

**Kings Theatre
Draft Scope of Work
Targeted Environmental Impact Statement**

A. INTRODUCTION

This draft scope of work outlines the issues to be analyzed in a targeted Environmental Impact Statement (EIS) for the proposed restoration and expansion of Kings Theatre (“the proposed project”) in the Flatbush neighborhood of Brooklyn (see **Figure 1**). As part of the proposed project, a portion of East 22nd Street between Tilden Avenue and Duryea Place would be demapped to accommodate an expansion of the theatre. Other public actions required for the proposed project include Mayoral and Borough Board approval pursuant to Section 384(b)(4) of the City Charter related to the business terms of the proposed disposition of the theatre and street, City capital funding, and nomination of the Kings Theatre to the State and National Registers (S/NR) of Historic Places. As shown in **Figure 2**, the project site consists of Block 5132, Lots 17 and 18, where the Kings Theatre is located, and East 22nd Street between Tilden Avenue and Duryea Place (Block 5132, Lots 17, 18, and a portion of Lot 12, and Block 5133, Lot 55 and a portion of Lots 1 and 50).

B. PROJECT DESCRIPTION

PROJECT SITE

The proposed project would restore and expand the currently vacant Kings Theatre located at 1027 Flatbush Avenue in Brooklyn. The existing theatre was designed by C.W. and George Rapp Architects and originally built in 1929 as a motion picture venue with a seating capacity of 3,600. The theatre has been closed since 1977 and has fallen into disrepair. The existing theatre square footage is approximately 66,230 square feet, including the cellar level. The theatre’s principal public entrance and exit is on Flatbush Avenue. The theatre rises to a height of approximately 87 feet. As part of the project, a portion of East 22nd Street between Tilden Avenue and Duryea Place would be demapped to accommodate an expansion of the theatre’s stagehouse and loading areas.

THEATRE RENOVATION AND EXPANSION

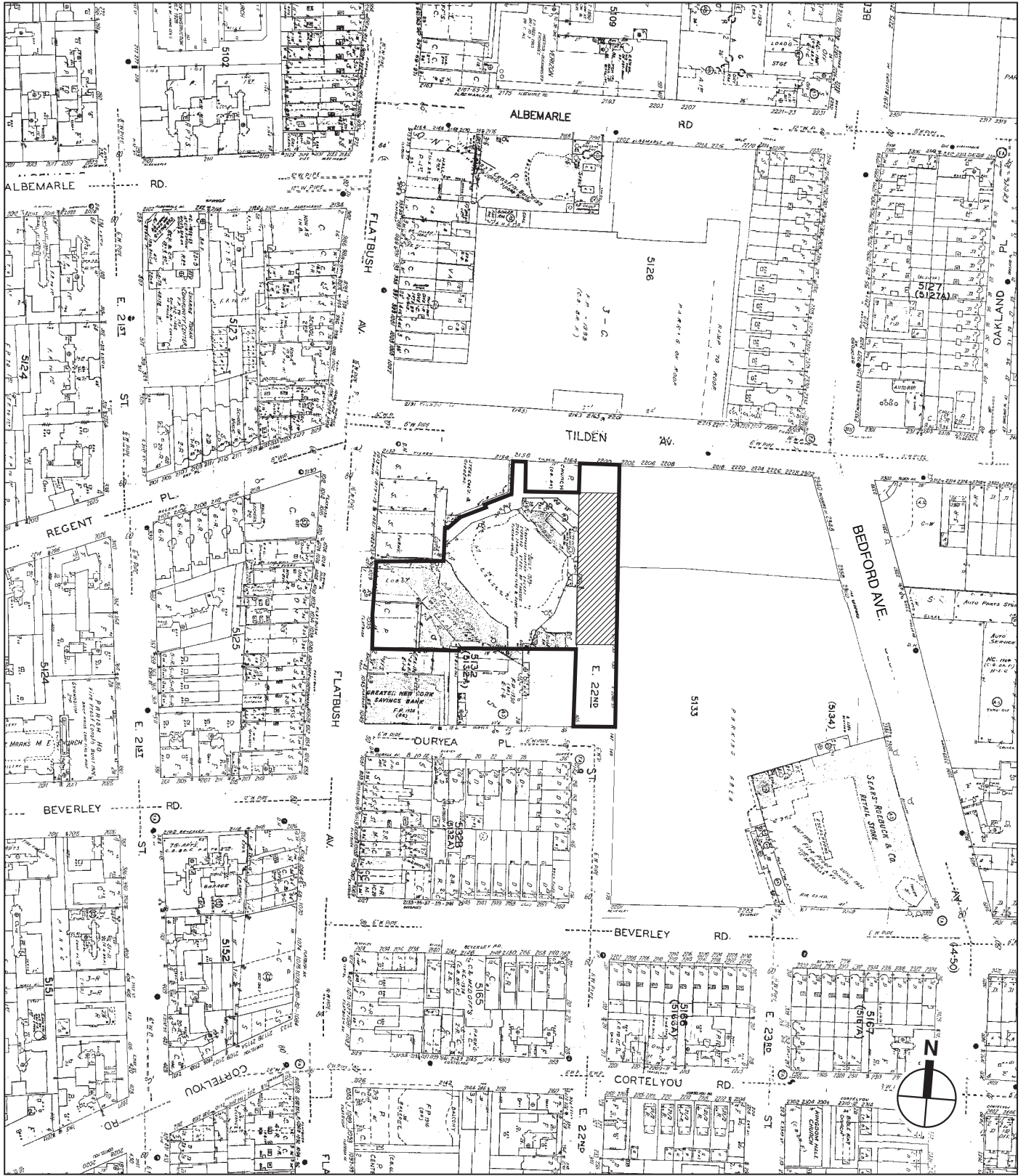
The existing theatre would be restored, expanded, and modernized, with the majority of the expansion to occur in the theatre’s stagehouse and back-of-house facilities so that live theatrical presentations can be accommodated. The renovation and expansion would result in an increase in the total square footage from 66,230 square feet to approximately 101,970 square feet; the seating capacity would remain similar to the existing theatre with up to approximately 3,600 seats. The proposed project is expected to be completed by 2014.

