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Chapter 24: Public Health

A. INTRODUCTION

1. Issues

This chapter examines the potential for the Proposed Action to affect public health. In accordance with the *CEQR Technical Manual*, this analysis examines potential impacts on the health of the community or on groups of individuals within the study area due to the Proposed Action. The evaluation of the potential affect of the Proposed Action on public health includes consideration of the findings of the following chapters:

- Chapter 14, Hazardous Materials;
- Chapter 17, Solid Waste and Sanitation Services;
- Chapter 21, Air Quality;
- Chapter 22, Noise and Vibration; and
- Chapter 23, Construction Impacts.

2. Principal Conclusions

No significant adverse impact to Public Health is expected as a result of the Proposed Action. Detailed analyses of hazardous materials, solid waste, air quality, noise, and construction impacts can be found in Chapters 14, 17, 21, 22, and 23.

a) Construction Period

During the worst case construction period, 2006, the Proposed Action would not cause exceedances of the health based National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), nitrogen dioxide (NO₂) and particulate matter smaller than 10 microns (PM₁₀) and 2.5 microns (PM_{2.5}) if Ultra-Low Sulfur Diesel (ULSD) fuel is used for all construction equipment. The results also show that, absent the mitigation measures, construction-phase impacts on PM_{2.5} levels would exceed the Significant Threshold Values (STVs) established by the New York City Department of Environmental Protection (DEP) and would therefore be significant.

With implementation of the emission reduction measures described in Chapter 23, "Construction Impacts," the construction-phase impacts would not exceed the PM_{2.5} STVs established by the New York City DEP and, therefore, the Proposed Action would not have a significant adverse impact on public health.

The Proposed Action would result in significant adverse construction period noise effects. However, it is anticipated that most of these noise impacts could be mitigated and that there would be no significant adverse impacts on public health. Accordingly, no significant adverse impacts regarding public health are expected as a result of construction activities.

b) Operational Period

The Proposed Action is not expected to result in any significant adverse effects on hazardous materials or solid waste and sanitation services. The Proposed Action would result in significant adverse impacts on noise. However, all such impacts could be mitigated. With such mitigation, the Proposed Action is not expected to result in any significant adverse impacts to public health during the operational period in either 2010 or 2025.

B. METHODOLOGY

1. Overview

Public health assessments of environmental issues typically evaluate the likelihood of exposure, as well as the potential impacts of those exposures on public health. Analytic methods for evaluating exposures are described in other chapters of the FGEIS, specifically, Chapter 14, “Hazardous Materials;” Chapter 17, “Solid Waste and Sanitation Services;” Chapter 21, “Air Quality;” and Chapter 22, “Noise and Vibration.” Impacts during the construction period are addressed in Chapter 23, “Construction Impacts.”

The *CEQR Technical Manual* recommends that a public health assessment be performed if a proposed action would result in any of the following actions:

- Increased emissions from mobile and stationary sources, resulting in significant adverse air quality impacts
- Increased exposure to heavy metals (e.g., lead and other contaminants in soil or dust), resulting in significant adverse impacts
- The presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking water.
- Solid waste management practices that could attract vermin and result in an increase in pest populations; e.g., rats, mice, cockroaches, and mosquitoes;
- Potentially significant adverse impacts to sensitive receptors (e.g., hospitals, schools, residences, and parks) from noise and odors
- Vapor infiltration from contaminants within a building or underlying soil (e.g., contamination originating from gasoline stations or dry cleaners) that could result in significant adverse hazardous materials or air quality impacts
- Actions from which the potential impact(s) results in an exceedance of accepted federal, State, or local standards; or
- Other actions, which might not exceed the preceding thresholds, but might nonetheless, result in significant public health concerns.

Since the Proposed Action has the potential to prompt several of these concerns, a public health assessment has been conducted.

The results of these analyses were compared with criteria and regulations established to protect public health to determine if there is a potential for significant adverse impact and to recommend appropriate mitigation measures.

2. Criteria and Regulations

Pertinent criteria and regulations relating to public health are promulgated at federal, State, and City levels.

a) Air Quality

Federal regulations established to protect public health from pollutants generated by motor vehicles and stationary sources include National Ambient Air Quality Standards (NAAQS) for criteria pollutants (40 CFR 50); Standards of Performance for New Stationary Sources (40 CFR 60); and National Emissions Standards for Hazardous Air Pollutants (40 CFR 61).

