

1.0 EXECUTIVE SUMMARY

1.1 PROJECT DESCRIPTION

The New York City School Construction Authority (NYCSCA) proposes to develop two new schools, collectively known as the Metropolitan Avenue School Campus, on an approximately eight-acre irregularly-shaped lot located in the Forest Hills section of Queens. The Metropolitan Avenue School Campus would consist of the following facilities: one 700-seat combined intermediate and high school serving students Citywide and one 1,000-seat high school to be locally zoned. There will also be 200 seats reserved for District 75.

The project site is located in the northeast quadrant of a former industrial superblock which is divided by two intersecting Long Island Railroad (LIRR) rights of way. The LIRR's inactive Rockaway Beach line (also known as the Glendale Cut-Off) forms the site's western boundary, while the active Babylon line forms the southern boundary. The Rockaway Beach line, which has been inactive since the late 1960s, is located on an overgrown berm that rises approximately 20 to 30 feet above grade. This berm separates the project site from other superblock properties that maintain frontage on Woodhaven Boulevard, including a Sports Authority store and Home Depot. Because of the barriers presented by the berm and active Babylon line, the project site has access to public streets only to the north along an approximately 200-foot-long portion of Metropolitan Avenue.

1.2 PROBABLE IMPACTS OF THE PROPOSED PROJECT

1.2.1 Land Use and Zoning

The proposed project would represent a significant positive impact on local land use conditions and zoning in the immediate area. Although Forest Hills is a predominantly residential section of Queens, the project site is located in an area of mixed land uses. The intersection of the two LIRR lines divides the project site from the existing manufacturing and commercial uses (i.e., Sports Authority and Home Depot) on the western portion of the superblock. The proposed schools would support and complement the residential communities that adjoin the site to the east and north. However, the project site is located in an M1-1 manufacturing zone, within which schools are not permitted as-of-right. The SCA would seek a zoning waiver from the New York City Deputy Mayor's Office to permit the proposed schools. Such zoning waivers may be granted when non-compliances do not represent a substantial conflict with the *Zoning Resolution* or other public policies.

1.2.2 Community Facilities

The proposed project would not introduce residents to the area and would create little new demand for community facilities and services. The project would slightly increase the demand for police and fire services. However, development of the proposed schools would alleviate existing and anticipated crowding at local intermediate and high schools throughout Queens.

1.2.3 Neighborhood Character

The proposed schools would make an area formerly used for manufacturing uses more consistent with the predominantly residential character of Forest Hills. They would provide improved educational conditions and services needed to support the ongoing growth of the neighborhood's residential population. The scale of the proposed school building may be greater than that of the residential uses typical of Forest Hills, but the schools would be set apart from local residences on a distinct campus.

1.2.4 Historic and Archaeological Resources

Other than the architecturally unremarkable manufacturing buildings that were recently cleared from the project site, historic research suggests that no other structures have been built on the project site. Given the site's development history and topographical features, it is unlikely that significant archaeological resources remain *in situ*. The Remsen Cemetery, a small New York City Landmark, is located approximately one block west and one block north of the project site, but would not be affected by the proposed schools. The New York State Office of Parks, Recreation and Historic Preservation, acting in its capacity as the State Historic Preservation Office (SHPO), has reviewed the proposed project and determined that it would have no impact on cultural resources in or eligible to be listed in the State and National Registers of Historic Places.

1.2.5 Urban Design and Aesthetics

Development of the proposed Metropolitan Avenue School Campus would not adversely affect the aesthetic quality of either the project site or the surrounding area. Although the schools would be built to a larger scale than the existing residences typical of Forest Hills, the project site is effectively separated from those residential uses by active and inactive railroad rights of way. The project site is currently an unused, open lot that does not provide any visual amenities to the neighborhood.

1.2.6 Infrastructure and Energy

No significant adverse impacts would occur because the existing water supply and gas services in the area are adequate to serve the needs posed by the two proposed schools. However, the proposed development would increase the impermeable surface area of the project site substantially – the majority of the site is currently open and vegetated – and could adversely impact the rate of storm water runoff. Therefore, the proposed development would have to incorporate measures required by New York City Department of Environmental Protection (DEP) for the combined sewer system (e.g., retention tanks to slow the rate of storm water flow). Since these measures are required by law, the project would not have any adverse impacts upon the combined sewer system.

1.2.7 Traffic and Transportation

Fifteen study intersections were identified in the vicinity of the project site, all located in a study area bounded by Metropolitan Avenue, Woodhaven Boulevard, Union Turnpike and Ascan Avenue. The estimated volume of project-generated traffic in the morning and afternoon peak hours will result in traffic impacts at six intersections during the weekday AM peak hour and nine intersections during the weekday PM peak hour, according to the *2001 CEQR Technical Manual* criteria. All of these impacts can be mitigated (with parking restrictions), with the exception of those occurring at the signalized Woodhaven Boulevard/Union Turnpike intersection.

