

**DRAFT SCOPE OF WORK FOR AN  
ENVIRONMENTAL IMPACT STATEMENT**

**TAXI MEDALLION INCREASE**

**Lead Agency:**

**New York City Taxi and Limousine Commission**

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## CHAPTER 1 - INTRODUCTION

As allowed under New York State Legislation (New York State Senate Bill S5825-2011 and New York State Assembly Bill A8496-2011), the New York City Taxi & Limousine Commission (TLC) proposes to issue by public sale up to 2,000 fully-transferable taxicab licenses (medallions) in addition to those already in existence, provided that all of these new licenses will be required to be used with taxicab vehicles that are accessible to individuals who use wheelchairs (the Proposed Action).

Sale of the additional medallions would be at the discretion of the Mayor of New York through TLC. This public discretionary action is subject to review under the State Environmental Quality Review Act (SEQRA) and the Rules of Procedure for City Environmental Quality Review (CEQR). TLC, as lead agency under CEQR, has determined that the Proposed Action will require the preparation of an Environmental Impact Statement (EIS). In accordance with CEQR, TLC is initiating a process to define the scope of the Draft EIS (DEIS). As an initial step in that process, it has prepared this Draft Scope of Work for the DEIS and has made it available for review and comment to agencies and the public. A Final Scoping Document will be prepared by TLC after consideration of public comments.

A public meeting has been scheduled for April 19, 2012 to provide a forum for receipt of public comments on this Draft Scope of Work for the DEIS. The public meeting will be held on April 19, 2012 between 6:30 p.m. and 8:30 p.m. at TLC offices, located at 33 Beaver Street in Lower Manhattan in the Commission Room (19<sup>th</sup> floor). Written comments on the Draft Scope of Work will be accepted by TLC until the close of business on April 30, 2012. Written comments should be addressed to:

New York City Taxi & Limousine Commission  
Justine Johnson  
33 Beaver St., 22nd Floor  
New York, NY 10004

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## CHAPTER 2 - PROJECT DESCRIPTION AND PURPOSE AND NEED

### 2.1 Description of the Proposed Action

**Overview.** New York State Legislation (New York State Senate Bill S6118A-2011 and companion New York State Assembly Bill A8691A-2011) authorizes the City of New York to:

- Issue up to two thousand (2,000) new taxicab licenses to vehicles that are accessible to individuals with disabilities (defined in the legislation as persons in wheelchairs);
- Issue eighteen thousand (18,000) HAIL vehicle licenses, six thousand (6,000) of which must be accessible to persons with disabilities;
- Issue up to four hundred fifty (450) base permits to for-hire base stations wishing to affiliate HAIL-licensed vehicles;
- Amend the tax law, the administrative code of the city of New York, and the traffic law in relation to taxicabs and HAIL licenses in New York City; and
- Repeal certain sections of Chapter 602 of the Laws of 2011 relating to livery permits in the City of New York.

**Issuance of 2,000 New Taxicab Licenses.** The sale of the 2,000 licenses to vehicles that are accessible to individuals with disabilities would increase the number of yellow taxi licenses from the existing number of 13,327 licenses to a total of 15,327 licenses, an increase of approximately 15.1%. The legislation prescribes that the City of New York may, acting by the mayor alone, administratively authorize the TLC or its successor agency to issue up to the 2,000 additional taxicab licenses provided that such licenses be restricted to vehicles designated for the purpose of transporting persons in wheelchairs or that contain a physical device or alteration designed to permit access to and enable the transportation of persons in wheelchairs in accordance with the Americans with Disability Act (ADA), provided further that:

- Such additional licenses be issued by public sale;
- The additional licenses be fully transferable;
- No more than four hundred of the taxicab licenses, authorized to be issued pursuant to the legislation, be issued until a Disabled Accessibility Plan (DAP) be approved by the New York State Department of Transportation (NYSDOT). The TLC is not authorized to issue more than four hundred (400) taxicab licenses pursuant to the Legislation until the DAP is approved by NYSDOT.

Authorization for the public sale of the additional taxicab medallions is also conditioned upon the TLC making available for issuance the licenses and permits for the 18,000 HAIL vehicles, of which 6,000 must be accessible to persons with disabilities.

TLC anticipates that the public sale of the initial 400 taxicab licenses would occur no earlier than July 15, 2012, and that the remaining 1,600 additional taxicab licenses would be issued by public sale in four equal 400 increments every six months thereafter (February 2013, July 2013, February 2014, and July 2014), subject to approval of the DAP by NYSDOT.

