

## 3.3 OPEN SPACE

### 3.3.1 Introduction

This Section describes the methodology used to evaluate the project’s effects on open space resources. The *CEQR Technical Manual* defines open space as “publicly or privately owned land that is publicly accessible and has been designated for leisure, play, or sport, or land set aside for the protection and/or enhancement of the natural environment.” Following the guidance in the manual, open space assessments focus on public open space, which is defined as open space “that is accessible to the public on a constant and regular basis or for designated daily periods.” This can include space under government or private jurisdiction, including public parks, recreation centers, pools, beaches, playgrounds, and school yards, as well as community gardens, esplanades, landscaped medians with seating, public housing complex grounds, and open space designated through regulatory approvals, such as “bonus” plazas.<sup>1</sup>

The *CEQR Technical Manual* guidelines indicate the need for an open space analysis when an action could potentially have an indirect or direct effect on open space. An *indirect* effect could occur if an action would introduce 200 or more residents or 500 or more workers to an area, who could create or exacerbate an over-utilization of open space resources. A *direct* effect would physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value. For the proposed Shaft 33B, there is no potential for indirect effects, since no new residents and very few workers (10 to 15 workers during construction and fewer than 10 during operation) would be introduced to the Study Area. Therefore, the evaluation of open space considers the project’s potential direct effects during construction of Shaft 33B and the associated water mains. Specifically, the analysis considers any possible disruptions to open spaces during project construction that could affect their use and enjoyment.

Because shaft activation would occur for a very short period of time (approximately one month) and would not directly affect any open spaces, it would not have the potential to result in significant adverse impacts to open space during this activity. Potential permanent impacts on open space once the Shaft 33B is operational are not anticipated because the completed shaft would not be located in a public open space nor would it add an additional user population to the Study Area. Whether at the preferred Shaft Site or the alternative Shaft Sites, Shaft 33B would not be located in an open space and would not affect the utilization of any open spaces in the surrounding area. Shaft 33B would be located below grade; the only above-grade features at the Shaft 33B Site would be two at-grade access hatchways to the shaft, a 10-foot-tall by 14-inch-wide air vent and two small hydrants on the site or in the adjacent sidewalk area (see Section 2.7 in Chapter 2, “Purpose and Need and Project Overview”). Similarly, operation of the water main

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<sup>1</sup> “Bonus” plazas are publicly accessible plazas provided on private property that were created to obtain additional development rights for the adjacent building. The Zoning Resolution of the City of New York sets forth the rules for bonus plazas, including the hours when they must be accessible to the public.

connections also does not have a potential to result in significant adverse impacts to open spaces, and no detailed analysis was conducted. The water main connections would be located in the street and sidewalk areas and would have no above-ground features; routine inspection and maintenance activities would involve a minimal number of NYCDEP personnel and would not adversely affect open spaces.

To analyze the potential impacts on open spaces during the construction phase, Study Areas encompassing a 400-foot radius of the proposed construction areas for the preferred Shaft Site, the alternative Shaft Sites, and the potential water main connection routes were used. Within those Study Areas, the open spaces immediately adjacent to potential construction areas were evaluated in particular detail. The 400-foot Study Area assessment focuses on the potential stresses open space resources could experience due to increased noise, traffic, and worker presence during the construction period of both the shaft and water main portions of the project. In addition, to analyze the effects of temporary use during two stages of construction of a portion of the multi-use area at the preferred Shaft Site, open spaces within a ¼-mile Study Area of the preferred Shaft Site were evaluated, as described in more detail below. This ¼-mile Study Area was selected to identify local open spaces within a reasonable walking distance from the preferred Shaft Site, to study the effect of limiting the utilization of the multi-use area (which is used for passive recreation, mainly strolling and dog walking) during construction.

