A. INTRODUCTION

This chapter assesses the Proposed Actions' potential effects on public health. As defined in the 2021 *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 because of a project and, if so, to identify measures to mitigate such effects.

The 2021 *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 **Chapter 1, "Project Description,"** the Applicant is seeking CPC approval of discretionary actions, including: (i) a Zoning Map Amendment to rezone the Project Area from an M1-2 zoning district to C6-4 and M1-6 zoning districts; (ii) special permits within a Large-Scale General Development (LSGD) pursuant to Sections 74-743(a)(1) and (2) of the *Zoning Resolution of the City of New York* (ZR) to distribute floor area across the LSGD and to modify rear yard and height and setback regulations, respectively; (iii) a ZR Section 74-161 special permit to allow Use Group VI retail uses in excess of 20,000 sf of floor area in the proposed M1-6 zoning district; (iv) Zoning Text Amendments to (a) ZR Appendix F to designate a Mandatory Inclusionary Housing ("MIH") Area over the C6-4 zoning district-portion of the Project Area and (b) ZR Section 74-742 with respect to the contiguity of ownership of zoning lots in an LSGD when there is an intervening elevated rail line; and (v) a combination acquisition and site selection of real property by the City to construct a publicly accessible open space at 1519 Herkimer Street (also known as Parcel 1; Block 1555, Lot 19) within the LSGD (collectively, the "Proposed Actions"). DCAS is applicant and NYCEDC is co-applicant only for the combination acquisition and site selection action. Approval of the Proposed Actions would facilitate the development of five new buildings and potentially, a small retail kiosk on the projected development sites in the Project Area. The new mixed-use development on the projected development sites would either contain a combined total of approximately 1,589,202 gross square feet (gsf) under the Proposed Development, or a combined total of approximately 1,620,348 gsf under the Alternate Community Facility Scenario.

As described in the relevant analyses of this EIS, the Proposed Actions would not result in any unmitigated significant adverse water quality, noise (operational ~~and~~ or construction-related), or air quality (stationary source, mobile source, or ~~and~~ construction-related) impacts, and, with the establishment of an (E) designation (E-857) as part of the Proposed Actions, no unmitigated significant adverse impacts would occur in the area of hazardous materials. ~~However, as described in **Chapter 14, "Air Quality,"** the Proposed Actions could result in unmitigated mobile source air quality impacts.~~

B. PRINCIPAL CONCLUSIONS

An assessment was conducted based on the methodology set forth in the 2021 *CEQR Technical Manual* and determined that the Proposed Actions would not result in a significant adverse impact related to public health. The Proposed Actions are not expected to result in unmitigated significant adverse impacts in the following technical areas that contribute to public health: water quality, noise (operational ~~and~~ or construction-related), air quality (stationary source, mobile source, or ~~and~~ construction-related) impacts, or hazardous materials. ~~The Proposed Actions could potentially result in unmitigated mobile source air quality impacts.~~ As described in **Chapter 14, "Air Quality,"** the Proposed Actions would not result in a potential significant adverse air quality impact ~~related to the $PM_{2.5}$ annual *de minimis* criterion at one of the intersection sites analyzed~~. Between certification of the DEIS and publication of the FEIS, additional ~~refinements to the analysis will be performed which is expected to determine that the identified threshold for a *de minimis* impact related to mobile source annual average $PM_{2.5}$ increments will not be met. Additional~~ modeling of $PM_{2.5}$ concentrations (Grid Analysis) ~~will be~~was performed using more comprehensive analysis procedures ~~to determine the magnitude and extent of neighborhood-scale $PM_{2.5}$ impacts from mobile sources~~. Other updates ~~may~~ included the use of newer vehicle emissions model data and projections. The grid analysis shows that the $PM_{2.5}$ concentrations are below the annual *de minimis* criterion threshold. ~~It is anticipated that the analysis accounting for these additional data points will conclude that $PM_{2.5}$ concentrations as a result of the Proposed Actions fall below the annual *de minimis* criteria thresholds, and consequently the identified impacts related to mobile sources would not occur. In addition, at each of the affected intersection locations, the Proposed Actions would not contribute to or exacerbate a violation of the $PM_{2.5}$ annual average National Ambient Air Quality Standards (NAAQS) even with the very conservative assumptions relating to traffic, vehicle emissions, meteorology, and background $PM_{2.5}$ concentration levels used in the analysis. Therefore, the exceedances of the $PM_{2.5}$ *de minimis* criterion on an annual basis would not constitute a significant adverse impact on public health.~~

