KINGS THEATRE

FINAL ENVIRONMENTAL IMPACT STATEMENT

CEQR No: 11DME003K

Lead Agency:
Office of the Deputy Mayor for Economic Development

Lead Agency Contact:
Robert R. Kulikowski

April 2011

KINGS THEATRE
FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

Project Location:	The Kings Theatre Block 5132, Lots 17 and 1 8 and a portion of Lot 12 Block 5133, Lot 55 and a portion of Lots 1 and 50 Community District 14 Borough of the Brooklyn
CEQR No.	11 DME003K
SEQR Classification	Unlisted
ULURP Nos.	N/A
Lead Agency:	Office of the Deputy Mayor for Economic Development
Lead Agency Contact:	Robert R. Kulikowski
Project Applicant:	The Office of the Deputy Mayor for Economic Development, in coordination with the New York City Economic Development Corporation
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	Acceptance Date: April 27, 2011

Copies of the FEIS are available for review on the websites of the New York City Economic Development Corporation and the Mayor's Office of Environmental Coordination.

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Foreword

This document is the Final Environmental Impact Statement (FEIS) for the Kings Theatre project (the proposed project). The Draft Environmental Impact Statement (DEIS) for the proposed project was accepted as complete by the Office of the Deputy Mayor for Economic Development, as lead agency under City Environmental Quality Review (CEQR), and issued for public review and comment on December 30, 2010. A public hearing on the DEIS was held on January 25, 2011 by the lead agency at the Brooklyn Public Library Flatbush Branch, 22 Linden Boulevard, Brooklyn, New York. Oral and written comments were accepted at that hearing and throughout the public comment period, which was held open until February 7, 2011.

This FEIS reflects all relevant substantive comments made on the DEIS during the public comment period and at the public hearing. The comments are summarized and responded to in Chapter 13, "Comments and Responses." Where appropriate, the text of other chapters of this FEIS was revised in response to comments or changes in the project. All revisions and changes made since completion of the DEIS are indicated by double underlines. However, no double-underlining was used for this Foreword and Chapter 13, both of which are presented for the first time in this FEIS. Changes to the FEIS include the following:

- Mitigation. In the DEIS, a range of mitigation measures was proposed to address the significant adverse traffic impacts that would occur during event conditions. These measures included the following:
  - Roadway modifications (e.g., lane restriping, intersection or street channelization improvements)
  - Parking regulation modifications (e.g., prohibit parking or "standing" at certain locations at certain time periods)
  - Signal phasing and/or timing modifications
  - Turning prohibitions
  - Signage

  The New York City Department of Transportation (NYCDOT) reviewed the transportation and mitigation analyses presented in the DEIS and provided input on the mitigation measures to be implemented. FEIS Chapter 8, "Mitigation," includes certain modifications to the mitigation measures presented in the DEIS, as recommended by NYCDOT. The types of mitigation measures (as described above) have not changed with the exception of the addition of signage at one location to provide advance warning of a particular roadway modification (see Chapter 8, "Mitigation"). The modifications to traffic mitigation do not affect the conclusions of the DEIS.

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A. PROJECT DESCRIPTION

INTRODUCTION

The applicant—the Kings Theatre Redevelopment Company, L.L.C.—proposes to restore and expand a vacant theatre, known as The Kings Theatre, located at 1027 Flatbush Avenue in the Flatbush neighborhood of Brooklyn (**see Figure S-1**). The Kings Theatre was originally built in 1929 as a movie theatre; it has been closed since 1977. 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. 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 and other funding (including a New York Economic Development Capital Assistance Program [NYEDCP] Grant, which is processed by the New York State Dormitory Authority State of New York [DASNY] on behalf of the New York State Legislature); and nomination of the Kings Theatre to the State and National Registers (S/NR) of Historic Places.

The targeted Environmental Impact Statement (EIS) has been prepared in conformance with 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 the New York City Environmental Quality Review (CEQR), found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS follows the guidance of the 2010 *CEQR Technical Manual*, dated May 2010. The Office of the Deputy Mayor for Economic Development is the CEQR lead agency for this proposal.

The Draft EIS (DEIS) for the proposed project was accepted as complete by the lead agency and issued for public review and comment on December 30, 2010. A public hearing on the DEIS was held on January 25, 2011 by the lead agency at the Brooklyn Public Library Flatbush Branch, 22 Linden Boulevard, Brooklyn, New York. Oral and written comments were accepted at that hearing and throughout the public comment period, which was held open until February 7, 2011.

PROJECT LOCATION

As shown in **Figure S-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 and 18 and a portion of Lot 12, and Block 5133, Lot 55 and a portion of Lots 1 and 50). East 22nd Street is currently a one-way southbound street with one moving lane and parking on both sides of the street. It is a discontinuous street, extending four blocks in the study area, between Tilden Avenue and Clarendon Road.

The site is located in a commercial zoning district (C4-2) surrounded by residential districts.

12.20.10

Project Site

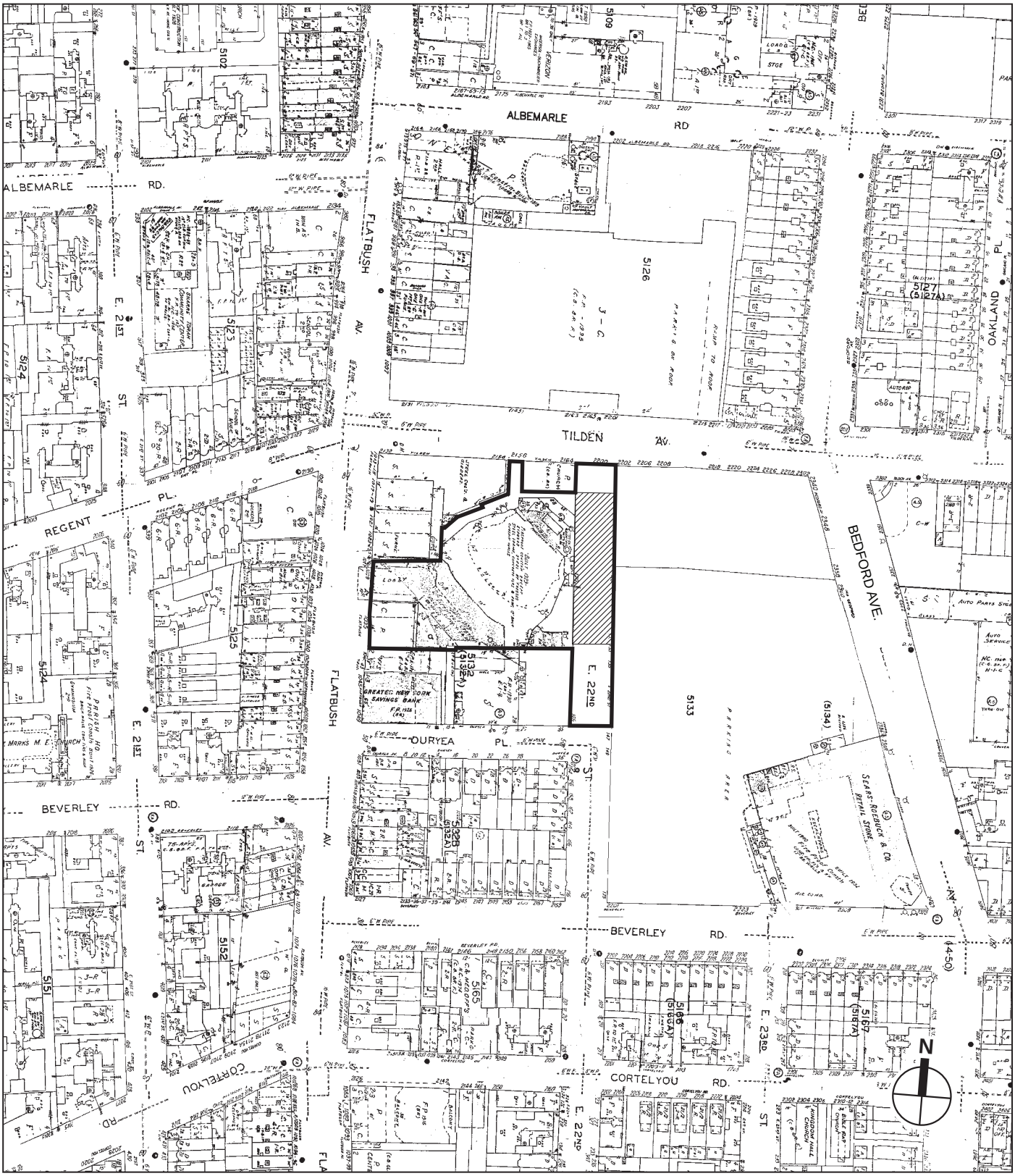
0 2000 FEET

SCALE

Project Location

Figure S-1

12.20.10



Project Site

Area to be Demapped

KINGS THEATRE

Project Site
Figure S-2

EXISTING THEATRE

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 approximately 3,600. The theatre has been closed since 1977 and has fallen into disrepair.

The existing theatre 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.

PROPOSED THEATRE

THEATRE RENOVATION AND EXPANSION

The existing theatre would be stabilized and restored, thereby improving the appearance and condition of this architectural resource. This renovation effort would include retaining the theatre's historic terra cotta façade as well as its significant public interior spaces, decoration, and finishes. Key historic elements in the plaster and painting, the millwork and ornamental murals and draperies would all be recaptured to revitalize the theatre as a center for the community.

The theatre would also be 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 performances and other presentations can be accommodated (see **Figures S-3 through S-6**). At its current size, the facility lacks the essential attribute necessary for the presentation of modern live performances. The stage is too small and the back-of-house support areas and dressing rooms are lacking. Front-of-house facilities, such as lobbies and lounges for patrons, are also insufficient by today's standards. Thus, this venue would be refitted and restored to fully function as a world-class venue for a wide range of live entertainment, serving both local and touring shows. 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. However, the renovated theatre would maintain a similar seating capacity as the existing theatre by providing up to approximately 3,600 seats.

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 lobby, would be provided. New public restroom facilities and new 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 large-scale 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.

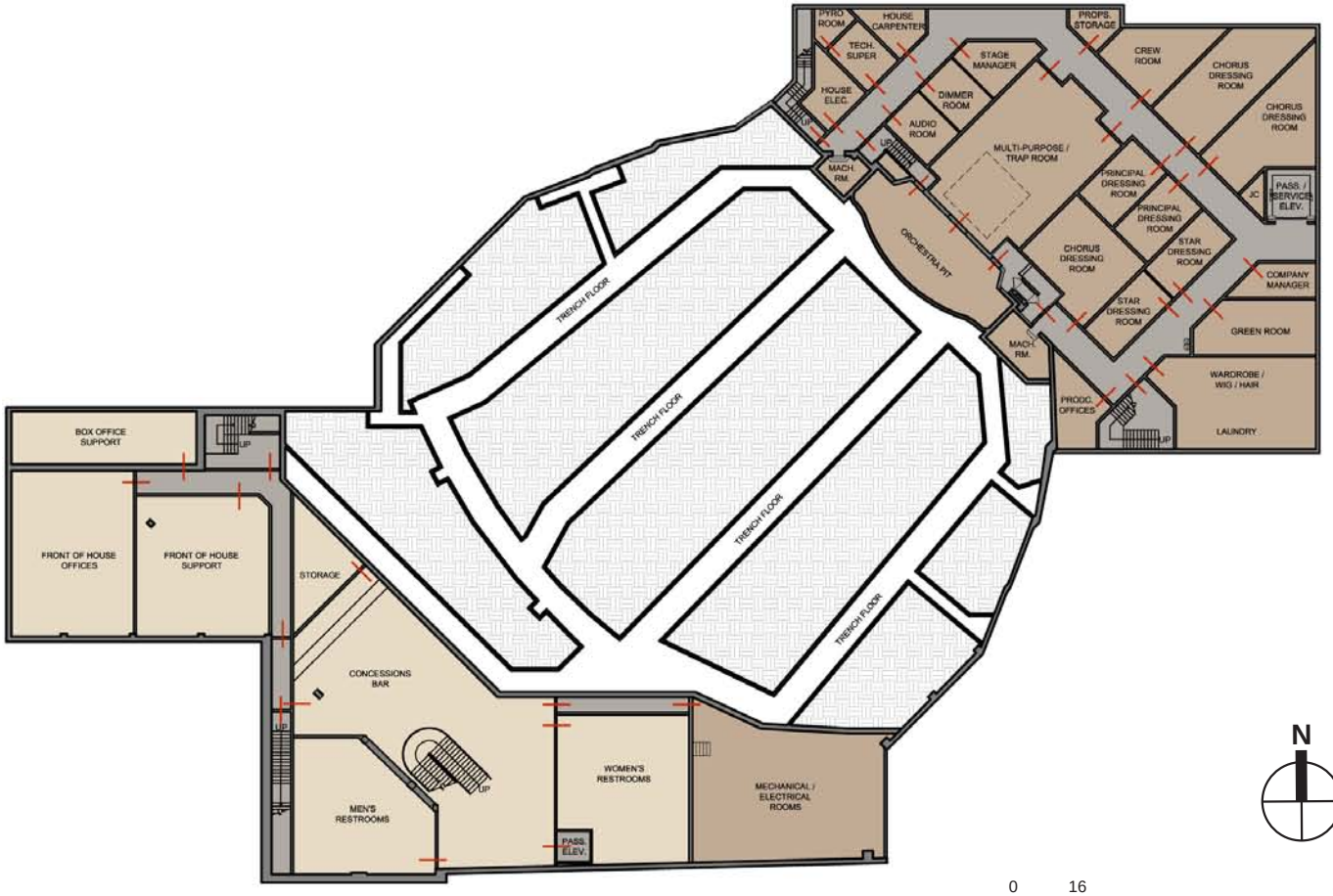
Restoration of the theatre would involve both the interior and exterior and would be undertaken to meet the Secretary of the Interior's Guidelines for Rehabilitation of Historic Structures. The proposed project would return this vacant cultural facility to productive use. As discussed below (see "Proposed Actions and Approvals"), listing the theatre on the State and National Registers

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

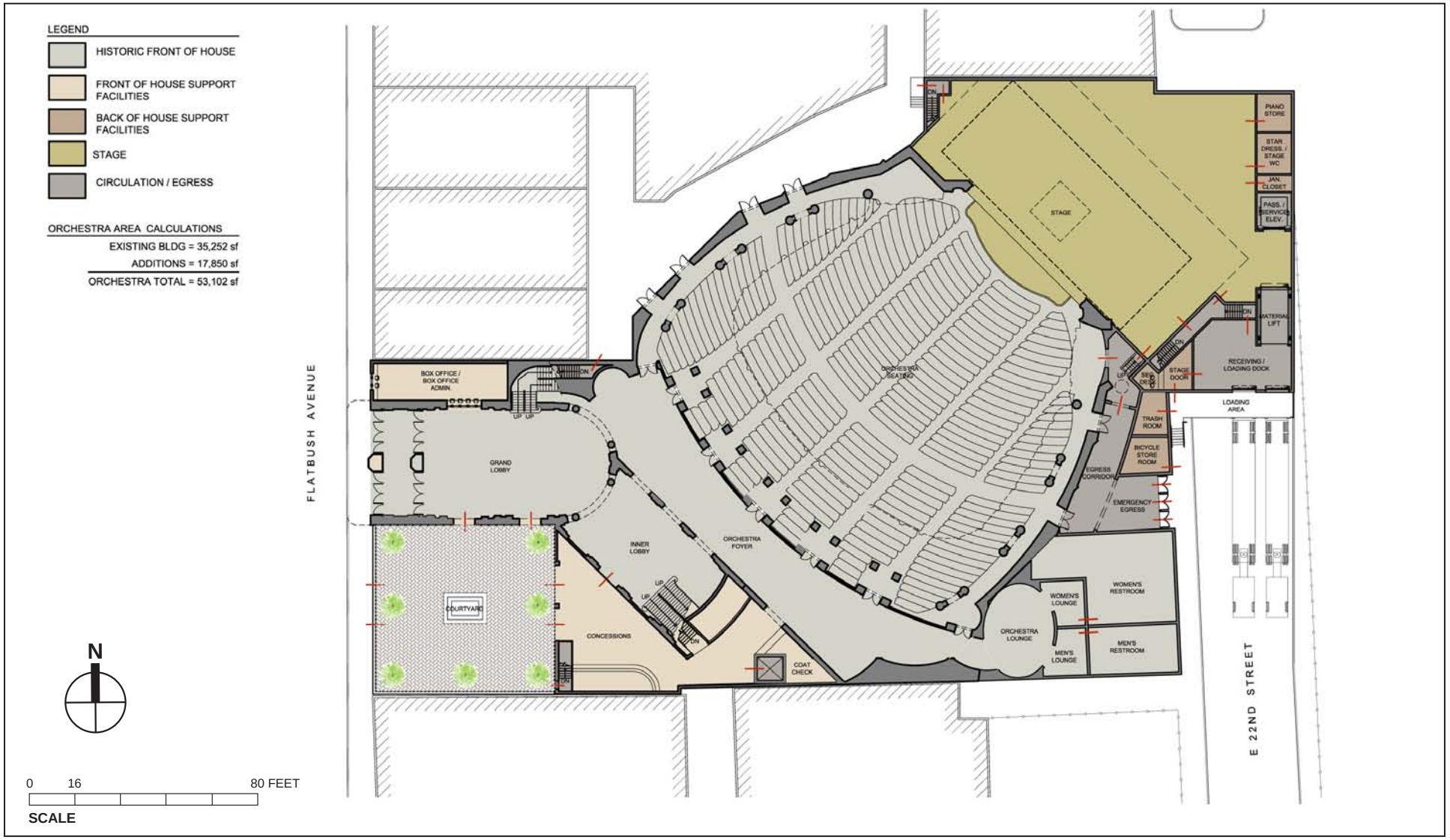


SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Basement Plan

Figure S-3

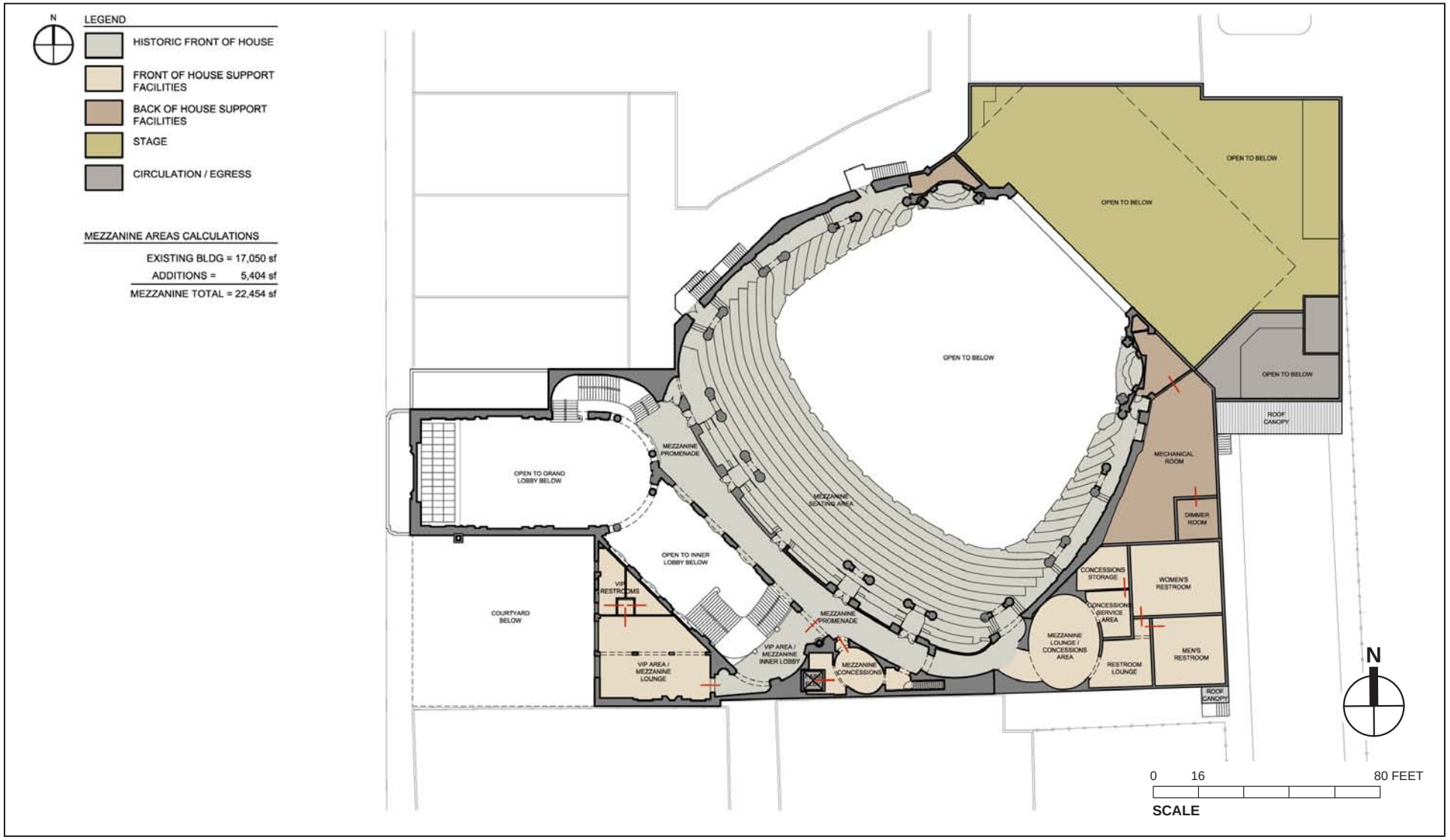


SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Ground Floor and Orchestra Plan

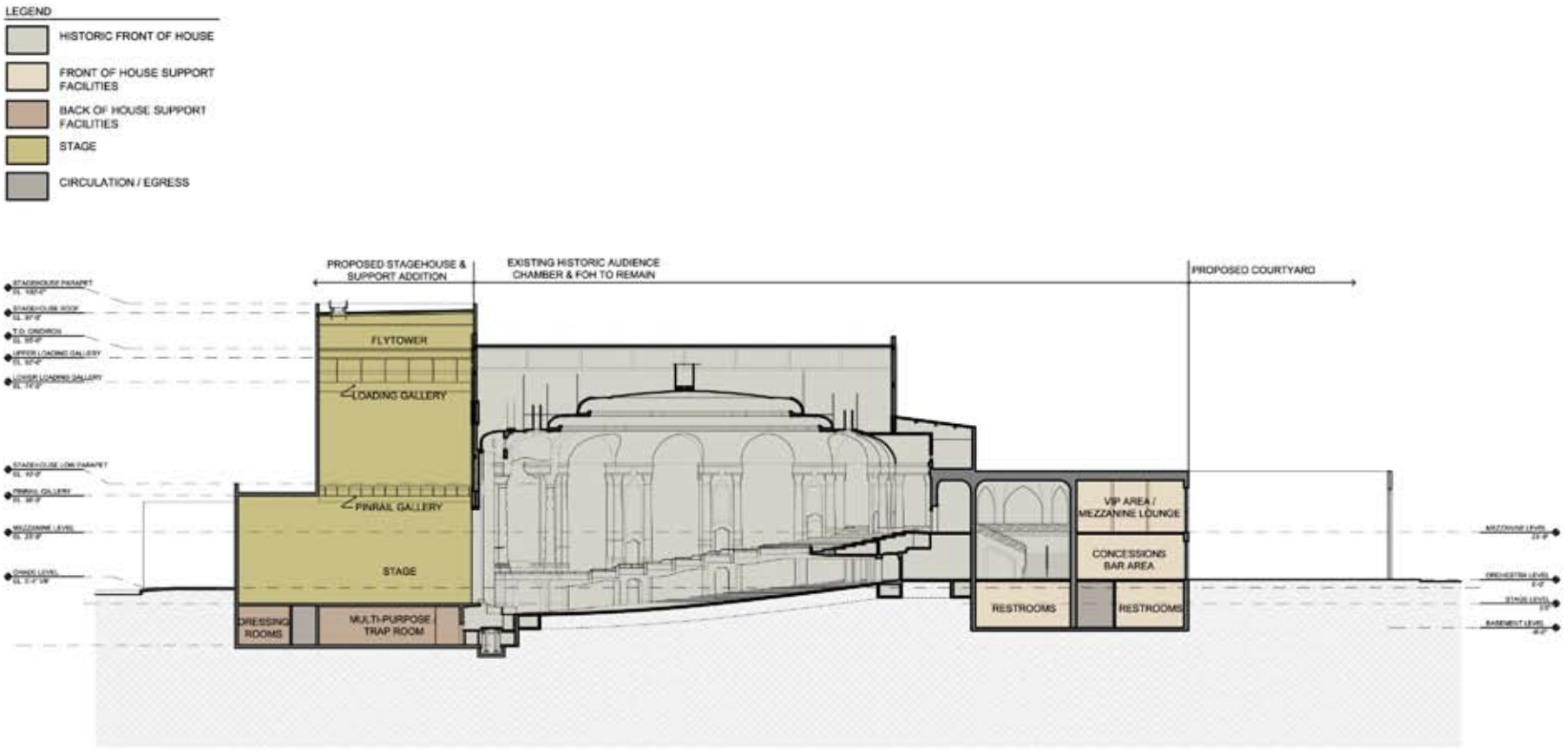
Figure S-4



SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Mezzanine Plan
Figure S-5



SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Section
Figure S-6

of Historic Places would enable the proposed project to be eligible for tax credits that would finance the restoration of the theatre.

PROPOSED OPERATIONS

The theatre would be used for a wide-ranging mix of 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. The design of the venue would enable it to respond to the demands of the presentation market and to the needs of a diverse community. 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.

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 CEQR, and received a Conditional Negative Declaration (CND) from the New York City 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 have been problematic without the acquisition of those properties, as the private properties used Tilden Avenue for access to the

[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.

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 to 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 and used to accommodate an expansion of the theatre's stagehouse and loading areas. The filing of a modification to the amendment to the City Map is a discretionary action subject to the CEQR process and requires approval of the City Planning Commission (CPC) and a referral to the Community Board and Borough President.
- Section 384(b)(4). Approval by the Mayor and the Borough Board pursuant to Section 384(b)(4) of the City Charter of the business terms of the proposed disposition of the theatre and street from the City to EDC and the negotiated disposition of the theatre and street from EDC to the Kings Theatre Redevelopment Company, L.L.C., the developer of the project. This approval is a discretionary action subject to CEQR.
- City Capital and Other 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, and any other approval related to any additional funding that may become available for the project, is a discretionary action subject to CEQR. In addition, the project is seeking a New York Economic Development Capital Assistance Program (NYEDCP) Grant, which is processed by the New York State Dormitory Authority State of New York (DASNY) on behalf of the New York State Legislature. This is a discretionary action subject to SEQRA.
- 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.

B. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

INTRODUCTION

The Office of the Deputy Mayor for Economic Development, lead agency for the proposed project, and the New York City Economic Development Corporation, as sponsoring agency, reviewed information regarding the proposed actions contained in an Environmental Assessment Statement (EAS), dated October 14, 2010, and determined that the proposed project would not have the potential to result in significant adverse 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; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; air quality from stationary sources; greenhouse gas emissions; noise from stationary sources; public health; and construction. The lead agency issued a Draft Scope of Work for the EIS on October 14, 2010 and a public scoping meeting was held for the proposed project on November 16, 2010 at 6:00 PM at the Flatbush Brooklyn Public Library (22 Linden Boulevard). No comments were made at the public meeting, and no written comments were received.

Further, as set forth in the EAS and Final Scope of Work, the ~~D~~EIS estimated the number of construction workers and truck deliveries per day in order to confirm whether construction-period worker and truck trips would be substantial enough to adversely affect transportation conditions in the area. Based on this analysis, it was confirmed that construction of the proposed project is not expected to result in any significant adverse impacts to the area's transportation system. For ease of reading, the assessment is explained in Chapter 7, "Construction." Therefore, the ~~DEIS~~ FEIS focuses on the project's potential to result in significant adverse impacts related to the following:

- Historic and cultural resources;
- Transportation;
- Air quality from mobile sources;
- Noise from mobile sources; and
- Neighborhood character.

The impact assessment for these subject areas are summarized below.

HISTORIC AND CULTURAL RESOURCES

In a letter dated March 29, 2010, the New York City Landmarks Preservation Commission (LPC) determined that the project site has no archaeological significance; therefore, the proposed project would not affect archaeological resources, and no significant adverse impacts would occur.

All alterations to the Kings Theatre building would be performed as per the Secretary of the Interior's Standards for Rehabilitation in consultation with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). 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, as stated in the Interim Agreement between NYCEDC and the project sponsor. Therefore, absent the federal tax credits, the project would not go forward. Compliance with the Secretary of the Interior's Standards as interpreted by OPRHP and the National Park Service, in order to receive the tax credits, would ensure that the proposed project would not adversely affect the Kings Theatre. In comments dated November 3, 2010, LPC has concurred

that there would be no significant adverse impacts to the Kings Theatre provided its restoration and rehabilitation is undertaken according to the Secretary of the Interior's Standards in consultation with OPRHP.[1] In a letter dated January 10, 2011, OPRHP generally concluded that restoration of the theatre interior and exterior would be appropriate; OPRHP will continue its review of the proposed restoration program as more details are developed.

The proposed project would also not result in significant adverse impacts on architectural resources surrounding the project site. Impacts on the former Brooklyn Union Gas Company Building and the former Flatbush Savings Bank, located adjacent to the Kings Theatre and the vacant area to be converted into the theatre courtyard, would be avoided with the development and implementation of a Construction Protection Plan (CPP) in consultation with LPC and OPRHP prior to construction. The CPP would describe measures to be taken to avoid adverse physical impacts on such structures, such as ground-borne construction-period vibrations, falling debris, and damage from heavy machinery. The CPP would follow the requirements established in the DOB's *TPPN #10/88*, concerning procedures for the avoidance of damage to adjacent historic structures from nearby construction. It would also follow the guidelines set forth in section 523 of the 2010 *CEQR Technical Manual*, including conforming with LPC's *New York City Landmarks Preservation Commission Guidelines for Construction Adjacent to a Historic Landmark* and *Protection Programs for Landmark Buildings*.

The proposed restoration and reuse of the Kings Theatre would not be expected to adversely affect the context of the former Brooklyn Union Gas Company Building and the former Flatbush Savings Bank or other architectural resources in the study area, as it would result in the renovation and reuse of a large underutilized historic structure.

Overall, the proposed actions would provide for the preservation and restoration of a significant historic structure, while providing a new cultural institution. As such, it is anticipated that the proposed project would have a positive impact on this historic structure, which would benefit the nearby architectural resources. With the preparation and implementation of a CPP for the former Brooklyn Union Gas Company Building and the former Flatbush Savings Bank, the proposed project would not result in adverse impacts on architectural resources.

TRANSPORTATION

The proposed project is expected to generate approximately 922 vehicle trips in the Saturday midday and evening arrival peak hours (770 vehicle trips to the project site and 152 away from the project site), and 1,092 vehicle trips in the Saturday midday departure peak hour (180 vehicle trips to the project site and 912 away from the project site). As part of the proposed project, a portion of the block of East 22nd Street between Tilden Avenue and Duryea Place would be demapped and closed to traffic to accommodate an expansion of the theatre's stagehouse, back-of-house support areas, and loading areas into the street to support live theatre events.

Of the 14 study area intersections analyzed, the proposed project would result in significant traffic impacts at 12 intersections in the Saturday midday arrival peak hour, 13 in the Saturday midday departure peak hour, and 10 in the Saturday evening arrival peak hour. Impacts would be fully mitigated at most of these intersections. During the Saturday midday arrival peak hour, three intersections could only be partially mitigated. During the Saturday midday departure peak

[1] ~~OPRHP will be providing comments on the project's potential impacts on historic and cultural resources between publication of the DEIS and FEIS.~~

hour, two intersections could only be partially mitigated and two intersections would be unmitigatable. During the Saturday evening arrival peak hour, two intersections could only be partially mitigated and two intersections would be unmitigatable. Overall, four of the 14 intersections would either be only partially mitigated or unmitigatable during at least one time period.

The parking demand generated by the proposed project would be fully accommodated by available on-street and off-street parking within the study area. Additionally, the loss of on-street parking spaces that would result from the proposed closure of East 22nd Street would not adversely impact parking conditions.

The proposed project would result in 273 passenger trips by bus and 547 passenger trips by subway during the Saturday midday and evening event arrival peak hours. During the Saturday midday event departure hour, 324 passenger trips by bus and 648 passenger trips by subway would be generated. Bus and subway trips were assigned to the various lines serving the project site. Based on these assignments, it was determined that fewer than 50 bus passenger trips would be assigned to any single route; therefore, there would be no need for quantitative bus analysis according to CEQR guidelines, and the proposed project would not result in significant adverse bus impacts. As many as 292 subway passenger trips would be assigned to at least one subway line, but since ridership volumes are substantially lower on Saturday as compared to weekdays (approximately 50 percent) at stations serving the project site, there is no potential for impacts at this level of passengers on a Saturday, and no quantitative subway analysis was performed.

Pedestrian volume increases generated by the proposed project consist of project-related walk-only trips as well as walk trips to the site from transit stations, taxi drop-off points and parking spaces. Two key pedestrian locations were analyzed based on the expected walking patterns of these trips. All analyzed crosswalk and corner reservoir areas would operate at acceptable LOS C or better under the proposed project, and would not result in significant adverse pedestrian impacts.

AIR QUALITY

The EIS examined the potential for mobile source air quality impacts from the proposed actions. Mobile source impacts are those generated by motor vehicles traveling to and from the project site once the project is operational. In addition, an analysis was conducted to evaluate pollutant concentrations from nearby parking facilities that would provide parking for the proposed project. The predicted increments from the parking facilities were added, where appropriate, to the predicted concentrations from the mobile source analysis, to assess the potential for cumulative impacts.

The maximum predicted pollutant concentrations and concentration increments from mobile sources with the proposed actions would be below the corresponding guidance thresholds and ambient air quality standards. Thus, the proposed action would not result in any significant adverse impacts from mobile source emissions. Further, no significant adverse air quality impacts would occur due to the combined effects of nearby parking facilities and on-street mobile sources.

NOISE

The noise analysis in this EIS focused on whether traffic generated by the proposed project would have the potential to result in significant noise impacts. Based on a screening analysis, it was determined that increases in noise levels would be below the CEQR threshold for a significant

adverse impact. Therefore, the proposed project would not result in significant adverse noise impacts from mobile sources.

NEIGHBORHOOD CHARACTER

With the exception of traffic, the proposed actions would not have a significant adverse impact in any of the technical areas that contribute to neighborhood character, including land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, and noise. While the proposed project would result in significant adverse traffic impacts at a number of locations in the traffic study area, at the majority of these intersections, readily implementable traffic improvements measures would mitigate these impacts (e.g., signal timing changes, parking regulation changes to gain or widen a travel lane at key intersections, lane markings and signage). Overall, the proposed project would not result in a significant adverse impact on neighborhood character despite increases in traffic. The study area is characterized by Flatbush Avenue, a busy, heavily trafficked commercial corridor, and, as such, the additional traffic impacts would not adversely affect neighborhood character. Instead, the proposed project would improve neighborhood character by transforming the vacant theatre into an active use, enlivening this area of Flatbush Avenue.

C. MITIGATION

Potential traffic impacts have been identified~~in the areas of traffic~~. Measures are examined to minimize or eliminate the anticipated impacts to the fullest extent practicable. These mitigation measures are discussed below. Areas in which the proposed project would result in significant adverse impacts that cannot be fully mitigated through reasonably practicable measures are discussed in section D, "Unavoidable Adverse Impacts."

As described above and shown in **Table S-1**, the proposed project is expected to result in significant adverse traffic impacts at 12 intersections in the Saturday midday arrival peak hour, 13 in the Saturday midday departure peak hour, and 10 in the Saturday evening arrival peak hour.

Table S-1
Traffic Impact Mitigation Summary

Intersections	Saturday Peak Hour		
	Midday Arrival	Midday Departure	Evening Arrival
No significant impact	2	1	4
Fully mitigated impact	9	9	7
Partially mitigated impact	3	2	2
Unmitigated impact	0	2	1

Measures are proposed to mitigate these significant adverse traffic impacts and are discussed in detail for each intersection in Chapter 8, "Mitigation." A range of mitigation measures was proposed in the Draft EIS (DEIS) to address the significant adverse traffic impacts that would occur during event conditions. The New York City Department of Transportation (NYCDOT) reviewed the transportation and mitigation analyses presented in the DEIS and provided input, including certain modifications, on the mitigation measures to be implemented. The types of mitigation measures presented in the DEIS have not changed in the FEIS with the exception of the addition of signage at one location (Flatbush Avenue and Church Avenue) to provide advance warning of a particular roadway modification. These modifications to traffic mitigation do not affect the conclusions of the DEIS with respect to traffic impacts.

Proposed mitigation measures consist of signal timing changes, parking regulation changes to gain or widen a travel lane at key intersections, lane markings and signage. These measures represent some of the standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYCDOT). Even with these measures, in some cases, project impacts would not be fully mitigated (see section D, "Unavoidable Adverse Impacts").

D. UNAVOIDABLE ADVERSE IMPACTS

As described in section C, "Mitigation," the majority of the intersections that would be impacted could be mitigated with readily implementable traffic improvement measures; however, as described below, in some cases, project impacts would not be fully mitigated.

Specifically, four of the 14 intersections analyzed would have significant adverse traffic impacts that could not be fully mitigated in at least one peak hour, including:

- Flatbush Avenue and Church Avenue (partially mitigated during all three peak hours).
- Bedford Avenue and Linden Boulevard/Caton Avenue (partially mitigated during the Saturday midday arrival peak hour; unmitigated during the Saturday midday departure and evening arrival peak hours).
- Bedford Avenue and Church Avenue (partially mitigated during all three peak hours).
- Flatbush Avenue and Bedford Avenue/Stephens Court (unmitigated during the Saturday midday departure peak hour).

At the partially mitigated locations, significant impacts could be mitigated for at least one (but not all) traffic movements that are significantly impacted. Because these impacts would be partially, not fully, mitigated, they are considered unavoidable adverse impacts.

All unmitigatable and partially mitigated traffic impacts reflect a worst-case condition where a theatre event is sold-out and 84 percent of all patrons arrive in one hour, and 100 percent of all departures leave in one hour. Traffic conditions would be less severe for non-sellout events since fewer patrons would attend.

E. GROWTH INDUCING ASPECTS

The proposed project would restore, expand, and modernize the existing vacant Kings Theatre and would provide a modern facility for the presentation of live performances. In turn, the renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity. The active theatre use would be compatible with surrounding uses. The proposed project would not be expected to induce additional notable growth outside the project site. The level of development in the surrounding area is controlled by zoning. The project site was part of the Flatbush Rezoning adopted by the City Council on July 29, 2009. While the zoning of the project site itself did not change under this rezoning, various zoning changes were adopted in the area to protect and preserve the existing character of the area by mapping lower density and contextual zoning districts to preserve the scale of detached home, row house, and apartment building neighborhoods; to provide incentives for affordable housing along certain corridors that are well-served by transit; and to maintain opportunities for commercial growth and reinvestment in commercial areas.

The proposed project would be consistent with zoning and would result in the reinvestment in a long vacant site.

F. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

There are a number of resources, both natural and built, that would be expended in the construction and operation of the proposed project. These resources include the materials used in construction; energy in the form of gas and electricity consumed during construction and operation of the proposed project; and the human effort (i.e., time and labor) required to develop, construct, and operate various components of the proposed project. The resources are considered irretrievably committed because their reuse for some purpose other than the proposed project would be highly unlikely. The proposed project constitutes an irreversible and irretrievable commitment of the development site as a land resource, thereby rendering land use for other purposes infeasible, at least in the near term.

These commitments of land resources and materials are weighed against the public purpose and benefits of the proposed project: to restore, expand, and modernize the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances. In turn, the renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity.

G. ALTERNATIVES TO THE PROPOSED PROJECT

Two alternatives to the proposed project were considered: a No Action Alternative, which assumes that the proposed actions are not approved and that the theatre remains in its existing conditions (i.e., vacant); and a No Significant Averse Impact Alternative, which considers a project program that would eliminate the proposed project's unmitigated significant adverse impacts.

NO ACTION ALTERNATIVE

In the No Action Alternative, the proposed project would not be implemented, and the existing vacant Kings Theatre would remain in its current condition. This alternative would not result in the stabilization, restoration, expansion, and reuse of the Kings Theatre as a live entertainment venue and would not return this vacant structure to a vibrant, productive use, as would the proposed project. This alternative would not increase traffic in the neighborhood and would therefore not result in the project's significant adverse traffic impacts; however, the increases in traffic expected with the proposed project would not result in a significant adverse affect on neighborhood character.

NO SIGNIFICANT ADVERSE IMPACT ALTERNATIVE

The proposed project would result in a number of significant adverse traffic impacts, several of which would remain unmitigated. Specifically, four intersections could not be fully mitigated during at least one time period. Therefore, an alternative was developed to explore modifications to the proposed project that would allow for the elimination of these unmitigated impacts.

An alternative program which would eliminate all unmitigated traffic impacts would require reducing the project's seating capacity from 3,600 seats to approximately 1,100 seats, a 70 percent reduction in seating capacity. This reduction in seating would decrease the project-

generated vehicle trip totals from 922 vehicles under the proposed actions to 308 vehicles during the Saturday midday and evening arrival peak hours, and from 1,092 vehicles under the proposed actions to 364 vehicles during the Saturday midday departure peak hour. Traffic analyses were performed at critical locations using the trip generation from the reduced program and determined that no significant adverse unmitigated traffic impacts would occur with the reduction to 1,100 seats.

However, the purpose of the proposed actions is to facilitate the restoration, expansion, and modernization of the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances. The renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity. A reduction in the number of seats from 3,600 to 1,100 would not be feasible since a theatre of this size would not accommodate the range of events planned for the theatre, nor would it be economically viable. ✶

Chapter 1: Project Description

A. INTRODUCTION

The applicant proposes to restore and expand a vacant theatre, known as The Kings Theatre, located at 1027 Flatbush Avenue in the Flatbush neighborhood of Brooklyn (**see Figure 1-1**). The Kings Theatre was originally built in 1929 as a movie theatre; it has been closed since 1977. 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. 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.

The targeted Environmental Impact Statement (EIS) has been prepared in conformance with 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 the New York City Environmental Quality Review (CEQR), found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS follows the guidance of the 2010 *CEQR Technical Manual*, dated May 2010. The Office of the Deputy Mayor for Economic Development (ODMED) is the CEQR lead agency for this proposal.

B. PROJECT LOCATION

As shown in **Figure 1-2**, 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 and 18 and a portion of Lot 12, and Block 5133, Lot 55 and a portion of Lots 1 and 50). East 22nd Street is currently a one-way southbound street with one moving lane and parking on both sides of the street. It is a discontinuous street, extending four blocks in the study area, between Tilden Avenue and Clarendon Road.

The site is located in a commercial zoning district (C4-2) surrounded by residential districts.

C. EXISTING THEATRE

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 approximately 3,600. The theatre has been closed since 1977 and has fallen into disrepair.

The existing theatre 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.

10.21.10

Project Site

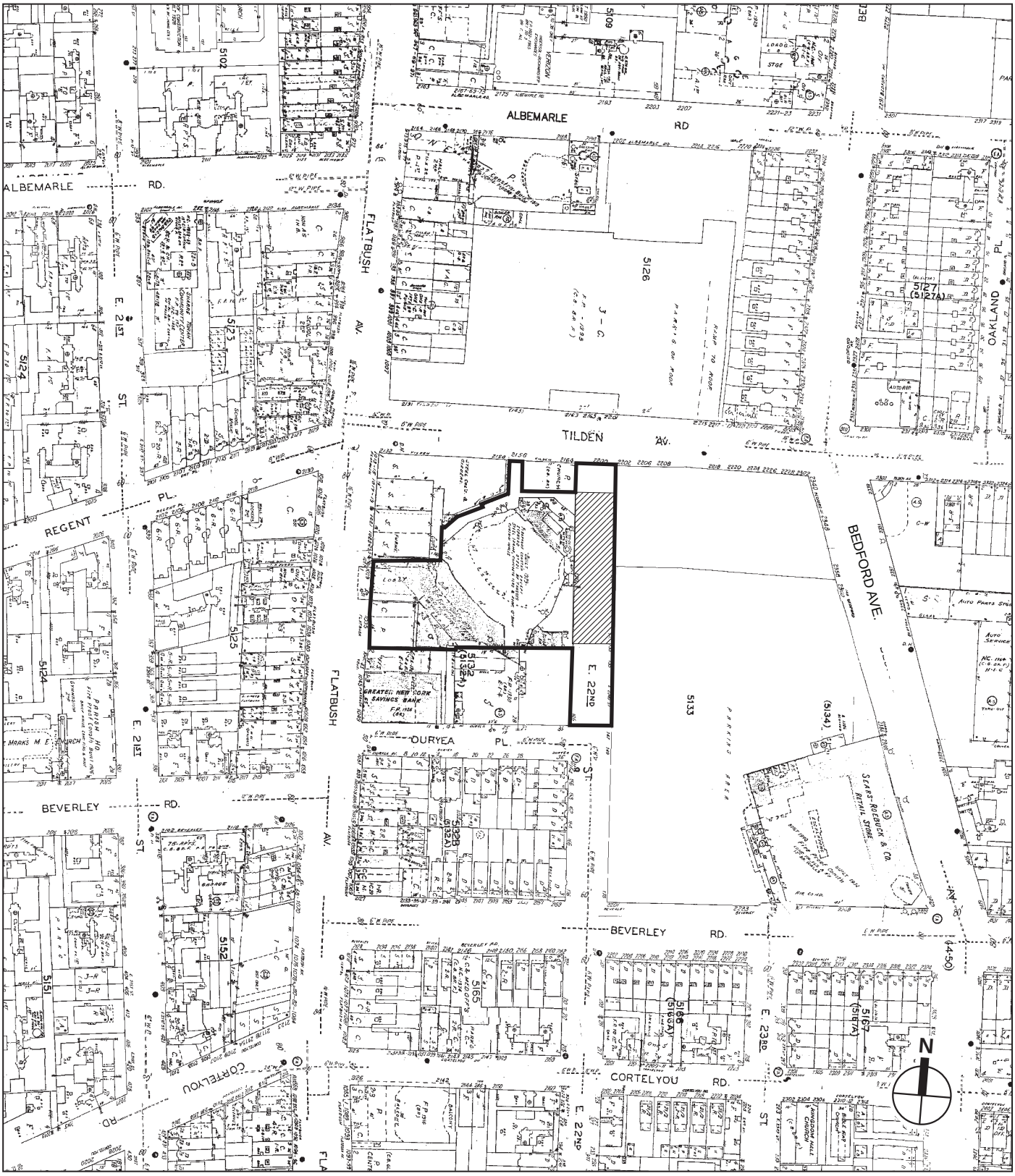
0 2000 FEET

SCALE

Project Location

Figure 1-1

10.21.10



Project Site
Figure 1-2

D. PROPOSED THEATRE

THEATRE RENOVATION AND EXPANSION

The existing theatre would be stabilized and restored, thereby improving the appearance and condition of this architectural resource. This renovation effort would include retaining the theatre's historic terra cotta façade as well as its significant public interior spaces, decoration, and finishes. Key historic elements in the plaster and painting, the millwork and ornamental murals and draperies would all be recaptured to revitalize the theatre as a center for the community.

The theatre would also be 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 performances and other presentations can be accommodated (see **Figures 1-3 through 1-6**). At its current size, the facility lacks the essential attribute necessary for the presentation of modern live performances. The stage is too small and the back-of-house support areas and dressing rooms are lacking. Front-of-house facilities, such as lobbies and lounges for patrons, are also insufficient by today's standards. Thus, this venue would be refitted and restored to fully function as a world-class venue for a wide range of live entertainment, serving both local and touring shows. 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. However, the renovated theatre would maintain a similar seating capacity as the existing theatre by providing up to approximately 3,600 seats.

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 lobby, would be provided. New public restroom facilities and new 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 large-scale 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.

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. The proposed project would return this vacant cultural facility to productive use.

PROPOSED OPERATIONS

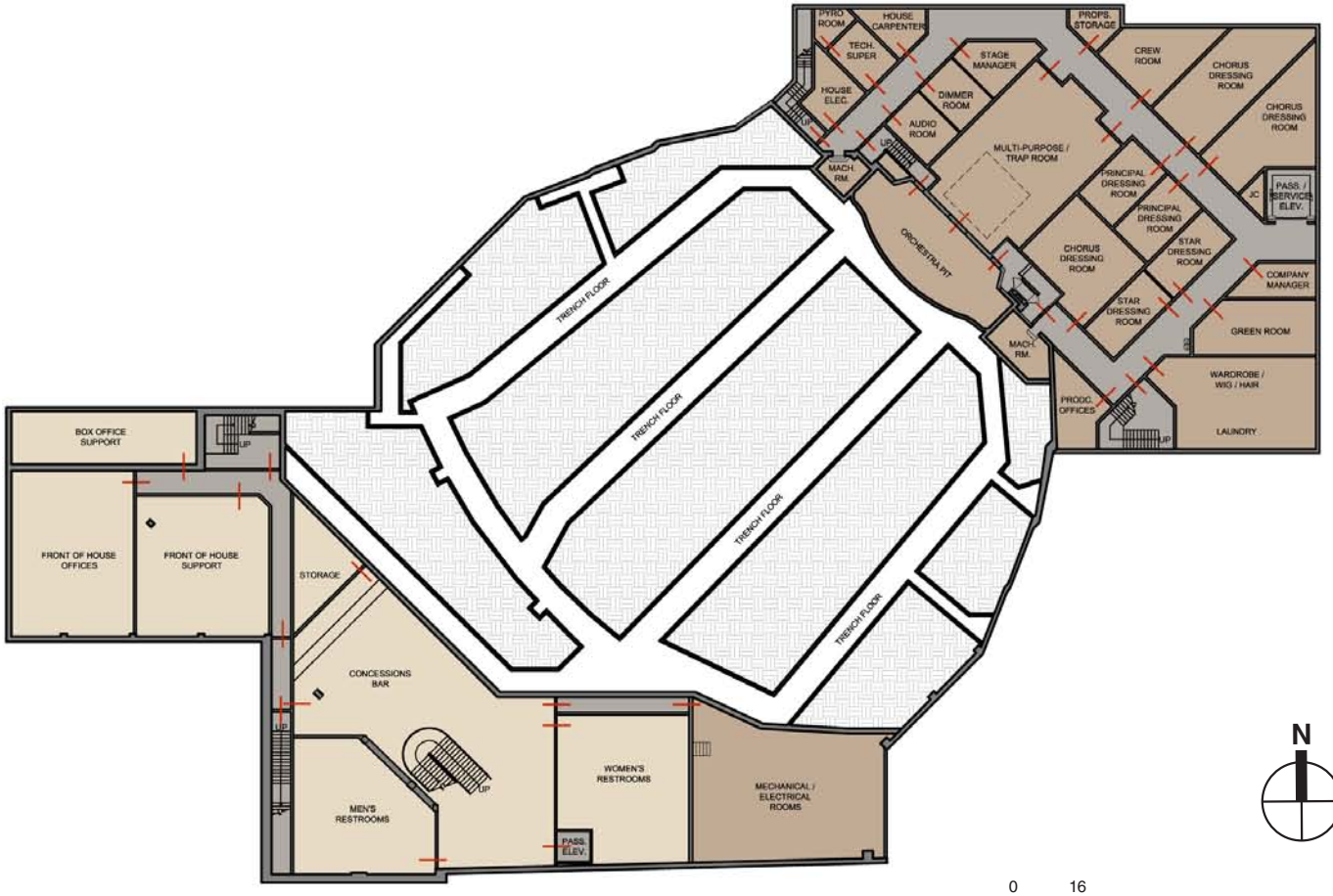
The theatre would be used for a wide-ranging mix of live entertainment, including music, dance, cabaret and comedy performances (both local and touring shows). The theatre would also be used for local theatrical and dance groups, conferences, and ceremonies of local importance. The design of the venue would enable it to respond to the ever changing demands of the presentation market and to needs of a widely diverse community. There would be up to approximately 200 performances in the theatre each year.

LEGEND

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

BASEMENT AREA CALCULATIONS

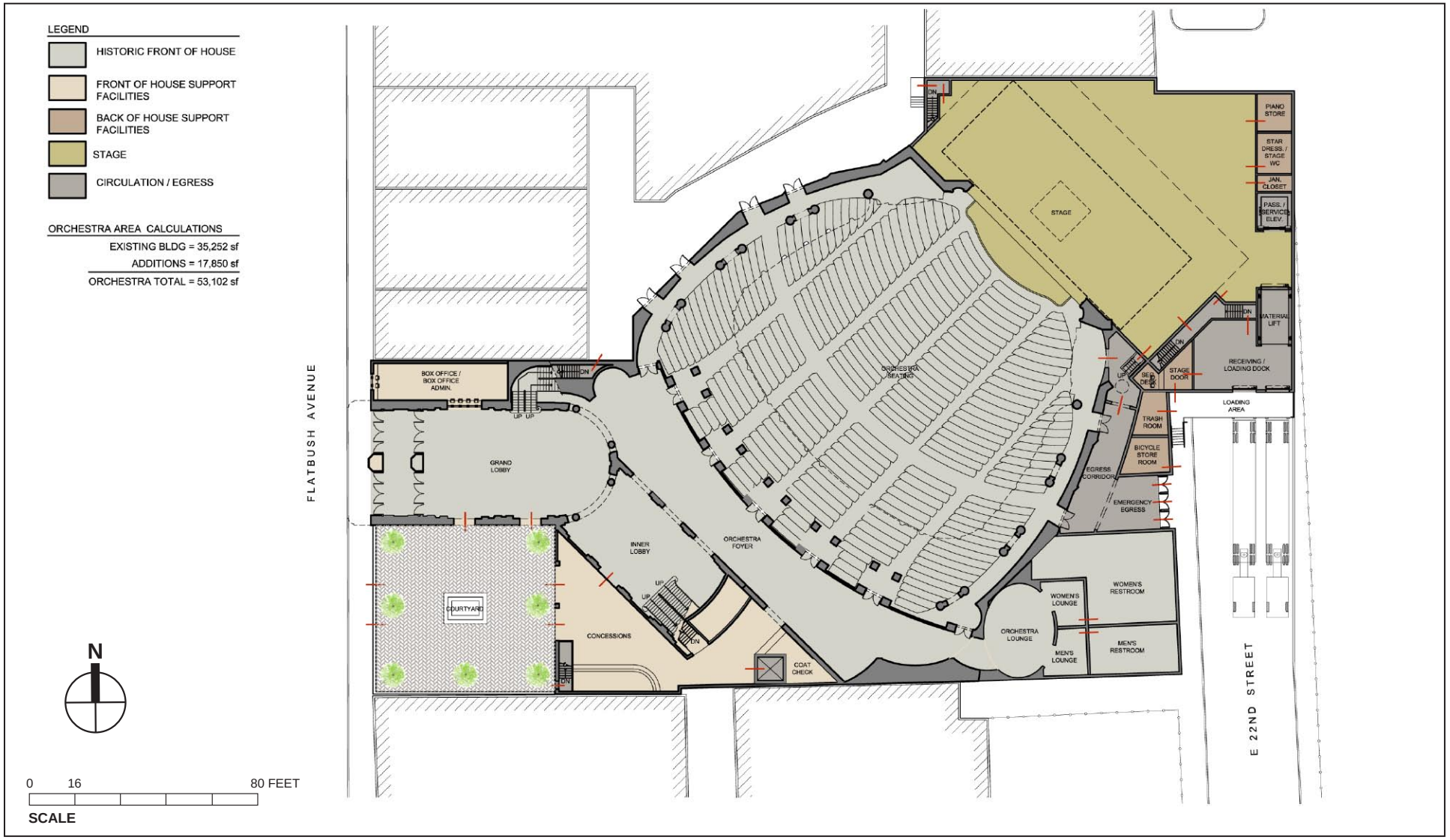
EXISTING BLDG = 15,392 sf
ADDITIONS = 12,487 sf
BASEMENT TOTAL = 26,414 sf



SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Basement Plan
Figure 1-3

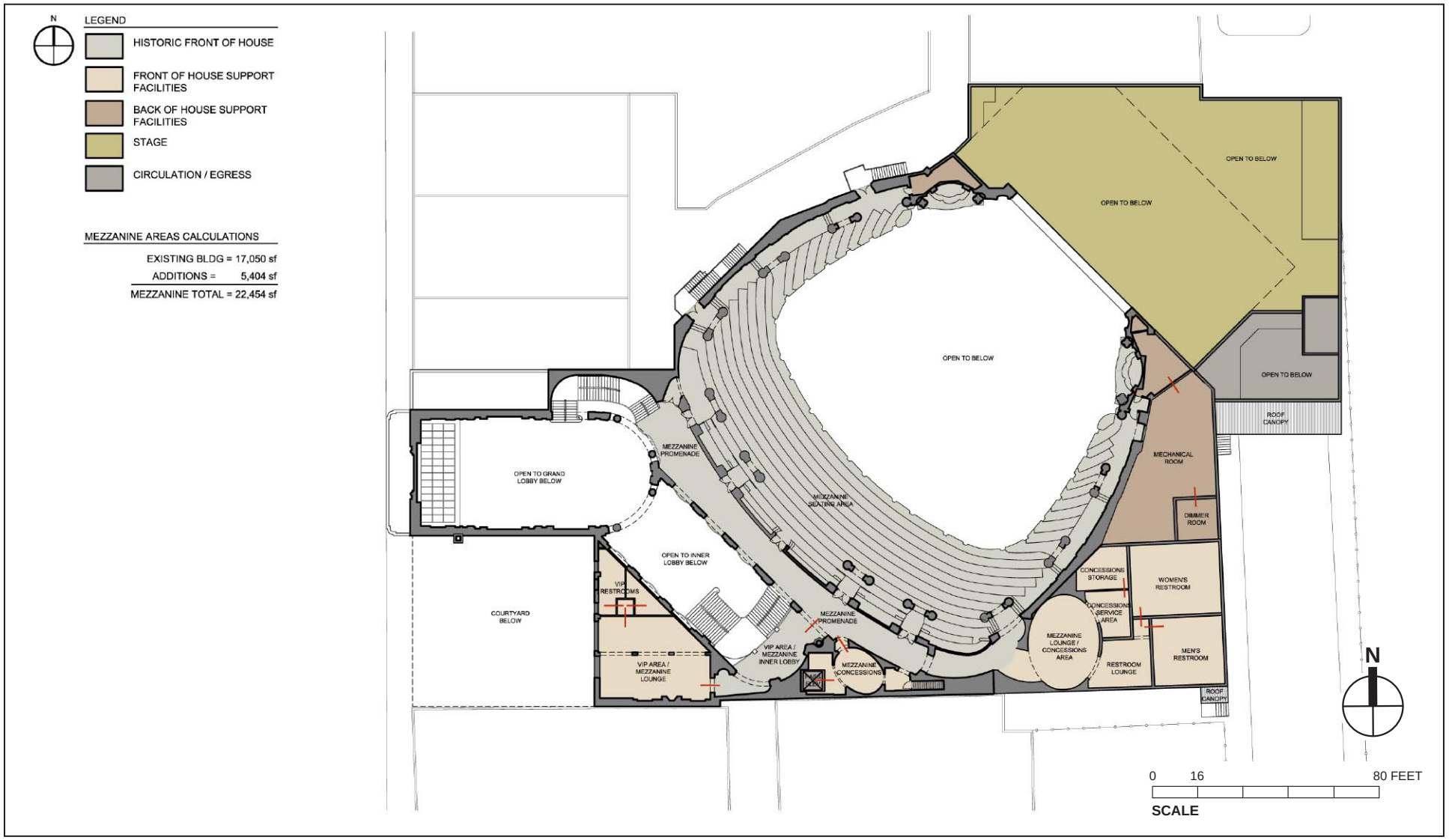


SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Ground Floor and Orchestra Plan

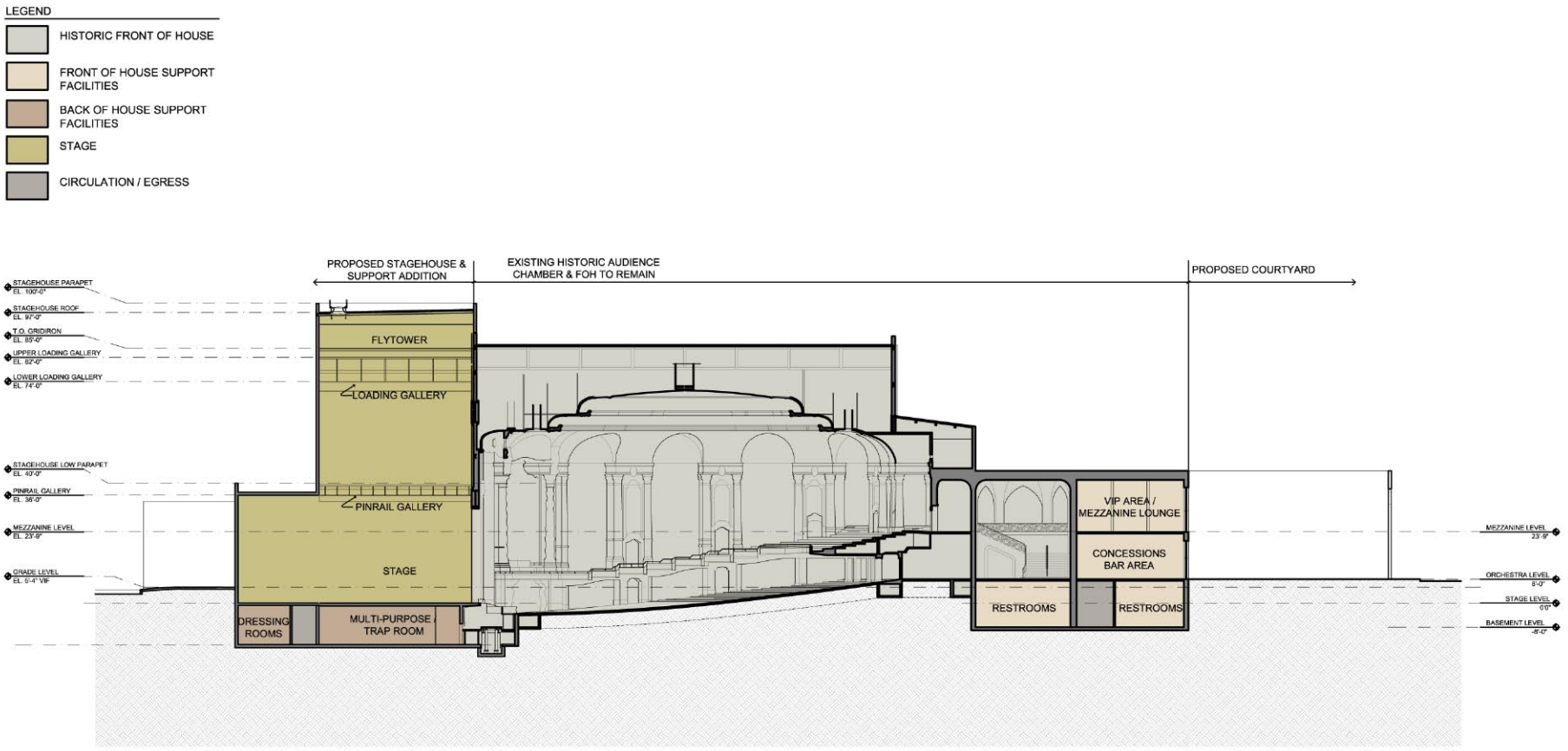
Figure 1-4



SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Mezzanine Plan
Figure 1-5



SOURCE: Martinez and Johnson Architecture

FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Section
Figure 1-6

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.