Although permitted to issue up to a maximum of 2,000 additional licenses by the legislation, the actual issuance and sale of the additional licenses would be a discretionary action by the City of New York under Subsection A of Chapter 65 (Sale of Taxicab Medallions) of the Rules of the TLC subject to review under CEQR requirements.

**Issuance of 18,000 HAIL Vehicle Licenses.** As indicated in the pending legislation, the City of New York, acting through the TLC, would be authorized to take such actions as are necessary to implement the issuance of the eighteen thousand HAIL vehicle licenses, subject only to the procedures and limitations of the pending legislation, and would not be required to engage in any review by any provision of the pending legislation or obtain any determination not expressly required by the legislation, including review under SEQRA and/or CEQR requirements. A HAIL vehicle is a for-hire vehicle (non-yellow taxi) licensed by the TLC to carry passengers and authorized to accept hails from passengers in the streets of the City of New York. A HAIL license would authorize a designated vehicle to pick up passengers by street hail outside of a defined HAIL exclusionary zone that includes airports in the City of New York, and that area of Manhattan south of East 96<sup>th</sup> Street and south of West 110<sup>th</sup> Street, and in such other areas as the TLC shall prohibit by rule from accepting passengers by street hail. Allowing for-hire vehicles with a HAIL license to accept street hails in the areas designated in the Legislation would legalize illegal street hails by these vehicles in the areas of the City in which street hails would be allowed by the pending Legislation.

## **2.2 Purpose and Need for the Proposed Project**

Fifty-four percent of New York City households do not own a car and rely heavily on public transportation, yellow taxis and other for-hire vehicles to make their daily trips. Yellow taxis are particularly essential to the 1.6 million residents of Manhattan, where only 24% of households own a car. Taxis are also used commonly by the 2.3 million people who work in Manhattan each day and the 48 million people who visit the City each year. New York City taxis provide approximately 500,000 trips each day.



As compared to other cities that rely heavily on public transportation and taxi service, New York's taxi supply is relatively low. New York City's 8.4 million residents share 13,237 taxis, or one taxi for every 630 residents. In contrast, London has 22,000 black cabs that serve its 7.5 million residents, or one taxi for every 340 residents. Similarly, in Chicago, where the 71% household car ownership rate is significantly higher than New York City's 46% household car ownership rate, there is approximately one taxi for every 385 residents.

The demand for taxis is reflected in the long hours of operation of the current taxi fleet. Approximately 75% of taxis in New York City currently operate two 12-hour shifts nearly every day, while the remaining 25% operate for one 12-hour shift nearly every day.

The demand for taxis is also reflected in the observed time that it takes to locate an unoccupied taxi. Passengers frequently report difficulty locating an unoccupied taxi when they need one. In particular, passengers report shortages in the late afternoon, weekend evenings and instances of bad weather. This observation is supported by global positioning system (GPS) data on taxi utilization. Since 2009 (when TLC began collecting GPS data for the existing taxi fleet), the number of trips per cab per day increased from approximately 36.9 trips per cab per day in the first quarter (Q1) of 2009 to 38.5 trips per cab per day in Q1 of 2010 and 39.0 trips per cab per day in Q1 of 2011. The average number of hours each day a cab was occupied also increased during the same period. In Q1 of 2009, each taxi was hired (i.e., was unavailable to receive a street hail) approximately 6.8 hours each day. By Q1 of 2011, the number of hours each day when a cab was hired increased 13% to 7.7 hours each day.

To address the observed shortage in the number of taxis, the Proposed Action would authorize the issuance of 2,000 new medallions, an increase of approximately 15.1% above the existing number of medallions, all of which would be required to be used with taxicab vehicles that are accessible to individuals who use wheelchairs. This would increase the supply of wheelchair-accessible vehicles from 231 wheelchair-accessible vehicles to 2,231 wheelchair-accessible vehicles. The increase in the number of medallions restricted for use with vehicles accessible to persons with disabilities would foster increased access, mobility and independence of persons with disabilities, a major goal of the City's transportation system.

### **2.3 Required Actions and the Environmental Review Process**

#### **State Approvals**

- No discretionary State approvals are required to implement the Proposed Action beyond the state Legislation identified in Section 1.1.

## Local Approvals

- The Proposed Action would require the discretionary action by TLC of the issuance and public sale of up to a maximum of 2,000 taxicab licenses. This action is subject to review pursuant to SEQRA and CEQR.