New York State regulations, found at 6 NYCRR Chapter III-Air Resources, Subchapter A-Prevention and Control of Air Contamination and Air Pollution, established to protect public health from pollutants generated by mobile and stationary sources, include for example: Indirect Sources of Air Contamination (Part 203); General Process Emission Sources (Part 212); Incinerators (Part 219); New Incinerators for New York City (Part 222); New Source Review in Nonattainment Areas (Part 231); Dry Cleaning (Part 232); Transportation Conformity (Part 240); Air Quality Standards (Part 257); and NYCDEP interim guidance (Significant Threshold Values) for PM_{2.5}.

b) Contaminants in Soil and Dust

The New York State Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM 4046, January 1994 with updates, issued by NYSDEC) applies to inactive hazardous waste sites. It establishes soil cleanup objectives designed to eliminate all significant threats to human health or the environment where pre-disposal site conditions are not feasible. 6 NYCRR Part 371 requires that a generator determine if contaminated soil to be transported from a site for disposal is subject to regulation as a hazardous waste. A solid waste (e.g., contaminated soil) is considered a hazardous waste if it exhibits one or more of the characteristics identified in 6 NYCRR Part 371.3, or if it is a listed acutely hazardous or toxic waste.

Regulations governing fugitive dust include the New York City Air Pollution Control Code, Section 1402.2-9.11, *Preventing Particulate Matter from Becoming Airborne; Spraying of Asbestos Prohibited; Spraying of Insulating Material and Demolition Regulated*.

c) Solid Waste Management Practices and the Control of Vermin

Solid waste management facilities in New York State are governed by 6 NYCRR Part 360. Section 16-130 of the Administrative Code of the City of New York governs solid waste transfer stations within New York City.

d) Noise, Vibration, and Odors

Regulations applicable to New York City environmental noise assessments are found in the City Environmental Quality Review (CEQR) Noise Exposure Guidelines. The New York City Noise Control Code applies to noise emitted from construction equipment and New York City Zoning Resolution (ZR) Performance Standards. Also considered for the No. 7 Subway Extension were FTA Transit Noise and Vibration Impact Assessment.

6 NYCRR Part 211.2 prohibits “emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which... unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited, to any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.”

e) Vapor Infiltration into Buildings from Contaminants

Regulations regarding hazardous materials provide the means to identify and fund the cleanup of hazardous sites and hazardous releases. Among the federal regulations are the Resource Conservation and Recovery Act (RCRA) (40 CFR 261) and Hazardous and Solid Waste Amendments; and the Comprehensive Environmental Response Compensation and Liability Act and Superfund Amendments and Reauthorization (40 CFR 300). Among the New York State regulations is the Inactive Hazardous Waste Sites Law (6 NYCRR 375). New York City Laws include the Hazardous Substances Emergency Response Law (Spill Law, Local Law 42/1987) and the Community Right-to-Know Law (Local Law 26/1988).

C. EXISTING CONDITIONS

1. Air Quality

The federal Clean Air Act (CAA) defines non-attainment areas as geographic regions that have been designated as not meeting one or more of the NAAQS. Air quality maintenance areas are regions that have recently attained compliance with the NAAQS. All of the New York City metropolitan area is currently designated as being a non-attainment area for ozone, and Manhattan is designated as a non-attainment area for PM₁₀. New York City was recently re-designated from a non-attainment area to a maintenance area for CO, after demonstrating compliance with the CO standards. The study area has not been designated for PM_{2.5}, although current monitored values exceed the PM_{2.5} annual standard. The study area is in attainment for the other pollutants. Existing air quality conditions are described in more detail in Chapter 21, “Air Quality.”

2. Hazardous Materials

According to historical maps and other available historical documentation (see Chapter 9, “Historic Resources” and Chapter 10, “Archaeological Resources”), much of the Project Area was originally comprised of river banks and adjacent wetland areas of the Hudson River prior to the industrial development in the early 19th century. During this period, significant railroad development occurred throughout much of the Project Area to facilitate the expanding shipping, manufacturing, and transportation-related development, including the area between what is now Eleventh and Twelfth Avenues.

Early development in and around the railroad yards, close to the port areas, was a mix of small industries, metal works, lumber yards, saw mills, hay and freight depots, stock yards, meat processing/packing facilities, and gas tanks interspersed among row houses. The areas east of Tenth Avenue were more residential than the locations closer to the port areas along the Hudson River.