The theatre’s front-of-house facilities (e.g., lobbies and patron lounges) and auditorium would be retained, restored, and modernized. The principal public entrance and exit to the theatre would remain on Flatbush Avenue, and a landscaped courtyard area, accessed from the theatre’s grand

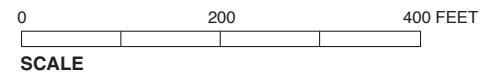


 Project Site

0 2000 FEET
SCALE



- Project Site
- Area to be Demapped



Project Site
Figure 2

lobby, would be provided. New public restroom facilities and concession areas would be provided. In the auditorium, the orchestra level would be re-graded and the seating layout would be modified to improve sightlines for live entertainment.

The rear of the theatre—the stagehouse—would be demolished (to the proscenium), and a new 97-foot-high steel structure would be constructed, providing a stage with the capacity to accommodate live performances, back-of-house support areas (e.g., dressing rooms, audio and lighting rooms), and new loading facilities. The loading facilities would consist of two truck bays sized to accommodate road trucks for touring performances. The new stagehouse and loading area would be located in the roadway of the demapped segment of East 22nd Street.

Figures 3, 4, 5, and 6 show the proposed renovated and expanded theatre.

Restoration of the theatre would involve both the interior and exterior and would be undertaken to meet the Secretary of the Interior’s Guidelines for Rehabilitation of Historic Structures.

PROPOSED OPERATIONS

The theatre would be used for live entertainment, including music, dance, cabaret and comedy performances (both local and touring shows). The theatre would also be used for local theatrical and dance groups, conferences, and ceremonies of local importance. There would be up to approximately 200 performances in the theatre each year.

Parking for theatre patrons would primarily be accommodated in two nearby parking facilities: a 425-space parking lot across East 22nd Street, behind the theatre, and a 253-space parking deck across Tilden Avenue.

C. PROPOSED ACTIONS AND APPROVALS

HISTORY OF ACTIONS AFFECTING THE PROJECT SITE

In the early 1980s, an Urban Renewal Plan for the Kings/Flatbush Urban Renewal Area, which included the project site, was approved.¹ The Urban Renewal Plan allowed for the acquisition and disposition of the theatre site and of East 22nd Street; permitted commercial use of the theatre site, consistent with applicable zoning; and contemplated the restoration of the theatre.

In the late 1980s, the New York City Economic Development Corporation (EDC), the New York City Department of Housing Preservation and Development (HPD), and the New York City Department of General Services proposed to develop a 654-space public parking lot across East 22nd Street from the theatre. This parking lot was to serve Sears, Roebuck and Co., and other retail establishments in the area and would have encompassed property in Block 5133 and two eliminated streets: specifically, East 22nd Street from Tilden Avenue to Duryea Place and Tilden Avenue from Flatbush Avenue to Bedford Avenue were to be eliminated, discontinued, and closed. This proposed amendment of the City Map (C 861226 MMK) and other related actions, including the grant of a special permit to allow the public parking use and the approval of the site selection and acquisition of private property for use as a parking facility, were approved by the City Planning Commission on September 21, 1992, Cal. No. 2.

The application was subject to review under the City Environmental Quality Review (CEQR) process, and received a Conditional Negative Declaration (CND) from the New York City