## Federal Approvals

- No discretionary Federal approvals are required to implement the Proposed Action.

## 2.4 Analysis Framework

### 2.4.1 Overview

This chapter discusses the framework for the analyses proposed for inclusion in the EIS, including the proposed Analysis Years (preliminarily set as 2013, 2014 and 2015) and describes the future development scenarios (No-Action scenario and With-Action scenarios) that will be assessed in the EIS. Each impact category will include a description of existing conditions, and conditions in the Analysis Years with the Proposed Action (“Future Action” scenario) and without the Proposed Action (“Future No Action” scenario). Included will be the identification of significant adverse impacts that would occur with the Proposed Action based on criteria provided in the *CEQR Technical Manual (2012)*.

### 2.4.2 Analysis Approach

The identification of potential significant adverse impacts of the Proposed Action will be based on an assessment of the incremental change to the environmental setting that would occur with the Proposed Action based on a comparison of conditions in the future with and without the Proposed Action. In describing the Future No Action conditions for each impact area, the EIS will incorporate the effects of generalized growth and the effects of development projects that would be completed independently of the Proposed Action in the Analysis Years.

Based on a review of the description of the Proposed Action, its purpose and need and the potential impact of the Proposed Action on each impact category, a reasonable worst-case scenario will be formulated for assessing the impacts of the Proposed Action, including anticipated temporal distribution of potential impacts of the Proposed Action on traffic and air quality, and the potential effects of the Proposed Action on the value of a yellow cab medallion. As indicated above, the No-Action scenario will incorporate background growth in existing traffic volumes and the incremental changes in traffic that would result from other projects that would be in place by the Analysis Years.

The No-Action scenario will also incorporate anticipated changes to the yellow taxi cab fleet that would occur due to the replacement of the existing fleet of yellow taxi cab vehicles with the Taxi

of Tomorrow. That is, separate and apart from the subject proposal to offer for sale up to 2,000 additional medallions, the TLC proposes to enter into an agreement with Nissan North America, Inc. (Nissan), to develop and provide the Nissan NV200 (NV200) as the Taxi of Tomorrow vehicle for purchase for use as a taxi over the period 2013 through 2023. It is anticipated that the replacement of the existing yellow taxi fleet with the Taxi of Tomorrow would occur in three phases: 1) a maximum period of four years during which the vehicle would be under development; 2) a ten-year period beginning in 2013 or 2014 during which the manufacturer would sell vehicles into the NYC taxi market; and 3) a period of five years, beginning at the conclusion of the ten-year selling period, during which Nissan would provide agreed-upon service and parts support for vehicles previously sold. The TLC would not purchase vehicles; rather, TLC would adopt rules--primarily through changes to Chapter 67 of the TLC rules--that will identify Nissan as the only authorized provider of non-accessible Taxi of Tomorrow vehicles. As such, the existing taxi fleet will be replaced with Taxi of Tomorrow vehicles beginning in 2013. Taxi of Tomorrow would not increase or decrease the number of medallions in service. The replacement of the existing taxi fleet with the Taxi of Tomorrow is the subject of a separate environmental review under CEQR.

#### 2.4.3 Analysis Year

The proposed sale of medallions would be completed in three phases: 400 would be sold in Year One (2012), 800 in Year Two (2013), and 800 in Year Three (2014). Therefore, 2013, 2014 and 2015 have been selected as the analysis years (i.e., the first full years of operation of the expanded taxi vehicle fleet after each incremental sale of medallions).

#### 2.4.4 Study Area

The proposed project would be implemented City-wide. Appropriate study areas differ depending on the technical area being analyzed and are identified, in conformance with the *CEQR Technical Manual (February 2012)*, in Chapter 3 "Scope of Work for the Environmental Impact Statement".

### **2.5 Environmental Review Process and Contents of the EIS**

The EIS will be prepared in conformance with SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will conform to guidance included in the *CEQR Technical Manual (February 2012)*.

The EIS will contain:

- A description of the proposed project and its environmental setting;
- Descriptions of environmental conditions in the future with and without the Proposed Action;
- Identification of any significant adverse environmental impacts that would occur with the Proposed Action, including its short-term (construction-related) and long-term (operation-related) environmental effects;
- A description of measures to avoid, minimize or mitigate any identified significant adverse environmental impacts;
- An identification of any adverse environmental effects that cannot be avoided if the project is implemented;
- A discussion of reasonable alternatives to the proposed project, including the No Action alternative; and
- An identification of irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented.