Currently, the Project Area is a mix of residential, commercial, manufacturing, and transportation-related uses, dominated by large public buildings and commercial parking lots.

The area of Corona Yard has historically been utilized for rail operations and other industrial and heavy commercial purposes.

Chapter 14 “Hazardous Materials” presents the results of the environmental site assessments and other hazardous material studies. For each element of the Proposed Action the potential contaminants of concern were identified. Chapter 14, “Hazardous Materials” defines mitigation measures, which will minimize or eliminate potential adverse impacts associated with construction of the Proposed Action project elements. The project elements evaluated for hazardous materials include: Projected and Potential Development Sites; Midblock Park and Boulevard System and Midblock Parking Garage; No. 7 Subway Extension including temporary construction facilities, stations, ancillary support facilities, and additional storage tracks at the MTA Corona Yard; Convention Center Expansion including the Convention Center Hotel, existing Quill Bus Depot, and relocated Quill Bus Depot; Multi-Use Facility; and the potential site to accommodate the relocated DSNY Facility and NYPD Tow Pound.

Typical contaminants of concern by project element are shown in Table 24-1.

TABLE 24-1
TYPICAL CONTAMINANTS OF CONCERN BY PROJECT ELEMENT

Project Element	Contaminant
Potential and Projected Development Sites	Petroleum and Non-petroleum Based
Midblock Park and Boulevard System & Midblock Parking Garage	VOC, SVOC, ACM, LBP, PCB, Heavy Metals, Creosote, Coal Tars, Cyanide
No. 7 Subway Extension	VOC, SVOC, ACM, LBP, PCB, Heavy Metals
Convention Center Expansion	VOC, SVOC, ACM, LBP, PCB
Existing Quill Bus Depot	VOC, SVOC, ACM, LBP, PCB, Heavy Metals
Relocated Quill Bus Depot	VOC, SVOC, ACM, LBP, PCB, Heavy Metals
Multi-Use Facility	VOC, SVOC, ACM, LBP, PCB, Heavy Metals
Relocated DSNY Facility and NYPD Tow Pound	VOC, SVOC, ACM, LBP, PCB, Heavy Metals

3. Solid Waste Management Practices

DSNY manages the disposal of municipal solid waste and recyclable materials collected by DSNY from residences, public areas, nonprofit institutions, and government buildings. It also collects wastes from street litter baskets, street sweeping operations, and lot cleaning activities. The City does not operate any incinerators or waste-to-energy facilities; individual apartment house incinerators are prohibited under Local Law 39 of 1989. Waste incineration is permitted at hospitals within the City. Commercial solid waste from offices, restaurants, retail stores, and other businesses is collected and disposed of by private carters.

Under the City's current interim Solid Waste Management Plan (SWMP), most of the City's municipal solid waste is collected and delivered to transfer stations, where it is loaded onto larger "hopper" trucks and transported out of the City. Municipal solid waste from the Hudson Yards area is collected and trucked directly to out-of-State landfills and waste-to-energy facilities. Private carters consolidate solid waste at waste transfer facilities both inside and outside the City, from where it is then transported to out-of-City disposal facilities.

The Project Area is principally located within Community Board No. 4 or DSNY service area M-4.

Based on information provided by DSNY, approximately 560 tons of municipal solid waste, 100 tons of paper, and 25 tons of metal and plastic are collected in M-4 each week. The estimated current volume of municipal solid waste produced by the residential areas within the Rezoning Area, based on solid waste generation rates provided in the *CEQR Technical Manual*, is approximately 13 tons per week (tpw) (see Chapter 17, "Solid Waste and Sanitation Services"). This volume represents approximately two percent of the overall municipal waste generated in the DSNY service area M-4.

The Convention Center uses a private carting service to collect and dispose of its recyclables and solid waste. As described in Chapter 17, "Solid Waste and Sanitation Services," the average weekly volume of solid waste at the Convention Center, is approximately 18 tpw, resulting in two truck trips per week. The peak event at the Convention Center occurs during the Auto Show, during which a daily maximum of approximately 16 tons of solid waste is generated. This tonnage of solid waste would require two truck trips per day.

Solid waste generated within MTA NYCT subway stations is disposed of by private carters. Solid waste and newspapers collected from waste bins located on the station platforms along the No. 7 Subway Line are hauled away by NYCT "work trains" to Corona Yard, transferred to private carters' collection trucks, and hauled out of the City to disposal facilities.