C. METHODOLOGY

As noted above, the 2021 *CEQR Technical Manual* states that where no unmitigated significant adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant 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. ~~Therefore, a preliminary assessment is provided below for the technical area relating to public health where unmitigated significant adverse impacts could not be ruled out – operational air quality.~~

D. PRELIMINARY SCREENING

Operational Air Quality

A quantitative assessment of emissions from traffic generated by the Proposed Actions was performed to evaluate the potential for air quality impacts, as described in **Chapter 14, "Air Quality."** The 2021 *CEQR Technical Manual* thresholds for particles with an aerodynamic diameter less than 2.5 microns in diameter ($PM_{2.5}$) include NAAQS. The NAAQS represent levels that are requisite to protect public health, allowing an adequate margin of safety. In addition, *de minimis* criteria, which for 24-hour and average $PM_{2.5}$ are quantified based on the incremental change in concentrations, is used to determine the potential for

significant adverse $PM_{2.5}$ impacts under CEQR.

The mobile source analysis determined that at ~~one~~ each of the intersection sites analyzed, the maximum annual incremental $PM_{2.5}$ concentration is predicted to exceed the *de minimis* criterion. Between certification of the DEIS and publication of the FEIS, additional refinements to the analysis ~~will be~~was performed, ~~which is expected to determine that the identified threshold for a *de minimis* impact related to mobile source annual average $PM_{2.5}$ increments will not be met. Additional modeling of $PM_{2.5}$ concentrations (Grid Analysis) will be performed~~ using more comprehensive analysis procedures to determine the magnitude and extent of neighborhood-scale $PM_{2.5}$ impacts from mobile sources. Other updates ~~may~~ included the use of newer vehicle emissions model data and projections. ~~It is anticipated that the analysis accounting for these additional data points will conclude that $PM_{2.5}$ concentrations as a result of the Proposed Actions fall below the annual *de minimis* criteria thresholds, and consequently the identified impacts related to mobile sources would not occur. In addition to the refined analysis which may demonstrate that potential impacts related to mobile sources would not occur, potential mitigation measures are currently being explored by the lead agency, DCP, and will be refined between certification of the DEIS and publication of the FEIS. Therefore, no significant adverse public health impacts related to mobile source air quality are expected because of the Proposed Actions.~~

E. ASSESSMENT

Operational Air Quality

Introduction

As discussed in **Chapter 14, "Air Quality,"** the maximum annual incremental $PM_{2.5}$ concentration is predicted to potentially exceed the annual *de minimis* criterion at East New York Avenue and Williams Avenue, and at Herkimer Street and Williams Place in the With-Action condition. However, additional review and evaluation was performed between the Draft EIS and Final EIS, which determined that the identified air quality impacts related to mobile source annual $PM_{2.5}$ increments were avoided. No other exceedances of air quality standards (i.e., the NAAQS, or the New York City 24-hour average $PM_{2.5}$ or carbon monoxide *de minimis* criteria) were projected as a result of the Proposed Actions. ~~Therefore, this section focuses on the potential public health effects related to annual incremental $PM_{2.5}$ concentrations in the future with the Proposed Actions.~~

~~*Limitations of Dispersion Models*~~

~~**Chapter 14, "Air Quality,"** provides the results of microscale analyses that evaluated the potential effect of the Proposed Actions on air pollutant concentrations at critical intersections from the emission of pollutants from mobile sources and their dispersion in the surrounding areas. The emissions and dispersion models utilized available traffic data from different periods of the day; however, for certain periods of the day where traffic data was not available (e.g., overnights, weekend off-peak periods), traffic model outputs from the most representative periods were used in the air quality analysis, which resulted in some hours of the 24-hour weekday and weekend periods utilizing more conservative traffic conditions.~~