Based on the preliminary screening assessments prepared in accordance with the screening procedures outlined in the *CEQR Technical Manual (February 2012)* and detailed in the EAS and related additional studies appended to this Draft Scope of Work, the following environmental areas are not anticipated to require further discussion in the EIS beyond that included in the EAS: land use, zoning, and public policy, community facilities and services, open space, shadows, historic and cultural resources, urban design and visual resources, natural resources, hazardous materials, water and sewer infrastructure, solid waste and sanitation services, and energy. The EIS will provide summaries of these assessments. Included in Chapter 3 “Scope of Work for the Environmental Impact Statement”, are descriptions of the draft scopes of studies for which detailed impact investigations are anticipated, including draft scopes of studies for Socioeconomic Conditions, Transportation, Air Quality, Greenhouse Gas Emissions, Noise, Public Health, Neighborhood Character, Alternatives, Mitigation, and EIS Summary Chapters.

## CHAPTER 3 - SCOPE OF WORK FOR THE ENVIRONMENTAL IMPACT STATEMENT

### 3.1 Socioeconomic Conditions

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of an area. According to the *CEQR Technical Manual*, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed action would result in significant adverse impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. As detailed in the EAS, the Proposed Action warrants an assessment of socioeconomic conditions with respect to one of these principal issues of concern— adverse effects on specific industries.

The proposed sale of 2,000 yellow taxicab medallions would not result in the direct or indirect residential, business or institutional displacement. Consequently, the socioeconomic analysis will focus on the potential effects of the increased number (i.e., supply) of taxicabs on:

- The value of a yellow taxicab medallion;
- The economic viability of taxicab-related businesses; and
- The overall impact on the taxicab industry, an industry of importance to the New York City economy.

**Value of a yellow taxicab medallion.** Currently selling at over \$700,000 for an independent medallion and approximately \$1 million for a corporate (also known as minifleet) medallion, a medallion is a license that confers an expected stream of net revenues to its owners. Increasing the number of medallions could potentially impact fare revenue and operating costs per taxi medallion given the increase in supply of taxi cabs. Increases in competition for taxi pick-ups and potential increases in traffic congestion (by introducing more vehicles onto the roadway network) could thus impact the medallion price for yellow taxis. This potential impact on medallion prices will be evaluated in the analysis.

**Economic viability of taxicab-related businesses.** The socioeconomic analysis will also quantify the potential impact of an increase in the supply of yellow taxi medallions on the livery car industry in the outer boroughs of New York City. The analysis will consider the extent to

which (and where) markets for the two types of service (livery and yellow cab) currently overlap; the potential impact of increasing the supply of yellow cabs in specific neighborhoods; differences in patterns of service between yellow taxis and livery cars; and other factors that could mitigate any adverse effects that an increase in the supply of yellow taxis might have on the livery car industry. This analysis will be carried out using: Geographic Information System (GIS) data on taxi trips provided by the TLC, data on livery base stations and the number of cars affiliated with them, and finally, using population projections at the neighborhood level by the Department of City Planning.

**Importance of the taxicab industry to the New York City economy.** The taxi cab industry provides significant benefits to New York City residents not only in terms of providing transportation options for the City's residents but also providing jobs for drivers, medallion owners and for supporting businesses such as the hack-up and motor vehicle repair industry. Using input – output multipliers, employment impacts and final expenditures, impacts on New York City's economy as a direct result of the additional taxi medallions will be evaluated.

## 3.2 Transportation

### 3.2.1 Traffic Analysis

The *CEQR Technical Manual* sets the basic threshold for a detailed traffic analysis at 50 vehicle trips per hour related to the proposed action traveling through an intersection. The sale of 2,000 new taxi medallions would increase the taxi fleet by approximately 15.1%. Increasing the current taxi volume by 15.1% could result in an increase of over 50 taxis in one hour at a number of intersections. Consequently, a detailed traffic impact analysis will be completed as part of the EIS.

#### Traffic Study Area

A set of 52 representative intersections (see Table 1) for analysis were selected, in consultation with TLC, New York City Department of Transportation (DOT) and New York City Department of Environmental Protection (DEP), based on the review of the hourly taxi pick-up/drop-off data summarized by Census Block Group for each of the three analysis (AM, midday, and PM) peak periods. In addition, taxi Global Positioning System (GPS) data was used to identify blocks (links) with 50 or more pick- up/drop-off activities during the AM, midday and PM peak hours.

