungle gyms, historic structures, bathrooms	1.13	0.48	Good / moderate
7	Daniel Carter Beard Mall	NYCDPR	Benches	0	0.66	Fair / light
8	Flushing Greens	NYCDPR	Trees, monuments, walkways	0	0.42	Fair / light
9	Lippmann Arcade	NYC	Trees, seating	0	0.10	Good / heavy
10	Roosevelt Avenue and College Point Boulevard GreenStreet	NYCDPR	Plantings	0	0.02	Good/Light
			Commercial Study Area Total	**4.40**	**3.52**	
Residential Study Area						
11	Hunter Gardens	Hunter Gardens Co-ops	Benches, paved walkways	0	0.85	Good / light
			Residential Study Area Total	**4.40**	**4.37**	
Outside Residential Study Area (Not Included in Quantitative Analysis)						
12	Latimer Gardens	NYCHA	Benches, paved walkways, jungle gyms, fountain (for children's play)	0.2	0.59	Good / light
13	Athletic Field	NYCDOE	Handball courts, baseball/softball field (paved), soccer field, tennis courts, benches, lighting, historic structure/museum	6.75	0.75	Good / moderate
14	Cadwallader Colden Playground	NYCDPR	Basketball courts, baseball/softball fields (paved), benches, jungle gyms, swings, fountain (for children's play)	1.33	0.15	Good / moderate
15	Kissena Corridor West	NYCDPR	Contains a wide array of active and passive amenities	100**		Good / moderate
16	Flushing Meadows-Corona Park	NYCDPR	Contains a wide array of active and passive amenities	1,255**		Good / moderate

Notes:
* See Figure 5-1.
** Breakdown between active and passive unknown.
Sources: New York City Department of Parks and Recreation (NYCDPR) open space data base; AKRF, Inc. field surveys, March 2006, and August 2008.

There are two public open spaces located within ½ mile of the project site and rezoning area that are nonetheless outside the residential study area. The first, the courtyard of the NYCHA Latimer Gardens houses, provides about three-quarters of an acre of passive space with some

active facilities for children. The second is a large athletic field bounded by 137th Street, Leavitt Street, and 32nd Avenue that is owned by the New York City Department of Education. The majority of this open space is occupied by artificial-turf baseball/softball diamonds, soccer fields, and tennis courts, some lit for night play. These fields are for use by permit only; a prominent sign displays the phone number to call to obtain a permit. Other facilities on the site, including handball courts, appear to be open to the general public without a permit. The southern portion of this space is occupied by the Lewis H. Latimer House, an historic structure/museum and grounds.

A small park, Cadwallader Colden Playground, lies just farther than ½ mile from the project site and rezoning area and across the street from the northern boundary of the residential study area at 31st Drive. This park provides about 1.5 acres of asphalt courts and ball fields and a well-manicured children's playground.

Kissena Corridor West, a 100-acre park with a wide array of active and passive facilities, is located just to the south of the residential study area. This park is part of a larger greenbelt that links most of the parkland in eastern Queens. The two open spaces joined by Kissena Corridor West, Flushing Meadows-Corona Park and Kissena Park, are the largest and sixth-largest parks in Queens, respectively. Portions of both of these parks lie within a mile of the project site and rezoning area. The Queens Botanical Garden is located within Kissena Corridor West at 43-50 Main Street. Admission to the 39-acre facility is free. The Queens Botanical Garden contains a variety of passive amenities, including formal bee, bird, woodland, herb, and perennial gardens; an arboretum and pinetum; six backyard demonstration gardens; and seasonal displays of tulips, roses, annuals and chrysanthemums.

ADEQUACY OF OPEN SPACES

COMMERCIAL STUDY AREA

Quantitative Analysis

As described above, the analysis of the commercial study area focuses on passive open spaces that may be used by workers in the area. To assess the adequacy of the open spaces in the area, the ratio of workers to acres of open space is compared to the City's planning guideline of 0.15 acres of passive space per 1,000 workers. In addition, the passive open space ratio for both workers and residents in the area is compared to the recommended weighted average ratio.

The commercial study area includes a total of approximately 7.92 acres of open space, of which approximately 3.52 acres are passive in nature. A total of 19,794 residents live within this vicinity, and 12,090 people work within the commercial study area's boundaries. The combined residential and commercial population is 31,884.

The area has a passive open space ratio of 0.291 acres of passive open space per 1,000 workers; this is higher than the City's guideline of 0.15 acres (see Table 5-5). The combined passive open space ratio is 0.110 acres per 1,000 residents and workers, which is lower than the recommended weighted average ratio of 0.367 acres per 1,000 residents and workers.