The proposed project would introduce a demand for approximately 129 additional parking spaces. A parking utilization survey of the immediate area surrounding the project site during the weekday morning and afternoon hours indicated that a sufficient number of unused on-street parking spaces are available to accommodate the increased demand. The proposed project is not expected to result in any significant impacts on pedestrians, and existing bus lines are anticipated to have sufficient capacity to accommodate new transit trips generated by the proposed schools complex.

1.2.8 Air Quality

The proposed project could result in adverse air quality impacts through the generation of additional traffic, which would emit carbon monoxide (CO), a major component of motor vehicle exhaust. A preliminary screening analysis identified the intersection of Metropolitan Avenue/Selfridge Street and Metropolitan Avenue/Woodhaven Boulevard – as intersections considered by the NYCDEP as critical for CO – as a worst-case intersection. Receptor points around these intersections were then selected, and the MOBILE6 and CAL3QHC models were used to determine CO concentrations at the receptor points for 2010 No-Build and 2010 Build conditions. For the Metropolitan Avenue and Selfridge Street intersection, the modeled

1-hour concentration of 1.5 ppm is equivalent to an 8-hour concentration of 1.05 ppm. When added to the background value of 2.0 ppm, the worst-case CO concentration under No-Build conditions for the Metropolitan Avenue and Selfridge Street intersection is 3.05 ppm. For the Metropolitan Avenue and Woodhaven Boulevard intersection, the modeled 1-hour concentration of 3.5 ppm is equivalent to an 8-hour concentration of 2.45 ppm. When added to the background value of 2.0 ppm, the worst-case CO concentration under No-Build conditions for the Metropolitan Avenue and Woodhaven Boulevard intersection is 4.45 ppm. As the total CO concentrations are within the NAAQS, the proposed development would not result in any significant adverse impacts on air quality.

1.2.9 Noise

The proposed development could generate additional noise in two ways: through increased vehicular traffic and from the proposed outdoor play areas. Existing noise levels at the intersections of Sybilla Street and 69th Road, and Sybilla Street and 70th Road were monitored to establish baseline conditions. An evaluation of project-generated traffic levels was then conducted to determine the extent of potential mobile source noise impacts. For the peak AM period, the back yard of the nearest home (87-09 69th Avenue) would experience a noise impact of 2.4 dBA above the threshold criterion of 5.0 dBA, and the home at 87-15 69th Avenue would experience a noise impact 0.7 dBA above the threshold criterion. PCEs were calculated for key intersections and compared with No-Build conditions to determine whether the proposed project would result in an increase of 5 dBA or more in vehicle-related noise levels. A 3-dBA increase would be generated by a doubling of traffic volume or a substantial increase in truck traffic. Along arterial roads, the project-generated increases in noise level are much lower than this, ranging from 0.0 dBA to 0.7 dBA. These potential increases are well below 5 dBA and the changes would not be perceptible.

According to the site plan, playing fields for the students would be on the north side of the school. Based on the Cowan and Holley study, the peak L_{eq} noise level of 68.2 dBA at the boundary of a high school playing field would attenuate to 59.1 dBA at a distance of 40 feet. Noise levels would continue to attenuate with distance at a rate of 6 dBA with each doubling of distance. Thus, the L_{eq} at the nearest residential receptor point, 120 feet from the playing field, would be approximately 49.6 dBA. To approximate total noise when the high school playing field is in use during morning and afternoon periods, the playground noise was added to traffic noise for the No-Build peak AM period at the corner of Sybilla Street and 69th Avenue. Adding the playground noise level of 49.6 dBA to the No-Build traffic L_{eq} of 50.3 dBA for the morning period would result in total noise levels of 53.0 dBA for that location. The incremental noise level increase of 2.7 is below the 5 dBA impact criterion.

1.2.10 Soil and Groundwater

Groundwater resides at approximately 60-70 feet below ground surface (bgs) at the Site. The groundwater surface corresponds to the top of a predominantly sand and gravel aquifer of glacial origin. The aquifer is approximately 100 feet thick, is unconfined, and occurs as a regional formation over much of Queens and adjacent areas. The bottom of the aquifer corresponding to a depth of approximately 150 feet bgs is bounded by a gray clay which also occurs regionally. Groundwater flow direction was confirmed to be in a southerly direction, with a gradient of 0.002 ft./ft.