E. 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 CEQR, and received a Conditional Negative Declaration (CND) from the New York City 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 have been 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:

[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.

- Modification of an Amendment to the City Map. The proposed project would require the filing of a modification to 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 and used to accommodate an expansion of the theatre's stagehouse and loading areas. The filing of a modification to the amendment to the City Map is a discretionary action subject to the CEQR process and requires approval of the City Planning Commission (CPC) and a referral to the Community Board and Borough President.
- Section 384(b)(4). Approval by the Mayor and the Borough Board pursuant to Section 384(b)(4) of the City Charter of the business terms of the proposed disposition of the theatre and street from the City to EDC and the negotiated disposition of the theatre and street from EDC to the Kings Theatre Redevelopment Company, L.L.C., the developer of the project. This approval is a discretionary action subject to CEQR.
- City Capital and Other 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, and any other approval related to any additional funding that may become available for the project, is a discretionary action subject to CEQR. In addition, the project is seeking a New York Economic Development Capital Assistance Program (NYEDCP) Grant, which is processed by the New York State Dormitory Authority State of New York (DASNY) on behalf of the New York State Legislature. This is a discretionary action subject to SEQRA, and DASNY will be an involved agency for the proposed project.
- 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.

F. 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. The purpose and need for each action is described in this section.

- Modification of an Amendment to the City Map. The demapping of East 22nd Street would enable the theatre's stagehouse, back-of-house support areas, and loading areas to be expanded and located within the bed of East 22nd Street. As described above, the existing stage, which was originally used for movies, is not sized to accommodate modern live performances. In addition, the back-of-house facilities, including the loading areas, are inadequate for live entertainment. The construction of a new stagehouse, along with the loading area, would enable the theatre to support a wide range of live entertainment, including both local and touring shows.

- City Capital Funding. The grant of approximately $50 million as is required in capital funds would help fund the restoration of the theatre.
- Disposition and Business Terms. Disposition of the theatre and the street to EDC requires approval pursuant to Section 384(b)(4) of the City Charter to permit the negotiated disposition by EDC to the Kings Theatre Redevelopment Company, L.L.C.
- Historic Resource Designation. Listing the theatre on the State and National Registers of Historic Places would enable the proposed project to be eligible for tax credits that would finance the restoration of the theatre. As discussed above, the restoration would be undertaken to meet the Secretary of the Interior's Guidelines for Rehabilitation of Historic Structures. Restoration and reuse of the Kings Theatre would return this structure to a vibrant, productive use.

G. CITY ENVIRONMENTAL QUALITY REVIEW

All state, county, and local government agencies in New York, except the State Legislature and the courts, must comply with the State Environmental Quality Review Act (SEQRA). The City of New York established CEQR regulations in accordance with SEQRA. This Draft EIS (DEIS) has been prepared in accordance with the guidelines set forth in the 2010 *CEQR Technical Manual*, where applicable. The environmental review process allows decision-makers to systematically consider the environmental effects of a proposed action, to evaluate reasonable alternatives, and to identify measures to mitigate significant adverse environmental effects. The process also facilitates public involvement by providing the opportunity for public comment on the DEIS. The environmental review process is outlined below.

- **Establishing a Lead Agency.** Under CEQR, the "lead agency" is the public entity responsible for conducting the environmental review. Usually, the lead agency is also the entity primarily responsible for carrying out, funding, or approving a proposed action. For the proposed project, the lead agency is the Office of the Deputy Mayor for Economic Development (ODMED). As discussed above, DASNY will be an involved agency; the CPC is also an involved agency.
- **Determination of Significance.** The lead agency's first charge is to determine whether a proposed action might have a significant adverse impact on the environment. To make this determination, an Environmental Assessment Statement (EAS) was prepared. Based on the information contained in the EAS, the lead agency determined that the proposed project could have the potential to result in significant adverse environmental impacts in the areas of historic and cultural resources; transportation; air quality (mobile sources); noise (mobile sources); and neighborhood character. Therefore, the lead agency issued a Positive Declaration on October 14, 2010, initiating the preparation of an EIS.

  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; hazardous materials; 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. Therefore, the conclusions of the EAS are incorporated herein by reference, and these areas need not be further discussed in this targeted EIS.

- **Scoping.** "Scoping," or creating the scope of work, focuses the environmental impact analyses on the key issues to be studied. In addition to the Positive Declaration, the lead agency issued a Draft Scope of Work for the EIS on October 14, 2010. A public scoping meeting was held for the proposed project on November 16, 2010 at 6:00 PM at the Flatbush Brooklyn Public Library (22 Linden Boulevard), and a Final Scope of Work, reflecting comments made during scoping, was issued on December 16, 2010. No comments were made at the public meeting, and no written comments were received; therefore, the Final Scope of Work reflects additional analyses determined to be appropriate for inclusion in the EIS.
- **Draft Environmental Impact Statement (DEIS).** The DEIS, prepared in accordance with the Final Scope of Work, is a comprehensive document that systematically considers the potential environmental effects of a proposed action, evaluates reasonable alternatives, and identifies feasible mitigation measures that, to the maximum extent practicable, address the significant adverse environmental impacts of the proposed action. The lead agency reviews all aspects of the DEIS to determine its adequacy and adherence to the work effort outlined in the Final Scope of Work. Once the lead agency is satisfied that the DEIS is complete for the purposes of public review and comment, it issues a Notice of Completion and circulates the DEIS for review among government agencies and the general public. Circulation of the DEIS marks the beginning of a public review period, during which time a public hearing will be held to solicit comments on the DEIS. The DEIS was published on December 30, 2010.
- **Public Review.** Publication of the DEIS and issuance of the Notice of Completion signal the beginning of the public review period. During this time, which must extend for a minimum of 30 days, the public may review and comment on the DEIS, either in writing or at a public hearing convened for the purpose of receiving such comments. The lead agency must publish a notice of the hearing at least 14 days before it takes place and must accept written comments for at least 10 days following the close of the hearing. All substantive comments received on the DEIS, at the hearing, or during the comment period become part of the CEQR record and will be summarized and responded to in the Final EIS (FEIS). As stated above, the DEIS was published on December 30, 2010. The public hearing on the DEIS was held on January 25, 2011, and the comment period remained open until February 7, 2011.
- **Final Environmental Impact Statement (FEIS).** Once the public comment period for the DEIS closes, an FEIS is prepared. This document includes a summary of, and response to, each substantive comment made about the DEIS. Once the lead agency determines that the FEIS is completed, it issues a Notice of Completion and circulates the FEIS. This document is the FEIS.
- **Statement of Findings.** To demonstrate that the responsible public decision-makers have taken a hard look at the environmental consequences of a proposed action, any agency taking a discretionary action regarding an action must adopt a formal set of written findings, reflecting its conclusions about the significant adverse environmental impacts, potential alternatives, and potential mitigation measures. The findings may not be adopted until 10 days after the Notice of Completion has been issued for the FEIS. Once findings are adopted, the lead and involved agencies may take their actions.

H. FRAMEWORK FOR ANALYSIS

SCOPE OF ENVIRONMENTAL ANALYSIS

As set forth in the Positive Declaration, the lead agency has determined that the proposed project may result in one or more significant adverse environmental impacts and thus requires preparation of this targeted EIS. This document uses methodologies and follows the guidelines set forth in the 2010 *CEQR Technical Manual*, where applicable. These are considered to be the most appropriate technical analysis methods and guidelines for environmental impact assessment of discretionary actions in the City.

A number of analysis areas were determined during preparation of the EAS to not have the potential to result in significant adverse impacts. These analysis areas include land use, zoning, and public policy; socioeconomic conditions; community facilities and services; open space; shadows; urban design and visual resources; natural resources; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; air quality from stationary sources; greenhouse gas emissions; noise from stationary sources; public health; and construction. Therefore, as per the Final Scope of Work, this EIS provides analyses of the proposed project's potential to affect only the following analysis areas: historic and cultural resources; transportation; air quality (mobile sources); noise (mobile sources); and neighborhood character.

With respect to potential construction effects from the proposed project, the EAS and Final Scope of Work stated that additional information would be provided in this targeted EIS to support the conclusion that construction-period worker and truck trips would not be substantial enough to adversely affect transportation conditions in the area. That information is provided in Chapter 7, "Construction."

ANALYSIS YEAR

An EIS analyzes the effects of a proposed action on its environmental setting. Since typically a proposed action, if approved, would take place in the future, the action's environmental setting is not the current environment but the environment as it would exist at project completion, in the future. Therefore, future conditions must be projected. This prediction is made for a particular year, generally known as the "analysis year" or the "Build year," which is the year when the action would be substantially operational. 2014 is the year that the proposed project is expected to be completed, and therefore 2014 is the analysis year for the EIS.

DEFINITION OF STUDY AREAS

For each technical area in which impacts may occur, a study area is defined for analysis. This is the geographic area likely to be affected by the proposed project for a given technical area, or the area in which impacts of that type could occur. Appropriate study areas differ depending on the type of impact being analyzed. It is anticipated that the direct principal effects of the proposed project would occur within the project study areas.

DEFINING BASELINE CONDITIONS

EXISTING CONDITIONS

For each technical area assessed in the EIS, the current conditions must first be described. The assessment of existing conditions establishes a baseline against which future conditions can be projected. The prediction of future conditions begins with an assessment of existing conditions. Studies of existing conditions are generally selected for their reasonable worst-case conditions.

For example, the times when the greatest number of new vehicular, pedestrian and transit trips to and from a project site would occur are measured for the traffic analysis. The project impacts are then assessed for those same traffic peak periods.

DEFINITION OF FUTURE WITHOUT THE PROPOSED PROJECT

The "future without the proposed project," or "No Build condition," describes a baseline condition which is evaluated and compared to the incremental changes due to the proposed project. The No Build condition is assessed for the same 2014 analysis year as the proposed project.

The No Build condition uses existing conditions as a baseline and adds to it changes known or expected to be in place by 2014. This includes development currently under construction or which can be reasonably anticipated due to the current level of planning and public approvals. There are no known development projects within the 400-foot study area surrounding the project site. The No Build analyses for some technical areas, such as traffic, also use a background growth factor to account for a general increase expected in the future.

The No Build condition at the project site is anticipated to be a continuation of existing conditions.

DEFINITION OF FUTURE WITH THE PROPOSED PROJECT

The "future with the proposed project," or "Build condition," is the condition which is evaluated and compared to the No Build condition to identify incremental changes due to the proposed project. The Build condition is assessed for the 2014 analysis year.

IDENTIFYING SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS

Identification of significant adverse environmental impacts is based on the comparison of future conditions without and with the proposed project. In certain technical areas (e.g., traffic, air quality, and noise), this comparison can be quantified and the severity of impact assessed in accordance with the 2010 *CEQR Technical Manual*. In other technical areas (e.g., neighborhood character), the analysis is qualitative.

MITIGATION

CEQR requires that any significant adverse impacts identified in the EIS be minimized or avoided to the fullest extent practicable. In the DEIS, options for mitigation can be presented for public review and discussion, without the lead agency having selected those that will be implemented. Where no practicable mitigation is available, the EIS must disclose the potential for unmitigated significant adverse impacts.

Potential mitigation measures for all significant adverse impacts identified in this DEIS are described in Chapter 8, "Mitigation."

ALTERNATIVES

CEQR and SEQRA require that a description and evaluation of the range of reasonable alternatives to the action be included in an EIS at a level of detail sufficient to allow a comparative assessment of the alternatives to a proposed action. Alternatives and the rationale behind their selection are important in the disclosure of environmental effects of a proposed action. Alternatives provide options to the proposed action and a framework for comparison of potential impacts and project objectives. If the environmental assessment and consideration of alternatives identify a feasible alternative that eliminates or minimizes adverse impacts while substantially meeting the project goals and objectives, the lead agency considers whether to adopt that alternative as the proposed action.

CEQR/SEQRA requires consideration of a "no action alternative," which evaluates environmental conditions that are likely to occur in the No Action condition. The No Action Alternative is analyzed throughout the EIS as the future without the proposed project. In addition to the No Action Alternative, the EIS considers an alternative that avoids significant impacts—the No Significant Averse Impact Alternative. These alternatives are assessed in Chapter 10~~9~~, "Alternatives." ✷

Chapter 2: Historic and Cultural Resources

A. INTRODUCTION

This attachment considers the potential for the proposed project to affect historic resources. The project site is occupied by the vacant former Loews Kings Theatre at 1027 Flatbush Avenue and the East 22nd Street roadbed between Duryea Place and Tilden Avenue, in the Flatbush neighborhood of Brooklyn. The proposed project would involve the restoration of the Kings Theatre and modernization of its front-of-house, stagehouse, loading, and support facilities to provide a modern facility for the presentation of live performances. The proposed project would be undertaken to meet the Secretary of the Interior's Guidelines for Rehabilitation of Historic Structures.

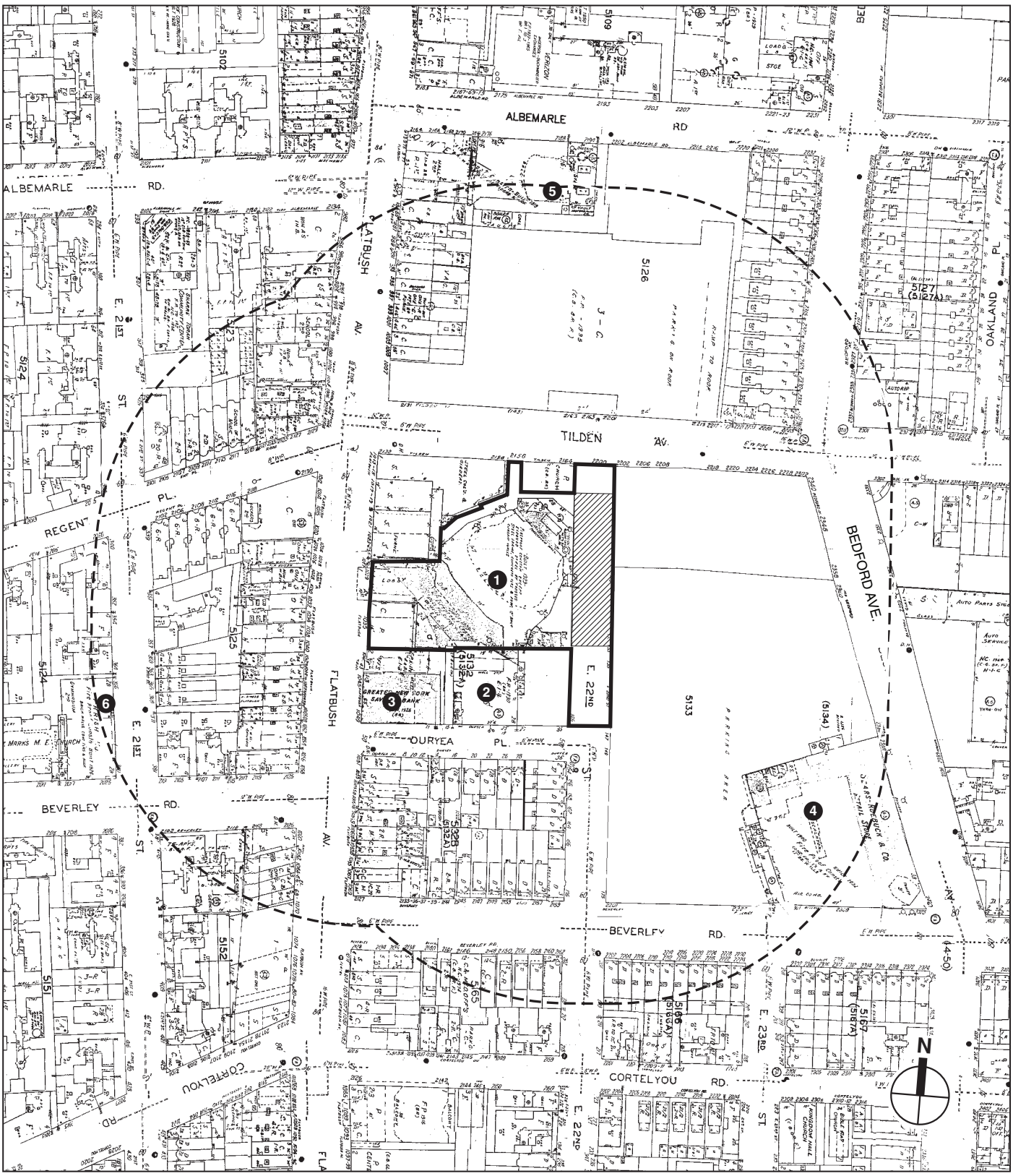
Historic resources include both archaeological and architectural resources. The study area for archaeological resources would be the area disturbed for project construction, the project site itself. In a letter dated March 29, 2010, the New York City Landmarks Preservation Commission (LPC) determined that the project site has no archaeological significance (see **Appendix A**). Therefore, this historic resources assessment analyzes standing structures only.

In general, potential impacts to architectural resources can include both direct physical impacts and indirect, contextual impacts. Direct impacts include demolition of a resource and alterations to a resource that cause it to become a different visual entity. A resource could also be damaged from vibration (i.e., from construction blasting or pile driving), and additional damage from adjacent construction could occur from falling objects, subsidence, collapse, or damage from construction machinery. Adjacent construction is defined as any construction activity that would occur within 90 feet of an architectural resource, as defined in the New York City Department of Buildings (DOB) *Technical Policy and Procedure Notice* (TPPN) #10/88.[1] Contextual impacts can include the isolation of a property from its surrounding environment, or the introduction of visual, audible, or atmospheric elements that are out of character with a property or that alter its setting. The study area for architectural resources is, therefore, larger than the archaeological resources study area to account for any potential impacts that may occur where proposed construction activities could physically alter architectural resources or be close enough to them to potentially cause physical damage or visual or contextual impacts.

Following the guidelines of the 2010 *City Environmental Quality Review (CEQR) Technical Manual*, the architectural resources study area for this project is defined as being within an approximately 400-foot radius of the project site (see **Figure 2-1**). Within the study area, architectural resources that were analyzed include National Historic Landmarks (NHL), State

[1] TPPN #10/88 was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. TPPN #10/88 outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

12.22.10



0 200 400 FEET

SCALE

Project Site/ Loews Kings Theatre

Area to be Demapped

Study Area Boundary (400-Foot Perimeter)

1 *Architectural Resources*

Architectural Resources

Figure 2-1

and National Register (S/NR)-listed properties or properties determined eligible for such listing (S/NR-eligible), New York City Landmarks (NYCLs) and Historic Districts, and properties determined eligible for landmark status ("known architectural resources"). Additionally, a survey was conducted to identify any previously undesignated properties that appear to meet S/NR or NYCL eligibility criteria ("potential architectural resources"). LPC and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) made determinations of eligibility for these properties.

The project is seeking federal historic tax credits, thereby ensuring that the proposed repair and alterations to the Kings Theatre would be undertaken in consultation with OPRHP and in compliance with the Secretary of the Interior's Standards for Rehabilitation, as described below. Overall, the proposed renovation and reuse of the Kings Theatre would improve the appearance and condition of this architectural resource. The proposed project would stabilize, restore, and reuse the Kings Theatre and return this vacant cultural facility to productive use, enlivening both the project site and adjacent areas, including other nearby architectural resources. The demapping of East 22nd Street would somewhat alter the context of the Kings Theatre as the proposed back-of-house addition would extend into a surrounding roadbed, however, this change would occur at the rear of the theatre, and would not affect the principal Flatbush Avenue façade and its context with other structures along this avenue. The proposed project is contingent on the listing of the property on the S/NR and receipt of federal tax credits, as stated in the Interim Agreement between NYCEDC and the project sponsor; therefore, compliance with the Secretary of the Interior's Standards as interpreted by OPRHP and the National Park Service, which is necessary to receive the tax credits, would ensure that the proposed project would not adversely affect the Kings Theatre. LPC has concurred with this assessment (See **Appendix A)**. In a letter dated January 10, 2011, OPRHP generally concluded that restoration of the theatre interior and exterior would be appropriate; OPRHP will continue its review of the proposed restoration program as more details are developed.

As described below, architectural resources identified within 90 feet of the project site would be protected during construction by a Construction Protection Plan (CPP). The CPP would be developed in consultation with LPC and OPRHP to protect such resources from inadvertent construction-related impacts.

B. EXISTING CONDITIONS

PROJECT SITE

The project site is occupied by one known architectural resource, the Kings Theatre. In comments dated November 3, 2010, LPC identified the Kings Theatre as appearing S/NR-eligible and also as appearing NYCL eligible (exterior only). OPRHP determined that the Kings Theatre meets criteria for listing on the S/NR on December 17, 2010.[1] There are no other structures, and thus no other potential architectural resources, on the project site.

[1] The Kings Theatre had previously been informally determined S/NR eligible by OPRHP based on a site visit conducted by staff in 2008.

The former **Loews Kings Theatre** was built in 1929 as a movie theatre for the Allied Owner's Corporation, one of five Loews theatres constructed in the metropolitan area.[1] Designed in the French Renaissance Revival style by C.W. and George Rapp, Architects, the theatre is a three-story (approximately 82-foot-tall) structure that is positioned on the site at a 45 degree angle to the street grid, with its principal façade and entrance on Flatbush Avenue. The theatre's Flatbush Avenue façade is clad in elaborate glazed terra cotta (see Photo 1A of **Figure 2-2**). The interior, containing large lobby, lounge, seating, and other accessory areas, is lavishly decorated with classical ornament. The ceilings in the entry, lobby and auditorium areas are vaulted with French Baroque paintings. Balconies, columns, wall surfaces, and hallway ceilings are clad in marble, gold leaf, and walnut paneling (see Photo 1B of **Figure 2-2** and Photos 1C and 1D of **Figure 2-3**). The interior surfaces, including paint and plaster are in disrepair (see Photo 1E of **Figure 2-4**). Most of its significant interior features and ornament have been retained. In addition to the wall and ceiling surfaces described above, these include the wrought iron stair and balcony railings, and glass light pendants in the lobby areas. In some areas, such as the bathroom lounge areas, fixtures, including lighting, counters, and mirrors, have been lost through theft and vandalism.

STUDY AREA

ARCHITECTURAL RESOURCES

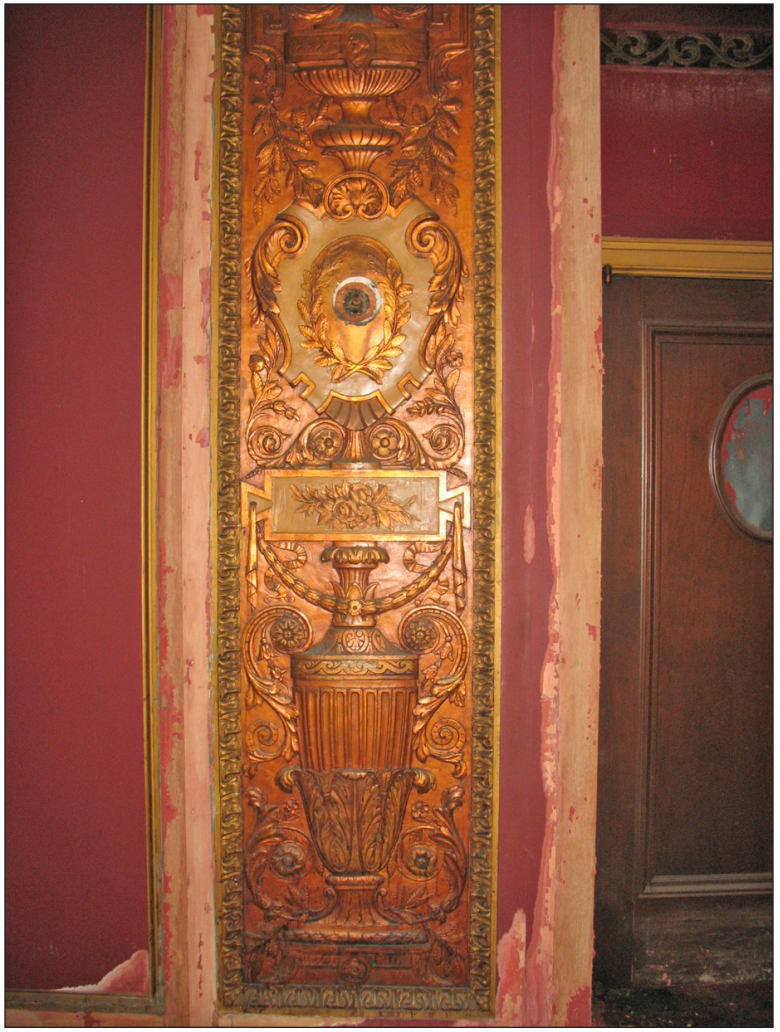
As shown in **Table 2-1**, 11 potential architectural resources were identified in the study area.[2] These include five individual properties and several groupings of rowhouses and multi-family dwellings throughout the study area dating to the early 20th century. In LPC's November 3, 2010 comment letter, LPC determined that of these 11 properties, three appeared S/NR eligible: the former Flatbush Savings Bank, the Sears Department Store, and the former Albemarle Theatre and two appeared NYCL eligible: the former Flatbush Savings Bank and the Sears Department Store. In a resource evaluation prepared by OPRHP on December 17, 2010, OPRHP found that five of the 11 properties met criteria for S/NR listing (see **Appendix A**). These properties are described below, mapped on Figure 2-1, with photographs provided in **Figures 2-4 through 2-6**).

South of, and adjacent to, the Loews Kings Theatre is the former **Brooklyn Union Gas Company Building** at 19 Duryea Place (S/NR-eligible, see Photo 2 of **Figure 2-4**). This two-story, classically designed, brick and stone-clad building was built by the Flatbush Gas Company, a subsidiary of the Brooklyn Union Gas Company, in 1930. It served as their Flatbush branch sales office. The building is clad in red brick with large window bays at the ground floor. These windows contain the original decorative metal transoms. These windows are separated by paired fluted stone pilasters, which support a Doric stone cornice that extends across the façade between the first and second stories. The entrance, centrally located on the façade, is surmounted by a broken stone pediment, framing a decorative shield. The windows at the second storey are grouped in two's and threes, and appear to contain modern aluminum sash windows. A bracketed cornice extends below the parapet. The building recently housed the Loehmann's

[1] Feasibility Study for the Former Loews Kings Theatre prepared by Lee-Saltzman Architects, January 9, 2008.

[2] Prior to the architectural resources survey undertaken as part of this EIS, no known architectural resources had been identified in the study area.

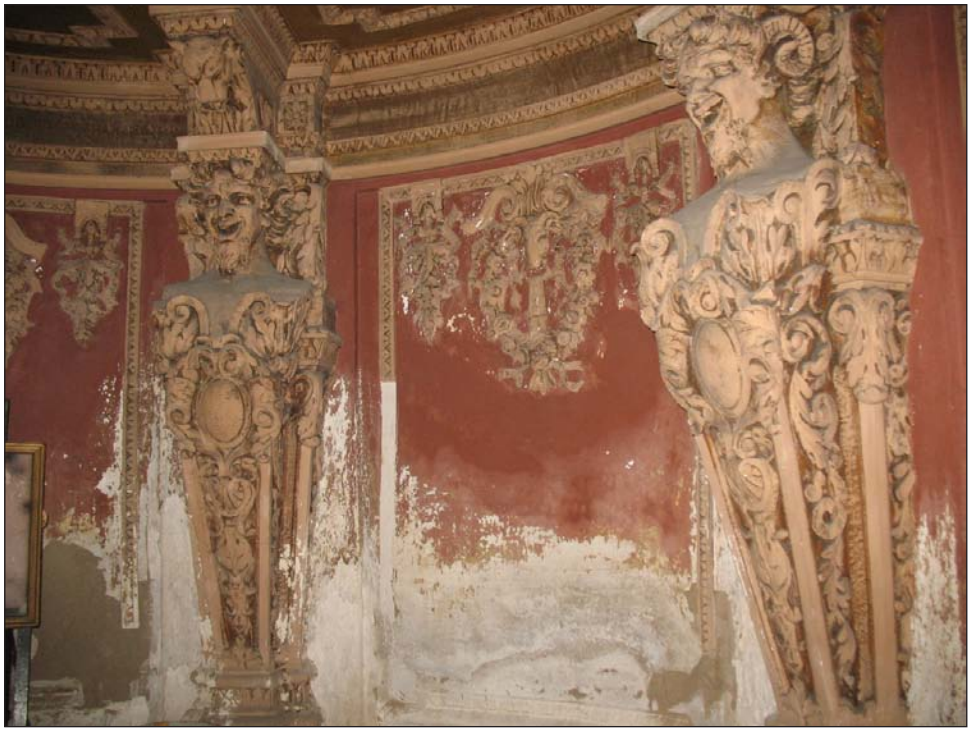
Kings Theatre façade, Flatbush Avenue **1a**



Kings Theatre, decorative hallway panel **1b**

Architectural Resources
Project Site
Figure 2-2

Kings Theatre, Auditorium column **1c**



Kings Theatre, Auditorium alcove **1d**

Known Architectural Resources –
Kings Theatre Project Site
Figure 2-3

Kings Theatre, Auditorium **1e**

Former Brooklyn Union Gas Company, 19 Duryea Place **2**

Known Architectural Resources –
Project Site and Study Area
Figure 2-4

Former Flatbush Savings Bank, 1045-1049 Flatbush Avenue **3**

Sears Department Store, 2301-2329 Beverly Road **4**

Known Architectural Resources – Study Area
Figure 2-5

Former Albemarle Theater, 977 Flatbush Avenue **5**

Adams Memorial Hall, 2017 Beverly Road **6**

Known Architectural Resources – Study Area

Figure 2-6

Department Store, and is currently occupied by the Federation Employment and Guidance Service (FEGS) Yatzkan Center.

Also adjacent to the Loews Kings Theatre is the former **Flatbush Savings Bank** (S/NR-eligible, NYCL-eligible) at the northeast corner of Flatbush Avenue and Duryea Place (see Photo 3 of **Figure 2-5**). The Flatbush Avenue Savings Bank built the one- to-three story bank building in 1927. The Renaissance Revival style building features a polished granite base with limestone facades. The Flatbush Avenue façade is detailed with ashlar rustication, with 45-foot-tall Corinthian columns at the corners. The main entrance is centrally located on the façade within a double height limestone arch. The entrance is set within a pedimented granite surround. Above this is a large arched window. Flanking the window are carved stone medallions that symbolize the successive stages of training, industry, thrift and success. The Duryea Place façade features three large round arched openings. At ground level, these openings each contain three rectilinear windows; two smaller windows flank a larger window. At the second story there are large arched windows. At either end of the façade are two medallions, similar to those on the Flatbush Avenue façade. The building is surmounted by a modillioned stone cornice. In 1946, the bank building was expanded through a two-story, 50-foot-wide addition to the north of the building. This addition is also clad in granite and rusticated limestone, and has a secondary entrance with Automated Teller Machines (ATMs). The bank building and addition are presently occupied by an Astoria Federal Savings and Loan bank branch.

Table 2-1
Architectural Resources on the Project Site and in the Study Area

Map Ref No.*	Property Name	Address	Date Built	S/NR-eligible	NYCL-eligible
1	Kings Theatre	1027 Flatbush Avenue	1929	YES	YES
2	Former Brooklyn Union Gas Company	19 Duryea Place	193-	YES	NO
3	Former Flatbush Savings Bank	1045-1049 Flatbush Avenue	1927	YES	YES
4	Sears Department Store	2301-2329 Beverly Road	1932	YES	YES
5	Former Albemarle Theatre	977 Flatbush Avenue	1920	YES	NO
6	Adams Memorial Hall	2017 Beverly Road	1926	YES	NO
N/A	Six residential buildings	14-28 Duryea Place	By 1905	NO	NO
N/A	Five rowhouses	154-164 East 22nd Street	By 1929	NO	NO
N/A	Ten rowhouses	2202-2230 Beverly Road	By 1905	NO	NO
N/A	Nine residential buildings	2312-2338 Bedford Avenue	By 1929	NO	NO
N/A	Six rowhouses	2107-2119 Regent Place	By 1929	NO	NO
N/A	Five residential buildings	2102-2116 Regent Place	By 1929	NO	NO

Notes:
***** Corresponds to Figure 2-1.
Determinations of S/NR and NYCL eligibility made by LPC on November 3, 2010 and determinations of S/NR eligibility made by OPRHP on December 17, 2010.

At the northwest corner of Bedford Avenue and Beverly Road is the **Sears Department Store** (S/NR-eligible, NYCL-eligible, see Photo 4 of **Figure 2-5**). This Sears retail branch was built in 1932 as one of the first three stores built by the Sears, Roebuck & Co. in the New York metropolitan area and the first Sears retail store built in New York City. Two other stores were built at the same time, one in Hackensack, NJ, still extant, and the other also in New Jersey in Union City, which has been demolished. All three stores were designed by Nimmons, Carr & Wright in a similar Art Moderne-Art Deco style. The Sears Store is clad in limestone and has a prominent chamfered corner tower at the intersection of Bedford Avenue and Beverly Road; at the top of the tower on all four facades stylized lettering reads “Sears Roebuck and Co.” The base, or ground floor of the building, is windowless. At the upper stories, vertical piers separate

narrow bays filled with decorative panels. The store was designed with entrances on both Bedford Avenue and Beverly Road; the Bedford Avenue entrance has been sealed. Above these entrances is etched "Sears Roebuck and Company." The upper stories above the entrances are distinguished by fluted limestone piers separating bays that contain decorative panels and carved stone spandrels. In 1936, Sears built a community auditorium at the top floor of the building. Opened by Mrs. Fiorello H. LaGuardia, the mayor's wife, the auditorium had 650 seats and the auditorium was designed to be used for free by any community, philanthropic, or church organizations in Flatbush and other parts of Brooklyn. In 1940, the building was expanded to the north and west. This addition is of the same height as the original store and of a plain design. The Sears Department Store tower is prominently visible on Bedford Avenue and in views west on Beverly Road.

At the southeast corner of Flatbush Avenue and Albemarle Road is the former **Albemarle Theatre** (S/NR-eligible, see Photo 5 of **Figure 2-6**). Designed by Harrison G. Wiseman, the movie theatre opened in 1920. The building's principal façade faces Flatbush Avenue. It is designed with a central pedimented bay that is clad in terra cotta. This bay has a large arched window with a decorative metal railing at the third story, with flanking rectangular windows. The windows are separated by double height pilasters. The pediment is ornamented with a shield and swag motif. The flanking building bays are clad in red brick and contain rectangular windows with terra cotta surrounds. The second and third storey windows are divided by decorative terra cotta panels. At each corner of the building is a double height terra cotta pilaster, and the building is capped by a Doric terra cotta cornice. Along Albemarle Road near Flatbush Avenue, the second and third stories are of a similar architectural character and with similar ornament as the Flatbush Avenue façade. Moving east on Albermarle Road, a portion of the original building has had its second and third storey windows sealed. The remainder of this façade is a plain brick façade. The building was damaged by fire in 1984. It was subsequently purchased by the Jehovah's Witnesses and presently serves as their Kingdom Hall. The building has been altered at ground level, with the majority of ground floor openings sealed with the exception of the entrances on Flatbush Avenue and Albemarle Road. The original marquee has been removed, as has the large vertically oriented neon "Albemarle" sign which extended along the building on Flatbush Avenue. In addition, with the exception of the arched section of the central third storey window on Flatbush Avenue, the original multi-pane double hung windows have been replaced with modern aluminum replacements.

At the west end of the study area, at the northwest corner of Beverly Road and East 21st Street is St. Marks' Methodist Church's **Adams Memorial Hall** (S/NR-eligible, see Photo 6 of **Figure 2-6**). This building, designed in the Gothic Revival style, was built in 1926 as a church house and community center. It is adjacent to St. Mark's Methodist Church, an early 20th century stone-clad structure at the corner of Ocean Avenue and Beverly Road. Adams Memorial Hall also houses a gymnasium on the second floor. The building is clad in brown and buff colored brick, with double height pointed arch window openings. Between the second and third storey windows are decorative stone panels. The building has a stone water table, and the parapet is crenellated with stone coping. The entrance to the gymnasium is on East 21st Street, and is set within a pointed arched stone surround. There are two entrances to the parish house/community center on Beverly Road, which are also pointed arched openings.

C. THE FUTURE WITHOUT THE PROPOSED ACTIONS

Absent the proposed actions, the Kings Theatre would be expected to remain in its current condition as a vacant building and the portions of East 22nd Street would not be demapped. The Theatre could deteriorate and its condition could worsen as it would continue to remain vacant.

OTHER FUTURE PROJECTS

There are no known development projects in the architectural resources study area that are expected to be completed by 2014.

The status of architectural resources could change in the future without the proposed project. Properties identified above could be determined eligible or listed on the S/NR, or properties could be calendared for a designation hearing. Changes to the potential architectural resources identified above or to their settings could occur irrespective of the proposed project. Future projects could also affect the settings of architectural resources. It is possible that some architectural resources in the study area could deteriorate, while others could be restored. In addition, future projects could accidentally damage architectural resources through adjacent construction.

Historic resources that are listed on the S/NR or that have been found eligible for listing are given a measure of protection under Section 106 of the National Historic Preservation Act from the effects of projects sponsored, assisted, or approved by federal agencies. Although preservation is not mandated, federal agencies must attempt to avoid adverse effects on such resources through a notice, review, and consultation process. Properties listed on the Registers are similarly protected against effects resulting from projects sponsored, assisted, or approved by State agencies under State Historic Preservation Act (SHPA). However, private owners of properties eligible for, or even listed on, the Registers using private funds can alter or demolish their properties without such a review process. Privately owned properties that are NYCLs, in New York City Historic Districts, or pending designation as NYCLs are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition permits can be issued, regardless of whether the project is publicly or privately funded. Publicly owned resources are also subject to review by LPC before the start of a project. However, LPC's role in projects sponsored by other City or State agencies generally is advisory only.

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction, however, these regulations do not afford special consideration for historic structures.

D. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

PROJECT SITE

The proposed actions would result in the stabilization, restoration, and reuse of the Kings Theatre as a live entertainment venue, thereby returning this vacant structure to a vibrant, productive use. The reuse of the building would involve exterior and interior alterations. This includes the cleaning and restoration of the exterior of the theatre. In addition, the vacant parcel south of the theatre, with an approximately 65-foot frontage on Flatbush Avenue, would be converted into a landscaped courtyard, with access provided to it from the theatre's lobby.

Interior alterations would include the cleaning and restoration of the ceiling, wall and floor surfaces in the theatre's front-of-house facilities. In addition, the auditorium floor would be regraded for better site lines and new seating installed. New restroom and concession facilities would be provided.

The rear of the theatre, which contains its back stage and supporting back-of-house facilities, would be demolished commencing behind the theatre's proscenium arch. A new, 97-foot-tall steel framed structure would be constructed to provide a stage with a capacity to accommodate live performances and with sufficient back-of-stage support areas, such as dressing rooms and loading facilities. This new structure—approximately the same height as the existing theatre—and loading areas, would extend into the demapped roadbed of East 22nd Street. The back-of-house addition could be clad in masonry, to be designed to distinguish it from the original historic structure, in consultation with OPRHP. As described above, the existing rear of the theatre consists of a largely unfenestrated blank brick façade.

All alterations would be performed as per the Secretary of the Interior's Standards for Rehabilitation in consultation with OPRHP. The proposed project is contingent on the listing of the property on the S/NR and receipt of federal tax credits, as stated in the Interim Agreement between NYCEDC and the project sponsor. Therefore, absent the federal tax credits, the project would not go forward. Compliance with the Secretary of the Interior's Standards as interpreted by OPRHP and the National Park Service, in order to receive the tax credits, would ensure that the proposed project would not adversely affect the Kings Theatre. LPC has concurred that there would be no significant adverse impacts to the Kings Theatre provided its restoration and rehabilitation is undertaken according to the Secretary of the Interior's Standards in consultation with OPRHP.[1]

STUDY AREA

As described above, two known architectural resources, the former Flatbush Savings Bank and the former Brooklyn Union Gas Company Building, are adjacent to the Kings Theatre. The former Flatbush Savings Bank is also located adjacent to the vacant area to be converted into the theatre courtyard. The former Brooklyn Union Gas Company Building is also located within 90 feet of the East 22nd Street demapping, in the location where the new back-of-house structure would be constructed. As these architectural resources are located within 90 feet of the project site, the proposed project would develop and implement a Construction Protection Plan (CPP) in consultation with LPC and OPRHP prior to construction. The CPP would describe measures to be taken to avoid adverse physical impacts on such structures, such as ground-borne construction-period vibrations, falling debris, and damage from heavy machinery. As described above, the CPP would follow the requirements established in the DOB's *TPPN #10/88*, concerning procedures for the avoidance of damage to adjacent historic structures from nearby construction. It would also follow the guidelines set forth in section 523 of the 2010 *CEQR Technical Manual*, including conforming with LPC's *New York City Landmarks Preservation Commission Guidelines for Construction Adjacent to a Historic Landmark* and *Protection Programs for Landmark Buildings*.

[1] LPC comments dated November 3, 2010. OPRHP will be providing comments on the project's potential impacts on historic and cultural resources between publication of the DEIS and FEIS.

The proposed restoration and reuse of the Kings Theatre would not be expected to adversely affect the context of this and the other architectural resources in the study area, as it would result in the renovation and reuse of a large underutilized historic structure.

The proposed exterior alterations to the theatre, including the removal of the existing backstage and back-of-house facilities, and construction of new facilities, would be reviewed by OPRHP. This would ensure the design of a structure that is compatible and appropriate to the historic theatre. This new structure would extend into East 22nd Street. The demapping and construction of the new back-of house addition would not adversely impact the context of the Brooklyn Union Gas Company, the Flatbush Savings Bank, the Sears Department Store, the Albemarle Theatre, and St. Marks' Methodist Church's Adams Memorial Hall. The former Brooklyn Union Gas Company Building faces south onto Duryea Place, and a vacant parcel intervenes between this building and the East 22nd Street roadbed. East of East 22nd Street is a large paved parking lot, and there is no meaningful visual relationship between the former Brooklyn Union Gas Company Building and this parking lot. The other architectural resources are located at too great a distance, or with buildings intervening between them and the East 22nd Street portion of the project site, to be adversely affected by the construction of the new back-of-house structure.

At 97 feet tall, the new structure would be taller than most of the two-to-four story architectural resources, but not substantially different from the height of the existing Kings Theatre structure. The new structure would be of a lesser height than the Sears Department Store corner tower, which extends significantly above the 50-foot-tall building. The prominent views of the tower on Bedford Avenue and Beverly Road would be unaffected by the proposed project.

The proposed actions would provide for the preservation and restoration of a significant historic structure, while providing a new cultural institution, in the heart of Brooklyn. As such, it is anticipated that the proposed project would have a positive impact on this historic structure, which would benefit the nearby potential architectural resources. With the preparation and implementation of a Construction Protection Plan for any S/NR and/or NYCL-eligible properties located within 90 feet of project construction, the proposed project would not be expected to result in adverse impacts on any historic or cultural resources. ✷

Chapter 3: Transportation

A. INTRODUCTION AND PRINCIPAL CONCLUSIONS

INTRODUCTION

This chapter evaluates the traffic and transportation conditions associated with the proposed redevelopment of the vacant Kings Theatre site into a live performance venue for concerts and shows. It addresses the potential traffic, parking, transit and pedestrian impacts of the proposed actions. First, it provides an assessment of existing conditions and future conditions without the proposed actions (2014 No Build conditions). It then provides a detailed description of the volume of trips expected to be generated by the proposed actions, and an assessment of future conditions with the proposed actions (2014 Build conditions), which addresses the potential for significant adverse impacts. Traffic capacity improvements needed to mitigate the potential significant adverse impacts are presented in Chapter 8, "Mitigation." A discussion of partially mitigatable and unmitigatable significant adverse traffic impacts appears in Chapter 9, "Unavoidable Adverse Impacts."

The project site is located in the Flatbush-Ditmas Park section of Brooklyn and is bounded by Flatbush Avenue on the west, Tilden Avenue on the north, East 22nd Street on the east, and Duryea Place on the south. The proposed actions would create a theatre on this block with up to 3,600 seats and would also entail the demapping and closure of a portion of East 22nd Street between Tilden Avenue and Duryea Place to accommodate an expansion of the theater's stagehouse, back-of-house support areas, and loading areas into the street to support live theatre events.

The programming for the proposed theatre venue would potentially include weekend midday events and weekday or weekend evening events. A Saturday afternoon study period was chosen to analyze a weekend midday event condition, and a Saturday evening study period was chosen to analyze an evening event. Both of these periods were chosen because they represent the highest background volumes for each potential event time. For a midday event, both the arrival and departure peaks were analyzed. For an evening event, only the arrival period was analyzed. The departure period is not analyzed since it would occur in the late evening when background traffic and transportation activity would be much lower. These traffic analysis hours were determined in conjunction with, and approved by, the New York City Department of Transportation (NYCDOT). This analysis evaluates a worst-case scenario where a sold-out event would occur.

PRINCIPAL CONCLUSIONS

TRAFFIC

Of the 14 study area intersections analyzed, the proposed actions would result in significant traffic impacts at 12 intersections in the Saturday midday arrival peak hour, 13 in the midday

departure peak hour, and 10 in the evening arrival peak hour. Traffic capacity improvements that would be needed to mitigate these significant adverse traffic impacts are addressed in Chapter 8, "Mitigation." Significant adverse traffic impacts that could only be partially mitigated or would be unmitigatable are addressed in Chapter 9, "Unavoidable Adverse Impacts."

PARKING

The parking demand generated by the proposed actions would be fully accommodated by available on-street and off-street parking within the study area. Additionally, the loss of on-street parking spaces that would result from the proposed closure of East 22nd Street would not adversely impact parking conditions.

TRANSIT

Based on the assessment performed in the EAS, it was determined that the number of bus and subway person trips expected to be generated by the proposed actions, and ridership levels during peak event periods would not have the potential for significant adverse bus or subway impacts and, therefore, no further analysis is warranted. However, transit trip assignments were conducted for the purpose of pedestrian analyses.

PEDESTRIANS

All crosswalk and corner reservoir areas analyzed for this study would operate at acceptable levels of service (LOS C or better) during all analysis periods under the future Build condition. Therefore, there would be no significant pedestrian impacts as a result of the proposed actions.

B. EXISTING CONDITIONS

TRAFFIC

ROADWAY NETWORK AND STUDY AREA

The traffic study area encompasses 13 signalized intersections and one unsignalized intersection. The specific analysis locations were selected based on observations of traffic patterns and expected trip patterns to the proposed theatre. The traffic study area primarily encompasses intersections along Flatbush, Bedford, and Ocean Avenues between Caton Avenue/Linden Boulevard and Foster Avenue.

Flatbush Avenue

Flatbush Avenue is a major commercial arterial that runs north-south through Brooklyn between the Manhattan Bridge in Downtown Brooklyn and Mill Basin at the southerly end of the borough. In the vicinity of the project site, Flatbush Avenue generally operates with two travel lanes and metered curb parking in each direction. Local and express bus routes travel along this corridor. It is also a designated through truck route.

Bedford Avenue

Bedford Avenue extends north-south through central Brooklyn, and has a diverse land use mix including residential, commercial, and institutional uses. Within the vicinity of the study area, Bedford Avenue passes the Sears parking lot, just east of the project site, and has one lane of traffic, a bicycle lane, and curbside parking in both directions.

Ocean Avenue

Ocean Avenue is a north-south arterial that generally carries one lane of traffic and curbside parking in each direction within the study area. This corridor is characterized by multi-family residential use. Several express bus routes and one local route travel along this corridor.

Caton Avenue

Caton Avenue is an east-west street that operates between Fort Hamilton Parkway and Bedford Avenue. Caton Avenue has one travel lane and a parking lane in each direction, and is a designated truck route.

Linden Boulevard

Linden Boulevard is an east-west street that operates with two lanes of traffic and parking in each direction. Linden Boulevard is also a designated local truck route through Brooklyn.

Church Avenue

Church Avenue is a major east-west commercial arterial and designated truck route within the project study area. It has one travel lane and metered parking in both directions. Church Avenue has high levels of pedestrian activity, especially during peak shopping hours. There is also a local bus route along this corridor.

Tilden Avenue

Tilden Avenue is a local east-west commercial street with one travel lane and metered parking in both directions between Flatbush and Bedford Avenues. East of Bedford Avenue, Tilden Avenue operates one-way westbound, and is primarily residential.

Beverley Road

Beverley Road is an east-west corridor that operates with one travel lane and parking in each direction. It is characterized by residential and commercial land uses.

Foster Avenue

Foster Avenue is an east-west street that operates with one travel lane and parking in each direction. This street is mostly residential and has local bus service.

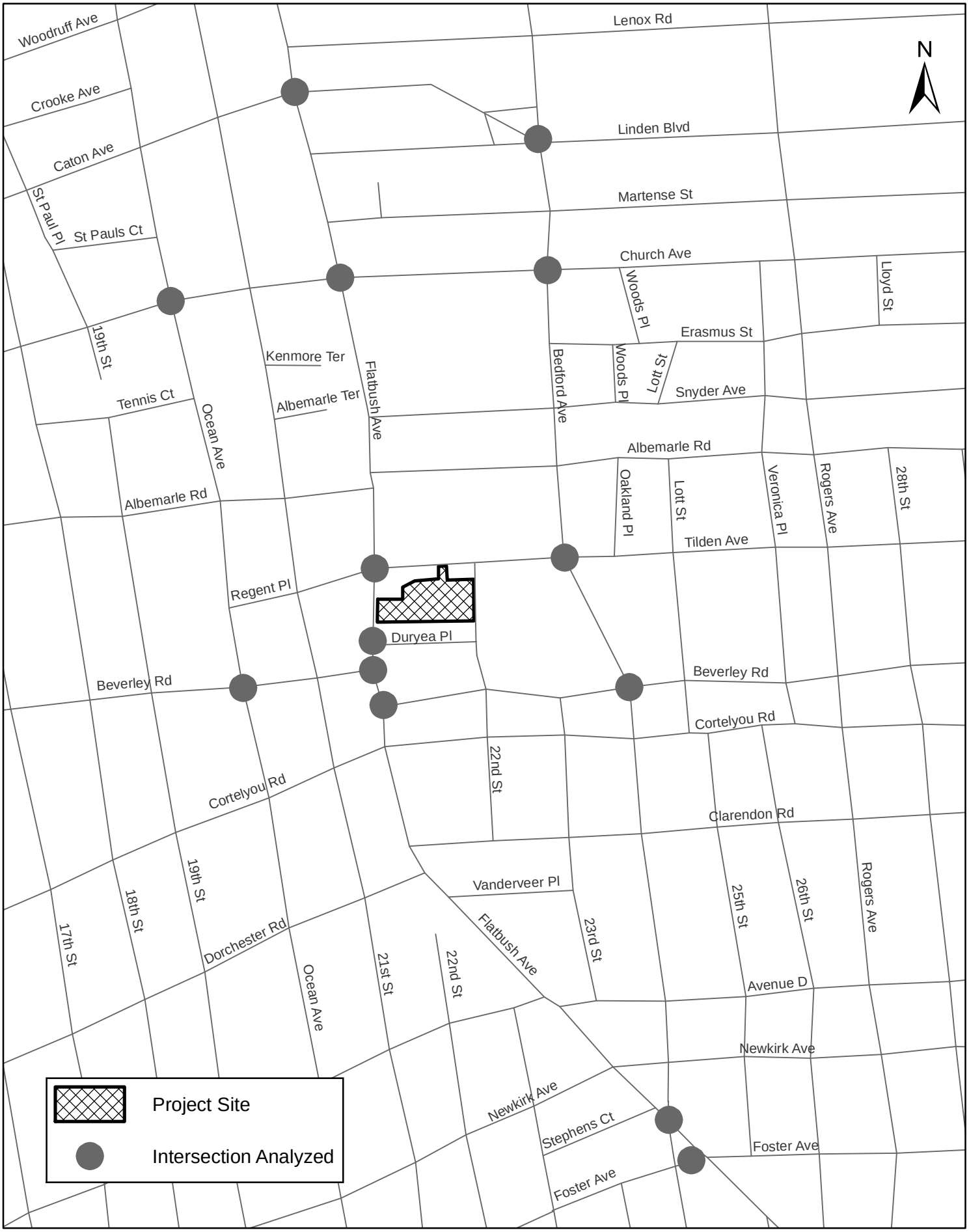
East 22nd Street

East 22nd Street is a southbound local street that has one travel lane and parking on both sides of the street. It is parallel to Flatbush Avenue and borders the project site to the east. East 22nd Street begins at Tilden Avenue and ends at Clarendon Road four blocks south. The proposed project would involve demapping a portion of this street in order to expand the theatre's stage.

The traffic study area analyzed in this study includes eight intersections (seven signalized and one unsignalized) along Flatbush Avenue, four intersections along Bedford Avenue, and two intersections along Ocean Avenue. The traffic analysis locations are shown in **Figure 3-1**.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

Traffic counts were conducted for this study in June 2010 for Saturday midday arrival, Saturday midday departure, and Saturday evening arrival peak periods using manual intersection counts and 24-hour Automatic Traffic Recorder (ATR) machine counts. These volumes were used



KINGS THEATRE

Traffic Study Area
Figure 3-1

along with observations of traffic conditions to determine levels of service for the Saturday 1 to 2 PM, 4:30 to 5:30 PM, and 7 to 8 PM peak hours. Overall, traffic volumes are relatively similar during each Saturday peak analysis hour. The following is a detailed summary of traffic volumes within the traffic study area during the Saturday peak hours.

Along Flatbush Avenue, southbound volumes are in the range of 550 to 700 vehicles during the Saturday midday arrival peak hour. During the Saturday midday departure and evening arrival peak hours, southbound volumes range from 600 to 775. Northbound traffic volumes along Flatbush Avenue are generally in the range of 675 to 875 vehicles within the study area, although they decrease to 550 to 600 vph for one block between Linden Boulevard and Caton Avenue.

Bedford Avenue has 275 to 425 vehicles per hour (vph) in the northbound direction and 425 to 575 vph in the southbound direction north of Newkirk Avenue during the peak analysis hours. South of Newkirk Avenue, traffic volumes along Bedford Avenue are 150 to 200 vph per direction.

Along Ocean Avenue, traffic volumes are in the range of 275 to 400 vph in the northbound direction and 375 to 475 vph in the southbound direction.

Caton Avenue has 325 to 450 vehicles per direction during the peak hours in the vicinity of the study area.

Linden Boulevard has 400 to 500 vph per direction during peak hours, east of Bedford Avenue. Linden Boulevard extends west of Bedford Avenue for one block and operates one-way eastbound. Traffic volumes for this stretch are approximately 100 vph during peak hours.

Along Church Avenue, traffic volumes are 375 to 450 vph in the eastbound direction during peak hours, east of Flatbush Avenue. West of Flatbush Avenue, eastbound traffic volumes decrease to the range of 250 to 350 vph during peak hours. Westbound traffic volumes along Church Avenue within the study area are 275 to 375 vph during peak hours.

Tilden Avenue is a two-way street between Flatbush and Bedford Avenues and has traffic volumes of 100 to 150 vph in the eastbound direction during Saturday peak hours. In the westbound direction, traffic volumes are 150 to 300 vehicles during the Saturday midday peak hours. East of Bedford Avenue, Tilden Avenue operates one-way westbound and has traffic volumes of approximately 250 vph during peak hours.

Along Beverley Road, traffic volumes are in the range of 150 to 300 vph per direction during peak hours.

Foster Avenue has 100 to 150 vph in the eastbound direction and 175 to 225 vph in the westbound direction within the study area during peak hours.

Existing traffic volume network maps are provided at the end of this chapter.

Levels of service (LOS) were determined using *2000 Highway Capacity Manual (HCM)* procedures, which is the analysis methodology approved for use by NYCDOT.

For signalized intersections, levels of service are defined in terms of average vehicle control delay, as follows:

- LOS A describes operations with very low delays, i.e., 10.0 seconds or less per vehicle. This occurs when signal progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all.

- LOS B describes operations with delays in excess of 10.0 seconds up to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delays in excess of 20.0 seconds up to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping is noticeable at this level, although many still pass through the intersection without stopping.
- LOS D describes operations with delays in excess of 35.0 seconds up to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.
- LOS E describes operations with delays in excess of 55.0 seconds up to 80.0 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

For unsignalized intersections, delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line: LOS A describes operations with very low delay, i.e., 10.0 seconds or less per vehicle; LOS B describes operations with delays in the range of 10.1 to 15.0 seconds; LOS C has delays in the range of 15.1 to 25.0 seconds; LOS D, 25.1 to 35.0 seconds per vehicle; and LOS E, 35.1 to 50.0 seconds per vehicle, which is considered to be the limit of acceptable delay. LOS F describes operation with delays in excess of 50.0 seconds per vehicle, which is considered problematic to most drivers. This condition exists when there are insufficient gaps of suitable duration to allow side street traffic to cross safely through a major vehicular traffic stream.