Table 5-5
Existing Conditions: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			City Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Commercial Study Area										
Workers	12,090	7.92	4.40	3.52	N/A	N/A	0.291	N/A	N/A	0.15
Combined workers and residents	31,884				N/A	N/A	0.110	N/A	N/A	0.367*
Residential Study Area										
Residents	55,145	8.77	4.40	4.37	0.159	0.080	0.079	2.5	2.0	0.50
Combined workers and residents	76,105				N/A	N/A	0.057	N/A	N/A	0.404*

Notes: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the commercial study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.

Qualitative Analysis

Though a number of passive open spaces are quantified in the blocks immediately surrounding the Main Street subway station, this area suffers from a lack of the green, landscaped passive spaces that typically appeal to worker populations. As shown in Table 5-4, the non-residential study area open spaces are mostly in good condition, and use levels range from heavy to light at the majority of these facilities. In the densest portion of Downtown Flushing nearest the subway station, the steps of the Flushing branch of the Queens Public Library (i.e., the triangular space at the corner of Kissena Boulevard and 41st Avenue) is heavily used for seating and a gathering/meeting place, as is the Lippmann Arcade located immediately south of the project site.

RESIDENTIAL STUDY AREA

Quantitative Analysis

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 combined residents and workers.

The residential study area contains a total of 8.77 acres of open space, of which approximately 4.40 acres are principally suited for active use and 4.37 acres are suited for passive use. With its total residential population of 55,145, this gives the residential study area an overall open space ratio of 0.159 acres per 1,000 residents. This is below the City's planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents.

The residential study area's residential passive open space ratio is 0.079 acres of passive open space per 1,000 residents, which is also below the City's planning goal of 0.5 acres per 1,000 residents. The area's residential active open space ratio is 0.080 acres per 1,000 residents, again below the City's planning guideline of 2.0 acres per 1,000 residents.

When the employees who work within the residential study area are added to the population, the passive open space ratio is lowered. With a worker and residential population of 76,105, the combined passive open space ratio in the residential study area is 0.057, which is lower than the recommended weighted average guideline ratio of 0.404 acres per 1,000 residents and workers.

Qualitative Analysis

In addition to the open spaces described above, there are also non-quantified destination open space resources (i.e., the Department of Education-owned athletic field to the north and Kissena Corridor West to the south) located just outside the residential study area boundary. These parks would be used by people within the residential study area and would substantially improve the active and passive open space ratios for this study area.

E. THE FUTURE WITHOUT THE PROPOSED ACTION

STUDY AREA POPULATION

Several new residential and commercial developments are currently planned and expected to be completed within the study areas by 2013, as discussed in Chapter 2, "Land Use, Zoning, and Public Policy." These new developments would increase both the residential and commercial populations within the study areas.

Without the proposed action, the project site is expected to remain a bi-level municipal parking garage. No new residential or commercial populations would be added to either study area.

COMMERCIAL STUDY AREA

Eighteen development projects are expected to be completed in the commercial study area by 2013. Ten of these are expected to add predominantly residential population, six are expected to add only worker population, and two are mixed-use developments that would add both residents and workers. In total, these projects are expected to add 1,181[1] new residents and 1,557[2] new workers in the commercial study area. These additions would bring the commercial study area's 2013 residential population to 20,975, its worker population to 13,647, and its combined residential and worker population to 34,621.

RESIDENTIAL STUDY AREA

Fourteen development projects are expected to be completed in the residential study area by 2013 (in addition to the 18 developments that also fall within the commercial study area). Of these 14 developments, eight are expected to add predominantly residential population, three are expected to add only worker population, and three are mixed-use developments that would add both residents and workers. These projects are expected to add 6,921 new residents and 3,694 new workers in the residential study area. When combined with the developments anticipated in the commercial study area, these additions would bring the residential study area's residential

[1] Number of new residents estimated by multiplying residential units planned in each anticipated development by the average household size in the development's census tract. Queens census tracts (average household sizes): 851 (3.24), 853 (2.71), 857 (2.96), 865 (2.26), 867 (3.19), 871 (2.74), 875 (3.63), and 889.02 (3.19). (See Chapter 2, "Land Use, Zoning, and Public Policy," for complete list of anticipated developments.)