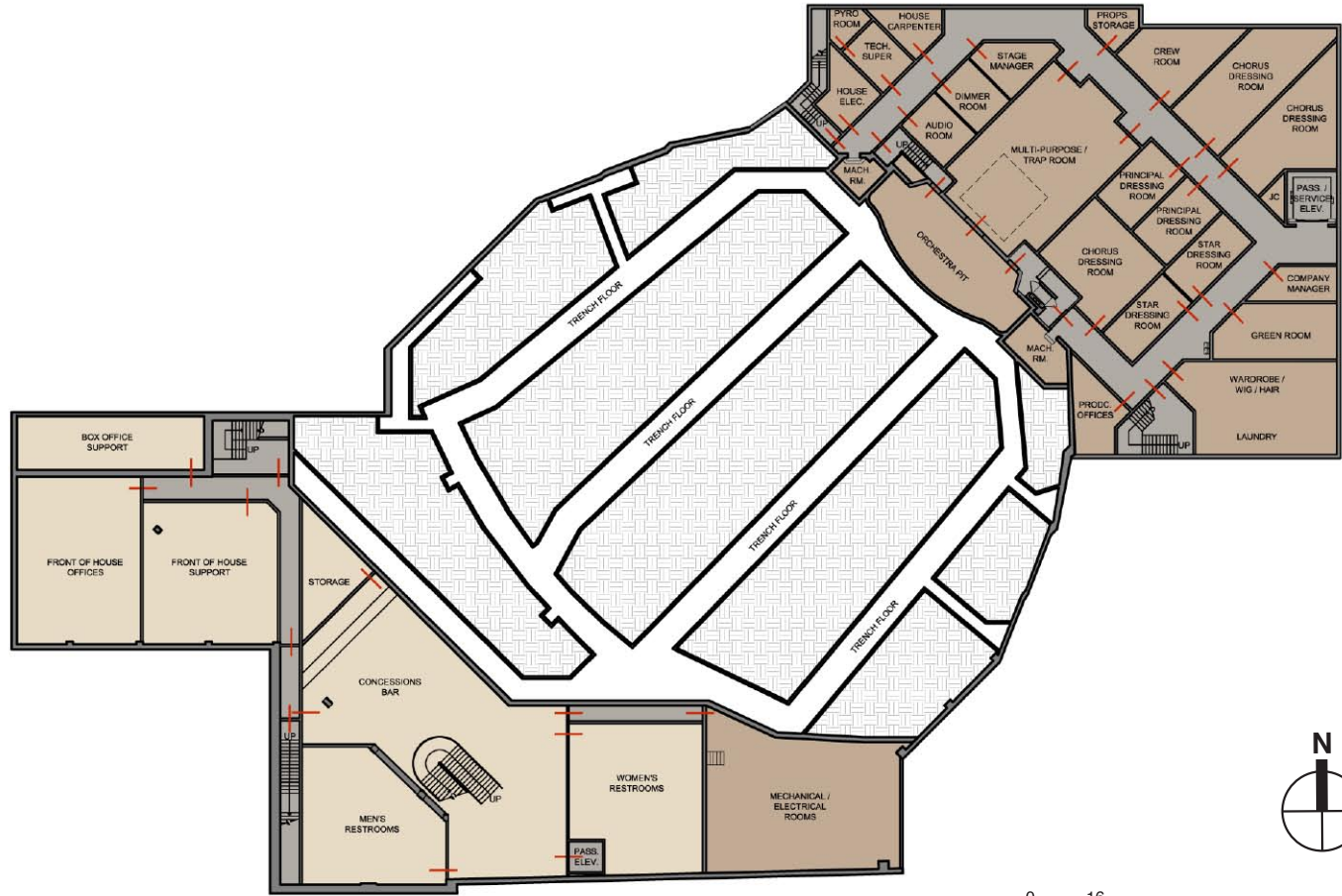
¹ Urban Renewal Plan: C800547 HUK, approved by the City Planning Commission on November 24, 1980/Cal. No. 3, and approved by the Board of Estimate on January 16, 1981/Cal No. 8.

LEGEND

- HISTORIC FRONT OF HOUSE
- FRONT OF HOUSE SUPPORT FACILITIES
- BACK OF HOUSE SUPPORT FACILITIES
- STAGE
- CIRCULATION / EGRESS