Based on guidance in the 2010 *City Environmental Quality Review (CEQR) Technical Manual*, LOS A, B, and C are considered acceptable; LOS D is generally considered marginally acceptable up to mid-LOS D (45 seconds of delay for signalized intersections) and unacceptable above mid-LOS D; and LOS E and F indicate congestion. These guidelines are applicable to individual traffic movements and lane group levels of service.

Table 3-1 provides an overview of the levels of service that characterize existing "overall" intersection conditions during the Saturday midday arrival, midday departure, and evening arrival peak hours. Overall levels of service of an intersection represent a weighted average of individual traffic movements' levels of service.

Table 3-1
Existing Traffic Level of Service Summary

Level of Service	Saturday Peak Hour		
	Midday Arrival	Midday Departure	Evening Arrival
Overall LOS A/B/C	10	11	11
Overall LOS D	4	3	3
Overall LOS E	0	0	0
Overall LOS F	0	0	0
Number of movements at LOS E or F (of approximately 59 movements analyzed)	6	4	4

This summary overview of existing conditions indicates that:

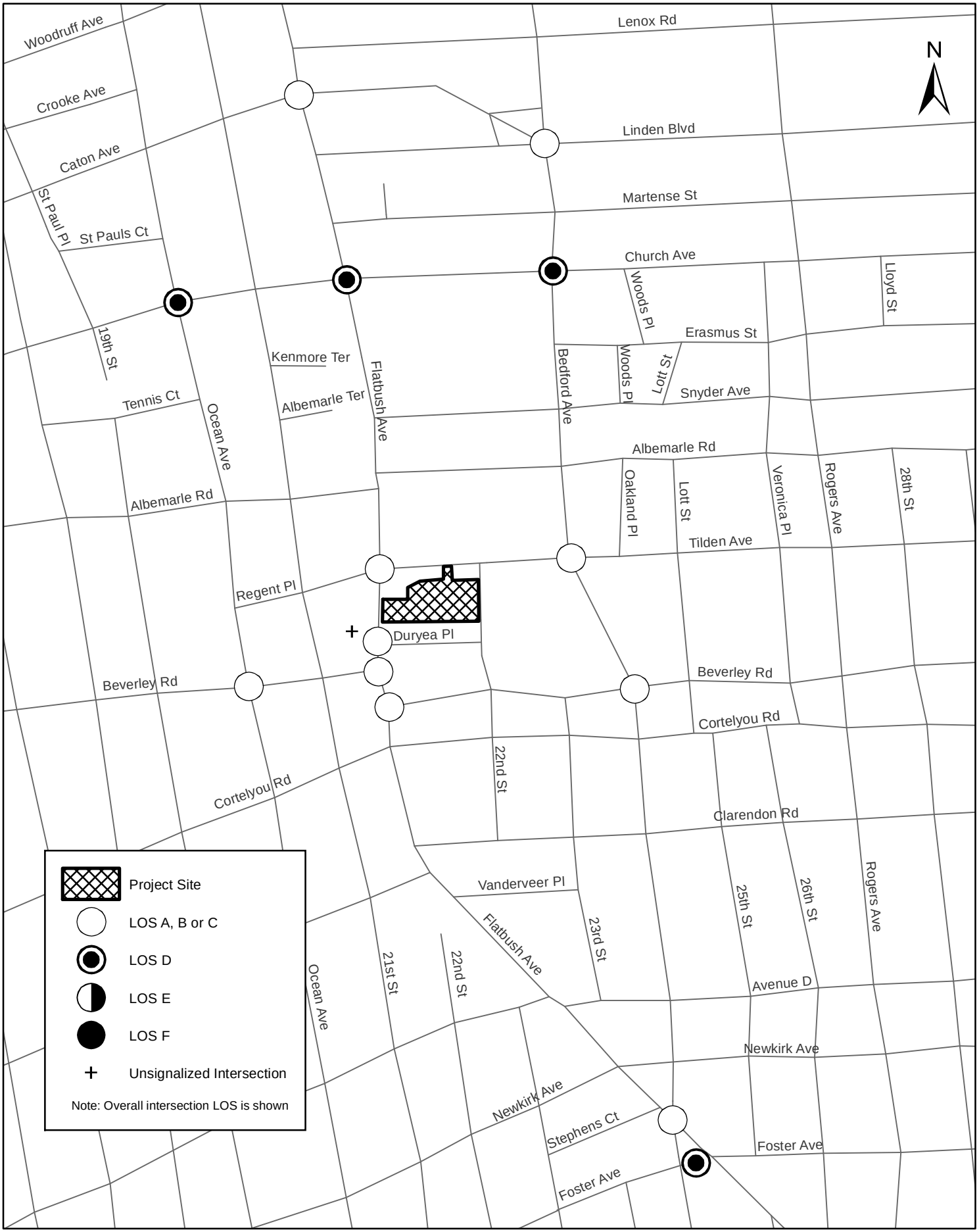
- During the Saturday midday arrival peak hour, none of the 14 intersections analyzed are operating at overall LOS E or F, and four intersections are operating at marginally acceptable/unacceptable LOS D. **Figure 3-2** shows the location of these intersections. Six individual traffic movements out of 59 such movements analyzed operate at LOS E or F (e.g., left turns from one street to another, through traffic on one street passing through the intersection, etc.).
- During the Saturday midday departure peak hour, none of the analyzed intersections operate at overall LOS E or F, and three intersections operate at marginally acceptable/unacceptable overall LOS D, as shown in **Figure 3-3**. Four individual traffic movements operate at LOS E or F.
- During the Saturday evening arrival peak hour, no intersections operate at overall LOS E or F, and three intersections operate at marginally acceptable/unacceptable overall LOS D as shown in **Figure 3-4**. Four individual movements operate at LOS E or F.

Seven intersections have individual movements that operate at LOS E of F during at least one time period including Flatbush Avenue and Church Avenue, Flatbush Avenue and Bedford Avenue/Foster Avenue, Bedford Avenue and Tilden Avenue, Bedford Avenue and Beverley Road, Ocean Avenue and Church Avenue, and Ocean Avenue and Beverley Road. Most of these movements are on the eastbound or westbound approaches.

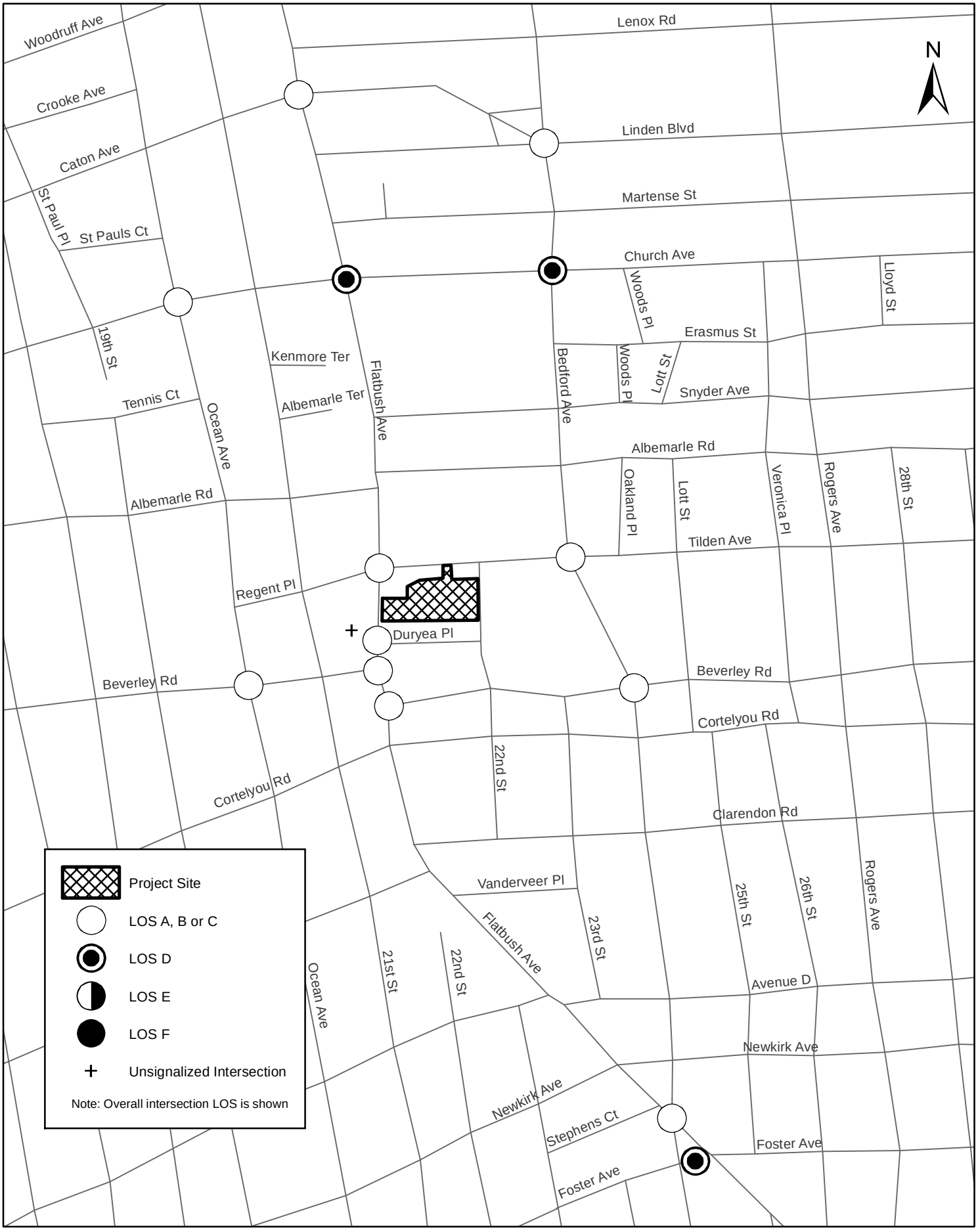
Detailed traffic levels of service, volume-to-capacity (v/c) ratios, and average vehicle delays for each traffic movement at each analysis location are presented at the end of this chapter.

PARKING

A detailed parking inventory of the area within a 5 to 10 minute walk of the project site was conducted. Initially, parking capacity and usage was collected within a primary study area encompassing a one-quarter mile radius (approximately a five minute walk) from the project site; this area is generally bounded by 18th Street to the west, Veronica Place to the east, Church Avenue to the north, and Dorchester Road to the south. In anticipation of project parking needs, data were also collected for an expanded secondary area which covers a walking distance from the site of five to ten minutes. **Figure 3-5** depicts the primary and secondary parking study areas. Parking data were collected during Saturday midday event arrival (12 to 2 PM) and departure (3 to 6 PM) parking periods, and during the Saturday evening event arrival (6 to 8:30 PM) period.



Existing Traffic Levels of Service
Saturday Midday Arrival Peak Hour
Figure 3-2



Existing Traffic Levels of Service
Saturday Midday Departure Peak Hour

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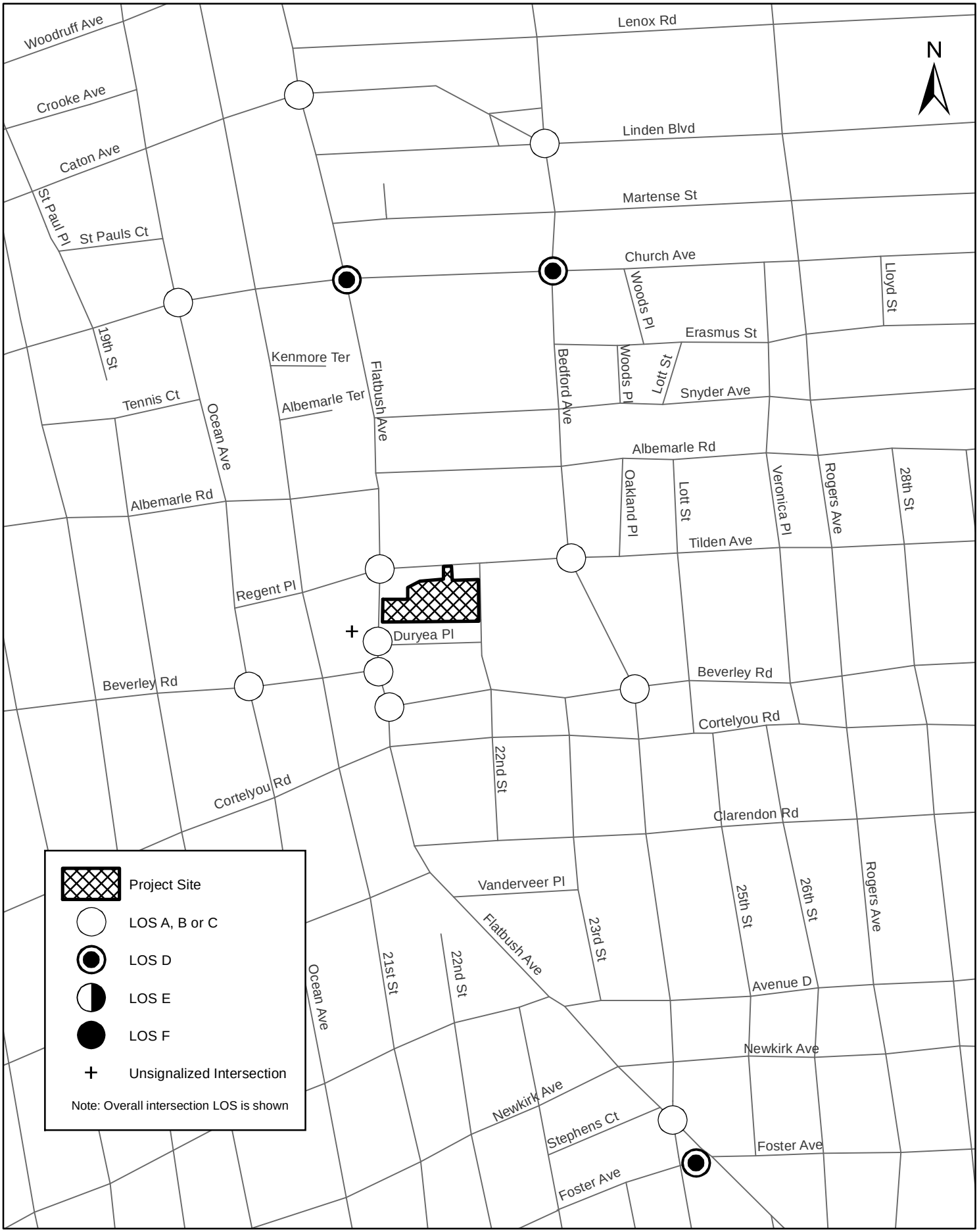
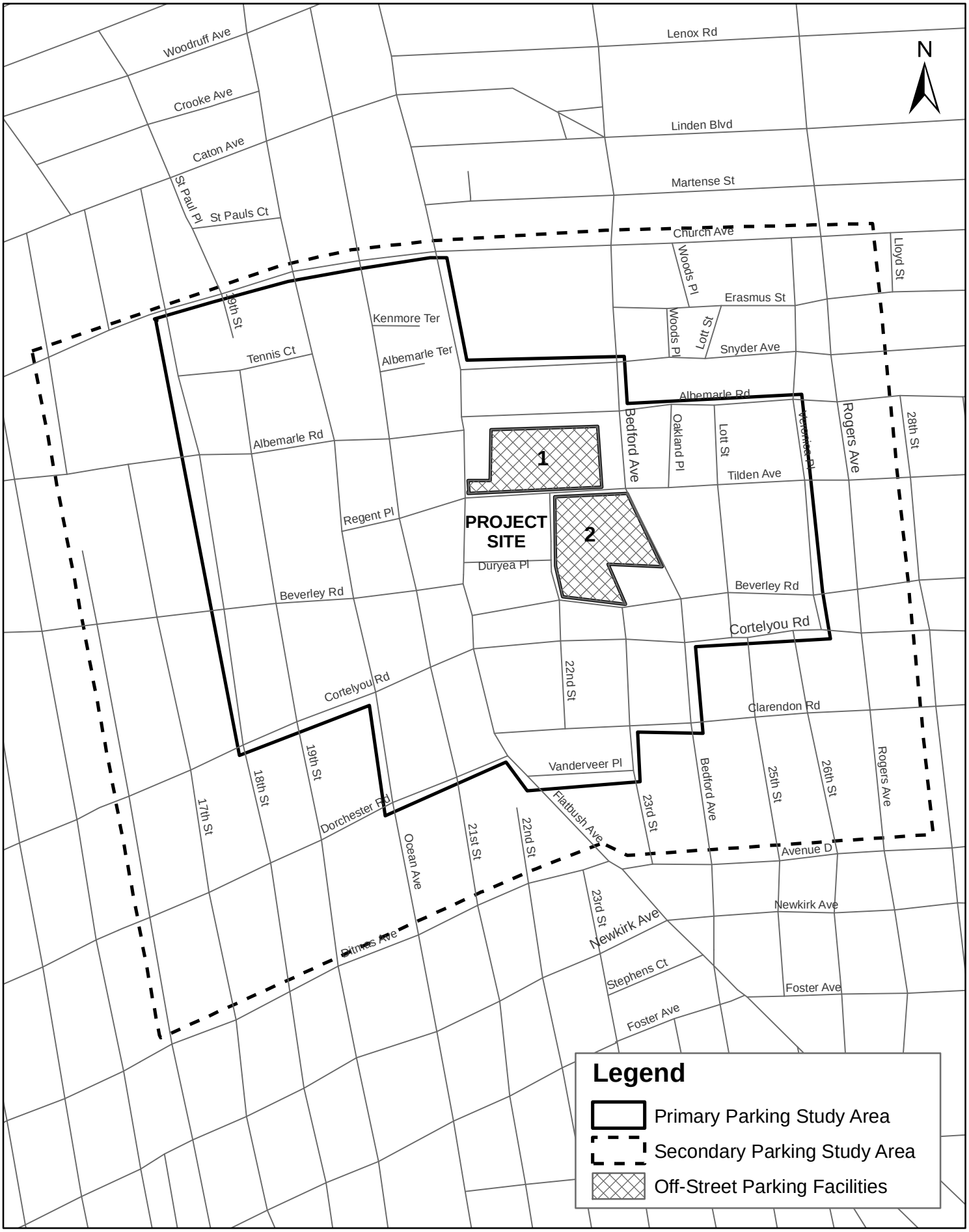
Figure 3-3



Existing Traffic Levels of Service
Saturday Evening Arrival Peak Hour



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Parking Study Area
Figure 3-5

There are two parking lots within the parking study area, and both facilities are within a block of the project site. These facilities are for the use of patrons of adjacent retailers, which would include the Kings Theatre. An existing Development and Operating Agreement dated as of July 15, 1997 which governs these lots provides a right exercisable by the Theatre owner to allow patrons to use the lot. As per the Interim Agreement dated February 1, 2010 between the New York City Economic Development Corporation (NYCEDC) and the developer, the developer is required to exercise this option prior to project completion.

In total, the off-street parking capacity within the study area is 678 spaces. As shown in **Table 3-2**, the peak off-street parking period is Saturday midday, when approximately 53 percent of the parking spaces are occupied. Demand decreases over the course of the day, dropping to approximately 39 percent during the midday departure period, and to 21 percent during the Saturday evening arrival period. This means that approximately 322 off-street spaces are available for theatre parking during the Saturday midday arrival period, 415 spaces are available during the Saturday midday departure period, and 533 spaces are available during the Saturday evening period.

Table 3-2
Existing Parking Utilization: Off-Street Parking Facilities

Location	Capacity	Saturday Occupancy (Percent Occupied)		
		Midday Arrival	Midday Departure	Evening Arrival
Sears Parking Lot (2360 Bedford Avenue)	425	207 (49%)	163 (38%)	89 (21%)
Stop & Shop Rooftop Lot (1007 Flatbush Avenue, parking entrance is on Tilden Avenue)	253	149 (59%)	100 (40%)	56 (22%)
Total	**678**	**356 (53%)**	**263 (39%)**	**145 (21%)**

Note: Official parking capacities were not available for these facilities so capacities were manually obtained in the field.

On-street parking inventories were also collected for streets within the primary and secondary parking study areas. Overall, there are 1,780 to 2,215 legal on-street parking spaces within the primary parking study area. This does not include one- and two-hour metered parking spaces as live theatre events would typically run longer than two hours. Approximately 91 percent of non-metered on-street parking spaces are occupied during all Saturday peak periods. There are approximately 160 available on-street parking spaces during the Saturday midday arrival period, 150 spaces available during the Saturday midday departure period, and 210 spaces during the Saturday evening peak period. For the secondary parking study area, there are approximately 2,000 to 2,200 legal non-metered on-street parking spaces, with occupancies of 87 to 90 percent during Saturday peak periods. Overall, there are approximately 200 to 250 non-metered parking spaces available in the secondary parking study area on a Saturday.

As shown in **Table 3-3**, The overall parking availability in the parking study area is approximately 737 spaces (322 off-street and 415 on-street) during the Saturday midday arrival peak period, approximately 766 spaces (415 off-street and 351 on-street) during the Saturday midday departure peak period, and 970 spaces (533 off-street and 210 on-street) during the Saturday evening arrival period. All available off-street street parking is in the primary parking study area which also has 148 to 208 available on-street parking spaces during Saturday peak periods. Additionally, there are between 203 and 255 available on-street spaces in the secondary parking study area during the peak periods.

Table 3-3
Existing Parking Availability

Type	Saturday Parking Availability		
	Midday Arrival	Midday Departure	Evening Arrival
Off-Street	322	415	533
On-Street – Primary Study Area	160	148	208
On-Street – Secondary Study Area	255	203	229
Total	**737**	**766**	**970**

TRANSIT

The project area is served by MTA/NYCT bus and subway service. There are a total of nine bus routes that serve the project area. The B41 operates along Flatbush Avenue between Downtown Brooklyn and Mill Basin, and stops one block from the project site. The B23 and B35 are local east-west routes that operate on Cortelyou Road and Church Avenue, respectively. The B49 (along Bedford Avenue) and B103 (along Flatbush Avenue and Cortelyou Road) are local north-south routes. Additionally, the BM1, BM2, BM3, and BM4 routes provide express commuter service between Brooklyn and Midtown Manhattan and stop on Cortelyou Road within the project study area.

There are four subway lines that operate within the project study area. The Q train stops at the Beverley Road station which is the closest station to the project site, approximately seven blocks to the west. The Q train operates between Coney Island, Brooklyn and Astoria, Queens, and operates through Manhattan along Broadway.

The B train stops at the Church Avenue station approximately four blocks north and four blocks west of the project site. The B train operates between Coney Island, Brooklyn and Bedford Park, Bronx via Manhattan along Sixth Avenue. The B train does not run during the late-night period or on weekends.

The Number 2 and 5 trains stop at the Beverley Road station, approximately seven blocks east of the project site. Both lines operate between Brooklyn College and the Bronx, via Manhattan. The Number 2 train operates express in Manhattan along Seventh Avenue, and the Number 5 train runs express along Lexington Avenue.

Trip generation results for the proposed actions (discussed in detail in the Build Traffic Conditions section) indicate that 273 passenger trips by bus and 547 passenger trips by subway would be generated during the Saturday midday event arrival and Saturday evening event arrival peak hours. During the Saturday midday event departure hour, 324 passenger trips by bus and 648 passenger trips by subway would be generated. Bus and subway trips were assigned to the various lines serving the project site. Based on these assignments, it was determined that fewer than 50 bus passenger trips would be assigned to any single line; therefore, there would be no need for quantitative bus analysis according to 2010 *CEQR Technical Manual* guidelines. As many as 292 subway passenger trips would be assigned to at least one subway line, but since ridership volumes are substantially lower on Saturday as compared to weekdays (48 to 53

percent[1]) at stations serving the project site, there is no potential for impacts at this level of passengers on a Saturday, and no quantitative subway analysis was performed.

PEDESTRIANS

The project area is primarily residential with commercial uses located along Flatbush and Church Avenues. Also, Tilden Avenue has commercial activity on the section between Flatbush and Bedford Avenues, just north of the project site. There are several schools located near the project site including a large public high school on Flatbush Avenue between Church and Snyder Avenues. The study area is not in a New York City Department of Transportation (NYCDOT) Senior Pedestrian Focus Area. During Saturday peak hours, pedestrian volumes varied from low to moderate-high depending on the period and location. Because significant increases in pedestrian volumes are expected as a result of the proposed actions, quantitative pedestrian analyses were performed.

Pedestrian analyses were performed for the Saturday midday arrival, midday departure, and evening arrival peak periods. Existing pedestrian conditions were assessed using pedestrian counts at the key pedestrian elements at two intersections adjacent to the project site: Flatbush Avenue and Tilden Avenue/Regent Place; and Flatbush Avenue and Beverley Road (north)

Pedestrian counts were collected for two consecutive Saturdays in June 2010. The counts determined the Saturday pedestrian peak hours to be similar to the traffic peak hours of 1-2 PM, 4:30-5:30 PM, and 7-8 PM. Within each of these peak hours, existing peak 15-minute volumes were identified. **Table 3-4** provides existing pedestrian volumes for the weekday AM and PM peak hours.

Table 3-4
Existing Pedestrian Peak 15-Minute Volumes

Location	Crosswalk or Corner	Saturday Peak Period Volume		
		Midday Arrival	Midday Departure	Evening Arrival
Flatbush Avenue and Tilden Avenue/Regent Place	North Crosswalk	175	142	128
	South Crosswalk	81	82	66
	East Crosswalk	243	222	217
	West Crosswalk	231	265	190
	Northeast Corner	100	79	66
	Northwest Corner	21	20	26
	Southeast Corner	31	21	27
	Southwest Corner	10	4	4
Flatbush Avenue and Beverley Road (north)	North Crosswalk	34	36	39
	South Crosswalk	54	44	41
	West Crosswalk	173	175	151
	Northwest Corner	28	30	18
	Southwest Corner	27	16	12

METHODOLOGY

Pedestrian level of service standards are determined on the basis of walking speed, pedestrian spacing, and probabilities of conflict. The level of service standards range from "A" (best) to "F"

[1] Source: MTA/NYCT 2009 Subway Ridership - http://www.mta.info/nyct/facts/ridership/ridership_sub.htm

(worst). These standards are primarily based on the space needs of people involved in various activities, and are widely used for planning and design of facilities for pedestrians.

Conditions at crosswalks and street corners are also influenced by the effects of traffic signals. Crosswalk conditions are expressed as a measurement of the area available (the crosswalk width multiplied by the width of the street) and the signal timing. This measure is expressed as square feet per pedestrian. The average time it takes for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. A walking speed of 3.5 feet per second for standard crosswalks and 3.0 feet per second for school crosswalks was used as per 2010 *CEQR Technical Manual* guidelines. The measure of pedestrian volume (pedestrians per minute) to time and space available in the crosswalk is the level of service measurement of available square feet per pedestrian. Additionally, in the first seconds of the "walk" cycle, the pedestrians queued to cross the street create a surge effect as they begin to cross. Therefore, the crosswalk level of service analysis includes a factor that adjusts for this "surge" to estimate worst-case conditions during the initial start-up. After the initial surge, the level of service analysis also accounts for vehicles moving through the crosswalk.

Similar to crosswalks, street corners must provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the other street or passing around the corner). The analysis applies a measure of time and space availability based on the area of the corner, signal timing, and the estimated time used by circulating pedestrians.[1] A summary of average 15-minute level of service conditions criteria is presented in **Table 3-5**, as per the *Highway Capacity Manual 2000 (HCM 2000).*

Table 3-5
Level of Service Criteria for Crosswalks And Corner Reservoir Spaces

LOS	Space (square feet/ pedestrian)
A	> 60
B	> 40-60
C	> 24-40
D	> 15-24
E	> 8-15
F	≤ 8

The pedestrian analysis determined that all analyzed crosswalks operate at LOS A or B during the Saturday midday arrival, midday departure, and evening arrival peak 15-minute periods. Corner reservoir area analyses resulted in LOS A at all analyzed corners and reservoir areas during peak periods. **Table 3-6** provides detailed pedestrian level of service analysis results for crosswalks and corners analyzed for the study area during the Saturday peak periods.

[1] The total "time-space" available for these activities is the net square footage of the corner multiplied by the cycle length and expressed as square feet per minute. The total circulation time for all pedestrian movements at the corner, expressed as pedestrians per minute, is then determined. The ratio of net time-space divided by pedestrian circulation time provides the level of service in square feet per pedestrian.

Table 3-6
Existing Conditions Pedestrian Levels of Service

Intersection	Crosswalk/Corner Reservoir	Midday Arrival Peak 15-Minutes		Midday Departure Peak 15-Minutes		Evening Arrival Peak 15-Minutes	
		SF/P (1)	LOS (2)	SF/P (1)	LOS (2)	SF/P (1)	LOS (2)
Flatbush Avenue and Tilden Avenue/Regent Place	North Crosswalk	40.9	B	48.9	B	56.7	B
	East Crosswalk	58.0	B	60.7	A	66.0	A
	West Crosswalk	51.6	B	44.3	B	65.2	A
	South Crosswalk	82.2	A	79.9	A	99.4	A
	Northwest Corner	65.5	A	64.5	A	84.2	A
	Southwest Corner	104.4	A	95.9	A	131.9	A
	Northeast Corner	70.3	A	81.3	A	88.9	A
	Southeast Corner	120.6	A	129.8	A	136.0	A
Flatbush Avenue and Beverley Road (north)	North Crosswalk	170.2	A	175.4	A	146.1	A
	West Crosswalk	72.8	A	69.7	A	83.4	A
	South Crosswalk	157.1	A	188.6	A	221.6	A
	Northwest Corner	132.0	A	128.0	A	150.9	A
	Southwest Corner	163.7	A	173.6	A	208.3	A

Notes: (1) SF/P = Square feet per pedestrian ; (2) LOS = Level of service

C. THE FUTURE WITHOUT THE PROPOSED ACTIONS (2014 NO BUILD CONDITION)

Future conditions without the proposed actions, i.e., No Build conditions, are established to provide the baseline against which the impacts of the project can be compared and to account for changes in conditions between the existing conditions and the future analysis year. Future conditions were analyzed for 2014.

TRAFFIC

Future No Build traffic volumes were developed by applying a background traffic growth rate of 0.5 percent per year, as stated in the 2010 *CEQR Technical Manual* for Brooklyn. No significant traffic generating background developments are anticipated to be built and occupied by 2014. Therefore, a two percent volume growth was applied.

Projected traffic volume increases are as follows:

- Flatbush Avenue volumes are expected to increase by 10 to 20 vehicles per hour (vph) per direction during the Saturday peak hours.
- Bedford, Ocean, Caton, and Church Avenue volumes, and Linden Boulevard volumes are expected to increase by 5 to 10 vph per direction during the Saturday peak hours.
- Tilden Avenue, Beverley Road and Foster Avenue volumes are expected to increase by approximately 5 vph per direction during the Saturday peak hours.

Based on these traffic volume increases, future No Build traffic levels of service were determined for the 14 analysis locations. No Build volume network maps are provided at the end of this chapter. **Table 3-7** shows a comparison of traffic levels of service for existing and future

No Build conditions. **Figures 3-6 through 3-8** provide an illustrative overview of overall intersection traffic levels of service.

Table 3-7
Traffic Level of Service Comparison
Existing vs. Future No Build Conditions (2014)

Level of Service	Existing			2014 No Build		
	Midday Arrival	Midday Departure	Evening Arrival	Midday Arrival	Midday Departure	Evening Arrival
Overall LOS A/B/C	10	11	11	10	11	10
Overall LOS D	4	3	3	4	3	4
Overall LOS E	0	0	0	0	0	0
Overall LOS F	0	0	0	0	0	0
Number of movements at LOS E or F (of approximately 59 movements analyzed)	6	4	4	8	9	6

This summary of future No Build conditions indicates that:

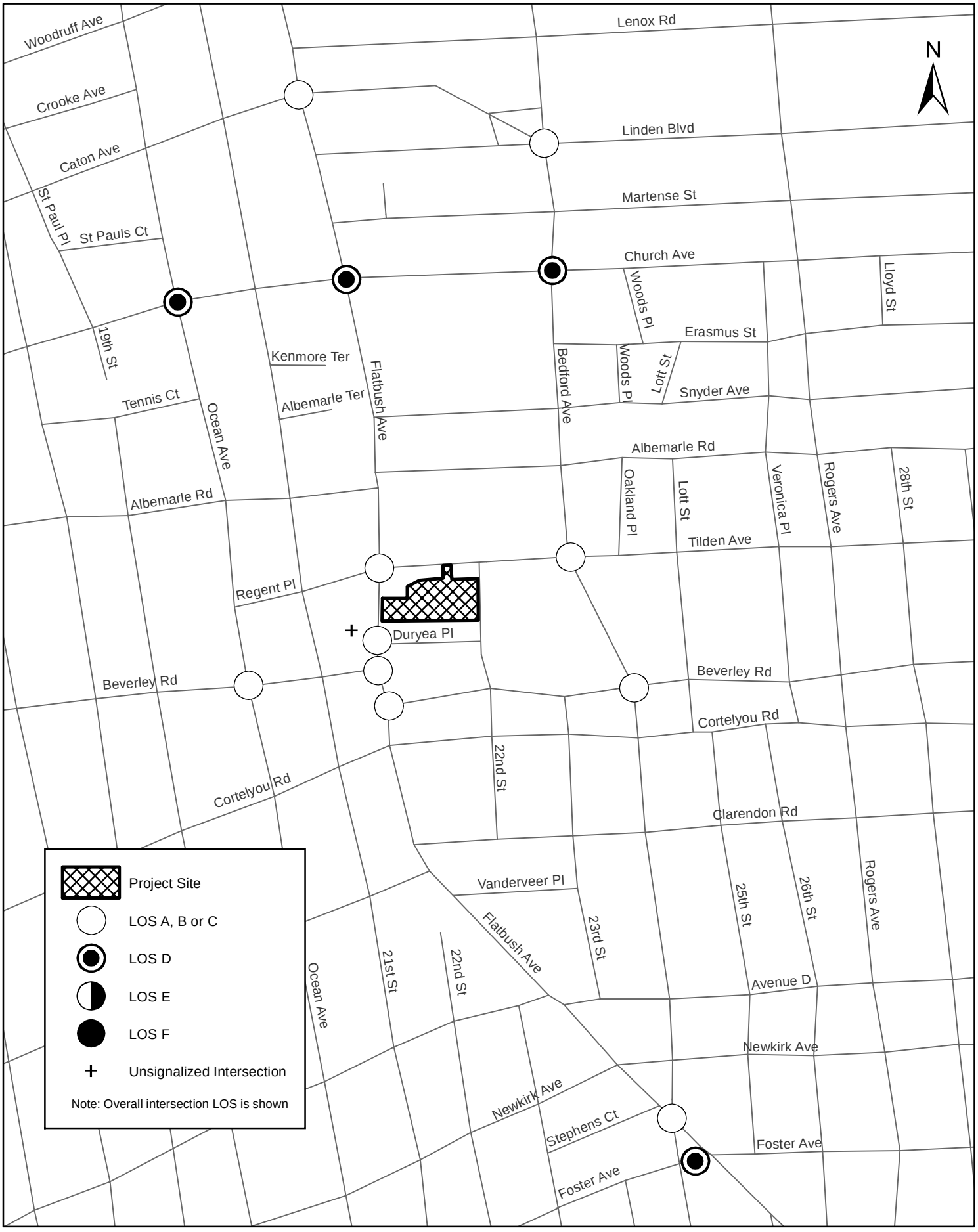
- During the Saturday midday arrival and departure peak hours, all intersections would continue to operate at the same levels of service as they do under existing conditions.
- During the Saturday evening arrival peak hour, four intersections would operate at marginally acceptable/unacceptable LOS D as compared to three intersections under existing conditions.
- The number of movements that would operate at LOS E or F would increase from six to eight during the Saturday midday arrival peak hour, from four to nine during the midday departure peak hour, and from four to six during the evening arrival peak hour under future No Build conditions.

The overall levels of service would thus be expected to deteriorate slightly under No Build conditions as compared to existing conditions since increases in background growth would be modest.

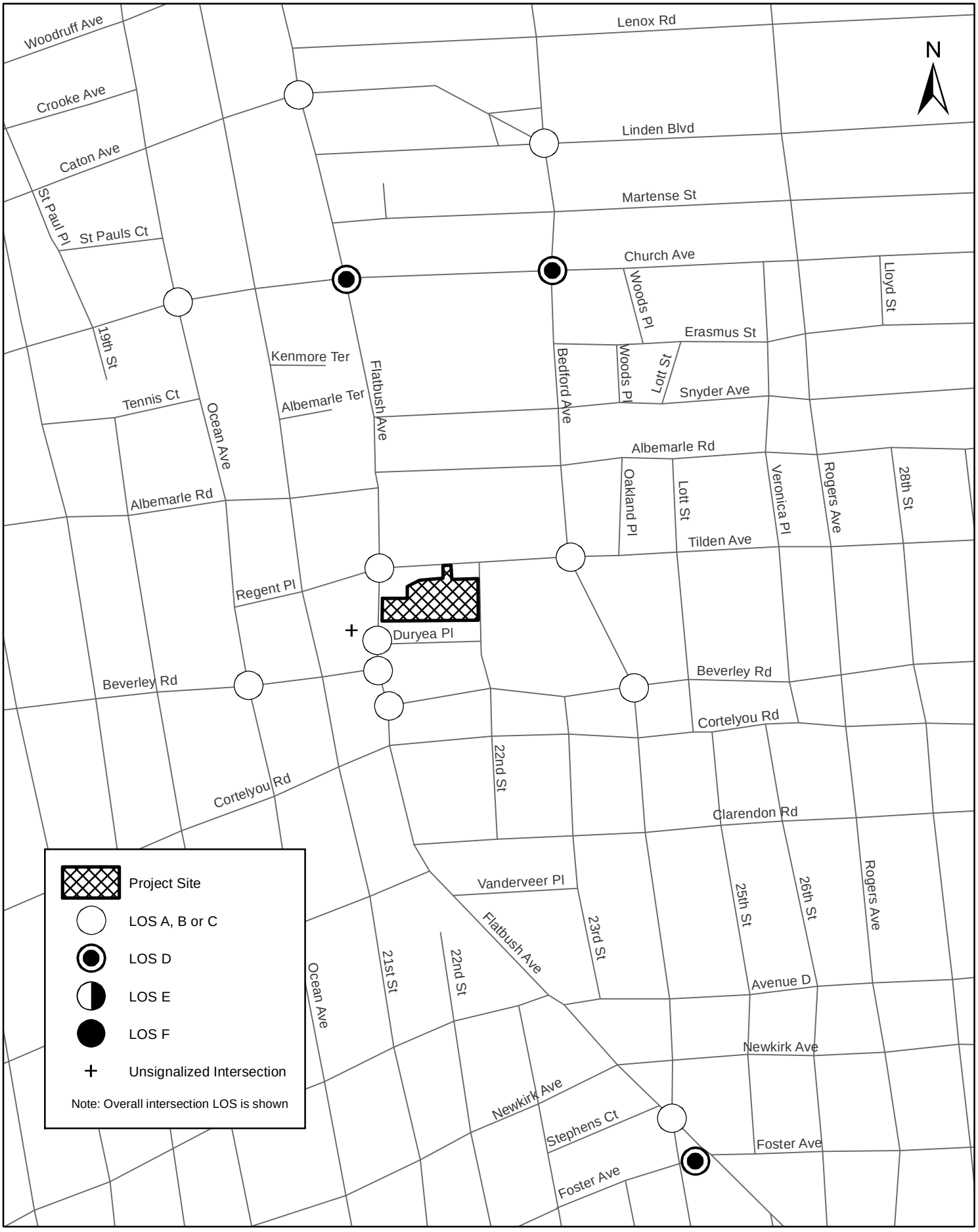
PARKING

To estimate future No Build parking conditions, existing parking demand was increased by the traffic background growth rate of 0.5 percent per year. As shown in **Table 3-8**, off-street parking occupancies would increase by about one percent (five cars or less) under No Build conditions.

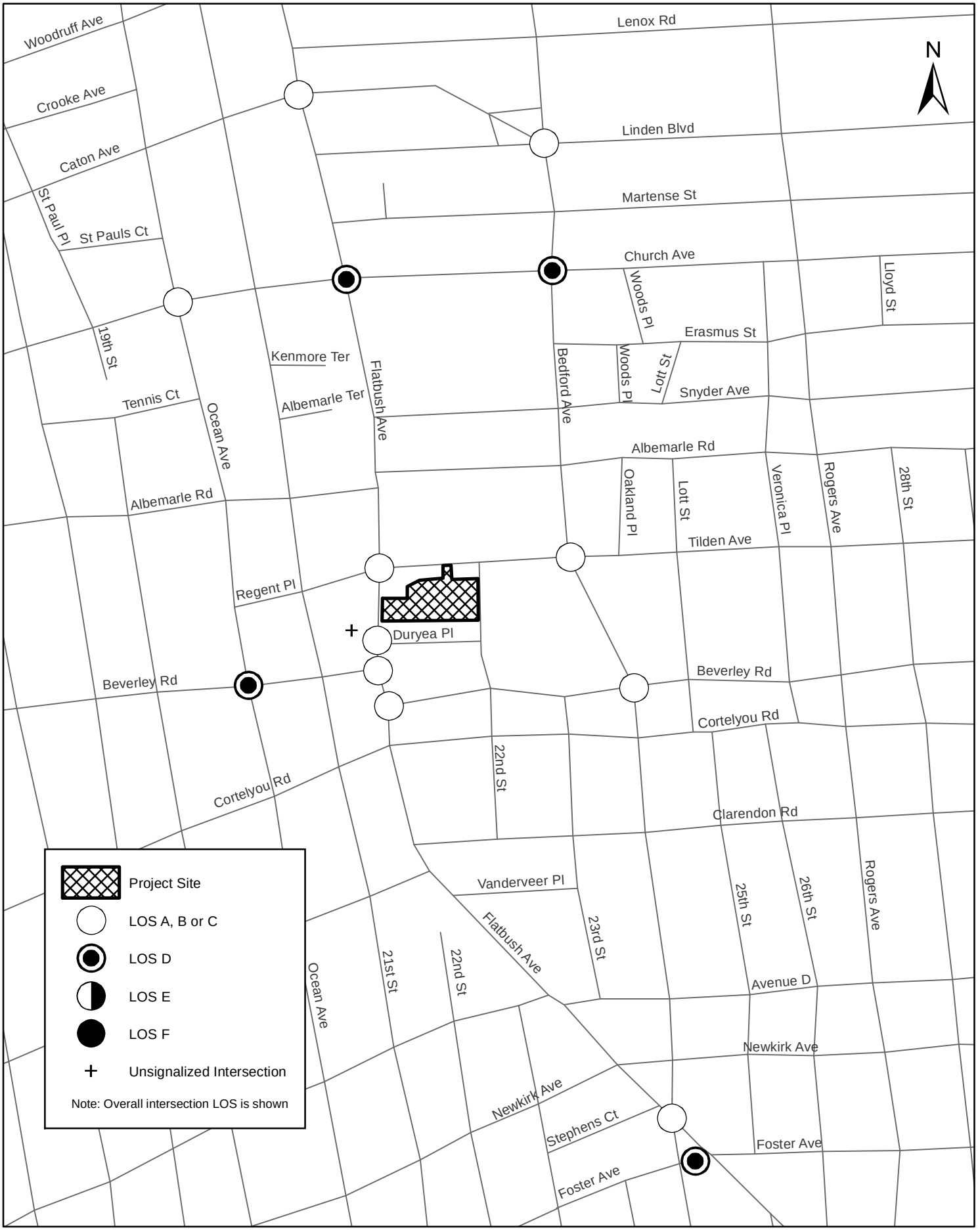
On-street occupancies would increase by approximately two percent under No Build conditions which means that occupancies would reach 92 to 94 percent in the primary study area and 89 to 92 percent in the secondary study area during the Saturday peak hours. As shown in **Table 3-9**, overall on- and off- street parking availability would decrease to 662 spaces (315 off-street and 347 on-street) during the Saturday midday arrival peak hour, 692 spaces (410 off-street and 282 on-street) during the Saturday midday departure peak hour, and 887 spaces (530 off-street and 357 on-street) during the Saturday evening arrival peak hour.



No Build Traffic Levels of Service
Saturday Midday Arrival Peak Hour
Figure 3-6



No Build Traffic Levels of Service
Saturday Midday Departure Peak Hour
Figure 3-7



No Build Traffic Levels of Service
Saturday Evening Arrival Peak Hour

Table 3-8
Existing vs. Future No Build Parking Utilization: Off-Street Parking Facilities

Location	Capacity	Saturday Occupancy (Percent Occupied) Existing Conditions			Saturday Occupancy (Percent Occupied) 2014 No Build Conditions		
		Midday Arrival	Midday Departure	Evening Arrival	Midday Arrival	Midday Departure	Evening Arrival
Sears Parking Lot (2360 Bedford Avenue)	425	207 (49%)	163 (38%)	89 (21%)	211 (50%)	166 (39%)	91 (21%)
Stop & Shop Rooftop Lot (1007 Flatbush Avenue, parking entrance is on Tilden Avenue)	253	149 (59%)	100 (40%)	56 (22%)	152 (60%)	102 (40%)	57 (23%)
Total	**678**	**356 (53%)**	**263 (39%)**	**145 (21%)**	**363 (54%)**	**268 (40%)**	**148 (22%)**

Table 3-9
Future No Build Parking Availability

Type	Saturday Parking Availability		
	Midday Arrival	Midday Departure	Evening Arrival
Off-Street	315	410	530
On-Street – Primary Study Area	127	115	168
On-Street – Secondary Study Area	220	167	189
Total	**662**	**692**	**887**

TRANSIT

As discussed earlier, there would be no potential for significant adverse transit impacts as a result of the proposed project, and no further assessment is needed.

PEDESTRIANS

Future No Build peak period pedestrian volumes were estimated by applying a background growth rate of 0.5 percent per year as per the 2010 *CEQR Technical Manual*. As described in the traffic section, no major background developments are anticipated in the area by 2014. The background growth rate resulted in minor increases in pedestrian volumes of approximately two percent. As shown in **Table 3-10**, pedestrian conditions would continue to operate without major conflicts. All corners and crosswalks would operate at LOS A, B, or C during Saturday midday arrival, midday departure, and evening arrival peak hours which are acceptable levels of service.

Table 3-10
Future No Build (2014) Pedestrian Levels of Service

Intersection	Crosswalk/Corner Reservoir	Midday Arrival Peak 15-Minutes		Midday Departure Peak 15-Minutes		Evening Arrival Peak 15-Minutes	
		SF/P (1)	LOS (2)	SF/P (1)	LOS (2)	SF/P (1)	LOS (2)
Flatbush Avenue and Tilden Avenue/Regent Place	North Crosswalk	38.9	C	48.9	B	56.7	B
	East Crosswalk	56.3	B	60.7	A	63.0	A
	West Crosswalk	51.6	B	41.6	B	63.9	A
	South Crosswalk	82.2	A	79.9	A	99.4	A
	Northwest Corner	64.4	A	63.3	A	84.2	A
	Southwest Corner	104.4	A	93.9	A	131.9	A
	Northeast Corner	66.7	A	81.3	A	87.1	A
	Southeast Corner	118.1	A	129.8	A	132.9	A
Flatbush Avenue and Beverley Road (north)	North Crosswalk	170.2	A	175.4	A	137.5	A
	West Crosswalk	69.7	A	69.7	A	~~83.4~~ 78.5	A
	South Crosswalk	157.1	A	188.6	A	221.6	A
	Northwest Corner	127.7	A	128.0	A	~~150.9~~ 145.3	A
	Southwest Corner	159.0	A	173.6	A	~~208.3~~ 200.9	A

Notes: (1) SF/P = Square feet per pedestrian ; (2) LOS = Level of service

D. PROBABLE IMPACTS OF THE PROPOSED ACTIONS (2014 BUILD CONDITIONS)

This section presents an analysis of the future transportation conditions with the proposed actions in place in 2014, i.e. the 2014 Build conditions. As described earlier, the proposed actions would redevelop a vacant movie theatre site to create a 3,600-seat live performance venue. As part of this action, a portion of the block of East 22nd Street between Tilden Avenue and Duryea Street would be demapped (closing the entire block to traffic) in order to accommodate an expanded stage for live performances. This section includes a determination of the volume and distribution of person and vehicle trips expected to be generated as a result of the proposed actions, and the analysis of future Build condition levels of service. This section also identifies any significant transportation impacts that would be incurred as a result of the proposed actions.

TRIP GENERATION AND MODAL SPLIT

In order to estimate the amount of vehicle and person trips that would be generated by the proposed live theatre, a trip generation analysis was performed. Trip generation estimates for the proposed live theatre use were developed using the results from a survey of a generally comparable site that was conducted for this study. The survey was performed because appropriate live theatre rates were not available. All trip generation–related assumptions were reviewed and approved by NYCDOT.

LIVE THEATRE SURVEY

In order to develop travel demand characteristics for the proposed live theatre, a door count and interview survey was conducted at the United Palace Theatre in the Washington Heights section of Manhattan on the evening of a concert event. Survey data were collected on Friday March 19 and Saturday March 20, 2010 during the arrival period before performances by the Allman Brothers Band.

The United Palace Theatre is a reasonably comparable site to the Kings Theatre because these theatres are similar in size and are located in neighborhoods that have reasonably similar density, demographic and transportation characteristics. Both theatres are served by subway and bus lines that are within walking distance; however, the Kings Theatre site is approximately a ten minute walk from the closest subway, while the United Palace Theatre is only one block away from a subway line and is in the vicinity of the George Washington Bridge Bus Station for bus service to and from Northern New Jersey.

Door counts were performed on a Friday evening (March 19, 2010) during the arrival period before a concert in order to determine the peak hour and temporal distribution. Counts were conducted from 6:45 to 8:45 PM covering the period from shortly before doors opened until shortly after the show began. There was no opening act at this event. The door counts indicated that 2,948 patrons attended the event, and that 2,489 attendees (84.4 percent) arrived during the hour of 7:30 to 8:30 PM. To calculate peak hour trips for the proposed Kings Theatre development, attendance was extrapolated to a potential sellout condition of up to 3,600 attendees. This translates to 3,039 person trips during the weekend arrival peak hour.

Additionally, a short travel pattern interview survey was performed on Friday and Saturday evenings during the event arrival period. The event and schedule were the same for both evenings. The survey contained travel pattern questions that were used to obtain a modal split, average auto and taxi occupancies, the use of on-street vs. off-street parking spaces, and trip origin information. In total, approximately 200 surveys were collected.

The survey results indicated the following travel characteristics for concert event attendees:

- A modal split of approximately 38 percent by auto, 26 percent by taxi, 33 percent by subway, 1.5 percent by George Washington Bridge Bus Station bus, 1 percent by MTA/NYCT bus, and 0.5 percent by walk.
- Vehicle occupancy rates of 2.46 persons per auto and 2.92 persons per taxi
- 64.4 percent of auto trips parked off-street (garage, lot, or valet parking service available by the theatre); 35.6 percent parked on-street.
- Approximately 43 percent of attendee trip origins were from within Manhattan; 20 percent were from New Jersey; 9 percent were from other boroughs; 7 percent were from Westchester County; 7 percent were from Long Island; 5 percent were from Connecticut; and 8 percent were from other areas around the region.

This data set was used as a basis for developing trip generation estimates for the proposed live theatre; however, some factors were modified in order to reflect project and site specific characteristics. The event surveyed at the United Palace Theatre was a concert performed by the Allman Brothers band -- a well known rock group -- and therefore drew attendance from areas throughout the New York/New Jersey region which consisted of a more affluent and suburban crowd than would typically be expected at the proposed Kings Theatre. Programming at the Kings Theatre, which is located on Flatbush Avenue between Tilden Avenue and Duryea Place

in Flatbush, Brooklyn, would cater heavily to local interests and is expected to attract a majority of trips from within the borough, many of which would originate within the neighborhood or surrounding neighborhoods. While these factors would be expected to result in reduced auto usage by Kings Theatre patrons as compared to the surveyed United Palace Theatre event, the total vehicle percentage obtained from the survey of the United Palace Theatre (auto plus taxi) was applied to Kings Theatre events as a conservative estimate of a vehicle-heavy event such as an Allman Brothers concert. One factor that was modified was the "split" between autos and taxis. Since the surveyed site is in Manhattan and the proposed Kings Theatre site is in Brooklyn, and taxi usage is higher in Manhattan than the outer boroughs, the auto share was increased and the taxi share was decreased.

Neither the United Palace Theatre nor the proposed Kings Theatre have or would have parking on the immediate site. There are two parking garages within easy walking distance of the United Place Theatre, while there are two parking lots across the street from the proposed Kings Theatre that would accommodate theatre-goers there. Therefore, the availability of parking was not deemed a significant difference between the two sites.

Transit and walk shares were also modified to reflect a lower subway share and higher walk and bus shares than what was obtained from the United Palace Theatre survey. As mentioned, the Kings Theatre is farther from subways and would attract more local patrons (hence, increased walk trips) as compared to the United Palace Theatre.

Taking these distinctions into account, a modified modal split of 50 percent by auto, 14 percent by taxi, 18 percent by subway, 9 percent by bus, and 9 percent by walk was used. Although the modal split was modified from the survey results, the vehicle-to-transit/walk ratio (approximately 2:1) was held constant.

The auto occupancy rate of 2.46 persons per auto was obtained from the live theatre survey results and used for the trip generation. A taxi occupancy rate of 2.80 persons per taxi was used; this rate was also based on the survey but was slightly modified to reflect a more conservative rate, as per NYCDOT request. No delivery trips were made during at the survey site during the peak hour, and none are expected at the project site.

These rates were developed from Friday and Saturday evening event arrival peak hours, and it is assumed that they would be similar for a Saturday midday event arrival as well. For a Saturday midday event departure peak hour, all assumptions are similar to Saturday midday and evening event arrival peak hours except for the temporal distribution (100 percent, since all patrons are assumed to depart within the peak hour), and the directional distribution (100 percent "out"). Travel demand factors used to calculate trips generated by the live performance theatre use are summarized in **Table 3-11**.

TRIP GENERATION SUMMARY

As shown in **Table 3-12**, the proposed actions would generate a total of 922 vehicles during the arrival peak hour of a sold-out event during the Saturday midday and evening arrival peak hours. This number is comprised of 618 inbound auto trips, 152 inbound taxi trips, and 152 outbound taxi trips (each taxi would make an inbound trip and an outbound trip). During the Saturday midday departure peak hour, 1,092 vehicle trips including 732 outbound auto trips, 180 inbound taxi trips, and 180 outbound taxi trips, as shown in **Table 3-13**.

Table 3-11
Travel Demand Characteristics: Live Theatre

Land Use	Live Theatre
Size	3,600 Seats
Person Trip Generation Rate	
	N/A (Assume 3,600 attendees per event)
Temporal Distribution	
Saturday Midday Arrival Peak Hour	84.4% [1, 2]
Saturday Midday Departure Peak Hour	100.0% [3]
Saturday Evening Arrival Peak Hour	84.4% [1]
Modal Split	
Auto	50.0% [1]
Taxi	14.0% [1]
Subway	18.0% [1]
Bus	9.0% [1]
Walk	9.0% [1]
Vehicle Occupancy	
Auto	2.46 [4]
Taxi	2.80 [4]
Directional Split (Ins)	
Saturday Midday Arrival Peak Hour	100.0% [1,2]
Saturday Midday Departure Peak Hour	0.0% [5]
Saturday Evening Arrival Peak Hour	100.0% [1]
Truck Trip Generation Rate	
Saturday	N/A [6]
Truck Temporal Distribution	
Saturday Midday Arrival Peak Hour	0.0% [6]
Saturday Midday Departure Peak Hour	0.0% [6]
Saturday Evening Arrival Peak Hour	0.0% [6]
Truck Directional Split (Ins)	
Saturday Midday Arrival Peak Hour	N/A
Saturday Midday Departure Peak Hour	N/A
Saturday Evening Arrival Peak Hour	N/A

Notes:
Trip Generation References
1. Based on Survey of the United Palace Theatre (March, 2010) with modal split modifications to reflect program and location specific condition.
2. Midday event assumed to be similar to evening.
3. Project assumption.
4. Based on United Palace Theatre survey results. Taxi rate modified as per NYCDOT request.
5. Departure assumed to be reverse of arrival.
6. No trucks trips would be generated during event arrival peak hour.

Table 3-12
Saturday Midday and Evening Arrival Peak Hours
Vehicle Trip Generation Totals

Vehicle Class	In	Out	Total
Auto	618	0	618
Taxi	152	152	304
Truck	0	0	0
Total	**770**	**152**	**922**

Table 3-13
Saturday Midday Departure Peak Hour
Vehicle Trip Generation Totals

Vehicle Class	In	Out	Total
Auto	0	732	732
Taxi	180	180	360
Truck	0	0	0
Total	**180**	**912**	**1,092**

In addition to vehicular trip generation, a person trip generation was developed for the proposed live theatre. As shown in **Table 3-14**, 3,037 total person trips would be generated to the site during Saturday midday and evening arrival peak hours during a sold-out event. All trips generated during the peak hour would be "in" trips since it is the event arrival period. **Table 3-15** shows the person trips that 3,600 total person trips would be generated during the Saturday midday departure peak hour for a sold-out event.

Table 3-14
Saturday Midday/Evening Arrival Peak Hour
Person Trip Generation Totals

Travel Mode	In	Out	Total
Auto	1,519	0	1,519
Taxi	425	0	425
Bus	273	0	273
Subway	547	0	547
Walk	273	0	273
Total	**3,037**	**0**	**3,037**

Table 3-15
Saturday Midday Departure Peak Hour
Person Trip Generation Totals

Travel Mode	In	Out	Total
Auto	0	1,800	1,800
Taxi	0	504	504
Bus	0	324	324
Subway	0	648	648
Walk	0	324	324
Total	**0**	**3,600**	**3,600**

TRAFFIC

TRAFFIC ASSIGNMENT

The volume of vehicular traffic generated by the proposed actions was assigned to the project site from various points of origin through the local street network. Expected trip origins were determined based on the programming of the proposed live theatre which would cater heavily to the local population. Therefore, approximately 60 percent of project trips were assigned from within Brooklyn; 25 percent were assigned from other boroughs, and 15 percent were assigned from areas outside of New York City including Long Island, New Jersey, Westchester County,

and Connecticut. Based on this distribution, project-generated vehicle trips were assigned along reasonable and direct travel routes.

SITE ACCESS

The project site is located on Flatbush Avenue between Tilden Avenue and Duryea Place. There would be no parking on the project site; however, there are two nearby parking facilities within a block of the site that would be used for event parking. One site is the Sears parking lot which encompasses the block bounded by Tilden Avenue to the north, Beverley Road to the south, Bedford Avenue to the east, and East 22nd Street to the west. There are entrances to this facility on Bedford Avenue and on Beverley Road. The second parking facility is a rooftop lot located above the Super Stop & Shop/Bally's/Old Navy shopping complex on the north side of Tilden Avenue. The entrance is located on Tilden Avenue between East 22nd Street and Bedford Avenue. Parking trips (autos) were assigned to these lots according to their estimated availabilities. The parking demand for a sold-out event would exceed availability at these facilities during Saturday midday and evening arrival peak hours. Parking trips that would not fit in the parking lots were assigned to park on the street. It was assumed that half of the on-street parking trips would find an on-street parking space before reaching the site. The other half would first "touch the site" (or the parking lots in this case), realize there was no parking available in the lots, and then find parking on the street. Taxi drop-offs were assigned to the curb in front of the project site entrance on Flatbush Avenue. No truck delivery trips are expected during the event peak hours.

TRAFFIC DIVERSIONS/DEMAPPING OF EAST 22ND STREET

As mentioned, the proposed project would demap a portion of the block of East 22nd Street between Tilden Avenue and Duryea Place and close the street to traffic so that the theatre stage and backstage facilities could be extended. Traffic counts and observations were performed on this block during peak Saturday traffic periods in order to determine the amount of traffic that would be displaced by the proposed street closure.