~~Furthermore, as described in that chapter, the air pollutant dispersion models used in the analysis mathematically simulate how vehicle characteristics, meteorology, and physical configuration combine to affect pollutant concentrations. The mathematical expressions and formulations contained in the various models attempt to predict an extremely complex physical phenomenon as closely as possible. However, because all models contain simplifications and approximations of actual conditions and interactions, and since it is necessary to predict the reasonable worst-case condition for regulatory purposes, most~~

~~dispersion analyses predict conservatively high concentrations of pollutants, particularly under adverse meteorological conditions.~~

~~Potential Areas of Impact~~

~~For the mobile source analysis, the predicted increase in annual average $PM_{2.5}$ concentrations is determined at a distance of 15 meters (approximately 50 feet) from a roadway corridor, which is similar to the minimum distance defined for locating neighborhood scale monitoring stations. The potential annual average $PM_{2.5}$ exceedance would be located in the immediate areas around the intersection of East New York Avenue and Williams Avenue. The areas with modeled exceedances of the annual *de minimis* criterion include the sidewalk locations at the affected intersections and the immediate surroundings. The affected areas are primarily used by transient users (pedestrians), therefore, the overall exposure to the predicted $PM_{2.5}$ exceedances at the affected locations near this intersection would be brief. Because the area affected represent a very small portion of the area within the neighborhood, the effect on $PM_{2.5}$ concentrations would not represent a neighborhood-wide effect but rather a localized one, primarily associated with areas near the intersection roadways.~~

Potential Effect on Public Health

~~While the maximum incremental increase in $PM_{2.5}$ concentration was predicted to potentially exceed the 2021 *CEQR Technical Manual de minimis* criterion on an annual basis, it should be noted that t~~The *de minimis* criteria by itself is not a direct indicator of unhealthy air quality. When including the current measured annual average background concentration at the nearest representative DEC monitoring station (7.6 µg/m^3, measured at JHS126), the maximum total annual concentration in the With-Action condition is 7.~~97~~83, which is below the NAAQS of 9 µg/m^3 (see **Table 14-17** in **Chapter 14, "Air Quality"**). The NAAQS are established at a level that reduces risk sufficiently that is protective of public health with an adequate margin of safety. Future background concentrations are expected to be lower, continuing a long-term trend in improvements in ambient air quality, due to ongoing efforts at the state and local levels to improve air quality. These include DEC's implementation plans for regional haze, the New York City Climate Mobilization Act (Local Law 97) and the New York State Climate Leadership and Community Protection Act, which seek to reduce emissions from fossil fuels through use of renewable energy sources and increased energy efficiency. In addition, in 2021, the New York City Council passed a bill (Local Law 154) that will effectively ban the installation of most new natural gas and other fossil fuel-fired systems in buildings in New York City prior to the Build Year for the Proposed Actions.

The prediction of future $PM_{2.5}$ concentrations from construction of the projected development sites under the Proposed Actions are based on very conservative assumptions of future traffic conditions and vehicle emissions (in particular, the analysis does not assume any significant change in current utilization of gasoline and diesel-powered vehicles versus electric vehicles). When accounting for the above-mentioned factors, the annual incremental $PM_{2.5}$ concentrations from the Proposed Actions mobile sources and the ambient background $PM_{2.5}$ concentrations are anticipated to be reduced in the 2036 analysis year as compared to current levels.

The Proposed Actions would not contribute to or exacerbate a violation of the $PM_{2.5}$ NAAQS even with the very conservative assumptions relating to traffic and future build year background $PM_{2.5}$ concentration levels used in this analysis. Therefore, irrespective of the incremental increases in $PM_{2.5}$ concentrations, the ~~exceedances of the $PM_{2.5}$ *de minimis* criterion~~concentrations on an annual basis would not constitute a significant adverse impact on public health.