### 3.3.2 Existing Conditions Methodology

An inventory was prepared of the existing open spaces in each Study Area. The inventory was developed using the New York City Department of City Planning's (NYCDCP) database, described in Section 3.2, "Land Use and Community Facilities, Zoning, and Public Policy," together with the Community District Needs reports for Community Boards 6 and 8; the New York City Department of Parks and Recreation's (NYCDPR) database of park properties; and *Privately Owned Public Space: The New York City Experience (2000)*, a collaboration by NYCDCP, Jerold S. Kayden, and the Municipal Art Society that provides information on bonus plazas. The open spaces thus identified were confirmed through field surveys conducted for the land use analysis. Additional field verification was conducted on July 26 and 27, 2005 for the open spaces in the additional ¼-mile Study Area for the preferred Shaft Site. Open spaces that are not regularly accessible by the general public were excluded from the analysis, as were public open spaces that do not offer useable recreational areas.

Once those inventories were available, further qualitative investigation of existing conditions was conducted for the 400-foot Study Areas, and quantitative analysis was conducted for the ¼-mile Study Area.

#### 400-Foot Study Areas

The area in the general vicinity of the preferred Shaft Site and each of the alternative Shaft Sites is known to be underserved by open spaces. The analysis conducted included user surveys of open spaces in the project area that could be indirectly affected during construction activities.

For each of the 400-foot Study Areas, user surveys were conducted in spring and summer 2005 to determine the level and types of usage at open spaces adjacent to potential project construction activities for the preferred and alternative Shaft Sites and for the reasonable worst-case water main connection route. For the reasonable worst-case water main connection route, open spaces that provide seating and would be adjacent to potential construction activities were surveyed. The *CEQR Technical Manual* recommends that open space surveys be conducted during the peak hour of use, which is typically during lunchtime (e.g., noon to 2:00 p.m.) for commercial areas and may be in the afternoon and on weekends in residential areas, although peak times can vary depending on the nature of the open space. The Study Areas for the preferred and alternative Shaft Sites are predominantly residential. For the 400-foot Study Areas for Shaft 33B, these user surveys were conducted on weekdays at all open spaces, because most construction activities would take place on weekdays. To cover the full range of potential open space users, the weekday surveys were conducted on Wednesday, April 6, 2005 during the morning, midday, afternoon, and evening, as follows:

- Morning—9:00 a.m. to 10:00 a.m. or 10:15 a.m. to 11:15 a.m.;
- Midday—Noon to 1:00 p.m.;
- Afternoon—2:30 p.m. to 3:30 p.m.; and
- Evening—5:00 p.m. to 6:00 p.m.

In addition, weekend user surveys were conducted for locations where project construction activities could affect open space use on weekends. These include the multi-use area adjacent to the preferred Shaft Site, since the 1,800 square feet of the multi-use area would be used for construction staging on weekends and weekdays for 23 months, and open spaces adjacent to the reasonable worst-case water main route, since water main construction could possibly occur during the weekends. Weekend surveys were conducted at the multi-use area on Saturday April 9, 2005 during the same time periods as the weekday surveys. Weekend surveys were conducted for open spaces that are immediately adjacent to the water main construction routes on Saturday, August 27, 2005 for the same time periods as above, except that the midday surveys were conducted from 11:30 a.m. to 12:30 p.m.

The user surveys identified the number and description of individuals using the open space, how the open space was used, and the length of time the open space was used by each individual. For open space areas that also serve as pedestrian passageways, the number of individuals who passed through the open space areas was also recorded.

#### **¼-Mile Study Area for the Preferred Shaft Site**

The ratio of useable open space acreage to the Study Area population—referred to as the “open space ratio”—was calculated and compared with guidelines established by NYCDCP to determine whether the area around the preferred Shaft Site is adequately served by public open spaces. This was done for a Study Area of approximately ¼ mile around the preferred Shaft Site, as described below.