The groundwater at the Site has historically been contaminated with 1,1,1-trichloroethane (TCA) and tetrachloroethene (PCE). The on-site source of TCA and PCE was contaminated soil at the northern end of the former Heinz warehouse building as a result of an apparent leak in the building's drain system. The majority of contaminated soil was removed through excavations performed by the property owner in August 2000.

Based on the NYSDEC approved Remedial Action Workplan (RAWP) prepared by Shaw in 2002, a remedial system to clean up the groundwater contamination was designed and constructed. The remedial system comprised of air sparging/soil vapor extraction began operation in April 2005 and has run continuously until March 2007. Monitoring of soil gas and groundwater has been conducted during the operation of the remedial system.

The remedial system was shut down on an interim basis in March 2007 and post-remediation monitoring will be completed to verify that operation of the treatment system has achieved the cleanup goals. The post-remediation monitoring will be performed on a monthly basis from March 2007 through July 2007, at which time construction of the new school will begin and a petition for the permanent removal of the AS/SVE system will be submitted to NYSDEC.

A vapor barrier and active sub slab depressurization system have been proposed for the school and will be installed to mitigate the potential for residual vapors to impact indoor air quality at the school. A vapor barrier and active sub slab depressurization system are recognized by the NYSDEC and by the NYSDOH Final Guidance Document (October 2006) as effective measures to address potential exposure pathways from subsurface vapors. The incorporation of these engineering controls into the construction of the school will assure that residual onsite contaminant levels do not pose an unacceptable risk to school occupants.

Upon completion of the aforementioned remedial activities, the Site will be suitable for construction of a New York City Public School.

1.2.11 Construction Impacts

Local noise and traffic impacts associated with the construction of the Metropolitan Avenue School Campus would occur primarily as a result of truck traffic delivering materials to the site. However, these impacts are not expected to be significant. In addition, appropriate dust and noise control measures would be closely followed during construction to minimize any impacts on the surrounding community.

1.3 ALTERNATIVES TO THE PROPOSED PROJECT

1.3.1 Shopping Plaza Alternative

The shopping plaza alternative is likely to result in greater impacts than the proposed project. A shopping plaza has the potential for higher traffic volumes and more noise than a school. However, since the shopping plaza would not have a playground, no noise impacts from a play area would be expected.

1.4 MITIGATION MEASURES

As noted in Section 1.2, Probable Impacts of the Proposed Project, the proposed Metropolitan Avenue School Campus could have significant adverse impacts on traffic and noise.

1.4.1 Traffic Impact Mitigation

The traffic generated by the proposed school has the potential to cause a significant deterioration in the operations at six intersections during the weekday AM peak hour and nine intersections during the weekday PM peak hour: Woodhaven Boulevard and Metropolitan Avenue (during both AM and PM peaks); Trotting Course Lane and Metropolitan Avenue (PM peak only); Woodhaven Boulevard and Union Turnpike (during both AM and PM peaks); Ascan Avenue and Metropolitan Avenue (during both AM and PM peaks); 71st Avenue-Continental Avenue and Metropolitan Avenue (during both AM and PM peaks); and Union Turnpike and Metropolitan Avenue (during both AM and PM peaks).

With the exception of the projected traffic impact at the Woodhaven Boulevard and Union Turnpike intersection, all of these traffic impacts can be mitigated through the implementation of low-cost measures such as signal timing and phasing modifications, and parking restrictions during the peak hour. At the Woodhaven Boulevard and Union Turnpike intersection, traffic operations are projected to continue to worsen over time as a result of continued traffic growth throughout Queens and additional development activities in the area (such as the planned commercial development at 90-30 Metropolitan Avenue), regardless of

the proposed schools complex. More substantial improvements, such as construction of turn lanes, or prohibition of turns at the intersection, would be required. Because there are pre-existing traffic operations and intersection capacity deficiencies at this particular intersection, and the solution to these issues extends beyond the direct and reasonable control of the School Construction Authority, NYCDOT should investigate pursuing larger, long-term improvements at this intersection.

The SCA acknowledges the local community's concerns regarding the implementation of additional parking restrictions in the area, particularly along Metropolitan Avenue, and as such, has identified an alternative Build scenario whereby the existing parking regulations for all on-street parking spaces are maintained. This alternative package of measures assumes that signal timing, phasing modifications, and re-striping are implemented in lieu of the on-street parking restrictions along Metropolitan Avenue and Woodhaven Boulevard described previously. With the alternative measures described above, unmitigated traffic impacts are projected to remain at two intersections during the AM peak hour and seven intersections during the PM peak hour.

1.4.2 Noise Impact Mitigation

A noise analysis of the proposed schools complex determined that noise from site-generated traffic could have a significant impact on the backyards of two houses in the immediate area. This impact would not be mitigated.