BASEMENT AREA CALCULATIONS

EXISTING BLDG = 15,392 sf
 ADDITIONS = 12,487 sf
 BASEMENT TOTAL = 26,414 sf



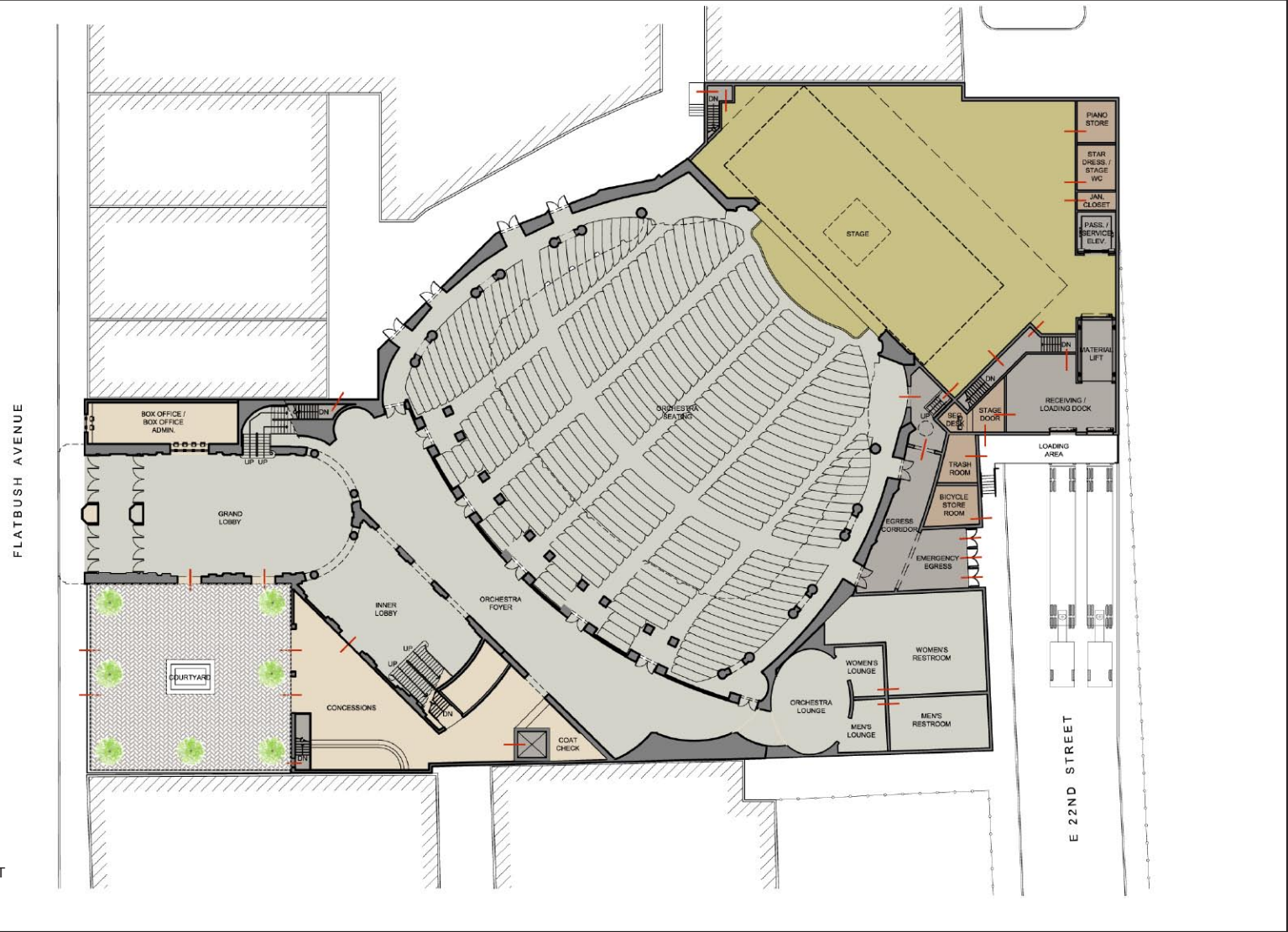
FOR ILLUSTRATIVE PURPOSES ONLY

SOURCE: Martinez and Johnson Architecture

- LEGEND**
-  HISTORIC FRONT OF HOUSE
 -  FRONT OF HOUSE SUPPORT FACILITIES
 -  BACK OF HOUSE SUPPORT FACILITIES
 -  STAGE
 -  CIRCULATION / EGRESS

ORCHESTRA AREA CALCULATIONS

EXISTING BLDG = 35,252 sf
 ADDITIONS = 17,850 sf
 ORCHESTRA TOTAL = 53,102 sf

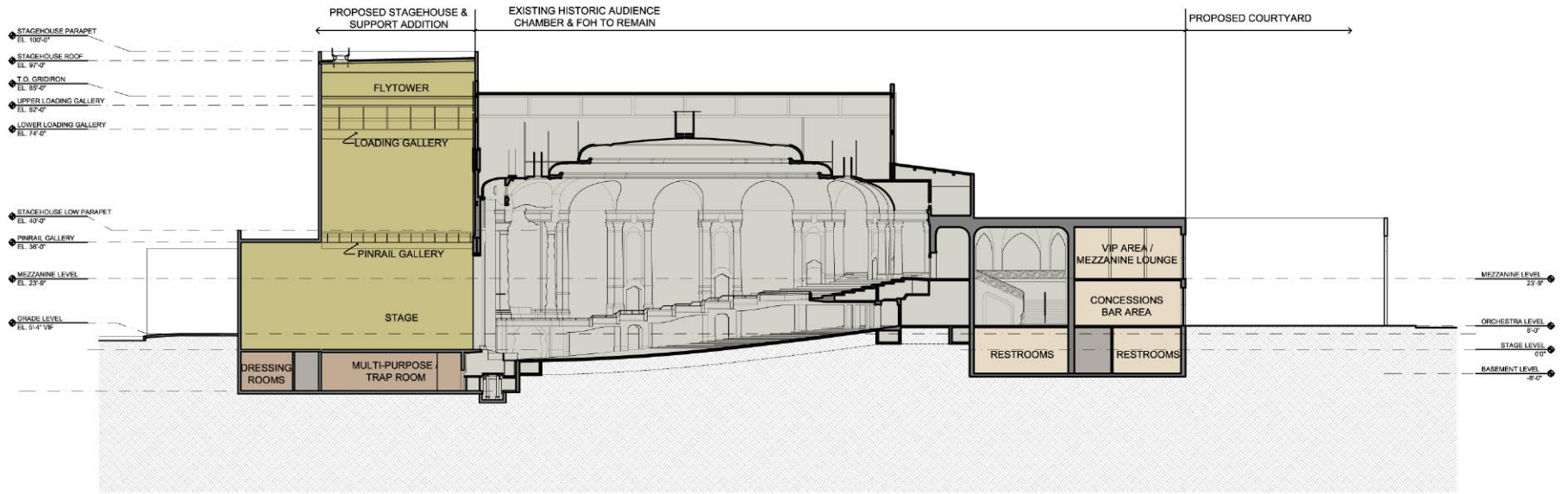


FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Ground Floor and Orchestra Plan
Figure 4

LEGEND

- HISTORIC FRONT OF HOUSE
- FRONT OF HOUSE SUPPORT FACILITIES
- BACK OF HOUSE SUPPORT FACILITIES
- STAGE
- CIRCULATION / EGRESS



FOR ILLUSTRATIVE PURPOSES ONLY

Departments of Environmental Protection (DEP) and City Planning (DCP) in January 1990 and again in April 1992 based on an amended project description. The conditions related to minor parking restrictions and signal timing changes to be made in connection with implementation of the proposed street closures.

Prior to the acquisition of private property through the Urban Renewal Plan, land use changes occurred over time and individual private property owners began to make investments in their properties along Tilden Avenue. In light of those investments, the City determined that the acquisition of those properties was not necessary to achieve the goals of the Urban Renewal Plan; and further the demapping of Tilden Avenue would be problematic without the acquisition of those properties as the private properties used Tilden Avenue for access to the street network. Therefore, the demapping application was never filed and the planned public parking lot was developed in two separate pieces, one north of Tilden Avenue and another directly across the street to the south. As East 22nd Street was included in the same alteration map as Tilden Avenue in the approved 1992 demapping application, the elimination of East 22nd Street was also not finalized. Rather than incorporate East 22nd Street into the parking lot on Block 5133, the area that was still mapped as street was improved as a street.