[2] Number of new employees estimated by applying standard employment ratios to the square footages, number of parking spaces, number of hotel rooms, or number of residential units planned in each anticipated development. One employee per: 400 square feet of retail space; 250 square feet of office space; 1,000 square feet of community facility space; 50 parking spaces; 3.1 hotel rooms; 22 residential units.

population to 62,066, its commercial population to 24,654, and its combined residential and worker population to 86,720.

STUDY AREA OPEN SPACES

No changes in the total amount of open space are expected to occur by the year 2013 in the future without the proposed action. Therefore, the total amount of public open space would remain unchanged at 7.92 and 8.77 acres in the commercial and residential study areas, respectively.

ADEQUACY OF OPEN SPACES

COMMERCIAL STUDY AREA

Without the proposed action, the population of workers in the commercial study area is expected to increase to 13,647 by 2013, and the area's total amount of passive open space is expected to remain at 3.52 acres. This would result in a passive open space ratio of 0.258 acres per 1,000 workers, which would remain above the City's guideline of 0.15 acres (see Table 5-6). The combined residential and commercial population in the commercial study area is expected to rise to 34,621. This would result in a passive open space ratio of 0.102 acres per 1,000 residents and workers, which is lower than the recommended weighted average ratio of 0.362 acres for the combined population.

Table 5-6
2013 Future Without the Proposed Action: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			City Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Commercial Study Area										
Workers	13,647	7.92	4.40	3.52	N/A	N/A	0.258	N/A	N/A	0.15
Combined workers and residents	34,621				N/A	N/A	0.102	N/A	N/A	0.362*
Residential Study Area										
Residents	62,066	8.77	4.40	4.37	0.141	0.071	0.070	2.5	2.0	0.5
Combined workers and residents	86,720				N/A	N/A	0.050	N/A	N/A	0.400*

Notes: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the commercial study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.

RESIDENTIAL STUDY AREA

Without the proposed action, the number of residents in the residential study area is expected to increase to 62,066 by 2013, with the area's total amount of open space remaining at 8.77 acres. This would result in a total residential open space ratio of 0.141 acres per 1,000 residents, which is below the City's guideline of 2.5 acres. The residential active open space ratio would fall to 0.071, which would remain below the City's guideline of 2.0 acres per 1,000 residents. For the combined population, the passive open space ratio would be 0.05 acres per 1,000 residents and workers, which is lower than the recommended weighted average ratio of 0.400.

F. PROBABLE IMPACTS OF THE PROPOSED ACTION

STUDY AREA POPULATION

COMMERCIAL STUDY AREA

The proposed action—the Flushing Commons project and the Macedonia Plaza project associated with the remainder of the rezoning area, as described in Chapter 1, "Project Description"—would add approximately 2,088 new residents and 2,101 new workers to the respective residential and commercial study areas. The office scenario for the proposed Flushing Commons project was conservatively assumed for this analysis because the office scenario, compared with the hotel scenario, would result in a greater number of workers. These additions would bring the commercial study area's 2013 residential population to approximately 23,063, its worker population to approximately 15,746, and its combined residential and worker population to approximately 38,808.

RESIDENTIAL STUDY AREA

With the proposed action, the residential and worker populations in the residential study area would increase to 64,154 and 26,744, respectively. The combined population would rise to approximately 90,898.