As a result of the closure of East 22nd Street between Tilden Avenue and Duryea Place, the proposed actions would cause existing traffic on this street to be diverted to other streets. The existing traffic volumes on this block are relatively minor; most traffic on this street is parking related. Therefore, some of the traffic was rerouted to East 22nd Street south of the closure, while some of the traffic was diverted to other streets with on-street parking.

The proposed street closure would also result in the loss of approximately 30 on-street parking spaces, which is addressed in the Parking section.

PROJECT-GENERATED TRAFFIC VOLUMES

As a result of the trip generation-assignment and traffic diversion steps, roadway-by-roadway and intersection-by-intersection traffic volume projections were developed within the study area. These projections are summarized below. Specific turning movement volume projections are detailed at the end of this chapter.

The proposed actions would add approximately 90 to 140 vehicles along Flatbush Avenue during the Saturday midday and evening arrival peak hours, in directions approaching the site (i.e., in the southbound direction from north of the project site, and in the northbound direction from south of the site). Additionally, 15 to 80 vehicles would be generated in directions leading

away from the site. During the Saturday midday departure peak hour, there would be approximately 90 to 165 vehicles added along Flatbush Avenue in directions leading away from the site, and 30 to 120 vehicles added in directions approaching the site.

On Bedford Avenue, Saturday midday and evening arrival peak hour volumes would increase by 60 to 150 vehicles per hour in the northbound direction, south of Tilden Avenue. North of Tilden Avenue, northbound traffic volume increases would be approximately 20 vehicles during the Saturday midday and evening arrival peak hours. In the southbound direction, traffic increases would be 50 to 190 vph during the Saturday midday and evening arrival peak hours. During the Saturday midday departure peak hour, southbound volumes would increase by approximately 5 to 15 vehicles north of the site, and by 90 to 140 vehicles south of the site. In the northbound direction, volumes would increase by approximately 45 vehicles approaching the site from the south, and 150 to 270 vehicles north of the site.

Volume increases on Ocean Avenue would range from 5 to 70 vph during the Saturday midday arrival and departure peak hours. During the Saturday evening arrival peak hour, volume increases would be between 5 and 40 vehicles.

Along Caton Avenue/Linden Boulevard, volume increases would vary from 15 to 90 vph per direction during peak hours.

Volume increases along Church Avenue would be approximately 5 to 45 vph per direction during the Saturday midday and evening arrival peak hours, and 10 to 25 vehicles per direction during the Saturday midday departure peak hour.

Volumes along eastbound Tilden Avenue would increase by 75 to 175 vph during the Saturday midday and evening arrival peak hours, and by 40 to 100 vehicles during the Saturday midday departure peak hour. Volume increases along westbound Tilden Avenue would be approximately 50 to 100 vehicles during the Saturday midday arrival peak hour, and 10 to 110 vph during the Saturday midday departure and evening arrival peak hours.

Beverley Road would have volume increases of 40 to 100 vehicles during the Saturday midday arrival, midday departure, and evening arrival peak hours in the eastbound direction. In the westbound direction, traffic would increase by approximately 15 to 70 vph during the Saturday midday arrival and departure peak hours, and by 5 to 35 vehicles during the Saturday evening arrival peak hour.

Along Foster Avenue during the Saturday midday and evening arrival peak hours, traffic volumes would increase by approximately 30 vph in the eastbound direction and would not increase in the westbound direction. During the Saturday midday departure peak hour, traffic volumes would increase by approximately 5 vehicles in the eastbound direction and 30 vehicles in the westbound direction.

TRAFFIC LEVELS OF SERVICE AND IMPACTS

The assessment of potential significant traffic impacts of the proposed project is based on significant impact criteria defined in the 2010 *CEQR Technical Manual*. No Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, E, or F in the future Build conditions are considered a significant traffic impact.

For future No Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, mitigation to mid-LOS D (45.0 seconds of delay for signalized intersections and 30.0 seconds of delay for unsignalized intersections) needs to be considered to fully mitigate the impact.

For a No Build LOS D, an increase of delay by five or more seconds in the Build condition is considered a significant impact if the Build delay meets or exceeds 45.0 seconds. For a No Build LOS E, the threshold is a four-second increase in Build delay; for a No Build LOS F, a three-second increase in delay in the Build condition is significant. For unsignalized intersections, for the minor street to generate a significant impact, 90 passenger car equivalents (PCEs) must be identified in the Build condition in any peak hour.

The remainder of this section provides an overview of significant traffic impacts that would be generated under 2014 Build conditions. The proposed actions would have significant traffic impacts at 12 intersections during the Saturday midday arrival peak hour, 13 intersections during the Saturday midday departure peak hour, and 10 intersections during the Saturday evening arrival peak hour.

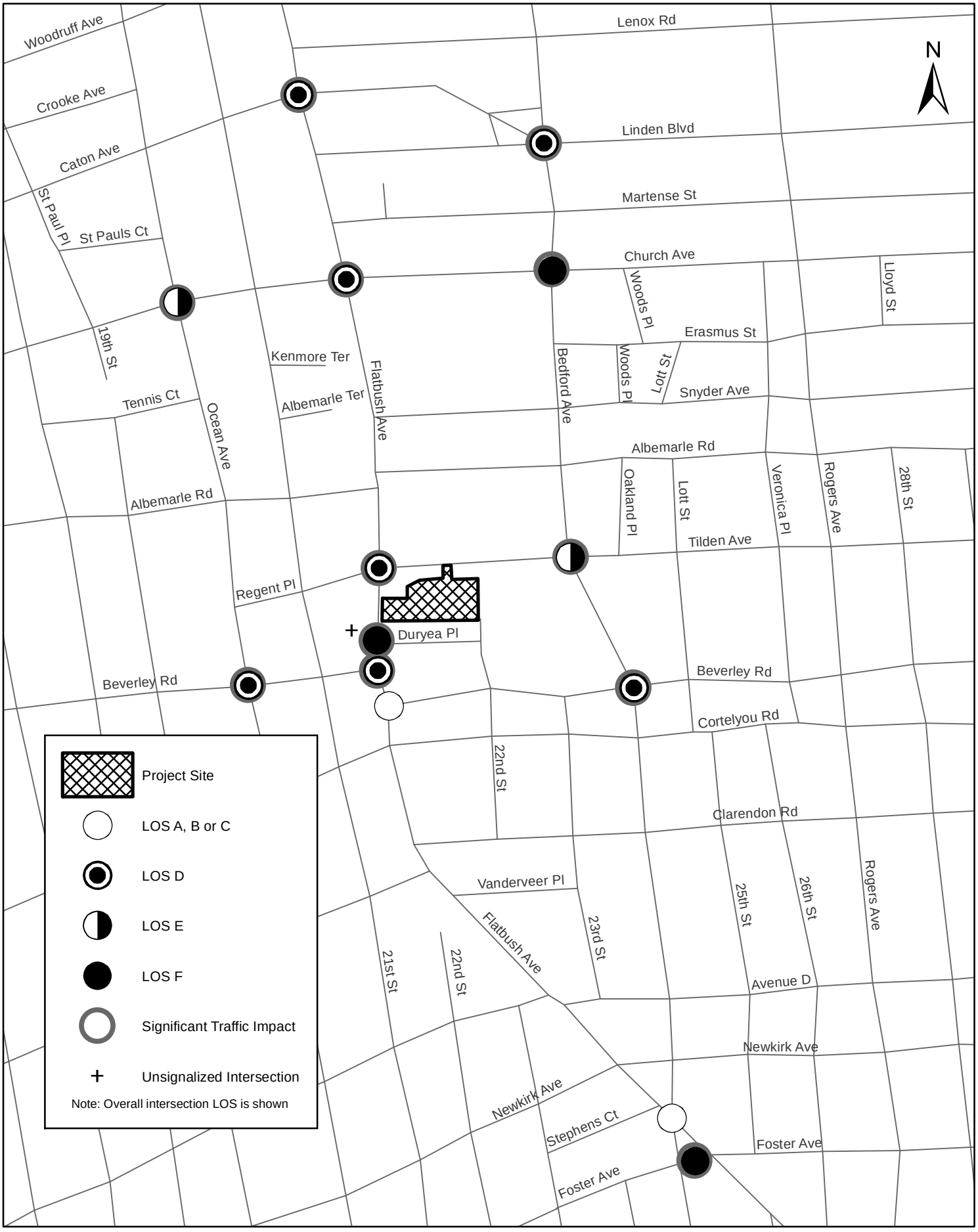
Detailed volume-to-capacity (v/c) ratios, average vehicle delay, and levels of service movement-by-movement at each intersection under the Build condition are provided at the end of this chapter. Generated traffic volume increment maps and total Build volume maps are also provided at the end of this chapter. A summary of level of service findings and significant traffic impacts for the 14 intersections analyzed is presented in **Table 3-16** and **Figures 3-9 through 3-11**.

Table 3-16
Traffic Level of Service Summary Comparison
Future No Build vs. Future Build Conditions (2014)

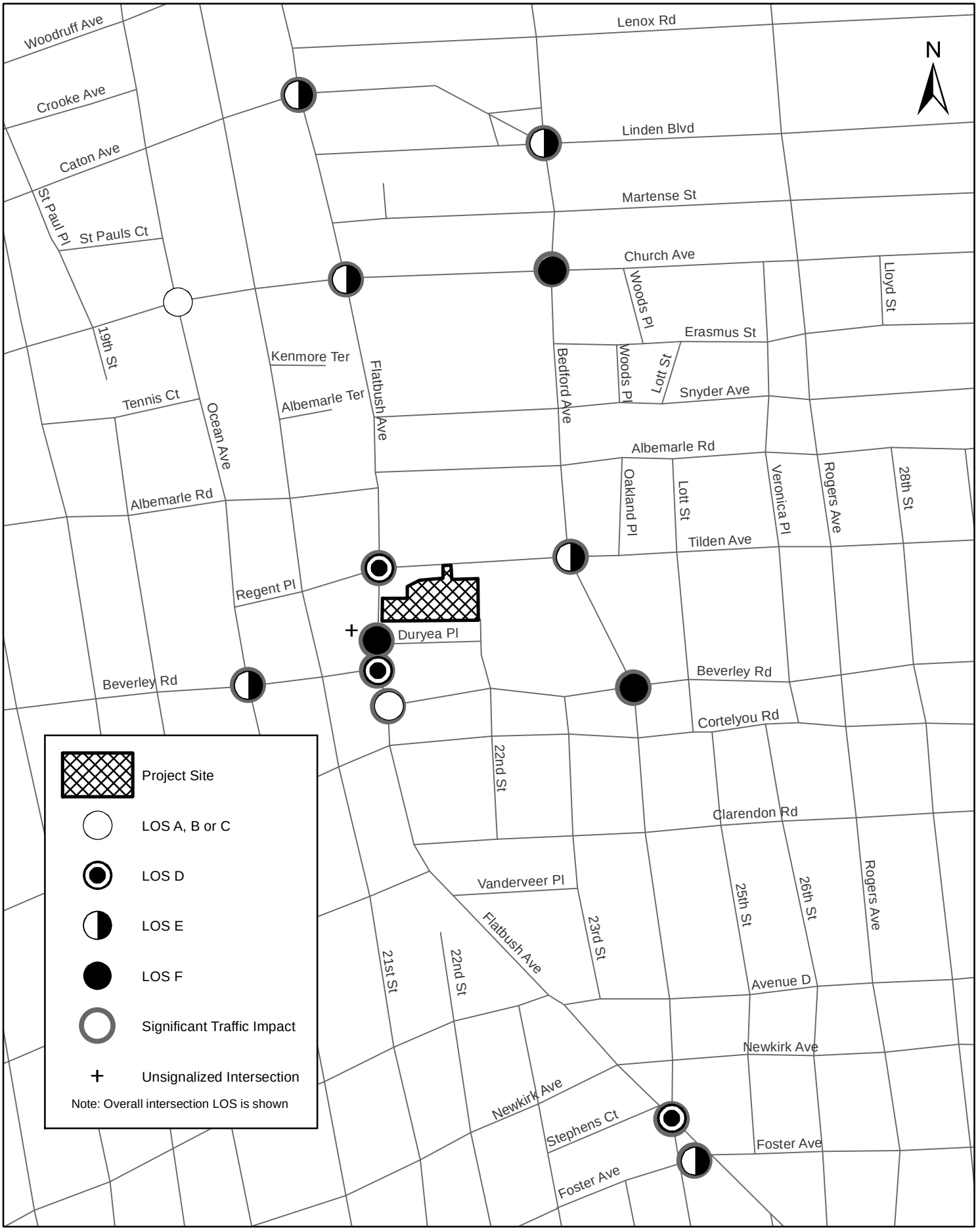
	2014 No Build			2014 Build		
	Saturday Midday Arrival	Saturday Midday Departure	Saturday Evening Arrival	Saturday Midday Arrival	Saturday Midday Departure	Saturday Evening Arrival
Overall LOS A/B/C	10	11	10	2	2	3
Overall LOS D	4	3	4	7	3	4
Overall LOS E	0	0	0	2	6	4
Overall LOS F	0	0	0	3	3	3
Number of intersections with significant impacts	-	-	-	12	13	10
Number of movements at LOS E or F (of approximately 59 movements analyzed)	8	9	6	21	20	20

This summary overview of Build conditions in **Table 3-16** indicates that:

- During the Saturday midday arrival peak hour, the number of intersections analyzed that are projected to operate at overall LOS E or F would increase from none under the No Build condition to five under the Build condition. "Overall" LOS E or F means that serious congestion exists—either one specific traffic movement has severe delays or two or more of the specific traffic movements at the intersection are at LOS E or F with very significant delays (the overall intersection LOS is a weighted average of all the individual traffic movements). The number of traffic movements projected to operate at LOS E or F would increase from eight under the No Build condition to twenty-one under the Build condition. Overall, 12 of the 14 intersections would have significant impacts. **Figure 3-9** shows overall levels of service and intersections where significant impacts would occur.
- During the Saturday midday departure peak hour, the number of intersections that would operate at overall LOS E or F would increase from none under the No Build condition to

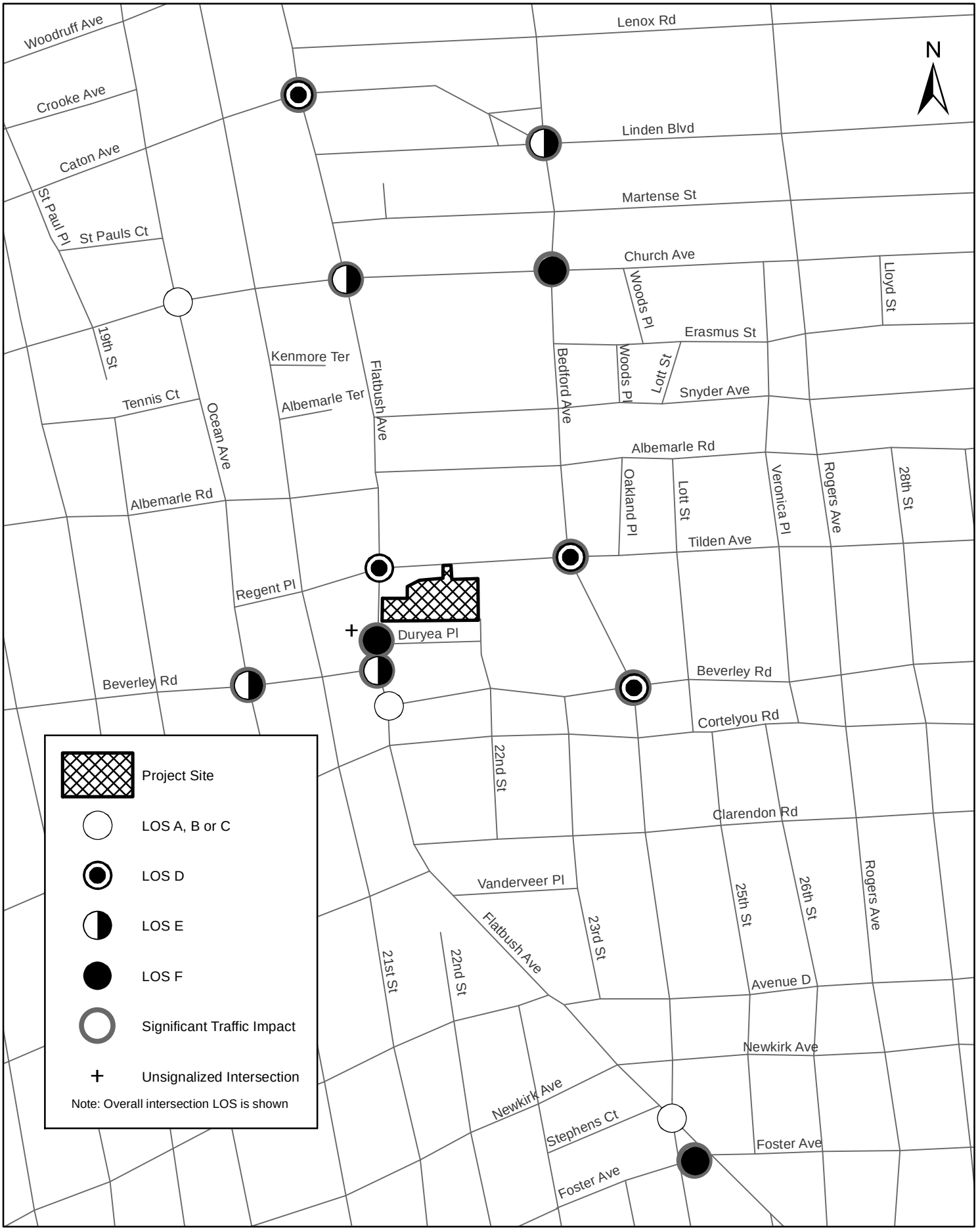


Build Traffic Levels of Service
Saturday Midday Arrival Peak Hour
Figure 3-9



Build Traffic Levels of Service
Saturday Midday Departure Peak Hour
Figure 3-10

KINGS THEATRE



Build Traffic Levels of Service
Saturday Evening Arrival Peak Hour

KINGS THEATRE

Figure 3-11

nine under the Build condition. The number of traffic movements at LOS E or F would increase from nine to twenty. Overall, 13 intersections would be significantly impacted, as shown in **Figure 3-10**.

- During the Saturday evening arrival peak hour, the number of intersections that are projected to operate at overall LOS E or F would increase from none under the No Build condition to seven under the Build condition. The number of traffic movements projected to operate at LOS E or F would increase from six to twenty. As shown in **Figure 3-11**, 10 intersections would experience significant impacts.

Detailed levels of service for each movement of each intersection is presented in the Build condition level of service tables provided at the end of this chapter, and in the No Build vs. Build condition levels of service comparison tables provided at the end of Chapter 8, "Mitigation."

PARKING

The proposed actions would generate a parking demand of 618 vehicles (auto "in" trips from the Build trip generation) in the arrival peak hour for midday and evening events. This demand would last for the duration of the show, approximately 2.5 hours. The Saturday midday departure peak hour is not of concern since all project-generated auto trips are "out" trips that would be leaving parking spaces, not seeking them.

The proposed actions would not create any new parking; therefore, the existing parking supply within the surrounding area would be relied upon to accommodate the project-generated parking demand. As noted above, theatre patrons would be able to park at the two nearby off-street facilities. Therefore, parking trips were assigned to these lots to the extent possible. Any parking demand not accommodated by the lots was assigned to on-street spaces within the parking study area.

In addition to project-generated parking demand, approximately 30 parked vehicles would be displaced from on-street spaces on East 22nd Street as a result of the proposed street closure. This displaced parking demand would be accommodated by other on-street spaces within the study area.

The No Build parking availability rates were used to determine the extent to which project-generated parking could be accommodated. Based on the No Build off-street parking occupancies, there would be 315 spaces available in the lots during the Saturday midday arrival peak hour, and 530 spaces available during the Saturday evening arrival peak hour within a five-to-ten minute walk from the site, as shown in **Table 3-17**. Although off-street parking availability would not fully accommodate the Build parking demand, the shortfall would be fully accommodated by available on-street spaces within the parking study area during the Saturday midday and evening event arrival periods. Overall, parking demands generated by the proposed actions during Saturday and Midday peak arrival hours would be fully accommodated by available on- and off-street parking within the study area.

TRANSIT

As mentioned, quantitative transit analysis has been screened out for this study. There would be no significant transit impacts as a result of the proposed actions.

PEDESTRIANS

The Build condition pedestrian network incorporates project-generated increases in pedestrian volumes. Build pedestrian volume increases consist of walk-only trips generated by the proposed actions as well as walk trips from transit stations to the site, walk trips from some taxi drop-offs, and auto person trips walking to the site from their parked cars.

Table 3-17
Future Build Condition (2014) Parking Utilization:
Saturday Midday and Evening Event Arrival Periods

Time Period	Parking Demand (project generated + project displaced)	Parking Availability				
		Off-Street Spaces			On-Street Spaces	Total Spaces (Off-Street + On-Street)
		Sears Parking Lot	Stop & Shop Lot	Total		
Saturday Midday Arrival Peak Hour	648 (618 +30)	214	101	315	347	662
Saturday Evening Arrival Peak Hour	648 (618 +30)	334	196	530	357	887

Pedestrian trips would be most concentrated on Flatbush Avenue between Tilden Avenue and Beverley Road. The following assumptions were used to assign pedestrian trips:

- Walk trips from parking locations were assigned to the most direct route.
- Taxi drop-offs and pickups occurring on the opposite side of the street of or around the corner from the project site were then assigned to walk to the site entrance
- Subway trips were assigned to the Beverley Road Number 2 and 5 train station a few blocks southeast of the project site and the Q train station on Beverley Road a few blocks southwest of the project site. All subway trips were assigned to the project site via Beverley Road, turning up Flatbush Avenue to reach the project site.
- Bus trips were distributed among the routes serving the study area. These trips were assigned to walk on a direct route from the closest bus stop of each route to the site. Walking routes included Flatbush Avenue north of the site (from Church Avenue), Flatbush Avenue south of the site (from Beverley and Cortelyou Roads), and along Tilden Avenue (from Bedford and Rogers Avenues).
- Walk-only trips were distributed equally from points north, south, east, and west since the project site is surrounded by residential neighborhoods.

Based on these assignments, pedestrian trips generated by the proposed actions would result in increased pedestrian volumes at the analyzed locations. The analyses conducted for the Build condition account for the distribution of project-generated trips added to the No Build pedestrian volumes at the analyzed crosswalks and corner reservoir areas. **Table 3-18** shows Build condition pedestrian volumes at the locations analyzed during the peak 15-minute analysis periods.

As shown in **Table 3-19**, all pedestrian elements would continue to operate at acceptable levels of service during the analysis peak periods. Therefore, the proposed project would not result in any significant adverse pedestrian impacts.

Table 3-18
Future Build Condition (2014) Pedestrian Peak 15-Minute Volumes

Location	Crosswalk or Corner	Saturday Peak Period Volume		
		Midday Arrival	Midday Departure	Evening Arrival
Flatbush Avenue and Tilden Avenue/Regent Place	North Crosswalk	186	~~156~~ 155	136
	South Crosswalk	151	171	130
	East Crosswalk	396	399	397
	West Crosswalk	247	289	202
	Northeast Corner	102	81	67
	Northwest Corner	21	20	26
	Southeast Corner	149	165	213
	Southwest Corner	10	4	4
Flatbush Avenue and Beverley Road (north)	North Crosswalk	150	176	134
	South Crosswalk	131	135	85
	West Crosswalk	~~223~~ 224	~~237~~ 239	~~186~~ 187
	Northwest Corner	~~28~~ 29	30	18
	Southwest Corner	~~27~~ 28	16	12

Table 3-19
Future Build Condition (2014) Pedestrian Levels of Service

Intersection	Crosswalk/Corner Reservoir	Midday Arrival Peak 15-Minutes		Midday Departure Peak 15-Minutes		Evening Arrival Peak 15-Minutes	
		SF/P (1)	LOS (2)	SF/P (1)	LOS (2)	SF/P (1)	LOS (2)
Flatbush Avenue and Tilden Avenue/Regent Place	North Crosswalk	36.3	C	42.7	B	52.1	B
	East Crosswalk	30.9	C	31.1	C	28.7	C
	West Crosswalk	46.8	B	37.6	C	57.2	B
	South Crosswalk	41.8	B	34.2	C	50.0	B
	Northwest Corner	60.4	A	58.3	B	77.9	A
	Southwest Corner	77.9	A	71.1	A	97.0	A
	Northeast Corner	50.2	B	56.7	B	58.3	B
	Southeast Corner	61.6	A	52.3	B	58.3	B
Flatbush Avenue and Beverley Road (north)	North Crosswalk	37.9	C	35.5	C	42.8	B
	West Crosswalk	52.9	B	49.6	B	~~68.5~~ 64.9	A
	South Crosswalk	56.0	B	61.1	A	94.3	A
	Northwest Corner	69.3	A	69.2	A	~~87.4~~ 85.2	A
	Southwest Corner	99.3	A	106.8	A	~~145.9~~ 142.0	A

Notes: (1) SF/P = Square feet per pedestrian ; (2) LOS = Level of service

PEDESTRIAN SAFETY

According to 2010 *CEQR Technical Manual* criteria, any intersection with 48 or more total (reportable and non-reportable) crashes or five or more pedestrian/bicycle injury crashes in any consecutive 12 months of the most recent three-year period for which data are available is considered a high crash location. As shown on **Table 3-20**, none of the analyzed intersections have 48 or more total crashes for a 12-month period; however, five intersections have five or more annual pedestrian/bicycle related crashes within at least one of the last three years.

Table 3-20
Intersection Crash Data

Intersection	Total Crashes			Pedestrian/Bicycle Crashes		
	2007	2008	2009	2007	2008	2009
Flatbush Avenue and Caton Avenue	8	12	12	***5***	2	***5***
Flatbush Avenue and Church Avenue	9	22	21	2	***15***	***5***
Flatbush Avenue and Tilden Avenue	13	8	7	1	1	***5***
Flatbush Avenue and Beverley Road (north)/Duryea Place	4	1	9	1	0	3
Flatbush Avenue and Beverley Road (south)	1	12	3	1	1	1
Flatbush Avenue and Bedford Avenue	3	2	11	3	0	1
Flatbush Avenue and Foster Avenue	6	5	2	2	4	1
Bedford Avenue and Linden Boulevard	12	14	16	4	***7***	***6***
Bedford Avenue and Church Avenue	6	10	7	3	0	1
Bedford Avenue and Tilden Avenue	3	4	7	1	1	2
Bedford Avenue and Beverley Road	1	7	8	0	0	3
Ocean Avenue and Church Avenue	9	8	14	***6***	3	2
Ocean Avenue and Beverley Road	3	3	4	2	1	0

Source: New York State Department of Transportation (NYSDOT)

Project-generated traffic volume increases would occur at each of the five high crash locations; however, volume increases at movements that would conflict with pedestrians (i.e. turning movements) are generally low. Additionally, project-generated pedestrian activity is not expected to increase substantially at these locations, except for Flatbush Avenue and Tilden Avenue.

At the intersection of Flatbush Avenue and Tilden Avenue, substantial project-generated pedestrians would be generated to the south and east crosswalks (226 to 312 and 537 to 635) during peak hours. Also, as many as 49 vph would be generated to turning movements conflicting with the south crosswalk, and up to 165 vph would be generated to turning movements conflicting with the east crosswalk during peak hours. However, based on an analysis of the contributing factors for crashes occurring at this location between 2007 and 2009, pedestrian-turning vehicle conflicts was not a major contributing factor to pedestrian related crashes occurring at this intersection. Therefore, no significant pedestrian safety impacts would be anticipated at this location as a result of the proposed actions.

A substantial number of pedestrian trips would also be generated across the east crosswalk of Duryea Place at Flatbush Avenue which is an unsignalized crosswalk. However, this is not a high crash location. Therefore, no significant pedestrian safety impacts would be anticipated at this location as a result of the proposed actions. Additionally, potential conflicting vehicle movements would decrease at this location (turns from Flatbush Avenue to Duryea Place) as a result of turning prohibitions proposed in the traffic mitigation plan (see Chapter 8, “Mitigation).

There is one bicycle route within the study area which runs north-south along Bedford Avenue. This route has a Class-II striped bicycle lane operating between a parking lane and travel lane in each direction. Project-generated traffic volume increases along Bedford Avenue would be substantial; however, increases to turning movements from Bedford Avenue (the movements most likely to conflict with bicycles) would generally be low. No modifications would be made to the bicycle facility as a result of this project. Therefore, no significant bicycle safety impacts would be anticipated as a result of the proposed actions. ✷

A. INTRODUCTION

Stationary source impacts include emissions from fuel burned for heating, ventilation, and air conditioning (HVAC) of buildings. A stationary source screening analysis was undertaken as part of the Environmental Assessment Statement (EAS). Based on the screening analysis, it was determined that this project would not have the potential for significant adverse stationary source impacts to Air Quality.

Therefore, this chapter examines the potential for mobile air quality impacts from the proposed actions. Mobile source impacts are those generated by motor vehicles traveling to and from the project site once the project is operational. The peak hour traffic from the proposed actions would exceed the 2010 *City Environmental Quality Review (CEQR) Technical Manual* carbon monoxide screening threshold of 170 peak hour vehicle trips at an intersection. In addition, the proposed actions would exceed the particulate matter emission screening thresholds discussed in Chapter 17, Sections 210 and 311 of the 2010 *CEQR Technical Manual*. Therefore, a quantified assessment of on-street mobile source emissions was performed. Further, an analysis was conducted to evaluate pollutant concentrations from nearby existing parking facilities that would provide parking for the proposed project. The predicted increments from the parking facilities were added, where appropriate, to the predicted concentrations from the mobile source analysis, to assess the potential for cumulative impacts.

As discussed below, the maximum predicted pollutant concentrations and concentration increments from mobile sources with the proposed actions would be below the corresponding guidance thresholds and ambient air quality standards. Thus, the proposed action would not result in any significant adverse impacts from mobile source emissions.

B. POLLUTANTS FOR ANALYSIS

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of carbon monoxide (CO) are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide, NO, and nitrogen dioxide, NO_2, collectively referred to as NO_x) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO_2) are associated mainly with stationary sources, and sources utilizing non-road diesel such as diesel trains, marine engines, and non-road vehicles (e.g., construction engines). On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NO_x and VOCs.

CARBON MONOXIDE

CO, a colorless and odorless gas, is produced in the urban environment primarily by the incomplete combustion of gasoline and other fossil fuels. In urban areas, approximately 80 to 90 percent of CO emissions are from motor vehicles. Since CO is a reactive gas which does not persist in the atmosphere, CO concentrations can vary greatly over relatively short distances; elevated concentrations are usually limited to locations near crowded intersections, heavily traveled and congested roadways, parking lots, and garages. Consequently, CO concentrations must be predicted on a local, or microscale, basis.

The proposed actions would result in changes in traffic patterns and an increase in traffic volume in the study area. Therefore, a mobile source analysis was conducted at critical intersections in the study area to evaluate future CO concentrations with and without the proposed actions. A cumulative impact analysis was also conducted to evaluate future CO concentrations from the nearby parking facilities and the adjacent roadways.

NITROGEN OXIDES, VOCS, AND OZONE

NO_x are of principal concern because of their role, together with VOCs, as precursors in the formation of ozone. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow, and occur as the pollutants are advected downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of NO_x and VOC emissions from all sources are therefore generally examined on a regional basis. The contribution of any action or project to regional emissions of these pollutants would include any added stationary or mobile source emissions; the change in regional mobile source emissions of these pollutants would be related to the total vehicle miles traveled added or subtracted on various roadway types throughout the New York metropolitan area, which is designated as a moderate non-attainment area for ozone by the U.S. Environmental Protection Agency (EPA).

The proposed actions would not have a significant effect on the overall volume of vehicular travel in the metropolitan area; therefore, no measurable impact on regional NO_x emissions or on ozone levels is predicted. An analysis of project-related emissions of these pollutants from mobile sources is therefore not warranted.

In addition to being a precursor to the formation of ozone, NO_2 (one component of NO_x) is also a regulated pollutant. Since NO_2 is mostly formed from the transformation of NO in the atmosphere, it has mostly been of concern further downwind from large stationary point sources, and not a local concern from mobile sources. (NO_x emissions from fuel combustion consist of approximately 90 percent NO and 10 percent NO_2 at the source.) However, with the promulgation of the 2010 1-hour average standard for NO_2, local sources such as vehicular emissions may become of greater concern for this pollutant.

LEAD

Airborne lead emissions are currently associated principally with industrial sources. Effective January 1, 1996, the Clean Air Act (CAA) banned the sale of the small amount of leaded fuel that was still available in some parts of the country for use in on-road vehicles, concluding a 25-year effort to phase out lead in gasoline. Even at locations in the New York City area where traffic volumes are very high, atmospheric lead concentrations are far below the 3-month average national standard of 0.15 micrograms per cubic meter ($\mu g/m^3$).

No significant sources of lead are associated with the proposed actions and, therefore, further analysis is not warranted.

RESPIRABLE PARTICULATE MATTER—PM_{10} AND $PM_{2.5}$

PM is a broad class of air pollutants that includes discrete particles of a wide range of sizes and chemical compositions, as either liquid droplets (aerosols) or solids suspended in the atmosphere. The constituents of PM are both numerous and varied, and they are emitted from a wide variety of sources (both natural and anthropogenic). Natural sources include the condensed and reacted forms of naturally occurring VOC; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and material from live and decaying plant and animal life; particles eroded from beaches, soil, and rock; and particles emitted from volcanic and geothermal eruptions and from forest fires. Naturally occurring PM is generally greater than 2.5 micrometers in diameter. Major anthropogenic sources include the combustion of fossil fuels (e.g., vehicular exhaust, power generation, boilers, engines, and home heating), chemical and manufacturing processes, all types of construction, agricultural activities, as well as wood-burning stoves and fireplaces. PM also acts as a substrate for the adsorption (accumulation of gases, liquids, or solutes on the surface of a solid or liquid) of other pollutants, often toxic and some likely carcinogenic compounds.

As described below, PM is regulated in two size categories: particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}, which includes $PM_{2.5}$). $PM_{2.5}$ has the ability to reach the lower regions of the respiratory tract, delivering with it other compounds that adsorb to the surfaces of the particles, and is also extremely persistent in the atmosphere. $PM_{2.5}$ is mainly derived from combustion material that has volatilized and then condensed to form primary PM (often soon after the release from a source exhaust) or from precursor gases reacting in the atmosphere to form secondary PM.

Diesel-powered vehicles, especially heavy duty trucks and buses, are a significant source of respirable PM, most of which is $PM_{2.5}$; PM concentrations may, consequently, be locally elevated near roadways with high volumes of heavy diesel powered vehicles. An analysis was conducted to assess the worst case PM impacts due to the increased traffic associated with the proposed actions.

SULFUR DIOXIDE

SO_2 emissions are primarily associated with the combustion of sulfur-containing fuels (oil and coal). Monitored SO_2 concentrations in New York City are lower than the current national standards. Due to the federal restrictions on the sulfur content in diesel fuel for on-road vehicles, no significant quantities are emitted from vehicular sources. Vehicular sources of SO_2 are not significant and therefore, an analysis of SO_2 from mobile sources was not warranted.

C. AIR QUALITY REGULATIONS, STANDARDS, AND BENCHMARKS

NATIONAL AND STATE AIR QUALITY STANDARDS

As required by the CAA, primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: CO, NO_2, ozone, respirable PM (both $PM_{2.5}$ and PM_{10}), SO_2, and lead. The primary standards represent levels that are requisite to protect the public health, allowing an adequate margin of safety. The secondary standards are

intended to protect the nation's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary and secondary standards are the same for NO_2 (annual), ozone, lead, and PM, and there is no secondary standard for CO and the 1-hour NO_2 standard. The NAAQS are presented in **Table 4-1**. The NAAQS for CO, annual NO_2, and SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only. New York State also has standards for total suspended particulate matter (TSP), settleable particles, non-methane hydrocarbons (NMHC), and ozone which correspond to federal standards that have since been revoked or replaced, and for beryllium, fluoride, and hydrogen sulfide (H_2S).

EPA has revised the NAAQS for PM, effective December 18, 2006. The revision included lowering the level of the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ and retaining the level of the annual standard at 15 $\mu g/m^3$. The PM_{10} 24-hour average standard was retained and the annual average PM_{10} standard was revoked.

EPA has also revised the 8-hour ozone standard, lowering it from 0.08 to 0.075 parts per million (ppm), effective as of May 2008. On January 6, 2010, EPA proposed a change in the 2008 ozone NAAQS, lowering the primary NAAQS from the current 0.075 ppm level to within the range of 0.060 to 0.070 ppm. EPA is also proposing a secondary ozone standard, measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation.

EPA lowered the primary and secondary standards for lead to 0.15 $\mu g/m^3$, effective January 12, 2009. EPA revised the averaging time to a rolling 3-month average and the form of the standard to not-to-exceed across a 3-year span. The current lead NAAQS will remain in place for one year following the effective date of attainment designations for any new or revised NAAQS before being revoked, except in current non-attainment areas, where the existing NAAQS will not be revoked until the affected area submits, and EPA approves, an attainment demonstration for the revised lead NAAQS.

EPA established a new 1-hour average NO_2 standard of 0.100 ppm, effective April 12, 2010, in addition to the annual standard. The statistical form is the 3-year average of the 98th percentile of daily maximum 1-hour average concentration in a year.

EPA established a new 1-hour average SO_2 standard of 0.075 ppm, replacing the current 24-hour and annual primary standards, effective August 23, 2010. The statistical form is the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour concentrations (the 4th highest daily maximum corresponds approximately to 99th percentile for a year.)

NAAQS ATTAINMENT STATUS AND STATE IMPLEMENTATION PLANS

The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as non-attainment by EPA, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA.

In 2002, EPA re-designated New York City as in attainment for CO. The CAA requires that a maintenance plan ensure continued compliance with the CO NAAQS for former non-attainment areas. New York City is also committed to implementing site-specific control measures throughout the city to reduce CO levels, should unanticipated localized growth result in elevated CO levels during the maintenance period.

Table 4-1
National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary		Secondary	
	ppm	µg/m^3	ppm	µg/m^3
Carbon Monoxide (CO)				
8-Hour Average [1]	9	10,000	None	
1-Hour Average [1]	35	40,000		
Lead				
Rolling 3-Month Average [2]	NA	0.15	NA	0.15
Nitrogen Dioxide (NO_2)				
1-Hour Average [3]	0.100	188	None	
Annual Average	0.053	100	0.053	100
Ozone (O_3)				
8-Hour Average [4,5]	0.075	150	0.075	150
Respirable Particulate Matter (PM_{10})				
24-Hour Average [1]	NA	150	NA	150
Fine Respirable Particulate Matter ($PM_{2.5}$)				
Annual Mean	NA	15	NA	15
24-Hour Average [6,7]	NA	35	NA	35
Sulfur Dioxide (SO_2) [8]				
1-Hour Average [9]	0.075	196	NA	NA
Maximum 3-Hour Average [1]	NA	NA	0.50	1,300

Notes:

ppm – parts per million
µg/m^3 – micrograms per cubic meter
NA – not applicable

All annual periods refer to calendar year.

PM concentrations (including lead) are in µg/m^3 since ppm is a measure for gas concentrations. Concentrations of all gaseous pollutants are defined in ppm and approximately equivalent concentrations in µg/m^3 are presented.

[1] Not to be exceeded more than once a year.

[2] EPA has lowered the NAAQS down from 1.5 µg/m^3, effective January 12, 2009.

[3] 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective April 12, 2010.

[4] 3-year average of the annual fourth highest daily maximum 8-hr average concentration.

[5] EPA has proposed lowering this standard further to within the range 0.060-0.070 ppm.

[6] Not to be exceeded by the annual 98th percentile when averaged over 3 years.

[7] EPA has lowered the NAAQS down from 65 µg/m^3, effective December 18, 2006.

[8] EPA revoked the 24-hour and annual primary standards, replacing them with a 1-hour average standard. Effective August 23, 2010.

[9] 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective August 23, 2010.

Source: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.

Manhattan has been designated as a moderate NAA for PM_{10}. On December 17, 2004, EPA took final action designating the five New York City counties and Nassau, Suffolk, Rockland, Westchester, and Orange Counties as a $PM_{2.5}$ non-attainment area under the CAA due to exceedance of the annual average standard. New York State submitted a final SIP to EPA, dated October 2009, designed to meet the annual average standard by April 5, 2010. Based on recent monitoring data (2006-2009), annual average concentrations of $PM_{2.5}$ in New York City no longer exceed the annual standard. On August 2, 2010, EPA proposed to determine that the New York–Northern New Jersey–Long Island $PM_{2.5}$ nonattainment area has attained the 1997 annual NAAQS.

As described above, EPA has revised the 24-hour average $PM_{2.5}$ standard. In October 2009 EPA finalized the designation of the New York City Metropolitan Area as nonattainment with the 2006 24-hour $PM_{2.5}$ NAAQS, effective in November 2009. The nonattainment area includes the same 10-county area EPA designated as nonattainment with the 1997 annual $PM_{2.5}$ NAAQS. By November 2012 New York will be required to submit a SIP demonstrating attainment with the 2006 24-hour standard by November 2014 (EPA may grant attainment date extensions for up to five additional years).

Nassau, Rockland, Suffolk, Westchester, Lower Orange County Metropolitan Area (LOCMA), and the five New York City counties had been designated as a severe non-attainment area for ozone (1-hour average standard). In November 1998, New York State submitted its *Phase II Alternative Attainment Demonstration for Ozone*, which was finalized and approved by EPA effective March 6, 2002, addressing attainment of the 1-hour ozone NAAQS by 2007. These SIP revisions included additional emission reductions that EPA requested to demonstrate attainment of the standard, and an update of the SIP estimates using the latest versions of the mobile source emissions model, MOBILE6.2, and the nonroad emissions model, NONROAD—which have been updated to reflect current knowledge of engine emissions and the latest mobile and nonroad engine emissions regulations.

On April 15, 2004, EPA designated these same counties as moderate non-attainment for the 8-hour average ozone standard which became effective as of June 15, 2004 (LOCMA was moved to the Poughkeepsie moderate non-attainment area for 8-hour ozone). EPA revoked the 1-hour standard on June 15, 2005; however, the specific control measures for the 1-hour standard included in the SIP are required to stay in place until the 8-hour standard is attained. The discretionary emissions reductions in the SIP would also remain but could be revised or dropped based on modeling. On February 8, 2008, New York State Department of Environmental Conservation (NYSDEC) submitted final revisions to a new SIP for ozone to EPA. NYSDEC has determined that achieving attainment for ozone before 2012 is unlikely, and has therefore made a request for a voluntary reclassification of the New York nonattainment area as "serious".

In March 2008 EPA strengthened the 8-hour ozone standards. SIPs will be due three years after the final designations are made. On March 12, 2009, NYSDEC recommended that the counties of Suffolk, Nassau, Bronx, Kings, New York, Queens, Richmond, Rockland, and Westchester be designated as a non-attainment area for the 2008 ozone NAAQS (the NYMA MSA nonattainment area). EPA has proposed to determine that the Poughkeepsie nonattainment area (Dutchess, Orange, Ulster, and Putnam counties) has attained the 2008 one-hour and eight-hour NAAQS for ozone. It is unclear at this time what the attainment status of these areas will be under the newly proposed standard due to the range of concentrations proposed.

New York City is currently in attainment of the annual-average NO_2 standard. EPA has promulgated a new 1-hour standard, but it is unclear at this time what the City's attainment

status will be due to the need for additional near road monitoring required for the new standard. The existing monitoring data indicates background concentrations below the standard. It is likely that New York City will be designated as "unclassifiable" at first (January 2012), and then classified once three years of monitoring data are available (2016 or 2017).

EPA has established a new 1-hour SO_2 standard, replacing the 24-hour and annual standards, effective August 23, 2010. Based on the available monitoring data, all New York State counties currently meet the 1-hour standard. Additional monitoring will be required. EPA plans to make final attainment designations in June 2012, based on 2008 to 2010 monitoring data and refined modeling. SIPs for nonattainment areas will be due by June 2014.

DETERMINING THE SIGNIFICANCE OF AIR QUALITY IMPACTS

The State Environmental Quality Review Act (SEQRA) regulations and the 2010 *CEQR Technical Manual* state that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[1] In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS (see **Table 4-1**) would be deemed to have a potential significant adverse impact. In addition, in order to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, threshold levels have been defined for certain pollutants; any action predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

DE MINIMIS CRITERIA REGARDING CO IMPACTS

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed actions on mobile sources, as set forth in the 2010 *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (1) an increase of 0.5 ppm or more in the maximum 8-hour average CO concentration at a location where the predicted No Action 8-hour concentration is equal to or between 8 and 9 ppm; or (2) an increase of more than half the difference between baseline (i.e., No Action) concentrations and the 8-hour standard, when No Action concentrations are below 8.0 ppm.

$PM_{2.5}$ INTERIM GUIDANCE CRITERIA

NYSDEC has published a policy to provide interim direction for evaluating $PM_{2.5}$ impacts[2]. This policy would apply only to facilities applying for permits or major permit modifications under SEQRA that emit 15 tons of PM_{10} or more annually. The policy states that such a project will be deemed to have a potentially significant adverse impact if the project's maximum impacts are

[1] *CEQR Technical Manual*, Chapter 17, section 400, May 2010; and State Environmental Quality Review Regulations, 6 NYCRR § 617.7

[2] CP33/Assessing and Mitigating Impacts of Fine Particulate Emissions, NYSDEC 12/29/2003.

predicted to increase $PM_{2.5}$ concentrations by more than 0.3 µg/m^3 averaged annually or more than 5 µg/m^3 on a 24-hour basis. Projects that exceed either the annual or 24-hour threshold will be required to prepare an Environmental Impact Statement (EIS) to assess the severity of the impacts, to evaluate alternatives, and to employ reasonable and necessary mitigation measures to minimize the $PM_{2.5}$ impacts of the source to the maximum extent practicable.

In addition, the 2010 *CEQR Technical Manual* applies interim guidance criteria for evaluating potential $PM_{2.5}$ impacts for projects subject to CEQR. The interim guidance criteria for determination of potential significant adverse $PM_{2.5}$ impacts under CEQR are as follows:

- 24-hour average $PM_{2.5}$ concentration increments which are predicted to be greater than 5 µg/m^3 at a discrete receptor location would be considered a significant adverse impact on air quality under operational conditions (i.e., a permanent condition predicted to exist for many years regardless of the frequency of occurrence);
- 24-hour average $PM_{2.5}$ concentration increments which are predicted to be greater than 2 µg/m^3 but no greater than 5 µg/m^3 would be considered a significant adverse impact on air quality based on the magnitude, frequency, duration, location, and size of the area of the predicted concentrations;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 µg/m^3 at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 µg/m^3 at a discrete receptor location (elevated or ground level).

Actions under CEQR predicted to increase $PM_{2.5}$ concentrations by more than the CEQR or NYSDEC interim guidance criteria above will be considered to have a potential significant adverse impact. Actions subject to CEQR that fail the interim guidance criteria should prepare an EIS and examine potential measures to reduce or eliminate such potential significant adverse impacts.

The above interim guidance criteria have been used to evaluate the significance of predicted impacts of the proposed actions on $PM_{2.5}$ concentrations and determine the need to minimize particulate matter emissions from the proposed actions.

D. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS (MOBILE SOURCE ANALYSIS)

The prediction of vehicle-generated emissions and their dispersion in an urban environment incorporates meteorological phenomena, traffic conditions, and physical configuration. Air pollutant dispersion models mathematically simulate how traffic, meteorology, and physical configuration combine to affect pollutant concentrations. The mathematical expressions and formulations contained in the various models attempt to describe an extremely complex physical phenomenon as closely as possible. However, because all models contain simplifications and approximations of actual conditions and interactions, and since it is necessary to predict the reasonable worst-case condition, most dispersion analyses predict conservatively high concentrations of pollutants, particularly under adverse meteorological conditions.

The mobile source analyses for the proposed actions employ a model approved by EPA that has been widely used for evaluating air quality impacts of projects in New York City, other parts of New York State, and throughout the country. The modeling approach includes a series of conservative assumptions relating to meteorology, traffic, and background concentration levels resulting in a conservatively high estimate of expected pollutant concentrations that could ensue from the proposed actions.

VEHICLE EMISSIONS

ENGINE EMISSIONS

Vehicular CO and PM engine emission factors were computed using the EPA mobile source emissions model, MOBILE6.2[1]. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOBILE6.2 incorporate the most current guidance available from NYSDEC and New York City Environmental Protection (NYCDEP).

Vehicle classification data were based on field studies. Appropriate credits were used to accurately reflect the inspection and maintenance program. The inspection and maintenance programs require inspections of automobiles and light trucks to determine if pollutant emissions from each vehicle exhaust system are lower than emission standards. Vehicles failing the emissions test must undergo maintenance and pass a repeat test to be registered in New York State.

All taxis were assumed to be in hot stabilized mode (i.e. excluding any start emissions). The general categories of vehicle types for specific roadways were further categorized into subcategories based on their relative breakdown within the fleet.[2]

An ambient temperature of 43.0° Fahrenheit was used. The use of this temperature is recommended in the 2010 *CEQR Technical Manual* and is consistent with current NYCDEP guidance.

ROAD DUST

The contribution of re-entrained road dust to PM_{10} concentrations, as presented in the PM_{10} SIP, is considered to be significant; therefore, the PM_{10} estimates include both exhaust and road dust. In accordance with the CEQR $PM_{2.5}$ interim guidance criteria methodology, emission rates were determined with fugitive road dust to account for their impacts in local microscale analyses. However, fugitive road dust was not included in the neighborhood scale $PM_{2.5}$ microscale analyses, since NYCDEP considers it to have an insignificant contribution on that scale. Road dust emission factors were calculated according to the latest procedure delineated by EPA.[3]

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[1] EPA, User's Guide to MOBILE6.1 and MOBILE6.2: Mobile Source Emission Factor Model, EPA420-R-03-010, August 2003.

[2] The MOBILE6.2 emissions model utilizes 28 vehicle categories by size and fuel. Traffic counts and predictions are based on broader size categories, and then broken down according to the fleet-wide distribution of subcategories and fuel types (diesel, gasoline, or alternative).

[3] EPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, December 2003.

TRAFFIC DATA

Traffic data for the air quality analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the proposed actions (see Chapter 3, "Transportation"). Traffic data for the future without the proposed actions and with the proposed actions were employed in the respective air quality modeling scenarios. The Saturday midday arrival, and the Saturday evening arrival peak periods were analyzed. These time periods were selected for the mobile source analysis because they produce the maximum anticipated project-generated traffic and therefore have the greatest potential for significant air quality impacts.

For particulate matter, the midday arrival, and evening arrival traffic volumes were used as a baseline for determining off-peak volumes. Off-peak traffic volumes in the existing condition and in the future without the proposed actions, and off-peak increments from the proposed actions, were determined by adjusting the peak period volumes by the 24-hour distributions of actual vehicle counts collected at appropriate locations.

DISPERSION MODEL FOR MICROSCALE ANALYSES

Maximum CO concentrations adjacent to streets near the project site, resulting from vehicle emissions, were predicted using the CAL3QHC model Version 2.0.[1] The CAL3QHC model employs a Gaussian (normal distribution) dispersion assumption and includes an algorithm for estimating vehicular queue lengths at signalized intersections. CAL3QHC predicts emissions and dispersion of CO from idling and moving vehicles. The queuing algorithm includes site-specific traffic parameters, such as signal timing and delay calculations (from the 2000 *Highway Capacity Manual* traffic forecasting model), saturation flow rate, vehicle arrival type, and signal actuation (i.e., pre-timed or actuated signal) characteristics to accurately predict the number of idling vehicles. The CAL3QHC model has been updated with an extended module, CAL3QHCR, which allows for the incorporation of hourly meteorological data into the modeling, instead of worst-case assumptions regarding meteorological parameters. This refined version of the model, CAL3QHCR, is employed if maximum predicted future CO concentrations are greater than the applicable ambient air quality standards or when *de minimis* thresholds are exceeded using the first level of CAL3QHC modeling.

To determine motor vehicle generated PM concentrations adjacent to streets near the proposed actions area, the CAL3QHCR model was applied. This refined version of the model can utilize hourly traffic and meteorology data, and is therefore more appropriate for calculating 24-hour and annual average concentrations.

METEOROLOGY

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability. Wind direction influences the direction in which pollutants are dispersed, and atmospheric stability accounts for the effects of vertical mixing in the atmosphere. These factors, therefore, influence the concentration at a particular prediction location (receptor).

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[1] EPA, User's Guide to CAL3QHC, A Modeling Methodology for Predicted Pollutant Concentrations Near Roadway Intersections, Office of Air Quality, Planning Standards, Research Triangle Park, North Carolina, EPA-454/R-92-006.

TIER I ANALYSES—CAL3QHC

CO calculations were performed using the CAL3QHC model. In applying the CAL3QHC model, the wind angle was varied to determine the wind direction resulting in the maximum concentrations at each receptor.

Following the EPA guidelines,[1] CAL3QHC computations were performed using a wind speed of 1 meter per second, and the neutral stability class D. The 8-hour average CO concentrations were estimated by multiplying the predicted 1-hour average CO concentrations by a factor of 0.70 to account for persistence of meteorological conditions and fluctuations in traffic volumes. A surface roughness of 3.21 meters was chosen. At each receptor location, concentrations were calculated for all wind directions, and the highest predicted concentration was reported, regardless of frequency of occurrence. These assumptions ensured that worst-case meteorology was used to estimate impacts.

TIER II ANALYSES—CAL3QHCR

A Tier II analysis performed with the CAL3QHCR model includes the modeling of hourly concentrations based on hourly traffic data and five years of monitored hourly meteorological data. The data consist of surface data collected at LaGuardia Airport and upper air data collected at Brookhaven, New York for the period 2005-2009. All hours were modeled, and the highest resulting concentration for each averaging period is presented.

ANALYSIS YEAR

The microscale analyses were performed for existing conditions and 2014, the year by which the proposed actions are likely to be completed. The future analysis was performed both without the proposed actions and with the proposed actions.

ANALYSIS *SITES*

A total of two intersections were selected for microscale analysis (see **Table 4-2**). These sites were selected because they are the locations in the study area where the largest levels of project-generated traffic are expected, and, therefore, where the greatest air quality impacts and maximum changes in concentrations would be expected. Each of these intersections was analyzed for CO. The intersection of Bedford Avenue and Tilden Avenue was also analyzed for PM because it has the highest overall build increment, and would therefore result in the maximum changes in PM concentrations.

Table 4-2
Mobile Source Analysis Sites

Analysis Site	Location
1	Bedford Avenue and Tilden Avenue
2	Flatbush Avenue and Tilden Avenue

[1] *Guidelines for Modeling Carbon Monoxide from Roadway Intersections*, EPA Office of Air Quality Planning and Standards, Publication EPA-454/R-92-005.

RECEPTOR PLACEMENT

Multiple receptors (i.e. precise locations at which concentrations are predicted) were modeled at each of the selected sites; receptors were placed along the approach and departure links at spaced intervals. Receptors were placed at sidewalk or roadside locations near intersections with continuous public access. Receptors in the analysis models for predicting annual average neighborhood-scale $PM_{2.5}$ concentrations were placed at a distance of 15 meters, from the nearest moving lane at each analysis location, based on the NYCDEP procedure for neighborhood-scale corridor $PM_{2.5}$ modeling.

BACKGROUND CONCENTRATIONS

Background concentrations are those pollutant concentrations originating from distant sources that are not directly included in the modeling analysis, which directly accounts for vehicular emissions on the streets within 1,000 feet and in the line of sight of the analysis site. Background concentrations must be added to modeling results to obtain total pollutant concentrations at an analysis site. The highest background concentrations monitored at the nearest NYSDEC background monitoring station in the most recent 3-year period were used. It was conservatively assumed that the maximum background concentrations occur on all days.

The eight-hour average CO background concentration used in this analysis was 2.0 ppm for the 2014 prediction, which is based on the second-highest eight-hour measurements over the most recent five-year period for which complete monitoring data is available (2004–2008), utilizing measurements obtained at the NYSDEC P.S. 59 monitoring station located on East 57th Street in Manhattan. The one-hour CO background employed in the analysis was 2.6 ppm.

The PM_{10} 24-hour background concentration of 60 $\mu g/m^3$ was based on the second-highest concentration, measured over the most recent three-year period for which complete data are available (2006–2008). The nearest NYSDEC monitoring site, at P.S. 59, was used. $PM_{2.5}$ background concentrations are not presented, since impacts are assessed on an incremental basis.

EXISTING PARKING FACILITIES

The proposed actions would not create any new parking facilities. The existing parking supply within the surrounding area, including the Sears parking lot directly east of the project site and the Stop and Shop rooftop lot directly north of the project site, would be relied upon to accommodate the project-generated parking demand. An analysis was conducted to evaluate CO concentrations from these two parking facilities. The predicted increments from the parking facilities were added, where appropriate, to the predicted concentrations from the mobile source analysis, to assess the potential cumulative impacts.

As described in Chapter 17, Sections 321.2 of the 2010 *CEQR Technical Manual*, $PM_{2.5}$ and PM_{10} are the primary pollutants of concern if the parking lots are used by large numbers of diesel trucks or buses. Both lots are private lots designated for patrons of adjacent retailers. The number of diesel trucks that use these parking lots is limited. In addition, the proposed actions would not generate any diesel truck or bus increments. Therefore, the predicted PM increments from these parking facilities would be negligible and a cumulative PM impact from the parking facilities and the adjacent roadways is not warranted.

Emissions from vehicles entering, parking, and exiting the parking lots were estimated using the EPA MOBILE6.2 mobile source emission model and an ambient temperature of 43°F, as referenced in the 2010 *CEQR Technical Manual*. All arriving and departing vehicles were conservatively assumed to

travel at an average speed of 5 miles per hour within the parking facilities. In addition, all departing vehicles were assumed to idle for 1 minute before exiting. To determine compliance with the NAAQS, CO concentrations were determined for the maximum 1- and 8-hour average periods.

The CO concentrations were determined for the Saturday midday arrival, and the Saturday evening arrival peak periods. These time periods produce the maximum anticipated project-generated traffic and therefore have the greatest potential for significant mobile source impacts and cumulative impacts from the parking facilities and the adjacent roadways. Traffic data for existing parking utilization were obtained from field observations. Project-generated parking demand was developed as part of the traffic analysis for the proposed actions (see Chapter 3, "Transportation").

A "near" and "far" receptor was placed adjacent to Tilden Avenue directly opposite each parking lot. A persistence factor of 0.70, supplied by DEP, was used to convert the calculated 1-hour average maximum concentrations to 8-hour averages, accounting for meteorological variability over the average 8-hour period. Background and on-street CO concentrations were added to the modeling results to obtain the cumulative totals.

E. EXISTING CONDITIONS

The background concentrations (presented above) represent general air quality in the study area. However, the concentrations adjacent to the mobile-source analysis sites in the existing condition may be higher than at the monitoring stations, due to the adjacent vehicular emissions. Existing concentrations were calculated using the CAL3QHC dispersion model. The highest simulated existing eight-hour average CO concentrations at the mobile-source analysis sites are presented in **Table 4-3**. (One-hour average values are not shown since predicted values are much lower than the one-hour standard of 35 ppm.)

Table 4-3
Maximum Predicted Existing Eight-Hour Average CO Concentrations for 2010

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)
1	Bedford Avenue and Tilden Avenue	SAT PM	2.5
2	Flatbush Avenue and Tilden Avenue	SAT PM	3.0
Note: 8-hour standard is 9 ppm.			

F. THE FUTURE WITHOUT THE PROPOSED ACTIONS

CO

CO concentrations without the proposed actions were determined for the 2014 analysis year using the methodology previously described. **Table 4-4** shows future maximum predicted eight-hour average CO concentrations at the analysis intersections without the proposed actions (i.e., No Action values). The values shown are the highest predicted concentrations for the receptor locations for any of the time periods analyzed.