**Table 1: List of 52 Traffic Study Area Locations**

1	3rd Avenue and 54th Street	30	8th Avenue and 31st Street
2	3rd Avenue and 55th Street	31	8th Avenue and 41st Street
3	3rd Avenue and 56th Street	32	8th Avenue and 42nd Street
4	3rd Avenue and 57th Street (Air Quality Location)	33	8th Avenue and 58th Street
5	3rd Avenue and 58th Street	34	9th Avenue and 58th Street
6	3rd Avenue and 59th Street	35	7th Avenue and 57th Street
7	3rd Avenue and 60th Street	36	7th Avenue and Central Park South
8	2nd Avenue and 57th Street	37	6th Avenue and 23rd Street
9	Lexington Avenue and 57th Street	38	6th Avenue and 31st Street
10	7th Avenue and 31st Street	39	6th Avenue and 42nd Street
11	7th Avenue and 32nd Street	40	6th Avenue and 57th Street
12	7th Avenue and 33rd Street	41	6th Avenue and Central Park South
13	7th Avenue and 34th Street (Air Quality Location)	42	5th Avenue and 23rd Street
14	7th Avenue and 35th Street	43	5th Avenue and 57th Street
15	7th Avenue and 36th Street	44	5th Avenue and Central Park South
16	7th Avenue and 37th Street	45	Madison Avenue and 57th Street
17	6th Avenue and 34th Street	46	1st Avenue and 33rd Street
18	8th Avenue and 34th Street	47	2nd Avenue and 36th Street
19	Madison Avenue and 39th Street	47	North of 2nd Avenue and 36th Street to Tunnel
20	Madison Avenue and 40th Street	48	3rd Avenue and 37th Street
21	Madison Avenue and 41st Street	49	Queens Plaza S and Northern Boulevard
22	Madison Avenue and 42nd Street (Air Quality Location)	49	Queens Plaza N and Northern Boulevard
23	Madison Avenue and 43rd Street	49	41st Avenue and Northern Boulevard
24	Madison Avenue and 44th Street	49	Queens Plaza S and Northern Boulevard (W Service Rd)
25	Madison Avenue and 45th Street	50	Tillary Street and Adams Street
26	5th Avenue and 42nd Street	50	Tillary Street and Adams Street (E Service Rd)
27	Vanderbilt Avenue and 42nd Street	50	Tillary Street and Adams Street (W Service Rd)
28	Park Avenue and 42nd Street	51	Tillary Street and Jay Street
29	8th Avenue and 33rd Street	52	Tillary Street and Flatbush Avenue

Further, the prior Taxi Medallion EIS [CEQR #03TLC001Y] was also reviewed to verify the locations where traffic or air-quality impacts were identified. The following additional attributes were also considered in making the selection of study intersections:

- Major origins/destinations (i.e., Penn Station, Grand Central Terminal, PA Bus Terminal, etc.);
- Proximity to the area with greatest concentration of taxi pick-up/drop-off volumes;
- High percentage of taxi cabs in baseline traffic;
- Presence of taxi stands; and
- Portals (Brooklyn, Manhattan and Queens Borough Bridges) with high taxi volumes.

### 3.2.2 Transit Analysis

The *CEQR Technical Manual* identifies the following thresholds as “triggers” for the completion of a detailed transit analysis: A) 200 passengers per peak hour related to a subway/rail line or station or B) 50 bus trips in a single direction on a single route. Since the sale of 2,000 new taxi medallions would not increase transit trips, but would increase the capacity and reduce wait times for taxi trips, a detailed transit analysis is not required. This will be documented in the EIS.

### 3.2.3 Pedestrian Analysis

The *CEQR Technical Manual* identifies a threshold of 200 pedestrian trips per peak hour for the need for a detailed assessment of pedestrian flows. The Proposed Action is expected to generate few new pedestrian trips in the peak hours. Furthermore, the new taxis could reduce some pedestrian activity by making the taxi mode more convenient. While the Proposed Action could redistribute some pedestrian trips, the pedestrian activity related to these new taxis is expected to be dispersed throughout the primary taxi service areas. Therefore, it is projected that there would not be any location where the peak hour pedestrian activity would exceed the 200 trip threshold, and a detailed transit analysis is not required. This will be documented in the EIS.

### 3.2.4 Parking

Given the dispersed nature of the taxi fleet both with respect to service areas and where they park when not in service, a detailed parking analysis is not required. The Proposed Action is not expected to have a direct impact on any parking location. This will be documented in the EIS.