PROPOSED ACTIONS AND APPROVALS FOR THE CURRENT PROJECT

The proposed project would require the following actions and approvals:

- Modification of an Amendment to the City Map. The proposed project would require the filing of a modification of a previously approved amendment to the City Map so that a portion of East 22nd Street between Tilden Avenue and Duryea Place can be demapped. The demapped East 22nd Street would accommodate an expansion of the theatre's stagehouse and loading areas. The filing of a modification of an amendment to the City Map requires approval of the City Planning Commission and a referral to the Community Board and Borough President.
- Section 384(b)(4). The project requires approval by the Mayor and the Borough Board pursuant to Section 384(b)(4) of the City Charter related to the business terms of the proposed disposition of the theatre and street from the City to EDC and the negotiated disposition of the street and theatre to Kings Theatre Redevelopment Company, L.L.C., the developer of the proposed project. This approval is a discretionary action subject to CEQR.
- City Capital Funding. The project requires approval by the City's Office of Management and Budget for the grant of approximately \$50 million as is required in capital funds for the restoration of the theatre. This approval, and any other approval related to any additional funding that may become available for the project, is a discretionary action subject to CEQR.
- Nomination of the Kings Theatre to the State and National Registers (S/NR) of Historic Places. As part of the project, the Kings Theatre would be nominated for listing on the State and National Registers of Historic Places, and the project would seek federal historic tax credits, and potentially New Markets Tax Credits, for the theatre's restoration. The theatre's restoration would be undertaken in consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and in compliance with the Secretary of the Interior's Standards for Rehabilitation. S/NR nomination and receipt of the federal tax credits are not actions subject to the CEQR process.

PURPOSE AND NEED

Together, the proposed actions would facilitate the restoration, expansion, and modernization of the existing vacant Kings Theatre and would provide a modern facility for the presentation of live performances. A renovated and modernized theatre, with active programming and a range of events, would result in the improvement of this section of Flatbush Avenue. The restored theatre would also serve as a community and City-wide amenity.

D. CITY ENVIRONMENTAL QUALITY REVIEW

All three city approvals require environmental review under CEQR procedures. The Office of the Deputy Mayor for Economic Development (ODMED) is the CEQR lead agency for the proposed project.

An Environmental Assessment Statement (EAS) was prepared. Based on the screening questions provided as part of the EAS (Part II: Technical Analyses), ODMED determined that the proposed project would not have the potential for significant adverse environmental impacts in the following areas: land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; shadows; urban design and visual resources; natural resources; water and sewer infrastructure; solid waste and sanitation services; energy; air quality (stationary sources); greenhouse gas emissions; noise (interior noise levels and stationary sources); public health; and construction impacts.

For historic and cultural resources, hazardous materials, air quality (stationary sources), and noise (interior noise levels and stationary sources), additional information was provided in more detailed screening assessments:

- For historic resources, the proposed project is contingent on the listing of the property on the State and National Registers of Historic Places and receipt of federal tax credits; since compliance with the Secretary of the Interior’s Standards as interpreted by the New York State Office of Parks, Recreation, and Historic Preservation and the National Park Service is necessary to receive the tax credits.
- For hazardous materials, the screening attachment detailed specific protocols that would be undertaken to avoid the potential for adverse impacts; with the implementation of these measures, no significant adverse impacts related to hazardous materials would be expected to occur.
- For air quality (stationary sources), a screening analysis, using information on the project’s floor area, the type of fuel to be burned, the project’s stack height, and the distance to the nearest building of a similar or greater height, was undertaken. Based on this screen, it was determined that the proposed project’s heating, ventilation, and air conditioning system would not result in significant adverse impacts, and no further analysis is warranted.
- For noise (interior noise levels and stationary sources), the screening analysis determined that because it is expected that the project’s acoustical design criteria (Noise Criteria [NC] 30 or less) for its use as a theatre would be more stringent than the CEQR interior noise level criterion of 45 dBA L₁₀₍₁₎, a CEQR building attenuation study is not warranted. Furthermore, the building’s mechanical system would be designed to meet all applicable noise regulations, as further detailed in the EAS. Therefore, no further analysis is warranted.

ODMED determined that the project would have the potential for significant adverse environmental impacts in the areas of historic and cultural resources, transportation, air quality

(mobile sources), noise (mobile sources), and neighborhood character. Therefore, a detailed assessment of likely effects in those areas of concern will be prepared and disclosed in a targeted EIS (see section E, “Scope of Work for the Targeted EIS”). In addition, the EIS will contain an estimate of construction-period worker and truck trips.

SCOPING

The CEQR scoping process is intended to focus the EIS on those issues that are most pertinent to the proposed action. The process at the same time allows other agencies and the public a voice in framing the scope of the EIS. This draft scope sets forth the analyses and methodologies proposed for the targeted EIS. During the scoping period, those interested in reviewing the targeted EIS draft scope may do so and give their comment in writing to the lead agency or at a public scoping hearing to be held on November 16, 2010 at 6:30 at the Flatbush Brooklyn Public Library (22 Linden Boulevard). Comments received during the draft scope’s public hearing, and written comments received up to 10 days after the hearing will be considered and incorporated as appropriate into a final scope of work (The comment period will close on December 3, 2010). The final scope of work will be used as a framework for preparing the targeted Draft EIS (DEIS) for the proposed project.

E. SCOPE OF WORK FOR THE TARGETED EIS

The targeted EIS will be prepared in conformance with all applicable laws and regulations, including the State Environmental Quality Review Act (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 follow the guidance of the *CEQR Technical Manual*, dated May 2010.

The EIS will contain:

- A description of the proposed project and its environmental setting;
- A statement of the environmental impacts of the proposed project, including its short- and long-term effects and typical associated environmental effects;
- 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;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the proposed project should it be implemented; and
- A description of mitigation proposed to minimize any significant adverse environmental impacts.

In addition, the EIS will include a brief summary of those analysis areas that have been screened from further analysis based on the checklist provided in the EAS. These areas are described in the previous section of this Scope of Work.

The specific areas to be included in the targeted EIS, as well as their respective tasks, are described below.