4. Noise and Vibration

a) Existing Noise Environment

As noted in Chapter 22, “Noise and Vibration,” the general noise level of the entire Project Area is considered to be “Marginally Unacceptable” per the NYC CEQR Noise Exposure Guidelines, while the riverfront area along Route 9A has “Clearly Unacceptable” noise exposure levels. The noise environment is typical of major metropolis districts, with L_{eq} (1 hour) noise levels ranging from 65 to 80 dBA, and with generally lower levels occurring at night and on weekends.

Traffic is the dominant source of noise under existing conditions, particularly the heavy truck and bus traffic associated with the Lincoln Tunnel, including along Route 9A between West 34th and West 42nd Streets. Other notable noise contributors include helicopters from Liberty Heli Tours southwest of the Convention Center, subway train noise from the subway vents/emergency exits found along Eighth Avenue, sirens from police and other emergency vehicles, and the ubiquitous vehicle horns and squealing brakes characteristic of New York City streets.

An ambient noise measurement program was conducted to document the existing noise levels in the Project Area.

b) Measured Noise Levels

Chapter 22, “Noise and Vibration,” summarizes the noise levels monitored in L_{eq} . Generally, the noise levels in the study area were in the low to high 70s dBA during the weekday periods. The chapter also summarizes the noise levels monitored in L_{10} . The L_{10} descriptor is commonly used for intermittent intrusive noise such as traffic. The NYC CEQR Noise Exposure uses the L_{10} descriptor when traffic noise dominates, as it does in the study area. Noise levels in L_{10} varied from the high 60s dBA to the low 80s dBA. These noise levels are typical of a busy urban center such as Manhattan.

D. 2010 FUTURE WITHOUT THE PROPOSED ACTION

1. Air Quality

a) Mobile Sources

Based on the Tier II analyses results discussed in Chapter 21, “Air Quality” there are no exceedances of any health based standards.

b) Stationary Sources

In the 2010 Future Without the Proposed Action, existing zoning provisions would remain. HVAC exhausts would be anticipated to be comparable to existing conditions, and fewer commercial and residential uses would be developed as compared to the Future With the Proposed Action. Since air quality regulations mandated by the CAA are anticipated to maintain or improve air quality, it can be expected that air quality conditions in the year 2010 would be no worse than under existing conditions.

c) Air Toxics

In the 2010 Future Without the Proposed Action, the existing zoning provisions would remain. Industrial uses would be anticipated to be comparable to the existing conditions, and fewer commercial and residential uses would be developed as compared to the Future With the Proposed Action. Since air quality regulations mandated by the CAA are anticipated to maintain or improve air quality, it can be expected that air quality conditions in the year 2010 would be no worse than under existing conditions.

2. Hazardous Materials

Without the Proposed Action, the Project Area will generally continue in its current condition; however, moderate levels of residential and commercial redevelopment are expected to occur, as described in Chapter 3, “Analytical Framework.”

Some of the Projected and Potential Development Sites would be redeveloped, resulting in ground disturbance comparable to ground disturbance with the Proposed Action.

If the Proposed Action were not implemented, potentially hazardous materials would remain in place. Hazardous materials would be encountered as these projects, in the No Build condition, would progress separately from the Proposed Action. For these sites, hazardous materials would be managed by the developers in accordance with Federal, State or local regulations.

3. Solid Waste Management Practices

On October 15, 2004, DSNY transmitted the Draft New SWMP for the next twenty year period for City Council for review and approval. As currently drafted, the October 2004 Draft New SWMP would mandate the use of four marine transfer stations (MTS) within the five boroughs at which solid waste would be consolidated, containerized, and barged or railed out of the City. The MTS facilities would include a combination of upgraded existing MTS facilities and new facilities. The barges currently used at MTS facilities would be replaced or retrofitted with new sealed containers or “intermodal containers” capable of being transported on barge or rail. According to the proposed SWMP, existing MTS facilities would be retrofitted by 2008. In the interim, all municipal solid waste would be trucked out of the City.

In DSNY M-4 service area, which includes Hudson Yards, municipal solid waste generated in 2010 would continue to be trucked out of the City for ultimate disposal. The existing 59th Street MTS, which currently receives paper for export and recycling, could be made available to receive commercial solid waste and load containerized waste onto barges.

The background growth expected to occur in the Future Without the Proposed Action would add new demand for private and municipal solid waste services.

