Chapter 23: Public Health

A. INTRODUCTION

Public health is the effort of society to protect and improve the health and well-being of its population. The goal of a public health analysis per the 2014 *City Environmental Quality Review (CEQR) Technical Manual* is to determine whether adverse impacts on public health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects. The potential effects of the proposed projects were considered with regard to effects on the surrounding community.

The *CEQR Technical Manual* states that a public health assessment is warranted for a specific technical area if there is a significant unmitigated adverse impact found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or operational noise. As described in the relevant analyses of this ~~Draft~~ Final Environmental Impact Statement (~~D~~FEIS), upon completion of construction, the proposed actions would not result in significant unmitigable adverse impacts in any of the technical areas related to public health. However, as identified in Chapter 19, "Construction," the proposed projects may result in unmitigated significant adverse construction-period noise impacts. Therefore, this chapter provides a public health assessment of construction-period noise.

B. PRINCIPAL CONCLUSIONS

The analyses presented in this ~~D~~FEIS conclude that the proposed projects would not result in unmitigated significant adverse impacts in air quality, water quality, hazardous materials, or operational noise. The analysis presented in Chapter 19, "Construction," determined that construction activities could potentially result in unmitigated significant adverse construction-period noise impacts at receptors in the vicinity of the proposed projects' work areas. However, construction of the proposed projects 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 of the proposed projects would not result in a significant adverse public health impact.

C. METHODOLOGY

The construction noise analysis presented in Chapter 19, "Construction," was used to identify the extent of the potential construction-period noise exposure to the public as a result of the proposed projects. 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 19, "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 projects 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 controls (i.e., reducing noise levels at the source or during the most sensitive construction time periods) and path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors).

Even with the implementation of these noise control measures, the analysis presented in Chapter 19, "Construction," determined that predicted noise levels due to construction-related activities would result in noise levels at receptors in the vicinity of the proposed projects' work areas that would constitute potential significant adverse construction-period noise impacts. These locations are shown in Figure 19-3.

Although the *CEQR Technical Manual* thresholds for significant adverse construction noise impacts are predicted to be exceeded at certain locations during construction, these exceedances would not constitute a significant adverse public health impact. As discussed above, the *CEQR Technical Manual* thresholds for construction noise 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 19, "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 projects, the maximum predicted construction noise levels (up to the high 80s to low 90s 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 of the proposed projects would not have the potential to result in chronic exposure to high levels of noise.

PROLONGED EXPOSURE TO NOISE LEVELS ABOVE 85 DBA

80 RUTGERS SLIP

80 Rutgers Slip is predicted to experience total construction noise levels in the mid-to-high 80s dBA at the exterior façades on Floors 1 to 4, which would be above the 85 dBA threshold (within approximately 4 dBA of the threshold) during peak construction periods. However, prolonged exposure to noise levels above 85 dBA would be limited by site conditions at 80 Rutgers Slip and would be experienced at the exterior façades. At the ground level, the area surrounding 80 Rutgers Slip would be an active construction site and would, therefore, be inaccessible to the public.

Additionally, 80 Rutgers Slip does not have any outdoor terraces. 80 Rutgers Slip was determined by field observations to have insulated glass windows and an alternate means of ventilation (i.e., through-the-wall air conditioning units) and is assumed to be able to maintain a closed-window condition during construction. The insulated glass windows and through-the-wall air conditioning units would be expected to provide approximately 25 dBA window/wall attenuation. Therefore, maximum interior noise levels at 80 Rutgers Slip during construction would be in the low-60s dBA, which is well below the 85 dBA threshold. Therefore, construction of the proposed projects would not have the potential to result in prolonged exposure to noise levels above 85 dBA at 80 Rutgers Slip.

275 SOUTH STREET

275 South Street is predicted to experience total construction noise levels in the mid-to-high 80s dBA at the exterior façade on Floors 1 through 6, 10 through 15, and 18, which would be above the 85 dBA threshold (within approximately 4 dBA of the threshold) during peak construction periods. As with 80 Rutgers Slip, prolonged exposure to noise levels above 85 dBA would be limited by site conditions at 275 South Street and would only be experienced at the exterior façades. 275 South Street does have outdoor terraces. However, 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. The outdoor terraces could be used during these times when construction is not occurring. 275 South Street was also determined by field observations to have insulated glass windows and an alternate means of ventilation (i.e., through-the-wall air conditioning units) and is assumed to be able to maintain a closed-window condition during construction. The insulated glass windows and through-the-wall air conditioning units would be expected to provide approximately 25 dBA window/wall attenuation. Therefore, maximum interior noise levels at 275 South Street during construction would be in the mid-60s dBA, which is well below the 85 dBA threshold. Therefore, as with 80 Rutgers Slip, construction of the proposed projects also would not have the potential to result in prolonged exposure to noise levels above 85 dBA at 275 South Street.

265 CHERRY STREET

265 Cherry Street is predicted to experience total construction noise levels in the low 90s dBA at the exterior façades on Floors 2 through 6, which would be above the 85 dBA threshold (within approximately 6 dBA of the threshold) during peak construction periods. However, prolonged exposure to noise levels above 85 dBA would be limited by site conditions at 265 Cherry Street and would be experienced at the exterior façades. 265 Cherry Street does not have any outdoor terraces. Additionally, as with 80 Rutgers Street and 275 South Street, 265 Cherry Street was determined by field observations to have insulated glass windows and an alternate means of ventilation (i.e., through-the-wall air conditioning units) and is assumed to be able to maintain a closed-window condition during construction. The insulated glass windows and through-the-wall air conditioning units would be expected to provide approximately 25 dBA window/wall attenuation. Therefore, maximum interior noise levels at 265 Cherry Street during construction would be in the low 60s dBA, which is well below the 85 dBA threshold. Therefore, construction of the proposed projects would not have the potential to result in prolonged exposure to noise levels above 85 dBA at 265 Cherry Street.

ALL OTHER RECEPTORS

The predicted absolute noise levels at all other analyzed noise receptors would be below the 85 dBA threshold. The maximum predicted levels of noise resulting from construction of the

proposed projects would be in the low-80s dBA. Therefore, construction of the proposed projects would not have the potential to result in prolonged exposure to noise levels above 85 dBA at any of the other receptor locations.

UNPREDICTABLE EXPOSURE TO SHORT-TERM HIGH NOISE LEVELS

Based on the predicted noise levels described in Chapter 19, "Construction," construction of the proposed projects 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 projects would be in the low 90s dBA during peak construction periods. However, because of the magnitude by which exterior noise levels would exceed the acceptable 85 dBA threshold at residential receptors, and because construction noise would typically not occur during the nighttime when residences are most sensitive to noise, predicted noise levels due to construction of the proposed projects 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 of the proposed projects 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 project would not constitute a potential significant adverse public health impact. Therefore, there would not be significant adverse public health impacts due to construction of the proposed projects. ✷