TASK 1. PROJECT DESCRIPTION

The first chapter of the EIS introduces the reader to the proposed Kings Theatre project and sets the context in which to assess impacts. The chapter will contain a project identification; the background and purpose and need for the proposed theatre restoration project and any related actions; a detailed description of the proposed action(s), the lots that are affected, and the proposed project elements; a discussion of the approvals required, the roles of involved public agencies, procedures to be followed, and the role of the EIS in the CEQR process. The chapter is the key to understanding the proposed project and its impacts, and gives the public and decision-makers a base from which to evaluate the proposed project.

TASK 2. HISTORIC AND CULTURAL RESOURCES

The Kings Theatre was informally determined eligible for listing on the State and National Registers of Historic Places by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) based on a site visit conducted by OPRHP staff in 2008. In addition, as identified in the EAS, the study area surrounding the project site contains a number of potential architectural resources. Therefore, an assessment of the proposed project's potential to affect historic resources will be undertaken for the EIS. The attachment provided in the EAS will be used as the basis for the analysis and will be updated as appropriate.

TASK 3. TRANSPORTATION

TRAFFIC AND PARKING

This section will analyze the project's potential for significant traffic impacts and the adequacy of parking in the area to accommodate its needs. The trip generation analysis developed for the EAS, which was reviewed and approved by the New York City Department of Transportation (NYCDOT), identified that a quantitative traffic and parking impact analysis will be required. The specific elements of this analysis will include the following:

- A. Develop traffic assignments using the trip generation estimates developed in the EAS.
- B. Define the traffic study area encompassing the intersections to be analyzed. The traffic study area includes 14 key intersections close to the project site, along north-south routes, through which the concentration of project-generated traffic would likely be most intense and will include the following:
 - Flatbush Avenue and Caton Avenue
 - Flatbush Avenue and Church Avenue
 - Flatbush Avenue and Tilden Avenue/Regent Place
 - Flatbush Avenue and Duryea Place
 - Flatbush Avenue and Beverley Road (north)
 - Flatbush Avenue and Beverley Road (south)
 - Flatbush Avenue and Bedford Avenue/Stephens Court
 - Flatbush Avenue and Foster Avenue/Bedford Avenue
 - Bedford Avenue and Linden Boulevard
 - Bedford Avenue and Church Avenue
 - Bedford Avenue and Tilden Avenue

- Bedford Avenue and Beverley Road
 - Ocean Avenue and Church Avenue
 - Ocean Avenue and Beverley Road
- C. Identify the peak traffic analysis hours. Three peak traffic hours will be analyzed: the Saturday midday arrival, midday departure, and evening arrival. According to traffic data collected by Automatic Traffic Recorder (ATR) machines for streets surrounding the project site, weekday, Friday, and Saturday evening traffic volumes are similar.
- D. Conduct new traffic counts for detailed analysis purposes. New counts will be obtained via a blend of 24-hour ATR machine counts and manual through and turning counts at all intersection analysis locations. The 24-hour ATR counts will be conducted for a period covering two weekends at approximately five to six locations, while the intersection counts will be conducted for one Saturday, and adjusted for traffic variations indicated in the ATR data, if necessary. After completion of data collection, the traffic count data will be tabulated, the specific Saturday peak hours will be identified, and balanced traffic volume maps for each peak traffic analysis hour will be prepared.
- E. Inventory street widths, street directions, number of travel lanes and lane widths, traffic restrictions, parking regulations, signal phasing and timing plans, location of bus stops, midblock driveways, and other data needed to conduct the traffic analyses. Official signal timing plans will be obtained from NYCDOT and discrepancies from field-observed signal timings will be noted and NYCDOT will be advised.
- F. Conduct travel time and delay runs for each of the traffic analysis peak periods along the principal routes in the area that would be used by traffic approaching and leaving the project sites, i.e., Flatbush Avenue and Bedford Avenue, including locations at which air quality analyses are to be conducted. Existing speed data will be tabulated.
- G. Conduct intersection capacity and level-of-service (LOS) analyses using 2000 *Highway Capacity Manual* procedures, resulting in volume-to-capacity (v/c) ratios, average vehicle delays, and LOS by lane group and for the overall intersection. Levels of service will be presented in graphical and tabular formats.
- H. Determine traffic volumes under the future No Build condition and prepare balanced No Build traffic volume maps. This will include an annual background traffic growth rate as specified in the *CEQR Technical Manual*, plus traffic expected to be generated by expected significant development projects in the immediate study area. The definition of No Build development projects will be identified in conjunction with EDC and DCP. The traffic projections for background conditions will be obtained either from those projects' EISs or from a trip generation analysis to be conducted for them for the No Build condition within this traffic study.
- I. Prepare trip generation estimates for the expected No Build development projects and assign project-generated vehicle trips to the roadway network and through each of the intersections being analyzed, and develop No Build traffic volume maps.
- J. Conduct intersection capacity and LOS analyses for future No Build conditions using 2000 *Highway Capacity Manual* procedures, resulting in volume-to-capacity (v/c) ratios, average vehicle delays, and LOS by lane group and for the overall intersection. Level of service results will be presented in graphical and tabular formats.