Based on this projected level of development, it is estimated that approximately 40 tpw of municipal solid waste and 394 tpw of commercial solid waste would be generated in Hudson Yards in the 2010 Future Without the Proposed Action (see Table 17-2 of Chapter 17, “Solid Waste and Sanitation Services”). This would result in four M-4 truck trips per week by DSNY collection trucks and 31 private hauler trips.

In the Future Without the Proposed Action, the capacity of the Convention Center would remain unchanged at 18 tpw on average, requiring two truck trips per week. The peak event (Auto Show) would continue to generate a maximum of approximately 16 tons per day of solid waste, resulting in two private carter truck trips per day. The Convention Center would continue to use private carters to haul the solid waste to out-of-City landfills. There would be no increased demand for private carter services.

4. Noise and Vibration

The noise exposure classifications in 2010 Future Without the Proposed Action are in the Clearly Unacceptable category at 5 receptor sites. The noise exposure classifications of the remaining 13 receptors are in the Marginally Unacceptable category. In all cases, the noise exposure classification would be either Marginally or Clearly Unacceptable.

The vibration and ground-borne noise environment in the 2010 Future Without the Proposed Action is expected to remain the same as that of the Existing Condition. The most significant change

between the 2010 Future Without the Proposed Action and existing conditions would be traffic growth. Vibration levels are expected to remain the same.

E. 2010 FUTURE WITH THE PROPOSED ACTION

1. Construction

As discussed in Chapter 23, “Construction Impacts,” the results of the updated cumulative air quality analysis for on-site activities (i.e., the effects of deconstruction, excavation activities, spoil and rock removal, and construction equipment) and off-site activities (e.g., the effects of traffic, including project-related truck trips and lane closures) indicated that the effect of these activities during the peak (reasonable worst case) construction period would not cause exceedances of the health based National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), nitrogen dioxide (NO₂) and particulate matter smaller than 10 microns (PM₁₀) and 2.5 microns (PM_{2.5}) if Ultra-Low Sulfur Diesel (ULSD) fuel is used for all construction equipment. The results also showed that, absent the mitigation measures described below, construction-phase impacts on PM_{2.5} levels would exceed the Significant Threshold Values (STVs) established by the New York City Department of Environmental Protection (DEP).

Because of this potential for significant adverse impacts of emissions from diesel-powered construction equipment on PM_{2.5} levels, the Project Sponsors are committed to the implementation of mitigation measures to reduce emissions from diesel engines and dust-generating activities.

The emission reduction measures selected include requirements for contractors to use construction equipment that will comply with EPA’s Tier 2 emission standards (post model year 2001/2003), retrofitting the equipment with diesel particulate filters (or, where that is not feasible, diesel oxidation catalysts or equivalent technology), electrification of compressors, pumps, and welders, and implementation of a dust control program. A description of these measures, and effects of these emission control measures on ambient air quality levels is presented in the Emission Reduction Measures section of Chapter 23, “Construction Impacts.”

With implementation of these mitigation measures, the construction-phase impacts would not exceed the PM_{2.5} STVs established by the New York City DEP and, therefore, would not have a significant adverse impact on public health.

2. Operational Issues

a) Air Quality

Mobile Sources

Based on the results of the Tier II analyses discussed in Chapter 21, “Air Quality” it is not anticipated that the Proposed Action would result in any exceedances of any health based National Ambient Air Quality Standards. Therefore, no significant adverse impact to public health would be anticipated due to changes in air quality with the Proposed Action.

Stationary Sources (HVAC and Air Toxics)

The analysis of the Multi-Use Facility, expanded Convention Center, and Quill Bus Depot demonstrated that the Proposed Action would not result in any significant air quality impacts, other than SO₂ emissions from the Quill Bus Depot, which will be avoided through implementation of mitigation measures discussed in Chapter 21 “Air Quality”.

The analysis of impacts in the year 2010 from combustion sources at Projected and Potential Development Sites and the analysis of impacts for existing emissions from industrial sources on the proposed development sites indicate that the predicted concentrations of air contaminants would be

less than the applicable NYSDEC guideline concentrations and applicable state and federal air quality standards. Therefore, no significant adverse impacts to public health are expected as a result of the Proposed Action.

b) Hazardous Materials

Hazardous materials in soil, soil gas, groundwater, consolidated rock and building materials present within the Project Area would be managed, isolated, and/or removed during the construction phase in this scenario (see Chapter 14, “Hazardous Materials”).