Table 4-4
Maximum Predicted Future (2014) Eight-Hour Average
CO No Action Concentrations

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)
1	Bedford Avenue and Tilden Avenue	SAT PM	2.4
2	Flatbush Avenue and Tilden Avenue	SAT PM	2.9
Note: 8-hour standard is 9 ppm.			

PM

PM concentrations in the No Action condition were determined for the Build year using the methodology previously described. **Table 4-5** presents the future maximum predicted 24-hour and annual average PM_{10} concentrations at the analysis intersections in the No Action condition (i.e., No Action values). The values shown are the highest predicted concentrations for the receptor locations for any of the time periods analyzed. Note that $PM_{2.5}$ concentrations in the No Action condition are not presented, since impacts are assessed on an incremental basis.

Table 4-5
Maximum Predicted Future (2014) 24-Hour Average
PM_{10} No Action Concentrations

Receptor Site	Location	Concentration (µg/m^3)
1	Bedford Avenue and Tilden Avenue	74.9
Note: NAAQS—24-hour, 150 µg/m^3.		

G. THE FUTURE WITH THE PROPOSED ACTIONS

CO

CO concentrations with the proposed actions were determined for future 2014 conditions at traffic intersections using the methodology previously described. **Table 4-6** shows the future maximum predicted eight-hour average CO concentration with the proposed actions at the two intersections studied. (No one-hour values are shown, since no exceedances of the NAAQS would occur and the *de minimis* criteria are only applicable to eight-hour concentrations; therefore, the eight-hour values are the most critical for impact assessment.) The values shown are the highest predicted concentration for any of the time periods analyzed. The results indicate that the proposed actions would not result in any violations of the eight-hour CO standard. In addition, the incremental increases in eight-hour average CO concentrations are very small, and consequently would not result in a violation of the CEQR *de minimis* CO criteria. Consequently, the proposed actions would not result in any significantly CO air quality impacts in the Build condition.

Table 4-6
Maximum Predicted Future (2014) Eight-Hour Average
No Action and Future with the Proposed Actions CO Concentrations

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)	
			No Action	Future with the Proposed Actions
1	Bedford Avenue and Tilden Avenue	SAT PM	2.4	2.6
2	Flatbush Avenue and Tilden Avenue	SAT PM	2.9	3.3
Note: 8-hour standard is 9 ppm.				

PM

PM concentrations with the proposed actions were determined for future 2014 conditions using the methodology previously described. **Table 4-7** shows the future maximum predicted 24-hour average PM_{10} concentrations with the proposed actions. The values shown are the highest predicted concentrations for all locations analyzed and include the ambient background concentrations. The results indicate that the proposed actions would not result in any violations of the PM_{10} standard or any significant adverse impacts on air quality.

Table 4-7
Maximum Predicted Future (2014) 24-Hour Average
No Action and Future with the Proposed Actions PM_{10} Concentrations

Receptor Site	Location	24-Hour Concentration (µg/m^3)	
		No Action	Future with the Proposed Actions
1	Bedford Avenue and Tilden Avenue	74.9	79.7
Note:	National Ambient Air Quality Standards—24-hour, 150 µg/m^3.		

Future maximum predicted 24-hour and annual average $PM_{2.5}$ concentration increments were calculated so that they could be compared to the interim guidance criteria that would determine the potential significance of any impacts from the proposed actions. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental $PM_{2.5}$ concentrations are presented in **Table 4-8**. The results show that the annual and daily (24-hour) $PM_{2.5}$ increments are predicted to be well below the interim guidance criteria and, therefore, the proposed actions would not result in significant $PM_{2.5}$ impacts at the analyzed receptor locations.

Table 4-8
Maximum Predicted Future (2014)
24-Hour and Annual Average $PM_{2.5}$ Increments

Receptor Site	Location	24-Hour Average $PM_{2.5}$ Increment (µg/m^3)	Annual Average $PM_{2.5}$ Increment (µg/m^3)
1	Bedford Avenue and Tilden Avenue	0.3	0.04
Note: $PM_{2.5}$ interim guidance criteria—24-hour average, 2 µg/m^3 (5 µg/m^3 not-to-exceed value). $PM_{2.5}$ interim guidance criteria—annual (neighborhood scale) 0.1 µg/m^3.			

ANALYSIS OF EXISTING PARKING FACILITIES

As presented in Table 4-6, based on an analysis of intersections within the study area, the future maximum predicted 8-hour average CO concentration from mobile sources with the proposed actions would be 3.3 ppm. This value includes a maximum predicted concentration of 1.3 ppm from mobile sources and a background level of 2.0 ppm, and would occur at receptors placed along the sidewalk on Tilden Avenue, near Flatbush Avenue.

Based on the methodology previously described, the maximum predicted 8-hour average CO concentrations from the existing parking facilities were analyzed using several receptor points; a near side receptor on the same side of the street as the parking facility on Tilden Avenue and a far side receptor on the opposite side of the street on Tilden Avenue from the parking facility. The maximum predicted 8-hour average CO concentration of all the sensitive receptors described above would be 0.5 ppm. This value includes a predicted concentration of 0.4 ppm

from the Stop and Shop rooftop lot and a predicted concentration of 0.1 ppm from the Sears parking lot.

The cumulative concentration of CO from the parking facilities and on-street mobile sources is estimated to be 3.8 ppm. This concentration is substantially below the applicable 8-hour standard of 9 ppm. Therefore, no significant adverse air quality impact would occur due to the combined effects of nearby parking facilities and on-street mobile sources. ✷

A. INTRODUCTION

The noise analysis presented in this chapter focuses on whether traffic generated by the proposed project would have the potential to result in significant noise impacts. Assessments of interior noise levels and noise from stationary sources are not provided in this chapter because it was determined in the Environmental Assessment Statement (EAS) that this project would not have the potential for significant adverse noise impacts from stationary sources.

In this EIS, a screening analysis for mobile sources was conducted. As discussed below, increases in noise levels would be below the CEQR threshold for a significant adverse impact. Therefore, no further analysis is warranted, and the project would also not result in significant adverse noise impacts from mobile sources.

B. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well-documented. If sufficiently loud, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Several noise scales and rating methods are used to quantify the effects of noise on people, taking into consideration such factors as loudness, duration, time of occurrence, and changes in noise level with time. However, it must be noted that all the stated effects of noise on people vary greatly with each individual.

"A"-WEIGHTED SOUND LEVEL (dBA)

Noise is typically measured in units called decibels (dB), which are 10 times the logarithm of the ratio of the sound pressure squared to a standard reference presence squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. One of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network, known as "A"-weighting, in the measurement system to simulate the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used in view of its widespread recognition and its close correlation with perception. In this chapter, all measured noise levels are reported in A-weighted decibels (dBA). Common noise levels in dBA are shown in **Table 5-1**.

ABILITY TO PERCEIVE CHANGES IN NOISE LEVELS

The average ability of an individual to perceive changes in noise levels is well-documented (see **Table 5-2**). Generally, changes in noise levels of less than 3 dBA are barely perceptible to most listeners, whereas changes in noise levels of 10 dBA are normally perceived as doubling (or

halving) of noise loudness. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

Table 5-1
Common Noise Levels

Sound Source	(dBA)
Military jet, air raid siren	130
Amplified rock music	110
Jet takeoff at 500 meters	100
Freight train at 30 meters	95
Train horn at 30 meters	90
Heavy truck at 15 meters	80–90
Busy city street, loud shout	80
Busy traffic intersection	70–80
Highway traffic at 15 meters, train	70
Predominantly industrial area	60
Light car traffic at 15 meters, city or commercial areas, or residential areas close to industry	50–60
Background noise in an office	50
Suburban areas with medium-density transportation	40–50
Public library	40
Soft whisper at 5 meters	30
Threshold of hearing	0

Note: A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness.
Sources: Cowan, James P. *Handbook of Environmental Acoustics,* Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

Table 5-2
Average Ability to Perceive Changes in Noise Levels

Change (dBA)	Human Perception of Sound
2–3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A "dramatic change"
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt, Beranek and Newman, Inc., *Fundamentals and Abatement of Highway Traffic Noise*, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.

NOISE DESCRIPTORS USED IN IMPACT ASSESSMENT

Because the sound pressure level unit of dBA describes a noise level at just one moment, and because very few noises are constant, other ways of describing noise over more extended periods have been developed. One way is to describe the fluctuating noise heard over a specific period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level," L_{eq}, can be computed. L_{eq} is the constant sound level that, in a given situation and period (e.g., 1 hour, denoted by $L_{eq(1)}$, or 24 hours, denoted by $L_{eq(24)}$), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors, such as L_1, L_{10}, L_{50}, L_{90}, and L_x, are sometimes used to indicate noise levels that are exceeded 1, 10, 50, 90, and x percent of the time, respectively. Discrete event peak levels are given as L_{01} levels.

The maximum 1-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in this noise impact evaluation. $L_{eq(1)}$ is the noise descriptor recommended for use in the 2010 *CEQR Technical Manual* for vehicular traffic and is used to provide an indication of highest expected sound levels.

C. NOISE STANDARDS, CRITERIA, AND IMPACT DEFINITION

Noise levels associated with the construction and operation of the proposed actions would be subject to the emission source provisions of the New York City Noise Control Code and to noise criteria set for the CEQR process. Other standards and guidelines promulgated by federal agencies do not apply to project noise control, but are useful to review in that they establish measures of impacts.

The New York City Noise Control Code, amended in December 2005, contains prohibitions regarding unreasonable noise, requirements for noise due to construction activities, circulation devices, and specific noise standards, with some specific noise sources being prohibited from being "plainly audible" within a receiving property.

As recommended in the 2010 *CEQR Technical Manual*, this study uses the following criterion to define the potential for a significant adverse noise impact: an increase of 3 dBA, or more, in Build $L_{eq(1)}$ noise levels at sensitive receptors (including residences, play areas, parks, schools, libraries, and houses of worship) over existing noise levels.

D. NOISE PREDICTION METHODOLOGY

PROPORTIONAL MODELING

In the study area, the dominant operational noise sources are vehicular traffic on adjacent and nearby streets and roadways. Noise from other sources, such as local or nearby industrial or commercial uses, are limited and do not contribute significantly to local ambient noise levels. To screen area roadways for the potential for a significant project impact, a proportional modeling technique was used to determine approximate increases in noise levels.

Using the proportional modeling technique, the prediction of future changes in noise levels, where traffic is the dominant noise source, is based on a calculation using predicted changes in traffic volumes. Using this methodology, vehicular traffic volumes (see Chapter 3, "Transportation") were converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars; one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars; and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future changes noise levels are calculated using the following equation:

$$F\ NL - E\ NL = 10 * \log_{10} (F\ PCE / E\ PCE)$$

where:

F NL = Future Noise Level
E NL = Existing Noise Level
F PCE = Future PCEs
E PCE = Existing PCEs

With this methodology, assuming traffic is the dominant noise source at a particular location, if the existing traffic volume on a street is 100 PCE and if the future traffic volume were increased by 50 PCE to a total of 150 PCE, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCE, or doubled to a total of 200 PCE, the noise level would increase by 3.0 dBA.

ANALYSIS PROCEDURE

To determine potential noise impacts from the project-generated traffic noise source, the following procedure was used in performing the noise analysis:

- Locations within the adjacent study area where the maximum project noise levels would be most likely to occur were determined;
- Changes in the future with the proposed project noise levels were calculated using the proportional technique previously described; and
- Predicted changes in noise levels were compared to CEQR noise impact criteria.

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS

As discussed in Chapter 3, "Transportation," future No Build traffic volumes were developed by applying a background traffic growth rate of 2 percent (0.5 percent per year). Traffic level increases of this amount would not result in a doubling of PCEs and would therefore cause increases in noise levels below 3.0 dBA. Changes of these magnitudes would be barely perceptible and insignificant.

F. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Using the methodology previously described, future changes in noise levels with the proposed project were calculated for the 2014 analysis year during the three project peak time periods (mid-day [MD] arrivals, mid-day [MD] departures, and evening [PM] arrivals) at adjacent locations with the highest likelihood for significant changes in noise levels. The values of the future changes in noise level with the proposed project are shown in **Table 5-3**.

Table 5-3
Future Changes in Noise Levels With the Proposed Project (in dBA)

Site	Location	Peak Hour	Existing Noise PCEs	Build Generated and Diverted Noise PCEs	% Increase	dBA Increase	Potential Impact?
1	Flatbush Avenue and Regent Place and Tilden Avenue	MD Arrivals	2973	351	11.8%	0.5	no
		MD Departures	2618	290	11.1%	0.5	no
		PM	2471	322	13.0%	0.5	no
2	Flatbush Avenue and Duryea Place and Beverly Road North	MD Arrivals	3163	279	8.8%	0.4	no
		MD Departures	2641	281	10.6%	0.4	no
		PM	2604	271	10.4%	0.4	no
3	Flatbush Avenue and Beverly Road South	MD Arrivals	2810	216	7.7%	0.3	no
		MD Departures	2712	244	9.0%	0.4	no
		PM	2480	220	8.9%	0.4	no

In 2014, the increase in noise levels would be less than 1 dBA for all the analysis periods at all three analysis locations. Changes of these magnitudes would be barely perceptible and insignificant, and they would be below the CEQR threshold for a significant adverse impact. Therefore, no further analysis is warranted, and, in addition to the determination in the EAS that

the project would not result in significant adverse noise impacts from stationary sources, the assessment above indicates that the project would also not result in significant adverse noise impacts from mobile sources. ✷

Chapter 6: Neighborhood Character

A. INTRODUCTION

This chapter analyzes the extent to which the proposed project may alter neighborhood character. Neighborhood character is considered to be an amalgam of various elements, including land use, urban design, visual resources, historic resources, socioeconomics, traffic and/or noise. Following the guidelines of the 2010 *City Environmental Quality Review (CEQR) Technical Manual*, the assessment in this chapter focuses on the defining elements that contribute to the character of the neighborhood.

The assessment provided in this chapter examines neighborhood character within a 400-foot study area around the project site and concludes that overall, the proposed project would not adversely affect neighborhood character despite increases in traffic. Instead, the proposed project would improve neighborhood character by transforming the vacant theatre into an active use, enlivening this area of Flatbush Avenue.

B. EXISTING CONDITIONS

The existing character of the project site and the neighborhood that surrounds it is defined in large part by the busy Flatbush Avenue commercial corridor, though it does contain some residential and institutional uses, as well as vacant land (see **Figure 6-1**).

The project site currently contains a closed movie theater that was built in 1929. Large commercial uses dominate the study area immediately surrounding the project site. The Sears Roebuck shopping center and associated parking lot are immediately east of the project site and comprise the full block bounded by Beverley Road to the south, Tilden Avenue to the north, Bedford Avenue to the east, and East 22nd Street to the west. Just north of the project site, on Tilden Avenue, a large commercial complex houses a Super Stop & Shop food store, Bally's gym, Old Navy, and Staples.

Neighborhood retail uses are also present in the study area. Flatbush Avenue is the area's main commercial corridor and contains neighborhood commercial uses, such as beauty salons, eating establishments, and clothing stores.

The surrounding neighborhood includes a mix of residential and community facility uses. However, it is the commercial uses that have the greatest influence on the character of the area.

Residential areas are concentrated in the western and southern portions of the study area, with some residential uses also found in the northeastern portion of the study area. Along Beverly Road within the study area, residential uses are characterized by attached and detached two- to three-story townhouses. West of Flatbush Avenue, residential uses are generally three- to four-story apartment buildings, with one larger, seven-story apartment building on the southeast corner of Beverly Road and East 21st Street. Along Bedford Avenue within the northeastern portion of the study area, residential uses are generally three-story apartment buildings. South of this residential area, on the east side of Bedford Avenue, there are several auto-related industrial uses.

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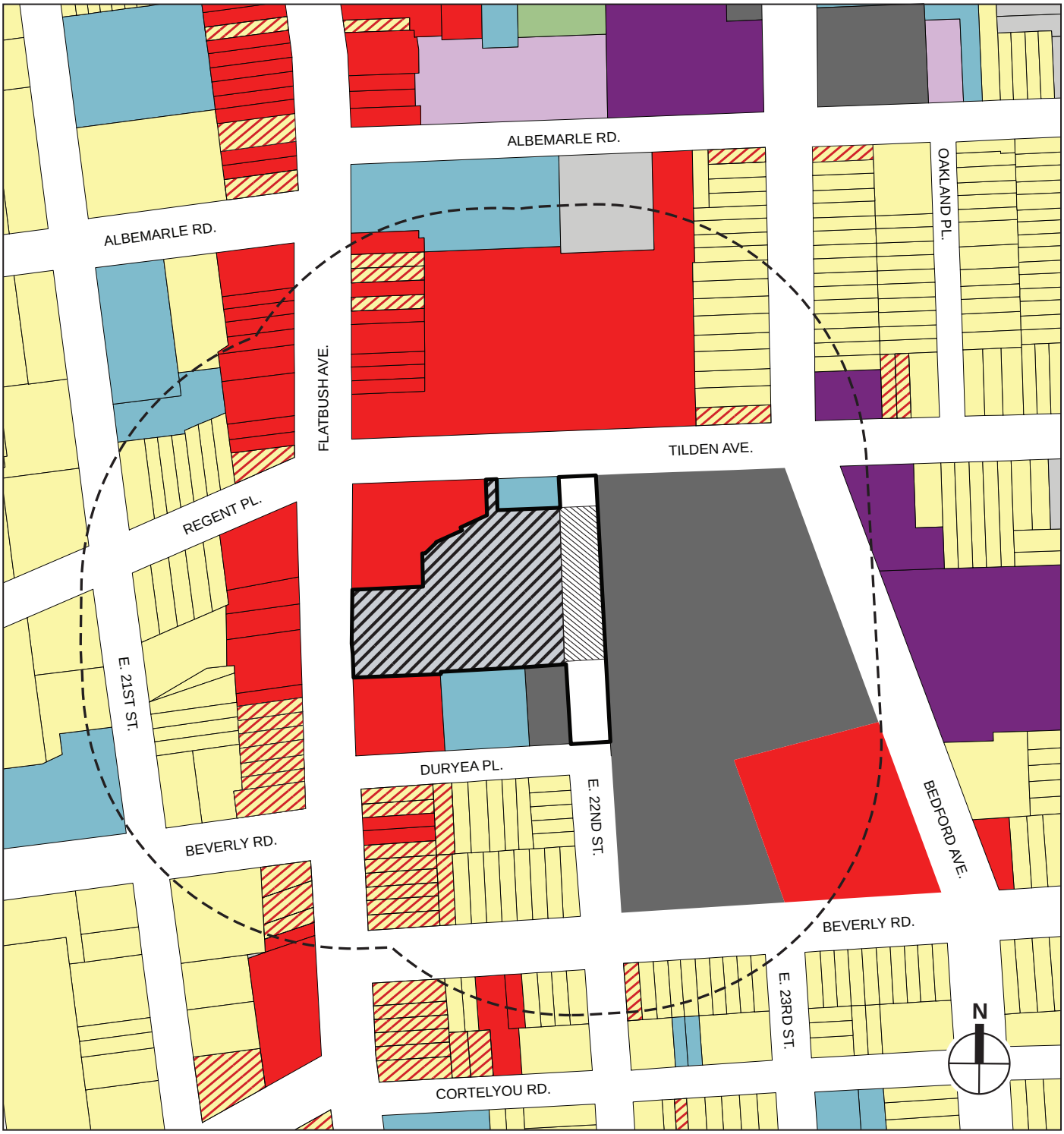


- *Project Site*
- *Area to be Demapped*
- *Study Area Boundary (400-Foot Perimeter)*
- *Residential*
- *Residential with Commercial Below*
- *Commercial and Office Buildings*
- *Industrial and Manufacturing*
- *Transportation and Utility*
- *Public Facilities and Institutions*
- *Open Space and Outdoor Recreation*
- *Parking Facilities*
- *Vacant Land*
- *Vacant Building*

KINGS THEATRE

Land Use
Figure 6-1

There are also a number of community facilities in the study area. There is a church on Tilden Avenue adjacent to the project site, just north and west of the portion of East 22nd Street that is proposed to be demapped. The Federation Employment and Guidance Service (FEGS) Yatzkhan Center, a mental health and substance abuse facility for adolescents, is located at 19 Duryea Place, also adjacent to the project site. The Kingdom Hall of Jehovah's Witnesses is located on the southeast corner of Flatbush Avenue and Albemarle Road; the Salem Missionary Baptist Church is at 305 East 21st Street between Albemarle Road and Regent Place; and St. Marks Methodist Church, as well as the Ghana Wesley United Methodist Church are located on the north side of Beverly Road between Ocean Avenue and East 21st Street.

There are no previously identified architectural resources in the study area. However, in addition to the existing theater, five individual properties in the study area appear to meet the criteria for listing on the S/NR and/or NYCL designation. There are also several groupings of rowhouses and multi-family dwellings throughout the study area dating to the early 20th century that are architecturally distinguished and may also meet S/NR criteria.

The study area is mostly developed in the typical Brooklyn grid pattern with busy commercial avenues running north-south and narrow streets running east-west. Flatbush Avenue is the primary commercial thoroughfare in the study area, and is a highly-trafficked two-way avenue with metered parking along both sides of the street.

The streetscape of the study area is urban in character, with relatively wide sidewalks and heavier pedestrian and vehicular traffic along the avenues and lighter activity on the side streets. The majority of the study area's pedestrian and vehicular traffic is concentrated along Flatbush Avenue. The study area includes typical street furniture, including newspaper stands, parking meters, phone booths, and garbage bins. Noise levels along the avenues are generally high, especially along Flatbush Avenue, and reflect the busy level of vehicular traffic on area streets.

C. THE FUTURE WITHOUT THE PROPOSED ACTION

Absent the proposed actions, the Kings Theatre is expected to remain in its current condition as a vacant building and the portions of East 22nd Street would not be demapped. There are no known developments currently scheduled for completion within the 400-foot study area by 2014.

Therefore, neighborhood character is expected to remain substantially similar to existing conditions.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

According to the 2010 *CEQR Technical Manual*, it is unlikely that a project would have neighborhood character impacts in the absence of an impact in any of the relevant technical areas. As described elsewhere in this EIS, with the exception of traffic, the proposed actions would not have a significant adverse impact in any of the technical areas that contribute to neighborhood character, including land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, and noise.

As discussed in Chapter 3, "Transportation," the proposed project would result in significant adverse traffic impacts at a number of locations in the traffic study area. However, the majority of the 14 intersections analyzed would either not be significantly impacted or would have impacts that could be mitigated with readily implementable traffic improvement measures, including signal timing changes, parking regulation changes to gain or widen a travel lane at key intersections, lane markings and signage. These measures represent some of the standard traffic

capacity improvements that are typically implemented by the New York City Department of Transportation (NYCDOT). All unmitigatable and partially mitigated traffic impacts reflect a worst-case condition where a theatre event is sold-out and 84 percent of all patrons arrive in one hour, and 100 percent of all departures leave in one hour. Traffic conditions would be less severe for non-sellout events since fewer patrons would attend. ~~Additionally, providing pre- and post-event programming to stagger event arrivals and departures could improve traffic conditions.~~ Therefore, with mitigation measures in place, the traffic impacts of the proposed project identified here would only occur during ~~infrequent occasions~~sellout events, and would not constitute a change in the overall neighborhood character in terms of traffic.

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 return this vacant cultural facility to productive use, enlivening both the project site, this section of Flatbush Avenue, and adjacent areas. The restored theatre would also serve as a community and City-wide amenity. Therefore, the effects of the proposed action on neighborhood character would constitute a substantial improvement over conditions in the future without the proposed actions. The proposed project would be consistent with the character of the surrounding neighborhood, and would add a community resource to a site that has been vacant and deteriorating for decades. The project site and the blocks immediately surrounding it are now and have traditionally been associated with commercial uses. The residential, commercial and community facility uses which are all found throughout the area have long existed alongside each other, and the proposed project would represent a continuation of that history.

In terms of urban design and visual character, the proposed project would have a slightly larger footprint than the existing building. Nevertheless, they would be substantially similar in terms of urban design and visual characteristics—the proposed project would in fact improve the appearance and condition of the existing building—and therefore it would not have a significant adverse impact on urban design and visual character.

The shadows cast by the proposed building would be similar to those cast by the existing building. Therefore, there would be no significant adverse shadow impacts.

Overall, the proposed project would not adversely affect neighborhood character despite increases in traffic. The study area is characterized by Flatbush Avenue, a busy, heavily trafficked commercial corridor, and, as such, the additional traffic impacts would not adversely affect neighborhood character. Instead, the proposed project would improve neighborhood character by transforming the vacant theatre into an active use, enlivening this area of Flatbush Avenue. ✷

Chapter 7: Construction

The EAS and Final Scope of Work stated that additional information would be provided in this targeted EIS to support the conclusion that construction-period worker and truck trips would not be substantial enough to adversely affect transportation conditions in the area. That information is provided in this chapter.

While the proposed project would involve the construction of some new components for the theatre complex, the majority of the construction would involve renovations and interior work that does not require heavy construction or substantial material deliveries. The number of construction workers and truck deliveries per day would vary with the types of construction work being undertaken, and the number of trades on the site during different phases of construction. Based on information provided by the project architects, it is expected that there would be on average 10 to 15 workers and 1 to 2 truck deliveries per trade per day throughout construction, with some of the major trades (i.e., mechanical, electrical, and plumbing) having peak high trucking activity of 5 trucks per day each, during the intermittent busiest portions of project construction. However, given the tight working quarters, there would be limited access and laydown space available, making it difficult for many different trades to work concurrently at the site. For this reason, it is assumed that there would typically be 7 to 8 trades on-site on a representative construction day, working on different parts of the project

The representative construction day described above is anticipated to generate a daily average of between 80 and 120 workers and between 20 to 25 truck deliveries (with a peak daily average of 3 trucks per hour). Based on the site's location in Brooklyn, with its proximity to mass transit (bus service on Flatbush Avenue passing in front of the site, and B/Q subway service at both Church Street and Beverly Road, a few minutes walk away) it has been assumed that a fairly high percentage of workers would travel to and from the site via mass transit. Examination of the reverse journey-to-work information for this area (for construction industry workers) revealed a very low auto share (43 percent) and vehicle occupancy of 1.15 persons per vehicle. For this project, a construction worker auto share of 50 percent has been assumed, which is conservatively higher than the census information indicates for the area, and a vehicle occupancy of 1.15 has been adopted for this study, based on the census information. Accounting for carpooling, and mass-transit or walk trips, by applying these factors, the anticipated 80 to 120 daily construction-worker person-trips to and from the site would translate to between 35 and 52 vehicle trips. Of these trips, 80 percent (28 to 42 trips) are expected to occur during the construction peak hour of 6 AM to 7 AM. Since most of the construction-period worker and truck trips would occur during non-peak hours, this level of projected activity is not expected to result in perceptible increases to the area's ambient traffic levels and is notably lower than the trip-generation for the project's operation. In addition, the anticipated parking areas for these workers are not all located in one place, which would also serve to spread out the routing of these trips to and from the area. Furthermore, closure of travel lanes and sidewalks on Flatbush Avenue is not anticipated, but if needed, would likely consist of limited temporary and partial closures of adjacent curb lanes and sidewalks to accommodate construction staging at the project site. These closures would be fully addressed by permits from the New York City Department of

Transportation's Office of Construction Mitigation and Coordination at the time of closure, so that proper vehicular and pedestrian protection can be maintained. For the above reasons, construction of the proposed project is not expected to result in any significant adverse impacts to the area's transportation system and no further analyses are warranted. ✷

Chapter 8: Mitigation

A. INTRODUCTION

The preceding chapters of this Environmental Impact Statement (EIS) discuss the potential for significant adverse impacts to result from the proposed project. Where such potential impacts have been identified—as they were in the area of traffic—measures are examined to minimize or eliminate the anticipated impacts to the fullest extent practicable. These mitigation measures are discussed below. Areas in which the proposed project would result in significant adverse impacts that cannot be fully mitigated through reasonably practicable measures are discussed in Chapter 9, "Unavoidable Adverse Impacts." In addition, this chapter analyzes the potential effects of the proposed traffic mitigation measures on air quality and noise.

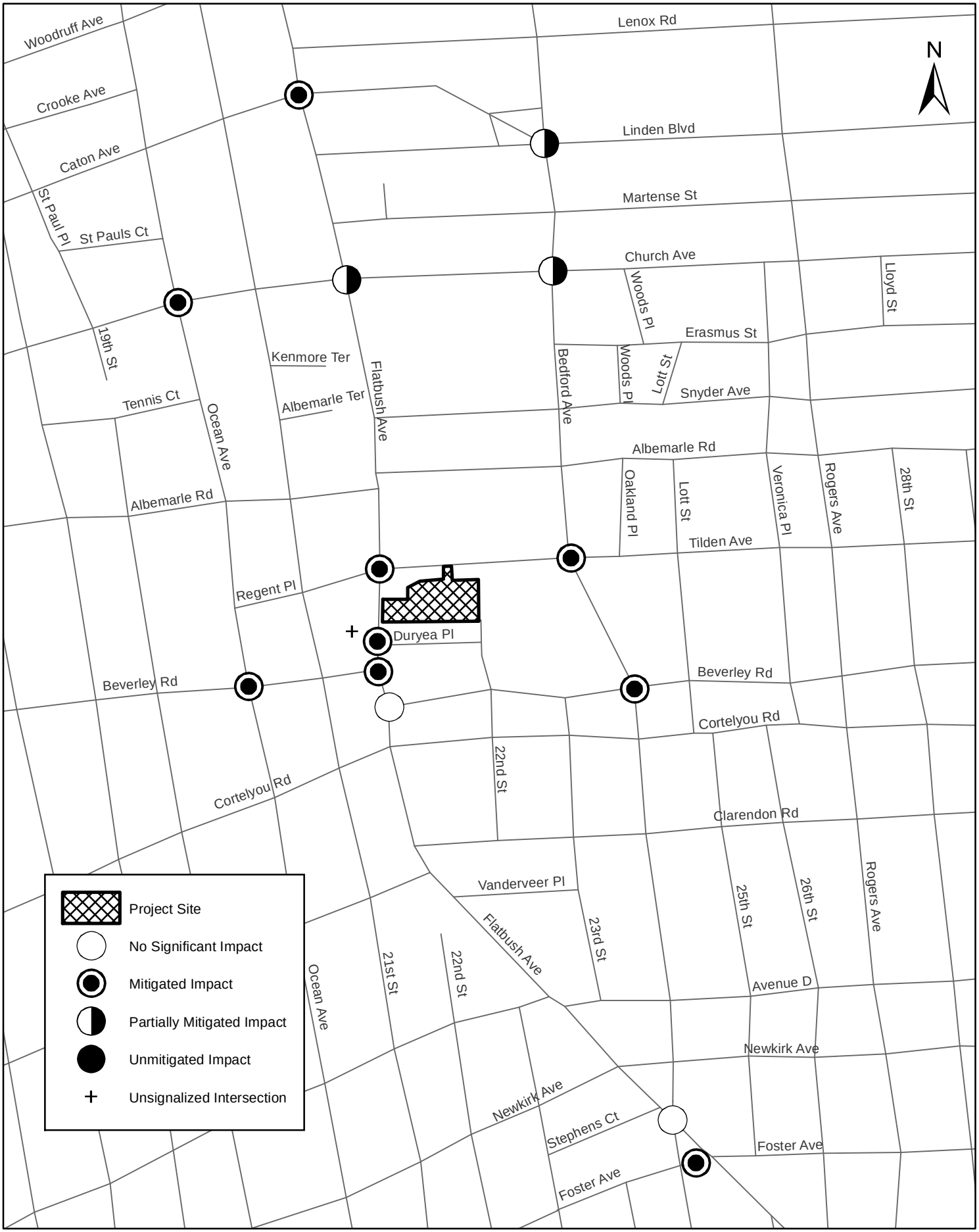
As discussed in the Foreword, a range of mitigation measures was proposed in the Draft EIS (DEIS) to address the significant adverse traffic impacts that would occur during peak hours for sold-out events. The New York City Department of Transportation (NYCDOT) reviewed the transportation and mitigation analyses presented in the DEIS and provided input on the mitigation measures to be implemented. This chapter includes certain modifications to the mitigation measures presented in the DEIS, as a result of NYCDOT's recommendations (see NYCDOT April 15, 2011 letter in Appendix A). Further, as discussed in detail below, the types of mitigation measures presented in the DEIS have not changed in the FEIS with the exception of the addition of signage at one location to provide advance warning of a particular roadway modification (see discussion of Flatbush Avenue and Church Avenue on page 8-3). These modifications to traffic mitigation do not affect the conclusions of the DEIS with respect to traffic impacts. The mitigation measures are discussed in detail in this chapter.

B. TRAFFIC

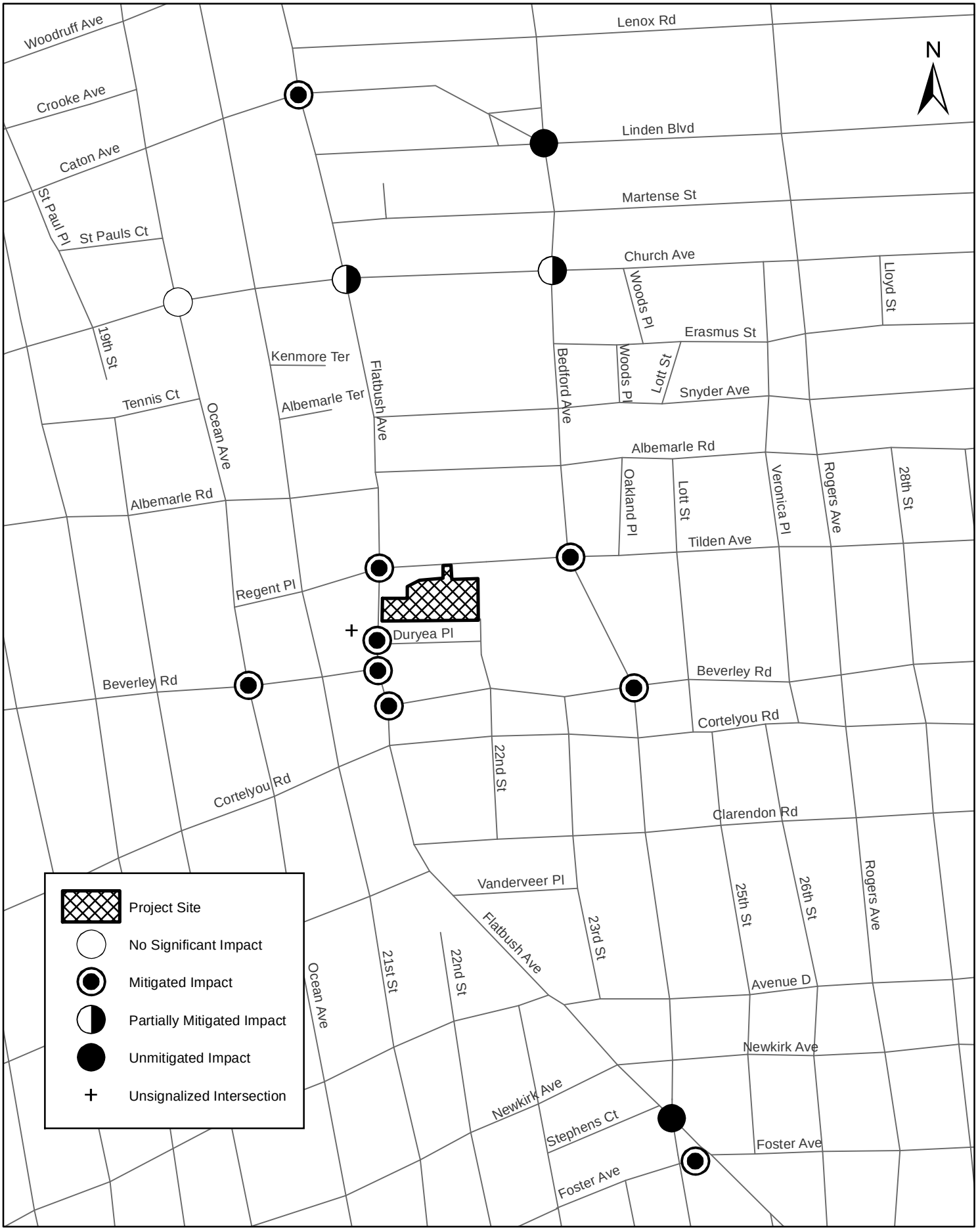
As discussed in Chapter 3, "Transportation," the proposed project would result in significant adverse traffic impacts at a number of locations in the traffic study area. This section describes the mitigation measures needed at each of these locations to reduce or eliminate the significant impacts, or whether they would remain unmitigated (**Figures 8-1 through 8-3** provide a graphic overview of these findings). **Table 8-1** summarizes the significant adverse traffic impacts and whether they could be fully or partially mitigated with the implementation of traffic improvement measures. Details of the intersection capacity analyses and all traffic mitigation measures (e.g., signal timing changes, parking regulation changes, lane reconfigurations, etc.) are presented at the end of this chapter.

Table 8-1
Traffic Impact Mitigation Summary

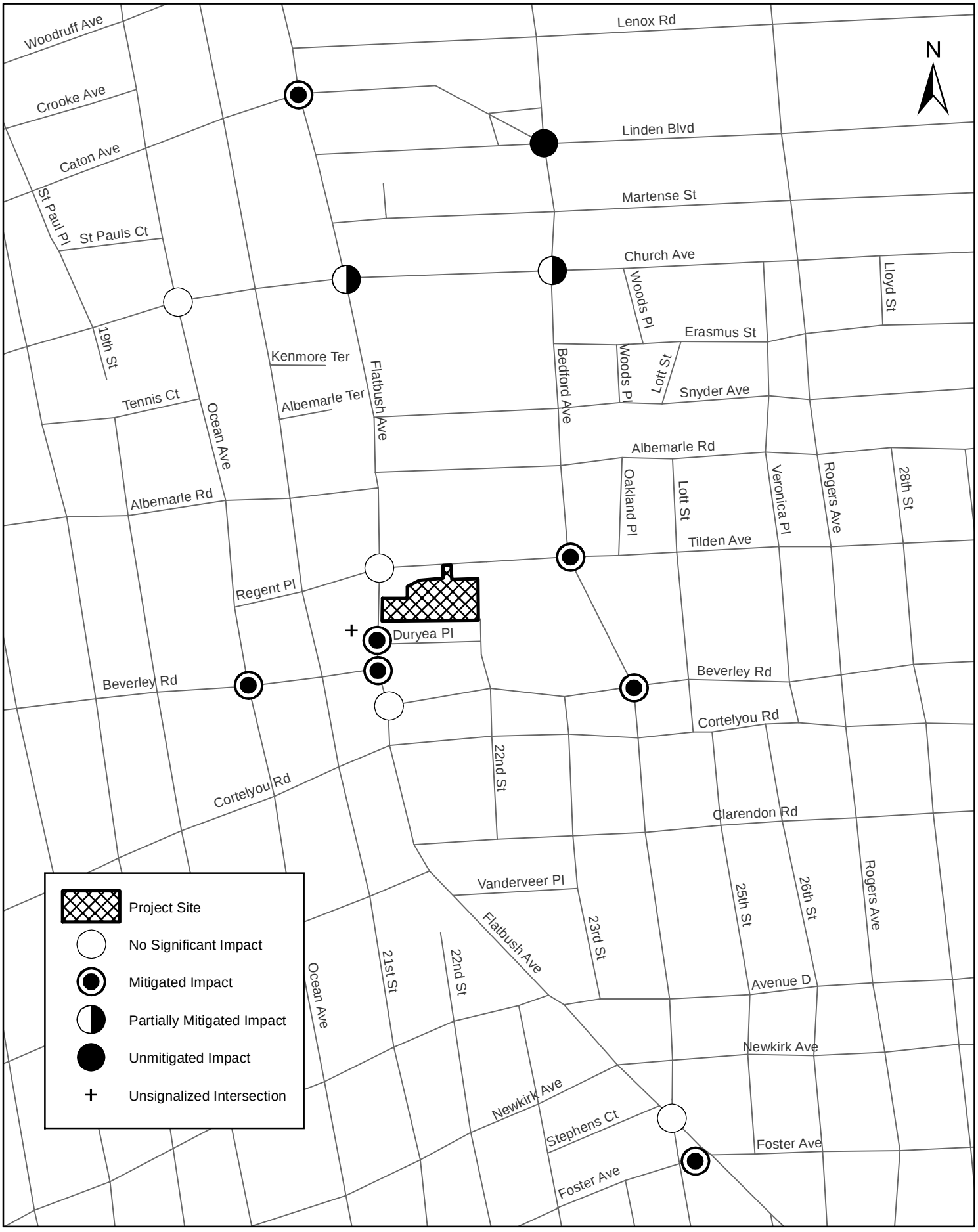
Intersections	Saturday Peak Hour		
	Midday Arrival	Midday Departure	Evening Arrival
No significant impact	2	1	4
Fully mitigated impact	9	9	7
Partially mitigated impact	3	2	2
Unmitigated impact	0	2	1



Traffic Mitigation Overview
Saturday Midday Arrival Peak Hour
Figure 8-1



Traffic Mitigation Overview
Saturday Midday Departure Peak Hour
Figure 8-2



Traffic Mitigation Overview
Saturday Evening Arrival Peak Hour
Figure 8-3

The major overall finding is that the majority of the 14 intersections analyzed would either not be significantly impacted or could be mitigated with readily implementable traffic improvement measures, including signal timing changes, parking regulation changes to gain or widen a travel lane at key intersections, lane markings and signage. These measures represent some of the standard traffic capacity improvements that are typically implemented by the New York City Department of Transportation (NYCDOT).

As shown in **Table 8-1**, in the Saturday midday arrival peak hour, three of the 14 intersections could only be partially mitigated; in the Saturday midday departure peak hour, two intersections would remain unmitigated and two intersections could be partially mitigated; and in the Saturday evening arrival peak hour, one intersection would remain unmitigated, and two intersections could be partially mitigated.

Four of the 14 intersections have significant adverse traffic impacts that would result from the Proposed Actions which could not be fully mitigated in at least one peak hour, including:

- Flatbush Avenue and Church Avenue (partially mitigated during all three peak hours).
- Bedford Avenue and Linden Boulevard/Caton Avenue (partially mitigated during the Saturday midday arrival peak hour; unmitigated during the Saturday midday departure and evening arrival peak hours).
- Bedford Avenue and Church Avenue (partially mitigated during all three peak hours).
- Flatbush Avenue and Bedford Avenue/Stephens Court (unmitigated during the Saturday midday departure peak hour).

Three of these intersections are along Bedford Avenue which has one narrow travel lane with a bicycle lane and parking in each direction.

These unmitigatable and partially mitigated traffic impacts reflect a worst-case condition where an event is sold-out and 84 percent of all patrons arrive in one hour, and 100 percent of all departures leave in one hour. Traffic conditions would be less severe for non-sellout events since fewer patrons would attend.

Traffic mitigation measures needed for each intersection are described below.

FLATBUSH AVENUE CORRIDOR

Six of the eight intersections analyzed along Flatbush Avenue would be significantly impacted during the Saturday midday arrival peak hour, all eight would be significantly impacted during the Saturday midday departure peak hour, and five would be significantly impacted during the Saturday evening departure peak hour. Each of these impacts could be fully mitigated with traffic capacity improvements with the exception of Flatbush Avenue and Church Avenue, which could only be partially mitigated during all peak hours, and Flatbush Avenue and Bedford Avenue/Stephens Court which could not be mitigated during the Saturday midday departure peak hour.

FLATBUSH AVENUE AND CATON AVENUE

Significant impacts would occur at this location during all three peak hours. These impacts could be fully mitigated during the Saturday midday and evening arrival peak hours with the following measures: (1) shift the centerline of eastbound Caton Avenue one foot to the north, and restripe the eastbound approach from one 20-foot wide lane with parking to one 10-foot wide left turn lane and one ~~10-foot~~ 11-foot wide through-right lane for 75 feet from the stop bar; and (2) ~~install~~

~~"No Standing Anytime" regulations along the north curb of the westbound receiving side for 25 feet (entailing the loss of approximately one parking space); and (3)~~ shift the centerline of westbound Caton Avenue one foot to the south, and restripe the westbound approach from one 27-foot wide lane with parking to one 10-foot wide left turn lane and one 18-foot wide through-right lane with parking. In addition to these measures, signal timing modifications would be needed to mitigate the Saturday midday departure peak hour.

FLATBUSH AVENUE AND CHURCH AVENUE

Significant impacts would occur at this intersection during all three peak hours and could only be partially mitigated. The following measures would be needed to partially mitigate this intersection: ~~(1) install "No Standing 12 PM to 8 PM Saturday" regulations along the north curb of the westbound approach for 100 feet (entailing a loss of approximately three parking spaces) to allow for two travel lanes; (2) restripe the westbound approach from one 21-foot wide lane with parking to one 10-foot wide lane and one 11-foot wide through-right lane for 100 feet from the stop bar; (3) restripe the westbound receiving side from one 21-foot wide lane to one 10-foot wide lane and one 11-ft wide curb lane;~~ (1) shift the centerline of Church Avenue one foot to the north west of Flatbush Avenue, and restripe the eastbound approach from one 10-foot wide left-through lane and one 11-foot wide right turn lane to one 11-foot wide left-through lane and one 11-foot wide right turn lane; ~~(4)~~ (2) restripe the northbound approach from one 10-foot wide left turn lane, one 11-foot wide through lane and one 11-foot wide right-turn lane to one 10-foot wide left turn lane, one 11-foot wide through lane and one 11-foot wide through-right lane; ~~and (5)~~ (3) restripe the northbound receiving side from one 22-foot wide lane to two 11-foot wide lanes; and (4) provide advance warning signage to inform motorists of the northbound receiving side's lane transition to the downstream intersection.

FLATBUSH AVENUE AND TILDEN AVENUE/REGENT PLACE

This intersection would have significant impacts during Saturday midday arrival and departure peak hours, and could be fully mitigated during both periods. The following measures would be needed: (1) install "No Standing Anytime" regulations along the north and south curbs of the westbound approach for 150 feet (entailing a loss of approximately 12 parking spaces) to allow for two westbound travel lanes; (2) stripe the westbound approach as one 11-foot wide left-through lane, one 11-foot wide right turn lane, and the eastbound receiving side as one 13-foot wide lane for 150 feet from the stop bar; and (3) stripe the westbound approach centerline to taper to the middle of the roadway beginning 150 feet east of the stop bar.

FLATBUSH AVENUE AND BEVERLEY ROAD NORTH

This intersection would have significant impacts during all three peak hours, and could be fully mitigated with the following measures: (1) install "No Standing 12 PM to 8 PM Saturday" regulations along the south curb of the eastbound approach for 150 feet (entailing a loss of approximately four parking spaces) to allow for two travel lanes; (2) restripe the eastbound approach from one 22-foot wide lane with parking to one 11-foot wide travel lane and one 11-foot wide lane which would serve as a travel lane for the peak analysis periods (Saturday 12 PM to 8 PM) and allow for parking during all other time periods; (3) install "No Standing 12 PM to 8 PM Saturday" regulations along the east curb of the northbound approach for 100 feet (entailing a loss of approximately four parking spaces) to increase the lane width of the approach; and (4) modify the signal timing.

FLATBUSH AVENUE AND BEVERLEY ROAD SOUTH

Significant impacts during the Saturday midday departure peak hour could be fully mitigated by installing "No Standing 4 PM to 6 PM Saturday" regulations along the north curb of the westbound approach for 100 feet (entailing a loss of approximately four parking spaces) to increase the lane width of the approach. Modification of the signal timing during the Saturday evening arrival peak hour is necessary to accommodate additional traffic demand generated by the mitigation measures needed at the intersection of Flatbush Avenue and Duryea Place.

FLATBUSH AVENUE AND BEDFORD AVENUE/STEPHEN COURT

Significant impacts would occur only during the Saturday midday departure peak hour and could not be mitigated. Signal timing modifications would be needed at this intersection due to mitigation measures needed at the adjacent intersection of Flatbush Avenue and Bedford Avenue/Foster Avenue, since these two intersections have coordinated signal timing plans.

FLATBUSH AVENUE AND BEDFORD AVENUE/FOSTER AVENUE

This intersection would have significant impacts during all three peak hours analyzed and could be fully mitigated with the following measures: (1) install "No Standing Anytime" regulations along the south curb of the eastbound approach for the entire block (230 feet, entailing a loss of approximately 10 parking spaces) to allow for two moving lanes; (2) restripe the eastbound approach from one 22-foot wide lane with parking to one 11-foot wide left turn lane and one 11-foot wide through-right lane for 230 feet from the stop bar; (3) restripe the westbound approach from one 22-foot wide lane to one 11-foot wide left-through lane and one 11-foot wide right turn lane for 75 feet from the stop bar; (4) ~~install "No Standing 12 PM to 6 PM Saturday" along the east curb of the northbound Flatbush Avenue approach for 100 feet (entailing a loss of approximately four parking spaces) to increase the lane width of the approach; (5)~~ install "No Standing ~~6 PM~~ 12 PM to 8 PM Saturday" along the east curb of the northbound Flatbush Avenue approach for 250 feet (entailing a loss of approximately 11 parking spaces) to increase the lane width of the approach; and ~~(7)~~ (5) modify the signal timing.

FLATBUSH AVENUE AND DURYEA PLACE

Significant impacts would occur at this intersection during all three peak hours and could be mitigated by installing "No Left Turns 12 PM – 8 PM Saturday" signage along the southbound approach to prohibit left turns from Flatbush Avenue to Duryea Place. Southbound left turns would be diverted to adjacent streets such as Tilden Avenue, Beverley Road, and Cortelyou Road. No significant changes in traffic levels of service would result from the diverted trips.

BEDFORD AVENUE CORRIDOR

Significant impacts would occur at all four intersections analyzed along Bedford Avenue during all peak hours. Impacts at two of the intersections could be fully mitigated with traffic capacity improvements. The intersection of Bedford Avenue and Linden Boulevard/Caton Avenue could only be partially mitigated during the Saturday midday arrival peak hour and could not be mitigated during the other peak hours. Also, the intersection of Bedford Avenue and Church Avenue could only be partially mitigated during all peak hours.

BEDFORD AVENUE AND LINDEN BOULEVARD/CATON AVENUE

Significant impacts would occur at this intersection during all three peak hours and could be partially mitigated by modifying the signal timing during the Saturday midday arrival peak hour.

This intersection could not be mitigated during the Saturday midday departure and evening arrival peak hours.

BEDFORD AVENUE AND CHURCH AVENUE

Significant impacts would occur at this intersection during all peak hours and could be partially mitigated. The measures needed to partially mitigate this intersection are as follows: (1) restripe the eastbound approach from one 22-foot wide lane with parking to one 11-foot wide left-through lane and one 11-foot wide right turn lane for 75 feet from the stop bar; (2) install "No Standing 12 PM to 8 PM Saturday" regulations along the north curb of the westbound approach for 75 feet (entailing a loss of approximately three parking spaces) to allow for two moving lanes; and (3) shift the centerline of westbound Church Avenue one foot south and restripe the westbound approach from one 22-foot wide lane with parking to one ~~11-foot~~ 12-foot wide travel lane and one 11-foot wide lane which would serve as a travel lane for the peak analysis periods (Saturday 12 PM to 8 PM) and allow for parking lane for all other time periods~~; (4) install "No Standing 4 PM to 6 PM Saturday" regulations along the west curb of the southbound approach for 250 feet (entailing a loss of approximately eight parking spaces) to reduce the effect of parking friction; and (5) install "No Standing 6 PM to 8 PM Saturday" regulations along the east curb of the northbound approach for 250 feet (entailing a loss of approximately 11 parking spaces) to reduce the effect of parking friction~~. In order to partially mitigate this intersection during the Saturday midday departure peak hour, signal timing modifications would be needed in addition to these measures.

BEDFORD AVENUE AND TILDEN AVENUE

Significant impacts during all peak hours could be fully mitigated by the following measures: (1) install "No Standing Anytime" regulations along the north and south curb of the eastbound approach for 150 feet (entailing a loss of approximately seven parking spaces) to allow for two eastbound travel lanes; (2) stripe the eastbound approach as one ~~11~~10-foot wide left ~~through~~ turn lane, one 11-foot wide right turn lane, and the westbound ~~approach (~~receiving side~~)~~ as one ~~12~~ 13-foot wide lane for 150 feet from the stop bar; ~~and~~ (3) stripe the eastbound approach centerline to taper to the middle of the roadway beginning 150 feet west of the stop bar~~.~~; and (4) restripe the westbound approach from one 34-foot wide travel lane with parking on both sides to one 23-foot wide travel lane with parking, one three-foot wide buffer ("blockbuster" treatment) for 50 feet, and one 8-foot wide parking lane.

BEDFORD AVENUE AND BEVERLEY ROAD

Significant impacts during all three peak hours could be fully mitigated with the following measures: (1) install "No Standing Anytime" regulations along the south curb of the eastbound approach for 125 feet (entailing a loss of approximately six parking spaces) to allow for two moving lanes; (2) restripe the eastbound approach from one 21-foot wide lane with parking and one 21-foot wide westbound receiving lane with parking to one 10-foot wide left turn lane tapered back 125 feet to the centerline, one 11-foot wide through-right lane with a ~~5-foot~~ 3- foot wide buffer, and one ~~16-foot~~ 18-foot wide westbound receiving lane with parking; (3) install "No Standing Anytime" regulations along the north curb of the westbound approach for 75 feet (entailing a loss of approximately four parking spaces) to allow for two moving lanes; (4) restripe the westbound approach from one 21-foot wide lane with parking and one 21-foot wide eastbound receiving lane with parking to one 10-foot wide left turn lane tapered back 125 feet to the centerline, one 11-foot wide through-right lane with a ~~5-foot~~ 3-foot wide buffer, and one ~~16-foot~~ 18-foot wide eastbound receiving lane with parking.

OCEAN AVENUE CORRIDOR

Both intersections analyzed along Ocean Avenue would be significantly impacted during the Saturday midday arrival peak hour, and one of the two intersections—Ocean Avenue and Beverley Road—would be significantly impacted during the Saturday midday departure and evening arrival peak hours. Each of these impacts could be fully mitigated with traffic capacity improvements.

OCEAN AVENUE AND CHURCH AVENUE

Significant impacts would occur at this location during the Saturday midday arrival peak hour and could be fully mitigated by installing "No Standing 12 PM to 2 PM Saturday" regulations along the south curb of the eastbound approach for 100 feet (entailing a loss of approximately four parking spaces) to increase the lane width of the approach, and by modifying the signal timing.

OCEAN AVENUE AND BEVERLEY ROAD

This intersection would have significant impacts during all three peak hours, and could be fully mitigated during all peak hours analyzed. The following measures would be needed to mitigate this intersection during the Saturday midday and evening arrival peak hours: (1) install "No Standing 12 PM to 8 PM Saturday" regulations along the south curb of the eastbound approach for 125 feet (entailing a loss of approximately five parking spaces) to allow for two moving lanes; (2) restripe the eastbound approach from one 22-foot wide lane with parking to one 11-foot wide travel lane and one 11-foot wide lane which would serve as a travel lane for the peak analysis periods (12 PM to 8 PM Saturday) and allow for parking at all other times; (3) install "No Standing 12 PM to 8 PM Saturday" regulations along the north curb of the westbound approach for 100 feet (entailing a loss of approximately four parking spaces) to allow for two moving lanes; and (4) restripe the westbound approach from one 22-foot wide lane with parking to one 11-foot wide travel lane and one 11-foot wide lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods. In order to mitigate this intersection during the Saturday midday departure peak hour, signal timing modifications would be needed in addition to these measures.

IMPLEMENTATION

Each of the traffic capacity improvements described above fall within the jurisdiction of NYCDOT for implementation. The implementation of these measures would result in the loss of approximately ~~71~~ 74 to ~~89~~ 78 parking or "standing" spaces during peak event arrival and departure periods, including up to ~~32~~ 29 metered spaces. Flatbush Avenue would lose up to 15 spaces (including meters) between Beverley Road and East 26th Street; Church Avenue would lose up to ~~ten~~ seven spaces (including meters) between East 19th Street and Veronica Place; and Tilden Avenue would lose up to 19 spaces (including meters) between Flatbush Avenue and Bedford Avenue~~; and Bedford Avenue would lose up to 19 spaces between Martense Street and Erasmus Street~~. Approximately ~~38~~ 37 spaces (including meters) would be lost along other streets, such as ~~Caton Avenue,~~ Beverley Road~~,~~ and Foster Avenue. No designated truck loading/unloading zones or bus layover space would be affected by the proposed parking modifications for mitigation. If it is determined that on-street parking should be retained at locations where such mitigation was assumed, additional unmitigated traffic impacts could result.

C. EFFECTS OF PROPOSED TRAFFIC MITIGATION MEASURES ON AIR QUALITY AND NOISE

AIR QUALITY

Chapter 4, "Air Quality," presents the maximum predicted carbon monoxide (CO) and particulate matter (PM_{10} and $PM_{2.5}$) concentrations related to traffic generated by the proposed actions, and concludes that the proposed actions would not result in significant adverse air quality impacts. Therefore, no air quality mitigation is required.

Since the proposed traffic mitigation measures described above would alter traffic conditions when compared with the proposed actions, the localized air quality impacts with mitigation were modeled for each of the intersections analyzed in Chapter 4, "Air Quality." The results of this modeling analysis (performed in accordance with methodologies described in Chapter 4) indicate that CO and particulate matter concentrations would not exceed National Ambient Air Quality Standards (NAAQS) or the city's interim guidance criteria for $PM_{2.5}$, and therefore would not affect the conclusions in Chapter 4 (see **Tables 8-2 through 8-5**). Therefore, no significant adverse air quality impacts would occur as a result of the proposed traffic mitigation measures.

Table 8-2
Maximum Predicted Future (2014) Eight-Hour Average
No Action and Future with the Proposed Actions
CO Concentrations with Traffic Mitigation

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)		
			No Action	Future with the Proposed Actions	Future with the Proposed Actions with Mitigation
1	Bedford Avenue and Tilden Avenue	SAT PM	2.4	2.6	2.8
2	Flatbush Avenue and Tilden Avenue	SAT PM	2.9	3.3	3.1
Note:	8-hour standard is 9 ppm.				

Table 8-3
Maximum Predicted Future (2014) 24-Hour Average
No Action and Future with the Proposed Actions
PM_{10} Concentrations with Traffic Mitigation

Receptor Site	Location	24-Hour Concentration ($\mu g/m^3$)		
		No Action	Future with the Proposed Actions	Future with the Proposed Actions with Mitigation
1	Bedford Avenue and Tilden Avenue	74.9	79.7	79.8
Note:	National Ambient Air Quality Standard—24-hour, 150 $\mu g/m^3$.			

Table 8-4
Maximum Predicted Future (2014) 24-Hour Average
$PM_{2.5}$ Concentrations with Traffic Mitigation

Receptor Site	Location	Annual Concentration ($\mu g/m^3$)	
		Increment	Increment (with Mitigation)
1	Bedford Avenue and Tilden Avenue	0.3	0.3
Note:	$PM_{2.5}$ interim guidance criteria—24-hour average, 2 $\mu g/m^3$ (5 $\mu g/m^3$ not-to-exceed value).		

Table 8-5
Maximum Predicted Future (2014) Annual Average
$PM_{2.5}$ Concentrations with Traffic Mitigation

Receptor Site	Location	Annual Concentration (µg/m^3)	
		Increment	Increment (with Mitigation)
1	Bedford Avenue and Tilden Avenue	0.04	0.04

Note: $PM_{2.5}$ interim guidance criteria—annual (neighborhood scale), 0.1 µg/m^3.

NOISE

The proposed traffic mitigation measures would not substantially alter the project-generated traffic routes to have any appreciable effect on noise levels at any of the three locations used in the mobile source noise analysis. All three noise locations used in the mobile source noise analysis are located adjacent to the development site. At the locations where traffic mitigation measures are proposed, the proposed traffic mitigation measures would not significantly affect noise levels. ✷

Chapter 9: Unavoidable Adverse Impacts

Unavoidable significant adverse impacts are defined as those that meet the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the impacts; and
- There are no reasonable alternatives to the proposed project that would meet the purpose and need of the action, eliminate the impact, and not cause other or similar significant adverse impacts.