- K. Combine project-generated vehicle trip assignments with future No Build traffic volumes, to reflect future Build traffic volumes. Vehicular traffic will be assigned to the project site and associated parking facilities. Additionally, assignments for traffic diversions resulting from the proposed demapping of East 22nd Street between Tilden Avenue and Duryea Place will be developed.
- L. Conduct intersection capacity and LOS analyses for Build conditions using 2000 *Highway Capacity Manual* procedures, resulting in volume-to-capacity (v/c) ratios, average vehicle delays, and LOS by lane group and for the overall intersection. Level of service results will be presented in graphical and tabular formats. Significant traffic impacts will be identified as per *CEQR Technical Manual* guidelines.
- M. Identify and evaluate traffic capacity improvements needed to mitigate significant traffic impacts.
- N. Prepare travel speed data for air quality analyses for No Build, Build, and Mitigated Build conditions.
- O. Conduct an inventory of on-street and off-street parking spaces within a half-mile radius of the project site. This will include a mapping of parking lots and garages, a tabulation of their capacities and occupancies on a typical Saturday (and weekday if needed), a general inventory of curbside parking regulations and their legal and illegal use, and a quantification of the number of available on-street spaces that are legally available for use by future development in the area.
- P. Project parking usage and availability under No Build conditions using the annual background traffic growth rate and new parking facilities (if any) expected to be operational in the future and their expected occupancy levels.
- Q. Develop parking accumulation estimates for the proposed Build condition based on the amount of parking proposed for the project, and develop profiles of in/out activity.
- R. Identify projected parking shortfalls, if any, and identify measures to alleviate such shortfalls.
- S. Assess vehicle/pedestrian safety conditions by reviewing the most recent three years of accident data from NYCDOT or the New York State Department of Transportation (NYSDOT) for the intersections being analyzed. High accident locations will be identified in accordance with criteria prescribed by the *CEQR Technical Manual*. If the proposed project is anticipated to generate notable vehicular and pedestrian traffic at such locations, future safety conditions will be evaluated. Where appropriate, mitigation or improvement measures will be recommended to avoid or mitigate safety impacts.

TRANSIT AND PEDESTRIANS

This section will analyze the project's potential to create significant impacts relating to transit services and pedestrians. The *CEQR Technical Manual* specifies that if an action would result in more than 200 peak hour transit and pedestrian trips, quantified analyses are warranted. Based on trip generation calculations performed for the EAS, the proposed development would exceed the 200 peak hour trip threshold; however, the peak hour of the generator would occur primarily outside of the commuter peak periods, and there are numerous nearby available transit options. Therefore, a qualitative assessment is expected to be sufficient to conclude that the proposed project would not result in significant adverse transit impacts. A detailed transit trip assignment

will, however, be performed to determine transit-related pedestrian volumes for pedestrian analysis.

Based on the person trip generation developed for the EAS, a quantitative pedestrian impact analysis will be required for the project's environmental review. The specific elements of the transit and pedestrians analysis are as follows:

- A. Describe transit services in the area. New York City Transit (NYCT) subway and bus routes, their hours of operation and frequency of service as an indicator of their ability to serve the project site. No additional analyses are expected.
- B. Develop future No Build and Build transit and pedestrian trip generation and assign transit trips to various transit and walking routes to determine pedestrian analysis locations. The No Build project list developed for traffic and parking analysis will also be used for transit and pedestrians. No Build trip generation and assignments will be developed from the same sources used for the traffic and parking analysis. The proposed project would generate pedestrian traffic along likely routes between the project site and connecting transit service and the adjacent neighborhoods.
- C. Collect pedestrian counts at up to two locations along Flatbush Avenue for the Saturday midday arrival, midday departure, evening arrival peak periods being analyzed for traffic conditions.
- D. Perform a quantitative analysis of existing corner, crosswalk and/or sidewalk conditions at the two Flatbush Avenue locations during the three analysis periods.
- E. Conduct future No Build and Build pedestrian analyses for the project's Build year, for the three analysis periods identified above.
- F. Summarize the latest three years of accident data from NYCDOT or NYSDOT to identify high vehicular-pedestrian accident locations and evaluate pedestrian safety with the proposed project.
- G. Identify and evaluate mitigation measures if significant impacts are identified.

TASK 4. AIR QUALITY

INTRODUCTION

The air quality studies for the proposed project will include an analysis of mobile sources (as described above, a stationary source screening analysis was undertaken as part of the EAS and no further analysis of the project's stationary sources is warranted). The number of project-generated vehicle trips would exceed the *CEQR Technical Manual* screening thresholds above which detailed analyses of mobile source emissions of carbon monoxide (CO) and particulate matter (PM) on ambient pollutant levels in the study area are required, and thus these detailed analyses will be performed. (The threshold for conducting an analysis of carbon monoxide (CO) emissions corresponds to 170 vehicles at a particular intersection in the peak hour.) The need for conducting an analysis of PM levels is based on the vehicular PM_{2.5} emissions during peak hour traffic.¹

¹ As discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*, the mobile source particular matter (PM) emissions screening threshold is based on peak hour heavy-duty diesel vehicle (HDDV) traffic or its equivalent in vehicular emissions. A worksheet is attached in the CEQR Technical

METHODOLOGY

The mobile source analysis methodology entails selecting appropriate locations for analysis, calculating vehicular emissions, calculating pollutant levels using dispersion models that have been approved by the applicable air quality review agencies (i.e., U.S. Environmental Protection Agency [EPA], the New York State Department of Environmental Conservation [NYSDEC], and the New York City Department of Environmental Protection [NYCDEP]), and determining whether the project would result in potential impacts. The methodologies used for this analysis would be consistent with the *CEQR Technical Manual*.