If encountered, contaminated groundwater would be treated on-site prior to discharge in accordance with applicable regulatory requirements. Contaminated soil would be removed or isolated through the use of impermeable materials (e.g., concrete, asphalt, geotextiles, etc.). Hazardous building materials would be abated or remediated prior to demolition activities, thus preventing the release of hazardous materials during demolition activities. Significant adverse impacts related to hazardous materials are not anticipated, and impacts to public health are not expected.

For all Projected and Potential Development Sites identified within the Rezoning Area, a preliminary screening assessment was conducted pursuant to Title 15, Rules of the City of New York, Chapter 24, Section 4. The conclusion of the preliminary screening assessment is that (E) Designations are warranted for lots comprising certain development sites that were identified to contain the potential for hazardous materials contamination. For these sites, (E) Designation would be mapped to ensure that no significant adverse impact would result from the proposed rezoning. Appropriate measures would be undertaken to avoid potential hazardous materials impacts prior to construction activity. The preliminary screening assessment conducted for the Proposed Action included a review of historical and current land uses of the tax lot(s) included within the projected and potential development sites; adjacent (within 400 feet) lots were assessed, as well. Regulatory agency databases were also reviewed for the listing of the aforementioned tax lots listings within the databases.

Hazardous materials that would be encountered as part of the Proposed Action would be managed, isolated, or removed during the construction phase (see Chapter 14, “Hazardous Materials”). During construction, management measures, including a CEPP, would be implemented to avoid any potential significant hazardous materials impacts. Since hazardous materials would be managed, isolated, or removed during construction, no adverse impacts associated with hazardous materials would occur during the operational phase of the Proposed Action, and impacts to public health are not expected.

c) Solid Waste Management Practices

It is anticipated that the No. 7 Subway Extension, Convention Center Expansion, and Multi-Use Facility would be completed and operational by 2010. In addition, a small portion of the commercial and residential development allowed under the proposed rezoning of Hudson Yards would be constructed. As a result, the Proposed Action would generate increased demand for solid waste and sanitation services.

Based on the *CEQR Technical Manual* solid waste generation rates, it is estimated that the Proposed Action would generate an estimated peak demand of 65 tpw of municipal solid waste and 538 tpw of commercial solid waste, as indicated in Chapter 17, “Solid Waste and Sanitation Services.” This volume of municipal solid waste generated by the Proposed Action would represent a 12 percent increase over the current volume of municipal solid waste collected in M-4 of 560 tpw. This volume would also represent a small increase over the City's daily solid waste generation of 12,000 tons per day of municipal waste collected by DSNY and 10,000 tons per day of commercial waste collected by private carters. DSNY has indicated that this additional level of service would not result in significant adverse impacts to its operations.

As currently drafted, the October 2004 Draft SWMP would require all municipal solid waste generated in Hudson Yards would be trucked out of the City for ultimate disposal.

The proposed No. 7 Subway Terminal Station would have public waste and newspaper collection bins within paid areas. Solid waste collected from the station would be consolidated in dumpsters on the platform, loaded onto a work train, taken to Corona Yard, consolidated by private carters, and trucked out of the City to disposal facilities.

A small portion of the residential and office developments allowed under the Zoning Amendments would be in place by 2010. The projected developments within the Project Area would generate approximately 65 tpw of municipal waste and 450 tpw of commercial waste. DSNY has indicated that this additional demand would not create a significant impact on their operations.

It is anticipated that the Convention Center expansion would be completed and operational by 2010. Using *CEQR Technical Manual* employee rates and rates based on similar events at the Meadowlands complex in New Jersey, this expansion would generate approximately 58 tpw (see Chapter 17, “Solid Waste and Sanitation Services”). A peak event day, with full occupancy of the new hotel and exposition space, would create an estimated 23 tons of solid waste daily. Private carters would cart all solid waste and recyclables generated.

In 2010, the Multi-Use Facility would be completed and open for sporting events, concerts, exhibitions, and other convention uses. The event that would generate the greatest volume of solid waste at the Multi-Use Facility would be a sold-out New York Jets football game, with 75,000 patrons. It is anticipated that a private carter would collect the solid waste from the Multi-Use Facility for disposal at out-of-City landfills.

DSNY has indicated that this projected amount of solid waste from the expanded Convention Center and Multi-Use Facility would not overburden the available private carter services.