STUDY AREA OPEN SPACES

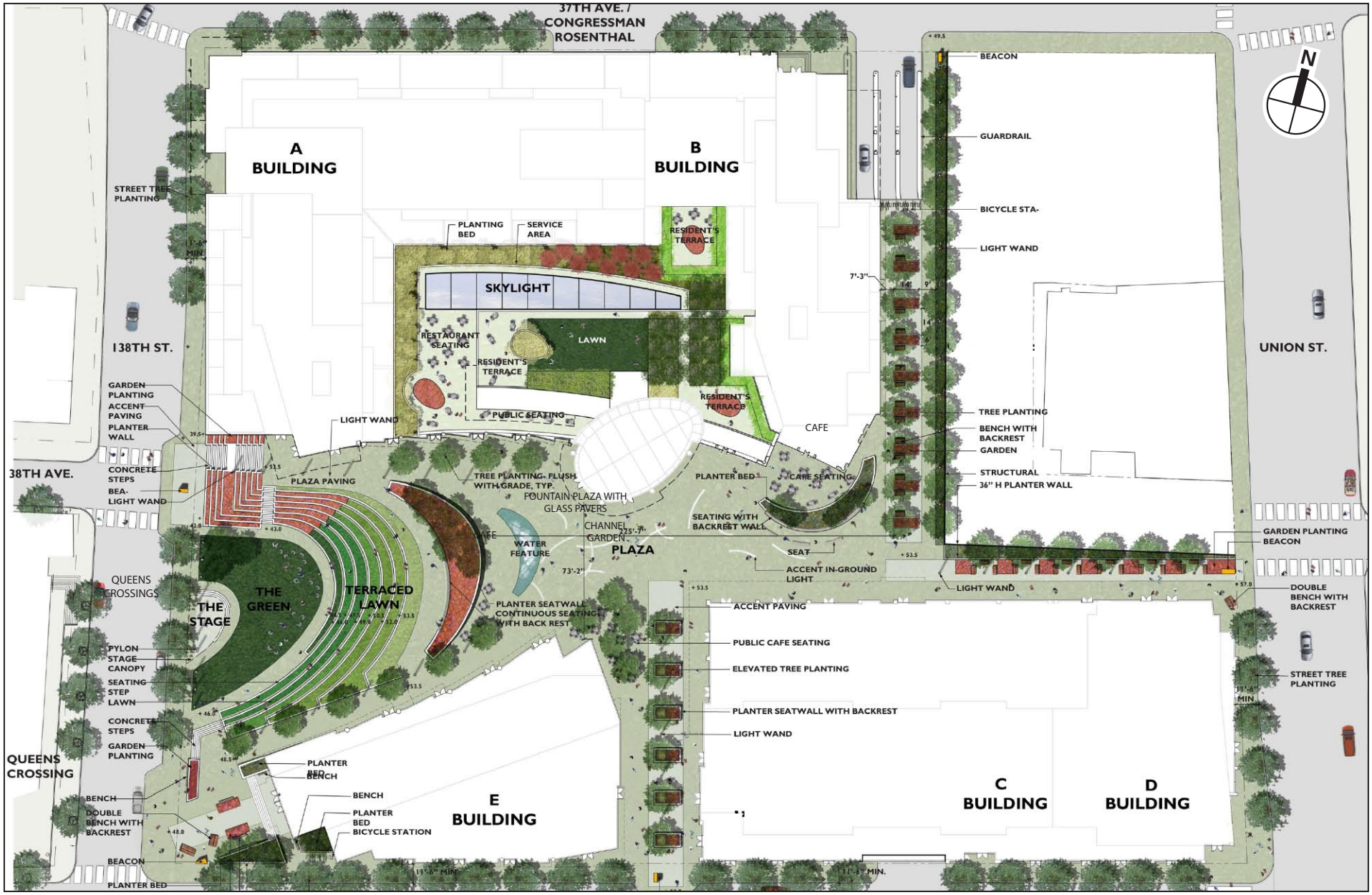
The proposed Flushing Commons project would add approximately 1.52 acres of passive open space to the study areas (see Figure 5-2). The main portion of this space would be an elliptical green opening onto 138th Street that is expected to contain a terraced lawn, formal plaza, trees, tables and chairs, additional seating, and a water feature. Three open pedestrian passageways would also lead into the central open space—from 39th Avenue, 37th Avenue, and Union Street. With the proposed action, the total amount of publicly accessible open space in the commercial and residential study areas would rise to 9.44 and 10.29 acres, respectively.

ADEQUACY OF OPEN SPACES

COMMERCIAL STUDY AREA

Quantitative Analysis

With the proposed action, the number of workers in the commercial study area is expected to increase to 15,746 and the total amount of open space is expected to rise to 9.44 acres. In 2013, the ratio of passive open space per 1,000 workers would be 0.320; this is above the City's guideline of 0.15 acres (see Table 5-7) and above the anticipated condition in the future without the proposed action. For the combined residential and worker population, the passive open space ratio would be 0.130 acres per 1,000 people, which is lower than the recommended weighted average ratio of 0.358 acres per 1,000 residents and workers.



Flushing Commons Open Space
Illustrative Rendering
Figure 5-2

Table 5-7
2013 Future with the Proposed Action: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			City Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Commercial Study Area										
Workers	15,746	9.44	4.40	5.04	N/A	N/A	0.320	N/A	N/A	0.15
Combined workers and residents	38,808				N/A	N/A	0.130	N/A	N/A	0.358*
Residential Study Area										
Residents	64,154	10.29	4.40	5.89	0.160	0.069	0.092	2.5	2.0	0.50
Combined workers and residents	90,898				N/A	N/A	0.065	N/A	N/A	0.394*

Notes: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the commercial study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.