### 3.2.5 Vehicular and Pedestrian safety

The accident data will be obtained and reviewed for the most recent three-year period to identify those intersections that exceed the CEQR guideline of 48 or more total accidents (reportable and non-reportable) or five or more pedestrian/bicycle accidents during any 12 consecutive months of the most recent three-year period. Results will be summarized in tabular format consistent with CEQR guidance. Based on the results of the review, any locations that meet the high-accident criteria will be further evaluated. For these locations, reasonable and feasible improvements to mitigate potential safety impacts will be proposed with City DOT's approval.

### 3.3 Air Quality

A set of 52 representative intersections for analysis were selected, in consultation with TLC, DOT and DEP, based on the review of the hourly taxi pick-up/drop-off data summarized by Census Block Group for each of the three analysis (AM, midday, and PM) peak periods. In addition, taxi GPS data was also used to identify blocks (links) with 50 or more pick-up/drop-off activities during the AM, midday and PM peak hours. Further, the prior Taxi Medallion EIS [CEQR #03TLC001Y] was also reviewed to verify the locations where traffic or air-quality impacts were identified. The following additional attributes were also considered in making the ultimate selection of study intersections:

- Major origins/destinations (i.e., Penn Station, Grand Central Terminal, PA Bus Terminal, etc.);
- Proximity to the area with greatest concentration of taxi pick-up/drop-off volumes;
- High percentage of taxi cabs in baseline traffic;
- Presence of taxi stands;
- Portals (Brooklyn, Manhattan and Queens Borough Bridges) with high taxi volumes; and
- All the intersections that were within the line of sight and within 1,000 feet from the selected air quality intersections.

Of these 52 intersections, four intersections were identified by TLC, in consultation with DEP, as having the potential to require an air quality analysis. The four locations were selected based on DEP's review of the existing overall traffic volume, existing traffic delays, existing taxi volume, and the proposed increase in taxi volume, based on the pro-rated approach – an increase of 15.1% in taxi volume at each intersection. The results of this review indicated that the locations where the highest potential air quality impacts are expected are:

- 3<sup>rd</sup> Avenue and 57<sup>th</sup> Street;
- 7<sup>th</sup> Avenue and 34<sup>th</sup> Street;

- 5<sup>th</sup> Avenue and 42<sup>nd</sup> Street; and
- 6<sup>th</sup> Avenue and 23<sup>rd</sup> Street.

Therefore, a detailed microscale mobile analysis of potential CO, PM<sub>2.5</sub> and PM<sub>10</sub> impacts will be conducted at these four intersections during AM, midday and PM peak hours.

A qualitative discussion of potential NO<sub>2</sub> impacts will be included in the EIS.

Pursuant to CEQR, the air quality analyses performed for the Proposed Action will:

- Describe Existing and Future No-Action air quality conditions in the New York Metropolitan Region; and
- Identify and quantify any potentially significant air quality impacts at the four intersections identified above.

The mobile analyses will be designed to determine whether the Proposed Action would cause or exacerbate violations of applicable ambient air quality standards and/or lead to an exceedance of appropriate air quality impact thresholds. The EIS will document the results of the detailed analysis.

### 3.3.1 Methodology

Mobile source analyses will be conducted to estimate concentrations of CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. The analysis will be conducted for the selected intersections to determine whether a 15.1% increase in the volume of taxis would cause or exacerbate violations of applicable NAAQS and/or exceed applicable CEQR impact thresholds.

Maximum 1-hour and 8-hour CO concentrations, 24-hour PM<sub>10</sub>, and 24-hour and annual PM<sub>2.5</sub> will be estimated at analysis sites, using procedures provided in the *2012 CEQR Technical Manual*. While pollutant levels will be estimated at multiple receptor locations near each analysis site, only the highest levels predicted at any of these locations will be reported as an indication of the maximum levels for the analysis site as a whole.

#### 3.3.1.1 Analysis Years

Analyses will be conducted for the following years:

- 2011 (based on when traffic data was collected) to estimate air quality concentrations under Existing Conditions; and
- 2015 to estimate air quality concentrations under Future No-Action and Future Action Conditions. 2015 is the year by which the sale of all additional taxicab medallions is projected to be completed.