Based on the above, no impact related to Solid Waste and Sanitation Services to public health is anticipated.

d) Noise and Vibration

In 2010, noise levels in the Study Area would increase by more than 3 dBA, the increment that is perceptible to humans and therefore considered significant, as a consequence of the Proposed Action at 6 of the 19 analysis locations. The implementation of a City-sponsored window replacement program for existing residences and community facilities, and furnishing alternate means of ventilation, would mitigate all potential significant adverse noise impacts of the Proposed Action. The Proposed Action would also introduce new noise-sensitive land uses in an area with high levels of ambient noise. To preclude the potential for significant adverse noise impacts the Proposed Action would include (E) Designations for new developments requiring window wall attenuation. Because all noise impacts would be avoided or mitigated, there would be no impacts on public health.

Since the No. 7 Subway Extension tracks would be deep underground, from approximately 65 feet at Ninth Avenue to 130 feet at West 34th Street, no vibration and ground-borne noise levels exceeding the FTA guideline criterion levels are expected at sensitive receptors at street level or above. No significant impacts on public health are anticipated from vibration.

F. 2025 FUTURE WITHOUT THE PROPOSED ACTION

1. Air Quality

a) Mobile Sources

Based on the Tier II analyses results discussed in Chapter 21, “Air Quality” there are no exceedances of any health based standards.

b) Stationary Sources

In the 2025 Future Without the Proposed Action, the existing zoning provisions would remain. Industrial uses are anticipated to be comparable to those under existing conditions. Fewer commercial and residential uses would be developed as compared to the Future With the Proposed Action. Since air quality regulations mandated by the CAA are anticipated to maintain or improve air quality, it can be expected that air quality conditions in the year 2025 would be no worse than those under existing conditions.

c) Air Toxics

In the 2025 Future Without the Proposed Action, the existing zoning provisions would remain. Industrial uses are anticipated to be comparable to those under Existing Conditions. Fewer commercial and residential uses would be developed as compared to the Future With the Proposed Action. As air quality regulations mandated by the CAA are anticipated to maintain or improve air quality, it can be expected that air quality conditions in the year 2025 would be no worse than those under existing conditions.

2. Hazardous Materials

With the exception of the No Build development sites, there would few changes to the existing conditions. If the Proposed Action were not implemented, potentially hazardous materials would likely remain in place.

3. Solid Waste Management Practices

Based on the *CEQR Technical Manual* methodology, the development within the Hudson Yards area anticipated to occur by 2025 in the Future Without the Proposed Action would generate approximately 53 tpw of municipal solid waste and 460 tpw of commercial solid waste. The DSNY has indicated that this would not overburden the City municipal solid waste system or private hauler operations. These projected volumes would result in approximately five DSNY truck trips per week in the M-4 service area, and 34 private carter truck trips per week. Based on the October 2004 Draft SWMP, it is anticipated that municipal solid waste generated within the Rezoning Area would be trucked out of the City for ultimate disposal.

The amount of recyclables and solid waste generated by the Convention Center in the 2025 Future Without the Proposed Action would remain unchanged from current levels.

Based on the above, no impact to public health is anticipated.

4. Noise and Vibration

The noise exposure classifications in 2025 Future Without the Proposed Action are in the Clearly Unacceptable category at 5 receptor sites. The noise exposure classifications of the remaining 14 receptors are in the Marginally Unacceptable category. In all cases, the noise exposure classification would be either Marginally or Clearly Unacceptable.

The vibration and ground-borne noise environment in the 2025 Future Without the Proposed Action is expected to be similar to that of the Existing Condition.

G. 2025 FUTURE WITH THE PROPOSED ACTION

1. Air Quality

a) Mobile Sources

Based on the Tier II analyses results discussed in Chapter 21, “Air Quality” there are no exceedances of any health based standards under the Proposed Action. Therefore, there is no significant adverse impact to public health, with or without implementation of traffic mitigation measures discussed in Chapter 19.

b) Stationary Sources (HVAC and Air Toxics)

The analysis of the Multi-Use Facility, expanded Convention Center, and the relocated Quill Bus Depot demonstrated that the Proposed Action would not result in any significant air quality impacts, other than the spray booth emissions from the Quill Bus Depot, of which will be avoided or mitigated as discussed in Chapter 21 “Air Quality”.