As discussed in Chapter 3, "Transportation," the proposed project would result in significant adverse traffic impacts at a number of locations in the traffic study area. As described in Chapter 8, "Mitigation," the majority of the intersections that would be impacted could be mitigated with readily implementable traffic improvement measures, such as signal timing changes, parking regulation changes to gain or widen a travel lane at key intersections, lane markings, and signage. However, as described below, in some cases, project impacts would not be fully mitigated.

Specifically, four of the 14 intersections analyzed would have significant adverse traffic impacts that could not be fully mitigated in at least one peak hour, including:

- Flatbush Avenue and Church Avenue (partially mitigated during all three peak hours).
- Bedford Avenue and Linden Boulevard/Caton Avenue (partially mitigated during the Saturday midday arrival peak hour; unmitigated during the Saturday midday departure and evening arrival peak hours).
- Bedford Avenue and Church Avenue (partially mitigated during all three peak hours).
- Flatbush Avenue and Bedford Avenue/Stephens Court (unmitigated during the Saturday midday departure peak hour).

At the partially mitigated locations, significant impacts could be mitigated for at least one (but not all) traffic movements that are significantly impacted. Because these impacts would be partially, not fully, mitigated, they are considered unavoidable adverse impacts. As discussed in Chapter 9, "Alternatives," an alternative was developed to explore modifications to the proposed project that would allow for the elimination of these unmitigated impacts. An alternative program which would eliminate all unmitigated traffic impacts would require reducing the project's seating capacity from 3,600 seats to approximately 1,100 seats, a 70 percent reduction in seating capacity. A theatre of this size would not meet the purpose of the proposed actions, which is to facilitate the restoration, expansion, and modernization of the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances, since a theatre of this size would not accommodate the range of events planned for the theatre, nor would it be economically viable. ✷

Chapter 10: Alternatives

A. INTRODUCTION

This chapter presents and analyzes alternatives to the proposed actions. Alternatives selected for consideration in an EIS are generally those which have the potential to reduce, eliminate, or avoid adverse impacts of a proposed action while meeting the goals and objectives of the project sponsor.

As detailed in Chapter 1, "Project Description," the purpose of the proposed actions is to facilitate the restoration, expansion, and modernization of the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances. The renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity.

This chapter considers two alternatives to the proposed project:

- A No Action Alternative, which assumes that the proposed actions are not approved and that the theatre remains in its existing conditions (i.e., vacant); and
- A No Significant Averse Impact Alternative, which considers a project program that would eliminate the proposed project's unmitigated significant adverse impacts.

B. NO ACTION ALTERNATIVE

DESCRIPTION

Consideration of the No Action Alternative is intended to provide an assessment of the consequences of not selecting the proposed project. The technical chapters of this EIS have described the future without the proposed project (the "No Action" condition), referred to in this chapter as the No Action Alternative, and have used it as the basis to assess the potential impacts and associated mitigation for the proposed project.

The No Action Alternative assumes that none of the proposed actions would be adopted. If this were to occur, the Kings Theatre would remain vacant. In addition, East 22nd Street would not be demapped and it would remain in its existing condition.

NO ACTION ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT

The following sections compare conditions under the No Action Alternative with conditions with the proposed project.

HISTORIC AND CULTURAL RESOURCES

With the No Action Alternative, the Kings Theatre would remain in its current condition. The vacant theatre would likely continue to deteriorate and its condition worsen. Unlike the proposed

project, this alternative would not result in the stabilization, restoration, expansion, and reuse of the Kings Theatre as a live entertainment venue and would not return this vacant structure to a vibrant, productive use.

With the No Action Alternative, there would be no potential for direct effects on the potential architectural resources located within 90 feet of the project site (the former Brooklyn Union Gas Company Building, the former Flatbush Savings Bank, and several rowhouses located on Duryea Place and East 22nd Street) since no construction would take place on the project site. However, with the proposed project, if the New York City Landmarks Preservation Commission (LPC) determines that one or more of these structures meet criteria for listing on the State and National Registers or for designation as a New York City Landmark (NYCL), a Construction Protection Plan (CPP) would be developed and implemented in consultation with LPC. With implementation of the CPP, the proposed project would not result in adverse impacts on architectural resources.

With the No Action Alternative, there would be no potential for contextual impacts on architectural resources since the theatre and East 22nd Street would continue in their current condition. However, no significant adverse contextual impacts to potential architectural resources are expected with the proposed project

Unlike the proposed project, the No Action Alternative would not provide for the preservation and restoration of a significant historic structure and would not provide a new cultural institution in Brooklyn. As such, this alternative would not result in the proposed project's positive impact on this historic structure and would not benefit nearby potential architectural resources.

TRANSPORTATION

With the No Action Alternative, the Kings Theatre would remain in its current condition, and no section of East 22nd Street would be demapped. As such, there would be no project-related increases in pedestrian or vehicular traffic. Therefore, this alternative would not have any significant adverse traffic impacts and would not require the mitigation measures proposed for the proposed project which include signal timing modifications, parking regulation changes, lane markings and signage. Neither the proposed project nor this alternative would result in significant adverse impacts to parking, pedestrians, or transit.

AIR QUALITY

The No Action Alternative would not result in increases in traffic, and would therefore not have the potential to result in significant adverse air quality impacts from mobile sources. The proposed project would result in increases in traffic, but these increases would not result in significant adverse mobile source air quality impacts.

NOISE

The No Action Alternative would not result in increases in traffic, and would therefore not have the potential to result in significant adverse noise impacts from mobile sources. The proposed project would result in increases in traffic, but these increases would not result in significant adverse mobile source noise impacts.

NEIGHBORHOOD CHARACTER

In the No Action Alternative, the Kings Theatre would remain vacant, and East 22nd Street would not be demapped; therefore, there would be no change to neighborhood character with this alternative. This alternative would forgo the improvements to neighborhood character that would occur, despite increases in traffic, with the proposed project. Unlike the proposed project, this alternative would not improve neighborhood character by transforming the vacant theatre into an active use, enlivening this area of Flatbush Avenue.

CONCLUSION

In the No Action Alternative, the proposed project would not be implemented, and the existing vacant Kings Theatre would remain in its current condition. This alternative would not result in the stabilization, restoration, expansion, and reuse of the Kings Theatre as a live entertainment venue and would not return this vacant structure to a vibrant, productive use, as would the proposed project. This alternative would not increase traffic in the neighborhood and would therefore not result in the project's significant adverse traffic impacts; however, the increases in traffic expected with the proposed project would not result in a significant adverse affect on neighborhood character.

C. NO SIGNIFICANT ADVERSE IMPACT ALTERNATIVE

As discussed in Chapters 7, "Mitigation," and 8, "Unavoidable Adverse Impacts," the proposed project would result in a number of significant adverse traffic impacts, several of which would remain unmitigated. Specifically, four intersections could not be fully mitigated during at least one time period. Therefore, an alternative was developed to explore modifications to the proposed project that would allow for the elimination of these unmitigated impacts. This alternative was developed because when a project would result in significant adverse impacts that cannot be mitigated, it is often CEQR practice to include an assessment of an alternative to the project that would result in no unmitigated impacts.

An alternative program which would eliminate all unmitigated traffic impacts would require reducing the project's seating capacity from 3,600 seats to approximately 1,100 seats, a 70 percent reduction in seating capacity. This reduction in seating would decrease the project-generated vehicle trip totals from 922 vehicles under the proposed actions to 308 vehicles during the Saturday midday and evening arrival peak hours, and from 1,092 vehicles under the proposed actions to 364 vehicles during the Saturday midday departure peak hour. Traffic analyses were performed at critical locations using the trip generation from the reduced program and determined that no significant adverse unmitigated traffic impacts would occur with the reduction to 1,100 seats.

As detailed in Chapter 1, "Project Description," the purpose of the proposed actions is to facilitate the restoration, expansion, and modernization of the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances. The renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity. A reduction in the number of seats from 3,600 to 1,100 would not be feasible since a theatre of this size would not accommodate the range of events planned for the theatre, nor would it be economically viable. ✷

Chapter 11: Growth-Inducing Aspects of the Proposed Project

The term "growth-inducing aspects" generally refers to the potential for a proposed project to trigger additional development in areas outside the project site that would otherwise not have such development without the proposed project. The 2010 *City Environmental Quality Review (CEQR) Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed project is appropriate when the project:

- Adds substantial new land use, new residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments to serve new residential uses; and/or
- Introduces or greatly expands infrastructure capacity.

The proposed project would restore, expand, and modernize the existing vacant Kings Theatre and would provide a modern facility for the presentation of live performances. In turn, the renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity. The active theatre use would be compatible with surrounding uses. The proposed project would not be expected to induce additional notable growth outside the project site. The level of development in the surrounding area is controlled by zoning. The project site was part of the Flatbush Rezoning adopted by the City Council on July 29, 2009. While the zoning of the project site itself did not change under this rezoning, various zoning changes were adopted in the area to protect and preserve the existing character of the area by mapping lower density and contextual zoning districts to preserve the scale of detached home, row house, and apartment building neighborhoods; to provide incentives for affordable housing along certain corridors that are well-served by transit; and to maintain opportunities for commercial growth and reinvestment in commercial areas.

The proposed project would be consistent with zoning and would result in the reinvestment in a long vacant site. ✷

Chapter 12: Irreversible and Irretrievable Commitment of Resources

There are a number of resources, both natural and built, that would be expended in the construction and operation of the proposed project. These resources include the materials used in construction; energy in the form of gas and electricity consumed during construction and operation of the proposed project; and the human effort (i.e., time and labor) required to develop, construct, and operate various components of the proposed project. The resources are considered irretrievably committed because their reuse for some purpose other than the proposed project would be highly unlikely. The proposed project constitutes an irreversible and irretrievable commitment of the development site as a land resource, thereby rendering land use for other purposes infeasible, at least in the near term.

These commitments of land resources and materials are weighed against the public purpose and benefits of the proposed project: to restore, expand, and modernize the existing vacant Kings Theatre and provide a modern facility for the presentation of live performances. In turn, the renovated and modernized theatre, with active programming and a range of events, is intended to result in the improvement of this section of Flatbush Avenue and to serve as a community and City-wide amenity. ✷

A. INTRODUCTION

This chapter summarizes and responds to all substantive comments on the Draft Environmental Impact Statement (DEIS) for the Kings Theatre project made during the public review period. Comments consist of spoken or written testimony submitted at the public hearing held by the lead agency on January 25, 2011. Written comments were accepted through the public comment period which ended on February 7, 2011.

Section B of this chapter lists the elected officials, community board and organization members, and individuals who commented at the DEIS public hearing or in writing, and Section C presents a summary of the comments as well as responses to them. The organization and/or individual that commented are identified after each comment. These summaries convey the substance of the comments but do not necessarily quote the comments verbatim. Comments are organized by subject matter and generally parallel the chapter structure of the DEIS. Where relevant and appropriate, these edits, as well as other substantive changes to the DEIS, have been incorporated into the Final Environmental Impact Statement (FEIS).

B. LIST OF OFFICIALS AND INDIVIDUALS WHO COMMENTED ON THE DEIS

1. Richard Bearak, representing Brooklyn Borough President Marty Markowitz, spoken testimony.
2. Fuk Lo, written comments dated November 29, 2010. (Lo)

C. COMMENTS AND RESPONSES

Speaker 1 (Richard Bearak, representing Brooklyn Borough President Marty Markowitz) spoke in favor of the project.

Comment 1: Opening a massive 63,000 square foot theater with about 250 performances annually would bring huge numbers of people and automobiles into an already overcrowded area that has insufficient parking spaces. Closing East 22nd Street for one block permanently would gridlock traffic, just like the 1970s and 1980s. I vehemently oppose this project. (Lo)

Response: The traffic analyses contained in the EIS provide a detailed assessment of traffic and parking conditions for sellout events during peak event periods, which are not expected to occur for all performances. The analyses identify the traffic improvements that would be needed to mitigate potentially significant adverse traffic impacts identified in the EIS, including lane restriping, signal phasing

and/or timing changes, parking regulation changes, lane markings, signage, and other standard traffic capacity improvements that are implemented by NYCDOT where and when needed. The traffic mitigation measures proposed in the DEIS were reviewed by the NYCDOT. As a result of NYDOT's recommendations, some mitigation measures originally proposed in the DEIS were modified in the FEIS (see NYCDOT April 15, 2011 letter in Appendix A).

Specifically, the DEIS had recommended parking prohibitions at several locations (Flatbush Avenue at Caton and Church Avenues and Bedford Avenue at Church Avenue) as a traffic mitigation measure. However, NYCDOT recommended eliminating the proposed parking prohibitions at these locations due to parking demand from retail and commercial establishments in the area. This change is now reflected in Chapter 8, "Mitigation," of the FEIS. However, the elimination of this proposed mitigation measure does not affect the conclusions of the DEIS with respect to traffic impacts.

Further, 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. Detailed surveys conducted for the EIS and documented within the EIS indicate that with these two parking facilities and other available parking there would be sufficient parking for sellout events within approximately a 10-minute walk to accommodate all those who drive to the events; for non-sellout events, parking needs would be accommodated closer to the site. The detailed analyses contained within the EIS were reviewed by NYCDOT and concurred with by NYCDOT.

✷

APPENDIX A

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

OFFICE OF ENVIRONMENTAL COORD./LA-CEQR-K 3/23/2010

Project number **Date received**

Project: KINGS THEATRE

Archaeological review only.

Properties with no archaeological significance:

E 22nd St. Streetbed adjacent to,
2166 TILDEN AVENUE, BBL 3051320017
1027 FLATBUSH AVENUE, BBL 3051320018

Gina Santucci

3/29/2010

SIGNATURE DATE

26610_FSO_DNP_03292010.doc

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

OFFICE OF ENVIRONMENTAL COORD./11DME003K 10/13/2010

Project number **Date received**

Project: KINGS THEATRE

Comments: The LPC is in receipt of the scope of work for targeted EIS of 10/7/10 and the preliminary draft Historic and Cultural Resources Chapter of the PDEIS dated 10/26/10.

The project site appears S/NR eligible and LPC eligible (exterior only). In the radius: Flatbush Savings Bank and Sears Dept. Store appear LPC and S/NR eligible. The Albemarle Theater appears S/NR eligible.

The text of the PDEIS chapter appears acceptable. No impacts to the project site are anticipated as long as the restoration and rehabilitation of the theatre are conducted according to the Secretary's Standards and in consultation with SHPO.

Cc: SHPO

Gina Santucci

11/3/2010

SIGNATURE DATE

26610_FSO_GS_11032010.doc

New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

David A. Paterson
Governor

Carol Ash
Commissioner

RESOURCE EVALUATION

DATE: December 17, 2010

STAFF: Kathy Howe

PROPERTY: multiple properties (see below)

MCD: Brooklyn

PROJECT REF: 10PR07293

COUNTY: Kings

****

ELIGIBLE PROPERTIES:

Based on the information currently available, the following properties meet the criteria for listing on the State/National Registers:

Loew's Kings Theatre, 1027 Flatbush Avenue (04701.016185)
Loew's Kings Theatre meets Criterion A in the area of entertainment and Criterion C in the area of architecture as an exemplary "movie palace" of the 1920s retaining a high degree of period integrity. Completed in 1929, at the height of the movie palace boom, Kings Theatre was one of five "Wonder Theaters" built in New York City and northern New Jersey by Loew's Inc., one of the nation's largest theater chains.

Brooklyn Union Gas Company, 19 Duryea Place (04701.016989)
The Classical Revival brick building at 19 Duryea Place was constructed in 1930 by the Flatbush Gas Company, a subsidiary of the Brooklyn Union Gas Company, as their Flatbush sales office. The building appears to meet Criterion A in the area of commerce as well as Criterion C as an example of early twentieth century commercial architecture.

Flatbush Savings Bank, 1045-1049 Flatbush Avenue (04701.016989)
Built in 1927 and expanded by a north addition in 1946, the former Flatbush Savings Bank meets Criterion A for its association with the history of a former Brooklyn financial institution and Criterion C as an outstanding example of Classical Revival bank architecture. The choice of this style for banks was typical of the period as it helped symbolize the wealth and stability of the institution.

Sears Department Store, 2301-2329 Beverly Road (04701.016990)
This Sears retail branch was built in 1932 as one of the first three stores built by the Sears, Roebuck & Co. in the New York metropolitan area and the first Sears store built in New York

City. Designed by Nimmons, Carr & Wright, the building meets Criterion C as a representative example of Art Deco commercial architecture. Of special note in the history of the building is the community auditorium at the top floor that Sears opened in 1936 which was available to be used for free for community groups. The building was expanded to the north and west in 1940. It also meets Criterion A in the area of commercial history.

Albemarle Theatre, 977 Flatbush Avenue (04701.016991)
The Albemarle Theatre was designed by architect Harrison G. Wiseman and opened as a movie theater in 1920. Though the building has undergone some changes including the infill of openings at the ground floor and removal of the original marquee, it appears to retain sufficient period integrity thus meeting Criterion C as an example of Classical Revival theater design and Criterion A in the area of entertainment.

St. Mark's Methodist Episcopal Church's Adams Memorial Hall, 2017 Beverly Road (04701.016992)
The Late Gothic Revival Adams Memorial Hall was built by the congregation of St. Mark's M.E. Church in 1926 as a parish house serving the adjacent Gothic Revival church (1906) to the west. The church (outside the "Study Area Boundary") and the Memorial Hall meet Criterion C as an outstanding complex of Gothic Revival ecclesiastical design.

NON-ELIGIBLE PROPERTIES:
Based on the information currently available, the following properties do not meet the criteria for listing on the State/National Registers:

14-28 Duryea Place (04701.016993)

154-164 East 22nd Street (04701.016994)

2202-2230 Beverly Road (04701.016995)
(Note: The street numbers in Table 2-1 of the DEIS incorrectly note this block as nos. 2707-2724 Beverly Road but the correct numbers for this block, between East 22nd & East 23rd, are nos. 2202-2230 Beverly Rd.)

2312-2338 Bedford Avenue (04701.016996)

2107-2119 Regent Place (04701.016997)

2102-2116 Regent Place (04701.016998)
(Note: Table 2-1 of the DEIS incorrectly notes this group as nos. 2102-2166 but the correct nos. are 2102-2116).

Please contact Kathy Howe at 518-237-8643 ext. 3266 with any questions. Be sure to use the project reference number (PR) in all future correspondence.

Andrew M. Cuomo
Governor

Andy Beers
Acting Commissioner

New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services • Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643

www.nysparks.com

January 10, 2011

Rob Holbrook
Senior Planner
NYC EDC
110 William Street
New York, NY 10038

Re: DASNY
Kings Theatre Redevelopment
New York County
06PR06595

Dear Mr. Holbrook:

Thank you for requesting the comments of the New York State Field Services Bureau of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted information in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York parks, Recreation and Historic Preservation Law). We have reviewed this under the State Preservation law since your stated that you have a grant application with DASNY, a New York State Agency. We further note that you propose to apply for the Federal Rehabilitation Tax Credit program. These comments shall apply to both reviews, although they are separate in their final determination. These comments are those of the Field Services Bureau and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Kathy Howe of our National Register Unit notes that the following buildings are eligible for listing on the State and National Registers of Historic Places: Loew's Kings Theatre 1027 Flatbush Avenue, Brooklyn Union Gas Company 19 Duryea Place, Flatbush Savings Bank 1045-1049 Flatbush Avenue, Sears Department Store 2301-2329 Beverly Road, Albemarle Theatre 977 Flatbush Avenue and St. Mark's Methodist Episcopal Church's Adams Memorial Hall 2017 Beverly Road. The following properties are not eligible for the State or National Registers of Historic Places: 14-28 Duryea Place, 154-164 East 22nd Street, 2202-2230 Beverly Road, 2312-2338 Bedford Avenue, 2107-2119 Regent Place and 2102-2116 Regent Place. Kathy's Resource Evaluation is attached for your use.

Since the project proposes to use DASNY funds and pursue the Federal Rehabilitation Tax Credit, we are pleased to see that the project intends to meet the Secretary of the Interiors Standards for Rehabilitation; a critical requirement for both programs. In general, restoration of the theatre both interior and exterior would be appropriate. As the details of the restoration become available, please submit these for our review and comment so that we may continue our review under both programs. Please be aware that changes to the auditorium in the orchestra level and seating may create concerns for our office. These should be discussed as early as possible in the program development.

Thank you for your request. If you have any questions, I can be reached at (518) 237-8643, ext. 3282. Please refer to the Project Review (PR) number in any future correspondences regarding this project.

Sincerely,

Beth A. Cumming
Historic Site Restoration Coordinator
e-mail: Beth.cumming@oprhp.state.ny.us
enc: Resource Evaluation

via e-mail only

NEW YORK CITY DOT

Department of Transportation

JANETTE SADIK-KHAN, Commissioner

To: Robert Kulikowski, Director
Mayor's Office of Environmental Coordination

From: Naim Rasheed, Director
Traffic Planning

Re: Kings Theatre
Draft Environmental Impact Statement
CEQR No.: 11DME003K

Date: April 15, 2011

The Office of the Deputy Mayor for Economic Development is the CEQR lead agency on behalf of the Kings Theatre Redevelopment Company, L.L.C. (the Applicant), is proposing to restore, modernize and expand an existing vacant theatre, known as The Kings Theatre, for the presentation of live performances. The Theatre is located at 1027 Flatbush Avenue between Tilden Avenue and Duryea Place in Brooklyn's Flatbush-Ditmas Park section, and is bounded by Flatbush Avenue on the west, Tilden Avenue on the north East 22nd Street on the east, and Duryea Place on the south. The renovated Theatre would maintain a similar seating capacity of approximately 3,600 seats. As part of the project, a portion of East 22nd Street between Tilden Street and Duryea Place would be demapped to accommodate an expansion of the Theatre's stagehouse and loading areas. The proposed Build Year is 2014.

We have completed our review of the Draft EIS which identifies significant traffic impacts which would potentially be mitigated by signal phasing and/or timing modifications, parking regulation changes, intersection or street channelization improvements, lane markings and signage. DOT, based on its review of the Mitigation chapter, recommended eliminating the proposed parking prohibition at the following locations between the Draft and Final Environmental Impact Statement due to high curbside parking demand because of the retail/commercial establishments in the area:

- Flatbush Avenue @ Caton Avenue: along the north curb of the westbound receiving side of Caton Avenue;
- Flatbush Avenue @ Church Avenue: along the north curb of the westbound approach of Church Avenue; and
- Bedford Avenue @ Church Avenue: along the east curb of the northbound approach, and the west curb of the southbound approach of Bedford Avenue.

NYC Department of Transportation
Division of Traffic Operations
55 Water Street, 6th Floor, New York, NY 10041
T:212- 839-7710 F: 212-839-7777
www.nyc.dot.gov

April 15, 2011

In addition, DOT's Office of Highway Design & Construction has requested the submission of schematic drawings related to the proposed geometric improvements, based on the actual survey, for its review and approval prior to advancing the final design:

- Bedford Avenue @ Tilden Avenue;
- Bedford Avenue @ Beverly Road;
- Flatbush Avenue @ Tilden Avenue; and
- Flatbush Avenue @ Caton Avenue.

As the project advances, the applicant should resubmit engineering drawings for DOT's Highway Design & Construction review and approval. DOT will participate in the final design process. The applicant will be responsible for all costs associated with any capital improvements, including field surveys, schematic drawings, and any other relevant items.

The proposed improvement measures appear reasonable and feasible. NYCDOT will investigate the need for implementing these improvement measures or similar measures when the project is built and occupied in 2014. The applicant should advise DOT six months prior to the completion and occupancy of the proposed project.

If you have any questions or need additional information, please call me at (212) 839-7710 or Marjorie Bryant at (212) 839-7756.

c: A/C R. Russo, B/C J. Palmieri, S. Barkho, E. Athanailos, J. Reda, H. Lord, R. Holbrook (EDC), S. Ahmed, A. Mian, M. Bryant, File
e:/docs/Bryant/Kings Theatre

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APPENDIX B

TABLE B-1
KINGS THEATRE FEIS
2010 EXISTING SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
FLATBUSH AVENUE													
1 FLATBUSH AVENUE & CATON AVENUE													
Flatbush Avenue	NB	LTR	0.53	17.2	B	LTR	0.53	17.2	B	LTR	0.57	17.8	B
	SB	LTR	0.57	18.7	B	LTR	0.67	20.9	C	LTR	0.60	19.3	B
Caton Avenue	EB	LTR	1.00	51.2	D	LTR	0.96	44.6	D	LTR	0.98	47.5	D
	WB	LTR	0.97	52.8	D	LTR	0.98	55.0	D	LTR	0.90	48.0	D
Overall Intersection		-	**0.74**	**31.5**	**C**	-	**0.79**	**31.1**	**C**	-	**0.75**	**29.4**	**C**
2 FLATBUSH AVENUE & CHURCH AVENUE													
Flatbush Avenue	NB	L	0.38	22.9	C	L	0.49	25.3	C	L	0.64	36.4	D
		T	0.83	32.9	C	T	0.83	31.0	C	T	0.83	33.6	C
		R	0.62	30.9	C	R	0.63	29.0	C	R	0.57	29.4	C
	SB	L	0.58	32.3	C	L	0.86	52.2	D	L	0.62	33.5	C
		T	0.69	26.2	C	T	0.77	28.1	C	T	0.79	29.7	C
		R	0.49	24.8	C	R	0.56	25.8	C	R	0.47	24.2	C
Church Avenue	EB	LT	0.93	62.4	E	LT	0.88	60.3	E	LT	0.83	53.5	D
		R	0.53	45.1	D	R	0.44	45.2	D	R	0.42	46.2	D
	WB	LT	0.89	58.5	E	LT	0.92	54.7	D	LT	0.99	86.0	F
		R	0.55	45.8	D	R	0.60	46.7	D	R	0.54	46.6	D
Overall Intersection		-	**0.88**	**38.9**	**D**	-	**0.89**	**38.4**	**D**	-	**0.90**	**41.3**	**D**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE													
Flatbush Avenue	NB	LTR	0.68	16.8	B	LTR	0.69	17.5	B	LTR	0.63	15.4	B
	SB	LTR	0.59	15.7	B	LTR	0.67	17.3	B	LTR	0.60	15.4	B
Tilden Avenue	WB	LTR	0.63	41.0	D	LTR	0.74	44.8	D	LTR	0.54	38.0	D
Overall Intersection		-	**0.66**	**19.3**	**B**	-	**0.71**	**21.1**	**C**	-	**0.60**	**17.8**	**B**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH													
Flatbush Avenue	NB	LT	0.89	28.0	C	LT	0.81	22.9	C	LT	0.97	40.0	D
	SB	TR	0.46	13.5	B	TR	0.52	14.2	B	TR	0.53	14.6	B
Beverley Road North	EB	LR	0.57	35.7	D	LR	0.55	37.5	D	LR	0.59	36.8	D
Overall Intersection		-	**0.78**	**23.9**	**C**	-	**0.72**	**21.0**	**C**	-	**0.84**	**29.8**	**C**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH													
Flatbush Avenue	NB	TR	0.54	14.5	B	TR	0.52	14.3	B	TR	0.49	13.8	B
	SB	LT	0.60	16.5	B	LT	0.63	17.0	B	LT	0.66	17.8	B
Beverley Road South	WB	LR	0.69	38.7	D	LR	0.70	39.8	D	LR	0.57	38.4	D
Overall Intersection		-	**0.63**	**18.7**	**B**	-	**0.65**	**19.1**	**B**	-	**0.63**	**18.6**	**B**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT													
Flatbush Avenue	NB	LTR	0.49	8.4	A	LTR	0.59	9.6	A	LTR	0.51	8.6	A
	SB	LTR	0.71	33.4	C	LTR	0.72	32.0	C	LTR	0.65	30.7	C
Bedford Avenue	WB	TR	0.65	51.5	D	TR	0.74	50.7	D	TR	0.71	49.8	D
Overall Intersection		-	**0.77**	**23.7**	**C**	-	**0.80**	**23.2**	**C**	-	**0.75**	**22.3**	**C**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE													
Flatbush Avenue	NB	LTR	0.94	40.7	D	LTR	0.90	38.5	D	LTR	0.91	38.8	D
	SB	LT	0.66	30.3	C	LT	0.75	32.6	C	LT	0.63	30.0	C
Bedford Avenue	NB	LR	0.45	42.4	D	LR	0.52	44.2	D	LR	0.70	50.7	D
	SB	LTR	0.12	5.7	A	LTR	0.15	5.8	A	LTR	0.18	6.0	A
Foster Avenue	EB	LTR	0.96	66.2	E	LTR	1.01	69.5	E	LTR	0.91	54.1	D
	WB	LTR	1.03	73.9	E	LTR	0.95	64.0	E	LTR	1.03	72.7	E
Overall Intersection		-	**0.82**	**41.3**	**D**	-	**0.82**	**39.4**	**D**	-	**0.87**	**39.1**	**D**

TABLE B-1
KINGS THEATRE FEIS
2010 EXISTING SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
BEDFORD AVENUE													
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE													
Bedford Avenue	NB	LTR	0.59	16.3	B	LTR	0.64	15.6	B	LTR	0.57	15.3	B
	SB	LTR	0.79	23.1	C	LTR	0.77	22.1	C	LTR	0.66	19.0	B
Linden Boulevard	EB	LTR	0.88	41.2	D	LTR	0.84	40.1	D	LTR	0.65	36.3	D
	WB	LTR	0.90	44.1	D	LTR	0.89	44.0	D	LTR	0.84	44.5	D
Overall Intersection		-	**0.83**	**31.5**	**C**	-	**0.81**	**30.7**	**C**	-	**0.72**	**29.4**	**C**
9 BEDFORD AVENUE & CHURCH AVENUE													
Bedford Avenue	NB	LTR	0.72	32.2	C	LTR	0.89	43.5	D	LTR	0.85	41.4	D
	SB	LTR	0.93	44.2	D	LTR	0.98	54.4	D	LTR	0.90	44.4	D
Church Avenue	EB	LTR	0.91	44.9	D	LTR	0.90	44.0	D	LTR	0.88	43.5	D
	WB	LTR	0.70	30.7	C	LTR	0.80	34.1	C	LTR	0.57	27.2	C
Overall Intersection		-	**0.92**	**38.7**	**D**	-	**0.94**	**44.7**	**D**	-	**0.89**	**40.2**	**D**
10 BEDFORD AVENUE & TILDEN AVENUE													
Bedford Avenue	NB	LT	0.46	12.0	B	LT	0.55	13.5	B	LT	0.46	12.0	B
	SB	TR	0.65	13.1	B	TR	0.83	16.8	B	TR	0.59	12.4	B
Tilden Avenue	EB	LR	0.89	77.2	E	LR	0.74	54.9	D	LR	0.76	60.6	E
	WB	LTR	0.77	48.7	D	LTR	0.80	50.1	D	LTR	0.81	50.0	D
Overall Intersection		-	**0.72**	**27.4**	**C**	-	**0.82**	**25.7**	**C**	-	**0.65**	**25.9**	**C**
11 BEDFORD AVENUE & BEVERLEY ROAD													
Bedford Avenue	NB	LTR	0.39	11.6	B	LTR	0.46	12.5	B	LTR	0.40	11.8	B
	SB	LTR	0.65	15.5	B	LTR	0.72	16.5	B	LTR	0.70	17.5	B
Beverley Road	EB	LTR	0.77	48.3	D	LTR	0.91	46.5	D	LTR	0.77	43.9	D
	WB	LTR	0.85	44.1	D	LTR	0.96	56.6	E	LTR	0.69	44.5	D
Overall Intersection		-	**0.71**	**25.7**	**C**	-	**0.79**	**28.8**	**C**	-	**0.72**	**25.9**	**C**
OCEAN AVENUE													
12 OCEAN AVENUE & CHURCH AVENUE													
Ocean Avenue	NB	L	0.33	23.7	C	L	0.37	24.6	C	L	0.25	21.8	C
		TR	0.56	26.1	C	TR	0.69	30.7	C	TR	0.57	26.5	C
	SB	LTR	0.68	28.9	C	LTR	0.67	28.8	C	LTR	0.73	30.4	C
Church Avenue	EB	LTR	0.99	65.8	E	LTR	0.62	28.3	C	LTR	0.68	29.8	C
	WB	LTR	0.97	47.5	D	LTR	0.63	25.8	C	LTR	0.69	26.4	C
Overall Intersection		-	**0.82**	**41.8**	**D**	-	**0.66**	**28.3**	**C**	-	**0.71**	**28.2**	**C**
13 OCEAN AVENUE & BEVERLEY ROAD													
Ocean Avenue	NB	LTR	0.57	14.8	B	LTR	0.52	14.0	B	LTR	0.51	13.7	B
	SB	LTR	0.57	14.0	B	LTR	0.55	13.9	B	LTR	0.56	13.9	B
Beverley Road	EB	LTR	0.90	44.8	D	LTR	0.86	50.9	D	LTR	1.05	73.5	E
	WB	LTR	0.57	41.3	D	LTR	0.61	42.2	D	LTR	0.75	47.1	D
Overall Intersection		-	**0.67**	**24.7**	**C**	-	**0.65**	**26.1**	**C**	-	**0.71**	**32.9**	**C**
UNSIGNALIZED INTERSECTIONS													
14 FLATBUSH AVENUE & DURYEA PLACE													
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-	19.5	C	LT	-	17.3	C	LT	-	16.0	C
Overall Intersection		-	**-**	**0.4**	**A**	-	**-**	**0.4**	**A**	-	**-**	**0.3**	**A**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.

TABLE B-2
KINGS THEATRE FEIS
2014 NO BUILD SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
FLATBUSH AVENUE													
1 FLATBUSH AVENUE & CATON AVENUE													
Flatbush Avenue	NB	LTR	0.55	17.5	B	LTR	0.55	17.5	B	LTR	0.58	18.0	B
	SB	LTR	0.58	19.1	B	LTR	0.69	21.5	C	LTR	0.62	19.7	B
Caton Avenue	EB	LTR	1.02	58.7	E	LTR	0.99	48.7	D	LTR	1.01	53.9	D
	WB	LTR	0.99	57.8	E	LTR	1.01	62.9	E	LTR	0.93	51.0	D
Overall Intersection		-	**0.76**	**34.0**	**C**	-	**0.82**	**33.7**	**C**	-	**0.77**	**31.4**	**C**
2 FLATBUSH AVENUE & CHURCH AVENUE													
Flatbush Avenue	NB	L	0.40	23.5	C	L	0.51	26.2	C	L	0.66	38.7	D
		T	0.85	34.0	C	T	0.85	32.0	C	T	0.85	34.7	C
		R	0.65	32.3	C	R	0.65	30.1	C	R	0.60	30.7	C
	SB	L	0.61	34.7	C	L	0.91	62.8	E	L	0.66	36.6	D
		T	0.70	26.7	C	T	0.79	28.7	C	T	0.80	30.5	C
		R	0.51	25.6	C	R	0.58	26.6	C	R	0.49	24.6	C
Church Avenue	EB	LT	0.96	69.3	E	LT	0.91	64.0	E	LT	0.87	56.9	E
		R	0.54	45.6	D	R	0.45	45.9	D	R	0.43	46.7	D
	WB	LT	0.93	64.5	E	LT	0.95	60.5	E	LT	1.04	98.1	F
		R	0.57	46.7	D	R	0.62	47.6	D	R	0.55	47.2	D
Overall Intersection		-	**0.89**	**41.3**	**D**	-	**0.94**	**40.7**	**D**	-	**0.91**	**43.9**	**D**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE													
Flatbush Avenue	NB	LTR	0.70	17.3	B	LTR	0.71	18.0	B	LTR	0.64	15.6	B
	SB	LTR	0.61	16.1	B	LTR	0.69	17.8	B	LTR	0.61	15.7	B
Tilden Avenue	WB	LTR	0.64	41.4	D	LTR	0.76	45.8	D	LTR	0.55	38.3	D
Overall Intersection		-	**0.68**	**19.7**	**B**	-	**0.72**	**21.7**	**C**	-	**0.61**	**18.0**	**B**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH													
Flatbush Avenue	NB	LT	0.91	30.6	C	LT	0.84	24.5	C	LT	0.99	46.3	D
	SB	TR	0.47	13.6	B	TR	0.53	14.4	B	TR	0.54	14.8	B
Beverley Road North	EB	LR	0.58	35.8	D	LR	0.56	37.8	D	LR	0.60	37.1	D
Overall Intersection		-	**0.80**	**25.3**	**C**	-	**0.74**	**21.9**	**C**	-	**0.86**	**33.0**	**C**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH													
Flatbush Avenue	NB	TR	0.55	14.7	B	TR	0.53	14.4	B	TR	0.50	14.0	B
	SB	LT	0.62	16.9	B	LT	0.65	17.5	B	LT	0.68	18.4	B
Beverley Road South	WB	LR	0.71	39.1	D	LR	0.71	40.2	D	LR	0.59	38.7	D
Overall Intersection		-	**0.65**	**19.0**	**B**	-	**0.67**	**19.4**	**B**	-	**0.65**	**18.9**	**B**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT													
Flatbush Avenue	NB	LTR	0.50	8.6	A	LTR	0.60	9.8	A	LTR	0.52	8.7	A
	SB	LTR	0.73	33.9	C	LTR	0.74	32.4	C	LTR	0.67	31.1	C
Bedford Avenue	WB	TR	0.66	52.1	D	TR	0.76	51.4	D	TR	0.72	50.5	D
Overall Intersection		-	**0.78**	**24.0**	**C**	-	**0.81**	**23.6**	**C**	-	**0.76**	**22.6**	**C**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE													
Flatbush Avenue	NB	LTR	0.98	46.0	D	LTR	0.93	41.2	D	LTR	0.94	41.4	D
	SB	LT	0.67	30.6	C	LT	0.76	33.1	C	LT	0.65	30.3	C
Bedford Avenue	NB	LR	0.46	42.5	D	LR	0.53	44.3	D	LR	0.72	51.4	D
	SB	LTR	0.12	5.7	A	LTR	0.15	5.9	A	LTR	0.18	6.1	A
Foster Avenue	EB	LTR	0.98	69.8	E	LTR	1.04	80.8	F	LTR	0.93	55.7	E
	WB	LTR	1.05	81.0	F	LTR	0.96	66.7	E	LTR	1.04	77.8	E
Overall Intersection		-	**0.84**	**44.4**	**D**	-	**0.84**	**41.7**	**D**	-	**0.89**	**40.7**	**D**

TABLE B-2
KINGS THEATRE FEIS
2014 NO BUILD SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
BEDFORD AVENUE													
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE													
Bedford Avenue	NB	LTR	0.61	16.6	B	LTR	0.66	15.9	B	LTR	0.58	15.6	B
	SB	LTR	0.81	24.2	C	LTR	0.79	23.0	C	LTR	0.68	19.5	B
Linden Boulevard	EB	LTR	0.91	42.5	D	LTR	0.87	40.8	D	LTR	0.67	36.5	D
	WB	LTR	0.93	46.5	D	LTR	0.92	46.0	D	LTR	0.87	46.0	D
Overall Intersection		-	**0.85**	**32.8**	**C**	-	**0.83**	**31.6**	**C**	-	**0.74**	**30.1**	**C**
9 BEDFORD AVENUE & CHURCH AVENUE													
Bedford Avenue	NB	LTR	0.74	33.0	C	LTR	0.91	45.6	D	LTR	0.87	43.2	D
	SB	LTR	0.95	48.0	D	LTR	1.00	59.9	E	LTR	0.92	48.2	D
Church Avenue	EB	LTR	0.93	47.7	D	LTR	0.92	46.8	D	LTR	0.90	45.8	D
	WB	LTR	0.72	31.3	C	LTR	0.83	35.9	D	LTR	0.58	27.5	C
Overall Intersection		-	**0.94**	**40.9**	**D**	-	**0.96**	**47.8**	**D**	-	**0.91**	**42.5**	**D**
10 BEDFORD AVENUE & TILDEN AVENUE													
Bedford Avenue	NB	LT	0.47	12.2	B	LT	0.56	13.8	B	LT	0.48	12.3	B
	SB	TR	0.66	13.3	B	TR	0.85	17.4	B	TR	0.60	12.6	B
Tilden Avenue	EB	LR	0.92	82.9	F	LR	0.76	56.7	E	LR	0.79	63.5	E
	WB	LTR	0.79	49.9	D	LTR	0.82	51.1	D	LTR	0.83	51.4	D
Overall Intersection		-	**0.74**	**28.4**	**C**	-	**0.84**	**26.4**	**C**	-	**0.67**	**26.7**	**C**
11 BEDFORD AVENUE & BEVERLEY ROAD													
Bedford Avenue	NB	LTR	0.40	11.7	B	LTR	0.47	12.7	B	LTR	0.41	11.9	B
	SB	LTR	0.67	15.9	B	LTR	0.74	16.9	B	LTR	0.72	18.0	B
Beverley Road	EB	LTR	0.79	49.3	D	LTR	0.94	48.4	D	LTR	0.80	45.1	D
	WB	LTR	0.88	45.0	D	LTR	0.99	61.9	E	LTR	0.71	45.3	D
Overall Intersection		-	**0.73**	**26.2**	**C**	-	**0.81**	**30.4**	**C**	-	**0.74**	**26.4**	**C**
OCEAN AVENUE													
12 OCEAN AVENUE & CHURCH AVENUE													
Ocean Avenue	NB	L	0.34	23.9	C	L	0.38	24.9	C	L	0.26	22.0	C
		TR	0.57	26.5	C	TR	0.71	31.3	C	TR	0.58	26.8	C
	SB	LTR	0.69	29.4	C	LTR	0.69	29.1	C	LTR	0.74	30.9	C
Church Avenue	EB	LTR	1.01	71.8	E	LTR	0.63	28.9	C	LTR	0.69	30.3	C
	WB	LTR	1.00	53.7	D	LTR	0.65	26.1	C	LTR	0.71	26.8	C
Overall Intersection		-	**0.84**	**45.0**	**D**	-	**0.68**	**28.7**	**C**	-	**0.73**	**28.6**	**C**
13 OCEAN AVENUE & BEVERLEY ROAD													
Ocean Avenue	NB	LTR	0.58	15.0	B	LTR	0.53	14.2	B	LTR	0.52	13.9	B
	SB	LTR	0.58	14.3	B	LTR	0.56	14.1	B	LTR	0.57	14.1	B
Beverley Road	EB	LTR	0.92	46.5	D	LTR	0.89	53.5	D	LTR	1.08	84.2	F
	WB	LTR	0.58	41.6	D	LTR	0.62	42.5	D	LTR	0.77	48.1	D
Overall Intersection		-	**0.69**	**25.3**	**C**	-	**0.66**	**26.8**	**C**	-	**0.73**	**35.6**	**D**
UNSIGNALIZED INTERSECTIONS													
14 FLATBUSH AVENUE & DURYEA PLACE													
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-	20.2	C	LT	-	17.9	C	LT	-	16.4	C
Overall Intersection		-	**-**	**0.4**	**A**	-	**-**	**0.4**	**A**	-	**-**	**0.3**	**A**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.

TABLE B-3
KINGS THEATRE FEIS
2014 BUILD SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
SIGNALIZED INTERSECTIONS													
FLATBUSH AVENUE													
1 FLATBUSH AVENUE & CATON AVENUE													
Flatbush Avenue	NB	LTR	0.58	18.0	B	LTR	0.63	19.0	B	LTR	0.61	18.5	B
	SB	LTR	0.88	32.7	C	LTR	0.75	23.5	C	LTR	0.89	32.7	C
Caton Avenue	EB	LTR	1.13	99.4	F	LTR	1.12	95.1	F	LTR	1.11	93.6	F
	WB	LTR	1.11	98.9	F	LTR	1.32	186.5	F	LTR	1.05	80.5	F
Overall Intersection		**-**	**0.98**	**53.6**	**D**	**-**	**0.97**	**70.3**	**E**	**-**	**0.98**	**48.2**	**D**
2 FLATBUSH AVENUE & CHURCH AVENUE													
Flatbush Avenue	NB	L	0.52	29.9	C	L	0.68	36.2	D	L	0.98	102.8	F
		T	0.87	35.7	D	T	0.96	44.1	D	T	0.87	36.4	D
		R	0.65	32.3	C	R	0.65	30.1	C	R	0.60	30.7	C
	SB	L	0.73	44.6	D	L	1.23	169.5	F	L	0.70	41.2	D
		T	0.87	35.1	D	T	0.88	33.4	C	T	0.97	47.3	D
		R	0.54	26.7	C	R	0.58	26.6	C	R	0.50	25.0	C
Church Avenue	EB	LT	1.03	86.5	F	LT	1.19	149.2	F	LT	0.94	68.7	E
		R	0.72	56.1	E	R	0.58	51.9	D	R	0.65	57.8	E
	WB	LT	1.11	115.5	F	LT	1.17	128.8	F	LT	1.23	169.3	F
		R	0.57	46.7	D	R	0.62	47.6	D	R	0.55	47.2	D
Overall Intersection		**-**	**0.96**	**52.6**	**D**	**-**	**1.23**	**69.1**	**E**	**-**	**1.08**	**60.6**	**E**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE													
Flatbush Avenue	NB	LTR	1.00	41.4	D	LTR	0.99	42.6	D	LTR	0.96	28.7	C
	SB	LTR	0.95	36.6	D	LTR	0.77	20.2	C	LTR	0.99	41.4	D
Tilden Avenue	WB	LTR	0.89	59.0	E	LTR	1.04	89.4	F	LTR	0.66	41.8	D
Overall Intersection		**-**	**0.96**	**42.0**	**D**	**-**	**1.01**	**41.1**	**D**	**-**	**0.88**	**35.5**	**D**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH													
Flatbush Avenue	NB	LT	1.10	79.5	E	LT	1.04	60.2	E	LT	1.14	98.4	F
	SB	TR	0.55	14.9	B	TR	0.64	16.5	B	TR	0.63	16.3	B
Beverley Road North	EB	LR	0.85	42.7	D	LR	0.79	47.1	D	LR	0.91	50.7	D
Overall Intersection		**-**	**1.02**	**52.0**	**D**	**-**	**0.96**	**40.4**	**D**	**-**	**1.07**	**60.3**	**E**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH													
Flatbush Avenue	NB	TR	0.64	16.4	B	TR	0.56	15.0	B	TR	0.59	15.4	B
	SB	LT	0.91	34.7	C	LT	0.89	30.0	C	LT	0.97	42.7	D
Beverley Road South	WB	LR	0.76	40.4	D	LR	0.92	51.9	D	LR	0.61	39.3	D
Overall Intersection		**-**	**0.86**	**26.2**	**C**	**-**	**0.90**	**27.0**	**C**	**-**	**0.85**	**29.2**	**C**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT													
Flatbush Avenue	NB	LTR	0.65	10.3	B	LTR	0.65	10.6	B	LTR	0.65	10.3	B
	SB	LTR	0.75	34.8	C	LTR	0.89	38.9	D	LTR	0.68	31.4	C
Bedford Avenue	WB	TR	0.72	55.4	E	TR	1.06	99.1	F	TR	0.79	53.5	D
Overall Intersection		**-**	**0.80**	**24.2**	**C**	**-**	**0.96**	**35.3**	**D**	**-**	**0.79**	**22.8**	**C**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE													
Flatbush Avenue	NB	LTR	1.17	115.6	F	LTR	1.07	76.0	E	LTR	1.11	90.5	F
	SB	LT	0.70	31.4	C	LT	0.94	44.0	D	LT	0.68	31.0	C
Bedford Avenue	NB	LR	0.54	45.4	D	LR	0.56	45.5	D	LR	0.80	57.6	E
	SB	LTR	0.13	5.7	A	LTR	0.23	6.3	A	LTR	0.19	6.1	A
Foster Avenue	EB	LTR	1.50	278.1	F	LTR	1.20	141.9	F	LTR	1.58	311.7	F
	WB	LTR	1.06	84.2	F	LTR	0.97	67.4	E	LTR	1.05	82.2	F
Overall Intersection		**-**	**1.06**	**92.1**	**F**	**-**	**0.94**	**60.0**	**E**	**-**	**1.12**	**82.0**	**F**

TABLE B-3
KINGS THEATRE FEIS
2014 BUILD SATURDAY TRAFFIC LEVELS OF SERVICE

INTERSECTION & APPROACH		Midday Arrival (1:00 - 2:00 PM) Mvt.	V/C	Control Delay	LOS	Midday Departure (4:30 - 5:30 PM) Mvt.	V/C	Control Delay	LOS	Evening Arrival (7:00 - 8:00 PM) Mvt.	V/C	Control Delay	LOS
BEDFORD AVENUE													
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE													
Bedford Avenue	NB	LTR	0.65	17.7	B	LTR	1.22	123.3	F	LTR	0.62	16.3	B
	SB	LTR	0.90	30.8	C	LTR	0.88	29.8	C	LTR	0.76	22.9	C
Linden Boulevard	EB	LTR	0.99	49.8	D	LTR	0.88	41.2	D	LTR	0.82	39.5	D
	WB	DefL	1.29	182.9	F	-	-	-	-	-	-	-	-
		TR	1.01	62.5	E	LTR	0.95	48.6	D	LTR	1.20	140.6	F
Overall Intersection		**-**	**1.03**	**49.7**	**D**	**-**	**1.13**	**67.1**	**E**	**-**	**0.91**	**57.0**	**E**
9 BEDFORD AVENUE & CHURCH AVENUE													
Bedford Avenue	NB	LTR	0.80	36.3	D	LTR	1.54	282.2	F	LTR	0.95	56.2	E
	SB	LTR	1.26	154.9	F	LTR	1.12	98.7	F	LTR	1.24	149.7	F
Church Avenue	EB	LTR	1.02	66.7	E	LTR	0.93	47.1	D	LTR	0.98	59.7	E
	WB	LTR	0.92	48.8	D	LTR	0.84	36.6	D	LTR	0.73	33.9	C
Overall Intersection		**-**	**1.14**	**86.5**	**F**	**-**	**1.23**	**143.1**	**F**	**-**	**1.11**	**84.6**	**F**
10 BEDFORD AVENUE & TILDEN AVENUE													
Bedford Avenue	NB	LT	0.77	21.7	C	LT	0.74	18.7	B	LT	0.71	18.9	B
	SB	TR	0.94	21.5	C	TR	0.86	17.7	B	TR	0.94	23.1	C
Tilden Avenue	EB	LR	1.50	287.0	F	LR	1.51	290.4	F	LR	1.21	169.7	F
	WB	LTR	0.79	50.4	D	LTR	0.82	51.5	D	LTR	0.83	51.8	D
Overall Intersection		**-**	**1.10**	**64.9**	**E**	**-**	**1.04**	**60.6**	**E**	**-**	**1.02**	**45.8**	**D**
11 BEDFORD AVENUE & BEVERLEY ROAD													
Bedford Avenue	NB	LTR	0.59	15.2	B	LTR	0.60	15.8	B	LTR	0.61	15.8	B
	SB	LTR	0.88	26.1	C	LTR	0.88	23.3	C	LTR	0.84	24.2	C
Beverley Road	EB	LTR	1.20	151.0	F	LTR	1.53	284.0	F	LTR	1.06	86.4	F
	WB	LTR	0.98	54.1	D	LTR	1.07	86.2	F	LTR	0.77	48.4	D
Overall Intersection		**-**	**0.98**	**49.8**	**D**	**-**	**1.08**	**87.6**	**F**	**-**	**0.91**	**36.5**	**D**
OCEAN AVENUE													
12 OCEAN AVENUE & CHURCH AVENUE													
Ocean Avenue	NB	L	0.37	24.7	C	L	0.53	29.8	C	L	0.29	22.5	C
		TR	0.60	27.2	C	TR	0.82	37.9	D	TR	0.61	27.5	C
	SB	LTR	0.70	29.8	C	LTR	0.69	29.2	C	LTR	0.76	31.7	C
Church Avenue	EB	LTR	1.12	108.2	F	LTR	0.66	29.5	C	LTR	0.79	35.0	D
	WB	LTR	1.05	69.7	E	LTR	0.68	26.9	C	LTR	0.74	27.5	C
Overall Intersection		**-**	**0.88**	**59.1**	**E**	**-**	**0.75**	**31.2**	**C**	**-**	**0.78**	**30.4**	**C**
13 OCEAN AVENUE & BEVERLEY ROAD													
Ocean Avenue	NB	LTR	0.69	18.0	B	LTR	0.69	18.5	B	LTR	0.59	15.6	B
	SB	LTR	0.66	16.0	B	LTR	0.61	15.1	B	LTR	0.62	15.0	B
Beverley Road	EB	LTR	1.14	108.3	F	LTR	1.31	192.4	F	LTR	1.29	177.8	F
	WB	LTR	0.76	49.8	D	LTR	0.85	56.3	E	LTR	0.95	68.7	E
Overall Intersection		**-**	**0.83**	**42.2**	**D**	**-**	**0.88**	**63.0**	**E**	**-**	**0.83**	**63.2**	**E**
UNSIGNALIZED INTERSECTIONS													
14 FLATBUSH AVENUE & DURYEA PLACE													
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-		F	LT	-		F	LT	-		F
Overall Intersection		-	**-**	**Note (3)**	**F**	-	**-**	**Note (3)**	**F**	-	**-**	**Note (3)**	**F**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.