Qualitative Analysis

Although the area also currently suffers from a shortfall of passive open space resources, the proposed action would reduce this deficiency by creating 1.52 acres of new publicly accessible passive open space on the Flushing Commons project site. This new open space would provide a quality passive open space amenity—green, landscaped, and relatively separated from major traffic flows—that is notably absent in this densest portion of Downtown Flushing near the Main Street subway station. In addition, the Macedonia Plaza project would create approximately 18,834 square feet of private open space that would be located primarily around the north, west and south sides of the existing Macedonia AME Church. While this facility would not be considered public open space, it would help to serve the passive open space needs of that project's residents, workers, and visitors.

It should be noted that during the mornings on each of the shadow analysis days (see Chapter 6, Shadows"), incremental shadow resulting from the proposed project would cover much of the proposed open space. During the afternoons, the proposed open space would not be in shadow and would receive sunlight throughout the afternoon. These incremental shadows are not considered a significant adverse impact because they are due to the project would only occur in the build condition. The *CEQR Technical Manual* specifies that a shadow impact on an open space occurs when a proposed action results in significant incremental shadow on an existing open space resource as compared to the no action condition. Since the shadows resulting from the proposed project would not affect an existing open space, the incremental shadows and height would not cause any qualitative open space impacts. As described in Chapter 6, the proposed project would not result in significant adverse shadow impacts on any nearby existing public open space.

RESIDENTIAL STUDY AREA

Quantitative Analysis

In the future with the proposed action, the number of residents in the residential study area is expected to increase to 64,154, and the total amount of open space is expected to rise to 10.29 acres. The total residential open space ratio would rise to 0.160 acres per 1,000 residents. The active open space ratio would fall to 0.069 acres per 1,000 residents. The combined residential and

worker passive open space ratio in the residential study area would rise to 0.065, but would still be below the recommended weighted average of 0.394 acres per 1,000 residents and workers.

The active open space ratio in the residential study area would decrease in the future with the proposed action and continue to be below the level recommended by the City. Because the active open space ratio is substantially lower than established City guidelines, this decline would constitute a significant adverse impact on active open spaces. Although the active open space ratio would continue to be below the levels recommended by the City, the *CEQR Technical Manual* recognizes that these optimal planning goals are not feasible for many areas of the City, and these ratios are not considered impact thresholds. As mentioned above, according to the *CEQR Technical Manual*, a 5 percent decrease in open space ratios is considered a substantial change, though a decrease of a smaller percentage can constitute a significant adverse impact in areas that are underserved by open space. The residential active open space ratio in the future with the proposed action would decrease by 2.82 percent compared with the no build condition in an area that currently does not meet City guidelines for active open space ratios. Therefore, as described in Chapter 20, "Mitigation," it is necessary to identify measures to mitigate this impact to the greatest extent practicable. The *CEQR Technical Manual* lists potential on- and off-site mitigation measures. Absent any such measures, an unmitigated significant adverse impact on active open spaces would result.

Qualitative Analysis

The residential population would remain underserved by the available active open space resources in the 2013 future with the proposed action. While nearby open spaces outside the study area, such as the athletic field at 137th and Leavitt Streets and Kissena Corridor West, would help to alleviate the problem, an active open space deficiency would persist.

The quantitative analysis does not account for the approximately 6.75 acres of active open space in the Department of Education-owned athletic field that lies within a ½ mile of the project site and rezoning area. This field was not included in the open space calculation due to the vagaries of census tract boundaries. It is likely that residents generated by the proposed action would make use of this open space, thus allaying the shortage of active open space predicted by the quantitative analysis. In addition, Kissena Corridor West, a 100-acre City park, lies just beyond the boundary of the residential study area, within three-quarters of a mile of the project site and rezoning area.

The quantitative open space analysis also does not account for the amenity space within the residential portion of the Flushing Commons project or the new YMCA space that would be provided. The residential portion of Flushing Commons would include several thousand square feet of amenity space, including exercise rooms and equipment, as well as a children's play space. The existing YMCA facility in Downtown Flushing is one of the oldest YMCA facilities in the City. The YMCA is currently located on a lot that cannot accommodate any further expansion. The proposed YMCA space in the Flushing Commons project would include approximately 62,000 sf of state-of-the art recreational facilities. In particular, it would contain two indoor swimming pools, a full basketball court, classrooms and meeting rooms for youth, as well as standard exercise equipment. The YMCA is also considering developing programs whereby residents of the proposed project would be allowed to buy discounted memberships at the same price as "group" or "corporate" memberships.

While neither of these resources would be considered to be public open space, the recreational space and the YMCA facility would each include a number of uses that would relieve future open space demands, particularly for active open space, created by the residential and worker populations introduced by the proposed action. ✷