The analysis of impacts in the year 2025 from combustion sources associated with the HVAC system exhausts of proposed development sites and the analysis of existing industrial source impacts on the proposed development sites have indicated that the predicted concentrations of associated air contaminants will be less than the applicable NYSDEC guideline concentrations and applicable state and federal air quality standards for ambient air. Therefore, no significant adverse impacts to public health are expected as a result of the Proposed Action.

2. Hazardous Materials

The project elements that are proposed to be built and completed between 2010 and 2025 analysis years include the remaining Projected or Potential Development Sites and Midblock Park and Boulevard System sites.

For all Projected and Potential Development Sites identified within the Rezoning Area, a preliminary screening assessment was conducted pursuant to Title 15, Rules of the City of New York, Chapter 24, Section 4. The conclusion of the preliminary screening assessment is that (E) Designations are warranted for lots comprising certain development sites that were identified to contain the potential for hazardous materials contamination. For these sites, (E) Designation would be mapped to ensure that no significant adverse impact would result from the proposed rezoning because appropriate measures would be undertaken to mitigate potential hazardous materials impacts prior to construction activity. The preliminary screening assessment conducted for the Proposed Action included a review of historical and current land uses of the tax lot(s) included within the projected and potential development sites; adjacent (within 400 feet) lots were assessed, as well. Regulatory agency databases were also reviewed for the listing of the aforementioned tax lots listings within the databases.

Hazardous materials (contaminated soil, soil gas, groundwater, and building materials) that would be encountered by implementation of the Proposed Action would be managed, isolated, and/or removed during the construction phase (see Chapter 23, “Construction Impacts”). Contaminated groundwater would be treated on-site prior to discharge in accordance with NYSDEC- and NYCDEP-issued permits. Hazardous building materials would be abated or remediated prior to demolition activities. Significant adverse impacts related to hazardous materials are not anticipated, and impacts to public health are not expected.

All elements of the Proposed Action would be operational. Since hazardous materials associated with each of the project elements would be managed, isolated, or removed during the construction phase, no significant impacts would occur during the operational phase of the Proposed Action, and impacts to public health are not expected.

3. Solid Waste Management Practices

The balance of the projected development that would occur within Hudson Yards between 2010 and 2025 would increase the demand for the City's solid waste management and sanitation services. Development allowed under the proposed Zoning Amendments would create approximately 28 million square feet of new commercial space, 12.6 million square feet of new residential space, and 1.5 million square feet of new hotel space. This development, including the extended No. 7 Subway Line, Multi-Use Facility, and Convention Center Expansion, would create approximately 266 tpw of municipal waste and 1,137 tpw of commercial waste (see Chapter 17, "Solid Waste and Sanitation Services"). These projected volumes of solid waste are based on generation rates established in the *CEQR Technical Manual*; however, they do not consider solid waste reduction measures mandated by the City. These volumes of solid waste would generate approximately 21 new DSNY collection truck trips and 85 new private carter truck trips each week to accommodate the additional waste generated by the Proposed Action.

DSNY has indicated that the projected increase in residential waste could be accommodated by facilities identified in the October 2004 Draft SWMP.

The solid waste generated by the No. 7 Subway Extension would increase in 2025 due to the completion of the Intermediate Station. The completion of this station would increase the total amount of solid waste generated by the No.7 Subway Extension to approximately 10 tpw (see Chapter 17, "Solid Waste and Sanitation Services"). This solid waste would be transported to Corona Yard and then trucked via private carters out of the City to disposal facilities. Impacts to public health associated with solid waste generation and management are not expected.

4. Noise and Vibration

In 2025, noise levels in the Study Area would increase by more than 3 dBA, the increment that is perceptible to humans and therefore considered significant, as a consequence of the Proposed Action at 8 of the 19 analysis locations. The implementation of a City-sponsored window replacement program for existing residences and community facilities, and furnishing alternate means of ventilation, would mitigate all potential significant adverse noise impacts of the Proposed Action. The Proposed Action would also introduce new noise-sensitive land uses in an area with high levels of ambient noise. To preclude the potential for significant adverse noise impacts the Proposed Action would include (E) Designations for new developments requiring window wall attenuation. Because all noise impacts would be avoided or mitigated, there would be no impacts on public health.

Since the No. 7 Subway Extension tracks would be deep underground, from approximately 65 feet at Ninth Avenue to 130 feet at West 34th Street, no vibration and ground-borne noise levels exceeding the FTA guideline criterion levels are expected at sensitive receptors at street level or above. No significant impacts on public health are anticipated from vibration. ❖