TABLE B-4
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
SIGNALIZED INTERSECTIONS									
FLATBUSH AVENUE									
1 FLATBUSH AVENUE & CATON AVENUE									
Flatbush Avenue	NB	LTR	0.55	17.5	B	LTR	0.58	18.0	B
	SB	LTR	0.58	19.1	B	LTR	0.88	32.7	C
Caton Avenue	EB	LTR	1.02	58.7	E	LTR	1.13	99.4	F
	WB	LTR	0.99	57.8	E	LTR	1.11	98.9	F
Overall Intersection		-	**0.76**	**34.0**	**C**	-	**0.98**	**53.6**	**D**
2 FLATBUSH AVENUE & CHURCH AVENUE									
Flatbush Avenue	NB	L	0.40	23.5	C	L	0.52	29.9	C
		T	0.85	34.0	C	T	0.87	35.7	D
		R	0.65	32.3	C	R	0.65	32.3	C
	SB	L	0.61	34.7	C	L	0.73	44.6	D
		T	0.70	26.7	C	T	0.87	35.1	D
		R	0.51	25.6	C	R	0.54	26.7	C
Church Avenue	EB	LT	0.96	69.3	E	LT	1.03	86.5	F
		R	0.54	45.6	D	R	0.72	56.1	E
	WB	LT	0.93	64.5	E	LT	1.11	115.5	F
		R	0.57	46.7	D	R	0.57	46.7	D
Overall Intersection		-	**0.89**	**41.3**	**D**	-	**0.96**	**52.6**	**D**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE									
Flatbush Avenue	NB	LTR	0.70	17.3	B	LTR	1.00	41.4	D
	SB	LTR	0.61	16.1	B	LTR	0.95	36.6	D
Tilden Avenue	WB	LTR	0.64	41.4	D	LTR	0.89	59.0	E
Overall Intersection		-	**0.68**	**19.7**	**B**	-	**0.96**	**42.0**	**D**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH									
Flatbush Avenue	NB	LT	0.91	30.6	C	LT	1.10	79.5	E
	SB	TR	0.47	13.6	B	TR	0.55	14.9	B
Beverley Road North	EB	LR	0.58	35.8	D	LR	0.85	42.7	D
Overall Intersection		-	**0.80**	**25.3**	**C**	-	**1.02**	**52.0**	**D**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH									
Flatbush Avenue	NB	TR	0.55	14.7	B	TR	0.64	16.4	B
	SB	LT	0.62	16.9	B	LT	0.91	34.7	C
Beverley Road South	WB	LR	0.71	39.1	D	LR	0.76	40.4	D
Overall Intersection		-	**0.65**	**19.0**	**B**	-	**0.86**	**26.2**	**C**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT									
Flatbush Avenue	NB	LTR	0.50	8.6	A	LTR	0.65	10.3	B
	SB	LTR	0.73	33.9	C	LTR	0.75	34.8	C
Bedford Avenue	WB	TR	0.66	52.1	D	TR	0.72	55.4	E
Overall Intersection		-	**0.78**	**24.0**	**C**	-	**0.80**	**24.2**	**C**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE									
Flatbush Avenue	NB	LTR	0.98	46.0	D	LTR	1.17	115.6	F
	SB	LT	0.67	30.6	C	LT	0.70	31.4	C
Bedford Avenue	NB	LR	0.46	42.5	D	LR	0.54	45.4	D
	SB	LTR	0.12	5.7	A	LTR	0.13	5.7	A
Foster Avenue	EB	LTR	0.98	69.8	E	LTR	1.50	278.1	F
	WB	LTR	1.05	81.0	F	LTR	1.06	84.2	F
Overall Intersection		-	**0.84**	**44.4**	**D**	-	**1.06**	**92.1**	**F**

TABLE B-4
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
BEDFORD AVENUE									
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE									
Bedford Avenue	NB	LTR	0.61	16.6	B	LTR	0.65	17.7	B
	SB	LTR	0.81	24.2	C	LTR	0.90	30.8	C
Linden Boulevard	EB	LTR	0.91	42.5	D	LTR	0.99	49.8	D
	WB	LTR	0.93	46.5	D	DefL	1.29	182.9	F
		-	-	-	-	TR	1.01	62.5	E
Overall Intersection		-	**0.85**	**32.8**	**C**	-	**1.03**	**49.7**	**D**
9 BEDFORD AVENUE & CHURCH AVENUE									
Bedford Avenue	NB	LTR	0.74	33.0	C	LTR	0.80	36.3	D
	SB	LTR	0.95	48.0	D	LTR	1.26	154.9	F
Church Avenue	EB	LTR	0.93	47.7	D	LTR	1.02	66.7	E
	WB	LTR	0.72	31.3	C	LTR	0.92	48.8	D
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.94**	**40.9**	**D**	-	**1.14**	**86.5**	**F**
10 BEDFORD AVENUE & TILDEN AVENUE									
Bedford Avenue	NB	LT	0.47	12.2	B	LT	0.77	21.7	C
	SB	TR	0.66	13.3	B	TR	0.94	21.5	C
Tilden Avenue	EB	LR	0.92	82.9	F	LR	1.50	287.0	F
	WB	LTR	0.79	49.9	D	LTR	0.79	50.4	D
Overall Intersection		-	**0.74**	**28.4**	**C**	-	**1.10**	**64.9**	**E**
11 BEDFORD AVENUE & BEVERLEY ROAD									
Bedford Avenue	NB	LTR	0.40	11.7	B	LTR	0.59	15.2	B
	SB	LTR	0.67	15.9	B	LTR	0.88	26.1	C
Beverley Road	EB	LTR	0.79	49.3	D	LTR	1.20	151.0	F
	WB	LTR	0.88	45.0	D	LTR	0.98	54.1	D
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.73**	**26.2**	**C**	-	**0.98**	**49.8**	**D**
OCEAN AVENUE									
12 OCEAN AVENUE & CHURCH AVENUE									
Ocean Avenue	NB	L	0.34	23.9	C	L	0.37	24.7	C
		TR	0.57	26.5	C	TR	0.60	27.2	C
	SB	LTR	0.69	29.4	C	LTR	0.70	29.8	C
Church Avenue	EB	LTR	1.01	71.8	E	LTR	1.12	108.2	F
	WB	LTR	1.00	53.7	D	LTR	1.05	69.7	E
Overall Intersection		-	**0.84**	**45.0**	**D**	-	**0.88**	**59.1**	**E**
13 OCEAN AVENUE & BEVERLEY ROAD									
Ocean Avenue	NB	LTR	0.58	15.0	B	LTR	0.69	18.0	B
	SB	LTR	0.58	14.3	B	LTR	0.66	16.0	B
Beverley Road	EB	LTR	0.92	46.5	D	LTR	1.14	108.3	F
	WB	LTR	0.58	41.6	D	LTR	0.76	49.8	D
Overall Intersection		-	**0.69**	**25.3**	**C**	-	**0.83**	**42.2**	**D**
UNSIGNALIZED INTERSECTIONS									
14 FLATBUSH AVENUE & DURYEA PLACE									
	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-	20.2	C	LT	-		F
Overall Intersection		-	**-**	**0.4**	**A**	**-**	**-**	**Note (3)**	**F**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact

TABLE B-5
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY DEPARTURE PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
SIGNALIZED INTERSECTIONS									
FLATBUSH AVENUE									
1 FLATBUSH AVENUE & CATON AVENUE									
Flatbush Avenue	NB	LTR	0.55	17.5	B	LTR	0.63	19.0	B
	SB	LTR	0.69	21.5	C	LTR	0.75	23.5	C
Caton Avenue	EB	LTR	0.99	48.7	D	LTR	1.12	95.1	F
	WB	LTR	1.01	62.9	E	LTR	1.32	186.5	F
Overall Intersection		-	**0.82**	**33.7**	**C**	-	**0.97**	**70.3**	**E**
2 FLATBUSH AVENUE & CHURCH AVENUE									
Flatbush Avenue	NB	L	0.51	26.2	C	L	0.68	36.2	D
		T	0.85	32.0	C	T	0.96	44.1	D
		R	0.65	30.1	C	R	0.65	30.1	C
	SB	L	0.91	62.8	E	L	1.23	169.5	F
		T	0.79	28.7	C	T	0.88	33.4	C
		R	0.58	26.6	C	R	0.58	26.6	C
Church Avenue	EB	LT	0.91	64.0	E	LT	1.19	149.2	F
		R	0.45	45.9	D	R	0.58	51.9	D
	WB	LT	0.95	60.5	E	LT	1.17	128.8	F
		R	0.62	47.6	D	R	0.62	47.6	D
Overall Intersection		-	**0.94**	**40.7**	**D**	-	**1.23**	**69.1**	**E**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE									
Flatbush Avenue	NB	LTR	0.71	18.0	B	LTR	0.99	42.6	D
	SB	LTR	0.69	17.8	B	LTR	0.77	20.2	C
Tilden Avenue	WB	LTR	0.76	45.8	D	LTR	1.04	89.4	F
Overall Intersection		-	**0.72**	**21.7**	**C**	-	**1.01**	**41.1**	**D**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH									
Flatbush Avenue	NB	LT	0.84	24.5	C	LT	1.04	60.2	E
	SB	TR	0.53	14.4	B	TR	0.64	16.5	B
Beverley Road North	EB	LR	0.56	37.8	D	LR	0.79	47.1	D
Overall Intersection		-	**0.74**	**21.9**	**C**	-	**0.96**	**40.4**	**D**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH									
Flatbush Avenue	NB	TR	0.53	14.4	B	TR	0.56	15.0	B
	SB	LT	0.65	17.5	B	LT	0.89	30.0	C
Beverley Road South	WB	LR	0.71	40.2	D	LR	0.92	51.9	D
Overall Intersection		-	**0.67**	**19.4**	**B**	-	**0.90**	**27.0**	**C**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT									
Flatbush Avenue	NB	LTR	0.60	9.8	A	LTR	0.65	10.6	B
	SB	LTR	0.74	32.4	C	LTR	0.89	38.9	D
Bedford Avenue	WB	TR	0.76	51.4	D	TR	1.06	99.1	F
Overall Intersection		-	**0.81**	**23.6**	**C**	-	**0.96**	**35.3**	**D**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE									
Flatbush Avenue	NB	LTR	0.93	41.2	D	LTR	1.07	76.0	E
	SB	LT	0.76	33.1	C	LT	0.94	44.0	D
Bedford Avenue	NB	LR	0.53	44.3	D	LR	0.56	45.5	D
	SB	LTR	0.15	5.9	A	LTR	0.23	6.3	A
Foster Avenue	EB	LTR	1.04	80.8	F	LTR	1.20	141.9	F
	WB	LTR	0.96	66.7	E	LTR	0.97	67.4	E
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.84**	**41.7**	**D**	-	**0.94**	**60.0**	**E**

TABLE B-5
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY DEPARTURE PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
BEDFORD AVENUE									
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE									
Bedford Avenue	NB	LTR	0.66	15.9	B	LTR	1.22	123.3	F
	SB	LTR	0.79	23.0	C	LTR	0.88	29.8	C
Linden Boulevard	EB	LTR	0.87	40.8	D	LTR	0.88	41.2	D
	WB	LTR	0.92	46.0	D	LTR	0.95	48.6	D
Overall Intersection		-	**0.83**	**31.6**	**C**	-	**1.13**	**67.1**	**E**
9 BEDFORD AVENUE & CHURCH AVENUE									
Bedford Avenue	NB	LTR	0.91	45.6	D	LTR	1.54	282.2	F
	SB	LTR	1.00	59.9	E	LTR	1.12	98.7	F
Church Avenue	EB	LTR	0.92	46.8	D	LTR	0.93	47.1	D
	WB	LTR	0.83	35.9	D	LTR	0.84	36.6	D
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.96**	**47.8**	**D**	-	**1.23**	**143.1**	**F**
10 BEDFORD AVENUE & TILDEN AVENUE									
Bedford Avenue	NB	LT	0.56	13.8	B	LT	0.74	18.7	B
	SB	TR	0.85	17.4	B	TR	0.86	17.7	B
Tilden Avenue	EB	LR	0.76	56.7	E	LR	1.51	290.4	F
	WB	LTR	0.82	51.1	D	LTR	0.82	51.5	D
Overall Intersection		-	**0.84**	**26.4**	**C**	-	**1.04**	**60.6**	**E**
11 BEDFORD AVENUE & BEVERLEY ROAD									
Bedford Avenue	NB	LTR	0.47	12.7	B	LTR	0.60	15.8	B
	SB	LTR	0.74	16.9	B	LTR	0.88	23.3	C
Beverley Road	EB	LTR	0.94	48.4	D	LTR	1.53	284.0	F
	WB	LTR	0.99	61.9	E	LTR	1.07	86.2	F
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.81**	**30.4**	**C**	-	**1.08**	**87.6**	**F**
OCEAN AVENUE									
12 OCEAN AVENUE & CHURCH AVENUE									
Ocean Avenue	NB	L	0.38	24.9	C	L	0.53	29.8	C
		TR	0.71	31.3	C	TR	0.82	37.9	D
	SB	LTR	0.69	29.1	C	LTR	0.69	29.2	C
Church Avenue	EB	LTR	0.63	28.9	C	LTR	0.66	29.5	C
	WB	LTR	0.65	26.1	C	LTR	0.68	26.9	C
Overall Intersection		-	**0.68**	**28.7**	**C**	-	**0.75**	**31.2**	**C**
13 OCEAN AVENUE & BEVERLEY ROAD									
Ocean Avenue	NB	LTR	0.53	14.2	B	LTR	0.69	18.5	B
	SB	LTR	0.56	14.1	B	LTR	0.61	15.1	B
Beverley Road	EB	LTR	0.89	53.5	D	LTR	1.31	192.4	F
	WB	LTR	0.62	42.5	D	LTR	0.85	56.3	E
Overall Intersection		-	**0.66**	**26.8**	**C**	-	**0.88**	**63.0**	**E**
UNSIGNALIZED INTERSECTIONS									
14 FLATBUSH AVENUE & DURYEA PLACE									
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-	17.9	C	LT	-		F
Overall Intersection		-	**-**	**0.4**	**A**	-	**-**	**Note (3)**	**F**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact

TABLE B-6
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (EVENING ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
SIGNALIZED INTERSECTIONS									
FLATBUSH AVENUE									
1 FLATBUSH AVENUE & CATON AVENUE									
Flatbush Avenue	NB	LTR	0.58	18.0	B	LTR	0.61	18.5	B
	SB	LTR	0.62	19.7	B	LTR	0.89	32.7	C
Caton Avenue	EB	LTR	1.01	53.9	D	LTR	1.11	93.6	F
	WB	LTR	0.93	51.0	D	LTR	1.05	80.5	F
Overall Intersection		-	**0.77**	**31.4**	**C**	-	**0.98**	**48.2**	**D**
2 FLATBUSH AVENUE & CHURCH AVENUE									
Flatbush Avenue	NB	L	0.66	38.7	D	L	0.98	102.8	F
		T	0.85	34.7	C	T	0.87	36.4	D
		R	0.60	30.7	C	R	0.60	30.7	C
	SB	L	0.66	36.6	D	L	0.70	41.2	D
		T	0.80	30.5	C	T	0.97	47.3	D
		R	0.49	24.6	C	R	0.50	25.0	C
Church Avenue	EB	LT	0.87	56.9	E	LT	0.94	68.7	E
		R	0.43	46.7	D	R	0.65	57.8	E
	WB	LT	1.04	98.1	F	LT	1.23	169.3	F
		R	0.55	47.2	D	R	0.55	47.2	D
Overall Intersection		-	**0.91**	**43.9**	**D**	-	**1.08**	**60.6**	**E**
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE									
Flatbush Avenue	NB	LTR	0.64	15.6	B	LTR	0.96	28.7	C
	SB	LTR	0.61	15.7	B	LTR	0.99	41.4	D
Tilden Avenue	WB	LTR	0.55	38.3	D	LTR	0.66	41.8	D
Overall Intersection		-	**0.61**	**18.0**	**B**	-	**0.88**	**35.5**	**D**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH									
Flatbush Avenue	NB	LT	0.99	46.3	D	LT	1.14	98.4	F
	SB	TR	0.54	14.8	B	TR	0.63	16.3	B
Beverley Road North	EB	LR	0.60	37.1	D	LR	0.91	50.7	D
Overall Intersection		-	**0.86**	**33.0**	**C**	-	**1.07**	**60.3**	**E**
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH									
Flatbush Avenue	NB	TR	0.50	14.0	B	TR	0.59	15.4	B
	SB	LT	0.68	18.4	B	LT	0.97	42.7	D
Beverley Road South	WB	LR	0.59	38.7	D	LR	0.61	39.3	D
Overall Intersection		-	**0.65**	**18.9**	**B**	-	**0.85**	**29.2**	**C**
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT									
Flatbush Avenue	NB	LTR	0.52	8.7	A	LTR	0.65	10.3	B
	SB	LTR	0.67	31.1	C	LTR	0.68	31.4	C
Bedford Avenue	WB	TR	0.72	50.5	D	TR	0.79	53.5	D
Overall Intersection		-	**0.76**	**22.6**	**C**	-	**0.79**	**22.8**	**C**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE									
Flatbush Avenue	NB	LTR	0.94	41.4	D	LTR	1.11	90.5	F
	SB	LT	0.65	30.3	C	LT	0.68	31.0	C
Bedford Avenue	NB	LR	0.72	51.4	D	LR	0.80	57.6	E
	SB	LTR	0.18	6.1	A	LTR	0.19	6.1	A
Foster Avenue	EB	LTR	0.93	55.7	E	LTR	1.58	311.7	F
	WB	LTR	1.04	77.8	E	LTR	1.05	82.2	F
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.89**	**40.7**	**D**	-	**1.12**	**82.0**	**F**

TABLE B-6
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD TRAFFIC LEVELS OF SERVICE COMPARISON (EVENING ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS
BEDFORD AVENUE									
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE									
Bedford Avenue	NB	LTR	0.58	15.6	B	LTR	0.62	16.3	B
	SB	LTR	0.68	19.5	B	LTR	0.76	22.9	C
Linden Boulevard	EB	LTR	0.67	36.5	D	LTR	0.82	39.5	D
	WB	LTR	0.87	46.0	D	LTR	1.20	140.6	F
Overall Intersection		-	**0.74**	**30.1**	**C**	-	**0.91**	**57.0**	**E**
9 BEDFORD AVENUE & CHURCH AVENUE									
Bedford Avenue	NB	LTR	0.87	43.2	D	LTR	0.95	56.2	E
	SB	LTR	0.92	48.2	D	LTR	1.24	149.7	F
Church Avenue	EB	LTR	0.90	45.8	D	LTR	0.98	59.7	E
	WB	LTR	0.58	27.5	C	LTR	0.73	33.9	C
		-	-	-	-	-	-	-	-
Overall Intersection		-	**0.91**	**42.5**	**D**	-	**1.11**	**84.6**	**F**
10 BEDFORD AVENUE & TILDEN AVENUE									
Bedford Avenue	NB	LT	0.48	12.3	B	LT	0.71	18.9	B
	SB	TR	0.60	12.6	B	TR	0.94	23.1	C
Tilden Avenue	EB	LR	0.79	63.5	E	LR	1.21	169.7	F
	WB	LTR	0.83	51.4	D	LTR	0.83	51.8	D
Overall Intersection		-	**0.67**	**26.7**	**C**	-	**1.02**	**45.8**	**D**
11 BEDFORD AVENUE & BEVERLEY ROAD									
Bedford Avenue	NB	LTR	0.41	11.9	B	LTR	0.61	15.8	B
	SB	LTR	0.72	18.0	B	LTR	0.84	24.2	C
Beverley Road	EB	LTR	0.80	45.1	D	LTR	1.06	86.4	F
	WB	LTR	0.71	45.3	D	LTR	0.77	48.4	D
Overall Intersection		-	**0.74**	**26.4**	**C**	-	**0.91**	**36.5**	**D**
OCEAN AVENUE									
12 OCEAN AVENUE & CHURCH AVENUE									
Ocean Avenue	NB	L	0.26	22.0	C	L	0.29	22.5	C
		TR	0.58	26.8	C	TR	0.61	27.5	C
	SB	LTR	0.74	30.9	C	LTR	0.76	31.7	C
Church Avenue	EB	LTR	0.69	30.3	C	LTR	0.79	35.0	D
	WB	LTR	0.71	26.8	C	LTR	0.74	27.5	C
Overall Intersection		-	**0.73**	**28.6**	**C**	-	**0.78**	**30.4**	**C**
13 OCEAN AVENUE & BEVERLEY ROAD									
Ocean Avenue	NB	LTR	0.52	13.9	B	LTR	0.59	15.6	B
	SB	LTR	0.57	14.1	B	LTR	0.62	15.0	B
Beverley Road	EB	LTR	1.08	84.2	F	LTR	1.29	177.8	F
	WB	LTR	0.77	48.1	D	LTR	0.95	68.7	E
Overall Intersection		-	**0.73**	**35.6**	**D**	-	**0.83**	**63.2**	**E**
UNSIGNALIZED INTERSECTIONS									
14 FLATBUSH AVENUE & DURYEA PLACE									
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A
	SB	LT	-	16.4	C	LT	-		F
Overall Intersection		-	**-**	**0.3**	**A**	-	**-**	**Note (3)**	**F**

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact

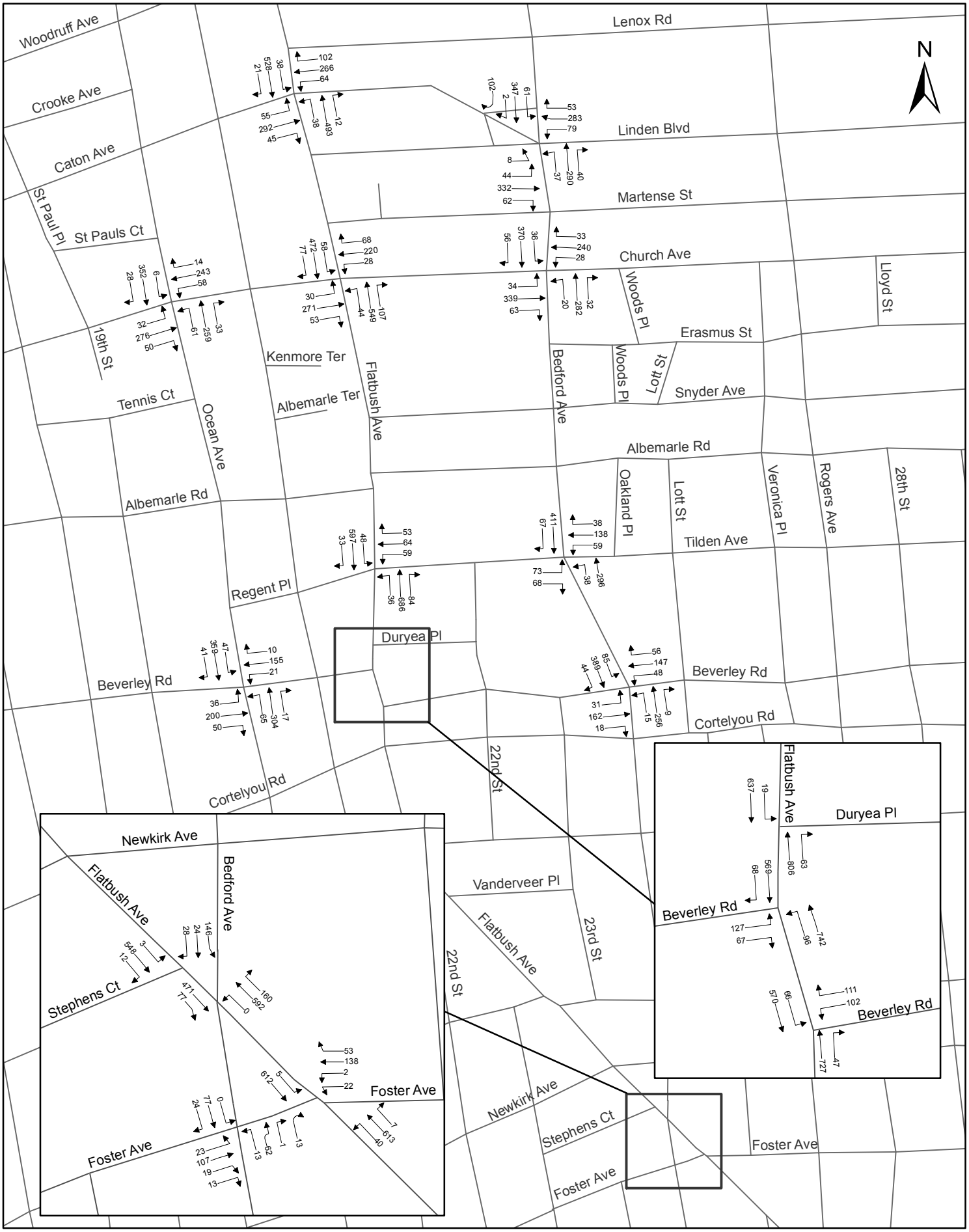

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Figure B-1
2010 Existing Traffic Volumes
Saturday Midday Arrival Peak Hour
Kings Theatre EIS

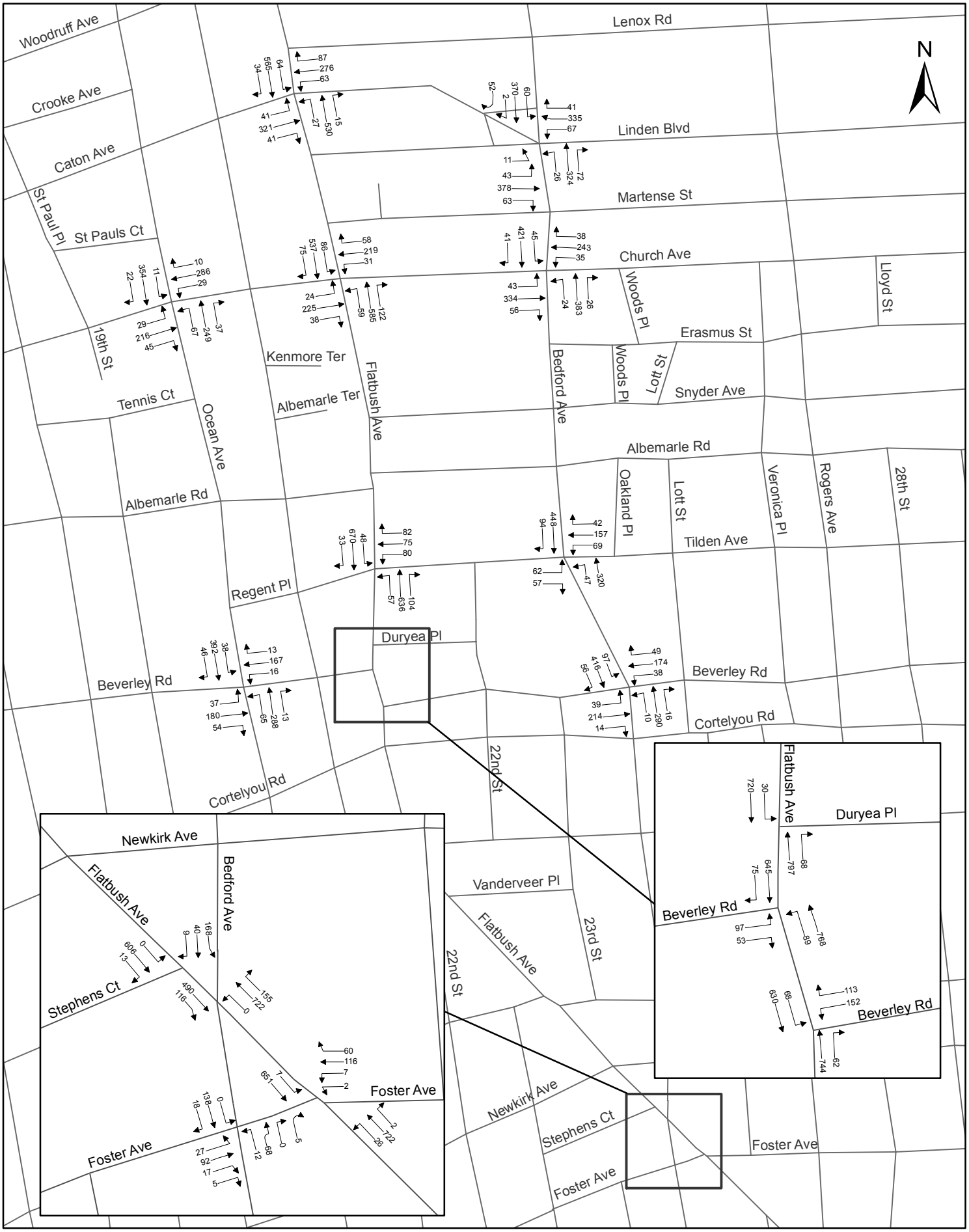

Figure B-2
2010 Existing Traffic Volumes
Saturday Midday Departure Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates

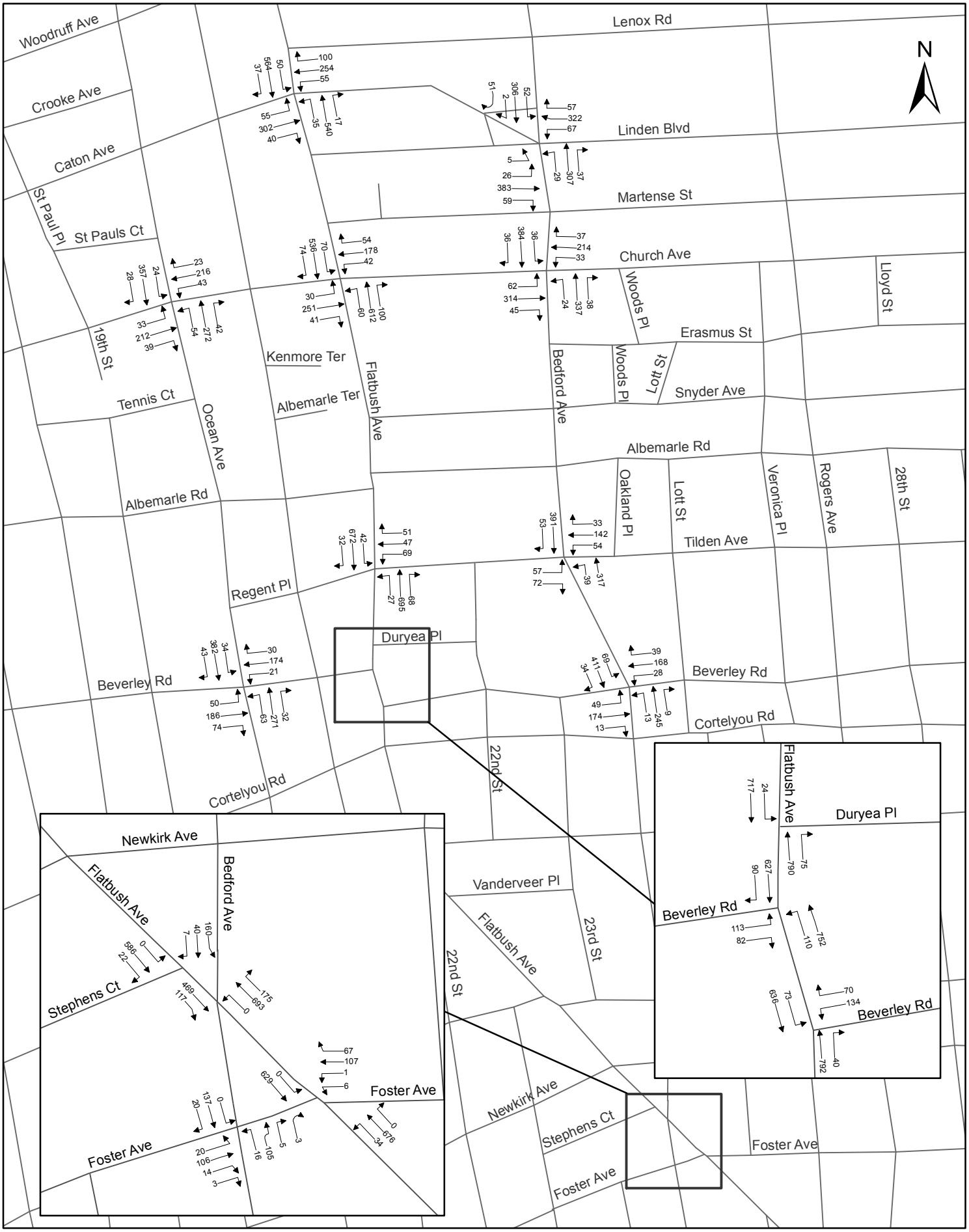

Figure B-3
2010 Existing Traffic Volumes
Saturday Evening Arrival Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates

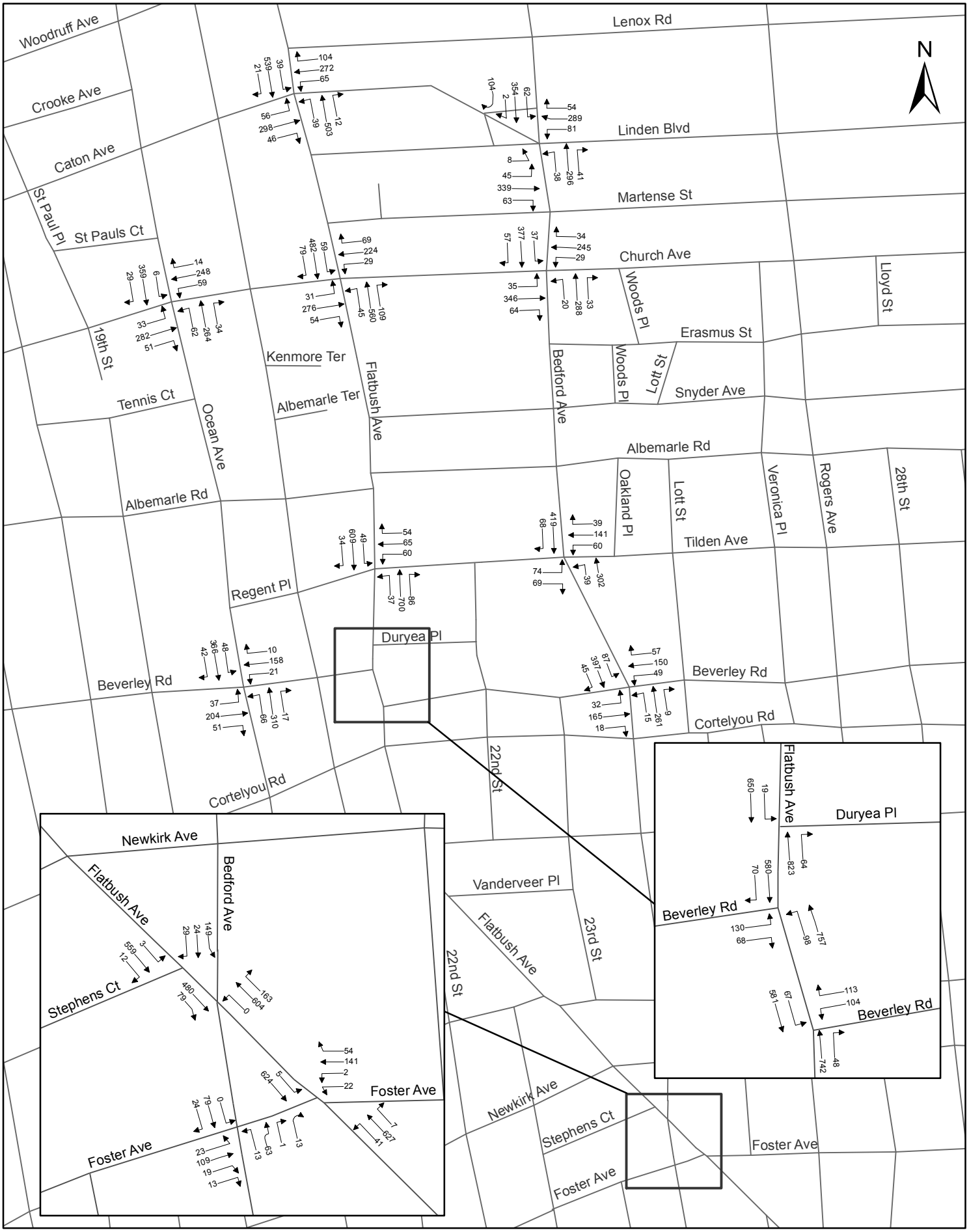

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Figure B-4
2014 No Build Traffic Volumes
Saturday Midday Arrival Peak Hour
Kings Theatre EIS

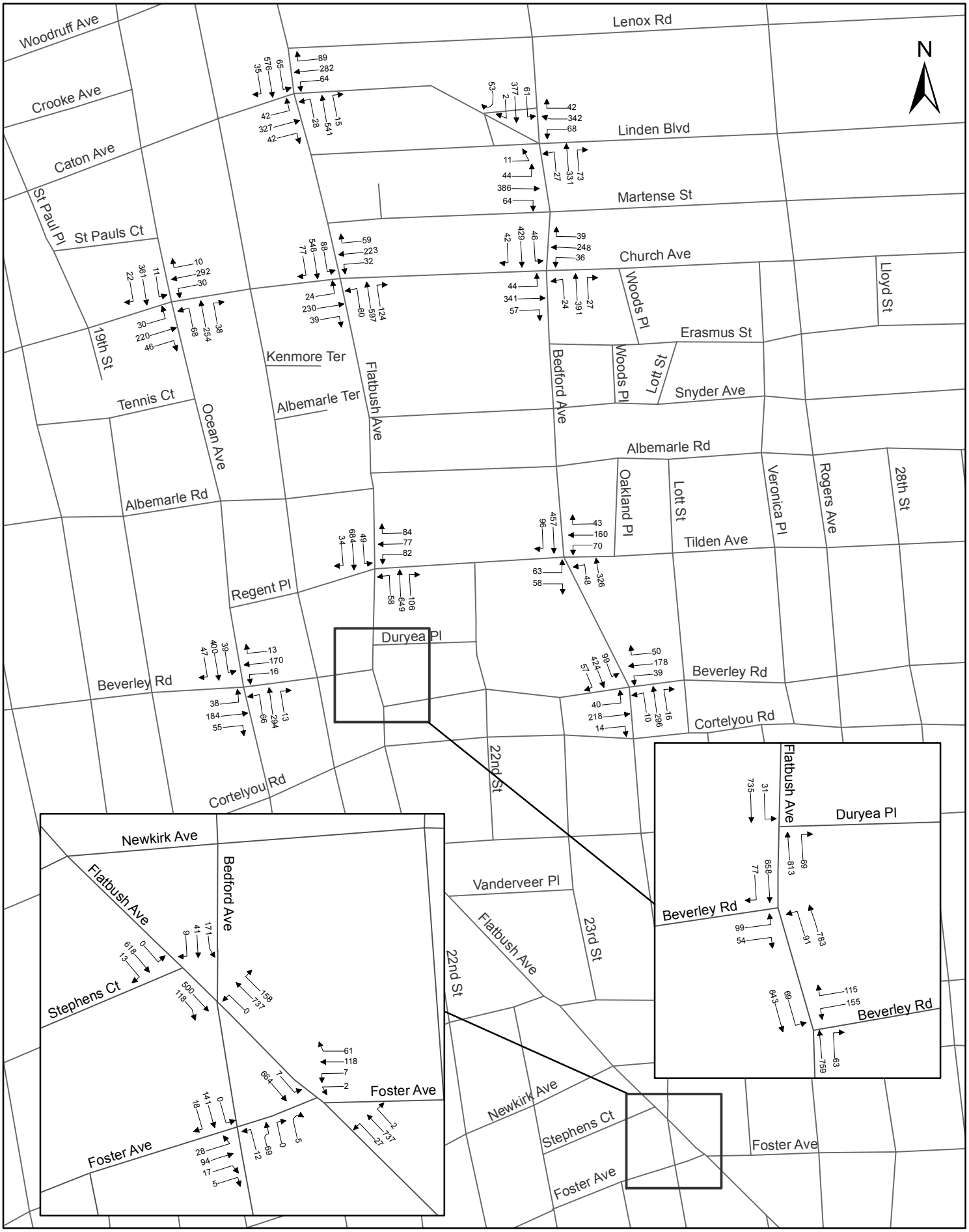


Figure B-5
2014 No Build Traffic Volumes
Saturday Midday Departure Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates

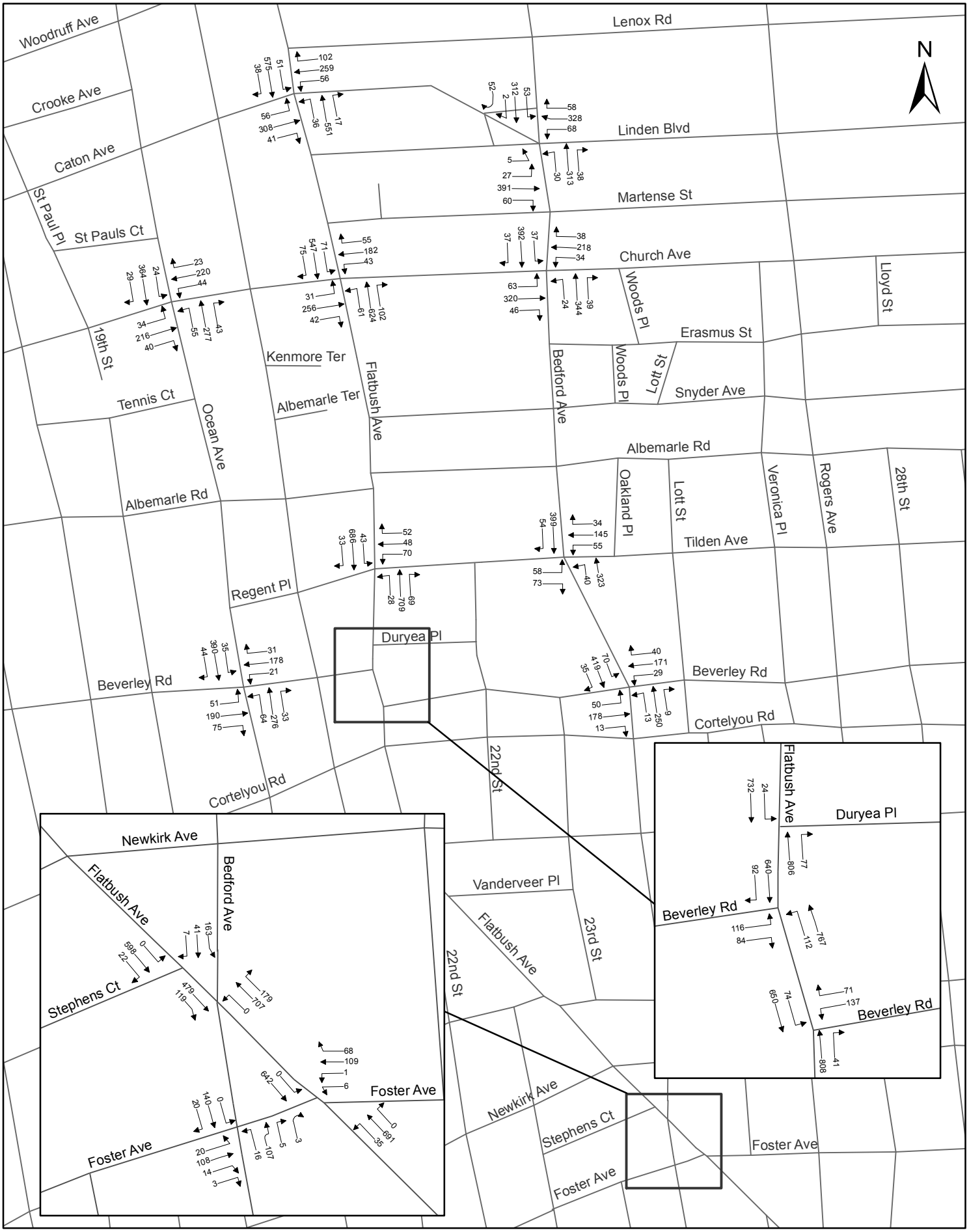
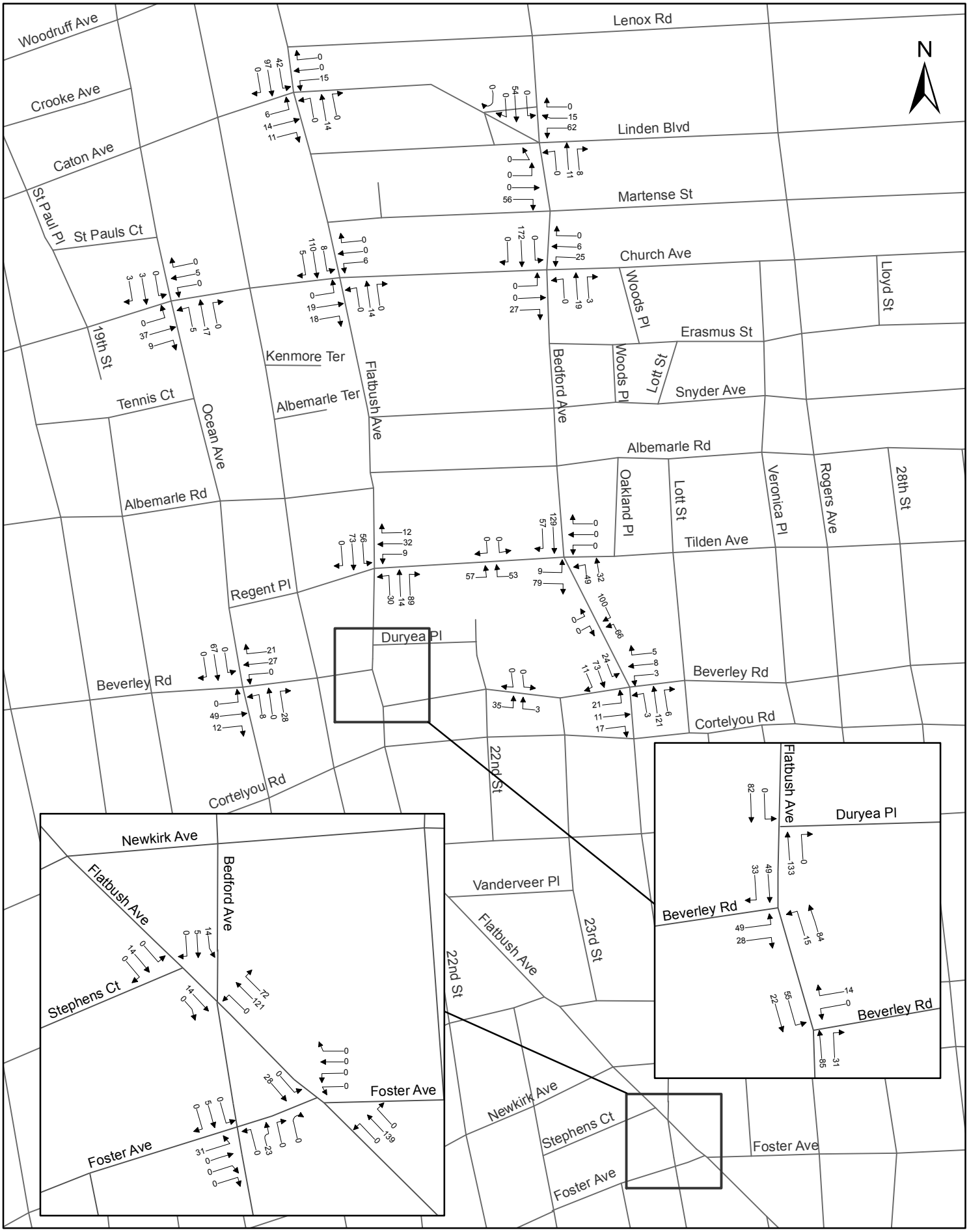


Figure B-6
2014 No Build Traffic Volumes
Saturday Evening Arrival Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates



Eng-Wong, Taub & Associates

Figure B-7
2014 Build Traffic Increments
Saturday Midday Arrival Peak Hour
Kings Theatre EIS

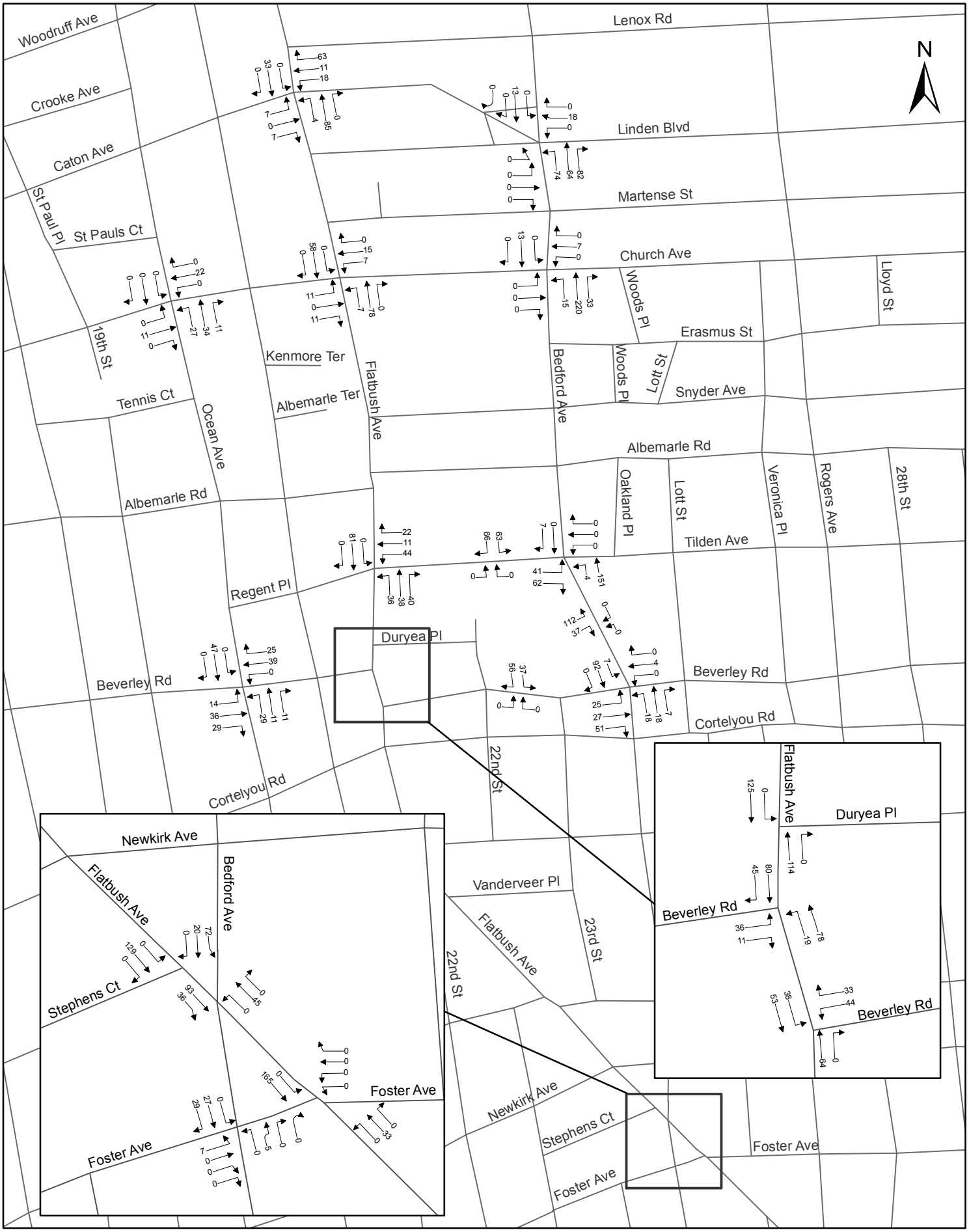


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Figure B-8
2014 Build Traffic Increments
Saturday Midday Departure Peak Hour
Kings Theatre EIS

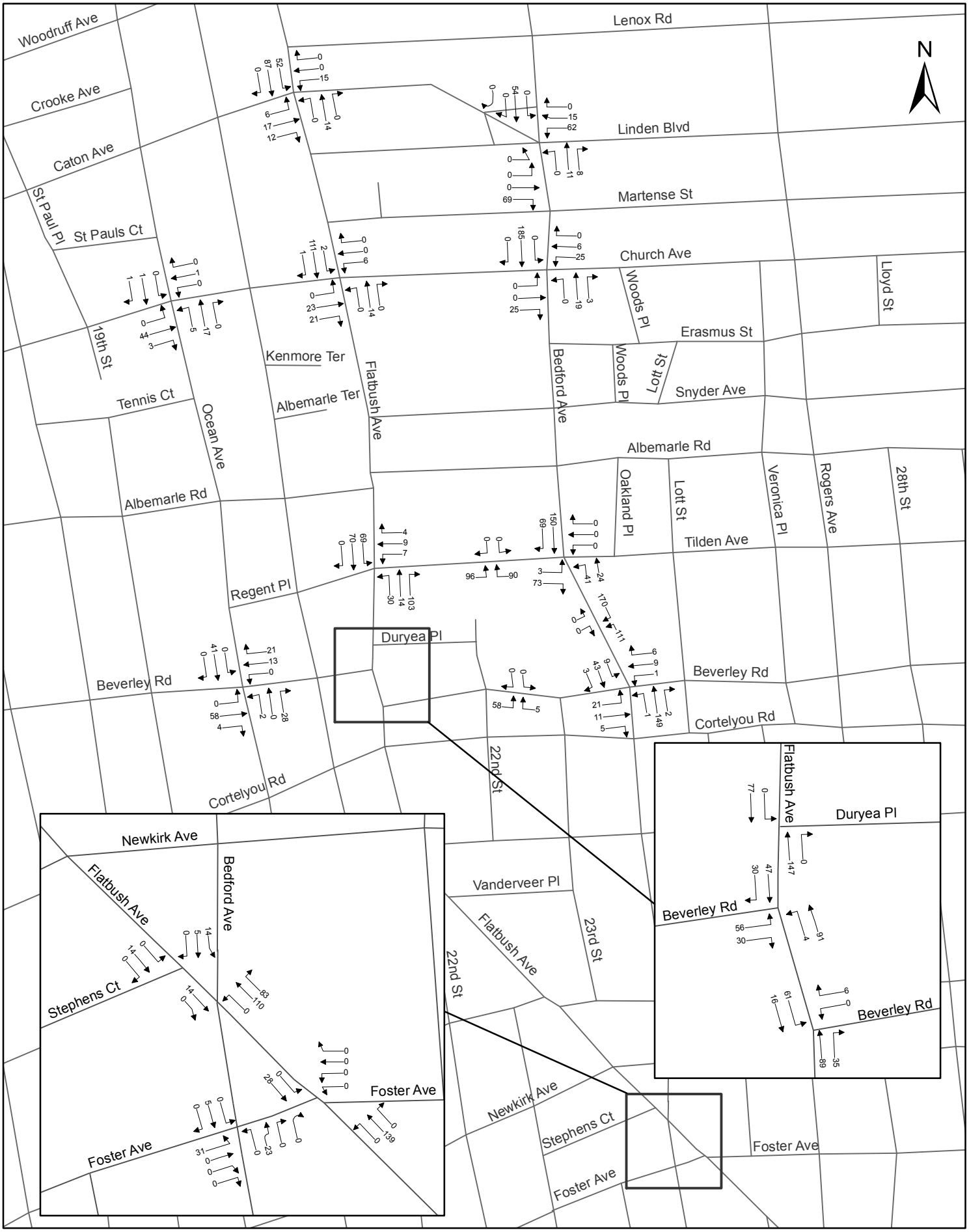

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Figure B-9
2014 Build Traffic Increments
Saturday Evening Arrival Peak Hour
Kings Theatre EIS

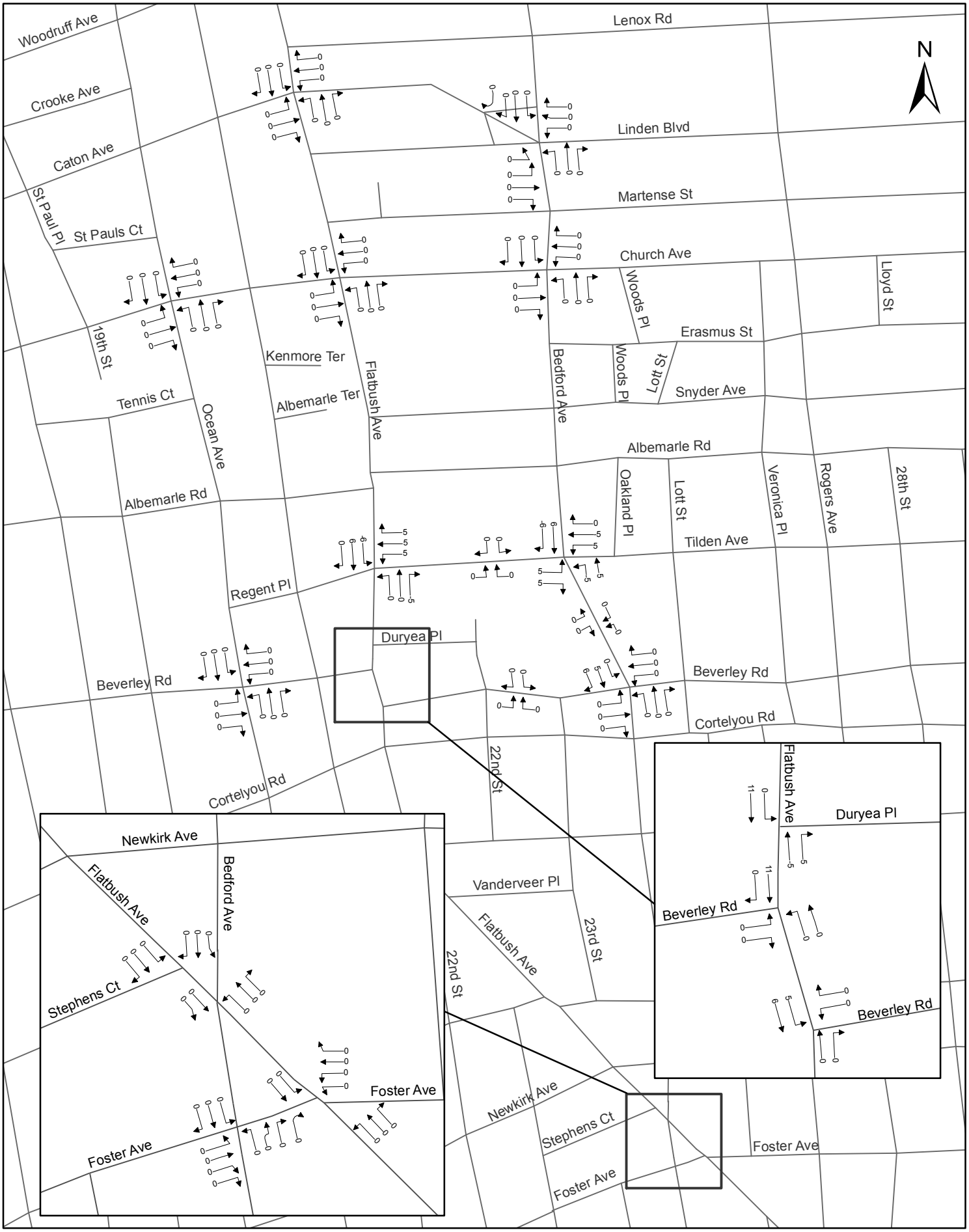

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Figure B-10
2014 Build Traffic Diversions
Saturday Midday Arrival Peak Hour
Kings Theatre EIS

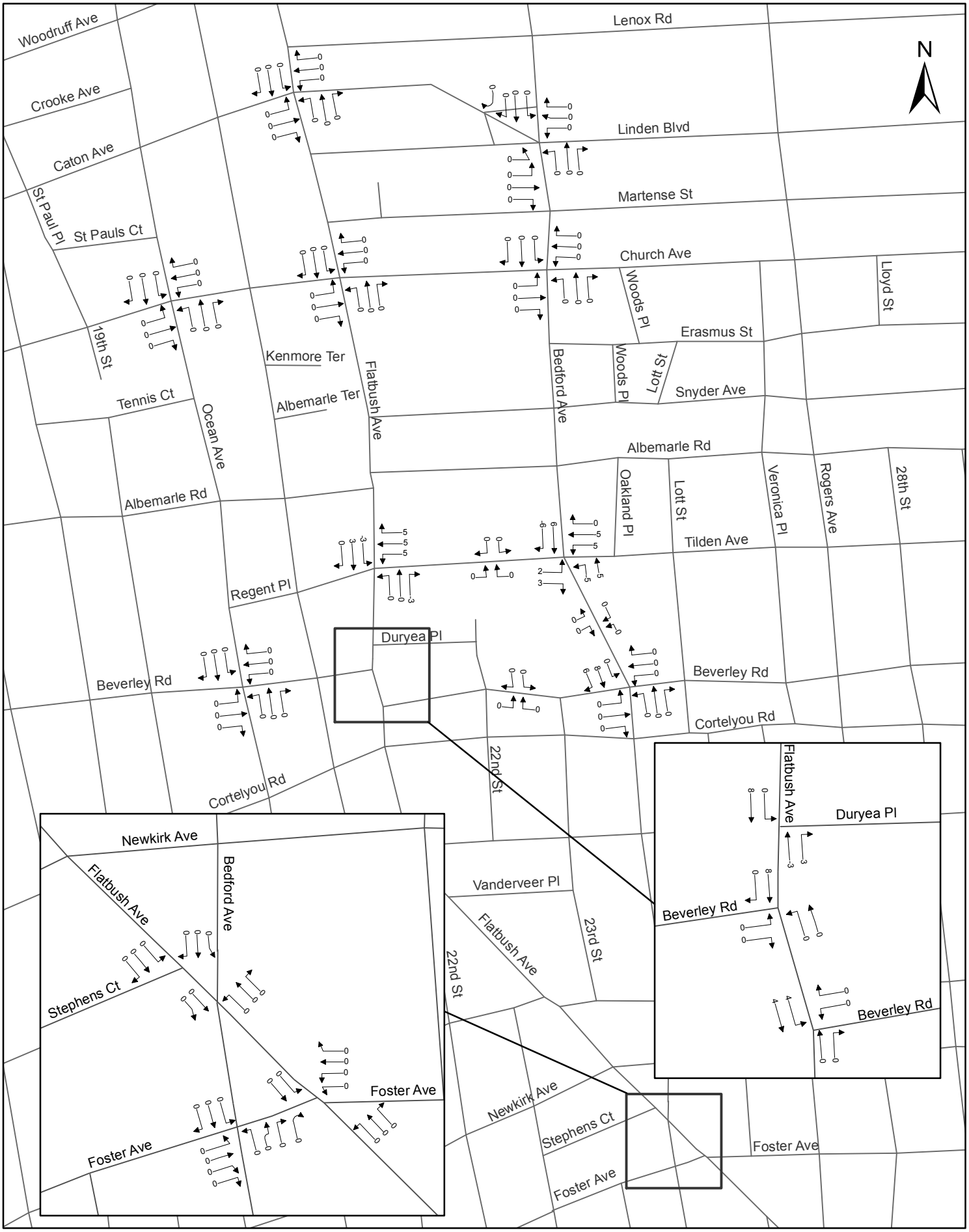

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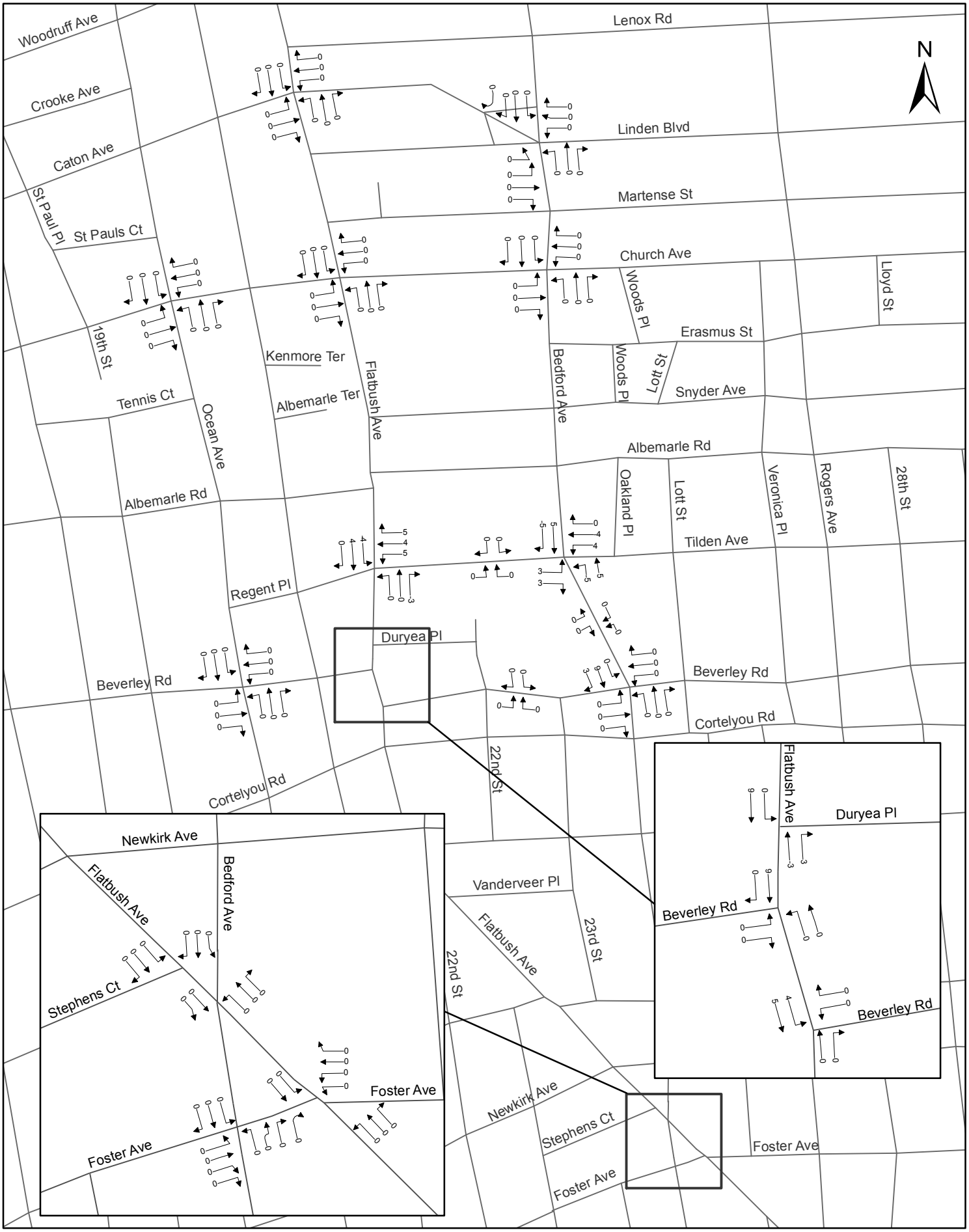
Figure B-11
2014 Build Traffic Diversions
Saturday Midday Departure Peak Hour
Kings Theatre EIS