Following the guidance of the *CEQR Technical Manual*, the Study Area for this analysis consisted of all census tracts that have at least 50 percent of their area within ¼ mile of the preferred Shaft Site. All open spaces and all residents and employees in those census tracts were included in the ¼-mile Study Area. Information on the number of residents in the Study Area was collected from the 2000 U.S. Census of Population and Housing (“Census 2000”). Information on the number of employees in the Study Area was also obtained from Census 2000, using journey to work data.<sup>2</sup> Total acreage and passive and active acreage was tallied for all useable publicly accessible open spaces in the ¼-mile Study Area, based on the sources noted above.

Open space can be categorized as active or passive. Active open space is used for sports or exercise and consists mainly of recreational facilities including ball fields and courts, pools, beach areas, esplanades, and open lawns. Passive open space is used for sitting or strolling and many of the following facilities would contain these areas: nature preserves; open lawn areas; beach areas; designated greenways; esplanades; and church yards or cemeteries with seating. Some open spaces, like lawns, are used for both active and passive activities. The employee population of the Study Area is most likely to use the area’s passive open spaces, since workers will typically use open spaces during their lunch break, while the residential population of the Study Area likely uses both its passive and active open spaces. Following the methodology outlined in the *CEQR Technical Manual*, both passive and active open space ratios were calculated. Passive open space ratios were calculated for the combined worker and residential population of the Study Area, and active open space ratios were calculated for the residential population. The ratio of total open space (active plus passive) to the Study Area’s residential population was also calculated.

The open space ratios were then compared to NYCDTCP’s guidelines for active and passive open space. To determine the adequacy of open space resources for the working (daytime) population of a given area, NYCDTCP 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 is a City-wide median open space ratio of 1.5 total acres per 1,000 residents. The second is an optimal planning goal established by NYCDTCP of 2.5 total acres per 1,000 residents—2.0 acres of active and 0.5 acres of passive open space per 1,000 residents. As noted above, the needs of workers in a study area and residents are also considered together, because it is assumed that both residents and workers will use the same passive open spaces. For this evaluation, a weighted average of the amount of open space necessary to meet the NYCDTCP guideline of 0.50 acres of passive space per 1,000 residents and 0.15 acres of passive open space per 1,000 workers is used. This ratio changes depending on the proportion of residents and workers in each study area.

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<sup>2</sup> Journey to work data are tallied in 2000 Census Transportation Planning Package Part 2: Total Workers at Place of Work (Regardless of Residence), Table CTPP2 P-1.

### 3.3.3 Future Conditions Without the Project Methodology

An analysis of future conditions without the project (the “Future Without the Project”) was conducted to provide baseline conditions against which potential impacts of the project could be assessed. This future baseline condition was developed using information collected for the analysis of land use, discussed earlier in Section 3.2, as well as information provided by NYCDPR on proposed future changes to open spaces. For the quantitative analysis of the ¼-mile Study Area for the preferred Shaft Site, future open space ratios were calculated, taking into consideration any additions or subtractions of open spaces and any changes in population that may occur in the Future Without the Project in the Study Area because of new development projects.

### 3.3.4 Future Conditions With the Project Methodology

An assessment was performed in order to determine whether construction activities required for the project could potentially have a significant adverse direct impact on open space resources. As noted above, the *CEQR Technical Manual* defines direct effects as related to 1) reduction in the utilization or aesthetic value of an open space; or 2) physically changing, diminishing, or eliminating an open space. For open spaces in the 400-foot Study Areas, the various construction activities proposed were evaluated to determine if the utilization or aesthetic value of open spaces within the Study Area would be adversely affected. The results of the user survey and a qualitative assessment based on the impact analyses included in this EIS were used to make this determination.

For the preferred Shaft Site, the proposed limited use (1,800 square feet for an estimated period of approximately 23 months) of the multi-use area for construction activities was evaluated in terms of its effects on the users of the multi-use area and possible indirect effects on other open spaces in the ¼-mile Study Area that could result if many users of the multi-use area were displaced to other open spaces. The results of the user surveys and a quantitative analysis of the project’s effects on the Study Area’s open space ratios were used to make this determination.