### 3.3.1.2 *Traffic Data*

Traffic data will be developed for the AM, midday and PM peak hours for Existing, Future No-Action and Future Action conditions. The traffic modeling results and field monitoring data will be used to develop the following traffic data necessary for the air quality analysis for all the roadway links within 1,000 feet of the selected analysis sites during the AM, midday, and PM peak hours:

- Peak hour traffic volumes obtained from traffic analysis;
- Average peak hour free flow travel speeds for signalized approaches and average travel speeds for unsignalized roadway approaches;
- Vehicle classifications (percent autos, sport-utility vehicles [SUVs], medallion taxis [where applicable], light-duty and heavy-duty trucks and buses);
- Width of traveled roadways (the effective width of the roadway);
- Signal timing data (cycle length, red time length);
- Number of effective moving lanes and exclusive turn lanes;
- Saturation flow rates (i.e., the maximum amount of vehicular throughput) per lane; and
- Arrival rate at signalized approaches.

### 3.3.1.3 *Vehicular Emissions*

Mobile source CO, PM<sub>10</sub> and PM<sub>2.5</sub> emissions will be estimated using the latest version of USEPA's MOBILE6.2 emissions model (dated September 24, 2003) for idling and moving vehicles emissions. The DEP MOBILE6.2 Guidance Package will be used, which includes files specific to taxis.

#### 3.3.1.3.1 Carbon Monoxide

Mobile source CO emissions will also be estimated using the USEPA MOBILE6.2 emission factor program. The most current state- and City-approved input parameters will be used to estimate existing and future emission factors.

#### 3.3.1.3.2 Particulates

Emissions of fugitive dust (i.e. emissions caused by the re-entrainment of dust into the air by moving vehicles) are primarily dependent on vehicle weight and on the surface silt loading. At the direction of the DEP, the following silt loading factors and average vehicle weight will be used for estimating PM<sub>10</sub> and PM<sub>2.5</sub> emissions:

- 0.16 for collector type roadways;
- 0.10 for principle and minor arterials;
- 0.015 for expressways and limited access roadways;
- 0.4 for paved roadways with fewer than 5,000 average daily traffic volumes; and
- A standard fleet average vehicle weight of 6,000 pounds.

Re-entrained dust will be considered for the 24-hour PM<sub>2.5</sub> analysis (incremental contribution at receptors three meters away from the edge of the roadway).

#### 3.3.1.3.3 Ambient Temperature

Following CEQR guidance, mobile emissions were calculated using the MOBILE6.2 model. Emission estimates were computed using an ambient temperature of 50°F in Manhattan for winter conditions.

#### 3.3.1.3.4 Vehicle Classification

Vehicle classification data required to determine composite emission factors will be based on traffic survey data and will include percentages of light duty gasoline vehicles (LDGVs), SUVs, medallion taxis, light-duty trucks, heavy-duty trucks and buses.

### 3.3.1.4 Dispersion Modeling

Dispersion analysis will be conducted using USEPA's dispersion model, CAL3QHCR, which uses local meteorological data. The analyses will follow USEPA's Intersection Modeling Guidelines for modeling methodology and receptor placement. The air quality dispersion analyses will be conducted as follows:

- All major roadway segments (links) within approximately 1,000 feet of each intersection will be considered.
- Receptors will be placed: (1) near the midpoint of the adjacent sidewalks (generally 6- to 7½-feet from the curb line) and set back from the corner of the intersection in accordance with USEPA's modeling guidelines; (2) adjacent to queued approaches at the corner of each intersection and set back at 25, 50 and 75 meters from the corner, as well as at the mid-block location, if appropriate; and (3) near sensitive land uses (schools, hospitals, etc).
- Receptor heights will be 1.8 meters (6.0 feet) above ground level.

For the annual neighborhood average PM<sub>2.5</sub> analysis, receptors will be placed at a distance of 15 meters (49 feet) from the curb line and set back from the corner of the intersection in accordance with USEPA's modeling guidelines (i.e., at the corner of each intersection and set back at 25, 50 and 75 meters from the corner, as well as at the mid-block location, as appropriate).

### 3.3.1.5 Meteorological Conditions

Concentrations were estimated using five consecutive years of meteorological data from LaGuardia Airport (2007 to 2011).