The mobile source air quality study will include the following work tasks:

- A. Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by NYSDEC will be compiled for the analysis of ambient background conditions.
- B. Determine locations for detailed mobile source analysis. Select critical intersection locations in the study area, based on data obtained from the traffic analysis. Receptor locations will include locations where maximum project impacts and highest pollutant levels are expected.
- C. Select dispersion model for analysis. EPA's CAL3QHC screening model will be used for the CO analysis. EPA's CAL3QHCR refined intersection model will be used at intersections that are found to exceed CO standards or *de minimis* criteria using the CAL3QHC screening model, and for the PM₁₀/PM_{2.5} intersection analysis.
- D. Select "worst-case" meteorological conditions. Worst-case conditions to be assumed for the microscale CO analysis are a 1.0 meter/second wind speed, Class D stability, and temperature and persistence factors as recommended in the *CEQR Technical Manual*. For the CAL3QHCR analysis, five years (2004-2008) of meteorological data from LaGuardia Airport and concurrent upper air data from Brookhaven, New York will be used for the simulation program.
- E. Select an appropriate emission calculation methodology and input parameters needed to compute emission source strengths. EPA's MOBILE6.2 model will be used with NYCDEP- and/or NYSDEC-supplied information as input to the model, to account for the state vehicle inspection and maintenance (I&M) program (including any applicable future I&M programs), and the state anti-tampering program. The *CEQR Technical Manual* recommended winter temperature of 43 degrees Fahrenheit for the Borough of Brooklyn will be used as input to the model for calculating CO emissions.
- F. Determine existing pollutant levels. At each mobile source receptor location, calculate maximum 1- and 8-hour CO concentrations for each peak traffic period analyzed. No field monitoring will be performed as part of this study.
- G. Compare existing levels with standards. Existing pollutant levels (both calculated and measured levels from NYSDEC monitoring stations) will be compared with National Ambient Air Quality Standards (NAAQS).

Manual to help determine if projects would generate traffic exceeding the screening threshold. According to the worksheet, the emission of 5 passenger vehicles is approximately equivalent to 1 HDDV for this project.

- H. Determine future CO, PM₁₀, and PM_{2.5} pollutant levels without the proposed project. Pollutant levels without the proposed project will be determined for the future analysis year of 2014. At each receptor location, maximum 1- and 8-hour CO concentrations, maximum 24-hour PM₁₀ concentrations, and maximum 24-hour and annual PM_{2.5} concentrations will be calculated for each of the peak periods analyzed.
- I. Compare future levels without the proposed project with standards. Future CO and PM₁₀ pollutant levels without the proposed project will be compared to the NAAQS to determine compliance with standards.
- J. Determine future CO, PM₁₀, and PM_{2.5} pollutant levels with the proposed project. Pollutant levels with the proposed project will be determined for the future analysis year. At each receptor location, maximum 1- and 8-hour incremental, maximum PM_{2.5} incremental, and total CO and PM₁₀ concentrations will be calculated for each of the peak periods analyzed, in accordance with the *CEQR Technical Manual*.
- K. Compare future levels with the proposed project with standards. Future CO and PM₁₀ pollutant levels with the proposed project will be compared with NAAQS to determine compliance with standards. CO concentration increments will be compared with the city's *de minimis* criteria (i.e., a comparison of future levels with the proposed project versus future levels without the proposed project) to determine project impacts. PM_{2.5} concentration increments will be compared with the PM_{2.5} interim guidance criteria.
- L. Assess the consistency of the proposed project with the State Implementation Plan (SIP). An assessment to determine the consistency of the proposed project with the strategies contained in the applicable SIP for the area will also be performed.

TASK 5. NOISE

As discussed above, as part of the EAS, the screening analysis demonstrated that no further analysis of interior noise levels or stationary sources is warranted. Therefore, the noise analysis will include a traffic screening analysis to determine if project-generated traffic would be sufficiently large to have the potential for causing significant increases in noise levels (i.e., result in a doubling of passenger car equivalents [Noise PCEs]). If the screening analysis indicates the potential for significant adverse noise impacts, a detailed mobile source analysis will be performed in accordance with the procedures described in the *CEQR Technical Manual*.

TASK 6. NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the characteristics of its population and economic activities, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include noise levels, traffic, and pedestrian patterns.

As described in the EAS, the proposed project may potentially result in significant adverse transportation and/or noise impacts, requiring an analysis of impacts to neighborhood character. The specific elements of this analysis are expected to include the following:

- A. Describe the predominant factors that contribute to defining the character of the neighborhood surrounding the project site.
- B. Based on planned development projects, public policy initiatives, and planned public improvements, summarize changes that can be expected in the character of the area in the future without the proposed project.

- C. Assess and summarize the proposed project's impacts on neighborhood character. Where appropriate, the analysis of impacts (such as transportation and noise) as presented in other pertinent EIS sections will be considered.

TASK 7. MITIGATION

Where significant impacts have been identified in the targeted EIS, measures to mitigate those impacts will be described. These measures will be developed and coordinated with the responsible City and State agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts (see "Summary Chapters" below).

TASK 8. ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and practicable options that avoid or reduce project-related significant adverse impacts and achieve the stated goals and objectives of the proposed project. The specific alternatives to be analyzed are typically finalized with the lead agency as project impacts become clarified. However, they will at least include the No Build Alternative (no modified amendment to the City Map), which assumes that the proposed project is not implemented and the project site maintains its current uses, and an alternative that reduces any significant adverse unmitigated impacts.

TASK 9. SUMMARY CHAPTERS

In accordance with *CEQR Technical Manual* guidelines, the EIS will include the following three summary chapters, where appropriate:

- Unavoidable Adverse Impacts—which summarizes any significant adverse impacts that are unavoidable if the proposed actions are implemented regardless of the mitigation employed (or if mitigation is impossible);
- Growth-Inducing Aspects of the Proposed Actions—which generally refers to "secondary" impacts of a proposed actions that trigger further development; and
- Irreversible and Irrecoverable Commitments of Resources—which summarizes the proposed actions and their impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long-term.

TASK 10. EXECUTIVE SUMMARY

The executive summary will utilize relevant material from the body of the EIS to describe the proposed actions, their significant and adverse environmental impacts, measures to mitigate those impacts, and alternatives to the proposed actions. *