CHAPTER 18: PUBLIC HEALTH

A. INTRODUCTION

This chapter assesses the Proposed Actions' effect on public health. As defined by the *City Environmental Quality Review* (CEQR) *Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability, and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether adverse impacts on human health may occur as a result of a proposed project and, if so, to identify measures to mitigate such effects.

The *CEQR Technical Manual* states that a public health assessment is not necessary for most projects. Where no significant adverse unmitigated impacts are found in other CEQR analysis areas—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated adverse impact is identified in any of these other CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area.

As described in the relevant analyses of this EIS, the Proposed Actions would not result in an unmitigated significant adverse impact in the areas of air quality, water quality, or hazardous materials. However, as discussed in Chapter 20, "Construction," the Proposed Actions could result in unmitigated construction noise impacts.

B. PRINCIPAL CONCLUSIONS

As described in the preceding chapters of this EIS, the Proposed Actions would not result in unmitigated significant adverse impacts in the following technical areas that contribute to public health: air quality, water quality, hazardous materials, or operational noise.

The analysis presented in Chapter 20, "Construction," determined that construction activities associated with the Proposed Actions could potentially result in unmitigated significant adverse construction-period noise impacts at receptors in the vicinity of the Projected Development Sites' work areas. However, construction due to the Proposed Actions would not result in chronic exposure to high levels of noise, prolonged exposure to noise levels above 85 dBA, or episodic and unpredictable exposure to short-term impacts of noise at high decibel levels, as per the *CEQR Technical Manual*. Consequently, construction due to the Proposed Actions would not result in a significant adverse public health impact.

C. METHODOLOGY

The construction noise analysis presented in Chapter 20, "Construction," was used to identify the extent of the potential construction-period noise exposure to the public as a result of the Proposed Actions. The *CEQR Technical Manual* thresholds for construction noise are based on quality of life considerations and not on public health considerations. However, the potential construction-period noise exposure identified in Chapter 20, "Construction," was evaluated for its potential to impact the

health of the affected population by comparing it with the relevant health-based noise criteria, as per the *CEQR Technical Manual*, which identifies chronic exposure to high levels of noise, prolonged exposure to noise levels above 85 dBA (the *CEQR Technical Manual* recommended threshold for potential hearing loss), and episodic and unpredictable exposure to short-term impacts of noise at high decibel levels of concern for public health effects.

D. PUBLIC HEALTH ASSESSMENT

Construction associated with the Proposed Actions would be required to follow the requirements of the New York City Noise Control Code (NYC Noise Code) for construction noise control measures. Specific noise control measures will be described in a noise mitigation plan required under the NYC Noise Code. These measures could include a variety of source and path controls.

Even with these measures, the analysis presented in Chapter 20, "Construction," determined that the predicted noise levels due to construction-related activities would result in noise levels at receptors in the vicinity of the Proposed Actions' work areas that would constitute potential significant adverse construction-period noise impacts. These locations are shown in Figure 20-4 in Chapter 20.

Although the *CEQR Technical Manual* thresholds for significant adverse impacts are predicted to be exceeded at certain locations during construction, the magnitude and duration of these exceedances would not constitute a significant adverse public health impact. As discussed above, the *CEQR Technical Manual* noise thresholds are based on quality of life considerations and not on public health considerations. An impact found pursuant to a quality of life framework (i.e., a significant adverse construction noise impact) does not definitively indicate that an impact would occur when the analysis area is evaluated in terms of public health (i.e., a significant adverse public health impact).

CHRONIC EXPOSURE TO HIGH LEVELS OF NOISE

The predicted construction-period noise impacts identified and described in Chapter 20, "Construction," would not constitute chronic exposure to high levels of noise because of the temporary and intermittent nature of construction-period noise. With the Proposed Actions, the maximum predicted construction noise levels (up to the low 80s dBA) would occur over a limited duration during the construction period based on the amount and type of construction work occurring in the construction work areas. Further, construction activity would typically be limited to a single shift during the day, leaving the remainder of the day and the evening unaffected by construction noise. Since the construction noise would fluctuate in level and would not occur constantly throughout the construction period, which itself is limited in duration, construction noise would not be described as "chronic." Therefore, construction activities facilitated by the Proposed Actions would not have the potential to result in chronic exposure to high levels of noise.

PROLONGED EXPOSURE TO NOISE LEVELS ABOVE 85 DBA

The predicted absolute noise levels at all analyzed noise receptors projected to experience the potential for a significant adverse construction-period noise impact would be below the 85 dBA threshold. The maximum predicted levels of noise resulting from construction of the Proposed Actions would be 81.5 dBA. Therefore, construction of the Proposed Actions would not have the

potential to result in prolonged exposure to noise levels above 85 dBA at any receptor location predicted to experience the potential for a significant adverse construction-period noise impact.

UNPREDICTABLE EXPOSURE TO SHORT-TERM HIGH NOISE LEVELS

Based on the predicted noise levels described in Chapter 20, "Construction," construction due to the Proposed Actions is also not expected to result in unpredictable exposure to short-term impacts of noise at high decibel levels, as per the *CEQR Technical Manual*. The maximum short-term noise impact resulting from construction of the Proposed Actions would be in the low-80s dBA during peak construction periods. However, because exterior noise levels would not exceed the acceptable 85 dBA threshold at residential receptors, and because construction noise would typically not occur during the nighttime when residential occupants are most sensitive to noise, predicted noise levels due to construction of the Proposed Actions would not constitute unpredictable exposure to short-term impacts of noise at high decibel levels.

Additionally, the predicted noise exposure for the occupants of the residential buildings that could experience potentially significant adverse construction noise impacts would depend on the amount of façade noise attenuation provided by the buildings. The façade noise attenuation is a factor of the building façade construction as well as whether the building's windows can remain closed. Buildings that have an alternate means of ventilation (e.g., some form of air conditioning) are assumed to be able to maintain a closed-window condition, which results in a higher level of façade noise attenuation. At all analyzed noise receptors, interior noise levels are predicted to be well below the 85 dBA threshold. Therefore, construction due to the Proposed Actions would not have the potential to result in episodic or unpredictable exposure to short-term impacts of noise at high decibel levels.

Since the area of potential noise impacts is limited and the population exposed to elevated noise levels due to construction is very limited and as described above, the noise would not be chronic, and would not exceed the threshold of short-term high decibel levels, the predicted noise resulting from construction of the Proposed Actions would not constitute a potential significant adverse public health impact. Therefore, there would not be significant adverse public health impacts due to construction resulting from the Proposed Actions.