## 3.4 Greenhouse Gas Emissions

The Proposed Action is neither a New York City capital project nor a new development, would not require additional power generation, or include new regulations or other actions that would fundamentally change the City's solid waste management system. As a consequence, the assessment of the impact of the Proposed Action on Greenhouse Gas (GHG) Emissions will be limited to confirming that the additional vehicular trips that would be generated by an additional 2,000 taxi medallions would not be inconsistent with the City's greenhouse gas reduction policy included in PlaNYC 2030 and its updates. Included in the assessment will be an estimate of the GHG emissions that would be generated from the operation of 2,000 additional taxicabs, and a comparison of the estimated increase in GHG emissions against total GHG emissions generated in the City.

### 3.5 Noise

As detailed in the EAS, a noise screening assessment was performed in accordance with impact screening procedures identified in the *CEQR Technical Manual* to determine if the project-related vehicles would cause a doubling of noise passenger car equivalents (PCEs) at any location. Since the proposed project would increase the number of existing taxi medallions by 15.1%, and the taxi medallions are only a portion of the total traffic that would be on the road, the proposed project would cause an increase of less than 15.1% in the overall traffic at any location. Per the *CEQR Technical Manual*, PCEs factors for noise are as follows:

- One Automobile, Light Truck or Taxi: One PCE
- One Medium Truck: 13 PCEs
- Each Bus: 18 PCEs
- One Heavy Truck: 47 PCEs

As shown above, taxi medallions are assigned a noise PCE of one. Although typically the vehicles in the study area consists of a mix of autos, light trucks, taxis, buses and trucks, it was conservatively<sup>1</sup> assumed for this noise screening assessment that all existing vehicles on the road are classified as automobiles, light trucks or taxis and would have a noise PCE factor of 1. Based on this conservative assumption, the proposed project would not result in a doubling (increase of 100%) of the existing PCEs at any location since the PCEs would increase by less than 15.1%. As a result, a detailed noise impact assessment is not required. The EIS will confirm and document noise-related conclusions of the EAS.

### 3.6 Public Health

Unmitigatable significant adverse impacts on air quality, water quality, hazardous materials, or noise may have the potential to result in significant adverse impacts to public health. If the Proposed Action would result in significant unmitigated adverse impacts in one or more of the above-mentioned environmental categories, then, in conformance with the *CEQR Technical Manual*, the EIS will include a public health analysis that would consist of the following four steps:

1. Identifying the extent of potential environmental exposures to the public as a result of a proposed project.

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<sup>1</sup> This approach is conservative because a mixture of other vehicle types (i.e., buses and/or trucks in addition to autos, light trucks and taxis) at a location would result in a higher existing PCE value. This would allow a larger number of taxi medallions to be added prior to causing a doubling of noise PCEs.

2. If necessary, identifying potential health impacts as a result of identified exposure pathways.
3. If necessary, determining the potential significance of the impact.
4. Recommending steps to reduce and prevent exposures.

### **3.7 Neighborhood Character**

The EIS will include an analysis of potential impacts to neighborhood character, in conformance with the *CEQR Technical Manual*, if there is a potential for a significant adverse impact in one or more of the following categories—or if there is a potential for moderate impacts in several of them, which, when viewed together, may result in a potentially significant adverse impact on neighborhood character: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; or Noise.

### **3.8 Alternatives**

The EIS will include an assessment of alternatives to the Proposed Action. Included will be a No Action Alternative and, as appropriate, one or more alternatives that avoid or reduce any identified significant adverse impacts. The level of analysis will depend on an assessment of project impacts determined by the analysis of impacts for each impact category in the EIS.

### **3.9 Mitigation**

Where significant project impacts have been identified, measures to mitigate those impacts will be identified and described. This task summarizes the findings of the relevant analyses and discusses potential mitigation measures. Where impacts cannot be practicably mitigated, they will be disclosed as unavoidable adverse impacts.

### **3.10 Summary Chapters**

#### **3.10.1 Executive Summary**

Once the EIS technical sections have been prepared, a concise executive summary will be drafted. The executive summary will use relevant material from the body of the EIS to describe the proposed project, its environmental impacts, measures to mitigate those impacts, and alternatives to the proposed project.

### 3.10.2 Unavoidable Adverse Impacts

Those impacts, if any, which could not be avoided and could not be practicably mitigated, will be listed in this chapter.

### 3.10.3 Growth-Inducing Aspects

This chapter will focus on whether the proposed project has the potential to induce new development within the surrounding area.

### 3.10.4 Irreversible and Irrecoverable Commitment of Resources

This chapter focuses on those resources, such as energy and construction materials, that would be irretrievably committed if the project is built.

### 3.10.5 Public Outreach Process

This chapter will summarize public outreach activities related to the preparation of the EIS.