Eng-Wong, Taub & Associates

Figure B-12
2014 Build Traffic Diversions
Saturday Evening Arrival Peak Hour
Kings Theatre EIS

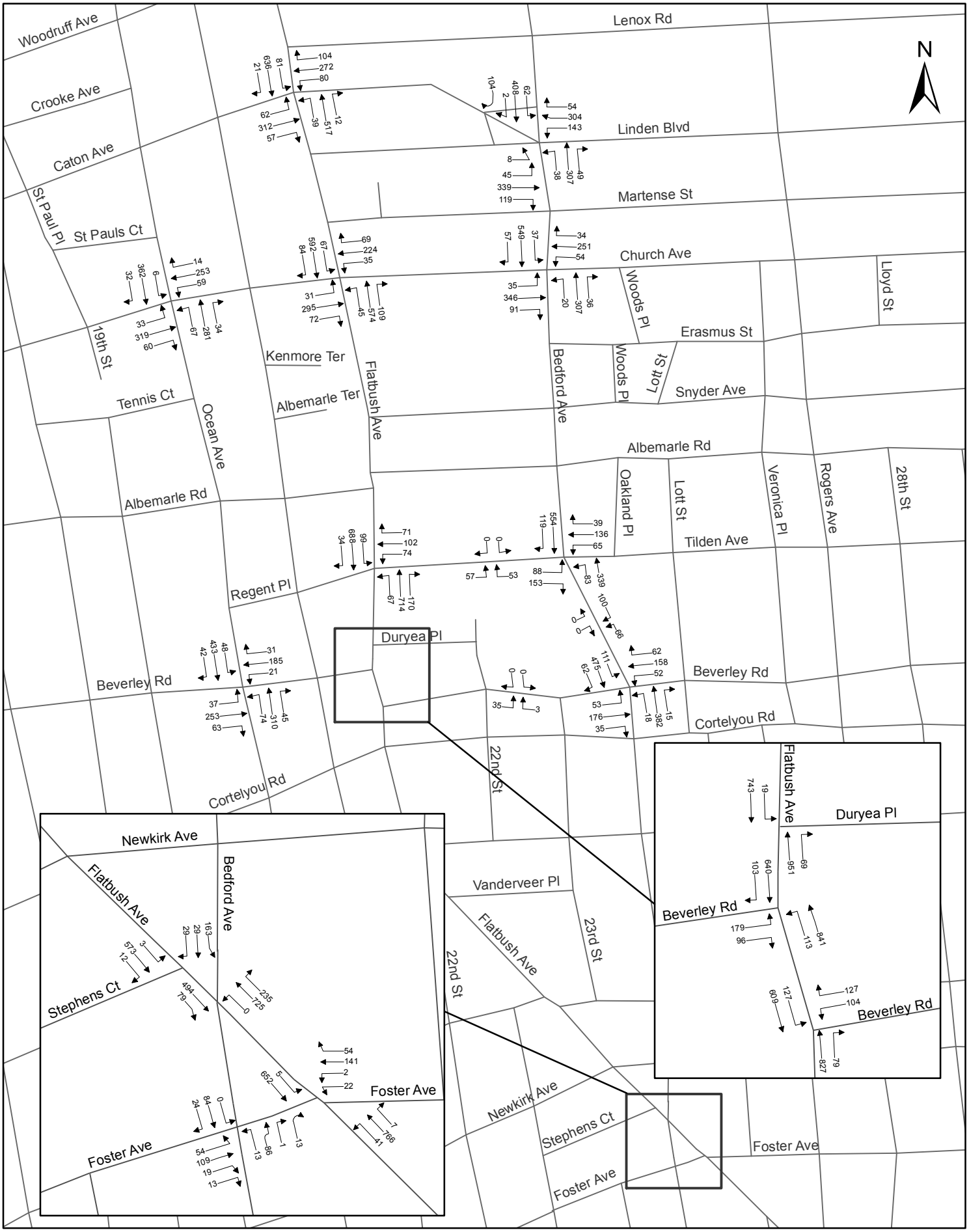


Figure B-13
2014 Build Traffic Volumes
Saturday Midday Arrival Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates

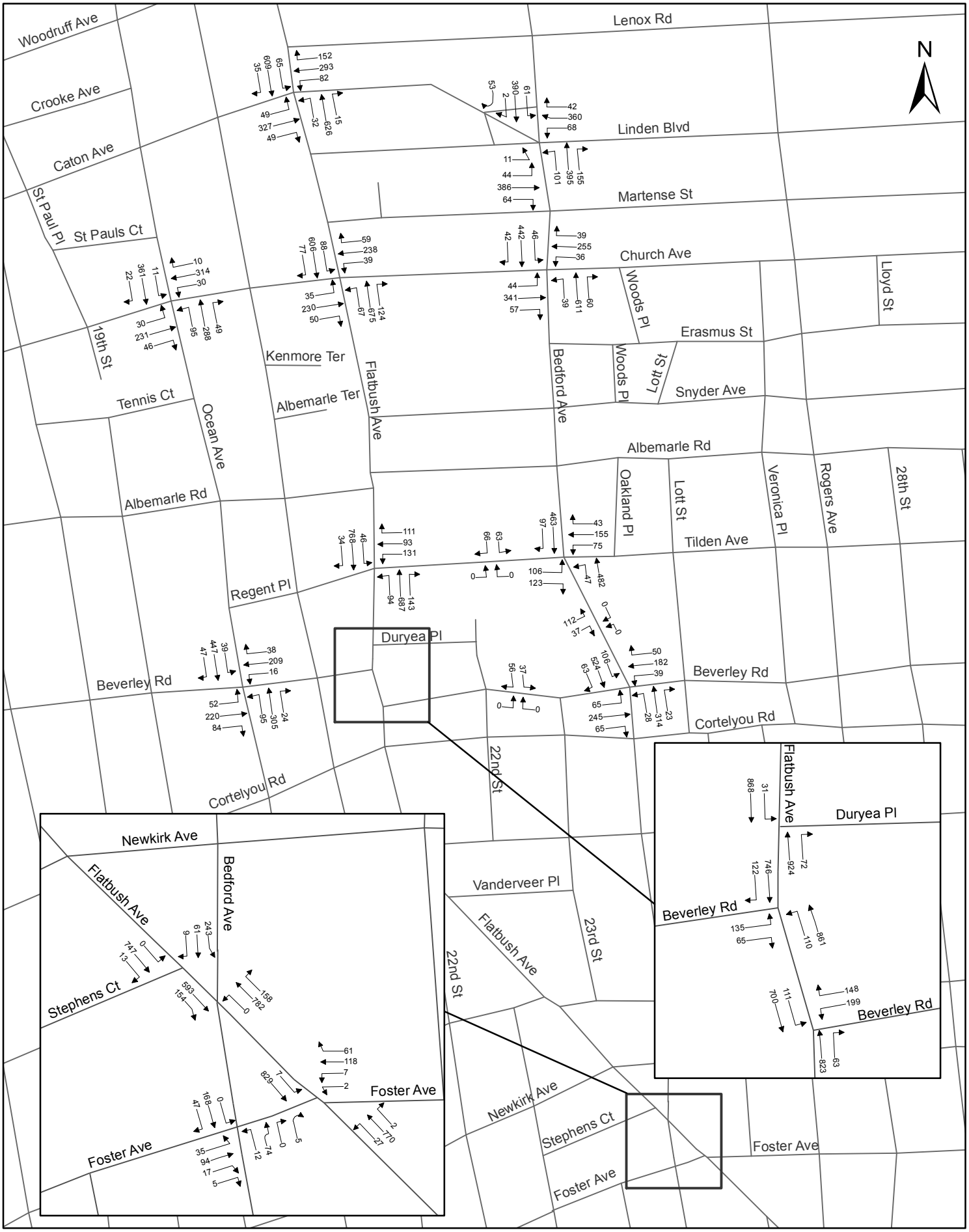


Figure B-14
2014 Build Traffic Volumes
Saturday Midday Departure Peak Hour
Kings Theatre EIS

Eng-Wong, Taub & Associates

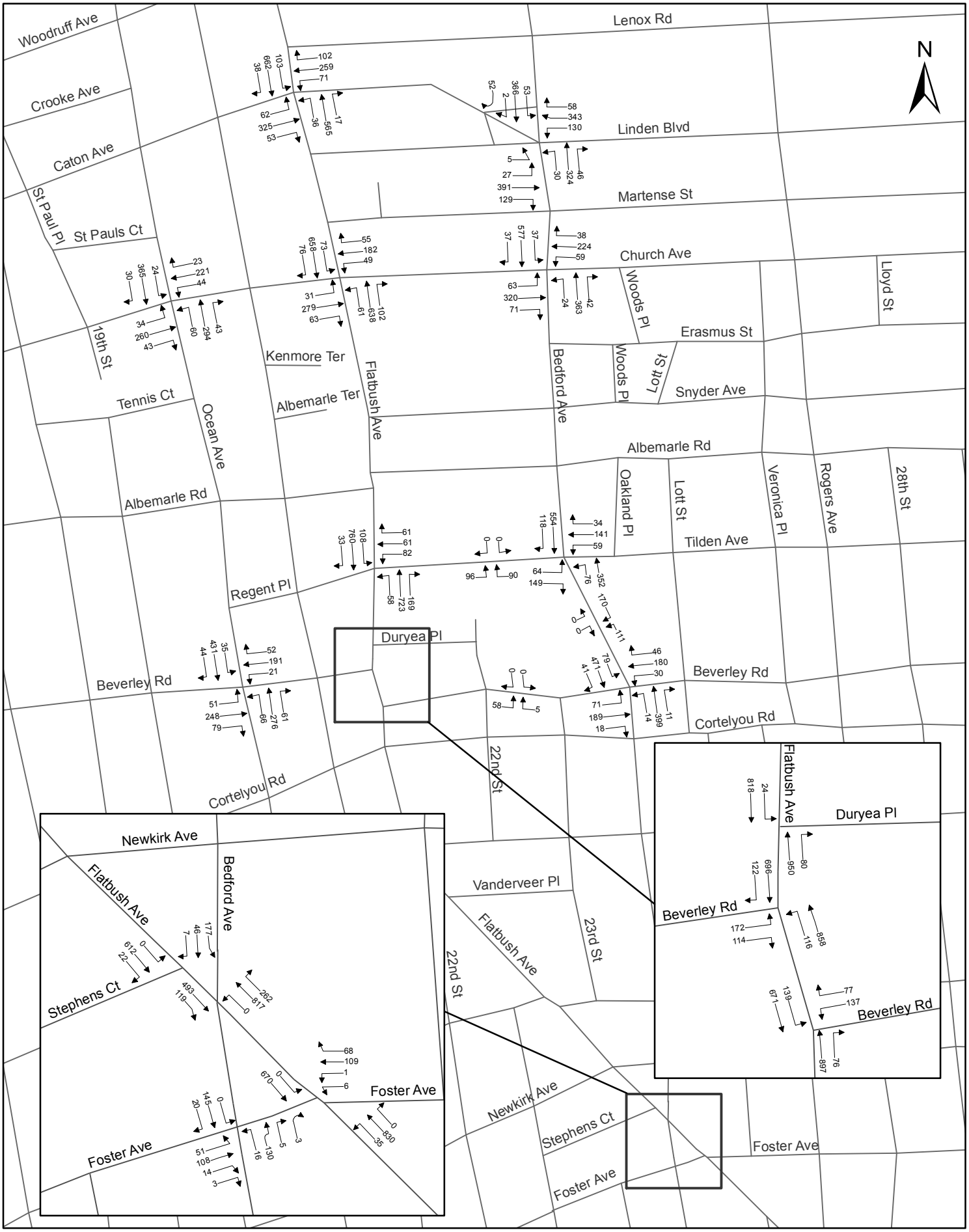


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Figure B-15
2014 Build Traffic Volumes
Saturday Evening Arrival Peak Hour
Kings Theatre EIS

APPENDIX C

TABLE C-1
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
SIGNALIZED INTERSECTIONS														
FLATBUSH AVENUE														
1 FLATBUSH AVENUE & CATON AVENUE														
Flatbush Avenue	NB	LTR	0.55	17.5	B	LTR	0.58	18.0	B	LTR	0.58	18.0	B	- Shift the centerline of Caton Avenue west of Flatbush Avenue 1-ft. the north. Restripe the EB approach from one
	SB	LTR	0.58	19.1	B	LTR	0.88	32.7	C	LTR	0.88	32.7	C	20-ft. lane with parking to one 10-ft. left turn lane and one 11-ft. through-right lane for 75-ft. from the stop bar.
Caton Avenue	EB	LTR	1.02	58.7	E	LTR	1.13	99.4	F	L	0.42	29.9	C	- Shift the centerline of Caton Avenue east of Flatbush Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	TR	0.80	36.0	D	one 27-ft. lane with parking to one 10-ft. left turn lane, and one 18-ft. through-right lane with parking for 100-ft. from
	WB	LTR	0.99	57.8	E	LTR	1.11	98.9	F	L	0.47	32.2	C	the stop bar.
		-	-	-	-	-	-	-	-	TR	0.85	41.0	D	
Overall Intersection		**-**	**0.76**	**34.0**	**C**	**-**	**0.98**	**53.6**	**D**	**-**	**0.87**	**30.4**	**C**	
2 FLATBUSH AVENUE & CHURCH AVENUE														
Flatbush Avenue	NB	L	0.40	23.5	C	L	0.52	29.9	C	L	0.52	29.9	C	- **Partially Mitigated.**
		T	0.85	34.0	C	T	0.87	35.7	D	TR	0.65	24.1	C	- Shift the centerline of Church Avenue west of Flatbush Avenue 1-ft. to the north. Restripe the EB approach from
		R	0.65	32.3	C	R	0.65	32.3	C	-	-	-	-	one 10-ft. left-through lane and one 11-ft. right turn lane to one 11-ft. left-though lane and one 11-ft. right turn lane.
	SB	L	0.61	34.7	C	L	0.73	44.6	D	L	0.56	29.3	C	- Restripe the NB approach from one 10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. right turn lane to one
		T	0.70	26.7	C	T	0.87	35.1	D	T	0.87	35.1	D	10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. through-right lane. [Measure reflect improvements needed
		R	0.51	25.6	C	R	0.54	26.7	C	R	0.54	26.7	C	for the Saturday Midday Departure and Evening Arrival peak periods]
Church Avenue	EB	LT	0.96	69.3	E	LT	1.03	86.5	F	LT	0.98	72.5	E	- Restripe the NB receiving side from one 22-ft. lane to two 11-ft. lanes.
		R	0.54	45.6	D	R	0.72	56.1	E	R	0.72	56.1	E	- Provide advance warning signage to inform motorists of the NB receiving side's lane transition to the downstream
	WB	LT	0.93	64.5	E	LT	1.11	115.5	F	LT	1.11	115.5	F	intersection.
		R	0.57	46.7	D	R	0.57	46.7	D	R	0.35	37.4	D	
Overall Intersection		**-**	**0.89**	**41.3**	**D**	**-**	**0.96**	**52.6**	**D**	**-**	**0.95**	**46.4**	**D**	
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE														
Flatbush Avenue	NB	LTR	0.70	17.3	B	LTR	1.00	41.4	D	LTR	1.00	41.4	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach and south curb of the EB
	SB	LTR	0.61	16.1	B	LTR	0.95	36.6	D	LTR	0.95	36.6	D	receiving side for 150-ft. to allow for two moving lanes along the WB approach.
Tilden Avenue	WB	LTR	0.64	41.4	D	LTR	0.89	59.0	E	LT	0.46	35.5	D	- Provide lane striping for the WB approach. Stripe the approach as one 11-ft. left-through lane, one 11-ft. right turn lane,
		-	-	-	-	-	-	-	-	R	0.39	35.9	D	and one 13-ft. EB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. east of the stop bar, stripe a
														centerline that tapers to the middle of the roadway.
Overall Intersection		**-**	**0.68**	**19.7**	**B**	**-**	**0.96**	**42.0**	**D**	**-**	**0.82**	**38.7**	**D**	
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH														
Flatbush Avenue	NB	LT	0.91	30.6	C	LT	1.10	79.5	E	LT	0.97	38.9	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 150-ft. to
	SB	TR	0.47	13.6	B	TR	0.55	14.9	B	TR	0.56	15.1	B	allow for two moving lanes.
Beverley Road North	EB	LR	0.58	35.8	D	LR	0.85	42.7	D	L	0.46	33.9	C	- Restripe the EB approach from one 22-ft. lane with parking to one travel 11-ft. lane and one 11-ft. lane which would
		-	-	-	-	-	-	-	-	R	0.47	34.6	C	serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
														- Install "No Standing 12 PM - 8 PM Saturday" regulations along the east curb of the NB approach for 100-ft to
Overall Intersection		**-**	**0.80**	**25.3**	**C**	**-**	**1.02**	**52.0**	**D**	**-**	**0.80**	**29.9**	**C**	increase the lane width of the approach from 10-ft to 12-ft.
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH														
Flatbush Avenue	NB	TR	0.55	14.7	B	TR	0.64	16.4	B	TR	0.64	16.4	B	- Mitigation not required.
	SB	LT	0.62	16.9	B	LT	0.91	34.7	C	LT	0.95	40.5	D	- **[Build with Mitigation delay increases are due to diversions that resulted from the Flatbush**
Beverley Road South	WB	LR	0.71	39.1	D	LR	0.76	40.4	D	LR	0.76	40.4	D	**Avenue and Duryea Place intersection mitigation.]**
Overall Intersection		**-**	**0.65**	**19.0**	**B**	**-**	**0.86**	**26.2**	**C**	**-**	**0.88**	**28.4**	**C**	

TABLE C-1
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT														
Flatbush Avenue	NB	LTR	0.50	8.6	A	LTR	0.65	10.3	B	LTR	0.65	10.3	B	- Mitigation not required.
	SB	LTR	0.73	33.9	C	LTR	0.75	34.8	C	LTR	0.72	32.3	C	- Modify signal timing: shift 2 s of green time from NB-lead phase to NB/SB phase [NB-lead green time shifts from
Bedford Avenue	WB	TR	0.66	52.1	D	TR	0.72	55.4	E	TR	0.72	55.4	E	25 s to 23 s; NB/SB green time shifts from 49 s to 51 s; WB/NB-R green time remains the same].
														- **[Signal timing shift due to mitigation measures at the Flatbush Avenue and Bedford Avenue/**
Overall Intersection		**-**	**0.78**	**24.0**	**C**	**-**	**0.80**	**24.2**	**C**	**-**	**0.78**	**23.3**	**C**	**Foster Avenue intersection].**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE														
Flatbush Avenue	NB	LTR	0.98	46.0	D	LTR	1.17	115.6	F	LTR	0.97	42.0	D	- Install "No Standing Anytime" regulations along the south curb of the EB approach for the entire block (230 ft.) to
	SB	LT	0.67	30.6	C	LT	0.70	31.4	C	LT	0.67	29.5	C	allow for two moving lanes.
Bedford Avenue	NB	LR	0.46	42.5	D	LR	0.54	45.4	D	LR	0.54	45.4	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left turn lane and one 11-ft. through-right lane
	SB	LTR	0.12	5.7	A	LTR	0.13	5.7	A	TR	0.13	5.1	A	for 230-ft. from the stop bar.
Foster Avenue	EB	LTR	0.98	69.8	E	LTR	1.50	278.1	F	L	0.50	47.2	D	- Restripe the WB approach from one 22-ft. lane to one 11-ft. left-through lane and one 11-ft. right turn lane for 75-ft.
		-	-	-	-	-	-	-	-	TR	0.76	51.4	D	from the stop bar.
	WB	LTR	1.05	81.0	F	LTR	1.06	84.2	F	LT	0.89	54.0	D	- Install "No Standing 12 PM - 8 PM Saturday" along the east curb of the NB Flatbush Avenue approach for 250-ft.
		-	-	-	-	-	-	-	-	R	0.29	43.3	D	to increase the lane width of the approach from 11-ft to 12-ft.
														- Modify signal timing: shift 2 s of green time from the EB/WB phase to the NB/SB Flatbush Avenue/SB Bedford
Overall Intersection		**-**	**0.84**	**44.4**	**D**	**-**	**1.06**	**92.1**	**F**	**-**	**0.83**	**38.0**	**D**	Avenue phase [EB/WB green time shifts from 23 s to 21 s; NB/SB Flatbush Avenue/SB Bedford Avenue green
														time shifts from 49 s to 51 s; NB/SB Bedford Avenue green time remains the same].
BEDFORD AVENUE														
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE														
Bedford Avenue	NB	LTR	0.61	16.6	B	LTR	0.65	17.7	B	LTR	0.68	20.1	C	- **Partially Mitigated.**
	SB	LTR	0.81	24.2	C	LTR	0.90	30.8	C	LTR	0.94	38.7	D	- Modify signal timing: shift 3 s from NB/SB phase to the EB/WB phase [NB/SB green time shifts from 73 s to 70 s;
Linden Boulevard	EB	LTR	0.91	42.5	D	LTR	0.99	49.8	D	LTR	0.89	39.9	D	EB/WB green time shifts from 37 s to 40 s].
	WB	LTR	0.93	46.5	D	DefL	1.29	182.9	F	DefL	1.11	105.8	F	
		-	-	-	-	TR	1.01	62.5	E	TR	0.93	46.4	D	
Overall Intersection		**-**	**0.85**	**32.8**	**C**	**-**	**1.03**	**49.7**	**D**	**-**	**1.01**	**41.2**	**D**	
9 BEDFORD AVENUE & CHURCH AVENUE														
Bedford Avenue	NB	LTR	0.74	33.0	C	LTR	0.80	36.3	D	LTR	0.80	36.3	D	- **Partially Mitigated.**
	SB	LTR	0.95	48.0	D	LTR	1.26	154.9	F	LTR	1.26	154.9	F	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left-through lane and one 11-ft. right turn lane.
Church Avenue	EB	LTR	0.93	47.7	D	LTR	1.02	66.7	E	LT	0.67	28.7	C	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 75-ft. to allow
		-	-	-	-	-	-	-	-	R	0.31	21.8	C	for two moving lanes.
	WB	LTR	0.72	31.3	C	LTR	0.92	48.8	D	LT	0.84	39.7	D	- Shift the centerline of Church Avenue east of Bedford Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	R	0.13	19.2	B	one 22-ft. lane with parking to one 12-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the
														peak analysis periods and allow for parking for all other time periods.
Overall Intersection		**-**	**0.94**	**40.9**	**D**	**-**	**1.14**	**86.5**	**F**	**-**	**1.05**	**74.6**	**E**	
10 BEDFORD AVENUE & TILDEN AVENUE														
Bedford Avenue	NB	LT	0.47	12.2	B	LT	0.77	21.7	C	LT	0.77	21.7	C	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 150-ft. to allow for two
	SB	TR	0.66	13.3	B	TR	0.94	21.5	C	TR	0.94	21.5	C	moving lanes.
Tilden Avenue	EB	LR	0.92	82.9	F	LR	1.50	287.0	F	LT	0.58	47.9	D	- Provide lane striping for the EB approach. Stripe the approach as one 10-ft. left turn lane, one 11-ft. right turn lane,
		-	-	-	-	-	-	-	-	R	0.71	51.5	D	and one 13-ft. WB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. west of the stop bar, stripe a
	WB	LTR	0.79	49.9	D	LTR	0.79	50.4	D	LTR	0.82	52.2	D	centerline that tapers to the middle of the roadway.
														- Restripe the WB approach from one 34-ft. travel lane with parking on both sides to one 23-ft. travel lane with
Overall Intersection		**-**	**0.74**	**28.4**	**C**	**-**	**1.10**	**64.9**	**E**	**-**	**0.90**	**30.7**	**C**	parking, one 3-ft. chevron (blockbuster treatment) for 50-ft., and one 8-ft. parking lane.

TABLE C-1
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
11 BEDFORD AVENUE & BEVERLEY ROAD														
Bedford Avenue	NB	LTR	0.40	11.7	B	LTR	0.59	15.2	B	LTR	0.59	15.2	B	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 125-ft. to allow for two moving lanes.
	SB	LTR	0.67	15.9	B	LTR	0.88	26.1	C	LTR	0.88	26.1	C	
Beverley Road	EB	LTR	0.79	49.3	D	LTR	1.20	151.0	F	L	0.53	42.5	D	- Restripe the EB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft. left turn lane tapered back 125-ft to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft. receiving lane with parking.
		-	-	-	-	-	-	-	-	TR	0.66	43.0	D	
	WB	LTR	0.88	45.0	D	LTR	0.98	54.1	D	L	0.35	35.4	D	
		-	-	-	-	-	-	-	-	TR	0.68	39.7	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach for 75-ft. to allow for two moving lanes.
Overall Intersection		**-**	**0.73**	**26.2**	**C**	**-**	**0.98**	**49.8**	**D**	**-**	**0.82**	**28.3**	**C**	- Restripe the WB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft. left turn lane tapered back 125-ft. to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft. receiving lane with parking.
OCEAN AVENUE														
12 OCEAN AVENUE & CHURCH AVENUE														
Ocean Avenue	NB	L	0.34	23.9	C	L	0.37	24.7	C	L	0.39	26.7	C	- Install "No Standing 12 PM - 2 PM Saturday" regulations along the south curb of the EB approach for 100-ft. to increase the lane width of the approach.
		TR	0.57	26.5	C	TR	0.60	27.2	C	TR	0.62	29.1	C	
	SB	LTR	0.69	29.4	C	LTR	0.70	29.8	C	LTR	0.73	32.2	C	- Modify signal timing: shift 2 s of green time from the NB/SB phase to the EB/WB phase [NB/SB green time shifts from 55 s to 53 s; EB/WB green time shifts from 55 s to 57 s].
Church Avenue	EB	LTR	1.01	71.8	E	LTR	1.12	108.2	F	LTR	1.01	68.6	E	
	WB	LTR	1.00	53.7	D	LTR	1.05	69.7	E	LTR	0.99	51.9	D	
Overall Intersection		**-**	**0.84**	**45.0**	**D**	**-**	**0.88**	**59.1**	**E**	**-**	**0.87**	**45.6**	**D**	
13 OCEAN AVENUE & BEVERLEY ROAD														
Ocean Avenue	NB	LTR	0.58	15.0	B	LTR	0.69	18.0	B	LTR	0.69	18.0	B	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 125-ft. to allow for two moving lanes.
	SB	LTR	0.58	14.3	B	LTR	0.66	16.0	B	LTR	0.66	16.0	B	
Beverley Road	EB	LTR	0.92	46.5	D	LTR	1.14	108.3	F	LT	0.89	44.6	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
		-	-	-	-	-	-	-	-	R	0.32	34.2	C	
	WB	LTR	0.58	41.6	D	LTR	0.76	49.8	D	LT	0.66	44.5	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 100-ft. to allow for two moving lanes.
		-	-	-	-	-	-	-	-	R	0.14	33.0	C	
Overall Intersection		**-**	**0.69**	**25.3**	**C**	**-**	**0.83**	**42.2**	**D**	**-**	**0.75**	**26.6**	**C**	- Restripe the WB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
UNSIGNALIZED INTERSECTIONS														
14 FLATBUSH AVENUE & DURYEA PLACE														
	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A	- Install "No Left Turns 12 PM - 8 PM Saturday" signage along the SB approach to prohibit left turns during the peak analysis periods.
	SB	LT	-	20.2	C	LT	-		F	LT	FREE	FLOW	A	
Overall Intersection		**-**	**-**	**0.4**	**A**	**-**	**-**	**Note 3)**	**F**	**-**	**-**	**0.0**	**A**	

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact

TABLE C-2
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY DEPARTURE PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build				2014 Build				2014 Build with Mitigation				Mitigation Measures
		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
SIGNALIZED INTERSECTIONS														
FLATBUSH AVENUE														
1 FLATBUSH AVENUE & CATON AVENUE														
Flatbush Avenue	NB	LTR	0.55	17.5	B	LTR	0.63	19.0	B	LTR	0.64	19.8	B	- Shift the centerline of Caton Avenue west of Flatbush Avenue 1-ft. the north. Restripe the EB approach from one
	SB	LTR	0.69	21.5	C	LTR	0.75	23.5	C	LTR	0.76	24.6	C	20-ft. lane with parking to one 10-ft. left turn lane and one 11-ft. through-right lane for 75-ft. from the stop bar.
Caton Avenue	EB	LTR	0.99	48.7	D	LTR	1.12	95.1	F	L	0.47	30.2	C	- Shift the centerline of Caton Avenue east of Flatbush Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	TR	0.78	34.9	C	one 27-ft. lane with parking to one 10-ft. left turn lane, and one 18-ft. through-right lane with parking for 100-ft. from
	WB	LTR	1.01	62.9	E	LTR	1.32	186.5	F	L	0.50	32.0	C	the stop bar.
		-	-	-	-	-	-	-	-	TR	1.01	61.6	E	- Modify signal timing: shift 1 s of green time from NB/SB phase to EB/WB phase [NB/SB green time shifts from
														67 s to 66 s; EB/WB green time shifts from 43 s to 44 s].
Overall Intersection		-	**0.82**	**33.7**	**C**	-	**0.97**	**70.3**	**E**	-	**0.86**	**31.9**	**C**	
2 FLATBUSH AVENUE & CHURCH AVENUE														
Flatbush Avenue	NB	L	0.51	26.2	C	L	0.68	36.2	D	L	0.68	36.2	D	- **Partially Mitigated.**
		T	0.85	32.0	C	T	0.96	44.1	D	TR	0.70	24.7	C	- Shift the centerline of Church Avenue west of Flatbush Avenue 1-ft. to the north. Restripe the EB approach from
		R	0.65	30.1	C	R	0.65	30.1	C	-	-	-	-	one 10-ft. left-through lane and one 11-ft. right turn lane to one 11-ft. left-though lane and one 11-ft. right turn lane.
	SB	L	0.91	62.8	E	L	1.23	169.5	F	L	0.78	40.9	D	- Restripe the NB approach from one 10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. right turn lane to one
		T	0.79	28.7	C	T	0.88	33.4	C	T	0.88	33.4	C	10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. through-right lane.
		R	0.58	26.6	C	R	0.58	26.6	C	R	0.58	26.6	C	- Restripe the NB receiving side from one 22-ft. lane to two 11-ft. lanes.
Church Avenue	EB	LT	0.91	64.0	E	LT	1.19	149.2	F	LT	1.13	125.6	F	- Provide advance warning signage to inform motorists of the NB receiving side's lane transition to the downstream
		R	0.45	45.9	D	R	0.58	51.9	D	R	0.58	51.9	D	intersection.
	WB	LT	0.95	60.5	E	LT	1.17	128.8	F	LT	1.17	128.8	F	
		R	0.62	47.6	D	R	0.62	47.6	D	R	0.40	40.2	D	
Overall Intersection		-	**0.94**	**40.7**	**D**	-	**1.23**	**69.1**	**E**	-	**0.99**	**54.6**	**D**	
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE														
Flatbush Avenue	NB	LTR	0.71	18.0	B	LTR	0.99	42.6	D	LTR	0.99	42.6	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach and south curb of the EB
	SB	LTR	0.69	17.8	B	LTR	0.77	20.2	C	LTR	0.77	20.2	C	receiving side for 150-ft. to allow for two moving lanes along the WB approach.
Tilden Avenue	WB	LTR	0.76	45.8	D	LTR	1.04	89.4	F	LT	0.50	36.0	D	- Provide lane striping for the WB approach. Stripe the approach as one 11-ft. left-through lane, one 11-ft. right turn lane,
		-	-	-	-	-	-	-	-	R	0.50	38.1	D	and one 13-ft. EB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. east of the stop bar, stripe a
														centerline that tapers to the middle of the roadway.
Overall Intersection		-	**0.72**	**21.7**	**C**	-	**1.01**	**41.1**	**D**	-	**0.83**	**32.4**	**C**	
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH														
Flatbush Avenue	NB	LT	0.84	24.5	C	LT	1.04	60.2	E	LT	0.93	32.3	C	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 150-ft. to
	SB	TR	0.53	14.4	B	TR	0.64	16.5	B	TR	0.66	16.9	B	allow for two moving lanes.
Beverley Road North	EB	LR	0.56	37.8	D	LR	0.79	47.1	D	L	0.34	33.2	C	- Restripe the EB approach from one 22-ft. lane with parking to one travel 11-ft. lane and one 11-ft. lane which would
		-	-	-	-	-	-	-	-	R	0.53	38.9	D	serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
														- Install "No Standing 12 PM - 8 PM Saturday" regulations along the east curb of the NB approach for 100-ft to
Overall Intersection		-	**0.74**	**21.9**	**C**	-	**0.96**	**40.4**	**D**	-	**0.79**	**26.2**	**C**	increase the lane width of the approach from 10-ft to 12-ft.
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH														
Flatbush Avenue	NB	TR	0.53	14.4	B	TR	0.56	15.0	B	TR	0.56	15.0	B	- Install "No Standing 4 PM - 6 PM Saturday" regulations along the north curb of the WB approach for 100-ft to
	SB	LT	0.65	17.5	B	LT	0.89	30.0	C	LT	0.96	40.9	D	increase the lane width of the approach from 13-ft. to 16-ft.
Beverley Road South	WB	LR	0.71	40.2	D	LR	0.92	51.9	D	LR	0.84	44.7	D	
Overall Intersection		-	**0.67**	**19.4**	**B**	-	**0.90**	**27.0**	**C**	-	**0.92**	**30.2**	**C**	

TABLE C-2
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY DEPARTURE PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build				2014 Build				2014 Build with Mitigation				Mitigation Measures
		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT														
Flatbush Avenue	NB	LTR	0.60	9.8	A	LTR	0.65	10.6	B	LTR	0.65	10.6	B	- **Unmitigatable impact.**
	SB	LTR	0.74	32.4	C	LTR	0.89	38.9	D	LTR	0.85	35.5	D	- Modify signal timing: shift 2 s of green time from NB-lead phase to NB/SB phase [NB-lead green time shifts from
Bedford Avenue	WB	TR	0.76	51.4	D	TR	1.06	99.1	F	TR	1.06	99.1	F	25 s to 23 s; NB/SB green time shifts from 49 s to 51 s; WB/NB-R green time remains the same].
														- **[Signal timing shift due to mitigation measures at the Flatbush Avenue and Bedford Avenue/**
Overall Intersection		-	**0.81**	**23.6**	**C**	-	**0.96**	**35.3**	**D**	-	**0.94**	**34.0**	**C**	**Foster Avenue intersection].**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE														
Flatbush Avenue	NB	LTR	0.93	41.2	D	LTR	1.07	76.0	E	LTR	0.88	35.7	D	- Install "No Standing Anytime" regulations along the south curb of the EB approach for the entire block (230 ft.) to
	SB	LT	0.76	33.1	C	LT	0.94	44.0	D	LT	0.91	38.9	D	allow for two moving lanes.
Bedford Avenue	NB	LR	0.53	44.3	D	LR	0.56	45.5	D	LR	0.56	45.5	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left turn lane and one 11-ft. through-right lane
	SB	LTR	0.15	5.9	A	LTR	0.23	6.3	A	TR	0.23	5.6	A	for 230-ft. from the stop bar.
Foster Avenue	EB	LTR	1.04	80.8	F	LTR	1.20	141.9	F	L	0.31	43.6	D	- Restripe the WB approach from one 22-ft. lane to one 11-ft. left-through lane and one 11-ft. right turn lane for 75-ft.
		-	-	-	-	-	-	-	-	TR	0.65	47.4	D	from the stop bar.
	WB	LTR	0.96	66.7	E	LTR	0.97	67.4	E	LT	0.66	49.2	D	- Install "No Standing 12 PM - 8 PM Saturday" along the east curb of the NB Flatbush Avenue approach for 250-ft.
		-	-	-	-	-	-	-	-	R	0.40	45.1	D	to increase the lane width of the approach from 11-ft to 12-ft.
														- Modify signal timing: shift 2 s of green time from the EB/WB phase to the NB/SB Flatbush Avenue/SB Bedford
Overall Intersection		-	**0.84**	**41.7**	**D**	-	**0.94**	**60.0**	**E**	-	**0.77**	**36.4**	**D**	Avenue phase [EB/WB green time shifts from 23 s to 21 s; NB/SB Flatbush Avenue/SB Bedford Avenue green
														time shifts from 49 s to 51 s; NB/SB Bedford Avenue green time remains the same].
BEDFORD AVENUE														
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE														
Bedford Avenue	NB	LTR	0.66	15.9	B	LTR	1.22	123.3	F					- **Unmitigatable impact.**
	SB	LTR	0.79	23.0	C	LTR	0.88	29.8	C					
Linden Boulevard	EB	LTR	0.87	40.8	D	LTR	0.88	41.2	D					
	WB	LTR	0.92	46.0	D	LTR	0.95	48.6	D					
Overall Intersection		-	**0.83**	**31.6**	**C**	-	**1.13**	**67.1**	**E**					
9 BEDFORD AVENUE & CHURCH AVENUE														
Bedford Avenue	NB	LTR	0.91	45.6	D	LTR	1.54	282.2	F	LTR	1.41	223.1	F	- **Partially Mitigated.**
	SB	LTR	1.00	59.9	E	LTR	1.12	98.7	F	LTR	1.01	60.5	E	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left-through lane and one 11-ft. right turn lane.
Church Avenue	EB	LTR	0.92	46.8	D	LTR	0.93	47.1	D	LT	0.81	38.0	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 75-ft. to allow
		-	-	-	-	-	-	-	-	R	0.16	21.8	C	for two moving lanes.
	WB	LTR	0.83	35.9	D	LTR	0.84	36.6	D	LT	0.88	44.4	D	- Shift the centerline of Church Avenue east of Bedford Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	R	0.14	21.5	C	one 22-ft. lane with parking to one 12-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the
														peak analysis periods and allow for parking for all other time periods.
Overall Intersection		-	**0.96**	**47.8**	**D**	-	**1.23**	**143.1**	**F**	-	**1.17**	**110.8**	**F**	- Modify signal timing: shift 4 s of green time from the EB/WB phase to the NB/SB phase [EB/WB green time shifts
														from 55 s to 51 s; NB/SB green time shifts from 55 s to 59 s].
10 BEDFORD AVENUE & TILDEN AVENUE														
Bedford Avenue	NB	LT	0.56	13.8	B	LT	0.74	18.7	B	LT	0.74	18.7	B	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 150-ft. to allow for two
	SB	TR	0.85	17.4	B	TR	0.86	17.7	B	TR	0.86	17.7	B	moving lanes.
Tilden Avenue	EB	LR	0.76	56.7	E	LR	1.51	290.4	F	L	0.71	53.5	D	- Provide lane striping for the EB approach. Stripe the approach as one 10-ft. left turn lane, one 11-ft. right turn lane,
		-	-	-	-	-	-	-	-	R	0.57	43.8	D	and one 13-ft. WB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. west of the stop bar, stripe a
	WB	LTR	0.82	51.1	D	LTR	0.82	51.5	D	LTR	0.85	53.7	D	centerline that tapers to the middle of the roadway.
														- Restripe the WB approach from one 34-ft. travel lane with parking on both sides to one 23-ft. travel lane with
Overall Intersection		-	**0.84**	**26.4**	**C**	-	**1.04**	**60.6**	**E**	-	**0.85**	**28.1**	**C**	parking, one 3-ft. chevron (blockbuster treatment) for 50-ft., and one 8-ft. parking lane.

TABLE C-2
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (MIDDAY DEPARTURE PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
11 BEDFORD AVENUE & BEVERLEY ROAD														
Bedford Avenue	NB	LTR	0.47	12.7	B	LTR	0.60	15.8	B	LTR	0.61	16.5	B	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 125-ft. to allow for two moving lanes.
	SB	LTR	0.74	16.9	B	LTR	0.88	23.3	C	LTR	0.89	24.9	C	
Beverley Road	EB	LTR	0.94	48.4	D	LTR	1.53	284.0	F	L	0.54	37.6	D	- Restripe the EB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft. left turn lane tapered back 125-ft to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft. receiving lane with parking.
		-	-	-	-	-	-	-	-	TR	0.93	47.0	D	
	WB	LTR	0.99	61.9	E	LTR	1.07	86.2	F	L	0.38	36.1	D	
		-	-	-	-	-	-	-	-	TR	0.77	42.5	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach for 75-ft. to allow for two moving lanes.
Overall Intersection		**-**	**0.81**	**30.4**	**C**	**-**	**1.08**	**87.6**	**F**	**-**	**0.91**	**30.1**	**C**	- Restripe the WB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft. left turn lane tapered back 125-ft. to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft. receiving lane with parking.
OCEAN AVENUE														
12 OCEAN AVENUE & CHURCH AVENUE														
Ocean Avenue	NB	L	0.38	24.9	C	L	0.53	29.8	C					- Mitigation not required.
		TR	0.71	31.3	C	TR	0.82	37.9	D					
	SB	LTR	0.69	29.1	C	LTR	0.69	29.2	C					
Church Avenue	EB	LTR	0.63	28.9	C	LTR	0.66	29.5	C					
	WB	LTR	0.65	26.1	C	LTR	0.68	26.9	C					
Overall Intersection		**-**	**0.68**	**28.7**	**C**	**-**	**0.75**	**31.2**	**C**					
13 OCEAN AVENUE & BEVERLEY ROAD														
Ocean Avenue	NB	LTR	0.53	14.2	B	LTR	0.69	18.5	B	LTR	0.72	21.7	C	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 125-ft. to allow for two moving lanes.
	SB	LTR	0.56	14.1	B	LTR	0.61	15.1	B	LTR	0.64	17.3	B	
Beverley Road	EB	LTR	0.89	53.5	D	LTR	1.31	192.4	F	LT	0.88	50.7	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
		-	-	-	-	-	-	-	-	R	0.38	34.0	C	
	WB	LTR	0.62	42.5	D	LTR	0.85	56.3	E	LT	0.60	39.4	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 100-ft. to allow for two moving lanes.
		-	-	-	-	-	-	-	-	R	0.14	30.6	C	
Overall Intersection		**-**	**0.66**	**26.8**	**C**	**-**	**0.88**	**63.0**	**E**	**-**	**0.77**	**28.7**	**C**	- Restripe the WB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
UNSIGNALIZED INTERSECTIONS														- Modify signal timing: shift 3 s of green time from the NB/SB phase to the EB/WB phase [NB/SB green time shifts from 76 s to 73 s; EB/WB green time shifts from 34 s to 37 s].
14 FLATBUSH AVENUE & DURYEA PLACE														
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A	- Install "No Left Turns 12 PM - 8 PM Saturday" signage along the SB approach to prohibit left turns during the peak analysis periods.
	SB	LT	-	17.9	C	LT	-		F	LT	FREE	FLOW	A	
Overall Intersection		**-**	**-**	**0.4**	**A**	**-**	**-**	**Note 3) (**	**F**	**-**	**-**	**0.0**	**A**	

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact

TABLE C-3
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (EVENING ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
SIGNALIZED INTERSECTIONS														
FLATBUSH AVENUE														
1 FLATBUSH AVENUE & CATON AVENUE														
Flatbush Avenue	NB	LTR	0.58	18.0	B	LTR	0.61	18.5	B	LTR	0.61	18.5	B	- Shift the centerline of Caton Avenue west of Flatbush Avenue 1-ft. the north. Restripe the EB approach from one
	SB	LTR	0.62	19.7	B	LTR	0.89	32.7	C	LTR	0.89	32.7	C	20-ft. lane with parking to one 10-ft. left turn lane and one 11-ft. through-right lane for 75-ft. from the stop bar.
Caton Avenue	EB	LTR	1.01	53.9	D	LTR	1.11	93.6	F	L	0.39	29.2	C	- Shift the centerline of Caton Avenue east of Flatbush Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	TR	0.82	36.0	D	one 27-ft. lane with parking to one 10-ft. left turn lane, and one 18-ft. through-right lane with parking for 100-ft. from
	WB	LTR	0.93	51.0	D	LTR	1.05	80.5	F	L	0.46	33.3	C	the stop bar.
		-	-	-	-	-	-	-	-	TR	0.82	41.7	D	
Overall Intersection		-	**0.77**	**31.4**	**C**	-	**0.98**	**48.2**	**D**	-	**0.86**	**30.4**	**C**	
2 FLATBUSH AVENUE & CHURCH AVENUE														
Flatbush Avenue	NB	L	0.66	38.7	D	L	0.98	102.8	F	L	0.98	102.8	F	- **Partially Mitigated.**
		T	0.85	34.7	C	T	0.87	36.4	D	TR	0.64	23.9	C	- Shift the centerline of Church Avenue west of Flatbush Avenue 1-ft. to the north. Restripe the EB approach from
		R	0.60	30.7	C	R	0.60	30.7	C	-	-	-	-	one 10-ft. left-through lane and one 11-ft. right turn lane to one 11-ft. left-though lane and one 11-ft. right turn lane.
	SB	L	0.66	36.6	D	L	0.70	41.2	D	L	0.52	26.8	C	- Restripe the NB approach from one 10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. right turn lane to one
		T	0.80	30.5	C	T	0.97	47.3	D	T	0.97	47.3	D	10-ft. left turn lane, one 11-ft. through lane, and one 11-ft. through-right lane.
		R	0.49	24.6	C	R	0.50	25.0	C	R	0.50	25.0	C	- Restripe the NB receiving side from one 22-ft. lane to two 11-ft. lanes.
Church Avenue	EB	LT	0.87	56.9	E	LT	0.94	68.7	E	LT	0.90	60.0	E	- Provide advance warning signage to inform motorists of the NB receiving side's lane transition to the downstream
		R	0.43	46.7	D	R	0.65	57.8	E	R	0.65	57.8	E	intersection.
	WB	LT	1.04	98.1	F	LT	1.23	169.3	F	LT	1.23	169.3	F	
		R	0.55	47.2	D	R	0.55	47.2	D	R	0.36	38.1	D	
Overall Intersection		-	**0.91**	**43.9**	**D**	-	**1.08**	**60.6**	**E**	-	**1.08**	**55.2**	**E**	
3 FLATBUSH AVENUE & TILDEN AVENUE/REGENT PLACE														
Flatbush Avenue	NB	LTR	0.64	15.6	B	LTR	0.96	28.7	C	LTR	0.96	28.7	C	- Mitigation not required.
	SB	LTR	0.61	15.7	B	LTR	0.99	41.4	D	LTR	0.99	41.4	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach and south curb of the EB
Tilden Avenue	WB	LTR	0.55	38.3	D	LTR	0.66	41.8	D	LT	0.35	33.5	C	receiving side for 150-ft. to allow for two moving lanes along the WB approach.
		-	-	-	-	-	-	-	-	R	0.26	32.8	C	- Provide lane striping for the WB approach. Stripe the approach as one 11-ft. left-through lane, one 11-ft. right turn lane,
														and one 13-ft. EB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. east of the stop bar, stripe a
Overall Intersection		-	**0.61**	**18.0**	**B**	-	**0.88**	**35.5**	**D**	-	**0.78**	**34.6**	**C**	centerline that tapers to the middle of the roadway.
														- **[Measures reflect improvements needed for the Saturday Midday Arrival and Midday Departure peak periods].**
4 FLATBUSH AVENUE & BEVERLEY ROAD NORTH														
Flatbush Avenue	NB	LT	0.99	46.3	D	LT	1.14	98.4	F	LT	1.01	50.6	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 150-ft. to
	SB	TR	0.54	14.8	B	TR	0.63	16.3	B	TR	0.64	16.7	B	allow for two moving lanes.
Beverley Road North	EB	LR	0.60	37.1	D	LR	0.91	50.7	D	L	0.47	34.5	C	- Restripe the EB approach from one 22-ft. lane with parking to one travel 11-ft. lane and one 11-ft. lane which would
		-	-	-	-	-	-	-	-	R	0.51	36.1	D	serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
														- Install "No Standing 12 PM - 8 PM Saturday" regulations along the east curb of the NB approach for 100-ft to
Overall Intersection		-	**0.86**	**33.0**	**C**	-	**1.07**	**60.3**	**E**	-	**0.84**	**35.3**	**D**	increase the lane width of the approach from 10-ft to 12-ft.
5 FLATBUSH AVENUE & BEVERLEY ROAD SOUTH														
Flatbush Avenue	NB	TR	0.50	14.0	B	TR	0.59	15.4	B	TR	0.57	14.1	B	- Modify signal timing: shift 2 s of green time from EB/WB to NB/SB phase [NB/SB green time shfits from 73 s to
	SB	LT	0.68	18.4	B	LT	0.97	42.7	D	LT	0.98	42.7	D	75 s; EB/WB green time shifts from 37 s to 35 s].
Beverley Road South	WB	LR	0.59	38.7	D	LR	0.61	39.3	D	LR	0.64	42.0	D	- **[Measures reflect improvements needed due to delay increases caused by the diversions that resulted from the Flatbush Avenue and Duryea Place intersection mitigation, and improvements**
		-	-	-	-	-	-	-	-					
Overall Intersection		-	**0.65**	**18.9**	**B**	-	**0.85**	**29.2**	**C**	-	**0.87**	**29.0**	**C**	**needed for the Saturday Midday Departure peak period].**

TABLE C-3
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (EVENING ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build				2014 Build				2014 Build with Mitigation				Mitigation Measures
		Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	Mvt.	V/C	Delay	LOS	
6 FLATBUSH AVENUE & BEDFORD AVENUE/STEPHEN COURT														
Flatbush Avenue	NB	LTR	0.52	8.7	A	LTR	0.65	10.3	B	LTR	0.69	12.3	B	- Mitigation not required.
	SB	LTR	0.67	31.1	C	LTR	0.68	31.4	C	LTR	0.74	35.8	D	- Modify signal timing: shift 3 s of green time from NB-lead phase to WB/NB-R phase and 1 s of green time from
Bedford Avenue	WB	TR	0.72	50.5	D	TR	0.79	53.5	D	TR	0.70	47.2	D	NB-lead phase to NB/SB phase [NB-lead green time shifts from 25 s to 21 s; NB/SB green time shifts from 49 s to 50 s; WB/NB-R green time shifts from 26 s to 29 s].
Overall Intersection		**-**	**0.76**	**22.6**	**C**	**-**	**0.79**	**22.8**	**C**	**-**	**0.79**	**24.5**	**C**	- **[Signal timing shift due to mitigation measures at the Flatbush Avenue and Bedford Avenue/ Foster Avenue intersection].**
7 FLATBUSH AVENUE & BEDFORD AVENUE/FOSTER AVENUE														
Flatbush Avenue	NB	LTR	0.94	41.4	D	LTR	1.11	90.5	F	LTR	0.94	40.8	D	- Install "No Standing Anytime" regulations along the south curb of the EB approach for the entire block (230 ft.) to
	SB	LT	0.65	30.3	C	LT	0.68	31.0	C	LT	0.66	30.0	C	allow for two moving lanes.
Bedford Avenue	NB	LR	0.72	51.4	D	LR	0.80	57.6	E	LR	0.73	49.2	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left turn lane and one 11-ft. through-right lane
	SB	LTR	0.18	6.1	A	LTR	0.19	6.1	A	TR	0.18	4.8	A	for 230-ft. from the stop bar.
Foster Avenue	EB	LTR	0.93	55.7	E	LTR	1.58	311.7	F	L	0.54	48.0	D	- Restripe the WB approach from one 22-ft. lane to one 11-ft. left-through lane and one 11-ft. right turn lane for 75-ft.
		-	-	-	-	-	-	-	-	TR	0.73	50.1	D	from the stop bar.
	WB	LTR	1.04	77.8	E	LTR	1.05	82.2	F	L	0.78	51.1	D	- Install "No Standing 12 PM - 8 PM Saturday" along the east curb of the NB Flatbush Avenue approach for 250-ft.
		-	-	-	-	-	-	-	-	TR	0.50	47.0	D	to increase the lane width of the approach from 11-ft to 12-ft.
														- Modify signal timing: shift 3 s of green time from the EB/WB phase to the NB/SB Bedford Avenue phase and 1 s
Overall Intersection		**-**	**0.89**	**40.7**	**D**	**-**	**1.12**	**82.0**	**F**	**-**	**0.84**	**36.9**	**D**	from the EB/WB phase to the NB/SB Flatbush Avenue/SB Bedford Avenue phase [EB/WB green time shifts from 23 s to 19 s; NB/SB Flatbush Avenue/SB Bedford Avenue green time shifts from 49 s to 50 s; NB/SB Bedford Avenue green time shifts from 31 s to 34 s].
BEDFORD AVENUE														
8 BEDFORD AVENUE & LINDEN BOULEVARD/CATON AVENUE														
Bedford Avenue	NB	LTR	0.58	15.6	B	LTR	0.62	16.3	B					- **Unmitigatable impact.**
	SB	LTR	0.68	19.5	B	LTR	0.76	22.9	C					
Linden Boulevard	EB	LTR	0.67	36.5	D	LTR	0.82	39.5	D					
	WB	LTR	0.87	46.0	D	LTR	1.20	140.6	F					
Overall Intersection		**-**	**0.74**	**30.1**	**C**	**-**	**0.91**	**57.0**	**E**					
9 BEDFORD AVENUE & CHURCH AVENUE														
Bedford Avenue	NB	LTR	0.87	43.2	D	LTR	0.95	56.2	E	LTR	0.95	56.2	E	- **Partially Mitigated.**
	SB	LTR	0.92	48.2	D	LTR	1.24	149.7	F	LTR	1.24	149.7	F	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. left-through lane and one 11-ft. right turn lane.
Church Avenue	EB	LTR	0.90	45.8	D	LTR	0.98	59.7	E	LT	0.74	32.6	C	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 75-ft. to allow
		-	-	-	-	-	-	-	-	R	0.19	19.9	B	for two moving lanes.
	WB	LTR	0.58	27.5	C	LTR	0.73	33.9	C	LT	0.67	31.3	C	- Shift the centerline of Church Avenue east of Bedford Avenue 1-ft. to the south. Restripe the WB approach from
		-	-	-	-	-	-	-	-	R	0.10	18.7	B	one 22-ft. lane with parking to one 12-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
Overall Intersection		**-**	**0.91**	**42.5**	**D**	**-**	**1.11**	**84.6**	**F**	**-**	**0.99**	**76.6**	**E**	
10 BEDFORD AVENUE & TILDEN AVENUE														
Bedford Avenue	NB	LT	0.48	12.3	B	LT	0.71	18.9	B	LT	0.71	18.9	B	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 150-ft. to allow for two
	SB	TR	0.60	12.6	B	TR	0.94	23.1	C	TR	0.94	23.1	C	moving lanes.
Tilden Avenue	EB	LR	0.79	63.5	E	LR	1.21	169.7	F	L	0.44	42.9	D	- Provide lane striping for the EB approach. Stripe the approach as one 10-ft. left turn lane, one 11-ft. right turn lane,
		-	-	-	-	-	-	-	-	R	0.67	50.0	D	and one 13-ft. WB receiving lane for 150-ft. from the stop bar. Beginning from 150-ft. west of the stop bar, stripe a
	WB	LTR	0.83	51.4	D	LTR	0.83	51.8	D	LTR	0.85	53.6	D	centerline that tapers to the middle of the roadway.
														- Restripe the WB approach from one 34-ft. travel lane with parking on both sides to one 23-ft. travel lane with
Overall Intersection		**-**	**0.67**	**26.7**	**C**	**-**	**1.02**	**45.8**	**D**	**-**	**0.91**	**30.5**	**C**	parking, one 3-ft. chevron (blockbuster treatment) for 50-ft., and one 8-ft. parking lane.

TABLE C-3
KINGS THEATRE FEIS
2014 NO BUILD VS. BUILD AND MITIGATION TRAFFIC LEVELS OF SERVICE COMPARISON (EVENING ARRIVAL PEAK HOUR)

INTERSECTION & APPROACH		2014 No Build Mvt.	V/C	Delay	LOS	2014 Build Mvt.	V/C	Delay	LOS	2014 Build with Mitigation Mvt.	V/C	Delay	LOS	Mitigation Measures
11 BEDFORD AVENUE & BEVERLEY ROAD														
Bedford Avenue	NB	LTR	0.41	11.9	B	LTR	0.61	15.8	B	LTR	0.61	15.8	B	- Install "No Standing Anytime" regulations along the south curb of the EB approach for 125-ft. to allow for two
	SB	LTR	0.72	18.0	B	LTR	0.84	24.2	C	LTR	0.84	24.2	C	moving lanes.
Beverley Road	EB	LTR	0.80	45.1	D	LTR	1.06	86.4	F	L	0.49	38.8	D	- Restripe the EB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft.
		-	-	-	-	-	-	-	-	TR	0.58	39.0	D	left turn lane tapered back 125-ft to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft.
	WB	LTR	0.71	45.3	D	LTR	0.77	48.4	D	L	0.19	34.5	C	receiving lane with parking.
		-	-	-	-	-	-	-	-	TR	0.66	43.5	D	- Install "No Standing Anytime" regulations along the north curb of the WB approach for 75-ft. to allow for two moving lanes.
Overall Intersection		**-**	**0.74**	**26.4**	**C**	**-**	**0.91**	**36.5**	**D**	**-**	**0.79**	**27.3**	**C**	- Restripe the WB approach from one 21-ft. lane with parking and one 21-ft. receiving lane with parking to one 10-ft. left turn lane tapered back 125-ft. to the centerline, one 11-ft. through-right lane with a 3-ft. buffer, and one 18-ft. receiving lane with parking.
OCEAN AVENUE														
12 OCEAN AVENUE & CHURCH AVENUE														
Ocean Avenue	NB	L	0.26	22.0	C	L	0.29	22.5	C					- Mitigation not required.
		TR	0.58	26.8	C	TR	0.61	27.5	C					
	SB	LTR	0.74	30.9	C	LTR	0.76	31.7	C					
Church Avenue	EB	LTR	0.69	30.3	C	LTR	0.79	35.0	D					
	WB	LTR	0.71	26.8	C	LTR	0.74	27.5	C					
Overall Intersection		**-**	**0.73**	**28.6**	**C**	**-**	**0.78**	**30.4**	**C**					
13 OCEAN AVENUE & BEVERLEY ROAD														
Ocean Avenue	NB	LTR	0.52	13.9	B	LTR	0.59	15.6	B	LTR	0.59	15.6	B	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the south curb of the EB approach for 125-ft. to
	SB	LTR	0.57	14.1	B	LTR	0.62	15.0	B	LTR	0.62	15.0	B	allow for two moving lanes.
Beverley Road	EB	LTR	1.08	84.2	F	LTR	1.29	177.8	F	LT	0.99	50.0	D	- Restripe the EB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would
		-	-	-	-	-	-	-	-	R	0.37	34.8	C	serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
	WB	LTR	0.77	48.1	D	LTR	0.95	68.7	E	LT	0.72	46.0	D	- Install "No Standing 12 PM - 8 PM Saturday" regulations along the north curb of the WB approach for 100-ft. to
		-	-	-	-	-	-	-	-	R	0.33	35.9	D	allow for two moving lanes.
Overall Intersection		**-**	**0.73**	**35.6**	**D**	**-**	**0.83**	**63.2**	**E**	**-**	**0.73**	**28.7**	**C**	- Restripe the WB approach from one 22-ft. lane with parking to one 11-ft. travel lane and one 11-ft. lane which would serve as a travel lane only for the peak analysis periods and allow for parking for all other time periods.
UNSIGNALIZED INTERSECTIONS														
14 FLATBUSH AVENUE & DURYEA PLACE														
Flatbush Avenue	NB	TR	FREE	FLOW	A	TR	FREE	FLOW	A	TR	FREE	FLOW	A	- Install "No Left Turns 12 PM - 8 PM Saturday" signage along the SB approach to prohibit left turns during the peak
	SB	LT	-	16.4	C	LT	-		F	LT	FREE	FLOW	A	analysis periods.
Overall Intersection		**-**	**-**	**0.3**	**A**	**-**	**-**	**Note 3) (**	**F**	**-**	**-**	**0.0**	**A**	

(1) Control delay is measured in seconds per vehicle.
(2) Overall intersection V/C ratio is the critical lane groups' V/C ratio.
(3) Overall delay cannot be calculated since the delay for some movements is beyond the threshold delay of HCS methodology.
Denotes a significant impact